



ADDENDUM 1

PROJECT NAME: Fuel Sump Replacement – Central PD

DATE: July 25, 2025

PROJECT NO: 35-00359

This addendum is separated into sections for convenience; however, all respondents, bidders, contractors, subcontractors, material men, and other parties must be responsible for reading the entire addendum. The failure to list an item or items in all affected sections of this addendum does not relieve any party affected from performing as per instructions, providing that the information is set forth one time any place in this addendum. These documents will be attached to and will become part of the Contract Documents for this project. The respondent/bidder is required to acknowledge the receipt of this addendum.

GENERAL:

1. The following changes and/or additions to the Contract Documents, via this addendum, must apply to proposals made for and to the execution of the various parts of the work affected thereby.
2. Careful note of the Addendum must be taken by all interested parties and all trades affected must be fully advised in their performance of the work involved.
3. This Addendum is hereby made part of the project requirements and contract documents for the above reference project. Ensure to acknowledge this Addendum in CivCast when downloading this Addendum. Acknowledgement of this Addendum is a requirement in order to submit bid in CivCast. This addendum consists of the items and their associated attachments as listed below:

A. ADMINISTRATIVE CHANGES TO BID DOCUMENTS:

1. BID OPENING DATE REVISED FROM: AUGUST 1, 2025, TO AUGUST 5, 2025.

B. CHANGES TO PLANS / SPECIFICATIONS:

1. PLEASE REFER TO THE NARRATIVE OF REVISIONS FOR CHANGES TO THE PLAN SHEETS.

C. QUESTIONS & RESPONSES:

1. QUESTION: IS THIS PROJECT A REBID??

ANSWER: YES, THIS PROJECT IS A RE-BID.

2. QUESTION: WHAT TIME IS THE PRE-BID IN THE MORNING (THE CALL IN INFORMATION IS SHOWN BUT NOT THE TIME)

ANSWER: THE PRE-BID WAS HELD ON FRIDAY, JULY 18, 2025, AT 10:00 A.M.

3. QUESTION: ARE THERE ANY ELECTRICAL PLANS INCLUDED WITH THE NEW PROJECT PLANS?

ANSWER: NO

4. QUESTION: ARE WE TO FIGURE REPLACING THE ENTIRE TANK TOP CONCRETE?

ANSWER: YES

5. QUESTION: ARE WE REPLACING ALL HOSES, NOZZLES, AND HOSE RETRIEVERS EVEN ON THE DISPENSERS THAT ARE NOT BEING REPLACED?

ANSWER: NO

6. QUESTION: ARE WE TO REPLACE THE TANK VENT PIPING?

ANSWER: NO, BUT WE DO NEED TO EXTEND THE EXISTING VENT RISER SO THE VENT IS 5' ABOVE THE WASH BAY SOFFIT.

7. QUESTION: WILL THERE BE AN ONSITE PREBID MEETING?

ANSWER: NO, THE PRE-BID MEETING WAS HELD ONLINE.

8. QUESTION: ARE TANK SPILL BUCKETS AND VAPOR RECOVERY BUCKETS TO REUSED OR REPLACED?

ANSWER: REPLACE, ADD THE COST TO YOUR BID

9. QUESTION: 1. IS THE CITY'S EXPECTATION THAT ALL EXISTING CONDUIT AND WIRE WILL BE RE-USED AND NOT REPLACED OTHER THAN DISCONNECTING AND CUTTING BACK CONDUITS FROM ALL SUMPS AND OPENINGS?

ANSWER: YES.

QUESTION: 2. IF IT IS DETERMINED WHETHER ANY EXISTING CONDUIT OR WIRE IS DAMAGED DURING EXCAVATION WILL A CHANGE ORDER BE SUBMITTED FOR APPROVAL?

ANSWER: NO, IF DAMAGED THEN THEY NEED TO BE REPLACED.

QUESTION: 3. ARE THERE ANY AS-BUILTS TO THE EXISTING CONDUIT RUNS?

ANSWER: NO

QUESTION: 4. SHEET F-5 STATES IF ANY VENT LINE OR FITTING IS DAMAGED DURING CONSTRUCTION TO REPLACE, WILL A CHANGE ORDER BE SUBMITTED FOR APPROVAL? OTHERWISE, WE RECOMMEND CITY TO REQUIRE REPLACEMENT OF THESE COMPONENTS IN THE SCOPE.

ANSWER: NO, IF DAMAGED THEN THEY NEED TO BE REPLACED. IF YOU SUSPECT THAT IT WILL BE DAMAGED, ADD IT TO YOUR BID.

QUESTION: 5. SHEET F-5 SHOWS THE UNLEADED FUEL LINE TO TEE OFF BETWEEN THE 1ST AND 2ND FUEL ISLANDS, BUT SHEET F-4 SHOWS THE DEMO FOR THE FIRST FUEL ISLAND IN FRONT WHERE THE PIPING IS TO BE REMOVED. WILL THE CITY UPDATE THE DEMO PLAN FOR THE ADDITIONAL CONCRETE DEMO AND REPLACEMENT IF WE ARE TO FOLLOW THE NEW PRODUCT LINE PLAN ON SHEET F-5?

ANSWER: NO, THE DEMO PLAN IS FOR THE PIPE REMOVAL ALONE.

QUESTION: 6. SHEET F-4 NOTE #4 FOR THE TANK PAD STATES, ANY FILL BUCKETS OR COMPONENTS DAMAGED DURING CONSTRUCTION SHOULD BE REPLACED, WILL A CHANGE ORDER BE SUBMITTED FOR APPROVAL? OTHERWISE, WE RECOMMEND CITY TO REQUIRE REPLACEMENT OF THESE COMPONENTS IN THE SCOPE.

ANSWER: NO, SEE ANSWER TO PREVIOUS QUESTION 8.

A. PLEASE VERIFY IF THE ASSUMPTION IS TO RE-USE OR PROVIDE NEW STP PUMPS, FILL VAPOR BUCKETS, CAPS, MANWAYS, DROP TUBES

ANSWER: BIDDERS ARE EXPECTED TO USE PROFESSIONAL JUDGEMENT IN DETERMINING WHETHER ANY COMPONENTS ARE AT RISK OF DAMAGE DURING THE PROJECT. ANY ITEMS THAT CAN BE REASONABLY ANTICIPATED TO REQUIRE REPLACEMENT SHOULD BE INCLUDED IN THE BID.

QUESTION: 7. WILL THE CITY CONFIRM PER PAGE F-5 THAT WE WILL RE-USE THE EXISTING DIESEL DISPENSER AS AN UNLEADED DISPENSER OR WILL WE BE REQUIRED TO UPGRADE THE DOORS, LABELS AND HANGING HARDWARE TO UNLEADED FROM DIESEL FUELS?

ANSWER: YES, REUSE THE EXISTING DIESEL DISPENSER AS AN UNLEADED DISPENSER AND UPGRADE THE DOORS, LABELS AND HANGING HARDWARE TO UNLEADED FROM DIESEL FUELS

QUESTION: 8. WILL COSA CONFIRM ALL EXCAVATED MATERIALS TO BE HAULED OFF SITE AND REPLACED WITH NEW BACKFILL FOR THE BASE BID?

ANSWER: REUSE EXCAVATED MATERIAL IF NOT CONTAMINATED. IF BACKFILL IS CONTAMINATED, NEW BACKFILL SHALL BE BROUGHT IN OF THE SAME SIEVE SIZE AND GRADATION.

QUESTION: 9. WILL COSA CONFIRM ALL ENVIRONMENTAL SAMPLING AND REPORTING TO BE HANDLED BY 3RD PARTY?

ANSWER: YES

QUESTION: 10. WILL THE EMERGENCY SHUT OFF SWITCH BE REPLACED PER DETAIL ON SHEET F-8 DETAIL 10?

ANSWER: NO, REUSE THE EFSO

10. QUESTION: 11. IF THE CONDUITS ARE ON THE OPPOSITE OF THE DEMO PLAN, CAN WE ASSUME ANY ADDITIONAL CONCRETE REMOVED NOT SHOWN ON THE DEMO PLAN WILL BE A CHANGE ORDER.

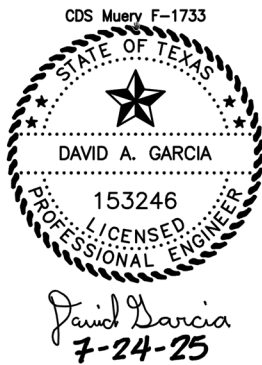
ANSWER: NO, INCLUDE ANY EXPECTED CONCRETE REMOVAL TO THE BASE BID

QUESTION: 12. WILL WE PROGRAM THE TLS450 PLUS TO ALTERNATE INVENTORY ON THE MANIFOLDED UNLEADED TANKS?

ANSWER: YES

SIGNED AND SEALED BY CONSULTANT (Engineer/Architect of Record)

By signing and sealing this addendum, the Engineer/Architect of Record acknowledges that the sign/seal is only for changes/clarifications to the items associated with the Engineer's/Architect's work referenced in this addendum.



Jaime E. Contreras

Jaime E. Contreras
Procurement Manager
Finance Department - Procurement Division

END OF ADDENDUM NO. 1

CITY OF SAN ANTONIO

Issued By: Building and Equipment Services Department
ID NO.: 35-00359

Date Issued: July 25, 2025

(010) LOW QUALIFIED FORMAL INVITATION FOR BIDS (IFB) to CONTRACT Fuel Sump Replacement – Central PD

Online bidding is utilized via CivCast at <https://www.civcastusa.com/bids>. Online bid services will open for bidding on **Friday, July 11, 2025**, and close on **Tuesday, August 5, 2025, at 2:00 P.M. (CT)**. Follow submittal instructions on <https://www.civcastusa.com/>. **Hard Copies will not be accepted for this solicitation.** Bids will be opened and the Bid Results will be posted on CivCast on the day of the bid deadline. Bid Results will be read aloud utilizing WebEx. Access WebEx by phone at **1-415-655-0001** and/or <https://www.webex.com/> with Access Code: 1770 23 1452, Password: 3HrMPWvWr58

A Non-Mandatory Pre-bid meeting will be held through WebEx on **Friday, July 18, 2025, at 10:00 A.M. (CT)**. A Non-Mandatory Site Visit will be held at **3:00 P.M.** at the Central Service Area Police Department, located at 515 S. Frio Street, San Antonio, Texas 78207. Access the WebEx by phone at **1-415-655-0001** and/or <https://www.webex.com/> with Access Code: 2335 506 0590, Password: YaQGQ4k8e5n. **The Deadline for questions is scheduled for July 21, 2025, at 4:00 P.M. (CT).**

The estimated construction budget for this contract is \$240,000.00.

Bidder acknowledges that this is a unit price or Lump Sum contract; that prices established will remain in effect and valid throughout the duration of the contract; the quantities shown are estimated quantities for budgetary purposes only; the award of this contract does not guarantee contractor the entire work shown in this FORMAL INVITATION FOR BID (IFB); the City of San Antonio (City) may order all, some, or none of the work shown in this IFB. **City may elect to award this Project based solely on the base bid, based on a combination of the base bid plus any combination of selected alternates or based on a combination of the base bid plus all alternates that serve the best interest of City. All bids must include a price for all units or line items, including any alternates. Entering a price of “\$0.00” shall mean the units or line items will be provided at no cost to City. A unit price left blank shall result in the bid being deemed nonresponsive and disqualified from consideration. City reserves the right to delete line items prior to award.**

This invitation includes the following Contract Documents which are required downloads in CivCast:

010	Invitation for Bids	☐	Local Preference Program Identification Form
020	Contract Signature Page	☐	VOSB Program Tracking Form
024	Unit Pricing Form (Lump Sum Bid Only)	☐	Wage Decision
030	Experience & Qualifications Form w/Project Sheets	☐	Insurance Requirements
040	Standard Instructions to Respondent	☐	Heat Illness Prevention Acknowledgment Form
041	Certificate of Interested Parties (TEC Form 1295)		
060	Supplemental Conditions		
075	Performance Bond		
076	Payment Bond		
081	General Conditions for Construction Contracts		

The City of San Antonio point of contact for this solicitation is **Procurement Specialist II, Michelle Birch**, michelle.birch@sanantonio.gov. Questions are to be submitted in writing in the Questions and Answers section on CivCast. Bid documents, addenda, and this solicitation will be posted on CivCast at <https://www.civcastusa.com>. The Bidder understands and agrees to the responsibility for obtaining any and all addenda and adhering to all requirements in addenda. The City is not responsible for incorrect information obtained through other sources.

Bid Documents must contain **“Legal Name of Company”** as listed by the Texas Secretary of State Registry (<http://www.sos.state.tx.us/>). The documents required in CivCast (fully completed and with digital signatures) constitute the required information to be submitted as a part of the bid proposal.

The following documents constitute the required information to be submitted as a part of the bid proposal and are required uploads in CivCast:

020	Contract Signature Page	☐	Local Preference Program Identification Form
024	Unit Pricing Form (Lump Sum Bid Only)	☐	VOSB Program Tracking Form
030	Experience & Qualifications Form w/Project Sheets	☐	Heat Illness Prevention Acknowledgment Form
☐	Bid Bond		
☐	TEC Form 1295 Certification Number & Date		

It is understood and agreed that the work is to be substantially completed on or before 75 calendar days. This project **does not** include hazardous environmental work. This project requires 0 project sign(s).

Local Preference Program Ordinance – For more detailed information on the Local Preference Program Ordinance, see solicitation document “040 Standard Instructions to Respondent”, section 5.

Veteran-Owned Small Business Preference Program – For more detailed information on the Veteran-Owned Small Business Preference Program, see Ordinance No. 2013-12-05-0864 and solicitation document “040 Standard Instructions to Respondent”, section 6.

Responsible Bidder Ordinance – For more detailed information on the Responsible Bidder Ordinance, see Ordinance No. 2023-01-26-0041 and solicitation document “040 Standard Instructions to Respondent”, section 7.

Heat Illness Ordinance – For more detailed information on the Heat Illness Ordinance, see Ordinance No. 2023-08-31-0585 and General Conditions for Construction Contract, Article X.1.5 and Art.X.2.3(a).

Bid Protest Procedures – See solicitation document “040 Standard Instructions to Respondent”, section 11.

Wage Decision – Bidder shall meet the prevailing wage rate requirements established for this contract and shall reference the wage decision posted with this solicitation on the City’s website.

July 24, 2025

Mr. Isai Rodriguez
Fuel Operations - Contract Manager
329 S. Frio St. San Antonio, TX

RE: Central Service Area Police Department – Addendum 1_Narrative of Revisions

Dear Mr. Rodriguez:

See below for an outline of the changes that have been made to the plan sheets since the bid set was distributed:

- F-1: No Changes
- F-2: No Changes
- F-3: No Changes.
- F-4: UST removal notes revised to direct contractor to replace pump sumps, vapor recovery and spill buckets.
Note revised to reuse diesel dispenser and configure to dispense unleaded
- F-5: Note revised to reuse diesel dispenser and configure to dispense unleaded
- F-5A: Note revised to reuse diesel dispenser and configure to dispense unleaded
- F-6: No Changes.
- F-7: No Changes.
- F-8: No Changes..
- F-9: No Changes.
- F-10: No Changes.
- F-11: No Changes.

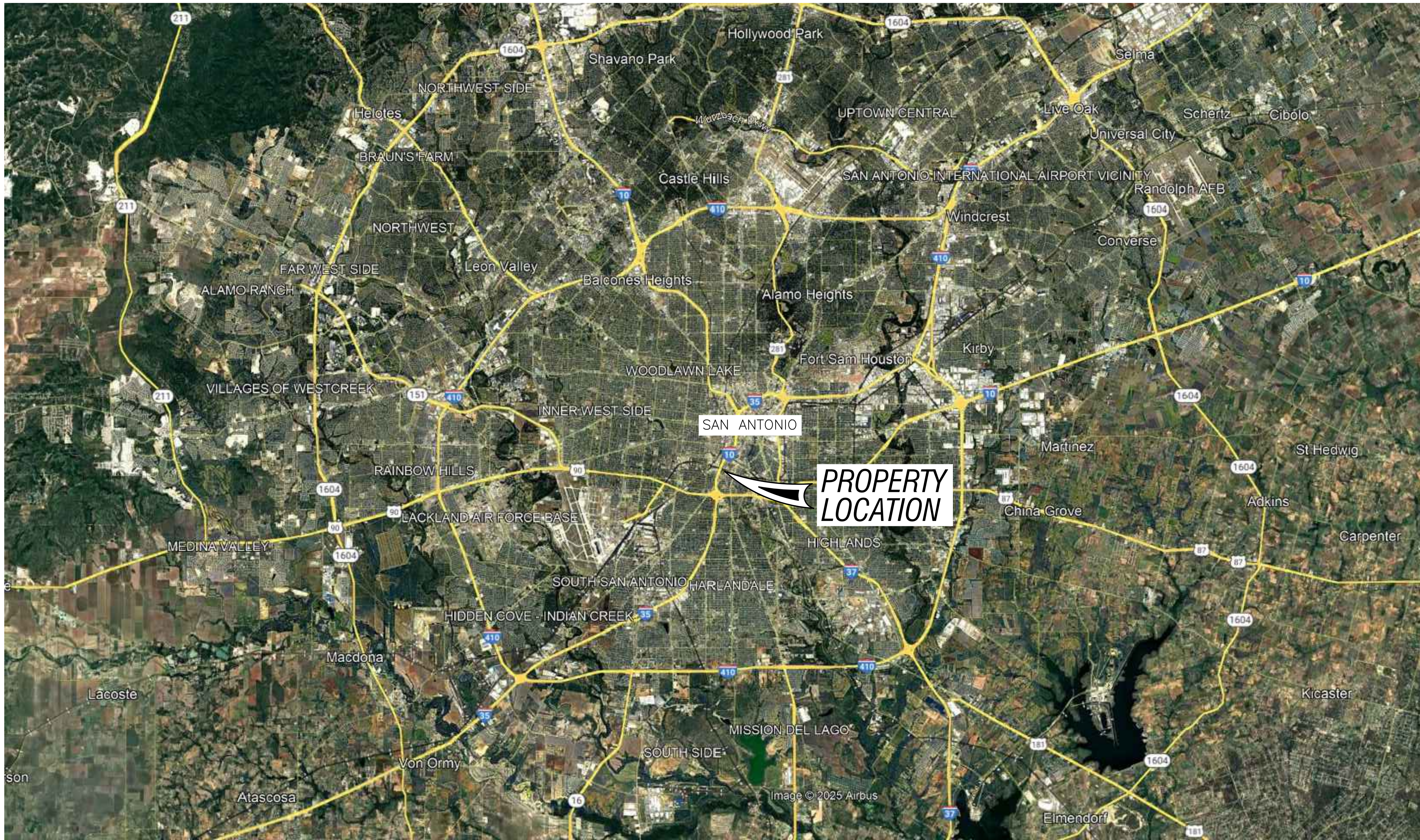
Please feel free to reach out if you need anything else or have any questions.

COSA CENTRAL SERVICE AREA POLICE DEPARTMENT FUEL SYSTEM REPLACEMENT

515 SOUTH FRIO STREET, SAN ANTONIO, TX 78207

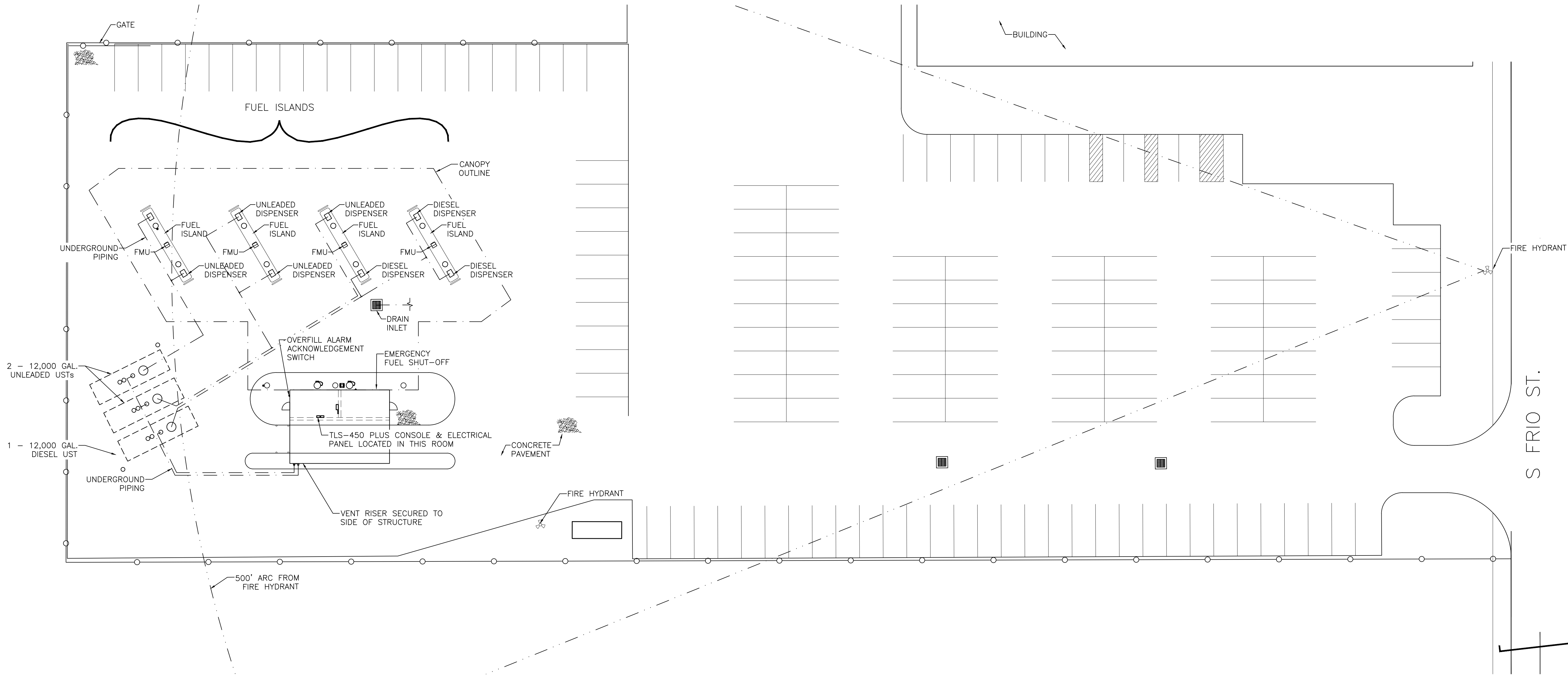
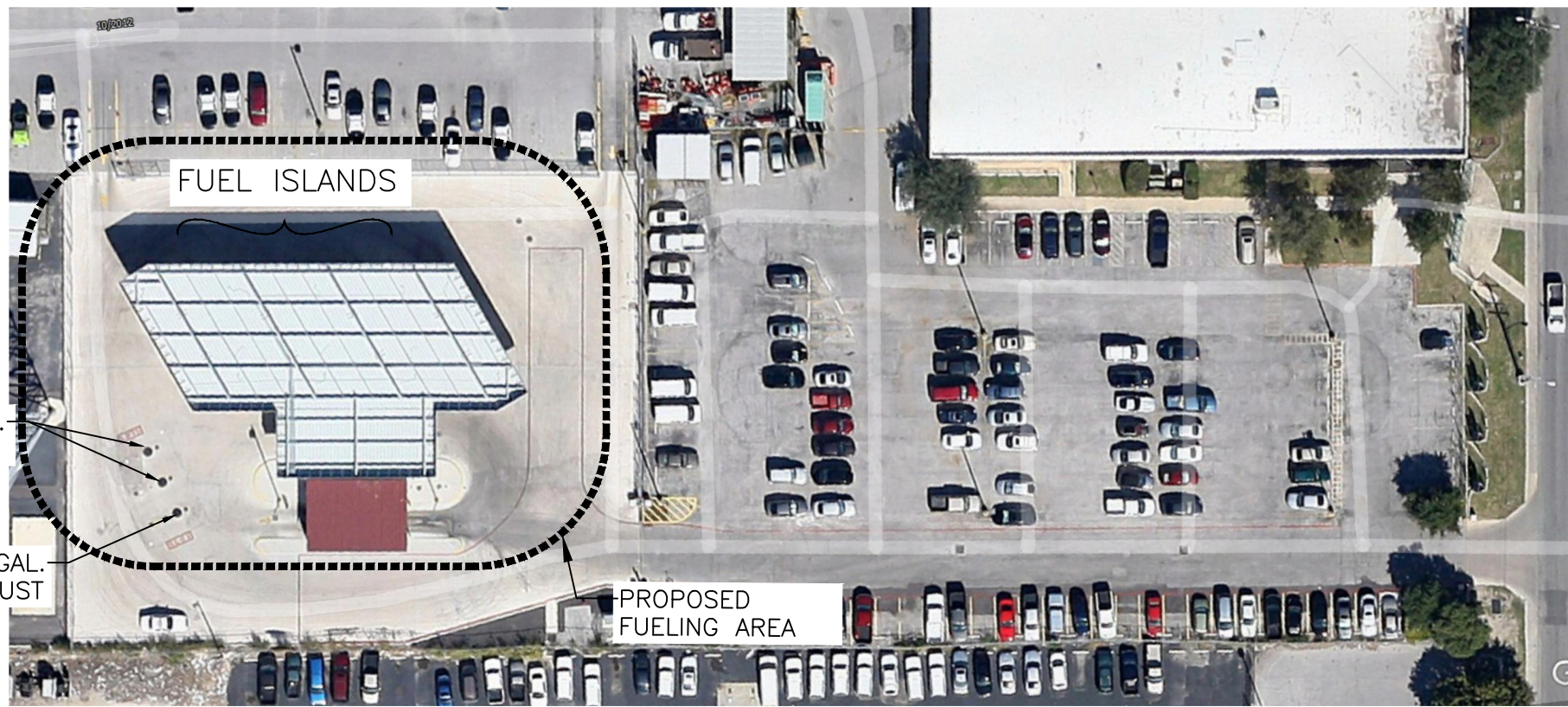
DRAWING INDEX

COVER	COVER SHEET/PROPERTY LOCATION
F-1	OVERALL SITE LAYOUT
F-2	STORWATER POLLUTION PROTECTION PLAN
F-3	BMP DETAILS 1
F-4	DEMOLITION PLAN
F-5	PROPOSED FUEL SYSTEM LAYOUT
F-5A	ADD ALTERNATIVE-PROPOSED FUEL SYSTEM LAYOUT
F-6	UST COMPONENT DETAILS
F-7	FUEL SYSTEM DETAILS 1
F-8	FUELING SYSTEM DETAILS 2
F-9	GENERAL NOTES AND SPECIFICATIONS

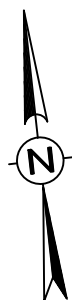
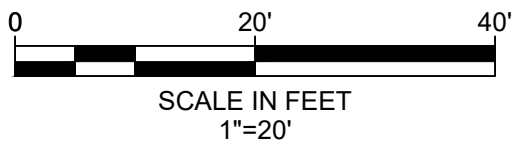


CONTACTOR NOTES:

1. CONTRACTOR TO VERIFY THE LOCATION OF ALL UTILITIES IN THE AREA PRIOR TO DIGGING.
2. CONTRACTOR TO VERIFY THE LOCATION OF ANY UNDER GROUND STORAGE TANKS OR PIPING IN THE AREA.
3. FUEL PIPE TRENCH PATH SHOWN IS ASSUMED. CONTRACTOR TO FIELD VERIFY EXISTING PIPING PATH.
4. ALL DIMENSIONS ARE APPROXIMATES.



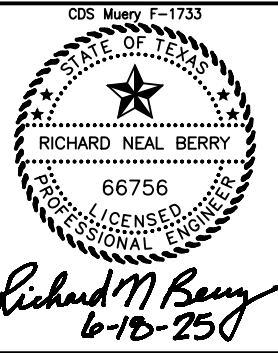
EXISTING FUEL SYSTEM LAYOUT



ADDENDUM 1

NO	DATE	REVISION	BY

DESIGNED BY	CDS
DRAWN BY	DAG
CHECKED BY	RNB
REVIEWED BY	RNB
DATE	6-6-25



CDS muery
ENGINEERS | SURVEYORS
100 NE LOOP 410, STE. 300 | SAN ANTONIO, TEXAS 78216
(210) 581-1111 | TBPE NO. F-1733 | TBPLS NO. 100495-00

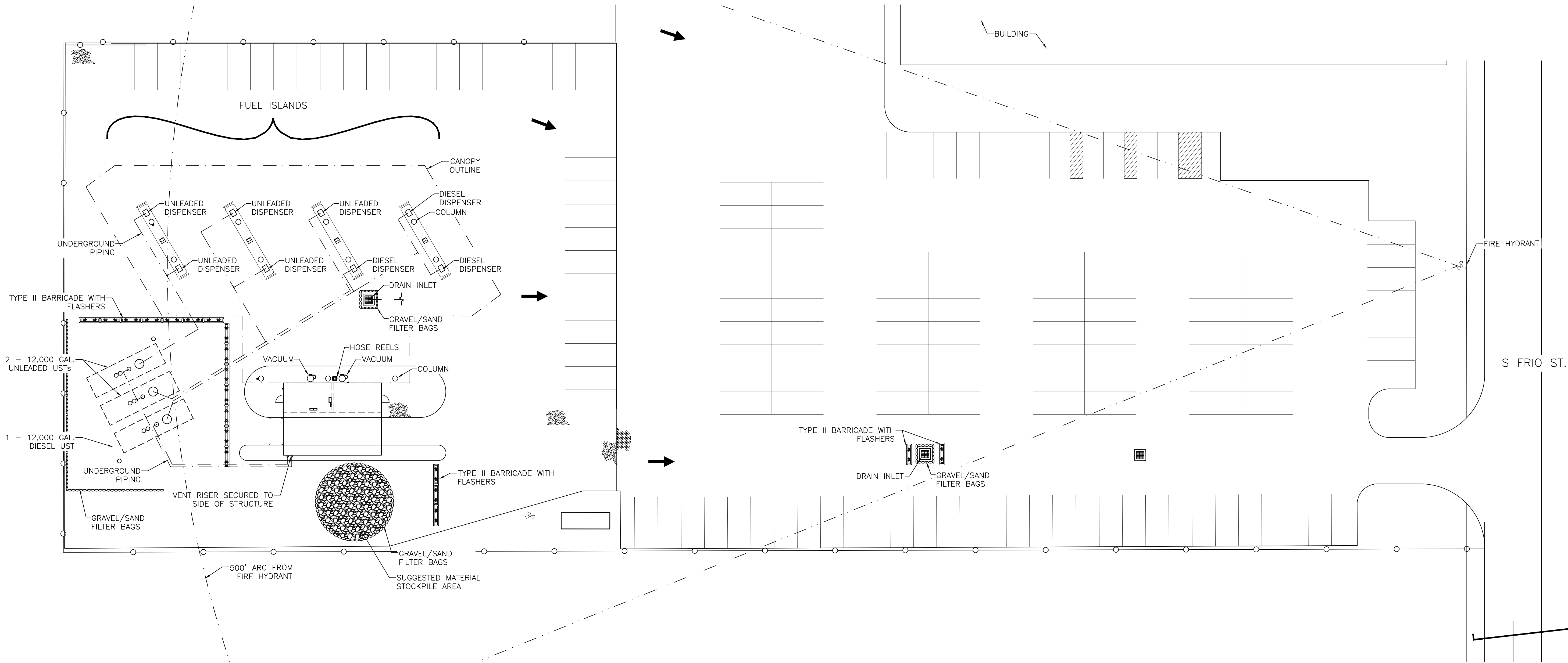
OVERALL SITE LAYOUT

COSA CENTRAL SERVICE AREA POLICE DEPARTMENT
FUEL SYSTEM REPLACEMENT
515 South Frio Street, San Antonio, TX 78207

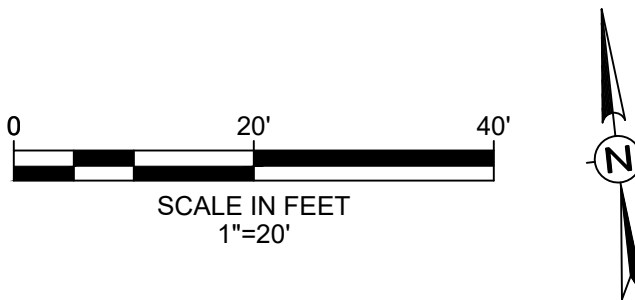
SHEET NO.	
OF	SHEETS
FILE NO.	125011

F-1

- NOTES:
1. CONTRACTOR TO VERIFY THE LOCATION OF ALL UTILITIES IN THE AREA PRIOR TO DIGGING.
 2. CONTRACTOR TO PROVIDE STORM WATER CONTROL IN ACCORDANCE WITH ALL FEDERAL AND STATE LAWS, AND THE SITE SWP3 PLAN.



STORMWATER POLLUTION PREVENTION PLAN

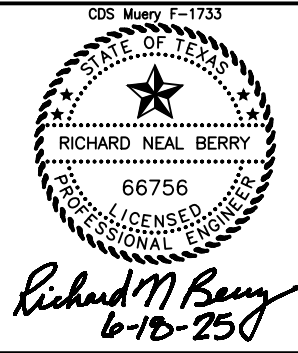


F-2

ADDENDUM 1

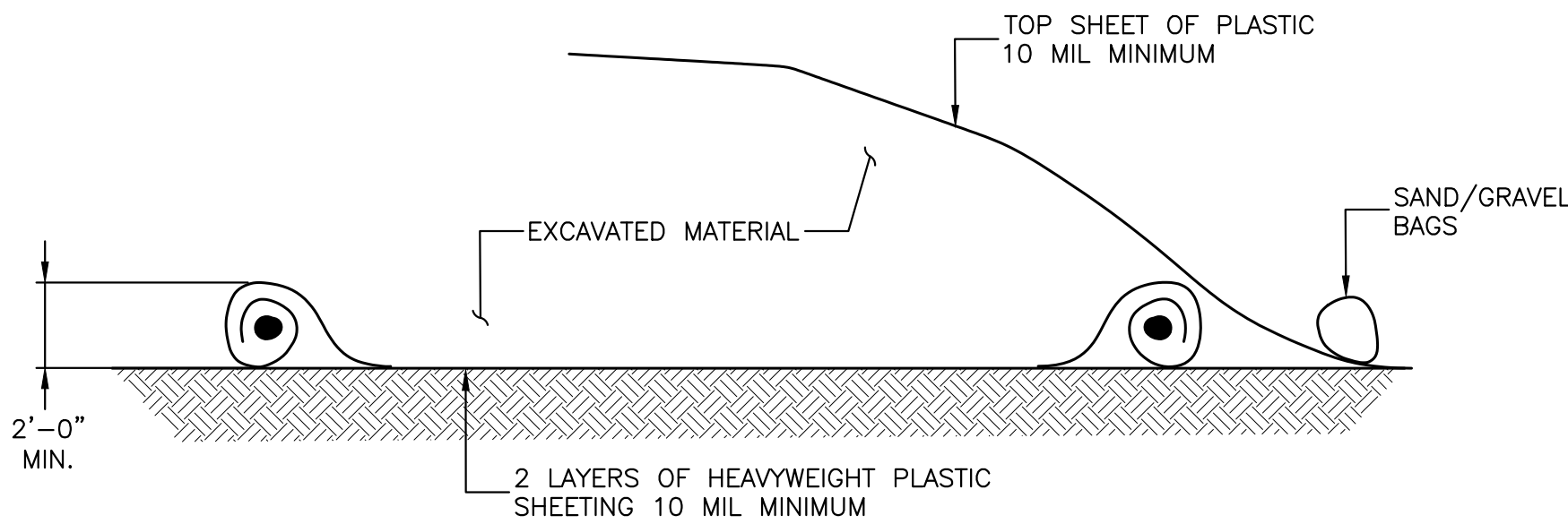
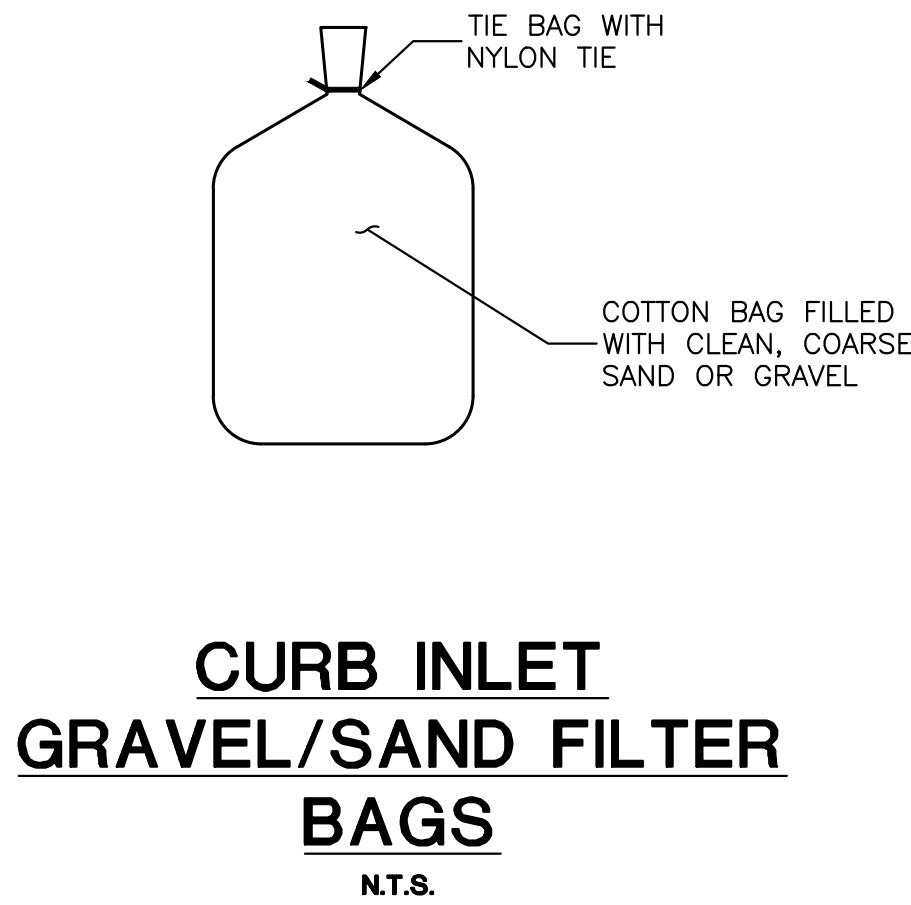
NO	DATE	REVISION	BY

DESIGNED BY	CDS
DRAWN BY	DAG
CHECKED BY	RNB
REVIEWED BY	RNB
DATE	6-6-25

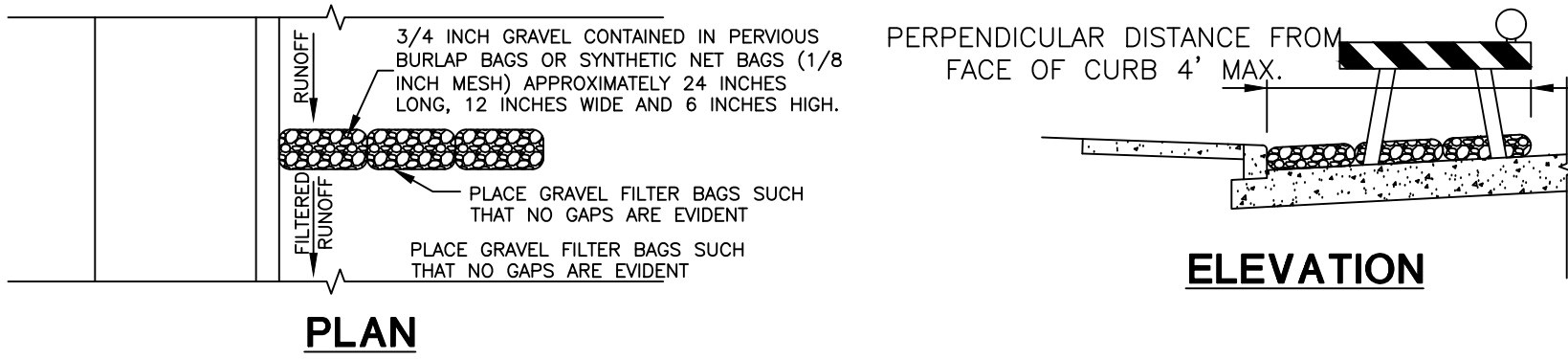
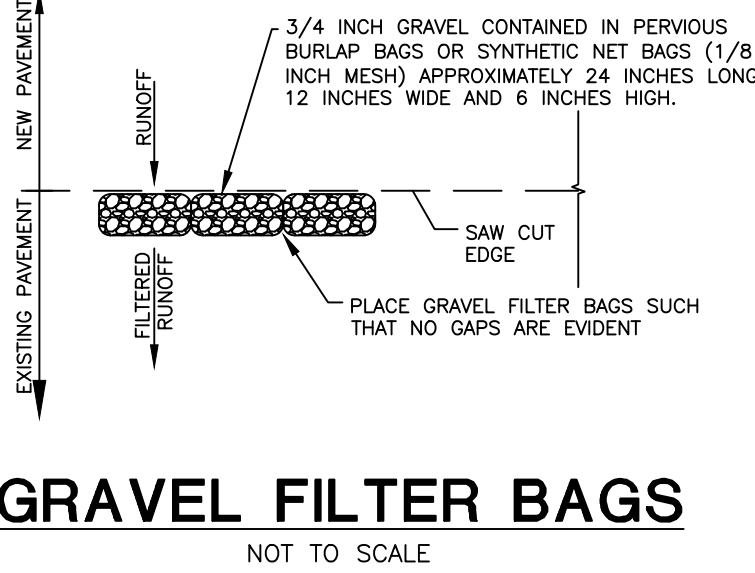
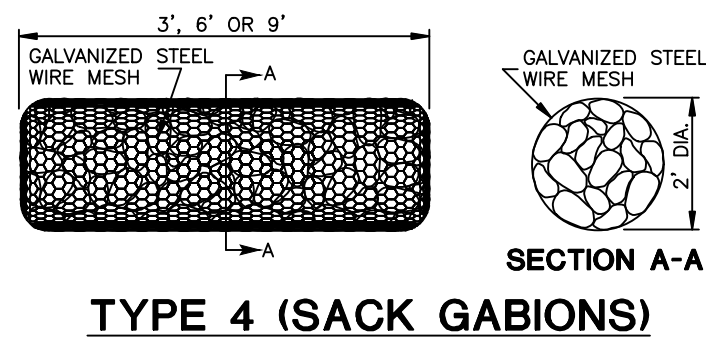


CDS muery
ENGINEERS | SURVEYORS
100 NE LOOP 410, STE. 300 | SAN ANTONIO, TEXAS 78216
(210) 581-1111 | TBPE NO. F-1733 | TBPLS NO. 100495-00

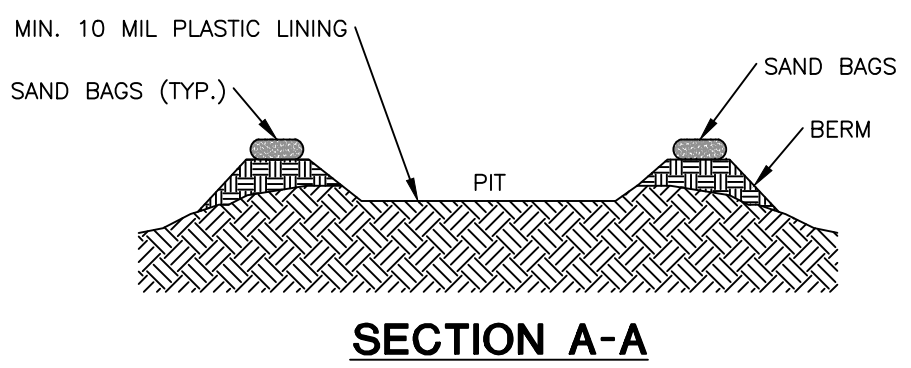
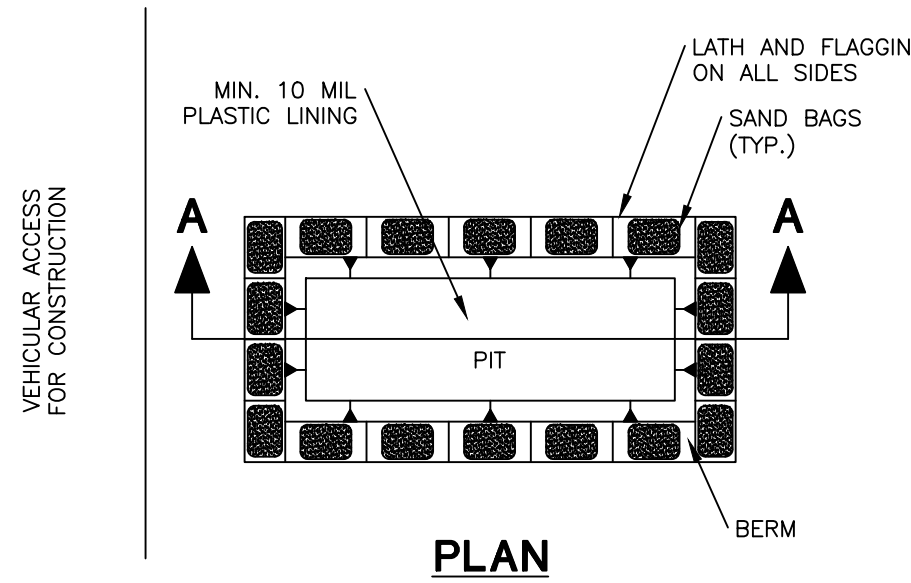
STORMWATER POLLUTION PREVENTION PLAN		SHEET NO.
COSA CENTRAL SERVICE AREA POLICE DEPARTMENT FUEL SYSTEM REPLACEMENT 515 South Frio Street, San Antonio, TX 78207		OF SHEETS
		FILE NO. 125011



- NOTES:**
1. WRAP SANDBAGS IN PLASTIC TO FORM A DIKE AROUND SOIL CONTAINMENT AREA. THE DEPTH OF THIS CONTAINMENT AREA IS TO BE 1'-0" MINIMUM.
 2. PLACE TOP SHEET OF PLASTIC OVER DIKE WALLS AND HOLD DOWN WITH SANDBAGS. THIS WILL ALLOW RAINWATER TO RUN OFF AND NOT INTO STOCK PILE.
 3. THIS CONTAINMENT FOR PREVIOUSLY USED MATERIAL ONLY.



- GENERAL NOTES**
1. STEEL POSTS WHICH SUPPORT THE SILT FENCE SHALL BE INSTALLED ON A SLIGHT ANGLE TOWARD THE ANTICIPATED RUNOFF SOURCE.
 2. THE TOE OF THE SILT FENCE SHALL BE TRENCHED IN WITH A SPADE OR MECHANICAL TRENCHER, SO THAT THE DOWNSLOPE FACE OF THE TRENCH IS FLAT AND PERPENDICULAR TO THE LINE OF FLOW.
 3. THE TRENCH SHOULD BE A MINIMUM OF 6 INCHES DEEP AND 4-8 INCHES WIDE TO ALLOW FOR THE SILT FENCE TO BE LAID IN THE GROUND AND BACKFILLED.
 4. SILT FENCE SHOULD BE SECURELY FASTENED TO EACH STEEL SUPPORT POST OR TO WOVEN WIRE, WHICH IS IN TURN ATTACHED TO THE SILT FENCE POSTS.
 5. INSPECTION SHALL BE FREQUENT AND REPAIR OR REPLACEMENT SHALL BE MADE PROMPTLY AS NEEDED.
 6. SEDIMENT TRAPPED BY THIS PRACTICE SHALL BE DISPOSED OF IN AN APPROVED SITE IN A MANNER THAT WILL NOT CONTRIBUTE TO ADDITIONAL SILTATION.
 7. ACCUMULATED SILT SHALL BE REMOVED WHEN IT REACHES A DEPTH OF 6 INCHES AND DISPOSED OF IN AN APPROVED SPOIL SITE OR AS IN NO. 6 ABOVE.



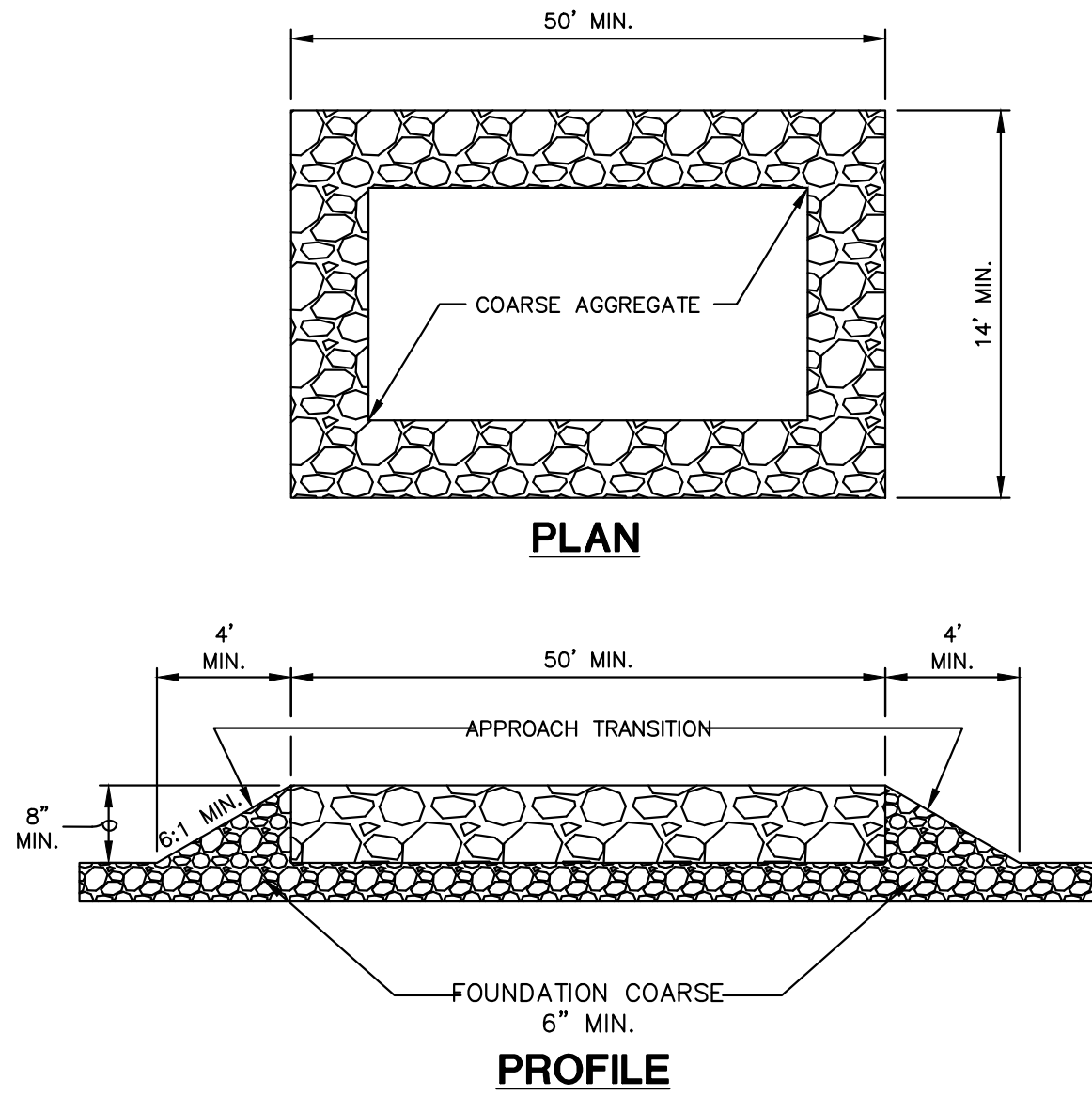
- GENERAL NOTES**
1. DETAIL ABOVE ILLUSTRATES MINIMUM DIMENSIONS. PIT CAN BE INCREASED IN SIZE DEPENDING ON EXPECTED FREQUENCY OF USE.
 2. WASHOUT PIT SHALL BE LOCATED IN AN AREA EASILY ACCESSIBLE TO CONSTRUCTION TRAFFIC.
 3. WASHOUT PIT SHALL NOT BE LOCATED IN AREAS SUBJECT TO INUNDATION FROM STORM WATER RUNOFF.
 4. LOCATE WASHOUT AREA AT LEAST 50 FEET FROM SENSITIVE FEATURES, STORM DRAINS, OPEN DITCHES OR WATER BODIES.
 5. TEMPORARY CONCRETE WASHOUT FACILITY SHOULD BE CONSTRUCTED WITH SUFFICIENT QUANTITY AND VOLUME TO CONTAIN ALL LIQUID AND CONCRETE WASTE GENERATED BY WASHOUT OPERATIONS.

- MATERIALS**
1. PLASTIC LINING MATERIAL SHOULD BE A MINIMUM OF 10 MIL IN POLYETHYLENE SHEETING AND SHOULD BE FREE OF HOLES, TEARS, OR OTHER DEFECTS THAT COMPROMISE THE IMPERMEABILITY OF THE MATERIAL.

- MAINTENANCE**
1. WHEN TEMPORARY CONCRETE WASHOUT FACILITIES ARE NO LONGER REQUIRED FOR THE WORK, THE HARDENED CONCRETE SHOULD BE REMOVED AND DISPOSED OF.
 2. MATERIALS USED TO CONSTRUCT TEMPORARY CONCRETE WASHOUT FACILITIES SHOULD BE REMOVED FROM THE SITE OF THE WORK AND DISPOSED OF.
 3. HOLES, DEPRESSIONS OR OTHER GROUND DISTURBANCES CAUSED BY THE REMOVAL OF THE TEMPORARY CONCRETE WASHOUT FACILITIES SHOULD BE BACKFILLED AND REPAIRED.

CONCRETE TRUCK WASHOUT PIT

NOT TO SCALE

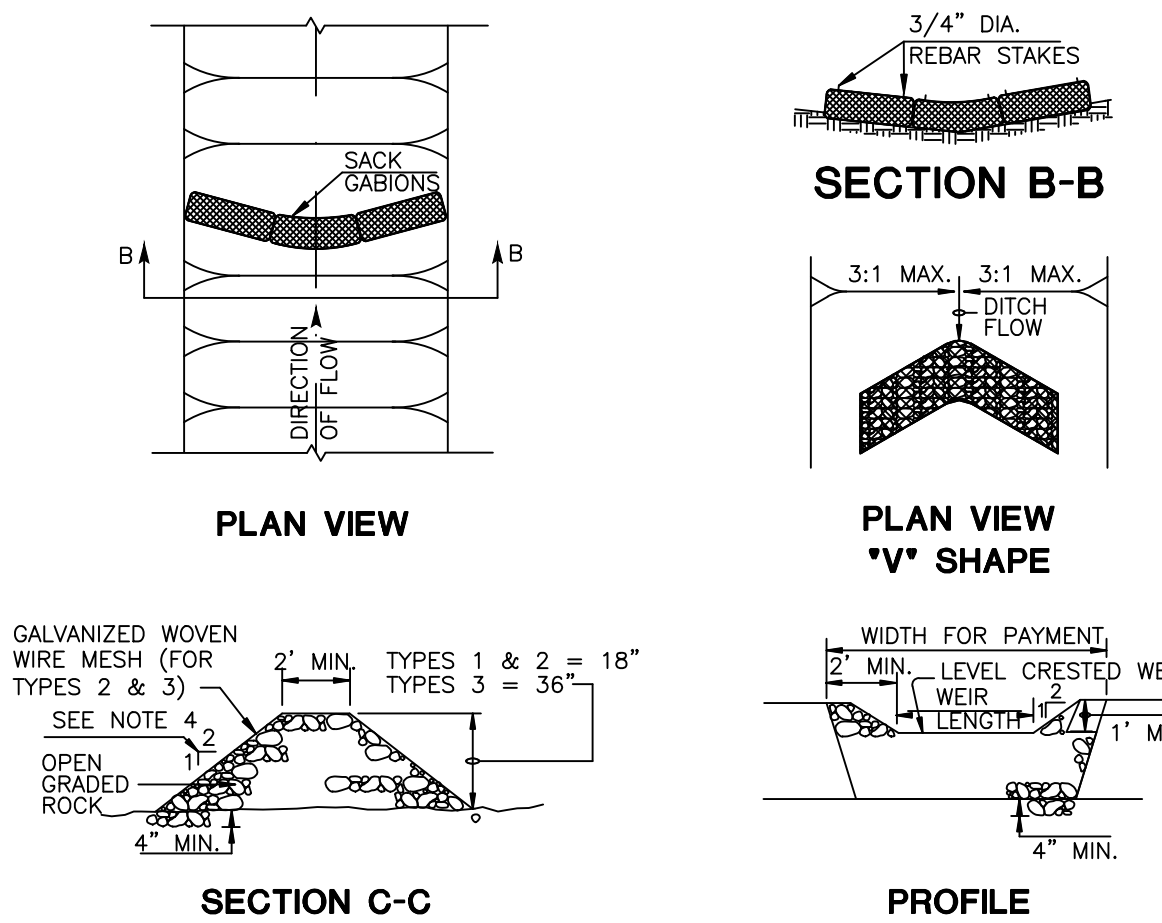


- GENERAL NOTES**
1. THE LENGTH OF THE TYPE 1 CONSTRUCTION EXIT SHALL BE AS INDICATED ON THE PLANS, BUT NOT LESS THAN 50'.
 2. THE COARSE AGGREGATE SHOULD BE OPEN GRADED WITH A SIZE OF 4" TO 8".
 3. THE APPROACH TRANSITIONS SHOULD BE NO STEEPER THAN 6:1 AND CONSTRUCTED AS DIRECTED BY THE ENGINEER.
 4. THE CONSTRUCTION EXIT FOUNDATION COURSE SHALL BE FLEXIBLE BASE, BITUMINOUS CONCRETE, PORTLAND CEMENT CONCRETE OR OTHER MATERIAL AS APPROVED BY THE ENGINEER.
 5. THE CONSTRUCTION EXIT SHALL BE GRADED TO ALLOW DRAINAGE TO A SEDIMENT TRAPPING DEVICE.
 6. THE GUIDELINES SHOWN HEREON ARE SUGGESTIONS ONLY AND MAY BE MODIFIED BY THE ENGINEER.

CONSTRUCTION EXIT (TYPE 1)

NOT TO SCALE

- GRAVEL FILTER BAGS**
- NOT TO SCALE
- ROCK FILTER DAM USAGE GUIDELINES**
1. ROCK FILTER DAMS SHOULD BE CONSTRUCTED DOWNSTREAM FROM DISTURBED AREAS TO INTERCEPT SEDIMENT FROM OVERLOAD RUNOFF AND/OR CONCENTRATED FLOW. THE DAMS SHOULD BE SIZED TO FILTER A MAXIMUM FLOW THROUGH RATE OF 60 GPM/FT OF CROSS SECTIONAL AREA. A 2 YEAR STORM FREQUENCY MAY BE USED TO CALCULATE THE FLOW RATE.
 2. **TYPE 1 (18" HIGH WITH NO WIRE MESH):** TYPE 1 MAY BE USED AT THE TOE OF SLOPES, AROUND INLETS, IN SMALL DITCHES, AND AT DIKE OR SWALE OUTLETS. THIS TYPE OF DAM IS RECOMMENDED TO CONTROL EROSION FROM A DRAINAGE AREA OF 5 ACRES OR LESS. TYPE 1 MAY NOT BE USED IN CONCENTRATED HIGH VELOCITY FLOWS (APPROX. 8 FT./SEC. OR MORE) IN WHICH AGGREGATE WASH OUT MAY OCCUR. SANDBAGS MAY BE USED AT THE EMBEDDED FOUNDATION (4" DEEP MIN.) FOR BETTER FILTERING EFFICIENCY OF LOW FLOWS IF CALLED FOR ON THE PLANS OR DIRECTED BY THE ENGINEER.
 3. **TYPE 2 (18" HIGH WITH WIRE MESH):** TYPE 2 MAY BE USED IN DITCHES AND AT DIKE OR SWALE OUTLETS.
 4. **TYPE 3 (36" HIGH WITH WIRE MESH):** TYPE 3 MAY BE USED IN STREAM FLOW AND SHOULD BE SECURED TO THE STREAM BED.
 5. **TYPE 4 (SACK GABIONS):** TYPE 4 MAY BE USED IN DITCHES AND SMALLER CHANNELS TO FORM AN EROSION CONTROL DAM.



- ROCK FILTER DAM USAGE GUIDELINES**
- ROCK FILTER DAMS SHOULD BE CONSTRUCTED DOWNSTREAM FROM DISTURBED AREAS TO INTERCEPT SEDIMENT FROM OVERLOAD RUMOFF AND/OR CONCENTRATED FLOW. THE DAMS SHOULD BE SIZED TO FILTER A MAXIMUM FLOW THROUGH RATE OF 60 GPM/FT OF CROSS SECTIONAL AREA. A 2 YEAR STORM FREQUENCY MAY BE USED TO CALCULATE THE FLOW RATE.
- TYPE 1 (18" HIGH WITH NO WIRE MESH):** TYPE 1 MAY BE USED AT THE TOE OF SLOPES, AROUND INLETS, IN SMALL DITCHES, AND AT DIKE OR SWALE OUTLETS. THIS TYPE OF DAM IS RECOMMENDED TO CONTROL EROSION FROM A DRAINAGE AREA OF 5 ACRES OR LESS. TYPE 1 MAY NOT BE USED IN CONCENTRATED HIGH VELOCITY FLOWS (APPROX. 8 FT./SEC. OR MORE) IN WHICH AGGREGATE WASH OUT MAY OCCUR. SANDBAGS MAY BE USED AT THE EMBEDDED FOUNDATION (4" DEEP MIN.) FOR BETTER FILTERING EFFICIENCY OF LOW FLOWS IF CALLED FOR ON THE PLANS OR DIRECTED BY THE ENGINEER.
- TYPE 2 (18" HIGH WITH WIRE MESH):** TYPE 2 MAY BE USED IN DITCHES AND AT DIKE OR SWALE OUTLETS.
- TYPE 3 (36" HIGH WITH WIRE MESH):** TYPE 3 MAY BE USED IN STREAM FLOW AND SHOULD BE SECURED TO THE STREAM BED.
- TYPE 4 (SACK GABLONS):** TYPE 4 MAY BE USED IN DITCHES AND SMALLER CHANNELS TO FORM AN EROSION CONTROL DAM.

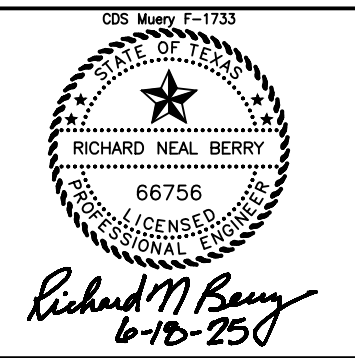
1. ALL AGGREGATE USED FOR THE CONSTRUCTION OF THE ROCK FILTER DAMS SHALL BE HARD, DURABLE, CLEAN, OPEN-GRADED, AND SHALL NATURALLY RESIST CRUMBLING, FLAKING AND ERODING. AGGREGATE GRADATION SHALL BE 3 TO 6 INCHES FOR ROCK FILTER DAMS TYPES 1, 2 AND 4 AND SHALL BE 4 TO 8 INCHES FOR TYPE 3.
2. THE GALVANIZED STEEL WIRE MESH AND TIE WIRES FOR TYPES 2 AND 3 SHALL BE A MINIMUM 20 GAUGE UNLESS SPECIFIED ON THE PLANS.
3. FOR TYPE 4: STEEL WIRE MESH SHALL UTILIZE A DOUBLE TWISTED HEXAGONAL WEAVE; MESH OPENING SHALL BE A NOMINAL 2.50 X 3.25 INCH, STEEL WIRE FOR NETTING SHALL BE 0.0866 INCH MINIMUM; STEEL WIRE FOR SELVEDGES AND CORNERS SHALL BE 0.1063 INCH (U.S. GAUGE NO. 11) MINIMUM; AND BINDING OR TIE WIRE SHALL BE 0.0866 INCH (U.S. GAUGE NO. 13) MINIMUM.
4. UNLESS OTHERWISE SPECIFIED, THE SANDBAG MATERIAL SHALL BE MADE OF POLYPROPYLENE, POLYETHYLENE OR POLYAMIDE WOVEN FABRIC, MINIMUM UNIT WEIGHT 4 OUNCES PER SQUARE YARD, MULLEN BURST STRENGTH EXCEEDING 300 PSI AND ULTRAVIOLET STABILITY EXCEEDING 70 PERCENT. THE SANDBAG SIZE SHALL BE 24 TO 30 INCHES IN LENGTH, 16 TO 18 INCHES IN WIDTH, 6 TO 8 INCHES THICK AND WEIGH 90 TO 125 POUNDS. THE SAND SHALL BE COARSE GRADE.

P:\085\2025\12011_CSA40 Fuel System\Draw 30\Draw\Engineer.dwg

ADDENDUM 1

NO	DATE	REVISION	BY

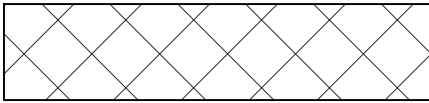
DESIGNED BY	CDS
DRAWN BY	DAG
CHECKED BY	RNB
REVIEWED BY	RNB
DATE	6-6-25



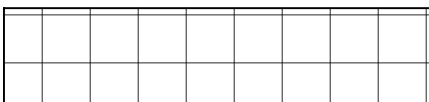
CDS muery
ENGINEERS | SURVEYORS
100 NE LOOP 410, STE. 300 | SAN ANTONIO, TEXAS 78216
(210) 581-1111 | TBPE NO. F-1733 | TBPLS NO. 100495-00

BMP DETAILS	SHEET NO.
COSA CENTRAL SERVICE AREA POLICE DEPARTMENT FUEL SYSTEM REPLACEMENT 515 South Frio Street, San Antonio, TX 78207	OF SHEETS FILE NO. 125011

LEGEND



TANK EXCAVATION AREA
891 S.F.



DISPENSER & PIPING EXCAVATION AREA
1118 S.F.

DEMOLITION PLAN FOR THIS AREA- PIPING AND DISPENSER REMOVAL

1. REMOVE ALL PIPING, FITTINGS, CONDUITS, FUEL DISPENSERS, AND ALL ASSOCIATED EQUIPMENT IN THIS AREA.
2. CONTRACTOR TO SANDBLAST AND PAINT EXISTING FUEL ISLAND FORMS
3. FULL DEPTH SAWCUT AND REMOVE ALL CONCRETE ASPHALT, REINFORCEMENT, AND BACKFILL IN THIS AREA.
4. PIPE RUNS ARE UNKNOWN. CONTRACTOR SHALL HAVE TRENCH FOLLOW PIPING FORM THE EXISTING MANHOLES TO DISPENSERS. PLACE HEAVY WEIGHT PLASTIC ON THE PAVEMENT SOUTH OF THE TANKS. WEIGH THE EDGES DOWN WITH SAND BAGS.
5. PLACE ALL EXCAVATED SOIL ON PLASTIC SO THAT SOIL SAMPLES MAY BE OBTAINED FOR TESTING.
7. COVER SOIL AT NIGHT OR DURING RAIN EVENTS TO PREVENT THE LOSS OF SOIL DURING THIS TIME.
8. ENTIRE CANOPY, CANOPY COLUMNS, AND ANY OTHER COMPONENTS ASSOCIATED WITH THE CANOPY WILL REMAIN. **DO NOT DAMAGE.**
9. FOR BASE BID, CONTRACTOR REUSE EXISTING FUEL DISPENSERS AFTER SUMP REPLACEMENT

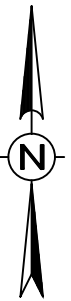
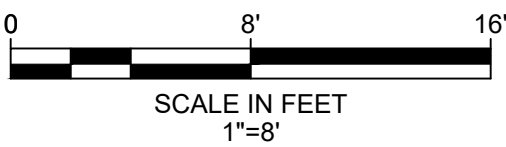
- DEMOLITION PLAN FOR THIS AREA- PIPING REMOVAL
1. REMOVE ALL PIPING, FITTINGS, AND ALL ASSOCIATED EQUIPMENT IN THIS AREA.
 2. FULL DEPTH SAWCUT AND REMOVE ALL CONCRETE ASPHALT, REINFORCEMENT, AND BACKFILL IN THIS AREA.
 3. PIPE RUNS ARE UNKNOWN. CONTRACTOR SHALL HAVE TRENCH FOLLOW PIPING FORM THE EXISTING MANHOLES TO DISPENSERS.
 4. ENTIRE CANOPY, CANOPY COLUMNS, AND ANY OTHER COMPONENTS ASSOCIATED WITH THE CANOPY WILL REMAIN. **DO NOT DAMAGE.**

DEMOLITION PLAN FOR THIS AREA- UST REMOVAL

1. REMOVE CONCRETE PAVEMENT, REINFORCEMENT, AND OBSTRUCTIONS IN THIS AREA. CONTACT ENGINEER IF ANY OBSTRUCTIONS FOUND UNDERGROUND.
2. REMOVE ALL BACKFILL IN THIS AREA UP TO THE TOP OF THE TANK TO EXPOSE THE FUEL PIPING AND TANK SUMP AND FITTINGS IN THIS AREA.
3. REMOVE ALL PUMP SUMPS AND COVERS, PRODUCT PIPING, CONDUIT, CONCRETE & ASSOCIATED EQUIPMENT IN THIS AREA.
4. THE PUMP SUMPS, VAPOR RECOVERY AND SPILL BUCKETS TO BE REPLACED, INCLUDING ASSOCIATED MANHOLE RING AND COVERS.
5. PLACE HEAVY WEIGHT PLASTIC ON TOP OF THE PAVEMENT NEAR THE TANKS. WEIGH THE EDGES DOWN WITH SANDBAGS.
6. PLACE ALL EXCAVATED SOIL ON PLASTIC.
7. COVER RUBBLE AND SOIL AT NIGHT OR DURING RAIN EVENTS TO PREVENT THE LOSS OF SOIL DURING THI TIME.
8. MANIFEST ALL SOILS/BACKFILL REMOVED FROM THE SITE AND DISPOSE OF THEM IN ACCORDANCE WITH STATE LAW.

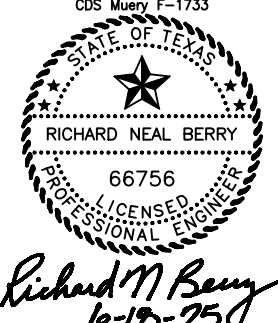
- PLAN FOR THIS AREA- VENT PIPING AND VENT
1. REUSE EXISTING VENT PIPING AND VENT EQUIPMENT.
 2. REPLACE ANY DAMAGED COMPONENTS OF THE VENT SYSTEM.
 3. EXTEND VENT PIPING TO 5' ABOVE WASH BAY SOFFITT.

DEMOLITION PLAN

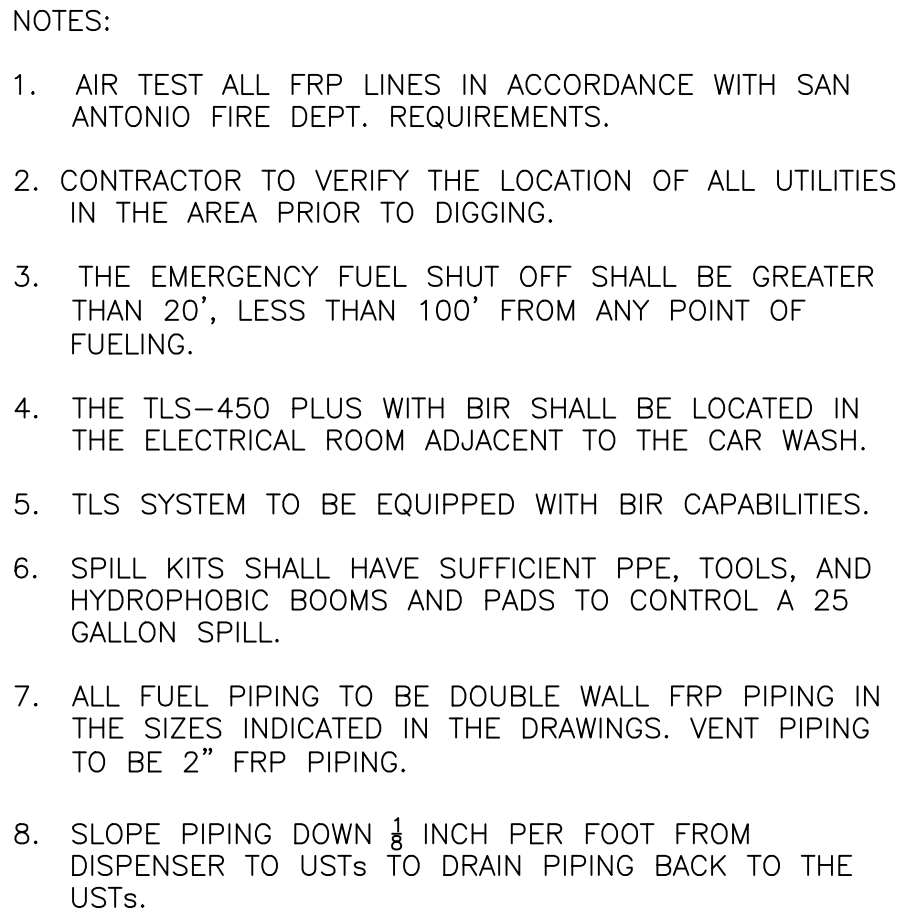


F-4

ADDENDUM 1

				DESIGNED BY CDS			DEMOLITION PLAN		SHEET NO.
				DRAWN BY DAG					OF SHEETS
				CHECKED BY RNB			COSA CENTRAL SERVICE AREA POLICE DEPARTMENT		FILE NO. 125011
				REVIEWED BY RNB			FUEL SYSTEM REPLACEMENT		
1	2025/7/24	NOTES REVISED		DATE 6-6-25			515 South Frio Street, San Antonio, TX 78207		
NO	DATE	REVISION	BY	DATE					

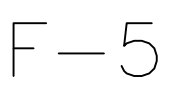
P:\J085\2025\125011_COSA Central Service Area Police Department Fuel System Replacement.dwg



0 6' 12'

SCALE IN FEET

1"=6'



1	2025/7/24	NOTES REVISED	
NO	DATE	REVISION	BY

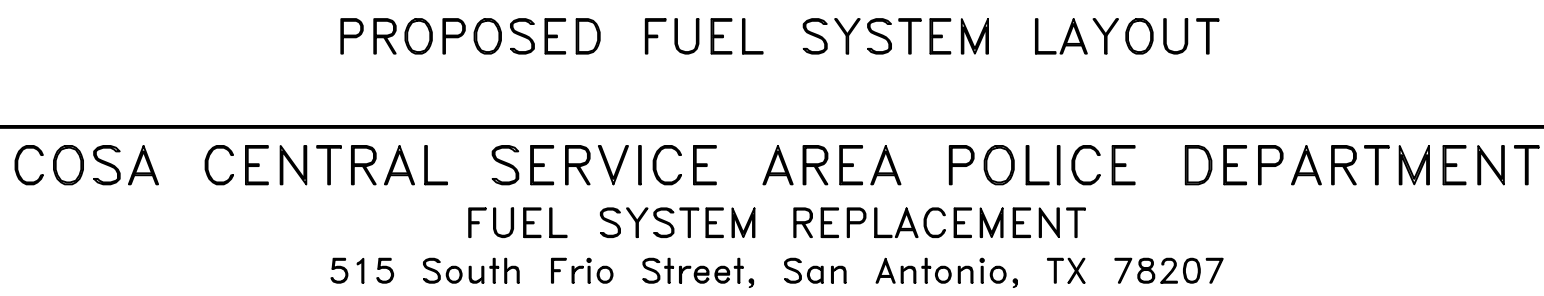
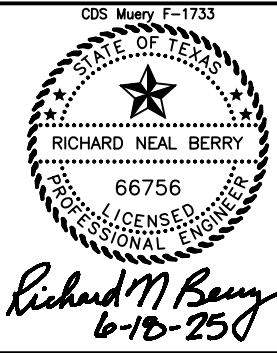
DESIGNED BY CDS

DRAWN BY DAG

CHECKED BY RNB

REVIEWED BY RNB

DATE 6-6-25

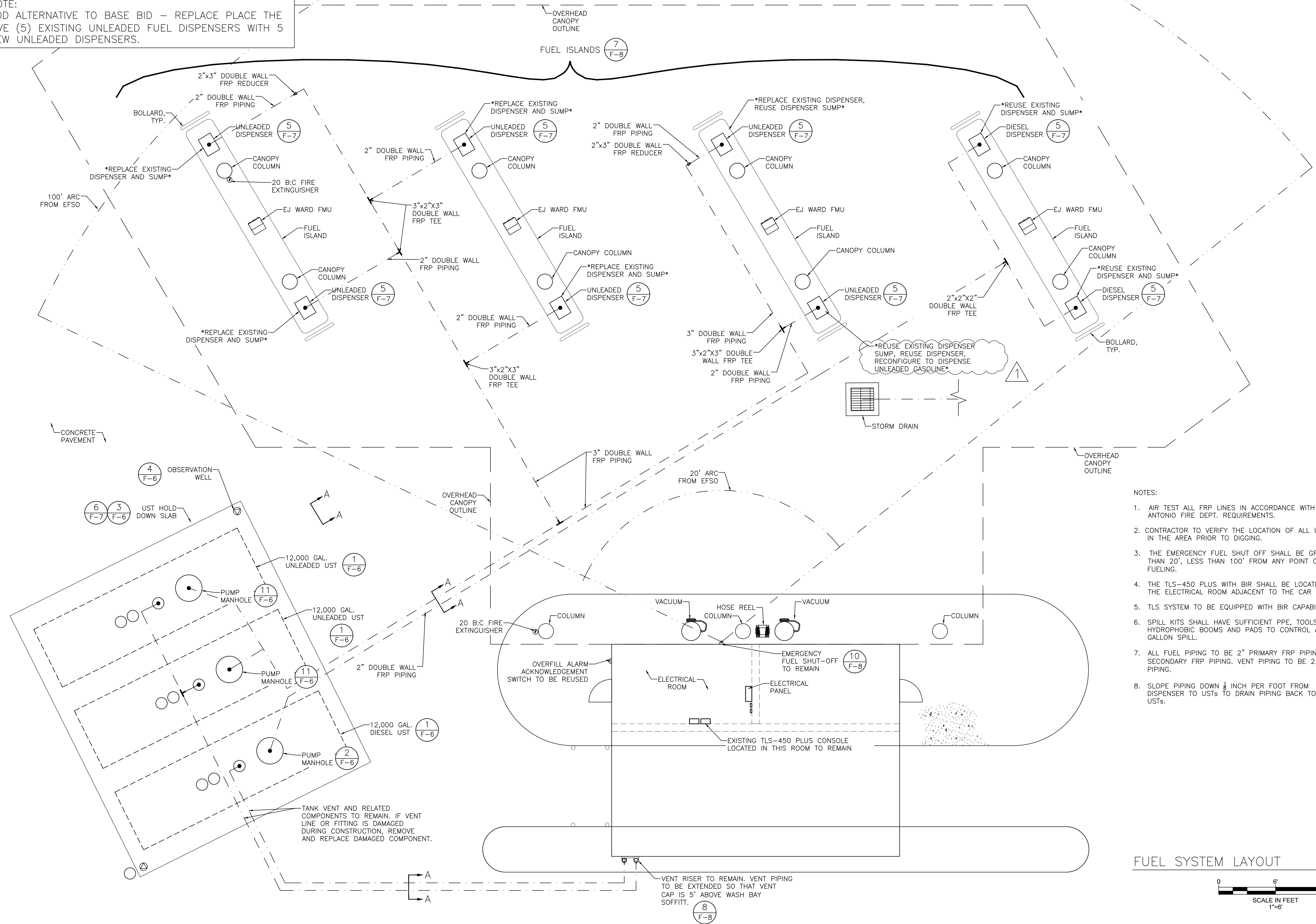


SHEET NO.

OF SHEETS

FILE NO. 125011

NOTE:
ADD ALTERNATIVE TO BASE BID - REPLACE PLACE THE
FIVE (5) EXISTING UNLEADED FUEL DISPENSERS WITH 5
NEW UNLEADED DISPENSERS.



- NOTES:
1. AIR TEST ALL FRP LINES IN ACCORDANCE WITH SAN ANTONIO FIRE DEPT. REQUIREMENTS.
 2. CONTRACTOR TO VERIFY THE LOCATION OF ALL UTILITIES IN THE AREA PRIOR TO DIGGING.
 3. THE EMERGENCY FUEL SHUT OFF SHALL BE GREATER THAN 20', LESS THAN 100' FROM ANY POINT OF FUELING.
 4. THE TLS-450 PLUS WITH BIR SHALL BE LOCATED IN THE ELECTRICAL ROOM ADJACENT TO THE CAR WASH.
 5. TLS SYSTEM TO BE EQUIPPED WITH BIR CAPABILITIES.
 6. SPILL KITS SHALL HAVE SUFFICIENT PPE, TOOLS, AND HYDROPHOBIC BOOMS AND PADS TO CONTROL A 25 GALLON SPILL.
 7. ALL FUEL PIPING TO BE 2" PRIMARY FRP PIPING IN 3" SECONDARY FRP PIPING. VENT PIPING TO BE 2" FRP PIPING.
 8. SLOPE PIPING DOWN 1/8 INCH PER FOOT FROM DISPENSER TO USTs TO DRAIN PIPING BACK TO THE USTs.

FUEL SYSTEM LAYOUT

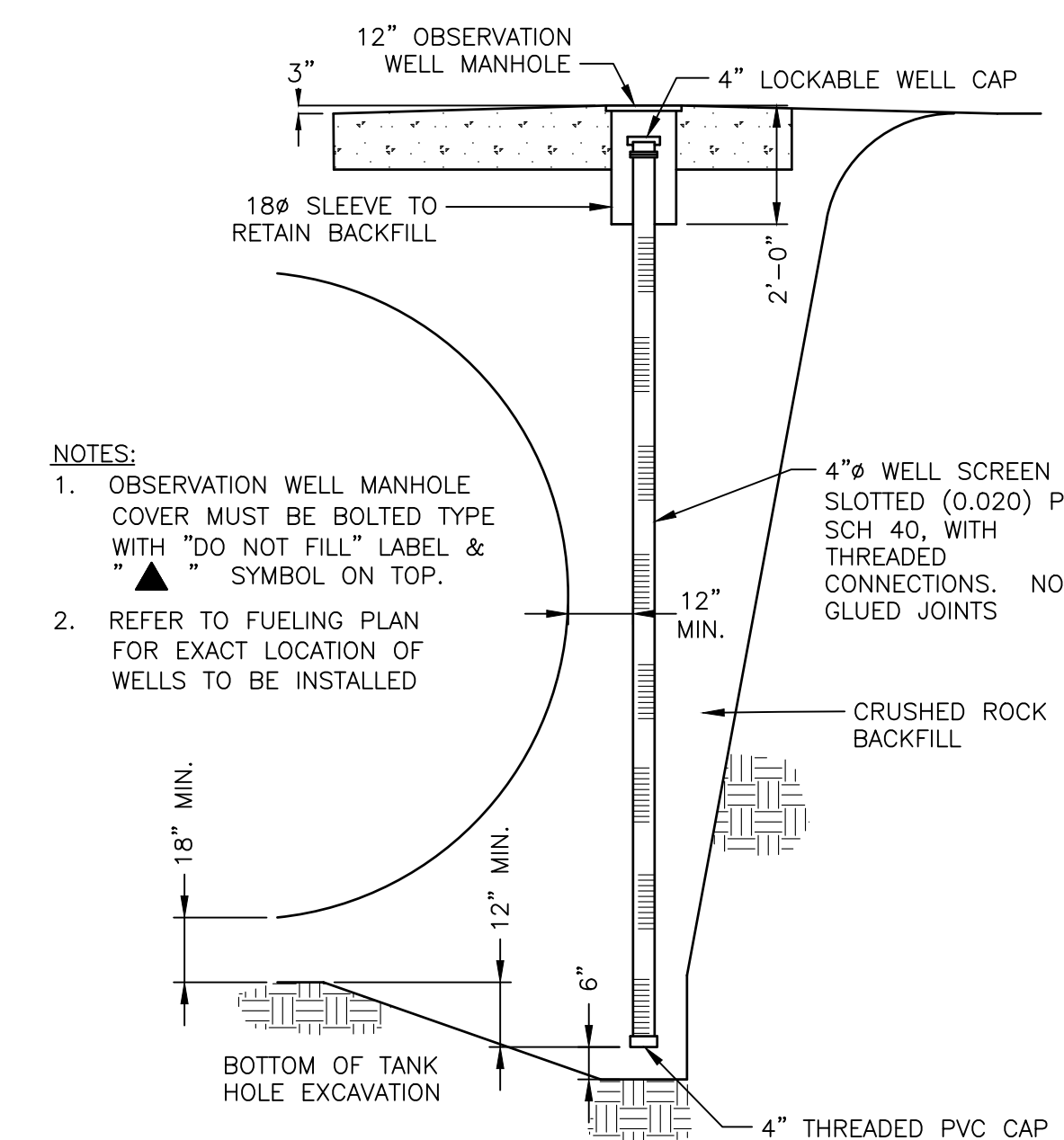
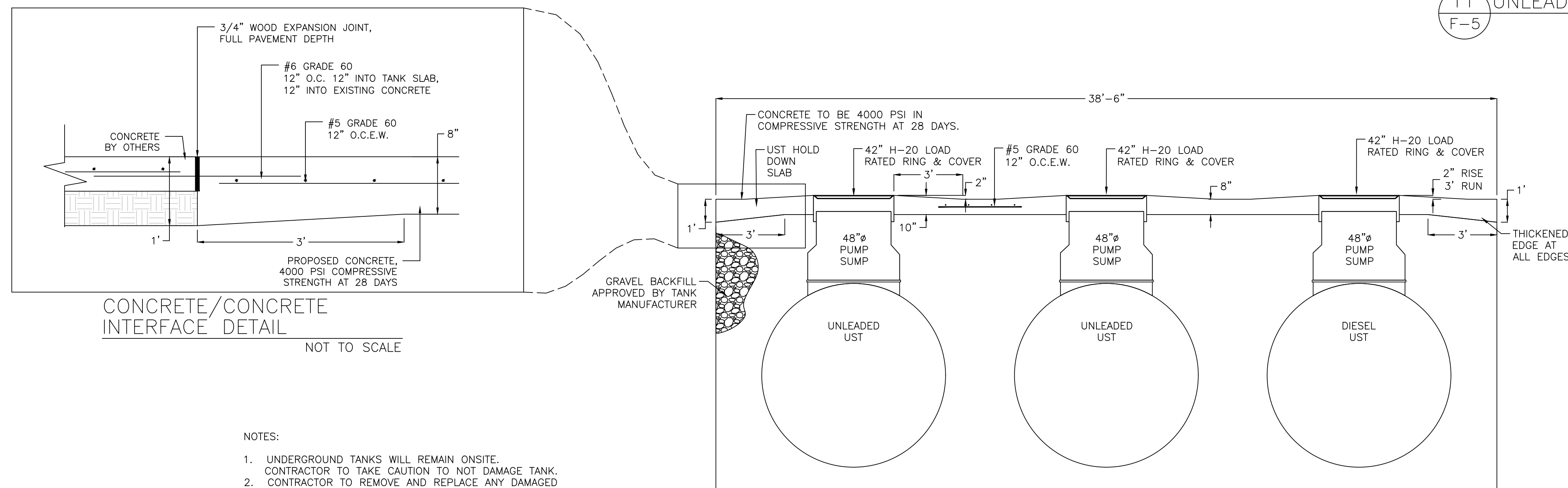
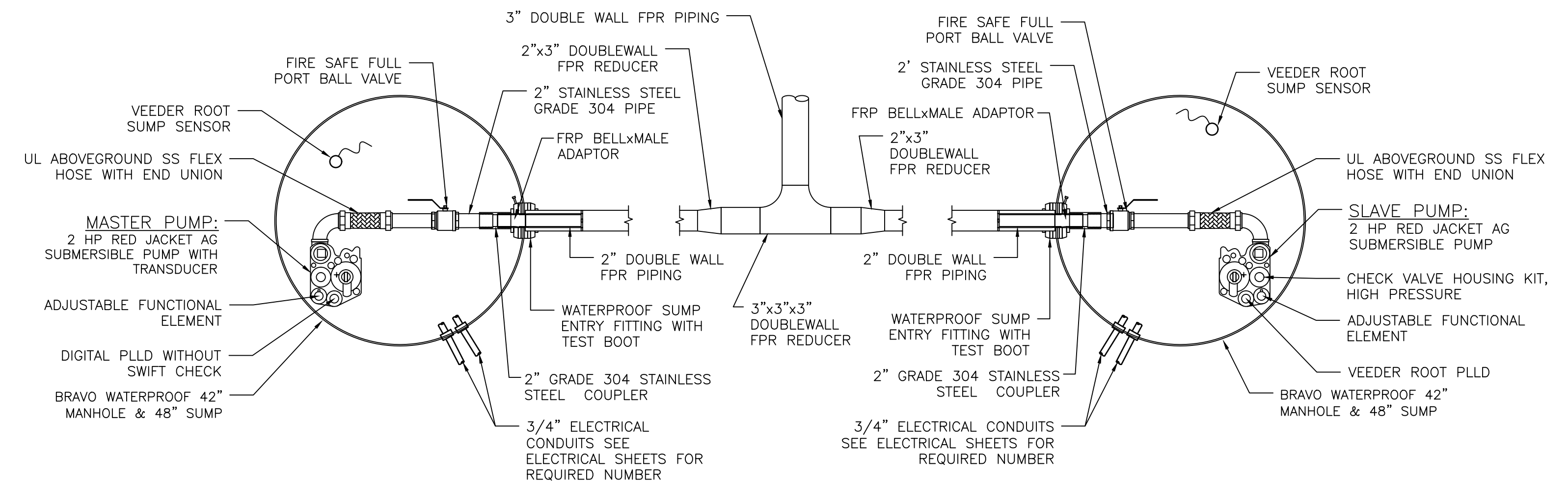
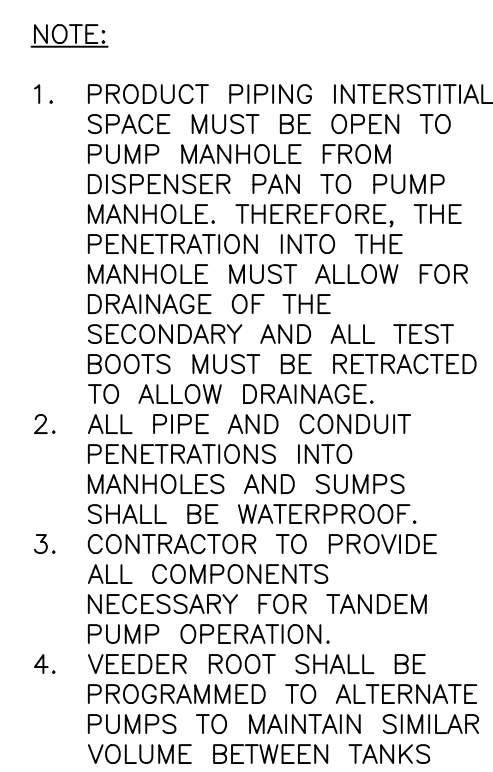
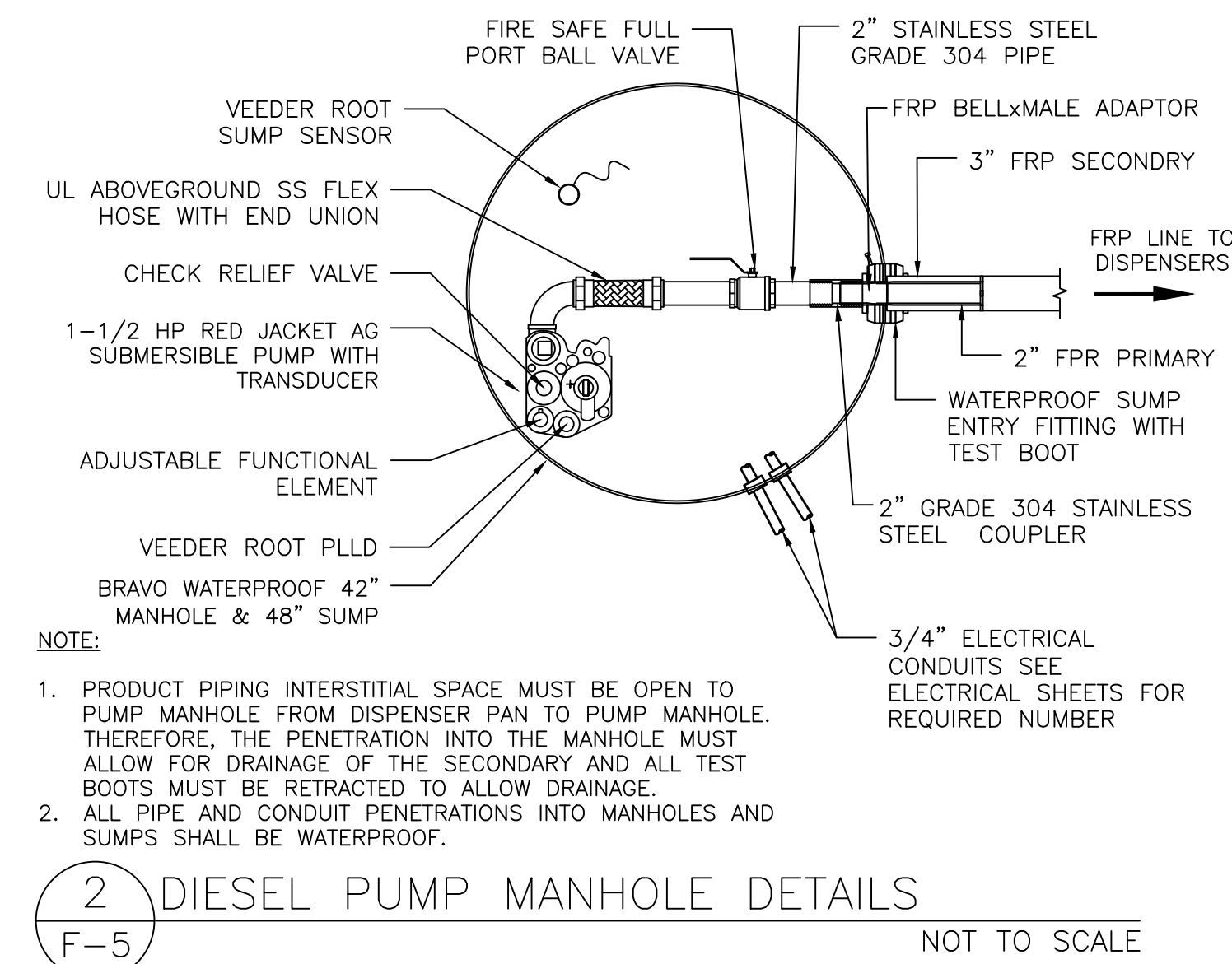
0 6' 12'

SCALE IN FEET
1"=6'

F-5A

ADDENDUM 1

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NO	DATE	REVISION	BY

DESIGNED BY CDS

DRAWN BY DAG

CHECKED BY RNB

REVIEWED BY RNB

DATE 6-6-25

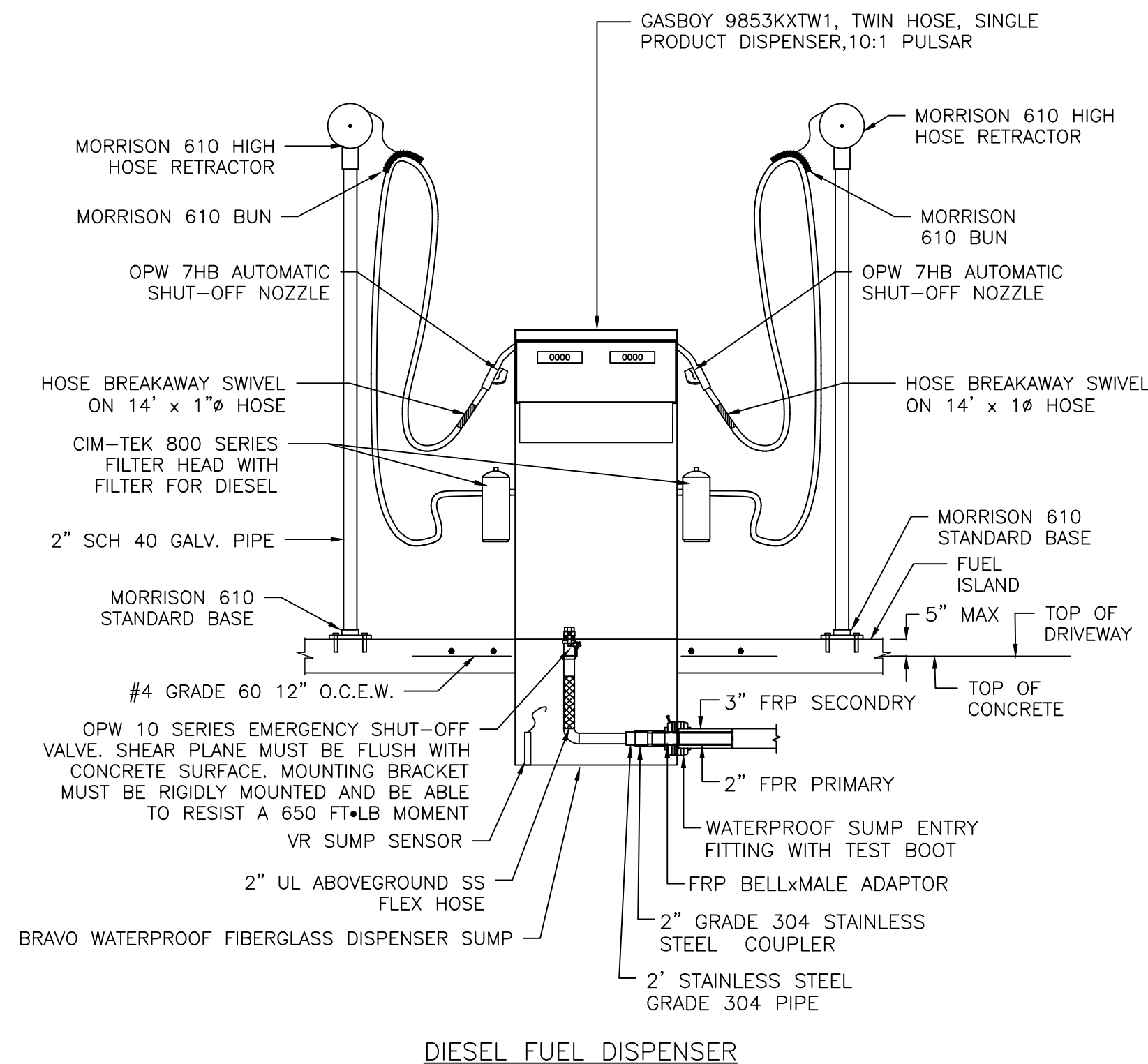
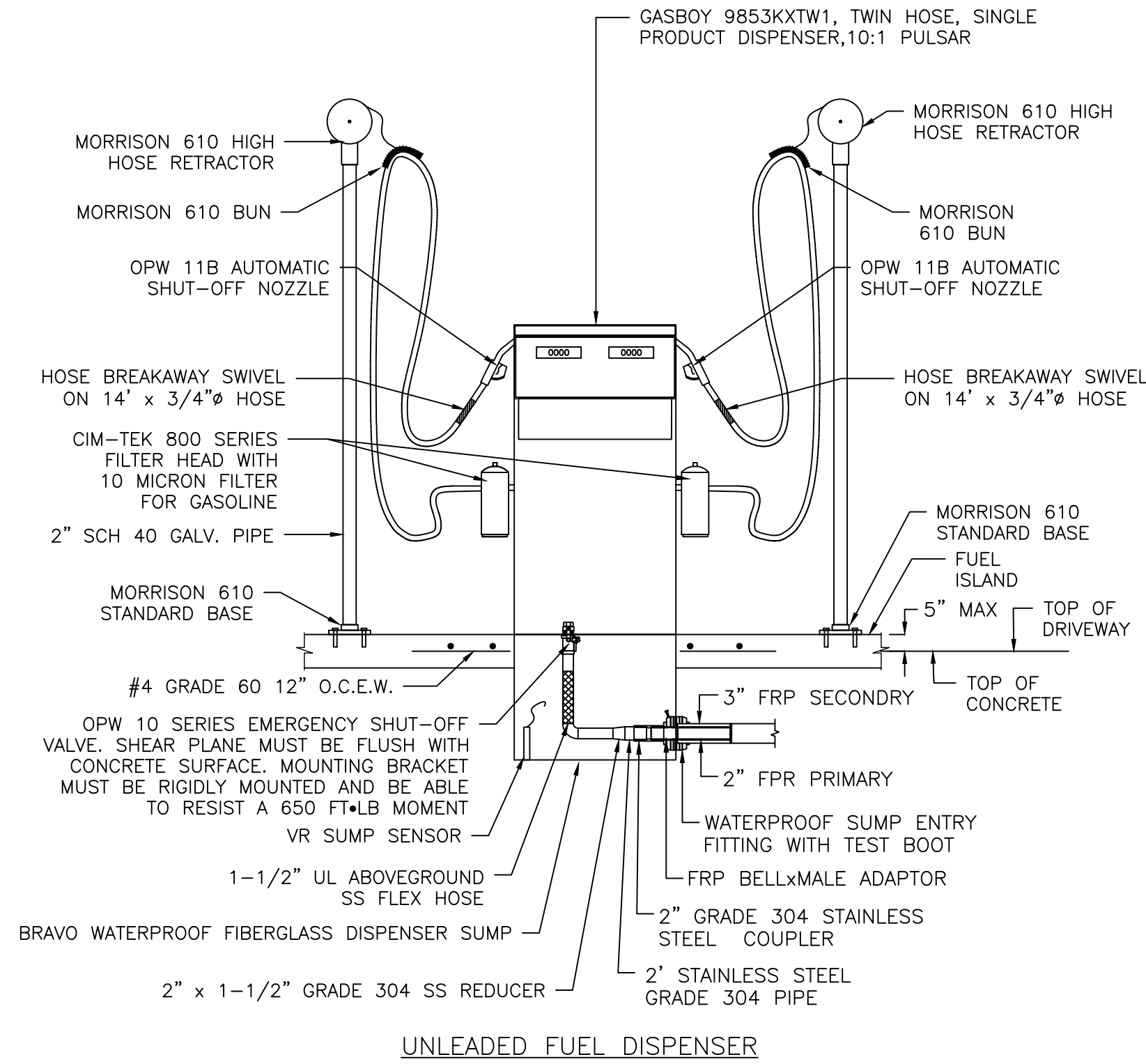


100 NE LOOP 410, STE. 300 | SAN ANTONIO, TEXAS 78216
(210) 581-1111 | TBPE NO. F-1733 | TBPLS NO. 100495-00

COSA CENTRAL SERVICE AREA POLICE DEPARTMENT
FUEL SYSTEM REPLACEMENT
515 South Frio Street, San Antonio, TX 78207

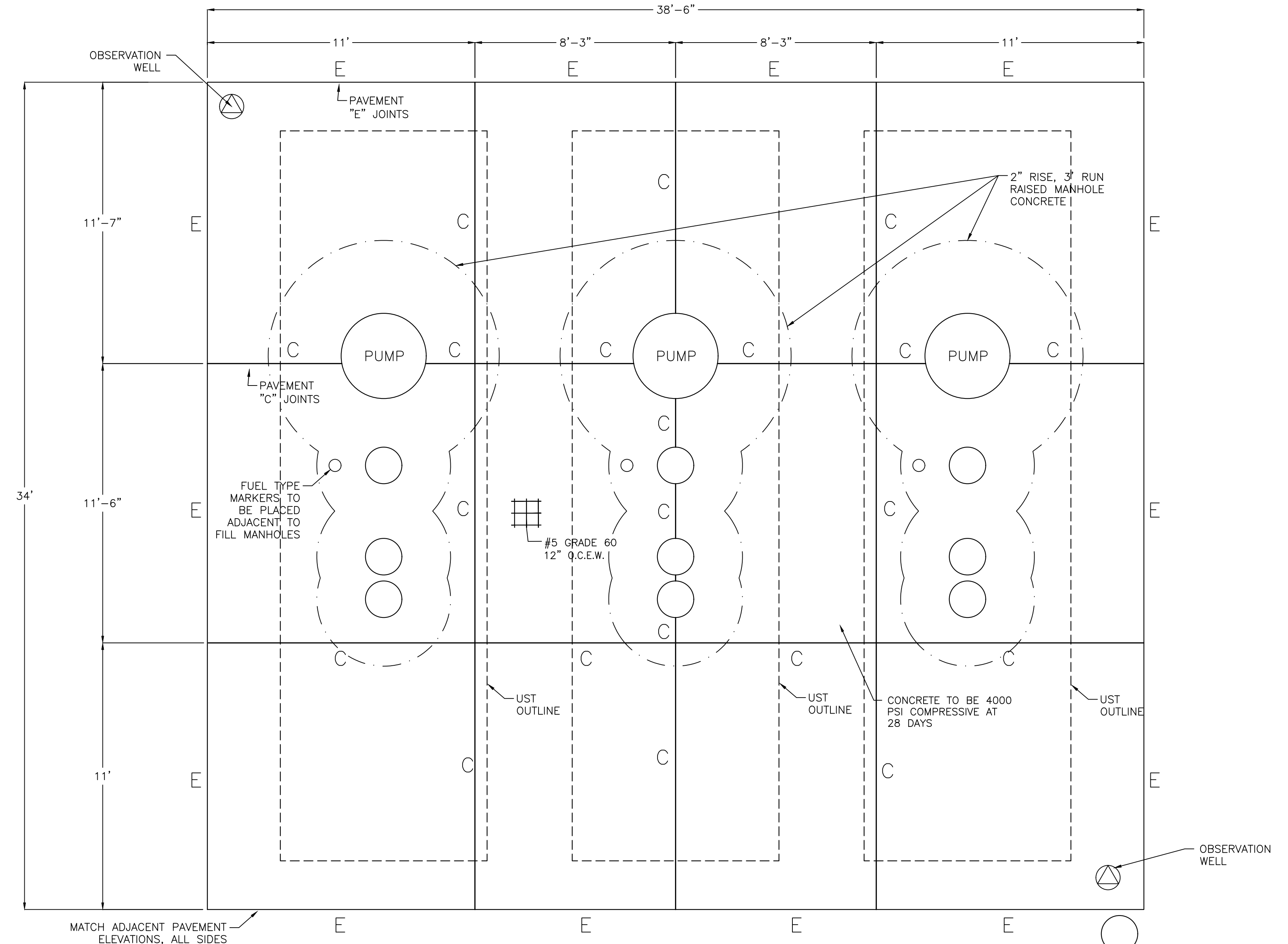
SHEET NO.	
OF	SHEETS
FILE NO.	125011

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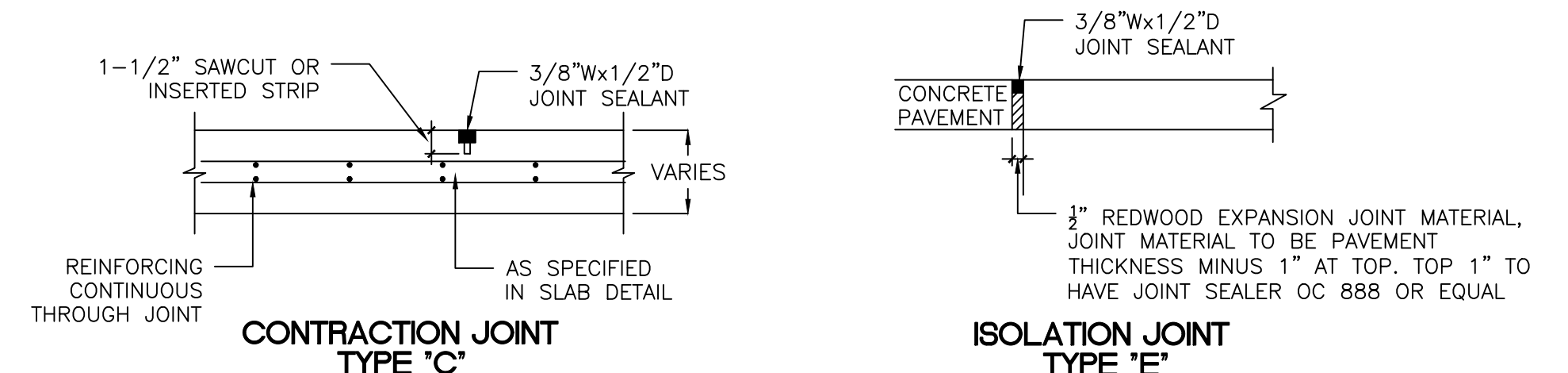


5 DISPENSER DETAILS
F-5

DOUBLE NOZZLE
NOT TO SCALE



6 HOLD DOWN SLAB JOINT DETAIL
F-5 SCALE: 1"=4'



NOTE: ALL SAW CUTS SHALL BE COMPLETED WITHIN 8 HOURS OF INITIAL SET OF CONCRETE

ISOLATION JOINT TYPE 'E'

ADDENDUM 1

NO	DATE	REVISION	BY
1			
2			
3			
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DESIGNED BY	CDS
DRAWN BY	DAG
CHECKED BY	RNB
REVIEWED BY	RNB
DATE	6-6-25

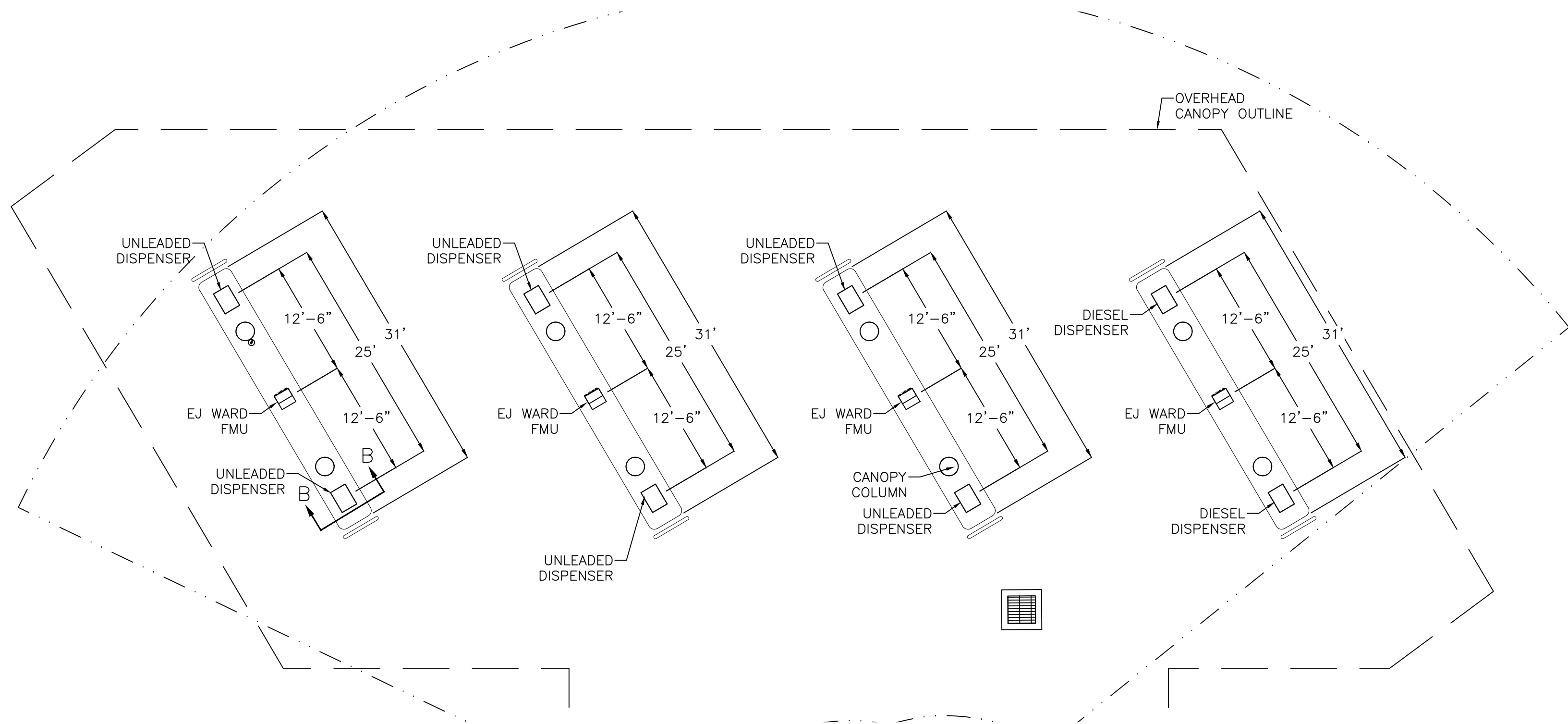


CDS muery
ENGINEERS | SURVEYORS
100 NE LOOP 410, STE. 300 | SAN ANTONIO, TEXAS 78216
(210) 581-1111 | TBPE NO. F-1733 | TBPLS NO. 100495-00

FUEL SYSTEM DETAILS 1
COSA CENTRAL SERVICE AREA POLICE DEPARTMENT
FUEL SYSTEM REPLACEMENT
515 South Frio Street, San Antonio, TX 78207

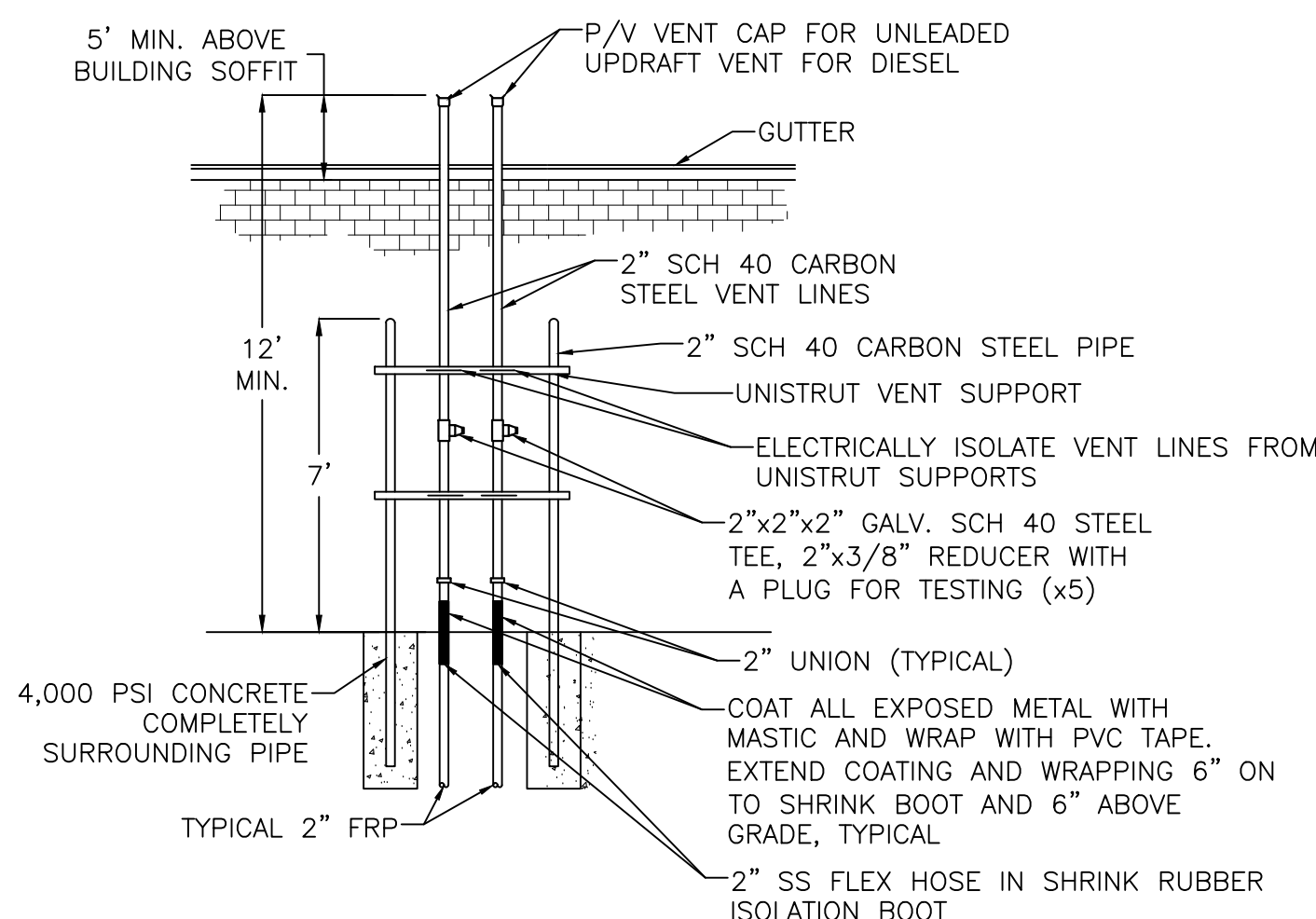
SHEET NO.
OF SHEETS
FILE NO. 125011

F-7



7 FUEL ISLAND LAYOUT
F-5

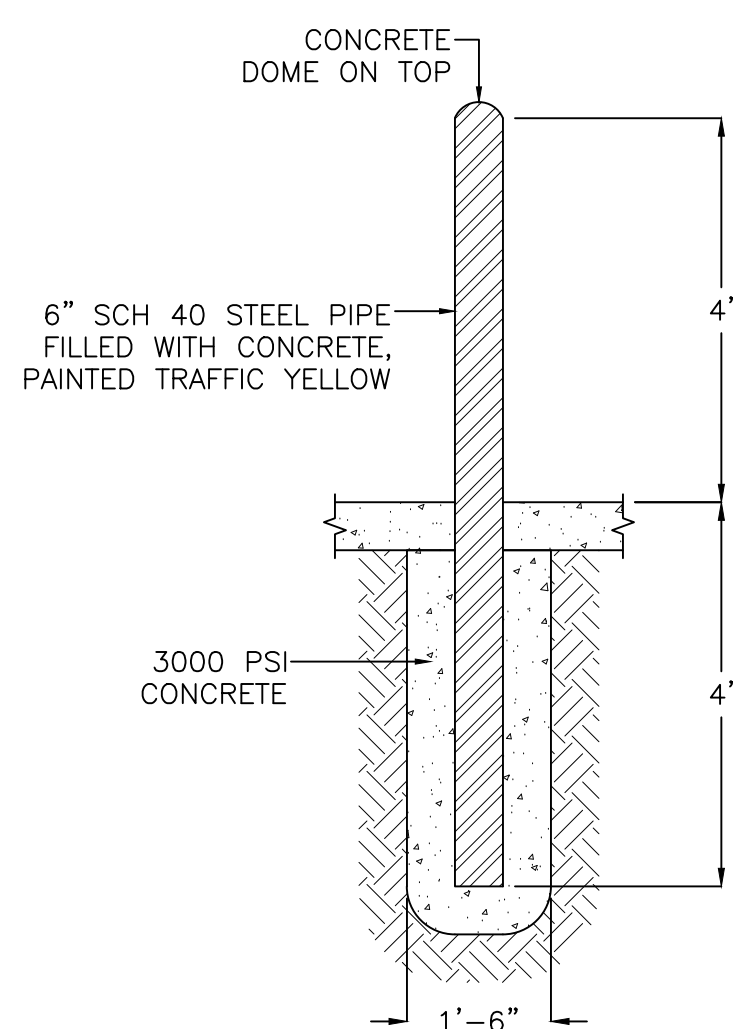
0 10' 20'
SCALE, IN FEET
1"=10'



- NOTES:
1. SLOPE VENT LINES TO TANKS AT 1/8" PER FOOT MINIMUM.
2. UNLEADED VENT LINES CAN BE MANIFOLDED TO ONE VENT.

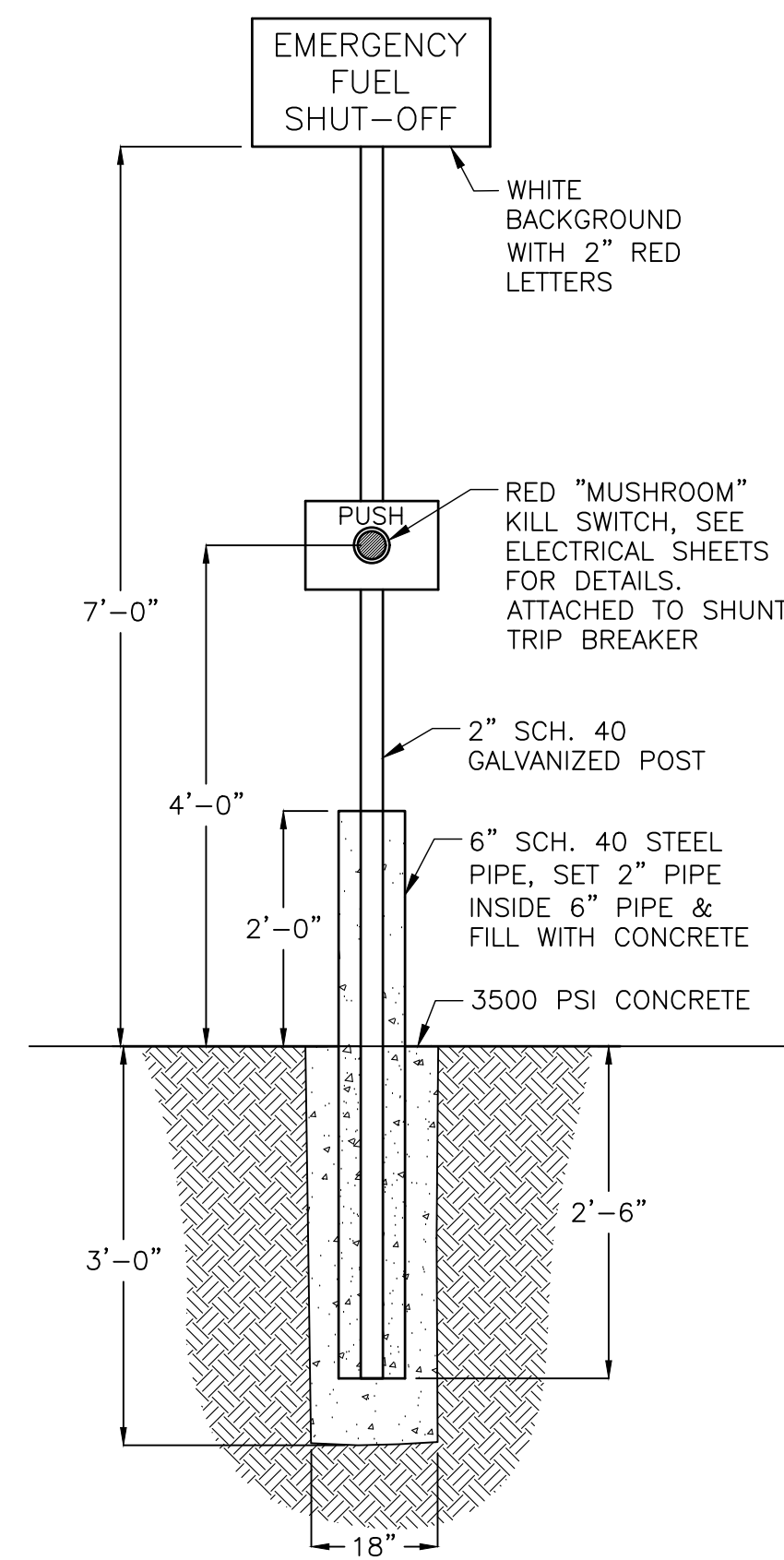
8 VENT RISER DETAIL
F-5

NOT TO SCALE



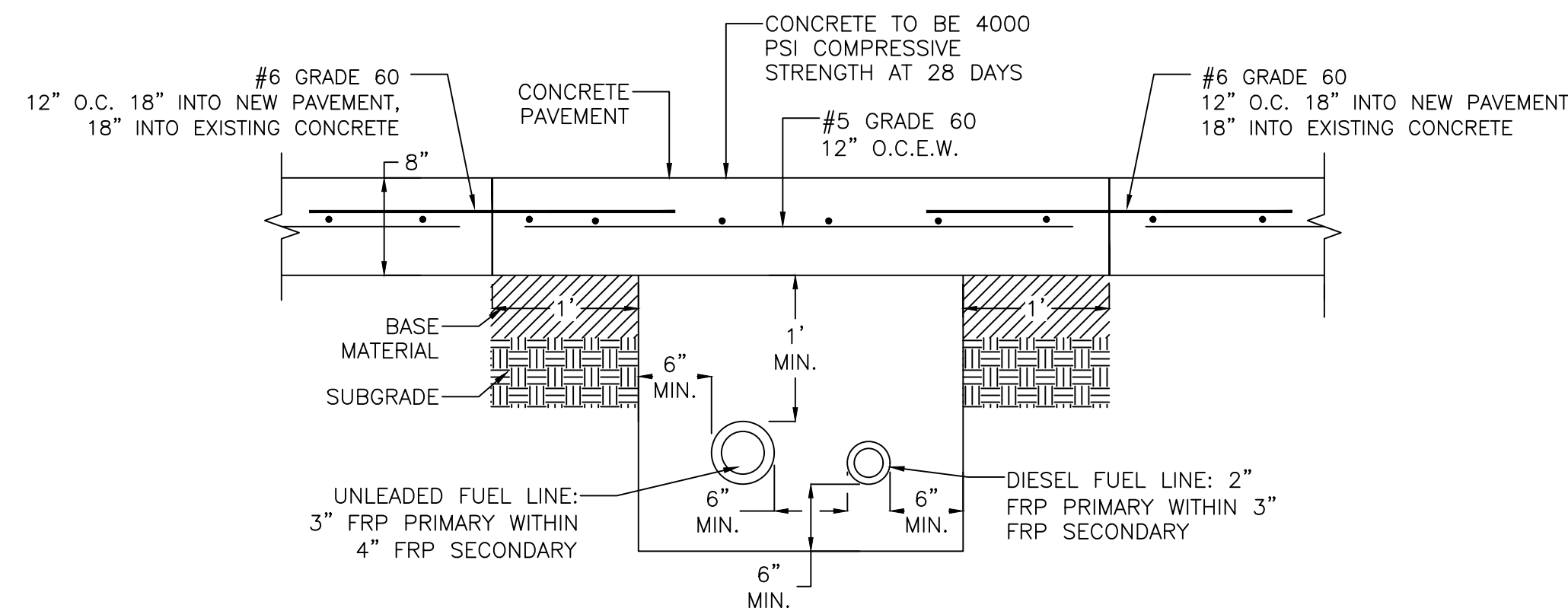
9 BOLLARD DETAIL
F-5

NOT TO SCALE

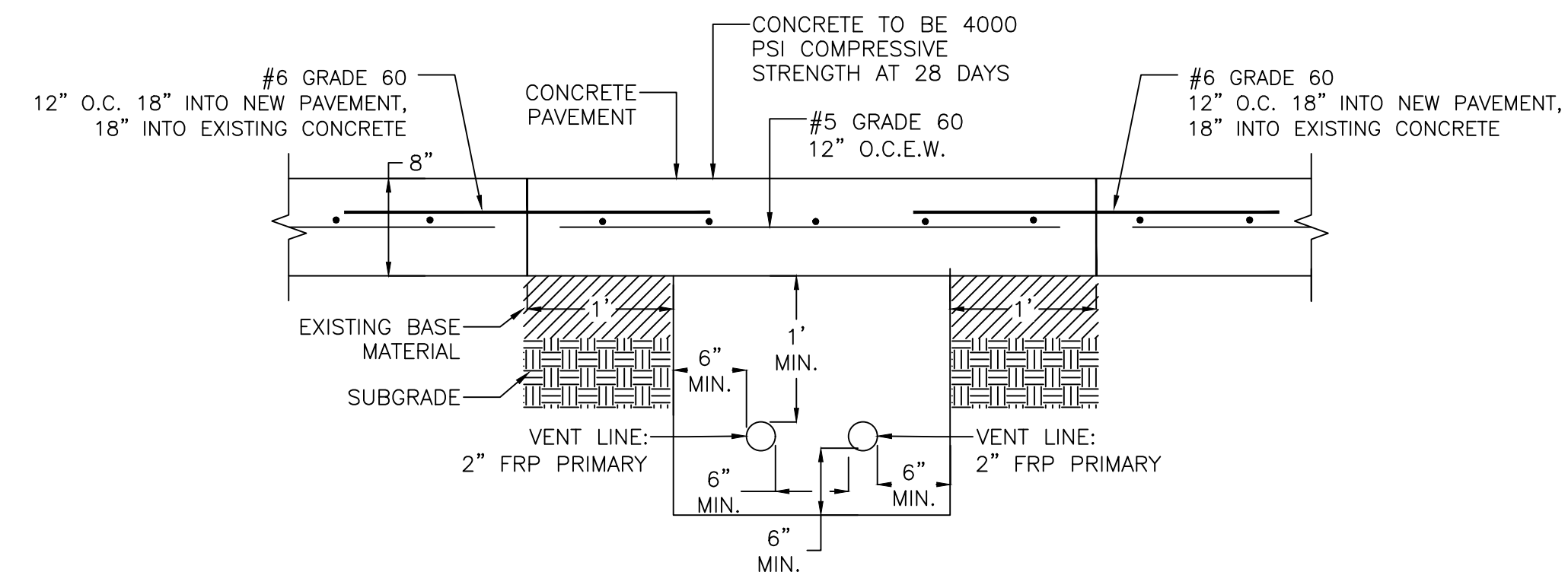


10 EMERGENCY SHUT-OFF DETAIL
F-5

NOT TO SCALE



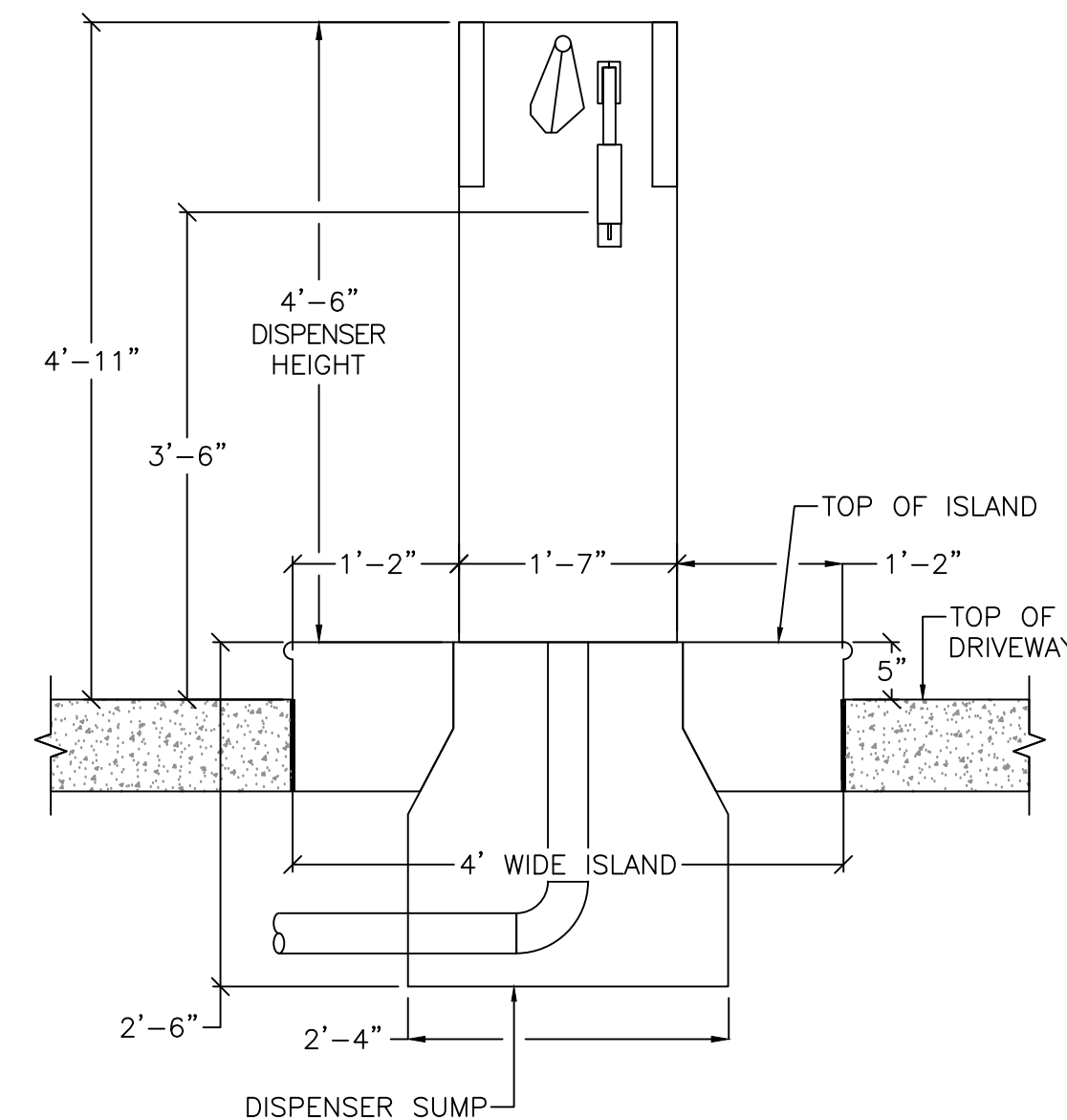
PRODUCT PIPING



NOTE: ALL PIPE TRENCHES TO BE BACKFILLED WITH GRANULAR MATERIAL MEETING PIPE MANUFACTURER'S SPECIFICATIONS

VENT PIPING

PIPE BURIAL SECTION DETAILS
SECTION "A-A"
NOT TO SCALE



FUEL ISLAND DETAIL
SECTION "B-B"

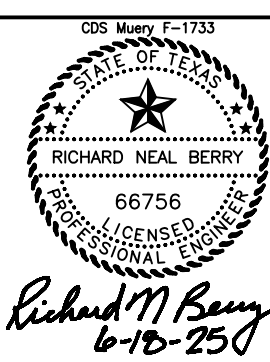
NOT TO SCALE

F-8

ADDENDUM 1

NO	DATE	REVISION	BY

DESIGNED BY	CDS
DRAWN BY	DAG
CHECKED BY	RNB
REVIEWED BY	RNB
DATE	6-6-25



CDS muery
ENGINEERS | SURVEYORS
100 NE LOOP 410, STE. 300 | SAN ANTONIO, TEXAS 78216
(210) 581-1111 | TBPE NO. F-1733 | TBPLS NO. 100495-00

FUEL SYSTEM DETAILS 2
COSA CENTRAL SERVICE AREA POLICE DEPARTMENT
FUEL SYSTEM REPLACEMENT
515 South Frio Street, San Antonio, TX 78207

SHEET NO.
OF SHEETS
FILE NO. 125011

P:\JOBS\2025\125011 CSAPD Fuel Systems\Civil 3D\Dwg\Engineer\9.dwg

1. The general scope of this project includes, but is not limited to: the removal and replacement of 3 underground tank manhole pump systems, dispenser sumps, and FRP piping. One diesel dispenser will be removed and replaced with a new unleaded dispenser. This includes a double nozzle single product dispenser, double wall FRP piping, concrete hold down slab over the USTs, and all other equipment presented in these plans and specifications. Contractor to replace any component of the fuel system disturbed or damaged during construction. The replacement of the 5 existing unleaded dispensers should be included as an add alternative to the base bid.
2. It shall be the Contractor's responsibility to submit the TCEQ 30 day Construction Notification Form, to notify the appropriate Fire Marshal having jurisdiction, and obtaining any and all permits for the construction of the system.
3. The Contractor shall document all major construction activities, which includes, but is not limited to: major plan revisions, request for information, change orders, testing, and "Red Lining" a set of plans for use in the development of "Record Drawings." This "Red Lined" set of drawings shall be submitted to the Engineer upon completion of the installation. Additionally, the Contractor shall provide all records regarding equipment operation and maintenance as required by 30 TAC §334. These records shall be submitted electronically and placed in a three ring binder to the Owner.
4. All gasoline components of this system shall be installed in accordance with the State of Texas 30 TAC §334 Subchapter C regulations. The Contractor installing this system shall be licensed in the State of Texas to install USTs. Additionally, there shall be a TCEQ Licensed On Site Supervisor (installer license) whenever UST system installation work is taking place. The licensed On Site Supervisor shall sign all manifests or other documentation as required for record keeping purposes. This documentation includes, but is not limited to, the TCEQ Registration Form, UST warranties and installation forms, and "Red Lined" drawings to be used in the development of "Record Drawings."
5. The Contractor is responsible for all means and methods of construction on this project, including all safety provisions required for this type of work. The Contractor shall have an OSHA 40 hour trained hazardous material supervisor on site at all times, and all other persons working on the site shall be OSHA trained for hazardous materials. Additionally, a site specific safety plan shall be on site at all times.
6. Persons installing equipment on this project shall have the appropriate OSHA health and safety training, and the Contractor shall have a site specific Health and Safety Plan for this project. This Health and Safety Plan shall be kept on site, and shall be available for use/review at any time.
7. The Contractor shall prepare a trench and excavation safety plan in accordance with 29 CFR §1926 Subpart P including the presence of an onsite competent person.
8. The Contractor completing the installation of the USTs shall prepare and submit all warranty documents such that the warranty on all components becomes effective.
9. It shall be the Contractor's responsibility to provide storm water control in accordance with all Federal and State laws, and the site SWP3 plan.
10. It shall be the Contractor's responsibility to locate all utilities prior to excavation activities. Damage to utilities will be repaired at the Contractor's expense. This is new construction at an existing facility, and the fuel system is being placed completely within the property lines. The address of this facility is 515 S. Frio St. San Antonio, TX 78207.
11. A careful search for utilities must be performed prior to excavating the tank hole and piping trench.
12. Upon completion of the installation of the underground piping and the USTs for the petroleum systems, the Contractor shall have a third party testing company perform a tank and line tightness test. The results of these tank and line tests shall be included in the permanent records for the site.
13. All pipe sealants and other components used for the petroleum equipment at this installation shall be compatible with fuels containing up to 85 percent alcohol. Gasoline with alcohol contents greater than 15 percent may not be placed in these systems without some component changes. Examples of required changes will be the overflow valve and drop tube, and the dispensers.

1. This storage and dispensing system includes three existing double wall 12,000 gallon underground storage tank (UST) to store unleaded and diesel fuel. The design of these USTs is not part of this project.
2. Upon arrival at the site, the Contractor shall examine the tanks for flaws, defects, or damage, and perform air testing and a holiday test. Any failures in the coating or damage to a tank shall be noted, and the tank repaired or returned. The Engineer shall be notified of any damage to a tank or coating prior to placement of the tank in the tank hole. Documentation of the air test shall be completed, and copies submitted to the Engineer for records and approval.
3. The UST shall be placed with a minimum of 36 inches of gravel over the top of the tank, and then 8 inches of concrete hold down slab as detailed. At no point may the cover be less than 28 inches of gravel and 8 inches of concrete.
4. All risers on the UST shall be coated with an approved mastic, and wrapped with a PVC tape to provide corrosion protection for those risers. Special care shall be taken to ensure that the threads on the UST bungs are thoroughly coated and protected as well as the threads on the fittings above.
5. The tanks may be ordered with a collar on which a 42-inch fiberglass riser shall be fiberglassed into place. The seal formed shall be waterproof, and shall be tested to guarantee this fact. The test shall be performed by filling the riser with water to a point specified by the Engineer, and a mark shall be made at that level. The Engineer shall witness this test and verify that the riser is holding water. During the riser water test, the UST shall have 3 psi of air pressure within it.
6. A waterproof manway cover shall be placed over each fiberglass riser. This manway cover shall have a H-20 load rating.
7. Underground product piping on this project will be double wall UL-971 listed FRP. All piping, fittings, and glue kits shall be from the same manufacturer. Installation shall be completed in accordance with the pipe manufacturer's specifications.
8. The piping shall be bedded in a gravel meeting the specifications of the piping manufacturer. Mixing different gradations of bedding materials is not acceptable.
9. All joints shall be straight and in concentric alignment in order to prevent leaking joints. Glue joints not in straight alignment will be cut out and replaced.
10. All product piping, shall be pressure tested including the primary and secondary piping in accordance with the City of San Antonio Fire Department, or as recommended by PEI/RP 100 and in compliance with TCEQ regulations. Pressure gauges shall be placed on the primary and secondary piping and the internal pressure raised and maintained at 25 psi until all pavement is placed over the piping. Any loss of pressure may indicate damage to the line and shall be investigated before concrete covers the line(s).
11. All fuel piping including the vent piping shall slope back to the UST at 1/8 inch per foot minimum. Sags in the lines or bends causing stresses are not acceptable.
12. The primary and secondary product lines shall be air tested upon completion of the installation in accordance with the Fire Marshal or Authority Having Jurisdiction. Once the line air tests have been completed, air pressure shall be kept on the lines until the concrete pavement has been placed on all areas over the system. Any loss of air pressure shall be investigated immediately.
13. No FRP piping shall be used in an aboveground application. Areas inside sumps and manholes which is exposed to the air is an aboveground condition and steel must be used in these areas. The details on the plans related to manholes and sumps presents details related to this transition.
14. Stainless steel UL Aboveground listed flex hoses shall be used to connect the product line tee to the shear valves. Do not torque these flex hoses or bend them to a radius tighter than the manufacturer's minimum bend radii.
15. For electrical details for this project, please see the electrical section of the plan set.
16. An emergency stop switch shall be mounted near the island as indicated on the plans and specifications. When activated, this switch shall open the circuits and thus shut off all power to the fuel pumps and dispensers. This switch shall require manual resetting before pumping can continue. A sign shall be mounted above the switch, 7 feet above the ground, and shall have 2 inch red letters on a white background stating "Emergency Fuel Shut Off". This switch shall be not less than 20 feet from the point of fueling, nor greater than 100 feet.

1. Double poppet shear valves shall be installed in line for each product line entering the fuel dispensers. These shear valves shall be placed such that the shear plane is flush with the top of the concrete island immediately adjacent to the shear valve. The shear valves shall be rigidly mounted so that they will resist a 650 ft-lb moment.
2. The design of this system was based on the use of Gasboy single product dispensers. The gasoline and diesel dispensers are specified as 9853KXTW on sheet F-7. See dispenser details on sheet F-7 for hanging hardware specifications.
3. Pulsars will be required for each product type at each dispenser. These pulsars will be used in the reconciliation of fuel dispensing for leak detection, and for the POS system. The Contractor shall verify that enough pulsars have been installed for both the leak detection and POS systems to operate correctly.
4. An Owner specified Card Reader shall be installed and used to control the fuel system. The card reader shall operate on proprietary cards. The system that will be used is the EJ Ward system.
5. Dispenser sumps are required for this system. These sumps shall be water tight and shall be monitored using the Veeder Root system in accordance with TCEQ regulations.
6. An Emergency Fuel Shut Off (EFSO) Switch shall be located greater than 20 feet from any point of fueling, and no more than 100 feet from any point of fueling. Lettering 2 inches in height and 7 feet above the surface shall indicate the location of these EFSO switches. Activation of the EFSO switch shall trip a shunt trip breaker and require that the breaker be reset before the system may be returned to service.
7. The vent lines shall terminate at minimum 12 feet above grade or 5 feet above adjacent building soffit and shall have rain caps with insect screens covering them.

1. The canopy at this site will remain. The contractor shall ensure the canopy, canopy columns, and the canopy foundation is not damaged during demolition and construction.

1. The design basis for this system is the Veeder Root TLS-450 plus. This system shall monitor the liquid level in both USTs, the interstitial space of both USTs, the interstitial spaces of the associated piping, and the pump manhole and dispenser sumps.
2. The Veeder Root system shall include electronic line leak detection for the pressurized piping in the petroleum systems. The Veeder Root TLS 450 Plus shall perform the monthly UST tank and line tightness tests as well as perform Business Inventory Reconciliation (BIR) each month. System testing shall include 3 gph tests upon the start of product dispensing, and .05 gph monthly tests. It shall also perform .01 gph annual tests. The system shall include Continuous Statistical Leak Detection (CSLD) that continuously monitors fuel height and temperature to detect quiet periods in the underground storage tank and collect leak-detection data during idle time in a database.
3. A sump sensor shall be placed in each dispenser sump and pump manhole for the petroleum systems. These sensors shall alert the operator to fuel or water in the dispenser sumps or pump manholes.
4. The leak detection system shall stop operation of all pumps if a leak is detected in any part of the system. The system shall not be returned to service until any leak has been located, and the failed component repaired or replaced. The leak detection system shall operate independently of the E.J. Ward system.
5. All components necessary for the system to operate as described are included in this bid.

The Fuel Management System for this facility will be EJ Ward. Pulsars shall be installed in each fuel dispenser sufficient to operate the Veeder Root system and the Fuel Management System. Coordinate installation of the conduits and hardware with the Fuel Management System vendor.

1. All concrete used on this project shall be normal weight concrete having a minimum compressive strength of 4000 psi at 28 days unless otherwise specified. This concrete shall be placed with a maximum slump of 4 inches. The concrete shall be wet cured through the use of burlap or blankets that are continuously kept wet, or by thoroughly and completely coating the concrete with a liquid membrane curing compound. This curing must be placed on the concrete as soon as finishing operations are complete, and damage to the surface will not occur by placing blankets or applying the curing compound.
2. No air entrainment will be used in the concrete on this project.
3. Forms shall be constructed to withstand the placement of the concrete, and shall be sufficiently tight as to prevent leakage of mortar during concrete placement. Forms shall remain in place at least 48 hours after concrete placement. Formed elements shall have square faces and shall be chamfered as specified on the plans.
4. Contraction joints shall be saw cut in neat, straight lines as indicated on the plans, and as soon as initial set has taken place and damage to the surface will not occur.
5. Expansion joints as specified shall be 1/2 inch Redwood, with a depth equal to the thickness of concrete adjacent to the joint. The top one inch of all expansion joints shall be sealed with an elastic type sealer that is resistant to gasoline and diesel. Prior to the application of the joint sealer, the joint shall be thoroughly cleaned, carefully removing all loose debris, and the surface clean and dry such that the sealant permanently adheres to the concrete.
6. Concrete test cylinders shall be cast by a qualified testing laboratory to verify the strength of the concrete. One set of four cylinders shall be cast for every 50 cubic yards or portion thereof, of concrete placed on a given day. Two cylinders shall be tested at seven days, and two shall be tested at 28 days to verify that the minimum strength has been achieved. No vehicles shall drive on any new concrete surface until the design strength has been reached.
7. Steel used in the reinforcement of all concrete on this project shall be sized as indicated on the specific detail, and shall be new, Grade 60 steel. No steel shall rest directly on the soil or any base or fill material, and all shall be supported with chairs or concrete bricks. Clay bricks are not acceptable.
8. Horizontal concrete surfaces shall be finished as a "Broom" finish. Slope the pavement to drain as directed by the "drainage arrows" at a minimum of one eighth of an inch per foot. The edges of the new pavement shall match the existing pavement grades.

Once all equipment has been installed, the Contractor shall perform a complete start up of all equipment. During this start up procedure, all meters and associated equipment shall be calibrated, and tested to insure the proper operation of all equipment shall be performed. The Veeder Root system shall be programmed to the specified settings and its operation shall be verified.

Training of all key personnel in the proper operation of the systems including the response actions to an alarm from the leak detection system shall take place within 3 business days of the system start up.