



Office of General Services

DESIGN & CONSTRUCTION GROUP
THE GOVERNOR NELSON A. ROCKEFELLER
EMPIRE STATE PLAZA
ALBANY, NY 12242

ADDENDUM NO. 1 TO PROJECT NO. 47674

CONSTRUCTION WORK
FUEL TANK MODIFICATION & ENVIRONMENTAL REMEDIATION
– SOUTHERN REGION
SERVICE CONTRACT
GNARESP CORNING TOWER
ALBANY, NY 12242

May 21, 2025

<p>NOTE: This Addendum forms a part of the Contract Documents. Insert it in the Project Manual. Acknowledge receipt of this Addendum in the space provided on the Bid Form.</p>
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DRAWINGS

1. Revised Drawings:
 - a. The drawing set that accompanies this Addendum, noted “ADDENDUM 01 C 5/21/25”, will replace the original contract drawing set in its entirety.

END OF ADDENDUM

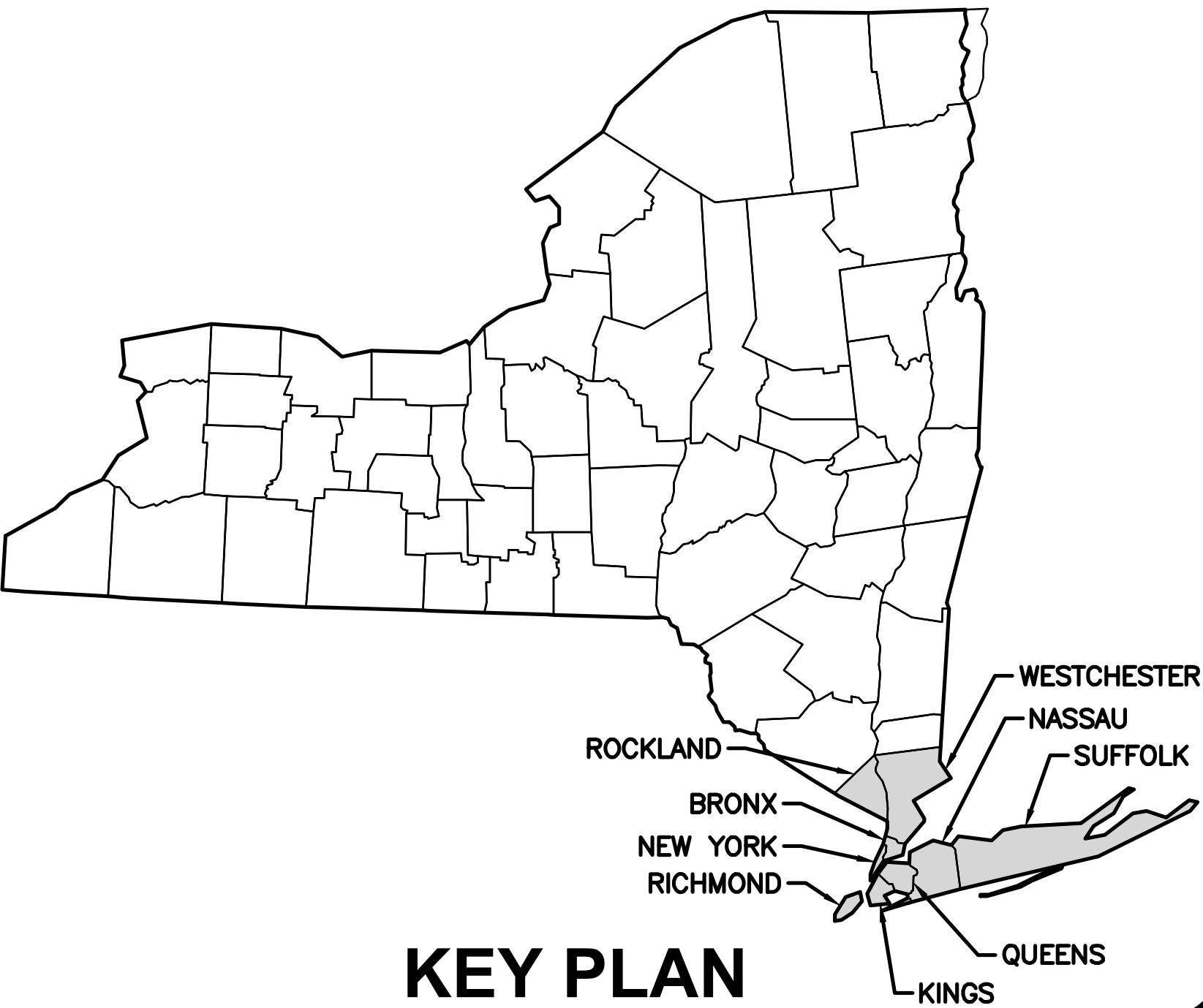
Brady M. Sherlock, P.E.
Director, Division of Design
Design & Construction

FUEL TANK MODIFICATION AND ENVIRONMENTAL REMEDIATION

SOUTHERN REGION VARIOUS FACILITIES

O.G.S. PROJECT NO. 47674-C

FINAL SUBMISSION
1/31/2025



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CODE ITEM	CODE SECTION	REQUIRED/ALLOWED	ACTUAL	COMMENTS
<u>CHAPTER 3 – USE AND OCCUPANCY CLASSIFICATION</u>	SECTION 307			
OCCUPANCY H				
<u>CHAPTER 5 – GENERAL BUILDING HEIGHTS AND AREAS</u>				
ALLOWABLE BUILDING HEIGHT (FEET)	TABLE 504.3	65'		
ALLOWABLE NUMBER OF STORIES	TABLE 504.4	2		
ALLOWABLE AREA	TABLE 506.2	9,500 SF		
<u>CHAPTER 10 – MEANS OF EGRESS</u>				
MEANS OF EGRESS ILLUMINATION	SECTION 1008	REQUIRED WITH EMERGENCY POWER		
ACCEPTABLE MEANS OF EGRESS	SECTION 1009	REQUIRED		
COMMON PATH OF EGRESS TRAVEL	SECTION 1029.8	75' MAXIMUM TRAVEL DISTANCE		
<u>CHAPTER 11 – ACCESSIBILITY</u>				
ACCESSIBLE ROUTE	SECTION 1104	REQUIRED		
ACCESSIBLE ENTRANCES	SECTION 1105	REQUIRED		
<u>CHAPTER 12 – VENTILATION</u>	SECTION 1202	MECHANICAL OR NATURAL		
LIGHT: NATURAL/ARTIFICIAL	SECTION 1204.2/1204.3	ARTIFICIAL AND NATURAL		
<u>CHAPTER 27 – ELECTRICAL</u>				
MEANS OF EGRESS ILLUMINATION	SECTION 2702.2.13	REQUIRED		

2020 UNIFORM CODE

101.2 Scope. The provisions of the Uniform Code shall apply to all new and existing buildings, structures, systems and equipment as indicated in Sections 101.2.1 through 101.2.8.

302.2 Additional codes. Alterations, repairs, additions and changes of occupancy to, or relocation of, existing buildings and structures shall comply with the provisions for alterations, repairs, additions and changes of occupancy or relocation, respectively, in this code and the International Energy Conservation Code, International Fire Code, International Fuel Gas Code, International Mechanical Code, International Plumbing Code, International Property Maintenance Code, International Private Sewage Disposal Code, International Residential Code and NFPA 70. Where provisions of the other codes conflict with provisions of this code, the provisions of this code shall take precedence.

101.2.2 The Building Code. The provisions of the 2020 Building Code of New York State shall apply to the construction, alteration, movement, enlargement, replacement, repair, equipment, use and occupancy, location, maintenance, removal and demolition of every building or structure or any appurtenances connected or attached to such buildings or structures.

REQUIRED CODES

1. Under the Uniform Code, all building projects must meet or exceed the following codes and applicable reference standards contained therein.

- a. 2020 Uniform Code, consisting of:
 - 2020 Building Code of New York State
 - 2020 Residential Code of New York State
 - 2020 Existing Building Code of New York State
 - 2020 Fire Code of New York State
 - 2020 Plumbing Code of New York State
 - 2020 Mechanical Code of New York State
 - 2020 Fuel Gas Code of New York State
 - 2020 Property Maintenance Code of New York State
 - 2017 National Electric Code NEPA 70, as referenced in the codes above.
- b. 2020 Energy Code, consisting of:
 - 2020 Energy Conservation Construction Code of New York State
 - 2019 ASHRAE 90.1
- c. 6NYCRR Part 613 Petroleum Bulk Storage
- d. NFPA 30 Flammable and Combustible Liquids Code
- e. NFPA 30A Code for Motor Fuel Dispensing Facilities and Repair Garages
- f. NFPA 110 Standard for Emergency and Standby Power Systems

THE PUBLICATIONS LISTED ABOVE ARE BASED ON THE FOLLOWING DOCUMENTS PUBLISHED BY THE INTERNATIONAL CODE COUNCIL AND ASHRAE INTERNATIONAL:

*2018 International Residential Code (first printing w/ errata)
 2018 International Building Code (first printing w/ errata)
 2018 International Plumbing Code (first printing w/ errata)
 2018 International Mechanical Code (first printing w/ errata)
 2018 International Fuel Gas Code (first printing w/ errata)
 2018 International Fire Code (first printing w/ errata)
 2018 International Property Maintenance Code (first printing w/ errata)
 2018 International Existing Building Code (first printing w/ errata)
 2018 International Energy Conservation Code (first printing w/ errata)
 2016 Edition of the Energy Standard for Buildings Except Low-Rise Residential Buildings (""ASH RAE 90.1-2016"")

CONSTRUCTION SAFEGUARDS

1. SCOPE: THE SAFETY OF THE CONSTRUCTION AREA, AND ADJACENT PUBLIC AND PRIVATE PROPERTIES SAFETY, SHALL BE PROTECTED DURING CONSTRUCTION AND DEMOLITION IN ACCORDANCE WITH THE 2020 EXISTING BUILDING CODE OF NEW YORK STATE (EBCNYS) CHAPTER 15 AND THE 2020 FIRE CODE OF NEW YORK STATE (FCNYS) CHAPTER 33. COMPLIANCE WITH NFPA 241 IS REQUIRED FOR ITEMS NOT SPECIFICALLY ADDRESSED. THIS SPECIFICATION PROSCRIBES MINIMUM SAFEGUARDS FOR CONSTRUCTION TO PROVIDE REASONABLE SAFETY TO LIFE AND PROPERTY FROM FIRE DURING SUCH OPERATIONS.
2. CONSTRUCTION INCLUDES ANY NEW CONSTRUCTION, REMOVALS, REMODELING, ALTERATIONS, REPAIRS OR ADDITIONS TO ANY BUILDING OR STRUCTURE.
3. MAINTENANCE OF SAFE CONDITIONS: REQUIRED SAFETY ELEMENTS SUCH AS EXITS, EXISTING STRUCTURAL MEMBERS, FIRE PROTECTION DEVICES AND SANITARY SAFEGUARDS SHALL BE MAINTAINED AT ALL TIMES, EXCEPT WHERE THE BUILDING IS NOT OCCUPIED OR WHERE SUCH REQUIRED ELEMENTS ARE BEING ALTERED OR REPAIRED AND ADEQUATE SUBSTITUTE PROVISIONS ARE MADE.
4. MEAN OF EGRESS: AN APPROVED PERMANENT OR TEMPORARY MEANS OF EGRESS SHALL BE MAINTAINED. AN EGRESS COMPONENT SHALL NOT BE DESTROYED UNLESS AND UNTIL A SUBSTITUTE MEANS OF EGRESS HAS BEEN PROVIDED.
5. FIRE SAFETY DURING CONSTRUCTION AND REMOVALS: FIRE SAFETY SHALL COMPLY WITH THE APPLICABLE REQUIREMENTS OF EBCNYS CHAPTER 15 AND FCNYS CHAPTER 33.
 - A. FIRE EXTINGUISHERS: PROVIDE PORTABLE FIRE EXTINGUISHERS FOR PROTECTION DURING CONSTRUCTION AND REMOVALS AT EACH STAIRWAY, ON EACH FLOOR LEVEL, WHERE COMBUSTIBLE MATERIALS HAVE ACCUMULATED, AND IN EVERY STORAGE AND CONSTRUCTION SHED. EXTINGUISHERS SHALL COMPLY WITH FCNYS 906, SIZED FOR ORDINARY HAZARD UNLESS GREATER HAZARD IS SPECIFIED. ADDITIONAL PORTABLE FIRE EXTINGUISHERS SHALL BE PROVIDED WHERE SPECIAL HAZARDS EXIST, SUCH AS THE STORAGE AND USE OF FLAMMABLE AND COMBUSTIBLE LIQUIDS.
 - B. ANY BURNING, CUTTING OR WELDING SHALL REQUIRE A HOT WORK PERMIT AND APPROVAL.
6. MATERIAL HANDLING: EQUIPMENT AND MATERIALS SHALL BE STORED AND PLACED, AND WASTE SHALL BE REMOVED, SO AS NOT TO ENDANGER THE PERSONS OR PROPERTY OR TO IMPEDE A MEANS OF EGRESS. PLACE MATERIAL AND WASTE SO AS NOT TO OBSTRUCT ACCESS TO FIRE HYDRANTS, STANDPIPES, FIRE EXTINGUISHERS, FIRE OR POLICE ALARMS BOXES, CATCH BASINS, MANHOLES, RELEVANT UTILITY STRUCTURES, TRAFFIC OR OBSERVATION OF TRAFFIC SIGNALS. COMBUSTION DEBRIS SHALL NOT BE ACCUMULATED ON SITE, AND SHALL BE REMOVED AT THE END OF EACH WORK SHIFT. RUBBISH CONTAINERS WITH A CAPACITY EXCEEDING 5.33 CUBIC FEET (40 GALLONS OR 0.15 CUBIC METERS) SHALL HAVE TIGHT FITTING OR SELF CLOSING LIDS, AND SHALL BE CONSTRUCTED OF NONCOMBUSTIBLE MATERIAL OR MATERIAL THAT MEETS FCNYS SECTION 3304.2.3 (2).

BUILDING INFORMATION (SPECIFIED ON A SITE BY SITE BASIS):

OCCUPANCY CLASSIFICATION:

CONSTRUCTION CLASSIFICATION:

CLASSIFICATION OF WORK (SPECIFIED ON A SITE BY SITE BASIS):

ALTERATION LEVEL

FEDERAL EMERGENCY MANAGEMENT AGENCY (FEMA) COMPLIANCE

THE DESIGNER OF RECORD SHALL REVIEW FEMA FLOOD HAZARD DATA AND FLOOD INSURANCE RATE MAPS (FIRMS) AND PERFORM A FLOOD RISK ANALYSIS IN, ON A SITE BY SITE BASIS, ACCORDANCE WITH FEMA GUIDELINES AND STANDARDS TO DETERMINE IF THE PROPOSED INSTALLATION IS IN A FLOOD HAZARD AREA. LOCATIONS DETERMINED TO BE IN A AREA OF FLOOD RISK SHALL INCORPORATE FLOOD RESISTANT DESIGN AND CONSTRUCTION REQUIREMENTS IN ACCORDANCE WITH THE NYS BUILDING CODE, NATIONAL FLOOD INSURANCE PROGRAM (NFIP), FEMA, NFPA, AND ASCE REQUIREMENTS.

[illegible]



NOTES:

1. TANK SHOWN IS TYPICAL FOR 64" INNER DIAMETER 4,000 GALLON CAPACITY. THIS 4,000 GALLON TANK IS SHOWN REPRESENTATIVE OF THE 300–8,000 GALLON TANKS. TANK INNER DIAMETERS MAY VARY BETWEEN 48 INCHES AND 96 INCHES BASED ON SITE SPECIFIC REQUIREMENTS. CONSULT WITH MANUFACTURER FOR REQUIRED DIMENSIONS, FITTING ARRANGEMENT, SUPPORT SADDLES AND ANCILLARY EQUIPMENT FOR TANK CAPACITIES 300–8,000 GALLONS.
2. PROVIDE WELDED ON SPILL CONTAINER APPROX. 24" DIA. X 13 1/2" HT. X 1/4" THICK (15 GALLON MINIMUM) WITH LOCKABLE LID FOR TANKS 1,000 GALLON AND LARGER. PROVIDE 10 GAL SPILL CONTAINER FOR 300–500 GALLON TANKS.
3. SADDLE LOCATION AS PER TANK MANUFACTURER SPECIFICATIONS.
4. 2" FITTING THROUGH OUTER SHELL ONLY WITH CAST IRON PLUG – FOR MFG USE ONLY.
5. WHEN TANK INSULATION PACKAGE IS REQUIRED, EXTEND LENGTH OF FITTINGS TO ACCOUNT FOR INSULATION THICKNESS.
6. TANKS SHALL BE CONSTRUCTED IN ACCORDANCE WITH UL 2085 SPECIFICATIONS.
7. QUANTITY, SIZE AND LOCATION OF TANK FITTINGS ARE SHOWN FOR GENERAL REFERENCE. REQUIRED FITTINGS WILL BE PROVIDED BASED ON SITE SPECIFIC REQUIREMENTS.

CONTRACT: CONSTRUCTION

TITLE: FUEL TANK MODIFICATION AND ENVIRONMENTAL REMEDIATION PROGRAM

LOCATION: SOUTHERN REGION
VARIOUS FACILITIES

[illegible]

SHEET TITLE:

TYPICAL TYPE DWS-1
ABOVEGROUND FUEL STORAGE
TANK - CYLINDRICAL
4,000 GALLON REFERENCE

DRAWING NUMBER:
C-01

SHEET 3 OF 57

Office of General Services

DESIGN & CONSTRUCTION

CONSULTANT

CERTIFICATE OF AUTHORIZATION #: 0017985

LiRo Engineers, Inc.

3 Aerial Way, Syosset, New York

ENERGY CONSERVATION CONSTRUCTION CODE OF NEW YORK STATE:

TO THE BEST OF MY KNOWLEDGE, BELIEF AND PROFESSIONAL JUDGEMENT, THE DRAWINGS AND SPECIFICATIONS, WHICH COMPRISE THE CONSTRUCTION DOCUMENTS FOR THIS PROJECT, ARE IN COMPLIANCE WITH THE 2016 NEW YORK ENERGY CODE.

WARNING:

THE ALTERATION OF THIS MATERIAL IN ANY WAY, UNLESS DONE UNDER THE DIRECTION OF A COMPARABLE PROFESSIONAL, I.E. ARCHITECT FOR AN ARCHITECT, ENGINEER FOR AN ENGINEER OR LANDSCAPE ARCHITECT FOR A LANDSCAPE ARCHITECT, IS A VIOLATION OF THE NEW YORK STATE EDUCATION LAW AND/OR REGULATIONS AND IS A CLASS 'A' MISDEMEANOR.

CONSTRUCTION

TITLE: FUEL TANK MODIFICATION AND ENVIRONMENTAL REMEDIATION PROGRAM

LOCATION: SOUTHERN REGION VARIOUS FACILITIES

MARK	DATE	DESCRIPTION
	1/31/2025	FINAL SUBMISSION
PROJECT NUMBER:	47674 - C	
DESIGNED BY:	M. GUTMANN	
DRAWN BY:	A. KELLY	
FIELD CHECK:	M. WESOLOWSKI	
APPROVED:	M. WESOLOWSKI	

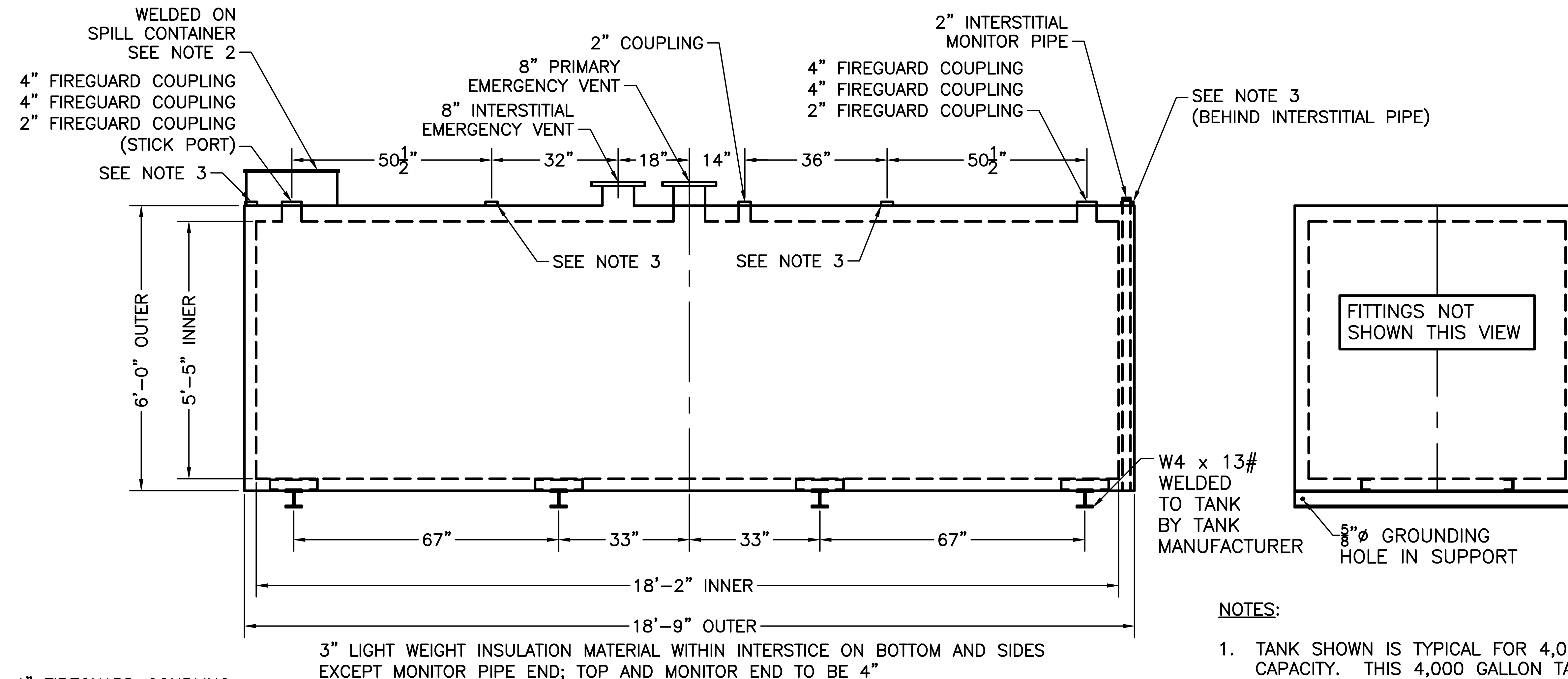
SHEET TITLE:

TYPICAL TYPE DWS-1 ABOVEGROUND FUEL STORAGE TANK - RECTANGULAR 4,000 GALLON REFERENCE

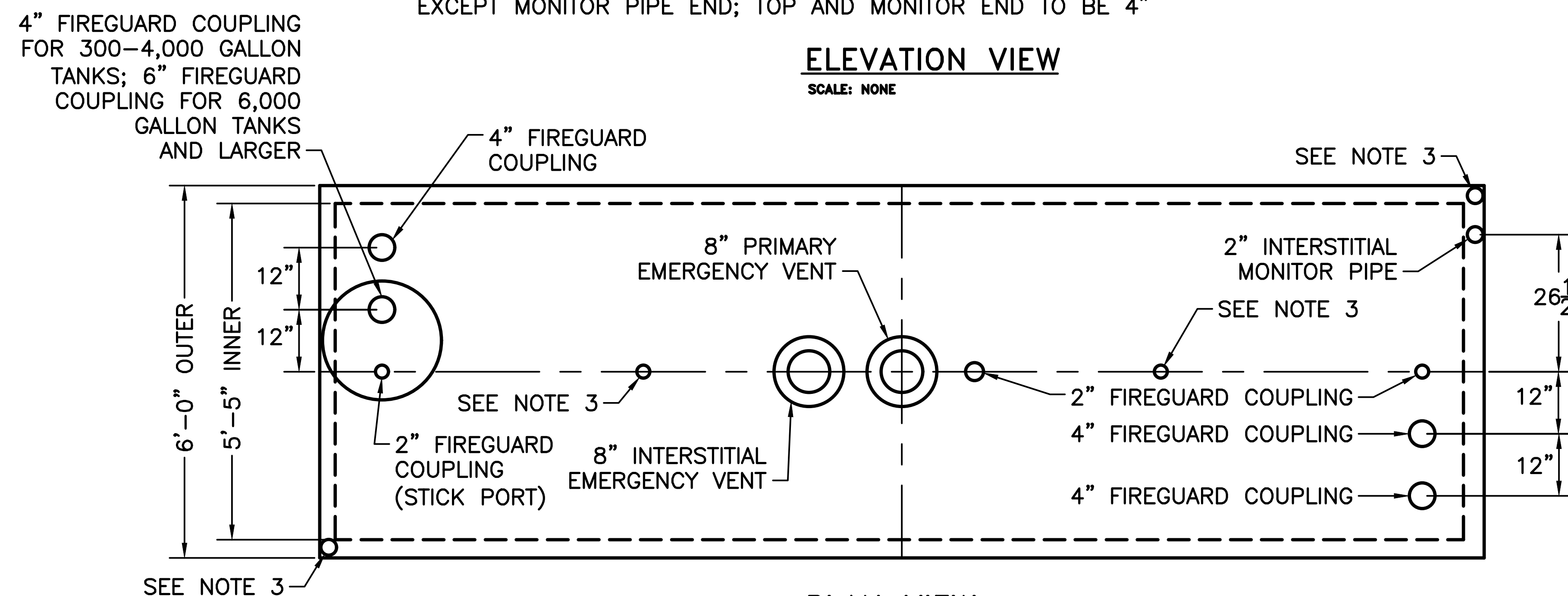
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C-02

SHEET 4 OF 57



ELEVATION VIEW
SCALE: NONE

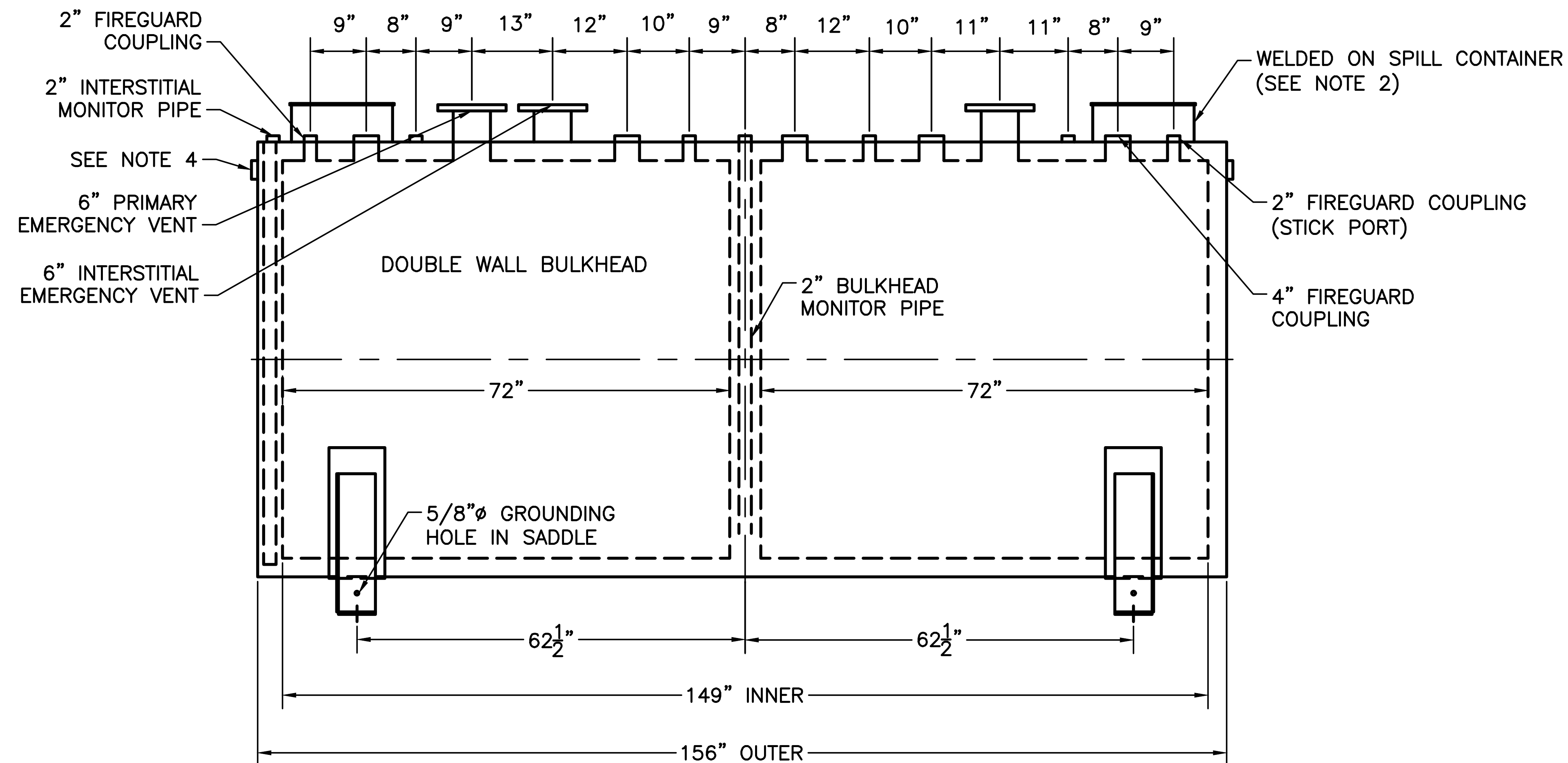


PLAN VIEW
SCALE: NONE

NOTES:

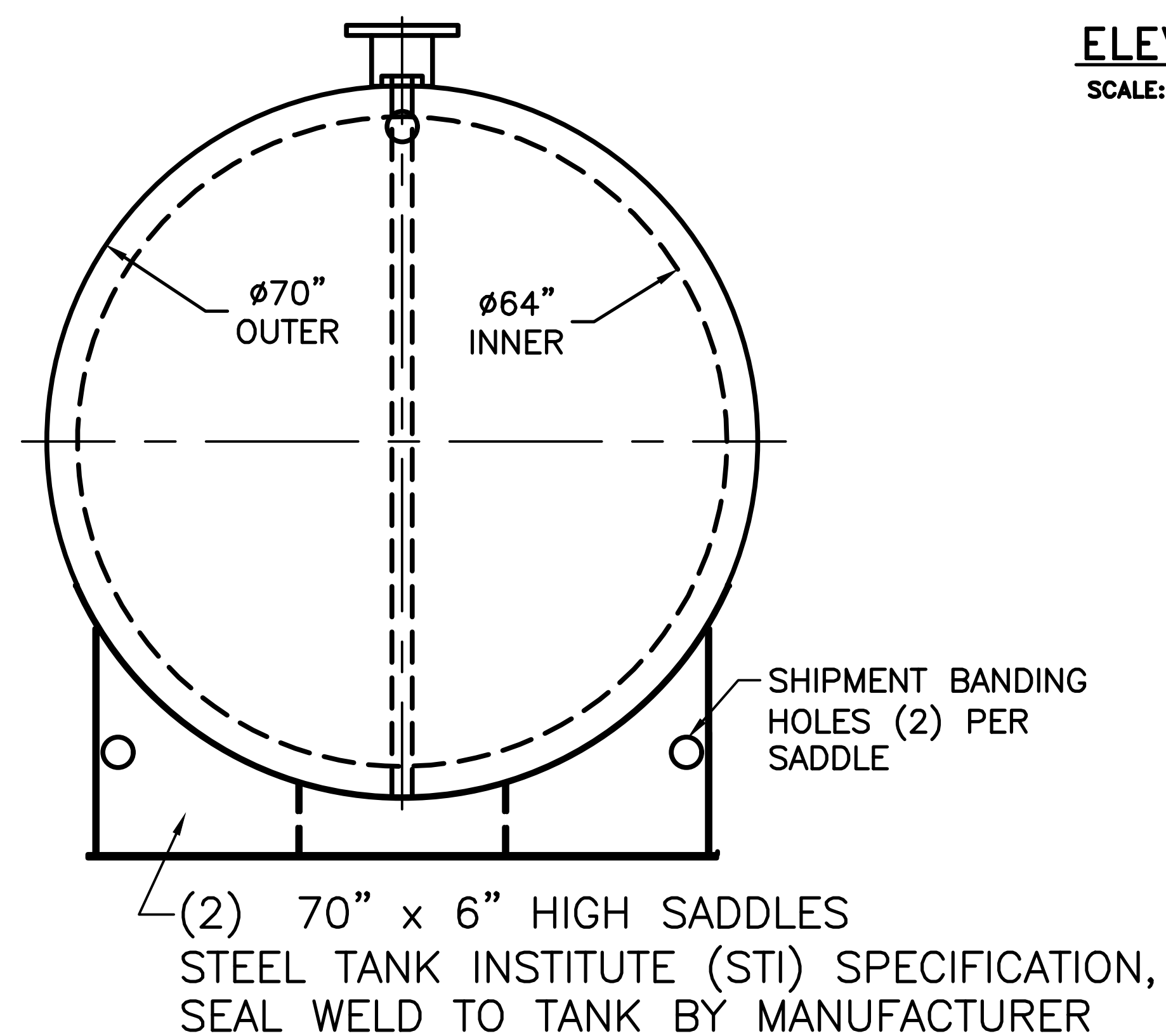
- TANK SHOWN IS TYPICAL FOR 4,000 GALLON CAPACITY. THIS 4,000 GALLON TANK IS SHOWN REPRESENTATIVE OF THE 300-8,000 GALLON TANKS. CONSULT WITH MANUFACTURER FOR REQUIRED DIMENSIONS, FITTING ARRANGEMENT, SUPPORT SADDLES AND ANCILLARY EQUIPMENT FOR TANK CAPACITIES 300-8,000 GALLONS.
- PROVIDE WELDED ON SPILL CONTAINER APPROX. 24" DIA. X 13 1/2" HT. X 1/4" THICK (15 GALLON MINIMUM) WITH LOCKABLE LID FOR TANKS 1,000 GALLON AND LARGER. PROVIDE 7 GALLON SPILL CONTAINER FOR 300-500 GALLON TANKS.
- 2" FITTING THROUGH OUTER SHELL ONLY WITH CAST IRON PLUG - FOR MFG USE ONLY.
- WHEN TANK INSULATION PACKAGE IS REQUIRED, EXTEND LENGTH OF FITTINGS TO ACCOUNT FOR INSULATION THICKNESS.
- TANKS SHALL BE CONSTRUCTED IN ACCORDANCE WITH UL 2085 SPECIFICATIONS.
- QUANTITY, SIZE AND LOCATION OF TANK FITTINGS ARE SHOWN FOR GENERAL REFERENCE. REQUIRED FITTINGS WILL BE PROVIDED BASED ON SITE SPECIFIC REQUIREMENTS.





ELEVATION VIEW

SCALE: NONE



END VIEW

SCALE: NONE

NOTES:

1. TANK SHOWN IS TYPICAL FOR 64" INNER DIAMETER 2,000 GALLON CAPACITY SPLIT TANK. THIS 2,000 GALLON TANK IS SHOWN REPRESENTATIVE OF THE 2,000-3,000 GALLON SPLIT TANKS. CONSULT WITH MANUFACTURER FOR REQUIRED DIMENSIONS, FITTING ARRANGEMENT, SUPPORT SADDLES AND ANCILLARY EQUIPMENT FOR TANK CAPACITIES 2,000-3,000 GALLONS.
2. PROVIDE WELDED ON SPILL CONTAINER APPROX. 24" DIA. X 13 1/2" HT. X 1/4" THICK (15 GALLON MINIMUM) WITH LOCKABLE LID.
3. SADDLE LOCATION AS PER TANK MANUFACTURER SPECIFICATIONS.
4. 2" FITTING THROUGH OUTER SHELL ONLY WITH CAST IRON PLUG - FOR MFG USE ONLY.
5. WHEN TANK INSULATION PACKAGE IS REQUIRED, EXTEND LENGTH OF FITTINGS TO ACCOUNT FOR INSULATION THICKNESS.
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NEW YORK
STATE OF
NEW YORK

**Office of
General Services**

DESIGN & CONSTRUCTION

CONSULTANT

CERTIFICATE OF AUTHORIZATION #: 0017985

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STATE OF NEW YORK
MARTIN I. WESOLOWSKI
No. 074264
PROFESSIONAL ENGINEER
REGISTRATION EXPIRES
12/31/2026

CONSTRUCTION

TITLE: FUEL TANK MODIFICATION AND ENVIRONMENTAL REMEDIATION PROGRAM

LOCATION: SOUTHERN REGION
VARIOUS FACILITIES

MARK	DATE	DESCRIPTION
	1/31/2025	FINAL SUBMISSION

PROJECT NUMBER: 47674 - C

DESIGNED BY: M. GUTMANN

DRAWN BY: A. KELLY

FIELD CHECK: M. WESOLOWSKI

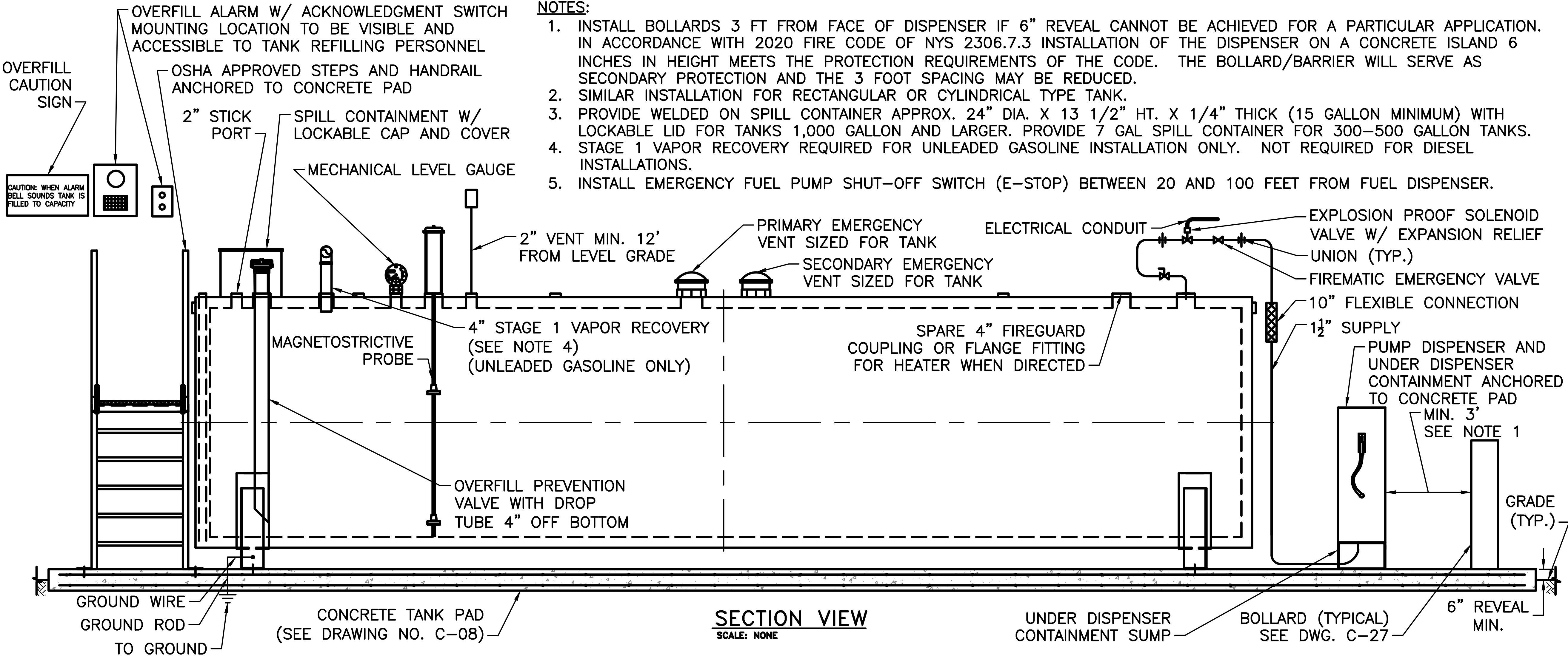
APPROVED: M. WESOLOWSKI

SHEET TITLE:

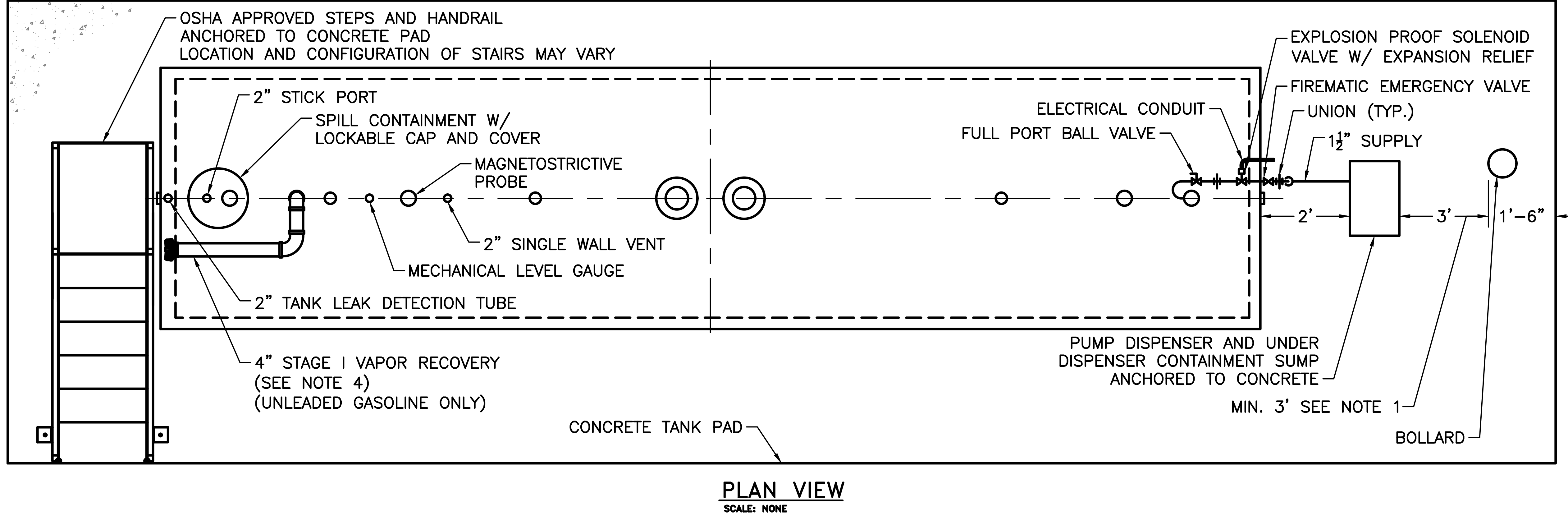
TYPICAL TYPE DWS-1
ABOVEGROUND MOTOR FUEL
STORAGE SPLIT TANK -
CYLINDRICAL 2,000 GALLON
REFERENCE

DRAWING NUMBER: C-04

SHEET 6 OF 57



- NOTES:**
1. INSTALL BOLLARDS 3 FT FROM FACE OF DISPENSER IF 6" REVEAL CANNOT BE ACHIEVED FOR A PARTICULAR APPLICATION. IN ACCORDANCE WITH 2020 FIRE CODE OF NYS 2306.7.3 INSTALLATION OF THE DISPENSER ON A CONCRETE ISLAND 6 INCHES IN HEIGHT MEETS THE PROTECTION REQUIREMENTS OF THE CODE. THE BOLLARD/BARRIER WILL SERVE AS SECONDARY PROTECTION AND THE 3 FOOT SPACING MAY BE REDUCED.
 2. SIMILAR INSTALLATION FOR RECTANGULAR OR CYLINDRICAL TYPE TANK.
 3. PROVIDE WELDED ON SPILL CONTAINER APPROX. 24" DIA. X 13 1/2" HT. X 1/4" THICK (15 GALLON MINIMUM) WITH LOCKABLE LID FOR TANKS 1,000 GALLON AND LARGER. PROVIDE 7 GAL SPILL CONTAINER FOR 300-500 GALLON TANKS.
 4. STAGE 1 VAPOR RECOVERY REQUIRED FOR UNLEADED GASOLINE INSTALLATION ONLY. NOT REQUIRED FOR DIESEL INSTALLATIONS.
 5. INSTALL EMERGENCY FUEL PUMP SHUT-OFF SWITCH (E-STOP) BETWEEN 20 AND 100 FEET FROM FUEL DISPENSER.



NEW YORK
STATE OF
DESIGN & CONSTRUCTION

Office of
General Services

DESIGN & CONSTRUCTION

CONSULTANT

CERTIFICATE OF AUTHORIZATION #: 0017985

LiRo Engineers, Inc.
3 Aerial Way, Syosset, New York

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STATE OF NEW YORK
MARK I. WESOLOWSKI
NO. 024264
PROFESSIONAL ENGINEER
REGISTRATION EXPIRES 12/31/2028

CONSTRUCTION

TITLE: FUEL TANK MODIFICATION AND ENVIRONMENTAL REMEDIATION PROGRAM

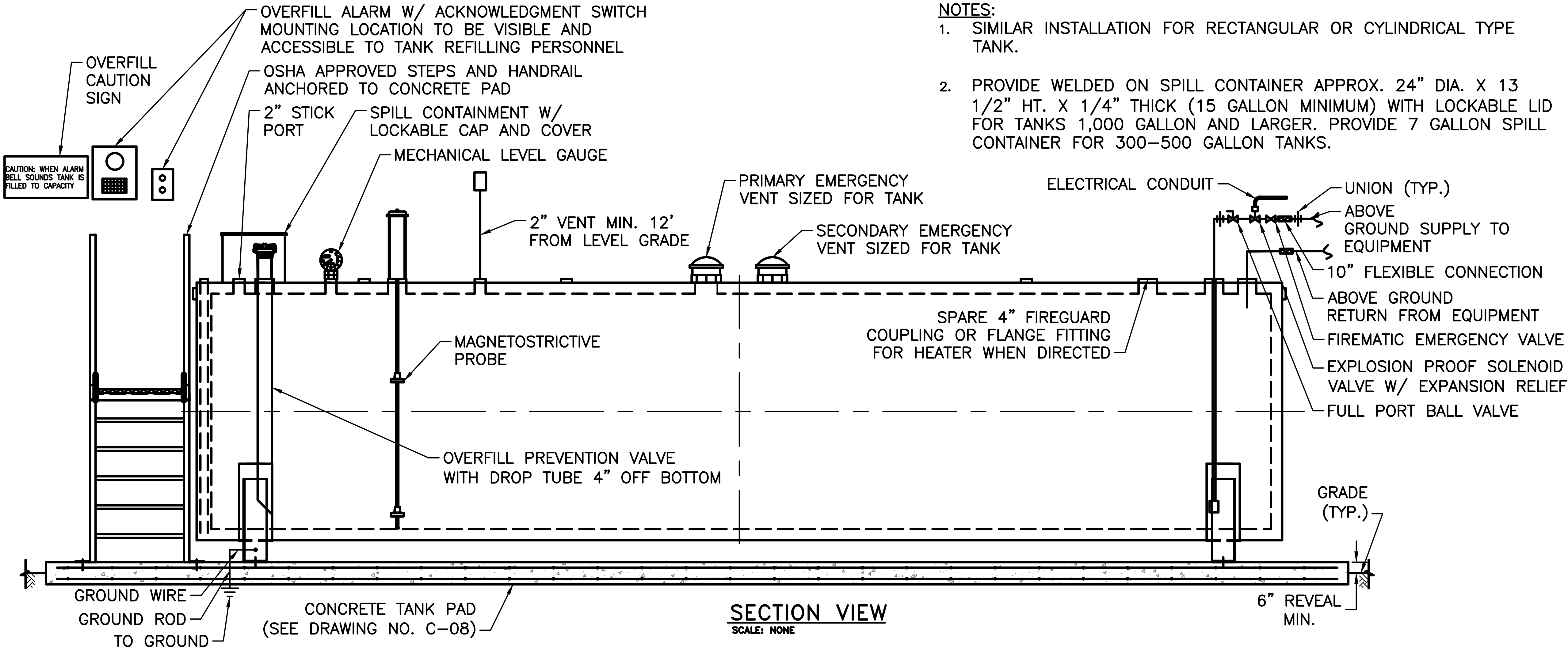
LOCATION: SOUTHERN REGION VARIOUS FACILITIES

MARK	DATE	DESCRIPTION
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PROJECT NUMBER:	47674 - C	
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DRAWN BY:	A. KELLY	
FIELD CHECK:	M. WESOLOWSKI	
APPROVED:	M. WESOLOWSKI	

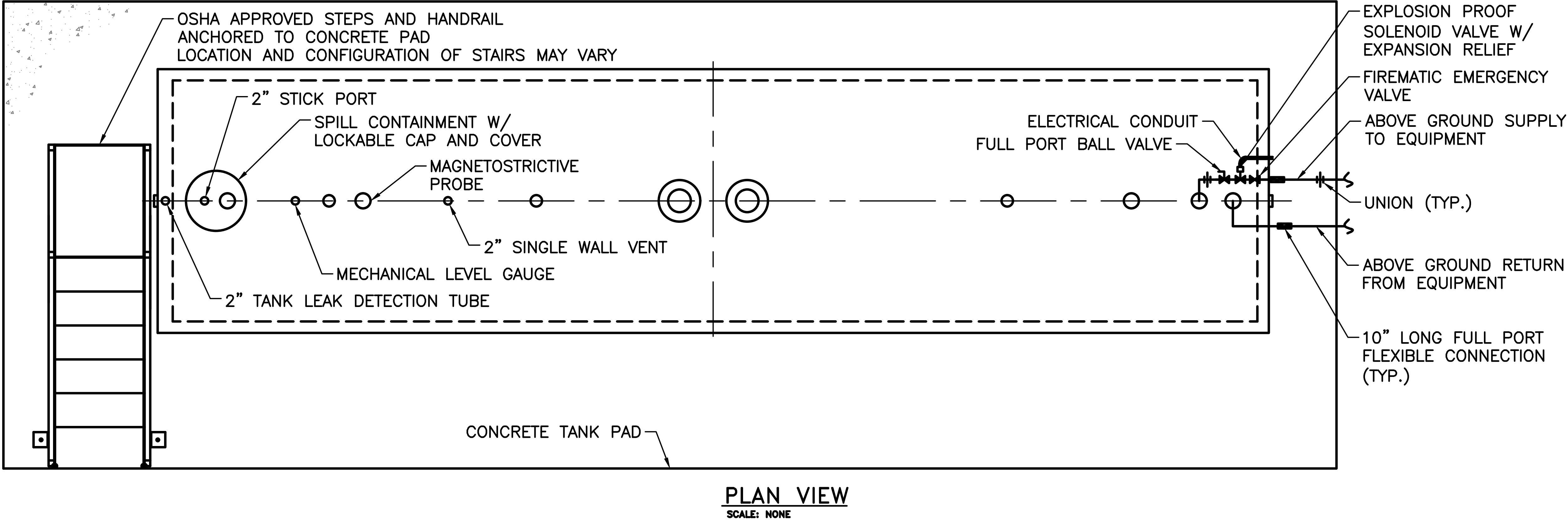
SHEET TITLE:
TYPICAL TYPE DWS-1 ABOVEGROUND MOTOR FUEL STORAGE TANK WITH TYPE UG-1 OR D-1 INSTALLATION PACKAGE


DRAWING NUMBER:
C-05

SHEET 7 OF 57



- NOTES:
1. SIMILAR INSTALLATION FOR RECTANGULAR OR CYLINDRICAL TYPE TANK.
 2. PROVIDE WELDED ON SPILL CONTAINER APPROX. 24" DIA. X 13 1/2" HT. X 1/4" THICK (15 GALLON MINIMUM) WITH LOCKABLE LID FOR TANKS 1,000 GALLON AND LARGER. PROVIDE 7 GALLON SPILL CONTAINER FOR 300-500 GALLON TANKS.






NEW YORK
STATE OF
CONSTITUTION

Office of
General Services

DESIGN & CONSTRUCTION

CONSULTANT

CERTIFICATE OF AUTHORIZATION #: 0017905



LiRo Engineers, Inc.
3 Aerial Way, Syosset, New York

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CODE OF NEW YORK STATE:

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STATE OF NEW YORK

MARK I. WESOLOWSKI

NO. 074264

PROFESSIONAL ENGINEER

REGISTRATION EXPIRES
12/31/2028

CONTRACT

CONSTRUCTION

TITLE:
FUEL TANK MODIFICATION AND
ENVIRONMENTAL REMEDIATION PROGRAM

LOCATION:
SOUTHERN REGION
VARIOUS FACILITIES

MARK	DATE	DESCRIPTION
	1/31/2025	FINAL SUBMISSION
PROJECT NUMBER:	47674	- C
DESIGNED BY:	M. GUTMANN	
DRAWN BY:	A. KELLY	
FIELD CHECK:	M. WESOLOWSKI	
APPROVED:	M. WESOLOWSKI	

SHEET TITLE:

TYPICAL TYPE DWS-1
ABOVEGROUND FUEL OIL
STORAGE TANK WITH
TYPE FO-1 INSTALLATION
PACKAGE

DRAWING NUMBER:

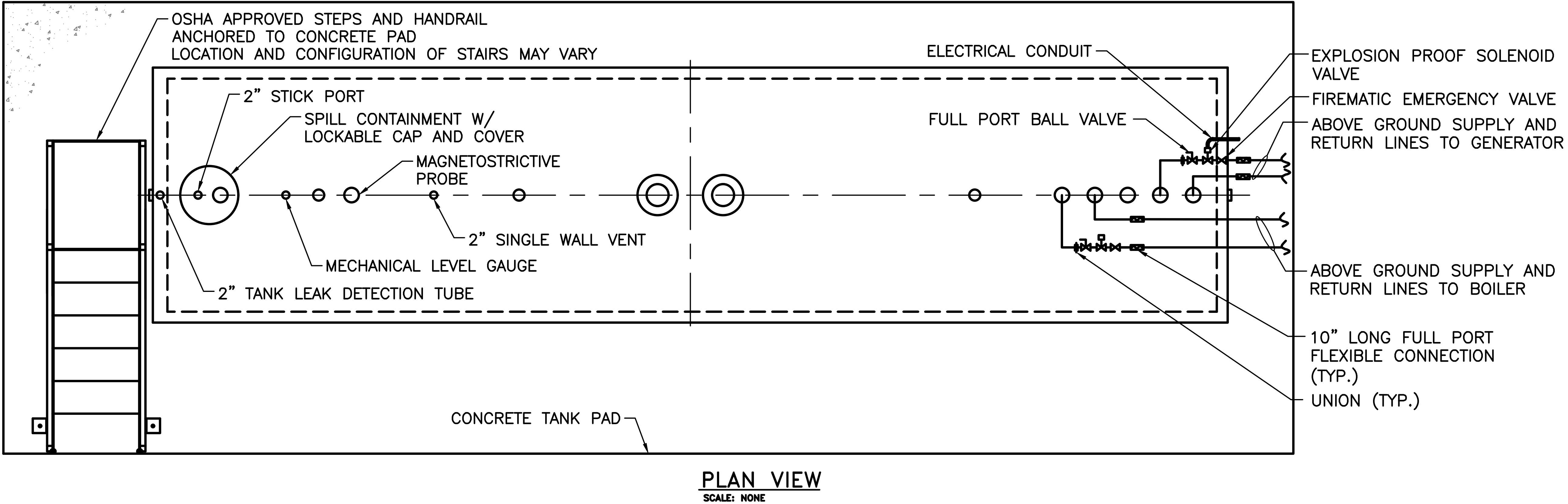
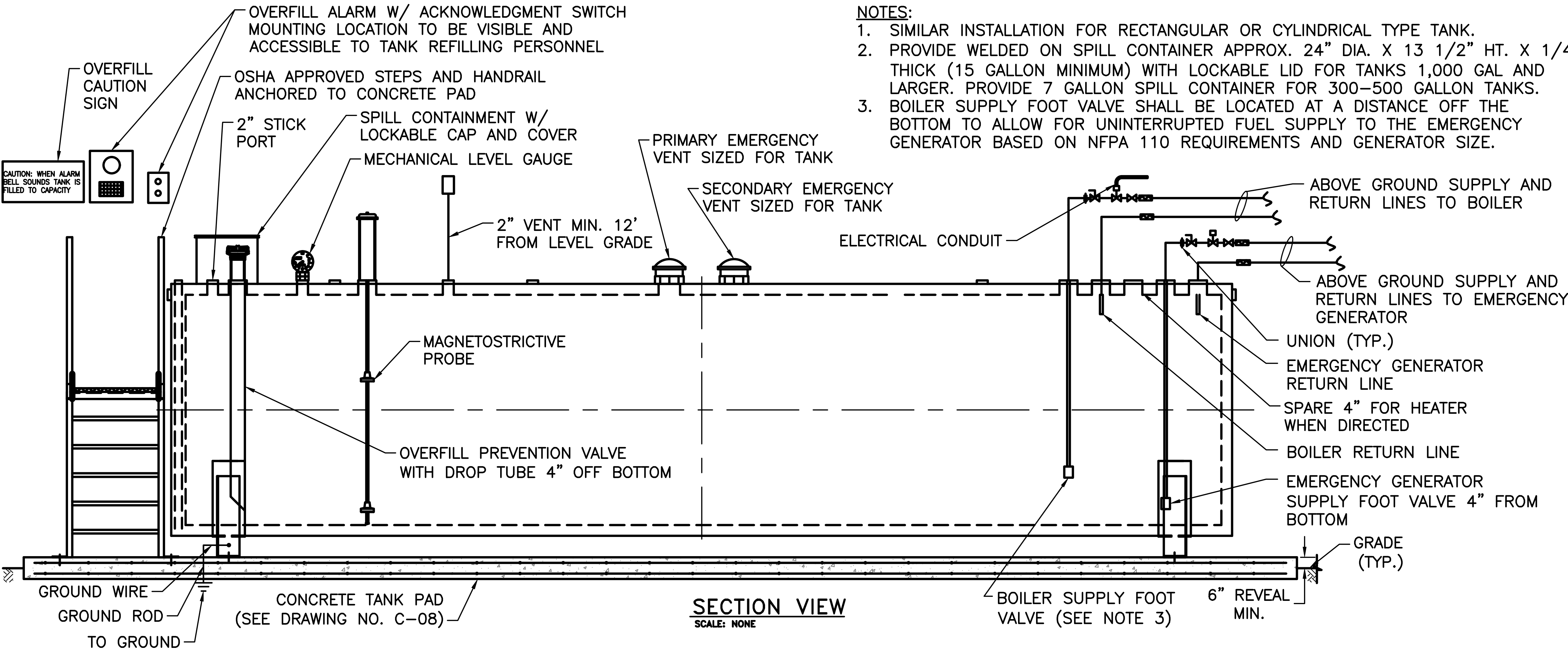
C-06

SHEET

8

OF

57



Office of General Services

DESIGN & CONSTRUCTION

CONSULTANT

CERTIFICATE OF AUTHORIZATION #: 0017905

LiRo Engineers, Inc.

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CONTRACT:

CONSTRUCTION

TITLE: FUEL TANK MODIFICATION AND ENVIRONMENTAL REMEDIATION PROGRAM

LOCATION: SOUTHERN REGION
VARIOUS FACILITIES

MARK	DATE	DESCRIPTION
	1/31/2025	FINAL SUBMISSION

PROJECT NUMBER: 47674 - C

DESIGNED BY: M. GUTMANN

DRAWN BY: A. KELLY

FIELD CHECK: M. WESOLOWSKI

APPROVED: M. WESOLOWSKI

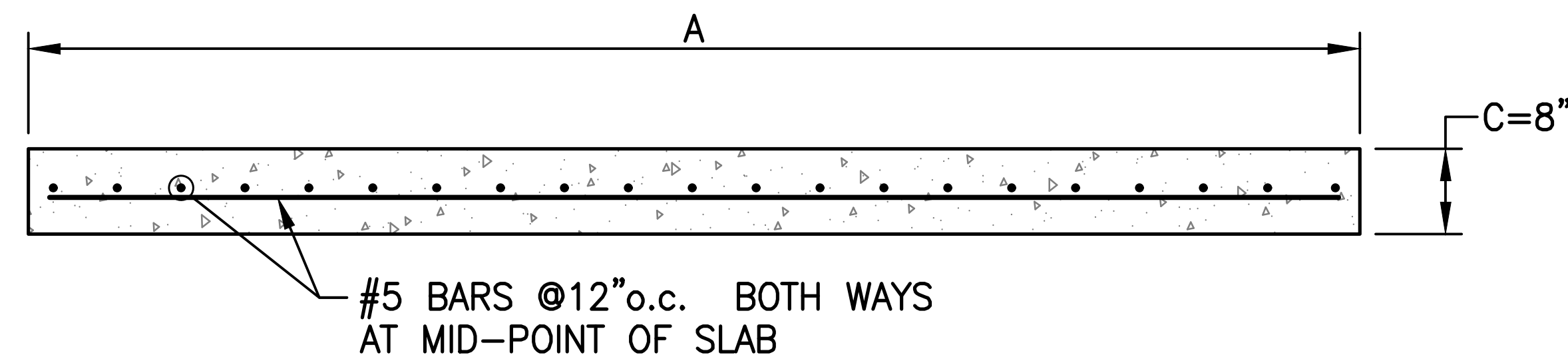
SHEET TITLE:

TYPE DWS-1 AST WITH TWO TYPE FO-1 INSTALLATION PACKAGES - BOILER & EMERGENCY GENERATOR

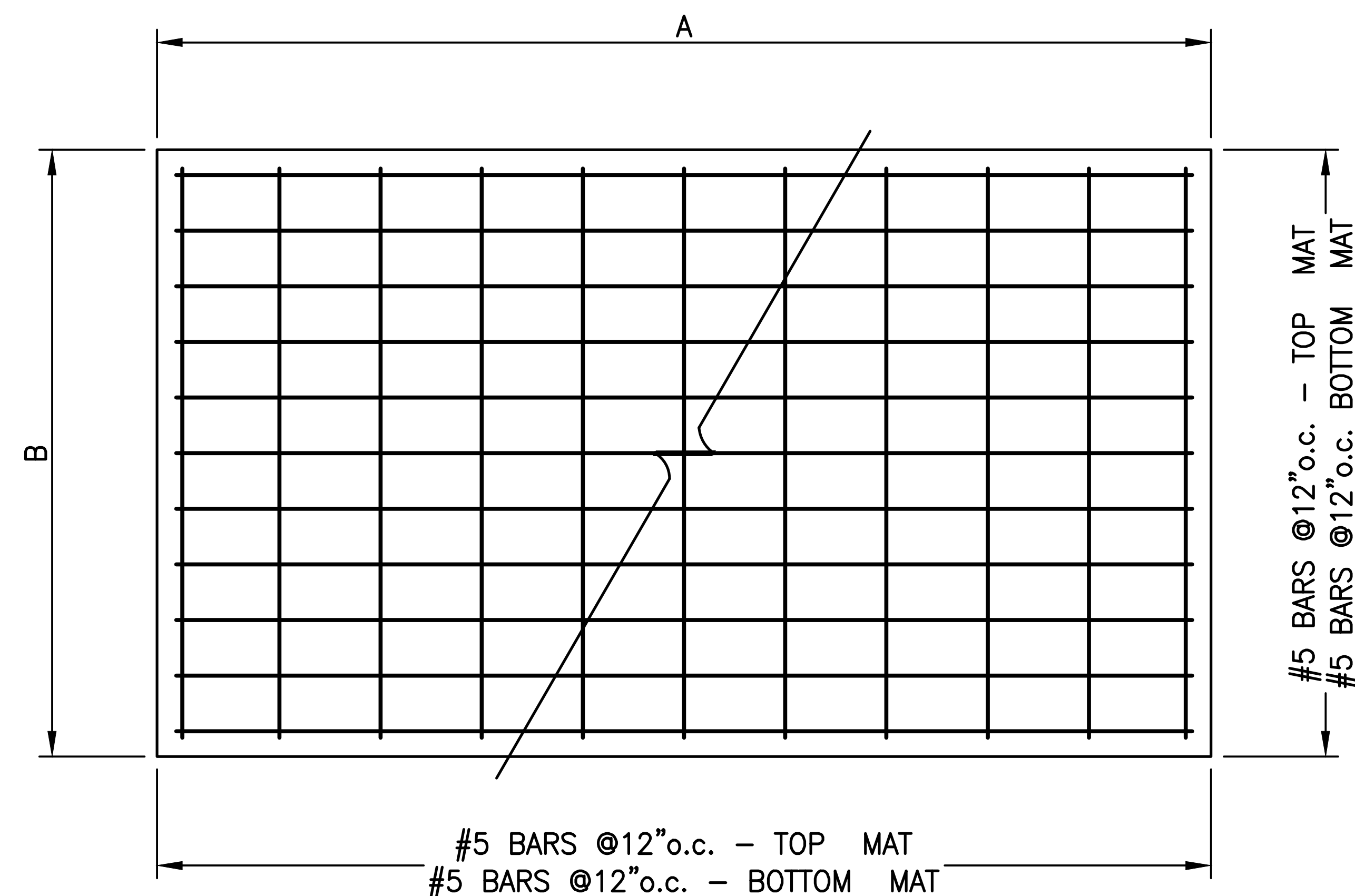
DRAWING NUMBER:

C-07

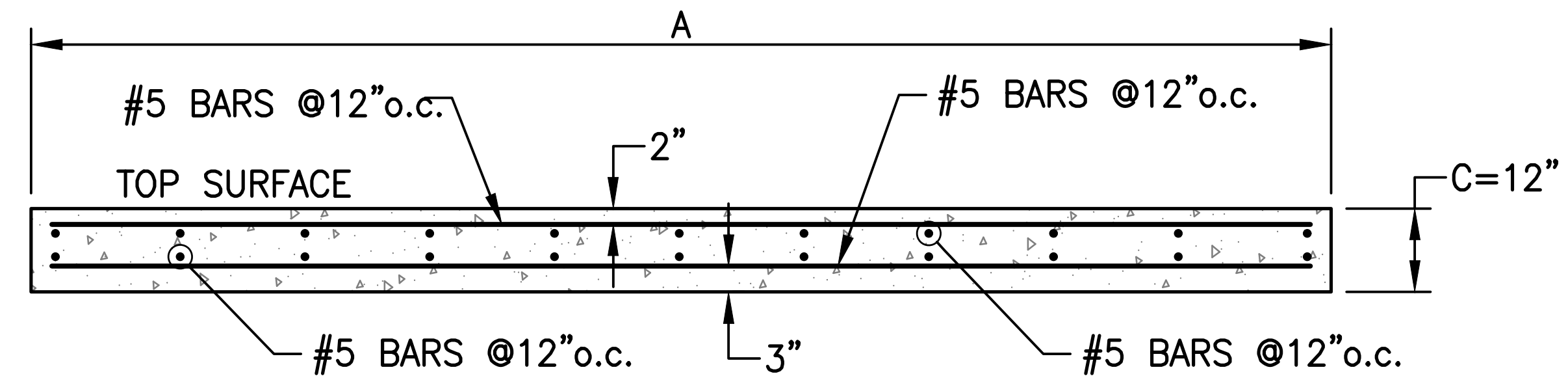
SHEET 9 OF 57



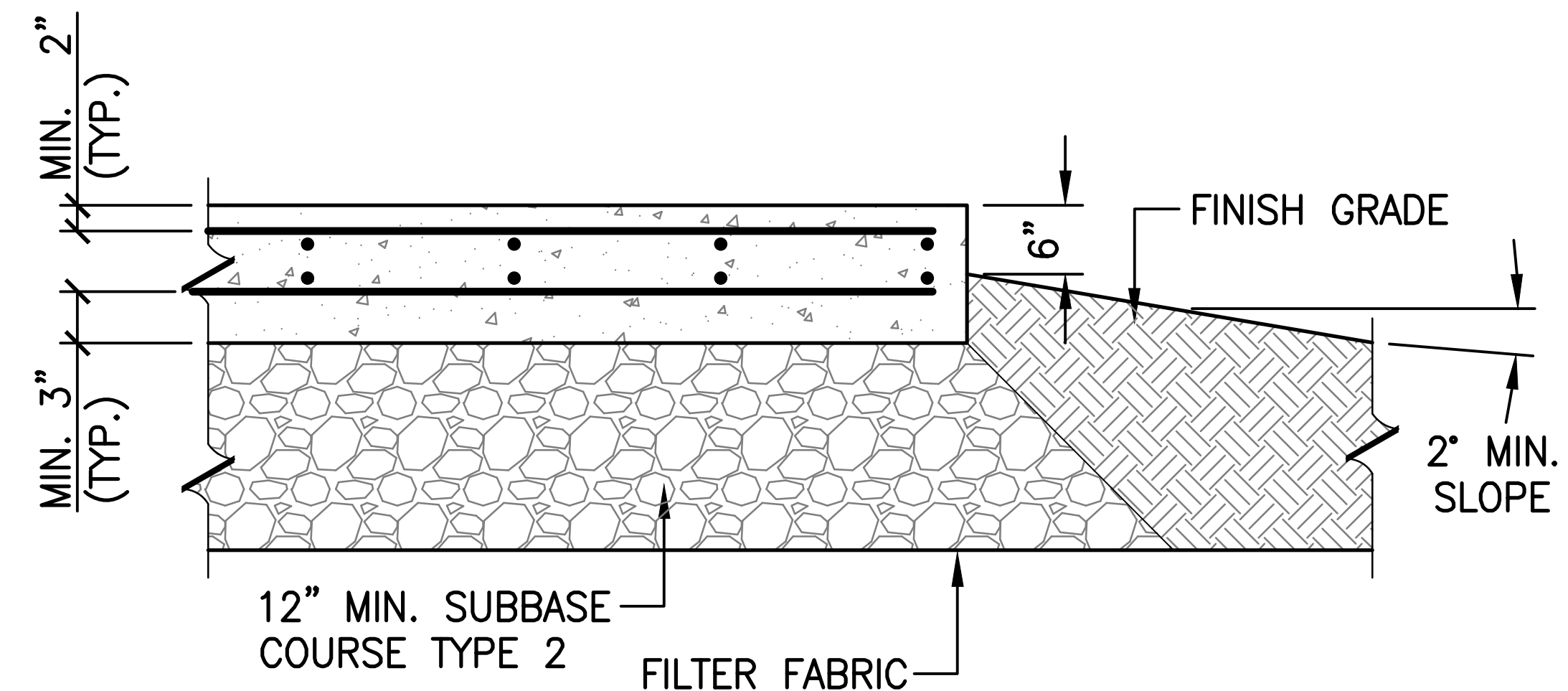
8" CONCRETE PAD ELEVATION
SCALE: NONE



CONCRETE PAD PLAN
SCALE: NONE



12" CONCRETE PAD ELEVATION
SCALE: NONE



TANK PAD FOUNDATION / FILL DETAIL
SCALE: NONE

C = 8" FOR TANKS 250 GALLON THROUGH 2,000 GALLON,
12" FOR TANKS >2,000 GALLON THROUGH 15,000 GALLON,
18" FOR TANKS >15,000 GALLON (SEE NOTE 5)

NOTES:

1. CONCRETE PAD DIMENSIONS SHALL BE DETERMINED BY SITE-SPECIFIC CONDITIONS AND FUEL SYSTEM REQUIREMENTS.
2. PROVIDE A 1/2" CHAMFER AT ALL EXPOSED CORNERS AND EDGES OF CONCRETE SLABS.
3. PROVIDE REBAR WITH CORROSION-RESISTANT EPOXY COATING.
4. SLOPE TANK PAD 1 DEGREE TO PREVENT POOLING OF WATER. PROVIDE SHIM BENEATH TANK ON ONE SIDE TO ENSURE IT IS LEVEL.
5. DESIGN OF TANK SLABS FOR >15,000 GALLON TANKS SHALL BE ON A SITE BY SITE BASIS.
6. FOR STANDARD SLABS, THE LAP LENGTH FOR REBAR SPLICING SHALL BE 40X THE REBAR DIAMETER.

Office of
General Services

DESIGN & CONSTRUCTION

CONSULTANT

CERTIFICATE OF AUTHORIZATION #: 0017985

LiRo Engineers, Inc.
3 Aerial Way, Syosset, New York

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CONSTRUCTION

TITLE: FUEL TANK MODIFICATION AND ENVIRONMENTAL REMEDIATION PROGRAM

LOCATION: SOUTHERN REGION
VARIOUS FACILITIES

MARK	DATE	DESCRIPTION
	1/31/2025	FINAL SUBMISSION

PROJECT NUMBER: 47674 - C

DESIGNED BY: M. GUTMANN

DRAWN BY: A. KELLY

FIELD CHECK: M. WESOLOWSKI

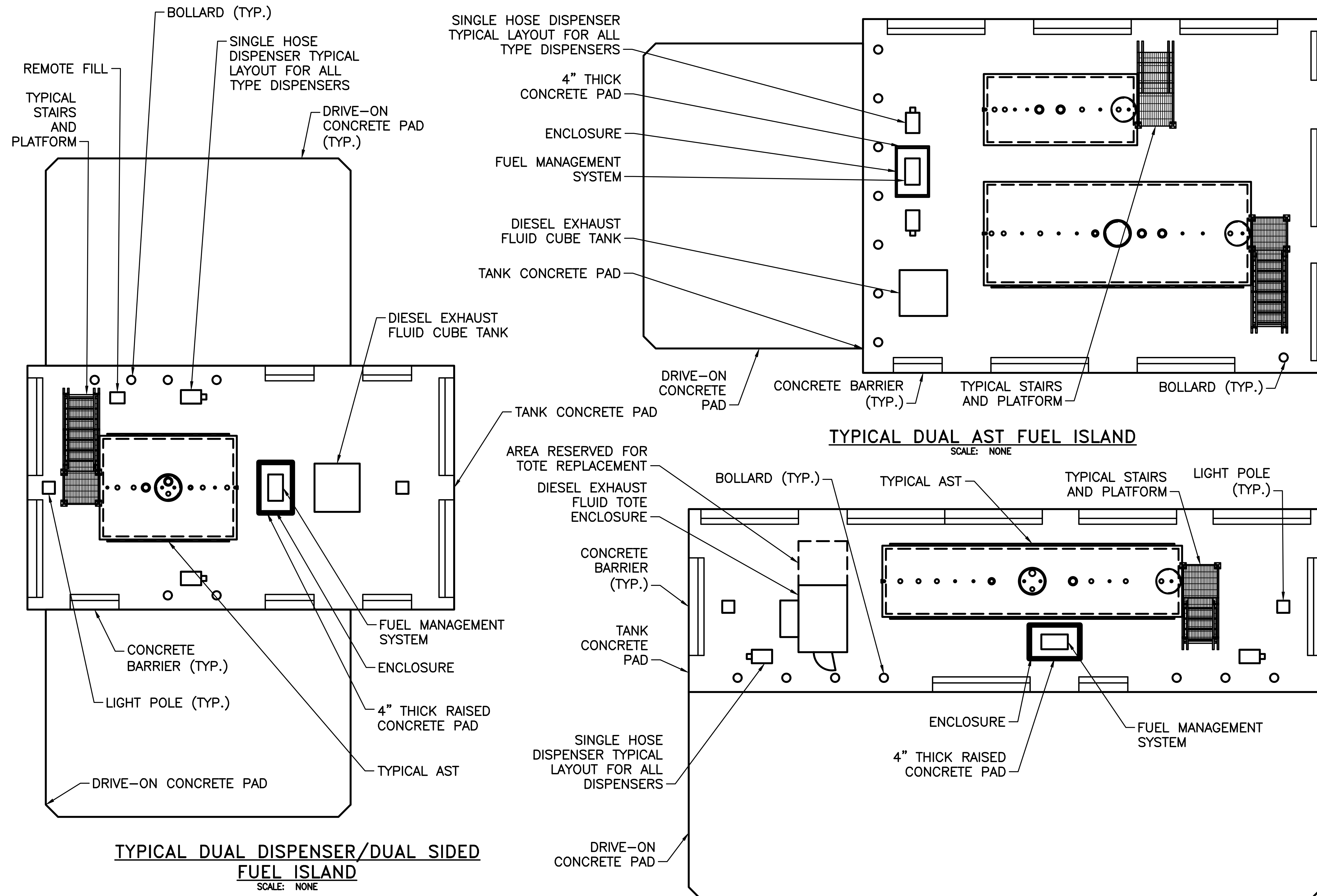
APPROVED: M. WESOLOWSKI

SHEET TITLE:

ABOVEGROUND FUEL STORAGE TANK CONCRETE PAD DETAILS

DRAWING NUMBER: C-08

SHEET 10 OF 57



NOTE:

- LAYOUTS SHOWN ARE TYPICAL. LOCATION OF EQUIPMENT AND SIZE OF PADS VARY BASED ON SITE SPECIFIC REQUIREMENTS.

NEW YORK STATE OF COURTESY | **Office of General Services**
DESIGN & CONSTRUCTION

CONSULTANT
CERTIFICATE OF AUTHORIZATION #: 0017985

LiRo Engineers, Inc.
3 Aerial Way, Syosset, New York

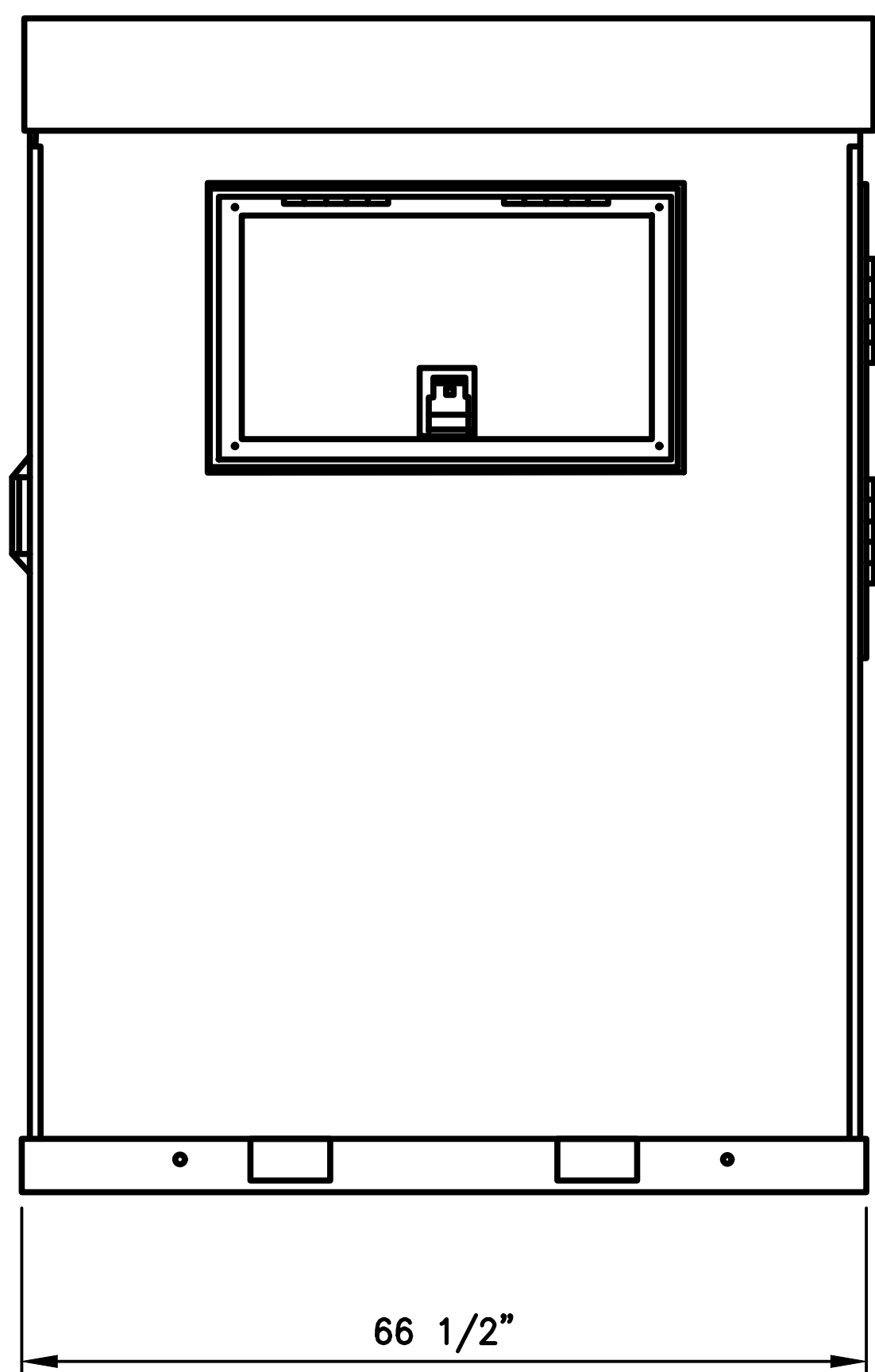
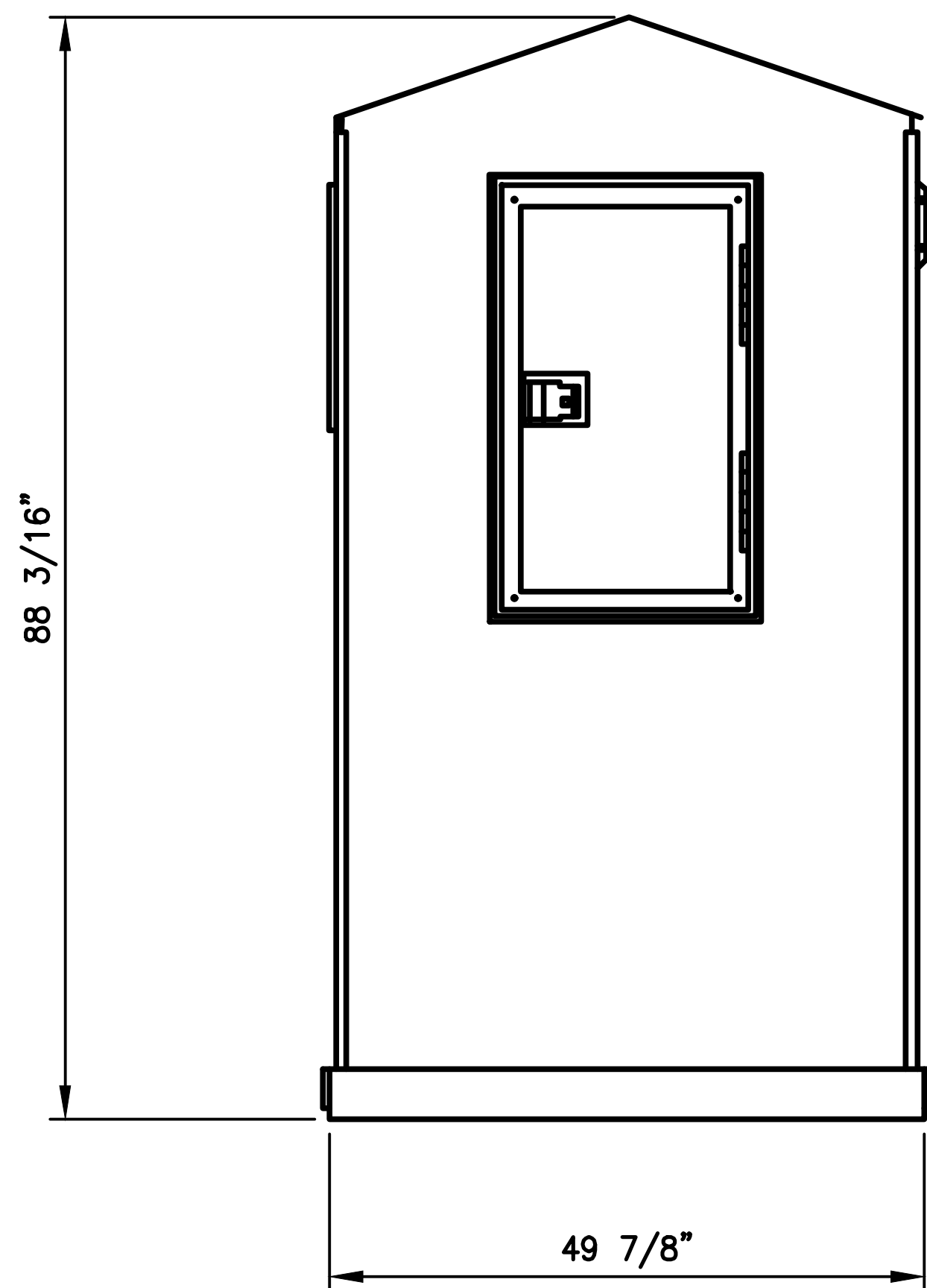
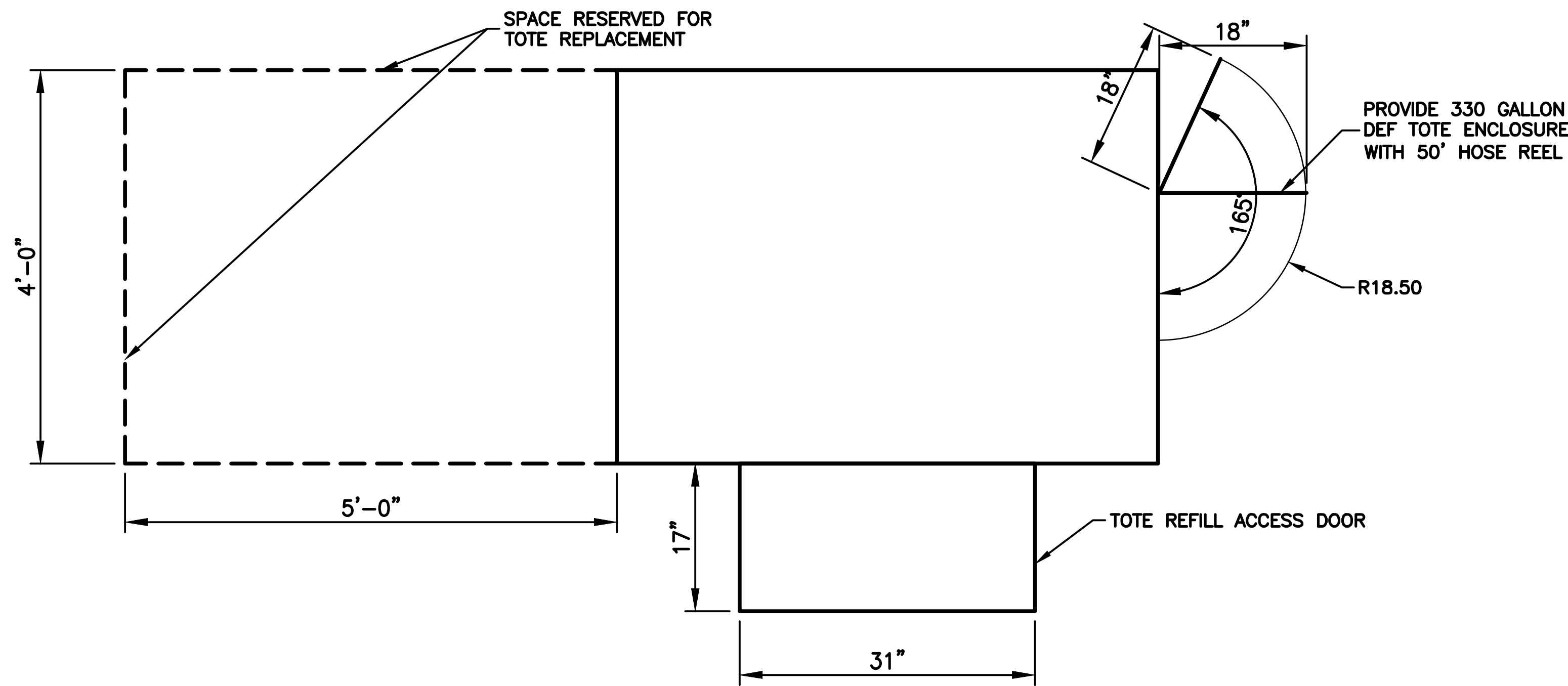
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STATE OF NEW YORK
MARK L. WESOLOWSKI
NO. 07454
PROFESSIONAL ENGINEER
RENEWAL EXPIRES: 12/31/2028

CONSTRUCTION
TITLE: FUEL TANK MODIFICATION AND ENVIRONMENTAL REMEDIATION PROGRAM
LOCATION: SOUTHERN REGION VARIOUS FACILITIES

MARK	DATE	DESCRIPTION
	1/31/2025	FINAL SUBMISSION
PROJECT NUMBER:	47674 - C	
DESIGNED BY:	M. GUTMANN	
DRAWN BY:	A. KELLY	
FIELD CHECK:	M. WESOLOWSKI	
APPROVED:	M. WESOLOWSKI	
SHEET TITLE: ABOVEGROUND FUEL STORAGE TANK TYPICAL LAYOUTS		
DRAWING NUMBER: C-10		
SHEET 12 OF 57		



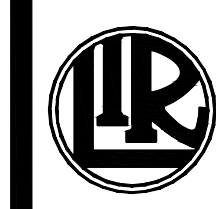
- DEF TANK SHALL INCLUDE:
1. COLD WEATHER PACKAGE WITH LIGHTED, INSULATED AND HEATED ENCLOSURE.
 2. DISPENSER SETUP WITH 50' HOSE REEL AND HOSE.
 3. 110V TOTE PUMP.
 4. IN-LINE PULSE METER FOR TIE-IN TO FUEL MANAGEMENT SYSTEM.
 5. 330 GALLON TOTE WITH FITTING AND FILL COUPLER.
 6. PRE-WIRED AND PRE-PIPED ENCLOSURE. 120 VOLT 20 AMP SERVICE REQUIRED.



DESIGN & CONSTRUCTION

CONSULTANT

CERTIFICATE OF AUTHORIZATION #: 0017985



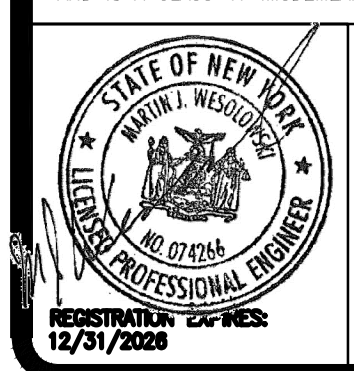
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3 Aerial Way, Syosset, New York

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STATE OF NEW YORK
MARK L. WESOLOWSKI
NO. 074264
PROFESSIONAL ENGINEER
REGISTRATION EXPIRES
12/31/2026

CONTRACT:

CONSTRUCTION

TITLE: FUEL TANK MODIFICATION AND ENVIRONMENTAL REMEDIATION PROGRAM

LOCATION: SOUTHERN REGION
VARIOUS FACILITIES

MARK	DATE	DESCRIPTION
	1/31/2025	FINAL SUBMISSION

PROJECT NUMBER: 47674 - C

DESIGNED BY: M. GUTMANN

DRAWN BY: A. KELLY

FIELD CHECK: M. WESOLOWSKI

APPROVED: M. WESOLOWSKI

SHEET TITLE:

330 GALLON DIESEL EXHAUST FLUID ABOVEGROUND STORAGE TANK DETAILS

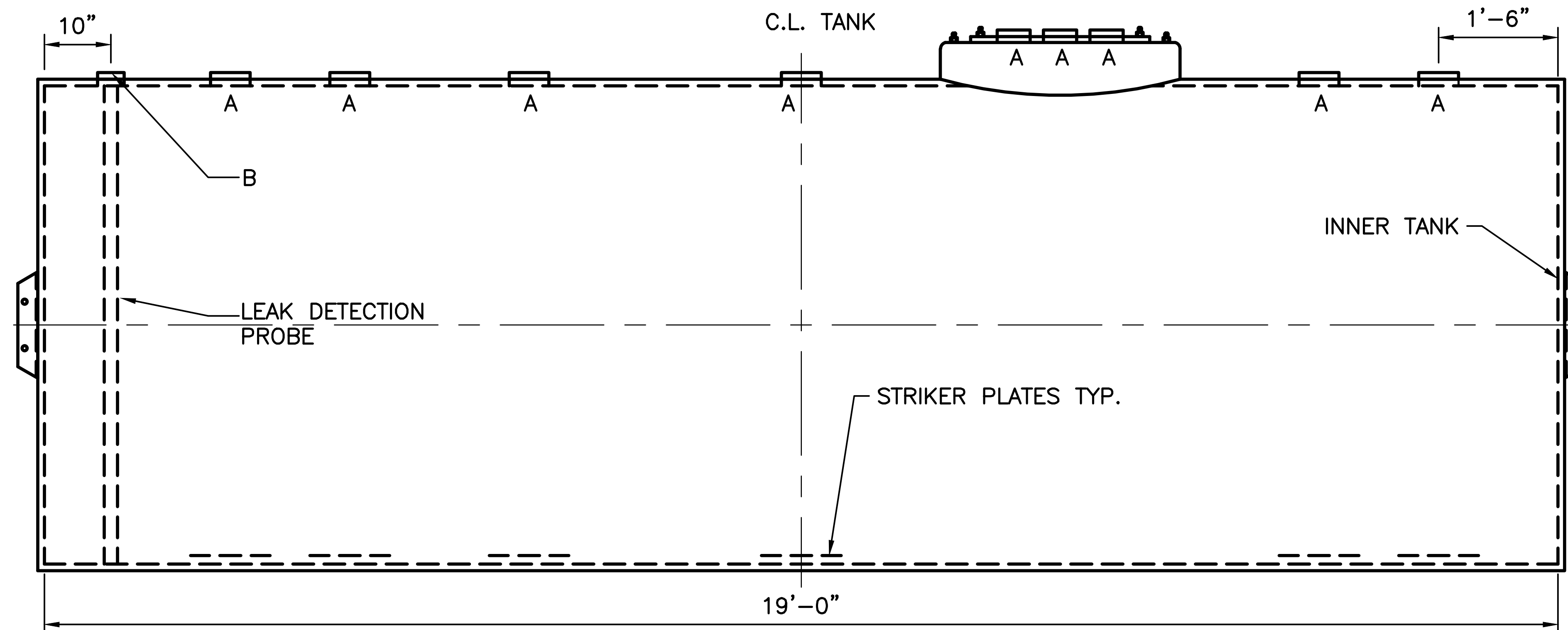
DRAWING NUMBER: C-11

SHEET 13 OF 57

DEF TANK SHALL INCLUDE:

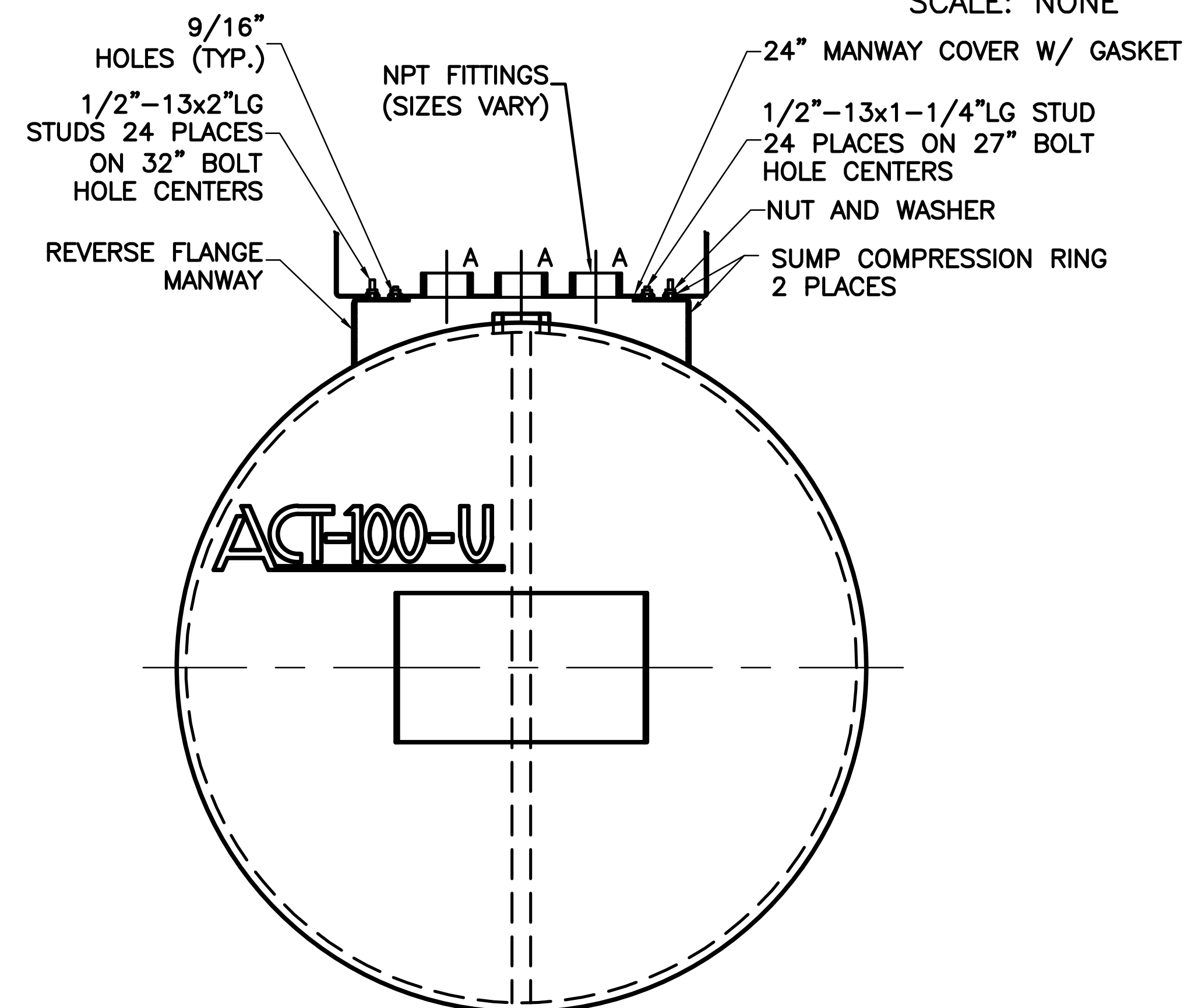
1. COLD WEATHER PACKAGE WITH 500W INTERNAL PROBE HEATER.
2. DISPENSER SETUP WITH 35' HOSE REEL AND HOSE.
3. 6 GPM 120V PUMP.
4. IN-LINE PULSE METER FOR TIE-IN TO FUEL MANAGEMENT SYSTEM.
5. 396 OR 660 GALLON TOTE WITH FITTING AND FILL COUPLER.
6. PRE-WIRED AND PRE-PIPED ENCLOSURE. 120 VOLT 20 AMP SERVICE REQUIRED.





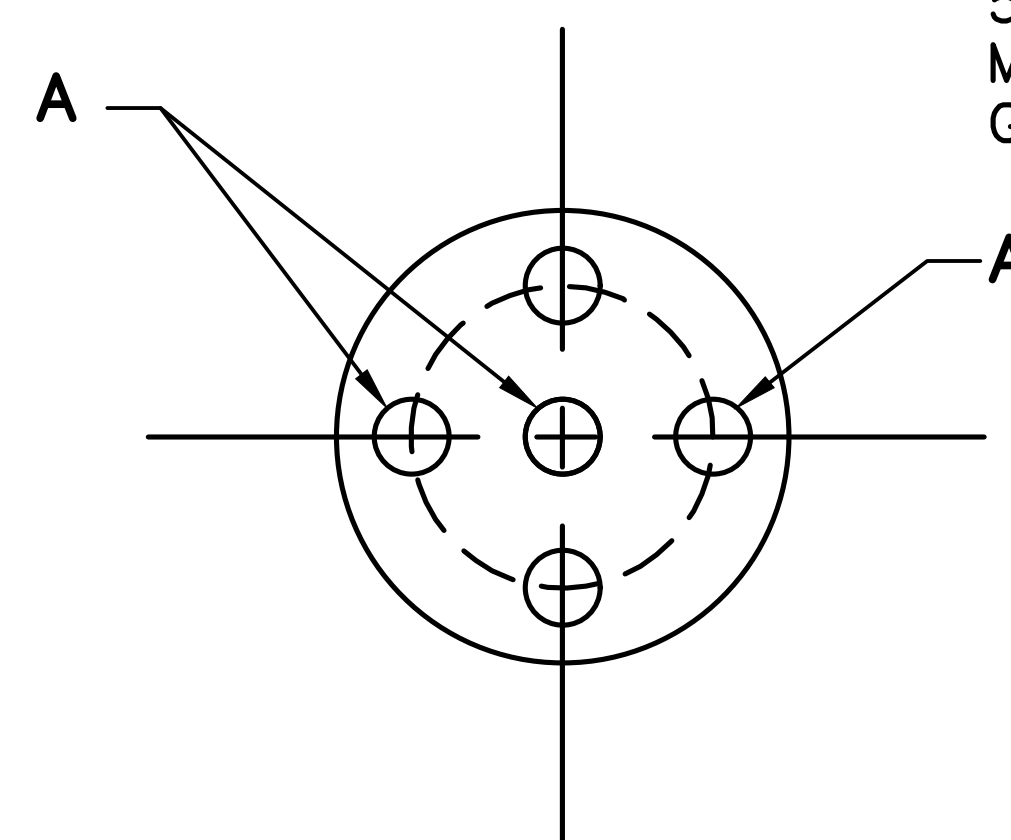
ELEVATION

SCALE: NONE



END VIEW

SCALE: NONE



PLAN VIEW OF 24" MANWAY

SCALE: NONE

A= 5"Ø NPT WITH 5"x4" DIELECTRIC BUSHING
B= 3"Ø NPT WITH 3"x2" DIELECTRIC BUSHING WITH INTERNAL MONITOR PIPE

NOTES:

1. TANK SHOWN IS TYPICAL FOR ACT-100-U DOUBLE WALL STEEL 4,000 GALLON CAPACITY. THIS 4,000 GALLON TANK IS SHOWN REPRESENTATIVE OF THE 500-8,000 GALLON TANKS. CONSULT WITH MANUFACTURER FOR CAPACITIES OF 500-8,000 GALLONS AND SPECIFIC FITTING ARRANGEMENT.

NEW YORK STATE OF **Office of General Services**
DESIGN & CONSTRUCTION

CONSULTANT
CERTIFICATE OF AUTHORIZATION #: 0017985

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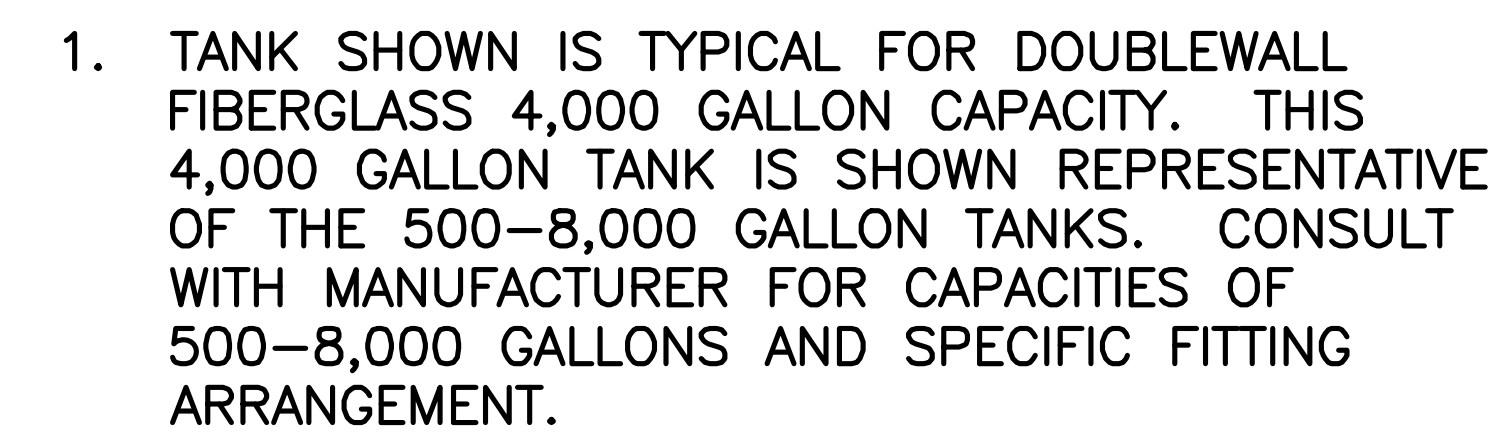
STATE OF NEW YORK
REGISTERED PROFESSIONAL ENGINEER
NO. 074264
EXPIRATION DATE: 12/31/2026

CONSTRUCTION

TITLE: FUEL TANK MODIFICATION AND ENVIRONMENTAL REMEDIATION PROGRAM

LOCATION: SOUTHERN REGION VARIOUS FACILITIES

MARK	DATE	DESCRIPTION
	1/31/2025	FINAL SUBMISSION
PROJECT NUMBER:	47674 - C	
DESIGNED BY:	M. GUTMANN	
DRAWN BY:	A. KELLY	
FIELD CHECK:	M. WESOLOWSKI	
APPROVED:	M. WESOLOWSKI	
SHEET TITLE:		
DOUBLE WALL STEEL ACT-100-U UNDERGROUND FUEL STORAGE TANK 4,000 GALLON REFERENCE		
DRAWING NUMBER:		
C-13		
SHEET 15 OF 57		



	1/31/2025	FINAL SUBMISSION
MARK	DATE	DESCRIPTION
PROJECT NUMBER:	47674 — C	
DESIGNED BY:	M. GUTMANN	
DRAWN BY:	A. KELLY	
FIELD CHECK:	M. WESOLOWSKI	
APPROVED:	M. WESOLOWSKI	
SHEET TITLE:		
<p>DOUBLE WALL FIBERGLASS UNDERGROUND FUEL STORAGE TANK 4,000 GALLON REFERENCE</p>		
DRAWING NUMBER:		
C-14		
SHEET	16	OF 57

PROVIDED EQUIPMENT

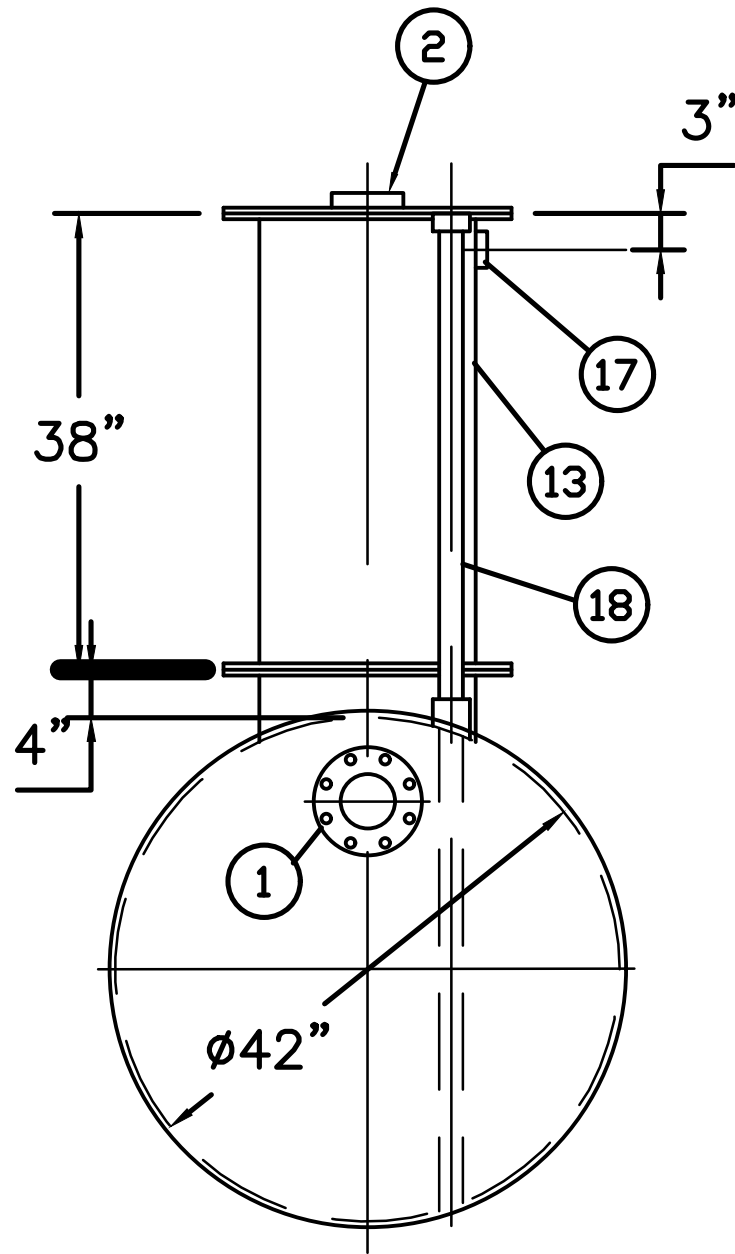
- 1. 150# R.F.S.O. FLANGE W/ 2" FNPT FOR VENT
- 2. 4"Ø FNPT FOR GAUGE WITH PLUG
- 3. VELOCITY HEAD DIFFUSION BAFFLE
- 4. WEAR PLATE
- 5. SEDIMENT CHAMBER
- 6. UNDERFLOW BAFFLE (REMOVABLE)
- 7. SLUDGE BAFFLE
- 8. STRIKER PLATES
- 9. PARALLEL CORRUGATED PLATE COALESCER. CORELLA PVC PLATES (3" PLATE SPACING)
- 10. OIL/WATER SEPARATOR CHAMBER
- 11. 6" THICK PETROSCREEN COALESCER MATERIAL INSTALLED W/ PULL ROD SHIPPED LOOSE
- 12. STEEL OUTLET DOWNCOMER
- 13. 18"Ø MANWAY WITH NEO-CORK GASKETS. BOLT-ON EXTENSION SHIPPED LOOSE
- 14. 4"Ø FNPT FOR OIL PUMP-OUT WITH INTERNAL PVC PIPE INSTALLED & RISER PIPE SHIPPED LOOSE
- 15. 2"Ø FNPT FOR LEVEL SENSOR WITH RISER PIPE SHIPPED LOOSE
- 16. LIFTING LUG
- 17. 2"Ø FNPT FOR VENT
- 18. 2"Ø FNPT FOR LEAK SENSOR WITH RISER PIPE SHIPPED LOOSE

ANCILLARY PROVIDED EQUIPMENT

- (4) 18" NEO-CORK MANWAY GASKETS
- (4) SETS OF NUTS/BOLTS/WASHERS FOR 18" MANWAY

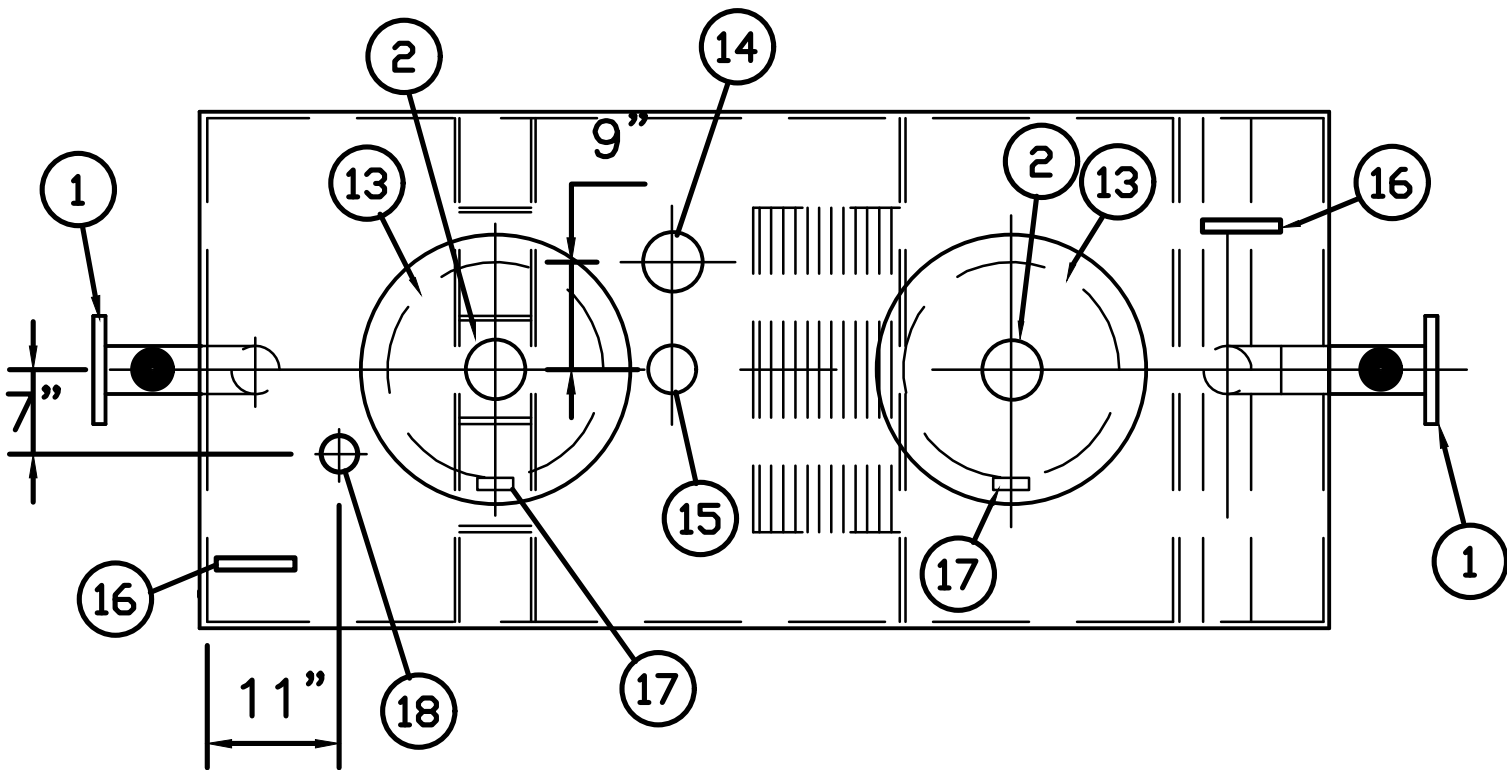
NOTES

- 1. POLYURETHANE HIGHGUARD TANK IS NOT APPROVED FOR THE STORAGE OF HEATED PRODUCTS
- 2. ALL VENT PIPING BY INSTALLER
- 3. 15000 VOLT SPARK TEST PROVIDED AT FACTORY



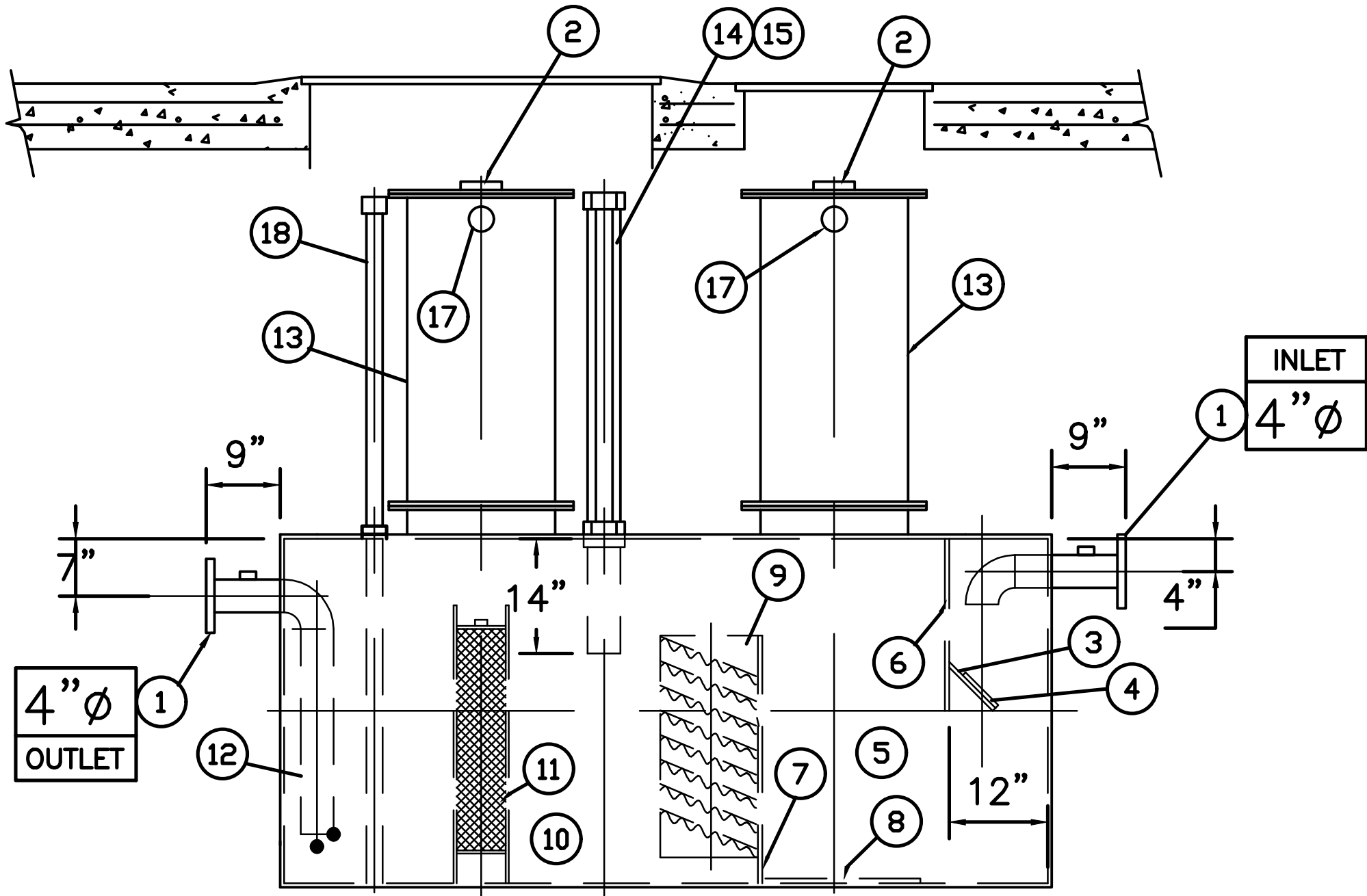
END VIEW

SCALE: NONE



PLAN VIEW

SCALE: NONE



ELEVATION VIEW

SCALE: NONE

NOTE:

- 1. SEPARATOR SHOWN IS TYPICAL FOR JACKETED DOUBLE-WALL STEEL 550-GALLON CAPACITY. CONSULT WITH MANUFACTURER FOR CAPACITIES OTHER THAN 550 GALLONS AND SPECIFIC FITTING AND MANWAY ARRANGEMENTS.

GENERAL SPECIFICATIONS

- NO. REQ'D: (1)
- CAPACITY: 550 GALLONS
- TYPE: HTC, HIGHGUARD, DW TYPE I 360
- MATERIAL: MILD CARBON STEEL
- FLOW RATE: 55 GPM
- GAUGE: BASED ON 60" MAX BURIAL
- INNER
- OUTER
- SHELL- 7 GA. 10 GA.
- HEADS- 7 GA. 10 GA.
- SURFACE PREP: SSPC NO.6 BLAST ALL EXTERIOR SURFACES

- COATING: MATERIAL THICKNESS
- EXTERIOR- HIGHGUARD (75 MILS)
- INTERIOR- NONE
- CONSTRUCTION : LAP FIT & WELD ALL EXTERIOR SEAMS
- OPERATING PRESSURE : ATMOSPHERIC

CONSTRUCTION

TITLE: FUEL TANK MODIFICATION AND ENVIRONMENTAL REMEDIATION PROGRAM
LOCATION: SOUTHERN REGION VARIOUS FACILITIES

MARK	DATE	DESCRIPTION
1/31/2025	FINAL SUBMISSION	
PROJECT NUMBER:	47674	- C
DESIGNED BY:	M. GUTMANN	
DRAWN BY:	A. KELLY	
FIELD CHECK:	M. WESOLOWSKI	
APPROVED:	M. WESOLOWSKI	

SHEET TITLE:
TYPICAL DOUBLE-WALL STEEL JACKETED 2 COMPARTMENT OIL/WATER SEPARATOR

DRAWING NUMBER:
C-15

NEW YORK
STATE OF
CIVIL SERVICE

Office of
General Services

DESIGN & CONSTRUCTION

CONSULTANT

CERTIFICATE OF AUTHORIZATION #: 0017905

LiRo Engineers, Inc.

3 Aerial Way, Syosset, New York

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STATE OF NEW YORK
JULIAN I. WESOLOWSKI
NO. 07426
PROFESSIONAL ENGINEER
REGISTRATION EXPIRES
12/31/2026

CONTRACT

CONSTRUCTION

TITLE:
FUEL TANK MODIFICATION AND
ENVIRONMENTAL REMEDIATION PROGRAM

LOCATION:
SOUTHERN REGION
VARIOUS FACILITIES

MARK	DATE	DESCRIPTION
	1/31/2025	FINAL SUBMISSION

PROJECT NUMBER:

47674 - C

DESIGNED BY:

M. GUTMANN

DRAWN BY:

A. KELLY

FIELD CHECK:

M. WESOLOWSKI

APPROVED:

M. WESOLOWSKI

SHEET TITLE:

TYPICAL DOUBLE-WALL STEEL
JACKETED 3 COMPARTMENT
OIL/WATER SEPARATOR

DRAWING NUMBER:

C-16

SHEET 18 OF 57

PLAN VIEW
SCALE: NONE

ELEVATION VIEW
SCALE: NONE

CONTROL PANEL DETAIL
SCALE: NONE

NOTE:

- CONTROL PANEL SHOWN IS TYPICAL. CONTROL PANEL LAYOUT MAY VARY BASED ON SITE SPECIFIC REQUIREMENTS.

END VIEW
SCALE: NONE

PROVIDED EQUIPMENT

- 150# R.F.S.O. FLANGE W/ 2" FNPT FOR VENT
- 4" FNPT FOR GAUGE WITH PLUG
- VELOCITY HEAD DIFFUSION BAFFLE
- WEAR PLATE
- SEDIMENT CHAMBER
- UNDERFLOW BAFFLE (REMOVABLE)
- SLUDGE BAFFLE
- STRIKER PLATES
- PARALLEL CORRUGATED PLATE COALESCER. CORELLA PVC PLATES (3" PLATE SPACING)
- OIL/WATER SEPARATOR CHAMBER
- 6" THICK PETROSCREEN COALESCER MATERIAL INSTALLED W/ PULL ROD SHIPPED LOOSE
- STEEL TRANSFER PIPE W/ DOWNCOMER
- 24" MANWAY WITH NEO-CORK GASKETS. BOLT-ON EXTENSION SHIPPED LOOSE
- 4" FNPT FOR OIL PUMP-OUT WITH INTERNAL PVC PIPE INSTALLED & RISER PIPE SHIPPED LOOSE
- 2" FNPT FOR LEVEL SENSOR WITH RISER PIPE SHIPPED LOOSE
- LIFTING LUG
- 2" FNPT FOR VENT
- 2" FNPT FOR LEAK SENSOR WITH RISER PIPE SHIPPED LOOSE
- 7 GA. BULKHEAD
- EFFLUENT WATER CHAMBER
- PUMP MOUNT
- 4" FNPT FOR EFFLUENT PUMP CONDUIT AND WIRING
- 2" FNPT FOR EFFLUENT LEVEL SENSOR CONDUIT AND WIRING
- RECTANGULAR MANWAY WITH CLOSED CELL SPONGE GASKET. BOLT-ON EXTENSION SHIPPED LOOSE

ANCILLARY PROVIDED EQUIPMENT

- 24" NEO-CORK MANWAY GASKETS
- SETS OF NUTS/BOLTS/WASHERS FOR 24" MANWAY
- 24"x30" CLOSED CELL FOAM MANWAY GASKET
- 24"x30" RUBBER RIBBON MANWAY GASKET
- SETS OF NUTS/BOLTS/WASHERS FOR 24"x30" MANWAY

NOTES

- POLYURETHANE HIGHGUARD TANK IS NOT APPROVED FOR THE STORAGE OF HEATED PRODUCTS
- ALL VENT PIPING BY INSTALLER
- 15000 VOLT SPARK TEST PROVIDED AT FACTORY
- DESIGNER TO PROVIDE EFFLUENT PUMPING INFORMATION FOR PROPER PUMP SIZING & PUMPOUT DESIGN

NOTE:

- SEPARATOR SHOWN IS TYPICAL FOR JACKETED DOUBLE-WALL STEEL 1,000-GALLON CAPACITY. CONSULT WITH MANUFACTURER FOR CAPACITIES OTHER THAN 1,000 GALLONS AND SPECIFIC FITTING AND MANWAY ARRANGEMENTS.

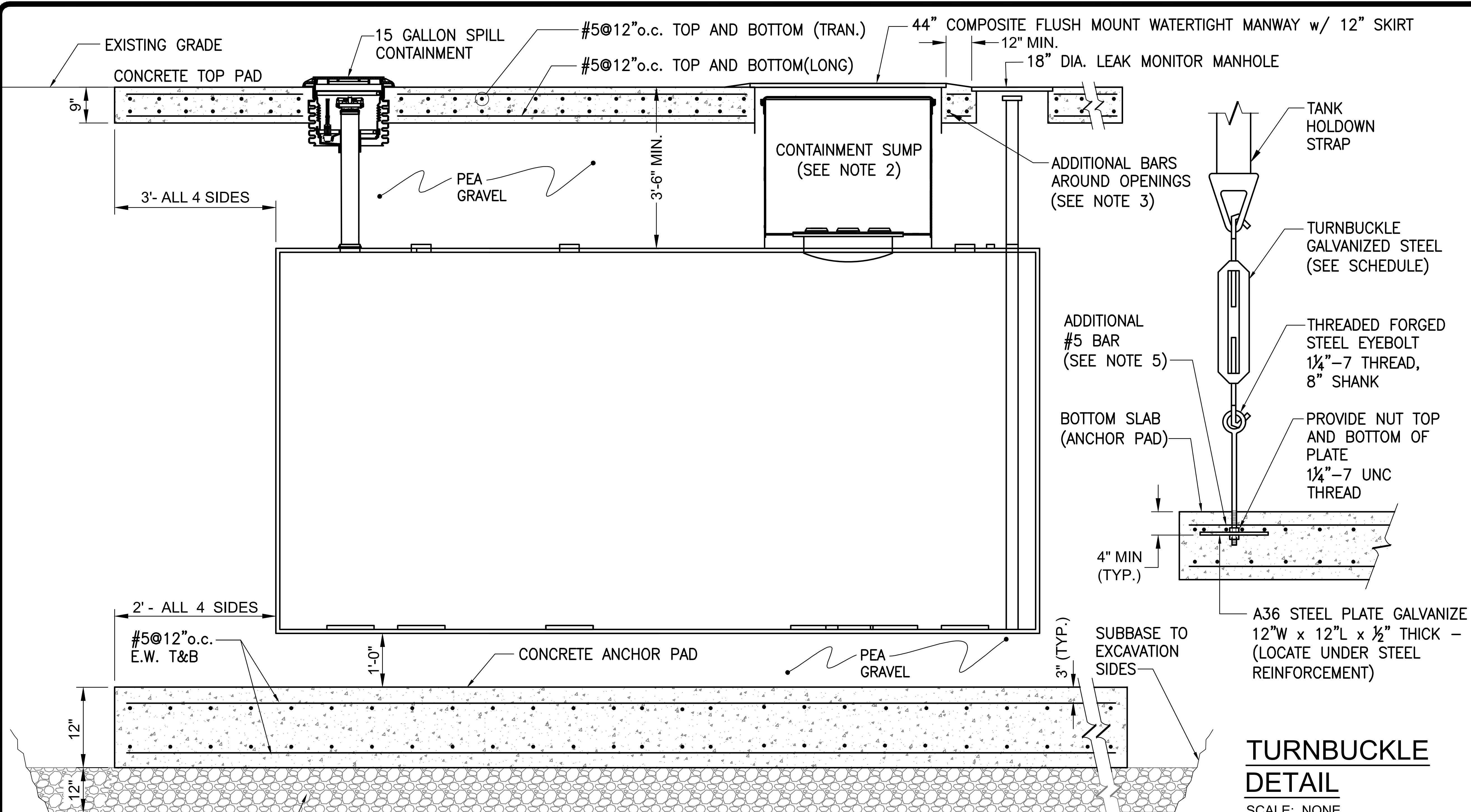
GENERAL SPECIFICATIONS

NO. REQ'D: (1)
CAPACITY: 1000 GALLONS
TYPE: HTC-J, HIGHGUARD, DW TYPE I 360
MATERIAL: MILD CARBON STEEL
FLOW RATE: 100 GPM
GAUGE: BASED ON 60" MAX BURIAL
INNER
SHELL- 7 GA. 10 GA.
HEADS- 7 GA. 10 GA.

SURFACE PREP:
SSPC NO.6 BLAST ALL EXTERIOR SURFACES
SSPC NO.10 BLAST ALL INTERIOR OF WATER CHAMBER ONLY

COATING:	MATERIAL	THICKNESS
EXTERIOR-	HIGHGUARD	(75 MILS)
INTERIOR-	POLYURETHANE	(15 MILS)
	INTERIOR OF WATER CHAMBER	

CONSTRUCTION :
LAP FIT & WELD ALL EXTERIOR SEAMS
OPERATING PRESSURE : ATMOSPHERIC



TANK SUBBASE COURSE TYPE 2

FILTER FABRIC

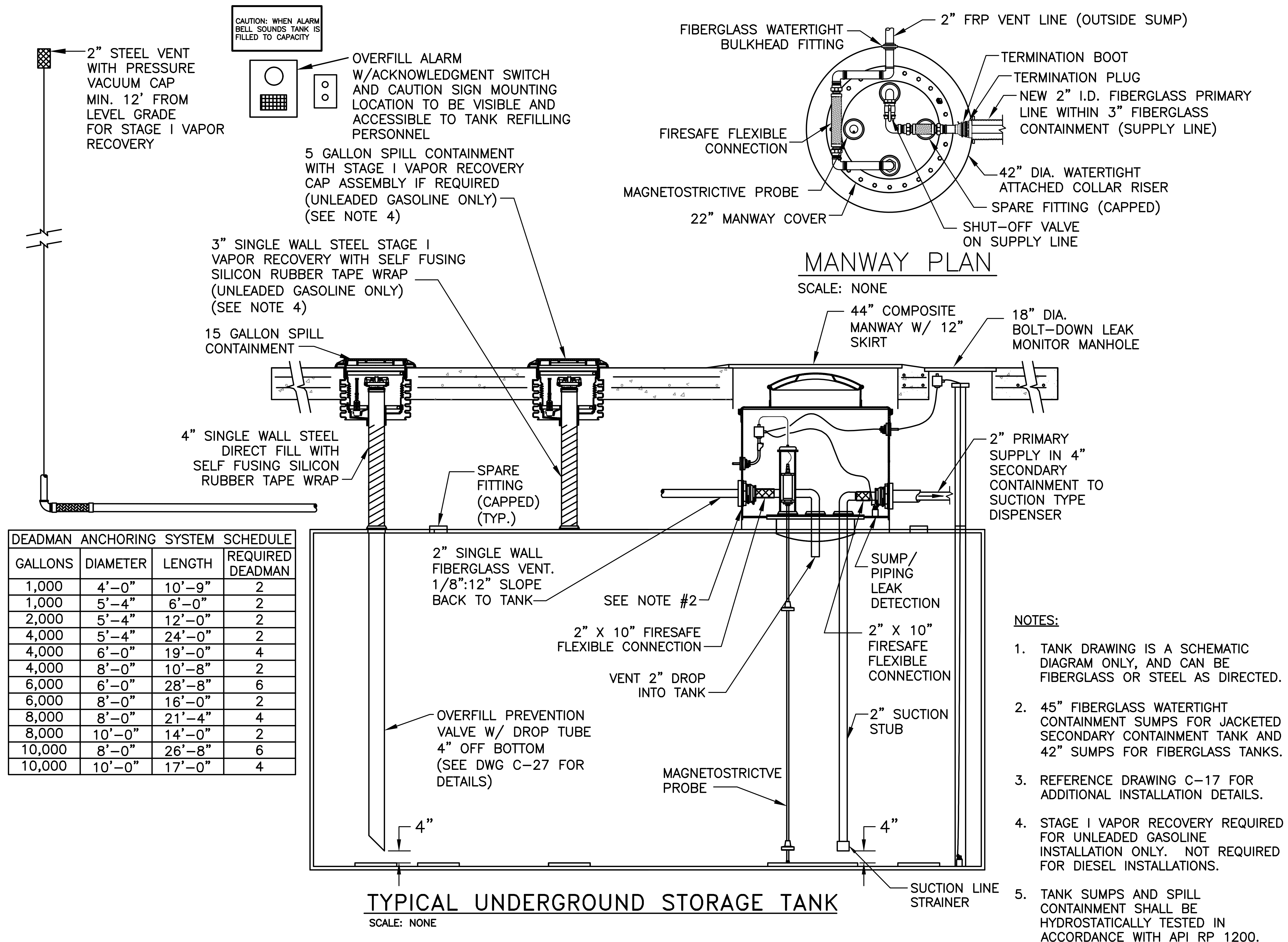
CONCRETE ANCHOR PAD DETAIL

SCALE: NONE

HOLDDOWN STRAP AND TURNBUCKLE SCHEDULE					
TANK	DIAMETER	STRAP	TURNBUCKLE	HOLE SIZE	"A" DIMENSION
48"		3" X 1/4"	3/4"	7/8"	27"
64"		3" X 1/4"	3/4"	7/8"	35"
72"		3" X 3/8"	1"	1-1/8"	39"
96"		3" X 3/8"	1-1/8"	1-1/4"	51"
120"		4" X 1/2"	1-1/2"	1-5/8"	63"

NOTE: NUMBER OF TANK STRAPS IS AS PER TANK MANUFACTURER RECOMMENDATIONS.

- ## NOTES:
1. TANK DRAWING IS A SCHEMATIC DIAGRAM ONLY, AND CAN BE FIBERGLASS OR STEEL AS DIRECTED.
 2. 45" SUMPS FOR JACKETED SECONDARY CONTAINMENT TANK AND 42" SUMPS FOR FIBERGLASS TANKS.
 3. PROVIDE ADDITIONAL #5 BAR TO FRAME AROUND SLAB PENETRATIONS. EXTEND BAR 2'-0" PAST PENETRATIONS.
 4. FOR EXCAVATIONS SUBJECT TO GROUNDWATER INFILTRATION THE CONTRACTOR SHALL INSTALL FILTER FABRIC ON EXCAVATION BOTTOM AND ALL SIDEWALLS UP TO A MINIMUM OF TWO FEET BELOW GRADE SURFACE.
 5. PROVIDE ADDITIONAL #5 BAR MINIMUM 3 FEET LONG ON EACH SIDE OF ANCHOR PLATE.



NEW YORK STATE **Office of General Services**
DESIGN & CONSTRUCTION

CONSULTANT
CERTIFICATE OF AUTHORIZATION #: 0017985

LiRo Engineers, Inc.
3 Aerial Way, Syosset, New York

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STATE OF NEW YORK
REGISTERED PROFESSIONAL ENGINEER
NO. 021254
EXPIRATION DATE: 12/31/2026

CONSTRUCTION
TITLE: FUEL TANK MODIFICATION AND ENVIRONMENTAL REMEDIATION PROGRAM
LOCATION: SOUTHERN REGION VARIOUS FACILITIES

MARK	DATE	DESCRIPTION
1/31/2025	FINAL SUBMISSION	

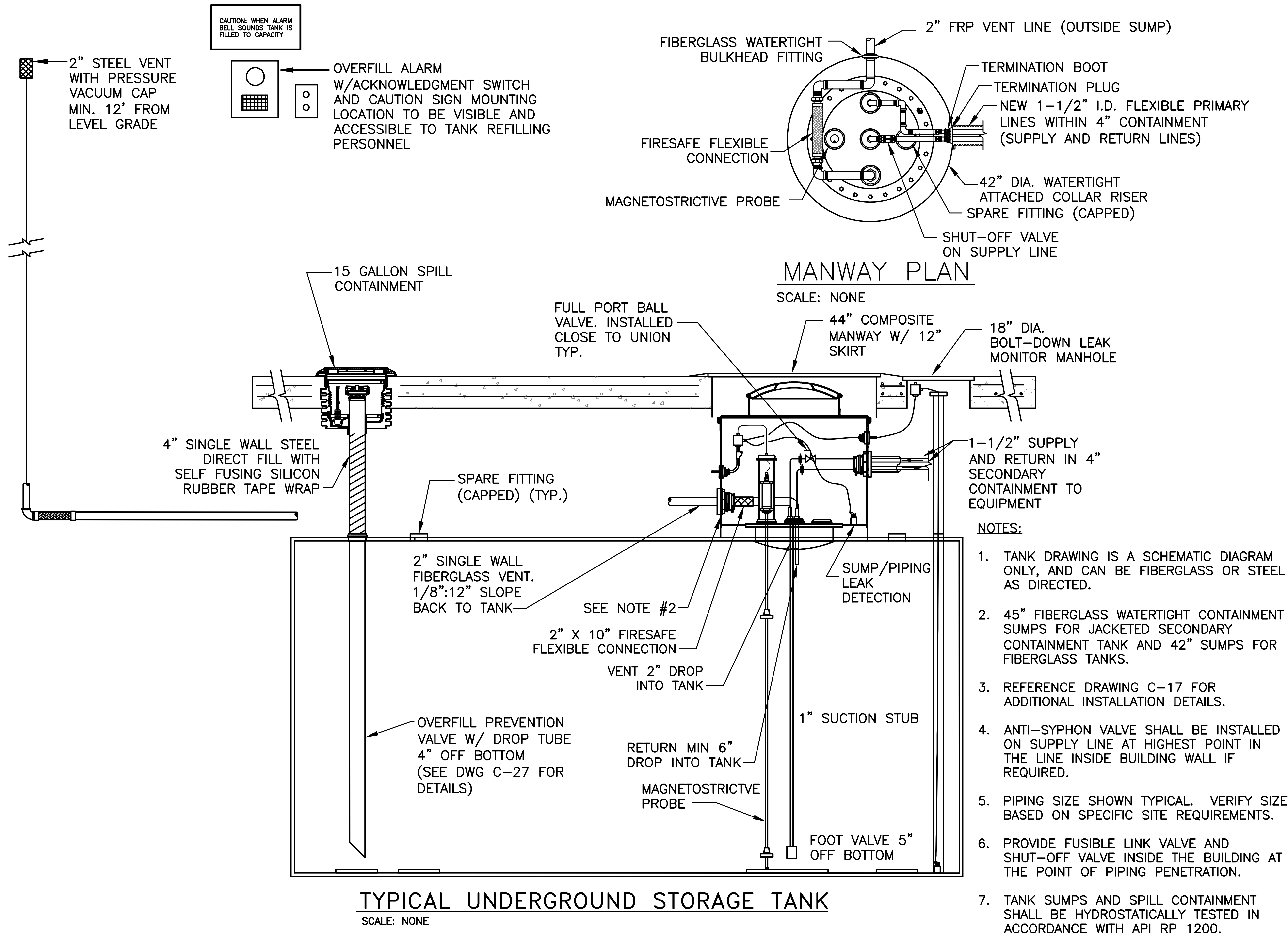
PROJECT NUMBER: 47674 - C

DESIGNED BY: M. GUTMANN
DRAWN BY: A. KELLY
FIELD CHECK: M. WESOLOWSKI
APPROVED: M. WESOLOWSKI

SHEET TITLE:
TYPICAL UNDERGROUND FUEL STORAGE TANK UNLEADED GASOLINE OR DIESEL MOTOR FUEL INSTALLATION PACKAGE

DRAWING NUMBER:
C-18

SHEET 20 OF 57



NEW YORK STATE OF NEW YORK **Office of General Services**
DESIGN & CONSTRUCTION

CONSULTANT
CERTIFICATE OF AUTHORIZATION #: 0017985

LiRo Engineers, Inc.
3 Aerial Way, Syosset, New York

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STATE OF NEW YORK
MARK I. WESOLOWSKI
NO. 024264
REGISTERED PROFESSIONAL ENGINEER
12/31/2028

CONSTRUCTION
TITLE: FUEL TANK MODIFICATION AND ENVIRONMENTAL REMEDIATION PROGRAM
LOCATION: SOUTHERN REGION VARIOUS FACILITIES

MARK	DATE	DESCRIPTION
PROJECT NUMBER:	47674	- C
DESIGNED BY:	M. GUTMANN	
DRAWN BY:	A. KELLY	
FIELD CHECK:	M. WESOLOWSKI	
APPROVED:	M. WESOLOWSKI	

SHEET TITLE:
TYPICAL UNDERGROUND STORAGE TANK FUEL OIL OR GENERATOR INSTALLATION PACKAGE

DRAWING NUMBER:
C-19

SHEET 21 OF 57

Office of General Services

DESIGN & CONSTRUCTION

CONSULTANT

CERTIFICATE OF AUTHORIZATION #: 0017905

LiRo Engineers, Inc.

3 Aerial Way, Syosset, New York

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CONSTRUCTION

TITLE: FUEL TANK MODIFICATION AND ENVIRONMENTAL REMEDIATION PROGRAM

LOCATION: SOUTHERN REGION VARIOUS FACILITIES

MARK	DATE	DESCRIPTION
	1/31/2025	FINAL SUBMISSION
PROJECT NUMBER:	47674 - C	
DESIGNED BY:	M. GUTMANN	
DRAWN BY:	A. KELLY	
FIELD CHECK:	M. WESOLOWSKI	
APPROVED:	M. WESOLOWSKI	

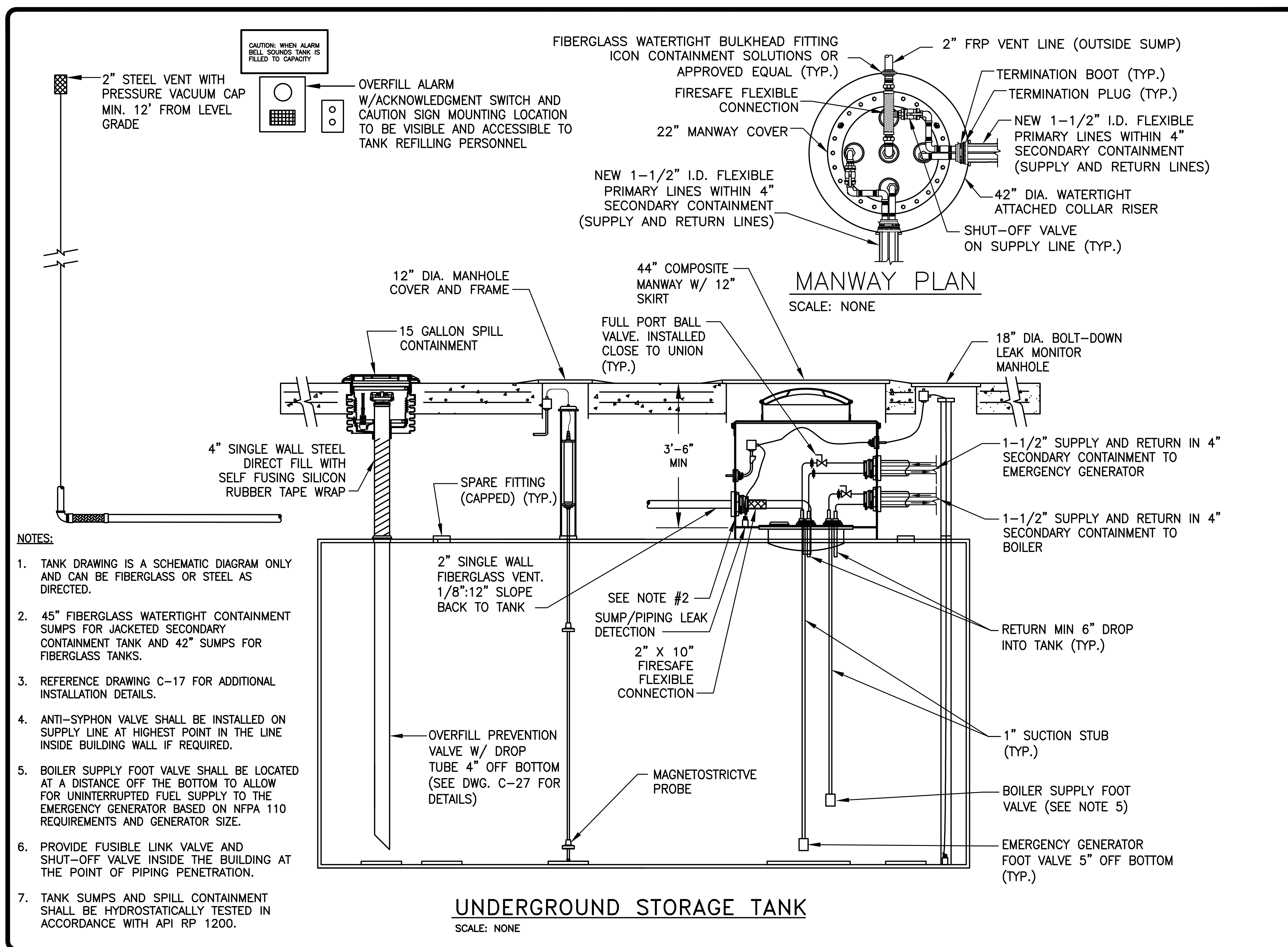
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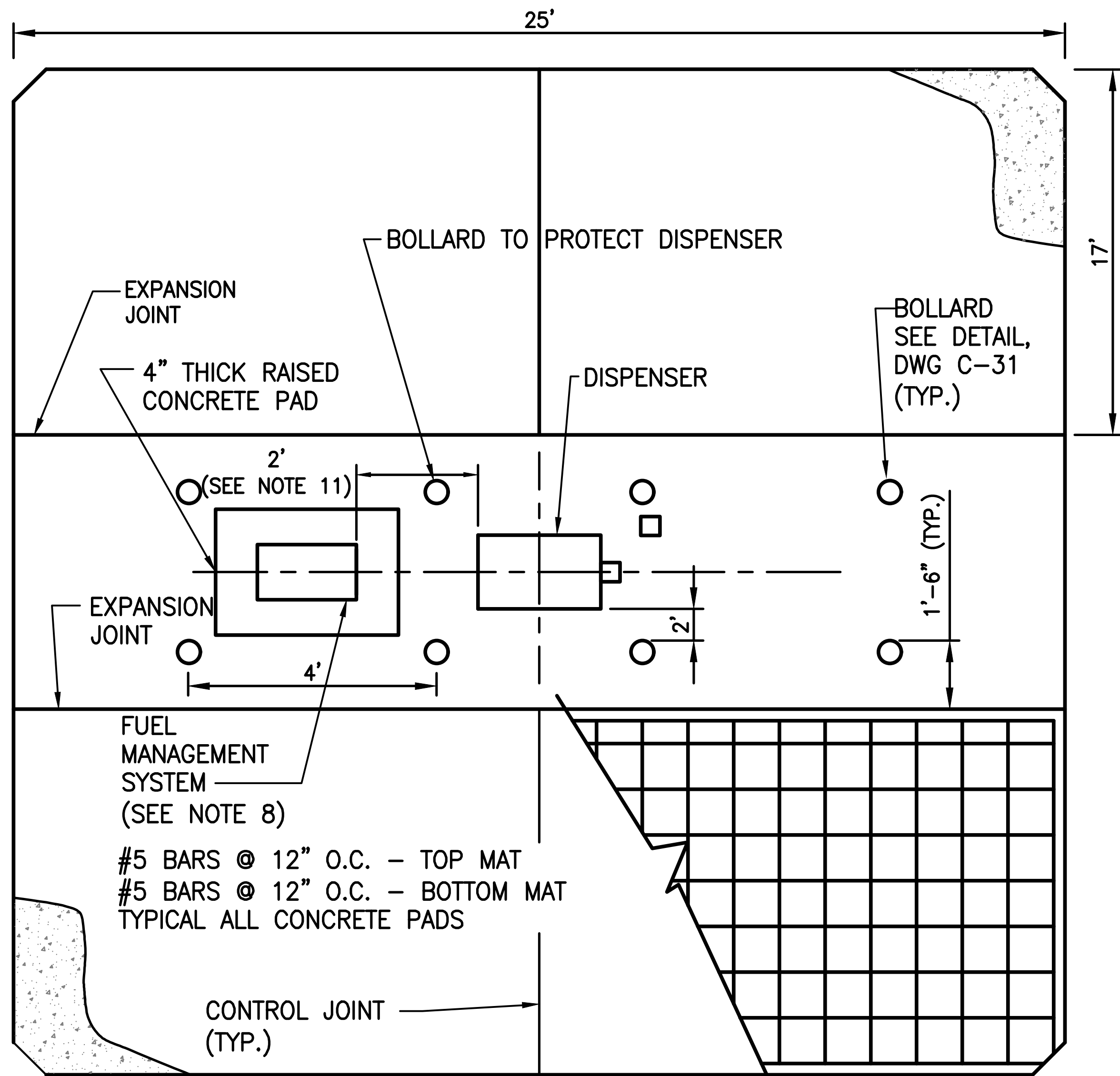
TYPICAL UNDERGROUND STORAGE TANK BOILER AND DUAL FEED FUEL OIL - EMERGENCY GENERATOR

DRAWING NUMBER:

C-20

SHEET 22 OF 57



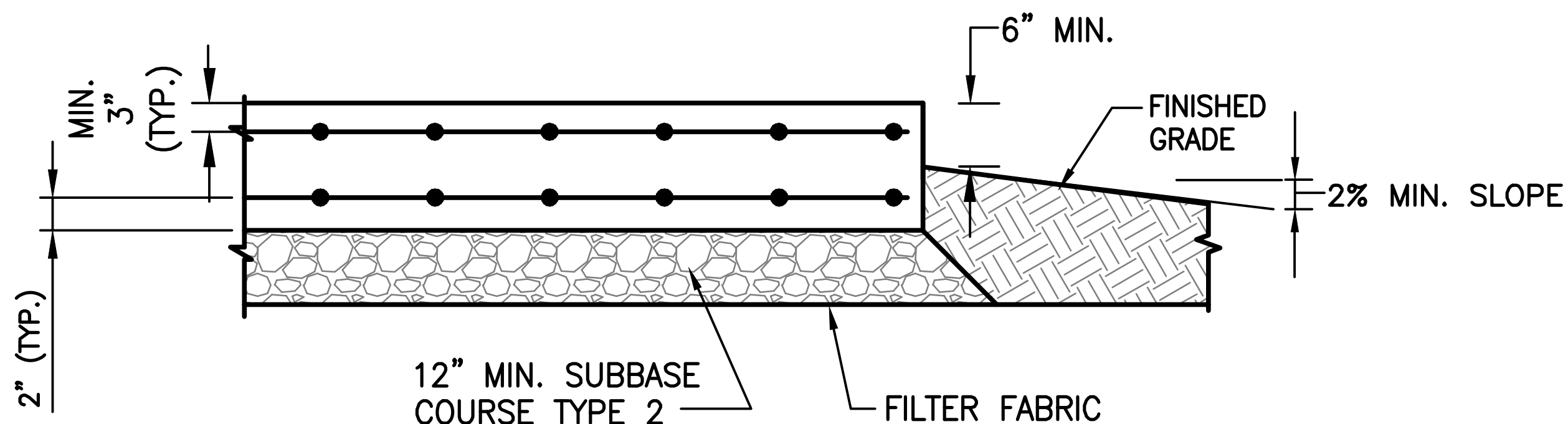


TYPICAL SINGLE HOSE DISPENSER ISLAND PLAN

SCALE: NONE

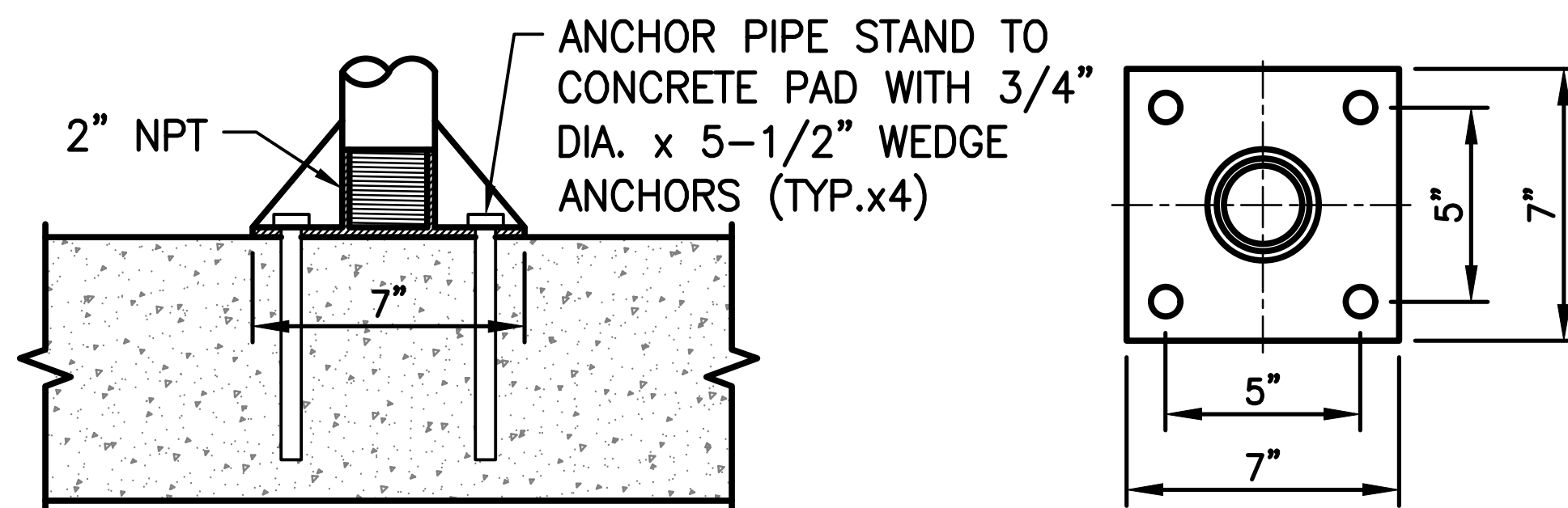
NOTES:

1. FOR FLEXIBLE DOUBLE-WALL PIPE USE 1-1/2" SUPPLY WITH 4" SECONDARY CARRIER PIPE.
2. CHECK FOR UTILITY INTERFERENCE AND LOCATE BOLLARDS ACCORDINGLY.
3. MIN. 6" REVEAL AT DISPENSER LOCATION.
4. DRIVE-ON PAD TO BE MINIMUM 12" THICK.
5. PROVIDE A 1/2" CHAMFER AT ALL EXPOSED CORNERS AND EDGES OF CONCRETE SLABS.
6. INSTALL EMERGENCY FUEL PUMP SHUT-OFF SWITCH BETWEEN 20 AND 100 FEET FROM FUEL DISPENSER.
7. PROVIDE A 20-POUND ABC-RATED (MINIMUM 40-B:C) FIRE EXTINGUISHER NOT MORE THAN 75 FEET FROM STORAGE TANK.
8. FOR ASSET WORKS FUEL MANAGEMENT SYSTEMS, STUB UP ALL REQUIRED CONDUIT IN AN 11" X 11" AREA (SEE DWG. C-41).
9. GASOLINE DISPENSER HOSE SHALL BE 15' IN LENGTH (ONE 5' HOSE AND 10' HOSE WITH A DISCONNECT IN BETWEEN).
10. DIESEL DISPENSER HOSE SHALL BE 18' IN LENGTH (TWO 9' HOSES).
11. DISPENSER SHALL BE 2' FROM THE FUEL MANAGEMENT SYSTEM OR THE FUEL MANAGEMENT SYSTEM ENCLOSURE.



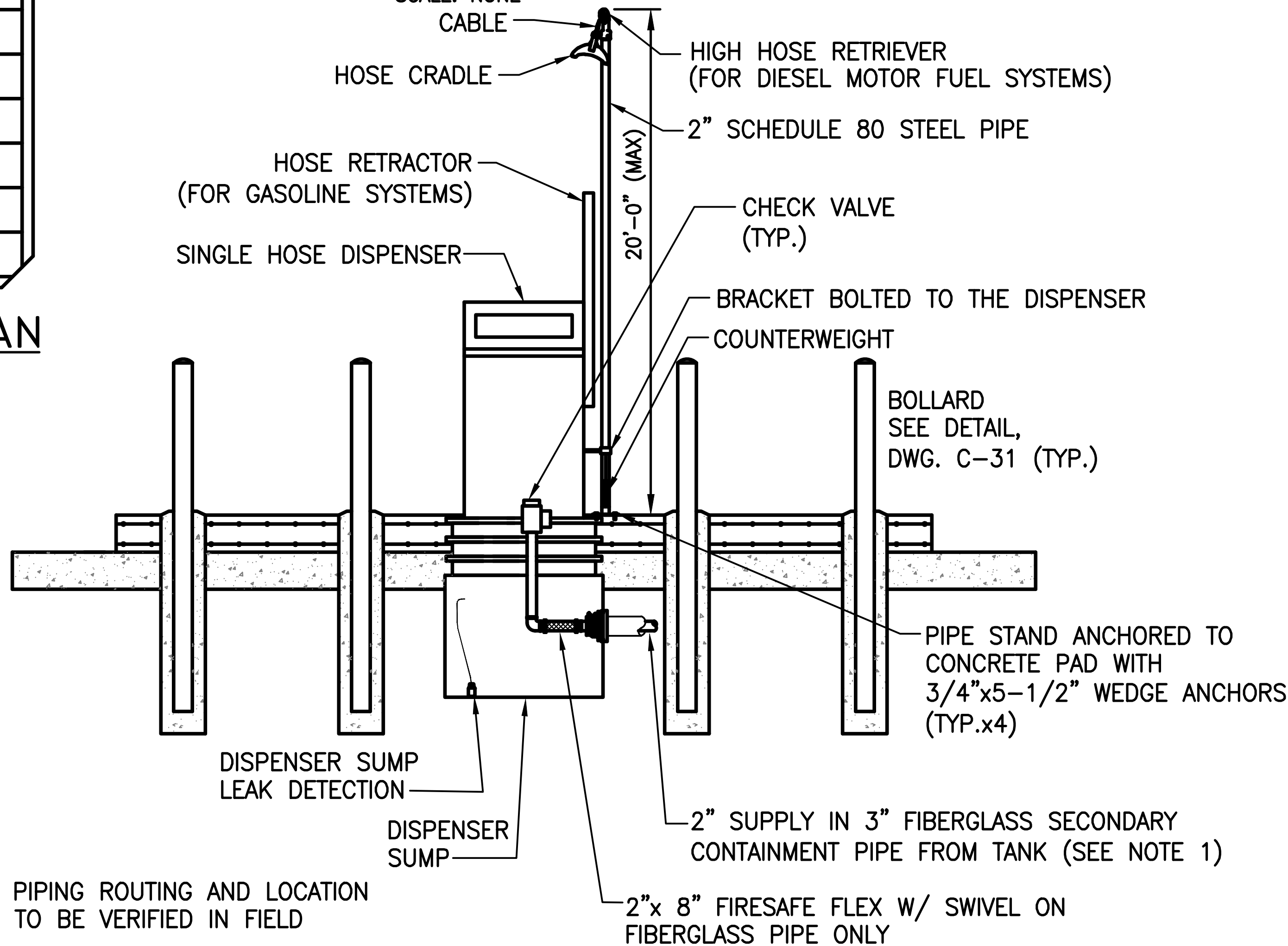
DISPENSER FOUNDATION DETAIL

SCALE: NONE



PIPE STAND DETAIL

SCALE: NONE



TYPICAL SINGLE HOSE ISLAND ELEVATION

SCALE: NONE

NEW YORK STATE OF COURTESY. Office of General Services
DESIGN & CONSTRUCTION

CONSULTANT
CERTIFICATE OF AUTHORIZATION #: 0017985

LiRo Engineers, Inc.
3 Aerial Way, Syosset, New York

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STATE OF NEW YORK
MARK L. WESOLOWSKI
NO. 07454
PROFESSIONAL ENGINEER
REGISTRATION EXPIRES 12/31/2028

CONTRACT
CONSTRUCTION

TITLE: FUEL TANK MODIFICATION AND ENVIRONMENTAL REMEDIATION PROGRAM

LOCATION: SOUTHERN REGION VARIOUS FACILITIES

MARK	DATE	DESCRIPTION
	1/31/2025	FINAL SUBMISSION
PROJECT NUMBER:	47674	- C
DESIGNED BY:	M. GUTMANN	
DRAWN BY:	A. KELLY	
FIELD CHECK:	M. WESOLOWSKI	
APPROVED:	M. WESOLOWSKI	
SHEET TITLE:	SINGLE HOSE DISPENSER ISLAND AND CONCRETE PAD DETAIL	
DRAWING NUMBER:	C-21	
SHEET	23	OF 57



1. FOR FLEXIBLE DOUBLE-WALL PIPE USE 1-1/2" SUPPLY WITH 4" SECONDARY CARRIER PIPE.
2. CHECK FOR UTILITY INTERFERENCE AND LOCATE BOLLARDS ACCORDINGLY.
3. MIN. 6" REVEAL AT DISPENSER LOCATION.
4. DRIVE-ON PAD TO BE MINIMUM 12" THICK.
5. PROVIDE A 1/2" CHAMFER AT ALL EXPOSED CORNERS AND EDGES OF CONCRETE SLABS.
6. INSTALL EMERGENCY FUEL PUMP SHUT-OFF SWITCH BETWEEN 20 AND 100 FEET FROM FUEL DISPENSER.
7. PROVIDE A 20-POUND ABC-RATED (MINIMUM 40-B:C) FIRE EXTINGUISHER NOT MORE THAN 75 FEET FROM STORAGE TANK.
8. FOR ASSET WORKS FUEL MANAGEMENT SYSTEMS, STUB UP ALL REQUIRED CONDUIT IN AN 11" X 11" AREA (SEE DWG. C-41).
9. GASOLINE DISPENSER HOSE SHALL BE 15' IN LENGTH (ONE 5' HOSE AND ONE 10' HOSE WITH A DISCONNECT IN BETWEEN).
10. DIESEL DISPENSER HOSE SHALL BE 18' IN LENGTH (TWO 9' HOSES).
11. DISPENSER SHALL BE 2' FROM THE FUEL MANAGEMENT SYSTEM OR THE FUEL MANAGEMENT SYSTEM ENCLOSURE.



Diagram illustrating the piping routing and location for a dual hose dispenser system, showing components and their connections:

- CABLE (TYP.)
- HOSE CRADLE (TYP.)
- HIGH HOSE RETRIEVER (TYP.) (FOR DIESEL MOTOR FUEL SYSTEMS)
- 2" SCHEDULE 80 STEEL PIPE (TYP.)
- 20'-0" (MAX)
- CHECK VALVE (TYP.)
- BRACKET BOLTED TO THE DISPENSER (TYP.)
- COUNTERWEIGHT (TYP.)
- BOLLARD SEE DETAIL, DWG. C-31 (TYP.)
- PIPE STAND ANCHORED TO CONCRETE PAD WITH 3/4"x5-1/2" WEDGE ANCHORS (TYP.x4)
- 2" SUPPLY IN 3" FIBERGLASS SECONDARY CONTAINMENT PIPE FROM TANK (SEE NOTE 1)
- 2"x 8" FIRESAFE FLEX W/ SWIVEL ON FIBERGLASS PIPE ONLY
- DISPENSER SUMP LEAK DETECTION
- DISPENSER SUMP
- HOSE RETRACTOR (FOR GASOLINE SYSTEMS) (TYP.)
- DUAL HOSE DISPENSER

PIPING ROUTING AND LOCATION TO BE VERIFIED IN FIELD

TYPICAL DUAL HOSE ISLAND ELEVATION

SCALE: NONE

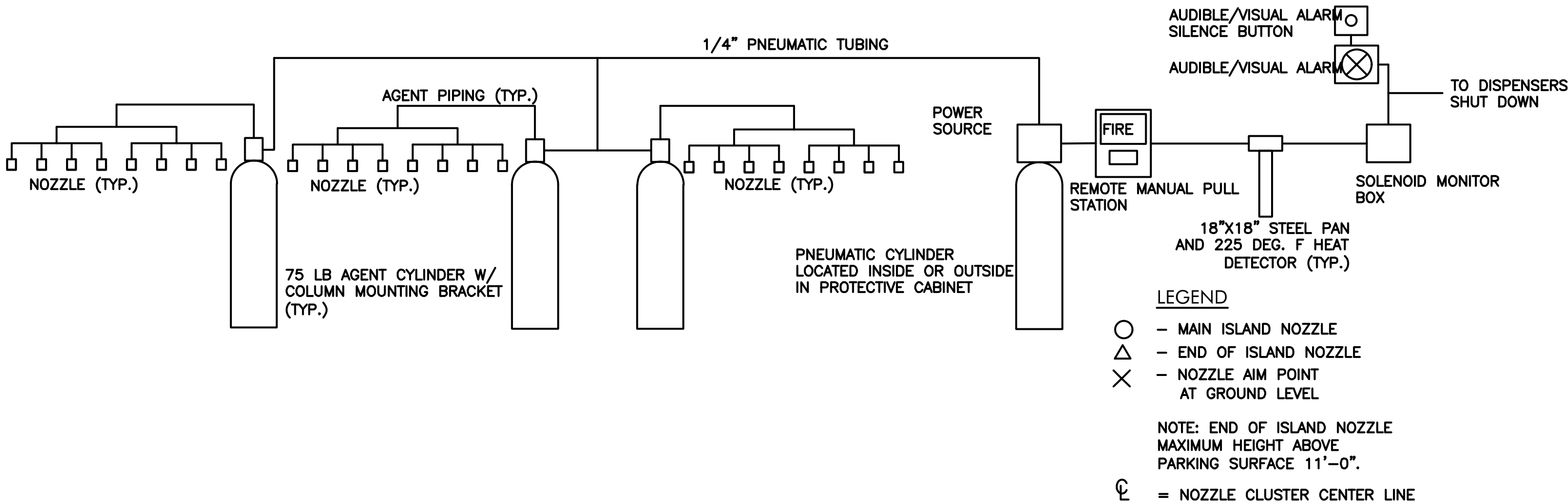
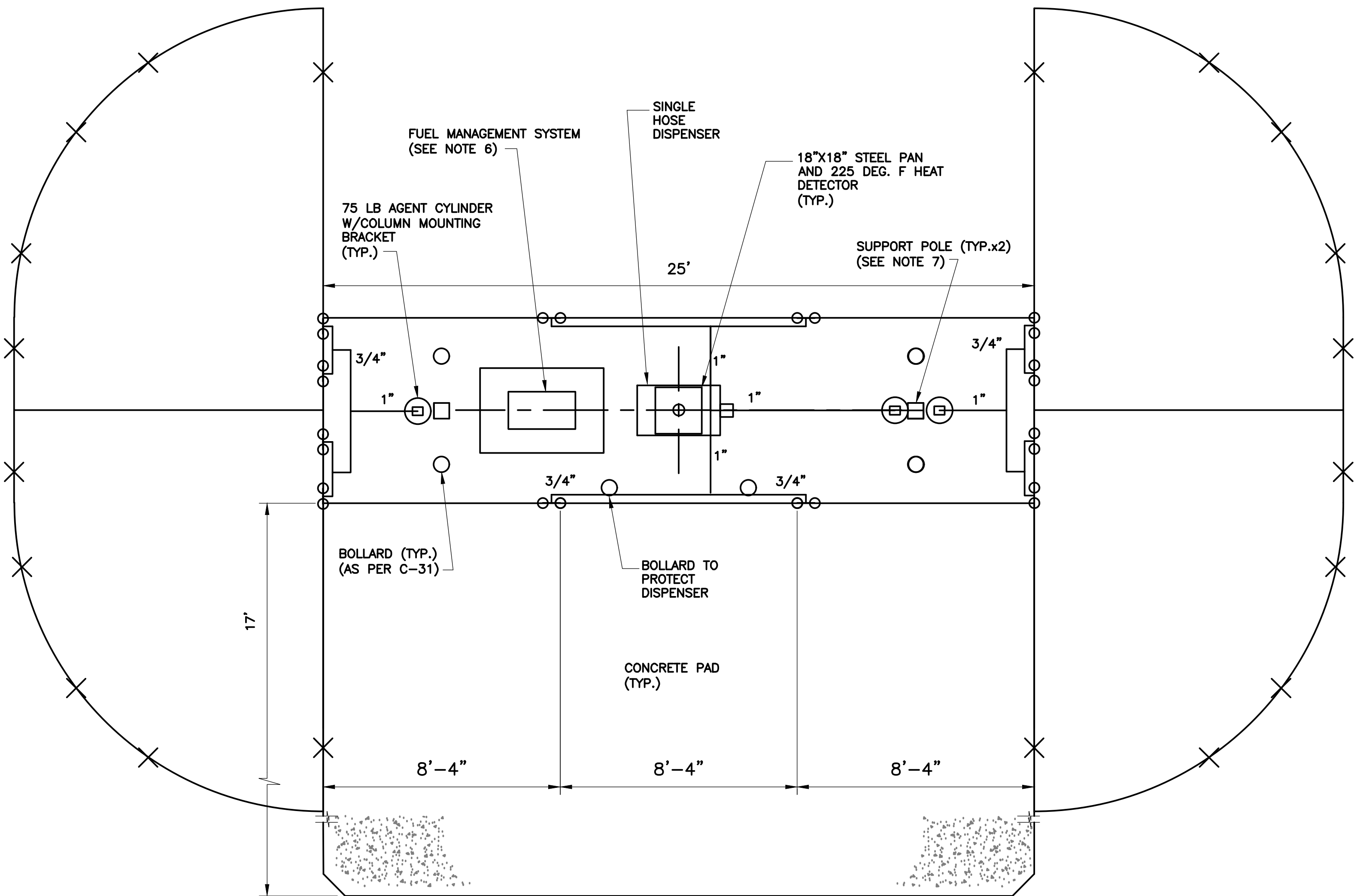
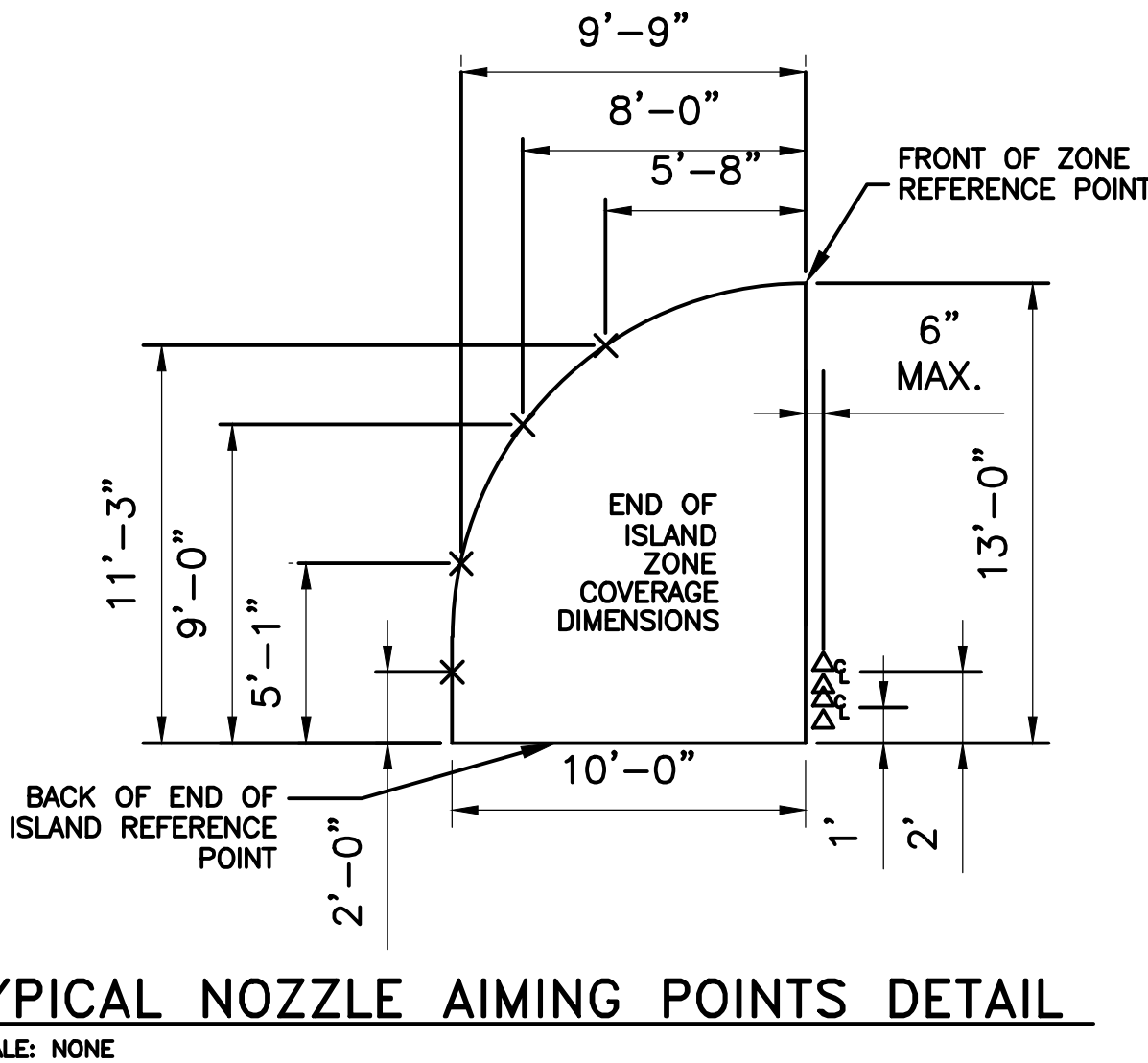
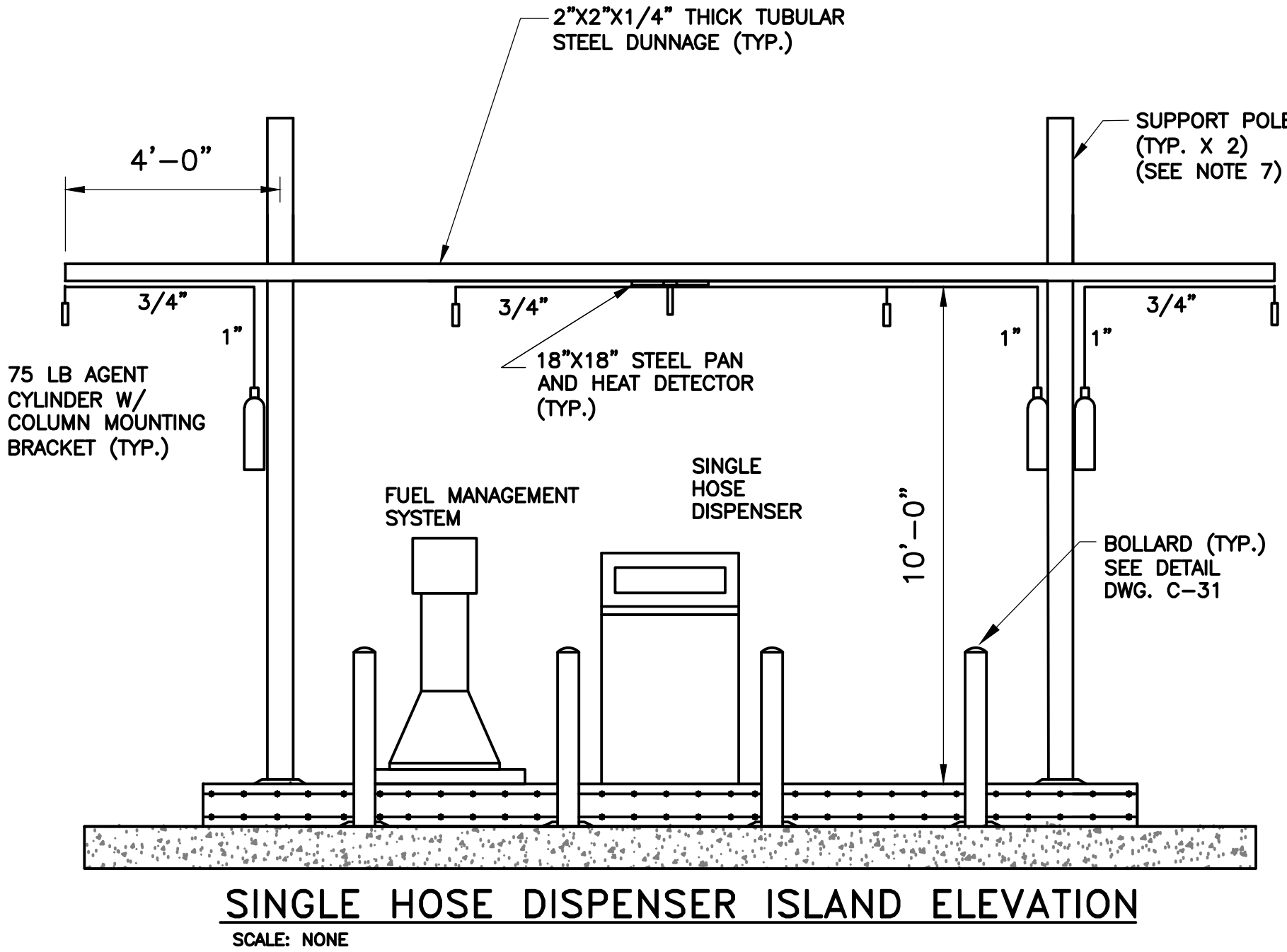
MARK	DATE	DESCRIPTION
	1/31/2025	FINAL SUBMISSION
PROJECT NUMBER:	47674	- C
DESIGNED BY:	M. GUTMANN	
DRAWN BY:	A. KELLY	
FIELD CHECK:	M. WESOLOWSKI	
APPROVED:	M. WESOLOWSKI	

SHEET TITLE:
SINGLE HOSE
DISPENSER ISLAND
FIRE SUPPRESSION
DETAILS

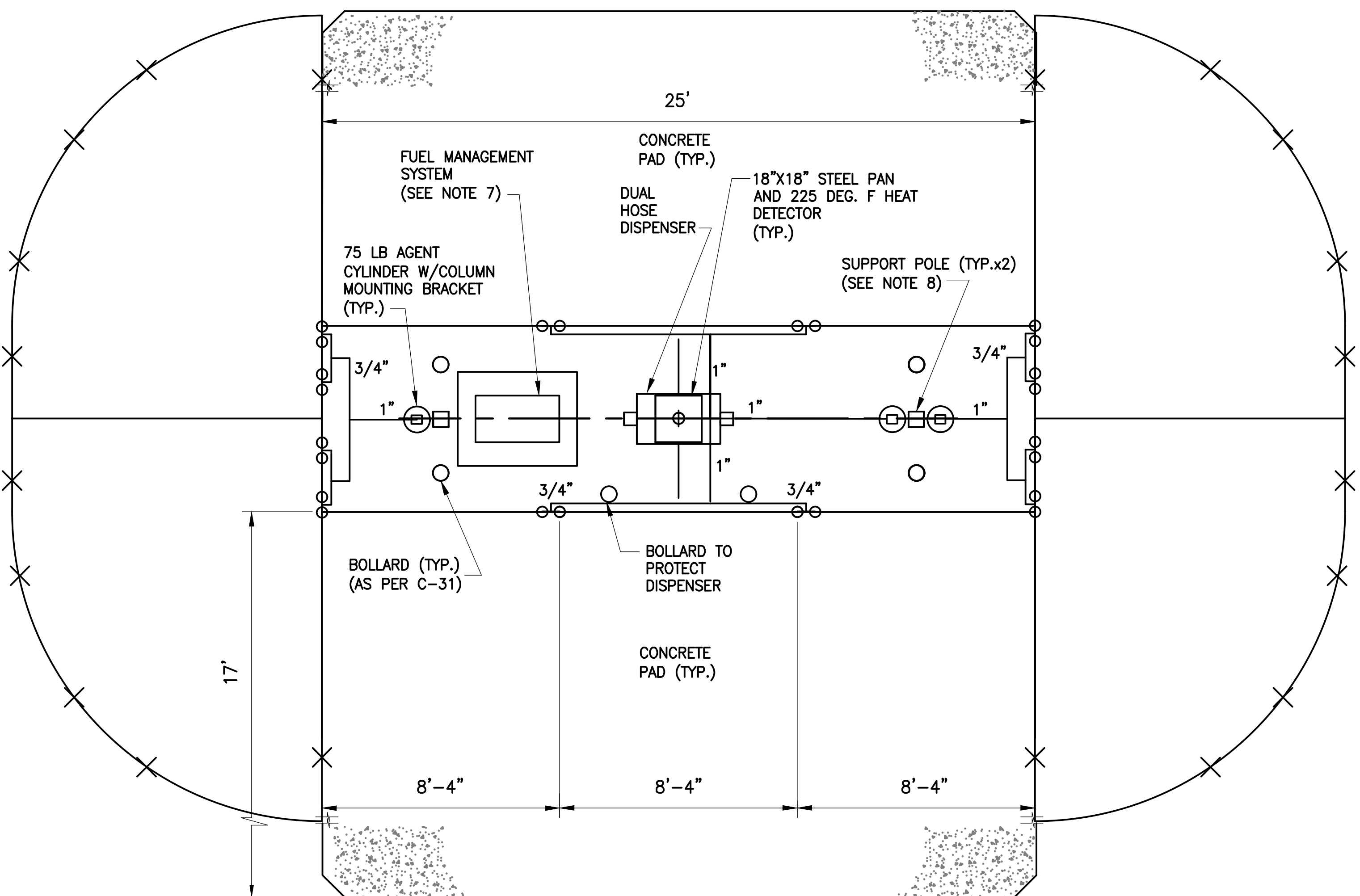
DRAWING NUMBER:
C-23

NOTES:

1. NUMBER OF NOZZLES AND PIPE SIZES ARE DIAGRAM ONLY. ACTUAL PIPE SIZE AND ROUTING TO BE VENDER CERTIFIED AND DESIGNED FOR HAZARD AREA.
2. SYSTEM TO BE UL1254 AND AS PER NFPA-17.
3. DUNNAGE LAYOUT TO BE SUBMITTED FOR DIRECTOR APPROVAL.
4. INSTALL EMERGENCY FUEL PUMP SHUT-OFF SWITCH BETWEEN 20 AND 100 FEET FROM FUEL DISPENSER.
5. FIRE SUPPRESSION SYSTEM MAY BE TIED INTO THE FACILITY'S CENTRAL ALARM SYSTEM. TIE-IN LOCATION AND ARRANGEMENT SHALL BE DETERMINED ON A SITE BY SITE BASIS. CONTRACTOR TO PROVIDE WIRE AND CONDUIT TO ALARM PANEL. FACILITY TO PROVIDE FINAL CONNECTION TO CENTRAL PANEL.
6. FOR ASSET WORKS FUEL MANAGEMENT SYSTEMS, STUB UP ALL REQUIRED CONDUIT IN AN 11" X 11" AREA.
7. FIRE SUPPRESSION SYSTEM SUPPORT POLES ARE PROHIBITED FROM BEING USED AS LIGHTING SUPPORT POLES. PROVIDE LIGHT POLES SEPARATELY.

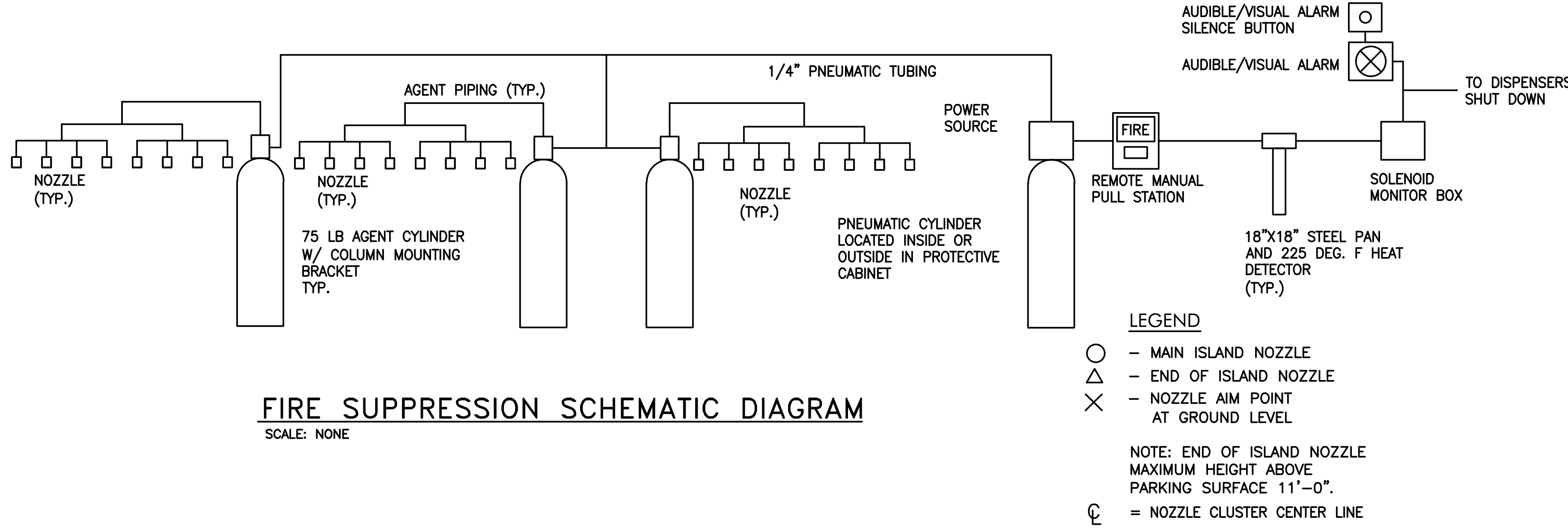


FIRE SUPPRESSION SCHEMATIC DIAGRAM
SCALE: NONE



DUAL HOSE DISPENSER ISLAND PLAN

SCALE: NONE

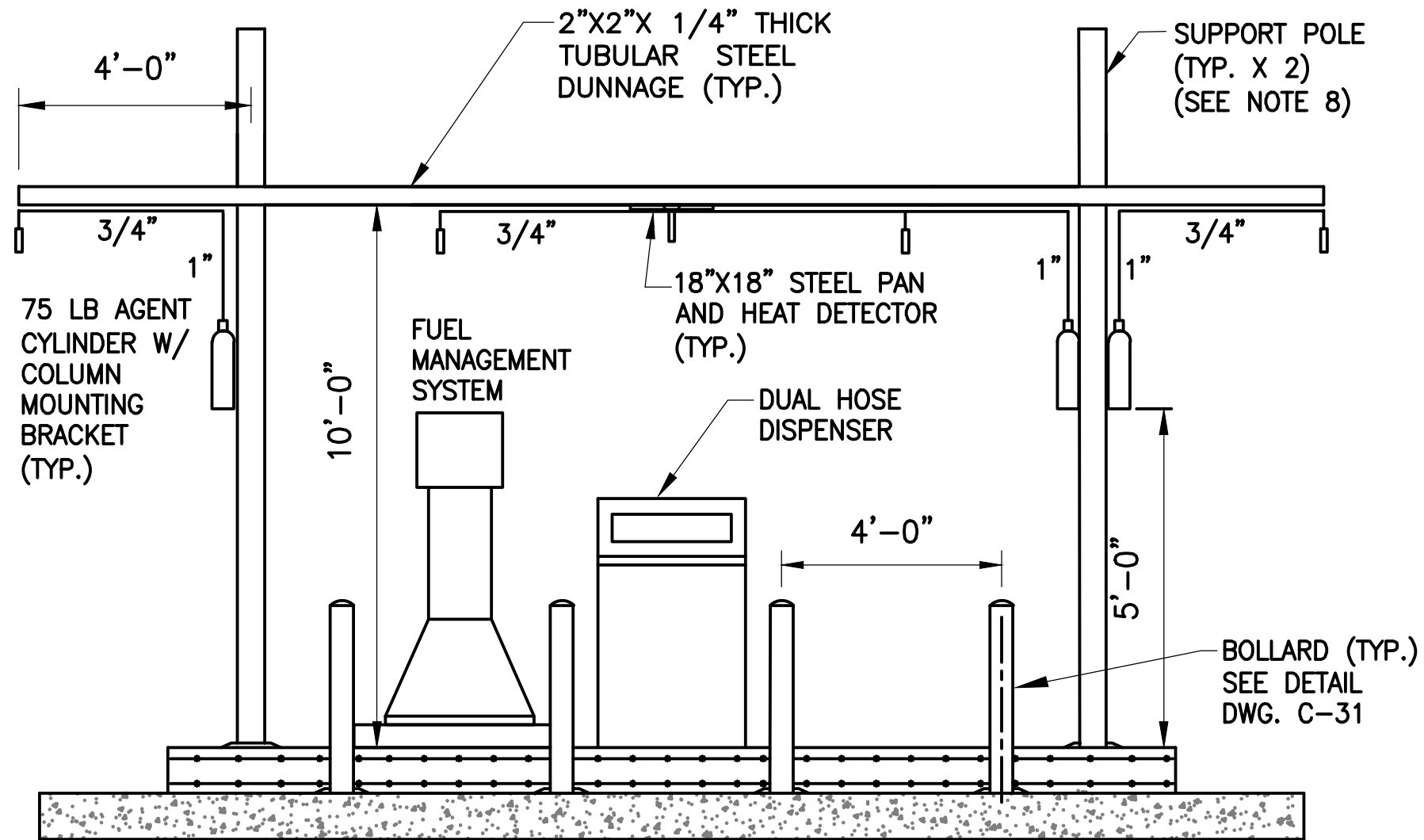


FIRE SUPPRESSION SCHEMATIC DIAGRAM

SCALE: NONE

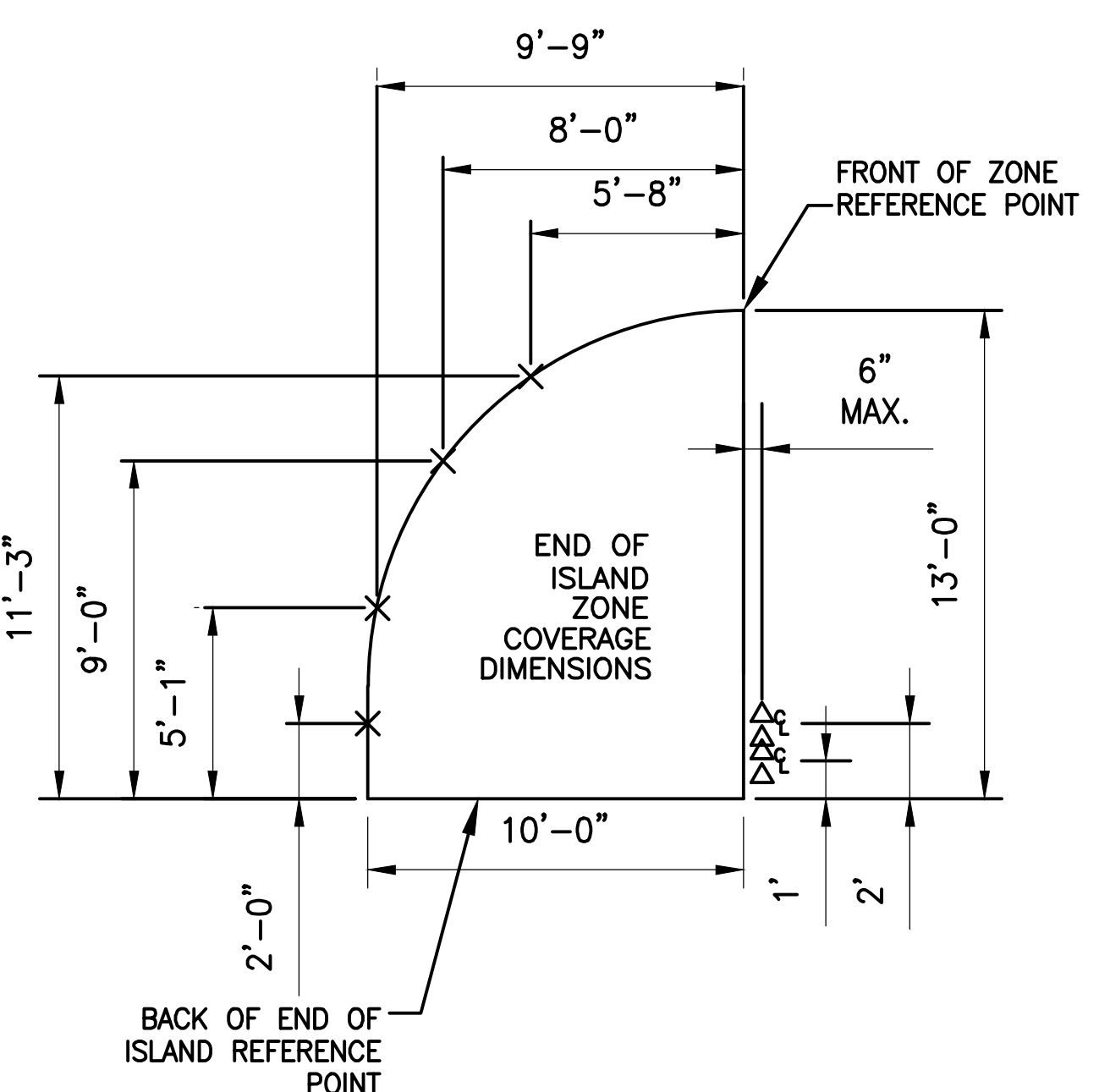
NOTES:

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6. AVOID HOSE ARCS INTERSECTING TO MINIMIZE AREA COVERED BY FIRE SUPPRESSION SYSTEM.
7. FOR ASSET WORKS FUEL MANAGEMENT SYSTEMS, STUB UP ALL REQUIRED CONDUIT IN AN 11" X 11" AREA.
8. FIRE SUPPRESSION SYSTEM SUPPORT POLES ARE PROHIBITED FROM BEING USED AS LIGHTING SUPPORT POLES. PROVIDE LIGHT POLES SEPARATELY.




DUAL HOSE DISPENSER ISLAND ELEVATION

SCALE: NONE



TYPICAL NOZZLE AIMING POINTS DETAIL

SCALE: NONE




Office of
General Services

DESIGN & CONSTRUCTION

CONSULTANT

CERTIFICATE OF AUTHORIZATION #: 0017905



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STATE OF NEW YORK
JULIAN I. WESOLOWSKI
NO. 02454
PROFESSIONAL ENGINEER
REGISTRATION EXPIRES
12/31/2026

CONTRACT

CONSTRUCTION

TITLE: FUEL TANK MODIFICATION AND
ENVIRONMENTAL REMEDIATION PROGRAM

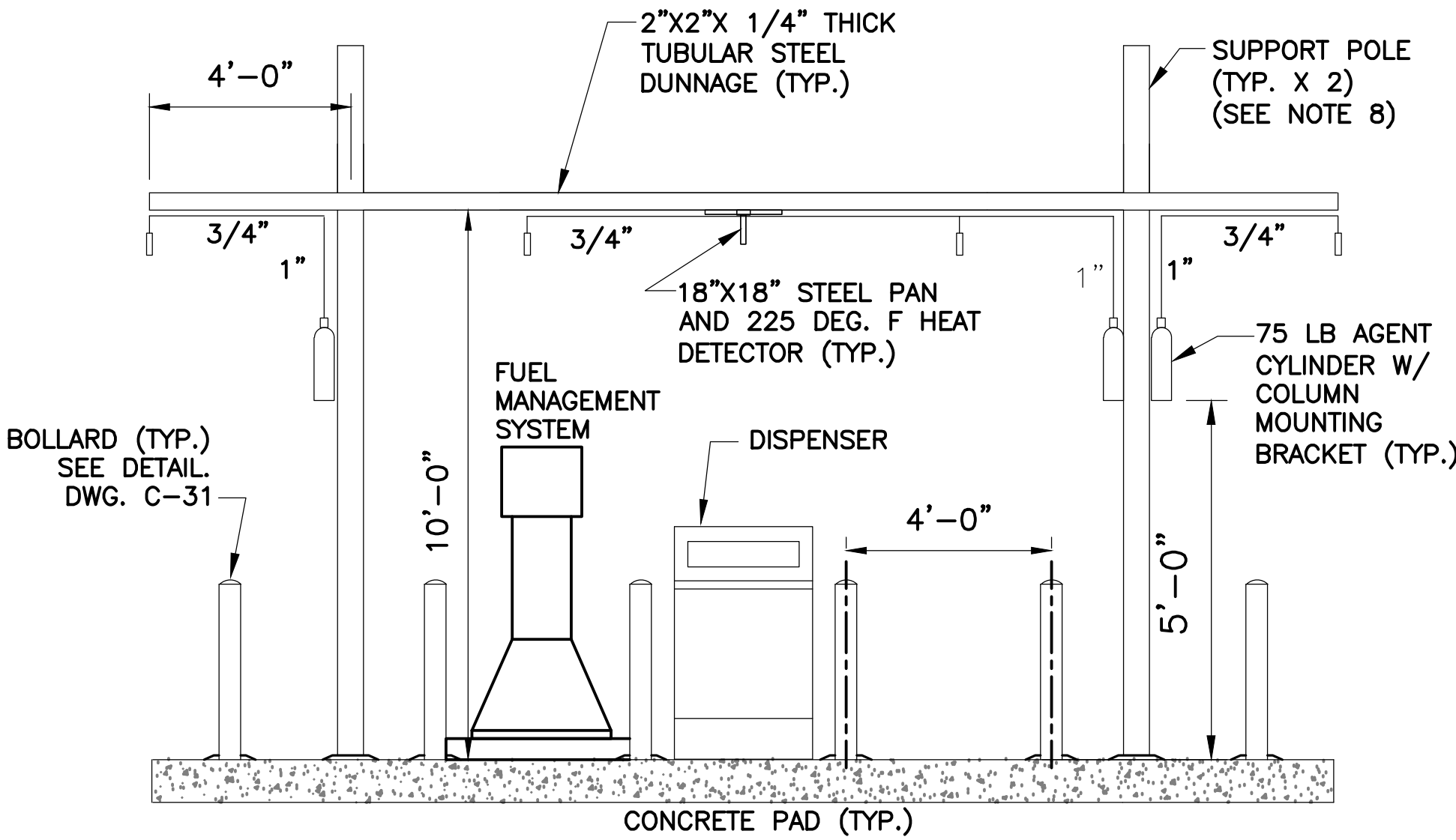
LOCATION: SOUTHERN REGION
VARIOUS FACILITIES

MARK	DATE	DESCRIPTION
	1/31/2025	FINAL SUBMISSION
PROJECT NUMBER:	47674	- C
DESIGNED BY:	M. GUTMANN	
DRAWN BY:	A. KELLY	
FIELD CHECK:	M. WESOLOWSKI	
APPROVED:	M. WESOLOWSKI	
SHEET TITLE:	DUAL HOSE DISPENSER ISLAND FIRE SUPPRESSION DETAILS	
DRAWING NUMBER:	C-24	

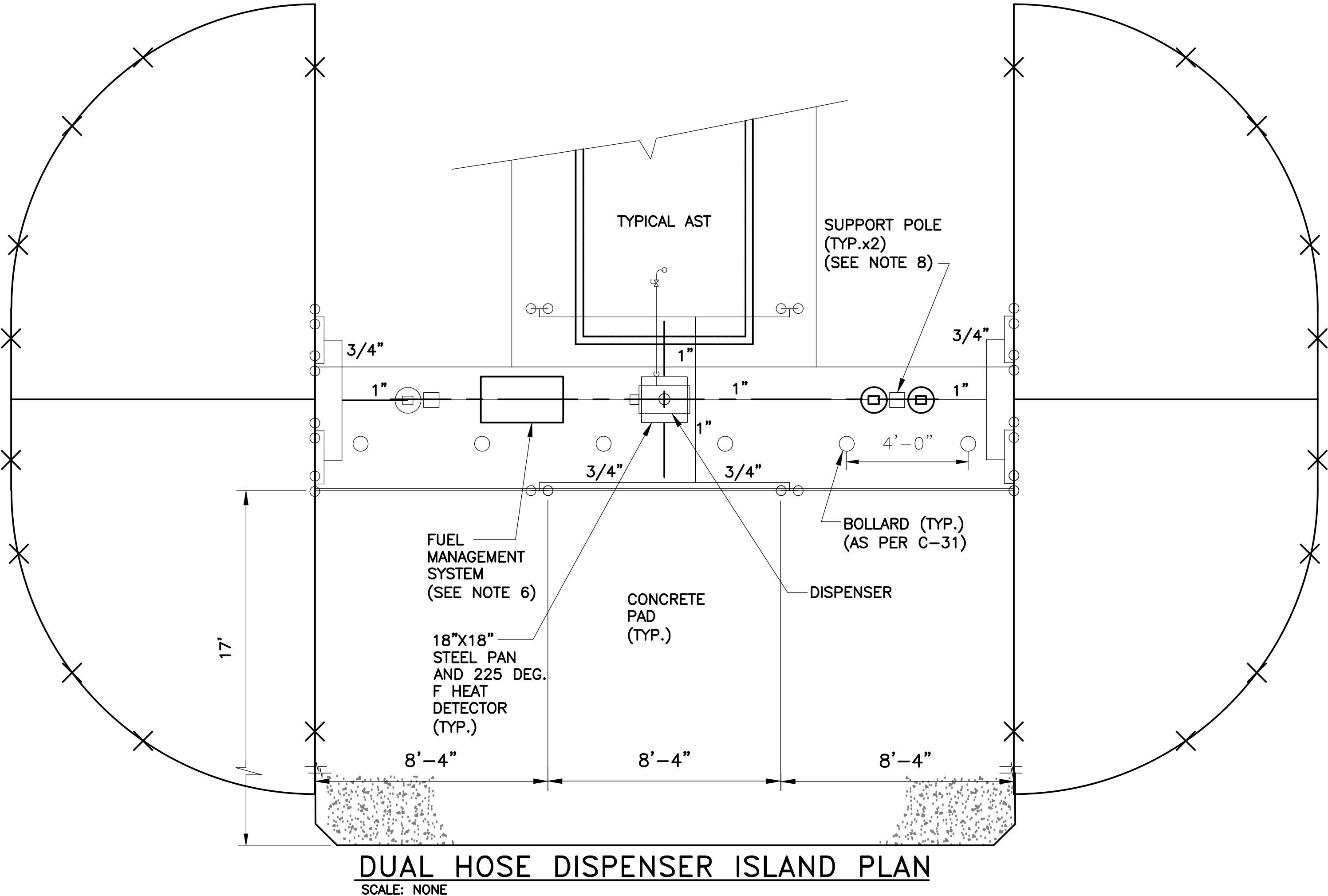
SHEET 26 OF 57

MARK	DATE	DESCRIPTION
	1/31/2025	FINAL SUBMISSION
PROJECT NUMBER:	47674	- C
DESIGNED BY:	M. GUTMANN	
DRAWN BY:	A. KELLY	
FIELD CHECK:	M. WESOLOWSKI	
APPROVED:	M. WESOLOWSKI	
SHEET TITLE: ABOVEGROUND FUEL STORAGE TANK SINGLE AND DUAL HOSE DISPENSER AND ISLAND DETAILS		

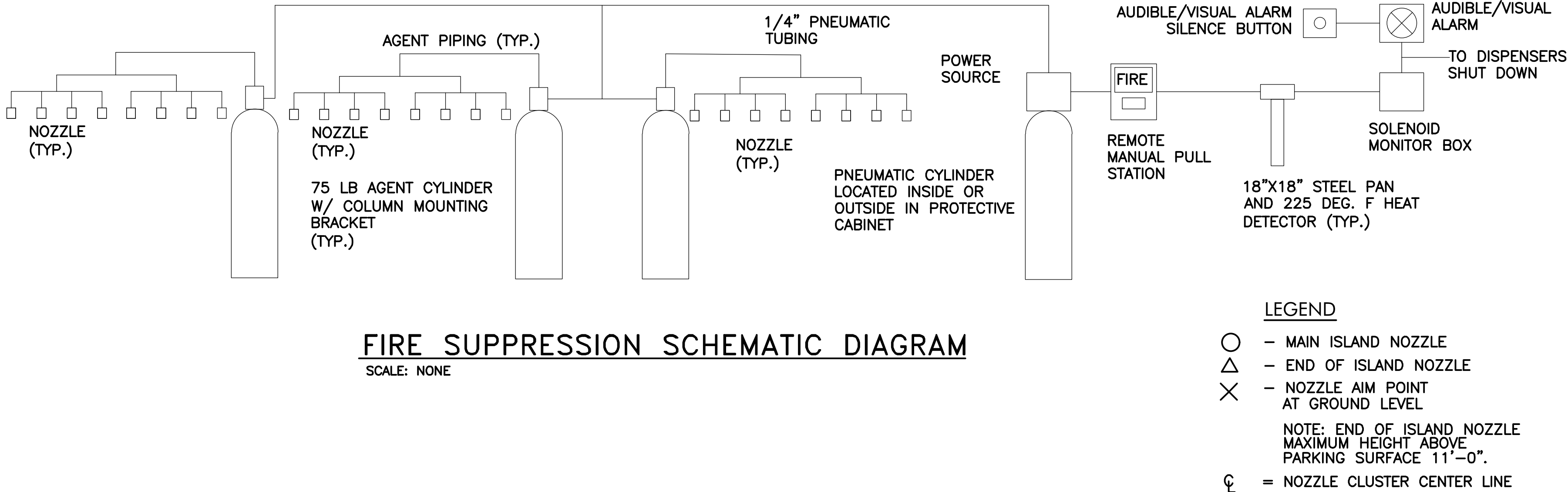
- NOTES:
1. NUMBER OF NOZZLES AND PIPE SIZES ARE DIAGRAM ONLY. ACTUAL PIPE SIZE AND ROUTING TO BE VENDER CERTIFIED AND DESIGNED FOR HAZARD AREA.
 2. SYSTEM TO BE UL1254 AND AS PER NFPA-17.
 3. DUNNAGE LAYOUT TO BE SUBMITTED FOR DIRECTOR APPROVAL.
 4. INSTALL EMERGENCY FUEL PUMP SHUT-OFF SWITCH BETWEEN 20 AND 100 FEET FROM FUEL DISPENSER.
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 6. AVOID HOSE ARCS INTERSECTING TO MINIMIZE AREA COVERED BY FIRE SUPPRESSION SYSTEM.
 7. FOR ASSET WORKS FUEL MANAGEMENT SYSTEMS, STUB UP ALL REQUIRED CONDUIT IN AN 11" X 11" AREA.
 8. FIRE SUPPRESSION SYSTEM SUPPORT POLES ARE PROHIBITED FROM BEING USED AS LIGHTING SUPPORT POLES. PROVIDE LIGHT POLES SEPARATELY.



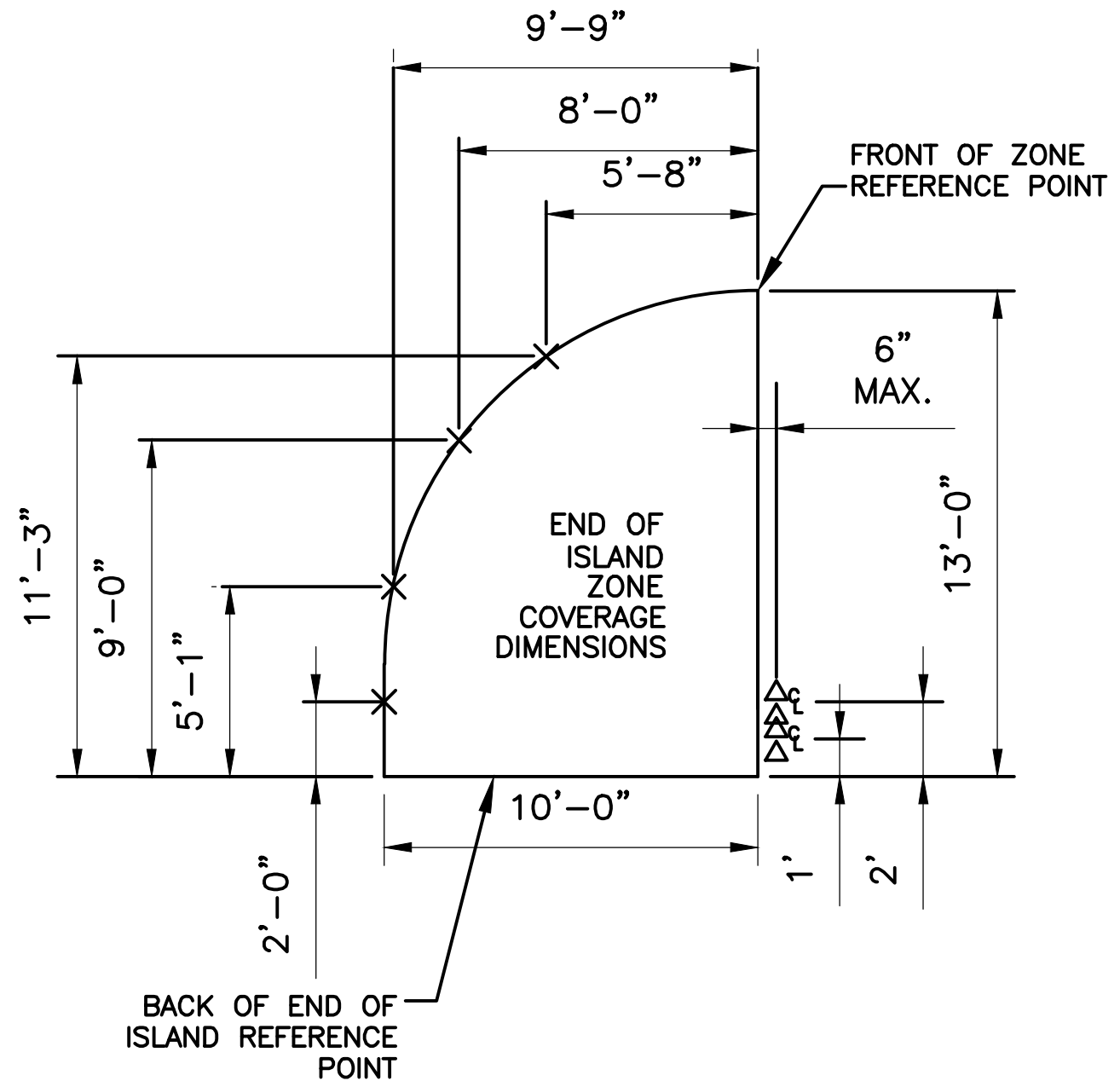
DUAL HOSE DISPENSER ISLAND ELEVATION
SCALE: NONE



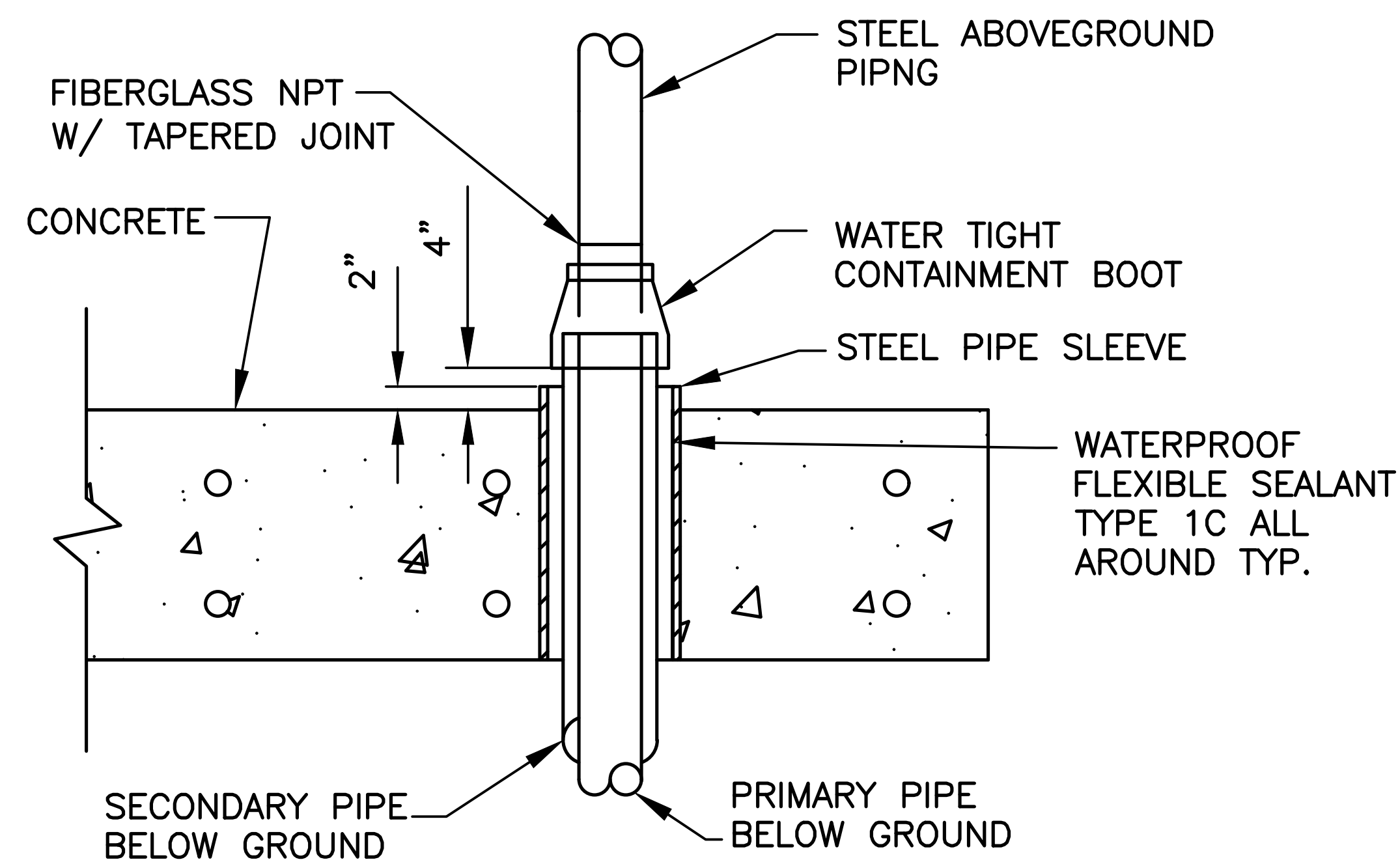
DUAL HOSE DISPENSER ISLAND PLAN
SCALE: NONE



FIRE SUPPRESSION SCHEMATIC DIAGRAM
SCALE: NONE

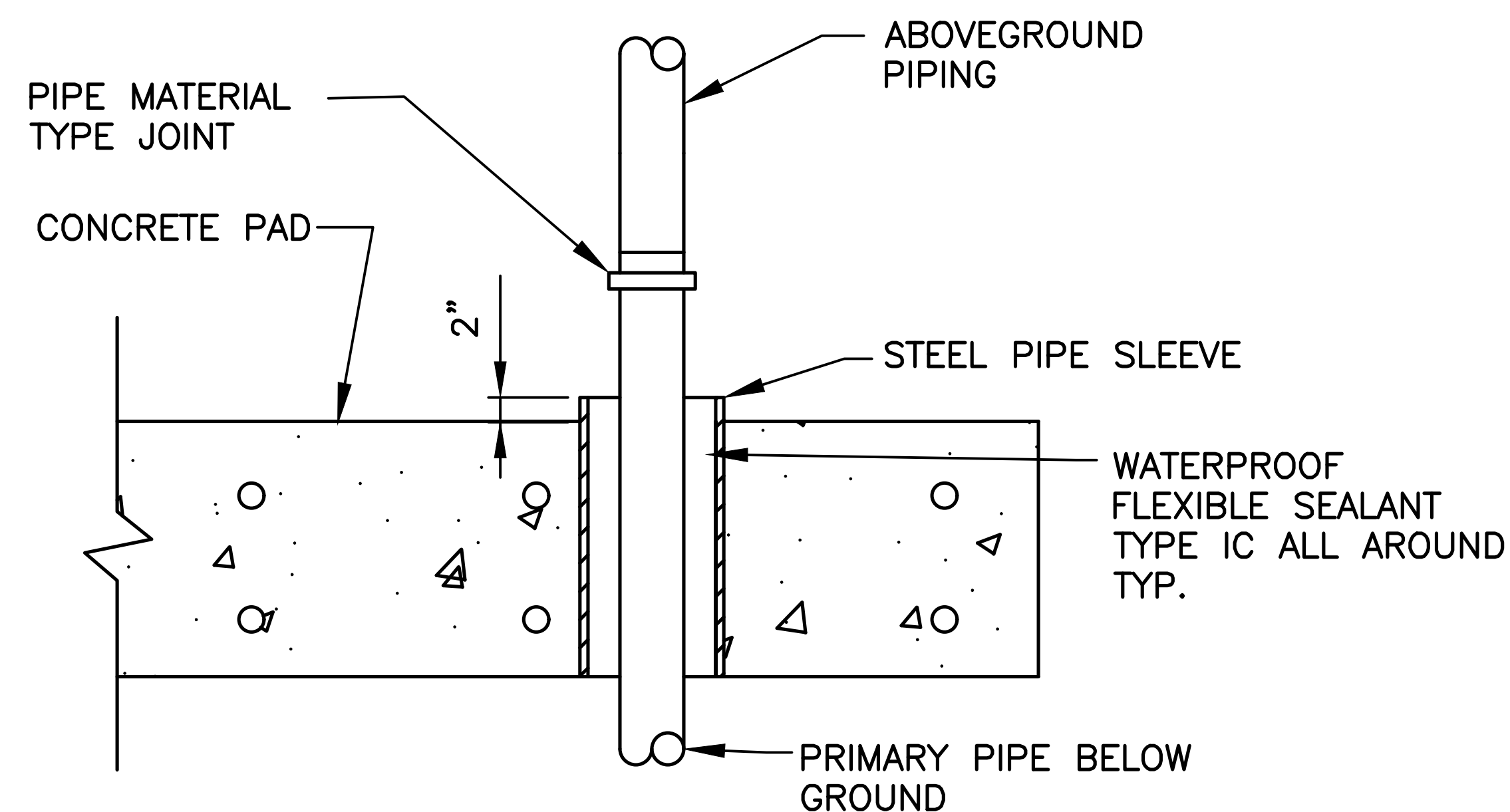


TYPICAL NOZZLE AIMING POINTS DETAIL
SCALE: NONE



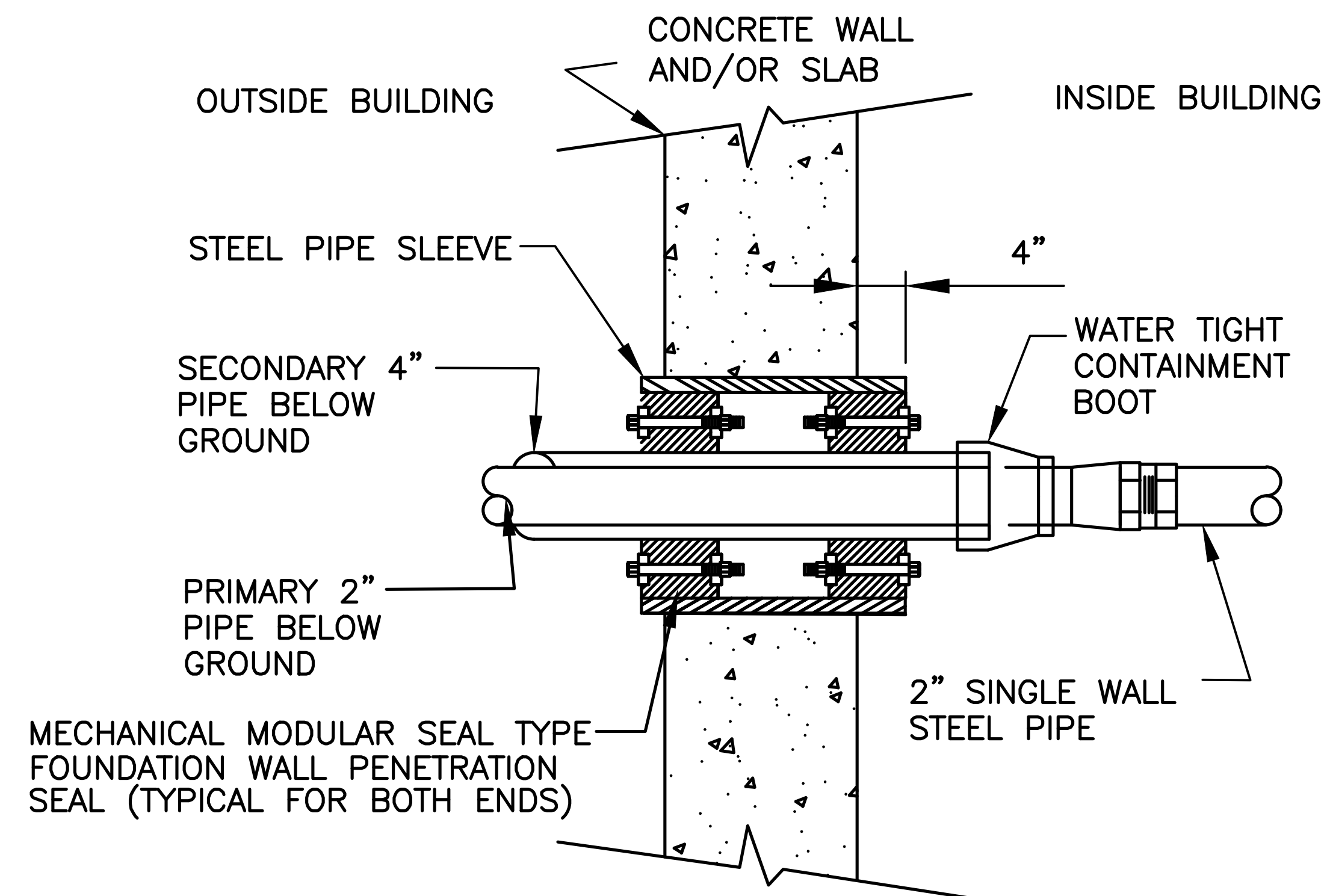
DOUBLEWALL PIPING SLAB PENETRATION DETAIL

SCALE: NONE



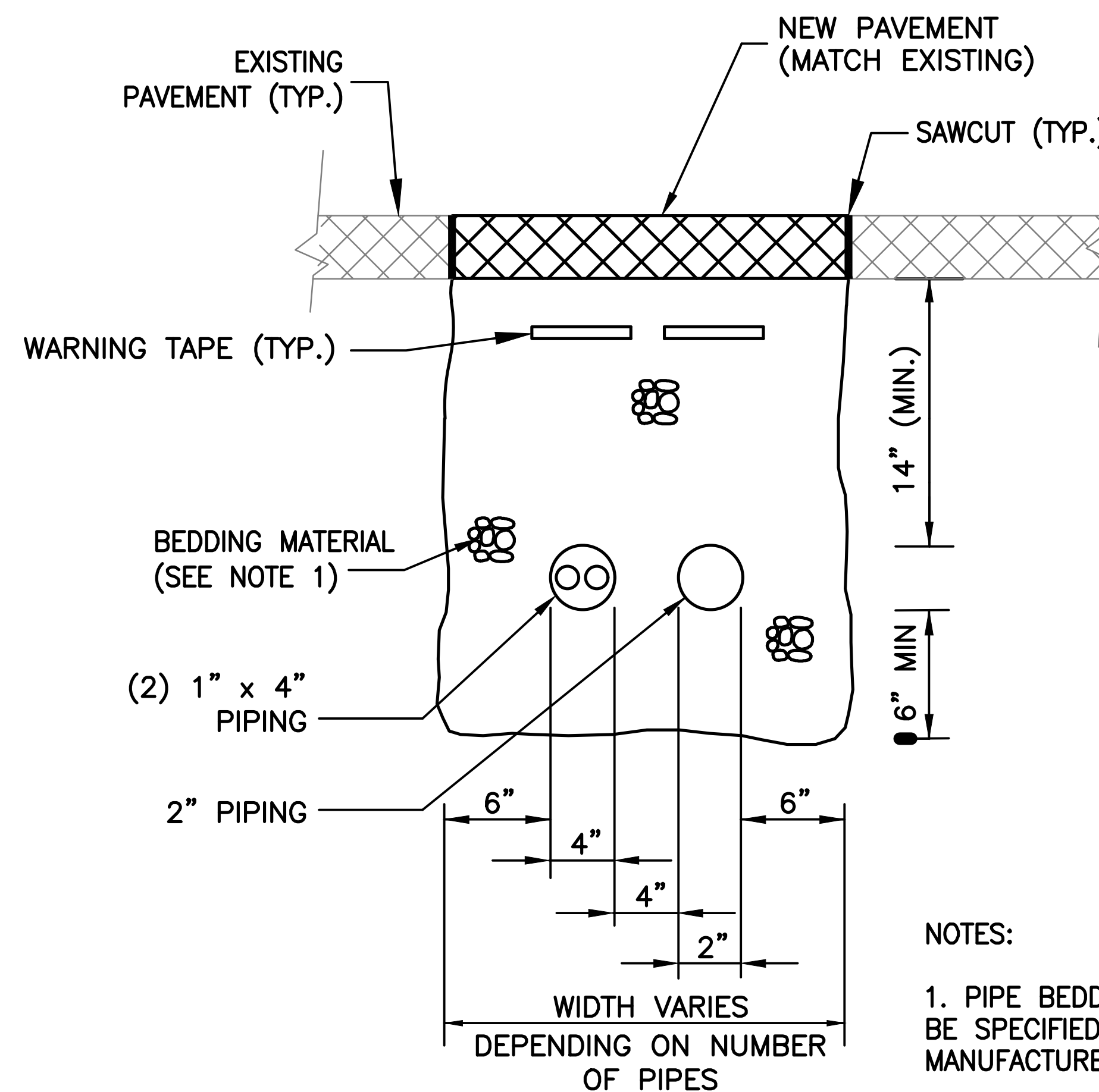
SINGLEWALL SLAB PENETRATION DETAIL

SCALE: NONE



WATER TIGHT PENETRATION DETAIL

SCALE: NONE



PIPING TRENCH DETAIL

SCALE: NONE

NEW YORK STATE OF CHANCERY | **Office of General Services**

DESIGN & CONSTRUCTION

CONSULTANT

CERTIFICATE OF AUTHORIZATION #: 0017005

LiRo Engineers, Inc.
3 Aerial Way, Syosset, New York

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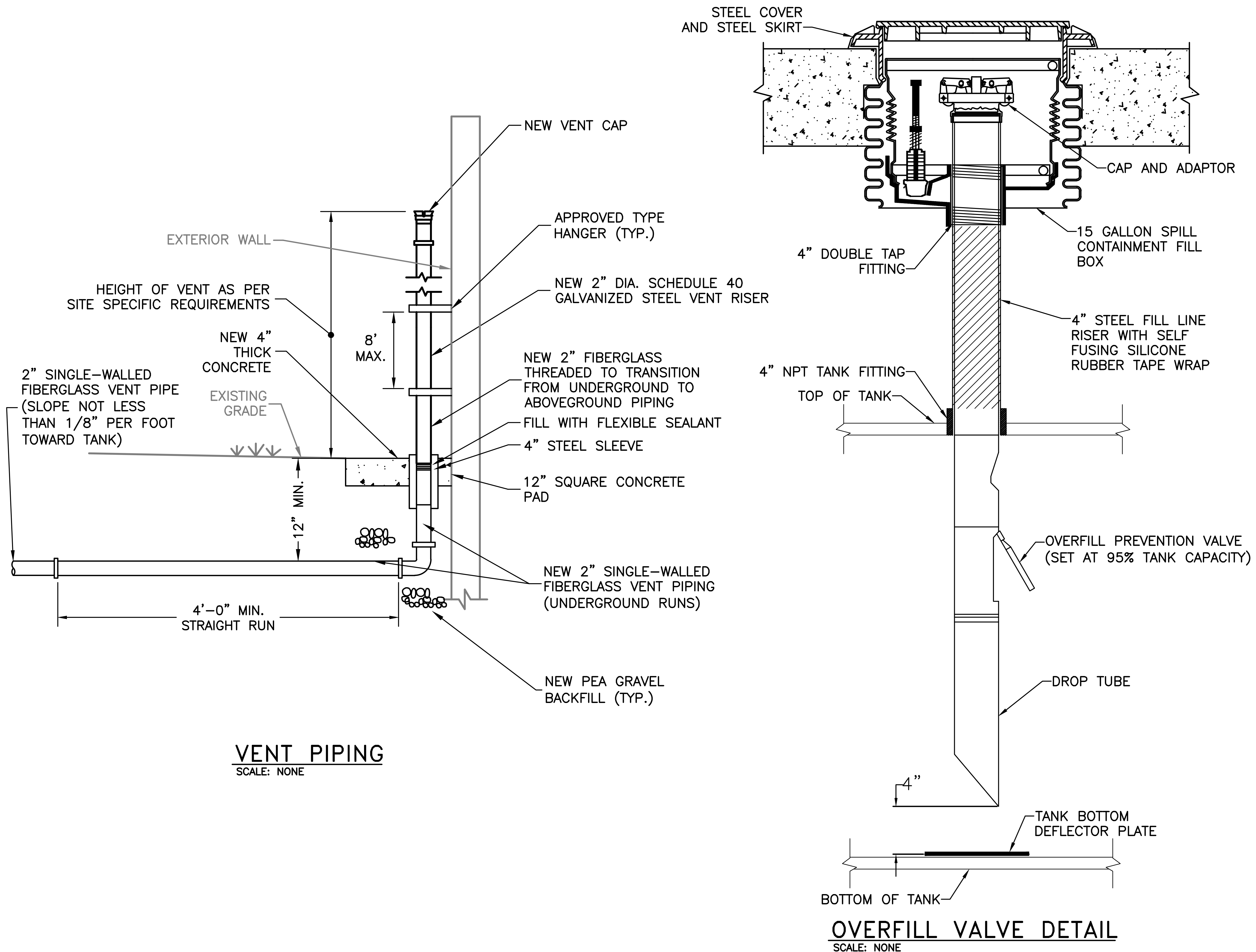
STATE OF NEW YORK
MARTIN I. WESOLOWSKI
NO 074264
PROFESSIONAL ENGINEER
REGISTRATION EXPIRES: 12/31/2026

CONSTRUCTION

TITLE: FUEL TANK MODIFICATION AND ENVIRONMENTAL REMEDIATION PROGRAM

LOCATION: SOUTHERN REGION VARIOUS FACILITIES

	1/31/2025	FINAL SUBMISSION
MARK	DATE	DESCRIPTION
PROJECT NUMBER:	47674 — C	
DESIGNED BY:	M. GUTMANN	
DRAWN BY:	A. KELLY	
FIELD CHECK:	M. WESOLOWSKI	
APPROVED:	M. WESOLOWSKI	
SHEET TITLE:		
PIPING PENETRATION & TRENCH DETAILS		
DRAWING NUMBER:		
C-26		
SHEET	28	OF 57



NEW YORK STATE OF ENVIRONMENT | **Office of General Services**
DESIGN & CONSTRUCTION

CONSULTANT
CERTIFICATE OF AUTHORIZATION #: 0017985

LiRo Engineers, Inc.
3 Aerial Way, Syosset, New York

ENERGY CONSERVATION CONSTRUCTION CODE OF NEW YORK STATE:
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STATE OF NEW YORK
MARK L. WESOLOWSKI
NO. 07426A
PROFESSIONAL ENGINEER
REGISTRATION EXPIRES: 12/31/2026

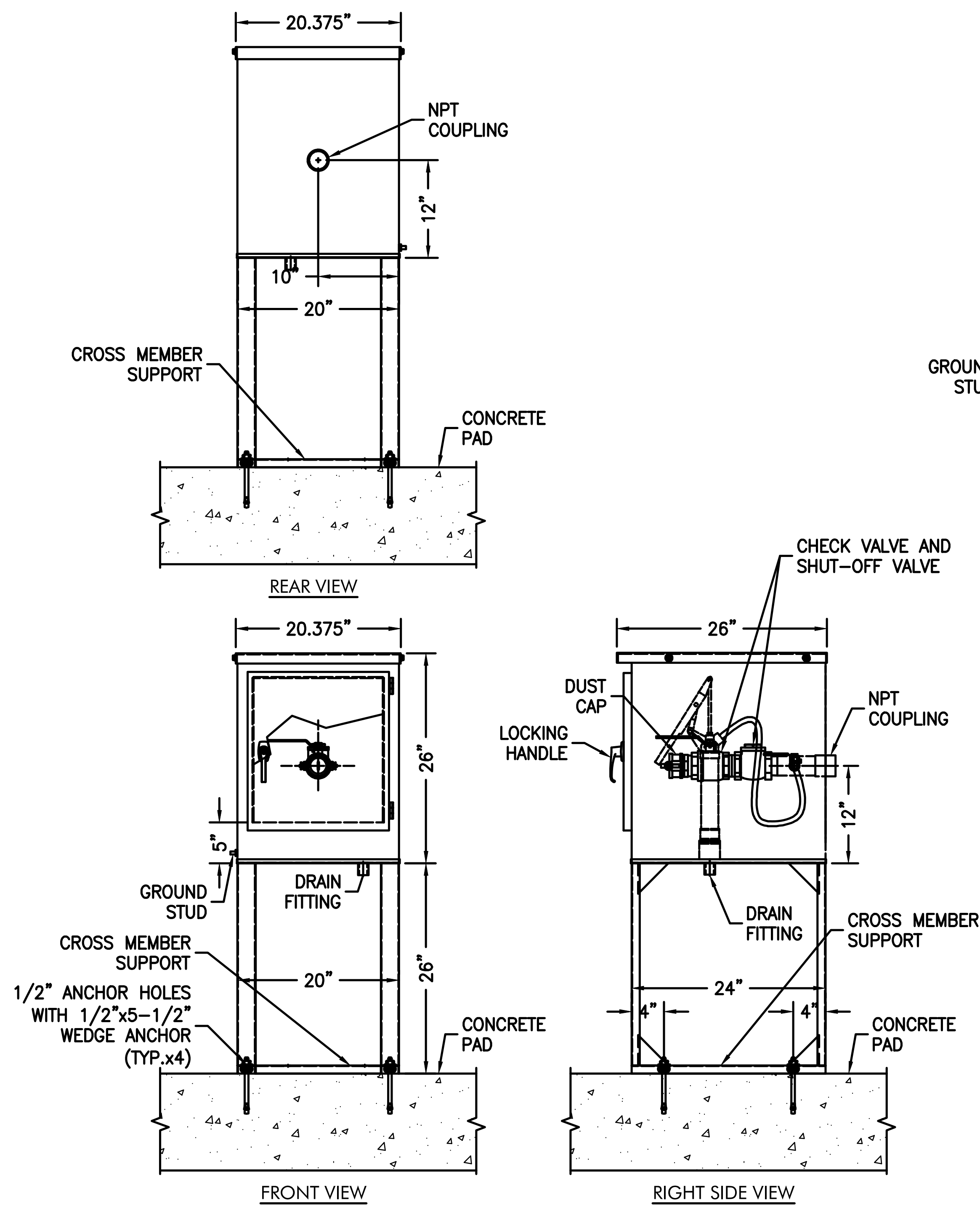
CONTRACT: CONSTRUCTION
TITLE: FUEL TANK MODIFICATION AND ENVIRONMENTAL REMEDIATION PROGRAM
LOCATION: SOUTHERN REGION VARIOUS FACILITIES

MARK	DATE	DESCRIPTION
PROJECT NUMBER:	47674	- C
DESIGNED BY:	M. GUTMANN	
DRAWN BY:	A. KELLY	
FIELD CHECK:	M. WESOLOWSKI	
APPROVED:	M. WESOLOWSKI	

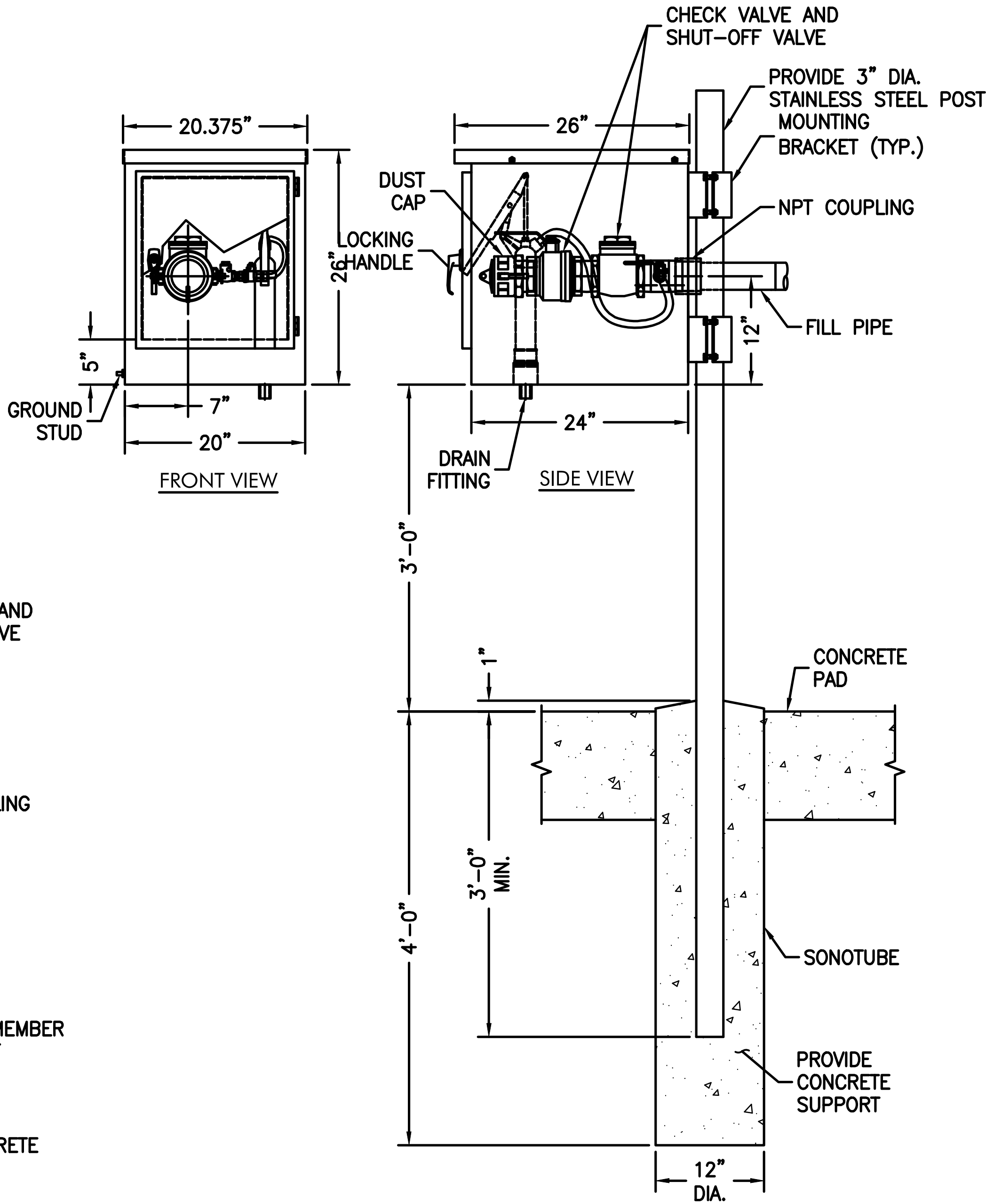
SHEET TITLE:
UST OVERFILL VALVE AND VENT PIPING DETAIL

DRAWING NUMBER:
C-27

SHEET 29 OF 57




TYPICAL SPILL CONTAINMENT STAND MOUNT DETAIL
SCALE: NONE



TYPICAL SPILL CONTAINMENT POST MOUNT DETAIL
SCALE: NONE


10-GALLON SPILL CONTAINMENT
FAIRFIELD INDUSTRIES ARFP SERIES OR EQUAL



DESIGN & CONSTRUCTION

CONSULTANT

CERTIFICATE OF AUTHORIZATION #: 0017985




LiRo Engineers, Inc.
3 Aerial Way, Syosset, New York

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CONTRACT:

CONSTRUCTION

TITLE: FUEL TANK MODIFICATION AND ENVIRONMENTAL REMEDIATION PROGRAM

LOCATION: SOUTHERN REGION
VARIOUS FACILITIES

MARK	DATE	DESCRIPTION
	1/31/2025	FINAL SUBMISSION

PROJECT NUMBER: 47674 — C

DESIGNED BY: M. GUTMANN

DRAWN BY: A. KELLY

FIELD CHECK: M. WESOLOWSKI

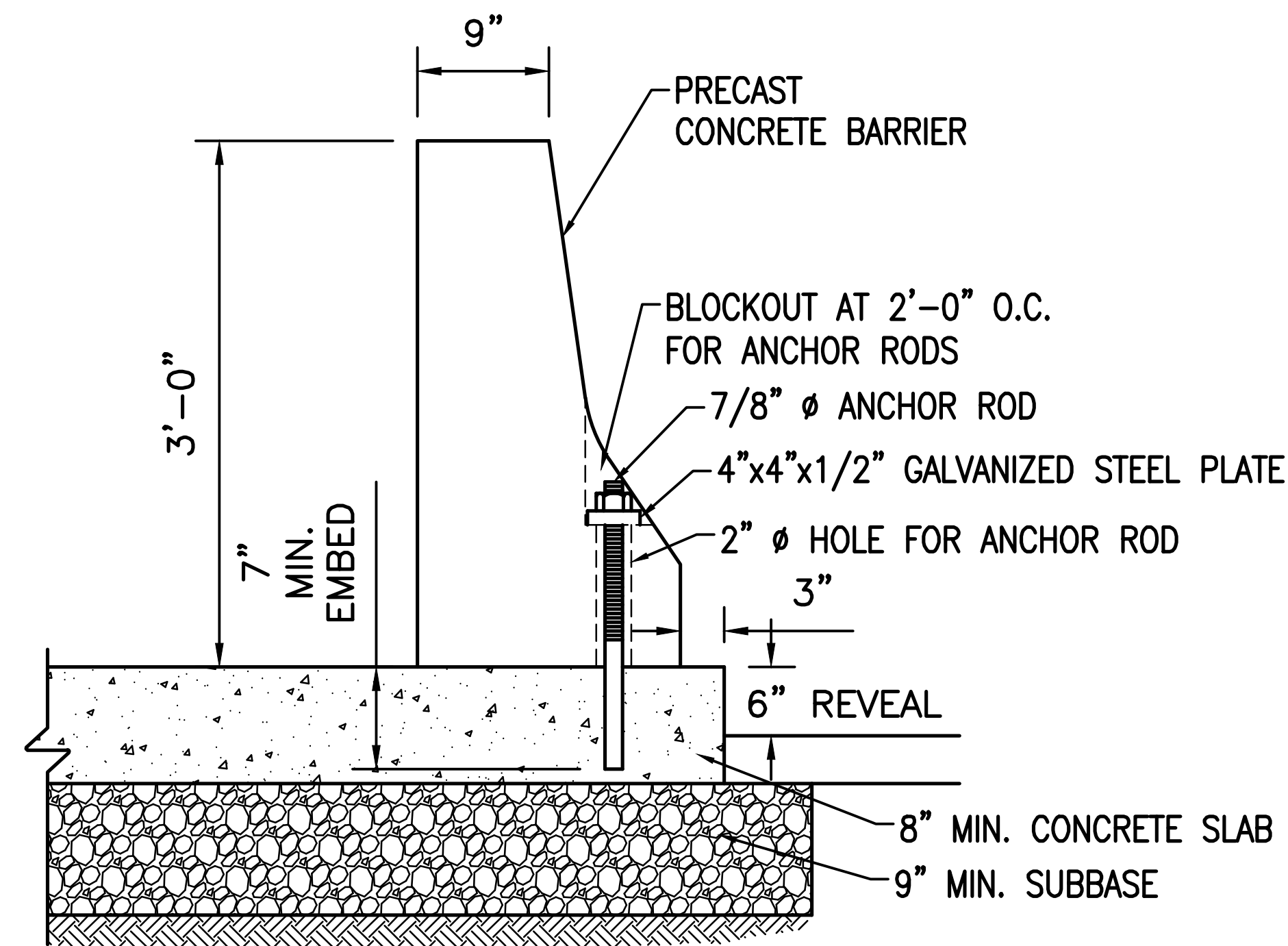
APPROVED: M. WESOLOWSKI

SHEET TITLE:

SPILL CONTAINMENT MOUNTING DETAILS

DRAWING NUMBER: C-28

SHEET 30 OF 57

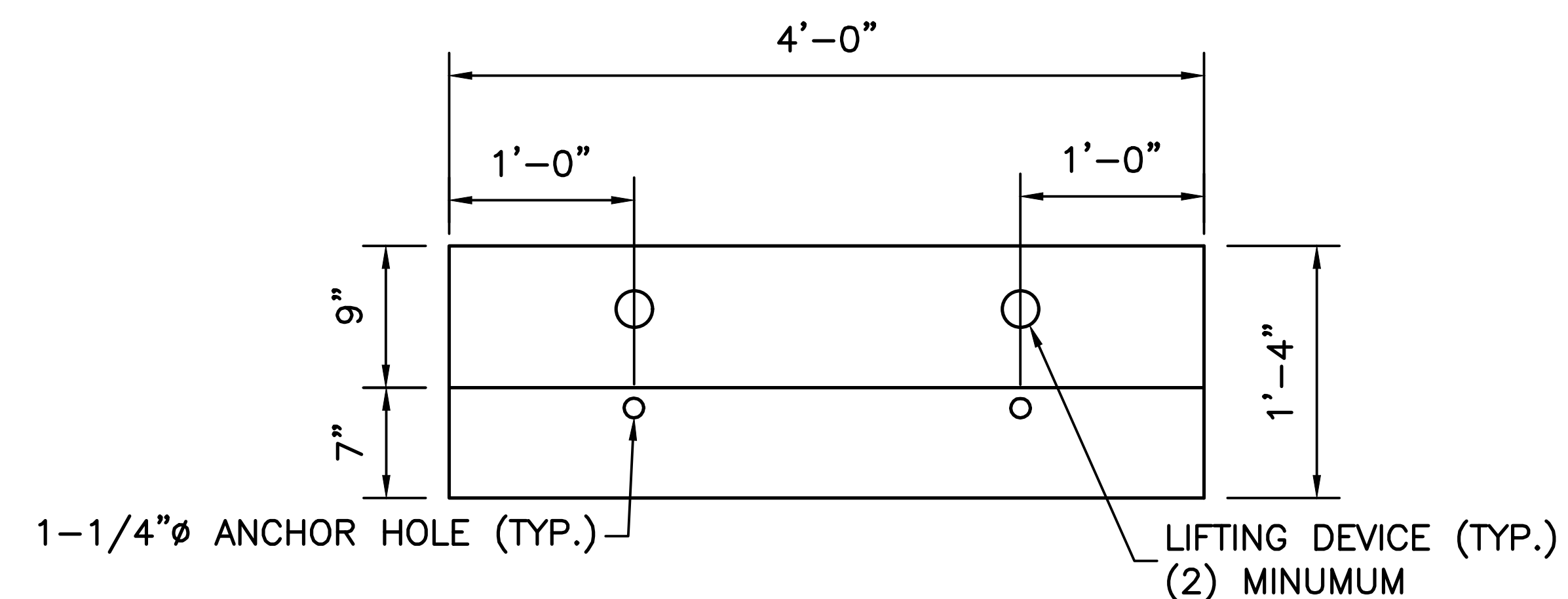
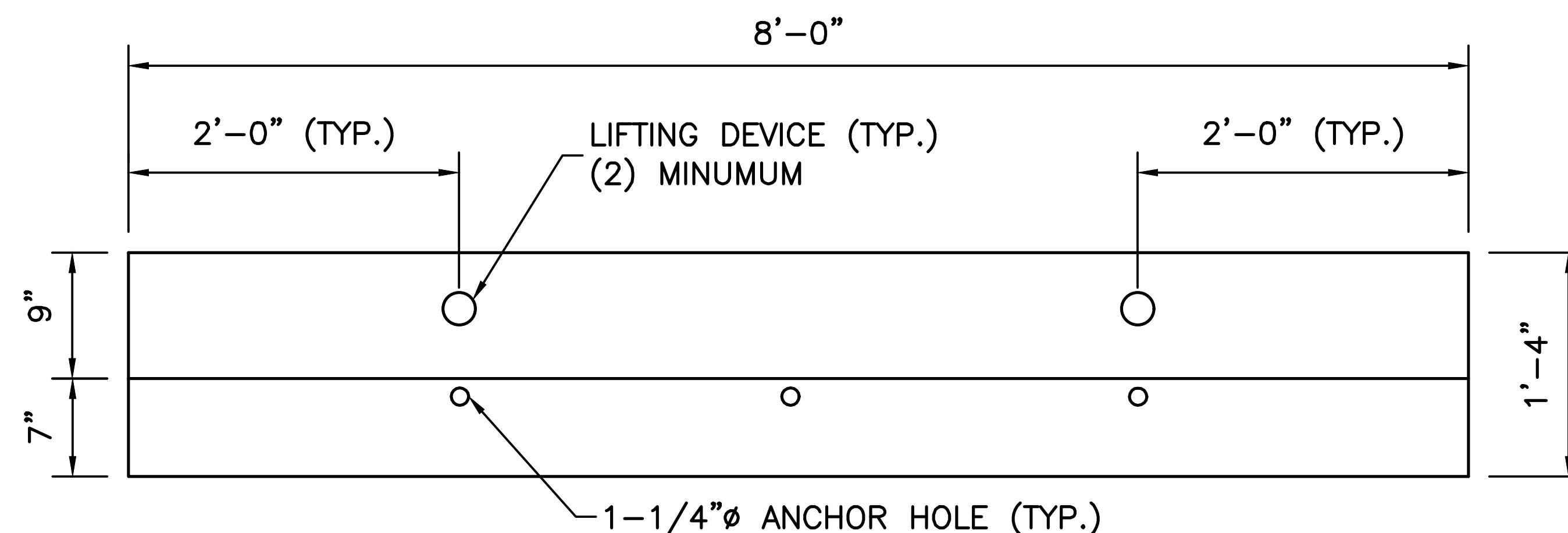


CONCRETE BARRIER ATTACHMENT DETAIL

SCALE: NONE

NOTES:

1. CONCRETE FOR THE SLAB-ON-GRADE SHALL HAVE A MINIMUM 28 DAY COMPRESSIVE STRENGTH OF 4,000 PSI.
2. CONCRETE FOR THE PRECAST CONCRETE BARRIER SHALL HAVE A MINIMUM 28 DAY COMPRESSIVE STRENGTH OF 5,000 PSI.
3. ANCHOR RODS SHALL BE 7/8" DIAMETER AND HAVE AN ULTIMATE TENSILE STRENGTH OF 60 KSI.
4. THE 4"x4"x1/2" STEEL PLATE SHALL HAVE A MINIMUM YIELD STRENGTH OF 36 KSI.
5. ANCHOR RODS SHALL BE DRILLED AND GROUTED INTO CONCRETE SLAB USING HILTI HVU CAPSULE ADHESIVE ANCHORING SYSTEM OR APPROVED EQUAL. ULTIMATE BOND/CONCRETE CAPACITY IN TENSION SHALL BE 36 KIPS.
6. AFTER ANCHOR RODS ARE INSTALLED IN CONCRETE SLAB, SET PRECAST BARRIER AND GROUT ANCHOR ROD HOLES IN BARRIER WITH NON-SHRINK GROUT FROM NYSDOT APPROVED MATERIALS LIST.
7. AFTER ANCHOR ROD HOLES ARE GROUTED, INSTALL 4"x4"x1/2" STEEL PLATE AND HEX NUT. TIGHTEN HEX NUT AND GROUT BLOCK-OUTS IN BARRIER WITH NON-SHRINK GROUT.
8. PROVIDE MINIMUM 3 FOOT DISTANCE BETWEEN THE TANK AND BOLLARD/BARRIER FOR NON IMPACT RESISTANT TANKS. IN ACCORDANCE WITH 2020 FIRE CODE OF NYS 2306.4 PHYSICAL PROTECTION, BOLLARDS/BARRIERS ARE NOT REQUIRED FOR UL-2085 IMPACT RESISTANT TANKS. THE BOLLARDS/BARRIERS WILL SERVE AS SECONDARY PROTECTION AND THE 3 FOOT DISTANCE MAY BE REDUCED.
9. PROVIDE BARRIERS THAT ARE A MINIMUM 36" IN HEIGHT RELATIVE TO SURROUNDING GRADE. BARRIERS MAY BE REDUCED IN HEIGHT IF PLACED ON RAISED PAD.






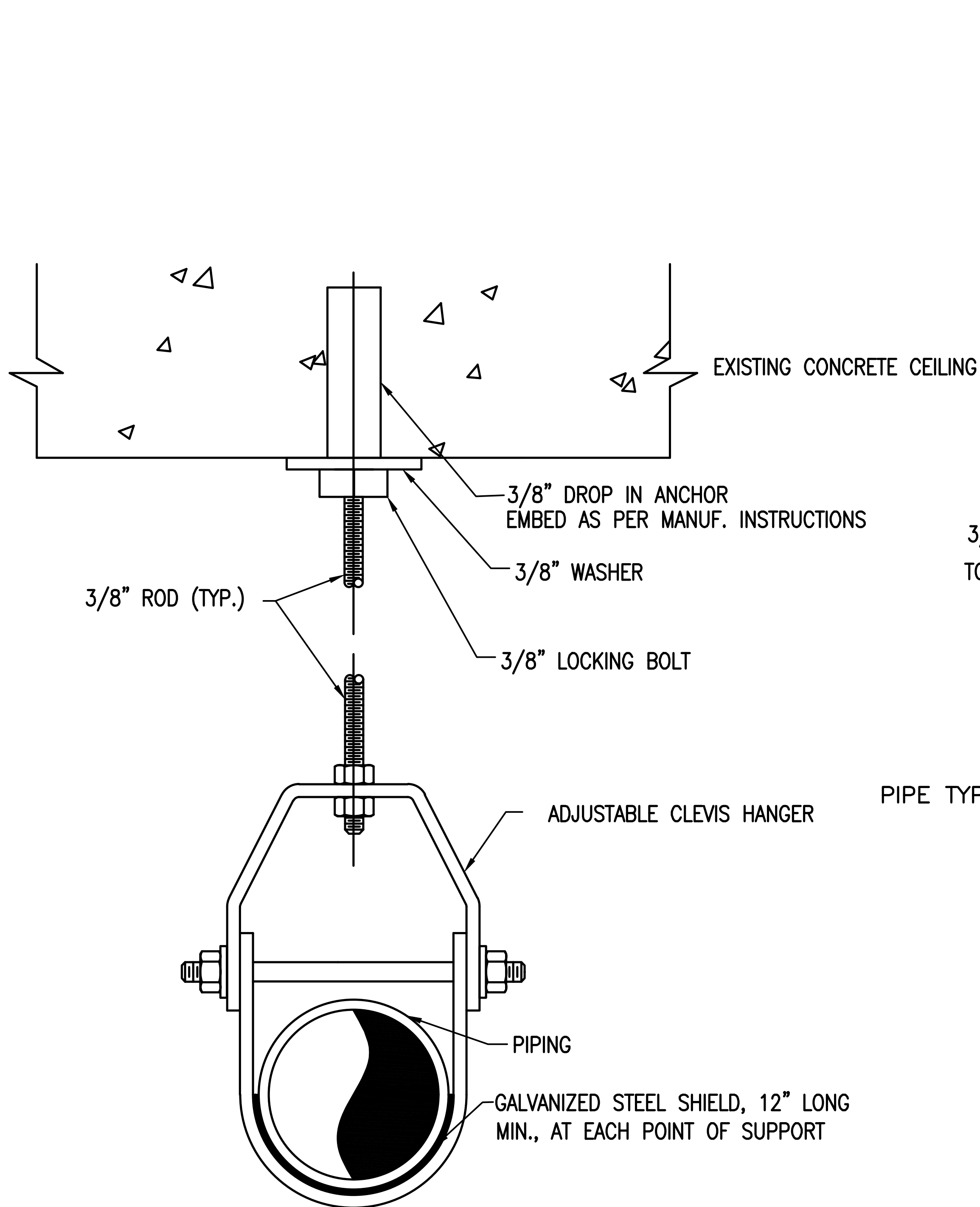
NOTES:

1. FOR 4'-0" BARRIER A MINIMUM OF TWO (2) ANCHOR HOLES ARE REQUIRED.
2. FOR 8'-0" BARRIER A MINIMUM OF THREE (3) ANCHOR HOLES ARE REQUIRED.

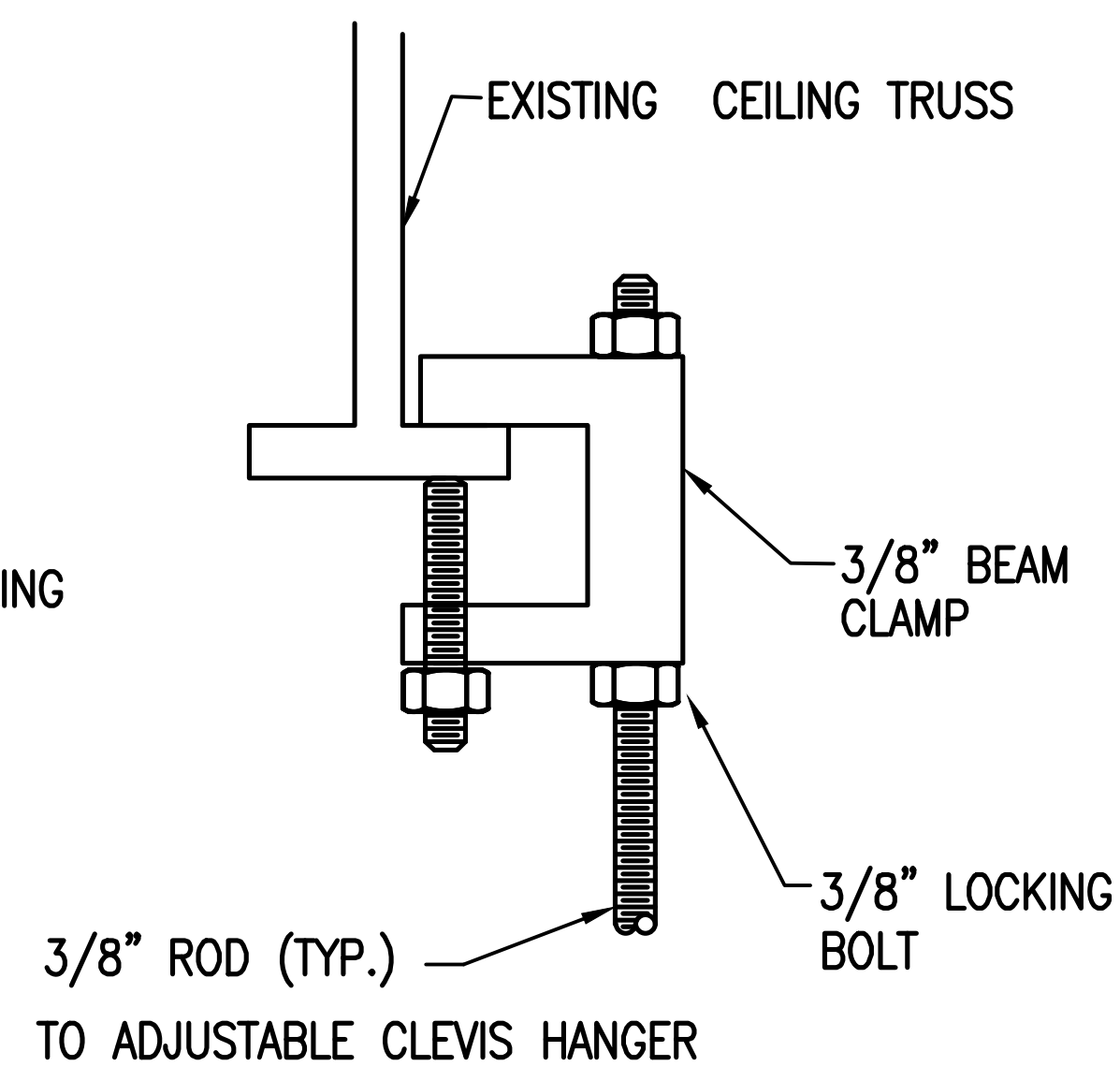
PLAN VIEW

SCALE: NONE

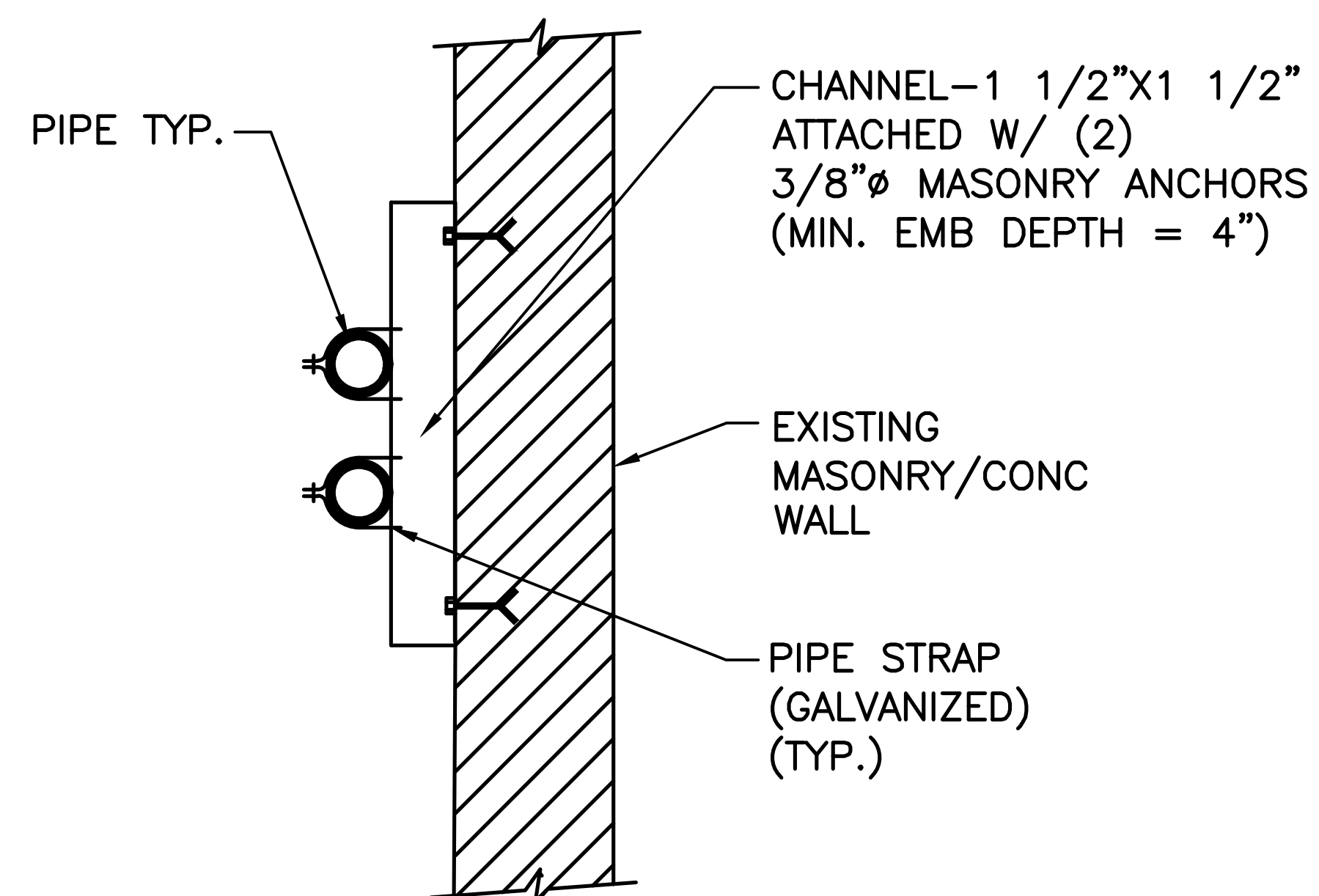
 DESIGN & CONSTRUCTION	
CONSULTANT	
CERTIFICATE OF AUTHORIZATION #: 0017985	
 LiRo Engineers, Inc. 3 Aerial Way, Syosset, New York	
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CONTRACT	
CONSTRUCTION	
TITLE: FUEL TANK MODIFICATION AND ENVIRONMENTAL REMEDIATION PROGRAM	
LOCATION: SOUTHERN REGION VARIOUS FACILITIES	
1/31/2025 FINAL SUBMISSION	
MARK	DATE DESCRIPTION
PROJECT NUMBER:	47674 - C
DESIGNED BY:	M. GUTMANN
DRAWN BY:	A. KELLY
FIELD CHECK:	M. WESOLOWSKI
APPROVED:	M. WESOLOWSKI
SHEET TITLE:	
CONCRETE BARRIER ANCHORING DETAILS	
DRAWING NUMBER:	
C-29	
SHEET 31 OF 57	



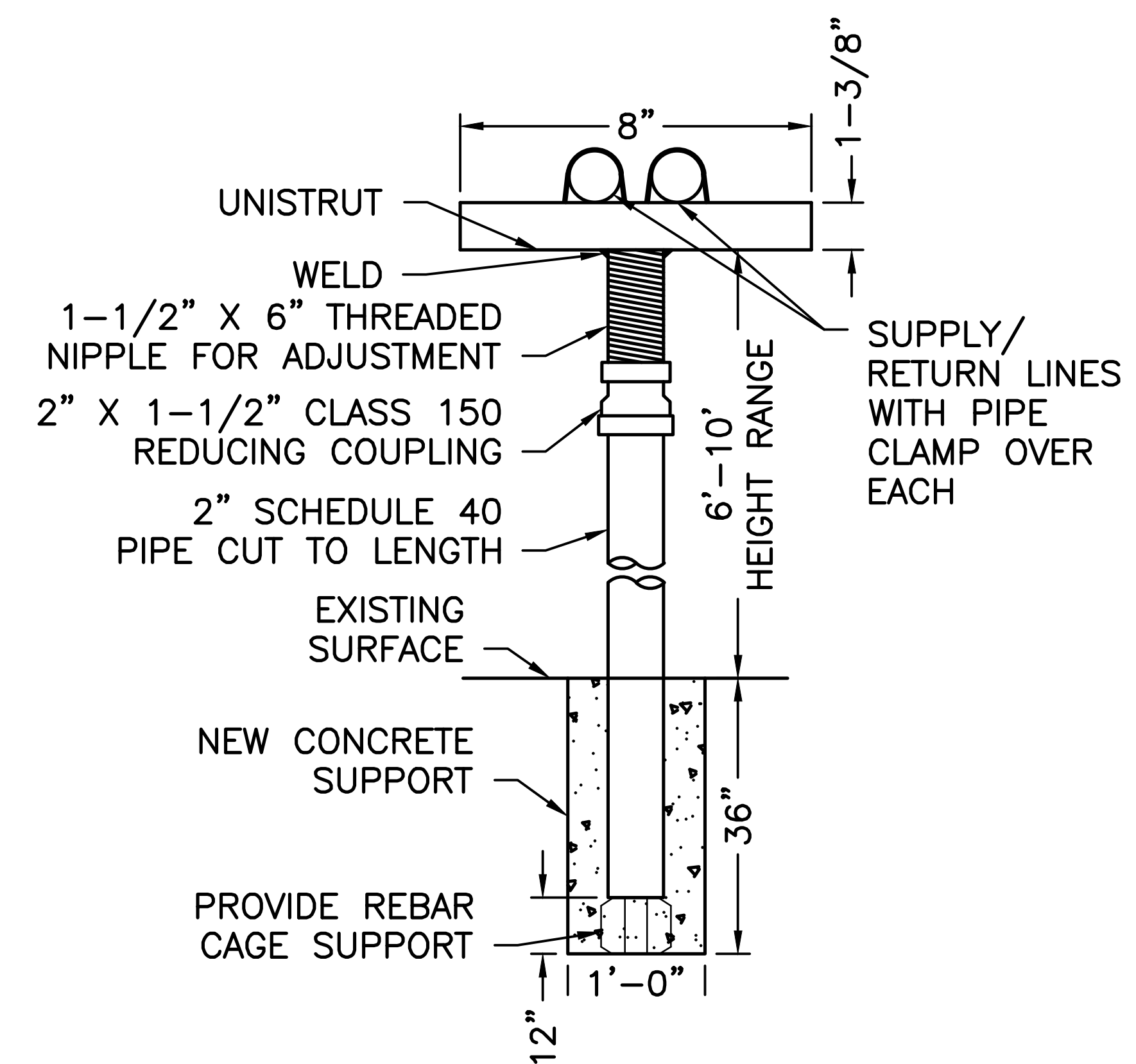
HANGER
SCALE: NONE



BEAM CLAMP
SCALE: NONE



WALL SUPPORT
SCALE: NONE



TYPICAL PIPE SUPPORT
SCALE: NONE

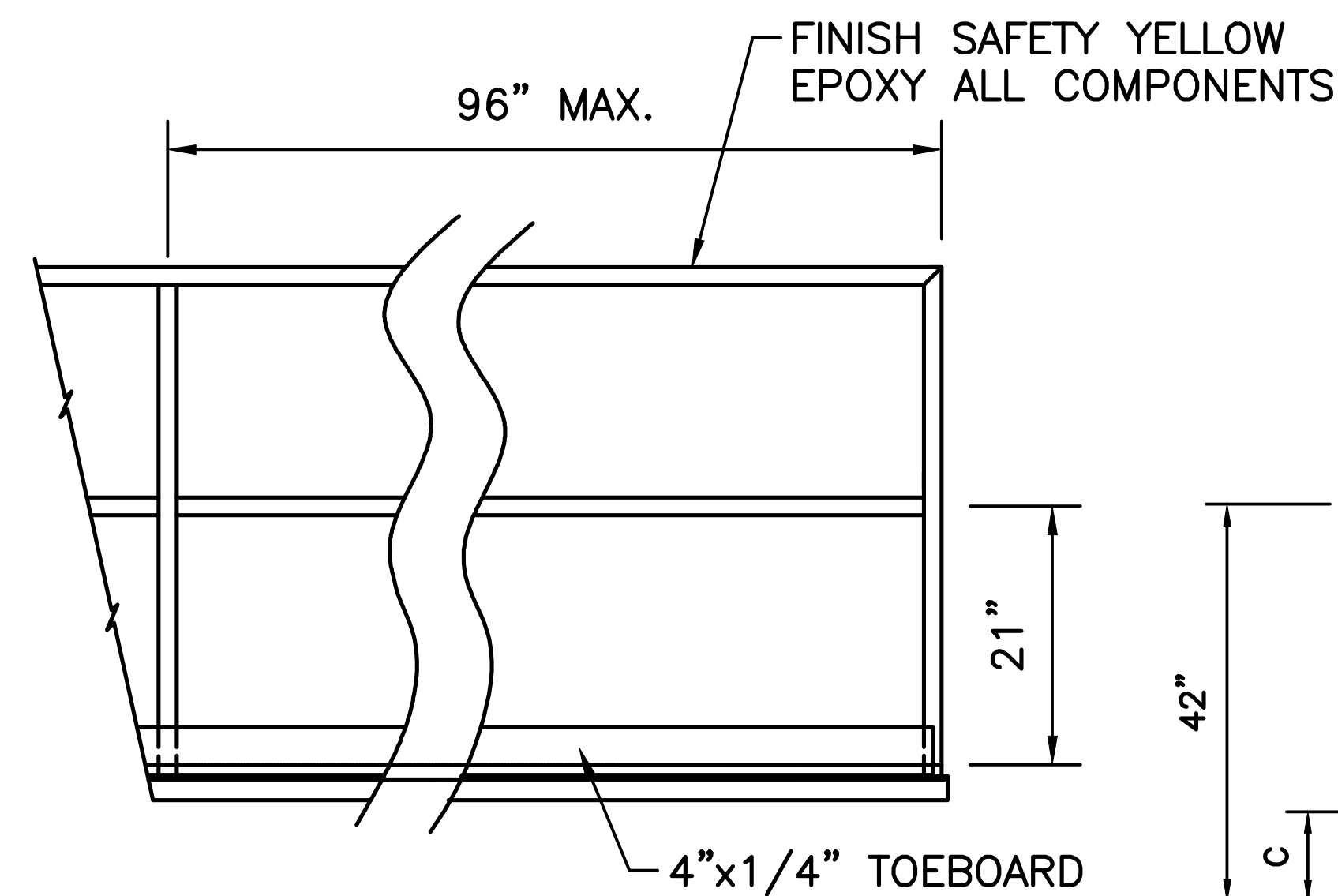
<p>Office of General Services</p> <p>DESIGN & CONSTRUCTION</p>							
<p>CONSULTANT</p> <p>CERTIFICATE OF AUTHORIZATION #: 0017985</p> <p> LiRo Engineers, Inc. 3 Aerial Way, Syosset, New York</p>							
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<p></p>							
<p>CONTRACT:</p> <p>CONSTRUCTION</p> <p>TITLE: FUEL TANK MODIFICATION AND ENVIRONMENTAL REMEDIATION PROGRAM</p> <p>LOCATION: SOUTHERN REGION VARIOUS FACILITIES</p>							
<table border="1"> <thead> <tr> <th>MARK</th> <th>DATE</th> <th>DESCRIPTION</th> </tr> </thead> <tbody> <tr> <td></td> <td>1/31/2025</td> <td>FINAL SUBMISSION</td> </tr> </tbody> </table>		MARK	DATE	DESCRIPTION		1/31/2025	FINAL SUBMISSION
MARK	DATE	DESCRIPTION					
	1/31/2025	FINAL SUBMISSION					
<p>PROJECT NUMBER: 47674 - C</p> <p>DESIGNED BY: M. GUTMANN</p> <p>DRAWN BY: A. KELLY</p> <p>FIELD CHECK: M. WESOLOWSKI</p> <p>APPROVED: M. WESOLOWSKI</p>							
<p>SHEET TITLE:</p> <p>HANGER AND SUPPORT DETAILS</p>							
<p>DRAWING NUMBER: C-30</p>							
<p>SHEET 32 OF 57</p>							

NOTES:

1. CONFIRM OSHA COMPLIANT STAIRS, PLATFORM AND HANDRAILS WITH MANUFACTURER PRIOR TO ORDERING ASSOCIATED TANK.
2. CONSULT WITH MANUFACTURER FOR STAIRS FOR TANKS LARGER THAN 96" DIAMETER.

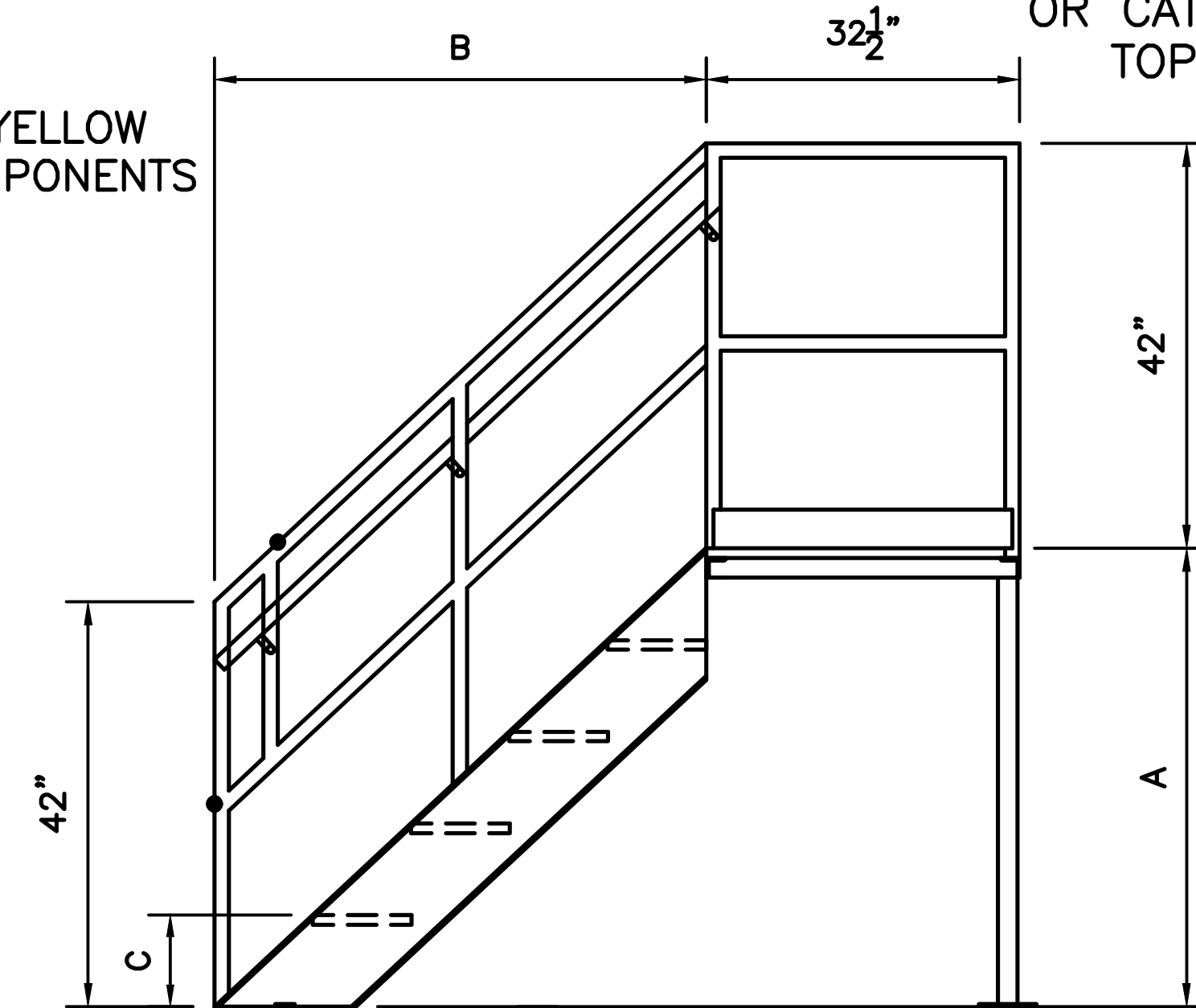
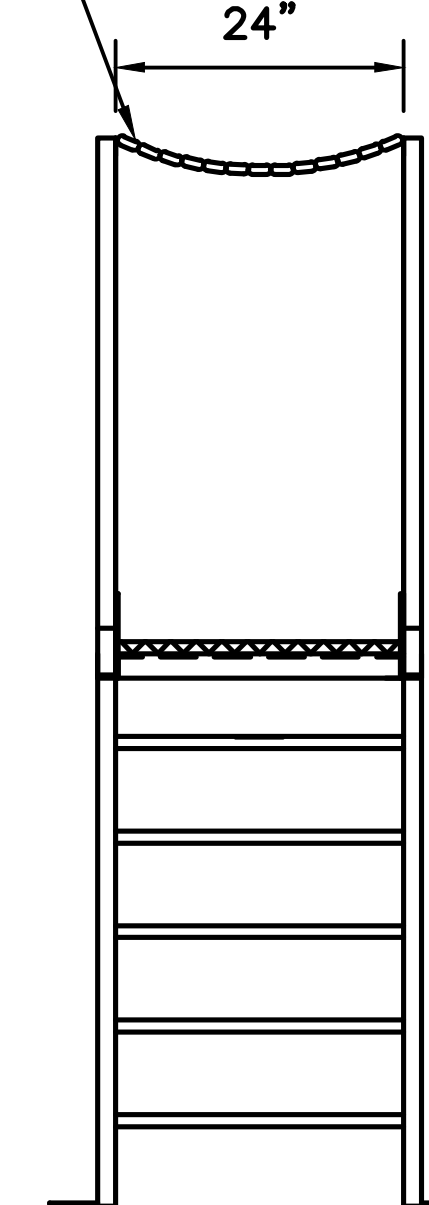
STAIR AND HANDRAILS SCHEDULE			
TANK SIZE (DIAMETER)	48"	64"	96"
A	30"	47"	72"
B	29 11/16"	47 1/4"	72 5/8"
C	10"	9 3/8"	9"

SAFETY CHAIN AT
TANK SIDE PLATFORM
OR CATWALK AND
TOP OF STAIR

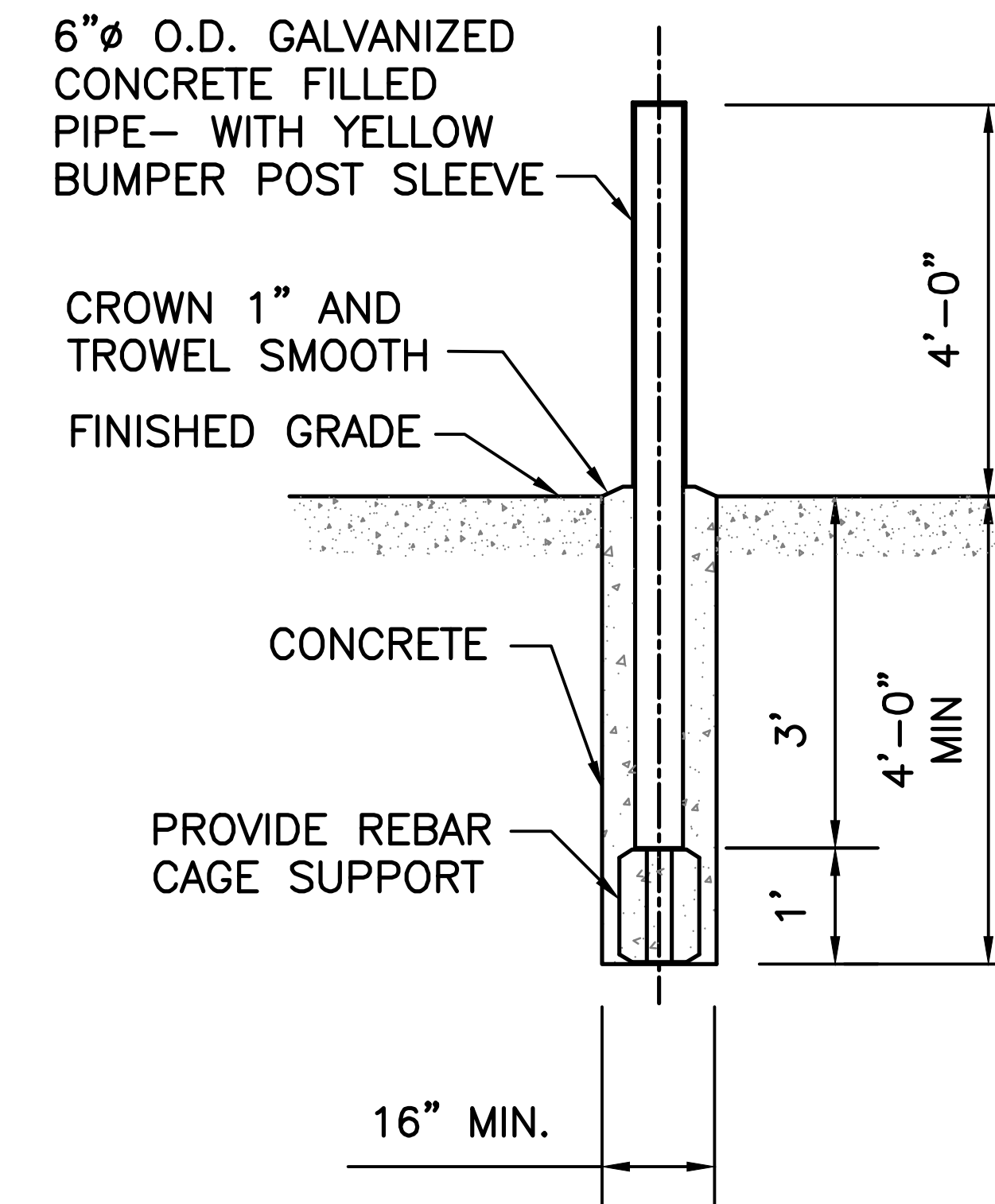


POST AND HANDRAIL DETAIL

SCALE: NONE

ELEVATION

END VIEW



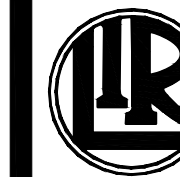
BOLLARD DETAIL

SCALE: NONE



CONSULTANT

CERTIFICATE OF AUTHORIZATION #: 0017995



LiRo Engineers, Inc.
3 Aerial Way, Syosset, New York

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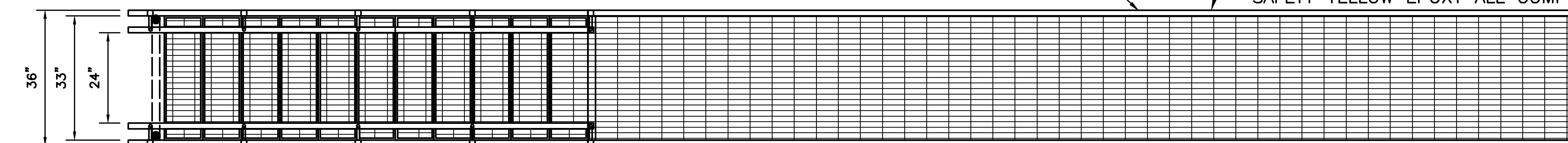


CONTRACT:

CONSTRUCTION

TITLE: FUEL TANK MODIFICATION AND ENVIRONMENTAL REMEDIATION PROGRAM

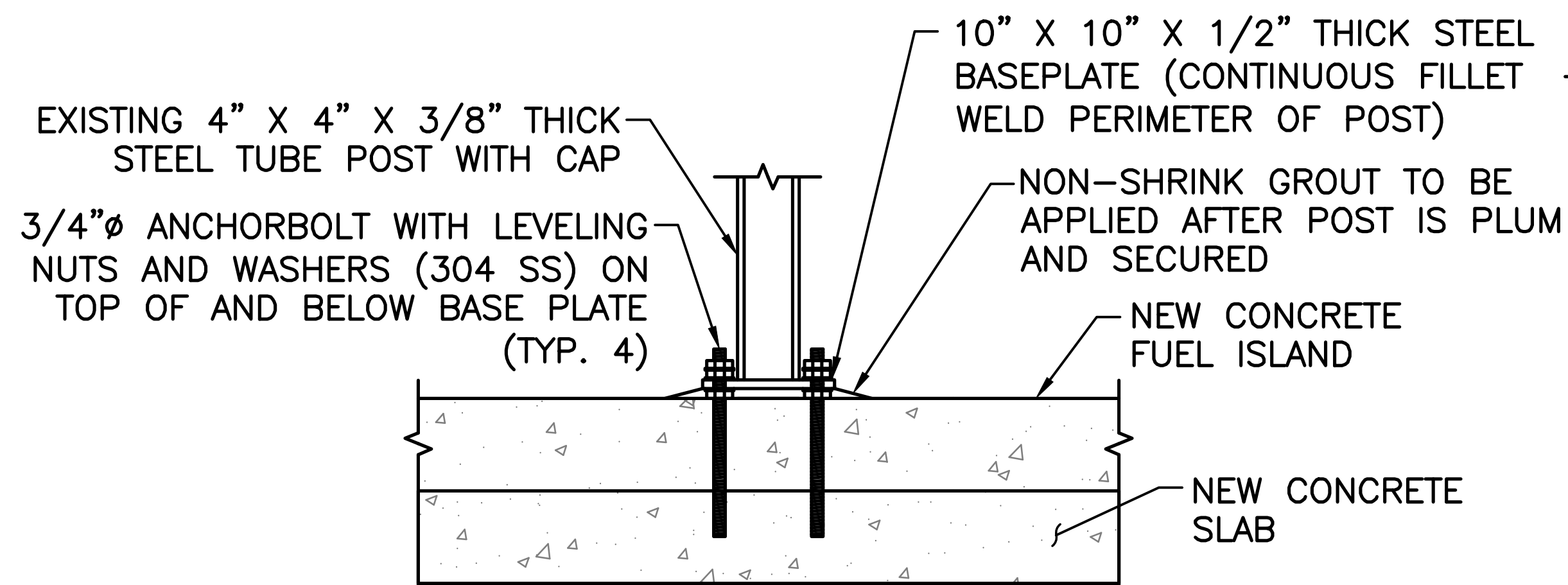
LOCATION: SOUTHERN REGION
VARIOUS FACILITIES



POST AND HANDRAIL (TYP.)

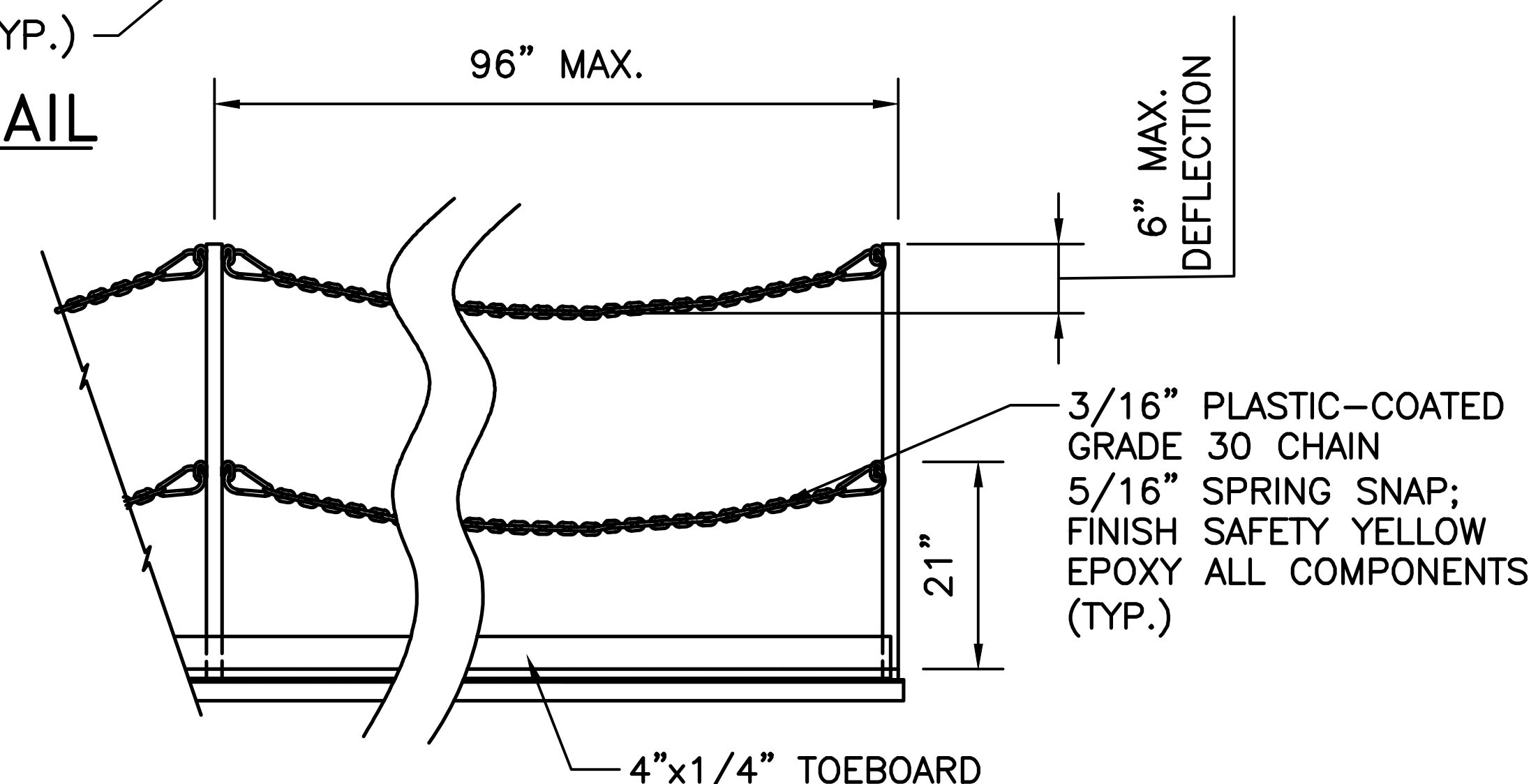
CATWALK DETAIL

SCALE: NONE



FIRE SUPPRESSION SYSTEM SUPPORT POST PLATE ANCHOR DETAIL

SCALE: NONE



POST AND CHAIN DETAIL

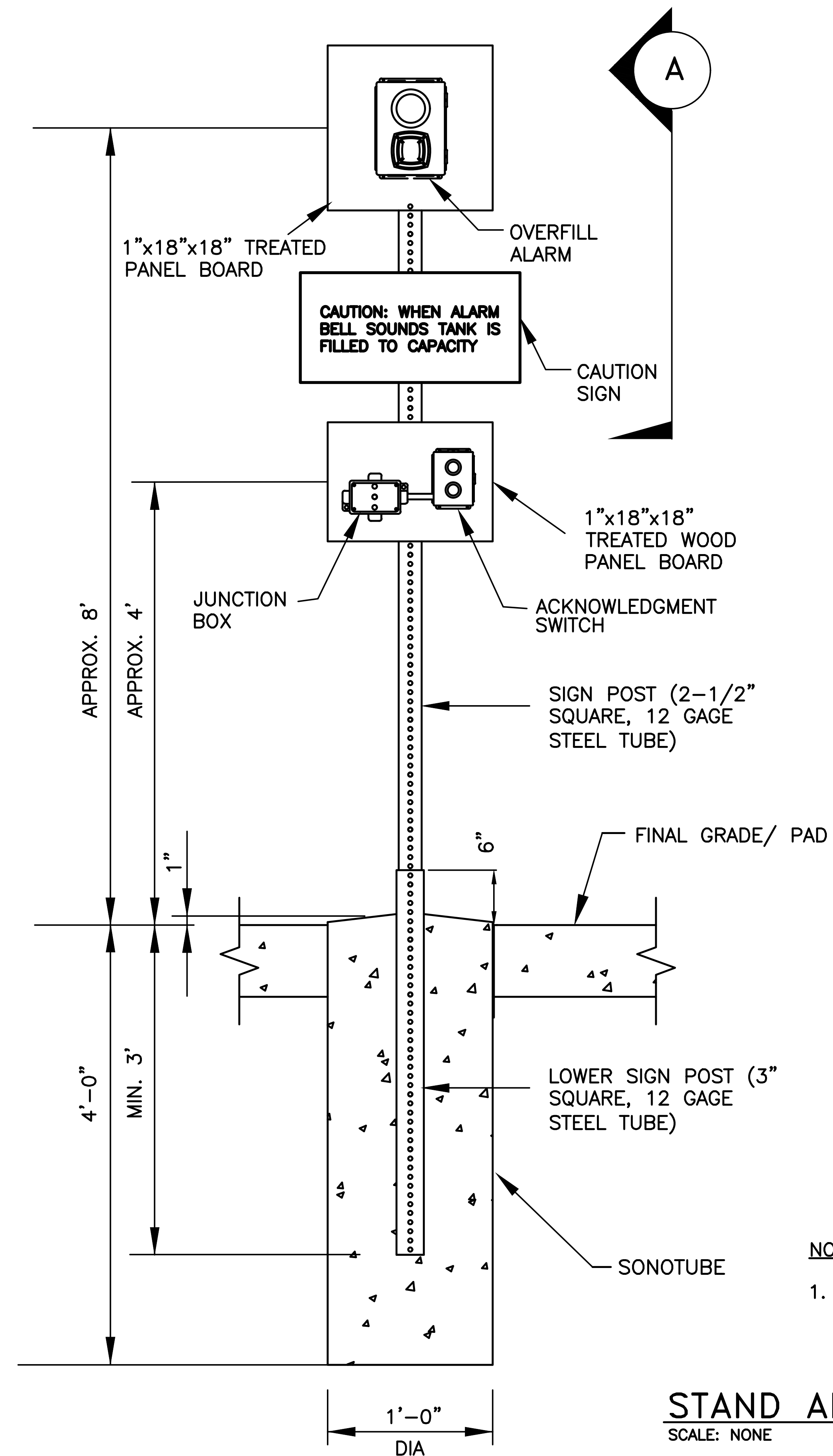
SCALE: NONE

	1/31/2025	FINAL SUBMISSION	
MARK	DATE	DESCRIPTION	
PROJECT NUMBER:	47674 — C		
DESIGNED BY:	M. GUTMANN		
DRAWN BY:	A. KELLY		
FIELD CHECK:	M. WESOLOWSKI		
APPROVED:	M. WESOLOWSKI		

STAIR, BOLLARD AND FIRE SUPPRESSION POST MOUNTING DETAILS

DRAWING NUMBER: C-31

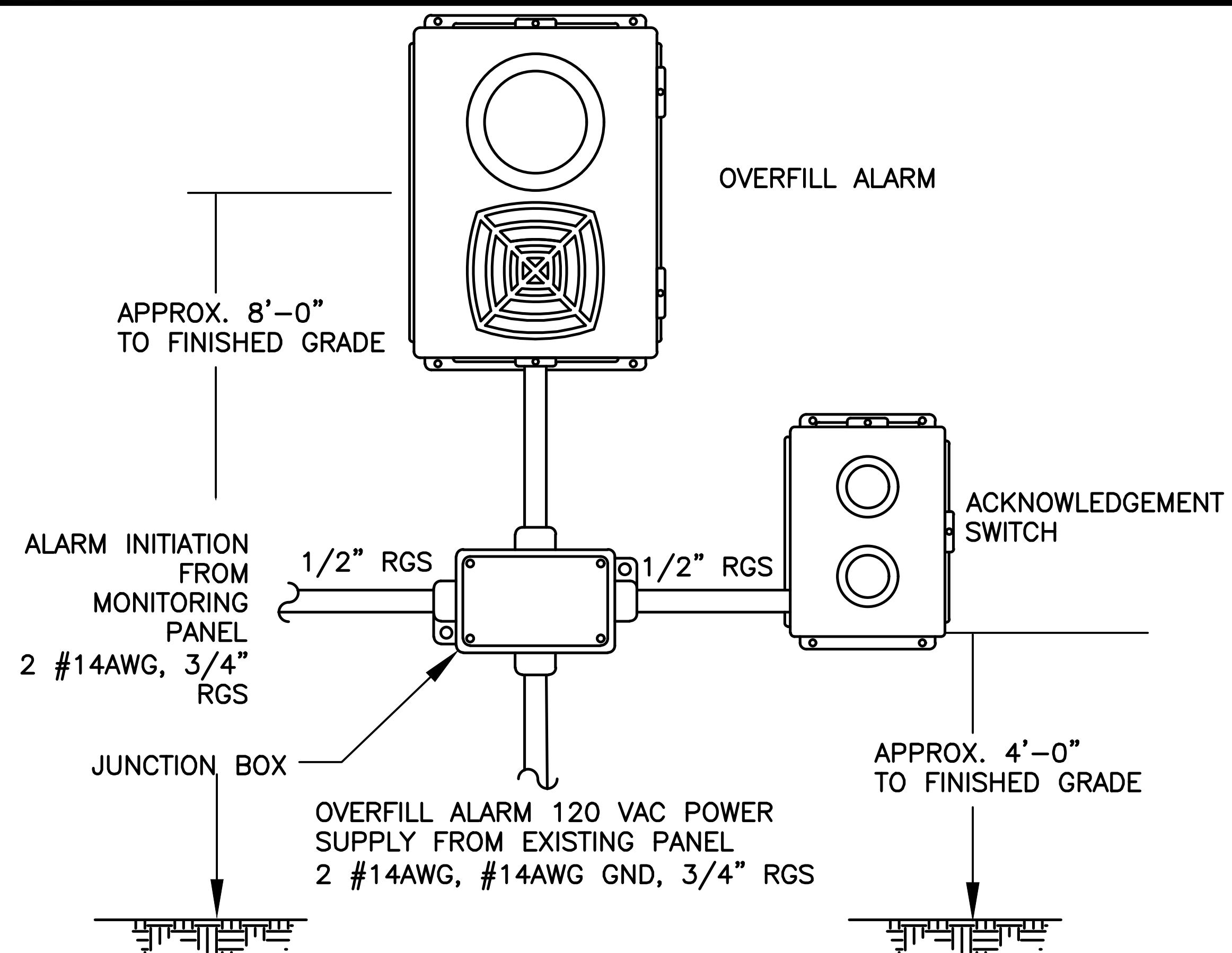
SHEET 33 OF 57



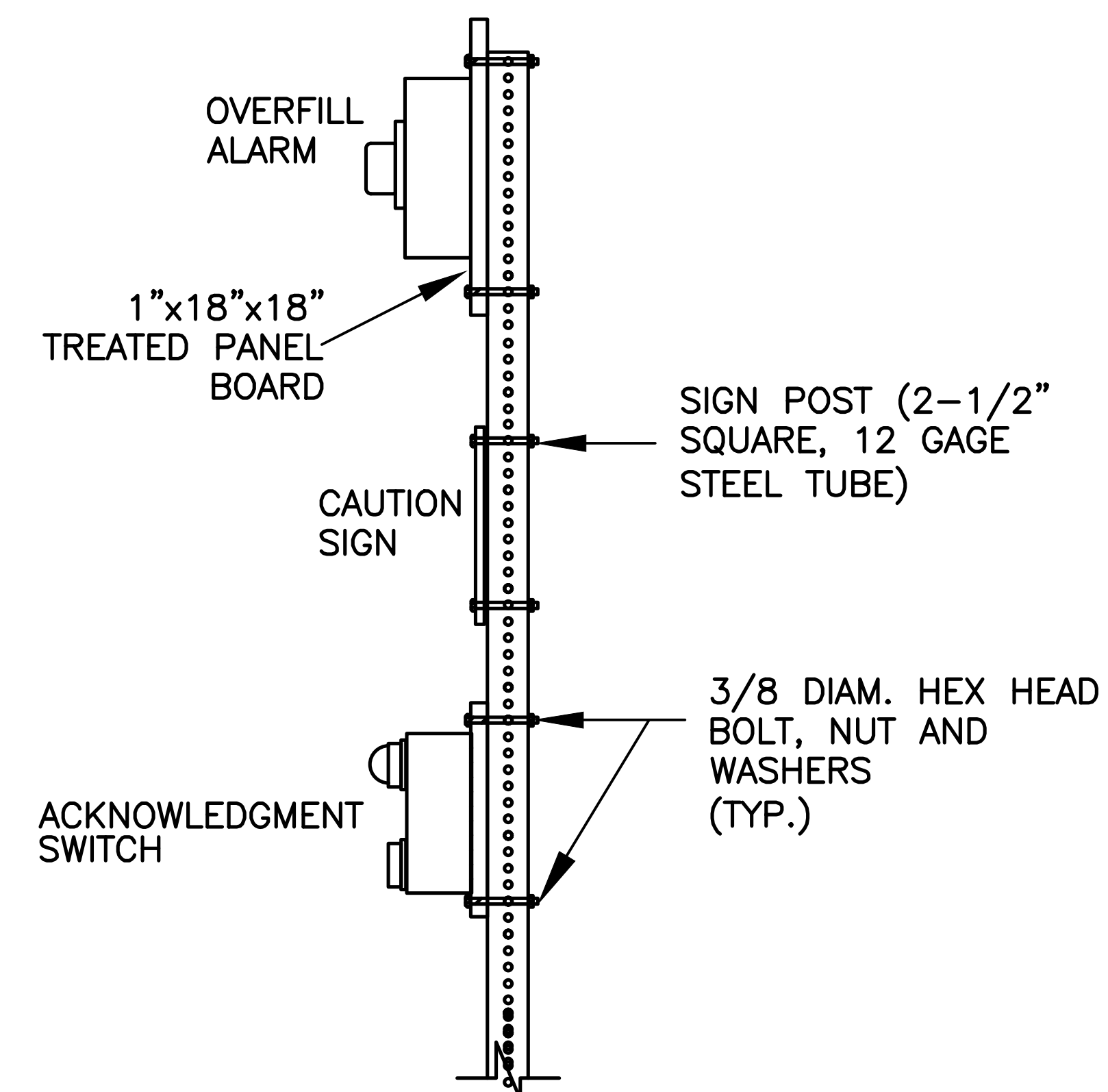
NOTE:

1. ALARM TO BE POSITIONED IN CLOSE PROXIMITY AND IN CLEAR VIEW OF FILL PORT.

STAND ALONE ALARM AND DETAIL
SCALE: NONE

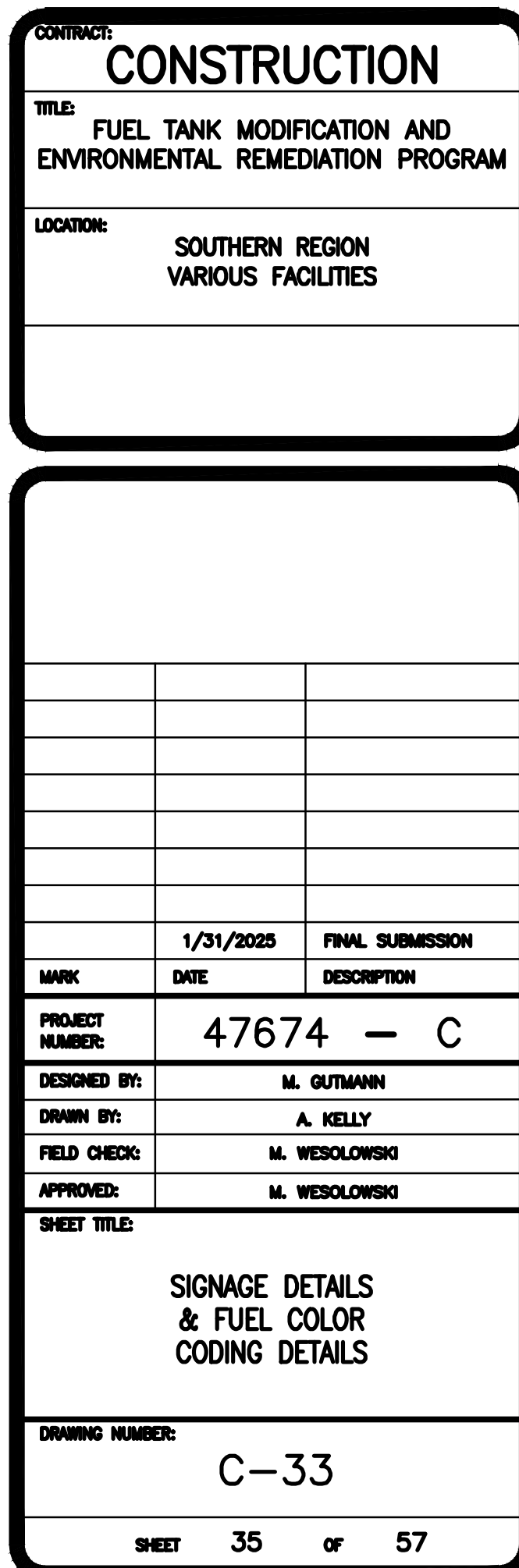
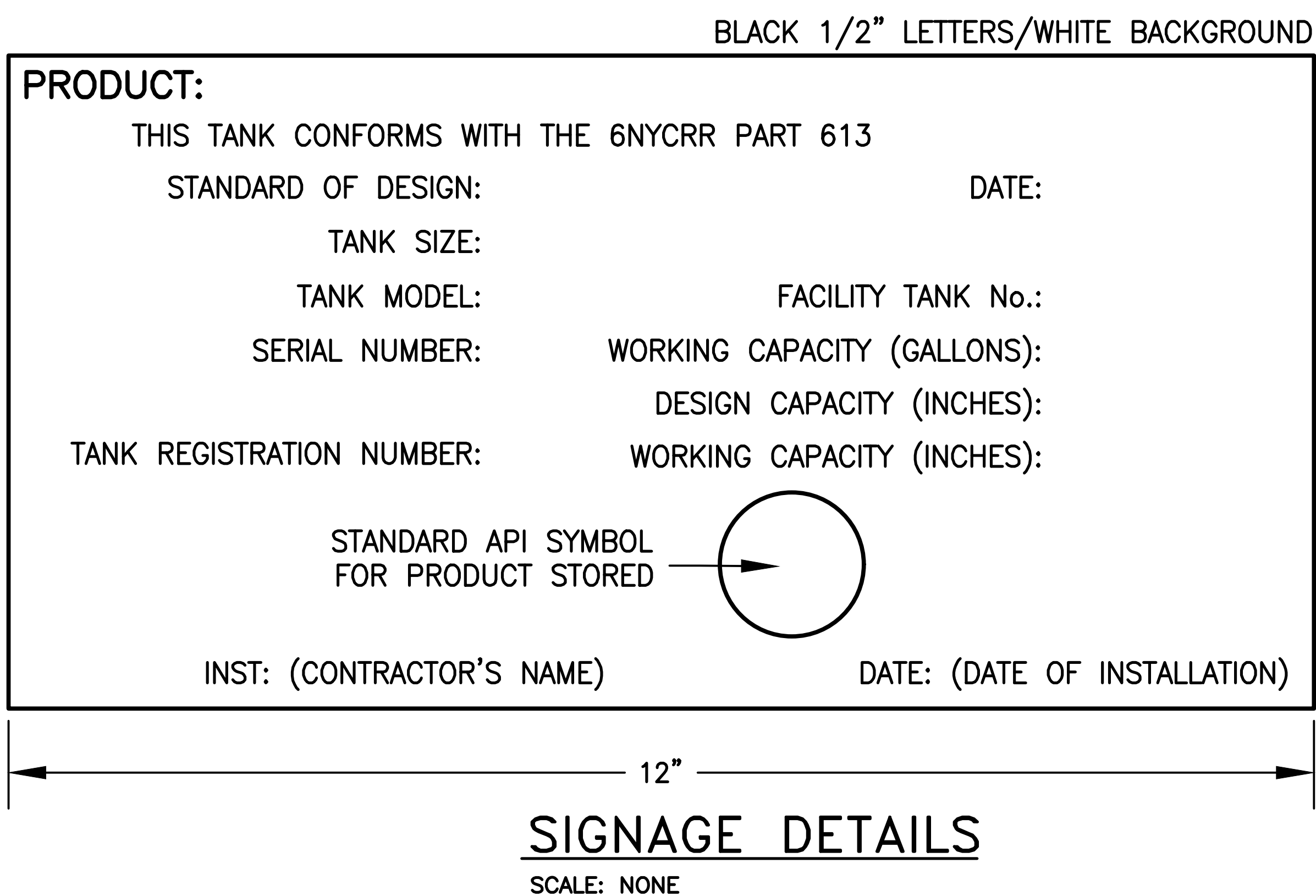


DETAIL
SCALE: NONE



VIEW A
SCALE: NONE

DESIGN & CONSTRUCTION							
CONSULTANT							
CERTIFICATE OF AUTHORIZATION #: 0017905							
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CONSTRUCTION TITLE: FUEL TANK MODIFICATION AND ENVIRONMENTAL REMEDIATION PROGRAM LOCATION: SOUTHERN REGION VARIOUS FACILITIES							
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	1/31/2025	FINAL SUBMISSION					
PROJECT NUMBER: 47674 - C DESIGNED BY: M. GUTMANN DRAWN BY: A. KELLY FIELD CHECK: M. WESOLOWSKI APPROVED: M. WESOLOWSKI							
SHEET TITLE: OVERFILL ACKNOWLEDGMENT ALARM DETAILS							
DRAWING NUMBER: C-32							
SHEET 34 OF 57							



WALL MOUNT FIRE
EXTINGUISHER SIGNAGE DETAIL
SCALE: NONE

POST MOUNT FIRE
EXTINGUISHER SIGNAGE DETAIL
SCALE: NONE

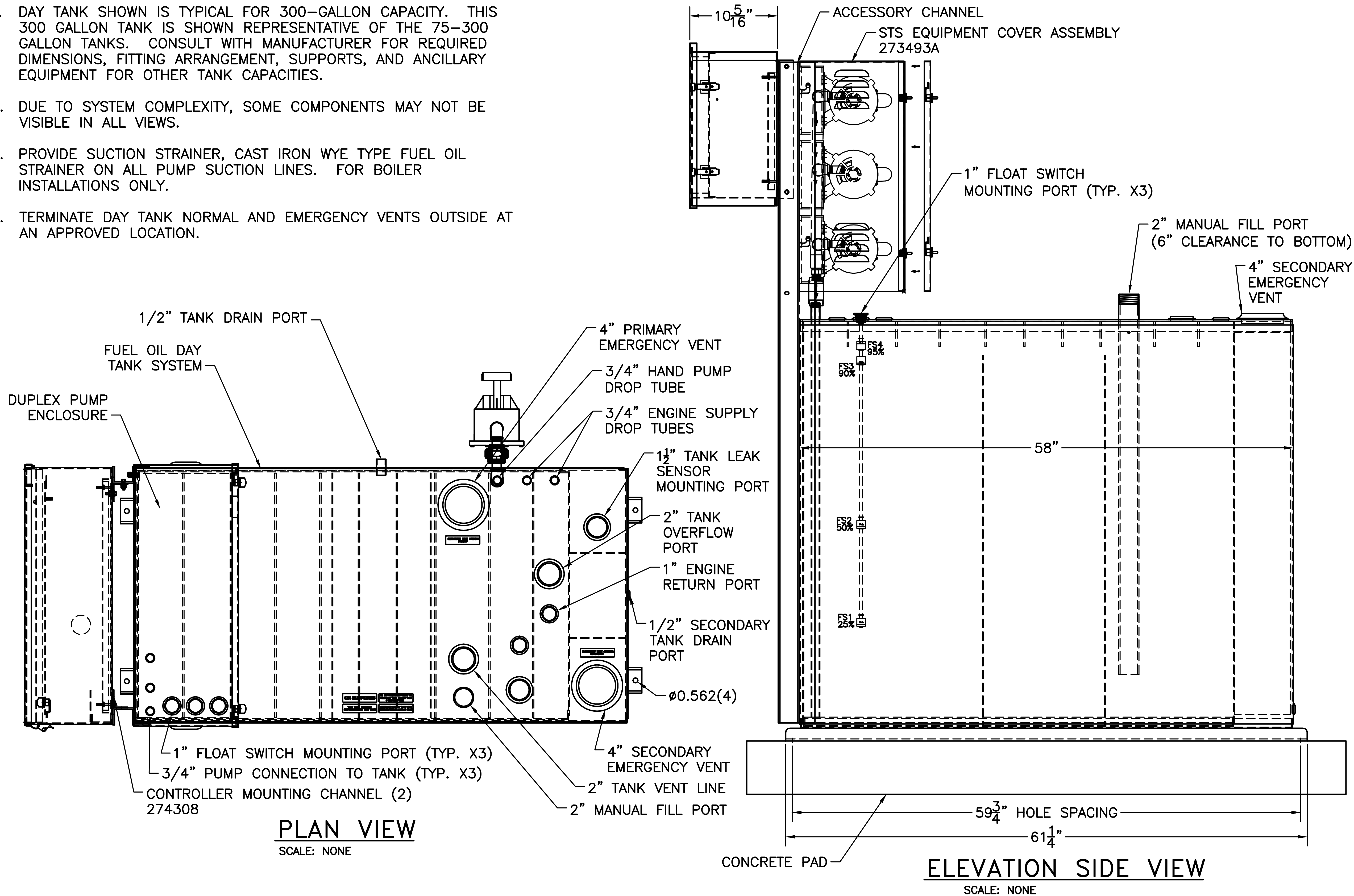
NFPA 704 STANDARD SYSTEM FOR THE
IDENTIFICATION OF THE HAZARDS OF
MATERIALS FOR EMERGENCY RESPONSE
SCALE: NONE


NOTES:

1. INSTALL LABEL ON ALL TANKS. LABEL SHALL BE SPECIFIC TO THE MATERIAL STORED IN ACCORDANCE WITH NFPA 704.
2. LABEL SHALL BE VINYL WITH SELF-ADHESIVE BACKING

NOTES:

1. DAY TANK SHOWN IS TYPICAL FOR 300-GALLON CAPACITY. THIS 300 GALLON TANK IS SHOWN REPRESENTATIVE OF THE 75-300 GALLON TANKS. CONSULT WITH MANUFACTURER FOR REQUIRED DIMENSIONS, FITTING ARRANGEMENT, SUPPORTS, AND ANCILLARY EQUIPMENT FOR OTHER TANK CAPACITIES.
2. DUE TO SYSTEM COMPLEXITY, SOME COMPONENTS MAY NOT BE VISIBLE IN ALL VIEWS.
3. PROVIDE SUCTION STRAINER, CAST IRON WYE TYPE FUEL OIL STRAINER ON ALL PUMP SUCTION LINES. FOR BOILER INSTALLATIONS ONLY.
4. TERMINATE DAY TANK NORMAL AND EMERGENCY VENTS OUTSIDE AT AN APPROVED LOCATION.






Office of
General Services

DESIGN & CONSTRUCTION

CONSULTANT

CERTIFICATE OF AUTHORIZATION #: 0017905




LiRo Engineers, Inc.
3 Aerial Way, Syosset, New York

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STATE OF NEW YORK
NO. 074264
PROFESSIONAL ENGINEER
REGISTRATION EXPIRES
12/31/2026

CONTRACT

CONSTRUCTION

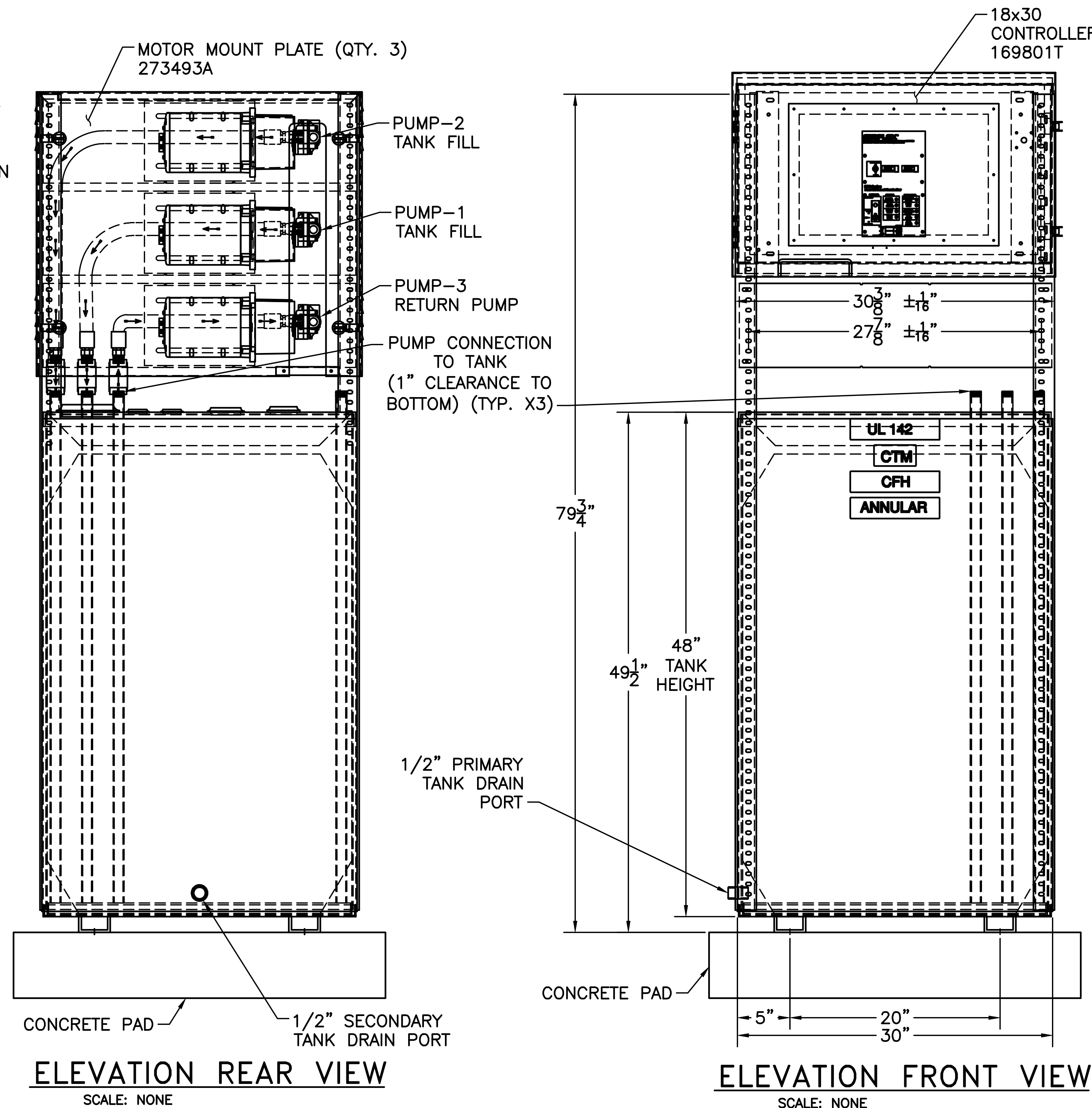
TITLE:
FUEL TANK MODIFICATION AND
ENVIRONMENTAL REMEDIATION PROGRAM

LOCATION:
SOUTHERN REGION
VARIOUS FACILITIES

MARK	DATE	DESCRIPTION
	1/31/2025	FINAL SUBMISSION
PROJECT NUMBER:	47674	- C
DESIGNED BY:	M. GUTMANN	
DRAWN BY:	A. KELLY	
FIELD CHECK:	M. WESOLOWSKI	
APPROVED:	M. WESOLOWSKI	
SHEET TITLE:	DAY TANK SHEET #1	
DRAWING NUMBER:	C-35	
SHEET	37	OF 57

NOTES:

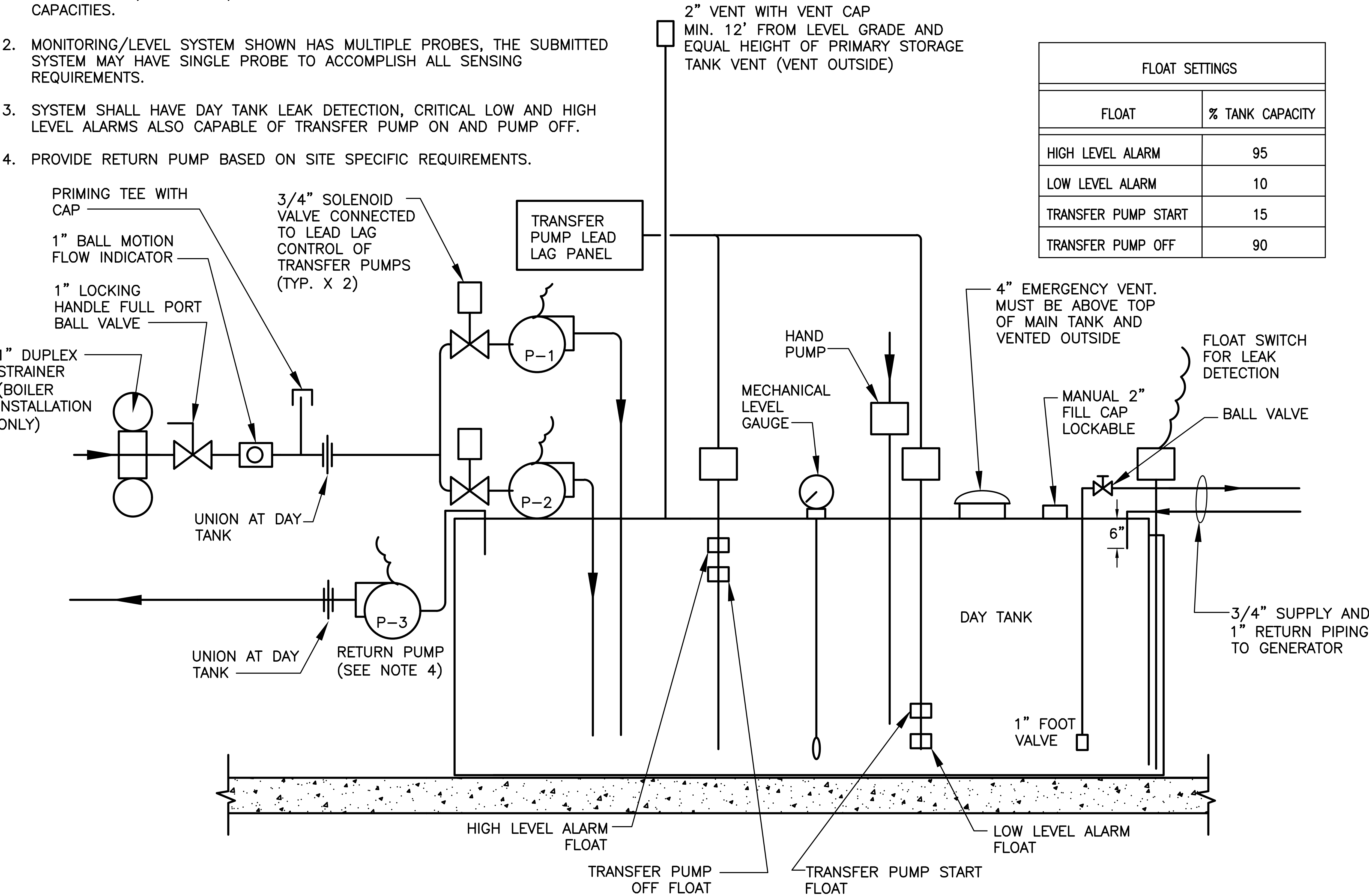
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2. PROVIDE SUCTION STRAINER, CAST IRON WYE TYPE FUEL OIL STRAINER ON ALL PUMP SUCTION LINES. FOR BOILER INSTALLATION ONLY.
3. TERMINATE TANK NORMAL AND EMERGENCY VENTS OUTSIDE AT AN APPROVED LOCATION.



<p>Office of General Services DESIGN & CONSTRUCTION</p>							
<p>CONSULTANT</p> <p>CERTIFICATE OF AUTHORIZATION #: 0017005</p> <p> LiRo Engineers, Inc. 3 Aerial Way, Syosset, New York</p>							
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<p>TITLE:</p> <p>FUEL TANK MODIFICATION AND ENVIRONMENTAL REMEDIATION PROGRAM</p>							
<p>LOCATION:</p> <p>SOUTHERN REGION VARIOUS FACILITIES</p>							
<table border="1"> <thead> <tr> <th>MARK</th> <th>DATE</th> <th>DESCRIPTION</th> </tr> </thead> <tbody> <tr> <td></td> <td>1/31/2025</td> <td>FINAL SUBMISSION</td> </tr> </tbody> </table>		MARK	DATE	DESCRIPTION		1/31/2025	FINAL SUBMISSION
MARK	DATE	DESCRIPTION					
	1/31/2025	FINAL SUBMISSION					
<p>PROJECT NUMBER: 47674 - C</p>							
<p>DESIGNED BY: M. GUTMANN</p>							
<p>DRAWN BY: A. KELLY</p>							
<p>FIELD CHECK: M. WESOLOWSKI</p>							
<p>APPROVED: M. WESOLOWSKI</p>							
<p>SHEET TITLE:</p> <p>DAY TANK SHEET #2</p>							
<p>DRAWING NUMBER:</p> <p>C-36</p>							
<p>SHEET 38 OF 57</p>							

NOTES:

- 1. DAY TANK SHOWN IS TYPICAL FOR 300-GALLON CAPACITY. THIS 300 GALLON TANK IS SHOWN REPRESENTATIVE OF THE 75-300 GALLON TANKS. CONSULT WITH MANUFACTURER FOR REQUIRED DIMENSIONS, FITTING ARRANGEMENT, SUPPORTS, AND ANCILLARY EQUIPMENT FOR OTHER TANK CAPACITIES.
- 2. MONITORING/LEVEL SYSTEM SHOWN HAS MULTIPLE PROBES, THE SUBMITTED SYSTEM MAY HAVE SINGLE PROBE TO ACCOMPLISH ALL SENSING REQUIREMENTS.
- 3. SYSTEM SHALL HAVE DAY TANK LEAK DETECTION, CRITICAL LOW AND HIGH LEVEL ALARMS ALSO CAPABLE OF TRANSFER PUMP ON AND PUMP OFF.
- 4. PROVIDE RETURN PUMP BASED ON SITE SPECIFIC REQUIREMENTS.



DAY TANK DIAGRAM
SCALE: NONE

NEW YORK

STATE OF

DESIGN & CONSTRUCTION

Office of

General Services

CONSULTANT

CERTIFICATE OF AUTHORIZATION #: 0017995

LiRo Engineers, Inc.

3 Aerial Way, Syosset, New York

ENERGY CONSERVATION CONSTRUCTION CODE OF NEW YORK STATE

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STATE OF NEW YORK

MARK I. WESOLOWSKI

NO 074264

PROFESSIONAL ENGINEER

RENEWAL DATE 12/31/2028

CONTRACT:

CONSTRUCTION

TITLE: FUEL TANK MODIFICATION AND ENVIRONMENTAL REMEDIATION PROGRAM

LOCATION: SOUTHERN REGION VARIOUS FACILITIES

MARK	DATE	DESCRIPTION
	1/31/2025	FINAL SUBMISSION

PROJECT NUMBER:

47674 - C

DESIGNED BY:

M. GUTMANN

DRAWN BY:

A. KELLY

FIELD CHECK:

M. WESOLOWSKI

APPROVED:

M. WESOLOWSKI

SHEET TITLE:

DOUBLEWALL ABOVEGROUND DAY TANK PIPING DIAGRAM

DRAWING NUMBER:

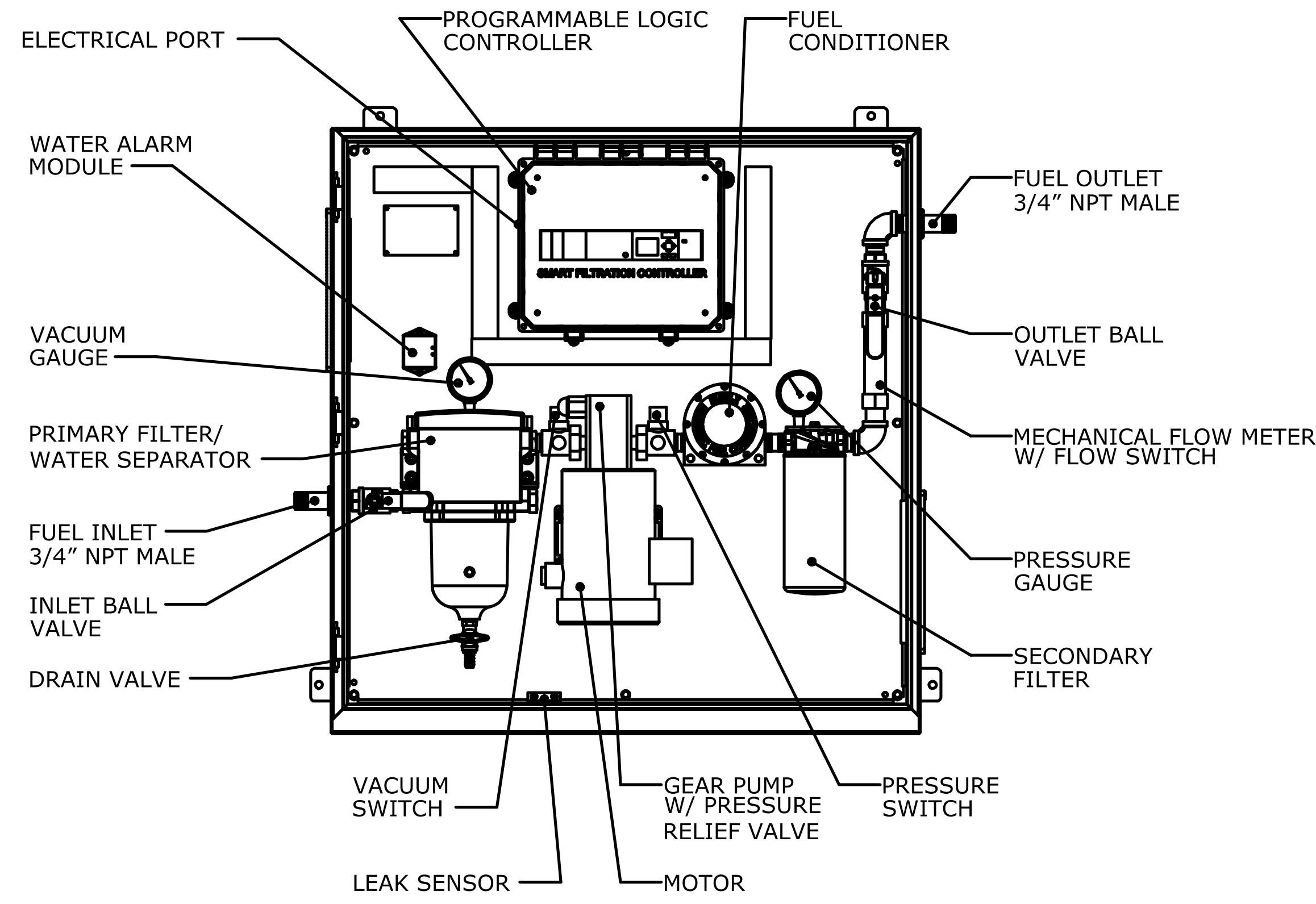
C-37

SHEET

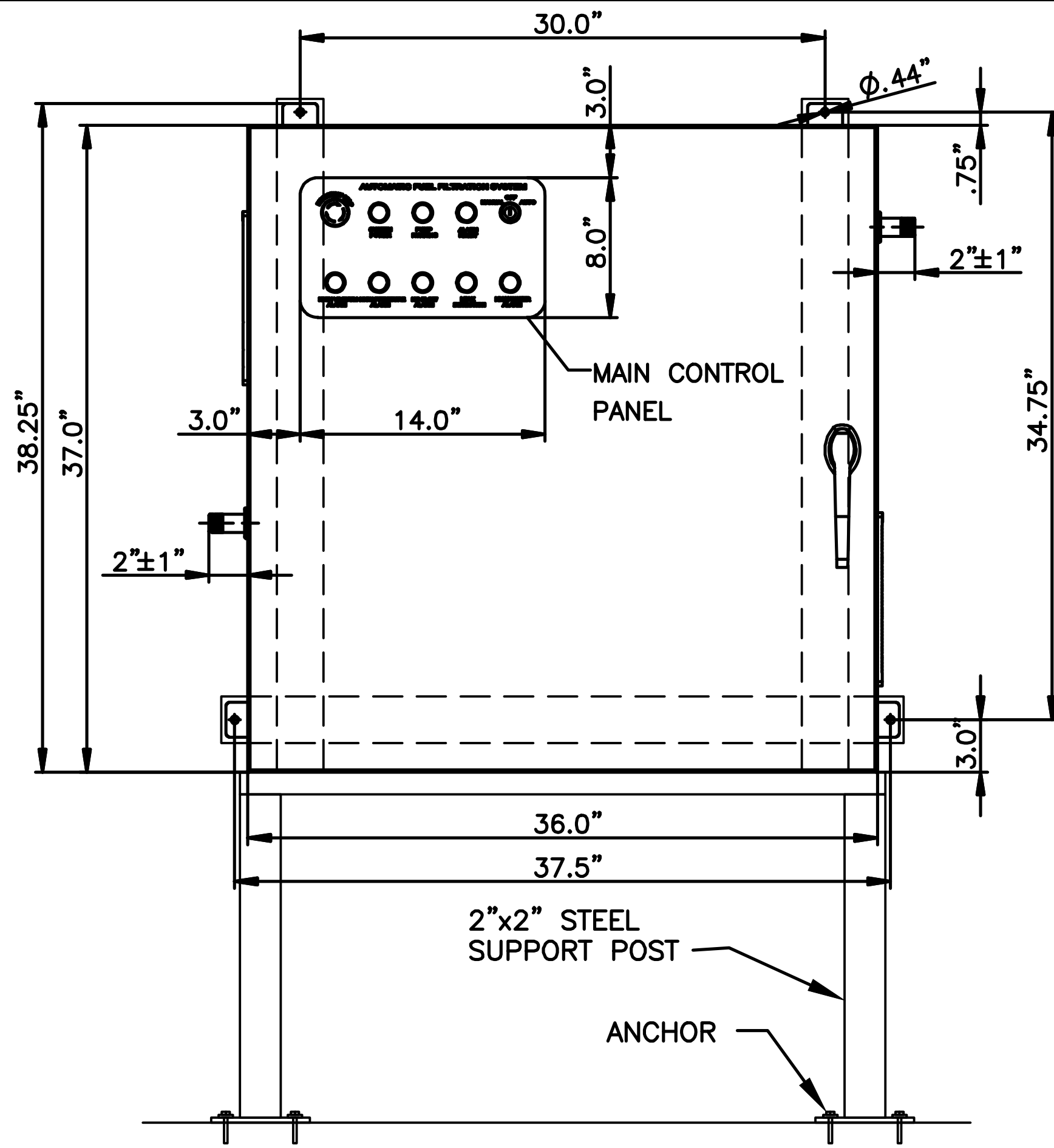
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OF

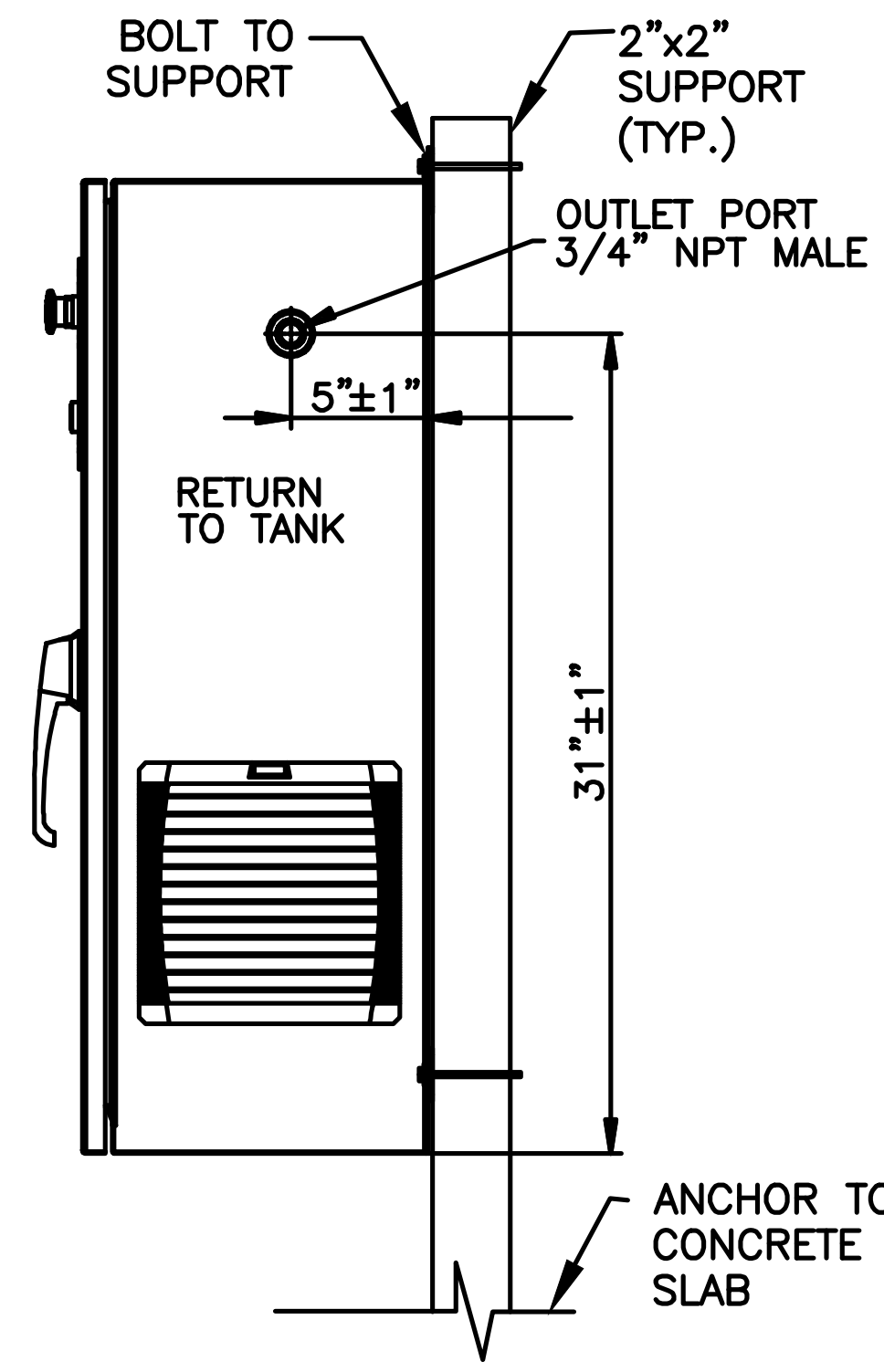
57



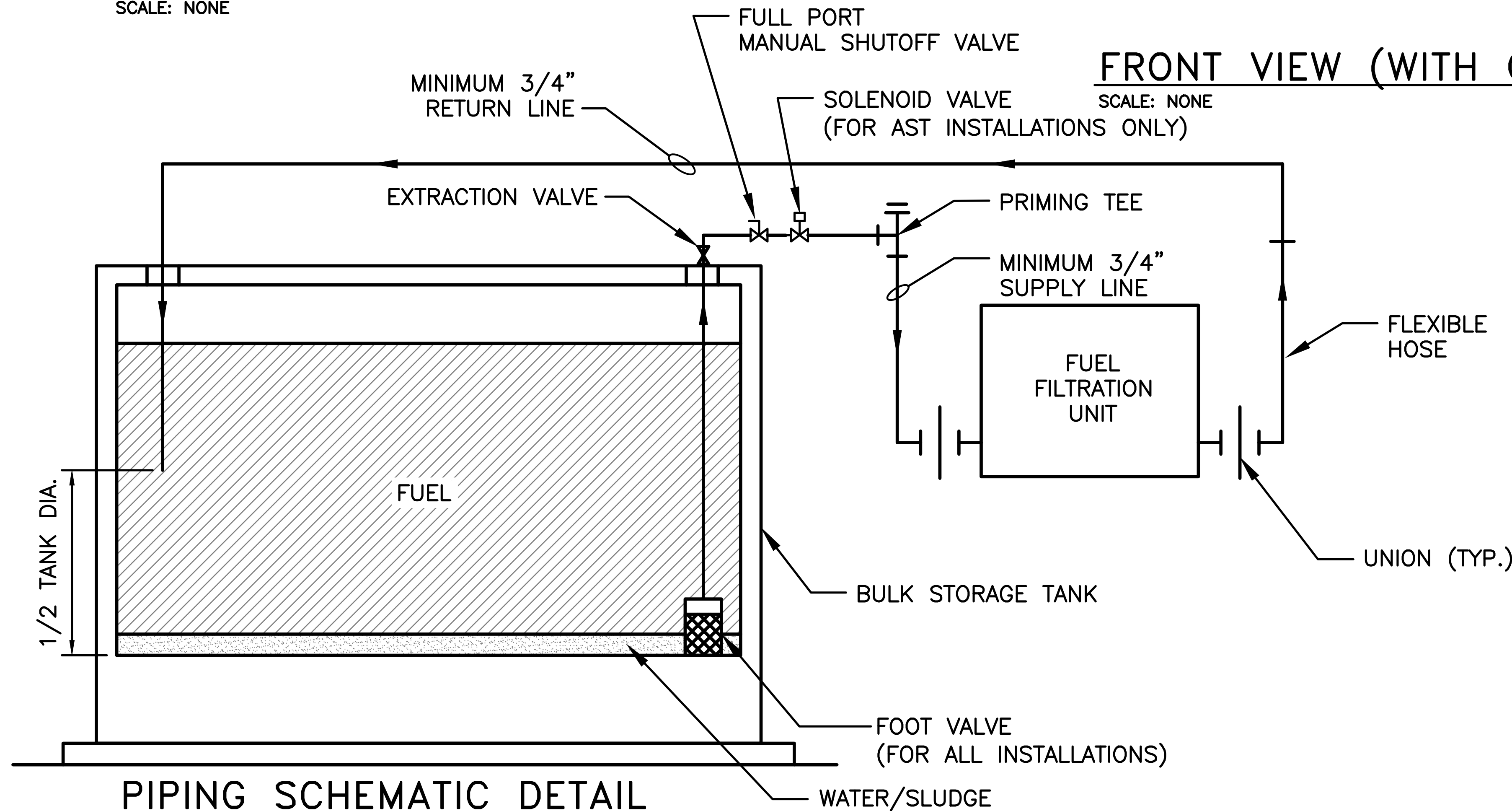
FRONT VIEW (WITHOUT COVER)
SCALE: NONE



FRONT VIEW (WITH COVER)
SCALE: NONE



SIDE VIEW
SCALE: NONE



PIPING SCHEMATIC DETAIL
SCALE: NONE

- NOTES:
1. PIPING TO BE SIZED PER INSTALLATION AND TO RUN AS STRAIGHT AS POSSIBLE WITH MINIMUM NUMBER OF FITTINGS.
 2. SUCTION LINES AND RETURN LINES ARE TO BE INSTALLED ON OPPOSITE ENDS OF PETROLEUM BULK STORAGE TANK, WITH THE SUCTION LINE AT THE LOWEST POINT OF THE TANK.
 3. FLEXIBLE HOSE LENGTH TO BE DETERMINED FOR EACH INSTALLATION
 4. FILTRATION SYSTEM IS TYPICALLY INSTALLED OUTDOOR AT THE TANK LOCATION. PROVIDE FILTRATION SYSTEM WITH WEATHERTIGHT ENCLOSURE AND HEATER OPTION FOR OUTDOOR INSTALLATIONS.
 5. FILTRATION SYSTEM SUPPORT SHALL BE PROVIDED FOR ALL INSTALLATIONS.

NEW YORK
STATE OF
EMPLOYMENT

Office of
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DESIGN & CONSTRUCTION

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CERTIFICATE OF AUTHORIZATION #: 0017905

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STATE OF NEW YORK

MARTIN I. WESOLOWSKI

NO. 074264

REGISTERED PROFESSIONAL ENGINEER

REGISTRATION EXPIRES
12/31/2026

CONTRACT:

CONSTRUCTION

TITLE:
FUEL TANK MODIFICATION AND
ENVIRONMENTAL REMEDIATION PROGRAM

LOCATION:
SOUTHERN REGION
VARIOUS FACILITIES

MARK	DATE	DESCRIPTION
	1/31/2025	FINAL SUBMISSION

PROJECT NUMBER:

47674 - C

DESIGNED BY:

M. GUTMANN

DRAWN BY:

A. KELLY

FIELD CHECK:

M. WESOLOWSKI

APPROVED:

M. WESOLOWSKI

SHEET TITLE:

FUEL FILTRATION
SYSTEM DETAIL

DRAWING NUMBER:

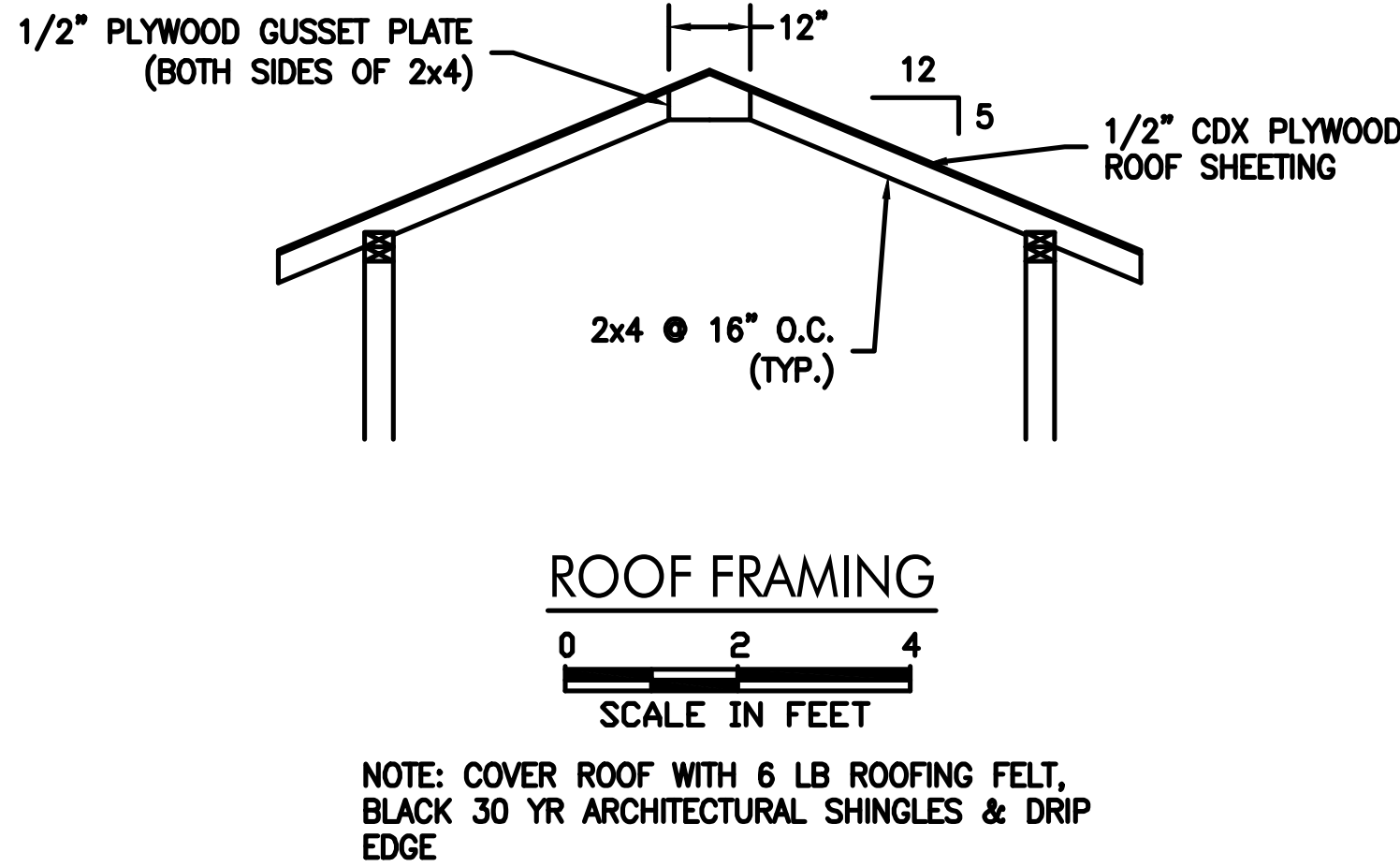
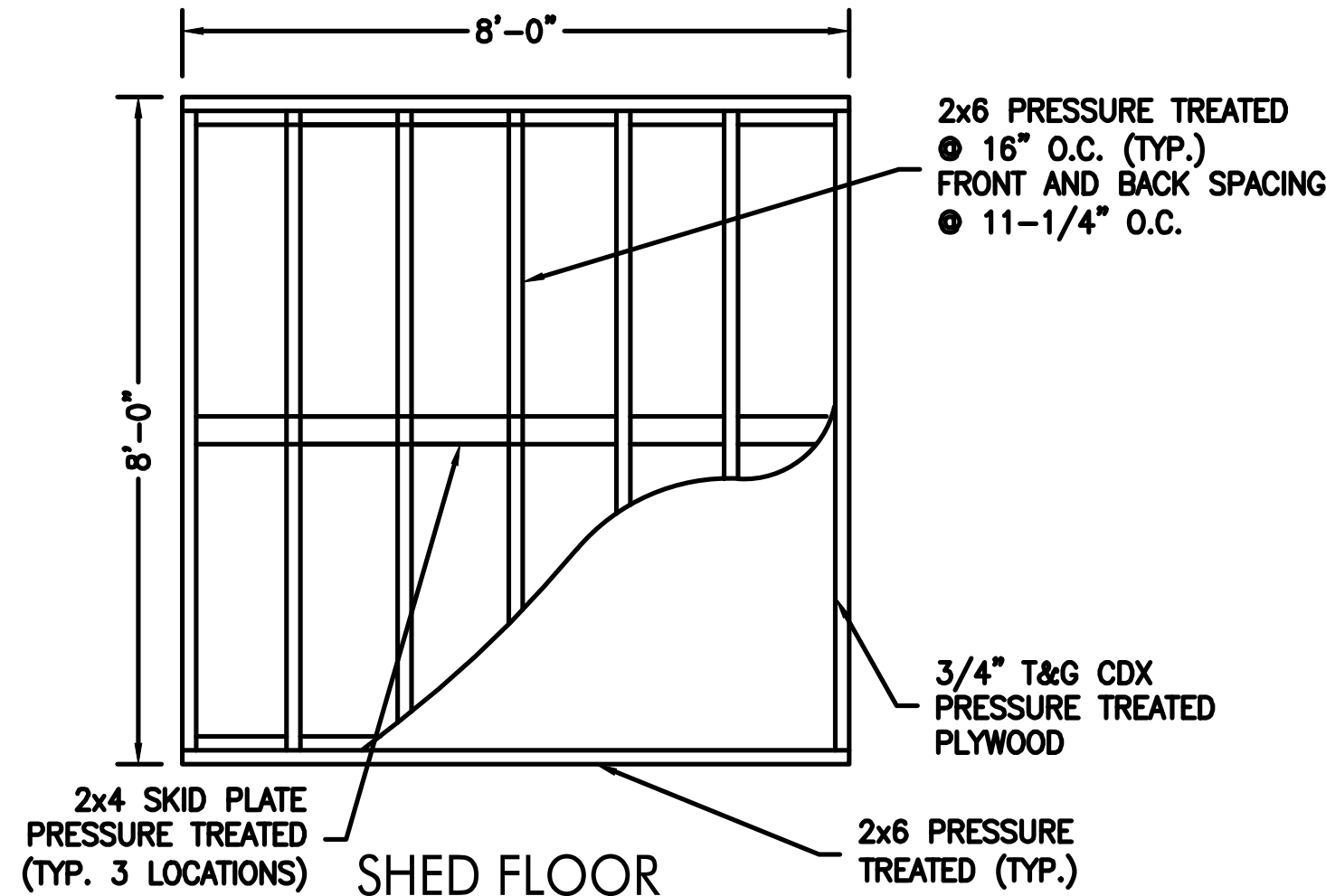
C-38

SHEET

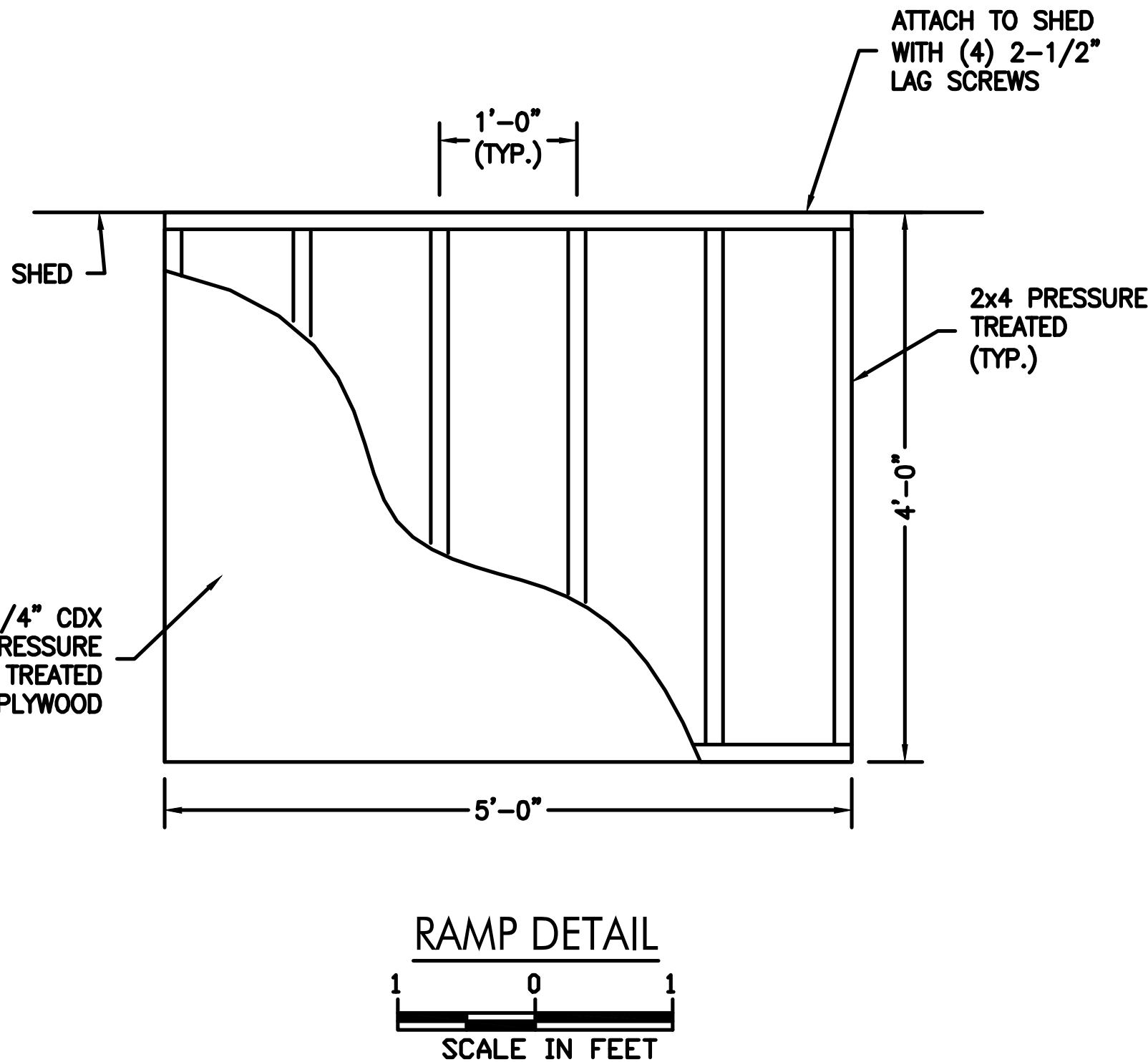
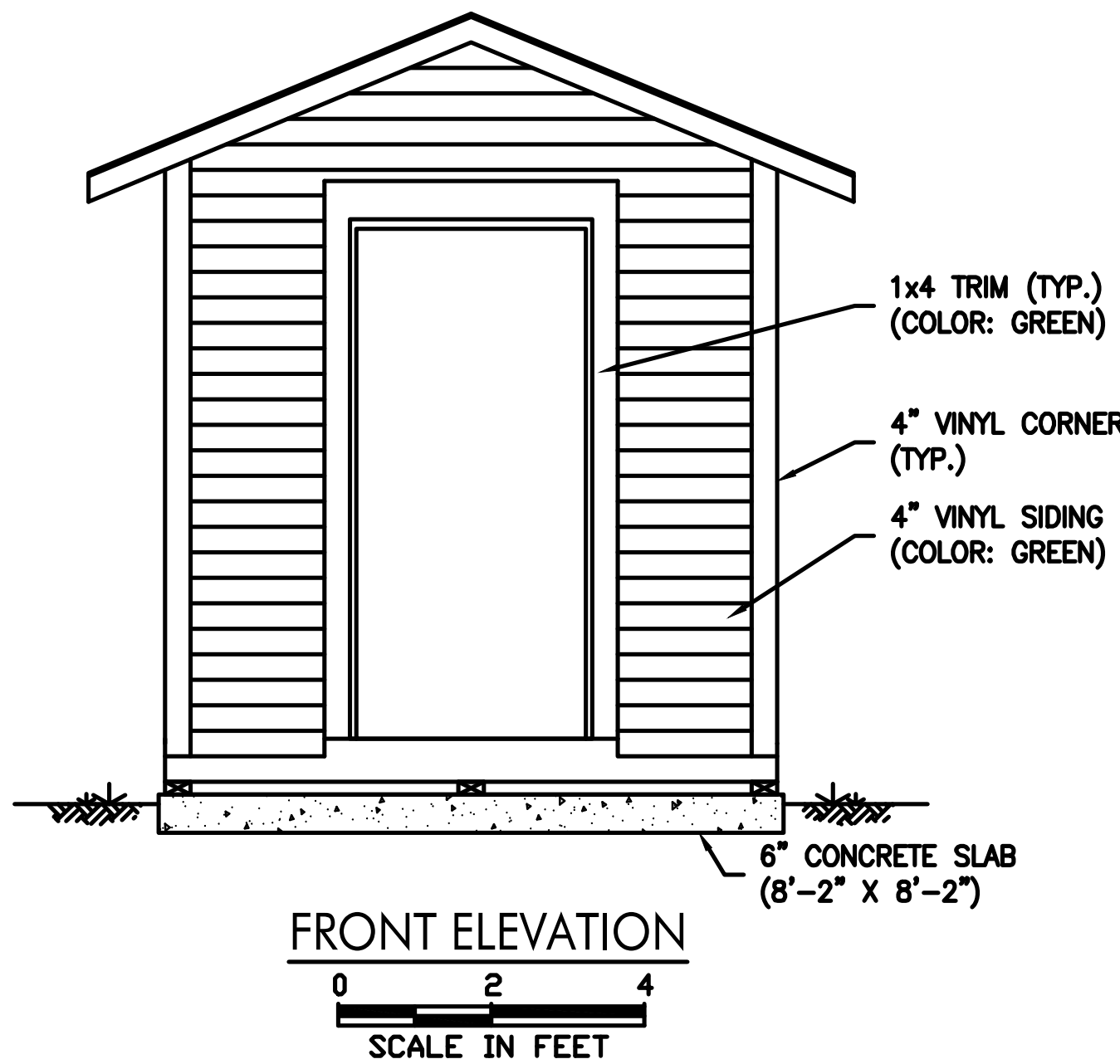
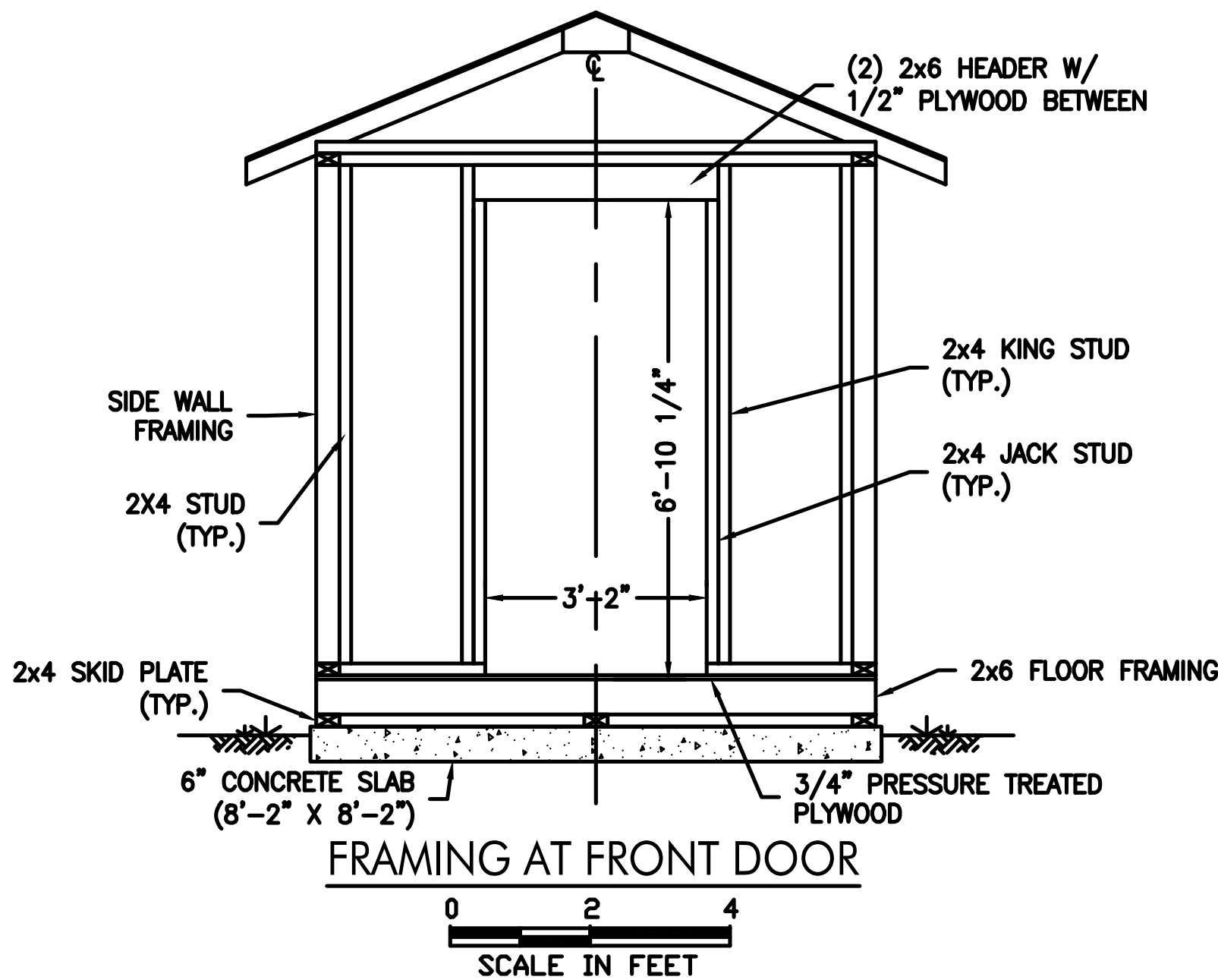
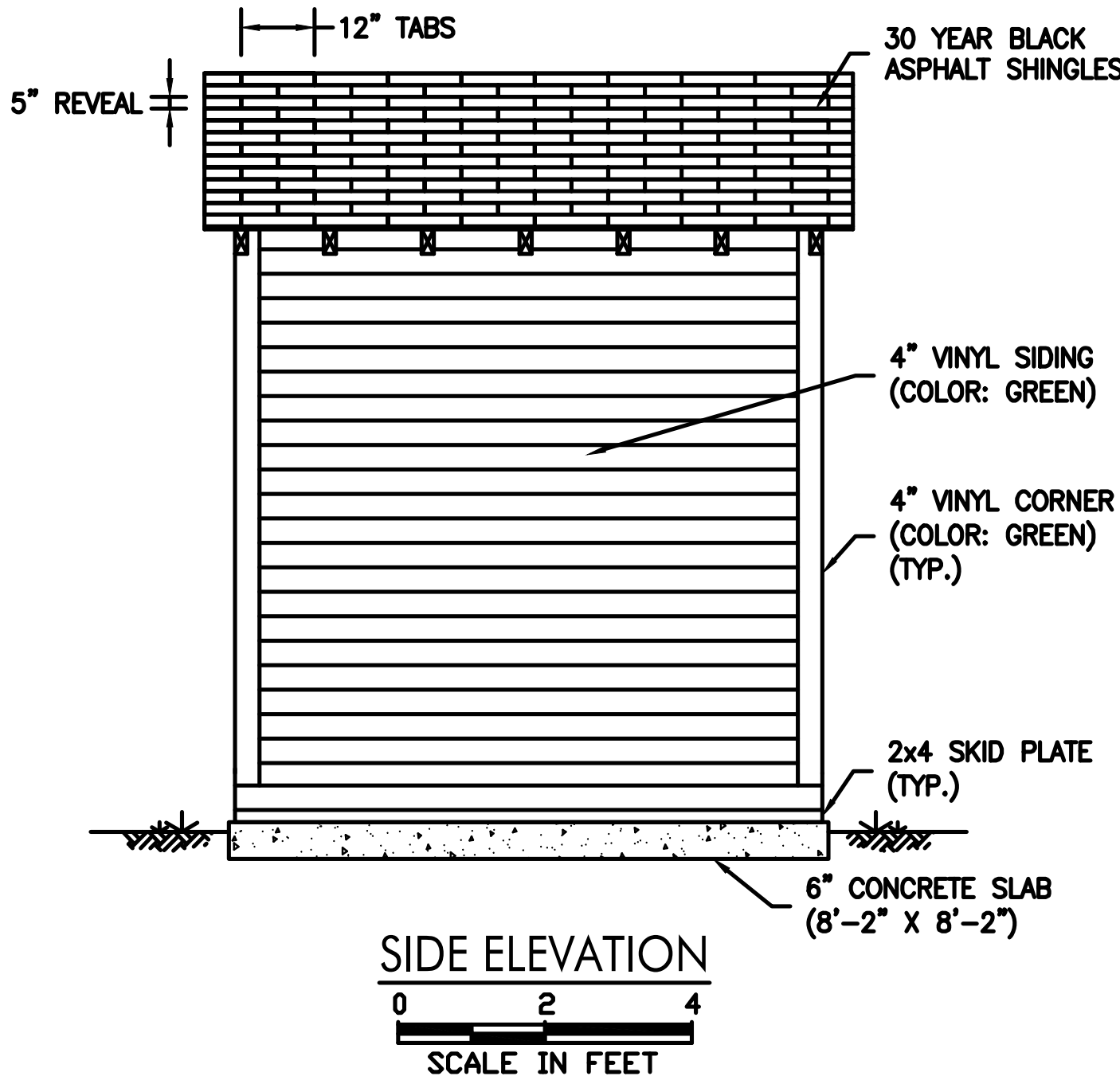
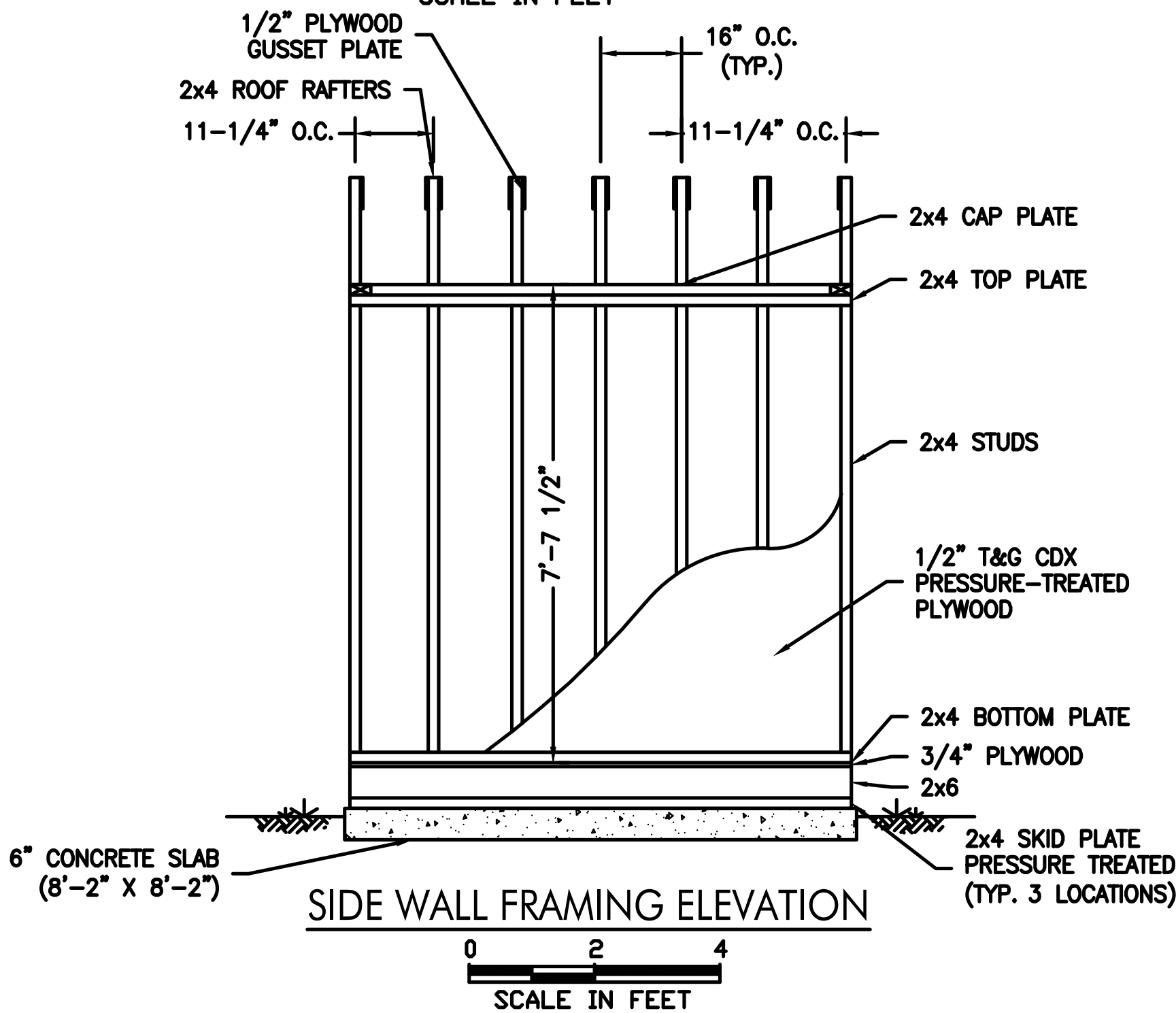
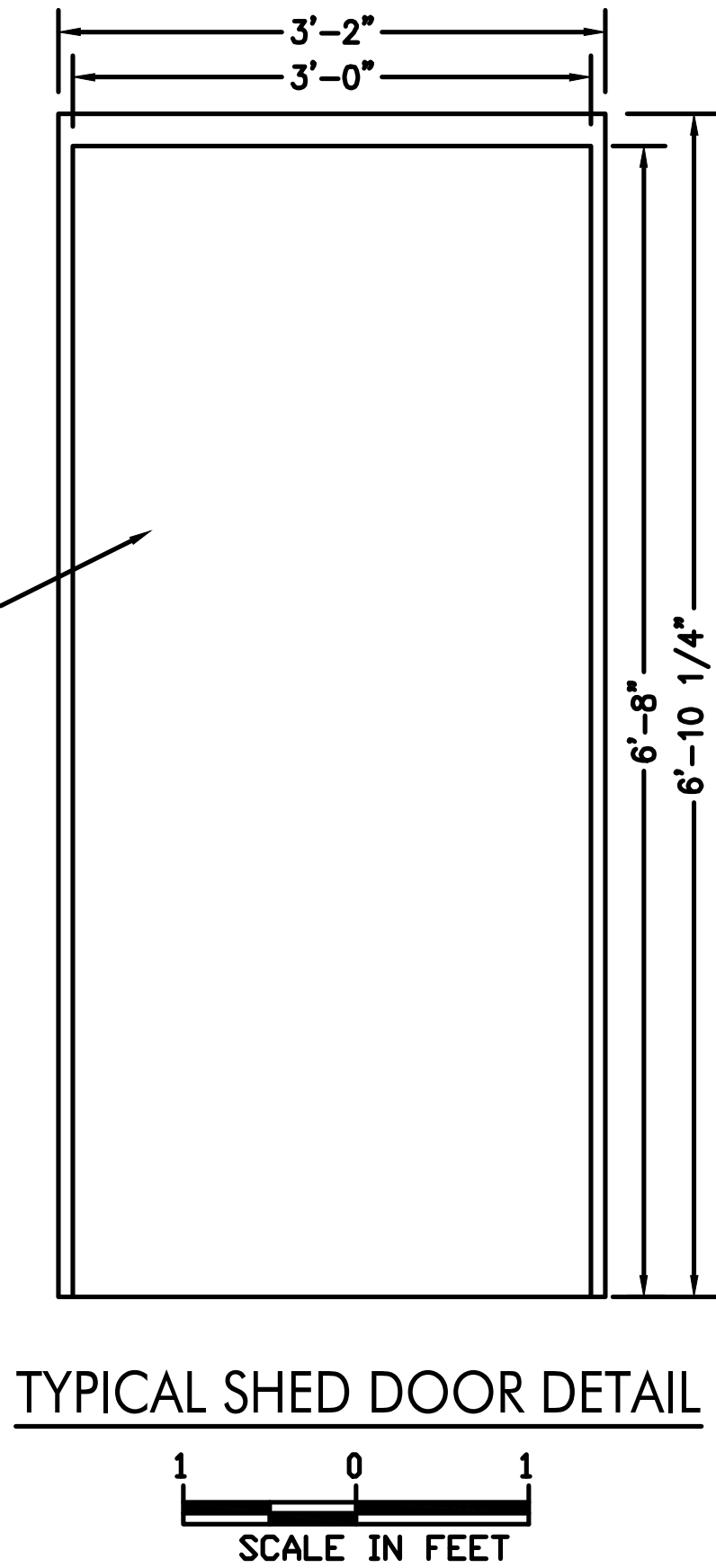
40

OF

57



PROVIDE PRE-HUNG STEEL MANDOR WITH ALL REQUIRED HARDWARE



NEW YORK STATE OF CONSTRUCTION

Office of General Services

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STATE OF NEW YORK

MAURIN I. WESOLOWSKI

PROFESSIONAL ENGINEER

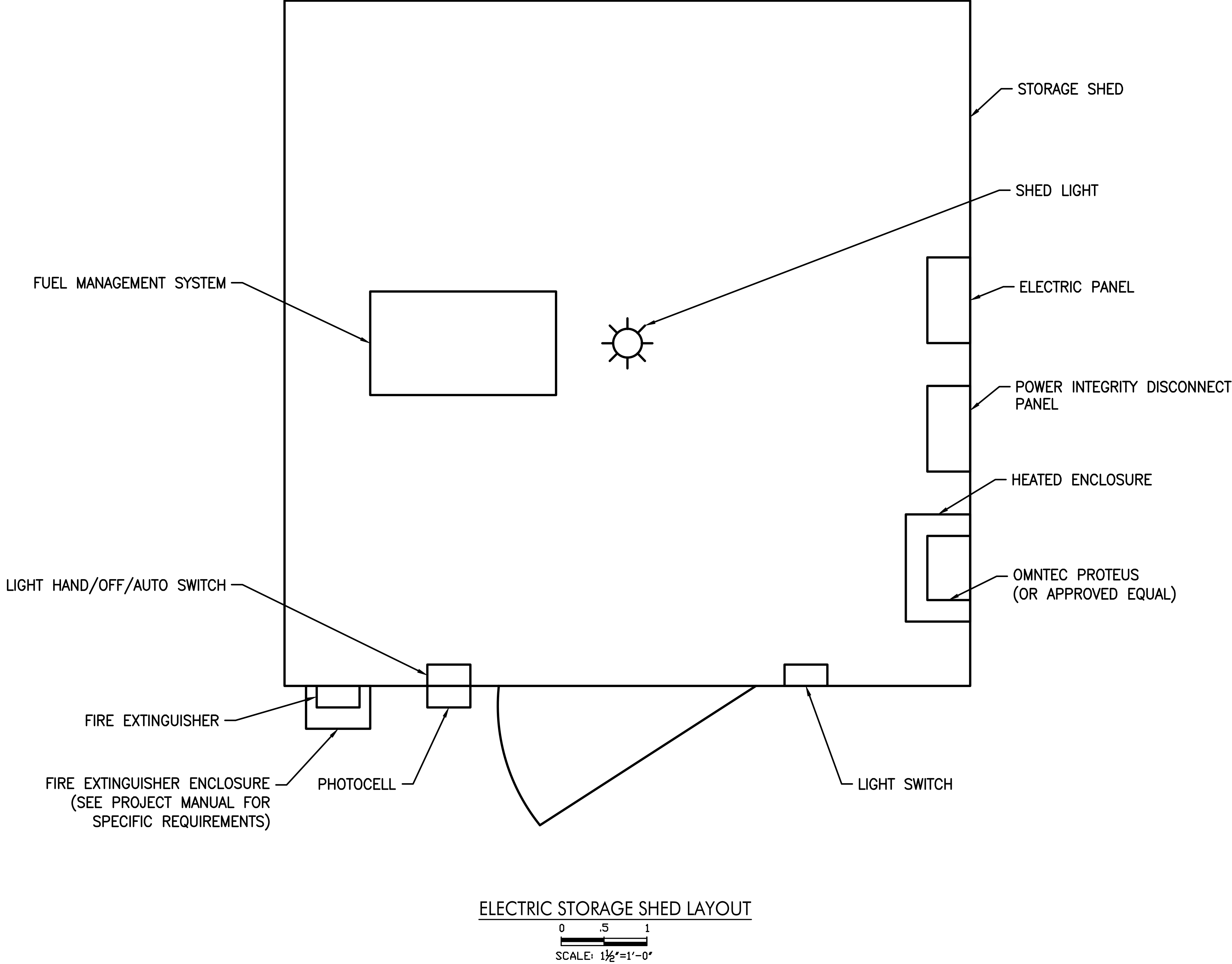
REGISTRATION NUMBER: 12/31/2026


CONSTRUCTION

TITLE: FUEL TANK MODIFICATION AND ENVIRONMENTAL REMEDIATION PROGRAM

LOCATION: SOUTHERN REGION VARIOUS FACILITIES

MARK	DATE	DESCRIPTION
	1/31/2025	FINAL SUBMISSION
PROJECT NUMBER:	47674	- C
DESIGNED BY:	M. GUTMANN	
DRAWN BY:	A. KELLY	
FIELD CHECK:	M. WESOLOWSKI	
APPROVED:	M. WESOLOWSKI	
SHEET TITLE:		
STORAGE SHED DETAILS AND ELEVATIONS		
DRAWING NUMBER: C-39		
SHEET 41 OF 57		






Office of
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STATE OF NEW YORK
MARK L. WESOLOWSKI
NO. 024264
PROFESSIONAL ENGINEER
REGISTRATION EXPIRES
12/31/2026

CONTRACT

CONSTRUCTION

TITLE:
FUEL TANK MODIFICATION AND
ENVIRONMENTAL REMEDIATION PROGRAM

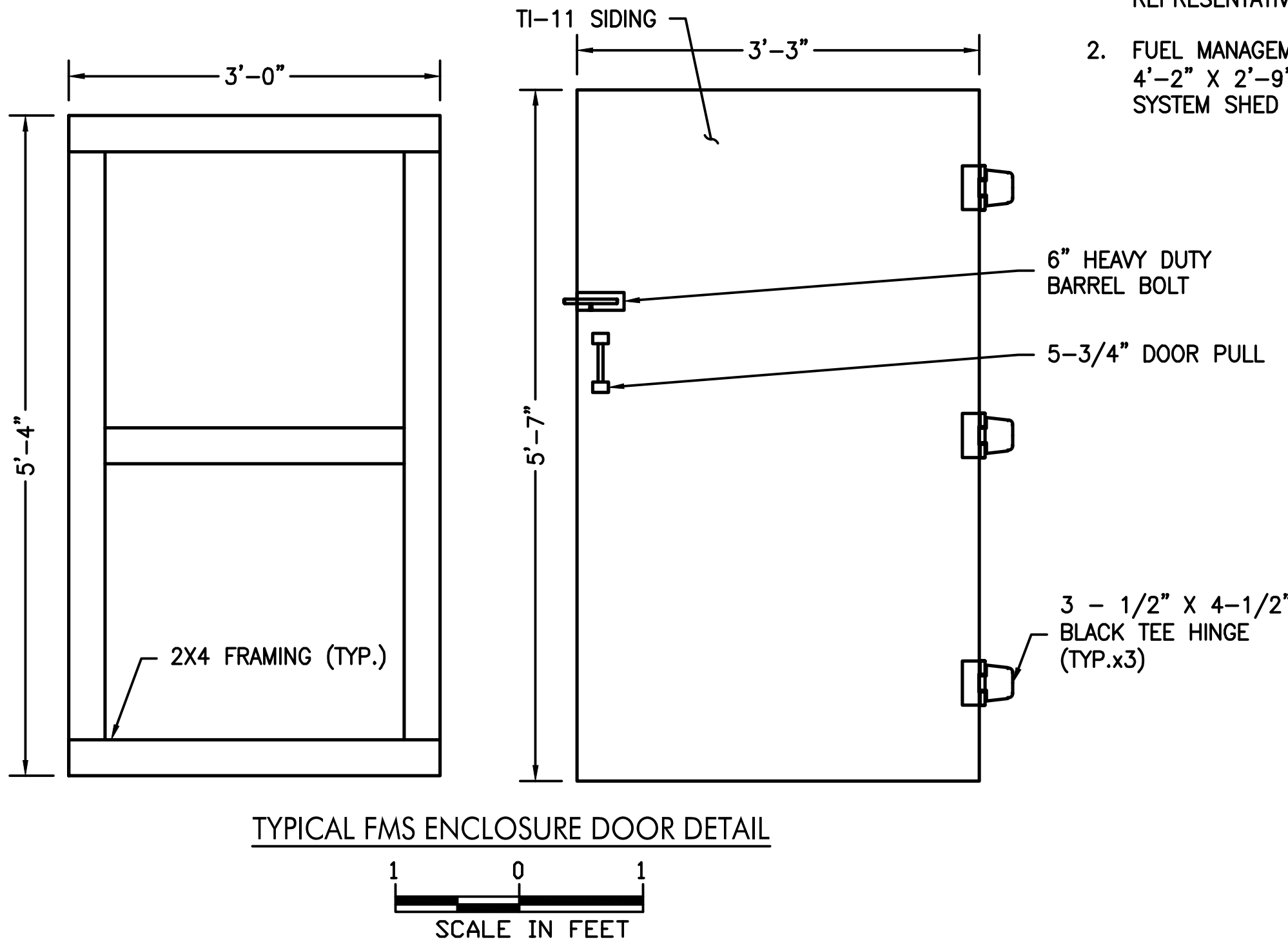
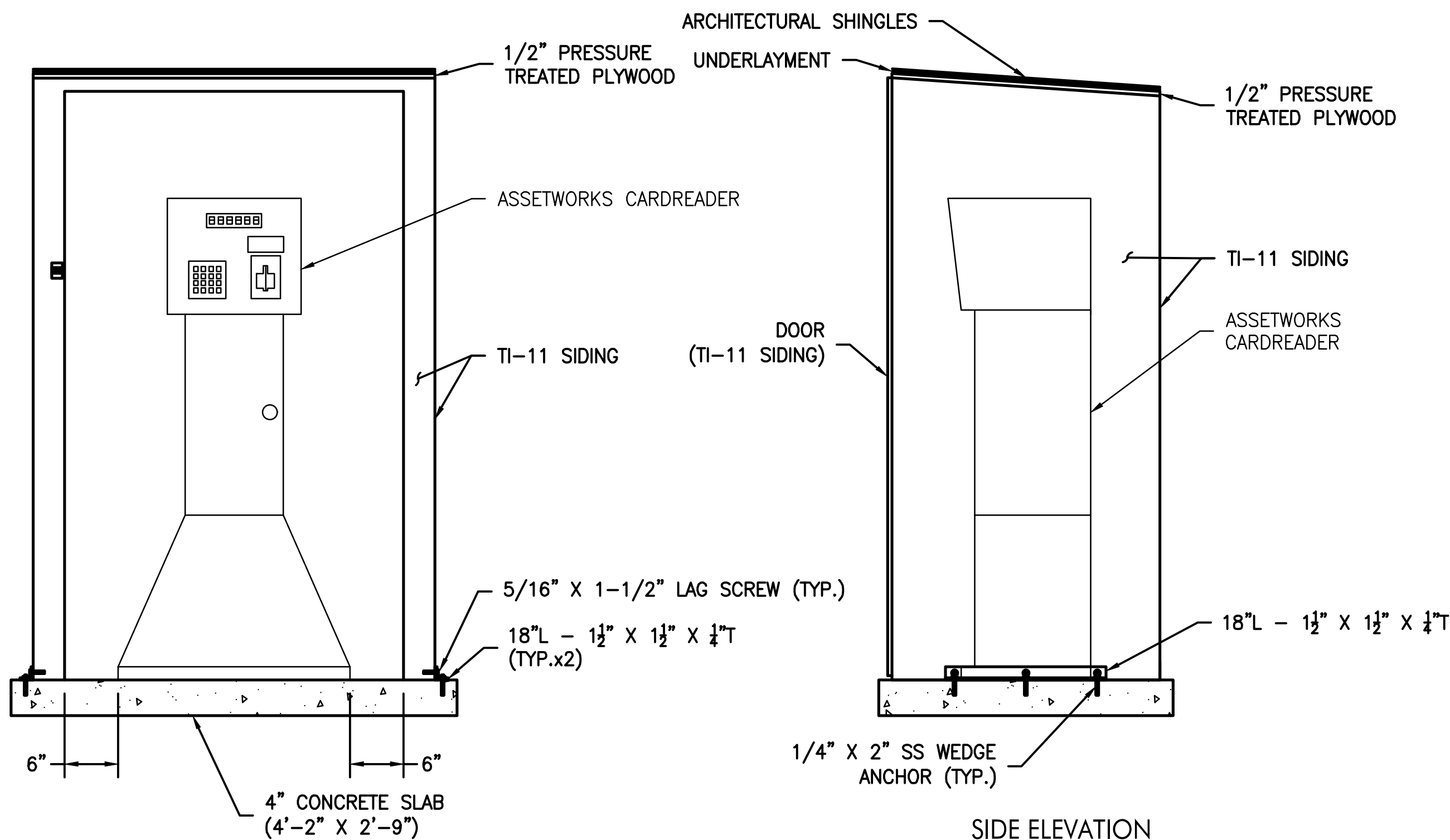
LOCATION:
SOUTHERN REGION
VARIOUS FACILITIES

MARK	DATE	DESCRIPTION
	1/31/2025	FINAL SUBMISSION
PROJECT NUMBER:	47674	- C
DESIGNED BY:	M. GUTMANN	
DRAWN BY:	A. KELLY	
FIELD CHECK:	M. WESOLOWSKI	
APPROVED:	M. WESOLOWSKI	

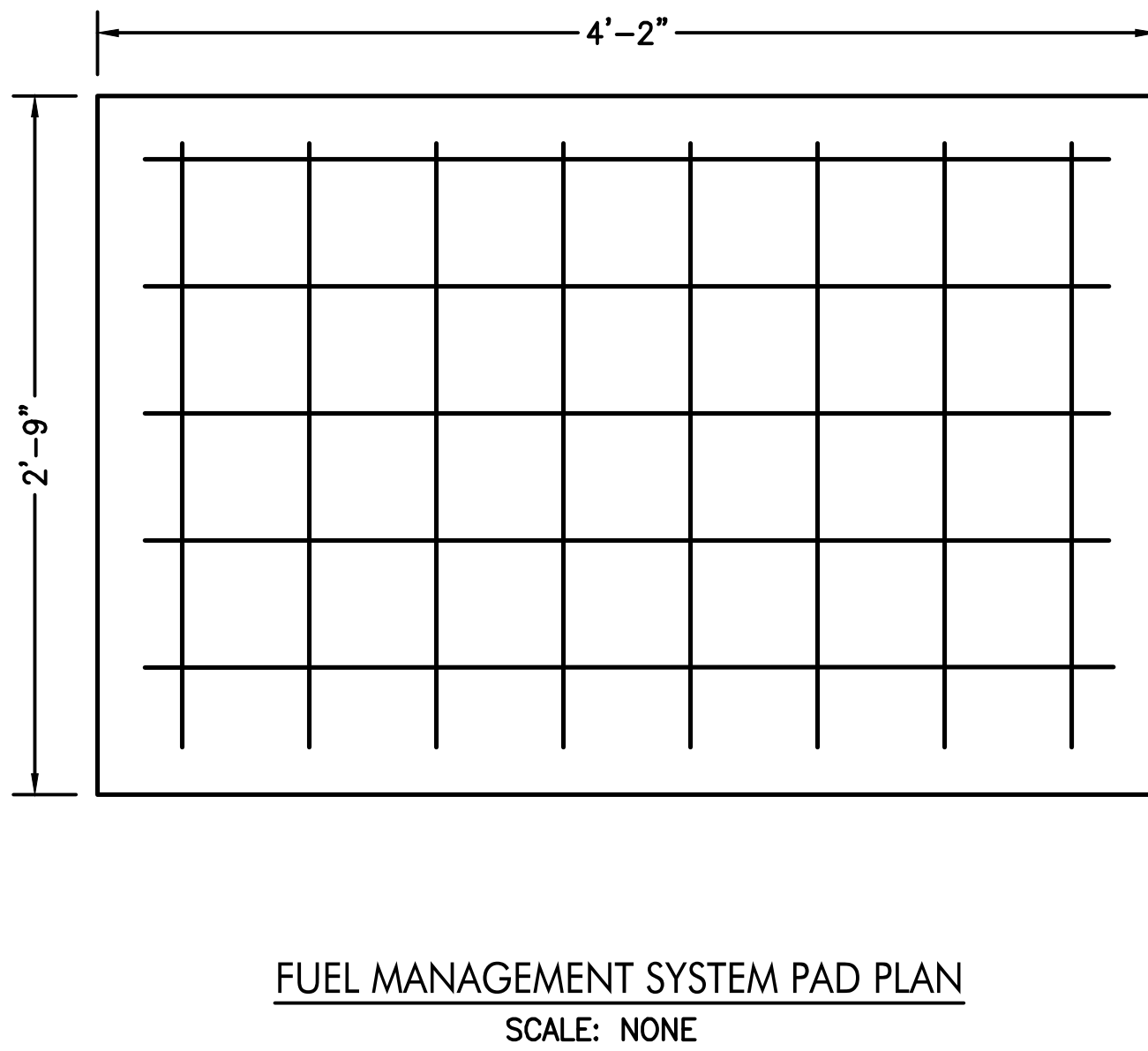
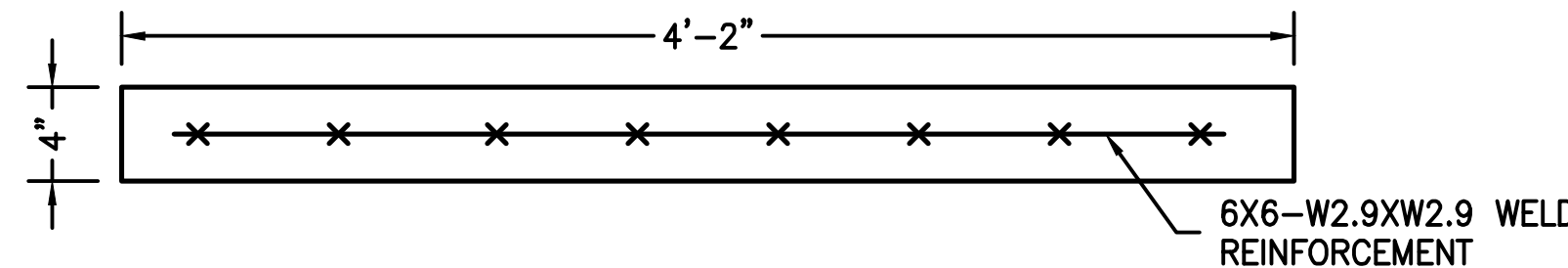
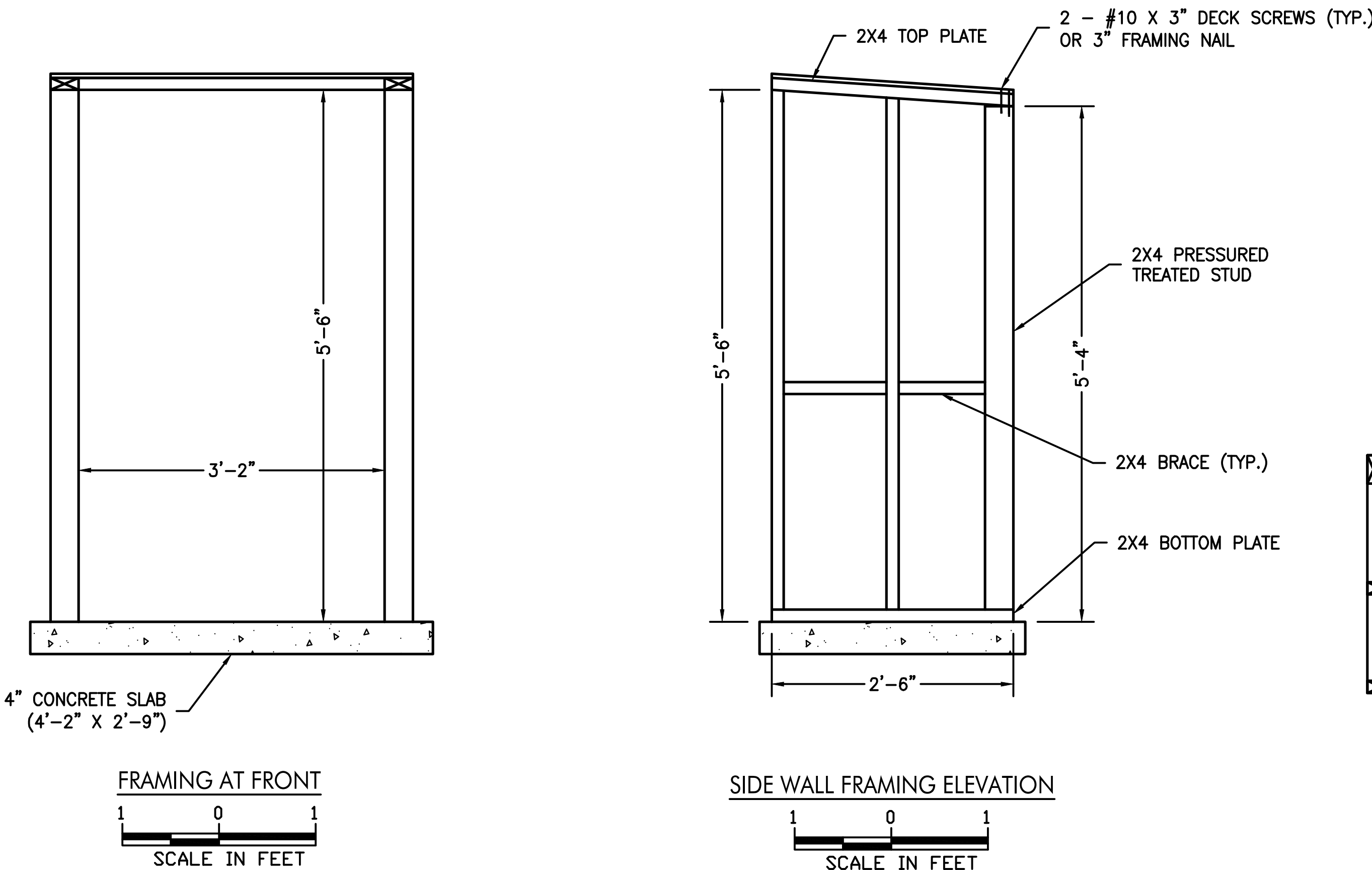
SHEET TITLE:
STORAGE SHED EQUIPMENT
LAYOUT

DRAWING NUMBER:
C-40

SHEET 42 OF 57



- NOTES:
- ENCLOSURE SHALL BE PAINTED GREEN UNLESS OTHERWISE DIRECTED BY THE OGS DIRECTOR'S REPRESENTATIVE.
 - FUEL MANAGEMENT SYSTEM PAD SHALL BE 4'-2" X 2'-9" WHEN A FUEL MANAGEMENT SYSTEM SHED IS REQUIRED.



Office of General Services

DESIGN & CONSTRUCTION

CONSULTANT

CERTIFICATE OF AUTHORIZATION #: 0017005

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STATE OF NEW YORK

MARK L. WESOLOWSKI

NO. 074264

PROFESSIONAL ENGINEER

REGISTRATION EXPIRES: 12/31/2026

CONTRACT

CONSTRUCTION

TITLE: FUEL TANK MODIFICATION AND ENVIRONMENTAL REMEDIATION PROGRAM

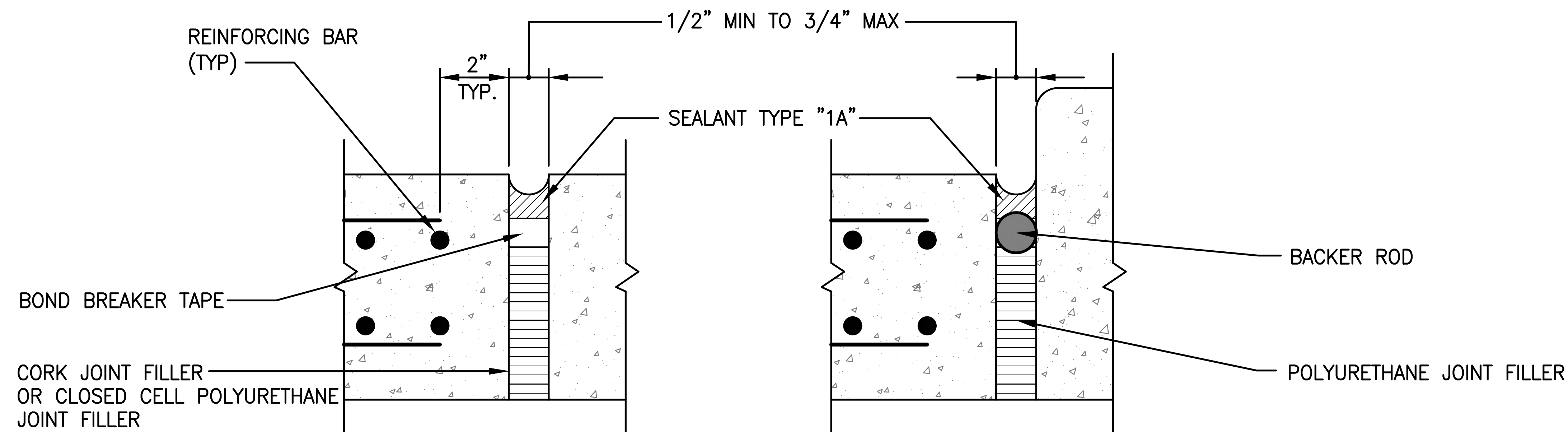
LOCATION: SOUTHERN REGION VARIOUS FACILITIES

MARK	DATE	DESCRIPTION
	1/31/2025	FINAL SUBMISSION
PROJECT NUMBER:	47674	- C
DESIGNED BY:	M. GUTMANN	
DRAWN BY:	A. KELLY	
FIELD CHECK:	M. WESOLOWSKI	
APPROVED:	M. WESOLOWSKI	

SHEET TITLE:
FUEL MANAGEMENT SYSTEM ENCLOSURE DETAILS AND ELEVATIONS

DRAWING NUMBER:
C-41

SHEET 43 OF 57



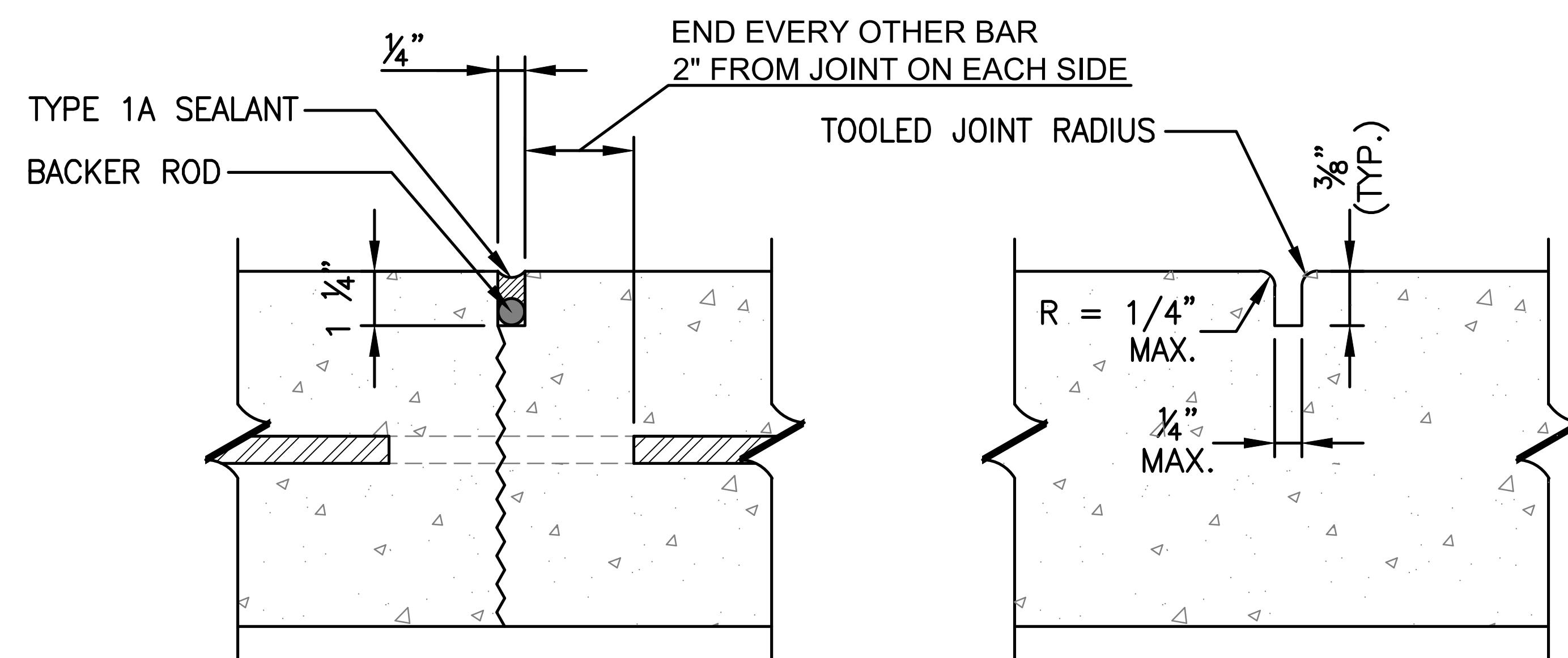
**TYPICAL FORMED
EXPANSION JOINT**

SCALE: NONE

**TYPICAL EXPANSION JOINT FOR
IRREGULAR SURFACES**

SCALE: NONE

USE THIS JOINT BETWEEN ALL TANK PADS AND VEHICLE PADS

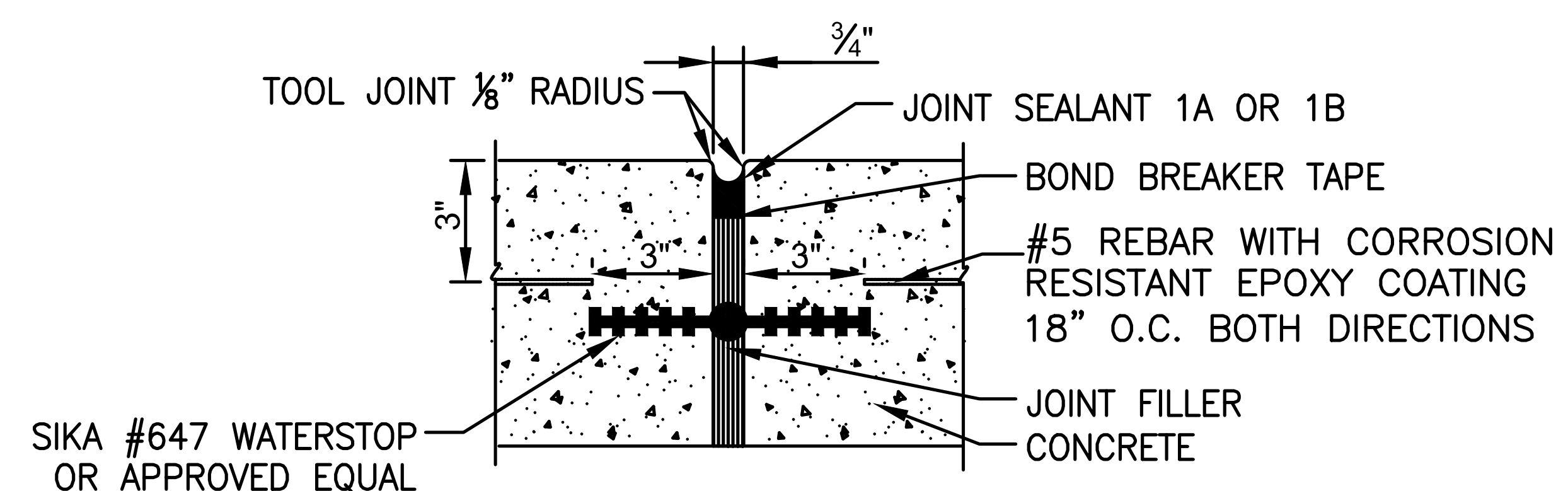


TYPICAL CONTROL JOINT

SCALE: NONE

**TYPICAL TOOLED CONTROL
JOINT DETAIL**

SCALE: NONE



EXPANSION JOINT WITH WATERSTOP

SCALE: NONE

Office of
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DESIGN & CONSTRUCTION

CONSULTANT

CERTIFICATE OF AUTHORIZATION #: 0017985

LiRo Engineers, Inc.
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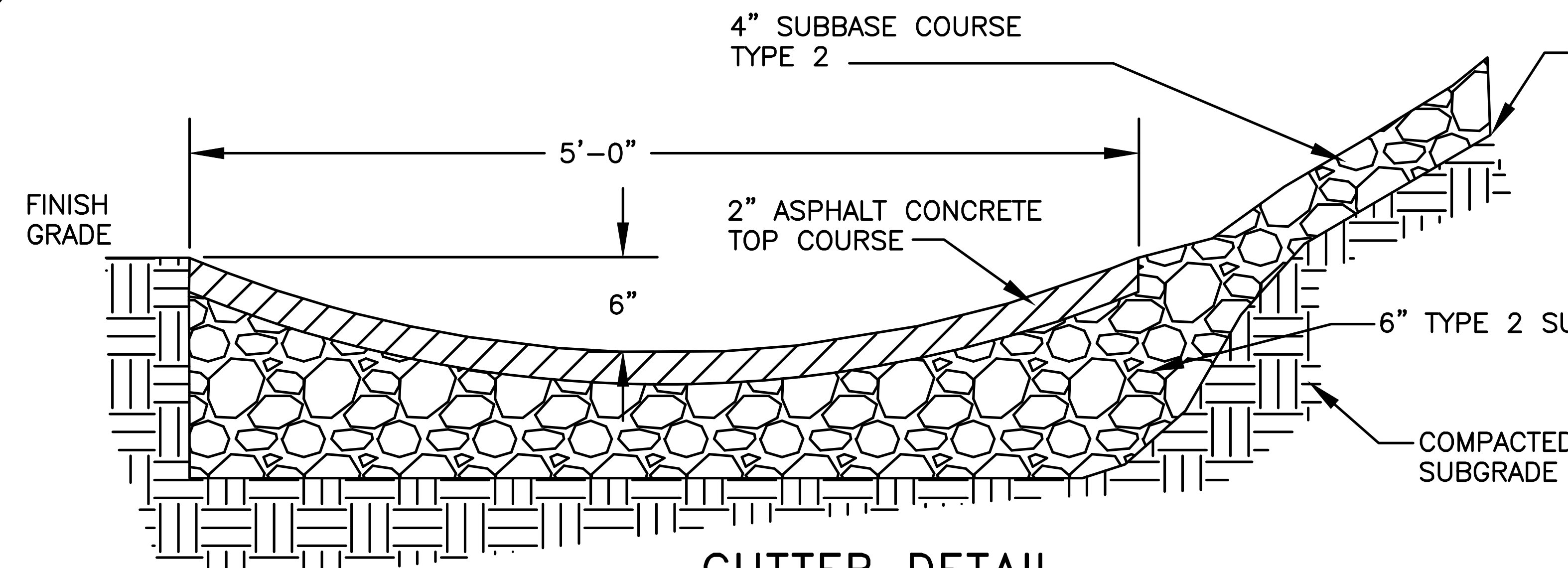
SHEET TITLE:

CONCRETE JOINT
DETAILS

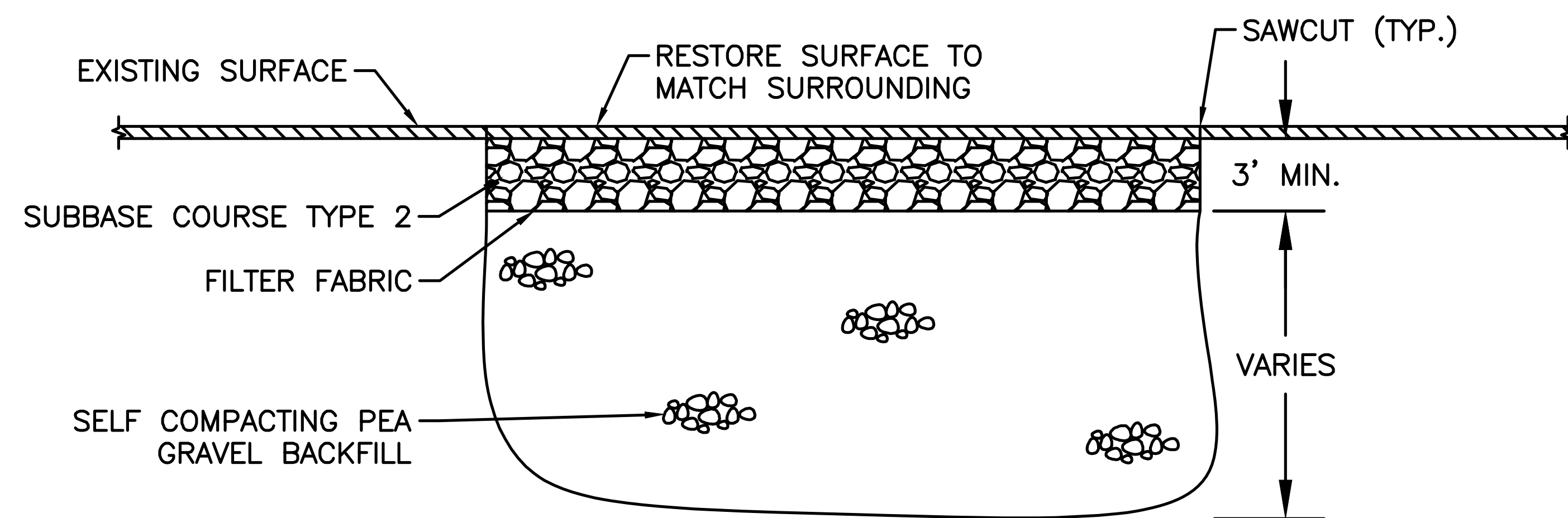
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C-42

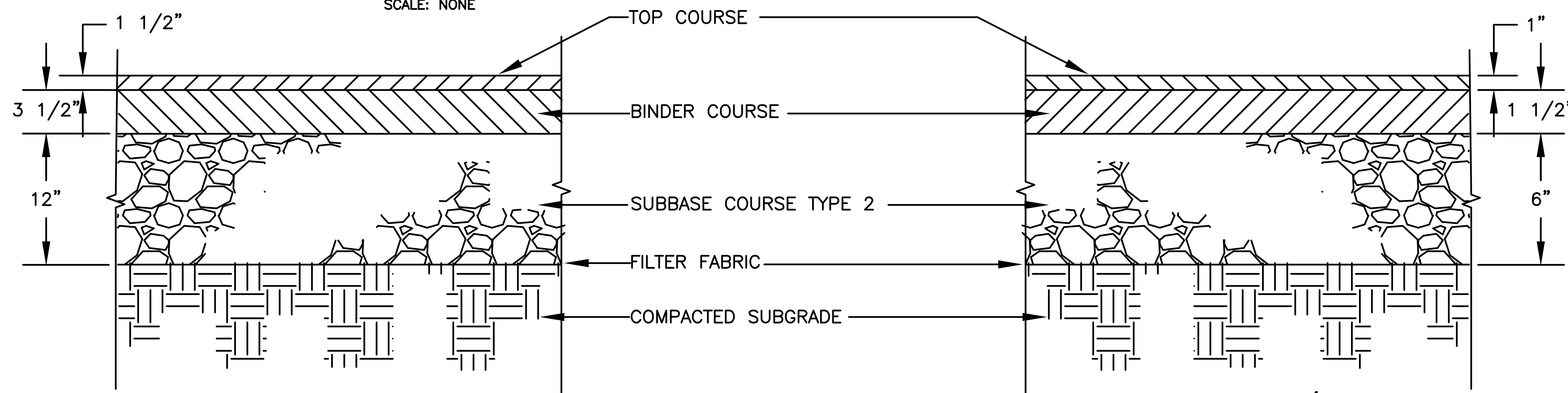
SHEET 44 OF 57



GUTTER DETAIL
SCALE: NONE

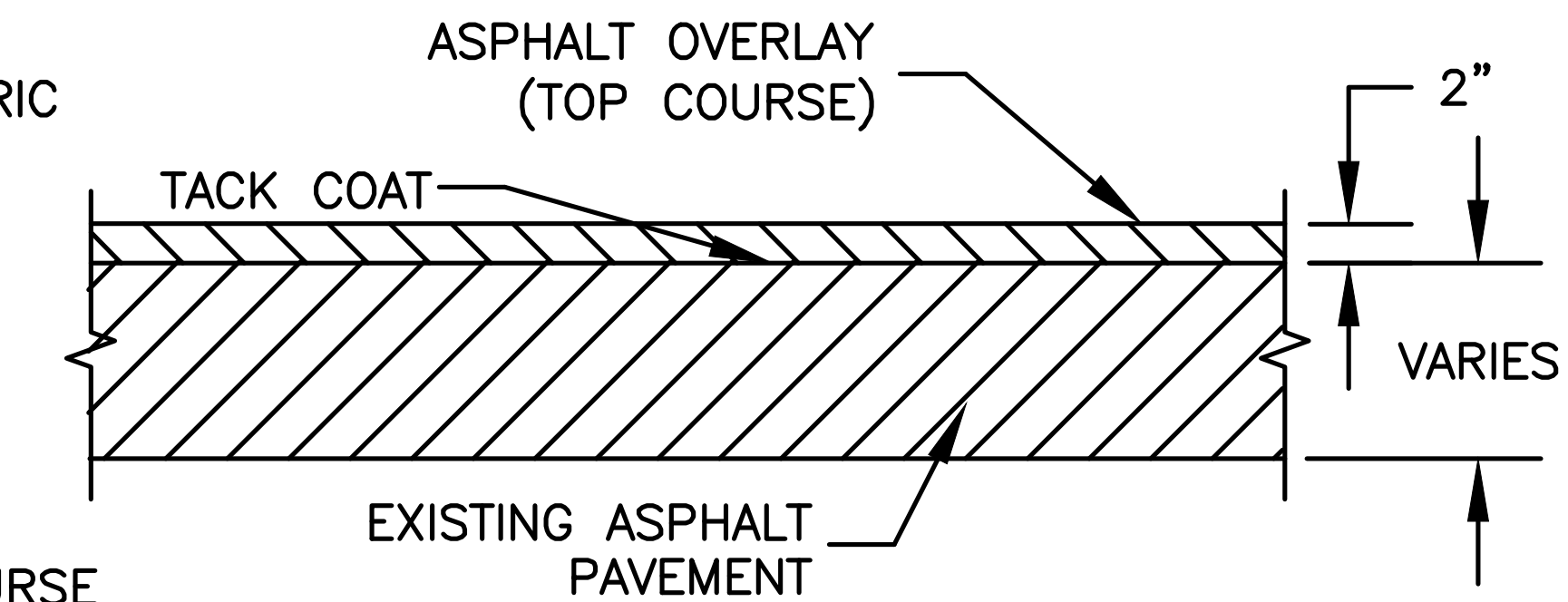


FORMER TANK EXCAVATION BACKFILL DETAIL
SCALE: NONE

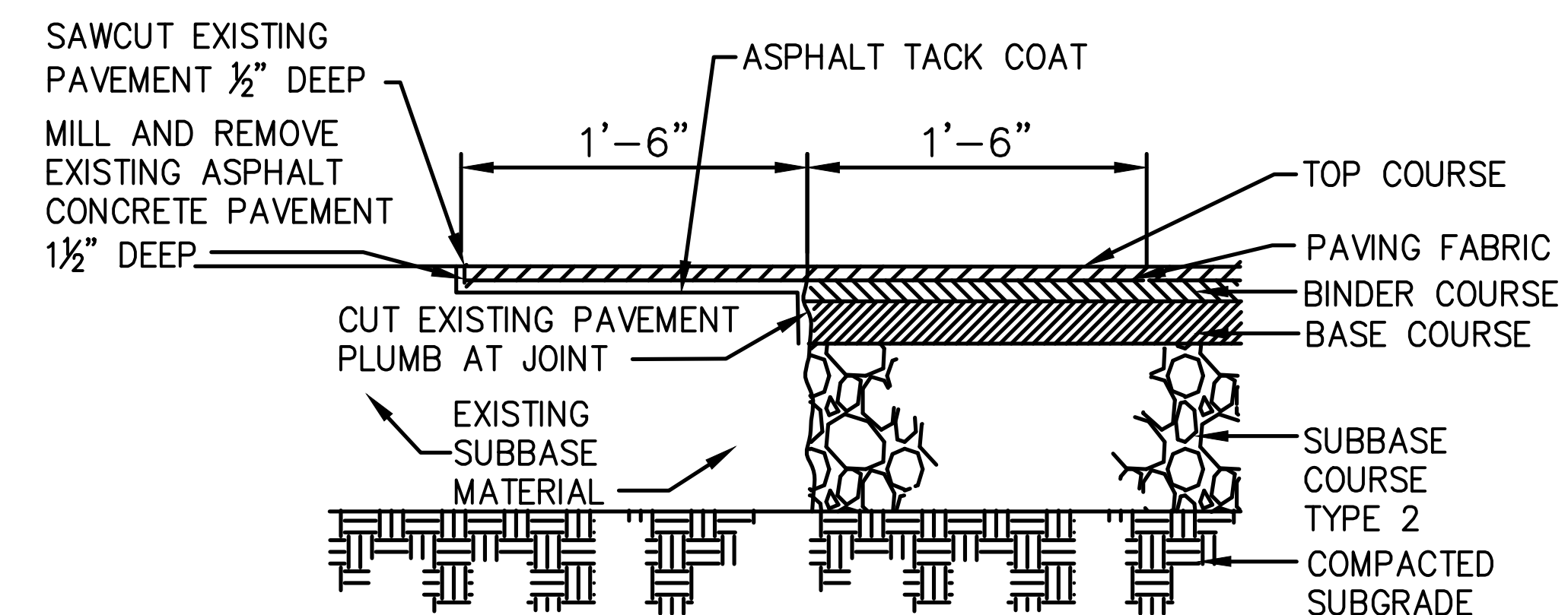


PARKING/ROAD AREA (HEAVY DUTY)
SCALE: NONE

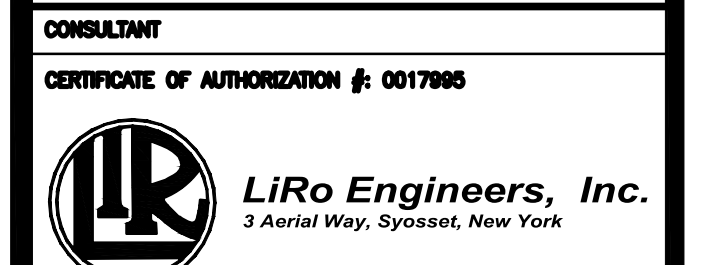
WALKS, PARKING/ROAD, AND PLAY AREAS (LIGHT DUTY)
SCALE: NONE



ASPHALT PAVEMENT OVERLAY DETAIL
SCALE: NONE

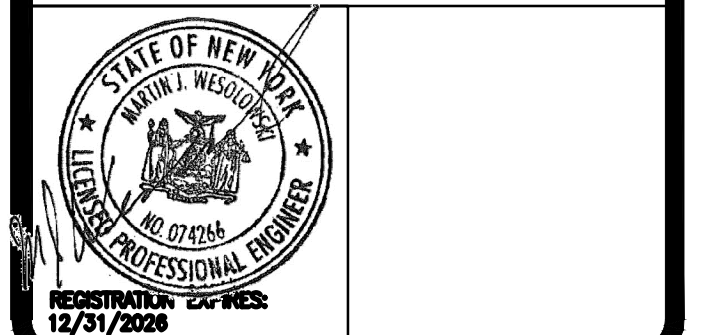


ASPHALT TRANSITION DETAIL
SCALE: NONE



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CONSTRUCTION

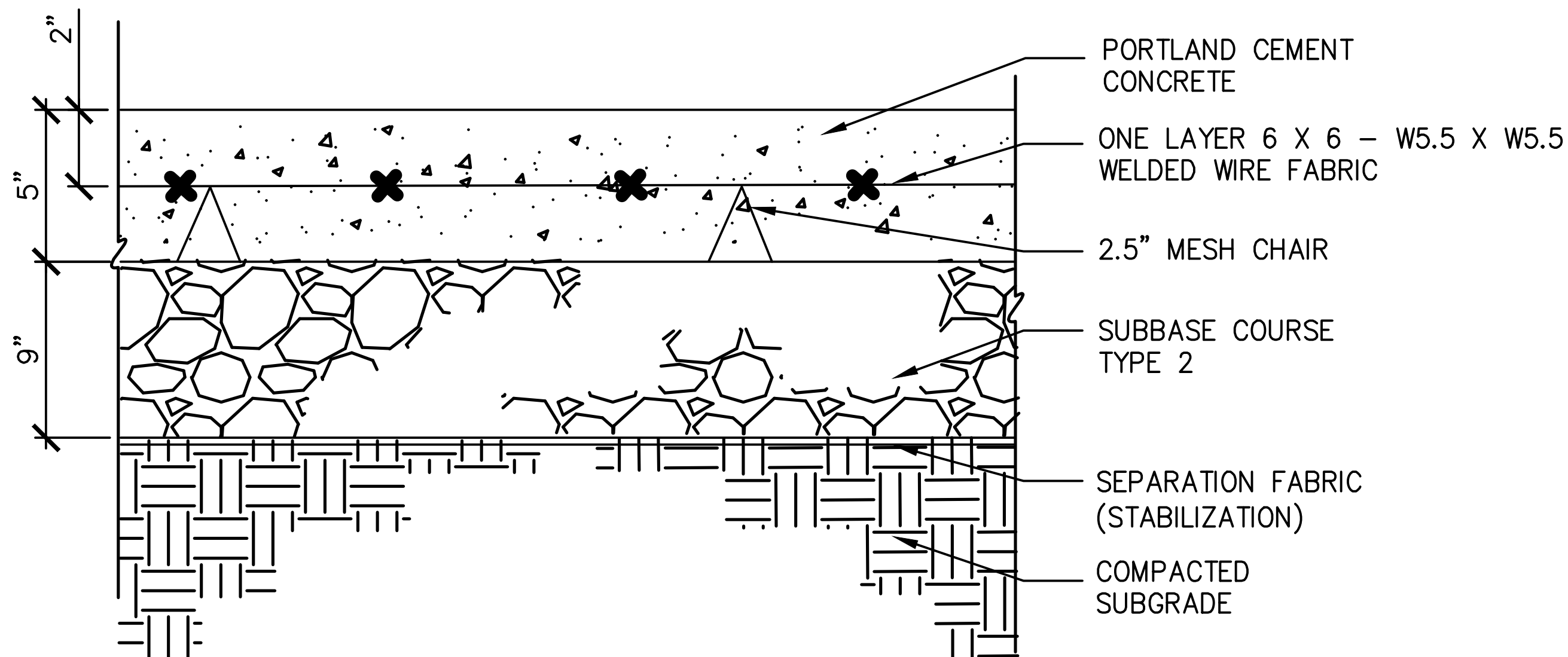
TITLE: FUEL TANK MODIFICATION AND ENVIRONMENTAL REMEDIATION PROGRAM

LOCATION: SOUTHERN REGION
VARIOUS FACILITIES

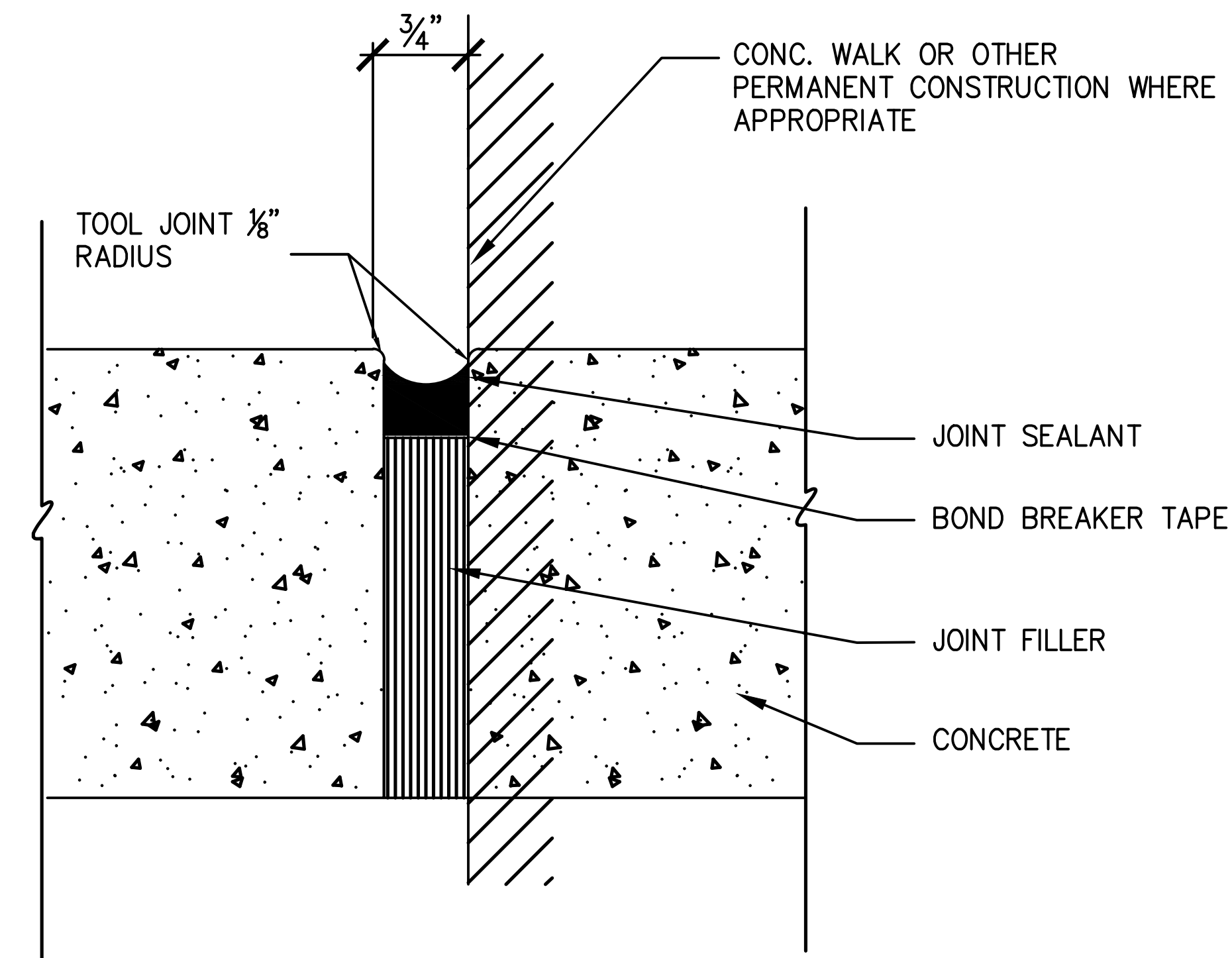
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DESIGNED BY:	M. GUTMANN	
DRAWN BY:	A. KELLY	
FIELD CHECK:	M. WESOLOWSKI	
APPROVED:	M. WESOLOWSKI	

SHEET TITLE:
ASPHALT CONCRETE PAVEMENT & EXCAVATION BACKFILL DETAILS

DRAWING NUMBER:
C-43



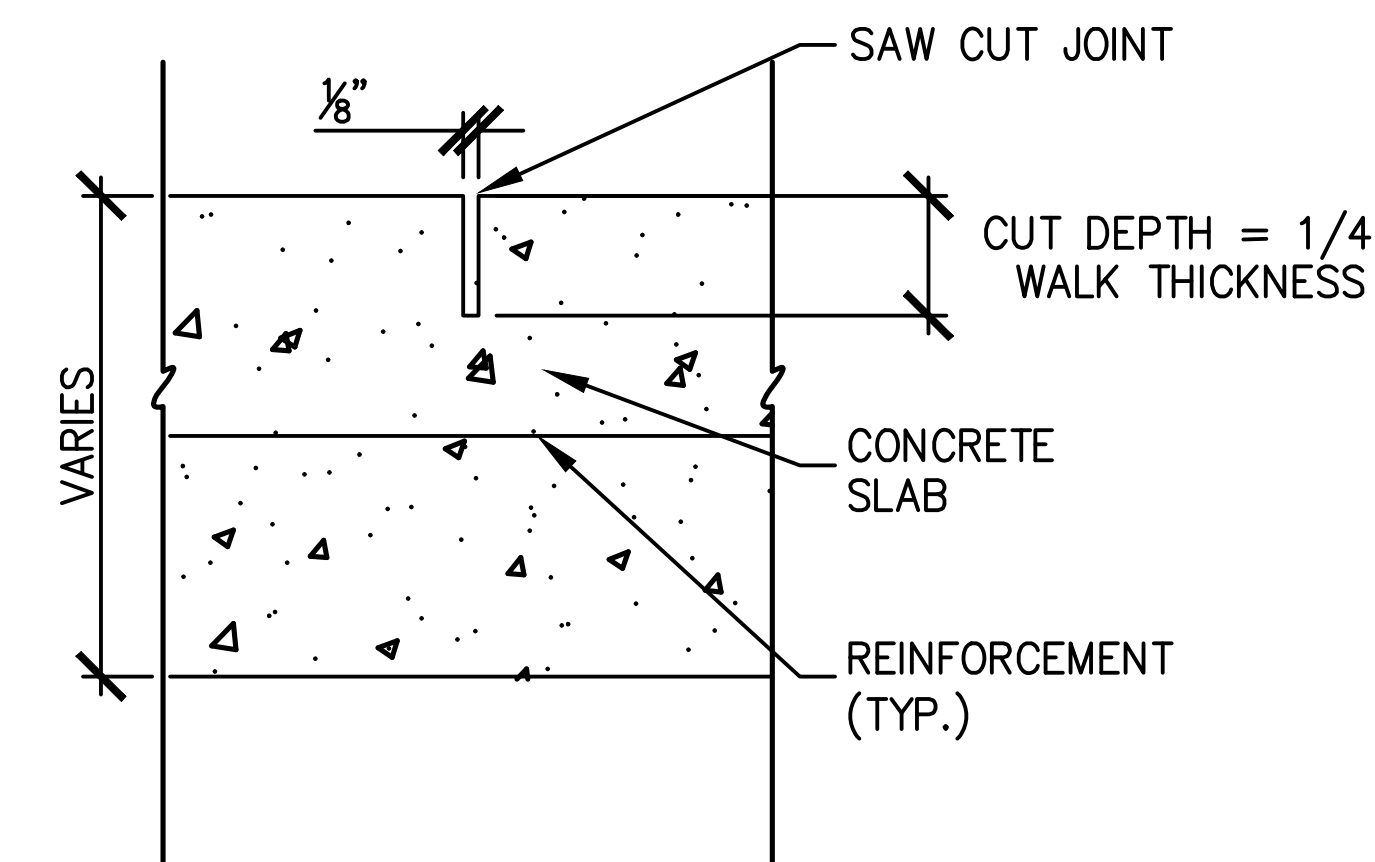
CONCRETE WALK – WWF REINFORCED



EXPANSION JOINT

NOTES:

1. PROVIDE EXPANSION JOINT WHERE THE SIDEWALK ABUTS THE CONCRETE SLAB FOR THE FUEL TANK AND AT THE CHANGE IN DIRECTION AND EVERY 50'.
2. VERTICAL EXPANSION JOINTS:
 - W.R. MEADOWS, INC. ASPHALT FIBRE EXPANSION JOINT, OR APPROVED EQUAL.
 - W.R. MEADOWS SNAP-CAP EXPANSION JOINT CAP (KEEPS THE FIBRE BOARD CLEAN DURING CONCRETE PLACEMENT), OR APPROVED EQUAL.
 - 3M BOND BREAKER TAPE OR APPROVED EQUAL.
 - A SINGLE COMPONENT, SELF-LEVELING, NON-SAG POLYURETHANE SEALANT – SIKAFLEX-1C SL OR APPROVED EQUAL.
3. EDGES AND EXPANSION JOINTS SHOULD TROWELED WITH A RADIUS EDGE.
4. SAW CONTROL JOINTS (CJ) AFTER THE CONCRETE HAS SET. COMPLETE SAWCUTS WITHIN 18 HOURS AFTER SLAB IS PLACED. SPACE CONTROL JOINTS EQUALLY BETWEEN EXPANSION JOINTS AT APPROXIMATELY 5'-0" ON CENTER OR MATCH EXISTING WALKS IN AREA, EXCEPT WHERE A DIFFERENT SPACING IS SHOWN ON THE DRAWINGS.
5. APPLY CURING IMMEDIATELY AFTER FINAL FINISH. KURE-N-SEAL OR APPROVED EQUAL.
6. CONCRETE SIDEWALK SHALL HAVE A BROOM FINISH.



SAWED CONTROL JOINT

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CERTIFICATE OF AUTHORIZATION #: 0017905

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CONSTRUCTION

TITLE: FUEL TANK MODIFICATION AND ENVIRONMENTAL REMEDIATION PROGRAM

LOCATION: SOUTHERN REGION
VARIOUS FACILITIES

MARK	DATE	DESCRIPTION
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DESIGNED BY:	M. GUTMANN	
DRAWN BY:	A. KELLY	
FIELD CHECK:	M. WESOŁOWSKI	
APPROVED:	M. WESOŁOWSKI	

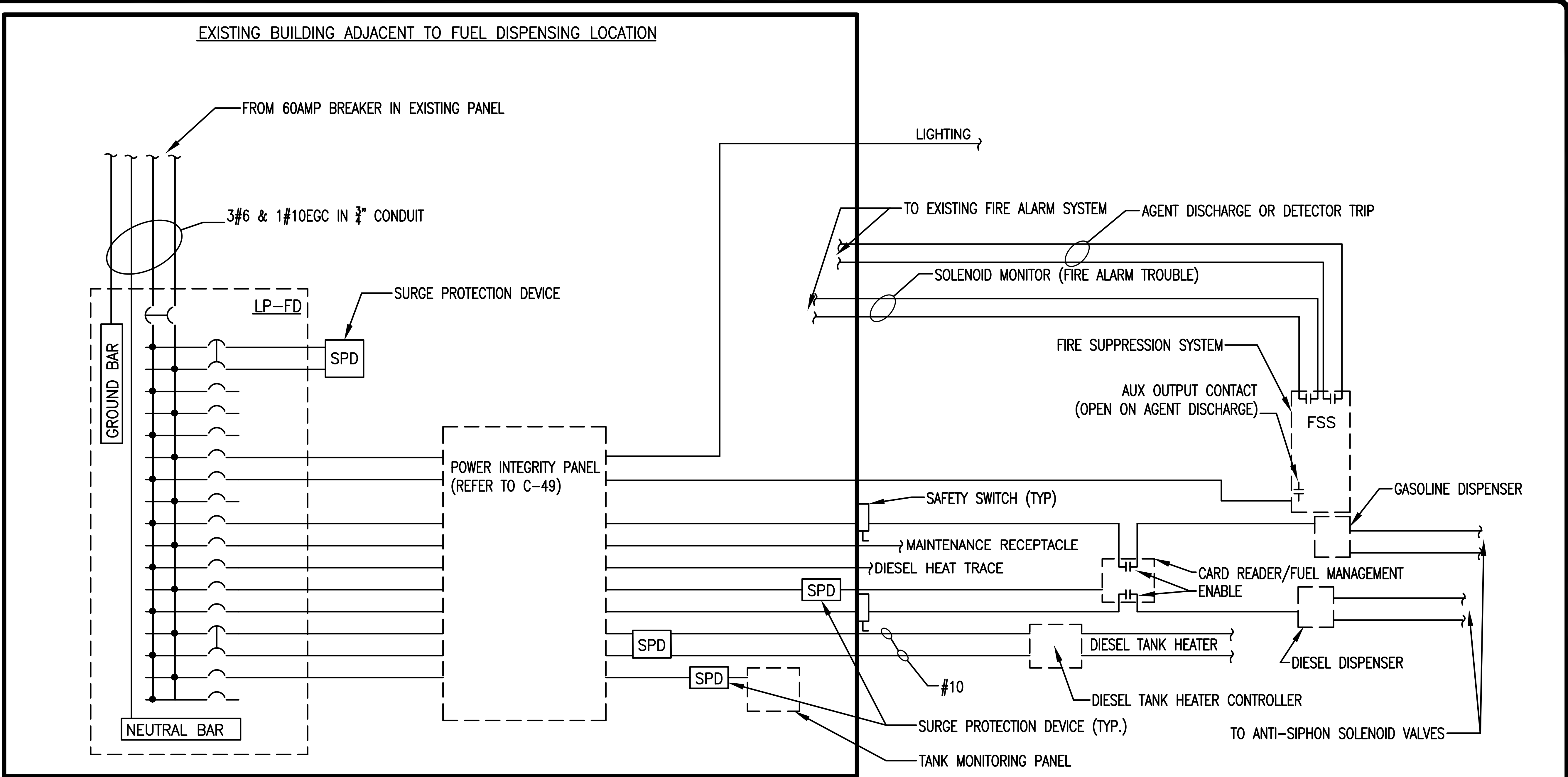
SHEET TITLE:

SIDEWALK AND
EXPANSION JOINT DETAIL

DRAWING NUMBER:

C-44

SHEET 46 OF 57



GENERAL NOTES:

(THIS DRAWING ONLY)

- A. CONDUIT LAYOUT IS SHOWN DIAGRAMMATICALLY. CONDUITS SHALL BE CONSOLIDATED TO REDUCE THE NUMBER OF CONDUITS REQUIRED ON A SITE BY SITE BASIS. CONTRACTOR SHALL SUBMIT CONDUIT CONSOLIDATION PLAN AS A FIELD SUBMITTAL ON ELECTRIC SUBMITTAL PLATFORM.

B. PROVIDE A 2 POLE 60 AMPERE TRIP ELEMENT BREAKER IN AN EXISTING PANEL AS DIRECTED. OR IF SUFFICIENT SPACE EXISTS IN AN EXISTING BREAKER, PROVIDE BRANCH BREAKERS IN THAT PANEL AS DIRECTED.

C. GROUNDING CONDUCTORS ARE TO BE PROVIDED IN ALL CONDUITS REGARDLESS OF WHAT IS DEPICTED ON THIS DIAGRAM.

D. PROVIDE ALL WIRING IN CONDUIT. CONDUITS PENETRATING SLABS OR AREAS EXPOSED TO SALT SHALL BE PVC-COATED RIGID METAL CONDUIT. PVC-COATED CONDUIT SHALL EXTEND FROM BENEATH SLAB TO 2 FEET ABOVE SLAB.
- E. THE MAINTENANCE RECEPTACLE CONDUCTORS SHALL NOT BE ROUTED THROUGH THE CONTACTOR.

F. MOUNT THE PHOTOCELL ON THE EXTERIOR OF THE BUILDING AT APPROXIMATELY 10 FEET ABOVE GRADE AS DIRECTED.

G. MOUNT SAFETY SWITCHES OUTDOORS, IN SIGHT OF THE DISPENSING LOCATION, OUTSIDE OF THE HAZARDOUS AREA, AS DIRECTED. BREAK NEUTRAL CONDUCTORS IN SAFETY SWITCHES AS WELL.

H. COMPONENTS SHOWN ON THE DIAGRAM ARE TYPICAL, NOT ALL INSTALLATIONS WILL REQUIRE ALL OF THE COMPONENTS SHOWN.
- I. PROVIDE THE NUMBER OF CONTACTORS AS REQUIRED TO OPEN ALL LINE AND NEUTRAL CONDUCTORS SHOWN ON THE DIAGRAM.

J. THE EMERGENCY POWER SWITCH SHALL BE LOCATED A MINIMUM OF 20 FEET FROM ALL DISPENSERS AND A MAXIMUM OF 100 FEET FROM ALL DISPENSERS AS DIRECTED.


K. SEALING FITTINGS ARE NOT SHOWN. PROVIDE SEALING FITTINGS AT LOCATIONS INDICATED BY AND DEPICTED IN ARTICLES: 500, 501, 511, 514 AND 515 OF THE 2014 NEC.
- L. ABOVE GROUND TANKS: UNLESS SPECIFIED BY THE TANK MANUFACTURER, PROVIDE A GROUND ROD FOR EACH TANK WITH A MINIMUM OF A #2 GROUNDING CONDUCTOR BETWEEN THE TANK AND THE ROD.

M. ALL COMPLETED RACEWAY SYSTEMS SHALL BE INSPECTED AND APPROVED PRIOR TO CONDUCTORS BEING INSTALLED.

N. MINIMUM CONDUCTOR SIZE #12 UNLESS OTHERWISE NOTED.

O. LOCATE THE MAINTENANCE RECEPTACLE AS DIRECTED OUTSIDE OF THE HAZARDOUS AREA.

P. SURGE PROTECTION DEVICE SHALL BE PROVIDED FOR INDIVIDUAL EQUIPMENT. THE USE OF A BRANCH PANEL BOARD SUPPRESSOR IN PLACE OF INDIVIDUAL EQUIPMENT SURGE PROTECTION DEVICES SHALL BE DETERMINED ON A SITE BY SITE BASIS.




Office of
General Services

DESIGN & CONSTRUCTION

CONSULTANT

CERTIFICATE OF AUTHORIZATION #: 0017985




LiRo Engineers, Inc.
3 Aerial Way, Syosset, New York

ENERGY CONSERVATION CONSTRUCTION
CODE OF NEW YORK STATE:

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MARK J. WESOLOWSKI
NO. 07426
PROFESSIONAL ENGINEER
REGISTRATION EXPIRES
12/31/2026

CONTRACT

CONSTRUCTION

TITLE:
FUEL TANK MODIFICATION AND
ENVIRONMENTAL REMEDIATION PROGRAM

LOCATION:
SOUTHERN REGION
VARIOUS FACILITIES

MARK	DATE	DESCRIPTION
	1/31/2025	FINAL SUBMISSION
PROJECT NUMBER:	47674	- C
DESIGNED BY:	M. GUTMANN	
DRAWN BY:	A. KELLY	
FIELD CHECK:	M. WESOLOWSKI	
APPROVED:	M. WESOLOWSKI	

SHEET TITLE:

POWER ONE LINE
DIAGRAM

DRAWING NUMBER:

C-45

SHEET 47 OF 57

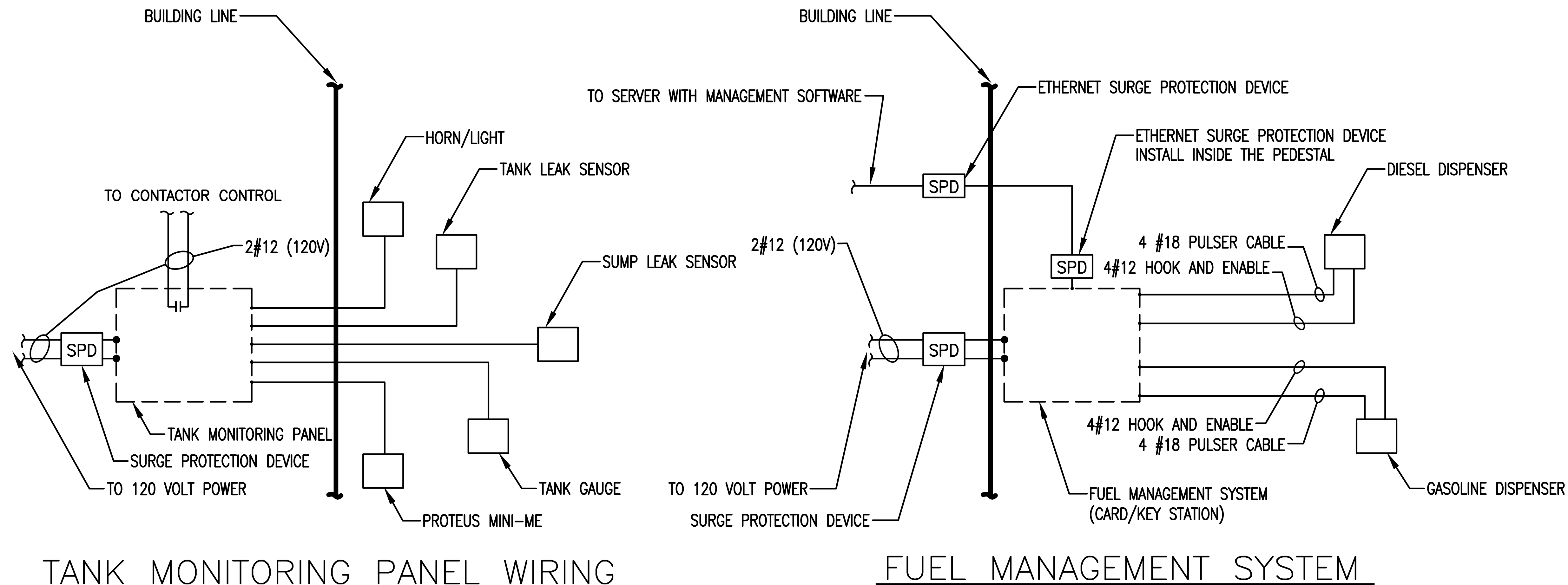
(THIS DRAWING ONLY)

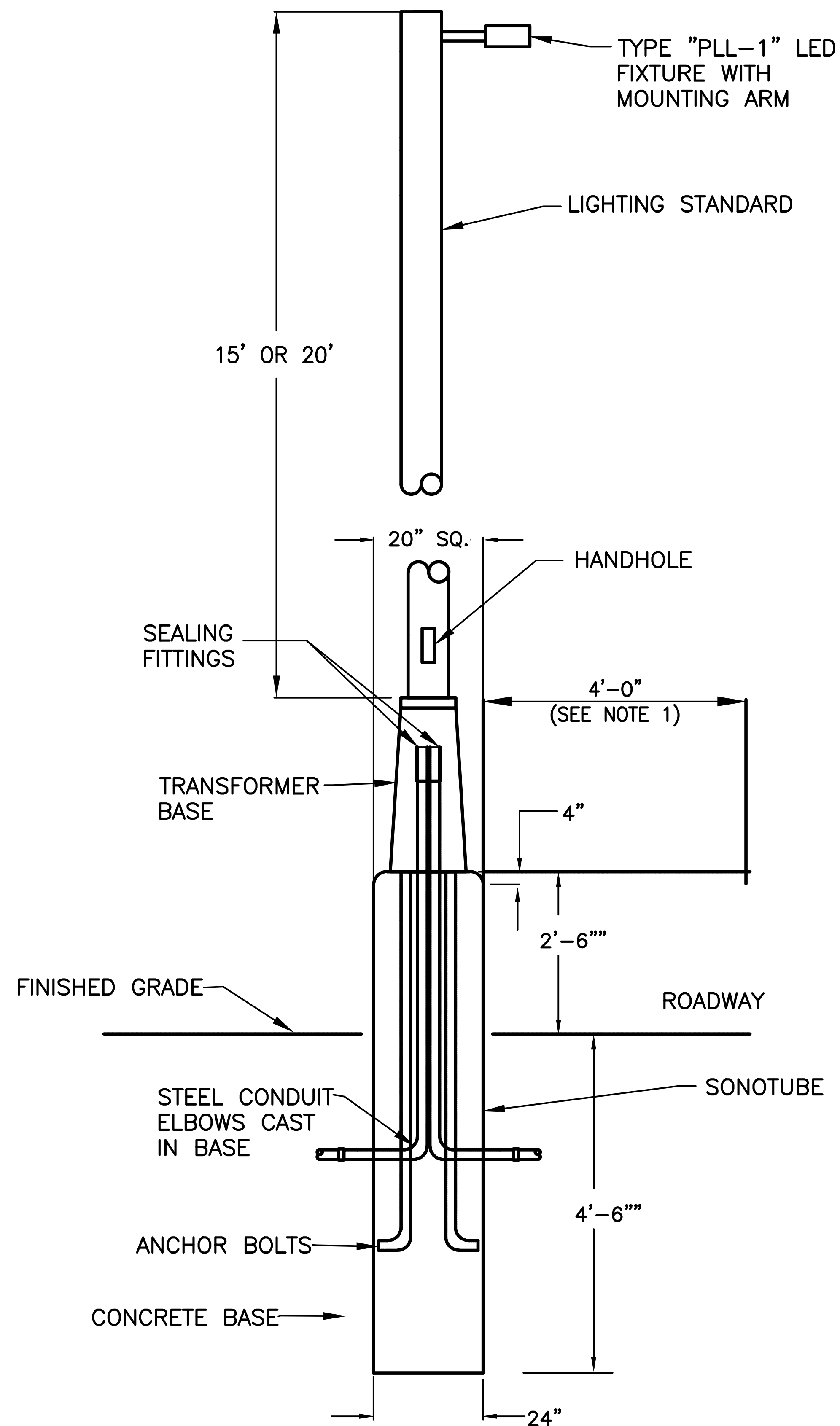
- A. WIRING FOR EQUIPMENT CONNECTED TO THE TANK MONITORING PANEL IS UNDER 120 VOLTS UNLESS OTHERWISE NOTED. WIRING OTHER THAN 120 VOLTS MAY BE COMBINED IN COMMON CONDUITS.
- B. WIRING FOR DEVICES CONNECTED TO THE TANK MONITORING PANEL IS A MINIMUM OF #22 UNLESS OTHERWISE RECOMMENDED BY THE MANUFACTURER.
- C. SEALING FITTINGS ARE NOT SHOWN. PROVIDE SEALING FITTINGS AT LOCATIONS INDICATED BY AND DEPICTED IN ARTICLES: 500, 501, 511, 514, AND 515 OF THE 2014 NEC.
- D. PROVIDE ALL WIRING IN CONDUIT. CONDUITS PENETRATING SLABS OR AREAS EXPOSED TO SALT SHALL BE PVC-COATED RIGID METAL CONDUIT. PVC-COATED CONDUIT SHALL EXTEND FROM BENEATH SLAB TO 2 FEET ABOVE SLAB.
- E. PULSER AND POWER CABLES SHALL NOT BE COMBINED IN COMMON RACEWAYS.
- F. CIRCUITS FROM TANK MONITORING PANEL OUTSIDE TO THE TANK LOCATION ARE INTRINSICALLY SAFE AND NEED TO BE RUN IN CONDUITS SEPARATE FROM ANY NON-INTRINSICALLY SAFE CIRCUITS.
- G. SURGE PROTECTION DEVICE SHALL BE PROVIDED FOR INDIVIDUAL EQUIPMENT. THE USE OF A BRANCH PANEL BOARD SUPPRESSOR IN PLACE OF INDIVIDUAL EQUIPMENT SURGE PROTECTION DEVICES SHALL BE DETERMINED ON A SITE BY SITE BASIS.

PANELBOARD SCHEDULE											
DESIGNATION: <u>LP-FD</u>	<input checked="" type="checkbox"/> FULLY RATED EQUIPMENT RATING IS REQUIRED FOR THIS PANELBOARD	PANELBOARD SHORT CIRCUIT RATING <u>10,000 RMS</u> SYMMETRICAL AMPERES									
CABINET NEMA TYPE: 1 <input checked="" type="checkbox"/> 3R <input type="checkbox"/> 4 <input type="checkbox"/> 4X <input type="checkbox"/> 12 <input type="checkbox"/>	<input type="checkbox"/> UL LISTED INTEGRATED EQUIPMENT SHORT CIRCUIT RATING IS ACCEPTABLE FOR THIS PANELBOARD	MAIN LUG ONLY <input type="checkbox"/>									
		MAIN CIRCUIT BREAKER <input checked="" type="checkbox"/>									
MOUNTING: <u>SURFACE</u>	<input type="checkbox"/> UL LABEL 'SUITABLE FOR USE AS SERVICE EQUIPMENT'	FRAME	POLES	ATE	COMPONENTS (SEE BELOW)						
		100	26	60	-						
MAIN: <u>100</u>	BRANCH/FEEDER CIRCUIT BREAKERS										
VOLTAGE: <u>120/208 OR 240</u>	DESCRIPTION	ATE	NO.	A B		NO.	ATE	DESCRIPTION			
PHASE: <u>SINGLE</u>	GASOLINE DISPENSER	20	1			2	20	DIESEL DISPENSER			
NO. WIRES: <u>3</u>	DIESEL TANK HEATER (NOTE 2)	30	3			4	20	DIESEL HEAT TRACE (NOTE 2)			
			5			6	15	CARD READER/FUEL MANAGEMENT			
OTHER REQ: _____	LIGHTING	15	7			8	20	FIRE SUPPRESSION SYSTEM (NOTE 1)			
FULL CAPACITY NEUTRAL BUS <input checked="" type="checkbox"/>	MAINTENANCE RECEPTACLE	20	9			10	20	CONTACTOR COIL VOLTAGE (NOTE 1)			
	CONTACTOR CONTROL POWER	15	11			12	15	LEAK DETECTION PANEL			
EQUIPMENT GROUNDING BUS <input checked="" type="checkbox"/>			13			14	20	PROTEUS MINI-ME			
			15			16					
			17			18					

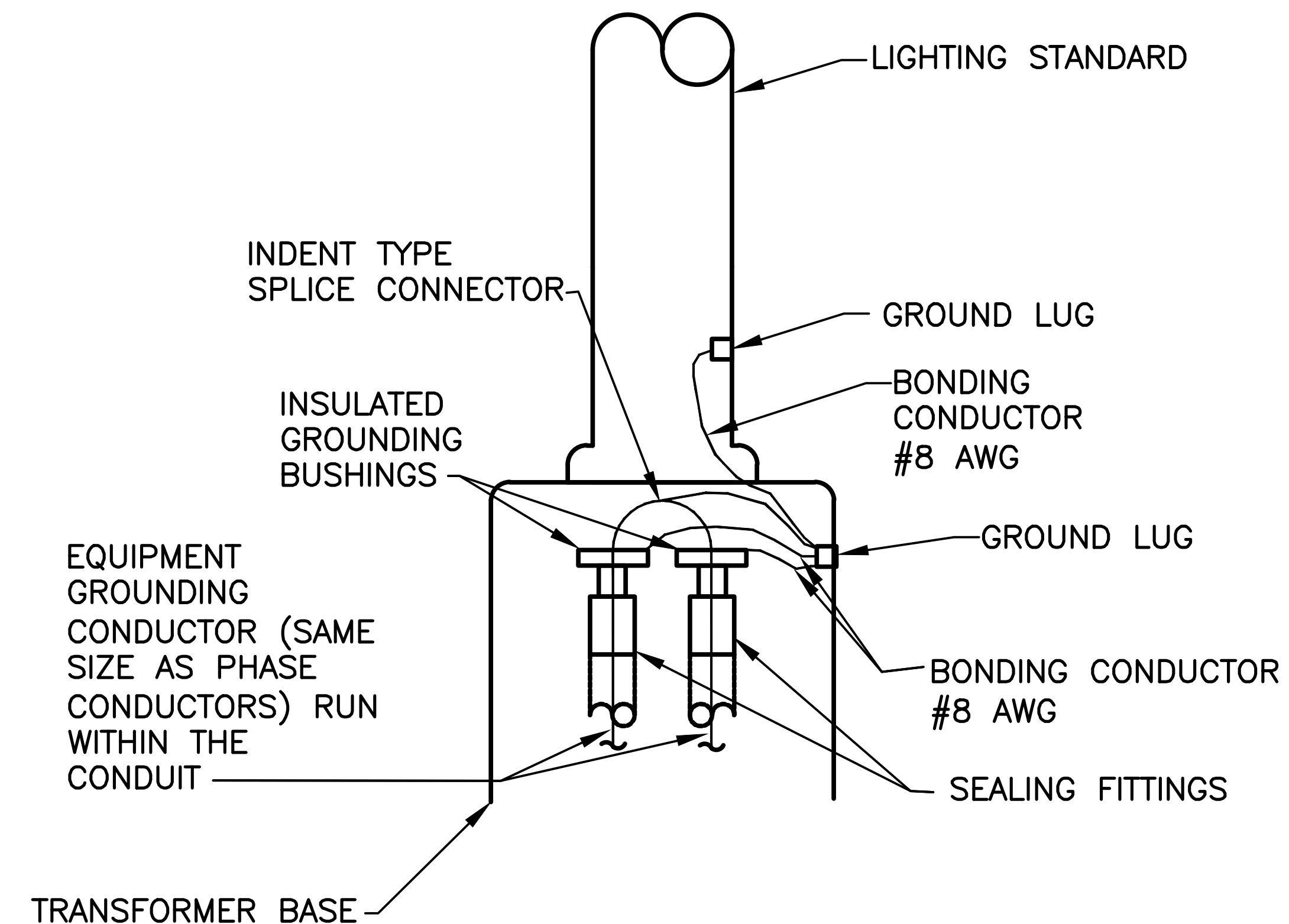
PANELBOARD SCHEDULE NOTES:

1. PROVISIONS FOR LOCKING BREAKER ON.
2. GROUND FAULT PROTECTION FOR EQUIPMENT TYPE.





LIGHTING STANDARD DETAIL
SCALE: NONE



**GROUNDING AND BONDING DETAIL
FOR LIGHTING STANDARD**
SCALE: NONE

NOTES:

1. LOCATE LIGHTING STANDARD A MINIMUM OF 4' AWAY FROM FUEL DISPENSERS AND FUEL TANKS.
2. LIGHTING STANDARD IS NOT TO BE USED AS VERTICAL SUPPORT FOR THE FIRE SUPPRESSION SYSTEM.

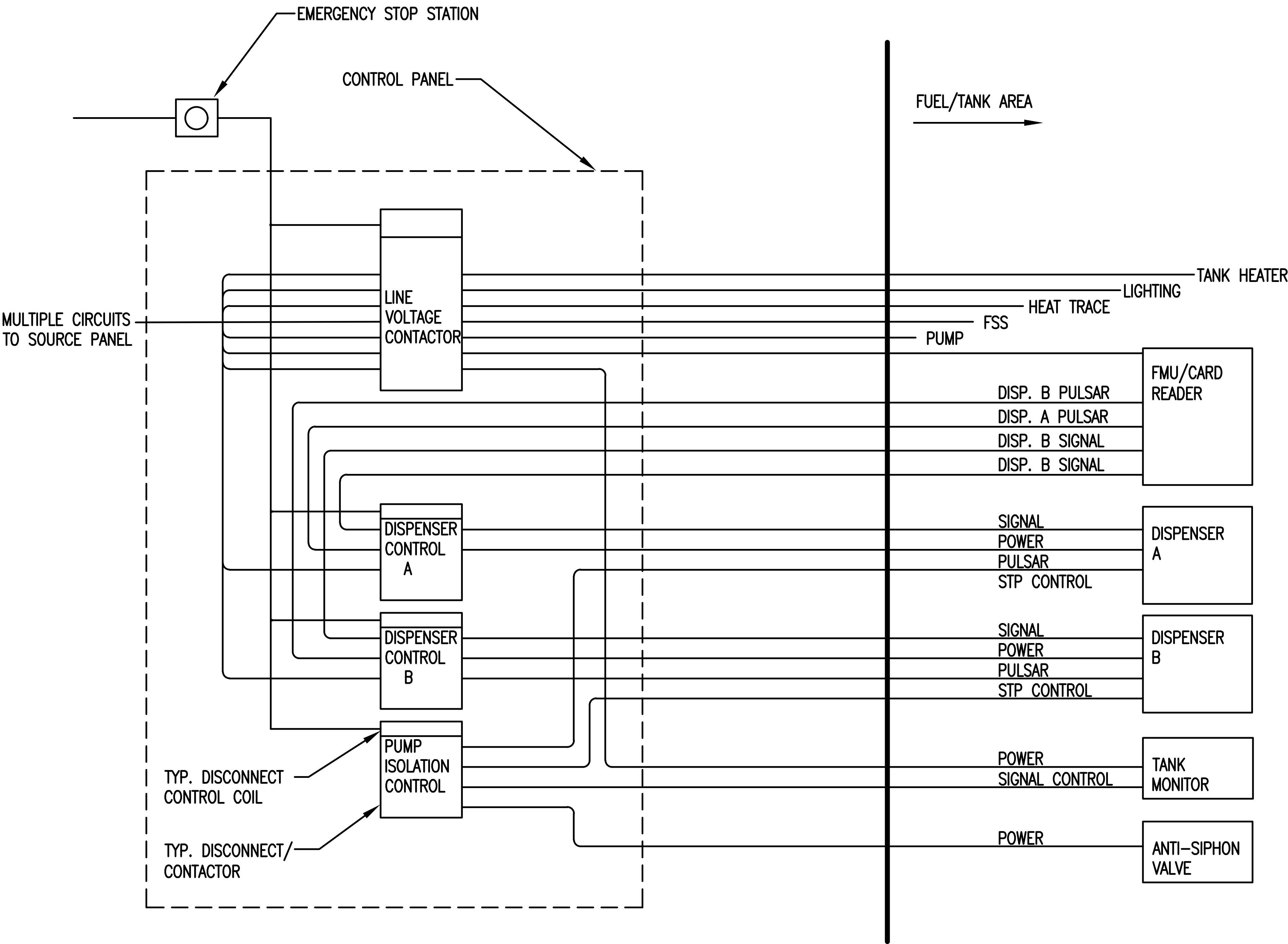
DESIGN & CONSTRUCTION							
CONSULTANT							
CERTIFICATE OF AUTHORIZATION #: 0017985							
ENERGY CONSERVATION CONSTRUCTION CODE OF NEW YORK STATE: TO THE BEST OF MY KNOWLEDGE, BELIEF AND PROFESSIONAL JUDGEMENT, THE DRAWINGS AND SPECIFICATIONS, WHICH COMPRISE THE CONSTRUCTION DOCUMENTS FOR THIS PROJECT, ARE IN COMPLIANCE WITH THE 2016 NEW YORK ENERGY CODE.							
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CONTRACT: CONSTRUCTION							
TITLE: FUEL TANK MODIFICATION AND ENVIRONMENTAL REMEDIATION PROGRAM							
LOCATION: SOUTHERN REGION VARIOUS FACILITIES							
<table border="1"> <thead> <tr> <th>MARK</th> <th>DATE</th> <th>DESCRIPTION</th> </tr> </thead> <tbody> <tr> <td></td> <td>1/31/2025</td> <td>FINAL SUBMISSION</td> </tr> </tbody> </table>		MARK	DATE	DESCRIPTION		1/31/2025	FINAL SUBMISSION
MARK	DATE	DESCRIPTION					
	1/31/2025	FINAL SUBMISSION					
PROJECT NUMBER: 47674 - C							
DESIGNED BY: M. GUTMANN							
DRAWN BY: A. KELLY							
FIELD CHECK: M. WESOLOWSKI							
APPROVED: M. WESOLOWSKI							
SHEET TITLE: LIGHTING STANDARD - HAZARDOUS AREA							
DRAWING NUMBER: C-47							
SHEET 49 OF 57							




GENERAL NOTES:

(THIS DRAWING ONLY)

- A. COMPONENTS SHOWN ON THE DETAIL ARE TYPICAL. NOT ALL INSTALLATIONS WILL REQUIRE ALL COMPONENTS SHOWN.
- B. DETAIL IS DIAGRAMMATIC ONLY, REFER TO MANUFACTURERS INSTALLATION REQUIREMENTS FOR EXACT REQUIREMENTS.
- C. SEALING FITTINGS ARE NOT SHOWN. PROVIDE SEALING FITTINGS AT LOCATIONS INDICATED BY AND DEPICTED IN ARTICLES: 500, 501, 511, 514, AND 515 OF THE 2017 NEC.
- D. PROVIDE ALL WIRING IN CONDUIT. CONDUITS PENETRATING SLABS OR AREAS EXPOSED TO SALT SHALL BE PVC-COATED RIGID METAL CONDUIT. PVC-COATED CONDUIT SHALL EXTEND FROM BENEATH SLAB TO 2 FEET ABOVE SLAB.
- E. PULSAR AND POWER CABLES SHALL NOT BE COMBINED IN COMMON RACEWAYS.
- F. CIRCUITS FROM TANK MONITORING PANEL OUTSIDE TO THE TANK LOCATION ARE INTRINSICALLY SAFE AND NEED TO BE RUN IN CONDUITS SEPARATE FROM ANY NON-INTRINSICALLY SAFE CIRCUITS.



CONTROL OVERVIEW DETAIL




Office of
General Services

DESIGN & CONSTRUCTION

CONSULTANT

CERTIFICATE OF AUTHORIZATION #: 0017905



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3 Aerial Way, Syosset, New York

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STATE OF NEW YORK

MARK L. WESOLOWSKI

NO. 074264

PROFESSIONAL ENGINEER

REGISTRATION EXPIRES
12/31/2026

CONTRACT

CONSTRUCTION

TITLE:
FUEL TANK MODIFICATION AND
ENVIRONMENTAL REMEDIATION PROGRAM

LOCATION:
SOUTHERN REGION
VARIOUS FACILITIES

MARK	DATE	DESCRIPTION
	1/31/2025	FINAL SUBMISSION
PROJECT NUMBER:	47674	- C
DESIGNED BY:	M. GUTMANN	
DRAWN BY:	A. KELLY	
FIELD CHECK:	M. WESOLOWSKI	
APPROVED:	M. WESOLOWSKI	

SHEET TITLE:

CONTROL OVERVIEW
DETAIL

DRAWING NUMBER:

C-49

SHEET

51

OF

57

NEW YORK
STATE OF
CHAMPAGNE

Office of
General Services

DESIGN & CONSTRUCTION

CONSULTANT

CERTIFICATE OF AUTHORIZATION #: 0017985

LiRo Engineers, Inc.

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STATE OF NEW YORK
JULIAN I. WESOLOWSKI
NO. 02426
PROFESSIONAL ENGINEER
REGISTRATION EXPIRES
12/31/2028

CONTRACT

CONSTRUCTION

TITLE:
FUEL TANK MODIFICATION AND
ENVIRONMENTAL REMEDIATION PROGRAM

LOCATION:
SOUTHERN REGION
VARIOUS FACILITIES

MARK	DATE	DESCRIPTION
	1/31/2025	FINAL SUBMISSION
PROJECT NUMBER:	47674	- C
DESIGNED BY:	M. GUTMANN	
DRAWN BY:	A. KELLY	
FIELD CHECK:	M. WESOLOWSKI	
APPROVED:	M. WESOLOWSKI	
SHEET TITLE:	TYPICAL TYPE CE-1 ABOVEGROUND FUEL STORAGE TANK 4,000 GALLON REFERENCE	
DRAWING NUMBER:	C-50	
SHEET	52	OF 57

SECTION VIEW - ELEVATION
SCALE: NONE

SECTION VIEW - END
SCALE: NONE

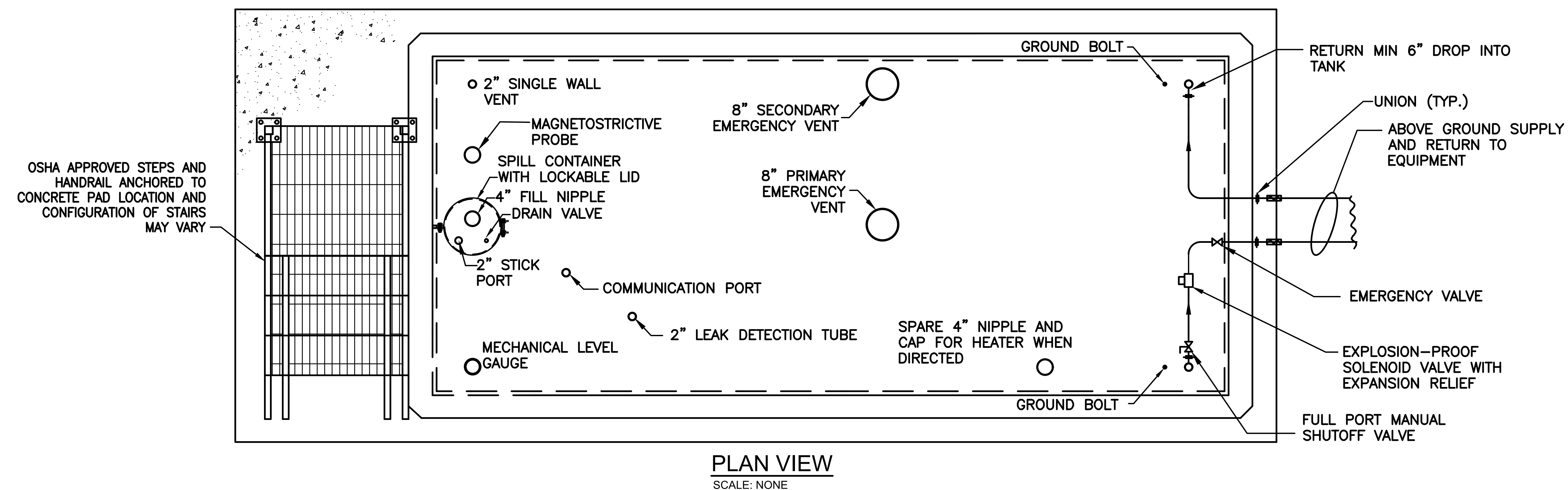
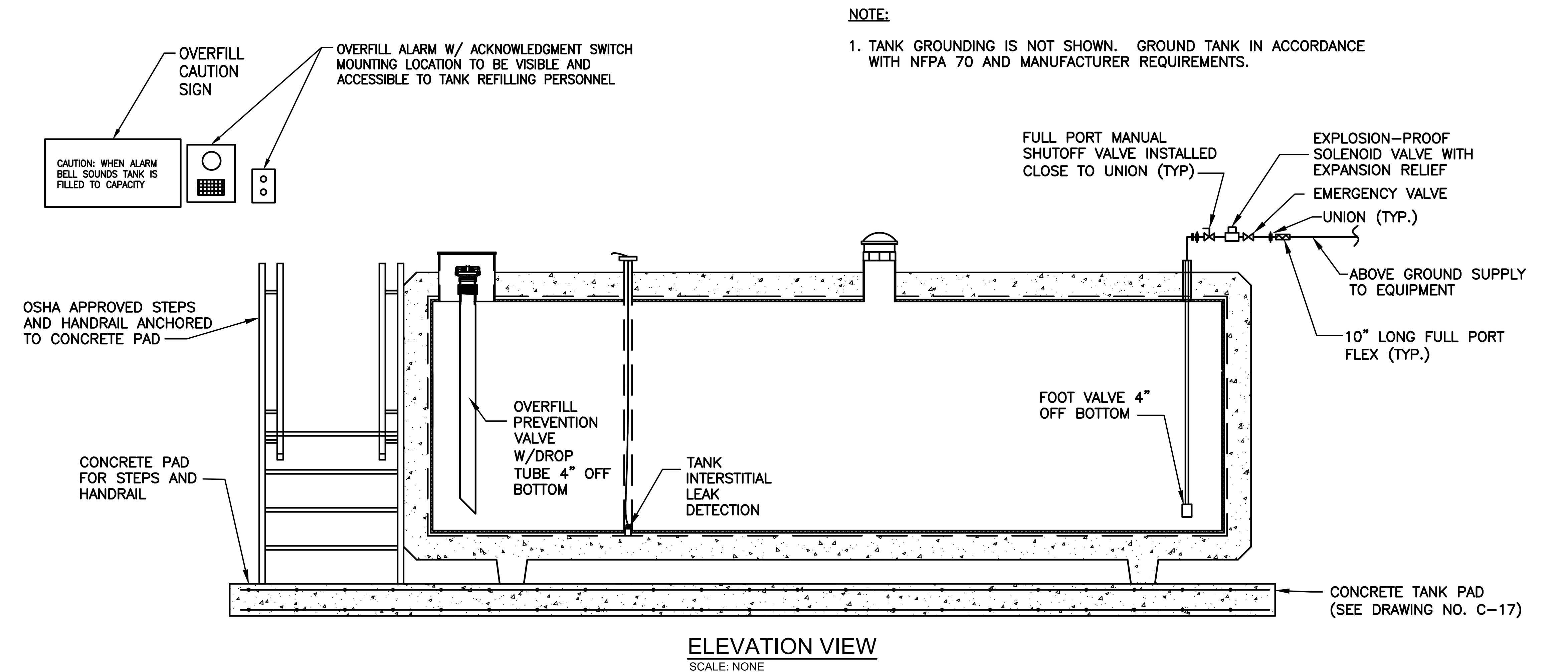
WALL DETAIL
SCALE: NONE

PLAN VIEW
SCALE: NONE

SPILL CONTAINMENT DETAIL
SCALE: NONE

NOTES:

- TANK SHOWN IS TYPICAL FOR 4,000 GALLON CAPACITY. THIS 4,000 GALLON TANK IS SHOWN REPRESENTATIVE OF THE 500-8,000 GALLON TANKS. CONSULT WITH MANUFACTURER FOR REQUIRED DIMENSIONS, FITTING ARRANGEMENT, SUPPORT SADDLES AND ANCILLARY EQUIPMENT FOR TANK CAPACITIES 500-8,000 GALLONS.
- PROVIDE WELDED ON SPILL CONTAINER APPROX. 24" DIA. X13 1/2" HT. X 1/4" THICK (15 GAL. MIN.) WITH LOCKABLE LID FOR TANKS 1,000 GAL AND LARGER. PROVIDE 10 GAL SPILL CONTAINER FOR 500 GAL TANKS.
- TANKS SHALL BE CONSTRUCTED IN ACCORDANCE WITH UL 2085 SPECIFICATIONS.



Office of General Services

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CONSULTANT

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REGISTERED PROFESSIONAL ENGINEER
12/31/2025

CONSTRUCTION

TITLE: FUEL TANK MODIFICATION AND ENVIRONMENTAL REMEDIATION PROGRAM

LOCATION: SOUTHERN REGION
VARIOUS FACILITIES

MARK	DATE	DESCRIPTION
	1/31/2025	FINAL SUBMISSION

PROJECT NUMBER: 47674 - C

DESIGNED BY: M. GUTMANN

DRAWN BY: A. KELLY

FIELD CHECK: M. WESOLOWSKI

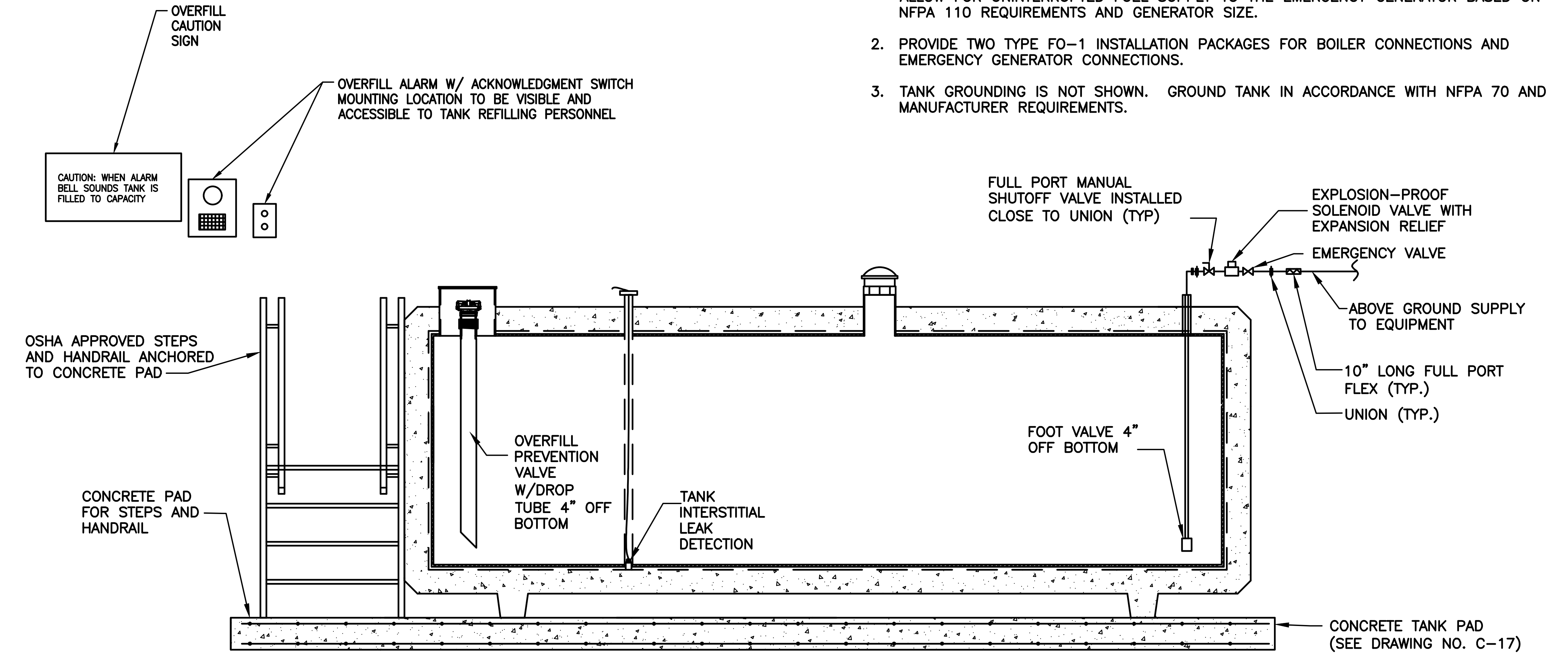
APPROVED: M. WESOLOWSKI

SHEET TITLE:

TYPICAL TYPE CE-1 ABOVEGROUND FUEL OIL STORAGE TANK WITH INSTALLATION PACKAGE FO-1

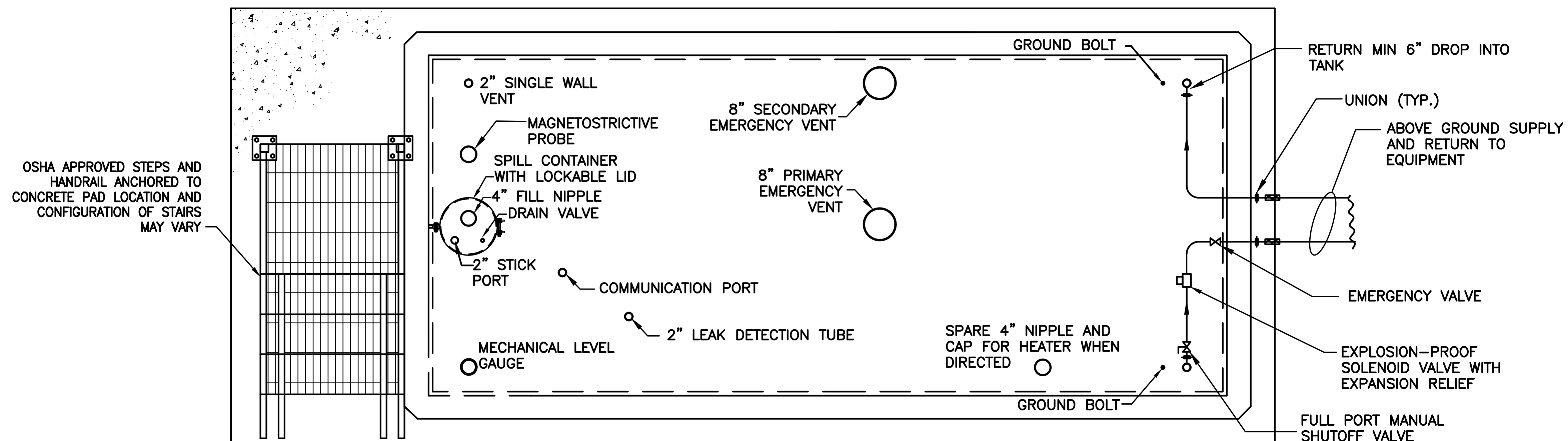
DRAWING NUMBER: C-51

SHEET 53 OF 57



ELEVATION VIEW

SCALE: NONE



PLAN VIEW

SCALE: NONE

NOTES:

1. BOILER SUPPLY FOOT VALVE SHALL BE LOCATED AT A DISTANCE OFF THE BOTTOM TO ALLOW FOR UNINTERRUPTED FUEL SUPPLY TO THE EMERGENCY GENERATOR BASED ON NFPA 110 REQUIREMENTS AND GENERATOR SIZE.
2. PROVIDE TWO TYPE FO-1 INSTALLATION PACKAGES FOR BOILER CONNECTIONS AND EMERGENCY GENERATOR CONNECTIONS.
3. TANK GROUNDING IS NOT SHOWN. GROUND TANK IN ACCORDANCE WITH NFPA 70 AND MANUFACTURER REQUIREMENTS.

Office of General Services

DESIGN & CONSTRUCTION

CONSULTANT

CERTIFICATE OF AUTHORIZATION #: 0017985

LiRo Engineers, Inc.

3 Aerial Way, Syosset, New York

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CONSTRUCTION

TITLE: FUEL TANK MODIFICATION AND ENVIRONMENTAL REMEDIATION PROGRAM

LOCATION: SOUTHERN REGION
VARIOUS FACILITIES

MARK	DATE	DESCRIPTION
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PROJECT NUMBER: 47674 - C

DESIGNED BY: M. GUTMANN

DRAWN BY: A. KELLY

FIELD CHECK: M. WESOLOWSKI

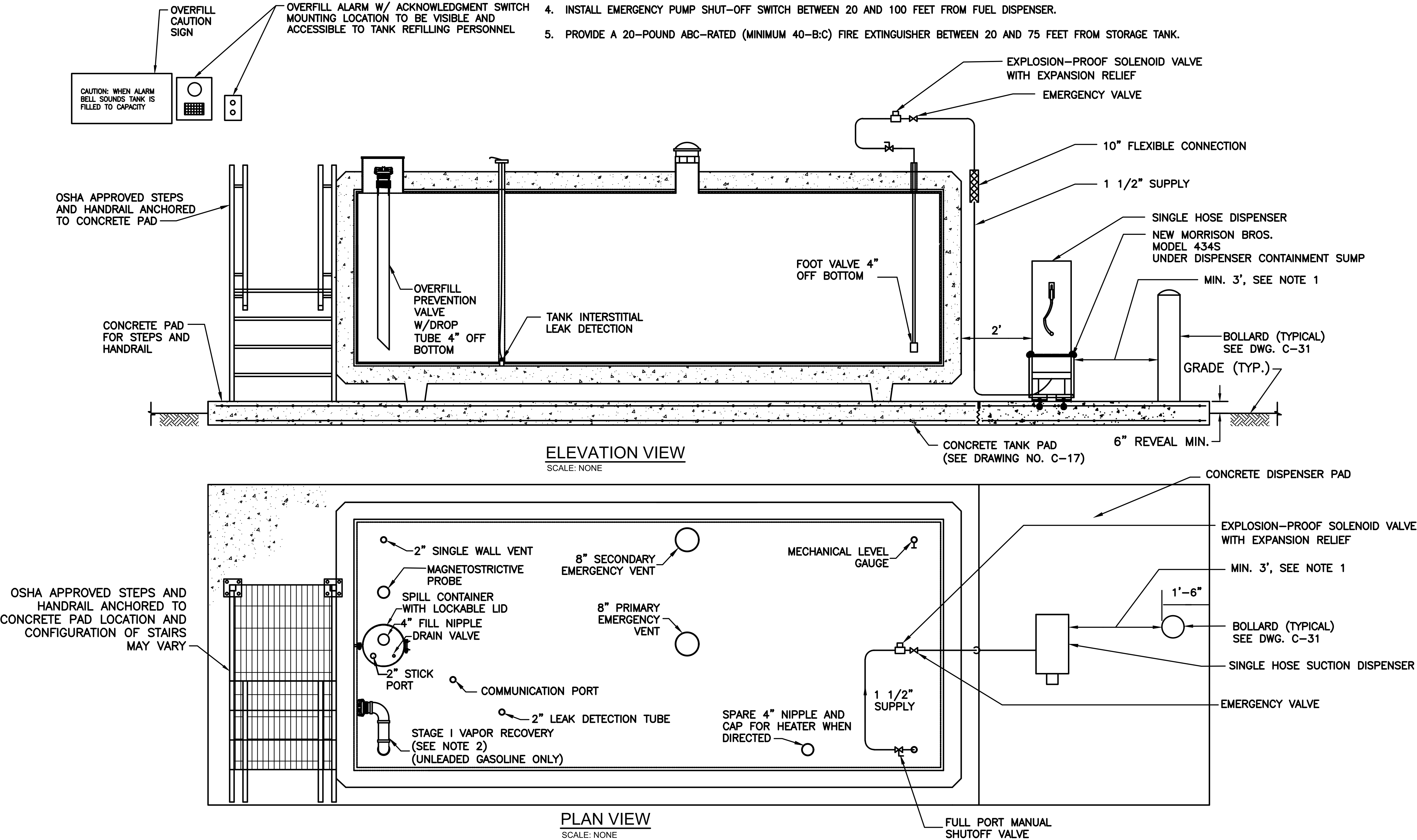
APPROVED: M. WESOLOWSKI


SHEET TITLE:

TYPICAL TYPE CE-1 AST BOILER AND EMERGENCY GENERATOR

DRAWING NUMBER: C-52

SHEET 54 OF 57






Office of
General Services

DESIGN & CONSTRUCTION

CONSULTANT

CERTIFICATE OF AUTHORIZATION #: 0017905



LiRo Engineers, Inc.
3 Aerial Way, Syosset, New York

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AND IS A CLASS "A" MISDEMEANOR.

STATE OF NEW YORK
JULIAN J. WESOLOWSKI
NO. 074264
PROFESSIONAL ENGINEER
REGISTRATION EXPIRES
12/31/2028

CONTRACT

CONSTRUCTION

TITLE: FUEL TANK MODIFICATION AND
ENVIRONMENTAL REMEDIATION PROGRAM

LOCATION: SOUTHERN REGION
VARIOUS FACILITIES

MARK	DATE	DESCRIPTION
	1/31/2025	FINAL SUBMISSION

PROJECT NUMBER:

47674 - C

DESIGNED BY:

M. GUTMANN

DRAWN BY:

A. KELLY

FIELD CHECK:

M. WESOLOWSKI

APPROVED:

M. WESOLOWSKI

SHEET TITLE:

TYPICAL TYPE CE-1
ABOVEGROUND FUEL STORAGE
TANK WITH TYPE UG-1 OR D-1
INSTALLATION PACKAGE

DRAWING NUMBER:

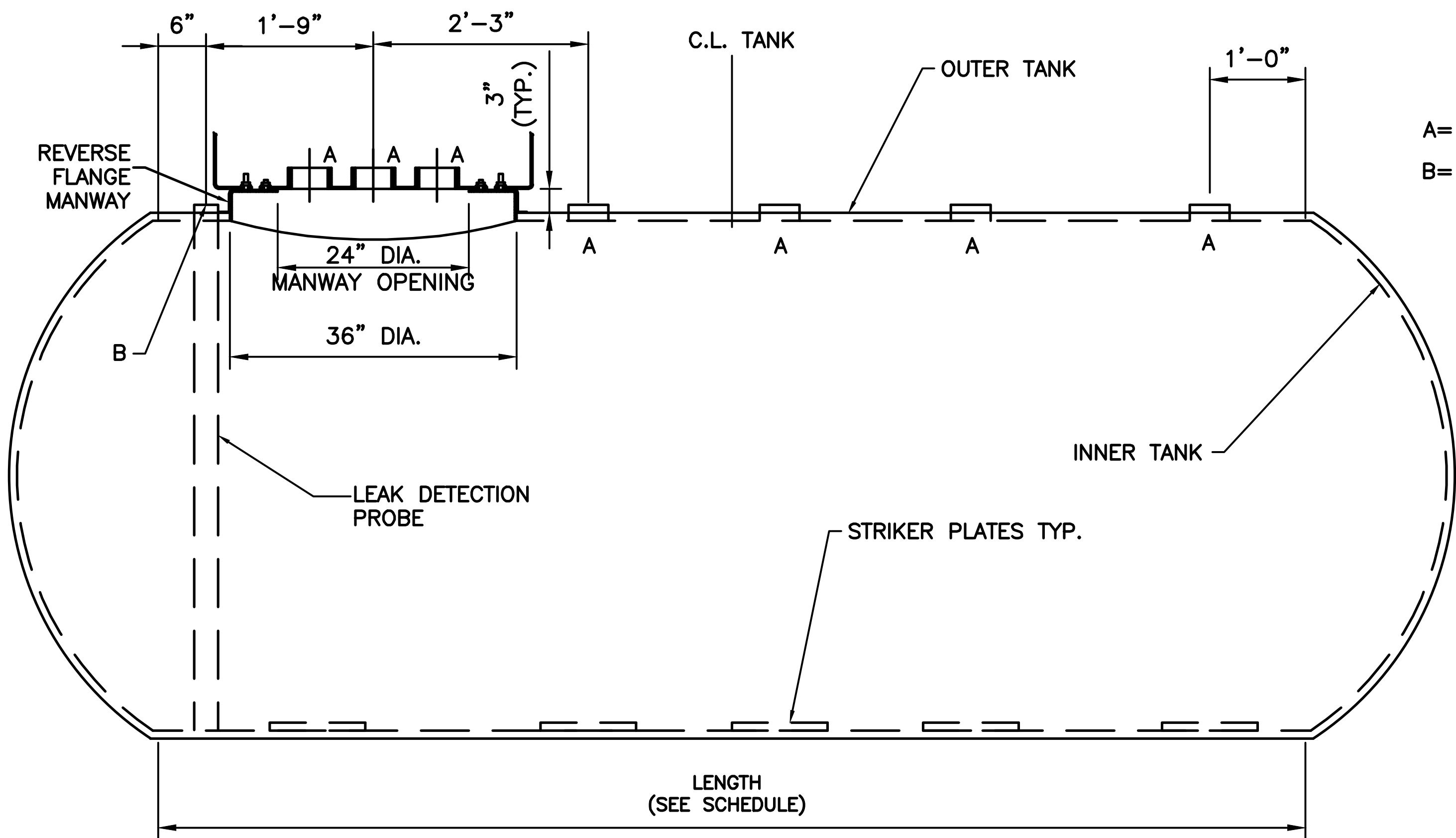
C-53

SHEET

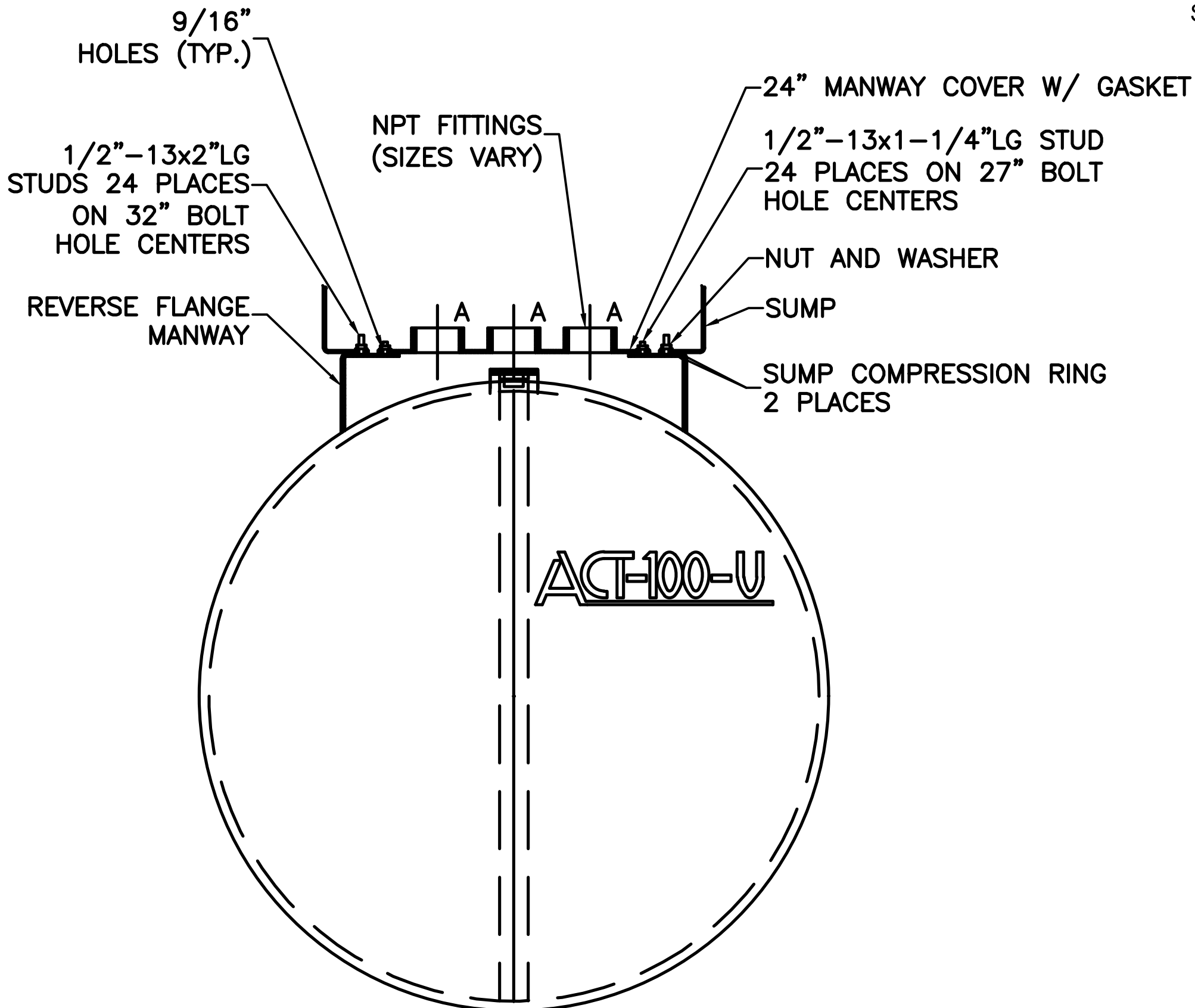
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OF

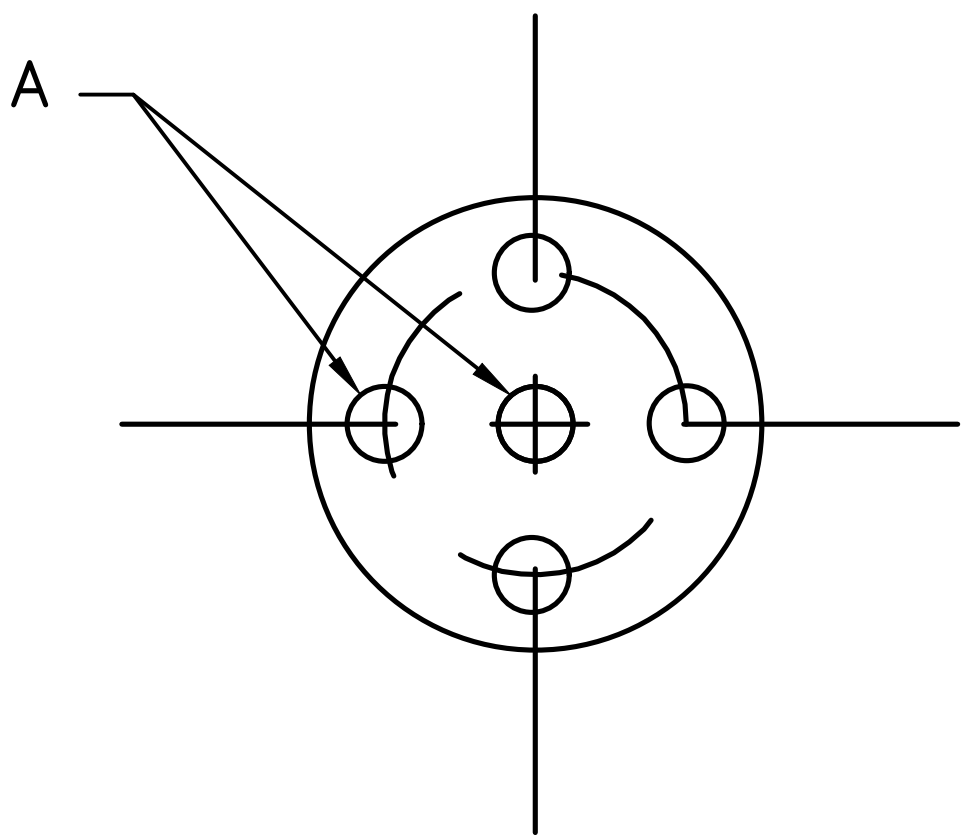
57



ELEVATION
SCALE: NONE



END VIEW
SCALE: NONE



PLAN VIEW OF 24" MANWAY
SCALE: NONE

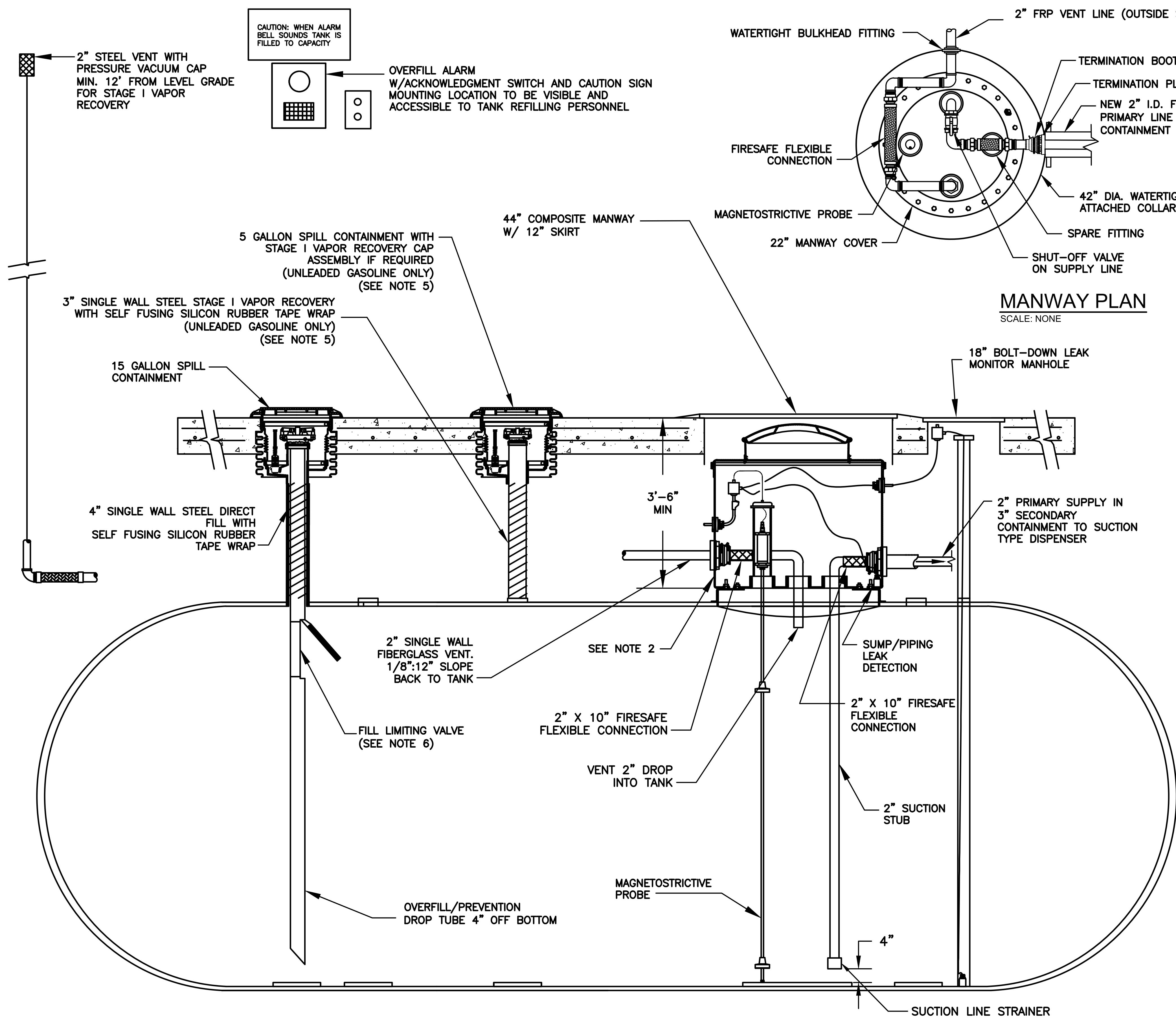
A= 5"Ø NPT WITH 5"x4" NYLON BUSHING
B= 3"Ø NPT WITH 3"x2" NYLON BUSHING

- NOTES:
- TANK SHOWN IS FOR USE WITH MOTOR FUELS IN NYC.
 - NYC = NEW YORK, BRONX, KINGS, QUEENS AND RICHMOND COUNTIES.
 - UNDERGROUND STORAGE TANKS FOR NYC MOTOR FUEL SHALL MEET REQUIRED HYDROSTATIC PRESSURE TESTING REQUIREMENTS OF THE NYC CODE.
 - TANK SHOWN IS TYPICAL FOR ACT-100U DOUBLEWALL STEEL 4,000 GALLON CAPACITY. THE 4,000 GALLON TANK IS SHOWN REPRESENTATIVE OF THE 500-8,000 GALLON TANKS. CONSULT WITH MANUFACTURER FOR CAPACITIES OF 500-8,000 GALLONS AND SPECIFIC FITTING ARRANGEMENT.

MARK	DATE	DESCRIPTION
	1/31/2025	FINAL SUBMISSION
PROJECT NUMBER:	47674	- C
DESIGNED BY:	M. GUTMANN	
DRAWN BY:	A. KELLY	
FIELD CHECK:	M. WESOLOWSKI	
APPROVED:	M. WESOLOWSKI	

SHEET TITLE:
DOUBLE WALL STEEL ACT
100-U UNDERGROUND MOTOR
FUELS STORAGE TANK FOR NYC
4,000 GALLON REFERENCE

DRAWING NUMBER:
C-54



UNDERGROUND STORAGE TANK
SCALE: NONE

MANWAY PLAN
SCALE: NONE

- NOTES:
1. TANK DRAWING IS A SCHEMATIC DIAGRAM ONLY, AND CAN BE FIBERGLASS OR STEEL AS DIRECTED.
 2. 45" FIBERGLASS WATERTIGHT CONTAINMENT SUMPS WITH REVERSE FLANGE MANWAY FOR JACKETED SECONDARY CONTAINMENT TANK AND 42" SUMPS WITH ATTACHED COLLAR RISER FOR FIBERGLASS TANKS.
 3. NYC= NEW YORK, BRONX, KINGS, QUEENS AND RICHMOND COUNTIES.
 4. REFERENCE DRAWING C-16 FOR ADDITIONAL INSTALLATION DETAILS.
 5. STAGE I VAPOR RECOVERY REQUIRED FOR UNLEADED GASOLINE INSTALLATION ONLY. NOT REQUIRED FOR DIESEL INSTALLATIONS.
 6. FILL LIMITING VALVE SHALL BE SUITABLE FOR PRESSURE FILL APPLICATIONS WHEN USED WITH DIESEL FUEL.

NEW YORK
STATE OF
CITY OF NEW YORK

Office of
General Services

DESIGN & CONSTRUCTION

CONSULTANT

CERTIFICATE OF AUTHORIZATION # 0017005

LiRo Engineers, Inc.

3 Aerial Way, Syosset, New York

ENERGY CONSERVATION CONSTRUCTION
CODE OF NEW YORK STATE:

TO THE BEST OF MY KNOWLEDGE, BELIEF AND PROFESSIONAL
JUDGEMENT, THE DRAWINGS AND SPECIFICATIONS, WHICH
COMPRISE THE CONSTRUCTION DOCUMENTS FOR THIS
PROJECT, ARE IN COMPLIANCE WITH THE 2016 NEW YORK
ENERGY CODE.

WARNING:

THE ALTERATION OF THIS MATERIAL IN ANY WAY,
UNLESS DONE UNDER THE DIRECTION OF A COMPARABLE
PROFESSIONAL, I.E. ARCHITECT FOR AN ARCHITECT,
ENGINEER FOR AN ENGINEER OR LANDSCAPE ARCHITECT
FOR A LANDSCAPE ARCHITECT, IS A VIOLATION OF THE
NEW YORK STATE EDUCATION LAW AND/OR REGULATIONS
AND IS A CLASS 'A' MISDEMEANOR.

STATE OF NEW YORK
JULIAN I. WESOLOWSKI
NO. 074264
PROFESSIONAL ENGINEER
REGISTRATION EXPIRES
12/31/2026

CONTRACT

CONSTRUCTION

TITLE:
FUEL TANK MODIFICATION AND
ENVIRONMENTAL REMEDIATION PROGRAM

LOCATION:
SOUTHERN REGION
VARIOUS FACILITIES

MARK	DATE	DESCRIPTION
	1/31/2025	FINAL SUBMISSION

PROJECT
NUMBER:

47674 - C

DESIGNED BY:

M. GUTMANN

DRAWN BY:

A. KELLY

FIELD CHECK:

M. WESOLOWSKI

APPROVED:

M. WESOLOWSKI

SHEET TITLE:

TYPICAL UNDERGROUND FUEL
STORAGE TANK UNLEADED
GASOLINE OR DIESEL MOTOR
FUEL INSTALLATION PACKAGE
FOR NYC

DRAWING NUMBER:

C-55

SHEET

57

OF

57