



Department of Building & Grounds
Architectural Services Division
City of Baton Rouge
Parish of East Baton Rouge
P.O. Box 1471
Baton Rouge, Louisiana 70821
225 389-4694 Voice
225 389-4704 Fax

ADDENDUM #1

March 8, 2024

TO ALL BIDDERS

**PROJECT: EMS STATION NO. 9
CITY PARISH PROJECT NO. 21-ASC-CP-1495**

The following revisions shall be incorporated in and take precedence over any conflicting part of the original contract documents.

1. Please see attached Addendum from WTD ARCHITECTURE (62 Pages.)

TOTAL PAGES53 (SPECIFICATIONS)
TOTAL PAGES9 (DRAWINGS)
TOTAL PAGES63 (INCLUDING THIS PAGE)

FAILURE TO INDICATE RECEIPT OF THIS ADDENDUM ON BID FORM MAY BE CAUSE FOR THE BID TO BE REJECTED

June Tran, AIA
Senior Architect
Architectural Services Division
1100 Laurel St Rm 231
Baton Rouge, LA 70802

Addendum #1**TO ALL CONTRACTORS:**

This Addendum is hereby made a part of the Contract Documents dated 2-9-2024

**New EMS Station No. 9
8850 Connell's Village Lane
Baton Rouge, LA 70815**

CITY PARISH PROJECT NO: 21-ASC-CP-1495

The following items shall be considered part of the contract documents and shall be included in the same when Construction Contract is executed. Changes made by Addenda shall take precedence over Original Documents. Any changes, which may affect construction or proper installation of materials, equipment or fixtures, not specifically mentioned in this addendum, shall be brought to the attention of Designer before submitting bid. Otherwise, such conditions, if found later to exist, must be worked out in an acceptable manner without additional cost to the Owner. Prime Contractors are hereby advised to call attention of all subcontractors to changes, which may affect their work.

General:

- Pre-Bid Agenda and Sign In Sheet attached.
- Mechanical
 - All exposed Mechanical, HVAC, Plumbing items, material, piping to be painted. Coordinate with architect in field during construction on exact color required. Figure in bid custom paint color. Provide color coded piping labels & directional flow arrows for all piping.
 - It is the Contractor's responsibility to have each large (greater than 50 gallon capacity, and/or 100,000 btuh heat input) water heater, and pressure vessels inspected by a State of Louisiana certified inspector upon installation. A copy of each report shall be transmitted to the Architect/Engineer. One additional copy of each report shall be included in EACH of the THREE Close-out Manuals. Coordinate with LAOSFM Boiler Section @ 1-800-256-5452.
 - Test all Backflow Preventers at project completion, include test report within closeout documents.
 - Contractor to coordinate exact sizes required for all duct/pipe floor/wall penetrations thru rated assemblies. Contractor to fill annular space between duct/pipe penetration in accordance with UL listed wall/floor assembly as to maintain all required ratings.
 - Contractor to figure in bid all required blocking within walls as to properly install all plumbing fixtures in strict accordance with manufacturer's installation guidelines.

Drawings:

- Sheet G1.01 – General
 - Remove Existing Sheet G1.01 from the bid documents
 - Replace with attached Sheet LS1.01, revisions include, but are not limited to, the following:
 - Added signage for Tank Room 117
- Sheet LS1.01 – Life Safety Plan
 - Remove Existing Sheet LS1.01 from the bid documents
 - Replace with attached Sheet LS1.01, revisions include, but are not limited to, the following:
 - Fire rated enclosure at Tank Room 117
- Sheet A1.01 – Floor Plan
 - Remove Existing Sheet A1.01 from the bid documents
 - Replace with attached Sheet A1.01, revisions include, but are not limited to, the following:
 - Changes to partition types at Tank Room 117
 - Changes to shower orientation and adjacent wall adjustments including clear opening and partition types at Men's Bathroom 109 and Women's Bathroom 106
 - Added partition for duct chase at Biohazard 118

- Sheet A3.01 - Schedules & Details
 - Remove Existing Sheet A3.01 from the bid documents
 - Replace with attached Sheet A3.01, revisions include, but are not limited to, the following:
 - Change Door 117 to rated door
 - Added wall partition types
- Sheet M1.01 – Mechanical Floor Plan
 - Remove Existing Sheet A3.01 from the bid documents
 - Replace with attached Sheet A3.01, revisions include, but are not limited to, the following:
 - Revised EF-6 and respective ductwork routing
- Sheet M2.01 – Mechanical Schedules
 - Remove Existing Sheet A2.01 from the bid documents
 - Replace with attached Sheet A2.01, revisions include, but are not limited to, the following:
 - Revised “Air Distribution Schedule”
- Sheet M2.02 – Mechanical Schedules
 - Remove Existing Sheet A2.02 from the bid documents
 - Replace with attached Sheet A2.02, revisions include, but are not limited to, the following:
 - Revised “Exhaust Fan” (EF-6)
- Sheet P1.01 – Floor Plan - Plumbing
 - Remove Existing Sheet P1.01 from the bid documents
 - Replace with attached Sheet P1.01, revisions include, but are not limited to, the following:
 - Revised plumbing at showers in Women’s Bathroom 106 & Men’s Bathroom 109
 - Revised location of electric water heater (WH-2) to be within ceiling space above Tank Room 117
 - Revised Plumbing Plan Keynotes
- Sheet P4.04 – Plumbing Details
 - Remove Existing Sheet P4.04 from the bid documents
 - Replace with attached Sheet P4.04, revisions include, but are not limited to, the following:
 - Revised Detail #3, Electric Water Heater (WH-2)

Specifications:

- Add attached Geotechnical Engineering Report from Terracon date December 20,2023

Prior Approvals:

The following manufacturers are considered equal to that specified in name brand only. However, neither the full effects of using them nor the compatibility with the entire project have been evaluated. Any required changes or modifications to the project resulting from substitution(s) will be the responsibility of the contractor.

<u>Item</u>	<u>Manufacturer</u>
Generator	Generac Industrial Power
Aluminum Canopies	Pelican Protective Covers

END OF ADDENDUM NO. ONE

**ARCHITECTURAL SERVICES DIVISION
CITY OF BATON ROUGE-PARISH OF EAST BATON ROUGE
DEPARTMENT OF BUILDINGS AND GROUNDS**

PRE-BID CONFERENCE AGENDA

Project Name**NEW EMS STATION No. 9**
 8850 Connell’s Village Lane, Baton Rouge, LA 70815
Project Number**21-ASC-CP-1495**
Date**February 28, 2024**
Location**8850 Connell’s Village Lane, Baton Rouge, LA 70815**
Time**10:00am**
Bid Date**Tuesday, March 19, 2024 at 2:00pm (Electronic or Delivered)**

1. Introductions:

- a. **Owner’s contact:** June Tran, AIA – Project Manager, Architectural Services Division
- b. **User Agency:** Renee Cashio, EMS
- c. **Project Architect:** Tommy Dauzat, WTD Architecture

BUILDING AREA:

CONDITIONED OFFICE/STATION: 2,934 SF

NON-CONDITIONED 2,322 SF

PORCHES 165 SF

TOTAL	5,421 SF
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Fully functional EMS Station inclusive of Office Space, Communications Center, Warming Kitchen, Bathrooms, Dayroom, and a 3-truck Ambulance Bay. Sitework inclusive of drainage, parking, circulation, and a new curb cut onto Connells Village Lane. Slab on Grade with Grade Beams and Spread Footings at Column Locations. Tube Steel Columns with Bar Joist/Metal Roof decking with Cold Formed Metal Stud Wall Infill...Fully Non-combustible, non Sprinkled. Exterior Materials are Brick Masonry and 2 metal wall panel types. Standing Seam Metal Roof. 2 Split System HVAC Units and a Mini Split in the IT Closet. Gas Heaters in Ambulance Bay. InGround Oil/Water Separator at Ambulance Bay. 400 Amp, 208- 3 phase electrical Service with Full Building Emergency Generator. Direct Communications Hardlined Fiber connection from the EMS IT room to the Main Safety Complex Data Closet.

2. Communications:

- a. Information requests- Any RFIs concerning the drawings and/or technical specifications should be directed toward Tommy Dauzat, tommy@wtd-architecture.com or (225) 412-4855.
- b. All Contractual or Front-end questions should be addressed to June Tran, jtran@brla.gov or (225) 389-4694

3. Use of Premises:

- a. Project location, contractor workers entrances and access to site **No existing Roads or Entrances to the Safety Complex are to be compromised or impeded.**
- b. Use of facilities, utilities, etc. **GC responsible for all utilities**
- c. Contractor parking, staging, dumpster location
- d. Conduct of workers - no smoking, radios, identification. **Very Visible and Reputable Safety Complex.**
- e. Expected working hours, shut down requests **7am to Sunset M-Sa, this will be finalized during the Pre Construction Conference. Any anticipated utility shutdowns require 5 days advance notice.**

4. Bidding Procedure:

- a. Budget: **The City-Parish does not give out the construction budget estimate. This will be read at the bid opening.**
- b. Base Bid and Alternates: **(0) Alternate**
- c. Unit prices and allowances:
- d. Contract time: **270 Calendar Days, \$700.00/Day Liquidated Damages. Contract time ends at Final Acceptance/Closeout.**

- e. Construction scheduling and phasing.
- f. Special issues related to the project.
- g. Addenda issued: **(0) Addenda will be forthcoming beginning next week.**
- h. **Part 1-A - Statutory and other forms and attachments must be completed and submitted to the Purchasing Division PRIOR to the opening of all bids.**
- i. **Bids shall be firm for a period of forty-five (45) days of the opening of bids.**
- j. **Bid must be on provided Bid form - Include Bid Bond & Performance and Payment Bond**

5. Project Meetings and Inspections:

- a. Pre-construction Conference. **To be determined upon GC Selection**
- b. Progress meetings – Weekly Meetings and Monthly Meetings. **To Be determined upon GC Selection**

6. Misc. Items:

- b. EBRP Fees paid directly by the Owner: **Permit Fees, Sewer Impact Fees, & Traffic Impact Fees**
- c. Testing Lab: **The Owner will engage and pay for the testing laboratory if required. If the Contractor obtain the services of a testing laboratory he/she will be responsible for all costs for that laboratory. Refer to Specification Section 01 00 00 CITY PARISH SUMMARY OF WORK.**
Permitting currently underway and nearing completion.

6. Any other business/Questions:

7. Review of site/project location:

Date: February 28, 2024






Project: NEW EMS STATION NO. 9

Project No: 21-ASC-CP-1495

Bid Date: March 14, 2024

PRE-BID CONFERENCE SIGN-IN SHEET

PLEASE SIGN IN AND WRITE YOUR PHONE NUMBER AND FAX NUMBER

(Print) Name & Email	Phone Number	Fax Number	Company Name & License#	Signature
Name: <u>Amanda Pittman</u> Email: <u>apittman@capconla.com</u>	<u>225-751-0386</u>	<u>225-751-0398</u>	<u>Capitol Construction, LLC</u> <u>44097</u>	
Name: <u>Karl Landry</u> Email: <u>brice@spartanbuilding.com</u>	<u>225-405-5195</u>		<u>Spartan Building Corporation</u>	
Name: <u>PATRICK DAUGHETY</u> Email: <u>bids@siennaconstruction.net</u>	<u>225-456-5466</u>		<u>SIENNA CONSTRUCTION</u> <u>43263</u>	
Name: <u>James Thompson</u> Email: <u>James.J.Thompson@SCI.com</u>	<u>337-453-7677</u>		<u>Johnson Controls</u>	
Name: <u>Eric Turner</u> Email: <u>ETurner@veriusproperty.com</u>	<u>205-936-9431</u>	<u>-</u>	<u>VRG Construction</u> <u>61043</u>	

Date: February 28, 2024

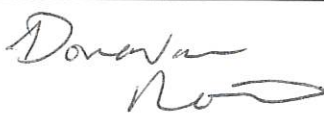



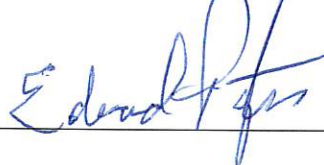
Project: NEW EMS STATION NO. 9

Project No: 21-ASC-CP-1495

Bid Date: March 14, 2024

PRE-BID CONFERENCE SIGN-IN SHEET

PLEASE SIGN IN AND WRITE YOUR PHONE NUMBER AND FAX NUMBER

(Print) Name & Email	Phone Number	Fax Number	Company Name & License#	Signature
Name: <u>Donovan Norris</u> Email: <u>bids@jwgrand.com</u>	<u>225-767-3724</u>	<u>225 767 4978</u>	<u>JW Grand</u> <u>9569</u>	
Name: <u>Steve McLin</u> Email: <u>bidemclmconstruction.com</u>	<u>225-435-3006</u>	<u>225-435-3007</u>	<u>McLin Construction</u> <u>42839</u>	
Name: <u>Brandon Chatelain</u> Email: <u>est:mat.ny@guyhopkins.com</u>	<u>225 751 2158</u>	<u>225 751 2159</u>	<u>Guy Hopkins Construction</u> <u>18310</u>	
Name: <u>DAVID CROGRAM</u> Email: <u>FLUSTER@TheLusterGroup.com</u>	<u>225 329-6573</u>	<u>225 4079787</u>	<u>THE LUSTER GROUP</u>	
Name: <u>Eddie Payton</u> Email: <u>ARL@ARLConstruction</u>	<u>337-828-7504</u>	<u>337-828-7508</u>	<u>ARL Construction</u> <u>16992</u>	

Date: February 28, 2024





Project: NEW EMS STATION NO. 9

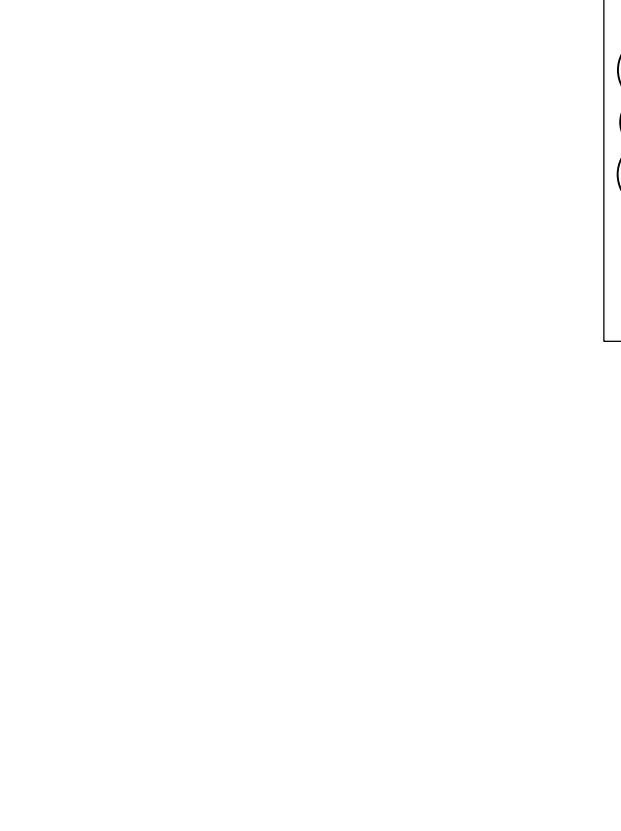
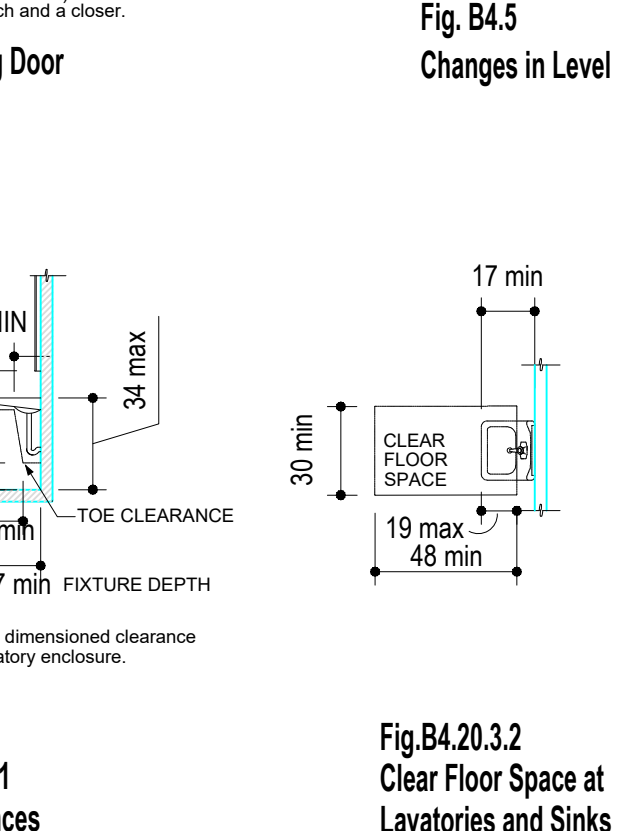
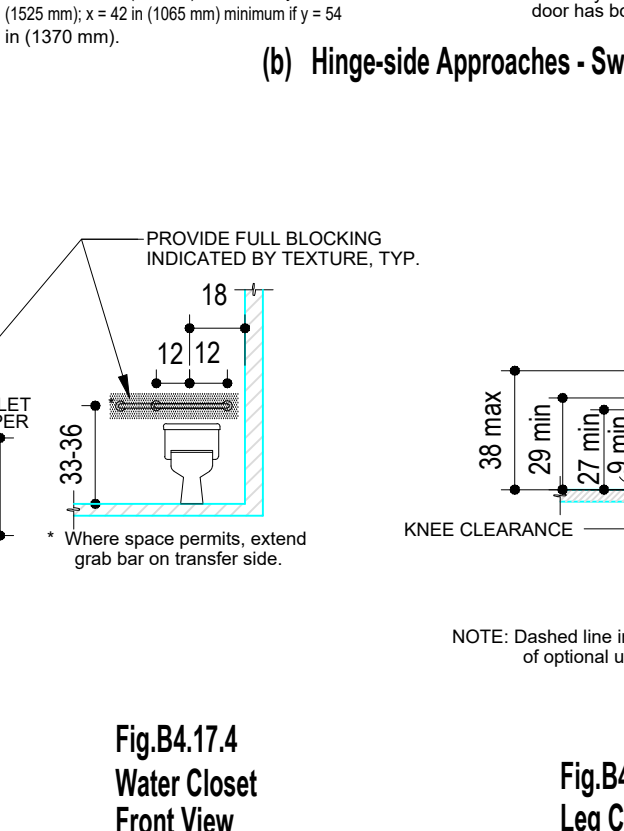
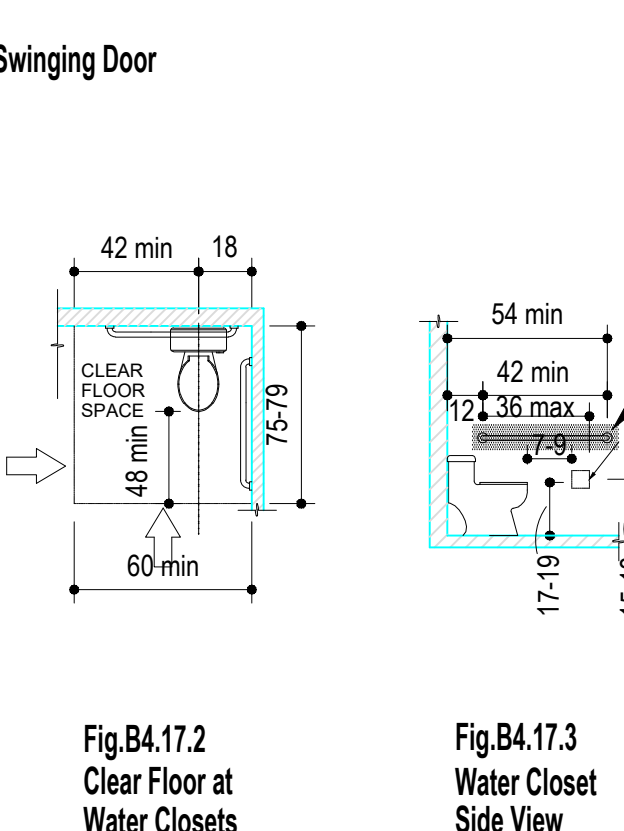
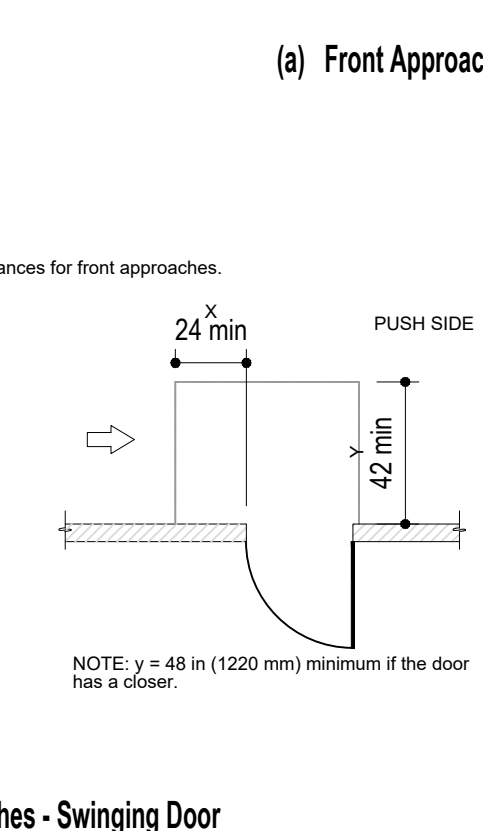
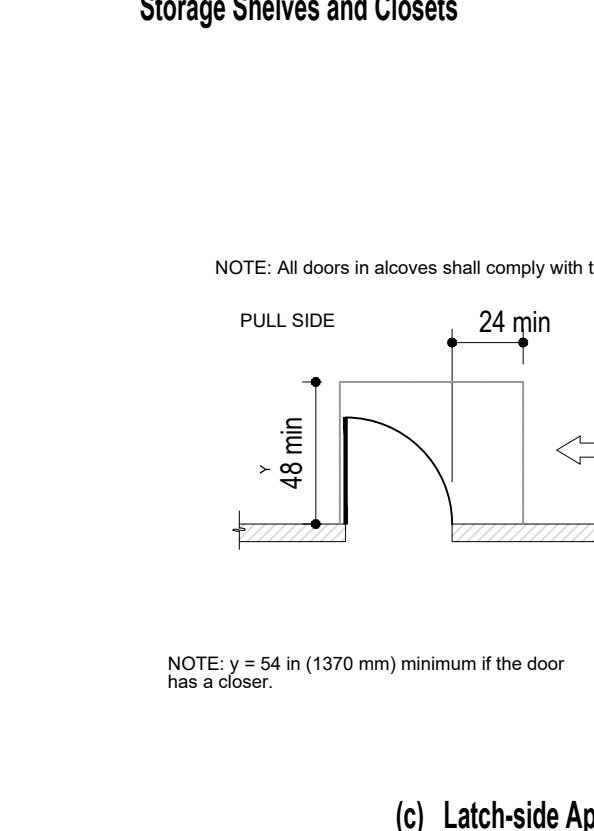
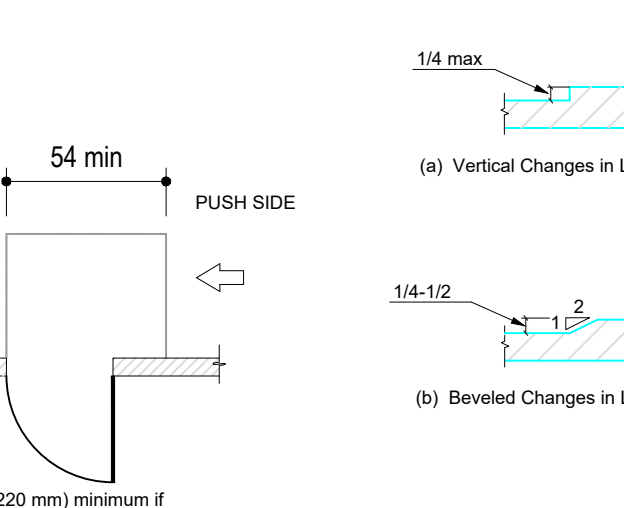
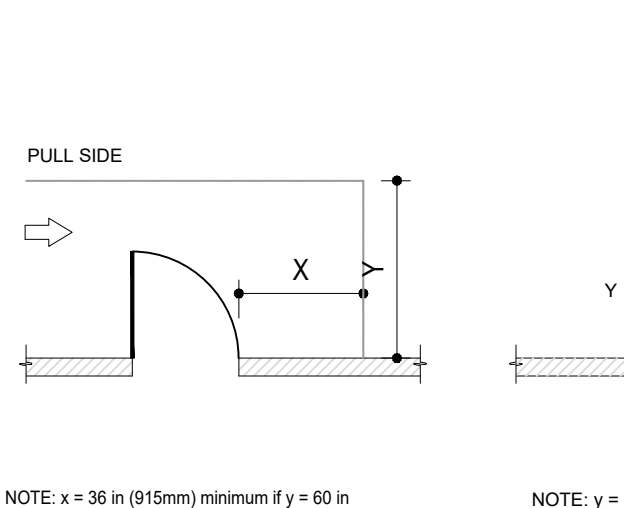
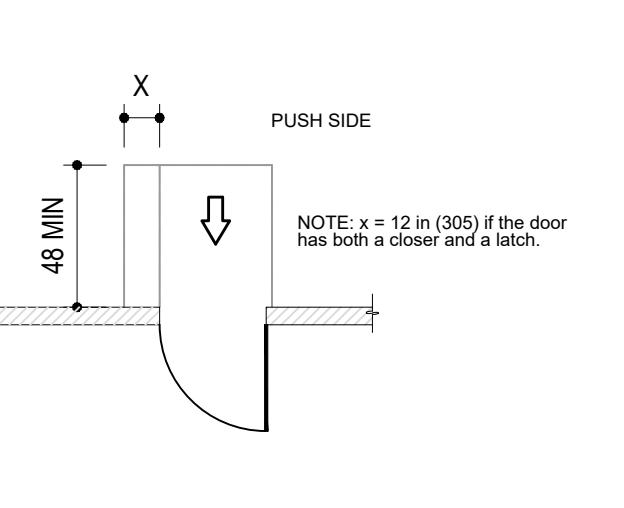
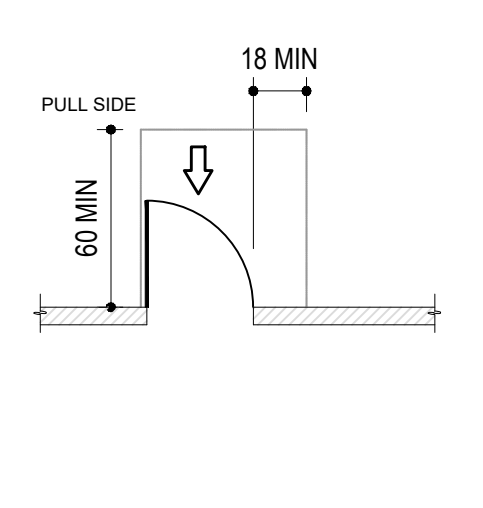
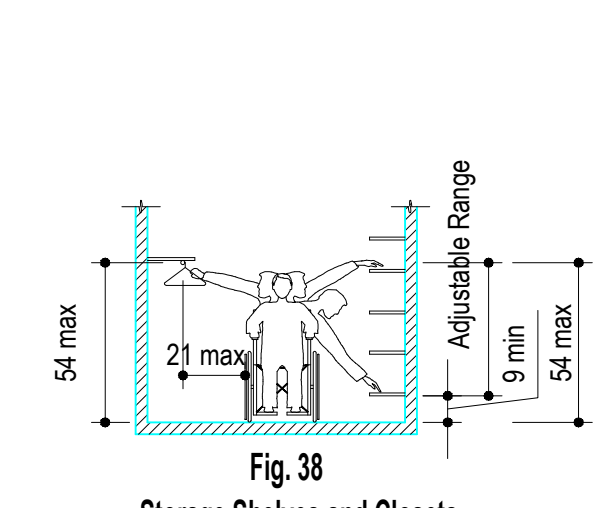
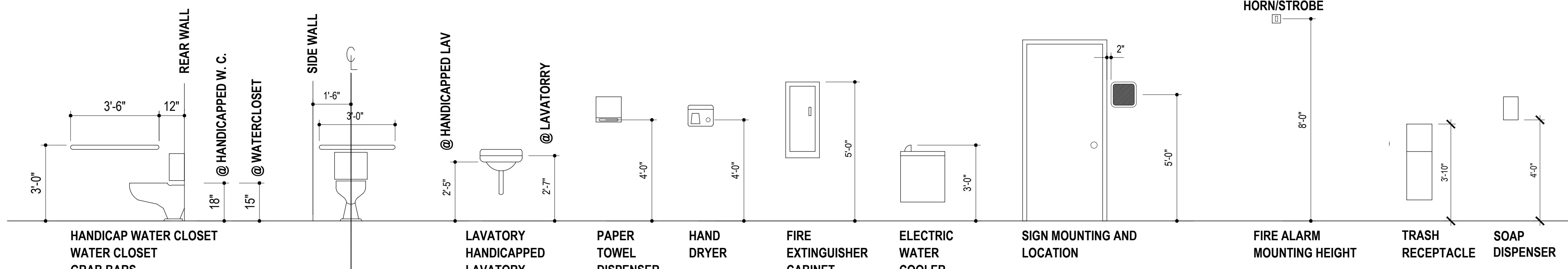
Project No: 21-ASC-CP-1495

Bid Date: March 14, 2024

PRE-BID CONFERENCE SIGN-IN SHEET

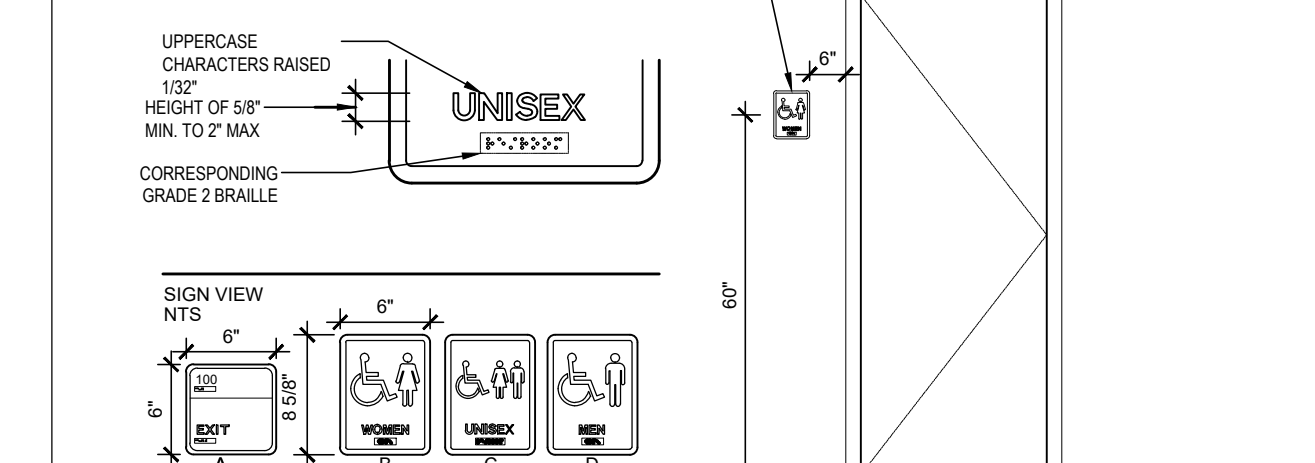
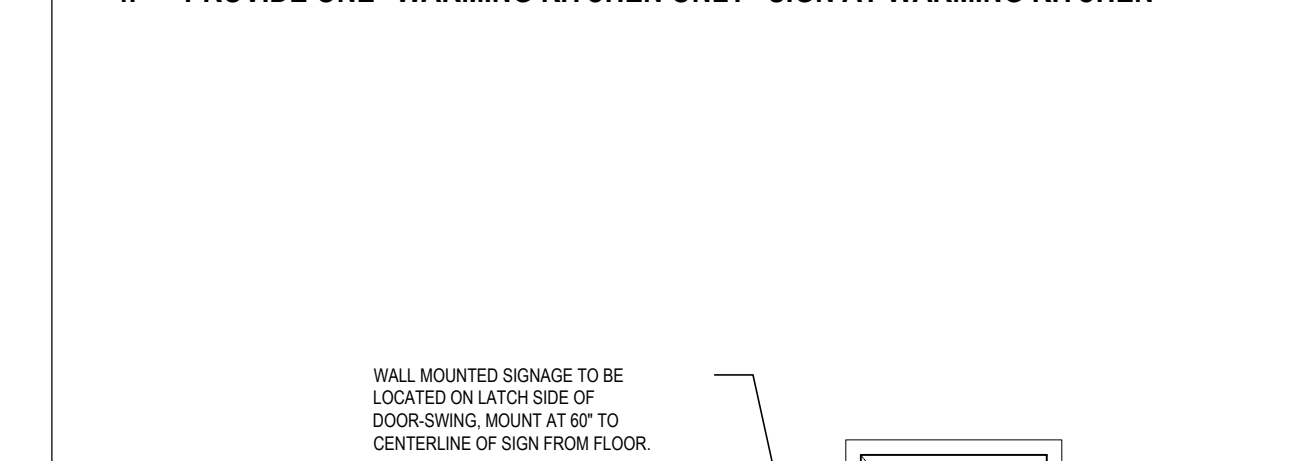
PLEASE SIGN IN AND WRITE YOUR PHONE NUMBER AND FAX NUMBER

(Print) Nam & Email	Phone Number	Fax Number	Company Name & License#	Signature
Name: <u>TOMMY SAUZAT</u> Email: <u>Tommy@WTD-Architecture</u>	<u>225-931-5015</u>		<u>WTD Architecture</u>	
Name: <u>MIKE BOURQUE</u> Email: <u>MIKE@WTD-ARCHITECTURE.COM</u>	<u>337-277-0339</u>		<u>WTD ARCHITECTURE</u>	
Name: <u>Michael Welman</u> Email: <u>m.welman@ksla.gov</u>	<u>225-572-8455</u>		<u>EBR EMS</u>	
Name: <u>Marchael Denicola</u> Email: <u>M.DENICOLA@BRLAGOV</u>	<u>225 202 0788</u>		<u>EBR EMS</u>	
Name: _____ Email: _____	_____	_____	_____	_____



SIGNAGE

- NOTES:
1. PROVIDE ROOM SIGNS AT ALL INTERIOR DOORS.
 2. PROVIDE TACTILE EXIT SIGNS AT ALL EXIT DOORS.
 3. REFER TO SPECIFICATIONS SECTION 10 14 00 SIGNAGE FOR DETAILS.
 4. PROVIDE ONE "WARMING KITCHEN ONLY" SIGN AT WARMING KITCHEN



WTD ARCHITECTURE
11019 Perkins Road, Suite C
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www.wtd-architecture.com

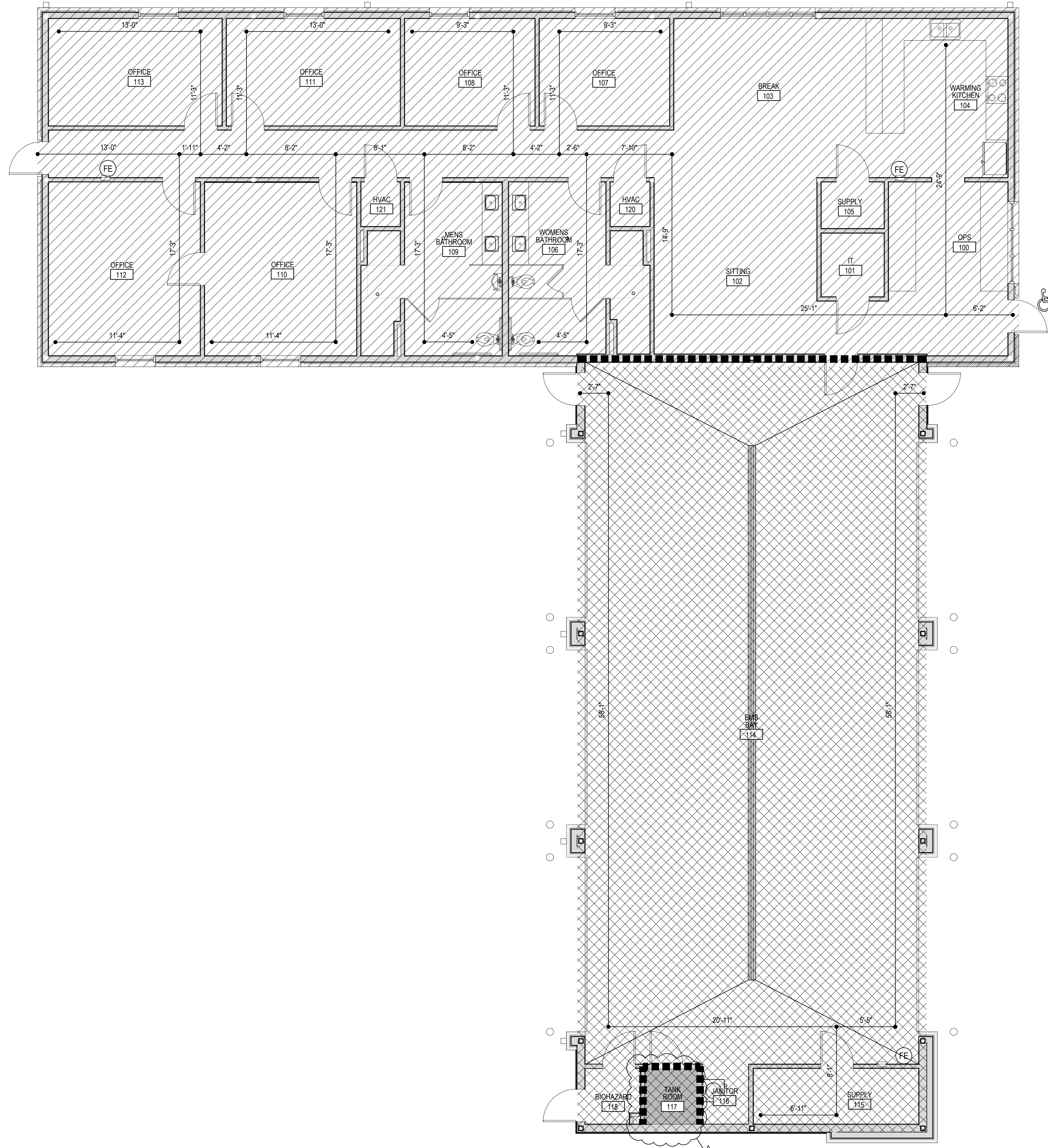
Consultants:

New EMS Station No. 9
CITY-PARISH PROJECT NO. 21-ASC-CP-1495
Public Safety Complex
860 Cornett's Village Lane
Baton Rouge, LA 70815

Phase: Construction Documents
Date: 2-9-2024
Revisions:
ADDENDUM NO. 1 3/6/24



Professional Seal
Scale: **As Noted**
Sht Description:
Standards & Signage



1 Life Safety Plan
Scale: 3/16" = 1'-0"

LIFE SAFETY / CODE ANALYSIS

Applicable Codes:
 BUILDING CODE: 2021 INTERNATIONAL BUILDING CODE
 LOCAL JURISDICTION: EAST BATON ROUGE PARISH
 ACCESSIBILITY CODE: 2010 ADA ACCESSIBILITY GUIDELINES
 LIFE SAFETY CODE: 2015 NFPA 101 LIFE SAFETY CODE
 MECHANICAL CODE: 2021 INTERNATIONAL MECHANICAL CODE
 PLUMBING CODE: 2021 INTERNATIONAL PLUMBING CODE
 ELECTRICAL CODE: 2020 NATIONAL ELECTRICAL CODE
 ENERGY CODE: IECC 2021

Construction Type:	IIB
Sprinkled:	No
Fire Alarm:	Yes
Maximum Travel Distance:	200'
Common Path of Travel:	75'

OCCUPANCY TYPE* MIXED NON-SEPARATED

- Business NFPA, IBC 150 SF PER PERSON
- Storage S-1 NFPA, IBC 500 SF PER PERSON

BUILDING AREA:

GROSS AREA BUSINESS S.F. :	2,934 S.F.
GROSS STORAGE S.F. :	2,322 S.F.
PORCH AREA:	167 S.F.
TOTAL GROSS S.F.(RE: T1.01):	5,423 S.F.

Calculated Occupant Load Business =	20 People
Calculated Occupant Load Storage =	5 People
Total Calculated Occupant Load =	25 People

Legend:

Travel Distance:

Fire Extinguisher Location: (First Alert 5 lb Class A/B/C, in semi-recessed cabinet)

Handicapped Accessibility:

1Hr Rated Interior Wall Assembly: UL U-419

1Hr Rated Ceiling Assembly: UL I-504



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Consultants:

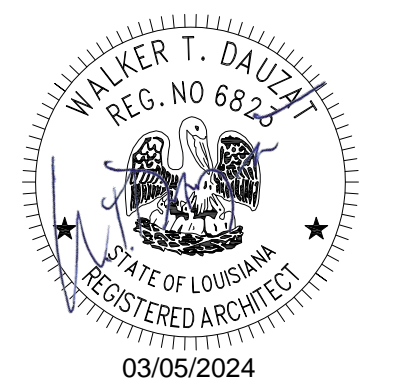
New EMS Station No. 9

Public Safety Complex
 CITY-PARISH PROJECT NO. 21-ASC-CP-1485
 8650 Cornett's Village Lane
 Baton Rouge, LA 70815

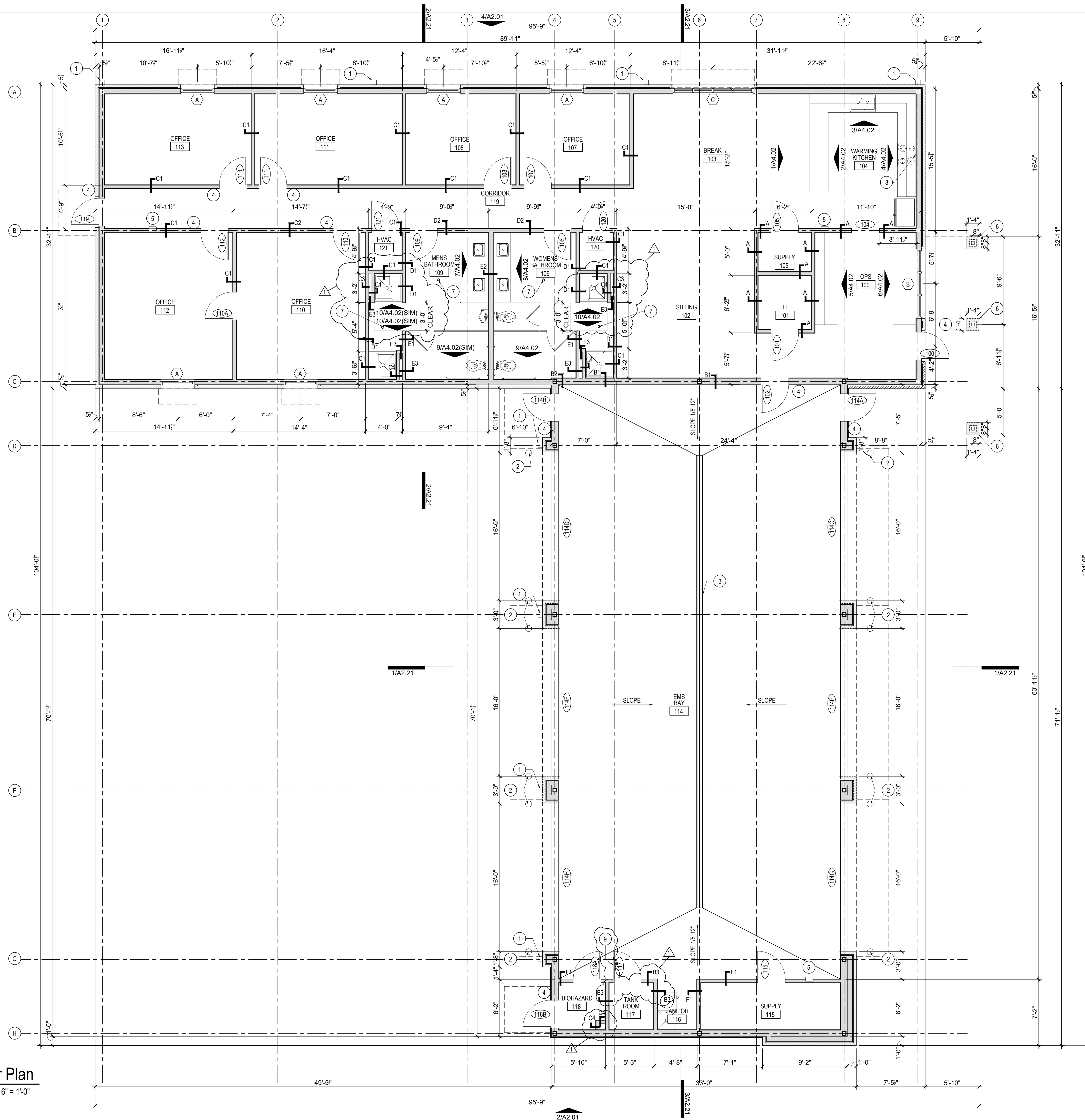
Phase: Construction Documents
 Date: 2-9-2024

Revisions:

ADDENDUM NO. 1	3/6/24



Professional Seal
 Scale:
 Sht Description:
3/16" = 1'-0"
Life Safety Plan



- FLOOR PLAN KEYNOTES
- ① DOWNSPOUT LOCATION
 - ② BOLLARD LOCATION. REFER TO CIVIL DRAWINGS.
 - ③ TRENCH DRAIN. REFER TO PLUMBING DRAWINGS.
 - ④ DOOR ACCESS CONTROL DEVICE LOCATION
 - ⑤ FIRE EXTINGUISHER AND SEMI-RECESSED CABINET
 - ⑥ BRICK COLUMN WRAP, TYPICAL
 - ⑦ FLOOR DRAIN (RE: PLUMBING) SLOPE FLOOR TO DRAIN 1/8:12.
 - ⑧ WARMING KITCHEN SIGNAGE
 - ⑨ TANK ROOM SIGN. MOUNT TO DOOR ON EMS BAY SIDE. RE: G1.01 FOR SIGN REQUIREMENTS



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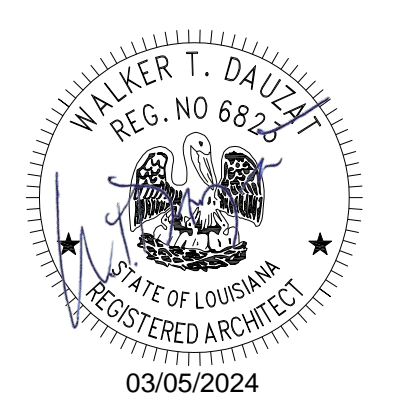
Consultants:

New EMS Station No. 9

Public Safety Complex
 850 Cornett's Village Lane
 Baton Rouge, LA 70815
 CITY-PARISH PROJECT NO. 21-ASC-CP-1495

Phase: Construction Documents
 Date: 2-9-2024
 Revisions:

△	ADDENDUM NO. 1	3/6/24



Professional Seal
 Scale: 3/16" = 1'-0"
 Sht Description:
Floor Plan

North
A1.01

1 Floor Plan
 Scale: 3/16" = 1'-0"

DOOR, FRAME, & HARDWARE SCHEDULE

DOOR NO.	DESCRIPTION	SIZE	DOOR DATA			FRAME DATA					REMARKS	
			MATERIAL	TYPE	GLAZING	MATERIAL	TYPE	FINISH	HEAD	JAMB		SILL
100	OPS	3'-0" X 8'-0"	ALUM. STOREFRONT	A		ALUMINUM			3-A3.11	8-A3.11	15-A3.11	ACCESS CONTROL
101	I.T.	3'-0" X 7'-0"	SOLID CORE WD.	D		H.M.			1-A3.11	6-A3.11		
102	SITTING	3'-0" X 7'-0"	FIBERGLASS	C		FIBERGLASS			1-A3.11	6-A3.11	15-A3.11	60 MIN. DOOR/FRAME/HDRW/GLAZING, ACCESS CONTROL
104	WARMING KITCHEN	3'-0" X 7'-0"	CASED OPENING	-		H.M.			1-A3.11	6-A3.11		
105	SUPPLY	3'-0" X 7'-0"	SOLID CORE WD.	D		H.M.			1-A3.11	6-A3.11		
106	WOMENS RESTROOM	3'-0" X 7'-0"	SOLID CORE WD.	D		H.M.			1-A3.11	6-A3.11		
107	OFFICE	3'-0" X 7'-0"	SOLID CORE WD.	D		H.M.			1-A3.11	6-A3.11		
108	OFFICE	3'-0" X 7'-0"	SOLID CORE WD.	D		H.M.			1-A3.11	6-A3.11		
109	MENS RESTROOM	3'-0" X 7'-0"	SOLID CORE WD.	D		H.M.			1-A3.11	6-A3.11		
110	OFFICE	3'-0" X 7'-0"	SOLID CORE WD.	D		H.M.			1-A3.11	6-A3.11		ACCESS CONTROL
110A	OFFICE	3'-0" X 7'-0"	SOLID CORE WD.	D		H.M.			1-A3.11	6-A3.11		
111	OFFICE	3'-0" X 7'-0"	SOLID CORE WD.	D		H.M.			1-A3.11	6-A3.11		ACCESS CONTROL
112	OFFICE	3'-0" X 7'-0"	SOLID CORE WD.	D		H.M.			1-A3.11	6-A3.11		ACCESS CONTROL
113	OFFICE	3'-0" X 7'-0"	SOLID CORE WD.	D		H.M.			1-A3.11	6-A3.11		ACCESS CONTROL
114A	EMS BAY	3'-0" X 7'-0"	FIBERGLASS	E		FIBERGLASS			11-A3.11	12-A3.11	15-A3.11	ACCESS CONTROL
114B	EMS BAY	3'-0" X 7'-0"	FIBERGLASS	E		FIBERGLASS			11-A3.11	12-A3.11	15-A3.11	ACCESS CONTROL
114C	EMS BAY	16'-0" X 12'-0"	SECTIONAL OVERHEAD	F					4-A3.11	9-A3.11	14-A3.11	
114D	EMS BAY	16'-0" X 12'-0"	SECTIONAL OVERHEAD	F					4-A3.11	9-A3.11	14-A3.11	
114E	EMS BAY	16'-0" X 12'-0"	SECTIONAL OVERHEAD	F					4-A3.11	9-A3.11	14-A3.11	
114F	EMS BAY	16'-0" X 12'-0"	SECTIONAL OVERHEAD	F					4-A3.11	9-A3.11	14-A3.11	
114G	EMS BAY	16'-0" X 12'-0"	SECTIONAL OVERHEAD	F					4-A3.11	9-A3.11	14-A3.11	
114H	EMS BAY	16'-0" X 12'-0"	SECTIONAL OVERHEAD	F					4-A3.11	9-A3.11	14-A3.11	
115	SUPPLY	3'-0" X 7'-0"	FIBERGLASS	B		FIBERGLASS			1-A3.11	6-A3.11	15-A3.11	
117	TANK ROOM	3'-0" X 7'-0"	FIBERGLASS	B		FIBERGLASS			1-A3.11	6-A3.11	15-A3.11	
118A	BIOHAZARD	3'-0" X 7'-0"	FIBERGLASS	B		FIBERGLASS			1-A3.11	6-A3.11	15-A3.11	
118B	BIOHAZARD	3'-0" X 7'-0"	FIBERGLASS	B		FIBERGLASS			11-A3.11	12-A3.11	15-A3.11	
119	CORRIDOR	3'-0" X 7'-0"	FIBERGLASS	B		FIBERGLASS			5-A3.11	10-A3.11	15-A3.11	
120	HVAC	3'-0" X 7'-0"	SOLID CORE WD.	D		H.M.			1-A3.11	6-A3.11		
121	HVAC	3'-0" X 7'-0"	SOLID CORE WD.	D		H.M.			1-A3.11	6-A3.11		

HARDWARE NOTES

- ALL HARDWARE TO BE ADA COMPLIANT
- HARDWARE STYLES AND FINISHES (RE: SPECS)
- PROVIDE OWNER WITH A MINIMUM OF 3 SETS OF KEYS FOR ALL KEY LOCKING DEVICES. PROVIDE ONE MASTER KEY FOR ALL DOORS.

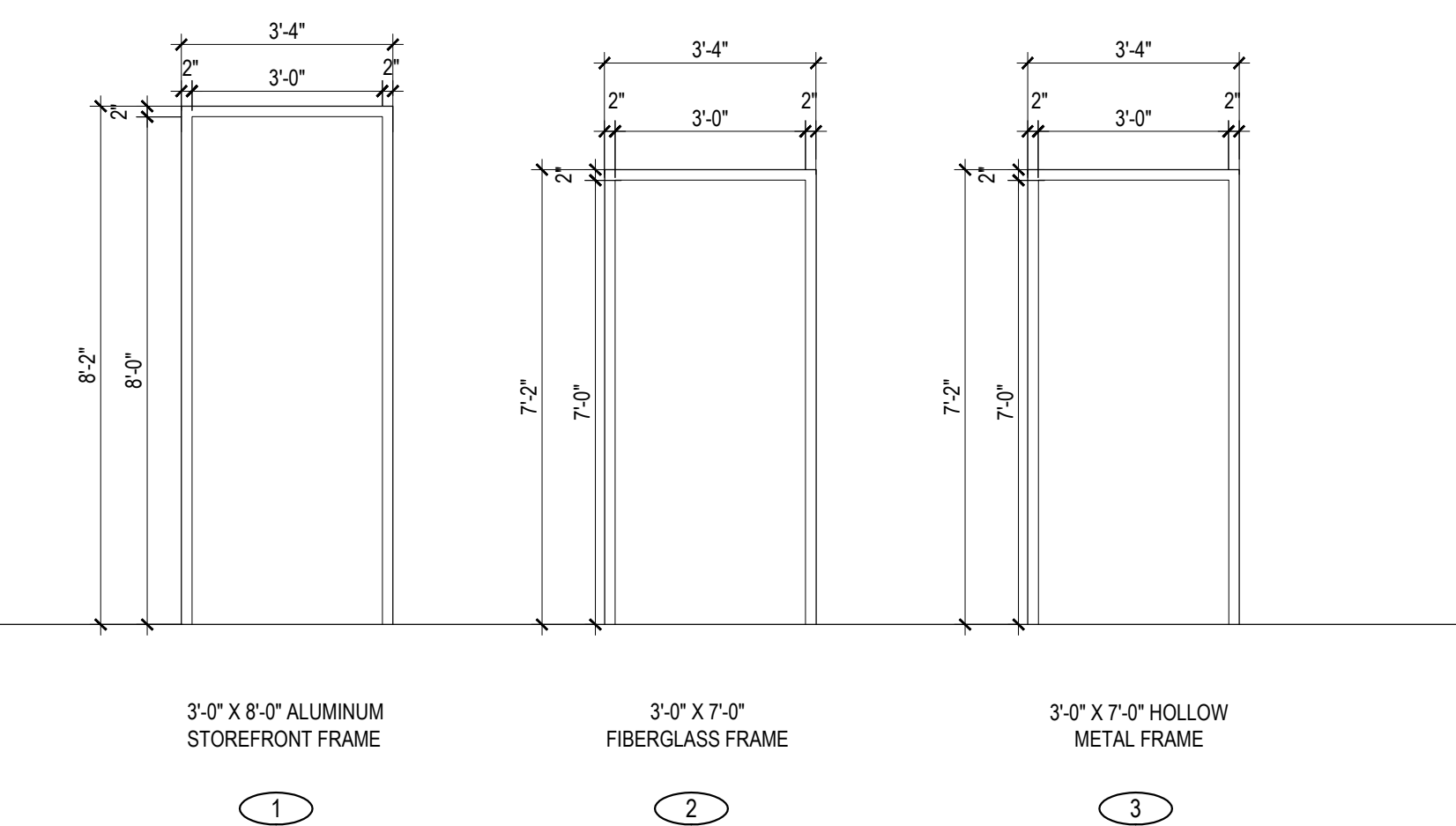
GENERAL NOTES

- WHERE FIRE RATING IS REQUIRED, DOOR, FRAME, AND HARDWARE MUST MEET RATING AND BE LABELED AS SUCH
- COORDINATE FINISHED FLOOR HEIGHTS w/ MATERIALS, etc TO BE USED IN ORDER TO ENSURE THAT NO ABRUPT CHANGES IN ELEVATION GREATER THAN 1/2" OR SLOPE GREATER THAN 1:50 IN ANY DIRECTION OCCUR

GLAZING SCHEDULE

I	INSULATED, SAFETY AS REQ'D, TINTED
II	1/4" FIXED, SAFETY, TINTED
III	1/8" CLEAR, DSB GLAZING

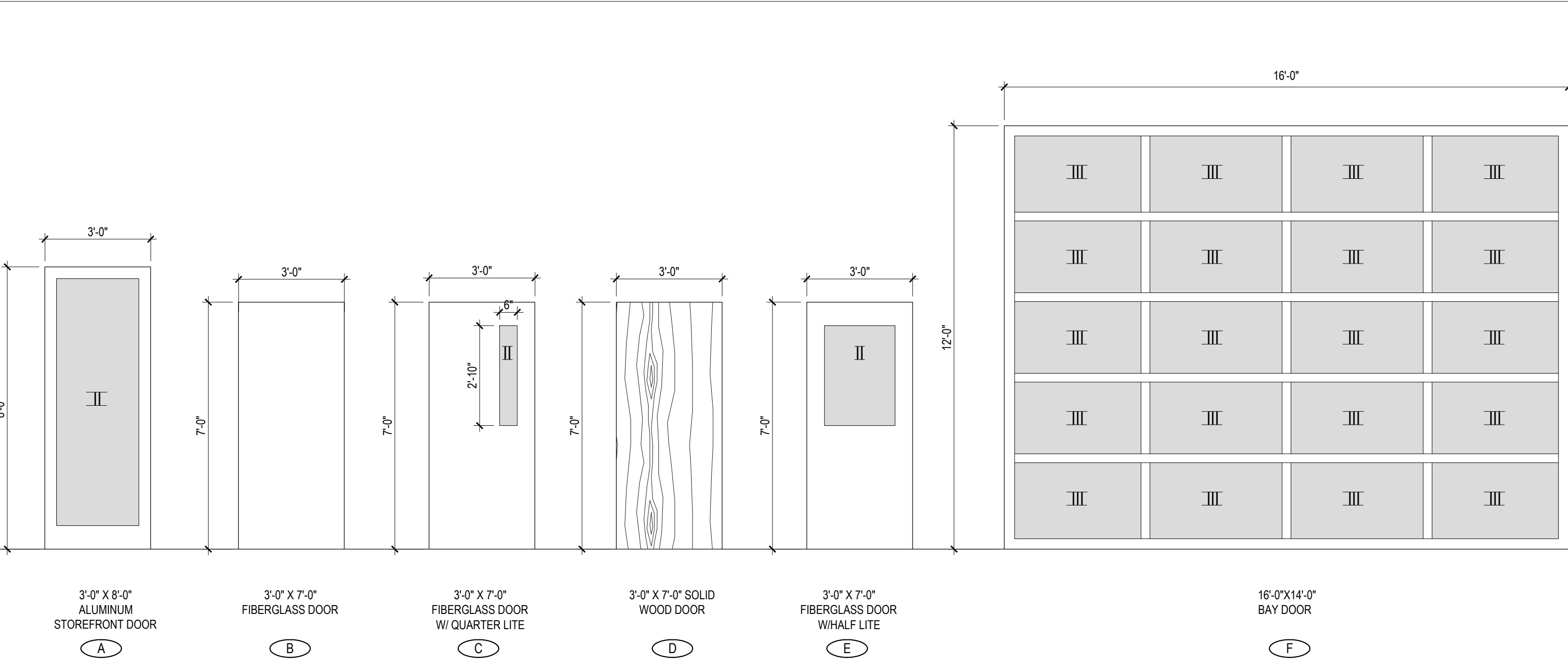
FRAME TYPES



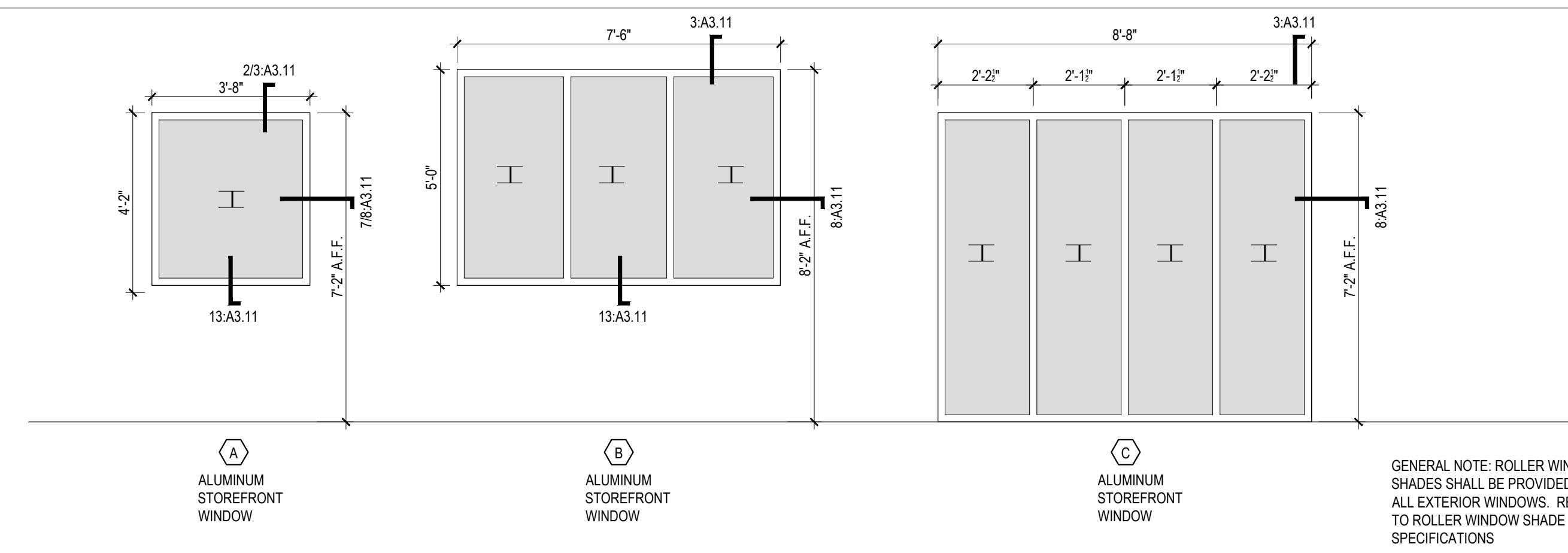
WALL PARTITION GENERAL NOTES

- CONSTRUCT FIRE RATED PARTITIONS, WHERE INDICATED IN PARTITION SYMBOL IN ACCORDANCE WITH REQUIREMENTS OF NOTED UL CRITERIA.
- SEE PLANS & SPECIFICATIONS FOR LOCATION OF FACING MATERIAL WITH SPECIAL PROPERTIES SUCH AS MOISTURE OR ABUSE RESISTANCE.
- SEAL ALL PENETRATIONS THROUGH RATED PARTITIONS w/ AN APPROVED FIRE RATED SEALANT MANUFACTURED SPECIFICALLY FOR SUCH A PURPOSE.
- COORDINATE WITH INTERIOR ELEVATION FOR SCHEDULED HEIGHT OF TILE WAINSCOT / WALL TILE / BACKSPLASH LOCATIONS REQUIRING CEMENT BACKER BOARD, ETC.
- VERIFY ALL INTENDED WAINSCOT / WALL TILE / BACKSPLASH LOCATIONS AND TERMINATION POINTS IN ADVANCE, RE: FINISH PLAN.
- PROVIDE SOUND ATTENUATING BLANKETS IN ALL INTERIOR WALLS TO LEVEL OF GYP. BOARD OR ALTERNATIVE INTERIOR SHEATHING.
- PROVIDE MOISTURE RESISTANT GYP BOARD AT ALL WALL/CEILING AREAS EXPOSED TO DIRECT MOISTURE AND STEAM

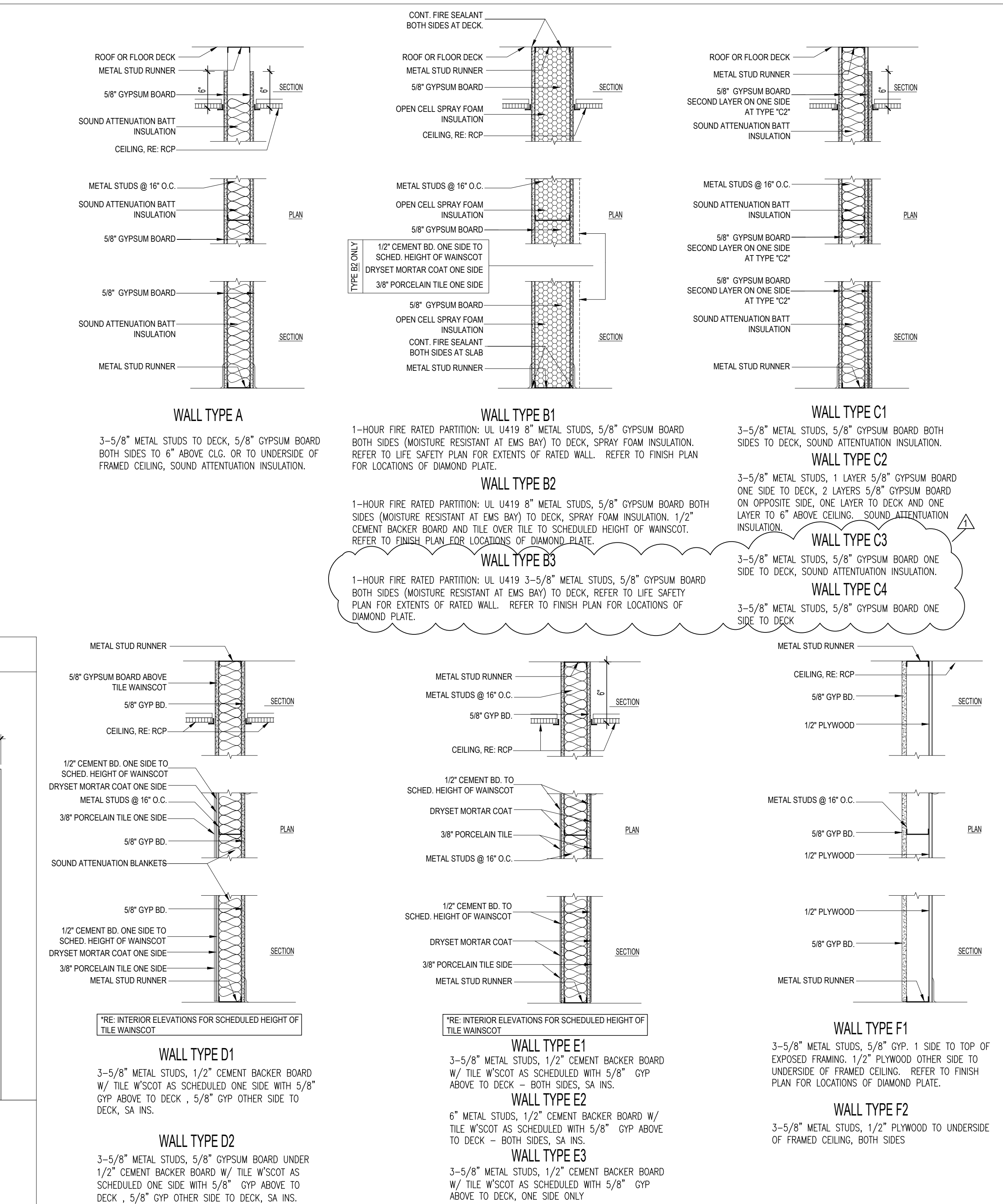
DOOR TYPES



WINDOW TYPES



WALL PARTITION TYPES



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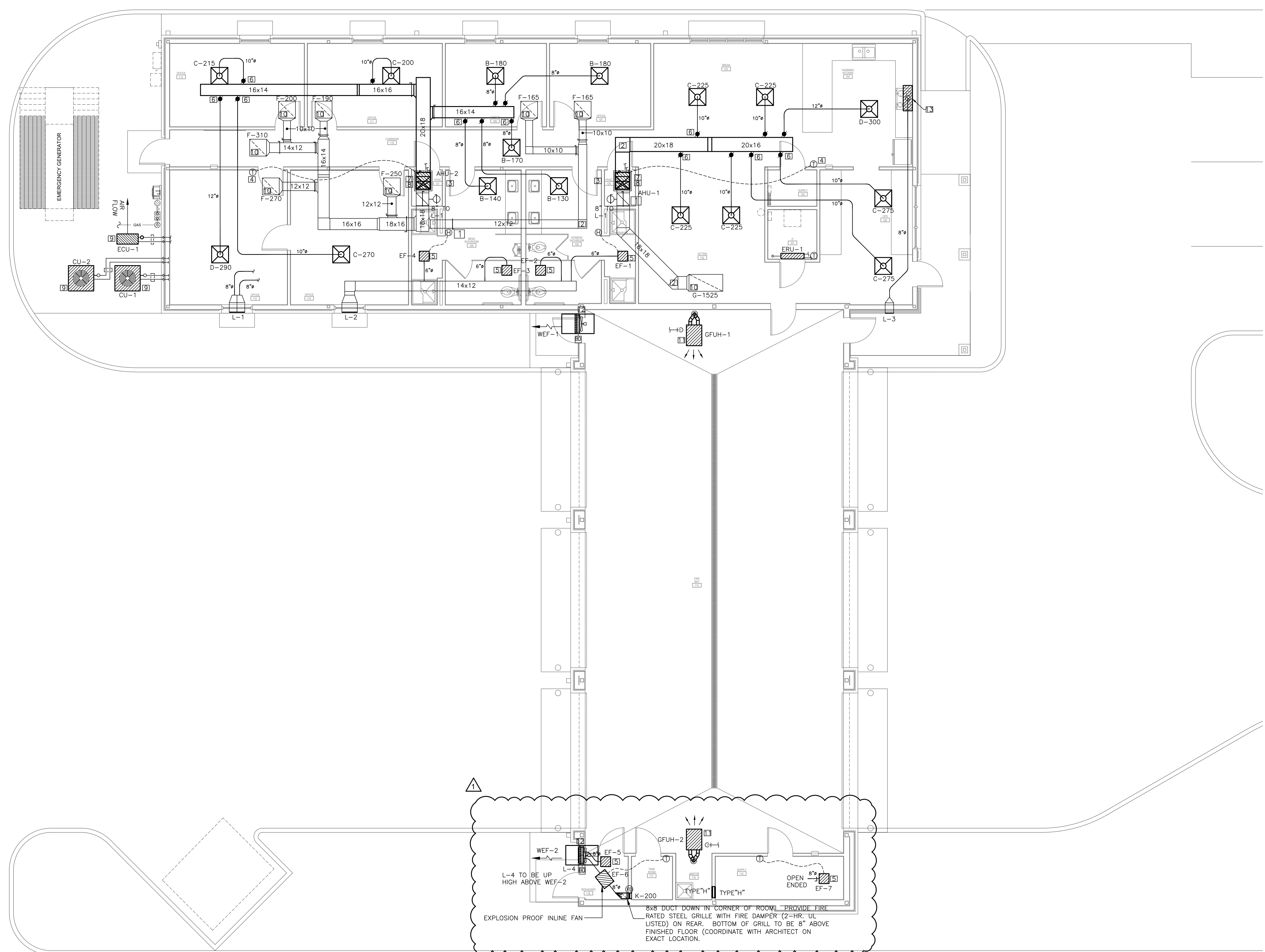
Consultants:

New EMS Station No. 9
 CITY/PARISH PROJECT NO. 21-ASC-CP-1485
 Public Safety Complex
 8650 Cormier's Village Lane
 Baton Rouge, LA 70815

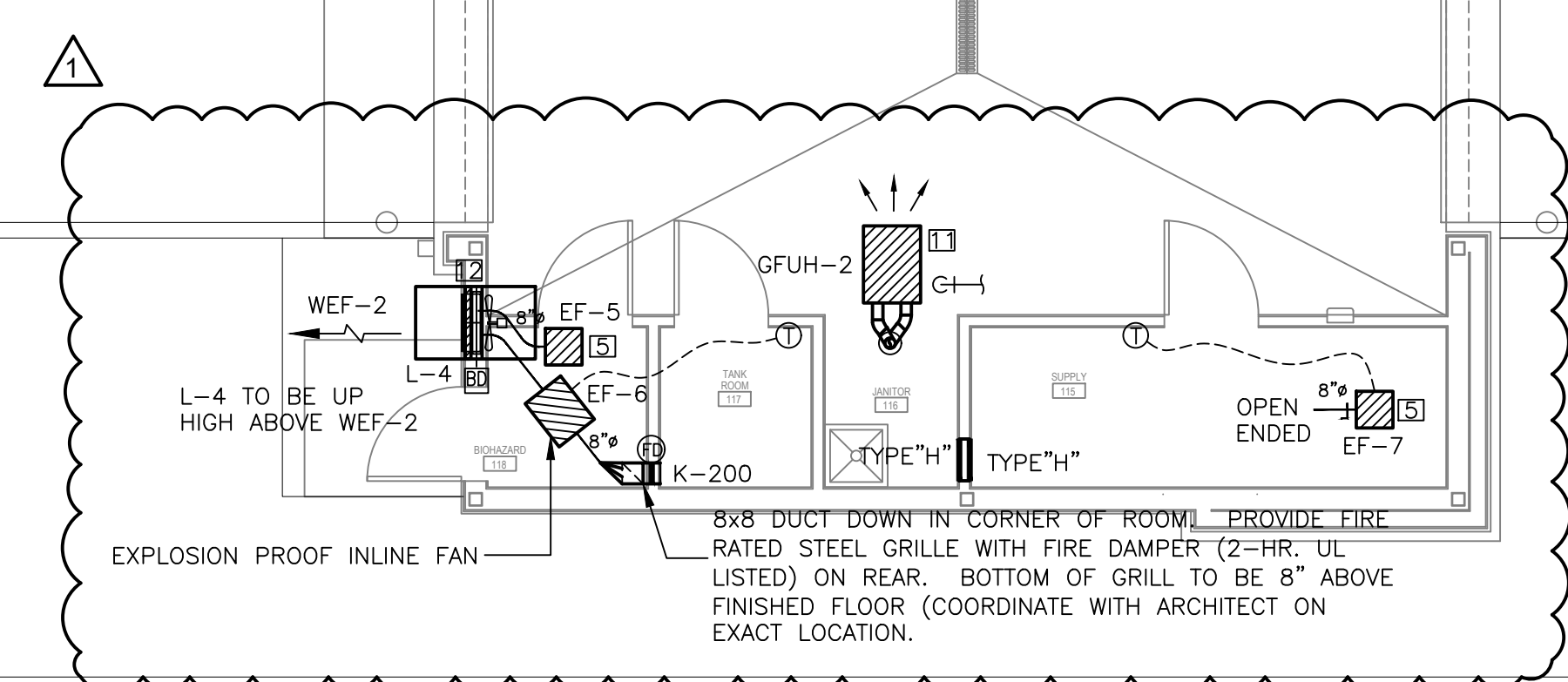
Phase: Construction Documents
 Date: 2-9-2024
 Revisions:
 1. ADDENDUM NO. 1 3/6/24

Professional Seal
 Scale: As Noted
 Sht Description:
 Schedules and Details

North
A3.01



1 MECHANICAL FLOOR PLAN
SCALE: 3/16" = 1'-0"



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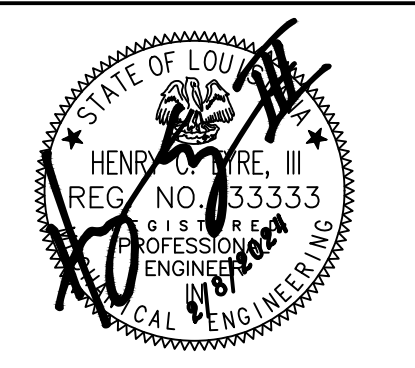
Public Safety Complex
CITY-PARISH PROJECT NO. 21-ASC-CP-1485
8850 Cornwell Village Lane
Baton Rouge, LA 70815

Phase: Construction Documents

Date: 2-9-2024

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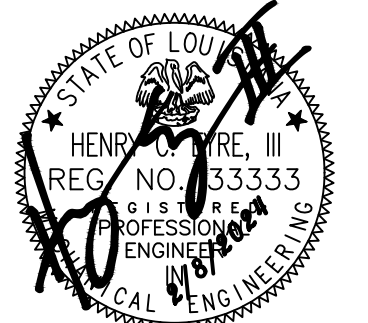
Consultants:

New EMS Station No. 9
CITY-PARISH PROJECT NO. 21-ASC-CP-1495
Public Safety Complex
8850 Commins Village Lane
Baton Rouge, LA 70815

Phase: Construction Documents

Date: 2-9-2024

Revisions: ADDENDUM NO. 1 3/6/24



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Scale: AS SHOWN

Sheet Description: MECHANICAL SCHEDULES

M2.01

AIR HANDLING UNIT SCHEDULE

Table with columns: UNIT NO., LOCATION, SERVICE, FAN DATA, MOTOR DATA, REFRIGERANT COIL DATA, ELECTRICAL (SGL. POINT CONN.), ELEC. HEAT DATA, CONDENSATE DRAIN LINE, WEIGHT (LBS), REMARKS. Row 1: AHU-1,2, CEILING SPACE, RE: DWGS., 1,600, 200, 0.5", 208, 1/60, ECM, 500, 34.7, 46.7, 74.6', 65.3', 55.2', 55.2', 3, 1.0", 45', 95', 208/1/60, 77, 80, 15, 38.5, 2, 68.0', 90.3', 1-1/4", 350, LENNOX MODEL CBA27UHE-048 OR PRIOR APPROVED EQUAL

- GENERAL NOTES: 1. ALL AIR HANDLING UNITS SHALL BE EQUIPPED WITH VIBRATION ISOLATORS... 2. EXT S.P. DOES NOT INCLUDE DIRTY FILTER LOSS... 3. PROVIDE SINGLE POINT POWER (ELECTRICAL) CONNECTION... 4. ALL CONDENSATE DRAIN LINES TO BE RIGID INSULATED COPPER... 5. ALL AIR HANDLING UNITS TO HAVE GLOBAL PLASMA SOLUTIONS SELF CLEANING NEEDLEPOINT BIPOLAR ION GENERATOR... 6. ELECTRIC HEATER NOMINAL KW IS AT 240V/1/60. ACTUAL HEATER KW WILL DE-RATE TO 208/1/60. MBH SCHEDULED IS ACTUAL HEAT REQUIRED @ 208-1-60 ELECTRICAL SERVICE.
REMARKS: 1. NOT USED. 2. PROVIDE WITH SINGLE POINT POWER KIT FOR FIELD INSTALLATION. 3. NOT USED. 4. PROVIDED WITH DEHUMIDIFICATION RELAY KIT TO DECREASE BLOWER SPEED DURING DEHUMIDIFICATION CALL FOR FIELD INSTALLATION. 5. PROVIDED WITH CIRCUIT BREAKER KIT FOR FIELD INSTALLATION. 6. PROVIDED WITH ECM MULTI-SPEED SUPPLY FAN MOTORS. 7. PROVIDE LENNOX THERMOSTATS (ONE PER HVAC SYSTEM), COMFORTSENSE 7500. COMFORTSENSE 7500 TO BE AS FOLLOWS: 7.1. ELECTRONIC 7-DAY, UNIVERSAL, MULTI-STAGE, PROGRAMMABLE TOUCHSCREEN THERMOSTAT 7.2. 4 HEAT/2 COOL 7.3. AUTO-CHANGEOVER 7.4. RELATIVE HUMIDITY SENSORS TO ADJUST BLOWER SPEED DURING DEHUMIDIFICATION CALL.

AIR COOLED CONDENSING UNIT SCHEDULE

Table with columns: UNIT NO., TONS OF REFR., STAGES, COMPR. MOTOR DATA, COMPRESSOR DATA, CONDENSER DATA, UNIT WIRING DATA, WEIGHT (LBS), REMARKS. Row 1: CU-1,2, 4, 2, 1, 208, 1/60, 19.9, 127, R-410a, 45, 48, 95, 16, 120, 208, 1/60, 1, 1.4, 3.2, 26, 45, 350, LENNOX MODEL ML18XC2-048 OR PRIOR APPROVED EQUAL

- GENERAL NOTES: 1. LIQUID & SUCTION LINES SHALL BE SIZED ACCORDING TO MANUFACTURER'S RECOMMENDATIONS WITH CONSIDERATION FOR ALL ACCESSORIES. 2. PROVIDE WITH FACTORY INSTALLED HAIL GUARDS. 3. PROVIDE SUCTION ACCUMULATORS. 4. PROVIDE WITH LOW AMBIENT CONTROL KIT (DOWN TO 30 DEG F) FOR FIELD INSTALLATION.
NOTES: 1. PROVIDED WITH 2 STAGE SCROLL COMPRESSORS FOR 2 STAGES OF COOLING. 2. PROVIDED WITH FACTORY INSTALLED CRANKCASE HEATER. 3. PROVIDED WITH COIL GUARD.

AIR DISTRIBUTION DEVICE SCHEDULE

Table with columns: MARK, MANUFACTURER, MODEL NO., C.F.M., SUPPLY, RETURN, EXHAUST, REGISTER, GRILLE, DIFFUSER, DOOR GR, LOUVER, CEILING, WALL/DR., SURF. MT., NECK SIZE, FACE SIZE, MATERIAL, FINISH, O.B.D., FILTER TYPE, REMARKS. Rows A-K listing various diffusers and louvers.

- GENERAL NOTES: 1. REFER TO ARCH FOR CEILING TYPE, CONTRACTOR TO PROVIDE AND INSTALL PLASTER FRAME FOR GYPSUM BOARD CEILING INSTALLATION. 2. ALL GRILLES, REGISTERS, DIFFUSERS, ETC. TO COME WITH WHITE FINISH UNLESS OTHERWISE SPECIFIED BY ARCHITECT IN FIELD DURING CONSTRUCTION. FINISH SHOULD BE SUITABLE FOR PAINTING WITHOUT ANY ADDITIONAL PREPARATION. 3. NOT ALL MARKS NECESSARILY FOUND ON THE DRAWINGS. 4. ALL GRILLES SHALL BE ALUMINUM CONSTRUCTION UNLESS OTHERWISE NOTED ON DRAWINGS. 5. MANUFACTURERS MODEL NUMBER REPRESENTS QUALITY OF EQUIPMENT TO BE INSTALLED, THIS PROJECT. 6. PERFORMANCE DATA FOR ALL GRILLES, DIFFUSERS, ETC. MUST BE SUBMITTED TO ENGINEER BEFORE PRIOR APPROVAL IS AWARDED. 7. NAILOR, KRUEGER, & TITUS - APPROVED MANUFACTURERS. 8. ALL DIFFUSERS/GRILLES/REGISTERS LOCATED IN ACOUSTICAL CEILING TILE ASSEMBLY TO HAVE PANEL THE SAME SIZE OF THE GRID (12x12 FACE DIFFUSER IN 24x24 GRID TO BE IN 24x24 PANEL). 9. ALL GRILLES/REGISTERS/DIFFUSERS SIZES AS NOTED ON SCHEDULE UNLESS OTHERWISE NOTED ON DRAWINGS. 10. FIGURE IN BID PROVIDING SQUARE TO ROUND TRANSITIONS AND/OR REDUCER ON REAR OF ALL AIR DISTRIBUTION DEVICES. 11. FIGURE IN BID CUSTOM COLOR FOR ALL AIR DEVICES NOTED TO "RE: ARCH".
THE FOLLOWING BRANCH DUCT SIZING CHART SHALL BE USED AS CONVENIENCE TO THE CONTRACTOR WHERE ROUND BRANCH DUCT SIZES ARE NOT SHOWN ON THE DRAWINGS:
TAG:
A. 6"
B. 8"
C. 10"
D. 12"
E. 6"

WALL PROP EXHAUST FAN SCHEDULE

Table with columns: UNIT NO., LOCATION, SERVICE, C.F.M., E.S.P. I.W.G., TOTAL S.P. I.W.G., TYPE, DRIVE, FAN R.P.M., MAX. SONES, MOTOR DATA, WEIGHT (LBS.), ROOF/WALL OPENING, REMARKS, CONTROLLED BY. Row 1: WEF'S-1,2, WALL, SEE DWGS, 2,500, 0.2, 0.291, WALL PROP., DIRECT, 1,179, 12, 3/4, 120, 1/60, 1,325, ODP, 200, 27.5'x27.5', GREENHECK MODEL AER-20-VG OR PRIOR APPROVED EQUAL, VARI-GREEN REMOTE CONTROLLER/DIAL, ONE (1) PER FAN

- GENERAL NOTES: 1. PROVIDE ALL EXHAUST FANS WITH BACKDRAFT DAMPERS & REMOTE DISCONNECTS. 2. CO-ORDINATE WITH ELECTRICAL CONTRACTOR ON CONNECTION OF FAN, REFER TO SCHEDULES. 3. MANUFACTURERS MODEL NUMBER REPRESENTS QUALITY OF EQUIPMENT TO BE INSTALLED, THIS PROJECT. 4. PROVIDE SPEED CONTROLLERS AT ALL DIRECT DRIVE FANS FOR AIR BALANCING. 5. ALL FANS SHALL BE ALL ALUMINUM CONSTRUCTION (FAN HOUSING, ETC.). 6. EQUIPMENT SHALL BE RATED A MINIMUM OF 75(C) IN ACCORDANCE WITH NATIONAL ELECTRIC CODE (NEC) ARTICLE 110.14. 7. ALL MOTORS SHALL HAVE SHAFT GROUNDING RINGS. 8. CONTRACTOR SHALL SUPPLY ALL REQUIRED PULLEYS & SHEAVES AS TO BALANCE AIR TO SPECIFIED CFM. PROVIDE ADDITIONAL PULLEYS AND SHEAVES AS REQUIRED. APPLICABLE TO ALL FANS WITH BELT DRIVEN MOTORS. 9. ALL REMOTE START/STOP SWITCHES THAT CONTROL EXHAUST FANS SHALL HAVE A PILOT LIGHT. 10. TOTAL STATIC PRESSURE INCLUDES PRESSURE DROP ACROSS WALL HOUSING, BACKDRAFT DAMPER, AND WEATHERHOOD.
GREENHECK FAN ACCESSORIES: 1. GALVANIZED STEEL FAN PANEL 2. DIE FORMED, GALVANIZED STEEL DRIVE FRAME ASSEMBLY 3. FABRICATED STEEL BLADE PROPELLER 4. BALL BEARING MOTORS 5. CORROSION RESISTANT FASTENERS 6. VARI-GREEN EC MOTOR WITH DIAL FOR BALANCING 7. VARI-GREEN REMOTE DIAL FOR INDOOR WALL MOUNTING 8. DIAL FOR BALANCING 9. VARI-GREEN TRANSFORMER 85-277VAC TO 24VDC, MOUNTED & WIRED 10. UL/CUL 705 LISTED - "POWER VENTILATORS" 11. GRAVITY OPERATED DAMPER 12. SHORT WALL HOUSING, FLUSH EXTERIOR WITH OSHA GUARD 13. MOTOR ACCESS FROM INTERIOR OF BUILDING 14. NEMA-1 TOGGLE SWITCH 15. JUNCTION BOX MOUNTED & WIRED 16. GALVANIZED 45° WEATHERHOOD WITH BIRD SCREEN; FINISHED TO MATCH EXTERIOR OF BUILDING (EXACT COLOR TO BE BY ARCHITECT). 17. UNIT WARRANTY 1 YEAR

GAS FIRED UNIT HEATER SCHEDULE

Table with columns: MARK, SERVICE, BTUH INPUT, BTUH OUTPUT, TOTAL CFM, HP MIN., FLUE SIZE, COMB. AIR INLET SIZE, ELECTRIC SERVICE, WEIGHT, REMARKS. Row 1: GFUH-1,2, TRUCK BAY, 400000, 332000, 5995, 3/4, 6", 6", 120/1/60, 400, MODINE MODEL PTX400, OR APPROVED EQUAL

- NOTES: 1. PROVIDE SUMMER FAN SWITCH TO OPERATE THE FAN ONLY. 2. MOUNT HEATERS AT HEIGHT OF RECOMMENDED BY GAS-FIRED UNIT HEATER MANUFACTURER, COORDINATE WITH ARCHITECT/OWNER PRIOR TO INSTALLATION. 3. PROVIDE HORIZONTAL COMBUSTION AIR/VENT KIT INCLUDING CONCENTRIC ADAPTER, TO SIDEWALL PENETRATION. 4. ALL GAS FIRED UNIT HEATERS TO HAVE SEPARATED SEALED COMBUSTION CHAMBER. 5. ALL HEATERS TO COME WITH VENT TERMINAL/COMBUSTION AIR INLET ASSEMBLY. 6. HEATER FAN MOTOR TO BE ENCLOSED TYPE. 7. PROVIDE OPTIONAL DOWNTURN NOZZLE WITH 25'-65' RANGE OF AIR DEFLECTION.

DUCTLESS MINI-SPLIT SYSTEM

Table with columns: UNIT NO., LOCATION, SERVICE, FAN DATA (INDOOR UNIT), COOLING DATA, HEATING DATA, ELECTRICAL (SGL. POINT CONN.), REMARKS. Row 1: ERU-1/ECU-1, SEE DRAWINGS, 208/1/60, 176-230-335, 12.0, 12.0, 13, 15, LENNOX MODEL MPC012S4S-1P (ERU-1) / MWM012S4-2P (ECU-1) OR PRIOR APPROVED EQUAL

- 1. LIQUID & SUCTION LINES SHALL BE SIZED ACCORDING TO MANUFACTURER'S RECOMMENDATIONS WITH CONSIDERATION FOR ALL ACCESSORIES, LENGTH OF RUN, TURNS, AND ELEVATION CHANGES TO INSURE PROPER OPERATION AND CAPACITY. 2. CONTRACTOR TO PROVIDE REMOTE WALL MOUNTED THERMOSTAT, LOCATE BY LIGHT SWITCH. 3. PROVIDE LOW AMBIENT OPERATION KIT. 4. ALL UNITS TO HAVE R-410a REFRIGERANT. 5. UNIT TO BE INVERTER TYPE. 6. PROVIDE HAIL GUARD SET. 7. ALL UNITS TO HAVE MAXIMUM EQUIVALENT REFRIGERANT RUN LENGTH OF 98'-0", NO EXCEPTION. 8. PROVIDE HAIL GUARD SET.



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EXHAUST FAN SCHEDULE

UNIT NO.	LOCATION	SERVICE	C.F.M.	TOTAL S.P. I.W.G.	TYPE	DRIVE	FAN R.P.M.	SONES	MOTOR DATA					ENCLOSURE	REMARKS	CONTROLLED BY
									WATTS	HP	VOLTS	PH	R.P.M.			
EF-1,4	CEILING	SHOWER	50	0.25"	CABINET	DIRECT	855	0.8	12	-	120	1/60	950	ODP	GREENHECK MODEL SP-A110 APPROVED EQUAL	HUMIDISTAT ON WALL
EF-2,3	CEILING	RRS	100	0.25"	CABINET	DIRECT	1237	1.5	33	-	120	1/60	1400	ODP	GREENHECK MODEL SP-A190 APPROVED EQUAL	OCCUPANCY SENSOR ON FACE OF GRILLE
EF-5	CEILING	HAZARDOUS	150	0.25"	CABINET	DIRECT	1237	1.5	33	-	120	1/60	1400	ODP	GREENHECK MODEL SP-A190 APPROVED EQUAL	TIMER SWITCH ON WALL
EF-6	CEILING	OXYGEN STOR.	200	0.25"	INLINE	BELT	838	5.9	-	1/4	120	1/60	1725	EXP	GREENHECK MODEL SP-A190 APPROVED EQUAL	THERMOSTAT ON WALL
EF-7	CEILING	STORAGE	150	0.25"	CABINET	DIRECT	1237	1.5	33	-	120	1/60	1400	ODP	GREENHECK MODEL SP-A190 APPROVED EQUAL	THERMOSTAT ON WALL

GENERAL NOTES:

- PROVIDE EXHAUST FAN WITH BACKDRAFT DAMPER, INTERGAL DISCONNECT.
- CO-ORDINATE WITH ELECTRICAL CONTRACTOR ON CONNECTION OF FAN, REFER TO SCHEDULES.
- PROVIDE SPEED CONTROL AT ALL DIRECT DRIVE FANS FOR AIR BALANCING.
- PROVIDE BACKDRAFT DAMPER FOR EXHAUST FAN.
- INSULATE ALL INLINE AND CABINET FAN HOUSINGS.
- ALL FANS SHALL BE ALL ALUMINUM CONSTRUCTION (FAN HOUSING, ETC.).
- MANUFACTURERS MODEL NUMBER REPRESENTS QUALITY OF EQUIPMENT TO BE INSTALLED, THIS PROJECT.

GREENHECK #SP_FAN ACCESSORIES:

- MOTORS WITH THERMAL OVERLOAD
- UL 507 LISTED
- FAN SPEED CONTROLLER FACTORY MOUNTED AND WIRED INSIDE FAN HOUSING
- INSULATED FAN HOUSING
- DESIGNER GRILLE WITH FACTORY MOUNTED & WIRED MOTION DETECTOR (UNLESS OTHERWISE NOTED)
- HANGING ISOLATION KIT

LOUVER SCHEDULE

ID TAG	AREA SERVED	MANUFACTURER	MODEL	SIZE W"xH"xD"	CFM	FREE AREA MIN (SF)	FPM (FT/MIN.)	APD ("WC)	MATERIAL	MOTORIZED DAMPER	CONTROL CIRCUIT	BPWP FT./MIN.
L-1	INTAKE AIR @ AHU-1,2	GREENHECK	ESD-435X	22x12x4	400	0.61	653	0.069	ALUMINUM	NO	NO	989
L-2	EXHAUST AIR @ EF'S-1,2,3,4	GREENHECK	ESD-435X	22x12x4	300	0.61	490	0.035	ALUMINUM	NO	NO	989
L-3	RANGE HOOD EXHAUST	GREENHECK	ESD-435X	12x12x4	190	0.29	646	0.059	ALUMINUM	NO	NO	989
L-4	EXHAUST AIR @ EF-5,6	GREENHECK	ESD-435X	22x12x4	350	0.61	572	0.046	ALUMINUM	NO	NO	989

NOTES:

- ALL LINE VOLTAGE WIRING AND INTERLOCK BY ELECTRICAL CONTRACTOR.
- LOUVER TO HAVE 70% KYNAR FINISH, COLOR TO BE SELECTED BY ARCHITECT/ENGINEER.
- LOUVERS SHALL HAVE THE FOLLOWING:
 - DRAINABLE BLADES
 - BIRDSCREEN
 - CHANNEL FRAMES
 - EXTENDED SILLS
- REFER TO DETAILS #1 & #2, SHEET M3.02.
- LOUVERS TO BE FLORIDA PRODUCT APPROVED.
- APPROVED MANUFACTURERS: POTTORF, RUSKIN.

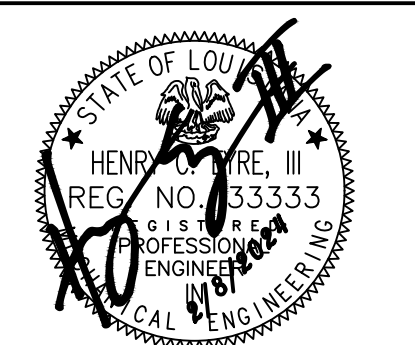
New EMS Station No. 9

Public Safety Complex
8850 Conrath Village Lane
Baton Rouge, LA 70815
CITY-PARISH PROJECT NO. 21-ASC-CP-1485

Phase: Construction Documents

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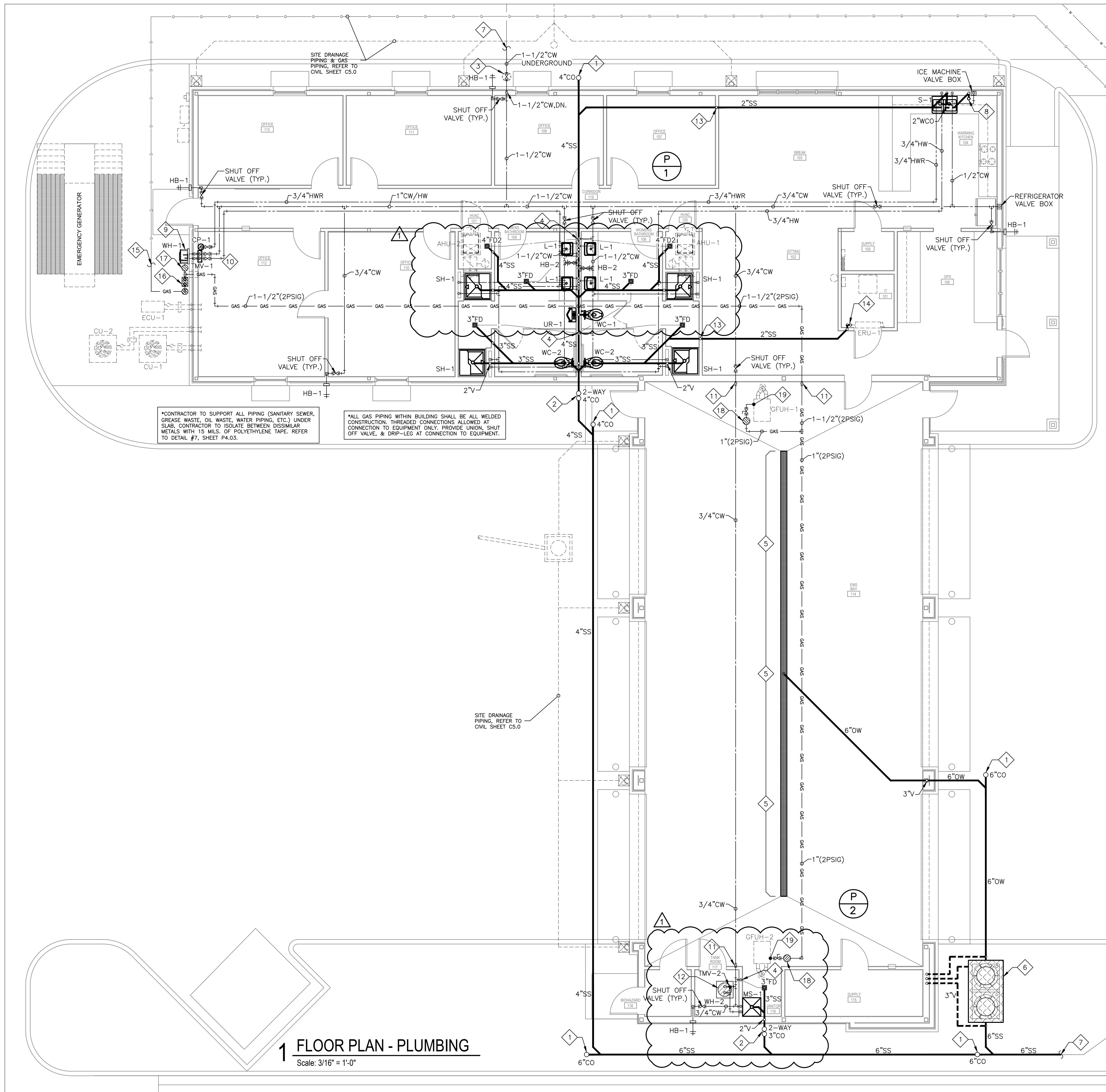
MECHANICAL SCHEDULES



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M2.02

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*CONTRACTOR TO SUPPORT ALL PIPING (SANITARY SEWER, GREASE WASTE, OIL WASTE, WATER PIPING, ETC.) UNDER SLAB. CONTRACTOR TO ISOLATE BETWEEN DISSIMILAR METALS WITH 15 MILS. OF POLYETHYLENE TAPE. REFER TO DETAIL #7, SHEET P4.03.

*ALL GAS PIPING WITHIN BUILDING SHALL BE ALL WELDED CONSTRUCTION. THREADED CONNECTIONS ALLOWED AT CONNECTION TO EQUIPMENT ONLY. PROVIDE UNION, SHUT OFF VALVE, & DRIP-LEG AT CONNECTION TO EQUIPMENT.

SITE DRAINAGE PIPING & GAS PIPING, REFER TO CIVIL SHEET C5.0

1 FLOOR PLAN - PLUMBING
Scale: 3/16" = 1'-0"

PLUMBING PLAN KEYNOTES:

- 1 CONTRACTOR TO PROVIDE AND INSTALL EXTERIOR CLEANOUT, REFER TO DETAIL #1, SHEET 4.01.
- 2 CONTRACTOR TO PROVIDE AND INSTALL 2-WAY EXTERIOR CLEANOUT, REFER TO DETAIL #2, SHEET P4.01.
- 3 CONTRACTOR TO PROVIDE AND INSTALL UNDERGROUND WATER SHUT OFF VALVE IN CAST IRON VALVE BOX WITH COVER MARKED "WATER", REFER TO DETAIL #7, SHEET P4.01.
- 4 CONTRACTOR TO PROVIDE AND INSTALL AUTOMATIC TRAP PRIMER WITH AIR GAP, ROUTE 1/2" LINE INSIDE WALL, DOWN INSIDE, UNDERGROUND TO FLOOR DRAIN. REFER TO DETAIL #10, SHEET P4.01.
- 5 CONTRACTOR TO PROVIDE AND INSTALL ZURN MODEL Z886-DGE (OR APPROVED EQUAL) DUCTILE IRON SLOTTED GRATE (CLASS E) TRENCH DRAIN SYSTEM. COORDINATE WITH EQUIPMENT SPECIFICATIONS ON EXACT REQUIREMENTS PRIOR TO INSTALLATION AND INSTALL IN STRICT ACCORDANCE WITH MANUFACTURERS RECOMMENDATIONS. REFER TO DETAIL #2 SHEET P4.04.
- 6 CONTRACTOR TO PROVIDE AND INSTALL 300 GALLON CONCRETE OIL/WATER SEPARATOR AS SHOWN ON DRAWINGS. COORDINATE WITH EQUIPMENT SPECIFICATIONS ON EXACT REQUIREMENTS PRIOR TO INSTALLATION AND INSTALL IN STRICT ACCORDANCE WITH MANUFACTURERS RECOMMENDATIONS. CONTRACTOR TO COORDINATE WITH CIVIL DRAWINGS, (UTILITIES LAYOUT) FOR EXACT LOCATION OF OIL/WATER SEPARATOR PRIOR TO CONSTRUCTION. REFER TO DETAIL #3, SHEET P4.03.
- 7 REFER TO CIVIL DRAWINGS, SHEET C5.0, FOR CONTINUATION OF PLUMBING SERVICES.
- 8 CONTRACTOR TO PROVIDE AND INSTALL 2" OPEN-ENDED HUB DRAIN STUBBED UP THRU FLOOR TO ACCOMMODATE DRAINAGE OF UNDER-COUNTER ICE MACHINE. COORDINATE WITH EQUIPMENT SPECIFICATIONS ON EXACT REQUIREMENTS PRIOR TO INSTALLATION AND INSTALL IN STRICT ACCORDANCE WITH MANUFACTURERS RECOMMENDATIONS.
- 9 CONTRACTOR TO PROVIDE AND INSTALL GAS FIRED INSTANTANEOUS WATER HEATER (WH-1). REFER TO DETAIL #9, SHEET P4.02, SPECIFICATIONS, & SCHEDULES. COORDINATE WITH EQUIPMENT SPECIFICATIONS ON EXACT REQUIREMENTS PRIOR TO INSTALLATION AND INSTALL IN STRICT ACCORDANCE WITH MANUFACTURERS RECOMMENDATIONS.
- 10 DOMESTIC HOT WATER CIRCULATING PUMP (CP-1), THERMOSTATIC MIXING VALVE (TMV-1), & THERMAL EXPANSION TANK TO BE MOUNTED ON WALL ABOVE CEILING, REFER TO DETAIL #8, SHEET P4.02, SPECIFICATIONS, & SCHEDULES.
- 11 CONTRACTOR TO OFF-SET PLUMBING PIPING (3/4" DOMESTIC COLD WATER & 1-1/2" GAS PIPING) UP TO UNDERSIDE OF STRUCTURE.
- 12 CONTRACTOR TO PROVIDE AND INSTALL ELECTRIC WATER HEATER LOCATED ABOVE CEILING. FIELD ROUTE AUXILIARY DRAIN PIPING (1" COPPER PIPE) AND T&P RELIEF DRAIN PIPING (COPPER PIPE FULL SIZE) DOWN INSIDE WALL, STUB OUT WALL IN TO MOP SINK, TURN DOWN. REFER TO DETAIL #3, SHEET P4.04.
- 13 CONTRACTOR TO PROVIDE AND INSTALL 2" HUB DRAIN WITH BARRIER TYPE TRAP PRIMER IN CEILING SPACE FOR CONDENSATE FROM HVAC UNIT. PLUMBING CONTRACTOR TO COORDINATE WITH MECHANICAL CONTRACTOR PRIOR TO INSTALLATION, RE: TYPICAL DETAIL.
- 14 CONTRACTOR TO PROVIDE 2" HUB DRAIN STUBBED OUT WALL TO RECEIVE CONDENSATE FROM AIR HANDLING UNIT. CONTRACTOR TO ROUTE CONDENSATE FROM AIR HANDLING UNIT TO HUB DRAIN AND TURN DOWN AT FUNNEL. COORDINATE EXACT LOCATION TO ENSURE GRAVITY FLOW OF CONDENSATE.
- 15 NEW HI-PRESSURE GAS PIPING TO BE ROUTED BY LOCAL GAS COMPANY, TO LOCATION OF NEW GAS METER. CONTRACTOR TO COORDINATE WITH LOCAL GAS COMPANY ON THE EXACT PIPE ROUTING AND LOCATION OF GAS METER AND INCLUDE ALL COST (FEES, PERMITS, METER, INSTALLATION, ETC.) IN BID.
- 16 CONTRACTOR TO PROVIDE AND INSTALL NEW GAS METER AND GAS REGULATOR. GAS REGULATOR SHALL BE SIZED DOWN FROM CITY PRESSURE TO 2-PSIG TO HANDLE 1,000 CFH (1,000,000 BTUH) TOTAL GAS LOAD. CONTRACTOR TO COORDINATE WITH LOCAL GAS COMPANY PRIOR TO INSTALLATION AND INCLUDE ALL ASSOCIATED COSTS (FEES, PERMITS, METER, INSTALLATION, ETC.) IN BID. REFER TO DETAIL #1, SHEET P4.04.
- 17 CONTRACTOR TO PROVIDE AND INSTALL NEW GAS REGULATOR SIZED DOWN FROM 2-PSIG TO MANUFACTURER RECOMMENDED OPERATING PRESSURE TO SERVE GAS FIRED INSTANTANEOUS WATER HEATER. REGULATOR TO BE SIZED FOR A MAXIMUM FLOW OF 199 CFH (199,000 BTU). CONTRACTOR TO VERIFY OPERATING PRESSURE WITH MANUFACTURER OF ACTUAL EQUIPMENT (THAT IS TO BE SUPPLIED TO THE PROJECT) PRIOR TO INSTALLATION. NATURAL GAS REGULATOR TO BE GOVERNOR SERIES AS MANUFACTURED BY PIETRO FLORENTINI (REGULATOR TO HAVE INTEGRAL VENT LIMITER, CAPACITY RANGE OF 500 TO 1 TURNDOWN).
- 18 CONTRACTOR TO PROVIDE AND INSTALL NEW GAS REGULATOR SIZED DOWN FROM 2-PSIG TO MANUFACTURER RECOMMENDED OPERATING PRESSURE TO SERVE GAS FIRED UNIT HEATER(S). REGULATOR TO BE SIZED FOR A MAXIMUM FLOW OF 400 CFH (400,000 BTU). CONTRACTOR TO VERIFY OPERATING PRESSURE WITH MANUFACTURER OF ACTUAL EQUIPMENT (THAT IS TO BE SUPPLIED TO THE PROJECT) PRIOR TO INSTALLATION. NATURAL GAS REGULATOR TO BE GOVERNOR SERIES AS MANUFACTURED BY PIETRO FLORENTINI (REGULATOR TO HAVE INTEGRAL VENT LIMITER, CAPACITY RANGE OF 500 TO 1 TURNDOWN).
- 19 CONTRACTOR SHALL FIELD ROUTE 1"(10"W.C.) GAS PIPING WITH SHUT OFF VALVE TO GAS FIRED UNIT HEATER AND CONNECT. COORDINATE WITH MECHANICAL DRAWINGS AND EQUIPMENT SPECIFICATIONS ON EXACT REQUIREMENTS PRIOR TO INSTALLATION AND INSTALL IN STRICT ACCORDANCE WITH MANUFACTURERS RECOMMENDATIONS.



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Consultants:

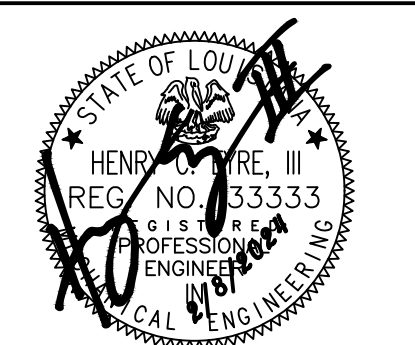
New EMS Station No. 9

Public Safety Complex
8850 Commins Village Lane
Baton Rouge, LA 70815
CITY-PARISH PROJECT NO. 21-ASC-CP-1495

Phase: Construction Documents

Date: 2-9-2024

Revisions:
ADDENDUM NO. 1 3/6/24



Professional Seal
Scale: AS SHOWN
Sht Description:

FLOOR PLAN - PLUMBING

North
P1.01



PRINTED: 3-4-2024

Consultants:

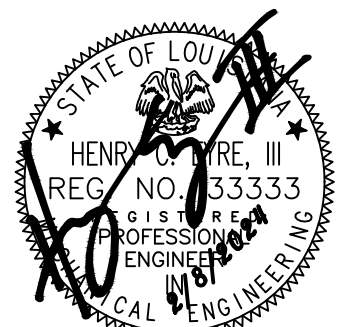
New EMS Station No. 9

Public Safety Complex
8850 Comahts Village Lane
Baton Rouge, LA 70815
CITY-PARISH PROJECT NO. 21-ASC-CP-1485

Phase: Construction Documents

Date: 2-9-2024

Revisions:
ADDENDUM NO. 1 3/6/24



Professional Seal

Scale: AS SHOWN

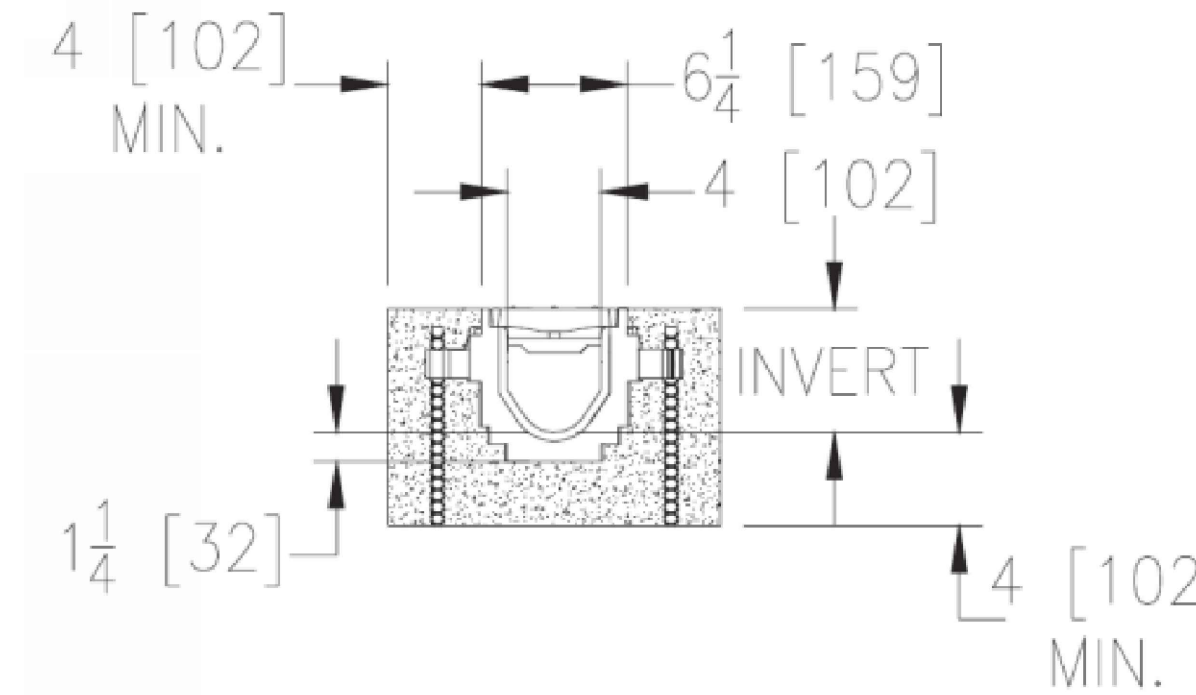
Sh Description:

PLUMBING DETAILS

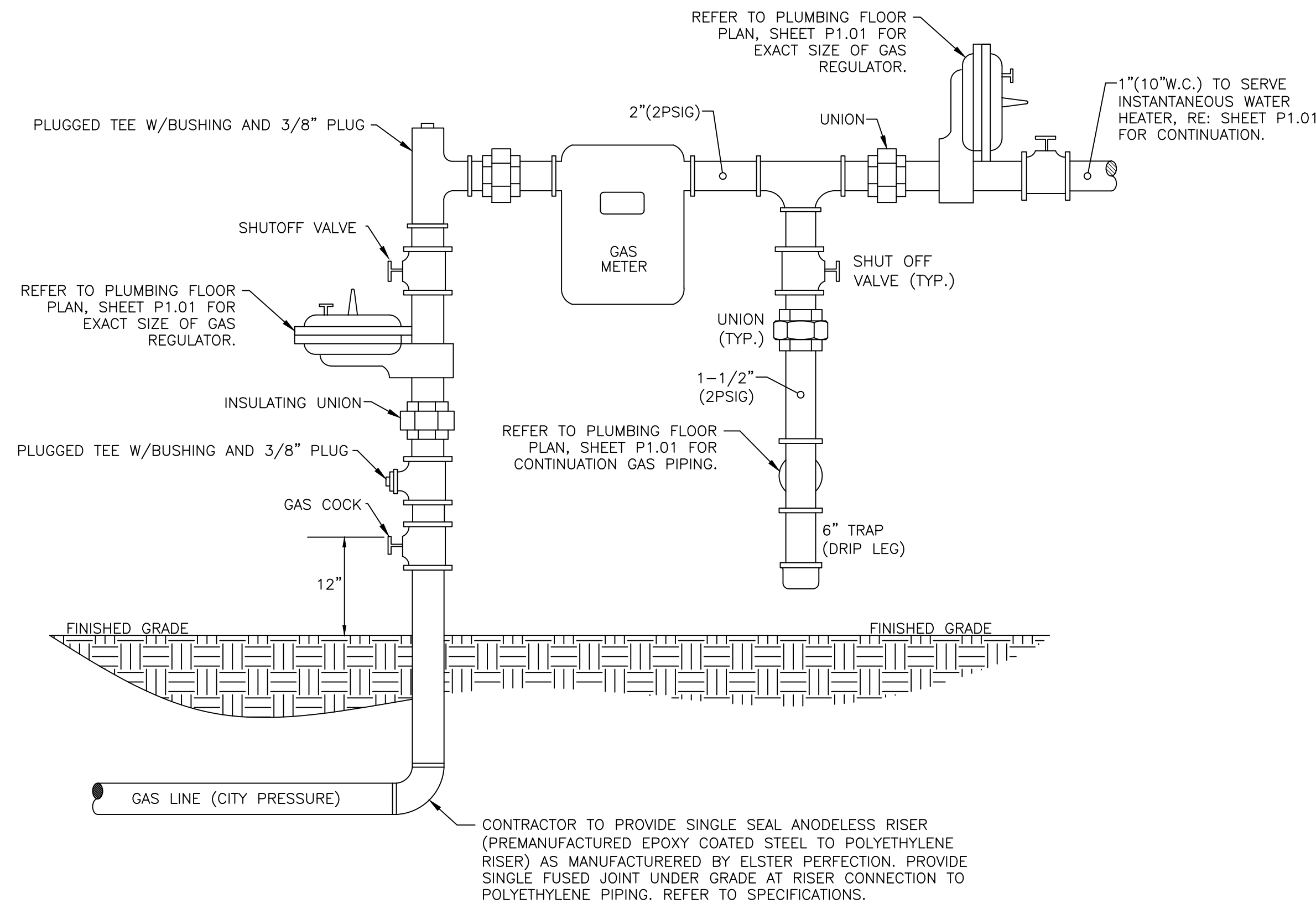
North
P4.04

Z886 Encasement

Four-inch new concrete encasement is minimum. Guidelines for reinforcing an encasement would be to use the same thickness and reinforcing used in the surrounding concrete slab. Concrete must be vibrated to remove air voids in encasement, especially under the frame rails.



CONTRACTOR TO PROVIDE AND INSTALL ZURN MODEL Z886 (OR APPROVED EQUAL) TRENCH DRAIN SYSTEM. PROVIDE TYPE 304 STAINLESS STEEL TOP VENEER FRAME. ZURN Z886 CHANNELS SHALL BE 80" LONG, 6-1/4" WIDE REVEAL AND HAVE A 4" THROAT. MODULAR CHANNEL SECTIONS ARE MADE OF 0% WATER ABSORBENT HIGH DENSITY POLYETHYLENE (HDPE). CHANNELS HAVE A POSITIVE MECHANICAL CONNECTION BETWEEN CHANNEL SECTIONS THAT WILL NOT SEPARATE DURING THE INSTALLATION AND MECHANICALLY LOCK INTO THE CONCRETE SURROUND A MINIMUM OF EVERY 10". CHANNELS WEIGH LESS THAN 2.31 LBS. PER LINEAR FOOT, HAVE A SMOOTH, 1-1/2" RADIUS SELF CLEANING BOTTOM WITH A MANNING'S COEFFICIENT OF .009 AND .75% BUILT IN SLOPE. CHANNELS HAVE REBAR CLIPS STANDARD TO SECURE TRENCH IN ITS FINAL LOCATION. CHANNELS ARE PROVIDED WITH STANDARD DGC GRATES THAT LOCK DOWN WITH LOCKDOWN BARS TO THE CHANNEL AND IS NOT INTENDED FOR DYNAMIC TRAFFIC LOADINGS. ZURN 5-3/8" WIDE REVEAL STAINLESS STEEL SLOTTED GRATE CONFORMING TO ASTM SPECIFICATION A536-84, GRADE 80-55-06. STAINLESS STEEL GRATE SHALL BE RATED CLASS C PER THE DIN EN1433 TOP LOAD CLASSIFICATIONS. SUPPLIED IN 20" NOMINAL LENGTHS WITH 1/2" WIDE SLOTS, AND 3/4" BEARING DEPTH. GRATE HAS AN OPEN AREA OF 28.1 SQ. IN PER FT.. PROVIDE ADAPTERS AS REQUIRED FOR INSTALLATION. INSTALL TRENCH DRAIN FRAMES WITHIN CONCRETE ENCASEMENT, REFER TO TYPICAL DETAIL.



CONTRACTOR TO PROVIDE SINGLE SEAL ANODELESS RISER (PREMANUFACTURED EPOXY COATED STEEL TO POLYETHYLENE RISER) AS MANUFACTURED BY ELSTER PERFECTION. PROVIDE SINGLE FUSED JOINT UNDER GRADE AT RISER CONNECTION TO POLYETHYLENE PIPING. REFER TO SPECIFICATIONS.

1 DETAIL - GAS METER (TYP.)

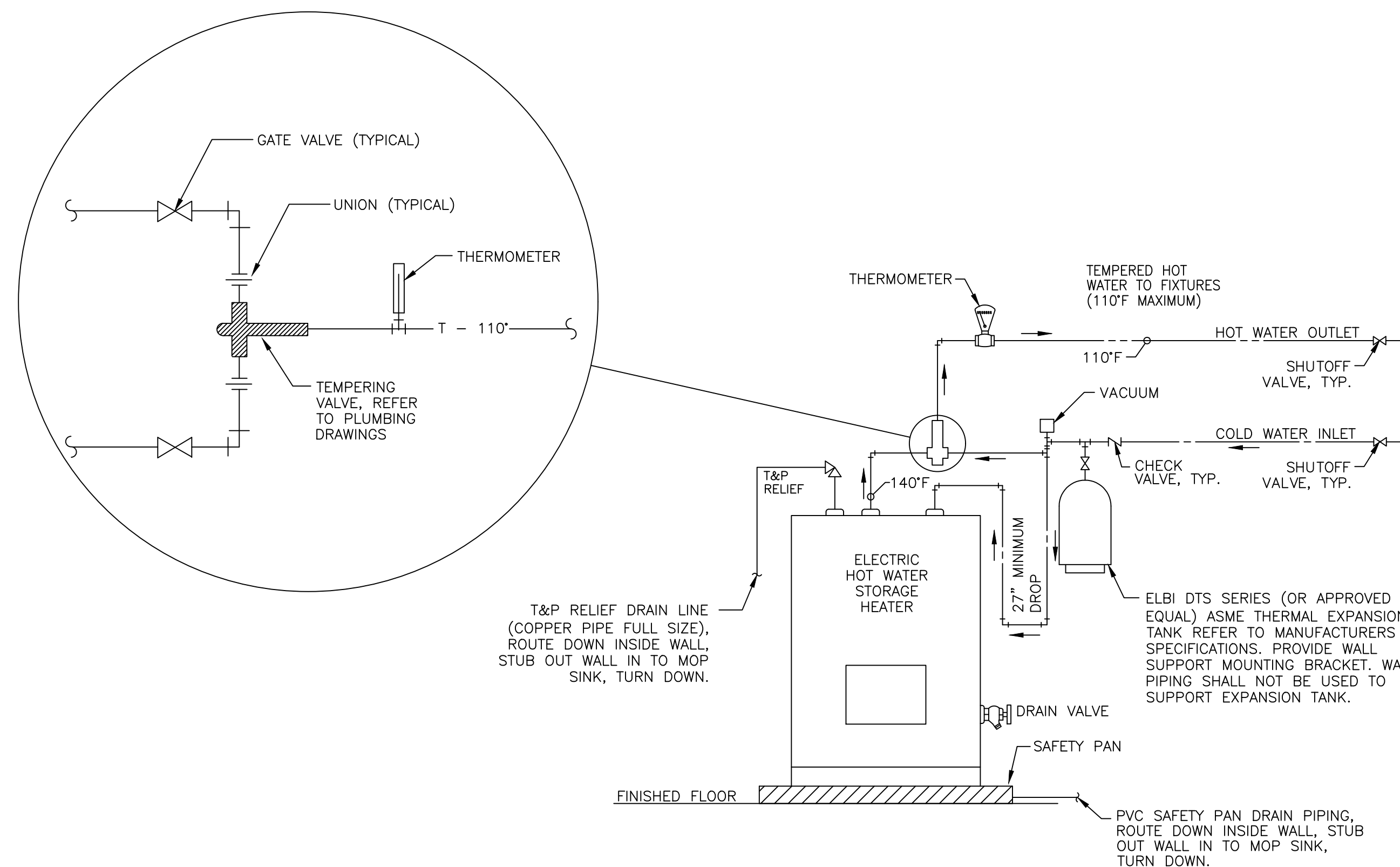
NTS

2 DETAIL - TRENCH DRAIN, TYPICAL

NTS

1

1. REQUIRED SAFETY DEVICES:
 - a. ANTI-SIPHON DEVICE: PROVIDE VACUUM BREAKER AT INCOMING COLD WATER LINE TO WATER HEATER.
 - b. WATER HEATER TO HAVE THERMOSTATIC MIXING VALVES.
 - c. WATER HEATER TO HAVE TEMPERATURE & PRESSURE RELIEF VALVES.
 - d. WATER HEATER SHALL HAVE INTERNAL CUTOFF DEVICE TO CUT THE ENERGY SOURCE TO THE WATER HEATER.



3 DETAIL - ELECTRIC WATER HEATER (WH-2)

NTS

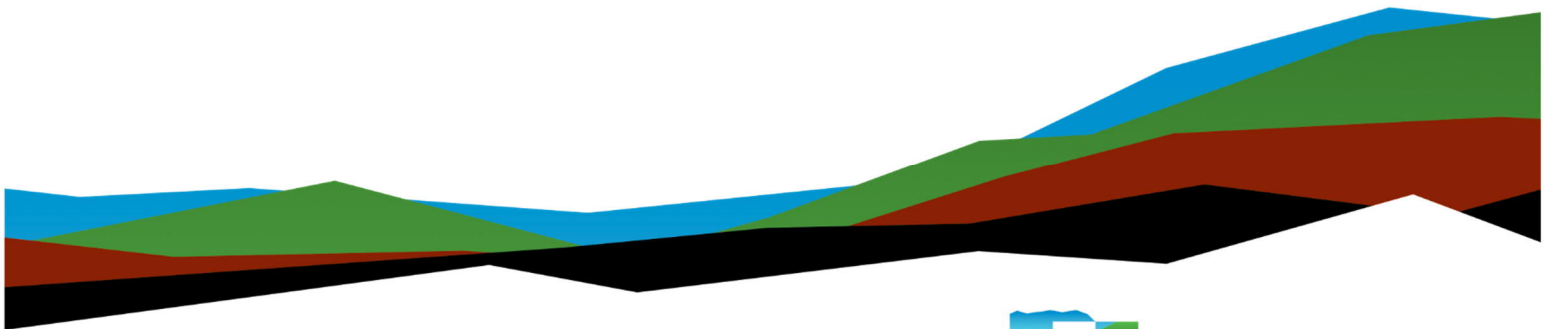
Baton Rouge EMS Station #9

Geotechnical Engineering Report

December 20, 2023 | Terracon Project No. EH235204

Prepared for:

City of Baton Rouge – Parish of
East Baton Rouge
1100 Laurel Street, Rm 227
Baton Rouge, LA



Nationwide
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December 20, 2023

City of Baton Rouge – Parish of East Baton Rouge
1100 Laurel Street, Rm 227
Baton Rouge, LA

Attn: June Tran, AIA
P: (225) 389-4694 x 4412
E: JTran@brla.gov

Re: Geotechnical Engineering Report
Baton Rouge EMS Station #9
9000 Airline Hwy
Baton Rouge, Louisiana
Terracon Project No. EH235204

Dear Ms. Tran:

We have completed the scope of Geotechnical Engineering services for the above referenced project in general accordance with Terracon Proposal No. PEH235204 Revision 1 dated October 11, 2023. This report presents the findings of the subsurface exploration and provides geotechnical recommendations concerning earthwork and the design and construction of foundations, floor slabs and pavements for the proposed project.

We appreciate the opportunity to be of service to you on this project. If you have any questions concerning this report or if we may be of further service, please contact us.

Sincerely,

Terracon

Ryan E. Poindexter, P.E.
Staff Engineer

Lynne E. Roussel, P.E.
Principal/Office Manager

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[Exploration and Testing Procedures](#)
[Site Location and Exploration Plans](#)
[Exploration and Laboratory Results](#)
[Supporting Information](#)

Note: This report was originally delivered in a web-based format. **Blue Bold** text in the report indicates a referenced section heading. The PDF version also includes hyperlinks which direct the reader to that section and clicking on the  logo will bring you back to this page. For more interactive features, please view your project online at client.terracon.com.

Refer to each individual Attachment for a listing of contents.

Introduction

This report presents the results of our subsurface exploration and Geotechnical Engineering services performed for the proposed building and pavement to be located at 9000 Airline Hwy in Baton Rouge, Louisiana. The purpose of these services was to provide information and geotechnical engineering recommendations relative to:

- Subsurface soil conditions
- Groundwater conditions
- Seismic site classification per IBC
- Site preparation and earthwork
- Demolition considerations
- Dewatering considerations
- Foundation design and construction
- Floor slab design and construction
- Pavement design and construction

The geotechnical engineering Scope of Services for this project included the advancement of test borings, laboratory testing, engineering analysis, and preparation of this report.

Drawings showing the site and boring locations are shown on the [Site Location](#) and [Exploration Plan](#), respectively. The results of the laboratory testing performed on soil samples obtained from the site during our field exploration are included on the boring logs and/or as separate graphs in the [Exploration Results](#) section.

Project Description

Our initial understanding of the project was provided in our proposal and was discussed during project planning. A period of collaboration has transpired since the project was initiated, and our final understanding of the project conditions is as follows:

Item	Description
Information Provided	Project information, including a site plan and structural information, were provided by Fox Nesbit via email dated September 29, 2023.
Project Description	The project includes construction of a new EMS Station with a new parking lot.

Item	Description
Proposed Structure	Structures associated with the project include a 5,400 square foot single story EMS station.
Building Construction	The building will be steel-framed with brick veneer and a slab-on-grade.
Finished Floor Elevation	Finished floor elevation for the building is anticipated to be within 2 feet of existing grade.
Maximum Loads	<p>Anticipated structural loads were provided by Fox-Nesbit Engineering, LLC.</p> <ul style="list-style-type: none"> ■ Columns: 25 kips compression, 10 kips uplift ■ Walls: 1.5 kips per linear foot (klf) ■ Slabs: 150 pounds per square foot (psf)
Grading/Slopes	<p>Proposed finished grade elevation for the building pad is expected to be at within 2 feet of existing grade.</p> <p>Approximately 2 feet of fill will be required to develop final grade, excluding remedial grading requirements.</p>
Below-Grade Structures	None anticipated.
Free-Standing Retaining Walls	None anticipated.
Pavements	<p>Paved concrete driveway and parking will be constructed on approximately 0.15 acres of the parcel.</p> <p>Unless information is provided prior to the report, the anticipated ACI traffic categories and daily truck traffic will be assumed to consist of:</p> <ul style="list-style-type: none"> ■ Category A: Car parking areas and access lanes, 10 truck per day ■ Category B: Entrance and truck service lanes, 10 trucks per day ■ Category D: Heavy duty trucks, 10 trucks per day ■ Category E: Garbage or fire truck lanes <p>The pavement design period is 20 years.</p>

Terracon should be notified if any of the above information is inconsistent with the planned construction, especially the grading limits, as modifications to our recommendations may be necessary.

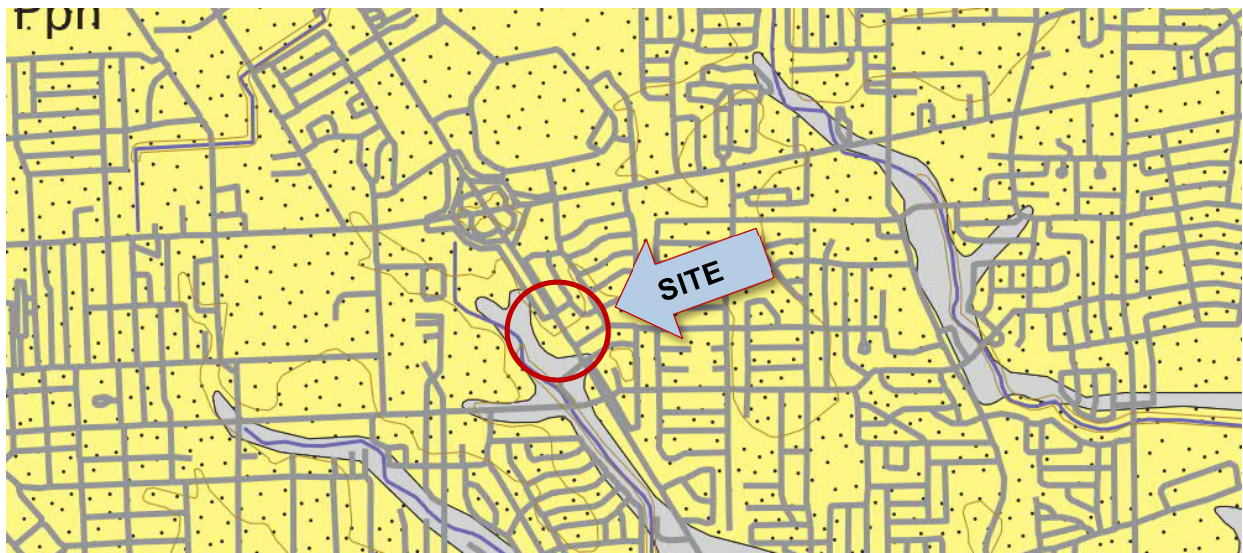
Site Conditions

The following description of site conditions is derived from our site visit in association with the field exploration and our review of publicly available geologic and topographic maps.

Item	Description
Parcel Information	The project is located at 9000 Airline Hwy in Baton Rouge, Louisiana. Approximately 0.3 acres Latitude/Longitude (approximate): 30.4469, -91.0925 See Site Location
Existing Improvements	Existing asphalt parking lot.
Current Ground Cover	Existing asphalt pavement.
Existing Topography	Relatively flat.

Geotechnical Characterization

Surface Geology



Baton Rouge 30x60 Minute Geologic Quadrangle, Louisiana Geological Survey 2000

The property is mapped within an area of the Hammond alloformation (Pph). These Pleistocene Age deposits of middle to late Wisconsin Coastal Plain streams include flood-plain deposits of the late Pleistocene Mississippi River, exposed in the eastern valley wall of the modern Mississippi River alluvial valley. The unit is blanketed by Peoria Loess, which in places is underlain by Sicily Island Loess. The deposits typically consist of upper very silty clay or silt overlying medium stiff to very stiff tan and light gray silty clays and clays with silt and sand layering. The soils within the Prairie Terrace typically provide good foundation support for relatively light to moderately loaded structures, are overconsolidated, and normally only marginally compressible. In some areas that are very dry and desiccated, the potential for expansive properties exists, but these conditions are not typical of the Prairie Terrace deposits

Subsurface Conditions

We have developed a general characterization of the subsurface conditions based upon our review of the subsurface exploration, laboratory data, geologic setting and our understanding of the project. This characterization, termed GeoModel, forms the basis of our geotechnical calculations and evaluation of the site. Conditions observed at each exploration point are indicated on the individual logs. The individual logs can be found in the [Exploration Results](#) and the GeoModel can be found in the [Figures](#) attachment of this report.

As part of our analyses, we identified the following model layers within the subsurface profile. For a more detailed view of the model layer depths at each boring location, refer to the GeoModel.

Model Layer	Layer Name	General Description
01	Pavement	Asphalt pavement and base
02	Upper Clay	Medium stiff to stiff lean to fat clay
03	Fat Clay	Stiff to very stiff fat clay

The borings were advanced using a flight auger drilling technique that allow short term groundwater observations to be made while drilling. Groundwater seepage was not encountered during drilling at the time of our field exploration. Groundwater conditions may be different at the time of construction. Groundwater conditions may change because of seasonal variations in rainfall, runoff, river levels and other conditions not apparent at the time of drilling. Long-term groundwater monitoring was outside the scope of services for this project.

Geologic Hazards

The site is mapped approximately 5 miles south from the Denham Springs-Scotlandville faults and approximately 1.9 miles north from the Baton Rouge fault. These faults of East Baton Rouge Parish are active but have not been demonstrated to be seismic (they do not generate detectable earthquakes). Rather, the faults have been shown to cause damage to road, pavement, and building structures in vicinity of the faults gradually, over periods of decades. Due to the low seismicity in the region and absence of soils prone to liquefaction, such as loose sands, the soils at the site are not considered a risk for liquefaction.

Seismic Site Class

The seismic design requirements for buildings and other structures are based on Seismic Design Category. Site Classification is required to determine the Seismic Design Category for a structure. The Site Classification is based on the upper 100 feet of the site profile defined by a weighted average value of either shear wave velocity, standard penetration resistance, or undrained shear strength in accordance with Section 20.4 of ASCE 7 and the International Building Code (IBC). Based on the soil properties observed at the site and as described on the exploration logs and results, our professional opinion is for that a Seismic Site Classification of D be considered for the project. Subsurface explorations at this site were extended to a maximum depth of 24 feet. The site properties below the boring depth to 100 feet were estimated based on our experience and knowledge of geologic conditions of the general area. Although not considered essential, additional deeper borings or geophysical testing may be performed to confirm the conditions below the current boring depth.

Geotechnical Overview

The site was covered in approximately 2.5 inches of asphalt over approximately 8 inches of aggregate base. Beneath the pavement, medium stiff to stiff predominately lean clays were present. Groundwater was not encountered during drilling.

Once the pavement is removed, the clays could become unstable with typical earthwork and construction traffic, especially after precipitation events. Effective drainage should be completed early in the construction sequence and maintained after construction to reduce potential issues. At project sites with minimal grade change and with developments and roads surrounding the construction area, such as the existing parking lot, it can be difficult to maintain positive drainage throughout the construction phase. The construction phase drainage should be considered in the development of the project overall grading and drainage plan. The possible poor drainage conditions can lead to

instability in the areas around the site and hamper construction progress. A temporary dewatering system of sumps and pumps could be necessary to remove ponding water where positive drainage is not feasible.

If possible, the grading should be performed during the warmer and drier times of the year. If grading is performed during the winter months, an increased risk for possible undercutting and replacement of unstable subgrade will persist. Initial processing and drying of the upper native soils is anticipated in some areas to achieve suitable stability for subsequent fill placement. It can be prudent to consider specifying chemical treatment of critical project access roads and construction laydown areas as part of the construction package to reduce potential weather related delays. Additional recommendations should be provided by the Geotechnical Engineer based on conditions noted at the time of site preparation. Additional site preparation recommendations, including proofrolling, subgrade improvement and fill placement, are provided in the [Earthwork](#) section.

Based on the conditions encountered and estimated load-settlement relationships, the proposed structures can be supported on conventional continuous or spread footings,. The soils which form the bearing stratum for shallow foundations are low and medium plasticity silty clays, but pockets of high plasticity fat clay were encountered at borings B-03. In general, lean clays are considered to exhibit low to moderate potential while fat clays are considered to exhibit a high potential for shrink-swell movements with changes in moisture. Additionally, a swell test was performed and indicated minimal swell potential of the subgrade soils. Maintaining a minimum dead load pressure on footings should reduce the anticipated swell movements to tolerable levels. The [Shallow Foundations](#) section addresses support of the building directly bearing on native stiff to very stiff lean/fat clay or structural fill. We do not expect significant dead load on the floors and recommend either placing a buffer layer of low plasticity structural fill or overexcavation and replacement of near-surface high plasticity clays or a combinations of both methods to reduce the heave potential. The [Floor Slabs](#) section addresses slab-on-grade support of the building.

It can be efficient with this type of construction to support the building on relatively shallow drilled shaft foundations. The [Deep Foundations](#) section addresses support of the building on relatively shallow drilled shafts, driven timber/prestressed concrete/pipe piles, auger cast piles.

Our opinion of pavement section thickness design has been developed based on our understanding of the intended use, assumed traffic, and subgrade preparation recommended herein using methodology contained in ACI 330 "Guide to Design and Construction of Concrete Parking Lots" and adjusted with consideration to LADOTD Louisiana State Specification for Roads and Bridges (LSSRB 2016)>. The [Pavements](#) section includes minimum pavement component thickness.

The recommendations contained in this report are based upon the results of field and laboratory testing (presented in the [Exploration Results](#)), engineering analyses, and our current understanding of the proposed project. The [General Comments](#) section provides an understanding of the report limitations.

Earthwork

Earthwork is anticipated to include demolition of existing structures/pavements, clearing and grubbing, excavations, and structural fill placement. The following sections provide recommendations for use in the preparation of specifications for the work.

Recommendations include critical quality criteria, as necessary, to render the site in the state considered in our geotechnical engineering evaluation for foundations, floor slabs, and pavements.

Demolition

The proposed building will be constructed within the footprint of the existing building which will need to be demolished, as well as exterior sidewalks, pavements, and utilities. We recommend existing foundations, slabs, and utilities be removed from within the proposed building footprint and at least 5 feet beyond the outer edge of foundations.

For areas outside the proposed building footprints and foundation bearing zones, the existing foundations, floor slabs, and utilities should be removed where they conflict with proposed utilities, retaining walls, or pavements. In such cases, existing foundations, floor slabs, and utilities should be removed up to a depth of at least 2 feet below the affected utility or design pavement subgrade elevation and the subgrade tested for stability.

Site Preparation

Prior to placing fill, loose, soft or otherwise unsuitable material should be removed. Complete stripping of the topsoil should be performed in the proposed building and parking/driveway areas. Topsoil measurements were made at the boring locations; however, stripping depths between our boring locations and across the site could vary considerably. As such we recommend actual stripping depths be evaluated by a representative of Terracon during construction to aid in preventing removal of excess material.

Although no evidence of debris, buried foundations, old fills or underground facilities (such as septic tanks, pools and utilities) was observed during the exploration and site reconnaissance on the previously developed/cleared site, such features could be encountered during construction clearing and should be further investigated. Such

features should be removed, and the excavation thoroughly cleaned prior to backfill placement and construction.

Subgrade Preparation

After stripping the site, the subgrade should be proofrolled with an adequately loaded rubber tire vehicle such as a partially-loaded tandem-axle dump truck or loaded scraper. The vehicle should weigh between 15 and 20 Tons (total vehicle weight). The proofrolling should be performed under the observation of the Geotechnical Engineer or representative. Areas excessively deflecting under the proofroll should be delineated and subsequently addressed by the Geotechnical Engineer. It is not unusual to find soft and wet soils immediately beneath existing pavements and slabs. If unstable subgrade is encountered after initial topsoil stripping, mitigation should be performed as described in the Soil Stabilization section. Unstable, isolated areas could either be removed or modified by treating with lime or cement as specified by the Geotechnical Engineer at the time of construction. Excessively wet or dry material should either be removed or moisture conditioned and recompacted.

Soil Stabilization

Once the existing pavements are removed, the existing clay subgrades are expected to become unstable with typical construction activities. Methods of subgrade improvement, as described below, could include scarification, drying and recompaction, chemical stabilization or removal of unstable materials and replacement with structural fill. The appropriate method of improvement, if required, would be dependent on factors such as schedule, weather, availability and costs of materials, the size of area to be stabilized, and the nature of the instability. More detailed recommendations can be provided during construction as the need for subgrade stabilization occurs. Performing site grading operations during warm seasons and dry periods would help reduce the amount of subgrade stabilization required.

If the exposed subgrade is unstable during proofrolling operations, it could be stabilized using one of the methods outlined below.

- Scarification and Recompaction - It may be feasible to scarify, dry, and recompact the exposed lean clay soils in unstable areas that were observed during proofrolling. The upper maximum 12 inches of native subgrade should be processed by frequent windrowing with a dozer or plowing with a set of heavy duty disc harrows for at least three working days to achieve stable conditions for fill placement before consideration of other mitigation approaches. The windrowing and drying effort should be performed during a period with at least two days forecasted to be dry. The processed areas should be sealed with the dozer at the end of the day in case of overnight rain. Stabilizing subgrades by

drying likely would not be achievable if the thickness of the unstable soil is greater than about 1 to 2 feet, if the unstable soil is at groundwater levels, or if construction is performed during a period of wet or cool weather when drying is difficult.

- **Chemical Treatment** – For higher plasticity or wet, unstable surficial soils, it may be prudent to consider specifying chemical treatment of critical project access roads, building pads and construction laydown areas as part of the construction package to reduce potential weather-related delays. For the typical near surface lean clay soils at this site, treatment of the subgrade with minimum 6% quick lime or 6% hydrated lime by volume to a depth of 12 inches should provide for a more weather resistant subgrade of these critical areas during the construction phase. The hazards of airborne particles during mixing blowing across the site or onto adjacent property should be considered. Additional testing could be needed to develop specific recommendations on determining the moist suitable stabilizing agent and optimum amounts required to improve subgrade stability by blending with the site soils.
- **Undercut and Replacement** – The surficial soils consist of low plasticity lean clay and non-plastic silt to around 2 feet below grade. Even though the subgrade appeared relatively stable during the subsurface exploration, repetitive construction traffic over the on-site surficial soil will likely lead to softening and disturbance of the exposed native subgrade. Additionally, this material has a narrow range of moisture contents where sufficient levels of compaction with stability can be achieved and then sustained during the compaction of the fill above. Even though leaving this material in place or reworking is possible and should be considered, chemical treatment of building pads, critical project access roads and construction laydown areas with cement should be budgeted as an alternative in the construction package or carefully considered at the time of construction to reduce potential weather related delays.

Further evaluation of the need and recommendations for subgrade stabilization can be provided during construction as the geotechnical conditions are exposed.

Fill Material Types

Fill required to achieve design grade should be classified as structural fill and general fill. Structural fill is material used below, or within 10 feet of structures, pavements or constructed slopes and other structural areas. General fill is material used to achieve grade outside of these areas, such as landscaped areas.

Reuse of On-Site Soil: Excavated on-site lean clay soil may be selectively reused as structural fill below foundations, pavements and landscaping areas

Material property requirements for on-site lean clay soil for use as general fill and structural fill are noted in the table below:

Property	General Fill	Structural Fill
Composition	Free of deleterious material	Free of deleterious material
Sand content	Not limited	Not limited
Plasticity	Liquid Limit less than 50, Plasticity index greater than 10 and less than 30	
GeoModel Layer Expected to be Suitable ¹	1, 2, 3	2, 3

1. Based on subsurface exploration. Actual material suitability should be determined in the field at time of construction.

Imported Fill Materials: Imported fill materials should meet the following material property requirements. Regardless of its source, compacted fill should consist of approved materials that are free of organic matter and debris.

Soil Type ¹	USCS Classification	Acceptable Parameters (for Structural Fill)
Low Plasticity Soil	CL, SC	Liquid Limit less than 45, Plasticity index greater than 10 and less than 25
River Sand	SP, SP-SM	Less than 10% Passing No. 200 sieve
Aggregate Base	GP, GM	LADOTD No. 610 Crushed Limestone or similarly graded crushed recycled concrete.

1. Structural and general fill should consist of approved materials free of organic matter and debris. A sample of each material type should be submitted to the Geotechnical Engineer for evaluation prior to use on this site. Additional geotechnical consultation should be provided prior to use of uniformly graded gravel on the site.

Fill Placement and Compaction Requirements

Structural and general fill should meet the following compaction requirements.

Item	Structural Fill	General Fill
Maximum Lift Thickness	9 inches or less in loose thickness when heavy, self-propelled compaction equipment is used. 4 to 6 inches in loose thickness when hand-guided equipment (i.e. jumping jack or plate compactor) is used.	Same as structural fill
Minimum Compaction Requirements ^{1,2,3}	95% of max. below foundations, floor slabs, and finished pavement subgrade. 100% of maximum dry density for aggregate base beneath pavement.	92% of max.
Water Content Range ¹	Low plasticity cohesive: -2% to +3% of optimum Granular: -3% to +3% of optimum Aggregate Base: -2% to +2% of optimum	As required to achieve min. compaction requirements.

1. Maximum density and optimum water content as determined by the standard Proctor test (ASTM D 698).
2. If the granular material is a coarse sand or gravel, or of a uniform size, or has a low fines content, compaction comparison to relative density may be more appropriate. In this case, granular materials should be compacted to at least 70% relative density (ASTM D 4253 and D 4254). Materials not amenable to density testing should be placed, compacted and conditioned at workable moisture levels to a stable condition observed without pumping when proofrolling by the Geotechnical Engineer or representative.

Utility Trench Backfill

Any soft or unsuitable materials encountered at the bottom of utility trench excavations should be removed and replaced with structural fill or bedding material in accordance with LADOTD or local public works specifications for the utility to be supported. This recommendation is particularly applicable to utility work requiring grade control and/or in areas where subsequent grade raising could cause settlement in the subgrade supporting the utility. Trench excavation should not be conducted below a downward 1:1 projection from existing foundations without engineering review of shoring requirements and geotechnical observation during construction.

On-site materials are considered suitable for backfill cover of utility and pipe trenches, provided the material is free of organic matter and deleterious substances.

Trench backfill should be mechanically placed and compacted as discussed earlier in this report. Compaction of initial lifts should be accomplished with hand-operated tampers or other lightweight compactors. Where trenches are placed beneath slabs or footings, the backfill should satisfy the gradation and expansion index requirements of structural fill

discussed in this report. Flooding or jetting for placement and compaction of backfill is not recommended.

For low permeability subgrades, utility trenches are a common source of water infiltration and migration. Utility trenches penetrating beneath the building should be effectively sealed to restrict water intrusion and flow through the trenches, which could migrate below the building. The trench should provide an effective trench plug that extends at least 5 feet from the face of the building exterior. The plug material should consist of cementitious flowable fill or low permeability clay. The trench plug material should be placed to surround the utility line. If used, the clay trench plug material should be placed and compacted to comply with the water content and compaction recommendations for structural fill stated previously in this report.

Grading and Drainage

All grades must provide effective drainage away from the building during and after construction and should be maintained throughout the life of the structure. Water retained next to the building can result in soil movements greater than those discussed in this report. Greater movements can result in unacceptable differential floor slab and/or foundation movements, cracked slabs and walls, and roof leaks. The roof should have gutters/drains with downspouts that discharge onto splash blocks at a distance of at least 10 feet from the building.

At project sites with minimal grade change and with developments and roads surrounding the construction area, such as the existing parking lot, it can be difficult to maintain positive drainage throughout the construction phase. The construction phase drainage should be considered in the development of the project overall grading and drainage plan. The possible poor drainage conditions can lead to instability in the areas around the building and hamper construction progress. The site grading and general contractor should consider their means and methods to maintain drainage during the construction phase. It is sometimes prudent to consider specifying chemical treatment of critical project access roads and construction laydown areas as part of the construction package to reduce potential weather-related delays as described above.

Exposed ground should be sloped and maintained at a minimum 5% away from the building for at least 10 feet beyond the perimeter of the building. Locally, flatter grades may be necessary to transition ADA access requirements for flatwork. After building construction and landscaping have been completed, final grades should be verified to document effective drainage has been achieved. Grades around the structure should also be periodically inspected and adjusted, as necessary, as part of the structure's maintenance program. Where paving or flatwork abuts the structure, a maintenance program should be established to effectively seal and maintain joints and prevent surface water infiltration.

Trees or other vegetation whose root systems can remove excessive moisture from the subgrade and foundation soils should not be planted next to the structure. Trees and shrubbery should be kept away from the exterior edges of the foundation element a distance at least equal to 1.5 times their expected mature height.

Earthwork Construction Considerations

Shallow excavations for the proposed structure are anticipated to be accomplished with conventional construction equipment, after removal of pavements. Upon completion of filling and grading, care should be taken to maintain the subgrade water content prior to construction of grade-supported improvements such as floor slabs and pavements. Construction traffic over the completed subgrades should be avoided. The site should also be graded to prevent ponding of surface water on the prepared subgrades or in excavations. Water collecting over or adjacent to construction areas should be removed. If the subgrade desiccates, saturates, or is disturbed, the affected material should be removed, or the materials should be scarified, moisture conditioned, and recompacted prior to floor slab construction.

The groundwater table could affect overexcavation efforts, especially for overexcavation and replacement of lower strength soils. A temporary dewatering system consisting of sumps with pumps may be necessary to achieve the recommended depth of overexcavation depending on groundwater conditions at the time of construction.

As a minimum, excavations should be performed in accordance with OSHA 29 CFR, Part 1926, Subpart P, "Excavations" and its appendices, and in accordance with any applicable local and/or state regulations.

Construction site safety is the sole responsibility of the contractor who controls the means, methods, and sequencing of construction operations. Under no circumstances shall the information provided herein be interpreted to mean Terracon is assuming responsibility for construction site safety or the contractor's activities; such responsibility shall neither be implied nor inferred.

Excavations or other activities resulting in ground disturbance have the potential to affect adjoining properties and structures. Our scope of services does not include review of available final grading information or consider potential temporary grading performed by the contractor for possible effects such as ground movement beyond the project limits. A preconstruction/ precondition survey should be conducted to document nearby property/infrastructure prior to any site development activity. Excavation or ground disturbance activities adjacent property lines should be monitored or instrumented for potential ground movements that could negatively affect adjoining property and/or structures.

Construction Observation and Testing

The earthwork efforts should be observed by the Geotechnical Engineer (or others under their direction). Observation should include documentation of adequate removal of surficial materials (vegetation, topsoil, and pavements), evaluation and remediation of existing fill/debris materials, as well as proofrolling and mitigation of unsuitable areas delineated by the proofroll.

Each lift of compacted fill should be tested, evaluated, and reworked, as necessary, as recommended by the Geotechnical Engineer prior to placement of additional lifts. Each lift of fill should be tested for density and water content at a frequency of at least one test for every 2,500 square feet of compacted fill in the building areas and 5,000 square feet in pavement areas. Where not specified by local ordinance, one density and water content test should be performed for every 100 linear feet of compacted utility trench backfill and a minimum of one test performed for every 12 vertical inches of compacted backfill.

In areas of foundation excavations, the bearing subgrade should be evaluated by the Geotechnical Engineer. If unanticipated conditions are observed, the Geotechnical Engineer should prescribe mitigation options.

In addition to the documentation of the essential parameters necessary for construction, the continuation of the Geotechnical Engineer into the construction phase of the project provides the continuity to maintain the Geotechnical Engineer’s evaluation of subsurface conditions, including assessing variations and associated design changes.

Shallow Foundations

If the site has been prepared in accordance with the requirements noted in [Earthwork](#), the following design parameters are applicable for shallow foundations.

Design Parameters – Compressive Loads

Item	Description
Maximum Net Allowable Bearing Pressure ^{1, 2}	1,500 psf - (Isolated columns and continuous footings) foundations bearing upon undisturbed natural subgrade soils or structural fill
Required Bearing Stratum ³	GeoModel Layer 2, undisturbed native soils or structural fill
Minimum Foundation Dimensions	Per IBC 1809.7

Item	Description
Ultimate Passive Resistance ⁴ (equivalent fluid pressures)	250 pcf (cohesive backfill) 350 pcf (granular backfill)
Sliding Resistance ⁵	250 psf allowable cohesion (native/structural fill clay) 0.25 allowable coefficient of friction (granular material)
Minimum Embedment below Finished Grade ⁶	Exterior footings: 18 inches Interior footings: 12 inches
Estimated Total Settlement from Structural Loads ²	Less than about 1 inch
Estimated Differential Settlement ^{2, 7}	About 1/2 of total settlement

1. The maximum net allowable bearing pressure is the pressure in excess of the minimum surrounding overburden pressure at the footing base elevation. Values assume that exterior grades are no steeper than 20% within 10 feet of structure.
2. Values provided are for maximum loads noted in [Project Description](#). Settlement is for structural loads and up to 2 feet of engineering fill. Additional settlement of about 1/3 of an inch per foot of fill above 2 feet can be expected. Additional geotechnical consultation will be necessary if higher loads or fill heights are anticipated.
3. Unsuitable or soft soils should be overexcavated and replaced per the recommendations presented in [Earthwork](#).
4. Use of passive earth pressures require the sides of the excavation for the spread footing foundation to be nearly vertical and the concrete placed neat against these vertical faces or that the footing forms be removed and compacted structural fill be placed against the vertical footing face. Assumes no hydrostatic pressure.
5. Can be used to compute sliding resistance where foundations are placed on suitable soil/materials. Frictional resistance for granular materials is dependent on the bearing pressure which may vary due to load combinations. A factor of safety of 1.5 was applied to this value. For fine-grained materials, lateral resistance using cohesion should not exceed 1/2 the dead load.
6. Embedment necessary to minimize the effects of seasonal water content variations. For sloping ground, maintain depth below the lowest adjacent exterior grade within 5 horizontal feet of the structure.
7. Differential settlements are noted for equivalent-loaded foundations and bearing elevation as measured over a span of 50 feet.

Design Parameters – Overturning and Uplift Loads

Shallow foundations subjected to overturning loads should be proportioned such that the resultant eccentricity is maintained in the center-third of the foundation (e.g., $e < b/6$, where b is the foundation width). This requirement is intended to keep the entire foundation area in compression during the extreme lateral/overturning load event. Foundation oversizing may be required to satisfy this condition.

Uplift resistance of spread footings can be developed from the effective weight of the footing and the overlying soils with consideration to the IBC basic load combinations.

Item	Description
Soil Moist Unit Weight	115 pcf
Soil Effective Unit Weight ¹	53 pcf
Soil weight included in uplift resistance	Soil included within the prism extending up from the top perimeter of the footing at an angle of 20 degrees from vertical to ground surface

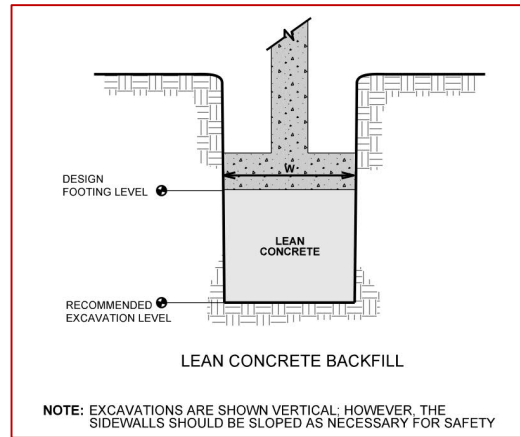
1. Effective (or buoyant) unit weight should be used for soil above the foundation level and below a water level. The high groundwater level should be used in uplift design as applicable.

Foundation Construction Considerations

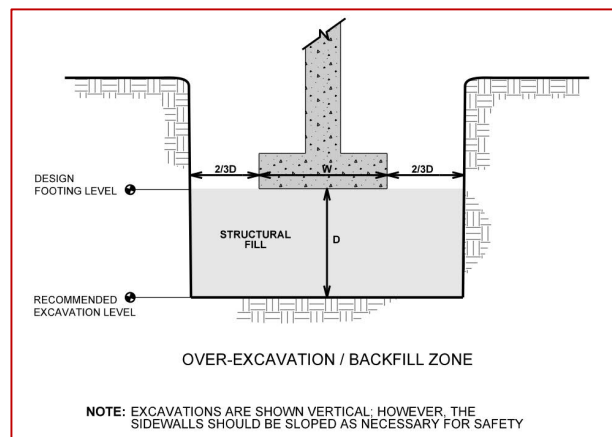
As noted in [Earthwork](#), the footing excavations should be evaluated under the observation of the Geotechnical Engineer. The base of all foundation excavations should be free of water and loose soil, prior to placing concrete. Concrete should be placed soon after excavating to reduce bearing soil disturbance. Care should be taken to prevent wetting or drying of the bearing materials during construction. Excessively wet or dry material or any loose/disturbed material in the bottom of the footing excavations should be removed/reconditioned before foundation concrete is placed.

Sensitive soils exposed at the surface of footing excavations may require surficial compaction with hand-held dynamic compaction equipment prior to placing structural fill, steel, and/or concrete. Should surficial compaction not be adequate, construction of a working surface consisting of either crushed stone or a lean concrete mud mat may be required prior to the placement of reinforcing steel and construction of foundations.

If unsuitable bearing soils are observed at the base of the planned footing excavation, the excavation should be extended deeper to suitable soils, and the footings could bear directly on these soils at the lower level or on lean concrete backfill placed in the excavations. The lean concrete replacement zone is illustrated on the sketch below.



Overexcavation for structural fill placement below footings should be conducted as shown below. The overexcavation should be backfilled up to the footing base elevation, with structural soil fill or crushed stone wrapped in non-woven geotextile fabric placed, as recommended in the [Earthwork](#) section.



Floor Slabs

Design parameters for floor slabs assume the requirements for [Earthwork](#) have been followed. Specific attention should be given to positive drainage away from the structure and positive drainage of the aggregate base beneath the floor slab.

Floor Slab Design Parameters

Item	Description
Floor Slab Support ¹	A leveling course of 4-6 inches of free-draining (less than 10% passing the U.S. No. 200 sieve) sand compacted to at least 95% of ASTM D 698 ² over compacted structural fill and/or stable subgrade.
Estimated Modulus of Subgrade Reaction ²	100 pounds per square inch per inch (psi/in) for point loads

1. Floor slabs should be structurally independent of building footings or walls to reduce the possibility of floor slab cracking caused by differential movements between the slab and foundation.
2. Modulus of subgrade reaction is an estimated value based upon our experience with the subgrade condition, the requirements noted in [Earthwork](#), and the floor slab support as noted in this table. It is provided for point loads. For large area loads the modulus of subgrade reaction would be lower.

The use of a vapor retarder should be considered beneath concrete slabs on grade covered with wood, tile, carpet, or other moisture sensitive or impervious coverings, when the project includes humidity-controlled areas, or when the slab will support equipment sensitive to moisture. When conditions warrant the use of a vapor retarder, the slab designer should refer to ACI 302 and/or ACI 360 for procedures and cautions regarding the use and placement of a vapor retarder.

Saw-cut contraction joints should be placed in the slab to help control the location and extent of cracking. For additional recommendations, refer to the ACI Design Manual. Joints or cracks should be sealed with a waterproof, non-extruding compressible compound specifically recommended for heavy duty concrete pavement and wet environments.

Where floor slabs are tied to perimeter walls or turn-down slabs to meet structural or other construction objectives, our experience indicates differential movement between the walls and slabs will likely be observed in adjacent slab expansion joints or floor slab cracks beyond the length of the structural dowels. The Structural Engineer should account for potential differential settlement through use of sufficient control joints, appropriate reinforcing or other means.

Mitigation measures, as noted in Existing Fill within [Earthwork](#), are critical to the performance of floor slabs. In addition to the mitigation measures, the floor slab can be stiffened by adding steel reinforcement, grade beams, and/or post-tensioned elements.

Floor Slab Construction Considerations

Finished subgrade, within and for at least 10 feet beyond the floor slab, should be protected from traffic, rutting, or other disturbance and maintained in a relatively moist condition until floor slabs are constructed. If the subgrade should become damaged or desiccated prior to construction of floor slabs, the affected material should be removed, and structural fill should be added to replace the resulting excavation. Final conditioning of the finished subgrade should be performed immediately prior to placement of the floor slab support course.

The Geotechnical Engineer should observe the condition of the floor slab subgrades immediately prior to placement of the floor slab support course, reinforcing steel, and concrete. Attention should be paid to high traffic areas that were rutted and disturbed earlier, and to areas where backfilled trenches are located.

Pavements

General Pavement Comments

Pavement designs are provided for the traffic conditions and pavement life conditions as noted in [Project Description](#) and in the following sections of this report. A critical aspect of pavement performance is site preparation. Pavement designs noted in this section must be applied to the site which has been prepared as recommended in the [Earthwork](#) section.

Pavement Design Parameters

An estimated California Bearing Ratio (CBR) of 4 was used for the subgrade for the asphaltic concrete (AC) pavement designs. A modulus of subgrade reaction of 125 pci was used for the portland cement concrete (PCC) pavement designs. The value was empirically derived based upon our experience with the clay subgrade soils and our expectation of the quality of the subgrade as prescribed by the Site Preparation conditions as outlined in [Earthwork](#). A modulus of rupture of 550 psi was used in design for the concrete (based on correlations with a minimum 28-day compressive strength of 4,000 psi).

Pavement Section Thicknesses

The following table provides our estimated minimum thickness of PCC pavements.

Portland Cement Concrete Design

Layer	Thickness (inches)			
	Traffic Category A ¹	Traffic Category B ¹	Traffic Category C ¹	Traffic Category E ¹
PCC ²	5	6	7	8
Aggregate Base ^{2,3}	4	4	4	4

1. See [Project Description](#) for more specifics regarding traffic classifications.
2. All materials should meet the current Louisiana Department of Transportation Specifications for Roads and Bridges (LSSRB).
 - Concrete Pavement - LSSRB 2016: Section 601
 - Aggregate base - LSSRB 2016 No. 610 limestone or similarly graded recycled crushed concrete: Section 1033.03

Areas for parking of heavy vehicles, concentrated turn areas, and start/stop maneuvers could require thicker pavement sections. Edge restraints (i.e. concrete curbs or aggregate shoulders) should be planned along curves and areas of maneuvering vehicles.

Although not required for structural support, a minimum 4-inch thick dense graded base course layer is recommended to help reduce potential for slab curl, shrinkage cracking, and subgrade pumping through joints. Proper joint spacing will also be required to prevent excessive slab curling and shrinkage cracking. Joints should be sealed to prevent entry of foreign material and doweled where necessary for load transfer. PCC pavement details for joint spacing, joint reinforcement, and joint sealing should be prepared in accordance with ACI 330 and ACI 325.

Where practical, we recommend early-entry cutting of crack-control joints in PCC pavements. Cutting of the concrete in its “green” state typically reduces the potential for micro-cracking of the pavements prior to the crack control joints being formed, compared to cutting the joints after the concrete has fully set. Micro-cracking of pavements may lead to crack formation in locations other than the sawed joints, and/or reduction of fatigue life of the pavement.

Openings in pavements, such as decorative landscaped areas, are sources for water infiltration into surrounding pavement systems. Water can collect in the islands and migrate into the surrounding subgrade soils thereby degrading support of the pavement. Islands with raised concrete curbs, irrigated foliage, and low permeability near-surface soils are particular areas of concern. The civil design for the pavements with these conditions should include features to restrict or collect and discharge excess water from

the islands. Examples of features are edge drains connected to the stormwater collection system, longitudinal subdrains, or other suitable outlets and impermeable barriers preventing lateral migration of water such as a cutoff wall installed to a depth below the pavement structure.

Pavement Drainage

Pavements should be sloped to provide rapid drainage of surface water. Water allowed to pond on or adjacent to the pavements could saturate the subgrade and contribute to premature pavement deterioration. In addition, the pavement subgrade should be graded to provide positive drainage within the granular base section.

Pavement Maintenance

The pavement sections represent minimum recommended thicknesses and, as such, periodic upkeep should be anticipated. Preventive maintenance should be planned and provided for through an on-going pavement management program. Maintenance activities are intended to slow the rate of pavement deterioration and to preserve the pavement investment. Pavement care consists of both localized (e.g., crack and joint sealing and patching) and global maintenance (e.g., surface sealing). Additional engineering consultation is recommended to determine the type and extent of a cost-effective program. Even with periodic maintenance, some movements and related cracking may still occur, and repairs may be required.

Pavement performance is affected by its surroundings. In addition to providing preventive maintenance, the civil engineer should consider the following recommendations in the design and layout of pavements:

- Final grade adjacent to paved areas should slope down from the edges at a minimum 2%.
- Subgrade and pavement surfaces should have a minimum 2% slope to promote proper surface drainage.
- Install pavement drainage systems surrounding areas anticipated for frequent wetting.
- Place 8 inches of compacted dense graded crushed stone around drop inlet basins extending at least 8 inches from the perimeter to reduce settlement at pavement interface
- Install joint sealant and seal cracks immediately.
- Seal all landscaped areas in or adjacent to pavements to reduce moisture migration to subgrade soils.
- Place compacted, low permeability backfill against the exterior side of curb and gutter.

- Place curb, gutter and/or sidewalk directly on clay subgrade soils rather than on unbound granular base course materials.

General Comments

Our analysis and opinions are based upon our understanding of the project, the geotechnical conditions in the area, and the data obtained from our site exploration. Variations will occur between exploration point locations or due to the modifying effects of construction or weather. The nature and extent of such variations may not become evident until during or after construction. Terracon should be retained as the Geotechnical Engineer, where noted in this report, to provide observation and testing services during pertinent construction phases. If variations appear, we can provide further evaluation and supplemental recommendations. If variations are noted in the absence of our observation and testing services on-site, we should be immediately notified so that we can provide evaluation and supplemental recommendations.

Our Scope of Services does not include either specifically or by implication any environmental or biological (e.g., mold, fungi, bacteria) assessment of the site or identification or prevention of pollutants, hazardous materials or conditions. If the owner is concerned about the potential for such contamination or pollution, other studies should be undertaken.

Our services and any correspondence are intended for the sole benefit and exclusive use of our client for specific application to the project discussed and are accomplished in accordance with generally accepted geotechnical engineering practices with no third-party beneficiaries intended. Any third-party access to services or correspondence is solely for information purposes to support the services provided by Terracon to our client. Reliance upon the services and any work product is limited to our client and is not intended for third parties. Any use or reliance of the provided information by third parties is done solely at their own risk. No warranties, either express or implied, are intended or made.

Site characteristics as provided are for design purposes and not to estimate excavation cost. Any use of our report in that regard is done at the sole risk of the excavating cost estimator as there may be variations on the site that are not apparent in the data that could significantly effect excavation cost. Any parties charged with estimating excavation costs should seek their own site characterization for specific purposes to obtain the specific level of detail necessary for costing. Site safety and cost estimating including excavation support and dewatering requirements/design are the responsibility of others. Construction and site development have the potential to affect adjacent properties. Such impacts can include damages due to vibration, modification of groundwater/surface water flow during construction, foundation movement due to undermining or subsidence from excavation, as well as noise or air quality concerns. Evaluation of these items on nearby properties are commonly associated with contractor means and methods and are not addressed in this report. The owner and contractor should consider a preconstruction/precondition survey of surrounding development. If changes in the

nature, design, or location of the project are planned, our conclusions and recommendations shall not be considered valid unless we review the changes and either verify or modify our conclusions in writing.

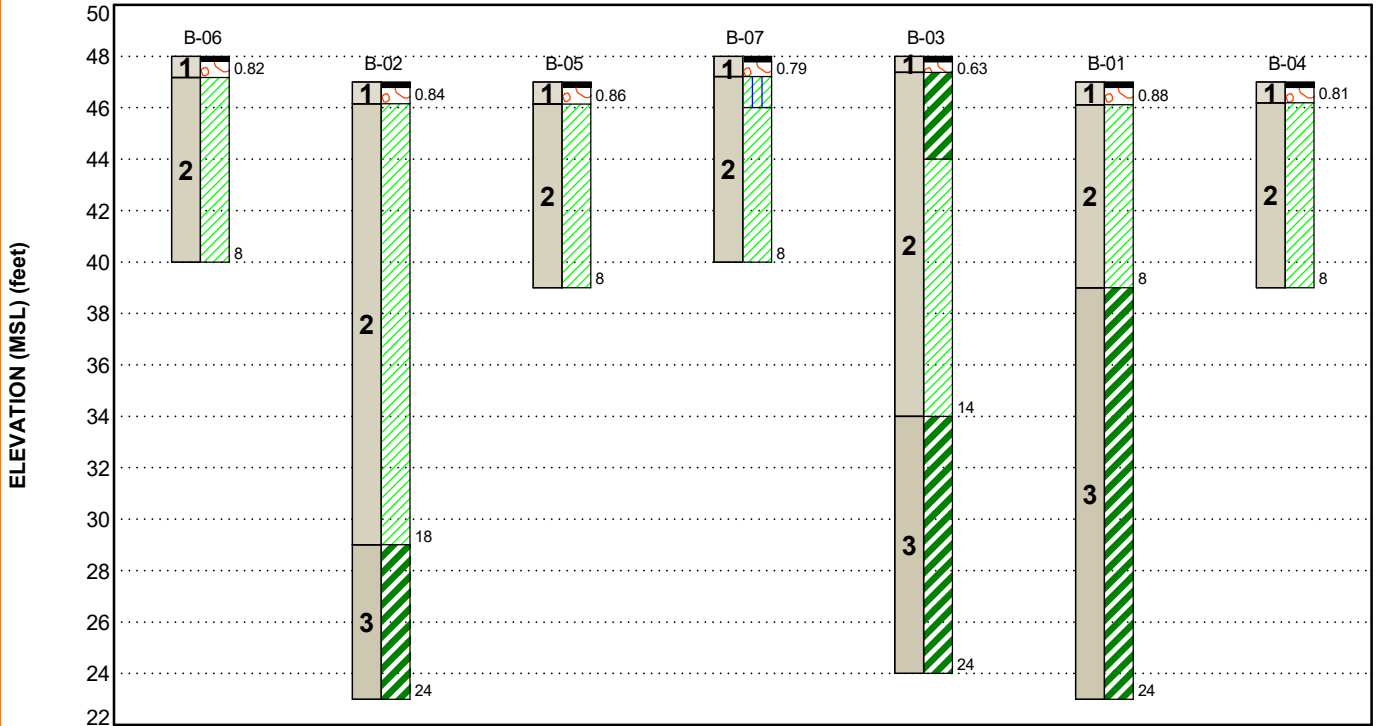
Figures

Contents:

GeoModel

GEOMODEL

Baton Rouge EMS Station #9 ■ Baton Rouge, LA
 Terracon Project No. EH235204



This is not a cross section. This is intended to display the Geotechnical Model only. See individual logs for more detailed conditions.

Model Layer	Layer Name	General Description
1	Pavement	Asphalt pavement and base
2	Upper Clay	Medium stiff to stiff lean to fat clay
3	Fat Clay	Stiff to very stiff fat clay

LEGEND

- Asphalt
- ▨ Fat Clay
- ▨ Aggregate Base Course
- ▨ Silty Clay
- ▨ Lean Clay

NOTES:

Layering shown on this figure has been developed by the geotechnical engineer for purposes of modeling the subsurface conditions as required for the subsequent geotechnical engineering for this project. Numbers adjacent to soil column indicate depth below ground surface.

Attachments

Exploration and Testing Procedures

Field Exploration

Number of Borings	Type of Exploration	Boring Depth (feet)	Planned Location
3	Soil Boring	24	Building area
4	Soil Boring	8	Parking/driveway area

Boring Layout and Elevations: Terracon personnel provided the boring layout using handheld GPS equipment (estimated horizontal accuracy of about ± 10 feet) and referencing existing site features. Approximate ground surface elevations were obtained by interpolation from the were estimated using Google Earth imagery. If elevations and a more precise boring layout are desired, we recommend borings be surveyed.

Subsurface Exploration Procedures: We advanced the borings with a track-mounted rotary drill rig using continuous flight augers (solid stem) to a depth of around 25 feet followed by rotary wash techniques. Six samples were obtained in the upper 10 feet of each boring and at intervals of 5 feet thereafter. In the thin-walled tube sampling procedure, a thin-walled, seamless steel tube with a sharp cutting edge was pushed hydraulically into the soil to obtain a relatively undisturbed sample. We observed and recorded groundwater levels during drilling and sampling. For safety purposes, all borings were backfilled with auger cuttings after their completion, consistent with state regulations. Pavements were patched with cold-mix asphalt, as appropriate.

The sampling depths, penetration distances, and other sampling information was recorded on the field boring logs. The samples were placed in appropriate containers and taken to our soil laboratory for testing and classification by a Geotechnical Engineer. Our exploration team prepared field boring logs as part of the drilling operations. These field logs included visual classifications of the materials observed during drilling and our interpretation of the subsurface conditions between samples. Final boring logs were prepared from the field logs. The final boring logs represent the Geotechnical Engineer's interpretation of the field logs and include modifications based on observations and tests of the samples in our laboratory.

Laboratory Testing

The project engineer reviewed the field data and assigned laboratory tests. The laboratory testing program included the following types of tests:

- Moisture Content
- Atterberg Limits

- Dry Unit Weight
- Unconfined Compression
- Swell

The laboratory testing program often included examination of soil samples by an engineer. Based on the results of our field and laboratory programs, we described and classified the soil samples in accordance with the Unified Soil Classification System.

Site Location and Exploration Plans

Contents:

Site Location Plan
Exploration Plan

Note: All attachments are one page unless noted above.

Site Location

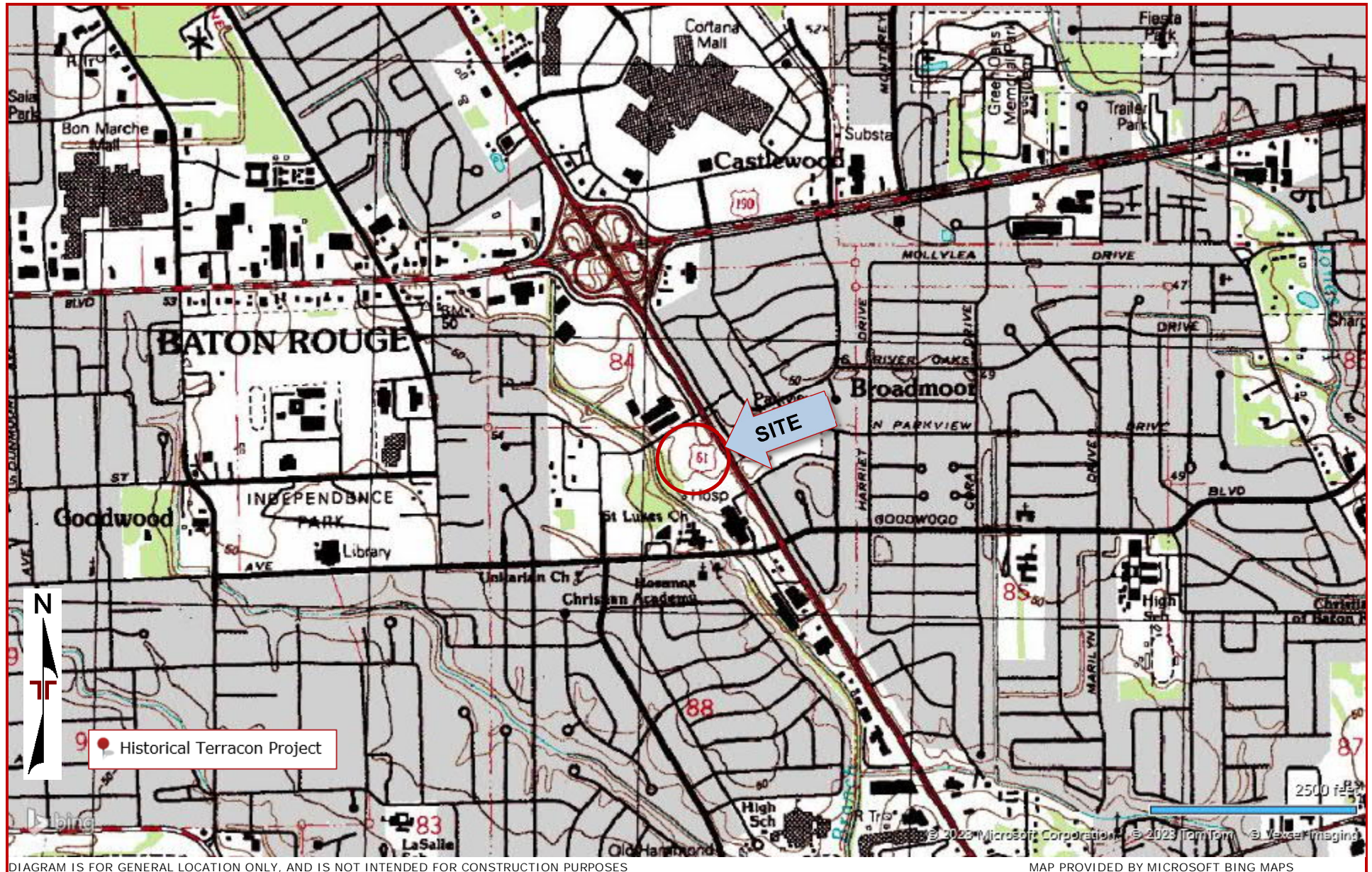


DIAGRAM IS FOR GENERAL LOCATION ONLY, AND IS NOT INTENDED FOR CONSTRUCTION PURPOSES

MAP PROVIDED BY MICROSOFT BING MAPS

Exploration Plan



DIAGRAM IS FOR GENERAL LOCATION ONLY, AND IS NOT INTENDED FOR CONSTRUCTION PURPOSES

MAP PROVIDED BY MICROSOFT BING MAPS

Exploration and Laboratory Results

Contents:

Boring Logs (7 pages)

Note: All attachments are one page unless noted above.

Boring Log No. B-01

Model Layer	Graphic Log	Location: See Exploration Plan Latitude: 30.4471° Longitude: -91.0925° Depth (Ft.) Elevation: 47 (Ft.) +/-	Depth (Ft.)	Water Level Observations	Sample Type	Field Test Results	Strength Test			Water Content (%)	Dry Unit Weight (pcf)	Atterberg Limits LL-PL-PI
							Test Type	Compressive Strength (tsf)	Strain (%)			
1		0.2 - 2.5" ASPHALT 46.79 0.9 - 8" AGGREGATE BASE WITH GEOTEXTILE FABRIC 46.12							21.8			
2		LEAN CLAY (CL), brownish gray to tan, stiff - with ferrous nodules below 4 feet	5			3.50 (HP) 3.25 (HP) 2.50 (HP) 2.25 (HP)	UC	1.64	7.3	23.0	102	45-21-24
3		FAT CLAY (CH), gray and tan, stiff to very stiff - failure at low strain at 14 feet	10 15 20			4.25 (HP) 4.25 (HP) 3.00 (HP) 3.25 (HP) 3.50 (HP)	UC	3.18	12.8	18.2	114	51-15-36
		8.0 39 24.0 23 Boring Terminated at 24 Feet										

See [Exploration and Testing Procedures](#) for a description of field and laboratory procedures used and additional data (If any).
 See [Supporting Information](#) for explanation of symbols and abbreviations.

Notes

Elevation Reference: Elevation based on Google Earth data.

Water Level Observations

No free water observed

Drill Rig
GP385

Hammer Type
Automatic

Driller
G. Triplette

Logged by
D. Gannfors

Boring Started
11-20-2023

Boring Completed
11-20-2023

Advancement Method

0' - 24' - Continuous Flight Auger

Abandonment Method

Boring backfilled with Auger Cuttings and/or Bentonite
 Surface capped with concrete

Boring Log No. B-02

Model Layer	Graphic Log	Location: See Exploration Plan Latitude: 30.4470° Longitude: -91.0928° Depth (Ft.) Elevation: 47 (Ft.) +/-	Depth (Ft.)	Water Level Observations	Sample Type	Field Test Results	Strength Test			Water Content (%)	Dry Unit Weight (pcf)	Atterberg Limits LL-PL-PI
							Test Type	Compressive Strength (tsf)	Strain (%)			
1		0.2 - 2.5" ASPHALT	46.79									
		0.8 - 7.5" AGGREGATE BASE WITH GEOTEXTILE FABRIC	46.16							12.9		NP
2		LEAN CLAY (CL), gray and tan, medium stiff to stiff, with ferrous nodules				2.50 (HP)	UC	0.97	7.3	24.1	97	
						3.50 (HP)						
			5			1.50 (HP)	UC	1.16	12.8	22.1	107	33-17-16
						2.50 (HP)						
			10			2.25 (HP)					19.6	
						4.50 (HP)						
3		FAT CLAY (CH), gray and tan, stiff to very stiff - failure at low strain at 18 feet	18.0	29		4.00 (HP)	UC	1.30	1.9	31.8	92	
						2.50 (HP)						
			24.0	23								
Boring Terminated at 24 Feet												

See [Exploration and Testing Procedures](#) for a description of field and laboratory procedures used and additional data (If any).
 See [Supporting Information](#) for explanation of symbols and abbreviations.

Notes
 Elevation Reference: Elevation based on Google Earth data.

Water Level Observations
 No free water observed

Drill Rig
 GP385
Hammer Type
 Automatic

Driller
 G. Triplette

Logged by
 D. Gannfors


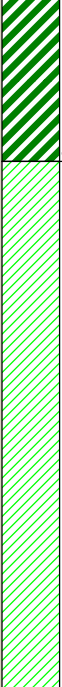

Boring Started
 11-20-2023

Boring Completed
 11-20-2023

Advancement Method
 0' - 24' - Continuous Flight Auger

Abandonment Method
 Boring backfilled with Auger Cuttings and/or Bentonite
 Surface capped with concrete

Boring Log No. B-03

Model Layer	Graphic Log	Location: See Exploration Plan Latitude: 30.4469° Longitude: -91.0926° Depth (Ft.) Elevation: 48 (Ft.) +/-	Depth (Ft.)	Water Level Observations	Sample Type	Field Test Results	Strength Test			Water Content (%)	Dry Unit Weight (pcf)	Atterberg Limits LL-PL-PI		
							Test Type	Compressive Strength (tsf)	Strain (%)					
1		0.2 - 2.5" ASPHALT 47.79 0.6 - 5" AGGREGATE BASE WITH GEOTEXTILE FABRIC 47.37							21.3					
2		FAT CLAY (CH), brownish gray and tan, medium stiff to stiff 4.0 44 LEAN CLAY (CL), gray and tan, medium stiff 14.0 34				2.50 (HP)	UC	1.28	7.3	26.6	95	56-25-31		
						2.00 (HP)								
			5				1.50 (HP)	UC	0.62	9	23.6	102		
								1.50 (HP)						
								2.50 (HP)						
								3.00 (HP)						
3		FAT CLAY (CH), gray and tan, very stiff, with ferrous nodules 14.0 34 24.0 24	15			2.50 (HP)	UC	2.47	9.8	22.6	105	55-20-35		
						3.25 (HP)								
						3.50 (HP)								
Boring Terminated at 24 Feet														

See [Exploration and Testing Procedures](#) for a description of field and laboratory procedures used and additional data (If any).
 See [Supporting Information](#) for explanation of symbols and abbreviations.

Notes
 Elevation Reference: Elevation based on Google Earth data.

Water Level Observations
 No free water observed

Drill Rig
 GP385
Hammer Type
 Automatic

Driller
 G. Triplette

Logged by
 D. Gannfors

Boring Started
 11-20-2023

Boring Completed
 11-20-2023

Advancement Method
 0' - 24' - Continuous Flight Auger



Abandonment Method
 Boring backfilled with Auger Cuttings and/or Bentonite
 Surface capped with concrete

Boring Log No. B-04

Model Layer	Graphic Log	Location: See Exploration Plan Latitude: 30.4469° Longitude: -91.0925°	Depth (Ft.)	Water Level Observations	Sample Type	Field Test Results	Strength Test			Water Content (%)	Dry Unit Weight (pcf)	Atterberg Limits LL-PL-PI
							Test Type	Compressive Strength (tsf)	Strain (%)			
1		Depth (Ft.) Elevation: 47 (Ft.) +/- 0.2 2.5" ASPHALT 46.79 0.8 7.25" AGGREGATE BASE WITH GEOTEXTILE FABRIC 46.19 LEAN CLAY (CL) , gray and tan, stiff to very stiff							24.5		36-22-14	
2			5			2.50 (HP)			25.8			
						3.00 (HP)						
						1.50 (HP)			23.9			
						2.00 (HP)						
8.0 Boring Terminated at 8 Feet 39												






<p>See Exploration and Testing Procedures for a description of field and laboratory procedures used and additional data (If any). See Supporting Information for explanation of symbols and abbreviations.</p> <p>Notes Elevation Reference: Elevation based on Google Earth data.</p>	<p>Water Level Observations No free water observed</p> <p>Advancement Method 0' - 8' - Continuous Flight Auger</p> <p>Abandonment Method Boring backfilled with Auger Cuttings and/or Bentonite Surface capped with concrete</p>	<p>Drill Rig GP385</p> <p>Hammer Type Automatic</p> <p>Driller G. Triplette</p> <p>Logged by D. Gannfors</p> <p>Boring Started 11-20-2023</p> <p>Boring Completed 11-20-2023</p>
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Boring Log No. B-05

Model Layer	Graphic Log	Location: See Exploration Plan Latitude: 30.4468° Longitude: -91.0927° Depth (Ft.) Elevation: 47 (Ft.) +/-	Depth (Ft.)	Water Level Observations	Sample Type	Field Test Results	Strength Test			Water Content (%)	Dry Unit Weight (pcf)	Atterberg Limits LL-PL-PI
							Test Type	Compressive Strength (tsf)	Strain (%)			
1		0.2' 2.25" ASPHALT 46.81										
		0.9' 8" AGGREGATE BASE WITH GEOTEXTILE FABRIC 46.14							23.6		39-22-17	
		LEAN CLAY (CL) , tan and gray, very stiff to hard				4.00 (HP)			23.5		40-22-18	
						2.00 (HP)						
2			5			1.50 (HP)			23.7			
						2.50 (HP)						
		8.0' Boring Terminated at 8 Feet 39										

<p>See Exploration and Testing Procedures for a description of field and laboratory procedures used and additional data (If any). See Supporting Information for explanation of symbols and abbreviations.</p> <p>Notes Elevation Reference: Elevation based on Google Earth data.</p>	<p>Water Level Observations No free water observed</p> <p>Advancement Method 0' - 8' - Continuous Flight Auger</p> <p>Abandonment Method Boring backfilled with Auger Cuttings and/or Bentonite Surface capped with concrete</p>	<p>Drill Rig GP385</p> <p>Hammer Type Automatic</p> <p>Driller G. Triplette</p> <p>Logged by D. Gannfors</p> <p>Boring Started 11-20-2023</p> <p>Boring Completed 11-20-2023</p>
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Boring Log No. B-06

Model Layer	Graphic Log	Location: See Exploration Plan Latitude: 30.4470° Longitude: -91.0928° Depth (Ft.) Elevation: 48 (Ft.) +/-	Depth (Ft.)	Water Level Observations	Sample Type	Field Test Results	Strength Test			Water Content (%)	Dry Unit Weight (pcf)	Atterberg Limits LL-PL-PI
							Test Type	Compressive Strength (tsf)	Strain (%)			
1		0.2' 2.25" ASPHALT 47.81										
		0.8' 7.5" AGGREGATE BASE WITH GEOTEXTILE FABRIC 47.18							18.5		40-22-18	
		LEAN CLAY (CL) , brownish gray and tan, very stiff				2.50 (HP)						
			5			3.00 (HP)			24.5			
2						2.00 (HP)						
		8.0' Boring Terminated at 8 Feet 40				2.00 (HP)						

<p>See Exploration and Testing Procedures for a description of field and laboratory procedures used and additional data (If any). See Supporting Information for explanation of symbols and abbreviations.</p> <p>Notes Elevation Reference: Elevation based on Google Earth data.</p>	<p>Water Level Observations No free water observed</p> <p>Drill Rig GP385</p> <p>Hammer Type Automatic</p> <p>Driller G. Triplette</p> <p>Logged by D. Gannfors</p> <p>Boring Started 11-20-2023</p> <p>Boring Completed 11-20-2023</p>	<p>Advancement Method 0' - 8' - Continuous Flight Auger</p> <p>Abandonment Method Boring backfilled with Auger Cuttings and/or Bentonite Surface capped with concrete</p>
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Boring Log No. B-07

Model Layer	Graphic Log	Location: See Exploration Plan Latitude: 30.4472° Longitude: -91.0926° Depth (Ft.) Elevation: 48 (Ft.) +/-	Depth (Ft.)	Water Level Observations	Sample Type	Field Test Results	Strength Test			Water Content (%)	Dry Unit Weight (pcf)	Atterberg Limits LL-PL-PI
							Test Type	Compressive Strength (tsf)	Strain (%)			
1		0.2 2.5" ASPHALT 47.79 0.8 7" SOIL GRAVEL MIX w/ FABRIC UNDER BASE 47.21							18.2		27-20-7	
2		2.0 SILTY CLAY (CL-ML) , brownish gray and tan, very stiff 46				2.50 (HP)						
		LEAN CLAY (CL) , gray and tan, stiff to very stiff				2.00 (HP)			24.1			
						3.00 (HP)						
						2.00 (HP)						
		8.0 Boring Terminated at 8 Feet 40										

<p>See Exploration and Testing Procedures for a description of field and laboratory procedures used and additional data (If any). See Supporting Information for explanation of symbols and abbreviations.</p> <p>Notes Elevation Reference: Elevation based on Google Earth data.</p>	<p>Water Level Observations No free water observed</p> <p>Advancement Method 0' - 8' - Continuous Flight Auger</p> <p>Abandonment Method Boring backfilled with Auger Cuttings and/or Bentonite Surface capped with concrete</p>	<p>Drill Rig GP385</p> <p>Hammer Type Automatic</p> <p>Driller G. Triplette</p> <p>Logged by D. Gannfors</p> <p>Boring Started 11-20-2023</p> <p>Boring Completed 11-20-2023</p>
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Supporting Information







Contents:

General Notes

Unified Soil Classification System

Note: All attachments are one page unless noted above.

General Notes

Sampling	Water Level	Field Tests
 Auger Cuttings  Shelby Tube	 Water Initially Encountered  Water Level After a Specified Period of Time  Water Level After a Specified Period of Time  Cave In Encountered Water levels indicated on the soil boring logs are the levels measured in the borehole at the times indicated. Groundwater level variations will occur over time. In low permeability soils, accurate determination of groundwater levels is not possible with short term water level observations.	N Standard Penetration Test Resistance (Blows/Ft.) (HP) Hand Penetrometer (T) Torvane (DCP) Dynamic Cone Penetrometer UC Unconfined Compressive Strength (PID) Photo-Ionization Detector (OVA) Organic Vapor Analyzer

Descriptive Soil Classification

Soil classification as noted on the soil boring logs is based Unified Soil Classification System. Where sufficient laboratory data exist to classify the soils consistent with ASTM D2487 "Classification of Soils for Engineering Purposes" this procedure is used. ASTM D2488 "Description and Identification of Soils (Visual-Manual Procedure)" is also used to classify the soils, particularly where insufficient laboratory data exist to classify the soils in accordance with ASTM D2487. In addition to USCS classification, coarse grained soils are classified on the basis of their in-place relative density, and fine-grained soils are classified on the basis of their consistency. See "Strength Terms" table below for details. The ASTM standards noted above are for reference to methodology in general. In some cases, variations to methods are applied as a result of local practice or professional judgment.

Location And Elevation Notes

Exploration point locations as shown on the Exploration Plan and as noted on the soil boring logs in the form of Latitude and Longitude are approximate. See Exploration and Testing Procedures in the report for the methods used to locate the exploration points for this project. Surface elevation data annotated with +/- indicates that no actual topographical survey was conducted to confirm the surface elevation. Instead, the surface elevation was approximately determined from topographic maps of the area.

Strength Terms

Relative Density of Coarse-Grained Soils (More than 50% retained on No. 200 sieve.) Density determined by Standard Penetration Resistance		Consistency of Fine-Grained Soils (50% or more passing the No. 200 sieve.) Consistency determined by laboratory shear strength testing, field visual-manual procedures or standard penetration resistance		
Relative Density	Standard Penetration or N-Value (Blows/Ft.)	Consistency	Unconfined Compressive Strength Qu (tsf)	Standard Penetration or N-Value (Blows/Ft.)
Very Loose	0 - 3	Very Soft	less than 0.25	0 - 1
Loose	4 - 9	Soft	0.25 to 0.50	2 - 4
Medium Dense	10 - 29	Medium Stiff	0.50 to 1.00	4 - 8
Dense	30 - 50	Stiff	1.00 to 2.00	8 - 15
Very Dense	> 50	Very Stiff	2.00 to 4.00	15 - 30
		Hard	> 4.00	> 30

Relevance of Exploration and Laboratory Test Results

Exploration/field results and/or laboratory test data contained within this document are intended for application to the project as described in this document. Use of such exploration/field results and/or laboratory test data should not be used independently of this document.

Unified Soil Classification System

Criteria for Assigning Group Symbols and Group Names Using Laboratory Tests ^A				Soil Classification	
				Group Symbol	Group Name ^B
Coarse-Grained Soils: More than 50% retained on No. 200 sieve	Gravels: More than 50% of coarse fraction retained on No. 4 sieve	Clean Gravels: Less than 5% fines ^C	$Cu \geq 4$ and $1 \leq Cc \leq 3$ ^E	GW	Well-graded gravel ^F
		Gravels with Fines: More than 12% fines ^C	$Cu < 4$ and/or $[Cc < 1 \text{ or } Cc > 3.0]$ ^E	GP	Poorly graded gravel ^F
			Fines classify as ML or MH	GM	Silty gravel ^{F, G, H}
		Sands: 50% or more of coarse fraction passes No. 4 sieve	Clean Sands: Less than 5% fines ^D	Fines classify as CL or CH	GC
	$Cu \geq 6$ and $1 \leq Cc \leq 3$ ^E			SW	Well-graded sand ^I
	Sands with Fines: More than 12% fines ^D		$Cu < 6$ and/or $[Cc < 1 \text{ or } Cc > 3.0]$ ^E	SP	Poorly graded sand ^I
			Fines classify as ML or MH	SM	Silty sand ^{G, H, I}
	Fine-Grained Soils: 50% or more passes the No. 200 sieve	Silt and Clays: Liquid limit less than 50	Inorganic:	PI > 7 and plots above "A" line ^J	CL
PI < 4 or plots below "A" line ^J				ML	Silt ^{K, L, M}
Organic:			$\frac{LL \text{ oven dried}}{LL \text{ not dried}} < 0.75$	OL	Organic clay ^{K, L, M, N} Organic silt ^{K, L, M, O}
			Silt and Clays: Liquid limit 50 or more	Inorganic:	PI plots on or above "A" line
PI plots below "A" line		MH			Elastic silt ^{K, L, M}
Organic:		$\frac{LL \text{ oven dried}}{LL \text{ not dried}} < 0.75$		OH	Organic clay ^{K, L, M, P} Organic silt ^{K, L, M, Q}
		Highly organic soils:		Primarily organic matter, dark in color, and organic odor	

^A Based on the material passing the 3-inch (75-mm) sieve.

^B If field sample contained cobbles or boulders, or both, add "with cobbles or boulders, or both" to group name.

^C Gravels with 5 to 12% fines require dual symbols: GW-GM well-graded gravel with silt, GW-GC well-graded gravel with clay, GP-GM poorly graded gravel with silt, GP-GC poorly graded gravel with clay.

^D Sands with 5 to 12% fines require dual symbols: SW-SM well-graded sand with silt, SW-SC well-graded sand with clay, SP-SM poorly graded sand with silt, SP-SC poorly graded sand with clay.

^E $Cu = D_{60}/D_{10}$ $Cc = \frac{(D_{30})^2}{D_{10} \times D_{60}}$

^F If soil contains $\geq 15\%$ sand, add "with sand" to group name.

^G If fines classify as CL-ML, use dual symbol GC-GM, or SC-SM.

^H If fines are organic, add "with organic fines" to group name.

^I If soil contains $\geq 15\%$ gravel, add "with gravel" to group name.

^J If Atterberg limits plot in shaded area, soil is a CL-ML, silty clay.

^K If soil contains 15 to 29% plus No. 200, add "with sand" or "with gravel," whichever is predominant.

^L If soil contains $\geq 30\%$ plus No. 200 predominantly sand, add "sandy" to group name.

^M If soil contains $\geq 30\%$ plus No. 200, predominantly gravel, add "gravelly" to group name.

^N PI ≥ 4 and plots on or above "A" line.

^O PI < 4 or plots below "A" line.

^P PI plots on or above "A" line.

^Q PI plots below "A" line.

