Date: January 19th, 2016
Project No. 1417

ADDENDUM NO. 03

To the drawings and specifications for:
Fire Station 30
911 Gembler Road,
San Antonio, Texas 78219

Beaty Palmer Architects, Inc.
110 Broadway, Suite 600
San Antonio, Texas 78205

ARCHITECTURAL DRAWINGS:

Item 3.1 Architectural Sheet A3.7 has been updated to reflect a change in tile height from 7'-6" to 4'-6" at Bath 126.

Item 3.2 Architectural Sheet A8.4 has been updated to include connection details for diagonal steel bracing through insulated metal wall panels at EMS Apparatus bay.

Item 3.3 Specification Section 074113.16 – Standing Seam Metal Roof Panels has been revised to include Galvalume finish and 24 ga in place of 22 ga metal thickness.

Item 3.4 Specification Section 087100.01 – Door Hardware has been updated and Specification Section 087100.02 – Gate Hardware has been added to the specification manual.

Item 3.5 Specification Section 012100 – Allowances has been revised. Allowances No. 3-6 have been deleted.

Item 3.6 Specification Section 012300 – Alternates has been added to the specification manual.

Item 3.7 General Conditions for City of San Antonio Construction Contracts have been added to the specification manual.

Item 3.8 Provide 5/8" Type "X" Gypsum board sheathing to underside of metal deck in order to cover closed cell spray insulation at all return air plenums.

MEP DRAWINGS:

Item 3.9 Mechanical Sheet M101 has been updated to include revised location and added control panel for Airvac 911 exhaust system to address permitting comments.

Item 3.10 Mechanical Sheet M102 has been updated to include revised location and added control panel for Airvac 911 exhaust system. EMS bay heater has been revised from unit heater infrared tube heater. VRF-05 has been added to EMS Storage 147.

Item 3.11 Mechanical Sheet M402 has been updated to include revised Daikin Heat Pump schedule to include additional unit VRF-05 and revised natural gas radiant heater schedule.

Item 3.12 Plumbing Sheet P301 has been revised to reflect changes made on the CFH rating of IUH-@A

in Phase 2 of the project.

Item 3.13 Plumbing Sheet P303 has been revised to reflect changes made on the CFH rating of IUH-@A in Phase 2 of the project. Table 402.4(1) from 2015 IFGC references the gas summary table and includes the total developed length in the notes.

Item 3.14 Plumbing Sheet P304 has been added to the drawing set and contains the Sanitary Sewer and Vent Riser Diagram as requested during permitting.

Item 3.15 Plumbing Sheet P305 has been added to the drawing set and contains the Domestic Water Riser Diagram as requested during permitting.

Item 3.16 Electrical Sheet E201 removed the emergency exit sign at the west end of Corridor 106 as requested during permitting.

Item 3.17 Electrical Sheet E302 has been revised to show the relocated IUH-2A, new additional unit VRF-5 per mechanical drawings and the additional J-Box at the EMS bay for the Air Scrubber control panel.

Item 3.18 Electrical Sheet E701 has been revised to include the new VRF-5 Mechanical Equipment load on the equipment connection schedule.

Item 3.19 IT Sheet IT401 has been revised to include addition of General Note 9.

Item 3.20 IT Sheet IT405 has been revised to include modifications to the floor plan and addition of keynote no. 11.

Item 3.21 Specification Section 270000: Basic Requirements for Communications Infrastructure has been modified to clarify the fire alerting system.

Questions from Bidders:

01 **Question:** Will there be any alternates? The Specification section refers to alternates being issued in a "forthcoming addendum".

Response: Refer to attached Specification Section 012300 – Alternates.

02 **Question:** Please confirm if the owner will employ the testing agencies and carry out special inspections or if they are the responsibility of the contractor?

Response: The City will hire and pay for Quality Assurance testing and Special Inspections. The contractor is responsible for all Quality Control testing.

03 **Question:** Will there be any unit pricing required for this bid?

Response: No.

04 **Question:** Will there be a site visit arranged for prospective bidders to view the existing fire station that is to be refurbished? If so can it be sooner, rather than later?

Response: Addendum 02, issued on 01.12.2016 states "A Non-Mandatory On-Site Meeting will be held on Thursday, January 14, 2016 at 3 p.m. at 919 Gembler Rd., San Antonio Texas

78219."

05 **Question:** The structural drawings refer to a Geotech survey, where do we find this?

Response: The Geotechnical Engineering Study is located in Volume 5 of the Specification Documents.

06 **Question:** Should the contractors mark-up be added to allowances?

Response: No.

07 **Question:** The Geo-tech soil report has two different soil depth recommendations – please clarify which applies ½" PVR or 1" PVR?

Response: Provide pricing for both options. Refer to the attached specification section 012300 – Alternates.

08 **Question:** Who pays for the Plan review fees and the Permit fees?

Response: The Plan Review fees will be taken care of by the Owner and the Permit fees are the responsibility of the contractor.

09 **Question:** The demolition of the stone cladding at the existing fire station has the potential to expose previously undetected Asbestos. What will happen if this is the case?

Response: A Pre-Demolition Asbestos survey has been carried out by STC Environmental Services and Asbestos was found in the roof. The accompanying report requests that after the station is vacated, and before the contractor commences demolition, the exterior stone veneer should be penetrated and a supplemental inspection should be carried out to confirm or deny the presence of asbestos containing water proofing mastic. Abatement will be carried out by the owner. Please refer to Volume 5 of the Specification Documents for further information.

10 **Question:** The documents require setup of temporary utilities for the existing facilities. Who pays for the monthly service charges on temporary utilities?

Response: The Contractor will provide and install the temporary utilities in order to minimize outages to the existing facility. Utility services will remain in the Owner's name and the Owner will continue to pay for these services until transfer of operations to the new addition.

11 **Question:** Is demolition of the existing slab required at the EMS bay?

Response: No demolition of the existing slab is required; however all existing floor finishes are to be removed during demolition phase.

12 **Question:** Note 14 on Sheet A3.2 says to remove light weight concrete deck to structural deck. Sheet A8.2, Detail note at drawing 5 & 6 states 'Existing low sloped roof over existing concrete double tee to remain". Please clarify.

Response: The low sloped roof over the existing concrete double tees is to remain in place for the duration of Phase I – New Construction. Details 5 & 6 on sheet A8.2 refer to the interim condition. This roof will be demolished in Phase II as part of the renovation of the existing fire

station.

13 **Question:** Sheet C-5 contraction joint & restrained joint shows ½" wide, this would entail a double cut, typically we see ¼" wide. Is ¼" wide acceptable?

Response: For the contraction joints the reduction to ¼" is acceptable. The restrained joints will require the ½" width. The contractor may opt to make a cold joint between pours or pavement depths. The joint sealant will be required at all of these locations.

14 **Question:** Is the existing building to be insured through the builder's risk? If so, please advise the value to be used for the existing structure and contents.

Response: Yes, the contractor must provide Builders All Risk Insurance on the existing building. An insurance value for entire project budget will be required.

15 **Question:** Drawing A2.2 shows #14, 6x3 reinforced concrete BBQ grill pad with steel mounting sleeve. Drawing A3.3 locates 2 positions for the gas grill, note 7 on one location refers to detail. Drawing A3.4 indicates item 32 is a gas grill and to refer to Appliance & Equipment schedule on Sheet A4.3. The grill is listed but is not specified but is OFOI. How many grills and what Detail? What are connection details/locations?

Response: The contractor is required to provide one 6'x3' concrete pad with steel mounting sleeve for the installation of an owner furnished, owner installed (OFOI) BBQ grill between the parking lot and rear patio (Drawing A2.2, Keynote 14). A gas supply is required at the rear patio for the installation of an owner furnished, owner installed (OFOI) gas grille. Refer to sheet P102, keynote 21 for sizing of gas line required.

15 **Question:** Note 6 on page M101 calls for DBR-1 – Dryer Booster Fan with duct and exhaust hood. However, I cannot find the specifications on the type or size of fan in the schedule or notes, either on the mechanical or the plumbing plans.

Response: Refer to attached revised sheet M101, keynote 6 for details.

16 **Question:** Earthwork Section 312000-8, 3.15: Will the 3'-6" drainage course layer be required in addition to the select fill?

Response: Bidders should refer to the Geotechnical Engineering Study for all information regarding material types and placement.

17 **Question:** Will the utilities for the existing station be left in service during the new construction, or will they be cut off and then made part of the temporary utilities?

Response: The existing gas and electric service meters are to be relocated to temporary locations prior to the commencement of Phase I. The existing utilities will remain in operation and will continue to be paid for by the owner. Temporary electrical service is to remain in place until Phase II permanent service is active. Refer to Drawing E101, Keynote 9 for further details.

<u>Substitutions:</u>

Subject to requirements the following manufacturer's products may be considered for use on the project:

1. Section 074213.19 – Insulated Metal Wall Panels, Horizontal. Manufacturer: Kingspan.

2. Section 096723 – Resinous Flooring. Manufacturer: Flowcrete.

Attachments:

- CNG Engineering, Addendum 03 Narrative – seal dated 01.15.2016

Drawings:

- Architectural Sheets A3.7 & A8.4
- MEP Sheets M101, M102, M402, E201, E302, E701, IT401, IT405, P301, P303, P304 & P305

Specifications:

- Specification Section 074113.16 –Standing Seam Metal Roof Panels
- Specification Section 087100.01 –Door Hardware
- Specification Section 087100.02 –Gate Hardware
- Specification Section 012100 –Allowances
- Specification Section 012300 –Alternates
- Specification Section 270000 -Basic Requirements For Communications Infrastructure
- General Conditions for City of San Antonio Construction Contracts

Building Wage Decision TX160280 Modification #1 –Published 01.15.2016

Cory W. Hawkins, AIA, LEEP AP
Principal

REGISTERED ARCHITECT
CORY W. HAWKINS
20466
STATE OF TEXAS
01.19.16

Beaty Palmer Architects, Inc.
110 Broadway St., Suite 600
San Antonio, Texas 78205

Tel: +1210212 8022

Date: January 15, 2016

Project: CoSA Fire Station #30

CNG Project No.: 0023-14

From: CNG Engineering, PLLC
1917 N New Braunfels Ave. Ste. 201
San Antonio, Texas 78208

CNG Engineering, PLLC
Reg. No. F-7964

To: All Sub-Contractors and others to whom Drawings and Specifications have been issued.

This document is generally separated into sections for convenience; however, all contractors, subcontractors, material men, and all other parties shall be responsible for reading this entire document. The failure to list an item or items in all affected sections of this document does not relieve any party affected from performing as per instructions, providing that the information is set forth one time any place in this document. This document is now considered part of the Contract Documents for the above mentioned project, modifying and superseding them where they are inconsistent. All other conditions of the Contract Documents remain unchanged.

CHANGES TO DRAWINGS AND SPECIFICATIONS

MECHANICAL

REPLACED DRAWING SHEET: M101

Item 1: Revised mechanical keyed note #21.

Item 2: Revised location of Airvac 911 exhaust system magnetic door and photo eye sensors.

Item 3: Added control panel for Airvac 911 exhaust system.

REPLACED DRAWING SHEET: M102

Item 1: Revised mechanical note #13.

Item 2: Revised location of Airvac 911 exhaust system magnetic door and photo eye sensors.

Item 3: Added control panel for Airvac 911 exhaust system.

Item 4: Revised EMS Bay heater from unit heater to infrared tube heater.

Item 5: Added VRF-05 to EMS Storage 147.

REPLACED DRAWING SHEET: M402

Item 1: Revised Daikin Heat Pump schedule to include added unit VRF-05.

Item 2: Revised Natural Gas Radiant Heater schedule.

PLUMBING

REPLACED DRAWING SHEET: P301

Item 1: Revised the Gas Summary Schedule to reflect the changes made on the CFH rating of IUH-2A in Phase 2 of the project.

REPLACED DRAWING SHEET: P303

Item 1: Revised the Gas Riser Diagram to reflect the changes made on the CFH rating of IUH-2A in Phase 2 of the project.

Item 2: Referenced Table 402.4(1) from the 2015 IFGC, referenced the Gas Summary table and included the total developed length in the notes.

ADDED DRAWING SHEET: P304

Item 1: This new sheet contains the Sanitary Sewer and Vent Riser Diagram.

ADDED DRAWING SHEET: P305

Item 1: This new sheet contains the Domestic Water Riser Diagram.

ELECTRICAL

REPLACED DRAWING SHEET: E201

Item 1: Removed exit sign at west end of corridor leading to the Apparatus Bay.

Replaced Drawing Sheet: E302

Item 1: Relocated the IUH-2A to location shown on drawing.

Item 2: Added new unit VRF-5 per Mechanical drawings.

Item 3: Added J-box at the EMS apparatus bay for the Air Scrubber control panel, with key note identification.

Replaced Drawing Sheet: E701

Item 1: Added the new VRF-5 Mechanical equipment load to the equipment connection Schedule.

IT

REPLACED DRAWING SHEET: IT401

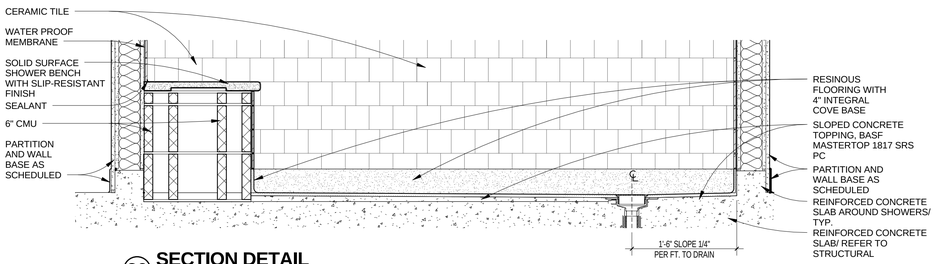
Item 1: Added General Note no. 9 to sheet.

Replaced Drawing Sheet: IT405

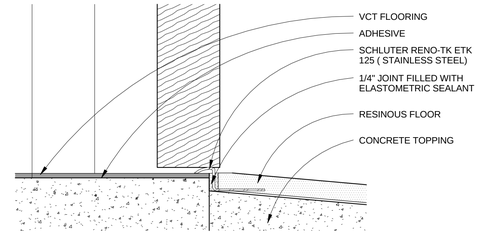
Item 1: Made modifications to the floor plan and modified key note no. 11.

Replaced Specification Section 270000: Basic Requirements for Communications Infrastructure

Item 1: Made modifications to the Specification Section to clarify fire alerting system.



26 SECTION DETAIL
1" = 1'-0" TYPICAL SHOWER



25 SECTION DETAIL
6" = 1'-0" FLOOR TRANSITION STRIP

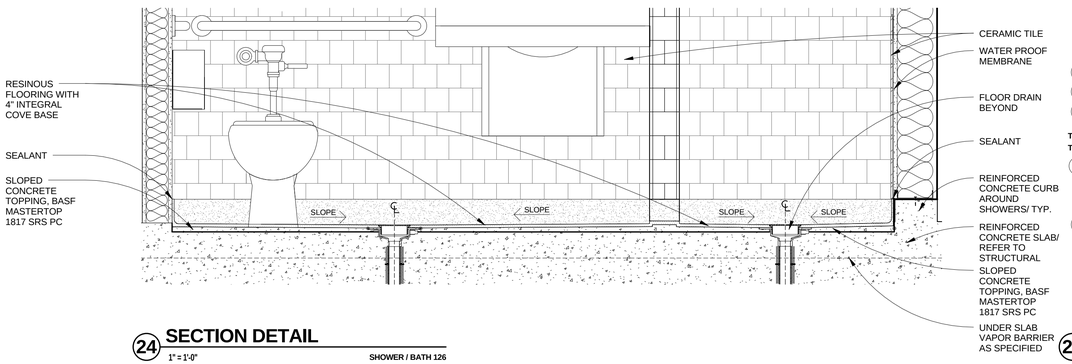
TOILET ACCESSORIES SCHEDULE

MARK	DESCRIPTION	MANUFACTURER	MODEL	COMMENTS
TA-1	TOILET TISSUE DISPENSER	MERFIN	2200	
TA-2	PAPER TOWEL DISPENSER	BOBRICK	B-2620	C-FOLD SURFACE MOUNTED
TA-3	PAPER TOWEL DISPENSER	BOBRICK	B-35930	C-FOLD RECESSED
TA-4	PAPER TOWEL DISPENSER	MERFIN	1080	HANDS FREE FLAT SHEET TOWEL DISPENSER
TA-5	PAPER TOWEL DISPENSER	BOBRICK	B-36903	RECESSED
TA-6	SOAP DISPENSER	GRAINGER	6055	
TA-7	MIRROR	BOBRICK	B-165 2436	24" X 36"
TA-8	SHOWER CURTAIN	BOBRICK	204-2	
TA-9	SHOWER CURTAIN ROD	INTERDESIGN FORMA	78470	REMOVABLE 1" BRUSHED STAINLESS STEEL TENSION SHOWER CURTAIN ROD
TA-10	GRAB BAR	BOBRICK	B-5806-24	
TA-11	GRAB BAR	BOBRICK	B-5806X36	
TA-12	GRAB BAR	BOBRICK	B-5806X42	
TA-13	CLOTHES HOOK	BOBRICK	B-2116	CONCEALED MOUNTING
TA-15	STAINLESS STEEL SHELF	BOBRICK	B-295 x 18	
TA-16	STAINLESS STEEL SHELF	BOBRICK	B-295 x 24	
TA-17	SHOWER SHAMPOO SHELF	DANIELSKITCHENBATH.COM	1 COMPARTMENT	MATTE WHITE
TA-18	HEAVY DUTY HANGING ROD	MISC.		1 1/4" DIAMETER GALVANIZED STEEL PIPE HANGING ROD W/GALVANIZED MOUNTING HARDWARE AND SCREWS
TA-19	BABY CHANGING STATION	KOALA KARE	KB100-ST	HORIZONTAL RECESS MOUNTED WITH STAINLESS STEEL FLANGE

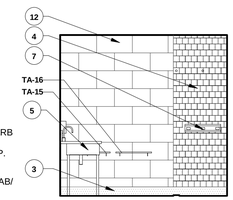
*** TOILET ACCESSORIES GENERAL NOTE: ALL TOILET ACESSORIES ARE TO BE FREE OF KEYED LOCKS. PROVIDE 2X BLOCKING WHERE REQUIRED FOR ALL CURRENT / FUTURE TOILET ACCESSORIES**

KEYNOTES

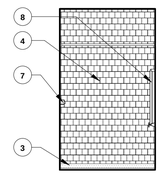
1. SOLID SURFACE SHOWER SEAT
2. ADA COMPLIANT URINAL / REFER TO PLUMBING DRAWINGS
3. RESINOUS COVE BASE INTEGRAL WITH FLOORING INSTALLATION
4. TILE WALL FINISH AS INDICATED ON ROOM FINISH SCHEDULE / SURFACE BULLNOSE SIZED AS SHOWN ON ALL EXTERIOR CORNERS AND WAINSCOT
5. LAVATORY / REFER TO PLUMBING DRAWINGS
6. RECESSED BABY CHANGING UNIT / REFER TO TOILET ACCESSORIES SCHEDULE FOR DETAILS
7. MOP HOLDER
8. COMMERCIAL WASH SPRAYER / REFER TO PLUMBING DRAWINGS
9. SEMI-RECESSED PLASTIC LAMINATE SUPPLY CABINET
10. PAINTED GYPSUM BOARD
11. CMU ON 8" CONCRETE CURB
12. PAINTED CMU
13. ROOM ID SIGNAGE / REFER TO SHEET A1.6



24 SECTION DETAIL
1" = 1'-0" SHOWER / BATH 126



23 SOUTH ELEVATION
1/4" = 1'-0" WASHROOM 102A



22 WEST ELEVATION
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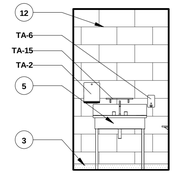
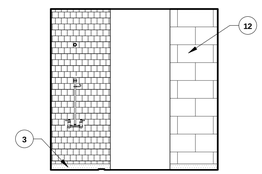
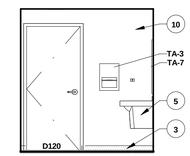


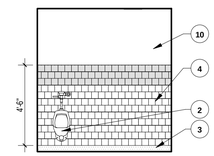
21 EAST ELEVATION
1/4" = 1'-0" WASHROOM 102A



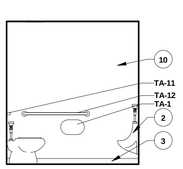
20 NORTH ELEVATION
1/4" = 1'-0" WASHROOM 102A



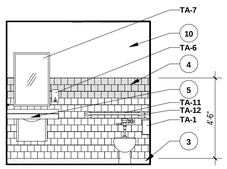
19 NORTH ELEVATION
1/4" = 1'-0" PERSONNEL TOILET 120



18 WEST ELEVATION
1/4" = 1'-0" PERSONNEL TOILET 120



17 SOUTH ELEVATION
1/4" = 1'-0" PERSONNEL TOILET 120



16 EAST ELEVATION
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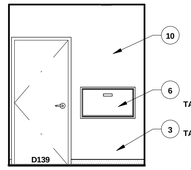
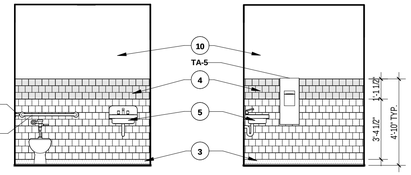
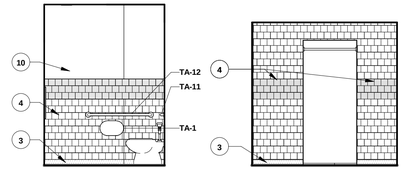


15 NORTH ELEVATION
1/4" = 1'-0" PUBLIC TOILET 139

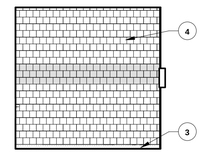


14 SOUTH ELEVATION
1/4" = 1'-0" PUBLIC TOILET 139

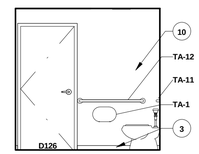


13 WEST ELEVATION
1/4" = 1'-0" PUBLIC TOILET 139

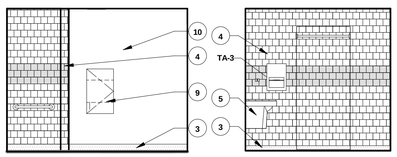
12 EAST ELEVATION
1/4" = 1'-0" PUBLIC TOILET 139



11 EAST ELEVATION
1/4" = 1'-0" OFFICER BATH 114 / SHOWER



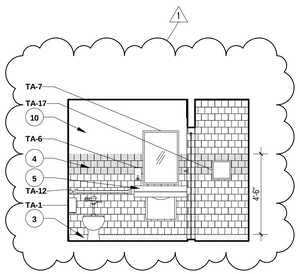
10 WEST ELEVATION
1/4" = 1'-0" OFFICER BATH 114 / SHOWER



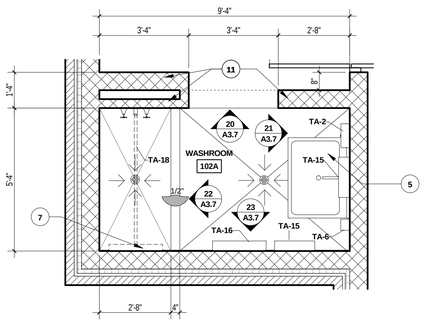
9 WEST ELEVATION
1/4" = 1'-0" BATH 126

8 SOUTH ELEVATION
1/4" = 1'-0" BATH 126

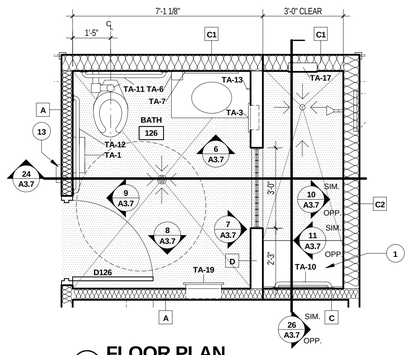
7 EAST ELEVATION
1/4" = 1'-0" BATH 126



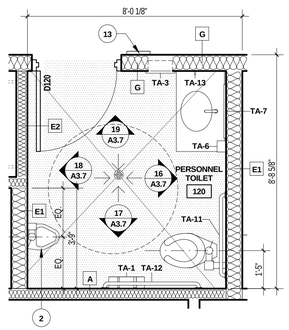
6 NORTH ELEVATION
1/4" = 1'-0" BATH 126



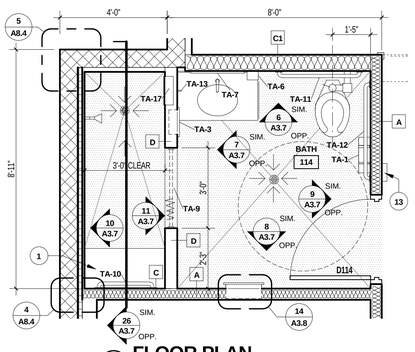
5 FLOOR PLAN
3/8" = 1'-0" WASHROOM 102A



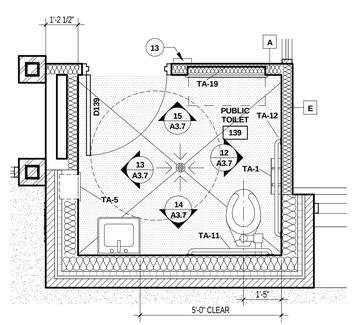
4 FLOOR PLAN
3/8" = 1'-0" BATH 126



3 FLOOR PLAN
3/8" = 1'-0" PERSONAL TOILET 120



2 FLOOR PLAN
3/8" = 1'-0" OFFICER BATH 114



1 PARTIAL PLAN
3/8" = 1'-0" PUBLIC TOILET 139

PROJECT

Fire Station No. 30

911 Gembler Road
San Antonio, Texas

REVISIONS		CONSULTANT
1	Addendum 03	01.15.16

ENGINEER

ARCHITECT

REGISTERED ARCHITECT COURTNEY W. HAWKINS 20466 STATE OF TEXAS 11.10.15

DRAWN BY JA / NF
REVIEWED BY CWH
DATE 11.10.15
SHEET NUMBER **A3.7**

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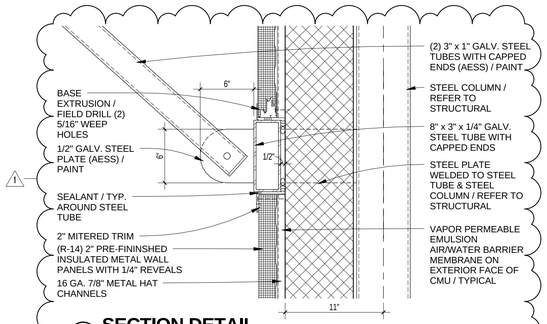
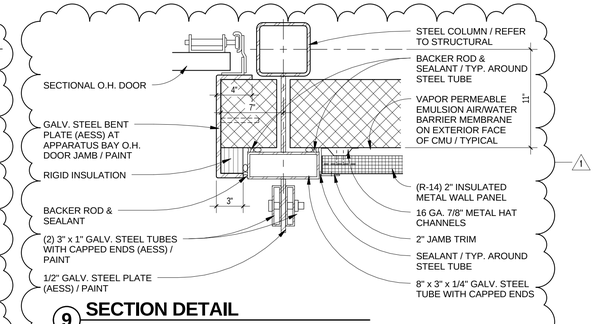


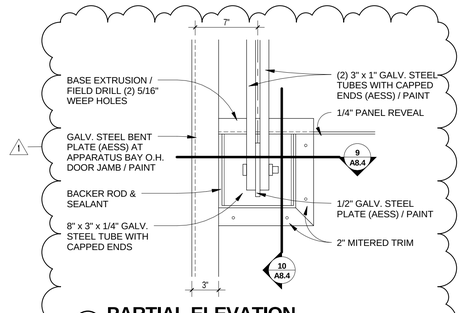
10 SECTION DETAIL

1 1/2" = 1'-0"



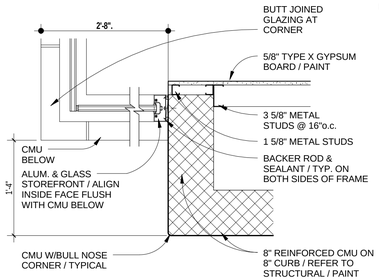
9 SECTION DETAIL

1 1/2" = 1'-0"



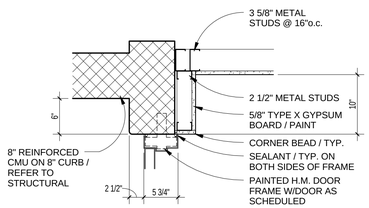
8 PARTIAL ELEVATION

1 1/2" = 1'-0"



7 PLAN DETAIL

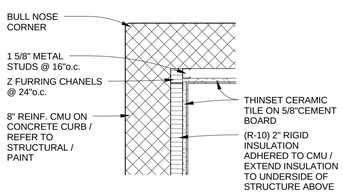
1" = 1'-0"



6 PLAN DETAIL

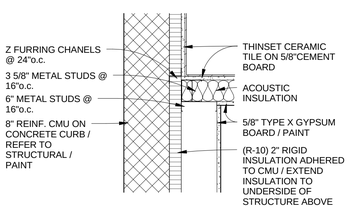
1" = 1'-0"

DOOR D106



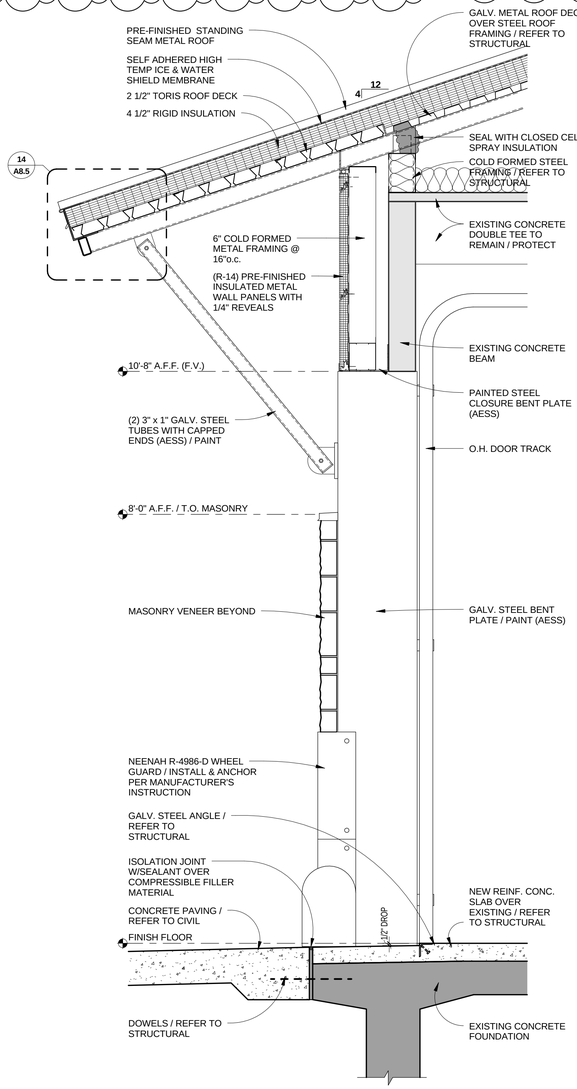
5 PLAN DETAIL

1" = 1'-0"



4 PLAN DETAIL

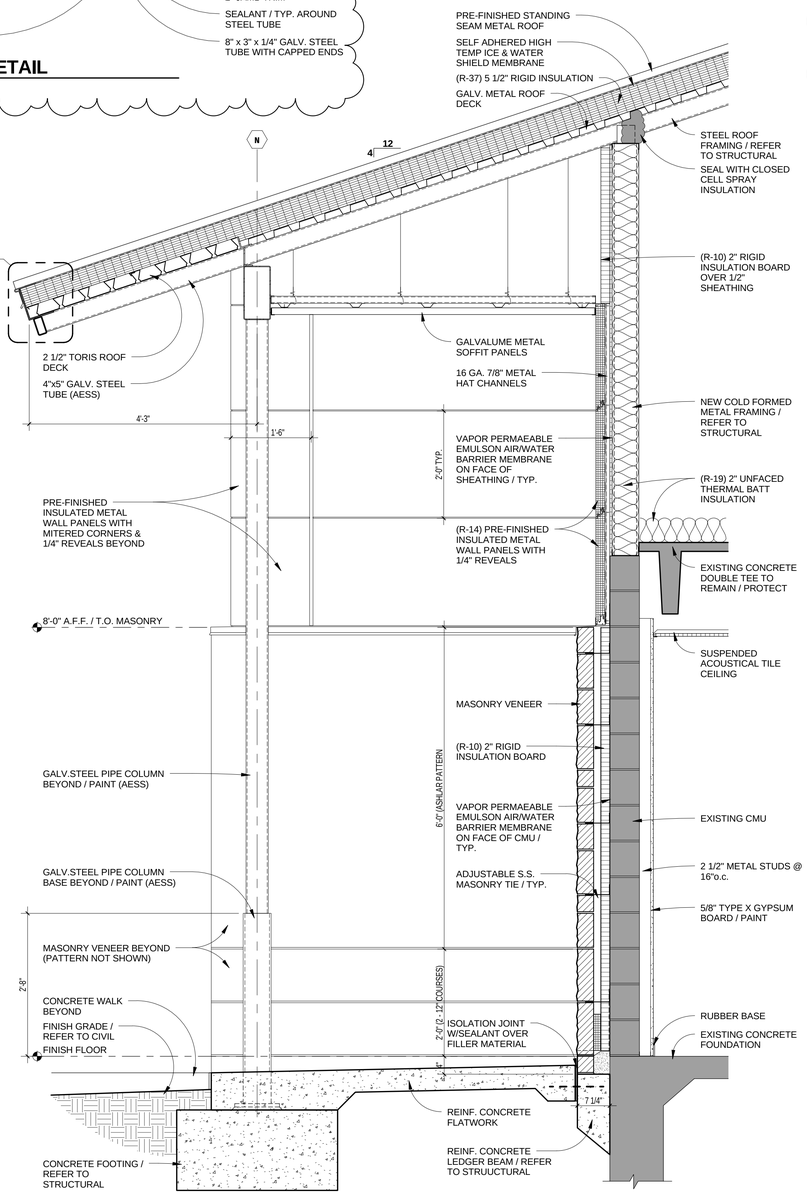
1" = 1'-0"



3 WALL SECTION

3/4" = 1'-0"

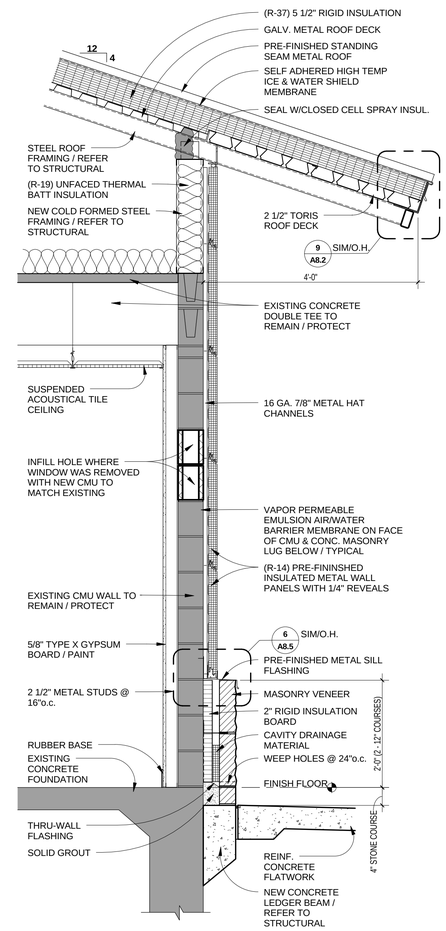
EMS APPARATUS BAY



2 WALL SECTION

3/4" = 1'-0"

EMS DORM



1 WALL SECTION

3/4" = 1'-0"

EMS DORM

PROJECT

Fire Station No. 30

911 Gembler Road
San Antonio, Texas

REVISIONS		CONSULTANT
1	Addendum 03	01.15.16

ENGINEER

ARCHITECT

REGISTERED ARCHITECT CORY W. HAWKINS 20466 STATE OF TEXAS 11.10.15

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REVIEWED BY CWH

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PROJECT NUMBER 1417
DATE 11.10.15
SHEET NUMBER **A8.4**

LIGHTING GENERAL NOTES:

A. CONDUIT LINES SHOWN ON DRAWING ARE DIAGRAMMATIC. VERIFY FIELD CONDITIONS AND CHOOSE APPROPRIATE CONDUIT ROUTING. IN THE EVENT THAT APPROXIMATE CONDUIT ROUTING SHOWN ON PLANS IS NOT FEASIBLE, NOTIFY ARCHITECT/ENGINEER.

B. LOCATIONS OF DEVICES ARE DIAGRAMMATICAL. EXACT LOCATIONS SHALL BE DETERMINED IN THE FIELD. NOTIFY ENGINEER OF ANY CONFLICTS PRIOR TO ROUGH-IN.

C. CONNECT EXITS SIGNS TO NEAREST UNSWITCHED GENERATOR LIGHTING CIRCUIT.

D. DRAWINGS SHOW GENERAL LOCATION OF LIGHTING FIXTURES. FOR EXACT LOCATIONS AND SPACING, SEE ARCHITECTURAL DRAWINGS. IF CONTRACTOR DETERMINES THAT THERE IS A DIFFERENCE IN QUANTITY OF FIXTURES SHOWN ON THE ARCHITECTURAL AND ELECTRICAL DRAWINGS, HE SHALL USE THE HIGHER NUMBER OF THE TWO QUANTITIES FOR BIDDING, THEN CONTACT THE DESIGN TEAM FOR FINAL RESOLUTION.

E. ADJUST LIGHTING FIXTURE LOCATIONS IN MECHANICAL, ELECTRICAL AND DATA ROOMS BASED ON ACTUAL EQUIPMENT LAYOUT. COORDINATE WITH MECHANICAL AND DATA CONTRACTORS PRIOR TO ROUGH-IN.

F. PROVIDEFIRE RATED MATERIAL AROUND ALL PENETRATIONS CREATED BY CONDUITS, CABLE TRAYS, ETC. IN FIRE RATED PARTITIONS. REFER TO ARCHITECTURAL DRAWINGS FOR DESIGNATED AREAS.

G. ALL CONDUITS FOR EXTERIOR WALL PACK LIGHTING FIXTURES MOUNTED ON THE CANOPY ROOF AND THE COLUMNS OF THE BLDG. SHALL USE CONCEALED PATHWAYS ALONG THE CANOPY AND THE CONCRETE COLUMNS.

H. PROVIDE SINGLE CIRCUIT, DUAL TECHNOLOGY (ULTRASONIC & INFRARED, EXCLUDING DORMS) WALL SWITCH OCCUPANCY SENSOR FOR CONTROL OF LIGHTING. SQUARE D SLSDWS1277U OR APPROVED EQUAL. (TYPICAL FOR OFFICES).

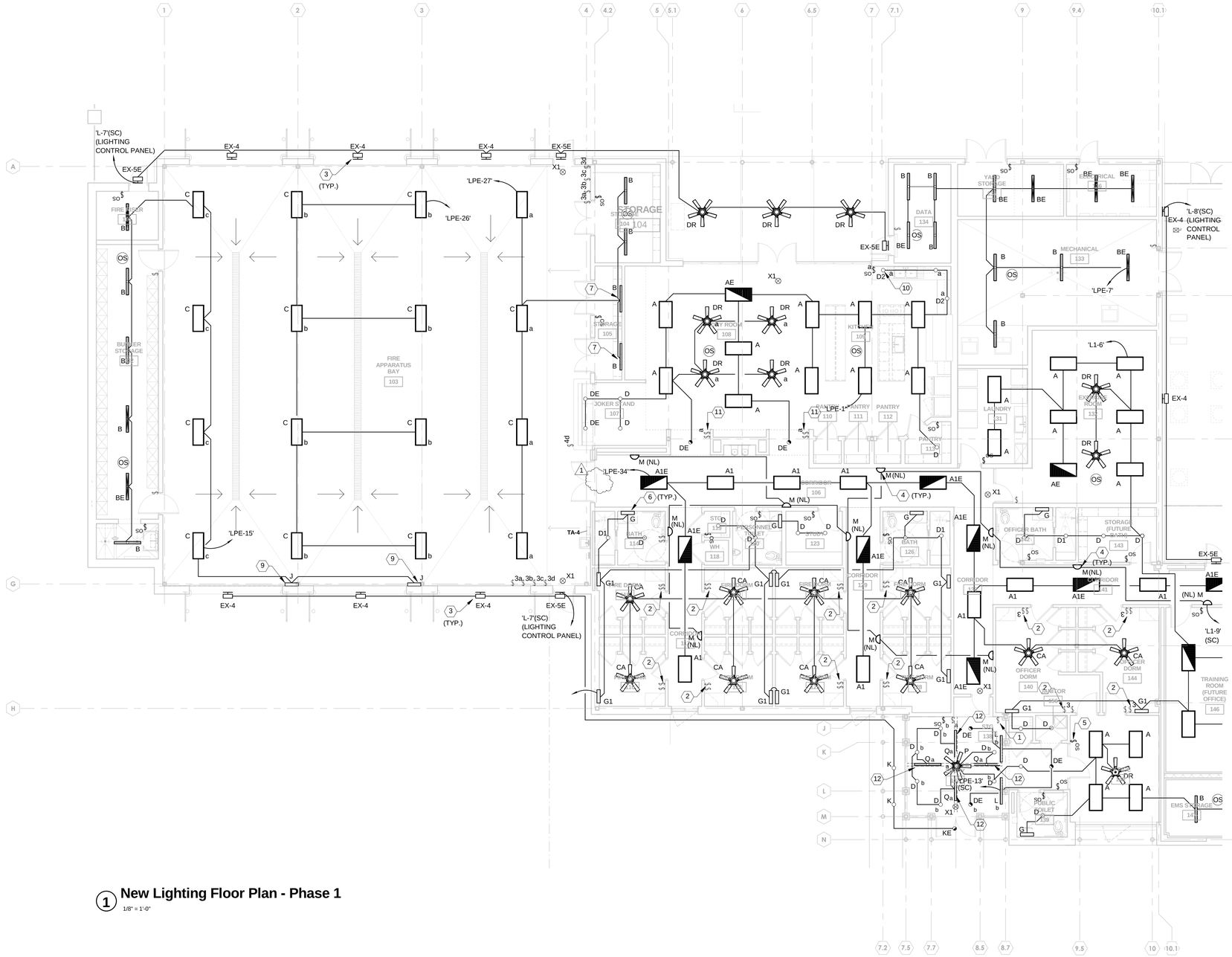
I. PROVIDE DUAL CIRCUIT, DUAL TECHNOLOGY (ULTRASONIC & INFRARED, EXCLUDING DORMS) WALL SWITCH OCCUPANCY SENSOR FOR CONTROL OF LIGHTING. SQUARE D SLSDWS1277U OR APPROVED EQUAL. (TYPICAL FOR OTHER ROOMS).

J. ALL J-BOXES ADJACENT TO EACH OTHER SHALL BE MOUNTED AT THE SAME HEIGHT.

K. ALL CONDUIT, WHETHER INDOOR OR OUTDOORS SHALL REMAIN UNPAINTED PER FIRE DEPARTMENT DESIGN STANDARDS.

LIGHTING KEYED NOTES:

1. CONTROL SWITCH FOR SEASONAL RECEPTACLES WHICH ARE MOUNTED UNDER SOFFIT. RE: POWER FLOOR PLAN FOR LOCATION OF RECEPTACLES. PROVIDE NAMEPLATE.
2. CIRCUIT SWITCHES IN DORM ROOMS AS FOLLOWS:
   a. SWITCH NEAREST DOOR - CLG. FAN LIGHT
   b. OUTER SWITCH - CLG. FAN
3. RE: ARCHITECTURAL DRAWINGS FOR TYPE 'EX-4' MOUNTING HEIGHTS.
4. TYPE 'M' LIGHT FIXTURES SHALL BE ON UNSWITCHED CIRCUIT.
5. MOUNT CONTROLS IN DRY WALL PARTITION.
6. ALL "G" TYPE LIGHT FIXTURES SHALL BE MOUNTED 72" AFF.
7. MOUNT LIGHTING FIXTURE ON WALL ABOVE DOOR.
8. ROUTE EXIT SIGN CONDUIT AND CALL BUTTON CONDUIT THROUGH ALUMINUM FRAMING AT ENTRY DOOR 100. REFER TO ARCHITECTURAL 13/A403 FOR DETAIL.
9. ROUTE 3/4" EMPTY CONDUIT WITH PULL CORD TO JOKERS STAND FOR CONTROL WIRING TO INDOOR TRAFFIC LIGHTS. COORDINATE ROUTING ON JOB SITE.
10. MOUNT TRANSFORMER IN CABINET FOR UNDERCABINET LED TYPE LIGHTING. VERIFY CONCEALED LOCATION OF TRANSFORMER PRIOR TO ROUGH-IN. PROVIDE A 120V CIRCUIT TI TRANSFORMER FOR UNDERCABINET LIGHTING.
11. CIRCUIT SWITCHES IN DAYROOM AS FOLLOWS:
    a. FAN CONTROL SWITCH - DESIGNATED WITH THE LETTER 'a'
    b. LIGHT KIT SHALL BE CONTROLLED BY CEILING MOUNTED OCCUPANCY SENSOR.
12. LIGHTING FIXTURE TO BE MOUNTED ON STRUCTURE SUSPENDING CEILING FAN TYPE 'P'. COORDINATE HEIGHT AND EXACT LOCATION ON JOB SITE PRIOR TO ROUGH-IN. FIXTURE TO ILLUMINATE INTERIOR OF TOWER.



1 **New Lighting Floor Plan - Phase 1**
1/8" = 1'-0"

PROJECT	REVISIONS	CONSULTANT	ENGINEER	ARCHITECT
Fire Station No. 30 911 Gembler Road	1 ADDENDUM 03 01/15/2016	CNG engineering 1917 N. New Braunfels Ave, Ste. 201 San Antonio, Texas 78208 (210) 224-8841, (210) 224-8824 FAX Firm #: F-7964	STATE OF TEXAS DOUGLAS W. SCHULZE 80707 LICENSED PROFESSIONAL ENGINEER 11/5/2015	100% CONSTRUCTION DOCUMENTS

DRAWN BY: DRG
REVIEWED BY: DWS
PROJECT NUMBER: 1417
DATE: 11.05.2015
SHEET NUMBER: **E201**

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POWER GENERAL NOTES:

A. PROVIDE 120V EMERGENCY CIRCUIT TO ALL FIRE/SMOKE DAMPERS. CONNECT NO MORE THAN FOUR(4) DAMPERS TO CIRCUITS INDICATED IN PANEL SCHEDULE. DAMPERS ON DIFFERENT FLOORS SHALL NOT BE CONNECTED TOGETHER. DAMPER CONTROL SHALL BE COORDINATED WITH MECHANICAL CONTRACTOR. REFER TO MECHANICAL DRAWINGS FOR LOCATIONS AND QUANTITIES OF ALL FIRE/SMOKE DAMPERS.

B. PROVIDE 120V POWER FOR ALL ADA DOOR OPENINGS, SLIDING DOORS. COORDINATE EXACT LOCATIONS AND QUANTITIES WITH ARCHITECTURAL AND SECURITY DRAWINGS. CONNECT TO AVAILABLE 20A/1P SPARE CRITICAL BRANCH CIRCUIT.

C. PROVIDE 120V POWER TO EACH HVAC DDC CONTROL PANEL. COORDINATE EXACT LOCATIONS AND QUANTITIES WITH MECHANICAL DRAWINGS. CONNECT TO AVAILABLE 20A/1P SPARE CRITICAL BRANCH POWER CIRCUIT.

D. PROVIDE LISTED FIRE-STOP AND CAULKING TO MAINTAIN INTEGRITY OF FIRE RATED WALLS AT ALL RACEWAY AND CABLE TRAY PENETRATIONS. REFER TO ARCHITECTURAL DRAWINGS FOR LOCATIONS OF RATED WALLS.

E. REFERENCE EQUIPMENT CONNECTION SCHEDULE, SHEET E107, FOR REQUIREMENTS AND ADDITIONAL INFORMATION OF TAGGED EQUIPMENT SHOWN ON PLAN DRAWINGS.

F. CONDUIT LINES SHOWN ON DRAWINGS ARE DIAGRAMMATIC. CONTRACTOR SHALL FIELD VERIFY CONDITIONS AND CHOOSE APPROPRIATE CONDUIT ROUTING. IN THE EVENT THAT THE APPROXIMATE CONDUIT ROUTING SHOWN ON PLANS IS NOT FEASIBLE CONTRACTOR SHALL NOTIFY ARCHITECT/ENGINEER.

G. LOCATIONS OF DEVICES ARE DIAGRAMMATICAL. EXACT LOCATIONS SHALL BE DETERMINED IN THE FIELD. NOTIFY ENGINEER OF ANY CONFLICTS PRIOR TO ROUGH-IN.

H. COORDINATE RECEPTACLE LOCATIONS WITH ARCHITECTURAL INTERIOR ELEVATIONS AND IT DRAWINGS.

I. PROVIDE 120V CIRCUIT FOR CONTROL POWER TO VAV BOXES. CIRCUIT 6 OR LESS BOXES TO A CIRCUIT. PROVIDE 20-AMP TOGLE SWITCH ADJACENT TO EACH VAV BOX, MOUNTED INDEPENDENTLY OF EQUIPMENT.

J. RECEPTACLES CONNECTED TO AN EMERGENCY POWER CIRCUIT SHALL BE RED IN COLOR.

K. ALL RECEPTACLES SHALL BE COMMERCIAL, SPECIFICATION GRADE UNLESS NOTED OTHERWISE.

L. RECEPTACLES LOCATED WITHIN 6' OF ANY PLUMBING FIXTURE, COUNTERTOPS, AT THE EXTERIOR, OR OTHERWISE EXPOSED TO WATER SHALL BE TYPE GFCI. PROVIDE IN-USE, CAST ALUMINUM COVERS FOR EXTERIOR RECEPTACLES.

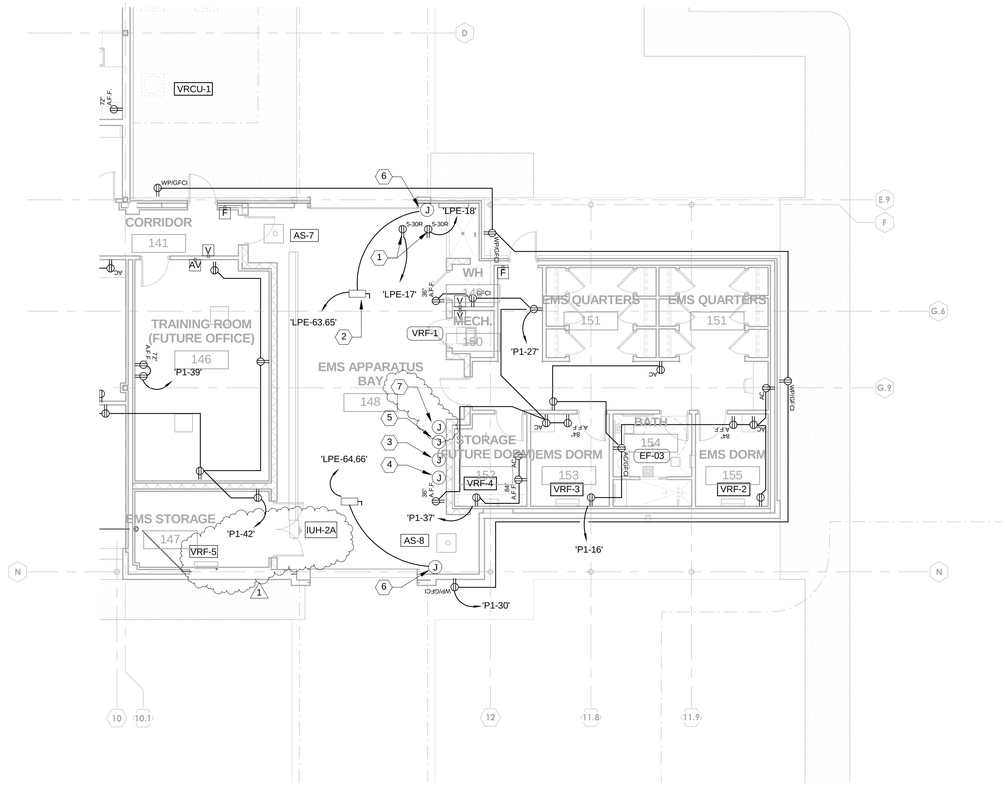
M. IDENTIFY PANEL AND CIRCUIT NUMBER FOR ALL INSTALLED ELECTRICAL DEVICES ON THE INSIDE OF THE JUNCTION BOX.

N. ALL J-BOXES ADJACENT TO EACH OTHER SHALL BE MOUNTED AT THE SAME HEIGHT.

O. PROVIDE 120V EMERGENCY POWER CIRCUIT FOR ALL DOOR OPERATIONS, CARD READERS, MAG LOCKS, ELECTRIC STRIKES AND EMERGENCY PANIC DOORS. COORDINATE EXACT LOCATIONS, QUANTITIES AND ROUGH-IN REQUIREMENTS WITH ARCHITECTURAL DRAWINGS. CONNECT TO AVAILABLE 20A/1P SPARE EMERGENCY POWER BRANCH CIRCUIT.

POWER KEYED NOTES:

1. PROVIDE NEMA 5-30R RECEPTACLE. MOUNT ON #10-SJO CORD WIT STRAIN RELIEF ("KELLEMS-GRIP") FROM BOTTOM OF JOISTS. SUSPEND CORD 36" A.F.F. PLUG AN 18" PIGTAIL TYPE CORD AT THE OF SUSPENDED CORD, LEAVING A CLEARANCE OF 18"A.F.F. PROVIDE STEEL SUPPORTS AS REQUIRED. MOUNT FACE OF OUTLET VERTICAL, NOT FACING DOWNWARD. LOCATE BEHIND DRIVERS DOOR.
2. PROVIDE 30A/2P FUSED DISCONNECT SWITCH AND MOUNT ADJACENT TO DOOR LIFT MOTOR.
3. PROVIDE A 4"X4"X1" JUNCTION BOX, FLUSH MOUNTED WITH WALL FOR PUSH BUTTON INSTALLATION. PUCH BUTTON SHALL CONTROL PEDESTRIAN WARININGS SIGNS AND FLASHER BEACON LIGHT. RE: 1/E101 FOR LOCATIONS OF WARNING SIGNS. COORDINATE EXACT LOCATION AND HEIGHT OF PUSH BUTTON PRIOR TO ROUGH-IN. RE: 3/E901.
4. PROVIDE A 4"X4"X1" JUNCTION BOX AND MOUNT FLUSH WITH WALL FOR FIRE BAY OVERHEAD DOORS CONTROLS.
5. PROVIDE 4"X4"X1" WALL FLUSH MOUNTED JUNCTION BOX FOR ELECTRONIC READER. RE: ARCHITECTURAL DRAWINGS FOR MOUNTING HEIGHT. 1
6. PROVIDE A 4"X4"X3/4" JUNCTION BOX, FLUSH MOUNTED ON WALL FOR MOTORIZED DOOR CONTROLS.
7. PROVIDE A FLUSH MOUNTED JUNCTION BOX FOR POWER TO AIR SCRUBBER CONTROL PANEL. VERIFY AND COORDINATE MOUNTING HEIGHT AT JOB SITE PRIOR TO ROUGH-IN.



1 **New Power Floor Plan - Phase 2**
1/8" = 1'-0"

PROJECT

Fire Station No. 30

911 Gembler Road

REVISIONS

1	ADDENDUM 03	01/15/2016

CONSULTANT

CNG engineering
1917 N. New Braunfels Ave, Ste. 201
San Antonio, Texas 78208
(210) 224-8841, (210) 224-8824 FAX
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ENGINEER

STATE OF TEXAS
DOUGLAS W. SCHULZE
80707
LICENSED
PROFESSIONAL ENGINEER
11/15/2016

ARCHITECT

DRAWN BY Author
REVIEWED BY Checker

100% CONSTRUCTION DOCUMENTS

BEATY PALMER ARCHITECTS

PROJECT NUMBER 1417
DATE 11.05.2015
SHEET NUMBER **E302**

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LIGHTING FIXTURE SCHEDULE

TYPE	LAMPS	MOUNTING	MOUNT HEIGHT	VOLTS	WATTS	DESCRIPTION	MANUFACTURER/CATALOG NO.
A	1-42W LED	RECESSED GRID	CEILING	120	42	2'X4' LED TYPE RECESSED LIGHT FIXRUE. LED DRIVER.	MERCURY LIGHTING - LFR-24G-42/4100/40K-UNI-ZK1 SERIES
AE	1-42W LED	RECESSED GRID	CEILING	120	42	SAME AS TYPE 'A' EXCEPT WITH BATTERY BACKUP BALLAST.	MERCURY LIGHTING - LFR-24G-42/4100/40K-UNI-ZK1 SERIES
A1	1-42W LED	RECESSED GRID	CEILING	120	42	SAME AS TYPE A FIXTURE EXCEPT WITH OVERLAPPING FLANGE TRIM.	MERCURY LIGHTING - LFR-FK24-42/4100/40K-UNI-ZK1 SERIES
A1E	1-42W LED	RECESSED GRID	CEILING	120	43	SAME AS TYPE A1 FIXTURE EXCEPT WITH BATTERY BACKUP BALLAST	MERCURY LIGHTING - LFR-FK24-42/4100/40K-UNI-ZK1 SERIES
B	2-28W T8 4100K	CHAIN HUNG	9' A.F.F. OR WALL	120	56	4' NARROW STRIP FIXTURE ELECTRONIC INSTANT START BALLAST AND WIREGUARD OPTION.	MERCURY LIGHTING - MM-C, MM-P SERIES
BE	2-28W T8 4100K	CHAIN HUNG	9' A.F.F. OR WALL	120	56	SAME AS TYPE 'B' EXCEPT WITH A BATTERY BACKUP BALLAST.	MERCURY LIGHTING - MM-C, MM-P SERIES
C	149W LED 4100K	SURFACE	CEILING	120	149	24" LENGTH HIGH BAY LINEAR LED INDUSTRIAL LUMINAIRE. LED DRIVER.	MERCURY LIGHTING - LHB5-2-16000-40K-UNI
CA	2-26W CFL	SURFACE	CEILING	120	143	24" - 3 BLADE FAN WITH LIGHT KIT.	EMERSON TILO CF130WW00
D	1-26W TRT	RECESSED	CEILING	120	26	7" OPEN COMPACT FLUORESCENT DOWNLIGHT WITH SPECULAR CLEAR "ALZAK" FINISH. POLISHED FLANGED.	VANTAGE LIGHTING - A7HF
DE	1-26W TRT	RECESSED	CEILING	120	26	SAME AS TYPE 'D' EXCEPT WITH EMERGENCY BATTERY BACKUP BALLAST	VANTAGE LIGHTING - A7HF
DR	1-26W CFL	PENDANT	CEILING	120	120	52" - 3 BLADE FAN WITH LIGHT KIT	THE MODERN FAN COMPANY - NIMBUS
D1	1-26W TRT	RECESSED	CEILING	120	26	7" TEMPERED CLEAR LENSED COMPACT FLUORESCENT DOWNLIGHT WITH SPECULAR CLEAR "ALZAK" FINISH AND POLISHED FLANGED. U.L. WET LOCATION.	VANTAGE LIGHTING - A7HF
D2	1-26W TRT	RECESSED	CEILING	120	26	7" OPEN COMPACT FLUORESCENT WALLWASH DOWNLIGHT WITH SPECULAR CLEAR "ALZAK" FINISH. POLISHED FLANGED.	VANTAGE LIGHTING - A7HF
D3	1-4.3W LED	SURFACE	UNDERCABINET	120	4.3	UNDERCABINET LED TYPE, SURFACE MOUNTED LIGHT FIXTURE. 24VDC, POWERED BY TRANSFORMER.	FLX SPOT DVS DVS4A
G	1-14W T5	WALL	84" A.F.F.	120	14	30" LUMINAIRE. OPAL WHITE ACRYLIC DIFFUSER PANELS. EXTRUDED ALUMINUM CORNER TRIM BARS. LIGHT SILVER HOUSING. INTEGRAL ELECTRONIC BALLAST. PROVIDE PULL CHAIN.	MANNING LIGHTING - LB-555
G1	1-14W T5	WALL	84" A.F.F.	120	14	30" LUMINAIRE. OPAL WHITE ACRYLIC DIFFUSER PANELS. EXTRUDED ALUMINUM CORNER TRIM BARS. LIGHT SILVER HOUSING. INTEGRAL ELECTRONIC BALLAST. WALL SWITCH CONTROLLED. PROVIDE PULL CHAIN	MANNING LIGHTING - LB-555
J	2-60W CFL	WALL	SEE ARCHITECTURAL	120	120	RED, GREEN TRAFFIC LIGHT FIXTURE. INCLUDE ALL MTG. HARDWARE FOR WALL MOUNTING, TRAFFIC SIGNAL BULBS BY MANUFACTURER.	LIGHTS TO GO PSRG
K	1-32W CFL	RECESSED		120	32	DAMP LOCATION DOWNLIGHT	LUMUX WS500-PL32-120-BLACK
KE	1-32W CFL	RECESSED		120	32	SAME AS TYPE 'K', EXCEPT WITH EMERGENCY BATTERY BACKUP BALLAST	LUMUX WS500-PL32-120-BLACK-IBP
L	2-F25T8 4100K	WALL	10' A.F.F.	120	56	6' WALL MOUNT INDIRECT UPLIGHT. EXTRUDED ALUMINUM MOUNTING PLATE, ELECTRONIC BALLAST, SPECULAR EXTRUDED ALUMINUM REFLECTOR.	ELLIPTIPAR F-106-1A132-S-01-1
M	1-18W TT	RECESSED		120	18	RECESSED HOLE IN THE WALL LIGHT NICHE	ELP - HITW SERIES
N	1-57W TT	RECESSED		120	57	RECTANGULAR RECESSED MOUNTED COMPACT FLUORESCENT LIGHT	KIRLIN FRT-04092
NE	1-57W TT	RECESSED		120	57	SAME AS TYPE 'N' EXCEPT WITH EMERGENCY BATTERY BACKUP BALLAST	KIRLIN FRT-04092
P	21W FAN	PENDANT EXTENDED		120	22	60 INCH FAN WITH EC MOTOR AND WITH DIGITAL INVERTER. ALUMINUM FINISH	HAIKU 60 S3150-X2-AB-04-03-C-F421
Q	11.7W	SYRFACE	STRUCTURAL MOUNTED	120	11.7	SURFACE MOUNTED LED TYPE, ADJUSTABLE LIGHT FIXTURE.	PRIMUS LIGHTING ALX3-FRL-LED-H-UNV-SM
X1	RED LED	CANOPY MOUNTING KIT		120		SINGLE FACE, DIE-CAST ALUMINUM EXIT SIGN WITH UNIVERSAL FACEPLATES, WHITE STENCIL FACE, RED LETTER COLOR, AND WHITE HOUSING. 90-MINUTE NICKEL-CADMIUM BATTERY.	EMERGI-LITE WW-P-1-R
X2	RED LED - (2) 12W	WALL MOUNTED		120	24W	SINGLE FACE, DIE-CAST ALUMINUM EXIT SIGN, WHITE FACE, RED LETTER COLOR, AND WHITE HOUSING. 90-MINUTE NICKEL-CADMIUM BATTERY. TWO HEAD 12W MR16 LIGHTS	EMERGI-LITE W-PR-1224M-1-R-2-MK
EX-1	1-200W LED	POLE RE; 2/E801	30'	MVOLT	200	DIE-CAST ALUMINUM ROADWAY MULTI-PURPOSE LUMINAIRE. TYPE 3 DISTRIBUTION. 12" ARM MOUNT. MOUNT ON A 25'-0" SQUARE POLE.	LITHONIA LIGHTING - D-SERIES DSX2LED-100C-1000-40K-T4M-MVOLT
EX-1A	1-200W LED	POLE RE; 2/E801	30'	MVOLT	200	DIE-CAST ALUMINUM ROADWAY MULTI-PURPOSE LUMINAIRE. TYPE 4 DISTRIBUTION. 12" ARM MOUNT.	LIGHTING SCIENCE FRFTAR-200W-NW-P4-R4
EX2	1-75W LED	GROUND		MVOLT	75	DIE-CAST AND EXTRUDED ALUMINUM LINEAR WALL WASH FOR SIGN	CORONA CX-1-48-8-BW-6-75-U
EX3	1-52W LED	GROUND MOUNT		MVOLT	52	FLAG POLE FLOODLIGHT WITH NARROW BEAM DISTRIBUTION. DIE-CAST ALUMINUM HOUSING. VISOR SHIELD FOR NARROW BEAM PROJECTION.	LYTESCAPER LSP2-52-CW-N11-U-DM-V
EX-4	1-71W LED	WALL		MVOLT	71	WALL MOUNT HEAVY DUTY CAST ALUMINUM FIXTURE. TYPE 4 DISTRIBUTION. TEMPERED GLASS LENS. WET LOCATION RATED.	LITHONIA LIGHTING - D-SERIES DSXW2LED-1000-40KT4M-MVOLT
EX-5E	1-40W	WALL	ABOVE DOOR	120	40	EXTERIOR WALL MOUNTED EMERGECY LIGHTING FIXTURE. PROVIDE EMERGENCY BACKUP BALLAST ELCW.	LITHONIA LIGHTING - D-SERIES DSXW1LED-10C-1000-40K-T4M-MVOLT
EX-6	1-40W	GROUND MOUNT	GRADE	120	40	EXTERIOR GROUND MOUNTED SIGNAGE LIGHTING FIXTURE. COORDINATE DIRECTION OF ILLUMINATION ON JOB SITE.	FC LIGHTING FCD7002-LED-3K-2800-AYM

EQUIPMENT CONNECTION SCHEDULE

EQUIPMENT TAG	VOLTAGE / PHASE	KW HEAT	VOLTAGE / PHASE	MOTOR (HP)	EQUIPMENT (FLA)	EQUIPMENT (MCA)	OCP	DISCONNECTING MEANS	ENCLOSURE NEMA RATING	WIRE & CONDUIT	CIRCUIT NUMBER	NOTES
FAN COIL UNITS												
FCU-1	---	14.4	208/1	1	77	96	100	240V/100A/NF/HD	N1	2#2, 1#8GND, IN 1 1/4"C.	'P2-3,5'	3,5,7
FCU-2	---	---	208/1	3/4	11	14	20	20A MOTOR RATED SWITCH	N1	2#10. 1#10GND, IN 3/4"C.	'P2-6'	3,5,7
FCU-3	---	---	208/1	3/4	11	14	20	20A MOTOR RATED SWITCH	N1	2#10. 1#10GND, IN 3/4"C.	'P2-8'	3,5,7
FCU-4	---	14.1	208/1	1	77	96	100	240V/100A/NF/HD	N1	2#2, 1#8GND, IN 1 1/4"C.	LPE-72,74'	3,5,7
CONDENSING UNITS												
CU-1	---	--	208/1		22	41	60	240V, 60A, NF, HD	N3R	2#6, 1#10GND, IN 1 1/4"C.	'AC-1,3'	3,5
CU-2	---	-	208/1		14	28	45	240V, 60A, NF, HD	N3R	2#6, 1#10GND, IN 1"C.	'AC-2,4'	3,5
CU-3	---	--	208/1		19	28	45	240V, 60A, NF, HD	N3R	2#6, 1#10GND, IN 1"C.	'AC-5,7'	3,5
CU-4	---	--	208/1		33	41	60	240V, 60A, NF, HD	N3R	2#6, 1#10GND, IN 1 1/4"C.	'AC-6,8'	3,5
MINI SPLIT SYSTEMS												
MSCU-1/MSCU-2	---	---	208/1		12	15	20	20A MOTOR RATED SWITCH	N3R	2#10. 1#10GND, IN 3/4"C.	'LPE-4,6'	3,5,7
VENTILATION FANS												
SF-1	---	---	120/1	1/6	1.0	1.2	20	20A MOTOR RATED SWITCH	N1	2#10. 1#10GND, IN 3/4"C.	'P2-17'	3,5
KSF-1	---	---	120/1	1/2	9.8	12.2	20	20A MOTOR RATED SWITCH	N1	2#10. 1#10GND, IN 3/4"C.	'P2-22'	3,5
EXHAUST FANS												
EF-01	---	-	120/1	1/6	1	1.2	20	20A MOTER RATED SWITCH	N1	2#10. 1#10GND, IN 3/4"C.	'P2-13'	3,5
EF-02			120/1	1/6	1	1.2	20	20A MOTER RATED SWITCH	N1	2#10. 1#10GND, IN 3/4"C.	'P2-1'	3,5
EF-03			120/1	1/6	1	1.2	20	20A MOTER RATED SWITCH	N1	2#10. 1#10GND, IN 3/4"C.	'P2-26'	3,5
KEF-1	---	---	120/1	3/4	13.8	17.2	20	20A MOTOR RATED SWITCH	N1	2#10. 1#10GND, IN 3/4"C.	'LPE-41'	3,5
ENERGY RECOVERY UNIT												
ERV-1	---	---	120/1	(2) 1	20.0	24	25	240V/30A/NF/HD	N1	2#10, 1#10GND, IN 3/4"C	'P2-38'	3
GAS UNIT HEATERS												
IUH-1A	--	--	120/1		1	1	20	20A MOTOR RATED SWITCH	N1	2#10. 1#10GND, IN 3/4"C.	'P2'19	3
IUH-1B	--	--	120/1		1	1	20	20A MOTOR RATED SWITCH	N1	2#10. 1#10GND, IN 3/4"C.	'P2-21'	3
IUH-2A			120/1		1	1	20	20A MOTOR RATED SWITCH	N1	2#10. 1#10GND, IN 3/4"C.	'P2-23'	3
HEAT PUMPS												
VRF-1	--	--	208/1		0.8	1	20	20A MOTOR RATED SWITCH	N1	2#10. 1#10GND, IN 3/4"C.	'P2-34,36'	3
VRF-2	--	--	208/1		0.8	0.3	20	20A MOTOR RATED SWITCH	N1	2#10. 1#10GND, IN 3/4"C.	'P2-34,36'	3
VRF-3	--	--	208/1		0.8	0.3	20	20A MOTOR RATED SWITCH	N1	2#10. 1#10GND, IN 3/4"C.	'P2-34,36'	3
VRF-4	--	--	208/1		0.8	0.3	20	20A MOTOR RATED SWITCH	N1	2#10. 1#10GND, IN 3/4"C.	'P2-34,36'	3
VRF-5	**--**	**--**	**208/1**		**0.8**	**0.3**	**20**	**20A MOTOR RATED SWITCH**	**N1**	**2#10, 1#10GND, IN 3/4"C.**	**'P2-34,36'**	**3**
VRCU-1	--	--	208/1		21.6	27.0	30	240V, 30A, NF, HD	N3R	2#10. 1#10GND, IN 3/4"C.	'P2-34,36'	3
HEATING COILS												
EDH-01	208/3	2	-	-	5.5	6.9	20	20A MOTOR RATED SWITCH	N1	2#10. 1#10GND, IN 3/4"C.	'P2-35,37'	
EDH-02	208/3	13.7	-	-	38	47.5	60	240V, 60A, NF, HD	N1	3#6, 1#10GND, 1 1/4" C.	'MDP-7'	
ELECTRIC UNIT HEATERS												
EUH-1	208/1	3	---	---	14	18	20	20A MOTOR RATED SWITCH	N1	2#10. 1#10GND, IN 3/4"C.	'P2-18,20'	3
AIR SCRUBBERS												
AS-01	---	---	120/1		8	10	20	20A RATED SWITCH	N1	3#10, 1#10GND, IN 3/4"C	'LPE-45'	
AS-02	---	---	120/1		8	10	20	20A RATED SWITCH	N1	3#10, 1#10GND, IN 3/4"C	'LPE-47'	
AS-03	---	---	120/1		8	10	20	20A RATED SWITCH	N1	3#10, 1#10GND, IN 3/4"C	'LPE-49'	
AS-04	---	---	120/1		8	10	20	20A RATED SWITCH	N1	3#10, 1#10GND, IN 3/4"C	'LPE-48'	
AS-05	---	---	120/1		8	10	20	20A RATED SWITCH	N1	3#10, 1#10GND, IN 3/4"C	'LPE-50'	
AS-06	---	---	120/1		8	10	20	20A RATED SWITCH	N1	3#10, 1#10GND, IN 3/4"C	'LPE-52'	
ELECTRIC WATER HEATERS												
EWH-1	208/1	2	---	---	7	9	20	20A MOTOR RATED SWITCH	N1	2#10, 1#10GND, IN 3/4"C	'P2-25,27'	3
EWH-2	208/1	2	---	---	7	9	20	20A MOTOR RATED SWITCH	N1	2#10, 1#10GND, IN 3/4"C	'P2-29,31'	3
HWRP-1	--	--	120/1	1/6	2	2	20	20A MOTOR RATED SWITCH	N3R	2#10, 1#10GND, IN 3/4"C	'P2-7'	3
GAS WATER HEATERS												
GWH-1	120/1	-	---	---	1	1	20	20A RATED SWITCH	N1	3#12, 1#12GND, IN 3/4"C	'P2-30'	3
GWH-2	120/1	-	---	---	1	1	20	20A RATED SWITCH	N1	3#12, 1#12GND, IN 3/4"C	'P2-32'	3

14-Jan

NOTES:

1. STARTER PROVIDED , INSTALLED AND WIRED THROUGH DIVISION 26.
2. VFD PROVIDED BY DIVISION 25. INSTALL AND WIRE THROUGH DIVISION 26.
3. DISCONNECT SWITCH PROVIDED , INSTALLED, AND WIRED THROUGH DIVISION 26.
4. CONTROL PANEL PROVIDED BY DIVISION 25. INSTALL AND WIRE THROUGH DIVISION 26.
5. CONTROLS PROVIDED BY DIVISION 25. INSTALL AND WIRE THROUGH DIVISION 26.
6. PROVIDE POWER CONNECTION BETWEEN INDOOR AND OUTDOOR UNIT PER MECHANICAL DRAWINGS/EQUIPMENT CONNECTION SCHEDULE
7. INSTALL SMOKE DETECTORS AS REQUIRED BY MECHANICAL. COORDINATE CONTROLS WITH FIRE ALARM FOR FUNCTIONALITY.

GENERAL NOTES:

1. VERIFY ELECTRICAL REQUIREMENTS WITH MECHANICAL / PLUMBING EQUIPMENT SUBMITTALS PRIOR TO ELECTRICAL ROUGH-IN.

PROJECT

Fire Station No. 30

911 Gembler Road
San Antonio, Texas

REVISIONS

1	ADDENDUM 03	01/15/2016

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1/15/2016

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PROJECT NUMBER
1417
DATE
11-5-2015
SHEET NUMBER
E701

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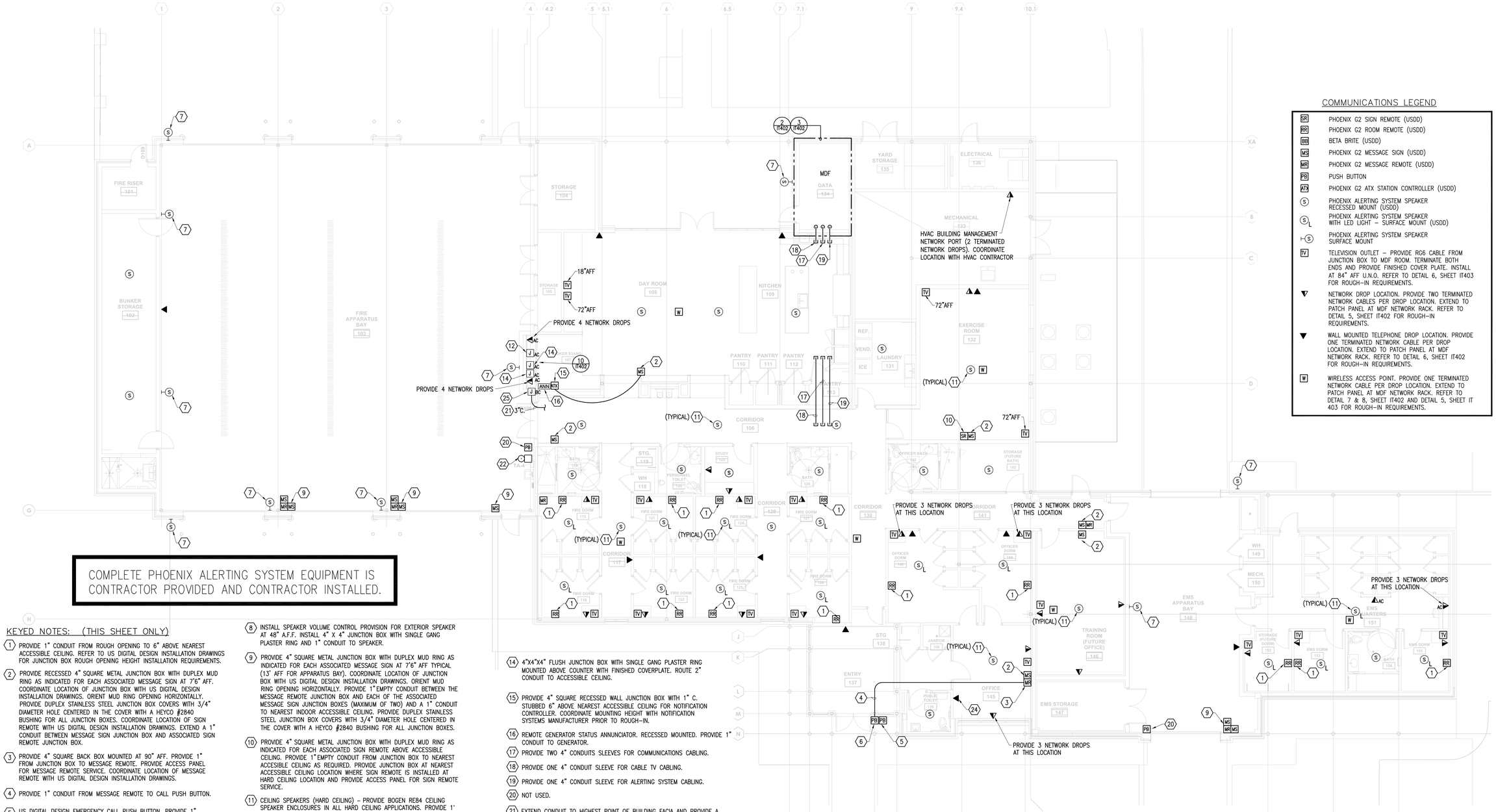

1 1ST FLOOR DATA PLAN
1/8" = 1'-0"

COMPLETE PHOENIX ALERTING SYSTEM EQUIPMENT IS CONTRACTOR PROVIDED AND CONTRACTOR INSTALLED.

COMMUNICATIONS LEGEND

SR	PHOENIX G2 SIGN REMOTE (USDD)
RR	PHOENIX G2 ROOM REMOTE (USDD)
BB	BETA BRITE (USDD)
MS	PHOENIX G2 MESSAGE SIGN (USDD)
MR	PHOENIX G2 MESSAGE REMOTE (USDD)
PB	PUSH BUTTON
ATX	PHOENIX G2 ATX STATION CONTROLLER (USDD)
S	PHOENIX ALERTING SYSTEM SPEAKER RECESSED MOUNT (USDD)
S L	PHOENIX ALERTING SYSTEM SPEAKER WITH LED LIGHT – SURFACE MOUNT (USDD)
S	PHOENIX ALERTING SYSTEM SPEAKER SURFACE MOUNT
TV	TELEVISION OUTLET – PROVIDE RG6 CABLE FROM JUNCTION BOX TO MDF ROOM. TERMINATE BOTH ENDS AND PROVIDE FINISHED COVER PLATE. INSTALL AT 84" AFF U.N.O. REFER TO DETAIL 6, SHEET IT403 FOR ROUGH-IN REQUIREMENTS.
▼	NETWORK DROP LOCATION. PROVIDE TWO TERMINATED NETWORK CABLES PER DROP LOCATION. EXTEND TO PATCH PANEL AT MDF NETWORK RACK. REFER TO DETAIL 5, SHEET IT402 FOR ROUGH-IN REQUIREMENTS.
▼	WALL MOUNTED TELEPHONE DROP LOCATION. PROVIDE ONE TERMINATED NETWORK CABLE PER DROP LOCATION. EXTEND TO PATCH PANEL AT MDF NETWORK RACK. REFER TO DETAIL 6, SHEET IT402 FOR ROUGH-IN REQUIREMENTS.
W	WIRELESS ACCESS POINT. PROVIDE ONE TERMINATED NETWORK CABLE PER DROP LOCATION. EXTEND TO PATCH PANEL AT MDF NETWORK RACK. REFER TO DETAIL 7 & 8, SHEET IT402 AND DETAIL 5, SHEET IT 403 FOR ROUGH-IN REQUIREMENTS.

KEYED NOTES: (THIS SHEET ONLY)

1. PROVIDE 1" CONDUIT FROM ROUGH OPENING TO 6" ABOVE NEAREST ACCESSIBLE CEILING. REFER TO US DIGITAL DESIGN INSTALLATION DRAWINGS FOR JUNCTION BOX ROUGH OPENING HEIGHT INSTALLATION REQUIREMENTS.
2. PROVIDE RECESSED 4" SQUARE METAL JUNCTION BOX WITH DUPLEX MUD RING AS INDICATED FOR EACH ASSOCIATED MESSAGE SIGN AT 7'6" AFF. COORDINATE LOCATION OF JUNCTION BOX WITH US DIGITAL DESIGN INSTALLATION DRAWINGS. ORIENT MUD RING OPENING HORIZONTALLY. PROVIDE DUPLEX STAINLESS STEEL JUNCTION BOX COVERS WITH 3/4" DIAMETER HOLE CENTERED IN THE COVER WITH A HEYCO #2840 BUSHING FOR ALL JUNCTION BOXES. COORDINATE LOCATION OF SIGN REMOTE WITH US DIGITAL DESIGN INSTALLATION DRAWINGS. EXTEND A 1" CONDUIT BETWEEN MESSAGE SIGN JUNCTION BOX AND ASSOCIATED SIGN REMOTE JUNCTION BOX.
3. PROVIDE 4" SQUARE BACK BOX MOUNTED AT 90" AFF. PROVIDE 1" FROM JUNCTION BOX TO MESSAGE REMOTE. PROVIDE ACCESS PANEL FOR MESSAGE REMOTE SERVICE. COORDINATE LOCATION OF MESSAGE REMOTE WITH US DIGITAL DESIGN INSTALLATION DRAWINGS.
4. PROVIDE 1" CONDUIT FROM MESSAGE REMOTE TO CALL PUSH BUTTON.
5. US DIGITAL DESIGN EMERGENCY CALL PUSH BUTTON. PROVIDE 1" CONDUIT TO MESSAGE REMOTE. OWNER TO PROVIDE PUSH BUTTON LABELS FOR CONTRACTOR INSTALLATION. PROVIDE JUNCTION BOXES AS REQUIRED.
6. US DIGITAL DESIGN NON-EMERGENCY CALL PUSH BUTTON. PROVIDE 1" CONDUIT TO MESSAGE REMOTE. OWNER TO PROVIDE PUSH BUTTON LABELS FOR CONTRACTOR INSTALLATION. PROVIDE JUNCTION BOXES AS REQUIRED.
7. PROVIDE SURFACE MOUNTED 4" SQUARE JUNCTION BOX WITH 2" MUD RING AND COVER. PROVIDE 1" CONDUIT TO MESSAGE REMOTE OR OTHER LOCATNON AS INDICATED ON US DIGITAL DESIGN INSTALLATION DRAWINGS. PROVIDE A 3/4" DIAMETER HOLE CENTERED IN THE JUNCTION BOX COVER WITH A HEYCO #2840 BUSHING. MOUNT APPARATUS BAY JUNCTION BOX SPEAKERS AT 13' AFF AND OUTSIDE SPEAKER JUNCTION BOXES AT 11' AFF. EXTERIOR SPEAKER JUNCTION BOXES SHALL BE RECESSED.
8. INSTALL SPEAKER VOLUME CONTROL PROVISION FOR EXTERIOR SPEAKER AT 48" A.F.F. INSTALL 4" X 4" JUNCTION BOX WITH SINGLE GANG PLASTER RING AND 1" CONDUIT TO SPEAKER.
9. PROVIDE 4" SQUARE METAL JUNCTION BOX WITH DUPLEX MUD RING AS INDICATED FOR EACH ASSOCIATED MESSAGE SIGN AT 7'6" AFF TYPICAL (13' AFF FOR APPARATUS BAY). COORDINATE LOCATION OF JUNCTION BOX WITH US DIGITAL DESIGN INSTALLATION DRAWINGS. ORIENT MUD RING OPENING HORIZONTALLY. PROVIDE 1"EMPTY CONDUIT BETWEEN THE MESSAGE REMOTE JUNCTION BOX AND EACH OF THE ASSOCIATED MESSAGE SIGN JUNCTION BOXES (MAXIMUM OF TWO) AND A 1" CONDUIT TO NEAREST INDOOR ACCESSIBLE CEILING. PROVIDE DUPLEX STAINLESS STEEL JUNCTION BOX COVERS WITH 3/4" DIAMETER HOLE CENTERED IN THE COVER WITH A HEYCO #2840 BUSHING FOR ALL JUNCTION BOXES.
10. PROVIDE 4" SQUARE METAL JUNCTION BOX WITH DUPLEX MUD RING AS INDICATED FOR EACH ASSOCIATED SIGN REMOTE ABOVE ACCESSIBLE CEILING. PROVIDE 1"EMPTY CONDUIT FROM JUNCTION BOX TO NEAREST ACCESSIBLE CEILING AS REQUIRED. PROVIDE JUNCTION BOX AT NEAREST ACCESSIBLE CEILING LOCATION WHERE SIGN REMOTE IS INSTALLED AT HARD CEILING LOCATION AND PROVIDE ACCESS PANEL FOR SIGN REMOTE SERVICE.
11. CEILING SPEAKERS (HARD CEILING) – PROVIDE BOGEN RE84 CEILING SPEAKER ENCLOSURES IN ALL HARD CEILING APPLICATIONS. PROVIDE 1' EMPTY CONDUIT TO ENCLOSURE AND RUN TO NEAREST ACCESSIBLE CEILING LOCATION EQUIPMENT OR AS NOTED ON US DIGITAL DESIGN INSTALLATION DRAWINGS.

    CEILING SPEAKERS (SUSPENDED CEILING) – PROVIDE BOGEN TB8 AS APPROPRIATE FOR SPECIFIED SPEAKERS. PROVIDE RE84 CEILING SPEAKER ENCLOSURES OR AS NOTED BY US DIGITAL DESIGN.
12. FURNISH AND INSTALL AN AIPHONE MASTER INTERCOM STATION WITH DOOR RELEASE BUTTON. WIRE INTERCOM STATION AT ENTRY GATE (SEE SITE PLAN) AND PROVIDE CONTROL WIRING TO GATE CONTROLLER TO OPEN AND CLOSE GATES. PROVIDE POWER TRANSFORMER MOUNTED CONCEALED BELOW JOKER STAND. INSTALL STATION ON FLUSH WALL BOX DIRECTED AT SITE. PROVIDE COMPLETE SUBMITTAL INCLUDING COMPLETE WIRING, ROUTING AND CONNECTIONS. INSTALL ALL WIRING IN CONDUIT. PROVIDE CONTROL RELAY AT GATE OPERATOR AS REQUIRED. EXTEND 1" CONDUIT TO 6" ABOVE NEAREST ACCESSIBLE CEILING.
13. NOT USED
14. 4"X4"X4" FLUSH JUNCTION BOX WITH SINGLE GANG PLASTER RING MOUNTED ABOVE COUNTER WITH FINISHED COVERPLATE. ROUTE 2" CONDUIT TO ACCESSIBLE CEILING.
15. PROVIDE 4" SQUARE RECESSED WALL JUNCTION BOX WITH 1" C. STUBBED 6" ABOVE NEAREST ACCESSIBLE CEILING FOR NOTIFICATION CONTROLLER. COORDINATE MOUNTING HEIGHT WITH NOTIFICATION SYSTEMS MANUFACTURER PRIOR TO ROUGH-IN.
16. REMOTE GENERATOR STATUS ANNUNCIATOR. RECESSED MOUNTED. PROVIDE 1" CONDUIT TO GENERATOR.
17. PROVIDE TWO 4" CONDUITS SLEEVES FOR COMMUNICATIONS CABLING.
18. PROVIDE ONE 4" CONDUIT SLEEVE FOR CABLE TV CABLING.
19. PROVIDE ONE 4" CONDUIT SLEEVE FOR ALERTING SYSTEM CABLING.
20. NOT USED.
21. EXTEND CONDUIT TO HIGHEST POINT OF BUILDING FACIA AND PROVIDE A 8"X8" NEMA 3R JUNCTION BOX WITH COVER PLATE FOR CABLE INSTALLATION OF ANTENNA CABLE.
22. INTRUSION ALARM BELL. REFER TO CITY OF SAN ANTONIO'S PHYSICAL SECURITY SYSTEM INFRASTRUCTURE GUIDELINE FOR ADDITIONAL REQUIREMENTS.
23. ALERTING SYSTEM VOLUME CONTROL PUSHBUTTON. PROVIDE SINGLE GANG JUNCTION BOX WITH 1" CONDUIT TO NEAREST ACCESSIBLE CEILING. PUSH BUTTON AND WIRING TO BE PROVIDED AND INSTALLED BY OWNER.
24. PROVIDE TWO NETWORK DROPS TO FACP.
25. 4"X4"X4" FLUSH JUNCTION BOX WITH COVERPLATE BELOW COUNTER. TERMINATE 3" ANTENNA CONDUIT IN JUNCTION BOX.

GENERAL NOTES: (THIS SHEET ONLY)

1. CONDUIT LINES SHOWN ON DRAWING ARE DIAGRAMMATIC. CONTRACTOR SHALL VERIFY FIELD CONDITIONS AND CHOOSE APPROPRIATE CONDUIT ROUTING. IN THE EVENT THAT APPROXIMATE CONDUIT ROUTING SHOWN ON PLANS IS NOT FEASIBLE, CONTRACTOR SHALL NOTIFY ARCHITECT/ENGINEER.
2. LOCATIONS OF DEVICES ARE DIAGRAMMATICAL. EXACT LOCATIONS SHALL BE DETERMINED IN THE FIELD. CONTRACTOR SHALL NOTIFY ENGINEER OF ANY CONFLICTS PRIOR TO ROUGH-IN.
3. REFER TO KEYED NOTES FOR ADDITIONAL CONDUIT AND JUNCTION BOX REQUIREMENTS.
4. COORDINATE ADDITIONAL CONDUIT AND JUNCTION BOX REQUIREMENTS WITH WITH US DIGITAL DESIGN (USDD) INSTALLATION DRAWINGS PRIOR TO ROUGH-IN.
5. PROVIDE ALL EMPTY CONDUITS WITH NYLON PULLSTRING AND PLASTIC BUSHINGS AT EACH END.
6. FIRE ALARM DEVICES SHOWN MOUNTED ON CONCRETE TILT WALLS SHALL BE COORDINATED WITH ARCHITECT ON WHETHER DEVICES SHALL BE FLUSH MOUNTED OR SURFACE MOUNTED.
7. ALL COMMUNICATIONS JUNCTION BOXES SHALL BE AT MINIMUM 4 11/16"X 4 11/16"X 2 1/8" SIZE
8. ALL COMMUNICATIONS CABLING REQUIRED FOR USDD SYSTEM TO BE PROVIDED BY USDD SYSTEM INSTALLER UNDER THIS CONTRACT.
9. REFER TO USDD SYSTEM INSTALLATION DRAWINGS FOR FINAL CONDUIT AND CABLING REQUIREMENTS. COMPLETE USDD PHOENIX ALERTING SYSTEM EQUIPMENT IS CONTRACTOR PROVIDED AND CONTRACTOR INSTALLED. CONTRACTOR TO INSTALL ALL NECESSARY RACEWAYS AND BACK BOXES REQUIRED FOR COMPLETE INSTALLATION UNDER BASE CONTRACT. RACEWAYS AND BOXES SERVING THE US DIGITAL DESIGN (USDD) PHOENIX ALERTING SYSTEM SHOWN ON THIS DRAWING ARE SHOWN FOR DESIGN INTENT. CONFIRM AND COORDINATE LOCATIONS AND REQUIREMENTS WITH VENDOR (USDD) PRIOR TO ROUGH-IN.
10. UNLESS OTHERWISE NOTED, EXTEND ALL DATA OUTLET CONDUITS FROM JOKER'S STAND TO NEAREST ACCESSIBLE CEILING.
11. ALL NETWORK CABLING IS TO BE INSTALLED AS PART OF THIS CONTRACT.

PROJECT

Fire Station No. 30

911 Gembler Road
San Antonio, Texas

REVISIONS

1	ADDENDUM 03	01/15/2016

CONSULTANT

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100% CONSTRUCTION DOCUMENTS

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PROJECT NUMBER

DATE
11-5-2015

SHEET NUMBER
IT401

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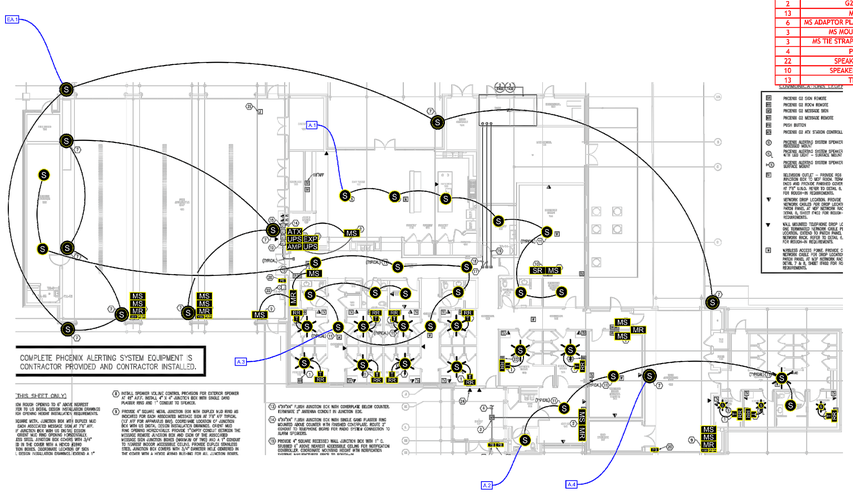
COMPLETE PHOENIX ALERTING SYSTEM EQUIPMENT IS CONTRACTOR PROVIDED AND CONTRACTOR INSTALLED.

NOTES:

1. SEE ARCHITECTURAL SPECIFICATIONS FOR ALL ROUGH-IN AND INSTALLATION DETAILS.
2. US DIGITAL DESIGNS DOES NOT SUPPLY BACK BOXES, CONDUITS, OR MOUNTING FASTENERS.
3. US DIGITAL DESIGNS FIRE STATION ALERTING PLANS ARE DIAGRAMMATIC AND FOR QUOTING PURPOSES ONLY. DRAWING MAY NOT BE TO SCALE.

NOTE: RELAY IF NIGHT MUTE NEEDED USE G2 ATX RELAY OUTPUT.



US DIGITAL DESIGNS	
Count	Name
1	EXTERNAL AMPLIFIER (SG-100W)
1	G2 ATX STATION CONTROLLER
1	G2 EXPANSION UNIT (G2-EXP-12)
14	G2 LED SPEAKER (G2-LYL-HC-70)
6	G2 MESSAGE REMOTE (G2-MR)
13	G2 ROOM REMOTE (G2-RR)
1	G2 SIGN REMOTE (G2-SR)
2	G2 UPS (G2-UPS)
13	MESSAGE SIGN
6	MS ADAPTOR PLATE - V100 (MS-ADPT-V100)
3	MS MOUNT (MS-MNT-ART-5)
3	MS TIE STRAPS - PAIR (MS-ADPT-STRP)
4	PUSH BUTTON
22	SPEAKER FLUSH MOUNT
10	SPEAKER WEATHER-PROOF
13	TRANSFORMER

SYMBOL	DESCRIPTION
ATX	G2 ATX STATION CONTROLLER
G2	PHOENIX G2 STATION CONTROLLER
EXP	G2 EXPANSION MODULE
IO	G2 I/O REMOTE
MR	G2 MESSAGE REMOTE
MS	G2 MESSAGE SIGN
RR	G2 ROOM REMOTE
SR	G2 SIGN REMOTE
HDT	G2 HDTV REMOTE
CIR	G2 COLOR INDICATOR REMOTE
	G2 LED SPEAKER, FLUSH MOUNT
	G2 LED SPEAKER, METAL BOX
PB	OEM PUSH BUTTON
STR	OEM STROBE LIGHT
AMP	OEM AMPLIFIER
T	OEM TRANSFORMER
	SPEAKER, WEATHER-PROOF
	SPEAKER, FLUSH MOUNT
	SPEAKER, METAL BOX

POE SCHEDULE	
Count	Name
1	G2 SIGN REMOTE (G2-SR)
6	G2 MESSAGE REMOTE (G2-MR)
13	G2 ROOM REMOTE (G2-RR)

POE = USDD devices requiring POE may be connected to
G2 ATX Power-Over-Ethernet port 1-8, or G2 Expansion Module(s) ports 1-12.
A.n = G2 ATX Amplifier 1...4
EA.n = G2 External Amplifier 1...n
N.n = Note 4...99

US DIGITAL DESIGNS
www.stationalerting.com

project	SAN ANTONIO (TX)
building	FS30
filename	USDD.SATX.FS30.DWG
date	10 SEPT 2015
design by	JB

GENERAL NOTES: (THIS SHEET ONLY)

1. FIRE STATION ALERTING SYSTEM (PHOENIX SYSTEM) IS DESIGNED BY US DIGITAL DESIGN (USDD). COMPLETE PHOENIX ALERTING SYSTEM EQUIPMENT IS CONTRACTOR PROVIDED AND CONTRACTOR INSTALLED. VENDOR OF PHOENIX ALERTING SYSTEM EQUIPMENT SHALL BE US DIGITAL DESIGN. INSTALLATION OF SYSTEM SHALL BE PERFORMED BY US DIGITAL DESIGN (USDD) APPROVED INSTALLER ONLY. CONTACT USDD REPRESENTATIVE ERICK HANSON AT 877–551–8733 FOR COORDINATION.
2. USDD PHOENIX FIRE ALERTING SYSTEM IS SHOWN FOR DESIGN INTENT. ALERTING SYSTEM SHALL BE DESIGNED, AND FULLY COMMISSIONED BY USDD TO BE INCLUDED UNDER THIS CONTRACT.
3. COMPLETE INSTALLATION OF FIRE ALERTING SYSTEM INCLUDING BUT NOT LIMITED TO WIRING, CONDUIT, BOXES, SUPPORT, PHOENIX EQUIPMENT DEVICES, AND PROGRAMMING SHALL BE INCLUDED IN THIS CONTRACT. COORDINATE SYSTEM INSTALLATION WITH USDD APPROVED INSTALLER PRIOR TO ROUGH–IN.
4. USDD DRAWING IS INCLUDED FOR REFERENCE PURPOSES ONLY. OBTAIN FINAL INSTALLATION DRAWING FROM US DIGITAL DESIGN.
5. LOCATIONS OF DEVICES ARE DIAGRAMMATICAL. EXACT LOCATIONS SHALL BE DETERMINED IN THE FIELD. CONTRACTOR SHALL NOTIFY ENGINEER OF ANY CONFLICTS PRIOR TO ROUGH–IN.
6. COORDINATE ADDITIONAL CONDUIT AND JUNCTION BOX REQUIREMENTS WITH WITH US DIGITAL DESIGN INSTALLATION DRAWINGS PRIOR TO ROUGH–IN.
7. REFER TO FINAL USDD SYSTEM INSTALLATION DRAWINGS FOR FINAL CONDUIT AND CABLING REQUIREMENTS.
8. CONTRACTOR TO SUBMIT USDD INSTALLATION SHOP DRAWINGS BASED ON FINAL CONTRACT DOCUMENTS FOR REVIEW PRIOR TO ROUGH–IN.
9. CONTRACTOR TO INCLUDE ONE YEAR SUPPORT ON SYSTEM.
10. CONTRACTOR TO INCLUDE ONE YEAR PARTS AND LABOR ON SYSTEM INSTALLATION.
11. CONDUIT, RACEWAYS, SUPPORT, JUNCTION BOXES AND BACKBOXES ARE TO BE PROVIDED AND INSTALLED BY THE GENERAL CONTRACTOR AND ARE NOT INCLUDED IN THE USDD ALLOWANCE AMOUNT.

PROJECT

Fire Station No. 30

911 Gembler Road
San Antonio, Texas

REVISIONS

1	ADDENDUM 03	01/15/2016

CONSULTANT

CNG engineering
1917 N. New Braunfels Ave, Ste. 201
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Firm #: F-7964

ENGINEER

ARCHITECT

DRAWN BY
JC

100% CONSTRUCTION DOCUMENTS

BEATY PALMER ARCHITECTS

PROJECT NUMBER

DATE
11-5-2015

SHEET NUMBER
IT405

Beaty Palmer Architects, Inc.
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MECHANICAL GENERAL NOTES:

1. OUTSIDE AIR INTAKE OPENINGS SHALL BE A MINIMUM OF 15 FEET FROM ANY HAZARDOUS OR NOXIOUS CONTAMINANT SOURCE.

2. ALL SUPPLY AIR DUCT SHALL HAVE 2" EXTERNAL INSULATION.

3. DUCTS SHALL BE GALVANIZED STEEL, EXCEPT WHERE NOTED. SUBSTITUTIONS OF ROUND OR RECTANGULAR SHALL BE OF EQUAL OR LESS AIR RESISTANCE PER ASHRAE TABLES. CONNECT TO ALL SUPPLY AIR DIFFUSERS WITH FLEXIBLE DUCT, LENGTH NOT TO EXCEED 6 FEET.

4. INTERNAL LINING OF DUCT SHALL NOT BE USED, EXCEPT WHERE NOTED. INSULATED FLEXIBLE DUCTS SHALL HAVE INNER SURFACES OF MYLAR OR FOIL.

5. DUCTS MAY BE LARGER THAN SIZE INDICATED, AS CONVENIENT, EXCEPT WHERE INTERFERENCES RESULT FROM OVER SIZING DUCT.

6. PROVIDE VANDAL-PROOF, CLEAR, LOCKABLE ENCLOSURES FOR ALL THERMOSTATS. IN PUBLIC AREAS.

7. DUCT RUN SECTIONS NOT LABELED FOR SIZE SHALL BE THE SAME SIZE AS NEAREST SIZE LABEL UPSTREAM.

8. ALL FIELD CONTROL WIRING AND INTERLOCK WIRING SHALL BE FURNISHED AND INSTALLED BY MECHANICAL CONTRACTOR.

9. THE INSTALLATION SHALL BE IN STRICT COMPLIANCE WITH APPLICABLE NATIONAL, AND LOCAL CODES AND REGULATIONS AND TO THE SATISFACTION OF ALL AUTHORITIES HAVING JURISDICTION.

10. PROVIDE MANUAL DAMPERS TO SUPPLY DIFFUSERS AND EXHAUST GRILLES. PROVIDE ROTO-TWIST DAMPERS FOR SUPPLY DIFFUSERS AND EXHAUST GRILLS IN INACCESSIBLE CEILINGS.

11. PROVIDE ACCESS HATCHES FOR EQUIPMENT IN SPACES THAT ARE NOT ACCESSIBLE.

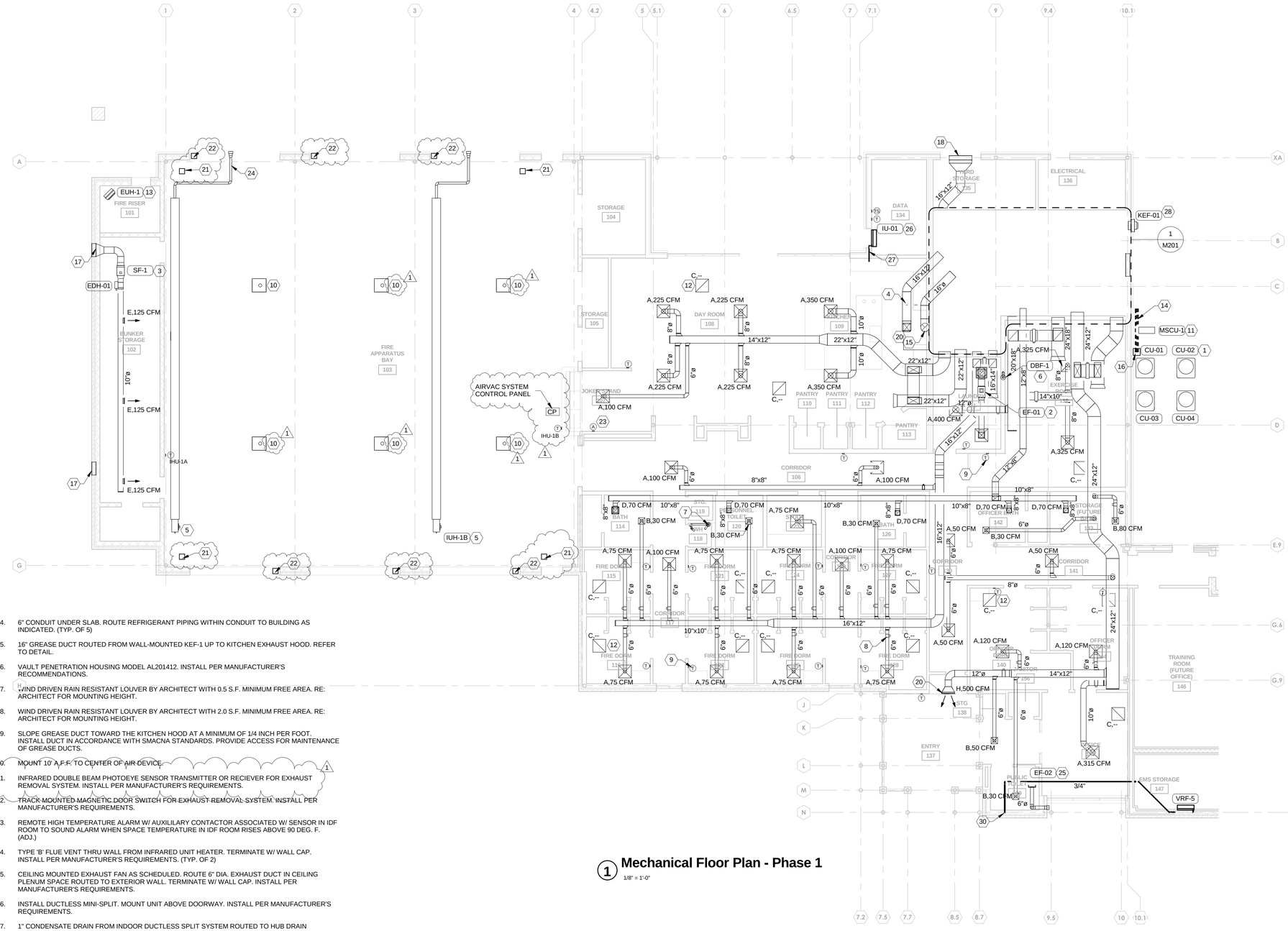
12. THE CONTRACTOR IS TO KEEP THE JOB SITE NEAT AND ORDERLY. DO NOT STORE ANY EQUIPMENT ON THE FLOOR OF THE JOB SITE.

13. PROVIDE A 2-HOUR RATED FOIL-FACED DUCT WRAP INSULATION FOR GREASE DUCTS RATED FOR A MINIMUM OF 2000 DEG F AND ZERO CLEARANCE TO COMBUSTIBLES.

14. CONDENSATE PIPING SHALL BE COPPER.

15. SUPPORT CONDENSATE PIPING TO PREVENT ANY SAG GREATER THAN 1/2" WHEN FULL OF WATER. CONDENSATE PIPING SHALL BE LEVEL OR SLOPE TOWARD DRAIN, WITH NO SECTIONS THAT DO NOT DRAIN.

16. CONDENSATE PIPING SHALL BE INSULATED 1" MINIMUM, SEALED VAPORTIGHT WITH NO EXPOSED CREVICES. PAINT EXPOSED INSULATION PER ARCHITECT'S DIRECTION.



1 **Mechanical Floor Plan - Phase 1**
1/8" = 1'-0"

MECHANICAL KEYED NOTES:

1. PROVIDE AN AIR COOLED CONDENSING UNIT AS SCHEDULED. MOUNT UNIT ON A 4" HOUSEKEEPING PAD AS RECOMMENDED BY THE MANUFACTURER. PROVIDE NEOPRENE INSULATED PADS AT EQUIPMENT UNDERNEATH BASERAIL OF UNIT. INSTALL PER MANUFACTURER'S REQUIREMENTS.

2. 10"X 10" TO EXHAUST FAN EF-01 MOUNTED ABOVE CEILING. PROVIDE TOGGLE TYPE SWITCH ADJACENT TO ROOM LIGHT SWITCH. REFER TO DETAIL FOR ADDITIONAL INFORMATION.

3. INLINE SUPPLY FAN AS INDICATED ON SCHEDULE. SUSPEND FROM STRUCTURE ABOVE PER MANUFACTURER'S INSTALLATION INSTRUCTIONS.

4. 16"X12" FROM KITCHEN HOOD TO MAKE UP AIR SUPPLY INLINE FAN W/ ELECTRIC DUCT HEATER. SUSPEND FROM STRUCTURE ABOVE PER MANUFACTURER'S INSTALLATION INSTRUCTIONS. TERMINATE WITH WALL LOUVER.

5. GAS-FIRED INFARED HEATER. SUSPEND HEATER FROM STRUCTURE ABOVE PER MANUFACTURER'S REQUIREMENTS. ROUTE FULL SIZED STAINLESS STEEL TYPE 'B' FLUE VENT THRU WALL AND TERMINATE WITH A WALL CAP. COORDINATE MOUNTING HEIGHT WITH ARCHITECTURAL, STRUCTURAL AND FIRE DEPARTMENT EQUIPMENT. (TYP. OF 6)

6. FULL SIZE DRYER VENT. PROVIDE LINT TRAP AND ROUTE EXHAUST DUCT UP THRU WALL TO DRYER BOOSTER FAN DBF-1, LOCATED IN CEILING PLENUM SPACE. CONTRACTOR SHALL ENSURE WIRING COMPLIES IN ACCORDANCE WITH UL 705 & NFPA 70. TERMINATE WITH ROOF CAP. INSTALL PER MANUFACTURER'S REQUIREMENTS.

7. 6" CONCENTRIC VENT UP TO ROOF FROM WATER HEATER. TERMINATE ABOVE ROOF WITH A CONCENTRIC ROOFCAP. INSTALL PER MANUFACTURER'S RECOMMENDATIONS AND REQUIREMENTS.

8. VVT ZONE DAMPER AS SHOWN. INSTALL PER MANUFACTURER'S REQUIREMENTS. (TYP.) FOR SIZING RE: M403.

9. MOUNT THERMOSTAT ON WALL AT APPROXIMATELY 48" A.F.F. COORDINATE EXACT LOCATION WITH ARCHITECT PRIOR TO INSTALLATION. (TYP.) REFER TO DETAIL.

10. AIRVAC 911 ENGINE EXHAUST REMOVAL SYSTEM W/ CONTROL PANEL. SUSPEND 18" BELOW STRUCTURE. INSTALL PER MANUFACTURER'S REQIREMENTS.

11. AIR COOLED CONDENSING UNIT FOR DUCTLESS MINI-SPLIT. INSTALL PER MANUFACTURER'S REQUIREMENTS.

12. SOUND BOOTS ON ALL R/A DEVICES. (TYP.)

13. PROVIDE ELECTRIC UNIT HEATER FOR FIRE RISER ROOM. INSTALL PER MANUFACTURER'S REQUIREMENTS.
.

14. 6" CONDUIT UNDER SLAB. ROUTE REFRIGERANT PIPING WITHIN CONDUIT TO BUILDING AS INDICATED. (TYP. OF 5)

15. 16" GREASE DUCT ROUTED FROM WALL-MOUNTED KEF-1 UP TO KITCHEN EXHAUST HOOD. REFER TO DETAIL.

16. VAULT PENETRATION HOUSING MODEL AL201412. INSTALL PER MANUFACTURER'S RECOMMENDATIONS.

17. WIND DRIVEN RAIN RESISTANT LOUVER BY ARCHITECT WITH 0.5 S.F. MINIMUM FREE AREA. RE: ARCHITECT FOR MOUNTING HEIGHT.

18. WIND DRIVEN RAIN RESISTANT LOUVER BY ARCHITECT WITH 2.0 S.F. MINIMUM FREE AREA. RE: ARCHITECT FOR MOUNTING HEIGHT.

19. SLOPE GREASE DUCT TOWARD THE KITCHEN HOOD AT A MINIMUM OF 1/4 INCH PER FOOT. INSTALL DUCT IN ACCORDANCE WITH SMACNA STANDARDS. PROVIDE ACCESS FOR MAINTENANCE OF GREASE DUCTS.

20. MOUNT 10' A.F.F. TO CENTER OF AIR DEVICE.

21. INFRARED DOUBLE BEAM PHOTOEYE SENSOR TRANSMITTER OR RECIEVER FOR EXHAUST REMOVAL SYSTEM. INSTALL PER MANUFACTURER'S REQUIREMENTS.

22. TRACK MOUNTED MAGNETIC DOOR SWITCH FOR EXHAUST REMOVAL SYSTEM. INSTALL PER MANUFACTURER'S REQUIREMENTS.

23. REMOTE HIGH TEMPERATURE ALARM W/ AUXILILARY CONTACTOR ASSOCIATED W/ SENSOR IN IDF ROOM TO SOUND ALARM WHEN SPACE TEMPERATURE IN IDF ROOM RISES ABOVE 90 DEG. F. (ADJ.)

24. TYPE 'B' FLUE VENT THRU WALL FROM INFRARED UNIT HEATER. TERMINATE W/ WALL CAP. INSTALL PER MANUFACTURER'S REQUIREMENTS. (TYP. OF 2)

25. CEILING MOUNTED EXHAUST FAN AS SCHEDULED. ROUTE 6" DIA. EXHAUST DUCT IN CEILING PLENUM SPACE ROUTED TO EXTERIOR WALL. TERMINATE W/ WALL CAP. INSTALL PER MANUFACTURER'S REQUIREMENTS.

26. INSTALL DUCTLESS MINI-SPLIT. MOUNT UNIT ABOVE DOORWAY. INSTALL PER MANUFACTURER'S REQUIREMENTS.

27. 1" CONDENSATE DRAIN FROM INDOOR DUCTLESS SPLIT SYSTEM ROUTED TO HUB DRAIN LOCATED IN KITCHEN. REFER TO PLUMBING DRAWINGS FOR COORDINATION.

28. WALL MOUNTED KITCHEN EXHAUST FAN AS SCHEDULED. INSTALL PER MANUFACTURER'S REQUIREMENTS.

29. PROVIDE BYPASS DAMPER FROM FAN COIL UNIT MAIN S/A DUCT TO MAIN R/A DUCT. INSTALL PER MANUFACTURER'S REQUIRMENTS. RE: M404 FOR SIZING.

30. 3/4" CONDENSATE DRAIN FROM VRF -05 ROUTED TO LAVATORY TAILPIECE. REFER TO PLUMBING DRAWINGS AND M-102 FOR COORDINATION.

PROJECT

Fire Station No. 30

911 Gembler Road

REVISIONS

1	ADDENDUM 03	01/15/2016

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LICENSED
PROFESSIONAL ENGINEER
01.15.2016

ARCHITECT

DRAWN BY OE
REVIEWED BY SMM

100% CONSTRUCTION DOCUMENTS

BEATY PALMER ARCHITECTS

PROJECT NUMBER 1417
DATE 11.05.2015
SHEET NUMBER **M101**

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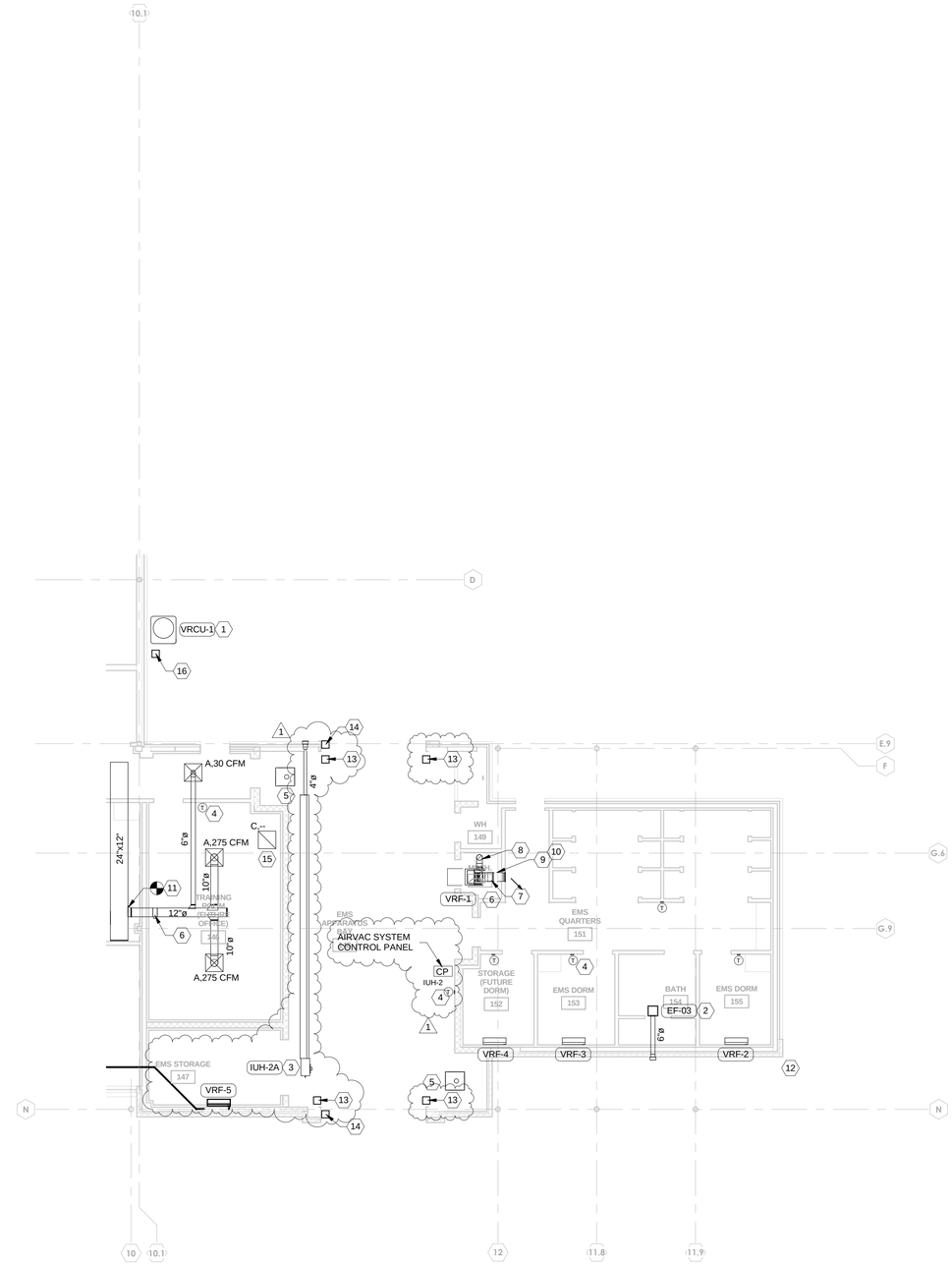
MECHANICAL KEYED NOTES:

1. PROVIDE AN AIR COOLED CONDENSING UNIT AS SCHEDULED. MOUNT UNIT ON A 4" HOUSEKEEPING PAD AS RECOMMENDED BY THE MANUFACTURER. PROVIDE NEOPRENE INSULATED PADS AT EQUIPMENT UNDERNEATH BASERAIL OF UNIT. INSTALL PER MANUFACTURER'S REQUIREMENTS.
2. CEILING MOUNTED EXHAUST FAN AS SCHEDULED. ROUTE 6" DIA. EXHAUST DUCT IN CEILING PLENUM SPACE ROUTED TO EXTERIOR WALL. TERMINATE W/ WALL CAP. INSTALL PER MANUFACTURER'S REQUIREMENTS.
3. GAS-FIRED UNIT HEATER. SUSPEND HEATER FROM STRUCTURE ABOVE PER MANUFACTURER'S REQUIREMENTS. COORDINATE MOUNTING HEIGHT WITH ARCHITECTURAL, STRUCTURAL AND FIRE DEPARTMENT EQUIPMENT.(TYP.)
4. MOUNT THERMOSTAT ON WALL AT APPROXIMATELY 48" A.F.F. COORDINATE EXACT LOCATION WITH ARCHITECT PRIOR TO INSTALLATION. (TYP.) REFER TO DETAIL.
5. AIRVAC 911 ENGINE EXHAUST REMOVAL SYSTEM. SUSPEND 18" BELOW STRUCTURE. INSTALL PER MANUFACTURER'S REQIREMENTS.
6. VVT ZONE DAMPER AS SHOWN. INSTALL PER MANUFACTURER'S REQUIREMENTS. (TYP.) FOR SIZING RE: M404.
7. PROVIDE A FAN COIL UNIT AS SCHEDULED. MOUNT UNIT ON A PLATFORM / BASE PLENUM, INSTALL PER MANUFACTURER'S REQUIREMENTS. ROUTE CONDENSATE PIPING TO FLOOR DRAIN IN WATER HEATER CLOSET.
8. 8" DIA. O/A DUCT UP THRY ROOF. TERMINATE W/ ROOF CAP.
9. 12"X10" S/A DUCT FROM TOP DISCHARGE OF VRF-01 ROUTED TO EMS QUARTERS.
10. 12"X10" R/A DUCT TO BOTTOM OF VRF-01 ROUTED FROM EMS QUARTERS. INSTALL AIR DEVICE 16" A.F.F.
11. CONNECT 12" DIA. S/A DUCT TO 24"X12" S/A DUCT INSTALLED IN PHASE I.
12. WALL-MOUNTED VRF INDOOR UNIT AS SCHEDULED. INSTALL PER MANUFACTURER'S REQUIREMENTS. ROUTE CONDENSATE PIPING TO FLOOR DRAIN IN WATER HEATER CLOSET. (TYP.)
13. INFRARED DOUBLE BEAM PHOTOEYE SENSOR TRANSMITTER OR RECIEVER FOR EXHAUST REMOVAL SYSTEM. INSTALL PER MANUFACTURER'S REQUIREMENTS. 1
14. TRACK MOUNTED MAGNETIC DOOR SWITCH FOR EXHAUST REMOVAL SYSTEM. INSTALL PER MANUFACTURER'S REQUIREMENTS.
15. SOUND BOOTS ON ALL R/A DEVICES. (TYP.)
16. VAULT PENETRATION HOUSING MODEL AL201412. INSTALL PER MANUFACTURER'S RECOMMENDATIONS. ROUTE REFRIGERANT LINES UP EXTERIOR WALL INTO CEILING PLENUM AND TO VRF INDOOR UNITS.



1 **Mechanical Floor Plan - Phase 2**
1/8" = 1'-0"

PROJECT

Fire Station No. 30

911 Gembler Road

REVISIONS

1	ADDENDUM 03	01/15/2016

CONSULTANT

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ENGINEER

STATE OF TEXAS
SCOTT M. MOORE
106184
LICENSED PROFESSIONAL ENGINEER
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ARCHITECT

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BEATY PALMER ARCHITECTS

PROJECT NUMBER 1417

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M102

ELECTRIC UNIT HEATER SCHEDULE

TAG	SERVICE	TYPE	AIR FLOW (CFM)	CAPACITY (KW)	VOLT / PH	MANUFACTURER	MODEL	WEIGHT	NOTES
EUH-1	FIRE RISER ROOM	WALL	160	3.0	208 / 1	REZNOR	EHC-3	25	1,2

NOTES:
1. COLOR MATCH BY ARCHITECT.
2. INSTALL THERMOSTAT BELOW UNIT.

DUCT MOUNTED ELECTRIC HEATING COIL SCHEDULE

TAG	SERVICE	TYPE	AIR FLOW (CFM)	CAPACITY (KW)	STAGES	MINIMUM SIZE (IN)	VOLT / PH	MANUFACTURER	MODEL	NOTES
EDH-01	BUNKER STORAGE	ELECTRIC	250	2.0	1	10 X 8	208/3	REDD-I	CHMS	1,2
EDH-02	KITCHEN	ELECTRIC	960	13.7	1	20 X 12	208/3	REDD-I	CHMS	1,2

NOTES:
1. PROVIDE WALL MOUNTED THERMOSTAT SET TO ENERGIZE COIL AT 40-DEG F.
2. PROVIDE 'FINNED TUBULAR HEATER'.

CoSA Firestation #30

DAIKIN HEAT PUMP SCHEDULE

INDOOR AND OUTDOOR UNIT INFORMATION

	UNIT TAG	MODEL NUMBER	TYPE OF UNIT	EAT DB/WB	TOTAL BTUH	SENSIBLE BTUH	HEAT BTUH	VOLTAGE	PHASE	CFM	MCA	MOCP	WEIGHT LBS
OUT. UNIT	CU-1	RXYMQ36PVJU	HEAT PUMP	105	34929	N/A	38397	208/230	1	N/A	27	30	310
IND. UNITS	VRF-1	FXTQ12PAVJU	VERTICAL AHU	82.7 / 65.7	11454	8643	14000	208/230	1	400	1.1	15	119
	VRF-2	FXAQ07PVJU	WALL MOUNTED	82.7 / 66.2	7288	6848	8700	208/230	1	260	0.3	15	26
	VRF-3	FXAQ07PVJU	WALL MOUNTED	82.7 / 66.2	7288	6848	8700	208/230	1	260	0.3	15	26
	VRF-4	FXAQ07PVJU	WALL MOUNTED	83.0 / 66.3	7315	6916	8700	208/230	1	260	0.3	15	26
	VRF-5	FXAQ07PVJU	WALL MOUNTED	83.0 / 66.3	7315	6916	8700	208/230	1	260	0.3	15	26

Outdoor Unit Notes:
1. Provide Field Installed Hail Guard Accessory

Indoor Fan Coil Notes:
1. Provide field mounted condensate pump on all indoor units
2. Provide BRC1E73 Navigation Stat for all FCU with Auto Change over and Dual Heat and Cool Setpoints
3. Provide 10 year parts, 10 year compressor warranty
***For pricing please contact Direct Expansion Solutions at 210-215-5845**

AIR DEVICE SCHEDULE

TAG	AIR FLOW (CFM)	SUPPLY	RETURN	EXHAUST	NECK SIZE (IN)	MODULE SIZE (IN)	MAX TOTAL PRESSURE DROP (IN WC)	MAX NOISE (NC)	MATERIAL	MANUFACTURER	MODEL	NOTES
A	0 - 135	X			6" Ø	24 X 24	0.05	25	ALUMINUM	PRICE	SCD	1,2,5
	140 - 245	X			8" Ø	24 X 24	0.05	25	ALUMINUM	PRICE	SCD	1,2,5
	250 - 385	X			10" Ø	24 X 24	0.06	25	ALUMINUM	PRICE	SCD	1,2,5
	390 - 550	X			12" Ø	24 X 24	0.07	25	ALUMINUM	PRICE	SCD	1,2,5
	555 - 1070	X			14" Ø	24 X 24	0.17	30	ALUMINUM	PRICE	SCD	1,2,5
B	0 - 135	X			6" Ø	12 X 12	0.03	10	ALUMINUM	PRICE	SCD	1,2,5
	140 - 245	X			8" Ø	12 X 12	0.04	15	ALUMINUM	PRICE	SCD	1,2,5
	241 - 280	X			10" Ø	12 X 12	0.05	15	ALUMINUM	PRICE	SCD	1,2,5
C	0 - 2500		X	X	22 X 22	24 X 24	0.10	25	ALUMINUM	PRICE	80	1,2,3
D	0 - 630		X	X	10 X 10	12 X 12	0.10	25	ALUMINUM	PRICE	80	1,2,3
E	0 - 180	X			-	10 X 6	0.08	10	ALUMINUM	PRICE	SDG-AL	1,2,6,7
F	0 - 275	X			10 X 6	10 X 6	0.09	25	ALUMINUM	PRICE	520	1,2,4
	280 - 420	X			18 X 6	18 X 6	0.09	25	ALUMINUM	PRICE	520	1,2,4
G	0 - 550		X	X	24 X 4	24 X 4	0.10	10	ALUMINUM	PRICE	520	1,2
H	0 - 550		X		18 X 6	18 X 6	0.05	25	ALUMINUM	PRICE	80	1,2,3

NOTES:
1. FURNISH AND INSTALL AIR DEVICE WITH LAY-IN BORDER FRAME FOR LAY IN CEILINGS OR SURFACE MOUNTING FRAME FOR MOUNTING IN GYP. BOARD CEILING OR WALL.
2. COLOR BY ARCHITECT.
3. PROVIDE 1/2" X 1/2" X 1/2" CORE.
4. PROVIDE 45 DEGREE DOUBLE-DEFLECTION.
5. PROVIDE WITH 3-CONE FACE.
6. PROVIDE W/ EXTRACTOR.
7. DUCT MOUNTED AIR DEVICE.

NATURAL GAS RADIANT UNIT HEATER SCHEDULE

TAG	SERVICE	TYPE	INPUT CAPACITY (MBH)	OUTPUT CAPACITY (MBH)	TUBE LENGTH (FT)	VOLT/PH/HZ	MANUFACTURER	MODEL	NOTES
IUH-1A	APPARATUS BAY	CEILING	200.0	-180.0	50	120/1/60	REZNOR	VCTN200A	1,2,3
~~IUH-1B~~	~~APPARATUS BAY~~	~~CEILING~~	~~200.0~~	~~180.0~~	~~50~~	~~120/1/60~~	~~REZNOR~~	~~VCTN200A~~	~~1,2,3~~
IUH-2A	EMS BAY	CEILING	150.0	135.0	30	120/1/60	REZNOR	VCTN150A	1,2,3,4

NOTES:
1. COLOR BY ARCHITECT.
2. PROVIDE WALL-MOUNTED THERMOSTAT.
3. PROVIDE HANGER KIT.
4. PROVIDE WITH SINGLE TUBE HEAT EXCHANGER W/ REFLECTOR.

VENTILATION FAN SCHEDULE

TAG	SERVICE	LOCATION	FAN DATA: AIR FLOW (CFM)	EXT SP (IN WG)	DRIVE TYPE	FAN (RPM)	MOTOR (HP)	VOLT/PH/HZ	SOUND LEVEL (SONES)	INTERLOCK WITH	UNIT PHYSICAL DATA: WIDTH (IN)	LENGTH (IN)	HEIGHT (IN)	OPERATING WEIGHT (LBS)	MANUFACTURER	MODEL	NOTES
SF-1	BUNKER STORAGE	IN-LINE	250	0.50	DIRECT	1,598	1/6	115/1/60	N/A	THERMOSTAT	17	14	14	91	COOK	90SQN12D	1,2,3
KSF-1	KITCHEN HOOD	IN-LINE	1,120	0.50	BELT	2,339	1/2	115/1/60	15.7	KITCHEN HOOD	14	22	14	150	COOK	SQN-B	1,2,3,4,5,6,7

NOTES:
1. PROVIDE A BACKDRAFT DAMPER.
2. PROVIDE WITH PRE-WIRED DISCONNECT.
3. PROVIDE WITH SPEED CONTROLLER.
4. PROVIDE WITH DUCT MOUNTED HEATER, INTERLOCK WITH FAN OPERATION AND KITCHEN HOOD CONTROLS.
5. PROVIDE W/ REMOTE OUTDOOR TEMPERATURE SENSOR.
6. PROVIDE W/ INSULATED CABINET.
7. PROVIDE W/FACTORY INSULATED CABINET.

PROJECT
Fire Station No. 30
911 Gembler Road
San Antonio, Texas

REVISIONS
ADDENDUM 03 **01/15/2016**

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PROFESSIONAL ENGINEER
01.15.2016

ARCHITECT

DRAWN BY
OE
SMM

100% CONSTRUCTION DOCUMENTS

BEATY PALMER ARCHITECTS
PROJECT NUMBER **1417**
DATE **11-5-2015**
SHEET NUMBER **M402**

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GENERAL FIRE PROTECTION NOTE:

THE CONTRACTOR SHALL PROVIDE A NEW WET PIPE SPRINKLER SYSTEM (AS INDICATED ON PLANS) IN ACCORDANCE WITH NFPA 13 & LATEST ADOPTED LOCAL CODES.

COORDINATE THE WORK WITH ALL ARCHITECTURAL, CIVIL, MECHANICAL, ELECTRICAL, PLUMBING AND STRUCTURE DISCIPLINES TO ENSURE THAT A COMPLETELY COORDINATED INSTALLATION IS ACHIEVED. THESE PLANS SERVE AS A GENERAL GUIDE ONLY AND DO NOT REPRESENT ACTUAL FIRE PROTECTION CONSTRUCTION.

BASED ON THE CODES MENTIONED ABOVE THE CONTRACTOR SHALL PROVIDED PIPING & HEADS AS REQUIRED FOR LIGHT HAZARD AREAS, UNLESS NOTED OTHERWISE.

THE FOLLOWING AREAS SHALL RECEIVE ORDINARY HAZARD GROUP 1 COVERAGE HEADS:
1. MECHANICAL AND PUMP ROOMS
2. STORAGE ROOMS
3. JANITOR CLOSETS

HYDRAULIC SHOCK ARRESTER SCHEDULE

P.D.I UNITS	A	B	C	D	E	F
FIXTURE UNITS	1-11	12-32	33-60	61-113	114-154	155-330

P.D.I = PLUMBING & DRAINAGE INSTITUTE
SIZE HSA WHERE SHOWN ON DWGS PER WATER SUPPLY FIXTURE UNITS

PIPE MATERIAL LIST

DOMESTIC WATER PIPING

ABOVE SLAB INSIDE THE BUILDING SHALL BE SEAMLESS ASTM B 88 TYPE L COPPER WATER TUBE WITH WROUGHT COPPER FITTINGS, ANSI B16.22. SOLDER MATERIAL SHALL BE 95.5% LEAD FREE, ASTM B 32. THE USE OF DRILLED-T CONNECTIONS IS NOT PERMITTED.

BELOW SLAB WITHIN 5'-0" OF THE BUILDING SHALL BE ASTM B 88 TYPE K COPPER WATER TUBE WITH WROUGHT COPPER FITTINGS, ANSI B16.22. ALL JOINTS SHALL BE BRAZED. ALL DOMESTIC WATER PIPING ABOVE CRAWL SPACE SHALL USE 1/2" INSULATION.

SANITARY SOIL WASTE AND VENT AND PIPING

ABOVE FLOOR INSIDE BUILDING SHALL BE NO-HUB CAST IRON SYSTEM CONFORMING TO CISPI STANDARD NO. 301-75. NEOPRENE GASKETS SHALL CONFORM TO ASTM STANDARD C564-75.

BELOW SLAB SHALL BE SCHEDULE 40 DWV POLYVINYL CHLORIDE PIPE AND FITTINGS CONIFORMING TO ASTM D-1784-82 WITH SOLVENT CEMENTED JOINTS.

NATURAL GAS

PIPE SHALL BE THREADED SCHEDULE 40 BLACK STEEL PIPE WITH STEEL FITTINGS, PROVIDE DIRT LEGS WHERE REQUIRED. MAT'L SHALL MEET OR EXCEED ASME.B36.10.M; ASTM A53 OR ASTM A106.

UNDERGROUND PIPING WHERE INSTALLED UNDER BUILDING STRUCTURE SHALL BE IN A VENTED CONDUIT WHERE OUTSIDE THE BUILDING ENVELOPE. COORDINATE WITH GAS UTILITY COMPANY & CITY OF BULVERDE & CIVIL DWGS.

PLUMBING FIXTURE CONNECTION SCHEDULE

MARK	FIXTURE	CW	HW	SS	V	GW	GV
WC-1	WATER CLOSET	1"	-	4"	2"	-	-
U-1	URINAL	3/4"	-	2"	2"	-	-
L-1	LAVATORY	1/2"	1/2"	2"	2"	-	-
L-2	SS LAVATORY	1/2"	1/2"	-	-	2"	2"
L-3	LAVATORY	1/2"	1/2"	2"	2"	-	-
SK-1	DOUBLE SINK	1/2"	1/2"	2"	2"	-	-
SK-2	SINGLE SINK	1/2"	1/2"	2"	2"	-	-
SK-3	SKULLERY SINK	1/2"	1/2"	-	-	2"	2"
SK-4	SINGLE SINK	1/2"	1/2"	2"	2"	-	-
EDF-1	DRINKING FOUNTAIN	1/2"	-	2"	2"	-	-
SH-1	SHOWER	1/2"	1/2"	3"	2"	-	-
MS-1	MOP SINK	3/4"	3/4"	3"	2"	-	-
MS-2	MOP SINK	3/4"	3/4"	-	-	3"	2"
WDF-1	WASH DOWN FAUCET	3/4"	3/4"	-	-	3"	2"
FD-1	FLOOR DRAIN	-	-	3"	2"	-	-
WMB-1	WASH MACHINE BOX	1/2"	1/2"	2"	2"	-	-
WH-1	WALL HYDRANT	3/4"	-	-	-	-	-
HB-1	HOSE BIBB	3/4"	-	-	-	-	-
TFH-1	TRUCK FILL HYDRANT	1-1/2"	-	-	-	-	-
FS-1	FLOOR SINK	-	-	3"	2"	-	-
TD-1	TRENCH DRAIN	-	-	-	-	3"	2"
IMB-1	ICE MAKER VALVE BOX	1/2"	-	-	-	-	-

PLUMBING FIXTURE SCHEDULE

TAG	DESCRIPTION	MANUFACTURER AND CATALOG NO.
WC-1 WATER CLOSET A.D.A. COMPLIANT	FLOOR MOUNTED WHITE VITREOUS CHINA ELONGATED BOWL, 1.6 GALLON PER FLUSH. FLUSH VALVE. CHURCH NO. 9500C WHITE OPEN FRONT SEAT LESS COVER. FLUSH VALVE SHALL BE ROUGHED-IN TO PROVIDE FLUSH HANDLE ON ACCESS SIDE OF TOILET. BOLT CAPS.	AMERICAN STANDARD "MADERA 17" HIGH" 3043.102 SLOAN ROYAL NO. 111
U-1 URINAL A.D.A. COMPLIANT	WALL MOUNTED WHITE VITREOUS CHINA, ELONGATED FRONT RIM, MINIMUM 14" FROM WALL. SIPHON JET, 3/4" TOP SPUD. LOW WATER CONSUMPTION, ONE GALLON PER FLUSH. MOUNT RIM MAXIMUM 17" ABOVE FLOOR.	AMERICAN STANDARD "WASHBROOK" 6501.010 SLOAN ROYAL 186-1 FLUSH VALVE
L-1 LAVATORY A.D.A. COMPLIANT	WALL MOUNTED VITREOUS CHINA, NOMINAL 20" X 18" FRONT OVERFLOW, CONCEALED ARM CARRIER, 4" WRIST BLADE HANDLES, 1-1/4" P.O. STRAINER DRAIN. CHROME PLATED BRASS SPOUT. 1/4 TURN CARTRIDGES. McGUIRE 8872, 17-GA. P-TRAP, ESCUTCHEON, CHICAGO NO. 1006 LAVATORY SUPPLIES WITH LOOSE KEY STOPS. INSULATE DRAIN TAILPIECE, P-TRAP AND SUPPLIES WITH TRUEBRO "HANDI-LAV-GUARD", McGUIRE "PROWRAP" OR BROCAR "TRAP WRAP".	AMERICAN STANDARD "LUCERNE" 0356.015 CHICAGO FAUCET NO. 404A-317-327A
L-2 SS LAVATORY	SINGLE COMPARTMENT WITH FAUCET DECK, NOMINAL OVERALL SIZE 17-1/4" X 17-1/4" X 5" DEEP. TYPE 304 STAINLESS STEEL, WALL HUNG, 4" WRIST BLADE HANDLES AND CHROME PLATED BRASS FLOOR MOUNTED SELF-CLOSING MIXING VALVE. BRASS DOUBLE FOOT PEDALS. CHROME PLATED BRASS GOOSENECK. 1/4 TURN CARTRIDGES. MODIFY GOOSENECK SPOUT WATER INLET CONNECTION TO ALLOW WATER FLOW FROM EITHER FAUCET OR FOOT PEDALS. ELKAY NO. LK-18 CHROME PLATED BRASS PERFORATED GRID STRAINER DRAIN OUTLET WITH TAILPIECE. McGUIRE 8912, 17 GA. P-TRAP. CHICAGO NO. 1006 LOOSE KEY SUPPLIES WITH RISERS AND ESCUTCHEON.	ADVANCE TABCO NO.7-PS-20 WITHOUT FAUCET NO.K-59OMIT CHICAGO FAUCET NO. 786-TW-327A CHICAGO 625-LP-CP
L-3 LAVATORY A.D.A. COMPLIANT	BRADLEY INTEGRAL "OMNIDECK 3000 SERIES, COORDINATE COLOR OF DECK WITH ARCHITECT, EASE EDGE, SS BRACKETS, DESIGNER WHITE SINGLE BOWL FOR TEMPERED WATER, NO SOAP, MODIFIED SIZE OF 36" LONG, 22" DEPTH, SL-T01 OVAL UNDERMOUNT BOWL, NO WASTE HOLE, BOTH SIDES 3" BACKSPLASH, 3" FRONT AND BOTH SIDES APRON, 8" CENTER SET, WITH PTRAP AND DRAIN ASSEMBLY. 4" WRIST BLADE HANDLES, . CHROME PLATED BRASS SPOUT. 1/4 TURN CARTRIDGES. McGUIRE 2165LK LOOSE KEY SUPPLIES WITH RISERS AND ESCUTCHEON.	BRADLEY OMNIDECK # LD-3010 CHICAGO FAUCET NO. 404A-317-327A
SK-1 DOUBLE SINK	NOMINAL OVERALL SIZE 66" X 22" WITH INSIDE BOWL SIZES 16"X16" X 7 5/8" DEEP. 18 GAUGE TYPE 304 STAINLESS STEEL, SELF-RIMMING, FULLY UNDERCOATED TO REDUCE CONDENSATION AND DAMPEN SOUND. CHROME PLATED BRASS SWIVEL TYPE HIGH RISE 13" GOOSE NECK SPOUT. 1/4 TURN CARTRIDGES. 17 GAUGE P-TRAP, McGUIRE NO. 151A STAINLESS STEEL STRAINER DRAIN OUTLET WITH TAILPIECE. McGUIRE 8912, 17 GA. P-TRAP. McGUIRE 2165LK LOOSE KEY SUPPLIES WITH RISERS AND ESCUTCHEON. McGUIRE 8912, 17 GA. P-TRAP. OFFSET DRAIN.	ELKAY NO. ILR6622DD T&S NO. B-2347
SK-2 DOUBLE SINK	NOMINAL OVERALL SIZE 33" X 22" WITH INSIDE BOWL SIZES 14"X15 3/4"X8" DEEP. 20 GAUGE TYPE 300 STAINLESS STEEL, SELF-RIMMING, FULLY UNDERCOATED TOREDUCE CONSENSATION AND DAMPEN SOUND. CHROME PLATED BRASS SWIVEL TYPE HIGH RISE 8" GOOSE NECK SPOUT, 1/4 TURN CARTRIDGES, BRASS 4" WRIST BLADE HANDLES, McGUIRE NO. 151A STAINLESS STEEL STRAINER DRAIN OUTLET WITH TAILPIECE. McGUIRE 8912, 17 GA. P-TRAP. McGUIRE 2165LK LOOSE KEY SUPPLIES WITH RISERS AND ESCUTCHEON. OFFSET DRAIN. IN-SINK-ERATOR EVOLUTION EXCEL SERIES STAINLESS STEEL GARBAGE DISPOSER, AUTOMATIC REVERSING ACTION, 1 H.P., 120 VOLT MOTOR.	ELKAY NO. DPP23322 T&S NO. B-2347
SK-3 SINGLE SKULLERY SINK	NOMINAL OVERALL SIZE 33" X 30" X 14" DEEP, 14 GAUGE TYPE 304 STAINLESS STEEL ON 4 STAINLESS STEEL LEGS. INTEGRAL STOPS, 4-ARM BRASS HANDLE, PAIL HOOK, TOP BRACE WITH WALL FLANGE, VACUUM BREAKER, ROUGH CHROME PLATED, PRE-RINSE UNIT WITH WALL BRACKET. McGUIRE NO. 151A STAINLESS STEEL STRAINER DRAIN OUTLET WITH TAILPIECE. McGUIRE 8912, 17 GA. P-TRAP.	ELKAY NO. SS8130 T&S # B-1033-B
SK-4 SINGLE SINK	NOMINAL OVERALL SIZE 22" X 22" WITH INSIDE BOWL SIZE 19"X16"X10" DEEP. 18 GAUGE TYPE 304 STAINLESS STEEL, SELF-RIMMING, FULLY UNDERCOATED TOREDUCE CONSENSATION AND DAMPEN SOUND. CHROME PLATED BRASS SWIVEL TYPE HIGH RISE 8" GOOSE NECK SPOUT, 1/4 TURN CARTRIDGES, BRASS 4" WRIST BLADE HANDLES, McGUIRE NO. 151A STAINLESS STEEL STRAINER DRAIN OUTLET WITH TAILPIECE. McGUIRE 8912, 17 GA. P-TRAP. McGUIRE 2165LK LOOSE KEY SUPPLIES WITH RISERS AND ESCUTCHEON. OFFSET DRAIN. IN-SINK-ERATOR EVOLUTION EXCEL SERIES STAINLESS STEEL GARBAGE DISPOSER, AUTOMATIC REVERSING ACTION, 1 H.P., 120 VOLT MOTOR.	ELKAY NO. DLR222210 T&S NO. B-2347
EDF-1 ELECTRIC DRINKING FOUNTAIN A.D.A. COMPLIANT	MEETING A.D.A. WALL MOUNTED ALL STAINLESS STEEL, ELECTRIC WATER COOLER, COOLING CAPACITY TO BE 8.0 GALLONS PER HOUR FROM 80 DEGREE F. INLET WATER TEMPERATURE TO 50 DEGREE F. OUTLET WATER TEMPERATURE IN 90 DEGREE F. AMBIENT. 1/5 H.P. COMPRESSOR, 120 VOLT,60 HZ. MOUNT AT HEIGHT REQUIRED FOR HANDICAPPED AND NON HANDICAPPED. R134A REFRIGERANT. PROVIDE HALSEY TAYLOR CANE TOUCH APRON IN COLOR TO MATCH DRINKING FOUNTAIN. INSTALL ON HIGH SIDE OF DRINKING FOUNTAIN PER MANUFACTURERS RECOMMENDATIONS.	HALSEY TAYLOR HRFSER-Q BARRIER FREE SPLIT LEVEL
SH-1 SHOWER	SHOWER BASE INSTALLED PER ARCHITECTURAL DRAWINGS, PLUMBING CONTRACTOR SHALL FURNISH AND INSTALL PRESSURE BALANCE SHOWER VALVE WITH INTEGRAL STOPS, NO. 600 SHOWER HEAD. PROVIDE SHOWER DRAIN, 5" DIAMETER NICKEL BRONZE. PROVIDE WALL MOUNTED HAND SPRAYER FOR OFFICER BATH B 111 AND EMS BATH 144 ONLY.	CHICAGO FAUCET NO. 1762-IS-VOC JAY R. SMITH 2005-A CHICAGO WALL MOUNTED SPRAYER 154-ALCP
MS-1 MOP SINK	FIAT FLOOR MOUNTED CORNER UNIT 24" X 24" X 12" HIGH RECEPTOR COMPOSED OF PRECAST TERRAZZO WITH STAINLESS STEEL THRESHOLD CAP. INTEGRAL STOPS, BRASS HANDLE, PAIL HOOK, TOP BRACE WITH WALL FLANGE, VACUUM BREAKER, ROUGH CHROME PLATED, PRE-RINSE UNIT WITH WALL BRACKET.	FIAT TSB-500 897-RCF
MS-2 MOP SINK	FIAT FLOOR MOUNTED CORNER UNIT 24" X 36" X 12" HIGH RECEPTOR COMPOSED OF PRECAST TERRAZZO WITH STAINLESS STEEL THRESHOLD CAP. INTEGRAL STOPS, BRASS HANDLE, PAIL HOOK, TOP BRACE WITH WALL FLANGE, VACUUM BREAKER, ROUGH CHROME PLATED, PRE-RINSE UNIT WITH WALL BRACKET.	FIAT TSB-700 897-RCF
WDF-1 WASH DOWN FAUCET	T&S WALL MOUNT MIXING FAUCET. ETERNA CARTRIDGES W/ SPRING CHECKS. LEVER HANDLES 44" FLEXIBLE STAINLESS STEEL HOSE. 1.42 GPM SPRAY VALVE. 6" WALL BRACKET & 1/2" NPT FEMALE OUTLETS. COORDINATE MOUNTING HEIGHT WITH ARCHITECT. PROVIDE WASH DOWN DRAIN.	T&S # B-0133-B JAY R. SMITH 2005-A
FD-1 FLOOR DRAIN	BOTTOM OUTLET CAST IRON BODY, ADJUSTABLE 6" DIAMETER NICKEL BRONZE STRAINER WITH VANDAL PROOF SCREWS. PROVIDE CLAMPING DEVICE FOR DRAINS IN MEMBRANE FLOOR AREAS. REFER TO FLOOR PLANS FOR SIZES. COORDINATE FINAL LOCATION AND INSTALLATION WITH ARCHITECTURAL DRAWINGS.	MIFAB F1100-1-6
WMB-1 WASHING MACHINE DRAIN BOX	16 GAUGE STEEL BOX WITH EPOXY FINISH, MALE IRON PIPE WATER SUPPLY CONNECTIONS AND DRAIN FITTING. PROVIDE SIOUX CHIEF LAUNDRY MINI WATER HAMMER ARRESTOR NO. 660-H AT BOTH HOT AND COLD WATER HOSE THREADS.	GUY GRAY B-200.
IMB-1 ICE MACHINE BOX	PLASTIC BOX WITH MALE IRON PIPE WATER SUPPLY CONNECTION WITH WATER HAMMER ARRESTOR WATER HOSE THREADS. CUT-OFF VALE IS INCLUDED WITH THIS BOX. PROVIDE REPLACEABLE IN-LINE WATER FILTER AFTER THIS CUT-OFF VALVE FOR THE ICE MAKER MACHINE.	GUY GRAY W9700 HA
HB-1 HOSE BIBB	EXPOSED TYPE WALL FAUCET WITH 3/4" F.P.T. INLET, 3/4" MALE HOSE THREAD OUTLET AND SELF-DRAINING ANTI-SIPHON VACUUM BREAKER. ROUGH CHROME PLATED BRASS FINISH, LOOSE TEE OPERATING KEY.	MIFAB MHY-90
WH-1 WALL HYDRANT FREEZE-PROOF	CONCEALED BOX TYPE, NON-FREEZE, 3/4" MALE HOSE THREAD OUTLET, SELF-DRAINING WITH ANTI-SIPHON VACUUM BREAKER. CHROME PLATED BRONZE HEAD CASTING HOUSED WITHIN SATIN FINISH NICKEL BRONZE BOX WITH LOCKING HINGED COVER. LOOSE TEE OPERATING KEY.	MIFAB MHY-20
TFH-1 TRUCK FILLING HYDRANT	1-1/2" BRASS VALVE BODY INLET, 1-1/2" GALVANIZED PIPE CASING, 1-1/2" FPT GALVANIZED TEE OUTLET, WHEEL TYPE HANDLE UNLESS DIRECTED OTHERWISE BY OWNER. PROVIDE COMPLETE WITH 2" WATER SHOCK ABSORBER. 1-1/2" COLD WATER. COORDINATE FINAL LOCATION AND HEIGHT IN ADVANCE WITH ARCHITECT / OWNER AND PROVIDE AS DIRECTED.	WOODFORD U-150 WATTS SERIES 15 WATER HAMMER ARRESTOR
SO-1 SAND-OIL INTERCEPTOR	SAND-OIL INTERCEPTOR, PRECAST CONCRETE WITH STEEL REINFORCEMENT AND MANHOLE ACCESS COMPLETE WITH COVERS AND FRAMES. DETAILED ON DRAWINGS. PROVIDE APPROVED SAMPLE WELL ON DISCHARGE SIDE OF UNIT.	
SW-1	SAMPLING WELL. DETAILED ON DRAWINGS.	
TD-1 TRENCH DRAIN	HEAVY DUTY TRENCH FRAME AND GRATE SYSTEM. GRAY IRON, CLASS 35. STANDARD 24"X8" SECTIONS. TYPE "A" GRATE OPENING. COORDINATE INSTALLATION WITH STRUCTURE. LENGTH AS INDICATED ON DRAWINGS. REFER TO FLOOR PLANS FOR SIZES. COORDINATE FINAL LOCATION AND INSTALLATION WITH ARCHITECTURAL DRAWINGS, FLOOR CONSTRUCTION, AND OWNER.	NEENAH FOUNDRY #R-4990AX
FS-1 FLOOR SINK	FLOOR SINK, BOTTOM OUTLET CAST IRON BODY, 12"SQUARE HALF GRATE AND RIM, ANCHOR FLANGE, NICKEL BRONZE, 8" DEEP SUMP WITH A.R.E. INTERIOR, ALUMINUM DOME STRAINER, PROVIDE CLAMPING DEVICE FOR DRAINS IN MEMBRANE FLOOR AREAS.	MIFAB FS1730-FL-150
FCO FLOOR CLEANOUT	CAST IRON BODY WITH SECONDARY O-RING TEST SEAL AND ADJUSTABLE COMBINED ACCESS COVER/PLUG TOP ASSEMBLY WITH PRIMARY GASKET SEAL, AND ROUND SCORIATED NICKEL BRONZE COVER AND FOR CARPETED FLOORS.	MIFAB C1100-R-1 MIFAB C1100-RC-1
WCO WALL CLEANOUT	CAST IRON CLEANOUT FERRULE WITH BRONZE RAISED HEAD PLUG AND ROUND STAINLESS STEEL COVER PLATE WITH CENTER SECURING SCREW. PROVIDE CAST IRON CLEANOUT TEE IN LIEU OF FERRULE AS REQUIRED FOR WALL CONSTRUCTION.	MIFAB C1440-RD6 MIFAB C1460
TWCO TWO WAY CLEANOUT TO GRADE	CAST IRON BODY WITH SECONDARY O-RING TEST SEAL AND ADJUSTABLE COMBINED ACCESS COVER/PLUG TOP ASSEMBLY WITH PRIMARY GASKET SEAL, AND ROUND SCORIATED VANDAL RESISTANT DUCTILE IRON TRACTOR TYPE COVER. IF LOCATED IN ASPHALT OR DIRT PROVIDE 18" X 18" X 12" CONCRETE PAD.	MIFAB C1100-XR-4

PLUMBING NOTES:
1. ALL ESCUTCHEONS SHALL BE STAINLESS STEEL.
2. ALL ACCESS PANELS SHOULD BE A MINIMUM OF 12"x12".

GAS SUMMARY

TAG	CAP. CFH
IUH-1A	200 CFH
IUH-1B	200 CFH
IUH-2A	150 CFH
GWH-1	120 CFH
GWH-2	120 CFH
FCU-2	80 CFH
FCU-3	80 CFH
RANGE	150 CFH
OUTDOOR GRILL	65 CFH
TOTAL GAS DEMAND	1,165 CFH

DOMESTIC GAS FIRED WATER HEATER SCHEDULE

TAG	TYPE	MAX. WORKING PRESSURE (PSIG)	OPERATING PRESSURE (PSIG)	NAT. GAS MIN-MAX INLET PRES.	MINIMUM EFFICIENCY (%)	ENTERING WATER TEMP. (DEG. F)	LEAVING WATER TEMP. (DEG. F)	WATER STORAGE (GAL.)	MAX. WATER DEMAND (GPH)	GPH @ 80°F TEMP RISE	FUEL NATURAL GAS INPUT (CFH)	CONTROL SYSTEM	MANUFACTURER	MODEL	NOTES
GWH-1	CYCLONE	160	70	3.2-10.5"w.c	95	60	AVG. 140	60	120	173	120	120V	AO SMITH	BTH 120	1,2,3,4
GWH-2	CYCLONE	160	70	3.2-10.5"w.c	95	60	AVG. 140	60	120	173	120	120V	AO SMITH	BTH 120	1,2,3,4

NOTES: 1. LOW WATER CUT-OFF. 2. GAS SOLENOID VALVE. 3. PROVIDE TMV-1 MIXING VALVE. 4. VENT 4" PVC.

ELECTRIC WATER HEATER SCHEDULE

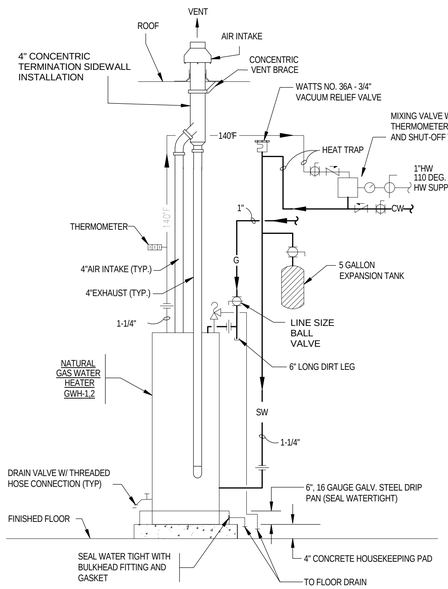
UNIT NUMBER	RECOVERY GPH @ 60 °F	STORAGE (GAL)	TANK CONSTR.	DIAMETER	HEIGHT	WATER CONN.	KW (QTY)	MANUFACTURER/MODEL	POWER REQUIREMENTS VOLTS	PHASE	M.C.A.	NOTES
EWH-1	34	20	STEEL / GLASS	22"	23"	3/4"	1.5(1)	A.O.SMITH MODEL DEL-20	208	1	14.4	1,2
EWH-2	34	20	STEEL / GLASS	22"	23"	3/4"	1.5(1)	A.O.SMITH MODEL DEL-20	208	1	14.4	1,2

NOTES:
1. MANUFACTURER SHALL PROVIDE MANUAL HIGH LIMIT RESET.
2. PROVIDE AND INSTALL MIXING VALVE TMV-1. REFER TO WATER HEATER DETAIL FOR MORE INFORMATION.

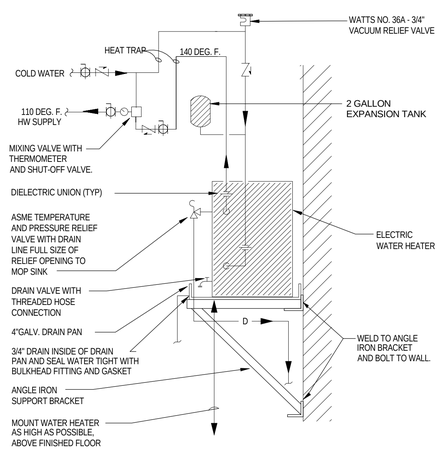
THERMOSTATIC MIXING VALVES

ITEM NO.	INLET HOT WATER TEMP (°F)	OUTLET MIXED WATER TEMP (°F)	MINIMUM FLOW (GPM)	DESIGN FLOW (GPM)	PRESSURE DROP @ DESIGN FLOW (PSI)	VALVE FINISH	MANUFACTURER / MODEL NO.
TMV-1	140°	110°	0.5	4	5.0	ROUGH BRONZE	SYMMONS #6-400A

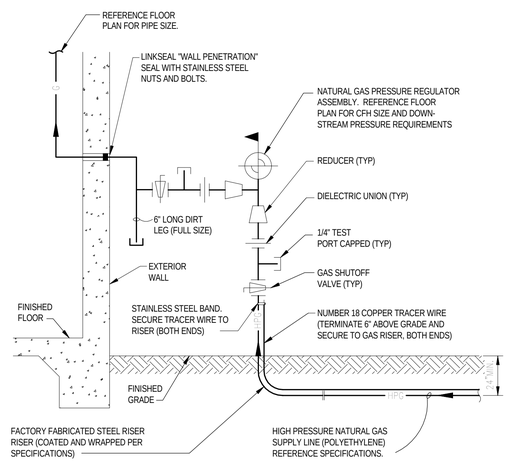
NOTES:
1. MAKE WATER CONNECTIONS TO THERMOSTATIC MIXING VALVE(S) IN ACCORDANCE WITH THE MANUFACTURER'S RECOMMENDATIONS.
2. PROVIDE PIPE INCREASERS AND/OR VALVES AS REQUIRED.



1 GAS WATER HEATER DETAIL
SCALE: NONE



2 ELECTRIC WATER HEATER DETAIL
SCALE: NONE



3 GAS METER AND REGULATOR DETAIL
SCALE: NONE

PROJECT
Fire Station No. 30
911 Gembler Road

REVISIONS

1	ADDENDUM 03	01/15/2016

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ARCHITECT

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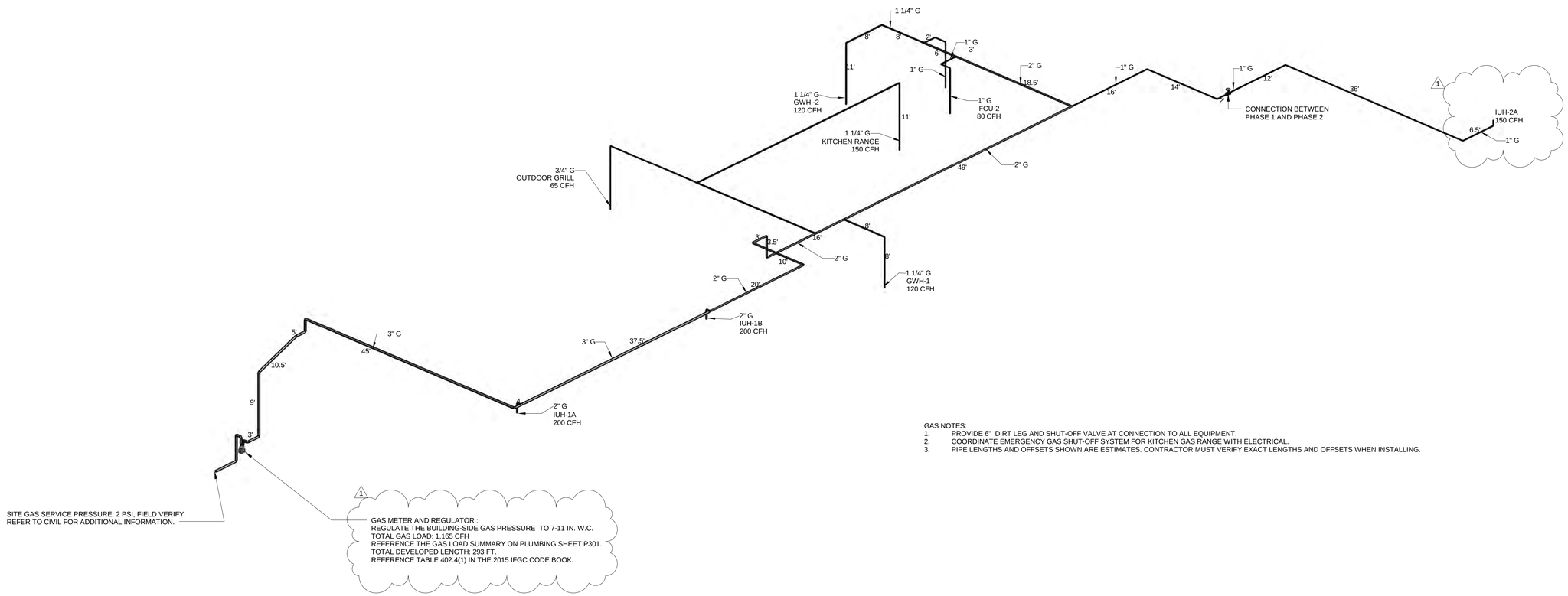

GAS NOTES:

1. PROVIDE 6" DIRT LEG AND SHUT-OFF VALVE AT CONNECTION TO ALL EQUIPMENT.
2. COORDINATE EMERGENCY GAS SHUT-OFF SYSTEM FOR KITCHEN GAS RANGE WITH ELECTRICAL.
3. PIPE LENGTHS AND OFFSETS SHOWN ARE ESTIMATES. CONTRACTOR MUST VERIFY EXACT LENGTHS AND OFFSETS WHEN INSTALLING.

PROJECT

Fire Station No. 30

911 Gembler Road

REVISIONS

1	ADDENDUM 03	01/15/2016

CONSULTANT

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STATE OF TEXAS
SCOTT M. MOORE
106184
LICENSED
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01.15.2016

ARCHITECT

100% CONSTRUCTION DOCUMENTS

DRAWN BY MF

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PROJECT NUMBER 1417

DATE 11.05.2015

SHEET NUMBER

P303

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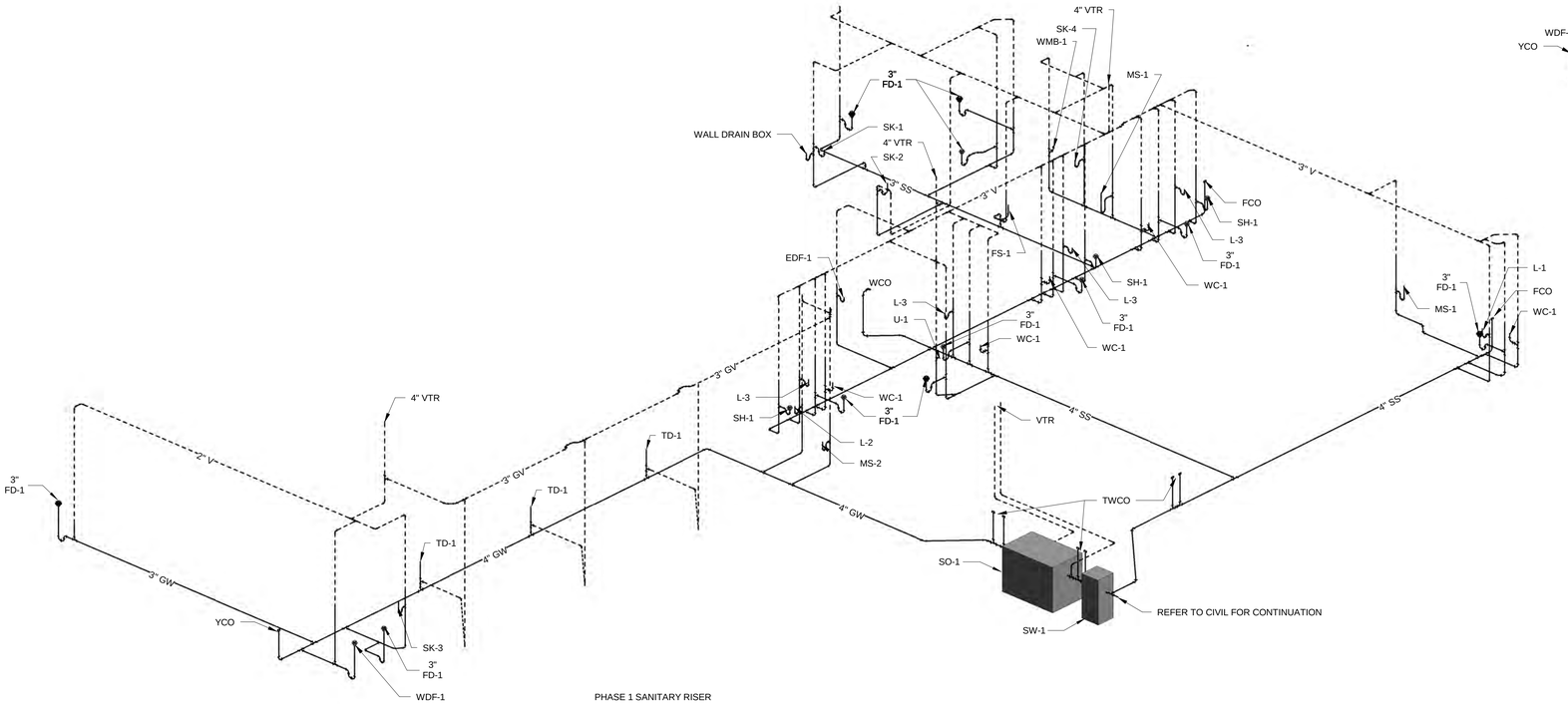
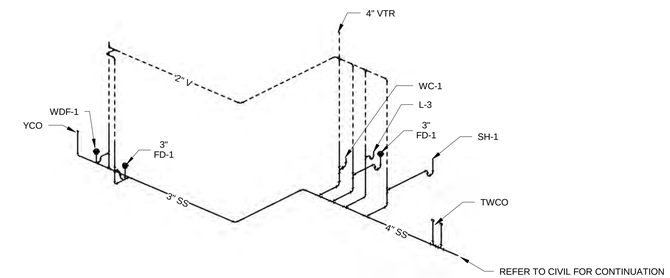


PHASE 1 SANITARY RISER



PHASE 2 SANITARY RISER

PROJECT

Fire Station No. 30

911 Gembler Road

REVISIONS

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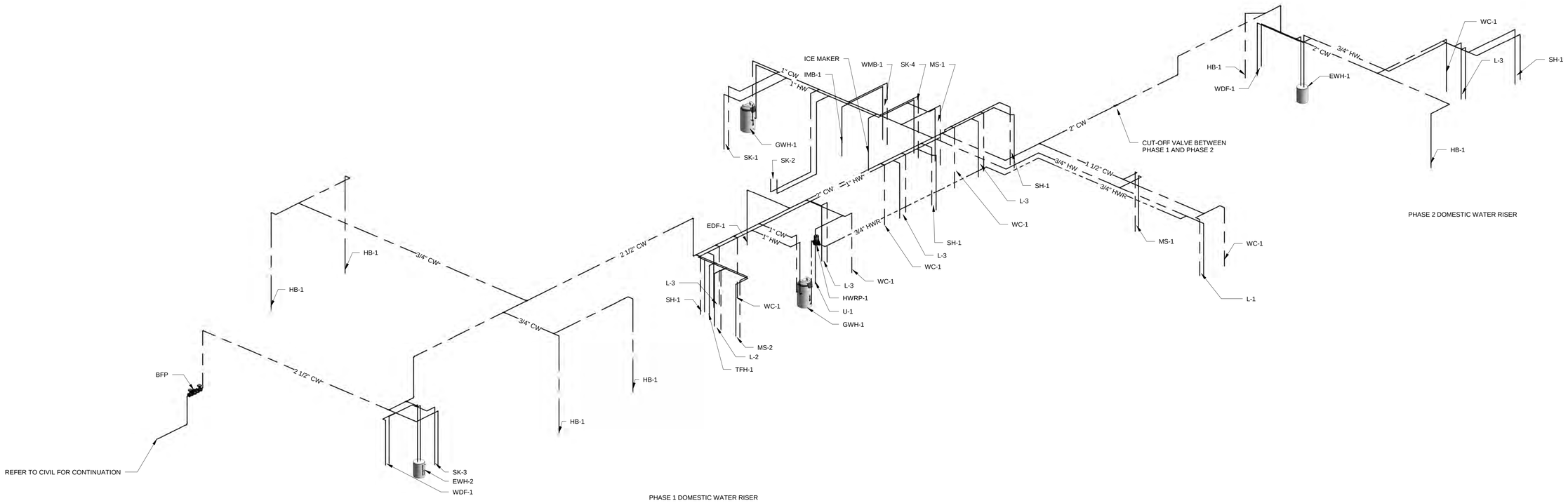

PROJECT

Fire Station No. 30

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REVISIONS

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SECTION 074113.16 - STANDING-SEAM METAL ROOF PANELS

PART 1 - GENERAL

1.1 SUMMARY

A. Section includes standing-seam metal roof panels.

1.2 PREINSTALLATION MEETINGS

A. Pre-Installation Conference: Conduct conference off project site. Include all exterior sheet metal components and products specified under division 7.

B. Shop Drawings: Include fabrication and installation layouts of metal panels; details of edge conditions, joints, panel profiles, corners, anchorages, attachment system, trim, flashings, closures, and accessories; and special details.

C. Samples: For each type of metal panel indicated.

1.3 INFORMATIONAL SUBMITTALS

A. Product test reports.

B. Warranties: Sample of special warranties.

1.4 CLOSEOUT SUBMITTALS

A. Maintenance data.

1.5 QUALITY ASSURANCE

A. Installer Qualifications: An entity that employs installers and supervisors who are trained and approved by manufacturer.

B. UL-Certified, Portable Roll-Forming Equipment: UL-certified, portable roll-forming equipment capable of producing metal panels warranted by manufacturer to be the same as factory-formed products. Maintain UL certification of portable roll-forming equipment for duration of work.

1.6 WARRANTY

A. Special Warranty: Manufacturer's standard form in which manufacturer agrees to repair or replace components of metal panel systems that fails in materials or workmanship within specified warranty period.

1. Warranty Period: Two years from date of Substantial Completion.

B. Special Warranty on Panel Finishes: Manufacturer's standard form in which manufacturer agrees to repair finish or replace metal panels that show evidence of deterioration of factory-applied finishes within specified warranty period.

1. Finish Warranty Period: 20 years from date of Substantial Completion.

C. Special Weathertightness Warranty: Manufacturer's standard form in which manufacturer agrees to repair or replace standing-seam metal roof panel assemblies that fail to remain weathertight, including leaks, within specified warranty period.

1. Warranty Period: 20 years from date of Substantial Completion.

PART 2 - PRODUCTS

2.1 PERFORMANCE REQUIREMENTS

A. Structural Performance: Provide metal panel systems capable of withstanding the effects of the following loads, based on testing according to ASTM E 1592:

1. Wind Loads: As indicated on Drawings.

B. Wind-Uplift Resistance: Provide metal roof panel assemblies that comply with UL 580 for wind-uplift-resistance class indicated.

1. Uplift Rating: UL 90.

C. Thermal Movements: Allow for thermal movements from ambient and surface temperature changes by preventing buckling, opening of joints, overstressing of components, failure of joint sealants, failure of connections, and other detrimental effects. Base calculations on surface temperatures of materials due to both solar heat gain and nighttime-sky heat loss.

2.2 STANDING-SEAM METAL ROOF PANELS

A. General: Provide factory-formed metal roof panels designed to be installed by lapping and interconnecting raised side edges of adjacent panels with joint type indicated and mechanically attaching panels to supports using concealed clips in side laps. Include clips, cleats, pressure plates, and accessories required for weathertight installation.

1. Steel Panel Systems: Unless more stringent requirements are indicated, comply with ASTM E 1514.

B. Vertical-Rib, Seamed-Joint, Standing-Seam Metal Roof Panels, Pre-finished Standing Seam Metal Roof; designed for sequential installation by mechanically attaching panels to supports using concealed clips located under one side of panels, engaging opposite edge of adjacent panels, and mechanically seaming panels together.

1. Basis-of-Design Product: Subject to compliance with requirements, provide Pre-finished 24GA Berridge Cee-Lock System with Natural Metal Finish “Acrylic Coated Galvalume” and Vinyl Weatherseal or comparable product by one of the following:
   a. Berridge Manufacturing Company.
   b. CENTRIA Architectural Systems.
   c. Morin; a Kingspan Group company.

2. Metallic-Coated Steel Sheet: 24GA Zinc-coated (galvanized) steel sheet complying with ASTM A 653/A 653M, G90 coating designation, or aluminum-zinc alloy-coated steel sheet complying with ASTM A 792/A 792M, Class AZ50 coating designation; structural quality. Prepainted by the coil-coating process to comply with ASTM A 755/A 755M.
   a. Exterior Finish: Natural Metal Finish “Acrylic Coated Galvalume”.

3. Clips: Continuous to accommodate thermal movement.

   a. Material: zinc-coated (galvanized) or aluminum-zinc alloy-coated steel sheet.

4. Joint Type: Single folded.
5. Panel Coverage: 16.5 inches.
6. Provide continuous clips as required for installation without solid sheathing; basis of design Berridge continuous CEE RIB. Standard clips may be utilized where solid sheathing is indicated.

2.3 UNDERLAYMENT MATERIALS

A. Self-Adhering, High-Temperature Underlayment: Provide self-adhering, cold-applied, sheet underlayment, a minimum of 30 mils thick, consisting of slip-resistant, top surface. Provide primer when recommended by underlayment manufacturer. Provide product recommended by roofing manufacturer for substrates indicated in the drawings.

   1. Thermal Stability: Stable after testing at 240 deg F (116 deg C); ASTM D 1970.
   2. Low-Temperature Flexibility: Passes after testing at minus 20 deg F (29 deg C); ASTM D 1970.
   3. Products: Subject to compliance with requirements, provide one of the following:

      a. Carlisle Residential, a division of Carlisle Construction Materials; WIP 300HT.
      b. Grace Construction Products, a unit of W. R. Grace & Co.; Grace Ice and Water Shield HT Ultra.
      c. Owens Corning; WeatherLock Metal High Temperature Underlayment.

B. Slip Sheet: Manufacturer's recommended slip sheet, of type required for application.

2.4 MISCELLANEOUS MATERIALS

A. Miscellaneous Metal Subframing and Furring: ASTM C 645; cold-formed, metallic-coated steel sheet, ASTM A 653/A 653M, G90 coating designation or ASTM A 792/A 792M, Class AZ50 coating designation unless otherwise indicated. Provide manufacturer's standard sections as required for support and alignment of metal panel system.

B. Panel Accessories: Provide components required for a complete, weathertight panel system including trim, copings, fasciae, mullions, sills, corner units, clips, flashings, sealants, gaskets, fillers, closure strips, and similar items. Match material and finish of metal panels unless otherwise indicated.

1. Closures: Provide closures at eaves and ridges, fabricated of same metal as metal panels.
2. Backing Plates: Provide metal backing plates at panel end splices, fabricated from material recommended by manufacturer.
3. Closure Strips: Closed-cell, expanded, cellular, rubber or crosslinked, polyolefin-foam or closed-cell laminated polyethylene; minimum 1-inch- thick, flexible closure strips; cut or premolded to match metal panel profile. Provide closure strips where indicated or necessary to ensure weathertight construction.

C. Flashing and Trim: Provide flashing and trim formed from same material as metal panels as required to seal against weather and to provide finished appearance. Locations include, but are not limited to, eaves, rakes, corners, bases, framed openings, ridges, fasciae, and fillers. Finish flashing and trim with same finish system as adjacent metal panels.

D. Roof Curbs: Fabricated from same material as roof panels, 0.048-inch nominal thickness; with bottom of skirt profiled to match roof panel profiles and with welded top box and integral full-length cricket. Fabricate curb subframing of 0.060-inch- nominal thickness, angle-, C-, or Z-shaped steel sheet. Fabricate curb and subframing to withstand indicated loads of size and height indicated. Finish roof curbs to match metal roof panels.

E. Panel Fasteners: Self-tapping screws designed to withstand design loads.

F. Panel Sealants: Provide sealant type recommended by manufacturer that are compatible with panel materials, are nonstaining, and do not damage panel finish.

1. Sealant Tape: Pressure-sensitive, 100 percent solids, gray polyisobutylene compound sealant tape with release-paper backing; 1/2 inch wide and 1/8 inch thick.
2. Joint Sealant: ASTM C 920; as recommended in writing by metal panel manufacturer.
3. Butyl-Rubber-Based, Solvent-Release Sealant: ASTM C 1311.

2.5 FABRICATION

A. General: Fabricate and finish metal panels and accessories at the factory, by manufacturer's standard procedures and processes, as necessary to fulfill indicated performance requirements demonstrated by laboratory testing. Comply with indicated profiles and with dimensional and structural requirements.

B. On-Site Fabrication: Subject to compliance with requirements of this Section, metal panels may be fabricated on-site using UL-certified, portable roll-forming equipment if panels are of same profile and warranted by manufacturer to be equal to factory-formed panels. Fabricate according to equipment manufacturer's written instructions and to comply with details shown.

C. Provide panel profile, including major ribs and intermediate stiffening ribs, if any, for full length of panel.

D. Fabricate metal panel joints with factory-installed captive gaskets or separator strips that provide a weathertight seal and prevent metal-to-metal contact, and that minimize noise from movements.

E. Sheet Metal Flashing and Trim: Fabricate flashing and trim to comply with manufacturer's recommendations and recommendations in SMACNA's "Architectural Sheet Metal Manual" that apply to design, dimensions, metal, and other characteristics of item indicated.

2.6 FINISHES

A. Panels and Accessories:

PART 3 - EXECUTION

3.1 PREPARATION

A. Miscellaneous Supports: Install subframing, furring, and other miscellaneous panel support members and anchorages according to ASTM C 754 and metal panel manufacturer's written recommendations.

3.2 UNDERLAYMENT INSTALLATION

A. Self-Adhering Sheet Underlayment: Apply primer if required by manufacturer. Comply with temperature restrictions of underlayment manufacturer for installation. Apply wrinkle free, in shingle fashion to shed water, and with end laps of not less than 6 inches staggered 24 inches between courses. Overlap side edges not less than 4 inches. Roll laps with roller. Cover underlayment within 30 days.

1. Apply over the entire roof surface.

B. Slip Sheet: Apply slip sheet over underlayment before installing metal roof panels.

C. Flashings: Install flashings to cover underlayment to comply with requirements specified in Section 076200 "Sheet Metal Flashing and Trim."

3.3 METAL PANEL INSTALLATION

A. Standing-Seam Metal Roof Panel Installation: Fasten metal roof panels to supports with concealed clips at each standing-seam joint at location, spacing, and with fasteners recommended in writing by manufacturer.

1. Install clips to supports with self-tapping fasteners.
2. Install pressure plates at locations indicated in manufacturer's written installation instructions.
3. Snap Joint: Nest standing seams and fasten together by interlocking and completely engaging factory-applied sealant.
4. Seamed Joint: Crimp standing seams with manufacturer-approved, motorized seamer tool so clip, metal roof panel, and factory-applied sealant are completely engaged.
5. Watertight Installation:

    a. Apply a continuous ribbon of sealant or tape to seal joints of metal panels, using sealant or tape as recommend in writing by manufacturer as needed to make panels watertight.
    b. Provide sealant or tape between panels and protruding equipment, vents, and accessories.
    c. At panel splices, nest panels with minimum 6-inch end lap, sealed with sealant and fastened together by interlocking clamping plates.

B. Accessory Installation: Install accessories with positive anchorage to building and weathertight mounting, and provide for thermal expansion. Coordinate installation with flashings and other components.

C. Flashing and Trim: Comply with performance requirements, manufacturer's written installation instructions, and SMACNA's "Architectural Sheet Metal Manual." Provide concealed fasteners where possible, and set units true to line and level as indicated. Install work with laps, joints, and seams that will be permanently watertight and weather resistant.

3.4 CLEANING AND PROTECTION

A. Remove temporary protective coverings and strippable films, if any, as metal panels are installed, unless otherwise indicated in manufacturer's written installation instructions. On completion of metal panel installation, clean finished surfaces as recommended by metal panel manufacturer. Maintain in a clean condition during construction.

END OF SECTION 074113.16

SECTION 08 71 00

DOOR HARDWARE

PART 1 - GENERAL

1.1 SUMMARY:

A. Section Includes: Finish Hardware for door openings, except as otherwise specified herein.

1. Door hardware for steel (hollow metal) doors.
2. Door hardware for aluminum doors.
3. Door hardware for wood doors.
4. Door hardware for other doors indicated.
5. Keyed cylinders as indicated.

B. Related Sections:

1. Division 6: Rough Carpentry.
2. Division 8: Aluminum Doors and Frames
3. Division 8: Hollow Metal Doors and Frames.
4. Division 8: Wood Doors.
5. Division 26 Electrical
6. Division 28: Electronic Security

C. References: Comply with applicable requirements of the following standards. Where these standards conflict with other specific requirements, the most restrictive shall govern.

1. Builders Hardware Manufacturing Association (BHMA)
2. NFPA 101 Life Safety Code
3. NFPA 80 -Fire Doors and Windows
4. ANSI-A156.xx- Various Performance Standards for Finish Hardware
5. UL10C – Positive Pressure Fire Test of Door Assemblies
6. ANSI-A117.1 – Accessible and Usable Buildings and Facilities
7. DHI /ANSI A115.IG – Installation Guide for Doors and Hardware
8. ICC – International Building Code

D. Intent of Hardware Groups

1. Should items of hardware not definitely specified be required for completion of the Work, furnish such items of type and quality comparable to adjacent hardware and appropriate for service required.
2. Where items of hardware aren't definitely or correctly specified, are required for completion of the Work, a written statement of such omission, error, or other discrepancy to be submitted to Architect, prior to date specified for receipt of bids for clarification by addendum; or, furnish such items in the type and quality established by this specification, and appropriate to the service intended.

E. Allowances

1. Refer to Division 1 for allowance amount and procedures.

F. Alternates

1. Refer to Division 1 for Alternates and procedures.

1.2 SUBSTITUTIONS:

A. Comply with Division 1.

1.3 SUBMITTALS:

A. Comply with Division 1.

B. Special Submittal Requirements: Combine submittals of this Section with Sections listed below to ensure the "design intent" of the system/assembly is understood and can be reviewed together.

C. Product Data: Manufacturer's specifications and technical data including the following:

1. Detailed specification of construction and fabrication.
2. Manufacturer's installation instructions.
3. Wiring diagrams for each electric product specified. Coordinate voltage with electrical before submitting.
4. Submit 6 copies of catalog cuts with hardware schedule.
5. Provide 9001-Quality Management and 14001-Environmental Management for products listed in Materials Section 2.2

D. Shop Drawings - Hardware Schedule: Submit 6 complete reproducible copy of detailed hardware schedule in a vertical format.

1. List groups and suffixes in proper sequence.
2. Completely describe door and list architectural door number.
3. Manufacturer, product name, and catalog number.
4. Function, type, and style.
5. Size and finish of each item.
6. Mounting heights.
7. Explanation of abbreviations and symbols used within schedule.
8. Detailed wiring diagrams, specially developed for each opening, indicating all electric hardware, security equipment and access control equipment, and door and frame rough-ins required for specific opening.

E. Templates: Submit templates and "reviewed Hardware Schedule" to door and frame supplier and others as applicable to enable proper and accurate sizing and locations of cutouts and reinforcing.

1. Templates, wiring diagrams and "reviewed Hardware Schedule" of electrical terms to electrical for coordination and verification of voltages and locations.

F. Samples: (If requested by the Architect)

1. 1 sample of Lever and Rose/Escutcheon design, (pair).
2. 3 samples of metal finishes

G. Contract Closeout Submittals: Comply with Division 1 including specific requirements indicated.

1. Operating and maintenance manuals: Submit 3 sets containing the following.

a. Complete information in care, maintenance, and adjustment, and data on repair and replacement parts, and information on preservation of finishes.
b. Catalog pages for each product.
c. Name, address, and phone number of local representative for each manufacturer.
d. Parts list for each product.

2. Copy of final hardware schedule, edited to reflect, "As installed".
3. Copy of final keying schedule
4. As installed “Wiring Diagrams” for each piece of hardware connected to power, both low voltage and 110 volts.
5. One set of special tools required for maintenance and adjustment of hardware, including changing of cylinders.

1.4 QUALITY ASSURANCE

A. Comply with Division 1.

1. Statement of qualification for distributor and installers.
2. Statement of compliance with regulatory requirements and single source responsibility.
3. Distributor's Qualifications: Firm with 3 years experience in the distribution of commercial hardware.

a. Distributor to employ full time Architectural Hardware Consultants (AHC) for the purpose of scheduling and coordinating hardware and establishing keying schedule.
b. Hardware Schedule shall be prepared and signed by an AHC.

4. Installer's Qualifications: Firm with 3 years experienced in installation of similar hardware to that required for this Project, including specific requirements indicated.
5. Regulatory Label Requirements: Provide testing agency label or stamp on hardware for labeled openings.

a. Provide UL listed hardware for labeled and 20 minute openings in conformance with requirements for class of opening scheduled.
b. Underwriters Laboratories requirements have precedence over this specification where conflict exists.

6. Single Source Responsibility: Except where specified in hardware schedule, furnish products of only one manufacturer for each type of hardware.

B. Review Project for extent of finish hardware required to complete the Work. Where there is a conflict between these Specifications and the existing hardware, notify the Architect in writing and furnish hardware in compliance with the Specification unless otherwise directed in writing by the Architect.

1.5 DELIVERY, STORAGE, AND HANDLING

A. Packing and Shipping: Comply with Division 1.

1. Deliver products in original unopened packaging with legible manufacturer's identification.
2. Package hardware to prevent damage during transit and storage.
3. Mark hardware to correspond with "reviewed hardware schedule".
4. Deliver hardware to door and frame manufacturer upon request.

B. Storage and Protection: Comply with manufacturer's recommendations.

1.6 PROJECT CONDITIONS:

A. Coordinate hardware with other work. Furnish hardware items of proper design for use on doors and frames of the thickness, profile, swing, security and similar requirements indicated, as necessary for the proper installation and function, regardless of omissions or conflicts in the information on the Contract Documents.

B. Review Shop Drawings for doors and entrances to confirm that adequate provisions will be made for the proper installation of hardware.

1.7 WARRANTY:

A. Refer to Conditions of the Contract

B. Manufacturer's Warranty:

1. Closers: Ten years
2. Exit Devices: Five Years
3. Locksets & Cylinders: Three years
4. All other Hardware: Two years.

1.8 OWNER'S INSTRUCTION:

A. Instruct Owner's personnel in operation and maintenance of hardware units.

1.9 MAINTENANCE:

A. Extra Service Materials: Deliver to Owner extra materials from same production run as products installed. Package products with protective covering and identify with descriptive labels. Comply with Division 1 Closeout Submittals Section.

1. Special Tools: Provide special wrenches and tools applicable to each different or special hardware component.
2. Maintenance Tools: Provide maintenance tools and accessories supplied by hardware component manufacturer.
3. Delivery, Storage and Protection: Comply with Owner's requirements for delivery, storage and protection of extra service materials.

B. Maintenance Service: Submit for Owner's consideration maintenance service agreement for electronic products installed.

PART 2 - PRODUCTS

2.1 MANUFACTURERS:

A. The following manufacturers are approved subject to compliance with requirements of the Contract Documents. Approval of manufacturers other than those listed shall be in accordance with Division 1.

Item:	Manufacturer:	Approved:
Hinges	Stanley	Ives, McKinney
Continuous Hinges	Stanley	Select, McKinney, Ives
Locksets & Cylinders	Best	No Substitution
Cores	Schlage	No Substitution
Exit Devices	Precision	Von Duprin,

Closers	Stanley	
Push/Pull Plates	Trimco	Rockwood, Ives
Push/Pull Bars	Trimco	Rockwood, Ives
Protection Plates	Trimco	Rockwood, Ives
Overhead Stops	ABH	Glynn Johnson, Sargent
Door Stops	Trimco	Rockwood, Ives
Flush Bolts	Trimco	Rockwood, Ives
Coordinator & Brackets	Trimco	Rockwood, Ives
Threshold & Gasketing	National Guard	Reese, Pemko, Zero

2.2 MATERIALS:

A. Hinges:

1. Template screw hole locations
2. Minimum of 2 permanently lubricated non-detachable bearings
3. Equip with easily seated, non-rising pins
4. Sufficient size to allow 180-degree swing of door
5. Furnish hinges with five knuckles and flush [concealed] bearings
6. Provide hinge type as listed in schedule.
7. Furnish 3 hinges per leaf to 7 foot 6 inch height. Add one for each additional 30 inches in height or fraction thereof.
8. Tested and approved by BHMA for all applicable ANSI Standards for type, size, function and finish
9. UL10C listed for Fire rated doors.

B. Geared Continuous Hinges:

1. Tested and approved by BHMA for ANSI A156.26-1996 Grade 1
2. Anti-spinning through fastener
3. UL10C listed for 3 hour Fire rating
4. Non-handed
5. Lifetime warranty
6. Provide Fire Pins for 3-hour fire ratings
7. Sufficient size to permit door to swing 180 degrees

C. Cylindrical Type Locks and Latchsets:

1. Tested and approved by BHMA for ANSI A156.2, Series 4000, Operational Grade 1, Extra-Heavy Duty, and be UL10C listed.
2. Provide 9001-Quality Management and 14001-Environmental Management.
3. Fit modified ANSI A115.2 door preparation.
4. Locksets and cores to be of the same manufacturer to maintain complete lockset warranty
5. Locksets to have anti-rotational studs that are thru-bolted
6. Keyed lever shall not have exposed “keeper” hole
7. Each lever to have independent spring mechanism controlling it
8. 2-3/4 inch (70 mm) backset
9. 9/16 inch (14 mm) throw latchbolt
10. Provide sufficient curved strike lip to protect door trim
11. Outside lever sleeve to be seamless, of one-piece construction made of a hardened steel alloy
12. Keyed lever to be removable only after core is removed, by authorized control key
13. Provide locksets with 7-pin removable and interchangeable core cylinders

14. Hub, side plate, shrouded rose, locking pin to be a one-piece casting with a shrouded locking lug.
15. Locksets outside locked lever must withstand minimum 1400 inch pounds of torque. In excess of that, a replaceable part will shear. Key from outside and inside lever will still operate lockset.
16. Core face must be the same finish as the lockset.
17. Functions and design as indicated in the hardware groups.

D. Exit Devices:

1. Exit devices to meet or exceed BHMA for ANSI 156.3, Grade 1.
2. Exit devices to be tested and certified by UL or by a recognized independent laboratory for mechanical operational testing to 10 million cycles minimum with inspection confirming Grade 1 Loaded Forces have been maintained.
3. Exit devices chassis to be investment cast steel, zinc dichromate.
4. Exit devices to have stainless steel deadlocking ¾" through latch bolt.
5. Exit devices to be equipped with sound dampening on touchbar.
6. Non-fire rated exit devices to have cylinder dogging.
7. Non-fire rated exit devices to have ¼" minimum turn hex key dogging.
8. Touchpad to be "T" style constructed of architectural metal with matching metal end caps.
9. Touchbar assembly on wide style exit devices to have a ¼" clearance to allow for vision frames.
10. All exposed exit device components to be of architectural metals and "true" architectural finishes.
11. Provide strikes as required by application.
12. Fire exit hardware to conform to UL10C and UBC 7-2. UL tested for Accident Hazard.
13. Exit device to be heavy investment cast stainless steel. The strike is to be black powder coated finish.
14. Exit devices to have field reversible handing.
15. Provide heavy duty vandal resistant lever trim with heavy duty investment cast stainless steel components and extra strength shock absorbing overload springs. Lever shall not require resetting. Lever design to match locksets and latchsets.
16. Provide 9001-Quality Management and 14001-Environmental Management.
17. Vertical Latch Assemblies to have gravity operation, no springs.

E. Cylinders:

1. Provide the necessary cylinder housings, collars, rings & springs as recommended by the manufacturer for proper installation.
2. Provide the proper cylinder cams or tail piece as required to operate all locksets and other keyed hardware items listed in the hardware sets.
3. Coordinate and provide as required for related sections.

F. Door Closers shall:

1. Tested and approved by BHMA for ANSI 156.4, Grade 1
2. UL10C certified
3. Provide 9001-Quality Management and 14001-Environmental Management.
4. Closer shall have extra-duty arms and knuckles
5. Conform to ANSI 117.1
6. Maximum 2 7/16 inch case projection with non-ferrous cover
7. Separate adjusting valves for closing and latching speed, and backcheck
8. Provide adapter plates, shim spacers and blade stop spacers as required by frame and door conditions
9. Full rack and pinion type closer with 1½" minimum bore

10. Mount closers on non-public side of door, unless otherwise noted in specification
11. Closers shall be non-handed, non-sized and multi-sized.

G. Door Stops: Provide a dome floor or wall stop for every opening as listed in the hardware sets.

1. Wall stop and floor stop shall be wrought bronze, brass or stainless steel.
2. Provide fastener suitable for wall construction.
3. Coordinate reinforcement of walls where wall stop is specified.
4. Provide dome stops where wall stops are not practical. Provide spacers or carpet riser for floor conditions encountered

H. Over Head Stops: Provide a Surface mounted or concealed overhead when a floor or wall stop cannot be used or when listed in the hardware set.

1. Concealed overhead stops shall be heavy duty bronze or stainless steel.
2. Surface overhead stops shall be heavy duty bronze or stainless steel.

I. Push Plates: Provide with four beveled edges ANSI J301, .050 thickness, size as indicated in hardware set. Furnish oval-head countersunk screws to match finish.

J. Pulls with plates: Provide with four beveled edges ANSI J301, .050 thickness Plate s with ANSI J401 Pull as listed in hardware set. Provide proper fasteners for door construction.

K. Push Pull Bars: Provide ANSI J504, .1” Dia. Pull and push bar model and series as listed in hardware set. Provide proper fasteners for door construction.

L. Kickplates: Provide with four beveled edges ANSI J102, 10 inches high by width less 2 inches on single doors and 1 inch on pairs of doors. Furnish oval-head countersunk screws to match finish.

M. Mop plates: Provide with four beveled edges ANSI J103, 4 inches high by width less 1 inch on single doors and 1 inch on pairs of doors. Furnish oval-head countersunk screws to match finish.

N. Door Bolts: Flush bolts for wood or metal doors.

1. Provide a set of Automatic bolts, Certified ANSI/BHMA 156.3 Type 25 for hollow metal label doors.
2. Provide a set of Automatic bolts, Certified ANSI/BHMA 156.3 Type 27 at wood label doors.
3. Manual flush bolts, Certified ANSI/BHMA 156.16 at openings where allowed local authority.
4. Provide Dust Proof Strike, Certified ANSI/BHMA 156.16 at doors with flush bolts without thresholds.

O. Coordinator and Brackets: Provide a surface mounted coordinator when automatic bolts are used in the hardware set.

1. Coordinator, Certified ANSI/BHMA A1156.3 Type 21A for full width of the opening.
2. Provide mounting brackets for soffit applied hardware.
3. Provide hardware preparation (cutouts) for latches as necessary.

P. Seals: All seals shall be finished to match adjacent frame color. Seals shall be furnished as listed in schedule. Material shall be UL listed for labeled openings.

Q. Weatherstripping: Provide at head and jambs only those units where resilient or flexible seal strip is easily replaceable. Where bar-type weatherstrip is used with parallel arm mounted closers install weatherstrip first.

1. Weatherstrip shall be resilient seal of (Neoprene, Polyurethane, Vinyl, Pile, Nylon Brush, Silicone)
2. UL10C Positive Pressure rated seal set when required.

R. Door Bottoms/Sweeps: Surface mounted or concealed door bottom where listed in the hardware sets.

1. Door seal shall be resilient seal of (Neoprene, Polyurethane, Nylon Brush, Silicone)
2. UL10C Positive Pressure rated seal set when required.

S. Thresholds: Thresholds shall be aluminum beveled type with maximum height of ½" for conformance with ADA requirements. Furnish as specified and per details. Provide fasteners and screws suitable for floor conditions.

T. Provide one wall mounted Telkee, Lund or MMF series key cabinet complete with hooks, index and tags to accommodate 50% expansion. Coordinate mounting location with architect.

U. Silencers: Furnish silencers on all interior frames, 3 for single doors, 2 for pairs. Omit where any type of seals occur.

2.3 FINISH:

A. Designations used in Schedule of Finish Hardware - 3.05, and elsewhere to indicate hardware finishes are those listed in ANSI/BHMA A156.18 including coordination with traditional U.S. finishes shown by certain manufacturers for their products

B. Powder coat door closers to match other hardware, unless otherwise noted.

C. Aluminum items shall be finished to match predominant adjacent material. Seals to coordinate with frame color.

2.4 KEYS AND KEYING:

~~A. Provide keyed brass construction cores and keys during the construction period. Construction control and operating keys and core shall not be part of the Owner's permanent keying system or furnished in the same keyway (or key section) as the Owner's permanent keying system. Permanent cores and keys (prepared according to the accepted keying schedule) will be furnished to the Owner.~~

B. Cylinders, ~~removable and interchangeable core system~~: ~~Best CORMAX™ Patented 7-pin~~. Conventional Schlage C Keyway 5 pin keying,

C. ~~Permanent~~ keys and cores: Stamped with the applicable key mark for identification. These visual key control marks or codes will not include the actual key cuts. Permanent keys will also be stamped "Do Not Duplicate."

D. Transmit Grand Masterkeys, Masterkeys and other Security keys to Owner by Registered Mail, return receipt requested.

E. Furnish keys in the following quantities:

1. 1 each Grand Masterkeys
2. 4 each Masterkeys
3. 3 each Change keys each keyed core
4. ~~12 each Construction masterkeys~~
5. ~~2 each Control keys~~
6. ~~2 each Construction Control keys~~

F. ~~The Owner, or the Owner's agent, will install permanent cores and return the construction cores to the Hardware Supplier. Construction cores and keys remain the property of the Hardware Supplier~~.

G. Keying Schedule: Arrange for a keying meeting, and programming meeting with Architect Owner and hardware supplier, and other involved parties to ensure locksets and locking hardware, are functionally correct and keying and programming complies with project requirements. Furnish 3 typed copies of keying and programming schedule to Architect.

PART 3 - EXECUTION

3.1 EXAMINATION

A. Verification of conditions: Examine doors, frames, related items and conditions under which Work is to be performed and identify conditions detrimental to proper and or timely completion.

1. Do not proceed until unsatisfactory conditions have been corrected.

3.2 HARDWARE LOCATIONS:

A. Mount hardware units at heights indicated in the following publications except as specifically indicated or required to comply with the governing regulations.

1. Recommended Locations for Builder’s Hardware for Standard Steel Doors and Frames, by the Door and Hardware Institute (DHI).

2. Recommended locations for Architectural Hardware for flush wood doors (DHI).

3. WDMA Industry Standard I.S.-1A-04, Industry Standard for Architectural wood flush doors.

3.3 INSTALLATION:

A. Install each hardware item per manufacturer's instructions and recommendations. Do not install surface mounted items until finishes have been completed on the substrate. Set units level, plumb and true to line and location. Adjust and reinforce the attachment substrate as necessary for proper installation and operation.

B. Conform to local governing agency security ordinance.

C. Install Conforming to ICC/ANSI A117.1 Accessible and Usable Building and Facilities.

1. Adjust door closer sweep periods so that from the open position of 70 degrees, the door will take at least 3 seconds to move to a point 3 inches from the latch, measured to the landing side of the door.

D. Installed hardware using the manufacturers fasteners provided. Drill and tap all screw holes located in metallic materials. Do not use “Riv-Nuts” or similar products.

3.4 FIELD QUALITY CONTROL AND FINAL ADJUSTMENT

A. Contractor/Installers, Field Services: After installation is complete, contractor shall inspect the completed door openings on site to verify installation of hardware is complete and properly adjusted, in accordance with both the Contract Documents and final shop drawings.

1. Check and adjust closers to ensure proper operation.

2. Check latchset, lockset, and exit devices are properly installed and adjusted to ensure proper operation.

   a. Verify levers are free from binding.
   b. Ensure latchbolts and dead bolts are engaged into strike and hardware is functioning.

3. Report findings, in writing, to architect indicating that all hardware is installed and functioning properly. Include recommendations outlining corrective actions for improperly functioning hardware if required.

3.5 SCHEDULE OF FINISH HARDWARE:

Manufacturer List

Code	Name
AB	ABH Manufacturing Inc.
BE	Best Access Systems
NA	National Guard
PR	Precision
SD	Stanley Door Closers
ST	Stanley
TR	Trimco
LO	Locinox

Option List

Code	Description
CD	CYLINDER DOGGING
M5	GALVANIZED STEEL CHAIN
S3	ANSI Strike Package
SN	Sex Nuts (Pkg. of 4)
B4E	BEVELED 4 EDGES
R704	STRAIGHT CYLINDER RING - 1/4"
SNB (4)	SEX BOLTS (4)
SNB (6)	SEX BOLTS (6)
P45-180D	Drop Plate for Narrow Top Rail
P45HD-110	Spacer Block HD Arm on Rabbet
P45HD-112	Angle Brkt. - Shoe Support HD Arms
C-SUNK	COUNTER SINKING OF PLATES

Finish List

Code	Description
AL	Aluminum
626	Satin Chromium Plated
630	Satin Stainless Steel
689	Aluminum Painted
GRE	GRE
652	Chromium Plated, Dull
US32D	Stainless Steel, Dull

Hardware Sets

SET #1 - Entrance Alum

1	Continuous Hinge	662HD	AL	ST
1	Exit Device	2403 CD SNB (4)	630	PR
1	Rim Cylinder	1E-62 ~~PATD~~ SCH C	626	BE
1	Mortise Cylinder	1E-64 ~~PATD~~ SCH C	626	BE
1	Door Pull	1191-3	630	TR
1	Door Closer	CLD-4550 CS P45-180D P45HD-110 P45HD-112 SN	689	SD
1	Saddle Threshold	425	AL	NA
1	Door Sweep	200 NA		NA

NOTE: Weatherseals by door manufacturer.

SET #1A - Entrance Alum

1	Continuous Hinge	662HD	AL	ST
1	Exit Device	2403 CD SNB (4)	630	PR
1	Electronic Exit Device Trim	EXZ-7EV15KP PATD PH2 RM	626	BE
1	Rim Cylinder	1E-62 ~~PATD~~ SCH C	626	BE
1	Mortise Cylinder	1E-64 ~~PATD~~ SCH C	626	BE
1	Door Closer	CLD-4550 CS P45-180D P45HD-110 P45HD-112 SN	689	SD
1	Saddle Threshold	425	AL	NA
1	Door Sweep	200 NA		NA

NOTE: Weatherseals by door manufacturer.

SET #2 - Apparatus

4	Hinges	CB199 4 1/2 X 4 1/2 NRP	US32D	ST
1	Exit Device	2108 X V4908A CD SNB (6)	630	PR
1	Rim Cylinder	1E-62 ~~PATD~~ SCH C	626	BE
1	Mortise Cylinder	1E-64 ~~PATD~~ SCH C	626	BE
1	Door Closer	CLD-4550 CS P45HD-112 SN	689	SD
1	Kick Plate	KO050 10" x 2" LDW B4E C-SUNK	630	TR
1	Saddle Threshold	425	AL	NA
1	Weatherstrip	700 SA x Head		NA
2	Weatherstrip	700 ES x Jambs		NA
1	Door Sweep	200 NA		NA
1	Drip Cap	16 A - 4" ODW		NA

SET #3 - Quarters

4	Hinges	CB199 4 1/2 X 4 1/2 NRP	US32D	ST
1	Lockset Keypad	9KZ3-6DV15KP ~~PATD~~ SCH C S3	626	BE
1	Door Closer	CLD-4550 CS P45HD-112 SN	689	SD
1	Kick Plate	KO050 10" x 2" LDW B4E C-SUNK	630	TR
1	Saddle Threshold	425	AL	NA
1	Weatherstrip	700 SA x Head		NA
2	Weatherstrip	700 ES x Jambs		NA
1	Door Sweep	200 NA		NA
1	Drip Cap	16 A - 4" ODW		NA

SET #4 - Mech

6	Hinges	CB191 4 1/2 X 4 1/2 NRP	US32D	ST
2	Flush Bolt	3917-12	626	TR
1	Dustproof Strike	3910	630	TR
1	Lockset	9K3-6D15D ~~PATD~~ SCH C S3	626	BE
2	Door Closer	CLD-4550 CS P45HD-112 SN	689	SD
1	Saddle Threshold	425	AL	NA
1	Weatherstrip	700 SA x Head		NA
2	Weatherstrip	700 ES x Jambs		NA
2	Door Sweep	200 NA		NA
1	Drip Cap	16 A - 4" ODW		NA
1	Astragal	158 SA		NA

SET #5 - Electrical

4	Hinges	CB191 4 1/2 X 4 1/2 NRP	US32D	ST
1	Lockset	9K3-6D15D ~~PATD~~ SCH C S3	626	BE
1	Door Closer	CLD-4550 CS P45HD-112 SN	689	SD
1	Saddle Threshold	425	AL	NA
1	Weatherstrip	700 SA x Head		NA
2	Weatherstrip	700 ES x Jambs		NA
1	Door Sweep	200 NA		NA
1	Drip Cap	16 A - 4" ODW		NA

SET #6 - Riser

4	Hinges	CB191 4 1/2 X 4 1/2 NRP	US32D	ST
1	Lockset	9K3-6D15D ~~PATD~~ SCH C S3	626	BE
1	Door Closer	CLD-4550 EDA P45HD-112 SN	689	SD
1	Base Stop	1205	626	TR
1	Saddle Threshold	425	AL	NA
1	Weatherstrip	700 SA x Head		NA
2	Weatherstrip	700 ES x Jambs		NA
1	Door Sweep	200 NA		NA
1	Drip Cap	16 A - 4" ODW		NA

SET #6A - Riser

4	Hinges	CB191 4 1/2 X 4 1/2 NRP	US32D	ST
1	Lockset Keypad	9KZ3-6DV15KP ~~PATD~~ SCH C S3	626	BE
1	Door Closer	CLD-4550 EDA P45HD-112 SN	689	SD
1	Base Stop	1205	626	TR
1	Saddle Threshold	425	AL	NA
1	Weatherstrip	700 SA x Head		NA
2	Weatherstrip	700 ES x Jambs		NA
1	Door Sweep	200 NA		NA
1	Drip Cap	16 A - 4" ODW		NA

SET #7 - OH

NOTE: hardware by door manufacturer.

SET #100 - Corridor

6	Hinges	CB168 4 1/2 X 4 1/2 NRP	652	ST
1	Removable Mullion	KR822	689	PR
1	Rim Cylinder	1E-72 PATD R704	626	BE
1	Exit Device	2102 X 4902A CD SNB (6)	630	PR
1	Exit Device	2108 X V4908A CD SNB (6)	630	PR
1	Rim Cylinder	1E-62 ~~PATD~~ SCH C	626	BE
2	Mortise Cylinder	1E-64 ~~PATD~~ SCH C	626	BE
2	Door Closer	CLD-4550 CS P45HD-112 SN	689	SD
1	Saddle Threshold	425	AL	NA
1	Weatherstrip	700 SA x Head		NA
2	Weatherstrip	700 ES x Jambs		NA
2	Door Sweep	200 NA		NA
1	Mullion Seal	5100 S		NA

SET #101 - Corridor

3	Hinges	CB168 4 1/2 X 4 1/2 NRP	652	ST
1	Exit Device	2103 CD SNB (6)	630	PR
1	Electronic Exit Device Trim	EXZ-6EV15KP ~~PATD~~ SCH C PH2 RM	626	BE
1	Mortise Cylinder	1E-64 ~~PATD~~ SCH C	626	BE
1	Door Closer	CLD-4550 EDA P45HD-112 SN	689	SD
1	Kick Plate	KO050 10" x 2" LDW B4E C-SUNK	630	TR
1	Wall Bumper	1270CV	626	TR
1	Saddle Threshold	425	AL	NA
1	Weatherstrip	700 SA x Head		NA
1	Weatherstrip	700 ES x Jambs		NA
1	Door Sweep	200 NA		NA

SET #102 - Fitness

3	Hinges	CB168 4 1/2 X 4 1/2	652	ST
1	Passage Set	9K3-0N15D PATD S3	626	BE
1	Wall Bumper	1270CV	626	TR
3	Door Silencers	1229A	GRE	TR

SET #103 - Corridor Alum

1	Continuous Hinge	662HD	AL	ST
1	Lockset Keypad	9KZ3-6DV15KP ~~PATD~~ SCH C S3	626	BE
1	Door Closer	CLD-4550 EDA P45-180D P45HD-110 P45HD-112 SN	689	SD
1	Wall Bumper	1270CV	626	TR

SET #104 - Dorm

3	Hinges	CB179 4 1/2 X 4 1/2	652	ST
1	Lockset	9K3-6T15D ~~PATD~~ SCH C S3	626	BE
1	Wall Bumper	1270CV	626	TR
1	Smoke Seal	5075 B x Head & Jambs	NA	
1	Auto Door Bottom	320 N	NA	

SET #105 - Dorm

3 Hinges	CB179 4 1/2 X 4 1/2	652	ST
1 Privacy Set	9K3-0L15D S3	626	BE
1 Roller Stop	1244	626	TR
1 Smoke Seal	5075 B x Head & Jambs		NA
1 Auto Door Bottom	225 N		NA

SET #105A - Dorm

3 Hinges	CB179 4 1/2 X 4 1/2	652	ST
1 Lockset	9K3-6T15D ~~PATD~~ SCH C S3	626	BE
1 Roller Stop	1244	626	TR
1 Smoke Seal	5075 B x Head & Jambs		NA
1 Auto Door Bottom	225 N		NA

SET #106 - Dorm

3 Hinges	CB179 4 1/2 X 4 1/2	652	ST
1 Privacy Set	9K3-0L15D S3	626	BE
1 Wall Bumper	1270CV	626	TR
1 Smoke Seal	5075 B x Head & Jambs		NA
1 Auto Door Bottom	225 N		NA

SET #107 - Lockers

3 Hinges	CB179 4 1/2 X 4 1/2	652	ST
1 Slide Bolt	1884	US32D	AB
3 Door Silencers	1229A	GRE	TR

SET #108 - Lockers

3 Hinges	CB179 4 1/2 X 4 1/2	652	ST
1 Slide Bolt	1884	US32D	AB
1 Overhead Stop	4420 Series	US32D	AB
3 Door Silencers	1229A	GRE	TR

SET #109 - Lockers

3 Hinges	CB179 4 1/2 X 4 1/2	652	ST
1 Slide Bolt	1884	US32D	AB
1 Wall Bumper	1270CV	626	TR
3 Door Silencers	1229A	GRE	TR

SET #110 - Office

4 Hinges	CB179 4 1/2 X 4 1/2	652	ST
1 Lockset	9K3-6B15D ~~PATD~~ SCH C S3	626	BE
1 Wall Bumper	1270CV	626	TR
3 Door Silencers	1229A	GRE	TR

SET #111 - Storage

3 Hinges	CB179 4 1/2 X 4 1/2	652	ST
1 Lockset	9K3-6R15D ~~PATD~~ SCH C S3	626	BE
1 Overhead Stop	4420 Series	US32D	AB
3 Door Silencers	1229A	GRE	TR

SET #112 - Storage

6	Hinges	CB179 4 1/2 X 4 1/2 NRP	652	ST
2	Flush Bolt	3917-12	626	TR
1	Dustproof Strike	3910	630	TR
1	Passage Set	9K3-0N15D PATD S3	626	BE
2	Wall Bumper	1270CV	626	TR
2	Door Silencers	1229A	GRE	TR

SET #113 - Pantry

3	Hinges	CB179 4 1/2 X 4 1/2	652	ST
1	Passage Set	9K3-0N15D PATD S3	626	BE
1	Overhead Stop	4420 Series	US32D	AB
3	Door Silencers	1229A	GRE	TR

SET #114 - Laundry

3	Hinges	CB179 4 1/2 X 4 1/2	652	ST
1	Passage Set	9K3-0N15D PATD S3	626	BE
1	Kick Plate	KO050 10" x 2" LDW B4E C-SUNK	630	TR
1	Mop Plate	KM050 4" X 1" LDW B4E C-SUNK	630	TR
1	Wall Bumper	1270CV	626	TR
3	Door Silencers	1229A	GRE	TR

SET #115 - Bath

3	Hinges	CB179 4 1/2 X 4 1/2	652	ST
1	Privacy Set	9K3-0L15D S3	626	BE
1	Door Closer	CLD-4551 REG	689	SD
1	Kick Plate	KO050 10" x 2" LDW B4E C-SUNK	630	TR
1	Mop Plate	KM050 4" X 1" LDW B4E C-SUNK	630	TR
1	Wall Bumper	1270CV	626	TR
1	Smoke Seal	5075 B x Head & Jambs		NA

SET #116 - Janitor

3	Hinges	CB179 4 1/2 X 4 1/2 NRP	652	ST
1	Lockset	9K3-6D15D ~~PATD~~ SCH C S3	626	BE
1	Door Closer	CLD-4550 CS P45HD-112 SN	689	SD
1	Kick Plate	KO050 10" x 2" LDW B4E C-SUNK	630	TR
1	Mop Plate	KM050 4" X 1" LDW B4E C-SUNK	630	TR
1	Wall Bumper	1270CV	626	TR
1	Smoke Seal	5075 B x Head & Jambs		NA

SET #117 - Storage

1	Concealed Closer	CO-30 HD Series	689	SD
2	Push Plate	1001-9	630	TR
2	Kick Plate	KO050 10" X 1"LDW B4E C-SUNK	630	TR
2	Floor Stop	1211	626	TR
1	Saddle Threshold	425	AL	NA

SET #118 - Mech.

3	Hinges	CB179 4 1/2 X 4 1/2 NRP	652	ST
1	Lockset	9K3-6D15D ~~PATD~~ SCH C S3	626	BE
1	Door Closer	CLD-4550 CS P45HD-112 SN	689	SD
1	Smoke Seal	5075 B x Head & Jambs		NA

Opening List

Opening	Hdw Set
D101	6
D104	112
D106	100
D108	1A
D110	113
D111	108
D112	108
D113	108
D114	115
D118	113
D119	113
D120	115
D123	102
D126	115
D130	103
D131	114
D132	102
D133	4
D134	6A
D135	4
D136	5
D138	111
D139	115
D141	2
D142	115
D143	102
D145	110
D146	102
D147	112
D149	113
D150	118
D152	102
D153	106
D154	115
D155	106
D156	116
D157	113
D102A	117
D102B	117
D103A	7
D103B	7
D103C	7
D103D	2
D103E	7
D103F	7
D103G	7
D103H	2
D105A	112
D105B	112
D115A	107
D115B	108
D115C	109
D115D	105

D116A	107
D116B	108
D116C	109
D116D	105
D121A	107
D121B	108
D121C	109
D121D	105
D122A	107
D122B	108
D122C	109
D122D	105
D124A	107
D124B	108
D124C	109
D124D	105
D125A	107
D125B	108
D125C	109
D125D	105
D127A	107
D127B	108
D127C	109
D127D	105
D128A	107
D128B	108
D128C	109
D128D	105
D137A	1
D140A	107
D140B	108
D140C	108
D140D	105A
D140E	110
D144A	107
D144B	108
D144C	108
D144D	105A
D144E	110
D148A	101
D148B	7
D148C	7
D151A	108
D151B	108
D151C	109
D151D	109
D151E	108
D151F	108
D151G	108
D151H	108
D151I	109
D151J	109
D151K	108
D151L	108
D151M	104
D151N	3

SECTION 08 71 00

GATE HARDWARE

PART 1 - GENERAL

1.1 SUMMARY:

A. Section Includes: Finish Hardware for door openings, except as otherwise specified herein.

1. Door hardware for steel (hollow metal) doors.
2. Door hardware for aluminum doors.
3. Door hardware for wood doors.
4. Door hardware for other doors indicated.
5. Keyed cylinders as indicated.

B. Related Sections:

1. Division 6: Rough Carpentry.
2. Division 8: Aluminum Doors and Frames
3. Division 8: Hollow Metal Doors and Frames.
4. Division 8: Wood Doors.
5. Division 26 Electrical
6. Division 28: Electronic Security

C. References: Comply with applicable requirements of the following standards. Where these standards conflict with other specific requirements, the most restrictive shall govern.

1. Builders Hardware Manufacturing Association (BHMA)
2. NFPA 101 Life Safety Code
3. NFPA 80 -Fire Doors and Windows
4. ANSI-A156.xx- Various Performance Standards for Finish Hardware
5. UL10C – Positive Pressure Fire Test of Door Assemblies
6. ANSI-A117.1 – Accessible and Usable Buildings and Facilities
7. DHI /ANSI A115.IG – Installation Guide for Doors and Hardware
8. ICC – International Building Code

D. Intent of Hardware Groups

1. Should items of hardware not definitely specified be required for completion of the Work, furnish such items of type and quality comparable to adjacent hardware and appropriate for service required.
2. Where items of hardware aren't definitely or correctly specified, are required for completion of the Work, a written statement of such omission, error, or other discrepancy to be submitted to Architect, prior to date specified for receipt of bids for clarification by addendum; or, furnish such items in the type and quality established by this specification, and appropriate to the service intended.

E. Allowances

1. Refer to Division 1 for allowance amount and procedures.

F. Alternates

1. Refer to Division 1 for Alternates and procedures.

1.2 SUBSTITUTIONS:

A. Comply with Division 1.

1.3 SUBMITTALS:

A. Comply with Division 1.

B. Special Submittal Requirements: Combine submittals of this Section with Sections listed below to ensure the "design intent" of the system/assembly is understood and can be reviewed together.

C. Product Data: Manufacturer's specifications and technical data including the following:

1. Detailed specification of construction and fabrication.
2. Manufacturer's installation instructions.
3. Wiring diagrams for each electric product specified. Coordinate voltage with electrical before submitting.
4. Submit 6 copies of catalog cuts with hardware schedule.
5. Provide 9001-Quality Management and 14001-Environmental Management for products listed in Materials Section 2.2

D. Shop Drawings - Hardware Schedule: Submit 6 complete reproducible copy of detailed hardware schedule in a vertical format.

1. List groups and suffixes in proper sequence.
2. Completely describe door and list architectural door number.
3. Manufacturer, product name, and catalog number.
4. Function, type, and style.
5. Size and finish of each item.
6. Mounting heights.
7. Explanation of abbreviations and symbols used within schedule.
8. Detailed wiring diagrams, specially developed for each opening, indicating all electric hardware, security equipment and access control equipment, and door and frame rough-ins required for specific opening.

E. Templates: Submit templates and "reviewed Hardware Schedule" to door and frame supplier and others as applicable to enable proper and accurate sizing and locations of cutouts and reinforcing.

1. Templates, wiring diagrams and "reviewed Hardware Schedule" of electrical terms to electrical for coordination and verification of voltages and locations.

F. Samples: (If requested by the Architect)

1. 1 sample of Lever and Rose/Escutcheon design, (pair).
2. 3 samples of metal finishes

G. Contract Closeout Submittals: Comply with Division 1 including specific requirements indicated.

1. Operating and maintenance manuals: Submit 3 sets containing the following.

a. Complete information in care, maintenance, and adjustment, and data on repair and replacement parts, and information on preservation of finishes.
b. Catalog pages for each product.
c. Name, address, and phone number of local representative for each manufacturer.
d. Parts list for each product.

2. Copy of final hardware schedule, edited to reflect, "As installed".
3. Copy of final keying schedule
4. As installed “Wiring Diagrams” for each piece of hardware connected to power, both low voltage and 110 volts.
5. One set of special tools required for maintenance and adjustment of hardware, including changing of cylinders.

1.4 QUALITY ASSURANCE

A. Comply with Division 1.

1. Statement of qualification for distributor and installers.
2. Statement of compliance with regulatory requirements and single source responsibility.
3. Distributor's Qualifications: Firm with 3 years experience in the distribution of commercial hardware.

a. Distributor to employ full time Architectural Hardware Consultants (AHC) for the purpose of scheduling and coordinating hardware and establishing keying schedule.
b. Hardware Schedule shall be prepared and signed by an AHC.

4. Installer's Qualifications: Firm with 3 years experienced in installation of similar hardware to that required for this Project, including specific requirements indicated.
5. Regulatory Label Requirements: Provide testing agency label or stamp on hardware for labeled openings.

a. Provide UL listed hardware for labeled and 20 minute openings in conformance with requirements for class of opening scheduled.
b. Underwriters Laboratories requirements have precedence over this specification where conflict exists.

6. Single Source Responsibility: Except where specified in hardware schedule, furnish products of only one manufacturer for each type of hardware.

B. Review Project for extent of finish hardware required to complete the Work. Where there is a conflict between these Specifications and the existing hardware, notify the Architect in writing and furnish hardware in compliance with the Specification unless otherwise directed in writing by the Architect.

1.5 DELIVERY, STORAGE, AND HANDLING

A. Packing and Shipping: Comply with Division 1.

1. Deliver products in original unopened packaging with legible manufacturer's identification.
2. Package hardware to prevent damage during transit and storage.
3. Mark hardware to correspond with "reviewed hardware schedule".
4. Deliver hardware to door and frame manufacturer upon request.

B. Storage and Protection: Comply with manufacturer's recommendations.

1.6 PROJECT CONDITIONS:

A. Coordinate hardware with other work. Furnish hardware items of proper design for use on doors and frames of the thickness, profile, swing, security and similar requirements indicated, as necessary for the proper installation and function, regardless of omissions or conflicts in the information on the Contract Documents.

B. Review Shop Drawings for doors and entrances to confirm that adequate provisions will be made for the proper installation of hardware.

1.7 WARRANTY:

A. Refer to Conditions of the Contract

B. Manufacturer's Warranty:

1. Closers: Ten years
2. Exit Devices: Five Years
3. Locksets & Cylinders: Three years
4. All other Hardware: Two years.

1.8 OWNER'S INSTRUCTION:

A. Instruct Owner's personnel in operation and maintenance of hardware units.

1.9 MAINTENANCE:

A. Extra Service Materials: Deliver to Owner extra materials from same production run as products installed. Package products with protective covering and identify with descriptive labels. Comply with Division 1 Closeout Submittals Section.

1. Special Tools: Provide special wrenches and tools applicable to each different or special hardware component.
2. Maintenance Tools: Provide maintenance tools and accessories supplied by hardware component manufacturer.
3. Delivery, Storage and Protection: Comply with Owner's requirements for delivery, storage and protection of extra service materials.

B. Maintenance Service: Submit for Owner's consideration maintenance service agreement for electronic products installed.

PART 2 - PRODUCTS

2.1 MANUFACTURERS:

A. The following manufacturers are approved subject to compliance with requirements of the Contract Documents. Approval of manufacturers other than those listed shall be in accordance with Division 1.

Item:	Manufacturer:	Approved:
Hinges	Stanley	Ives, McKinney
Continuous Hinges	Stanley	Select, McKinney, Ives
Locksets & Cylinders	Best	No Substitution
Exit Devices	Precision	Von Duprin,
Closers	Stanley	

Push/Pull Plates	Trimco	Rockwood, Ives
Push/Pull Bars	Trimco	Rockwood, Ives
Protection Plates	Trimco	Rockwood, Ives
Overhead Stops	ABH	Glynn Johnson, Sargent
Door Stops	Trimco	Rockwood, Ives
Flush Bolts	Trimco	Rockwood, Ives
Coordinator & Brackets	Trimco	Rockwood, Ives
Threshold & Gasketing	National Guard	Reese, Pemko, Zero

2.2 MATERIALS:

A. Hinges:

1. Template screw hole locations
2. Minimum of 2 permanently lubricated non-detachable bearings
3. Equip with easily seated, non-rising pins
4. Sufficient size to allow 180-degree swing of door
5. Furnish hinges with five knuckles and flush [concealed] bearings
6. Provide hinge type as listed in schedule.
7. Furnish 3 hinges per leaf to 7 foot 6 inch height. Add one for each additional 30 inches in height or fraction thereof.
8. Tested and approved by BHMA for all applicable ANSI Standards for type, size, function and finish
9. UL10C listed for Fire rated doors.

B. Geared Continuous Hinges:

1. Tested and approved by BHMA for ANSI A156.26-1996 Grade 1
2. Anti-spinning through fastener
3. UL10C listed for 3 hour Fire rating
4. Non-handed
5. Lifetime warranty
6. Provide Fire Pins for 3-hour fire ratings
7. Sufficient size to permit door to swing 180 degrees

C. Cylindrical Type Locks and Latchsets:

1. Tested and approved by BHMA for ANSI A156.2, Series 4000, Operational Grade 1, Extra-Heavy Duty, and be UL10C listed.
2. Provide 9001-Quality Management and 14001-Environmental Management.
3. Fit modified ANSI A115.2 door preparation.
4. Locksets and cores to be of the same manufacturer to maintain complete lockset warranty
5. Locksets to have anti-rotational studs that are thru-bolted
6. Keyed lever shall not have exposed “keeper” hole
7. Each lever to have independent spring mechanism controlling it
8. 2-3/4 inch (70 mm) backset
9. 9/16 inch (14 mm) throw latchbolt
10. Provide sufficient curved strike lip to protect door trim
11. Outside lever sleeve to be seamless, of one-piece construction made of a hardened steel alloy
12. Keyed lever to be removable only after core is removed, by authorized control key
13. Provide locksets with 7-pin removable and interchangeable core cylinders

14. Hub, side plate, shrouded rose, locking pin to be a one-piece casting with a shrouded locking lug.
15. Locksets outside locked lever must withstand minimum 1400 inch pounds of torque. In excess of that, a replaceable part will shear. Key from outside and inside lever will still operate lockset.
16. Core face must be the same finish as the lockset.
17. Functions and design as indicated in the hardware groups.

D. Exit Devices:

1. Exit devices to meet or exceed BHMA for ANSI 156.3, Grade 1.
2. Exit devices to be tested and certified by UL or by a recognized independent laboratory for mechanical operational testing to 10 million cycles minimum with inspection confirming Grade 1 Loaded Forces have been maintained.
3. Exit devices chassis to be investment cast steel, zinc dichromate.
4. Exit devices to have stainless steel deadlocking ¾" through latch bolt.
5. Exit devices to be equipped with sound dampening on touchbar.
6. Non-fire rated exit devices to have cylinder dogging.
7. Non-fire rated exit devices to have ¼" minimum turn hex key dogging.
8. Touchpad to be "T" style constructed of architectural metal with matching metal end caps.
9. Touchbar assembly on wide style exit devices to have a ¼" clearance to allow for vision frames.
10. All exposed exit device components to be of architectural metals and "true" architectural finishes.
11. Provide strikes as required by application.
12. Fire exit hardware to conform to UL10C and UBC 7-2. UL tested for Accident Hazard.
13. Exit device to be heavy investment cast stainless steel. The strike is to be black powder coated finish.
14. Exit devices to have field reversible handing.
15. Provide heavy duty vandal resistant lever trim with heavy duty investment cast stainless steel components and extra strength shock absorbing overload springs. Lever shall not require resetting. Lever design to match locksets and latchsets.
16. Provide 9001-Quality Management and 14001-Environmental Management.
17. Vertical Latch Assemblies to have gravity operation, no springs.

E. Cylinders:

1. Provide the necessary cylinder housings, collars, rings & springs as recommended by the manufacturer for proper installation.
2. Provide the proper cylinder cams or tail piece as required to operate all locksets and other keyed hardware items listed in the hardware sets.
3. Coordinate and provide as required for related sections.

F. Door Closers shall:

1. Tested and approved by BHMA for ANSI 156.4, Grade 1
2. UL10C certified
3. Provide 9001-Quality Management and 14001-Environmental Management.
4. Closer shall have extra-duty arms and knuckles
5. Conform to ANSI 117.1
6. Maximum 2 7/16 inch case projection with non-ferrous cover
7. Separate adjusting valves for closing and latching speed, and backcheck
8. Provide adapter plates, shim spacers and blade stop spacers as required by frame and door conditions
9. Full rack and pinion type closer with 1½" minimum bore

10. Mount closers on non-public side of door, unless otherwise noted in specification
11. Closers shall be non-handed, non-sized and multi-sized.

G. Door Stops: Provide a dome floor or wall stop for every opening as listed in the hardware sets.

1. Wall stop and floor stop shall be wrought bronze, brass or stainless steel.
2. Provide fastener suitable for wall construction.
3. Coordinate reinforcement of walls where wall stop is specified.
4. Provide dome stops where wall stops are not practical. Provide spacers or carpet riser for floor conditions encountered

H. Over Head Stops: Provide a Surface mounted or concealed overhead when a floor or wall stop cannot be used or when listed in the hardware set.

1. Concealed overhead stops shall be heavy duty bronze or stainless steel.
2. Surface overhead stops shall be heavy duty bronze or stainless steel.

I. Push Plates: Provide with four beveled edges ANSI J301, .050 thickness, size as indicated in hardware set. Furnish oval-head countersunk screws to match finish.

J. Pulls with plates: Provide with four beveled edges ANSI J301, .050 thickness Plate s with ANSI J401 Pull as listed in hardware set. Provide proper fasteners for door construction.

K. Push Pull Bars: Provide ANSI J504, .1” Dia. Pull and push bar model and series as listed in hardware set. Provide proper fasteners for door construction.

L. Kickplates: Provide with four beveled edges ANSI J102, 10 inches high by width less 2 inches on single doors and 1 inch on pairs of doors. Furnish oval-head countersunk screws to match finish.

M. Mop plates: Provide with four beveled edges ANSI J103, 4 inches high by width less 1 inch on single doors and 1 inch on pairs of doors. Furnish oval-head countersunk screws to match finish.

N. Door Bolts: Flush bolts for wood or metal doors.

1. Provide a set of Automatic bolts, Certified ANSI/BHMA 156.3 Type 25 for hollow metal label doors.
2. Provide a set of Automatic bolts, Certified ANSI/BHMA 156.3 Type 27 at wood label doors.
3. Manual flush bolts, Certified ANSI/BHMA 156.16 at openings where allowed local authority.
4. Provide Dust Proof Strike, Certified ANSI/BHMA 156.16 at doors with flush bolts without thresholds.

O. Coordinator and Brackets: Provide a surface mounted coordinator when automatic bolts are used in the hardware set.

1. Coordinator, Certified ANSI/BHMA A1156.3 Type 21A for full width of the opening.
2. Provide mounting brackets for soffit applied hardware.
3. Provide hardware preparation (cutouts) for latches as necessary.

P. Seals: All seals shall be finished to match adjacent frame color. Seals shall be furnished as listed in schedule. Material shall be UL listed for labeled openings.

Q. Weatherstripping: Provide at head and jambs only those units where resilient or flexible seal strip is easily replaceable. Where bar-type weatherstrip is used with parallel arm mounted closers install weatherstrip first.

1. Weatherstrip shall be resilient seal of (Neoprene, Polyurethane, Vinyl, Pile, Nylon Brush, Silicone)
2. UL10C Positive Pressure rated seal set when required.

R. Door Bottoms/Sweeps: Surface mounted or concealed door bottom where listed in the hardware sets.

1. Door seal shall be resilient seal of (Neoprene, Polyurethane, Nylon Brush, Silicone)
2. UL10C Positive Pressure rated seal set when required.

S. Thresholds: Thresholds shall be aluminum beveled type with maximum height of ½" for conformance with ADA requirements. Furnish as specified and per details. Provide fasteners and screws suitable for floor conditions.

T. Provide one wall mounted Telkee, Lund or MMF series key cabinet complete with hooks, index and tags to accommodate 50% expansion. Coordinate mounting location with architect.

U. Silencers: Furnish silencers on all interior frames, 3 for single doors, 2 for pairs. Omit where any type of seals occur.

2.3 FINISH:

A. Designations used in Schedule of Finish Hardware - 3.05, and elsewhere to indicate hardware finishes are those listed in ANSI/BHMA A156.18 including coordination with traditional U.S. finishes shown by certain manufacturers for their products

B. Powder coat door closers to match other hardware, unless otherwise noted.

C. Aluminum items shall be finished to match predominant adjacent material. Seals to coordinate with frame color.

2.4 KEYS AND KEYING:

A. Provide keyed brass construction cores and keys during the construction period. Construction control and operating keys and core shall not be part of the Owner's permanent keying system or furnished in the same keyway (or key section) as the Owner's permanent keying system. Permanent cores and keys (prepared according to the accepted keying schedule) will be furnished to the Owner.

B. Cylinders, removable and interchangeable core system: Best CORMAX™ Patented 7-pin.

C. Permanent keys and cores: Stamped with the applicable key mark for identification. These visual key control marks or codes will not include the actual key cuts. Permanent keys will also be stamped "Do Not Duplicate."

D. Transmit Grand Masterkeys, Masterkeys and other Security keys to Owner by Registered Mail, return receipt requested.

E. Furnish keys in the following quantities:

1. 1 each Grand Masterkeys
2. 4 each Masterkeys
3. 3 each Change keys each keyed core
4. 12 each Construction masterkeys
5. 2 each Control keys
6. 2 each Construction Control keys

F. The Owner, or the Owner's agent, will install permanent cores and return the construction cores to the Hardware Supplier. Construction cores and keys remain the property of the Hardware Supplier.

G. Keying Schedule: Arrange for a keying meeting, and programming meeting with Architect Owner and hardware supplier, and other involved parties to ensure locksets and locking hardware, are functionally correct and keying and programming complies with project requirements. Furnish 3 typed copies of keying and programming schedule to Architect.

PART 3 - EXECUTION

3.1 EXAMINATION

A. Verification of conditions: Examine doors, frames, related items and conditions under which Work is to be performed and identify conditions detrimental to proper and or timely completion.

1. Do not proceed until unsatisfactory conditions have been corrected.

3.2 HARDWARE LOCATIONS:

A. Mount hardware units at heights indicated in the following publications except as specifically indicated or required to comply with the governing regulations.

1. Recommended Locations for Builder’s Hardware for Standard Steel Doors and Frames, by the Door and Hardware Institute (DHI).

2. Recommended locations for Architectural Hardware for flush wood doors (DHI).

3. WDMA Industry Standard I.S.-1A-04, Industry Standard for Architectural wood flush doors.

3.3 INSTALLATION:

A. Install each hardware item per manufacturer's instructions and recommendations. Do not install surface mounted items until finishes have been completed on the substrate. Set units level, plumb and true to line and location. Adjust and reinforce the attachment substrate as necessary for proper installation and operation.

B. Conform to local governing agency security ordinance.

C. Install Conforming to ICC/ANSI A117.1 Accessible and Usable Building and Facilities.

1. Adjust door closer sweep periods so that from the open position of 70 degrees, the door will take at least 3 seconds to move to a point 3 inches from the latch, measured to the landing side of the door.

D. Installed hardware using the manufacturers fasteners provided. Drill and tap all screw holes located in metallic materials. Do not use “Riv-Nuts” or similar products.

3.4 FIELD QUALITY CONTROL AND FINAL ADJUSTMENT

A. Contractor/Installers, Field Services: After installation is complete, contractor shall inspect the completed door openings on site to verify installation of hardware is complete and properly adjusted, in accordance with both the Contract Documents and final shop drawings.

1. Check and adjust closers to ensure proper operation.

2. Check latchset, lockset, and exit devices are properly installed and adjusted to ensure proper operation.

   a. Verify levers are free from binding.
   b. Ensure latchbolts and dead bolts are engaged into strike and hardware is functioning.

3. Report findings, in writing, to architect indicating that all hardware is installed and functioning properly. Include recommendations outlining corrective actions for improperly functioning hardware if required.

3.5 SCHEDULE OF FINISH HARDWARE:

Manufacturer List

Code	Name
LO	Locinox

Hardware Sets

SET #8 - Gates

1	Gate Lock	LAKQ4040 U2L SHKL QF ZILV	LO
1	Gate Lock Cylinder	3012-46-STD VCA	

Opening List

Opening	Hdw Set
GATES	8

SECTION 012100 - ALLOWANCES

PART 1 - GENERAL

1.1 SUMMARY

A. Section includes administrative and procedural requirements governing allowances.

B. Types of allowances include the following:

1. Lump-sum allowances.

C. Related Requirements:
1. Section 014000 "Quality Requirements" for procedures governing the use of allowances for testing and inspecting.

1.2 SELECTION AND PURCHASE

A. At the earliest practical date after award of the Contract, advise Architect of the date when final selection and purchase of each product or system described by an allowance must be completed to avoid delaying the Work.

B. At Architect's request, obtain proposals for each allowance for use in making final selections. Include recommendations that are relevant to performing the Work.

C. Purchase products and systems selected by Architect from the designated supplier.

1.3 ACTION SUBMITTALS

A. Submit proposals for purchase of products or systems included in allowances, in the form specified for Change Orders.

1.4 INFORMATIONAL SUBMITTALS

A. Submit invoices or delivery slips to show actual quantities of materials delivered to the site for use in fulfillment of each allowance.

B. Submit time sheets and other documentation to show labor time and cost for installation of allowance items that include installation as part of the allowance.

C. Coordinate and process submittals for allowance items in same manner as for other portions of the Work.

1.5 COORDINATION

A. Coordinate allowance items with other portions of the Work. Furnish templates as required to coordinate installation.

1.6 LUMP-SUM ALLOWANCES

A. Allowance shall include cost to Contractor of specific products and materials ordered by Owner or selected by Architect under allowance and shall include taxes, freight, and delivery to Project site.

B. Unless otherwise indicated, Contractor's costs for receiving and handling at Project site, labor, installation, overhead and profit, and similar costs related to products and materials ordered by Owner and or selected by Architect under allowance shall be included as part of the Contract Sum and not part of the allowance.

C. Unused Materials: Return unused materials purchased under an allowance to manufacturer or supplier for credit to Owner, after installation has been completed and accepted.

1. If requested by Architect, retain and prepare unused material for storage by Owner. Deliver unused material to Owner's storage space as directed.

1.7 ADJUSTMENT OF ALLOWANCES

A. Allowance Adjustment: To adjust allowance amounts, prepare a Change Order proposal based on the difference between purchase amount and the allowance, multiplied by final measurement of work-in-place where applicable. If applicable, include reasonable allowances for cutting losses, tolerances, mixing wastes, normal product imperfections, and similar margins.

1. Include installation costs in purchase amount only where indicated as part of the allowance.
2. If requested, prepare explanation and documentation to substantiate distribution of overhead costs and other margins claimed.
3. Submit substantiation of a change in scope of work, if any, claimed in Change Orders related to unit-cost allowances.
4. Owner reserves the right to establish the quantity of work-in-place by independent quantity survey, measure, or count.

B. Submit claims for increased costs because of a change in scope or nature of the allowance described in the Contract Documents, whether for the purchase order amount or Contractor's handling, labor, installation, overhead, and profit.

1. Do not include Contractor's or subcontractor's indirect expense in the Change Order cost amount unless it is clearly shown that the nature or extent of work has changed from what could have been foreseen from information in the Contract Documents.

2. No change to Contractor's indirect expense is permitted for selection of higher- or lower-priced materials or systems of the same scope and nature as originally indicated.

PART 2 - PRODUCTS (Not Used)

PART 3 - EXECUTION

3.1 EXAMINATION

A. Examine products covered by an allowance promptly on delivery for damage or defects. Return damaged or defective products to manufacturer for replacement.

3.2 PREPARATION

A. Coordinate materials and their installation for each allowance with related materials and installations to ensure that each allowance item is completely integrated and interfaced with related work.

3.3 SCHEDULE OF ALLOWANCES

Allowance No. 1: Include the sum of one hundred forty thousand dollars ($140,000.00) for the provision and installation of US Digital Designs (USDD) Phoenix Station Alerting System.

Allowance No. 2: Include the sum of ninety thousand dollars ($90,000.00) for payment of utility impact fees.

END OF SECTION 012100

SECTION 012300 - ALTERNATES

PART 1 - GENERAL

1.1 SUMMARY

A. Section includes administrative and procedural requirements for alternates.

1.2 DEFINITIONS

A. Alternate: An amount proposed by bidders and stated on the Bid Form for certain work defined in the bidding requirements that may be added to or deducted from the base bid amount if Owner decides to accept a corresponding change either in the amount of construction to be completed or in the products, materials, equipment, systems, or installation methods described in the Contract Documents.

1. Alternates described in this Section are part of the Work only if enumerated in the Agreement.
2. The cost or credit for each alternate is the net addition to or deduction from the Contract Sum to incorporate alternate into the Work. No other adjustments are made to the Contract Sum.

1.3 PROCEDURES

A. Coordination: Revise or adjust affected adjacent work as necessary to completely integrate work of the alternate into Project.

1. Include as part of each alternate, miscellaneous devices, accessory objects, and similar items incidental to or required for a complete installation whether or not indicated as part of alternate.

B. Notification: Immediately following award of the Contract, notify each party involved, in writing, of the status of each alternate. Indicate if alternates have been accepted, rejected, or deferred for later consideration. Include a complete description of negotiated revisions to alternates.

C. Execute accepted alternates under the same conditions as other work of the Contract.

D. Schedule: A schedule of alternates is included at the end of this Section. Specification Sections referenced in schedule contain requirements for materials necessary to achieve the work described under each alternate.

PART 2 - PRODUCTS (Not Used)

PART 3 - EXECUTION

3.1 SCHEDULE OF ALTERNATES

A. Alternate No. 1 – Earthwork

1. Base Bid: The Base Bid for the Project includes provision and installation of a building pad with a ½" PVR.

2. Alternate: For Alternate No. 1, include the amount to be added or deducted from the Base Bid for provision and installation of a building pad with a 1" PVR.

A. Alternate No. 2 – Stone Masonry

1. Base Bid: The Base Bid for the project includes Calcium Silicate Manufactured Stone Masonry by Arriscraft International.

2. Alternate: For Alternate No. 2, include the amount to be added or deducted from the Base Bid for provision and installation of Lueders Limestones 'Rough Back' by San Jacinto materials or similar. 12" regular courses with random lengths in place of masonry veneer.

END OF SECTION 012300

SECTION 270000 - BASIC REQUIREMENTS FOR COMMUNICATIONS INFRASTRUCTURE

PART 1 - GENERAL

1.1 SYSTEM DESCRIPTION

A. The objective of this project is to provide a complete communications cabling infrastructure system installation including but not limited to: riser system, horizontal data and voice cabling with attendant terminations, mounting equipment, cable pathway and management systems, testing, fire station alerting system and other items/materials, as specified in drawings, these specifications, and contract documents.

1.2 CONTRACTOR QUALIFICATIONS

A. Contractor and staff shall be a current authorized Panduit Certified Installers and certified by Panduit to provide and furnish a 20-year performance warranty for structured cabling and connectivity components.

B. Contractor and staff shall possess relevant past-experience and references for a minimum of (5) projects of similar size and scope to that of the City of San Antonio.

C. Contractor's Project Manager shall be a RCDD in good standing and shall provide Certificate.

D. Contractor shall have a local office within a 75-mile radius of the project site.

E. Sub-contractors to the primary structured cabling contractor shall meet the same requirements for the primary structured cabling contractor as identified above.

1.3 RELATED DOCUMENTS

A. Drawings and general provisions of the Contract, including General and Supplementary Conditions and Division 01 Specification Sections, apply to this Section.

B. Drawings and Specifications

1. Division 27 specifications are written in imperative and streamlined format. This imperative language is directed to the Contractor. The word "shall be" shall be included by inference where a colon (:) is used within sentences and phrases.

C. Codes, Permits and Standards

Comply with the most recently revised versions of applicable laws, rules, regulations, and ordinances of federal, state, and local utilities and authorities. The following industry standards shall be adhered to unless specifically directed otherwise by the City of San Antonio Information technology Services Department. The list is not all-inclusive and does not alleviate compliance with the latest applicable standards, codes, and best practices:

a. TIA-568-C.0 Generic Telecommunications Cabling for Customer Premises
b. TIA-568-C.1 Commercial Building Telecommunication Cabling Standards – Part 1 General Requirements (2008)
c. TIA-568-C.2 Balanced Twisted-Pair Telecommunications Cabling and Components Standard (2009)
d. TIA-569-B Commercial Building Standard for Telecommunications Pathways and Spaces - (October 2004)
e. TIA/EIA-606-B Administration Standard for Commercial Telecommunications Infrastructure - (May 2012)
f. ANSI J-STD-607-B Commercial Building Grounding and Bonding Requirements for Telecommunications - (October 2011)
g. TIA-758-A Customer-Owned Outside Plant Telecommunications Infrastructure Standard - (August 2004)
h. AIA
i. Local Building Code
j. NEC
k. ISO
l. ANSI
m. FCC
n. UL
o. OSHA
p. NFPA
q. NEMA

2. Obtain all applicable permits, licenses and inspections and pay all fees charged by above authorities.

3. Work shall comply with the local city codes and ordinances, the regulations of state authorities having lawful jurisdiction and the codes, statues and reference standards identified within these Specifications. None of the terms or provisions of the Drawings or specification shall be construed as waiving any of the rules, regulations or requirements of these authorities. In the event of conflict between the Contract Documents and the local enforcing authority, the latter shall rule.

4. Where alterations to and deviations from the Contract Documents are required to comply with interpretations of a Code Authority Having Jurisdiction (AHJ), report the requirements and secure approval before starting work. Contractor shall review any requested modifications with the Design Consultant and secure his approval before proceeding.

5. Where Contract Document requirements are in excess of Code requirements and are permitted under the Code, the Contract Documents shall govern.

1.4 DEFINITIONS & ABBREVIATIONS

A. DEFINITIONS

1. Contract Documents - Drawings and the project manual, including Specifications.

2. Design Consultant – CNG Engineering, PLLC.
3. Install: to set in place in position for service.
4. Furnish: to supply.
5. Provide: to install and furnish.

6. City - When used in an otherwise non-specific reference anywhere in the Contract documents, City is defined to refer to the local municipal authority governing the project address (City of San Antonio).

B. ABBREVIATIONS

1. ANSI American National Standards Institute.
2. EIA Electronic Industry Association.
3. ETL Electrical Testing Laboratory.
4. ETJ Extra-Territorial Jurisdiction
5. FM Factory Mutual
6. IEEE Institute of Electrical and Electronics Designers
7. NEC National Electric Code (NFPA-70)
8. NESC National Electric Safety Code
9. NECA National Electrical Contractors Association
10. NEMA National Electrical Manufacturers Association
11. NETA InterNational Electrical Testing Association
12. NRTL Nationally Recognized Testing Laboratory
13. OSHA Occupational Safety Health Administration (US Department of Labor)
14. UL Underwriters Laboratories
15. EMI: Electromagnetic Interference
16. FD: Floor Distributor also referred as HC
17. GE: Ground Equalizer
18. HC: Horizontal Cross-Connect (IDF)
19. IC: Intermediate Cross-Connect
20. IDC: Insulation Displacement Connector
21. IDF: Intermediate Distribution Frame
22. I/O: Information Outlet or Work Area Information Outlet
23. LAN: Local Area Network
24. MC: Main Cross-Connect
25. MDF: Main Distribution Frame also referred as BD
26. RCDD: Registered Communications Distribution Designer
27. RFI: Radio Frequency Interference
28. TBB: Telecommunications Bonding Backbone
29. TBC: Telecommunications Bonding Conductor
30. TGB: Telecommunications Ground Bus Bar
31. TMBC: Telecommunications Main Bonding Conductor
32. TMGB: Telecommunications Main Grounding Bus Bar
33. TR: Telecommunications Room
34. UTP: Unshielded Twisted Pair
35. WA: Work Area

1.5 SUMMARY ORGANIZATION

A. PART 1 of This Section Includes:

1. Communication Utilities and Service
2. Communications equipment coordination and installation
3. Submittal requirements

B. PART 2 of This Section Includes:

1. Substitution requirements

C. PART 3 of This Section Includes:

1. Common Requirements for communications Installation
2. Quality Assurance requirements
3. ***Fire Station Alerting System by USDD***

1.6 UTILITIES AND SERVICE

A. Utilities: The Contract Documents reflect the general location and routing of utilities required for this project. Visit the site, and coordinate and confirm the exact requirements for telephone and communication services. Refer to Division 01.

1.7 COMMUNICATIONS EQUIPMENT COORDINATION AND INSTALLATION

A. General: Refer to Division 1 for general coordination requirements applicable to the entire work. It is recognized that the Contract Documents are diagrammatic in showing certain physical relationships which must be established within the electrical work, and in its interface with other work including utilities and mechanical work and that such establishment is the exclusive responsibility of the Contractor. The Drawings show diagrammatically the sizes and locations of the various conduit and raceway systems and equipment items and the sizes of the major interconnecting distribution, without showing exact details as to elevations, offsets, control lines, and installation details.

1. Arrange communications work in a neat, plumb and straight well organized and workmanlike manner with conduits running parallel with primary lines of the building construction and with a minimum of 7’ overhead clearance where possible. Maintain 4” clearance of other systems and 12” above ceiling.

2. The Contractor shall carefully lay out his work at the site to conform to the architectural and structural conditions, to avoid obstructions and to provide proper grading of lines. Exact locations of data outlets, apparatus and connections thereto shall be determined by reference to detail Drawings, equipment Drawings, roughing-in Drawings, etc., by measurements at the building and in cooperation with other Contractors and in all cases shall be subject to the approval of the Design Consultant. Relocations necessitated by the conditions at the site or directed by the Design Consultant shall be made without any additional cost to the Owner or Design Consultant.

3. All conduit and boxes except those in the various equipment rooms, in unfinished spaces or where specifically designated herein or on the Drawings shall be run concealed in furrings, plenums and chases. Wherever conditions exist which would cause any of these items to be exposed in finished spaces, the Contractor whose work is involved shall immediately call the situation to the attention of the Design Consultant and shall stop work in those areas until the Owner's Representative or General Contractor directs the resumption of the work. Submit for approval a Shop Drawing for any change in equipment placement, etc.

4. Equipment has been chosen to fit within the available space with all required Code and maintenance clearances and shall be installed as shown. Every effort has been made to also accommodate equipment of other approved manufacturers, however since equipment and access space requirements vary, the final responsibility for installation access and proper fit of substituted equipment rests with the Contractor with approval from Author by having jurisdiction.

B. Pre-installation planning: Coordinate arrangement, mounting, and support of communications equipment as follows:

1. Allow maximum possible headroom unless specific mounting heights that reduce headroom are indicated.
2. Provide access for working space for equipment with minimum interference to adjacent equipment.
3. The equipment shall be arranged to facilitate service, maintenance, and repair or replacement of components and equipment.
4. System interferences shall be handled by giving precedence to pipe lines which require a stated grade for proper operation. Where space requirements conflict, the following hierarchy of precedence shall, in general, be observed:
   a. Building lines
   b. Structural members
   c. Piping and ductwork installed at required slope.
   d. Supply Ductwork
   e. Exhaust Ductwork
   f. Cable Tray
   g. Domestic water piping
   h. Feeder conduit
   i. Branch conduit
   j. Communications conduit
   k. Cabling not installed in raceway or cable trays
5. Coordination submittal requirements
   a. Provide MDF room layouts, scaled to 1/4" = 1' - 0" for all rooms or spaces containing communications and electrical distribution equipment. These shall be provided with the associated communications equipment submittals. Include the exact dimensions and locations of MDF layout, wall elevations, equipment cabinet elevations, cable runways, cable tray, sleeves, backbone and horizontal cable pathways, workstation locations, and numbering and labeling scheme.
   b. Shop drawings shall be prepared by the cabling contractor's Registered Communications Distribution Designer (RCDD) detailing layout of his equipment within the MDF room.
   c. Floor plans shall show dimensioned layout and working clearances. Show equipment layout and relationships between components and adjacent structural and mechanical elements. Indicate field measurements.

1.8 DRAWINGS AND SPECIFICATIONS

A. General: The Drawings are schematic in nature and indicate approximate locations of the communications systems, equipment, fixtures and devices, except where specific locations are noted and dimensioned on the Drawings. All items are shown to approximate scale with intent to depict how these items shall be integrated into the building. Locate all items by field measurements and in accordance with the Contract Documents. Cooperate with other trades to ensure project completion as indicated.

B. Location: Prior to locating devices and other items, obtain the Architect/ Design Consultant's approval as to exact location. Locations shall not be determined by scaling Drawings. Mount communication devices at the heights directed by the Architect/Design Consultant. Where there is a question concerning the required location for items of work, the Contractor shall submit a request for information to the Architect/Design Consultant requesting specific directions for locating the item. Contractor shall be responsible for costs of redoing work of trades necessitated by failure to comply with this requirement.

1. All devices shall be referenced to coordinated, established data points and shall be located to present symmetrical arrangements with these points and to facilitate the proper arrangements of building construction details, acoustical tile panels and other building features with respect to the mechanical and electrical outlets and devices. Communication devices shall be referenced to such features as wall and ceiling furrings, balanced border widths, masonry joints, etc. Outlets in acoustical tile shall occur symmetrically in tile joints or in the centers of whole tiles and the exact location of each outlet and the arrangements to be followed shall be acceptable to the Architect/Design Consultant. Outlets in wall tile or masonry construction shall occur symmetrically in the centers of whole tiles, bricks, or blocks and the exact location of each outlet and the arrangement to be followed shall be acceptable to the Architect/Design Consultant.

2. The Drawings show diagrammatic locations of the various outlets and apparatus. Exact locations of these outlets and apparatus shall be determined by reference to the Architectural Drawings and to all detail Drawings, equipment vendor Drawings, rough-in Drawings, etc., by measurements at the building, and in cooperation with the other trades. The Owner and Architect/Design Consultant reserve the right to make any reasonable change in location of any outlet or apparatus before installation, without additional cost to the Owner.

C. Specifications: The specifications are intended to supplement the Drawings and it is not in the scope of the specifications to mention any part of the work which the Drawings are competent to fully explain. Conversely, any part of the work which the specifications are competent to fully explain, may not be mentioned on the Drawings.

D. Disagreement: Disagreement between the Drawings or specifications or within the Drawings or specifications shall be estimated using the better quality or greater quantity of material or installation, and a request for information shall be made to the Design Consultant.

1.9 DISCREPANCIES

A. Clarification: Clarification shall be obtained before submitting a proposal for the Work under this Division as to discrepancies or omissions from the Contract Documents or questions as to the intent thereof.

B. Detailed Instructions: Should it appear that the work hereby intended to be done or any of the materials relative thereto, is not sufficiently detailed or explained in the Drawings or Specifications, then the Contractor shall submit a request for information to the Design Consultant for such further Drawings or explanations as may be necessary before proceeding, allowing a reasonable time for the Design Consultant to respond.

The Contractor shall conform to this additional information as a part of the Contract without additional cost to the Owner or Design Consultant.

C. Interpretations: Should any doubt or question arise respecting the true meaning of Drawings or Specifications, reference shall be made to the Design Consultant, whose written decision shall be final and conclusive. No alleged statement by the Design Consultant will be accepted as an excuse for inferior work.

D. Contractor Agreement: Consideration will not be granted for misunderstanding of the amount of work to be performed. Submission of a bid conveys full Contractor agreement of the items and conditions specified, shown, scheduled, or required for completion of the project.

1.10 SUBMITTAL REQUIREMENTS

A. Provide all Division 27 submittals at the same time.

B. Submittals shall be provided in binders and arranged in sequence by Specification section number. Provide submittals only for specification sections that list this requirement.

1. Provide tabs for each section, labeled to match the associated specification. The page after each tab section shall contain a typed list of any exceptions that the Contractor is proposing.

2. Each page of the submittal shall be a clear copy or scan, indicating items and options proposed for use in the project with a graphical arrow. Items included on a submittal page that are not proposed for use shall be deleted with strike-through or other acceptable method that clearly distinguishes the proposed from non-relevant information.

C. Subject to the requirements in Division 1, at the Contractor's option, submittals may be provided in PDF form.

1. All format and informational requirements for submittals in binders apply to PDF submittals.

2. Multiple files may be submitted, however, these must be organized into a consistent format.

3. PDF submittal shall include a table of contents with page numbers listed for the beginning of each section.

4. Additionally, the PDF shall be formatted to include tab or chapter shortcuts, labeled with the associated specification section. These shortcuts shall allow the reader to jump to a tab or chapter associated with beginning of each specification section with a single action.

5. At Design Consultant's request, the contractor shall submit hard copy version in accordance with requirements outlined above.

PART 2 - PRODUCTS

2.1 GENERAL MATERIALS AND EQUIPMENT REQUIREMENTS

A. Materials and equipment shall be new, of best grade and quality, and meet all requirements of the Contract Documents. Materials and equipment shall conform to National Electrical Code requirements and shall be listed by Underwriters Laboratories, Inc. (UL). UL listing will be accepted as evidence that the material or equipment conform to the standards of that agency. In lieu of this listing, submit a statement from a nationally recognized testing agency, indicating that products have been tested in accordance with UL criteria and that the materials and equipment comply with Contract requirements.

B. Materials and equipment shall be standard catalog products of manufacturers regularly engaged in the manufacture of products conforming to these Specifications. Custom fabricated items shall be fully described using Drawings and technical data sufficient to demonstrate compliance with the Contract Documents.

2.2 SUBSTITUTIONS

A. Basis of Design - For products specified in part 2.1 of the associated specification section, as "Basis of Design", that term is herein defined as the standard level of product that is required for the project.

1. The use of term Basis of Design in these specifications is intended to allow the Contractor to propose use of non-specified manufacturer's products, provided that the proposed substitute is of equal or greater construction material, workmanship, quality, performance, and manufacturer support. If the product's proposed location is not concealed, aesthetic considerations are also considered as a significant factor.

2. During the bid process, the Design Consultant will not evaluate products and provide approval prior to the bid date on proposed substitute products. If the Contractor wishes to propose substitutions, the Design Consultant will evaluate the successful Contractor's proposed alternates during the submittal review process. The Design Consultant will take no exception to the use of individual products determined to be equal. That decision may be the result of consultation and input from other members of the design team and the Owner. If a product is not determined to be equal, it will be rejected and another product that is equal to the basis of design shall be re-submitted by the Contractor. The Design Consultant will not evaluate more than two substitution attempts before the Contractor is required to submit the specified product.

3. If the Contractor proposes product substitutions that may not be equal to the specified product, and cost savings are associated with the use of the proposed substitute, then the Contractor should propose these as part of a VE (Value Engineering) process, with line item cost savings identified for each product substitution proposed. With information on line item costs, the design team may determine if the proposed substitutes, though not equal, represent a better value and these *may* be recommended for use.

B. Substitutions are generally not allowed for products specified in the associated specification section when listed as "Provide products by one of the following". If there is a concern about delivery schedules from the manufacturers listed or other factors, these special case substitutions will be considered individually during the submittal phase.

PART 3 - EXECUTION

3.1 COMMON REQUIREMENTS FOR COMMUNICATIONS INFRASTRUCTURE INSTALLATION

A. Workmanship: Work shall be executed and materials installed in accordance with the best practice of the trades in a thorough, substantial, workmanlike manner by competent workmen, presenting a neat appearance when completed, straight and plumb.

B. Manufacturer's Recommendations: With exceptions as specified or indicated on the Drawings or in the Specifications, apply, install, connect, erect, use, clean, and condition manufactured articles, materials, and equipment per manufacturer's current printed recommendations. Copies of such printed recommendations shall be kept at the job site and made available as required.

C. Labeling:

1. Coordination with and approval by the City of San Antonio Information Technology Services Department is required on the specific site labeling schema.
2. All labels shall be typed (not handwritten).
3. Verify room numbers and confirm the final room numbering scheme prior to generating labels.
4. Horizontal Cables shall be labeled within 12 inches from the termination point inside the MDF.
5. Horizontal Cables shall be labeled within 6 inches from the termination point at the workstation end.
6. Backbone Copper Cables shall be labeled within 12 inches of the visible end of the jacket.
7. Cables shall be labeled identically at both ends.
8. MDF Room shall be labeled (signage) with the permanent room designations that match the final building signage for cable labeling.
9. Equipment cabinets or racks in MDF shall be labeled in sequential numeric order. Labels shall be centered on the top front of the equipment rack.
10. Copper backbone cables labels shall contain the cable origin room number, the cable destination room number, and cable pairs (i.e. MDFA150-IDFC126/001-025).
11. Horizontal cables shall be labeled identically at each end with the destination end and origin room number, patch panel number, and port number. (i.e. IDFC126-C115-B5).

12. Patch panels in each closet shall be uniquely alphabetically labeled sequentially starting with the first Patch Panel in the top of the first equipment rack (i.e. A, B, C, D, E, etc.). Each MDF or IDF starts with A and shall not repeat a letter.
13. Workstation Faceplates shall be labeled denoting origin MDF/IDF Room Number, patch panel, and port number (i.e. IDFC126-B5).

3.2 SPACE REQUIREMENTS

A. General: Determine in advance of purchase that the equipment and materials proposed for installation will fit into the confines indicated, leaving adequate code clearances for adjustments, repair, or replacement and comply with code.

B. Clearance: Allow adequate space for clearance in accordance with requirements of the Code and local inspection department.

C. Scheduled Equipment: The design shown on the Drawings is based on the equipment scheduled.

D. Responsibility: Space requirements and equipment arrangement may vary for each manufacturer, the responsibility for ensuring initial access and suitability rests with the Contractor.

E. Review: Final arrangements of equipment to be installed shall be subject to the Architect's review.

3.3 DELIVERY, STORAGE AND HANDLING OF MATERIALS

A. General: Protect all materials and equipment to be installed under this Division from physical and weather damage.

B. Scope: Work under this Division shall include, but not limited to:

1. Shipping from point of manufacture to job site.
2. Unloading, moving, and storage on site with proper safeguards as required to properly protect equipment from corrosion, drip, humidity, dust, and physical damage.
3. Hoisting and scaffolding of materials and equipment included in this Division.
4. Ensuring safety of employees, materials, and equipment using such hoisting equipment and scaffolding.

C. Coordination: All large pieces of equipment which are to be installed in the building and which are too large to permit access through doorways, stairways or shafts shall be brought to the job by the Contractor and shall be placed in the spaces before enclosing partitions and structure are completed. Contractor shall support equipment above floor slab and provide suitable, protective covering.

D. Install in accordance with approved, equipment submittal layouts.

E. Coordinate installation of required supporting devices and set sleeves in cast-in-place concrete, masonry walls, and other structural components as they are constructed.

F. Coordinate location of access panels and doors for electrical and communications items that are behind finished surfaces or otherwise concealed. Access doors and panels are specified in Division 08 Section "Access Doors and Frames." Coordinate location of access panels and doors with Architect prior to the associated equipment rough-in.

G. Coordinate sleeve selection and application with selection and application of firestopping specified in Division 07 Section "Penetration Firestopping."

H. Apply firestopping to penetrations of fire-rated floor and wall assemblies for communication installations to restore original fire-resistance rating of assembly. Firestopping materials and installation requirements are specified in Division 07 Section "Penetration Firestopping."

3.4 VIBRATION ISOLATION

A. General: Warrant the communication systems, and their component parts to operate without objectionable noise or vibration. Noise from systems or equipment which results in noise within occupied spaces above the recommended NC curves (refer to ASHRAE Standard) shall be considered objectionable. Vibration shall not be apparent to the senses in occupied areas of the building. Objectionable noise, vibration, or transmission thereof to the building shall be corrected.

B. Provide vibration isolation means for equipment and materials to prevent the transmission of perceptible vibration, structure borne or air borne noise. Items requiring vibration isolation include:

1. Communications Conduit: Isolate from rotating and reciprocating machinery using flexible conduit, 18" minimum length or 12" of flexible conduit per 1" of conduit diameter with maximum of 36”.

3.5 QUALITY ASSURANCE TESTING

A. DESCRIPTION OF WORK

1. General: Provide testing of work installed under Divisions 27, as specified herein.

B. PERSONNEL

1. Personnel: Submit evidence to show that the personnel who will actually test the systems are qualified and state certified.

2. The Design Consultant/Owner reserves the right to require that the originally approved personnel be replaced with other qualified personnel if, in his opinion, the original personnel are not qualified or are not properly conducting the system testing.

C. SUBMITTALS

1. Testing Procedures: Submit four copies of all proposed testing procedures to the Design Consultant for review at least 30 days prior to conducting any testing.

2. Reporting Forms: Submit four copies of proposed forms to be used in recording testing data and results to the Design Consultant for review at least 30 days prior to conducting any testing on the project.
3. Test Data and Results: Submit four copies of complete data and certified test results for each test performed, including, but not limited to:
   a. Test performed.
   b. Test procedure.
   c. System and area tested.
   d. Date(s) and time(s) of test.
   e. Weather conditions.
   f. Test criteria.
   g. Test results.
   h. Additional pertinent information.
4. Operational Certification: Submit four certified copies of an operational certification which documents that all equipment and systems have been fully tested to verify proper operation in accordance with the design shown in the Construction Documents and manufacturer's recommendations.
5. Certification: Certifications stating that submitted test data and results are true and correct shall be provided for all submittals under this Section. Certification shall be executed by an authorized officer if the Contractor is a corporation, by a partner if the Contractor is a partnership, by the Owner if the Contractor is a sole proprietorship or by the authorized representative if the Contractor is a joint venture.

D. NOTICE

1. General: Notify the Design Consultant and the Owner’s Representative in writing two weeks prior all scheduled testing to allow time for scheduling witness of testing, where elected by the Design Consultant and Owner’s Representative.

E. TESTING

1. All test results shall be submitted to the owner along with all other final documentation. Test results shall be submitted in both PDF format and the Native Tester format along with the software needed to read the Native Tester Format.
2. Terminated backbone copper cable links shall be tested in accordance with applicable industry standards and manufacturer certification requirements for attenuation, continuity, and pin-mapping with approved field tester(s) that are within their calibration period.
3. Terminated Category 6 UTP cable links shall be tested in accordance with applicable industry standards and manufacturer certification requirements for Category 6 compliance with approved field tester(s) that are within their calibration period.

F. RESULTS AND DEFICIENCY CORRECTIONS

1. Correct malfunctions on-site, where possible, and retest to demonstrate compliance; otherwise, replace with new units and retest.

2. Any resultant delay as a result of such necessary retest does not relieve the Contractor of his responsibility under this contract.
3. Equipment will be considered defective if it does not pass tests and inspections. Tested products, cables, and terminations which fail to provide acceptable test results shall be repaired or replaced with suitable materials as required to obtain acceptable test results.

3.6 AS-BUILT DOCUMENTATION

A. Produce drawings depicting the condition of the Structured Cabling System as installed produced in AutoCAD 2010 or higher and provided in hardcopy, electronically in .DWG and .PDF format. Include the exact dimensions and locations of MDF and IDF layouts, wall elevations, equipment cabinet elevations, cable runways, cable tray, sleeves, backbone and horizontal cable pathways, workstation locations, and numbering and labeling scheme.

B. A half-size hard copy of the as-built drawings for the applicable region served by the MDF and/or IDFs shall be provided in MDF and each IDF for reference.

C. Produce cable records for the Structured Cabling System as installed to include a list of all horizontal and backbone cables produced in an Excel format and provided in hardcopy and electronic format indicating cable number, unique cable label, cable type, origin and destination, length, termination method, and pass/fail result.

D. Produce (3) hard copies of all test results for each cable, to include technician’s name and date stamp, a list of tested cables, and the individual results for each cable tested. Test results shall be furnished on CD ROM to include native file format and .PDF format.

3.7 CONTRACTOR WARRANTIES AND GUARANTEES

A. General: Contractor shall guarantee all material and equipment installed by him against defects in workmanship and material for a period of 12 months after final acceptance of the work by the Owner and he shall repair or replace any materials or equipment developing such defects within that time, promptly on due notice given him by the Owner and at Contractor's sole cost and expense.

B. The contractor shall furnish a 20-year performance warranty from Panduit for the structured cabling and connectivity components.

C. Equipment: All equipment bearing a manufacturer's guarantee in excess of the time requirement above, such as electrical equipment, devices, components, and similar items, shall be considered to have that guarantee extended directly to the Owner by the manufacturer. Any such equipment that proves defective in materials or workmanship within the guarantee period is to be corrected by the Contractor in accordance with the manufacturer's guarantee.

D. Defects in material or workmanship appearing within this period of time, shall be promptly repaired without cost to the City of San Antonio.

E. Start-up: The Electrical Contractor shall provide instructions and equipment starting service on new equipment for two complete years after date of final acceptance of the work by the Owner, at Contractor's sole cost and expense.

3.8 FIRE STATION ALERTING SYSTEM

A. Fire Station Alerting System is contractor furnished, contractor installed.

B. Fire Station Alerting System (Phoenix System) is designed by US Digital Design (USDD). Complete Phoenix system equipment is contractor provided contractor installed. Installation of system equipment and wiring shall be performed by USDD approved installer only. Contact Erick Hanson at 877-551-8733 for vendor coordination.

C. Conduit, raceways, support, junction boxes, and back-boxes required for the Fire Station Alerting System are to be provided and installed by the General Contractor under this contract.

D. Fire Station Alerting System equipment, wiring and USDD approved vendor installation shall be covered under Allowance No. 1 as described under Specification Section 012100 Allowances.

E. USDD approved vendor does not install conduit, raceways, support, junction boxes and back-boxes and these costs are not to be included in Allowance No. 1.

F. General Contractor to comply with USDD contract requisites. Refer to Exhibit A for Contractor's Purchase Agreement and Exhibit B for End User Agreement.

G. USDD to provide final design shop drawings for owner review. USDD cost quote is based on initial coordination with engineer and owner. Refer to Exhibit C for quote from USDD.

Attachments:
EXHIBIT A – Contractor's Purchase Agreement
EXHIBIT B – End User Agreement
EXHIBIT C – USDD Quote

END OF SECTION 270000

EXHIBIT A

US Digital Designs

FIRE STATION ALERTING SYSTEM
PURCHASE CONTRACT
(Non-Governmental)

This Fire Station Alerting System Purchase Contract ("Contract") is made in by and between US Digital Designs, Inc. ("USDD"), with its principal place of business at 1835 East Sixth Street, Suite 27, Tempe, Arizona 85281 and the following entity ("Customer"):

[customer]
[division or department]
[Contact person]
[address]
[address]
[phone numbers]
[email address]

1. **Recitals**. The Customer requires USDD to provide certain goods, products and services related to the fire station alerting system described in **USDD Quote SAT014 for the City of San Antonio Fire Station 30 Remodel Updates**. USDD has agreed to provide such goods and services to the Customer pursuant to the terms, conditions, and limitations of this Contract. In consideration of the forgoing, and for other good and valuable consideration, the parties hereby agree to the terms set forth in this Contract.

2. **Definitions**. For purposes of this Contract, the following terms shall have the following meanings:

a. “Additional Services” means any and all services performed by USDD at the instruction or request of Customer through its authorized personnel that are not specifically included in the Scope of Work.

b. “Communications Gateway” means the pair of redundant servers used as the master communications hub for the System as set forth in the Quote.

c. “End User” means the following fire department: **City of San Antonio Fire Department.**

d. “Engineering Services” means engineering or project management services performed by USDD’s employees, agents or contractors directly related to planning and documenting the layout, design, project schedule, installation, and functionality of the System as a whole and at each individual installation sight.

e. “GaRI Audio Interface” means the proprietary USDD VoiceAlert Radio Hardware component integrated into the Communications Gateway.

f. “Hardware” means a physically tangible electro-mechanical system or sub-system and associated documentation provided to Customer or End User by USDD, provided however, that Hardware shall not include any televisions or monitors manufactured by third parties.

g. “Intellectual Property” means any and all rights of USDD related to USDD’s Products and business existing from time to time under patent law, copyright law, trade secret law, trademark law, unfair competition law, and any and all other proprietary rights, and any and all derivative works, work product, applications, renewals, extensions and restorations thereof, now or hereafter in force and effect worldwide.

h. “Prime Contract” means the written contract or agreement between Customer and End User for the Project.

i. “Products” means the Hardware, Software and other tangible goods, equipment, supplies and components included in the Quote.

j. “Project” means the **Fire Station Alerting System for Station 30 Remodel Updates as described in the Quote.**

k. “Quote” means the document at Exhibit A, excluding the section titled “terms and conditions,” if any.

l. “Scope of Work” means the document attached at Exhibit B (Scope of Work excludes any goods or services to be provided directly to End User under the Service Agreement previously entered into between USDD and the City of San Antonio.

m. "Software" means software programs, including embedded software, firmware, executable code, linkable object code, and source code, including any updates, modifications, revisions, copies, documentation, and design data that are licensed to End User by USDD.

n. "System" means all Hardware and Software purchased by Customer for resale to End User as part of the Project and that is used exclusively by End User as part of its fire station alerting system, provided however, that the term "System" specifically excludes any components, hardware, or software provided by third parties, including without limitation Customer's or End User's computers, lap tops, computer peripherals, monitors, televisions, routers, switches, operating systems, computer programs, applications, internet and network connections, and any other parts or items not provided directly by USDD.

o. "Station Controller" means the CPU and related computer components (whether USDD's ATX or ATU model) to be installed at each fire station as described in the Quote.

p. "VoiceAlert Radio" means the Software that controls the GaSi Audio Interface and functionality of the optional radio alert system.

q. "Warranty" means the Product Warranty attached at Exhibit C.

r. Undefined technical terms, specifications and acronyms used throughout this Contract shall have the meanings generally attributed to them in the in the fire station alerting industry.

3. **Products and Services**. USDD agrees to provide the Products and perform the services set forth in the Scope of Work at the prices set forth in the Quote. Prices are subject to correction for error. Unless otherwise specifically waived in the quote, Customer shall bear all costs of shipping the Products. Risk of loss or damage in transit shall be borne by USDD. Upon delivery to Customer's site, Customer shall bear all risk of loss or damage to any Products occurring thereafter.

4. **Engineering Services and Additional Services**. Except as otherwise set forth in the Quote, all Engineering Services and Additional Services provided by USDD to Customer shall be charged at $250.00 per man-hour.

5. **Invoices and Payment**. USDD shall invoice Customer for all Products delivered to Customer and all services provided to Customer on a monthly basis. All invoices shall be due and payable upon receipt in United States currency, free of exchange, or any other charges, or as otherwise agreed upon and set forth in writing by USDD. Invoices unpaid for 30 days are subject to interest at 18% per annum.

6. **Training**. USDD shall provide training as set forth in the Scope of Work for the price stated in the Quote. Except as otherwise set forth in the Quote, all training provided by USDD related to the System shall be charged at $250.00 per man-hour, plus reasonable costs and expenses incurred by USDD related to the training. Reasonable costs and expenses shall include air fare, lodging, meals, ground transportation, shipping, document reproduction, and other reasonably necessary costs and expenses related to the training.

7. **Acceptance of Station Installation**. Upon substantial completion of installation at Station 30, Customer shall prepare and deliver to End User a written request in a form acceptable to USDD for End User's acceptance of the installation ("Request for Acceptance"). Upon presentation of the Request for Acceptance, Customer shall provide End User with a reasonable time frame to inspect the station installation and (i) accept the installation as presented, or (ii) accept the installation subject to completion of specified tasks necessary for the installation to comply with the Scope of Work ("Punch List"). The Punch List shall specifically identify each task or item that is not in compliance with the Scope of Work and propose reasonable dates for completion, but not less than 14 days. Thereafter, Customer shall address all Punch List items in a timely and reasonable fashion and the installation shall be deemed complete and accepted.

8. **System Acceptance Testing**. Reserved.

9. **Taxes**. The amount of any sales, use, occupancy, excise, or other tax, federal, state, or local which USDD shall be obligated legally to pay, either on its own, on behalf of the Customer or otherwise, with respect to the Products and services to be provided under this Contract, shall be paid by Customer in addition to all other sums due hereunder.

10. **Warranty**. USDD warrants and guarantees its Products subject to the terms and limitations set forth in the Warranty. The Customer's rights and remedies with respect to Products found to be defective in material or workmanship shall be limited exclusively to the rights and remedies set forth in the Warranty. For purposes of determining the commencement date of the Warranty Period, the date of this Contract shall be the date that the Prime Contract is executed between Customer and End User or the date this contract is executed between the parties, which is later.

11. **Intellectual Property**. Customer hereby agrees and acknowledges that USDD owns all rights, title, and interest in and to the Intellectual Property. Customer agrees to not remove, obscure, or alter USDD's or any third party's copyright notice, trademarks, or other proprietary rights notices affixed to or contained within or accessed in conjunction with or through USDD's Products. Nothing herein shall be deemed to give, transfer, or convey to Customer any rights in the Intellectual Property other than the license to use the Software, as set forth below.

12. **License**. At all times that Customer is in compliance with the terms of this Contract and all other agreements between the parties, Customer shall have a non-exclusive, non-transferable, fully paid license to use the Software in conjunction with the System.

13. **Insurance**. If required, USDD and its contractors will provide to Customer copies of current insurance certificates for general liability insurance and workers' compensation insurance

("Proof of Insurance"). Notwithstanding the foregoing, if after submission of the Proof of Insurance Customer authorizes USDD or its contractors to proceed with the performance of this Agreement, it shall be conclusively presumed and determined that the insurance is in full compliance with Customer's requirements, and such requirements shall be deemed revised and amended to require only the coverages provided in the Proof of Insurance. These terms are effective and shall be controlling whether the Proof of Insurance is provided before or after the date of this Contract.

14. **Contingencies**. This Contract and the parties' rights and duties hereunder are contingent on the following occurrences ("Contingencies") or USDD's written waiver thereof:

a. The execution of the Prime Contract by the Customer and End User;

b. The End User's written agreement, in a form acceptable to USDD in its sole discretion, to the Warranty, the terms of this Contract relating to the Intellectual Property, and the terms of the Software license granted hereunder; and

15. **Customer Obligations**. Customer shall take and perform all reasonable action necessary to facilitate USDD's performance of the Scope of Work hereunder. Without limiting the foregoing, Customer shall be responsible for or ensure that End User is responsible for the following:

a. The procurement and/or provision of all computers, peripherals, and consumables (collectively "Customer Equipment"), including printer paper, toner and ink necessary for the installation, testing and functionality of the of the System;

b. At each ATX Station Controller installation site, Customer shall:

i. Provide mounting location for Station Controller;

ii. Provide one 15A/120V AC outlet within 4' of the Station Controller location preferably on a Generator circuit;

iii. Provide mounting location for Station Controller UPS, if necessary;

iv. Provide one 10/100baseT LAN connection within 6' of the Station Controller from station LAN with 2-way TCP/IP and UDP/IP connectivity to Communications Gateway network (dispatch center or computer equipment location);

v. Provide one IP address, subnet mask, and default gateway for each station location;

vi. Provide external VPN access to the IP addresses assigned to the Station Controllers, which must provide access for SSH (22), and HTTPS (443);

vii. Provide connection to existing 70 volt speaker system if existing amplifier and/or speaker system is to be used;

viii. Provide dispatch radio for audio source for dispatch alerting, if necessary. Provide made and model of radio to be used, as well as any connector pinouts if USDD is responsible for connection per the Contract. Note, Customer is responsible for connection to Customer's radios unless otherwise specified in the Contract;

ix. Provide connections from telephone intercom, secondary dispatch radio, or other existing audio sources to the Station Controller, if necessary. Provide technical documentation on any interfaces that USDD is responsible for per the Contract. Note, Customer is responsible for connection to Customer Equipment unless otherwise specified in the Contract; and

x. Provide technical documentation of all existing equipment to which the Station Controller or Peripherals are to be interfaced. Note, Customer is responsible for connection to Customer Equipment unless otherwise specified in the Contract.

c. Any configuration and regular maintenance that is normally undertaken by the user or operator as described in any operating manuals for the Customer Equipment, including the replacement of UPS batteries as necessary;

d. Providing all reasonable security and bearing all risk of loss or damage to any Products delivered to, stored at, or installed on Customer's property;

e. Providing a stable means of data transmission between the Communications Gateway and each Station Controller serviced by the System necessary for the installation, testing and functionality of the of the System; such means of data transmission may include, but is not limited to, TCP/IP, data modems, leased lines, radios, etc;

f. The correct use of the Products and System in accordance with the manufacturer and USDD's operating instructions; and

g. The security, accessibility, and integrity of the System, Customer Equipment, and installation site.

16. **Termination**

a. **By Customer**. If this Contract is terminated by Customer for any reason other than USDD's breach, Customer shall immediately pay USDD for all work in progress, services rendered, all inventoried or ordered Products, and all other costs incurred by USDD related to this Contract.

b. **By USDD**. If Customer refuses or fails to perform any of its obligations in accordance with this Contract, including, without limitation, to remit all payments in a timely manner, USDD shall provide written notice thereof to Customer ("Default Notice"). The Default notice shall specifically describe the nature of the alleged failure and demand that Customer cure such failure within a specified reasonable time period, which in the event of a failure to make timely payment shall be five days, and in all other events shall not be less than 30 days ("Cure Period"). If Customer fails to cure the failure within the Cure Period, such failure shall be deemed a default under this Contract. In such event, USDD shall have the right to terminate this Contract by written notice to Customer, and Customer shall immediately pay USDD for all work in progress, services rendered, all inventoried or ordered Products, and all other costs incurred by USDD related to this Contract.

c. **For Failure of Contingencies**. USDD may terminate this Contract upon written notice at any if it determines, in its sole discretion, that any of the Contingencies have failed or are unlikely to occur.

17. **Arbitration**. If the parties are unable to informally resolve any dispute arising out of this Contract either during or after its Term, including the question as to whether any particular matter is subject to arbitration, the parties agree to submit the matter to binding arbitration. In the event the parties have not agreed upon an arbitrator within 20 days after either party has demanded arbitration in writing, either party may file a demand for arbitration with the Phoenix regional office of the American Arbitration Association ("AAA") and a single arbitrator shall be appointed in accordance with the then existing Commercial Arbitration Rules of the AAA. Discovery may be conducted either upon mutual consent of the parties, or by order of the arbitrator upon good cause being shown. In ruling on motions pertaining to discovery, the arbitrator shall consider that the purpose of arbitration is to provide for the efficient and inexpensive resolution of disputes, and the arbitrator shall limit discovery whenever appropriate to ensure that this purpose is preserved. The dispute between the parties shall be submitted for determination within 60 days after the arbitrator has been selected. The decision of the arbitrator shall be rendered within 30 days after the conclusion of the arbitration hearing. The decision of the arbitrator shall be in writing and shall specify the factual and legal basis for the decision. Upon stipulation of the parties, or upon a showing of good cause by either party, the arbitrator may lengthen or shorten the time periods set forth herein for conducting the hearing or for rendering a decision. The decision of the arbitrator shall be final and binding upon the parties. Judgment to enforce the decision of the arbitrator, whether for legal or equitable relief, may be entered in any court having jurisdiction thereof, and the parties hereto expressly and irrevocably consent to the jurisdiction of the Maricopa County Superior Court of Arizona for such purpose. The arbitrator shall conduct all proceedings pursuant to the then existing Commercial Arbitration Rules of the AAA, to the extent such rules are not inconsistent with the provisions of this Section. In the event a dispute is submitted to arbitration pursuant to this Section, the prevailing party shall be entitled to the payment of its reasonable attorneys' fees and costs, as determined by the arbitrator. Each of the parties shall keep all disputes and arbitration proceedings strictly confidential, except for disclosures of information required by applicable law or regulation.

18. **Assignment**. The parties shall not assign in whole or in part the Contract without the prior written consent of the other party, which consent may not be unreasonably withheld. Notwithstanding the foregoing, USDD may freely transfer its rights under this Contract in the event of a sale of all or substantially all of this assets or stock. Each party binds itself, its successors, assigns, executors, administrators or other representatives to the other party hereto and to successors, assigns, executors, administrators or other representatives of such other party in connection with all terms and conditions of this Contract.

19. **Force Majeure**. Except for Customer's duty to pay sums due hereunder, neither party will be liable for any act, omission, or failure to fulfill its obligations under this Contract if such act, omission or failure arises from any cause beyond its control including acts of nature, strikes, lockouts, riots, acts of war, acts of terrorism, epidemics, governmental action after the date of this Contract, fire communication line failures, power failures, earthquakes or other disasters. The party unable to fulfill its obligations due to Force Majeure will immediately:

a. Notify the other in writing of the reasons for its failure to fulfill its obligations and the effect of such failure; and

b. Use all responsible endeavors to avoid or remove the cause and perform its obligations.

20. **Images and Testimonials**. During the term of this agreement and, Customer agrees that USDD may take, make or obtain images, pictures, photographs, commentary, and video and audio recordings of the System and installation sites and reproductions of the same in whole or in part, either digitally or in any other medium now known or later discovered (collectively "Images"). In addition, USDD may request Customer to provide testimonials, endorsements, feedback or other written or oral comments concerning Customer's experience with the System (collectively "Testimonials"). Customer consents to USDD's use of such Images and Testimonials for verification, training, and promotional purposes in USDD's sole discretion and agrees that all such Images and Testimonials shall remain the property of USDD and may be used and exploited in any media format.

21. **Notices**. Whenever any provision of this Contract requires the giving of written notice, it shall be deemed to have been validly given if delivered (i) in person, (ii) by registered mail, postage pre-paid, (iii) by a nationally recognized overnight courier service, or (iv) electronically via facsimile copy or email, provided that the sender obtains confirmation of transmission, to the following:

For the Customer:
Name: _____
Title: _____
Address: _____
_____
Fax: _____
Email: _____

For USDD:
US Digital Designs, Inc.
Attention: Dominic Magnoni
1835 East 6th Street, Suite 27
Tempe, Arizona 85281
Fax: 480-290-7892
Email: dmagnoni@usdd.com

22. **Headings and Usage**. The headings, captions, and section numbers contained herein are provided for convenience only and are not part of the terms of this Contract. When the context of the words used in this Contract indicate that such is the intent, words in the singular shall include the plural, and vice versa, and the references to the masculine, feminine or neuter shall be construed as the gender of the person, persons, entity or entities actually referred to require.

23. **Waiver**. No failure or delay, in any one or more instances, to enforce or require strict compliance with any term of this Contract shall be deemed to be a waiver of such term nor shall such failure or delay be deemed a waiver of any other breach of any other term contained in this Contract.

24. **Governing Law**. This Contract will be governed by and construed according to the laws of the State of Arizona without regard to conflicts of law principles.

25. **Execution in Counterparts**. This Contract may be executed in counterparts, all of which taken together shall be deemed one original. The date of this Contract shall be the latest date on which any party executes this Contract.

26. **Entire Agreement**. This Contract contains the entire understanding between the parties, and supersedes any prior understandings and agreements between or among them with respect to the subject matter hereof. This Contract supersedes and replaces the "terms and conditions" section set forth in the Quote, if any. This Contract may not be amended, altered, or changed except by the express written agreement of the parties. No part or term of the Prime Contract shall be deemed to amend or supplement this Contract except upon the express written agreement of the parties.

27. **Joint Effort**. This Contract has been drafted through the joint efforts of the parties and shall not be construed against any party on the basis that such party is the drafter of this Contract or any term thereof.

28. **Savings Clause**. In the event any part, provision, or term of this Contract is deemed to be illegal or unenforceable, this Contract shall be construed as if such unenforceable part, provision, or term had not been included herein. Such illegal or unenforceable part, provision, or term shall be deemed revised to the extent necessary to cure its defect and such revision and the remainder of the Contract shall be and remain in full force and effect.

29. **Customer Representative**. The undersigned representative of Customer hereby represents and warrants that s/he has the authority to bind Customer and that the execution, delivery and performance by Customer under this Contract will not violate the provisions of any law, rule, regulation or policy, and will not conflict with or result in the breach or termination or constitute a default under any agreement or instrument to which Customer is a party.

30. **Incorporation of all Exhibits**. All exhibits, addenda, schedules and other documents referenced herein and attached hereto are hereby fully incorporated and made a part hereof by this reference as if the terms and content thereof had been fully set forth in the body of this Contract.

[Customer Name]:	US Digital Designs, Inc.:
By: _____	By _____
Name: _____	DOMINIC MAGNONI, Vice President
Its: _____	
Date: _____	Date:_____

EXHIBIT A
Quote

[Attach Quote SAT14-Qv1 – Station 30Contractor Quote.pdf]

EXHIBIT B
Scope of Work

Provision of the equipment and services as provided for in the Quote, for installation in City of San Antonio Fire Department's Station 30 as shown on the engineered designed attached hereto [Attach USDD.FS30.2015.09.10.pdf]

EXHIBIT C
Warranty

US Digital Designs

PRODUCT WARRANTY

1. **Warranty**. Subject to the terms, conditions and limitations contained herein, US Digital Designs, Inc. ("USDD") warrants that the Products purchased under the Fire Station Alerting System Purchase Contract ("Contract") and integrated into the System shall not contain any material defects and shall function in material conformity with the descriptions and specifications set forth in the Contract for a period of 18 months from the date of the Contract ("Warranty Period"). Capitalized terms used herein and not specifically defined in this Warranty shall have the meanings set forth in the Contract.

2. **Hardware Defects**. If a Hardware defect arises and a valid claim is made within the Warranty Period, at its option, USDD will either (1) repair the hardware defect at no charge, using new parts or parts equivalent to new in performance and reliability or (2) exchange the product with a product that is new or equivalent to new in performance and reliability and is at least functionally equivalent to the original product. Any replacement product or part, including a user-installable part that has been installed in accordance with instructions provided by USDD, shall remain under warranty during the Warranty Period or for 90 days from the date of repair, whichever is later. When a product or part is exchanged, any replacement item becomes the Customer's property and the replaced item becomes the property of USDD. Parts provided by USDD in fulfillment of its warranty obligation must be used in the System for which warranty service is claimed. Customer shall be responsible for and bear all risks and costs of shipping any Hardware to USDD for repair. USDD shall be responsible for and bear all risks and costs of returning any Hardware to Customer after repair or replacement. Replacement Hardware will be

returned to Customer configured as it was when the Hardware was originally purchased, subject to applicable updates.

3. **System Maintenance and Support**. During the Warranty Period, USDD shall provide Software updates and maintenance for the System (collectively the "Support Services"). The Services shall include the following:

a. Technical phone support Monday through Friday from 08:00 to 17:30 MST, excluding USDD holidays;

b. Remote access support Monday through Friday from 08:00 to 17:30 MST, excluding USDD holidays;

c. 24 hour per day telephone access for Customer's System Administrator to USDD's senior staff and engineers in the event of a "Mission Critical Failure" (as defined below); and

d. Updates for all System Software, as and when released by USDD.

4. **Claims**. Prior to making a Warranty claim or requesting Support Services, Customer is encouraged to review USDD's online help resources. Thereafter, to make a valid claim hereunder, Customer must contact USDD technical support and describe the problem or defect with specificity. The first such contact must occur during the Warranty Period. USDD's technical support contact information can be found on USDD's web site at http://stationalerting.com/home/about-usdd/contact-usdd/. Customer must use its best efforts to assist in diagnosing defects, follow USDD's technical instructions, and fully cooperate in the diagnostic process. Failure to do so shall relieve USDD of any further obligation hereunder.

5. **Mission Critical Failure**. "Mission Critical Failure" means a failure in the materials, workmanship or design of the System that causes any fire station served by the System to be incapable of receiving dispatches through all communications paths, provided however, that any such failure caused by operator error, internet or telephony service outages, misuse or neglect of the System or any cause outside of USDD's direct control does not constitute a Mission Critical Failure. Customer's use of Emergency Support in the absence of a Mission Critical Failure shall constitute Additional Services under the Contract, which will be charged at USDD's then current rates.

6. **Exclusions and Limitations**. USDD's obligations under this Warranty are contingent on the Customer providing USDD with VPN access or other means for remote access to the System for remote diagnosis. USDD does not warrant that the operation of the System, Hardware, Software, or any related peripherals will be uninterrupted or error-free. USDD is not responsible for damage arising from Customer's failure to follow instructions relating to the product's use. This Warranty does not apply to any Hardware or Software not used in conjunction with the System and for its intended purpose. This Warranty does not apply to monitors or televisions manufactured by third parties. Recovery and reinstallation of Hardware and user data (including passwords) are not covered under this Warranty. This Warranty does not apply: (a) to

consumable parts, such as batteries, unless damage has occurred due to a defect in materials or workmanship; (b) to cosmetic damage, including but not limited to scratches, dents and broken plastic on ports; (c) to damage caused by use with non-USDD products; (d) to damage caused by accident, abuse, misuse, flood, lightning, fire, earthquake or other external causes; (e) to damage caused by operating the product outside the permitted or intended uses described by USDD; (f) to damage or failure caused by installation or service (including upgrades and expansions) performed by anyone who is not a representative of USDD or a USDD authorized installer or service provider; (g) to a product or part that has been modified to alter functionality or capability without the written permission of USDD; or (h) if any serial number has been removed or defaced. TO THE EXTENT PERMITTED BY LAW, THIS WARRANTY AND REMEDIES SET FORTH ABOVE ARE EXCLUSIVE AND IN LIEU OF ALL OTHER WARRANTIES, REMEDIES AND CONDITIONS, WHETHER ORAL OR WRITTEN, STATUTORY, EXPRESS OR IMPLIED. AS PERMITTED BY APPLICABLE LAW, **USDD SPECIFICALLY DISCLAIMS ANY AND ALL STATUTORY OR IMPLIED WARRANTIES, INCLUDING, WITHOUT LIMITATION, WARRANTIES OF MERCHANTABILITY, FITNESS FOR A PARTICULAR PURPOSE AND WARRANTIES AGAINST HIDDEN OR LATENT DEFECTS**. If USDD cannot lawfully disclaim statutory or implied warranties then to the extent permitted by law, all such warranties shall be limited in duration to the duration of this express Warranty and to repair or replacement service as determined by USDD in its sole discretion. No reseller, agent, or employee is authorized to make any modification, extension, or addition to this Warranty. If any term is held to be illegal or unenforceable, the legality or enforceability of the remaining terms shall not be affected or impaired. EXCEPT AS PROVIDED IN THIS WARRANTY AND TO THE EXTENT PERMITTED BY LAW, USDD IS NOT RESPONSIBLE FOR DIRECT, SPECIAL, INCIDENTAL OR CONSEQUENTIAL DAMAGES RESULTING FROM ANY BREACH OF WARRANTY OR CONDITION, OR UNDER ANY OTHER LEGAL THEORY, INCLUDING BUT NOT LIMITED TO LOSS OF USE; LOSS OF REVENUE; LOSS OF THE USE OF MONEY; LOSS OF ANTICIPATED SAVINGS; LOSS OF GOODWILL; LOSS OF REPUTATION; and LOSS OF, DAMAGE TO OR CORRUPTION OF DATA. USDD IS NOT RESPONSIBLE FOR ANY INDIRECT LOSS OR DAMAGE HOWSOEVER CAUSED INCLUDING THE REPLACEMENT OF EQUIPMENT AND PROPERTY, ANY COSTS OF RECOVERING PROGRAMMING OR REPRODUCING ANY PROGRAM OR DATA STORED OR USED WITH USDD PRODUCTS, AND ANY FAILURE TO MAINTAIN THE CONFIDENTIALITY OF DATA STORED ON THE PRODUCT. USDD disclaims any representation that it will be able to repair any Hardware under this Warranty or make a product exchange without risk to or loss of the programs or data stored thereon.

EXHIBIT B

US Digital Designs

END USER'S ACKNOWLEDGMENT AND AGREEMENT

CITY OF SAN ANTONIO FIRE DEPARTMENT ("End User") and [Customer/Prime Contractor] ("Prime Contractor") entered into the **contract for the remodel of Station 30 [include additional info such as Contract #, etc.]**("Prime Contract") on or about _____, 20_____, for the acquisition and installation of a fire station alerting system ("System," as more specifically defined below) designed and manufactured by US DIGITAL DESIGNS, INC. ("USDD"). USDD and Prime Contractor entered into a Fire Station Alerting System Purchase Contract on or about _____, 20____ ("USDD Contract"), for the provision of the System and certain related services. The USDD Contract and USDD's obligation to perform thereunder, is contingent, in part, on USDD's receipt of End User's written agreement, in a form acceptable to USDD in its sole discretion, to the terms of the Warranty set forth in the USDD Contract, the terms of the USDD Contract relating to USDD's "Intellectual Property" (as defined below), and the terms of the software license granted under the USDD Contract (collectively, the "Contingencies").

In order to satisfy the Contingencies, and for other good and valuable consideration, the receipt and sufficiency of which is hereby acknowledged, End User agrees as follows:

1. **Definitions**.

a. **"Hardware"** means a physically tangible electro-mechanical system or sub-system and associated documentation provided to Prime Contractor or End User by USDD; provided, however, that Hardware shall not include any televisions or monitors manufactured by third parties.

b. **"Intellectual Property"** means any and all rights of USDD related to Hardware, Software, and other products and business existing from time to time under patent law, copyright law, trade secret law, trademark law, unfair competition law, and any and all other proprietary rights, and any and all derivative works, work product, applications, renewals, extensions and restorations thereof, now or hereafter in force and effect worldwide.

c. **"Software"** means software programs, including embedded software, firmware, executable code, linkable object code, and source code, including any updates, modifications, revisions, copies, documentation, and design data provided to End User by USDD as part of the System.

d. **"System"** means all hardware and software purchased by Prime Contractor for resale to End User as part of the Prime Contract and that is used exclusively by End User as part of its fire station alerting system; provided, however, that the term "System" specifically excludes any components, hardware, or software provided by third parties, including without limitation Prime Contractor's or End User's computers, laptops, computer peripherals, routers, switches, operating systems, computer programs, applications, internet and network connections, and any other parts or items not provided directly by USDD.

2. **Warranty**. End User acknowledges and agrees to the terms of the New System Warranty attached hereto at **Schedule 1** (the "Warranty") and made a part hereof by this reference. End User agrees that all services provided under the Warranty will be provided directly by USDD and that USDD will not be obligated to honor any warranty claims made through Prime Contractor or any other entity.

3. **Service Agreement**. Upon expiration of the Warranty Period (as defined in the Warranty), the System shall be subject to the Service Agreement entered into between USDD and the City of San Antonio attached to RFO #6100006459.

4. **Intellectual Property**. End User hereby agrees and acknowledges that USDD owns all rights, title, and interest in and to the Intellectual Property. End User agrees not to remove, obscure, or alter USDD's or any third party's copyright notice, trademarks, or other proprietary rights notices affixed to or contained within or accessed in conjunction with or through any Hardware, Software, or other products. Nothing in this instrument, the Prime Contract, or the USDD Contract shall be deemed to give, transfer, or convey to End User any rights in the Intellectual Property other than the license to use the Software, as set forth below.

5. **License**. At all times that End User is in compliance with the terms of the Prime Contract and any and all other agreements between the parties, End User shall have a non-exclusive, non-transferable, fully paid license to use the Software in conjunction with the System. All other rights to the Software and other Intellectual Property are reserved exclusively to USDD.

IN WITNESS WHEREOF, End User has executed this instrument as of the date set forth below.

CITY OF SAN ANTONIO FIRE DEPARTMENT:

By _____
Name:_____
Its: _____
Date:_____

SCHEDULE 1

PRODUCT WARRANTY

US Digital Designs

PRODUCT WARRANTY

1. **Warranty**. Subject to the terms, conditions and limitations contained herein, US Digital Designs, Inc. ("USDD") warrants that the Products purchased under the Fire Station Alerting System Purchase Contract ("Contract") and integrated into the System shall not contain any material defects and shall function in material conformity with the descriptions and specifications set forth in the Contract for a period of 18 months from the date of the Contract ("Warranty Period"). Capitalized terms used herein and not specifically defined in this Warranty shall have the meanings set forth in the Contract.

2. **Hardware Defects**. If a Hardware defect arises and a valid claim is made within the Warranty Period, at its option, USDD will either (1) repair the hardware defect at no charge, using new parts or parts equivalent to new in performance and reliability or (2) exchange the product with a product that is new or equivalent to new in performance and reliability and is at least functionally equivalent to the original product. Any replacement product or part, including a user-installable part that has been installed in accordance with instructions provided by USDD, shall remain under warranty during the Warranty Period or for 90 days from the date of repair, whichever is later. When a product or part is exchanged, any replacement item becomes the Customer's property and the replaced item becomes the property of USDD. Parts provided by USDD in fulfillment of its warranty obligation must be used in the System for which warranty service is claimed. Customer shall be responsible for and bear all risks and costs of shipping any Hardware to USDD for repair. USDD shall be responsible for and bear all risks and costs of returning any Hardware to Customer after repair or replacement. Replacement Hardware will be

returned to Customer configured as it was when the Hardware was originally purchased, subject to applicable updates.

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b. Remote access support Monday through Friday from 08:00 to 17:30 MST, excluding USDD holidays;

c. 24 hour per day telephone access for Customer's System Administrator to USDD's senior staff and engineers in the event of a "Mission Critical Failure" (as defined below); and

d. Updates for all System Software, as and when released by USDD.

4. **Claims**. Prior to making a Warranty claim or requesting Support Services, Customer is encouraged to review USDD's online help resources. Thereafter, to make a valid claim hereunder, Customer must contact USDD technical support and describe the problem or defect with specificity. The first such contact must occur during the Warranty Period. USDD's technical support contact information can be found on USDD's web site at http://stationalerting.com/home/about-usdd/contact-usdd/. Customer must use its best efforts to assist in diagnosing defects, follow USDD's technical instructions, and fully cooperate in the diagnostic process. Failure to do so shall relieve USDD of any further obligation hereunder.

5. **Mission Critical Failure**. "Mission Critical Failure" means a failure in the materials, workmanship or design of the System that causes any fire station served by the System to be incapable of receiving dispatches through all communications paths, provided however, that any such failure caused by operator error, internet or telephony service outages, misuse or neglect of the System or any cause outside of USDD's direct control does not constitute a Mission Critical Failure. Customer's use of Emergency Support in the absence of a Mission Critical Failure shall constitute Additional Services under the Contract, which will be charged at USDD's then current rates.

6. **Exclusions and Limitations**. USDD's obligations under this Warranty are contingent on the Customer providing USDD with VPN access or other means for remote access to the System for remote diagnosis. USDD does not warrant that the operation of the System, Hardware, Software, or any related peripherals will be uninterrupted or error-free. USDD is not responsible for damage arising from Customer's failure to follow instructions relating to the product's use. This Warranty does not apply to any Hardware or Software not used in conjunction with the System and for its intended purpose. This Warranty does not apply to monitors or televisions manufactured by third parties. Recovery and reinstallation of Hardware and user data (including passwords) are not covered under this Warranty. This Warranty does not apply: (a) to

consumable parts, such as batteries, unless damage has occurred due to a defect in materials or workmanship; (b) to cosmetic damage, including but not limited to scratches, dents and broken plastic on ports; (c) to damage caused by use with non-USDD products; (d) to damage caused by accident, abuse, misuse, flood, lightning, fire, earthquake or other external causes; (e) to damage caused by operating the product outside the permitted or intended uses described by USDD; (f) to damage or failure caused by installation or service (including upgrades and expansions) performed by anyone who is not a representative of USDD or a USDD authorized installer or service provider; (g) to a product or part that has been modified to alter functionality or capability without the written permission of USDD; or (h) if any serial number has been removed or defaced. TO THE EXTENT PERMITTED BY LAW, THIS WARRANTY AND REMEDIES SET FORTH ABOVE ARE EXCLUSIVE AND IN LIEU OF ALL OTHER WARRANTIES, REMEDIES AND CONDITIONS, WHETHER ORAL OR WRITTEN, STATUTORY, EXPRESS OR IMPLIED. AS PERMITTED BY APPLICABLE LAW, **USDD SPECIFICALLY DISCLAIMS ANY AND ALL STATUTORY OR IMPLIED WARRANTIES, INCLUDING, WITHOUT LIMITATION, WARRANTIES OF MERCHANTABILITY, FITNESS FOR A PARTICULAR PURPOSE AND WARRANTIES AGAINST HIDDEN OR LATENT DEFECTS**. If USDD cannot lawfully disclaim statutory or implied warranties then to the extent permitted by law, all such warranties shall be limited in duration to the duration of this express Warranty and to repair or replacement service as determined by USDD in its sole discretion. No reseller, agent, or employee is authorized to make any modification, extension, or addition to this Warranty. If any term is held to be illegal or unenforceable, the legality or enforceability of the remaining terms shall not be affected or impaired. EXCEPT AS PROVIDED IN THIS WARRANTY AND TO THE EXTENT PERMITTED BY LAW, USDD IS NOT RESPONSIBLE FOR DIRECT, SPECIAL, INCIDENTAL OR CONSEQUENTIAL DAMAGES RESULTING FROM ANY BREACH OF WARRANTY OR CONDITION, OR UNDER ANY OTHER LEGAL THEORY, INCLUDING BUT NOT LIMITED TO LOSS OF USE; LOSS OF REVENUE; LOSS OF THE USE OF MONEY; LOSS OF ANTICIPATED SAVINGS; LOSS OF GOODWILL; LOSS OF REPUTATION; and LOSS OF, DAMAGE TO OR CORRUPTION OF DATA. USDD IS NOT RESPONSIBLE FOR ANY INDIRECT LOSS OR DAMAGE HOWSOEVER CAUSED INCLUDING THE REPLACEMENT OF EQUIPMENT AND PROPERTY, ANY COSTS OF RECOVERING PROGRAMMING OR REPRODUCING ANY PROGRAM OR DATA STORED OR USED WITH USDD PRODUCTS, AND ANY FAILURE TO MAINTAIN THE CONFIDENTIALITY OF DATA STORED ON THE PRODUCT. USDD disclaims any representation that it will be able to repair any Hardware under this Warranty or make a product exchange without risk to or loss of the programs or data stored thereon.

EXHIBIT C

US DIGITAL DESIGNS
Tempe, Arizona USA

Phoenix G2 - Automated Fire Station Alerting

Quotation to:

City of San Antonio, Texas
San Antonio Fire Department

Project:

Fire Station Alerting System

Station 30 Remodel Updates

Proposal number:

SAT014 (CONTRACTOR QUOTE)

3rd-Party Purchase Agreement MUST be Executed with Awarded Contractor before any USDD Materials or Services can be rendered

Revision #

1

Quote Date:

28-Dec-2015

Quote Expires:

25-Jun-2016

FOR FINAL INSTALLATION CONTACT:

Custom Systems Design, Inc.

George Vigue / george@csdisa.com

By:

Erik Hanson

Project Manager

US Digital Designs, Inc.

1835 E Sixth St #27

Tempe, AZ 85281

602-687-1739 direct

480-290-7892 fax

ehanson@usdd.com

This Proposal is subject to corrections due to Errors or Omissions

US DIGITAL DESIGNS

1835 E. Sixth St. Suite #27
Tempe, Arizona 85281
877-551-8733 tel *480-290-7892 fax*

QUOTE

DATE: **12/28/2015**
Expires: **6/25/2016**

Quote SUBMITTED TO:
City of San Antonio, Texas
Fire Station Alerting System

REF PROPOSAL
SAT014 (CONTRA **Station-Level Equipment/Services**

STATION 01

Based from USDD G2 Fire Station Alerting System Design Drawing # USDD.SATX.FS30.2015.09.10.pdf

Item	Unit	Mfr	Qty	Description	Part No.	US List Unit	USDD Direct Unit	USDD Direct Ext	
				STATION LICENSES					
L1	Ea	USDD	**1**	**G2 VOICEALERT** - Single Station License. One-Time/Perpetual (unless furthur USDD modification is needed)	**VA**	$ 927.00	**$ 834.30**	**$ 834.30**	
L2	Ea/Yr	USDD	**24**	**G2 MOBILE FSAS APP** - Single Device License. Up to 24 Licenses-Per-ATX are **offered at $0.00 cost each** as long as system is currently under warranty or elected recurring annual support coverage. See 'Mobile' Section for more detail.	**G2-APP-DL**	$ -	**$ -**	**$ -**	
				PHOENIX G2 - STATION CONTROLLER (Required)					
				Control up to (8) peripherals					
1	Kit	USDD	**1**	**G2 ATX STATION CONTROLLER -** Power/Signal/Control up to 8 peripheral Remote Options. 4 Unique Amps/Zones available.	**ATX**	$ 20,000.00	**$ 18,000.00**	**$ 18,000.00**	
2	Kit	USDD	**0**	Rack Mount Ears	ATX-E	$ 54.00	**$ 48.60**	**$ -**	
3	Kit	USDD	**0**	Base Plate	ATX-P	$ 54.00	**$ 48.60**	**$ -**	
				STATION CONTROLLER OPTIONS					
4	Kit	USDD	**1**	**ATX EXPANSION KIT** - Allows ability to Power/Signal/Control up to 12 more peripheral Remote options per EXP.	**ATX-EXP**	$ 6,660.00	**$ 5,994.00**	**$ 5,994.00**	
5	Kit	USDD	**0**	Rack Mount Ears	ATX-E	$ 54.00	**$ 48.60**	**$ -**	
6	Kit	USDD	**0**	Base Plate	ATX-P	$ 54.00	**$ 54.00**	**$ -**	
				STATION PERIPHERAL OPTIONS					
7	Ea	USDD	**13**	**G2 ROOM REMOTE** Module	**RR**	$ 1,830.00	**$ 1,647.00**	**$ 21,411.00**	
8	Ea	USDD	**0**	**G2 ROOM REMOTE** Module / 2016 version 2	**RR**2	$ 1,780.00	**$ 1,602.00**	**$ -**	
8	Ea	USDD	**0**	RR Trim Plate, for Flush-Mount	RR-TP	$ 46.00	**$ 41.40**	**$ -**	
9	Ea	USDD	**0**	RR Back-Straps, for solid-wall flush-mounting	RR-BS	$ 27.00	**$ 24.30**	**$ -**	
10	Ea	USDD	**0**	RR Back-Box, for solid-wall flush-mounting	RR-BB	$ 86.00	**$ 77.40**	**$ -**	
11	Ea	USDD	**6**	**G2 MESSAGE REMOTE** Module	**MR**	$ 1,167.00	**$ 1,050.30**	**$ 6,301.80**	
12	Ea	USDD	**1**	**G2 SIGN REMOTE** Module	**SR**	$ 583.00	**$ 524.70**	**$ 524.70**	
13	Ea	USDD	**1**	**G2 HDTV REMOTE / STATION** Module (TV & Electrical Outlet by Others)	**TVR-S**	$ 875.00	**$ 787.50**	**$ 787.50**	
14	Ea	USDD	**0**	**G2 MESSAGE SIGN**, Digital LED (**STANDARD GammaSign / 24" Active Screen Width**)	**MS-G2-S**	$ 883.00	**$ 794.70**	**$ -**	
15	Ea	USDD	**0**	**G2 MESSAGE SIGN**, Digital LED (**EXTENDED GammaSign / 36" Active Screen Width**)	**MS-G2-E**	$ 1,325.00	**$ 1,192.50**	**$ -**	
16	Ea	USDD	**13**	MESSAGE SIGN, Digital LED (BetaBrite - LEGACY Replacement 24" Screen Width)	MS-B	$ 360.00	**$ 324.00**	**$ 4,212.00**	
17	Ea	USDD	**6**	MS Adapter Plate, VESA 100	MS-ADPT-V100	$ 60.00	**$ 54.00**	**$ 324.00**	
18	Ea	USDD	**3**	MS Tie-Straps (pair) - join two MSs	MS-ADPT-STRP	$ 27.00	**$ 24.30**	**$ 72.90**	
19	Ea	USDD	**3**	MS Mount - Articulating, Long reach	MS-MNT-ART-L	$ 287.00	**$ 258.30**	**$ 774.90**	
20	Ea	USDD	**0**	**G2 DOUBLE MS KIT (**MR, 90-deg Mount, x2MS)	**MS-X2K**	$ 2,065.00	**$ 1,858.50**	**$ -**	
21	Ea	USDD	**0**	**G2 I/O REMOTE** w/ 8 In & 8 Out	**IOR**	$ 1,165.00	**$ 1,048.50**	**$ -**	
22	Ea	USDD	**0**	**G2 Strobe Light** / Red LED	**STR**	$ 500.00	**$ 450.00**	**$ -**	
23	Ea	USDD	**0**	**G2 Color Indicator Remote** - Up to 8 unique colors	**CIR**	$ 635.00	**$ 571.50**	**$ -**	
24	Ea	USDD	**4**	Push Button, Standard (Black)	PB-B	$ 100.00	**$ 90.00**	**$ 360.00**	

25	Ea	USDD	**0**	Push Button, Emergency (Red)	PB-R	$ 100.00	**$ 90.00**	**$ -**	
26	Ea	Atlas	**1**	Audio Amplifier, External, Standard	AMP	$ 987.00	**$ 888.30**	**$ 888.30**	
27	Ea	Atlas	**1**	Shelf, Under Table or Wall Mount, for 1U 1/2 Rack	AMP-S	$ 66.00	**$ 59.40**	**$ 59.40**	
28	Ea	Bogn	**10**	Speaker-**APP**/Weatherized (**A2T**), Surface, 70v	SPK-W-SM	$ 280.00	**$ 252.00**	**$ 2,520.00**	
29	Ea	Bogn	**22**	Speaker - Standard, Flush Mount, 70v (**S86**)	SPK-STD-FM	$ 73.00	**$ 65.70**	**$ 1,445.40**	
30	Ea	Bogn	**0**	Speaker - Surface Mount (**MB**), 70v	SPK-STD-SM	$ 73.00	**$ 65.70**	**$ -**	
31	Ea	USDD	**14**	**G2 LED SPEAKER** - Flush Mount, 70v	**SPK-LED-FM**	$ 297.00	**$ 267.30**	**$ 3,742.20**	
32	Ea	USDD	**0**	**G2 LED SPEAKER** - Surface Mount (**MB**), 70v	**SPK-LED-SM**	$ 297.00	**$ 267.30**	**$ -**	
33	Ea	TIC	**13**	Transformer, 8ohm to 70V, External	XFMR	$ 53.00	**$ 47.70**	**$ 620.10**	
34	Ea	TBD	**2**	ATX UPS, Standard	UPS-STD	$ 923.00	**$ 830.70**	**$ 1,661.40**	
35	Ea	TBD	**2**	Shelf/Bracket, Wall-Mount for UPS	UPS-WMB	$ 57.00	**$ 51.30**	**$ 102.60**	
36	Ea	USDD	**0**	UPS Extended Runtime Battery	UPS-EXT	$ 2,765.00	**$ 2,488.50**	**$ -**	

STATION-LEVEL SERVICES

37	Ea	USDD	**1**	**Station Installation (Custome Systems Design, Inc)**	**ST-INST**	$ 22,398.65	**$ 20,158.78**	**$ 20,158.78**	
38	Ea	USDD	**0**	**Station Remediation (NA/TBD)**	**ST-INST**	$ -	**$ -**	**$ -**	
39	Ea	USDD	**0**	**Station Installation Supervision**	**ST-IS**	$ -	**$ -**	**$ -**	
40	Ea	USDD	**1**	**Station Configuration & Start-Up**	**ST-SU**	$ 2,094.07	**$ 1,884.66**	**$ 1,884.66**	
41	Ea	USDD	**1**	**Station Project Management**	**ST-PM**	$ 1,396.04	**$ 1,256.44**	**$ 1,256.44**	
42	Ea	USDD	**1**	**Station Engineering / Design Services**	**ST-ES**	$ 698.02	**$ 628.22**	**$ 628.22**	
43	Ea	USDD	**1**	**Station Documentation**	**ST-DM**	$ 104.70	**$ 94.23**	**$ 94.23**	
44	Ea	USDD	**0**	**Station Training - User/Technician** via streamed online video with per-station license and participant registration/verification.	**TRA-UT-VID**	$ -	**$ -**	**$ -**	
45	Ea	USDD	**0**	**Station Training - User/Technician. On-Site @ Station.** 1 Hour, 1 Visit. (3 Units/Hours suggested to cover 3 shifts)	**TRA-UT-OS**	$ -	**$ -**	**$ -**	
46	Ea	USDD	**0**	**Training - Installation Contractor / USDD G2 Certification** (TBD - only needed if using non-certified contractor)	**TRA-IC**	$ -	**$ -**	**$ -**	
47	Ea	USDD	**0**	**Miscellaneous/TBD**	**MISC**	$ -	**$ -**	**$ -**	

STATION 01	**Individual Station Equipment & Services Subtotal**	$	94,658.83
	Individual Station Shipping	$	2,592.00
	INDIVIDUAL STATION GRAND TOTAL	**$**	**97,250.83**

Installation Notes:
01 - Unless specifically detailed in this proposal, no installation by USDD or it's subcontractors is assumed or provided.
02 - Because these are mission-critical systems, USDD can only warrant and support systems installed by G2 Trained and Certified Contractors.
03 - USDD can source, qualify, train and certify Local Licensed Regional Subcontrators where needed.
04 - Installation warranted by installation contractor - G2 FSAS warranted, serviced and supported by USDD.
05 - Unless specifically detailed in this proposal, installation to be performed during normal working hours.
06 - Unless specifically detailed in this proposal, no permit fees or material charges have been included.
07 - Unless specifically detailed in this proposal, no removal or remediation has been assumed or included.
08 - Unless specifically detailed in this proposal, no bonds of any type (performance, bid) have been assumed,included or budgeted for in this proposal.
09 - USDD FSAS Equipment to be made available by owner to Installation Contractor prior to on-site arrival.
10 - Structural backing for system devices and other millwork (not specifically detailed) by others.
11 - If applicable, Gas Control Shutoff Valve Addendum (to USDD and installation contractor) must be signed prior to installation.
12 - All electrical power, including (but not limited to) raceway,conduit, backboxes, service panels, high-voltage wiring and fixtures by others.
13 - All communications pathway infrastructure (network, radio, etc.) by others unless specifically detailed in this proposal.
14 - USDD cannot warrant nor support any owner-furbished (3rd-Party) system or component we are required to integrate with.

US DIGITAL DESIGNS

1835 E. Sixth St. Suite #27
Tempe, Arizona 85281
877-551-8733 tel *480-290-7892 fax*

QUOTE

DATE: **12/28/2015**
Expires: **6/25/2016**

Quote SUBMITTED TO:
City of San Antonio, Texas
Fire Station Alerting System

REF PROPOSAL
SAT014 (CONTRACT

Section Totals

(unless otherwise noted, all prices are $US)

Station 01 FSAS Subtotal	$	97,250.83
US Digital Designs System Total	**$**	**97,250.83**

GENERAL CONDITIONS FOR
CITY OF SAN ANTONIO CONSTRUCTION CONTRACTS

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GENERAL CONDITIONS FOR
CITY OF SAN ANTONIO CONSTRUCTION CONTRACTS

ARTICLE I. GENERAL PROVISIONS

1.1 CONTRACT DEFINITIONS

Wherever used in the Contract Documents and printed with initial capital letters, the terms listed below shall have the meanings indicated, which are applicable to both the singular and plural thereof.

1.1.1 **"ALTERNATE"** means a variation in the Work in which Owner requires a price separate from the Base Bid. If an Alternate is accepted by Owner, the variation shall become a part of the Contract through award of the Contract and the Base Bid shall be adjusted to include the amount quoted as stated in the Notice of Award to Contractor. If an Alternate is accepted by Owner, and later deleted, Owner shall be entitled to a credit in the full value of the Alternate as priced in Contractor's Bid Proposal.

1.1.2 **"AMENDMENT"** is a written modification of the Contract prepared by Owner or Design Consultant and signed by Owner and Contractor, (and approved by the San Antonio City Council, if required) which authorizes an addition, deletion or revision in the Work (specifically the services) or an adjustment in the Contract Sum or the Contract Times and is issued on or after the Effective Date of the Agreement.

1.1.3 **"BASE BID"** is the price quoted for the Work before Alternates are considered.

1.1.4 **"CHANGE ORDER"** refer to **Article VII** herein for definition.

1.1.5 **"CITY COUNCIL"** means the duly elected members of the City Council of the City of San Antonio, Texas.

1.1.6 **"CONSTRUCTION OBSERVER/INSPECTOR** (hereafter referred to as "COI") is the authorized representative of the Director of Transportation and Capital Improvements (hereafter referred to as "TCI"), or its designee department, assigned by Owner to observe and inspect any or all parts of the Project and the materials to be used therein. Also referred to herein as Resident Inspector.

1.1.7 **"CONTRACT"** means the Contract Documents which represent the entire and integrated agreement between Owner and Contractor and supersede all prior negotiations, representations or agreements, either written or oral. The terms and conditions of the Contract Documents may be changed only in writing by a Field Work Directive, Change Order or Amendment. The Contract Documents shall not be construed to create a contractual relationship of any kind between:

(1) Design Consultant and Contractor;

(2) Owner and a Subcontractor or Sub-Subcontractor; or

(3) any persons or entities other than Owner and Contractor.

1.1.8 **"CONTRACT DOCUMENTS"** means the Construction Contract between Owner and Contractor, which consists of, but are not limited to, the following: the Notice of Award, an enabling City of San Antonio Ordinance, the solicitation documents and other contract-related documents, which include:

(1) General Conditions;

(2) Vertical and/or Horizontal specific General Conditions and Special Conditions included by Special Provisions or addenda;

(3) Drawings;

(4) Specifications;

(5) addenda issued prior to the close of the solicitation period; and

(6) other documents listed in the Contract, including Field Work Directives, Change Orders and/or Amendments;

(7) a written order for a minor change in the Work issued by Design Consultant and/or Owner, as described in **Article VII** herein.

The geotechnical and subsurface reports which Owner may have provided to Contractor specifically are excluded from the Contract Documents.

1.1.9 **"CONTRACT TIME"** means, unless otherwise provided, the period of time, including any authorized adjustments, allotted in the Contract Documents for Substantial Completion of the Work. When the plural ("Contract Times") is used, it refers to milestones designated in the Work Progress Schedule.

1.1.10 **"CONTRACTOR"** means the entity that has entered into a Contract with Owner to complete the Work. Contractor, as used herein, includes Construction Manager at Risk or other applicable entities performing work under a Contract with City.

1.1.11 **"DAY"** as used in the Contract Documents shall mean Calendar Day, unless otherwise specifically defined. A Calendar Day is a day of 24 hours, measured from midnight to the next midnight, unless otherwise specifically stipulated. For

Projects not affecting City traffic, a Working Day is measured from sunrise to sundown Monday through Friday, except legal holidays, or the hours during which Contractor has been authorized and/or directed to work by Owner. For Projects affecting City traffic, a working day shall mean sunrise to sundown Monday through Saturday, except legal holidays, or hours during which Contractor has been authorized and/or directed to work by Owner.

1.1.12 **"DEPARTMENT"** means the Department of Transportation and Capital Improvements (hereafter referred to as "TCI"), City of San Antonio, Texas or Director of TCI.

1.1.13 **"DESIGN CONSULTANT"** means, unless the context clearly indicates otherwise, an Engineer, Architect or other Design Consultant in private practice, licensed to do work in Texas and retained for a specific project under a contractual agreement with Owner.

1.1.14 **"DRAWINGS"** (also referred to herein as **"Plans"**) are the graphic and pictorial portions of the Contract Documents, wherever located and whenever issued, showing the design, location and dimensions of Work, generally including elevations, sections, details, schedules and diagrams.

1.1.15 **"FIELD WORK DIRECTIVES" OR "FORCE ACCOUNT"** is a written order signed by Owner directing a change in the Work prior to agreement an adjustment, if any, in the Contract Sum and/or Contract, as further defined in **Section 7.3** herein.

1.1.16 **"HAZARDOUS SUBSTANCE"** is defined to include the following:

(a) any asbestos or any material which contains any hydrated mineral silicate, including chrysolite, amosite, crocidolite, tremolite, anthophylite or actinolite, whether friable or non-friable;

(b) any polychlorinated biphenyls ("PCBs"), or PCB-containing materials, or fluids;

(c) radon;

(d) any other hazardous, radioactive, toxic or noxious substance, material, pollutant, or solid, liquid or gaseous waste; any pollutant or contaminant (including but not limited to petroleum, petroleum hydrocarbons, petroleum products, crude oil or any fractions thereof, any oil or gas exploration or production waste, any natural gas, synthetic gas or any mixture thereof, lead, or other toxic metals) which in its condition, concentration or area of release could have a significant effect on human health, the environment, or natural resources;

(e) any substance that, whether by its nature or its use, is subject to

regulation or requires environmental investigation, monitoring, or remediation under any federal, state, or local environmental laws, rules, or regulations;

(f) any underground storage tanks, as defined in 42 U.S.C. Section 6991(1)(A)(I) (including those defined by Section 9001(1) of the 1984 Hazardous and Solid Waste Amendments to the Resource Conservation and Recovery Act, 42 U.S.C. Section 6901 et seq.;

(g) the Texas Water Code Annotated Section 26.344; and Title 30 of the Texas Administrative Code Sections 334.3 and 334.4), whether empty, filled or partially filled with any substance; and

(h) any other hazardous material, hazardous waste, hazardous substance, solid waste, and toxic substance as those or similar terms are defined under any federal, state, or local environmental laws, rules, or regulations.

1.1.17 **"NOTICE TO PROCEED (HEREIN ALSO REFERRED TO AS "WORK PROJECT AUTHORIZATION" OR "NTP")"** is a written notice given by Owner to Contractor establishing the date on which the Contract Time shall commence to run and the date on which Contractor may begin performance of its contractual obligations.

1.1.18 **"OWNER"** is defined in **Article II** herein.

1.1.19 **"OWNER DESIGNATED REPRESENTATIVE (ODR)"** means the person(s) designated by Owner to act for Owner.

1.1.20 **"PROJECT"** means the total design and construction of Work performed under the Contract Documents and may be the whole or a part of the Project and which may include construction by Owner or by separate contractors. All references in these General Conditions to or concerning the Work or the Site of the Work shall use the term "Project," notwithstanding that the Work only may be a part of the Project.

1.1.21 **"PROJECT MANAGEMENT TEAM"** is composed of Owner, its representatives, Design Consultant and Program Manager (if any) for this Work.

1.1.22 **"SITE"** means the land(s) or area(s) (as indicated in the Contract Documents) furnished by Owner, upon which the Work is to be performed, including rights-of-way and easements for access thereto, and such other lands furnished by Owner which are designated for the use of Contractor.

1.1.23 **"SPECIAL CONDITIONS"** are terms and conditions to an Agreement that supplement and are superior to these General Conditions and grant greater authority or impose greater restrictions upon Contractor, beyond those granted or imposed in these General Conditions. City's Horizontal Special Conditions are

attached hereto, made a part of these General Conditions and shall be used as applicable.

1.1.24 **"SPECIFICATIONS"** are that portion of the Contract Documents consisting of the written requirements for materials, equipment, construction systems, standards, workmanship for the Work, performance of related services and other technical requirements.

1.1.25 **"SUBSTANTIAL COMPLETION"** is the date certified by Owner and Design Consultant, in accordance with **Section 9.8** herein, when the Work, or a designated portion thereof, is sufficiently complete in accordance with the Contract Documents so as to be operational and fit for the intended use by Owner.

1.1.26 **"TEMPORARY BENCH MARKS (TBM)"** are temporary affixed marks which establish the exact elevation of a place; TBMs are used by surveyors in measuring site elevations or as a starting point for surveys.

1.1.27 **"THE 3D MODEL"** is the Building Information Model prepared by Design Consultant in the format designated, approved and acceptable to Owner with databases of materials, products and systems that can be used by Contractor to prepare schedules for cost estimating, product and materials placement schedules and evaluations of crash incidences. The 3D Model, if available, may be used as a tool, however all information taken from the Model is the responsibility of Contractor and not Owner or Design Consultant.

1.1.28 **"WORK"** means the construction and services required by the Contract Documents, whether completed or partially completed, and includes all labor, materials, equipment and services provided or to be provided by Contractor, or any Subcontractors, Sub-Subcontractors, material suppliers or any other entities for which Contractor is responsible, to fulfill the Contractor's obligations. The Work may constitute the whole or a part of the Project**.**

1.1.29 **OTHER DEFINITIONS.** As used in the Contract Documents, the following additional terms have the following meanings:

1.1.29.1 "provide" means to furnish, install, fabricate, deliver and erect, including all services, materials, appurtenances and all other expenses necessary to complete in place and ready for operation or use;

1.1.29.2 "shall" means the mandatory action of the party of which reference is being made;

1.1.29.3 "as required" means as prescribed in the Contract Documents; and

1.1.29.4 "as necessary" means all action essential or needed to complete the work in accordance with the Contract Documents and applicable laws, ordinances, construction codes and regulations.

1.2 PRELIMINARY MATTERS

1.2.1 Upon the San Antonio City Council's passing of an Ordinance authorizing the issuance of a contract, a Notice of Award Letter shall be sent to Contractor by TCI Contract Services, notifying Contractor of the award of a contract. In its Notice of Award Letter, Contractor shall be informed of a date certain by which Contractor's bond(s) and evidence of insurance shall be delivered to TCI Contract Services.

1.2.2 **DELIVERY OF CONTACT AND BONDS.** Not later than the Pre-Construction meeting and prior to the commencement of any Work on the Project, Contractor shall deliver a fully executed Contract to Owner, along with such bonds as Contractor may be required to furnish, including, but not limited to, a required payment bond in the form and amount specified in the Contract Documents and these General Conditions and a required performance bond in the form and amount specified in the Contract Documents and these General Conditions.

1.2.3 **DELIVERY OF EVIDENCE OF INSURANCE.** Not later than the Pre-Construction meeting, and prior to the commencement of any Work under this Contract, Contractor shall deliver evidence of insurance to Owner. Contractor shall furnish an original completed Certificate of Insurance and a copy of all insurance policies, together with all required endorsements thereto, required by the Contract Documents to the TCI Contract Services Division, or its delegated department, clearly labeled with the name of the Project and which shall contain all information required by the Contract Documents. Contractor shall be prohibited from commencing the Work and Owner shall have no duty to pay or perform under this Contract until such evidence of insurance is delivered to Owner. No officer or employee, other than Owner's Risk Management Department, shall have authority to waive this requirement.

1.2.4 **NOTICE TO PROCEED AND COMMENCEMENT OF CONTRACT TIMES.** Unless otherwise stated on the Notice to Proceed, the Contract Time shall commence to run on the date stated on the Notice to Proceed. No Work shall commence any earlier than the date stated on Notice to Proceed and no Work shall be performed by Contractor or any Subcontractor prior to issuance of the Notice to Proceed. Any work commenced prior to Contractor receiving a Notice to Proceed is performed at Contractor's risk.

1.2.5 **SUBMISSION OF PROJECT SCHEDULE(S).** Prior to comment of Work (unless otherwise specified elsewhere in the Contract Documents), Contractor shall submit to the Director of TCI or his/her designee the Project schedule(s), as defined in **Section 3.10** herein, a minimum of fifteen (15) days prior to the Pre-Construction Conference.

1.2.6 **PRE-CONSTRUCTION CONFERENCE.** Before Contractor commences any Work on the Project, a Pre-Construction Conference attended by Contractor, Design Consultant, Owner's Designated Representative(s) and others, as appropriate, shall be held to establish a working understanding among the parties as to the Work and discuss, at minimum: the Project Schedule(s) referenced in this **Article 1**; the procedures for handling Shop Drawings and other submittals; the processing of

Applications for Payment; and Contractor maintaining required records. The Notice to Proceed may be issued at the Pre-Construction Conference or issued by Owner at any time at Owner's discretion. Said issuance of the Notice to Proceed shall not be unreasonably withheld by Owner.

1.2.7 Payments for services, goods, work, equipment and materials are contingent upon and subject to the availability and appropriation of funds and the sale of future City of San Antonio Certificates of Obligation and/or General Obligation Bonds in accordance with adopted budgets. In the event funds are not available, appropriated or encumbered to fund a Project, then, at City's discretion, this Agreement may be terminated immediately with no additional liability to City.

1.3 CONTRACT DOCUMENTS

1.3.1 **EXECUTION OF CONTRACT DOCUMENTS.** Execution of the Contract by Contractor is a representation Contractor has been provided unrestricted access to the existing improvements and conditions on the Project Site, Contractor thoroughly has investigated the visible conditions at the Site and the general local conditions affecting the Work and Contractor's investigation was instrumental in preparing its bid or proposal submitted to Owner to perform the Work. Contractor shall not make or be entitled to any claim for any adjustment to the Contract Time or the Contract Sum arising from conditions which Contractor discovered or, in the exercise of reasonable care, should have discovered in Contractor's investigation.

1.3.2 **OWNERSHIP AND USE OF DRAWINGS, SPECIFICATIONS AND OTHER INSTRUMENTS OF SERVICE.** The Drawings, Specifications and other documents, including those in electronic form, prepared by Design Consultant, its Consultants or other Consultants retained by Owner for the Project, which describe the Work to be executed by Contractor (collectively referred to as the "Construction Documents") are and shall remain the property of Owner, whether the Project for which they are made is executed or not. Contractor shall be permitted to retain one record set. Neither Contractor nor any Subcontractor, sub-Subcontractor or material or equipment supplier shall own or claim a copyright in the Drawings, Specifications and other documents prepared by Design Consultant or Design Consultant's Consultants. All copies of Construction Documents, except Contractor's record set, shall be returned or suitably accounted for to Design Consultant on request and upon completion of the Work. The Drawings, Specifications and other documents prepared by Design Consultant and Design Consultant's Consultants, along with copies thereof furnished to Contractor, are for use solely with respect to this Project. The drawings, specifications or other documents are not to be used by Contractor or any Subcontractor or material or equipment supplier on other projects or for additions to this Project outside the scope of the Work without the specific written consent of the Owner. Any such use without written authorization shall be at the sole risk and liability of Contractor. Contractor, Subcontractors and material or equipment suppliers are authorized to use and reproduce applicable portions of the Drawings, Specifications and other documents prepared by the Design Consultant and the Design Consultant's Consultants appropriate to and for use in the execution of

their Work under the Contract Documents. All copies made under this authorization shall bear the statutory copyright notice, if any, shown on the Drawings, Specifications and other documents prepared by Design Consultant and Design Consultant's Consultants. Submittal or distribution to meet official regulatory requirements or for other purposes, in connection with this Project, is not to be construed as publication.

1.3.2.1 All of Contractor's non-proprietary, documentary Work product, including reports and correspondence to Owner, prepared pursuant to this Contract, shall be the property of Owner and, upon completion of this Contract and upon written request by Owner, promptly shall be delivered to Owner in a reasonably organized form, without restriction on its future use by Owner. For the avoidance of doubt, documentary Work product does not include privileged communications, proprietary information and documents used to prepare Contractor's Bid Proposal.

1.3.2.2 Contractor may retain for its files any copies of documents it chooses to retain and may use its Work product as it deems fit. Any materially-significant Work product lost or destroyed by Contractor shall be replaced or reproduced at Contractor's non-reimbursable sole cost. In addition, Owner shall have access during normal business hours, during the duration this Contract is in effect and for four (4) years after the final completion of the Work, unless there is an ongoing dispute under the Contract, then such access period shall extend longer until final resolution of the dispute, to all of Contractor's records and documents covering reimbursable expenses, actual base hourly rates, time cards and annual salary escalation records maintained in connection with this Contract for purposes of auditing same at the sole cost of Owner. The purpose of any such audit shall be for the verification of such costs. Contractor shall not be required to keep records of, or provide access to, the make up of any negotiated and agreed-to lump sums, unit prices or fixed overhead and profit multipliers. Nothing herein shall deny Contractor the right to retain duplicates. Refusal by Contractor to comply with the provisions hereof shall entitle Owner to withhold any payment(s) to Contractor until compliance is obtained.

1.3.2.3 All of Contractor's documentary Work product shall be maintained within Contractor's San Antonio offices, unless otherwise authorized by Owner. After expiration of this Contract, Contractor's documents may be archived in the Contractor's central record storage facility but shall remain accessible to Owner for the four (4) year period cited in **Section 1.3.22** herein.

1.3.3 **CORRELATION AND INTENT.** The intent of the Contract Documents is to include all items necessary for the proper execution and completion of the Work by Contractor. The Contract Documents are complementary and what is required by one shall be as binding as if required by all. Performance by Contractor shall be required only to the extent consistent with the Contract Documents and which reasonably is inferable from the Contract Documents as deemed necessary to

produce the indicated results. In cases of discrepancy between any drawing and the dimension figures written thereon:

(1) the dimension figures shall govern over scaled dimensions;

(2) Detailed Drawings and accompanying notations shall govern over general Drawings;

(3) Specifications shall govern over Drawings, subject to **Section 1.3.3.6** herein;

(4) General Conditions and Supplemental Conditions;

(5) Special Conditions shall govern over Specifications, Drawings and General/Supplemental Conditions; and

(6) Negotiated Special Conditions shall govern over Special Conditions.

The most recent revision of Plans shall control over older revisions.

1.3.3.1 Organization of the Specifications into divisions, sections, articles, and the arrangement of Drawings shall not control Contractor in dividing the Work among Subcontractors or establishing the extent of Work to be performed by any trade.

1.3.3.2 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. Where the phrases "directed by", "ordered by" or "to the satisfaction of" Owner, Design Consultant or Owner's Resident Inspector or other specified designation occur, it is to be understood that the directions, orders or instructions to which they relate are those within the scope of and authorized by the Contract Documents.

1.3.3.3 Reference to manufacturer’s instructions, standard specifications, manuals or codes of any technical society, organization or association, laws or regulations of any governmental authority, or to any other documents, whether such reference be specific or by implication, shall mean the latest standard specification, manual, code or laws or regulations in effect at the time of opening of Contractor’s Bid Proposal, except as otherwise may be specifically stated or where a particular issue is indicated. Municipal and utility standards shall govern except in case of conflict with the

Specifications. In case of a conflict between the Specifications and the referenced standard, the more stringent shall govern.

1.3.3.4 The most recently issued Document takes precedence over previous issues of the same Document. The order of precedence is as follows, with the highest authority listed herein as "1" and in descending order:

1. Modifications to this Agreement signed by Contractor, Owner and Design Consultant;

2. Addenda, with those of later date(s) having precedence over those with earlier date(s);

3. Special Conditions;

4. General Conditions;

5. Special Provisions (Horizontal Projects);

6. Specifications;

7. Drawings;

1.3.3.5 Should the Drawings and Specifications be inconsistent, contract pricing shall be based on the better quality and greater quantity of work indicated. In the event of the above-mentioned inconsistency, Owner shall determine the resolution of the inconsistency.

1.3.3.6 In the Drawings and Specifications, where certain products, manufacturer's trade names or catalog numbers are given, such information is given for the sole and express purpose of establishing a standard of function, dimension, appearance and quality of design in harmony with the Work and is not intended for the purpose of limiting competition. Materials or equipment shall not be substituted unless such a substitution has been specifically accepted for use on this Project by Owner and Design Consultant.

1.3.3.7 When the work is governed by reference to standards, building codes, manufacturer's instructions or other documents, unless otherwise specified, the edition currently in place as of the date of the submission of the bid shall apply.

1.3.3.8 Requirements of public authorities apply as minimum requirements only and do not supersede more stringent specified requirements.

1.3.3.9 Special Provisions, if any, shall be issued by Owner directly to Contractor, shall become part of the Project Specifications and shall modify Owner’s Standard Specifications.

1.3.4 **INTERPRETATION.** In the interest of brevity, the Contract Documents frequently omit modifying words such as "all" and "any" and articles such as "the" and "an", but the fact that a modifier or an article is absent from one statement and appears in another is not intended to affect the interpretation of either statement.

ARTICLE II. OWNER

2.1 GENERAL

2.1.1 The City of San Antonio, Texas, a home-rule, Texas Municipal Corporation located in Bexar County and identified as "Owner" or as "City" in the Contract and these General Conditions, is referred to throughout the Contract Documents as if singular in number. Owner shall designate in writing to Contractor a representative (hereafter referred to as "Owner's Designated Representative" or "ODR") who shall have express authority to bind Owner with respect to all matters concerning this Contract requiring Owner's approval or authorization. Whenever the term "City" or "Owner" is found in this Contract or the Contract Documents, such term shall include the City's agents, elected officials, employees, officers, directors, volunteers, representatives, successors and assigns.

2.1.2 Contractor acknowledges that no lien rights exist with respect to public property.

2.2 INFORMATION AND SERVICES TO BE PROVIDED BY OWNER

2.2.1 Owner shall provide and maintain the Preliminary Budget and general schedule, if any, for the Project. The Preliminary Budget shall include the anticipated construction cost, contingencies for changes in the Work during construction and other costs that are the responsibility of Owner. The general schedule shall set forth Owner's plan for milestone dates and completion of the Project.

2.2.2 Owner shall furnish surveys, if in existence, describing physical characteristics, legal limitations and utility locations. The furnishing of these surveys and reports shall not relieve Contractor of any of its duties under the Contract Documents or these General Conditions. Information or services required of Owner by the Contract Documents shall be furnished by Owner with reasonable promptness following actual receipt of a written request from Contractor. It is incumbent upon Contractor to identify, establish and maintain a current schedule of latest dates for submittal and approval by Owner, as required in **Section 3.10** herein, including when such information or services must be delivered. If Owner delivers the

information or services to Contractor as scheduled and Contractor is not prepared to accept or act on such information or services, then Contractor shall reimburse Owner for all extra costs incurred by holding, storage, retention or performance, including redeliveries by Owner in order to comply with the current schedule.

2.2.3 Unless otherwise provided in the Contract Documents, Contractor shall be furnished, free of charge, up to ten (10) complete sets of the Plans and Specifications by Design Consultant. Additional complete sets of Plans and Specifications, if requested by Contractor, shall be furnished at reproduction cost to Contractor.

2.2.4 Owner's personnel may, but are not required to, be present at the construction site during progress of the Work, along with Design Consultant in the performance of its duties, to verify Contractor's record of the number of workers employed on the Work site, the workers' occupational classification, the time each worker is engaged in the Work and the equipment used by the workers in the performance of the Work, for purpose of verification of Contractor's Applications for Payment and payroll records.

2.2.5 Owner shall reimburse Contractor for the necessary Project-related approvals, fees and required permits with no markup paid to Contractor for these necessary Project-related approvals, fees and required permits costs unless said costs are stipulated in the Contract Documents as a part of the Work.

2.2.6 **OWNER'S RIGHT TO STOP THE WORK**. If Contractor fails to correct Work deemed by Owner to not be in accordance with the requirements of the Contract Documents, as required by **Section 12.3** herein, fails to carry out Work in accordance with the Contract Documents or fails to submit its preliminary schedule(s), bond(s), insurance certificate(s) or any other required submittals, Owner may issue a written order to Contractor to stop the Work, or any portion thereof, until the cause for such order has been eliminated. The 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 the Contractor or any other person or entity. This right shall be in addition to and not in restriction of Owner's rights pursuant to **Section 12.3** herein. Owner's issuance of an order to Contractor to stop the Work shall not give rise to any claim by Contractor for additional time, cost or general conditions costs.

2.2.7 **OWNER'S RIGHT TO CARRY OUT THE WORK**. If Contractor defaults, neglects or fails to carry out the Work in accordance with the Contract Documents and fails, within a three (3) work-day period after receipt of written notice from Owner, to commence and continue correction of such default, neglect or failure with diligence and promptness, Owner may, without prejudice to other remedies Owner may have, correct such deficiencies, neglect or failure. In such case, an appropriate Change Order may be issued deducting from payments then or thereafter due Contractor reflecting the reasonable cost of correcting such deficiencies, neglect or failure of Contractor, including all of Owner's incurred expenses and compensation for Design Consultant's additional services made

necessary by such default, neglect or failure of Contractor. If payments then or thereafter due Contractor are not sufficient to cover such amounts for the Work performed, Contractor shall pay the difference to Owner.

ARTICLE III. CONTRACTOR

3.1 GENERAL

3.1.1 Contractor is the person or entity identified as such in the Agreement and is referred to throughout the Contract Documents as if singular in number. The term "Contractor" means the Contractor or the Contractor's authorized representative.

3.1.2 Contractor shall perform the Work in a good and workmanlike manner, except to the extent the Contract Documents expressly specify a higher degree of finish or workmanship.

3.1.3 Contractor shall not be relieved of its obligations, responsibilities or duties to perform the Work in accordance with the Contract Documents, either by any activities or duties of Design Consultant in Design Consultant's administration of the Contract or by tests, inspections or approvals required or performed by Owner or any person other than the Contractor.

3.2 REVIEW OF CONTRACT DOCUMENTS AND FIELD CONDITIONS BY CONTRACTOR

3.2.1 Since the Contract Documents are complementary, before starting each portion of the Work, Contractor carefully shall:

(1) study and compare the various Drawings and other Contract Documents relative to that portion of the Work and the information furnished by Owner;

(2) take field measurements of any existing conditions related to that portion of the Work; and

(3) observe any conditions at the Site affecting the Work.

Any error, inconsistencies or omissions discovered by Contractor shall be reported

promptly to Owner via a Request for Information in such form as the Owner may require.

3.2.1.1 The exactness of existing grades, elevations, dimensions or locations given on any Drawings issued by Design Consultant, or the work installed by other contractors, is not guaranteed by Owner. Contractor shall, therefore, satisfy itself as to the accuracy of all grades, elevations, dimensions and locations.

3.2.1.2 In all cases of interconnection of its Work with existing conditions or with work performed by others, Contractor shall verify at the site all dimensions relating to such existing or other work. Any errors due to Contractor's failure to so verify all such grades, elevations, dimensions or locations promptly shall be rectified by Contractor without any additional cost to Owner.

3.2.2 As between Owner and Contractor, and subject to the provisions of **Section 3.2.4** below, Contractor has no responsibility for the timely delivery, completeness, accuracy and/or sufficiency of the Specifications or Drawings (or any errors, omissions, or ambiguities therein), and is not responsible for any failure of the design of the facilities or structures as reflected thereon to be suitable, sound or safe. Contractor shall be deemed to have satisfied itself as to the design contained in and reflected by the Specifications and the Drawings. In particular, but without prejudice to the generality of the foregoing, Contractor shall review the Contract Documents to establish that:

3.2.2.1 the information is sufficiently complete to perform the Work; and

3.2.2.2 there are no obvious or patent ambiguities, inaccuracies or inconsistencies within or between the documents forming the Contract; and

3.2.2.3 Contractor shall work with the aforementioned Contract Documents so as to perform the Work and of each and every part thereof such that the Work and each and every part thereof shall, jointly and severally, be in accordance with the requirements of the Contract Documents and in particular, but without limiting the generality of the foregoing, such that the Work as a whole and, as appropriate, each and every part thereof, shall comply with the requirements of any performance specifications.

3.2.3 Any design errors or omissions noted by Contractor during its review promptly shall be reported to Owner, but it is recognized that the Contractor's review is made in Contractor's capacity as a contractor and not as a licensed design professional, unless otherwise specifically provided in the Contract Documents. Contractor is not required to ascertain if Contact Documents are in accordance with applicable laws, statutes, ordinances, building codes, and rules and regulations, but any nonconformity discovered by or made known to Contractor promptly shall be reported both to Owner and Design Consultant.

3.2.4 If Contractor believes additional cost or time is involved because of clarifications or instructions issued by Design Consultant, in response to the Contractor's Notices or Requests for Information, Contractor shall make

Claims as provided in **Section 4.3.6** and **Section 4.3.7** herein. If Contractor fails to perform the obligations of **Section 3.2.1** and **Section 3.2.2** herein, Contractor shall pay such costs and damages to Owner as would have been avoided if Contractor had performed such obligations. Contractor shall not be liable to Owner or Design Consultant for damages resulting from errors, inconsistencies or omissions in the Contract Documents or for differences between field measurements or conditions and the Contract Documents, unless Contractor recognized or should have recognized such error, inconsistency, omission or differences and knowingly failed to report it to Owner and Design Consultant, as required by this **Section 3.2.4**.

3.3 SUPERVISION AND CONSTRUCTION PROCEDURES

3.3.1 Contractor shall supervise, inspect and direct the Work competently and efficiently, exercising the skill and attention of a reasonably prudent Contractor, devoting such attention and applying such skills and expertise as may be necessary to perform the Work in accordance with the Contract Documents. Contractor solely shall be responsible for the means, methods, techniques, sequences, procedures and coordination of all portions of the Work under the Contract, unless the Contract Documents give other specific instructions concerning these matters. If the Contract Documents give specific instructions concerning construction means, methods and/or techniques, Contractor then shall evaluate the jobsite safety thereof and, except as stated herein below, shall be fully and solely responsible for the jobsite safety of such means, methods, techniques, sequences or procedures. If, upon its evaluation, Contractor determines such means, methods, techniques, sequences or procedures may not be safe, Contractor shall give timely written notice to Owner and Design Consultant and Contractor shall not proceed with that portion of the Work without further written instructions from Owner. Sequencing and procedures shall be coordinated and agreed upon by Owner, Design Consultant and Contractor.

3.3.2 Contractor shall be responsible to Owner for the acts and omissions of Contractor's agents and employees, Subcontractors and their agents and employees and other persons or entities performing portions of the Work for or on behalf of Contractor or any of its Subcontractors.

3.3.3 Contractor shall be responsible for inspection of portions of Work already performed, to determine which such portion are in proper condition to receive subsequent Work.

3.3.4 Contractor shall bear responsibility for design and execution of acceptable trenching and shoring procedures, in accordance with Texas Government Code, Section 2166.303 and Texas Health and Safety Code, Subchapter C, Sections 756.021, et seq.

3.3.5 It is understood and agreed the relationship of Contractor to Owner shall be of an independent contractor. Nothing contained or inferable in the Contract documents shall be read, deemed or construed to make Contractor the agent, servant or

employee of Owner or create any partnership, joint venture or other association between Owner and Contractor. Any direction or instruction by Owner, in respect of the Work, shall relate to the results the Owner desires to obtain from the Work and shall in no way affect Contractor's independent contractor status, as described herein.

3.3.6 Contractor shall review Subcontractor(s) written safety programs, procedures and precautions in connection with performance of the Work. However, Contractor's duties shall not relieve any Subcontractor(s) or any other person or entity (e.g. a supplier), including any person or entity with whom Contractor does not have a contractual relationship, of their responsibility or liability relative to compliance with all applicable federal, state and local laws, rules, regulations and ordinances, which shall include the obligation to provide for the safety of their employees, persons, and property and their requirements to maintain a work environment free of recognized hazards. The foregoing notwithstanding, the requirements of this **Section 3.4.6** are not intended to impose upon Contractor any additional obligations Contractor would not have under any applicable state or federal laws including, but not limited to, any rules, regulations or statutes pertaining to the Occupational Safety and Health Administration.

3.4 LABOR AND MATERIALS

3.4.1 Unless otherwise provided in the Contract Documents, Contractor shall provide and pay for all labor, materials, equipment, tools, construction equipment and machinery, water, heat, utilities, transportation and other facilities and services necessary for proper execution and completion of the Work, whether temporary or permanent and whether or not incorporated or to be incorporated in the Work.

3.4.2 **PREVAILING WAGE RATE AND LABOR STANDARD PROVISIONS**. The Provisions of Chapter 2258 of the Texas Government Code, and the "Wage and Labor Standard Provisions" amended in City of San Antonio Ordinance 2008-11-20-1045, expressly are made a part of this Contract. In accordance therewith, a schedule of the general prevailing rate of per diem wages in this locality for each craft or type of worker needed to perform this Contract shall be obtained by Contractor from the City of San Antonio's Labor Compliance Office and included in Contractor's Project bid package, prior to Contractor bidding of the Project and such schedule shall become a part hereof. Contractor shall forfeit, as a penalty to Owner, sixty dollars ($60.00) for each laborer, worker or mechanic employed <u>for each calendar day</u>, or portion thereof, in which such laborer, worker or mechanic is paid less than the stipulated prevailing wage rates for any work done under this Contract by the Contractor or any Subcontractor employed on the project. The establishment of prevailing wage rates, pursuant to Chapter 2258 of the Texas Government Code, shall not be

construed to relieve Contractor from its obligation under any federal or state law, regarding the wages to be paid to or hours worked by laborers, workers or mechanics, insofar as applicable to the work to be performed hereunder. Contractor, in the execution of this Project, agrees it shall not discriminate in its employment practices against any person because of race, color, creed, sex, or origin. Contractor agrees it shall not engage in employment practices which have the effect of discriminating against employees or prospective employees because of race, color, creed, national origin, sex, age, handicap or political belief or affiliation. This Contract provision shall be included in its entirety in all Subcontractor agreement entered into by the Contractor or any Subcontractor employed on the project.

3.4.3 **SUBSTITUTIONS**

3.4.3.1 Contractor's proposed substitutions and alternates may be rejected by Owner without explanation and shall be considered by Owner only under one or more of the following conditions:

(a) the proposal is required for compliance with interpretation of code requirements or insurance regulations then existing;

(b) specified products are unavailable through no fault of Contractor; and

(c) when in the judgment of Owner or Design Consultant, a substitution substantially would be in Owner's best interests in terms of cost, time or other considerations.

3.4.3.2 Contractor shall submit to Owner and Design Consultant:

(a) a full explanation of the proposed substitution and submittal of all supporting data, including technical information, catalog cuts, warranties, test results, installation instructions, operating procedures and other like information necessary for a complete evaluation of the substitution;

(b) a written explanation of the reasons the substitution is necessary, including the benefits to the Owner and to the Work, in the event the substitution is acceptable to Owner;

(c) the adjustment, if any, in the Contract Sum;

(d) the adjustment, if any, in the time of completion of the Contract and the construction schedule; and

(e) in the event of a substitution under **Section 3.4.2.1** herein, an affidavit stating:

(1) Contractor's proposed substitution conforms to and meets all the requirements of the pertinent Specifications and requirements shown on the Drawings; and

(2) Contractor accepts the warranty and correction obligations in connection with the proposed substitution as if originally specified by Design Consultant.

Proposals for substitutions shall be submitted to Design Consultant in sufficient time to allow Design Consultant no less than twenty-one (21) calendar days for review. No substitutions shall be considered or allowed without Contractor's submittal of complete substantiating data and information as stated hereinbefore.

3.4.3.3 In the event of a substitution submittal under this **Section 3.4.3**, and whether or not any such proposed substitution is accepted by Owner or Design Consultant, Contractor shall reimburse Owner, at Owner's reasonable discretion, for any fees incurred and charged by Design Consultant or other Consultants for evaluating each proposed substitute.

3.4.3.4 Except as otherwise stipulated in the Contract Documents or required for safety or protection of persons or the Work or property at the Site or adjacent thereto, no Work shall be allowed by Owner between the hours of 10:00 p.m. and 6:00 a.m. of the following calendar day, unless directed by the ODR or requested in writing by Contractor and approved by Owner.

3.4.4 Contractor shall, at all times, enforce strict discipline and good order among persons working on the Project and shall not employ or continue to employ any unfit person on the Project or any person not skilled in the assigned work. Contractor shall be liable for and responsible to Owner for all acts and omissions of its employees, all tiers of its Subcontractors, material suppliers, anyone who Contractor may allow to perform any Work on the Project and their respective officers, agents, employees, and Consultants who Contractor may allow to come on the job site, with the exception of Owner or Owner's Designee. Owner, at any time, for any reason or for no reason, may direct Contractor to remove any employee, Subcontractor, material supplier or anyone else from the Project and Contractor promptly shall comply with Owner's direction. In addition, if Contractor receives written notice from Owner complaining about any Subcontractor, employee or anyone who is a hindrance to the proper or timely execution of the Work, Contractor shall remedy such complaint without delay to the Project and at no additional cost to Owner. This provision shall be included in all contracts between Contractor and all Subcontractors of all tiers.

3.4.5 Contractor recognizes and acknowledges that the Project Site is a public facility representing the City of San Antonio. As such, Contractor shall prohibit the possession or use of alcohol, controlled substances, tobacco and any prohibited weapons on the Project Site and shall require appropriate dress of Contractor's forces consistent with the nature of the Work being performed, including the wearing of shirts at all times. Harassment of any kind, including sexual harassment, of employees of Contractor or any Subcontractor, employees or Consultants of Owner or of any visitor to the Project site, by Contractor, employee(s) of Contractor, a Subcontractor or an employee of Subcontractor strictly is forbidden. Any person, Contractor, employee of Contractor, Subcontractor or employee of Subcontractor who is found to have engaged in such conduct shall be subject to appropriate disciplinary action by Contractor and/or City, including the removal and exclusion of the violating person(s) or employee(s) of Contractor or Subcontractor from the Project Site and, if City so elects, termination from the Project.

3.4.6 Contractor only shall employ or use labor in connection with the Work capable of working harmoniously with all trades, crafts and any other individuals associated with the Project.

3.4.7 All materials and installed equipment shall be as specified in the Contract Documents, and if not specified, shall be of good quality and shall be new, except as otherwise provided in the Contract Documents. If required by Owner or Design Consultant, Contractor shall furnish satisfactory evidence (including reports of required tests) as to the source, kind and quality of materials and equipment installed. Contractor may make substitutions only with the consent of Owner, after Contractor's compliance with **Section 3.4.2** herein.

3.4.8 All materials shall be shipped, stored and handled in a manner which shall protect and ensure their condition at the time of incorporation in the Work. After installation, all materials shall be properly protected against damage to ensure they are in the condition as required by **Section 3.5.1** herein when the Work is Substantially Completed or Owner takes over use and occupancy, whichever is earlier.

3.4.9 Contractor shall procure and furnish to Owner all guarantees, warranties, spares and maintenance manuals called for by the Specifications or which normally are provided by a manufacturer. The maintenance manual shall include a catalog for any equipment, materials, supplies or parts used in the inspection, calibration, maintenance or repair of the equipment and items in the catalog shall be readily available for purchase.

3.4.10 During construction of the Work and for four (4) years after final completion or longer if, during the duration of this Contract or during the four (4) years after the final completion of the Work, a dispute between any parties to this Project exists,

Contractor shall retain and shall require all Subcontractors to retain for inspection and audit by Owner all books, accounts, reports, files, time cards, material invoices, payrolls and evidence of all other direct or indirect costs related to the bidding and performance of this Work. Upon request by Owner, a legible copy or the original of any or all such records shall be produced by Contractor at the administrative office of Owner. To the extent that it requests copies of such documents, Owner shall reimburse Contractor and its Subcontractors for copying costs. Contractor shall not be required to keep records of or provide access to the make up of any negotiated and agreed-to lump sums, unit prices or fixed overhead and profit multipliers.

3.5 WARRANTY

3.5.1 Contractor warrants to Owner materials and equipment furnished and installed under the Contract shall be of good quality and new, unless otherwise required or permitted by the Contract Documents, the Work shall be free from defects not inherent in the quality required or permitted and the Work shall conform to the requirements of the Contract Documents. Work not conforming to this warranty and these requirements, including substitutions not properly approved and authorized by Owner, may be considered defective. Contractor's warranty excludes remedy for damage or defect caused by abuse, modifications not executed by the Contractor, improper or insufficient maintenance, improper operation, normal wear and tear and normal usage, and additional damage or defects caused by Owner's failure to promptly notify Contractor. If required by Owner, Contractor shall furnish satisfactory evidence as to the kind and quality of materials and equipment.

3.5.2 A right of action by Owner for any breach of Contractor's express warranty herein shall be in addition to, and not in lieu of, any other remedies Owner may have under this Contract at law or in equity, regarding any defective Work.

3.5.3 The warranty provided in **Section 3.5.1** herein shall be in addition to and not in limitation of any other warranty or remedy required by law or by the Contract Documents. Such warranty shall be interpreted to require Contractor, upon written timely demand by Owner, to replace defective materials and equipment and re-execute any defective Work disclosed to the Contractor by the Owner within a period of one (1) year after Substantial Completion of the applicable Work or, in the event of a latent defect, within one (1) year after discovery thereof by Owner.

3.5.4 All warranties shall be assignable by Owner. Submittal of all warranties and guarantees are required as a prerequisite to the final payment.

3.5.5 Except when a longer warranty time is specifically called for in the Specifications or is otherwise provided by law or by manufacturer, all warranties shall be at minimum for twelve (12) months and shall be in form and content otherwise reasonably satisfactory to Owner. Owner and Contractor acknowledge that the Project may involve construction work on more than one (1) building or section of infrastructure of Owner's. While the entire Project will have a single date for

Substantial Completion of the Work, each building, section of infrastructure or approved phase of each section of infrastructure may have its own separate and independent date of Substantial Completion or Final Completion.

3.5.6 If separate dates for Substantial Completion and Final Completion are granted by Owner as a result of Owner electing partially to occupy areas prior to the Project's date for Substantial Completion, Contractor shall maintain a complete and accurate schedule of the dates of Substantial Completion and, if Owner accepts partial occupancy of those completed areas, the dates upon which the one (1) year warranty on each building, phase or section of infrastructure that achieved Substantial Completion shall expire. If separate dates are granted, Contractor agrees to provide notice of the warranty expiration date(s) to Owner and Design Consultant at least one (1) month prior to the expiration of the one (1) year warranty period on each building, section of infrastructure or each phase of the section of infrastructure which has achieved Substantial Completion.

3.5.7 Prior to termination of any one (1) year warranty period, Contractor shall accompany Owner and Design Consultant on re-inspection of the building, section of infrastructure or phase of the section of infrastructure and be responsible for correcting any reasonable additional deficiencies not caused by the Owner or by the use of the building, section of infrastructure or phase of the section of infrastructure observed and/or reported during the re-inspection.

3.5.8 For extended warranties required by the Contract Documents, Owner shall notify Contractor of deficiencies and Contractor shall start remedying these defects within seven (7) calendar days of initial notification from Owner. Contractor shall prosecute the work without interruption until accepted by Owner and Design Consultant, even though such prosecution may extend beyond the limit of the warranty period. If Contractor fails to provide notice of the expiration of the one (1) year warranty period at least one (1) month prior to the expiration date and conduct the required walk through with Owner, Contractor's warranty obligations described in this **Section 3.5.5** shall continue until such inspection is conducted and any deficiencies found in the inspection is corrected.

3.5.9 Warranties shall become effective on a date established by Owner in accordance with the Contract Documents. This date shall be the date of Substantial Completion of the entire Work, unless otherwise provided in any Certificate of Partial Substantial Completion approved by the parties, except for Work to be completed or corrected after the date of Substantial Completion and prior to final payment and those occurrences addressed in **Section 3.5.4** herein. Warranties for Work to be completed or corrected after the date of Substantial Completion and prior to Final Completion shall become effective on the later of the date the Work

is completed or corrected and accepted by Owner and Design Consultant or the date of final completion of the Work.

3.5.10 Neither final payment nor compliance by Contractor with any provision in the Contract Documents shall constitute an acceptance of Work not done in accordance with the Contract Documents or relieve Contractor or its sureties of liability, with respect to any warranties or responsibility for faulty materials and workmanship. Contractor warrants that the Work shall conform to the requirements of the Contract Documents.

3.5.11 Contractor agrees to assign to Owner, at the time of Final Completion of the Work, any and all manufacturer's warranties relating to materials and labor used in the Work and further agrees to perform the Work in such manner so as to preserve any and all such manufacturer's warranties, provided that such assignment shall contain a reservation of Contractor's right also to enforce the manufacturer's warranties. As a condition precedent to final payment, Contractor shall prepare a notebook with reference tabs and submit three (3) copies of the notebook to Owner that includes a complete set of warranties from Subcontractors, manufacturers or suppliers, as appropriate, and executed by and between Contractor and Owner, as required under this Agreement, with a specified warranty commencement date, as required by the Contract Documents. Copies of the complete set of warranties from Subcontractors, manufacturers and/or suppliers, as appropriate, executed by Contractor as required by the Contract Documents, with and between Owner and Contractor. A specified warranty commencement date, as required by the Contract Documents, also shall be submitted to Owner in an electronic format (PDF) on a Compact Disc (CD).

3.5.12 When Contractor is constructing a building, the building shall be watertight and leak proof at every point and in every area, except where leaks can be attributed to damage to the building by external forces beyond Contractor's control. Contractor, immediately upon notification by the Owner of water penetration, shall determine the source of water penetration and perform any work necessary to make the building watertight. Contractor also shall repair or replace any damaged material, finishes and/or fixtures damaged as a result of any water penetration, returning the building to original condition. The costs of such determination and repair shall be borne by Contractor only to the extent that the leak(s) is/are attributable to faulty workmanship or unauthorized or defective materials.

3.6 TAXES. Contractor shall not include in the Contract Sum or any modification thereto any amount for sales, use or similar taxes for which Owner is exempt. Upon request by Contractor, Owner shall provide Contractor with a tax exemption certificate or other documentation necessary to establish Owner's exemption from such taxes.

3.7 PERMITS, FEES AND NOTICES

3.7.1 **PERMITS.** Unless otherwise provided in the Contract Documents or by Owner, as per **Section 2.2.2** herein, it is the responsibility of and Contractor shall secure all permits, licenses and inspections. Owner and Design Consultant may assist Contractor, when necessary, in obtaining such permits, licenses and inspections necessary for the proper execution and completion of the work. For federally funded construction projects, when applicable, Owner shall prepare and submit the necessary paperwork to satisfy Texas Pollutant Discharge Elimination System (hereafter referred to as "TPDES"), regulations of the Texas Commission on Environmental Quality.

3.7.2 Contractor shall comply with and give all notices required by law, ordinance, rule, regulations and lawful orders of public authorities applicable to performance of the Work.

3.7.3 It is not Contractor's responsibility to ascertain that the Contract Documents are in accordance with applicable laws, statutes, ordinances, building codes and rules and regulations. However, if Contractor observes that portions of the Contract Documents are at variance therewith, Contractor promptly shall notify Owner and Design Consultant in writing of any variances and all necessary changes shall be accomplished by appropriate modification(s) before Contractor performs any Work affected by such modification(s).

3.7.4 If Contractor performs Work knowing Work is contrary to laws, statutes, ordinances, building codes and rules and regulations, without such notice to and approval from Owner and Design Consultant, Contractor shall assume sole responsibility for performing such Work and shall bear all costs attributable to correct such Work.

3.7.5 Contractor also shall assist Owner in obtaining all permits and approvals and, at Owner's request, pay all fees and expenses, if any, associated with TPDES regulations of the Texas Commission on Environmental Quality, as well as local authorities, if applicable, which require completion of documentation and/or acquisition of a "Land Disturbing Activities Permit" for a Project. Contractor's obligations under this paragraph do not require it to perform engineering services during the pre-construction phase to prepare proper drainage for the Project Site. However, any drainage alterations made by Contractor during the construction process, which require the issuance of a permit, shall be at Contractor's sole cost. It shall be Contractor's responsibility to prepare and submit the permit approval documentation provided by the regulatory agencies prior to beginning any Work.

3.8 ALLOWANCES

3.8.1 Contractor shall include in the Contract Sum all allowances stated in the Contract Documents. Items covered by allowances shall be supplied for such amounts and by such persons or entities as Owner may direct, but Contractor shall not be required to employ persons or entities to whom Contractor has reasonable objection.

3.8.2 Unless otherwise provided in the Contract Documents:

3.8.2.1 Allowances shall cover the cost to Contractor of materials and equipment delivered at the site and all required taxes, less applicable trade discounts;

3.8.2.2 Contractor's costs for unloading and handling at the site, labor, installation costs, overhead, profit and other expenses, contemplated for stated allowance, shall be included in the allowances;

3.8.2.3 Whenever actual costs are more than or less than allowances, the Contract Sum shall be adjusted accordingly by Change Order. The amount of the Change Order shall reflect both the difference between actual costs and the allowances under **Section 3.8.2.1** herein and all changes in Contractor's costs under **Section 3.8.2.2** herein.

3.8.3 Materials and equipment under an allowance shall be selected by Owner within such time as is reasonably specified by Contractor as necessary to avoid any delay in the Work.

3.9 SUPERINTENDENT/KEY PERSONNEL

3.9.1 At all times during the progress of the Work, Contractor shall assign a competent resident superintendent who is able to communicate fluently in English, along with any necessary assistant(s) who is/are satisfactory to Owner. Any superintendent designee shall be identified in writing to Owner promptly after Owner issues written Notice to Proceed. The superintendent shall represent Contractor at all time and all directions given to the superintendent shall be binding on Contractor. The designated superintendent shall not be replaced without written notice to and the approval of Owner, which approval shall not be unreasonably withheld, except with good reason (including any termination or disability of the superintendent) or under extraordinary circumstances. The superintendent may not be employed on any other project prior to Final Completion of the Work without the approval of Owner, which approval shall not be unreasonably withheld.

3.9.2 Contractor shall furnish a list to Design Consultant and Owner of all Architects, Engineers, Consultants, Sub-Consultants, job-site superintendents, Subcontractors and suppliers involved in the Project construction. Design Consultant also shall provide said information to Owner.

3.9.2.1 Owner, upon the showing of good and reasonable cause, may reject or require removal of any Architect, Engineer, Consultant, sub-Consultant, job superintendent, employee of the Contractor, Subcontractor or sub-Subcontractor and/or supplier involved in the Project.

3.9.2.2 Contractor shall provide an adequate staff for the proper coordination and expedition of the Work. Owner reserves the right to require Contractor to remove from the Project any employee(s) Owner, at its sole discretion, deems incompetent, careless, insubordinate, unnecessary or in violation of any provision in these Contract Documents. This provision is applicable to Subcontractors, sub-Subcontractors and their employees.

3.9.2.3 Owner reserves the right to utilize one or more of its employees or Consultants to function in the capacity of Owner's Inspector, whose primary function shall be daily inspections, checking pay requests or construction timelines and the verification of the storage of supplies and materials.

3.9.2.4 Contractor shall not change any key personnel or key Subcontractors without the prior written consent of Owner, which consent shall not be unreasonably withheld. In the event key personnel leaves Contractor's employment, such key personnel's replacement shall be subject to Owner's reasonable approval.

3.10 CONTRACTOR'S PROJECT SCHEDULES

3.10.1 **PROJECT SCHEDULE METHOD.** Contractor shall create and maintain a Critical Path Method (hereafter referred to as "CPM") Project Schedule, showing the manner of execution of Work which Contractor intends to follow, in order to complete the Project within the allotted time. The Project Schedule shall employ computerized CPM for the planning, scheduling and reporting of Work, as described in this **Section 3.10**. Contractor shall create and maintain the Project Schedule using project management scheduling software compatible with Owner's project management scheduling software. The observance of the requirements herein is an essential part of the Work to be performed under the Contract.

3.10.2 **SCHEDULING PERSONNEL.** Unless otherwise indicated in writing by Owner, Contractor shall provide an individual, who shall be referred to hereafter as "Scheduler", to create and maintain the Project Schedule. Scheduler shall be proficient in CPM analysis, possess sufficient experience to be able to perform required tasks on the specified software and able to prepare and interpret reports from the software. Scheduler shall be made available for discussion or meetings when requested by Owner.

3.10.3 **PROJECT SCHEDULE SUBMISSION**

3.10.3.1 Unless indicated otherwise, Contractor shall submit Project Schedule(s) for the Work in relation to the entire Project to Owner and Design Consultant at least fifteen (15) calendar days prior to the pre-construction conference.

3.10.3.2 All Project Schedule submittals shall be in the electronic form to include PDF plots of the schedule, a PDF plot defining the Critical Path and two week look-ahead, and include the native compatible scheduling file format. Contractor shall submit the schedule to Owner and Design Consultant via electronic mail, CD-Rom or any other electronic format acceptable to Owner.

3.10.3.3 This initial schedule shall indicate the dates for starting and completing the various aspects/phases required to complete the Work, including mobilization, procurement, installation, testing, inspection and acceptance of all the Work of the Contract, including any contractually mandated milestone dates. The Project Schedule shall not exceed the time limits set forth in the Contract Documents. Contractor shall organize the Project Schedule and provide adequate detail so the Schedule is capable of measuring and forecasting the effect of delaying events on completed and uncompleted activities.

3.10.3.4 The Project Schedule shall show the order in which Contractor proposes to carry out the Work in accordance with the final approved phasing plan, if any, and the anticipated start and completion dates of each phase of the Work. The Project Schedule shall be in the form of a time scaled work progress chart, to indicate the percentage of Work scheduled for completion at various critical milestones.

3.10.3.5 Contractor shall maintain a schedule of Shop Drawings and Sample Submittals and each submitted Shop Drawing and Sample Submittal shall list each required submittal and the expected time(s) for submitting, reviewing and processing such submittal.

3.10.3.6 Owner shall review the Project Schedule within fifteen (15) calendar days for compliance with the specifications and notify Contractor of its acceptability.

3.10.4 **PROJECT SCHEDULE SEQUENCING.** The Project Schedule shall show the sequence and interdependence of activities required for complete performance of the Work. Contractor shall be responsible for assuring all Work sequences are logical and show a coordinated plan of Work in accordance with the sequence of work outlined in the plans. The purpose of Owner requiring the Project Schedule shall be to:

3.10.4.1 Ensure adequate planning during the execution and progress of the Work in accordance with the allowable number of calendar days and all milestones;

3.10.4.2 Assure coordination of the efforts of Contractor, Owner, utilities and others that may be involved in the Project and those activities are included in the Schedule highlighting coordination points with others;

3.10.4.3 Assist Contractor and Owner in monitoring the progress of the Work and evaluating proposed changes to the Contract; and

3.10.4.4 Assist Owner in administering the Contract time requirements.

3.10.5 **PROJECT SCHEDULE ACTIVITIES.** Contractor shall provide Owner a legend for all abbreviations used. The activities shall be coded so that organized plots of the Project Schedule may be produced. Typical activity coding includes traffic control phase, location and work type. Contractor shall show an estimated production rate per working day for each Work activity. Activity durations shall be based on production rates shown. Each activity on the Project Schedule shall include:

3.10.5.1 An activity number utilizing an alphanumeric designation system that is agreeable to Owner;

3.10.5.2 A concise description of the Work represented by the activity; and

3.10.5.3 Activity durations in whole work days, with a maximum of twenty (20) work days. Durations greater than twenty (20) work days may be used for non-construction activities (mobilization, submittal preparation, curing, etc.), and other activities mutually agreeable between Owner and Contractor.

3.10.6 **PROJECT SCHEDULE WORK DURATION AND RESOURCES**

3.10.6.1 The Project Schedule layout shall be grouped by Project and then by Work Breakdown Structure (hereafter referred to as "WBS") for organizational purposes.

3.10.6.2 The original and remaining Work duration shall be displayed. The grouping band shall, by default, report Work days planned. One additional level of effort activity shall be added to the schedule as a "time calculator" with a seven (7) day calendar without holidays reflected. The calculation of days should be reflected in the appropriate duration columns.

3.10.6.3 Work shall be scheduled based upon Contractor's five (5) day work week, utilizing the appropriate calendar assignments and using compatible Project Scheduling software. If Contractor's Project affects

City traffic, Work shall be scheduled upon Contractor's six (6) day work week, utilizing the appropriate calendar assignments and using compatible Project Scheduling software.

3.10.6.4 Assign working calendars for the days Contractor plans to work. Contractor shall designate all twelve (12) Owner holidays as non-working days (holidays). For dates beyond the then-current calendar year, Contractor shall assume Owner holidays are the same as the current calendar year.

3.10.6.5 Seasonal weather conditions shall be considered and included in the Project Schedule for all work influenced by temperature and/or precipitation. Seasonal weather conditions shall be determined by an assessment of average historical climatic conditions. Average historical weather data is available through the National Oceanic and Atmospheric Administration (hereafter referred to as "NOAA"). These effects shall be simulated through the use of work calendars for each major work type (i.e., earthwork, concrete paving, structures, asphalt, drainage, etc.). Project and work calendars should be updated each month to show days actually able to work on the various work activities.

3.10.6.6 Only Owner-responsible delays in activities that affect milestone dates or the Contract completion date, as determined by CPM analysis, shall be considered for a time extension.

3.10.7 **PROJECT SCHEDULE - OTHER REQUIREMENTS.** The Project Schedule shall:

3.10.7.1 have all Work coded and organized by WBS. An example of an acceptable WBS shall be provided, upon written request, by Owner to Contractor;

3.10.7.2 reflect Duration Percent complete as the percent complete type;

3.10.7.3 reflect Fixed Units as the duration type;

3.10.7.4 include submittals with a logical tie to what each drives;

3.10.7.5 add proposed Change Order(s) and those Change Order(s) shall be reflected on the Schedule as proposed Change Order(s). This task shall be linked to the schedule with logical ties and approved by Owner. Upon approval of a Change Order, a task shall be renamed and shall identify Work performed and Change Order number and resources shall be added to the task;

3.10.7.6 only have constraints in accordance with the plans;

3.10.7.7 include activity milestones for material delivery;

3.10.7.8 disallow default progress; and

3.10.7.9 include a detailed explanation in the Project narrative, if Work is performed out of sequence.

3.10.8 **PROJECT SCHEDULE JOINT REVIEW AND ACCEPTANCE**

3.10.8.1 The Project Schedule and successive updates or revisions thereof are for Contractor's use in managing the Work. The Project Schedule is for the information of Owner and to demonstrate that Contractor has complied with requirements for planning the Work. Owner's acceptance of a Schedule and Schedule updates or revisions constitutes Owner's agreement to coordinate its own activities with Contractor's activities, as shown on the schedule.

3.10.8.2 Within fifteen (15) calendar days of receipt of Contractor's proposed Project Schedule, Owner shall evaluate the Schedule for compliance with this specification and notify Contractor of its findings. If Owner requests a revision or justification, Contractor shall provide satisfaction to Owner within seven (7) calendar days. If Contractor submits a Project Schedule for acceptance, based on a sequence of work not shown in the plans, Contractor shall notify Owner in writing of said sequence of work, separate from the Schedule submittal.

3.10.8.3 Owner's review and acceptance of Contractor's Project Schedule only is for conformance to the requirements of the Contract Documents. Review and acceptance by Owner of Contractor's Project Schedule does not relieve Contractor of any of its responsibility for the Project Schedule, Contractor's ability to meet interim milestone dates (if so specified) or meeting the Contract completion date, nor does such review and acceptance expressly or by implication warrant, acknowledge or admit the reasonableness of the logic, durations, manpower or equipment loading of Contractor's Project Schedule. In the event Contractor fails to define any element of Work, activity or logic and Owner's review does not detect this omission or error, such omission or error, whether or when discovered by Contractor or Owner, shall be corrected by Contractor at the next monthly schedule update and shall not affect the Project or Contract completion date.

3.10.8.4 Acceptance of the Project Schedule, or update and/or revision thereto, does not indicate any approval of Contractor's proposed sequences and duration.

3.10.8.5 Acceptance by Owner of the Project Schedule or updated Project Schedule which exceeds contractual time does not alleviate Contractor from meeting the contractual completion date.

3.10.8.6 Acceptance of a Project Schedule update or revision indicating early or late completion does not constitute Owner's consent to any changes, alter the terms of the Contract, waive either Contractor's responsibility for timely completion, or waive Owner's right to damages for Contractor's failure to do so.

3.10.8.7 Contractor's scheduled dates for completion of any activity or of the entire Work do not constitute a change in terms of the Contract. Change Orders are the only method of modifying the completion date(s) and Contract time.

3.10.8.8 Submittal of a schedule, schedule revision or schedule update constitutes Contractor's representation to Owner, as of the date of the submittal, of the accurate depiction of all progress to date and that Contractor shall follow the schedule as submitted in performing the Work.

3.10.9 PROJECT SCHEDULE UPDATES AND REVISIONS

3.10.9.1 The Project Schedule shall be updated monthly, at a minimum, to reflect progress to date and current plans for completing the Work. A paper and an electronic copy of the update shall be submitted to Owner and Design Consultant as directed. Owner has no duty to make progress payments to Contractor unless Contractor's payment application accompanied by the updated Project Schedule. The anticipated date of Substantial Completion shall show all extensions of time granted through Change Order(s) as of the date of the update.

3.10.9.2 The Project Schedule update shall be submitted no later than the date the pay application is submitted.

3.10.9.3 Contractor shall meet with Owner each month, at a scheduled Project Schedule update meeting, to review actual progress made through the data date of the schedule update, as determined by Owner. The review of progress shall include dates of activities actually started and/or completed, the percentage of Work completed, the remaining duration of each activity started and/or completed and the amount of Work still to complete, with an analysis of the relationship between the remaining duration of the activity and the quantity of material to install over that given period of time with a citation of past productivity.

3.10.9.4 The monthly Schedule Update shall include a progress narrative, explaining the Project's progress, identifying all progress made out of sequence, defining the Critical Path, identification of any potential delays, and other relevant data. A Project Schedule Narrative template shall be

required for the narrative. Upon request, Owner shall supply said template to Contractor.

3.10.9.5 Each Schedule shall segregate the Work into a sufficient number of activities to facilitate the efficient use of critical path method scheduling by Contractor, Owner and Design Consultant. The Project Schedule layout shall be grouped first by Project then by WBS. The layout shall include the following columns:

(1) Activity ID

(2) Activity Description

(3) Original Durations

(4) Remaining Durations

(5) Early Start and Early Finish Dates

(6) Late Start and Late Finish Dates
(7) Total Float

(8) Performance Percent Complete

(9) Display logic and target bars in the Gantt bar chart view

3.10.9.6 Each schedule shall include activities representing manufacturing, fabrication or ordering lead time for materials, equipment or other items for which Design Consultant is required to review submittals, shop drawings, product data or samples.

3.10.9.7 Each schedule, other than the initial schedule, shall:

(1) indicate the activities, or portions thereof, which have been completed;

(2) reflect the actual time for completion of such activities; and

(3) reflect any changes to the sequence or planned duration of all activities.

3.10.9.8 If any updated schedule exceeds the time limits set forth in the Contract Documents for Substantial Completion of the Work, Contractor shall include, along with its updated schedule, a statement of the reasons for the anticipated delay in achieving Substantial Completion of the Work and Contractor's planned course of action for completing the Work within the time limits set forth in the Contract Documents. If Contractor asserts that the failure of Owner or Design

Consultant to provide requested and required information to Contractor as the reason for anticipated delay in completion, Contractor also shall specify what information has been requested and is required from Owner or Design Consultant.

3.10.9.9 Neither Owner nor Contractor shall have exclusive ownership of float time in the schedule and all float time shall inure to the benefit of the Project.

3.10.9.10 Submission of any schedule under this Contract constitutes a representation by Contractor, as of the date of the submittal,:

(1) the schedule represents the sequence in which Contractor intends to prosecute the remaining Work;

(2) the schedule represents the actual sequence and duration used to prosecute the completed Work;

(3) to the best of its knowledge and belief, Contractor is able to complete the remaining Work in the sequence and time indicated; and

(4) Contractor intends to complete the remaining work in the sequence and time indicated.

3.10.9.11 If Contractor desires to make major changes in the Project Schedule, Contractor shall notify Owner in writing and submit the proposed schedule revision. The written notification shall include the reason for the proposed revision, what the revision is composed of and how the revision was incorporated into the schedule. Major changes are hereby defined as those that may affect compliance with the contract requirements or those that change the critical path. All other changes may be accomplished through the monthly updating process without written notification.

3.10.10 **COMPLETION OF WORK**

3.10.10.1 Contractor is accountable for substantially completing the Work in the Contract Time or as otherwise amended by Change Order.

3.10.10.2 If, in the sole judgment of Owner, the Schedule update reflects Work is behind schedule and the rate of performance of Work is inadequate to regain scheduled progress to insure Contractor achieving any Project Milestones (including, but not limited to, Substantial Completion) in accordance with the Project Schedule, Owner may, at its sole option, give written notice to Contractor and direct Contractor, at Contractor's

sole expense, to propose and adopt a plan to accelerate the Work so that the Work conforms to the Project Schedule and Project Milestones previously agreed upon. Contractor may, but is not limited to, propose:

(1) increasing Project work forces;

(2) increasing Project equipment or tools;

(3) increasing the hours of work or number of shifts per day;

(4) expediting the delivery of Project materials;

(5) changing, with the approval of Owner, the schedule logic and Work sequences; or

(6) taking some other action as Contractor may proposes, if acceptable to Owner.

3.10.10.3 Within ten (10) calendar days after such notice from Owner, Contractor shall notify Owner in writing of the specific measures taken and/or planned to be taken to increase the rate of progress of Work on the Project. Contractor shall include an estimate as to the date of scheduled full progress recovery and an updated Project Schedule, illustrating Contractor's plan for achieving timely completion of the Project Milestone's and the Project's Substantial Completion.

3.10.10.4 Should Owner deem Contractor's plan of action inadequate to achieve the desired acceleration to bring the Work back on the Project Schedule and achieve Substantial Completion on time, Owner shall have the right to order Contractor, at Contractor's sole expense, to take any corrective measures Owner deems necessary to expedite the progress of Work including, without limitations:

(1) increasing work forces and hours, to include Contractor working additional shifts of overtime;

(2) supplying additional manpower, equipment and facilities;

(3) re-sequencing the Work;

(4) expediting the fabrication and supply of materials; and/or

(5) other similar measures Owner may direct (hereafter **(1) – (5)** herein above collectively referred to as "Extraordinary Measures").

Such Extraordinary Measures Owner directs shall continue until the progress of the Work complies with the Milestone required by the Contract Documents.

3.10.10.5 Owner's right to require Extraordinary Measures solely is for the purpose of ensuring Project Milestones and Substantial Completion of the Work is achieved within the Contract Time. Contractor shall not be entitled to an adjustment in the Contract Sum in connection with Extraordinary Measures required by Owner under or pursuant to this **Section 3.10**, except as may be provided under the provisions of **Section 4.3.11** herein.

3.10.10.6 Owner may exercise the rights furnished pursuant to this **Section 3.10.5** as frequently as Owner deems necessary to ensure Contractor's performance of the Work is in compliance with any milestone date or completion date(s) set forth in the Contract Documents.

3.10.10.7 If reasonably required by Owner, Contractor also shall prepare and furnish Project cash flow projections, manning data for critical activities and schedules for the purchase and delivery of all critical equipment and material, together with periodic updating thereof.

3.10.10.8 Contractor shall recommend to Owner and Design Consultant a schedule for procurement of long-lead time items, which shall constitute part of the Work as required to meet the Project Schedule.

3.10.11 **PROJECT SCHEDULE TIME IMPACT ANALYSIS**

3.10.10.1 Contractor shall notify Owner when an impact may justify an extension of Contract time or adjustment of milestone dates. Said notice shall be made by Contractor in writing as soon as possible, but no later than the end of the next estimate period after the commencement of an impact or the notice for a change is given to Contractor. Not providing notice to Owner within twenty (20) calendar days after receipt shall indicate Contractor's approval of the time charges as shown on that time statement. Future consideration of that statement shall not be permitted and Contractor forfeits its right to subsequently request a time extension or time suspension unless the circumstances are such that Contractor could not reasonably have knowledge of the impact by the end of the next estimate period.

3.10.11.1 When changes are initiated or impacts are experienced, Contractor shall submit to Owner a written Time Impact Analysis describing the influence of each change or impact. A "Time Impact Analysis" is an evaluation of the effects of changes in the construction sequence, contract, plans or site conditions on Contractor's plan for constructing the Project, as represented by the schedule. The purpose of the Time

Impact Analysis is to determine if the overall Project has been delayed and, if necessary, to provide Contractor and Owner a basis for making adjustments to the Contract.

3.10.11.2 A Time Impact Analysis shall consist of one or all of the steps listed below:

(1) Establish the status of the Project before the impact using the most recent Project Schedule Update prior to the impact occurrence.

(2) Predict the effect of the impact on the most recent Project Schedule Update prior to the impact occurrence. This requires estimating the duration of the impact and inserting the impact into the schedule update. Any other changes made to the schedule including modifications to the calendars or constraints shall be noted.

(3) Track the effects of the impact on the schedule during its occurrence. Note any changes in sequencing and mitigation efforts.

(4) Compare the status of the work prior to the impact **(#1 above)** to the prediction of the effect of the impact **(#2 above)**, and to the status of the work during and after the effects of the impact are over **(#3 above)**. Note that if an impact causes a lack of access to a portion of the Project, the effects of the impact may extend to include a reasonable period for remobilization.

3.10.11.3 The Time Impact Analysis shall be electronically submitted to Owner. If the Project Schedule is revised after the submittal of a Time Impact Analysis but prior to its approval, Contractor promptly shall indicate in writing to Owner the need for any modification to its Time Impact Analysis. One (1) copy of each Time Impact Analysis shall be submitted within fourteen (14) calendar days after the completion of an impact. Owner may require **Step 1** and **Step 2** in **Section 3.10.11.2** herein of the Time Impact Analysis be submitted at the commencement of the impact, if needed to make a decision regarding the suspension of Contract time. Approval or rejection of each Time Impact Analysis by Owner shall be made within fourteen (14) calendar days after receipt, unless subsequent meetings and negotiations are necessary.

3.11 DOCUMENTS AND SAMPLES AT THE SITE

3.11.1 Contractor shall maintain, on Site and for Owner's use, one record copy of the Drawings, Specifications, Addenda, Change Orders and other Amendments, in good order and currently marked, to record field changes and selections made during construction, along with one record copy of approved Shop Drawings, Product Data, Samples and similar required submittals. These record copies also shall be available to Design Consultant and shall be delivered to Design Consultant for submittal to Owner upon completion of the Work.

3.11.2 Contractor shall at all times maintain job records including, but not limited to, invoices, payment records, payroll records, daily reports, logs, diaries and job meeting minutes applicable to the Project. Contractor shall make such reports and records available for inspection by Owner, Design Consultant and/or their respective agents, during normal business hours if requested by Owner.

3.12 SHOP DRAWINGS, PRODUCT DATA AND SAMPLES

3.12.1 Shop Drawings are drawings, diagrams, illustrations, schedules, performance charts, brochures and other data prepared and furnished by Contractor or its agents, manufacturers, suppliers or distributors and which illustrate and detail some portion of the Work.

3.12.2 Product Data are illustrations, standard schedules, performance charts, instructions, brochures, diagrams and other information furnished by Contractor to illustrate materials or equipment for some portion of the Work.

3.12.3 Samples are physical samples of materials, equipment or workmanship that are representative of some portion of the Work, furnished by the Contractor to Owner to assist Owner and Design Consultant in the establishment of workmanship and quality standards by which the Work shall be judged.

3.12.4 Shop Drawings, Product Data, Samples and similar submittals are not Contract Documents. The purpose of their submittals is to demonstrate, for those portions of the Work for which submittals are required by the Contract Documents, the way by which Contractor proposes to conform to the information given and the design concept expressed in the Contract Documents. Review by Design Consultant is subject to the limitations of **Section 4.2.8** herein. Informational submittals, upon which Design Consultant is not expected to take responsive action, may be so identified in the Contract Documents. Submittals which are not required by the Contract Documents may be returned by the Design Consultant without action.

3.12.5 Contractor shall review for compliance with the Contract Documents, approve and submit to Design Consultant Shop Drawings, Product Data, Samples and similar submittals required by the Contract Documents with reasonable promptness and in such sequence as to cause no delay in the Work or in the activities of Owner or of separate contractors. Submittals which are not marked as reviewed for compliance with the Contract Documents and approved by Contractor may be returned by Design Consultant without action.

3.12.6 By approving and submitting Shop Drawings, Product Data, Samples and similar submittals, Contractor represents that it has determined and verified materials, field measurements and filed construction criteria related thereto, or shall do so, and has checked and coordinated the information contained within such submittals with the requirements of the Work and of the Contract Documents.

3.12.7 Contractor shall perform no portion of the Work for which the Contract Documents require submittal and review of Shop Drawings, Product Data, Samples or similar submittals until the respective submittal and review has been approved by Design Consultant. Design Consultant shall review and return such submittals within ten (10) calendar days or within a reasonable period so as to not delay the project.

3.12.8 The Work shall be in accordance with approved submittals, except that Contractor shall not be relieved of responsibility for deviations from requirements of the Contract Documents by Design Consultant's approval of Shop Drawings, Product Data, Samples or similar submittals unless Contractor specifically has informed Design Consultant in writing of such deviation at the time of submittal and:

(1) Design Consultant has given written approval in the specific deviation as a minor change in the Work; or

(2) a Change Order or Field Work Directive has been issued authorizing the deviation. Contractor shall not be relieved of responsibility for errors or omissions in Shop Drawings, Product Data, Samples or similar submittals by Design Consultant's approval thereof.

3.12.9 Contractor shall direct specific attention, in writing or on resubmitted Shop Drawings, Product Data, Samples or similar submittals, to revisions other than those requested by Design Consultant on previous submittals. In the absence of such written notice, Design Consultant's approval of a resubmission shall not apply to such revisions.

3.12.10 Contractor shall not be required to provide professional services which constitute the practice of architecture or engineering unless such services specifically are required by the Contract Documents for a portion of the Work or unless Contractor needs to provide such services in order to carry out Contractor's responsibilities for construction means, methods, techniques, sequences and procedures. Contractor shall not be required to provide professional services in violation of applicable law. If professional design services or certifications by a design professional related to systems, materials or equipment specifically are required of Contractor by the Contract Documents, Owner and Design Consultant shall specify all performance and design criteria that such services must satisfy. Contractor shall cause such services or certifications to be provided by a properly Texas-licensed design professional, whose signature and seal shall appear on all drawings, calculations, specifications, certifications, Shop Drawings and other submittals prepared by such professional. Shop Drawings and other submittals related to the Work designed or certified by such professional, if prepared by others, shall bear such professional's written approval when submitted to Design Consultant. Owner and Design Consultant shall be entitled to rely upon the adequacy, accuracy and completeness of the services, certifications or approvals performed by such design professionals, provided Owner and Design Consultant

have specified to Contractor all performance and design criteria that such services must satisfy. Pursuant to this **Section 3.12.10**, Design Consultant shall review, approve or take other appropriate action on submittals only for the limited purpose of checking of conformance with information given and the design concept expressed in the Contract Documents. Contractor shall not be responsible for the adequacy of the performance or design criteria required by the Contract Documents.

3.13 USE OF SITE

3.13.1 Contractor shall confine construction equipment, the storage of materials and equipment and the operations of workers to areas permitted by law, ordinances, permits or the requirements of the Contract Documents and shall not unreasonably encumber the premises with construction equipment or other materials or equipment.

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

3.13.3 Contractor shall abide by all applicable rules and regulations of Owner with respect to conduct, including smoking, parking of vehicles, security regulations and entry into adjacent facilities owned by Owner.

3.13.4 Contractor shall provide access to residents and businesses affected by the construction of this Project to the greatest extent possible, including providing temporary base and asphalt as needed.

3.13.5 Contractor shall erect and maintain on Site a Project Bulletin Board, accessible to all Contractor and Subcontractor employees, upon which Contractor shall post and maintain, throughout the Project's duration, all employment and safety information required by law and Contractor shall include information listing Contractor's bonding and insurance agencies/providers, to include agency contact names, address and telephone numbers.

3.13.6 As applicable, Owner shall have appropriate Temporary Bench Marks (hereafter referred to as "TBM") and a baseline (for both horizontal and vertical projects, as applicable) established. As of the date of the Notice To Proceed, it shall be Contractor's responsibility to protect, preserve and reestablish (if required) the TBM and/or baseline. Construction staking and tolerances shall be in accordance with the "Manual of Practice for Land Surveying in the State of Texas Category 5".

3.13.7 As applicable, Contractor shall layout its work from an established baseline and TBM indicated on the drawings and shall be responsible for all measurements in connection with the layout. Contractor shall furnish, at its own expense, all stakes, templates, platforms, equipment, tools, materials and labor required to layout any part of the work. Contractor shall provide cut sheets to Owner's

inspector at minimum seven (7) calendar days prior to construction of street and drainage work. Contractor shall establish the necessary offsets, hubs and guards marked showing control designation and offsets for SAWS Work, if present. Contractor shall provide cut sheets for improvements where Sewer profiles are provided for various phases of the project and cut sheets for Water profiles, if applicable. Contractor shall provide staking and preparation of cut sheets after receiving notice to proceed from Owner. If present, Contractor shall provide SAWS with cut sheets at minimum (7) calendar days prior to commence of SAWS work. Contractor shall be responsible for maintaining and preserving a baseline and TBM indicated on the drawings for duration of construction. If such marks are destroyed, Contractor shall replace them at its own expense. At the end of construction of the Project, Contractor shall provide Owner a grade certificate prepared by a Registered Professional Land Surveyor. This certificate shall state that the infrastructure is constructed in accordance to the construction documents or as approved by Owner and the Engineer of Record, which is noted on the record plan set.

3.14 CUTTING AND PATCHING

3.14.1 Contractor shall be responsible for all cutting, fitting or patching required to complete the Work or to make its parts fit together properly.

3.14.2 Contractor shall not damage or endanger a portion of the Work or a fully or partially completed construction by either Owner or separate contractors by cutting, patching or otherwise altering such construction, or by excavation. Contractor shall not cut or otherwise alter such construction by Owner or a separate contractor except with written consent of Owner and, if Owner so designates, of such separate contractor and said consent shall not be unreasonably withheld. Contractor unreasonably shall not withhold from Owner or a Owner's separate contractor Contractor's consent to cutting or otherwise altering the Work.

3.14.3 Any part of the Work damaged by Contractor, either during installation or prior to Substantial Completion of the Work (or such earlier date established in **Section 9.9** herein), shall be repaired by Contractor so as to be equal in quality, appearance, serviceability and other respects to an undamaged item or part of the Work. Where this repair cannot fully be accomplished, a damaged item or part shall be replaced by Contactor.

3.15 CLEANING UP

3.15.1 During the progress of the Work, Contractor shall keep the Project Site and surrounding area including, but not limited to, creeks, drainage channels, easements and private property free from accumulations of waste materials, rubbish and other debris resulting from the Work. As applicable, Contractor shall clean, sweep, mop, brush and polish, as appropriate, the interior of the improvements and/or renovated areas including, but not limited to, any floors, carpeting, ducts, fixtures and ventilation units operated during construction, and shall clean exterior gutters, drainage, walkways, driveways and roofs of debris. If

Contractor fails to clean up as provided in the Contract Documents, Owner may elect to do so and all costs incurred by Owner shall be paid by Contractor.

3.15.2 Prior to Substantial 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, and shall leave the Project Site clean and ready for occupancy by Owner. As applicable, Contractor shall clean, sweep, mop, brush and polish, to Owner's satisfaction, the interior of the improvements and/or renovated areas including, but not limited to, any floors, carpeting, ducts, fixtures and ventilation units operated during construction, and shall clean exterior gutters, drainage, walkways, driveways and roofs of debris. Contractor shall restore to their original condition those portions of the Site not designated for alteration by the Contract Documents. If Contractor fails to clean up the premises as provided in the Contract Documents, Owner may elect to do so and all costs incurred by Owner shall be paid by Contractor.

3.16 ACCESS TO WORK. Contractor shall provide Owner and Design Consultant access to Work in preparation and in progress, wherever located.

3.17 PATENT FEES AND ROYALTIES. Contractor shall pay all license fees and royalties and assume all costs incident to the use of the performance of the Work or the incorporation in the Work of any invention, design, process, product or device which is the subject of patent rights or copyrights held by others. If a particular invention, design, process, product or device is specified in the Contract Documents for use in the performance of the Work and if to the actual knowledge of Owner its use is subject to patent rights or copyrights calling for the payment of any license fee or royalty to others, the existence of such rights shall be disclosed by Owner in the Contract Documents.

3.18 INDEMNITY PROVISIONS

3.18.1 Contractor covenants and agrees to **HOLD HARMLESS AND UNCONDITIONALLY INDEMNIFY, PROTECT AND DEFEND** Owner, its elected officials, employees, officers, directors, volunteers and representatives of Owner, individually or collectively, from and against any and all third party claims, demands, actions, liabilities, liens, losses, damages, costs and expenses, of every kind and character whatsoever, including without limitation by enumeration the amount of any judgment, penalty, interest, court costs and reasonable legal fees incurred in connection with the same, or the defense thereof, for or in connection with loss of life or personal injury (including employees of Contractor and of Owner) damage to property (other than the Work itself and including property of Contractor and of Owner), but only to the extent caused by the negligent acts or omissions of, or incident to or in connection with or resulting from the negligent acts or omissions of, Contractor, its agents, servants, employees or its Subcontractors and their agents, servants and employees, in connection with the Work to be performed, services to be rendered or materials to be furnished under this Contract, including but not limited to violations of any statute, regulation, ordinance or provision of this Contract. Notwithstanding anything to the contrary included herein, in no event shall Contractor be liable for

claims arising out of accidents resulting from the sole negligence of Owner, all without however, waiving any governmental immunity available to Owner under Texas Law and without waiving any defenses of the parties under Texas Law. In the event Contractor and Owner are found jointly liable by a court of competent jurisdiction, liability shall be apportioned comparatively, in accordance with the laws of the State of Texas without, however, waiving any governmental immunity available to Owner under Texas law and without waiving any defenses of the parties under Texas law.

3.18.2 In addition to the above, Contractor also covenants and agrees to **HOLD HARMLESS AND UNCONDITIONALLY INDEMNIFY, PROTECT AND DEFEND** Owner, its elected officials, employees, officers, directors, volunteers and representatives of Owner, individually or collectively, from and against any and all third party claims, demands, actions, liabilities, liens, losses, damages, costs and expenses of every kind and character whatsoever, including, without limitation by enumeration, the amount of any judgment, penalty, interest, court costs and reasonable legal fees incurred in connection with the same, or the defense thereof, for or in connection with loss of life or personal injury (including employees of Contractor and of Owner) damage to property (other than the Work itself and including property of Contractor and of Owner), but only to the extent caused by the intentional or deliberate misconduct, grossly negligent, willful acts or omissions of Contractor, its agents, servants, employees, or its Subcontractors and their agents, servants and employees, or in connection with the Work to be performed, services to be rendered or materials to be furnished under this Contract, including but not limited to violations of any statute, regulation, ordinance or provision of this Contract. Notwithstanding anything to the contrary included herein, in no event shall Contractor be liable for claims arising out of accidents resulting from the sole negligence of Owner, all without however, waiving any governmental immunity available to Owner under Texas Law and without waiving any defenses of the parties under Texas Law. In the event Contractor and Owner are found jointly liable by a court of competent jurisdiction, liability shall be apportioned comparatively, in accordance with the laws of the State of Texas without, however, waiving any governmental immunity available to Owner under Texas law and without waiving any defenses of the parties under Texas law.

3.18.3 **INTELLECTUAL PROPERTY INDEMNIFICATION.** Contractor shall protect, indemnify, and defend and/or handle at its own cost and expense any claim or action against Owner, its elected officials, employees, officers, directors, volunteers and representatives of Owner, individually or collectively, for infringement of any United States Patent, copyright or similar property right including, but not limited to, misappropriation of trade secrets and any infringement by Contractor and its employee or its Subcontractors and their

agents, servants and employees, based on any deliverable or any other materials furnished hereunder by Contractor and used by either Owner or Contractor within the scope of this Agreement (unless said infringement results directly from Contractor's compliance with City's written standards or specifications). Contractor does not warrant against infringement by reason of Owner's or Design Consultant's design of articles or their use in combination with other materials or in the operation of any process. Contractor shall have the sole right to conduct the defense of any such claim or action and all negotiations for its settlement or compromise, unless otherwise mutually agreed upon, expressed in writing and signed by the parties hereto. Contractor agrees to consult with Owner's City Attorney during such defense or negotiations and make good faith efforts to avoid any position adverse to the interest of Owner. Owner shall make available to Contractor any deliverables and/or works made for hire by Contractor necessary to the defense of Contractor against any claim of infringement for the duration of Contractor's legal defense.

3.18.4 If such infringement claim or action has occurred or, in Contractor's judgment, is likely to occur, Owner shall allow Contractor, at Contractor's option and expense, (unless such infringement results directly from Contractor's compliance with Owners written standards or specifications or by reason of Owner's or Design Consultants' design of articles or their use in combination with other materials or in the operation of any process for which the City shall be liable) to elect to:

(1) procure for Owner the right to continue using said deliverable and/or materials;

(2) modify such deliverable and/or materials to become non-infringing (provided that such modification does not adversely affect Owner's intended use of the deliverable and/or materials as contemplated hereunder);

(3) replace said deliverable and/or materials with an equally suitable, compatible and functionally equivalent non-infringing deliverable and/or materials at no additional charge to Owner; or

(4) if none of the foregoing alternatives is reasonably available to Contractor, upon written request, Owner shall return the deliverable and/or materials in question to Contractor and Contractor shall refund all monies paid by Owner, with respect to such deliverable and/or materials, and accept return of same. If any such cure provided for in this **Section 3.18** shall fail to satisfy the third-party claimant, these actions shall not relieve Contractor from its defense and indemnity obligations set forth in this **Section 3.18**.

3.18.5 The indemnification obligations under this **Section 3.18** shall not be limited in any way by the limits of any insurance coverage or any limitation on the amount

or type of damages, compensation or benefits payable by, for or to Contractor or any Subcontractor, supplier or any other individual or entity under any insurance policy, workers' compensation acts, disability benefit acts or other employee benefits acts.

3.18.6 **WORKER SAFETY.** The Indemnification hereunder shall include, without limiting the generality of the foregoing, liability which could arise to Owner, its agents, Consultants and/or representatives or Design Consultant pursuant to State statutes for the safety of workers and, in addition, all Federal statutes and rules existing there under for protection, occupational safety and health to workers. It is agreed that the primary obligation of Contractor is to comply with these statutes in the performance by Contractor of the Work and that the obligations of Owner, its agents, Consultants and representatives under said statutes are secondary to that of Contractor.

3.18.7 **OTHER PROVISIONS REGARDING INDEMNITY**

3.18.7.1 The provisions of this Indemnification solely are for the benefit of the Parties hereto and are not intended to create or grant any rights, contractual or otherwise, to any other person or entity.

3.18.7.2 The indemnities contained herein shall survive the termination of this Contract for any reason whatsoever.

3.18.7.3 Contractor shall, within twenty-one (21) calendar days, advise Owner in writing of any potential or actual claim or demand against Owner or Contractor, as the case may be, known to Contractor and related to or arising out of Contractor's activities under this Contract and Contractor shall see to the investigation and defense of such claim or demand at Contractor's sole cost. Owner shall have the right, at its option and at its own expense, to participate in such defense without relieving Contractor of any of its obligations under this **Section 3.18**.

3.18.8 **DEFENSE COUNSEL.** Owner shall have the right to approve defense counsel, of which approval shall not be unreasonably withheld, to be retained by Contractor in fulfilling its obligation hereunder to defend and indemnify Owner, unless such right is expressly waived by Owner in writing. Contractor shall retain Owner-approved defense counsel within ten (10) calendar days of Owner's written notice that Owner is invoking its right to Indemnification under this Contract. If Contractor fails to retain counsel within such time period, Owner shall have the right to retain defense counsel on its own behalf and Contractor shall be liable for all costs incurred by Owner. Owner also shall have the right, at its option, to be

represented by advisory counsel of its own selection and at its own expense, without waiving the foregoing.

3.19 REPRESENTATIONS AND WARRANTIES. Contractor represents and warrants the following to Owner (in addition to the other representations and warranties contained in the Contract Documents), as an inducement to Owner to execute this Contract, which representations and warranties shall survive the execution and delivery of the Contract and the Final Completion of the Work, that Contractor:

3.19.1 is financially solvent, able to pay its debts as they mature and possessed of sufficient working capital to complete the Work and perform its obligations under the Contract Documents;

3.19.2 is able to furnish the plant, tools, materials, supplies, equipment and labor required to complete the Work and perform its obligations hereunder and has sufficient experience and competence to do so;

3.19.3 is authorized to do business in the State of Texas and properly is licensed by all necessary governmental, public and quasi-public authorities having jurisdiction over it, the Work and the site of the Project;

3.19.4 is acting within its duly authorized powers to execute this Contract and execute the performance and obligations thereof; and

3.19.5 had directed its duly authorized representative(s) to visit the Site of the Work, familiarize itself with the local conditions under which the Work is to be performed and correlated its observations with the requirements of the Contract Documents.

3.20 **BUSINESS STANDARDS.** Contractor, in performing it's obligations under this Contract, shall establish and maintain appropriate business standards, procedures and controls, including those necessary to avoid any real or apparent impropriety or adverse impact on the interest of Owner or affiliates. Contractor shall review with Owner, at a reasonable frequency during the performance of the Work hereunder, such business standards and procedures including, without limitation, those related to the activities of Contractor's employees, Subcontractors and agents in their relations with Owner's employees, Consultants, agents, representatives, vendors, Subcontractors, other third parties and those relating to the placement and administration of purchase orders and subcontracts.

ARTICLE IV. ADMINISTRATION OF THE CONTRACT

4.1 DESIGN CONSULTANT. A Design Consultant is a person registered as an Architect pursuant to Tex. Occupations Code Ann., Chapter 1051, as a Landscape Architect pursuant to Texas Occupations Code, Chapter 1052, and/or a person licensed as a professional Engineer pursuant to Texas Occupations Code, Chapter 1001, or a firm employed by Owner to provide professional architectural or engineering services and exercising overall responsibility for the design of a Project or a significant portion thereof, and performing

certain contract administration responsibilities as set forth in its Contract and these General Conditions. If the employment of a Design Consultant is terminated, Owner shall employ a new Design Consultant whose status under the Contract Documents shall be that of the former Design Consultant.

4.2 ROLES IN ADMINISTRATION OF THE CONTRACT

4.2.1 Owner and Design Consultant shall provide administration of the Contract, as described in the Contract Documents, and Design Consultant shall be Owner's representative:

(1) during construction;

(2) until final payment is due; and

(3) with Owner's concurrence, from time to time during the one-year period for correction of Work described in **Article XII** herein.

Design Consultant only shall have authority to act on behalf of Owner to the extent provided in the Contract Documents, unless otherwise modified in writing by Owner in accordance with other provisions of the Contract Documents.

4.2.2 Owner's instruction to Contractor may be issued through Design Consultant and Owner reserves the right to issue instructions directly to Contractor or through other designated Owner representatives. Contractor understands that Owner may modify the authority of such Design Consultant as provided in the terms of its contractual relationship with Design Consultant, and Owner shall, in such event, be vested with powers formerly exercised by such Design Consultant, provided written notice of such modification immediately shall be served on Contractor. Nothing herein shall authorize independent agreements between Contractor and Design Consultant, nor shall Design Consultant be deemed to have a legal relationship with Contractor.

4.2.3 Neither Design Consultant nor Owner shall have control over, charge of nor be responsible for the construction means, methods or techniques, or for the safety precautions, quality control program and other programs in connection with the Work, since these solely are Contractor's rights and responsibilities under the Contract Documents. Sequencing and procedures shall be coordinated and agreed upon by Owner, Design Consultant and Contractor and shall remain the responsibility of Contractor for implementation.

4.2.4 Design Consultant shall not be responsible for Contractor's failure to perform the Work in accordance with the requirements of the Contract Documents. Design Consultant shall not have control over, charge of and shall not be responsible for

acts or omissions of Contractor, Subcontractor, their respective agents, employees or any other persons or entities performing portions of the Work.

4.2.5 Owner and Contractor shall endeavor to communicate with each other directly, through Design Consultant and/or through the ODR about matters arising out of or relating to the Contract. Communications by and with Design Consultant's Consultants shall be through Design Consultant. Communications by Owner and Design Consultant with Contractor's employees Subcontractors and material suppliers shall be through Contractor. All communications by and with Owner's separate contractors shall be through Owner.

4.2.6 Design Consultant shall review and approve or take other appropriate action upon Contractor's submittals such as Shop Drawings, Product Data and Samples, but only for the limited purpose of checking for conformance with information given and the design concept expressed in the Contract Documents. Design Consultant shall perform these reviews in a timely fashion so as to not delay the Work. Design Consultant promptly shall respond to submittals such as Shop Drawings, Product Data and Samples pursuant to the procedures set forth in the Project Specifications. Review of such submittals is not conducted for the purpose of determining the accuracy and completeness of equipment or systems, all of which remain the responsibility of Contractor as required by the Contract Documents. Design Consultant's review of Contractor's submittals shall not relieve the Contractor of the obligations under **Sections 3.3, 3.5** and **3.12** herein. Design Consultant's review shall not constitute approval of safety precautions or, unless otherwise specifically stated by Design Consultant, any construction means, methods, techniques, sequences or procedures. Design Consultant's approval of a specific item shall not indicate approval of an assembly of which the item is a component.

4.2.7 Upon written request of Owner or Contractor, Design Consultant shall issue its interpretation of the requirements of the plans and specifications. Design Consultant's response to such requests shall be made in writing within a time limit agreed upon or otherwise with reasonable promptness. If no agreement is made concerning the time within which interpretations required of Design Consultant shall be furnished in compliance with this **Section 4.2**, then no delay shall be recognized on account of any failure by Design Consultant to furnish such interpretations except for actual substantiated delays, for which Contractor is not responsible, occurring more than fifteen (15) calendar days after written request is made for the interpretations.

4.2.8 Interpretations and decisions of Design Consultant shall be consistent with the intent of and reasonably inferable from the Contract Documents and shall be in writing or in the form of drawings.

4.2.9 Design Consultant's decisions on matters relating to aesthetic effect shall be final if consistent with the intent expressed in the Contract Documents and not expressly overruled in writing by Owner.

4.3 CLAIMS AND DISPUTES

4.3.1 **DEFINITION.** A Claim is a demand or assertion by one of the parties seeking, as a matter of right, an adjustment or interpretation of Contract terms, payment of money, extension of time or other relief, with respect to the terms of the Contract. The term "Claim" also includes other disputes and matters in question between Owner and Contractor arising out of or relating to the Contract. Claims must be initiated by written notice. Except as contemplated by **Section 8.2** herein, every Claim of Contractor, whether for additional compensation, additional time or other relief including, but not limited to, claims arising from concealed conditions, shall be signed and sworn to by an authorized corporate officer (if not a corporation, then an official of the company authorized to bind Contractor by his/her signature) of Contractor, verifying the truth and accuracy of the Claim. The responsibility to substantiate a Claim shall rest with the party making the Claim.

4.3.2 **TIME LIMIT ON CLAIMS.** Except for those Claims resulting from unusually severe weather, as addressed in **Section 4.3.6** herein, Contractor Claims must be initiated within fifteen (15) calendar days after occurrence of the event giving rise to such Claim. Claims by Contractor must be submitted by written notice to both Owner and Design Consultant. Claims by Owner must be submitted by written notice to Contractor. Failure by Contractor to submit written notice of the claim within fifteen (15) calendar days shall constitute a waiver of such claim.

4.3.3 **CONTINUING CONTRACT PERFORMANCE.** Pending final resolution of a Claim, except as otherwise agreed in writing or as provided in **Sections 4.5.1, Section 9.7.1** and **Article 14** herein, Contractor shall proceed diligently with performance of the Contract and Owner shall continue to make payments in accordance with the Contract Documents.

4.3.4 **CLAIMS FOR CONCEALED OR UNKNOWN CONDITIONS.** If conditions are encountered at the Site which either are subsurface or are otherwise concealed physical conditions which were not known to Contractor and which differ materially from those indicated in the Contract Documents or in the reports of investigations and tests of subsurface and latent physical conditions provided by Owner to Contractor prior to the preparation by Contractor of its Bid, as referred to above, or are unknown physical conditions of an unusual nature, which differ materially from those ordinarily found to exist and generally recognized as inherent in construction activities of the character provided for in the Contract Documents in the general vicinity of the Project site, then Contractor promptly shall notify Owner and Design Consultant of such conditions before conditions are disturbed, and in no event more than three (3) workdays after first observation

of the conditions. Upon notification by Contractor, Design Consultant promptly shall investigate such conditions and report its findings to Owner. If Owner and Contractor cannot agree on an adjustment to the Contract Sum or Contract Time, the adjustment shall be subject to dispute resolution pursuant to **Section 4.5** herein.

4.3.5 **CLAIMS FOR ADDITIONAL COST.** If Contractor wishes to make a Claim for an increase in the Contract Sum, written notice as provided in this **Section 4.3** shall be given and accepted by Owner before proceeding to execute the Work, provided that prior notice is not required for Claims relating to an emergency endangering life or property. Contractor shall file a Claim in accordance with this **Section 4.3** if Contractor believes additional cost is involved for reasons including, but not limited to:

(1) a written interpretation from Design Consultant;

(2) an order by Owner to stop the Work where Contractor was not at fault;

(3) a written order for a minor change in the Work issued by Design Consultant;

(4) failure of payment by Owner;

(5) termination of the Contract by Owner for convenience;

(6) Owner's suspension; or

(7) other reasonable grounds.

4.3.6 **CLAIMS FOR ADDITIONAL TIME**

4.3.6.1 If Contractor wishes to make Claim for an increase in the Contract Time, written notice, as required in this **Section 4.3**, shall be given. Contractor's Claim shall include an estimate of probable impact of delay on progress of the Work in accordance with **Section 3.10.11** herein. In the case of a continuing delay, only one Claim is necessary.

4.3.6.2 Contractor shall be entitled to an extension of the Contract Time for delays or disruptions due to unusually severe weather in excess of that normally experienced at the job site, as determined from climatological data set forth by National Weather Service and which affects the Project's critical path. Contractor shall bear the entire economic risk of all weather delays and disruptions. Contractor shall not be entitled to any increase in the Contract Sum by reason of such delays or disruptions. With regard to Vertical projects with Owner, requests for an extension of time, pursuant to this **Section 4.3.6**, shall be submitted to Owner and Design Consultant not later than the fifteenth (15th) calendar day of the month following the month during which the delays or disruptions occurred and shall include

documentation and all details reasonably available, demonstrating the nature and duration of the delays or disruptions and their effect on the critical path of the Schedule. With regard to Horizontal projects with Owner, upon Contractor reaching Substantial Completion, Owner and Contractor shall look back at the entire duration of the calendar day Project and review the totality of what Contractor claims were unusually severe weather disruptions. If the Project was delayed or disrupted due to unusually severe weather in excess of that normally experienced over the entire duration of the Project, Contractor may make a Claim for an extension of the Contract Time for delays or disruptions due to unusually severe weather in excess of that normally experienced at the job site, as determined from climatological data set forth by National Weather Service and which affects the Project's critical path. Any time extension granted to Contractor for either Vertical or Horizontal projects under **Section 4.3.6** shall be non-compensatory.

4.3.7 **INJURY OR DAMAGE TO PERSON OR PROPERTY.** If either party to the Contract suffers injury or damage to person or property because of an act or omission of the other party or an act or omission of others for whose acts such other party legally is responsible (including, with respect to Owner, the acts or omissions of Owner's separate contractors), written notice of such injury or damage, whether or not insured, shall be given to the other party within a reasonable time not exceeding three (3) calendar days after the discovery of the injury or damage. The written notice shall provide sufficient detail to enable the other party to investigate the injury or damage.

4.3.8 **CHANGE IN UNIT PRICES.** As applicable, if unit prices are stated in the Contract Documents or subsequently agreed upon by Owner and Contractor and if quantities originally contemplated are materially changed in a proposed Change Order or Field Work Directive so that application of such unit prices to quantities of Work proposed shall cause substantial inequity to Owner or Contractor, the applicable unit prices shall be equitably adjusted.

4.3.9 **CLAIMS FOR CONSEQUENTIAL DAMAGES.** Except as otherwise provided in this Contract, in calculating the amount of any Claim or any measure of damages for breach of contract (such provision to survive any termination following such breach), the following standards shall apply both to Claims by Contractor and to Claims by Owner:

4.3.9.1 No consequential, indirect, incidental, punitive or exemplary damages shall be allowed, whether or not foreseeable, regardless of whether based on breach of contract, tort (including negligence), indemnity, strict liability or other bases of liability.

4.3.9.2 No recovery shall be based on a comparison of planned expenditures to total actual expenditures, on estimated losses of labor efficiency, on a comparison of planned manloading to actual manloading or on any other similar analysis that is used to show total cost or other damages.

4.3.9.3 Damages are limited to extra costs specifically shown to directly have been caused by a proven wrong for which the other party is claimed to be responsible.

4.3.9.4 The maximum amount of any recovery for delay, to the extent damages for delay are not otherwise disallowed by the terms of the Contract Documents, shall be as is provided in **Article VIII** herein.

4.3.9.5 No damages shall be allowed for home office overhead or other home office charges or any Eichleay formula calculation, except or unless as expressly authorized by the Contract Documents.

4.3.9.6 No profit shall be allowed on any damage Claim, except or unless as expressly authorized by the Contract Documents.

4.3.10 **SUBCONTRACTOR PASS-THROUGH CLAIMS.** In the event that any Subcontractor of Contractor asserts a Claim to Contractor that Contractor seeks to pass through to Owner under the Contract Documents, any entitlement to submit and assert the Claim as to Owner shall be subject to:

4.3.10.1 the requirements of **Section 4.3** herein of these General Conditions; and

4.3.10.2 the following additional three (3) requirements listed below, all three of said additional requirements shall be conditions precedent to the entitlement of Contractor to seek and assert such Claim against Owner:

(1) Contractor shall:

(a) have direct legal liability as a matter of contract, common law, or statutory law to Subcontractor for the claim that Subcontractor is asserting; or

(b) have entered into a written liquidating agreement with Subcontractor, prior to the Claim's occurrence, under which Contractor has agreed to be legally responsible to the Subcontractor for pursing the assertion of such Claim against Owner under said Contract and for paying to Subcontractor any amount that may be recovered, less Contractor's included markup (subject to the limits in the Contract Documents for any markup). The relationship, liability or responsibilities shall be identified in writing by Contractor to Owner at the time such Claim is submitted to Owner and a copy of any liquidating agreement shall be included by Contractor in the Claim submittal materials.

(2) Contractor shall have reviewed the Claim of the Subcontractor prior to its submittal to Owner and independently shall have evaluated such Claim in good faith to determine the extent to which the Claim is believed in good faith to be valid. Contractor shall inform Owner that Contractor has made a review, evaluation, and determination that the Claim is made in good faith and is believed to be valid.

(3) Subcontractor making the Claim to Contractor shall certify to both Contractor and Owner that it has compiled, reviewed and evaluated the merits of such Claim and that the Claim is believed in good faith by Subcontractor to be valid. A copy of the certification by Subcontractor shall be included by Contractor in the Claim submittal materials.

4.3.10.3 Any failure of Contractor to comply with any of the foregoing requirements and conditions precedent with regard to any such Claim shall constitute a waiver of any entitlement to submit or pursue such Claim.

4.3.10.4 Receipt and review of a Claim by Owner under this **Section 4.3** shall not be construed as a waiver of any defenses to the Claim available to Owner under the Contract Documents or at law.

4.3.11 **OWNER'S RIGHT TO ORDER ACCELERATION AND TO DENY CLAIMED AND APPROPRIATE TIME EXTENSIONS, IN WHOLE OR IN PART.** Contractor acknowledges and agrees that Substantial Completion of the Work by or before the Scheduled Completion Date is of substantial importance to Owner. The following provisions, therefore, shall apply:

4.3.11.1 If Contractor falls behind the approved construction schedule for whatever reason, Owner shall have the right, in Owner's sole discretion, to order Contractor to develop a schedule recovery plan to alter its work sequences or to otherwise accelerate its progress in such a manner as to achieve Substantial Completion on or before the Contract Time completion date or such other date as Owner reasonably may direct. Upon receipt, Contractor shall take any and all action necessary to comply with Owner's order. In such event, any possible right, if any, of Contractor to additional compensation for any acceleration shall be subject to the terms of this **Section 4.3.11**.

4.3.11.2 In the event Owner agrees that Contractor is entitled to an extension of Contract Time and Contractor properly has initiated a Claim for a time

extension in accordance with **Section 4.3(a)** herein, Owner shall have the right, in Owner's sole discretion, to deny any portion of Contractor's Claim for an extension of Contract Time and order Contractor to exercise its commercially reasonable efforts to achieve Substantial Completion on or before the date that would have been required, but for the existence of the event giving rise to the Claim, by giving written notice to Contractor provided within fourteen (14) calendar days after receipt of Contractor's Claim. If Owner denies Contractor's claim for an extension of Contract Time under this **Section 4.3.11**, either in whole or in part, Contractor shall proceed to prosecute the Work in such a manner as to achieve Substantial Completion on or before the then-existing Scheduled Completion Date. If, after initiating good faith acceleration efforts and is it shown that, through no fault of Contractor, Contractor fell behind on the approved construction schedule and Contractor still is unable to achieve Substantial Completion within the originally scheduled Contract Time, Owner shall not be entitled to liquidated damages. Nothing in this **Section 4.3.11.2** shall prohibit Contractor from filing a Claim for an extension of time Contractor feels it may be owed.

4.3.11.3 If Owner orders Contractor to accelerate the Work under **Section 4.3.11.2** herein, and Contractor would have been entitled to a time extension for a reason specifically allowed under the Contract Documents for an amount of time that would have justified approval by Owner if not for the need and right to complete the Project within the stipulated period, Contractor may initiate a Claim for schedule recovery or acceleration costs, pursuant to **Section 4.3.1** herein. Any resulting Claim for these costs properly initiated by Contractor under **Section 4.3.1** herein shall be limited to those reasonable and documented direct costs of labor, materials, equipment and supervision solely and directly attributable to the actual recovery or acceleration activity necessary for Contractor to bring the Work back within the then existing approved construction schedule. These direct costs of Contractor include, but are not limited to, the premium portion of overtime pay for additional crew, shift, or equipment costs, if requested in advance by Contractor and approved in writing by Owner. A percentage markup for the prorated cost of premium on the existing performance and payment bonds and required insurance, profit and field overhead, not to exceed the markups permitted by this Contract, shall be allowed on the claimed costs. **NO OTHER MARKUP FOR PROFIT, OVERHEAD (INCLUDING, BUT NOT LIMITED TO, HOME OFFICE OVERHEAD) OR ANY OTHER COSTS SHALL BE ALLOWED ON ANY ACCELERATION CLAIM**. Owner shall not be liable for any costs related to an acceleration claim other than those described in this **Section 4.3.11**.

4.3.12 **NO WAIVER OF GOVERNMENTAL IMMUNITY.** Nothing in this contract shall be construed to waive Owner's Governmental Immunity from a lawsuit, which Immunity is expressly retained to the extent it is not clearly and unambiguously waived by State law.

4.4 RESOLUTION OF CLAIMS AND DISPUTES

4.4.1 Claims by Contractor against Owner and Claims by Owner against Contractor, including those alleging an error or omission by Design Consultant but excluding those arising under **Section 10.3** and **Section 10.5** herein, shall be referred initially to Design Consultant for consideration and recommendation to Owner.

4.4.2 An initial recommendation by Design Consultant shall be required as a condition precedent to mediation or litigation of all Claims by the parties arising prior to the date final payment is due, unless thirty (30) calendar days have passed after the Claim has been referred to Design Consultant with no recommendation having been rendered by Design Consultant.

4.4.3 Design Consultant shall review Claims and, within ten (10) work days of receipt of a Claim, take one or more of the following actions:

(1) request additional supporting data from the party making the Claim;

(2) issue an initial recommendation;

(3) suggest a compromise; or

(4) advise the parties that Design Consultant is unable to issue an initial Recommendation, due to a lack of sufficient information or conflict of interest.

4.4.4 Following receipt of Design Consultant's initial recommendation regarding a Claim, Owner and Contractor shall attempt to reach agreement as to any adjustment to the Contract Sum and/or Contract Time. If no agreement is reached, either party may request mediation of the dispute, pursuant to **Section 4.5** herein.

4.4.5 If Design Consultant requests either or any party to provide a response to a Claim or to furnish additional supporting data, such requested party shall provide a response or the requested supporting data to Design Consultant, advise Design Consultant when the response or supporting data shall be furnished or advise Design Consultant that no response of supporting data shall be furnished.

4.4.6 With receipt of all information requested by Design Consultant, Design Consultant shall review the Claim and all received information within ten (10) calendar days of receipt of the information and shall take one of the following actions:

(1) issue a recommendation;

(2) suggest a compromise; or

(3) advise the parties Design Consultant is unable to issue a recommendation due to lack information or conflict of interest.

4.4.7 Upon Design Consultant's action or inaction, the two parties may agree to accept recommendations made by either party or may request mediation of the dispute pursuant to **Section 4.5** herein.

4.4.8 **WAIVER OF LIEN.** It is understood that, by virtue of this Contract, no mechanic, contractor, material man, artisan or laborer, whether skilled or unskilled, ever shall, in any manner, have a claim or acquire any lien upon the building or any of the improvements of whatever nature or kind so erected or to be erected by virtue of this Contract, nor upon any of the land upon which said building or any of the improvements are so erected, built or situated.

4.5 ALTERNATIVE DISPUTE RESOLUTION

4.5.1 **CONTINUATION OF WORK PENDING DISPUTE RESOLUTION.** Each party is required to continue to perform its obligations under this Contract pending the final resolution of any dispute arising out of or relating to this Contract, unless it would be impossible or impracticable under the circumstances then present.

4.5.2 **REQUIREMENT FOR SENIOR LEVEL NEGOTIATIONS.** Before invoking mediation or any other alternative dispute process set forth herein, the parties to this Contract agree that they first shall try to resolve any dispute arising out of or related to this Contract through discussions directly between those senior management representatives within their respective organizations who have overall managerial responsibility for similar projects. Both Owner and Contractor agree that this step shall be a condition precedent to use of any other alternative dispute resolution process. If the parties' senior management representatives cannot resolve the dispute within thirty (30) calendar days after a party delivers a written notice of such dispute to the other, then the parties shall proceed with the alternative dispute resolution process contained in **Section 4.5** herein, including mediation and/or litigation. All negotiations pursuant to this **Section 4.5** are confidential and shall be treated as compromise and settlement negotiations for purposes of applicable rules of evidence.

4.5.3 **MEDIATION.** In the event that Owner and/or Contractor contend that the other has committed a material breach of this Contract, or the two parties cannot reach a resolution of a claim or dispute pursuant to **Section 4.4** herein, as a condition preceding to filing a lawsuit, either party shall request mediation of the dispute with the following requirements:

4.5.3.1 Request for mediation shall be in writing, and shall request that the mediation commence not less than thirty (30) or more than ninety (90) calendar days following the date of the request, except upon agreement of both parties.

4.5.3.2 In the event Owner and Contractor are unable to agree to a date for the mediation or to the identity of the mediator(s) within thirty (30) calendar days following the date of the request for mediation, all conditions precedent in this **Section 4.5** shall be deemed to have occurred.

4.5.3.3 The parties shall share the mediator's fee and any mediation filing fees equally. Venue for any mediation or lawsuit arising under this Contract shall be in Bexar County, Texas. Any agreement reached in mediation shall be enforceable as a settlement agreement in any court having jurisdiction thereof. No provision of this Contract shall waive any immunity or defense. No provision of this Contract is consent to a suit.

4.6 INTERNET-BASED PROJECT MANAGEMENT SYSTEMS. At its option, Owner may administer its design and construction management through an Internet-based Project Management system (also referred to as "PRIME*Link*"). In such cases, Contractor shall conduct communication through this medium and perform all Project-related functions utilizing this management system, to include all correspondences, submittals, Requests for Information, vouchers, payment requests and processing, Amendments, Change Orders and other administrative activities. When such a management system is employed, Owner shall administer the software, provide training to Project Team Members and shall make the software accessible via the Internet to all Project Team Members.

ARTICLE V. SUBCONTRACTORS

5.1 DEFINITION

A Subcontractor is defined and used herein as a person or entity that has a direct contract with the Contractor to perform a portion of the Work at the site. The term "Subcontractor" is referred to throughout the Contract Documents as if singular in number and means a Subcontractor, Sub-Consultant or an authorized representative of Subcontractor or Sub-Consultant. The term "Subcontractor" does not include a separate contractor or Subcontractor of a separate contractor.

5.2 AWARD OF SUBCONTRACTS AND OTHER CONTRACTS FOR PORTIONS OF THE WORK

5.2.1 Contractor shall, prior to entering into an agreement with such Subcontractor, notify Owner in writing of the names of all proposed first-tier Subcontractors for the Work.

5.2.2 Contractor shall not employ any Subcontractor or other person or organization (including those who are to furnish the principal items of materials or equipment), whether initially or as a substitute, against whom Owner may have reasonable objection. A Subcontractor or other person or organization identified in writing to Owner, prior to the Notice of Award and not objected to in writing by Owner prior to the Notice of Award, shall be deemed acceptable to Owner. Acceptance of any Subcontractor, other person or organization by Owner shall not constitute a waiver of any right of Owner to reject defective Work. If Owner, after due investigation, has reasonable objection to any Subcontractor, other person or organization proposed by Contractor after the Notice of Award, Contractor shall be required to submit an acceptable substitute. Contractor shall not be required to employ any Subcontractor, other person or organization against whom Contractor has reasonable objection.

5.2.3 Contractor fully shall be responsible to Owner for all acts and omissions of its Subcontractors, persons and organizations directly or indirectly employed by them and persons and organizations for whose acts any of them may be liable to the same extent that Contractor is responsible for the acts and omissions of persons directly employed by Contractor. Nothing in the Contract Documents shall create any contractual relationship between Owner and any Subcontractor or other person or organization having a direct contract with Contractor, nor shall it create any obligation on the part of Owner to pay or to see to the payment of any moneys due any Subcontractor or other person or organization, except as may otherwise be required by law. Owner may furnish to any Subcontractor or other person or organization, to the extent practicable, evidence of amounts paid to Contractor on account of specific Work done.

5.2.4 The divisions and sections of the Specifications, as well as the identifications of any Drawings, shall not control Contractor in dividing the Work among Subcontractors or delineating the Work to be performed by any specific trade.

5.2.5 All Work performed for Contractor by a Subcontractor shall be performed pursuant to an appropriate agreement between Contractor and Subcontractor which specifically binds Subcontractor to the applicable terms and conditions of the Contract Documents for the benefit of Owner.

5.2.6 **SBEDA/DBE REPORTING AND AUDITING.** During the term of the contract, Contractor must report the actual payments to all SBEDA or DBE (as applicable) Subcontractors and Suppliers in the time intervals and format prescribed by Owner. Owner reserves the right, at any time during the term of this Contract, to request additional information, documentation or verification of payments made to such Subcontractors and suppliers in connection with this Contract. Verification of amounts being reported may take the form of requesting copies of canceled checks paid to SBEDA or DBE Subcontractors and suppliers and/or confirmation

inquiries directly to the SBEDA or DBE participants. Proof of payments, such as copies of canceled checks, properly must identify the Project name or Project number to substantiate a SBEDA or DBE payment for the Project.

5.2.7 **SMALL BUSINESS SUBCONTRACTOR SUBSTITUTIONS.** Reference SBEDA or DBE Requirements in Supplementary Conditions for Substitution of Subcontractors. Failure to follow such procedures is an event of default under this Contract and may be grounds for termination.

5.3 SUB-CONTRACTUAL RELATIONS

5.3.1 By appropriate agreement, written where legally required for validity, Contractor shall require each Subcontractor, to the extent of the Work to be performed by Subcontractor, to be bound to the Contractor by terms of the Contract Documents and to assume toward Contractor all the obligations and responsibilities, including the responsibility for safety of Subcontractor's Work and workers, which Contractor, by these Documents, assumes toward Owner and Design Consultant. Each Subcontractor agreement shall preserve and protect the rights of Owner and Design Consultant under the Contract Documents, with respect to the Work to be performed by Subcontractor, so that subcontracting thereof shall not prejudice such rights. Where appropriate, Contractor shall require each Subcontractor to enter into similar agreements with Sub-Subcontractors. Contractor shall make available to each proposed Subcontractor, prior to the execution of all Subcontractor agreement(s), copies of the Contract Documents to which Subcontractor(s) shall be bound. Subcontractors similarly shall make copies of applicable portions of such documents available to their respective proposed Sub-Subcontractors.

5.4 CONTINGENT ASSIGNMENT OF SUBCONTRACTS

Each Subcontractor agreement for a portion of the Work assigned by Contractor to Owner shall provided:

5.4.1 an assignment is effective only after termination of the Contract by Owner and only for those Subcontractor agreements which Owner accepts by notifying Subcontractor and Contractor in writing; and

5.4.2 an assignment is subject to the prior rights of the Surety, if any, obligated under bond relating to the Contract.

5.4.3 upon any such assignment, if the Work has been suspended for more than thirty (30) calendar days, Subcontractor's compensation equally shall be adjusted for increase in cost resulting from the suspension.

ARTICLE VI. CONSTRUCTION BY OWNER OR BY SEPARATE CONTRACTS

6.1 OWNER'S RIGHT TO PERFORM CONSTRUCTION AND TO AWARD SEPARATE CONTRACTS

6.1.1 Owner reserves the right to perform construction or operations related to the Project with Owner's own forces and to award separate contracts in connection with other portions of the Project or other construction or operations on the Site under General Conditions of the Contract identical or substantially similar to these. If Contractor claims that a delay or additional cost is involved, due to such action by Owner, Contractor shall make a Claim as provided in **Section 4.3** herein.

6.1.2 When separate contracts are awarded for different portions of the Project or for other construction or operations on the Project Site, the term "Contractor" in the Contract Documents in each case shall mean the Contractor that executes each separate Owner-Contractor Agreement.

6.1.3 Owner shall provide for coordination of the activities of Owner's own forces and of each separate contractor with the Work of Contractor and Contractor fully shall cooperate with said coordination. Contractor shall participate with other separate contractors and Owner in reviewing all construction schedules when directed by Owner to do so. Contractor shall make any revisions to its construction schedule deemed necessary after said joint review and mutual agreement. The revised construction schedules then shall constitute the schedules to be used by Contractor, separate contractors and Owner until subsequently revised.

6.1.4 Unless otherwise provided in the Contract Documents, when Owner and Owner's own forces perform construction or operation related to the Project, Owner shall be subject to the same obligations and to have the same rights that apply to Contractor under these General Conditions and the Contract Documents.

6.2 MUTUAL RESPONSIBILITY

6.2.1 Contractor shall afford Owner and Owner's separate contractor(s) reasonable opportunity for the introduction and storage of materials and equipment, the performance of their activities and the coordination of Contractor's construction and operations with theirs, as required by the Contract Documents.

6.2.2 If part of Contractor's Work depends upon the construction or operations by Owner or a separate contractor for the proper execution or results, Contractor shall, prior to proceeding with that portion of the Work, promptly report to Owner apparent discrepancies or defects in such other construction that would render it unsuitable for such proper execution and results. Failure of Contractor to so report shall constitute an acknowledgment that Owner's separate contractor's completed or partially completed construction is fit and proper to receive Contractor's Work, except as to defects not then reasonably discoverable.

6.2.3 Owner shall be reimbursed by Contractor for costs incurred by Owner which are payable to a separate contractor because of delays, improperly timed activities or defective construction of Contractor. Owner shall be responsible to Contractor for costs incurred by Contractor because of delays, improperly timed activities and damage to the Work or defective construction of Owner's separate contractor(s).

6.2.4 Contractor promptly shall remedy any damage wrongfully caused by Contractor or its Subcontractor(s) to any completed or partially completed construction or to property of Owner or Owner's separate contractor(s), as provided in **Section 10.2.5** herein.

6.2.5 Owner and each separate contractor shall have the same responsibilities for cutting and patching as are described for Contractor in **Section 3.14** herein.

6.3 OWNER'S RIGHT TO CLEAN UP. If a dispute arises among or between Contractor, Owner's separate contractor(s) and Owner, as to the responsibility under their respective contracts for maintaining the premises and surrounding area free from waste materials and rubbish, Owner may clean up and those costs shall be allocated amongst those parties responsible.

ARTICLE VII. CHANGES IN THE WORK

7.1 GENERAL

7.1.1 Changes in the Work may be accomplished, after the execution of the Contract and without invalidating the Contract, by Change Order, Field Work Directive/Force Account or order for a minor change in the Work that does not affect the Contract Time or the Contract Sum, subject to the limitations stated in this **Article VII** and elsewhere in the Contract Documents.

7.1.2 A Change Order shall be based upon agreement among the Owner and Contractor; a Field Work Directive requires a directive by Owner and, if necessary, Design Consultant and may or may not be agreed to by Contractor; and an order for a minor change in the Work that does not affect the Contract Time or the Contract Sum may be issued by Owner.

7.1.3 Changes in the Work shall be performed under applicable provisions of the Contract Documents and Contractor promptly shall proceed with the changed Work, unless otherwise provided in a Change Order, Field Work Directive or order for a minor change in the Work or in this **Article VII**.

7.1.4 Changes resulting from Change Orders, Field Work Directives or orders for minor changes shall be recorded by Contractor on the As-Built record documents.

7.2 CHANGE ORDERS

7.2.1 A Change Order is a written modification of the Contract signed by both Owner and Contractor (and approved by City Council, if required) that authorizes an addition, deletion or revision in the Work or an adjustment in the Contract Sum or the Contract Times and is issued on or after the Effective Date of the Agreement.

7.2.2 Methods used in determining adjustments to the Contract Sum may include those listed in **Section 7.3.4** herein.

7.2.3 Acceptance of a Change Order by Contractor shall constitute a full accord and satisfaction for any and all claims and costs of any kind, whether direct or indirect, including, but not limited to impact, delay or acceleration damages arising from the subject matter of the Change Order. Each Change Order shall be specific and final as to prices and any extensions of time, with no reservations or other provisions allowing for future additional money or time as a result of the particular changes identified and fully compensated in the Change Order**.** The execution of a Change Order by Contractor shall constitute conclusive evidence of Contractor's agreement to the ordered changes in the Work, cost and additional time, if any. This Contract, as amended, forever releases any Claim against Owner for additional time or compensation for matters relating to or arising out of or resulting from the Work included within or affected by the executed Change Order. This release of any Claim applies to Claims related to the cumulative impact of all Change Orders and to any Claim related to the effect of a change on unchanged Work.

7.2.4 Owner or Design Consultant shall prepare Change Orders and Field Work Directives and shall have authority to order minor changes in the Work not involving an adjustment in the Contract Sum or an extension of the Contract Time. Such changes shall be effected by written order, which Contractor promptly shall carry out and record on the As-Built record documents.

7.2.5 Contractor and Subcontractors shall be entitled to include overhead and profit in any Change Order only as provided by Project Specifications.

7.3 FIELD WORK DIRECTIVES

7.3.1 A Field Work Directive is a written directive signed by Owner and, if necessary, Design Consultant directing a change in the Work prior to agreement on an adjustment, if any, in the Contract Sum or Contract time, or both. Owner may, by Field Work Directive and without invalidating the Contract, order changes in the Work within the general scope of the Contract consisting of additions, deletions or other revisions, with any changes to the Contract Sum and/or the Contract Time to be adjusted according to the terms of this **Section 7.3**.

7.3.2 A Field Work Directive shall be used in the absence of total agreement on the terms of a Change Order. Owner shall issue a Field Work Directive to Contractor with a defined Not-To-Exceed dollar amount for the scope of Work defined.

7.3.3 Upon receipt of a Field Work Directive, Contractor promptly shall proceed with the change in the Work involved and, in writing, advise Owner of the Contractor's agreement or disagreement with the method, if any, provided in the Field Work Directive for determining the proposed adjustment in the Contract Sum or Contract Time.

7.3.4 If the Field Work Directive provides for an adjustment to the Contract Sum, the adjustment shall be based on one of the following methods, as applicable:

7.3.4.1 mutual acceptance of a lump sum properly itemized and supported by sufficient substantiating data to permit evaluation;

7.3.4.2 prices, including unit prices, stated in the Contract Documents or subsequently agreed upon;

7.3.4.3 cost to be determined in a manner agreed upon by Owner and Contractor and a mutually acceptable fixed or percentage fee; or

7.3.4.4 as provided in **Section 7.3.6** herein.

7.3.5 If Contractor does not respond promptly or disagrees with the method for adjustment in the Contract Sum, the method and the adjustment shall initially be determined by Design Consultant on the basis of reasonable costs and savings attributable to the change including, in case of an increase in the Contract Sum, as applicable, a reasonable allowance for overhead and profit. In such case, and also under **Section 7.3.4.**3 herein, Contractor shall keep and present, in such form as Owner may prescribe, an itemized and detailed accounting together with appropriate supporting data. Unless otherwise provided in the Contract Documents, costs for the purposes of this **Section 7.3.5** shall be limited to the following:

7.3.5.1 costs of all labor, including social security, old age and unemployment insurance, fringe benefits required by Law, agreement or custom, and workers' compensation insurance;

7.3.5.2 costs of all materials, supplies and equipment, including cost of transportation, storage installation, maintenance, dismantling and removal, whether incorporated or consumed;

7.3.5.3 rental costs of all machinery and equipment, exclusive of hand tools, whether rented from Contractor or others, including costs of transportation, installation, minor repairs and replacements, dismantling and removal;

7.3.5.4 expenses incurred in accordance with Contractor's standard personnel policy for travel approved in writing by Owner in advance;

7.3.5.5 costs of premiums for all bonds and insurance, permit fees and allowable sales, use or similar taxes related to the Work;

7.3.5.6 all additional costs of supervision and field office personnel directly attributable to the change; and

7.3.5.7 all payments made by the Contractor to Subcontractors.

7.3.6 The amount of credit to be allowed by Contractor to Owner for a deletion or change which results in a net decrease in the Contract Sum shall be actual net cost of the deleted or change Work, plus Contractor's allocated percent for profit and overhead, as confirmed by Design Consultant, subject to any equitable adjustment recommended by Design Consultant and approved by Owner. When both additions and credits covering related Work or substitutions are involved in a change, the allowance for overhead and profit shall be figured on the basis of net increase or decrease, if any, with respect to that change.

7.3.7 If Owner and Contractor agree with the determination made by Design Consultant concerning the adjustments in the Contract Sum and Contract Time, or otherwise reach agreement upon the adjustments, such agreement shall be effective immediately and shall be recorded by preparation and execution of an appropriate Change Order.

7.3.8 If Owner and Contractor cannot reach an agreement on either an adjustment on the Contract Sum and Contract Time, pursuant to an issued Field Work Directive, Owner and Contractor shall execute a Change Order for the adjustment on the Contract Sum or Contract Time, if any, the parties do agree upon for the Work performed and Contractor reserves the right to file a Claim for any disagreements in Contract Sum or Contract Time not addressed in the Change Order, pursuant to **Section 4.4** herein. If Owner and Contractor can not agree on both the adjustment in the Contract Sum and the Contract Time associated with an issued Field Work Directive, Owner unilaterally shall file a Change Order listing Owner's adjustments in the Contract Sum and/or Contract Time and Contractor reserves the right to file a Claim for payment and/or time, pursuant to **Section 4.4** herein.

7.4 MINOR CHANGES TO THE WORK. Owner or Design Consultant both shall have authority to order minor changes in the Work not involving adjustment in the Contract Sum or extension of the Contract Time and not inconsistent with the intent of the Contract Documents. Such changes shall be effected by written order and shall be binding on Owner and Contractor. Contractor promptly shall carry out such written orders and record such changes in the As-Built drawings.

7.5 TIME REQUIRED TO PROCESS CHANGE ORDERS

7.5.1 All responses by Contractor to proposal requests from Owner or Design Consultant shall be accompanied by a complete itemized breakdown of costs. Responses to proposal requests shall be submitted sufficiently in advance of the required work to allow Owner and Design Consultant a minimum of thirty (30) calendar days after receipt by Owner to review the itemized breakdown and to prepare or distribute additional documents as may be necessary. Each of Contractor's responses to proposal requests shall include a statement that the cost and additional time described and requested in Contractor's response represents the complete, total and final cost and additional Contract Time associated with the extra work, change, addition to, omission, deviation, substitution or other grounds for seeking extra compensation or additional time under the Contract Documents, without reservation or further recourse.

7.5.2 All Change Orders require written approval by either Owner or City Council or, where authorized by the state law and Owner ordinance, by Owner's City Manager or designee, pursuant to Administrative Action. The approval process requires a minimum of forty-five (45) calendar days after submission to Owner in final form with all supporting data. Receipt of a submission by Owner does not constitute acceptance or approval of a proposal, nor does it constitute a warranty that the proposal shall be authorized by Owner or City Council Resolution or Administrative Action. **THE TIME REQUIRED FOR THE APPROVAL PROCESS SHALL NOT BE CONSIDERED A DELAY AND NO EXTENSIONS TO THE CONTRACT TIME OR INCREASE IN THE CONTRACT SUM SHALL BE CONSIDERED OR GRANTED AS A RESULT OF THIS PROCESS.** Pending the approval of a Change Order as described above, Contractor shall proceed with the work under a pending Change Order only if directed in writing to do so by Owner.

ARTICLE VIII. TIME

8.1 PROGRESS AND COMPLETION

8.1.1 **TIME LIMITS STATED IN THE CONTRACT DOCUMENTS ARE OF THE ESSENCE OF THE CONTRACT**. By executing the Contract, Contractor confirms that the Contract Time is a reasonable period for performing the Work.

8.1.2 Contractor shall proceed with the Work expeditiously using adequate forces and shall achieve Substantial Completion within the Contract Time.

8.1.3 For Projects not affecting City traffic and a Working Day is measured from sunrise to sundown Monday through Friday, nothing in this **Article VIII** shall be construed as prohibiting Contractor from working on Saturdays if it so desires and

giving Owner at least the prerequisite forty-eight (48) hours written notice of intent to perform Work on Saturday, Sunday and holidays so that Owner's representative may be scheduled to observe/inspect said Work and only if Contractor has performed work on the Project during the same week of the requested Saturday, Sunday or holiday.

8.1.4 On Projects affecting City traffic, Contractor shall work sunrise to sundown Monday through Saturday.

8.2 DELAYS AND EXTENSIONS OF TIME

8.2.1 Neither Owner nor Contractor, except as provided for in this **Section 8.2**, shall be liable to the other for any delay to Contractor's Work by reason of fire, act of God, riot, strike or any other cause beyond Owner's control. Should any of these listed factors delay the Work's critical path, as evidenced by a Time Impact Analysis developed by Contractor and verified by Design Consultant, Program Manager and Owner, Contractor shall receive an extension of the Contract Times equal to the delay if a written claim is made within five (5) calendar days of the delaying event and granted by Owner. Under no circumstances shall Owner be liable to pay Contractor any compensation for such delays. Note that any request for an extension of time due to delays or disruption caused by unusually severe weather are addressed in **Section 4.3.6.2** herein.

8.2.2 Should Contractor be delayed solely by the act, negligence or default of Owner or Design Consultant, and should any of these factors delay the Project's critical path, as evidenced by a Time Impact Analysis developed by Contractor and verified by Design Consultant, Program Manager and Owner, Contractor shall receive an extension of the Contract Time equal to the verified delay or portion thereof if a written claim is made within five (5) calendar days of the act, negligence or default of Owner or Design Consultant and granted by Owner. In addition, Contractor, upon timely notice to Owner, with substantiation by Owner and Design Consultant and upon approval of Owner, shall be compensated for its Project facilities and field management expenses on a per diem basis (said per diem includes the costs incurred by Contractor to administer its Work and does not include costs associated for any tier of Subcontractor or supplier to administer their Work. Compensation for Subcontractor's and supplier's compensable delay affecting the Project critical path shall be separate and apart from the per diem cost due and payable to the Contractor) for the particular Project delayed and for the period of the critical path delay attributable to the Owner-caused event. In no event shall Contractor be entitled to home office or other off-site expenses or damages.

8.2.3 Claims relating to time shall be made in accordance with applicable provisions of **Section 4.3** herein.

8.2.4 This Contract does not permit the recovery of damages by Contractor for delay, disruption or acceleration, other than those described in **Section 8.2.2** herein, as provided under Section **4.3.11(3)** herein and those justified by a Time Impact Analysis. Contractor agrees that it fully shall be compensated for all delays solely

by an extension of non-compensatory time or as contemplated in **Section 8.2.2** herein.

ARTICLE IX. PAYMENTS AND COMPLETION

9.1 CONTRACT SUM. The Contract Sum is stated in the Contract and, including authorized adjustments, is the total maximum not-to-exceed amount payable by Owner to Contractor for performance of the Work under the Contract Documents. Contractor accepts and agrees that all payments pursuant to this Contract are subject to the availability and appropriation of funds by the San Antonio City Council. If funds are not available and/or appropriated, this Contract shall immediately be terminated with no liability to any party to this Contract.

9.2 SCHEDULE OF VALUES

9.2.1 A Schedule of Values for all of the Work shall be submitted by Contractor and shall include quantities and prices of items which, when added together, equal a contract Price and subdivides the Work into component parts in sufficient detail to serve as the basis for progress payments during performance of the Work. Where applicable, overhead and profit shall be included as a separate line item.

9.2.2 Before the first Application for Payment, Contractor shall submit to Owner and Design Consultant a schedule of values allocated to various portions of the Work, prepared in such form and supported by such data to substantiate its accuracy as Owner and Design Consultant may require. This schedule, unless objected to by Design Consultant or Owner, shall be used as a basis for reviewing Contractor's Applications for Payment.

9.3 APPLICATIONS FOR PAYMENT

9.3.1 Contractor shall submit Applications for Payment to Owner electronically, at minimum, every thirty (30) days throughout the duration of the Project. Contractor electronically shall attach to its Application for Payment all data substantiating Contractor's right to payment as Owner or Design Consultant may require, such as copies of requisitions from Subcontractors and material suppliers reflecting retainage, if provided for in the Contract Documents, and reflecting a deduction for Liquidated Damages, if applicable. Applications for Payment shall not include requests for payment for portions of the Work which Contractor does not intend to pay to a Subcontractor or material supplier, unless such Work has been performed by others whom Contractor intends to pay.

9.3.2 Unless otherwise provided in the Contract Documents, payments shall be made on account of materials and equipment delivered and suitably stored at the Site

for subsequent incorporation in the Work and verified by Owner. If approved in advance in writing by Owner, payment similarly may be made for materials and equipment suitably stored off the Site at a location agreed upon in writing and verified by Owner. Payment for materials and equipment stored on or off the Site shall be conditioned upon compliance by Contractor with procedures reasonably satisfactory to Owner to establish Owner's title to such materials and equipment or otherwise protect Owner's interest. Contractor solely shall be responsible for payment of all costs of applicable insurance, storage and transportation to the site for materials and equipment stored off the site.

9.3.3 Contractor warrants that, upon submittal of an Application for Payment, all Work for which payment previously has been received from Owner shall, to the best of Contractor's knowledge, information and belief, be free and clear of liens, claims, security interests or encumbrances in favor of Contractor, Subcontractors, material suppliers or other persons or entities making a claim by reason of having provided labor, materials and equipment relating to the Work. **CONTRACTOR SHALL INDEMNIFY AND HOLD OWNER HARMLESS FROM ANY LIENS, CLAIMS, SECURITY INTEREST OR ENCUMBRANCES FILED BY CONTRACTOR, SUBCONTRACTORS OR ANYONE CLAIMING BY, THROUGH OR UNDER CONTRACTOR OR SUBCONTRACTOR(S) FOR ITEMS COVERED BY PAYMENTS MADE BY OWNER TO CONTRACTOR**.

9.3.4 By submission of an Application for Payment, Contractor certifies that there are no known liens or bond claims outstanding as of the date of said Application for Payment, that all due and payable bills with respect to the Work have been paid to date or are included in the amount requested in the current application and, except for such bills not paid but so included, there is no known basis for the filing of any liens or bond claims relating to the Work and that releases from all Subcontractors and Contractor's materialmen have been obtained in such form as to constitute an effective release of lien or claim under the laws of the State of Texas covering all Work theretofore performed and for which payment has been made by Owner to Contractor; provided if any of the foregoing is not true and cannot be certified, Contractor shall revise the certificate as appropriate and identify all exceptions to the requested certifications.

9.4 PAY APPLICATION APPROVAL

9.4.1 Design Consultant shall, within ten (10) business days after receipt of Contractor's Application for Payment, either approve the Application for Payment or reject the Application for Payment and state on the electronic notification to Contractor and Owner the Design Consultant's reasons for withholding approval, as provided in **Section 9.5.1** herein.

9.4.2 The certification of an Application for Payment shall constitute a representation by Design Consultant to Owner, based on Design Consultant's evaluation of the Work and the data comprising the Application for Payment, that the Work has progressed to the point indicated and that, to the best of Design Consultant's

knowledge, information and belief, the quality of the Work is in accordance with the Contract Documents. The foregoing representations are subject to an evaluation of the Work for conformance with the Contract Documents upon Substantial Completion, to results of subsequent tests and inspections, to correction of minor deviations from the Contract Documents prior to completion and to any specific qualifications expressed by Design Consultant. The issuance of a Certificate for Payment further shall constitute a representation that Contractor is entitled to payment in the amount certified. However, the issuance of a Certificate for Payment shall not be a representation Design Consultant has:

(1) made exhaustive or continuous on-site inspections to check the quality or quantity of the Work;

(2) reviewed construction means, methods, techniques, sequences or procedures;

(3) reviewed copies of requisitions received from Subcontractors and material suppliers and other data requested by Owner to substantiate Contractor's right to payment; or

(4) made any examination to ascertain how or for what purpose Contractor has used money previously paid on account of the Contract Sum.

9.5 DECISIONS TO REJECT APPLICATION FOR PAYMENT

9.5.1 The Application for Payment may be rejected to protect Owner for any of the following reasons:

9.5.1.1 Work not performed or defective ;

9.5.1.2 third party claims filed or reasonable evidence indicating a probable filing of such claims for which Contractor is responsible hereunder unless security acceptable to Owner is provided by Contractor;

9.5.1.3 failure of Contractor to make payments properly to Subcontractors or for labor, materials or equipment;

9.5.1.4 reasonable evidence that the Work cannot be completed for the unpaid balance of the Contract Sum and Contractor has failed to provide Owner adequate assurance of its continued performance within a reasonable time after demand;

9.5.1.5 damage to Owner or another contractor;

9.5.1.6 reasonable evidence that the Work shall 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;

9.5.1.7 persistent failure by Contractor to carry out the Work in accordance with the Contract Documents;

9.5.1.8 the applicable liquidated damages were not included in the Application for Payment;

9.5.1.9 billing for unapproved/unverified materials stored off Site; or

9.5.1.10 a current schedule update has not been submitted by Contractor.

9.5.2 Owner shall not be deemed in default by reason of rejecting Application for Payment as provided for in **Section 9.5.1** herein.

9.6 PROGRESS PAYMENTS

9.6.1 After the final approval of the Application for Payment, Owner may make payment in the manner and within the time provided in the Contract Documents.

9.6.2 During the latter part of each month, as the Work progresses on all Owner Contracts regardless of Contract Sum, Owner and Contractor shall determine the cost of the labor and materials incorporated into the Work during that month and actual invoiced cost of Contractor-acquired materials stored on the Project Site, and/or within off-site storage facilities either owned or leased by Contractor. Upon receipt of a complete and mathematically accurate Application for Payment from Contractor, Owner shall make payments, in accordance with **Article IX** herein, to Contractor within thirty (30) calendar days on Contracts totaling four hundred thousand dollars ($400,000.00) or less, based upon such cost determination and at the Contract prices in a sum equivalent to ninety percent (90%) of each such invoice. The remaining ten percent (10%) retainage shall be held by Owner until the Final Completion. However, where the Contract amount exceeds four hundred thousand dollars ($400,000.00), installments shall be paid to Contractor at the rate of ninety-five percent (95%) of each monthly invoice within thirty (30) calendar days of Owner receipt of a complete and mathematically accurate Application for Payment from the Contractor, and the retainage held until Final Completion shall be five percent (5%).

9.6.3 Owner's payment of installments shall not, in any way, be deemed to be a final acceptance by Owner of any part of the Work, shall not prejudice Owner in the final settlement of the Contract account or shall not relieve Contractor from completion of the Work herein provided.

9.6.4 Contractor shall, within ten (10) calendar days following receipt of payment from Owner, pay all bills for labor and materials performed and furnished by others in connection with the construction, furnishing and equipping of the improvements and the performance of the work, and shall, if requested, provide Owner with written evidence of such payment. Contractor’s failure to make payments or provide written evidence of such payments within such time shall constitute a material breach of this contract, unless Contractor is able to demonstrate to Owner bona fide disputes associated with the unpaid Subcontractor(s) or

supplier(s) and its/their work. Contractor shall include a provision in each of its subcontracts imposing the same written documentation of payment obligations on its Subcontractors as are applicable to Contractor hereunder, and if Owner so requests, shall provide copies of such Subcontractor payments to Owner. If Contractor has failed to make payment promptly to Contractor's Subcontractors or for materials or labor used in the Work for which Owner has made payment to the Contractor, Owner shall be entitled to withhold payment to Contractor to the extent necessary to protect Owner.

9.6.5 Owner and/or Design Consultant shall, if practicable and upon request, furnish to Subcontractor information regarding percentages of completion or amounts applied for by Contractor and action taken thereon by Owner and Design Consultant on account of portions of the Work done by such Subcontractor.

9.6.6 Neither Owner nor Design Consultant shall have an obligation to pay or to see to the payment of money to a Subcontractor, except as may otherwise be required by law, if any.

9.6.7 Payments to material suppliers shall be treated in a manner similar to that provided in **Section 9.6.2, Section 9.6.3** and **Section 9.6.4** herein regarding Subcontractors.

9.6.8 A Certificate for Payment, a progress payment or a partial or entire use or occupancy of the Project by Owner shall not constitute acceptance of Work that was not performed or furnished in accordance with the Contract Documents.

9.6.9 Contractor shall, as a condition precedent to any obligation of Owner under this Contract, provide to Owner payment and performance bonds in the full penal amount of the Contract in accordance with Texas Government Code Chapter 2253.

9.7 SUBSTANTIAL COMPLETION

9.7.1 Substantial Completion is defined as the stage in the progress of the Work when the Work – or a designated portion thereof, which Owner agrees to accept separately – sufficiently is complete, in accordance with the Contract Documents, so Owner may occupy or utilize the Work or a designated portion thereof for its intended use. In the event Substantial Completion is not achieved by the designated date, or the date extended by issued and accepted Change Order(s), Owner may withhold payment of sums necessary to pay the estimated Liquidated Damages due Owner. Owner shall be entitled, at any time, to deduct out of any sums due to Contractor any or all Liquidated Damages due Owner in accordance with the Contract between Owner and Contractor.

9.7.2 When Contractor considers that the Work, or a portion thereof which Owner agrees to accept separately, is Substantially Complete, Contractor shall prepare and submit to Owner and Design Consultant a preliminary comprehensive list of items to be completed or corrected prior to Final Completion and final payment.

Failure to include an item on such list does not alter the responsibility of the Contractor to complete all Work in accordance with the Contract Documents.

9.7.3 Upon receipt of Contractor's list of items to be completed or corrected, Owner and Design Consultant shall make a Site inspection to determine whether the Work or designated portion thereof is Substantially Complete. If Owner's or Design Consultant's inspection discloses any item, whether or not it was included on Contractor's list of items to be completed or corrected, which is not sufficiently complete or correct in accordance with the Contract Documents so that Owner may occupy or utilize the Work or designated portion thereof for its intended use, Contractor shall, before issuance of the Certificate of Substantial Completion, complete or correct such item upon written notification by Owner or Design Consultant. In such case, Contractor then shall submit a request for another inspection by Owner and Design Consultant to determine Substantial Completion and Contractor shall be responsible for all costs incurred and associated with re-inspection.

9.7.4 When the Work – or the designated portion thereof which Owner agrees to accept separately – is Substantially Complete, Design Consultant or Owner shall prepare a Certificate of Substantial Completion (Vertical Projects) or a Letter of Conditional Approval (Horizontal Projects) which shall:

(1) establish the date of Substantial Completion (which shall be the date on which the Work met the requirements under the Contract Documents for Substantial Completion);

(2) establish responsibilities of Owner and Contractor, as agreed to by Owner and Contractor, for security, maintenance, heat, utilities, damage to the Work and insurance; and

(3) fix the time limit by which Contractor shall complete all items on the list accompanying the Certificate.

Warranties required by the Contract Documents shall commence on the date of Substantial Completion of the Work, or the designated portion thereof, unless otherwise provided in the Certificate of Substantial Completion.

9.8 PARTIAL OCCUPANCY OR USE

9.8.1 Owner may occupy or use any completed or partially completed portion of the Work at any stage of the Work when such partially completed portion is designated by separate agreement with Contractor, provided such occupancy or use is consented to by the insurer, as required under **Section 11.4.1.5** herein and authorized by public authorities having jurisdiction over the Work. Such partial occupancy or use may commence whether or not the portion is Substantially Complete, provided Owner and Contractor have accepted in writing the responsibilities assigned to each of them for security, maintenance, heat, utilities, damage to the Work and insurance and have agreed in writing concerning the period for correction of the Work and commencement of warranties required by

the Contract Documents. When Contractor considers a portion of the Work to be Substantially Complete, Contractor shall prepare and submit a list of items to be completed or corrected prior to Final Completion and final payment and submit such list to Owner and Design Consultant, as provided under **Section 9.8.2** herein. Consent of Contractor to partial occupancy or use shall not be unreasonably withheld. The state of the progress of the Work shall be determined by written agreement between Owner and Contractor or, if no agreement is reached, by the decision of Design Consultant.

9.8.2 Immediately prior to such partial occupancy or use, Owner, Contractor and Design Consultant collectively shall inspect the area to be occupied or portion of the Work to be used in order to determine and record the condition of the Work.

9.8.3 Unless expressly agreed upon in writing, partial occupancy or use of a portion or portions of the Work shall not constitute acceptance of Work not complying with the requirements of the Contract Documents.

9.8.4 Upon such partial occupancy or use, and upon Substantial Completion, Owner may assume responsibility for maintenance, security and insuring that portion of the Work that it has put into use.

9.8.5 Partial occupancy or use by Owner does not constitute substantial completion and does not start any warranty period(s).

9.9 FINAL COMPLETION AND FINAL PAYMENT

9.9.1 When all of the Work finally is completed and ready for final inspection, Contractor shall notify Owner and Design Consultant thereof in writing. Thereupon, Owner and Design Consultant shall make final inspection of the Work and, if the Work is complete in full accordance with this Contract and this Contract has been fully performed, the final Application for Payment may be submitted. If Owner and Design Consultant are unable to approve the final Application for Payment for reasons for which Contractor is responsible and Owner and Design Consultant are required to repeat a final inspection of the Work, Contractor shall be responsible for all costs incurred and associated with such repeat final inspection(s) and said costs may be deducted by Owner from the Contractor's retainage.

9.9.2 Contractor shall not be entitled to payment of retainage unless and until it submits to Owner its affidavit that the payrolls, invoices for materials and equipment, and other liabilities, to include Liquidated Damages, connected with the Work for which Owner or the Owner's property might be responsible fully have been paid or otherwise satisfied or shall be paid from final payment; releases and waivers of liens from all Subcontractors of Contractor and of any and all other parties

required by Design Consultant or Owner that either are unconditional or conditional on receipt of final payment; Certificates of insurance showing continuation of required insurance coverage; such other documents as Owner may request; and consent of Surety to final payment. A Retainage Checklist shall be provided by Owner to Contractor upon request.

9.9.3 If, after Substantial Completion of the Work, Final Completion of the Work materially is delayed through no fault of Contractor nor by Issuance of Change Orders affecting Final Completion of the Work, and Design Consultant so confirms, Owner shall, upon application by Contractor and certification by Design Consultant and without terminating the Contract, make payment of the balance due Contractor for that portion of the work fully completed and accepted. If the remaining balance for Work not fully completed or corrected is less than retainage stipulated in the Contract Documents, and if bonds have been furnished, the written consent of Surety to payment of the balance due for that portion of the Work fully completed and accepted shall be submitted by Contractor to Design Consultant, prior to certification of such payment. Such payment shall be made under the terms and conditions governing final payment, except that it shall not constitute a waiver of claims.

9.9.4 Request for final payment by Contractor shall constitute a waiver of all claims against Owner, except those previously made in writing and identified by that payee as unsettled at the time of final Application for Payment.

9.10 ADDITIONAL INSPECTIONS. In addition to any Liquidated Damages accrued by and payable to Owner by Contractor, Owner shall be entitled to deduct from the Contract Sum amounts due to Contractor by Owner to compensate Design Consultant for any additional inspections or services provided by Design Consultant, provided Design Consultant undertook these additional inspections or services due to the fault or negligence of Contractor if:

(1) Design Consultant is required to make more than one inspection to determine if Substantial Completion has been achieved by Contractor;

(2) Design Consultant is required to make more than one inspection to determine if Final Completion has been achieved by Contractor; or

(3) the Work is not substantially complete within thirty (30) calendar days after the date established for the Work's Substantial Completion in the Contract Documents.

ARTICLE X. PROTECTION OF PERSONS AND PROPERTY

10.1 SAFETY PRECAUTIONS AND PROGRAMS

10.1.1 Contractor shall be responsible for initiating, maintaining and supervising all safety precautions and programs in connection with the performance of the Contract. Contractor shall develop a safety program applicable to each job site and to the Work to be done, review such program with Owner in advance of beginning the Work, and enforce such program at all times. Further, Contractor shall comply with all applicable laws and regulations including, but not limited to, the standards and regulations promulgated by the Secretary of Labor under the Occupational Safety and Health Act of 1970 (OSHA) and any other legislation enacted for the safety and health of Contractor employees. Owner shall have the right, but not the obligation, to inspect and verify Contractor's compliance with Contractor's responsibility for protecting the safety and health of its employees and Subcontractor.

10.1.2 Contractor shall notify Owner immediately, by telephone with prompt confirmation in writing, of all injuries and fatalities including, but not limited to, copies of all reports and other documents filed or provided to Contractor's insurers and the State of Texas in connection with such injuries or fatalities.

10.1.3 Contractor has adopted or shall adopt its own policy to assure a drug and alcohol free work place while performing the Work. Contractor's employees, agents, and Subcontractors shall not perform any service for Owner while under the influence of alcohol or any controlled substance. Contractor, its employees, agents and Subcontractors shall not use, possess, distribute or sell illegal, illicit and/or prescribed controlled drugs or drug paraphernalia or misuse legitimate prescription drugs while on Site or performing the Work. Contractor, its employees, agents and Subcontractors shall not use, possess, distribute or sell alcoholic beverages while performing the Work or while on Site or performing the Work. Contractor shall remove any of its employees or Subcontractor employees from performing the Work or from the Site any time there is suspicion of alcohol and/or drug use, possession or impairment involving such employee and at any time an incident occurs where drug or alcohol use could have been a contributing factor. Owner has the right to require Contractor to remove employees or Subcontractor employees from performing the Work or from the Site any time cause exists to suspect alcohol or drug use. In such cases, Contractor's or Subcontractor's employees only may be considered for return to work after Contractor certifies, as a result of a for-cause test conducted immediately following a removal, said employee was in compliance with this Contract. Contractor shall not employ any individual, or shall not accept any Subcontractor employees, to perform the Work who either refuses to take or tests positive in any alcohol or drug test.

10.1.4 Contractor shall comply with all applicable federal, state and local drug and alcohol related laws and regulations (e.g., Department of Transportation regulations, Department of Defense Drug-free Work-free Workforce Policy, Drug-Free Workplace Act of 1988). The presence of any firearms or other lethal weapons by any person is prohibited on the Project site, regardless of whether the owner thereof has a permit for a concealed weapon.

10.1.5 Both Owner and Contractor agree that these safety and health terms are of the highest importance and that a breach or violation of any of the terms of this **Section X** by Contractor or a Subcontractor shall be a material and substantial breach of this Contract. In the event that Owner shall determine that Contractor has breached or violated the terms of this Section, then Owner shall determine, immediately upon written notice to Contractor, whether the Work shall be suspended as a result thereof. If the Work is suspended, the Work shall not recommence until Owner is satisfied that the safety provisions hereof shall not be breached or violated thereafter. If Owner terminates the Contract as a result of such breach or violation, Owner and Contractor shall complete their obligations hereunder to one another in accordance with **Section 14.2** herein.

10.1.6 Nothing contained in this **Article X** shall be interpreted as creating or altering the legal duty of Owner to Contractor or to Contractor's agents, employees, Subcontractors or third parties, or altering the status of Contractor as an independent contractor.

10.1.7 Notwithstanding either of the above provisions, or whether Owner exercises its rights set forth herein, Owner neither warrants nor represents to Contractor, Contractor's employees or agents, any Subcontractors or any other third party that Contractor's safety policy meets the requirements of any applicable law, code, rule or regulation, nor does Owner warrant that the proper enforcement of Contractor's policy shall insure that no accidents or injuries shall occur. In addition, any action by Owner under these provisions in no way diminishes any of Contractor's obligations under applicable law or the contract documents.

10.2 SAFETY OF PERSONS AND PROPERTY

10.2.1 Contractor shall take reasonable precautions for the safety of and shall provide reasonable protection to prevent damage, injury or loss to:

10.2.1.1 employees performing the Work and other persons who may be affected thereby;

10.2.1.2 the Work and materials and equipment to be incorporated therein, whether in storage on or off the site, under the care, custody or control of Contractor or Contractor's Subcontractors or Sub-Subcontractors;

10.2.1.3 other property at the site or adjacent thereto, such as trees, shrubs, lawns, walks, pavements, roadways, structures and utilities not designated for removal, relocation or replacement in the course of Construction; and

10.2.1.4 the contents of a building or structure, when Contractor is working in, on or around an existing/operating City facility.

10.2.2 Contractor shall give notices and comply with applicable laws, ordinances, rules, regulations and lawful orders of public authorities bearing on safety of persons or property or their protection from damage, injury or loss.

10.2.3 Contractor shall erect and maintain, as required by existing conditions and performance of the Contract, reasonable safeguards for safety and protection, including posting danger signs and other warnings against hazards, promulgating safety regulations and notifying all owners and users of adjacent sites and utilities.

10.2.4 When use or storage of explosives or other hazardous materials or equipment or unusual methods are necessary for the execution of the Work, Contractor shall exercise extraordinary care and shall carry on such activities under the direct supervision of properly qualified personnel. Prior to the use of any explosives, Contractor shall submit a written blasting plan, shall obtain Owner's approval and shall comply with Owner's requirements for such use.

10.2.5 Contractor promptly shall remedy any and all damage and loss (other than damage or loss insured under property insurance required by the Contract Documents). Contractor also shall HOLD HARMLESS and UNCONDITIONALLY INDEMNIFY, PROTECT and DEFEND Owner, its elected officials, employees, officers, directors, volunteers and representatives of Owner, individually or collectively, from and against any and all damage or loss to property (other than the Work itself and including property of Contractor and of Owner) referred to in **Section 10.2.1.2** and **Section 10.2.1.3** herein, but only to the extent caused in whole or in part by the acts, omissions and/or negligence of Contractor, its agents, servants and employees, its Subcontractor(s) and its/their agents, servants and employees, anyone directly or indirectly employed by Contractor or Subcontractor and/or by any other person or entity for which Contractor or Subcontractor may be responsible under the Contract Documents in connection with the Work to be performed, services to be rendered or materials to be furnished under this Contract including, but not limited to violations of any statute, regulation, ordinance or provision of this Contract. Notwithstanding anything to the contrary included herein, in no event shall Contractor be liable for claims arising out of accidents resulting from the sole negligence of Owner, all without, however, waiving any governmental immunity available to Owner under Texas Law and without waiving any defenses of the parties under Texas Law. The foregoing obligations of Contractor are in addition to Contractor's obligations under **Section 3.18** herein**.** In the event Contractor and Owner are found jointly liable by a court of competent jurisdiction, liability shall be apportioned comparatively, in accordance with the laws of the State of Texas without, however, waiving any governmental immunity available to Owner under Texas law and without waiving any defenses of the parties under Texas law.

10.2.6 Contractor shall designate a responsible member of Contractor's organization at the site whose duty shall be the prevention of accidents. This person shall be Contractor's superintendent unless otherwise designated by Contractor in writing to Owner and Design Consultant.

10.2.7 Contractor shall not load or permit any part of the construction or site to be loaded so as to endanger its safety.

10.2.8 Notwithstanding the delivery of a survey or other documents by Owner, Contractor shall use reasonable efforts to perform all Work in such a manner so as to avoid damaging any utility lines, cables, pipes or pipelines on the property. Contractor acknowledges and accepts that the location of underground utilities (both public and private) reflected on any City-provided plans are not guaranteed and may not be completely accurate. Contractor shall locate and verify any and all utilities and associated service lines prior to beginning any Work. Contractor shall be responsible for and shall repair, at Contractor's own expense, any damage done to lines, cables, pipes and pipelines identified or not identified to Contractor.

10.3 EMERGENCIES.

10.3.1 In an emergency affecting safety of persons or property, Contractor shall exercise its best efforts to act to prevent or minimize threatened damage, injury or loss. Additional compensation or extension of time claimed by Contractor on account of an emergency shall be determined, as provided in **Section 4.3** and **Article VII** herein.

10.3.2 If Contractor causes damage resulting in an issue of safety and/or security to a property owner, Contractor immediately shall repair any damage caused. If Contractor does not or shall not act immediately to repair the damage caused by Contractor to eliminate the resulting safety and/or security issue(s), Owner shall act to repair the damage caused and deduct all costs associated with the repair from any money due Contractor.

10.4 PUBLIC CONVENIENCE AND SAFETY

10.4.1 Contractor shall place materials stored at the Project site and shall conduct the Work at all times in a manner that causes no greater obstruction to the public than is considered necessary by Owner. Sidewalks or streets shall not be obstructed, except by special permission of Owner. Materials excavated and construction materials or plants used in the performance of the Work shall be placed in a manner that does not endanger the Work or prevent free access to all fire hydrants, water mains and appurtenances, water valves, gas valves, manholes for the telephone, telegraph signal or electric conduits, wastewater mains and appurtenances and fire alarm or police call boxes in the vicinity.

10.4.2 Owner reserves the right to remedy any neglect on the part of Contractor, in regard to public convenience and safety, which may come to Owner's attention after twenty-four (24) hours notice in writing to Contractor. In case of an emergency, Owner shall have the right immediately to remedy any neglect without notice. In either case, the cost of any work done by or for Owner to remedy Contractor's neglect shall be deducted by Owner from Contractor's Contract Sum. Contractor shall notify Owner, Owner's Traffic Control Department and Design Consultant when any street is to be closed or obstructed. The notice shall, in the case of major thoroughfares or street upon which transit lines operate, be given at least forty-eight (48) hours in advance. Owner reserves the right to postpone and/or prohibit any closure or obstruction of any streets or

thoroughfares, to the extent necessary for the safety and benefit of the traveling public. Contractor shall, when directed by Owner or Design Consultant, keep any street or streets in condition for unobstructed use by Owner departments. When Contractor is required to construct temporary bridges or make other arrangements for crossing over ditches or around structures, Contractor's responsibility for accidents shall include the roadway approaches as well as the crossing structures.

10.4.3 Contractor shall limit airborne dust and debris throughout the Project site and its duration. Contractor shall apply the necessary amounts of water or other appropriate substance required to maintain sufficient moisture content for dust control. For City horizontal projects, Contractor shall apply appropriate amounts of water or other appropriate substance to the base on streets under construction and on detours required to maintain sufficient moisture control in the surface layer for dust control.

10.4.4 City's Office of Sustainability continues to work on City's Air Quality Control Strategies Plan in its ongoing efforts to lower emissions throughout the City, including City's Project sites. In an effort to assist City in these goals, Contractor shall strive to:

10.4.4.1 reduce fuel use by directing its employees and its Subcontractors to reduce vehicle idling, maintaining equipment utilized on the Project and replacing or repowering equipment with current technologies;

10.4.4.2 conserve electricity used to provide power to Contractor's offices and throughout the Project site, to include Project lighting, tools and Contractor's Project construction trailer; and

10.4.4.3 recycle Project site materials such as asphalt, steel, other metals and concrete.

10.4.4.4 All costs associated with Contractor's and its Sub-Consultants' and Subcontractors' acquisition and installation of emission control technology shall be considered incidental costs of the Project; as such, no additional compensation shall be provided Contractor by City.

10.5 BARRICADES, LIGHTS AND WATCHMEN. If the Work is carried on, in or adjacent to any street, alley or public place, Contractor shall, at Contractor's own cost and expense, furnish, erect and maintain sufficient barricades, fences, lights and danger signals, provide sufficient watchmen and take such other precautionary measures as are necessary for the protection of persons or property and of the Work. All barricades shall be painted in a color that shall be visible at night, and shall be illuminated by lights as required under City's Barricades specifications. The term "lights," as used in this **Section 10.5**, shall mean flares, flashers or other illuminated devices. A sufficient number of barricades with adequate markings and directional devices also shall be erected to keep vehicles from being driven on or into any Work under construction. Contractor shall be held responsible for all damage to the Work due to failure of barricades, signs, lights and/or watchmen

necessary to protect the Work. Whenever evidence is found of such damage, Owner or Design Consultant may order the damaged portion immediately removed and replaced by Contractor at Contractor's sole cost and expense. Contractor's responsibility for maintenance of barricades, signs, lights, and for providing watchmen, as required under this **Section 10.5**, shall not cease until the Project has been finally accepted by Owner.

10.6 PUBLIC UTILITIES AND OTHER PROPERTIES TO BE CHANGED. In case it is necessary for Contractor to change or move the property of Owner or of any telecommunications or public utility, such property shall not be touched, removed or interfered with until ordered to do so by Owner. Owner reserves the right to grant any public or private utility personnel the authority to enter upon the Project site for the purpose of making such changes or repairs to their property that may become necessary during the performance of the Work. Owner reserves the right of entry upon the Project site at any time and for any purpose, including repairing or relaying sewer and water lines and appurtenances, repairing structures and for making other repairs, changes, or extensions to any of Owner's property. Owner's actions shall conform to Contractor's current and approved schedule for the performance of the Work, provided that proper notification of schedule requirements has been given to Owner by Contractor.

10.7 TEMPORARY STORM SEWER AND DRAIN CONNECTIONS. When existing storm sewers or drains have to be taken up or removed, Contractor shall, at its expense, provide and maintain temporary outlets and connections for all public and private storm sewers and drains. Contractor also shall provide for all storm sewage and drainage which shall be received from these storm drains and sewers. For this purpose, Contractor shall provide and maintain, at Contractor’s own expense, adequate pumping facilities and temporary outlets or diversions. Contractor shall, at Contractor’s own expense, construct such troughs, pipes or other structures that may be necessary and shall be prepared at all times to dispose of storm drainage and sewage received from these temporary connections until such time as the permanent connections are built and are in service. The existing storm sewers and connections shall be kept in service and maintained under the Contract, except where specified or ordered to be abandoned by Design Consultant. All storm water and sewage shall be disposed of in a satisfactory and lawful manner so that no nuisance is created and that the Work under construction shall be adequately protected.

10.8 ARRANGEMENT AND CHARGE FOR WATER FURNISHED BY THE OWNER/ELECTRICITY FOR THE PROJECT/WIRELESS ACCESS

10.8.1 When Contractor desires to use Owner's water in connection with the Work, Contractor shall make complete and satisfactory arrangements with the San Antonio Water Service and shall be responsible for the cost of the water Contractor uses. Where meters are required and used, the charge shall be at the regular established rate; where no meters are required and used, the charge shall be as prescribed by Owner ordinance, or where no ordinance applies, payment

shall be based on estimates made by the representatives of the San Antonio Water Service.

10.8.2 Contractor shall make complete and satisfactory arrangements for electricity and metered electrical connections with Owner or with any retail electric provider, in the event that separately metered electrical connections are required for the Project. Contractor shall pay for all electricity used in the performance of the Work through separate metered electrical connections obtained by Contractor through a retail electric provider.

10.8.3 If Contractor elects or is required by City to place and operate out of a construction trailer or office on the Project site, for which all related costs shall be borne by Contractor, Contractor shall provide for an electronic device to exchange data wirelessly via a local area computer network, to include high-speed internet connections (commonly known as "Wi Fi access"), for City personnel's use while on the Project site for the duration of the Project.

10.9 USE OF FIRE HYDRANTS. Contractor, Subcontractors and any other person working on the Project shall not open, turn off, interfere with, attach any pipe or hose to or connect anything with any fire hydrant, stop valve or stop cock, or tap any water main belonging to Owner, unless duly authorized in writing to do so by Owner.

10.10 ENVIRONMENTAL COMPLIANCE

10.10.1 Contractor and its Subcontractors are deemed to have made themselves familiar with and at all times shall comply with any and all applicable federal, state or local laws, rules, regulations, ordinances and rules of common law now in effect (including any amendments now in effect), relating to the environment, Hazardous Substances or exposure to Hazardous Substances including, but not limited to, the Comprehensive Environmental Response, Compensation and Liability Act of 1980, 42 U.S.C.A. §§ 9601, et seq.; the Hazardous Materials Transportation Act, 49 U.S.C.A. §§ 1801, et seq.; the Resource Conservation and Recovery Act of 1976, 42 U.S.C.A. §§ 6901, et seq.; the Federal Water Pollution Control Act, 33 U.S.C.A §§ 1201, et seq.; the Toxic Substances Control Act, 15 U.S.C.A. §§ 2601, et seq.; the Clean Air Act, 42 U.S.C.A. §§ 7401, et seq.; the Safe Drinking Water Act, 42 U.S.C.A. §§ 3808, et seq., and any current judicial or administrative interpretation of these laws, rules, regulations, ordinances or rules of common law including, but not limited to, any judicial or administrative order, consent decree or judgment affecting the Project.

10.10.2 In the event Contractor encounters on the Project Site materials reasonably believed to be a Hazardous Substance that have not been rendered harmless, and the removal of such materials is not a part of the scope of Work required under the Contract Documents, Contractor immediately shall stop Work in the affected area and report in writing the facts of such encounter to Owner and Design Consultant.

Work in the affected area shall not thereafter be resumed except by written order of Owner and written consent of Contractor, unless and until the material is determined not to be a Hazardous Substance or the Hazardous Substance is remediated. Unless removal of such materials is a part of the scope of Work required under the Contract Documents, Owner shall remediate the Hazardous Substance with a separate contractor or through a Change Order with Contractor. If the Hazardous Substance exists in the affected area due to the fault or negligence of Contractor or any of its Subcontractors, Contractor shall be responsible for remediating the condition at the sole expense of Contractor. If applicable, such remediation shall be in accordance with Contractor's Spill Remediation Plan. An extension of the Contract Time for any delay in the progress schedule caused as a result of the discovery and remediation of a Hazardous Substance may be granted by Owner only if the Project critical path is affected and Contractor is not the source of the Hazardous Substance. Any request for an extension of the Contract Time related to the discovery and remediation of a Hazardous Substance is subject to the provisions of **Section 4.3** and **Article VIII** herein.

10.10.3 Contractor shall be responsible for identification, abatement, cleanup, control, removal, remediation and disposal of any Hazardous Substance brought into or onto the site by Contractor or any Subcontractor or Contractor's Supplier. Contractor shall obtain any and all permits necessary for the legal and proper handling, transportation and disposal of the Hazardous Substance and shall, prior to undertaking any abatement, cleanup, control, removal, remediation and/or disposal, notify Owner and Design Consultant so that they may observe the activities; provided, however, that it shall be Contractor's sole responsibility to comply with all applicable laws, rules, regulations or ordinances governing said activities.

ARTICLE XI. INSURANCE AND BONDS

11.1 CONTRACTOR'S LIABILITY INSURANCE

11.1.1 Without limiting any of the other obligations or liabilities of Contractor under the Contract Documents, Contractor shall purchase and maintain, during the term of the Contract and at Contractor's own expense, the minimum liability insurance coverage described below with insurance companies duly authorized or approved to do business in the State of Texas and otherwise satisfactory to Owner. Contractor also shall require each Subcontractor performing work under the Contract, at Subcontractor's own expense, to maintain levels of insurance necessary and appropriate for the Work performed during the term of the Contract, said levels of insurance comply with all applicable laws.

Subcontractor's liability insurance shall name Contractor, Owner and Design Consultant as additional insureds by using endorsement CG 20 26 or broader. Certificates of insurance complying with the requirements prescribed in **Section 11.1.2** herein shall show the existence of each policy, together with copies of all policy endorsements showing Owner and Design Consultant as an additional insured, and shall be delivered to Owner before any Work is started. Contractor promptly shall furnish, upon the request of and without expense to Owner, a copy of each policy required, including all endorsements, which shall indicate:

11.1.1.1 Workers' Compensation, with statutory limits, with the policy endorsed to provide a waiver of subrogation as to Owner; Employer's Liability Insurance of not less than $1,000,000 for each accident, $1,000,000 disease for each employee and $1,000,000 disease policy limit;

11.1.1.2 Commercial General Liability Insurance, Personal Injury Liability, Independent Contractor's Liability and Products and Completed Operations and Contractual Liability covering, but not limited to, the liability assumed under the indemnification provisions of this Contract, fully insuring Contractor's (and/or Subcontractor's) liability for injury to or death of Owner's employees and all third parties, and for damage to property of third parties, with a combined bodily injury (including death) and property damage minimum limit of $1,000,000 per occurrence, $2,000,000 annual aggregate. If coverage is written on a claims-made basis, coverage shall be continuous (by renewal or extended reporting period) for no less than sixty (60) months following completion of the contract and acceptance of work by Owner. Coverage, including any renewals, shall have the same retroactive date as the original policy applicable to the Project. Owner shall be named as additional insured by using endorsement CG 20 26 or broader. The general liability policy shall include coverage extended to apply to completed operations and XCU hazards. The Completed Operations coverage must be maintained for a minimum of one (1) year after final completion and acceptance of the Work, with evidence of same filed with Owner. The policy shall include an endorsement CG2503 amendment of limits (designated project or premises) in order to extend the policy's limits specifically to the Project in question.

11.1.1.3 Business Automobile Liability Insurance, covering owned, hired and non-owned vehicles, with a combined bodily injury (including death) and property damage minimum limit of $1,000,000 per occurrence. Such insurance shall include coverage for loading and unloading hazards.

11.1.1.4 Five (5) calendar days prior to a suspension, cancellation or non-renewal of any required line of insurance coverage, Contractor shall provide Owner a replacement certificate of insurance with all applicable endorsements included. Owner shall have the option to suspend Contractor.

11.1.2 If any insurance company providing insurance coverage(s) required under the Contract Documents for Contractor becomes insolvent or becomes the subject of any rehabilitation, conservatorship, liquidation or similar proceeding, Contractor immediately shall procure, upon first notice to Contractor or Owner of such occurrence and without cost to Owner, replacement insurance coverage before continuing the performance of the Work at the Project. Any failure to provide such replacement insurance coverage shall constitute a material breach of the Contract.

11.2 PROPERTY INSURANCE

11.2.1 In addition to the insurance described in **Section 11.1** and **Section 11.4** herein, Contractor shall obtain at its expense and maintain throughout the duration of the Project, All-Risk Builder's Risk Insurance, if the Project involves complete construction of a new building, or an All-Risk Installation Floater policy, if the Project involves materials and supplies needed for additions to, renovations or remodeling of an existing building. Coverage on either policy shall be All-Risk, including, but not limited to, Fire, Extended Coverage, Vandalism and Malicious Mischief, Flood (if located in a flood zone) and Theft, in an amount equal to one hundred percent (100%) of the insurable value of the Project for the Installation Floater policy, and one hundred percent (100%) of the replacement cost of the Project for the Builder's Risk policy. If an Installation Floater policy is provided, Owner shall be shown as a Joint Named Insured with respect to the Project. If a Builder's Risk policy is provided, the policy shall be written on a Completed Value Form, including materials delivered and labor performed for the Project. This policy shall be in the name of Contractor and naming Owner, Design Consultant and Subcontractors, as well as any Sub-Subcontractors, as additional insureds as their interests may appear. The policy shall have endorsements as follows:

11.2.1.1 This insurance shall be specific as to coverage and not contributing insurance with any permanent insurance maintained on the property.

11.2.1.2 Loss, if any, shall be adjusted with and made payable to Contractor or Owner and Contractor as trustee for the insureds as their interests may appear.

11.2.2 **BOILER AND MACHINERY INSURANCE**. If applicable, Owner shall purchase and maintain Boiler and Machinery Insurance required by the Contract Documents or by law, which specifically shall cover such insured objects during installation and until final acceptance by Owner. This insurance shall include the interests of Owner, Contractor, Subcontractors and Sub-Subcontractors in the Work, and Owner and Contractor shall be named insureds.

11.2.3 **LOSS OF USE INSURANCE**. Owner, at Owner's option, may purchase and maintain such insurance as shall insure Owner against loss of use of Owner's property due to fire or other hazards, however caused. Owner waives all rights of action against Contractor that it may now have or have in the future for loss or damage

to Owner's property howsoever arising, including consequential losses due to fire or other hazards however caused.

11.2.4 Contractor shall provide to Design Consultant for delivery to Owner a Certificate of Insurance evidencing all property insurance policies procured under **Section 11.2** herein and all endorsements thereto, before any exposure to loss may occur.

11.2.5 Partial occupancy or use in accordance with **Section 9.9** herein shall not commence until the insurance company/companies providing property insurance have consented to such partial occupancy or use by endorsement or otherwise. Owner and Contractor shall take reasonable steps to obtain consent of the insurance company/companies and shall take no action without mutual written consent with respect to partial occupancy or use that would cause cancellation, lapse or reduction of insurance.

11.3 PERFORMANCE BOND AND PAYMENT BONDS

11.3.1 Subject to the provisions of **Section 11.3.2** herein, Contractor shall, with the execution and delivery of the Contract, furnish and file with Owner, in the amounts required in this **Article XI**, the surety bonds described in **Section 11.3.1.1** and **Section 11.3.1.2** herein, with said surety bonds in accordance with the provisions of Chapter 2253, Texas Government Code, as amended. Each surety bond shall be signed by Contractor, as the Principal, as well as by an established corporate surety bonding company as surety, meeting the requirements of **Section 11.3.3** herein and approved by Owner. The surety bonds shall be accompanied by an appropriate Power-of-Attorney clearly establishing the extent and limitations of the authority of each signer to so sign and shall include:

11.3.1.1 **PERFORMANCE BOND**. A good and sufficient bond in an amount equal to one hundred percent (100%) of the total Contract Sum, guaranteeing the full and faithful execution of the Work and performance of the Contract in accordance with Plans, Specifications and all other Contract Documents, including any extensions thereof, for the protection of Owner. This bond shall also provide for the repair and maintenance of all defects due to faulty materials and workmanship that appear within a period of one (1) year from the date of final Completion or acceptance of the Work by the Owner or lesser or longer periods as may be otherwise designated in the Contract Documents.

11.3.1.2 **PAYMENT BOND**. A good and sufficient bond in an amount equal to 100% of the total Contract Sum, guaranteeing the full and prompt payment of all claimants supplying labor or materials in the prosecution of the Work provided for in the Contract, and for the use and protection of each claimant.

11.3.2 If the Contract Sum, including Owner-accepted Alternates and allowances, if any, is greater than $100,000, Performance and Payment Bonds equaling one hundred percent (100%) of the Contract Sum are mandatory and shall be provided by Contractor. If the Contract Sum is greater than $50,000 but less than or equal to $100,000, only a Payment Bond equaling One hundred percent (100%) of the Contract amount is mandatory; provided, however, that Contractor also may elect to furnish a Performance Bond in the same amount if Contractor so chooses. If the Contract Sum is less than or equal to $25,000, Contractor may elect not to provide Performance and Payment Bonds; provided that in such event, no money shall be paid by Owner to Contractor until Final Completion of all Work. If Contractor elects to provide Performance and Payment Bonds, the Contract Sum shall be payable to Contractor through progress payments in accordance with these General Conditions.

11.3.3 No surety shall be accepted by Owner that is in default, delinquent on any bonds or that is a party to any litigation against Owner. All bonds shall be made and executed on Owner's standard forms, shall be approved by Owner and shall be executed by not less than one (1) corporate surety that is authorized and admitted to do business in the State of Texas, is licensed by the State of Texas to issue surety bonds, is listed in the most current United States Department of the Treasury List of Acceptable Sureties and is otherwise acceptable to Owner. Each bond shall be executed by Contractor and the surety and shall specify that legal venue for enforcement of each bond exclusively shall lie in Bexar County, Texas. Each surety shall designate an agent resident in Bexar County, Texas to which any requisite statutory notices may be delivered and on which service of process may be had in matters arising out of the suretyship.

11.3.4 The person or persons, partnership, company, firm, limited liability company, association, corporation or other business entity to whom the Contract is awarded shall, within ten (10) days after such award, sign the required Contract with Owner and provide the necessary surety bonds and evidence of insurance as required under the Contract Documents. No Contract shall be binding on Owner until:

(1) it has been approved as to form by Owner’s City Attorney;

(2) it has been executed by Owner’s City Manager;

(3) the performance and payment bonds and evidence of insurance have been furnished to Owner by Contractor, as

required by the Contract Documents; and

(4) a fully executed Contract has been delivered to Contractor.

11.3.5 The failure of Contractor to execute the Contract and deliver the required bonds and evidence of insurance within ten (10) days after the Contract is awarded or as soon thereafter as Owner can assemble and deliver the Contract and by the time the Owner-scheduled Pre-Construction meeting is held shall, at Owner's option, constitute a material breach of Contractor's bid proposal and Owner may rescind the Contract award and collect or retain the proceeds of the bid security. By reason of the uncertainty of the market prices for materials and labor, and it being impracticable and difficult to determine accurately the amount of damages occurring to Owner by reason of Contractor's failure to execute the Contract within ten (10) days and deliver bonds and insurance by the Owner-scheduled Pre-Construction meeting, the filing of a bid proposal shall constitute an acceptance of this **Section 11.3.5**. In the event Owner should re-advertise for bids, the defaulting Contractor shall not be eligible to bid, and the lowest responsible bid obtained in the re-advertisement shall be the bid referred to in this **Section 11.3**.

11.4 'UMBRELLA' LIABILITY INSURANCE. Contractor shall obtain, pay for and maintain Umbrella Liability Insurance during the Contract term, insuring Contractor for an amount of not less than $5,000,000 per occurrence combined limit Bodily Injury (including death) and Property Damage, that follows form and applies in excess of the primary coverage required hereinabove. Owner and Design Consultant shall be named as additional insureds using endorsement CG 20 26 or broader. No aggregate shall be permitted for this type of coverage. The Umbrella Liability Insurance policy shall provide "drop down" coverage, where the underlying primary insurance coverage limits are insufficient or exhausted.

11.5 POLICY ENDORSEMENTS AND SPECIAL CONDITIONS

11.5.1 Each insurance policy to be furnished by Contractor shall address the following required provisions within the certificate of insurance, which shall be reflected in the body of the insurance contract and/or by endorsement to the policy:

11.5.1.1 Owner and Design Consultant shall be named as additional insureds on all liability coverages, using endorsement CG 20 26 or broader. When Owner employs a Construction Manager on the Project, Contractor and Subcontractor(s) shall include the Construction Manager on all liability insurance policies to the same extent as Owner and Design Consultant are required to be named as additional insureds.

11.5.1.2 Within five (5) calendar days of a suspension, cancellation or non-renewal of any required line of insurance coverage, Contractor shall provide Owner a replacement certificate of insurance with all applicable endorsements included. Owner shall have the option to suspend

Contractor's performance should there be a lapse in coverage at any time during the Contract.

11.5.1.3 The terms "Owner," "City" or "City of San Antonio" shall include all authorities, boards, bureaus, commissions, divisions, departments and offices of Owner and the individual members, employees and agents thereof in their official capacities, while acting on behalf of Owner.

11.5.1.4 The policy phrase or clause "Other Insurance" shall not apply to Owner where Owner is an additional insured on the policy. The required insurance coverage furnished by Contractor shall be the primary insurance for all purposes for the Project, as well as the primary insurance for the additional insureds named in the required policies.

11.5.1.5 All provisions of the Contract Documents concerning liability, duty and standard of care, together with the indemnification provision, shall, to the maximum extent allowable in the insurance market, be underwritten with contractual liability coverage(s) sufficient to include such obligations with the applicable liability policies.

11.5.2 Concerning the insurance to be furnished by the Contractor, it is a condition precedent to acceptability which:

11.5.2.1 All policies must comply with the applicable requirements and special provisions of this **Article 11**.

11.5.2.2 Any policy evidenced by a Certificate of Insurance shall not be subject to limitations, conditions or restrictions deemed inconsistent with the intent of the insurance requirements set forth herein, and Owner's decision regarding whether any policy contains such provisions and contrary to this requirement shall be final.

11.5.2.3 All policies required are to be written through companies duly authorized and approved to transact that class of insurance in the State of Texas and that otherwise are acceptable to Owner.

11.5.3 Contractor agrees to the following special provisions:

11.5.3.1 Contractor hereby waives subrogation rights for loss or damage to the extent same are covered by insurance. Insurers shall have no right of recovery or subrogation against Owner, it being the intention that the insurance policies shall protect all parties to the Contract and be primary coverage for all losses covered by the policies. This waiver of subrogation shall be included, by endorsement or otherwise, as a provision of all policies required under this **Article XI**.

11.5.3.2 Insurance companies issuing the insurance policies and Contractor shall have no recourse whatsoever against Owner for payment of any

premiums or assessments for any deductibles, as all such premiums and assessments solely are the responsibility and risk of Contractor.

11.5.3.3 Approval, disapproval or failure to act by Owner, regarding any insurance supplied by Contractor or any Subcontractor(s), shall not relieve Contractor of any responsibility or liability for damage or accidents as set forth in the Contract Documents. The bankruptcy, insolvency or denial of liability of or by Contractor's insurance company shall likewise not exonerate or relieve Contractor from liability.

11.5.3.4 Owner reserves the right to review the insurance requirements of this **Article XI** during the effective period of this Contract and to adjust insurance coverage and insurance limits when deemed necessary and prudent by Owner's Risk Management Division, based upon changes in statutory law, court decisions or the claims history of Contractor and Subcontractors. Contractor agrees to make any reasonable request for deletion, revision or modification of particular policy terms, conditions, limitations or exclusions, except where policy provisions are established by law or regulation binding upon either party to this Contract or upon the underwriter of any such policy provisions. Upon request by Owner, Contractor shall exercise reasonable efforts to accomplish such changes in policy coverage.

11.5.3.5 No special payments shall be made for any insurance policies that Contractor and Subcontractors are required to carry. Except as provided in **Section 11.5.3.4** herein, all amounts payable regarding the insurance policies required under the Contract Documents are included in the Contract Sum.

11.5.3.6 Any insurance policies required under this **Article XI** may be written in combination with any of the other policies, where legally permitted, but none of the specified limits neither may be lowered or otherwise negatively impacted by doing so, nor may any of the requirements or special provisions of this **Article XI** be limited or circumvented by doing so.

ARTICLE XII. INSPECTING, UNCOVERING AND CORRECTING OF WORK

12.1 Inspecting Work. Owner and Design Consultant shall have authority to reject Work that does not conform to the Contract Documents. Whenever Owner or Design Consultant considers it necessary or advisable, Owner and/or Design Consultant shall have authority to require inspection or testing of the Work in accordance with this **Article XII**, whether or not such Work is fabricated, installed or completed.

12.2 UNCOVERING WORK

12.2.1 If a portion of the Work is covered, concealed and/or obstructed, contrary to Owner's or Design Consultant's requirements specifically expressed in the Contract Documents, it must be uncovered for Owner's or Design Consultant's

inspection and properly be replaced at Contractor's expense without any change in the Contract Time or Sum.

12.2.2 If a portion of the Work has been covered, concealed and/or obstructed and Design Consultant or Owner has not inspected the Work prior to its being covered, concealed and/or obstructed, Owner and Design Consultant retain the right to inspect such Work and, when directed by Owner, Contractor shall uncover it. If said Work is found to be in accordance with the Contract Documents, the costs for uncovering and replacement shall, by appropriate Change Order, be paid by Owner. If such Work uncovered is found to not be in accordance with the Contract Documents, Contractor shall pay all costs associated with the uncovering, correction and replacement of the Work, unless the condition found was caused by Owner or Owner's separate contractor, in which event Owner shall be responsible for payment of actual costs incurred by Contractor.

12.3 CORRECTING WORK

12.3.1 Contractor promptly shall correct any Work rejected by Owner or Design Consultant as failing to conform to the requirements of the Contract Documents, whether inspected before or after Substantial Completion and whether or not fabricated, installed or completed. Contractor shall bear costs of correcting such rejected Work, along with all costs for additional testing, inspections and compensation for Design Consultant's services and expenses made necessary thereby.

12.3.2 In addition to Contractor's warranty obligations, if any of the Work is found to be defective or nonconforming with the requirements of the Contract Documents, including, but not limited to these General Conditions, Contractor shall correct it promptly after receipt of written notice from Owner or Design Consultant to correct unless Owner previously has given Contractor a written acceptance or waiver of the defect or nonconformity. Contractor's obligation to correct defective or nonconforming Work remains in effect for:

12.3.2.1 one (1) year after the date of Substantial Completion of the Work or designated portion of the Work;

12.3.2.2 one (1) year after the date for commencement of warranties established by agreement in connection with partial occupancy under **Section 9.9.1** hereto; or

12.3.2.3 the stipulated duration of any applicable special warranty required by the

Contract Documents.

12.3.3 The one (1) year period, described in **Section 12.3.2.1**, **Section 12.3.2.2** and **Section 12.3.2.3** herein, shall be extended, with respect to portions of the Work first performed after Substantial Completion, by the period of time between Substantial Completion and the actual completion of the Work.

12.3.4 The obligations of Contractor under **Section 3.5** herein and this **Section 12.3** shall survive final acceptance of the Work and termination of this Contract. Owner shall give notice to Contractor promptly after discovery of a defective or nonconforming condition in the Work. The one (1) year period stated in this **Section 12.3** does not limit the ability of Owner to require Contractor to correct latent defects or nonconformities in the Work, which defects or nonconformities could not have been discovered through reasonable diligence by Owner or Design Consultant at the time the Work was performed or at the time of inspection for certification of Substantial Completion or Final Completion. The one (1) year period also does not relieve Contractor from liability for any defects or deficiencies in the Work that may be discovered after the expiration of the one (1) year correction period.

12.3.5 Contractor shall remove from the Project Site portions of the Work which are not in accordance with the requirements of the Contract Documents and are neither corrected by Contractor nor accepted by Owner.

12.3.6 If Contractor fails to correct any defective or nonconforming Work within what Owner deems a reasonable time after Owner or Design Consultant gives written notice of rejection to Contractor, Owner may correct the defective or nonconforming Work in accordance with this **Section 12.3**. If Contractor promptly does not proceed with correction of any defective or nonconforming Work within a reasonable time fixed by written notice from Owner or Design Consultant, Owner may remove or replace the defective or nonconforming Work and store the salvageable materials or equipment at Contractor's expense. If Contractor does not pay the costs of removal and storage within ten (10) calendar days after written notice by Owner or Design Consultant, Owner may, upon ten (10) additional calendar days written notice, sell the materials and equipment at auction or at private sale and shall account to Contractor for the proceeds, after deducting all costs and damages that should have been borne by Contractor to correct the defective work, including all compensation for Design Consultant's services and expenses made necessary as a result of the sale, removal and storage. If the proceeds of sale do not cover the costs that Contractor should have borne, the Contract Sum shall be reduced by the deficiency. If payments due to Contractor then or thereafter are not sufficient to cover the deficiency, Contractor shall pay the difference to Owner.

12.3.7 Contractor shall bear the cost of correcting destroyed or damaged construction of Owner or Owner's separate contractors, whether the construction is completed or partially completed, caused by Contractor's correction or removal of Work which is not in accordance with the requirements of the Contract Documents.

12.3.8 Nothing contained in this **Section 12.3** shall be construed to establish a period of limitation with respect to other obligations which Contractor might have under the Contract Documents. The establishment of the one (1) year time period, as described in **Section 12.3.2** relates only to the specific obligation of Contractor to correct the Work and has no relationship to the time within which the obligation to comply with the Contract Documents may be sought to be enforced or to the time within which proceedings may be commenced to establish Contractor's liability with respect to Contractor's obligations other than specifically to correct the Work.

12.3.9 Any Work repaired or replaced, pursuant to this **Article XII,** shall be subject to the provisions of **Article XII** to the same extent as Work originally performed or installed.

12.4 Acceptance of Nonconforming Work. Owner may, in Owner's sole discretion, accept Work that is not in accordance with the requirements of the Contract Documents instead of requiring its removal and correction. Upon that occurrence, the Contract Sum shall be reduced as appropriate and equitable, as solely determined by Owner. Any adjustment shall be accomplished whether or not final payment has been made.

ARTICLE XIII. COMPLETION OF THE CONTRACT; TERMINATION; TEMPORARY SUSPENSION

13.1 Final Completion Of Contract. The Contract shall be considered completed, except as provided in any warranty or maintenance stipulations, bond or by law, when all the Work has been finally completed, a final inspection is made by Owner and Design Consultant and final acceptance and final payment is made by Owner.

13.2 Warranty Fulfillment. Prior to the expiration of the specified warranty period provided for in the Contract Documents, Owner or Design Consultant shall make a detailed inspection of the Work and shall advise Contractor and Contractor's Surety of the items that require correction. Owner or Design Consultant shall make a subsequent inspection and, if the corrections have been properly performed, Owner shall issue a letter of release on the maintenance obligations to Contractor. If, for any reason, Contractor has not made the required corrections before the expiration of the warranty period, the warranty provisions as provided for in the Contract Documents shall remain in effect until the corrections have properly been performed and a letter of release from Owner to Contractor is issued.

13.3 TERMINATION BY THE OWNER FOR CAUSE

13.3.1 Notwithstanding any other provision of these General Conditions, the Work or any portion of the Work may be terminated immediately by Owner for any good cause after giving seven (7) calendar days advance written notice and an opportunity to cure to Contractor, including but not limited to the following causes:

13.3.1.1 Failure or refusal of Contractor to start the Work within ten (10) calendar days after the date of the written Notice to Proceed is issued by

Owner to Contractor commence Work.

13.3.1.2 A reasonable belief of Owner or Design Consultant that the progress of the Work being made by Contractor is insufficient to complete the Work within the specified Contract time.

13.3.1.3 Failure or refusal of Contractor to provide sufficient and proper equipment or construction forces properly to execute the Work in a timely manner.

13.3.1.4 A reasonable belief that Contractor has abandoned the Work.

13.3.1.5 A reasonable belief that Contractor has become insolvent, bankrupt, or otherwise is financially unable to carry on the Work.

13.3.1.6 Failure or refusal on the part of Contractor to observe any material requirements of the Contract Documents or to comply with any written orders given by Owner or Design Consultant, as provided for in the Contract Documents.

13.3.1.7 Failure or refusal of Contractor promptly to correct any defects in materials or workmanship, or defects of any nature, the correction of which has been directed to Contractor in writing by Owner or Design Consultant.

13.3.1.8 A reasonable belief by Owner that collusion exists or has occurred for the purpose of illegally procuring the contract or a Subcontractor, or that a fraud is being perpetrated on Owner in connection with the construction of Work under the Contract.

13.3.1.9 Repeated and flagrant violation of safe working procedures.

13.3.2 When the Work or any portion of the Work is terminated for any of the causes itemized in **Section 13.3.1** herein, or for any other cause except termination for convenience pursuant to **Section 13.3.5** herein, Contractor shall, as of the date specified by Owner, immediately discontinue the Work or portion of the Work as Owner shall designate, whereupon the Surety shall, within fifteen (15) calendar days after the written Notice of Termination by Owner For Cause has been served upon Contractor and the Surety or its authorized agents, assume the obligations of Contractor for the Work or that portion of the Work which Owner has ordered Contractor to discontinue and Surety may:

13.3.2.1 perform the Work with forces employed by the surety;

13.3.2.2 with the written consent of Owner, tender a replacement Contractor to take over and perform the Work, in which event the Surety shall be responsible for and pay the amount of any costs required to be incurred for the completion of the Work that are in excess of the amount of funds remaining under the Contract as of the time of the termination; or

13.3.2.3 with the written consent of Owner, tender and pay to Owner in settlement the amount of money necessary to finish the balance of uncompleted Work under the Contract, correct existing defective or nonconforming work and compensate Owner for any other loss sustained as a result of Contractor's default.

In the event of Termination by Owner For Cause involving **Article 13.3.2.1** and/or **Article 13.3.2.2**, the Surety shall assume Contractor's place in all respects and the amount of funds remaining and unpaid under the Contract shall be paid by Owner for all Work performed by the Surety or the replacement contractor in accordance with the terms of the Contract Documents, subject to any rights of Owner to deduct any and all costs, damages or liquidated or actual damages that Owner incurred, including, but not limited to, any and all additional fees and expenses of Design Consultant and any attorneys' fees Owner incurs as a result of Contractor's default and subsequent termination.

13.3.3 The balance of the Contract Sum remaining at the time of Contractor's default and subsequent termination shall become due and payable to the Surety as the Work progresses, subject to all of the terms, covenants and conditions of the Contract Documents. If the Surety does not, within the time specified in **Section 13.3.2** herein, exercise its obligation to assume the obligations of the Contract, or that portion of the Work which Owner has ordered Contractor to discontinue, then Owner shall have the power to complete the Work by contract or otherwise, as Owner may deem necessary and elect. Contractor agrees that Owner shall have the right to:

(1) take possession of or use any or all of the materials, plant, tools, equipment, supplies and property of every kind, to be provided by Contractor for the purpose of the Work; and

(2) procure other tools, equipment, labor and materials for the completion of the Work at Contractor's expense; and

(3) charge to the account of Contractor the expenses of completion and labor, materials, tools, equipment, and incidental expenses.

13.3.4 All expenses incurred by Owner to complete the Work shall be deducted by Owner out of the balance of the Contract Sum remaining unpaid to or unearned by Contractor. Contractor and the Surety shall be liable to Owner for any costs incurred in excess of the balance of the Contract Sum for the completion and correction of the Work, and for any other costs, damages, expenses (including, but not limited to, additional fees of Design Consultant and attorney's fees) and liquidated or actual damages incurred as a result of the termination.

13.3.5 Owner shall not be required to obtain the lowest bid for the Work of completing the Contract, as described in **Section 13.3.3** herein, but the expenses to be deducted from the Contract Sum shall be the actual cost of such Work and the

other damages, as provided in **Section 13.3.3** herein. In case Owner's costs and damages are less than the sum which would have been payable under the Contract if the Work had been completed by Contractor pursuant to the Contract, then Owner may pay Contractor (or the Surety, in the event of a complete Termination by Owner For Cause) the difference, provided that Contractor (or the Surety) shall not be entitled to any claim for damages or for loss of anticipated profits. In case such costs for completion and damages shall exceed the amount which would have been payable under the Contract if the Work had been completed by Contractor pursuant to the Contract, then Contractor and its Surety shall pay the amount of the excess to Owner immediately upon written notice from Owner to Contractor and/or the Surety for the excess amount owed. When only a particular part of the Work is being carried on by Owner, by contract or otherwise under the provisions of this Section, Contractor shall continue the remainder of the Work in conformity with the terms of the Contract and in such manner as not to hinder or interfere with the performance of workers employed and provided by Owner.

13.3.6 The right to terminate this Contract for the convenience of Owner (including, but not limited to, non-appropriation of funding) expressly is retained by Owner. In the event of a termination for convenience by Owner, Owner shall, at least ten (10) calendar days in advance, deliver written notice of the termination for convenience to Contractor. Upon Contractor's receipt of such written notice, Contractor immediately shall cease the performance of the Work and shall take reasonable and appropriate action to secure and protect the Work then in place. Contractor shall then be paid by Owner, in accordance with the terms and provisions of the Contract Documents, an amount not to exceed the actual labor costs incurred, the actual cost of all materials installed and the actual cost of all materials stored at the Project site or away from the Project site, as approved in writing by Owner but not yet paid for and which can not be returned, plus applicable overhead, profit, and actual, reasonable and documented termination costs, if any, paid by Contractor in connection with the Work in place which is completed and in conformance with the Contract Documents up to the date of termination for convenience, less all amounts previously paid for the Work. No amount ever shall be paid to Contractor for lost or anticipated profits on any part of the Work not performed.

13.4 TEMPORARY SUSPENSION OF THE WORK

13.4.1 The Work or any portion of the Work may temporarily be suspended by Owner, for a time period not to exceed ninety (90) calendar days, immediately upon written notice to Contractor for any reason, including, but not limited to:

13.4.1.1 the causes described in **Section 13.3.1.1** through **Section 13.3.1.9** herein;

13.4.1.2 under other provisions in the Contract Documents that require or permit temporary suspension of the Work;

13.4.1.3 situations where the Work is threatened by, contributes to or causes an immediate threat to public health, safety, or security; or

13.4.1.4 other unforeseen conditions or circumstances.

13.4.2 Contractor immediately shall resume the temporarily suspended Work when ordered in writing to do so by Owner. Owner shall not, under any circumstances, be liable for any claim of Contractor arising from a temporary suspension due to a cause described in **Section 13.4.1** herein; provided, however, that in the case of a temporary suspension for any of the reasons described under **Section 13.4.1.2** through **Section 13.4.1.4** herein, where Contractor is not a contributing cause of the suspension or where the provision of the Contract Documents in question does not specifically provide that the suspension is at no cost to Owner, Owner shall make an equitable adjustment for the following items, provided that a claim properly is made by Contractor under **Section 4.3** herein:

13.4.2.1 an equitable extension of the Contract Time, not to exceed the actual delay caused by the temporary suspension, as determined by Owner and Design Consultant;

13.4.2.2 an equitable adjustment to the Contract Sum for the actual, necessary and reasonable costs of properly protecting any Work finished or partially finished during the period of the temporary suspension; provided, however, that no payment of profit and/or overhead shall be allowed on top of these costs; and

13.4.2.3 if it becomes necessary to move equipment from the Project Site and then return it to the Project Site when the Work is ordered to be resumed, an equitable adjustment to the Contract Sum for the actual, necessary and reasonable cost of these moves; provided, however, that no adjustment to the Contract Sum shall be due if said equipment is moved to another Project site of Owner.

ARTICLE XIV. MISCELLANEOUS PROVISIONS

14.1 Small Business Economic Development Advocacy. Contractor shall comply with the requirements of City's Small Business Economic Development Advocacy Office as posted in the Project's solicitation documents and the Contract Documents.

14.2 GOVERNING LAW; COMPLIANCE WITH LAWS AND REGULATIONS

14.2.1 This Contract shall be governed by the laws and case decisions of the State of Texas, without regard to conflict of law or choice of law principles of Texas or of any other state.

14.2.2 This Contract is entered into subject to and controlled by the Charter and ordinances of the City of San Antonio and all applicable laws, rules and regulations of the State of Texas and the Government of the United States of America. Contractor shall, during the performance of the Work, comply with all applicable City of San Antonio codes and ordinances, as amended, and all applicable State of Texas and Federal laws, rules and regulations, as amended.

14.3 SUCCESSORS AND ASSIGNS. Owner and Contractor respectively bind themselves, their partners, successors, assigns and legal representatives to the promises, covenants, terms, conditions and obligations contained in the Contract Documents. Contractor shall not assign, transfer or convey its interest or rights in the Contract, in part or as a whole, without the written consent of Owner. If Contractor attempts to make an assignment, transfer or conveyance without Owner's written consent, Contractor nevertheless shall remain legally responsible for all obligations under the Contract Documents. Owner shall not assign any portion of the Contract Sum due or to become due under this Contract without the written consent of Contractor, except where assignment is compelled by court order, other operation of law or the terms of these General Conditions.

14.4 WRITTEN NOTICE. Any notice, payment, statement or demand required or permitted to be given under this Contract by either party to the other may be effected by personal delivery in writing or by facsimile transmission, email or by mail, postage prepaid, or by overnight delivery to an officer, management level employee or other designated representative of either party. Mailed or email notices shall be addressed to the parties at an address designated by each party, but each party may change its address by written notice in accordance with this section. Mailed notices shall be deemed received as of three (3) calendar days after mailing.

14.5 RIGHTS AND REMEDIES; NO WAIVER OF RIGHTS BY OWNER

14.5.1 The duties and obligations imposed on Contractor by the Contract Documents and the rights and remedies available to Owner under the Contract Documents shall be in addition to, and not a limitation of, any duties, obligations, rights and remedies otherwise imposed or made available by law.

14.5.2 No action or failure to act by Owner shall constitute a waiver of a right afforded Owner under the Contract Documents, nor shall any action or failure to act by Owner constitute approval of or acquiescence in a breach of the Contract by Contractor, except as may be specifically agreed in writing by Change Order, Amendment or Supplemental Agreement.

14.6 Interest. Owner shall not be liable for interest on any progress or final payment to be made under the Contract Documents, except as may be provided by the applicable provisions of the Prompt Payment Act, Chapter 2251, Texas Government Code, as amended, subject to **Article IX** of these General Conditions.

14.7 INDEPENDENT MATERIALS TESTING AND INSPECTION

In some circumstances, Owner shall retain, independent of Contractor, the inspection services, the testing of construction materials engineering and the verification testing services necessary for acceptance of the Project by Owner. Such Consultants shall be selected in accordance with Section 2254.004 of the Government Code. The professional services, duties and responsibilities of any independent Consultants shall be described in the agreements between Owner and those Consultants. The provision of inspection services by Owner shall be for Quality Assurance and shall not reduce or lessen Contractor's responsibility for the Work or its duty to establish and implement a thorough

Quality Control Program to monitor the quality of construction and guard the Owner against defects and deficiencies in the Work, as required herein. Contractor fully and solely is responsible for constructing the Project in strict accordance with the Construction Documents.

14.8 OFFICERS OR EMPLOYEES OF THE OWNER NOT TO HAVE FINANCIAL INTEREST IN ANY CONTRACT OF THE OWNER. Contractor acknowledges the Charter of the City of San Antonio and its Ethics Code prohibits a City officer or employee, as those terms are defined in Section 2-52 of the Ethics Code, from having a financial interest in any contract with the City or any City agency, such as City-owned utilities. An officer or employee has a "prohibited financial interest" in a contract with the City or in the sale to the City of land, materials, supplies or service, if any of the following individual(s) or entities is a party to the contract or sale:

(1) a City officer or employee; his parent, child or spouse;

(2) a business entity in which the officer or employee, or his parent, child or spouse owns ten (10) percent or more of the voting stock or shares of the business entity, or ten (10) percent or more of the fair market value of the business entity;

(3) a business entity in which any individual or entity above listed is a Subcontractor on a City contract, or

(4) a partner or a parent or subsidiary business entity.

Pursuant to this **Article XIV**, Contractor warrants and certifies, and this Contract is made in reliance thereon, that it, its officers, employees and/or agents are neither officers nor employees of Owner. Except with Owner's low-bid contract awards, Contractor warrants and certifies that it has tendered to Owner a Discretionary Contracts Disclosure Statement in compliance with Owner's Ethics Code. Any violation of this article shall constitute malfeasance in office and any officer or employee of Owner guilty thereof shall thereby forfeit his office or position. Any violation of this **Section 14.8**, with the knowledge, express or implied, of the person, persons, partnership, company, firm, association or corporation contracting with Owner shall render a Contract voidable by the Owner's City Manager or City Council.

14.9 Venue. This Contract is performed in Bexar County, Texas, and if legal action is necessary to enforce this Contract, exclusive venue shall lie in Bexar County, Texas.

14.10 INDEPENDENT CONTRACTOR. In performing the Work under this Contract, the relationship between Owner and Contractor is that of an independent contractor. Contractor shall exercise independent judgment in performing the Work and solely is responsible for setting

working hours, scheduling and/or prioritizing the Work flow and determining the means and methods of performing the Work, subject only to the requirements of the Contract Documents. No term or provision of this Contract shall be construed as making Contractor an agent, servant or employee of Owner or making Contractor or any of Contractor's employees, agents or servants eligible for the fringe benefits, such as retirement, insurance and worker's compensation which Owner provides to its employees.

14.11 NON-DISCRIMINATION. As a party to this Contract, Contractor understands and agrees to comply with the *Non-Discrimination Policy* of the City of San Antonio contained in Chapter 2, Article X of the City Code and further, Contractor shall not discriminate on the basis of race, color, religion, national origin, sex, sexual orientation, gender identity, veteran status, age or disability, unless Contractor is exempted by state or federal law, or as otherwise established herein. Contractor covenants that it shall take all necessary actions to insure that, in connection with any Work under this Contract, Contractor and its Subcontractor(s) shall not discriminate in the treatment or employment of any individual or groups of individuals on the grounds of race, color, religion, national origin, sex, sexual orientation, gender identity, veteran status, age or disability, either directly, indirectly or through contractual or other arrangements. Contractor also shall comply with all applicable requirements of the Americans with Disabilities Act, 42 U.S.C.A. §§12101-12213, as amended.

14.12 GIFTS TO PUBLIC SERVANTS

14.12.1 Owner may terminate this Contract immediately if Contractor has offered, conferred or agreed to confer any benefit on a City of San Antonio employee or official that the employee or official is prohibited by law from accepting.

14.12.2 For purposes of this Article, "benefit" means anything reasonably regarded as pecuniary gain or pecuniary advantage, including benefit to any other person in whose welfare the beneficiary has a direct or substantial interest, but does not include a contribution or expenditure made and reported in accordance with law.

14.12.3 Notwithstanding any other legal remedies, Owner may require Contractor to remove any employee of Contractor, a Subcontractor or any employee of a Subcontractor from the Project who has violated the restrictions of this **Article XIV** or any similar State or Federal law and Owner may obtain reimbursement for any expenditures made to Contractor as a result of an improper offer, an agreement to confer or the conferring of a benefit to a City of San Antonio employee or official.

ARTICLE XV. AUDIT

15.1 RIGHT TO AUDIT CONTRACTOR'S RECORDS. By execution of the Contract, Contractor grants Owner the right to audit, examine, inspect and/or copy, at Owner's election at all reasonable times during the term of this Contract and for a period of four (4) years following the completion or termination of the Work, all of Contractor's written and

electronically stored records and billings relating to the performance of the Work under the Contract Documents. The audit, examination or inspection may be performed by an Owner designee, which may include its internal auditors or an outside representative engaged by Owner. Contractor agrees to retain its records for a minimum of four (4) years following termination of the Contract, unless there is an ongoing dispute under the Contract, then, such retention period shall extend until final resolution of the dispute, with full access allowed to authorized representatives of Owner upon request, for purposes of evaluating compliance with this and other provisions of the Contract.

15.1.1 As used in these General Conditions, "Contractor written and electronically stored records" shall include any and all information, materials and data of every kind and character generated as a result of the work under this Contract. Example of Contractor written and electronically stores records include, but are not limited to: accounting data and reports, billings, books, general ledgers, cost ledgers, invoices, production sheets, documents, correspondences, meeting notes, subscriptions, agreements, purchase orders, leases, contracts, commitments, arrangements, notes, daily diaries, reports, drawings, receipts, vouchers, memoranda, time sheets, payroll records, policies, procedures, Subcontractor agreements, Supplier agreements, rental equipment proposals, federal and state tax filings for any issue in question, along with any and all other agreements, sources of information and matters that may, in Owner's sole judgment, have any bearing on or pertain to any matters, rights, duties or obligations under or covered by any Agreement Documents.

15.1.2 Owner agrees that it shall exercise the right to audit, examine or inspect Contractor’s records only during regular business hours. Contractor agrees to allow Owner and/or Owner’s designee access to all of the Contractor's Records, Contractor's facilities and current or former employees of Contractor, deemed necessary by Owner or its designee(s), to perform such audit, inspection or examination. Contractor also agrees to provide adequate and appropriate work space necessary for Owner or its designees to conduct such audits, inspections or examinations.

15.1.3 Contractor shall include this **Article XV** in any Subcontractor, supplier or vendor contract.

ARTICLE XVI.
ATTORNEY FEES

The Parties hereto expressly agree that, in the event of litigation, all parties waive rights to payment of attorneys’ fees that otherwise might be recoverable, pursuant to the Texas Civil Practice and Remedies Code Chapter 38, Texas Local Government Code §271.153, the Prompt Payment Act, common law or any other provision for payment of attorney’s fees.

Special Conditions for Horizontal Projects

3.2.5 Differing Site Conditions (Adds this Section 3.2.5 to GENERAL CONDITIONS FOR CITY OF SAN ANTONIO CONSTRUCTION CONTRACTS)

Contractor promptly shall, before such discovered conditions and/or structures are disturbed, notify Owner in writing of differing site conditions. Differing site conditions are defined as subsurface or latent physical and/or structural conditions at the Site differing materially from those indicated in the Plans, Specifications and other Contract Documents or newly discovered and previously unknown physical conditions at the Site of an unusual nature differing materially from those geophysical conditions typically encountered in the type Work being performed and generally being recognized as not indigenous to the San Antonio, Bexar County, Texas environs.

Owner and/or Design Consultant promptly shall investigate the reported physical and/or structural conditions and shall determine whether or not the physical and/or structural conditions do materially so differ and thereby cause an increase or decrease in Contractor's cost of and/or time required for performance of any part of the Work under this Contract. In the event that Owner reasonably determines that the physical and/or structural conditions materially so differ, a negotiated and equitable adjustment shall be made to the Contract Time and/or Contract Sum and a Change Order promptly shall be issued by Owner.

(1) No claim of Contractor under this **Section 3.2.5** shall be allowed unless Contractor has given the written notice called for above, prior to disturbing the discovered conditions and/or structures.

(2) No Contract adjustment shall be allowed under this **Section 3.2.5** for any effects caused on unchanged work.

3.4.7 Material Testing (Added to Section 3.4.7 of GENERAL CONDITIONS FOR CITY OF SAN ANTONIO CONSTRUCTION CONTRACTS)

Materials not meeting Contract requirements or that do not produce satisfactory results shall be rejected by Owner, unless Owner or Design Consultant approves corrective actions. Upon rejection, Contractor immediately shall remove and replace rejected materials. If Contractor does not comply with these requirements, Owner may remove and replace defective material and all costs incurred by Owner for testing, removal and replacement of rejected materials shall be deducted from any money due or owed to Contractor.

The source of supply of each of the materials shall be approved by Owner or Design Consultant before delivery is started and, at the option of Owner, may be sampled and tested by Owner for determining compliance with the governing specifications before delivery is started. If it is found after trial that sources of supply previously approved do not produce uniform and satisfactory products, or if the product from any source proves unacceptable at any time, Contractor shall furnish materials from other approved sources. Only materials conforming to the requirements of the Contract documents and approved by Owner shall be used by Contractor in the work. All materials being used by Contractor are subject to inspection or test at any time during preparation or use. Any material which has been tested and accepted at the source of supply may be subjected to a check test after delivery and all materials which, when retested, do not meet the requirements of the specifications shall be rejected. No material which, after approval, has in any way become unfit for use shall be used in the Work.

If, for any reason, Contractor selects a material which is approved for use by Owner or Design Consultant by sampling, testing or other means, and Contractor decides to change to a different material requiring additional sampling and testing by Owner for approval, Contractor shall pay for any expense incurred by Owner for such additional sampling and testing and the costs incurred by Owner shall be deducted from any money due or owed to Contractor.

4.3.8 Change in Unit Prices (Added to Section 4.3.8 of GENERAL CONDITIONS FOR CITY OF SAN ANTONIO CONSTRUCTION CONTRACTS)

Unit prices established in the Contract documents only may be modified when a Change Order or Field Work Directive causes a material change in quantity to a Major Bid Item. A Major Bid Item is defined as a single bid item that constitutes a minimum of five percent (5%) of the total contract value. A material change in quantity is defined as an increase or decrease of twenty five percent (25%) or more of the units of an individual bid item or an increase or decrease of twenty five percent (25%) or more of the dollar value of a lump sum bid item. Revised unit pricing only shall apply to the quantity of a major bid item in excess of a twenty five percent (25%) increase or decrease of the original Contract quantity.

7.2.5 Allowable Markups (Added to Section 7.2.5 of GENERAL CONDITIONS FOR CITY OF SAN ANTONIO CONSTRUCTION CONTRACTS)

Maximum allowable markups for Change Order pricing, when said pricing is not determined through unit prices, are established as follows:

7.2.5.1 Labor

Contractor shall be allowed the documented payroll rates for each hour laborers and foremen actually shall be engaged in the Work. Contractor shall be allowed to receive an additional twenty five percent (25%) as compensation, based on the total wages paid said laborers and foremen. No charge shall be made by Contractor for organization or overhead expenses. For costs of premiums on public liability and workers compensation insurance(s), Social Security and unemployment insurance taxes, an amount

equal to fifty five percent (55%) of the sum of the labor cost, excluding the twenty five percent (25%) documented payroll rate compensation allowed herein, shall be the established maximum allowable labor burden cost. No charge for superintendence shall be made unless considered necessary and approved by Owner or a Change Order includes an extension of the Contract Time.

7.2.5.2 Materials

Contractor shall be allowed to receive the actual cost, including freight charges, for materials used on such Work, including an additional twenty five percent (25%) of the actual cost as compensation. When material invoices indicate an available discount, the actual cost shall be determined as the invoiced price less the available discount.

7.2.5.3 Equipment

For Contractor-owned machinery, trucks, power tools or other equipment, necessary for use on Change Order work, the Rental Rate Blue Book for Construction Equipment (hereafter referred to as "Blue Book") rate, as modified by the following, shall be used to establish Contractor's allowable hourly rental rates. Equipment used shall be at the rates in effect for each section of the Blue Book at the time of use. The following formula shall be used to compute the hourly rates:

$$H = \frac{M \times R1 \times R2}{176} + OP$$

Where
H = Hourly Rate
M = Monthly Rate
R1 = Rate Adjustment Factor
R2 = Regional Adjustment Factor
OP = Operating Costs

If Contractor-owned machinery and/or equipment is not available and equipment is rented from an outside source, the hourly rate shall be established by dividing the actual invoice cost by the actual number of hours the equipment is involved in the Work. Owner reserves the right to limit the hourly rate to comparable Blue Book rates. When the invoice specifies that the rental rate does not include fuel, lubricants, repairs and servicing, the Blue Book hourly operating cost shall be allowed to be added for each hour the equipment operates. The allowable equipment hourly rates shall be paid for each hour that the equipment is involved in the Work and an additional maximum of fifteen percent (15%) may be added as compensation.

7.2.5.4 Subcontractor Markups

Contractor shall be allowed administrative cost only when extra Work, ordered by Owner, is performed by a Subcontractor or Subcontractors. The maximum allowable payment for administrative cost shall not exceed five percent (5%) of the total Subcontractor work. Off-duty peace officers and patrol cruisers shall be considered as Subcontractors, with regard to consideration of allowable contractor markups.

7.3.9 Field Work Directive Allowable Markups (Adds this Section 7.3.9 to GENERAL CONDITIONS FOR CITY OF SAN ANTONIO CONSTRUCTION CONTRACTS)

Maximum allowable markups for Field Work Directives shall follow the allowable markups established in **Section 7.2.5** herein.

8.2.2 Standby Equipment Costs (Added to Section 8.2.2 of GENERAL CONDITIONS FOR CITY OF SAN ANTONIO CONSTRUCTION CONTRACTS)

Contractor shall be entitled to standby costs only when directed to standby in writing by Owner. Standby costs may include actual documented Project overhead costs of Contractor, consisting of administrative and supervisory expenses incurred at the Project Site. Standby equipment costs shall not be allowed during periods when the equipment would otherwise have been idle.

For Projects not affecting City traffic and working under a five (5) day work week, with a Working Day measured from sunrise to sundown Monday through Friday, no more than eight (8) hours of standby time shall be paid during a 24-hour day, no more than forty (40) hours shall be paid per week for standby time and no more than one hundred and seventy six (176) hours per month shall be paid of standby time. Standby time shall be computed at fifty percent (50%) of the rates found in the Rental Rate Blue Book for Construction Equipment and shall be calculated by dividing the monthly rate found in the Blue Book by 176, then multiplying that total by the regional adjustment factor and the rate adjustment factor. Operating costs shall not be charged by Contractor.

For Projects affecting City traffic and working under a six (6) day work week, with a Working Day measured from sunrise to sundown Monday through Saturday, no more than eight (8) hours of standby time shall be paid during a 24-hour day, no more than forty eight (48) hours shall be paid per week for standby time and no more than two hundred and eight (208) hours per month shall be paid of standby time. Standby time shall be computed at fifty percent (50%) of the rates found in the Rental Rate Blue Book for Construction Equipment and shall be calculated by dividing the monthly rate found in the Blue Book by 208, then multiplying that total by the regional adjustment factor and the rate adjustment factor. Operating costs shall not be charged by Contractor.

10.11 Road Closures and Detour Routes (Adds this Section 10.11 to GENERAL CONDITIONS FOR CITY OF SAN ANTONIO CONSTRUCTION CONTRACTS)

Contractor shall not begin construction of the Project or close any streets until adequate barricades and detour signs have been provided, erected and maintained in accordance with the

detour route and details shown on the Project Plans. Contractor shall notify Owner forty eight (48) hours in advance of closing any street to through traffic. Local traffic shall be permitted the use of streets under construction whenever feasible.

10.12 Use of City Streets (Adds this Section 10.12 to GENERAL CONDITIONS FOR CITY OF SAN ANTONIO CONSTRUCTION CONTRACTS)

Contractor shall confine the movements of all steel-tracked equipment to the limits of the Project Site and any such equipment shall not be allowed use of Owner's streets unless being transported on pneumatic-tired vehicles. Any damage to Owner's streets caused by Contractor and/or Contractor's equipment, either outside the limits of the Project site or within the limits of the Project site but not within the limits of the current phase then being constructed, shall be repaired by Contractor at its own expense and as prescribed by Owner's specifications and direction. If Contractor can not or refuses to repair street damage caused by Contractor and/or Contractor's equipment, Owner may perform the repairs and all expenses incurred by Owner in performing the repairs shall be deducted for any money due or owed to Contractor.

10.13 Maintenance of Traffic (Adds this Section 10.13 to GENERAL CONDITIONS FOR CITY OF SAN ANTONIO CONSTRUCTION CONTRACTS)

In accordance with the approved traffic control plan and as specified in the Contract, Contractor shall:

(1) keep existing roadways open to traffic or construct and maintain detours and temporary structures for safe public travel;

(2) maintain the Work in passable condition, including proper drainage, to accommodate traffic;

(3) provide and maintain temporary approaches and crossings of intersecting roadways in a safe and passable condition;

(4) construct and maintain necessary access to adjoining property as shown in the plans or as directed by Owner; and

(5) furnish, install and maintain traffic control devices in accordance with the Contract.

The cost of maintaining traffic shall be subsidiary to the Project and shall not directly be paid for by Owner, unless otherwise stated in the Plans and Specifications. Owner shall notify Contractor if Contractor fails to meet the above traffic requirements. Owner may perform the work necessary for compliance, but any action n by Owner shall not change the legal responsibilities of Contractor, as set forth in the Contract Documents. Any costs incurred by Owner for traffic maintenance shall be deducted from money due or owed to Contractor.

10.14 Abatement and Mitigation of Excessive or Unnecessary Construction Noise (Adds this Section 10.14 to GENERAL CONDITIONS FOR CITY OF SAN ANTONIO CONSTRUCTION CONTRACTS)

Contractor shall ensure abatement and mitigation of excessive or unnecessary construction noise to the satisfaction of Owner and as prescribed by all applicable state and local laws.

10.15 Incidental Work, Connections, and Passageways (Adds Section 10.15 to GENERAL CONDITIONS FOR CITY OF SAN ANTONIO CONSTRUCTION CONTRACTS)

Contractor shall perform all incidental Work necessary to complete and comply with this Contract including, but not limited to the following:

(1) Contractor shall make and provide all suitable reconnections with existing improvements (generally excluding new connections with or relocation of utility services, unless specifically provided for otherwise in the Contract Documents) as are necessarily incidental to the proper completion of the Project;

(2) Contractor shall provide passageways or leave open such thoroughfares in the Work Site as may be reasonably required by Owner; and

(3) Contractor shall protect and guard same at its own risk and continuously shall maintain the Work Site in a clean, safe and workmanlike manner.

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Special Conditions for Task Order Contracts

When applying these General Conditions for City of San Antonio Construction Contracts to Task Order contracts for horizontal work, **Section 9.3 Application for Payment, Section 9.4 Pay Application Approval, Section 9.5 Decisions to Reject Application for Payment, Section 9.6 Progress Payments** and **Section 9.9 Final completion and Final Payment** of the City's General Conditions for City of San Antonio Construction Contracts hereby are deleted in their entireties and collectively replaced with the following replacement Sections:

9.3 APPLICATION FOR PAYMENT/CONTRACTOR BILLING

9.3.1 Under an issued Task Order contract with Owner, Contractor shall not be required to submit an application for payment to Owner for materials and work performed. Instead, Owner shall calculate the accrual of materials utilized for the subject payment period and submit a request for payment from Owner on Contractor's behalf.

9.3.2 Owner, through its on-site Project Inspector, shall calculate the daily total of materials utilized by Contractor performing horizontal work through an issued Task Order contract. Inspector's daily total of utilized materials shall be confirmed daily by Contractor. Inspector also shall keep a monthly running total of work performed and materials utilized as agreed upon, for each day of Work, by Contractor.

9.3.3 Inspector, at minimum every thirty (30) days throughout the Project's duration, then shall submit, on Contractor's behalf, the agreed upon total materials utilized by Contractor for the outstanding days, up to the date of Inspector's submittal, to Owner's TCI Fiscal Department for payment to Contractor.

9.3.4 Owner's TCI Fiscal Department then shall issue payment to Contractor, within ____ days of receipt of Inspector's and Contractor's agreed upon total materials utilized, calculated at the rate for the utilized materials reflected in Contractor's Task Order contract with Owner.

9.3.5 Unless otherwise provided in the Contract Documents, payments by Owner shall be made on account of materials and equipment delivered and suitably stored at the Site for subsequent incorporation in the Work and verified by Owner. If approved in advance in writing by Owner, payment similarly may be made for materials and equipment suitably stored off the Site at a location agreed upon in writing and verified by Owner. Payment for materials and equipment stored on or off the Site shall be conditioned upon compliance by Contractor with procedures reasonably satisfactory to Owner to establish Owner's title to such materials and equipment or otherwise protect Owner's interest. Contractor solely shall be responsible for payment of all costs of applicable insurance, storage and transportation to the site for materials and equipment stored off the site.

9.3.6 Contractor warrants, upon Owner's submittal of an Application for Payment to Contractor, all Work for which payment previously has been received from Owner shall, to the best of Contractor's knowledge, information and belief, be free and clear of liens, claims, security interests or encumbrances in favor of Contractor, Subcontractors, material suppliers or other persons or entities making a claim by reason of having provided labor, materials and equipment relating to the Work. **CONTRACTOR SHALL INDEMNIFY AND HOLD OWNER HARMLESS FROM ANY LIENS, CLAIMS, SECURITY INTEREST OR ENCUMBRANCES FILED BY CONTRACTOR, SUBCONTRACTORS OR ANYONE CLAIMING BY, THROUGH OR UNDER CONTRACTOR OR SUBCONTRACTOR(S) FOR ITEMS COVERED BY PAYMENTS MADE BY OWNER TO CONTRACTOR**.

9.3.7 By Owner's submission of an Application for Payment on behalf of Contractor and by its concurrence with said submission, Contractor certifies that there are no known liens or bond claims outstanding as of the date of said Application for Payment, that all due and payable bills with respect to the Work have been paid to date or are included in the amount requested in the current application and, except for such bills not paid but so included, there is no known basis for the filing of any liens or bond claims relating to the Work and that releases from all Subcontractors and Contractor's materialmen have been obtained in such form as to constitute an effective release of lien or claim under the laws of the State of Texas covering all Work theretofore performed and for which payment has been made by Owner to Contractor; provided if any of the foregoing is not true and cannot be certified, Contractor shall revise the certificate as appropriate and identify all exceptions to the requested certifications.

9.4 PAYMENT APPROVAL

9.4.1 Contractor's concurrence of the total daily Work performed, as recorded by the on-site Project Inspector and subsequent confirmation by Contractor of the daily total of materials utilized by Contractor, shall constitute a representation by Contractor to Owner the Work has progressed to the point indicated and that, to the best of Contractor's knowledge, information and belief, the quality of the Work is in accordance with the Contract Documents. The foregoing representations are subject to an evaluation of the Work for conformance with the Contract Documents upon Substantial Completion, to results of subsequent tests and inspections, to correction of minor deviations from the Contract Documents prior to completion and to any specific qualifications expressed by Owner. Contractor's concurrence further shall constitute a representation that Contractor is entitled to payment in the amount submitted. The issuance of a Payment to Contractor shall not be a representation that Owner has:

(1) made exhaustive or continuous on-site inspections to check the quality or quantity of the Work;

(2) reviewed construction means, methods, techniques, sequences or procedures;

(3) reviewed copies of requisitions received from Subcontractors and material suppliers and other data requested by Owner to substantiate Contractor's right to payment; or

(4) made any examination to ascertain how or for what purpose Contractor has used money previously paid on account of the Contract Sum.

9.5 DECISIONS TO REJECT PAYMENT TO CONTRACTOR

9.5.1 A request for payment to Contractor may be rejected at any time by Owner to protect Owner for any of the following reasons:

9.5.1.1 Work not performed or is defective ;

9.5.1.2 third party claims filed or reasonable evidence indicating a probable filing of such claims for which Contractor is responsible hereunder, unless security acceptable to Owner is provided by Contractor;

9.5.1.3 failure of Contractor to make payments properly to Subcontractors or for labor, materials or equipment;

9.5.1.4 reasonable evidence that the Work cannot be completed for the unpaid balance of the Contract Sum and Contractor has failed to provide Owner adequate assurance of its continued performance within a reasonable time after demand;

9.5.1.5 damage to Owner or another contractor;

9.5.1.6 reasonable evidence that the Work shall not be completed within the time allotted on the issued Task Order and that the unpaid balance on the issued Task Order would not be adequate to cover actual or liquidated damages for the anticipated delay;

9.5.1.7 persistent failure by Contractor to carry out the Work in accordance with the issued Task Order and/or Contract Documents;

9.5.1.8 the applicable liquidated damages were not included in the Owner-submitted Application for Payment;

9.5.1.9 billing for unapproved/unverified materials stored off Site; or

9.5.1.10 a current schedule update has not been submitted by Contractor to Owner.

9.5.2 Owner shall not be deemed in default by reason of rejecting Application for Payment as provided for in **Section 9.5.1** herein.

9.6 PROGRESS PAYMENTS

9.6.1 Owner's payment of installments shall not, in any way, be deemed to be a final acceptance by Owner of any part of the Work, shall not prejudice Owner in the final settlement of the Contract account or shall not relieve Contractor from completion of the Work herein provided.

9.6.2 Contractor shall, within ten (10) calendar days following receipt of payment from Owner, pay all bills for labor and materials performed and furnished by others in connection with the construction, furnishing and equipping of the improvements and the performance of the work, and shall, if requested, provide Owner with written evidence of such payment. Contractor's failure to make payments or provide written evidence of such payments within such time shall constitute a material breach of this contract, unless Contractor is able to demonstrate to Owner bona fide disputes associated with the unpaid Subcontractor(s) or supplier(s) and its/their work. Contractor shall include a provision in each of its subcontracts imposing the same written documentation of payment obligations on its Subcontractors as are applicable to Contractor hereunder, and if Owner so requests, shall provide copies of such Subcontractor payments to Owner. If Contractor has failed to make payment promptly to Contractor's Subcontractors or for materials or labor used in the Work for which Owner has made payment to the Contractor, Owner shall be entitled to withhold payment to Contractor to the extent necessary to protect Owner.

9.6.3 Owner shall, if practicable and upon request, furnish to Subcontractor information regarding percentages of completion or amounts applied for by Contractor and action taken thereon by Owner on account of portions of the Work done by such Subcontractor.

9.6.4 Owner shall have an obligation to pay or to see to the payment of money to a Subcontractor, except as may otherwise be required by law, if any.

9.6.5 Payments to material suppliers shall be treated in a manner similar to that provided in **Section 9.6.3** and **Section 9.6.4** herein regarding Subcontractors.

9.6.6 A Certificate for Payment, a progress payment or a partial or entire use or occupancy of the Project by Owner shall not constitute acceptance of Work that was not performed or furnished in accordance with the Contract Documents.

9.6.7 Contractor shall, as a condition precedent to any obligation of Owner under this Contract, provide to Owner payment and performance bonds in the full penal amount of the Contract in accordance with Texas Government Code Chapter 2253.

9.9 FINAL COMPLETION AND FINAL PAYMENT

9.9.1 When all of the Work on an issued Task Order finally is complete and ready for final inspection, Contractor shall notify Owner in writing. Thereupon, Owner shall make final inspection of the Work and, if the Work is complete in full accordance with the issued Task Order and, pursuant to this Contract, fully has been performed, Contractor shall submit a final Application for Payment. If Owner is unable to approve the final Application for Payment for reasons for which Contractor is responsible and Owner is required to repeat a final inspection of the Work, Contractor shall be responsible for all costs incurred and associated with such repeat final inspection(s) and said costs may be deducted by Owner from the Contractor's final payment.

9.9.2 If, after Substantial Completion of the Work, Final Completion of the Work materially is delayed through no fault of Contractor nor by Issuance of Change Orders affecting Final Completion of the Work, and Owner so confirms, Owner shall, upon application by Contractor and without terminating the Contract, make payment of the balance due Contractor for that portion of the work fully completed and accepted. Request for final payment by Contractor shall constitute a waiver of all claims against Owner, except those previously made in writing and identified by that payee as unsettled at the time of final Application for Payment.

9.9.3 For all payments made through an issued Task Order contract, City shall not withhold any retainage from payments made to Contractor.

General Decision Number: TX160280 01/15/2016 TX280

Superseded General Decision Number: TX20150280

State: Texas

Construction Type: Building

County: Bexar County in Texas.

BUILDING CONSTRUCTION PROJECTS (does not include single family homes or apartments up to and including 4 stories).

Note: Under Executive Order (EO) 13658, an hourly minimum wage of $10.15 for calendar year 2016 applies to all contracts subject to the Davis-Bacon Act for which the solicitation was issued on or after January 1, 2015. If this contract is covered by the EO, the contractor must pay all workers in any classification listed on this wage determination at least $10.15 (or the applicable wage rate listed on this wage determination, if it is higher) for all hours spent performing on the contract in calendar year 2016. The EO minimum wage rate will be adjusted annually. Additional information on contractor requirements and worker protections under the EO is available at www.dol.gov/whd/govcontracts.

Modification Number	Publication Date
0	01/08/2016
1	01/15/2016

ASBE0087-014 01/01/2014

	Rates	Fringes
ASBESTOS WORKER/HEAT & FROST INSULATOR (Duct, Pipe and Mechanical System Insulation)....	$ 21.17	8.77

BOIL0074-003 01/01/2014

	Rates	Fringes
BOILERMAKER.....	$ 23.14	21.55

ELEC0060-003 06/01/2015

	Rates	Fringes
ELECTRICIAN (Communication Technician Only).....	$ 21.45	9%+4.65

ELEC0060-004 06/01/2015

	Rates	Fringes
ELECTRICIAN (Excludes Low Voltage Wiring).....	$ 27.82	11%+4.65

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* ELEV0133-002 01/01/2016

	Rates	Fringes
ELEVATOR MECHANIC.....	$ 37.76	29.985+a

Footnote: A. 6% under 5 years based on regular hourly rate for all hours worked. 8% over 5 years based on regular hourly rate for all hours worked.

New Year's Day, Memorial Day, Independence Day, Labor Day, Thanksgiving Day, the Friday after Thanksgiving Day, Christmas Day, and Veterans Day.

ENGI0450-002 04/01/2014

	Rates	Fringes
POWER EQUIPMENT OPERATOR Cranes.....	$ 34.85	9.85

IRON0066-013 06/01/2015

	Rates	Fringes
IRONWORKER, STRUCTURAL.....	$ 21.30	5.95

IRON0084-011 06/01/2015

	Rates	Fringes
IRONWORKER, ORNAMENTAL	$ 23.02	6.35

PLUM0142-009 07/01/2014

	Rates	Fringes
HVAC MECHANIC (HVAC Electrical Temperature Control Installation Only)	$ 30.40	10.10
HVAC MECHANIC (HVAC Unit Installation Only)	$ 30.40	10.10
PIPEFITTER (Including HVAC Pipe Installation)	$ 30.40	10.10
PLUMBER (Excludes HVAC Pipe Installation)	$ 30.40	10.10

SFTX0669-002 04/01/2015

	Rates	Fringes
SPRINKLER FITTER (Fire Sprinklers)	$ 27.43	17.12

SHEE0067-004 04/01/2014

	Rates	Fringes
Sheet metal worker		
Excludes HVAC Duct Installation	$ 25.60	13.54
HVAC Duct Installation Only	$ 25.60	13.54

SUTX2014-006 07/21/2014

	Rates	Fringes
BRICKLAYER	$ 22.15	0.00
CARPENTER (Acoustical Ceiling Installation Only)	$ 17.83	0.00
CARPENTER (Form Work Only)	$ 13.63	0.00
CARPENTER, Excludes Acoustical Ceiling Installation, Drywall Hanging, Form Work, and Metal Stud Installation	$ 16.86	4.17
CAULKER	$ 15.00	0.00
CEMENT MASON/CONCRETE FINISHER	$ 22.27	5.30

DRYWALL FINISHER/TAPER.....$ 13.81 0.00

DRYWALL HANGER AND METAL STUD
INSTALLER.....$ 15.18 0.00

ELECTRICIAN (Low Voltage
Wiring Only).....$ 20.39 3.04

IRONWORKER, REINFORCING.....$ 12.27 0.00

LABORER: Common or General.....$ 10.75 0.00

LABORER: Mason Tender - Brick...$ 11.88 0.00

LABORER: Mason Tender -
Cement/Concrete.....$ 12.00 0.00

LABORER: Pipelayer.....$ 11.00 0.00

LABORER: Roof Tearoff.....$ 11.28 0.00

LABORER: Landscape and
Irrigation.....$ 8.00 0.00

OPERATOR:
Backhoe/Excavator/Trackhoe.....$ 15.98 0.00

OPERATOR: Bobcat/Skid
Steer/Skid Loader.....$ 14.00 0.00

OPERATOR: Bulldozer.....$ 14.00 0.00

OPERATOR: Drill.....$ 14.50 0.00

OPERATOR: Forklift.....$ 12.50 0.00

OPERATOR: Grader/Blade.....$ 23.00 5.07

OPERATOR: Loader.....$ 12.79 0.00

OPERATOR: Mechanic.....$ 18.75 5.12

OPERATOR: Paver (Asphalt,
Aggregate, and Concrete).....$ 16.03 0.00

OPERATOR: Roller.....$ 12.00 0.00

PAINTER (Brush, Roller and
Spray), Excludes Drywall
Finishing/Taping.....$ 13.07 0.00

ROOFER.....$ 12.00 0.00

TILE FINISHER.....$ 11.32 0.00

TILE SETTER.....$ 14.94 0.00

TRUCK DRIVER: Dump Truck.....$ 12.39 1.18

TRUCK DRIVER: Flatbed Truck.....$ 19.65 8.57

TRUCK DRIVER: Semi-Trailer
Truck.....$ 12.50 0.00

TRUCK DRIVER: Water Truck.....$ 12.00 4.11

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

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

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

Union Rate Identifiers

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

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

Survey Rate Identifiers

Classifications listed under the "SU" identifier indicate that

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

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

Union Average Rate Identifiers

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

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

WAGE DETERMINATION APPEALS PROCESS

1.) Has there been an initial decision in the matter? This can be:

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

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

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

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

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

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

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

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

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

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

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END OF GENERAL DECISION

CITY OF SAN ANTONIO
TRANSPORTATION & CAPITAL IMPROVEMENTS

Note: Addenda Acknowledgement Form for Addendum 3 is attached herein. This form must be signed and submitted with the bid package.

RECEIPT OF ADDENDUM NUMBER **3** IS HEREBY ACKNOWLEDGED FOR PLANS AND SPECIFICATIONS FOR CONSTRUCTION OF THE **FIRE STATION 30 REPLACEMENT PROJECT** FOR WHICH BIDS WILL BE OPENED ON **TUESDAY, JANUARY 26, 2016 AT 2:00 P.M.**

THIS ACKNOWLEDGEMENT MUST BE SIGNED AND RETURNED WITH THE BID PACKAGE.

Company Name: _____

Address: _____

City/State/Zip Code: _____

Date: _____

_____
Signature

_____
Print Name/Title