ADDENDUM No. 1

Date October 5, 2015

City of Austin

Project Name South Austin Regional Wastewater Treatment Plant Filter Improvements

C.I.P. No. 3333.015

This Addendum forms a part of Contract and clarifies, corrects or modifies original Bid Documents, dated September 14, 2015. Acknowledge receipt of this addendum in space provided on bid form. Failure to do so may subject bidder to disqualification.

A. Project Manual Revisions:

1. Replace the Table of Contents dated 08/21/15 with the attached, revised Table of Contents dated 10/19/15.
2. Replace Section 00020, "Invitation for Bids" with the attached, revised Section 00020, "Invitation for Bids".
3. Replace Section 00100, "Instructions to Bidders" with the attached, revised Section 00100, "Instruction to Bidders".
4. Replace Section 00300L, "Bid Form (Lump Sum) with the attached, revised Section 00300L, "Bid Form (Lump Sum)".
5. Replace Section 00425A, "Insurance Cost Form" with the attached, revised Section 00425A, "Insurance Cost Form".
6. Add the attached Section 00425B, "Insurance Program Information".
7. Replace Section 00440, "Affidavit – Prohibited Activities" with the attached, revised Section 00440, "Affidavit – Prohibited Activities".
8. Replace Section 00500, "Agreement" with the attached, revised Section 00500, "Agreement".
9. Add the attached Section 00500 Exhibit, "Texas Ethics Commission Interested Parties Disclosure".
10. Replace Section 00700, "General Conditions", with the attached, revised Section 00700, "General Conditions".
11. Replace Section 00810, "Supplemental General Conditions", with the attached, revised Section 00810, "Supplemental General Conditions".
12. Replace Section 00820, "Modifications to Bidding Requirements and Contract Forms" with the attached, revised Section 00820, "Modifications to Bidding Requirements and Contract Forms".
13. Replace Section 00830BC, "Wage Rates and Payroll Reporting", with the attached, revised Section 00830BC, "Wage Rates and Payroll Reporting."
14. Replace Section 01040, "Project Coordination" with the attached, revised Section 01040, "Project Coordination".

15. Replace Section 01050, "Grades, Lines, and Levels" with the attached, revised Section 01050, "Grades, Lines, and Levels."
16. Replace Section 01500, "Temporary Facilities" with the attached, revised Section 01500, "Temporary Facilities".
17. Replace Volume 4, "ROCIP Safety Manual", dated 04/04/14 with the attached, revised Volume 4, "ROCIP Safety Manual", dated 09/23/15.

B. Drawing Revisions:

1. Replace Drawing CA01, "Filter Building Control Room Level Floor Plan Floor Tile Demolition" with the attached, revised Drawing CA01, "Filter Building Control Room Level Floor Plan Floor Tile Demolition".
2. Replace Drawing CA02, "Filter Building Reflective Ceiling Plan Ceiling Tile Demolition" with the attached, revised Drawing CA01, "Filter Building Reflective Ceiling Plan Ceiling Tile Demolition".
3. Replace Drawing CS01, "Structural Demolition Plan at Lower Pipe Gallery Level" with the attached, revised Drawing CS01, "Structural Demolition Plan at Lower Pipe Gallery Level".
4. Replace Drawing CS02, "Structural Demolition Plan at Upper Pipe Gallery (1 of 2)" with the attached, revised "Structural Demolition Plan at Upper Pipe Gallery (1 of 2)".
5. Replace Drawing CS03, "Structural Demolition Plan at Upper Pipe Gallery (2 of 2)" with the attached, revised Drawing CS03, "Structural Demolition Plan at Upper Pipe Gallery (2 of 2)".
6. Replace Drawing CS04, "Structural Demolition Plan at Control Room Level (1 of 2)" with the attached, revised Drawing CS04, "Structural Demolition Plan at Control Room Level (1 of 2)".
7. Replace Drawing CS05, "Structural Demolition Plan at Control Room Level (2 of 2)" with the attached, revised Drawing CS05, "Structural Demolition Plan at Control Room Level (2 of 2)".
8. Replace Drawing CS06, "Structural Demolition Sections" with the attached, revised Drawing CS06, "Structural Demolition Sections".
9. Replace Drawing CS07, "Structural Demolition Sections" with the attached, revised Drawing CS07, "Structural Demolition Sections".
10. Replace Drawing FM06, "Disk Filters 1 and 2 Overall Mechanical Plan" with the attached, revised Drawing FM06, "Disk Filters 1 and 2 Overall Mechanical Plan".
11. Replace Drawing FM07, "Disk Filter Cells No.s 3-6 Overall Mechanical Plan" with the attached, revised Drawing FM07, "Disk Filter Cells No.s 3-6 Overall Mechanical Plan".

This addendum consists of 352 page(s)/sheet(s).

10/5/2015

Approved by OWNER

Approved by ENGINEER/ARCHITECT

STATE OF TEXAS
JOHN N. BUSER
90881
LICENSED
PROFESSIONAL ENGINEER
10/05/2015

END

Document Number		Title
VOLUME 1		
INTRODUCTORY INFORMATION		
		TITLE PAGE
10/19/15		TABLE OF CONTENTS
BIDDING REQUIREMENTS, CONTRACT FORMS, & CONDITIONS OF THE CONTRACT		
PRE-BID INFORMATION		
00020	02/04/15	INVITATION FOR BIDS
INSTRUCTIONS TO BIDDERS		
00100	10/19/15	INSTRUCTIONS TO BIDDERS
INFORMATION AVAILABLE TO BIDDERS		
00220	05/06/11	GEOTECHNICAL DATA
BID FORMS		
00300L	10/19/15	BID FORM (LUMP SUM)
SUPPLEMENTS TO BID FORMS		
00400	04/22/13	STATEMENT OF BIDDER'S EXPERIENCE
00405	09/25/05	CERTIFICATE OF NON-SUSPENSION OR DEBARMENT
00410	05/06/11	STATEMENT OF BIDDER'S SAFETY EXPERIENCE
00425A	10/19/15	INSURANCE COST FORM
00425B	10/19/15	ROLLING OWNER CONTROLLED INSURANCE PROGRAM INFORMATION
00440	10/19/15	AFFIDAVIT - PROHIBITED ACTIVITIES
00475	05/11/15	NONRESIDENT BIDDER PROVISIONS
AGREEMENT FORM		
00500	10/18/15	AGREEMENT
00500EXHIBIT	10/19/15	TEXAS ETHICS COMMISSION INTERESTED PARTIES DISCLOSURE
BONDS AND CERTIFICATES		
00610	02/23/10	PERFORMANCE BOND
00620	02/23/10	PAYMENT BOND
00630	05/11/15	NONDISCRIMINATION CERTIFICATE
00631	03/06/14	TITLE VI ASSURANCES APPENDIX A
00650	07/30/12	CERTIFICATE OF INSURANCE
00670	03/20/14	SALES TAX EXEMPTION CERTIFICATE
00680	06/05/06	NON-USE OF ASBESTOS AFFIDAVIT (PRIOR TO CONSTRUCTION)
00681	06/05/06	NON-USE OF ASBESTOS AFFIDAVIT (AFTER CONSTRUCTION)
GENERAL CONDITIONS		
00700	10/19/15	GENERAL CONDITIONS
SUPPLEMENTARY CONDITIONS		
00810	10/19/15	SUPPLEMENTAL GENERAL CONDITIONS
00819	06/10/05	BIDDING REQUIREMENTS, CONTRACT FORMS & CONDITIONS OF THE CONTRACT SECURITY REQUIREMENTS
00820	10/19/15	MODIFICATIONS TO BIDDING REQUIREMENTS AND CONTRACT FORMS

Document Number		Title
00830	02/04/15	WAGE RATES AND PAYROLL REPORTING
00830BC	09/25/15	WAGE RATES BUILDING CONSTRUCTION
00830HH	01/05/15	WAGE RATES HIGHWAY HEAVY
ADDENDA		
00900	02/23/10	ADDENDUM
SPECIFICATIONS		
DIVISION 1 - GENERAL REQUIREMENTS		
01010	04/22/13	SUMMARY OF WORK
01020	07/24/15	ALLOWANCES
01025	07/24/15	MEASUREMENT AND PAYMENT
01030	07/28/15	ALTERNATES
01040	09/30/15	PROJECT COORDINATION
01045	07/27/15	SEQUENCE OF CONSTRUCTION
01046	07/28/15	TEMPORARY FILTRATION AND BYPASS PUMPING SYSTEM
01050	10/19/15	GRADES LINES & LEVELS
01095	07/21/03	REFERENCE STANDARDS AND DEFINITIONS
01096	05/06/11	STORMWATER POLLUTION PREVENTION PLAN (SWPPP)
01200	08/09/12	PROJECT MEETINGS
01300	04/22/13	SUBMITTALS
01310	07/28/15	PROGRESS SCHEDULES
01352	04/22/13	SUSTAINABLE CONSTRUCTION REQUIREMENTS
01353	08/09/12	CONSTRUCTION EQUIPMENT EMISSIONS REDUCTION PLAN
01380	08/09/12	CONSTRUCTION PHOTOGRAPHY & VIDEOS
01400	10/25/13	CONSTRUCTION MATERIALS TESTING
01445	01/19/09	MANUFACTURERS FIELD SERVICES
01500	08/09/12	TEMPORARY FACILITIES
01505	04/22/13	CONSTRUCTION AND DEMOLITION WASTE MANAGEMENT
01550	08/09/12	PUBLIC SAFETY AND CONVENIENCE
01600	10/29/13	GENERAL EQUIPMENT REQUIREMENTS
01730	09/30/14	OPERATION AND MAINTENANCE DATA
01900	03/12/12	PROHIBITION OF ASBESTOS CONTAINING MATERIALS
01900A	06/05/06	STATEMENT OF NON-INCLUSION OF ASBESTOS CONTAINING MATERIAL (E/A PRIOR TO DESIGN)
01900B	06/05/06	STATEMENT OF NON-INCLUSION OF ASBESTOS CONTAINING MATERIAL (E/A AFTER DESIGN)
CITY STANDARD TECHNICAL SPECIFICATIONS		
SERIES 100 – EARTHWORK		
102S	08/20/07	CLEARING AND GRUBBING
104S	09/26/12	REMOVING PORTLAND CEMENT CONCRETE
111S	09/26/12	EXCAVATION
SERIES 200 – SUBGRADE AND BASE CONSTRUCTION		
201S	08/20/07	SUBGRADE PREPARATION
210S	02/24/10	FLEXIBLE BASE
220S	02/24/10	SPRINKLING FOR DUST CONTROL
236S	08/20/07	PROOF ROLLING
SERIES 300 – STREET SURFACE COURSES		
360S	09/26/12	CONCRETE PAVEMENT

Document Number	Title	
SERIES 400 – CONCRETE STRUCTURES AND MISCELLANEOUS CONCRETE		
401S	09/26/12	STRUCTURAL EXCAVATION AND BACKFILL
402S	11/13/07	CONTROLLED LOW STRENGTH MATERIAL
403S	09/26/12	CONCRETE FOR STRUCTURES
405S	11/13/07	CONCRETE ADMIXTURES
406S	09/26/12	REINFORCING STEEL
407S	07/01/09	FIBROUS CONCRETE
408S	11/13/07	CONCRETE JOINT MATERIALS
409S	11/13/07	MEMBRANE CURING
410S	09/26/12	CONCRETE STRUCTURES
411S	11/13/07	SURFACE FINISHES FOR CONCRETE
413S	11/13/07	CLEANING AND/OR SEALING JOINTS AND CRACKS (PCC)
SERIES 500 – PIPE AND APPURTENANCES		
509S	09/26/12	EXCAVATION SAFETY SYSTEMS
SERIES 600 – ENVIRONMENTAL ENHANCEMENT		
601S	09/01/11	SALVAGING AND PLACING TOPSOIL
604S	12/30/14	SEEDING FOR EROSION CONTROL
606S	06/21/07	FERTILIZER
610S	09/26/12	PRESERVATION OF TREES AND OTHER VEGETATION
620S	05/23/00	FILTER FABRIC
639S	08/18/10	ROCK BERM
641S	06/21/07	STABILIZED CONSTRUCTION ENTRANCE (SCE)
642S	09/01/11	SILT FENCE
648S	08/18/10	MULCH SOCK
SERIES 700 – INCIDENTAL CONSTRUCTION		
700S	09/26/12	MOBILIZATION
SERIES 800 – URBAN TRANSPORTATION		
802S	09/26/12	PROJECT SIGNS
SPECIAL PROVISIONS TO CITY STANDARD TECHNICAL SPECIFICATIONS		
SP1	07/29/15	SPECIAL PROVISION TO THE MEASUREMENT AND PAYMENT SECTION
SP401S	08/22/14	SPECIAL PROVISION TO THE STRUCTURAL EXCAVATION AND BACKFILL SECTION
SP403S	08/22/14	SPECIAL PROVISIONS TO CONCRETE FOR STRUCTURES
SP406S	09/26/12	SPECIAL PROVISIONS TO REINFORCING STEEL
SP410S	09/26/12	SPECIAL PROVISIONS TO CONCRETE STRUCTURES
VOLUME 2		
SPECIAL SPECIFICATIONS		
DIVISION 2 – SITE CONSTRUCTION		
02687	07/23/15	TESTING OF INSTALLED PIPING SYSTEMS
02770	07/23/15	CONSTRUCTION OF UNDERGROUND LINES
DIVISION 3 – CONCRETE		
NOT USED		
DIVISION 4- MASONRY		
04210	07/29/15	BRICK UNIT MASONRY

Document Number		Title
DIVISION 5 – METALS		
05010	07/23/15	METALS FOR STRUCTURES
05015	07/23/15	STAINLESS STEEL FABRICATIONS
05120	09/09/15	STRUCTURAL STEEL
05310	07/23/15	STEEL DECK
05500	07/23/15	METAL FABRICATIONS
05520	07/23/15	ALUMINUM HANDRAILS
DIVISION 6 – WOOD AND PLASTICS		
06201	07/29/15	EXPANSION JOINT SYSTEM
DIVISION 7 – THERMAL AND MOISTURE PROTECTION		
07714	07/23/15	GUTTERS AND DOWNSPOUTS
07950	07/23/15	EXPANSION JOINT COVERS
DIVISION 8 – DOORS AND WINDOWS		
NOT USED		
DIVISION 9 – FINISHES		
09511	07/23/15	ACOUSTICAL LAY-IN CEILINGS
09660	07/23/15	RESILIENT TILE FLOORING
09902	07/29/15	PAINT AND PROTECTIVE COATINGS
DIVISION 10 – SPECIALTIES		
10400	07/23/15	IDENTIFICATION DEVICES
DIVISION 11 – EQUIPMENT		
11304	07/23/15	DRY PIT SOLIDS HANDLING PUMPS
11319	07/23/15	SELF-PRIMING PUMPS AND APPURTENANCES
11399	07/23/15	DISK FILTERS AND APPURTENANCES
DIVISION 12 – FURNISHINGS		
NOT USED		
DIVISION 13 – SPECIAL CONSTRUCTION		
13390	06/12/15	PACKAGED CONTROL SYSTEMS
DIVISION 14 – CONVEYING SYSTEMS		
14620	07/23/15	CRANES, MONORAIL AND HOISTS
DIVISION 15 – MECHANICAL		
15061	07/23/15	PIPE SUPPORTS
15062	07/23/15	DUCTILE IRON PIPE AND CAST IRON AND DUCTILE IRON FITTINGS
15063	07/23/15	INSTALLATION OF DUCTILE IRON PLANT PIPING
15064	07/23/15	POLYVINYL CHLORIDE PLASTIC PIPING SYSTEMS
15072	07/23/15	LARGE STEEL PIPE AND FITTINGS
15075	07/23/15	MECHANICAL IDENTIFICATION
15100	07/23/15	VALVES
15103	07/23/15	SLUICE GATES
15104	07/23/15	FABRICATED STAINLESS STEEL SLIDE GATES

Document Number		Title
15111	07/23/15	BALL VALVES
15112	07/23/15	BUTTERFLY VALVES
15114	07/29/15	CHECK VALVES
15115	07/23/15	GATE, GLOBE, AND ANGLE VALVES
15116	07/23/15	PLUG VALVES
15119	07/23/15	AIR AND VACUUM RELIEF VALVES
15172	07/29/15	ELECTRICAL MOTOR, HIGH EFFICIENCY, HORIZONTAL INDUCTION, 300 HP AND SMALLER
15173	07/23/15	ELECTRICAL MOTOR, VERTICAL INDUCTION TYPE
DIVISION 16 – ELECTRICAL		
16120	06/12/15	480 VOLT MOTOR CONTROL CENTERS
16140	06/12/15	SWITCHBOARDS
16150	06/12/15	RACEWAYS, FITTINGS AND SUPPORTS
16200	06/12/15	WIRING (600 VOLTS AND BELOW)
16250	06/12/15	BOXES AND CABINETS
16300	06/12/15	WIRING DEVICES
16350	06/12/15	LIGHTING
16444	06/12/15	COMBINATION MOTOR STARTERS
16450	06/12/15	600 VOLTS AND BELOW DRY TYPE TRANSFORMERS
16500	06/12/15	PANELBOARDS
16524	06/12/15	480 VOLT AUTOMATIC TRANSFER SWITCHES
16540	06/12/15	FIELD CONTROL STATIONS
16550	06/12/15	GROUNDING
16600	06/12/15	DISCONNECT SWITCHES AND ENCLOSURES
16800	06/12/15	CALIBRATION, TESTING, AND SETTINGS
DIVISION 17 – INSTRUMENTATION AND CONTROLS		
17100	06/12/15	PROCESS INSTRUMENTATION AND CONTROL SYSTEMS PICS
17200	06/12/15	INSTRUMENTATION AND CONTROL CABINETS AND ASSOCIATED EQUIPMENT
17380	06/12/15	FIELD INSTRUMENTS AND SENSING DEVICES
17600	06/12/15	DISTRIBUTED CONTROL SYSTEMS

VOL. 3 10/09/00 **MBE/WBE PROCUREMENT PROGRAM PACKAGE**

VOL. 4 09/23/15 **ROCIP SAFETY MANUAL**

END

Following is a summary of information for this Project. Bidder is cautioned to refer to other sections of the Project Manual, Drawings and Addenda (Bid Documents) for further details.

The City of Austin, hereafter called OWNER, is requesting sealed written Bids for furnishing all labor, materials, equipment, supervision, and incidentals, and for performing all Work required for the following Project:

South Austin Regional Wastewater Treatment Plant Filter Improvements

Located at: 1017 Fallwell Lane, Del Valle, Texas 78617

CIP ID# 3333.015 IFB# 6100 CLMC 562

The Work consists of , but is not limited to, removal of (12) existing single media filters, conversion of up to six (6) existing filter cells to cloth media filters, associated structural improvements to accommodate the installation of new cloth media filters, replacement of associated piping inside the filter building up to the limit shown on PLANs, improvement to electrical and instrumentation equipment, replacement of existing mudwell solid handling pumps and discharge pipeline to the treatment trains, construction of a new splitter box in the yard, replacement of floor tile at filter building, and installation of a roof over the filter cells with bird netting.

Bid Documents may be obtained at One Texas Center, 505 Barton Springs Road, Ste. 1045 (Front Desk), Austin, TX 78704. Copies will be available in CD format at no cost.

At the time Bid Documents are obtained, Bidder must provide a working e-mail address, so that they will receive any addenda or clarification issued by the Owner.

Sealed Bids will be received at the Contract Management Department, 105 W. Riverside Dr., Suite 210, Austin, Texas 78704 and then publicly opened and read aloud in the **SUITE 210 Conference Room**.

ALL BIDS ARE DUE PRIOR TO (Austin time) October 22, 2015 at 9:30AM.

ALL COMPLIANCE PLANS ARE DUE PRIOR TO (Austin time) October 22, 2015 at 1:30PM.

BIDS WILL BE OPENED AT (Austin time) October 22, 2015 at 1:30PM.

ALL BIDS AND COMPLIANCE PLANS NOT RECEIVED PRIOR TO THE DATE AND TIME SET FORTH ABOVE WILL NOT BE ACCEPTED FOR CONSIDERATION. The time stamp clock in **SUITE 210** is the time of record and is verified with www.time.gov, the official U.S. time.

All CONTRACTORS must be registered to do business with OWNER prior to the Contract Award. All Subcontractors must be registered with the OWNER prior to execution of a contract. Prime Contractors are responsible for ensuring that their Subcontractors are registered as vendors with the City of Austin. Registration can be done through the OWNER's on-line Vendor Registration system. Log onto https://www.ci.austin.tx.us/vss/Advantage and follow the directions.

All City procurements are subject to the City's Minority-Owned and Women-Owned Business Enterprise Procurement Program found at Chapter 2-9-A of the City Code, as amended. The Program provides Minority-Owned and Women-Owned Business Enterprises (MBEs/WBEs) or Disadvantaged Business Enterprises (DBEs) full opportunity to participate in all City contracts. Goals for MBE/WBE or DBE participation are stated for each solicitation. Information on achieving the goals or documenting good faith efforts to achieve the goals are contained in the MBE/WBE Procurement Program Package or DBE Procurement Program Package attached to the solicitation. When goals are established, Bidders are required to complete and return the MBE/WBE or DBE

Compliance Plan with their Bid. If a Compliance Plan is not submitted prior to the date and time set forth in the solicitation, the Bid will not be accepted for consideration. (See Section 00820 for MBE/WBE requirements on "no goal" solicitations.)

All Bids shall be accompanied by an acceptable Bid guaranty in an amount of not less than five percent (5%) of the total Bid, as specified in Section 00100, Instructions To Bidders.

Performance and payment bonds when required shall be executed on forms furnished by OWNER. Each bond shall be issued in an amount of one hundred percent (100%) of the Contract Amount by a solvent corporate surety company authorized to do business in the State of Texas, and shall meet any other requirements established by law or by OWNER pursuant to applicable law.

Minimum insurance requirements are specified in Section 00810, Supplemental General Conditions.

Minimum wage rates have been established and are specified in Section 00830, Wage Rates and Payroll Reporting.

Contract Time is of the essence and all Work shall be substantially completed within **eight hundred and fifty (850) Calendar** Days after date specified in the Notice to Proceed, in accordance with the Bid Form, Section 00300. Final completion shall be achieved within **60 Calendar** Days after substantial completion. Liquidated damages are $**1,760.00** per **Calendar** Day for failure to substantially complete the work and $**450.00** per **Calendar** Day for failure to achieve final completion within **60 Calendar** Days after substantial completion, in accordance with the Bid Form, Section 00300.

OWNER reserves the right to reject any or all Bids and to waive any minor informality in any Bid or solicitation procedure (a minor informality is one that does not affect the competitiveness of the Bid).

A **Mandatory** Pre-Bid Conference will be held on September 22, 2015 (date) at 10:30AM (time)

(Austin time) at South Austin Regional Wastewater Treatment Plant, 1017 Fallwell Lane, Del Valle, TX 78617 Administration Building Conference Room. A site visit will be conducted following the pre-bid meeting. (location)

Austin, Texas. Attendance is mandatory unless otherwise stated. Bidders must attend any mandatory Pre-Bid Conference and are encouraged to attend any non-mandatory Pre-Bid Conference to ensure their understanding of Owner's bidding and contracting requirements, particularly MBE/WBE Procurement Program requirements. If the Pre-Bid Conference is mandatory the Bidder must arrive and sign-in within fifteen (15) minutes of the scheduled start time of the meeting, otherwise the Bidder will not be allowed to submit a Bid for the project.

The persons listed below may be contacted for information regarding the Invitation for Bid. If the Bidder contacts any other City employee, including Council Members and members of Boards and Commissions, the Bidder may be found in violation of Ordinance No. 20111110-052, dated November 10, 2011, regarding Anti-Lobbying and Procurement. The text of that Ordinance may be viewed at http://www.cityofaustin.org/edims/document.cfm?id=161145.

AUTHORIZED CONTACT PERSONS

PROJECT MANAGER: Steve Parks telephone (512) 974-3576 email steve.parks@austintexas.gov

CONTRACT COMPLIANCE REP.: MaryLou Ochoa tele (512) 974-7215

Email: marylou.ochoa@austintexas.gov

END

1. Preparation of Bid

a. **Bid Documents.** Each Bidder must prepare its Bid in ink on forms furnished by OWNER or as otherwise specified or permitted. Blank spaces for each item in Bid form must be filled. Bidder must submit a price for each item in Bid. In case of conflict between unit prices and extensions, unit prices shall govern. The Bid must be executed in the complete and correct legal name of individual, partnership, firm, corporation or other legal entity constituting the Bidder.

b. **Vendor Registration.** All CONTRACTORS must be registered to do business with OWNER prior to Contract Award. All Subcontractors must be registered with the OWNER prior to execution of a contract. Prime Contractors are responsible for ensuring that their Subcontractors are registered as vendors with the City of Austin. Registration can be done through the OWNER's on- line Vendor Registration system. Log onto https://www.ci.austin.tx.us/vss/Advantage and follow the directions.

c. **Pre-Bid Conference.** Unless otherwise notified, Bidders must attend the Pre-Bid Conference to ensure their understanding of OWNER's bidding and contracting requirements, particularly MBE/WBE Procurement Program requirements.

d. **Sales Tax Exemption.** The Owner is a tax-exempt organization as defined by Chapter 11 of the Property Tax Code of Texas. Bid prices shall not include sales tax on materials, supplies, or equipment that are incorporated into the real property interest of the OWNER or are otherwise completely used and consumed in the performance of the Contract. OWNER will furnish CONTRACTOR with a Sales Tax Exemption Certificate to be issued to Suppliers in lieu of the tax.

e. **Addenda.** Bidder shall be knowledgeable of all Addenda issued and shall acknowledge all Addenda in spaces provided on Bid form. Further information regarding the Bid documents and the Project may be obtained from the Project Manager listed at the end of Section 00020, Invitation for Bids.

f. **Required Items.** Bids must include all specified items in this section and be submitted in accordance with paragraph No. 7 below. Any additional requirement to the bid submittal is specified in Section 00820. Any corrections to a Bid shall be initialed by the person signing the Bid.

g. **Professional Services.** Bidders must secure any required professional services that are defined as professional services under the Professional Services Procurement Act, Chapter 2254 of the Texas Government Code (for example: registered professional land surveyors and professional engineers) using the qualifications based selection process prescribed by that chapter. (Note: It is a violation of State Law to solicit Bids for professional services.)

h. **Further Information.** Prospective Bidders desiring further information or interpretation of Project Manual or Drawings must make a written request for such information to OWNER addressed to the Authorized Contact Person listed in Section 00020 no later than seven Working Days before Bid opening. Interpretation of Project Manual or Drawings will be made by Addendum only and a copy of each Addendum will be provided to each person to whom a set of Bid Documents has been furnished. Any verbal communications will not be binding on the OWNER.

i. **Anti-Lobbying and Procurement.** Article 6, Chapter 2-7, Austin City Code, prohibits

lobbying activities or representations by the Bidder between the date that the Invitation for Bid (IFB) is issued and the date of contract execution. The text of the pertinent City Ordinance may be viewed at http://www.cityofaustin.org/edims/document.cfm?id=161145.

(1) Definitions

(A) "Agent" means a person authorized by a bidder to act for or in place of bidder, including a person acting at the request of bidder, a person acting with the knowledge and consent of a bidder, or a person acting with any arrangement, coordination, or direction between the person and the bidder.

(B) "Authorized Contact Person" means the Project Manager listed in Section 00020, IFB, or other persons specifically identified in the IFB as the contact regarding the solicitation, or the authorized contact person's designee during the course of the no- contact period.

(C) "City Employee" means a person employed by the City.

(D) "City Official" is defined in Section 2-7-2 of the City Code.

(E) "No-Contact Period" means the period of time from the date the IFB is issued until a contract is executed. If the City withdraws the IFB or rejects all bids with the stated intention to reissue the same or a similar IFB for the same or similar project, the no- contact period continues during the time period between the withdrawal and reissue.

(F) "Response" means a bid.

(G) "Respondent" means a bidder. The term "respondent" also includes:

- (i) an owner, board member, officer, employee, contractor, subsidiary, joint enterprise, partnership, agent, lobbyist, or other representative of a bidder;
- (ii) a person or representative of a person that is involved in a joint venture with the bidder, or a subcontractor in connection with the bidder's bid; and
- (iii) a bidder who has withdrawn a bid or who has had a bid rejected or disqualified by the City.

(H) "Representation" means a communication related to a bid to a council member, official, employee, or City representative that is intended to or that is reasonably likely to:

- (i) provide information about the bid;
- (ii) advance the interests of the bidder;
- (iii) discredit the bid of another bidder;
- (iv) encourage the City to withdraw the IFB;
- (v) encourage the City to reject all of the bids;
- (vi) convey a complaint about a particular bid; or
- (vii) directly or indirectly ask, influence, or persuade any City official, City employee, or body to favor or oppose, recommend or not recommend, vote for or against, consider or not consider, or take action or refrain from taking action on any vote, decision, or agenda item regarding the solicitation.

(I) "Solicitation" means an opportunity to compete to conduct business with the City that requires City Council approval under City Charter Article VII Section 15 (Purchase Procedure).

(J) "City" means Owner.

(2) Restriction on Contacts.

(A) During a no-contact period, a bidder shall make a representation only

through the authorized contact person.

(B) During the no-contact period, a bidder may not make a representation to a City official or to a City employee other than to the authorized contact person. This prohibition also applies to a vendor that makes a representation and then becomes a bidder.

(C) The prohibition of a representation during the no-contact period applies to a representation initiated by a bidder, and to a representation made in response to a communication initiated by a City official or a City employee other than the authorized contact person.

(D) If the City withdraws an IFB or rejects all bids with a stated intention to reissue the same or similar IFB for the same or similar project, the no-contact period shall expire after the ninetieth day after the date the IFB is withdrawn or all bids are rejected if the IFB has not been reissued during the ninety day period.

(E) The no-contact period shall expire when the first of the following occurs: contract is executed or solicitation is cancelled.

(F) The purchasing officer or the Contract Management Director may allow bidders to make representations to city employees or city representatives in addition to the authorized contact person for a solicitation that the purchasing officer or the Contract Management Director finds must be conducted in an expedited manner; an expedited solicitation is one conducted for reasons of health or safety under the shortest schedule possible with no extensions. The purchasing officer's or Contract Management Director's finding and additional city employees or city representatives who may be contacted must be included in the solicitation documents.

(G) Representations to an independent contractor hired by the City to conduct or assist with a solicitation will be treated as representations to a City employee.

(H) A current employee, director, officer, or member of a bidder, or a person related within the first degree of consanguinity or affinity to a current employee, director, officer or member of a bidder, is presumed to be an agent of the bidder for purposes of making a representation. This presumption is rebuttable by a preponderance of the evidence as determined by the purchasing officer or Contract Management Director.

(I) A bidder's representative is a person or entity acting on a bidder's behalf with the bidder's request and consent. For example, a bidder may email their membership list and ask members to contact council members on the bidder's behalf. The members are then acting per bidder's request and with their consent, and the members have become bidder representatives.

(3) Permitted Representations

(A) If City seeks additional information from bidder, the bidder shall submit the representation in writing only to the authorized contact person. The authorized contact person will then distribute the written representation in accordance with the terms of the IFB. A bidder cannot amend or add information to a bid after the bid deadline.

(B) If bidder wishes to send a complaint to the City, the bidder shall submit the complaint in writing only to the authorized contact person. The authorized contact person will then distribute a complaint regarding the process to members of the city council or members of the City board, to the Contract Management Director, and to all bidders on the IFB. However, the Contract Management Director or purchasing officer shall not permit distribution of

any complaint that promotes or disparages the qualifications of a bidder, or that amends or adds information to a bid. A determination of what constitutes promoting or disparaging the qualifications of a bidder or constitutes amending or adding information is at the Contract Management Director's or purchasing officer's sole discretion. Bid protests are not subject to this subsection. Documents related to a bid protest may not be forwarded to council under this subsection.

(C) If a bidder submits a written inquiry regarding an IFB, the authorized contact person will provide a written answer and distribute both the inquiry and answer to all bidders on the IFB.

(D) If a bidder does not receive a response from the authorized contact person, the bidder may contact the Contract Management Director or purchasing officer as appropriate.

(E) A bidder may ask a purely procedural question, for example a question regarding the time or location of an event, or where information may be obtained, of a City employee other than the authorized contact person. This provision does not permit a bidder to make suggestions or complaints about the contract process that constitute a representation to a City employee other than the authorized contact person. Notwithstanding this provision, a bidder may not ask a procedural question of a councilmember, a councilmember's aide, or of a City board member except in a meeting held under the Texas Government Code, Chapter 551 (Open Meetings Act).

(F) Article 6 of the City Code allows representations:

(i) made at a meeting convened by the authorized contact person, including meetings to evaluate bids or negotiate a contract;

(ii) required by Financial Services Department protest procedures for vendors;

(iii) made at a Financial Services Department protest hearing;

(iv) provided to the Small & Minority Business Resources Department in order to obtain compliance with Chapter 2-9A-D (the Minority-Owned and Women-Owned Business Enterprise Procurement Program);

(v) made to the City Risk Management coordinator about insurance requirements for a bid;

(vi) made in public at a meeting held under the Texas Open Meetings Act; or

(vii) made from a bidder's attorney to an attorney in the Law Department in

compliance with Texas Disciplinary Rules of Professional Conduct.

(G) Communication regarding the solicitation is permitted between or among City officials or City employees acting in their official capacity.

(H) A contribution or expenditure as defined in Chapter 2-2 (Campaign Finance) is not a representation.

(4) Contract Voidable.

If a contract is awarded to a bidder who has violated these Anti- Lobbying & Procurement provisions, the contract is voidable by the Owner.

(5) Debarment.

If a bidder has been disqualified under these provisions more than two times in a sixty month period, the purchasing officer shall debar the bidder from

bidding for a period not to exceed three years, provided the bidder is given written notice and a hearing in advance of the debarment.

j. **City's Minority-Owned and Women-Owned Business Enterprise (MBE/WBE) Program Requirements. Good Faith Efforts.** When a bidder cannot achieve the MBE/WBE goals or subgoals established for the project, the bidder must document its Good Faith Efforts to meet the goals or subgoals. Good Faith Effort evaluations will consider, at a minimum, the bidder's efforts to do the following:

(1) Soliciting through at least two reasonable, available and verifiable means MBEs/WBEs within the Significant Local Business Presence boundaries at least seven (7) business days prior to the bid opening date to allow the MBEs/WBEs to respond to the bid.

(2) Providing interested MBEs/WBEs adequate information about the bid documents and requirements, including addenda, in a timely manner to assist them in responding to the bid.

(3) Negotiating in good faith with interested MBEs/WBEs that have submitted bids to the bidder.

(4) Publishing notice in a local publication such as a newspaper, trade association publication or via electronic/social media.

(5) Not rejecting MBEs/WBEs as being unqualified without sound reasons based on a thorough investigation of their capabilities.

(6) Making economically feasible portions of the work available to MBE/WBE subcontractors and suppliers and to select those portions of the work or material needs consistent with the available MBE/WBE subcontractors and suppliers, so as to facilitate meeting the goals or subgoals.

(7) The ability or desire of the bidder to perform the project work with its own organization does not relieve the bidder of the responsibility to make Good Faith Efforts.

(8) Bidders are not required to accept higher quotes in order to meet the goals or subgoals.

(9) Effectively using the services of Minority Person/Women community organizations; Minority Person/Women Contractors groups; local, state and federal Minority Person/Women business assistance offices; and other organizations to provide assistance in solicitation and utilization of MBEs, WBEs and/or DBEs.

(10) In assessing minimum Good Faith Efforts, the OWNER may consider (1) whether the bidder sought guidance from the City of Austin Small and Minority Business Resources Department (SMBR) on any question regarding compliance with these requirements; and (2) the performance of other bidders in meeting the goals.

For additional information, refer to the MBE/WBE Compliance Program Requirements Volume of the Project Manual.

Bid shopping is not allowed in conjunction with this solicitation and may result in the disqualification of prospective bidders and subcontractors.

2. Estimates of Quantities (Unit Price Contracts Only)

Quantities listed in unit price Bid form are to be considered approximate quantities and will be used only for comparison of Bids. Payment to CONTRACTOR will be made only for actual quantities of Work performed or materials furnished in accordance with Contract and it is understood that quantities may be increased or decreased as provided in Section 00700, General Conditions, and as may be modified by Section 00810, Supplemental General Conditions.

3. Drawings, Project Manual and Site (s) of Work

Before submitting a Bid, the Bidder shall carefully examine the Bid Documents, site(s) of the proposed Work, soils, and other conditions that may affect the performance of the Work to satisfy the Bidder as to character, quality and quantities of Work to be performed and materials to be furnished. By submitting a Bid, the Bidder will be deemed to have certified that the Bidder has complied with these requirements. If, during preparation of the Bid, the Bidder discovers any suspected discrepancies or errors, the Bidder must immediately notify the Authorized Contact Person in writing of the suspected discrepancy or error. Failure to provide written notice of any suspected discrepancies or errors may be cause for rejection of the Bid.

4. Bid Guaranty

All Bids shall be accompanied by a Bid guaranty in an amount of not less than five percent (5%) of the total Bid. If the total Bid amount is $100,000 or less, Bidder has the option of providing a cashier's or certified check, made payable to City of Austin accompanied by a letter from a surety company indicating that Bidder can be bonded for the amount of the Project, or a Bid bond with Power of Attorney attached, issued by a solvent surety authorized under laws of the State of Texas and acceptable to OWNER. If the total Bid amount exceeds $100,000, the only acceptable Bid guaranty will be a Bid bond with Power of Attorney attached, issued by a solvent surety authorized under laws of the State of Texas and acceptable to OWNER.

The Bid guaranty accompanying the Bid of the three (3) apparent low Bidders will be retained until Contract is awarded and successful Bidder executes Contract and furnishes required bonds and insurance, after which Bid guaranty will be returned to the Bidders. All other Bid guaranties will be returned after Bid certification. In the event that the Bidder to whom the Contract is awarded fails to timely execute the Contract, the Bidder agrees that the OWNER in its discretion may rescind the initial award and award the Contract to the next lowest responsible Bidder.

5. Performance and Payment Bonds

When performance and/or payment bonds are required, each shall be issued in an amount equal to the Contract Amount as security for the faithful performance and/or payment of all Contractor's obligations under the Contract Documents. Performance and payment bonds shall be issued by a solvent corporate surety authorized to do business in the State of Texas, and shall meet any other requirements established by law or by OWNER pursuant to applicable law.

6. Consideration of Bid Amount

For purpose of award, after Bids are opened, read aloud, reviewed, and certified, the total amount of the Bid, including accepted Bid alternates, will be considered the amount of the Bid. Upon request, certified Bid tabulations will be made available to the public. OWNER reserves the right to reject any or all Bids and to waive any minor informality in any Bid or solicitation procedure (a minor informality is one that does not affect the competitiveness of the Bids).

7. Submission of Bid

Each Bid must be completed and signed by person(s) authorized to bind individual, partnership, firm, corporation, or any other legal entity submitting the Bid, and, shall include the following in one envelope furnished by OWNER:

(a) One copy of Bid form (Section 00300L or 00300U) completed and signed.

(b) Acknowledgment of receipt of Addenda issued in spaces provided in Bid form.
(c) Required Bid guaranty.
(d) Copy of statement of legal entity status, as applicable, including but not limited to, as applicable, Statement of Sole Proprietorship, Articles of Partnership or Incorporation and resolution, or corporate board minutes, empowering signatory to bind Bidder, attested to by an officer of Bidder. The required information is set forth in Section 00100, Paragraph 15.
(e) Unless provided to the contrary in Section 00820 (Modifications to Bidding Requirements and Contract Forms), one copy of Attachments A, B, C, and D and any other specifically designated Attachments if the Statement of Bidder's Experience (Section 00400) is required to be submitted as part of the Bid, completed and signed.
(f) One Copy of the Certificate of Non-Suspension or Debarment (Section 00405), completed and signed. (Applicable for Bid amounts equal to or in excess of $25,000.00.)
(g) One copy of the Insurance Cost Form (Section 00425A), completed and signed (ROCIP projects only).
(h) One copy of the Owner Controlled Insurance Program Information (Section 00425B Affidavit), signed (ROCIP projects only).
(i) One copy of the Affidavit - Prohibited Activities (Section 00440), completed and signed.
(j) One copy of the Nonresident Bidder Provisions (Section 00475), completed and signed.
(k) One copy of the Nondiscrimination Certificate (Section 00630), completed and signed.
(l) One copy of the Title VI Assurances Appendix A (Section 00631), completed and signed.
(m) One copy of Exhibit A Federal Provisions (Section 00810A, pages 1-9) completed and signed. (Federal projects only)
(n) Required information indicated in Drawings or Project Manual.
(o) One copy of the Texas Ethics Commission Interested Parties Disclosure Form (Section 00500), completed and signed.

Bid must be accompanied by a MBE/WBE or DBE Compliance Plan, signed by the authorized representative described above, that should be submitted separately in a second envelope furnished by OWNER, or other appropriate packaging accompanied by the furnished envelope, prior to the date and time set forth in Section 00020, Invitation for Bids. The Compliance Plan forms are included in the MBE/WBE Procurement Program Package or DBE Procurement Program Package (a separately bound volume).

Bid shall include all specified items in this section and be placed in envelopes furnished by OWNER, or other appropriate packaging, accompanied by and attached to the OWNER furnished envelopes, sealed and clearly identified on outside as a Bid to OWNER, with Bidder's name and address, and project name. Failure to submit Bid appropriately may subject Bidder to disqualification. Bid may be mailed or delivered (in person or by Federal Express, Express Mail or other delivery service) to:

City of Austin
Contract Management
Department
105 W. Riverside Dr., Suite
210
Austin, Texas 78704

When sent by mail, Federal Express, Express Mail, or other delivery service, sealed Bid (marked as indicated above) shall be enclosed in an additional envelope, or other appropriate packaging, clearly identified on outside as a Bid to OWNER with Bidder's name

and address, Project name, and Bid date and time. It is the sole responsibility of the Bidder to ensure timely delivery of Bid. OWNER will not be responsible for failure of service on the part of the U.S. Post Office, courier services, or any other form of delivery service chosen by the Bidder. (See Section 00820, Modifications to Bidding Requirements and Contract Forms, for modifications to solicitations without MBE/WBE goals.)

In submitting its Bid, Bidder certifies that it has not lobbied the City or its officials, managers, employees, consultants, or contractors in such a manner as to influence or to attempt to influence the bidding process. In the event it reasonably appears that the Bidder influenced or attempted to influence the bidding process, the City may, in its discretion, reject the Bid.

8. Withdrawal of Bid

A Bid may be withdrawn by a Bidder, provided an authorized individual of the Bidder submits a
written request to withdraw the Bid prior to the time set for opening the Bids.

9. Rejection of Bids

A. The following **will** be cause to reject a Bid:

(1) Bids which are not signed by an individual empowered to bind the Bidder.

(2) Bids which are not accompanied by acceptable Bid guaranty, with Power of Attorney attached, or a letter certifying the Bidder's ability to be bonded, from a surety company, in accordance with Paragraph 4 above.

(3) More than one Bid for same Work from an individual, firm, partnership or corporation.

(4) Evidence of collusion among Bidders.

(5) Sworn testimony or discovery in pending litigation with OWNER which discloses misconduct or willful refusal by contractor to comply with subject contract or instructions of OWNER.

(6) Failure to submit MBE/WBE or DBE Compliance Plan in accordance with the separately bound volume titled MBE/WBE Procurement Program Package or DBE Procurement Program Package.

(7) Failure to have an authorized agent of the Bidder attend the mandatory Pre- Bid Conference, if applicable.

(8) Bids received from a Bidder who has been debarred or suspended by OWNER's Purchasing Officer.

(9) Bids received from a Bidder when Bidder or principals are currently debarred or suspended by Federal, State or City governmental agencies. (Applicable for Bid amounts equal to or in excess of $25,000.00).

(10) Failure to submit a signed copy of the Title VI Assurances Appendix A (Section 00631)

(11) Failure to submit Section 00810A Exhibit A Federal Provisions pages 1-9 with Bidder's Bid, if applicable.

B. The following **may** be cause to reject a Bid:

(1) Poor performance in execution of work under a previous City of Austin contract.

(2) Failure to achieve reasonable progress on an existing City of Austin contract.

(3) Default on previous contracts or failure to execute Contract after award.

(4) Evidence of failure to pay Subcontractors, Suppliers or employees in accordance with Contract requirements.

(5) Bids containing omissions, alterations of form, additions, qualifications or conditions not called for by OWNER, or incomplete Bids may be rejected. In any case of ambiguity or lack of clarity in the Bid, OWNER reserves right to determine most advantageous Bid or to reject the Bid.

(6) Failure to acknowledge receipt of Addenda.

(7) Failure to submit any of the items specified above in paragraph 7, "Submission of Bid", which are not cause for mandatory rejection in paragraph 9, "Rejection of Bids," section A.

(8) Failure to identify a dollar amount (price) of a unit price(s) in the 00300U

(9) Failure to submit post-Bid information within the allotted time(s) (see paragraph 11 for post-Bid requirements)

(10) Failure to timely execute Contract after award.

(11) Previous environmental violations resulting in fines or citations by a governmental entity (i.e. U.S. Environmental Protection Agency, Texas Commission on Environmental Quality, etc.).

(12) Safety record as set forth in Section 00410, Statement of Bidder's Safety Experience.

(13) Failure of Bidder to demonstrate, through submission of Attachments A, B, C, and D, the minimum experience required as specified in Section 00400 if that Section is included in the bidding documents.

(14) Evidence of Bidder's lack of sufficient resources, workforce, equipment or supervision, if required by inclusion of appropriate attachments in Section 00400.

(15) Evidence of poor performance on previous Projects as documented in Owner's project performance evaluations.

(16) Unbalanced Unit Price Bid: "Unbalanced Bid" means a Bid, which includes a Bid that is based on unit prices which are significantly less than cost for some Bid items and significantly more than cost for others. This may be evidenced by submission of unit price Bid items where the cost are significantly higher/lower than the cost of the same Bid items submitted by other Bidders on the project.

(17) Failure of Bidder to complete, sign and submit Section 00440, Affidavit - Prohibited Activities.

(18) Failure of Bidder to complete, sign and submit Section 00500, Texas Ethics Commission Interested Parties Disclosure Form.

(19) Failure to execute and deliver the 00425-B Affidavit.

10. Protest Procedures:

The OWNER's Contract Management Director has the authority to settle or resolve any claim of an alleged deficiency or protest. The procedures for notifying OWNER of an alleged deficiency or filing a protest are listed below. If you fail to comply with any of these requirements, the Contract Management Director may dismiss your complaint or protest.

Prior to Bid opening: If you are a prospective Bidder and you become aware of the facts regarding what you believe is a deficiency in the solicitation process before the Bid is opened, you must notify OWNER in writing of the alleged deficiency before that date, giving OWNER an opportunity to resolve the situation prior to the Bid opening.

After Bid opening: If you submit a Bid to OWNER and (1) you have been found non-responsive, or
(2) you believe that there has been a deficiency in the solicitation process or the award, you have the opportunity to protest the solicitation process or the recommended award as follows:

1. You must file written notice of your intent to protest within four (4) calendar days of the date that you know or should have known of the facts relating to the protest. If you do not file a written notice of intent within this time, you have waived all rights to protest the solicitation process or the award.
2. You must file your written protest within fourteen (14) calendar days of the date that you know or should have known of the facts relating to the protest unless you know of the facts before the Bid has been opened. If you know of the facts before that date, you must notify OWNER as stated above.
3. You must submit your protest in writing and must include the following information:
    a. your name, address, telephone, and email address;
    b. the solicitation number and the CIP number, if applicable;
    c. a detailed statement of the factual grounds for the protest, including copies of any relevant documents.
4. Your protest must be concise and presented logically and factually to help with OWNER's review.
5. When OWNER receives a timely written protest, the Contract Management Director will determine whether the grounds for your protest are sufficient. If the Contract Management Director decides that the grounds are sufficient, the Contract Management Department will schedule a protest hearing, usually within five (5) working days. If the Contract Management Director determines that your grounds are insufficient, you will be notified of that decision in writing.
6. The protest hearing is informal and is not subject to the Open Meetings Act. The purpose of the hearing is to give you a chance to present your case, it is not an adversarial proceeding. Those who may attend from OWNER are: representatives from the department that requested the purchase, the Law Department, the Contract Management Department, and other appropriate City staff. You may bring a representative or anyone else that will present information to support the factual grounds for your protest with you to the hearing.

7. A decision will usually be made within fifteen (15) calendar days after the hearing.
8. The Contract Management Director will send you a copy of the hearing decision after the appropriate City staff has reviewed the decision.
9. When a protest is filed, OWNER usually will not make an award until a decision on the protest is made. However, OWNER will not delay an award if the City Manager or the Contract Management Director determines that:
    a. OWNER urgently requires the supplies or services to be purchased, or
    b. Failure to make an award promptly will unduly delay delivery or performance.

In those instances, the Contract Management Department will notify you and make every effort to resolve your protest before the award.

The protest or notice of intent and the protest shall be submitted in writing to the following address:

City of Austin
Contract Management
Department ATTN: Contract
Management Director 105
W. Riverside Dr., Suite 205
Austin, Texas
78704 PHONE:
512/974-7141
FAX: 512/974-
9427

11. Submission of Post Bid Information

Prior to determination of the certified low Bidder, the three (3) apparent low Bidders must submit to OWNER the following information within three (3) business days of receipt of notice of apparent low Bidder status by the OWNER:

1. One copy of any additionally required attachments, if specified in the bidding documents, to the Bidder's Experience Record (Section 00400) completed in their entirety, including attachments, and signed.
2. Section 00410, Statement of Bidder's Safety Experience, including required attachments, completed and signed.
3. Such other information as is required to evaluate Bid or Bidder.

Upon notification of status as certified low Bidder, Bidder shall submit the following information to OWNER within three (3) business days:

a. Letter(s) of intent between Bidder and all subcontractor(s) and all supplier(s) identified in the MBE/WBE Compliance Plan.
b. Such other information as is required.

(Note: OWNER reserves the right to solely determine whether the comparable experience documentation provided by the Bidder is sufficient and relevant to the Work described in the Contract Documents for the Bidder to be considered a responsible Bidder. In addition, the Bidder acknowledges and agrees that the failure to timely provide the additional information required by this section will result in a determination that, for the purposes of this solicitation, the Bidder has not provided sufficient information for the OWNER to be able to determine that the Bidder is a responsible Bidder.)

12. Award and Execution of Contract

OWNER will process Bids expeditiously. Award of Contract will be to the lowest, responsible Bidder meeting all requirements of the Bid Documents. OWNER may not award Contract to a nonresident Bidder unless the nonresident underbids the lowest Bid submitted by a responsible resident Bidder by an amount that is not less than the amount by which a resident Bidder would be required to underbid the nonresident Bidder to obtain a comparable contract in the state in which the nonresident's principal place of business is located.

Award of Contract will occur within the period identified on the Bid form, unless mutually agreed between the parties. Contract Management Director shall submit recommendation for award to the City Council for those project awards requiring City Council action. Contract will be signed by City Manager or his/her designee after award and submission of required documentation by Bidder. Contract will not be binding upon OWNER until it has been executed by both parties. OWNER will process the Contract expeditiously. However, OWNER will not be liable for any delays prior to the award or execution of Contract.

Upon contract award, the selected Bidder must submit either their existing or an updated personnel policy (on letterhead) documenting conformity with City Code, Chapter 5-4, § 5-4-2. If the company does not submit a copy of their personnel policy incorporating the non-discrimination policy, the City of Austin Nondiscrimination Policy (Section 00630) will be considered the Bidder's nondiscrimination policy.

In any case of ambiguity or lack of clarity in the Bid, OWNER reserves the right to determine the most advantageous Bid or to reject the Bid.

Notwithstanding anything in this Section 00100 to the contrary, the OWNER may award a contract for construction services in an amount of less than $100,000 to a bidder whose principal place of business is in the City of Austin and whose bid is within 5% of the lowest bid price received from a bidder whose principal place of business is not within the City of Austin, if the City finds that the local bidder offers the City the best combination of contract price and additional economic development opportunities for the City created by the contract award including the employment of resident of the City and increased tax revenues to the City.

13. Partnering

In order to complete the Work in a manner that is most beneficial to the OWNER and CONTRACTOR, OWNER and CONTRACTOR may form a "Partnering Team", which will include the E/A, and any major Subcontractors. This partnering relationship will draw on the strength of all parties to identify and achieve mutual goals. The objectives of this partnering relationship are effective and efficient communication and Contract performance, which is intended to ensure that the Project is completed within budget, on schedule, and in accordance with the Drawings and Specifications and other Contract requirements. While the partnering relationship will be multilateral in makeup and participation will be totally voluntary, the OWNER and CONTRACTOR agree to cooperate and use reasonable good faith efforts to discuss and resolve any and all Project issues and disputes. Section 01100, Special Project Procedures and/or Section 01200, Project Meetings contain additional information regarding the intent of the partnering relationship and responsibilities of the entities entering into the partnering charter.

14. ROCIP Requirements

If the insurance on this Project will be under the Rolling Owner Controlled

Insurance Program (ROCIP), the Bidder is directed to Section 00810, Supplemental General Conditions, Section 00820, Modifications to Bidding Requirements and Contract Forms, and the Project Safety Manual included with these contract documents for information and bidding requirements. The Statement of Bidder's Safety Experience, Section 00410, must be accurately completed and submitted with the Bid. The Insurance Cost Form, Section 00425, must be accurately completed and submitted with the Bid to indicate insurance removed from Base Bid and Alternates. CONTRACTOR shall remove from the Bid the cost of insurance for the CONTRACTOR and Subcontractors of all tiers working on site.

15. Signature Requirements

The Bid and any subsequent supporting Bid documents and Contract must be executed in the Bidder's full name and legal entity status by an authorized representative of the Bidder and accompanied by sufficient documentation, which clearly indicates not only the legal name and entity status of Bidder, but also the capacity and authority of the person signing on behalf of Bidder. Accordingly, a partnership/joint venture must file its partnership/joint venture agreement, a corporation must file its articles and bylaws, a limited liability company must file its certificate of organization and article of organization and regulations, and a limited partnership must file not only limited partnership agreement and the certificate of limited partnership, but also the documentation for its general partner, and any Bidder must file a copy of any assumed name certificate, or such limited portion of such documents reasonably establishing signature authority.

The following samples show the entity information and signature requirements that will apply to all Bid and contract execution documents for the type of entity indicated:

1. Individual/Sole Proprietor (sample)

   The individual/sole proprietor must sign the document in his or her personal capacity or in any assumed name capacity accompanied by a copy of any assumed name certificate.

   Name of Contractor (d/b/a, if appropriate), a sole

   proprietor By: _____

   Printed Name:_____

2. Partnership/Joint Venture (sample)

   A partner/joint venturer must sign the document in his or her capacity as a partner/joint venturer and in any assumed name capacity accompanied by a copy of the assumed name certificate, if any, and a copy of the partnership or joint venture agreement, as applicable, with additional documentation, if necessary, establishing the authority of the signatory individual.

   Name of Partnership/Joint Venture, a Texas Partnership/JV, as

   appropriate By: _____

   Printed or Typed Name: _____

   Title:_____(Partner, managing partner, venturer, managing venturer, as approp.)
   Authorized Representative

3. Corporation (sample)

An authorized officer or agent of the corporation must sign the documents on behalf of the corporation in his or her capacity as the authorized representative of the corporation accompanied by a copy of a corporate resolution and minutes granting such authority with a certificate of an officer of the corporation as to the authority of the signatory to bind the CONTRACTOR signed and dated no more than one week before the date of execution of the document.

Name of Contractor, Inc. or Co., a Texas corporation, as

appropriate By: _____

Printed or Typed Name: _____

Title:_____(Officer or Agent (as appropriate)) Authorized Representative

4. Limited Liability Company (sample)

An authorized manager or member of the LLC must sign the document in his or her capacity as a manager or member accompanied by a copy of the LLC's certificate of organization and articles of organization and regulations evidencing such person's signatory authority.

Name of Contractor, L.L.C., a Texas limited liability company,

as appropriate By:_____,

Printed or Typed Name:_____

Title:_____, (Manager or Member (as appropriate)) Authorized Representative

5. Limited Partnership (sample)

The general partner of a limited partnership must execute the documents on behalf of the limited partnership, accompanied by copy of the limited partnership agreement and the certificate of limited partnership. In addition, the signatory must sign the documents in his or her capacity as an authorized officer or agent of the corporation or member or manager of the LLC, as appropriate, accompanied by a copy of the corporate or LLC documentation stipulated above.

Name of Contractor, Ltd., a Texas limited partnership, as

appropriate By: Name of General Partner (usually a

Texas corporation or an L.L.C.) By: _____

Printed or Typed Name:_____

Title:_____Officer or Agent of Corporation or LLC Authorized Representative

16. Contractor Evaluation

The Owner will review and evaluate the Contractor's Work and performance on the Project and provide the Contractor with a written Contractor Evaluation Report in accordance with City of Austin Administrative Rule R161-13.37. Rule R161-13.37

provides an appeal process.

http://www.austintexas.gov/department/contract-management

17. Texas Ethics Commission Interested Parties Disclosure Form

(1) Definitions:

(A) "Interested Party" – means a person who has a controlling interest in a Business Entity with whom the Owner contacts or who actively participates in facilitating the Contract or negotiating the terms of the Contract, including a broker, intermediary, adviser, or attorney for the Business Entity.

(B) "Business Entity" – means any entity recognized by law through which business is conducted, including a sole proprietorship, partnership, or corporation.

(2) As a condition to entering the Contract, the Business Entity constituting the Bidder must provide the following disclosure of Interested Parties to the Owner at the time the Business Entity/Bidder submits the signed Contract to the Owner on the form prescribed by the Texas Ethics Commission (the "Disclosure Form"), which is attached to the Section 00500 Agreement as Attachment 1.

(3) The Disclosure Form requires the Bidder to disclose a list of each Interested Party for the Contract of which the Business Entity is aware. The Disclosure Form must be signed by the authorized agent of the Business Entity with an acknowledgment that the disclosure is made under oath and under penalty of perjury. The Owner will submit a copy of the Disclosure Form to the Texas Ethics Commission within 30 days of receipt by Owner.

End

City Manager
Austin, Texas

The undersigned, in compliance with the Invitation for Bids for construction of the following Project:

South Austin Regional Wastewater Treatment Plant Filter Improvements

(CIP ID# 3333.015) (IFB# 6100 CLMC 562) for the City of Austin, Texas, having examined the Project Manual, Drawings and Addenda, the site of the proposed Work and being familiar with all of the conditions surrounding construction of the proposed Project, having conducted all inquiries, tests and investigations deemed necessary and proper; hereby proposes to furnish all labor, permits, material, machinery, tools, supplies and equipment, and incidentals, and to perform all Work required for construction of the Project in accordance with the Project Manual, Drawings and Addenda within the time indicated for the lump sum prices of:

EXCAVATION SAFETY SYSTEMS UNIT PRICES: The undersigned Bidder agrees that the Base Bid for the Work includes the following amounts in the Bid for excavation safety systems as specified in Item Number 509S of the Specifications and in case of an authorized adjustment to the scope of Work, the following unit price(s) will be used in adjusting the Contract Amount:

Quantity	Unit	Item Description	Unit Price	Amount
1,761	ln. ft.	Trench Safety systems	$_____	$_____

ALLOWANCES

Allowance #1	Allowance for Permits and Fees Paid by CONTRACTOR, as Evidenced by Paid Receipts, and Required for Completion of the Project, complete in place, for Five Thousand Dollars and Zero Cents	$ 5,000.00
Allowance #2	Allowance for Procurement of the permanent badge decals or ID badge blanks, per Section 00819, for One Thousand Dollars and Zero Cents	$ 1,000.00

SUBTOTAL ALLOWANCES $ 6,000.00

Bid Item	Quantity	Unit	Item Description	Amount
1	1	L.S.	Rehabilitation of the South Austin Regional Wastewater Treatment Plant Filters excluding work associated with Special Specification 11399, complete in place, for	$_____
2	1	L.S.	Disk Filter System in accordance with Contract Specification 11399, complete in place, for	$_____

BASE BID..... = $ _____
(Base Bid includes Allowances and Excavation Safety Systems Unit Prices, if applicable.)

ALTERNATE NO. 1: Conversion of existing Filter Basins 1 and 2 to cloth media filters and demolition of existing backwash pump room floor, removal of existing backwash pump discharge piping, construction of a new backwash pump room floor, and all associated structural, mechanical, and electrical and instrumentation complete in place for,

_____ = $ _____ Figures

ALTERNATE NO. 2: Cleaning of entire volume of mudwell, complete in place for,

_____ = $ _____ Figures

ALTERNATE NO. 3: Removal of all abandoned piping in the Filter Building Upper Pipe Gallery Level, complete in place for,

_____ = $ _____ Figures

ALTERNATE NO. 4: Removal of all existing and abandoned piping at the filter building lower pipe gallery level, complete in place for,

_____ = $ _____ Figures

ALTERNATE NO. 5: Demolition and removal of existing Air Scour Blowers Nos. 1 and 2, High Pressure Air Compressor and Receiver, all associated valves, piping, and instruments, complete in place for,

_____ = $ _____ Figures

ALTERNATE NO. 6: Cleaning of entire volume of clearwells, complete in place for,

_____ = $ _____ Figures

ALTERNATE NO. 7: Providing a temporary filtration and bypass pumping system for the duration of construction, complete in place, for

_____ = $ _____ Figures

TOTAL BID (Base Bid Plus Alternate 1)..... = $ _____

TOTAL BID (Base Bid Plus Alternate 1 & 2)..... = $ _____

TOTAL BID (Base Bid Plus Alternate 1, 2, & 3)..... = $ _____

TOTAL BID (Base Bid Plus Alternate 1, 2, 3, & 4)..... = $ _____

TOTAL BID (Base Bid Plus Alternate 1, 2, 3, 4, & 5)..... = $ _____

TOTAL BID (Base Bid Plus Alternate 1, 2, 3, 4, 5, & 6)..... = $ _____

TOTAL BID (Base Bid Plus Alternate 1, 2, 3, 4, 5, 6, & 7)..... = $ _____

Notes:

1. For information pertaining to Rolling Owner Controlled Insurance Program (ROCIP), see Sections 00810 and 00820.
2. For information pertaining to Bid alternate prioritization, see Section 00820.
3. For a more detailed explanation of Bid alternates, see Section 01030.
4. For a more detailed explanation of Bid allowances, see Section 1020

BID GUARANTY: A Bid guaranty must be enclosed with this Bid , as required in Section 00020 or Section 00020S, in the amount of not less than five percent (5%) of the total Bid. Following the Bid opening, submitted Bids may not be withdrawn for a period of 90 Calendar Days. Award of Contract will occur within this period, unless mutually agreed between the parties. The Bid guaranty may become the property of the OWNER, or the OWNER may pursue any other action allowed by law, if:

- Bidder withdraws a submitted Bid within the period stated above;
- Bidder fails to submit the required post Bid information within the period specified in Section 00020 or 00100, or any mutually agreed extension of that period; or
- Bidder fails to execute the Contract and furnish the prescribed documentation (bonds, insurance, etc.) needed to complete execution of the Contract within five (5) Working Days after notice of award, or any mutually agreed extension of that period.

The Bid includes all Automobile Liability and Builder's Risk Insurance premiums required to meet the insurance limits in the Supplemental General Conditions and includes all premiums for a Performance Bond and a Payment Bond in the sum of one hundred percent of the Contract Amount. The Bid excludes all costs for the insurance coverages and limits, up to the limits set forth in the Supplemental General Conditions, duplicated by those in the ROCIP, including the costs for all proposed Subcontractors for such coverages and limits as described in the Supplemental General Conditions, and as calculated in accordance with the Insurance Cost Form, Section 00425.

The Bid also includes the cost to provide and maintain through completion of Work all necessary safety rails, barricades, platforms, fences, covers, and signs necessary to adequately protect and safeguard all vehicular and pedestrian traffic within proximity of the Work. The safety information identified in the Project Safely Manual, and in the Supplemental General Conditions, outlines the minimum safety requirements for the Project. CONTRACTOR shall not limit the amount of effort directed toward its safety program based on the requirements identified in the Project Safety Manual. This program is in addition to CONTRACTOR's existing safety program, not in lieu of that program.

TIME OF COMPLETION: The undersigned Bidder agrees to commence work on the date specified in the written "Notice to Proceed" to be issued by the OWNER and to **substantially** complete construction of the improvements, as required by the Project Manual, Drawings and Addenda for the Work within **eight hundred and fifty (850) Calendar Days**, and to reach **Final Completion** within **sixty (60) Calendar Days** after **Substantial Completion** as required by the Project Manual, Drawings and Addenda for the work. The Bidder further agrees that should the Bidder fail to **finally** complete the Work within the number of days indicated in the Bid or as subsequently adjusted, Bidder shall pay the liquidated damages for each consecutive day thereafter as provided below; unless the OWNER elects to pursue any other action allowed by law.

WAIVER OF ATTORNEY FEES: In submitting its bid, in consideration for the waiver of its right to attorney's fees by the OWNER, the Bidder knowingly and intentionally agrees to and shall waive the right to attorney's fees under Section 271.153 of the Texas Local Government Code in any administrative proceeding, alternative dispute resolution proceeding, or litigation arising out of or connected to any Contract awarded pursuant to this solicitation process.

LIQUIDATED DAMAGES: The Bidder understands and agrees that the timely completion of the described Work is of the essence. The Bidder and OWNER further agree that the OWNER's actual damages for delay caused by failure to timely complete the Project are difficult, if not impossible to measure. However, with respect to the additional administrative and consultant costs to be incurred by OWNER, the reasonable estimate of such damages has been calculated and agreed to by OWNER and Bidder. Therefore, the Bidder and the OWNER agree that for each and every **Calendar** Day the Work or any portion thereof, remains incomplete after the **Substantial** Completion date as established by the above paragraph, "Time of Completion", payment will be due to the Owner in the amount of **one thousand seven hundred and sixty** dollars **($1,760.00)** per **Calendar Day** as liquidated damages, not as a penalty, but for delay damages to the OWNER. Bidder and the OWNER further agree that for each and every **Calendar Day** the Work or any portion thereof, remains incomplete after the **Final** Completion date as established by the above paragraph, "Time of Completion", payment will be due to the OWNER in the amount of **four hundred and fifty** dollars **($450.00)** per **Calendar Day** as liquidated damages, not as a penalty, but for delay damages to the OWNER. Such amount shall be deducted by the OWNER from any Contract payment due. In the event of a default or breach by the CONTRACTOR and demand is made upon the surety to complete the project, in accordance with the Contract Documents, the surety shall be liable for liquidated damages pursuant to the Contract Documents in the same manner as the CONTRACTOR would have been.

OWNER reserves the right to reject any or all Bids and to waive any minor informality in any Bid or solicitation procedure (a minor informality is one that does not affect the competitiveness of the Bidders).

The undersigned acknowledges receipt of the following addenda:

Addendum No. 1 dated _____ Received _____

Addendum No. 2 dated _____ Received _____

Addendum No. 3 dated _____ Received _____

Addendum No. 4 dated _____ Received _____

Addendum No. 5 dated _____ Received _____

Secretary, *if Bidder is a Corporation

(Seal)

Bidder

Authorized Signature

Title

Date

Address

Telephone Number / FAX Number

Email Address for Person Signing Bid

Email Address for Bidder's Primary Contact Person

* Copy of Corporate Resolution and minutes with certificate of officer of Bidder as to authority of signatory to bind Bidder is to be signed and dated no earlier than one week before Bid date, and attached to this document.

End

INSURANCE COST FORM

Section 00425A

Project Name: South Austin Regional Wastewater Treatment Plant Filter Improvements

CIP ID Number: **3333.015**

In the event the bidder is awarded the Contract, it is agreed that the bidder will permit the OWNER or its ROCIP Administrator to inspect the insurance policies and audit the methods and rates used in determining the premium cost stated below. Requests for inspection of any policies or payroll records will be made in writing ten (10) days in advance of any review which will be conducted at the project site or an OWNER or ROCIP Administrator office near the site.

The "**Total Insurance Cost Excluded from Base Bid**" (and the "Total **Insurance Cost Excluded from Alternate No.(s)**", as appropriate for this project) amount(s) as stated within this form represents the amount of cost the bidder has excluded from the Bid for insurance coverages for the prospective CONTRACTOR and all Subcontractor(s) and Sub-Subcontractor(s) which the OWNER anticipates furnishing through ROCIP. This cost includes but is not limited to insurance premiums, expected losses within any retention or deductible program, overhead and profit. Instructions to assist with calculation of these costs are included on the following page.

The bidder as insured hereby assigns and transfers to the OWNER, its rights, title and interest in any and all returns of premium, dividends, discounts, merit bonus or other adjustments applicable to the OWNER's Rolling Owner Controlled Insurance Program. This assignment shall pertain to the policies as now written and as subsequently modified, rewritten, or replaced in the policies of the OWNER's, including any additional amounts of coverage as a result thereof. This assignment is valid only for insurance policies whose premiums have been paid by the OWNER on behalf of the prospective CONTRACTOR/Subcontractor(s)/Sub-Subcontractor(s).

Total Insurance Cost Excluded from Base Bid..... = $ _____

Total Insurance Cost Excluded from Alternate No.1..... = $ _____

Total Insurance Cost Excluded from Alternate No.2..... = $ _____

Total Insurance Cost Excluded from Alternate No.3..... = $ _____

Total Insurance Cost Excluded from Alternate No.4..... = $ _____

Total Insurance Cost Excluded from Alternate No.5..... = $ _____

Total Insurance Cost Excluded from Alternate No.6..... = $ _____

Total Insurance Cost Excluded from Alternate No.7..... = $ _____

Bidder's Name: _____

Signed by: _____ Date: _____

Title: _____

CITY OF AUSTIN INSTRUCTIONS FOR IDENTIFYING INSURANCE COSTS

The ROCIP contract documents require that the Bidding Contractor exclude from the bid the cost of insurance provided by ROCIP. This includes the cost of said insurance for all contractors/ subcontractors of any tier who are performing work on site. These instructions are intended to be a tool to assist you in calculating your insurance costs.

Workers' Compensation Premium Calculation:
(A) Payroll/$100 X (B) Rate X (C) Experience Mod Factor X (D) Other factors as included on the policy = (E) Workers' Compensation Premium

(A) Payroll (remuneration) is the estimated amount of labor dollars including benefit costs that you anticipate for the project term. Payrolls should be broken down by Workers' Compensation Class Code. The calculation is payroll divided by $100 and then multiplied by the rate for each Class Code.

(B) Rates are based on Workers' Compensation Class Codes which identify the kind(s) of work the employees in that trade are performing. They are set by the Insurance Carrier and can be found in your "regular" Workers' Compensation Policy.

(C) Experience Modification Factors are based upon your past claim and premium experience that is filed by your previous Insurance Carriers. If you do not have an Experience Modifier Factor, use a 1.00 factor in the calculation.

(D) Other factors include Increased Limits, Scheduled Credits, Premium Discounts, etc.

(E) Workers' Compensation Premium is the insurance cost for Workers' Compensation that must be excluded in your bid price and recorded for the Contractor and all Subcontractors at every tier on the bidder's Insurance Cost Identification Worksheet.

General Liability Premium Calculation:
(A) Rate Base (Payroll/Sales) X (B) Rate X (C) Other factors as included on the policy = (D) General Liability Premium

(A) Rating base for General Liability may be Payroll (remuneration) or Sales/Receipts. Please refer to your "regular" General Liability Policy for rate base and rates used to calculate your current premium.

(B) Rates – again, refer to your regular policy and keep in mind that Payroll is per $1,000 and Sales/Receipts usually per $1,000

(C) Other factors include experience modifier, premium discounts, debits, credits, etc.

(D) The General Liability Premium is the insurance cost for General Liability that must be excluded in your bid price and recorded for the prime/general and all subcontractors at every tier on the bidder's Insurance Cost Identification Worksheet.

Expected Losses or Allocated Self-Insured Retention (if applicable):

In the event the Contractor or any Subcontractor retains a coverage or portion of coverage by a self-insured retention, deductible or other means, the contractor should estimate the portion of losses or retention which is estimated for or allocated to this project.

END

I. In compliance with Sections 151.003 – 153.009 of the Texas Insurance Code, the Owner hereby provides the following information to the Bidder/Contractor (the "ROCIP Information") in electronic format on the following website addresses:

A. City of Austin Rolling Owner Controlled Insurance Program VI – ROCIP VI Insurance Manual, August 26, 2013 ("ROCIP VI Insurance Manual") http://www.austintexas.gov/page/bid-docs

B. City of Austin Rolling Owner Controlled Insurance Program VI- ROCIP VI Claims Kit. ("ROCIP VI Claims Kit.") http://www.austintexas.gov/page/bid-docs

C. City of Austin Capital Improvement Program ROCIP –Safety Manual – ROCIP Safety Policy and Procedures April 14, 2014 ("ROCIP Safety Manual") http://www.austintexas.gov/page/bid-docs

D. ROCIP VI Program Master Insurance Policy & Endorsements ("ROCIP VI Master Policy") http://www.austintexas.gov/page/bid-docs

E. ROCIP VI Excess Coverage Policies & Endorsements (ROCIP VI Excess Coverage Policies) http://www.austintexas.gov/page/bid-docs

F. City of Austin Project Manual Contract Documents ("Contract Documents") http://www.austintexas.gov/page/bid-docs

1. Section 00410 Statement of Bidder's Safety Experience
2. Section 00425A Insurance Cost Form
3. Section 00700 General Conditions
4. Section 00810 Supplemental General Conditions

II. ROCIP Program Compliance Information

A. Contact information, including phone number and email address, for:

1. the Program Administrator -

Marsh USA, Inc.
Attention: Cindy Gibbens, Program Manager
1717 Main Street, Suite 4400
Dallas, Texas 75201
303-308-4519

austinwrapup.faxes@marsh.com

2. the Owner's Risk Manager -

Leslie Milvo, City of Austin Risk Manager
City of Austin, One Texas Center
505 Barton Springs Road, 10th Floor
Austin, Texas 78704
512-972-3245
leslie.milvo@austintexas.gov

3. insurer's contact person for filing a claim for each type of insurance coverage provided in the program;

Liberty Mutual
1-800-362-0000
Account Number for ROCIP VI: 42404

ROCIP VI Claims Advocate
Melodie Langford
Marsh USA, Inc.
9830 Colonade Blvd., Suite 400
San Antonio, TX 78230
Phone: 214-989-2305
Fax: 212-948-5020
Phone: 248-701-4168
melodie.s.langford@marsh.com

See ROCIP VI Claims Kit

B. the criteria for eligibility of enrollment into the Program:

See Section 00410 Statement of Bidder's Safety Experience
See Section 00425A Insurance Cost Form
See Section 00810 Supplemental General Conditions
See ROCIP VI Insurance Manual
See ROCIP VI Master Policy

C. a description of the Project site covered by the program coverages:

See ROCIP VI Insurance Manual Definitions Section – the Project site includes the (referenced Project Name) and adjacent or nearby areas where incidental operations are performed excluding permanent locations of any insured party, except the Owner.

See "Contract Documents" - The Project site is more particularly described in the Contract Documents, specifically including but not limited to the Project's Site Plan,

which is available along with the Bid Documents in the City's Plan Room and on its Website.

D. a summary of insurance coverages to be provided to the contractor under the program, including:

1. the policy form number and issuing organization, if the policy is a standardized insurance policy or, if the policy is not standardized, a sample policy form;

2. per occurrence and aggregate limits of insurance coverages and any sub-limits that may apply;

3. term of coverages for each limit and sublimit, if any; and

4. any material endorsements to the insurance policy described above;

See Section 00810 Supplemental General Conditions
See ROCIP VI Insurance Manual
See ROCIP VI Master Policy
See ROCIP VI Excess Coverage Policies

E. a summary of insurance coverages to be provided by the contractor;

See ROCIP VI Insurance Manual
See Section 00810 Supplemental General Conditions

F. instructions on how to include or exclude costs of insurance provided by the program in the person's proposal for work on the construction project;

See Section 00425A Insurance Cost Form
See Section 00810 Supplemental General Conditions

G. a description of the audit or claims procedures related to the program that may result in additional cost to a contractor, including the method of calculation for any assessment charged to a contractor related to the Owner's payment of a policy deductible and any other specific cost amounts; and

See Section 00425A Insurance Cost Form
See ROCIP VI Claims Kit
See ROCIP Safety Manual
See ROCIP VI Insurance Manual
See ROCIP VI Master Policy
See Section 00810 Supplemental General Conditions

H. a description of a contractor's duties related to reporting:

1. payroll and retention of documentation; and

2. claims and participation in safety inspections and incident reporting.

See ROCIP VI Claims Kit
See ROCIP Safety Manual
See ROCIP VI Insurance Manual
See Section 00700 General Conditions
See Section 00810 Supplemental General Conditions

III CONTRACTOR MAY REQUEST COPY OF ROCIP INSURANCE POLICY

A complete copy of the insurance policy that provides coverage for the contractor under the consolidated insurance program is posted online at the web address set forth above.

IV. The information required from the Owner may be requested in hard written copies or the Bidder/Contractor may use the Owner's internet website.

V. This Section 00425B will apply to an original construction contract with the Owner that is entered into on or after January 1, 2016. If a construction contract is entered into on or after January 1, 2016, the requirements in this Section 00425B apply to a related subcontract, purchase order contract, personal property lease agreement, consolidated insurance program, and insurance policy.

VI. CONTRACTOR ROCIP INFORMATION TO BE PROVIDED BEFORE ENTERING CONSTRUCTION CONTRACT

Prior to the Bidder/Contractor entering into a contract with the Owner, the Bidder/Contractor must acknowledge that it received the ROCIP Information. If the ROCIP Information is not provided, the Bidder/Contractor may elect not to enroll in ROCIP. If the Bidder/Contractor does not enroll in ROCIP, the Bidder/Contractor must provide the "Contractor Provided Insurance" required under Article 5 of the 00700 General Conditions and Paragraph 5.3.1 of the Section 00810 Supplemental General Conditions as a condition to continuing service under the Contract. If for any reason a Bidder/Contractor is not provided the ROCIP Information on a timely basis and the Owner subsequently provides the ROCIP Information to the Contractor, the Contractor may acknowledge its receipt and provide the Affidavit included in Section 00425B to the Owner prior to commencing Work on the Project. In submitting its bid, the Bidder/Contractor acknowledges receipt of the required ROCIP Information and represents that it has read and understands the ROCIP Information. In addition, the Bidder/Contractor is making its acknowledgment and representation specifically to comply with the requirements of Section 151.004 of the Texas Insurance Code.

(Affidavit Signature Page and Acknowledgment follows)

CONTRACTOR AFFIDAVIT OF RECEIPT AND PROVISION OF ROCIP INFORMATION

As an authorized representative of the Bidder/Contractor, I acknowledge and agree that the Bidder/Contractor has received the required ROCIP Information referenced in Section 00425B of the Contract Documents for the referenced Project and has provided the ROCIP Information to the Owner. I certify that the representations and information in this Affidavit are true and correct to the best of my personal knowledge and belief and that I have made no willful misrepresentations in this Affidavit, nor have I withheld any relevant information. I am aware that the information given will be relied upon in entering into a subsequent Contract.

Bidder/Contractor:

_____
(business entity name)

Name: _____

Printed Name: _____
(Authorized Representative)

Date: _____, 20__

VII. ROCIP INFORMATION TO BE PROVIDED BY CONTRACTOR TO SUBCONTRACTORS AND SUB-SUBCONTRACTORS BEFORE ENTERING CONSTRUCTION SUBCONTRACT

Prior to the Subcontractor or Sub-subcontractor (being collectively and respectively referred to as the "Subcontractor") entering into a contract with the Contractor or Subcontractor (being collectively and respectively referred to as the "Principal") for the referenced Project, the Principal must provide the ROCIP Information to the Subcontractor and the Subcontractor must acknowledge that it received the ROCIP Information. If the ROCIP Information is not provided, the Subcontractor may elect not to enroll in ROCIP.

If the Principal does not provide the ROCIP Information to its Subcontractor and obtain the Affidavit of Receipt and Provision of the ROCIP Information from its Subcontractor prior to entering into the applicable subcontract or sub-subcontract, the Principal is responsible to the Subcontractor under Section 151.006 of the Texas Insurance Code for the actual cost of providing the insurance required under Article 5 of the 00700 General Conditions and Paragraph 5.3.1 of the Section 00810 Supplemental General Conditions.

If for any reason a Subcontractor is not provided the ROCIP Information on a timely basis and the Principal subsequently provides the ROCIP Information to the Subcontractor, the Subcontractor may acknowledge its receipt and provide the Affidavit included in Section 00425B to the Principal prior to commencing Work on the Project.

In submitting its bid for its subcontract or sub-subcontract, the Subcontractor acknowledges receipt of the required ROCIP Information and represents that it has read and understands the ROCIP Information. In addition, the Subcontractor is making its acknowledgment and representation specifically to comply with the requirements of Section 151.004 of the Texas Insurance Code.

(Affidavit Signature Page and Acknowledgment follows)

SUBCONTRACTOR AFFIDAVIT OF RECEIPT AND PROVISION OF ROCIP INFORMATION

As an authorized representative of the Subcontractor, I acknowledge and agree that the Subcontractor has received the required ROCIP Information referenced in Section 00425B of the Contract Documents and has provided the ROCIP Information to the Principal. I certify that the representations and information in this Affidavit are true and correct to the best of my personal knowledge and belief and that I have made no willful misrepresentations in this Affidavit, nor have I withheld any relevant information. I am aware that the information given will be relied upon in entering into any subsequent subcontract.

Subcontractor:

_____
(business entity name)

Name: _____

Printed Name: _____
(Authorized Representative)

Date: _____, 20__

CITY OF AUSTIN

BIDDER'S AFFIDAVIT OF NON-COLLUSION,

NON-CONFLICT OF INTEREST, AND ANTI-LOBBYING FOR

IFB NO. 6100 CLMC 562

FOR South Austin Regional Wastewater Treatment Plant Filter Improvements

CIP ID Number: 3333.015

State of Texas

County of Travis

The undersigned "Affiant" is a duly authorized representative of the bidder for the purpose of making this Affidavit, and, after being first duly sworn, has deposed and stated and hereby deposes and states, to the best of his or her personal knowledge and belief as follows:

The term **"Bidder"**, as used herein, includes the individual or business entity submitting the bid and for the purpose of this Affidavit includes the directors, officers, partners, managers, members, principals, owners, agents, representatives, employees, other parties in interest of the Bidder, and anyone or any entity acting for or on behalf of the Bidder, including a subcontractor in connection with this bid.

The terms **"City"** and **"Owner"** are synonymous.

1. **Anti-Collusion Statement.** The Bidder has not and will not in any way directly or indirectly:

   a. colluded, conspired, or agreed with any other person, firm, corporation, bidder or potential bidder to the amount of this bid or the terms or conditions of this bid.

   b. paid or agreed to pay any other person, firm, corporation bidder or potential bidder any money or anything of value in return for assistance in procuring or attempting to procure a contract or in return for establishing the prices in the attached bid or the bid of any other bidder.

2. **Preparation of Invitation for Bid and Contract Documents**. The Bidder has not received any compensation or a promise of compensation for participating in the preparation or development of the underlying bid or contract documents., In addition, the Bidder has not otherwise participated in the preparation or development of the underlying bid or contract documents, except to the extent of any comments or questions and responses in the bidding process, which are available to all bidders, so as to have an unfair advantage over other bidders, provided that the Bidder may have provided relevant product or process information to a consultant in the normal course of its business.

3. **Participation in Decision Making Process.** The Bidder has not participated in the evaluation of bids or proposals or other decision making process for this solicitation, and, if Bidder is awarded a contract hereunder, no individual, agent, representative, consultant or sub contractor or consultant associated with Bidder, who may have been involved in the evaluation or other decision making process for this solicitation, will have any direct or indirect financial interest in the Contract, provided that the Bidder may have provided relevant product or process information to a consultant in the normal course of its business.

4. **Present Knowledge.** Bidder is not presently aware of any potential or actual conflicts of interest regarding this solicitation, which either enabled Bidder to obtain an advantage over other bidders or would prevent Bidder from advancing the best interests of OWNER in the course of the performance of the Contract.

5. **City Code.** As provided in Sections 2-7-61 through 2-7-65 of the City Code, no individual with a substantial interest in Bidder is a City official or employee or is related to any City official or employee within the first or second degree of consanguinity or affinity.

6. **Chapter 176 Conflict of Interest Disclosure.** In accordance with Chapter 176 of the Texas Local Government Code, the Bidder:

   a. does not have an employment or other business relationship with any local government officer of OWNER or a family member of that officer that results in the officer of family member receiving taxable income;

   b. has not given a local government officer of OWNER one or more gifts, other than gifts of food lodging transportation or entertainment accepted as a guest, that have an aggregate value of more than $100 in the twelve month period preceding the date the officer becomes aware of the execution of the Contract or that OWNER is considering doing business with the Bidder; and

   c. does not have a family relationship with a local government officer of OWNER in the third degree of consanguinity or the second degree of affinity.

   As required by Chapter 176, Bidder must file the Conflicts of Interest Questionnaire with the Purchasing Department no later than the seventh business day after the commencement of contract discussions or negotiations with the City or the submission of a Bid, response to a request for proposals, or other writing related to a potential contract with OWNER. The questionnaire must be updated not later than the seventh day after the date of an event that would make a statement in the questionnaire inaccurate or incomplete. There are statutory penalties for failure to comply with Chapter 176.

7. **Anti-Lobbying Ordinance.** As set forth in paragraph 1.i. of the Instructions to Bidders Section 00100, between the date that the Invitation for Bid was issued and the date of full execution of the Contract, Bidder has not made and will not make a representation to a member of the City Council, a member of a City Board, or any other official, employee or agent of the City, other than the authorized contact person for the solicitation, except as permitted by the Ordinance.

If the Bidder cannot affirmatively swear and subscribe to the forgoing statements, the Bidder shall provide a detailed written explanation in the space provided below or, as necessary, on separate pages to be annexed hereto.

Signature: _____ Date: _____

Printed Name: _____

Title: _____

Firm/Entity: _____

Subscribed and sworn to before me this ____ day of _____, 20__.

_____ My Commission Expires _____

Notary Public

BIDDER'S EXPLANATION:

_____

END

STATE OF TEXAS
COUNTY OF TRAVIS

THIS AGREEMENT is made and entered into this _____ day of _____, 20____, by and between the City of Austin, Texas, a municipal corporation, organized and existing under laws of State of Texas, acting through its City Manager or other duly authorized designee, hereinafter referred to as the "OWNER," and _____, of the City of _____, County of _____, and State of _____, hereinafter referred to as the "CONTRACTOR."

In consideration of the promises, performances, payments and agreements set forth herein CONTRACTOR hereby agrees to commence and complete the following Project:

South Austin Regional Wastewater Treatment Plant Filter Improvements and all Work in accordance with the Project Manual, Drawings and Addenda, which are incorporated herein by reference and made a part hereof and which have been prepared by AECOM Technical Services, Inc. and approved by OWNER, and OWNER agrees to pay the CONTRACTOR the total amount of:

$_____ _____
(Figures) **(Words)**

The CONTRACTOR hereby agrees to commence work on the date specified in the written "Notice to Proceed" to be issued by the OWNER and to **substantially** complete construction of the improvements, as required by the Project Manual, Drawings and Addenda for the Work within **eight hundred and fifty (850) Calendar** Days. **The CONTRACTOR further agrees to reach Final Completion within sixty (60) Calendar Days after Substantial Completion as required by the Project Manual, Drawings and Addenda for the work.** Waiver of any breach of this Contract shall not constitute waiver of any subsequent breach.

In consideration of the award and execution of this Contract, and in consideration of the waiver of its right to attorney's fees by the OWNER, the CONTRACTOR knowingly and intentionally waives its right to attorney's fees under Section 271.153 of the Texas Local Government Code in any administrative proceeding, alternative dispute resolution proceeding, or litigation arising out of or connected to this Contract.

OWNER agrees to pay CONTRACTOR from available funds for performance of the Contract in accordance with the Bid and the provisions of the Contract Documents, subject to additions and deductions, as provided therein.

The OWNER's payment obligations are payable only and solely from funds available for the purposes of this Agreement.

Although drafted by OWNER, this Agreement, in event of any disputes over its meaning or application, shall be interpreted fairly and reasonably, and neither more strongly for nor against either party.

OWNER

By:_____
City of Austin (Signature)

_____
Date

_____
Title of Signatory

APPROVED AS TO FORM:

By:_____
Law Department

_____
Date

§ CONTRACTOR
§
§ By:_____
§ (Signature)
§
§ Date
§ _____
§ Printed Name of Signatory
§
§ _____
§ Title of Signatory, Authorized Representative
§
§ ATTEST (as applicable)
§
§_____
§ **Secretary of Corporate Bidder or Corporate General Partner** *

*Copy of Corporate Resolution and minutes with certificate of officer of CONTRACTOR as to authority of signatory to bind CONTRACTOR is to be signed, dated no earlier than one week before the date of award of Contract, and attached to this document.

END

TEXAS ETHICS COMMISSION INTERESTED PARTIES DISCLOSURE

This Disclosure Form is included in the Contract Documents in substantial compliance with the requirements of Section 2252.908 of the Texas Government Code. Upon receipt of a prescribed Disclosure Form from the Texas Ethics Commission, the Contractor constituting the Business Entity will use that form to make and reaffirm the following disclosure of Interested Parties.

"Interested Party" – means a person who has a controlling interest in a Business Entity with whom the Owner contacts or who actively participates in facilitating the Contract or negotiating the terms of the Contract, including a broker, intermediary, adviser, or attorney for the Business Entity.

"Business Entity" – means any entity recognized by law through which business is conducted, including a sole proprietorship, partnership, or corporation.

In submitting the signed Section 00500 Agreement, the "Business Entity" constituting the Contractor hereby discloses a list of the following "Interested Parties" of which the Business Entity is aware:

_____ x

_____ x

_____ x

_____ x

_____ x

(Add additional pages, if necessary)

BUSINESS ENTITY SIGNATURE AND ACKNOWLEDGMENT

_____, a Texas (form of business entity)
(Contractor Name)

By: _____

Printed Name: _____
(Authorized Representative)

Date: _____, 20___

The Disclosure Form must be signed by the authorized agent of the Business Entity with an acknowledgment that the disclosure is made under oath and under penalty of perjury.

TEXAS ETHICS COMMISSION INTERESTED PARTIES DISCLOSURE

JURAT AND ACKNOWLEDGEMENT

THE STATE OF TEXAS §

COUNTY OF _____ §

Sworn, Subscribed, and Acknowledged before me, the undersigned authority, on this ____ day of _____, 20____, by _____, the _____ of _____, on behalf of said Business Entity, acknowledging that the disclosure is made under oath and under penalty of perjury.

(SEAL)

_____
Notary Public Signature

General Conditions Table of Contents

ARTICLE 1 - DEFINITIONS 2
ARTICLE 2 - PRELIMINARY MATTERS 5
ARTICLE 3 - CONTRACT DOCUMENTS: INTENT, AMENDING, REUSE 8
ARTICLE 4 - AVAILABILITY OF LANDS; SUBSURFACE AND PHYSICAL CONDITIONS; REFERENCE POINTS 9
ARTICLE 5 - BONDS AND INSURANCE 12
ARTICLE 6 - CONTRACTOR'S RESPONSIBILITIES 15
ARTICLE 7 - OTHER WORK 27
ARTICLE 8 - OWNER'S RESPONSIBILITIES 27
ARTICLE 9 - ENGINEER/ARCHITECT'S STATUS DURING CONSTRUCTION 28
ARTICLE 10 - CHANGES IN THE WORK 30
ARTICLE 11 - CHANGE OF CONTRACT AMOUNT 32
ARTICLE 12 - CHANGE OF CONTRACT TIMES 34
ARTICLE 13 - TESTS AND INSPECTIONS; CORRECTION, REMOVAL OR ACCEPTANCE OF DEFECTIVE WORK 37
ARTICLE 14 - PAYMENTS TO CONTRACTOR AND COMPLETION 40
ARTICLE 15 - SUSPENSION OF WORK AND TERMINATION 45
ARTICLE 16 - DISPUTE RESOLUTION 48
ARTICLE 17 - MISCELLANEOUS 50

ARTICLE 1 – DEFINITIONS

Whenever used in these General Conditions or in the other Contract Documents the following terms have the meanings indicated which are applicable to both the singular and plural thereof:

1.1 **Addendum -** Written instruments issued by the Contract Awarding Authority which clarify, correct or change the bidding requirements or the Contract Documents prior to the Due Date. "Addenda" is the plural form of Addendum.

1.2 **Agreement -** Prescribed form, Section 00500.

1.3 **Alternative Dispute Resolution -** The process by which a disputed Claim may be settled if the OWNER and the CONTRACTOR cannot reach an agreement between themselves, as an alternative to litigation.

1.4 **Bid -** A complete, properly signed response to an Invitation for Bid that, if accepted, would bind the Bidder to perform the resultant Contract.

1.5 **Bidder -** A person, firm, or entity that submits a Bid in response to a Solicitation. Any Bidder may be represented by an agent after submitting evidence demonstrating the agent's authority. The agent cannot certify as to his own agency status.

1.6 **Bid Documents -** The advertisement or Invitation for Bids, instructions to Bidders, the Bid form, the Contract Documents and Addenda.

1.7 **Calendar Day -** Any day of the week; no days being excepted. Work on Saturdays, Sundays, and/or Legal Holidays shall be coordinated with OWNER.

1.8 **Change Directive -** A written directive to CONTRACTOR, signed by OWNER, ordering a change in the Work and stating a proposed basis for adjustment, if any, in the Contract Amount or Contract Time, or both. A Change Directive may be used in the absence of total agreement on the terms of a Change Order. A Change Directive does not change the Contract Amount or Contract Time, but is evidence that the parties expect that the change directed or documented by a Change Directive will be incorporated in a subsequently issued Change Order.

1.9 **Change Orders -** Written agreements entered into between CONTRACTOR and OWNER authorizing an addition, deletion, or revision to the Contract, issued on or after the Execution Date of the Agreement.

1.10 **Claim -** A written demand seeking, as a matter of right, adjustment or interpretation of Contract terms, payment of money, extension of time or other relief with respect to the terms of the Contract.

1.11 **Contract -** The binding legal agreement between the OWNER and the CONTRACTOR. The Contract represents the entire and integrated agreement between OWNER and CONTRACTOR for performance of the Work, as evidenced by the Contract Documents.

1.12 **Contract Amount -** The moneys payable by OWNER to CONTRACTOR for completion of the Work in accordance with the Contract Documents.

1.13 **Contract Awarding Authority -** A City department authorized to enter into Contracts on behalf of the City.

1.14 **Contract Documents -** Project Manual, Drawings, Addenda and Change Orders.

1.15 **Contract Time -** The number of days allowed for completion of the Work as defined by the Contract. When any period is referred to in days, it will be computed to exclude the first and include the last day of such period. A day of twenty-four hours measured from midnight to the next midnight will constitute a day.

1.16 **CONTRACTOR -** The individual, firm, corporation, or other business entity with whom OWNER has entered into the Contract for performance of the Work.

1.17 Critical Path - The longest series of tasks that runs consecutively from the beginning to the end of the project, as determined by duration and workflow sequence. This longest path sets the managerial standard for how quickly a project can be completed, given appropriate resources.

1.18 Drawings - Those portions of the Contract Documents which are graphic representations of the scope, extent and character of the Work to be furnished and performed by CONTRACTOR and which have been approved by OWNER. Drawings may include plans, elevations, sections, details, schedules and diagrams. Shop Drawings are not Drawings as so defined.

1.19 Due Date - The date and time specified for receipt of Bids.

1.20 Engineer/Architect (E/A) - The OWNER's design professional identified as such in the Contract. The titles of "Architect/Engineer," "Architect" and "Engineer" used in the Contract Documents shall read the same as Engineer/Architect (E/A). Nothing contained in the Contract Documents shall create any contractual or agency relationship between E/A and CONTRACTOR.

1.21 Equal - The terms "equal" or "approved equal" shall have the same meaning.

1.22 Execution Date - Date of last signature of the parties to the Agreement.

1.23 Field Order - A written order issued by Owner's Representative which orders minor changes in the Work and which does not involve a change in the Contract Amount or the Contract Time.

1.24 Final Completion - The point in time when OWNER determines that all Work has been completed and final payment to CONTRACTOR will be made in accordance with the Contract Documents.

1.25 Force Account - a basis of payment for the direct performance of Work with payment based on the actual cost of the labor, equipment and materials furnished and consideration for overhead and profit as set forth in Section 11.5.

1.26 Inspector - The authorized representative of any regulatory agency that has jurisdiction over any portion of the Work.

1.27 Invitation for Bid (IFB) - a Solicitation requesting pricing for a specified Good or Service which has been advertised for Bid in a newspaper and/or the Internet.

1.28 Legal Holidays

1.28.1 The following are recognized by the OWNER:

Holiday	Date Observed
New Year's Day	January 1
Martin Luther King, Jr.'s Birthday	Third Monday in January
President's Day	Third Monday in February
Memorial Day	Last Monday in May
Independence Day	July 4
Labor Day	First Monday in September
Veteran's Day	November 11
Thanksgiving Day	Fourth Thursday in November
Friday after Thanksgiving	Friday after Thanksgiving
Christmas Eve	December 24
Christmas Day	December 25

1.28.2 If a Legal Holiday falls on Saturday, it will be observed on the preceding Friday. If a Legal Holiday falls on Sunday, it will be observed on the following Monday.

1.28.3 Christmas Eve is observed only if it falls on a Monday through Thursday. If Christmas Eve falls on a Friday, that day is observed as the Christmas Day holiday.

1.29 Milestones - A significant event specified in the Contract Documents relating to an intermediate completion date or time prior to Substantial Completion of all the Work.

1.30 Notice to Proceed - A Written Notice given by OWNER to CONTRACTOR fixing the date on which the Contract Times will commence to run and on which CONTRACTOR shall start to perform CONTRACTOR's obligations under the Contract Documents.

1.31 OWNER - City of Austin, Texas, a municipal corporation, home rule city and political subdivision organized and existing under the laws of the State of Texas, acting through the City Manager or his/her designee, officers, agents or employees to administer design and construction of the Project.

1.32 Owner's Representative - The designated representative of the OWNER. The Owner's Representative will be identified at the pre-construction conference.

1.33 Partial Occupancy or Use - Use by OWNER of a substantially completed part of the Work for the purpose for which it is intended (or a related purpose) prior to Substantial Completion of all the Work, provided OWNER and CONTRACTOR have accepted in writing the responsibilities assigned to each of them for payments, retainage if any, security, maintenance, utilities, corrective work, insurance and warranties.

1.34 Project - The subject of the Work and its intended result.

1.35 Project Manual - That portion of the Contract Documents which may include the following: introductory information; bidding requirements, Contract forms and General and Supplemental General Conditions; General Requirements; Specifications; Drawings; MBE/WBE or DBE Procurement Program Package; Project Safety Manual; and Addenda.

1.36 Resident Project Representative - The authorized representative of E/A who may be assigned to the site or any part thereof.

1.37 Shop Drawings - All drawings, diagrams, illustrations, schedules and other data or information which are specifically prepared or assembled by or for CONTRACTOR and submitted by CONTRACTOR as required by the Contract Documents.

1.38 Specifications - Those portions of the Contract Documents consisting of written technical descriptions as applied to the Work, which set forth to CONTRACTOR, in detail, the requirements which must be met by all materials, equipment, construction systems, standards, workmanship, equipment and services in order to render a completed and useful project.

1.39 Solicitation - Solicitation means, as applicable, an Invitation for Bid or a Request for Proposal.

1.40 Substantial Completion - The stage in the progress of the Work when the Work, or designated portion thereof, is sufficiently complete in accordance with the Contract Documents so OWNER can occupy or utilize the Work for its intended use, as evidenced by a Certificate of Substantial Completion approved by OWNER.

1.41 Subcontractor - An individual, firm, corporation, or other business entity having a direct contract with CONTRACTOR for the performance of a portion of the Work under the Contract.

1.42 Sub-Subcontractor - A person or entity who has a direct or indirect contract with a Subcontractor to perform a portion of the work.

1.43 Superintendent - The representative of CONTRACTOR authorized in writing to receive and fulfill instructions from the Owner's Representative, and who shall supervise and direct construction of the Work.

1.44 Supplemental General Conditions - The part of the Contract Documents which amends or supplements the General Conditions. All General Conditions which are not so amended or supplemented remain in full force and effect.

1.45 Supplier - An individual or entity having a direct contract with CONTRACTOR or with any Subcontractor to furnish materials or equipment to be incorporated in the Work by CONTRACTOR or any Subcontractor.

1.46 Time Extension Request - An approved request for time extension on a form acceptable to OWNER.

1.47 Work - The entire completed construction, or the various separately identifiable parts thereof, required to be furnished under the Contract Documents.

1.48 Working Day - Any day of the week, not including Saturdays, Sundays, or Legal Holidays in which conditions under the CONTRACTOR's control will permit work for a continuous period of not less than seven (7) hours between 7:00 a.m. and 6:00 p.m. Upon agreement with Owner's Representative, work on Saturdays, Sundays and/or Legal Holidays may be allowed and will be considered a Working Day.

1.49 Working Hours

1.49.1 Working Day Contract: All Work shall be done between 7:00 a.m. and 6:00 p.m. unless authorized by Owner's Representative. However, emergency work may be done without prior permission as indicated in paragraph 6.11.5. If night Work is authorized and conditions under CONTRACTOR's control will permit Work for a continuous period of not less than seven (7) hours between 12:00 a.m. and 11:59 p.m. it will be considered a Working Day. Night Work may be revoked at any time by OWNER if CONTRACTOR fails to maintain adequate equipment and supervision for the prosecution and control of the night Work.

1.49.2 Calendar Day Contract: All Work shall be done between 7:00 a.m. and 6:00 p.m. unless authorized by Owner's Representative. However, emergency work may be done without prior permission as indicated in paragraph 6.11.5. Night Work may be revoked at any time by OWNER if CONTRACTOR fails to maintain adequate equipment and supervision for the prosecution and control of the night Work.

1.50 Written Notice - Written communication between OWNER and CONTRACTOR. Written Notice shall be deemed to have been duly served if delivered in person to Owner's Representative or CONTRACTOR's duly authorized representative, or if delivered at or sent by registered or certified mail to the attention of Owner's Representative or CONTRACTOR's duly authorized representative at the last business address known to the party giving notice.

ARTICLE 2 - PRELIMINARY MATTERS

2.1 Delivery of Agreement, Bonds, Insurance, etc.: Within five (5) Working Days after written notification of award of Contract, CONTRACTOR shall deliver to OWNER signed Agreement, Bond(s), Insurance Certificate(s) and other documentation required for execution of Contract.

2.2 Copies of Documents: OWNER shall furnish to CONTRACTOR one (1) Project Manual with original signatures, one (1) copy of the executed Project Manual, one (1) set of Drawings

and one (1) copy of the Contract Documents in .pdf format. Additional copies will be furnished, upon request, at the cost specified in the Supplemental General Conditions."

2.3 Commencement of Contract Times; Notice to Proceed: The Contract Time(s) will begin to run on the day indicated in the Notice to Proceed. Notice to Proceed will be given at any time within sixty (60) calendar days after the Execution Date of the Agreement, unless extended by written agreement of the parties.

2.4 Before Starting Construction:

2.4.1 No Work shall be done at the site prior to the preconstruction conference without OWNER's approval. Before undertaking each part of the Work, CONTRACTOR shall carefully study the Contract Documents to check and verify pertinent figures shown thereon compare accurately to all applicable field measurements. CONTRACTOR shall promptly report in writing to Owner's Representative any conflict, error, ambiguity or discrepancy which CONTRACTOR may discover and shall obtain a written interpretation or clarification from Owner's Representative before proceeding with any Work affected thereby. CONTRACTOR shall be liable to OWNER for failure to report any conflict, error, ambiguity or discrepancy in the Contract Documents of which CONTRACTOR knew or reasonably should have known.

2.4.2 It is mutually agreed between CONTRACTOR and OWNER that successful completion of the Work within the Contract completion date is of primary importance. Therefore, the CONTRACTOR hereby agrees to submit to the Owner's Representative for review and approval, or acceptance, as appropriate, all information requested within this section, including a Baseline Schedule, no later than five working days prior to the preconstruction conference. The Owner's Representative will schedule the preconstruction conference upon the timely submittal of the required documents, unless time is extended by written mutual agreement. CONTRACTOR will submit the following:

.1 A proposed Baseline Schedule developed using Microsoft Project software, unless otherwise approved by Owner's Representative ("Baseline Schedule") to confirm that all Work will be completed within the Contract time. The Baseline Schedule must (i) indicate the times (number of days or dates) for starting and completing the various stages of the Work, including any Milestones specified in the Contract Documents, (ii) identify the Critical Path for completing the Work, (iii) identify when all Subcontractors will be utilized, and (iv) take into consideration any limitations on Working Hours, including baseline Rain Days on Calendar Day Contracts, and (v) be prepared accordance with Section 01310, Schedules and Reports, if applicable; otherwise in accordance with Section 01300, Submittals. This Baseline Schedule, a copy of which shall be made available at the job site(s), must contain sufficient detail to indicate that the CONTRACTOR has properly identified required Work elements and tasks, has provided for a sufficient and proper workforce and integration of Subcontractors, has provided sufficient resources and has considered the proper sequencing of the Work required to result in a successful Project that can be completed within the Contract time;

.2 An organizational chart showing the principals and management personnel who will be involved with the Work, including each one's responsibilities for the Work;

.3 To the extent not set forth in the Section 00400 Statement of Contractor's Experience, a complete listing of the CONTRACTOR's employees proposed for the Work. List each one by name and job title, and show length of employment with CONTRACTOR;

.4 To the extent not set forth in the Section 00410 Statement of Bidder's Safety Experience, a discussion and confirmation of the CONTRACTOR's commitment to safety by providing a copy of its employee's safety handbook and the safety records for the past three years of CONTRACTOR's proposed project manager and Superintendent;

.5 A preliminary schedule of Shop Drawing and sample submittals;

.6 A preliminary schedule of values for all of the Work, subdivided into component parts in sufficient detail to serve as the basis for progress payments during construction. Such prices will be deemed to include an appropriate amount of overhead and profit applicable to each item of Work;

.7 To the extent not set forth in the Section 00400 Statement of Contractor's Experience, a letter designating CONTRACTOR's Superintendent and project manager, and a confirmation of past project experience for the CONTRACTOR's Superintendent and project manager specifically intended for the Work;

.8 A letter from CONTRACTOR and Subcontractor(s) listing salaried specialists. A salaried specialist is anyone except an hourly worker whose wage rate is governed by Section 00830 of this agreement;

.9 A letter designating the "Competent Person(s)" on general safety and excavation safety measures along with certifications or other documentation of the safety representative's qualifications;

.10 If applicable, an excavation safety system plan;

.11 If applicable, a plan illustrating proposed locations of temporary facilities;

.12 A completed Non-Use of Asbestos Affidavit (Prior to Construction);

.13 A letter designating the Texas Registered Professional Land Surveyor for layout of the Work, if the Work requires the services of a surveyor; and

.14 Appropriate safety training certificates for workers that will initially be on site;

.15 A certificate of worker's compensation insurance coverage for all persons providing services on the Project (refer to 5.2.1.3 in Section 00700 for definition of persons providing services on the Project);

.16 A Construction Equipment Emissions Reduction Plan.

2.4.3 Neither the acceptance nor the approval of any of the submittals required in paragraph 2.4.2, above, will constitute the adoption, affirmation, or direction of the CONTRACTOR'S means and methods.

2.5 **Preconstruction Conference:** Prior to commencement of Work at the site, CONTRACTOR must attend a preconstruction conference with Owner's Representative and others, as set forth in Division 1. Additionally, prior to commencement of work, the CONTRACTOR shall host a preconstruction conference for the Subcontractors identified on the originally approved compliance plan, Owner's Representative and others, as set forth in Division 1. The CONTRACTOR shall notify all Subcontractors five (5) working days prior to the preconstruction conference. If the CONTRACTOR has included Subcontractors in the initial preconstruction conference, the additional Subcontractor preconstruction conference will not be required.

2.6 **Initially Acceptable Schedules:** Unless otherwise provided in the Contract Documents, CONTRACTOR shall obtain approval of Owner's Representative on the Baseline Schedule submitted in accordance with paragraph 2.4.2.1 and Division 1 before the first progress payment will be made to CONTRACTOR. The Baseline Schedule must provide for an orderly

progression of the designated portion of the Work to completion within any specified Milestones and Contract Times. Acceptance of the schedule by Owner's Representative will neither impose on Owner's Representative responsibility or liability for the sequencing, scheduling or progress of the Work nor interfere with or relieve CONTRACTOR from CONTRACTOR's full responsibility for such Work. CONTRACTOR's schedule of Shop Drawings and sample submissions must provide an acceptable basis for reviewing and processing the required submittals. CONTRACTOR's schedule of values must conform to the requirements set forth in Division 1.

ARTICLE 3 - CONTRACT DOCUMENTS: INTENT, AMENDING, REUSE

3.1 Intent:

3.1.1 The intent of the Contract Documents is to include all information necessary for the proper execution and timely completion of the Work by CONTRACTOR. The CONTRACTOR will execute the Work described in and reasonably inferable from the Contract Documents as necessary to produce the results indicated by the Contract Documents. The Contract Documents are complementary, and what is required by one shall be as binding as if required by all. In cases of disagreement, the following order of precedence shall generally govern (top item receiving priority of interpretation):

Signed Agreement
Addendum to the Contract Documents, including approved changes
Supplemental General Conditions
General Conditions
Other Bidding Requirements and Contract Forms
Special Provisions to the Standard Technical Specifications
Special Specifications
Standard Technical Specifications
Drawings (figured dimensions shall govern over scaled dimensions)
Project Safety Manual (if applicable),

with the understanding that a common sense approach will be utilized as necessary so that the Contract Documents produce the intended response.

3.1.2 Unless otherwise stated in the Contract Documents, words that have well-known technical or construction industry meanings are used in the Contract Documents in accordance with such recognized meanings.

3.2 Reporting and Resolving Discrepancies: If, during the performance of the Work, CONTRACTOR discovers any conflict, error, ambiguity or discrepancy within the Contract Documents or between the Contract Documents and any provisions of any such law or regulation applicable to the performance of the Work or of any such standard, specification, manual or code or instructions of any Supplier, CONTRACTOR shall report it to Owner's Representative in writing at once, and CONTRACTOR shall not proceed with the Work affected thereby until an amendment or supplement to the Contract Documents has been issued by one of the methods indicated in paragraph 3.3.1 or 3.3.2. CONTRACTOR shall be liable to OWNER for failure to report any such conflict, error, ambiguity or discrepancy of which CONTRACTOR knew or reasonably should have known.

3.3 Amending and Supplementing Contract Documents:

3.3.1 The Contract Documents may be amended to provide for additions, deletions and revisions in the Work or to modify the terms and conditions thereof in one or more of the following ways:

.1 Change Order.

.2 Change Directive.

.3 Time Extension Request.

3.3.2 In addition, the requirements of the Contract Documents may be supplemented, and minor variations and deviations in the Work may be authorized, in one or more of the following ways:

.1 Field Order.

.2 Review of a Shop Drawing or sample.

.3 Written interpretation or clarification.

3.4 Reuse of Documents Prohibited: CONTRACTOR and any Subcontractor or Supplier or other person or organization performing or furnishing any of the Work under a direct or indirect contract with OWNER: (i) shall not have or acquire any title to or ownership rights in any of the Drawings, Specifications or other documents (or copies of any thereof) prepared by or bearing the seal of E/A or E/A's consultant, and (ii) shall not reuse any of such Drawings, Specifications, other documents or copies on extensions of the Project or any other project without written consent of OWNER and E/A.

3.5 In the event of the breach by the OWNER or CONTRACTOR of any of its obligations under the Contract, so as to support a claim by the other party, the provisions of this Contract will be equitably construed to allow the resolution of such a claim and all of the other provisions of this Contract shall continue in full force and effect as to the rights, responsibilities, and remedies of the OWNER and CONTRACTOR.

ARTICLE 4 - AVAILABILITY OF LANDS; SUBSURFACE AND PHYSICAL CONDITIONS; REFERENCE POINTS

4.1 **Availability of Lands:** The OWNER will provide access to all land and interests in land required for the Work and will notify CONTRACTOR of any restrictions in such access. CONTRACTOR may make a claim if OWNER fails to provide timely access to the Work. CONTRACTOR must obtain any additional temporary construction facilities, stockpiling or storage sites not otherwise provided.

4.2 **Subsurface and Physical Conditions:**

4.2.1 CONTRACTOR specifically represents that it has carefully examined the plans, the geotechnical report, if any, and the site of the proposed Work and is thoroughly familiar with all of the conditions surrounding construction of the Project, having had the opportunity to conduct any and all additional inquiry, tests and investigation that he/she deems necessary and proper. CONTRACTOR acknowledges the receipt of the geotechnical report, if any, and agrees that the report, while it is an accurate record of the geotechnical conditions at the boring locations, is not a guarantee of specific site conditions which may vary between boring locations.

4.2.2 CONTRACTOR must notify OWNER in writing as soon as reasonably possible, but no later than three (3) calendar days, if unforeseen conditions are encountered at the site which are (i) subsurface or otherwise concealed physical conditions that differ materially from those indicated in the Contract Documents or (ii) unknown physical conditions of an unusual nature, that differ materially from those normally encountered in the type of work being performed under this Contract. CONTRACTOR may not disturb the conditions until OWNER conducts an investigation. Owner's Representative and E/A will promptly investigate such

conditions with E/A. If it is determined that such conditions differ materially and cause an increase or decrease in the CONTRACTOR's cost of or time required for performance of any part of the Work, Owner's Representative will recommend an equitable adjustment in the Contract Amount or Contract Time, or both. If it is determined that such conditions are not materially different from those indicated in the Contract Documents, Owner's Representative will notify CONTRACTOR in writing of such findings and the Contract will not be adjusted. CONTRACTOR may dispute such a determination in accordance with Article 16.

4.2.3 Notwithstanding any other provision of this Contract, CONTRACTOR is solely responsible for the location and protection of any and all public utility lines and utility customer service lines in the Work area. "Public utility lines" means the utility distribution and supply system, and "utility customer service lines" means the utility lines connecting customers to the utility distribution and collection system. Generally, existing utility customer service line connections are not shown on the Drawings. CONTRACTOR shall notify "One Call" and exercise due care to locate, mark, uncover and otherwise protect all such lines in the construction zone and any of CONTRACTOR's work or storage areas. CONTRACTOR's responsibility for the location and protection of utilities is primary and nondelegable. CONTRACTOR shall indemnify or reimburse such expenses or costs (including fines that may be levied against OWNER) that may result from unauthorized or accidental damage to all public lines and utility customer service lines in the work area. OWNER reserves the right to repair any damage CONTRACTOR causes to such utilities at CONTRACTOR's expense. If a public line and/or customer service line is damaged by CONTRACTOR, CONTRACTOR shall give verbal notice within one (1) hour and written notice within twenty-four (24) hours to the Owner's Representative.

4.2.4 CONTRACTOR shall take reasonable precaution to avoid disturbing primitive records and antiquities of archaeological, paleontological or historical significance. No objects of this nature shall be disturbed without written permission of OWNER and Texas Historical Commission. When such objects are uncovered unexpectedly, CONTRACTOR shall stop all Work in close proximity and notify Owner's Representative and Texas Historical Commission of their presence and shall not disturb them until written permission and permit to do so is granted. All primitive rights and antiquities uncovered on OWNER's property shall remain property of State of Texas, Texas Historical Commission conforming to Texas Natural Resources Code. If it is determined by OWNER, in consultation with Texas Historical Commission, that exploration or excavation of primitive records or antiquities on Project site is necessary to avoid loss, CONTRACTOR shall cooperate in salvage work attendant to preservation. If the Work stoppage or salvage work causes an increase in CONTRACTOR's cost of, or time required for, performance of the Work, the Contract Amount and/or Contract Time will be equitably adjusted.

4.3 Reference Points: Unless otherwise specified, all control lines and bench marks suitable for use in layout will be furnished by OWNER. Lay out of the Work shall be performed in accordance with Division 1. Controls, bench marks and property boundary markers shall be carefully preserved by CONTRACTOR by use of flags, staffs or other visible devices and in case of destruction or removal by CONTRACTOR or its employees, such controls and bench marks shall be replaced by a Registered Professional Land Surveyor at CONTRACTOR's expense. City of Austin survey monuments damaged by CONTRACTOR will be reestablished by OWNER at CONTRACTOR's expense.

4.4 Hazardous Materials:

4.4.1 To the extent provided by applicable law, OWNER shall be responsible for any hazardous material uncovered or revealed at the site which was not shown,

indicated or identified in the Contract Documents to be within the scope of the Work and which may present a substantial danger to persons or property exposed thereto in connection with the Work at the site. CONTRACTOR shall immediately notify Owner's Representative of any suspected hazardous materials encountered before or during performance of the Work and shall take all necessary precautions to avoid further disturbance of the materials.

4.4.2 CONTRACTOR shall be responsible for any hazardous materials brought to the site by CONTRACTOR, Subcontractor, Suppliers or anyone else for whom CONTRACTOR is responsible.

4.4.3 No asbestos-containing materials shall be incorporated into the Work or brought on Project site without prior approval of OWNER. The CONTRACTOR shall not knowingly use, specify, request or approve for use any asbestos containing materials or lead-based paint without the OWNER'S written approval. When a specific product is specified, the CONTRACTOR shall endeavor to verify that the product does not include asbestos containing material.

4.4.4 Refer to Division 1 for hazardous material definitions and procedures.

.1 Unless otherwise expressly provided in the Contract Documents to be part of the Work, CONTRACTOR is not responsible for any unexpected Hazardous Materials encountered at the site. Upon encountering any Hazardous Conditions, CONTRACTOR must stop Work immediately in the affected area and duly notify OWNER and, if required by applicable law or regulations, all government or quasi-government entities with jurisdiction over the Project or site.

.2 Upon receiving notice of the presence of suspected Hazardous Materials, OWNER shall take the necessary measures required to ensure that the Hazardous Materials are remediated or rendered harmless. Such necessary measures shall include OWNER retaining qualified independent experts to (i) ascertain whether Hazardous Materials have actually been encountered, and, if they have been encountered, (ii) prescribe the remedial measures that OWNER must take either to remove the Hazardous Materials or render the Hazardous Materials harmless.

.3 CONTRACTOR shall be obligated to resume Work at the affected area of the Project only after OWNER's Representative provides written certification that (i) the Hazardous Materials have been removed or rendered harmless and (ii) all necessary approvals have been obtained from all government and quasi-government entities having jurisdiction over the Project or site. The CONTRACTOR shall be responsible for continuing the Work in the unaffected portion of the Project and site.

.4 CONTRACTOR will be entitled, in accordance with these General Conditions, to an adjustment in its Contract Amount and/or Contract Time(s) to the extent CONTRACTOR's cost and/or time of performance have been adversely impacted by the presence of Hazardous Materials.

.5 Notwithstanding the preceding provisions of this Section 4.1, OWNER is not responsible for Hazardous Materials introduced to the Site by CONTRACTOR, Subcontractors or anyone for whose acts they may be liable. CONTRACTOR shall indemnify, defend and hold harmless OWNER and OWNER's officers, directors, employees and agents from and against all claims, losses, damages, liabilities and expenses, including attorneys' fees and expenses, arising out of or resulting from those hazardous materials introduced to the site by CONTRACTOR, Subcontractors or anyone for whose acts they may be liable.

4.4.5 CONTRACTOR shall be responsible for use, storage and remediation of any hazardous materials brought to the Site by CONTRACTOR, Subcontractors, Suppliers or anyone else for whom CONTRACTOR is responsible.

ARTICLE 5 - BONDS AND INSURANCE

5.1 Surety and Insurance Companies: All bonds and insurance required by the Contract Documents shall be obtained from solvent surety or insurance companies that are duly licensed by the State of Texas and authorized to issue bonds or insurance policies for the limits and coverages required by the Contract Documents. The bonds shall be in a form acceptable to OWNER and shall be issued by a surety which complies with the requirements of Texas Insurance Code, Title 12, Chapter 3503. The surety must obtain reinsurance for any portion of the risk that exceeds 10% of the surety's capital and surplus. For bonds exceeding $100,000, the surety must also hold a certificate of authority from the U.S. Secretary of the Treasury or have obtained reinsurance for any liability in excess of $1,000,000 from a reinsurer that is authorized as a reinsurer in Texas or holds a certificate of authority from the U.S. Secretary of the Treasury. In the event that the proposed surety for a contract award in excess of $100,000 does not hold a certificate of authority from the U.S. Secretary of the Treasury and/or its proposed reinsurer does not hold a certificate of authority from the U.S. Secretary of the Treasury, the OWNER may require additional financial solvency information from the Bidder/Contractor and the proposed surety company and/or reinsurer as part of the 00400 Statement of Bidders Experience and determination of bidder responsibility in the award of the Contract.

5.2 Workers' Compensation Insurance Coverage:

5.2.1 Definitions:

.1 Certificate of coverage ("certificate") - A copy of a certificate of insurance, a certificate of authority to self-insure issued by the commission, or a coverage agreement (DWC-81, DCW-82, DCW-83, or DCW84), showing statutory workers' compensation insurance coverage for the person's or entity's employees providing services on the Project, for the duration of the Project.

.2 Duration of the Project - includes the time from the beginning of the Work on the Project until the CONTRACTOR's/ person's Work on the Project has been completed and accepted by OWNER.

.3 Persons providing services on the Project ("subcontractor" in Texas Labor Code, Section 406.096) - includes all persons or entities performing all or part of the services the CONTRACTOR has undertaken to perform on the Project, regardless of whether that person contracted directly with the CONTRACTOR and regardless of whether that person has employees. This includes, without limitation, independent contractors, Subcontractors, leasing companies, motor carriers, owner-operators, employees of any such entity, or employees of any entity which furnishes persons to provide services on the Project. "Services" include, without limitation, providing, hauling, or delivering equipment or materials, or providing labor, transportation, or other service related to a project. "Services" does not include activities unrelated to the Project, such as food/beverage vendors, office supply deliveries, and delivery of portable toilets.

5.2.2 CONTRACTOR shall provide coverage, based on proper reporting of classification codes and payroll amounts and filing of any coverage agreements, which meets the statutory requirements of Texas Labor Code, Section 401.011(44) for all

employees of the CONTRACTOR providing services on the Project, for the duration of the Project.

5.2.3 CONTRACTOR must provide a certificate of coverage to OWNER prior to being awarded the Contract.

5.2.4 If the coverage period shown on the CONTRACTOR's current certificate of coverage ends during the duration of the Project, the CONTRACTOR must, prior to the end of the coverage period, file a new certificate of coverage with OWNER showing that coverage has been extended.

5.2.5 CONTRACTOR shall obtain from each person providing services on the Project, and provide to OWNER:

.1 A certificate of coverage, prior to that person beginning Work on the Project, so OWNER will have on file certificates of coverage showing coverage for all persons providing services on the Project; and

.2 No later than seven (7) days after receipt by CONTRACTOR, a new certificate of coverage showing extension of coverage, if the coverage period shown on the current certificate of coverage ends during the duration of the Project.

5.2.6 CONTRACTOR shall retain all required certificates of coverage for the duration of the Project and for one (1) year thereafter.

5.2.7 CONTRACTOR shall notify OWNER in writing by certified mail or personal delivery, within ten (10) days after CONTRACTOR knew or should have known, of any change that materially affects the provision of coverage of any person providing services on the Project.

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

5.2.9 CONTRACTOR shall contractually require each person with whom it contracts to provide services on a Project, to:

.1 Provide coverage, based on proper reporting of classification codes and payroll amounts and filing of any coverage agreements, which meets the statutory requirements of Texas Labor Code, Section 401.011(44) for all of its employees providing services on the Project, for the duration of the Project;

.2 Provide to CONTRACTOR, prior to that person beginning Work on the Project, a certificate of coverage showing that coverage is being provided for all employees of the person providing services on the Project, for the duration of the Project;

.3 Provide CONTRACTOR, prior to the end of the coverage period, a new certificate of coverage showing extension of coverage, if the coverage period shown on the current certificate of coverage ends during the duration of the Project;

.4 Obtain from each other person with whom it contracts, and provide to CONTRACTOR: a) a certificate of coverage, prior to the other person beginning Work on the Project; and b) a new certificate of coverage showing extension of coverage, prior to the end of the coverage period, if the coverage period shown on the current certificate of coverage ends during the duration of the Project;

.5 Retain all required certificates of coverage on file for the duration of the Project and for one (1) year thereafter;

.6 Notify OWNER in writing by certified mail or personal delivery, within ten (10) days after the person knew or should have known, of any change that materially affects the provision of coverage of any person providing services on the Project; and

.7 Contractually require each person with whom it contracts, to perform as required by paragraphs 5.2.9.1 - 5.2.9.7, with the certificates of coverage to be provided to the person for whom they are providing services.

5.2.10 By signing this Contract or providing or causing to be provided a certificate of coverage, CONTRACTOR is representing to OWNER that all employees of the CONTRACTOR who will provide services on the Project will be covered by workers' compensation coverage for the duration of the Project, that the coverage will be based on proper reporting of classification codes and payroll amounts, and that all coverage agreements will be filed with the appropriate insurance carrier or, in the case of a self-insured, with the Texas Worker's Compensation Commission's Division of Self- Insurance Regulation. Providing false or misleading information may subject CONTRACTOR to administrative penalties, criminal penalties, civil penalties, or other civil actions.

5.2.11 CONTRACTOR's failure to comply with any of these provisions is a breach of Contract by CONTRACTOR which entitles OWNER to declare the Contract void if CONTRACTOR does not remedy the breach within ten (10) days after receipt of notice of breach from OWNER.

5.3 Other Bond and Insurance Requirements: For additional insurance requirements, refer to the Supplemental General Conditions.

5.4 Bonds:

5.4.1 General.

.1 Bonds, when required, shall be executed on forms furnished by or acceptable to OWNER. All bonds signed by an agent must be accompanied by a certified copy of such agent's authority to act.

.2 If the surety on any bond furnished by CONTRACTOR is declared bankrupt or becomes insolvent or its right to do business is terminated in the State of Texas or it ceases to meet the requirements of the preceding paragraph, CONTRACTOR shall within ten (10) days thereafter substitute another bond and surety, both of which must be acceptable to OWNER.

.3 When Performance Bonds and/or Payment Bonds are required, each shall be issued in an amount of one hundred percent (100%) of the Contract Amount as security for the faithful performance and/or payment of all CONTRACTOR's obligations under the Contract Documents. Performance Bonds and Payment Bonds shall be issued by a solvent surety company authorized to do business in the State of Texas, and shall meet any other requirements established by law or by OWNER pursuant to applicable law. Any surety duly authorized to do business in Texas may write Performance and Payment Bonds on a project without reinsurance to the limit of ten percent (10%) of its capital and surplus. Such a surety must reinsure any obligations over ten percent (10%).

5.4.2 Performance Bond.

.1 If the Contract Amount exceeds $100,000, CONTRACTOR shall furnish OWNER with a Performance Bond in the form set out in Section 00610.

.2 If the Contract Amount exceeds $25,000 but is less than or equal to $100,000, CONTRACTOR shall furnish OWNER with a Performance Bond in the form set out in Section 00610, unless the original Contract Time is 60 Calendar

Days/40 Working Days or less, in which case CONTRACTOR can agree to the following terms and conditions for payment in lieu of providing a Performance Bond: no moneys will be paid to CONTRACTOR until completion and acceptance of the Work by OWNER; CONTRACTOR shall be entitled to receive 95% of the Contract Amount following Final Completion, and the remaining 5% of the Contract Amount following the one (1) year warranty period.

.3 If the Contract Amount is less than or equal to $25,000, CONTRACTOR will not be required to furnish a Performance Bond; provided that no moneys will be paid to CONTRACTOR until completion and acceptance of the Work by OWNER under the following terms and conditions: CONTRACTOR shall be entitled to receive 95% of the Contract Amount following Final Completion, and the remaining 5% of the Contract Amount following the one (1) year warranty period.

.4 If a Performance Bond is required to be furnished, it shall extend for the one (1) year warranty period.

5.4.3 Payment Bond.

.1 If the Contract Amount exceeds $50,000, CONTRACTOR shall furnish OWNER with a Payment Bond in the form set out in Section 00620.

.2 If the Contract Amount is less than or equal to $50,000, CONTRACTOR will not be required to furnish a Payment Bond; provided that no moneys will be paid to CONTRACTOR until completion and acceptance of the Work by OWNER under the terms and conditions specified in paragraph 5.4.2.3.

5.4.4 **Maintenance Bond:** If the Contract Documents contemplate a period of maintenance beyond the one (1) year contractual warranty period, OWNER agrees that any bond to be required for such maintenance work will be in the amount of the maintenance work during any extended maintenance period.

ARTICLE 6 - CONTRACTOR'S RESPONSIBILITIES

6.1 Supervision and Superintendence:

6.1.1 CONTRACTOR shall supervise, inspect and direct the Work competently and efficiently, devoting such attention thereto and applying such skills and expertise as may be necessary to perform the Work in accordance with the Contract Documents. CONTRACTOR shall be solely responsible for the means, methods, techniques, sequences and procedures of construction. CONTRACTOR shall be responsible to see that the completed Work complies accurately with the Contract Documents.

6.1.2 CONTRACTOR shall have an English-speaking, competent Superintendent on the Work at all times that work is in progress. The Superintendent will be CONTRACTOR's representative on the Work and shall have the authority to act on the behalf of CONTRACTOR. All communications given to the Superintendent shall be as binding as if given to CONTRACTOR. Either CONTRACTOR or the Superintendent shall provide a cellular telephone number and an emergency and home telephone number at which one or the other may be reached if necessary when work is not in progress. The Superintendent must be an employee of the CONTRACTOR, unless such requirement is waived in writing by the Owner's Representative. If the CONTRACTOR proposes a management structure with a Project Manager supervising, directing, and managing construction of the work in addition to or in substitution of a Superintendent, the requirements of these Construction Documents with respect to the Superintendent shall likewise apply to any such Project Manager.

.1 CONTRACTOR shall present the resume of the proposed Superintendent to the Owner's Representative showing evidence of experience and successful superintendence and direction of work of a similar scale and complexity. If, in the opinion of the Owner's Representative, the proposed Superintendent does not indicate sufficient experience in line with the Work, he/she will not be allowed to be the designated Superintendent for the Work.

.2 The Superintendent shall not be replaced without Written Notice to Owner's Representative. If CONTRACTOR deems it necessary to replace the Superintendent, CONTRACTOR shall provide the necessary information for approval, as stated above, on the proposed new Superintendent.

.3 A qualified substitute Superintendent may be designated in the event that the designated Superintendent is temporarily away from the Work, but not to exceed a time limit acceptable to the Owner's Representative. CONTRACTOR shall replace the Superintendent upon OWNER's request in the event the Superintendent is unable to perform to OWNER's satisfaction.

6.2 Labor, Materials and Equipment:

6.2.1 CONTRACTOR shall maintain a work force adequate to accomplish the Work within the Contract Time. CONTRACTOR agrees to employ only orderly and competent workers, skillful in performance of the type of Work required under this Contract. CONTRACTOR, Subcontractors, Sub-subcontractors, and their employees may not use or possess any alcoholic or other intoxicating beverages, illegal drugs or controlled substances while on the job or on OWNER's property, nor may such workers be intoxicated, or under the influence of alcohol or drugs, on the job. Subject to the applicable provisions of Texas law, CONTRACTOR, Subcontractors, Sub-subcontractors, and their employees may not use or possess any firearms or other weapons while on the job or on OWNER'S property. If OWNER or Owner's Representative notifies CONTRACTOR that any worker or representative of Contractor is incompetent, disorderly, abusive, or disobedient, has knowingly or repeatedly violated safety regulations, has possessed any firearms in contravention of the applicable provisions of Texas law, or has possessed or was under the influence of alcohol or drugs on the job, CONTRACTOR shall immediately remove such worker or representative, including an officer or owner of CONTRACTOR, from performing Contract Work, and may not employ such worker or representative again on Contract Work without OWNER's prior written consent. CONTRACTOR shall at all times maintain good discipline and order on or off the site in all matters pertaining to the Project. CONTRACTOR shall pay workers no less than the wage rates established in Section 00830, and maintain weekly payroll reports as evidence thereof, in accordance with the requirements of Chapter 2258 of the Texas Government Code.

6.2.2 Unless otherwise specified in Division 1, CONTRACTOR shall provide and pay for all materials, equipment, labor, transportation, construction equipment and machinery, tools, appliances, fuel, power, light, heat, telephone, water, sanitary facilities, temporary facilities and all other facilities and incidentals necessary for the furnishing, performance, testing, start-up and completion of the Work.

6.2.3 All materials and equipment shall be of good quality and new (including new products made of recycled materials, pursuant to Section 361.426 of the Texas Health & Safety Code), except as otherwise provided in the Contract Documents. If required by Owner's Representative, CONTRACTOR shall furnish satisfactory evidence (reports of required tests, manufacturer's certificates of compliance with material requirements, mill reports, etc.) as to the kind and quality of materials and equipment. All materials and equipment shall be applied, installed, connected,

erected, used, cleaned and conditioned in accordance with instructions of the applicable Supplier, except as otherwise provided in the Contract Documents.

6.2.4 Substitutes and "Approved Equal" Items:

.1 Whenever an item of material or equipment is specified or described in the Contract Documents by using the name of a proprietary item or the name of a particular Supplier, the specification or description is intended to establish the type, function and quality required. Unless the specification or description contains words reading that no like, equivalent or "approved equal" item or no substitution is permitted, other items of material or equipment of other Suppliers may be submitted by CONTRACTOR, at CONTRACTOR'S sole risk, including disruptions to the Critical Path of the Progress Schedule, to E/A through Owner's Representative under the following circumstances:

.1.1 "Approved Equal": If in E/A's sole discretion an item of material or equipment proposed by CONTRACTOR is functionally equal to that named and sufficiently similar so that no change in related Work will be required, it may be considered by E/A as an "approved equal" item, in which case review of the proposed item may, in E/A's sole discretion, be accomplished without compliance with some or all of the requirements for evaluation of proposed substitute items. CONTRACTOR shall provide E/A with the documentation required for E/A to make its determination.

.1.2 Substitute Items: If in E/A's sole discretion an item of material or equipment proposed by CONTRACTOR does not qualify as an "approved equal" item under subparagraph 6.2.4.1.1, it will be considered a proposed substitute item. CONTRACTOR shall submit sufficient information as provided in Division 1 to allow E/A to determine that the item of material or equipment proposed is essentially equivalent to that named and a substitute therefor.

.2 Substitute Construction Methods and Procedures: If a specific means, method, technique, sequence or procedure of construction is shown or indicated in and expressly required by the Contract Documents, CONTRACTOR may, at CONTRACTOR'S sole risk, including disruptions to the Critical Path of the Progress Schedule, with prior approval of E/A furnish or utilize a substitute means, method, technique, sequence, or procedure of construction. CONTRACTOR shall submit sufficient information to Owner's Representative to allow E/A, in E/A's sole discretion, to determine that the substitute proposed is equivalent to that expressly called for by the Contract Documents. The procedure for review by E/A will be same as that provided for substitute items in Division 1.

.3 E/A's Evaluation: E/A will be allowed a reasonable time within which to evaluate each proposal or submittal made pursuant to subparagraphs 6.2.4.1.1 and 6.2.4.1.2. E/A will be the sole judge of acceptability. No "approved equal" or substitute shall be ordered, installed, or utilized until E/A's review is complete, which will be evidenced by either a Change Order or completion of the Shop Drawing review procedure. OWNER may require CONTRACTOR to furnish at CONTRACTOR's expense a special performance guarantee or other surety bond with respect to any "approved equal" or substitute or for any other delay or disruption to the Critical Path of the Project Schedule attributable to any such substitution. OWNER shall not be responsible for any delay due to review time for any "approved equal" or substitute.

.4 CONTRACTOR's Expense: All data and documentation to be provided by CONTRACTOR in support of any proposed "approved equal" or substitute item will be at CONTRACTOR's expense.

.5 The approval of the E/A will not relieve the CONTRACTOR from primary responsibility and liability for the suitability and performance of any proposed substitute item, method or procedure and will not relieve CONTRACTOR from its primary responsibility and liability for curing defective Work and performing warranty work, which the CONTRACTOR shall cure and perform, regardless of any claim the CONTRACTOR may choose to advance against the E/A or manufacturer.

6.2.5 CONTRACTOR agrees to assign to OWNER any rights it may have to bring antitrust suits against its Suppliers for overcharges on materials incorporated in the Project growing out of illegal price fixing agreements. CONTRACTOR further agrees to cooperate with OWNER should OWNER wish to prosecute suits against Suppliers for illegal price fixing.

6.3 Progress Schedule: Unless otherwise provided in Division 1, CONTRACTOR shall adhere to the Baseline Schedule established in accordance with paragraph 2.6 as it may be adjusted from time to time as provided below:

6.3.1 CONTRACTOR shall submit to Owner's Representative for review and approval any proposed adjustments in the Progress Schedule that will not change the Contract Times or Milestones on a monthly basis. Any such proposed adjustments must be substantiated with documentation of any changes to the underlying logic of the Progress Schedule. CONTRACTOR's Progress Schedule must show how the CONTRACTOR will consistently advance the progress of the Work in accordance with the Critical Path of the Work and the Contract Time or Milestones. Such adjustments will conform generally to the Progress Schedule then in effect and additionally will comply with any provisions of Division 1 applicable thereto.

6.3.2 Proposed adjustments in the Progress Schedule that will change the Contract Times or Milestones shall be submitted in accordance with the requirements of Article 12. Any such proposed adjustments must be substantiated with documentation of any changes to the underlying logic of the Progress Schedule. Such adjustments may only be made by a Change Order or Time Extension Request in accordance with Article 12.

6.4 Concerning Subcontractors, Suppliers and Others:

6.4.1 Assignment: CONTRACTOR agrees to retain direct control of and give direct attention to the fulfillment of this Contract. CONTRACTOR agrees not to, by Power of Attorney, or otherwise, assign said Contract without the prior written consent of OWNER. In addition, without OWNER'S written consent, the CONTRACTOR will not subcontract the performance of the entire Work or the supervision and direction of the Work.

6.4.2 Award of Subcontracts for Portions of the Work: CONTRACTOR shall not employ any Subcontractor, Supplier or other person or organization, whether initially or as a substitute, against whom OWNER may have reasonable objection. OWNER will communicate such objections by Written Notice. If OWNER requires a change without good cause of any Subcontractor, person or organization previously accepted by OWNER, the Contract Amount shall be increased or decreased by the difference in the cost occasioned by any such change, and appropriate Change Order shall be issued. CONTRACTOR shall not substitute any Subcontractor, person or organization that has been accepted by OWNER, unless the substitute has been accepted in writing by OWNER. No acceptance by OWNER of any Subcontractor,

Supplier or other person or organization shall constitute a waiver of any right of OWNER to reject defective Work.

6.4.3 CONTRACTOR shall enter into written agreements with all Subcontractors and Suppliers which specifically binds the Subcontractors or Suppliers to the applicable terms and conditions of the Contract Documents for the benefit of OWNER and E/A. The OWNER reserves the right to specify that certain requirements shall be adhered to by all Subcontractors and Sub-subcontractors as indicated in other portions of the Contract Documents and these requirements shall be made a part of the agreement between CONTRACTOR and Subcontractor or Supplier. Subject to and in accordance with the above requirements, the CONTRACTOR must provide and will be deemed for all purposes to have provided in its contracts with major Subcontractors or Suppliers on the Project (those contracts of more than $10,000) the following specific provision: alternative dispute resolution (paragraphs 16.2 and 16.3), which shall be mandatory in the event of a subcontractor or supplier claim and a prerequisite for the submission of any derivative claim. The CONTRACTOR's standard subcontract form is subject to the OWNER's review and approval. The OWNER may request and the CONTRACTOR will provide within five (5) working days a copy of any subcontract requested by the OWNER.

6.4.4 CONTRACTOR shall be fully responsible to OWNER for all acts and omissions of the Subcontractors, Suppliers and other persons and organizations performing or furnishing any of the Work under a direct or indirect contract with CONTRACTOR just as CONTRACTOR is responsible for CONTRACTOR's own acts and omissions. Nothing in the Contract Documents shall create for the benefit of any such Subcontractor, Supplier or other person or organization any contractual relationship between OWNER and any such Subcontractor, Supplier or other person or organization, nor shall it create any obligation on the part of OWNER or E/A to pay or to see to the payment of any moneys due any such Subcontractor, Supplier or other person or organization except as may otherwise be required by laws and regulations.

6.4.5 CONTRACTOR shall be solely responsible for efficiently scheduling and coordinating the Work of Subcontractors, Suppliers and other persons and organizations performing or furnishing any of the Work under a direct or indirect contract with CONTRACTOR in order to avoid any delays or inefficiencies in the prosecution of the Work. CONTRACTOR shall require all Subcontractors, Suppliers and such other persons and organizations performing or furnishing any of the Work to communicate with Owner's Representative through CONTRACTOR.

6.4.6 The divisions and sections of the Specifications and the identifications of any Drawings shall not control CONTRACTOR in dividing or delineating the Work to be performed by any specific trade.

6.4.7 CONTRACTOR shall pay each Subcontractor and Supplier their appropriate share of payments made to CONTRACTOR not later than ten (10) Calendar Days of CONTRACTOR's receipt of payment from OWNER. Upon request from Owner, the CONTRACTOR has two (2) Working Days to provide documentation verifying Payment to Subcontractor(s). The CONTRACTOR is required to notify the Subcontractor(s) in writing of rejection of Application for Payment within two (2) Working Days following notification by Owner. Failure of CONTRACTOR to make payments to Subcontractors or for labor, materials or equipment in accordance to this contract, may be cause to reject future Bids by the CONTRACTOR in accordance with Section 00100 9.B.4 and may be cause to reject payment in accordance with 00700 14.4.1.3.

6.4.8 To the extent allowed by Texas law, the OWNER shall be deemed to be a third party beneficiary to each subcontract and may, if OWNER elects, following a termination of the CONTRACTOR, require that the Subcontractor(s) perform all or a portion of

unperformed duties and obligations under its subcontract(s) for the benefit of the OWNER, rather than the CONTRACTOR; however, if the OWNER requires any such performance by a Subcontractor for the OWNER's direct benefit, then the OWNER shall be bound and obligated to pay such Subcontractor the reasonable value for all Work performed by such Subcontractor to the date of the termination of the CONTRACTOR, less previous payments, and for all Work performed thereafter. In the event that the OWNER elects to invoke its right under this section, OWNER will provide notice of such election to the CONTRACTOR and the affected Subcontractor(s).

6.5 Patent Fees and Royalties:

6.5.1 CONTRACTOR shall be responsible at all times for compliance with applicable patents or copyrights encompassing, in whole or in part, any design, device, material, or process utilized, directly or indirectly, in the performance of the Work or the formulation or presentation of its Bid.

6.5.2 CONTRACTOR shall pay all royalties and license fees and shall provide, prior to commencement of Work hereunder and at all times during the performance of same, for lawful use of any design, device, material or process covered by letters, patent or copyright by suitable legal agreement with the patentee, copyright holder, or their duly authorized representative whether or not a particular design, device, material, or process is specified by OWNER.

6.5.3 CONTRACTOR shall defend all suits or claims for infringement of any patent or copyright and shall save OWNER harmless from any loss or liability, direct or indirect, arising with respect to CONTRACTOR's process in the formulation of its Bid or the performance of the Work or otherwise arising in connection therewith. OWNER reserves the right to provide its own defense to any suit or claim of infringement of any patent or copyright in which event CONTRACTOR shall indemnify and save harmless OWNER from all costs and expenses of such defense as well as satisfaction of all judgments entered against OWNER.

6.5.4 OWNER shall have the right to stop the Work and/or terminate this Agreement at any time in the event CONTRACTOR fails to disclose to OWNER that CONTRACTOR's work methodology includes the use of any infringing design, device, material or process.

6.6 Permits, Fees: Unless otherwise provided in the Supplemental General Conditions, CONTRACTOR shall obtain and pay for all construction permits, licenses and fees required for prosecution of the Work.

6.7 Laws and Regulations:

6.7.1 CONTRACTOR shall give all notices and comply with all laws and regulations applicable to furnishing and performing the Work, including arranging for and obtaining any required inspections, tests, approvals or certifications from any public body having jurisdiction over the Work or any part thereof. Except where otherwise expressly required by applicable laws and regulations, neither OWNER nor E/A shall be responsible for monitoring CONTRACTOR's compliance with any laws and regulations.

6.7.2 Maintaining clean water, air and earth or improving thereon shall be regarded as of prime importance. CONTRACTOR shall plan and execute its operations in compliance with all applicable Federal, State and local laws and regulations concerning control and abatement of water pollution and prevention and control of air pollution.

6.7.3 If CONTRACTOR performs any Work knowing or having reason to know that it is contrary to laws or regulations, CONTRACTOR shall bear all claims, costs, losses and damages arising therefrom; however, it shall not be CONTRACTOR's primary

responsibility to make certain that the Specifications and Drawings are in accordance with laws and regulations, but this does not relieve CONTRACTOR of CONTRACTOR's obligations under Article 3.

6.8 Taxes:

6.8.1 CONTRACTOR shall pay only those sales, consumer, use and other similar taxes required to be paid by CONTRACTOR in accordance with the laws and regulations of the State of Texas in the performance of this public works contract.

6.8.2 OWNER is an exempt organization as defined by Chapter 11 of the Property Tax Code of Texas and is thereby exempt from payment of Sales Tax under Chapter 151, Limited Use Sales, Excise and Use Tax, Texas Tax Code, and Article 1066 (C), Local Sales and Use Tax Act, Revised Civil Statutes of Texas.

6.9 Use of Premises:

6.9.1 CONTRACTOR shall confine construction equipment, the storage of materials and equipment and the operations of workers to the site and land and areas identified in and permitted by the Contract Documents and other land and areas permitted by laws and regulations, right-of-way, permits and easements, and shall not unreasonably encumber the premises with construction equipment or other materials or equipment. CONTRACTOR shall assume full responsibility for any damage to any such land or area, or to the owner or occupant thereof or of any adjacent land or areas, resulting from the performance of the Work. Should any claim be made by any such owner or occupant because of or in connection with the performance of the Work, CONTRACTOR shall promptly settle with such other party by negotiation or otherwise resolve the claim by arbitration or other dispute resolution proceeding or at law. CONTRACTOR shall indemnify, defend and hold harmless OWNER, E/A, E/A'S Consultants and anyone directly or indirectly employed by any of them from and against all claims, costs, losses and damages (including court costs and reasonable attorney's fees) arising out of or resulting from any claim or action, legal or equitable, brought by any such owner or occupant against OWNER, E/A or any other party indemnified hereunder to the extent caused by or based upon performance of the work or failure to perform the Work.

6.9.2 During the progress of the Work and on a daily basis, CONTRACTOR shall keep the premises free from accumulations of waste materials, rubbish and other debris resulting from the Work. At the completion of the Work, CONTRACTOR shall remove all waste materials, rubbish and debris from and about the premises as well as all tools, appliances, construction equipment and machinery and surplus materials. CONTRACTOR shall leave the site clean and ready for occupancy by OWNER at Substantial Completion of the Work. CONTRACTOR shall, at a minimum, restore to original condition all property not designated for alteration by the Contact Documents. If the CONTRACTOR fails to clean up at the completion of the Work, OWNER may do so and the cost thereof will be charged against the CONTRACTOR.

6.9.3 CONTRACTOR shall not load nor permit any part of any structure to be loaded in any manner that will endanger the structure, nor shall CONTRACTOR subject any part of the Work or adjacent property to stresses or pressures that will endanger it.

6.10 Record Documents: CONTRACTOR shall maintain in a safe place at the site, or other location acceptable to OWNER, one (1) record copy of all Drawings, Specifications, Addenda, Change Orders, Change Directives, Field Orders and written interpretations and clarifications (issued pursuant to paragraph 9.5) in good order and annotated to show all changes made during construction. These record documents together with all final samples and all final Shop Drawings will be available to OWNER and E/A for reference during performance of the Work. Upon Substantial Completion of the Work, these record documents, samples and Shop Drawings shall be promptly delivered to Owner's Representative.

6.11 Safety and Protection:

6.11.1 CONTRACTOR shall be responsible for initiating, maintaining and supervising all safety precautions and programs in connection with the Work. Upon request, and prior to installation of measures, CONTRACTOR shall submit a site security plan for approval by OWNER. By reviewing the plan or making recommendations or comments, OWNER will not assume liability nor will CONTRACTOR be relieved of liability for damage, injury or loss. CONTRACTOR shall take all necessary precautions for the safety of and shall provide the necessary protection to prevent damage, injury or loss to:

.1 all persons on the Work site or who may be affected by the Work;

.2 all the Work and materials and equipment to be incorporated therein, whether in storage on or off the site; and

.3 other property at the site or adjacent thereto, including, but not limited to, trees, shrubs, lawns, walks, pavements, roadways, structures, utilities and underground facilities not designated for removal, relocation or replacement in the course of construction.

6.11.2 CONTRACTOR shall comply with all applicable laws and regulations of any public body having jurisdiction for safety of persons or property or to protect them from damage, injury or loss; and shall erect and maintain all necessary safeguards for such safety and protection. CONTRACTOR shall notify owners of adjacent property and of underground facilities, and utility owners when prosecution of the Work may affect them, and shall cooperate with them in the protection, removal, relocation and replacement of their property. All damage, injury or loss to any property referred to in paragraph 6.11.1.2 and 6.11.1.3 caused, directly or indirectly, in whole or in part, by CONTRACTOR, Subcontractor, Supplier or any person or organization directly or indirectly employed by any of them to perform or furnish any of the Work or anyone for whose acts any of them may be liable, shall be remedied by CONTRACTOR (except damage or loss attributable to the fault of Drawings or Specifications or to the acts or omissions of OWNER, or E/A, or E/A's consultant or anyone employed by any of them or anyone for whose acts any of them may be liable, and not attributable, directly or indirectly, in whole or in part, to the faults or negligence of CONTRACTOR or any Subcontractor, Supplier or other person or organization directly or indirectly employed by any of them). CONTRACTOR's duties and responsibilities for safety and protection of the Work shall continue until such time as all the Work is completed and Owner's Representative has issued a notice to OWNER and CONTRACTOR in accordance with Article 14 that the Work is acceptable (except as otherwise expressly provided in connection with Substantial Completion). Without limitation, CONTRACTOR shall comply with the following specific provisions:

It shall be the duty and responsibility of CONTRACTOR and all of its subcontractors to be familiar with and comply with 29 USC Section 651, et seq., the Occupational Safety and Health Act of 1970, as amended ("OSHA") and to enforce and comply with all provisions of this Act.

The CONTRACTOR and all of its subcontractors shall comply with all applicable requirements of Subpart P of Part 1926 of 29 C.F.R, OSHA Safety and Health Standards, Texas Health and Safety Code Section 756.023, as amended, and shall submit a unit price for the particular excavation safety systems to be utilized by the Contractor for all excavations which exceed a depth of five feet (5').

Before commencing any excavation which will exceed a depth of five feet (5'), the CONTRACTOR shall provide the Owner with detailed plans and specifications regarding the safety systems to be utilized. Said plans and specifications shall

include a certification from a Texas licensed professional engineer indicating full compliance with the OSHA provisions cited above.

6.11.3 Safety Representative: CONTRACTOR shall designate in writing a qualified and experienced safety representative (the "Safety Representative") at the site whose duties and responsibilities shall include safety training; identifying and mitigating hazardous conditions and unsafe work practices; and developing, maintaining and supervising the implementation of safe work practices and safety programs as deemed necessary and appropriate for the Project. The term "Safety Representative" includes any designated Safety Supervisor, Superintendent or Safety Manager. The Safety Representative shall exercise due diligence in the execution of all Project related safety duties. The Safety Representative shall report directly to a company executive, not an on site project manager. Upon request of OWNER, CONTRACTOR shall provide certifications or other acceptable documentation of the Safety Representative's qualifications. The following requirements will be effective as of September 1, 2010:

.1 The Safety Representative shall present certification of completion of the OSHA 30-hour Construction Industry Training Outreach Program described at: http://www.osha.gov/dte/outreach/construction_generalindustry/construction.html

.2 The Safety Representative shall verify that all construction workers (defined as persons covered by a prevailing wage determination) on the job site, whether employed by the CONTRACTOR or subcontractors, have completed the OSHA 10-hour Construction Industry Training Outreach Program described at: http://www.osha.gov/dte/outreach/construction_generalindustry/construction.html. The Safety Representative must receive a certificate of training completion before allowing a worker on site and shall have all such certificates available for inspection by the OWNER.

.3 The Safety Representative shall ensure that workers, including designated competent persons, have completed all applicable OSHA specific or other training needed to perform their job assignments. Training topics applicable to the scope of the current Project may include, but are not limited to, scaffolds, fall protection, cranes, excavations, electrical safety, tools, concrete and masonry construction, steel erection, operation of motor vehicles and mechanized equipment.

.4 The Safety Representative shall post notice on the site of the Work stating that all workers shall have completed OSHA Construction Industry Training. The Owner may require, and the Safety Representative should consider providing a means of readily identifying workers who have completed the required training to monitor compliance with these requirements.

.5 The Safety Representative shall ensure that all required OSHA and Workers Compensation notices to workers are posted in English and Spanish at one or more conspicuous locations on the work site.

6.11.4 Hazard Communication Programs: CONTRACTOR shall be responsible for coordinating any exchange of material safety data sheets or other hazard communication information required to be made available to or exchanged between or among employers at the site in accordance with laws and regulations.

6.11.5 Emergencies:

.1 In emergencies affecting the safety or protection of persons or the Work at the site or adjacent thereto, CONTRACTOR, without special instruction or authorization from OWNER or E/A, is obligated to act reasonably to prevent threatened damage, injury or loss and to mitigate damage or loss to the Work.

CONTRACTOR shall give Owner's Representative telephone notification as soon as reasonably practical and a prompt written notice if CONTRACTOR believes that any significant changes in the Work or variations from the Contract Documents have been caused thereby. If Owner's Representative determines that a change in the Contract Documents is required because of the action taken by CONTRACTOR in response to such an emergency, a Change Directive or Change Order will be issued to document the consequences of such action; otherwise OWNER will not be responsible for CONTRACTOR's emergency action.

.2 Authorized agents of CONTRACTOR shall respond immediately to call-out at any time of any day or night when circumstances warrant the presence on Project site of CONTRACTOR or his agent to protect the Work or adjacent property from damage, restriction or limitation or to take such action or measures pertaining to the Work as may be necessary to provide for the safety of the public. Should CONTRACTOR and/or their agent fail to respond and take action to alleviate such an emergency situation, OWNER may direct other forces to take action as necessary to remedy the emergency condition, and OWNER will deduct any cost of such remedial action from the funds due CONTRACTOR under this Contract.

.3 In the event there is an accident involving injury to any individual or damage to any property on or near the Work, CONTRACTOR shall provide to Owner's Representative verbal notification within one (1) hour and written notification within twenty-four (24) hours of the event and shall be responsible for recording the location of the event and the circumstances surrounding the event through photographs, interviewing witnesses, obtaining medical reports, police accident reports and other documentation that describes the event. Copies of such documentation shall be provided to Owner's Representative, for OWNER's and E/A's records, within forty-eight (48) hours of the event. Contractor shall cooperate with OWNER on any OWNER investigation of any such incident.

6.11.6 Rest Breaks:

.1 Except as provided in subsection 6.11.6.2 below, an employee performing construction activity at a construction site is entitled to a rest break of not less than ten (10) minutes for every four (4) hours worked. No employee may be required to work more than 3.5 hours without a rest break. A rest break means a break from work within working hours, excluding meal breaks, during which an employee may not work. A rest break shall be scheduled as near as possible to the midpoint of the work period.

.2 An employee is not entitled to a rest break under subsection 6.11.6.1 on any day the employee works less than 3.5 hours or spends more than half of his or her work time engaged in non-strenuous labor in a climate controlled environment.

.3 A sign describing the requirements of this Section 6.11.6 in English and Spanish shall be posted by the employer in each establishment subject to the requirement of a rest break in a conspicuous place or places where notices to employees are customarily posted, in accordance with the OWNER's then current rules for size, content, and location of such signage.

.4 The violation of Ordinance No. 20100729-047, enacted July 29, 2010, which establishes the rest break requirements set forth above, may be enforced with criminal penalties and civil remedies, as set forth in the Ordinance.

6.11.7 If the Contractor fails to carry out the Work in accordance with the Contract Documents so that a safety violation has occurred, the Owner may order the Contractor to stop the Work or any portion thereof, until the cause for such order has been eliminated. However, the right of the Owner to stop the Work under this paragraph shall not give rise to a duty on the part of the Owner to supervise the Contractor's Work or to control the Contractor's means and methods or to exercise this right for the benefit of the Contractor or any other person or entity. All time lost due to Project shut down will be the Contractor's sole responsibility, will be charged against the Contract Time, and the Contractor will be responsible for any and all expenses incurred. This provision is in addition to and supplemental to the applicable provisions of the Project's ROCIP Safety Manual.

6.11.8 Confined Space Program

.1 Contractor acknowledges and agrees that the Owner is temporarily transferring management and control of the site of the Work to the Contractor for the purpose of constructing the Project. The Contractor's responsibilities to manage the Work includes the responsibility to manage the property for purposes of compliance with 29 CFR 1926 subpart AA. To the best of Owner's knowledge and belief, Owner has provided the following information in the plans and specifications and other Contract Documents: (i) the location of each known permit space, (ii) the hazards or potential hazards in each space or the reason it is a permit space; and (iii) any precautions that the Owner or any previous contractor has implemented for the protection of employees in the permit space. This transfer will result in the Contractor being both the host employer and the controlling contractor for this portion of the Work.

6.12 Continuing the Work: CONTRACTOR shall carry on the Work and adhere to the Progress Schedule during all disputes or disagreements with OWNER. No Work shall be delayed or postponed pending resolution of any disputes or disagreements, except as OWNER and CONTRACTOR may otherwise agree in writing.

6.13 CONTRACTOR's General Warranty and Guarantee:

6.13.1 CONTRACTOR warrants and guarantees to OWNER that all Work will conform to the plans and specifications, be performed in a good and workmanlike manner in accordance with the Contract Documents and will not be defective. This warranty will survive the termination or expiration of the Contract. CONTRACTOR's warranty and guarantee hereunder excludes defects or damage caused by:

.1 abuse, modification or improper maintenance or operation by persons other than CONTRACTOR, Subcontractors or Suppliers; or

.2 normal wear and tear under normal usage.

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

.1 observations by Owner's Representative and/or E/A;

.2 recommendation of any progress or final payment by Owner's Representative;

.3 the issuance of a certificate of Substantial Completion or any payment by OWNER to CONTRACTOR under the Contract Documents;

.4 use or occupancy of the Work or any part thereof by OWNER;

.5 any acceptance by OWNER or any failure to do so;

.6 any review of a Shop Drawing or sample submittal;

.7 any inspection, test or approval by others; or

.8 any correction of defective Work by OWNER.

6.14 INDEMNIFICATION:

6.14.1 CONTRACTOR shall defend, indemnify and hold harmless OWNER, E/A, E/A'S Consultants and Sub consultants and their respective officers, directors, partners, employees, agents and other Consultants and any of them (the "INDEMNIFIED PARTIES") from and against all claims, costs, losses and damages (including but not limited to all fees and charges of engineers, architects, attorneys and other professionals and all court or arbitration or other dispute resolution costs) arising out of or resulting from the performance of the Work, provided that any such claim, cost, loss or damage:

.1 Is attributable to bodily injury, sickness, disease or death, or to injury to or destruction of tangible property (other than the work itself), including the loss of use resulting therefrom, and

.2 Is caused in whole or in part by any negligent act or omission of CONTRACTOR, any Subcontractor, any Supplier, any person or organization directly or indirectly employed by any of them to perform or furnish any of the work or anyone for whose acts any of them may be liable, regardless of whether or not caused in part by any negligence or omission of the INDEMNIFIED PARTIES hereunder or whether liability is imposed upon such INDEMNIFIED PARTY by laws and regulations regardless of the negligence of any such person or entity.

In the event that indemnification of the INDEMNIFIED PARTIES is prohibited by law, CONTRACTOR shall nonetheless be solely responsible for any liability arising out of or resulting from the performance of the Work, subject to the limitations set forth above, and shall indemnify and hold harmless the remaining INDEMNIFIED PARTIES, who may be legally indemnified, from such liability of the CONTRACTOR and the associated costs described above.

6.14.2 The indemnification obligation under paragraph 6.14.1 shall not be limited in any way by any limitation on the amount or type of damages, or compensation or benefits payable by or for CONTRACTOR or any such Subcontractor, Supplier or other person or organization under workers' compensation acts, disability benefit acts or other employee benefit acts.

6.14.3 The obligations of CONTRACTOR under paragraph 6.14.1 shall not extend to the liability of OWNER, E/A, E/A's consultants, and their officers, directors, partners, employees or agents caused primarily by negligent preparation of maps, drawings, surveys, designs or specifications upon which is placed the applicable state-authorized design professional seal of OWNER's, E/A's or E/A's consultant's officers, directors, partners, employees or agents.

6.14.4 In the event CONTRACTOR fails to follow OWNER's directives concerning use of the site, scheduling or course of construction, or engages in other conduct which proximately causes damage to property based on inverse condemnation or otherwise, then and in that event, CONTRACTOR shall indemnify OWNER against all costs resulting from such claims.

6.14.5 In the event CONTRACTOR unreasonably delays progress of the work being done by others on the site so as to cause loss for

which OWNER becomes liable, then CONTRACTOR shall indemnify OWNER from and reimburse OWNER for such loss.

6.15 Survival of Obligations: All representations, indemnifications, warranties and guarantees made in, required by or given in accordance with the Contract Documents, as well as all continuing obligations indicated in the Contract Documents, will survive final payment, completion and acceptance of the Work and termination or completion of the Agreement.

6.16 Losses from Natural Causes: Unless otherwise specified, all loss or damage to CONTRACTOR arising out of the nature of the Work to be done or from action of the elements, floods or from unforeseeable circumstances in prosecution of the Work or from unusual obstructions or difficulties which may be encountered in prosecution of the Work, shall be sustained and borne by CONTRACTOR at its own cost and expense.

6.17 Notice of Claim: Should CONTRACTOR suffer injury or damage to person or property because of any error, omission or act of OWNER or of any of OWNER's employees or agents or others for whose acts OWNER is liable, a Claim must be made to the other party within thirty (30) calendar days of the event giving rise to such injury or damage. The provisions of this paragraph 6.17 shall not be construed as a substitute for or a waiver of the provisions of any applicable statute of limitations or statute of repose.

6.18 Liquidated Damages: CONTRACTOR or its Surety shall be liable for liquidated damages for the failure of the CONTRACTOR to timely complete the Work or any portion thereof within the Contract Time.

ARTICLE 7 - OTHER WORK

7.1 OWNER may perform other work related to the Project at the site by OWNER's own forces, or let other contracts therefor, or have other work performed by utility owners. CONTRACTOR and OWNER agree to and shall use best efforts to cooperate and coordinate the Work with others performing work and other work related to the Project in order to avoid conflicts and delays in the Work. If CONTRACTOR believes that delay or additional cost is involved because of such action by OWNER, CONTRACTOR may make a Claim as provided in Article 11 or 12.

7.2 CONTRACTOR shall afford other contractors who are in a contract with OWNER and each utility owner (and OWNER, if OWNER is performing the additional work with OWNER's employees) proper and safe access to the site and a reasonable opportunity for the introduction and storage of materials and equipment and the execution of such other work and shall properly connect and coordinate the Work with theirs. Unless otherwise provided in the Contract Documents, CONTRACTOR shall do all cutting, fitting and patching of the Work that may be required to make its several parts come together properly and integrate with such other work. CONTRACTOR shall not endanger any work of others by cutting, excavating or otherwise altering their work and will only cut or alter their work with the written consent of Owner's Representative and the other contractors whose work will be affected. CONTRACTOR shall promptly remedy damage wrongfully caused by CONTRACTOR to completed or partially completed construction or to property of the OWNER or separate contractors.

7.3 If the proper execution or results of any part of CONTRACTOR's Work depends upon work performed by others under this Article 7, CONTRACTOR shall inspect such other work and promptly report to Owner's Representative in writing any delays, defects or deficiencies in such other work that render it unavailable or unsuitable for the proper execution and results of CONTRACTOR's Work. CONTRACTOR's failure to report will constitute an acceptance of such other work as fit and proper for integration with CONTRACTOR's Work except for latent or non-apparent defects and deficiencies in such other work.

7.4 OWNER shall provide for coordination of the activities of the OWNER's own forces and of each separate contractor with the Work of CONTRACTOR, who shall cooperate with them. CONTRACTOR shall participate with other separate contractors and Owner's Representative in reviewing their construction Progress Schedules when directed to do so. On the basis of such review, CONTRACTOR shall make any revisions to the construction Progress Schedule deemed necessary after a joint review and mutual agreement. The agreed upon construction Progress Schedules shall then constitute the Progress Schedules to be used by CONTRACTOR, separate contractors and OWNER until subsequently revised.

7.5 Costs caused by delays or by improperly timed activities or defective construction shall be borne by the party responsible therefor.

ARTICLE 8 - OWNER'S RESPONSIBILITIES

8.1 Prior to the start of construction, OWNER will designate in writing a person or entity to act as Owner's Representative during construction. Except as otherwise provided in these General Conditions, OWNER shall issue all communications to CONTRACTOR through Owner's Representative.

8.2 OWNER will not supervise, direct, control or have authority over or be responsible for CONTRACTOR's means, methods, techniques, sequences or procedures of construction or the safety precautions and programs incident thereto. OWNER is not responsible for any failure of CONTRACTOR to comply with laws and regulations applicable to furnishing or performing the Work. OWNER is not responsible for CONTRACTOR's failure to perform or furnish the Work in accordance with the Contract Documents. Failure or omission of OWNER to discover, or object to or condemn any defective Work or material shall not release CONTRACTOR from the obligation to properly and fully perform the Contract.

8.3 OWNER is not responsible for the acts or omissions of CONTRACTOR, or of any Subcontractor, any Supplier, or of any other person or organization performing or furnishing any of the Work. CONTRACTOR acknowledges and agrees that OWNER'S direction to perform Work in accordance with the approved Progress Schedule is not a demand for acceleration or a dictation of CONTRACTOR'S means or methods.

8.4 Information or services under the OWNER's control shall be furnished by the OWNER with reasonable promptness to avoid delay in orderly progress of the Work. The OWNER shall have a reasonable amount of time to investigate site conditions, review submittals, analyze requests for changes, and to make other decisions in the orderly administration of the Contract. CONTRACTOR must notify the OWNER in writing, if the time for the investigation, review, analysis of any submittals, required for changes or otherwise required for OWNER'S decision, impacts in any way the Critical Path of the approved Progress Schedule.

8.5 The foregoing are in addition to other duties and responsibilities of the OWNER enumerated herein and especially those in respect to Article 4 (Availability of Lands; Subsurface and Physical Conditions; Reference Points), Article 7 (Other Work) and Article 14 (Payments to CONTRACTOR and Completion).

8.6 **Notice of Claim:** Should OWNER suffer injury or damage to person or property because of any error, omission or act of CONTRACTOR or of any of CONTRACTOR's employees or agents or others for whose acts CONTRACTOR is liable, a Claim will be made to the other party within thirty (30) calendar days of receipt of actual or constructive notice of the event giving rise to such injury or damage. The provisions of this paragraph 8.6 shall not be construed as a substitute for or a waiver of the provisions of any applicable statute of limitations or statute of repose.

ARTICLE 9 - ENGINEER/ARCHITECT'S STATUS DURING CONSTRUCTION

9.1 E/A's Authority and Responsibilities:

9.1.1 The duties and responsibilities and the limitations of authority of E/A during construction, as set forth in the Contract Documents, may be assigned or assumed by the OWNER, but shall not be extended without written consent of OWNER and/or E/A. The assignment of any authority, duties or responsibilities to E/A under the Contract Documents, or under any agreement between OWNER and E/A, or any undertaking, exercise or performance thereof by E/A, is intended to be for the sole and exclusive benefit of OWNER and not for the benefit of CONTRACTOR, Subcontractor, Supplier, or any other person or organization, or for any surety or employee or agent of any of them.

9.1.2 E/A will not supervise, direct, control or have authority over or be responsible for CONTRACTOR's means, methods, techniques, sequences or procedures of construction, or the safety precautions and programs incident thereto. E/A is not responsible for any failure of CONTRACTOR to comply with laws and regulations applicable to the furnishing or performing the Work. E/A is not responsible for CONTRACTOR's failure to perform or furnish the Work in accordance with the Contract Documents. Failure or omission of E/A to discover, or object to or condemn any defective Work or material shall not release CONTRACTOR from the obligation to properly and fully perform the Contract.

9.1.3 E/A is not responsible for the acts or omissions of CONTRACTOR, or of any Subcontractor, any Supplier, or of any other person or organization performing or furnishing any of the Work.

9.1.4 If OWNER and E/A agree, E/A will review the final Application for Payment and accompanying documentation and all maintenance and operating instructions, schedules, guarantees, bonds and certificates of inspection, tests and approvals and other documentation required to be delivered by Article 14, but only to determine generally that their content complies with the requirements of, and in the case of certificates of inspections, tests and approvals that the results certified indicate compliance with, the Contract Documents.

9.1.5 The limitations upon authority and responsibility set forth in this paragraph 9.1 shall also apply to E/A's Consultants, Resident Project Representative and assistants.

9.2 E/A as Owner's Representative: E/A may be designated as the Owner's Representative under paragraph 8.1.

9.3 Visits to Site: If OWNER and E/A agree, E/A will make visits to the site at intervals appropriate to the various stages of construction as E/A deems necessary in order to observe as an experienced and qualified design professional the progress that has been made and the quality of the various aspects of CONTRACTOR's executed Work. Based on information obtained during such visits and observations, E/A will endeavor for the benefit of OWNER to determine, in general, if the Work is proceeding in accordance with the Contract Documents. E/A will not be required to make exhaustive or continuous on-site inspections to check the quality or quantity of the Work. E/A's efforts will be directed toward providing for OWNER a greater degree of confidence that the completed Work will conform generally to the Contract Documents. On the basis of such visits and on-site observations, E/A will keep OWNER informed of the progress of the Work and will endeavor to guard OWNER against defective Work. E/A's visits and on-site observations are subject to all the limitations on E/A's authority and responsibility set forth in paragraph 9.1.

9.4 Resident Project Representative: If OWNER and E/A agree, E/A will furnish a Resident Project Representative to assist E/A in providing more continuous observation of the Work. The responsibilities and authority and limitations of any such Resident Project Representative and assistants will be as provided in paragraph 9.1 and in the Supplemental General Conditions. OWNER may designate another representative or agent to represent OWNER at the site who is not E/A, E/A's consultant, agent or employee.

9.5 Clarifications and Interpretations: E/A may determine that written clarifications or interpretations of the requirements of the Contract Documents (in the form of drawings or otherwise) are necessary. Such written clarifications or interpretations will be consistent with the intent of and reasonably inferable from the Contract Documents, will be issued with reasonable promptness by Owner's Representative and will be binding on OWNER and CONTRACTOR. If OWNER or CONTRACTOR believes that a written clarification or interpretation justifies an adjustment in the Contract Amount or the Contract Times, OWNER or CONTRACTOR may make a Claim therefor as provided in Article 11 or 12.

9.6 Rejecting Defective Work: E/A will recommend that OWNER disapprove or reject Work which E/A believes to be defective, or believes will not produce a completed Project that conforms to the Contract Documents or will prejudice the integrity of the design concept of the completed Project as a functioning whole as indicated by the Contract Documents.

9.7 Shop Drawings: Refer to Division 1 for E/A's authority concerning Shop Drawings.

ARTICLE 10 - CHANGES IN THE WORK

10.1 Changes:

10.1.1 Without invalidating the Contract and without notice to any surety, OWNER may, at any time or from time to time, order additions, deletions or revisions in the Work. Such changes in the Work will be authorized by Change Order, Change Directive or Field Order. In the event that the OWNER and the CONRACTOR are unable to negotiate the terms of a Change Order for the performance of additional Work, the OWNER may, at its election, perform such additional Work with its own forces or with another contractor and such work will be considered "Other Work" in accordance with Article 7.

10.1.2 Changes in the Work shall be performed under applicable provisions of the Contract Documents, and CONTRACTOR shall proceed promptly, unless otherwise provided in the Change Order, Change Directive or Field Order. CONTRACTOR's proposals for changes in the Contract Amount and/or Contract Time shall be submitted within ten (10) Calendar Days of request by Owner's Representative, including impacts to the approved Progress Schedule, unless Owner's Representative grants an extension. OWNER will review each proposal and respond to CONTRACTOR within ten (10) Calendar Days. After review by OWNER, CONTRACTOR shall provide any supporting data requested by Owner's Representative within seven (7) Calendar Days, unless Owner's Representative grants an extension. OWNER will determine within seven (7) Calendar Days whether to pursue the change in Work.

10.1.3 CONTRACTOR shall not be entitled to an increase in the Contract Amount or an extension of the Contract Times with respect to any Work performed that is not required by the Contract Documents as amended, modified and supplemented as provided in paragraphs 3.3.1 and 3.3.2, except in the case of an emergency as provided in paragraph 6.11.5 or in the case of uncovering Work as provided in paragraph 13.4.

10.1.4 Except in the case of an emergency as provided in paragraph 6.11.5, a Change Order or Change Directive is required before CONTRACTOR commences any activities associated with a change in the Work which, in CONTRACTOR 's opinion, will result in a change in the Contract Amount and/or Contract Times.

10.1.5 If notice of any change affecting the general scope of the Work or the provisions of the Contract Documents (including, but not limited to, Contract Amount or Contract Times) is required by the provisions of any Bond to be given to a surety, the giving of any such notice will be CONTRACTOR's responsibility, and the amount of each applicable Bond will be adjusted accordingly.

10.2 Change Orders:

10.2.1 OWNER and CONTRACTOR shall execute appropriate written Change Orders covering:

.1 a change in the Work;

.2 the amount of the adjustment in the Contract Amount, if any; and

.3 the extent of the adjustment in the Contract Time, if any.

10.2.2 An executed Change Order shall represent the complete, equitable, and final amount of adjustment in the Contract Amount and/or Contract Time owed to CONTRACTOR or OWNER as a result of the occurrence or event causing the change in the Work encompassed by the Change Order.

10.3 Change Directives:

10.3.1 Without invalidating the Contract, OWNER may, by written Change Directive, using the Force Account method, order changes in the Work within the general scope of the Contract consisting of additions, deletions or other revisions, the Contract Amount and Contract Time being adjusted as necessary. "Force Account" means a basis of payment for the direct performance of Work with payment based on the actual cost of the labor, equipment and materials furnished and consideration for overhead and profit as set forth in Section 11.5, below. A Change Directive shall be used in the absence of complete and prompt agreement on the terms of a Change Order. Where practicable, any items of Work that may be agreed upon, prior to the performance of Work under this Section, will be included in a separate Change Order. For example, the cost of the installation of additional asphalt may be agreed upon based on the unit prices in the Bid.

10.3.2 If the Change Directive provides for an adjustment to the Contract Amount, the adjustment shall be based on the method provided in paragraph 11.5.

10.3.3 A Change Directive shall be effective immediately and shall be recorded later by preparation and execution of an appropriate Change Order.

10.3.4 Upon receipt of a Change Directive, CONTRACTOR shall promptly proceed with the change in the Work involved, provided, prior to the commencement of any Work under this section, the CONTRACTOR must submit its proposed Work plan, anticipated schedule, and a list of its work force and equipment proposed to be used in the Work for OWNER'S approval. Upon such approval, CONTRACTOR must promptly commence and make continuous progress in the Work. The OWNER reserves the right to withhold payment for low production or lack of progress.

10.4 Field Order:

10.4.1 Owner's Representative may authorize minor variations in the Work from the requirements of the Contract Documents which do not involve an adjustment in the Contract Amount or the Contract Times and are compatible with the design concept of the completed Project as a functioning whole as indicated by the

Contract Documents. These shall be accomplished by written Field Order and shall be binding on OWNER and on CONTRACTOR who shall perform the Work involved promptly.

10.4.2 If CONTRACTOR believes that a Field Order would require an adjustment in the Contract Amount and/or Contract Times, CONTRACTOR shall make a prompt written request to Owner's Representative for a Change Order. Any request by CONTRACTOR for an adjustment in Contract Amount and/or Contract Times must be made in writing prior to beginning the work covered by the Field Order.

10.5 No Damages for Delay: CONTRACTOR shall receive no compensation for delays or hindrances to the Work, except when direct and unavoidable extra cost to CONTRACTOR is caused by failure of OWNER to provide information or material, if any, which is to be furnished by OWNER or access to the Work and only to the extent that such acts continue after the CONTRACTOR furnishes OWNER with written notice of such failure. When such extra compensation is claimed a written statement thereof shall be presented by CONTRACTOR to OWNER and if by OWNER found correct shall be approved. If delay is caused by specific orders given by OWNER to stop work or by performance of extra Work or by failure of OWNER to provide material or necessary instructions for carrying on the Work, then such delay will entitle CONTRACTOR to an equivalent extension of time, CONTRACTOR's application for which shall, however, be subject to approval of OWNER. No such extension of time shall release CONTRACTOR or surety on its performance bond from all CONTRACTOR's obligations hereunder which shall remain in full force until discharge of the Contract. In no event shall the CONTRACTOR be entitled to any compensation or recovery of any special damages in connection with any delays, including without limitation: consequential damages, lost opportunity costs, impact damages, or other similar damages. The OWNER'S exercise of any of its rights or remedies under the Contract Documents (including without limitation ordering changes in the Work, or directing suspension, rescheduling, or correction of the Work), regardless of the extent or frequency of the OWNER'S exercise of such rights or remedies, shall not be construed as active interference in the CONTRACTOR'S performance of the Work. Except as otherwise provided herein, an extension of Contract Time, to the extent permitted under Article 12, shall be the sole remedy of the CONTRACTOR for any acknowledged delays.

ARTICLE 11 - CHANGE OF CONTRACT AMOUNT

11.1 The Contract Amount is stated in the Agreement and, including authorized adjustments, is the total amount payable by OWNER to CONTRACTOR for performance of the Work under the Contract Documents.

11.2 The original Contract Amount may not be increased by more than twenty-five percent (25%) and it may not be decreased more than twenty-five percent (25%) without the consent of the CONTRACTOR to such decrease, except in the event of a termination for convenience under paragraph 15.2 or the failure of the City Council to appropriate sufficient funding for the Project, in which events it is agreed that the consent of the CONTRACTOR will not be required.

11.3 The Contract Amount shall only be changed by a Change Order. Any claim for an adjustment in the Contract Amount shall be made by Written Notice delivered by the party making the Claim to the other party promptly (but in no event later than thirty (30) calendar days) after the start of the occurrence or event giving rise to the Claim and stating the general nature of the Claim. Notice of the amount of the Claim with supporting data shall be delivered within thirty (30) calendar days after Written Notice of Claim is delivered by claimant, and shall represent that the adjustment claimed covers all known amounts to which claimant is entitled as a result of said occurrence or event. If OWNER and

CONTRACTOR cannot otherwise agree, all Claims for adjustment in the Contract Amount shall be determined as set out in Article 16.

11.4 Determination of Value of Work:

11.4.1 The value of any Work covered by a Change Order for an adjustment in the Contract Amount will be determined by one or more of the following methods:

.1 by application of unit prices contained in the Contract Documents to the quantities of the items involved.

.2 by a mutually agreed lump sum properly itemized and supported by sufficient substantiating data, including documentation by subcontractors performing the work, to permit evaluation.

.3 by cost of Work plus CONTRACTOR's fee for all overhead costs and profit (determined as provided in paragraph 11.5).

.4 No cost will be included in the change order for time spent preparing the change order, nor will costs be included for an estimate of time to negotiate the change order costs for machinery, tools, or equipment as described in subparagraph 11.5.3

11.4.2 Before using the method described in paragraph 11.4.1.3, OWNER and CONTRACTOR agree to negotiate a Change Order using the methods identified in paragraphs 11.4.1.1 and 11.4.1.2, as appropriate, to determine the adjustment in the Contract Amount.

11.5 Cost of Work: If neither of the methods defined in paragraphs 11.4.1.1 nor 11.4.1.2 can be agreed upon before a change in the Work is commenced which will result in an adjustment in the Contract Amount, then the change in the Work will be performed by Change Directive, using the Force Account method, and payment will be made as follows:

11.5.1 For all personnel, CONTRACTOR will receive actual field cost wage rates for each hour that said personnel are actually engaged in such Work, as substantiated by its certified payroll, to which will be added an amount equal to twenty-five percent (25%) of the sum thereof as compensation for CONTRACTOR's and any effected Subcontractor's total overhead and profit. No separate charge will be made by CONTRACTOR or its Subcontractor(s) for organization or overhead expenses. In no case will the rate of wage be less than the minimum shown in the Contract for a particular category. CONTRACTOR will also receive an amount equal to 55% of the wages paid personnel, excluding the 25% compensation provided above, for CONTRACTOR's and any effected Subcontractor's cost of premiums on public liability insurance, workers' compensation insurance, social security and unemployment insurance. The actual cost of CONTRACTOR's bond(s) on the extra Work will be paid based on invoices from surety. No charge for superintendence will be made unless considered necessary and ordered by OWNER.

11.5.2 CONTRACTOR will receive the actual cost, including freight charges, of the materials used and installed on such Work, to which costs will be added a sum equal to twenty-five percent (25%) thereof as compensation for CONTRACTOR's and any effected Subcontractor's total overhead and profit. In case material invoices indicate a discount may be taken, the actual cost will be the invoice price minus the discount.

11.5.3 For machinery, trucks, power tools, or other similar equipment (the "equipment") agreed to be necessary by OWNER and CONTRACTOR, OWNER will allow CONTRACTOR the Regional and Model Year adjusted Monthly Ownership Cost divided by 176 plus the Hourly Estimated Operating Costs as given in the latest edition of the "Rental Rate Blue Book" as published by EquipmentWatch (1-800-

669-3282) for each hour that said equipment is in use on such work. The established equipment rates will be paid for each hour that the equipment is utilized in the Work. In the event that the equipment is used intermittently during the Work, full payment for an eight-hour day will be made if the equipment is not idle more than four (4) hours of the day. If the equipment is idle more than four (4) hours in a day, then payment will be made only for the actual hours worked. No additional compensation will be allowed on the equipment for CONTRACTOR's or any affected Subcontractor's overhead and profit. OWNER may accept an actual rental invoice in lieu of the method of calculation set forth in paragraph 11.5.3 for equipment rented exclusively for Force Account Work or for equipment not included in the Rental Rate Blue Book.

11.5.4 The compensation, as herein provided for, shall be received by CONTRACTOR and any affected Subcontractor as payment in full for work done by Change Directive and will include use of small tools, and total overhead expense and profit. CONTRACTOR and Owner's Representative shall compare records of work done by Change Directive at the end of each day. Copies of these records will be made upon forms provided for this purpose by OWNER and signed by both Owner's Representative and CONTRACTOR, with one copy being retained by OWNER and one by CONTRACTOR. Refusal by CONTRACTOR to sign these records within two (2) working days of presentation does not invalidate the accuracy of the record.

11.6 Unit Price Work:

11.6.1 Where the Contract Documents provide that all or part of the Work is to be unit price Work, initially the Contract Amount will be deemed to include for all unit price work an amount equal to the sum of the established unit price for each separately identified item of unit price work times the estimated quantity of each item as indicated in the Bid. The estimated quantities of items of unit price work are not guaranteed and are solely for the purpose of comparison of Bids and determining an initial Contract Amount. Determinations of the actual quantities and classifications of unit price work performed by CONTRACTOR will be made by Owner's Representative. Owner's Representative will review with CONTRACTOR the preliminary determinations on such matters before rendering a written decision thereon (by recommendation of an Application for Payment or otherwise).

11.6.2 When "plan quantity" is indicated for a Bid item, CONTRACTOR shall be paid amount specified in the Contract Documents without any measurements.

11.6.3 Each unit price will be deemed to include an amount considered by CONTRACTOR to be adequate to cover CONTRACTOR's overhead and profit for each separately identified item.

11.6.4 A Major Item is any individual Bid item in the Bid that has a total cost equal to or greater than five percent (5%) of the original Contract Amount or $50,000, whichever is greater, computed on the basis of Bid quantities and Contract unit prices.

11.6.5 OWNER or CONTRACTOR may make a Claim for an adjustment in the Contract Amount in accordance with Article 11 if:

.1 the actual quantity of any Major Item should become as much as twenty percent (20%) more than or twenty percent (20%) less than that in the Bid; or

.2 CONTRACTOR presents documentation contesting accuracy of "plan quantity" and Owner's Representative verifies quantity and determines original value is in error by five percent (5%) or more;

Provided, however, in the event a Major Item is reduced by twenty percent (20%) or more of the amount in the Bid, no additional Article 11 profit or overhead will be added, if, due to other additions in the Work, the net value of the Contract Amount is not reduced.

ARTICLE 12 - CHANGE OF CONTRACT TIMES

12.1 Working Day and Calendar Day Contracts:

12.1.1 The Contract Times (or Milestones) may only be changed by Change Order or Time Extension Request duly executed by both CONTRACTOR and Owner's Representative. Any claim for an adjustment of the Contract Times (or Milestones) shall be made by Written Notice delivered by the party making the Claim to the other party promptly (but in no event later than thirty (30) calendar days after the start of the occurrence or event giving rise to the delay) and stating the general nature of the delay. Notice of the extent of the delay with supporting data shall be delivered within thirty (30) calendar days after Written Notice of Claim is delivered by claimant, and shall represent that the adjustment claimed is the entire adjustment to which claimant is entitled as a result of said occurrence or event. If OWNER and CONTRACTOR cannot otherwise agree, all Claims for adjustment in the Contract Times (or Milestones) shall be determined as set out in Article 16. No Claim for an adjustment in the Contract Times (or Milestones) will be valid if not submitted in accordance with the requirements of this paragraph.

12.1.2 When CONTRACTOR is at fault and OWNER stops the Work, so that corrections in the Work can be made by CONTRACTOR, no extension in time will be allowed.

12.1.3 When CONTRACTOR is prevented from completing any part of the Work within the Contract Times (or Milestones) due to delay beyond the control of both OWNER and CONTRACTOR, an extension of the Contract Times (or Milestones) in an amount equal to the time lost due to such delay shall be CONTRACTOR's sole and exclusive remedy for such delay. If performance by the CONTRACTOR or OWNER is interrupted by any occurrence not occasioned by its own conduct, whether such occurrence be an act of god or the result of war, riot, civil commotion, sovereign conduct, or the conduct of a third party, then such performance will be excused for a period of time necessary to remedy its effects, provided, however, in such an event, a conference will be held within three (3) business days to establish a proposed new Progress Schedule for the Project.

12.1.4 OWNER will consider time extension requests and may grant CONTRACTOR an extension of time because of:

.1 Changes ordered in the work which justify additional time.

.2 Failure of materials or products being at the Project site due to delays in transportation or failures of Suppliers, which are not the result of CONTRACTOR's, Subcontractor's or Supplier's negligence. The request for an extension of time shall be supported by a citation of acts demonstrating that the delays are beyond CONTRACTOR's control, including, but not limited to, CONTRACTOR's efforts to overcome such delays documented as follows:

a) Copy of purchase order for delayed item(s) indicating date ordered by CONTRACTOR/ Subcontractor and date purchase order received by Supplier.

b) If item(s) require Shop Drawings or other submittal information in accordance with the Contract Documents, provide record of date

submittal(s) forwarded to Owner's Representative, date submittal(s) returned to CONTRACTOR, and date submittal(s) forwarded to Supplier.

c) Copy of document(s) from Supplier, on Supplier's letterhead, indicating date(s) item(s) would be ready for shipment and/or actual shipment date(s).

d) Copies of all correspondence between CONTRACTOR / Subcontractor and Supplier indicating CONTRACTOR / Subcontractor's efforts to expedite item(s).

e) If item(s) are being purchased by a Subcontractor, provide correspondence, meeting notes, etc., that reflect CONTRACTOR's efforts with the Subcontractor to expedite delivery of the item(s).

.3 When acts of OWNER, E/A, utility owners or other contractors employed by OWNER delay progress of work through no fault of CONTRACTOR. The CONTRACTOR will only be entitled to an extension of time for delays that affect the Critical Path of the Work and that are not caused by the CONTRACTOR.

.4 When CONTRACTOR is delayed by strikes, lockouts, fires, losses from natural causes, or other unavoidable cause or causes beyond CONTRACTOR's control.

12.2 Calendar Day Contracts:

12.2.1 Under a Calendar Day Contract, CONTRACTOR may be granted an extension of time because of unusual inclement weather, including but not limited to unusual rainfall events, which are beyond the normal rainfall recorded and expected for Austin, Texas. However, the CONTRACTOR will not be granted an extension of time for "normal rainfall", as described below.

12.2.2 "Unusual Inclement Weather" is defined as a rain event or other weather related event which occurs at the site and is of sufficient magnitude to prevent CONTRACTOR from performing units of Work critical to maintaining the Progress Schedule.

12.2.3 Baseline Rain Day Determination. "Normal rainfall" compiled by the State climatologist, based on U.S. Weather Bureau Records for Austin, Texas, is considered a part of the Calendar Day Contract, and is not a justification for an extension of time. Listed below are the number of days in each month for which no compensatory days for rainfall events ("Rain Days") in such months may be claimed:

January..... 8 days

February..... 8 days

March..... 7 days

April..... 7 days

May..... 9 days

June..... 6 days

July..... 5 days

August..... 5 days

September..... 7 days

October..... 7 days

November..... 7 days

December..... 7 days

Rain Days in addition to the baseline Rain Day determination described above will be measured with the Owner's Representative's approval at the nearest operational public weather data collection facility to the site, including but not limited to the OWNER's early warning flood gauge system.

12.2.4 CONTRACTOR may receive credit in any month for Unusual Inclement Weather, and specifically for any Rain Days in that month which exceed the number of Rain Days allocated to that month, if a Claim is made in accordance with paragraph 12.1.1 and the weather event meets the definition for "Unusual Inclement Weather", and as applicable, "Rain Day" and such claimed day is a day on which Work critical to maintaining the Progress Schedule is scheduled to be performed and is otherwise capable of being performed.

ARTICLE 13 - TESTS AND INSPECTIONS; CORRECTION, REMOVAL OR ACCEPTANCE OF DEFECTIVE WORK

13.1 Notice of Defects: Prompt notice of all defective Work of which OWNER or E/A has actual knowledge will be given to CONTRACTOR. All defective Work may be rejected, corrected or accepted as provided in Article 13. CONTRACTOR must give OWNER and E/A prompt notice of any defective Work of which CONTRACTOR has actual knowledge.

13.2 Access to Work: OWNER, E/A, E/A's Consultants, other representatives and personnel of OWNER, independent testing laboratories and governmental agencies having jurisdiction will have access to the Work at reasonable times for observing, inspecting and testing. CONTRACTOR shall provide them proper and safe conditions for such access, and advise them of CONTRACTOR's site safety procedures and programs so that they may comply therewith as applicable.

13.3 Tests and Inspections:

13.3.1 CONTRACTOR shall give timely notice of readiness of the Work for all required inspections, tests or approvals, and shall cooperate with inspection and testing personnel to facilitate required inspections or tests.

13.3.2 OWNER shall employ and pay for services of an independent testing laboratory to perform all inspections, tests or approvals required by the Contract Documents except:

.1 for inspections, tests or approvals covered by paragraphs 13.3.3 and 13.3.4 below;

.2 that costs incurred for tests or inspections conducted pursuant to paragraph 13.4.3 shall be paid as provided in paragraph 13.4.3;

.3 for reinspecting or retesting defective Work, including any associated costs incurred by the testing laboratory for cancelled tests or standby time; and

.4 as otherwise specifically provided in the Contract Documents.

13.3.3 If laws or regulations of any public body having jurisdiction require any Work (or part thereof) specifically to be inspected, tested or approved by an employee or other representative of such public body, CONTRACTOR shall assume full responsibility for arranging and obtaining such inspections, tests or approvals, pay

all costs in connection therewith and furnish Owner's Representative the required certificates of inspection or approval.

13.3.4 CONTRACTOR shall also be responsible for arranging and obtaining and shall pay all costs in connection with any inspections, tests or approvals required for OWNER's and E/A's review of submittals covering materials, equipment, and mix designs to be incorporated in the Work.

13.3.5 All testing laboratories shall meet the requirements of ASTM E-329.

13.4 Uncovering Work:

13.4.1 If any Work (or the work of others) that is to be inspected, tested or approved is covered by CONTRACTOR without written concurrence of Owner's Representative, or if any Work is covered contrary to the written request of Owner's Representative, it must, if requested by Owner's Representative, be uncovered and recovered at CONTRACTOR's expense.

13.4.2 Uncovering Work as provided in paragraph 13.4.1 shall be at CONTRACTOR's expense unless CONTRACTOR has given Owner's Representative timely notice of CONTRACTOR's intention to cover the same and Owner's Representative has not acted within five (5) working days to such notice.

13.4.3 If Owner's Representative considers it necessary or advisable that covered Work be observed, inspected or tested, CONTRACTOR shall uncover, expose or otherwise make available for observation, inspection or testing that portion of the Work in question, furnishing all necessary labor, material and equipment. If it is found that such Work is defective, CONTRACTOR shall pay all claims, costs, losses and damages caused by, arising out of or resulting from such uncovering, exposure, observation, inspection and testing and of satisfactory replacement or reconstruction (including but not limited to all costs of repair or replacement of work of others); and OWNER shall be entitled to an appropriate decrease in the Contract Amount, and may make a Claim therefor as provided in Article 11. If, however, such Work is not found to be defective, CONTRACTOR shall be allowed an increase in the Contract Amount or an extension of the Contract Times (or Milestones), or both, directly attributable to such uncovering, exposure, observation, inspection, testing, replacement and reconstruction; and CONTRACTOR may make a Claim therefor as provided in Articles 11 and 12.

13.5 OWNER May Stop the Work:

13.5.1 If the Work is defective, or CONTRACTOR fails to supply sufficient skilled workers, suitable materials, and/or equipment; or fails to furnish or perform the Work in such a way that the Work in progress or the completed Work will conform to the Contract Documents, OWNER may order CONTRACTOR to stop the Work, or any portion thereof, until the cause for such order has been eliminated; however, this right of OWNER to stop the Work shall not give rise to any duty on the part of OWNER to exercise this right for the benefit of CONTRACTOR or any surety or other party.

13.5.2 If CONTRACTOR fails to correct defective Work or submit a satisfactory plan to take corrective action, with procedure and time schedule, OWNER may order CONTRACTOR to stop the Work, or any portion thereof, until cause for such order has been eliminated, or take any other action permitted by this Contract. A notice to stop the Work, based on defects, shall not stop calendar or working days charged to the Project.

13.6 Correction or Removal of Defective Work: If required by OWNER, CONTRACTOR shall promptly, as directed, either correct all defective Work, whether or not fabricated, installed or completed, or, if the Work has been rejected by Owner's Representative, remove it from the site and replace it with Work that is not defective. CONTRACTOR shall correct or remove and replace defective Work, or submit a plan of action detailing how the deficiency will be corrected, within the time frame identified in the notice of defective Work. CONTRACTOR shall pay all claims, costs, losses and damages caused by or resulting from such correction or removal (including but not limited to all costs of repair or replacement of work of others).

13.7 Warranty period:

13.7.1 If within one year after the date of Substantial Completion or such longer period of time as may be prescribed by laws or regulations or by the terms of any applicable special guarantee required by the Contract Documents or by any specific provision of the Contract Documents (e.g. paragraph 14.11.2), any Work, including work performed after the Substantial Completion date, is found to be defective, CONTRACTOR shall promptly, without cost to OWNER and in accordance with OWNER's written instructions:

(i) correct such defective Work, or, if it has been rejected by OWNER, remove it from the site and replace it with Work that is not defective, and

(ii) satisfactorily correct or remove and replace any damage to other Work or the work of others resulting therefrom.

If CONTRACTOR does not promptly comply with the terms of such instructions, or in an emergency where delay would cause serious risk of loss or damage, OWNER may have the defective Work corrected or the rejected Work removed and replaced, and all claims, costs, losses and damages caused by or resulting from such removal and replacement (including but not limited to all costs of repair or replacement of work of others) will be paid by CONTRACTOR. The warranty period will be deemed to be renewed and recommenced in connection with the completed items of Work requiring correction.

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

13.7.3 If correction of defective Work will affect the function or use of the facility CONTRACTOR shall not proceed with correction of defective Work without prior coordination and approval of OWNER.

13.7.4 The obligations of the CONTRACTOR to perform warranty work will survive the acceptance of the Work and any termination of the Contract.

13.8 Acceptance of Defective Work: If, instead of requiring correction or removal and replacement of defective Work, OWNER decides to accept it, OWNER may do so. CONTRACTOR shall pay all claims, costs, losses and damages attributable to OWNER's evaluation of and determination to accept such defective Work. If any such acceptance occurs prior to recommendation of final payment, a Change Order will be issued incorporating the necessary revisions in the Contract Documents and compensating OWNER for the diminished value of the defective Work. If the acceptance occurs after such recommendation, an appropriate amount will be paid by CONTRACTOR to OWNER after a calculation by OWNER of the diminution in value of the defective Work.

13.9 OWNER May Correct Defective Work: If CONTRACTOR fails within a reasonable time after Written Notice of OWNER to correct defective Work, or to remove and replace rejected Work, or if CONTRACTOR fails to perform the Work in accordance with the Contract Documents, or if CONTRACTOR fails to comply with any other provision of the Contract

Documents, OWNER may, after seven (7) calendar days' Written Notice to CONTRACTOR, correct and remedy any such deficiency. If, in the opinion of the Owner's Representative, significant progress has not been made during this seven (7) calendar day period to correct the deficiency, the OWNER may exercise any actions necessary to remedy the deficiency. In exercising the rights and remedies under this paragraph, OWNER shall proceed expeditiously. In connection with such corrective and remedial action, OWNER may exclude CONTRACTOR from all or part of the site, take possession of all or part of the Work, and suspend CONTRACTOR's services related thereto, and incorporate in the Work all materials and equipment stored at the site or for which OWNER has paid CONTRACTOR but which are stored elsewhere. CONTRACTOR shall allow OWNER, its agents and employees, OWNER's other contractors, E/A and E/A's consultants access to the site to enable OWNER to exercise the rights and remedies under this paragraph. All claims, costs, losses and damages incurred or sustained by OWNER in exercising such rights and remedies will be charged against CONTRACTOR and a Change Order will be issued incorporating the necessary revisions in the Contract Documents with respect to the Work. Such claims, costs, losses and damages will include but not be limited to all costs of repair or replacement of work of others destroyed or damaged by correction, removal or replacement of CONTRACTOR's defective Work. CONTRACTOR shall not be allowed an extension of the Contract Times (or Milestones), or claims of damage because of any delay in the performance of the Work attributable to the exercise by OWNER of OWNER's rights and remedies hereunder.

ARTICLE 14 - PAYMENTS TO CONTRACTOR AND COMPLETION

14.1 Application for Progress Payment:

14.1.1 No more often than once a month, CONTRACTOR shall submit to Owner's Representative for review an Application for Payment, in a form acceptable to OWNER, filled out and signed by CONTRACTOR covering the Work completed as of the date of the Application and accompanied by such supporting documentation as is required by the Contract Documents.

14.1.2 Such applications shall not include requests for payment on account of changes in the Work which have been properly authorized by Change Directives but not yet included in Change Orders.

14.1.3 Such applications shall not include requests for payment of amounts the CONTRACTOR does not intend to pay to a Subcontractor or Supplier because of a dispute or other reason.

14.1.4 If payment is requested on the basis of materials or equipment not incorporated in the Work but delivered and suitably stored at the site or at another location agreed to in writing, the Application for Payment shall be accompanied by such bills of sale, data and other procedures satisfactory to OWNER substantiating OWNER's title to such materials or equipment or otherwise protecting OWNER's interest. Payment on account of such materials or equipment will not include any amount for CONTRACTOR's overhead or profit or relieve CONTRACTOR of its obligation to protect and install such materials or equipment in accordance with the requirements of the Contract and to restore damaged or defective Work. If materials or equipment are stored at another location, at the direction of the OWNER they shall be stored in a bonded and insured facility, accessible to E/A and OWNER, and shall be clearly marked as property of OWNER. Title to materials delivered to the site of the Work or a staging area will pass to OWNER upon payment by OWNER without the necessity for further documentation. Risk of loss will not pass to OWNER until acceptance.

14.1.5 Where the original Contract Amount is less than $400,000, OWNER will pay CONTRACTOR total amount of approved Application for Payment, less ten percent (10%) of amount thereof, which ten percent (10%) will be retained until final payment, less all previous payments and less all other sums that may be retained by OWNER under the terms of this Agreement. Where the original Contract Amount is $400,000 or more, OWNER will pay CONTRACTOR total amount of approved Application for Payment, less five percent (5%) of amount thereof, which five percent (5%) will be retained until final payment, less all previous payments and less all other sums that may be retained by OWNER under the terms of this Agreement. In either case, if the Work is near completion and delay occurs due to no fault or neglect of CONTRACTOR, OWNER may pay a portion of the retained amount to CONTRACTOR. CONTRACTOR, at OWNER's option, may be relieved of the obligation to complete the Work and, thereupon, CONTRACTOR shall receive payment of the balance due under the Contract subject to the conditions stated under paragraph 15.2. A Subcontractor may submit a written request to the CONTRACTOR and Project Manager requesting release of retainage for work by the Subcontractor that has been completed and approved. The Project Manager will evaluate the request and if it is approved, the Project Manager will request the CONTRACTOR to include the request for release of an appropriate amount of retainage in the next Pay Application.

14.1.6 Applications for Payment shall include the following documentation:

.1 updated Progress Schedule;

.2 monthly subcontractor report;

.3 any other documentation required under the Supplemental General Conditions.

14.2 CONTRACTOR's Warranty of Title: CONTRACTOR warrants and guarantees that title to all Work, materials and equipment covered by any Application for Payment, whether incorporated in the Project or not, will pass to OWNER free and clear of all Liens no later than the time of payment to CONTRACTOR.

14.3 Review of Applications for Progress Payment:

14.3.1 Owner's Representative will, within seven (7) calendar days after receipt of each Application for Payment, either indicate a recommendation for payment and forward the Application for processing by OWNER, or return the Application to CONTRACTOR indicating Owner's Representative's reasons for refusing to recommend payment. In the latter case, CONTRACTOR shall make the necessary corrections and resubmit the Application.

14.3.2 Owner's Representative's recommendation of any payment requested in an Application for Payment will constitute a representation by Owner's Representative, based upon Owner's Representative's on-site observations of the executed Work and on Owner's Representative's review of the Application for Payment and the accompanying data and schedules, that to the best of Owner's Representative's knowledge, information and belief:

.1 the Work has progressed to the point indicated; and

.2 the quality of the Work is generally in accordance with the Contract Documents (subject to an evaluation of the Work as a functioning whole prior to or upon Substantial Completion, to the results of any subsequent tests called for in the Contract Documents, to a final determination of quantities and classifications for unit price Work, and to any other qualifications stated in the recommendation).

14.3.3 By recommending any such payment, Owner's Representative will not thereby be deemed to have represented that:

.1 exhaustive or continuous on-site inspections have been made to check the quality or the quantity of the Work;

.2 examination has been made to ascertain how or for what purpose CONTRACTOR has used money previously paid on account of the Contract Amount;

.3 CONTRACTOR's construction means, methods, techniques, sequences or procedures have been reviewed; or

.4 that there may not be other matters or issues between the parties that might entitle CONTRACTOR to be paid additionally by OWNER or entitle OWNER to withhold payment to CONTRACTOR.

14.4 Decisions to Withhold Payment:

14.4.1 OWNER may withhold or nullify the whole or part of any payment to such extent as may be necessary on account of:

.1 defective Work not remedied;

.2 third party Claims filed or reasonable evidence indicating probable filing of such Claims;

.3 failure of CONTRACTOR to make payments properly to Subcontractors for labor, materials or equipment;

.4 reasonable evidence that the Work cannot be completed for the unpaid balance of the Contract Amount;

.5 damage to OWNER or another contractor;

.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 failure of CONTRACTOR to submit a schedule of values in accordance with the Contract Documents;

.8 failure of CONTRACTOR to submit a submittal schedule in accordance with the Contract Documents;

.9 failure of CONTRACTOR to submit and update a construction Progress Schedule in accordance with the Contract Documents;

.10 failure of CONTRACTOR to maintain a record of changes on drawings and documents;

.11 failure of CONTRACTOR to maintain weekly payroll reports and, as applicable, provide copies of reports in a timely manner upon request of OWNER;

.12 failure of CONTRACTOR to submit monthly subcontractor reports;

.13 CONTRACTOR's neglect or unsatisfactory prosecution of the Work, including failure to clean up;

.14 failure of CONTRACTOR to comply with the Austin City Code, Chapter 2-9-A, as amended, "Minority-Owned and Women-Owned Business Enterprise Procurement Program;" or

.15 failure of CONTRACTOR to comply with any provision of the Contract Documents.

14.4.2 When the above reasons for withholding payment are removed, CONTRACTOR shall resubmit a statement for the value of Work performed. Payment will be made within thirty (30) calendar days of receipt of approved Application for Payment.

14.4.3 Subcontractors may request Partial Payment when the OWNER withholds payment of an invoice to the CONTRACTOR for any reason listed in Section 14.4.1. If payment is withheld by the OWNER, the CONTRACTOR shall notify all affected Subcontractors within two (2) working days of notice that payment is being withheld. Upon notification, Subcontractors may submit a formal written request for Partial Payment to the CONTRACTOR and OWNER. If directed by the OWNER, the CONTRACTOR shall within three (3) working days resubmit to the OWNER an invoice for the same period that includes only the work performed by the requesting Subcontractors during this period. The OWNER will review this resubmitted invoice in accordance with Section 14.3.1. Upon receipt of payment for the resubmitted invoice, CONTRACTOR shall pay the subcontractor within ten (10) Calendar Days in accordance with Section 6.4.7.

14.5 Delayed Payments: Should OWNER fail to make payment to CONTRACTOR of sum named in any Application for Payment within thirty (30) calendar days after the day on which OWNER received the mutually acceptable Application for Payment, then OWNER will pay to CONTRACTOR, in addition to sum shown as due by such Application for Payment, interest thereon at the rate specified in Government Code, Section 2251.025(b) from date due until fully paid, which shall fully liquidate any injury to CONTRACTOR growing out of such delay in payment.

14.6 Arrears: No money shall be paid by OWNER upon any claim, debt, demand or account whatsoever, to any person, firm or corporation who is in arrears to City for taxes; and City shall be entitled to counterclaim and automatically offset against any such debt, claim, demand or account in the amount of taxes so in arrears and no assignment or transfer of such debt, claim, demand or account after said taxes are due, shall affect the right of OWNER to so offset said taxes, and associated penalties and interest if applicable, against the same.

14.7 Substantial Completion:

14.7.1 When the CONTRACTOR considers that the Work, or a portion thereof which the OWNER agrees to accept separately, is substantially complete, the CONTRACTOR shall notify Owner's Representative and request a determination as to whether the Work or designated portion thereof is substantially complete. If Owner's Representative does not consider the Work substantially complete, Owner's Representative will notify CONTRACTOR giving reasons therefor. After performing any required Work, CONTRACTOR shall then submit another request for Owner's Representative to determine Substantial Completion. If Owner's Representative considers the Work substantially complete, Owner's Representative will prepare and deliver a certificate of Substantial Completion which shall establish the date of Substantial Completion, shall include a punch list of items to be completed or corrected before final payment, shall establish the time within which CONTRACTOR shall finish the punch list, and shall establish responsibilities of the OWNER and CONTRACTOR for security, maintenance, heat, utilities, damage to the Work, warranty and insurance. Failure to include an item on the punch list does not alter the responsibility of CONTRACTOR to complete all Work in accordance with the Contract Documents. If a Certificate of Occupancy is required by public authorities having jurisdiction over the Work, said certificate shall be issued before the Work or any portion thereof is considered substantially complete. The certificate of Substantial Completion shall be signed by OWNER and CONTRACTOR to evidence acceptance of the responsibilities assigned to them in such certificate.

14.7.2 OWNER shall have the right to exclude CONTRACTOR from the Work after the date of Substantial Completion, but OWNER will allow CONTRACTOR reasonable access to complete or correct items on the punch list and complete warranty work.

14.8 Partial Utilization: Use by OWNER, at OWNER's option, of any substantially completed part of the Work which: (i) has specifically been identified in the Contract Documents, or (ii) OWNER and CONTRACTOR agree constitutes a separately functioning and usable part of the Work that can be used by OWNER for its intended purpose without significant interference with CONTRACTOR's performance of the remainder of the Work, may be accomplished prior to Substantial Completion of all the Work in accordance with the following:

14.8.1 OWNER at any time may request CONTRACTOR to permit OWNER to use any such part of the Work which OWNER believes to be ready for its intended use and substantially complete. If CONTRACTOR agrees that such part of the Work is substantially complete, CONTRACTOR shall certify to Owner's Representative that such part of the Work is substantially complete and request Owner's Representative to issue a certificate of substantial Completion for that part of the Work. CONTRACTOR at any time may notify Owner's Representative that CONTRACTOR considers any such part of the Work ready for its intended use and substantially complete and request Owner's Representative to issue a certificate of Substantial Completion for that part of the Work. The provisions of paragraphs 14.7.1 and 14.7.2 will apply with respect to certification of Substantial Completion of that part of the Work and the division of responsibility in respect thereof and access thereto.

14.8.2 Such partial utilization is authorized by public authorities having jurisdiction over the Work.

14.9 Final Inspection: Upon Written Notice from CONTRACTOR that the entire Work or an agreed portion thereof is complete, Owner's Representative will make a final inspection with CONTRACTOR and provide Written Notice of all particulars in which this inspection reveals that the Work is incomplete or defective. CONTRACTOR shall immediately take such measures as are necessary to complete such Work or remedy such deficiencies.

14.10 Final Application for Payment: CONTRACTOR may make application for final payment following the procedure for progress payments after CONTRACTOR has completed all such corrections to the satisfaction of Owner's Representative and delivered the following documents:

14.10.1 Affidavit by CONTRACTOR certifying the payment of all debts and claims;

14.10.2 Three (3) complete operating and maintenance manuals, each containing maintenance and operating instructions, schedules, guarantees, and other documentation required by the Contract Documents;

14.10.3 Record documents (as provided in paragraph 6.10);

14.10.4 Consent of surety, if any, to final payment. If surety is not provided, complete and legally effective releases or waivers (satisfactory to OWNER) of all claims arising out of or filed in connection with the Work;

14.10.5 Certificate evidencing that insurance required by the Supplemental General Conditions will remain in force after final payment and through the warranty period;

14.10.6 Non-Use of Asbestos Affidavit (After Construction);

14.10.7 Subcontractor report and all other documentation necessary for evaluation of CONTRACTOR's fulfillment of the Contract MBE/WBE or DBE goals;

14.10.8 Documentation of notice to claimants, to the extent applicable and subject to subparagraph 14.11.4; and

14.10.9 Any other documentation called for in the Contract Documents.

14.11 Final Payment and Acceptance:

14.11.1 If, on the basis of observation of the Work during construction, final inspection, and review of the final Application for Payment and accompanying documentation as required by the Contract Documents, Owner's Representative is satisfied that the Work has been completed and CONTRACTOR's other obligations under the Contract Documents have been fulfilled and there are no outstanding claims, Owner's Representative will recommend the final Application for Payment and thereby notify the OWNER, who will pay to CONTRACTOR the balance due CONTRACTOR under the terms of the Contract. If the sole remaining unfinished item to complete the Work is the reestablishment of vegetation, CONTRACTOR may execute a revegetation letter with fiscal posted (letter of credit) to ensure completion of this item. This Work must be accomplished within one hundred twenty (120) Calendar Days of the date of Final Completion of the Work. When the permanent erosion control has been established, OWNER will initiate an inspection for final acceptance of the erosion controls. If the revegetation is not completed within the one hundred twenty (120) Calendar Days, OWNER, at its option, may complete the Work using the posted fiscal.

14.11.2 If the Contract measures Contract Time to Final Completion, rather than Substantial Completion, Owner's Representative will issue a letter of final acceptance to CONTRACTOR which establishes the Final Completion date and initiates the one-year warranty period. If the sole remaining unfinished item to complete the Work is the reestablishment of vegetation and CONTRACTOR has executed a revegetation letter with fiscal posted (letter of credit) to ensure completion of this item, the Owner's Representative will issue a letter of conditional acceptance to CONTRACTOR which established the Final Completion date and initiates the one-year warranty period.

14.11.3 Final payment is considered to have taken place when CONTRACTOR or any of its representatives negotiates OWNER's final payment check, whether labeled final or not, for cash or deposits check in any financial institution for its monetary return.

14.11.4 The OWNER will withhold funds sufficient to cover the amount of any unresolved contract claims from final payment for six months under the following limited conditions:

.1 CONTRACTOR must provide written notice to the claimant (via certified mail or hand delivery) that (i) OWNER will hold funds in the amount of the disputed claim for six (6) months from the date of the receipt of the notice and (ii) CONTRACTOR and the claimant have certain alternative dispute resolution rights; and

.2 CONTRACTOR must provide OWNER with a copy of the receipted notice.

Provided the claimant has received notice under this section, OWNER will release the withheld funds, if the CONTRACTOR provides a bond in substantial compliance with the provisions of Section 52.231 of the Texas Property Code; when the OWNER receives a settlement or release of the claim with accompanying instructions regarding payment; upon resolution of the claim in litigation, if suit is filed within such six (6) month period and the OWNER receives written notice of such filing; or when such six (6) month period has passed, if no such bond, settlement, release, or notice of filing of suit have been received. The above provisions notwithstanding, if efforts to timely resolve a disputed claim are not

being made to OWNER'S reasonable satisfaction, OWNER may, in its complete discretion, file an interpleader action and deposit the withheld funds in the registry of a court of competent jurisdiction. In addition, CONTRACTOR must include a provision in each of its subcontracts that the prevailing party in any litigation arising thereunder will be entitled to recover its costs of court and reasonable attorney's fees.

14.12 Waiver of Claims: The making and acceptance of final payment will constitute:

14.12.1 a waiver of claims by OWNER against CONTRACTOR, except claims arising from unsettled claims, from defective Work appearing after final inspection, from failure to comply with the Contract Documents or the terms of any warranty specified therein, or from CONTRACTOR's continuing obligations under the Contract Documents; and

14.12.2 a waiver of all claims by CONTRACTOR against OWNER other than those previously made in writing and still unsettled.

ARTICLE 15 - SUSPENSION OF WORK AND TERMINATION

15.1 OWNER May Suspend Work Without Cause: At any time and without cause, OWNER may suspend the Work or any portion thereof for a period of not more than ninety (90) calendar days by Written Notice to CONTRACTOR which will fix the date on which the Work will be resumed. CONTRACTOR shall resume the Work on the date so fixed. CONTRACTOR shall be allowed an adjustment in the Contract Amount or an extension of the Contract Times, or both, directly attributable to any such suspension if CONTRACTOR makes an approved Claim therefor as provided in Articles 11 and 12.

15.2 OWNER May Terminate Without Cause: Upon seven (7) calendar days' Written Notice to CONTRACTOR, OWNER may, without cause and without prejudice to any right or remedy of OWNER, elect to terminate the Agreement. In such case, CONTRACTOR shall be paid (without duplication of any items):

15.2.1 for completed and acceptable Work executed in accordance with the Contract Documents prior to the effective date of termination;

15.2.2 for reasonable demobilization costs;

15.2.3 for anticipated profits on completed and accepted Work not previously paid and not included in separate pay items calculated to date of termination but not for anticipated profit on the entire Contract not previously paid, unabsorbed overhead, or lost opportunity; and

15.2.4 for all claims incurred in settlement of terminated contracts with Subcontractors, Suppliers and others, including for anticipated profits on completed and accepted Work not previously paid and not included in separate pay items calculated to date of termination but not for anticipated profit on the entire Contract not previously paid, unabsorbed overhead, or lost opportunity. CONTRACTOR agrees to negotiate in good faith with Subcontractors, Suppliers and others to mitigate OWNER's cost.

15.3 OWNER May Terminate With Cause:

15.3.1 Upon the occurrence of any one or more of the following events:

.1 if CONTRACTOR persistently fails to perform the Work in accordance with the Contract Documents;

.2 if CONTRACTOR disregards laws or regulations of any public body having jurisdiction;

.3 if CONTRACTOR disregards the authority of Owner's Representative;

.4 if CONTRACTOR makes fraudulent statements;

.5 if CONTRACTOR fails to maintain a work force adequate to accomplish the Work within the Contract Time;

.6 if CONTRACTOR fails to make adequate progress and endangers successful completion of the Contract; or

.7 if CONTRACTOR otherwise violates in any substantial way any provisions of the Contract Documents;

OWNER may, after giving CONTRACTOR (and the surety, if any) seven (7) calendar days Written Notice terminate the services of CONTRACTOR. OWNER, at its option, may proceed with negotiation with surety for completion of the Work. Alternatively, OWNER may under these circumstances exclude CONTRACTOR from the site and take possession of the Work (without liability to CONTRACTOR for trespass or conversion), incorporate in the Work all materials and equipment stored at the site or for which OWNER has paid CONTRACTOR but which are stored elsewhere, and finish the Work as OWNER may deem expedient. In such case CONTRACTOR shall not be entitled to receive any further payment until the Work is finished. If the unpaid balance of the Contract Amount exceeds all claims, costs, losses and damages sustained by OWNER arising out of or resulting from completing the Work, such excess will be paid to CONTRACTOR. If such claims, costs, losses and damage exceed such unpaid balance, CONTRACTOR or surety shall pay the difference to OWNER. In the event that a termination for cause is found to be wrongful, the termination shall be converted to a termination without cause as set forth in Section 15.2 and CONTRACTOR'S remedy for wrongful termination is limited to the recovery of the payments permitted for termination without cause as set forth in Section 15.2.

15.3.2 Where CONTRACTOR's services have been so terminated by OWNER, the termination will not affect any rights or remedies of OWNER against CONTRACTOR and surety then existing or which may thereafter accrue. Any retention or payment of moneys due CONTRACTOR by OWNER will not release CONTRACTOR from liability. In the event OWNER terminates Contract with cause, OWNER may reject any and all Bids submitted by CONTRACTOR for up to three (3) years after the date of such termination. These Progressive Sanctions will be administered in accordance with the City of Austin Purchasing Office Probation, Suspension, and Debarment Procedures for Vendors, which include notice and an opportunity for a hearing.

15.4 CONTRACTOR May Stop Work or Terminate: If through no act or fault of CONTRACTOR, the Work is suspended for a period of more than ninety (90) calendar days by OWNER or under an order of court or other public authority, or (except during disputes) Owner's Representative fails to forward for processing any mutually acceptable Application for Payment within thirty (30) calendar days after it is submitted, or (except during disputes) OWNER fails for sixty (60) calendar days after it is submitted to pay CONTRACTOR any sum finally determined by OWNER to be due, then CONTRACTOR may, upon seven (7) calendar days' Written Notice to OWNER, and provided OWNER does not remedy such suspension or failure within that time, terminate the Agreement and recover from OWNER payment on the same terms as provided in paragraph 15.2. In lieu of terminating the Agreement and without prejudice to any other right or remedy, if (except during disputes) Owner's Representative has failed to forward for processing any mutually acceptable Application for Payment within thirty (30) calendar days after it is submitted, or (except during disputes)

OWNER has failed for sixty (60) calendar days after it is submitted to pay CONTRACTOR any sum finally determined by OWNER to be due, CONTRACTOR may upon seven (7) calendar days' Written Notice to OWNER stop the Work until payment of all such amounts due CONTRACTOR, including interest thereon. The provisions of this paragraph 15.4 are not intended to preclude CONTRACTOR from making a Claim under Articles 11 and 12 for an increase in Contract Amount or Contract Times or otherwise for expenses or damage directly attributable to CONTRACTOR's stopping Work as permitted by this paragraph.

15.5 Discretionary Notice to Cure: In its complete discretion, OWNER may, but is not required to, provide a Notice to Cure to CONTRACTOR and its surety to cure an event of default described above and/or an anticipatory breach of contract and, if required by OWNER, to attend a meeting with OWNER, regarding the Notice to Cure, the event of default, and/or the anticipatory breach of contract. The Notice to Cure will set forth the time limit in which the cure is to be completed or commenced and diligently prosecuted. Upon receipt of any Notice to Cure, CONTRACTOR shall prepare a report describing its program and measures to affect the cure of the event of default and/or anticipatory breach of contract within the time required by the Notice to Cure. The CONTRACTOR'S report must be delivered to OWNER at least three (3) days prior to any requested meeting with the OWNER and surety.

15.6 Bankruptcy: If CONTRACTOR declares bankruptcy or is adjudged bankrupt or makes an assignment for the benefit of creditors or if a receiver is appointed for the benefit of creditors or if a receiver is appointed by reason of CONTRACTOR'S insolvency, CONTRACTOR may be unable to perform this Contract in accordance with the Contract requirements. In such an event, OWNER may demand CONTRACTOR or its successor in interest provide OWNER with adequate assurance of CONTRACTOR'S future performance in accordance with the terms and conditions of the Contract. If CONTRACTOR fails to provide adequate assurance of future performance to OWNER'S reasonable satisfaction within ten (10) days of such a request, OWNER may terminate the CONTRACTOR'S services for cause or without cause, as set forth above. If CONTRACTOR fails to provide timely adequate assurance of its performance and actual performance, OWNER may prosecute the Work with its own forces or with other contractors on a time and material or other appropriate basis and the cost of which will be charged against the Contract balance.

15.7 Duty to Mitigate: In the event of any termination or suspension under this Contract, the CONTRACTOR agrees to and shall take all reasonable actions to mitigate its damages and any and all claims which may be asserted against the OWNER.

15.8 Responsibility during Demobilization: While demobilizing, the CONTRACTOR will take all necessary and reasonable actions to preserve and protect the Work, the site and other property of the OWNER or others at the site.

ARTICLE 16 - DISPUTE RESOLUTION

16.1 Filing of Claims:

16.1.1 Claims arising from the circumstances identified in paragraphs 3.2, 4.1, 4.2.2, 4.2.4, 6.4.2, 6.11.5.2, 6.17, 7.5, 8.6, 9.5, 10.4.2, 13.4.3, 13.8, 13.9, 15.1, 15.2, 15.3, or 15.4, or other occurrences or events, shall be made by Written Notice delivered by the party making the Claim to the other party within thirty (30) calendar days after the start of the occurrence or event giving rise to the Claim and stating the general nature of the Claim. Notice of the amount of the Claim with supporting data shall be delivered in writing within thirty (30) calendar days after Written Notice of Claim is delivered by claimant and shall represent that the adjustment claimed covers all known amounts and/or extensions of time to which claimant is entitled.

16.1.2 Within thirty (30) calendar days of receipt of notice of the amount of the Claim with supporting data, Owner's Representative and CONTRACTOR shall meet to discuss the Claim, after which an offer of settlement or notification of no settlement offer will be made to claimant. If claimant is not satisfied with the proposal presented, claimant shall have thirty (30) calendar days in which to: (i) submit additional supporting data requested by the other party; (ii) modify the initial Claim; or (iii) request Alternative Dispute Resolution.

16.2 Alternative Dispute Resolution:

16.2.1 If a dispute exists concerning a Claim, the parties agree to use the following procedure prior to pursuing any other available remedies. OWNER reserves the right to include the E/A as a party.

16.2.2 Negotiating with Previously Uninvolved Personnel: Either party may make a written request for a meeting to be held between representatives of each party within fourteen (14) Calendar Days of the request or such later period that the parties may agree to. Each party shall endeavor to include, at a minimum, one (1) previously uninvolved senior level decision maker (an owner, officer, or employee of each organization) empowered to negotiate on behalf of their organization. If a previously uninvolved senior level decision maker is unavailable due to the size of the CONTRACTOR'S organization or any other reason, the CONTRACTOR shall nonetheless provide an appropriate senior level decision maker for the meeting. The purpose of this and any subsequent meetings will be good faith negotiations of the matters constituting the dispute. Negotiations shall be concluded within thirty (30) Calendar Days of the first meeting, unless mutually agreed otherwise. This step may be waived by a written agreement signed by both parties, in which event the parties may proceed directly to mediation as described below.

16.2.3 Mediation:

.1 If the procedure described in 16.2.2 proves unsuccessful or is waived pursuant to its terms, the parties shall initiate the mediation process. OWNER and CONTRACTOR agree to select within thirty (30) calendar days a mediator trained in mediation skills, to assist with resolution of the dispute. OWNER and CONTRACTOR agree to act in good faith in the selection of the mediator and to give consideration to qualified individuals nominated to act as mediator. Nothing in this agreement prevents the parties from relying on the skills of a person who also is trained in the subject matter of the dispute and/or a contract interpretation expert. Should the parties fail to agree on a mediator within thirty (30) calendar days of initiation of the mediation process, the parties agree to ask the Travis County Dispute Resolution Center to select a qualified individual, which selection shall be binding on the parties.

.2 Mediation is a forum in which an impartial person, the mediator, facilitates communication between parties to promote reconciliation, settlement, or understanding among them. The parties hereby agree that mediation, at a minimum, shall provide for (i) conducting an on-site investigation, if appropriate, by the mediator for fact gathering purposes, (ii) a meeting of all parties for the exchange of points of view and (iii) separate meetings between the mediator and each party to the dispute for the formulation of resolution alternatives. The parties agree to participate in mediation in good faith for up to thirty (30) calendar days from the date of the first mediation session, unless mutually agreed otherwise. Should the parties fail to reach a resolution of the dispute through mediation, then each party is released to pursue other remedies available to them.

16.3 Resolution of Disputes between Contractor and Subcontractor or Supplier: If a dispute exists concerning a claim between a CONTRACTOR and a Subcontractor or Supplier, the CONTRACTOR agrees to participate with such Subcontractor and/or Supplier in a process substantially paralleling the steps set out in paragraphs 16.1 and 16.2 above, including the delivery of written notices, submission of supporting data, negotiation with previously uninvolved personnel, and, if such alternative dispute resolution process is unsuccessful, mediation between the parties to the claim. If the CONTRACTOR and Subcontractor or Supplier agreement provides an alternative dispute resolution process, which provides substantially equivalent rights to those set forth herein, it may be followed, unless the CONTRACTOR and affected Subcontractor or Supplier agree to follow the process outlined above. The OWNER is not a party to the alternative dispute resolution process between the CONTRACTOR and Subcontractor or Supplier and will not pay any costs incurred in the process. Each party will be responsible for its own expenses incurred in the process, which will include an equal share of the mediation expenses, unless otherwise determined by the mediator. NOTICE: THE PROCESS SET FORTH HEREIN IS NOT A SUBSTITUTE FOR THE STATUTORY PAYMENT BOND CLAIM PROCESS.

16.4 Claim Calculation:

16.4.1 Delay Claims: The intent of paying for delay damages is to reimburse the CONTRACTOR for actual expense arising out of a compensable delay. No profit or force account markups, other than labor burden, will be allowed for delay claims by the CONTRACTOR seeking reimbursement for expenses arising out of an alleged event of delay. No consequential damages will be allowed to the CONTRACTOR in connection with any claimed delays. If the CONTRACTOR requests compensation for delay damages and the delay is determined to be compensable, then standby equipment costs and project overhead compensation will be based on the duration of the compensable delay and the following:

.1 Standby equipment costs will not be allowed during periods when the equipment would have otherwise been idle. Standby equipment time will not exceed more than eight (8) hours per twenty-four (24) hour day, forty (40) hours per week, and one hundred seventy-six (176) hours per month. Standby equipment costs will be paid at 50 percent (50%) of the applicable Rental Rate Blue Book rates and calculated by dividing the monthly rate by one hundred seventy-six (176), multiplying the result by the number of standby hours and multiplying that number by the regional adjustment factor and the rate adjustment factor contained in the Blue Book. Operating costs will not be allowed.

.2 Project overhead will be determined from actual costs that the CONTRACTOR will be required to document. Project overhead is defined as the administrative and supervisory expenses incurred at the work site and will not include home office overhead.

16.4.2 General: Except as limited with respect to delay claims, as set forth above, the criteria set forth in Section 11.4.1 may be used as a basis to calculate an adjustment in the Contract Amount in the resolution of a claim, provided that there will be no compensation for home office overhead.

16.5 MBE/WBE Program Progressive Sanctions: CONTRACTOR is subject to progressive sanctions for failure of CONTRACTOR to comply with Austin City Code, Chapter 2-9A, as amended: "Minority-owned and Women-owned Business Enterprise Procurement Program." Available sanctions for Program violations are set forth in Program rules adopted by the Small and Minority Business Resources Department (SMBR), as amended, and may include the following progressive sanctions for Program violations within a rolling 24-month period: (i) a period of probation for up to six (6) months for the first violation (ii) a period of suspension from bidding for up to 24 months for the second violation, and (iii) a period of

debarment for up to five (5) years for the third violation. If the CONTRACTOR engages in more than one of the violations listed below at any given time, OWNER has the discretion to determine whether such actions should be counted as multiple violations of the MBE/WBE Ordinance. Program violations include:

.1 providing false or misleading information to the OWNER in connection with the submission of a Bid, responses to request for qualifications or Proposals, Good Faith Efforts documentation, post award compliance or other Program operations;

.2 substituting M/WBE Subcontractors without first receiving approval for such substitutions;

.3 failure to comply with the approved Compliance Plan without an approved request for a change, an approved Change Order or other approved change to the Contract;

.4 violation of any other provision of the "Minority-owned and Women-owned Business Enterprise Procurement Program";

.5 providing false or misleading information to the OWNER in connection with an application for or challenge to certification, recertification or decertification as a MBE/WBE; and

.6 bid shopping.

The Progressive Sanctions will be administered in accordance with the City of Austin Purchasing Office Probation, Suspension, and Debarment Procedures for Vendors, which includes notice and an opportunity for a hearing.

ARTICLE 17 – MISCELLANEOUS

17.1 Venue: In the event of any suit at law or in equity involving the Contract, venue shall be exclusively in Travis County, Texas and the laws of the State of Texas shall apply to the interpretation and enforcement of the Contract.

17.2 Extent of Agreement: This Contract represents the entire and integrated agreement between the OWNER and CONTRACTOR with respect to the subject matter hereof and supersedes all prior negotiations, representations or agreements, either written or oral.

17.3 Cumulative Remedies: The rights and remedies available to the parties are not to be construed in any way as a limitation of any rights and remedies available to any or all of them which are otherwise imposed or available by laws or regulations, by special warranty or guarantees or by other provisions of the Contract Documents, and the provisions of this paragraph will be as effective as if repeated specifically in the Contract Documents in connection with each particular duty, obligation, right and remedy to which they apply. Specifically, the OWNER is not required to only assess liquidated damages, and OWNER may elect to pursue its actual damages resulting from the failure of the CONTRACTOR to complete the Work in accordance with the requirements of the Contract Documents.

17.4 Severability: If any word, phrase, clause, sentence or provision of the Contract, or the application of same to any person or set of circumstances is for any reason held to be unconstitutional, invalid or unenforceable, that finding shall only effect such word, phrase, clause, sentence or provision, and such finding shall not affect the remaining portions of this Contract; this being the intent of the parties in entering into the Contract; and all provisions of the Contract are declared to be severable for this purpose.

17.5 Independent Contractor: The Contract shall not be construed as creating an employer/employee relationship, a partnership, or a joint venture. CONTRACTOR is an independent contractor and CONTRACTOR's services shall be those of an independent contractor. CONTRACTOR agrees and understands that the Contract does not grant any rights or privileges established for employees of OWNER.

17.6 Prohibition of Gratuities: OWNER may, by Written Notice to CONTRACTOR, terminate the Contract without liability if is determined by OWNER that gratuities were offered or given by CONTRACTOR or any agent or representative of CONTRACTOR to any officer or employee of OWNER with a view toward securing the Contract or securing favorable treatment with respect to the awarding or amending or the making of any determinations with respect to the performing of such Contract. In the event the Contract is terminated by OWNER pursuant to this provision, OWNER shall be entitled, in addition to any other rights and remedies, to recover or withhold the amount of the cost incurred by CONTRACTOR in providing such gratuities.

17.7 Prohibition Against Personal Interest in Contracts: No officer, employee, independent consultant, or elected official of OWNER who is involved in the development, evaluation, or decision-making process of the performance of any solicitation shall have a financial interest, direct or indirect, in the Contract resulting from that solicitation. Any violation of this provision, with the knowledge, expressed or implied, of CONTRACTOR shall render the Contract voidable by OWNER.

17.8 OWNER'S Right to Audit:

17.8.1 Records means all records generated by or on behalf of CONTRACTOR and each Subcontractor and Supplier of CONTRACTOR, whether paper, electronic, or other media, which are in any way related to performance of or compliance with this Contract, including, without limitation:

.1 accounting records;

.2 written policies and procedures;

.3 subcontract files (including proposals of successful and unsuccessful Bidders, Bid recaps, etc.);

.4 original estimates and estimating work sheets;

.5 correspondence;

.6 Change Order files (including documentation covering negotiated settlements);

.7 back charge logs and supporting documentation;

.8 general ledger entries detailing cash and trade discounts earned, insurance rebates and dividends;

.9 lump sum agreements between CONTRACTOR and any Subcontractor or Supplier;

.10 records necessary to evaluate: Contract compliance, Change Order pricing, and any Claim submitted by CONTRACTOR or any of its payees; and

.11 any other CONTRACTOR record that may substantiate any charge related to this Contract.

17.8.2 CONTRACTOR shall allow OWNER'S agent or its authorized representative to inspect, audit, and/or reproduce, or all three, all Records generated by or on behalf of CONTRACTOR and each Subcontractor and Supplier, upon OWNER'S written request. Further, CONTRACTOR shall allow OWNER'S agent or authorized

representative to interview any of CONTRACTOR'S employees, all Subcontractors and all Suppliers, and all their respective employees.

17.8.3 CONTRACTOR shall retain all its Records, and require all its Subcontractors and Suppliers to retain their respective Records, during this Contract and for three (3) years after final payment, until all audit and litigation matters that OWNER has brought to the attention of CONTRACTOR are resolved, or as otherwise required by law, whichever is longer. OWNER'S right to inspect, audit, or reproduce Records, or interview employees of CONTRACTOR or its respective Subcontractors or Suppliers exists during this Contract, and for three (3) years after final payment, until all audit and litigation matters that OWNER has brought to CONTRACTOR'S attention are resolved, or as otherwise required by law, whichever is longer, and at no cost to OWNER, either from CONTRACTOR or any of its Subcontractors or Suppliers that may furnish Records or make employees available for interviewing.

17.8.4 CONTRACTOR must provide sufficient and accessible facilities during its normal business hours for OWNER to inspect, audit, or reproduce Records, or all three, and to interview any person about the Records.

17.8.5 CONTRACTOR shall insert these requirements in each written contract between CONTRACTOR and any Subcontractor or Supplier and require each Subcontractor and Supplier to comply with these provisions.

17.9 Survival: The terms and conditions of this Contract, which contemplate a period of time beyond completion or termination will survive such completion or termination and not be merged therein or otherwise terminated.

17.10 No Waiver: The waiver of any provision of this Contract will not be deemed to be a waiver of any other provision of this Contract. No waiver of any provision of this Contract will be deemed to constitute a continuing waiver unless expressly provided in writing, nor will a waiver of any default be deemed a waiver of any subsequent defaults of the same type. The failure at any time to enforce this Contract, whether the default is known or not, shall not constitute a waiver or estoppel of the right to do so.

17.11 Conditions Precedent to Right to Sue: Notwithstanding anything herein to the contrary, the CONTRACTOR will have at least 90 days to give notice of a claim for damages as a condition precedent to the right to sue on the Contract, subject to the contractual claim and alternative dispute resolution processes set forth herein.

17.12 Waiver of Trial by Jury: OWNER and CONTRACTOR agree that they have knowingly waived the right to trial by jury and have instead agreed that, in the event of any litigation arising out of or connected to this Contract, to proceed with a trial before the court, unless both parties subsequently agree otherwise in writing.

17.13 Contractor Evaluation: The Owner will review and evaluate the Contractor's Work and performance on the Project and provide the Contractor with a written Contractor Evaluation Report in accordance with City of Austin Administrative Rule R161-13.37. Rule R161-13.37 provides an appeal process.

http://www.austintexas.gov/department/contract-management

End

The Supplemental General Conditions contained herein amend or supplement the General Conditions, Section 00700.

ARTICLE 1 - DEFINITIONS

Add the following definition:

"**1.20** Engineer/Architect (E/A): Add the following:

Name: *Shelby Eckols, PE*
AECOM Technical Services, Inc.
Address: *9400 Amberglen Blvd., Austin, TX 78729"*

Add the following definitions:

"**1.51** Insurance Cost Form - Section 00425 of the Contract, submitted by CONTRACTOR with its Bid, used to notify OWNER of insurance costs not included in CONTRACTOR's Bid as a result of the OWNER providing insurance through ROCIP.

1.52 Payment Form - A form used by the ROCIP Administrator to notify the OWNER's Project Manager that all required insurance information and documentation has been received from CONTRACTOR.

1.53 OWNER's ROCIP Administrator - The insurance broker responsible for administering the OWNER's Rolling Owner Controlled Insurance Program (ROCIP).

1.54 Rolling Owner Controlled Insurance Program (ROCIP) - A specialized insurance program provided by OWNER for specifically identified Capital Improvements Program (CIP) projects."

Add the following definition:

"**1.56** Allowance - Allowance is defined as "a not-to-be-exceeded amount", either individually or in the aggregate, which is established between the Owner and the Contractor as part of its Bid Proposal when the precise scope of a particular line item(s) has not been defined to a level which is adequate for the Contractor to provide a definitive line item pricing for that particular scope of Work. The use of any Allowances by the Contractor will be subject to the Owner's sole approval and it is the Owner's intent to minimize the use of Allowances to the fullest extent possible. For any Allowances which the Owner allows the Contractor to use, the following rules shall apply: (i) Allowances shall cover the cost to the Contractor of the Cost of Work; (ii) Contractor's overhead and profit associated with the stated Allowance shall be included in the Allowance; and (iii) upon completion of the portion of the Work subject to an Allowance, the Contract Amount for that portion of the Work will be adjusted based upon the approved actual cost of the Work, which will not exceed the approved aggregate amount of the Allowances."

Add the following definition:

"**1.57** "Mobilization Prompt Payment Program - The Owner's Mobilization Prompt Payment Program, will allow bimonthly payments during "critical mobilization stages" as specified in the Contract Documents by the Prime Contractor. The Mobilization Prompt Payment Program will only apply to projects with a construction cost of greater than $2,000,000."

ARTICLE 2 - PRELIMINARY MATTERS

2.1 Delivery of Agreement, Bonds, Insurance, etc.: Add the following:

"2.1.1 CONTRACTOR shall complete enrollment in the Rolling Owner Controlled Insurance Program (ROCIP) within five (5) Working Days after written notification of award of Contract."

2.4 Before Starting Construction:

Add the following modification to the end of 2.4.2.1 for Mobilization Prompt Payment Program:

.1 The Baseline Schedule and schedule submittals for Projects in the Mobilization Prompt Payment Program, must identify periods of "critical mobilization." The periods of critical mobilization will include the first two months of the Contract Time and additional periods identified by the Contractor and approved by Owner when peak Subcontractor mobilization will occur.

Delete 2.4.2.6 and replace with the following (changes to the original text are identified by underlining):

"**.6** a preliminary schedule of values for all of the Work, subdivided into component parts in sufficient detail to serve as the basis for progress payments during construction. At a minimum, the schedule of values shall be broken out by trade and split between materials and labor. Prices will include an appropriate amount of overhead and profit applicable to each item of Work;"

ARTICLE 5 - BONDS AND INSURANCE

"5.3 Insurance:

5.3.1 CONTRACTOR Provided Insurance

CONTRACTOR shall provide insurance coverages described in paragraph(s) 5.3.1.1 and 5.3.1.2 (and 5.3.1.5 and 5.3.1.6, as required) for all Work required by the Contract through the end of the warranty period (with the exception of Builders' Risk, which is required only until the Work is accepted by OWNER). In addition, CONTRACTOR shall provide insurance coverages described in Paragraph(s) 5.3.1.3 and 5.3.1.4 from Substantial Completion of the Work (in accordance with Section 00700 General Conditions Paragraph 14.11) to the end of the warranty period.

Subcontractors performing Work which involves asbestos, hazardous material or pollution defined as asbestos or any other excluded contractor as described in 5.3.2.1 will not be enrolled in the Rolling Owner Controlled Insurance Program (ROCIP) and must provide insurance as specified in paragraphs 5.3.1.1 through 5.3.1.6.

In the event that the Rolling Owner Controlled Insurance Program (ROCIP) or the coverage it provides to the Project is terminated for any reason, whether prior to the start of Work or any time during the Work, upon thirty (30) days Written Notice from OWNER, CONTRACTOR shall purchase and maintain as minimum the insurance coverages described in Paragraphs 5.3.1.3 and 5.3.1.4, for all Work remaining under the Contract through the end of the warranty period. All insurance secured by CONTRACTOR, Subcontractors and Sub-subcontractors pursuant to OWNER's requirements under this provision shall be in accordance with Article 5 of the General Conditions and paragraph 5.3.1.1 of this section. If CONTRACTOR is required to provide insurance as described in paragraphs 5.3.1.3 and 5.3.1.4, OWNER shall reimburse CONTRACTOR for the reasonable cost of providing the insurance described therein based upon the "Total Cost of Insurance for Base Bid" (plus total of all "Total Cost of Insurance for Alternates" selected by OWNER) as stated by CONTRACTOR in Contract Section 00425 (Insurance Cost Form) pro rated to

take into account the Contract Time and Work remaining for performance of CONTRACTOR's obligations under the Contract.

5.3.1.1 General Requirements.

.1 CONTRACTOR shall carry insurance in the types and amounts indicated below for the duration of the Contract, which shall include items owned by OWNER in the care, custody and control of CONTRACTOR prior to and during construction and warranty period.

.2 CONTRACTOR must complete and forward the Certificate of Insurance, Section 00650, to OWNER before the Contract is executed as verification of coverage required below. CONTRACTOR shall not commence Work until the required insurance is obtained and until such insurance has been reviewed by OWNER. Approval of insurance by OWNER shall not relieve or decrease the liability of CONTRACTOR hereunder and shall not be construed to be a limitation of liability on the part of CONTRACTOR. CONTRACTOR must also complete and forward the Certificate of Insurance, Section 00650, to OWNER whenever a previously identified policy period has expired as verification of continuing coverage.

.3 CONTRACTOR's insurance coverage is to be written by companies licensed to do business in the State of Texas at the time the policies are issued and shall be written by companies with A.M. Best ratings of B+VII or better, except for hazardous material insurance which shall be written by companies with A.M. Best ratings of A- or better.

.4 All endorsements naming the OWNER as additional insured, waivers, and notices of cancellation endorsements as well as the Certificate of Insurance shall indicate: City of Austin, Contract Management Department, P.O. Box 1088, Austin, Texas 78767.

.5 The "other" insurance clause shall not apply to the OWNER where the OWNER is an additional insured shown on any policy. It is intended that policies required in the Contract, covering both OWNER and CONTRACTOR, shall be considered primary coverage as applicable.

.6 If insurance policies are not written for amounts specified below, CONTRACTOR shall carry Umbrella or Excess Liability Insurance for any differences in amounts specified. If Excess Liability Insurance is provided, it shall follow the form of the primary coverage.

.7 OWNER shall be entitled, upon request and without expense, to receive certified copies of policies and endorsements thereto and may make any reasonable requests for deletion or revision or modification of particular policy terms, conditions, limitations, or exclusions except where policy provisions are established by law or regulations binding upon either of the parties hereto or the underwriter on any such policies.

.8 OWNER reserves the right to review the insurance requirements set forth during the effective period of this Contract and to make reasonable adjustments to insurance coverage, limits, and exclusions when deemed necessary and prudent by OWNER based upon changes in statutory law, court decisions, the claims history of the industry or financial condition of the insurance company as well as CONTRACTOR.

.9 CONTRACTOR shall not cause any insurance to be canceled nor permit any insurance to lapse during the term of the Contract or as required in the Contract.

.10 CONTRACTOR shall be responsible for premiums, deductibles and self-insured retentions, if any, stated in policies. All deductibles or self-insured retentions shall be disclosed on the Certificate of Insurance.

.11 CONTRACTOR shall provide OWNER thirty (30) days written notice of erosion of the aggregate limits below occurrence limits for all applicable coverages indicated within the Contract.

.12 If OWNER owned property is being transported or stored off-site by CONTRACTOR, then the appropriate property policy will be endorsed for transit and storage in an amount sufficient to protect OWNER's property.

.13 The insurance coverages required under this contract are required minimums and are not intended to limit the responsibility or liability of CONTRACTOR.

5.3.1.2 Business Automobile Liability Insurance. Provide coverage for all owned, non-owned and hired vehicles. The policy shall contain the following endorsements in favor of OWNER:

a) Waiver of Subrogation endorsement CA 0444;

b) 30 day Notice of Cancellation endorsement CA 0244; and

c) Additional Insured endorsement CA 2048.

Provide coverage in the following types and amounts:

.2 A minimum combined single limit of $<1,000,000 minimum> per occurrence for bodily injury and property damage.

5.3.1.3 Workers' Compensation And Employers' Liability Insurance. Coverage shall be consistent with statutory benefits outlined in the Texas Workers' Compensation Act (Section 401). CONTRACTOR shall assure compliance with this Statute by submitting two (2) copies of a standard certificate of coverage (e.g. ACCORD form) to Owner's Representative for every person providing services on the Project as acceptable proof of coverage. The Certificate of Insurance, Section 00650, must be presented as evidence of coverage for CONTRACTOR. CONTRACTOR's policy shall apply to the State of Texas and include these endorsements in favor of OWNER:

a) Waiver of Subrogation, form WC 420304; and

b) 30 day Notice of Cancellation, form WC 420601.

The minimum policy limits for Employers' Liability Insurance coverage shall be as follows:

.1 $100,000 bodily injury per accident, $500,000 bodily injury by disease policy limit and $100,000 bodily injury by disease each employee.

5.3.1.4 Commercial General Liability Insurance. The Policy shall contain the following provisions:

a) Contractual liability coverage for liability assumed under the Contract and all contracts relative to this Project.

b) Completed Operations/Products Liability for the duration of the warranty period.

c) Explosion, Collapse and Underground (X, C & U) coverage.

d) Independent Contractors coverage (Contractors/ Subcontractors work).

e) Aggregate limits of insurance per project, endorsement CG 2503.

f) OWNER listed as an additional insured, endorsement CG 2010 and CG 2037 or equivalent.

g) 30 day notice of cancellation in favor of OWNER, endorsement CG 0205.

h) Waiver of Transfer of Recovery Against Others in favor of OWNER, endorsement CG 2404.

Provide coverages A&B with minimum limits as follows:

.2 A combined bodily injury and property damage limit of $<1,000,000 minimum> per occurrence.

5.3.1.5 Builders' Risk Insurance. CONTRACTOR shall maintain Builders' Risk Insurance or Installation Insurance on an all risk physical loss form in the Contract Amount. Coverage shall continue until the Work is accepted by OWNER. OWNER shall be a loss payee on the policy. If off-site storage is permitted, coverage shall include transit and storage in an amount sufficient to protect property being transported or stored.

5.3.1.6 Hazardous Materials Insurance.

For Work which involves lead and asbestos or any hazardous materials or pollution defined as lead or asbestos, CONTRACTOR or Subcontractor responsible for the Work shall comply with the following insurance requirements in addition to those specified above:

.1 Provide a lead and asbestos abatement endorsement to the Commercial General Liability policy with minimum bodily injury and property damage limits of $1,000,000 per occurrence for coverages A&B and products/completed operations coverage with a separate aggregate of $1,000,000. This policy shall not exclude lead, asbestos or any hazardous materials or pollution defined as lead or asbestos, and shall provide "occurrence" coverage without a sunset clause. The policy shall provide 30 day Notice of Cancellation and Waiver of Subrogation endorsements in favor of OWNER.

.2 CONTRACTOR or Subcontractor responsible for transporting lead and asbestos or any hazardous materials defined as lead and asbestos shall provide pollution coverage. Federal law requires interstate or intrastate transporters of lead and asbestos to provide an MCS 90 endorsement with a $5,000,000 limit when transporting lead and asbestos in bulk in conveyances of gross vehicle weight rating of 10,000 pounds or more. Interstate transporters of lead and asbestos in non-bulk in conveyances of gross vehicle weight rating of 10,000 pounds or more must provide an MCS 90 endorsement with a $1,000,000 limit. The terms "conveyance" and "bulk" are defined by Title 49 CFR 171.8. All other transporters of lead and asbestos shall provide either an MCS 90 endorsement with minimum limits of $1,000,000 or an endorsement to their Commercial General Liability Insurance policy which provides coverage for bodily injury and property damage arising out of the transportation of lead and asbestos. The endorsement shall, at a minimum, provide a $1,000,000 limit of liability and cover events caused by the hazardous properties of airborne lead and asbestos arising from fire, wind, hail, lightning, overturn of conveyance, collision with other vehicles or objects, and loading and unloading of conveyances.

.3 CONTRACTOR shall submit complete copies of the policy providing pollution liability coverage to OWNER.

5.3.1.7 Professional Liability Insurance. For Work which requires professional engineering or professional survey services to meet the requirements of the Contract, including but not limited to excavation safety systems, traffic control plans, and construction surveying, the CONTRACTOR or Subcontractors, responsible for performing the professional services shall provide Professional Liability Insurance with a minimum limit of $500,000 per claim and in the aggregate to pay on behalf of the assured all sums which the assured shall become legally obligated to pay as damages by reason of any negligent act, error, or omission committed with respect to all professional services provided in due course of the Work of this Contract.

5.3.1.8 If City equipment is provided to the CONTRACTOR, the CONTRACTOR is required to provide all risk inland marine coverage including but not limited to fire, wind, hail, theft, vandalism and malicious mischief at 100% replacement cost for the value of that equipment. The value will be provided by the City. Coverage for transit shall be included. The City of Austin shall be named on the policy as Their Interest May Appear.

5.3.2 OWNER Controlled Insurance.

5.3.2.1 OWNER has procured, and will maintain at its own expense a Rolling Owner Controlled Insurance Program (ROCIP) with the following coverage for OWNER, CONTRACTOR, each Subcontractor and their respective Sub-subcontractors while engaged in Work under the Contract. It is not the intent of this ROCIP to cover architects, engineers (not including design/build subcontractors), consultants, vendors, suppliers (who do not perform or subcontract installation), material dealers, guard services, janitorial services, truckers. Moreover, this ROCIP will not provide coverage for:

.1 Contractors and subcontractors whose main function is abating asbestos or removing hazardous materials and/or waste from the project site;

.2 Others whose sole function is to transport, pickup, deliver or carry materials, supplies, tools, equipment, parts or other items to or from the project site;

.3 Any employee(s) of the Contractor or an enrolled subcontractor of any tier that does not work and/or generate payroll at the Project Site

5.3.2.2 Workers' Compensation and Employers' Liability Insurance. All states including monopolistic.

.1 Workers' Compensation - Statutory Benefits for Texas or state of hire as required by statute.

.2 Employers' Liability. Limits of $1,000,000 bodily injury each accident. $1,000,000 bodily injury by disease, each employee. $1,000,000 bodily injury by disease, policy limit.

.3 Endorsements:

a) Employers' Liability Coverage Endorsement

b) Designated Workplaces Exclusion Endorsement

c) Voluntary Compensation and Employers Liability Coverage Endorsement

d) Policy Period Endorsement

e) Texas Waiver of Our Right to Recover From Others Endorsement

f) Federal Employers' Liability Act Coverage Endorsement

g) Longshoremen's and Harbor Workers' Compensation Act

h) Maritime Coverage Endorsement

i) Sole Proprietors, Partners, Officers and Others Coverage Endorsement

j) Sole Agent Consolidated Insurance Programs

k) Unintentional Error And Omissions Endorsement

l) Knowledge and Notice of Occurrence Endorsement

m) Texas Health Care Network Endorsement

n) Terrorism Risk Insurance Program Reauthorization Act Disclosure Endorsement

o) Notice of Cancellation

p) Texas Amendatory Endorsement - Notice of Cancellation

q) Alternate Employer Endorsement

r) Texas Deductible Endorsement

s) Texas Amendatory Endorsement – Who Is An Insured

t) State Specific Endorsements

5.3.2.3 Commercial General Liability Insurance.

.1 Limits of Liability:

a) $4,000,000 General Aggregate Limit

b) $4,000,000 Products-Completed Operations Aggregate Limit

c) $2,000,000 Personal and Advertising Injury

d) $2,000,000 Each Occurrence

e) $1,000,000 Damages to Premises Rented to You Limit (Any one premises. Subject to occurrence limit.)

f) $10,000 Medical Expense Limit (Any one person. Subject to occurrence limit.)

g) Aggregate limits reinstate annually during the 5-year project period. For 10 Year Completed Operations Extension, the Products Completed Operations Aggregate will be shared with the latest annual policy period during which a policy issued by us was in effect.

.2 Policy Form. Commercial General Liability Coverage Form CG 00 01 (12/07 Edition).

.3 Forms:

a) Wrap-up Insurance Program – Amendment of Coverage

b) Products and Completed Operations Extension – Ten (10) Years – This is part of the Wrap-Up Insurance Program Amendment of Coverage Endorsement

c) Sole Agent / First Named Insured is the Sole Agent – This is part of the Wrap-Up Insurance Program Amendment of Coverage Endorsement

d) Designated Projects - This is part of the Wrap-Up Insurance Program Amendment of Coverage Endorsement

e) Common Policy Conditions

f) Texas Disclosure Form

g) Early Notice of Cancellation Provided By Us

h) Texas Changes - Cancellation And Nonrenewal Provisions For Casualty Lines And Commercial Package Policies

i) Combined Limits of Insurance – Multiple Policies

j) Blanket Additional Insured

k) Notice of Occurrence, Offense or Injury

l) Knowledge of Occurrence or Offense

m) Nonowned Watercraft Amended

n) Contractual Liability - Railroads

o) Texas Changes – Employment Related Practices Exclusion

p) Per Project and Per Location combined Aggregate Limits – With Optional Capped Limits Endorsement

q) Unintentional Failure to Disclose

r) Reasonable Force

s) Bodily Injury Redefined

t) Waiver of Transfer Rights of Recovery Against Others to Us

u) Bodily Injury to Co-Employees Coverage – Supervisors, Managers and Good Samaritans

v) Exclusion – Contractors – Professional Liability

w) Professional Health Care Services by Employees or Volunteer Workers Coverage

x) Texas - Total Pollution Exclusion

y) Silica Exclusion Endorsement

z) Recording and Distribution of Material or Information in Violation of Law Exclusion

aa) Lead Exclusion

bb) Mold And Mold Related Construction Defect Exclusion

cc) Asbestos Exclusion Endorsement

dd) Advertisement Redefined

ee) Joint Defense Endorsement

ff) Joint and Several Amendment

gg) Nuclear Energy Liability Exclusion Endorsement (Broad Form)

hh) Non-Cumulation of Liability (Same Occurrence)

ii) Discrimination Exclusion

jj) Composite Rate Endorsement

kk) Deductible – Damages and Supplementary Payments (Damages Within The Deductible Erode The Policy Limit)

ll) Personal and Advertising Injury – Occurrence Redefined

mm) Personal and Advertising Injury – Definition of Publication

nn) Cap On Losses From Certified Acts of Terrorism

oo) Exclusion of Punitive Damages From Certified Acts of Terrorism

pp) Other Terrorism Endorsements

qq) All State Mandatory Endorsements

5.3.2.4 Umbrella/Excess Liability Insurance.

.1 $50,000,000 Each Occurrence

.2 $50,000,000 Products-Completed Operations Aggregate

.3 $50,000,000 Other Aggregate (Where Applicable)

.4 Umbrella/Excess includes a Completed Operations Extension period of Ten (10) years.

5.3.2.5 General Provisions.

.1 Coverage Availability. All insurance specified herein shall be maintained continuously until Substantial Completion of the Project except as provided in Section 5.3.1. All insurance shall provide for OWNER to take occupancy of the Work or any part thereof during the term of said insurance.

.2 Insurance Policies and Certificates. The Broker and/or Insurers will issue Policies for Worker's Compensation and Binders for General Liability to CONTRACTOR, each Subcontractor and each Sub-subcontractor participating in the ROCIP.

.3 CONTRACTOR, Subcontractor and Sub-subcontractors agree to comply with the requirements of the ROCIP including enrollment, record keeping, reporting, auditing, and claim requirements.

.4 The first five thousand dollars ($5,000) of any insurable general liability property damage loss will be the responsibility of and paid by the CONTRACTOR and deducted from the contract amount.

.5 Contract Insurance Cost.

a) CONTRACTOR agrees not to duplicate or include any portion of their normal insurance cost, including Subcontractor insurance costs, in their Bid or in Change Orders (if any) for the coverages provided by OWNER under paragraphs 5.3.2.2 through 5.3.2.4.

b) CONTRACTOR stipulates that the insurance costs as defined in the Insurance Cost Form (Section 00425), submitted with the Bid and part of the Contract, is the amount that would have been included in the Bid if OWNER elected not to provide such coverage.

c) CONTRACTOR agrees to the audit conditions specified in the Insurance Cost Form (Section 00425).

d) In the event OWNER elects not to include CONTRACTOR's Work under the ROCIP coverages, the insurance amounts reported in the Insurance Cost Form (Section 00425) will be added to the Contract Amount on a pro rated basis.

e) CONTRACTOR shall agree to cooperate fully with OWNER's ROCIP Administrator and Project Manager in providing the necessary

insurance data and information as required in the Bid Documents and associated documents and submittals furnished and required by OWNER during the duration of the Project or until OWNER furnished coverages are terminated. Failure to provide insurance information or documents/submittals to the OWNER's ROCIP Administrator and OWNER's Representative within specified time periods, by CONTRACTOR, any Subcontractor or Sub-subcontractor will result in withholding of progress payments to CONTRACTOR by OWNER. The Green Form can be withheld due to failure to provide insurance information or documents within specified time periods.

.6 Governing Conditions. In the event of conflict between Insurance Policy Terms and Conditions and the coverage conditions specified herein, the insurance policies will govern.

.7 CONTRACTOR Furnished Insurance.

a) Automobile Liability Insurance. CONTRACTOR and all Subcontractors, Sub-subcontractors and vendors shall maintain Automobile Liability Insurance as specified in paragraphs 5.3.1.1 and 5.3.1.2, at their own expense. CONTRACTOR must submit Certificates of Insurance for all Subcontractors to OWNER prior to their commencing Work on the Project.

b) Vendors, Suppliers and Haulers Required Insurance

a. Workers' Compensation and Employers' Liability Insurance. Vendors, suppliers, haulers, and other non-ROCIP participants as outlined in 5.3.2.1 shall provide workers' compensation insurance as specified in paragraphs 5.3.1.1 and 5.3.1.3.

This coverage requirement does not apply to motor carriers who are required pursuant to Texas Civil Statutes, Article 6675c to register with the Texas Department of Transportation and to provide accidental insurance coverage pursuant to Texas Civil Statutes, Article 6675c.

This coverage requirement does not apply to sole proprietors, partners, and corporate officers who meet the requirements of the Texas Workers' Compensation Act (Act), Article 406.09(c) and who are explicitly excluded from coverage in accordance with the Act.

b. Automobile Liability Insurance. Vendors, suppliers, haulers and other non-ROCIP participants as outlined in 5.3.2.1 shall provide workers' compensation insurance as specified in paragraphs 5.3.1.1 and 5.3.1.2.

c. Commercial General Liability Insurance. Vendors, suppliers, haulers, and other non-ROCIP participants as outlined in 5.3.2.1 shall provide Commercial General Liability Insurance as specified in paragraphs 5.3.1.1 and 5.3.1.4.

.8 Other Insurance.

a) The ROCIP as outlined herein is intended to afford broad coverage and relatively high limits of liability, but it may not provide all the insurance needed or desired by CONTRACTOR, Subcontractors or Sub-subcontractors. Any insurance or limits of liability greater than those provided by the ROCIP or other coverages which CONTRACTOR, Subcontractors or Sub-subcontractors may be required by Law to carry or may need for its own protection, shall be at their own expense and the cost therefore may not be included in the Bid.

b) If CONTRACTOR chooses to have such policies endorsed to recognize the Project site during the construction period, coverage should be excess and/or Difference

In Conditions (DIC) of the OWNER's ROCIP as determined by CONTRACTOR or Subcontractor. OWNER shall be endorsed as additional insured.

c) Any policy of insurance covering CONTRACTOR, any Subcontractor or any Sub-subcontractor for its owned and leased machinery, water craft, vehicles, tools, or equipment (used in connection with the Project) for physical loss or damage shall provide a Waiver of Subrogation Rights against OWNER, Project Manager, if applicable, CONTRACTOR, Subcontractor, or Sub-subcontractor that is insured under the ROCIP, including the employees, agents or assigns of any one of them.

.9 Mutual Waiver of Property Damage and Right of Recovery. To the extent of coverage provided by the Builder's Risk Insurance, OWNER has waived its rights to recover physical damage or loss to its property against CONTRACTOR, Subcontractors and Sub-subcontractors. CONTRACTOR, Subcontractors and Sub-subcontractors shall also waive any and all rights each may have to recover physical damage or loss to the property of each against OWNER, its designees, E/A, and other contractors engaged in the Project. This waiver of the right of recovery for property damage shall be binding upon any property, automobile or equipment insured in respect to any subrogation rights which such insurer may possess by virtue of any payments of damage or loss. CONTRACTOR, Subcontractors and Sub-subcontractors agree as a condition of performing Work on the Project to execute such documents and coverage described herein and the waiver(s) of subrogation as described herein.

.10 Certificates of Insurance. CONTRACTOR shall submit three (3) copies of the required Certificates of Insurance (Section 00650) for CONTRACTOR and all Subcontractors and Sub-subcontractors to OWNER prior to their commencing Work on the job site. CONTRACTOR and all Subcontractors and Sub-subcontractors shall provide the following information on the Certificate of Insurance:

Workers' Compensation (off-site)
General Liability (off-site)
Umbrella/Excess Liability (off-site)
Automobile Liability - Primary (CONTRACTOR must provide hired/non-owned)

ARTICLE 6 - CONTRACTOR'S RESPONSIBILITIES

6.6 Permits, Fees: Add the following:

"OWNER will obtain and pay for the following permits, licenses and/or fees:

.1 Site Development Permit.

.2 Building Permit(s). OWNER's responsibility for obtaining and paying for the Building Permit(s) shall be limited to the following where applicable, and is included in Allowance Item No. 1: the required Electrical Service (Aid of Construction) Fee, Water and Wastewater Tap Fees, Water and Wastewater Capital Recovery Fees, and Septic Permit Fee. The OWNER's responsibility for obtaining and paying for the Building Permit(s) excludes securing and paying for the following where applicable: Driveway Permit (Concrete) Fee, Electrical Permit, Mechanical Permit, Plumbing Permit, Water Engineering Inspection Fee, Temporary Use of Right-of Way Permit, the gas company's Gas Yard Line Contribution Fee, and any other permits/fees not listed above."

6.7 Laws and Regulations: Add the following:

"**6.7.4** This Work is subject to the Texas Pollution Discharge Elimination System (TPDES) permitting requirements for the installation and maintenance of temporary and

permanent erosion and sediment controls and storm water pollution prevention measures throughout the construction period.

OWNER has prepared a Storm Water Pollution Prevention Plan (SWPPP). Reference Section 01096 for this SWPPP.

OWNER shall file the Owner's Notice of Intent to the Texas Commission on Environmental Quality (TCEQ). OWNER shall pay the TPDES storm water application fee.

CONTRACTOR's responsibilities are as follows:

.1 Obtain a signed certification statement from all Subcontractors responsible for implementing the erosion / sedimentation controls and other best management practices that are part of the SWPPP. This statement shall indicate that the Subcontractor understands the permit requirements. The certified statement forms shall be attached to and become part of the SWPPP.

.2 Fill out the TCEQ's "Construction Site Notice" form, which is Attachment 2 to the TPDES General Permit TXR150000 (form available from OWNER or on the Internet at http://www.tceq.state.tx.us/assets/public/permitting/waterquality/attachments/stormwater/txr152d2.pdf and post it near the main entrance of the Work, or at multiple postings if the Work is linear. Mail a copy of the completed Construction Site Notice form to the local Municipal Separate Storm Sewer Systems (MS4) representative:

TPDES Program Coordinator
City of Austin – WPD – ERM
P.O. Box 1088
Austin, TX 78767

.3 Maintain all erosion/sedimentation controls and other protective measures identified in the SWPPP in effective operating condition.

.4 Perform inspections every five (5) working days and after every ½ inch rainfall event, noting the following observations on an inspection form provided by OWNER:

- Locations of discharges of sediment or other pollutants from the site.
- Locations of storm water / erosion / sedimentation controls that are in need of maintenance.
- Locations of storm water / erosion / sedimentation controls that are not performing, failing to operate, or are inadequate.
- Locations where additional storm water / erosion / sedimentation controls are needed.

.5 Maintain at Work site at all times a copy of the SWPPP (with all updates, as described below) and inspection reports.

.6 Update the SWPPP as necessary to comply with TPDES permitting requirements, which includes noting changes in erosion / sedimentation controls and other best management practices that are part of the SWPPP and which may be necessary due to the results of inspection reports. Any SWPPP revisions or updates must be signed and certified by a Certified Professional in Erosion and Sedimentation Control (CPESC) or a Registered Professional Engineer. If the SWPPP

includes engineering calculations, then SWPPP must be sealed and signed by a Registered Professional Engineer.

.7 Upon completion of the Work, provide TPDES records to OWNER."

6.11 Safety and Protection: Add the following to paragraph 6.11.2:

"6.11.2 CONTRACTOR shall comply with all provisions of the "Project Safety Manual" provided by OWNER as part of its insurance coverage program under the Rolling Owner Controlled Insurance Program (ROCIP). This program is in addition to CONTRACTOR's existing safety program, not in lieu of that program."

ARTICLE 11 - CHANGE OF CONTRACT AMOUNT

11.4 Determination of Value of Work: Add the following to paragraph 11.4.1.2:

"11.4.1.2 In the case of a Change Order determined by a mutually agreed lump sum or unit price properly itemized and supported by sufficient substantiating data, including documentation by subcontractors performing the work, to permit evaluation, the following method may be used:

COMPONENT ONE - The R.S. Means Co., Inc. 'Building Construction Cost Data' - latest edition - will be used as a basis for evaluating:

1a - the cost of labor (base rate, including fringe benefits),

1b - the cost of material and equipment to be incorporated in the Work, and

1c - the cost of tools, equipment and facilities necessary to accomplish the Work described in the change.

COMPONENT TWO - The costs of payroll taxes and insurance, Liability and Builder's Risk Insurance, shall be calculated as follows:

2a - Payroll taxes and Workers' Compensation Insurance <25% of payroll (Item 1a) (14.65% of 1a for ROCIP Projects)>

2b - Liability and Builder's Risk Insurance <2% of "total costs" (Items 1a, 1b, 1c, and 2a) (.034% of "total costs" for ROCIP Projects)>

COMPONENT THREE - Overhead and profit shall be calculated as follows:

3a - For Subcontractors and for those portions of the Work performed by CONTRACTOR'S own forces:

15% of the first $10,000.00 of costs and 10% of the balance over $10,000.00.

("costs" = Items 1a, 1b, and 1c, above, broken down into Contractor and Subcontractor costs).

3b - For the CONTRACTOR for that portion of the Work performed by Subcontractors:

10% of the first $10,000.00 of the Subcontractor costs and 7.5% of the balance over $10,000.00.

("costs" = Items 1a, 1b, and 1c, above, broken down into Subcontractor costs)

COMPONENT FOUR - Bonds

Performance and Payment Bond according to the following table ("TOTAL COST" = Items 1a, 1b, 1c, 2a, 2b, 3a and 3b,):

DOLLAR VALUE OF CONTRACT			% OF TOTAL COST OF CHANGE ORDER ADDED FOR BOND EXPENSE
100,000	or	less	2.5
100,001	thru	500,000	1.5
500,001	thru	2,500,000	1.0
2,500,001	thru	5,000,000	0.75
5,000,001	thru	7,500,000	0.70
OVER 7,500,000			0.65

- The total costs for the change, whether additive or deductive, shall be the sum total of COMPONENTS ONE - FOUR.

ARTICLE 13 - TESTS AND INSPECTIONS; CORRECTION, REMOVAL OR ACCEPTANCE OF DEFECTIVE WORK

13.7 Warranty Period: Add the following:

"**13.7.5** OWNER will utilize a "Warranty Item Form" (attached at the end of this Section) for the purpose of providing Written Notice of warranty defects to CONTRACTOR. CONTRACTOR shall date, sign, complete and return the form to OWNER when the defect is corrected, including such information on or attached to the form to describe the nature of the repairs or corrections that were made. If the defect cannot be corrected in seven (7) Calendar Days, CONTRACTOR shall provide a written explanation to the Owner's Representative describing the repairs needed and the time required to complete the repairs."

ARTICLE 14 - PAYMENTS TO CONTRACTOR AND COMPLETION

14.1 Application for Progress Payment: Delete 14.1.1 and replace with the following (changes to the original text are identified by underling):

"14.1.1 No more often than once a month, unless authorized as part of the Mobilization Prompt Payment Program, CONTRACTOR shall submit to Owner's Representative for review a completed and executed Application for Payment, in a form acceptable to OWNER, covering the Work completed as of the date of the Application and not previously paid and accompanied by such supporting documentation as required by the Contract Documents.

Add the following .1:

.1 - Mobilization Prompt Payment Program. During critical mobilization periods, as identified by the CONTRACTOR and as approved by OWNER in accordance with 00700 2.4.2.1 of this Contract, CONTRACTOR shall submit bi-monthly Applications for Payment. The additional Pay Applications will include any costs accrued during the periods of critical mobilization. The Program will allow the CONTRACTOR and Subcontractors to invoice for costs as they are accrued during periods of critical mobilization. The CONTRACTOR shall submit bimonthly invoices to the OWNER for such costs. The CONTRACTOR shall pay Subcontractors for costs within 10 days of receipt of payment from OWNER.

14.1 Application for Progress Payment: Delete 14.1.6.3 and replace with the following:

".3 Time Extension Request."

".4 Payroll Authorization and Certificates of Insurance. CONTRACTOR shall provide monthly payroll reports (including CONTRACTOR and all Subcontractors and Sub-subcontractors) to the ROCIP Insurance Administrator on forms provided by the ROCIP Administrator or on other mutually agreed upon forms. In addition, Contractor shall assure that current certificates of insurance are provided as necessary for CONTRACTOR and all Subcontractors and Sub-subcontractors. A Payment Form signed by the ROCIP Administrator shall be submitted with each Application for Payment. Failure to submit this form will result in withholding of payment. The ROCIP Insurance Administrator will generate the Payment Form upon receipt of the monthly payroll report and required certificates of insurance."

".5 Construction Progress Photos."

14.4 Decisions to Withhold Payment:

Reference 14.4.1; add the following:

".16 failure of CONTRACTOR to meet the ROCIP and/or Safety Program requirements.

.17 property damage losses that are the responsibility of the CONTRACTOR (reference section 00810, 5.3.2.5.4)"

14.7 Substantial Completion:

Add the following:

"**14.7.3** Substantial Completion of the work is defined as successful completion of the Performance Test in accordance with Specification Section 11399 "Disk Filter and Appurtenances" and includes all work identified in Specification Section 01045 "Sequence of Construction" as Phases I, II, and III and also as shown on the Phasing Drawings Nos. AP05-PH1, AP06-PH1, AP05-PH2, AP06-PH2, AP05-PH3, and AP06-PH3."

14.8 Partial Utilization: Delete 14.8.1 and replace with the following (changes to the original text are identified by underlining):

".1 OWNER at any time may request CONTRACTOR to permit OWNER to use any such part of the Work which OWNER believes to be ready for its intended use and substantially complete. If CONTRACTOR agrees that such part of the Work is substantially complete, CONTRACTOR will certify to Owner's Representative that such part of the Work is substantially complete and request Owner's Representative to issue a notice specifying what portion of the Work is substantially complete for the purpose of payment and what Work remains to be done on the portion being accepted. CONTRACTOR at any time may notify Owner's Representative that CONTRACTOR considers any such part of the Work ready for its intended use and substantially complete and request Owner's Representative to issue a notice specifying what portion of the Work is partially completed for the purpose of

payment and what Work remains to be done on the portion being accepted. The provisions of paragraphs 14.7.1 and 14.7.2 will apply with respect to the notice specifying what portion of the Work is partially completed for the purpose of payment and what Work remains to be done on the portion being accepted."

14.10 Final Application for Payment: Add the following paragraph(s) to 14.10:

".10 Documentation required by the ROCIP."

".11 TPDES records in accordance with 6.7.4."

14.11 Final Payment and Acceptance:

Add the following to paragraph 14.11.1:

"If the sole remaining, unfinished item of the Work is revegetation or other permanent erosion control, including, if applicable, tree mitigation, (collectively, the "revegetation"), the CONTRACTOR may execute a zero-cost "Revegetation Change Order" for such Work and post fiscal security acceptable to Owner to ensure completion of the revegetation.

The fiscal security will be a bond, letter of credit, or cash escrow in a form promulgated by OWNER and posted with OWNER's Watershed Protection Department.

Upon receipt of the executed Revegetation Change Order and fiscal security, the Owner's Representative will issue a conditional letter of final acceptance to the CONTRACTOR for the Work, excluding the revegetation, which establishes the Final Completion Date for that Work and initiates the one year warranty period.

This revegetation must be accomplished within 120 Calendar Days of the date of Final Completion of the balance of the Work or such other stipulated time for completion directed in the Change Order. When the revegetation has been established, OWNER will inspect for final acceptance of that portion of the Work and, as applicable, initiate the one year warranty period for that Work.

If the revegetation is not completed within the 120 Calendar Days or such other time set forth in the Change Order, the OWNER, at its option, may complete the Work using the posted fiscal security."

ARTICLE 15 – SUSPENSION OF WORK AND TERMINATION

15.3 Owner May Terminate with Cause: Add the following paragraph to 15.3.1:

".8 if CONTRACTOR fails to meet the ROCIP and/or Safety Program requirements;"

WARRANTY ITEM NO. _____ **(South Austin Regional WWTP Filter Improvements)**

The General Conditions of the Contract require that Warranty Defects be corrected within 7 days after written notice is received.

TO: _____
contractor name address / telephone / fax / email

ATTENTION OF: _____

FROM: _____
project manager name / address / telephone / fax / email

PROJECT: _____
name / location / CIP ID number

END OF ONE YEAR WARRANTY: _____

SUBJECT: _____
[ ] If checked, the damage requires immediate attention. The Contractor has been called.
[ ] If checked, the Consultant has been asked to consult with the Contractor on the problem.

PLEASE CORRECT OR REPAIR THE FOLLOWING ITEM(S):

DATE OF REQUEST _____ **SIGNATURE** _____
Project Manager

xc:
[ ] _____ Phone No._____
[ ] _____ Phone No._____
[ ] _____ Phone No._____
[ ] _____ Phone No._____

RESPONSE FROM CONTRACTOR: DATE CORRECTION WAS MADE:_____

The Contractor must endeavor to correct the defect within 7 calendar days after written notice is given. If the defect cannot be corrected in that time, Contractor shall provide a written explanation to the Owner's Representative describing the repairs needed and the time required to complete the repairs.

Description of corrections made:

DATE OF REPLY_____SIGNATURE_____

When the repair is complete, the contractor should return a copy to each of the following:

[ ] _____ Phone No._____
[ ] _____ Phone No._____
[ ] _____ Phone No._____
[ ] _____ Phone No._____

END

SECTION 00100 – INSTRUCTIONS TO BIDDERS

Add the following to Section 6, Consideration of Bid Amount:

"OWNER has established a priority order (Alternate No. 1 has highest priority) for acceptance of Bid alternates based on the Project needs and budget. Alternates will be accepted in the order listed on the Bid Form, not to exceed the construction contract budget. Bidders are to respond to all alternates listed on the Bid Form, even if acceptance or rejection of an alternate will not change the Bid amount."

Delete (This should be referenced as Item or Paragraph not "Section")4, ROCIP Requirements, and replace with the following:

"14. ROCIP Requirements

CONTRACTOR will be required to comply with the provisions of the 'Construction Safety Act' and the 'Occupational Safety and Health Act of 1970' as amended, as well as all other applicable Federal, State, and local requirements. CONTRACTOR will be required to comply with all provisions of the "Project Safety Manual" provided by OWNER as part of its insurance coverage program under the Rolling Owner Controlled Insurance Program (ROCIP) as set forth in the Supplemental General Conditions. This program is in addition to CONTRACTOR's existing safety program, not in lieu of that program.

Insurance. OWNER has procured and will maintain at its own expense an Owner Controlled Insurance Policy under a Rolling Owner Controlled Insurance Program (ROCIP) with the coverages defined in Section 00810, Supplemental General Conditions, for OWNER and eligible contractors (regardless of tier) while engaged in the Work. The bidder must exclude from the Bid all costs for insurance coverages and limits up to the limits set forth in the Supplemental General Conditions duplicated by those in the ROCIP, including the costs for all proposed Subcontractors for such coverages and limits. As set forth in the Supplemental General Conditions, the bidder must report the costs excluded on the Insurance Cost Form, Section 00425. The bidder may include in its Bid all costs for Automobile Liability Insurance and other coverage required by OWNER for the limits described in the Supplemental General Conditions, including the cost for all proposed Subcontractors' Automobile Liability Insurance and other coverages required by OWNER. The Certificate of Insurance for Automobile Liability Insurance to be provided by CONTRACTOR shall be issued on the Certificate of Insurance, Section 00650."

Delete (This should be referenced as Item or Paragraph not "Section") 13, Partnering, and replace with the following:

"13. Partnering

To complete this Work most beneficially for all parties, OWNER desires to form a Partnering Team among OWNER, E/A, CONTRACTOR, and Subcontractor(s). This relationship will draw on the strength of all parties to identify and achieve mutual goals. The objectives are effective and efficient Contract performance, intended to achieve completion within budget, on schedule, and in accordance with the Drawings and Specifications. The partnering relationship will be multilateral in makeup and participation will be totally voluntary. Refer to Section 01100, Special Project Procedures, and/or Section 01200, Project Meetings, for clarification of the intents and responsibilities of the persons and entities entering into the partnering charter."

END

PREVAILING WAGE RATE DETERMINATION

BUILDING CONSTRUCTION TYPE

COUNTY NAME : TRAVIS

Wages based on DOL General Decision: TX150323 09/25/2015 TX323

CLASSIFICATION	RATE	FRINGES	TOTAL WAGE
Asbestos Worker/Heat & Frost Insulator (Duct, Pipe, and Mechanical System Insulation)	$ 21.17	$ 8.77	$ 29.94
Boilermaker	$ 23.14	$ 21.55	$ 44.69
Bricklayer	$ 20.07	$ -	$ 20.07
Carpenter	$ 20.75	$ 7.30	$ 28.05
Carpenter (Acoustical Ceiling Installation only)	$ 14.00	$ -	$ 14.00
Carpenter (Form Work Only)	$ 15.62	$ 0.05	$ 15.67
Cement Mason/Concrete Finisher	$ 15.71	$ -	$ 15.71
Drywall Finisher/Taper	$ 17.06	$ 4.43	$ 21.49
Drywall Hanger and Metal Stud Installer	$ 17.47	$ 3.45	$ 20.92
Electrical Installer (Sound and Communication Systems, Excluding Wiring)	$ 18.00	$ 2.30	$ 20.30
Electrician (Excludes Installation of Sound and Communication Systems)	$ 27.15	$ 7.88	$ 35.03
Elevator Mechanic <5 years experience	$ 37.09	$ 30.62	$ 67.71
Elevator Mechanic >5 years experience	$ 37.09	$ 31.36	$ 68.45
Floor Layer (Carpet)	$ 21.88	$ -	$ 21.88
Glazier	$ 12.83	$ -	$ 12.83
HVAC Mechanic (HVAC Unit Installation Only)	$ 23.78	$ 6.89	$ 30.67
Ironworker, Ornamental	$ 22.02	$ 6.35	$ 28.37
Ironworker, Reinforcing	$ 12.27	$ -	$ 12.27
Ironworker, Structural	$ 20.73	$ 5.24	$ 25.97
*Lead Paint or Asbestos Abatement Worker	$ 12.27	$ -	$ 12.27
Laborer, Common or General	$ 11.44	$ -	$ 11.44
Laborer, Mason Tender - Brick	$ 12.22	$ -	$ 12.22
Laborer, Mason Tender - Cement/Concrete	$ 11.85	$ -	$ 11.85
Laborer, Pipelayer	$ 12.45	$ -	$ 12.45
Laborer, Roof Tearoff	$ 11.28	$ -	$ 11.28
Operator, Backhoe/Excavator/Trackhoe	$ 19.43	$ 3.49	$ 22.92
Operator, Bobcat/Skid Steer/Skid Loader	$ 13.00	$ -	$ 13.00
Operator, Bulldozer	$ 14.00	$ -	$ 14.00
Operator, Crane	$ 34.85	$ 9.85	$ 44.70
Operator, Drill	$ 14.50	$ -	$ 14.50
Operator, Forklift	$ 16.64	$ 6.26	$ 22.90
Operator, Grader/Blade	$ 19.30	$ -	$ 19.30
Operator, Loader	$ 14.00	$ -	$ 14.00

Operator, Mechanic	$ 18.75	$ 5.12	$ 23.87
Operator, Paver (Asphalt, Aggregate, and Concrete)	$ 16.03	$ -	$ 16.03
Operator, Roller	$ 11.25	$ -	$ 11.25
Painter (Brush, Roller, and Spray, Excludes Drywall Finishing/Taping)	$ 18.76	$ 6.35	$ 25.11
Pipefitter (Including HVAC Pipe Installation)	$ 28.00	$ 11.41	$ 39.41
Plumber, Excludes HVAC Pipe Installation	$ 23.57	$ 6.37	$ 29.94
Roofer	$ 12.00	$ -	$ 12.00
*Roofer, Metal	$ 14.05	$ -	$ 14.05
Sheet Metal Worker (Including HVAC Duct Installation)	$ 24.38	$ 13.74	$ 38.12
Sprinkler Fitter (Fire Sprinklers)	$ 27.43	$ 17.12	$ 44.55
Tile Finisher	$ 11.32	$ -	$ 11.32
Tile Setter	$ 16.35	$ -	$ 16.35
Truck Driver, Dump Truck	$ 12.39	$ 1.18	$ 13.57
Truck Driver, Flatbed Truck	$ 19.65	$ 8.57	$ 28.22
Truck Driver, Semi-Trailer Truck	$ 12.50	$ -	$ 12.50
Truck Driver, Water Truck	$ 12.00	$ 4.11	$ 16.11
Waterproofer	$ 16.30	$ 0.06	$ 16.36

http://www.wdol.gov/wdol/scafiles/davisbacon/tx.html

*** See Page 2 for Additional Wage Information**

Note: *Lead Paint & Asbestos Abatement and Roofer, Metal Classifications have been added to this Prevailing Wage Rate Determination pursuant to a City of Austin Prevailing Wage Survey (trades absent from DOL).

The Wage Compliance information detailed below was excerpted from General Decision TX070018 or other DOL sources.

1. **Additional Trade information:**

Electricians** - Including low voltage wiring for computers, fire/smoke alarms and telephones.
Elevator Mechanics*** - also must be paid for 7 holidays - New Years Day, Memorial Day, Independence Day, Labor Day, Thanksgiving Day, the Friday after Thanksgiving Day, Christmas Day, and Veterans Day.
Welders - Receive rate prescribed for craft performing operation to which welding is incidental.

Unlisted classifications needed for work not included within the scope of the classifications listed may be added upon the advance approval of City of Austin Contract Administration. CONTRACTOR shall submit to City of Austin Contract Administration for review the classification, a bona fide definition of work to be performed and a proposed wage with sample payrolls conforming to area practice **prior** to the start of the job for that type of work.

2. **Wages**

The Total Wage may be met by any combination of cash wages and credible "bona fide" fringe benefits by the employer. For overtime, the basic hourly rate listed in the contract wage determination must be used in computing pay obligations.

3. **Crediting fringe benefit contributions to meet DBA/DBRA and City of Austin requirements:**

The Davis-Bacon Act (and 29 CFR 5.23), list fringe benefits to be considered. Examples are:

> Life Insurance
> Health Insurance
> Pension
> Vacation
> Holidays
> Sick Leave

Note: The use of a truck is not a fringe benefit; a Thanksgiving turkey or Christmas bonus is not a fringe benefit. No credit may be taken for any benefit required by federal, state, or local law such as: workers compensation, unemployment compensation; or social security contributions.

Contributions to fringe benefit plans must be made regularly, e.g. daily, weekly, etc. They must be more frequent than quarterly. (see 29 CFR 5.5 (a)(1)(I)) A periodic bonus may not be counted as a fringe benefit.

4. **Annualization of Benefit Costs**
   If a firm provides an electrician with $200 per month medical insurance, to calculate allowable fringe benefit credit contributions per hour, the formula ([$200 x 12 months] divided by 2080 hours = $1.15 per hour) should be used.

5. **Proper Designation of Trade**
   A work classification on the wage decision for each worker must be made based on the actual type of work he/she performed and each worker must be paid no less than the wage rate on the wage decision for that classification **regardless** of his or her level of skill.

6. **Split Classification**
   If a firm has employees that perform work in more than one classification, it can pay the wage rates specified for each classification ONLY if it maintains accurate time records showing the amount of time spent in each classification. If accurate time records are not maintained, these employees must be paid the highest wage rate of all the classifications of work performed by each worker. Accurate time records tracking how many hours a worker performed the work of one trade and then switched to another trade must be accounted for on a daily basis and reflected on Employer Certified Payroll accordingly.

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

==========

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

In the listing above, the "SU" designation means that rates listed under the identifier do not reflect collectively bargained wage and fringe benefit rates. Other designations indicate unions whose rates have been determined to be prevailing.

WAGE DETERMINATION APPEALS PROCESS

1.) Has there been an initial decision in the matter? This can be:

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

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

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

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

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

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

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

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

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

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

==========

PART 1 - GENERAL

1.01 COORDINATION WITH OWNER

A. Coordination of OWNER's Work by Others: Reference Contract General Conditions for coordination of OWNER's Work by others, if any, and coordinate CONTRACTOR's Work with OWNER or OWNER's designated coordinator.

B. The CONTRACTOR shall coordinate with the OWNER's Abatement Contractor who will perform the required hazardous material abatement and/or removal, as defined by other CONTRACT DOCUMENTS.

B. Other Work may be performed at site by others during scheduled performance of Work under these Contract Documents.

C. Other Contractors:
   1. Other Contractor and Contact Person: To be provided prior to Notice to Proceed or when available.

1.02 UTILITIES

A. Coordinate Work with various utilities within Project limits in accordance with the General Conditions. Notify applicable utilities prior to commencing Work, and if damage occurs, or if conflicts or emergencies arise during Work.

1.03 PROJECT MEETINGS

A. Reference Section 01200, "Project Meetings".

1.04 OTHER CONTRACTS

A. The OWNER may have other construction contracts being performed simultaneously with this project at the site. Limits of construction and project work area for this contract are indicated on the PLANS. Afford utility companies and other contractors reasonable opportunity for introduction and storage of their materials and execution of their work. Work under this contract connecting to work in other contracts must be carefully coordinated with that construction by others.

B. Abatement of Lead Containing Paint (LSP) and Asbestos Containing Materials (ACM)
   1. Paint containing lead has been found on metal piping, equipment, pumps and appurtenances in the filter gallery. Additionally, asbestos containing materials (ACMs) have been found in the insulation in the block walls of the Filter Building.
   2. Lead containing paint is present on surfaces that will be required to be disturbed during the scope of work for this project. CONTRACTOR will be responsible for removing material from the site. Any required removal of lead containing paint coated nuts and bolts can be conducted using water based foam to collect any residual resultant dusts/debris. The CONTRACTOR will ensure that their work procedures involving disturbance of any lead containing paint are in compliance with the OSHA Lead in Construction rule for workers, 29 CFR 1926.62. In addition, any lead containing wastes will be evaluated and disposed of properly and in compliance with RCRA regulations for hazardous waste characterization and management.

a. CONTRACTOR shall not saw, torch-cut, or drill an piping during the course of this work. Coordinate with OWNER in the event sawing, cutting or drilling of pipe is necessary.

3. ACM encountered in these materials shall be abated as part of the Work of this project. Owner will provide an Abatement Contractor who will perform all abatement work on this project. Abatement Contractor is already under contract with the Owner to perform this type of work. All work performed by Abatement Contractor will be in accordance with specifications already accepted by the Owner and Abatement Contractor. The Abatement Contractor will be responsible to the Owner for performing all abatement work and will be compensated directly by the Owner. The Contractor will coordinate work in these areas directly with the Abatement Contractor so that abatement can proceed without incident and in the most efficient manner. Abatement Contractor will be responsible for abatement and disposal of all ACM as required by separate contract with the Owner. Abatement Contractor will provide all tools and equipment required to complete the abatement work.

4. Coordination with Abatement Contractor:
   a. Contractor will work with Abatement Contractor to develop a schedule that will ensure abatement of hazardous materials is completed as the Work of the project progresses in an efficient manner. Coordination of work space will include providing space for the Abatement Contractor to access hazardous materials and providing adequate room for the construction of required containments as required for the removal of ACM.
   b. Drilling or cutting penetrations through Block Wall: Abatement Contractor will remove insulation fill from the hollow cavities within the block wall. Sleeves, provided by the Contractor as part of the Work, will be installed by the Abatement Contractor.

1.05 ACCESS FOR OTHERS

A. Access to all roads is to be maintained throughout construction period. Under no circumstances will access to roads to be blocked or denied to traffic during construction of this Contract, unless noted on the PLANS.

1.06 OPERATION OF AND CONNECTION TO EXISTING FACILITIES

A. Existing water and wastewater facilities shall be kept in continuous operation throughout the construction period. No interruption will be permitted which adversely affects the degree of service provided.

B. Provided permission is obtained from OWNER in advance, portions of the existing facilities may be taken out of service for short periods corresponding with periods of minimum service demands.

C. CONTRACTOR to provide temporary facilities and make temporary modifications as necessary to keep the existing facilities in operation during the construction period.

D. The CONTRACTOR is to submit a construction plan and schedule, which details the methods, means, techniques, and sequences to be used to establish a base element of surety against a wastewater spill, to the ENGINEER for review and approval by the OWNER at least two weeks prior to any connections to existing pipes or structures. Such plan is to provide assurance against a wastewater spill, with at least one level of backup. Any and all fines or fees imposed upon the OWNER resulting from spills or process interruptions to be assessed solely upon CONTRACTOR. One week prior to connections being made to existing structures or pipes, a coordination meeting is to be held between the CONTRACTOR, ENGINEER, and OWNER to discuss the construction plan previously submitted by the CONTRACTOR.

E. Schedule of construction, interconnecting details, and other revisions necessary for proper interfacing of the Work to be subsequently modified by CONTRACTOR accounting for results of said coordination meeting. The ENGINEER and OWNER are to be notified 24 hours prior to any actual interruptions or connections being made. Begin no work prior to securing OWNER's approval of respective connection plan and work schedule.

1.07 OWNER'S OCCUPANCY

A. OWNER may occupy the premises during the period of construction for the conduct of its normal operations. Cooperate with OWNER in all construction operations to minimize conflict and to facilitate OWNER usage.

1.08 PARTIAL UTILIZATION BY THE OWNER

A. Reference the General Conditions for requirements regarding OWNER's utilization of a portion of the Work. Unless agreed in writing prior to OWNER's use, the following conditions to apply:
   1. CONTRACTOR's Responsibilities:
      a. Allow access for OWNER's personnel.

1.09 PHYSICAL CONDITIONS

A. Exercise care to verify locations of existing subsurface structures and underground facilities.

B. Thoroughly check immediate and adjacent areas subject to excavation by visual examination (and by electronic metal and pipe detection equipment, as necessary) for indications of subsurface structures and underground facilities.

C. Make exploratory excavations where existing underground facilities or structures may potentially conflict with proposed underground facilities or structures. Conduct exploratory excavations in presence of ENGINEER and sufficiently ahead of construction to avoid possible delays to CONTRACTOR's Work. Notify ENGINEER at least 24-hours prior to excavation.

PART 2 - PRODUCTS (NOT USED)

PART 3 - EXECUTION

3.01 CUTTING, FITTING AND PATCHING

A. General: Reference the General Conditions.
   1. Cut, fit, adjust, or patch Work and work by others, including excavation and backfill as required, to make Work complete.
   2. Obtain prior written authorization of ENGINEER before commencing Work to cut or otherwise alter:
      a. Structural or reinforcing steel, structural columns or beams, elevated slabs, trusses, or any other structural member.
      b. Weather- or moisture-resistant elements.
      c. Efficiency, maintenance, or safety of element.
      d. Work of others.
   3. Refinish surfaces to provide an even finish.
      a. Refinish continuous surfaces to nearest intersection.
      b. Refinish entire assemblies.

c. Finish restored surfaces to such planes, shapes, and textures that no transition between existing work and proposed Work or proposed Work and work by others is evident in finished surfaces.

4. Restore existing work, underground facilities, and surfaces that are to remain in completed Work including concrete-embedded piping, conduit, and other utilities as specified and as shown.
5. Make restorations with new materials and appropriate methods as specified for new Work of similar nature; if not specified, use best recommended practice of manufacturer or appropriate trade association.
6. Fit Work airtight to pipes, sleeves, ducts, conduit, and other penetrations through surfaces and fill voids.
7. Remove specimens of installed Work for testing when requested by ENGINEER.

3.02 CHEMICALS FOR START-UP (NOT USED)

3.03 - 3.10 (NOT USED)

3.11 MEASUREMENT AND PAYMENT

No separate measurement or payment for Work performed under this Section. Include cost of same in Contract price bid for Work of which this is a component part.

END OF SECTION

PART 1 GENERAL

1.01 SUMMARY

A. CONTRACTOR shall perform all layout work to transfer all controls for grades, lines, levels and measurements from a minimum of two reference points provided by OWNER on the PLANS. All survey work will be performed under the direct supervision of a Texas Registered Professional Land Surveyor (RPLS).

B. Within 5 work days of the Notice To Proceed date, or within 10 Working Days of initiating work based on the approved Schedule in a new area of the Project, the CONTRACTOR shall survey and stake the locations of all proposed improvements behind the curb and within the ROW (examples: manholes, storm inlets, fire hydrants, etc.), or any other improvements identified by the OWNER'S REPRESENTATIVE, for the purpose of identifying the nature and location of these improvements to the adjacent property owner(s).

C. OWNER will not stake for construction and will not be on site for survey layout activities, except to perform quality control checks.

D. The construction PLANS include horizontal and vertical control points. CONTRACTOR shall provide such instruments, tools, stakes, and other materials as required to stake out Work and establish elevations from bench marks and horizontal control references established on the PLANS and assume responsibility for correctness of installation as to location and grade.

E. CONTRACTOR shall submit construction staking layout sheets sealed by a Registered Professional Land Surveyor registered in the State of Texas. CONTRACTOR shall use a qualification based selection process consistent with the Professional Services Procurement Act, Chapter 2254.004 of the Texas Government Code, when securing the services of a Registered Professional Land Surveyor. It is a violation of State Law to solicit bids for the services of a Registered Professional Land Surveyor.

1. Any discrepancies found with the construction documents' dimensional layout will be corrected. CONTRACTOR shall assure that the Owner's Representative and E/A are notified so that the appropriate actions are taken to correct the Contract drawings.
2. All Work shall be done to the lines, grades and elevations indicated on the drawings. Information concerning basic horizontal and vertical control points is provided in the PLANS. These points shall be used as the datum basis under this Contract.
3. All work to transfer all controls for grades, lines, levels, layout and measurements shall be performed under the supervision of a Texas Registered Professional Land Surveyor, provided by the CONTRACTOR. Such work shall conform to the standards for construction staking in the most recent edition of the Texas Society of Professional Surveyors Manual of Practice for Land Surveying, Category 5, Sections 1-12 inclusive.
4. The centerline and offset centerline stakes will be set at no greater than fifty (50) foot intervals and at points of alignment or grade changes. References to lines and grades as established by the CONTRACTOR's surveyor shall be in reference to these stake lines. The CONTRACTOR is required to provide a sealed statement from his RPLS that the controls are correct and the site layout has been done by their professional staff.
5. Prior to any excavation, the CONTRACTOR shall establish the elevation to top of ground at centerline of the pipe as well as cuts and offset stakes at the

distance deemed appropriate by the CONTRACTOR to preclude disturbance of offset stakes during construction.

6. The CONTRACTOR shall furnish, without charge, experienced personnel and such calibrated survey equipment, tools, stakes, and other materials that the Owner's Representative may require in establishing or checking control points, or in checking survey, layout, and measurement work performed by the CONTRACTOR.
7. The CONTRACTOR shall keep the Owner's Representative informed in a reasonable time in advance of the times and places at which he wishes to do work, so that any checking deemed necessary by the OWNER may be done with minimum inconvenience to the E/A and minimum delay to the CONTRACTOR. Surveying will be coordinated between the Owner's Representative and CONTRACTOR in a manner convenient to both.
8. During layout, CONTRACTOR shall field verify the elevation and alignment of all tie-in points to existing infrastructure. This work shall be performed sufficiently in advance of construction so that any conflicts may be resolved without delay. Any work done without being properly located may be ordered removed and replaced at the CONTRACTOR's expense.
9. The CONTRACTOR shall carefully preserve all monuments, benchmarks, reference points, and stakes. In case of the destruction thereof, the CONTRACTOR shall bear the cost of replacement and shall be responsible for any mistake or loss of time that may be caused. Permanent monuments or benchmarks, which must be removed or disturbed, shall be protected until properly referenced for relocation. The CONTRACTOR shall furnish materials and assistance for the proper replacement of such monuments or benchmarks.
10. The CONTRACTOR shall satisfy himself before commencing work as to the meaning and correctness of all survey control stakes, marks, etc., and no claim will be entertained by the OWNER for or on account of any alleged inaccuracies, unless the CONTRACTOR notifies the OWNER in writing before commencing the affected Work.

F. As needed for necessary documentation of the work progress, the CONTRACTOR shall maintain and/or protect offset or survey staking for the duration of the project. Any re-staking required to meet this requirement shall be done at the CONTRACTOR'S expense.

G. Upon completion of construction, or at intervals specified in the Contract, CONTRACTOR shall provide a record survey of the work in progress or completed. This information will be submitted to the Owner's Representative and shall be supplied electronically and on a separate full size plan sheet to be transmitted to the E/A for evaluation and merging into the Record Drawings.

PART 2 PODUCTS (NOT USED)

PART 3 EXECUTION

3.01 – 3.10 (NOT USED)

3.11 MEASURMENT AND PAYMENT

No separate measurement or payment for work performed under this Section. Include cost of same in Contract price bid for work of which this is a component part.

END

PART 1 - GENERAL

1.1 Summary

A. This Section includes temporary facilities and the necessary controls for the project, including utilities, telephone, sanitary facilities, storage sheds and buildings, first aid equipment, fire protection, security measures, protection of the Work and property, access roads and parking, environmental controls, disposal of trash, debris, and excavated material, pest and rodent control, water runoff and erosion control.

1.2 Contractor's Responsibility

A. The facilities and controls specified in this Section are considered minium for the Project. The CONTRACTOR may provide additional facilities and controls for the propoer execution of the Work and to meet CONTRACTOR's responsibilities for protection of persons and property.

B. Comply with applicable requirements specified in other Specificaiton Sections.
1. Modify and extend systems as Work progress requires.
2. Completely remove temporary materials and equipment when their use is no longer required.
3. Restore existing facilities used for temporary services to specified or to original condition.

1.3 Related Documents:

A. Drawings and general provisions of Contract, including General Conditions, Section 00700,and Supplemental General Conditions, Section 00810, and Division 1 requirements.

1.4 Protection of Work and Property

A. Keep OWNER informed of serious accidents on the site and related claims.

B. During the performance of the Work, CONTRACTOR is responsible for adapting its means, methods, techniques, sequences and procedures of construction to all EXISTING UTILITIES to maintain operation as described in Section 01010, "Summary of Work", at the existing level of facility production and consistent with applicable permit requirements, and Laws and Regulations. In performing such Work and in cooperating with the EXISTING UTILITES to maintain operations, it may be necessary for the CONTRACTOR to plan, design, and provide various temporary services, utilities, connections, temporary piping and heating, access, and similar items which will be included within the Contract Price.

PART 2 - PRODUCTS (NOT USED)

PART 3 - EXECUTION

3.1 Office at the Work Site (Job Shack)

A. During the performance of this Contract, CONTRACTOR shall maintain a suitable office at or near the site of the Work which shall be the headquarters of his superintendent. Any communication given to the superintendent or delivered to CONTRACTOR's office at the site of the Work in his absence shall be deemed to have been delivered to CONTRACTOR.

B. CONTRACTOR shall maintain in good repair and appearance the existing OWNER/ENGINEER's field trailer, located as shown on the PLANS. In addition, CONTRACTOR shall provide weekly cleaning service and replenishment, as required, of paper towels, paper cups, hand soap, toilet paper, first aid kit supplies, and bottled water.

3.2 Water for Construction

All water required for and in connection with the Work to be performed shall be furnished by and at the expense of the CONTRACTOR through meters installed on hydrants. All water used in the disinfection process shall not be metered, but rather shall be measured by calculation. Such water use does not require a meter, but a double-check valve assembly is required when connecting to a fire hydrant or a City main. CONTRACTOR shall submit a written plan for the disinfection process for review and approval by OWNER prior to commencing Work. The written plan shall include the CONTRACTOR's plan for final flushing and discharge of chlorinated water, and shall specify the quantities of potable water that will be required for the procedure and dosage plan proposed by the CONTRACTOR.

For all water required for and in connection with the Work to be performed other than for the disinfection process, water and meters will be available from OWNER at standard rates. All costs for obtaining a water meter shall be the responsibility of the CONTRACTOR. The CONTRACTOR shall contact the Austin Water Utility and arrange to pick up the meter. CONTRACTOR shall install a double-check valve assembly on the fire hydrant between the hydrant and the meter, to prevent backflow in the event of pressure failure. CONTRACTOR shall supply all necessary tools, hose and pipe, and shall make necessary arrangements for securing and transporting such water and shall take water in such a manner, and at such times, that will not produce a harmful drain or decrease of pressure in the OWNER's water system. It shall be the CONTRACTOR's responsibility to make arrangements with the Austin Water Utility for the metering and reporting of the amount of water used. Water shall not be used in a wasteful manner. Standard hydrant wrenches shall be used for opening and closing of fire hydrants. In no case shall pipe wrenches be used for this purpose. Temporary lines shall be removed when no longer required.

3.3 Telephone Service

CONTRACTOR shall make all necessary arrangements and pay all installation charges for telephone lines in his offices at the site and shall provide all telephone instruments. The telephone service shall be available to the Owner's Representative for toll free calls.

3.4 Sanitary Facilities

CONTRACTOR shall furnish temporary sanitary facilities at the site, as provided herein, for the needs of all construction workers and others performing Work or furnishing services on the Project.

Sanitary facilities shall be of reasonable capacity, properly maintained throughout the construction period, and obscured from public view to the greatest practical extent. If toilets of the chemically treated type are used, at least one toilet shall be furnished for each 20 employees. CONTRACTOR shall enforce the use of such sanitary facilities by all personnel at the site.

3.5 Protection of Public and Private Property

CONTRACTOR shall protect, shore, brace, support and maintain all underground pipes, conduits, drains, and other underground construction uncovered or otherwise affected by the CONTRACTOR's operations. All pavement, surfacing, driveways, curbs, walks, buildings, utility poles, guy wires, fences, and other surface structures affected by construction operations, together with all sod and shrubs in yards, parkways, and medians, shall be restored to their original condition, whether within or outside the easement/right-of-way. All replacements shall be made with new materials.

CONTRACTOR shall be responsible for all damage to streets, roads, curbs, sidewalks, highways, shoulders, ditches, embankments, culverts, bridges, or other public or private property, which may be caused by transporting equipment, materials, or men to or from the Work, whether by him or his Subcontractors. CONTRACTOR shall make satisfactory and acceptable arrangements with the owner of, or the agency having jurisdiction over, the damaged property concerning its repair or replacement or payment of costs incurred in connection with the damage.

All fire hydrants and water control valves shall be kept free from obstruction and available for use at all times.

3.6 Tree and Plant Protection

All trees and other vegetation which must be removed to perform the Work shall be removed and disposed of by the CONTRACTOR; however, no trees or cultured plants shall be unnecessarily removed unless their removal is indicated on the Drawings. All trees and plants not removed shall be protected against injury from construction operations.

No tree shall be removed outside of permanent easement(s), except where authorized by the E/A. Whenever practicable, CONTRACTOR shall tunnel beneath trees in yards and parking lots when on or near the line of trenching operations. Hand excavations shall be employed as necessary to prevent injury to trees. Care shall be taken with exposed roots, unearthed during construction, so that roots do not dehydrate causing tree damage.

Trees considered by the E/A to have any significant effect on construction operations are indicated on the PLANS and those which are to be preserved are so indicated.

CONTRACTOR shall take extra measures to protect trees designated to be preserved, using methods shown on the PLANS and as specified in Standard Specification Item No. 610S "Preservation of Trees and other Vegetation".

3.7 Security

CONTRACTOR shall be responsible for protection of the site, and all Work, materials, equipment, and existing facilities hereon, against vandals and other unauthorized persons.

No claim shall be made against OWNER by reason of any act of an employee or trespasser, and CONTRACTOR shall make good all damage to the OWNER's property resulting from CONTRACTOR's failure to provide security measures as specified.

Security measures shall be at least equal to those usually provided by OWNER to protect existing facilities during normal operations, and shall also include such additional security fencing, barricades, lighting, and other measures as required to protect the site. When required, the CONTRACTOR shall provide a security plan to the OWNER for review as to appropriateness of the security measures proposed.

CONTRACTOR shall provide, for the OWNERs use, a security guard shack and appurtenances, located adjacent to the construction entrance for the SARWWTP. The CONTRACTOR is responsible for the purchase and installation, but the daily occupancy of the guard shack will be the responsibility of the OWNER. Coordinate the final location of the shack with the OWNER prior to installation.

1. Provide a 4ft by 7 ft pre-built security guard shack. Guard shack shall be made of welded galvanized steel, insulated double panel steel walls and roof, and be fully wired in accordance with UL requirements. Shack shall be equipped with 1500w fan forced A/C/heater, built in painted steel working counter and storage drawers, interior/exterior lighting, duplex/GFCI receptacle, sliding steel door with hookbolt lock, and clear tempered glass windows all around set in anodized aluminimum frames. The shack shall be portable, capable of being moved easily with a forklift or boom truck.
   a. Manufacturer: Par-Kut International, Inc., Model 74 booth.
2. Provide concrete slab the size of the shack for anchoring portable shack. Coordinate location of slab with OWNER prior to installation. Slab shall be a minimum of 6 inches thick and reinforced per Detail 5/SM04. Provide a minimum of 6 inches of concrete around the perimeter of the supplied shack.
3. Locate and secure temporary electrical and telephone service. CONTRACTOR shall maintain both electrical and telephone service throughout the length of the project, until Final Completion. Provide telephone for use in shack.
4. Provide a street light/task lighting to illuminate the area around the guard shack and give the security officer the ability to check an id in the dark. Exterior/task lighting may be integral with the supplied shack or supplied independent.
5. Provide a stop sign and mount on the construction entrance gate. Mount the stop sign 54" above the pavement. Sign shall be type R1-1 as specified in the Texas Manual of Uniform Traffic Control Devices.

3.8 Access Roads

CONTRACTOR shall establish and maintain temporary access roads to various parts of the site as required to complete the Project. Such roads shall be available for the use of all others performing Work or furnishing services in connection with the Project.

Prevent interference with traffic and OWNER's operations on existing roads. Access to all plant roads is to be maintained throughout the construction period. Under no circumstances is access to be blocked or denied to traffic or plant operators unless specifically noted otherwise on the PLANS.

3.9 Parking

CONTRACTOR shall provide and maintain suitable parking areas for the use of all construction workers and others performing Work or furnishing services in connection with the Project, as required, to avoid any need for parking personal vehicles where they may interfere with public traffic, the OWNER's operations, or construction activities.

The PLANS indicate the location of parking areas to be used during this project. When site space is not adequate, provide additional parking. Locate as approved by OWNER. No employee or equipment parking will be permitted on OWNER's existing paved areas, unless specifically noted otherwise on the PLANS.

3.10 Dust Control

Dust Control during construction of this Project shall conform to Standard Specifications Item No. 220S, "Sprinkling for Dust Control". No direct payment will be made for dust control. Dust Control shall be considered subsidiary work relating to various Bid items of the Contract.

3.11 Temporary Drainage Provisions

CONTRACTOR shall be responsible for providing for the drainage of stormwater and such water as may be applied or discharged on the site in performance of the Work. CONTRACTOR shall obtain E/A approval for temporary drainage facilities which will handle, carry through, or divert around his Work all drainage flow, including storm flow and flows created by construction activity, to prevent silting of waterways or flooding damage to the property and adjacent property.

3.12 Erosion Control

CONTRACTOR shall prevent erosion of soil on the site and adjacent property resulting from his construction activities. Effective measures shall be initiated prior to the commencement of clearing, grading, excavation, or other operations which will disturb the natural protection.

3.13 Pollution Control

CONTRACTOR shall prevent the pollution of drains and watercourses by sanitary wastes, sediment, debris and the substances resulting from construction activities. No sanitary wastes will be permitted to enter any drain or watercourse. No sediment, debris or other substance will be permitted to enter sanitary sewers and reasonable measures shall be taken by CONTRACTOR to prevent such materials from entering any drain or watercourse.

CONTRACTOR shall observe the rules and regulations of the State of Texas and agencies of the U.S. Government prohibiting the pollution of any lake, stream, river, or wetland by the dumping of any refuse, rubbish, dredge material, or debris therein.

CONTRACTOR is specifically cautioned that disposal of materials into any water of the State must conform to the requirements of the Texas Commission on Environmental Quality (TCEQ), and any applicable permit from the U.S. Army Corps of Engineers.

3.14 Noise Control

CONTRACTOR shall comply with the City of Austin's Noise Ordinance. CONTRACTOR shall take reasonable measures to avoid unnecessary noise. Such measures shall be appropriate for the normal ambient sound level in the area during working hours. All construction machinery and vehicles shall be equipped with practical sound-muffling devices, and operated in a manner to cause the least noise consistent with efficient performance of the Work.

3.15 CIP Sign

CONTRACTOR shall erect install and maintain CIP signs as specified. Signs shall be constructed in accordance with City Standard Specification Item No. 802S "Project Signs," and as indicated on the PLANS.

3.16 Fences

All existing fences affected by the Work shall be maintained by the CONTRACTOR until completion of the Work. Fences which interfere with construction operations shall not be relocated or dismantled until written permission is obtained from the owner of the fence, and the period the fence may be left relocated or dismantled has been agreed upon. Where fences must be maintained across any construction easement, adequate gates shall be installed. Gates shall be kept closed and locked at all times when not in use.

Upon completion of the Work across any tract of land, CONTRACTOR shall restore all fences to preconstruction, or to a better, condition and to their preconstruction location.

3.17 Mail Boxes

CONTRACTOR shall remove, reset temporarily, and relocate permanently all mail boxes that are within construction site limits conforming to requirements of United States Postal Service. Mailboxes shall not be laid on the ground, but shall be temporarily reset the same day as removed. Payment for removing and resetting of mail boxes will not be paid for directly, but will be considered subsidiary to the various Bid items. Any damage to mail boxes or posts shall be the responsibility of the CONTRACTOR.

3.18 Emergency Facilities

Free access shall be maintained at all times to fire lanes and emergency and utility control facilities such as fire hydrants, fire alarm boxes, police call boxes, and utility valves, manholes, junction boxes, etc. In the event that it is necessary to make one of these facilities temporarily inaccessible, CONTRACTOR shall obtain approval of such action and schedule of Work from the OWNER. CONTRACTOR shall also provide at least 24 hours prior notice to the Fire Department, Police Department, and City Department governing the affected utility. The same Department(s) shall be promptly notified by the CONTRACTOR when such facilities are placed back in unobstructed service.

3.19 Notification of Owners

Unless otherwise indicated, the OWNER will notify property owners abutting the right-of-way of impending construction. The CONTRACTOR shall exercise diplomacy and tact with individual property owners.

3.20 Maintenance of Traffic

CONTRACTOR shall conduct his Work to interfere as little as possible with public travel, whether vehicular or pedestrian. Whenever it is necessary to cross, obstruct, or close roads, driveways, and walks whether public or private, the CONTRACTOR shall provide and maintain suitable safe bridges, detours or other temporary measures to accommodate public and private travel, and shall provide reasonable notice to owners of private drives before interfering with them. Such maintenance of traffic will not be required when CONTRACTOR has obtained written permission from the owner and the tenant of the private property, or from the authority having jurisdiction over public property involved, to obstruct traffic at the designated point. A copy of the initial written permission shall be provided to the Owner's Representative.

Safety and conveyance of traffic shall be regarded as prime importance. Unless otherwise directed, all portions of streets associated with this Project shall be kept open and provided a dust free, smooth and comfortable ride to traffic. It shall be the responsibility of the CONTRACTOR to ensure that two-way traffic may safely bypass the construction site and that access is provided to abutting private property. In making open cut street crossings, the CONTRACTOR shall not block more than one-half of the street at one time without approval of the OWNER. Whenever possible, CONTRACTOR shall widen the shoulder on the opposite side to facilitate traffic control. Temporary surfacing shall be provided as necessary on shoulders.

Prior to beginning Work, CONTRACTOR shall designate, in writing, a competent person who will be responsible and available on the Project site, or in the immediate area, to ensure compliance with the

traffic control plan. CONTRACTOR shall provide documentation to demonstrate the sufficient training in Traffic Control for his competent person.

The CONTRACTOR shall perform the necessary cleanup and finishing immediately after all or a portion of the Work is completed. When the Work includes paving operations, the entire site shall be kept clean to facilitate placement of required traffic control devices. Temporary and permanent striping lay-out shall be approved by the Transportation Department prior to placement, when included in the Work.

1. Detours

Where indicated on the traffic control plan CONTRACTOR shall erect and maintain detours around construction activities. Should CONTRACTOR desire to propose a detour, not already included in the traffic control plan, it shall be his responsibility to prepare a revised traffic control plan showing the detour, and obtain approval of the revised traffic control plan from the Transportation Department, prior to implementation of the detour. The Transportation Department has final authority as to the acceptability of any proposed revisions to the traffic control plan. The CONTRACTOR shall bear all costs for revising the traffic control plan and for maintaining the proposed detour.

2. Barricades and lights

CONTRACTOR shall place and maintain in good condition, standard barricades at each end of the Project and at other locations where traffic is rerouted or blocked from using regular traffic lanes. Barricades and warning signs shall be in accordance with the Texas Manual on Uniform Traffic Control Devices (MUTCD) and City of Austin Standard Specification Item No. 803S, "Barricades, Signs and Traffic Handling". Signs, barricades, and warning devices informing the public of construction features will be placed and maintained by the CONTRACTOR, who shall be solely responsible for their maintenance. The decision to use a particular device at a particular location as indicated in the traffic control plan or as determined by the CONTRACTOR, shall be the sole responsibility of the CONTRACTOR.

All open trenches and other excavations shall have suitable barricades, signs, and lights to provide adequate protection to the public. Obstructions, such as material piles and equipment shall be provided with similar warning signs and lights.

All barricades and obstructions shall be illuminated with warning lights from sunset to sunrise. Material storage and conduct of the Work on, or along side, public streets and highways shall cause a minimum obstruction and inconvenience of the traveling public.

3.21 Miscellaneous Maintenance Requirements

Maintain Construction Access Road, as delineated on the PLANS, beginning at Fallwell Lane. Grade and smooth construction road at regular intervals, depending on traffic conditions. The Construction Access Road consists of nominally 12 inches of road base with a single course surface treatment on top. Road maintenance includes leveling and recompacting of the road base. Replacement of the surface treatment is not required.

3.21 Required Job Site Postings and Notices

CONTRACTOR shall post the following postings and notices in English and Spanish at one or more conspicuous locations on the job site. In the case of Projects with multiple sites, the notices and postings must be displayed at each site. In the case of Projects that do not have a job shack or other temporary facility on the site, CONTRACTOR shall post all notices on a temporary bulletin board. Other special conditions are noted below.

Required for all Projects	
Poster	Available at:
Baseline Schedule for Project identifying when all subcontractors will be used	N/A (as required under Section 00700, paragraph 2.4.2.1.)
Wage Rates as required under Section 00830.	Section 00830BC and/or Section 008300HH

City of Austin Wage Contact posters	Provided at Pre-Construction meeting (English and Spanish)
City of Austin Equal Employment Opportunity posters	http://austintexas.gov/department/wage-compliance (English and Spanish)
Texas Commission on Environmental Quality "Construction Site Notice" form, if applicable, as required or the required TPDES information	http://www.tceq.state.tx.us/assets/public/permitting/waterquality/attachments/stormwater/txr152d2.pdf (Option 1 – as required under Section 00810, 6.7.4.2 N/A (Option 2 – as required under Section 00810, 2.6.7.4.3)
OSHA poster "Job Safety and Health: It's the Law"	http://www.osha.gov/Publications/osha3165.pdf (English) http://www.osha.gov/Publications/osha3167.pdf (Spanish)
City of Austin Rest Break Ordinance Signs	http://austintexas.gov/department/wage-compliance (English and Spanish) As required to be posted in English and Spanish under Ordinance No. 20100729-047
Texas Payday Law Poster	http://www.twc.state.tx.us/ui/lablaw/ll10.pdf (English) http://www.twc.state.tx.us/ui/lablaw/ll10s.pdf (Spanish)
Texas Workers Compensation notice that the employer does or does not carry Workers Compensation insurance	Does not carry Workers Compensation Insurance: http://www.tdi.state.tx.us/forms/dwc/notice5.pdf (English) http://www.tdi.state.tx.us/forms/dwc/notice5s.pdf (Spanish) Does carry Workers Compensation Insurance: http://www.tdi.state.tx.us/forms/dwc/notice6.pdf (English) http://www.tdi.state.tx.us/forms/dwc/notice6s.pdf (Spanish)
TWC Employer's Notification of the Ombudsman Program to Employees	http://www.oiec.state.tx.us/documents/Employer_Notice_of_O.pdf (both versions)
DOL – The Uniformed Services Employment and Reemployment Rights Act (USERRA)	http://www.dol.gov/vets/programs/userra/USERRA_Private.pdf
EEOC Equal Employment Act and the Americans with Disabilities Act (ADA)	http://www.dol.gov/ofccp/regs/compliance/posters/pdf/eeopost.pdf (English) http://www.dol.gov/ofccp/regs/compliance/posters/pdf/eeosp.pdf (Spanish)
Fair Labor Standards Act (FLSA) Minimum Wage Poster	http://www.dol.gov/whd/regs/compliance/posters/flsa.htm (English) http://www.dol.gov/whd/regs/compliance/posters/flsaspan.htm (Spanish)
If applicable: Employee Rights for Workers with Disabilities/Special Minimum Wage Poster – Employment Standards	http://www.dol.gov/whd/regs/compliance/posters/disabc.pdf http://www.dol.gov/whd/regs/compliance/posters/disabspanc3p.pdf
"Your Rights Under the Family and Medical Leave Act (FLMA)"	http://www.dol.gov/whd/regs/compliance/posters/fmlaen.pdf (English) http://www.dol.gov/whd/regs/compliance/posters/fmlasp.pdf (Spanish)
Title VI Rights Poster	http://austintexas.gov/department/wage-compliance
Additional Postings Required for Austin Water Projects	
"No Smoking" Notification. See City Charter Chapter 10-6	The Austin Water Utility (AWU) adheres to a Tobacco-Free Workplace (TFW) policy. Tobacco use of any kind, including snuf, and e-cigarettes, are prohibited while on any AWU location. This includes buildings, garages, construction sites, treatment plants, and a 100 foot perimeter from entrances and exits. Tobacco use is prohibited in vehicles parked on AWU sites. Contractors and their employees shall comply with this policy when making deliveries or providing services to any AWU location. Post universal "No Smoking" sign per City Code.

Additional Postings Required for Federally Funded Projects	
"Employee Rights Under the Davis-Bacon Act"	http://www.dol.gov/whd/regs/compliance/posters/fedprojc.pdf (English) http://www.dol.gov/whd/regs/compliance/posters/davispan.pdf (Spanish)
Applies to USDOT/FHWA funded projects: "Notice of False Statements Concerning Highway Projects"	http://www.mdt.mt.gov/publications/docs/forms/dbe/eeo_board/false_statements.pdf (as required in Section 00810A Standard Federal-Aid Assurances)
Applies to USDOT/FHWA funded projects; "Contractors EEO Policy"	N/A (as required in Section 00810A Standard Federal-Aid Assurances)

END

CITY OF AUSTIN

CAPITAL

IMPROVEMENTS
PROGRAM

ROCIP
Project Safety Manual

ROCIP MISSION STATEMENT

We have responsibility to our community, City leadership, and the State of Texas to create a program for our capital improvement projects that reflect our commitment to safety. The men and women who work with us throughout the City not only have the right to a safe and healthy workplace but to work with a City striving to become the benchmark for all safety and health programs throughout the State of Texas.

We have a sense of urgency regarding the safety and health of our contractors. This urgency will distance us from a reactionary and statutory based approach to a new progressive leadership style approach. This approach will be the driving force behind our safety and health program. We will provide mechanisms for increased hazard awareness, employee involvement, local management ownership, and more City management visibility. This will foster open and clear communication concerning workplace safety and allow us to more closely monitor conditions in the workplace and integrate safety and health into the normal flow of business as well as improve hazard awareness of our contractors.

The safety and health of our contractors and their employees is an investment and not a cost. Implementation of this program will result in the City of Austin leading the way in the health and safety arena within the State of Texas.

We will set a standard of excellence in health and safety for others to follow.

DISCLAIMER

The purpose of the Project Safety Manual, prepared for the City of Austin, is to assist in the development and implementation of appropriate safety standards. It acts as a guideline to safety during the construction, renovation, and expansion activities to be completed by independent contractors working on any ROCIP project for the City of Austin. The program is based on applicable government regulations, insurance related safety/risk management requirements, accepted safety practices within the construction industry, and common sense. The maintenance of safe premises, operations and equipment, protection of the employees, and the community, and the avoidance of unsafe conditions and practices (during all construction phases) are the responsibility of the Controlling Contractors and Subcontractors performing the work. While mandatory compliance with all the provisions of this Project Safety Manual may not guarantee or ensure compliance with all the requirements of the Department of Labor Occupational Safety and Health Act (29 CFR 1926 and 29 CFR 1910) and all other applicable standards. This manual is not intended to replace the requirement for each Controlling Contractor and Subcontractor to establish and maintain a proper Safety Program as directed by the Federal Department of Labor Occupational Safety and Health Act (Titles 29 CFR 1926 and 29 CFR 1910) the State of Texas and all other applicable standards. No part of this manual is intended to circumvent federal, state, or local regulations. If these regulations exceed the requirements of this manual the federal, state, or local regulation shall take precedence. If the manual exceeds these regulations, the manual shall apply. If the manual does not address a topic the federal, state, or local regulations shall apply.

Statement of Safety and Health Policy

To: All Contractors and Their Employees

Safety and health on all construction projects for the City of Austin must be a part of every operation. Safety and health is the responsibility of each contractor and every employee on the job site regardless of level.

It is the intent of the City of Austin to comply with all applicable federal, state, and local safety regulations. To do this those responsible must constantly be aware of conditions in the work areas that can produce injury. No supervisor shall require an employee to work at a job he or she knows to be unsafe or unhealthy.

The OSH Act requires that *each employer shall furnish to each of his employees employment and a place of employment which are free from recognized hazards that are causing or likely to cause death or serious physical harm to his employees and shall comply with occupational safety and health standards promulgated under this Act. Each employee shall comply with occupational safety and health standards and all rules, regulations, and orders issued pursuant to this Act which are applicable to his own actions and conduct.*

In practice, OSHA, court precedent, and the review commission have established that if the following elements are present, a "general duty clause" citation may be issued:

1) *The employers failed to keep the workplace free of a hazard to which employees of that employer were exposed.*
2) *The hazard was recognized. (Examples might include: through your safety personnel, employees, organization, trade organization or industry customs.)*
3) *The hazard was causing or was likely to cause death or serious physical harm.*
4) *There was a feasible and useful method to correct the hazard.*

It is the intent of the City of Austin and the ROCIP Construction Safety Manager to enforce these requirements whenever a particular section of this manual or the federal standard does not explicitly cover a recognized hazard.

Compliance by both the contractors and their employees in detecting hazards controlling them is a condition of continued presence on the job site. Supervisors should be immediately informed of any unsafe condition. Where correction of any unsafe situation is beyond a supervisor's ability or authority it shall be reported to the ROCIP Safety Team.

The personal safety and health of each employee working on any ROCIP project is of primary importance. The prevention of occupational-induced injuries and illnesses is of such consequence that it shall be given precedence over production at all times. To the greatest degree possible contractors shall provide all means required for the personal safety and health of their workers.

Each Contractor will maintain a safety program conforming to the best practices of the construction industry. To be successful such a program must embody the proper attitudes toward injury and illness prevention from all levels of management and employees. It also requires cooperation in all safety and health matters not only between supervisor and employee but also between each employee and his/her fellow workers. Only through such a cooperative effort can a safety culture be established and maintained.

The objective of the City of Austin is a Safety Program that will achieve zero accidents and injuries.

All Contractor Safety Programs must include:

1. Enforcement and compliance with all applicable federal, state, and local safety regulations.

2. Provision for the necessary mechanical and physical safeguards to assure maximum protection for employees working on the project and the general public.
3. Provision for a Competent Person to conduct safety and health inspections, to locate and correct unsafe working conditions or practices, to control health hazards, and to comply fully with the safety and health standards of this program.

4. Provision for training of all employees in safety and health practices.

5. Provision for the necessary personal protective equipment and training for its use and care.

6. Development and enforcement of safety and health rules and the requirement for all employees to cooperate with the rules as a condition of employment.

7. Provision for prompt and thorough investigation of every accident to determine the cause and implement corrective action to prevent reoccurrence.

8. Provision to pre-plan all phases of work. No new phase of work will begin until a Job Hazard Analysis (JSA) has been conducted and reviewed and all potentially hazardous job operations are anticipated.

9. Provisions for an Emergency Action Plan and for access for emergency services at all times.

The success of this Program relies on the participation of all parties to take responsibility for the safety and health of employees on all projects.

The ROCIP Safety Team accepts a role in the leadership of the Safety Program. We will endeavor to assist contractors in the identification of problem areas and suggest improvements to provide a safe working environment for all employees.

Contractors are responsible for the implementation of a safety program that develops a positive attitude in supervision and employees towards safety and is directed to ensure that all operations will be performed with the utmost regard for the safety and health of all involved.

Employees are to be held responsible for a wholehearted genuine cooperation with all aspects of the Safety Program including compliance with all rules and regulations and for continuously practicing safety while performing their duties.

For the purpose of this document the ROCIP Safety Team *consists of the ROCIP Coordinator, Construction Safety Representative, City of Austin Project Manager, Owners Representative(s), CIP Inspector(s), Construction Safety Manager or designee, and the Insurance Carrier or Broker representative (also referred to as the "ROCIP Team") all of whom may be referred to as the "ROCIP Representative" or as a ROCIP Safety Team Member.*

_____

Contractor's Signature

City of Austin

ACKNOWLEDGEMENT OF SAFETY RESPONSIBILITY

I, _____ as a duly authorized representative for the below referenced firm do hereby attest that I have reviewed this ROCIP Project Safety Manual. I will ensure that all project employees, regardless of subcontractor, are aware of the contents and are trained per the Federal Occupational Safety and Health Act (29 CFR 1926 and applicable 29 CFR 1910) Guidelines. I acknowledge that our firm is responsible for all safety provisions while performing work on this project.

_____
Signature and Title

_____
Contractor

_____
Business Address

_____ _____
Telephone Number Date

NOTE: A copy of this page with an original signature is to be returned to the City of Austin prior to commencement of any construction activities. The Manual is to remain on the project premises throughout the duration of work.

ROCIP

SAFETY MANUAL

TABLE OF CONTENTS

IMPROVEMENTS II

ROCIP MISSION STATEMENT II
DISCLAIMER III
STATEMENT OF SAFETY AND HEALTH POLICY IV
ACKNOWLEDGEMENT OF SAFETY RESPONSIBILITY VII
ROCIP DISCIPLINARY POLICY
DRUG AND ALCOHOL POLICY - 1
1. Policy 1
2. Purpose 1
3. Scope 1
4. Definitions 1
5. Requirements 1
6. Prohibited Activities 2
7. Drug and Alcohol Testing 2
8. Employees Subject to Testing 2
9. Prescribed Drugs 3
10. Confidentiality 3
11. References 3
CONDUCT- 2
1. Policy 1
2. Purpose 1
3. Scope 1
4. Definitions 1
5. Requirements 1
CONTRACTOR SAFETY REQUIREMENTS - 3
1. Policy 1
2. Purpose 1
3. Scope 1
4. Definitions 1
5. Requirements 1
SAFETY SYSTEMS - 4
1. Policy 1
2. Purpose 1
3. Scope 1
4. Definitions 1
5. Requirements 1
6. References 3
AERIAL PERSONNEL LIFTS - 5
1. Policy 1
2. Purpose 1
3. Scope 1
4. Definitions 1
5. Requirements 1
6. References 2

BLOODBORNE PATHOGENS - 6
1. Policy 1
2. Purpose 1
3. Scope 1
4. Definitions 1
5. Requirements 3
6. References 9
CONFINED SPACES - 7
1. Policy 1
2. Purpose 1
3. Scope 1
4. Definitions 1
5. Requirements 1
6. References 6
CRANES, HOISTS AND RIGGING – 8
1. Policy 1
2. Purpose 1
3. Scope 1
4. Definitions 1
5. Requirements 1
6. References 7
STEEL ERECTION - 9
1. Policy 8
2. Purpose 8
3. Scope 8
4. Definitions 8
5. Requirements 8
6. References 21
EMERGENCY PREPAREDNESS - 10
1. Policy 1
2. Purpose 1
3. Scope 1
4. Definitions 1
5. Requirements 1
6. References 8
ENERGY CONTROL (LOCKOUT/TAGOUT) - 11
1. Policy 1
2. Purpose 1
3. Scope 1
4. Definitions 1
5. Requirements 2
6. References 6
EQUIPMENT OTHER THAN CRANES & HOISTS - 12
1. Policy 1
2. Purpose 1
3. Scope 1
4. Definitions 1
5. Requirements 1
6. References 5
EXCAVATION & TRENCHING - 13
1. Policy 1
2. Purpose 1
3. Scope 1
4. Definitions 1
5. Requirements 2

6. References 8
FALL PROTECTION - 14
1. Policy 1
2. Purpose 1
3. Scope 1
4. Definitions 1
5. Requirements 1
6. References 9
FIRE PROTECTION AND PREVENTION - 15
1. Policy 1
2. Purpose 1
3. Scope 1
4. Definitions 1
5. Requirements 1
6. Responsibilities 2
7. References 2
FORKLIFTS - 16
1. Policy 1
2. Purpose 1
3. Scope 1
4. Definitions 1
5. Requirements 1
6. References 4
GENERAL SAFETY - 17
1. Policy 1
2. Purpose 1
3. Scope 1
4. Definitions 1
5. Requirements 1
6. Employee Training 5
7. Contractors Responsibilities 5
8. Subcontractors Responsibilities 5
9. Driver Qualifications 6
10. Trucks and Company Vehicles 6
11. References 6
LASER IONIZING AND NON-IONIZING
1. Policy 1
2. Purpose 1
3. Scope 1
4. Definitions 1
5. Training (Non-Ionizing) 1
6. Requirements (Non-Ionizing) 1
7. Requirements (Ionizing) 2
8. Traffic and Pedestrian Safety 2
9. References 2
HAZARDOUS COMMUNICATIONS (HAZCOM) - 18
1. Policy 1
2. Purpose 1
3. Scope 1
4. Definitions 1
5. Requirements 1
6. Responsibilities 3
7. References 3

HOUSEKEEPING AND SANITATION - 19
1. Policy 1
2. Purpose 1
3. Scope 1
4. Definitions 1
5. Requirements 1
6. References 3
INDUSTRIAL HYGIENE - 20
1. Policy 1
2. Purpose 1
3. Scope 1
4. Definitions 1
5. Requirements 1
6. References 3
LADDERS - 21
1. Policy 1
2. Purpose 1
3. Scope 1
4. Definitions 1
5. Requirements 1
6. References 6
PERSONAL PROTECTIVE EQUIPMENT - 22
1. Policy 1
2. Purpose 1
3. Scope 1
4. Definitions 1
5. Requirements 1
6. References 4
RESPIRATORY PROTECTION - 23
1. Policy 1
2. Purpose 1
3. Scope 1
4. Definitions 1
5. Requirements 2
6. Responsibilities 9
7. References 9
SCAFFOLDING - 24
1. Policy 1
2. Purpose 1
3. Scope 1
4. Definitions 1
5. Requirements 1
6. References 6
TOOLS - 25
1. Policy 1
2. Purpose 1
3. Scope 1
4. Definitions 1
5. Requirements 1
6. References 10

WELDING AND CUTTING - 26
1. Policy 1
2. Purpose 1
3. Scope 1
4. Definitions 1
5. Requirements 1
6. References 8
ELECTRICAL - GENERAL - 27
1. Policy 1
2. Purpose 1
3. Scope 1
4. Definitions 1
5. Requirements 1
Vehicular and Mechanical Equipment 2
Ground Fault Circuit Interrupters 4
6. References 7
UNDERGROUND CONSTRUCTION, CASSIONS, AND COFFERDAMS - 28 1
1. Policy 1
2. Purpose 1
3. Scope 1
4. Requirements 1
7. References 3
DEMOLITION - 29
1. Policy 1
2. Purpose 1
3. Scope 1
4. Requirements 1
5. Training 2
6. Fall Protection 2
7. Falling Object Protection 2
8. Material disposal and Chutes 2
9. Stairways and Access 3
10. Walls 3
11. References 4
DIVING OPERATIONS - 30
1. Policy 1
2. Purpose 1
3. Scope 1
4. Requirements 1
5. Training 1
6. References 2
APPENDIX - FORMS 3

ROCIP Disciplinary Policy

This disciplinary policy covers all ROCIP Projects. The violations of OSHA Safety Rules and Regulations committed by a Contractor working on multiple ROCIP Projects may be cumulatively totaled to apply disciplinary action against that Contractor to maintain the safety and integrity of the Program.

I. **Definitions: the definitions applicable to this Policy are those definitions contained in the General Conditions and Agreement and the following additional definitions:**

ROCIP Safety Team - *consists of the ROCIP Coordinator, Construction Safety Representative, City of Austin Project Manager, Owners Representative(s), CIP Inspector(s), Construction Safety Manager or designee, and the Insurance Carrier or Broker representative (also referred to as the "ROCIP Team") all of whom may be referred to as the "ROCIP Representative" or as a ROCIP Safety Team Member.*

Willful - *OSHA applies a classification of "Willful" where the employer is determined to have committed a violation with an intentional disregard of, or conscious indifference to, the requirements of the Occupational Safety and Health Act and/or OSHA Standards. Following legal precedent.*

Imminent Danger Violation - *is ". . . Any conditions or practices in any place of employment which are such that a danger exists which could reasonably be expected to cause death or serious physical harm immediately or before the imminence of such danger can be eliminated through the enforcement procedures otherwise provided by this Act." Section 13(a) of the OSH Act.*

Serious Violation - *"shall be deemed to exist in a place of employment if there is a substantial probability that death or serious physical harm could result from a condition which exists ..." Section 17 (k) of the OSH Act*

Other Than Serious Violation - *" "shall be cited in situations where the most serious injury or illness that would be likely to result from a hazardous condition, cannot reasonably be predicted to cause death or serious physical harm to exposed employees, but does have a direct and immediate relationship to their safety and health". Chapter III of OSHA's Field Inspection Reference Manual*

Negligence - *The failure to use reasonable care. The doing of something which a reasonably prudent person would not do, or the failure to do something which a reasonably prudent person would do under like circumstances. A departure from what an ordinary reasonable member of the community would do in the same community.*

II. General

A. All time lost when a Project is shutdown because of safety violations will be charged against the Contractor and the Contractor will be liable for any and all related expenses incurred.

B. All training required herein shall be conducted by a ROCIP Safety Team approved source at the Contractor's expense.

C. The Contractor will be held accountable for any and all safety violations on this Project.

D. Any combination of three (3) Imminent Danger or Serious safety violations will result in the permanent removal of the Superintendent and the Safety Representative from this Project and all ROCIP projects.

III. *Imminent Danger Violation* - REQUIRES IMMEDIATE CORRECTIVE ACTION

A. Procedures

- When an Imminent Danger Violation is identified, the Project/Task will be shut down immediately by any member of the ROCIP Safety Team.
- The Construction Safety Representative will be notified of the shutdown and given a detailed briefing. The ROCIP Safety Team representative will immediately contact the Contractor's Superintendent, Project Manager, or Safety Representative to notify the Contractor of the shutdown.
- The Violation will be noted on a safety inspection report or daily report.
- Remediation of the violation shall begin immediately.
- The Contractor shall ensure that any and all necessary corrections are made.
- *The Contractor shall notify the Safety Inspector or the Construction Safety Manager when the hazard has been abated and all of the disciplinary actions stated below have been satisfied.*
- A member of the ROCIP Safety Team will verify that the work can be resumed safely, prior to the recommencement of the work.
- The Contractor must document its corrective actions and provide a copy of such report to the Construction Safety Representative.
- The ROCIP Safety Team will continue to focus on Project Safety and will implement an additional mandatory weekly Project Safety Meetings.

B. Disciplinary Action

1. 1st Imminent Danger Offense:

a. Employee: The involved Employee will be interviewed to determine if his/her actions were a result of employee misconduct or lack of comprehension or training. Misconduct will result in removal of the Employee from this Project. If there is a lack of comprehension or training the employee shall attend the appropriate remedial safety training classes prior to reinstatement on the Project.

b. Superintendent: Superintendent will be interviewed. If it is determined that the Superintendent directed the employee action (so as to constitute a Willful act) the Superintendent will be permanently removed from the Project. If the violation was not a "Willful" act, the Superintendent will be given a written warning in the form of a safety report.

c. Safety Representative: The Safety Representative will be interviewed to determine if his/her actions are a result of Negligence. A finding of Negligence will result in the Safety Representative's removal from this Project. If the violation was not an act of Negligence, the Safety Representative will be given a written warning in the form of a safety report.

d. Contractor: The Contractor must attend a management meeting convened promptly by the ROCIP Safety Team. The Project Manager, Superintendent, or other fully authorized agent of the Contractor must attend the meeting. An initial corrective action plan will be formulated and any other appropriate course of action will be determined at that time.

2. 2nd Imminent Danger Offense:

a. Employee: The employee will be permanently removed from this Project and all other ROCIP projects.

b. Superintendent: The Superintendent will be permanently removed from all ROCIP projects. The Contractor must provide a duly qualified replacement Superintendent. The Owner's Project Manager and/or Owner Representative(s) will interview and approve a replacement Superintendent.

c. **Safety Representative:** The Safety Representative will be permanently removed from this Project and all other ROCIP Projects. The Contractor must provide a duly qualified replacement Safety Representative. The Owner's Construction Safety Manager and/or the City of Austin Construction Safety Representative will interview and approve a replacement Safety Representative.

d. **Contractor:** The Contractor must attend a management meeting convened promptly by the ROCIP Safety Team to implement a corrective action plan and to determine any other appropriate course of action.

3. 3rd Imminent Danger Offense:

Contractor: The City may terminate the Contractor for cause. The Subcontractors involved in the disciplinary action will be removed from this Project and all other ROCIP Projects.

IV. Serious Safety Violations - REQUIRES IMMEDIATE CORRECTIVE ACTION

A. Procedures

- When a Serious Violation is identified, the Project/Task will be shut down immediately by any member of the ROCIP Safety Team.
- Contractor will be briefed immediately on the situation.
- The Violation will be noted on a safety inspection or a daily report.
- Contractor shall immediately begin the process to abate the violation.
- *The portion of the Project involved in the safety violation will remain shut down until <u>all</u> of the disciplinary actions stated below have been satisfied.*
- Contractor shall ensure that any and all necessary corrections are made.
- The Contractor shall notify the Safety Inspector or the Construction Safety Manager when the hazard has been abated and all of the disciplinary actions stated below have been satisfied.
- The Contractor must document the corrective actions and provide a copy of such report to the Construction Safety Representative.

B. Disciplinary Action

1. 1st Serious Offense:

a. Employee: The involved Employee will be interviewed to determine if his/her actions were a result of employee misconduct or lack of comprehension or training. Misconduct will result in removal of the Employee from this Project. If there is a lack of comprehension or training, the employee will be required to attend the appropriate remedial safety training classes prior to reinstatement on the Project.

b. Superintendent: Superintendent will be interviewed. If it is determine that the Superintendent directed the employee action (so as to constitute a Willful act) then the Superintendent will be removed from the Project. If the violation was not a "Willful" act the Superintendent will be given a written warning in the form of a safety report. If this is the first offense of a serious safety violation and the Superintendent has previously received an Imminent Danger Violation of the same classification of offense, the Superintendent will be removed from this Project.

c. Safety Representative: The Safety Representative will be interviewed to determine if his/her actions are a result of Negligence. A finding of Negligence will result in the Safety Representative's removal from this Project. If the violation was not an act of negligence, the Safety Representative will be given a written warning in the form of a safety report. If this is the first offense of a serious safety violation and the Safety Representative has previously received an Imminent Danger violation of the same classification of offense he/she will be removed from this Project.

d. Contractor: The Contractor must attend a management meeting convened by the ROCIP Safety Team as soon as practicable. The Project Manager, Superintendent or other fully authorized agent of Contractor must attend the meeting. A corrective action plan will be formulated and any other appropriate course of action will be determined at that time.

2. 2nd Offense: (Cumulative total of any combination of Imminent Danger or Serious)

a. Employee: If second offense is a reoccurrence of a previous Imminent Danger/Serious violation, the employee will be permanently removed from the Project. If the second offense is not a reoccurrence of a previous imminent/serious violation, the

employee will be removed from the Project and shall attend the appropriate remedial safety training classes prior to reinstatement on the Project.

b. Superintendent: If second offense is a reoccurrence of a previous Serious Violation or the Project has had a previous Imminent Danger Violation, the Superintendent will be permanently removed from the Project. The Contractor must provide a duly qualified replacement Superintendent. The Owner's Project Manager and/or Owner Representative(s) will interview and approve a replacement. If the second offense is not a reoccurrence a member of the ROCIP Safety Team will promptly convene a meeting to formulate a corrective action plan and to determine any other appropriate course of action.

c. Safety Representative: If second offense is a reoccurrence of a previous Serious Violation, or the Project has had a previous Imminent Danger violation, the Safety Representative will be permanently removed from this Project and all ROCIP projects. The Construction Safety Manager or the City of Austin Construction Safety Representative will interview and approve a replacement. If the second offense is not a reoccurrence of a previous Serious Violation and the Project has not had a previous Imminent Danger Violation, a member of the ROCIP Safety Team will promptly convene a meeting to determine an appropriate course of action.

d. Contractor: Contractor must attend a management meeting to be convened as soon as practicable. The Contractor's Project Manager, Superintendent, or other duly authorized agent of company must attend the meeting. A corrective action plan will be formulated and any other appropriate course of action will be determined at that time.

3. 3rd Offense: (Cumulative total of any combination of Imminent Danger or Serious)

a. Employee: Regardless of whether or not the offense is a reoccurrence of a previous offense, the employee will be permanently removed from this Project and all other ROCIP projects.

b. Superintendent: Regardless of whether or not the offense is a reoccurrence of a previous offense, the Superintendent will be permanently removed from this Project and cannot serve in this capacity on any other ROCIP projects.

c. Safety Representative: Regardless of whether or not the offense is a reoccurrence of a previous offense, the Safety Representative will be permanently removed from this Project and cannot serve in this capacity on any other ROCIP projects.

d. The City may terminate the Contractor for cause. Subcontractors involved in the disciplinary action will be removed from this Project and all other ROCIP Projects.

V. Other Than Serious Violations - *REQUIRES CORRECTION WITHIN 24 HOURS*

A. Procedures

- Violation is identified by the ROCIP Safety Team Member.
- Contractor will be briefed on the situation.
- Violation will be noted on a safety inspection report or a daily report.
- Contractor shall correct the violation as soon as possible.
- Contractor shall document the corrective action and provide a copy of the report to the ROCIP Safety Team.

B. Disciplinary Action

1. 1st Offense:

a. Equipment: will be tagged out of service until the violation is brought into compliance.

b. Safety Representative: will receive a written warning in the form of the inspection report.

c. Employee: will receive a verbal warning.

d. Superintendent: will be notified in writing.

2. 2nd Offense:

a. Equipment: will be tagged out of service until the violation is brought into compliance.

b. Safety Representative: will receive a formal written warning.

c. **Employee:** The employee will be required to attend appropriate remedial safety training classes prior to reinstatement on the Project.

d. **Superintendent:** will receive a written warning.

3. ***3rd Offense:***

a. **Equipment:** will be removed from the Project.

b. **Safety Representative:** will be temporarily removed from project and be required to attend the appropriate remedial safety training classes to rectify deficiencies in skills prior to reinstatement on the Project.

c. **Employee:** will be removed from Project.

d. **Superintendent:** will receive a written notice and the COA Project Manager will be notified to determine an appropriate course of action.

Drug and Alcohol Policy - 1

1. Policy

All employees working on any City of Austin project will be free of drugs and alcohol.

2. Purpose

The purpose of this program is to comply with the Drug-Free Workplace Act of 1988 (41 U.S.C. 701 et seq.). The intent is through this policy to reduce accidents, fatalities, injuries, and property damage that may result from employee use of controlled substances or alcohol.

3. Scope

Applies to all ROCIP projects.

4. Definitions

Illegal Drug - any drug in any detectable amount which is not legally obtainable; any drug which is legally obtainable but has not been legally obtained; any prescribed drug not legally obtained; any prescribed drug not being used for the prescribed purpose; any over-the-counter drug being used at a dosage level different than recommended by the manufacturer or being used for a purpose not in accordance with bona fide medical authority. Examples of illegal drugs are marijuana and hashish, cocaine, heroin, phencyclidine (PCP), and so-called designer drugs and look-alike drugs. This includes the use of inhalants.

Medical Review Officer (MRO) - a licensed doctor of medicine or osteopathy (MD or DO) with knowledge of drug abuse disorders. The MRO has the knowledge and medical training to interpret and evaluate an individual's positive test result together with his or her medical history and any other relevant biomedical information.

5. Requirements

It is the Contractor's responsibility to promote an overall safe, healthful, and efficient working environment for all employees. The use, sale, purchase, transfer, or possession of an illegal drug or alcohol in the workplace, or being under the influence of a controlled substance or alcohol on the job poses serious safety and health risks to the user and to all those who work with the user.

When applicable contractors and their subcontractor's shall comply with US D.O.T. CFR 49 relating to controlled substances and alcohol use.

6. Prohibited Activities

The use, sale, offer to sell, purchase, transfer, distribution, or possession of drug paraphernalia or any detectable amount of an illegal drug or alcohol by any employee while on any ROCIP project is strictly prohibited.

Contractor's shall not allow any employee on the project if that employee uses any controlled substances or alcohol while working or tests positive for the use of controlled substances or alcohol except in the case of legally prescribed medications.

7. Drug and Alcohol Testing

As soon as practicable following an accident each person involved shall be tested for alcohol and drugs. If the alcohol test is not administered within 2 hours of the accident the Contractor will document the reason preventing testing to occur within the specified time frame.

Any employees who are found to have an alcohol concentration of 0.02 or greater will be removed from the project for 24 hours. Employees who have a result of 0.04 alcohol or greater shall be removed from the project permanently.

Any employee who tests positive for the use of a controlled substance shall be permanently removed from the project.

8. Employees Subject to Testing

An employee involved in any accident/incident involving a fatality or injury or where property damage occurred is subject to testing based on the following guidelines:

Each employee involved in a reportable accident will be subject to an alcohol test within 2 hours of the incident and a drug test within 4 hours. If these time frames cannot be met documentation regarding the lack of compliance will be made.

All employees who may be involved in or contributed to an accident requiring medical attention will be subject to drug and alcohol testing.

An employee who is seriously injured and cannot provide a specimen at the time of the accident will provide the necessary authorization for obtaining hospital reports and other documents that would indicate whether there were any controlled substances in his or her system.

Any employee who is involved in an accident/incident and who refuses to be tested for any controlled substances or alcohol will not be permitted to work. Such a refusal will be treated as a positive test and the employee shall be permanently removed from all ROCIP project.

9. Prescribed Drugs

Only legally prescribed drugs are allowed provided that it does not impair in any way the employee's ability to conduct his/her task safely.

10. Confidentiality

All employee information relating to drug or alcohol testing will be protected as confidential unless otherwise required by law, or authorized in writing by the employee. There may be some instances where overriding public health or safety concerns may require the release of information otherwise considered confidential.

Contractors will ensure that only an authorized person will obtain the individual test results retained by the laboratory or the MRO (Medical Review Officer).

The Contractor will ensure that only those persons on a need-to-know basis or those persons in management directly involved in the decision-making process will obtain any drug or alcohol testing information.

11. References

Drug-Free Workplace Act of 1988 (41 U.S.C. 701 et seq.).

Conduct- 2

1. Policy

Contractor shall ensure that their employees maintain appropriate conduct.

2. Purpose

To establish rules and practices for appropriate personal conduct.

3. Scope

Applies to all ROCIP projects.

4. Definitions

None

5. Requirements

5.1 General Requirements

Smoking is permitted in designated areas only. All other areas are non-smoking.

Creating or contributing to unsanitary or unhealthy conditions is prohibited.

All forms of horseplay are prohibited.

Employees are required to remain in assigned work areas unless directed by their immediate supervisor.

Employees must wear and care for hard hats/eye protection and any other required personal protective equipment. Hard hats and eye protection will be worn 100% of the time on all ROCIP projects.

No possession or consumption of alcoholic beverages on any ROCIP project.

No possession or use of drugs of any type on any ROCIP project. Exception: medications prescribed by a physician which do not impair work requirements will be allowed.

No weapons of any type are allowed on any ROCIP project. Exceptions: tools such as knives used in conjunction with job activities.

No riding on equipment or in pick-up trucks unless they are specifically designated to carry or transport passengers and a proper seat and seat belt are provided.

No fighting or harassment of other employees or the general public will be tolerated.

Contractor Safety Requirements - 3

1. Policy

Contractors and subcontractors for the ROCIP projects shall be selected and managed in a manner consistent with the overall ROCIP safety objectives, polices, and procedures embodied in this manual.

2. Purpose

To ensure that the contractor's safety programs meets the ROCIP requirements and to outline the requirements for the on-site safety personnel.

3. Scope

Applies to all ROCIP projects.

4. Definitions

Contractor, also referred to herein as General Contractor, Construction Manager at Risk, Construction Manager, or Design-Builder, means the person or business which has a contract as an "independent contractor" (not an employee) with the City of Austin to provide some portion of the work or services on a ROCIP project.

5. Requirements

The Contractor is responsible for all safety related issue on their respective projects and are responsible for enforcing this document with all subcontractors.

5.1 Contractor Selection

The contractor's safety performance shall be considered in the selection process.

5.1.1 Experience modification rate (EMR) Loss Time Incident Rate (LTIR), Total Recordable Incident Rate (TRIR) and Days Away-Restricted-Transferred (DART)

Prospective contractors shall be required to furnish their EMR (or equivalent) for the past three years. This information should come directly for the contractor's insurance broker. Note: certified copy may be requested.

An EMR greater than 1.0 indicates an employer with a high frequency and/ or severity of workers compensation claims. In the event of an EMR greater than 1.0 a more detailed evaluation of their safety program will be required by the ROCIP Safety Team. The contractors LTIR and TRIR will

also be reviewed and those contractors exceeding the national average for their SIC should not be selected.

5.1.2 Recordkeeping Information

The Contractor will be required to submit form 5a1 on a monthly basis for the duration of the project. This form will include the Contractor's and all Subcontractors' man-hours and recordable incidents and be submitted to the Construction Safety Manager no later than the 10th of each month.

5.1.3 Evaluation of Contractors Safety Program

The Contractor shall cooperate with the safety assessment and evaluation and promptly comply with all deficiencies identified.

The Contractor shall demonstrate that their and their subcontractors program meets or exceed the ROCIP program requirements. The following shall be addressed by the Contractor:

- The program should be industry specific, not generic, and should be responsive to the exposures prevalent in the industry and anticipated on the prospective project.
- There should be elements of supervisor **accountability** for safety, accidents, and claims.
- Safety meetings should be held regularly with documentation as to the subject, names of attendees, and a review of past losses.
- The contractor on a regular basis should conduct safety audits (inspections). Audit results should be documented to identify deficiencies and corrective action taken.
- The program should provide for employee safety training and documentation.

5.1.4 OSHA Citations

The Contractor shall be required to provide information (reason, correction, and fines) regarding OSHA citations during the past three years. Once a contract has been awarded all current and future citations during the project will be reported to the Construction Safety Manager.

5.2 Pre-job Planning

The Contractor shall be responsible for overall safety on the project including but not limited to the following:

- Tools and equipment and inspection thereof

- Performance of employees and subcontractors in accordance with OSH Act
- PPE, training on its use, and enforcement of usage at the worksite
- Responsibility for housekeeping and debris removal efforts
- Responsibility for utility locates maintenance, and protection during all phases of the project.
- Safe delivery of material/personnel and all vendor activities

5.3 Project Safety Requirements

A Contractor's Safety Supervisor is required on all ROCIP project from 2-5 million dollars.

A Contractor's Safety Superintendent is required on all ROCIP projects from 5-20 million dollars.

A Contractor's Safety Manager is required on all ROCIP projects greater than 20 million dollars.

Note: these requirements are not cumulative-i.e., a Contractor's Safety Supervisor is not required on a 5-20 million dollar project in addition to the Contractor's Safety Superintendent except as otherwise stated above.

Regardless of the dollar value of a project, when the total man-hours of the project exceed (a) twenty thousand (20,000) hours per month an additional Contractor's Safety Supervisor will be added and (b) forty thousand (40,000) man-hours per month an additional Contractor's Safety Superintendent will be added.

All Contractors shall have safety staffing based on the project value and the man-hours consistent with this section. In addition the Construction Manager at Risk or Design Builder will ensure that all Subcontractors have the appropriate safety staffing based on the contract value consistent with this section. For example:

> If a Subcontractor has a subcontract valued at 2 million dollars the Subcontractor will employ a Safety Supervisor;
> If the Subcontractor has a subcontract valued at more than 5 million dollars the Subcontractor will employ a Safety Superintendent; and
>
> If the Subcontractor has a contract valued at 20 million dollars they will employ a Safety Manager.

In addition the Subcontractor shall add additional staffing based on the man-hours generated on the Project. For example if a Subcontractor exceeds 20 thousand man-hours in a month the Subcontractor will be required to add an additional Safety Supervisor.

These Subcontractor Safety Representatives are in addition to the Construction Manager at Risk's or Design-Builder's safety staffing.

5.4 Qualifications for the Contractor's Safety Personnel

All Contractors performing work on a ROCIP project will have on-site safety staffing approved by the Construction Safety Manager. The designated safety representative shall have no other duties that could affect his/her ability to monitor the safety for the project and shall report directly to the contractor's executive management. The designated safety personnel shall meet the criteria below:

Contractor Safety Personnel

The Contractor's safety personnel listed below shall be full time safety professionals separate from the Contractor's superintendent and project manager employed by the Contractor to manage the project safety efforts and will be on site 100% of the time during project construction activities. Contractor's safety personnel will be required to demonstrate experience by providing training certificate(s) and independent references. The safety personnel's experience shall include managing on-site safety programs on construction projects comparable in scope and complexity to this project. In addition to any specific training requirement set forth below, the safety personnel shall have a minimum of an OSHA 30 hour course and courses specific to the scope of work of this project (e.g. trench safety, confined spaces, steel erection, scaffolding, demolition, tunneling, etc.) The safety personnel shall be able to demonstrate sufficient knowledge of safety for this particular type of project. The safety personnel will report to the Contractor's executive management.

Contractor's Safety Supervisor

A Safety Supervisor must meet all of the basic criteria set forth above applicable for Contractor Safety Personnel for a project of this size, scope, and complexity.

Contractor's Safety Superintendent

In addition to the requirements set forth above a Safety Superintendent must have a minimum of two (2) years of experience with sole responsibility as a professional, full time safety superintendent. At the discretion of the ROCIP Construction Safety Manager five (5) years heavy construction experience may be substituted for each year of safety experience.

Contractor's Safety Manager

In addition to the requirements set forth above a Safety Manager must have a minimum of ten (10) years experience with sole responsibility as a professional full time Safety Manager. A candidate for a Safety Manager position must have at least one of the following credentials (or equivalent):

A degree in safety and health from a recognized university; a designation as Certified Safety Professional; designation as Associate Safety Professional; a designation as Certified Safety and Health Official; a designation as Construction Health Safety Technician; or a certification/standing in safety and health from a recognized certifying agency or university, or substantially equivalent credentials acceptable to the ROCIP Construction Safety Manager, which indicate that the candidate has the necessary training, experience, and knowledge of worker and work site safety requirements, procedures, and protocols or a combination of those factors to reasonably justify approval of the candidate as a Safety Manager.

If the project requires more than one safety person on site the Contractor's Safety Manager will direct the safety efforts of the additional safety personnel.

5.5 Contractor's Safety Personnel

To meet the safety requirements of the Contract Documents the contractor must provide adequate personnel. If the contractor chooses to employee a third party to provide safety staffing for the project the candidate will meet the criteria stated in 5.4 for the respective position. This person will be dedicated to providing safety oversight for the project and meeting the requirements of this safety program and will have **no** other duties. This person is required to be on the project at all times when work is in progress.

The Contractor is required to provide an alternate qualified person in the event that the designated safety person is not on site. This alternate person will be a substantially equivalent safety person in terms of qualifications subject to approval by the ROCIP Construction Safety Manager. The alternate safety person will only be acceptable for a period of time that the designated safety person cannot reasonably be on site such as personal business, vacations, shift work, etc. This person will be separate from the Contractor's Superintendent or Project Manager and will have similar qualifications. This person must be approved by the Construction Safety Manager and cannot be designated as the full time Safety Representative or interchanged at will without approval of the Construction Safety Manager.

The contractor is required to provide additional safety staffing for all shift work. The qualifications of this person will have substantially equivalent credentials acceptable to the ROCIP Construction Safety Manager which indicate that the candidate has the necessary training, experience, and knowledge of worker and work site safety requirements, procedures, and protocols or a combination of

those factors to reasonably justify approval of the candidate as a Safety Manager.

Contractor's Safety Manager Contractor's Safety Superintendent or Contractor's Safety Supervisor

The contractor safety representative shall direct all safety related activity on the project. When applicable the Contractor's safety manager shall direct the efforts of the Contractor's safety superintendent and Contractor's safety supervisor.

The position requires this person to perform the following:

- Routine inspection of the jobsite. These inspections shall be based on the type and complexity of the project and shall be conducted at least four times per shift to eliminate unsafe acts and/or conditions.
- Provide timely correction of any observed unsafe conditions, practices, or violations.
- Provide safety training as necessary.
- Investigate all accidents and implement immediate corrective action. Comply with the insurance carrier in all accident investigation and reporting procedures.
- Report all injuries and accidents in a timely manner to the Construction Safety Representative in accordance with Contract Documents, federal, state and local laws and regulations.
- Ensure that the necessary Competent Persons are on site as required by this manual.
- Be responsible for the availability and proper use of necessary safety equipment including personal protective equipment and apparel for the employees.
- Coordinate safety activities with the City of Austin Project Manager, Construction Safety Manager, Construction Safety Representative, Administrators and the Carriers, and take necessary steps to promptly implement safety recommendations or directives issued thereby.
- Attend special safety meetings held or sponsored by the City of Austin Project Manager, Construction Safety Manager, Construction Safety Representative, Administrator, and/or Carrier. The Contractor's safety manager, Contractor's safety superintendent, or Contractor's safety supervisor is expected to participate in these meetings.
- Ensure that adequate first-aid supplies are available at the work site and that personnel are qualified and identified to administer first-aid as required.
- *Be on the project at all times while work is in progress.* If the designated safety person has to leave the project a suitable replacement will be submitted to and approved by the COA Construction Safety Representative or the Construction Safety Manager.

Contractor shall submit their candidate's resume to the Construction Safety Manager for review and approval. An interview by the Construction Safety Manager is required. The Construction Safety Manager can refuse a candidate based on past performance, lack of comprehension of duties, lack of experience, lack of understanding of the safety profession, or insufficient qualifications.

The qualified safety representative will be approved and in place at the time of NTP.

Contractor's Project Manager

This person will ensure compliance with all provisions of the Contract Documents, OSHA, and other governmental agency and industry safety requirements and standards. Additional duties of the Project Manager shall include the following:

- Support the safety representative's effort to correct all substandard safety conditions.
- Take an active part in all supervisory safety meetings, including the discussion of observed unsafe work practices or conditions, a review of the accident experience and corrective actions, and encouragement of safety suggestions from employees.
- Cooperate with the Project Manager, Construction Safety Manager, Carrier, Construction Safety Representative and Administrators.
- Provide the Project Manager, Construction Safety Manager, Construction Safety Representative and ROCIP Administrator with copies of all OSHA Citations as soon as received.

Safety Systems - 4

1. Policy

Processes and systems shall be established and designed to control hazards and work-related injuries and illnesses.

2. Purpose

To define systems and methods for the identification, control, and communication of potential or existing hazards.

3. Scope

Applies to all ROCIP projects.

4. Definitions

Job Safety Analysis (JSA) means a systematic process of studying a 'job' (task) so as to define the activities associated with the job; identify the hazards or potential accidents associated with each sequential activity and to develop solutions that shall eliminate, nullify, or prevent such hazards from causing harm.

5. Requirements

5.1 Training

Each policy section of this manual indicates training requirements to be used in addition to applicable training required by state and federal regulations. Each employer is responsible to ensure their employees are properly trained as required by the OSH Act.

5.1.2 New Employee Orientation

All contractors shall ensure that all employees receive a comprehensive session of dedicated safety orientation on the ROCIP safety policies and procedures **prior** to the commencement of work.

This orientation shall include all applicable safety information and materials relevant to that employee's foreseeable duties and exposures.

This orientation can be conducted by the contractor or the City of Austin Safety Representative. If the contractor chooses to conduct their own orientation the orientation must be approved by the Construction Safety Representative prior to conducting said orientation. A list of attendees will

be forwarded to the City of Austin Safety Representative prior to the employee starting work.

5.1.3 Site-specific Orientation

The General Contractor(s) shall ensure that all employees and all sub-contractor employees, upon initial assignment, receive site specific orientation. This orientation shall include site requirements and standards that apply uniquely to the work site.

5.1.4 Weekly Safety Training Meetings (Tool-box Talks)

All contractors and subcontractors shall meet weekly at their work site to review a safety subject relevant to current work site exposures. Documentation of this process shall be retained.

5.2 Job Safety Analysis (JSA)

Each Contractor shall develop JSA's to perform based on the following priorities:

- Past accident frequency
- Past accident severity
- Potential injury severity
- Newly established tasks
- Work schedule involving interaction with other contractors
- Changes predicted in the work schedule, i.e., critical lifts, equipment movement, etc., that may create distractions.

JSA's shall be developed using a standardized format **prior** to the commencement of work. JSA's shall be retained at the originating work site as long as the task is performed.

JSA's shall be coordinated by the designated Safety Person and include all affected employees.

JSA's shall be conducted for all of the following:

- Before the commencement of the project
- Daily for any employee engaged in a new task

5.3 Fall Protection

Each employee on a walking/working surface with an unprotected side or edge which is 6 feet (six-feet) or more above a lower level shall be protected from falling by the use of guardrail systems, safety net systems or personal fall arrest

systems. This shall apply 100% (one-hundred percent) of the time on all ROCIP projects regardless of the subcontractor or type of work.

5.4 Inspections

Each policy section of this manual will indicate inspection requirements. Each contractor safety personnel shall establish an inspection process for all work sites.

The General Contractor shall ensure that all subcontractors comply with these requirements. All inspection activities shall be appropriately documented and retained.

5.5 Safety Violations

All Contractors and subcontractors shall review the disciplinary policy for safety violations covered in this manual.

5.6 Recordkeeping

Written records of all safety processes outlined in this policy section shall be maintained by the contractor.

6. References

29 CFR 1926 and 29 CFR 1910

Aerial Personnel Lifts - 5

1. Policy

All aerial personnel lifts shall be operated, maintained, and controlled in a safe manner and in accordance with manufacturers guidelines.

2. Purpose

To define the procedures and standards that applies to the care, control, maintenance, inspection, and operation of aerial personnel lifts.

3. Scope

Applies to all ROCIP projects.

4. Definitions

Aerial personnel lift means any vehicle-mounted device, telescoping or articulating, or both, which is used to position personnel. These include extensible boom platforms, aerial ladders, articulating boom platforms, vertical towers, and a combination of any of the above. Also for the purposes of this policy powered work platforms and scissor lifts shall be considered as aerial personnel lifts.

Articulating boom platform means an aerial personnel lift with two or more hinged boom sections.

Extension boom platform means an aerial personnel lift (except ladders) with a telescopic or extension boom. Telescopic derricks with personnel platform attachments shall be considered to be extension boom platforms when used with a personnel platform.

Platform means any personnel-carrying device (basket or bucket) that is a component of an aerial personnel lift.

5. Requirements

5.1 General

Only trained personnel who have been designated by their employer are authorized to operate aerial personnel lifts. All aerial lifts shall be inspected before use in accordance with the manufacturer's guidelines

Fall protection requirements for aerial personnel lifts are found in the Fall Protection section of this manual. Personnel shall not be permitted to stand on the rails, buckets, planks, or any makeshift device while working from aerial

devices. A body harness shall be worn 100% of the time and a lanyard appropriately attached.

Personnel shall not be permitted to use an aerial personnel lift as a means of access. In the event that there are no other means of access specific procedures including rationale (feasibly), duration, evacuation, fall protection, etc. shall be developed and reviewed with employees prior to implementation.

Large or excessive amounts of material shall not be transported in an aerial personnel lift. Other means would be necessary for such activities.

Load limits specified by the manufacturer shall not be exceeded.

Scissor lifts shall only travel on solid surfaces and shall not travel over objects.

Scissor lifts shall not be extended on inclines.

5.2 Boom Lifts

An aerial lift may not be moved when the boom is elevated in a working position with personnel in the basket except for equipment that is specifically designed for this type of operation.

Articulating boom and extendible boom platforms primarily designed as personnel carriers shall have both platform (upper) and lower controls. Upper controls shall be in or beside the platform within easy reach of the operator. Lower controls shall provide for overriding the upper controls. Controls shall be plainly marked as to their function. Lower level controls shall not be operated unless permission has been obtained from the employee in the lift except in case of emergency.

The insulated aerial devices shall not be altered in any manner that might reduce its insulating value. The insulated boom of a lift shall be regularly maintained and certified to ensure the continued insulating properties.

Before moving an aerial lift for travel the boom(s) shall be inspected to see that it is properly cradled and outriggers are in stowed position.

6. References

CFR 29 CFR 1926.453, .952(b), and .955(e)

Bloodborne Pathogens - 6

1. Policy

All contractors who have been identified as having a predetermined risk of occupational exposure to Bloodborne Pathogens shall be provided with appropriate procedural precautions and training.

2. Purpose

To protect contractors from occupational exposure to Bloodborne Pathogens and certain other potentially infectious materials.

3. Scope

Applies to all ROCIP projects. Particularly, this section applies to certain cleaning service work areas, plumbing service work, plumbing construction work when tying into active sewer systems, certain hospital work areas, certain lab work areas, first-responders, and any supervisors for these activities.

4. Definitions

Approved Disinfectant means a bleach/water solution in a ratio of 1:10 or any commercially available disinfectant such as Betacide or Madacide.

Blood means human blood, human blood components and products made from human blood.

Bloodborne Pathogens means pathogenic microorganisms that are present in human blood and can cause disease in humans. These Pathogens include, but are not limited to, Hepatitis B virus (HBV) and human immunodeficiency virus (HIV).

Contaminated means the presence or the reasonably anticipated presence of blood or other potentially infectious materials on an item or surface.

Decontamination means the use of physical or chemical means to remove, inactivate, or destroy Bloodborne pathogens on a surface or item to the point where they are no longer capable of transmitting infectious particles and the surface or item is rendered safe for handling, use, or disposal.

Engineering Controls means any controls that isolate or remove the Bloodborne pathogens hazard from the workplace.

Exposure Incident means a specific eye, mouth, other mucous membrane, non-intact skin, or parenteral contact with blood or other potentially infectious materials that result from the performance of an employee's duties.

First Responder means any employee who has received accredited training in first aid and/or cardiopulmonary resuscitation (CPR) and has been designated as a person responsible for rendering immediate first aid assistance to persons who require emergency assistance while on company property.

Hand-washing Facilities means a facility providing an adequate supply of running potable water, soap, and single use towels or hot air drying machines.

HBV stands for Hepatitis B virus.

HIV stands for Human Immunodeficiency Virus.

Licensed Healthcare Professional means a person whose legally permitted scope of practice allows him or her to independently perform the activities required by Hepatitis B Vaccination and Post-exposure Evaluation and Follow-up.

Occupational Exposure means reasonably anticipated skin, eye, mucous membrane, or parenteral contact with blood or other potentially infectious materials that may result from the performance of an employee's duties.

Other Potentially Infectious Materials (OPIM) means: The following human body fluids: semen, vaginal secretions, cerebrospinal fluid, synovial fluid, pleural fluid, pericardial fluid, peritoneal fluid, amniotic fluid, saliva in dental procedures, any body fluid that is visibly contaminated with blood, and all body fluids in situations where it is difficult or impossible to differentiate between body fluids; any unfixed tissue or organ (other than intact skin) from a human (living or dead); and HIV-containing cell or tissue cultures, organ cultures, and HIV- or HBV containing culture medium or other solutions; and blood, organs, or other tissues from experimental animals infected with HIV or HBV.

Parenteral means piercing mucous membranes or the skin barrier through such events as human bites, cuts, and abrasions.

Responsible Person (Personnel) means any person or persons trained in the control of disinfecting procedures and disposal procedures of equipment, product or materials suspected to be contaminated with Bloodborne Pathogens.

Source Individual means any individual, living or dead, whose blood or other potentially infectious materials may be a source of occupational exposure to the employee.

Universal Precautions means an approach to infection control. According to the concept of Universal Precautions, all human blood and certain human body fluids are treated as if known to be infectious for HIV, HBV, and other Bloodborne pathogens.

Work Practice Controls means controls that reduce the likelihood of exposure by altering the manner in which a task is performed.

5. Requirements

Exposure Determination

All job classifications shall be reviewed by the Contractor to determine activities that involve potential occupational exposure to Bloodborne pathogens or OPIM. A list of these classifications as noted in 5.1.1 of this Policy section shall be compiled and retained. Exposure determination shall be based on the definition of occupational exposure without regard to personal protective clothing and equipment.

5.1. Job Classifications with Possible Occupational Exposure

The first group includes job classifications in which all contractors have occupational exposure. These job classifications shall be listed, although it is not necessary to list the specific work tasks of the people contained in this group

The second group includes job classifications in which some of the contractors have occupational exposure. For these job classifications, it shall be necessary to list the specific tasks and procedures causing occupational exposure

First Responders and other responsible personnel have been identified as having a potential occupational exposure to blood and/or Bloodborne Pathogens. Contractors who volunteer for this assignment could be exposed to blood and Bloodborne Pathogens as a result of providing immediate first aid assistance, or due to decontamination of contaminated equipment and/or surfaces.

Any employee who has been identified as a First Responder shall sign a First Responder Information Form. This form shall be maintained in the employee's personnel file

Any employee who has been identified as a Responsible Person shall be required to sign a Responsible Person Bloodborne Pathogen Exposure Control Statement. This form shall be maintained in the employee's personnel file

5.2 Training

Bloodborne Pathogen Exposure Control training shall be held within ninety (90) days of the effective date of hire, initially upon work site assignment, and annually for all applicable contractors.

A hard copy of this Bloodborne Pathogens Exposure Control Program shall be provided to every applicable employee trained.

5.3 Exposure Prevention

5.3.1 Universal Precautions

All contractors shall adhere to the Universal Precautions method, that is, all human blood and OPIM shall be treated as known to be infectious for HIV, HBV (Hepatitis B Virus), HCV (Hepatitis C Virus) or other Bloodborne pathogens. Where differentiation of types of body fluids is difficult or impossible, all body fluids are to be considered potentially infectious. Appropriate personal protective equipment shall be utilized at all times. See 5.3.3 of this policy.

5.3.2 Engineering Controls and Work Practice Controls

Engineering controls and work practice controls are to be the primary methods used to prevent occupational transmission of HBV and HIV. Engineering Controls reduce employee exposure at the work site by either removing or isolating the hazard or isolating the employee from exposure. Engineering controls shall be examined and maintained or replaced on a scheduled basis. Proper work practice controls change the manner in which a task is performed.

All contractors who come in contact with the blood of another person or other potential infectious materials shall wash their hands and any other skin with soap and water; if contact with eyes, mouth or nose, flush area with water immediately or as soon as possible following such contact. When hand-washing facilities are unavailable, contractors shall use antiseptic cleanser and paper towels or antiseptic towelettes. All contractors must know where the hand-washing facilities and other hand-washing supplies are located.

5.3.3 Personal Protective Equipment

If occupational exposures remain after instituting engineering and work practice controls, personal protective equipment (PPE) shall be used. PPE is considered appropriate only if it does not permit blood or other potentially infectious materials to pass through or reach contractors' work clothes, street clothes, undergarments, skin, eyes, mouth, or other mucous membranes under normal conditions of use and for the duration of the time that the PPE shall be used.

Types of PPE include gloves, gowns, masks, mouthpieces and resuscitation bags. If the PPE is reusable, it shall be repaired, replaced and/or cleaned when necessary.

First Responders and Responsible Personnel shall have an Infection Protection Kit in their possession. Contents of an Infection Protection Kit should include the following items:

- Antiseptic Towelettes
- Rubber latex gloves
- Face mask
- Disposable body gown and shoe covers
- Protective eye wear
- Biohazard bag with secure tie
- Area Control Biohazard warning tape and signs

Disposable PPE shall not be reused. If circumstances require the use of this equipment, it shall be properly disposed of after its use in the designated leak-proof container.

First Responders certified in CPR shall be provided with plastic mouth shields to protect a first responders' mouth area while performing Artificial Respiration or Cardiopulmonary Resuscitation (CPR).

All First Responders and Responsible Personnel shall be required to use PPE at all times when performing first aid on another person or decontaminating suspected contaminated equipment, products, or materials. It shall be the responsibility of each person rendering first aid assistance to use the appropriate degree of discretion and judgment necessary when deciding what type of PPE should be utilized for the given circumstances. However, in all cases, when rendering immediate first aid to a bleeding person, First Responders shall be required to use all PPE in their assigned Infection Protection Kits. If the First Responder makes a judgment in a given circumstance, that the use of PPE shall impede the delivery of first aid treatment or pose an increased hazard to the safety of the injured person or other contractors, this judgment shall be documented.

5.3.4 Housekeeping

Any surface that has been exposed to potentially infectious materials shall be decontaminated.

5.4 Vaccinations

Contractors shall make available Hepatitis B vaccinations to all of their employees who have occupational exposure to blood within 10 working days of applicable work site assignment, at no cost, at a reasonable time and place, and under the supervision of a licensed physician/licensed healthcare professional, and according to the latest recommendations of the U.S. Public Health Service. Contractors shall sign a declination form if they choose not to be vaccinated, but may later opt to receive the vaccine at no cost to the employee.

All contractors identified as First Responders or Responsible Persons, shall be immediately eligible to be prescreened for the presence of Hepatitis B virus antibodies and to receive a Hepatitis B Vaccine at no cost to the employee within ten (10) working days of their designation as a First Responder or Responsible Person. Contractors who decline a Hepatitis B vaccination shall sign a Hepatitis B Vaccination Declination Form.

Contractors shall be provided with a copy of the medical provider's written report within fifteen (15) working days of receipt.

If the U.S. Public Health Service recommends a routine dose(s) of Hepatitis B vaccine at a future date, such booster dose(s) shall be made available at no charge.

5.5 Exposure Incidents

An exposure incident may occur if an employee comes into contact with the blood of another person or some other employee or potentially infectious material. If any exposure incident occurs, Contractor shall ensure that the area and/or equipment that has been contaminated by blood or other potentially infectious materials is secured from inadvertent exposure to others by placing warning tape and signs around the contaminated area. Signs shall not be removed until the area is thoroughly cleaned and disinfected with disinfectant solution by a Qualified Person wearing appropriate personal protective equipment.

The Contractor shall document the incident on the Blood and Body Fluid Exposure Report.

When any employee is subject to an exposure incident, regardless of whether or not that employee is a designated First Responder, the Contractor shall:

- Immediately refer that employee to the designated medical provider.
- Ensure that the employee subjected to the exposure incident receives a confidential medical evaluation and follow-up.

- Provide the designated medical provider with a copy of the completed Blood and Fluid Exposure Report as soon as possible following the investigation of the exposure incident.
- Request the source individual voluntarily submit to serological blood test to screen for the presence of Hepatitis B (HBV) and human immunodeficiency (HIV) virus antibodies.
- If the source individual agrees to be tested, the person shall be directed to the designated medical provider.
- Request the source individual provide the medical provider for the employee subjected to the exposure incident the results of all blood tests conducted on the source individual.

If the source individual refuses to voluntarily submit to blood testing, advise the medical provider that the source individual refused to be tested, and document.

If the source individual declines a blood test to determine the presence of human immunodeficiency (HIV) virus antibodies, but does give consent for a blood test to determine the presence of Hepatitis B (HBV) antibodies, the medical provider shall be instructed to retain the source individual's blood sample for a period of ninety (90) days following the date the source individual's blood was drawn. The source individual may elect to have a blood test to detect HIV antibodies at a later date, in which case the medical provider can use the original sample provided by the source individual.

Request that the medical provider send a written report to the company documenting that the employee subjected to the exposure incident was informed of the medical evaluation results and the need for any further follow-up. A copy of the medical providers report is given to the employee subjected to the exposure incident shall be provided a copy of the medical provider's report within fifteen (15) days after receipt.

All post-exposure evaluation and follow-up plus laboratory tests conducted shall be available, in confidence, to each employee who has had an exposure incident. The evaluations and test shall be conducted by an accredited laboratory and provided at no cost to the employee. Follow-up shall include a confidential medical evaluation documenting the following information:

- Circumstances of the exposure
- Identifying and testing the source individual, if feasible
- Testing the exposed employee's blood if he/she consents
- Post-exposure prophylaxis
- Counseling and evaluation of reported illnesses

5.6 Contaminated Materials and Labeling

Any disposable contaminated materials shall be discarded by sealing within a plastic bag, which is then to be sealed in a red bag or one that is marked with a bio-hazard symbol.

Proper disposal of these items shall occur by coordinating with a local waste disposal company. Disposal of these items without such coordination is prohibited.

Work areas that contain processes where occupational exposure is known shall be marked with the biohazard symbol and include: Warning Biohazard Area. The contractor for the applicable work area, or designee, shall ensure proper disposal.

5.7 Recordkeeping

Exposure and medical records shall be maintained for thirty (30) years past the exposed employee's last date of employment, as follows:

- The name and social security number of the employee
- A copy of the contractors HBV vaccination status, including the dates of vaccination
- A copy of the results of examinations, medical testing, and follow-up procedures
- A copy of the information provided to the healthcare professional, including a description of the employee's duties as they relate to the exposure incident, and documentation of the routes of exposure and circumstances of the exposure

Training records shall be maintained and kept for three years from the date of training. Other documentation of this training is acceptable when multiple topics are covered. The following information shall be included with the documentation:

- The dates of the training sessions
- An outline describing the material presented
- The names and qualifications of persons conducting the training
- The names and job titles of all persons attending the training sessions
- Training records shall be available to contractors or employee representatives upon request

The contractor shall provide to any employee who so requests, a copy of the Bloodborne Pathogen Exposure Control Program no later than fifteen (15) working days from the date of the employee's request.

6. References

CFR 29 CFR 1910.1030

Confined Spaces - 7

1. Policy

Procedures shall be utilized to ensure the safety of employees who are required to enter confined spaces.

2. Purpose

To set forth procedures for the safe entry to confined spaces.

3. Scope

Applies to all ROCIP projects.

4. Definitions

All definitions from 29 CFR 1926 subpart AA apply.

Confined space means a space that is large enough and so configured that an individual can bodily enter and perform assigned work; has limited or restricted means for entry or exit, and is not designed for continuous occupancy.

5. Requirements

Before work begins at the site each employer must ensure that a competent person identifies all confined spaces in which one or more of the employees it directs may work and identifies each space that is a permit space through consideration and evaluation of the elements of that space including testing as necessary.

If the workplace contains one or more permit spaces the employer who identifies, or who receives notice of, a permit space must:

- Inform exposed employees by posting danger signs or by any other equally effective means, of the existence and location of, and the danger posed by, each permit space; A sign reading "DANGER – PERMIT REQUIRED CONFINED SPACE, DO NOT ENTER" or using other similar language would satisfy the requirement for a sign.

- Inform in a timely manner and in a manner other than posting its employees authorized representatives and the controlling contractor of the existence and location of, and the danger posed by, each permit space.

Each employer who identifies or receives notice of a permit space and has not authorized employees it directs to work in that space must take effective measures to prevent those employees from entering that permit space in addition to complying with all other applicable requirements of this standard.

If any employer decides that employees it directs will enter a permit space that employer must have a written permit space program implemented at the construction site. The written program must be made available prior to and during entry operations for inspection by employees and their authorized representatives.

Permit Space Entry Communication and Coordination

Before entry operations begin the host employer will provide the following information, if available, to the controlling contractor:

- The location of each known permit space.
- The hazards or potential hazards in each space or the reason it is a permit space.
- Any precautions that the host employer or any previous controlling contractor or entry employer implemented for the protection of employees in the permit space.

Before entry operations begin the controlling contractor must:

- Obtain the host employer's information about the permit space hazards and previous entry operations.
- Provide the following information to each entity entering a permit space and any other entity at the worksite whose activities could foreseeably result in a hazard in the permit space.
- The information received from the host employer.
- Any additional information the controlling contractor has about the spaces.
- The precautions that the host employer, controlling contractor, or other entry employers implemented for the protection of employees in the permit spaces.

Before entry operations begin each entry employer must:

- Obtain all of the controlling contractor's information regarding permit space hazards and entry operations.

- Inform the controlling contractor of the permit space program that the entry employer will follow including any hazards likely to be confronted or created in each permit space.

The controlling contractor and entry employer(s) must coordinate entry operations when:

- More than one entity performs permit space entry at the same time or
- Permit space entry is performed at the same time that any activities that could foreseeably result in a hazard in the permit space are performed.

After entry operations:

- The controlling contractor must debrief each entity that entered a permit space regarding the permit space program followed and any hazards confronted or created in the permit space(s) during entry operations.
- The entry employer must inform the controlling contractor in a timely manner of the permit space program followed and of any hazards confronted or created in the permit space(s) during entry operations.
- The controlling contractor must apprise the host employer of the information exchanged with the entry entities pursuant to this subpart.
- If there is no controlling contractor present at the worksite the requirements for, and role of, controlling contactors must be fulfilled by the employer who arranges to have employees perform work that involves permit space entry.

5.1 Training

The employer shall provide training so that all employees whose work is regulated by this section acquire the understanding, knowledge, and skills necessary for the safe performance of the duties assigned under this section.

All training will be conducted in accordance with Federal and State laws, and best industry practices. Training will include, but not limited to 29 CFR 1926 subpart AA.

This training must result in an understanding of the hazards in the permit space and the methods used to isolate, control, or in other ways protect employees from these hazards, and for those employees not authorized to perform entry rescues in the dangers of attempting such rescues.

The training shall establish employee proficiency in the duties required by this section.

The employer shall certify that the training required by this section has been accomplished. The certification shall contain each employee's name, the signatures or initials of the trainers, and the dates of training. The certification shall be available for inspection by the City or their authorized representatives.

5.2 Reclassification of Permit Required Spaces

Permit required confined spaces may be reclassified as non-permit spaces in accordance with 1926.1203 (g) (1) through (g) (4) of 29 CFR 1926 subpart AA.

5.3 Confined Space Entry Form

The employer shall ensure that a confined space entry form containing all of the requirements of 29 CFR 1926 subpart AA are completed prior to the entry of any permit required confined space and that all other requirements of the subpart are met.

5.4 Atmospheric Testing

Atmospheric testing will be conducted in accordance with the standard to evaluate the atmosphere of the space and to verify acceptable entry conditions.

5.5 Acceptable Entry Conditions

Acceptable levels of oxygen shall be 20.8% or 20.9 % unless the Competent Person can determine what has displaced the oxygen. If the O2 levels are not 20.8% or 20.9% an initial test will be made at the worksite and the oxygen reading inside the confined space shall be consistent with the surrounding atmosphere outside the confined space.

If the potential exists for other chemical hazards to be present such as Chlorine, Ammonia, or other such gases the Competent Person shall ensure that the appropriate instrumentation is acquired and utilized during the testing of the confined space.

5.6 Ventilation of Confined Spaces

Air hoses with diffusers (air horns) may not be used to provide forced ventilation unless the compressor being used is certified for breathable air and communication equipment and hearing protection is suitable based on the increased noise.

Ventilation shall occur only by forcing air into a confined space. If it is necessary to exhaust hazardous gases such as those produced when welding or equipment, the air being forced into the confined space shall be increased by at least the amount that is being exhausted out of the space.

5.7 Performance of Work

All persons who enter permit confined spaces shall comply with the provisions of this section and the confined space permit.

Hot work (e.g., flame. arc, spark, or source of ignition) shall not be permitted in any confined space until tests have ensured that the percentage of combustible/flammable gas or vapor is safely below the Lower Explosive Limit (LEL).

Compressed gas cylinders may not be taken into any confined space.

The hoses of gas cutting and welding tools shall be inspected for leaks prior to taking them into any confined space and removed immediately after the work involving them has been concluded.

5.8 Duties of Authorized Entrants

The employer shall ensure that each entrant complies with all of the requirements of 1926.1208.

5.9 Duties of Authorized Attendants

In addition to the requirements of 1926.1209 the employer shall ensure that each attendant:

- Is able to effectively communicate with members of the Host Employer, Controlling Contractor, ROCIP Safety Team, and the general public.

5.10 Duties of Entry Supervisor

The employer shall ensure that each entry supervisor complies with all of the requirements of 1926.1210.

5.11 Completion of Work

When the work is completed in a confined space the employer shall ensure:

- All tools, equipment and materials have been removed.

- The area surrounding the confined space shall be clean of materials, equipment, waste, and debris.

- The supervisor responsible for the confined space work shall inspect the work location to ensure cleanup of materials, tools, and other items is complete.

6. References

29 CFR 1926 subpart AA

Cranes, Hoists and Rigging – 8

1. Policy

Cranes and rigging shall be used safely and in accordance with their designed purpose and that of the manufacturer.

2. Purpose

To define the procedures and standards for the use, care, control and operation of cranes and associated rigging equipment.

3. Scope

All ROCIP projects.

4. Definitions

Crane means any mobile or fixed lifting equipment, excluding forklifts.

5. Requirements

5.1 Cranes

All personnel working with or around cranes will be trained in accordance with 29 CFR 1926 Subparts CC, H, and N. All crane operations with be in accordance with the requirements of Subpart CC.

5.1.1 General Operation of Cranes

Only persons designated by certification shall be permitted to operate cranes.

Crane operators shall be certified, trained, and deemed competent by the National Commission for the Certification of Crane Operators (NCCCO), or a training entity accredited by the NCCCO, the National Center for Construction Education and Research (NCCER), or National Commission for Certifying Agencies (NCCA) that provides crane operator certification for the type of crane being utilized. Skills must be verified by a function test with visual observation of operating skills on a predetermined course that adequately tests the operating skills. The contractor shall verify that the certifying entity has had their program audited and approved by one of the above organizations. Certification shall be presented by the General Contractor to the ROCIP Construction Safety Manager prior to work requiring the use of cranes.

When a third party provides a crane operator the third party must provide written evidence that their employee is a Certified Operator in accordance with the above paragraph.

Cranes shall not be operated beyond 75% (percent of their configured lifting capacity) at the specified boom length in calm conditions. Any lift above 75% of a crane capacity requires a critical lift plan. Any planned load over 50,000 pounds requires a lift plan. All lift plans must approved by a Qualified Person and the Construction Safety Manager.

Outriggers shall be fully extended when loads are being lifted and the crane shall be in the level position on a minimum of a 3'X3'X6" thick pad of rigid wood (hardwood or plywood) for cranes up to 50 tons and a minimum of 3'X3'X 1 ½" steel, composite, or other structurally sound material for cranes 50 to 100 tons. For cranes over 100 tons calculate the capacity of crane (in tons) / 5 = Blocking area (in square feet) of 2" steel, composite, or other structurally sound material or the recommendations of the manufacturer whichever is greater.

Prior to any lift the working surface shall be inspected to verify that the surface will bear the weight of the crane and its intended load.

If cranes are to be used to transport or walk loads from one location to another only cranes designated for this purpose shall be used and a thorough inspection of the intended route shall be made by a Competent Person.

Prior to traveling on any road the weight capacity of that route shall be verified to ensure that the surface will bear the weight of the crane and its intended load.

The swing radius of cranes shall be marked with a barrier to warn others (on the ground or in other equipment) of its swing radius.

Only industry established hand signals shall be used to direct the crane operator during lifting operations. Only trained and designated persons are permitted to give hand signals to crane operators except during an emergency. In this instance any person may give a stop signal.

The crane operator is ultimately responsible for making the decision to initiate the lift.

Crane operators are required to wear the minimum required personal protective equipment.

No employee(s) shall be permitted within the crane radius or conducting any service activity on a crane while it is being moved, lifting a load, or being operated in any manner.

All cranes exceeding 50 tons shall be equipped with a boom mounted wind speed indicator.

The boom of mobile cranes shall be in the lowered and retracted position when moving from location to location or around the jobsite.

During severe storm or weather conditions the crane boom shall be lowered or placed in a position that precludes damage to the crane itself or immediate surroundings.

No operator shall hoist any load when the wind speed exceeds the safe limits stated in the operator's manual. Under no circumstance shall a lift be performed in wind speed of 30 miles per hour or greater including gusts. When wind speeds have subsided and no gusts exceeding 30 MPH have been recorded within the previous 15 minutes, and other conditions do not prohibit, crane operations may resume under the direction of the site safety representative.

All cranes shall be equipped with a functional and operational anti-two-block device.

Cell phones are prohibited in all cranes. If crane operations require an electronic form of communications other suitable means shall be used such as radios or walkie-talkies.

5.2 Hoists (Overhead)

The safe working load of the overhead hoist as determined by the manufacturer shall be indicated on the hoist and this safe working load shall not be exceeded.

The supporting structure to which the hoist is attached shall have a safe working load equal to that of the hoist.

The support shall be arranged so as to provide for free movement of the hoist and shall not restrict the hoist from lining itself up with the load.

The hoist shall be installed only in locations that will permit the operator to stand clear of the load at all times.

Air hoists shall be connected to an air supply of sufficient capacity and pressure to safely operate the hoist. All air hoses supplying air shall be positively connected to prevent their becoming disconnected during use.

All overhead hoists in use shall meet the applicable requirements for construction, design, installation, testing, inspection, maintenance, and operation, as prescribed by the manufacturer.

Prior to using the crane/hoist the operator shall do a visual inspection to confirm the safety of this equipment. This includes a check of the wire rope, chain, sling(s), hook(s) and other components.

5.2.1 Inspection of Cranes

All cranes shall have a current annual inspection prior to delivery to the project provided by an approved third party inspection service.

Cranes shall be visually inspected and documented prior to each shift. The inspection shall include observation for deficiencies during operation. At a minimum this inspection shall include the following:

- All control mechanisms for adjustments;
- Control and drive mechanism for excessive wear of components and contamination by lubricants, water, or other foreign matter;
- Safety devices, including but not limited to boom angle indicators, boom stops, boom kick out devices, anti-two block devices, and load moment indicators, wind speed indicators, etc.;
- Air, hydraulic, and other pressurized lines for deterioration or leakage, particularly those which flex in normal operation;
- Hooks and latches for deformation, chemical damage, cracks, or wear;
- Wire rope reeving for compliance with hoisting equipment manufacturer's specifications;
- Electrical apparatus for malfunctioning, signs of excessive deterioration, dirt, or moisture accumulation;
- Hydraulic system for proper fluid level;
- Tires for proper inflation and condition;
- Ground conditions around the hoisting equipment for proper support, including ground settling under and around outriggers, ground water accumulation, or similar conditions;
- The hoisting equipment for level position; and
- The hoisting equipment for level position after each move and setup.
- If any deficiency is identified an immediate determination shall be made by the Competent Person as to whether the deficiency constitutes a hazard.

If defects or other unsafe conditions are found during an inspection the crane shall be taken out of service until repairs have made. A record of repairs and associated maintenance of cranes shall be documented.

Providers of rental or leased cranes shall provide proof to the ROCIP Safety Team that the annual inspection of their equipment is current. A copy of this annual inspection report shall be kept in the operator cab of cranes.

5.3 Rigging (slings, hooks and chains)

5.3.1 General

All rigging equipment shall have a demonstratable - documented safety factor of 5:1 available on site.

All rigging hooks and hooks on cranes except shakeout hooks shall have a functional safety latch.

Each sling shall be accompanied with a "Sling Rating Tag". This tag will identify the maximum amount of load the sling is able to sustain.

Shackles shall be of the screw pin or threaded pin with nut and safety keeper type only. Clevis type devices are prohibited

Slings, hooks, and other rigging equipment shall be used in accordance with their designed purpose and manufacturer specifications.

Tag lines shall be used to guide and control loads that are being lifted and moved. Employees shall not be allowed to guide loads directly with their hands.

Employees shall be required to keep clear of loads being moved and lifted.

Employees shall not be permitted to ride or be on the headache ball, suspended loads, muck buckets, clams, or any other apparatus not designed for personnel being lifted or moved by cranes.

Rigging equipment such as nylon slings and wire rope slings shall not be used in conjunction with personnel fall protection equipment or fall protection systems. This includes using rigging equipment as anchor points, beam wraps, or an extension of a fall arrest system.

5.3.2 Inspection

An inspection program for all slings, hooks, and chains shall be implemented. Manufacturer guidelines shall be followed for inspections.

Defective rigging equipment shall be tagged "Do Not Use" and taken out of service and removed from the work area and destroyed or returned to the owner.

Prior to each use a Competent Person shall inspect the condition of lifting hooks. Hooks that are deformed, or stretched 10% of the throat or 15% twist shall be removed from service, and destroyed.

5.4 Personnel Basket Use

Requires prior approval by a Qualified Person and shall be considered in accordance with OSH Act as the least preferred method of personnel transport.

5.5 Overhead Clearance

The operation of mobile equipment near energized electrical power lines shall conform to power line clearance shall meet minimum clearances in ASME B30.5 and all applicable federal laws.

A person shall be designated to observe clearance of the equipment and give timely warning for all operations when any crane is operated within 20' of a power line.

Cage-type boom guards, insulating links, or proximity warning devices may be used on cranes but the use of such devices shall not alter the requirements of any other regulation of this part even if such device is required by law or regulation.

Any overhead wire shall be considered to be an energized line unless and until the person owning such line or the electrical utility authorities indicate that it is not an energized line and it has been visibly grounded.

Prior to work near transmitter towers where an electrical charge can be induced in the equipment or materials being handled, the transmitter shall be de-energized or tests shall be made to determine if electrical charge is induced on the crane. The following precautions shall be taken when necessary to dissipate induced voltages:

- The equipment shall be provided with an electrical ground directly to the upper rotating structure supporting the boom; and ground jumper cables shall be attached to materials being handled by boom equipment when

electrical charge is induced while working near energized transmitters. Contractors shall be provided with nonconductive poles having large alligator clips or other similar protection to attach the ground cable to the load.

6. References

29 CFR 1926 Subpart CC, N, H, and applicable ASME standards

Steel Erection - 9

1. Policy

All contractors involved with steel erection shall provide a safe method of steel erection in compliance with this Safety Manual and Federal Standards.

2. Purpose

To protect contractor employees from hazards associated with steel erection activities.

3. Scope

Applies to all ROCIP projects.

4. Definitions

All definitions can be referenced in 1926 subpart R

5. Requirements

5.1 Approval to begin steel erection

Before authorizing the commencement of steel erection the controlling contractor shall ensure that the steel erector is provided with the following written notifications:

The concrete in the footings, piers and walls and the mortar in the masonry piers and walls have attained, on the basis of an appropriate ASTM standard test method of field-cured samples either 75 percent of the intended minimum compressive design strength or sufficient strength to support the loads imposed during steel erection.

Any repairs, replacements and modifications to the anchor bolts were conducted in accordance with 1926.755(b).

Commencement of steel erection

A steel erection contractor shall not erect steel unless it has received written notification that the concrete in the footings, piers, and walls or the mortar in the masonry piers and walls has attained, on the basis of an appropriate ASTM standard test method of field-cured samples, either 75 percent of the intended minimum compressive design strength or sufficient strength to support the loads imposed during steel erection.

Site layout

The controlling contractor shall ensure that the following is provided and maintained:

- Adequate access roads into and through the site for the safe delivery and movement of derricks, cranes, trucks, other necessary equipment, and the material to be erected and means and methods for pedestrian and vehicular control. Exception: this requirement does not apply to roads outside of the construction site.
- A firm, properly graded, drained area, readily accessible to the work with adequate space for the safe storage of materials and the safe operation of the erector's equipment.

Pre-planning of overhead hoisting operations

All hoisting operations in steel erection shall be pre-planned to ensure that the requirements of 1926.753(d) are met.

Site-specific erection plan

Where employers elect, due to conditions specific to the site, to develop alternate means and methods that provide employee protection, a site-specific erection plan shall be developed by a Qualified Person and be available at the work site. *Under no circumstances will the steel erector be allowed to deviate from the 6' fall protection requirements of this manual.*

Pre-shift visual inspection of cranes

Cranes being used in steel erection activities shall be visually inspected and documented prior to each shift. The inspection shall include observation for deficiencies during operation.

If the deficiency is determined to constitute a hazard, the hoisting equipment shall be removed from service until the deficiency has been corrected.

The operator shall be responsible for those operations under the operator's direct control. Whenever there is any doubt as to safety, the operator shall have the authority to stop and refuse to handle loads until safety has been assured.

A qualified rigger (a rigger who is also a Qualified Person) shall inspect the rigging prior to each shift.

The headache ball, hook or load shall not be used to transport personnel.

Safety latches on hooks shall not be deactivated or made inoperable except:

- When a qualified rigger has determined that the hoisting and placing of purlins and single joists can be performed more safely by doing so; or
- When equivalent protection is provided in a site-specific erection plan.

Working under loads

Routes for suspended loads shall be pre-planned to ensure that no employee is required to work directly below a suspended load except for:

- Employees engaged in the initial connection of the steel; or
- Employees necessary for the hooking or unhooking of the load.

When working under suspended loads the following criteria shall be met:

- Materials being hoisted shall be rigged to prevent unintentional displacement;
- Hooks with self-closing safety latches or their equivalent shall be used to prevent components from slipping out of the hook; and
- All loads shall be rigged by a qualified rigger

Multiple lift rigging procedure

No multiple lifts (Christmas treeing) are allowed on any ROCIP project.

5.2 Structural Steel Assembly

Structural stability shall be maintained at all times during the erection process.

The following additional requirements shall apply for multi-story structures:

- The permanent floors shall be installed as the erection of structural member's progresses and there shall be not more than eight stories between the erection floor and the upper-most permanent floor except where the structural integrity is maintained as a result of the design.
- At no time shall there be more than four floors or 48 feet, whichever is less, of unfinished bolting or welding above the foundation or uppermost permanently secured floor, except where the structural integrity is maintained as a result of the design.

Walking/working surfaces

Tripping hazards. Shear connectors (such as headed steel studs, steel bars or steel lugs), reinforcing bars, deformed anchors, or threaded studs shall not be attached to the top flanges of beams, joists, or beam attachments so that they

project vertically from or horizontally across the top flange of the member until after the metal decking, or other walking/working surface, has been installed.

Installation of shear connectors on composite floors, roofs and bridge decks. When shear connectors are used in construction of composite floors, roofs and bridge decks, employees shall lay out and install the shear connectors after the metal decking has been installed, using the metal decking as a working platform.

Plumbing-up

When deemed necessary by a Competent Person, plumbing-up equipment shall be installed in conjunction with the steel erection process to ensure the stability of the structure.

When used plumbing-up equipment shall be in place and properly installed before the structure is loaded with construction material such as loads of joists, bundles of decking, or bundles of bridging.

Plumbing-up equipment shall be removed only with the approval of a Competent Person.

Metal decking

Hoisting, landing, and placing of metal decking bundles.

Bundle packaging and strapping shall not be used for hoisting unless specifically designed for that purpose.

If loose items such as dunnage, flashing, or other materials are placed on the top of metal decking bundles to be hoisted, such items shall be secured to the bundles.

Metal decking bundles shall be landed on framing members so that enough support is provided to allow the bundles to be unbanded without dislodging the bundles from the supports. Bundles shall not be unbanned until such time as the decking is to be placed.

At the end of the shift or when environmental or jobsite conditions require metal decking shall be secured against displacement.

No decking will be allowed in wind speeds in excess of 30 mph including gusts. The same criteria for hoisting will apply for decking.

Roof and floor holes and openings

Metal decking at roof and floor holes and openings shall be installed as follows:

- Framed metal deck openings shall have structural members turned down to allow continuous deck installation except where not allowed by structural design constraints or constructability
- Roof and floor holes and openings shall be decked over. Where large size configuration or other structural design does not allow openings to be decked over (such as elevator shafts, stair wells, etc.) employees shall be protected from fall greater than 6 feet by guardrails or PPE
- Metal decking holes and openings shall not be cut until immediately prior to being permanently filled with the equipment or structure needed or intended to fulfill its specific use and which meets the strength requirements of this section or shall be immediately covered

Covering roof and floor openings

Covers for roof and floor openings shall be capable of supporting, without failure, twice the weight of the employees, equipment and materials that may be imposed on the cover at any one time.

All covers shall be secured when installed to prevent accidental displacement by the wind, equipment or employees.

All covers shall be painted with high-visibility paint or shall be marked with the word "HOLE" or "COVER" to provide warning of the hazard.

Smoke dome or skylight fixtures that have been installed are not considered covers for the purpose of this section unless they meet the strength requirements of this section.

Decking gaps around columns

Wire mesh, exterior plywood, or equivalent, shall be installed around columns where planks or metal decking do not fit tightly. The materials used must be of sufficient strength to provide fall protection for personnel and prevent objects from falling through.

Installation of metal decking

Metal decking shall be laid tightly and *immediately secured* upon placement to prevent accidental movement or displacement.

During initial placement metal decking panels shall be placed to ensure full support by structural members.

Derrick floors

A derrick floor shall be fully decked and/or planked and the steel member connections completed to support the intended floor loading.

Temporary loads placed on a derrick floor shall be distributed over the underlying support members so as to prevent local overloading of the deck material.

5.3 Column Anchorage

All columns shall be anchored by a minimum of 4 anchor rods (anchor bolts).

Each column anchor rod (anchor bolt) assembly, including the column-to-base plate weld and the column foundation, shall be designed to resist a minimum eccentric gravity load of 300 pounds located 18 inches from the extreme outer face of the column in each direction at the top of the column shaft.

Columns shall be set on level finished floors, pre-grouted leveling plates, leveling nuts, or shim packs which are adequate to transfer the construction loads.

All columns shall be evaluated by a Competent Person to determine whether guying or bracing is needed; if guying or bracing is needed, it shall be installed.

Repair, replacement or field modification of anchor rods (anchor bolts)

Anchor rods (anchor bolts) shall not be repaired, replaced, or field-modified without the approval of the project structural engineer of record.

Prior to the erection of a column the controlling contractor shall provide written notification to the steel erector if there has been any repair, replacement or modification of the anchor rods (anchor bolts) of that column. *The steel erector will notify the controlling contractor if they perform any modifications to the anchor bolts.*

5.4 Beams and Columns

During the final placing of solid web structural members the load shall not be released from the hoisting line until the members are secured with at least two bolts per connection, of the same size and strength as shown in the erection drawings, drawn up wrench-tight or the equivalent as specified by the project structural engineer of record, except as specified in this section.

A Competent Person shall determine if more than two bolts are necessary to ensure the stability of cantilevered members; if additional bolts are needed, they shall be installed.

Diagonal bracing. Solid web structural members used as diagonal bracing shall be secured by at least two bolts per connection drawn up wrench-tight or the equivalent as specified by the project structural engineer of record.

Double connections at columns and/or at beam webs over a column. When two structural members on opposite sides of a column web, or a beam web over a column, are connected sharing common connection holes, at least one bolt with its wrench-tight nut shall remain connected to the first member unless a shop-attached or field-attached seat or equivalent connection device is supplied with the member to secure the first member and prevent the column from being displaced.

If a seat or equivalent device is used, the seat (or device) shall be designed to support the load during the double connection process. It shall be adequately bolted or welded to both a supporting member and the first member before the nuts on the shared bolts are removed to make the double connection.

Column splices. Each column splice shall be designed to resist a minimum eccentric gravity load of 300 pounds located 18 inches from the extreme outer face of the column in each direction at the top of the column shaft.

Perimeter columns. Perimeter columns shall not be erected unless:

- The perimeter columns extend a minimum of 48 inches above the finished floor to permit installation of perimeter safety cables prior to erection of the next tier, except where constructability does not allow
- The perimeter columns have holes or other devices in or attached to perimeter columns at 42-45 inches above the finished floor and the midpoint between the finished floor and the top cable to permit installation of perimeter safety cables required by this section except where constructability does not allow

5.5 Joists

Except as provided elsewhere in this section, where steel joists are used and columns are not framed in at least two directions with solid web structural steel members, a steel joist shall be field-bolted at the column to provide lateral stability to the column during erection. For the installation of this joist:

A vertical stabilizer plate shall be provided on each column for steel joists. The plate shall be a minimum of 6 inch by 6 inch and shall extend at least 3 inches below the bottom chord of the joist with a $^{13/16}$ inch hole to provide an attachment point for guying or plumbing cables.

The bottom chords of steel joists at columns shall be stabilized to prevent rotation during erection.

Hoisting cables shall not be released until the seat at each end of the steel joist is field-bolted, and each end of the bottom chord is restrained by the column stabilizer plate.

Where constructability does not allow a steel joist to be installed at the column an alternate means of stabilizing joists shall be installed on both sides near the column and shall:

- Provide stability equivalent to that listed above;
- Be designed by a Qualified Person;
- Be shop installed; and
- Be included in the erection drawings

Hoisting cables shall not be released until the seat at each end of the steel joist is field-bolted and the joist is stabilized.

Where steel joists at or near columns span 60 feet or less, the joist shall be designed with sufficient strength to allow one employee to release the hoisting cable without the need for erection bridging.

Where steel joists at or near columns span more than 60 feet, the joists shall be set in tandem with all bridging installed unless an alternative method of erection, which provides equivalent stability to the steel joist, is designed by a Qualified Person and is included in the site-specific erection plan.

A steel joist or steel joist girder shall not be placed on any support structure unless such structure is stabilized.

When steel joist(s) are landed on a structure, they shall be secured to prevent unintentional displacement prior to installation.

No modification that affects the strength of a steel joist or steel joist girder shall be made without the approval of the project structural engineer of record.

Field-bolted joists

Except for steel joists that have been pre-assembled into panels, connections of individual steel joists to steel structures in bays of 40 feet or more shall be fabricated to allow for field bolting during erection.

These connections shall be field-bolted unless constructability does not allow.

Steel joists and steel joist girders shall not be used as anchorage points for a fall arrest system unless written approval to do so is obtained from a Qualified Person.
A bridging terminus point shall be established before bridging is installed.

Attachment of steel joists and steel joist girders

Each end of "K" series steel joists shall be attached to the support structure with a minimum of two $^{1/8}$-inch fillet welds 1 inch long or with two $^{1/2}$-inch bolts, or the equivalent.

Each end of "LH" and "DLH" series steel joists and steel joist girders shall be attached to the support structure with a minimum of two $^{1/4}$-inch fillet welds 2 inches long, or with two $^{3/4}$-inch bolts, or the equivalent.

Except as provided in this section, each steel joist shall be attached to the support structure; at least one end on both sides of the seat immediately upon placement in the final erection position and before additional joists are placed.

Panels that have been pre-assembled from steel joists with bridging shall be attached to the structure at each corner before the hoisting cables are released.

Erection of steel joists

Both sides of the seat of one end of each steel joist that requires bridging shall be attached to the support structure before hoisting cables are released.

For joists over 60 feet, both ends of the joist shall be attached as specified in this section and the provisions of this section met before the hoisting cables are released.

On steel joists that do not require erection bridging, only one employee shall be allowed on the joist until all bridging is installed and anchored.

For table A and B, see 29 CFR 1926 Subpart R.

Employees shall not be allowed on steel joists where the span of the steel joist is equal to or greater than the span shown in Tables A and B except in accordance with 1926.757(d).

When permanent bridging terminus points cannot be used during erection, additional temporary bridging terminus points are required to provide stability.

Erection bridging

Where the span of the steel joist is equal to or greater than the span shown in Tables A and B, the following shall apply:

- A row of bolted diagonal erection bridging shall be installed near the midspan of the steel joist;

- Hoisting cables shall not be released until this bolted diagonal erection bridging is installed and anchored; and
- No more than one employee shall be allowed on these spans until all other bridging is installed and anchored.

Where the span of the steel joist is over 60 feet through 100 feet, the following shall apply:

- All rows of bridging shall be bolted diagonal bridging;
- Two rows of bolted diagonal erection bridging shall be installed near the third points of the steel joist;
- Hoisting cables shall not be released until this bolted diagonal erection bridging is installed and anchored; and
- No more than two employees shall be allowed on these spans until all other bridging is installed and anchored.

Where the span of the steel joist is over 100 feet through 144 feet, the following shall apply:

- All rows of bridging shall be bolted diagonal bridging;
- Hoisting cables shall not be released until all bridging is installed and anchored; and
- No more than two employees shall be allowed on these spans until all bridging is installed and anchored.

For steel members spanning over 144 feet, the erection methods used shall be in accordance with 1926.756.

Where any steel joist specified in this section is a bottom chord bearing joist, a row of bolted diagonal bridging shall be provided near the support(s). This bridging shall be installed and anchored before the hoisting cable(s) is released.

When bolted diagonal erection bridging is required by this section, the following shall apply:

- The bridging shall be indicated on the erection drawing;
- The erection drawing shall be the exclusive indicator of the proper placement of this bridging;
- Shop-installed bridging clips, or functional equivalents, shall be used where the bridging bolts to the steel joists;
- When two pieces of bridging are attached to the steel joist by a common bolt, the nut that secures the first piece of bridging shall not be removed from the bolt for the attachment of the second; and
- Bridging attachments shall not protrude above the top chord of the steel joist.

Landing and placing loads

During the construction period the employer placing a load on steel joists shall ensure that the load is distributed so as not to exceed the carrying capacity of any steel joist.

Except as otherwise noted in this section, no construction loads are allowed on the steel joists until all bridging is installed and anchored and all joist-bearing ends are attached.

The weight of a bundle of joist bridging shall not exceed a total of 1,000 pounds. A bundle of joist bridging shall be placed on a minimum of three steel joists that are secured at one end. The edge of the bridging bundle shall be positioned within 1 foot of the secured end.

No bundle of decking may be placed on steel joists until all bridging has been installed and anchored and all joist bearing ends attached unless all of the following conditions are met:

- The employer has first determined from a Qualified Person and documented in a site-specific erection plan that the structure or portion of the structure is capable of supporting the load;
- The bundle of decking is placed on a minimum of three steel joists;
- The joists supporting the bundle of decking are attached at both ends;
- At least one row of bridging is installed and anchored;
- The total weight of the bundle of decking does not exceed 4,000 pounds; and
- Placement of the bundle of decking shall be in accordance with this section.

The edge of the construction load shall be placed within 1 foot of the bearing surface of the joist end.

5.6 All of the requirements of this subpart apply to the erection of systems-engineered metal buildings except column anchorage and open web steel joists.

Each structural column shall be anchored by a minimum of four anchor rods (anchor bolts).

Rigid frames shall have 50 percent of their bolts or the number of bolts specified by the manufacturer (whichever is greater) installed and tightened on both sides of the web adjacent to each flange before the hoisting equipment is released. Construction loads shall not be placed on any structural steel framework unless such framework is safely bolted, welded or otherwise adequately secured.

In girt and eave strut-to-frame connections, when girts or eave struts share common connection holes, at least one bolt with its wrench-tight nut shall remain connected to the first member unless a manufacturer-supplied, field-attached seat or similar connection device is present to secure the first member so that the girt or eave strut is always secured against displacement.

Both ends of all steel joists or cold-formed joists shall be fully bolted and/or welded to the support structure before:

- Releasing the hoisting cables;
- Allowing an employee on the joists; or
- Allowing any construction loads on the joists.

Purlins and girts shall not be used as an anchorage point for a fall arrest system unless written approval is obtained from a Qualified Person.

Purlins may only be used as a walking/working surface when installing safety systems, after all permanent bridging has been installed and fall protection is provided.

Construction loads may be placed only within a zone that is within 8 feet of the center-line of the primary support member.

5.8 Securing loose items aloft.

All materials, equipment, and tools, which are not in use while aloft shall be secured against accidental displacement.

Protection from falling objects other than materials being hoisted. The controlling contractor shall bar other construction processes below steel erection unless overhead protection for the employees below is provided.

5.8 Fall Protection

Each employee engaged in a steel erection activity that is on a walking/working surface with an unprotected side or edge which is 6 feet (six-feet) or more above a lower level shall be protected from falling by the use of guardrail systems, safety net systems, positioning device systems, or personal fall arrest systems. Fall protection shall be 100% on all projects *(2 lanyards or combination of lanyard SRL, etc.).*

This shall apply 100% (one-hundred percent) of the time on all ROCIP projects.

Perimeter safety cables. On multi-story structures perimeter safety cables shall be installed at the final interior and exterior perimeters of the floors as soon as the metal decking has been installed.

Connectors shall be protected from fall hazards as provided in this section.

Connectors. Each connector shall:

- Be protected in accordance with this section from fall hazards of more than 6 feet above a lower level;
- Have completed connector training; and
- Be provided with, wear, and utilize at heights over 6 feet above a lower level with a personal fall arrest system, positioning device system or fall restraint system.

Criteria for fall protection equipment

Guardrail systems, safety net systems, personal fall arrest systems, positioning device systems and their components shall conform to section 17 of this manual.

Fall arrest system components shall be used in fall restraint systems and shall conform to the fall protection section of this manual. Body harnesses shall be used in fall restraint systems.

Perimeter safety cables shall meet the criteria for guardrail systems.

Custody of fall protection. Fall protection provided by the steel erector shall remain in the area where steel erection activity has been completed to be used by other trades only if the controlling contractor or its authorized representative:

- Has directed the steel erector to leave the fall protection in place; and
- Has inspected and accepted control and responsibility of the fall protection prior to authorizing persons other than steel erectors to work in the area.

5.9 Training

The following provisions supplement the requirements of 1926.21 regarding the hazards addressed in this chapter.

Training Personnel. Training required by this section shall be provided by a Qualified Person(s).

Fall hazard training. The employer shall provide a training program for all employees exposed to fall hazards. The program shall include training and instruction in the following areas:

- The recognition and identification of fall hazards in the work area.
- The use and operation of guardrail systems (including perimeter safety cable systems), personal fall arrest systems, positioning device systems, fall restraint systems, safety net systems, and other protection to be used.

- The correct procedures for erecting, maintaining, disassembling, and inspecting the fall protection systems to be used.
- The procedures to be followed to prevent falls to lower levels and through or into holes and openings in walking/working surfaces and walls; and
- The fall protection requirements of this section.

Special training programs. In addition to the training required in this section, the employer shall provide special training to employees engaged in the following activities:

Connector procedures. The employer shall ensure that each connector has been provided training in the following areas:

- The nature of the hazards associated with connecting; and
- The establishment, access, proper connecting techniques and work practices required by 1926.756(c) and 1926.760(b).

Rigging procedures

- The nature of the hazards associated with rigging
- Proper rigging procedures

Controlled Decking Zone Procedures.

- Where CDZs are being used the employer shall assure that each employee has been provided training in the following areas:
- The nature of the hazards associated with work within a controlled decking zone; and
- The establishment, access, proper installation techniques and work practices required by § 1926.760(c) and § 1926.754(e).

6. References

29 CFR 1926 Subpart R

Emergency Preparedness - 10

1. Policy

Foreseeable emergency situations shall be prepared for and controlled to the greatest extent possible.

2. Purpose

To maintain a high level of responsiveness to emergency situations

3. Scope

Applies to all ROCIP projects.

4. Definitions

Emergency means (for the purpose of this section) an adverse event(s) beyond the means of the contractors in the immediate area to satisfactorily restore to a safe and healthful work environment.

Assembly Points/Safe Areas means a location safely outside the evacuation area designated for assembly.

5. Requirements

5.1 General

All contractors shall have an emergency action plan which shall be documented and include at a minimum the following components:

- Hazard assessment of emergencies reasonably expected at the worksite
- Emergency evacuation procedures and evacuation route assignments
- Procedures to be followed by personnel required to remain to operate/maintain critical processes or equipment
- Procedures to account for evacuated personnel
- Rescue and medical duties for those contractors required to perform them
- A list of key emergency response personnel and personnel available to provide additional information or explanation of duties required under this plan or processes involved
- Emergency notification/alarm systems
- Training
- Program review and evaluation

5.1.1 Hazard assessment / emergencies

Worksite assessment and the identification of emergencies are critical to the development of a program that will be responsive, all inclusive, and effective in preparing against and responding to worksite emergencies. Emergency types may include:

- Injury and illness
- Fire and explosion
- Chemical spills and releases
- Natural disasters such as tornadoes, lightning storms, floods, etc.
- Civil strife and bomb threats

When practicable the contractor shall develop a diagram / drawing of the facility or jobsite. It should indicate the placement of buildings, fuel and flammable/combustible material storage, parking, traffic patterns, assembly areas, etc. A separate layout of each facility or jobsite should illustrate:

- Ingress and egress, hallways, routes of travel, and emergency exits
- Location of fire suppression equipment
- Location of flammable / combustible product storage
- Location of first aid kits and other emergency equipment

5.1.2 Emergency evacuation procedures and routes

Depending on the emergency situation employees may be required to evacuate their specific work area or the facility. This should be under the direction of supervisory personnel or designated response personnel.

All ROCIP projects shall establish primary and secondary means of egress to assembly points ('safe areas') subject to pre-established means determined by owners or primary contractors.

In an extreme emergency situation it may be necessary to quickly evacuate the work site to a designated area. Owner controlled pre-established evacuation procedures shall supersede this procedure in these circumstances.

- Primary and alternate escape routes from the work area or building(s) shall be developed and maintained
- In the event of a toxic chemical release contractors shall evacuate upwind or across wind whichever is the most feasible
- All means of egress shall be continually maintained and free from all obstructions and impediments

- Evacuation routes shall not go through higher hazard areas. Included with the evacuation routes shall be designated assembly points.

As soon as possible after the evacuation and as often as deemed safe and necessary during the evacuation, the general contractor, site safety representative, and other site management personnel shall make or direct a complete inspection of the work site to ensure that it is safe from the threats posed by the original evacuation hazard or unattended equipment left by evacuated contractors.

5.1.3 Critical process / equipment maintenance

In certain instances key personnel may be required to remain at their positions to maintain critical operations.

The general contractor shall list in detail the procedures to be taken by those contractors who shall remain behind to care for essential operations until their evacuation becomes absolutely necessary.

Essential operations may include such activities as monitoring power supplies, water supplies, and other essential services that cannot be shut down for every emergency alarm; as well as the use of fire extinguishers.

In all such instances these persons shall be provided with the appropriate protective equipment and an appropriate means of communication with senior response personnel.

5.1.4 Key personnel assignments / responsibilities

The emergency plan shall detail the personnel and associated duties that they must perform in the event of an emergency:

- Senior management shall oversee all emergency activities
- Supervision shall coordinate area evacuation procedures and associated contractors headcount reporting to the senior supervisor any employees who are missing and providing their location prior to the evacuation
- Safety personnel shall insure that the site emergency plans are in unison with any owner controlled plans.

Additional key responsibilities include:

- An emergency response team personnel list shall be developed, maintained at the work site and kept up to date as assignments change

- The list shall include key personnel's name, their telephone/Nextel contact number, and agencies to contact in case of emergency
- The list shall be posted near each telephone in a site office area, on contractors bulletin boards and in other prominent locations
- The general contractor for the work site shall notify local government agencies immediately when an emergency has the potential to affect public health and safety

5.1.5 Contractors evacuation assembly points and headcount

Assembly points shall be developed in unison with the established primary and secondary means of egress. These locations shall be act as "safe areas" for evacuated employees. Consideration should be given to the location of the assembly point as well as its ability to protect employees from the effects of the emergency condition as well as the associated weather conditions (i.e., time of day, temperature extremes, rain, etc.)

- All evacuees shall gather at the designated assembly area(s). A list of primary and alternate designated safe areas shall be included along with the emergency escape route assignments
- Assembly points shall be at a safe distance from the building and/or work site; well off roadways, fire lanes, and other emergency access routes
- Once the evacuees have gathered it is necessary to have a means of accounting for personnel during an evacuation
- The general contractor shall be responsible for accounting for personnel and informing law enforcement or emergency personnel of those persons believed missing

5.1.6 Emergency notification and alarm systems

All plans shall detail the methods and equipment utilized to notify employees of an emergency evacuation situation. General characteristics of appropriate methods include; a consistent and continuously available communication system, methods capable of being heard over background noise, and in the case of audible alarms, individually recognizable.

To report a possible emergency evacuation situation the following procedure shall be followed:

- If there is a question as to whether the emergency is severe enough to evacuate or not employees are encouraged to leave their work areas on their own and go to a predetermined safe area
- A work area supervisor with a radio shall call the general contractor who shall sound the emergency alarm when necessary unless work site requirements give that authority to another Qualified Person

- Field supervisors without radios shall seek out supervisors with radios for specific evacuation instructions
- It is important to remember that once an emergency is declared – non-emergency radio traffic must be stopped
- Once the evacuation signal is sounded all employees supervision shall assist in a quick and orderly evacuation reporting immediately to the general contractor when the evacuation is complete.
- When the evacuation signal sounds employees shall shut down and make safe any equipment they are using or that is being used in their work area (within their span of control)
- Contractors and their employees shall then go calmly but quickly to the designated safe area
- In the event of a toxic chemical release employees shall evacuate upwind or across wind (whichever is the most feasible) utilizing the most effective escape route
- Employees shall group together with their crews and check in with their supervisor immediately after evacuation
- Employees shall stay out of the evacuated area until the all-clear signal is given. All employees shall be informed of the evacuation procedure for the all-clear signal

5.1.7 Emergency response duties (rescue, first aid, etc.)

In certain operations employees may be required to support location emergency response activities. In these situations employees must be trained and identified within the projects site emergency plan.

A general requirement of all emergency plans shall be to insure that rescue services are identified and in the case of sites that have designated first aid personnel that those personnel are available and capable of supporting those activities in the event they are needed.

5.1.8 Training

Contractor shall provide training to all of their employees at the time of initial work assignment and retraining annually thereafter (as a minimum) or if conditions on site change impacting the emergency plan. Training should address the following areas:

- The site emergency plan
- Emergency communications systems – both internal and external as well as back-up system
- Emergency notification procedures and alarm systems
- Site evacuation plans and assembly points
- Specific training to designated employees who are required to direct emergency equipment to the area and assist in the

emergency including roles/responsibilities and equipment operation procedures

- Employees required to respond to emergency situations as emergency technicians, etc. shall be trained in accordance with 29 CFR1910.120 (q)(6)

5.1.9 Program review and evaluation

The effectiveness of emergency programs shall be evaluated and reviewed on an as needed basis.

5.2 Hazardous Chemical Spills or Rupture

In the event of ruptured tanks, lines, vessels, tank cars, rail cars, dikes, and other forms of containers/containment of hazardous chemicals all affected personnel shall be immediately evacuated from the emergency area by supervision.

The ROCIP Safety Team and the general contractor shall be immediately notified of such an event.

The General contractor's safety representative and/or management shall take necessary action for protection of all contractors' employees and, if necessary, shall notify the owner and other personnel responsible for cleanup.

5.3 Severe Weather Procedure

One major type of condition to consider in the development of an emergency plan is that of severe weather. This may come in the form of severe storms, floods, lightning storms, tornadoes, etc.

All contractors shall evaluate their geographic area and incorporate responses that address appropriate foreseeable weather conditions in their area of operation as an attachment to this policy section. Additional requirements include:

- All work sites with offices shall have a means to assure they are provided with as much advance warning of adverse weather conditions as possible
- The general contractor or site safety coordinator is responsible for maintaining up-to-date information regarding approaching storms. They shall provide adequate warning to allow the appropriate individuals to secure the equipment and materials under their jurisdiction
- All supervisors shall be responsible for ensuring that all employees follow these procedures
- Safe locations shall be designated for employees in the event of tornadoes

- The general contractor shall follow the instructions of local authorities and the weather service so that the necessary precautions can be taken in the event of severe weather

5.4 Bomb Threats

All bomb threats shall be taken seriously.

Immediately notify the City of Austin and all contractors at the work site of the threat, who then shall contact their employees, as necessary.

Once the bomb threat has been received the general contractor shall decide whether to evacuate based on consultation with emergency responders, civil authorities, and other local representatives.

In all cases two way radios and cell phones shall be shut off in the affected area due to the fact that the frequencies used by them could activate the device.

In the event an employee receives a bomb threat the employees should try and remain calm and ascertain as much information as possible on the caller and their intentions.

5.5 Workplace Violence

City of Austin has a zero-tolerance for workplace violence, verbal and nonverbal threats, and related actions. Employees are expected to report violent incidents promptly and accurately to their immediate supervisor.

If a violent incident occurs the general contractor shall focus first on providing for the medical and psychological needs of affected employees.

Other immediate steps include:

- Reporting the incident to local law enforcement
- Securing work areas where disturbances occurred
- Accounting for all employees and ensuring the physical safety of those remaining in the area as soon as possible
- Providing for site security
- Quickly assessing the work area to determine if it is safe or if damage has occurred
- Providing critical incident debriefing to victims, witnesses, and other affected employees
- Providing accurate communication to outside agencies and law enforcement
- Any media communication shall be channeled through the City of Austin Risk Management department or their designee.

- Provisions for follow-up after medical and psychological treatment, medical confidentiality, and protection from discrimination should be arranged with the expressed intent to prevent the victims of workplace violence from suffering further loss
- Notify the ROCIP Safety Team and Risk Management so as to obtain assistance with EAP issues and employees concerns

6. References

CFR 29 CFR 1910.38, CFR 29 CFR 1910.165, CFR 29 CFR 1926.35, CFR 29 CFR 1926.159

Energy Control (Lockout/Tagout) - 11

1. Policy

Work activities associated with energized equipment or processes shall be controlled prior to initiating by verifying a zero energy state. No "Hot Work" will be conducted on any ROCIP project unless there is a verifiable demonstrated need for such work.

2. Purpose

To establish safe practices associated with equipment or processes that involve hazardous energy sources.

3. Scope

Applies to all ROCIP projects that perform activities such as, but not limited to, erecting, installing, constructing, repairing, adjusting, inspecting, cleaning, operating or maintaining equipment/machines/processes whereby hazardous energy sources are involved.

Note special exception to policy: equipment/machines that have an electrical plug as the sole hazardous energy source and can reach a zero energy state by simply being unplugged are exempt from this policy as long as control of the plug can be maintained at all times.

4. Definitions

All definitions can be referenced in 29 CFR1910. 147

Affected Employees means any employee who is required to work in the area of equipment/machine/processes where Lockout procedures are being implemented.

Authorized Employees means any employee who utilizes Lockout procedures on equipment/machines/processes.

Hazardous Energy Source means any type of energy that could injure anyone working on or near the equipment/machine/process if released as a result of work activities. Examples of hazardous energy sources include, but are not limited to the following: electrical; hydraulic (fluid/liquids); pneumatic (air); chemical; radiation; thermal; mechanical (from stored energy, like in flywheels and springs); and mechanical (from gravity).

Hot Work means working on live or energized parts.

Other Personnel means non-ROCIP contractors personnel or visitors to any work area where ROCIP authorized contractors are utilizing processes outlined in this Policy.

Zero Energy State means the equipment/machine/process has been purged of and blocked from hazardous energy sources that has no hazardous energy is present.

5. Requirements

All contractors whose work requires their employees to work on energized systems or utilize equipment that encompass the City's processes *shall develop a site specific lockout/tag-out plan in conjunction with the City.*

If equipment/machine/process will accommodate a lockout device it must be locked out. If the equipment/machine/process cannot be locked out it must be disabled in such a manner as to ensure that there is no possibility of re-energization.

5.1 Identifying Applicable Equipment/Machines/Processes

The following shall be documented:

- All equipment/machine/processes where this policy applies
- All owned energy isolating devices for applicable procedures related to the identified equipment/machine/processes
- All applicable lockout mechanisms necessary for applicable energy control procedures related to the identified equipment/machine/processes
- All applicable energy control procedures related to the identified equipment/machine/processes

This information shall be developed by the employer and kept on the job site and updated as equipment/machines/processes and lockout mechanisms are introduced or changed.

5.2 Training

The employer shall develop a training program to meet the requirement for the control of hazardous energy and to ensure that the proper procedures are understood and skills are acquired by the employees. All training will be conducted in accordance with Federal and State laws, and best industry practices. Training will include, but not limited to 29 CFR 1910.147.

Training shall be provided to each employee:

- To ensure that the purpose and function of the energy control program are understood by employees and that the knowledge and skills required for the safe application, usage, and removal of the energy controls are acquired.
- Each affected employees shall receive training on the procedures for the expressed purpose of ensuring awareness of the prohibition of removing

control mechanisms and Lockout/Tag-out devices on applicable equipment, machines, and processes.

- Each authorized employee shall receive special training in the recognition of hazardous energy sources the specific and/or common equipment or processes within respective work areas, types of necessary control mechanisms, and the procedures. This part applies when employees are working in conjunction with an existing hazardous energy sources.

When the supervisor or safety representative has reason to believe or observes deviations from the established procedures or inadequacies in the employee's knowledge or use of these procedures retraining is required. Affected or authorized employee shall be immediately re-trained if their actions during related work activities violated any portion of this policy.

5.3 Lockout Procedures (in order of action)

5.3.1 Preparation

Authorized employees shall verbally and in writing notify all affected employees including, if applicable, City of Austin personnel before commencing work activities.

5.3.2 Lockout Application

Perform the actions BEFORE commencing other work activities in the following order:

- Identify all operational devices for the equipment or process and place them in the off or neutral position.
- Identify all known energy control devices for the equipment or process and place them in the off or neutral position and utilize a Lockout device to secure them in that position. If the proper Lockout procedures or a hazardous energy source is unknown activities will stop and the authorized employee shall immediately contact their supervisor and the safety representative for assistance or instructions before proceeding.
- Tag the Lockout mechanism and mark the tag with your name and contact information.
- Visually inspect the equipment or process and use appropriate electronic or mechanical means to verify that a zero energy state has been reached.
- Ensure that all affected and authorized employees are clear from the equipment or process then try to activate the equipment or process by initiating all identified operation devices to ensure that a zero energy state has been achieved. Apply additional locks to any energy controlling devices having unprotected energy sources and

repeat this procedure until a zero energy state is obtained. Proceed with the required work activities for the equipment or process only after a zero energy state is obtained.

- If a zero energy state cannot be reached contact your supervisor and the safety representative for instructions.
- *Each employee involved in work on equipment/machine/process shall have his/her lock on the energy isolating device prior to work commencing.*

5.3.3 Release from Lockout

- After service or maintenance is complete check the area to ensure that no employees are exposed.
- Remove all tools and repair equipment.
- Ensure that all guards have been replaced and all safety interlocks reactivated (if so equipped),
- Verify that the operating controls are in the "off" or "neutral" position.
- Notify all affected employees that lockout is going to be discontinued and the reason why. This information is also to be noted in the lockout/tag-out form.
- Conduct a head count to be sure that everyone is clear of the start-up area.
- Remove all lockout and tag devices and activate the energy isolation devices to restore energy.
- The authorized person is to restore equipment to normal operation.
- Record this information on the lockout/tag-out form.

Only the authorized employees who placed the Lockout mechanism can remove the device. If the authorized employee that placed the device is not available to remove the device refer to the emergency lock removal section of this policy for Emergency Lock Removal Procedures.

5.4 Testing/Diagnosis/Re-positioning Procedures during Lockout

Perform the following actions in order:

- Clear the equipment/machine/process of tools, materials, and personnel
- Remove the applicable lockout mechanisms from the energy isolating device
- Energize the applicable portion of the equipment/machine/process
- Proceed with the test/diagnosis/re-positioning
- De-energize the equipment/machine/process in the same manner as defined above
- Re-apply the applicable lockout mechanisms to the energy isolating device
- Re-test operation devices to ensure a zero energy state is in place

- Continue work and repeat this procedure as necessary

5.5 Emergency Lock Removal Procedures

A lock removal procedure form shall be utilized for documentation. Every effort shall be made to personally contact the authorized employee prior to their lock being removed.

Prior to any lock being removed the supervisor, authorized employee, and the safety representative shall conduct the release from lockout procedures stated above to ensure it is safe to remove the lock.

Only the direct supervisor of an authorized employee who is familiar with the hazards is allowed to remove their lock. If the applicable supervisor is not physically capable only another authorized employee can be provided with the authority directly by the applicable supervisor.

In either event the direct supervisor of the authorized employees who originally placed the lockout mechanism(s) to be removed shall inform that employee of the removal BEFORE that employee returns to that work area. This communication shall be documented on an appropriate form. Under no circumstance can a City of Austin employees lock be removed without express written authorization of the particular department head.

5.6 Lockout Documentation

Documentation of lockout mechanism shall be maintained.

5.7 Lockout Control Mechanisms

5.7.1 Locks

Each authorized employee shall be issued a lock (or locks) individually keyed and manufactured of a standard size, shape, and/or color.

Each Controlling Contractor shall require a list of subcontractors and corresponding lock numbers maintained at the work site.

5.7.2 Multi-lock Hasps

A multi-lock hasp shall be utilized when more than one authorized employee is performing work on the equipment/machine/process.

When a traditional multi-lock hasp will not provide enough attachment points for all authorized employee, another method shall be established (e.g. lockout box, lockout cabinet, etc.).

5.7.3 Tags

Tags used shall be durable standardized in type and color and contain the employee's name and contact information. Tags shall be used in conjunction with locks. These tags shall be established in accordance with 29 CFR 1910.147

5.8 Multi-Contractor Site/Subcontractor

Authorized employees shall inform the supervision of other employers in a multi-employer work site of all aspects covered by this manual section.

Contractors for ROCIP are required to meet or exceed all aspects covered by this manual section.

5.9 Policy Review and Certification

Contractors shall ensure that their program meet or exceeds the ROCIP program and is reviewed on an as needed basis.

6. References

CFR 29 CFR 1910.147, CFR 29 CFR 1926.417

Equipment Other Than Cranes & Hoists - 12

1. Policy

All equipment shall be operated, maintained, and controlled in a safe manner and in accordance with manufacturer's guidelines.

2. Purpose

To define the procedures and standards applying to the care, control, maintenance, inspection, and operation of the noted equipment.

3. Scope

All ROCIP projects.

4. Definitions

Mobile equipment means earthmoving equipment: scrapers, loaders, crawler or wheel tractors, bulldozers, off-highway trucks, graders, agricultural and industrial tractors, backhoes and similar equipment.

Mobile unit means a combination of an aerial device, its vehicle, and related equipment.

Vehicle means any carrier that is not manually propelled.

5. Requirements

5.1 General

Only qualified operators designated by the Contractor shall operate equipment.

Cell phones are prohibited in all equipment covered by this subpart.

Regular preventative maintenance programs shall be established in accordance with regulatory requirements or industry standards for each type of equipment.

All operators of the equipment shall be trained in safe operation of the equipment prior to being authorized to operate it. Records of initial and retraining shall be maintained. All operators who operate equipment on public roadways and any other public property shall hold a valid state driver's license.

Operators observed committing unsafe acts shall be prohibited from further equipment operation until retrained.

Persons may only be transported on equipment with designed seating capacity for such persons.

Unauthorized persons shall not be transported on equipment even if the equipment is designed for such transport.

Unsafe conditions or function failure shall be reported to management. Equipment that is unsafe shall not be operated and tagged out of service.

Personal protective equipment (PPE) assessments shall be made for each type of equipment operations and the appropriate PPE provided.

Employees taking prescription medication shall notify their supervisor if the medication warns against operation of machinery/vehicles/equipment. Supervisors shall take necessary actions with the appropriate employee and the prescribing physician to provide direction on related work activities.

5.2 Mobile Equipment

Mobile equipment shall have functional/operable:

- Braking system(s)
- Taillights/when applied
- Brake lights/when applied
- Wipers for front windows
- Seat belt restraint systems
- Head lights (when operated in low light or at night)
- Reflective devices to warn of their presence in accordance with federal standards
- Back-up alarms, horns, and mirrors.
- Fire extinguishers
- Mirrors

These items shall be in place and operable at all times.

Mobile equipment (not normally operated on public highways or roadways) shall display a slow-moving equipment symbol when traveling on them and be operated in accordance with local and state highway regulations.

Operators shall wear seat belts at all times while operating mobile equipment.

Material, tools, and other objects shall not be transported in the cab of mobile equipment.

Personnel are not permitted to ride:

- In mobile equipment cabs with operators (except during training exercises or when such equipment is designed and equipped by the manufacturer for additional riders)
- In buckets
- On fenders
- On running boards
- On forklifts
- Any other part of mobile equipment
- On any load being transported by mobile equipment

Mobile equipment shall be inspected at the beginning of each shift to assure that parts, equipment, and accessories are in safe operating condition and free of apparent damage that could cause failure while in use. Inspections shall be documented and include, at a minimum, the following when applicable:

- Service brakes, including trailer brake connections
- Parking system (hand brake)
- Emergency stopping system (brakes)
- Tires
- Horn
- Steering mechanism
- Coupling devices
- Seat belts
- Operating controls
- Safety devices
- Window and cab glass
- Power window wipers
- Defogging and defrosting equipment
- Hydraulics for leaks
- Back-up alarms
- Mirrors
- Fire extinguishers

Defects that affect the safe operation of equipment shall be corrected before the unit is placed in service.

Only Qualified Personnel shall repair equipment.

A safety tire rack, cage, or equivalent protection shall be provided and used when inflating, mounting, or dismounting tires installed on split rims, or rims equipped with locking rings or similar devices. A remote wand shall be used to inflate tires that are mounted on rims on operational vehicles if they are equipped with split rims. No employees shall be allowed to be in front of the rim during this process.

When performing maintenance and/or repairs on movable parts of mobile equipment such as hydraulic rams, dump beds, buckets that create a pinch point shall be blocked, de-energized, cribbed or otherwise immobilized by other such activity.

Bulldozer and scraper bowls, end-loader buckets, dump bodies, and similar equipment shall be either fully lowered or blocked when being repaired or when not in use. All controls shall be in a neutral position with the motors stopped and brakes set unless work being performed requires otherwise.

All mobile wheeled equipment shall be chocked during repair to prevent unintentional movement.

Whenever mobile equipment is parked the parking brake shall be set. Such equipment parked on inclines shall have the wheels chocked and the parking brake set.

During fueling operations the engine of mobile equipment shall be turned off and movable parts such as dozer blades or buckets shall be lowered to the ground.

Mobile equipment fueled with gasoline shall not be operated in enclosed areas such as buildings, tunnels, bore pits, etc.

Mobile equipment fueled with compressed gas within enclosed areas shall be operated in accordance with manufacturer specifications.

The use, care, and charging of mobile equipment using batteries shall be in accordance with manufacturer specifications.

All cab glass shall be safety glass or equivalent that introduces no visible distortion affecting the safe operation of any mobile equipment. Glass that is cracked or broken shall be replaced before the affected mobile equipment is operated. When window glass is subject to conditions that cause fogging or frosting the windshields shall be equipped with operable defogging or defrosting devices.

The operation of mobile equipment near energized electrical power lines shall conform to clearances defined in 1926.400.

A person shall be designated to observe clearance of the equipment and give timely warning for all operations where it is difficult for the operator to maintain the desired clearance by visual means.

Cage-type boom guards, insulating links, or proximity warning devices may be used on equipment, but the use of such devices shall not alter the requirements

of any other regulation of this part even if such device is required by law or regulation.

Any overhead wire shall be considered to be an energized line unless and until the person owning such line or the electrical utility authorities indicate that it is not an energized line and/or it has been visibly grounded.

Prior to work near transmitter towers where an electrical charge can be induced in the equipment or materials being handled, the transmitter shall be de-energized or tests shall be made to determine if electrical charge is induced on the crane. The following precautions shall be taken when necessary to dissipate induced voltages.

The equipment shall be provided with an electrical ground directly to the upper rotating structure supporting the boom; and ground jumper cables shall be attached to materials being handled by boom equipment when electrical charge is induced while working near energized transmitters. Employee shall be provided with nonconductive poles having large alligator clips or other similar protection to attach the ground cable to the load.

Personnel shall only ride in compartments designed for occupancy. These areas shall have a firmly attached seat and seat belt for each occupant. Seat belts and anchorage's meeting the requirements of 29 CFR 1926.602.2 and 49 CFR 571 Department of Transportation Federal Motor Vehicle Safety Standards shall be installed in all construction equipment except for equipment that does not have a ROPS or cab.

Trucks with dump bodies shall be equipped with positive means of support, permanently attached, and capable of being locked in position to prevent accidental lowering of the body while maintenance or inspection work is being done.

Operating levers controlling hoisting or dumping devices on haulage bodies shall be equipped with a latch or other device which will prevent accidental starting or tripping of the mechanism.

Trip handles for tailgates of dump trucks shall be so arranged that in dumping the operator will be in the clear.

6. References

CFR 29 CFR 1910 Subparts F, N, CFR 29 CFR 1926 Subparts H, N, O, W

Excavation & Trenching - 13

1. Policy

Excavation work activities shall be conducted safely with associated exposures eliminated and/or controlled.

2. Purpose

To ensure that every employee involved in excavation work is protected against foreseeable associated hazards.

3. Scope

Applies to all ROCIP projects where construction and service work activities require excavation or trenching.

4. Definitions

4.1 General Definitions

All definitions from 29 CFR 1926 subpart P apply.

Approved means tested and certified by the manufacturer or any recognized national testing laboratory to possess the requirements specified in this section.

Competent Person means one who is capable of identifying existing and predictable hazards in the surroundings or working conditions which are unsanitary, hazardous, or dangerous to employee, and who has the authorization to take prompt corrective measures to eliminate them.

Construction Work means work for construction, alteration, and/or repair to new underground utilities.

Defect means any characteristic or condition that tends to weaken or reduce the strength of the tool, object, or structure of which it is a part.

Employee means every person regardless of title or contractual relationship.

Service Work means work for alteration and/or repair of existing underground utilities.

Work Area means that portion of a walking/working surface where work activities are being performed.

5. Requirements

Risk Assessment

A Competent Person shall conduct a JSA prior to excavation work activities beginning to assess the identifiable hazards associated with work areas, occupations, and tasks.

The contractor shall ensure that a Competent Person is present during all trenching operations greater than ***four feet (4') in depth.***

All open trenches that expose the general public to potential harm will be barricaded with a substantial barricade to prevent entry.

Written Work Plan

A Competent Person shall develop a written trench plan for every excavation exceeding five feet in depth based on the JSA and the other requirements of this section.

The written trench safety plan shall include:

- Identification of all hazards in the work area related to excavation equipment
- Describe the excavation protection system(s) to be provided
- Describe the soil type and the correct procedures for the selection, fit, use and maintenance of the excavation protection system
- Describe procedures for excavation
- Describe the method for prompt, safe removal of injured workers
- Be available on the job site
- Signature of the Competent Person

Training Employees

The employer shall develop a standardized training program to meet the requirement for trenching and excavations. All training will be conducted in accordance with Federal and State laws, and best industry practices. Training will include, but not limited to 29 CFR 1926 Subpart P

Training should be provided to each affected employee:

- Before an employee works in or near trenches or excavations
- Retraining is required when the supervisor or safety representative has reason to believe that there are deviations from the established procedures or inadequacies in the employee's knowledge or use of these procedures.

Inspections

Inspections shall be conducted by a Competent Person:

- Prior to the start of work each day
- As needed throughout the shift
- After every rainstorm
- When an unusual occurrence affects the integrity of the excavation

Note: Where the Competent Person finds evidence of a situation that could result in a possible cave-in, indications of failure of protective systems, hazardous atmospheres, or other hazardous conditions, exposed employees shall be removed from the hazardous area until the necessary precautions have been taken to ensure their safety.

Personal Protective Equipment

Minimum Personal Protective Equipment shall consist of:

- Approved Hardhats
- Approved Safety Glasses
- Approved Safety-toe Boots
- If exposed to vehicular traffic or within the R.O.W. employees shall be provided with, and shall wear, type II warning vests or other suitable garments made of bright florescent orange/green material and have reflective material incorporated within the garment. For work during hours of darkness type III vest/clothing are required. All clothing shall comply with the MUTCD for work zone operations.

Specific Engineering Control Options

5.1 Requiring Registered Professional Engineer

Excavation protection system configurations requiring development by a Registered Professional Engineer:

- Excavations greater than twenty (20) feet in depth
- Any excavation <u>below</u> the level of the base or footing of any foundation or retaining wall that could be reasonably expected to pose a hazard to employees
- Where the stability of adjoining buildings, walls, or other structures is endangered by excavation operations

Designs shall be in written form and will include at least the following:

- The protective system configurations that were determined to be safe for the particular project

- The identity and stamped seal of the Registered Professional Engineer approving the design

At least one copy of the design shall be maintained at the jobsite.

5.2 Sloping and Benching Systems (excavation depth ≥ five ft., ≤ twenty ft.)

Note: Suitable sloping or benching shall occur at ≥4 feet in depth for unstable soil (Type C).

5.3 Classifying Soil

Soil and rock deposits shall be classified in accordance with 1926 subpart P.

5.4 Maximum allowable slope

The maximum allowable slope for a soil or rock deposit shall be determined from Appendix 16-1 of subpart P.

When additional weight loads to the system are present from stored material or equipment, operating equipment, or traffic, a Competent Person shall determine the degree to which the slope must be reduced below the maximum allowable slope and will assure that such reduction is achieved.

5.5 Prohibition

Employees shall not be permitted to work on the faces of sloped or benched excavations at levels above other employees except when employees at the lower levels are adequately protected from the hazard of falling, rolling, or sliding material or equipment.

5.6 Shielding Systems (excavation depth ≥ five ft., ≤ twenty ft.)

General

Installation of a support system shall be closely coordinated with the excavation of trenches.

Shield systems shall not be subjected to loads exceeding those which the system was designed to withstand.

Employees shall not be allowed in shield systems when shields are being installed, removed, or moved vertically.

Employees shall be protected from the hazard of cave-ins when entering or exiting the areas protected by shields. This means that

the access and egress methods shall be within the protection of the shielding system.

Excavation of material to a level no greater than 2 feet below the bottom of the members of a shield system shall be permitted.

Materials and Equipment

Materials and equipment used for protective systems shall be free from damage or defects that might impair their proper function.

Manufactured materials and equipment used for protective systems shall be used and maintained in a manner that is consistent with the recommendations of the manufacturer.

When material or equipment that is used for protective systems is damaged a Competent Person shall examine the material or equipment and evaluate its suitability for continued use. If the Competent Person cannot assure the material or equipment is able to support the intended loads or is otherwise suitable for safe use, then such material or equipment shall be removed from service. Manufactured material or equipment, in this case, shall be evaluated and approved by the manufacturer or a Registered Professional Engineer before being returned to service.

Designs for shoring in trenches shall be determined in accordance with the conditions and requirements set forth in Classifying Soil section and with the Aluminum Hydraulic Shoring for Trenches Appendix 16-1 of subpart P. Other manufactured shoring systems that meet or exceed these tables are permitted.

Note: Aluminum Hydraulic Shoring is preferred to Timber Shoring. However, if Timber Shoring is more feasible or practical, it shall be utilized in accordance with CFR 29 CFR 29 1926 Subpart P, Appendix C.

5.7 Combination Systems (excavation depth ≥ five ft., ≤ twenty ft.)

If the excavation is of a depth whereby the shielding system is not of sufficient height sloping/benching shall be utilized in combination.

5.8 Installation and removal of support

Members of support systems shall be securely connected together to prevent sliding, falling, kick outs, or other predictable failure.

Support systems shall be installed and removed in a manner that protects employees from cave-ins, structural collapses, or from being struck by members of the support system.

Individual members of support systems shall not be subjected to loads exceeding those which those members were designed to withstand.

Before removal of individual members begins, additional precautions shall be taken to ensure the safety of employees, such as installing other structural members to carry the loads imposed on the support system.

Removal shall begin at, and progress from, the bottom of the excavation. Members shall be released slowly so as to note any indication of possible failure of the remaining members of the structure or possible cave-in of the sides of the excavation.

Back-filling shall progress together with the removal of support systems from excavations.

5.9 Specific Excavation Hazard Controls

Access and egress

A means of egress from trench excavations shall be maintained. A structural stairway, ladder, ramp, or other structural means of egress shall be located in trench excavations that are 4 feet or more in depth so as to require no more than 25 feet of lateral travel for employees. *Backfill material, benching, cuts in the side of the excavation are not suitable means of egress and shall not be used.*

Employees shall not utilize mechanical equipment to access or egress from trench excavations.

Exposure to falling loads

Employees shall be protected from excavated or other materials or equipment that could pose a hazard by falling or rolling into excavations. Protection shall be provided by placing and keeping such materials or equipment at least 2 feet from the edge of excavations or by the use of retaining devices that are sufficient to prevent materials or equipment from falling or rolling into excavations or by a combination of both if necessary.

No employees shall be permitted under loads handled by lifting or excavating equipment.

Employees shall stand away from any vehicle being loaded or unloaded to avoid being struck by any spillage or falling materials.

Hazardous atmospheres

Where oxygen deficiency or a hazardous atmosphere exists or could reasonably be expected to exist such as in excavations in landfill areas or excavation in areas where hazardous substances are stored nearby; the atmospheres in the excavation shall be tested before employees enter the excavation.

Mobile equipment

When mobile equipment is operated adjacent to an excavation, or when such equipment is required to approach the edge of an excavation, and the operator does not have a clear and direct view of the edge of the excavation, a warning system shall be utilized such as barricades, hand or mechanical signals, or other physical barrier.

Underground installations

The contractor shall review and familiarize themselves with the Underground Facility Damage Prevention Safety Act prior to commencement of excavation operations.

When excavation operations approach the estimated location of underground installations, the exact location of the installations shall be determined by safe and acceptable means. *Hand digging is determined to be the only acceptable means.*

While the excavation is open underground installations shall be protected, supported, or removed as necessary to safeguard employees.

Water accumulation

Employees shall not work in excavations in which there is accumulated water or in excavations in which water is accumulating unless adequate precautions have been taken to protect employees against the hazards posed by water accumulation. The precautions necessary to protect employees include special support or shield systems to protect from cave-ins and/or water removal to control the level of accumulating water.

If water is controlled or prevented from accumulating by the use of water removal equipment the water removal equipment and operations shall be monitored by a Competent Person to ensure proper operation.

If excavation work interrupts the natural drainage of surface water (such as streams), diversion ditches, dikes, or other suitable means shall be used to prevent surface water from entering the excavation and to provide adequate drainage of the area adjacent to the excavation.

Protection of employees from loose rock, soil, equipment, and materials

Adequate protection shall be provided to protect employees from loose rock or soil that could pose a hazard by falling or rolling from an excavation face. Such rock, soil and materials and equipment shall additionally be kept at least 2 feet from the edge of excavations.

Fall protection

Fall protection shall be provided around all bore pits when an employee is exposed to a fall of greater than six ft (6'). All trenches left open overnight or unattended for more than ½ day (that is not within a roadway) shall be guarded with orange safety fence or equivalent to prevent unauthorized person from entering the area.

5.10 Classifying Soils

Classification of soil and rock deposits

Each soil and rock deposit shall be classified by a Competent Person as Stable Rock, Type A, Type B, or Type C in accordance with the definitions of 1926 subpart P.

The classification of the deposits shall be made based on the results of at least one visual and at least one manual analysis. Such analyses shall be conducted by a Competent Person using tests described.

In a layered system the trench or excavation shall be classified in accordance with its weakest layer.

If, after classifying a deposit the properties, factors, or conditions affecting its classification change in any way, the changes shall be evaluated by a Competent Person. The deposit shall be reclassified as necessary to reflect the changed circumstances.

5.11 Acceptable visual and manual tests

The Competent Person shall conduct these tests in accordance with 29 CFR 1926 Subpart P.

6. References

29 CFR 1926 Subpart

Fall Protection - 14

1. Policy

Work activities where employees may be exposed to falls and falling objects shall be conducted safely with associated exposures eliminated and/or controlled.

2. Purpose

To ensure that employees are protected from the hazards associated falls and falling objects.

3. Scope

Applies to all ROCIP projects

4. Definitions

All definitions from 29 CFR 1926 subpart M apply.

Anchorage means a secure point of attachment for lifelines, lanyards, or deceleration devices that is capable of supporting 5,000 lbs. per employees or two times the intended impact load, whichever is greater, or for a positioning system, 3,000 lbs. without failure.

Employee means every contractor's employee or subcontractor employee regardless of title or contractual relationship.

Qualified Person means one who, by possession of a recognized degree, certificate, or professional standing, or who by extensive knowledge, training, and experience, has successfully demonstrated his/her ability to solve or resolve problems related to the subject matter, the work, or the project.

Work Area means that portion of a walking/working surface where work activities are being performed.

5. Requirements

5.1 Fall Protection

Each employee on a walking/working surface with an unprotected side or edge which is 6 feet (six-feet) or more above a lower level shall be protected from falling by the use of guardrail systems, safety net systems, or personal fall arrest systems. This shall apply 100% (one-hundred percent) of the time on all ROCIP projects.

5.2 Training

The employer shall develop a training program to meet the requirement for fall protection. All training will be conducted in accordance with Federal and State laws, and best industry practices. Training will include, but not limited to 29 CFR 1926 Subpart M

Training should be provided to each affected employee prior to the employee being exposed to a fall hazard.

Any employees who have not received initial training shall not be allowed to work at heights identified by this section.

5.3 Conventional Fall Arrest and Fall Restraints Systems shall be utilized where the exposure to falls greater than 6 foot and from falling objects is reasonably foreseen. The following systems shall be utilized:

5.3.1 Guardrail System (fall restraint and potentially from falling objects)

All guard rail and toe board systems shall be constructed in accordance with 1926 subpart M.

When guardrail systems are used at hoisting areas, a chain, gate or removable guardrail section shall be placed across the access opening between guardrail sections when hoisting operations are not taking place.

At uncovered holes, guardrail systems shall be set up on all unprotected sides or edges. When holes are used for the passage of materials, the hole shall not have more than two sides with removable guardrail sections. When the hole is not in use, it shall be covered or provided with guardrails along all unprotected sides/edges.

If guardrail systems are used around uncovered holes that are used as access points (such as ladder ways), gates shall be used or the guardrail shall be offset at a 45-degree angle to prevent accidental walking into the hole. Toe boards shall be utilized around the edges not utilized as the actual access point.

If guardrails are used at unprotected sides or edges of ramps and runways, they shall be erected on each unprotected side/edge.

5.3.2 Covers for holes (fall restraint and from falling objects)

Covers shall be installed over holes in floors, roofs and walkways.

Hole covering material shall support at least two times the potential weight that will cross over it. If plywood is chosen as the cover material, it shall be of at least ¾ inch in thickness.

All hole covers shall be secured in place in such a manner as to not easily be displaced. Examples of securing methods include, but are not limited to: nailing, attached cleats, wire, etc.

Such covers shall have the word 'HOLE' or 'COVER' predominately marked on the top surface. Where covers are too small for such marking, they shall be painted or significantly marked in the color orange.

5.3.3 Restraining/Positioning System (fall restraint)

Only full body harness systems with positioning rings are to be utilized with any Restraining/Positioning system.

Restraint line (rope) length shall not exceed the distance to fall exposure and shall be secured to an anchorage capable of supporting at least twice the potential impact load of an employee's fall or 3,000 pounds, whichever is greater.

Requirements for body harness systems, snap hooks, D-rings, and other connectors used with positioning device systems shall meet the same criteria as those for fall arrest systems.

Body belts are prohibited.

5.3.4 (Personal) Fall Arrest System (fall arrest)

(Personal) Fall Arrest Systems shall meet or exceed the requirements of 1926 subpart M.

The following items/actions are prohibited for use with (personal) fall arrest systems:

- Body belts
- Non-locking snaphooks
- Lanyards without shock absorbers
- Tying back to the lanyard (around another object and back into the lanyard) for a means of an anchorage point, unless the lanyard was designed for this purpose by the manufacturer, the object tied around can support the anticipated fall force and the object does not have sharp edges or burrs.

5.3.5 (Personal) fall arrest systems shall be utilized in the following manner:

5.3.5.1 Pre-Use Inspection

All components shall be inspected prior to each use for wear damage, and other.

5.3.5.2 General Proper Body Harness Fit

The body harness type and size shall meet the physical needs of its user (male/female or small, medium, large, etc.).

Follow the manufacturer's guidelines on proper fit.

5.3.5.3 Sufficient Anchorage Points Utilized

Anchorage's shall be used under the supervision of a Competent Person, as part of a complete (personal) fall arrest system that maintains a *safety factor of at least two* (i.e., capable of supporting at least twice the weight expected to be imposed upon it).

Anchorage's used to attach (personal) fall arrest systems will be independent of any anchorage being used to support or suspend platforms and shall be capable of supporting at least 5,000 pounds of force per person attached.

Prohibited anchorage points include, but are not limited to:

- Standard guardrails and railing
- Ladders/rungs
- Scaffolding, unless approved by the manufacturer for/with anchorage points
- Light fixtures, ductwork, conduit, pipe vents, wiring/duct/piping harnesses, other roof stacks, vents or fans
- C-clamps
- Piping (unless capable of meeting the criteria of an anchorage point)
- To a lanyard (around a solid object), unless the lanyard and hardware is manufactured for that purpose

5.3.5.4 Lifeline/Lanyard Applications

Lanyards shall only be attached to anchorage points sufficient to meet the fall force requirements.

Shock-absorbing lanyards are required on all fall arrest systems.

Lanyards that do not limit free fall distance to 2 feet or less, such as rip stitch lanyards and tearing/deforming lanyards will be capable of sustaining a minimum tensile load of 5,000 pounds applied to the device with the lifeline or lanyard in the fully extended position.

Horizontal lifelines will be designed, installed, and used under the supervision of a Competent Person as part of a complete (personal) fall arrest system. Lifelines shall be protected against being cut or abraded. Horizontal lifelines cannot exceed sixty feet in length.

Vertical lifelines shall be utilized with leading edge work shall reach the ground and the method of anchorage attachment shall be of proper design (i.e., no knots).

5.3.6 Safety Net System (fall arrest and potentially from falling objects)

Safety net systems shall be used and installed in accordance with 29 CFR 1926.502.c

5.4 Where conventional fall restraint and fall arrest methods cannot be utilized (or utilized safely), the following non-conventional methods can be utilized

A written work plan shall be developed when a project or task possesses a fall exposure whereby these systems are utilized. A sample written plan format can be found in 29 CFR 1926 Subpart M Appendix E.

A Competent Person will develop and implement a written Fall Protection Work Plan including each area of the work place where the employees are assigned and where a fall hazard of 6 feet or more exists. The Risk Assessment for this project/task should be reviewed for this document.

The written Fall Protection Work Plan shall include:

- Identification of all fall hazards in the work area
- Describe the non-conventional method (or in combination with conventional method) of fall protection to be provided
- Describe the correct procedures for the assembly, maintenance, inspection, and disassembly of any fall protection system to be used
- Describe the correct procedures for the handling, storage, and securing of tools and materials
- Describe the method of providing overhead protection for workers who may be in or pass through the area below the work site
- Describe the method for prompt, safe removal of injured workers
- Describe the method for destruction of personal fall arrest system equipment subjected to the forces of any fall
- Be available at all times on the jobsite

5.4.1 Controlled Access Zone System (CAZ)

Controlled access zone systems shall be set up in accordance with 1926 subpart M.

5.4.2 Warning Line System (pitches of ≤4:12 and flat surfaces only)

Warning line systems shall be developed and implemented in accordance with 1926 subpart M.

The warning line system shall be used in conjunction with one of the following:

- Safety monitoring system (most common); or
- (Personal) fall arrest system; or
- Safety net system; or
- Guardrails

5.4.3 Safety Monitoring System

A Competent Person will appoint the 'safety monitor' and will ensure that the Safety Monitor:

- Is competent in the recognition of fall hazards
- Is capable of warning workers of fall hazard dangers and in detecting unsafe work practices.
- Is operating on the same walking/working surfaces of the employees and can see them
- Is close enough to work operations to communicate orally with the employees and has no other duties but the monitoring function
- Has the authority to stop work

Only employees engaged in roof/surface work and the safety monitor shall be allowed in an area where a contractor is being protected by a safety monitoring system.

5.5 Specific Fall Hazard Procedures

5.5.1 Aerial Personnel Lifts

Employees utilizing aerial personnel lifts (e.g. scissor lifts, genie lifts, boom-lifts, etc.) shall use a full body harness even though a guardrail system is in place.

Attachment points for these systems shall be capable of withstanding 5,000 pounds and shall be maintained in the floor of the lift or where designed by the manufacturer.

Rails of such lifts shall not to be used as attachment points unless designed for that purpose by the manufacture.

5.5.2 Excavations

See Trenching and Excavation section of this manual.

Where walk-ways are provided to permit employees to cross over excavations, guardrails are required on the walkway if the fall would be 6 feet or more to the lower level.

5.5.3 Hoist Areas

Each employee in a hoist area will be protected from falling 6 feet or more by guardrail, restraint/positioning or (personal) fall arrest systems.

If guardrail systems (or chain gate or guardrail), or portions thereof, must be removed to facilitate hoisting operations, as during the landing of materials, and a worker shall lean through the access opening or out over the edge of the access opening to receive or guide equipment and materials, that employees shall be protected by a (personal) fall arrest system.

5.5.4 Falling Objects (additional protection from)

Except for scaffolding and aerial lifts, no materials or equipment shall be stored within 6 feet of working edges.

When **canopies** are used as protection from falling objects, canopies shall be strong enough to prevent collapse and to prevent penetration by any objects that may fall onto them.

When toe boards are used as protection from falling objects, they shall be erected along the edges of the overhead walking or working surface for a distance sufficient to protect persons working below. Toe boards will be capable of withstanding a force of at least 50 pounds of force applied in any downward or outward direction at any point along the toe board. Toe boards will be a minimum of four (4) inches tall from their top edge to the level of the walking/working surface, have no more than one (1) inch clearance between its bottom and the surface.

5.5.5 Ladders (where work height (due to leaning out) exposure exceeds six foot and/or the maximum ladder height is within the distance to a leading edge).

(Personal) Fall Arrest Systems should be utilized when anchorage points are available.

If anchorage points are not available or other traditional fall control systems are not feasible, a non-conventional system can be implemented.

5.5.6 Leading Edge Work

Employees working near a leading edge 6 feet or more above lower levels shall be protected by guardrail, safety net, restraint/positioning, or (personal) fall arrest systems.

5.5.7 Roadway/Vehicular Passage Covers

Covers located in roadways and vehicular aisles shall be able to support at least twice the maximum axle load of the largest vehicle to which the cover might be subjected, and secured/marked.

5.5.8 Roofs (work from or on)

5.5.8.1 Low-sloped (<4:12 pitch)

Employees engaged in roof activities on low-slope roofs with unprotected sides and edges 6 feet or more above lower levels will be protected from falling by guardrail systems, safety net systems, (personal) fall arrest systems or a combination of a warning line system and guard-rail system, warning line system and safety net system, warning line system and (personal) fall arrest system, or warning line system and safety monitoring system.

5.5.8.2 Steep Roofs (>4:12 pitch)

Employees on a steep roof with unprotected sides and edges 6 feet or more above lower levels will be protected by either guardrail systems with toeboards, a safety net system, or a (personal) fall arrest systems.

5.5.9 Wall Openings

Employees working on, at, above, or near wall openings (including those with chutes attached) shall be protected from falling by the use of either a guardrail system, a safety net system, or a (personal) fall arrest system.

5.6 Equipment Inspection and Maintenance Procedures

5.6.1 Inspection, Replacement and Destruction

All equipment shall be visually inspected in accordance with the manufacturers guidelines before each use, replaced immediately if any of the defective conditions are found, tagged 'out of service' and removed from the project.

5.6.2 Storage/Cleaning

Contractor shall assure all personal fall arrest systems will be cleaned, inspected and stored as per manufacturer's requirements.

5.7 Post-Fall Incidents

All employees involved in a fall with a fall distance of over 6ft shall be required to receive an immediate medical evaluation.

All components of a (personal) fall arrest system involved in any fall with a fall distance of over six feet shall be immediately and completely replaced. Such equipment shall be tagged 'out of service' and removed from the project.

6. References

CFR 29 CFR 1926 Subpart M, CFR 29 CFR 1910 Subpart D

Fire Protection and Prevention - 15

1. Policy

Work activities shall be conducted safely with associated fire exposures eliminated and/or controlled through a fire protection and prevention plan.

2. Purpose

To ensure reliable function and availability of fire protection and prevention systems.

3. Scope

Applies to all ROCIP projects.

4. Definitions

Hot Work means the performing of operations capable of providing a source of ignition, e.g. riveting, welding, cutting, grinding, soldering, burning and heating.

Hot work permit means a specific written document to do 'hot work'.

Fire watch means employees trained and assigned to monitor or watch for potential fire hazards.

5. Requirements

Each ROCIP project shall have a written fire protection and prevention plan developed by the general contractor. All employees will be aware of the plan and trained accordingly. The plan shall contain at a minimum the following elements:

- Listing of the major work site fire hazards by location
- Potential ignition sources and means to control them
- Procedures regarding smoking on the site
- Hot work permitting process for the site
- List of types and quantity of fire extinguishing equipment on site
- Name and contact phone number of local fire departments
- Statement on whether or not employees will respond to incipient stage fires and use of portable fire extinguishers
- Inspection process for fire extinguishing systems and equipment
- Fire alarm system to be used for the site
- Inspection plan for the site
- List of trained employees to man fire extinguishers
- All applicable federal standards

6. Responsibilities

All employees on the project shall take actions to prevent fires such as:

- Separating fuel from ignition sources
- Proper handling and use of flammable liquids and gases
- Following "No Smoking" rules and warnings while maintaining good housekeeping
- Preventing electrical hazards such as arching, damaged cords, overloaded circuits
- Use of applicable Hot Work permits and fire watches

Fire protection and prevention requirements may be found in the applicable OSHA standards.

7. References

CFR 29 CFR 1910 Subpart L, CFR 29 CFR 1926 Subpart F, CFR 29 CFR 1910.38, CFR 29 CFR 1926

Forklifts - 16

1. Policy

All forklifts (powered industrial trucks) shall be operated, maintained, and controlled in a safe manner and in accordance with the manufacturer's guidelines.

2. Purpose

To define the procedures and standards that applies to the care, control, maintenance, inspection, and operation of forklifts.

3. Scope

All ROCIP projects.

4. Definitions

Forklift means a mobile, power-propelled truck used to carry, push, pull, lift, stack, or tier materials. Powered industrial trucks (forklifts) are also commonly known as pallet trucks, rider trucks, fork trucks, or lift trucks.

5. Requirements

5.1 Training

Only trained and authorized persons are permitted to operate a forklift. No employees are allowed to operate a forklift without the proper training.

The following requirements shall be met to become a "Qualified Forklift Operator":

- Complete the educational requirement as stated in 29 CFR 1910.178.
- Perform a function test satisfactorily and be deemed competent.

Each trainee who satisfactorily completes the qualifications as outlined above shall be issued a written document as evidence of being a qualified forklift operator.

5.2 Inspection and Maintenance

Each forklift truck operator shall inspect their vehicle at the start of each shift and document this inspection. Any noted condition that affects the safe operation shall be reported to the operator's supervisor for corrective action. The lift truck shall not be operated until the unsafe condition is corrected.

Forklifts that are defective, in need of repair, or are unsafe shall be tagged "Danger - Do Not Operate" and taken out of service until restored to safe operating condition. Only Qualified Personnel shall perform maintenance and repair.

5.3 General

Stunt driving and horseplay shall not be permitted.

All forklifts shall be equipped with seat belts and utilized by the operator when in use.

Personnel are not permitted to ride on forklifts except in designated seats that are part of the equipment design.

All forklifts shall be equipped with a dry chemical fire extinguisher.

The forklift shall be operated at a safe speed at all times.

All traffic regulations shall be observed including reasonable work site speed limits.

The driver shall be required to slow down and sound the horn at cross aisles/roads and other areas where vision is obstructed. If the load being carried obstructs forward view the driver shall be required to travel in the reverse direction.

Forklifts shall have a functional horn and back-up alarm with a distinctive sound, loud enough to be heard clearly above background noises.

Copies of the manufacturer's operating instructions for each type of forklift shall be readily available for review by operators and supervisory personnel.

Forklifts shall have the rated capacity clearly posted on the vehicle so as to be clearly visible to the operator. When the manufacturer provides auxiliary equipment corresponding alternate rated capacities also shall be clearly shown on the vehicle. These ratings shall not be exceeded.

No modifications or additions which affect the capacity or safe operation of the equipment shall be made without the manufacturer's written approval. If such modifications or changes are made the capacity, operation, and maintenance instruction plates, tags, or decals shall be changed accordingly. In no case shall the original safety factor of the equipment be reduced.

If a load is lifted by two or more forklifts working in unison the total load carried by all shall not exceed their total combined capacity. This would be considered a non-routine task. Therefore, a JSA is required.

All forklifts shall have the manufacturer's nameplate showing its weight with attachments, lifting capacity, lift height maximum and other pertinent data.

Nameplates or markings shall be maintained in a legible condition and remain in place at all times.

Railroad tracks shall be crossed diagonally wherever possible. Parking closer than 50 feet from the center of railroad tracks is prohibited.

Grades shall be ascended or descended slowly.

When ascending or descending grades forklifts should be driven with the load or load engaging means upgrade.

On all grades the load and load engaging means shall be tilted back if applicable and raised only as far as necessary to clear the road surface.

No person shall be allowed to stand or pass under the elevated portion of any forklift whether loaded or empty.

There shall be sufficient headroom under overhead installations, lights, pipes, power lines, sprinkler system, etc.

Arms or legs are prohibited from being placed between the uprights of the mast or outside the running lines of the forklift.

When a forklift is left unattended load engaging means shall be fully lowered, controls shall be neutralized, power shall be shut off, and brakes set. Wheels shall be blocked if parked on an incline.

A safe distance shall be maintained from the edge of ramps or platforms while on any elevated dock, or platform.

Brakes shall be set and wheel blocks shall be in place to prevent movement of trucks, trailers, or railroad cars while loading or unloading. Fixed jacks may be necessary to support a semi-trailer during loading or unloading when the trailer is not coupled to a tractor. Prior to forklift entry the flooring and frames of trucks, trailers, and railroad cars shall be checked for breaks and weakness before they are driven into and to determine that it will bear the intended weight of the forklift and load.

Dock board or bridge plates shall be properly secured before they are driven over. Dock board or bridge plates shall be driven over carefully and slowly and their rated capacity never exceeded. Portable dock boards shall be secured in position by being anchored or equipped with devices that will prevent their slipping.

An overhead guard shall be used as protection against falling objects. It should be noted that an overhead guard is intended to offer protection from the impact of small packages, boxes, bagged material, etc., representative of the job application, but not to withstand the impact of a falling capacity load.

Additional counter weighting of forklifts shall not be allowed unless approved by the manufacturer.

5.4 Refueling and Battery Changing/Charging

Refueling and battery charging operations shall be performed only in designated areas. Open flames, smoking, sparks or electric arcs shall be eliminated from refueling and battery changing/charging areas.

All forklifts shall be properly positioned and brakes applied before attempting to refuel or change/charge battery.

6. References

CFR 29 CFR 110.178, CFR 29 CFR 1926.601c

General Safety - 17

1. Policy

All work activities shall be conducted safely.

2. Purpose

To identify, establish, and implement general safety work rules and procedures as a requirement of all employees to be utilized on all ROCIP projects that are not covered in other sections of this manual.

3. Scope

Applies to all ROCIP projects.

4. Definitions

None

5. Requirements

5.1 General Requirements

All vendors shall remain in their vehicle at all times while on any ROCIP Project except when conducting the work that necessitates their presence.

Smoking is permitted in designated areas only. All other areas are non-smoking.

Any activity creating or contributing to unsanitary or unhealthy conditions is prohibited.

All forms of horseplay are prohibited.

The use of air for removing dirt or foreign particles from personal attire is prohibited. Do not direct compressed air toward yourself or other employees.

Employees are required to remain in assigned work areas, unless directed by their immediate supervisor.

5.2 Clothing and Personal Appearance

Employees shall wear clothing appropriate for their task.

Employees exposed to public vehicular traffic or working within the R.O.W. shall wear an approved Type II safety vest. When employees are required to work during hours of darkness a Type III vest is required.

No dangling earrings or necklaces (exposed) that may become entangled in equipment is allowed except in office areas.

No loose clothing is allowed in operating areas - i.e., clothing tied around waist or over the shoulders, neckties, shirttails not tucked in, etc. This is to prevent the potential for getting caught in rotating/moving equipment.

No sleeveless or fishnet shirts are allowed while on the job site - i.e., muscle shirts, tank tops, etc. In addition, shirts cannot display advertisements of illegal drugs, profanity, or implications of sexual or racial discrimination.

Safety glasses will be worn on all ROCIP project at all times.

Shoes or work boots must be appropriate for the job and substantial in construction and in good condition. No tennis shoes, cowboy boots (with leather soles), lightweight athletic shoes, sneakers, sandals, or similar shoes are to be worn. Additional toe and upper foot protection shall be provided when hazardous conditions exist.

Long hair or beards, where allowed, shall be groomed or covered to avoid being caught in moving parts. Ponytails, hairnets or other approved headgear shall be required as deemed appropriate when the length of hair exposes employees to such hazards.

5.3 Barricades

Barricades shall be installed when a hazard exists and removed immediately after completing work activities or when the hazard has been abated.

Barricades shall be erected to include the area where the hazard exists and shall consist of material suitable to constitute a physical barrier.

Caution tape (yellow with black lettering) shall be used to identify a hazard, but will allow personnel to proceed through the area with care.

Danger tape (red with black lettering) shall be used to identify a hazard zone where only authorized personnel are allowed to enter.

Whenever barricade tape is used a warning tag shall be attached to the tape at all normal through traffic locations stating the date of installation and the specific hazard information.

Orange safety fencing shall be used when pedestrian traffic is prohibited through an area.

All trenches/excavations left open overnight or unattended for more than one day (that is not within a roadway) shall be guarded with orange safety fence or equivalent.

5.4 Manual Lifting

Tasks involving repetitive lifting should be analyzed to determine alternate methods of completing the task.

Training on proper lift techniques shall be provided in the contractor's orientation and periodically through site safety meetings.

5.5 Access

Employees shall ensure that a stairway or ladder shall be provided at all personnel points of access where there is a break in elevation of 19 inches or more, and no ramp, runway, or personnel hoist is provided.

A double-cleated ladder or two or more separate ladders shall be provided when ladders are the only means of access or exit from a working area for 25 or more employees or when a ladder is to serve simultaneous two-way traffic.

When a building or structure has only one point of access between levels that point of access shall be kept clear to permit free passage of employees. When work must be performed or equipment must be used such that free passage at that point of access is restricted a second point of access shall be provided and used.

The following requirements apply to all stairways as indicated:

- Stairways that will not be a permanent part of the structure on which construction work is being performed shall have landings of not less than 30 inches in the direction of travel and extend at least 22 inches in width at every 12 feet or less of vertical rise
- Stairs shall be installed between 30 deg. and 50 deg. from horizontal
- Riser height and tread depth shall be uniform within each flight of stairs including any foundation structure used as one or more threads of the stairs. Variations in riser height or tread depth shall not be over ¼-inch in any stairway system
- Where doors or gates open directly on a stairway, a platform shall be provided, and the swing of the door shall not reduce the effective width of the platform to less than 36 inches

- All parts of stairways shall be free of hazardous projections such as protruding nails
- Slippery conditions on stairway shall be eliminated before the stairways are used.

Stairways having four or more risers shall be equipped with:

- At least one handrail; and
- One stair rail system along each unprotected side or edge.

Stair rails installed shall be not less than 36 inches from the upper surface of the stair rail system to the surface of the tread in line with the face of the riser at the forward edge of the tread.

Other structural members when used shall be installed so as to create no openings in the stair rail system that are more than 18 inches apart.

Handrails and the top rails of stair rail systems shall be capable of withstanding, without failure, a force of at least 200 pounds applied within 2 inches of the top edge, in any downward or outward direction, at any point along the top edge.

When the top edge of a stair rail system also serves as a handrail the height of the top edge shall be not more than 37 inches nor less than 36 inches from the upper surface of the stair rail system to the surface of the tread in line with the face of the riser at the forward edge of the tread.

Unprotected sides and edges of stairway landings shall be provided with guardrail systems.

5.6.1. Illumination

Construction areas, ramps, runways, corridors, offices, shops, and storage areas shall be lighted to not less than the minimum illumination intensities listed below while any work is in progress:

MINIMUM ILLUMINATION INTENSITIES IN FOOT-CANDLES

- General construction areas, concrete placement, excavation and waste areas, access ways, active storage areas, loading platforms, refueling, and field maintenance areas; 8 foot candles
- Indoors: warehouses, corridors, hallways, and exit-ways; 10 foot candles
- Tunnels, shafts, and general underground work areas: 10 foot candles
- General construction plant and shops (e.g., batch plants, screening plants, mechanical and electrical equipment rooms, carpenter shops, rigging lofts and active store rooms, mess halls, and indoor toilets and workrooms.)
- First aid stations and offices; 30 foot candles

6. Employee Training

The Contractor shall ensure that all employees are periodically retrained regarding federal and state regulations and this manual. Supervisors are encouraged to use the weekly safety meeting for this purpose. All employees should work safely. Unsafe conditions must be reported immediately to the job site superintendent or the foreman.

New employees shall attend a safety orientation prior to placement on any ROCIP project.

All accidents must be reported immediately to the job site superintendent or foreman and the ROCIP Safety Team.

Defective tools or equipment will not be used. Such equipment must be reported immediately to the job site superintendent or foreman and removed from service.

7. Contractors Responsibilities

Contractors are required to assume certain safety related responsibilities on every job site. These are, but not limited to:

- Plan and execute all work so as to comply with OSHA regulations, contract specifications for safety, and the requirements of this manual
- Take immediate action to correct unsafe practices or unsafe conditions
- Conduct daily safety inspections. More frequent inspection shall be conducted during hazardous operations such as demolition, tunneling, etc.
- Attend or conduct weekly job site safety meetings. Maintain a record of these meetings.
- Meet with the Construction Safety Manager monthly to discuss accidents/incidents and safety reports.
- Maintain good housekeeping at all times.
- Ensure vendors remain in their vehicles at all times.

8. Subcontractors Responsibilities

Prior to a subcontractor beginning work, the contractor shall ensure that all subcontractors are notified and comply with all regulations outline in this manual.

All contractors and subcontractors shall read and understand the disciplinary program section.

9. Driver Qualifications

CDL Drivers

Contractors or any tier subcontractors whose employees drive vehicles requiring a CDL will be subject to D.O.T. drivers' qualification standards including the following:

- All applicable laws under 29 CFR, 49 CFR.
- Be twenty (21) years or older.
- Can read and speak English sufficiently to converse with general public.
- Understand all traffic signs and signals.
- Be in control of the equipment or materials to be transported.
- Be physically able and qualified to drive the vehicle.
- Evidence of no disqualification to drive a motor vehicle.
- Provided general contractor a current copy of the CDL.
- Has a current D.O.T. physical
- Has completed the required road test.

10. Trucks and Company Vehicles

All employees shall comply with the following:

- All traffic and safety rules will be adhered to.
- Consumption of alcoholic beverages or illicit drugs is prohibited.
- Only authorized use of contractor's vehicles is allowed.
- Full adherence and compliance with speed limits at all times.
- All transport trucks (dump trucks) will tarp all loads.
- All equipment shall be secured in accordance with 49CFR.
- Contractors or subs commercial motor vehicle will be equipped with the following items:

  A. First Aid Kit
  B. Fire extinguisher
  C. Current insurance card and registration documents

11. References

29 CFR 1926, 29 CFR 1910, and 29 CFR 49

Laser Ionizing and Non-Ionizing

1. Policy

Laser use shall be conducted safely and in accordance with manufacturer's guidelines, 29 CFR 1926, and 29 CFR 1910 with associated exposures eliminated/controlled.

2. Purpose

To ensure that all employees are protected against laser hazards.

3. Scope

Applies to all ROCIP projects.

4. Definitions

None

5. Training (Non-Ionizing)

Contractors shall provide training to employees assigned to install, adjust, and operate laser equipment.

Proof of qualification of the laser equipment operator shall be documented in the employees possession at **all** times.

6. Requirements (Non-Ionizing)

Employees working in areas where a potential exposure to direct or reflected laser light greater than 0.005 watts (5 milliwatts) exists shall be provided with appropriate eye protection.

Areas in which lasers are used shall be posted with standard laser warning placards.

Beam shutters or caps shall be utilized, or the laser turned off, when laser transmission is not actually required. When the laser is left unattended for a substantial period of time such as during lunch hours, overnight, or at change of shifts, the laser shall be turned off.

Only mechanical or electronic means shall be used as a detector for guiding the internal alignment of the laser.

The laser beam shall not be directed at employees.

Laser equipment shall bear a label to indicate maximum output.

Employees shall not be exposed to light intensities above:

- Direct staring: 1 micro-watt per square centimeter;
- Incidental observing: 1 milliwatt per square centimeter;
- Diffused reflected light: 2 ½ watts per square centimeter

Laser unit in operation should be set up above the heads of the employees, when possible.

Employees shall not be exposed to microwave power densities in excess of 10 milliwatts per square centimeter.

7. Requirements (Ionizing)

In construction and related activities involving the use of sources of ionizing radiation, the pertinent provisions of the Nuclear Regulatory Commission Standards for Protection Against Radiation (10 29 CFR Part 20) relating to protection against occupational radiation exposure shall apply.

Any activity which involves the use of radioactive materials or X-rays whether or not under license from the Nuclear Regulatory Commission shall be performed by Competent Persons specially trained in the proper and safe operation of such equipment. In the case of materials used under Commission license only persons actually licensed or Competent Persons under direction and supervision of the licensee, shall perform such work.

8. Traffic and Pedestrian Safety

Although OSHA regulations make only general references to traffic and pedestrian exposure these activities may create hazards as construction activities progress. In order to provide this protection all employees shall comply with the Texas Manual of Uniform Traffic Control Devices for Streets and Highways and all other applicable laws, when their scope of work requires protective measures for the general public and pedestrians.

8.1 All ROCIP projects shall be secured as to prevent unauthorized vehicular or pedestrian traffic from entering each project.

9. References

29 CFR 1926.54 (Non-Ionizing)
29 CFR 1926.53 and 29 CFR 1910.1096 (Ionizing)

Hazardous Communications (HAZCOM) - 18

1. Policy

Work activities involving hazardous and potentially hazardous chemicals shall be conducted safely through a Hazard Communication Plan.

2. Purpose

To ensure that all employees involved with such chemical hazards are informed of potential chemical exposures and control methods.

3. Scope

Applies to all ROCIP projects.

4. Definitions

All definitions from 29 CFR 1910.1200 apply.

Health hazard means a chemical for which there is statistically significant evidence based on a least one study conducted in accordance with established scientific principles that acute or chronic health effects may occur to exposed employees.

Label means any written, printed, or graphic material displayed on or affixed to containers of hazardous chemicals.

Safety Data Sheet (SDS) means written or printed material concerning a hazardous chemical.

Physical Hazards means a chemical that acts outside the body to produce a dangerous situation. Flammable or explosive chemicals pose physical hazards.

5. Requirements

5.1 Written

Each contractor shall develop his/her own specific written Hazard Communication Program. An evaluation of the written hazard communication Program shall be conducted at least annually or as necessary during the project.

5.2 Hazard determination and chemical inventories

Master chemical SDS inventories shall be kept current.

5.3 Labels and other forms of warnings shall contain:

- The identity of the hazardous chemical(s)
- Appropriate hazard warnings
- Name and address of the chemical manufacturer, importer, or other responsible party
- Appropriate signal word
- Appropriate pictograms

5.4 Safety Data Sheets (SDS)

The most current SDS available shall be utilized.

A master set of SDSs shall be maintained in the general contractor's office. SDSs for a specific work area shall be established, maintained, and made available to employees in designated locations within these areas.

5.5 Contractor information and training

The employer shall develop a training program to meet the requirement the Federal Hazardous Communication Standard and the Global Harmonization System. All training will be conducted in accordance with Federal and State laws, and best industry practices. Training will include, but not limited to 29 CFR 1910.1200

Training shall be provided to each affected employee prior to employee exposure to hazardous chemicals.
Contractor shall provide all employees with the following information and training:

- The requirements and details of the written Hazard Communication Program
- Location of operations in their work area where hazardous chemicals are present
- The location and availability of the written Hazard Communication Program and SDS
- Methods and observations that may be used to detect the presence or release of a hazardous chemical in the work area
- Physical and health hazards of the chemicals in their work area
- Measures taken to protect them from these hazards including any specific control procedures implemented to protect from exposure
- Labeling requirements

As new chemicals are introduced to the work area further training is required as follows:

- Location of operations in their work area where such new chemicals will be present
- Methods and observations that may be used to detect the presence or release of such new chemicals in the work area
- Physical and health hazards of such chemicals
- Measures that can be taken for protection from such chemicals

5.6 Multi-employer worksites shall:

- Abide by the applicable provisions of Federal, State and local hazard communication laws
- Maintain a copy of all contractors Hazard Communication Program and applicable SDS in a readily accessible area and will permit access to employees
- Provide information for all chemicals used or stored in the work area and all applicable procedures/precautions for handling and proper use.

5.7 Non-Routine Tasks

Hazard Communication plans for non-routine tasks shall include:

- the method used to identify the hazards of non-routine tasks
- the methods used to inform employees of these hazards
- a description of special procedures required for hazardous non-routine tasks

6. Responsibilities

The employer shall ensure proper chemical inventory and hazard evaluations have been conducted

The employee is responsible to:

- Read and follow all label directions
- Report the use of new chemicals brought on site
- Promptly report concerns

7. References

CFR 29 CFR 1910.1200, CFR 29 CFR 1926.59, GHS

Housekeeping and Sanitation - 19

1. Policy

Contractor(s) shall maintain all work areas in a clean, safe, and orderly condition.

2. Purpose

To define good housekeeping and sanitation procedures.

3. Scope

Applies to all ROCIP projects.

4. Definitions

Potable Water means water that meets the quality standards prescribed in the U.S. Public Health Service Drinking Water Standards, published in 42 CFR part 72, or water which is approved for drinking purposes by the State or local authority having jurisdiction.

Lavatory means a basin or similar vessel used exclusively for washing of the hands, arms, faces, and head.

Number of employees means, unless otherwise specified, the maximum number of employees present at any one time on a regular shift.

5. Requirements

5.1 General Housekeeping

All work sites, vehicles, fabrication facilities, warehouse, material lay-down areas, offices, and parking lot areas shall be kept in a clean and orderly condition.

All tools (construction, service and emergency equipment) shall be kept clean and well maintained.

Walkways, stairways and roadways shall be kept clear to allow the safe movement of persons, material and equipment.

Arrangements shall be made for adequate trash receptacles and the emptying of such receptacles on a regular schedule.

All trash receptacles used for food waste shall have a cover and be in place at all times

Electrical cords, hoses, ropes, conduit, pipe and other hazards shall not be placed in walkways, stairways, or work areas in such a manner as to create a tripping hazard.

Scrap materials shall be stacked or stored for disposal or recycling in a neat and orderly manner so as not to interfere with job processes or create hazards.

Employees shall keep their work areas in a clean and orderly manner. Inspections of overall or general work areas shall be conducted on a daily basis.

Emergency exits and evacuation routes shall be clearly marked and kept clear at all times.

5.2 Potable Water

An adequate supply of potable water shall be provided at all work sites.

5.3 Water Containers and Drinking Cups

Portable potable water containers used to dispense drinking water shall be capable of being tightly closed and equipped with a tap. Water shall not be dipped from containers.

Any container used to distribute drinking water shall be clearly marked as to the nature of its contents and not used for any other purpose.

Water containers shall be cleaned periodically with an antiseptic cleaning solution.

The 'common drinking cup' is prohibited.

Where single service cups are supplied both a sanitary container for the unused cups and a receptacle for disposing of the used cups shall be provided.

5.4 Non-potable water

Non-potable water outlets (such as water for industrial or firefighting purposes only) shall be identified with signs to indicate clearly that the water is unsafe for drinking, washing, or cooking purposes.

There shall be no cross-connection, open or potential, between a system furnishing potable water and a system furnishing non-potable water.

5.5 Toilets at temporary worksites

The minimum numbers of toilets that shall be provided for employees on job sites are 1facility per every ten people/week. All portable toilets shall be maintained in a clean and sanitary manner.

Under temporary field conditions provisions shall be made to assure not less than one toilet facility is available.

5.6 Washing facilities

Washing facilities shall be maintained in a sanitary condition. Washing facilities shall be provided for employees engaged in the application of paints, coating, herbicides, or insecticides, or in other operations where contaminants may be harmful to the employees. Such facilities shall be in near proximity to the work site and shall be so equipped as to enable employees to remove such substances.

Each facility shall be provided with tepid running water.

Hand soap or similar cleansing agents shall be provided.

Individual hand towels shall be provided.

Safety showers will be provided by the contractor when a contaminant (based on the MSDS) requires the washing of all exposed skin and the removal of the employees clothing.

5.7 Eating and Drinking Areas

Employees shall not be allowed to consume food or beverages in a toilet room nor in any area exposed to a toxic material.

Eating areas shall be designated and kept in a sanitary condition. On work sites provisions shall be made to properly dispose of food scraps and trash.

Employees shall not be permitted to eat in areas where food may become contaminated or food may contaminate an environment.

6. References

CFR 29 CFR 1910, Subparts E, J, N. CFR 29 CFR 1926, Subparts C, D

Industrial Hygiene - 20

1. Policy

Contractor(s) shall maintain all work areas to the highest feasible level of quality.

2. Purpose

To ensure that risk of personnel injury, environmental impact, and property damage are controlled for industrial hygiene-related issues.

3. Scope

Applies to all ROCIP projects.

4. Definitions

TLV means Threshold Limit Value

PEL means Permissible Exposure Level

5. Requirements

5.1 General

Periodic evaluations of every work site shall be made to determine the degree of risk arising from exposure to chemical, physical, or biological agents.

All work areas shall be evaluated for exposures by the contractor or other designated Competent Person.

Noise levels shall be controlled, where feasible, so as to create and sustain a productive work place for the type of work being conducted. Any employee subject to noise which exceeds the limits established in 1926 subpart D shall be provided with and wear hearing protection.

Supplementary and/or temporary fuel fired heaters shall not be used unless the contractor has reviewed the environmental conditions in the area of use.

Work environments involving extreme heat or cold shall be evaluated as necessary.

5.2 Air Contaminants

Potential health hazards of air contaminants resulting from industrial operations shall be evaluated by a designated Competent Person.

The contractor(s) shall determine what air contaminants should be evaluated further through the use of industrial hygiene monitoring.

Any initial or baseline monitoring shall consist of air monitoring in multiple locations within each worksite depending upon layout and repeated under varying conditions.

Changes to the work environment and the continuing effectiveness of engineering controls shall be determined through follow-up monitoring.

Personal monitoring shall be utilized to the fullest extent possible.

When the results of the air monitoring reveal air contaminants at concentration equal to or greater than one-half the PEL, engineering controls shall be implemented where feasible to reduce the contaminant level.

Respiratory protection shall be worn in areas with air contaminant concentrations above the TLV or the PEL when engineering controls and/or administrative controls do not resolve. Applicable engineering and/or administrative controls shall continue to be implemented during the use of respiratory protection.

Control devices on equipment shall be regularly inspected and tested. The employer shall evaluate the control techniques and their effectiveness on controlling air contamination. Work site management shall immediately inform the ROCIP Safety Team of any changes that may affect contaminant concentrations.

5.3 Ensuring Reliability of Test Equipment

All users of portable air monitoring equipment shall be trained in proper use, care, inspection, and calibration requirements and limitations of the equipment.

Routine replacement of parts shall be performed in accordance with the manufacturers written instructions by Qualified Personnel. The authorized service provider must undertake all other repairs.

An external independent calibration is necessary on a scheduled basis to ensure correct performance of the units. Preventative maintenance shall also be carried out at this time.

5.4 Noise Monitoring

The Contractor in response to workplace assessments, employee complaints, or regulatory requirement shall arrange for noise monitoring.

6. References

CFR 29 CFR 1910 Subpart(s) G, J, Z
CFR 29 CFR 1926 Subpart(s) C, D, Z
CFR 29 CFR 1926.51(c) Table D-1
ASHRAE standards appropriate to the site
ACGIH standards as referenced and appropriate at site.

Ladders - 21

1. Policy

Work activities requiring the use of approved ladders shall be conducted safely and in accordance with manufacturer's guidelines.

2. Purpose

To define the requirements for the safe use of approved ladders.

3. Scope

Applies to all ROCIP projects.

4. Definitions

General Common Terms

ANSI stands for the American National Standards Institute that provides ladder manufacturing guidelines.

Competent Person (for ladders) means a person possessing the ability to identify hazardous or dangerous conditions and shall have the authorization to take prompt corrective measures to eliminate these conditions. A Competent Person shall know how to detect defects as well as the proper procedures to follow when equipment is found to be defective.

All other definitions of 29 CFR 1926 subpart X shall apply.

5. Requirements

5.1 Ladder Selection Criteria

The following table outlines the weight-capacity classifications for approved ladder types:

TYPE	APPLICATION	WORKING LOAD
IAA	Construction/Services/Shop/Warehouse	375 lbs. Maximum
IA	Construction/Services/Shop/Warehouse	300 lbs. Maximum
I	Construction/Services/Shop/Warehouse	250 lbs. Maximum

Only type IAA, IA, or I ladder are approved for ROCIP projects.

Ladders of these types should only be of fiberglass/non-conductive material. Wood or job-made ladders are discouraged and require approval by a Competent Person for use under special circumstances.

Any future-developed ladder with a rating higher in 'working load' capacity than the type IAA is acceptable.

5.2 Training

Contractor(s) shall provide annual training to all employees utilizing ladders either separately or in conjunction with fall protection training.

Ladder safety shall also be covered as a part of a new employee's orientation.

Individual refresher training shall be required of all employees engaged in work-related near-miss or injury incidents involving ladders.

All training related to applicable ladders shall include:

- The nature of ladder hazards in the work site
- As applicable, the correct procedures for construction (job-made ladders), use, placement and care in handling all ladder types and styles
- The maximum intended load-carrying capacities of all ladder types and styles
- Applicable standards contained in 29 CFR 1926 subpart X and those of this policy section

5.3 Inspections

Ladders shall be visually inspected before use.

Ladder defects include but are not limited to:

- Structural defects-such as bent, broken or missing rungs, cleats, or steps, broken or split rails, corroded components, or other faulty or defective components.
- Such ladders shall be immediately removed from service and tagged with **"DANGEROUS-DO NOT USE"** sign/tag and immediately reported to your supervisor or a designated Competent Person
- Such ladders are to be removed from the work area for proper disposal or repair by personnel trained to manufacturer's standards.

5.4 Ladder Use and Transportation

5.4.1 Choosing the Proper Ladder

Before a ladder is used it shall be determined that a ladder is the best device to use. Scaffolds and mechanical lifts may be a better choice for certain situations. Once a ladder has been determined to be the best option the proper ladder shall be chosen.

Ladders shall be chosen in accordance with the job to be performed. Choose ladders based on the ladders rated strength, usable height, and load specification. The combined weight of the user, their tools, and materials shall not exceed the rating of the ladder. Each ladder shall have a duty rating displayed on a label affixed to the ladder.

5.4.2 Transporting

Two people should carry step ladders over 10 feet, and straight/extension ladders 20 feet or greater in length.

Any ladder less than ten feet (10') in length can be carried by one contractor when supporting the ladder in the middle and to his/her side.

Ladders stored on/in vehicles shall be secured from movement at both ends. Materials used to secure such ladders shall be properly sized and inspected for decay before use and discarded if in disrepair.

Ladders projecting more than three (3) feet from the vehicle body shall be marked with a red 'flag'.

5.4.3 Setup Rules

All ladders shall be placed on firm stable footing.

If the ladder is positioned by a door or walkway ensure that the door is locked or the walkway is barricaded to prevent collisions.

Keep ladders at least ten feet (10') away from energized power lines (all personnel shall be trained and instructed to watch for overhead power lines before erecting any ladder).

When using portable extension ladders identify the best location that allows for the proper securing of the ladder at the base and/or top.

Barriers and/or warnings should be posted while working on a ladder in any high-traffic areas.

5.4.4 Setup and Use

5.4.4.1 Portable Step Ladders

Ensure that the folding cross braces on the ladder are locked in the proper position.

Ensure that the bottom areas of the ladder are kept clear and free of debris.

Ensure that a portable step ladder is never utilized as a straight or extension ladder (for example, leaning it against an object when climbing).

Place the top step directly under or slightly in-front of the intended work area.

It is good practice to have someone hold any ladder over twelve feet (12') in height while ascending/descending/ performing work.

Where possible, do not work with the side rails facing the working surface.

Never climb the back side of a ladder.

5.4.4.2 Portable Straight and Extension Ladders

Place a straight or extension ladder at an angle of 4:1. For every 4 feet of height, the base of the ladder should be out 1 foot (i.e., one horizontal foot from the support point).

Ensure that both side rails make contact with the structure at the bearing point.

All ladders must extend at least three feet (3') (approximately three rungs) beyond the surface being accessed. Further overlap adds stability.

Straight or extension ladder are not to be placed in a horizontal position as a substitute for a scaffold or a runway between two elevated locations.

Straight or extension ladder are never to be placed directly against a windowpane or sash.

Ensure that the top and bottom areas of the ladder are kept clear and free of debris.

5.5 General Rules for Use

All ladders shall only be used as specified by the manufacturer.

Never jump from or onto any ladder. Never slide down a ladder.

Never "walk" a ladder while working on it.

Never "jump" a ladder while working on it.

Remove any ice, snow, mud or other slippery substance from the rungs/steps.

Always use the 3-point rule when climbing up or down. At least two hands and one foot, or two feet and one hand, should be in contact with the ladder at all times.

Ladders cannot be moved, shifted or extended while employees are on them.

Always face the ladder when ascending or descending.

If tools are needed they should be carried in a tool belt or pulled up with a rope once the employee has reached his/her destination.

When ascending or descending tools/equipment/supplies that cannot be readily carried in a tool pouch shall be handled by another employee on the ground or lowered/raised to/from the ground by the employee on the ladder once positioned safely on the ladder.

Do not store tools or materials on the top of ladders unless specifically designed for this purpose.

Do not lean outside the frame rails of a ladder. This could cause the user to lose balance and fall. With a properly positioned ladder the work should always be directly in front of you.

Wear slip resistance footwear for climbing/descending such as work boots.

Do not use the top two steps of a portable stepladder and the top four rungs on extension ladders. Those steps/rungs are necessary for balance only. Obtain a larger ladder if more height is needed.

Always climb slowly with your weight centered between side rails.

Never join two short ladders to make a longer one.

5.6 Maintenance and Storage

5.6.1 Maintenance

Ladder shall be maintained in accordance with the manufacturer recommendations. Ladders should never be painted (other than for property marking) because paint may hide defects that could lead to ladder failure.

5.6.2 Storage

Never store ladders in such a way that they present a tripping hazard or could potentially fall on employees.

Keep ladders in areas where they will not come into contact with oil, grease, or other slipping hazards.

Store and secure ladders in a safe and dry place out of direct exposure to the sun and other weather elements whenever possible.

6. References

CFR 29 CFR 1926. 1051, 1053, 1060

Personal Protective Equipment - 22

1. Policy

Employees shall use appropriate personal protective equipment (PPE) as determined by hazard assessments, training, and ROCIP requirements.

2. Purpose

To establish a specific procedure for the control, use, and care of personal protective clothing and equipment.

3. Scope

Applies to all ROCIP projects and includes all visitors, vendors, and subcontractors.

4. Definitions

General Use PPE means any PPE that is generally issued to all employees for a work site for known exposures.

PPE is an abbreviated term for 'personal protective equipment'.

ANSI is an abbreviated term for 'American National Standards Institute'.

5. Requirements

All PPE shall be selected by the employer and assigned/issued by supervision.

PPE is to be provided by all employers for controlling exposures to applicable hazards. The first and foremost means of protecting employees from injuries or exposures is to eliminate the exposure, the second is engineering controls, and the third is PPE. PPE is a means of preventing injury or exposure when exposure elimination and/or engineering controls are not possible.

Prior to any personal protective equipment being selected for any work site a hazard assessment shall be performed for each specific task or work area. The assessment shall be written and maintained on file at the work site.

A PPE hazard assessment shall be conducted whenever there is a change in operations, processes, machinery or any other conditions that may promote, create, or produce any potential physical or health hazard.

5.1 Training

5.1.1 Initial

All employees shall be trained on the following:

- When PPE is necessary
- What PPE is necessary
- How to properly don, doff, adjust, and wear PPE
- The limitations of the PPE; and
- The proper care, maintenance, useful life, and disposal of the PPE

5.1.2 Refresher

Refresher training of individual employees shall occur when any of the following occur:

- Changes in the work site render previous training obsolete
- Changes in the types of PPE to be used render previous training obsolete
- Inadequacies in the employees knowledge or use of assigned PPE indicate that the employee has not retained an understanding or skill of PPE use

5.1.3 Certification of Training

All employees shall certify their receipt and understanding of this training. The following information shall be documented with this certification:

- Name of each employee
- Date(s) of training
- Identification of the PPE subject

5.2 Head Protection

All hard hats shall be in compliance with or exceed ANSI standard Z89.1 (1997). Criteria to be considered when purchasing hard hats shall include:

- Compatibility to welding hoods
- Compatibility with earmuffs, splash goggles, face shields, etc.
- Comfort for the wearer
- Ratchet suspension

Bump caps and metallic hardhats are prohibited.

Approved Hardhats shall be worn at all times on all ROCIP projects except in designated areas (offices).

5.3 Eye/Face Protection

Safety glasses, goggles, and face shields shall meet ANSI Standard Z87.1-1989.

ANSI approval is distinguished on the frame and/or on the lens (Z87.1).

Approved eye protection shall be worn at all times except in designated areas such as offices. Approved face protection shall be worn as required by the hazard assessment.

Only those sunglasses approved by ANSI Z 87.1 are permitted on work sites.

Prescription glasses shall meet ANSI Standard Z 87.1-1989 or ANSI-approved glasses/goggles shall be used over non-ANSI approved prescription glasses.

Employees exposed to arc flashes shall wear eye/face protection that meets NFPA 70E standards appropriate for the maximum potential arc flash.

The cost of obtaining ANSI approved prescription lenses is the responsibility of the employer.

Employees shall wear ANSI-approved safety glasses or goggles whenever they are using face shields.

5.4 Hand Protection

When hand protection is utilized or required the appropriate form of hand protection shall be worn as determined by the PPE hazard assessment.

5.5 Clothing

Employees shall wear protective clothing as determined by the PPE hazard assessment.

All employees engaged in "Hot Work" (energized circuits) shall wear the appropriate Fire Rated (FR) clothing. All employees engaged in working on live electrical circuits/components shall wear Arc Flash FR clothing sufficient to withstand the maximum arc flash anticipated.

All employees engaged in hot work (welding, cutting, brazing) shall wear the appropriate Fire Rated (FR) clothing.

Employees exposed to public vehicular traffic or working in the R.O.W. shall be provided with and wear class II or class III warning vests or other suitable garment marked with or made of reflectorized or high visibility material.

5.6 Hearing Protection

When hearing protection is utilized or required various types and styles of hearing protection shall be made available for employee selection and use.

In the event that hearing protection is required the protection chosen must have the ability to reduce the noise exposure to below 85 DBA. The Noise Reduction Rating (NRR) will indicate the amount of reduction provided by the specific hearing protection equipment. All requirements for this part shall be in accordance with 1926 subpart D.

5.7 Fall Protection

See the Fall Protection section of this manual.

5.8 Foot Protection

Footwear shall be determined in accordance with the PPE hazard assessment.

Appropriate sturdy leather footwear shall be worn at all times. No tennis shoes, running shoes, sandal, etc. are allowed on any project.

Employee operating jackhammers, hand operated compactors ("jumping jacks"), or other equipment that introduces a recognized hazard that would potentially cause a foot injury, shall wear metatarsals.

All protective safety footwear shall meet the requirements and specifications of ANSI Z41-1991.

5.9 Respiratory Protection

See the Respiratory Protection section of this manual.

6. References

29 CFR 1926, 29 CFR 1910, and associated ANSI and NFPA standards.

Respiratory Protection - 23

1. Policy

Employees will be protected from the adverse effects of airborne contaminants or a lack of oxygen. Respiratory protection shall only be used when engineering controls are not feasible or while these engineering controls are being instituted.

2. Purpose

To provide guidance for respirator use in order to protect employees from any exposure to airborne hazards. This policy is designed to comply with the requirements of the Occupational Safety and Health Administration's Respiratory Protection Standard (29CFR 1910.134).

3. Scope

Applies to all ROCIP projects.

4. Definitions

IDLH – "Immediately Dangerous to Life and Health". An atmosphere that poses an immediate threat to life, would cause irreversible adverse health effects, or would impair a person's ability to escape from a dangerous atmosphere.

Respirator - Any personal protective equipment which is designed to protect a person's respiratory tract. Respirators include:

- Negative pressure air purifying devices - Respirators in which the air pressure inside the facepiece is negative during inhalation with the respect to the ambient air pressure outside the respirator. Filtering facepieces (commonly referred to as dust masks) fall under this category.
- Positive pressure air supplying devices - Respirators in which the pressure inside the respiratory inlet covering exceeds the ambient air pressure outside the respirator. Self-contained breathing apparatus (SCBA) certified by NIOSH for a minimum service life of 30 minutes, or a combination full facepiece pressure demand supplied air respirator with auxiliary self-contained air supply are examples of positive pressure air supplying devices.
- Powered Air Purifying Respirator (PAPR) – Respirators in which ambient air is pulled through a filter by a battery driven motor and forced into either a loose fitting hood or a tight fitting face piece.
- Escape-only respirators – Respirators intended for use only in escaping a hazardous atmosphere (e.g. loose-fitting respirators)

Hood – A respiratory inlet covering that completely covers the head and neck and may also cover portions of the shoulders and torso.

Employee Exposure means exposure to a concentration of an airborne contaminant that would occur if the contractor were not using respiratory protection.

End-of-service-life Indicator (ESLI) means a system that warns the respirator user of the approach of the end of adequate respiratory protection, for example, that the absorbent is approaching saturation or is no longer effective.

Fit Factor means a qualitative estimate of the fit of a particular respirator to a specific individual, and typically estimates the ratio of the concentration of a substance in ambient air to its concentration inside the respirator when worn.

Fit Test means the use of a protocol to qualitatively or quantitatively evaluate the fit of a respirator on an individual (see Qualitative Fit Testing and Quantitative Fit Testing).

Oxygen Deficient means an atmosphere with oxygen content below 19.5% by volume.

Qualitative Fit Testing means a pass/fail test to assess the adequacy of respirator fit that relies on the individual's response to the test agent.

Quantitative Fit Testing means an assessment of the adequacy of respirator fit by numerically measuring the amount of leakage into the respirator.

5. Requirements

5.1 Requirements

Respiratory protection requirements will be included in all hazard analysis. Confined Space Entry Permits, Welding, Cutting, and Hot Work Permits may also require respiratory equipment requirements for the task(s) being performed.

Employees shall not be allowed to enter an area requiring the use of a respirator without meeting all of the requirements of this policy and federal standards.

Medical evaluations shall be required for respirator users. Parameters of the medical evaluation are determined by a physician or other licensed health care professional (PLHCP) and required regulations.

Training and fit testing shall be required initially (prior to use) and annually thereafter for all respirator users.

Respirators not in use shall be maintained according to the manufacturer's requirements.

5.2 Respirator Selection

Respiratory hazards in the workplace must be evaluated to identify relevant workplace and user factors. Respirator selection will be based on those factors. This evaluation will include:

- Anticipated use of the material and employee exposure potential
- Employee monitoring data
- Exposure limits set by OSHA or the American Conference of Government Industrial Hygienists (ACGIH)
- Recommendation for respiratory protection by the chemical manufacturer
- Toxicity of the material

Note: Where the employee exposure cannot be easily identified or reasonably estimated the atmosphere will be considered to be IDLH.

A self-contained breathing apparatus will be required for all IDLH or potentially IDLH atmospheres.

The respirator selected for use in non-IDLH service must be appropriate for the state and physical form of the contaminant.

Where negative pressure respirators are worn for protection against gases and vapors employees must change out cartridges upon usage need and concentration level of substances. The number of hours before cartridge change-out is required will be adjusted when there is sufficient data to determine the breakthrough period. Each cartridge shall be dated with the current date upon putting into service.

Where negative pressure respirators are worn for protection against particulate (dust, mist, and fumes), an increase in breathing resistance or a change is smell or taste indicates that the filters should be changed out. Disposable dust masks should be changed out when there is an increase in breathing resistance or change in smell and after each use whichever occurs first.

All air purifying respirators shall be NIOSH approved for the types and levels of contaminants they are to protect against. All SCBA's shall be NIOSH approved with pressure demanded-regulators for the types and levels of contaminants they are to protect against.

5.3 Respirator Assignment

Employers shall be responsible for enforcing regular respirator use. Respirators shall be issued for routine and non-routine work to employees after medical evaluations, training and fit testing.

A list of authorized users by respirator type shall be maintained by the employer.

5.4 Training

Training is required for all employees who wear respirators prior to initial use. Additionally annual refresher training is required for all employees who wear respirators. Training will be accomplished through one-on-one instruction during the fit test and through classroom training. The employer is responsible for developing and conducting the classroom training. Training will consist of:

- Consequences of improper fit, use, or maintenance of respirator effectiveness
- Limitations and capabilities of the respirators used by the employee
- instructions on how to change cartridges/canisters when breakthrough occurs
- Appropriate use of respirators in emergency situations
- Specific instruction on inspection, donning/removing, performing a user seal check, what to do if problems are encountered during inspection, how to report problems, and how to obtain replacement equipment
- Procedures for maintenance and storage of respirators
- A familiarizing period of wear in normal air
- How to recognize medical signs and symptoms that may limit or prevent the effective use of respirators, i.e. shortness of breath or dizziness; and
- The general intent of the Respiratory Protection Standard (29 CFR 1910.134)
- In addition to the annual refresher training retraining in the use of respiratory equipment will be provided if any of these situations occur
- Changes in the workplace or the type of respirator render the previous training ineffective or obsolete

Retraining shall occur before the next use of a respirator if:

- An employee is observed to demonstrate a lack of knowledge in the use of a respirator
- There are changes in the respiratory equipment
- In adequacies in the employee's knowledge or use of the respirator indicate that the employee has not retained the understanding or skill needed.

Any other situation arises in which the need for retraining in order to ensure proper respirator use is indicated.

All employees who are required to wear respirators while performing tasks required by their job assignment and those employees who elect to voluntarily wear a respirator shall have respiratory training. Those employees who voluntarily wear a dust mask shall read Appendix D of 29 CFR 1910.134.

5.5 Medical Evaluation & Fit Testing

The use of a respirator may place a physiological burden on an employee that can vary with the type of respirator worn, the task being performed, the workplace conditions in which the respirator is being used, and the medical status of the employee. Because of this, it is required that each employee who is required to wear a respirator to perform the task(s) required by his/her job and those employees who voluntarily wear a respirator receive a medical evaluation prior to being fit-tested and prior to being asked to use a respirator.

It is not necessary for an employee to have a medical evaluation to wear the escape-only respirator.

Initial Evaluation

All employees who will be required to use a respirator will complete a medical questionnaire. In addition to completing the questionnaire for evaluation employees will be required to have a baseline Pulmonary Function Test.

Additional Evaluations

Additional Medical Evaluation will be required if:

- An employee reports medical signs or symptoms that are related to the ability to use a respirator
- Observations during fit testing or in program evaluation indicate a need
- A change occurs in workplace conditions that may result in a substantial increase in the physiological burden placed on an employee (e.g. significantly increased protective clothing requirements).

Annual Evaluation

After the initial medical evaluation an annual review is required for personnel who continue to be required to wear a respirator.

Fit Testing

Before an employee will be allowed to wear a tight-fitting respirator, negative, or positive pressure he/she must pass a fit test for the specific make, model, style, and size of the respirator to be used. Quantitative fit tests will be required for employees who are required to wear any negative pressure or supplied air respirator. In the event that a quantitative fit test cannot be performed a qualitative fit test will be performed in its place. The Administrator for Respiratory Protection program or their designee will conduct fit tests. Employees will be fit tested on each type of respirator that they are required to wear. Fit testing will be repeated annually and prior to the employee using a different respirator or type of respirator facepiece. Additional fit testing will also be required if there is a

change in the person's physical condition that could affect respirator fit. Employees who are to be fit tested to wear tight-fitting respirators must be clean shaven in the seal area.

Documentation

The employee's fit test qualification will be kept in his/her file.

Use of Respirators

Employees are required to perform a user seal check every time they use a tight-fitting respirator. User seal checks are not intended to take the place of the required fit test.

When conditions change in the workplace in a way that may affect the effectiveness of a respirator the respiratory program administrator must be notified so that changes to the respiratory requirements can be made as needed.

5.6 Maintenance, Care, and Storage

Cleaning and Disinfecting of Personal Negative-Pressure Respirators

Respirators must be kept clean and disinfected so that they are ready for use at all times. The employee is responsible for cleaning his/her respirator in accordance with the manufacturer's requirements at the end of the shift each time the respirator has been used.

Storage of Respirators

All personal respirators shall be stored to protect them from damage, contamination, dust, sunlight, extreme temperatures, excessive moisture and chemical damage. They should not be stored outdoors, in a process area, with tools or chemicals, or underneath equipment. The recommended mode of storage for personal respirators is inside a clean plastic bag. Respirators shall not be stored with cartridges attached. Each pair of cartridges is factory sealed in a plastic bag they are dated as to the date of manufacture. The cartridges have a shelf life of three years as long as they are unopened.

Inspection of Respirators

All respirators used in routine service shall be inspected before each use and during cleaning.

The person who will be wearing the respirator prior to each use must perform a before-use inspection. This includes supplied-air respirators as well as negative-pressure respirators. The inspection must include:

- A functional check of the respirator, tightness of connections, condition of the various parts including the facepiece, head straps, valves, connecting tube, cartridges and/or filters
- A check of the elastomeric parts for pliability and signs of deterioration
- Supplied-air respirators must be inspected to ensure that the breathing air cylinder is at least 90% full and that the regulator and warning devices work as designed. Breathing air cylinders that are less than 90% full (below the full mark) should be replaced and arrangements made to have the cylinder refilled.

5.7 Program Surveillance

Program effectiveness shall be evaluated through regular inspections of each area/situation where respirators are used and stored. The safety coordinator or supervisor shall be responsible for these evaluations.

Work areas where emergency respirator use may be required shall be reviewed

The procedures to be taken during an emergency are included in the emergency action plan established by the general contractor.

5.8 Recordkeeping

Records of medical evaluations shall be retained and made available per 29 CFR1910.134.

5.8.1 Site Administrator for Respirator Protection

In accordance with 1910.134, the site shall maintain a site administrator for respiratory protection. This administrator shall be responsible for overseeing of the respirator program including fit testing, training, and auditing. The site administrator must attend a refresher training every 3 years.

5.9 Respirator Details

5.9.1 SCBA Basics

Open-circuit systems with pressure-demand regulators are recommended for use in both oxygen-deficient and IDLH atmospheres.

The buddy system is required when using SCBA in immediately dangerous to life health (IDLH) environments.

All SCBA shall have an alarm that goes off when 20-25% of the air is left.

Any SCBA with less than a 15-minute air supply may be used for emergency escape only.

5.9.2 Air Line Respirator Basics

Air may be supplied from an air cylinder or a compressor (oxygen shall not be used). Cylinders are to be tested and maintained according to DOT regulations and need to be properly labeled.

As related to compressors:

- Contractor shall ensure that carbon monoxide levels in the breathing air do not exceed 10 PPM
- Oil-lubricated types need either a high temperature or CO alarms or both. If only a high temperature alarm is used, the air shall be tested routinely to ensure a CO level of not more than 10 PPM
- Alarms are necessary to indicate compressor failure and overheating
- Between the compressor and the receiver air shall pass through a particulate filter followed by a bed of activated charcoal and moisture absorber. The filters and absorbents shall be inspected regularly and changed as necessary.
- The intake of the compressor should be protected by locating it away from sources of contamination such as auto exhaust or the exhaust of engines which run the compressor.

Air-line couplings shall not be the same size or types as other gas system outlets.

In an immediately dangerous to life or health (IDLH) atmosphere:

- A wearer shall also have an auxiliary self-contained supply of respirable air for escape
- A stand-by person with self-contained breathing apparatus shall be available for emergency rescue

Air-line respirators need a flow control valve to govern air flow. Air flow depends on the length of the hose and the mask and is specific for each respirator type, make, and approval. Never circumvent the manufacturer's recommendations. Air-line respirators are approved as systems. Any interchange of parts between units of different manufacturers or systems

shall void the NIOSH/MSHA approval. Breathing air quality shall meet the requirements of 1910.134

6. Responsibilities

6.1 Employer(s)

Overall accountability for respiratory protection program with direct program implementation and maintenance assigned to the employer's program administrator. The employer will review the effectiveness of the program on a regular basis.

Ensure fit testing and training are properly documented.

Periodically audit respirator permitted areas to determine the effectiveness of the program.

Remove unapproved respirators from service.

Maintain a list of current approved respirators by NIOSH that are used in the Respiratory Program.

6.2 Contractor Superintendents/Supervisors

Ensure that subcontractor training, fit testing, and medical evaluation requirements are met.

Maintain surveillance of work area conditions and levels of contractor exposure or stress.

6.3 Physician or other Licensed Health Care Professionals (PLHCP)

Medical evaluations shall be conducted by a PLHCP. They shall determine if the employee is medically fit to use a respirator.

The frequency of follow-up medical evaluations shall occur defined by the health care professional during the initial evaluation, based on expose.

7. References

CFR 29 CFR 1910.134
CFR 29 CFR 1910.1000
ANSI Z88.2 1969
ANSI Z88.2 1980
ANSI Z88.6 1984
NIOSH Guide to Industrial Respiratory Protection (Published 1987).

Scaffolding - 24

1. Policy

Scaffolding shall be constructed and used in a safe manner.

2. Purpose

Procedures for the safe erection, use, and dismantling of scaffold systems.

3. Scope

Applies to all ROCIP.

4. Definitions

All definitions of 29 CFR 1926 subpart L apply

Competent Person means one who is capable of identifying existing and predictable hazards in the surroundings or working conditions which are unsanitary, hazardous or dangerous to personnel, and who has authorization to take prompt corrective measures to eliminate them.

Qualified Person means a person who, by possession of a recognized degree, certificate, or professional standing, or who by extensive knowledge, training and experience has successfully demonstrated his/her ability to solve or resolve problems related to the subject matter, the work, or the project.

5. Requirements

5.1 General

Scaffolds shall be erected, used, modified, and dismantled in accordance with the requirements of this policy and those of regulatory agencies. These standards also apply to contracted parties responsible for these activities.

When scaffold assemblies are no longer required they shall be dismantled and removed.

Only Competent Persons designated as scaffold builders by the employer are authorized to construct, modify, and dismantle scaffolds.

Only persons who are trained and designated as scaffold users may enter onto scaffold assemblies except for stand-alone scaffold stairways.

Persons working inside the confines of a completed scaffold are not required to wear fall protection equipment unless otherwise specified.

5.2 Designing and Building Scaffolds

Only a Qualified Person shall design scaffold systems.

Tube and coupler or fabricated frame scaffolds over one hundred and twenty-five (125) feet in height shall be designed by a Registered Professional Engineer, and shall be constructed and loaded in accordance with that design.

A designated Competent Person shall direct the erection, repair, and dismantling of scaffolding systems.

A Competent Person shall be at the physical location where scaffold assemblies are under construction, being modified, or being dismantled.

5.3 Training

5.3.1 Scaffold Users

Prior to the commencement of work scaffold users shall be trained by a Competent Person to recognize the hazards associated with the type of scaffold being used and to understand the procedures to control or minimize those hazards. The training shall include the following areas as applicable:

- Recognition of known hazards
- Correct procedures for dealing with electrical hazards and for erecting, maintaining, and disassembling the fall protection systems and falling object protection systems being used
- Maximum intended load and load-carrying capacities and the type of scaffold(s) used
- All other pertinent information associated with this policy manual section and 29 CFR 1926 Subpart L

5.3.2 Scaffold Builders and Inspectors

Scaffold builders and inspectors shall be trained by a Competent Person to recognize any hazards associated with the work being conducted.

The training shall include the following areas as applicable:

- Nature of scaffold hazards
- Correct procedures for erecting, disassembling, moving, operating, repairing, inspecting, and maintaining the type of scaffold(s) used

- Design criteria, maximum intended load-carrying capacity and intended use of the scaffold(s)
- All other pertinent information associated with this policy manual section and 29 CFR 1926.451 Subpart L

5.3.3 Refresher Training

Any scaffold builder, inspector or user who displays a lack of skill or understanding for conducting their work safely shall be retrained until such skill is observed to be understood satisfactorily.

Retraining shall include the following areas, at a minimum:

- Any changes at the worksite that have not been previously trained
- Any changes in the type of scaffold, fall protection, falling object protection, or other equipment have not been previously trained
- Any particular points of skill or understanding that is not being proficiently displayed

5.4 Inspections

5.4.1 Competent Person Inspection

Upon the completion of a scaffold assembly a Competent Person is responsible for conducting an inspection to verify the condition of the assembly.

5.4.2 Daily Inspection

Competent Persons are responsible for visually inspecting scaffolds and work platforms for defects and damage prior to use each day. If defects or damage is noted or discovered work shall stop and the immediate supervisor shall be notified and work shall not commence until corrective action has been taken.

These inspections shall be documented on an inspection tag attached to the scaffold assembly or a form that is retained.

This inspection shall include the following information:

- Name of the person inspecting scaffold
- Name of Users
- Date inspected
- Items inspected shall be documented appropriately by comment (on the tag) or by initialing an inspection checklist

5.5 Scaffold Inspection Tags

Because not all scaffolds are constructed to a 100% complete state a scaffold tagging procedure as defined in this document shall be used to identify the condition of a scaffold assembly.

During the construction phase of a scaffold assembly a "Red" Scaffold tag shall be affixed to the assembly and remain in place until a final inspection has been conducted.

Personnel and others shall not use scaffolds that **do not** have a yellow or green scaffold tag affixed to it under any circumstances.

Scaffold tags shall be in use while scaffolds are being erected, modified, used and dismantled. Only Scaffold Builders are permitted to be on a scaffold with a Red Tag (Danger, Do Not Use Scaffold).

5.5.1 Green Tag

A Green tag shall be used to indicate a scaffold is complete and ready for use. This tag authorizes personnel to use the scaffold without fall protection equipment while working within the confines of the work platform.

5.5.2 Yellow Tag

A yellow tag indicates a scaffold is not complete.

5.5.3 Red Tag

A red tag indicates a scaffold is not safe to use.

5.6 Access

Access shall be provided to scaffold platforms when they are more than nineteen (19) inches above or below a point of access. Cross braces shall not be used for access. Acceptable access includes:

- Portable ladder
- Hook-on ladder
- Attachable ladder
- Stair tower
- Stairway-type ladder
- Ladder stand
- Ramp
- Walkway

- Integral prefabricated scaffold access or direct access from another scaffold
- Personnel hoist

A safe means of access shall be provided for personnel erecting and dismantling a scaffold where the provision of safe access is feasible and does not create a greater hazard as determined by a Competent Person. This decision shall be based upon site conditions and the type of scaffold being erected or dismantled.

Hook on type ladders shall be installed as soon as scaffold erection has progressed to a point that permits safe installation and use.

5.7 Working on Scaffold Assemblies

Scaffolds shall not be loaded in excess of their maximum intended loads or rated capacities whichever is less.

Any part of a scaffold damaged or weakened shall be taken of out service until repaired, replaced, or braced to meet requirements.

Employees shall not be on scaffolds while they are moved horizontally except:

- When designed by a registered engineer specifically for such movement; or
- Provisions for mobile scaffolds are followed (CFR 29 CFR 1926.452 (w)

Employees shall not be permitted to work on scaffolds covered with snow, ice or other slippery material except as necessary for removal of such materials. Under these circumstances slip resistant footwear and other precautions shall be taken to ensure personnel do not fall from the scaffold assembly.

Protection from falling objects such as tools, equipment, materials, and debris is required for personnel working on scaffolds and work platforms. Protection includes installation of toe boards, screens, guardrail systems, debris nets, catch platforms, deflectors or canopies. Heavy, massive and large objects shall be placed away from edges and secured in place to prevent accidental falling.

The area below scaffolds shall be barricaded to protect personnel working below from falling objects.

Employees shall not be permitted to work on scaffolds during storms and high winds unless a Qualified Person has determined that it is safe and personnel are utilizing fall protection equipment. Windscreens shall not be used unless scaffolds are designed to withstand wind loads and the load of the windscreen itself.

Employees shall not be permitted to work on scaffold assemblies when electrical storms are visible and in near proximity.

Debris shall not be allowed to accumulate on work platforms.

Barrels, boxes, blocks, bricks, and other devices shall not be used to increase the working level height of personnel on any type of scaffold.

5.8 Electrical Lines and Hazards

All electrical lines shall be treated as 'live' unless proven otherwise.

Clearance between scaffolds and electrical power lines during erection, use, and dismantling shall be as follows:

Insulated Lines Voltage	Minimum Distance	Alternatives
Less than 300 Volts	3 Feet	
300 Volts to 50 kv	10 Feet	
More than 50 kv	10 feet plus 0.4 inches for each 1 kv over 50 kv 2	times the length of the line insulator, but never less than 10 feet
Un-insulated Lines Voltage	**Minimum Distance**	
Less than 50 kv	10 Feet and no contact can be made during material handling operations	
More than 50 kv	10 feet plus 0.4 inches for each 1 kv over 50 kv	

Exception is granted to these requirements when the utility operator or electrical system operator has de-energized the systems, relocated the lines, or installed protective covering to prevent accidental contact with the lines. This must be verified and documentation available at the jobsite.

6. References

29 CFR 1926 Subpart L
ANSI Guidelines as referenced

Tools - 25

1. Policy

Tools shall be in good working order and shall be safely used for their intended purpose in accordance with manufacturer specifications.

2. Purpose

To define the procedures for the safe use, care, and inspection of tools.

3. Scope

Applies to all ROCIP projects.

4. Definitions

None

5. Requirements

5.1 General

Appropriate personal protective equipment (PPE) shall be used with all tools.

Electrically powered tools shall not be carried, hoisted, lowered, or handled by their electrical cords.

Where practical, tools or devices should be used to hold chisels, stakes, and other implements driven or struck with a hammer. Hands shall be kept clear of impact tools.

Guards shall not be removed from tools.

When using ladders tools that cannot be carried safely in a tool belt shall be hoisted to/from the work position by a rope or by other means.

Tools, except for small tools within a tool belt, shall not be carried while climbing ladders, platforms, and other structures where the hands are required for gripping, stability, movement and balance.

Only authorized persons shall be permitted to repair tools.

Tools shall not be altered from their original design.

Tools shall be used according to their design. Handles shall be in place and used during the operation.

All 120 Volt A.C operated tools shall be used in conjunction with a Ground Fault Circuit Interrupter (GFCI). GFCI's shall be tested before each use.

Tools shall not be left on scaffolds or elevated workspaces.

On-off switches controlling the operation of hand-held powered tools shall conform to the following requirements:

- All hand-held powered sanders, grinders with 2-inch or less diameter wheels, routers, planers, laminate trimmers, nibblers, shears, scroll saws, and jigsaws with blade shanks 0.25 inch wide or less may be equipped with only a positive on-off control
- All hand-held powered drills; tappers; fastener drivers; horizontal, vertical, and angle grinders with wheels exceeding 2 inches in diameter; disk sanders; belt sanders; reciprocating saws; saber saws; and other similar tools shall be equipped with a momentary contact on-off control. They may have a lock-on control provided the turnoff can be accomplished by a single motion of the same finger or fingers that turn it on
- Jackhammers and similar pneumatic-powered hand tools and other hand-held power tools including chainsaws, circular saws, and percussion tools shall be equipped with a constant pressure switch that shuts off power when pressure is released

Only non-sparking tools shall be used in locations where sources of ignition may cause an explosion or fire.

Employees shall not work under areas where hand-held tools are being used unless the tools are equipped with restraining straps or appropriate decking, planking, and netting are provided for contractor protection.

When the periphery of the blades of a fan is less than seven (7) feet above the floor or working level, the blades shall be guarded. The guard shall have openings no larger than 1/2 inch.

Machines designed for a fixed location shall be securely anchored to prevent walking or moving.

Loose or frayed clothing or long hair, necklaces, dangling ties, finger rings, etc. shall not be worn around moving machinery or other sources of entanglement.

5.2 Inspections

All hand and power tools will be inspected in accordance with the manufacturer's requirements.

Only authorized persons shall inspect, test, or repair hand or power tools.

Users shall be trained to visually inspect the tools they are assigned to use.

Users are responsible for visually inspecting the tools they use each day for visual defects. Defective tools shall be reported to the appropriate supervisor and taken out of service.

"Do Not Use" tags shall be attached to defective tools. The tag shall have the name of the person who attached it, date, and a description of the defect. The appropriate supervisor shall be notified when a defective tool is tagged out of service.

Defective tools shall be removed from the project until they are repaired. Non-repairable tools shall be destroyed.

5.3 Abrasive Blasting Tools

The blast cleaning nozzles shall be equipped with an operating valve which must be held open manually. A support shall be provided on which the nozzle may be mounted when it is not in use.

Abrasive blasting suits shall be inspected daily for leaks, tears, and general conditions. Defective equipment shall be taken out of service until repairs are completed or the suit is replaced.

5.4 Air Hoses

All hoses exceeding ½ inch inside diameter shall have a safety device at the source of supply which will automatically reduce pressure in case of a line failure. All connections, couplings, and splices in air lines exceeding ½ inch inside diameter shall be equipped with clips and wire rope or chain lashings. The clips and lashings shall be installed in a manner that prevents whipping of the hose line should the connection coupling or splice fail.

Air hoses shall not be disconnected at compressors until air pressure has been relieved.

The manufacturer's safe operating pressure for hoses, pipes, valves, and fittings shall not be exceeded. Defective hoses, valves, and fittings shall be removed from service.

Compressed air shall not be directed at any part of the body. Compressed air shall not be used for cleaning purposes, except when reduced to less than 30 PSI, and then only with effective chip guarding and the operator protected by applicable personal protective equipment.

Air hoses shall not be used for hoisting or lowering tools. Hoses shall not be laid on ladders, steps, scaffolds, or walkways in a manner creating a tripping hazard. Air hoses shall not be exposed to damage from vehicle or other traffic.

5.5 Drill Press

Pieces of metal being drilled shall be held tightly in a vise or clamp.

Before drilling the employee shall check the spindle speed and the setup.

Before drilling the chuck key shall be removed. Never leave the chuck key in the chuck.

5.6 Electric Powered Tools (general)

Electric powered tools shall be double-insulated type or effectively grounded as required for ground fault protection or other grounding and bonding requirements.

Power cords shall not be used for hoisting or lowering tools. Power cords shall not be laid on ladders, steps, scaffolds, or walkways in a manner creating a tripping hazard. Electric power cords shall not be exposed to damage from vehicle or other traffic.

When automatic restarting would create a hazard electrically driven equipment shall be controlled with a device that will prevent automatic restarting following a power failure.

5.7 Fuel Powered Tools (general)

All fuel powered tools shall be stopped while being refueled, serviced, or maintained, and fuel shall be transported, handled, and stored as appropriate for the type of material.

When fuel powered tools are used in enclosed spaces the applicable requirements for concentrations of toxic gases and use of personal protective equipment shall apply.

Gasoline powered tools shall not be used inside, underground, or in locations where toxic exhaust gases can accumulate.

5.8 Grinders

All abrasive wheels shall be closely inspected and ring-tested before mounting to ensure that they are free from cracks or other defects. Cracked or defective abrasive wheels shall be removed from service immediately.

Grinding wheels shall be carefully installed and not forced.

Whenever possible, when grinding with a portable grinder, position the grinding wheel so that the sparks and steel go away from the person doing the work.

Nonferrous metal should not be ground because of the danger of exploding grinding wheels unless the grinding wheel is designed to grind these metals.

Sheet metal and other small pieces of work shall never be ground on a pedestal grinder.

Grinding shall never be done against the side of the wheel.

Grinding wheels shall not be used if the pores are clogged. The wheels shall also be free of large chips and grooves.

5.9 Grinders (bench and floor stand)

Floor and bench-mounted grinders shall be provided with readily adjustable work rests which are rigidly supported. The tool rest shall always be set within 1/8 inch away from the wheel. The nose guard shall be adjusted to within 1/4 inch of the wheel.

Grinding tools shall not be used without the safety guards.

All abrasive wheel bench and stand grinders shall be provided with safety guards that cover the spindle ends, nut, and flange projects and are strong enough to withstand the effects of a bursting wheel.

5.10 Hand Tools (general)

Sharp tools such as chisels, screwdrivers, knives, and pointed objects shall not be carried in pockets. Sharp tools carried by hand shall have the sharp or pointed end facing away from the body.

Lengths of pipe shall not be used as an extension of a tool to increase torque. For example a length of pipe inserted over the handle of a pipe wrench.

Persons shall not hammer on any wrenches unless they are designed for that purpose.

The wooden handles of tools shall be kept free of splinters or cracks and shall be kept tight in the tool. Impact tools such as drift pins, wedges, and chisels, shall be kept free of mushroomed heads.

Screwdrivers shall not be used as chisels.

Wrenches, including adjustable pipe, end, and socket wrenches shall not be used when jaws are sprung to the point that slippage occurs.

Files shall be equipped with handles and not be used to punch or pry.

5.11 Hydraulic-Powered Tools (general)

The manufacturer's safe operating pressure for hoses, valves, pipes, filters, and fittings shall not be exceeded.

The fluid used in hydraulic powered tools shall be an approved fire-resistant fluid and checked on a regular basis.

Stationary presses shall be provided with guards that adequately contain flying particles forcibly expelled from the material being compressed.

5.12 Jacks (ratchet, screw, and hydraulic)

The manufacturer's rated capacity shall be legibly marked on all jacks and shall not be exceeded.

Jacks of any type shall have a positive stop to prevent over-travel.

Jacks shall be set on a stable and firm footing and cribbed or blocked where necessary to prevent settlement or dislodgment. Where there is a possibility of slippage of the metal cap of the jack a wood block shall be placed between the cap and the load. After the load has been raised it shall be cribbed, blocked, or otherwise secured at once.

Persons shall not work under vehicles supported by bumper jacks or chain hoists without protective blocking that will prevent injury if jacks or hoists should fail.

All jacks shall be properly lubricated at regular intervals.

Each jack shall be inspected as required by the federal standard.

5.13 Nail Guns

Shall be provided with an automatically closing valve actuated by a trigger located inside the handle where it is reasonably safe from accidental operation. The machine shall operate only when the trigger is depressed.

Do not pull trigger or depress contact arm while connected to air supply.

When in operation always point the contact arm downward away from the personnel.

The air supply shall be disconnected when reloading or servicing of a nailing gun.

Pneumatically driven nailers, staplers, and similar equipment provided with automatic fastener feed shall have a safety device on the muzzle to prevent the ejection of the fasteners unless the muzzle is in contact with the work surface.

5.14 Pneumatic Tools (general)

The pneumatic impact tools shall have the following features:

- An automatically closing valve activated by a trigger located inside the handle where it is reasonably safe from accidental operation. The machine shall operate only when the trigger is depressed
- A retaining device that holds the tool in place so that it cannot fly off accidentally from the barrel
- Be provided with heavy rubber grips to reduce operator vibration and fatigue

Pneumatic power tools shall be secured to the hose in a positive manner to prevent accidental disconnection.

5.15 Powder-Actuated Tools

Powder-actuated tools shall be operated and serviced only by persons who have been trained and certified in the use of such tools. Operators shall possess a training card at issued by a firm or person authorized to issue such cards.

Operators of powder-operated tools shall wear safety goggles and face shields and utilize hearing protection when the tool is in use. Other employees working in close proximity to this activity shall also utilize hearing protection.

Powder-actuated tools shall not be used in explosive or flammable atmospheres.

Only powder charges, studs, or fasteners specified by the manufacturer for the specified tool shall be used.

Tools shall be designed to operate only when pressed against the work surface with a force at least 5 pounds greater than the weight of the tool. They shall be constructed so the tool cannot fire when dropped or during loading or preparation to fire. All tools shall be used with the correct shield, guard, or attachment recommended by the manufacturer.

Driving into soft or easily penetrated material is prohibited unless the material is backed to prevent the pin or fastener from passing completely through and creating a flying missile hazard on the other side. Tools shall not be used on very hard or brittle materials including, but not limited to, cast iron, glazed tile, surface hardened steel, glass block, live rock, face brick, or hollow tile. No fastener shall be driven into a spalled area caused by an unsatisfactory fastening.

Tools shall not be loaded until just prior to firing. Loaded tools shall not be left unattended. Neither loaded nor empty tools shall be pointed at any person and all parts of the body shall be kept clear of the muzzle.

Tools shall be tested each day before loading to ensure that the safety devices are in proper working order; the test shall be conducted in accordance with the manufacturer's recommended test procedures.

High-velocity tools shall be used only for those applications where low-velocity tools will not meet the job requirements.

Work sites where powder actuated tools are used shall maintain a list of all powder-actuated tools and names of certified operators. This list shall be made available at the control point of where tools are issued or controlled and distributed to supervisory personnel as appropriate.

Signs warning of the use of powder-actuated tools shall be posted appropriately.

5.16 Saws (bench and radial-arm)

Bench-type circular saws shall be equipped with spreaders, anti-kickback devices, and guards that automatically enclose the exposed cutting edges.

Radial arm saws and swing cutoff saws shall be equipped with:

- Limit stops, which prevent the leading edge of the blade from traveling beyond the edge of the table
- Hoods and/or guards that protect the operator from flying material, direct the sawdust toward the back of the blade, and enclose all parts of the blade not in contact with the material being cut
- Automatic brakes or automatic return devices

Power saws shall not be left running and unattended.

Push sticks or other devices shall be used to guide materials through the cutting plan of circular saws.

The hand, arm, or any other part of the body shall not pass over the saw blade while it is in operation.

Cracked, bent, or otherwise defective blades shall be removed from service.

The blade of a table saw shall not be set higher than (1/16") one sixteenth of an inch above the material being cut.

5.17 Saws (portable electric)

Portable circular saws shall have the following features:

- Guards above and below the base plate
- Both guards shall cover the saw to depth of the teeth
- When the tool is withdrawn from the work the lower guard shall automatically and instantly return to the covered position
- Be equipped with a constant pressure switch or control that shuts off the power when pressure is released
- ***The hand, foot, knee, leg, or any other part of the body shall not be used as a support for materials***

5.18 Spray Guns (airless)

Airless spray guns of the type which atomize paints and fluids at pressures of 1,000 PSI or more shall be equipped with automatic or visible manual safety devices, which will prevent pulling of the trigger and prevent release of the paint or fluid until the safety device is manually released.

In lieu of the above, a diffuser nut to prevent high-pressure release when the nozzle tip is removed and a nozzle tip guard to prevent the tip from contacting the operator or other equivalent protection shall be provided.

5.19 Washing and Steam Units (high pressure)

Employees who use high pressure washing tools and steam cleaning systems shall follow the manufacturer operating instructions and wear required protective equipment.

As a minimum, operating personnel are required to wear protective footwear, eye and facial protection, and hand protection as determined by the operating process, operating design, and manufacturer specifications.

Employees who operate high pressure washing units or steam systems shall be trained and qualified by a Competent Person.

5.20 Winches and Hoists (hand-powered)

Hand-powered winches and hoists shall be used within the manufacturer's rated capacity, and the capacity shall be legibly marked on the winch or hoist.

The use of hand cranks is prohibited unless the winch or hoist is equipped with positive self-locking dogs or if the wormgear type hand wheels do not have projecting spokes or knobs.

5.21 Woodworking Tools (general)

Switches shall be located to enable the operator to cut off the power without leaving his operating position. Fixed power-driven tools shall be provided with a disconnect switch that can be locked or tagged in the off position.

When automatic restarting would create a hazard, electrically driven equipment shall be controlled with a device that will prevent automatic restarting following a power failure.

A push stick, block, or similar safe means shall be used for all operations close to high-speed cutting edges.

Planers and joiners shall be equipped with cylindrical cutting heads and fully guarded.

Band saw blades shall be fully enclosed except at the point of operation.

6. References

CFR 29 CFR 1910 (as applicable)
CFR 29 CFR 1926 (as applicable)
Applicable Manufacturer Manuals

Welding and Cutting - 26

1. Policy

Work activities involving welding and cutting shall be conducted in a safe manner.

2. Purpose

To define the safety requirements for welding, cutting, brazing, metals grinding, and other hot work.

3. Scope

Applies to all ROCIP projects.

4. Definitions

Authorized Persons means the employee(s) for the work area or a designated site safety coordinator for that work site.

Authorized Free-Burn Area means a work area where no sources of combustion are present therefore no 'Hot Work Permit' would be required.

Combustible means any material that has the possibility of catching fire or supporting a fire.

Fire watch means contractor(s) employees trained and assigned to monitor or watch for potential fires or fire hazards and warn others in the event of an emergency or unsafe condition.

Hot Work means the performing of operations capable of providing a source of ignition e.g. riveting, welding, cutting, grinding, soldering, burning, and heating.

5. Requirements

5.1 General

Authorized hot work areas for welding and cutting shall be free of flammable and combustible materials, provided with adequate fire extinguishing equipment, and properly screened off to prevent viewing of welding operations.

5.2 Hot Work Permits

Permits for Hot Work are required for all welding, cutting, and brazing operations exclusive of those areas designated as authorized free-burn areas.

When hot work is to be performed outside of a hot work area the contractor or employee performing the hot work shall complete a Hot Work Permit before commencing work. Upon completion of the work the permit shall be turned in to the permit issuer (safety representative).

Permit issuers shall retain returned permits for a minimum of 30 days from the date of return.

A new permit shall be completed where there is an interruption in the work process such as meal breaks, shift changes, work condition changes, or the area has been left unmonitored for significant periods of time.

Before beginning hot work activities the affected area(s) shall be inspected and results documented on the Hot Work Permit.

Only authorized persons are allowed to use flame or spark producing equipment.

Air monitoring shall be conducted in accordance with the established procedures and regulations.

5.3 Fire Prevention and Protection

If the object to be welded or cut cannot be readily moved to an area designated for hot work all moveable fire hazards shall be moved at least 35 feet from the work site.

Combustibles and flammables that cannot be relocated shall be isolated from ignition sources by flameproof covers or otherwise shielded with metal or fire-resistant guards or curtains.

Appropriate fire extinguishing equipment shall be readily available for use whenever hot work is performed.

A fire watch shall be provided when welding or cutting is performed outside of a free burn area. The fire watch will remain in the watch area for a minimum of thirty (30) minutes at the completion of hot work activities to ensure there is no smoldering fires or potential for fire.

5.4 Confined Spaces

No Hot Work will be conducted in any confined space that contains or has the potential to contain explosive, flammable, or combustible atmospheres.

All welding and cutting operations conducted in confined spaces shall be adequately ventilated to prevent the accumulation of toxic materials or possible oxygen deficiency. This applies not only to the welder but also to helpers and

other personnel in the immediate vicinity. All air that is replacing the air that is withdrawn shall be clean and respirable.

In circumstances for which it is impossible to provide such ventilation airline respirators or hose masks approved for this purpose by the National Institute for Occupational Safety and Health (NIOSH) must be used.

In areas immediately hazardous to life a full-face piece pressure-demand self-contained breathing apparatus or a combination full-face piece, pressure-demand supplied-air respirator with an auxiliary, self-contained air supply approved by NIOSH must be used.

Where welding operations are carried on in confined spaces and where welders and helpers are provided with hose masks, hose masks with blowers, or self-contained breathing equipment a worker shall be stationed on the outside of such confined spaces to insure the safety of those working within.

All respiratory equipment will be approved by MSHA or NIOSH.

All work performed in confined spaces shall conform to the Confined Space Policy of this Manual.

5.5 Compressed Gas Cylinders

Empty cylinders shall be labeled as such and kept separate from full cylinders.

Cylinders shall be used in an upright position particularly those containing liquefied gas or acetylene.

When transporting cylinders they shall be upright, secured, gauges removed, and capped.

Cylinders shall be secured against being knocked over with a non-combustible restraint such as a chain.

Oxygen cylinders in storage shall be separated from fuel-gas cylinders and any flammable or combustible materials by a minimum of twenty (20) feet or by a non-combustible barrier at least five (5) feet in height having a fire-resistance rating of at least one-half hour.

The gauges shall be removed and the metal cylinder cap shall be in place to protect the valve when a cylinder is not in use.

Make sure the threads on a regulator or union corresponds to those on the cylinder valve outlet. DO NOT force connections that do not fit.

Open cylinder valves slowly. A cylinder not provided with a hand wheel valve shall be opened with a spindle key or a special wrench or other tool provided or approved by the gas supplier or manufacturer.

DO NOT use a cylinder of compressed gas without a pressure-reducing regulator attached to the cylinder valve.

Before making connection to a cylinder valve outlet "crack" the valve for an instant to clear the opening of particles of dust or dirt. Always point the valve and opening away from the body and not toward anyone else. NEVER crack a fuel gas cylinder valve near other welding work, sparks, open flames, or other sources of ignition.

Use regulators and pressure gauges only with the gases for which they were designed and intended. DO NOT attempt to repair or alter cylinders, valves, or attachments. The glass face of gauges shall be kept intact.

Gauges shall be turned off and hoses shall be 'bled' when not in use.

All fuel-gas welding, burning, and cutting equipment shall be equipped with a check valve.

5.6 Energy Control (Lockout)

When systems must be shut down to accomplish the hot work, the shutdown shall be performed in accordance with the Energy Control procedures (Lockout) section of this manual.

5.7 Welding or Cutting of Containers and Piping

No hot work shall be performed on used drums, barrels, tanks, or other containers until it can be determined that absolutely no flammable materials or other materials are present which, when subject to heat, might produce flammable or toxic vapors. Containers shall be adequately vented to the atmosphere to prevent explosion. When containers do contain flammable or toxic materials, the following precautions shall be taken:

- Piping to the containers shall be disconnected or blanked off
- The container shall be purged with an inert gas
- After purging is completed the atmosphere in the container shall be sampled to ensure it is safe for hot work

5.8 Fire Watch

5.8.1 Training

Personnel assigned to perform "Fire Watch" duties shall be trained prior to assignment to perform such duties. Training shall include:

- Use of firefighting equipment such as extinguishers and water hoses
- Emergency notification procedures
- Property of fires
- Duties of a "Fire Watch"
- Potential hazards
- Use of emergency equipment

5.8.2 Responsibilities

5.8.2.1 Supervisors

- Complete an assessment of the work to be performed
- Review the Hot Work Permit
- Ensuring personnel assigned to conduct Hot Work have been properly trained
- Ensure fire watches have received adequate instruction and training
- Be responsible for safe use of the cutting or welding equipment
- Determine what combustible materials and hazardous areas are present or likely to be present in the work location
- Ensure that unmovable combustibles are protected from ignition
- See that cutting and welding are scheduled so that operations that might expose flammables/combustibles to ignition are not conducted during cutting or welding operations
- Secure authorization for any Hot Work from the designated management representative
- Ensure that the employee conducting Hot Work secures the supervisors approval that conditions are safe before beginning operations
- Ensure that fire protection and extinguishers are readily available at all times
- Ensure that if Fire Watches are required, they are at the site

5.8.2.2 Fire watch personnel

The primary responsibility of a "Fire Watch" is to monitor for potential fire hazards and the presence of fire during operations such as welding and cutting. This includes:

- Having the ability to communicate to employee(s)
- Continuously monitor the area surrounding the immediate work area for conditions that could result in a fire or explosion
- Immediately stop all Hot Work in the event of an emergency or other unplanned event affecting the safety of employee(s)
- Know the permit requirements relative to fire protection and ensure they are being followed as work is being performed
- Extinguish fires when they occur if possible. When a fire occurs all work must be discontinued and the supervisor and the safety representative must be notified immediately
- When a fire or fire potential is not controllable call 911
- Remain at the assigned location at all times except when evacuating in case of an emergency in which the fire watch is not capable of handling
- Perform no other work that will interfere with fire watch duties
- Remain at the work site for at least 30 minutes after welding, cutting, or other such Hot Work operations have ceased to ensure smoldering and other potential fire conditions do not exist

5.9 Ventilation

Adequate ventilation (natural or mechanical) shall be provided for all welding, cutting, brazing, and related operations to ensure permissible exposure levels are not exceeded.

Before welding, cutting, burning, or grinding is commenced on any surface covered by a preservative coating whose composition is not known a test shall be made by a Competent Person for hazard determination. Work processes shall be modified based on the test results.

When welding, cutting or burning galvanized or cadmium plated metal local exhaust ventilation and a respirator is required and shall be used.

5.10 Protection of Employees

All outer clothing shall be free from oil or grease.

All outer clothing shall have the appropriate Fire Rating (FR)

Synthetic or plastic clothing shall not be worn.

Welding helmets and face shields shall be used to protect the face, forehead, neck and ears from direct radiant energy from the arc and from weld spatter.

Sleeves and collars shall be kept buttoned. Pockets shall be emptied of flammable or readily combustible material. Pants shall not have cuffs and shall not be turned up on the outside. Pants shall overlap shoe tops to prevent slag from getting into shoes.

If respiratory protection is required, respirators shall be used in accordance with Respiratory Protection section of this manual.

Fire resistant screens or curtains shall be used around the welding area to protect-passers-by from flying sparks and direct view of the arc.

When welding or cutting shielded electrodes using alternating current (AC) single-phase transformer-rectifier arc welding machines and under electrically hazardous conditions, the welder shall use dry gloves and clothing, non-conductive footwear, and avoid accidental contact with live electrical parts.

Filter Lens Shades shall be selected in accordance with 29 CFR 1910.252.

Only manual electrode holders which are specifically designed for arc welding and cutting and are of a capacity capable of safely handling the maximum rated current required by the electrodes shall be used.

Any current-carrying parts passing through the portion of the holder which the arc welder or cutter grips in his hand shall be fully insulated against the maximum voltage encountered to ground.

All arc welding and cutting cables shall be of the completely insulated flexibly type capable of handling the maximum current requirements of the work in progress, taking into account the duty cycle under which the arc welder or cutter is working.

Only cable free from repair or splices for a minimum distance of 10 feet from the cable end to which the electrode holder is connected shall be used.

When it becomes necessary to connect or splice lengths of cable one to another substantial insulated connectors of a capacity at least equivalent to that of the cable shall be used. If connections are effected by means of cable lugs, they shall be securely fastened together to give good electrical contact and the exposed metal parts of the lugs shall be completely insulated.

Cables in need of repair shall not be used. When a cable other than the cable lead referred to in above becomes worn to the extent of exposing bare conductors, the portion thus exposed shall be protected by means of rubber and friction tape or other equivalent insulation.

6. References

CFR 29 1910 Subpart Q
CFR 29 1926 Subpart J

Electrical - General - 27

1. Policy

Work activities involving electrical hazards shall be conducted safely.

2. Purpose

To establish the procedures that shall be followed in the safe performance of work activities involving general electrical hazards. **Note: The National Electric Code, NFPA 70E, and 29 CFR 1926 subpart K shall be the governing source for installation, maintenance, repair, replacement or removal of new or used wiring, electrical fixtures of any kind, or any other associated electrical work.**

3. Scope

Applies to all ROCIP projects.

4. Definitions

Approved means acceptable to the authorities.

Authorized Person means an employee approved or assigned by contract to perform a specific duty or duties or to be at a specific location or locations on the project.

Cabinet means an enclosure designed either for surface or flush mounting.

Competent Person means one who is capable of identifying existing and predictable hazards in the surroundings or working conditions which are unsanitary, hazardous, or dangerous to employees, and who has the authorization to take prompt corrective measures to eliminate them.

NEC National Electric Code.

NFPA National Fire Protection Association

Qualified means persons who are capable of working safely on equipment and are familiar with electrical properties, the proper use of special precautionary techniques, personal protective equipment, insulating and shielding materials, and insulated tools.

5. Requirements

5.1 General

Contractors shall ensure all feasible engineering and administrative controls shall be applied to mitigate or minimize the risk of injury and illness from exposure to

electrical hazards. Where such hazards still exist after application of these controls employees are required to develop applicable safe work procedures, determine PPE, and equipment as a supplement to this manual section. Under no circumstance shall any contractor perform live electrical work when the work can be de-energerized.

In work areas where the exact location of underground electric power lines is unknown employees using jackhammers, bars, or other hand tools that may contact a line shall be provided with insulated protective gloves. Gloves must be rated to (or exceed) the voltage for which they may be exposed. The gloves shall be inspected before use and tested as required.

5.2 Energized Electrical Parts and Systems

Safety-related work practices shall be employed to prevent electric shock or other injuries resulting from either direct or indirect electrical contacts when work is performed near or on equipment or circuits which are or may be energized. The specific safety-related work practices shall be consistent with the nature and extent of the associated electrical hazards.

Live parts to which an employee may be exposed shall be de-energized before the employee works on or near them unless it can be demonstrated that de-energizing introduces additional or increased hazards or is infeasible due to equipment design or operational limitations. Live parts that operate at less than 50 volts to ground need not be deenergized if there will be no increased exposure to electrical burns or to explosion due to electric arcs. ***Only qualified journeyman electricians shall work on energized parts.***

If the exposed live parts are not de-energized (i.e., for reasons of increased or additional hazards or infeasibility), a JSA shall be completed and signed by the affected employees and the Competent Person and additional safety practices shall be used to protect employees who may be exposed to the electrical hazards involved. Such work practices shall protect employees against contact with energized circuit parts directly with any part of their body or indirectly through some other conductive object. The work practices that are used shall be suitable for the conditions under which the work is to be performed and for the voltage level of the exposed electric conductors or circuit parts.

5.2.1 Overhead electrical lines

Vehicular and Mechanical Equipment

Vehicles or mechanical equipment capable of having parts of its structure elevated near energized overhead lines shall be operated so that a clearance of 10 ft. is maintained. If the voltage is higher than 50kV, the clearance shall be increased 4 inches for every 10kV over that voltage.

However, under any of the following conditions, the clearance may be reduced:

- If the vehicle is in transit with its structure lowered, the clearance may be reduced to 4 ft. If the voltage is no higher than 50kV, the clearance shall be increased 4 in. for every 10kV over that voltage
- If insulating barriers rated for the voltage of the line being guarded are installed to prevent contact with the lines, the clearance may be reduced to a distance within the designed working dimensions of the insulating barrier
- The equipment shall be insulated for the voltage involved. The equipment shall be positioned so that its uninsulated portions cannot approach the lines or equipment any closer than the minimum approach distances specified in Table R-6 of 1910.269 (I) (10)

Employees standing on the ground may not contact the vehicle or mechanical equipment or any of its attachments, unless:

- The employee is using protective equipment rated for the voltage
- The equipment is located so that no UN-insulated part of its structure can come closer to the line than 10 ft. If the voltage is higher than 50kV, the clearance shall be increased 4 in. for every 10kV over that voltage

For any vehicle or mechanical equipment capable of having parts of its structure elevated near energized overhead lines that is intentionally grounded, the ground location must be barricaded to prevent employees from making contact.

5.2.2 Illumination

Employees shall not enter spaces containing exposed energized parts unless illumination is provided that enables the employees to perform the work safely. Where lack of illumination or an obstruction precludes observation of the work to be performed employees shall not perform tasks near exposed energized parts. Employees shall not reach blindly into areas which may contain energized parts.

5.2.3 Confined Space or enclosed space work

When an employee works in a confined or enclosed space (such as a manhole or vault) that contains exposed energized parts protective shields, protective barriers, or insulating materials shall be used as necessary to avoid inadvertent contact with these parts. Doors, hinged panels, and the like shall be secured to prevent swinging into an employee and causing the employee to contact exposed energized parts.

5.2.4 Conductive materials and equipment

Conductive materials and equipment that are in contact with any part of an employee's body shall be handled in a manner that will prevent them from contacting exposed energized conductors or circuit parts. If an employee must handle long dimensional conductive objects (such as ducts and pipes) in areas with exposed live parts a JSA (reference JSAs in the Safety Systems section of this manual) shall be performed in advance.

5.2.5 Portable ladders

Portable ladders shall have nonconductive side rails if they are used where the employee or the ladder could contact exposed energized parts (reference Ladder section of this manual).

5.2.6 Conductive apparel

Conductive articles of jewelry and clothing (such as watch bands, bracelets, rings, key chains, necklaces, metalized aprons, cloth with conductive thread, or metal headgear) shall not be worn if they might contact exposed energized parts. However, such articles may be worn if they are rendered nonconductive by covering, wrapping, or other insulating means.

5.3 GFCI's and Assured Grounding Procedures

Ground Fault Circuit Interrupters

Ground fault circuit interrupters shall be used on all 120V outlets on construction sites and portable generators. In addition all 220 volt outlets shall be protected with a GFCI if an employee is operating equipment or utilizing a tool (such as water pumps) that requires such voltage.

Portable electric equipment and extension cords used in highly conductive work locations such as those inundated with water or other conductive liquids, or in job locations where employees are likely to contact water or conductive liquids, shall be approved for those locations and shall be GFCI protected.

When connecting attachment plugs the following applies:

- Employees' hands may not be wet when plugging and unplugging flexible cords equipment, if energized equipment is involved
- Energized plug and receptacle connections may be handled only with insulating protective equipment if the connection could provide a conducting path to the employee's hand

- Locking-type connectors shall be properly secured after connection

5.3.1 Assured Grounding Program

GFCI's shall be used in conjunction with portable electrical hand tools. When this is not possible (feasible) the Assured Grounding procedures in this section shall apply and the contractor shall include in addition to this policy section an Assured Grounding Program. The elements of this program shall include as a minimum:

- Written description of program
- Program coordinator
- Inspections
- Documented Testing
- Availability of Equipment
- Integrity of testing equipment (repairs/testing of test equipment)
- Handling of defective tools and equipment
- Who will perform tests, and repairs
- Recordkeeping

5.3.2 Equipment and tools

All tools shall be double insulated and inspected prior to use.

Portable equipment shall be handled in a manner which will not cause damage. Flexible electric cords connected to equipment may not be used for raising or lowering the equipment. Flexible cords may not be fastened with staples or otherwise hung in such a fashion as could damage the outer jacket or insulation.

Portable cord equipment and extension cords shall be visually inspected before use for external defects such as loose parts, missing pins, or damage to outer jacket or insulation and for evidence of possible internal damage such as pinched or crushed outer jacket.

If there is a defect or evidence of damage that might expose an employee to injury the defective item shall be removed from service, tagged to identify the hazard, and remain out of service until repairs and tests necessary to render the equipment safe have been made.

When an attachment plug is to be connected to a receptacle including any on a cord set, the plug and receptacle contacts shall first be checked to ensure that they are of proper mating configurations and the ground prong is in place.

Only flexible cord of 12 gauge or greater with three wire grounding-type shall be used. All cord sets shall be inspected prior to each shifts use. Damaged cords shall be removed immediately. Attachment plugs and receptacles may not be connected or altered in a manner which would prevent proper continuity of the equipment-grounding conductor at the point where plugs are attached to receptacles. Additionally, these devices may not be altered to allow the grounding pole of a plug to be inserted into slots intended for connection to the current-carrying conductors.

5.4 Work Space Clearances - 600 Volts, nominal, or less

5.4.1 Working clearances

Working clearances shall be in accordance with 29 CFR 1926 subpart k and the NEC.

5.4.2 Guarding of live parts

Live parts of electric equipment operating at 50 volts or more shall be guarded against accidental contact by approved cabinets or other forms of approved enclosures or by any of the following means:

- By location in a room, vault, or similar enclosure that is accessible only to qualified persons
- By suitable permanent substantial partitions or screens so arranged that only qualified persons will have access to the space within reach of the live parts. Any openings in such partitions or screens shall be so sized and located that persons are not likely to come into accidental contact with the live parts or to bring conducting objects into contact with them
- By location on a suitable balcony, gallery, or platform so elevated and arranged as to exclude unqualified persons
- Entrances to rooms and other guarded locations containing exposed live parts shall be marked with conspicuous warning signs forbidding unqualified persons to enter

5.5 Work Space Clearances - over 600 volts, nominal

Working clearances shall be in accordance with 29 CFR 1926 subpart k and the NEC.

5.5.1 Elevation of unguarded live parts

There shall be no unguarded live parts above working spaces on any project except for overhead distribution lines.

6. References

OSHA 29 CFR 1910 Subpart R
OSHA 29 CFR 1910 Subpart S
OSHA 29 CFR 1926 Subpart K
OSHA 29 CFR 1926 Subpart V
National Electric Code
American National Standards Institute, Z89.2-1971
NFPA 70E

Underground Construction, Cassions, and Cofferdams - 28

1. Policy

Work activities involving underground tunnels, shafts, chambers, passageways caissons, and cofferdams shall be conducted in accordance with 29 CFR Subpart S, applicable federal standards, and this policy.

1. Purpose

To establish procedures for the safe performance of work activities involving underground tunnels, shafts, chambers, and passageways.

2. Scope

This section applies to all ROCIP projects.

3. Requirements

General

All contractors and their employees shall conduct all work in underground tunnels, shafts, chambers, and passageways in accordance with 29 CFR 1926 Subpart S.

The following requirements are additional requirements to Subpart S and are intended to create a safer working environment.

All inspection shall be made by a competent person who is competent in the subject matter; for instance a separate competent person may be required for the tunnel, equipment, fire protection, air quality, etc. Each employee designated as a competent person shall demonstrate proficiency in the subject matter.

All employees shall be medically fit and trained in the use of SCBA or self rescuers when required.

The contractor shall use and in-and-out board to ensure proper accounting of all personnel.

All tunneling operation shall have an authorized attendant at the tunneling opening area while any employees are in a tunnel.

All tunneling operation will have continuous mechanical ventilation while work is being conducted.

Smoking is prohibited in all tunnels.

Before conducting any hot work a JSA or equivalent shall be preformed and a hot work permit shall be issued. No oxygen or acetylene tank shall be underground except when in use. Tanks shall be removed immediately after use regardless of the intervals of which they may be used.

All electrical equipment shall be designed for underground use and for the environment for which they will be used.

Sufficient fire extinguishing equipment shall be maintained underground at all times.

Cofferdams shall be designed by a qualified engineer.

Earthen cofferdams shall have no seepage of water inside the dam.

Testing of atmosphere

All testing will be in accordance with this part and the appropriate standard. If oxygen readings inside the tunnel are not equal to the ambient air outside of the tunnel the competent person shall determine what has displaced the oxygen and determine if it is safe to continue operations.

4. Training

All training will be conducted in accordance with Federal and State laws, and best industry practices. Training will include, but not limited to 29 CFR 1926 subpart S.

Training shall be provided to each affected employee before the employee is first assigned duties affected by this section and shall include:

- The proper procedures for testing and monitoring air quality
- Maintaining proper ventilation
- Emergency procedures
- 29 CFR 1910.134
- 29 CFR 1910.146 and this manual
- Fire prevention and protection
- Caissons and cofferdams
- Whenever there is a change in operations that presents a hazard about which an employee has not previously been trained
- Whenever the supervisor or safety representative has reason to believe that there are deviations from the procedures required by this instruction or inadequacies in the employee's knowledge or use of these procedures.

The training shall establish employee proficiency in the duties required by this section and shall introduce new or revised procedures, as necessary, for compliance with this section.

The employer shall certify that the training required by this section has been accomplished. The documentation shall be available for inspection by the City and their authorized representatives.

5. Working Over Water

All employees working over water shall be protected from falling by guard rails, safety nets, or personal fall arrest systems.

Employees working over or near water or on barges shall be provided with and wear a U.S. Coast Guard-approved life jacket or buoyant work vests.

Prior to and after each use the buoyant work vests or life preservers shall be inspected for defects which would alter their strength or buoyancy. Defective units shall not be used.

Ring buoys with at least 90 feet of line shall be provided and readily available for emergency rescue operations. Distance between ring buoys shall not exceed 200 feet.

At least one lifesaving skiff shall be immediately available at locations where employees are working over or adjacent to water.

7. References

29 CFR 1926 subpart S

Demolition - 29

1. Policy

Work activities involving demolition shall be conducted in accordance with 29 CFR 1926 Subpart T, applicable federal standards, and this policy.

2. Purpose

To establish procedures for the safe performance of work activities involving demolition.

3. Scope

This section applies to all ROCIP projects.

4. Requirements

General

Prior to permitting employees to start demolition operations an engineering survey shall be made by a competent person of the structure to determine the condition of the framing, floors, and walls, and possibility of unplanned collapse of any portion of the structure. Any adjacent structures where employees may be exposed shall also be similarly checked. The employer shall have in writing evidence that such a survey has been performed.

When employees are required to work within a structure to be demolished which has been damaged by any means the walls, floor, and roof shall be shored or braced.

All utility service lines shall be shut off, capped, or otherwise controlled outside of all building before demolition work is started. All utility companies which are involved shall be notified well in advance of commencement of demolition work.

If it is necessary to maintain any onsite utilities such lines shall be temporarily relocated and protected.

The engineering survey shall also determined if any type of hazardous chemicals, gases, explosives, flammable materials, or similarly dangerous substances have been used in any pipes, tanks, or other equipment on the property. When the presence of any such substances is apparent or suspected testing and purging shall be performed and the hazard eliminated before demolition begins.

Employees shall be protected from hazard associated with fragmentation of glass.

5. Training

All training will be conducted in accordance with Federal and State laws, and best industry practices. Training will include, but not limited to 29 CFR 1926 subpart T. Training shall be provided to each affected employee:

- Before the employee is first assigned duties in demolition operations
- Whenever there is a change in operations that presents a hazard about which an employee has not previously been trained
- Whenever the supervisor or safety representative has reason to believe that there are deviations from the procedures required by this instruction or inadequacies in the employee's knowledge or use of these procedures

The training shall establish employee proficiency in the duties required by this section and shall introduce new or revised procedures, as necessary, for compliance with this section.

The employer shall certify that the training required by this section has been accomplished. The documentation shall be available for inspection by the City and their authorized representatives.

6. Fall Protection

When employees are exposed to falls of six feet or more; or a ***fall of any distance onto exposed rebar, debris, or other impalement hazard*** the employee shall be protected in accordance with the fall protection section of this manual. ***No employee shall be allowed to walk among exposed rebar or impalement hazards.*** Such hazards shall be eliminated prior to any employee entering that area.

6. Falling Object Protection

Employee entrances to multistory structures being demolished shall be completely protected by sidewalk sheds or canopies, or both, providing protection from the face of the building for a minimum of 8 feet. All such canopies shall be at least 2 feet wider than the building entrances or openings (1 foot wider on each side thereof) and shall be capable of sustaining a load of 200 pounds per square foot.

7. Material disposal and Chutes

When debris is dropped through holes in the floor without the use of chutes the area onto which the material is dropped shall be completely enclosed with barricades not less than 42 inches high and not less than 6 feet back from the projected edge of the opening above. Warning signs shall be posted at each level. Removal shall not be permitted in this lower area until debris handling ceases above. Employee shall not be allowed closer than six feet from the floor opening without fall protection. Any openings

cut in a floor for the disposal of materials shall be no larger in size than 25 percent of the aggregate of the total floor area unless the lateral supports of the removed flooring remain in place. Floors weakened or otherwise made unsafe by demolition operations shall be shored to carry safely the intended imposed load from demolition.

All floor openings not used as material drops shall be covered over with material substantial enough to support the weight of any load which may be imposed. Such material shall be properly secured to prevent its accidental movement.

Except for the cutting of holes in floors for to drop materials preparation of storage space and similar necessary preparatory work the demolition of exterior walls and floor construction shall begin at the top of the structure and proceed downward. Each story of exterior wall and floor construction shall be removed and dropped into the storage space before commencing the removal of exterior walls and floors in the story next below.

No material shall be dropped to any point lying outside the exterior walls of the structure unless the area is effectively protected and barricaded.

All materials chutes shall be installed and maintained in accordance with 29 CFR 1926 Subpart T. Chutes shall be designed and constructed of such strength as to eliminate failure due to impact of materials or debris loaded therein.

8. Stairways and Access

Only those stairways, passageways, and ladders, designated as means of access to the structure of a building shall be used. Other access ways shall be entirely closed and blocked at all times to prohibit inadvertent entry.

All stairs, passageways, ladders, and equipment shall be inspected daily and maintained in a clean safe condition.

In a multistory building all stairwell and working areas shall be properly illuminated by either natural or artificial means in accordance with this manual.

Walkways or ladders shall be provided to enable employees to safely reach or leave any scaffold or wall.

9. Walls

Masonry walls shall not be permitted to fall upon the floors of the building in such a manner as to exceed the safe carrying capacities of the floors.

No wall section which is more than one story in height shall be permitted to stand alone without lateral bracing from both sides. All walls shall be left in a stable condition at the end of each shift.

Structural or load-supporting members on any floor shall not be cut or removed until all stories above such a floor have been demolished and removed.

In buildings of "skeleton-steel" construction the steel framing may be left in place during the demolition of masonry. Where this is done all steel beams, girders, and similar structural supports shall be cleared of all loose material as the masonry demolition progresses downward.

Walls which serve as retaining walls to support earth or adjoining structures shall not be demolished until such earth has been properly braced or adjoining structures have been properly underpinned.

Walls which are to serve as retaining walls against which debris will be piled shall be safely supporting.

Mechanical equipment shall not be used on floors or working surfaces unless such floors or surfaces are of sufficient strength to support the imposed load.

Mechanical equipment used shall meet the requirements specified in federal standard and this manual. All equipment will have working back-up alarms and horns. Operator shall wear seatbelts at all times. All mobile equipment shall have sufficient protection in an around the cab to protect employees from falling or flying objects.

Storage space into which material is dumped shall be blocked off, except for openings necessary for the removal of material. Such openings shall be kept closed at all times when material is not being removed.

Cranes, derricks, and other hoisting equipment used shall meet the requirements specified in this manual.

No workers shall be permitted in any area, which can be adversely affected by demolition operations when work is being performed. Only those workers necessary for the performance of the operations shall be permitted in this area at any other time.

During demolition continuous inspections by a competent person shall be made as the work progresses to detect. No employee shall be permitted to work where such hazards exist until they are corrected by effective means.

10. References

29 CFR 1926 subpart T

Diving Operations - 30

1. Policy

Work activities involving diving shall be conducted in accordance with 29 CFR 1910 subpart T, applicable federal standards, and the Association of Diving Contractors International (ADC) safety practices.

2. Purpose

To establish procedures for the safe performance of work activities involving diving.

3. Scope

This section applies to all diving operations.

4. Requirements

General

All diving operations will be conducted in accordance with the federal standards and the safe diving program developed by the ADC.

5. Training

All training will be conducted in accordance with Federal and State laws, and best industry practices. Training will include, but not limited to 29 CFR 1910 subpart T
Training shall be provided to each affected employee:

- Before the employee is first assigned duties in diving operations
- Whenever there is a change in operations that presents a hazard about which an employee has not previously been trained
- Whenever the supervisor or safety representative has reason to believe that there are deviations from the procedures required by this instruction or inadequacies in the employee's knowledge or use of these procedures

The training shall establish employee proficiency in the duties required by this section and shall introduce new or revised procedures, as necessary, for compliance with this section.

The employer shall certify that the training required by this section has been accomplished. The documentation shall be available for inspection by the City and their authorized representatives.

6. References

29 CFR 1910 subpart T and the Association of Diving Contractors International (ADC) safety practices.

APPENDIX - FORMS

ROCIP Safety Information Form

This form and the required submittals shall be provided within 5 business days of council award. Contact Anthony Pleasant with City of Austin at 512.974.3456 to arrange for delivery of this form and required safety submittals to the City.

Company Name: _____ **Date:** _____

Address: _____ **Phone Number:** _____

1. List your company's Experience Modification Rate for the last three years:

   Year 1_____ Year 2_____ Year 3_____

2. List the following OSHA Log Information for the past three years:

	Year 1	Year 2	Year 3
A. Total Recordable Cases	_____	_____	_____
B. Lost Workday Cases	_____	_____	_____
C. Lost Workdays	_____	_____	_____
D. Total Employee Hours Worked	_____	_____	_____
E. Number of Fatalities	_____	_____	_____

3. Do you have a designated Safety Representative? ❒ Yes, denote below

   Safety Representative Name: _____ Phone Number: _____

   ❒ If No, advise who is in charge of safety and to what extent:

   _____

4. Do you hold "Tool Box Talks" for employees? ❒ Yes ❒ No

   How often?_____

   Provide documentation of Tool Box meetings - ex: sign-in sheets, etc.

5. Do you have a training program for newly hired or promoted foremen?

   ❒ No ❒ Yes, what does this include? _____

Safety Submittals:

- ❒ **Copy of your written safety program**
- ❒ **Provide evidence of training for the past 12 months. Examples, certificates or sign in sheets. If an outside firm is used for training, provide the contact name and phone number.**
- ❒ **Qualifications of your designated Safety Representative (Resume, Certifications, etc.)**

Please call Anthony Pleasant at 512-974-3456 with the City of Austin prior to the pre-construction meeting to schedule a time to allow us to conduct a safety assessment interview with your management team and designated safety representative.

I hereby certify that the above information is true and correct to the best of my knowledge.

Print name: _____ Title: _____

Signature_____ Date: _____

CITY OF AUSTIN

ROLLING OWNER CONTROLLED INSURANCE PROGRAM

Form 5al

CONSTRUCTION SAFETY MANAGEMENT
MONTHLY SAFETY INFORMATION REPORTING FORM

This report must be faxed to Safety Solutions, Inc. the ROCIP Construction Safety Manager no later than the 10th of each month
Subcontractors: Fax this report to the General Contractor only

General Contractor *fax to 888-259-6684 or e-mail to jaime@safety-solutionsinc.com*

If you have any questions on how to complete this report
please contact Jaime Orina at 512.423.0028

To: Jaime Orina **Fax #: 888-259-6684**

From: _____ (Safety Representative)

General Contractor: _____

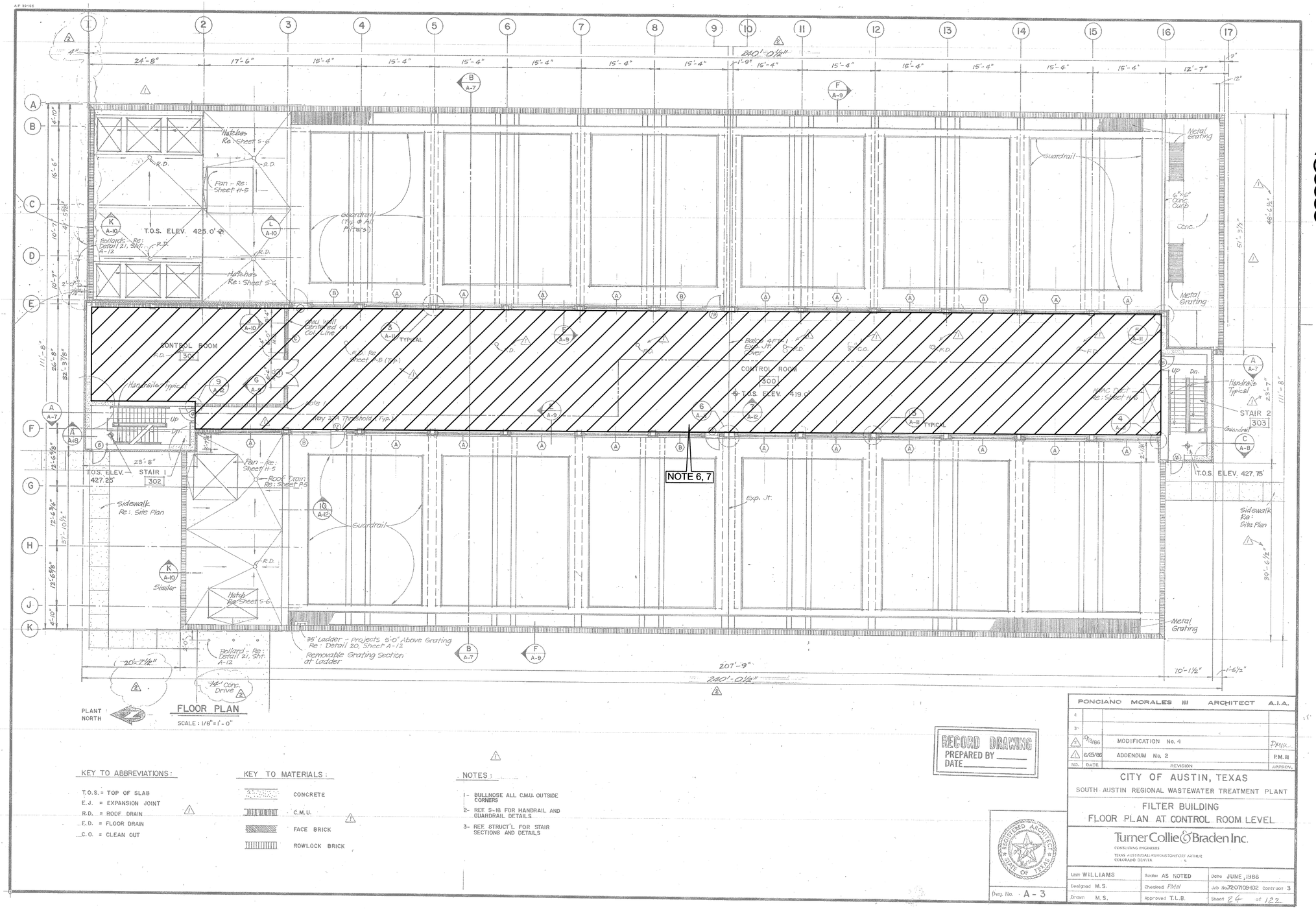
Project: _____

_____

# of Manhours:		*(This month only)*
# of Lost Workday Cases:		*(This month only)*
# of Workdays Lost:		*(This month only)*
# of Recordable Incidents including lost workday cases:		*(This month only)*

I certify that the numbers included in this report are accurate and include the General Contractor and all subcontractors' information for the report month indicated.

_____ _____ _____
Signature Date Signed Phone Number



KEY TO ABBREVIATIONS:

T.O.S. = TOP OF SLAB
E.J. = EXPANSION JOINT
R.D. = ROOF DRAIN
F.D. = FLOOR DRAIN
C.O. = CLEAN OUT

KEY TO MATERIALS:

CONCRETE
C.M.U.
FACE BRICK
ROWLOCK BRICK

NOTES:

1- BULLNOSE ALL C.M.U. OUTSIDE CORNERS
2- REF. S-18 FOR HANDRAIL AND GUARDRAIL DETAILS
3- REF. STRUCT'L FOR STAIR SECTIONS AND DETAILS

RECORD DRAWING
PREPARED BY _____
DATE _____

Dwg. No. A - 3

NOTES:

1. THIS IS A RECORD DRAWING FROM A PREVIOUS PROJECT. IT IS INTENDED TO PROVIDE BASIC INFORMATION ON EXISTING FACILITIES, CONTRACTOR TO REFER TO CONSTRUCTION CONTRACT DOCUMENTS FOR RESPONSIBILITIES RELATIVE TO VERIFICATION OF EXISTING FACILITIES AND COORDINATION WITH PLANT OPERATIONS.
2. THE FILTER BUILDING WAS CONSTRUCTED IN THE 1980's AND HAS THE POTENTIAL TO CONTAIN HAZARDOUS MATERIALS WITHIN THE MATERIALS USED TO CONSTRUCT THE FACILITY.
3. A "LEAD BASED PAINT SURVEY" OF THE FILTER BUILDING WAS PERFORMED AND A REPORT PUBLISHED BY TERRACON CONSULTANTS, INC., DATED AUGUST 9, 2010. COPIES OF THE REPORT ARE INCLUDED IN THE CONTRACT DOCUMENTS.
4. NOT USED.
5. ALL DEMOLITION WORK SHALL BE PERFORMED IN RECOGNITION OF MATERIALS PRESENT AND IN COMPLIANCE WITH FEDERAL, STATE AND LOCAL REGULATIONS.
6. EXISTING FLOOR TILE AND 4 INCH WALL BASE TO BE REMOVED AND DISPOSED OF IN ACCORDANCE WITH CONTRACT REQUIREMENTS.
7. INSTALL RESILIENT TILE FLOORING AND RUBBER WALL BASE IN ACCORDANCE WITH CONTRACT REQUIREMENTS.
8. A SEPARATE OWNER CONTRACT MAY BE ONGOING FOR REMOVAL OF TILES. CONTRACTOR TO COORDINATE WITH OWNER PRIOR TO START OF WORK.

PONCIANO MORALES III ARCHITECT A.I.A.

NO.	DATE	REVISION	APPROV.
4			
3			
2	10/13/86	MODIFICATION No. 4	P.M.M.
1	6/23/86	ADDENDUM No. 2	P.M. III

CITY OF AUSTIN, TEXAS
SOUTH AUSTIN REGIONAL WASTEWATER TREATMENT PLANT
FILTER BUILDING
FLOOR PLAN AT CONTROL ROOM LEVEL

Turner Collie & Braden Inc.
CONSULTING ENGINEERS
TEXAS AUSTIN/DALLAS/HOUSTON/FORT ARTHUR
COLORADO DENVER

Unit WILLIAMS	Scales AS NOTED	Date JUNE, 1986
Designed M.S.	Checked PMM	Job No. 7207109402 Contract 3
Drawn M.S.	Approved T.L.B.	Sheet 24 of 122

Jose I. Guerra, Inc.
Consulting Engineers
2401 South IH-35 Suite 210
Austin, Texas 78741
(512) 445-2090
Structural ◆ Civil ◆ Mechanical ◆ Electrical
TBPE FIRM F-3

REV	DATE	DESCRIPTION	
1	10/8/15	ADDENDUM NO 1	BMG
			APPROVED

CITY OF AUSTIN
FOUNDED 1839

CITY OF AUSTIN

SOUTH AUSTIN REGIONAL WASTEWATER TREATMENT PLANT - FILTER IMPROVEMENTS
CIP PROJECT No. 3333.015
FILTER BUILDING
CONTROL ROOM LEVEL FLOOR PLAN
FLOOR TILE DEMOLITION

AECOM
AECOM TECHNICAL SERVICES INC.
400 W 15th STREET SUITE 500
AUSTIN, TEXAS 78701
WWW.AECOM.COM
TBPE REG. NO. F-3580

Registered Professional Engineer
92456
LICENSED
10-2-2015

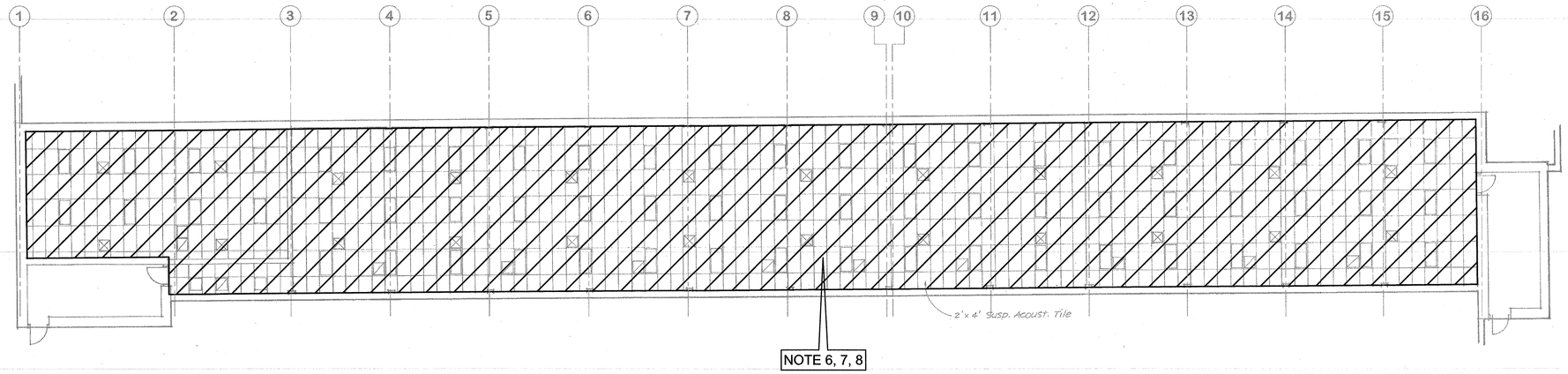
VERIFY SCALES
BAR IS ONE INCH ON ORIGINAL DRAWING
0 1"
IF THIS BAR DOES NOT MEASURE ONE INCH, DWG IS NOT TO SCALE

DESIGNED:	LS, LP
DRAWN:	RH, FS
CHECKED:	BG
APPROVED:	JL
SCALE:	NTS
DATE:	JULY 2015

PROJECT No. 60282054
DRAWING No. CA01
SHEET No. OF

F:\12023_SARWWTP_FILTER_IMPROVEMENTS\DRAWINGS\CAD\CA01.DWG BY: FSOLIS DATE: 10/1/2015 3:20 PM

AF 30185



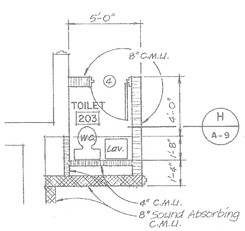
REFLECTED CEILING PLAN — CONTROL ROOM LEVEL

SCALE : 1/8"-1'=0"

KEY TO SYMBOLS:

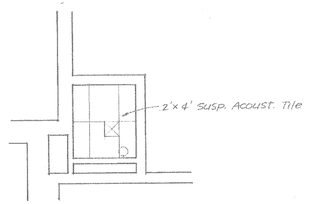
- ⊠ = SUPPLY AIR
- ⊘ = RETURN AIR GRILLE
- ▭ = FLUOR. LIGHT

NOTE : Refer to Elect. and Mech. Drawings for Lights and Air Conditioning Grilles



TOILET ROOM PLAN (2 / A-10)

SCALE : 1/4" = 1'-0"

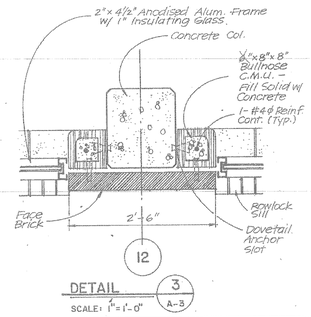


TOILET ROOM REF. CLG. PLAN

SCALE : 1/4" = 1'-0"

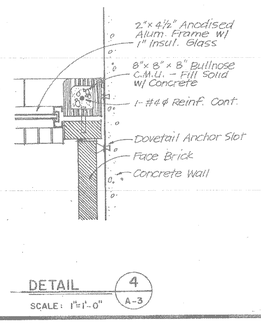
TOILET ACCESSORIES:

Mirror : Bobrick B-165 1624
Tissue Dispenser : Bobrick B-273
Soap Dispenser : Bobrick B-111
Towel Dispenser : B-262



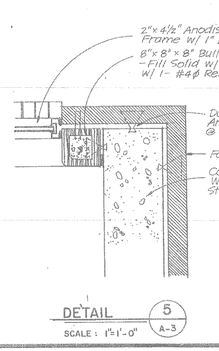
DETAIL (3 / A-3)

SCALE: 1"=1'-0"



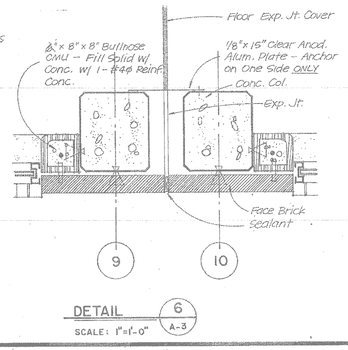
DETAIL (4 / A-3)

SCALE : 1"=1'-0"



DETAIL (5 / A-3)

SCALE : 1"=1'-0"



DETAIL (6 / A-3)

SCALE: 1"=1'-0"

NOTES:

1. THIS IS A RECORD DRAWING FROM A PREVIOUS PROJECT. IT IS INTENDED TO PROVIDE BASIC INFORMATION ON EXISTING FACILITIES. CONTRACTOR TO REFER TO CONSTRUCTION CONTRACT DOCUMENTS FOR RESPONSIBILITIES RELATIVE TO VERIFICATION OF EXISTING FACILITIES AND COORDINATION WITH PLANT OPERATIONS.
2. THE FILTER BUILDING WAS CONSTRUCTED IN THE 1980's AND HAS THE POTENTIAL TO CONTAIN HAZARDOUS MATERIALS WITHIN THE MATERIALS USED TO CONSTRUCT THE FACILITY.
3. A "LEAD BASED PAINT SURVEY" OF THE FILTER BUILDING WAS PERFORMED AND A REPORT PUBLISHED BY TERRACON CONSULTANTS, INC., DATED AUGUST 9, 2010. COPIES OF THE REPORT ARE INCLUDED IN THE CONTRACT DOCUMENTS.
4. NOT USED.
5. ALL DEMOLITION WORK SHALL BE PERFORMED IN RECOGNITION OF MATERIALS PRESENT AND IN COMPLIANCE WITH FEDERAL, STATE AND LOCAL REGULATIONS.
6. EXISTING CEILING TILE AND SUPPORT GRID TO BE REMOVED AND DISPOSED OF IN ACCORDANCE WITH CONTRACT REQUIREMENTS.
7. INSTALL ACOUSTICAL LAY-IN CEILING IN ACCORDANCE WITH CONTRACT REQUIREMENTS.
8. EXISTING CEILING LIGHTING, HVAC DEVICES AND OTHER ITEMS PENETRATE AND/OR EMBEDDED WITHIN EXISTING CEILING TILE AND SUPPORT GRID. CONTRACTOR SHALL PROVIDE TEMPORARY SUPPORT TO THESE ITEMS DURING DEMOLITION. NEW CEILING TILE AND SUPPORT SYSTEM SHALL BE INSTALLED TO MAINTAIN EXISTING LOCATION AND SUPPORT OF THESE ITEMS.
9. A SEPARATE OWNER CONTRACT MAY BE ONGOING FOR REMOVAL OF TILES. CONTRACTOR TO COORDINATE WITH OWNER PRIOR TO START OF WORK.

RECORD DRAWING
PREPARED BY _____
DATE _____

REGISTERED ARCHITECT STATE OF TEXAS

Dwg. No. A - 11

PONCIANO MORALES III ARCHITECT A.I.A.

NO.	DATE	REVISION	APPROV.
4			
3			
2			
1			

CITY OF AUSTIN, TEXAS
SOUTH AUSTIN REGIONAL WASTEWATER TREATMENT PLANT
FILTER BUILDING
REFLECTED CEILING PLAN

Turner Collie & Braden Inc.
CONSULTING ENGINEERS
TEXAS AUSTIN DALLAS HOUSTON FORT WORTH ARLINGTON
COLORADO DENVER

Unit WILLIAMS	Scales AS NOTED	Date JUNE, 1986	
Designed M.S.	Checked FMH	Job No. 7207109102	Contract 3
Drawn M.S.	Approved T.L.B	Sheet 32	of 122

Jose I. Guerra, Inc.
Consulting Engineers
2401 South IH-35 Suite 210
Austin, Texas 78741
(512) 445-2090
Structural ◆ Civil ◆ Mechanical ◆ Electrical
TBPE FIRM F-3

REV	DATE	DESCRIPTION	APPROVED
1	10/8/15	ADDENDUM NO 1	BMG

CITY OF AUSTIN
FOUNDED 1839

CITY OF AUSTIN

SOUTH AUSTIN REGIONAL WASTEWATER TREATMENT PLANT - FILTER IMPROVEMENTS
CIP PROJECT No. 3333.015
FILTER BUILDING
REFLECTIVE CEILING PLAN
CEILING TILE DEMOLITION

AECOM
AECOM TECHNICAL SERVICES INC.
400 W 15th STREET SUITE 500
AUSTIN, TEXAS 78701
WWW.AECOM.COM
TBPE REG. NO. F-3580

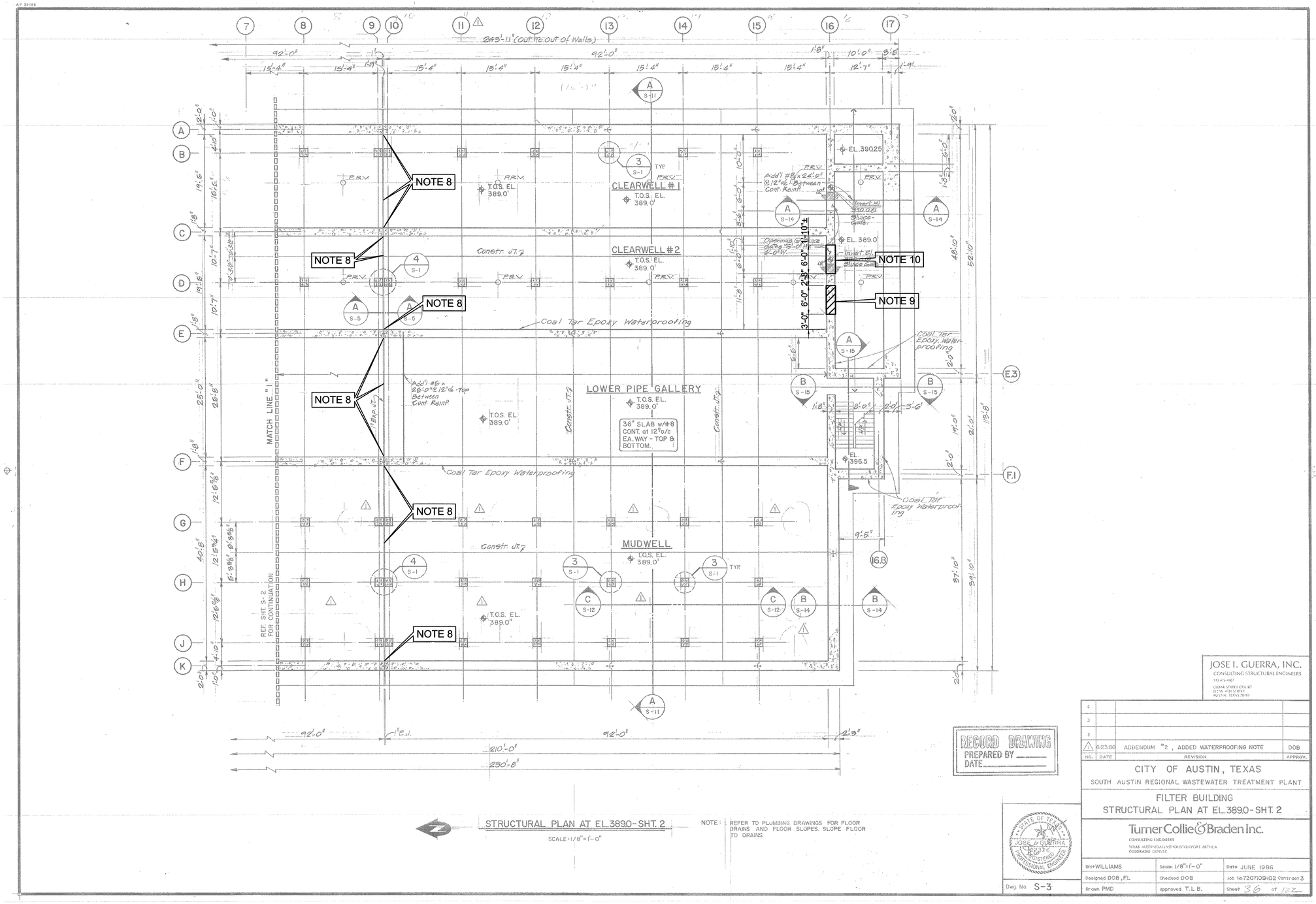
Brandon T. Goodlow 92456 Licensed Professional Engineer 10-2-2015

VERIFY SCALES
BAR IS ONE INCH ON ORIGINAL DRAWING
0 — 1"
IF THIS BAR DOES NOT MEASURE ONE INCH, DWG IS NOT TO SCALE

DESIGNED:	LS, LP
DRAWN:	RH, FS
CHECKED:	BG
APPROVED:	JL
SCALE:	NTS
DATE:	JULY 2015

PROJECT No. 60282054
DRAWING No. CA02
SHEET No. OF

F:\12023_SARWWTP_FILTER_IMPROVEMENTS\DRAWINGS\CAD\CA02.DWG BY: FSOLIS DATE: 10/1/2015 3:31 PM



STRUCTURAL PLAN AT EL. 3890 - SHT. 2

SCALE: 1/8"=1'-0"

NOTE: REFER TO PLUMBING DRAWINGS FOR FLOOR DRAINS AND FLOOR SLOPES. SLOPE FLOOR TO DRAINS.

RECORD DRAWING
PREPARED BY _____
DATE _____

NOTES:

1. THIS IS A RECORD DRAWING FROM A PREVIOUS PROJECT. IT IS INTENDED TO PROVIDE BASIC INFORMATION ON EXISTING FACILITIES. CONTRACTOR TO REFER TO CONSTRUCTION CONTRACT DOCUMENTS FOR RESPONSIBILITIES RELATIVE TO VERIFICATION OF EXISTING FACILITIES AND COORDINATION WITH PLANT OPERATIONS.
2. THE FILTER BUILDING WAS CONSTRUCTED IN THE 1980's AND HAS THE POTENTIAL TO CONTAIN HAZARDOUS MATERIALS WITHIN THE MATERIALS USED TO CONSTRUCT THE FACILITY.
3. A "LEAD BASED PAINT SURVEY" OF THE FILTER BUILDING WAS PERFORMED AND A REPORT PUBLISHED BY TERRACON CONSULTANTS, INC., DATED AUGUST 9, 2010. COPIES OF THE REPORT ARE INCLUDED IN THE CONTRACT DOCUMENTS.
4. NOT USED.
5. FILTER SAND SHALL BE REMOVED AND DISPOSED OF AT A PERMITTED LANDFILL IN ACCORDANCE WITH 30 TAC CHAPTER 335 SUBCHAPTER K AND OTHER APPLICABLE LOCAL, STATE AND FEDERAL REQUIREMENTS.
6. REMOVE FILTER UNDERDRAIN PRECAST CONCRETE PANELS AND DISPOSE OF IN ACCORDANCE WITH TEXAS COMMISSION ON ENVIROMENTAL QUALITY REGULATIONS.
7. WASH BASIN TO REMOVE RESIDUE AND PUMP WASH WATER AND RESIDUE TO PLANT DRAIN MANHOLE. FOLLOWING THE WASHDOWN OF THE BASIN, CONCRETE AND MECHANICAL DEMOLITION WORK MAY PROCEED.
8. EXISTING EXPANSION JOINT IN SLAB & WALL TO BE REPAIRED- REF. DETAIL 1/SS03.
9. PORTION OF EXISTING 20" WALL TO BE REMOVED - 6'-0" W x 5'-0" H, INVERT EL = 390.0'
10. EXISTING SLUICE GATE OPNG IN FLOW SPLITTER WALL TO BE INFILLED. REF DETAIL 7/SS01. EXIST OPNG IS APPROX 6'-0" WIDE x 5'-0" TALL WITH AN APPROX INV EL = 390.00'.

JOSE I. GUERRA, INC.
CONSULTING STRUCTURAL ENGINEERS
512 476-4967
CEDAR STREET COURT
312 W. 4TH STREET
AUSTIN, TEXAS 78701

NO.	DATE	REVISION	APPROV.
4			
3			
2			
1	6/23/86	ADDENDUM "2", ADDED WATERPROOFING NOTE	DOB

CITY OF AUSTIN, TEXAS
SOUTH AUSTIN REGIONAL WASTEWATER TREATMENT PLANT
FILTER BUILDING
STRUCTURAL PLAN AT EL. 3890 - SHT. 2

Turner Collie & Braden Inc.
CONSULTING ENGINEERS
TEXAS AUSTIN/DALLAS/HOUSTON/PORT ARTHUR
COLORADO DENVER

Unit WILLIAMS	Scale 1/8"=1'-0"	Date JUNE 1986
Designed DOB, FL	Checked DOB	Job No. 7207109-102 Contract 3
Drawn PMD	Approved T.L.B.	Sheet 36 of 122

Dwg. No. S-3

STATE OF TEXAS · JOSE I. GUERRA · 92456 · REGISTERED PROFESSIONAL ENGINEER

Jose I. Guerra, Inc.
Consulting Engineers
2401 South IH-35 Suite 210
Austin, Texas 78741
(512) 445-2090
Structural ◆ Civil ◆ Mechanical ◆ Electrical
TBPE FIRM F-3

REV	DATE	DESCRIPTION	APPROVED
1	10/8/15	ADDENDUM NO 1	BMG

CITY OF AUSTIN
FOUNDED 1839

CITY OF AUSTIN

SOUTH AUSTIN REGIONAL WASTEWATER TREATMENT PLANT - FILTER IMPROVEMENTS
CIP PROJECT No. 3333.015

STRUCTURAL DEMOLITION PLAN AT LOWER PIPE GALLERY LEVEL

AECOM
AECOM TECHNICAL SERVICES INC.
400 W 15th STREET SUITE 500
AUSTIN, TEXAS 78701
WWW.AECOM.COM
TBPE REG. NO. F-3580

BRANDON M. GOODLETT · 92456 · LICENSED PROFESSIONAL ENGINEER · 10-2-2015

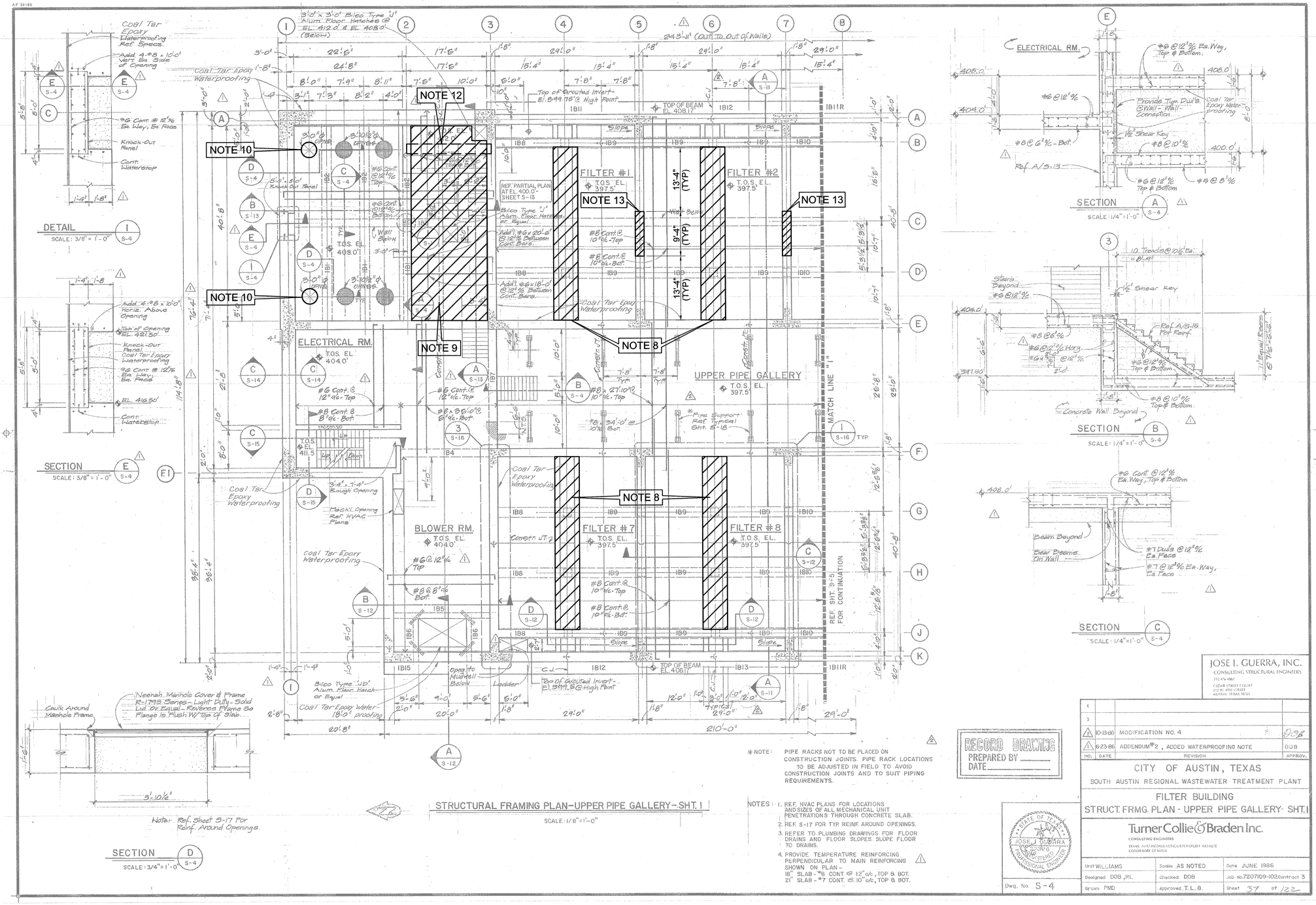
VERIFY SCALES
BAR IS ONE INCH ON ORIGINAL DRAWING
0 1"
IF THIS BAR DOES NOT MEASURE ONE INCH, DWG IS NOT TO SCALE

DESIGNED:	LS, LP
DRAWN:	RH, FS
CHECKED:	BG
APPROVED:	JL
SCALE:	NTS
DATE:	JULY 2015

PROJECT No. 60282054
DRAWING No. CS01
SHEET No. OF

F:\12023_SARWWTP_FILTER_IMPROVEMENTS\DRAWINGS\CAD\CS01.DWG BY: FSOLIS DATE: 7/24/2015 12:33 PM

AF 33185



* NOTE: PIPE RACKS NOT TO BE PLACED ON CONSTRUCTION JOINTS. PIPE RACK LOCATIONS TO BE ADJUSTED IN FIELD TO AVOID CONSTRUCTION JOINTS AND TO SUIT PIPING REQUIREMENTS.

NOTES:
1. REF. HVAC PLANS FOR LOCATIONS AND SIZES OF ALL MECHANICAL UNIT PENETRATIONS THROUGH CONCRETE SLAB.
2. REF. S-17 FOR TYP. REINF. AROUND OPENINGS.
3. REFER TO PLUMBING DRAWINGS FOR FLOOR DRAINS AND FLOOR SLOPES. SLOPE FLOOR TO DRAINS.
4. PROVIDE TEMPERATURE REINFORCING PERPENDICULAR TO MAIN REINFORCING SHOWN ON PLAN - 18" SLAB - #6 CONT. @ 12" o/c, TOP & BOT. 21" SLAB - #7 CONT. @ 10" o/c, TOP & BOT.

RECORD DRAWING
PREPARED BY _____
DATE _____

NOTES:

1. THIS IS A RECORD DRAWING FROM A PREVIOUS PROJECT. IT IS INTENDED TO PROVIDE BASIC INFORMATION ON EXISTING FACILITIES, CONTRACTOR TO REFER TO CONSTRUCTION CONTRACT DOCUMENTS FOR RESPONSIBILITIES RELATIVE TO VERIFICATION OF EXISTING FACILITIES AND COORDINATION WITH PLANT OPERATIONS.
2. THE FILTER BUILDING WAS CONSTRUCTED IN THE 1980's AND HAS THE POTENTIAL TO CONTAIN HAZARDOUS MATERIALS WITHIN THE MATERIALS USED TO CONSTRUCT THE FACILITY.
3. A "LEAD BASED PAINT SURVEY" OF THE FILTER BUILDING WAS PERFORMED AND A REPORT PUBLISHED BY TERRACON CONSULTANTS, INC., DATED AUGUST 9, 2010. COPIES OF THE REPORT ARE INCLUDED IN THE CONTRACT DOCUMENTS.
4. NOT USED.
5. FILTER SAND SHALL BE REMOVED AND DISPOSED OF AT A PERMITTED LANDFILL IN ACCORDANCE WITH 30 TAC CHAPTER 335 SUBCHAPTER K AND OTHER APPLICABLE LOCAL, STATE AND FEDERAL REQUIREMENTS.
6. REMOVE FILTER UNDERDRAIN PRECAST CONCRETE PANELS AND DISPOSE OF IN ACCORDANCE WITH TEXAS COMMISSION ON ENVIROMENTAL QUALITY REGULATIONS.
7. WASH BASIN TO REMOVE RESIDUE AND PUMP WASH WATER AND RESIDUE TO PLANT DRAIN MANHOLE. FOLLOWING THE WASHDOWN OF THE BASIN, CONCRETE AND MECHANICAL DEMOLITION WORK MAY PROCEED.
8. EXISTING CONCRETE GULLET TO BE REMOVED.
9. EXISTING 18" CONCRETE SLAB TO BE REMOVED. REFER TO DETAILS ON DWG CS08 FOR ADDTL INFO.
10. EXISTING MANHOLE OPENING TO BE FILLED WITH CONCRETE - REF DETAIL 9/SS01. REFER TO ELECTRICAL FOR STANDPIPE OR CONDUIT.
11. REFERENCE SPECIFICATION SECTION 01045 "SEQUENCE OF CONSTRUCTION" AND ISOLATION PLAN PHASING DRAWINGS.
12. PROTECT EXISTING SLIDE GATE DURING DEMOLITION AND CONSTRUCTION.
13. PORTION OF EXIST 20" CONC WALL TO BE REMOVED, AT NEW EFFLUENT CHANNEL LOCATION.

JOSE I. GUERRA, INC.
CONSULTING STRUCTURAL ENGINEERS
512 476-4867
CEDAR STREET COURT
212 W. 45TH STREET
AUSTIN, TEXAS 78751

NO.	DATE	REVISION	APPROV.
4			
3			
2	10-13-86	MODIFICATION NO. 4	DJB
1	6-23-86	ADDENDUM #2, ADDED WATERPROOFING NOTE	DOB

CITY OF AUSTIN, TEXAS
SOUTH AUSTIN REGIONAL WASTEWATER TREATMENT PLANT
FILTER BUILDING
STRUCT. FRMG. PLAN - UPPER PIPE GALLERY - SHT. 1

Turner Collie & Braden Inc.
CONSULTING ENGINEERS
TEXAS: AUSTIN/DALLAS/HOUSTON/FORT ARTHUR
COLORADO: DENVER

Unit: WILLIAMS		Scales: AS NOTED	Date: JUNE 1986
Designed: DOB, RL		Checked: DOB	Job No.: 7207109-102 Contract 3
Drawn: PMD		Approved: T.L.B.	Sheet: 37 of 122

Dwg. No. S-4

REV	DATE	DESCRIPTION	
1	10/8/15	ADDENDUM NO 1	BMG
			APPROVED

Jose I. Guerra, Inc.
Consulting Engineers
2401 South IH-35 Suite 210
Austin, Texas 78741
(512) 445-2090
Structural ◆ Civil ◆ Mechanical ◆ Electrical
TBPE FIRM F-3

CITY OF AUSTIN
FOUNDED 1839

CITY OF AUSTIN

SOUTH AUSTIN REGIONAL WASTEWATER TREATMENT PLANT - FILTER IMPROVEMENTS
CIP PROJECT No. 3333.015

STRUCTURAL DEMOLITION PLAN AT UPPER PIPE GALLERY LEVEL (1 OF 2)

AECOM
AECOM TECHNICAL SERVICES INC.
400 W 15th STREET SUITE 500
AUSTIN, TEXAS 78701
WWW.AECOM.COM
TBPE REG. NO. F-3580

BRANDON M. GOSS 92456 LICENSED PROFESSIONAL ENGINEER 10-2-2015

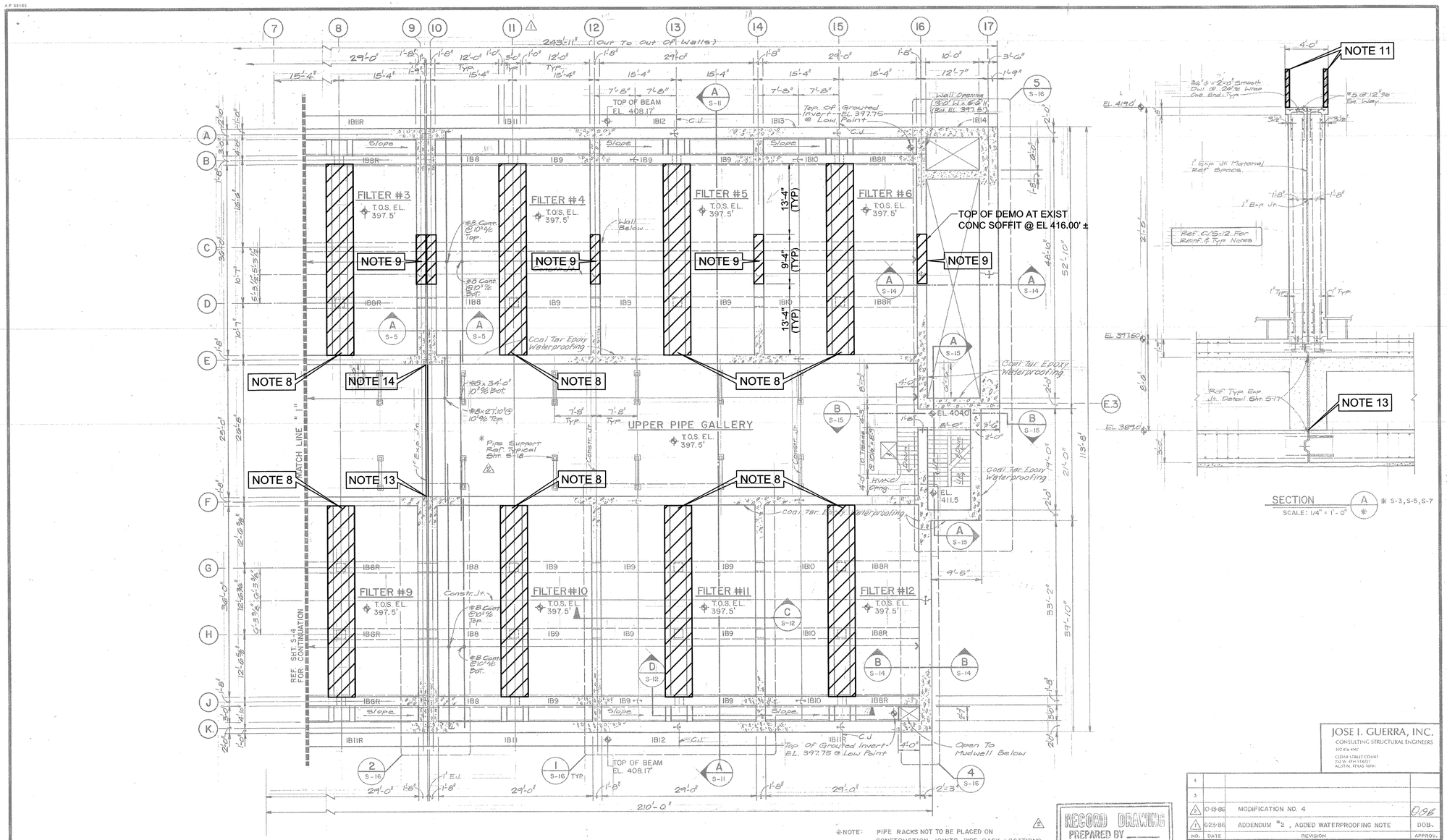
VERIFY SCALES
BAR IS ONE INCH ON ORIGINAL DRAWING
0 1"
IF THIS BAR DOES NOT MEASURE ONE INCH, DWG IS NOT TO SCALE

DESIGNED:	LS, LP
DRAWN:	RH, FS
CHECKED:	BG
APPROVED:	JL
SCALE:	NTS
DATE:	JULY 2015

PROJECT No. 60282054
DRAWING No. CS02
SHEET No. OF

F:\12023_SARWWTP_FILTER_IMPROVEMENTS\DRAWINGS\CAD\CS02.DWG BY: FSOLIS DATE: 7/24/2015 12:34 PM

A.P. 93165



SECTION A S-3, S-5, S-7
SCALE: 1/4" = 1'-0"

NOTES:

1. THIS IS A RECORD DRAWING FROM A PREVIOUS PROJECT. IT IS INTENDED TO PROVIDE BASIC INFORMATION ON EXISTING FACILITIES. CONTRACTOR TO REFER TO CONSTRUCTION CONTRACT DOCUMENTS FOR RESPONSIBILITIES RELATIVE TO VERIFICATION OF EXISTING FACILITIES AND COORDINATION WITH PLANT OPERATIONS.
2. THE FILTER BUILDING WAS CONSTRUCTED IN THE 1980's AND HAS THE POTENTIAL TO CONTAIN HAZARDOUS MATERIALS WITHIN THE MATERIALS USED TO CONSTRUCT THE FACILITY.
3. A "LEAD BASED PAINT SURVEY" OF THE FILTER BUILDING WAS PERFORMED AND A REPORT PUBLISHED BY TERRACON CONSULTANTS, INC., DATED AUGUST 9, 2010. COPIES OF THE REPORT ARE INCLUDED IN THE CONTRACT DOCUMENTS.

⚠4

4. NOT USED.

5. FILTER SAND SHALL BE REMOVED AND DISPOSED OF AT A PERMITTED LANDFILL IN ACCORDANCE WITH 30 TAC CHAPTER 335 SUBCHAPTER K AND OTHER APPLICABLE LOCAL, STATE AND FEDERAL REQUIREMENTS.
6. REMOVE FILTER UNDERDRAIN PRECAST CONCRETE PANELS AND DISPOSE OF IN ACCORDANCE WITH TEXAS COMMISSION ON ENVIROMENTAL QUALITY REGULATIONS.
7. WASH BASIN TO REMOVE RESIDUE AND PUMP WASH WATER AND RESIDUE TO PLANT DRAIN MANHOLE. FOLLOWING THE WASHDOWN OF THE BASIN, CONCRETE AND MECHANICAL DEMOLITION WORK MAY PROCEED.
8. EXISTING CONCRETE GULLET TO BE REMOVED.
9. PORTION OF EXISTING 20" CONCRETE WALL TO BE REMOVED, AT NEW EFFLUENT CHANNEL LOCATION.
10. EXISTING 8" CONCRETE SLAB TO BE REMOVED.
11. EXISTING METAL HANDRAIL TO BE REMOVED.
12. REFERENCE SPECIFICATION SECTION 01045 "SEQUENCE OF CONSTRUCTION" AND ISOLATION PLAN PHASING DRAWINGS.
13. EXISTING EXPANSION JOINT TO BE REPAIRED - REF. DETAIL 1/SS03.
14. NEW EXP JT COVER PLATE - REF 9/SS02.

*NOTE: PIPE RACKS NOT TO BE PLACED ON CONSTRUCTION JOINTS. PIPE RACK LOCATIONS TO BE ADJUSTED IN FIELD TO AVOID CONSTRUCTION JOINTS AND TO SUIT PIPING REQUIREMENTS.

⚠6 RECORD DRAWING PREPARED BY _____ DATE _____

STRUCTURAL FRAMING PLAN-UPPER PIPE GALLERY-SHT.2
SCALE: 1/8"=1'-0"

NOTE:
1. REF. HVAC PLANS FOR LOCATIONS AND SIZES OF ALL MECHANICAL UNIT PENETRATIONS THROUGH CONCRETE SLAB.
2. REF S-17 FOR TYP. REINF. AROUND OPENINGS.
3. REFER TO PLUMBING DRAWINGS FOR FLOOR DRAINS AND FLOOR SLOPES. SLOPE FLOOR TO DRAINS.
⚠4. PROVIDE TEMPERATURE REINFORCING PERPENDICULAR TO MAIN REINFORCING - SHOWN ON PLAN -
18" SLAB - #5 CONT. @ 12" o/c, TOP & BOT.
21" SLAB - #7 CONT. @ 10" o/c, TOP & BOT.

JOSE I. GUERRA, INC.
CONSULTING STRUCTURAL ENGINEERS
512 476-4967
CEDAR STREET COURT
712 W. 6TH STREET
AUSTIN, TEXAS 78701

NO.	DATE	REVISION	APPROV.
4			
3			
⚠2	10-13-86	MODIFICATION NO. 4	DOB
⚠1	6-23-86	ADDENDUM #2, ADDED WATERPROOFING NOTE	DOB

CITY OF AUSTIN, TEXAS
SOUTH AUSTIN REGIONAL WASTEWATER TREATMENT PLANT
FILTER BUILDING
STRUCT. FRMG. PLAN - UPPER PIPE GALLERY - SHT.2

Turner Collie & Braden Inc.
CONSULTING ENGINEERS
TEXAS AUSTIN/DALLAS/HOUSTON/PORT ARTHUR
COLORADO DENVER

Unit WILLIAMS	Scale 1/8" = 1'-0"	Date JUNE 1986
Designed DOB ; RL-	Checked DOB	Job No. 7207.09-02, Contract 3
Drawn FS, GA	Approved T.L.B.	Sheet 28 of 122

STATE OF TEXAS JOSE I. GUERRA 92456 REGISTERED PROFESSIONAL ENGINEER
Dwg. No. S-5

Jose I. Guerra, Inc.
Consulting Engineers
2401 South IH-35 Suite 210
Austin, Texas 78741
(512) 445-2090
Structural ◆ Civil ◆ Mechanical ◆ Electrical
TBPE FIRM F-3

REV	DATE	DESCRIPTION	APPROVED
⚠1	10/8/15	ADDENDUM NO 1	BMG

CITY OF AUSTIN
FOUNDED 1839

SOUTH AUSTIN REGIONAL WASTEWATER TREATMENT PLANT - FILTER IMPROVEMENTS
CIP PROJECT No. 3333.015
STRUCTURAL DEMOLITION PLAN AT UPPER PIPE GALLERY LEVEL (2 OF 2)

AECOM
AECOM TECHNICAL SERVICES INC.
400 W 15th STREET SUITE 500
AUSTIN, TEXAS 78701
WWW.AECOM.COM
TBPE REG. NO. F-3580

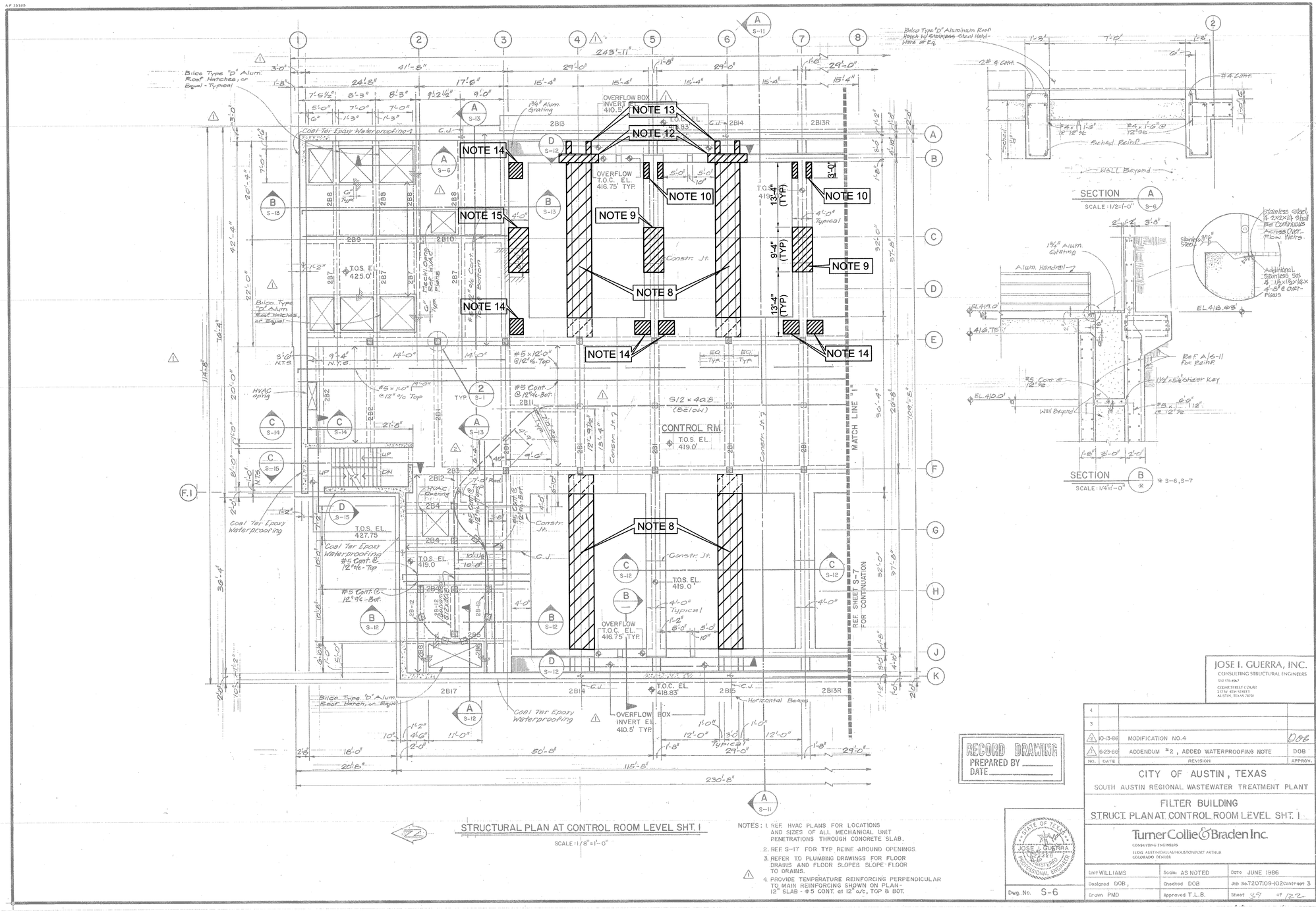
BRANDON M. COOK OF TEXAS 92456 REGISTERED PROFESSIONAL ENGINEER
10-2-2015

VERIFY SCALES
BAR IS ONE INCH ON ORIGINAL DRAWING
0 1"
IF THIS BAR DOES NOT MEASURE ONE INCH, DWG IS NOT TO SCALE

DESIGNED:	LS, LP
DRAWN:	RH, FS
CHECKED:	BG
APPROVED:	JL
SCALE:	NTS
DATE:	JULY 2015

PROJECT No. 60282054
DRAWING No. CS03
SHEET No. OF

F:\12023_SARWWTP_FILTER_IMPROVEMENTS\DRAWINGS\CAD\CS03.DWG BY: FSOLIS DATE: 10/1/2015 3:42 PM



STRUCTURAL PLAN AT CONTROL ROOM LEVEL SHT. 1

SCALE: 1/8"=1'-0"

NOTES:
1. REF. HVAC PLANS FOR LOCATIONS AND SIZES OF ALL MECHANICAL UNIT PENETRATIONS THROUGH CONCRETE SLAB.
2. REF S-17 FOR TYP. REINF. AROUND OPENINGS.
3. REFER TO PLUMBING DRAWINGS FOR FLOOR DRAINS AND FLOOR SLOPES. SLOPE FLOOR TO DRAINS.
4. PROVIDE TEMPERATURE REINFORCING PERPENDICULAR TO MAIN REINFORCING SHOWN ON PLAN - 12" SLAB - #5 CONT. at 12" o/c, TOP & BOT.

RECORD DRAWING
PREPARED BY _____
DATE _____

NOTES:

1. THIS IS A RECORD DRAWING FROM A PREVIOUS PROJECT. IT IS INTENDED TO PROVIDE BASIC INFORMATION ON EXISTING FACILITIES. CONTRACTOR TO REFER TO CONSTRUCTION CONTRACT DOCUMENTS FOR RESPONSIBILITIES RELATIVE TO VERIFICATION OF EXISTING FACILITIES AND COORDINATION WITH PLANT OPERATIONS.
2. THE FILTER BUILDING WAS CONSTRUCTED IN THE 1980's AND HAS THE POTENTIAL TO CONTAIN HAZARDOUS MATERIALS WITHIN THE MATERIALS USED TO CONSTRUCT THE FACILITY.
3. A "LEAD BASED PAINT SURVEY" OF THE FILTER BUILDING WAS PERFORMED AND A REPORT PUBLISHED BY TERRACON CONSULTANTS, INC., DATED AUGUST 9, 2010. COPIES OF THE REPORT ARE INCLUDED IN THE CONTRACT DOCUMENTS.
4. NOT USED.
5. FILTER SAND SHALL BE REMOVED AND DISPOSED OF AT A PERMITTED LANDFILL IN ACCORDANCE WITH 30 TAC CHAPTER 335 SUBCHAPTER K AND OTHER APPLICABLE LOCAL, STATE AND FEDERAL REQUIREMENTS.
6. REMOVE FILTER UNDERDRAIN PRECAST CONCRETE PANELS AND DISPOSE OF IN ACCORDANCE WITH TEXAS COMMISSION ON ENVIROMENTAL QUALITY REGULATIONS.
7. WASH BASIN TO REMOVE RESIDUE AND PUMP WASH WATER AND RESIDUE TO PLANT DRAIN MANHOLE. FOLLOWING THE WASHDOWN OF THE BASIN, CONCRETE AND MECHANICAL DEMOLITION WORK MAY PROCEED.
8. EXISTING CONCRETE GULLET TO BE REMOVED.
9. EXISTING 8" CONCRETE SLAB & 20" CONCRETE WALL BELOW TO BE REMOVED AT NEW EFFLUENT CHANNEL PASSAGE.
10. DEMO 14" x 36" SECTIONS OF EXIST 8" THICK WALKWAY SLAB AT NOTED LOCATIONS TO PROVIDE NEW BASIN ACCESS POINTS PER DETAIL C / FS17. DO NOT OVERCUT NEW OPNGS. CORE DRILL 3"Ø HOLES AT CORNERS PRIOR TO SAWING. CAREFULLY SQUARE CORNERS WITH HAND TOOLS.
11. REFERENCE SPECIFICATION SECTION 01045 "SEQUENCE OF CONSTRUCTION" AND ISOLATION PLAN PHASING DRAWINGS
12. DEMO TOP OF EXIST 20" CONC WALL TO MATCH PROFILE SHOWN ON A/FS10 & SIZE SHOWN ON A/FS21.
13. REMOVE TOP PORTIONS OF EXIST 12" CONC WALLS DN TO EL 409.33'. SEE SECTION A/FS21 FOR NEW CONSTRUCTION
14. DEMO HOLES FOR NEW FILTER ACCESS OPNGS. SEE DETAIL E / FS17 FOR ADDT'L INFO. DO NOT OVERCUT NEW OPNGS. CORE DRILL 3"Ø HOLES AT CORNERS PRIOR TO SAWING. CAREFULLY SQUARE CORNERS WITH HAND TOOLS.
15. DEMO EXIST 8" THICK x 4'-0" CANT WALKWAY AT NEW EFFLUENT CHANNEL LOCATION.

JOSE I. GUERRA, INC.
CONSULTING STRUCTURAL ENGINEERS
512 476-4867
CEDAR STREET COURT
2270 W. 45th STREET
AUSTIN, TEXAS 78701

NO.	DATE	REVISION	APPROV.
4			
3			
2	10-13-86	MODIFICATION NO.4	DOB
1	6-23-86	ADDENDUM #2, ADDED WATERPROOFING NOTE	DOB

CITY OF AUSTIN, TEXAS
SOUTH AUSTIN REGIONAL WASTEWATER TREATMENT PLANT
FILTER BUILDING
STRUCT. PLAN AT CONTROL ROOM LEVEL SHT. 1

Turner Collie & Braden Inc.
CONSULTING ENGINEERS
TEXAS AUSTIN/DALLAS/HOUSTON/PORT ARTHUR COLORADO/DENVER

Unit WILLIAMS	Scale AS NOTED	Date JUNE 1986
Designed DOB,	Checked DOB	Job No.7207109-102Contract 3
Drawn PMD	Approved T.L.B.	Sheet 39 of 122

JOSE I. GUERRA 92456 REGISTERED PROFESSIONAL ENGINEER

Dwg. No. S-6

Jose I. Guerra, Inc.
Consulting Engineers
2401 South IH-35 Suite 210
Austin, Texas 78741
(512) 445-2090
Structural ◆ Civil ◆ Mechanical ◆ Electrical
TBPE FIRM F-3

REV	DATE	DESCRIPTION	
1	10/8/15	ADDENDUM NO 1	BMG
			APPROVED

CITY OF AUSTIN
FOUNDED 1839

CITY OF AUSTIN

SOUTH AUSTIN REGIONAL WASTEWATER TREATMENT PLANT - FILTER IMPROVEMENTS
CIP PROJECT No. 3333.015

STRUCTURAL DEMOLITION PLAN AT CONTROL ROOM LEVEL (1 OF 2)

AECOM
AECOM TECHNICAL SERVICES INC.
400 W 15th STREET SUITE 500
AUSTIN, TEXAS 78701
WWW.AECOM.COM
TBPE REG. NO. F-3580

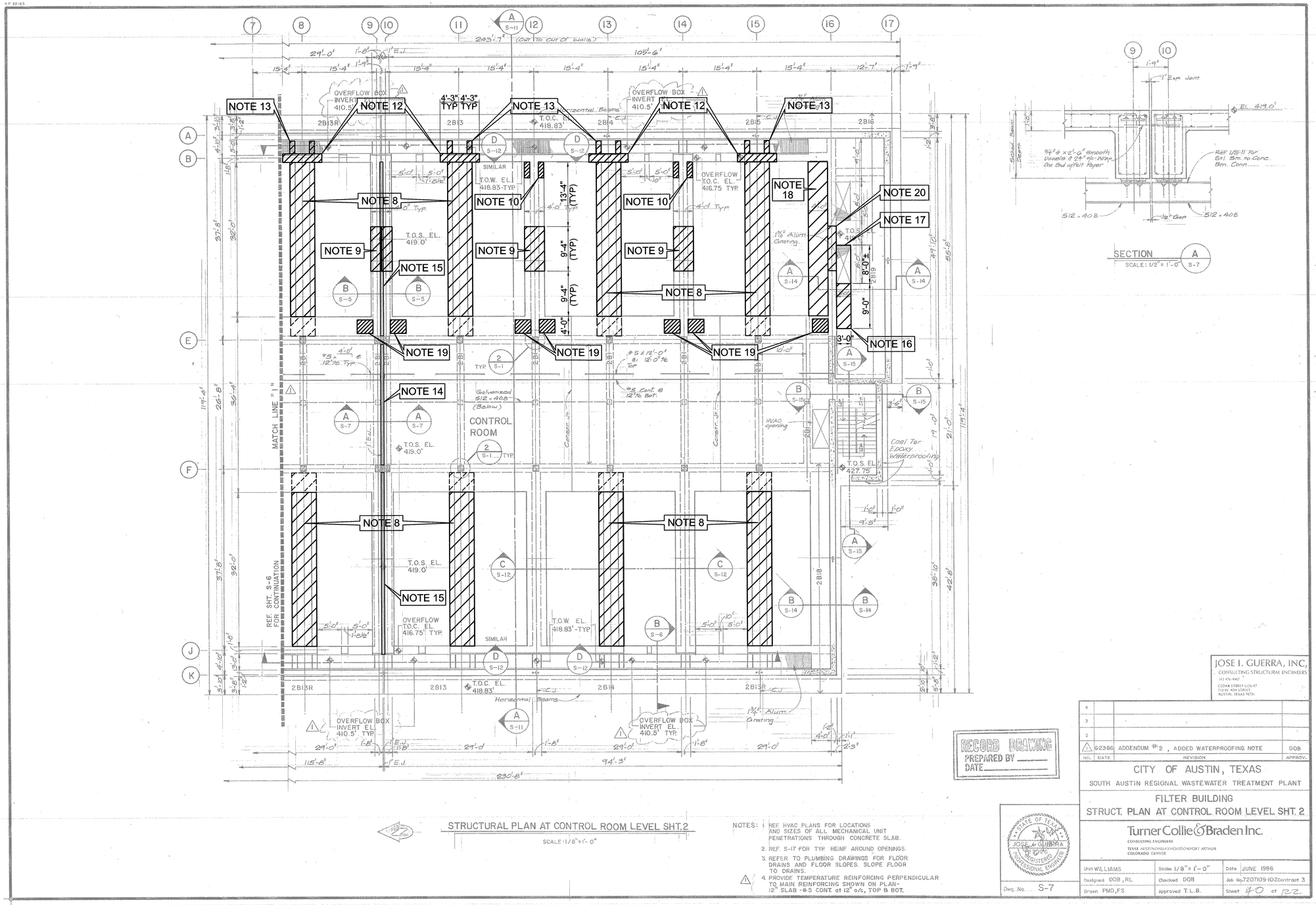
Barclay Kuykendall
92456
REGISTERED PROFESSIONAL ENGINEER
10-2-2015

VERIFY SCALES
BAR IS ONE INCH ON ORIGINAL DRAWING
0 1"
IF THIS BAR DOES NOT MEASURE ONE INCH, DWG IS NOT TO SCALE

DESIGNED:	LS, LP
DRAWN:	RH, FS
CHECKED:	BG
APPROVED:	JL
SCALE:	NTS
DATE:	JULY 2015

PROJECT No. 60282054
DRAWING No. CS04
SHEET No. OF

F:\12023_SARWWTP_FILTER_IMPROVEMENTS\DRAWINGS\CAD\CS04.DWG BY: FSOLIS DATE: 7/24/2015 12:35 PM



SECTION A / S-7
SCALE: 1/2" = 1'-0"

NOTES:

1. THIS IS A RECORD DRAWING FROM A PREVIOUS PROJECT. IT IS INTENDED TO PROVIDE BASIC INFORMATION ON EXISTING FACILITIES. CONTRACTOR TO REFER TO CONSTRUCTION CONTRACT DOCUMENTS FOR RESPONSIBILITIES RELATIVE TO VERIFICATION OF EXISTING FACILITIES AND COORDINATION WITH PLANT OPERATIONS.
2. THE FILTER BUILDING WAS CONSTRUCTED IN THE 1980's AND HAS THE POTENTIAL TO CONTAIN HAZARDOUS MATERIALS WITHIN THE MATERIALS USED TO CONSTRUCT THE FACILITY.
3. A "LEAD BASED PAINT SURVEY" OF THE FILTER BUILDING WAS PERFORMED AND A REPORT PUBLISHED BY TERRACON CONSULTANTS, INC., DATED AUGUST 9, 2010. COPIES OF THE REPORT ARE INCLUDED IN THE CONTRACT DOCUMENTS.
4. NOT USED.
5. FILTER SAND SHALL BE REMOVED AND DISPOSED OF AT A PERMITTED LANDFILL IN ACCORDANCE WITH 30 TAC CHAPTER 335 SUBCHAPTER K AND OTHER APPLICABLE LOCAL, STATE AND FEDERAL REQUIREMENTS.
6. REMOVE FILTER UNDERDRAIN PRECAST CONCRETE PANELS AND DISPOSE OF IN ACCORDANCE WITH TEXAS COMMISSION ON ENVIROMENTAL QUALITY REGULATIONS.
7. WASH BASIN TO REMOVE RESIDUE AND PUMP WASH WATER AND RESIDUE TO PLANT DRAIN MANHOLE. FOLLOWING THE WASHDOWN OF THE BASIN, CONCRETE AND MECHANICAL DEMOLITION WORK MAY PROCEED.
8. EXISTING CONCRETE GULLET TO BE REMOVED.
9. EXISTING 8" CONCRETE SLAB & 20" CONCRETE WALL BELOW TO BE REMOVED AT NEW EFFLUENT CHANNEL PASSAGE.
10. DEMO 14" x 36" SECTIONS OF EXIST 8" THICK WALKWAY SLAB AT NOTED LOCATIONS TO PROVIDE NEW BASIN ACCESS POINTS PER DETAIL C / FS17. DO NOT OVERCUT NEW OPNGS. CORE DRILL 3"Ø HOLES AT CORNERS PRIOR TO SAWING. CAREFULLY SQUARE CORNERS WITH HAND TOOLS.
11. REFERENCE SPECIFICATION SECTION 01045 "SEQUENCE OF CONSTRUCTION" AND ISOLATION PLAN PHASING DRAWINGS.
12. DEMO TOP OF EXIST 20" CONC WALL TO MATCH PROFILE SHOWN ON A/FS10 & SIZE SHOWN ON A/FS21.
13. REMOVE TOP PORTIONS OF EXIST 12" CONC WALLS DN TO EL 409.33'. SEE SECTION A/FS21 FOR NEW CONSTRUCTION.
14. NEW EXPANSION JOINT COVER - REF. DETAIL 8/SS02.
15. NEW EXPANSION JOINT COVER - REF. DETAIL 9/SS02.
16. SAWCUT A NEW SLUICE GATE OPNG IN THE EXIST 36" THICK SLAB, WEST OF AND ADJACENT TO THE EXIST 3'-0" x 8'-0" SLIDE GATE OPNG (TO BE INFILLED). TAKE CARE NOT TO DAMAGE THE ADJACENT EXISTING WALL AND BELT BEAM. IN LIEU OF OVERCUTTING, CORE DRILL 3"Ø HOLES AT THE CORNERS BEFORE SAWING. DO NOT SAWCUT THIS NEW OPNG PRIOR TO FILLING THE EXISTING ADJACENT OPNG.
17. EXISTING 3'-0" x 8'-0" SLUICE GATE ACCESS OPNG TO BE INFILLED PER DETAIL A / FS17. INFILL MUST OCCUR PRIOR TO CUTTING THE NEW ADJACENT OPNG.
18. DEMO EXIST 8" THICK x 4'-0" WIDE CANT WALKWAY AS NOTED.
19. DEMO HOLES FOR NEW FILTER ACCESS OPNGS. SEE DETAIL E / FS17 FOR ADDT'L INFO. DO NOT OVERCUT NEW OPNGS. CORE DRILL 3"Ø HOLES AT CORNERS PRIOR TO SAWING. CAREFULLY SQUARE CORNERS WITH HAND TOOLS.
20. DEMO WALL BELOW ADJACENT, EXIST CONC SLAB SOFFIT @ EL 416.00'. SEE SECTION A/ FS13.

STRUCTURAL PLAN AT CONTROL ROOM LEVEL SHT.2
SCALE: 1/8" = 1'-0"

NOTES:
1. REF HVAC PLANS FOR LOCATIONS AND SIZES OF ALL MECHANICAL UNIT PENETRATIONS THROUGH CONCRETE SLAB.
2. REF. S-17 FOR TYP. REINF. AROUND OPENINGS.
3. REFER TO PLUMBING DRAWINGS FOR FLOOR DRAINS AND FLOOR SLOPES. SLOPE FLOOR TO DRAINS.
4. PROVIDE TEMPERATURE REINFORCING PERPENDICULAR TO MAIN REINFORCING SHOWN ON PLAN- 12" SLAB - #5 CONT. at 12" o/c, TOP & BOT.

RECORD DRAWING
PREPARED BY _____
DATE _____

JOSE I. GUERRA, INC.
CONSULTING STRUCTURAL ENGINEERS
512-476-4967
CLOVE STREET COURT
TEXAS 78703-2810
AUSTIN, TEXAS 78731

NO.	DATE	REVISION	APPROV.
4			
3			
2			
1	02386	ADDENDUM #2, ADDED WATERPROOFING NOTE	DOB

CITY OF AUSTIN, TEXAS
SOUTH AUSTIN REGIONAL WASTEWATER TREATMENT PLANT
FILTER BUILDING
STRUCT. PLAN AT CONTROL ROOM LEVEL SHT. 2

Turner Collie & Braden Inc.
CONSULTING ENGINEERS
TEXAS AUSTIN/DALLAS/HOUSTON/PORT ARTHUR
COLORADO DENVER

Unit WILLIAMS	Scale 1/8" = 1'-0"	Date JUNE 1986	
Designed DOB, RL	Checked DOB	Job No. 7207109-102 Contract 3	
Drawn PMD, FS	Approved T.L.B.	Sheet 40 of 122	

STATE OF TEXAS — JOSE I. GUERRA — 92456 — REGISTERED PROFESSIONAL ENGINEER
Dwg. No. S-7

Jose I. Guerra, Inc.
Consulting Engineers
2401 South IH-35 Suite 210
Austin, Texas 78741
(512) 445-2090
Structural ◆ Civil ◆ Mechanical ◆ Electrical
TBPE FIRM F-3

REV	DATE	DESCRIPTION	APPROVED
1	10/8/15	ADDENDUM NO 1	BMG

CITY OF AUSTIN
FOUNDED 1839

SOUTH AUSTIN REGIONAL WASTEWATER TREATMENT PLANT - FILTER IMPROVEMENTS
CIP PROJECT No. 3333.015
STRUCTURAL DEMOLITION PLAN AT CONTROL ROOM LEVEL (2 OF 2)

AECOM
AECOM TECHNICAL SERVICES INC.
400 W 15th STREET SUITE 500
AUSTIN, TEXAS 78701
WWW.AECOM.COM
TBPE REG. NO. F-3580

BRANDON M. GOOLOOK — 92456 — REGISTERED PROFESSIONAL ENGINEER
10-2-2015

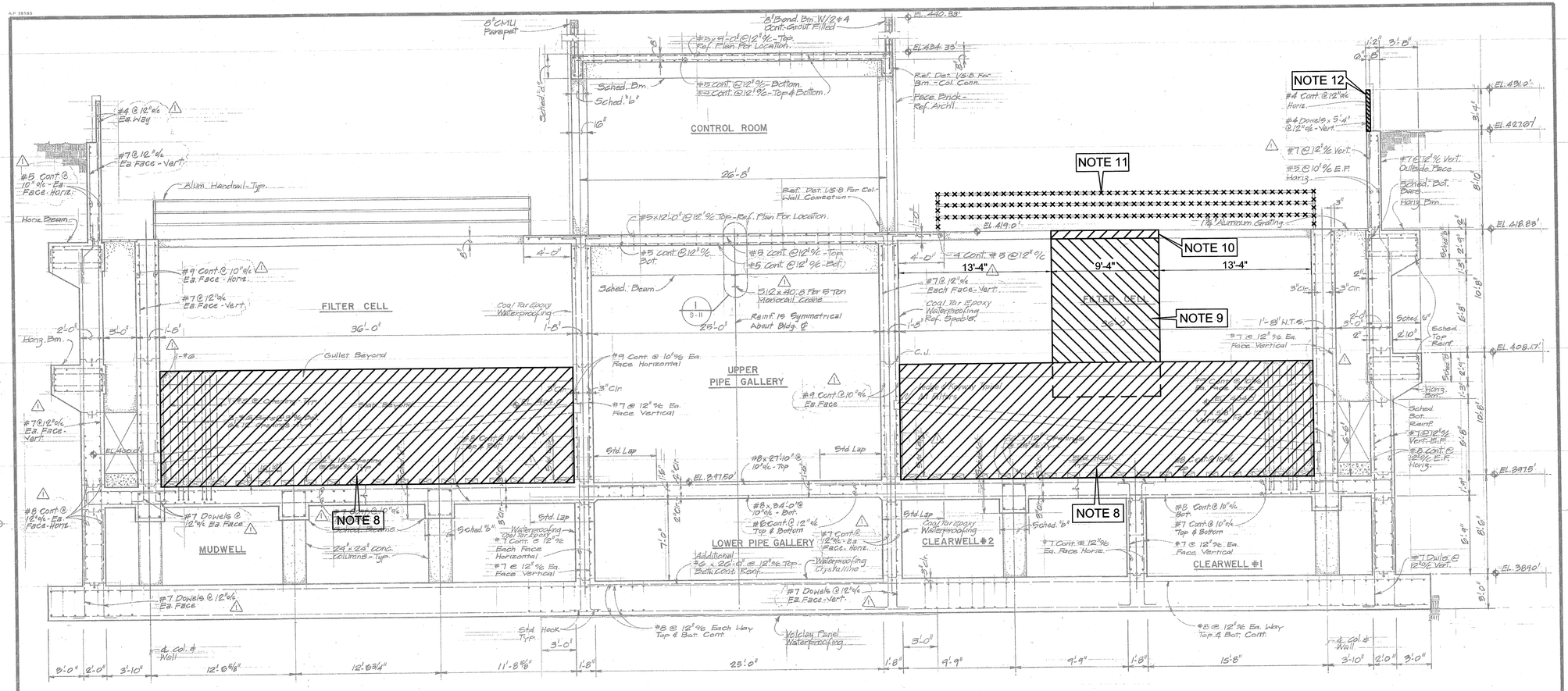
VERIFY SCALES
BAR IS ONE INCH ON ORIGINAL DRAWING
0 — 1"
IF THIS BAR DOES NOT MEASURE ONE INCH, DWG IS NOT TO SCALE

DESIGNED:	LS, LP
DRAWN:	RH, FS
CHECKED:	BG
APPROVED:	JL
SCALE:	NTS
DATE:	JULY 2015

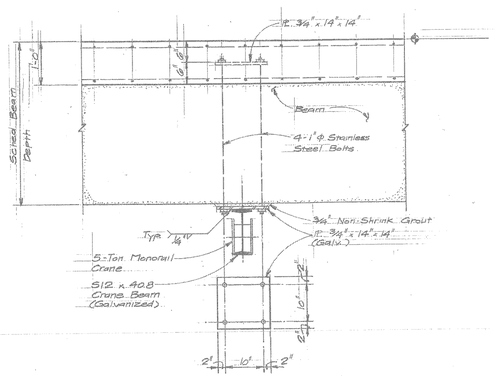
PROJECT No. 60282054
DRAWING No. CS05
SHEET No. OF

F:\12023_SARWWTP_FILTER_IMPROVEMENTS\DRAWINGS\CAD\CS05.DWG BY: FSOLIS DATE: 7/24/2015 12:36 PM

A.F. 38185



SECTION A
SCALE: 1/4" = 1'-0"
S-2 THRU S-9



DETAIL 1
SCALE: 3/4"=1'-0" S-11

RECORD DRAWING
PREPARED BY _____
DATE _____

JOSE I. GUERRA, INC.
CONSULTING STRUCTURAL ENGINEERS
512 474-4967
CEDAR STREET COURT
212 W. 4TH STREET
AUSTIN, TEXAS 78701

NO.	DATE	REVISION	APPROV.
4			
3			
2			
1	6-23-86	ADDENDUM #2 "Added Water Stops & Coat Tar Epoxy Deleted Steel Stair"	DOB

CITY OF AUSTIN, TEXAS
SOUTH AUSTIN REGIONAL WASTEWATER TREATMENT PLANT
FILTER BUILDING
STRUCTURAL SECTIONS - SHT. 1

Turner Collie & Braden Inc.
CONSULTING ENGINEERS
TEXAS AUSTIN DALLAS HOUSTON PORT ARTHUR
COLORADO DENVER

Unit WILLIAMS	Scale AS NOTED	Date JUNE 1986
Designed DOB	Checked DOB	Job No. 7207/09-102 Contract 3
Drawn PMD	Approved T.L.B.	Sheet 44 of 132

STATE OF TEXAS
JOSEF GUERRA
86126
REGISTERED
PROFESSIONAL ENGINEER

Dwg. No. S-11

NOTES:

1. THIS IS A RECORD DRAWING FROM A PREVIOUS PROJECT. IT IS INTENDED TO PROVIDE BASIC INFORMATION ON EXISTING FACILITIES. CONTRACTOR TO REFER TO CONSTRUCTION CONTRACT DOCUMENTS FOR RESPONSIBILITIES RELATIVE TO VERIFICATION OF EXISTING FACILITIES AND COORDINATION WITH PLANT OPERATIONS.
2. THE FILTER BUILDING WAS CONSTRUCTED IN THE 1980's AND HAS THE POTENTIAL TO CONTAIN HAZARDOUS MATERIALS WITHIN THE MATERIALS USED TO CONSTRUCT THE FACILITY.
3. A "LEAD BASED PAINT SURVEY" OF THE FILTER BUILDING WAS PERFORMED AND A REPORT PUBLISHED BY TERRACON CONSULTANTS, INC., DATED AUGUST 9, 2010. COPIES OF THE REPORT ARE INCLUDED IN THE CONTRACT DOCUMENTS.
4. NOT USED.
5. FILTER SAND SHALL BE REMOVED AND DISPOSED OF AT A PERMITTED LANDFILL IN ACCORDANCE WITH 30 TAC CHAPTER 335 SUBCHAPTER K AND OTHER APPLICABLE LOCAL, STATE AND FEDERAL REQUIREMENTS.
6. REMOVE FILTER UNDERDRAIN PRECAST CONCRETE PANELS AND DISPOSE OF IN ACCORDANCE WITH TEXAS COMMISSION ON ENVIROMENTAL QUALITY REGULATIONS.
7. WASH BASIN TO REMOVE RESIDUE AND PUMP WASH WATER AND RESIDUE TO PLANT DRAIN MANHOLE. FOLLOWING THE WASHDOWN OF THE BASIN, CONCRETE AND MECHANICAL DEMOLITION WORK MAY PROCEED.
8. EXISTING CONCRETE GULLET TO BE REMOVED.
9. PORTION OF EXISTING 20" CONCRETE WALL BEYOND TO BE REMOVED.
10. EXISTING 8" CONCRETE SLAB TO BE REMOVED
11. EXISTING METAL HANDRAIL TO BE REMOVED.
12. DEMO PORTIONS OF 8" THICK x 3'-4" TALL EXIST CONC WALL TO INSTALL NEW CONC COLUMNS PER DETAIL C/FS09.
13. REFERENCE SPECIFICATION SECTION 01045 "SEQUENCE OF CONSTRUCTION" AND ISOLATION PLAN PHASING DRAWINGS.

Jose I. Guerra, Inc.
Consulting Engineers
2401 South IH-35 Suite 210
Austin, Texas 78741
(512) 445-2090
Structural ◆ Civil ◆ Mechanical ◆ Electrical
TBPE FIRM F-3

REV	DATE	DESCRIPTION	
1	10/8/15	ADDENDUM NO 1	BMG
			APPROVED

CITY OF AUSTIN
FOUNDED 1839

CITY OF AUSTIN

SOUTH AUSTIN REGIONAL WASTEWATER TREATMENT PLANT - FILTER IMPROVEMENTS
CIP PROJECT No. 3333.015

STRUCTURAL DEMOLITION SECTIONS

AECOM
AECOM TECHNICAL SERVICES INC.
400 W 15th STREET SUITE 500
AUSTIN, TEXAS 78701
WWW.AECOM.COM
TBPE REG. NO. F-3580

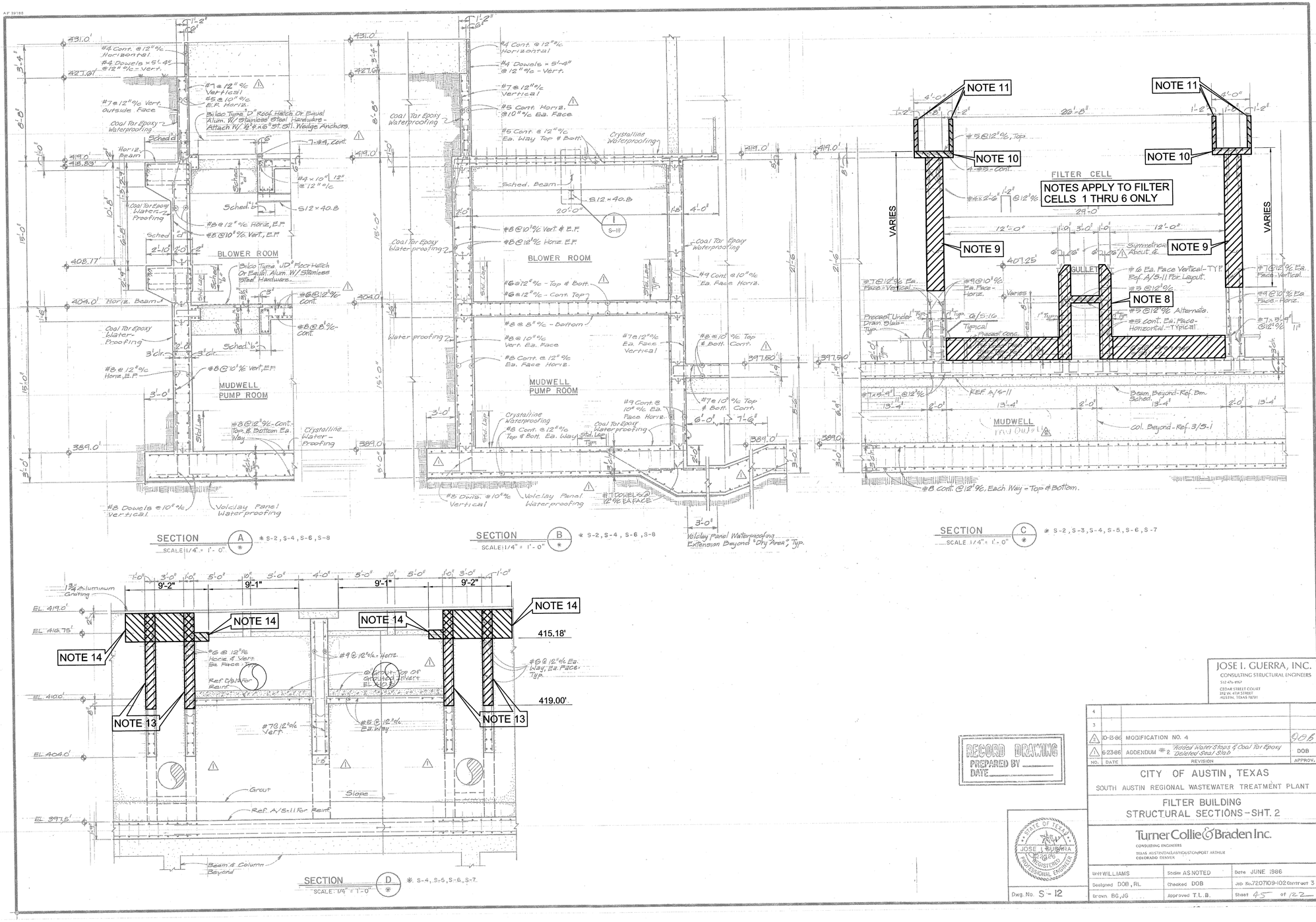
BRANDON M. GOODWIN
92456
LICENSED
PROFESSIONAL ENGINEER
10-2-2015

VERIFY SCALES
BAR IS ONE INCH ON ORIGINAL DRAWING
0 1"
IF THIS BAR DOES NOT MEASURE ONE INCH, DWG IS NOT TO SCALE

DESIGNED:	LS, LP
DRAWN:	RH, FS
CHECKED:	BG
APPROVED:	JL
SCALE:	NTS
DATE:	JULY 2015

PROJECT No. 60282054
DRAWING No. CS06
SHEET No. OF

F:\12023_SARWWTP_FILTER_IMPROVEMENTS\DRAWINGS\CAD\CS06.DWG BY: FSOLIS DATE: 7/24/2015 12:37 PM



NOTES:

1. THIS IS A RECORD DRAWING FROM A PREVIOUS PROJECT. IT IS INTENDED TO PROVIDE BASIC INFORMATION ON EXISTING FACILITIES. CONTRACTOR TO REFER TO CONSTRUCTION CONTRACT DOCUMENTS FOR RESPONSIBILITIES RELATIVE TO VERIFICATION OF EXISTING FACILITIES AND COORDINATION WITH PLANT OPERATIONS.
2. THE FILTER BUILDING WAS CONSTRUCTED IN THE 1980's AND HAS THE POTENTIAL TO CONTAIN HAZARDOUS MATERIALS WITHIN THE MATERIALS USED TO CONSTRUCT THE FACILITY.
3. A "LEAD BASED PAINT SURVEY" OF THE FILTER BUILDING WAS PERFORMED AND A REPORT PUBLISHED BY TERRACON CONSULTANTS, INC., DATED AUGUST 9, 2010. COPIES OF THE REPORT ARE INCLUDED IN THE CONTRACT DOCUMENTS.
4. NOT USED.
5. FILTER SAND SHALL BE REMOVED AND DISPOSED OF AT A PERMITTED LANDFILL IN ACCORDANCE WITH 30 TAC CHAPTER 335 SUBCHAPTER K AND OTHER APPLICABLE LOCAL, STATE AND FEDERAL REQUIREMENTS.
6. REMOVE FILTER UNDERDRAIN PRECAST CONCRETE PANELS AND DISPOSE OF IN ACCORDANCE WITH TEXAS COMMISSION ON ENVIROMENTAL QUALITY REGULATIONS.
7. WASH BASIN TO REMOVE RESIDUE AND PUMP WASH WATER AND RESIDUE TO PLANT DRAIN MANHOLE. FOLLOWING THE WASHDOWN OF THE BASIN, CONCRETE AND MECHANICAL DEMOLITION WORK MAY PROCEED.
8. EXISTING CONCRETE GULLET TO BE REMOVED.
9. PORTION OF EXISTING 20" CONCRETE WALL TO BE REMOVED.
10. EXISTING 8" CONCRETE SLAB TO BE REMOVED AT EFFLUENT CHANNEL.
11. EXISTING METAL HANDRAIL TO BE REMOVED AT EFFLUENT CHANNEL.
12. REFERENCE SPECIFICATION SECTION 01045 "SEQUENCE OF CONSTRUCTION" AND ISOLATION PLAN PHASING DRAWINGS.
13. EXISTING 12" CONCRETE WALL TO BE REMOVED.
14. REMOVE TOP PORTION OF 20" CONCRETE WALL BEYOND.

RECORD DRAWING
PREPARED BY
DATE

JOSE I. GUERRA, INC.
CONSULTING STRUCTURAL ENGINEERS
512-476-4967
CEDAR STREET COURT
212 W. 4TH STREET
AUSTIN, TEXAS 78701

NO.	DATE	REVISION	APPROV.
4			
3			
2	10-13-86	MODIFICATION NO. 4	DOB
1	6-23-86	ADDENDUM #2 "Rotated Water Stops & Coal Tar Epoxy & Deleted Seal Slab	DOB

CITY OF AUSTIN, TEXAS
SOUTH AUSTIN REGIONAL WASTEWATER TREATMENT PLANT
FILTER BUILDING
STRUCTURAL SECTIONS - SHT. 2

Turner Collie & Braden Inc.
CONSULTING ENGINEERS
TEXAS AUSTIN/DALLAS/HOUSTON/PORT ARTHUR
COLORADO DENVER

Unit WILLIAMS	Scale AS NOTED	Date JUNE 1986	
Designed DOB, RL	Checked DOB	Job No. 7207109-102 Contract 3	
Drawn BG, JG	Approved T.L.B.	Sheet 45 of 122	

STATE OF TEXAS — JOSE I. GUERRA — 92456 — REGISTERED PROFESSIONAL ENGINEER

Dwg. No. S - 12

Jose I. Guerra, Inc.
Consulting Engineers
2401 South IH-35 Suite 210
Austin, Texas 78741
(512) 445-2090
Structural ◆ Civil ◆ Mechanical ◆ Electrical
TBPE FIRM F-3

REV	DATE	DESCRIPTION	
1	10/8/15	ADDENDUM NO 1	BMG
			APPROVED

CITY OF AUSTIN
FOUNDED 1839

SOUTH AUSTIN REGIONAL WASTEWATER TREATMENT PLANT - FILTER IMPROVEMENTS
CIP PROJECT No. 3333.015

STRUCTURAL DEMOLITION SECTIONS

AECOM
AECOM TECHNICAL SERVICES INC.
400 W 15th STREET SUITE 500
AUSTIN, TEXAS 78701
WWW.AECOM.COM
TBPE REG. NO. F-3580

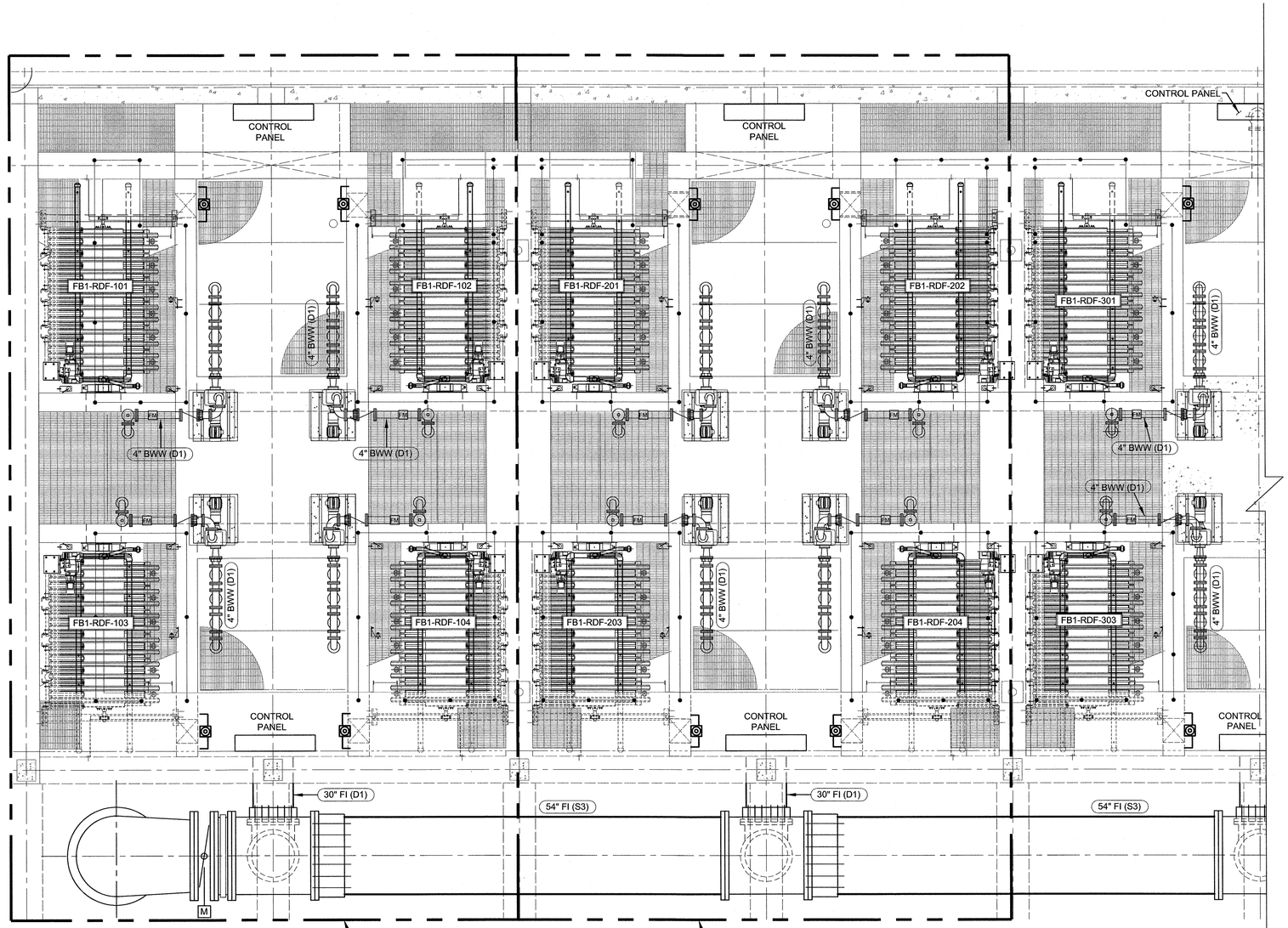
BRANDON L. SCOTT — 92456 — LICENSED PROFESSIONAL ENGINEER — 10-2-2015

VERIFY SCALES
BAR IS ONE INCH ON ORIGINAL DRAWING
0 — 1"
IF THIS BAR DOES NOT MEASURE ONE INCH, DWG IS NOT TO SCALE

DESIGNED:	LS, LP
DRAWN:	RH, FS
CHECKED:	BG
APPROVED:	JL
SCALE:	NTS
DATE:	JULY 2015

PROJECT No. 60282054
DRAWING No. CS07
SHEET No. OF

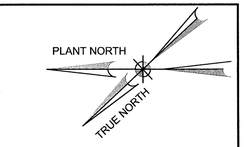
F:\12023_SARWWTP_FILTER_IMPROVEMENTS\DRAWINGS\CAD\CS07.DWG BY: FSOLIS DATE: 10/1/2015 3:49 PM



1 / FM08
ENLARGED MECHANICAL PLAN FILTER No. 1

1 / FM09
ENLARGED MECHANICAL PLAN FILTER No. 2

PLAN DETAIL 1 / FM03
SCALE: 1/4" = 1'-0"

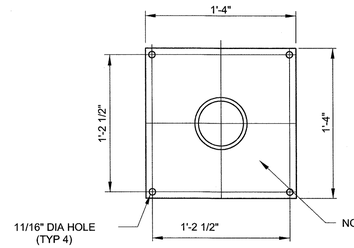


NOTES:

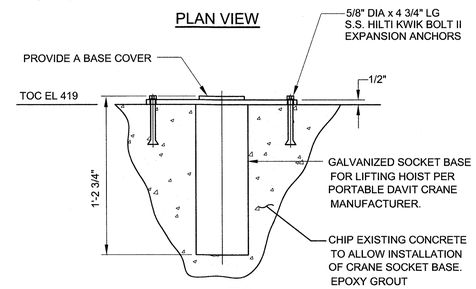
1. REFERENCE ENLARGED PLANS FOR TAG NUMBERS AND MECHANICAL DETAILS.
2. THE INTERIOR WALLS OF EXISTING FILTER BASINS AT THE INTERFACE OF DRY AND WET AREAS ARE COATED WITH COAL-TAR EPOXY FOR WATER PROOFING. REFERENCE RECORD DRAWINGS FOR EXACT LOCATIONS. CONTRACTOR SHALL REPAIR ANY DAMAGE TO THE EXISTING COATING RESULTING FROM THE CONSTRUCTION OF THESE IMPROVEMENTS, IN ACCORDANCE WITH SPECIFICATION SECTION 09902 "PAINT AND PROTECTIVE COATING". (1)
3. CONTRACTOR SHALL SUPPLY ONE PORTABLE DAVIT CRANE, TO HAVE A MINIMUM LIFT CAPACITY OF 2,000 LBS. HOIST TO HAVE 25' REACH BELOW FLOOR LEVEL, CORROSION RESISTANT COMPONENTS. HOIST TO BE THERN PRODUCTS MODEL 5124M1GAL OR EQUAL. THE UNIT SHALL BE PURCHASED AND DELIVERED TO THE OWNER. NO INSTALLATION IS REQUIRED AS PART OF THIS PURCHASE.
4. PORTABLE CRANE TO BE SOCKET BASE MOUNTED FLUSH. BASES TO BE INSTALLED ON THE ACCESS PLATFORM, AS SHOWN ON THE STRUCTURAL PLANS FOR ACCESS INTO THE FILTER CELLS THROUGH THE CENTER OF OPENINGS. TYPICAL HOIST BASE SHOWN FOR INFORMATION PURPOSES ONLY. HOIST BASE TO BE A PRODUCT OF HOIST MANUFACTURER, AND TO BE LINED TO ALLOW EASY ROTATION WHEN LOADED.
5. ENCLOSE THE ENTIRE OPEN AREA AROUND THE NEW CANOPY OVER FILTER CELLS WITH A BIRD NETTING. THE NETTING SHOULD ENCLOSE ALL THE OPEN AREAS AND BLOCK OFF ALL THE ROUTES THAT BIRDS CAN USE TO GAIN ACCESS TO INSIDE THE NEW FILTER AREA AND UNDER THE CANOPY. REFERENCE SHEET FS20 FOR ADDITIONAL DETAILS AND INSTALLATION REQUIREMENTS.

ALTERNATE:

1. REFERENCE SPECIFICATION SECTION 01030 "ALTERNATES" FOR DESCRIPTION OF ALTERNATE BID ITEMS THAT MAY BE INCLUDED IN THE ACCEPTED BID. THIS WILL INCLUDE INSTALLATION OF DISK FILTERS IN FILTER BASIN NOS. 1 AND 2.



PLAN VIEW



ELEVATION

PORTABLE CRANE SOCKET BASE DETAIL 1 / -
SCALE: NTS

REV	DATE	DESCRIPTION
1	10/05/15	ADDENDUM No. 1

APPROVED

CITY OF AUSTIN

SOUTH AUSTIN REGIONAL WASTEWATER TREATMENT PLANT - FILTER IMPROVEMENTS
CIP PROJECT No. 3333.015

DISK FILTER NOS 1 AND 2
OVERALL MECHANICAL PLAN

AECOM
AECOM TECHNICAL SERVICES INC.
400 W 15th STREET SUITE 600
AUSTIN, TEXAS 78701
WWW.AECOM.COM
TBPE REG. NO. F-3580

STATE OF TEXAS
BEHNOUSH A. YEGANEH
106391
LICENSED PROFESSIONAL ENGINEER
10/5/15

VERIFY SCALES
BAR IS ONE INCH ON ORIGINAL DRAWING
0 1"
IF THIS BAR DOES NOT MEASURE ONE INCH, DWG IS NOT TO SCALE

DESIGNED:	BY
DRAWN:	PW
CHECKED:	JNB
APPROVED:	SGE
SCALE:	1/4"=1'-0"
DATE:	JULY 2015

PROJECT No. 60282054
DRAWING No. FM06
SHEET No. OF

E:\60282054 SAR FILTER FINAL DESIGN & BID\400 TECHNICAL INFORMATION\423 CADD\FM06_ADD1.DWG BY: NUNGARAYJ DATE: 9/30/2015 2:32 PM

PLANT NORTH

TRUE NORTH

CONTROL PANEL

FB1-RDF-301 FB1-RDF-302 FB1-RDF-303 FB1-RDF-304

FB1-RDF-401 FB1-RDF-402 FB1-RDF-403 FB1-RDF-404

FB1-RDF-501 FB1-RDF-502 FB1-RDF-503 FB1-RDF-504

FB1-RDF-601 FB1-RDF-602 FB1-RDF-603 FB1-RDF-604

4" BWW (D1)

54" FI (S3)

30" FI (D1)

54"X36" REDUCER

36"x30" REDUCING ELBOW (D1)

FB1-BFV-002

M

1 FM10 ENLARGED MECHANICAL PLAN FILTER No. 3

1 FM11 ENLARGED MECHANICAL PLAN FILTER No. 4

1 FM12 ENLARGED MECHANICAL PLAN FILTER No. 5

1 FM13 ENLARGED MECHANICAL PLAN FILTER No. 6

PLAN DETAIL

SCALE: 1/4" = 1'-0"

1 — FM03, FM04

NOTES

1. REFERENCE ENLARGED PLANS FOR TAG NUMBERS AND MECHANICAL DETAILS.
2. THE INTERIOR WALLS OF EXISTING FILTER BASINS AT THE INTERFACE OF DRY AND WET AREAS ARE COATED WITH COAL-TAR EPOXY FOR WATER PROOFING. REFERENCE RECORD DRAWINGS FOR EXACT LOCATIONS. CONTRACTOR SHALL REPAIR ANY DAMAGE TO THE EXISTING COATING RESULTING FROM THE CONSTRUCTION OF THESE IMPROVEMENTS, IN ACCORDANCE WITH SPECIFICATION SECTION 09902 "PAINT AND PROTECTIVE COATING". (1)

ALTERNATE

1. REFERENCE SPECIFICATION SECTION 01030 "ALTERNATES" FOR DESCRIPTION OF ALTERNATE BID ITEMS THAT MAY BE INCLUDED IN THE ACCEPTED BID. THIS WILL INCLUDE INSTALLATION OF DISK FILTERS IN FILTER BASIN NOS. 1 AND 2.

REV	DATE	DESCRIPTION	APPROVED
1	10/05/15	ADDENDUM No. 1	

CITY OF AUSTIN

SOUTH AUSTIN REGIONAL WASTEWATER TREATMENT PLANT - FILTER IMPROVEMENTS
CIP PROJECT No. 3333.015

DISK FILTER CELLS NOS. 3-6
OVERALL MECHANICAL PLAN

AECOM TECHNICAL SERVICES INC.
400 W 15th STREET SUITE 600
AUSTIN, TEXAS 78701
WWW.AECOM.COM
TBPE REG. NO. F-3580

STATE OF TEXAS
BEHNOUSH A. YEGANEH
106391
LICENSED PROFESSIONAL ENGINEER
10/5/15

VERIFY SCALES
BAR IS ONE INCH ON ORIGINAL DRAWING
0 — 1"
IF THIS BAR DOES NOT MEASURE ONE INCH, DWG IS NOT TO SCALE

DESIGNED: BY	PROJECT No. 60282054
DRAWN: PW	DRAWING No. FM07
CHECKED: JNB	
APPROVED: SGE	SHEET No.
SCALE: 1/4"=1'-0"	
DATE: JULY 2015	OF

E:\60282054 SAR FILTER FINAL DESIGN & BID\400 TECHNICAL INFORMATION\423 CADD\FM07_ADD1.DWG BY: NUNGARAYJ DATE: 10/1/2015 8:09 AM