APPROVALS

Attachment 1

COUNTY OF SONOMA
LEACHATE TANK REPLACEMENT
JULY 2024

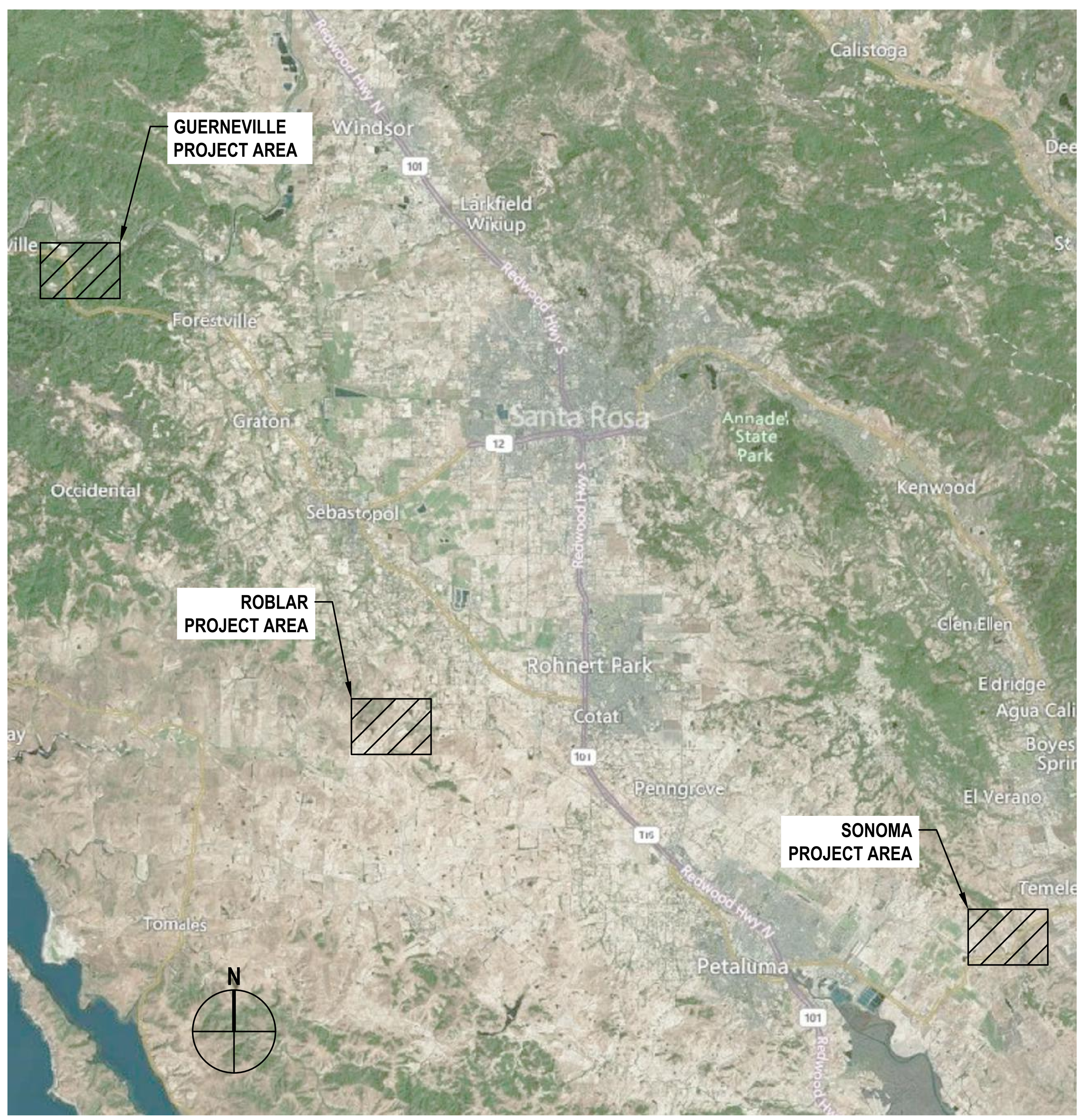
COUNTY OF SONOMA

SIGNED ______________ DATE ______________

ENGINEER: GHD Inc.

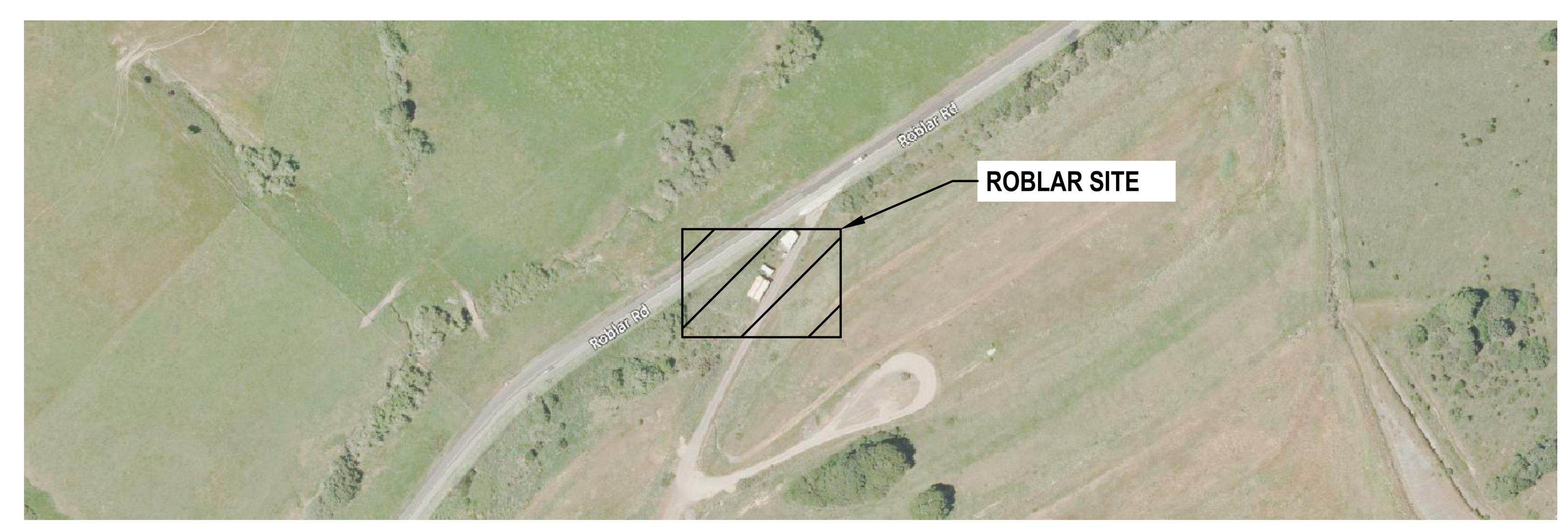
SIGNED ______________ DATE 7/03/2024

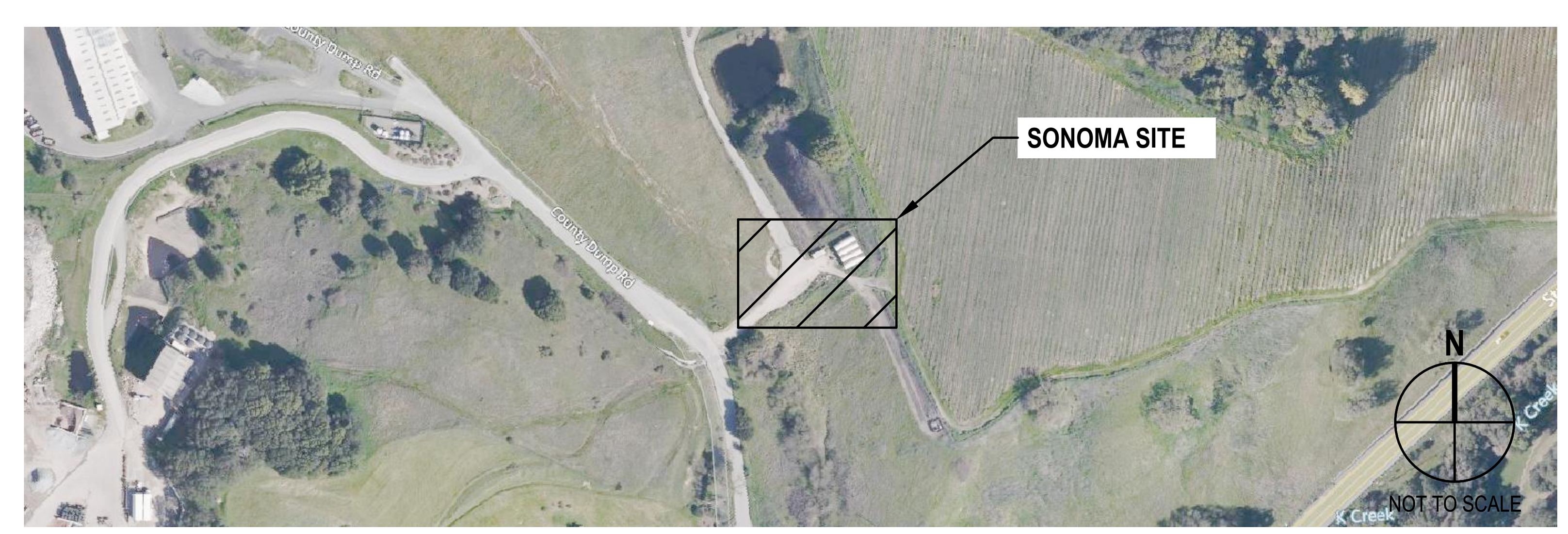
AREA MAP



SOURCE: GOOGLE MAPS 2022

VICINITY MAP





SOURCE: GOOGLE MAPS 2022

SHEET INDEX

No.	Issue	Checked	Approved	Date
	Conformed Drawings	GT	GT	07/18/2024

Author **D. AGUAS** Drafting Check **S. PEARL** Project Manager **G. TOMASINO**
Designer **S. PEARL** Design Check **M. KENNEDY** Project Director **M. KENNEDY**

CONFORMED DRAWINGS

Bar is one inch on original size sheet
0 1"

REGISTERED PROFESSIONAL ENGINEER · GIUSEPPE W. TOMASINO · No. C86552 · CIVIL · STATE OF CALIFORNIA
7/18/2024

GHD Inc.
2235 Mercury Way Suite 150
Santa Rosa California 95407 USA
T 1 707 523 1010 **F** 1 707 527 8679
www.ghd.com

Client **COUNTY OF SONOMA**
Project **LEACHATE TANK REPLACEMENT**
Title **TITLE SHEET AND VICINITY MAP**
Size **ANSI D**

Project No. **12558724** Date **7/18/2024** Scale **AS SHOWN**
Drawing No. **G-001** Sheet No. **01 of 48**

GENERAL NOTES

1. CONTRACTOR SHALL FIELD VERIFY ALL EXISTING SITE CONDITIONS PRIOR TO THE COMMENCEMENT OF WORK. ANY DISCREPANCY DISCOVERED BY CONTRACTOR IN THESE PLANS OR ANY FIELD CONDITIONS DISCOVERED BY CONTRACTOR THAT MAY DELAY OR OBSTRUCT THE PROPER COMPLETION OF THE WORK PER THESE PLANS SHALL BE BROUGHT TO THE ATTENTION OF THE ENGINEER IMMEDIATELY UPON DISCOVERY. SAID NOTIFICATION SHALL BE IN WRITING.
2. CONTRACTOR AGREES THAT IN ACCORDANCE WITH GENERALLY ACCEPTED CONSTRUCTION PRACTICES, CONTRACTOR WILL BE REQUIRED TO ASSUME SOLE AND COMPLETE RESPONSIBILITY FOR JOB SITE CONDITIONS DURING THE COURSE OF CONSTRUCTION OF THE PROJECT, INCLUDING SAFETY OF ALL PERSONS AND PROPERTY: THAT THIS REQUIREMENT SHALL BE MADE TO APPLY CONTINUOUSLY AND NOT BE LIMITED TO NORMAL WORKING HOURS, AND CONTRACTOR FURTHER AGREES TO HOLD HARMLESS, INDEMNIFY AND DEFEND THE OWNER, ENGINEER AND THEIR CONSULTANTS, AND EACH OF THEIR OFFICERS, EMPLOYEES AND AGENTS.
3. THE CONTRACTOR SHALL MAINTAIN ACCESS TO FACILITIES DURING CONSTRUCTION.
4. UNDERGROUND OBSTRUCTIONS, NOT SHOWN ON THESE PLANS, MAY BE ENCOUNTERED. THOSE SHOWN ARE BASED ON THE BEST INFORMATION AVAILABLE AND THE CONTRACTOR IS CAUTIONED THAT THE OWNER, THE ENGINEERS, AND DISTRICT ASSUME NO RESPONSIBILITY FOR ANY OBSTRUCTIONS EITHER SHOWN OR NOT SHOWN ON THESE PLANS. THE CONTRACTOR SHALL COOPERATE WITH ALL UTILITY COMPANIES WORKING WITHIN THE LIMITS OF THIS PROJECT.
5. ALL UNDERGROUND IMPROVEMENTS SHALL BE INSTALLED, INSPECTED AND APPROVED PRIOR TO BACKFILLING TRENCHES AND EXCAVATIONS.
6. ALL LANDSCAPING AND UTILITIES OR OTHER COUNTY OWNED OR PRIVATE IMPROVEMENTS DISTURBED BY THE CONTRACTOR SHALL BE REPAIRED OR REPLACED IN KIND OR AS DIRECTED BY THE COUNTY OR ENGINEER.
7. A GEOTECHNICAL INVESTIGATION REPORT FOR THE PROJECT DATED JANUARY 2022, HAS BEEN PREPARED BY MILLER PACIFIC ENGINEERING CORP. AND IS AVAILABLE AS A REFERENCE DOCUMENT. THE SOIL BORINGS LOGS ARE INCLUDED AS PART OF THE CONSTRUCTION CONTRACT DOCUMENTS.
8. ACCESS TO THE PROJECT SITE IS ACROSS LANDS OWNED BY THE COUNTY.
9. ALL DISTANCES SHOWN ON THE DRAWINGS ARE BASED ON HORIZONTAL AND VERTICAL MEASUREMENTS.
10. WHERE NO CONSTRUCTION DETAILS ARE SHOWN OR NOTED FOR ANY PART OF THE WORK, DETAILS SHALL BE THE SAME AS FOR OTHER SIMILAR WORK.
11. EROSION CONTROL MEASURE SHOWN HERE ARE THE MINIMUM RECOMMENDED. THE CONTRACTOR SHALL ADHERE TO THE QSD/QSP SPECIFIC PLAN OF BMP'S (BEST MANAGEMENT PRACTICES) FOR THE PROJECT SITE APPROPRIATE TO THE PHASE OF CONSTRUCTION AND THE TIME OF YEAR.
12. CONTRACTOR SHALL PROPERLY ADJUST THE VOLUMETRIC QUANTITIES OF CONCRETE DELIVERIES TO AVOID SPILLAGE ON STEEP SLOPES. ALL SPILLS SHALL BE REMOVED AND CLEANED IMMEDIATELY.
13. FIRE SAFETY DURING CONSTRUCTION AND DEMOLITION WILL BE ENFORCED IN ACCORDANCE WITH 2019 CBC AND CFC CHAPTER 33.
14. IF CONTAMINATED SOIL IS ENCOUNTERED DURING CONSTRUCTION, CONTRACTOR SHALL NOTIFY COUNTY. AFTER CONTAMINATED SOIL IS ENCOUNTERED (OIL, PETROLEUM, HYDROCARBONS, SMELLS OR ODORS, OIL SHEET AT THE SURFACE). ALL CONTAMINATED SOILS WILL BE STOCKPILED ON AND COVERED WITH 10 MIL PLASTIC SHEETING.
15. UPON COMPLETION OF THE CONSTRUCTION PROJECT, THE CONTRACTOR SHALL LEAVE THE PROJECT AREA FREE OF DEBRIS AND UNUSED MATERIAL.
16. (E) UTILITIES NOT DESIGNATED FOR REMOVAL MUST BE PROTECTED AND CONTINUOUS SERVICE MAINTAINED DURING THE CONTRACT. ANY TEMPORARY SHUT-DOWNS MUST BE COORDINATED WITH THE COUNTY.
17. CONTRACTOR RESPONSIBLE FOR REPAIRING DAMAGE CAUSED FROM CONSTRUCTION.
18. CONTRACTOR RESPONSIBLE FOR REMOVING AND DISPOSING OF MATERIAL OFF SITE.
19. CONTRACTOR RESPONSIBLE FOR COORDINATING REMOVAL AND RELOCATION OF COUNTY STRUCTURES AND EQUIPMENT WITHIN PROJECT LIMITS.
20. LOCATION OF EXISTING UTILITIES AND STRUCTURES ARE FROM INFORMATION AVAILABLE AT THE TIME OF DESIGN. EXACT LOCATION AND COMPLETENESS ARE NOT GUARANTEED. CONTRACTOR SHALL NOTIFY THE OWNER AND UNDERGROUND SERVICES ALERT A MINIMUM OF 72 HOURS PRIOR TO ANY EXCAVATION. CONTRACTOR IS RESPONSIBLE FOR LOCATING EXISTING UTILITIES AND SHALL POTHOLE FOR EXACT LOCATIONS.
21. NOT ALL FITTINGS SHOWN. PROVIDE ALL FITTINGS NECESSARY TO PROVIDE A COMPLETE WORKING SYSTEM.
22. CONTRACTOR SHALL RESTORE STAGING AREAS WITHIN AND OUTSIDE OF CONSTRUCTION LIMITS TO PRE-CONSTRUCTION CONDITIONS.
23. CONTRACTOR SHALL USE CAUTION TO PREVENT DAMAGE TO TANKS THAT MUST REMAIN IN SERVICE AND SHALL NOT INTERFERE WITH TANK AND LEACHATE SYSTEM OPERATIONS. CONTRACTOR IS RESPONSIBLE FOR ANY DAMAGE AND INTERFERENCE TO TANKS, AND LEACHATE SYSTEM OPERATIONS.

EROSION CONTROL NOTES

1. AT A MINIMUM, THE CONTRACTOR SHALL EMPLOY THE FOLLOWING BEST MANAGEMENT PRACTICES (BMPS) AS DESCRIBED IN THE CURRENT CALIFORNIA STORMWATER BMP HANDBOOK FOR CONSTRUCTION (WWW.CASQA.ORG):

   EC-1 SCHEDULING
   EC-2 PRESERVATION OF EXISTING VEGETATION
   EC-4 HYDROSEEDING
   SE-1 SILT FENCE
   SE-5 FIBER ROLLS
   SE-10 STORM DRAIN INLET PROTECTION
   WE-1 WIND EROSION CONTROL
   NS-9 VEHICLE EQUIPMENT AND FUELING
   NS-10 VEHICLE & EQUIPMENT MAINTENANCE
   TC-1 STABILIZED CONSTRUCTION ENTRANCE/EXIT
   TC-3 ENTRANCE/OUTLET TIRE WASH
   WM-1 MATERIALS DELIVERY AND STORAGE
   WM-2 MATERIAL USE
   WM-3 STOCKPILE MANAGEMENT
   WM-4 SPILL PREVENTION AND CONTROL
   WM-5 SOLID WASTE MANAGEMENT
   WM-8 CONCRETE WASTE MANAGEMENT
   WM-9 SANITARY/SEPTIC WASTE MANAGEMENT

2. IT IS THE RESPONSIBILITY OF THE CONTRACTOR TO MINIMIZE EROSION AND PREVENT THE TRANSPORT OF SEDIMENT TO SENSITIVE AREAS.
3. SUFFICIENT EROSION CONTROL SUPPLIES SHALL BE AVAILABLE ON-SITE AT ALL TIMES TO DEAL WITH AREAS SUSCEPTIBLE TO EROSION DURING RAIN EVENTS.
4. MINIMIZE DISTURBANCE OF EXISTING VEGETATION TO THAT NECESSARY TO COMPLETE THE WORK.
5. THE CONTRACTOR SHALL MAKE ADEQUATE PREPARATIONS, INCLUDING TRAINING & EQUIPMENT, TO CONTAIN SPILLS OF OIL AND OTHER HAZARDOUS MATERIALS.
6. ACTIVITIES SUCH AS VEHICLE WASHING ARE TO BE CARRIED OUT AT AN OFF-SITE FACILITY WHEREIN THE WATER IS DISCHARGED INTO A SANITARY SEWER.
7. THE CONTRACTOR SHALL PROVIDE COVERED WASTE RECEPTACLE FOR COMMON SOLID WASTES AT CONVENIENT LOCATIONS ON THE JOB SITE AND PROVIDE REGULAR COLLECTION OF WASTES.
8. THE CONTRACTOR SHALL PROVIDE SANITARY FACILITIES OF SUFFICIENT NUMBER AND SIZE TO ACCOMMODATE CONSTRUCTION CREWS AND ENSURE ADEQUATE ANCHORAGE OF SUCH FACILITIES TO PREVENT THEM FROM BEING TIPPED BY THE WEATHER OR VANDALISM.
9. APPROPRIATE STORAGE AND DISPOSAL OF WATER FROM DEWATERING OPERATIONS SHALL BE EXERCISED IN THE EVENT THAT ACCUMULATED WATER MUST BE REMOVED FROM A WORK LOCATION.
10. COVERED AND SECURED STORAGE AREAS FOR POTENTIALLY TOXIC MATERIALS SHALL BE PROVIDED. ALL HAZARDOUS MATERIAL CONTAINERS SHOULD BE PLACED IN SECONDARY CONTAINMENT.
11. VEHICLE AND EQUIPMENT & MAINTENANCE SHOULD BE PERFORMED OFF-SITE WHENEVER PRACTICAL.
12. SOIL STOCKPILES SHALL BE COVERED, AND LOCATED AT LEAST 50 FEET AWAY FROM DRAINAGE CHANNELS AND STORMWATER SYSTEMS.
13. CONTRACTOR MUST ENSURE THAT THE CONSTRUCTION SITE IS PREPARED PRIOR TO THE ONSET OF ANY STORM.
14. ALL SEDIMENT DEPOSITED ON PAVED SURFACES SHALL BE SWEPT AT THE END OF EACH WORKING DAY, AS NECESSARY OR AS DIRECTED BY THE OWNER'S REPRESENTATIVE. A STABILIZED CONSTRUCTION ENTRANCE MAY BE REQUIRED TO PREVENT SEDIMENT FROM BEING DEPOSITED ON PAVED ROADWAYS.
15. ALL EROSION AND SEDIMENT CONTROL MEASURES SHALL BE MAINTAINED IN ACCORDANCE TO THEIR RESPECTIVE BMP FACT SHEET UNTIL DISTURBED AREAS ARE STABILIZED.
16. THIS PLAN MAY NOT COVER ALL THE SITUATIONS THAT ARISE DURING CONSTRUCTION DUE TO UNANTICIPATED FIELD CONDITIONS. VARIATIONS MAY BE MADE TO THE PLAN IN THE FIELD SUBJECT TO THE APPROVAL OF OR AT THE DIRECTION OF THE OWNER'S REPRESENTATIVE.
17. IT WILL BE THE RESPONSIBILITY OF THE CONTRACTOR TO FIX ANY DEFICIENCIES INDICATED BY THE OWNER'S REPRESENTATIVE TO PREVENT EROSION AND CONTROL SEDIMENT.
18. PRIOR TO FINAL ACCEPTANCE ALL DISTURBED AREAS OF THE SITE SHALL BE PERMANENTLY STABILIZED WITH HYDROSEED BY CONTRACTOR AND TEMPORARY SEDIMENT CONTROL MEASURES SHALL BE REMOVED AS DIRECTED.

GRADING NOTES

1. CONTRACTOR IS RESPONSIBLE FOR FIELD VERIFICATION OF ALL FINISHED GRADES. CONTRACTOR IS RESPONSIBLE FOR ESTABLISHING ALL HORIZONTAL AND VERTICAL CONTROL PRIOR TO CONSTRUCTION.
2. CONTRACTOR IS RESPONSIBLE FOR CONSTRUCTION STAKING. STAKING WILL BE REVIEWED BY OWNER FOR CONFIRMATION TO DESIGN PRIOR TO CONSTRUCTION.
3. ALL GRADES BETWEEN SPOT ELEVATIONS SHALL HAVE UNIFORM SLOPE UNLESS OTHERWISE INDICATED. MAINTAIN POSITIVE DRAINAGE AWAY FROM ALL BUILDING WALLS AND DOORS.
4. CONTRACTOR SHALL BE RESPONSIBLE FOR THE SAFETY OF ALL CONSTRUCTION. ADEQUATE SHORING BRACING, TIES, AND SUPPORTS SHALL BE USED TO PROVIDE PROPER TEMPORARY INTEGRITY DURING ALL PHASES OF CONSTRUCTION.
5. ALL EXISTING LANDSCAPED AND UNPAVED AREAS WHICH ARE DISTURBED BY CONSTRUCTION OR EARTHWORK OPERATIONS SHALL BE HAND RAKED SMOOTH AND RETURNED TO ORIGINAL EXISTING CONDITIONS.
6. ALL DITCHES, SWALES, GUTTERS, ETC. SHOULD BE CONSIDERED ACTIVE STORM CONVEYANCES UNLESS OTHERWISE INDICATED. CONTRACTOR IS RESPONSIBLE FOR ADDRESSING STORM WATER DRAINAGE AND DEWATERING OF WORK AREAS DURING CONSTRUCTION.
7. DURING WET WEATHER PERIODS, CONTRACTOR IS RESPONSIBLE FOR SEQUENCING CONSTRUCTION IN A MANNER TO MINIMIZE IMPACT ON OPEN EARTHWORK AND COMPACTION OPERATIONS.
8. COMPLETELY COVER ANY SOIL STOCKPILES WITH 10 MIL BLACK PLASTIC AND PROVIDE RESTRAINTS TO HOLD PLASTIC IN PLACE. MONITOR PLASTIC COVER AS PART OF CONTINUOUS EROSION CONTROL PLAN. PLACE SILT FENCE COMPLETELY AROUND STOCKPILE.
9. CONTRACTOR TO INSTALL STRAW WATTLES AROUND STOCKPILE AND GRADED AREAS. CONTRACTOR TO SEED ALL DISTURBED AREAS WITH APPROVED NATIVE MIX AND APPLY STRAW.
10. ALL BACKFILLS AND FILLS SHALL BE PLACED IN HORIZONTAL LIFTS NO MORE THAN 8 INCHES THICK MOISTURE CONDITIONED AND COMPACTED PER SPECIFICATIONS.
11. ENGINEERED FILL MATERIALS SHALL CONSIST OF AN APPROVED AGGREGATE MIXTURE FREE OF VEGETATION, ORGANIC MATERIAL, RUBBISH AND/OR RUBBLE, A MAXIMUM PARTICLE SIZE OF 4 INCHES, A PLASTICITY INDEX LESS THAN 15 AND A LIQUID LIMIT LESS THAN 45. EXCEPT FOR CLAY SOILS, NATIVE SOILS MAY BE USED AS ENGINEERED FILL. SEE SPECIFICATIONS.
12. FOUNDATION SUBGRADE PREPARATION WILL EXTEND A MINIMUM OF 5 FEET BEYOND THE PLANNED FOUNDATIONS IN ALL DIRECTIONS.
13. GEOTECHNICAL ENGINEER OR REPRESENTATIVE SHALL INSPECT THE TANK FOUNDATION EXCAVATIONS PRIOR TO INSTALLATION OF NEW IMPROVEMENTS. PROVIDE MINIMUM 3 WORKING DAY NOTICE FOR INSPECTIONS.
14. CONTRACTOR TO PROVIDE A EROSION AND SEDIMENT CONTROL PLAN APPROVED BY OWNER. SEE SPECIFICATIONS.
15. ROOT BALLS, LOOSE SOIL OR ROCKS EXPOSED AT SUBGRADE SHALL BE REMOVED TO EXPOSE FIRM NATURAL SOILS OR BEDROCK. 5. THE OWNER OR THEIR REPRESENTATIVE SHALL INSPECT THE TANK FOUNDATION EXCAVATION PRIOR TO THE INSTALLATION OF NEW IMPROVEMENTS.
16. MATERIAL REMOVED BELOW THE BOTTOM OF THE PROPOSED FOUNDATIONS SHALL BE REPLACED WITH ENGINEERED FILL.

ABBREVIATIONS

ACP	ASBESTOS CEMENT PIPE
AB	AGGREGATE BASE
AC	ASPHALT
APN	ASSESSORS PARCEL NUMBER
AWWA	AMERICAN WATER WORKS ASSOCIATION
BFP	BACKFLOW PREVENTER
BFPCV	BACKFLOW PREVENTION CHECK VALVE
BLDG	BUILDING
BMP	BEST MANAGEMENT PRACTICE
C	COLD WATER
CB	CATCH BASIN
CDF	CONTROLLED DENSITY FILL
CI	CAST IRON
CLR	CLEARANCE
CMP	CORREGATED METAL PIPE
CO	CLEANOUT
COM, COMM	COMMUNICATION
CONC	CONCRETE
COND	CONDUIT
COR	CORNER
CP	CONTROL POINT
DI	DRAIN INLET
DIA	DIAMETER
DIP	DUCTILE IRON PIPE
DN	DOCUMENT NUMBER
DR	DRAIN
DWG	DRAWING
DW	DRIVEWAY
E	EAST
(E)	EXISTING
EB	ELECTRICAL BOX
EG	EXISTING GRADE
ELEC	ELECTRIC
ELEV	ELEVATION
EOR	ENGINEER OF RECORD
EP	EDGE OF PAVEMENT, END POINT
ER	EDGE OF ROAD
FCA	FLANGE COUPLING ADAPTER
FG	FINISH GRADE
FH	FIRE HYDRANT
FL	FLOWLINE, FLANGE
FND	FOUND
FM	FLOW METER
FNL	FENCE LINE
FS	FINISH SURFACE
G	GAS
GALV	GALVANIZED
GB	GRADE BREAK
GV	GAS VALVE
H	HORIZONTAL, HOT WATER
HDPE	HIGH DENSITY POLYETHYLENE
HMA	HOT MIX ASPHALT
ID	INSIDE DIAMETER
INV, IE	INVERT ELEVATION
IT	INFORMATION TECHNOLOGY
(ITEM NO)	TITLE REPORT ITEM NUMBER
JB	JUNCTION BOX
LF	LINEAR FEET
MAX	MAXIMUM
MH	MANHOLE
MIN	MINIMUM
N	NORTH
(N)	NEW
NG	NATURAL GROUND
OD	OUTSIDE DIAMETER
OH	OVERHEAD
PE	PLAIN END
PGE	PACIFIC GAS AND ELECTRIC
PL	PLASTIC, PROPERTY LINE
POC	POINT OF CONNECTION
PSI	POUNDS PER SQUARE INCH
PVC	POLYVINYL CHLORIDE PIPE
RC	RELATIVE COMPACTION
RCP	REINFORCED CONCRETE PIPE
RE	RIM ELEVATION
RWB	RETAINING WALL BOTTOM
RWT	RETAINING WALL TOP
RWD	REDWOOD
S	SOUTH
SCH	SCHEDULE
SD	STORM DRAIN
SDMH	STORM DRAIN MANHOLE
SL	STREET LIGHT
SLB	STREET LIGHT BOX
SS	SANITARY SEWER
SSMH	SANITARY SEWER MANHOLE
STA	STATION
STD	STANDARD
SST	STAINLESS STEEL
TB	TELEPHONE BOX, TOP OF BANK
TEL, TELE	TELEPHONE
TG	TOP OF GRATE
TOE	TOE OF BANK
TOF	TOP OF FOUNDATION
TW	TOP OF WALL
TYP	TYPICAL
UG	UNDERGROUND
UON	UNLESS OTHERWISE NOTED
V	VERTICAL
VAR	VARIES
W	WATER, WEST
WB	WATER BOX
WM	WATER METER
WV	WATER VALVE

NOTE: SOME ABBREVIATIONS MAY BE USED IN COMBINATION

LEGEND

EXISTING

- 5 (E) SURVEY CONTROL POINT
- A-21-001 BORING LOCATION
- PROPERTY LINE
- EASEMENT LINE
- CENTERLINE
- 150 (E) CONTOUR LINE & ELEVATION
- ×465.12 (E) SPOT ELEVATION
- (E) DRIVEWAY
- E (E) UNDERGROUND ELECTRIC LINE
- (E) FENCE LINE
- JT (E) JOINT TRENCH
- OHE (E) OVERHEAD POWER LINE
- T (E) TELEPHONE LINE
- W (E) WATER LINE & VALVE
- (E) TRAFFIC SIGN
- (E) TREE
- T (E) TRANSFORMER
- (E) BOLLARD
- WATER (E) WATER VAULT
- ELEC (E) ELECTRICAL VAULT
- (E) UTILITY POLE
- (E) BUILDING
- (E) CONCRETE

PROPOSED

- LIMITS OF CONSTRUCTION AND STAGING
- REMOVE OR ABANDON (E) UTILITY
- E (N) UNDERGROUND ELECTRIC LINE
- W (N) WATER LINE & VALVE
- DR (N) UNDERGROUND DRAIN LINE
- CLEAR AND GRUB AREA
- (N) GRAVEL SURFACE
- (N) HYDROSEED
- SF TEMPORARY SILT FENCE
- FR TEMPORARY FIBER ROLL
- 465 (N) CONTOUR LINE & ELEVATION
- WM (N) WATER METER
- (N) DOUBLE CHECK BACKFLOW PREVENTER
- (N) FLOW LINE OF EARTHEN DRAINAGE DITCH
- FLOW ARROW
- (N) DROP INLET
- TRAFFIC FLOW ARROW

DRAWING DESIGNATION

C - 1 0 1

DESIGNATION — INDIVIDUAL DRAWING NUMBER

DESIGNATION	DISCIPLINE
G	GENERAL
C	CIVIL
S	STRUCTURAL
E	ELECTRICAL

NUMBER	SHEET TYPE
000	GENERAL
100	PLANS
200	ELEVATIONS
300	SECTIONS
400	LARGE SCALE VIEWS
500	DETAILS
600	SCHEDULES AND DIAGRAMS
700	CODE COMPLIANCE FORMS

SYMBOLS

SECTION IDENTIFICATION

- A / X-301: SECTION LETTER; SHEET NUMBER ON WHICH SECTION APPEARS
- 1 / C-501 SECTION SCALE: SECTION LETTER; SHEET NUMBER ON WHICH SECTION WAS TAKEN

DETAIL IDENTIFICATION

- 1 / C-501: DETAIL NUMBER; SHEET NUMBER ON WHICH DETAIL APPEARS
- 1 / C-501 DETAIL SCALE: DETAIL NUMBER; SHEET NUMBER ON WHICH DETAIL WAS REFERENCED

"-" INDICATES THAT DETAIL IS REFERENCED FROM SAME SHEET.
"VAR" INDICATES THAT DETAIL IS REFERENCED FROM MULTIPLE SHEETS.

No.	Issue	Checked	Approved	Date
	Conformed Drawings	GT	GT	07/18/2024

Author D. AGUAS — Drafting Check S. PEARL — Project Manager G. TOMASINO
Designer S. PEARL — Design Check M. KENNEDY — Project Director M. KENNEDY

CONFORMED DRAWINGS

Bar is one inch on original size sheet 0 — 1"

REGISTERED PROFESSIONAL ENGINEER — C-... — CIVIL — STATE OF CALIFORNIA — 7/18/2024

GHD Inc.
2235 Mercury Way Suite 150
Santa Rosa California 95407 USA
T 1 707 523 1010 F 1 707 527 8679
www.ghd.com

Client COUNTY OF SONOMA

Project LEACHATE TANK REPLACEMENT

Title LEGEND, ABBREVIATIONS AND GENERAL NOTES

Size ANSI D

Project No. 12558724 — Date 7/18/2024 — Scale AS SHOWN

Drawing No. G-002 — Sheet No. 02 of 48

BORING 1G

EQUIPMENT: Track-Mounted Drill Rig with 4.0-inch Solid Flight Auger
DATE: 10/20/2021
ELEVATION: 482 - feet*
*REFERENCE: Google Earth, 2021

DEPTH (feet)	DESCRIPTION	BLOWS / FOOT (1)	DRY UNIT WEIGHT pcf (2)	MOISTURE CONTENT (%)	SHEAR STRENGTH psf (3)	OTHER TEST DATA	OTHER TEST DATA
0	2.0-Inches Aggregate Baserock						
	Sandstone Medium to dark gray brown, friable, low hardness, highly weathered. [Bedrock]	50/2" 50/2"					
		75/5"		3.9			
		50/4"		8.1			
	Boring terminated at 6.5 feet. No groundwater encountered during exploration.						

Water level encountered during drilling
Water level measured after drilling

NOTES: (1) UNCORRECTED FIELD BLOW COUNTS
(2) METRIC EQUIVALENT DRY UNIT WEIGHT kN/m³ = 0.1571 x DRY UNIT WEIGHT (pcf)
(3) METRIC EQUIVALENT STRENGTH (kPa) = 0.0479 x STRENGTH (psf)
(4) GRAPHIC SYMBOLS ARE ILLUSTRATIVE ONLY

MILLER PACIFIC ENGINEERING GROUP — 504 Redwood Blvd. Suite 220, Novato, CA 94947, T 415 / 382-3444, F 415 / 382-3450, www.millerpac.com

BORING LOG — Guerneville Leachate Tank, 13450 Pocket Drive, Guerneville, California — Project No. 1206.192 — Date: 12/8/2021 — Drawn MMT — A-3 FIGURE

BORING 2G

EQUIPMENT: Track-Mounted Drill Rig with 4.0-inch Solid Flight Auger
DATE: 10/20/2021
ELEVATION: 483 - feet*
*REFERENCE: Google Earth, 2021

DEPTH (feet)	DESCRIPTION	BLOWS / FOOT (1)	DRY UNIT WEIGHT pcf (2)	MOISTURE CONTENT (%)	SHEAR STRENGTH psf (3)	OTHER TEST DATA	OTHER TEST DATA
0	2.0-Inches Aggregate Baserock						
	Sandstone Medium dark brown, friable, low hardness, highly weathered. [Bedrock]	50/6"	120	6.0			
		50/5"		4.9			
		50/4.5"					
	Boring terminated at 6.5 feet. No groundwater encountered during exploration.						

BORING LOG — Guerneville Leachate Tank, 13450 Pocket Drive, Guerneville, California — Project No. 1206.192 — Date: 12/8/2021 — A-4 FIGURE

1 GUERNEVILLE BORING LOGS
SEE SHEET C-101

BORING 1-R

EQUIPMENT: Track-Mounted Drill Rig with 4.0-inch Solid Flight Auger
DATE: 10/18/2021
ELEVATION: 160 - feet*
*REFERENCE: Google Earth, 2021

DEPTH (feet)	DESCRIPTION	BLOWS / FOOT (1)	DRY UNIT WEIGHT pcf (2)	MOISTURE CONTENT (%)	SHEAR STRENGTH psf (3)	OTHER TEST DATA	OTHER TEST DATA
0	Sandy GRAVEL (GP) Medium gray, dry, medium dense, angular gravel, ~25-30% fine to medium grained sand. [Fill]	39/6"	116	6.4			
	Sandstone Medium yellow brown, friable, crushed, low hardness, completely weathered. [Wilson Grove Bedrock]	32		5.7			
		20	97	6.2	UC 320		
			108	10.5	TXUU 3250		
10	grades medium brown mottled red and orange	22	71	14.5			
15		16	92	30.8	TXUU 1500		
	Claystone Medium dark blue gray, friable, low hardness, highly to completely weathered. [Wilson Grove Bedrock]						
20	Boring terminated at 20.5 feet. Groundwater measured at 17.0 feet upon completion of exploration.	60	103	22.3	UC 1840		

BORING LOG — Roblar Leachate Tank, Roblar Road, Petaluma, California — Project No. 1206.192 — Date: 12/27/2021 — A-3 FIGURE

BORING 2-R

EQUIPMENT: Track-Mounted Drill Rig with 4.0-inch Solid Flight Auger
DATE: 10/18/2021
ELEVATION: 167 - feet*
*REFERENCE: Google Earth, 2021

DEPTH (feet)	DESCRIPTION	BLOWS / FOOT (1)	DRY UNIT WEIGHT pcf (2)	MOISTURE CONTENT (%)	SHEAR STRENGTH psf (3)	OTHER TEST DATA	OTHER TEST DATA
0	Clayey GRAVEL with Sand (GC) Medium gray brown, dry to moist, medium dense, subangular gravel, ~30-35% fine to medium grained sand, ~10-15% low plasticity clay. [Fill]	30	103	13.7	UC 1730		
	Sandstone Medium red brown mottled gray, friable, crushed, low hardness, moderately weathered. [Wilson Grove Bedrock]	25		14.2			
		25	111	15.5	UC 320		
	Claystone Dark medium gray, crushed, low hardness, friable, moderately weathered. [Wilson Grove Bedrock]						
10		48	105	22.7	UC 2210		
15		51	97	21.7	UC 540		
	Boring terminated at 15.5 feet. No groundwater encountered during exploration.						

BORING LOG — Roblar Leachate Tank, Roblar Road, Petaluma, California — Project No. 1206.192 — Date: 12/27/2021 — A-4 FIGURE

2 ROBLAR BORING LOGS
SEE SHEET C-106

BORING 1-S

EQUIPMENT: Track-Mounted Drill Rig with 4.0-inch Solid Flight Auger
DATE: 10/21/2021
ELEVATION: 249 - feet*
*REFERENCE: Google Earth, 2021

DEPTH (feet)	DESCRIPTION	BLOWS / FOOT (1)	DRY UNIT WEIGHT pcf (2)	MOISTURE CONTENT (%)	SHEAR STRENGTH psf (3)	OTHER TEST DATA	OTHER TEST DATA
0	Clayey SAND (SC) Medium to dark brown and gray, moist, medium dense, fine to coarse grained sand, ~30% gravel, ~35-40% medium plasticity clay. [Colluvium]	40	88	16.2	UC 770	P200 36.2%	
	CLAY (CL) Dark brown, moist, stiff, medium to high plasticity clay, ~20% fine to medium grained sand. [Colluvium]	22					
		10					
	Tuff Blue gray brown, friable, low hardness, highly weathered. [Bedrock]	34	57	69.3	UC 2100 TXUU 2500		
		19		59.2			
		29		61.0			
	Boring terminated at 17.5 feet. No groundwater encountered during exploration.						

BORING LOG — Sonoma Leachate Tank, 4376 Stage Gulch Road, Sonoma, California — Project No. 1206.192 — Date: 12/22/2021 — A-3 FIGURE

BORING 2-S

EQUIPMENT: Track-Mounted Drill Rig with 4.0-inch Solid Flight Auger
DATE: 10/21/2021
ELEVATION: 250 - feet*
*REFERENCE: Google Earth, 2021

DEPTH (feet)	DESCRIPTION	BLOWS / FOOT (1)	DRY UNIT WEIGHT pcf (2)	MOISTURE CONTENT (%)	SHEAR STRENGTH psf (3)	OTHER TEST DATA	OTHER TEST DATA
0	CLAY with Sand (CL) Medium dark brown, moist, very stiff, medium plasticity clay, ~20% fine to coarse grained sand. [Colluvium]	25	78	19.2			
	Clayey SAND with Gravel (SC) Light to medium gray brown, dry, medium dense, fine to coarse grained sand, ~45-50% medium plasticity clay, ~20% gravel. [Colluvium]	25	65	24.5		P200 47.1%	
	CLAY with Sand (CL) Black, moist, medium stiff, medium plasticity clay, ~20% fine to coarse grained sand. [Colluvium]	11		34.6			
	Tuff Medium brown, friable, crushed, low hardness, highly weathered. [Bedrock]	44	64	57.3	UC 1670		
15		26	62	62.3	UC 1450		

BORING LOG — Sonoma Leachate Tank, 4376 Stage Gulch Road, Sonoma, California — Project No. 1206.192 — Date: 12/22/2021 — A-4 FIGURE

BORING 2 (CONTINUED)

DEPTH (feet)	DESCRIPTION	BLOWS / FOOT (1)	DRY UNIT WEIGHT pcf (2)	MOISTURE CONTENT (%)	SHEAR STRENGTH psf (3)	OTHER TEST DATA	OTHER TEST DATA
20	Tuff Medium brown, friable, crushed, low hardness, highly weathered. [Bedrock]	61	58	66.6	UC 890		
		41		63.0			
	Boring terminated at 23.0 feet. No groundwater encountered during exploration.						

BORING LOG — Sonoma Leachate Tank, 4376 Stage Gulch Road, Sonoma, California — Project No. 1206.192 — Date: 12/22/2021 — A-5 FIGURE

3 SONOMA BORING LOGS
SEE SHEET C-111

No.	Issue	Checked	Approved	Date
	Conformed Drawings	GT	GT	07/18/2024

Author D. AGUAS — Drafting Check S. PEARL — Project Manager G. TOMASINO
Designer S. PEARL — Design Check M. KENNEDY — Project Director M. KENNEDY

CONFORMED DRAWINGS

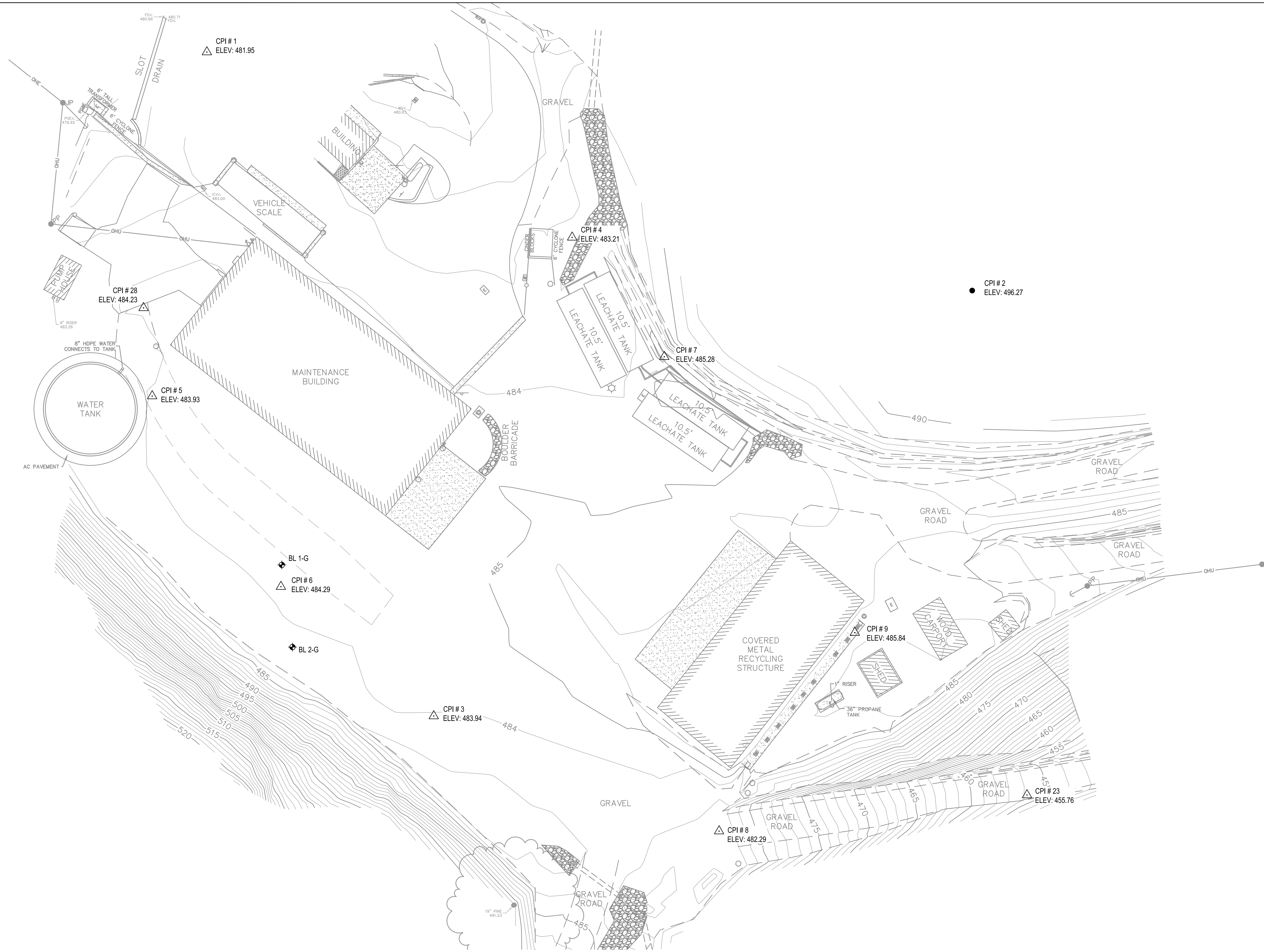
Bar is one inch on original size sheet 0 — 1"

REGISTERED PROFESSIONAL ENGINEER — STATE OF CALIFORNIA — CIVIL — C89682 — 7/18/2024

GHD Inc.
2235 Mercury Way Suite 150
Santa Rosa California 95407 USA
T 1 707 523 1010 F 1 707 527 8679
www.ghd.com

Client COUNTY OF SONOMA
Project LEACHATE TANK REPLACEMENT
Title GEOTECHNICAL BORING LOGS - GUERNEVILLE SITE

Project No. 12558724 — Date 7/18/2024 — Scale AS SHOWN — Size ANSI D — Drawing No. C-001 — Sheet No. 03 of 48



EXISTING SITE PLAN AND SURVEY CONTROL

0 10' 20' 40'

N

SURVEY INFORMATION

BASIS OF BEARING:

THE BASIS OF BEARINGS FOR THIS SURVEY IS THE CALIFORNIA COORDINATE SYSTEM, ZONE 2, NAD 83, EPOCH 2017.50 AS DETERMINED LOCALLY BY A LINE BETWEEN CONTINUOUS GLOBAL POSITIONING SYSTEMS (CGPS) STATION P196 AND STATION P195; BEING A GRID BEARING OF NORTH 24°23'10" WEST AS DERIVED FROM GEODETIC VALUES PUBLISHED BY THE CALIFORNIA SPATIAL REFERENCE CENTER (CSRC).

BENCHMARK:

CINQUINI & PASSARINO CONTROL POINT NO. 2, BEING A FOUND CONTROL 3/4" IRON PIPE AS SHOWN HEREON.
ELEVATION = 496.27' (NAVD 88)
THE ORTHOMETRIC ELEVATIONS SHOWN HEREON ARE BASED ON THE NORTH AMERICAN VERTICAL DATUM OF 1988 (NAVD 1988) AND WERE DETERMINED BY STATIC GPS TIES TO CGPS STATION P195 WITH A PUBLISHED ELLIPSOIDAL HEIGHT OF 483.292', IN ADDITION TO APPLYING THE NGS GEOID HEIGHT MODEL "GEOID2012B".

SURVEY CONTROL TABLE

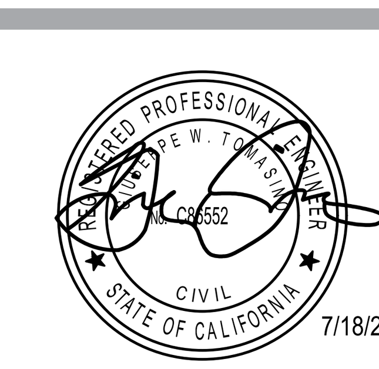
POINT #	NORTHING	EASTING	ELEV	DESCRIPTION
1	1942567.351	6288796.653	481.95	SET CPI CTRL CUT 'X'
2	1942480.493	6289075.390	496.27	FND CTRL 3/4" IRON PIPE
3	1942325.503	6288879.290	483.94	SET CPI CTRL SPIKE 100d
4	1942499.848	6288929.688	483.21	SET CPI CTRL SPIKE 100d
5	1942442.051	6288776.731	483.93	SET CPI CTRL SPIKE d
6	1942372.627	6288823.626	484.29	SET CPI CTRL SPIKE d
7	1942456.378	6288963.243	485.28	SET CPI CTRL SPIKE 100d
8	1942283.580	6288983.205	482.29	SET CPI CTRL SPIKE 100d
9	1942355.874	6289032.648	485.84	SET CPI CTRL CUT 'X'
23	1942296.735	6289095.352	455.76	SET CPI CTRL SPIKE 60d
28	1942474.180	6288773.588	484.23	SET CPI CTRL MAG NAIL
BL 1-G	1942380.559	6288823.943	484.48	BORING LOCATION
BL 2-G	1942350.623	6288827.812	483.65	BORING LOCATION

No.	Issue	Checked	Approved	Date
	Conformed Drawings	GT	GT	07/18/2024

Author **D. AGUAS** Drafting Check **S. PEARL** Project Manager **G. TOMASINO**
Designer **S. PEARL** Design Check **M. KENNEDY** Project Director **M. KENNEDY**

CONFORMED DRAWINGS

Bar is one inch on original size sheet
0 1"



7/18/2024

GHD Inc.
2235 Mercury Way Suite 150
Santa Rosa California 95407 USA
T 1 707 523 1010 **F** 1 707 527 8679
www.ghd.com

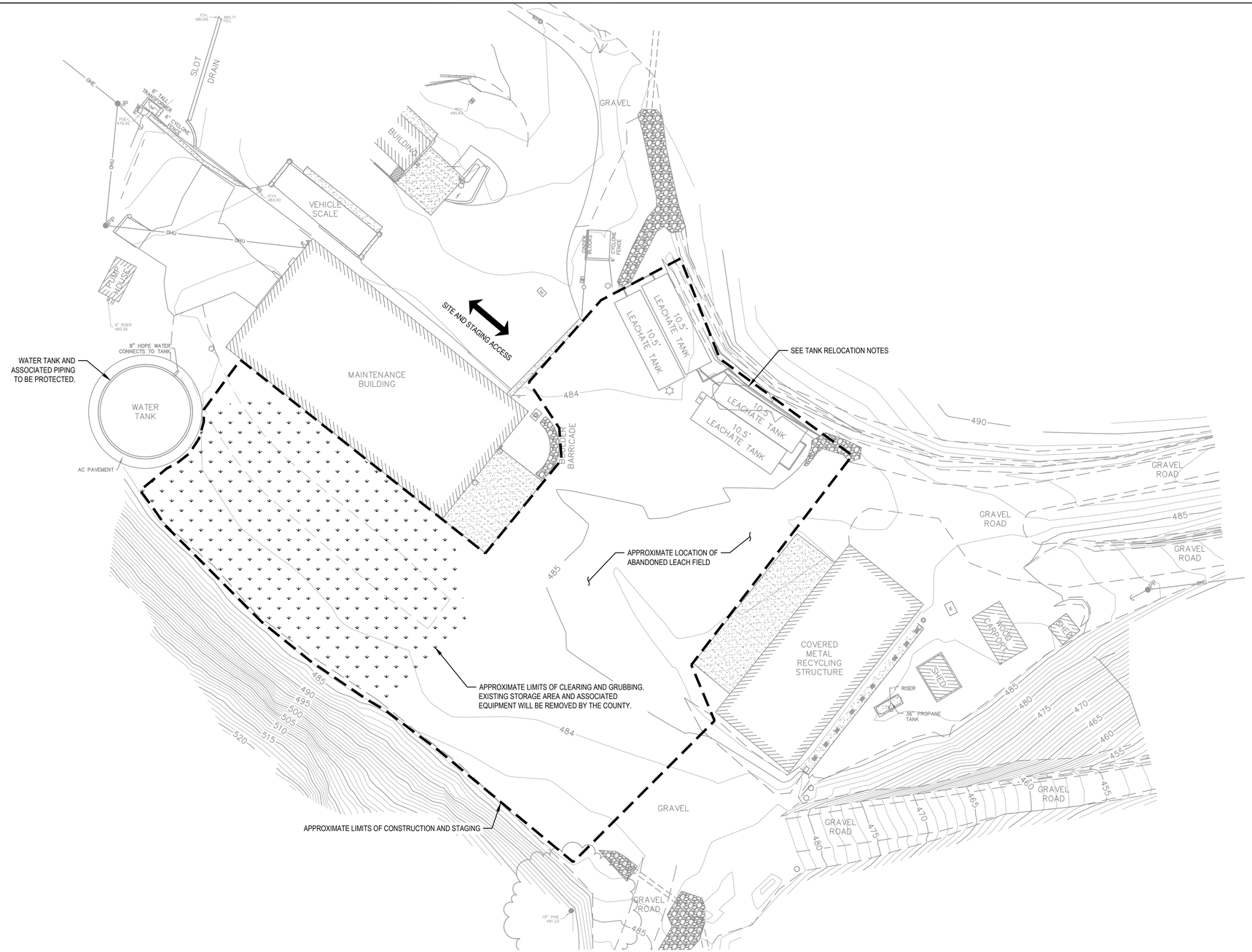
Client **COUNTY OF SONOMA**

Project **LEACHATE TANK REPLACEMENT**

Title **EXISTING SITE PLAN AND SURVEY CONTROL – GUERNEVILLE SITE**

Size **ANSI D**

Project No.	Date	Scale	Drawing No.	Sheet No.
12558724	7/18/2024	AS SHOWN	C-101	04 of 48



SITE DEMOLITION PLAN

0 10' 20' 40'

N

GENERAL NOTES

1. (E) UTILITIES NOT DESIGNATED FOR REMOVAL MUST BE PROTECTED AND CONTINUOUS SERVICE MAINTAINED DURING THE CONTRACT. ANY TEMPORARY SHUT-DOWNS MUST BE COORDINATED WITH OWNER.
2. REMOVAL AND RELOCATION OF THE (E) LEACHATE TANKS SHALL BE PHASED TO MAINTAIN UNINTERUPPTED STORAGE OF LEACHATE DURING CONSTRUCTION. CONTRACTOR RESPONSIBLE FOR (E) LEACHATE TANK REMOVAL AND RELOCATION AS DIRECTED BY OWNER.
3. CONTRACTOR TO INSTALL CONCRETE WASHOUT PER DETAIL 4 SHEET C-501.
4. LOCATION OF EXISTING UTILITIES AND STRUCTURES ARE FROM INFORMATION AVAILABLE AT THE TIME OF DESIGN. EXACT LOCATION AND COMPLETENESS ARE NOT GUARANTEED. CONTRACTOR SHALL NOTIFY THE OWNER AND UNDERGROUND SERVICES ALERT A MINIMUM OF 72 HOURS PRIOR TO ANY EXCAVATION. CONTRACTOR IS RESPONSIBLE FOR LOCATING EXISTING UTILITIES AND SHALL POTHOLE FOR EXACT LOCATIONS.
5. CONTRACTOR SHALL USE CAUTION TO PREVENT DAMAGE TO TANKS THAT MUST REMAIN IN SERVICE AND AVOID INTERFERENCE WITH TANK AND LEACHATE SYSTEM OPERATIONS. CONTRACTOR IS RESPONSIBLE FOR ANY DAMAGE AND INTERFERENCE TO TANKS, AND LEACHATE SYSTEM OPERATIONS.

TANK RELOCATION NOTES

1. EXISTING LEACHATE SYSTEM TO BE UNINTERRUPTED DURING CONSTRUCTION.
2. CONTRACTOR TO SALVAGE (E) MAG METER AT (E) LEACHATE TANKS FOR RE-USE.
3. CONSTRUCTION OF NEW TANKS AND NEW FILL STATION TO BE INSTALLED PRIOR TO DRAINING EXISTING TANKS AND SALVAGING EXISTING FLOW METER FOR INSTALLATION AS SHOWN ON SHEET C-105.
4. TANKS TO BE DRAINED BY OWNER BEFORE TIE IN WITH EXISTING LINE.
5. EXISTING TANKS TO REMAIN ON SITE.

No.	Issue	Checked	Approved	Date
	Conformed Drawings	GT	GT	07/18/2024

Author **DRA** Drafting Check **STP** Project Manager **G. TOMASINO**

Designer **GWT** Design Check **MGK** Project Director **M. KENNEDY**

CONFORMED DRAWINGS

Bar is one inch on original size sheet
0 1"

PROFESSIONAL ENGINEER — CIVIL — STATE OF CALIFORNIA — 7/18/2024

GHD Inc.
2235 Mercury Way Suite 150
Santa Rosa California 95407 USA
T 1 707 523 1010 **F** 1 707 527 8679
www.ghd.com

Client **COUNTY OF SONOMA**

Project **LEACHATE TANK REPLACEMENT**

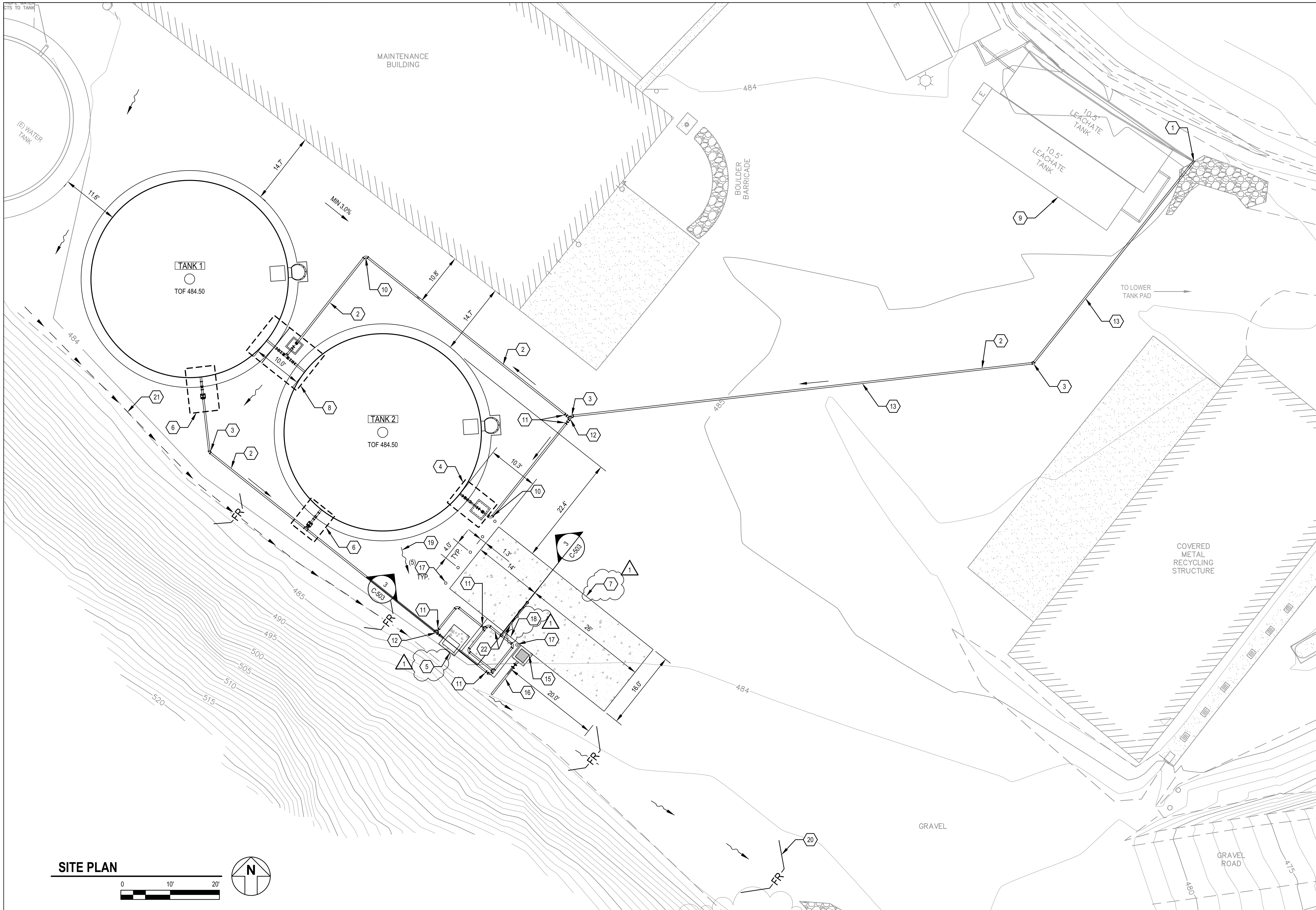
Title **SITE DEMOLITION PLAN - GUERNEVILLE SITE**

Size **ANSI D**

Project No. **12558724** Date **7/18/2024** Scale **AS SHOWN**

Drawing No. **C-102** Sheet No. **05 of 48**

Plot Date: 24 July 2024 - 1:02 PM Plotted By: Steven Toft Filename: \\ghdnet\ghd\US\San Francisco\Projects\561\12558724\Digital_Design\ACAD\Sheets\Leachate Tanks\12558724-GHD-0001-DWG-CI-0102.dwg



GENERAL NOTES

1. LOCATION OF EXISTING UTILITIES AND STRUCTURES ARE FROM INFORMATION AVAILABLE AT THE TIME OF DESIGN. EXACT LOCATION AND COMPLETENESS ARE NOT GUARANTEED. CONTRACTOR SHALL NOTIFY THE OWNER AND UNDERGROUND SERVICES ALERT A MINIMUM OF 72 HOURS PRIOR TO ANY EXCAVATION. CONTRACTOR IS RESPONSIBLE FOR LOCATING EXISTING UTILITIES AND SHALL POTHOLE FOR EXACT LOCATIONS.
2. NOT ALL FITTINGS SHOWN. PROVIDE ALL FITTINGS NECESSARY TO PROVIDE A COMPLETE WORKING SYSTEM.

KEYNOTES

1. CONNECT TO EXISTING 4" HDPE FILL LINE PER SPECIFICATIONS, CONTRACTOR TO PROVIDE NECESSARY FITTINGS.
2. (N) 4" HDPE PIPE. MAINTAIN CONTINUOUS UPWARD SLOPE TOWARD TANKS.
3. (N) 4" 45° DI ELBOW.
4. (N) 4" TANK INLET, SEE DETAIL 1 SHEET C-502.
5. (N) CAL WEST RAIN CUSTOM PUMP, FLOW METER AND BACKFLOW PREVENTION ASSEMBLY OR APPROVED EQUAL, ANCHORED TO PAD PER DETAIL 2, SHEET S-004 PER MANUFACTURER REQUIREMENTS.

1 SW CORNER N=1942330.759 E=6288845.385 FS=484.50
SE CORNER N=1942328.271 E=6288848.516 FS=484.50
NW CORNER N=1942334.674 E=6288848.495 FS=484.50
NE CORNER N=1942332.186 E=6288851.627F FS=484.50

6. (N) 4" TANK OUTLET, SEE DETAIL 2 SHEET C-502.
7. (N) 16' X 40' CONTAINMENT PAD PER DETAIL 1 SHEET S-108.

1 NE CORNER N=1942329.593 E=6288888.856 FS=484.17
SE CORNER N=1942317.065 E=6288878.904 FS=484.17
NW CORNER N=1942354.474 E=6288857.537 FS=484.17
SW CORNER N=1942341.946 E=6288847.584 FS=484.17

8. (N) TANK INTERTIE, SEE DETAIL 3 SHEET C-502.
9. RELOCATION OF THE EXISTING LEACHATE TANKS SHALL BE PHASED TO MAINTAIN UNINTERRUPTED STORAGE OF LEACHATE DURING CONSTRUCTION. SEE SHEET C-103 FOR TANK RELOCATION NOTES.
10. (N) 4" 90° DI ELBOW.
11. (N) 4" DI GATE VALVE IN RISER BOX, SEE DETAIL 2 SHEET C-503.
12. (N) 4"x4"x4" DI TEE.
13. (N) SCHEIB DRAINAGE ANTI SEEP COLLAR OR APPROVED EQUAL, INSTALLED EVERY 20 FT BETWEEN FITTINGS. INSTALL PER MANUFACTURER INSTRUCTIONS.
14. NOT USED.
15. (N) 24" X 24"' X 36" JENSEN PRECAST JUNCTION BOX OR APPROVED EQUAL PER DETAIL 3, SHEET C-503.
16. (N) 6" PVC DRAIN PIPE, MIN 1% SLOPE.
17. (N) BOLLARD PER DETAIL 5, SHEET C-503.
18. (N) 8.5' X 8.5' SLAB PER DETAIL 2, S-004.

1 NW CORNER N=1942335.873 E=6288855.229 FS=484.50
NE CORNER N=1942330.586 E=6288861.884 FS=484.50
SW CORNER N=1942329.218 E=6288849.942 FS=484.50
SE CORNER N=1942323.931 E=6288856.597 FS=484.50

19. GRADE AWAY FROM TANK FOOTINGS AND ADJACENT BUILDINGS TO MAINTAIN POSITIVE DRAINAGE.
20. INSTALL FIBER ROLLS ACROSS DRAINAGE SWALE.
21. ESTABLISH AND MAINTAIN POSITIVE DRAINAGE ALONG (E) TOE OF SLOPE.
22. (N) SS CAL WEST RAIN PRE-FABRICATED FILL STATION WITH MANUAL BYPASS. SEE DETAIL 3 SHEET C-503

No.	Issue	Checked	Approved	Date
1	RFI #005	GT	GT	07/30/2024
	Conformed Drawings	GT	GT	07/18/2024

Author D. AGUAS — Drafting Check S. PEARL — Project Manager G. TOMASINO
Designer S. PEARL — Design Check M. KENNEDY — Project Director M. KENNEDY

CONFORMED DRAWINGS

Bar is one inch on original size sheet
0 1"

7/18/2024

GHD Inc.
2235 Mercury Way Suite 150
Santa Rosa California 95407 USA
T 1 707 523 1010 F 1 707 527 8679
www.ghd.com

Client COUNTY OF SONOMA
Project LEACHATE TANK REPLACEMENT

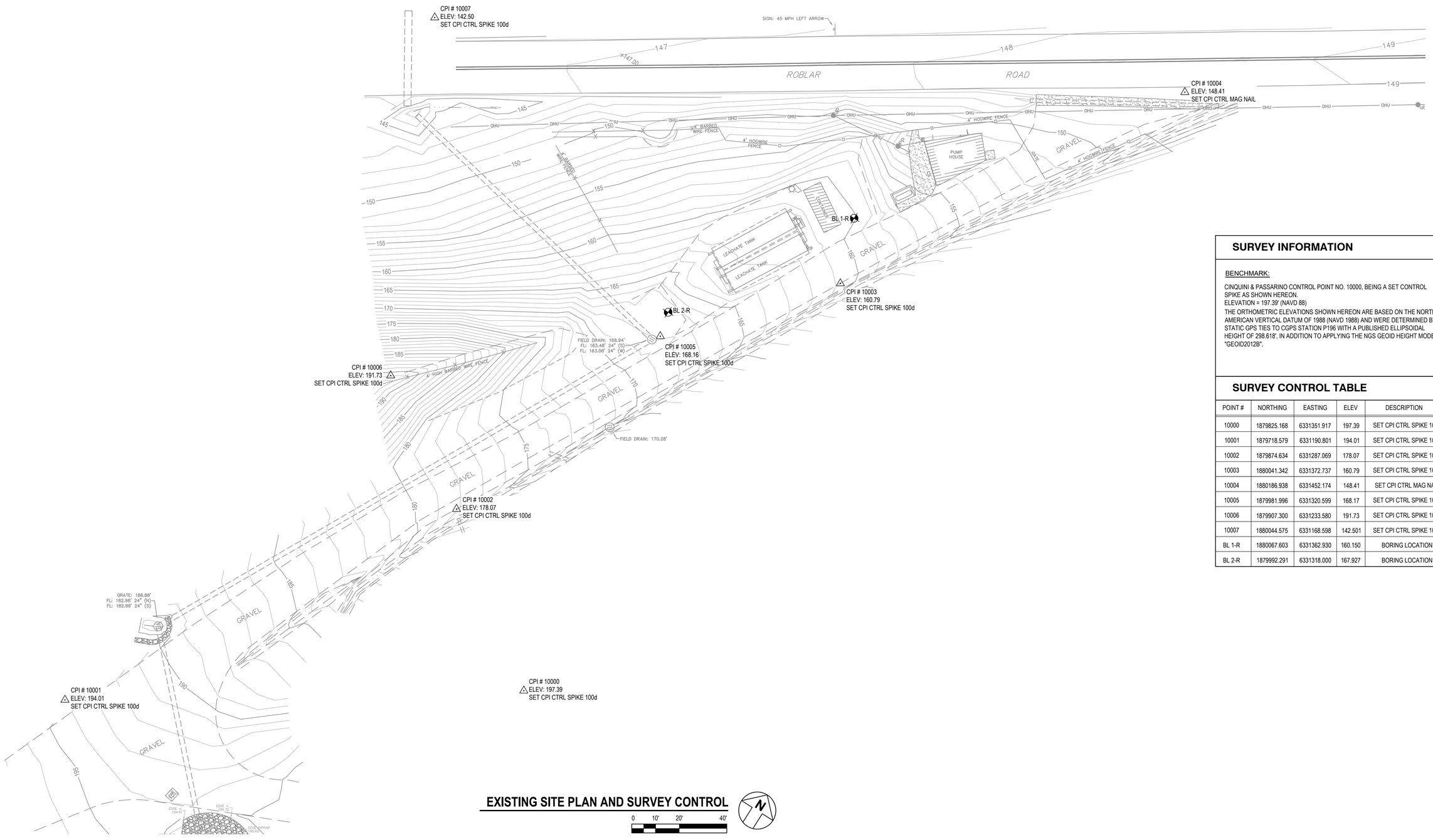
Project No. 12558724 — Date 7/18/2024 — Scale AS SHOWN

Title SITE PLAN - GUERNEVILLE SITE

Size ANSI D

Drawing No. C-103

Plot Date: 14 August 2024 - 1:04 PM Plotted By: Steven Toft Filename: \\ghdnet\ghd\US\San Francisco\Projects\561\12558724\Digital_Design\ACAD\Sheets\Leachate Tanks\12558724-GHD-0001-DWG-CI-0103.dwg



EXISTING SITE PLAN AND SURVEY CONTROL

0 10' 20' 40'

SURVEY INFORMATION

BENCHMARK:

CINQUINI & PASSARINO CONTROL POINT NO. 10000, BEING A SET CONTROL SPIKE AS SHOWN HEREON.
ELEVATION = 197.39' (NAVD 88)
THE ORTHOMETRIC ELEVATIONS SHOWN HEREON ARE BASED ON THE NORTH AMERICAN VERTICAL DATUM OF 1988 (NAVD 1988) AND WERE DETERMINED BY STATIC GPS TIES TO CGPS STATION P196 WITH A PUBLISHED ELLIPSOIDAL HEIGHT OF 298.618', IN ADDITION TO APPLYING THE NGS GEOID HEIGHT MODEL "GEOID20128".

SURVEY CONTROL TABLE

POINT #	NORTHING	EASTING	ELEV	DESCRIPTION
10000	1879825.168	6331351.917	197.39	SET CPI CTRL SPIKE 100d
10001	1879718.579	6331190.801	194.01	SET CPI CTRL SPIKE 100d
10002	1879874.634	6331287.069	178.07	SET CPI CTRL SPIKE 100d
10003	1880041.342	6331372.737	160.79	SET CPI CTRL SPIKE 100d
10004	1880186.938	6331452.174	148.41	SET CPI CTRL MAG NAIL
10005	1879981.996	6331320.599	168.17	SET CPI CTRL SPIKE 100d
10006	1879907.300	6331233.580	191.73	SET CPI CTRL SPIKE 100d
10007	1880044.575	6331168.598	142.501	SET CPI CTRL SPIKE 100d
BL 1-R	1880067.603	6331362.930	160.150	BORING LOCATION
BL 2-R	1879992.291	6331318.000	167.927	BORING LOCATION

Conformed Drawings	GT	GT	07/18/2024
No. Issue	Checked	Approved	Date

Author **D. AGUAS** Drafting Check **S. PEARL** Project Manager **G. TOMASINO**
Designer **S. PEARL** Design Check **M. KENNEDY** Project Director **M. KENNEDY**

CONFORMED DRAWINGS

Bar is one inch on original size sheet
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7/18/2024

GHD Inc.
2235 Mercury Way Suite 150
Santa Rosa California 95407 USA
T 1 707 523 1010 **F** 1 707 527 8679
www.ghd.com

Client **COUNTY OF SONOMA**
Project **LEACHATE TANK REPLACEMENT**

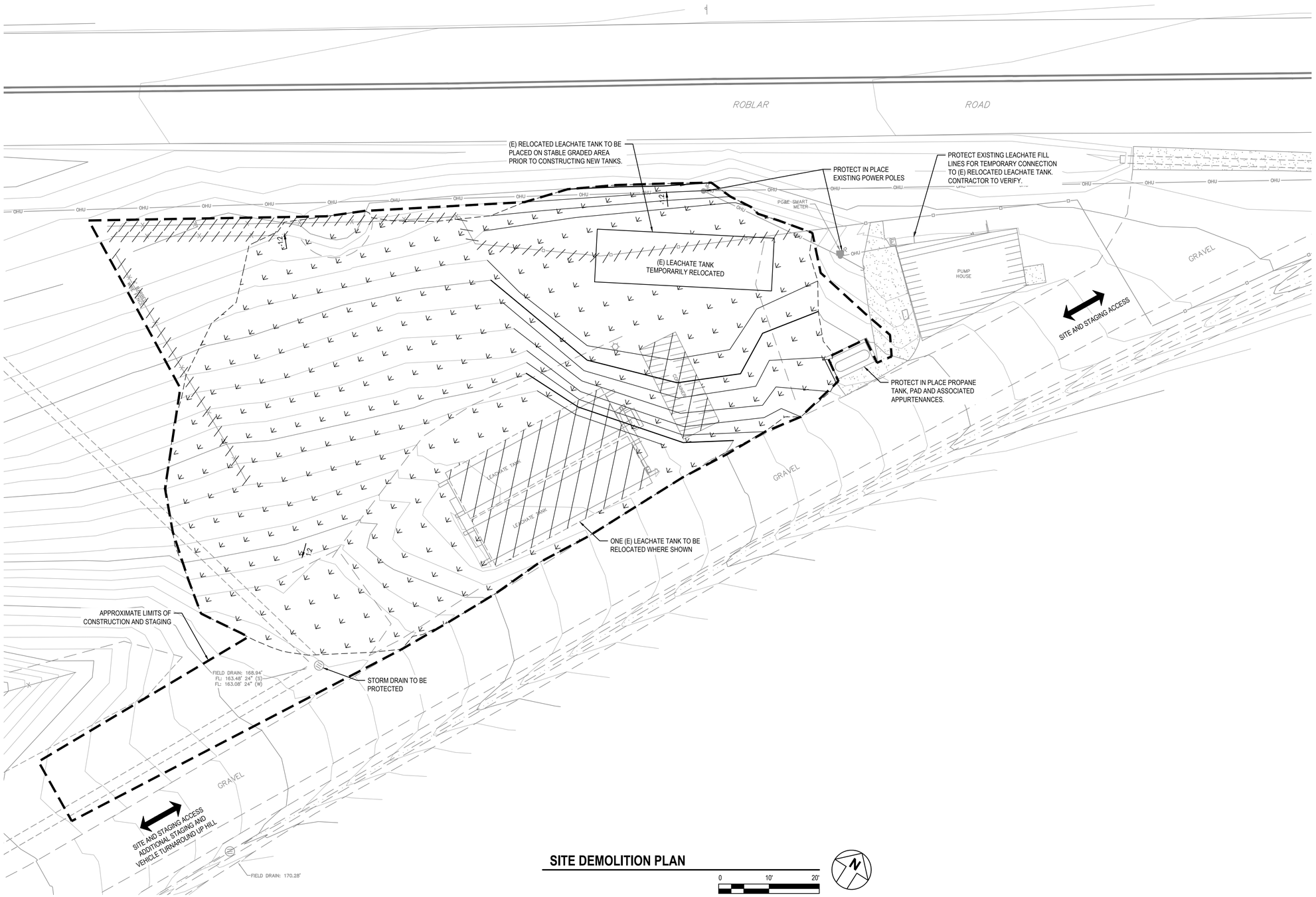
Title **EXISTING SITE PLAN AND SURVEY CONTROL - ROBLAR SITE**

Size **ANSI D**

Project No. **12558724** Date **7/18/2024** Scale **AS SHOWN**

Drawing No. **C-104** Sheet No. **07 of 48**

Plot Date: 24 July 2024 - 1:05 PM Plotted By: Steven Toft Filename: \\ghdnet\ghd\US\San Francisco\Projects\561\12558724\Digital_Design\ACAD\Sheets\Leachate Tanks\12558724-GHD-0001-DWG-CI-0104.dwg



SITE DEMOLITION PLAN

0 10' 20'

GENERAL NOTES

1. (E) UTILITIES NOT DESIGNATED FOR REMOVAL MUST BE PROTECTED AND CONTINUOUS SERVICE MAINTAINED DURING THE CONTRACT. ANY TEMPORARY SHUT-DOWNS MUST BE COORDINATED WITH OWNER.
2. REMOVAL AND RELOCATION OF THE (E) LEACHATE TANKS SHALL BE PHASED TO MAINTAIN UNINTERUPPTED STORAGE OF LEACHATE DURING CONSTRUCTION. CONTRACTOR RESPONSIBLE FOR (E) LEACHATE TANK REMOVAL AND RELOCATION AS DIRECTED BY OWNER.
3. CONTRACTOR TO INSTALL CONCRETE WASHOUT PER DETAIL 4 SHEET C-501.
4. LOCATION OF EXISTING UTILITIES AND STRUCTURES ARE FROM INFORMATION AVAILABLE AT THE TIME OF DESIGN. EXACT LOCATION AND COMPLETENESS ARE NOT GUARANTEED. CONTRACTOR SHALL NOTIFY THE OWNER AND UNDERGROUND SERVICES ALERT A MINIMUM OF 72 HOURS PRIOR TO ANY EXCAVATION. CONTRACTOR IS RESPONSIBLE FOR LOCATING EXISTING UTILITIES AND SHALL POTHOLE FOR EXACT LOCATIONS.
5. CONTRACTOR SHALL USE CAUTION TO PREVENT DAMAGE TO TANKS THAT MUST REMAIN IN SERVICE AND AVOID INTERFERENCE WITH TANK AND LEACHATE SYSTEM OPERATIONS. CONTRACTOR IS RESPONSIBLE FOR ANY DAMAGE AND INTERFERENCE TO TANKS, AND LEACHATE SYSTEM OPERATIONS.
6. CONTRACTOR TO PROVIDE TEMPORARY TRAFFIC CONTROL AT ROBLAR ROAD AS NECESSARY.

TANK RELOCATION NOTES

1. (E) LEACHATE TANKS TO BE DRAINED BY OWNER PRIOR TO REMOVAL AND RELOCATION.
2. OWNER RESPONSIBLE FOR COORDINATION AND REMOVAL OF (E) STORAGE CONTAINER.
3. CONTRACTOR RESPONSIBLE FOR COORDINATION, REMOVAL AND RELOCATION OF EXISTING LEACHATE TANKS AS DIRECTED BY OWNER.
4. PREP AND GRADE AREA FOR TEMPORARY RELOCATION OF ONE (E) LEACHATE TANK AND CONNECT RELOCATED TANK TO (E) LEACHATE FILL LINES FROM PUMP HOUSE. CONTRACTOR TO VERIFY LOCATION OF (E) LEACHATE FILL LINES.
5. CONTRACTOR TO SALVAGE (E) MAG METER AT (E) LEACHATE TANKS FOR RE-USE.
6. CONNECT RELOCATED (E) LEACHATE TANK TO TEMPORARY POWER, BY OTHERS.
7. COMPLETE SITE GRADING AND CONSTRUCT RETAINING WALL, CONSTRUCT TANK 1 AND CONNECT TO (E) LEACHATE FILL LINES PER PLANS ON SHEET C-110.
8. OWNER TO PUMP AND HAUL LEACHATE FROM (E) LEACHATE TANK PRIOR TO RELOCATION. CONTRACTOR TO REMOVE RELOCATED TANK FROM SITE AFTER COMPLETION AND COMMISSIONING OF TANK 1 AS DIRECTED BY OWNER.

No.	Issue	Checked	Approved	Date
	Conformed Drawings	GT	GT	07/18/2024

Author **D. AGUAS**	Drafting Check **S. PEARL**	Project Manager **G. TOMASINO**	
Designer **S. PEARL**	Design Check **M. KENNEDY**	Project Director **M. KENNEDY**	

CONFORMED DRAWINGS

Bar is one inch on original size sheet
0 1"

CIVIL PROFESSIONAL ENGINEER — STATE OF CALIFORNIA — 7/18/2024

GHD Inc.
2235 Mercury Way Suite 150
Santa Rosa California 95407 USA
T 1 707 523 1010 **F** 1 707 527 8679
www.ghd.com

Client **COUNTY OF SONOMA**

Project **LEACHATE TANK REPLACEMENT**

Title **SITE DEMOLITION PLAN - ROBLAR SITE**

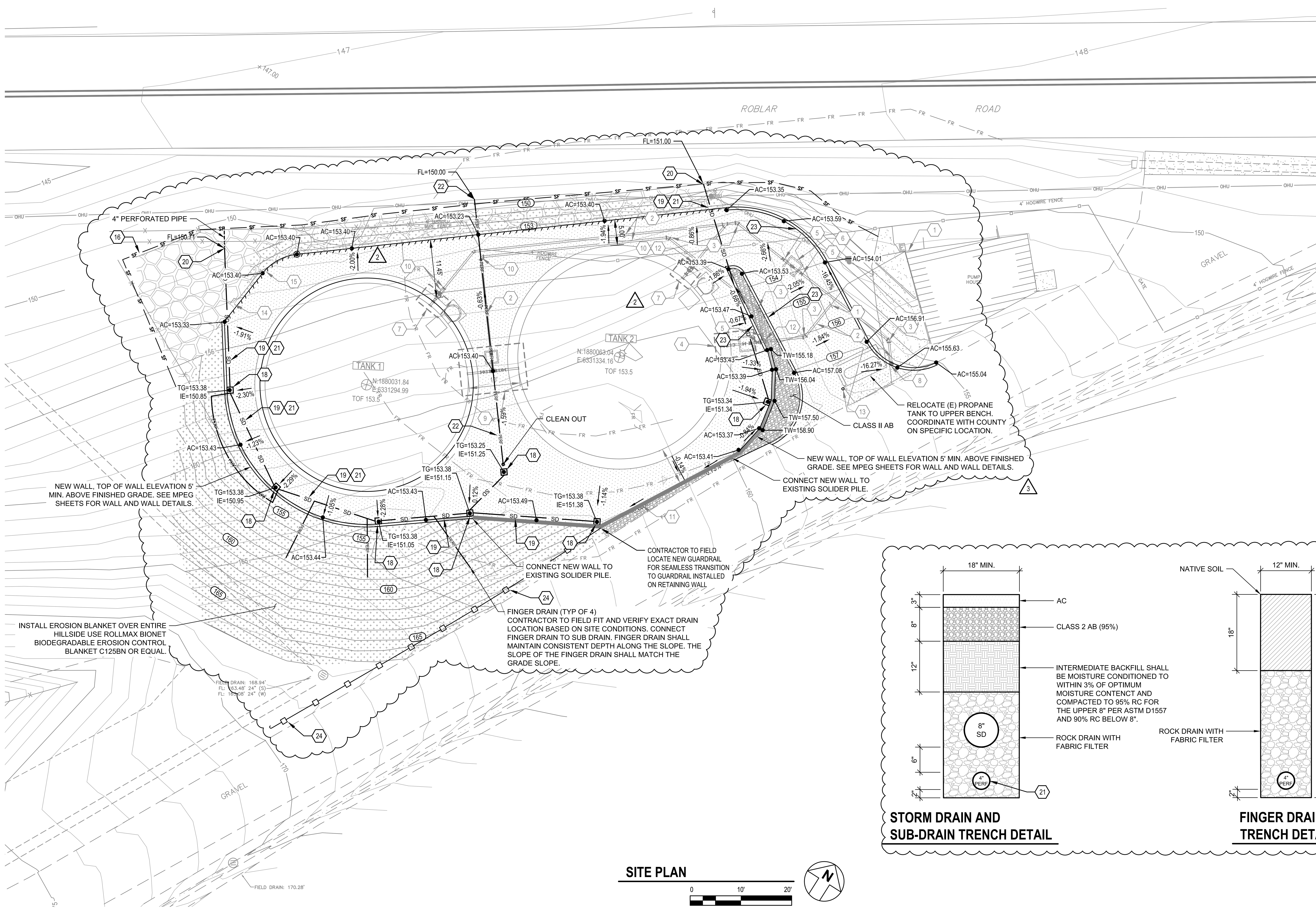
Size **ANSI D**

Project No.	Date	Scale
12558724	**7/18/2024**	**AS SHOWN**

Drawing No. **C-105**

Sheet No. **08 of 48**

Plot Date: 24 July 2024 - 1:05 PM
Plotted By: Steven Toft
Filename: \\ghdnet\ghd\US\San Francisco\Projects\561\12558724\Digital_Design\ACAD\Sheets\Leachate Tanks\12558724-GHD-0001-DWG-CI-0105.dwg



SITE PLAN

0 10' 20'

STORM DRAIN AND SUB-DRAIN TRENCH DETAIL

FINGER DRAIN TRENCH DETAIL

GENERAL NOTES

1. LOCATION OF EXISTING UTILITIES AND STRUCTURES ARE FROM INFORMATION AVAILABLE AT THE TIME OF DESIGN. EXACT LOCATION AND COMPLETENESS ARE NOT GUARANTEED. CONTRACTOR SHALL NOTIFY THE OWNER AND UNDERGROUND SERVICES ALERT A MINIMUM OF 72 HOURS PRIOR TO ANY EXCAVATION. CONTRACTOR IS RESPONSIBLE FOR LOCATING EXISTING UTILITIES AND SHALL POTHOLE FOR EXACT LOCATIONS.
2. NOT ALL FITTINGS SHOWN. PROVIDE ALL FITTINGS NECESSARY TO PROVIDE A COMPLETE WORKING SYSTEM.
3. TG= TOP OF GRATE

KEYNOTES

1. CONTRACTOR TO PROVIDE NECESSARY FITTINGS TO CONNECT TO (3) EXISTING 2" HDPE FILL LINES THAT DAYLIGHT BEHIND PUMP HOUSE PER SPECIFICATIONS. CONTRACTOR TO VERIFY ALIGNMENT.
2. (N) 4" HDPE PIPE.
3. (N) 4" 45° DI ELBOW.
4. (N) 4" TANK INLET, SEE DETAIL 1 SHEET C-502.
5. (N) 4" DI GATE VALVE.
6. (E) 4" FLOW METER IN (N) PRE-CAST VAULT, SEE DETAIL 4 SHEET C-503.
7. (N) 4" TANK OUTLET, SEE DETAIL 2 SHEET C-502.
8. (N) 4" PUMP CONNECTION. QUICK COUPLING PROVIDED BY OWNER.
9. (N) TANK INTERTIE. SEE DETAIL 3 SHEET C-502.
10. (N) 4" 90° DI ELBOW.
11. (N) RETAINING WALL. SEE SHEET S-107.
12. (N) 4"x4"x4" DI TEE.
13. (N) BOLLARD. SEE DETAIL 5 SHEET C-503.
14. (N) CLASS IV ROCK SLOPE PROTECTION PER CALTRANS STANDARD 4-7203A OVER CLASS 8 RSP FABRIC.
15. INSTALL FIBER ROLLS PER DETAIL 2 SHEET C-501.
16. INSTALL SILT FENCE PER DETAIL 1 SHEET C-501.
17. ESTABLISH AND MAINTAIN POSITIVE DRAINAGE ALONG TOE.
18. INSTALL 12" SQUARE PRECAST CONCRETE CATCH BASIN. JENSEN 1212-HDI OR APPROVED EQUAL. ROUGHEN PIPE, APPLY RUBBER CEMENT GLUE AND SAND TO 12 LINEAR INCHES OF PIPE AT THE CONNECTION TO STRUCTURE AND GROUT BETWEEN PIPE AND STRUCTURE.
19. INSTALL 8" HDPE STORM DRAIN PIPE, S=0.5% MIN. STORM DRAIN LF=152
20. STORM PIPE TO OUTFALL ON RIPRAP SLOPE.
21. INSTALL 4" PERFORATED SUB-DRAIN. SUB-DRAIN TO BE INSTALLED IN SAME TRENCH AS 8" STORM DRAIN WITH A MINIMUM 6" VERTICAL CLEARANCE.
22. INSTALL 4" PERFORATED SUB-DRAIN WITH CLEANOUT ON UPSTREAM END (IE=151.35) AND DAYLIGHT ONTO RIPRAP SLOPE. SUB DRAIN LF=215
23. INSTALL AC CURB
24. INSTALL GUARDRAIL PER CALTRANS STD PLAN A77L1 AND END CAP PER CALTRANS STD PLAN A77M1.

No.	Issue	Checked	Approved	Date
3	GRADING AND DRAINAGE IMPROVEMENTS	PRT	DS	02/14/2025
2	RFI #017	DS	DS	10/03/2024
1	RFI #005	GT	GT	07/30/2024
	Conformed Drawings	GT	GT	07/18/2024

Author D. AGUAS — Drafting Check S. PEARL — Project Manager G. TOMASINO
Designer S. PEARL — Design Check M. KENNEDY — Project Director M. KENNEDY

CONFORMED DRAWINGS

Bar is one inch on original size sheet 0 1"

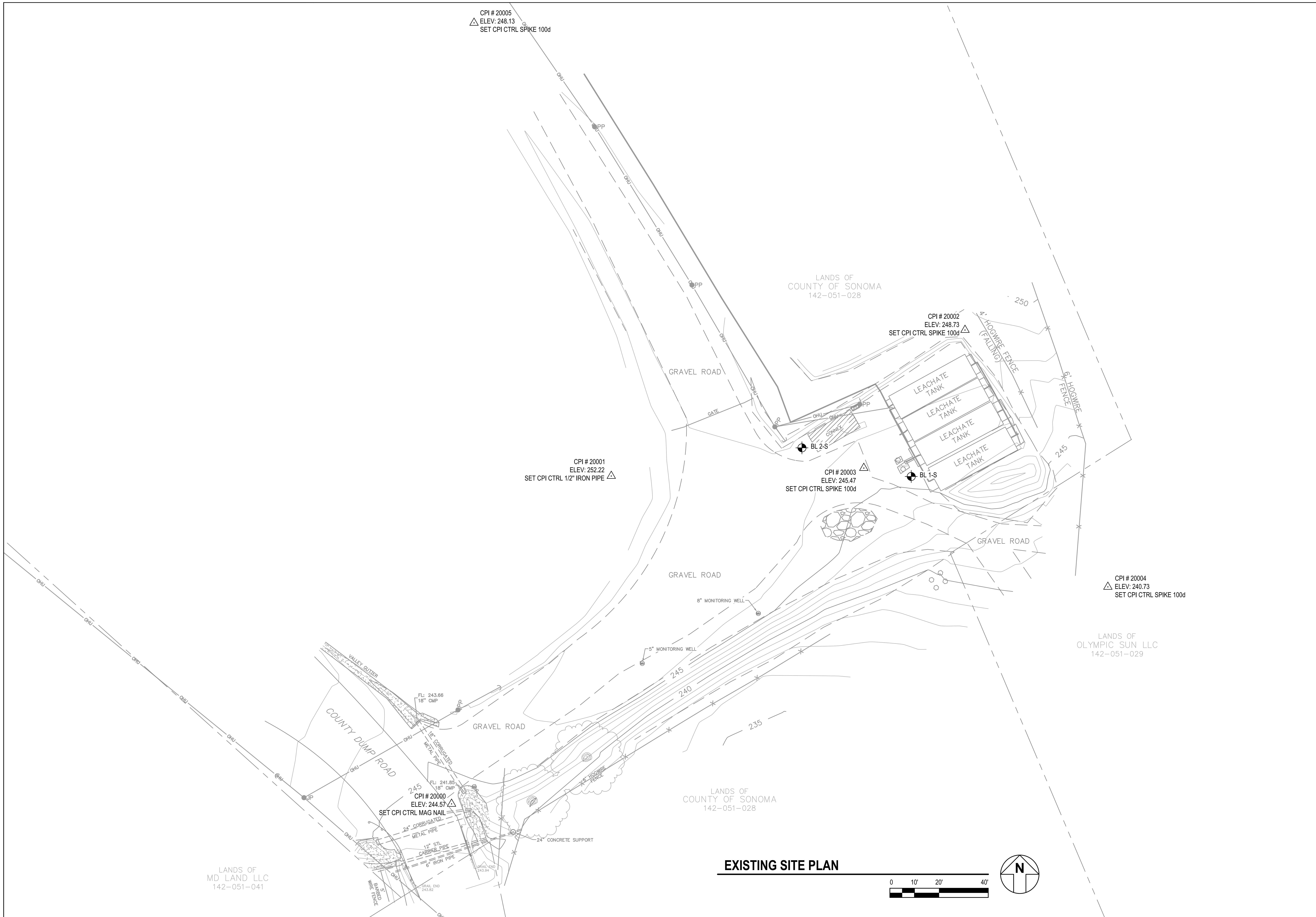
7/18/2024

GHD Inc.
2235 Mercury Way Suite 150
Santa Rosa California 95407 USA
T 1 707 523 1010 F 1 707 527 8679
www.ghd.com

Conditions of Use

Client **COUNTY OF SONOMA**
Project **LEACHATE TANK REPLACEMENT**
Title **SITE PLAN - ROBLAR SITE**
Size ANSI D

Project No.	Date	Scale	Drawing No.	Sheet No.
12558724	7/18/2024	AS SHOWN	C-106	09 of 48



EXISTING SITE PLAN

0 10' 20' 40'

N

SURVEY INFORMATION

BASIS OF BEARING:

THE BASIS OF BEARINGS FOR THIS SURVEY IS THE CALIFORNIA COORDINATE SYSTEM, ZONE 2, NAD 83, EPOCH 2017.50 AS DETERMINED LOCALLY BY A LINE BETWEEN CONTINUOUS GLOBAL POSITIONING SYSTEMS (CGPS) STATION P200 AND STATION P196; BEING A GRID BEARING OF NORTH 75°21'34" WEST AS DERIVED FROM GEODETIC VALUES PUBLISHED BY THE CALIFORNIA SPATIAL REFERENCE CENTER (CSRC).

BENCHMARK:

CINQUINI & PASSARINO CONTROL POINT NO. 20001, BEING A SET 1/2" CONTROL IRON PIPE AS SHOWN HEREON.
ELEVATION = 252.22' (NAVD 88)
THE ORTHOMETRIC ELEVATIONS SHOWN HEREON ARE BASED ON THE NORTH AMERICAN VERTICAL DATUM OF 1988 (NAVD 1988) AND WERE DETERMINED BY STATIC GPS TIES TO CGPS STATION P196 WITH A PUBLISHED ELLIPSOIDAL HEIGHT OF 298.618', IN ADDITION TO APPLYING THE NGS GEOID HEIGHT MODEL "GEOID2012B".

SURVEY CONTROL TABLE

POINT #	NORTHING	EASTING	ELEV	DESCRIPTION
20000	1851449.683	6416027.633	244.57	SET CPI CTRL MAG NAIL
20001	1851582.973	6416092.563	252.22	SET CPI CTRL 1/2" IRON PIPE
20002	1851642.321	6416236.381	248.73	SET CPI CTRL SPIKE 100d
20003	1851586.207	6416195.242	245.47	SET CPI CTRL SPIKE 100d
20004	1851537.904	6416294.476	240.73	SET CPI CTRL SPIKE 100d
20005	1851767.176	6416036.777	248.13	SET CPI CTRL SPIKE 100d
BL 1-S	1851582.786	6416214.521	245.43	BORING LOCATION
BL 2-S	1851594.423	6416170.089	246.51	BORING LOCATION

No.	Issue	Checked	Approved	Date
	Conformed Drawings	GT	GT	07/18/2024

Author **D. AGUAS** Drafting Check **S. PEARL** Project Manager **G. TOMASINO**
Designer **S. PEARL** Design Check **M. KENNEDY** Project Director **M. KENNEDY**

CONFORMED DRAWINGS

Bar is one inch on original size sheet
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REGISTERED PROFESSIONAL ENGINEER
JAMES KUOCHIANG PAN
No. C72188
CIVIL
STATE OF CALIFORNIA
7/18/2024

GHD Inc.
2235 Mercury Way Suite 150
Santa Rosa California 95407 USA
T 1 707 523 1010 **F** 1 707 527 8679
www.ghd.com

Client **COUNTY OF SONOMA**

Project **LEACHATE TANK REPLACEMENT**

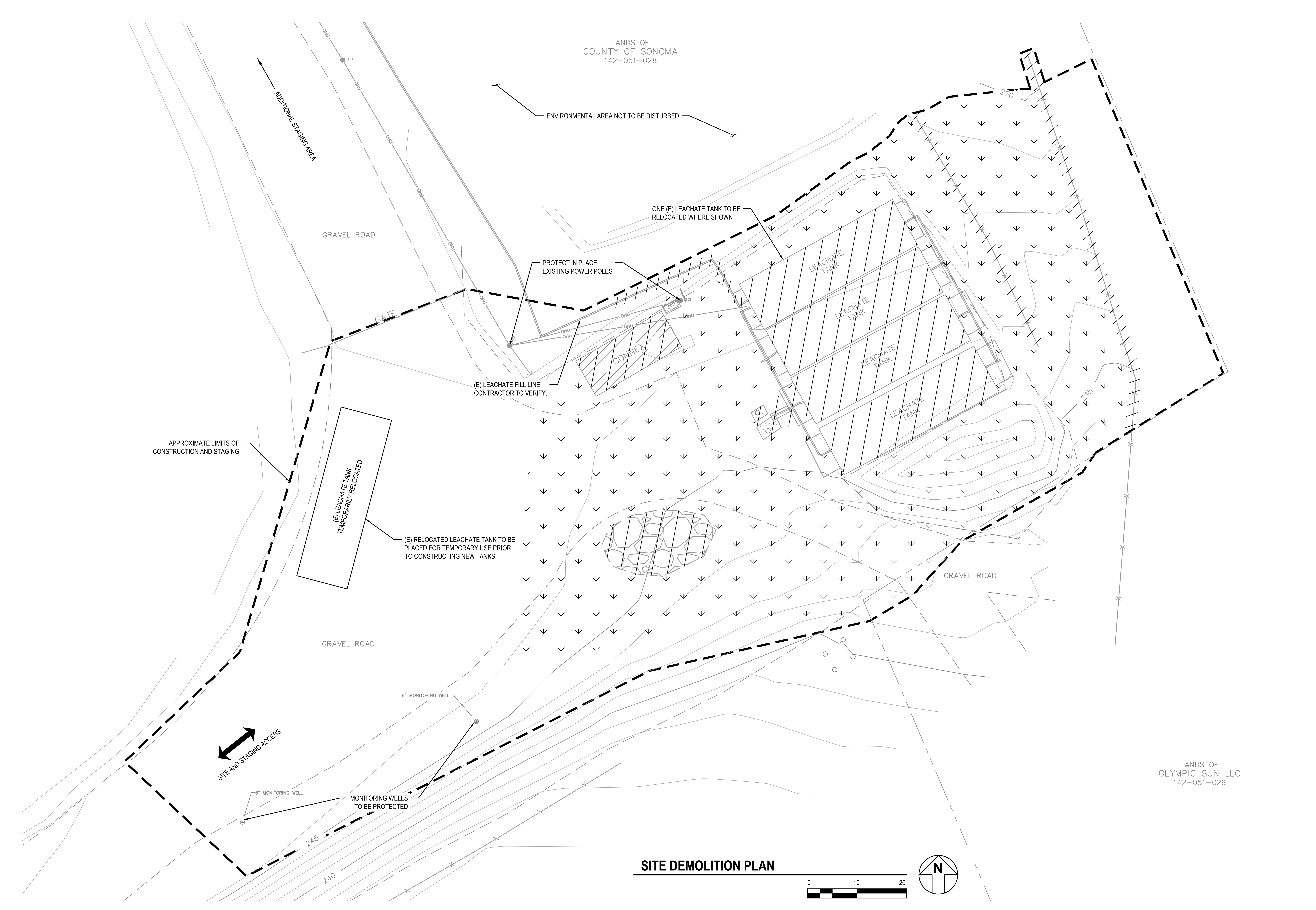
Title **EXISTING SITE PLAN AND SURVEY CONTROL - SONOMA SITE**

Size **ANSI D**

Project No. **12558724** Date **7/18/2024** Scale **AS SHOWN**

Drawing No. **C-107**

Plot Date: 24 July 2024 - 1:08 PM Plotted By: Steven Toft Filename: \\ghdnet\ghd\US\San Francisco\Projects\561\12558724\Digital_Design\ACAD\Sheets\Leachate Tanks\12558724-GHD-0001-DWG-CI-0107.dwg



SITE DEMOLITION PLAN

0 10' 20'

N

GENERAL NOTES

1. (E) UTILITIES NOT DESIGNATED FOR REMOVAL MUST BE PROTECTED AND CONTINUOUS SERVICE MAINTAINED DURING THE CONTRACT, ANY TEMPORARY SHUT-DOWNS MUST BE COORDINATED WITH OWNER.
2. REMOVAL AND RELOCATION OF THE (E) LEACHATE TANKS SHALL BE PHASED TO MAINTAIN UNINTERUPPTED STORAGE OF LEACHATE DURING CONSTRUCTION. CONTRACTOR RESPONSIBLE FOR (E) LEACHATE TANK REMOVAL AND RELOCATION AS DIRECTED BY OWNER.
3. CONTRACTOR TO INSTALL CONCRETE WASHOUT PER DETAIL 4 SHEET C-501.
4. LOCATION OF EXISTING UTILITIES AND STRUCTURES ARE FROM INFORMATION AVAILABLE AT THE TIME OF DESIGN. EXACT LOCATION AND COMPLETENESS ARE NOT GUARANTEED. CONTRACTOR SHALL NOTIFY THE OWNER AND UNDERGROUND SERVICES ALERT A MINIMUM OF 72 HOURS PRIOR TO ANY EXCAVATION. CONTRACTOR IS RESPONSIBLE FOR LOCATING EXISTING UTILITIES AND SHALL POTHOLE FOR EXACT LOCATIONS.
5. CONTRACTOR SHALL USE CAUTION TO PREVENT DAMAGE TO TANKS THAT MUST REMAIN IN SERVICE AND AVOID INTERFERENCE WITH TANK AND LEACHATE SYSTEM OPERATIONS. CONTRACTOR IS RESPONSIBLE FOR ANY DAMAGE AND INTERFERENCE TO TANKS, AND LEACHATE SYSTEM OPERATIONS.
6. ACCESS ROADS TO NEIGHBORING FACILITIES SHALL BE MAINTAINED AND FREE OF OBSTRUCTIONS AT ALL TIMES.

TANK RELOCATION NOTES

1. (E) LEACHATE TANKS TO BE DRAINED BY OWNER PRIOR TO REMOVAL AND RELOCATION.
2. OWNER RESPONSIBLE FOR COORDINATION AND REMOVAL OF (E) STORAGE CONTAINER.
3. CONTRACTOR RESPONSIBLE FOR COORDINATION, REMOVAL AND RELOCATION OF EXISTING LEACHATE TANKS AS DIRECTED BY OWNER.
4. PREP AND GRADE AREA FOR TEMPORARY RELOCATION OF ONE (E) LEACHATE TANK AND CONNECT RELOCATED TANK TO (E) LEACHATE FILL LINES . CONTRACTOR TO VERIFY LOCATION OF (E) LEACHATE FILL LINES AND TRENCH AND CONNECT TO (E) RELOCATED TANK FOR TEMPORARY USE.
5. CONTRACTOR TO SALVAGE (E) MAG METER AT (E) LEACHATE TANKS FOR RE-USE.
6. CONNECT RELOCATED (E) LEACHATE TANK TO TEMPORARY POWER, BY OTHERS.
7. COMPLETE SITE GRADING, CONSTRUCT NEW TANKS AND CONNECT TO (E) LEACHATE FILL LINES PER PLANS ON SHEET C-110.
8. OWNER TO PUMP AND HAUL LEACHATE FROM (E) RELOCATED LEACHATE TANK. CONTRACTOR TO REMOVE TANK FROM SITE AS DIRECTED BY OWNER.

No.	Issue	Checked	Approved	Date
	Conformed Drawings	GT	GT	07/18/2024

Author D. AGUAS | Drafting Check S. PEARL | Project Manager G. TOMASINO

Designer S. PEARL | Design Check M. KENNEDY | Project Director M. KENNEDY

CONFORMED DRAWINGS

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GHD Inc.
2235 Mercury Way Suite 150
Santa Rosa California 95407 USA
T 1 707 523 1010 F 1 707 527 8679
www.ghd.com

Client **COUNTY OF SONOMA**

Project **LEACHATE TANK REPLACEMENT**

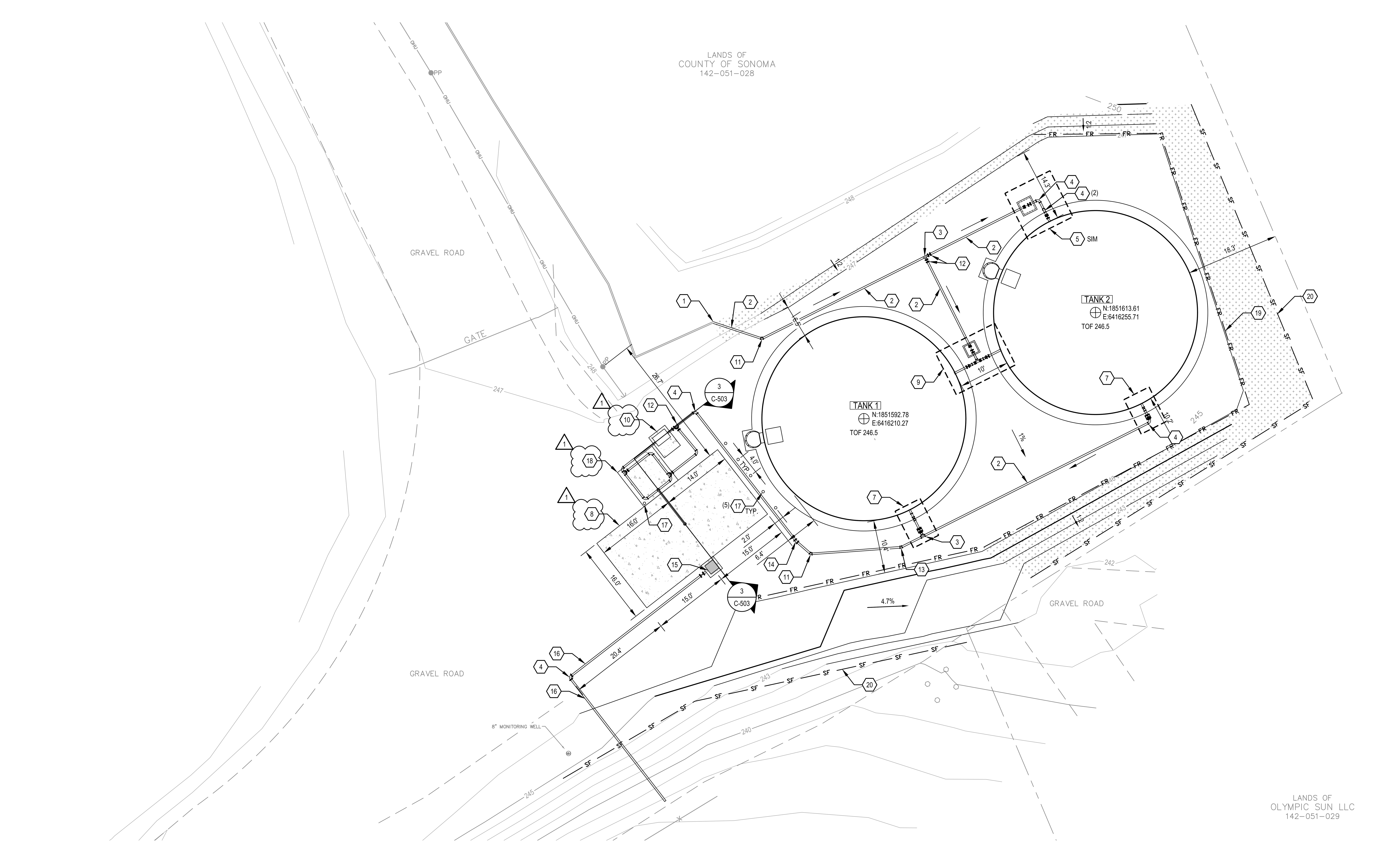
Title **SITE DEMOLITION PLAN - SONOMA SITE**

Size **ANSI D**

Project No.	Date	Scale
12558724	7/18/2024	AS SHOWN

Drawing No. C-108

Plot Date: 24 July 2024 - 1:08 PM Plotted By: Steven Toft Filename: \\ghdnet\ghd\US\San Francisco\Projects\561\12558724\Digital_Design\ACAD\Sheets\Leachate Tanks\12558724-GHD-0001-DWG-CI-0108.dwg



SITE PLAN

0 10' 20'

N

GENERAL NOTES

1. ALL BACKFILLS AND FILLS SHALL BE MOISTURE CONDITIONED TO SLIGHTLY ABOVE THE OPTIMUM, PLACED IN HORIZONTAL LIFT NO MORE THAN 8 INCHES THICK AND COMPACTED TO A LEAST 90% R.C. IN ACCORDANCE WITH ASTM-D1557.
2. ENGINEERED FILL MATERIALS SHALL CONSIST OF A HOMOGENOUS MIXTURE OF SOIL AND ROCK FREE OF VEGETATION, ORGANIC MATERIAL, RUBBISH AND/OR RUBBLE, A MAXIMUM PARTICLE SIZE OF 4 INCHES, A PLASTICITY INDEX LESS THAN 15 AND A LIQUID LIMIT LESS THAN 45. EXCEPT FOR CLAY SOILS, NATIVE SOILS MAY BE USED AS ENGINEERED FILL.
3. FOUNDATION SUBGRADE PREPARATION WILL EXTEND A MINIMUM OF 5 FEET BEYOND THE PLANNED FOUNDATIONS IN ALL DIRECTIONS.
4. GEOTECHNICAL ENGINEER OR REPRESENTATIVE SHALL INSPECT THE TANK FOUNDATION EXCAVATIONS PRIOR TO INSTALLATION OF NEW IMPROVEMENTS. PROVIDE MINIMUM 3 WORKING DAY NOTICE FOR INSPECTIONS.

KEYNOTES

1. CONTRACTOR TO PROVIDE NECESSARY FITTINGS TO CONNECT TO EXISTING 3" HDPE FILL LINE PER SPECIFICATIONS.
2. (N) 4" HDPE PIPE.
3. (N) 4"x4"x4" DI TEE.
4. (N) 4" 90° DI ELBOW.
5. (N) 4" TANK INLET, SEE DETAIL 1 SHEET C-502.
6. NOT USED.
7. (N) 4" TANK OUTLET, SEE DETAIL 2 SHEET C-502.
8. (N) 16' X 30' CONTAINMENT SLAB PER DETAIL 1, SHEET S-108.

NW CORNER	N=1851568.321	E=6416157.875	FS=246.17
SW CORNER	N=1851555.683	E=6416167.686	FS=246.17

9. (N) TANK INTERTIE, SEE DETAIL 3 SHEET C-502.
10. (N) CAL WEST RAIN CUSTOM PUMP, FLOW METER AND BACKFLOW PREVENTION ASSEMBLY OR APPROVED EQUAL, ANCHORED TO PAD PER DETAIL 2, SHEET S-004 PER MANUFACTURER REQUIREMENTS.

NW CORNER	N=1851589.054	E=6416161.933	FS=246.50
NE CORNER	N=1851591.507	E=6416171.225	FS=246.50
SW CORNER	N=1851585.104	E=6416171.132	FS=246.50
SE CORNER	N=1851587.557	E=6416174.292	FS=246.50

11. (N) 4" 45° DI ELBOW.
12. (N) 4" DI GATE VALVE IN RISER BOX, SEE DETAIL 2 SHEET C-503.
13. (N) 4" 22.5° DI ELBOW.
14. (N) 4" 11.25° DI ELBOW.
15. (N) 24" X 24" X 36" JENSEN PRECAST JUNCTION BOX OR APPROVED EQUAL PER DETAIL 3, SHEET C-503.
16. (N) 6" PVC DRAIN PIPE MIN 1% SLOPE. CONTRACTOR TO COORDINATE DISCHARGE POINT WITH OWNER.
17. (N) BOLLARD PER DETAIL 5, SHEET C-503.
18. (N) 8.5' X 8.5' SLAB PER DETAIL 2, S-004.

SW CORNER	N=1851575.519	E=6416167.146	FS=246.50
NW CORNER	N=1851582.233	E=6416161.933	FS=246.50
SE CORNER	N=1851580.731	E=6416173.860	FS=246.50
NE CORNER	N=1851587.445	E=6416168.647	FS=246.50

19. INSTALL FIBER ROLLS PER DETAIL 2 SHEET C-501.
20. INSTALL SILT FENCE ALONG BOTTOM OF SLOPE PER DETAIL 1 SHEET C-501.

No.	Issue	Checked	Approved	Date
1	RFI #005	GT	GT	07/30/2024
	Conformed Drawings	GT	GT	07/18/2024

Author D. AGUAS | Drafting Check S. PEARL | Project Manager G. TOMASINO
Designer S. PEARL | Design Check M. KENNEDY | Project Director M. KENNEDY

CONFORMED DRAWINGS

Bar is one inch on original size sheet
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REGISTERED PROFESSIONAL ENGINEER — C86662 — CIVIL — STATE OF CALIFORNIA
7/18/2024

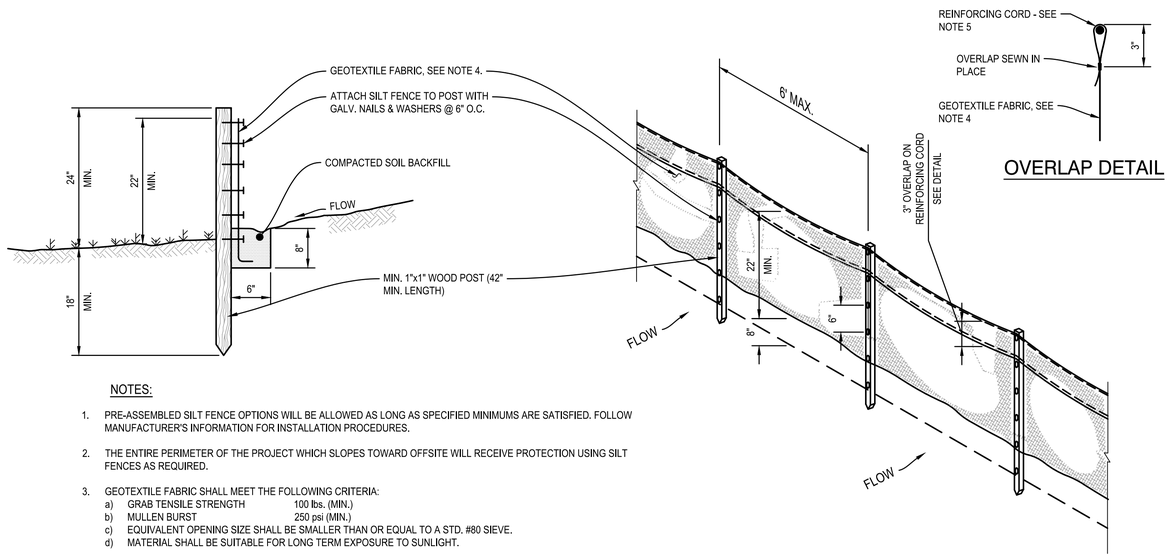
GHD Inc.
2235 Mercury Way Suite 150
Santa Rosa California 95407 USA
T 1 707 523 1010 F 1 707 527 8679
www.ghd.com

Client **COUNTY OF SONOMA**
Project **LEACHATE TANK REPLACEMENT**

Project No. 12558724 | Date 7/18/2024 | Scale AS SHOWN

Title **SITE PLAN - SONOMA SITE**

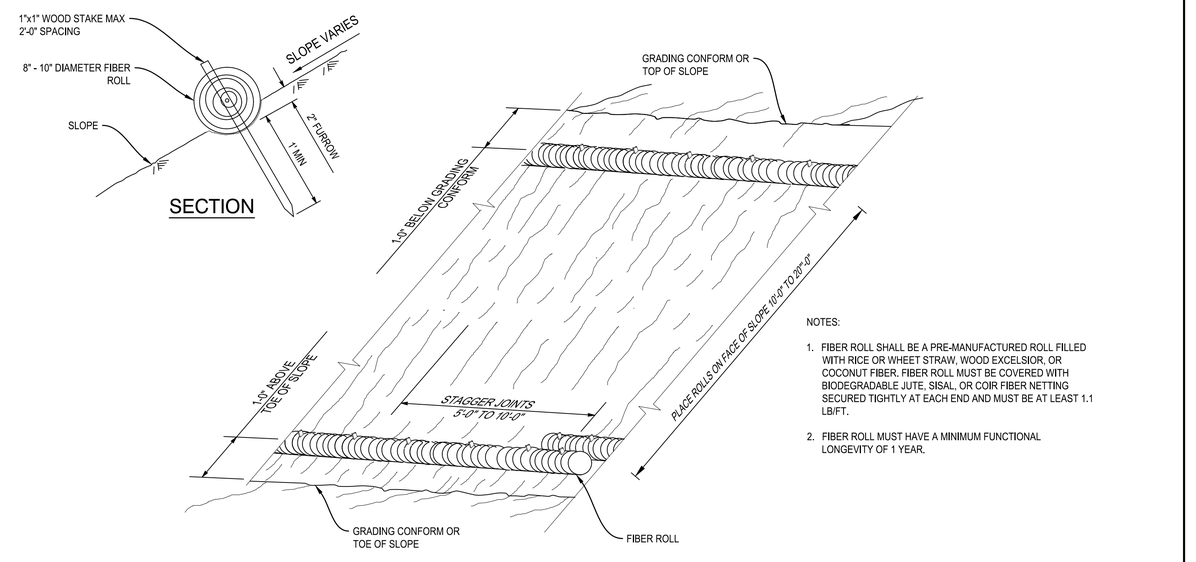
Size ANSI D
Drawing No. C-109



NOTES:

1. PRE-ASSEMBLED SILT FENCE OPTIONS WILL BE ALLOWED AS LONG AS SPECIFIED MINIMUMS ARE SATISFIED. FOLLOW MANUFACTURER'S INFORMATION FOR INSTALLATION PROCEDURES.
2. THE ENTIRE PERIMETER OF THE PROJECT WHICH SLOPES TOWARD OFFSITE WILL RECEIVE PROTECTION USING SILT FENCES AS REQUIRED.
3. GEOTEXTILE FABRIC SHALL MEET THE FOLLOWING CRITERIA:
   a) GRAB TENSILE STRENGTH 100 lbs. (MIN.)
   b) MULLEN BURST 250 psi (MIN.)
   c) EQUIVALENT OPENING SIZE SHALL BE SMALLER THAN OR EQUAL TO A STD. #80 SIEVE.
   d) MATERIAL SHALL BE SUITABLE FOR LONG TERM EXPOSURE TO SUNLIGHT.
4. REINFORCING CORD SHALL HAVE A MIN. TENSILE STRENGTH OF 500 lbs.

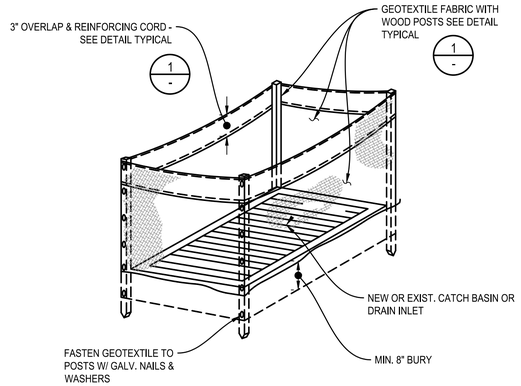
1 TEMPORARY SILT FENCE NOT TO SCALE



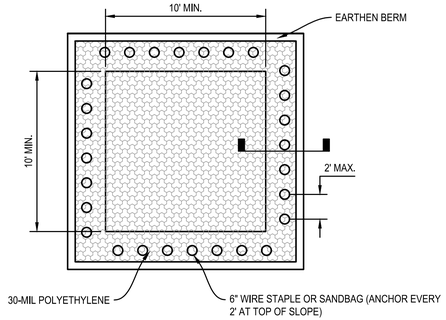
NOTES:

1. FIBER ROLL SHALL BE A PRE-MANUFACTURED ROLL FILLED WITH RICE OR WHEET STRAW, WOOD EXCELSIOR, OR COCONUT FIBER. FIBER ROLL MUST BE COVERED WITH BIODEGRADABLE JUTE, SISAL, OR COIR FIBER NETTING SECURED TIGHTLY AT EACH END AND MUST BE AT LEAST 1.1 LB/FT.
2. FIBER ROLL MUST HAVE A MINIMUM FUNCTIONAL LONGEVITY OF 1 YEAR.

2 FIBER ROLL NOT TO SCALE



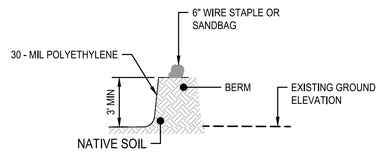
3 DRAINAGE INLET PROTECTION NOT TO SCALE



PLAN VIEW

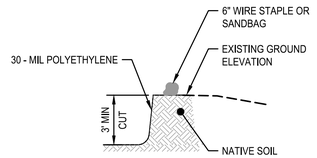
NOTES:

1. MAINTAINING TEMPORARY CONCRETE WASHOUT FACILITIES SHALL INCLUDE REMOVING AND DISPOSING OF HARDEND CONCRETE AND/OR SLURRY AND RETURNING THE FACILIITIES TO A FUNCTIONAL CONDITION.
2. FACILITY SHALL BE CLEANED OR RECONSTRUCTED IN A NEW AREA ONCE WASHOUT BECOMES TWO-THIRDS FULL.



SANDBAG ANCHOR

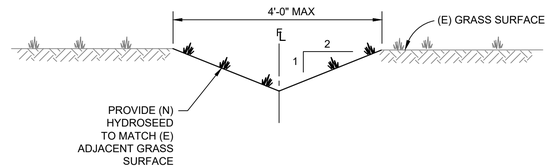
EARTHEN BERM ANCHOR SECTIONS



SANDBAG ANCHOR

SUBGRADE ANCHOR SECTIONS

4 CONCRETE WASHOUT AREA NOT TO SCALE



5 DRAINAGE SWALE SECTION NOT TO SCALE

No.	Issue	Checked	Approved	Date
	Conformed Drawings	GT	GT	07/18/2024

Author **D. AGUAS** Drafting Check **S. PEARL** Project Manager **G. TOMASINO**
Designer **S. PEARL** Design Check **M. KENNEDY** Project Director **M. KENNEDY**

CONFORMED DRAWINGS

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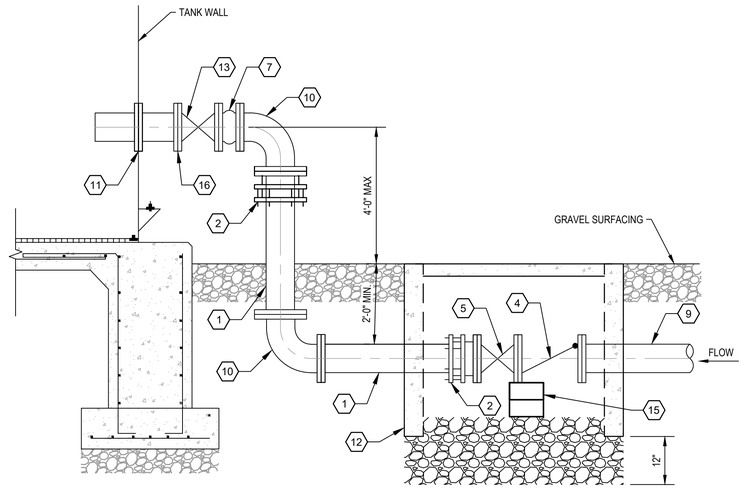
STATE OF CALIFORNIA — PROFESSIONAL ENGINEER — CIVIL — 7/18/2024

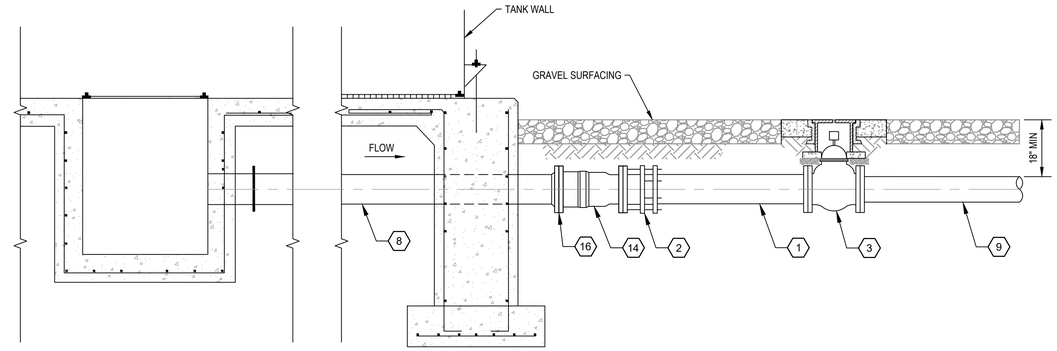
GHD Inc.
2235 Mercury Way Suite 150
Santa Rosa California 95407 USA
T 1 707 523 1010 F 1 707 527 8679
www.ghd.com

Client **COUNTY OF SONOMA**
Project **LEACHATE TANK REPLACEMENT**
Title **EROSION CONTROL AND DRAINAGE DETAILS**
Size **ANSI D**
Project No. **12558724** Date **7/18/2024** Scale **AS SHOWN**
Drawing No. **C-501** Sheet No. **13 of 48**

Plot Date: 18 July 2024 - 3:05 PM Plotted By: Steven Toft Filename: \\ghdnet\ghd\US\San Francisco\Projects\561\12558724\Digital_Design\ACAD\Sheets\Leachate Tanks\12558724-GHD-0001-DWG-CI-0501.dwg



1 **TANK INLET** NOT TO SCALE



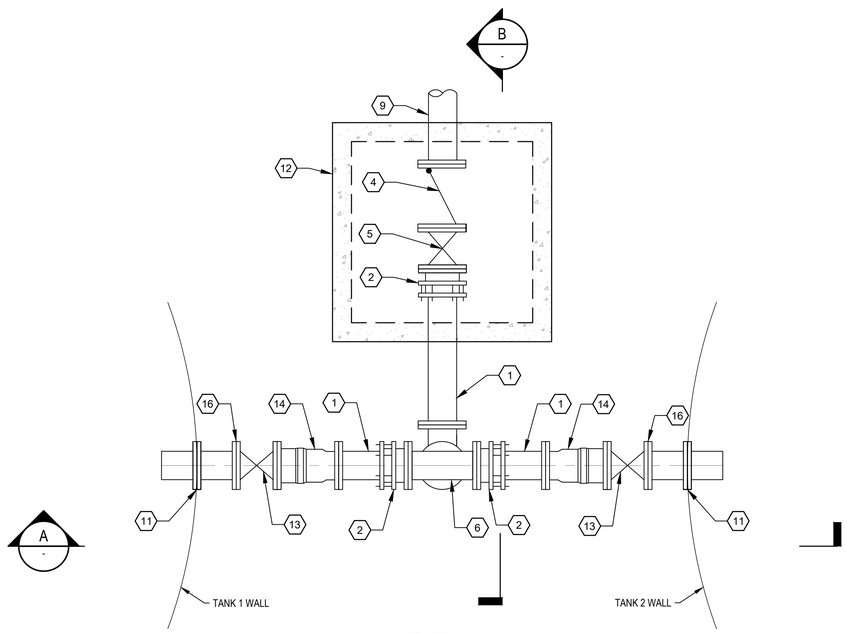
2 **TANK OUTLET** NOT TO SCALE

GENERAL NOTES

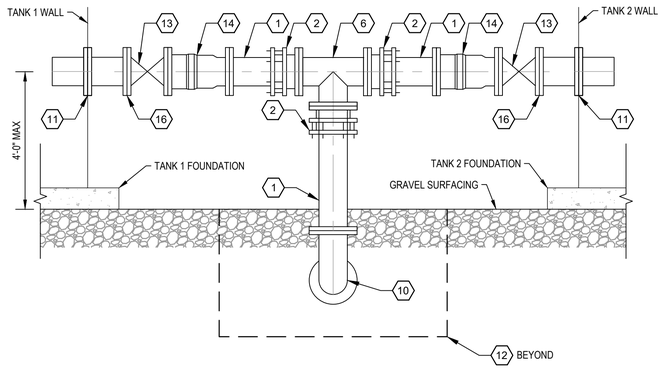
1. ABOVE GRADE PIPING SHALL BE FLANGED. BELOW GRADE PIPING SHALL BE RESTRAINED MECHANICAL JOINT. CONTRACTOR MAY PROPOSE ALTERNATIVE FITTINGS UPON REVIEW AND APPROVAL.
2. PROVIDE DIELECTRIC GASKETS BETWEEN ALL FLANGES OF DISSIMILAR METAL.
3. ALL ABOVE GRADE METALLIC PIPING SHALL BE COATED WITH FUSION BONDED EPOXY COATING WITH URETHANE TOP COAT.
4. INSTALL FLEXIBLE EXPANSION JOINT IN ACCORDANCE WITH MANUFACTURER'S INSTALLATION INSTRUCTIONS. INSTALL IN POLYETHYLENE SLEEVE AND BED AND BACKFILL A MINIMUM OF 6" ON ALL SIDES WITH COHESIONLESS PEA GRAVEL.

SHEET KEYNOTES

1. (N) 4" FL x PE DI PIPE.
2. (N) 4" RESTRAINED FCA.
3. (N) 4" GATE VALVE IN RISER BOX, SEE DETAIL 2 SHEET C-503.
4. (N) 4" CHECK VALVE.
5. (N) 4" DI GATE VALVE WITH OPERATING NUT.
6. (N) 4"x4"x4" DI TEE.
7. (N) 4" RUBBER FLEXIBLE EXPANSION JOINT.
8. (N) 4" FL x PE SST PIPE.
9. (N) 4" HDPE PIPE WITH BUTTED FLANGE ADAPTER.
10. (N) 4" 90° DI ELBOW.
11. (N) 4" FLANGED NOZZLE PER TANK MANUFACTURER, SEE DETAIL 10 SHEET S-501.
12. (N) 36"x36" PRECAST CONCRETE VAULT.
13. (N) 4" DI GATE VALVE WITH HAND WHEEL.
14. (N) 4" DOUBLE-BALL FLEXIBLE EXPANSION JOINT.
15. (N) CINDER BLOCK PIPE SUPPORTS.
16. (N) DIELECTRIC UNION.



PLAN



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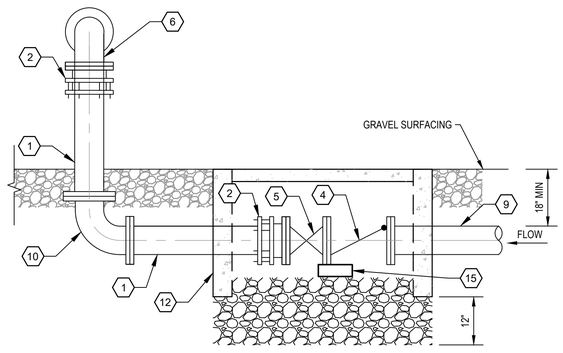

B SECTION

3 **TANK INTERTIE** NOT TO SCALE

	Conformed Drawings		GT	GT	07/18/2024
No.	Issue		Checked	Approved	Date
Author	**D. AGUAS**	Drafting Check	**S. PEARL**	Project Manager	**G. TOMASINO**
Designer	**S. PEARL**	Design Check	**M. KENNEDY**	Project Director	**M. KENNEDY**

CONFORMED DRAWINGS

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GHD Inc.
2235 Mercury Way Suite 150
Santa Rosa California 95407 USA
T 1 707 523 1010 F 1 707 527 8679
www.ghd.com

Client **COUNTY OF SONOMA**

Project **LEACHATE TANK REPLACEMENT**

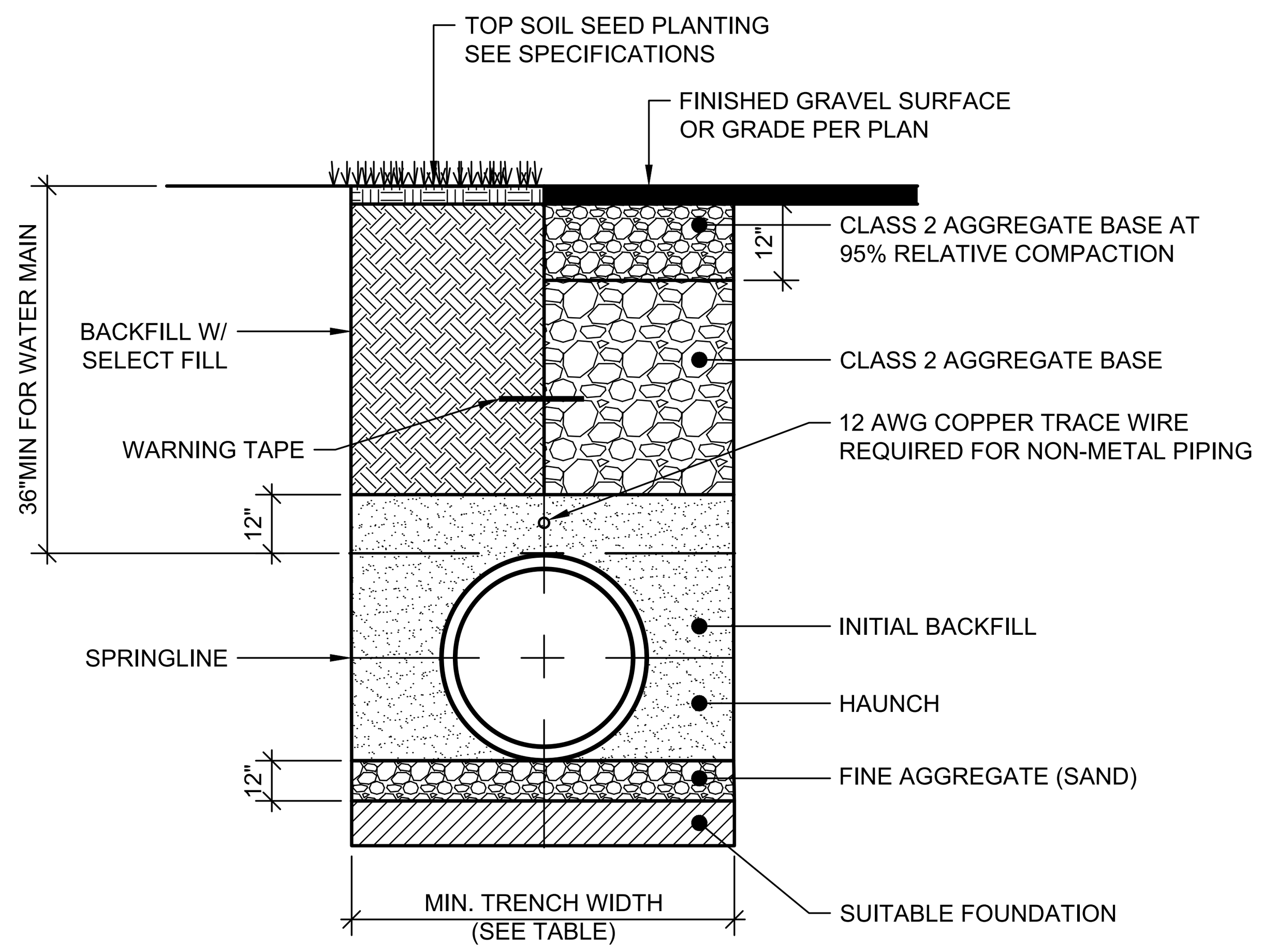
Title **CIVIL DETAILS 1**

Size **ANSI D**

Project No.	Date	Scale
12558724	**7/18/2024**	**AS SHOWN**

Drawing No. **C-502** Sheet No. **14 of 48**

Plot Date: 18 July 2024 - 3:06 PM Plotted By: Steven Toft Filename: \\ghdnet\ghd\US\San Francisco\Projects\561\12558724\Digital_Design\ACAD\Sheets\Leachate Tanks\12558724-GHD-0001-DWG-CI-0502.dwg



RECOMMENDED MINIMUM TRENCH WIDTHS	
PIPE DIA	MIN. TRENCH WIDTH
<4"	18"
4"	24"
6"	30"
8"	30"
12"	36"

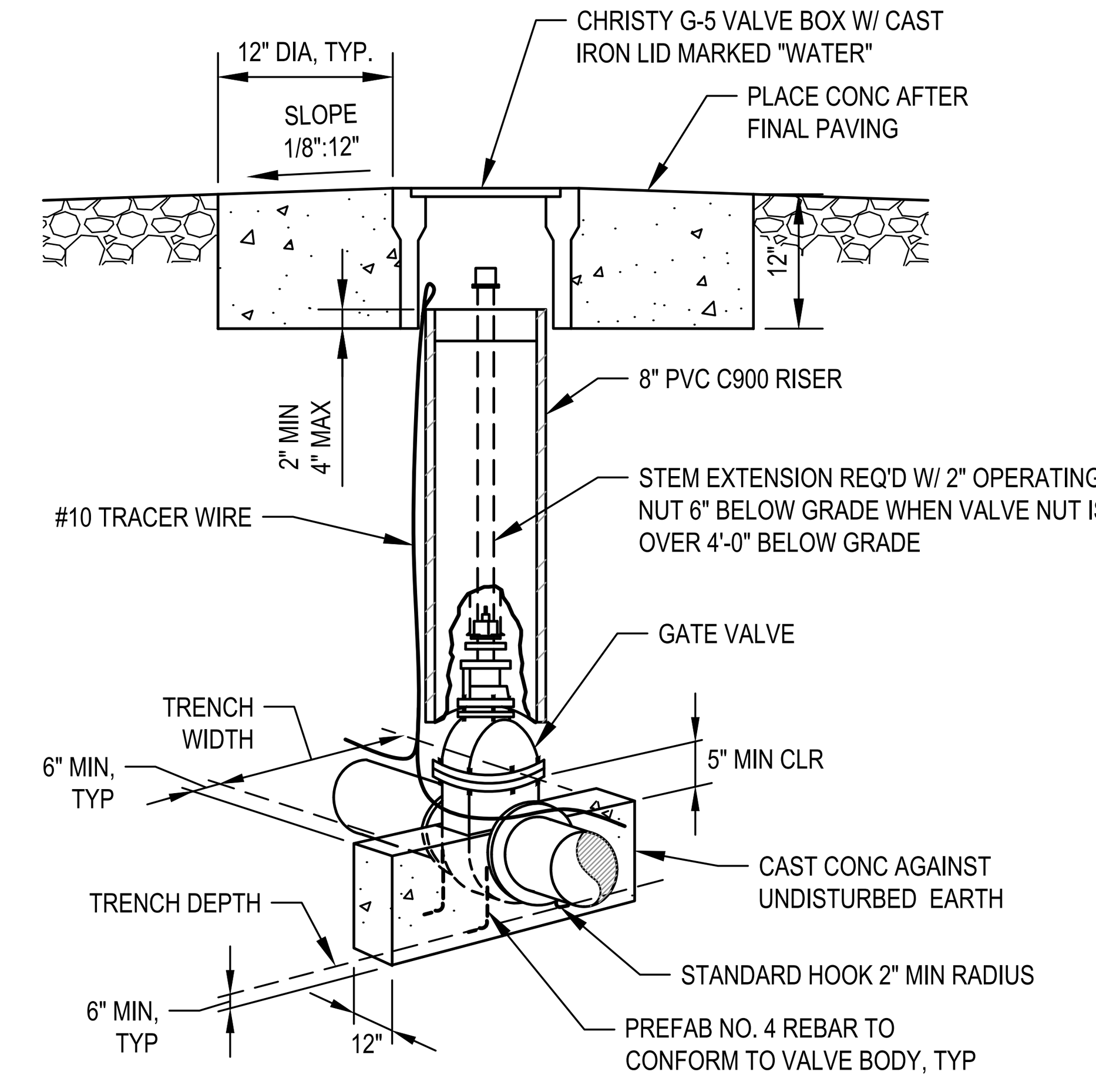
NOTES:

1. WIDER TRENCHES SHALL REQUIRE HIGHER STRENGTH PIPE AND/OR SPECIAL BEDDING.
2. DIFFERING TRENCH WIDTHS REQUIRE PRIOR APPROVAL OF ENGINEER.
3. WARNING AND IDENTIFICATION TAPE SHALL BE BURIED 12 INCHES BELOW FINISHED GRADE OR 6" BELOW TOP OF SUBGRADE UNDER PAVEMENTS AND SLABS.
4. TRACER WIRE SHALL BE BURIED DIRECTLY ABOVE PIPING AT A DISTANCE NOT TO EXCEED 12 INCHES ABOVE THE TOP OF PIPE.

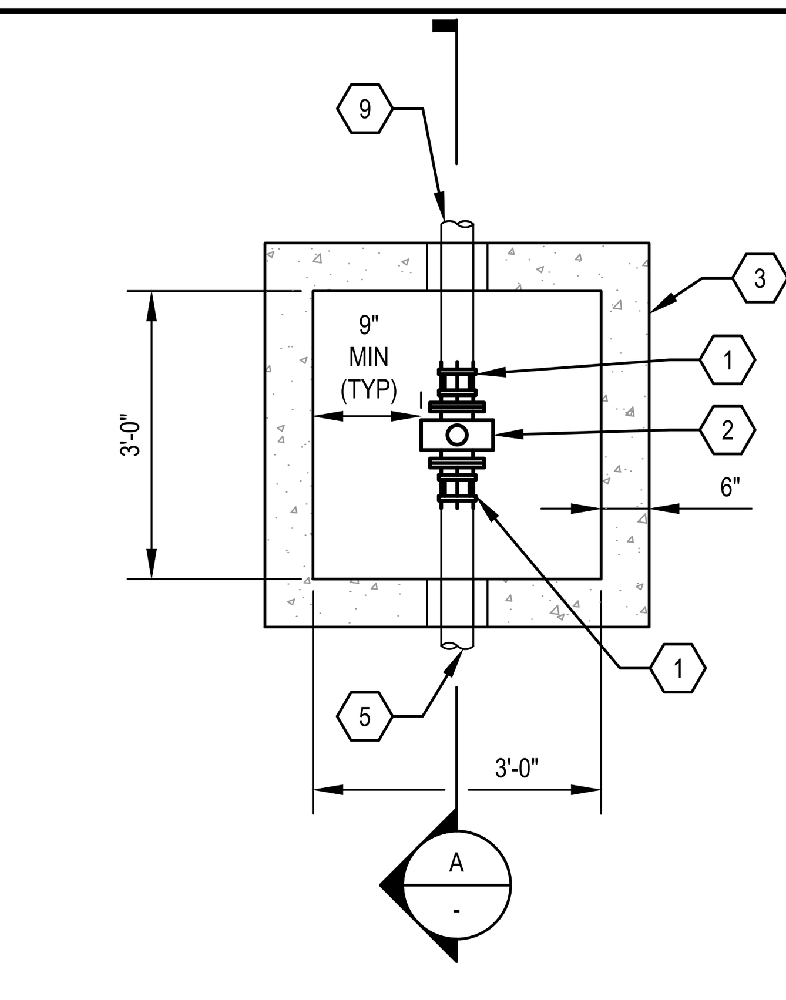
1 TYPICAL TRENCH SECTION NOT TO SCALE

NOTES:

1. A BURIED VALVE 5' AND DEEPER SHALL BE PROVIDED WITH A SOLID STEEL EXTENSION STEM OPERATOR WITH A 2" SQUARE AWWA NUT WITHIN 36" OF VALVE BOX COVER. NUT IS TO INDICATE DIRECTION OF ROTATION TO OPEN VALVE.
2. CONTRACTOR SHALL REMOVE ALL DEBRIS AND SOIL FROM VALVE BOX BEFORE ACCEPTANCE.
3. CONCRETE COLLAR FLUSH WITH FINISHED GRADE FOR PAVED AREA AND 2" ABOVE FINISHED GRADE FOR UNPAVED AREA.
4. JOINTS, BOLTS AND NUTS SHALL BE CLEAR OF CONCRETE.
5. VALVE BOX SHALL BE CHRISTY MODEL G5 TRAFFIC BOX, OR APPROVED EQUAL.
6. VALVE SIZE AS SHOWN ON PLANS.
7. WRAP VALVE IN PPOLYETHYLENE PRIOR TO POURING CONCRETE.



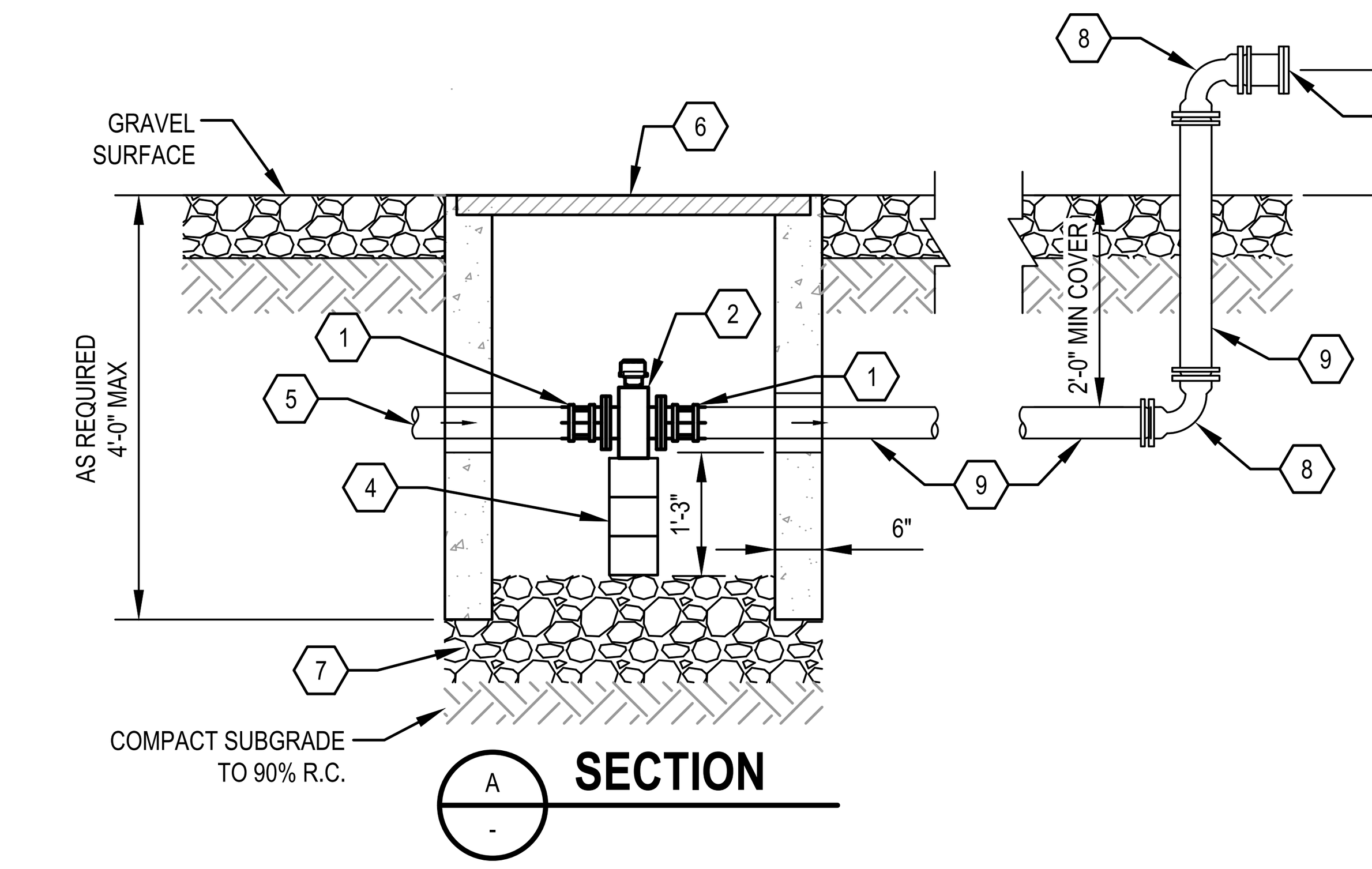
2 GATE VALVE IN RISER BOX NOT TO SCALE



PLAN

NOTES:

1. ABOVE GRADE PIPING SHALL BE FLANGED. BELOW GRADE PIPING SHALL BE FUSED HDPE OR RESTRAINED MECHANICAL JOINT, UNLESS NOTED OTHERWISE. CONTRACTOR MAY PROPOSE ALTERNATIVE FITTINGS UPON REVIEW AND APPROVAL.
2. PROVIDE DIELECTRIC GASKETS BETWEEN ALL FLANGES OF DISSIMILAR METAL.
3. PRECAST CONCRETE SHALL HAVE A MINIMUM COMPRESSIVE STRENGTH OF 5,000 PSI AT 28 DAYS.
4. INSTALL PIPE SUPPORT IN ACCORDANCE WITH MANUFACTURERS INSTALLATION INSTRUCTION.
5. EXISTING MAG METER, EXISTING FLEX HOSE AND CAM LOCK FITTING TO BE SALVAGED AND RE-USED.



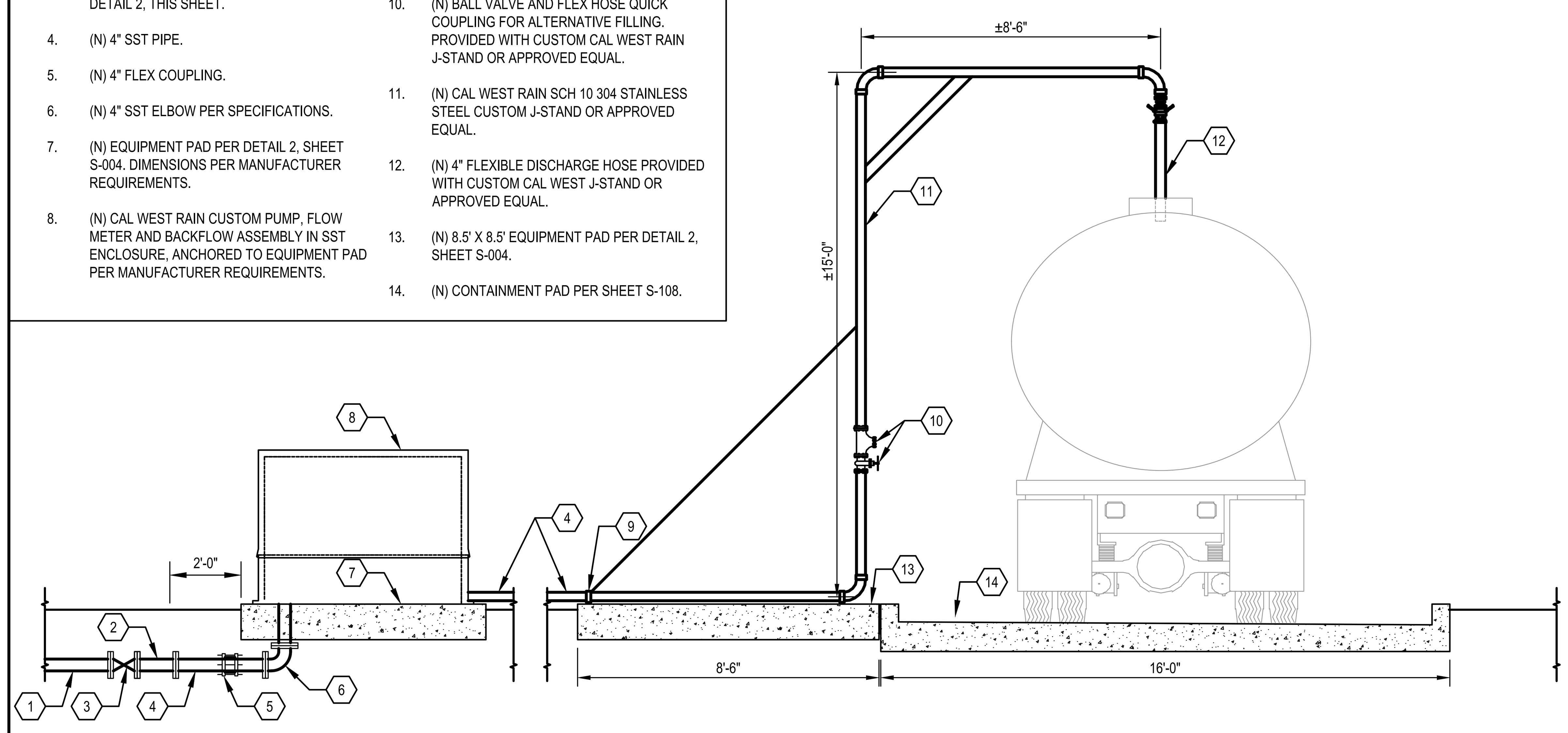
A SECTION

MATERIAL LIST		
ITEM	QTY	DESCRIPTION
1	1	4" TRANSITION COUPLING
2	1	SALVAGED 4" MAGNETIC FLOW METER, PROVIDED BY OWNER.
3	1	3'x3' ID PRECAST CONCRETE UTILITY VAULT, DEPTH AS REQUIRED (4'-0" MAX)
4	AS REQ'D	CMU BLOCK FLOW METER SUPPORT.
5	AS REQ'D	4" HDPE PIPE
6	1	3' X 3' SINGLE LEAF VAULT ACCESS COVER
7	0.17 CY	GRANULAR BEDDING (COMPACTED)
8	2	4" SST RESTRAINED MJ 90° ELBOW
9	AS REQ'D	4" SST PIPE
10	1	SALVAGED FLEX HOSE CAM LOCK COUPLING FROM EXISTING SYSTEM

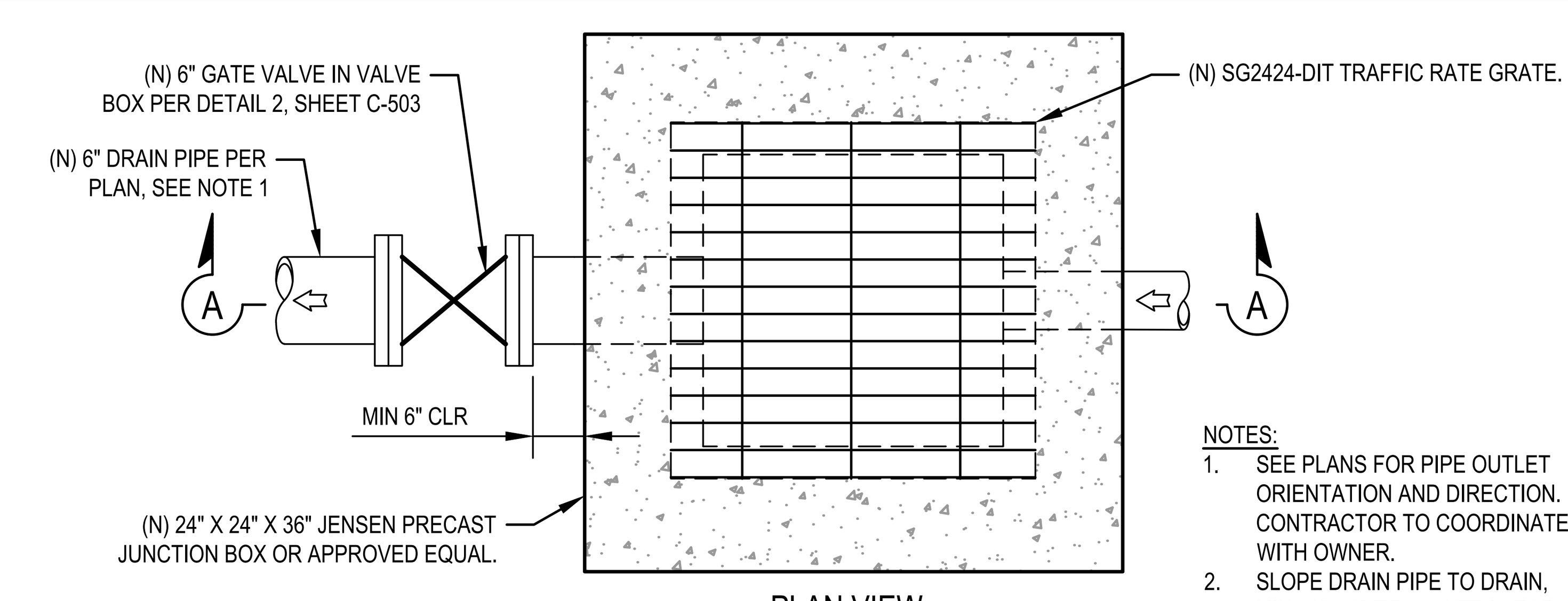
4 FLOW METER VAULT NOT TO SCALE

SHEET KEYNOTES

1. (N) 4" HDPE PIPE PER SPECIFICATIONS.
2. (N) 4" DI TEE. SEE PLAN FOR MANUAL BYPASS.
3. (N) 4" DI GATE VALVE WITH RISER BOX PER DETAIL 2, THIS SHEET.
4. (N) 4" SST PIPE.
5. (N) 4" FLEX COUPLING.
6. (N) 4" SST ELBOW PER SPECIFICATIONS.
7. (N) EQUIPMENT PAD PER DETAIL 2, SHEET S-004. DIMENSIONS PER MANUFACTURER REQUIREMENTS.
8. (N) CAL WEST RAIN CUSTOM PUMP, FLOW METER AND BACKFLOW ASSEMBLY IN SST ENCLOSURE, ANCHORED TO EQUIPMENT PAD PER MANUFACTURER REQUIREMENTS.
9. (N) WAGNER STEEL, OR APPROVED EQUAL, 4" PIPE BRACE. CONTRACTOR TO INSTALL (2) ON OPPOSITE SIDE OF J-STAND ANCHORED TO PAD USING HILTI KWIK BOLT TZ 5/8" WEDGE ANCHOR, MIN 6" EMBEDMENT.
10. (N) BALL VALVE AND FLEX HOSE QUICK COUPLING FOR ALTERNATIVE FILLING. PROVIDED WITH CUSTOM CAL WEST RAIN J-STAND OR APPROVED EQUAL.
11. (N) CAL WEST RAIN SCH 10 304 STAINLESS STEEL CUSTOM J-STAND OR APPROVED EQUAL.
12. (N) 4" FLEXIBLE DISCHARGE HOSE PROVIDED WITH CUSTOM CAL WEST J-STAND OR APPROVED EQUAL.
13. (N) 8.5' X 8.5' EQUIPMENT PAD PER DETAIL 2, SHEET S-004.
14. (N) CONTAINMENT PAD PER SHEET S-108.



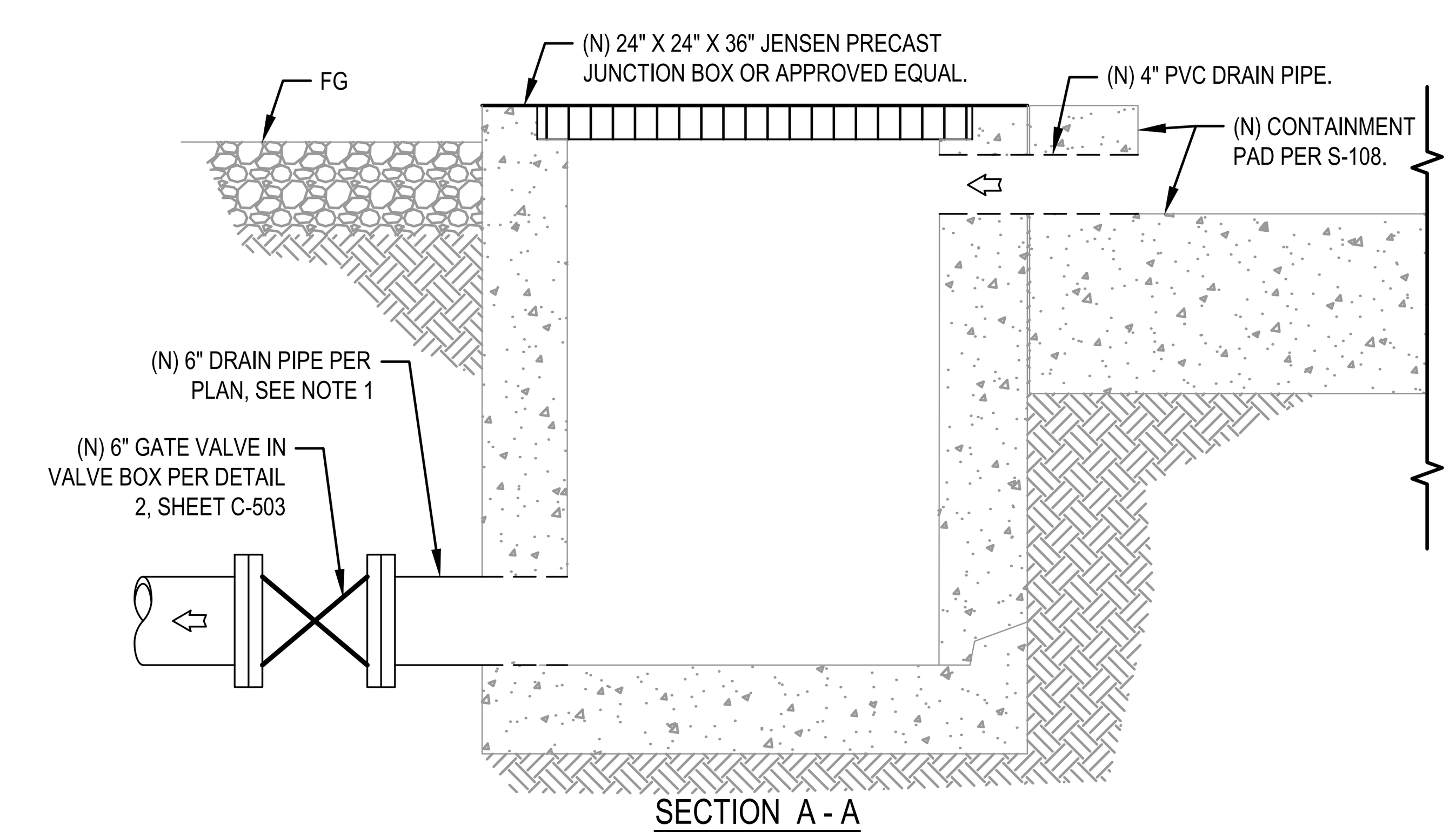
PREFABRICATED FILL STATION



PLAN VIEW

NOTES:

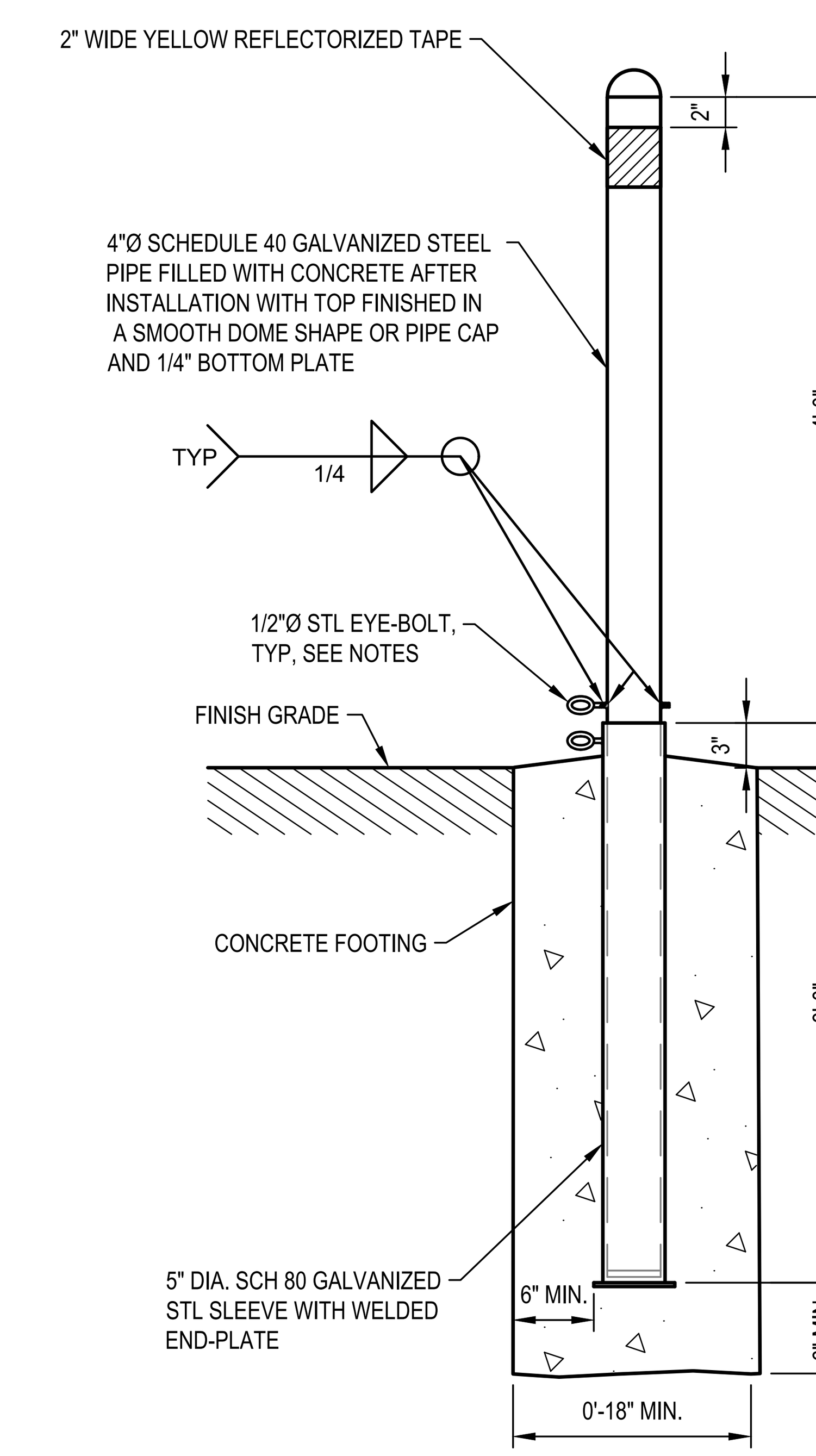
1. SEE PLANS FOR PIPE OUTLET ORIENTATION AND DIRECTION. CONTRACTOR TO COORDINATE WITH OWNER.
2. SLOPE DRAIN PIPE TO DRAIN, MIN 18" COVER. CONTRACTOR TO COORDINATE DISCHARGE POINT WITH OWNER.



SECTION A - A

MODIFIED STORM DRAIN JUNCTION STRUCTURE

3 FILL STATION AND OVERFLOW SUMP NOT TO SCALE



5 REMOVABLE BOLLARD NOT TO SCALE

Conformed Drawings	GT	GT	07/18/2024	
No. Issue	Checked	Approved	Date	

Author D. AGUAS | Drafting Check S. PEARL | Project Manager G. TOMASINO
Designer S. PEARL | Design Check M. KENNEDY | Project Director M. KENNEDY

CONFORMED DRAWINGS

Bar is one inch on original size sheet
0 1"

7/18/2024

GHD Inc.
2235 Mercury Way Suite 150
Santa Rosa California 95407 USA
T 1 707 523 1010 F 1 707 527 8679
www.ghd.com

Client **COUNTY OF SONOMA**

Project **LEACHATE TANK REPLACEMENT**

Title **CIVIL DETAILS 2**

Size ANSI D

Project No. 12558724 | Date 7/18/2024 | Scale AS SHOWN

Drawing No. C-503 | Sheet No. 15 of 48

STRUCTURAL ABBREVIATIONS

AB	ANCHOR BOLT
ABV	ABOVE
ACI	AMERICAN CONCRETE INSTITUTE
ADD'L	ADDITIONAL
AISC	AMERICAN INSTITUTE OF STEEL CONSTRUCTION
AISI	AMERICAN IRON AND STEEL INSTITUTE
AITC	AMERICAN INSTITUTE OF TIMBER CONSTRUCTION
ALT	ALTERNATE
ALUM	ALUMINUM
ANSI	AMERICAN NATIONAL STANDARDS INSTITUTE
APA	AMERICAN PLYWOOD ASSOCIATION
ARCH	ARCHITECT/ARCHITECTURAL
ASTM	AMERICAN SOCIETY FOR TESTING AND MATERIALS
AWS	AMERICAN WELDING SOCIETY
AWWA	AMERICAN WATER WORKS ASSOCIATION
B/	BOTTOM OF
BB	BOTTOM BARS
BLDG	BUILDING
BLKG	BLOCKING
BM	BEAM
BRG	BEARING
B/S	BOTH SIDES
BTWN	BETWEEN
C	CHANNEL
C/C	CENTER TO CENTER
CAP	CAPACITY
CBC	CALIFORNIA BUILDING CODE
CF	CUBIC FEET
CHKD	CHECKED
CJ	CONTRACTION/CONTROL JOINT
CL	CENTERLINE
CLR	CLEAR
CMU	CONCRETE MASONRY UNIT
COL	COLUMN
CONC	CONCRETE
CONN	CONNECTION
CONSTR	CONSTRUCTION
CONT	CONTINUOUS
COORD	COORDINATE
CRSI	CONCRETE REINFORCING STEEL INSTITUTE
CTR/CTR'D	CENTER/CENTERED
d	PENNY (NAIL SIZE)
DBL	DOUBLE
DEG	DEGREES
DET	DETAIL
DIA	DIAMETER
DIM	DIMENSION
DL	DEAD LOAD
DWG	DRAWING
DWL	DOWEL
(E)/EXIST	EXISTING
EA	EACH
EF	EACH FACE
EL/ELEV	ELEVATION
EMBED	EMBEDMENT
ENGR	ENGINEER
EQ	EQUAL
EQUIP	EQUIPMENT
ETC	ET CETERA
EW	EACH WAY
EWEF	EACH WAY EACH FACE
EXT	EXTERIOR
FF	FINISHED FLOOR
FG	FINISHED GRADE
FIN	FINISH
FL	FLOOR
FLG/FL	FLANGE
FND	FOUNDATION
FO	FACE OF
FOM	FACE OF MASONRY
FOW	FACE OF WALL
FPT	FEMALE PIPE THREAD
FRMG	FRAMING
FTG	FOOTING
GA	GAUGE
GALV	GALVANIZED
GR	GRADE
GWB	GYPSUM WALL BOARD
HK	HOOK
HM	HOLLOW METAL
HOF	HORIZONTAL OUTSIDE FACE
HORIZ	HORIZONTAL
HSS	TUBE STEEL/HOLLOW STRUCTURAL STEEL
HT	HEIGHT
IBC	INTERNATIONAL BUILDING CODE
ID	INSIDE DIAMETER
IE	THAT IS
INFO	INFORMATION
INT	INTERIOR
INTERMED	INTERMEDIATE
INTERSECT	INTERSECTION
INV	INVERT
JT	JOINT
L	ANGLE
LBS	POUNDS
LG	LONG
LL	LIVE LOAD
LLH	LONG LEG HORIZONTAL
LLV	LONG LEG VERTICAL
LOC	LOCATION
LONGIT/LONGL	LONGITUDINAL
LP	LOW POINT
LT	LEFT
LWR	LOWER
MAINT	MAINTENANCE
MAS	MASONRY
MAX	MAXIMUM
MB	MACHINE BOLT
MC	CHANNEL
MCJT	MASONRY CONTROL JOINT
MECH	MECHANICAL
MFR	MANUFACTURER
MHHW	MEAN HIGHER HIGH WATER
MIN	MINIMUM
MISC	MISCELLANEOUS
MLLW	MEAN LOWER LOW WATER
MNTG	MOUNTING
MO	MASONRY OPENING
MOD	MODIFIED
MTL	METAL
(E)	NEW
NIC	NOT IN CONTRACT
NO.	NUMBER
NOM	NOMINAL
NS	NEAR SIDE
NTS	NOT TO SCALE
OC	ON CENTER
OD	OUTSIDE DIAMETER
OF	OUTSIDE FACE
OPG	OPENING
OPP	OPPOSITE
PL	PLATE
PLCS	PLACES
PNL	PANEL
PREFAB	PREFABRICATED
PT	POINT, PRESSURE TREATED
QTY	QUANTITY
R/RAD	RADIUS
REF	REFERENCE
REINF	REINFORCING
REQD	REQUIRED
RF	ROOF
RM	ROOM
SCHED/SCH	SCHEDULE
SEC	SECTION
SF	SQUARE FEET
SHT	SHEET
SIM	SIMILAR
SP	SPACE/SPACES
SPCG	SPACING
SPEC	SPECIFICATIONS
SST	STAINLESS STEEL
STD	STANDARD
STIFF	STIFFENER
STL	STEEL
STRUCT	STRUCTURAL
SYM	SYMMETRICAL
T	TOP
T/	TOP OF
T&B	TOP AND BOTTOM
TB	TOP OF BAR
THK	THICK
TOC	TOP OF CONCRETE
TOS	TOP OF STEEL
TYP	TYPICAL
UNO	UNLESS NOTED OTHERWISE
UON	UNLESS OTHERWISE NOTED
VAR	VARIES
VERT	VERTICAL
W/	WITH
W OR WF	WIDE FLANGE (BEAM)
W/O	WITHOUT
WP	WORK POINT
WS	WATERSTOP
WT	TEE
&	AND
@	AT
°	DEGREE
Ø	DIAMETER
'	FEET
"	INCHES
#	NUMBER
±	PLUS OR MINUS

STRUCTURAL LEGEND

CMU IN PLAN

CMU IN SECTION

CONCRETE IN SECTION

EARTH IN SECTION

GROUT IN SECTION

STEEL IN SECTION

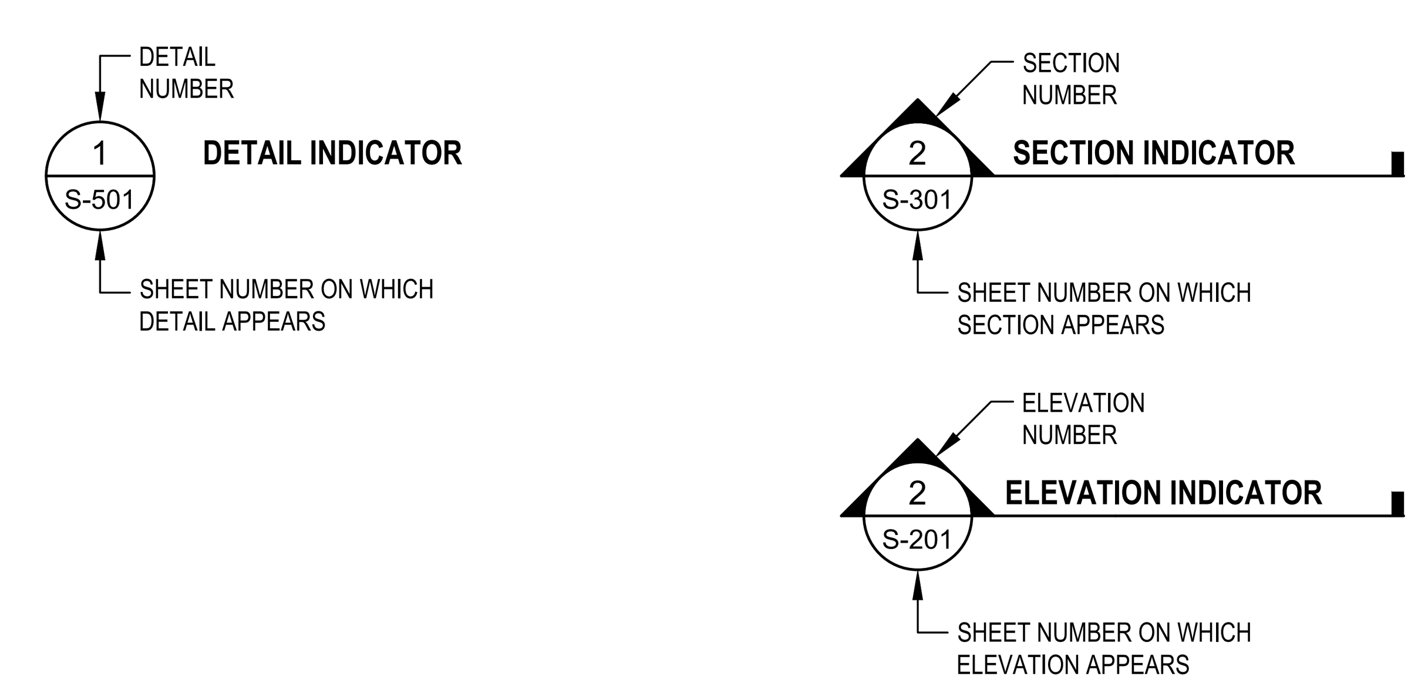
VOID FORM IN SECTION

FOOTING

SLAB CONSTRUCTION JOINT

SLAB CONTROL JOINT

ANNOTATION



GENERAL STRUCTURAL NOTES

GENERAL

1. CONTRACTOR TO COORDINATE ALL STRUCTURAL DOCUMENTS WITH ALL OTHER DISCIPLINES AND REPORT ANY DISCREPANCIES TO THE OWNER PRIOR TO THE START OF ANY FABRICATION OR CONSTRUCTION.
2. CONTRACTOR TO COORDINATE ALL NEW WORK WITH EXISTING SITE CONDITIONS AND REPORT ANY DISCREPANCIES TO THE OWNER PRIOR TO CONSTRUCTION.
3. ABBREVIATIONS ON THIS SHEET APPLY ONLY TO THE STRUCTURAL DRAWINGS, REFER TO OTHER DISCIPLINES FOR APPLICABLE SYMBOLS NOT PROVIDED HERE.
4. THIS IS A STANDARD ABBREVIATION AND LEGEND SHEET, THEREFORE, SOME ABBREVIATIONS AND LEGEND SYMBOLS MAY APPEAR ON THIS SHEET AND MAY NOT BE UTILIZED ON THIS PROJECT.
5. DO NOT SCALE DRAWINGS.

No.	Issue	Checked	Approved	Date
	Conformed Drawings	GT	GT	07/18/2024

Author CFB | Drafting Check MGK | Project Manager G. TOMASINO
Designer MGK | Design Check MGK | Project Director M. KENNEDY

CONFORMED DRAWINGS

Bar is one inch on original size sheet
0 1"

7/18/2024

GHD Inc.
2235 Mercury Way Suite 150
Santa Rosa California 95407 USA
T 1 707 523 1010 F 1 707 527 8679
www.ghd.com

Client COUNTY OF SONOMA

Project LEACHATE TANK REPLACEMENT

Title STRUCTURAL LEGEND, ABBREVIATIONS AND GENERAL NOTES

Size ANSI D

Project No. 12558724 | Date 7/18/2024 | Scale AS SHOWN

Drawing No. S-001

Plot Date: 18 July 2024 - 3:30 PM | Plotted By: Steven Toft | Filename: \\ghdnet\ghd\US\San Francisco\Projects\561\12558724\Digital_Design\ACAD\Sheets\Leachate Tanks\12558724-GHD-0001-DWG-ST-0001.dwg

STRUCTURAL GENERAL NOTES

GENERAL

1. REFERENCE TO CODES, RULES, REGULATIONS, STANDARDS, MANUFACTURER'S INSTRUCTIONS OR REQUIREMENTS OF REGULATORY AGENCIES IS TO THE LATEST PRINTED EDITION OF EACH IN EFFECT AT THE DATE OF SUBMISSION OF BID UNLESS THE DOCUMENT DATE IS SHOWN.
2. THESE DRAWINGS INDICATE GENERAL AND TYPICAL DETAILS OF CONSTRUCTION. WHERE CONDITIONS ARE NOT SPECIFICALLY INDICATED BUT ARE OF SIMILAR CHARACTER TO DETAILS SHOWN, USE SIMILAR DETAILS OF CONSTRUCTION, SUBJECT TO REVIEW BY THE OWNER'S REPRESENTATIVE.
3. THE CONTRACTOR IS RESPONSIBLE FOR COORDINATING THE WORK OF ALL TRADES AND FOR CHECKING DIMENSIONS. NOTIFY THE OWNER'S REPRESENTATIVE OF ANY DISCREPANCIES AND RESOLVE BEFORE PROCEEDING WITH THE WORK.
4. DO NOT SCALE THE DRAWINGS.
5. PROVIDE MEASURES NECESSARY TO PROTECT THE STRUCTURE DURING CONSTRUCTION. SUCH MEASURES INCLUDE, BUT MAY NOT BE LIMITED TO, BRACING AND SHORING FOR LOADS DURING CONSTRUCTION. RETAIN A REGISTERED CIVIL ENGINEER WHOM IS PROPERLY QUALIFIED TO DESIGN BRACING, SHORING, ETC. VISITS TO THE SITE BY THE OWNER'S REPRESENTATIVE WILL NOT INCLUDE OBSERVATION OF THE ABOVE NOTED ITEMS.
6. INFORMATION SHOWN ON THE DRAWINGS RELATED TO EXISTING CONDITIONS REPRESENTS THE PRESENT KNOWLEDGE, BUT WITHOUT GUARANTEE OF ACCURACY. REPORT CONDITIONS THAT CONFLICT WITH THE CONTRACT DOCUMENTS TO THE OWNER'S REPRESENTATIVE. DO NOT DEVIATE FROM THE CONTRACT DOCUMENTS WITHOUT WRITTEN DIRECTION FROM THE OWNER'S REPRESENTATIVE.
7. REFER TO CIVILL DRAWINGS FOR SIZE AND LOCATION OF FLOOR, ROOF AND WALL OPENINGS NOT SHOWN ON THE STRUCTURAL DRAWINGS. COORDINATE THE SIZE AND LOCATION OF OPENINGS ASSOCIATED WITH, BUT NOT LIMITED TO, ELECTRICAL, MECHANICAL AND PLUMBING TRADES. SUBMIT FINAL SIZING AND LOCATION REQUIREMENTS OF OPENINGS TO THE OWNER'S REPRESENTATIVE FOR REVIEW.
8. THE CONTRACTOR IS SOLELY RESPONSIBLE FOR PROVIDING A SAFE PLACE TO WORK AND MEETING THE REQUIREMENTS OF ALL APPLICABLE JURISDICTIONS. EXECUTE WORK TO ENSURE THE SAFETY OF PERSONS AND ADJACENT PROPERTY AGAINST DAMAGE BY FALLING DEBRIS AND OTHER HAZARDS IN CONNECTION WITH THIS WORK.
9. UNLESS NOTED OTHERWISE, REFER TO DRAWINGS OTHER THAN STRUCTURAL FOR FINISHES, SLOPES, DEPRESSIONS, OPENINGS, CURBS, STAIRS, RAMPS, TRENCHES, EQUIPMENT AND LOCATIONS AND EXTENT OF SUCH CONDITIONS.
10. CONTRACTOR TO COORDINATE ALL NEW WORK WITH EXISTING SITE CONDITIONS AND REPORT ANY DISCREPANCIES TO THE ENGINEER PRIOR TO CONSTRUCTION.
11. DETAILS OR CONDITIONS NOT FULLY DEVELOPED ON STRUCTURAL DOCUMENTS ARE SIMILAR TO DEVELOPED DETAILS.
12. REFER TO SITE SPECIFIC GEOTECHNICAL REPORTS FOR SITE CONDITIONS, EXCAVATION, SHORING REQUIREMENTS, UNDERPINNING, BACKFILL BEHIND WALLS AND SUBDRAINAGE PREPARATIONS.
13. ALL BUILDING FOUNDATION PLANS, FLOOR PLANS AND ROOF PLANS TO BE COORDINATED WITH GENERAL NOTES AND TYPICAL DETAILS AS APPLICABLE.

SPECIAL INSPECTION

1. SPECIAL INSPECTIONS, PER CBC 1704A AND 1705A.

CONCRETE

1. ALL CONCRETE SHALL BE NORMAL WEIGHT, WITH A MINIMUM COMPRESSIVE STRENGTH OF 4000 PSI AT 28 DAYS.
2. ALL CONCRETE DIMENSIONS SHOWN ARE MINIMUM DIMENSIONS. CONTRACTOR TO REVIEW FORMING, REINFORCING DETAILS AND ANY EMBEDDED ITEMS AND DETERMINE PRIOR TO FABRICATION OF ANY REINFORCING, PLACEMENT REQUIREMENTS AND CLEARANCES.
3. CONCRETE IS REINFORCED AND CAST-IN-PLACE UNLESS OTHERWISE NOTED. WHERE REINFORCING IS NOT SPECIFICALLY SHOWN OR WHERE DETAILS ARE NOT GIVEN, PROVIDE REINFORCING SIMILAR TO THAT SHOWN FOR SIMILAR CONDITIONS, SUBJECT TO REVIEW BY THE OWNER'S REPRESENTATIVE.
4. ROUGHEN CONCRETE SURFACES OF CONSTRUCTION JOINTS TO ¼ INCH AMPLITUDE AND CLEAN OF LAITANCE, FOREIGN MATTER, AND LOOSE PARTICLES. LOCATE CONSTRUCTION JOINTS AS SHOWN ON THE DRAWINGS. SUBMIT ALTERNATE JOINT LOCATIONS OR JOINTS NOT SHOWN TO THE OWNER'S REPRESENTATIVE FOR REVIEW AND APPROVAL PRIOR TO PROCEEDING WITH THE WORK.
5. AT LOCATIONS WHERE CONCRETE IS CAST AGAINST EXISTING CONCRETE, ROUGHEN CONTACT SURFACES TO ¼ INCH AMPLITUDE AND CLEAN OF LAITANCE, FOREIGN MATTER, AND LOOSE PARTICLES. EXISTING SURFACE SHALL BE SATURATED SURFACE DRY WITH NO STANDING WATER PRIOR TO NEW CONCRETE POUR.
6. CONCRETE CLEAR COVER TO REINFORCING BARS IS AS FOLLOWS, UNLESS OTHERWISE NOTED:

LOCATION	CLEAR COVER
CONCRETE PLACED AGAINST EARTH	3 INCHES
FORMED SURFACES EXPOSED TO WEATHER OR IN CONTACT WITH EARTH: #6 BARS AND LARGER #5 BARS AND SMALLER	 2 INCHES 1 1/2 INCHES
SLABS ON GRADE (TOP CLEARANCE)	1 1/2 INCHES
BEAMS, GIRDERS AND COLUMNS NOT EXPOSED TO WEATHER OR EARTH	1 1/2 INCHES
WALL OR SLAB SURFACES NOT EXPOSED TO WEATHER OR EARTH #5 AND SMALLER #5 AND #7 #8, #9, #10 AND #11 #14 AND #18	 3/4 INCH 1 INCH 1 1/2 INCHES 2 1/2 INCHES

7. NON-SHRINK GROUT, 7000 PSI: EUCLID CHEMICAL COMPANY'S "EUCO-NS", L&M CRYSTEX, MASTER BUILDERS' "MASTERFLOW 713", OR FIVE STAR GROUT. WHERE HIGH FLUIDITY OR INCREASED PLACING TIME IS REQUIRED, USE EUCLID CHEMICAL COMPANY'S "EUCO HI -FLOW GROUT", MASTER BUILDERS' "MASTERFLOW 928", OR APPROVED EQUAL.

FORMWORK

1. PROVIDE POUR POCKETS IN FORMS AND UNDER EXISTING STRUCTURAL MEMBERS AS REQUIRED TO PREVENT AIR POCKETS AND/OR "HONEYCOMB" UNDER OR AROUND THE EXISTING MEMBERS. CONCRETE CAST WITH AIR POCKETS AND/OR "HONEYCOMB" UNDER OR AROUND THE MEMBERS IS NOT ACCEPTABLE.
2. REMOVE FORMS AND SHORES IN ACCORDANCE WITH THE FOLLOWING:

LOCATION CONCRETE PLACED AGAINST EARTH	REMOVE FORMS AND SHORES NO SOONER THAN
COLUMNS AND WALLS	72 HOURS
FOOTINGS, PILE CAPS AND GRADE BEAMS	48 HOURS

3. PROVIDE CURING WHERE FORMS ARE REMOVED IN LESS THAN 7 DAYS INCLUDING, BUT NOT LIMITED TO, WALLS, COLUMNS, AND UNDERSIDE OF ELEVATED SLABS.

REINFORCING STEEL

1. ALL CONCRETE REINFORCING SHALL BE ASTM A615, GRADE 60.
2. REINFORCING SHALL EXTEND CONTINUOUS FOR THE DIMENSION SHOWN.
3. NO WELDING OF ANY REINFORCING IS PERMITTED.
4. LOCATE ALL REINFORCING AS SHOWN ON DRAWINGS AND FASTEN SECURELY.
5. ALL REINFORCING TO TERMINATE WITH STANDARD HOOKS AS SHOWN ON PLANS. ALL STIRRUPS AND TIES TO BE CLOSED WITH 135 DEGREE BENDS.
6. ACCURATELY POSITION, SUPPORT, AND SECURE REINFORCEMENT FROM DISPLACING DUE TO FORMWORK, CONSTRUCTION, OR CONCRETE PLACEMENT OPERATIONS. LOCATE AND SUPPORT REINFORCING BY METAL CHAIRS, RUNNERS, BOLSTERS, SPACERS, AND HANGERS AT A MAXIMUM 3 -FOOT SPACING.

FOUNDATIONS

1. CONTRACTOR SHALL PREPARE SITE AND PROVIDE FILL IN ACCORDANCE WITH ALL RECOMMENDATIONS CONTAINED WITHIN THE GEOTECHNICAL REPORT AND EARTHWORK SPECIFICATION.
2. CONTRACTOR'S GEOTECHNICAL ENGINEER TO BE PRESENT TO OBSERVE SITE PREPARATION AND EXCAVATION AS WELL AS FILL EXCAVATION AND RE-COMPACTION AS RECOMMENDED IN THE GEOTECHNICAL REPORT.
3. PROVIDE SITE DE-WATERING AS NECESSARY TO ACHIEVE THE WORK. WATER SHALL BE TESTED PRIOR TO DISPOSAL.
4. LOCATE AND PROTECT EXISTING UTILITIES TO REMAIN DURING AND/OR AFTER CONSTRUCTION.
5. REMOVE ABANDONED FOOTINGS, UTILITIES, ETC. WHICH INTERFERE WITH NEW CONSTRUCTION, UNLESS OTHERWISE INDICATED.
6. NOTIFY THE OWNER'S REPRESENTATIVE IF ANY BURIED STRUCTURES NOT INDICATED, SUCH AS UTILITY LINES, FOUNDATIONS, ETC., ARE FOUND.
7. THE CONTRACTOR IS SOLELY RESPONSIBLE FOR EXCAVATION PROCEDURES INCLUDING LAGGING, SHORING, UNDERPINNING AND PROTECTION OF EXISTING CONSTRUCTION.
8. REMOVE LOOSE SOIL AND STANDING WATER FROM FOUNDATION EXCAVATIONS PRIOR TO PLACING CONCRETE.
9. EXCAVATIONS FOR FOUNDATIONS MUST BE ACCEPTED BY THE OWNER'S REPRESENTATIVE PRIOR TO PLACING REINFORCING AND CONCRETE. NOTIFY THE OWNER'S REPRESENTATIVE WHEN EXCAVATIONS ARE READY FOR INSPECTION.

No.	Issue	Checked	Approved	Date
	Conformed Drawings	GT	GT	07/18/2024

Author **CFB** Drafting Check **MGK** Project Manager **G. TOMASINO**
Designer **MGK** Design Check **MGK** Project Director **M. KENNEDY**

CONFORMED DRAWINGS

Bar is one inch on original size sheet
0 1"

REGISTERED PROFESSIONAL ENGINEER
JAMES KUOCHIANG PAN
No. C72188
CIVIL
STATE OF CALIFORNIA
7/18/2024

GHD Inc.
2235 Mercury Way Suite 150
Santa Rosa California 95407 USA
T 1 707 523 1010 **F** 1 707 527 8679
www.ghd.com

Client **COUNTY OF SONOMA**
Project **LEACHATE TANK REPLACEMENT**
Title **STRUCTURAL GENERAL NOTES**
Size **ANSI D**

Project No.	Date	Scale	Drawing No.	Sheet No.
12558724	7/18/2024	AS SHOWN	S-002	17 of 48

STATEMENT OF SPECIAL INSPECTIONS

THIS STATEMENT OF SPECIAL INSPECTIONS IS SUBMITTED AS A CONDITION FOR PERMIT ISSUANCE IN ACCORDANCE WITH THE SPECIAL INSPECTION AND STRUCTURAL TESTING REQUIREMENTS OF THE BUILDING CODE SECTIONS 1704 AND 1705.

THIS STATEMENT OF SPECIAL INSPECTIONS ENCOMPASS THE FOLLOWING DISCIPLINES:

- ☒ STRUCTURAL SPECIAL INSPECTIONS PER 1704
- ☒ STRUCTURAL SPECIAL INSPECTIONS FOR SEISMIC RESISTANCE
- ☐ STRUCTURAL SPECIAL INSPECTIONS FOR WIND RESISTANCE

THE SCHEDULE OF SPECIAL INSPECTIONS SUMMARIZES THE SPECIAL INSPECTIONS AND TESTS REQUIRED. SPECIAL INSPECTORS WILL REFER TO THE APPROVED PLANS AND SPECIFICATIONS FOR DETAILED SPECIAL INSPECTION REQUIREMENTS. ANY ADDITIONAL TESTS AND INSPECTIONS REQUIRED BY THE APPROVED PLANS AND SPECIFICATIONS WILL ALSO BE PERFORMED.

THE SPECIAL INSPECTIONS IDENTIFIED ARE IN ADDITION TO THOSE REQUIRED BY OTHER SECTIONS OF THE BUILDING CODE. SPECIAL INSPECTION IS NOT A SUBSTITUTE FOR INSPECTION BY THE BUILDING OFFICIAL

THE SPECIAL INSPECTION COORDINATOR SHALL KEEP RECORDS OF ALL INSPECTIONS AND SHALL FURNISH INSPECTION REPORTS TO THE BUILDING OFFICIAL AND THE REGISTERED DESIGN PROFESSIONAL IN RESPONSIBLE CHARGE. DISCOVERED DISCREPANCIES SHALL BE BROUGHT TO THE IMMEDIATE ATTENTION OF THE CONTRACTOR FOR CORRECTION. IF SUCH DISCREPANCIES ARE NOT CORRECTED, THE DISCREPANCIES SHALL BE BROUGHT TO THE ATTENTION OF THE BUILDING OFFICIAL/CONTRACTING OFFICER AND THE REGISTERED DESIGN PROFESSIONAL IN RESPONSIBLE CHARGE. THE SPECIAL INSPECTION PROGRAM DOES NOT RELIEVE THE CONTRACTOR OF HIS OR HER RESPONSIBILITIES.

INTERIM REPORTS SHALL BE SUBMITTED TO THE BUILDING OFFICIAL AND THE REGISTERED DESIGN PROFESSIONAL IN RESPONSIBLE CHARGE IN ACCORDANCE WITH SECTION 1704.1.2.

A FINAL REPORT OF SPECIAL INSPECTIONS DOCUMENTING COMPLETION OF ALL REQUIRED SPECIAL INSPECTIONS, TESTING AND CORRECTION OF ANY DISCREPANCIES NOTED IN THE INSPECTIONS SHALL BE SUBMITTED PRIOR TO ISSUANCE OF A CERTIFICATE OF USE AND OCCUPANCY PER SECTION 1704.1.2. THE FINAL REPORT WILL DOCUMENT THE REQUIRED SPECIAL INSPECTIONS AND CORRECTION OF DISCREPANCIES NOTED IN INSPECTIONS.

JOB SITE SAFETY AND MEANS AND METHODS OF CONSTRUCTION ARE SOLELY THE RESPONSIBILITY OF THE CONTRACTOR.

THE CONTRACTOR IS REQUIRED TO COORDINATE ALL INSPECTIONS. THE CONTRACTOR SHALL NOTIFY THE OWNER'S REPRESENTATIVE AND THE SPECIAL INSPECTOR A MINIMUM OF 24 HOURS PRIOR TO ANY SPECIAL INSPECTIONS THAT ARE REQUIRED. THE CONTRACTOR SHALL NOTIFY THE OWNER'S REPRESENTATIVE AND THE SPECIAL INSPECTOR A MINIMUM OF 24 HOURS PRIOR TO ANY CONCRETE TO BE POURED.

THE INSPECTORS AND TESTING AGENCIES SHALL BE ENGAGED BY THE OWNER OR THE OWNER'S AGENT, AND NOT BY THE CONTRACTOR OR SUBCONTRACTOR WHOSE WORK IS TO BE INSPECTED OR TESTED PER SECTION 1704.1. ANY CONFLICT OF INTEREST MUST BE DISCLOSED TO THE BUILDING OFFICIAL/CONTRACTING OFFICER, PRIOR TO COMMENCING WORK. IF APPROPRIATE AGENTS ARE NOTED AS "TO BE DETERMINED (TBD)", THE OWNER IS RESPONSIBLE TO COORDINATE THE ASSEMBLY OF A SPECIAL INSPECTION TEAM. ALL SPECIAL INSPECTORS AND QUALIFICATIONS SHALL BE SUBMITTED TO GHD INC. AND THE BUILDING OFFICIAL FOR REVIEW.

SPECIALLY INSPECTED WORK THAT IS INSTALLED OR COVERED WITHOUT THE APPROVAL OF THE BUILDING OFFICIAL IS SUBJECT TO REMOVAL OR EXPOSURE.

CONTINUOUS INSPECTION IS ALWAYS REQUIRED DURING THE PERFORMANCE OF THE WORK UNLESS OTHERWISE SPECIFIED. WHEN WORK IN MORE THAN ONE CATEGORY OF WORK REQUIRING SPECIAL INSPECTION IS TO BE PERFORMED SIMULTANEOUSLY, OR THE GEOGRAPHIC LOCATION OF THE WORK IS SUCH THAT IT CANNOT BE CONTINUOUSLY OBSERVED, IT IS THE AGENT'S RESPONSIBILITY TO EMPLOY A SUFFICIENT NUMBER OF INSPECTORS TO ASSURE THAT ALL THE WORK IS INSPECTED IN ACCORDANCE WITH THE PROVISIONS OF THE BUILDING CODE.

CONTRACTOR STATEMENT OF RESPONSIBILITY

EACH CONTRACTOR RESPONSIBLE FOR THE CONSTRUCTION OR FABRICATION OF A SYSTEM OR COMPONENT DESIGNATED ABOVE AS PART OF THE MAIN WIND FORCE OR MAIN SEISMIC FORCE RESISTING SYSTEMS ABOVE MUST SUBMIT A STATEMENT OF RESPONSIBILITY PER SECTION 1706.

QUALIFICATIONS OF INSPECTORS AND TESTING TECHNICIANS

THE QUALIFICATIONS OF ALL PERSONNEL PERFORMING SPECIAL INSPECTION AND TESTING ACTIVITIES ARE SUBJECT TO THE APPROVAL OF NMWD. THE CREDENTIALS OF ALL INSPECTORS AND TESTING TECHNICIANS SHALL BE PROVIDED IF REQUESTED.

KEY FOR MINIMUM QUALIFICATIONS OF INSPECTION AGENTS:

WHEN THE REGISTERED DESIGN PROFESSIONAL IN RESPONSIBLE CHARGE DEEMS IT APPROPRIATE THAT THE INDIVIDUAL PERFORMING A STIPULATED TEST OR INSPECTION HAVE A SPECIFIC CERTIFICATION OR LICENSE AS INDICATED BELOW, SUCH DESIGNATION SHALL APPEAR BELOW THE *AGENCY NUMBER* ON THE SCHEDULE.

PE/SE	STRUCTURAL ENGINEER - A LICENSED SE OR PE SPECIALIZING IN THE DESIGN OF BUILDING STRUCTURES
PE/GE	GEOTECHNICAL ENGINEER - A LICENSED GE OR PE SPECIALIZING IN SOIL MECHANICS AND FOUNDATIONS
EIT	ENGINEER-IN-TRAINING - A GRADUATE ENGINEER WHO HAS PASSED THE FUNDAMENTALS OF ENGINEERING EXAMINATION

AMERICAN CONCRETE INSTITUTE (ACI) CERTIFICATION

ACI-CFTT	CONCRETE FIELD TESTING TECHNICIAN - GRADE 1
ACI-CCI	CONCRETE CONSTRUCTION INSPECTOR
ACI-LTT	LABORATORY TESTING TECHNICIAN - GRADE 1&2
ACI-STT	STRENGTH TESTING TECHNICIAN

AMERICAN WELDING SOCIETY (AWS) CERTIFICATION

AWS-CWI	CERTIFIED WELDING INSPECTOR
AWS/AISC-SSI	CERTIFIED STRUCTURAL STEEL INSPECTOR

INTERNATIONAL CODE COUNCIL (ICC) CERTIFICATION

ICC-SMSI	STRUCTURAL MASONRY SPECIAL INSPECTOR
ICC-SWSI	STRUCTURAL STEEL AND WELDING SPECIAL INSPECTOR
ICC-SFSI	SPRAY-APPLIED FIREPROOFING SPECIAL INSPECTOR
ICC-PCSI	PRESTRESSED CONCRETE SPECIAL INSPECTOR
ICC-RCSI	REINFORCED CONCRETE SPECIAL INSPECTOR

AMERICAN SOCIETY OF NONDESTRUCTIVE TESTING (ASNT)

SCHEDULE OF INSPECTION AND TESTING AGENCIES

THIS STATEMENT OF SPECIAL INSPECTIONS / QUALITY ASSURANCE PLAN INCLUDES THE FOLLOWING BUILDING SYSTEMS:

☒ SOILS AND FOUNDATIONS	☐ WOOD CONSTRUCTION
☒ CAST-IN-PLACE CONCRETE	☐ MECHANICAL & ELECTRICAL SYSTEMS
☐ PRECAST CONCRETE	☐ ARCHITECTURAL SYSTEMS
☐ MASONRY LEVEL 1	☐ STRUCTURAL STEEL
☐ MASONRY LEVEL 2	☐ COLD-FORMED STEEL FRAMING

SPECIAL INSPECTION AGENCIES	FIRM AND CONTACT INFO.
1. SPECIAL INSPECTION COORDINATOR	TBD
2. CONCRETE INSPECTOR	TBD
3. STEEL INSPECTOR	TBD
4. SOILS INSPECTOR	TBD
5. CONCRETE TESTING AGENCY	TBD

TABLE 1705.3 - CONCRETE

ITEM	DESCRIPTION	INSPECTION	AGENCY # (QUALIF.):
ITEM 1:	INSPECTION OF REINFORCING STEEL, INCLUDING PRESTRESSING TENDONS AND PLACEMENT.	☒ PERIODIC ☐ CONTINUOUS	ACI-CCI, ICC-RCSI
ITEM 2:	~~INSPECTION OF REINFORCING STEEL WELDING~~	☐ PERIODIC ☐ CONTINUOUS	ACI-CCI, ICC-RCSI
ITEM 3:	INSPECT BOLTS TO BE INSTALLED IN CONCRETE PRIOR TO AND DURING PLACEMENT OF CONCRETE	☐ PERIODIC ☒ CONTINUOUS	ACI-CCI, ICC-RCSI
ITEM 4:	INSPECTION OF ANCHORS INSTALLED IN HARDENED CONCRETE.	☒ PERIODIC ☐ CONTINUOUS	ACI-CCI, ICC-RCSI
ITEM 5:	VERIFYING USE OF REQUIRED DESIGN MIX.	☒ PERIODIC ☐ CONTINUOUS	ACI-CCI, ICC-RCSI
ITEM 6:	AT TIME FRESH CONCRETE IS SAMPLED TO FABRICATE SPECIMENS FOR STRENGTH TESTS, PERFORM SLUMP AND AIR CONTENT TESTS AND DETERMINE THE TEMPERATURE OF THE CONCRETE.	☐ PERIODIC ☒ CONTINUOUS	ACI-CCI, ICC-RCSI
ITEM 7:	INSPECTION OF CONCRETE AND SHOTCRETE PLACEMENT FOR PROPER APPLICATION TECHNIQUES.	☐ PERIODIC ☒ CONTINUOUS	ACI-CCI, ICC-RCSI
ITEM 8:	INSPECTION FOR MAINTENANCE OF SPECIFIED CURING TEMPERATURE AND TECHNIQUES.	☒ PERIODIC ☐ CONTINUOUS	ACI-CCI, ICC-RCSI
ITEM 9:	~~INSPECTION OF PRESTRESSED CONCRETE: A: APPLICATION OF PRESTRESSING FORCES (☐ PERIODIC ☐ CONTINUOUS); B: GROUTING OF BONDED PRESTRESSING TENDONS IN THE SEISMIC FORCE-RESISTING SYSTEM~~	☐ PERIODIC ☐ CONTINUOUS	ACI-CCI, ICC-RCSI
ITEM 10:	~~ERECTION OF PRECAST CONCRETE MEMBERS~~	☐ PERIODIC ☐ CONTINUOUS	ACI-CCI, ICC-RCSI
ITEM 11:	VERIFICATION OF IN-SITU CONCRETE STRENGTH, PRIOR TO STRESSING OF TENDONS IN POSTENSIONED CONCRETE AND PRIOR TO REMOVAL OF SHORES AND FORMS FROM BEAMS AND STRUCTURAL SLABS.	☒ PERIODIC ☐ CONTINUOUS	ACI-CCI, ICC-RCSI
ITEM 12:	INSPECT FORMWORK FOR SHAPE, LOCATION, AND DIMENSIONS OF THE CONCRETE MEMBER BEING FORMED.	☒ PERIODIC ☐ CONTINUOUS	ACI-CCI, ICC-RCSI

TABLE 1705.6 - INSPECTION OF SOILS

ITEM	DESCRIPTION	INSPECTION	AGENCY # (QUALIF.):
ITEM 1:	VERIFY MATERIALS BELOW FOOTINGS ARE ADEQUATE TO ACHIEVE THE DESIRED BEARING CAPACITY.	☒ PERIODIC ☐ CONTINUOUS	PE/GE
ITEM 2:	VERIFY EXCAVATIONS ARE EXTENDED TO PROPER DEPTH AND HAVE REACHED PROPER MATERIAL.	☒ PERIODIC ☐ CONTINUOUS	PE/GE
ITEM 3:	PERFORM CLASSIFICATION AND TESTING OF CONTROLLED FILL MATERIALS. PERFORM SIEVE TESTS (ASTM D422 & D1140); ATTERBERG LIMIT TEST (ASTM D4318) AND MODIFIED PROCTOR TESTS (ASTM D1557) OF EACH SOURCE OF FILL MATERIAL.	☒ PERIODIC ☐ CONTINUOUS	PE/GE
ITEM 4:	VERIFY USE OF PROPER MATERIALS, DENSITIES AND LIFT THICKNESSES DURING PLACEMENT AND COMPACTION OF CONTROLLED FILL. TEST DENSITY OF EACH LIFT OF FILL BY NUCLEAR METHODS (ASTM D6938) OR SAND CONE (ASTM D1556). VERIFY EXTENT AND SLOPE OF FILL PLACEMENT. VERIFY COMPACTION OF FILL AND BACKFILL MATERIAL TO 95 PERCENT OF ASTM D 1557. TEST EACH LIFT AT RANDOMLY SELECTED LOCATIONS EVERY 1000 SQUARE FEET OF FILL OR 50 LINEAR FOOT OF WALL OR CONTINUOUS FOOTING, WHICHEVER IS GREATER. PERFORM A MINIMUM OF ONE TEST PER ISOLATED FOOTING. PERFORM 3 TEST MINIMUM PER LIFT.	☐ PERIODIC ☒ CONTINUOUS	PE/GE
ITEM 5:	PRIOR TO PLACEMENT OF CONTROLLED FILL, OBSERVE SUBGRADE AND VERIFY THAT SITE HAS BEEN PREPARED PROPERLY.	☒ PERIODIC ☐ CONTINUOUS	PE/GE

NOTES: SEE GENERAL STRUCTURAL NOTES FOR REFERENCE GEOTECHNICAL REPORT AND DESIGN BEARING CAPACITIES.

No.	Issue	Checked	Approved	Date
	Conformed Drawings	GT	GT	07/18/2024

Author CFB | Drafting Check MGK | Project Manager G. TOMASINO
Designer MGK | Design Check MGK | Project Director M. KENNEDY

CONFORMED DRAWINGS

Bar is one inch on original size sheet
0 1"

REGISTERED PROFESSIONAL ENGINEER — JAMES KUDCHADKER? No. C72?? — CIVIL — STATE OF CALIFORNIA
7/18/2024

GHD Inc.
2235 Mercury Way Suite 150
Santa Rosa California 95407 USA
T 1 707 523 1010 F 1 707 527 8679
www.ghd.com

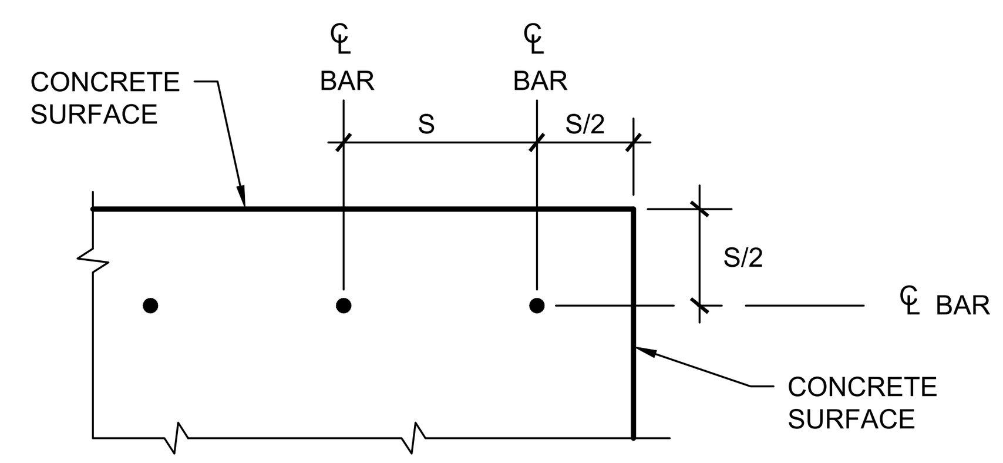
Client COUNTY OF SONOMA
Project LEACHATE TANK REPLACEMENT
Title STATEMENT OF SPECIAL INSPECTONS

Project No.	Date	Scale	Size	Drawing No.	Sheet No.
12558724	7/18/2024	AS SHOWN	ANSI D	S-003	18 of 48

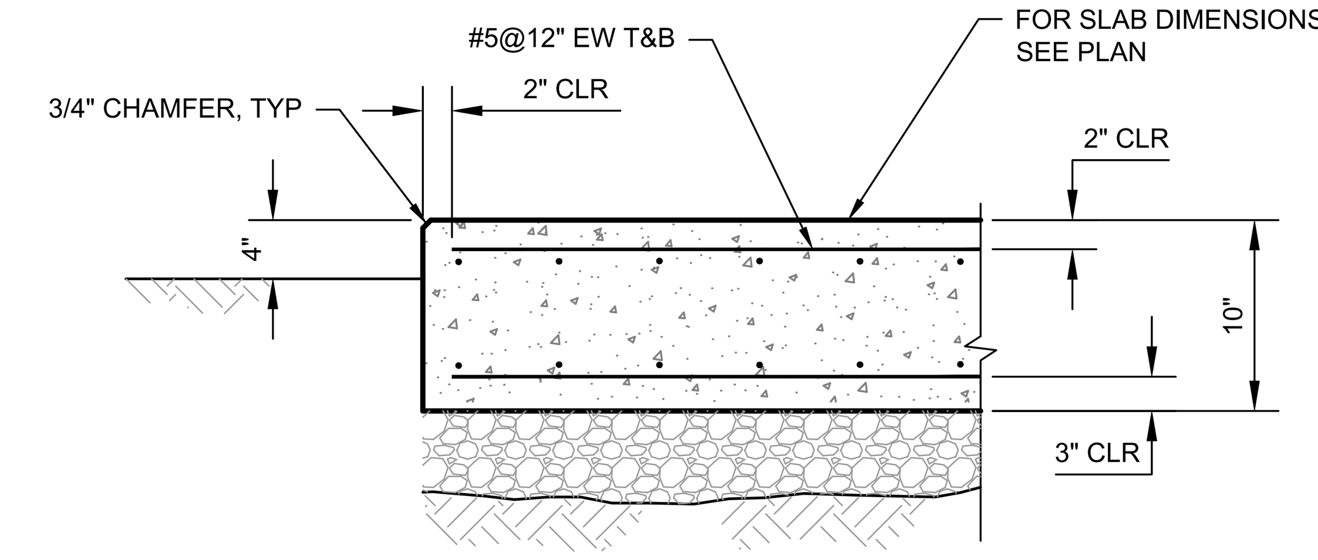
DEVELOPMENT LENGTH (ℓ) d												
BAR SIZE	3000 PSI CONC (f'c)				4000 PSI CONC (f'c)				5000 PSI CONC (f'c)			
	TOP		OTHER		TOP		OTHER		TOP		OTHER	
	s ≥ 6"	s < 6"	s ≥ 6"	s < 6"	s ≥ 6"	s < 6"	s ≥ 6"	s < 6"	s ≥ 6"	s < 6"	s ≥ 6"	s < 6"
#3	13	22	12	17	12	19	12	15	12	17	12	13
#4	18	29	14	22	15	25	12	19	14	23	12	17
#5	22	36	17	28	19	31	15	24	17	28	13	22
#6	26	43	20	33	23	37	18	29	20	34	16	26
#7	38	63	29	48	33	54	25	42	29	49	23	38
#8	43	72	33	55	37	62	29	48	34	56	26	43
#9	49	81	37	62	42	70	33	54	38	63	29	48
#10	56	89	43	69	49	78	38	60	44	69	34	54
#11	68	98	52	76	59	85	45	66	53	76	41	59
TENSION LAP SPLICE LENGTH (CLASS 'B' SPLICE)												
BAR SIZE	3000 PSI CONC (f'c)				4000 PSI CONC (f'c)				5000 PSI CONC (f'c)			
	TOP		OTHER		TOP		OTHER		TOP		OTHER	
	s ≥ 6"	s < 6"	s ≥ 6"	s < 6"	s ≥ 6"	s < 6"	s ≥ 6"	s < 6"	s ≥ 6"	s < 6"	s ≥ 6"	s < 6"
#3	17	28	16	22	16	25	16	19	16	22	16	17
#4	23	38	18	29	20	33	16	25	18	29	16	23
#5	28	47	22	36	25	41	19	31	22	36	17	28
#6	34	56	26	43	29	49	23	38	26	44	20	34
#7	49	82	38	63	43	71	33	55	38	63	30	49
#8	56	93	43	72	49	81	38	62	44	72	34	56
#9	63	105	49	81	55	91	42	70	49	81	38	63
#10	73	116	56	90	63	101	49	78	57	90	44	70
#11	88	128	68	99	76	111	59	85	68	99	53	76

NOTES:

1. LENGTHS SHOWN ARE FOR GRADE 60 UNCOATED BARS.
2. LENGTHS SHOWN ARE IN INCHES.
3. INCREASE LENGTHS 30% FOR LIGHT WEIGHT CONCRETE
4. TOP BARS: HORIZONTAL BARS WITH MORE THAN 12" OF FRESH CONCRETE CAST BELOW THEM.
5. THE QUANTITY 'S' IS DEFINED AS FOLLOWS:



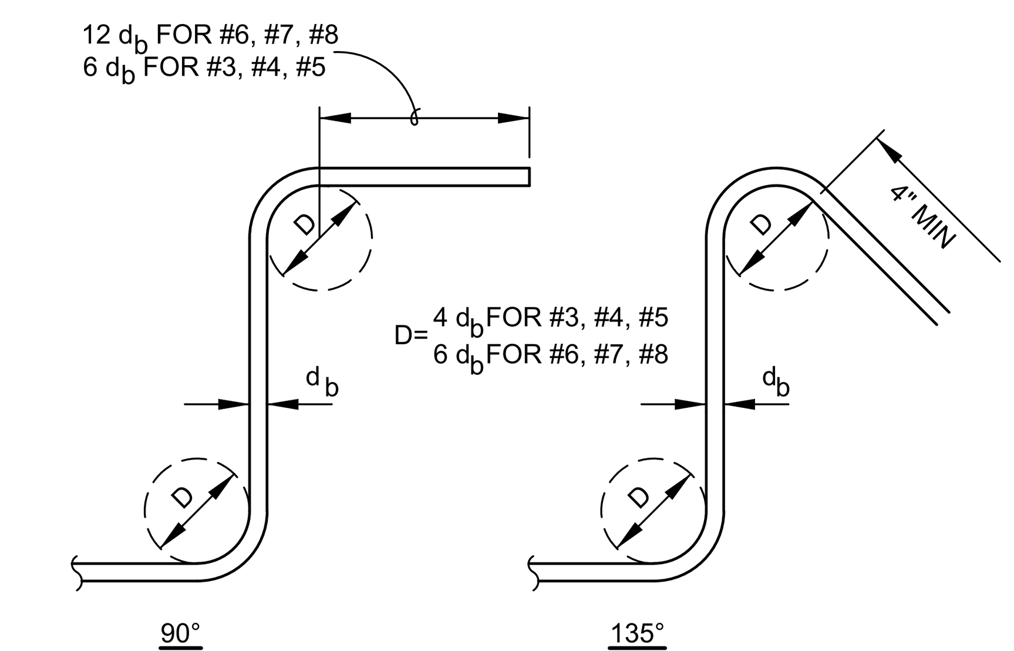
1 TYP
BAR DEVELOPMENT LENGTHS AND LAP SPLICE LENGTHS
SCALE: NOT TO SCALE



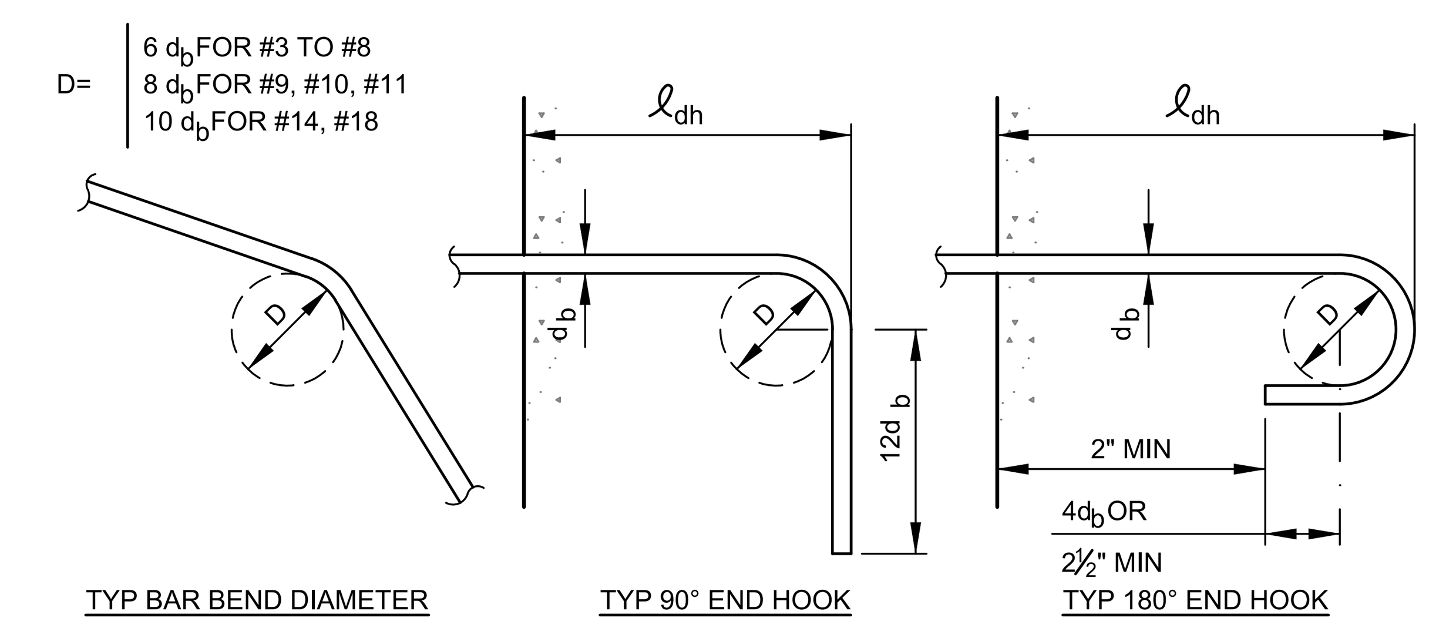
NOTES:

1. SUBGRADE PREPARATION, INCLUDING SOFT SOIL REPAIR AREAS, SHOULD BE PERFORMED PER THE RECOMMENDATIONS PER GEOTECHNICAL REPORT, SECTIONS 8.1 AND 8.4.
2. SUBGRADE PREPARATION - REMOVE AND REPLACE UPPER 24 INCHES OF SUBGRADE BENEATH BOTTOM OF AGGREGATE BASE LAYER AND 3 FEET LATERALLY BEYOND SLAB WITH NON-EXPANSIVE FILL MEETING REQUIREMENTS OF SOILS REPORT. COMPACT AND MOISTURE CONDITION SUBGRADE IN ACCORDANCE WITH SOILS REPORT.
3. 6" MIN OF CALTRANS CLASS 1 PERMEABLE MATERIAL TYPE "A" COMPACTED TO AT LEAST 95% RELATIVE COMPACTION IN ACCORDANCE WITH ASTM D698.
4. USE THIS DETAIL FOR TYPICAL EXTERIOR SLAB ON GRADE UNLESS OTHERWISE NOTED.

2 TYP
TYPICAL EXTERIOR SLAB ON GRADE
SCALE: NOT TO SCALE

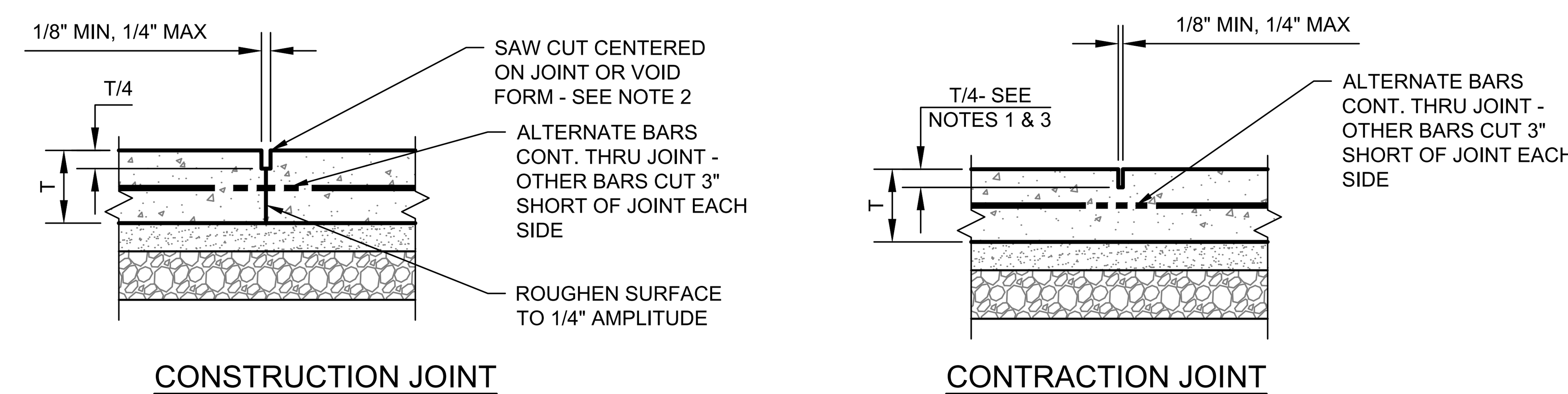


3 TYP
STIRRUP AND TIE HOOKS
SCALE: NOT TO SCALE



MINIMUM TENSION EMBEDMENT LENGTHS ℓ_{dh} (IN.) FOR STANDARD END HOOKS ON REINFORCING BARS				
BAR SIZE	NORMAL WEIGHT CONCRETE, f'c PSI			
	3000	4000	5000	6000
#3	6	6	6	6
#4	8	7	6	6
#5	10	9	8	7
#6	12	10	9	9
#7	14	12	11	10
#8	16	14	12	11
#9	18	15	14	13
#10	20	17	16	14
#11	22	19	17	16
#14	38	33	29	27
#18	50	43	39	35

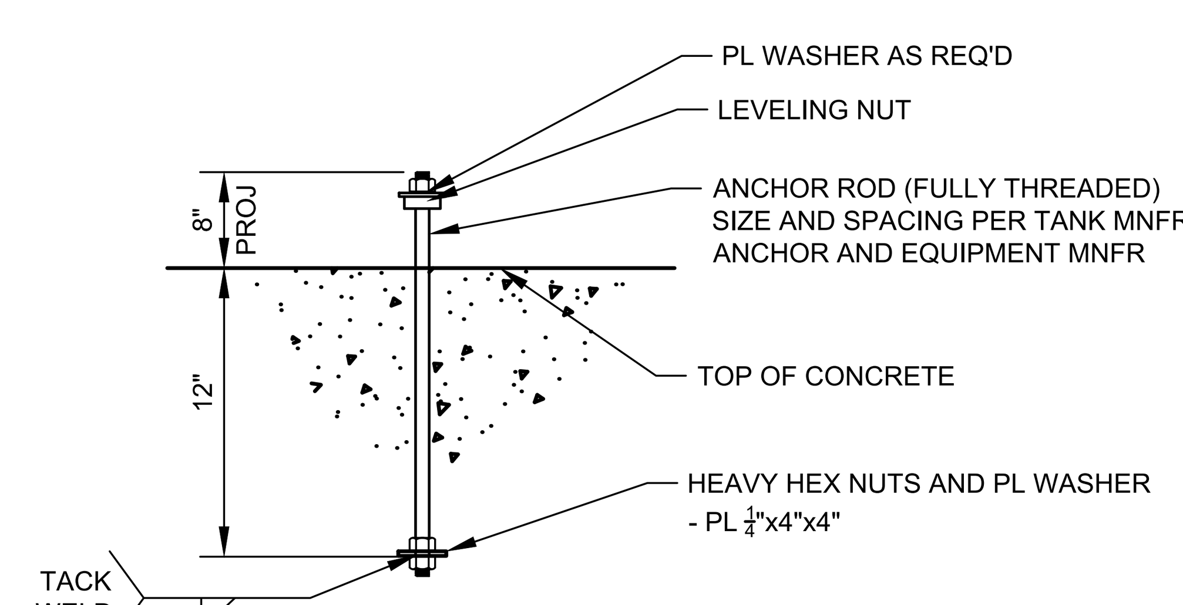
4 TYP
BAR BENDS AND END HOOKS
SCALE: NOT TO SCALE



NOTES:

1. SAWCUT JOINTS WITHIN 12 HOURS AFTER PLACING CONCRETE
2. REMOVE VOID FORM AFTER PLACING CONCRETE.
3. DEPRESS REINFORCEMENT IN VICINITY OF SAWCUT TO AVOID DAMAGING REINFORCEMENT

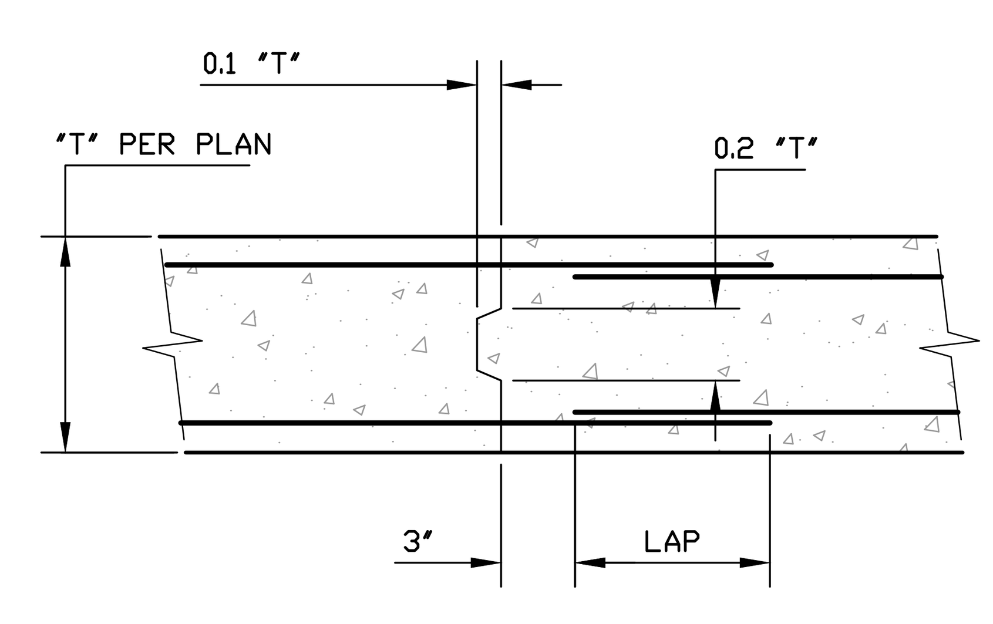
5 TYP
SLAB CONTROL JOINTS
SCALE: NOT TO SCALE



NOTES:

1. ASTM F1554 GRADE 55 ALL THREAD ANCHOR ROD
2. ALL DIMENSIONS TO BE VERIFIED BY TANK MANUFACTURER OR EQUIPMENT MANUFACTURER

6 TYP
TYP CAST-IN-PLACE ANCHOR ROD DETAIL
SCALE: NOT TO SCALE



"T" = CONCRETE THICKNESS

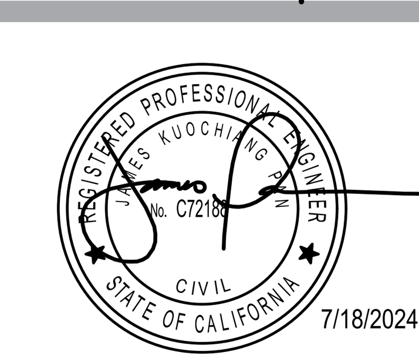
7 TYP
SLAB CONSTRUCTION JOINT
SCALE: NOT TO SCALE

No.	Issue	Checked	Approved	Date
	Conformed Drawings	GT	GT	07/18/2024

Author CFB | Drafting Check MGK | Project Manager G. TOMASINO
Designer MGK | Design Check MGK | Project Director M. KENNEDY

CONFORMED DRAWINGS

Bar is one inch on original size sheet
0 1"



7/18/2024

GHD Inc.
2235 Mercury Way Suite 150
Santa Rosa California 95407 USA
T 1 707 523 1010 F 1 707 527 8679
www.ghd.com

Client **COUNTY OF SONOMA**

Project **LEACHATE TANK REPLACEMENT**

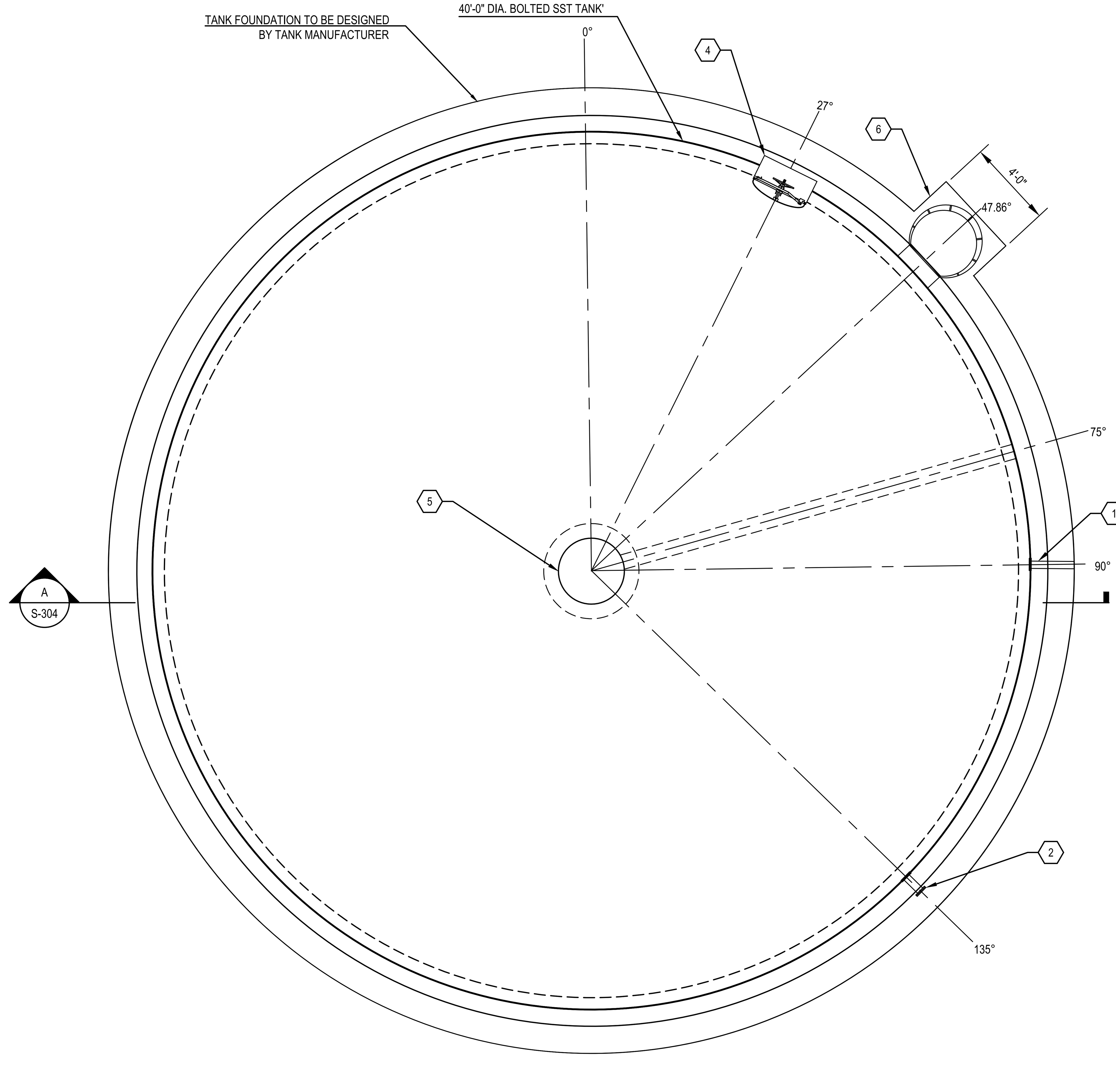
Project No. 12558724 | Date 7/18/2024 | Scale AS SHOWN

Title **TYPICAL STRUCTURAL DETAILS**

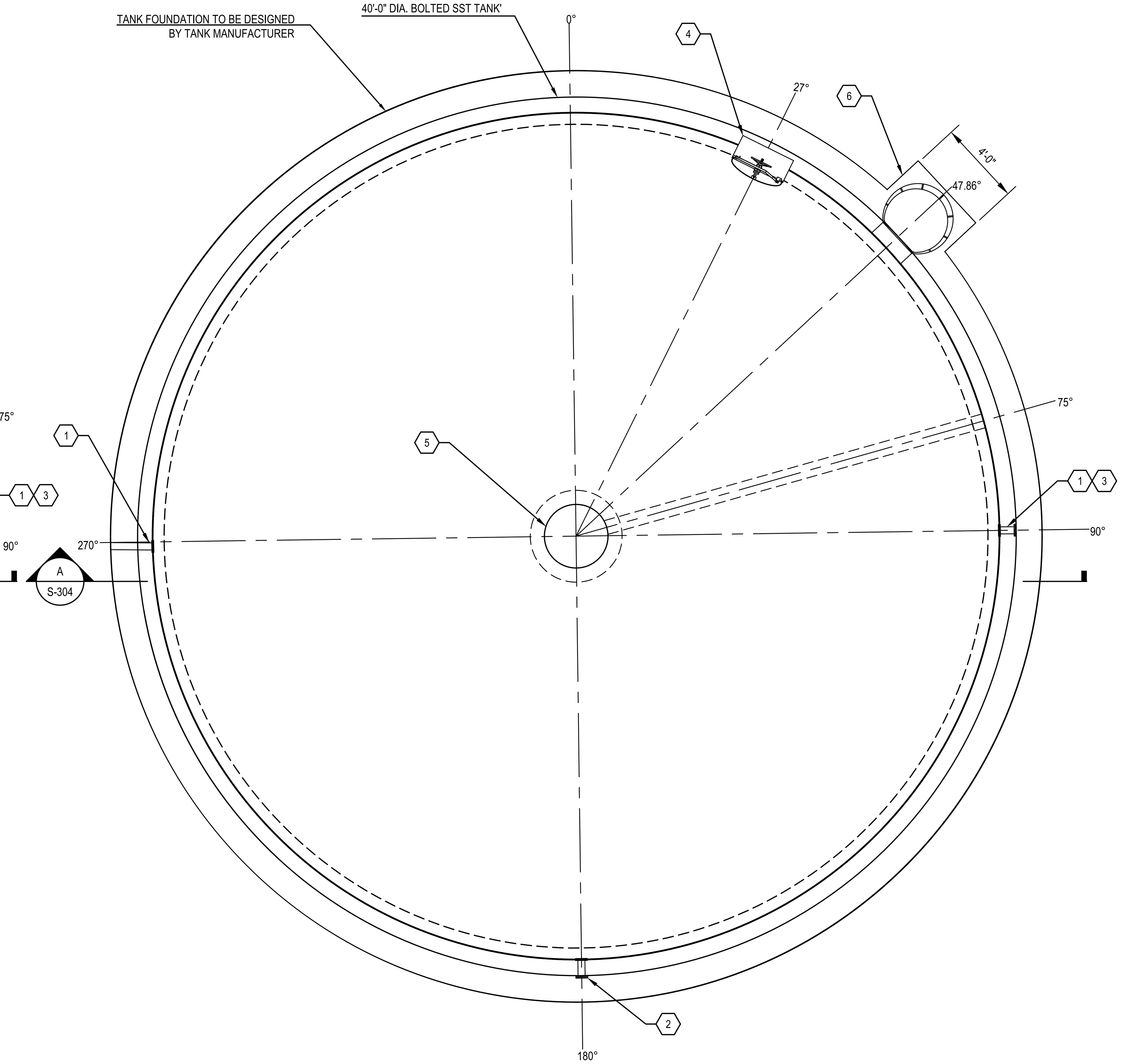
Size ANSI D

Drawing No. S-004

Plot Date: 18 July 2024 - 3:33 PM   Plotted By: Steven Toft   Filename: \\ghdnet\ghd\US\San Francisco\Projects\561\12558724\Digital_Design\ACAD\Sheets\Leachate Tanks\12558724-GHD-0001-DWG-ST-0004.dwg



1 S-101 **TANK 1 PLAN**
SCALE: NTS



2 S-101 **TANK 2 PLAN**
SCALE: NTS

KEYNOTES

1. (N) 2" SST INFLUENT/FILL
2. (N) 4" SST DISCHARGE/ DRAIN
3. (N) LIQUID LEVEL INDICATOR
4. (N) 32" MANWAY
5. (N) DRAIN SUMP
6. (N) BOTTOM LANDING

SHEET NOTES

GENERAL

1. DESIGN CRITERIA: 2019 CALIFORNIA BUILDING CODE (2019 CBC)
   ASCE 7-16
   ACI 318-14
   AWWA D103-09

2. LOADS:
   RISK CATEGORY = III, AWWA SEISMIC USE GROUP = II
   ROOF LIVE LOADS: 20 PSF (REDUCTIONS TAKEN AS ALLOWED BY BUILDING CODE)
   GROUND SNOW LOAD: P_g = 0 PSF
   WIND LOADS:
   MAIN FORCE RESISTING SYSTEM:
   BASIC WIND SPEED: V = 102 MPH
   EXPOSURE CATEGORY: C
   SEISMIC LOADS:
   SEISMIC IMPORTANCE FACTOR: I_E = 1.50
   MAPPED SPECTRAL RESPONSE ACCELERATION PARAMETERS:
   S_S = 1.50 g S_1 = 0.60 g
   SOIL SITE CLASS: C
   DESIGN SPECTRAL RESPONSE ACCELERATION PARAMETERS:
   S_{DS} = 1.20 g S_{D1} = 0.56 g
   SEISMIC DESIGN CATEGORY: D

FOUNDATIONS

1. FOUNDATION DESIGN BASED UPON RECOMMENDATIONS CONTAINED IN PROJECT GEOTECHNICAL REPORT FOR GUERNEVILLE LEACHATE TANKS DATED JANUARY 19, 2022 BY MILLER PACIFIC ENGINEERING GROUP
2. FOUNDATION DESIGN CRITERIA:
   MINIMUM DEPTH: 18 INCHES
   ALLOWABLE BEARING CAPACITY: 3,000 PSF DL + LL
   BASE FRICTION COEFFICIENT: 0.35
   LATERAL PASSIVE RESISTANCE: 350 PCF

No.	Issue	Checked	Approved	Date
	Conformed Drawings	GT	GT	07/18/2024

Author DRA Drafting Check MGK Project Manager G. TOMASINO
Designer MGK Design Check MGK Project Director M. KENNEDY

CONFORMED DRAWINGS

Bar is one inch on original size sheet
0 1"

REGISTERED PROFESSIONAL ENGINEER – STATE OF CALIFORNIA – CIVIL – No. C7218
7/18/2024

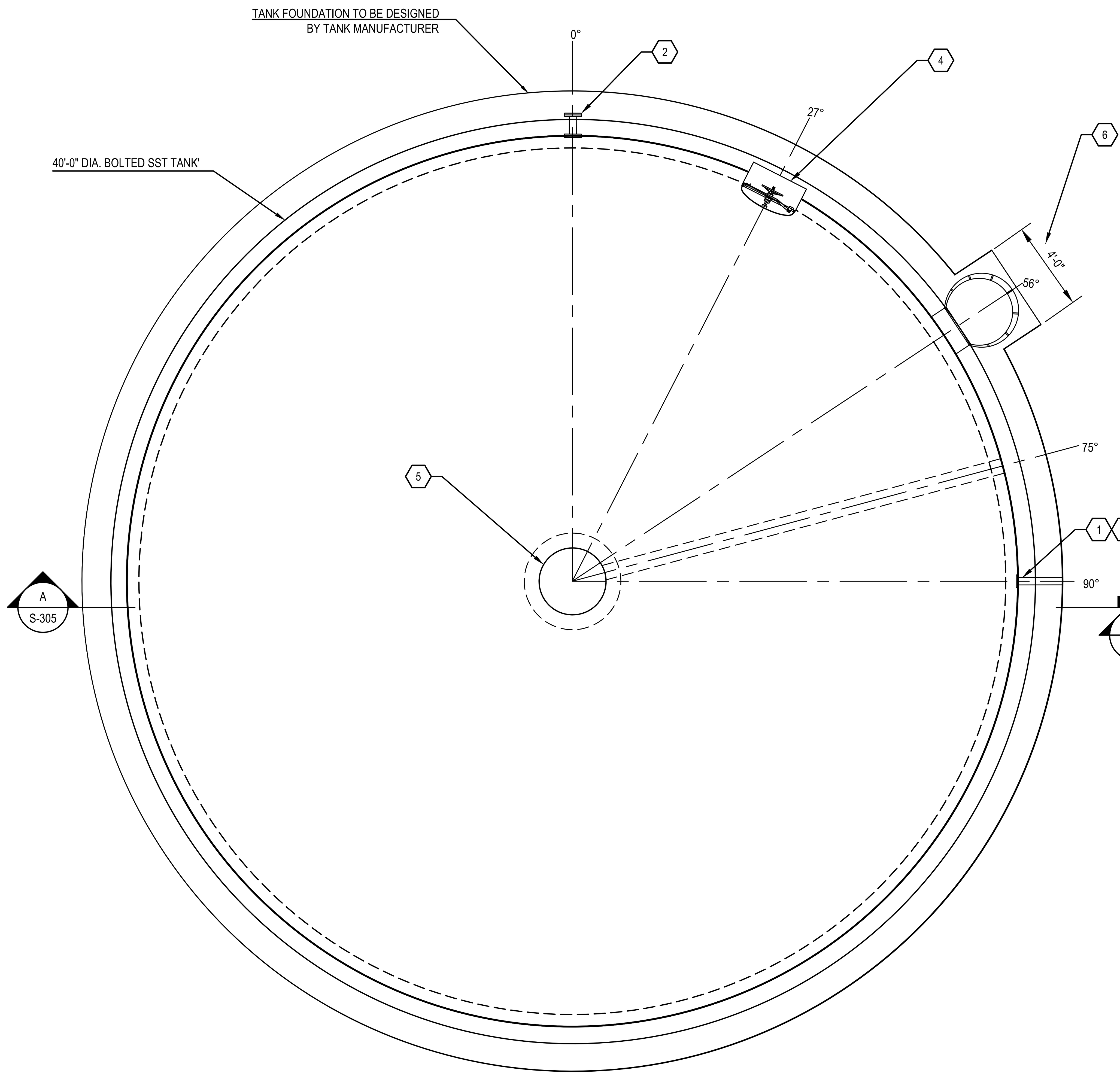
GHD Inc.
2235 Mercury Way Suite 150
Santa Rosa California 95407 USA
T 1 707 523 1010 F 1 707 527 8679
www.ghd.com

Client **COUNTY OF SONOMA**
Project **LEACHATE TANK REPLACEMENT**

Project No. 12558724 Date 7/18/2024 Scale AS SHOWN

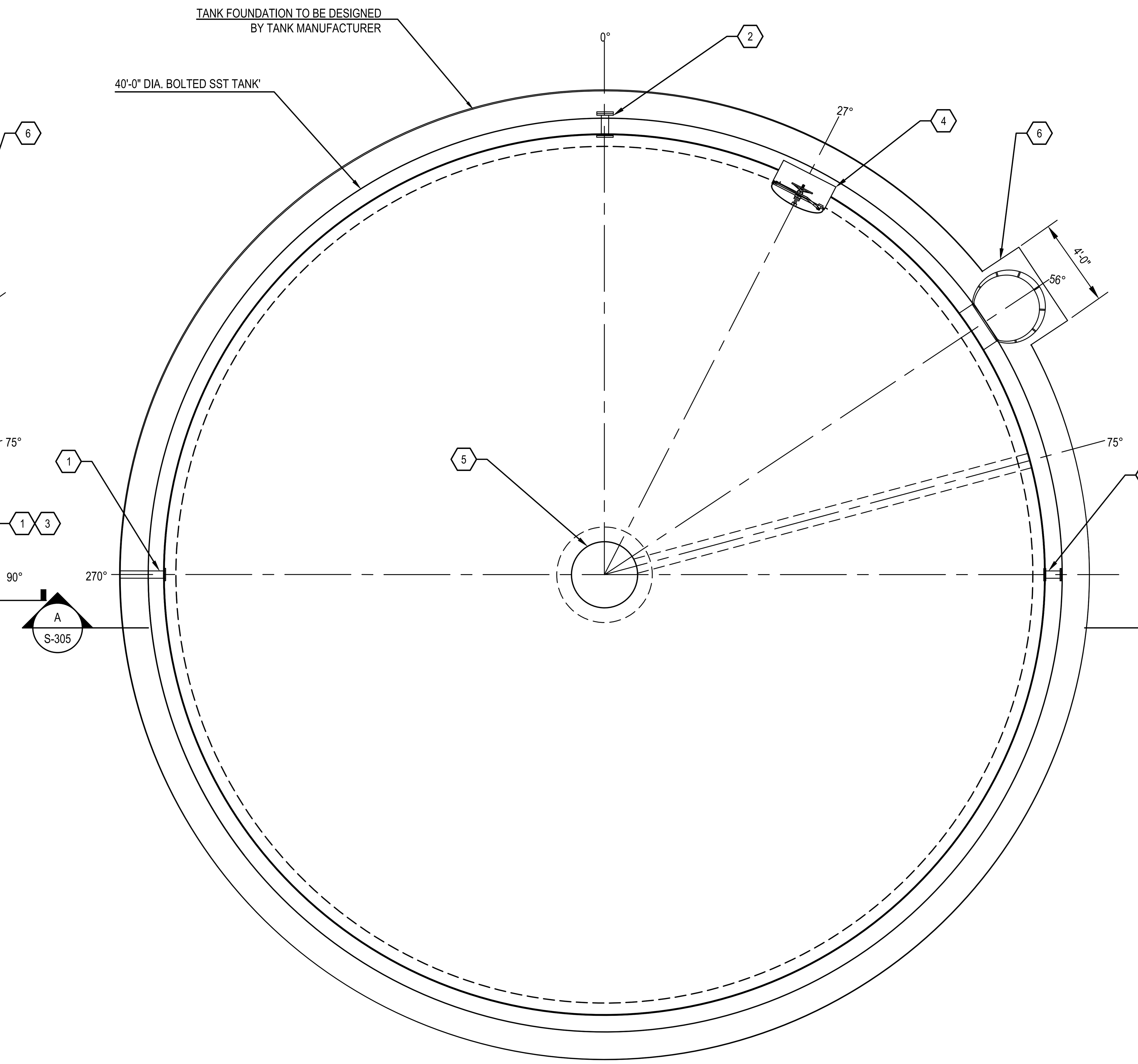
Title **TANK FOUNDATION PLAN - GUERNEVILLE SITE**

Size ANSI D
Drawing No. S-101



TANK 1 PLAN

1 / S-102 — SCALE: NTS



TANK 2 PLAN

2 / S-102 — SCALE: NTS

KEYNOTES

1. (N) 2" SST INFLUENT/FILL
2. (N) 4" SST DISCHARGE/ DRAIN
3. (N) LIQUID LEVEL INDICATOR
4. (N) 32" MANWAY
5. (N) DRAIN SUMP
6. (N) BOTTOM LANDING

SHEET NOTES

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   ACI 318-14
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2. LOADS:
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   ROOF LIVE LOADS: 20 PSF (REDUCTIONS TAKEN AS ALLOWED BY BUILDING CODE)
   GROUND SNOW LOAD: P_g = 0 PSF
   WIND LOADS:
   MAIN FORCE RESISTING SYSTEM:
   BASIC WIND SPEED: V = 102 MPH
   EXPOSURE CATEGORY: C
   SEISMIC LOADS:
   SEISMIC IMPORTANCE FACTOR: I_E = 1.50
   MAPPED SPECTRAL RESPONSE ACCELERATION PARAMETERS:
   S_S = 1.50 g — S_1 = 0.60 g
   SOIL SITE CLASS: C
   DESIGN SPECTRAL RESPONSE ACCELERATION PARAMETERS:
   S_{DS} = 1.20 g — S_{D1} = 0.56 g
   SEISMIC DESIGN CATEGORY: D

FOUNDATIONS

1. FOUNDATION DESIGN BASED UPON RECOMMENDATIONS CONTAINED IN PROJECT GEOTECHNICAL REPORT FOR ROBLAR LEACHATE TANKS DATED JANUARY 19, 2022 BY MILLER PACIFIC ENGINEERING GROUP
2. FOUNDATION DESIGN CRITERIA:
   MINIMUM DEPTH: 18 INCHES
   ALLOWABLE BEARING CAPACITY: 3,000 PSF DL + LL
   BASE FRICTION COEFFICIENT: 0.35
   LATERAL PASSIVE RESISTANCE: 350 PCF

No.	Issue	Checked	Approved	Date
	Conformed Drawings	GT	GT	07/18/2024

Author DRA — Drafting Check MGK — Project Manager G. TOMASINO

Designer MGK — Design Check MGK — Project Director M. KENNEDY

CONFORMED DRAWINGS

Bar is one inch on original size sheet
0 — 1"

REGISTERED PROFESSIONAL ENGINEER — JAMES KUOCHIANG PAN — No. C72188 — CIVIL — STATE OF CALIFORNIA
7/18/2024

GHD Inc.
2235 Mercury Way Suite 150
Santa Rosa California 95407 USA
T 1 707 523 1010 F 1 707 527 8679
www.ghd.com

Client **COUNTY OF SONOMA**

Project **LEACHATE TANK REPLACEMENT**

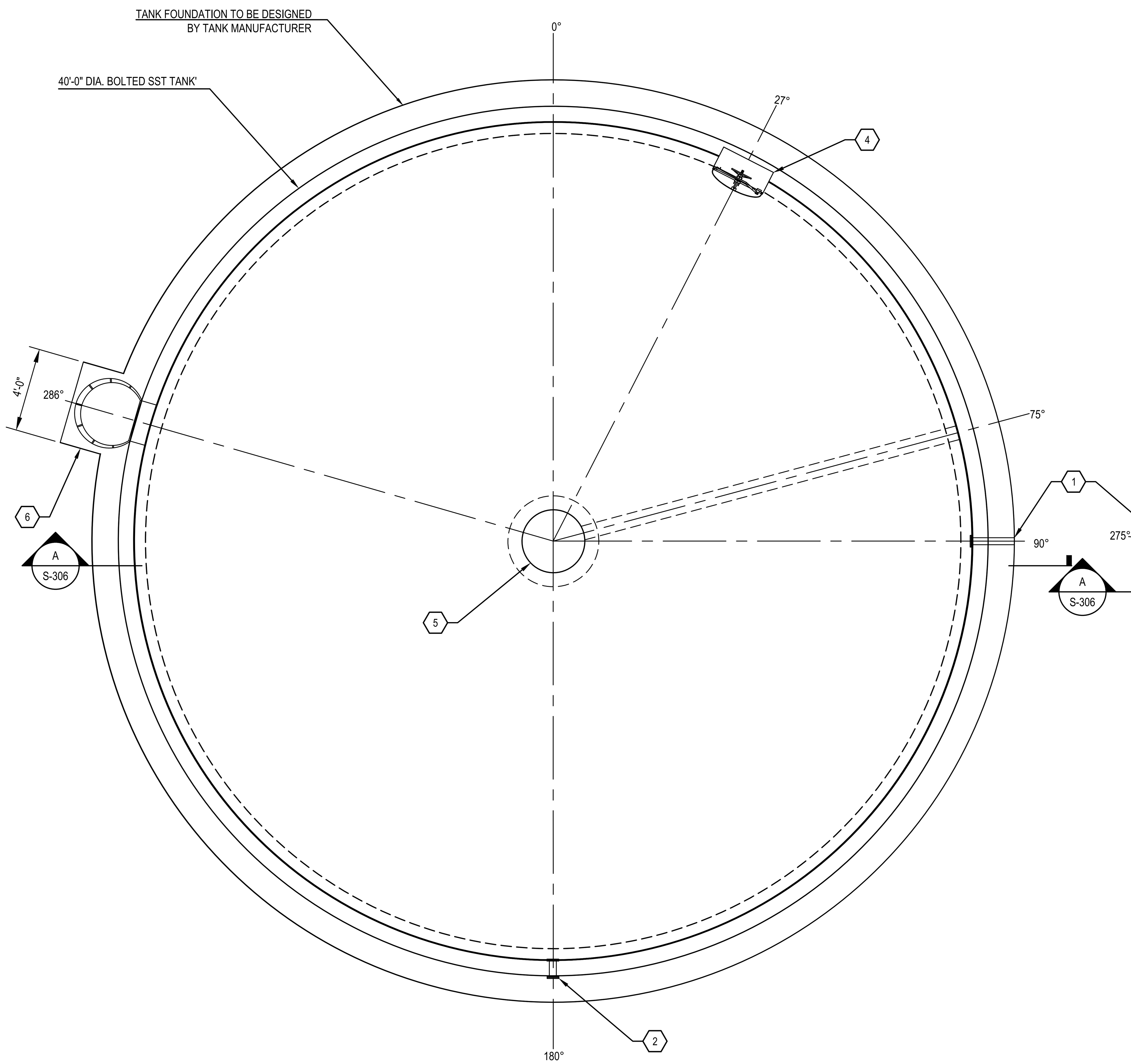
Project No. 12558724 — Date 7/18/2024 — Scale AS SHOWN

Title **TANK FOUNDATION PLAN - ROBLAR SITE**

Size ANSI D

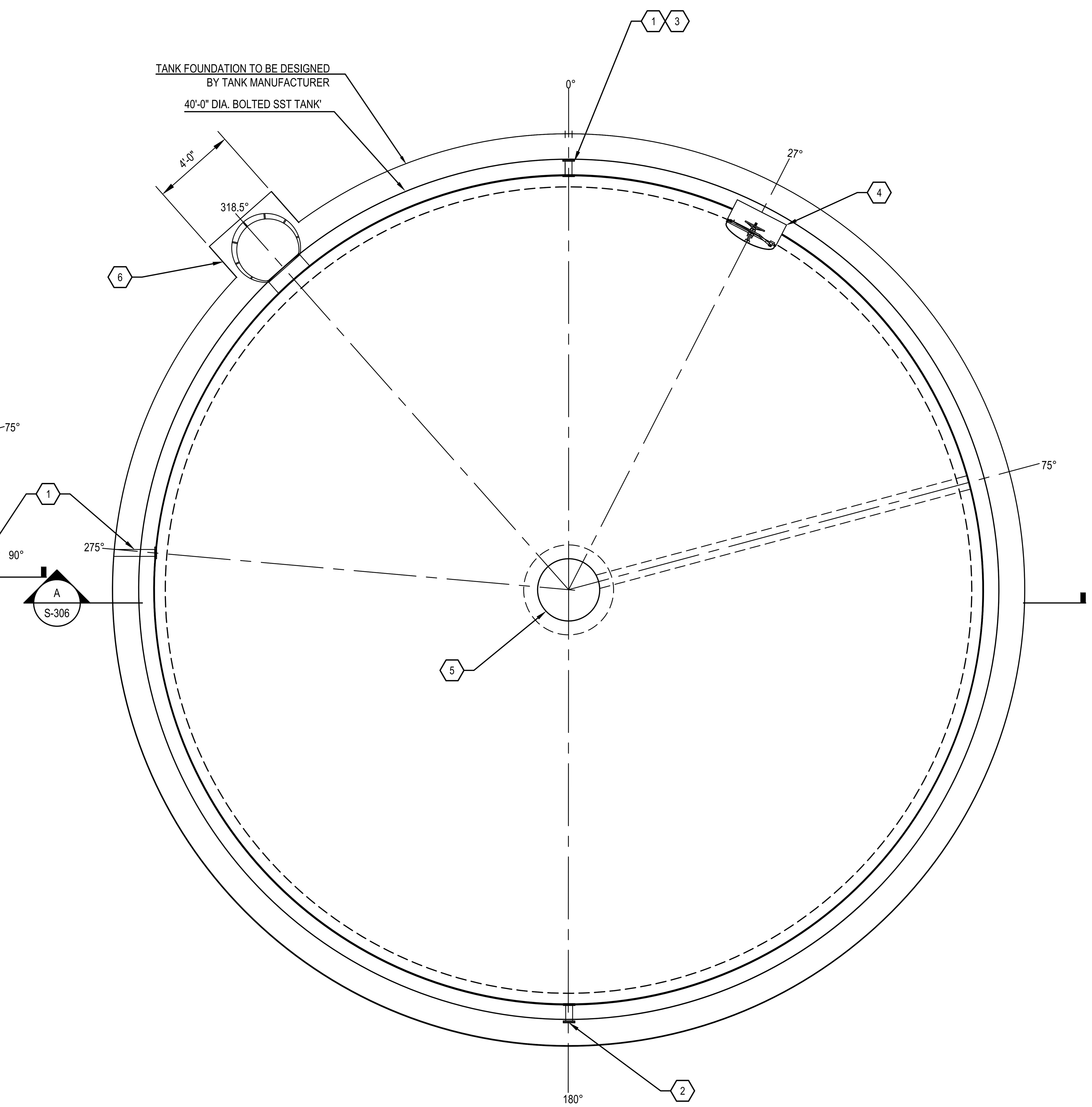
Drawing No. S-102

Plot Date: 18 July 2024 - 3:35 PM — Plotted By: Steven Toft — Filename: \\ghdnet\ghd\US\San Francisco\Projects\561\12558724\Digital_Design\ACAD\Sheets\Leachate Tanks\12558724-GHD-0001-DWG-ST-0102.dwg



1 S-103 **TANK 1 PLAN**

SCALE: NTS



2 S-103 **TANK 2 PLAN**

SCALE: NTS

KEYNOTES

1. (N) 2" SST INFLUENT/FILL
2. (N) 4" SST DISCHARGE/ DRAIN
3. (N) LIQUID LEVEL INDICATOR
4. (N) 32" MANWAY
5. (N) DRAIN SUMP
6. (N) BOTTOM LANDING

SHEET NOTES

GENERAL

1. DESIGN CRITERIA: 2019 CALIFORNIA BUILDING CODE (2019 CBC)
   ASCE 7-16
   ACI 318-14
   AWWA D103-09

2. LOADS:
   RISK CATEGORY = III, AWWA SEISMIC USE GROUP = II
   ROOF LIVE LOADS: 20 PSF (REDUCTIONS TAKEN AS ALLOWED BY BUILDING CODE)
   GROUND SNOW LOAD: P_g = 0 PSF
   WIND LOADS:
   MAIN FORCE RESISTING SYSTEM:
   BASIC WIND SPEED: V = 102 MPH
   EXPOSURE CATEGORY: C
   SEISMIC LOADS:
   SEISMIC IMPORTANCE FACTOR: I_E = 1.50
   MAPPED SPECTRAL RESPONSE ACCELERATION PARAMETERS:
   S_S = 2.52 g S_1 = 0.97 g
   SOIL SITE CLASS: C
   DESIGN SPECTRAL RESPONSE ACCELERATION PARAMETERS:
   S_{DS} = 2.01 g S_{D1} = 0.90 g
   SEISMIC DESIGN CATEGORY: E

FOUNDATIONS

1. FOUNDATION DESIGN BASED UPON RECOMMENDATIONS CONTAINED IN PROJECT GEOTECHNICAL REPORT FOR SONOMA LEACHATE TANKS DATED JANUARY 19, 2022 BY MILLER PACIFIC ENGINEERING GROUP
2. FOUNDATION DESIGN CRITERIA:
   MINIMUM DEPTH: 18 INCHES
   ALLOWABLE BEARING CAPACITY: 3,000 PSF DL + LL
   BASE FRICTION COEFFICIENT: 0.35
   LATERAL PASSIVE RESISTANCE: 350 PCF

No.	Issue	Checked	Approved	Date
	Conformed Drawings	GT	GT	07/18/2024

Author **DRA** Drafting Check **MGK** Project Manager **G. TOMASINO**
Designer **MGK** Design Check **MGK** Project Director **M. KENNEDY**

CONFORMED DRAWINGS

Bar is one inch on original size sheet
0 1"

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GHD Inc.
2235 Mercury Way Suite 150
Santa Rosa California 95407 USA
T 1 707 523 1010 F 1 707 527 8679
www.ghd.com

Client **COUNTY OF SONOMA**

Project **LEACHATE TANK REPLACEMENT**

Title **TANK FOUNDATION PLAN - SONOMA SITE**

Size **ANSI D**

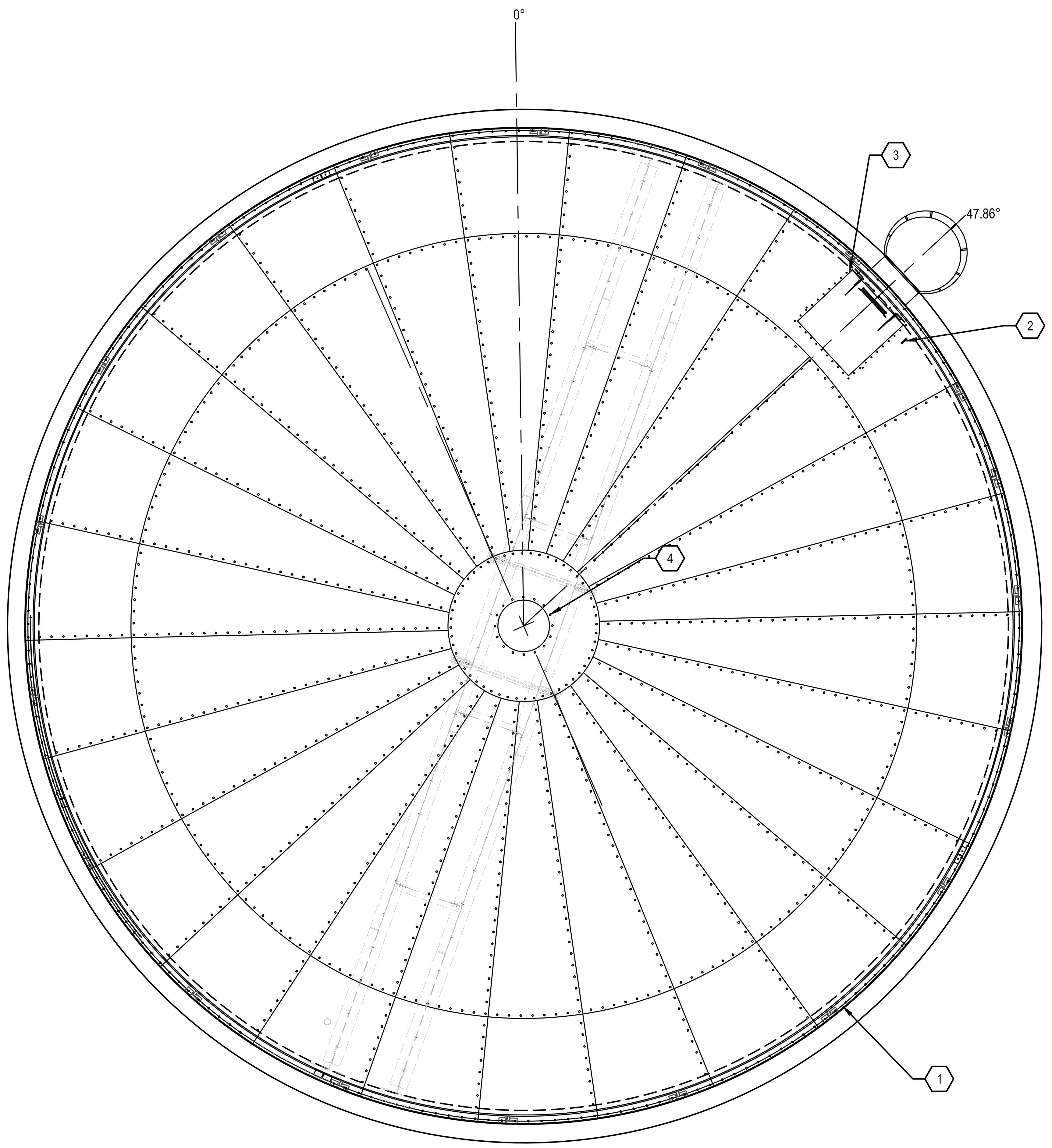
Project No.	Date	Scale
12558724	7/18/2024	AS SHOWN

Drawing No. **S-103**

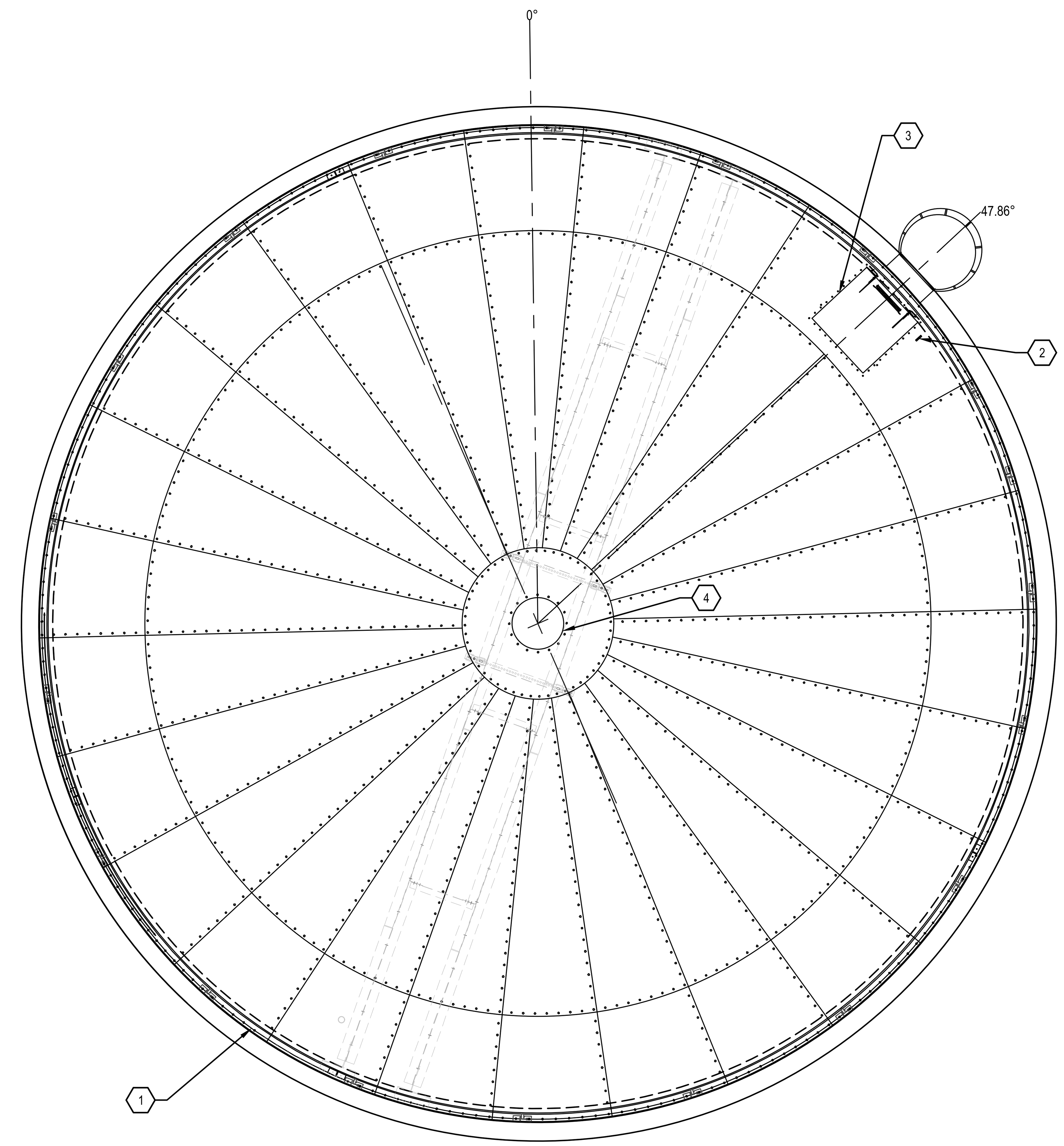
Plot Date: 18 July 2024 - 3:36 PM Plotted By: Steven Toft Filename: \\ghdnet\ghd\US\San Francisco\Projects\561\12558724\Digital_Design\ACAD\Sheets\Leachate Tanks\12558724-GHD-0001-DWG-ST-0103.dwg

KEYNOTES

1. STAINLESS STEEL PERIMETER GUARDRAIL
2. STAINLESS STEEL TIEOFF
3. 36" X 36" STAINLESS STEEL ROOF HATCH
4. Ø17 1/2" SST ROOF VENT, SEE DETAIL 3/S-503



1 / S-104 TANK 1 ROOF PLAN
SCALE: NTS



2 / S-104 TANK 2 ROOF PLAN
SCALE: NTS

No.	Issue	Checked	Approved	Date
	Conformed Drawings	GT	GT	07/18/2024

Author **DRA** Drafting Check **MGK** Project Manager **G. TOMASINO**
Designer **MGK** Design Check **MGK** Project Director **M. KENNEDY**

CONFORMED DRAWINGS

Bar is one inch on original size sheet
0 1"

REGISTERED PROFESSIONAL ENGINEER JAMES KUOCHIANG PAN No. C72188 CIVIL STATE OF CALIFORNIA
7/18/2024

GHD Inc.
2235 Mercury Way Suite 150
Santa Rosa California 95407 USA
T 1 707 523 1010 F 1 707 527 8679
www.ghd.com

Client **COUNTY OF SONOMA**
Project **LEACHATE TANK REPLACEMENT**

Title **TANK ROOF PLAN - GUERNEVILLE SITE**

Size **ANSI D**

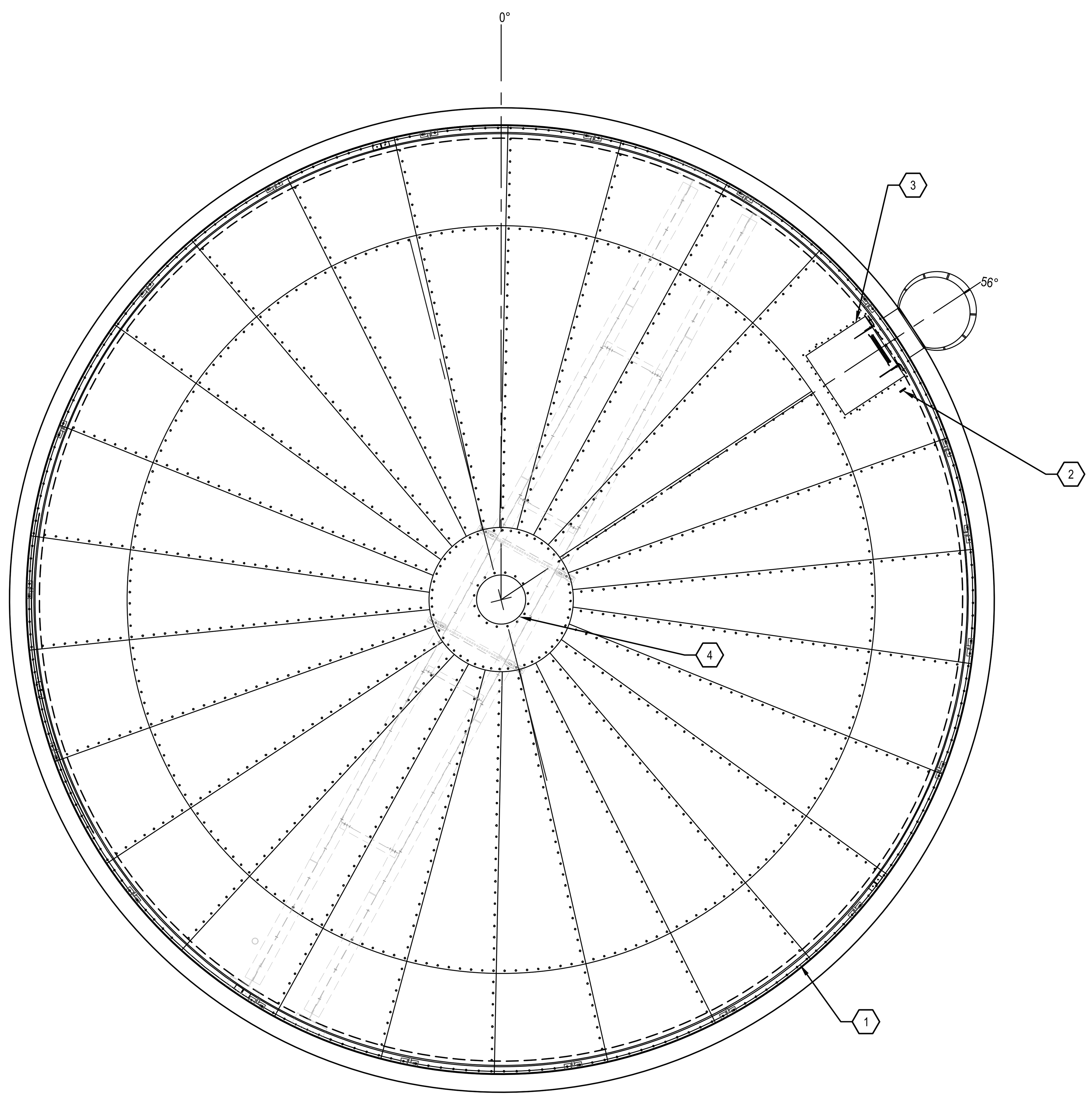
Project No.	Date	Scale
12558724	7/18/2024	AS SHOWN

Drawing No. **S-104**

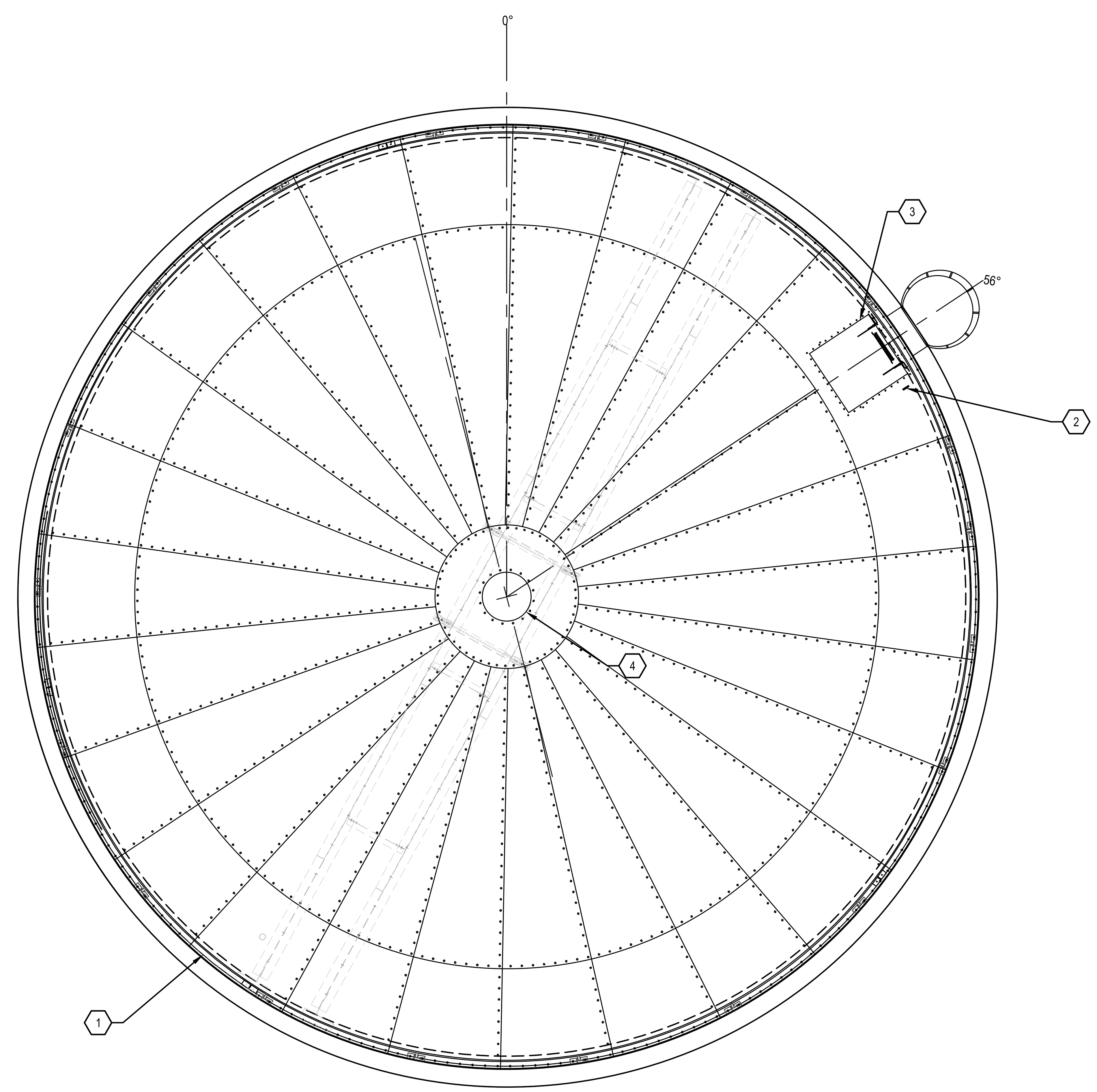
Plot Date: 18 July 2024 - 3:38 PM Plotted By: Steven Toft Filename: \\ghdnet\ghd\US\San Francisco\Projects\561\12558724\Digital_Design\ACAD\Sheets\Leachate Tanks\12558724-GHD-0001-DWG-ST-0104.dwg

KEYNOTES

1. STAINLESS STEEL PERIMETER GUARDRAIL
2. STAINLESS STEEL TIEOFF
3. 36" X 36" STAINLESS STEEL ROOF HATCH
4. Ø17 1/2" SST ROOF VENT, SEE DETAIL 3/S-503



1 / S-105 **TANK 1 ROOF PLAN**
SCALE: NTS



2 / S-105 **TANK 2 ROOF PLAN**
SCALE: NTS

No.	Issue	Checked	Approved	Date
	Conformed Drawings	GT	GT	07/18/2024

Author **DRA** Drafting Check **MGK** Project Manager **G. TOMASINO**
Designer **MGK** Design Check **MGK** Project Director **M. KENNEDY**

CONFORMED DRAWINGS

Bar is one inch on original size sheet
0 1"

REGISTERED PROFESSIONAL ENGINEER JAMES KUOCHIANG PAN No. C72188 CIVIL STATE OF CALIFORNIA
7/18/2024

GHD Inc.
2235 Mercury Way Suite 150
Santa Rosa California 95407 USA
T 1 707 523 1010 **F** 1 707 527 8679
www.ghd.com

Client **COUNTY OF SONOMA**
Project **LEACHATE TANK REPLACEMENT**

Title **TANK ROOF PLAN - ROBLAR SITE**

Size **ANSI D**

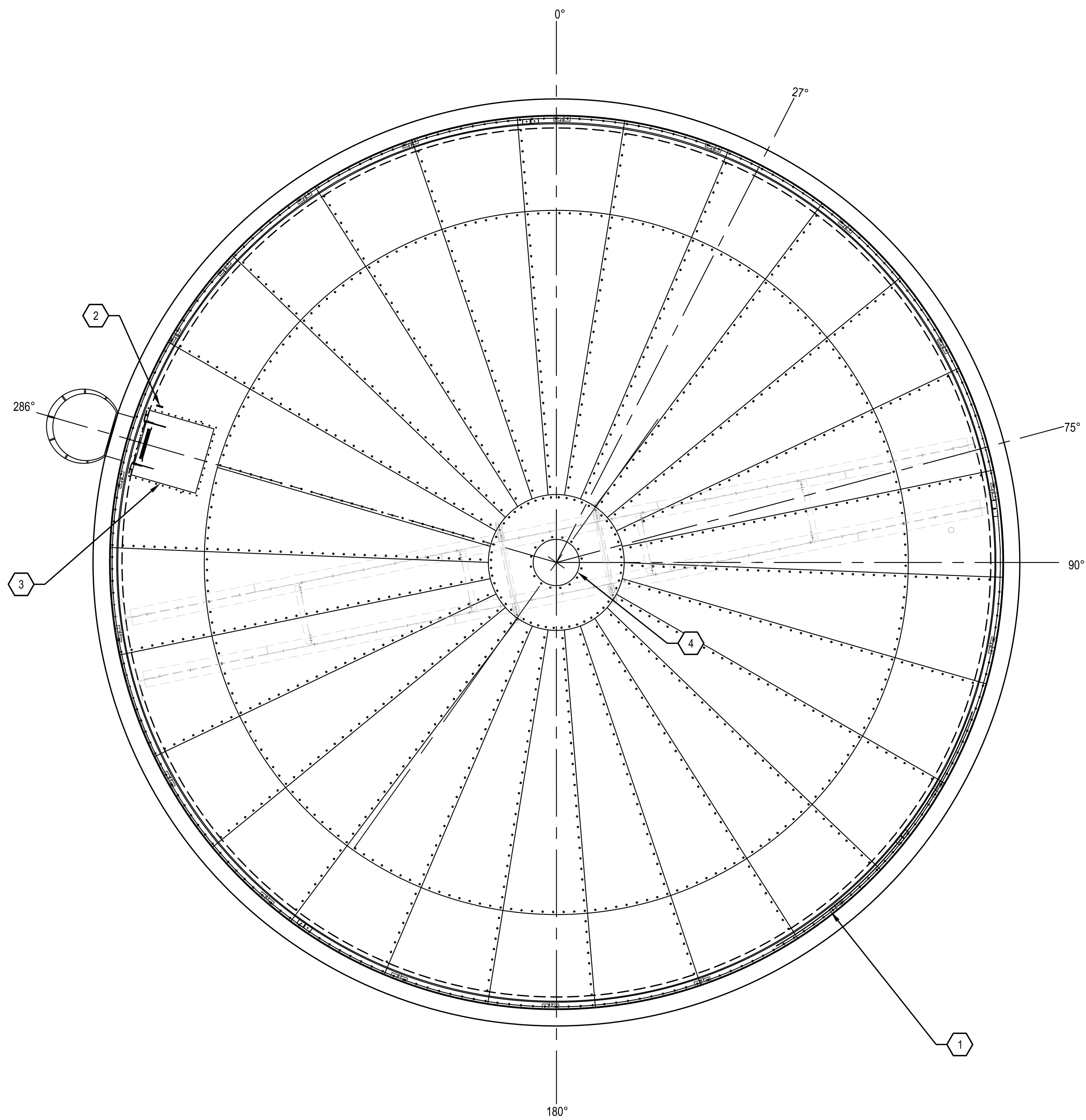
Project No.	Date	Scale
12558724	**7/18/2024**	**AS SHOWN**

Drawing No. **S-105**

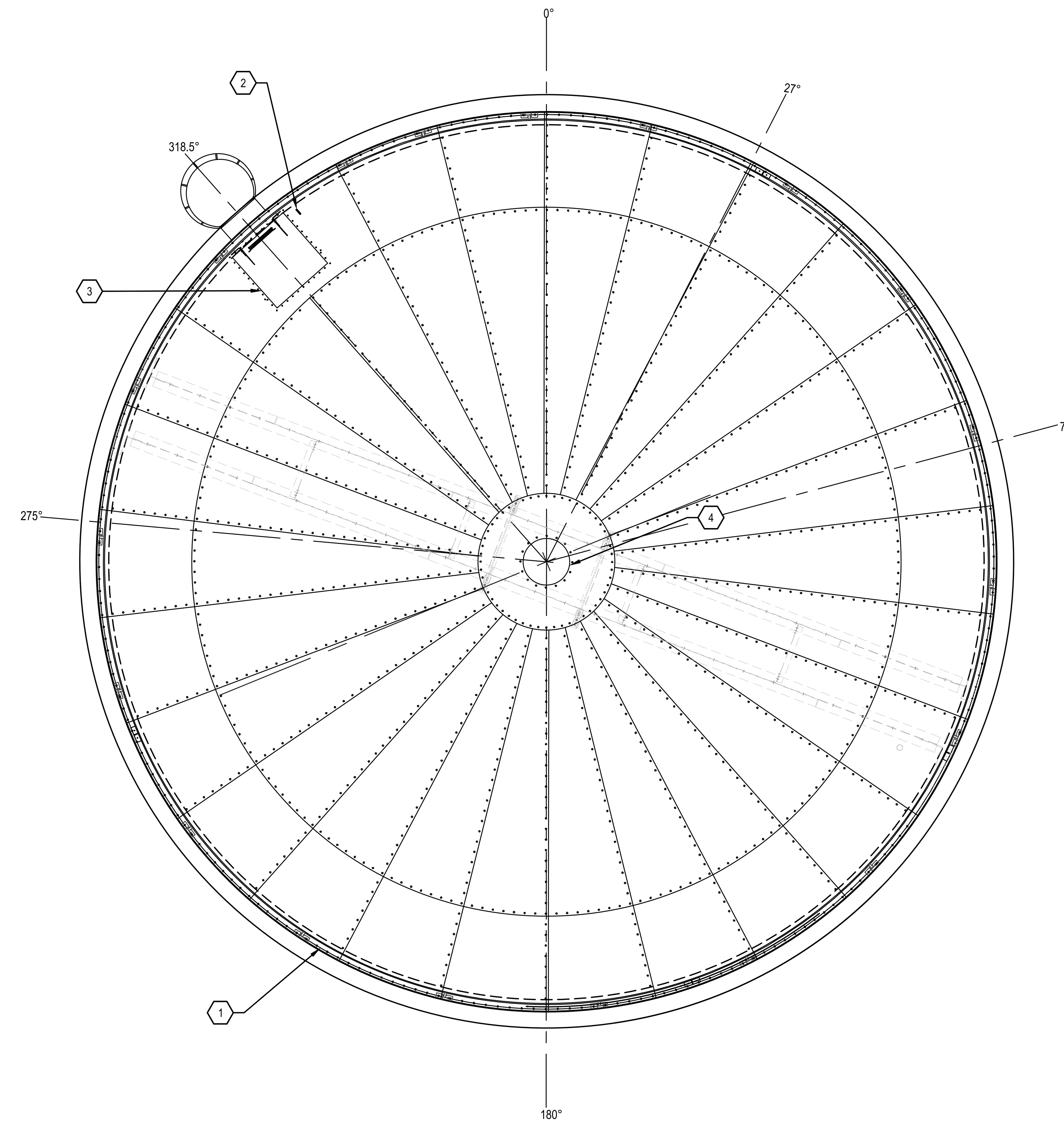
Plot Date: 18 July 2024 - 3:39 PM Plotted By: Steven Toft Filename: \\ghdnet\ghd\US\San Francisco\Projects\561\12558724\Digital_Design\ACAD\Sheets\Leachate Tanks\12558724-GHD-0001-DWG-ST-0105.dwg

KEYNOTES

1. STAINLESS STEEL PERIMETER GUARDRAIL
2. STAINLESS STEEL TIEOFF
3. 36" X 36" STAINLESS STEEL ROOF HATCH
4. Ø17 1/2" SST ROOF VENT, SEE DETAIL 3/S-503



1 / S-106 TANK 1 ROOF PLAN
SCALE: NTS



2 / S-106 TANK 2 ROOF PLAN
SCALE: NTS

No.	Issue	Checked	Approved	Date
	Conformed Drawings	GT	GT	07/18/2024

Author **DRA** Drafting Check **MGK** Project Manager **G. TOMASINO**
Designer **MGK** Design Check **MGK** Project Director **M. KENNEDY**

CONFORMED DRAWINGS

Bar is one inch on original size sheet
0 1"

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7/18/2024

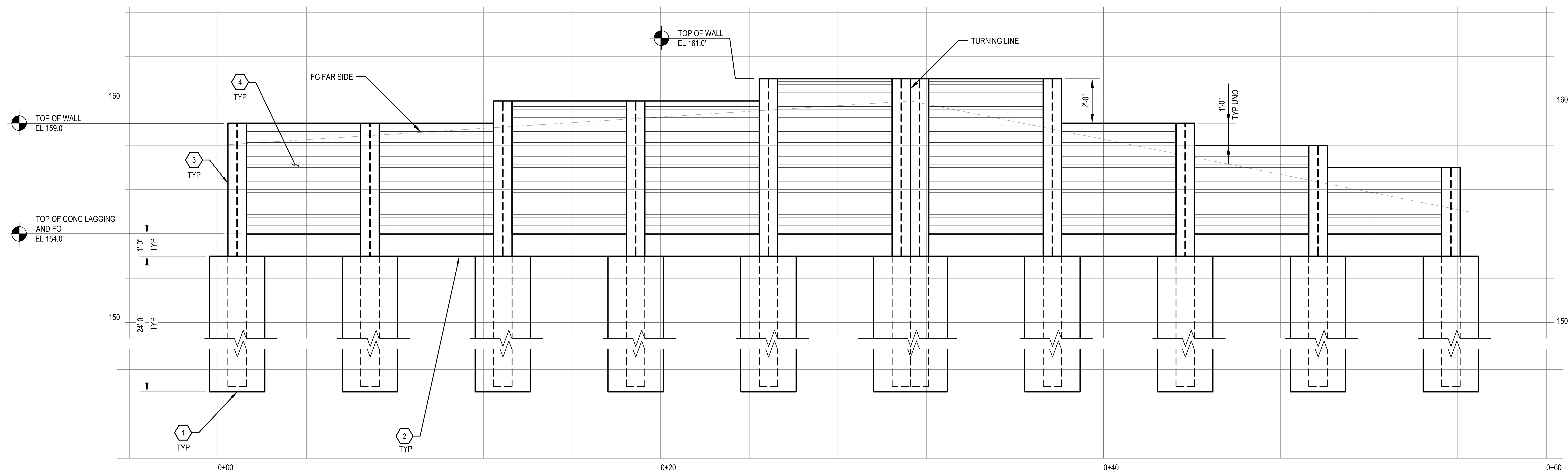
GHD Inc.
2235 Mercury Way Suite 150
Santa Rosa California 95407 USA
T 1 707 523 1010 F 1 707 527 8679
www.ghd.com

Client **COUNTY OF SONOMA**
Project **LEACHATE TANK REPLACEMENT**
Title **TANK ROOF PLAN - SONOMA SITE**

Project No.	Date	Scale
12558724	7/18/2024	AS SHOWN

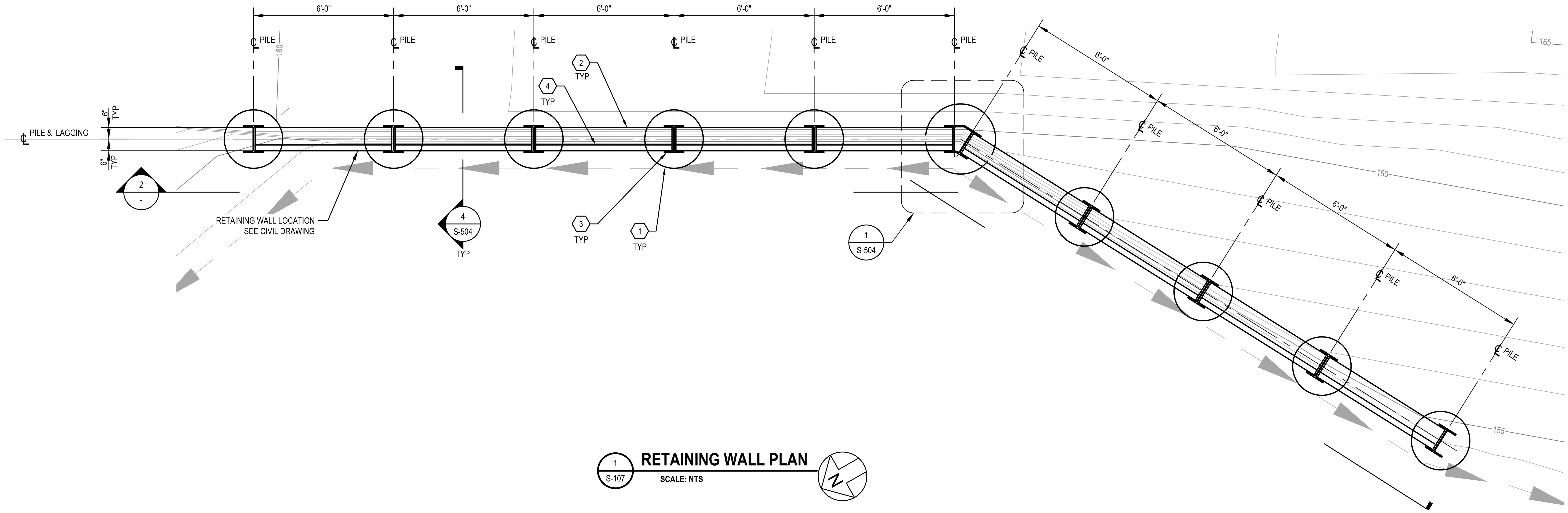
Size **ANSI D**
Drawing No. **S-106**
Sheet No. 25 of 48

Plot Date: 18 July 2024 - 3:40 PM Plotted By: Steven Toft Filename: \\ghdnet\ghd\US\San Francisco\Projects\561\12558724\Digital_Design\ACAD\Sheets\Leachate Tanks\12558724-GHD-0001-DWG-ST-0106.dwg



RETAINING WALL ELEVATION

2 S-107 SCALE: NTS



RETAINING WALL PLAN

1 S-107 SCALE: NTS

KEYNOTES

1. CAST-IN DRILLED HOLE CONCRETE, SEE DETAIL 4/S-504
2. PRE-CAST LAGGING, SEE DETAIL 3/S-504
3. W14x61 STEEL SOLDIER PILE, SEE DETAIL 4/S-504
4. METAL DECK LAGGING, SEE DETAIL4/S-504

No.	Issue	Checked	Approved	Date
	Conformed Drawings	GT	GT	07/18/2024

Author DRA | Drafting Check MGK | Project Manager G. TOMASINO
Designer MGK | Design Check MGK | Project Director M. KENNEDY

CONFORMED DRAWINGS

Bar is one inch on original size sheet
0 1"

7/18/2024

GHD Inc.
2235 Mercury Way Suite 150
Santa Rosa California 95407 USA
T 1 707 523 1010 F 1 707 527 8679
www.ghd.com

Client **COUNTY OF SONOMA**

Project **LEACHATE TANK REPLACEMENT**

Project No. 12558724 | Date 7/18/2024 | Scale AS SHOWN

Title **RETAINING WALL PLAN & ELEVATION - ROBLAR SITE**

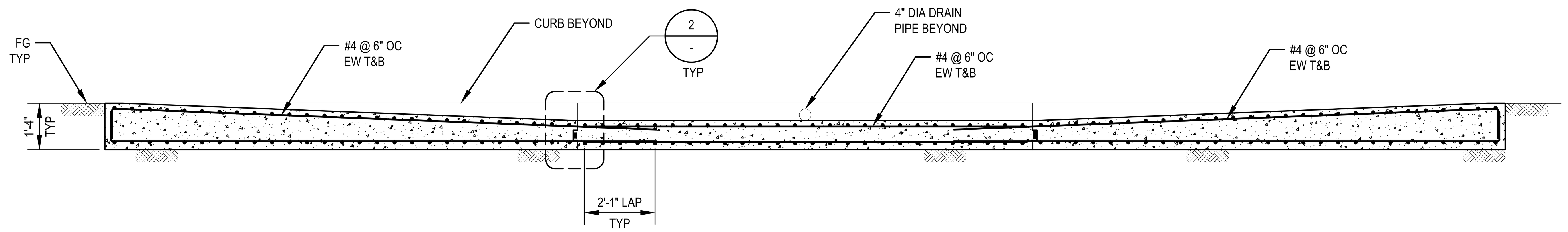
Size ANSI D

Drawing No. S-107

Plot Date: 18 July 2024 - 3:41 PM Plotted By: Steven Toft Filename: \\ghdnet\ghd\US\San Francisco\Projects\561\12558724\Digital_Design\ACAD\Sheets\Leachate Tanks\12558724-GHD-0001-DWG-ST-0107.dwg

SHEET NOTES

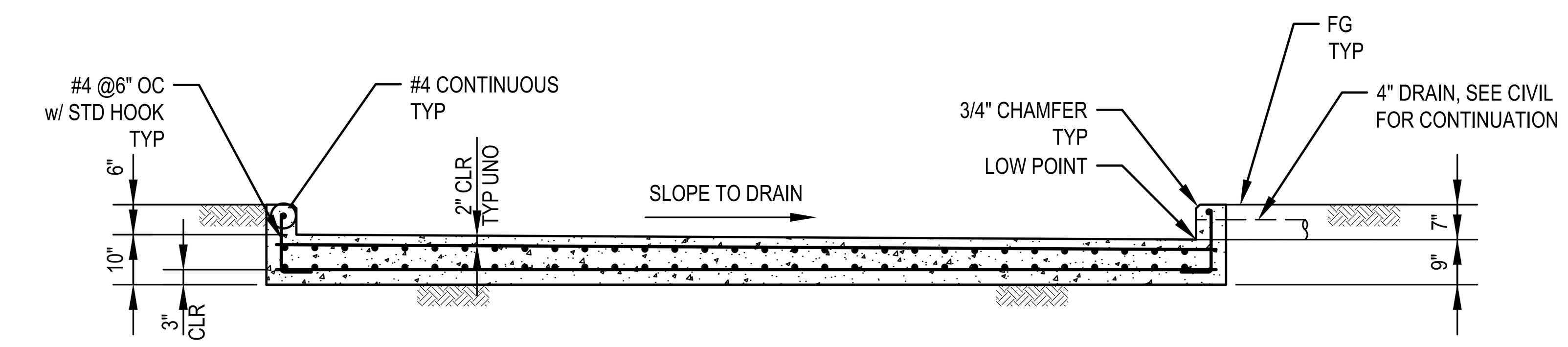
1. FOR CONTAINMENT PAD LOCATION, SEE CIVIL SHEETS



A / S-108 **CONTAINMENT PAD SECTION**

SCALE: 3/8"=1'-0"

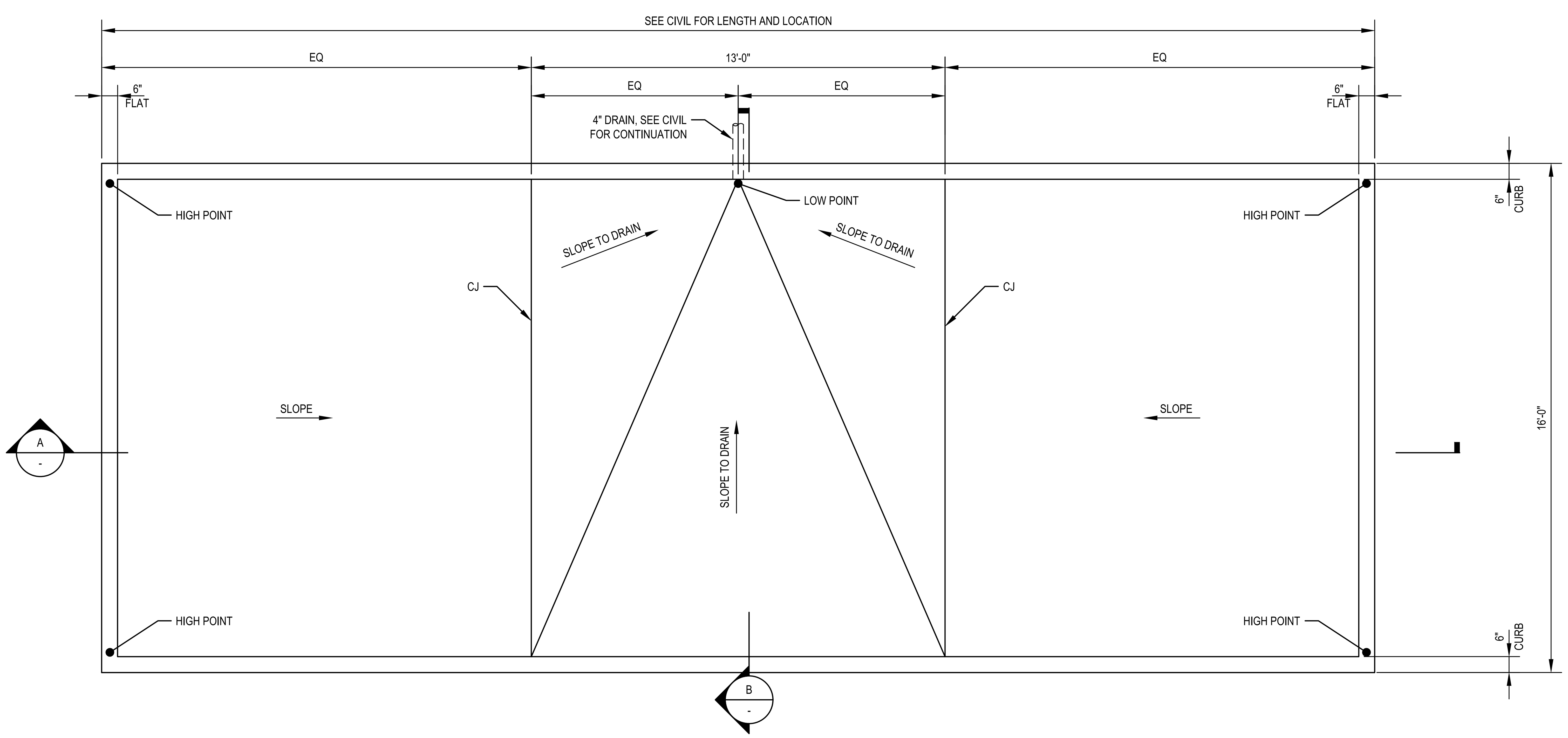
0 2' 4' 6'



B / S-108 **CONTAINMENT PAD SECTION**

SCALE: 3/8"=1'-0"

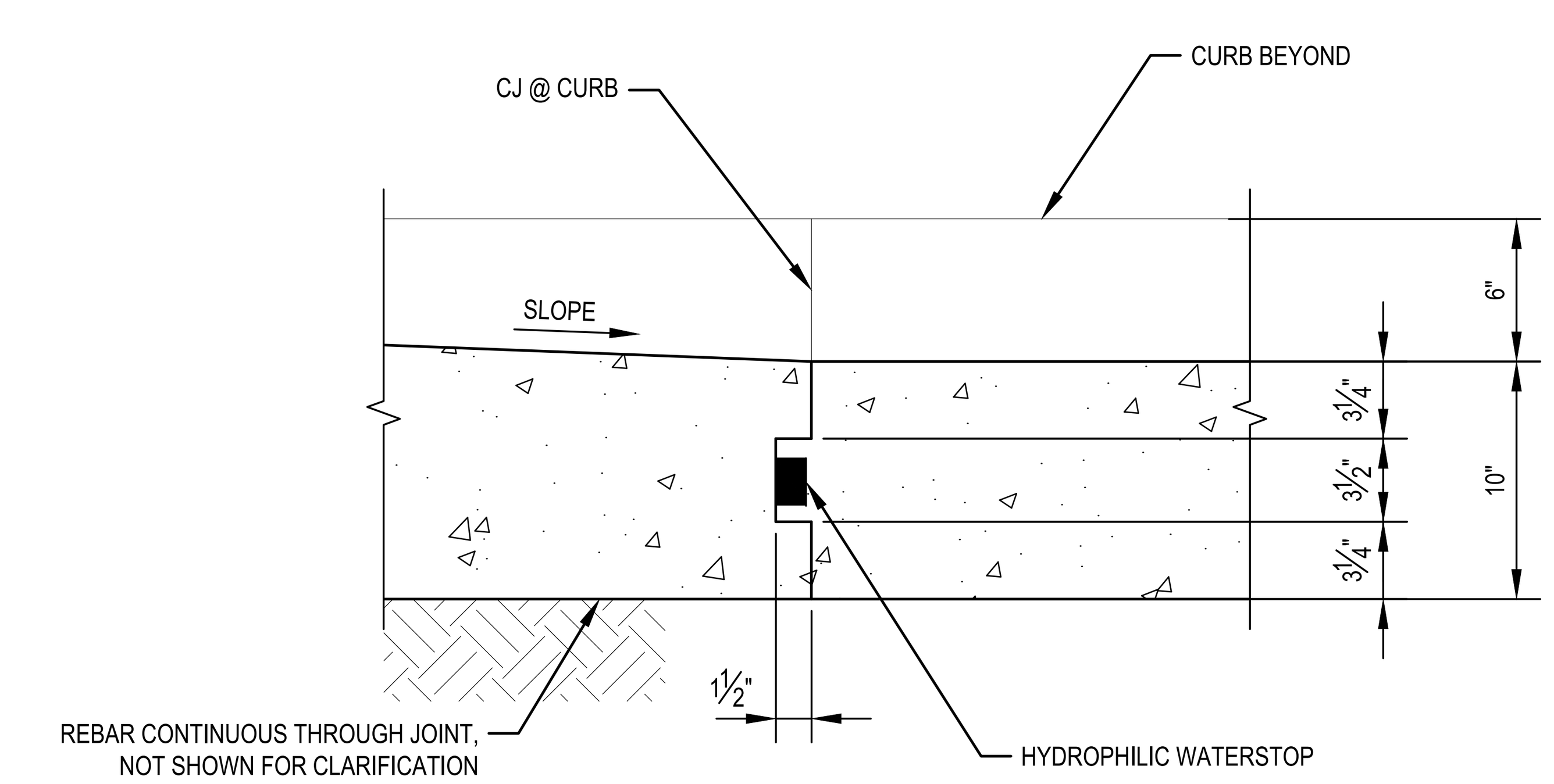
0 2' 4' 6'



1 / S-108 **CONTAINMENT PAD PLAN**

SCALE: 3/8"=1'-0"

0 2' 4' 6'



2 / S-108 **CONSTRUCTION JOINT DETAIL**

SCALE: 1 1/2"=1'-0"

0 1/2' 1' 1 1/2'

No.	Issue	Checked	Approved	Date
	Conformed Drawings	GT	GT	07/18/2024

Author DRA — Drafting Check MGK — Project Manager G. TOMASINO

Designer MGK — Design Check MGK — Project Director M. KENNEDY

CONFORMED DRAWINGS

Bar is one inch on original size sheet
0 1"

REGISTERED PROFESSIONAL ENGINEER — STATE OF CALIFORNIA — CIVIL — No. C7218 — 7/18/2024

GHD Inc.
2235 Mercury Way Suite 150
Santa Rosa California 95407 USA
T 1 707 523 1010 F 1 707 527 8679
www.ghd.com

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Client **COUNTY OF SONOMA**

Project **LEACHATE TANK REPLACEMENT**

Title **CONTAINMENT PAD PLAN & SECTIONS - ALL SITES**

Size ANSI D

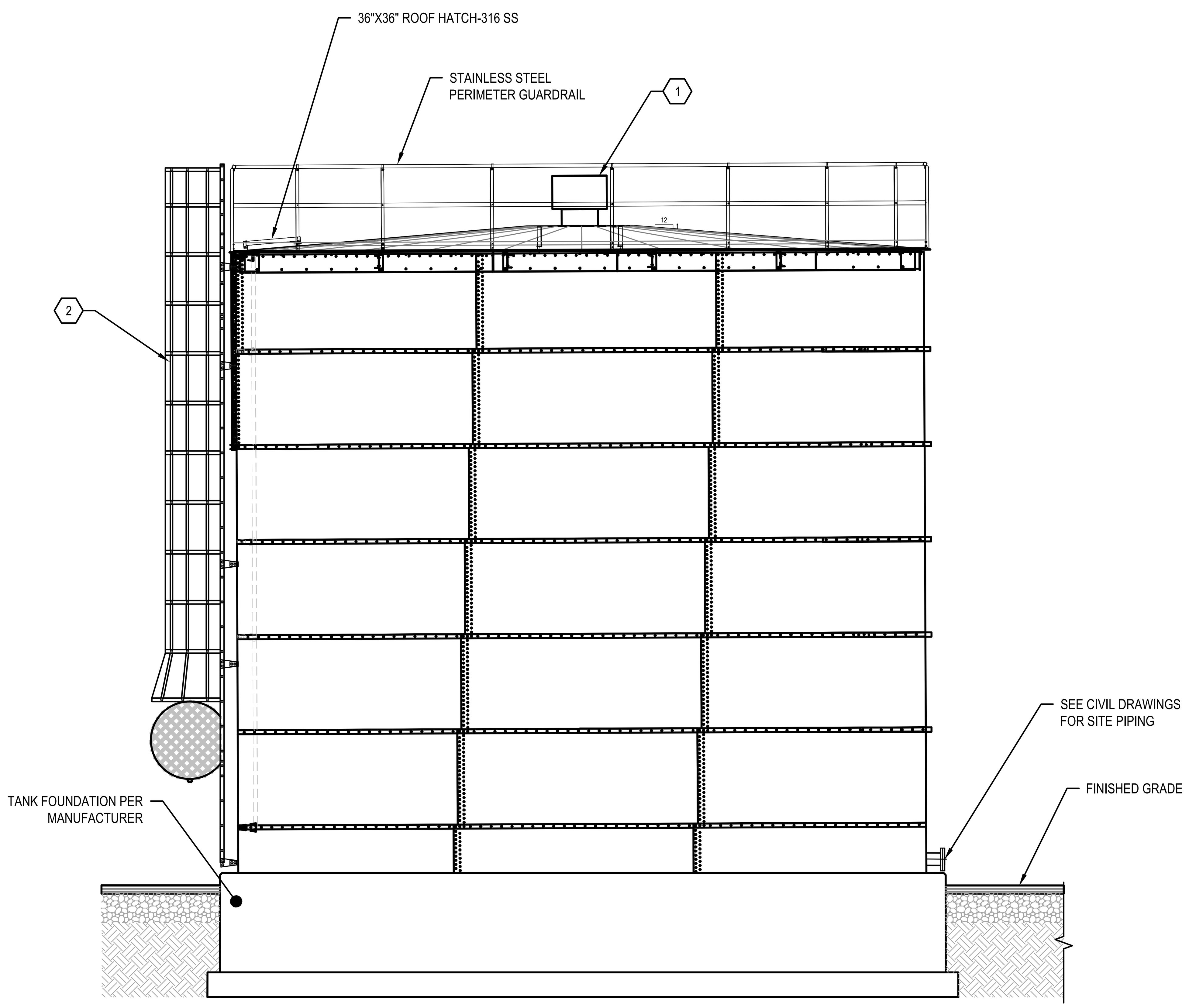
Project No.	Date	Scale
12558724	7/18/2024	AS SHOWN

Drawing No. S-108 — Sheet No. 27 of 48

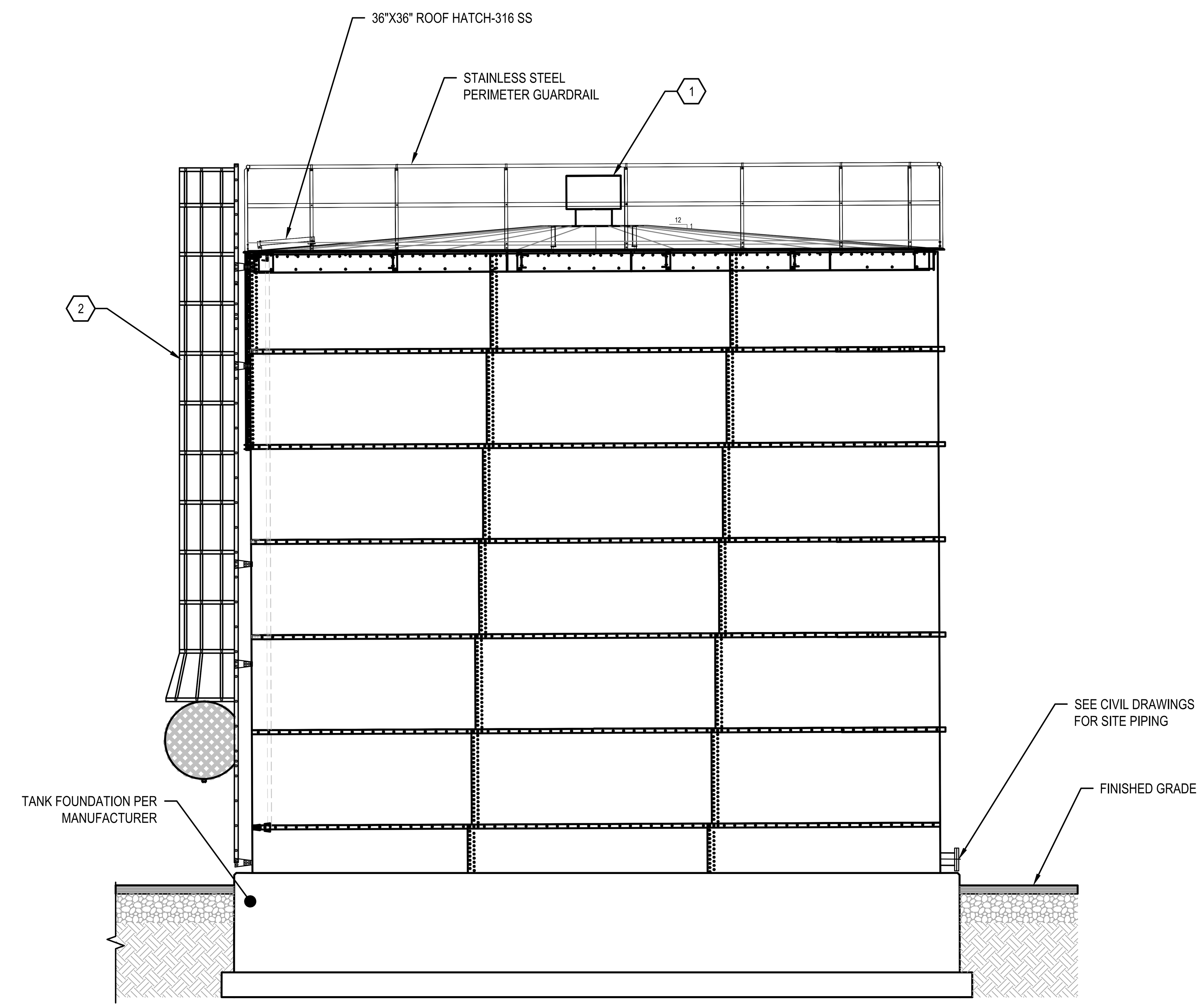
Plot Date: 18 July 2024 - 3:42 PM — Plotted By: Steven Toft — Filename: \\ghdnet\ghd\US\San Francisco\Projects\561\12558724\Digital_Design\ACAD\Sheets\Leachate Tanks\12558724-GHD-0001-DWG-ST-0108.dwg

KEYNOTES

1. Ø17 1/2" SST ROOF VENT, SEE DETAIL 3/S-503
2. LADDER W/ SAFETY CAGE-316 SS



1 S-301 **TANK 1 ELEVATION**
SCALE: NTS



2 S-301 **TANK 2 ELEVATION**
SCALE: NTS

No.	Issue	Checked	Approved	Date
	Conformed Drawings	GT	GT	07/18/2024

Author DRA | Drafting Check MGK | Project Manager G. TOMASINO
Designer MGK | Design Check MGK | Project Director M. KENNEDY

CONFORMED DRAWINGS

Bar is one inch on original size sheet
0 1"

7/18/2024

GHD Inc.
2235 Mercury Way Suite 150
Santa Rosa California 95407 USA
T 1 707 523 1010 F 1 707 527 8679
www.ghd.com

Client **COUNTY OF SONOMA**

Project **LEACHATE TANK REPLACEMENT**

Title **TANK ELEVATION AND SECTION - GUERNEVILLE SITE**

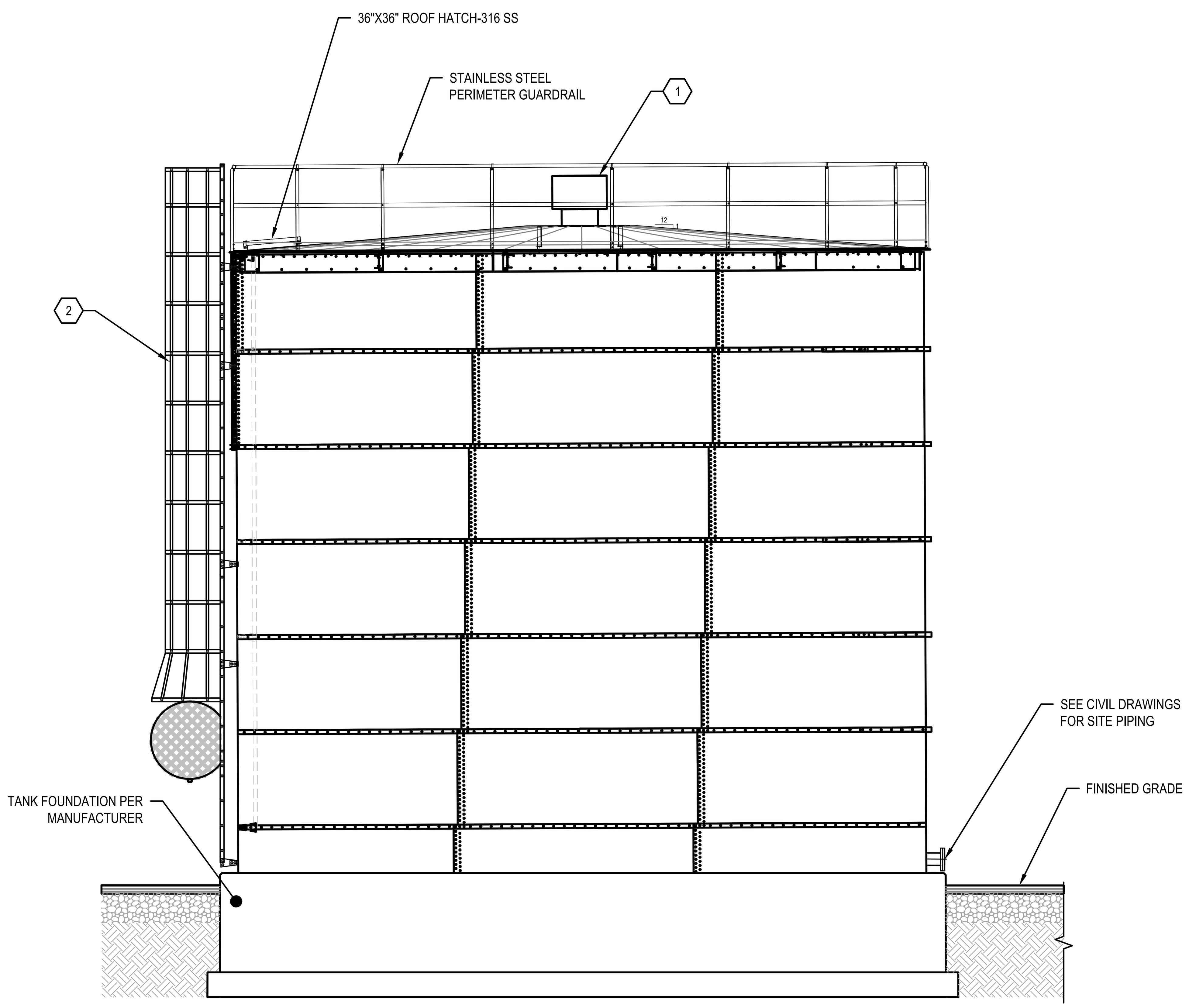
Size ANSI D

Project No. 12558724 | Date 7/18/2024 | Scale AS SHOWN

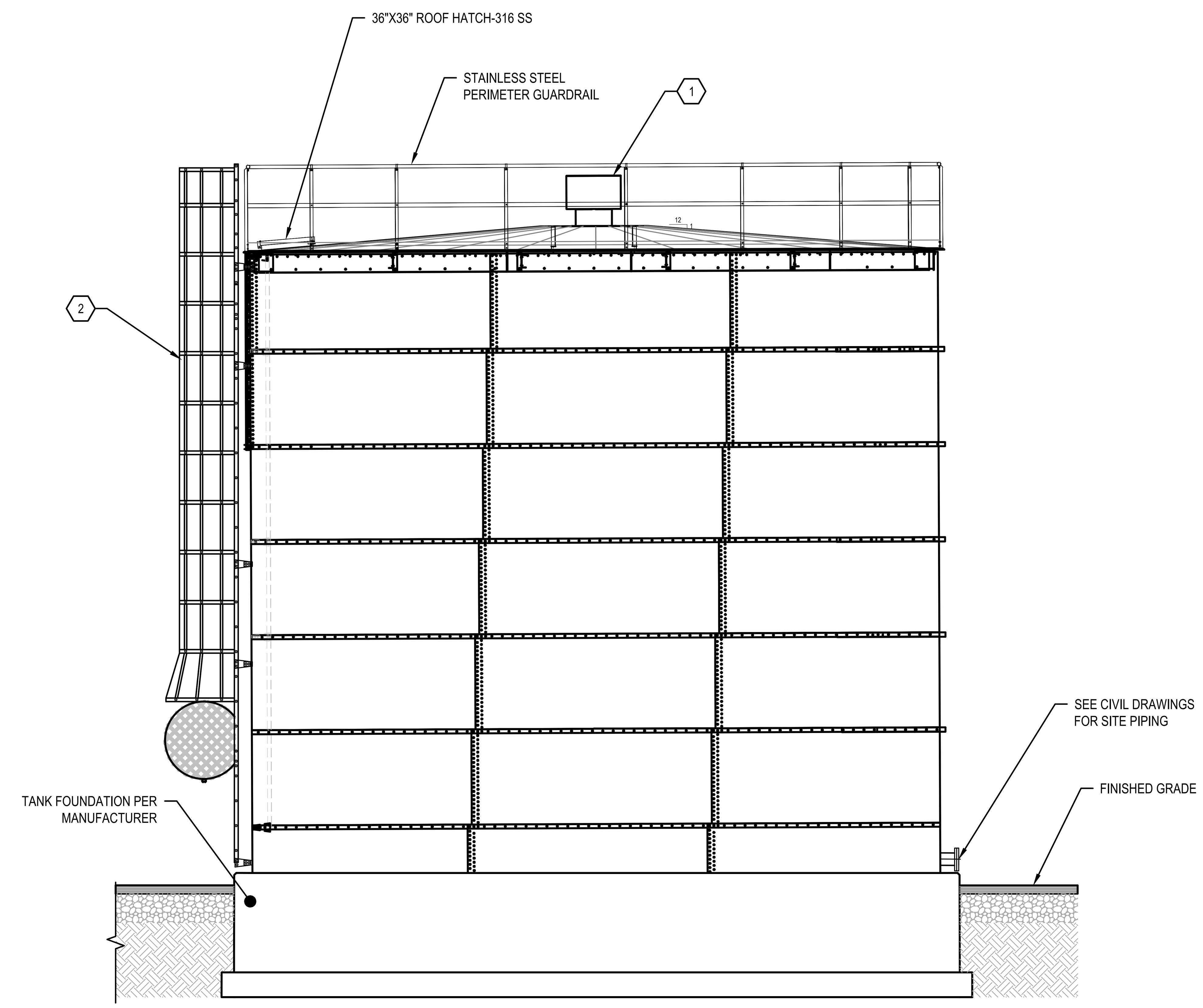
Drawing No. S-301 | Sheet No. 28 of 48

KEYNOTES

1. Ø17 1/2" SST ROOF VENT, SEE DETAIL 3/S-503
2. LADDER W/ SAFETY CAGE-316 SS



1 S-302 **TANK 1 ELEVATION**
SCALE: NTS



2 S-302 **TANK 2 ELEVATION**
SCALE: NTS

No.	Issue	Checked	Approved	Date
	Conformed Drawings	GT	GT	07/18/2024

Author DRA | Drafting Check MGK | Project Manager G. TOMASINO
Designer MGK | Design Check MGK | Project Director M. KENNEDY

CONFORMED DRAWINGS

Bar is one inch on original size sheet
0 1"

REGISTERED PROFESSIONAL ENGINEER JAMES KUOCHIANG PAN No. C72186 CIVIL STATE OF CALIFORNIA
7/18/2024

GHD Inc.
2235 Mercury Way Suite 150
Santa Rosa California 95407 USA
T 1 707 523 1010 F 1 707 527 8679
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Client **COUNTY OF SONOMA**
Project **LEACHATE TANK REPLACEMENT**

Title **TANK ELEVATION AND SECTION - ROBLAR SITE**

Size ANSI D

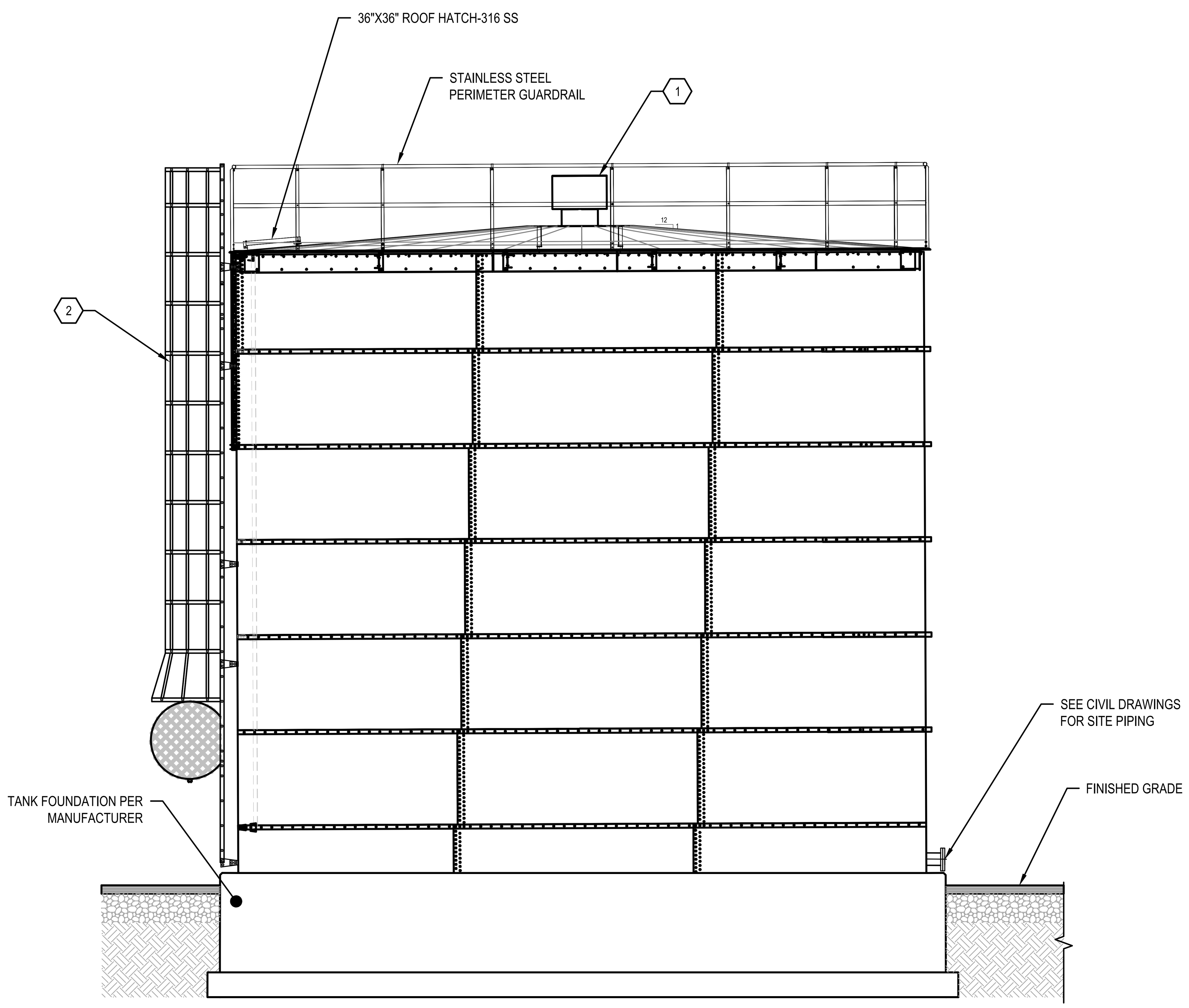
Project No.	Date	Scale
12558724	7/18/2024	AS SHOWN

Drawing No. S-302

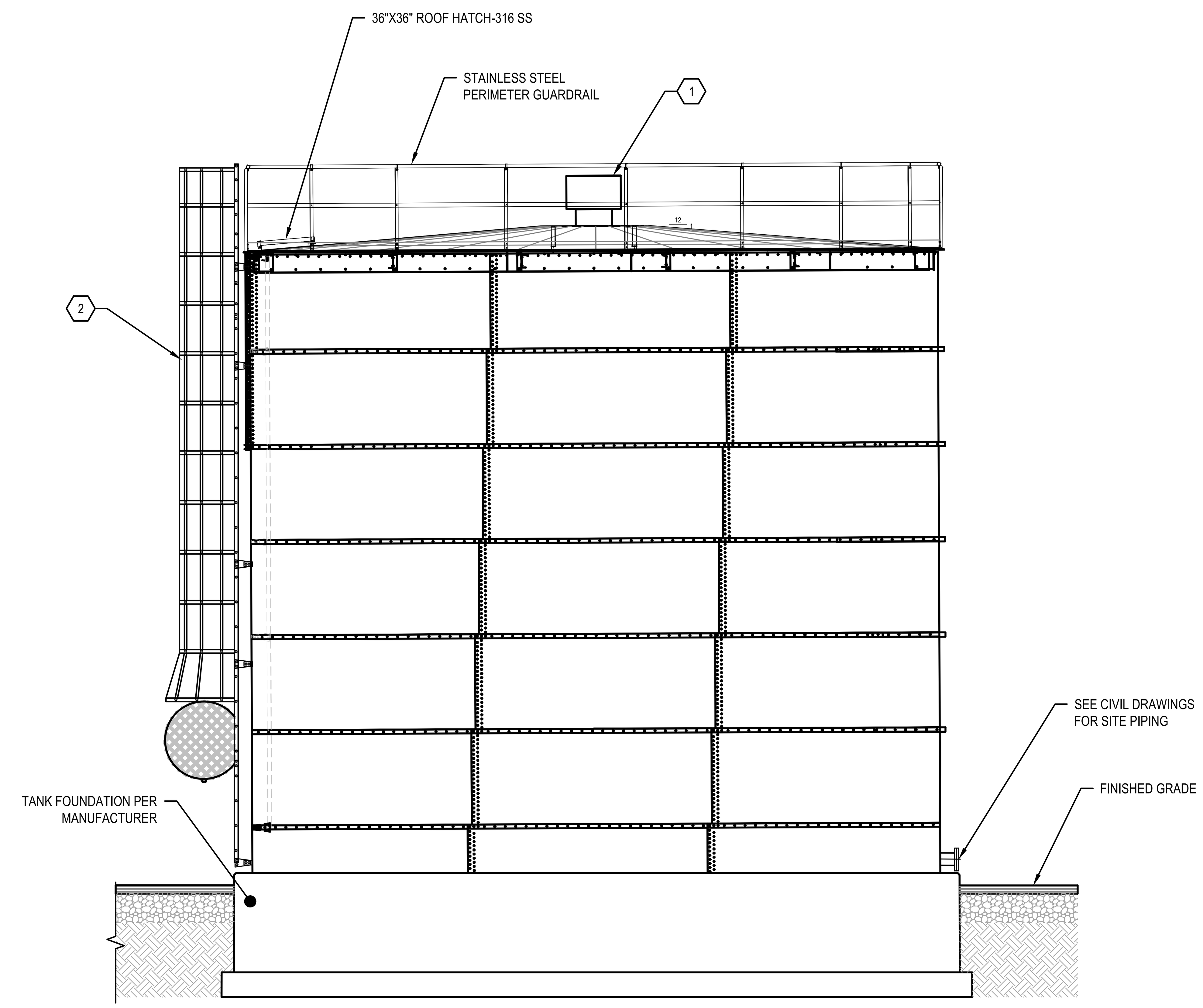
Plot Date: 18 July 2024 - 3:44 PM Plotted By: Steven Toft Filename: \\ghdnet\ghd\US\San Francisco\Projects\561\12558724\Digital_Design\ACAD\Sheets\Leachate Tanks\12558724-GHD-0001-DWG-ST-0302.dwg

KEYNOTES

1. Ø17 1/2" SST ROOF VENT, SEE DETAIL 3/S-503
2. LADDER W/ SAFETY CAGE-316 SS



1 S-303 **TANK 1 ELEVATION**
SCALE: NTS



2 S-303 **TANK 2 ELEVATION**
SCALE: NTS

No.	Issue	Checked	Approved	Date
	Conformed Drawings	GT	GT	07/18/2024

Author DRA — Drafting Check MGK — Project Manager G. TOMASINO
Designer MGK — Design Check MGK — Project Director M. KENNEDY

CONFORMED DRAWINGS

Bar is one inch on original size sheet
0 1"

7/18/2024

GHD Inc.
2235 Mercury Way Suite 150
Santa Rosa California 95407 USA
T 1 707 523 1010 F 1 707 527 8679
www.ghd.com

Client **COUNTY OF SONOMA**
Project **LEACHATE TANK REPLACEMENT**

Title **TANK ELEVATION AND SECTION - SONOMA SITE**

Size ANSI D

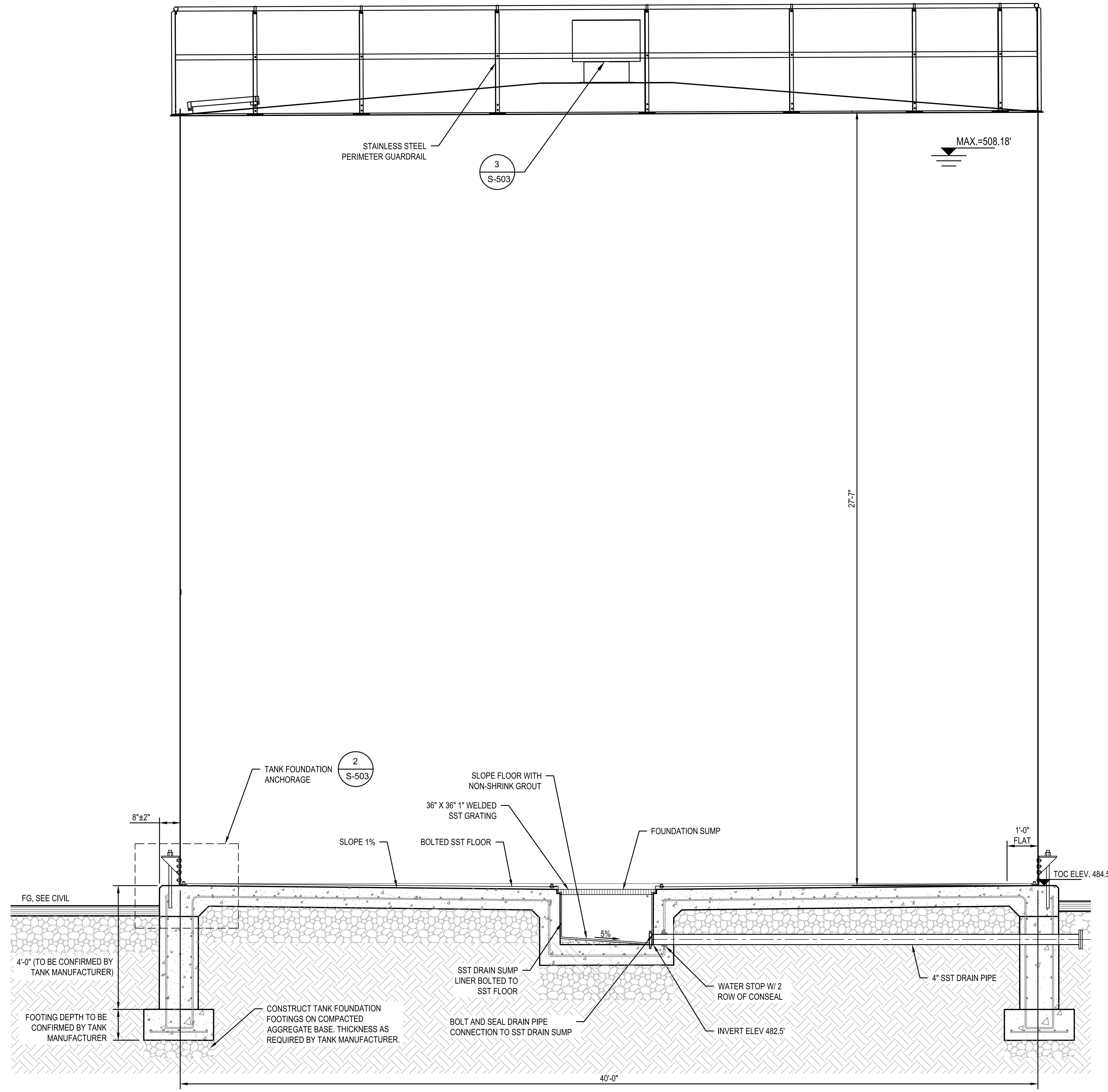
Project No.	Date	Scale
12558724	7/18/2024	AS SHOWN

Drawing No. S-303

Plot Date: 18 July 2024 - 3:45 PM Plotted By: Steven Toft Filename: \\ghdnet\ghd\US\San Francisco\Projects\561\12558724\Digital_Design\ACAD\Sheets\Leachate Tanks\12558724-GHD-0001-DWG-ST-0303.dwg

GENERAL NOTES

1. FILL SHALL BE COMPACTED TO 90% RELATIVE COMPACTION. WHERE FILL THICKNESS IS GREATER THAN 5 FEET, FILL MATERIAL SHALL BE COMPACTED AT LEAST 92% RELATIVE COMPACTION.
2. IN PAVED AREAS, THE UPPER 12 INCHES OF FILL SHALL BE COMPACTED TO AT LEAST 95% RELATIVE COMPACTION.



A
S-101
TANK DRAIN AND OVERFLOW SECTION

No.	Issue	Checked	Approved	Date
	Conformed Drawings	GT	GT	07/18/2024

Author **DRA** Drafting Check **MGK** Project Manager **G. TOMASINO**
Designer **MGK** Design Check **MGK** Project Director **M. KENNEDY**

CONFORMED DRAWINGS

Bar is one inch on original size sheet
0 1"

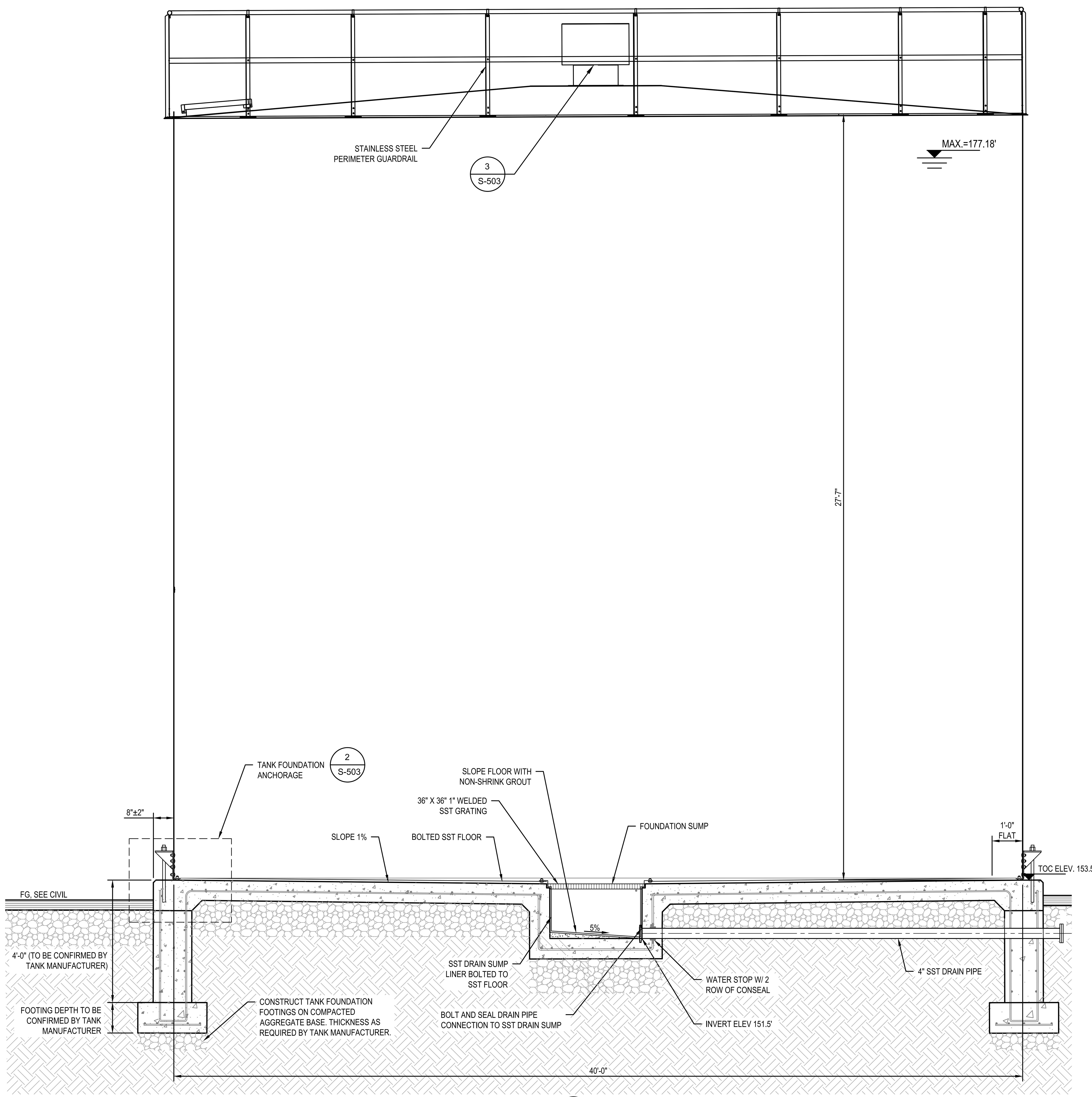
7/18/2024

GHD Inc.
2235 Mercury Way Suite 150
Santa Rosa California 95407 USA
T 1 707 523 1010 F 1 707 527 8679
www.ghd.com

Client **COUNTY OF SONOMA**
Project **LEACHATE TANK REPLACEMENT**
Title **TANK SECTIONS AND DETAILS - GUERNEVILLE SITE**
Size **ANSI D**

Project No. **12558724** Date **7/18/2024** Scale **AS SHOWN**
Drawing No. **S-304**

Plot Date: 18 July 2024 - 3:46 PM Plotted By: Steven Toft Filename: \\ghdnet\ghd\US\San Francisco\Projects\561\12558724\Digital_Design\ACAD\Sheets\Leachate Tanks\12558724-GHD-0001-DWG-ST-0304.dwg



A
S-101

TANK DRAIN AND OVERFLOW SECTION

GENERAL NOTES

1. FILL SHALL BE COMPACTED TO 90% RELATIVE COMPACTION. WHERE FILL THICKNESS IS GREATER THAN 5 FEET, FILL MATERIAL SHALL BE COMPACTED AT LEAST 92% RELATIVE COMPACTION.
2. IN PAVED AREAS, THE UPPER 12 INCHES OF FILL SHALL BE COMPACTED TO AT LEAST 95% RELATIVE COMPACTION.

No.	Issue	Checked	Approved	Date
	Conformed Drawings	GT	GT	07/18/2024

Author **DRA** Drafting Check **MGK** Project Manager **G. TOMASINO**
Designer **MGK** Design Check **MGK** Project Director **M. KENNEDY**

CONFORMED DRAWINGS

Bar is one inch on original size sheet
0 1"

7/18/2024

GHD Inc.
2235 Mercury Way Suite 150
Santa Rosa California 95407 USA
T 1 707 523 1010 **F** 1 707 527 8679
www.ghd.com

Client **COUNTY OF SONOMA**
Project **LEACHATE TANK REPLACEMENT**

Title **TANK SECTIONS AND DETAILS - ROBLAR SITE**

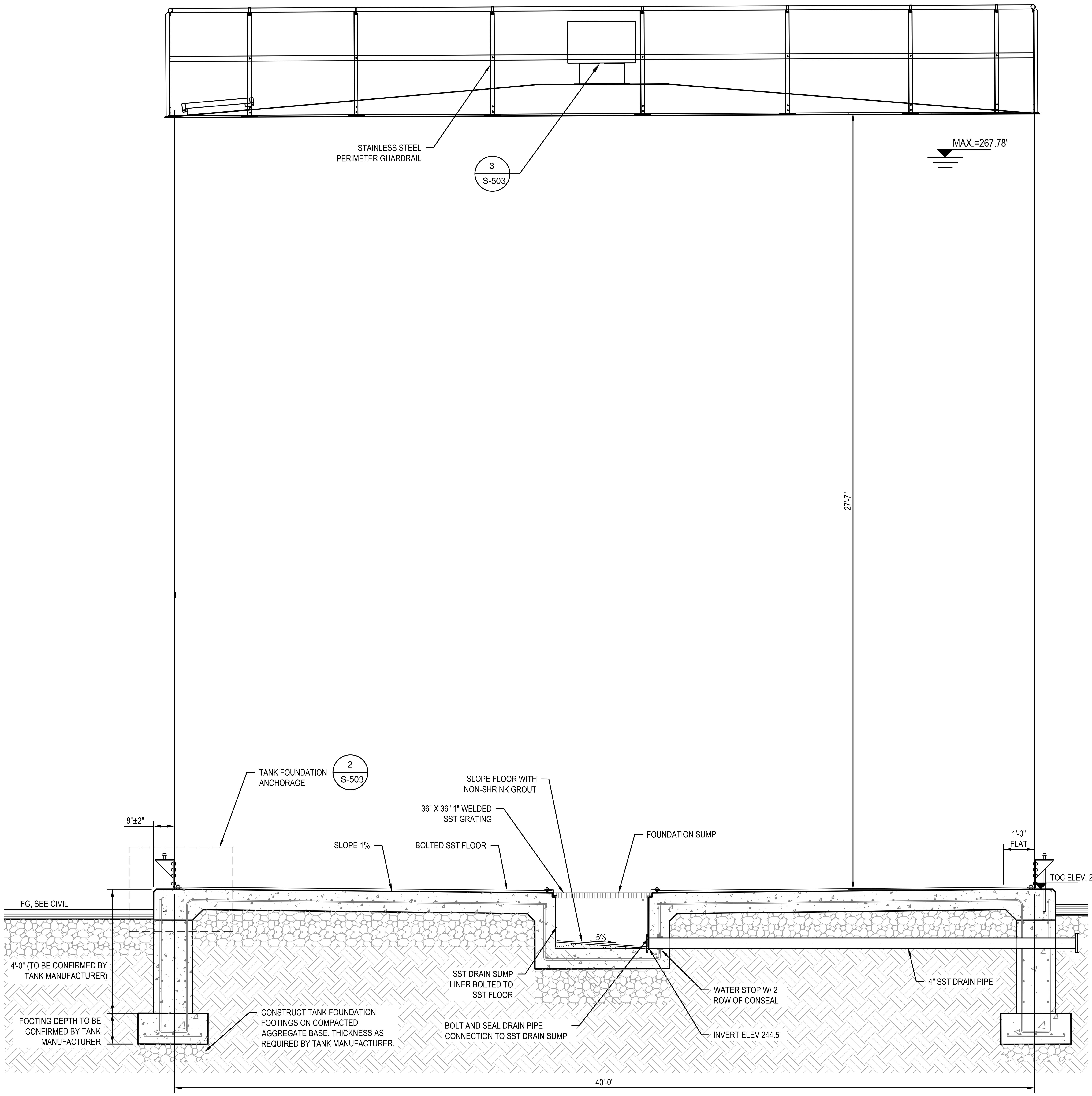
Size **ANSI D**

Project No. **12558724** Date **7/18/2024** Scale **AS SHOWN**

Drawing No. **S-305** Sheet No. **32** of **48**

GENERAL NOTES

1. FILL SHALL BE COMPACTED TO 90% RELATIVE COMPACTION. WHERE FILL THICKNESS IS GREATER THAN 5 FEET, FILL MATERIAL SHALL BE COMPACTED AT LEAST 92% RELATIVE COMPACTION.
2. IN PAVED AREAS, THE UPPER 12 INCHES OF FILL SHALL BE COMPACTED TO AT LEAST 95% RELATIVE COMPACTION.



A S-101 **TANK DRAIN AND OVERFLOW SECTION**

No.	Issue	Checked	Approved	Date
	Conformed Drawings	GT	GT	07/18/2024

Author DRA | Drafting Check MGK | Project Manager G. TOMASINO
Designer MGK | Design Check MGK | Project Director M. KENNEDY

CONFORMED DRAWINGS

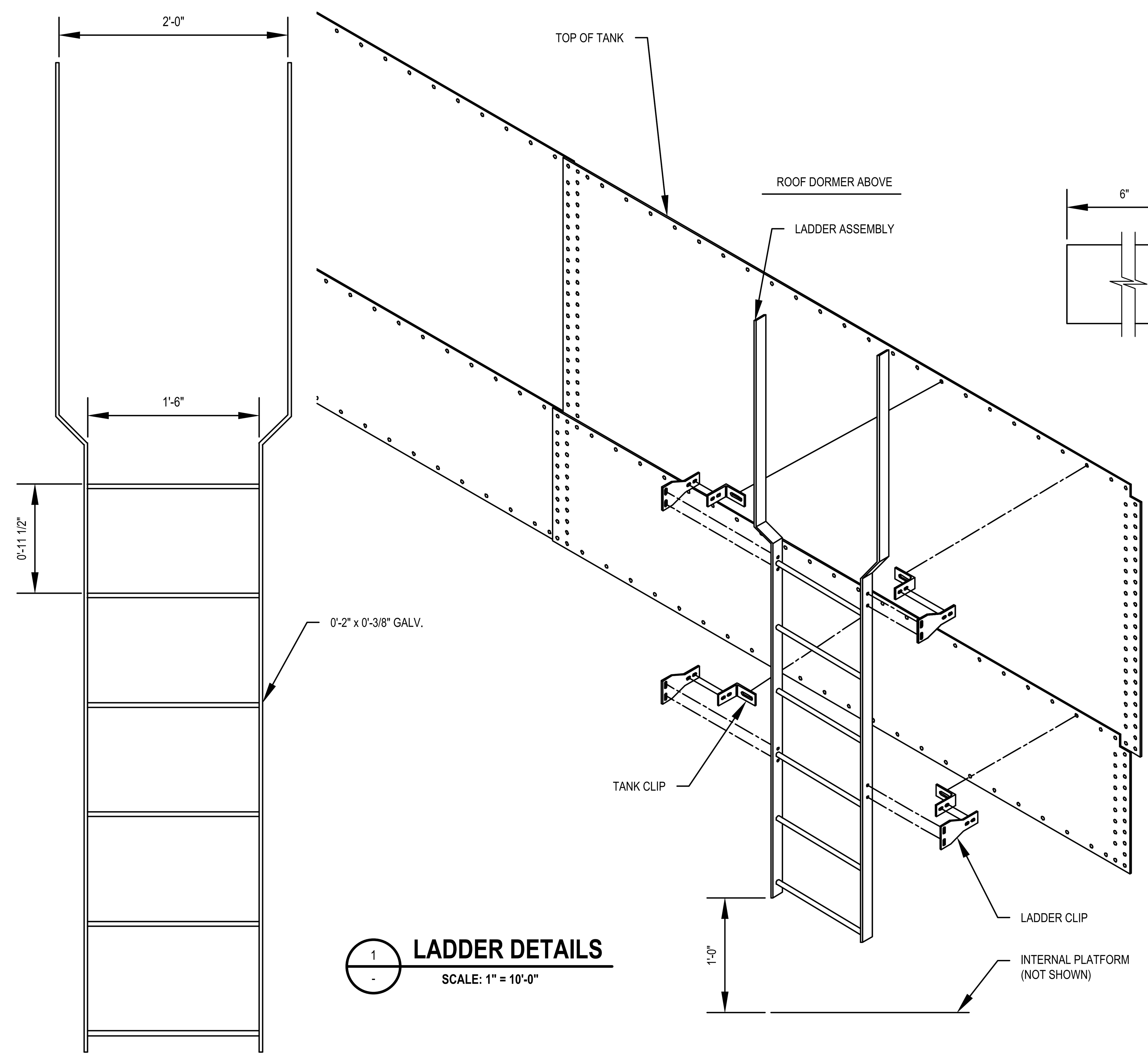
Bar is one inch on original size sheet
0 1"

REGISTERED PROFESSIONAL ENGINEER, No. C7218, CIVIL, STATE OF CALIFORNIA
7/18/2024

GHD Inc.
2235 Mercury Way Suite 150
Santa Rosa California 95407 USA
T 1 707 523 1010 F 1 707 527 8679
www.ghd.com

Client **COUNTY OF SONOMA**
Project **LEACHATE TANK REPLACEMENT**
Title **TANK SECTIONS AND DETAILS - SONOMA SITE**
Size ANSI D

Project No.	Date	Scale	Drawing No.	Sheet No.
12558724	7/18/2024	AS SHOWN	S-306	33 of 48



1 - **LADDER DETAILS**
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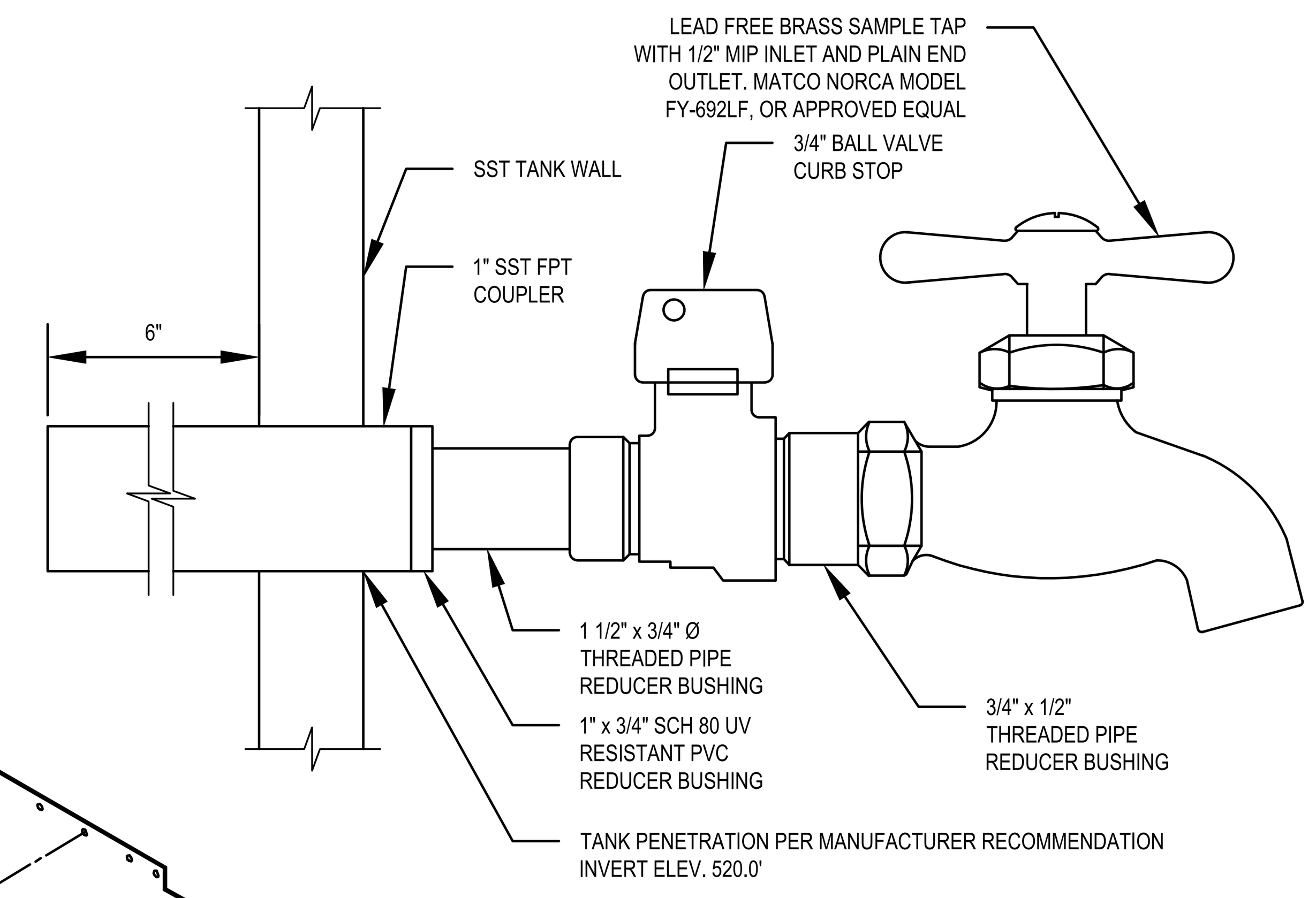
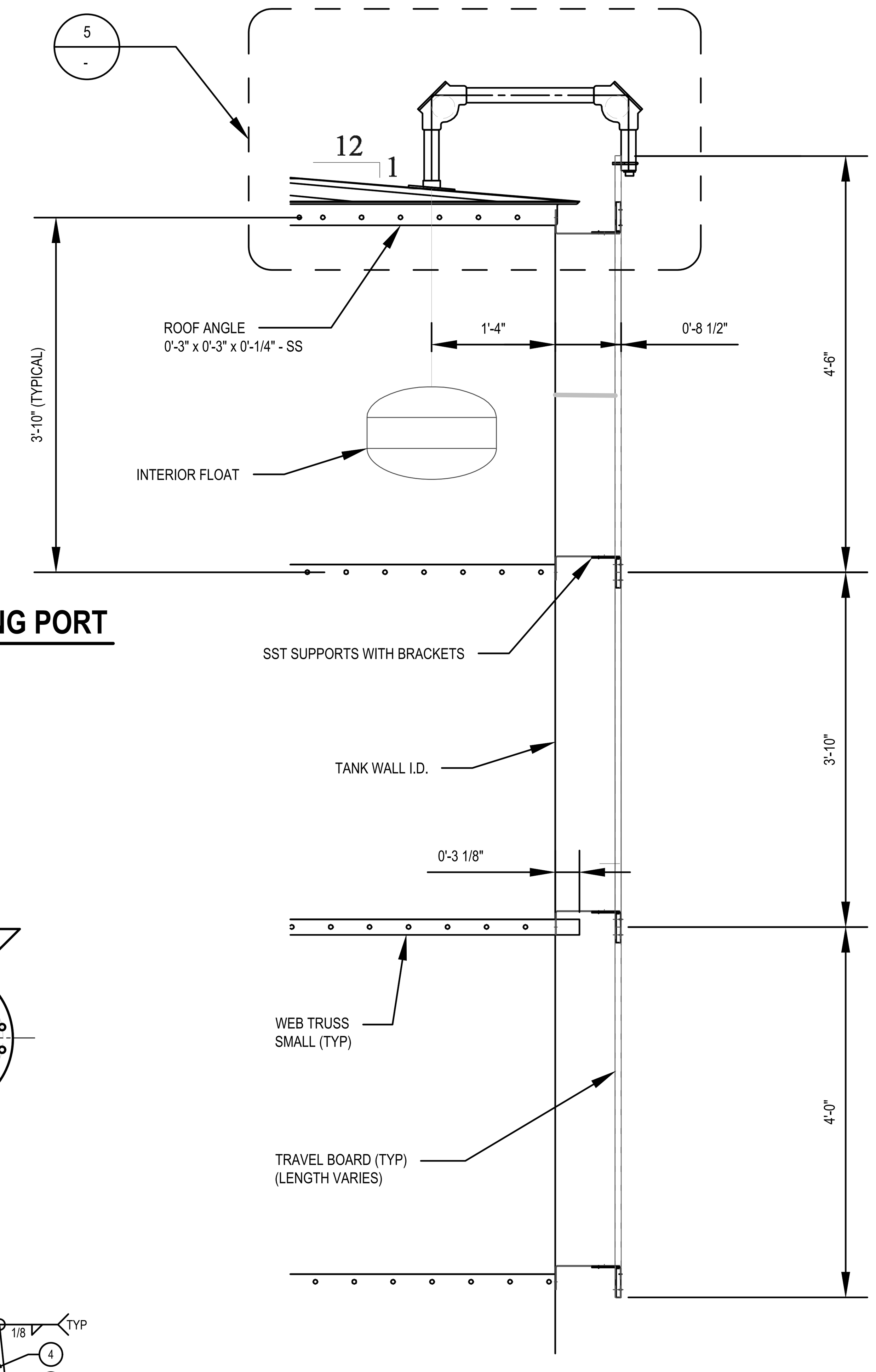


6 - **1" TANK WALL PENETRATION AND SAMPLING PORT**
SCALE: 1" = 1'-0"



3 - **LIQUID LEVEL INDICATOR DETAIL**
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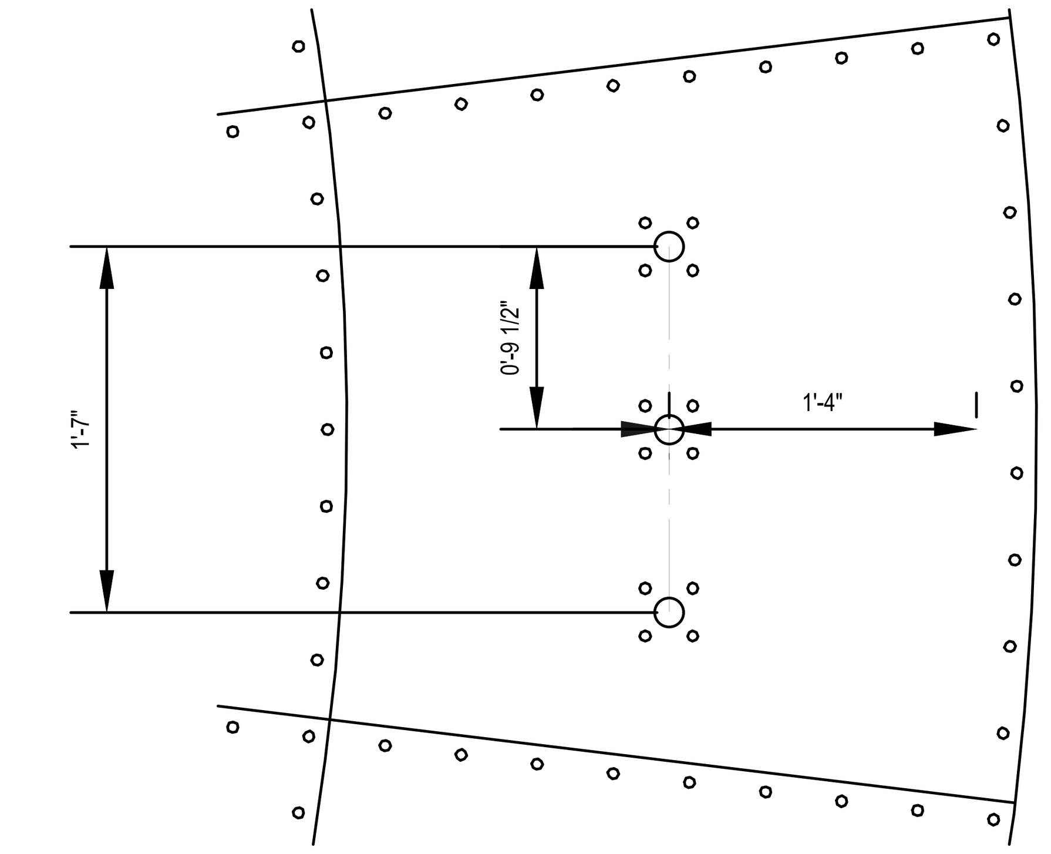
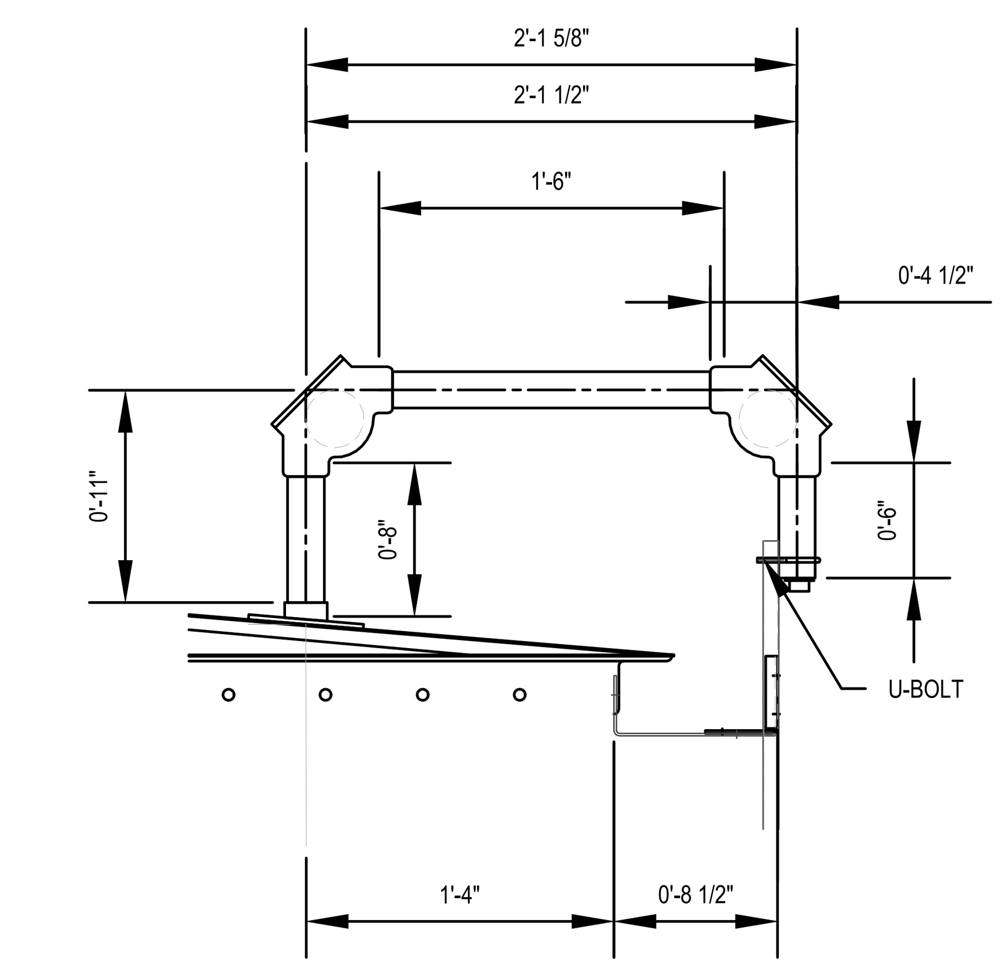
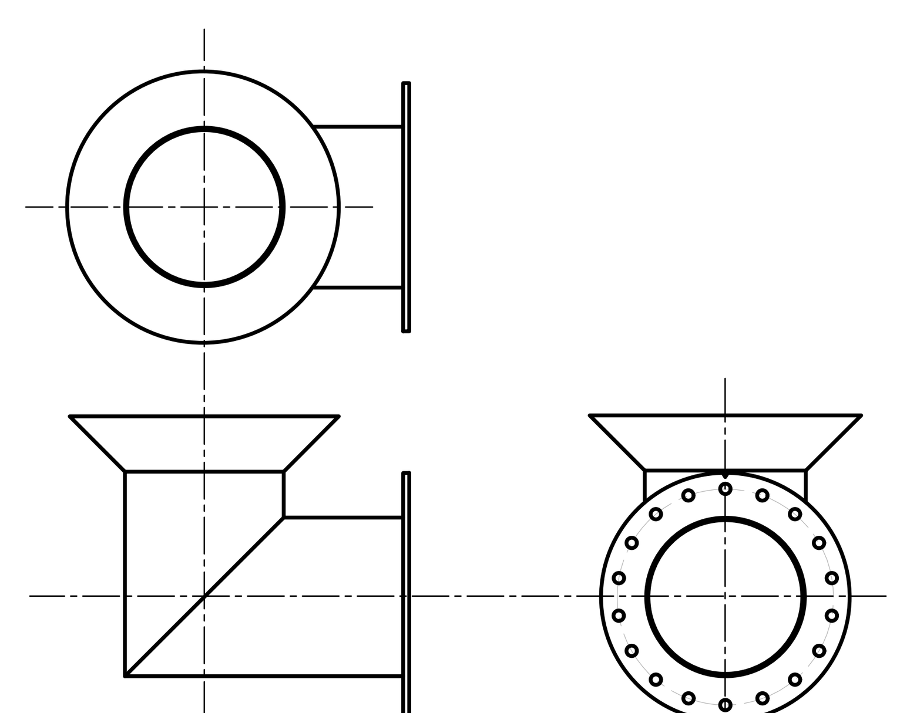


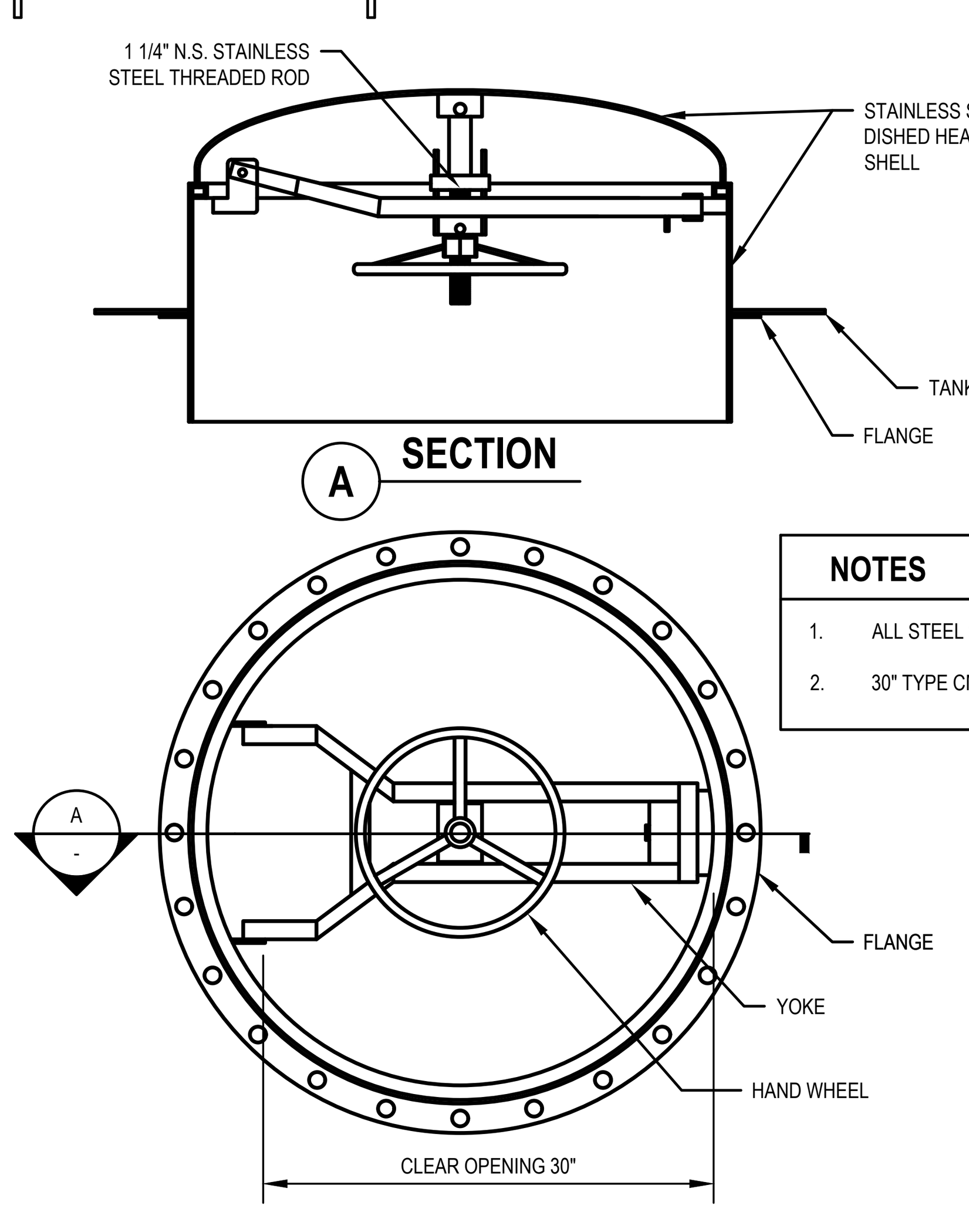
4 - **ROOF PANEL DETAIL**
SCALE: 1" = 10'-0"



5 - **DETAIL**
SCALE: 1" = 10'-0"



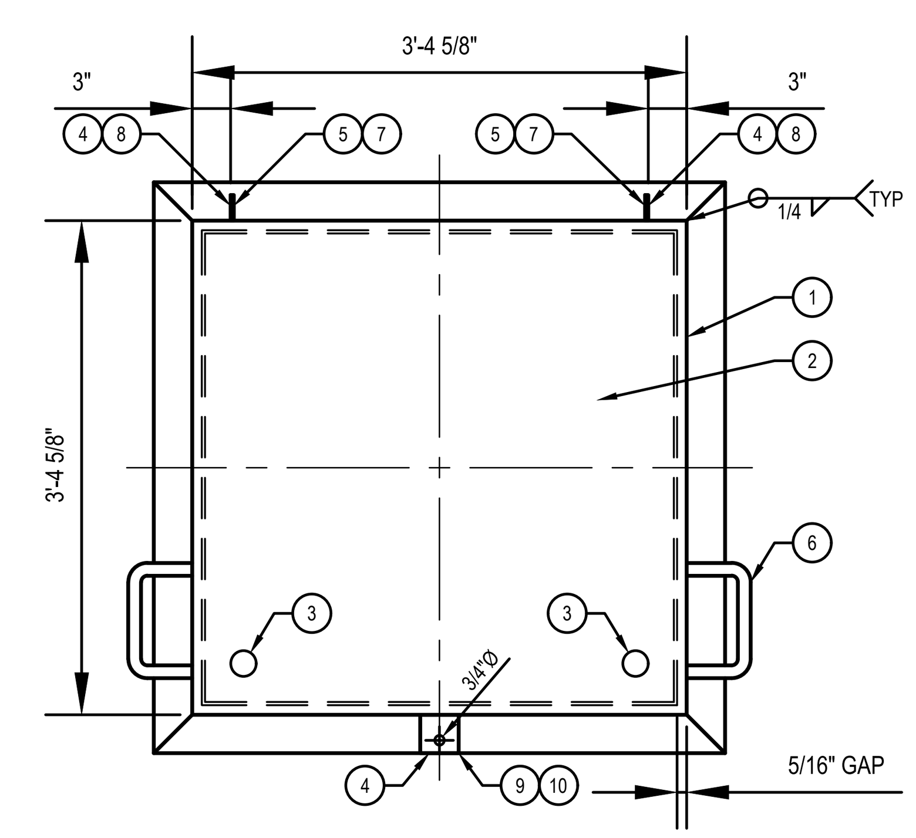
7 - **OVERFLOW WEIR CONE**
SCALE: 1" = 10'-0"



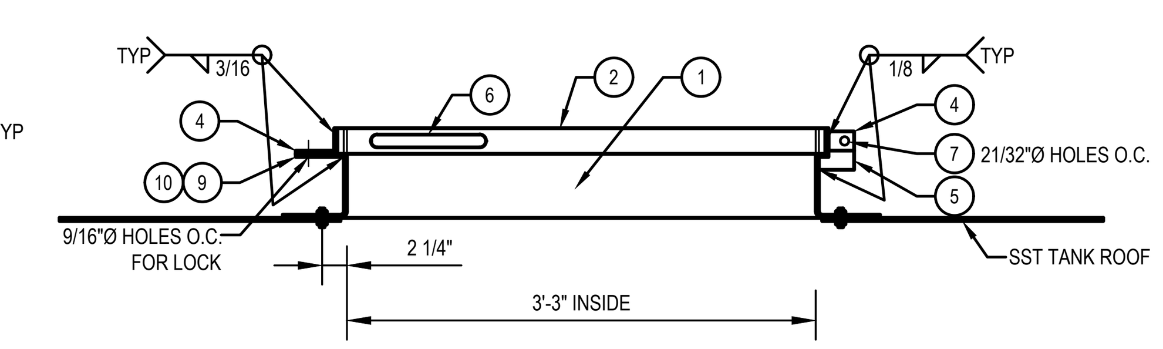
EXTERIOR ELEVATION

NOTES
1. ALL STEEL SHALL BE AISI TYPE 316 STAINLESS STEEL.
2. 30" TYPE CM-2 AS MANUFACTURED BY CHASE ASSOCIATES OR APPROVED EQUAL.

2 - **MANWAY DETAIL**
NOT TO SCALE

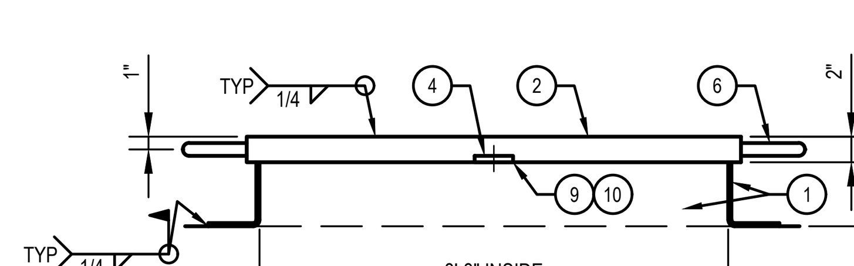


TOP VIEW



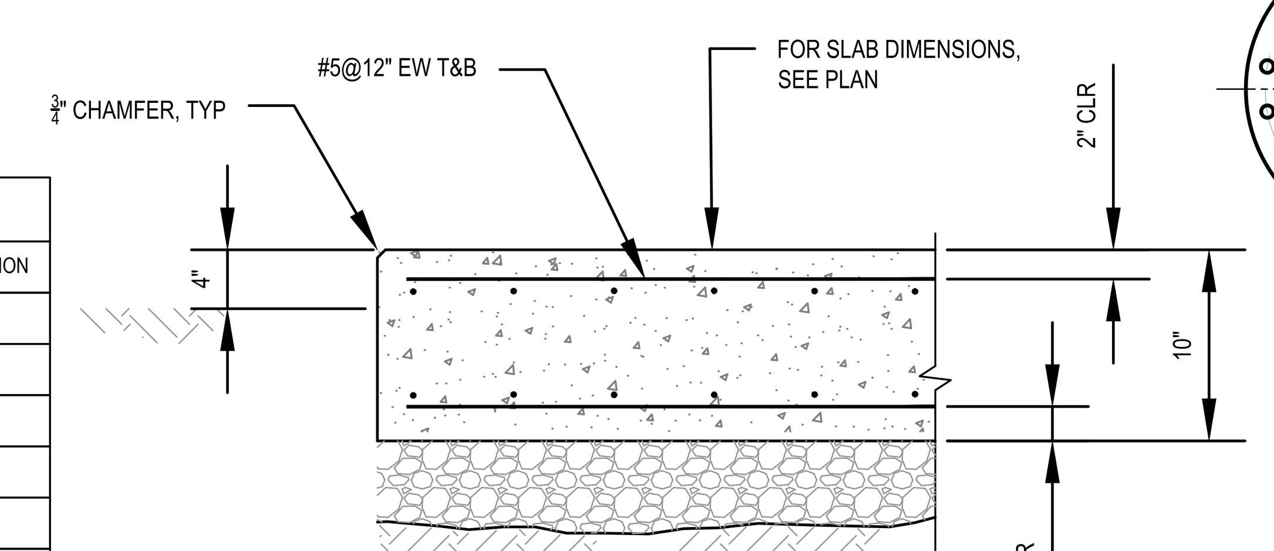
SIDE VIEW

SUMMARY OF MATERIALS			
ITEM	DESCRIPTION	QUANTITY	SPECIFICATION
1	PL 1/4" x 11 3/16" x 3'-9 7/8"	8	A36
2	PL 1/4" x 3'-4 5/8" x 3'-4 5/8"	2	SST
3	RUBBER BUMPERS	4	A36
4	FB 1/4 x 2 x STANDARD HINGE	6	SST
5	FB 1/4 x 2 x STANDARD HINGE	4	A36
6	RB 3/4" Ø x 1'-1 1/4" x SK	4	SST
7	BOLT 1/2" - 13 UNC x1" HVY EX HD W/HVY HEX NUT	4	SS304
8	INSULATION KIT	4	NYLON
9	FB 1/4 x 2 x STANDARD HASP	2	A36
10	STANDARD LOCK ENCLOSURE	2	SST



FRONT VIEW

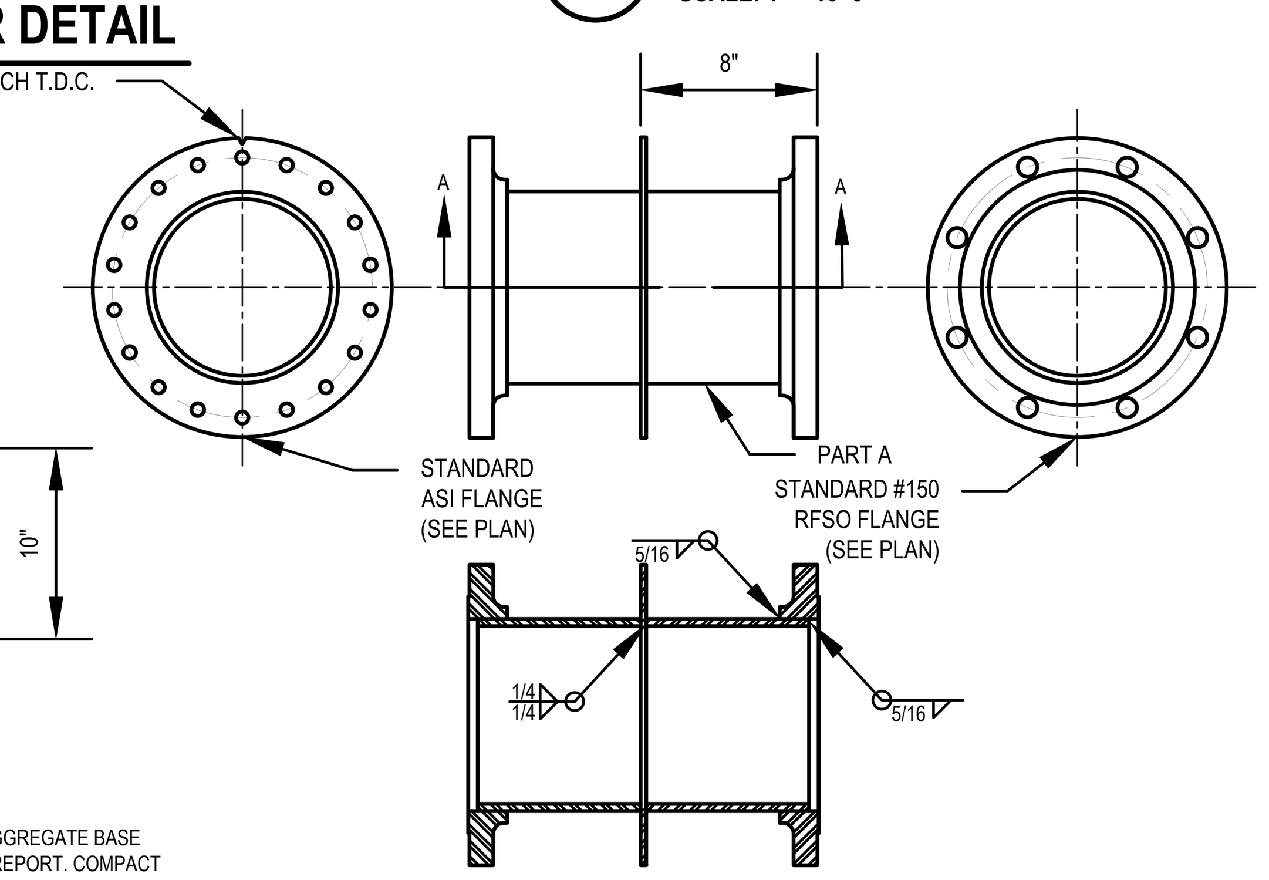
8 - **ROOF HATCH DETAIL**
SCALE: 1" = 15'-0"



NOTES:

1. SUBGRADE PREPARATION - REMOVE AND REPLACE UPPER 24 INCHES OF SUBGRADE BENEATH BOTTOM OF AGGREGATE BASE LAYER AND 3 FEET LATERALLY BEYOND SLAB WITH NON-EXPANSIVE FILL MEETING REQUIREMENTS OF SOILS REPORT. COMPACT AND MOISTURE CONDITION SUBGRADE IN ACCORDANCE WITH SOILS REPORT.
2. 6" MIN OF CALTRANS CLASS 2 AGGREGATE BASE COMPACTED TO AT LEAST 95% RELATIVE COMPACTION IN ACCORDANCE WITH ASTM D1557.
3. USE THIS DETAIL FOR TYPICAL EXTERIOR SLAB ON GRADE UNLESS OTHERWISE NOTED.

9 - **STAIR BOTTOM LANDING**
NTS



SECTION A-A

NOTE:

1. DEBUR ALL SHARP EDGES AND CORNERS.
2. DO NOT GRIND OR DAMAGE SURFACE OF RFSO
3. TANK PENETRATIONS SHALL BE SHOP WELDED.

10 - **FLANGE PIPE WALL PENETRATION**
NTS

Conformed Drawings		GT	GT	07/18/2024
No. Issue		Checked	Approved	Date
Author DRA	Drafting Check MGK	Project Manager G. TOMASINO		
Designer MGK	Design Check MGK	Project Director M. KENNEDY		

CONFORMED DRAWINGS

Bar is one inch on original size sheet
0 1"

7/18/2024

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www.ghd.com

Client **COUNTY OF SONOMA**

Project **LEACHATE TANK REPLACEMENT**

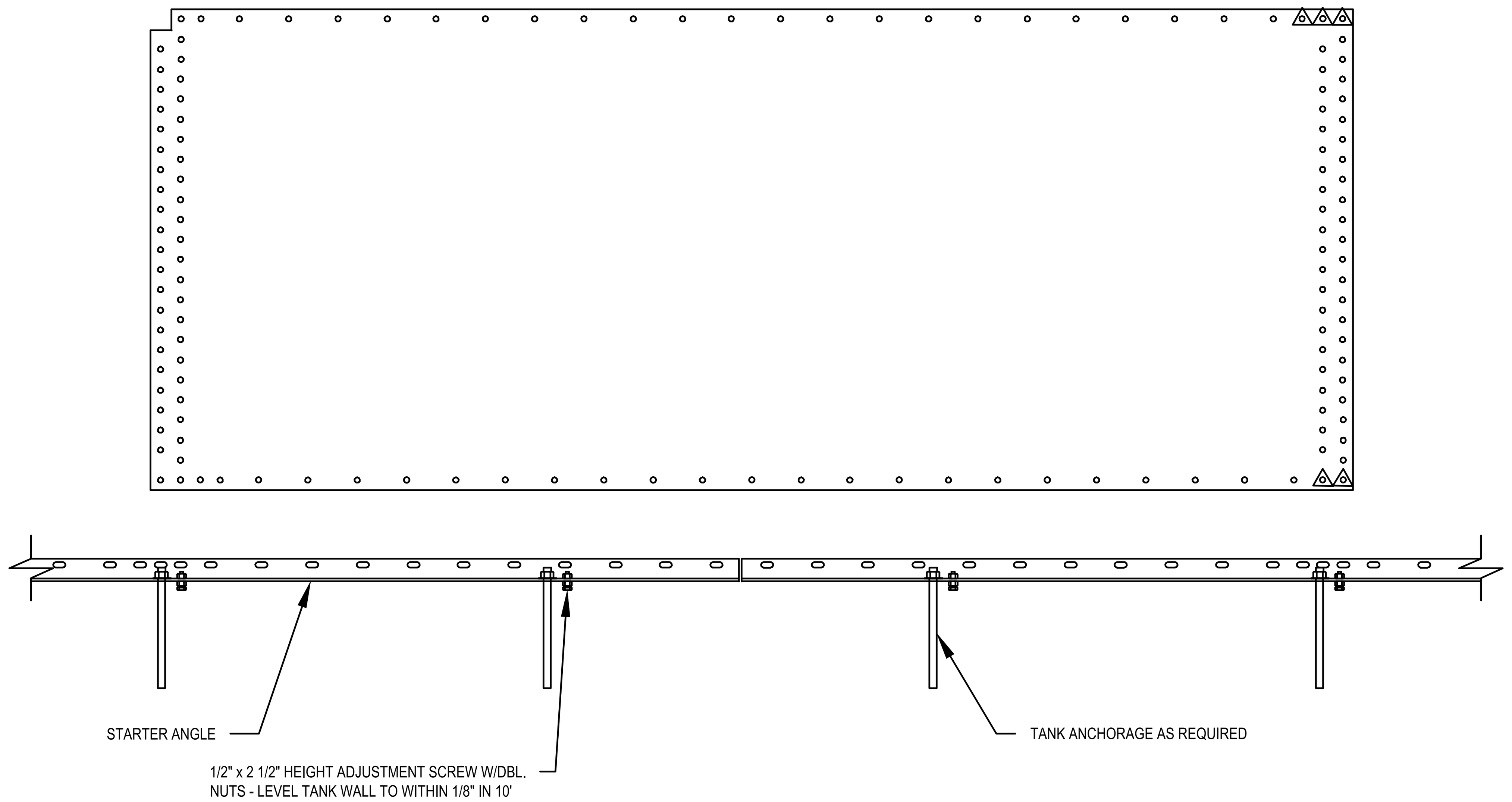
Title **STRUCTURAL DETAILS 1**

Size ANSI D

Project No.	Date	Scale
12558724	7/18/2024	AS SHOWN

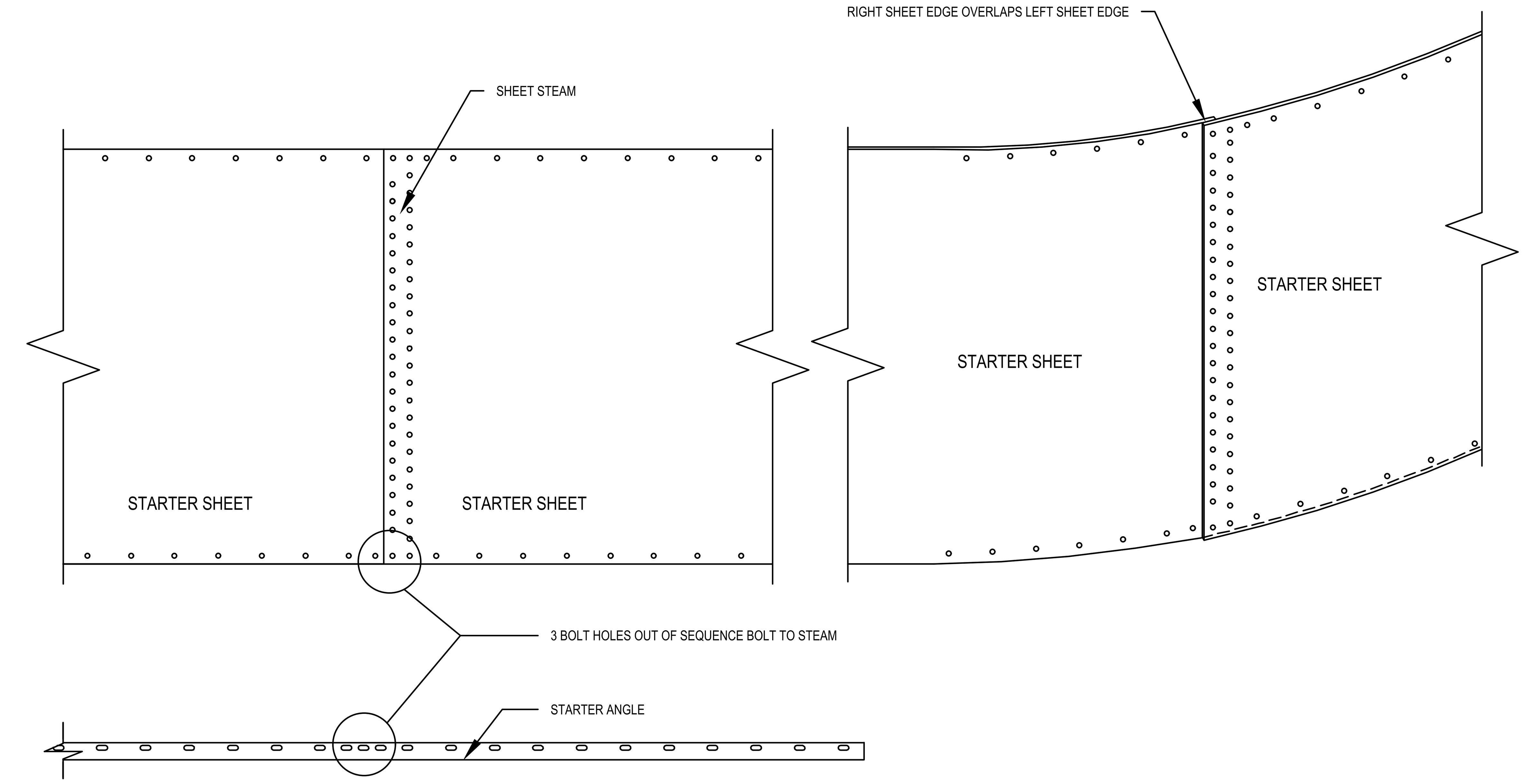
Drawing No. S-501

Plot Date: 18 July 2024 - 3:50 PM Plotted By: Steven Toft Filename: \\ghdnet\ghd\US\San Francisco\Projects\561\12558724\Digital_Design\ACAD\Sheets\Leachate Tanks\12558724-GHD-0001-DWG-ST-0501.dwg



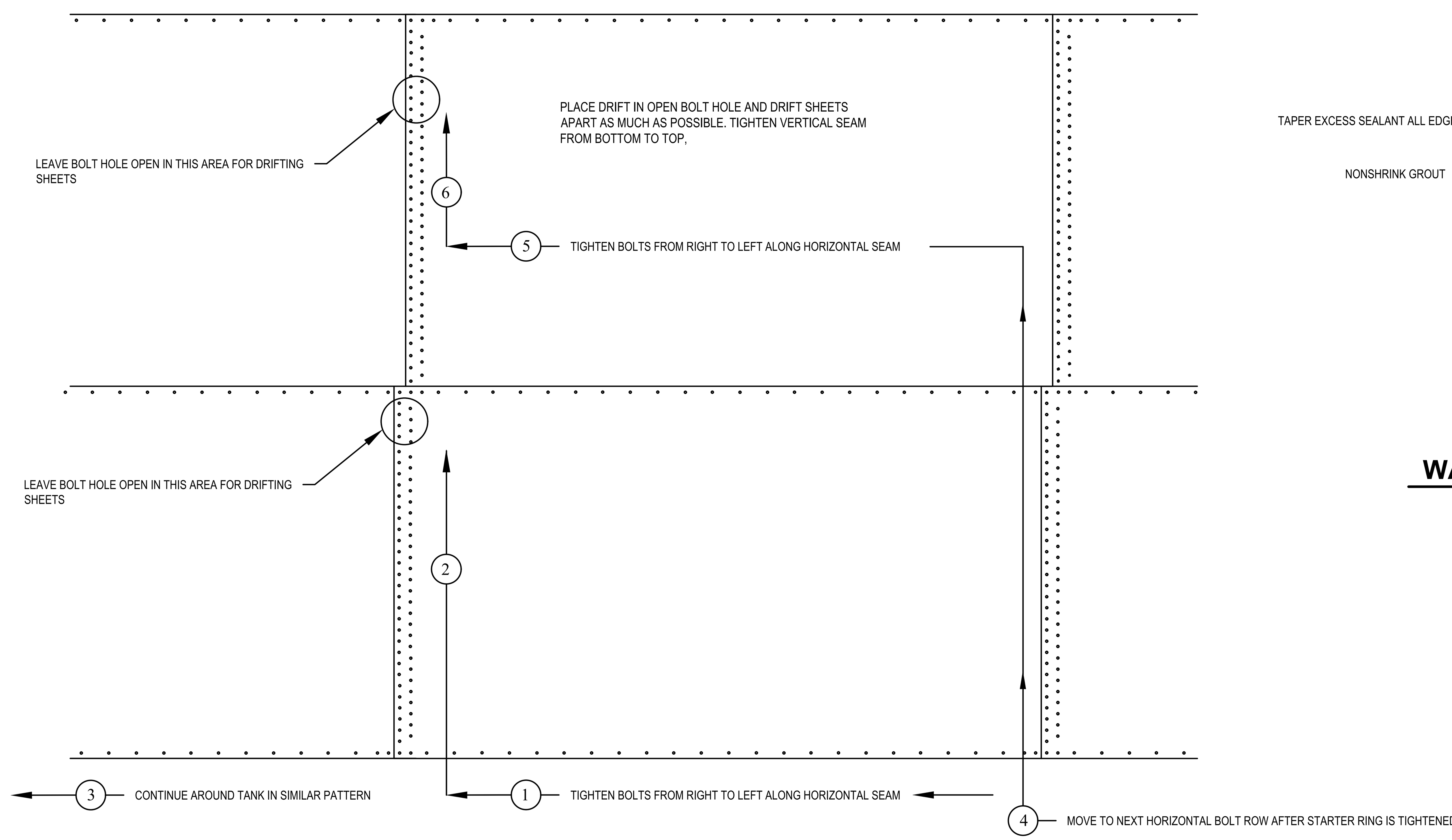
STARTER SHEET AS VIEWED FROM FROM THE INSIDE OF THE TANK FACING CENTER

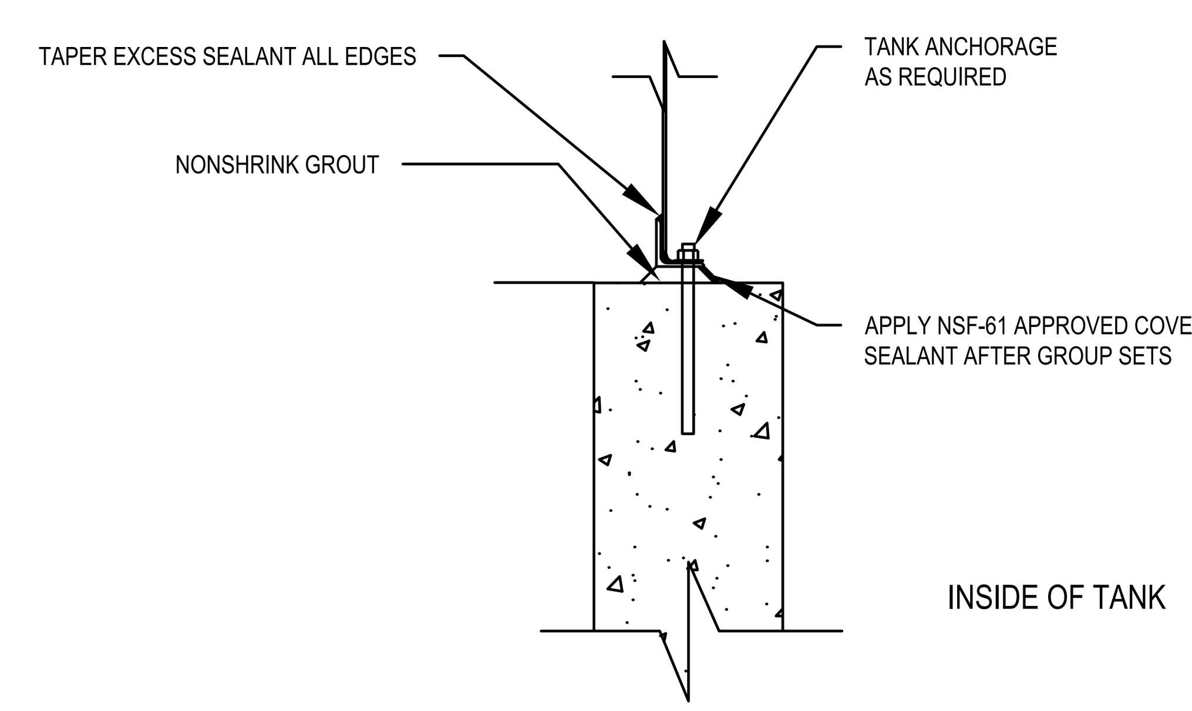
NOT TO SCALE



STARTER SHEET AS VIEWED FROM THE OUTSIDE OF THE TANK

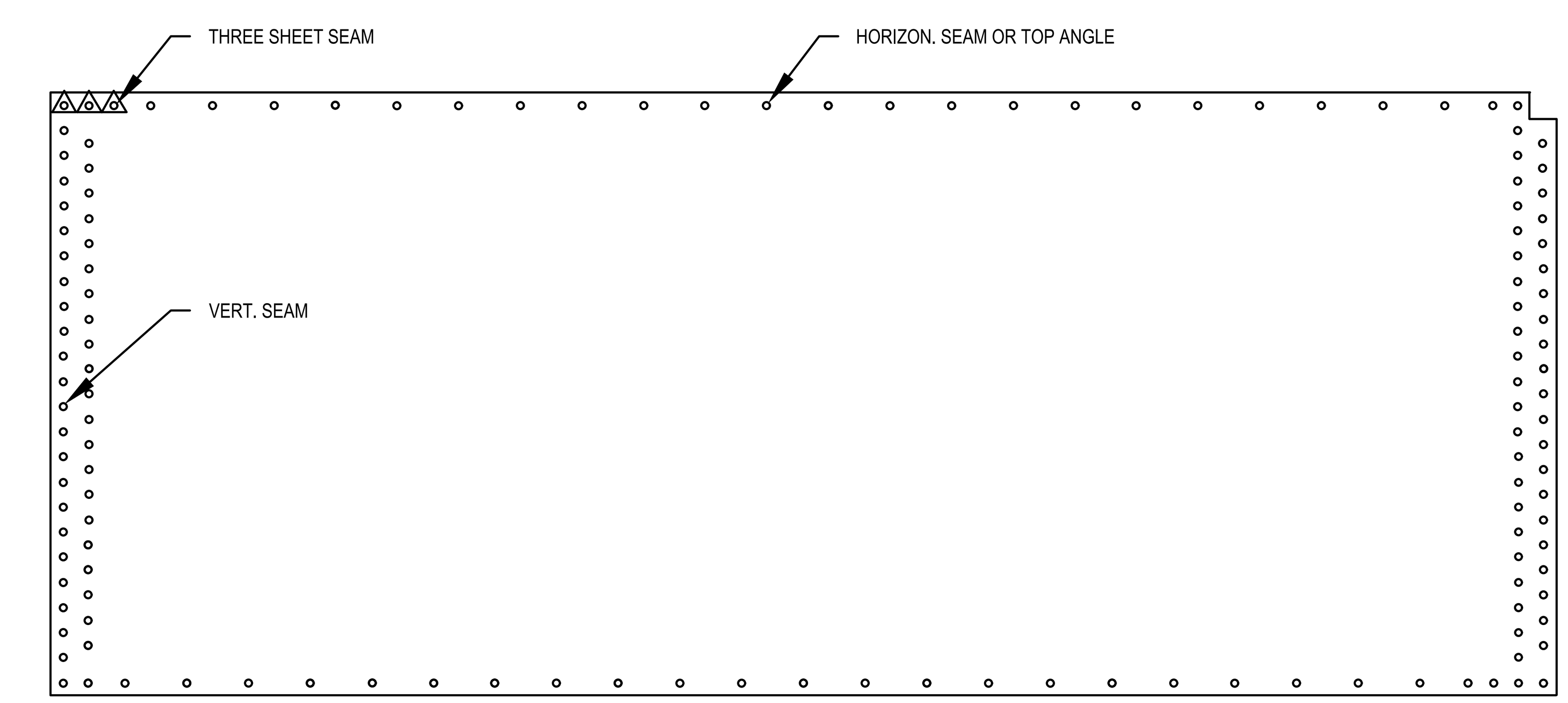
LAP RIGHT OVER LEFT
NOT TO SCALE





WALL ATTACHMENT DETAIL

NOT TO SCALE



No.	Issue	Checked	Approved	Date
	Conformed Drawings	GT	GT	07/18/2024

Author DRA | Drafting Check MGK | Project Manager G. TOMASINO
Designer MGK | Design Check MGK | Project Director M. KENNEDY

CONFORMED DRAWINGS

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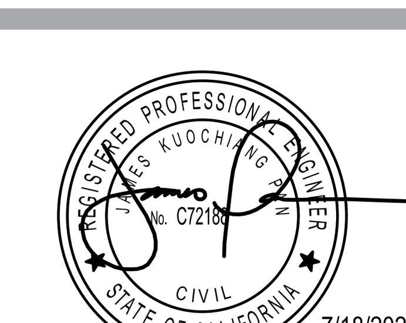
0 1"



7/18/2024

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2235 Mercury Way Suite 150
Santa Rosa California 95407 USA
T 1 707 523 1010 F 1 707 527 8679
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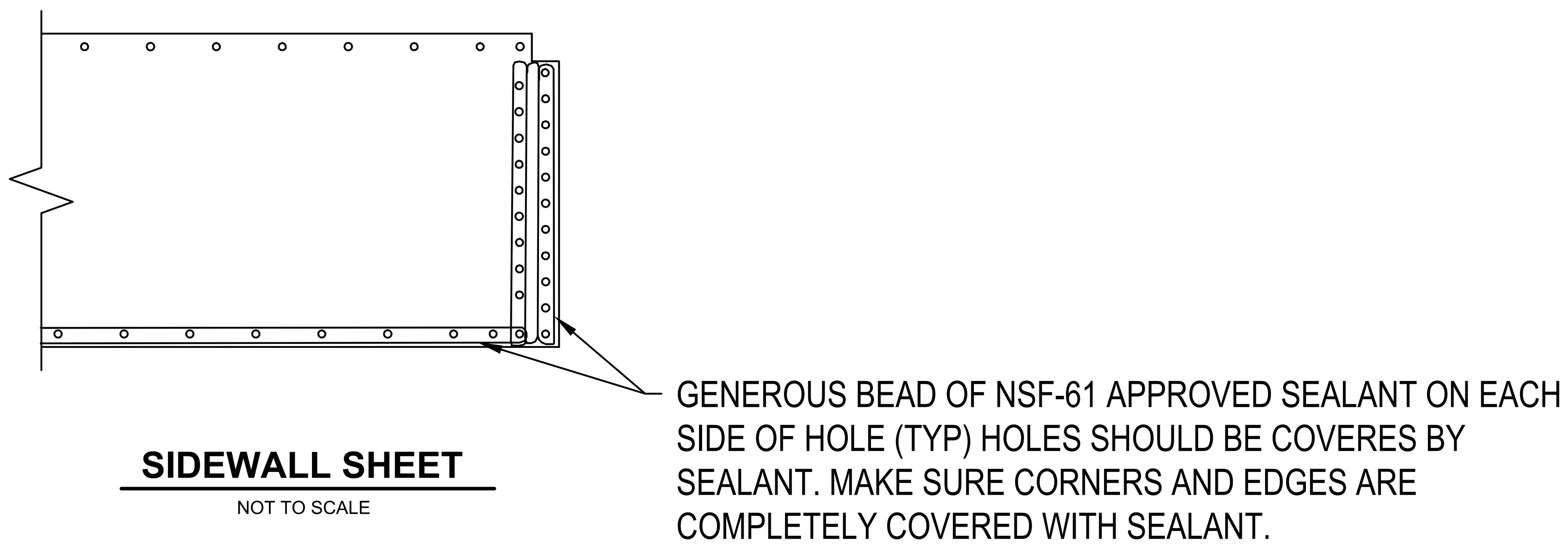
Conditions of Use

Client COUNTY OF SONOMA
Project LEACHATE TANK REPLACEMENT
Title STRUCTURAL DETAILS 2
Size ANSI D

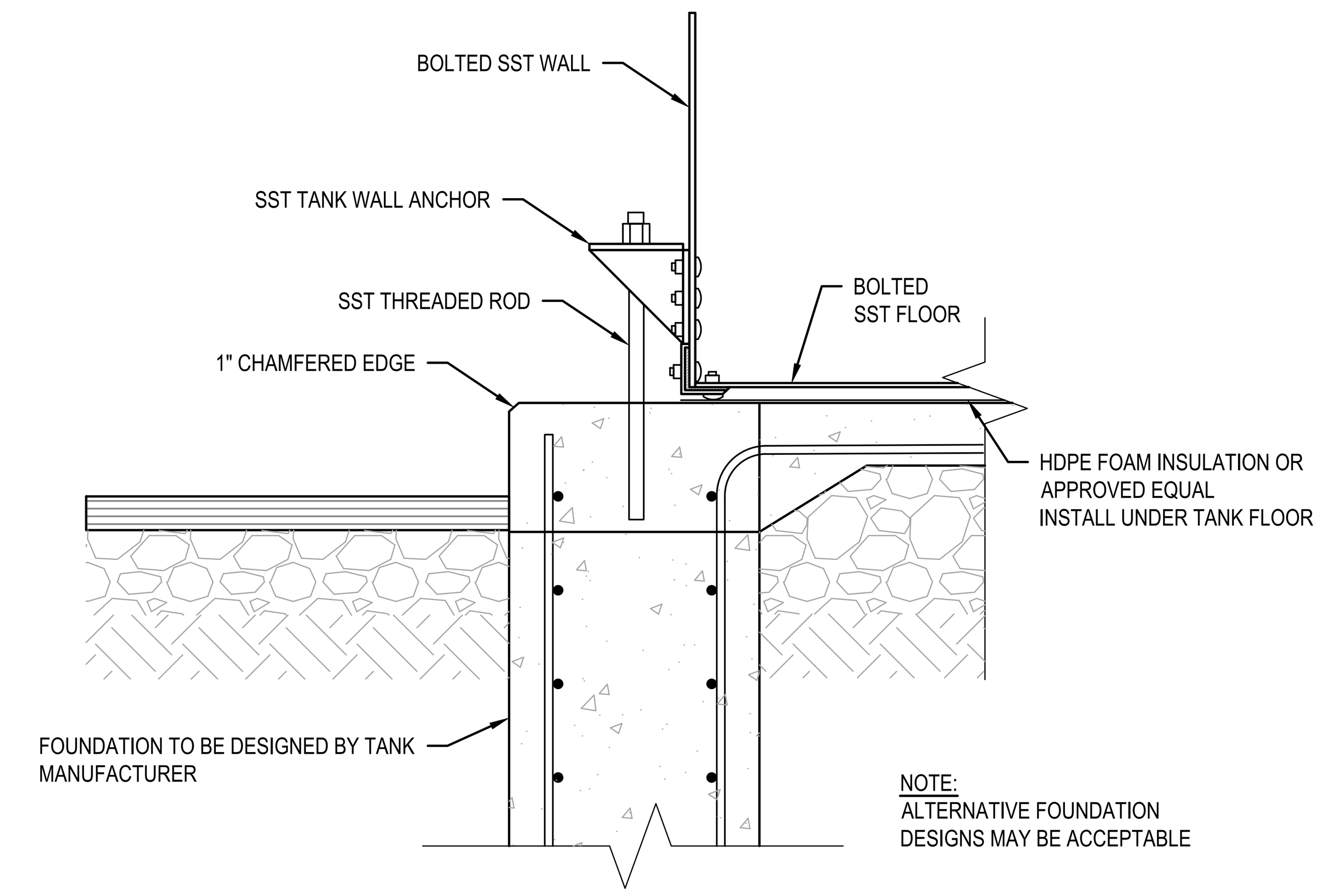
Project No. 12558724 | Date 7/18/2024 | Scale AS SHOWN
Drawing No. S-502 | Sheet No. 35 of 48

Plot Date: 18 July 2024 - 3:51 PM Plotted By: Steven Toft Filename: \\ghdnet\ghd\US\San Francisco\Projects\561\12558724\Digital_Design\ACAD\Sheets\Leachate Tanks\12558724-GHD-0001-DWG-ST-0502.dwg

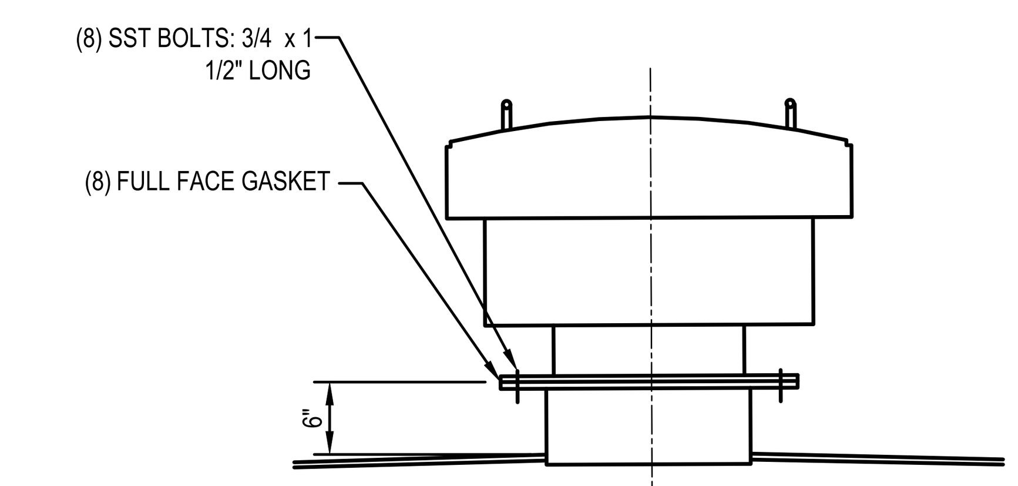


SIDEWALL SHEET

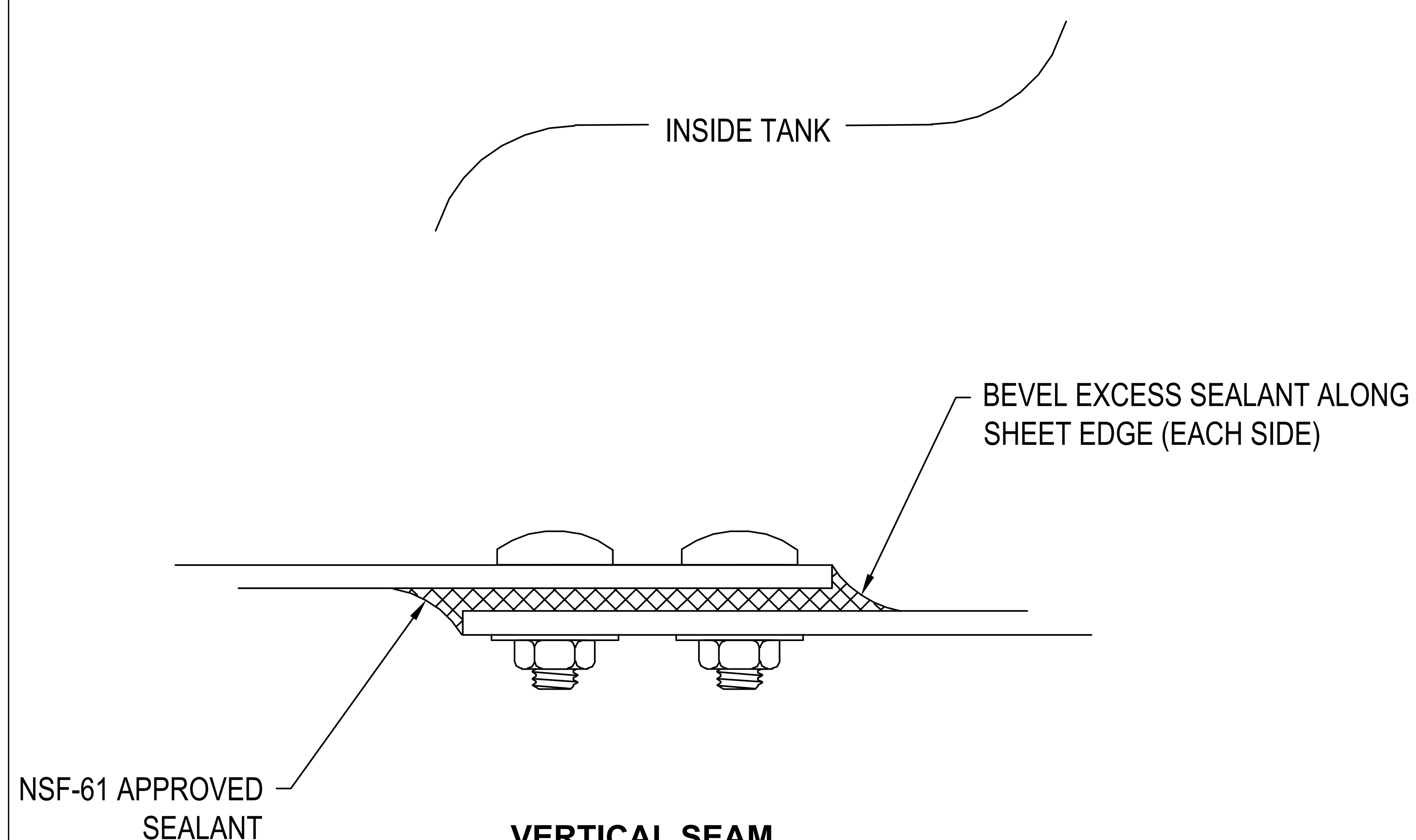
NOT TO SCALE



2 TANK FOUNDATION ANCHORAGE

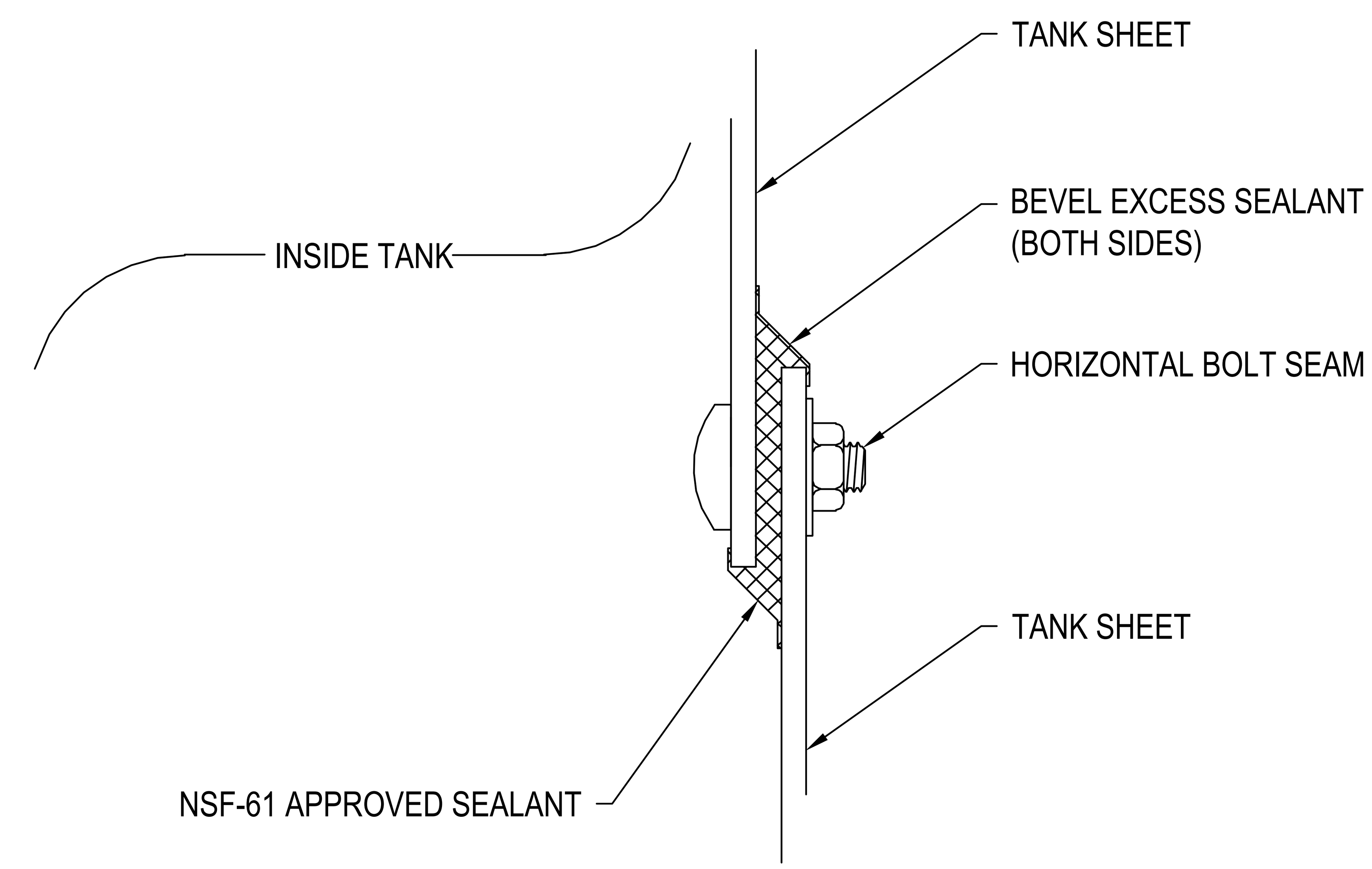


3 ROOF VENT DETAIL



VERTICAL SEAM

NOT TO SCALE



HORIZONTAL SEAM

NOT TO SCALE

1 SEALANT APPLICATION LOCATIONS

NOT TO SCALE

No.	Issue	Checked	Approved	Date
	Conformed Drawings	GT	GT	07/18/2024

Author **DRA** Drafting Check **MGK** Project Manager **G. TOMASINO**

Designer **MGK** Design Check **MGK** Project Director **M. KENNEDY**

CONFORMED DRAWINGS

Bar is one inch on original size sheet

0 1"

REGISTERED PROFESSIONAL ENGINEER JAMES KUOCHIANG PAN No. C72186 CIVIL STATE OF CALIFORNIA

7/18/2024

GHD Inc.
2235 Mercury Way Suite 150
Santa Rosa California 95407 USA
T 1 707 523 1010 **F** 1 707 527 8679
www.ghd.com

Client **COUNTY OF SONOMA**

Project **LEACHATE TANK REPLACEMENT**

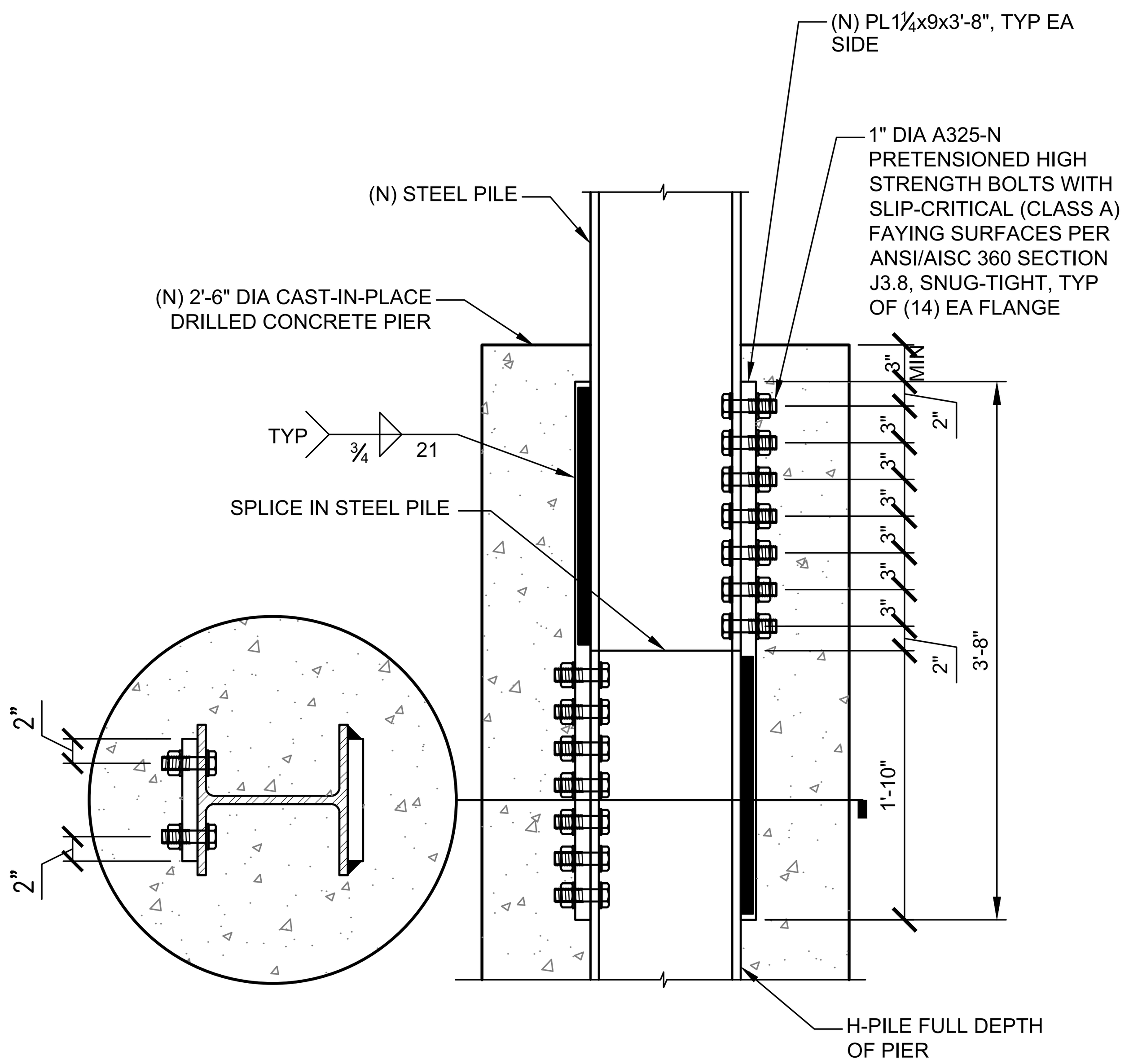
Title **STRUCTURAL DETAILS 3**

Size **ANSI D**

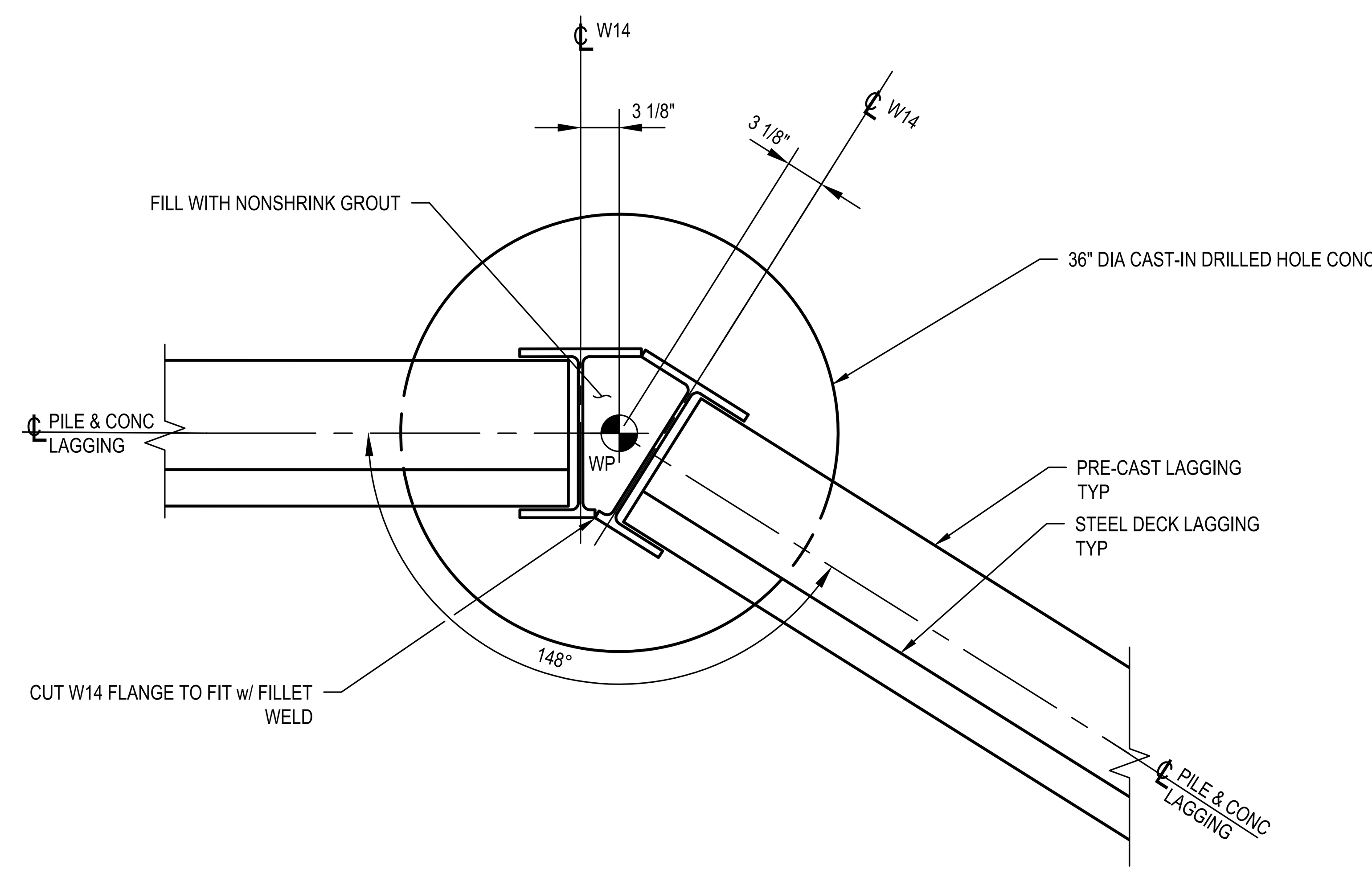
Project No. **12558724** Date **7/18/2024** Scale **AS SHOWN**

Drawing No. **S-503**

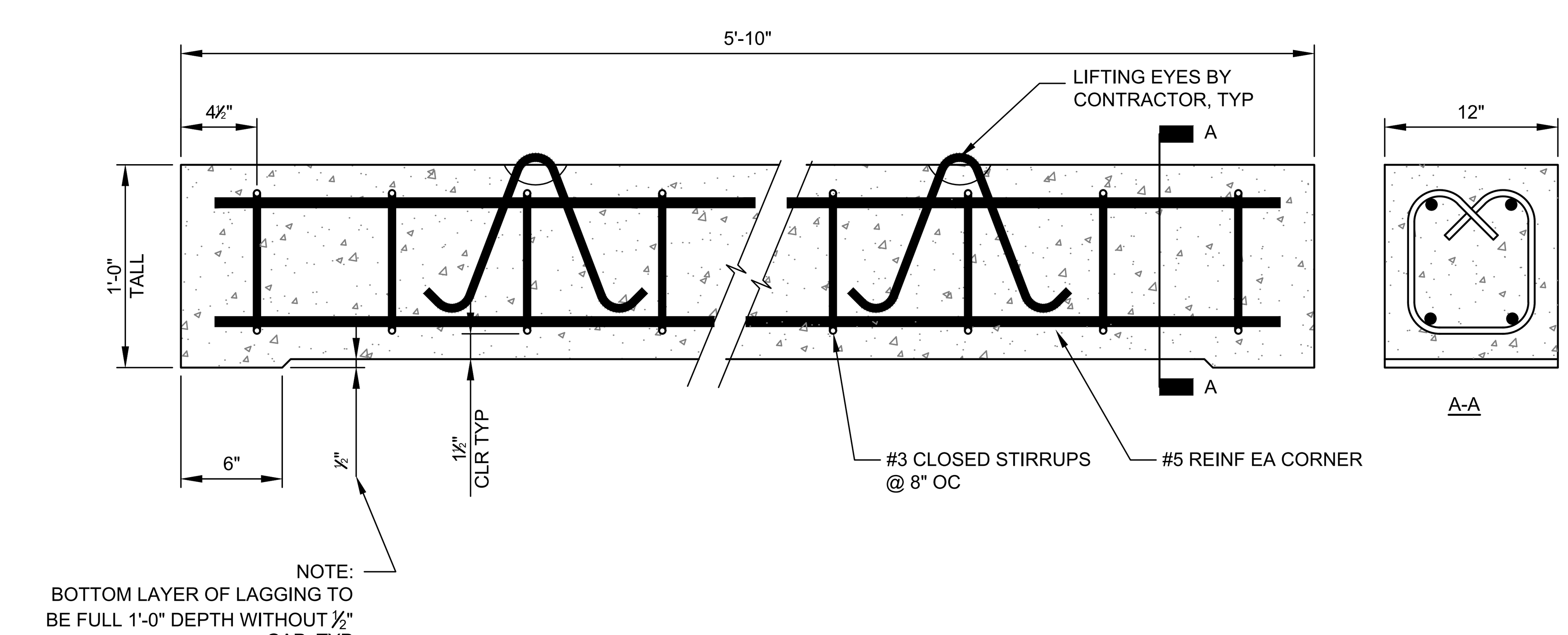
Plot Date: 18 July 2024 - 3:52 PM Plotted By: Steven Toft Filename: \\ghdnet\ghd\US\San Francisco\Projects\561\12558724\Digital_Design\ACAD\Sheets\Leachate Tanks\12558724-GHD-0001-DWG-ST-0503.dwg



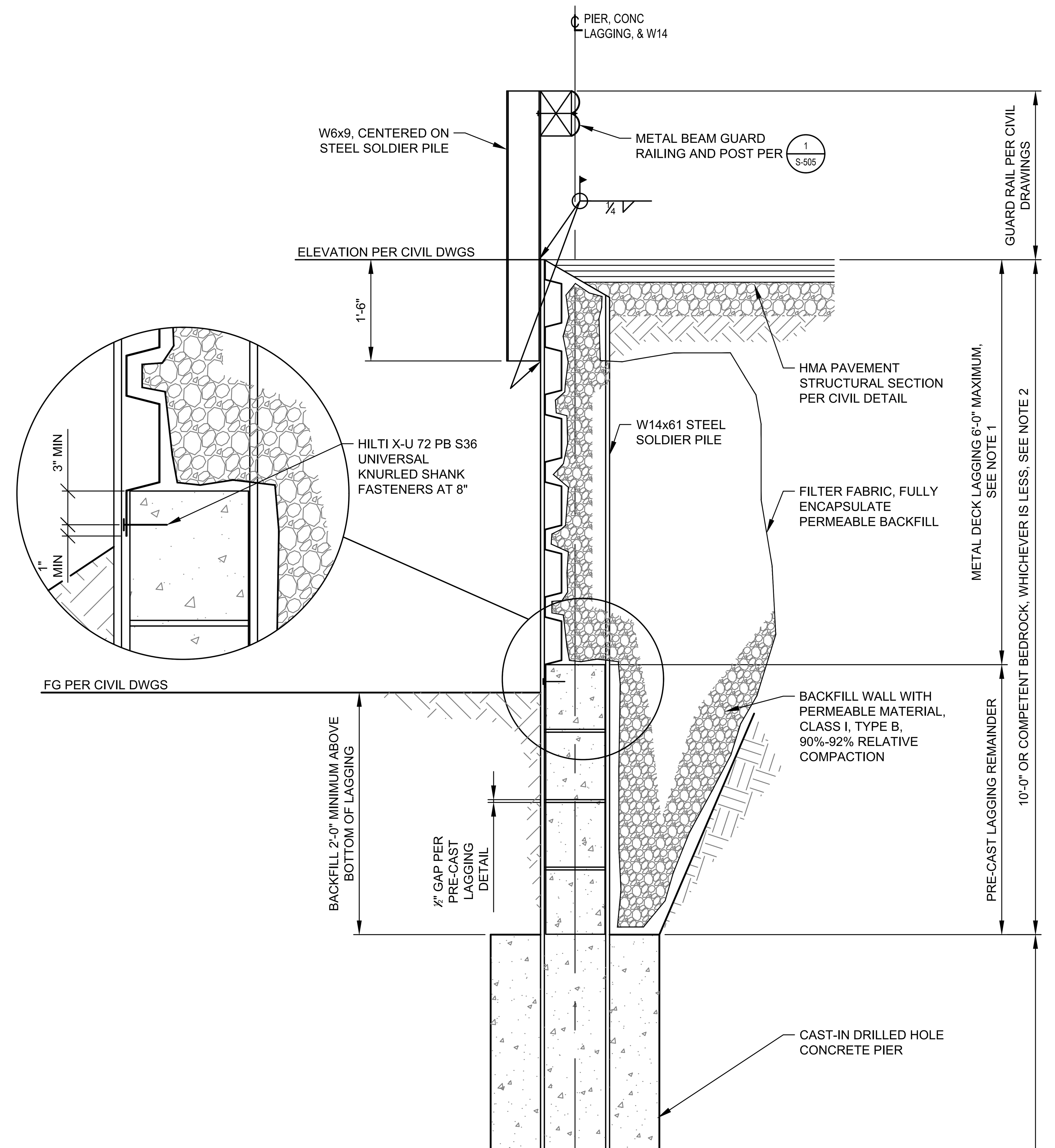
1 OPTIONAL PILE SPLICE
NOT TO SCALE

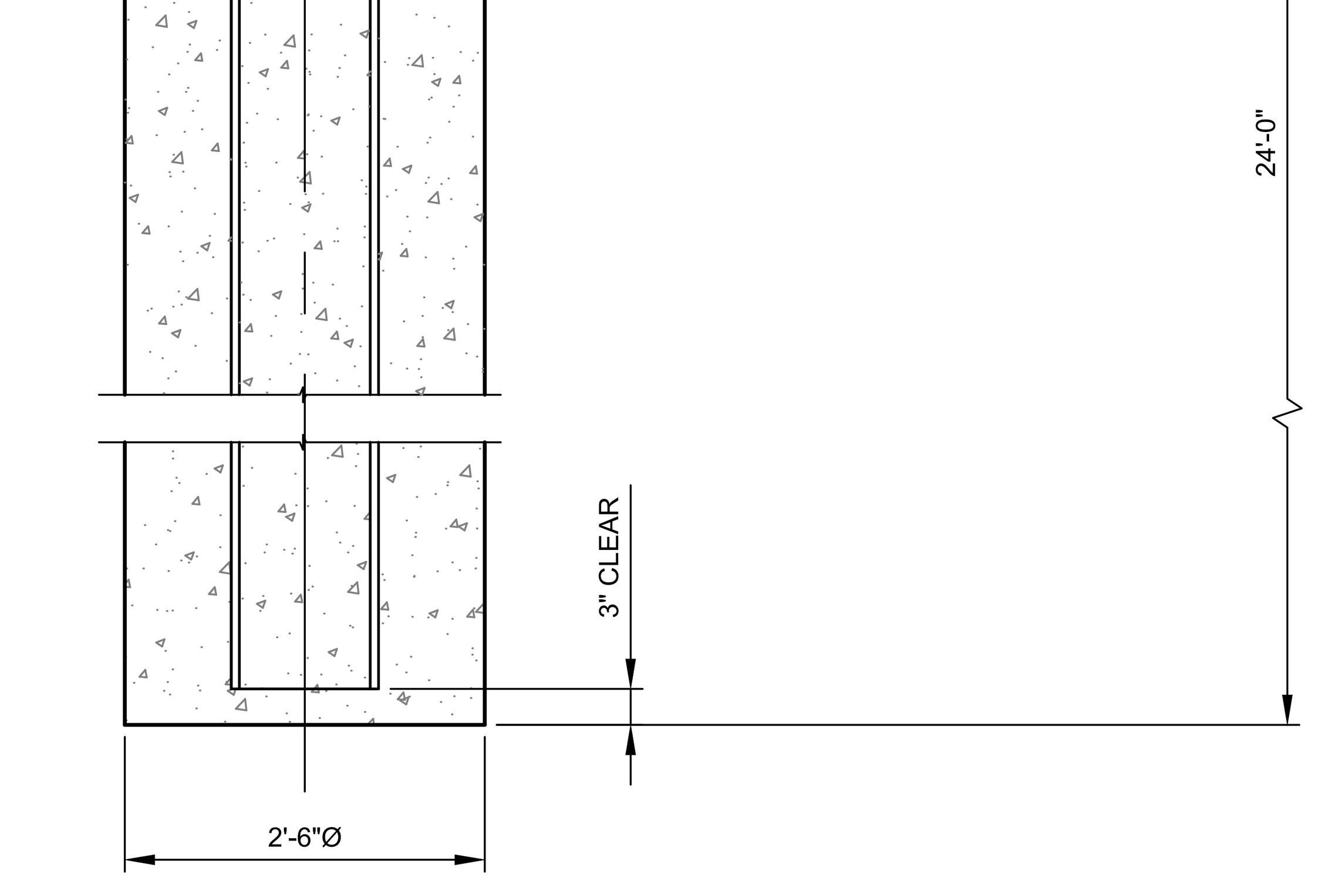


2 CORNER TRANSITION DETAIL
NOT TO SCALE



3 PRE-CAST LAGGING
NOT TO SCALE





NOTES:

1. VERCO PLN-24 3" DEEP ROOF DECK, 16 GA, GALVANIZED (G90). PROVIDE WITH FACTORY PUNCHED VENT TABS. FASTEN TO STEEL PILE FLANGES USING HILTI X-U 42 UNIVERSAL KNURLED SHANK FASTENERS AT EACH BOTTOM FLUTE. PROVIDE TOP SEAM WELDS AT 24" ON CENTER AT SIDELAP CONNECTIONS.
2. CONTRACTOR TO COORDINATE WITH ENGINEER TO VERIFY DEPTH TO SUITABLE BEDROCK.
3. FOR BIDDING PURPOSES CONTRACTOR TO ASSUME THAT IT WILL BE NECESSARY TO EXCAVATE A LEVEL BENCH AT A DEPTH OF 10 FEET BELOW THE EXISTING ROAD GRADE AND THAT THE PIERS WILL BE DRILLED BELOW THIS BENCH, AS SHOWN. IF COMPETENT BEDROCK IS ENCOUNTERED AT A SHALLOWER DEPTH THE BENCH MAY BE CONSTRUCTED AT THE DEPTH OF COMPETENT BEDROCK.

4 WALL SECTION
C-104
NOT TO SCALE

No.	Issue	Checked	Approved	Date
	Conformed Drawings	GT	GT	07/18/2024

Author DRA | Drafting Check MGK | Project Manager G. TOMASINO
Designer MGK | Design Check MGK | Project Director M. KENNEDY

CONFORMED DRAWINGS

Bar is one inch on original size sheet
0 1"

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7/18/2024

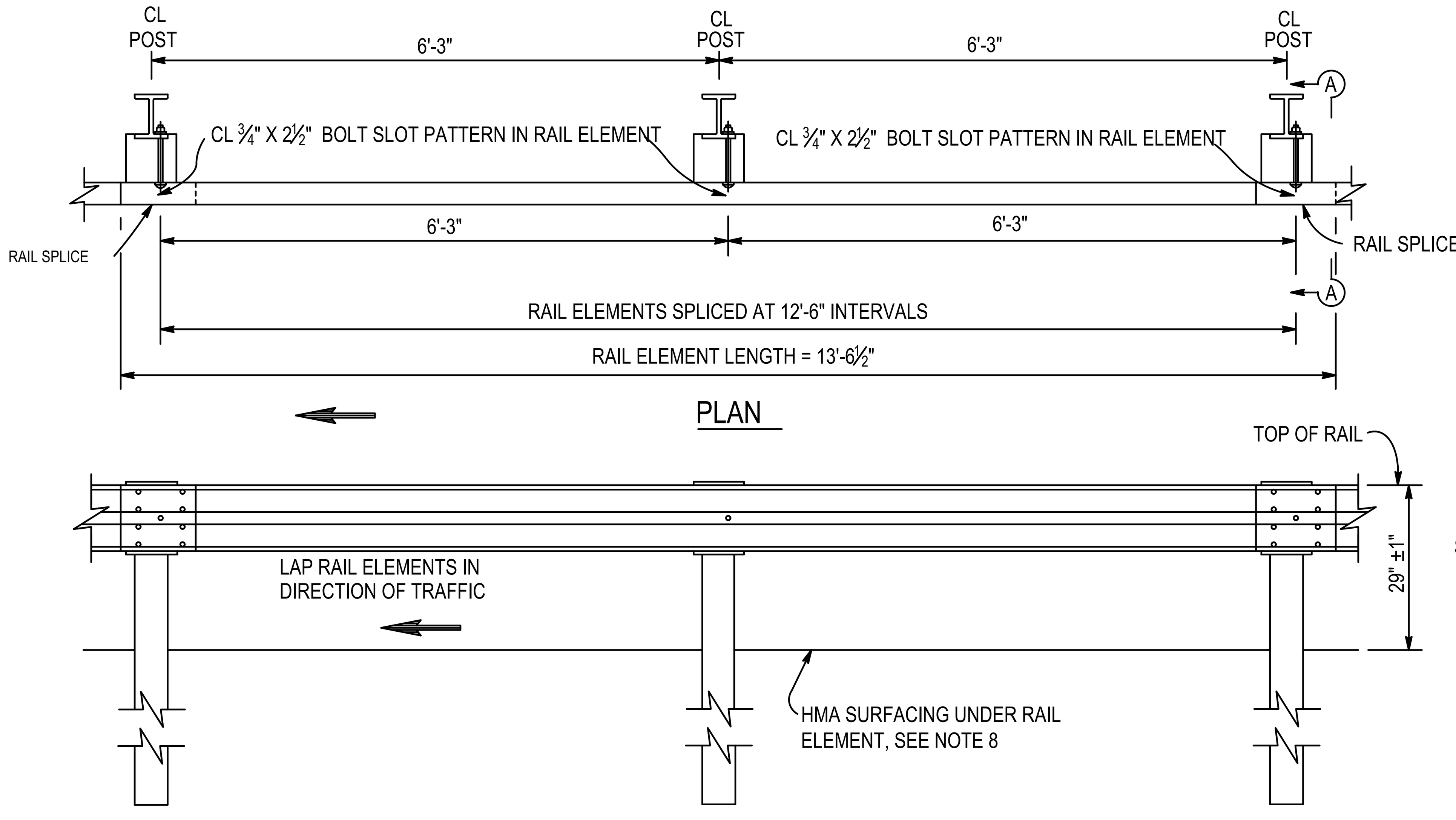
GHD Inc.
2235 Mercury Way Suite 150
Santa Rosa California 95407 USA
T 1 707 523 1010 F 1 707 527 8679
www.ghd.com

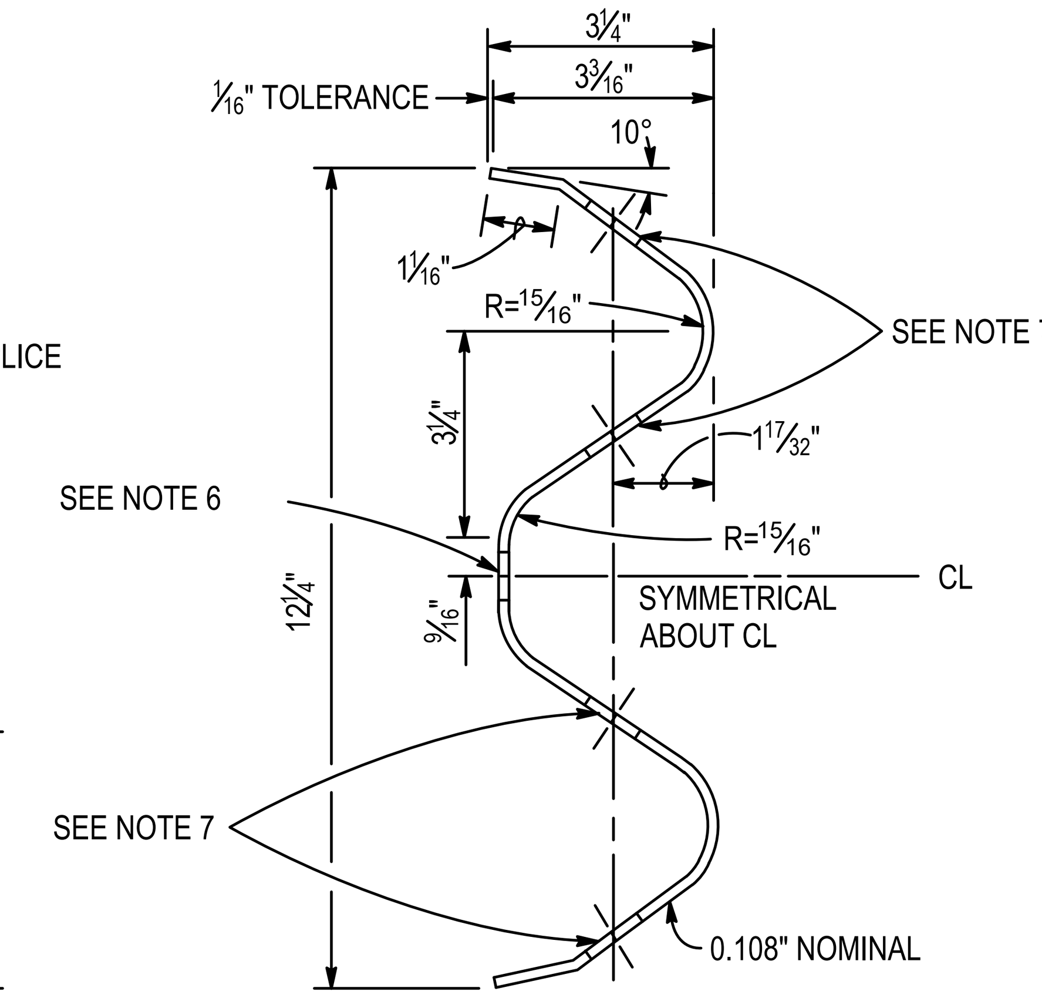
Client COUNTY OF SONOMA
Project LEACHATE TANK REPLACEMENT
Title STRUCTURAL DETAILS 4
Size ANSI D

Project No.	Date	Scale
12558724	7/18/2024	AS SHOWN

Drawing No. S-504

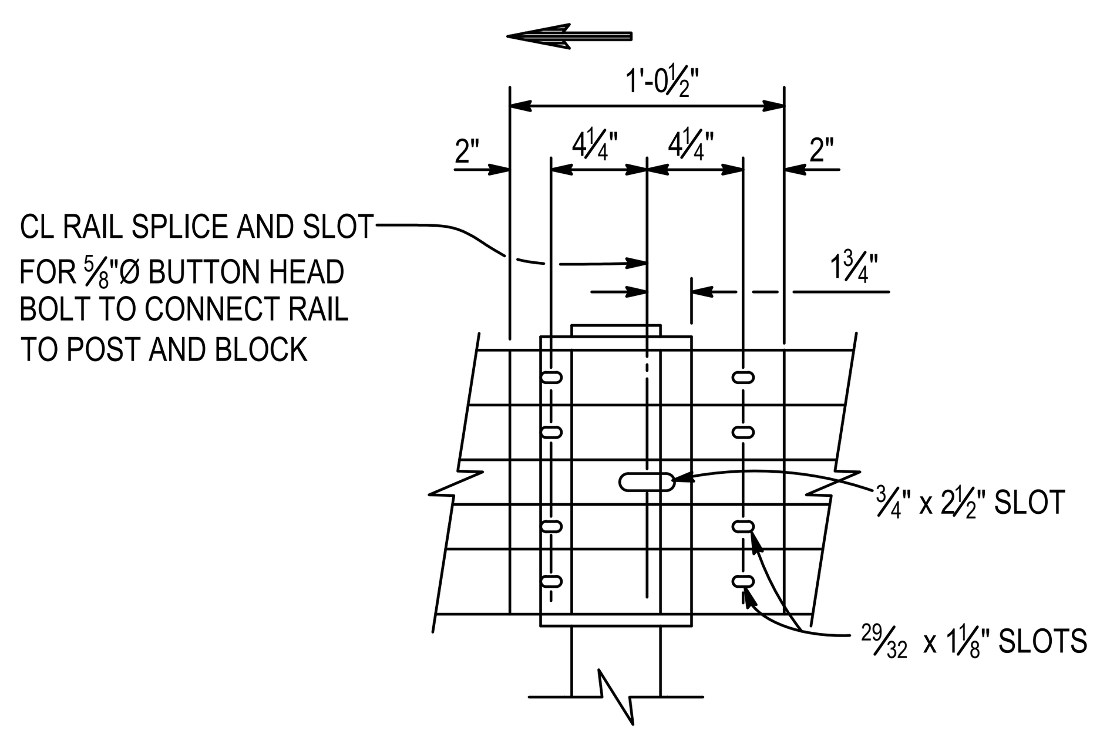
Plot Date: 18 July 2024 - 3:53 PM   Plotted By: Steven Toft   Filename: \\ghdnet\ghd\US\San Francisco\Projects\561\12558724\Digital_Design\ACAD\Sheets\Leachate Tanks\12558724-GHD-0001-DWG-ST-0504.dwg





SECTION THRU RAIL ELEMENT

METAL BEAM GUARD RAILING WITH STEEL POSTS AND NOTCHED WOOD OR NOTCHED RECYCLED PLASTIC BLOCKS



RAIL ELEMENT SPLICE DETAIL

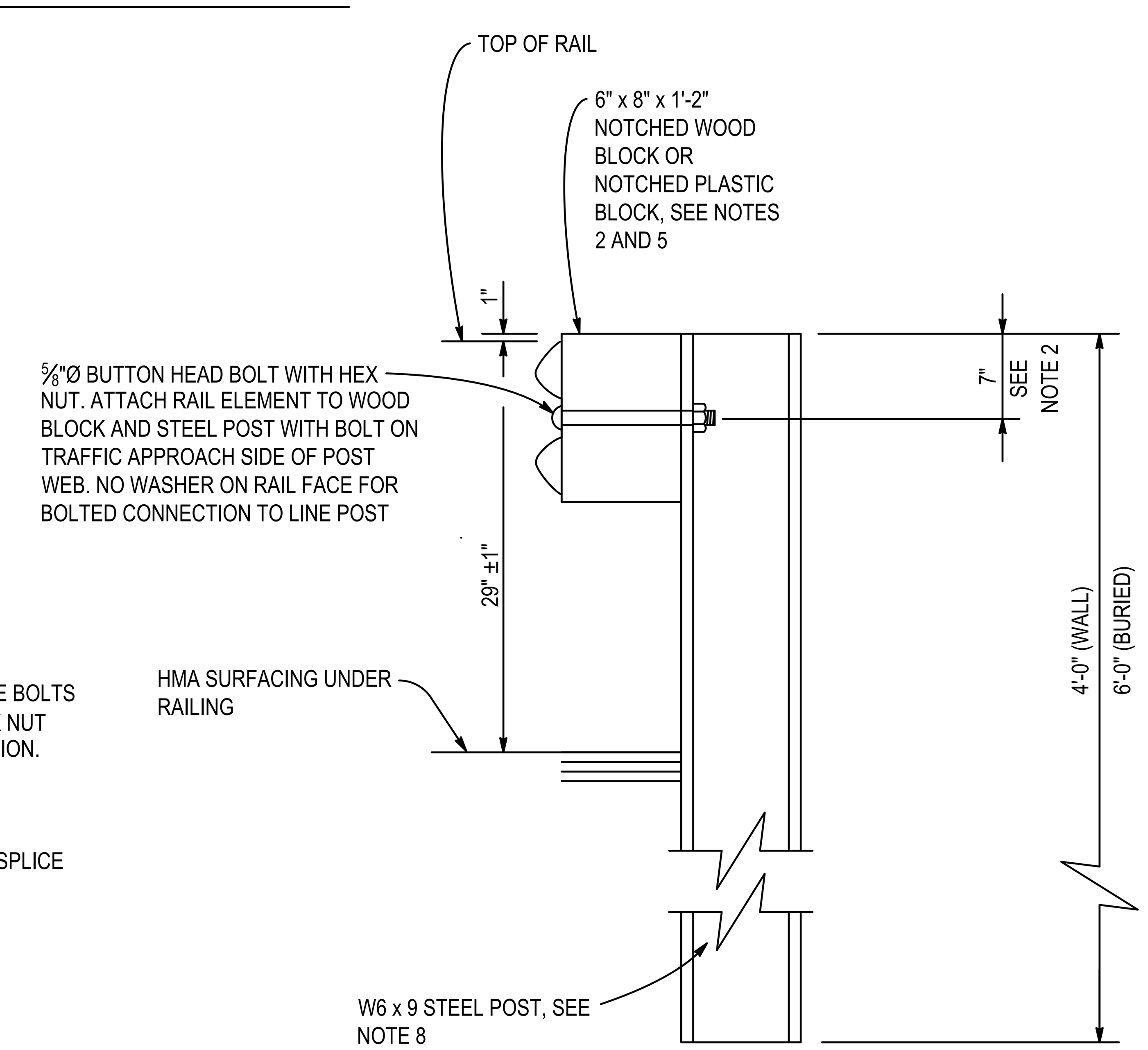
a) CONNECT THE OVER LAPPED END OF THE RAIL ELEMENTS WITH ⅝"Ø X 1¼" BUTTON HEAD OVAL SHOULDER SPLICE BOLTS INSERTED INTO THE ²⁹⁄₃₂" X 1⅛" SLOTS AND BOLTED TOGETHER WITH ⅝" Ø RECESSED HEX NUTS. RECESS OF HEX NUT POINTS TOWARD RAIL ELEMENT. A TOTAL OF 8 BOLTS AND NUTS ARE TO BE USED AT EACH RAIL SPLICE CONNECTION.

b) THE ENDS OF THE RAIL ELEMENTS ARE TO BE OVERLAPPED IN THE DIRECTION OF TRAFFIC (SEE DETAILS)

c) WHERE END CAP IS TO BE ATTACHED TO THE END OF A RAIL ELEMENT, A TOTAL OF 4 OF THE ABOVE DESCRIBED SPLICE BOLTS AND NUTS ARE TO BE USED

NOTES:

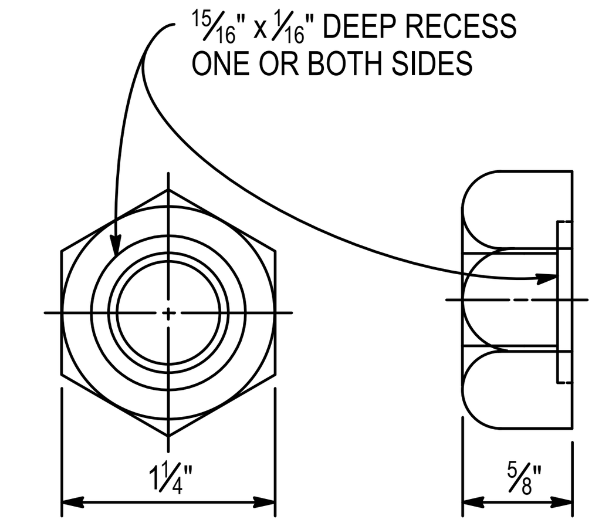
1. FOR DETAILS OF STANDARD HARDWARE USED TO CONSTRUCT GUARD RAILING, SEE DETAIL 2
2. FOR DETAILS OF STEEL POSTS AND NOTCHED WOOD BLOCKS USED TO 3. CONSTRUCT GUARD RAILING, SEE DETAIL 3
3. GUARD RAILING POST SPACING TO BE 6'-0" CENTER TO CENTER, EXCEPT AS OTHERWISE NOTED
4. NOTCHED FACE OF BLOCK FACES STEEL POST
5. SLOTTED HOLE FOR BOLTED CONNECTION OF RAIL ELEMENT TO BLOCK AND POST. SEE "SECTION THRU RAIL ELEMENT"
6. SLOTTED HOLES FOR SPLICE BOLTS TO OVERLAP ENDS OF RAIL ELEMENT. SEE "SECTION THRU RAIL ELEMENT"



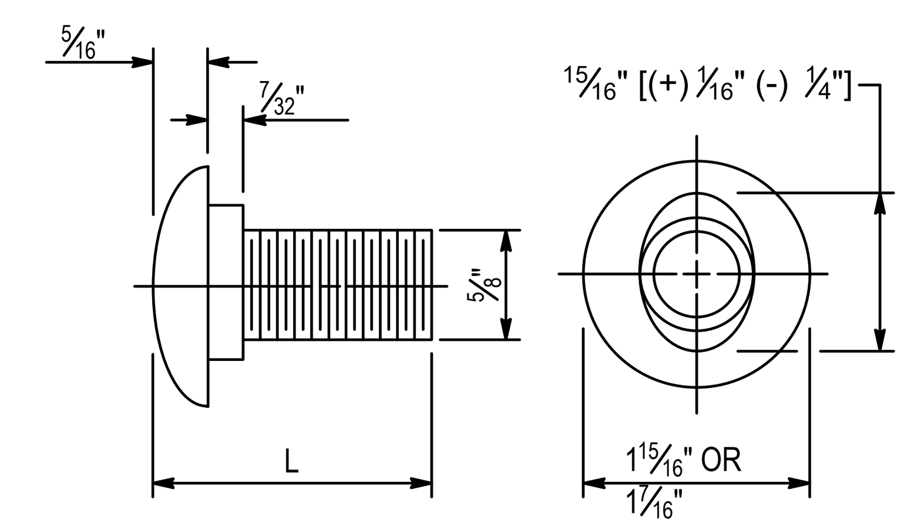
SECTION A-A

TYPICAL STEEL LINE POST INSTALLATION

1 VAR **METAL BEAM GUARD RAILING**
N.T.S.



⅝"Ø RECESS NUT

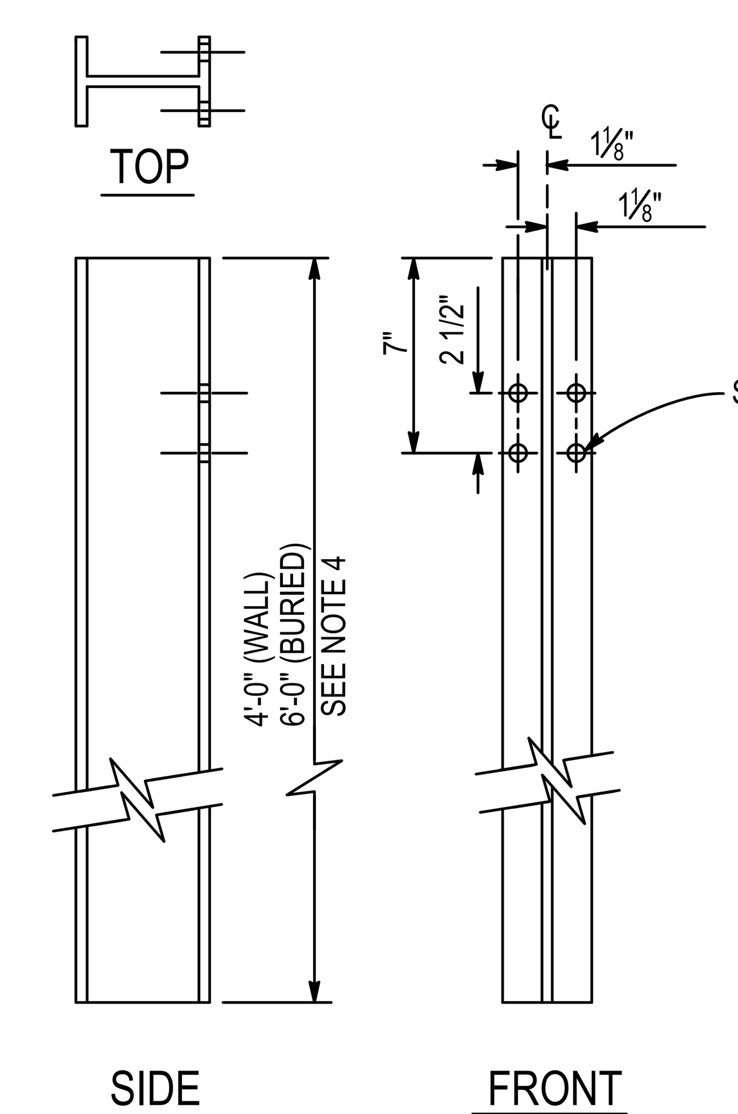


⅝"Ø BUTTON HEAD BOLT

L	THREAD LENGTH
1⅜"	FULL THREAD LENGTH
2"	FULL THREAD LENGTH
10"	4" MIN THREAD LENGTH
18"	4" MIN THREAD LENGTH
20"	4" MIN THREAD LENGTH
22"	4" MIN THREAD LENGTH
** 2¾"	2" MIN THREAD LENGTH
** 19"	4" MIN THREAD LENGTH

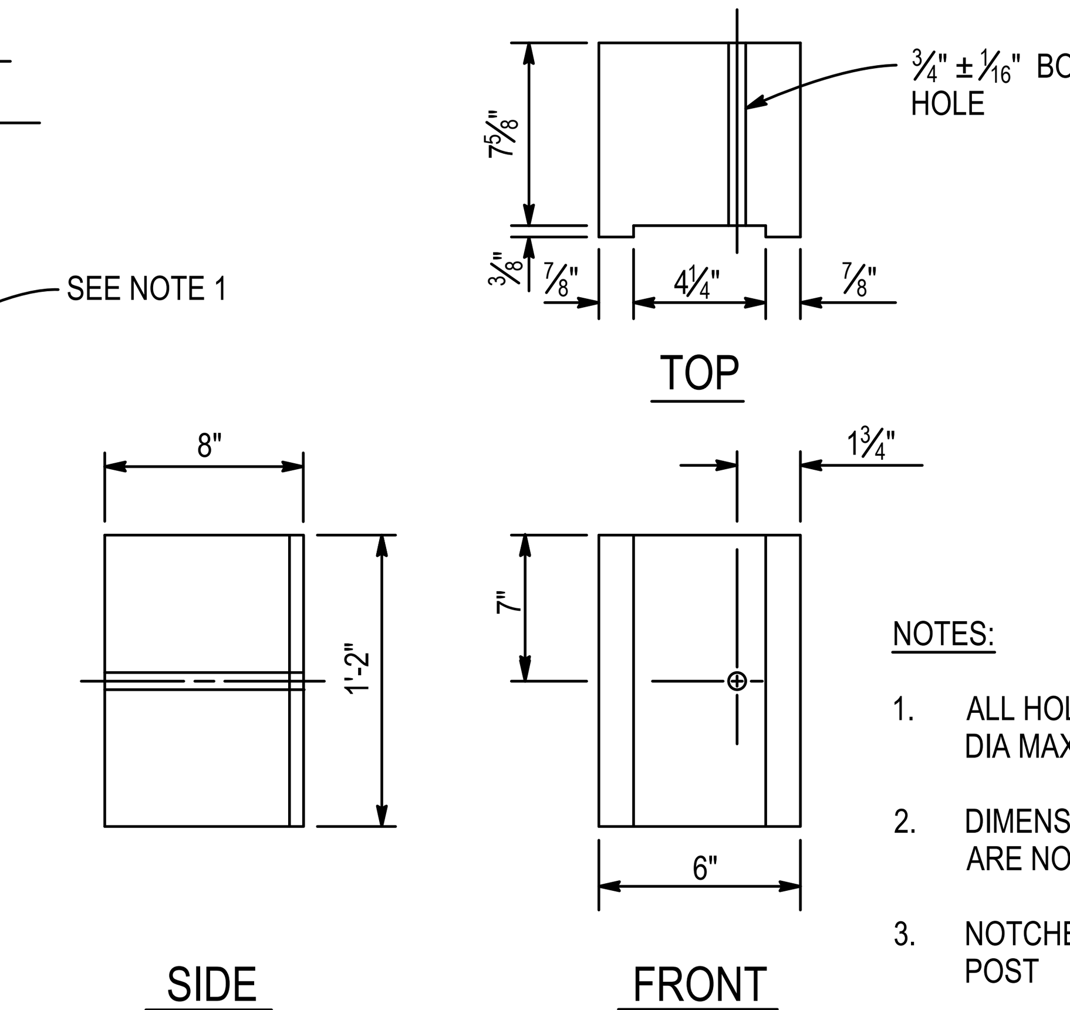
** FOR NESTED RAIL APPLICATIONS

2 – **METAL BEAM GUARD RAILING HARDWARE**
N.T.S.



W6 x 9 STEEL POST

SEE NOTE 4



6" x 8" NOTCHED WOOD BLOCK

SEE NOTES 2 AND 3

NOTES:

1. ALL HOLES IN STEEL POST TO BE ¹³⁄₁₆" DIA MAXIMUM
2. DIMENSIONS SHOWN FOR WOOD BLOCK ARE NOMINAL
3. NOTCHED FACE OF BLOCK FACES STEEL POST
4. 4'-0" LENGTH POSTS TO BE USED ON WALL ONLY

3 – **METAL BEAM GUARD RAILING STEEL POST AND NOTCHED WOOD BLOCK**
N.T.S.

No.	Issue	Checked	Approved	Date
	Conformed Drawings	GT	GT	07/18/2024

Author DRA | Drafting Check MGK | Project Manager G. TOMASINO
Designer MGK | Design Check MGK | Project Director M. KENNEDY

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Client **COUNTY OF SONOMA**
Project **LEACHATE TANK REPLACEMENT**
Title **STRUCTURAL DETAILS 5**
Size ANSI D

Project No.	Date	Scale
12558724	7/18/2024	AS SHOWN

ABBREVIATIONS

(D)	DEMOLISH	KAIC	KILO-AMPS INTERRUPTING CAPACITY
(E)	EXISTING	KVA	KILOVOLT-AMP
(F)	FUTURE	KW	KILOWATT
(N)	NEW	KWH	KILOWATT-HOUR
A	AMPERES	LSH	LEVEL SWITCH - HIGH
AC	ALTERNATING CURRENT	LSHH	LEVEL SWITCH - HIGH-HIGH
AF	AMP FRAME	LSL	LEVEL SWITCH - LOW
AFF	ABOVE FINISHED FLOOR	LSLL	LEVEL SWITCH - LOW-LOW
AFG	ABOVE FINISHED GRADE	LV	LOW VOLTAGE
AHU	AIR HANDLING UNIT	MCB	MAIN CIRCUIT BREAKER
AIC	AMPS INTERRUPTING CAPACITY	MCC	MOTOR CONTROL CENTER
ANN	ANNUNCIATOR	MCP	MOTOR CIRCUIT PROTECTOR
ATS	AUTOMATIC TRANSFER SWITCH	MFR	MANUFACTURER
AWG	AMERICAN WIRE GAUGE	MLO	MAIN LUGS ONLY
BAT	BATTERY	NIC	NOT IN CONTRACT
BFG	BELOW FINISH GRADE	NTS	NOT TO SCALE
CATV	CABLE TELEVISION	OC	ON CENTER
C	CONDUIT	PA	PUBLIC ADDRESS
CB	CIRCUIT BREAKER	PT	POTENTIAL TRANSFORMER
CCTV	CLOSED CIRCUIT TELEVISION	PV	PHOTOVOLTAIC
CO	CONDUIT ONLY	PVC	POLYVINYL CHLORIDE
CPT	CONTROL POWER TRANSFORMER	PB	PULL BOX, ELECTRICAL
CT	CURRENT TRANSFORMER	PLC	PROGRAMMABLE LOGIC CONTROLLER
CU	COPPER	RECPT	RECEPTACLE, OUTLET
DC	DIRECT CURRENT	RGS	RIGID GALVANIZED STEEL (CONDUIT)
EGU	ENGINE GENERATOR UNIT	RVSS	REDUCED VOLTAGE SOFT START
EM	EMERGENCY	RTU	REMOTE TERMINAL UNIT
EMT	ELECTRICAL METALLIC TUBING	SPD	SURGE PROTECTION DEVICE
ENT	ELECTRICAL NON-METALLIC TUBING	SSRV	SOLID STATE REDUCE VOLTAGE
EP	EXPLOSION PROOF	SSTL	STAINLESS STEEL
FA	FIRE ALARM	SR	RECEPTACLE
FACP	FIRE ALARM CONTROL PA	STC	STANDARD TEST CONDITIONS
FU	FUSE	TV	TELEVISION MONITOR (SET)
GND	GROUND	UF	UNDER FLOOR
GFCI	GROUND FAULT CIRCUIT INTERRUPTER	UG	UNDERGROUND
GFI	GROUND FAULT INTERRUPTER	UON	UNLESS OTHERWISE NOTED
GFR	GROUND FAULT RELAY	UPS	UNINTERRUPTIBLE POWER SUPPLY
HID	HIGH INTENSITY DISCHARGE	V	VOLT
HOA	"HAND-OFF-AUTO" SWITCH	VA	VOLT-AMP
HP	HORSEPOWER	VFD	VARIABLE FREQUENCY DRIVE
HPS	HIGH PRESSURE SODIUM	WP	WEATHERPROOF
HMI	HUMAN-MACHINE INTERFACE	WPI	WEATHERPROOF IN USE
HVAC	HEATING, VENTILATION & AIR-CONDITIONING	XFMR	TRANSFORMER
IG	ISOLATED GROUND		
INST	INSTRUMENTATION		
JB	JUNCTION BOX		

ANNOTATION

- KEYNOTE
- RACEWAY, FEEDER OR CIRCUIT DESIGNATION (SEE SCHEDULE)
- DETAIL NUMBER / DETAIL INDICATOR / SHEET NUMBER ON WHICH DETAIL APPEARS (1, E-501)
- SECTION LETTER / SECTION INDICATOR / SHEET NUMBER ON WHICH SECTION APPEARS (A, E-301)
- MECHANICAL EQUIPMENT DESIGNATION (SEE SCHEDULE) (WH 1)

OBJECT LINES

- NEW OBJECTS (HEAVY CONTINUOUS LINES, UNDERGROUND CONDUIT HEAVY DASHED LINES)
- EXISTING OBJECTS TO REMAIN. MAY INCLUDE NEW CIRCUITING ETC. (FINE CONTINUOUS LINES, UNDERGROUND CONDUIT FINE DASHED LINES)
- EXISTING OBJECTS TO BE DEMOLISHED (EXTRA FINE DASHED LINES, SCREENED)

ELECTRICAL SYMBOLS LEGEND

DIAGRAM

- ALARM, INDICATING LIGHT, SIGNAL LIGHT OR STROBE
- CIRCUIT BREAKER - SIZE AND TYPE AS INDICATED (AT / AF)
- CIRCUIT BREAKER IN NEMA ENCLOSURE SIZE AND TYPE AS INDICATED (XXX/X NEMA XX)
- THERMAL OVERLOAD RELAY (OL)
- COMBINATION MOTOR CONTROLLER, STARTER, CIRCUIT BREAKER TYPE (XXX/X, SIZE, OL)
- SHUNT TRIP
- DRAW-OUT TYPE CONNECTION
- DISCONNECT SWITCH WITH FUSE
- FUSE - SIZE AS INDICATED
- INTERLOCK, ELECTRICAL
- METER, ELECTRICAL
- MOTOR - SIZE AS INDICATED
- TRANSFER SWITCH, ATS: AUTOMATIC, MTS: MANUAL
- GENERATOR UNIT - RATED AS INDICATED
- TRANSFORMER, PAD MOUNT
- TRANSFORMER, DRY TYPE
- POTENTIAL TRANSFORMER WITH FUSE
- CURRENT TRANSFORMER
- SURGE ARRESTOR - LIGHTING
- GROUNDING ELECTRODE OR CONNECTION

POWER

- DUPLEX RECEPTACLE, 20A 125V 2P 3W, GROUNDING TYPE, MOUNTING HEIGHT: +18" AFF UON (+48" DENOTES HEIGHT IN INCHES AFF (INTERIOR) AFG (EXTERIOR))
- DUPLEX RECEPTACLE - SPLIT WIRED, SWITCHED
- DUPLEX RECEPTACLE - EMERGENCY POWER
- DUPLEX RECEPTACLE - CEILING MOUNTED
- FLOOR RECEPTACLE, 20A 125V 2P 3W, GROUNDING TYPE, FLUSH TYPE UON
- DOUBLE DUPLEX RECEPTACLE, 20A 125V 2P 3W, GROUNDING TYPE, MOUNTING HEIGHT: +18" AFF UON
- SINGLE RECEPTACLE, 20A 125V 2P 3W, GROUNDING TYPE, MOUNTING HEIGHT: +18" AFF UON
- SPECIAL PURPOSE RECEPTACLE AS DESIGNATED SEE 'SPECIAL SYMBOLS' ON EACH SHEET
- DUAL SERVICE RECESSED FLOOR BOX WITH DUPLEX AND DATA RECEPTACLES
- JUNCTION BOX, CODE SIZED UON
- FLOOR JUNCTION BOX
- DISCONNECT SWITCH - FUSED WHERE APPLICABLE
- MOTOR STARTER, COMBINATION WITH DISCONNECT SWITCH
- MOTOR STARTER OR CONTROLLER
- MOTOR CONNECTION
- CEILING EXHAUST FAN
- WATER HEATER
- POWER POLE: P=POWER, T=TELEPHONE, D=DATA, C=COMBINATION
- TEST PORT
- GROUND ROD
- GUY WIRE AND ANCHOR
- THERMOSTAT (SEE MECHANICAL DRAWINGS) COORDINATE MOUNTING HEIGHT
- DOOR CONTACT/INTRUSION SWITCH

CONDUIT

- CONDUIT INSTALLED ABOVE GRADE
- CONDUIT INSTALLED UNDERGROUND OR UNDER SLAB
- CONDUIT STUB-OUT WITH CAP
- FLEXIBLE CONDUIT WHIP TO LIGHT FIXTURE OR EQUIPMENT
- INDICATES CIRCUIT BREAKER I.D. / INDICATES BRANCH PANEL (L1-4) — CONDUIT HOME RUN TO DESIGNATED PANEL, TERMINAL, OR CONTROL CABINET EXAMPLES:
  - L1-6,8 — COMMA INDICATES MULTIPLE SINGLE POLE CIRCUITS
  - L1-10/12 — SLASH INDICATES MULTI-POLE CIRCUIT

NOTE FOR CONDUIT: THE TIC MARKS INDICATE THE QUANTITY OF #12 AWG WIRES OR, IF INDICATED, THE QUANTITY OF OTHER SIZE WIRE OR CABLES.

SEE THE SINGLE LINE DIAGRAM FOR FEEDER SIZES.
EXAMPLES: = (3) #12   #10 = (2) #10

F1 = (1) TYPE F1 CABLE. SEE CABLE SCHEDULE.

SCHEMATIC

- BATTERY CHARGER
- COIL RELAY (CR)
- CONTACT - NORMALLY CLOSED
- CONTACT - NORMALLY OPEN
- DC BATTERY
- ELAPSED TIME METER (ETM)
- FLOAT OR LEVEL SWITCH - NORMALLY CLOSED
- FLOAT OR LEVEL SWITCH - NORMALLY OPEN
- LIMIT SWITCH - NORMALLY CLOSED
- LIMIT SWITCH, NORMALLY OPEN
- PILOT LIGHT, LED TYPE - COLOR AS INDICATED
- PRESSURE SWITCH - CLOSED ON INCREASE
- PRESSURE SWITCH - OPEN ON INCREASE
- PUSH BUTTON, MOMENTARY - NORMALLY CLOSED
- PUSH BUTTON, MOMENTARY - NORMALLY OPEN
- RECTIFIER
- SELECTOR SWITCH - HAND-OFF-AUTO (H O A)
- SWITCH - NORMALLY CLOSED
- SWITCH - NORMALLY OPEN
- TEMPERATURE SWITCH - NORMALLY CLOSED
- TEMPERATURE SWITCH - NORMALLY OPEN
- TIMER SWITCH - NORMALLY CLOSED
- TIMER SWITCH - NORMALLY OPEN

GENERAL ELECTRICAL NOTES

1. ALL WORK SHALL CONFORM TO THE LATEST ADOPTED VERSION OF THE CALIFORNIA ELECTRICAL CODE (CEC), AND ALL RECOGNIZED CODES OF THE AUTHORITY HAVING JURISDICTION.
2. THE CONTRACTOR IS RESPONSIBLE TO MAINTAIN ALL EQUIPMENT IN A SAFE AND RESPONSIBLE MANNER. KEEP DEAD FRONT EQUIPMENT IN PLACE WHILE EQUIPMENT IS ENERGIZED. CONDUCT ALL CONSTRUCTION OPERATIONS IN A SAFE MANNER FOR EMPLOYEES AS WELL AS OTHER WORK PERSONS OR ANYONE VISITING THE JOB SITE. PROVIDE BARRIERS, FLAGS, TAPE, ETC. AS REQUIRED TO MAINTAIN SAFETY.
3. PRIOR TO COMMENCING WORK ON EXISTING SYSTEMS OR WHERE EXISTING SYSTEMS REQUIRE TEMPORARY SHUT DOWNS, COORDINATE WITH OWNERS REPRESENTATIVE. WHERE DISCONNECTING, MODIFYING OR WORKING ON EXISTING EQUIPMENT OR SYSTEMS, PROVIDE A WRITTEN METHOD OF PROCEDURE OUTLINING DATES, TIMES, DURATION AND DESCRIPTION OF PROPOSED WORK FOR APPROVAL PRIOR TO COMMENCING WORK . WORK ON EXISTING EQUIPMENT SHALL NOT COMMENCE UNTIL WRITTEN AUTHORIZATION IS GIVEN BY THE OWNERS REPRESENTATIVE.
4. ALL EQUIPMENT SHALL BE LISTED AND LABELED PER RECOGNIZED ELECTRICAL TESTING LABORATORY AND INSTALLED PER THE LISTING REQUIREMENTS AND THE MANUFACTURERS INSTRUCTIONS.
5. ALL EQUIPMENT SHALL BE GROUNDED PER THE REQUIREMENTS OF CEC ARTICLE 250. EQUIPMENT GROUNDING CONDUCTORS SHALL BE INSTALLED IN ALL POWER SYSTEM RACEWAYS.
6. CONTRACTOR RESPONSIBLE FOR FIELD VERIFICATION OF ALL DIMENSIONS PRIOR TO CONSTRUCTION. DRAWINGS INDICATE THE REQUIRED EQUIPMENT, DEVICES, FIXTURES, ETC. AND THEIR RELATED CIRCUITING REQUIREMENTS. THE CONTRACTOR IS RESPONSIBLE FOR COORDINATION OF THE DEVICE LOCATIONS WITH ALL DISCIPLINES.
7. UNLESS SPECIFICALLY INDICATED OTHERWISE, ALL EQUIPMENT INDICATED SHALL BE CONSIDERED NEW AND PROVIDED BY THE CONTRACTOR COMPLETE, INSTALLED, TESTED AND FUNCTIONING.
8. MAINTAIN AS BUILT CONDITIONS OF THE INSTALLATION DURING CONSTRUCTION AND SUBMIT THE FINAL CONSTRUCTED CONDITIONS TO THE OWNER/ARCHITECT FOR THEIR RECORDS.

SHEET INDEX

No.	Issue	Checked	Approved	Date
	Conformed Drawings	GT	GT	07/18/2024

Author EAO | Drafting Check MGK | Project Manager G. TOMASINO
Designer EAO | Design Check RPG | Project Director M. KENNEDY

CONFORMED DRAWINGS

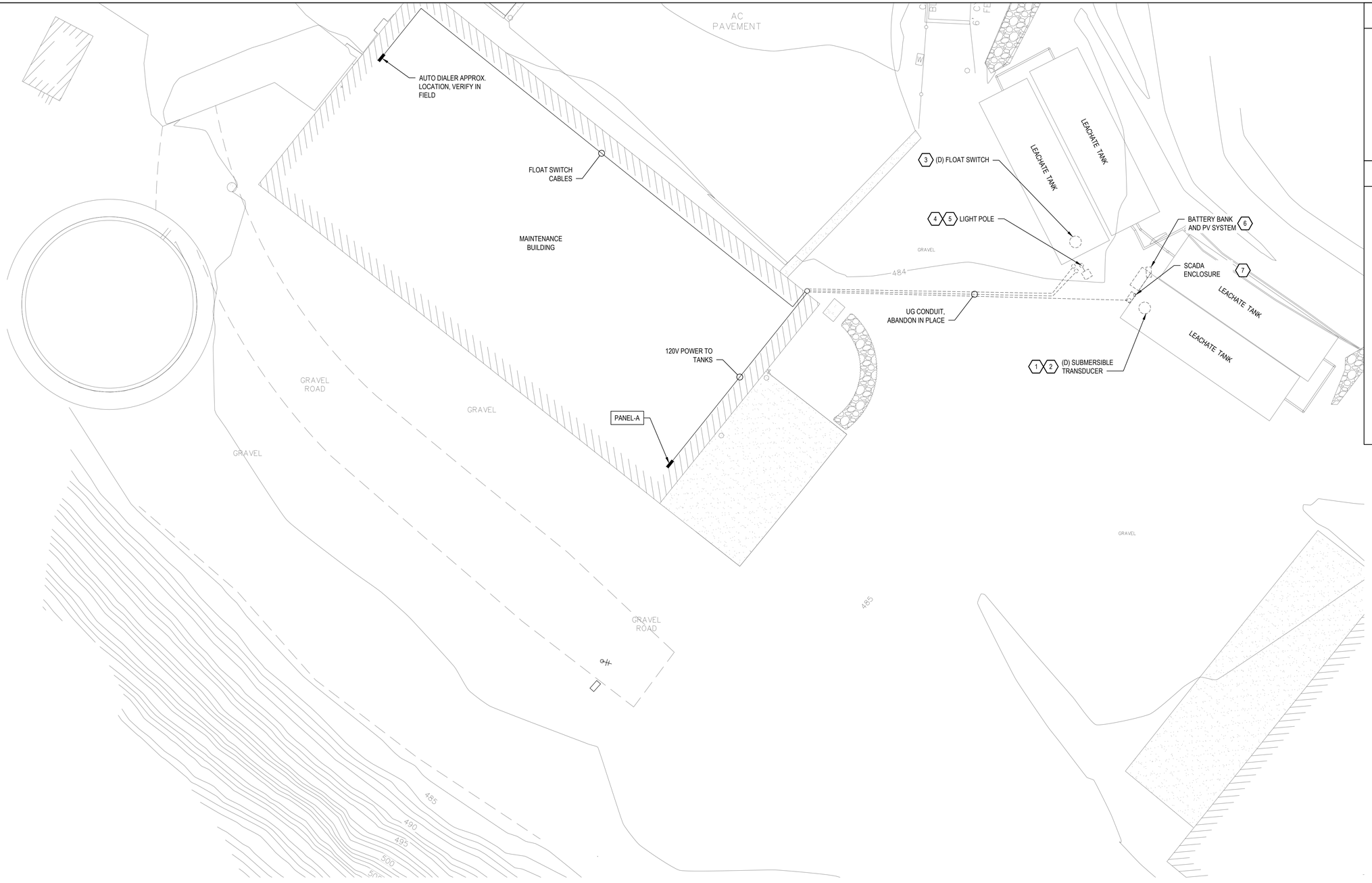
Bar is one inch on original size sheet 0 1"

REGISTERED PROFESSIONAL ENGINEER ERICK A. OSORIO E22903 ELECTRICAL STATE OF CALIFORNIA 7/18/2024

GHD Inc.
2235 Mercury Way Suite 150
Santa Rosa California 95407 USA
T 1 707 523 1010 F 1 707 527 8679
www.ghd.com

Client COUNTY OF SONOMA
Project LEACHATE TANK REPLACEMENT
Title ELECTRICAL LEGEND, ABBREVIATIONS AND GENERAL NOTES
Size ANSI D

Project No. 12558724 | Date 7/18/2024 | Scale AS SHOWN | Drawing No. E-001 | Sheet No. 39 of 48



GENERAL NOTES

1. CONTRACTOR TO VERIFY THE LOCATION OF ALL EXISTING UTILITIES PRIOR TO THE COMMENCEMENT OF CONSTRUCTION.
2. SCADA AND ASSOCIATED ELECTRICAL EQUIPMENT TO BE REMOVED BY COUNTY PRIOR TO DEMOLITION OF TANKS.
3. DEMOLITION AND RELOCATION OF EXISTING ELECTRICAL EQUIPMENT AND DEVICES SHALL BE DONE IN ACCORDANCE WITH SITE RELOCATION PLAN ON SHEET C-102.

KEYNOTES

1. DISCONNECT AND REMOVE SUBMERSIBLE LEVEL TRANSDUCER AND CABLES BACK TO SOURCE. TURN OVER TO COUNTY.
2. REMOVE SURFACE MOUNTED TRANSDUCER CONDUITS AND FITTING MOUNTED ON TANK.
3. DISCONNECT AND REMOVE LEVEL FLOAT SWITCH, TURN OVER TO COUNTY. DISCONNECT CABLES AND PULL BACK TO SOURCE, PRESERVE CABLES AND PREPARE TO REUSE.
4. REMOVE SURFACE MOUNTED FLOAT SWITCH CONDUITS AND FITTING ON WOODEN POLE. CUT CONDUIT FLUSH WITH GROUND, CAP AND ABANDON UNDERGROUND SECTION IN PLACE.
5. DISCONNECT AND REMOVE POWER LIGHTING CIRCUIT TO LIGHT FIXTURE. REMOVAL OF LIGHT FIXTURE AND POLE BY COUNTY.
6. COORDINATE REMOVAL OF BATTERY BANK, PV SYSTEM AND ASSOCIATED EQUIPMENT WITH COUNTY. EQUIPMENT TO BE RELOCATED BY COUNTY.
7. COORDINATE REMOVAL OF SCADA EQUIPMENT AND ASSOCIATED EQUIPMENT WITH COUNTY. SCADA EQUIPMENT TO BE RELOCATED BY COUNTY.

1 ELECTRICAL DEMOLITION SITE PLAN

SCALE 1" = 10'-0"

0 10' 20'

N

No.	Issue	Checked	Approved	Date
	Conformed Drawings	GT	GT	07/18/2024

Author **EAO** Drafting Check **MGK** Project Manager **G. TOMASINO**

Designer **EAO** Design Check **RPG** Project Director **M. KENNEDY**

CONFORMED DRAWINGS

Bar is one inch on original size sheet

0 1"

REGISTERED PROFESSIONAL ENGINEER ERICK A. OSORIO No. CE 25981 ELECTRICAL STATE OF CALIFORNIA

7/18/2024

GHD Inc.
2235 Mercury Way Suite 150
Santa Rosa California 95407 USA
T 1 707 523 1010 F 1 707 527 8679
www.ghd.com

Client **COUNTY OF SONOMA**

Project **LEACHATE TANK REPLACEMENT**

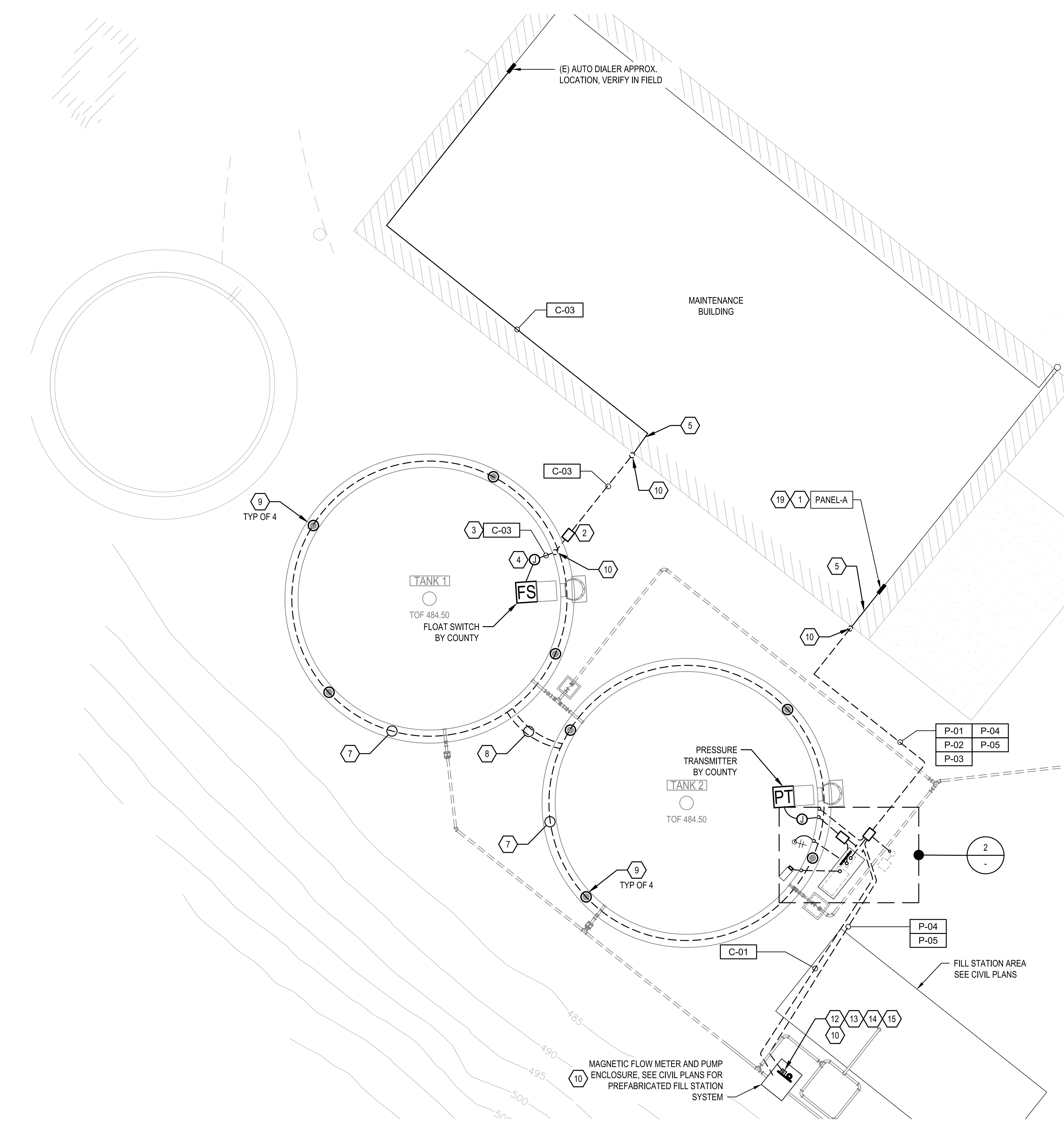
Title **ELECTRICAL DEMOLITION SITE PLAN - GUERNEVILLE SITE**

Size **ANSI D**

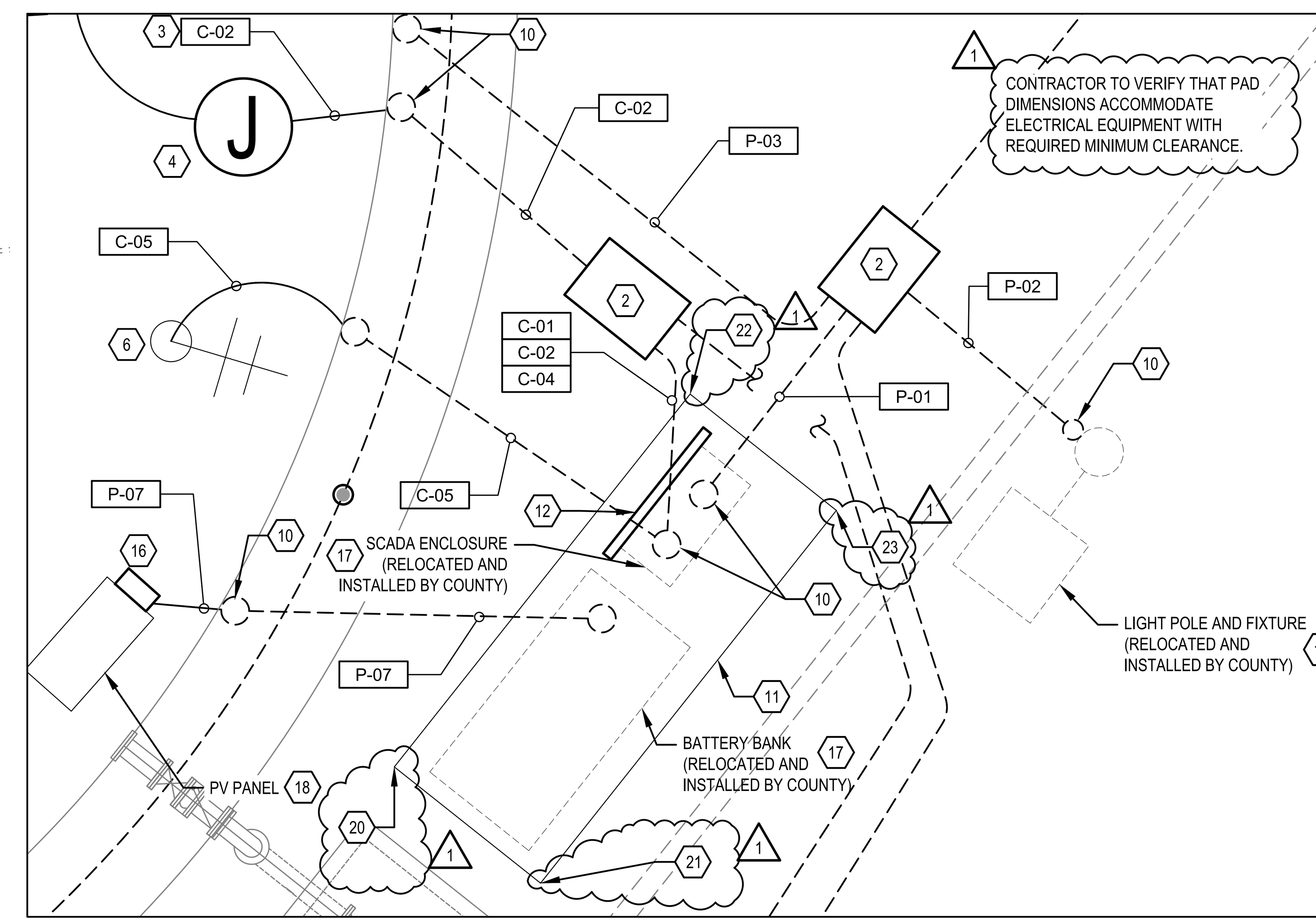
Project No. **12558724** Date **7/18/2024** Scale **AS SHOWN**

Drawing No. **E-101** Sheet No. **40 of 48**

Plot Date: 18 July 2024 - 3:18 PM Plotted By: Steven Toft Filename: \\ghdnet\ghd\US\San Francisco\Projects\561\12558724\Digital_Design\ACAD\Sheets\Leachate Tanks\12558724-GHD-0001-DWG-EL-0101.dwg



1 **ELECTRICAL SITE PLAN**
SCALE 1" = 10'-0"



2 **ENLARGED ELECTRICAL SITE PLAN**
SCALE 1" = 2'-0"

GENERAL NOTES

1. CONTRACTOR TO VERIFY THE LOCATION OF ALL EXISTING UTILITIES PRIOR TO THE COMMENCEMENT OF CONSTRUCTION.
2. SCADA AND PV SYSTEM TO BE RELOCATED BY COUNTY.
3. REFER TO INSTRUMENTATION RISER DIAGRAM 1 ON SHEET E-601 FOR ADDITIONAL CONDUIT AND CABLE REQUIREMENTS NOT SHOWN ON THIS SHEET.
4. PROVIDE UG CONDUITS IN TRENCH PER DETAIL 2 ON SHEET E-501. PROVIDE DRAINAGE ANTI SEEP COLLAR EVERY 20FT BETWEEN FITTINGS PER MANUFACTURER INSTRUCTIONS.
5. PROVIDE CONDUIT AND CABLE PER CONDUIT AND CABLE SCHEDULE ON SHEET E-602.

KEYNOTES

1. PROVIDE CIRCUIT BREAKERS IN PANEL WITH RATINGS AS SHOWN ON PANEL SCHEDULE. SEE E-602.
2. PROVIDE 11" X 17" TRAFFIC RATED PULL BOX. SEE DETAIL 3 ON SHEET E-501.
3. SEE DETAIL 5 ON SHEET E-501 FOR CONDUIT MOUNTING ON TANK WALL.
4. PROVIDE STAINLESS STEEL JUNCTION BOX WITH TERMINAL STRIP AT TOP OF TANK TO TRANSITION BETWEEN DEVICE MANUFACTURER CABLES AND FIELD CABLE.
5. PROVIDE WEATHER PROOF WALL PENETRATION.
6. PROVIDE ANTENNA MOUNTING KIT CONSISTING OF A 2" SS CONDUIT MAST AND SS ANTENNA CLAMP COMPATIBLE WITH EXISTING ANTENNA HARDWARE OR EQUIVALENT MOUNTING KIT. POSITION ANTENNA DIRECTION AND HEIGHT TO RE-ESTABLISH ORIGINAL COMMUNICATION SIGNAL.
7. PROVIDE #4/0 AWG BARE COPPER GROUNDING RING, IN TANK CONCRETE FOOTING.
8. PROVIDE (2) #4/0 GROUND JUMPERS BETWEEN TANK 1 AND TANK 2 GROUNDING RINGS.
9. PROVIDE TANK GROUNDING AT 4 PLACES. CONNECT GROUNDING CABLES TO A #4/0 AWG BARE COPPER GROUNDING RING EMBEDDED IN THE TANK'S CONCRETE FOOTING. REFER TO DETAIL 4 ON SHEET E-501 FOR GROUNDING CONNECTION TO TANK.
10. PROVIDE CONDUIT STUB UP. SEE DETAIL 1 ON SHEET E-501.
11. PROVIDE MINIMUM 8'X3' CONCRETE EQUIPMENT PAD. VERIFY DIMENSIONS IN FIELD WITH EQUIPMENT. SEE DETAIL 9 ON SHEET S-501.
12. PROVIDE UNISTRUT MOUNTING FRAME. SEE DETAIL 6 ON SHEET E-501.
13. PROVIDE COMBINATION STARTER IN NEMA 3R ENCLOSURE OR APPROVED EQUAL FILL STATION PUMP CONTROL PANEL.
14. PROVIDE TWIST LOCK RECEPTACLE WITH WEATHER PROTECTED SPRING COVER.
15. PROVIDE MOTOR STARTER START/STOP PUSH BUTTON HAND SWITCH AND 20FT MIN SO CORD.
16. PROVIDE COMBINER BOX NEAR PANELS. TRANSITION FROM MANUFACTURER CABLES TO BATTERY CHARGER CABLES.
17. AFTER COUNTY RELOCATES INDICATED EQUIPMENT AND ASSOCIATED DEVICES, PROVIDE BUSHINGS, FITTINGS AND CONDUITS TO MATCH ORIGINAL CONNECTIONS.
18. MOUNT EXISTING PV PANEL AND MOUNTING RACK AT TOP OF TANK. MOUNTING RACK SHALL ATTACHED VIA TANK PANEL BOLTS ON ROOF.
19. PROVIDE JUNCTION BOX SIZED FOR INCOMING CONDUITS. PROVIDE UNISTRUT AND FITTING TO MOUNT ON WALL ADJACENT TO PANEL-A. PROVIDE 2" CONDUIT AND FITTINGS, CONNECT TO PANEL-A.

1

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22. N=1942366.845 E=6288858.791 FS=484.50
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No.	Issue	Checked	Approved	Date
1	RFI #005	GT	GT	07/30/2024
	Conformed Drawings	GT	GT	07/18/2024

Author EAO | Drafting Check MGK | Project Manager G. TOMASINO
Designer EAO | Design Check RPG | Project Director M. KENNEDY

CONFORMED DRAWINGS

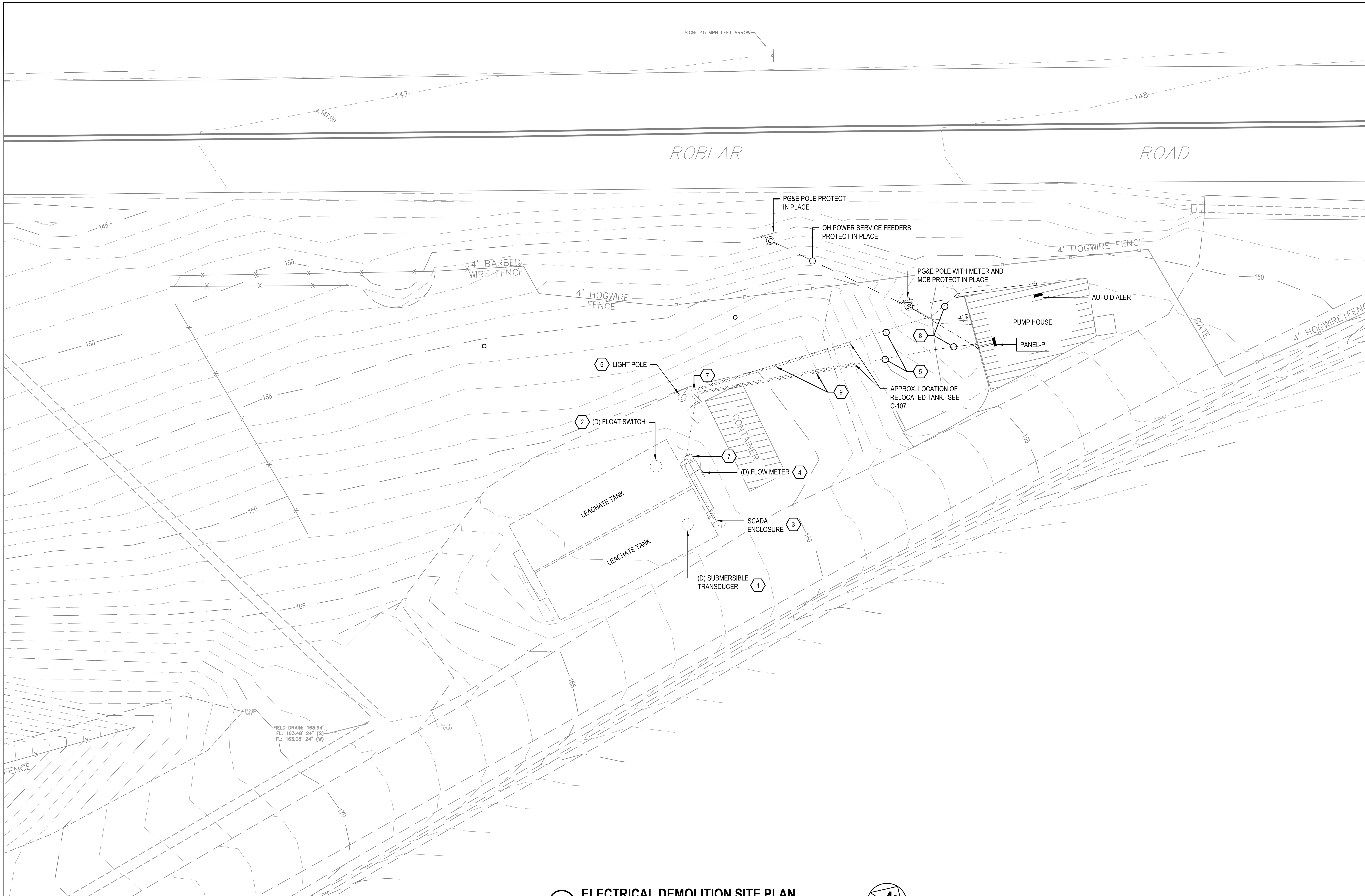
Bar is one inch on original size sheet
0 1"

REGISTERED PROFESSIONAL ENGINEER ERICK A. OSORIO E23591 ELECTRICAL STATE OF CALIFORNIA
7/18/2024

GHD Inc.
2235 Mercury Way Suite 150
Santa Rosa California 95407 USA
T 1 707 523 1010 F 1 707 527 8679
www.ghd.com

Client **COUNTY OF SONOMA**
Project **LEACHATE TANK REPLACEMENT**
Title **ELECTRICAL SITE PLAN - GUERNEVILLE SITE**

Project No.	Date	Scale	Size	Drawing No.	Sheet No.
12558724	7/18/2024	AS SHOWN	ANSI D	E-102	41 of 48



1 **ELECTRICAL DEMOLITION SITE PLAN**

SCALE 1" = 10'-0"

0 10' 20'

GENERAL NOTES

1. CONTRACTOR TO VERIFY THE LOCATION OF ALL EXISTING UTILITIES PRIOR TO THE COMMENCEMENT OF CONSTRUCTION.
2. COORDINATE WITH COUNTY FOR REMOVAL AND STORAGE ELECTRICAL EQUIPMENT AND INSTRUMENTATION.
3. COORDINATE WITH COUNTY FOR REMOVAL AND STORAGE OF SCADA EQUIPMENT.
4. DEMOLITION AND RELOCATION OF EXISTING ELECTRICAL EQUIPMENT AND DEVICES SHALL BE DONE IN ACCORDANCE WITH SITE RELOCATION PLAN ON SHEET C-107.

KEYNOTES

1. LEVEL TRANSDUCER TO REMAIN ON TANK FOR TEMPORARY RELOCATION OF TANK. AFTER CONSTRUCTION OF TANK 1 REMOVE TRANSDUCER AND WIRES FROM (E) TANK BACK TO SOURCE. TURN OVER TO COUNTY.
2. COORDINATE RELOCATION OF FLOAT SWITCH TO TEMPORARILY RELOCATED TANK. AFTER CONSTRUCTION OF TANK 1 REMOVE FLOAT SWITCH AND CABLES BACK TO SOURCE. TURN OVER FLOAT SWITCH BACK TO COUNTY.
3. SCADA EQUIPMENT TO REMAIN ON TANK FOR TEMPORARY RELOCATION OF TANK. AFTER CONSTRUCTION OF TANK 1, COORDINATE REMOVAL OF SCADA AND ASSOCIATED ELECTRICAL EQUIPMENT WITH COUNTY. REMOVAL OF EQUIPMENT BY OTHERS.
4. FLOW METER TO BE RELOCATED WITH TANK. AFTER CONSTRUCTION OF (N) TANK 1 REMOVE FLOW METER AND WIRES FROM (E) TANK BACK TO SOURCE AND TURN OVER TO COUNTY.
5. PRESERVE ELECTRICAL CONDUITS TO RELOCATED TANK FOR TEMPORARY POWER/SIGNAL TO SCADA. CONNECTIONS TO SCADA AND INSTRUMENTATION BY OTHERS.
6. DISCONNECT AND REMOVE POWER LIGHTING CIRCUIT TO LIGHT FIXTURE. REMOVAL OF LIGHT FIXTURE AND POLE BY COUNTY.
7. DEMOLISH PULL BOX.
8. PRESERVE PORTION OF UG CONDUIT AND PREPARE TO REUSE.
9. REMOVE SECTION OF UG CONDUIT. AREA WILL BE CUT TO A LOWER GRADE.

No.	Issue	Checked	Approved	Date
	Conformed Drawings	GT	GT	07/18/2024

Author **EAO** Drafting Check **MGK** Project Manager **G. TOMASINO**

Designer **EAO** Design Check **RPG** Project Director **M. KENNEDY**

CONFORMED DRAWINGS

Bar is one inch on original size sheet

0 1"

REGISTERED PROFESSIONAL ENGINEER ERICK A. OSORIO E23893 ELECTRICAL STATE OF CALIFORNIA

7/18/2024

GHD Inc.
2235 Mercury Way Suite 150
Santa Rosa California 95407 USA
T 1 707 523 1010 F 1 707 527 8679
www.ghd.com

Client **COUNTY OF SONOMA**

Project **LEACHATE TANK REPLACEMENT**

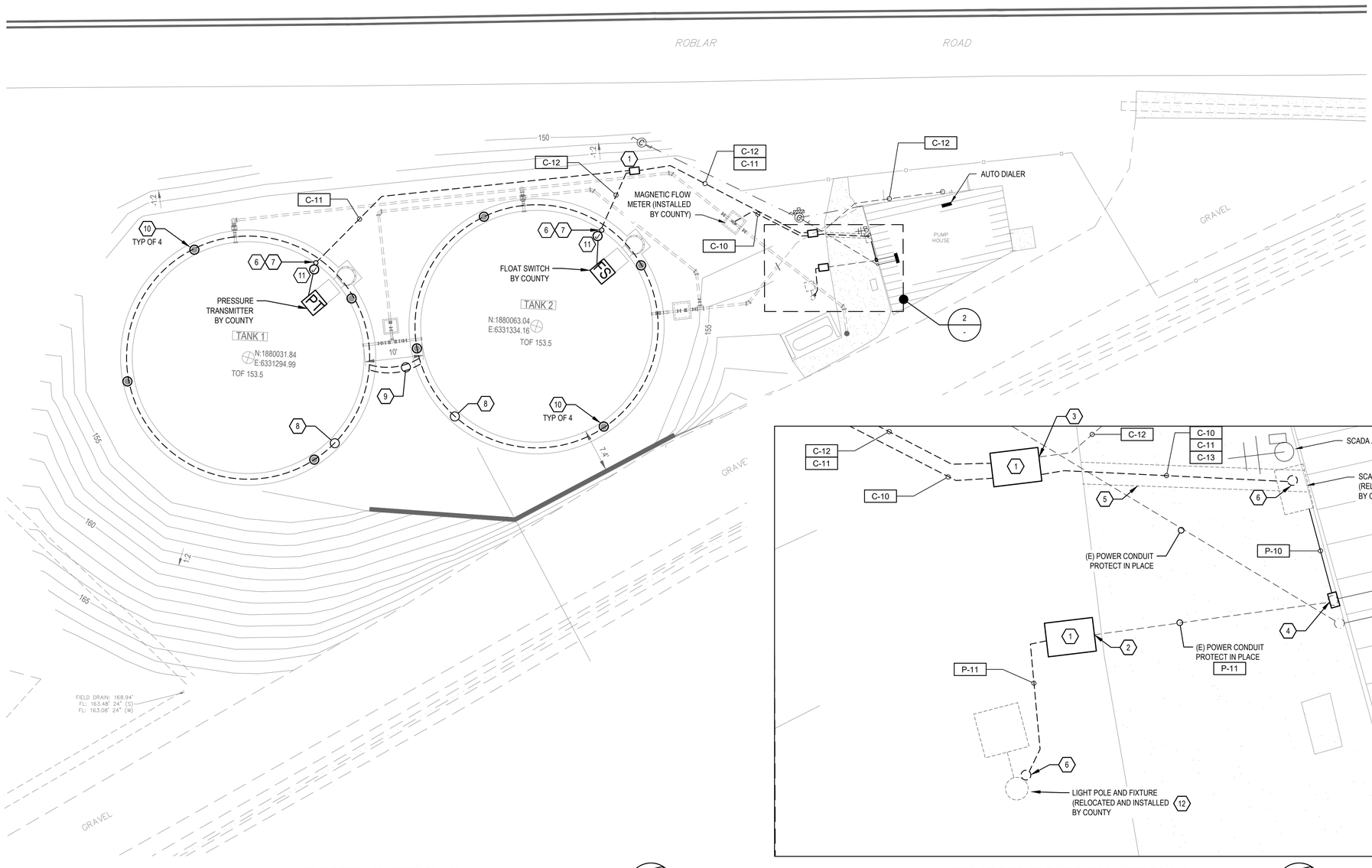
Project No. **12558724** Date **7/18/2024** Scale **AS SHOWN**

Title **ELECTRICAL DEMOLITION SITE PLAN - ROBLAR SITE**

Size **ANSI D**

Drawing No. **E-103**

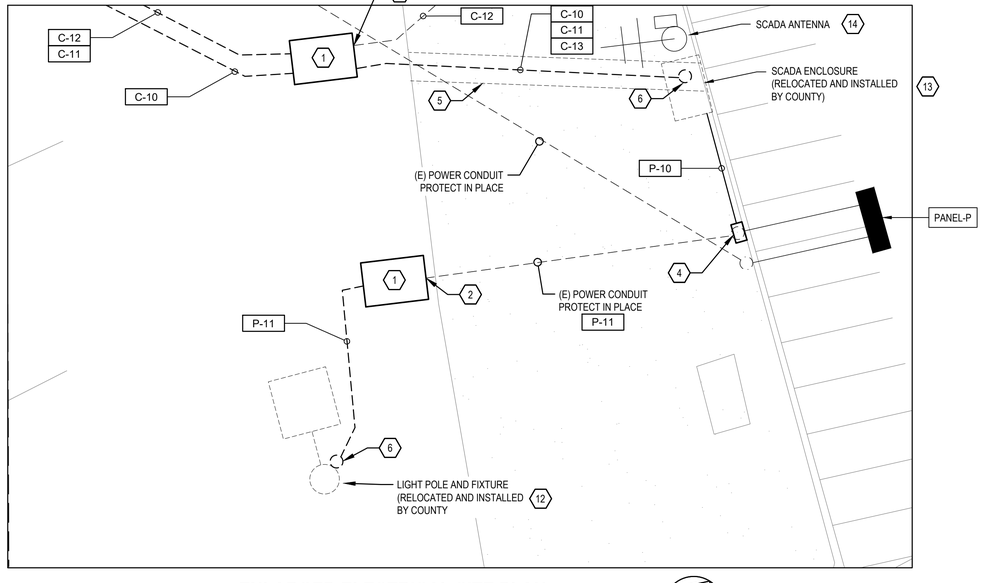
Plot Date: 18 July 2024 - 3:21 PM Plotted By: Steven Toft Filename: \\ghdnet\ghd\US\San Francisco\Projects\561\12558724\Digital_Design\ACAD\Sheets\Leachate Tanks\12558724-GHD-0001-DWG-EL-0103.dwg



1 ELECTRICAL SITE PLAN

SCALE 1" = 10'-0"

0 10' 20'



2 ENLARGED ELECTRICAL SITE PLAN

SCALE 1" = 2'-0"

0 2' 4'

GENERAL NOTES

1. CONTRACTOR TO VERIFY THE LOCATION OF ALL EXISTING UTILITIES PRIOR TO THE COMMENCEMENT OF CONSTRUCTION.
2. SCADA AND PV SYSTEM TO BE RELOCATED BY COUNTY.
3. REFER TO INSTRUMENTATION RISER DIAGRAM 2 ON SHEET E-601 FOR ADDITIONAL CONDUIT AND CABLE REQUIREMENTS NOT SHOWN ON THIS SHEET.
4. PROVIDE UG CONDUITS IN TRENCH PER DETAIL 2 ON SHEET E-501.
5. PROVIDE CONDUIT AND CABLE PER CONDUIT AND CABLE SCHEDULE ON SHEET E-602.

KEYNOTES

1. PROVIDE 11" X 17" TRAFFIC RATED PULL BOX. SEE DETAIL 3 ON SHEET E-501.
2. INTERCEPT (E) UG POWER CONDUIT FROM PANEL P AND CONNECT TO POWER PULL BOX.
3. INTERCEPT (E) UG SIGNAL CONDUIT FROM AUTO DIALER AND CONNECT TO SIGNAL PULL BOX.
4. PROVIDE 6"x6"x4" NEMA 3R JUNCTION BOX AND INTERCEPT EXISTING PANEL-P BRANCH CIRCUIT POWER CONDUIT ON EXTERIOR WALL OF PUMP HOUSE.
5. PROVIDE SAW CUT FOR (N) CONDUIT. PATCH AFTER CONDUIT INSTALLATION TO MATCH EXISTING CONDITIONS.
6. PROVIDE CONDUIT STUB UP. SEE DETAIL 1 ON SHEET E-501.
7. SEE DETAIL 5 ON SHEET E-501 FOR CONDUIT MOUNTING ON TANK WALL.
8. PROVIDE #4/0 AWG BARE COPPER GROUNDING RING, IN TANK CONCRETE FOOTING.
9. PROVIDE (2) #4/0 GROUND JUMPERS BETWEEN TANK 1 AND TANK 2 GROUNDING RINGS.
10. PROVIDE TANK GROUNDING AT 4 PLACES. CONNECT GROUNDING CABLES TO A #4/0 AWG BARE COPPER GROUNDING RING EMBEDDED IN THE TANK'S CONCRETE FOOTING. REFER TO DETAIL 4 ON SHEET E-501 FOR GROUNDING CONNECTION TO TANK.
11. PROVIDE STAINLESS STEEL JUNCTION BOX WITH TERMINAL STRIP AT TOP OF TANK TO TRANSITION BETWEEN DEVICE MANUFACTURER CABLES AND FIELD CABLE.
12. AFTER COUNTY RELOCATES INDICATED EQUIPMENT AND ASSOCIATED DEVICES, PROVIDE BUSHINGS, FITTINGS AND CONDUITS TO MATCH ORIGINAL CONNECTIONS.
13. PROVIDE UNISTRUT MOUNTING FOR SCADA ENCLOSURE AND ANCHOR TO WALL.
14. PROVIDE ANTENNA MOUNTING KIT CONSISTING OF A 2" SS CONDUIT MAST AND SS ANTENNA CLAMP COMPATIBLE WITH EXISTING ANTENNA HARDWARE OR EQUIVALENT MOUNTING KIT. POSITION ANTENNA DIRECTION AND HEIGHT TO RE-ESTABLISH ORIGINAL COMMUNICATION SIGNAL.

No.	Issue	Checked	Approved	Date
	Conformed Drawings	GT	GT	07/18/2024

Author **EAO** Drafting Check **MGK** Project Manager **G. TOMASINO**

Designer **EAO** Design Check **RPG** Project Director **M. KENNEDY**

CONFORMED DRAWINGS

Bar is one inch on original size sheet

0 1"

REGISTERED PROFESSIONAL ENGINEER ERICK A. OSORIO No. E23501 ELECTRICAL STATE OF CALIFORNIA

7/18/2024

GHD Inc.
2235 Mercury Way Suite 150
Santa Rosa California 95407 USA
T 1 707 523 1010 F 1 707 527 8679
www.ghd.com

Client **COUNTY OF SONOMA**

Project **LEACHATE TANK REPLACEMENT**

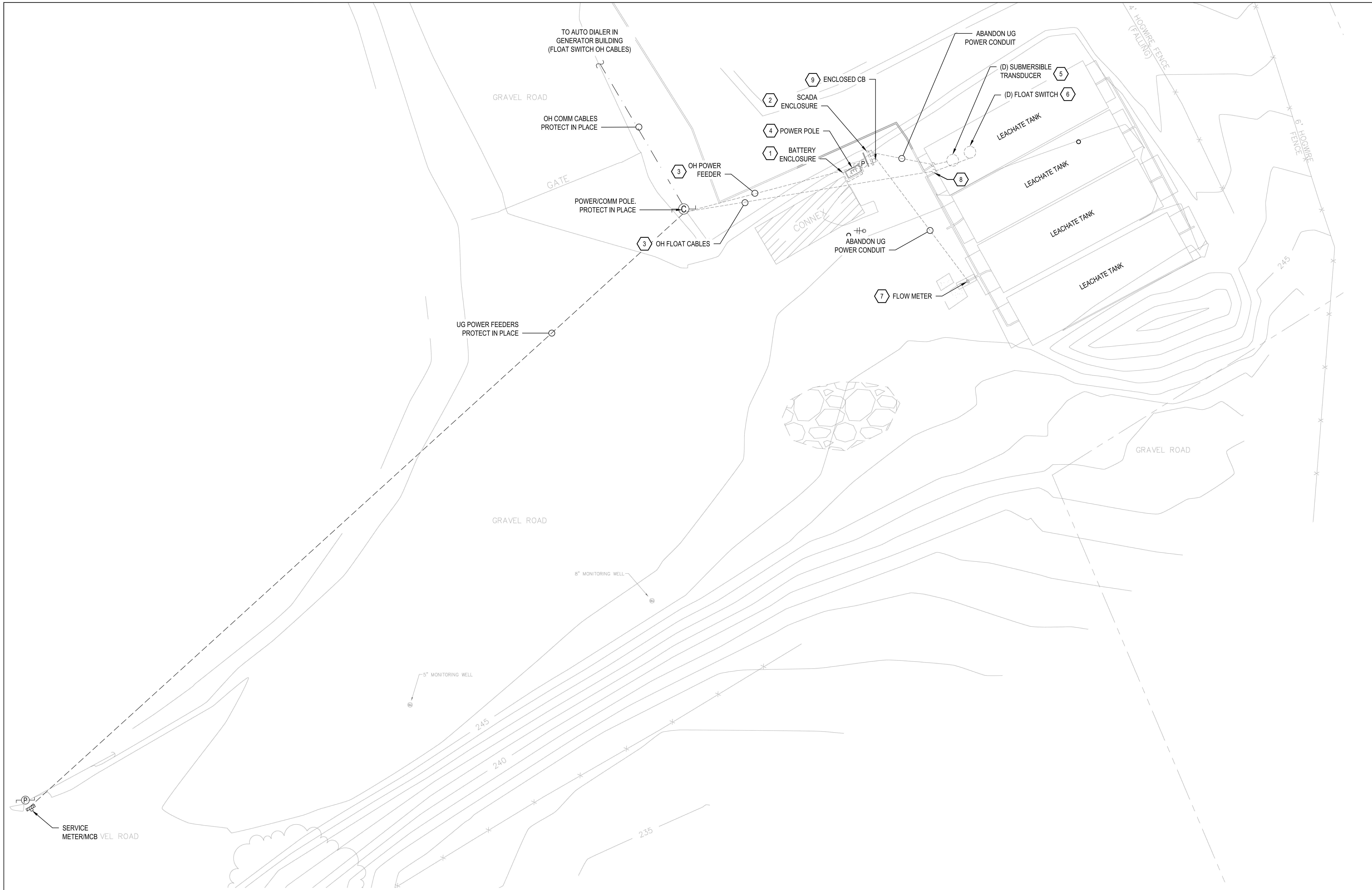
Title **ELECTRICAL SITE PLAN - ROBLAR SITE**

Size **ANSI D**

Project No. **12558724** Date **7/18/2024** Scale **AS SHOWN**

Drawing No. **E-104** Sheet No. **43 of 48**

Plot Date: 18 July 2024 - 3:22 PM Plotted By: Steven Toft Filename: \\ghdnet\ghd\US\San Francisco\Projects\56\12558724\Digital_Design\ACAD\Sheets\Leachate Tanks\12558724-GHD-0001-DWG-EL-0104.dwg



1 **ELECTRICAL DEMOLITION SITE PLAN**
SCALE 1" = 10'-0"
0 10' 20'
N

GENERAL NOTES

1. CONTRACTOR TO VERIFY THE LOCATION OF ALL EXISTING UTILITIES PRIOR TO THE COMMENCEMENT OF CONSTRUCTION.
2. COORDINATE WITH COUNTY FOR REMOVAL AND STORAGE ELECTRICAL EQUIPMENT AND INSTRUMENTATION.
3. COORDINATE WITH COUNTY FOR REMOVAL AND STORAGE OF SCADA EQUIPMENT.
4. DEMOLITION AND RELOCATION OF EXISTING ELECTRICAL EQUIPMENT AND DEVICES SHALL BE DONE IN ACCORDANCE WITH SITE RELOCATION PLAN ON SHEET C-112.

KEYNOTES

1. COORDINATE REMOVAL OF BATTERY BANK AND ASSOCIATED EQUIPMENT WITH COUNTY. EQUIPMENT TO BE RELOCATED BY COUNTY.
2. COORDINATE REMOVAL OF SCADA EQUIPMENT AND ASSOCIATED ELECTRICAL EQUIPMENT WITH COUNTY. SCADA EQUIPMENT TO BE RELOCATED BY COUNTY.
3. DISCONNECT OH WIRES, PRESERVE AND PREPARE TO REUSE.
4. COORDINATE REMOVAL OF POWER POLE AND ASSOCIATED POWER EQUIPMENT WITH COUNTY.
5. LEVEL TRANSDUCER TO REMAIN ON TANK FOR TEMPORARY RELOCATION OF TANK. AFTER CONSTRUCTION OF TANK 1 REMOVE TRANSDUCER AND WIRES FROM (E) TANK BACK TO SOURCE.
6. COORDINATE RELOCATION OF FLOAT SWITCH TO TEMPORARILY RELOCATED TANK. AFTER CONSTRUCTION OF TANK 1 REMOVE FLOAT SWITCH, TURN OVER TO COUNTY. PRESERVE FLOAT SWITCH CABLE FROM AUTO DIALER AND PREPARE TO REUSE.
7. FLOW METER TO BE RELOCATED WITH TANK. AFTER CONSTRUCTION OF (N) TANK 1 REMOVE FLOW METER AND WIRES FROM (E) TANK BACK TO SOURCE AND TURN OVER TO COUNTY.
8. OH CABLE MAST AND WEATHER HEAD TO REMAIN ON TANK, REROUTE AND RECONNECT FLOAT SWITCH CABLES AFTER TEMPORARY TANK RELOCATION. REUSE AND EXTEND TRANSDUCER AND FLOW METER CABLES TO RELOCATED SCADA EQUIPMENT. ROUTE CABLES OH ACROSS GRAVEL ROAD VIA (E) POWER POLE AND WEATHER HEAD ON TANK. COORDINATE TEMPORARY CONNECTIONS WITH COUNTY.
9. DISCONNECT AND REMOVE ENCLOSED BREAKER.

No.	Issue	Checked	Approved	Date
	Conformed Drawings	GT	GT	07/18/2024

Author	EAO	Drafting Check	MGK	Project Manager	G. TOMASINO
Designer	EAO	Design Check	RPG	Project Director	M. KENNEDY

CONFORMED DRAWINGS

Bar is one inch on original size sheet
0 1"

REGISTERED PROFESSIONAL ENGINEER ERICK A. OSORNO No. E23831 ELECTRICAL STATE OF CALIFORNIA
7/18/2024

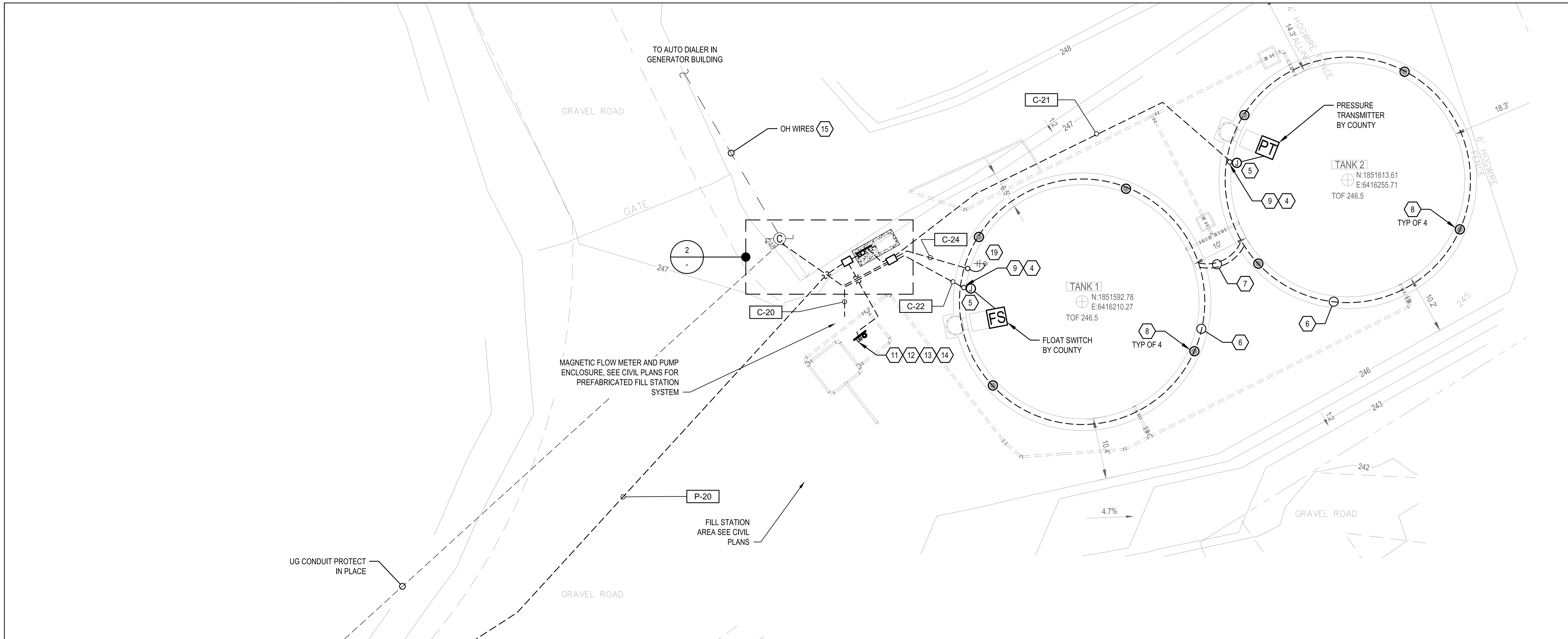
GHD Inc.
2235 Mercury Way Suite 150
Santa Rosa California 95407 USA
T 1 707 523 1010 **F** 1 707 527 8679
www.ghd.com

Client **COUNTY OF SONOMA**
Project **LEACHATE TANK REPLACEMENT**

Title **ELECTRICAL DEMOLITION SITE PLAN - SONOMA SITE**

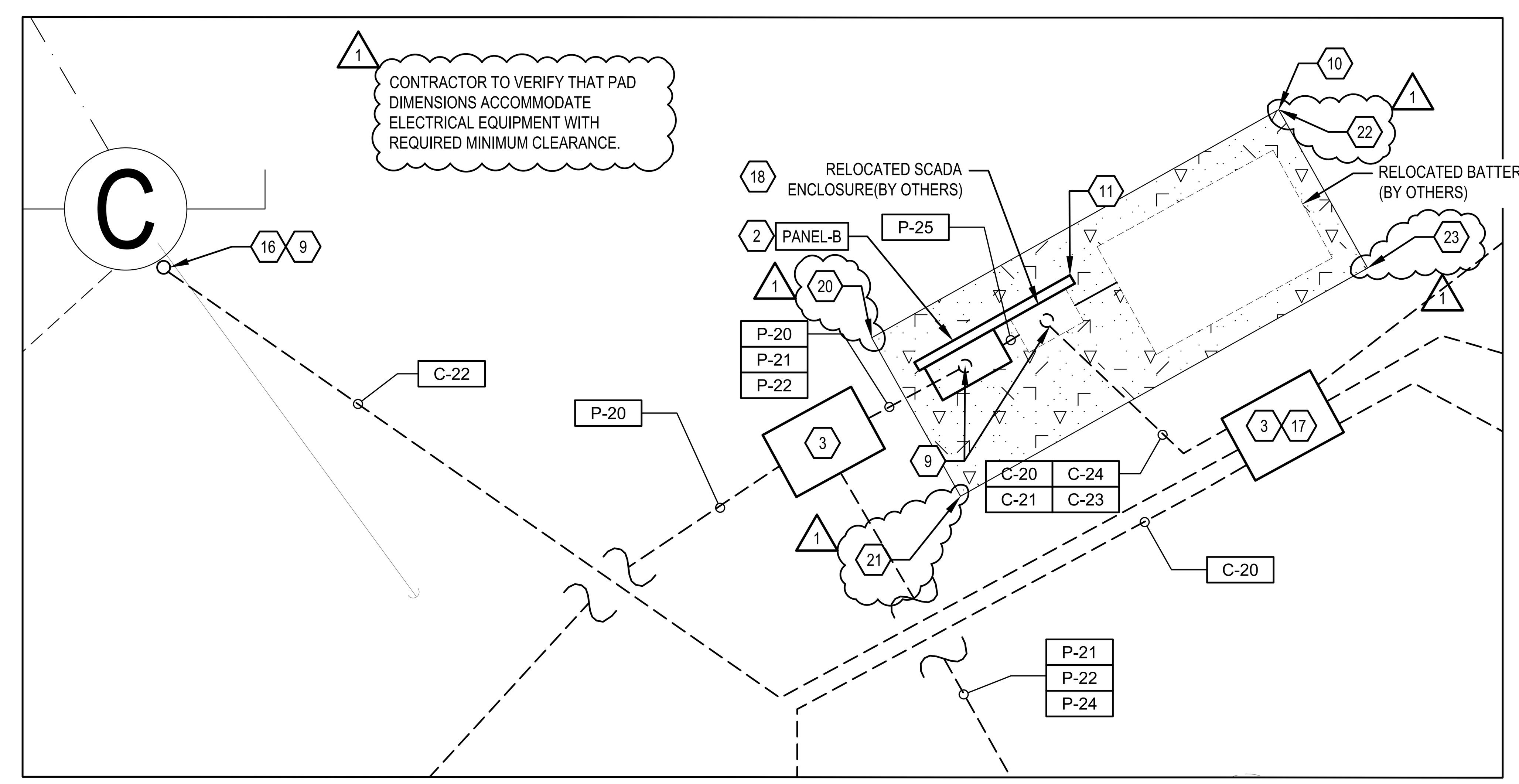
Size **ANSI D**

Project No.	Date	Scale	Drawing No.	Sheet No.
12558724	7/18/2024	AS SHOWN	E-105	44 of 48



1 ELECTRICAL SITE PLAN

SCALE 1" = 10'-0"



2 ENLARGED ELECTRICAL SITE PLAN

SCALE 1" = 2'-0"

GENERAL NOTES

1. CONTRACTOR TO VERIFY THE LOCATION OF ALL EXISTING UTILITIES PRIOR TO THE COMMENCEMENT OF CONSTRUCTION.
2. SCADA TO BE RELOCATED BY COUNTY.
3. REFER TO INSTRUMENTATION RISER DIAGRAM 3 ON SHEET E-601 FOR ADDITIONAL CONDUIT AND CABLE REQUIREMENTS NOT SHOWN ON THIS SHEET.
4. PROVIDE UG CONDUITS IN TRENCH PER DETAIL 2 ON SHEET E-501. PROVIDE DRAINAGE ANTI SEEP COLLAR EVERY 20FT BETWEEN FITTINGS PER MANUFACTURER INSTRUCTIONS.
5. PROVIDE CONDUIT AND CABLE PER CONDUIT AND CABLE SCHEDULE ON SHEET E-602.

KEYNOTES

1. PROVIDE 100A 2P BREAKER IN METER/MAIN PANEL.
2. PROVIDE BRANCH PANEL-B IN NEMA 3R ENCLOSURE WITH CIRCUIT BREAKERS AND PANEL FEATURES AS SHOWN ON PANEL SCHEDULE. SEE SCHEDULE ON E-602.
3. PROVIDE 11" X 17" TRAFFIC RATED PULL BOX. SEE DETAIL 3 ON SHEET E-501.
4. SEE DETAIL 5 ON SHEET E-501 FOR CONDUIT MOUNTING ON TANK WALL.
5. PROVIDE STAINLESS STEEL JUNCTION BOX WITH TERMINAL STRIP AT TOP OF TANK TO TRANSITION BETWEEN DEVICE MANUFACTURER CABLES AND FIELD CABLE.
6. PROVIDE #4/0 AWG BARE COPPER GROUNDING RING, IN TANK CONCRETE FOOTING.
7. PROVIDE (2) #4/0 GROUND JUMPERS BETWEEN TANK 1 AND TANK 2 GROUNDING RINGS.
8. PROVIDE TANK GROUNDING AT 4 PLACES. CONNECT GROUNDING CABLES TO A #4/0 AWG BARE COPPER GROUNDING RING EMBEDDED IN THE TANK'S CONCRETE FOOTING. REFER TO DETAIL 4 ON SHEET E-501 FOR GROUNDING CONNECTION TO TANK.
9. PROVIDE CONDUIT STUB UP. SEE DETAIL 1 ON SHEET E-501.
10. PROVIDE MINIMUM 8'X3' CONCRETE EQUIPMENT PAD. VERIFY DIMENSIONS IN FIELD WITH EQUIPMENT. SEE DETAIL 9 ON SHEET S-501.
11. PROVIDE UNISTRUT MOUNTING FRAME. SEE DETAIL 6 ON SHEET E-501.
12. PROVIDE COMBINATION STARTER IN NEMA 3R ENCLOSURE OR APPROVED EQUAL FILL STATION PUMP CONTROL PANEL.
13. PROVIDE TWIST LOCK RECEPTACLE WITH WEATHER PROTECTED SPRING COVER.
14. PROVIDE MOTOR STARTER START/STOP PUSH BUTTON HAND SWITCH AND 20FT MIN SO CORD.
15. FIELD VERIFY LOCATION OF FLOAT SIGNAL CABLES AND PREPARE TO INTERCEPT.
16. PROVIDE SIGNAL RISER AT POWER POLE. TRANSITION TO UG CONDUIT AND TERMINATE AT SIGNAL PULL BOX.
17. INTERCEPT FLOAT CABLES AND ROUTE TO PULL BOX. PROVIDE SPLICE TO MATCH EXISTING CABLES AND EXTEND TO FLOAT SWITCH.
18. AFTER COUNTY RELOCATES INDICATED EQUIPMENT AND ASSOCIATED DEVICES, PROVIDE BUSHINGS, FITTINGS AND CONDUITS TO MATCH ORIGINAL CONNECTIONS.
19. PROVIDE ANTENNA MOUNTING KIT CONSISTING OF A 2" SS CONDUIT MAST AND SS ANTENNA CLAMP COMPATIBLE WITH EXISTING ANTENNA HARDWARE OR EQUIVALENT MOUNTING KIT. POSITION ANTENNA DIRECTION AND HEIGHT TO RE-ESTABLISH ORIGINAL COMMUNICATION SIGNAL.
20. N=1851601.419 E=6416170.883 FS=246.50
21. N=1851598.795 E=6416172.354 FS=246.50
22. N=1851605.143 E=6416177.651 FS=246.50
23. N=1851602.572 E=6416179.092 FS=246.50

No.	Issue	Checked	Approved	Date
1	RFI #005	GT	GT	07/30/2024
	Conformed Drawings	GT	GT	07/18/2024

Author EAO — Drafting Check MGK — Project Manager G. TOMASINO
Designer EAO — Design Check RPG — Project Director M. KENNEDY

CONFORMED DRAWINGS

Bar is one inch on original size sheet 0 1"

REGISTERED PROFESSIONAL ENGINEER — ERICK A. OSORIO — No. E23681 — ELECTRICAL — STATE OF CALIFORNIA — 7/18/2024

GHD Inc.
2235 Mercury Way Suite 150
Santa Rosa California 95407 USA
T 1 707 523 1010 F 1 707 527 8679
www.ghd.com

Client **COUNTY OF SONOMA**
Project **LEACHATE TANK REPLACEMENT**
Project No. 12558724 — Date 7/18/2024 — Scale AS SHOWN

Title **ELECTRICAL SITE PLAN - SONOMA SITE**
Size ANSI D
Drawing No. E-106

Plot Date: 14 August 2024 - 1:19 PM Plotted By: Steven Toft Filename: \\ghdnet\ghd\US\San Francisco\Projects\561\12558724\Digital_Design\ACAD\Sheets\Leachate Tanks\12558724-GHD-0001-DWG-EL-0106.dwg

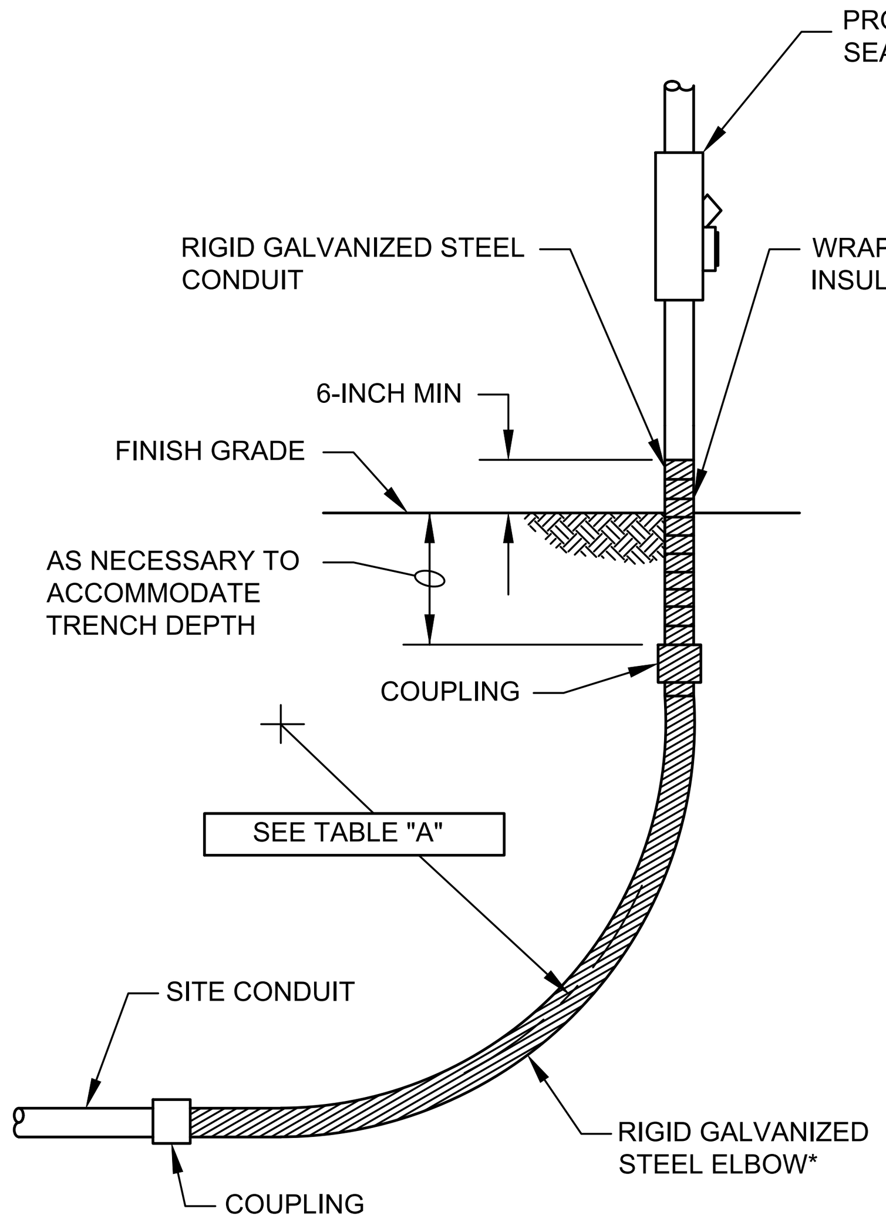
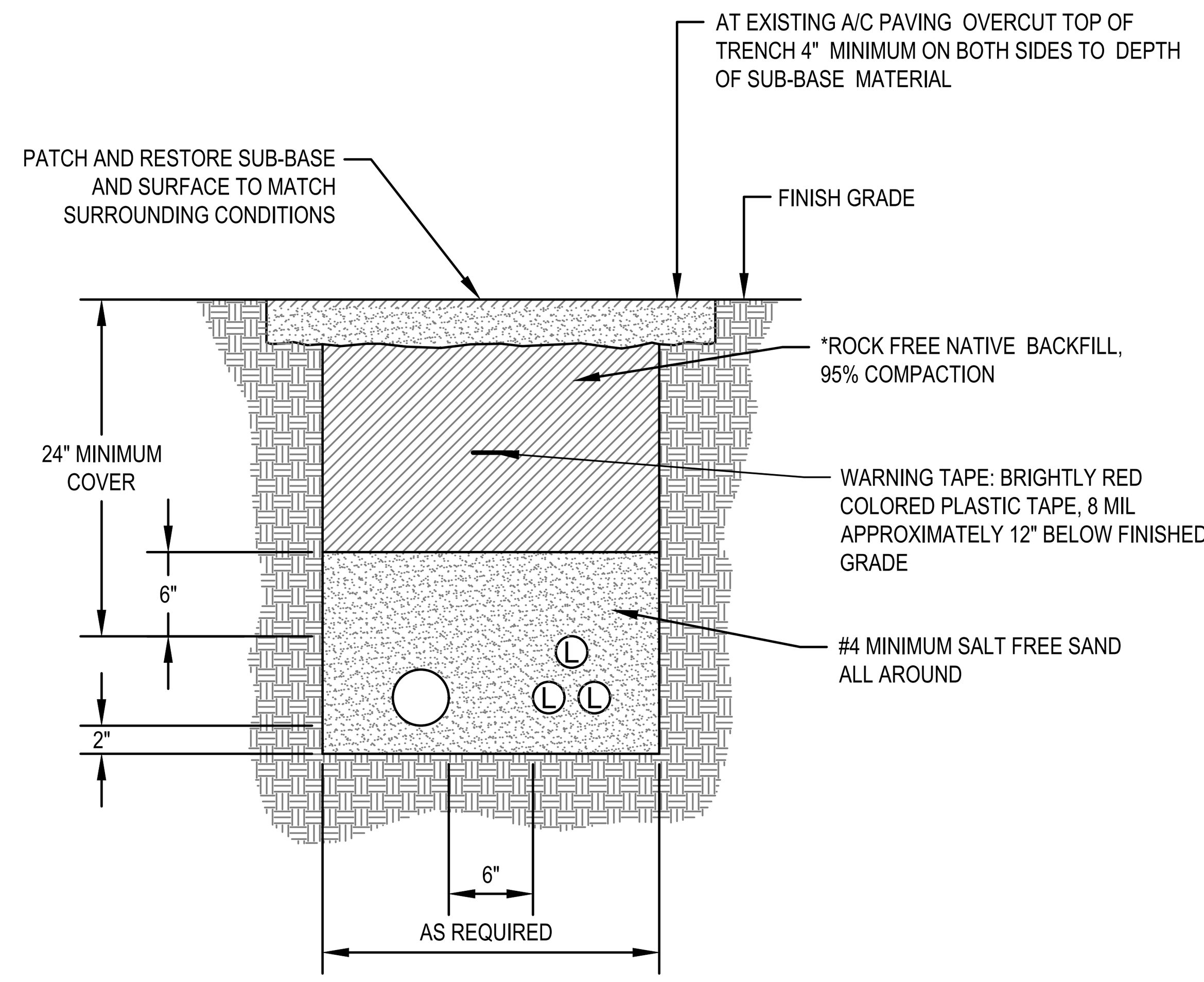


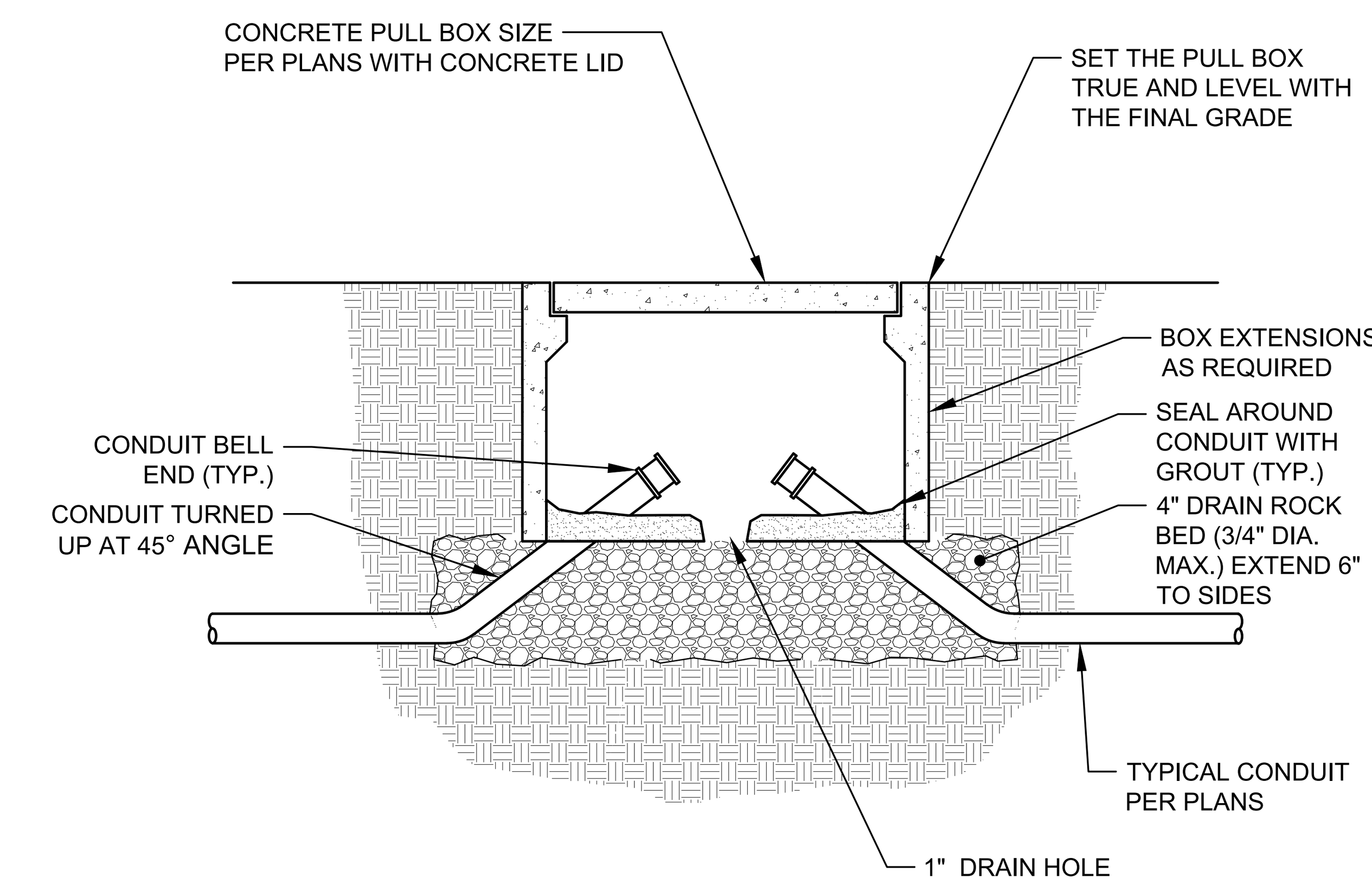
TABLE "A" - RGS		
CONDUIT SIZE	MINIMUM ELBOW RADIUS REQUIREMENTS	
	RUNS 0-100 FEET	RUNS GREATER THAN 101 FEET
1/2-INCH	4-INCH	4-INCH
3/4-INCH	4 1/2-INCH	4 1/2-INCH
1-INCH	5 3/4-INCH	5 3/4-INCH
1 1/4-INCH	7 1/4-INCH	7 1/4-INCH
1 1/2-INCH	8 1/4-INCH	8 1/4-INCH
2-INCH	9 1/2-INCH	9 1/2-INCH
2 1/2-INCH	10 1/2-INCH	11 7/16-INCH
3-INCH	13-INCH	13 3/4-INCH
4-INCH	16-INCH	18 1/4-INCH
5-INCH	24-INCH	-
6-INCH	30-INCH	-

1 TYPICAL CONDUIT STUB-UP NOT TO SCALE

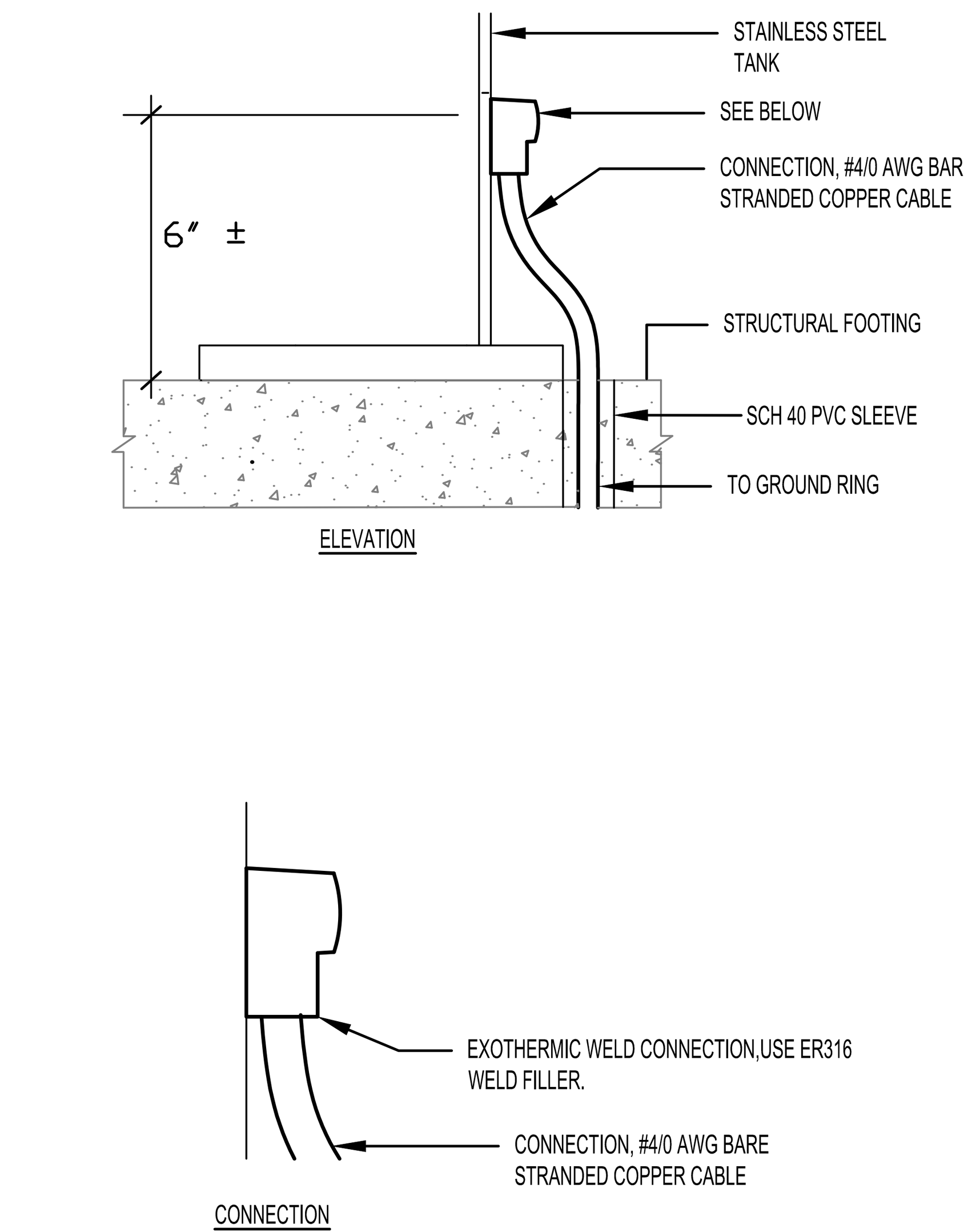


NOTE:
MAINTAIN A MINIMUM VERTICAL SEPARATION OF 12" WHEN CROSSING UTILITIES. ROUTE CONDUIT EITHER ABOVE OR BELOW OTHER UTILITIES AS NECESSARY TO ACHIEVE THIS SEPARATION WHILE MAINTAINING THE MINIMUM BACKFILL COVERAGE.

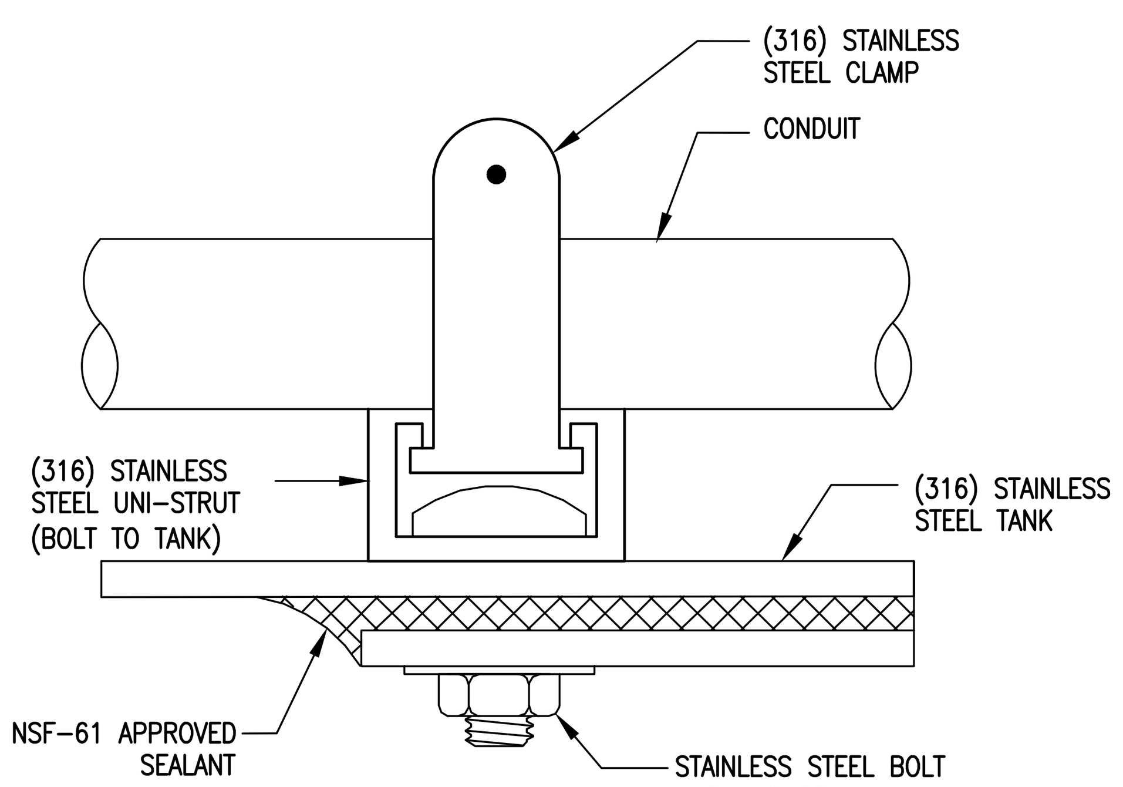
2 TYPICAL ELECTRICAL TRENCH NOT TO SCALE



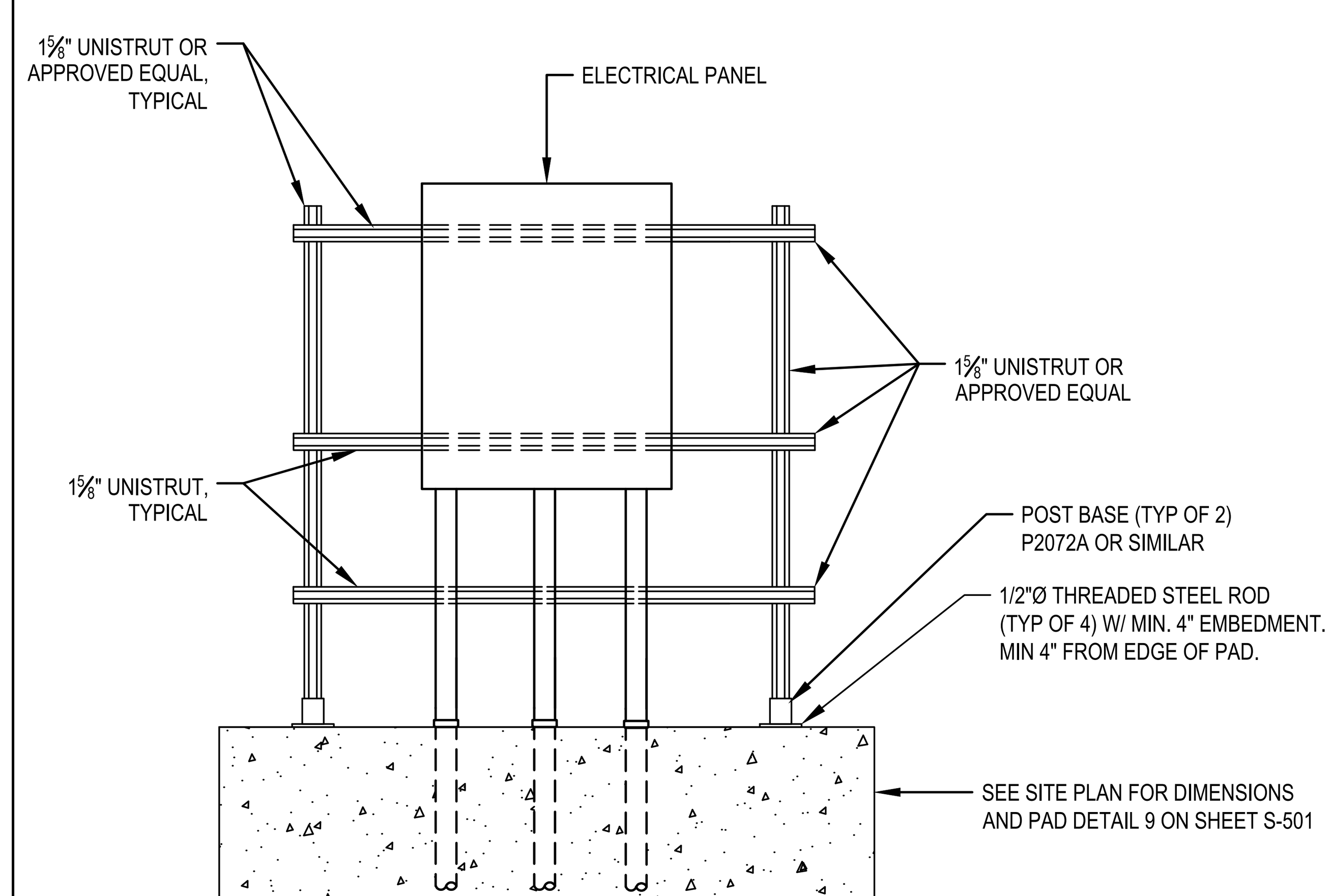
3 TYP. PULL BOX - TELE OR LOW VOLTAGE POWER NOT TO SCALE



4 METHOD FOR GROUNDING STEEL TANK NOT TO SCALE



5 CONDUIT MOUNTING ON TANK NOT TO SCALE



GENERAL NOTES:

1. COORDINATE MOUNTING FRAME DIMENSION WITH EQUIPMENT SIZE.

6 TYPICAL UNISTRUT EQUIPMENT MOUNTING NOT TO SCALE

No.	Issue	Checked	Approved	Date
	Conformed Drawings	GT	GT	07/18/2024

Author EAO — Drafting Check MGK — Project Manager G. TOMASINO
Designer EAO — Design Check RPG — Project Director M. KENNEDY

CONFORMED DRAWINGS

Bar is one inch on original size sheet
0 — 1"

REGISTERED PROFESSIONAL ENGINEER — ERICK A. OSORIO — ELECTRICAL — STATE OF CALIFORNIA — 7/18/2024

GHD Inc.
2235 Mercury Way Suite 150
Santa Rosa California 95407 USA
T 1 707 523 1010 F 1 707 527 8679
www.ghd.com

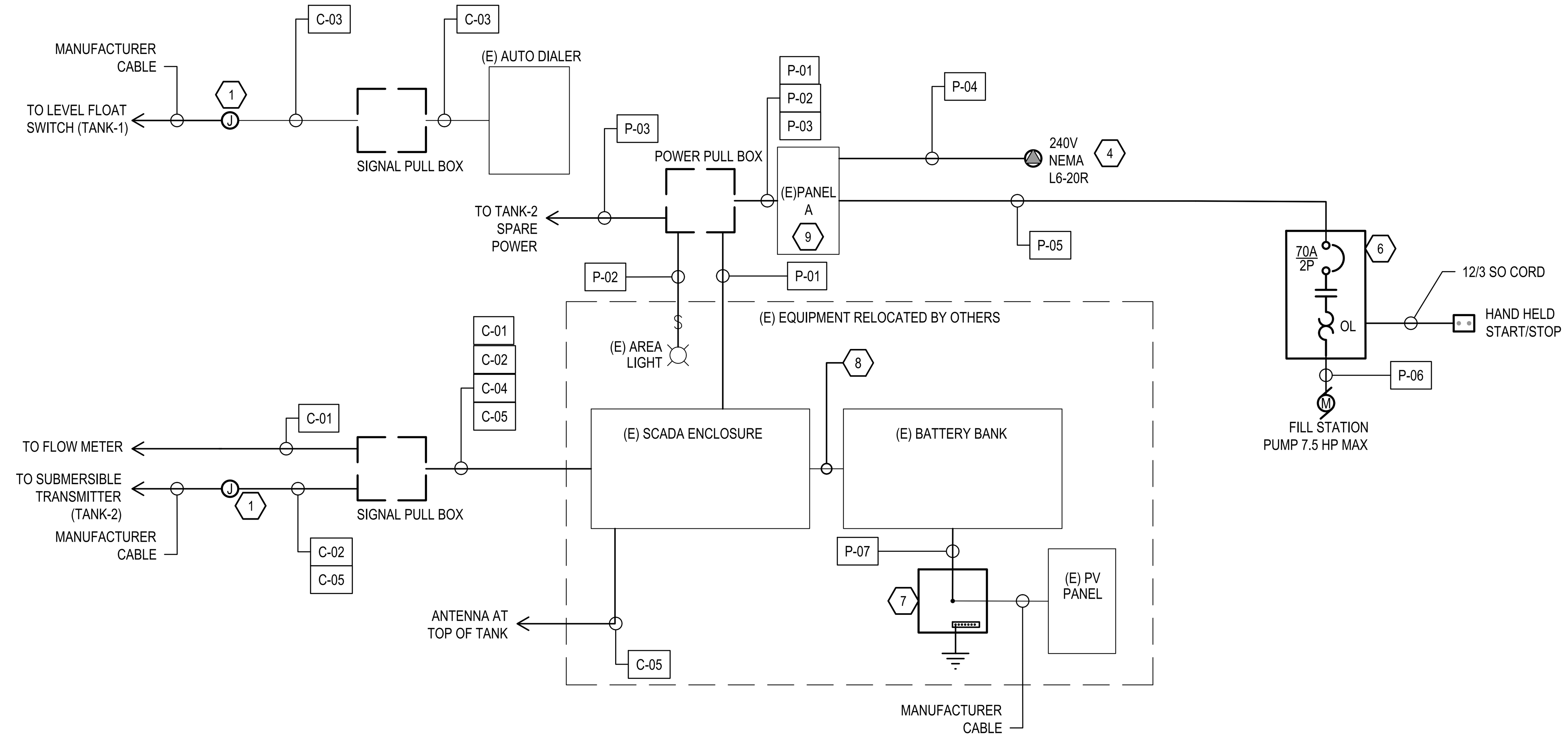
Client COUNTY OF SONOMA
Project LEACHATE TANK REPLACEMENT
Title ELECTRICAL DETAILS
Size ANSI D
Project No. 12558724 — Date 7/18/2024 — Scale AS SHOWN
Drawing No. E-501 — Sheet No. 46 of 48

GENERAL NOTES

1. SCADA SYSTEM, BATTERY BANK, SOLAR EQUIPMENT AND ASSOCIATED EQUIPMENT TO BE RELOCATED BY COUNTY.
2. FINAL CONNECTIONS TO SCADA EQUIPMENT BY COUNTY.

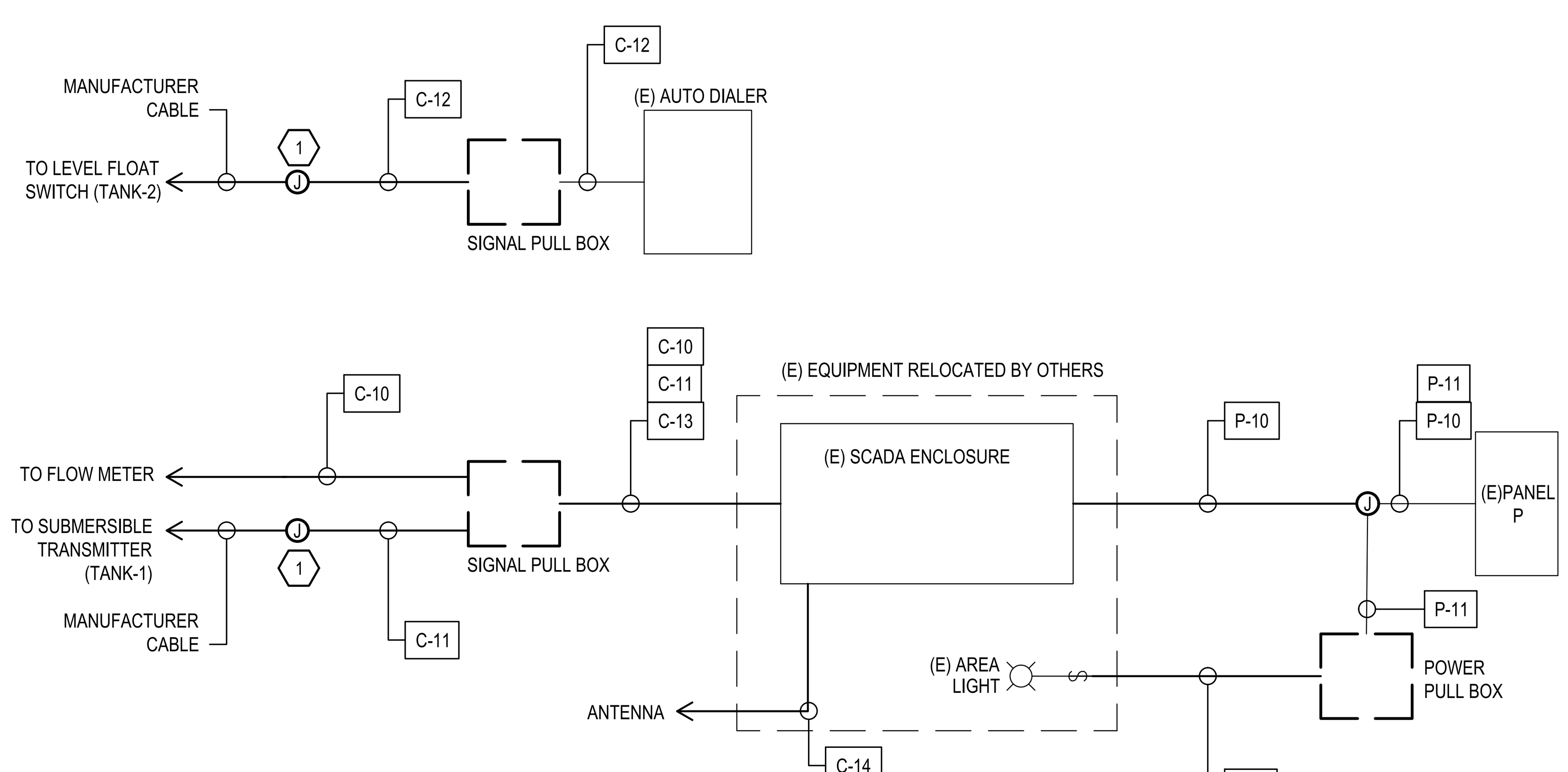
KEYNOTES

1. TERMINATE FIELD WIRING AT JUNCTION BOX TERMINAL STRIP.
2. PROVIDE 100A/2P BREAKER IN METER/MAIN PANEL.
3. PROVIDE (N) NEMA 3R 100-AMP 240/120-V SINGLE PHASE 12 CIRCUIT PANEL COMPLETE WITH CIRCUIT BREAKERS AS INDICATED IN PANEL SCHEDULE FOR NEW AND EXISTING LOADS. SEE SHEET E-602.
4. PROVIDE TWIST LOCK RECEPTACLE.
5. PROVIDE BREAKER WITH RATING AS SHOWN.
6. PROVIDE COMBINATION NEMA 2 STARTER. WITH BREAKER IN NEMA 3R ENCLOSURE. PROVIDE HAND HELD START STOP PUSHBUTTON AS INDICATED ON PLANS. COORDINATE WITH FILL STATION PUMP REQUIREMENTS PRIOR TO ORDERING. FILL STATION PUMP CONTROLS CAN BE SUBSTITUTED WITH APPROVED EQUAL FILL STATION MANUFACTURER PUMP CONTROL PANEL.
7. PROVIDE COMBINER BOX 8"X8"X4" NEMA 4X COMBINER BOX WITH BACKPANEL, TERMINAL BLOCKS AND GROUNDING BUS.
8. AFTER RELOCATION OF SCADA EQUIPMENT BY COUNTY, PROVIDE CONDUIT AND FITTINGS TO MATCH ORIGINAL SIZES. WIRES AND FINAL CONNECTIONS BY COUNTY.
9. PROVIDE CIRCUIT BREAKERS WITH RATINGS AS SHOWN ON PANEL SCHEDULE FOR NEW LOADS. SEE SHEET E-602.



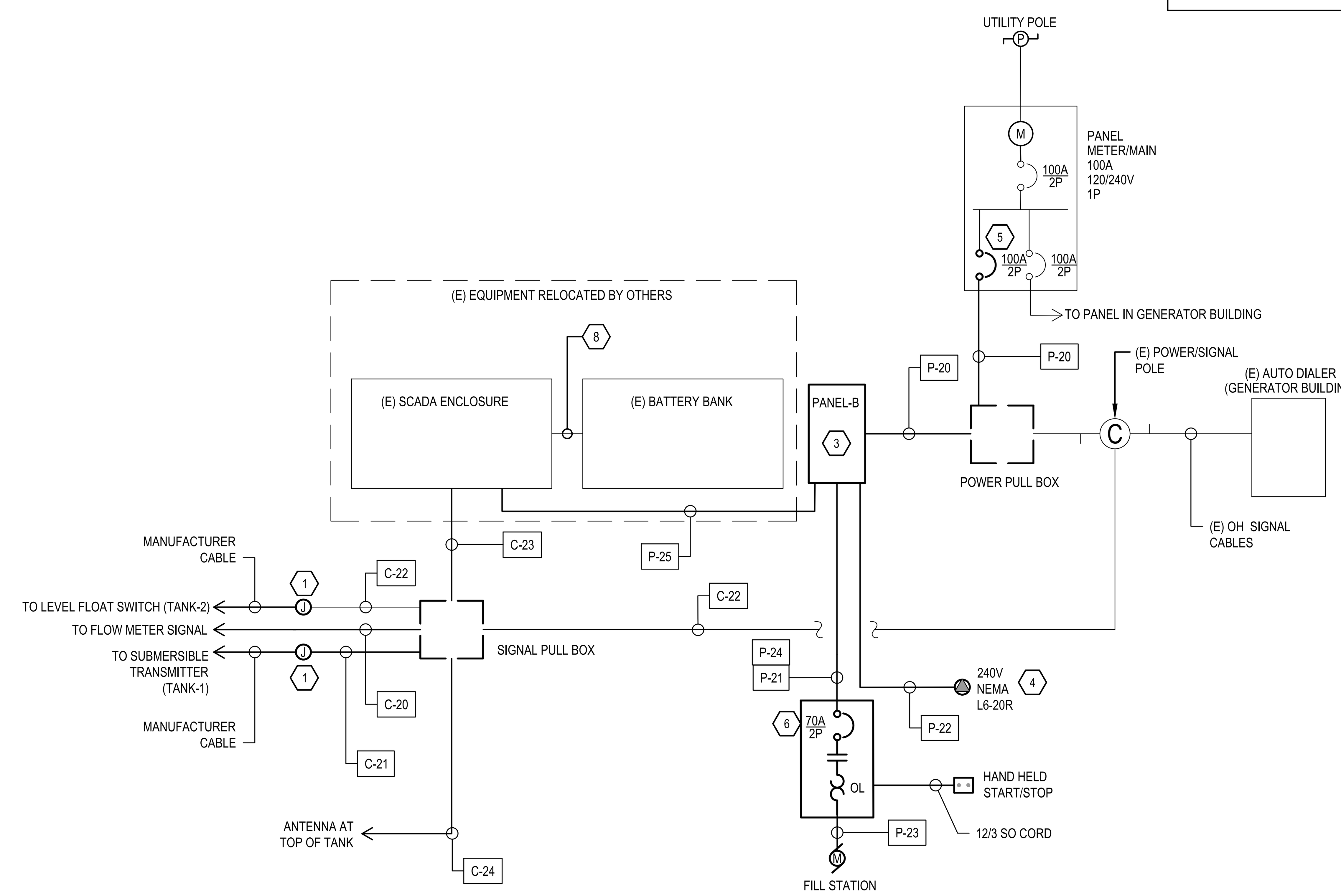
1 LEACHATE TANK INSTRUMENTATION AND ELECTRICAL RISER DIAGRAM GUERNEVILLE SITE

SCALE: NONE



2 LEACHATE TANK INSTRUMENTATION AND ELECTRICAL RISER DIAGRAM ROBLAR SITE

SCALE: NONE



3 LEACHATE TANK INSTRUMENTATION AND ELECTRICAL RISER DIAGRAM SONOMA SITE

SCALE: NONE

No.	Issue	Checked	Approved	Date
	Conformed Drawings	GT	GT	07/18/2024

Author EAO | Drafting Check MGK | Project Manager G. TOMASINO
Designer EAO | Design Check RPG | Project Director M. KENNEDY

CONFORMED DRAWINGS

Bar is one inch on original size sheet
0 1"

7/18/2024

GHD Inc.
2235 Mercury Way Suite 150
Santa Rosa California 95407 USA
T 1 707 523 1010 F 1 707 527 8679
www.ghd.com

Client COUNTY OF SONOMA

Project LEACHATE TANK REPLACEMENT

Title ELECTRICAL RISER DIAGRAM AND SCHEDULES

Size ANSI D

Project No.	Date	Scale	Drawing No.	Sheet No.
12558724	7/18/2024	AS SHOWN	E-601	47 of 48

Plot Date: 18 July 2024 - 3:27 PM Plotted By: Steven Toft Filename: \\ghdnet\ghd\US\San Francisco\Projects\561\12558724\Digital_Design\ACAD\Sheets\Leachate Tanks\12558724-GHD-0001-DWG-EL-0601.dwg

EXISTING PANEL-GUERNEVILLE SITE

PANEL NAME: **A** | MAINS RATING: MLO A MCB | BUS RATING: 200 A
VOLTAGE: 240/120 | PHASE: 1 | WIRE: 3
NEMA RATING: 3R | AIC RATING: | DEMAND FACTOR: STD
MOUNTING: SURFACE | LOCATION: GURNEVILLE SITE
NOTES: EXISTING LOADS SHOWN IN ITALIC, NEW LOADS ARE SHOWN BOLD.

CKT NO.	USE	DESCRIPTION	BKR SIZE	CKT KVA	CKT AMPS	WIRE SIZE	WIRE LENGTH (FT)	VOLTAGE DROP %	PHASE	VOLTAGE DROP %	WIRE LENGTH (FT)	WIRE SIZE	CKT AMPS	CKT KVA	BKR SIZE	DESCRIPTION	USE	CKT NO.
1		UNMARKED LOAD	15/1						A						80/2	UNMARKED LOAD		2
3		UNMARKED LOAD	20/1						B						80/2			4
5		LIGHTS	15/1						A						20/1	UNMARKED LOAD		6
7		UNMARKED LOAD	70/2						B						30/2	COMP		8
9			70/2						A						30/2			10
11	M	**FILL STATION PUMP**	**70/2**	4.79	39.92	4	150	1.47	B						20/1	SCADA/STREET LIGHTS		12
13	M		**70/2**	4.79	39.92	4	150	1.47	A							SPACE		14
15	M	**FILL STATION SUMP PUMP RECEPTACLE**	**20/1**	1.00	8.33	10	150	2.19	B							SPACE		16
17	L	**AREA LIGHTING**	**20/1**						A							SPACE		18
19		SPACE	20/1						B							SPACE		20

CONNECTED KVA		DEMAND KVA	DEMAND AMPS
PHASE A:	4.8	6.0	49.9
PHASE B:	5.8	7.0	58.2

STD DEMAND LOAD BASED ON 125% OF THE LARGEST MOTOR AND 100% OF THE REMAINING MOTORS, 125% OF CONTINUOUS LOADS, 100% OF NONCONTINUOUS LOADS, AND 50% OF RECEPTACLE LOADS BEYOND THE FIRST 10KVA

USE LEGEND

ID	LOAD TYPE	ASSUMED PF
H	HVAC	0.85
L	LIGHTING	0.80
M	MOTOR	0.85
R	RECEPTACLE	0.80
P	PANEL	0.85
O	OTHER	0.85

VOLTAGE DROP CALCULATION

VOLTAGE DROP IS BASED ON THE IEEE RED BOOK AND 2011 NEC CHAPTER 9 TABLE 9 FORMULA:
VD = I * (R * PF + X * SIN(ACOS(PF)) * L
WITH AN ADDITIONAL MULTIPLIER OF 2 FOR SINGLE PHASE AND 1.732 FOR 3-PHASE LOADS
R AND X VALUES ARE TAKEN FROM 2011 NEC CHAPTER 9 TABLE 9.

ASSUMPTIONS:
POWER FACTOR VARIED BY LOAD TYPE
CONDUIT TYPE RGS
WIRE MATERIAL CU

NEW PANEL-SONOMA SITE

PANEL NAME: **B** | MAINS RATING: 100 A MCB | BUS RATING: 100 A
VOLTAGE: 240/120 | PHASE: 1 | WIRE: 3
NEMA RATING: 3R | AIC RATING: 10000 | DEMAND FACTOR: STD
MOUNTING: SURFACE | LOCATION: SONOMA SITE
NOTES: EXISTING LOADS SHOWN IN ITALIC, NEW LOADS ARE SHOWN BOLD.

CKT NO.	USE	DESCRIPTION	BKR SIZE	CKT KVA	CKT AMPS	WIRE SIZE	WIRE LENGTH (FT)	VOLTAGE DROP %	PHASE	VOLTAGE DROP %	WIRE LENGTH (FT)	WIRE SIZE	CKT AMPS	CKT KVA	BKR SIZE	DESCRIPTION	USE	CKT NO.
1	O	*EXISTING SCADA*	**15/1**	1.00	8.33				A						**20/1**	SPARE		2
3	O	*AREA LIGHTING*	**15/1**	1.00	8.33				B						**20/1**	SPARE		4
5	M	**FILL STATION PUMP**	**70/2**	4.79	39.92	4	20	0.20	A						**20/1**	SPARE		6
7	M		**70/2**	4.79	39.92	4	20	0.20	B						**20/1**	SPARE		8
9	M	**FILL STATION SUMP PUMP RECEPTACLE**	**20/1**	1.00	8.33	12	20	0.48	A						**20/1**	SPARE		10
11		SPARE	**20/1**						B						**20/1**	SPARE		12

CONNECTED KVA		DEMAND KVA	DEMAND AMPS
PHASE A:	6.8	8.0	66.6
PHASE B:	5.8	7.0	58.2

STD DEMAND LOAD BASED ON 125% OF THE LARGEST MOTOR AND 100% OF THE REMAINING MOTORS, 125% OF CONTINUOUS LOADS, 100% OF NONCONTINUOUS LOADS, AND 50% OF RECEPTACLE LOADS BEYOND THE FIRST 10KVA

USE LEGEND

ID	LOAD TYPE	ASSUMED PF
H	HVAC	0.85
L	LIGHTING	0.80
M	MOTOR	0.85
R	RECEPTACLE	0.80
P	PANEL	0.85
O	OTHER	0.85

VOLTAGE DROP CALCULATION

VOLTAGE DROP IS BASED ON THE IEEE RED BOOK AND 2011 NEC CHAPTER 9 TABLE 9 FORMULA:
VD = I * (R * PF + X * SIN(ACOS(PF)) * L
WITH AN ADDITIONAL MULTIPLIER OF 2 FOR SINGLE PHASE AND 1.732 FOR 3-PHASE LOADS
R AND X VALUES ARE TAKEN FROM 2011 NEC CHAPTER 9 TABLE 9.

ASSUMPTIONS:
POWER FACTOR VARIED BY LOAD TYPE
CONDUIT TYPE RGS
WIRE MATERIAL CU

CONDUIT AND CABLE SCHEDULE LEACHATE TANKS

CKT #	DESCRIPTION	FROM	TO	CONDUIT TYPE	CONDUIT SIZE	CABLE SIZE	REMARKS
GUERNEVILLE							
P-01	SCADA POWER	PANEL-A	SCADA ENCLOSURE	PVC	1 INCH	MATCH EXISTING	PROVIDE CONDUCTORS SIZED TO MATCH EXISTING.PROVIDE 3/4" RGS INSIDE BUILDING. FINAL CONNECTIONS TO SCADA BY COUNTY.
P-02	LIGHT FIXTURE	PANEL-A	LIGHT POLE	PVC	1 INCH	2-#12 AWG, #12 GND	POLE AND FIXTURE ISTALLED BY COUNTY. FINAL CONNECTIONS TO FIXTURE BY COUNTY
P-03	SPARE	PANEL-A	TANK 2	PVC	2 INCH	PULL STRING	
P-04	FILL STATION SUMP PUMP	PANEL-A	FILL STATION RECEPT	PVC	1 INCH	3- #10 AWG, #10 GND	
P-05	FILL STATION PANEL	PANEL-A	STARTER PANEL	PVC	2 INCH	3- #4 AWG, #8 GND	
P-06	FILL STATION PUMP	STARTER PANEL	FILL STATION PUMP	PVC	1 INCH	MANUFACTURE CABLE	
P-07	SOLAR PANEL	COMBINER BOX	SCADA ENCLOSURE	PVC	1 INCH	MATCH EXISTING	PROVIDE CONDUCTORS SIZED TO MATCH EXISTING.
C-01	FLOW METER SIGNAL	FLOW METER	SCADA ENCLOSURE	PVC	1 INCH	3- #12 AWG	PROVIDE 6FT OF EXTRA CABLE AT PULL BOX. SCADA CONNECTION BY OTHERS. PROVIDE 3/4" SS CONDUIT AT TANK.
C-02	TANK PRESSURE SIGNAL	PRESSURE TRANSMITTER (JUNCTION BOX)	SCADA ENCLOSURE	PVC	1 INCH	3- #12 AWG	PROVIDE 6FT OF EXTRA CABLE AT PULL BOX. SCADA CONNECTION BY OTHERS. PROVIDE 3/4" SS CONDUIT AT TANK.
C-03	LEVEL FLOAT SWITCH	FLOAT SWITCH (JUNCTION BOX)	AUTODIALER	PVC	1 INCH	MATCH EXISTING	PROVIDE 3/4" SS CONDUIT AT TANK AND 3/4" RGS INSIDE BUILDING.PROVIDE CONDUCTORS SIZED TO MATCH EXISTING.
C-04	SPARE	PULL BOX	SCADA ENCLOSURE	PVC	2 INCH	PULL STRING	
C-05	ANTENNA	SCADA ENCLOSURE	ANTENNA	PVC	1 INCH	MATCH EXISTING	PROVIDE ANTENNA CABLE WITH 6FT OF EXTRA CABLE AT PULL BOX. SCADA CONNECTION BY OTHERS. PROVIDE 2" SS CONDUIT AT TANK.
ROBLAR							
P-10	SCADA POWER	PANEL-P	SCADA ENCLOSURE	PVC	1 INCH	MATCH EXISTING	PROVIDE CONDUCTORS SIZED TO MATCH EXISTING.FINAL CONNECTIONS TO SCADA BY COUNTY.
P-11	SITE LIGHTING	PANEL-P	LIGHT POLE	PVC	1 INCH	2-#12 AWG, #12 GND	POLE AND FIXTURE ISTALLED BY COUNTY. FINAL CONNECTIONS TO FIXTURE BY COUNTY
C-10	FLOW METER SIGNAL	FLOW METER	SCADA ENCLOSURE	PVC	1 INCH	3- #12 AWG	PROVIDE 6FT OF EXTRA CABLE AT PULL BOX. SCADA CONNECTION BY OTHERS. PROVIDE 3/4" SS CONDUIT AT TANK.
C-11	TANK PRESSURE SIGNAL	PRESSURE TRANSMITTER (JUNCTION BOX)	SCADA ENCLOSURE	PVC	1 INCH	3- #12 AWG	PROVIDE 6FT OF EXTRA CABLE AT PULL BOX. SCADA CONNECTION BY OTHERS. PROVIDE 3/4" SS CONDUIT AT TANK.
C-12	LEVEL FLOAT SWITCH	FLOAT SWITCH (JUNCTION BOX)	AUTODIALER	PVC	1 INCH	EXISTING	PROVIDE 3/4" SS CONDUIT AT TANK.SPLICE AND EXTEND CABLES AS NEEDED.
C-13	SPARE	PULL BOX	SCADA ENCLOSURE	PVC	2 INCH	PULL STRING	
C-14	ANTENNA	SCADA ENCLOSURE	ANTENNA	PVC	1 INCH	MATCH EXISTING	PROVIDE ANTENNA CABLE WITH 6FT OF EXTRA CABLE AT PULL BOX. SCADA CONNECTION BY OTHERS. PROVIDE 2" SS CONDUIT AT TANK.
SONOMA							
P-20	100A FEEDER	METER/MAIN PANEL	PANEL-B	PVC	2 INCH	3- #4 AWG, #8 GND	
P-21	FILL STATION PANEL	PANEL-B	STARTER PANEL	PVC	2 INCH	3- #4 AWG, #8 GND	
P-22	FILL STATION SUMP PUMP	PANEL-B	FILL STATION RECEPT	PVC	1 INCH	3- #10 AWG, #10 GND	
P-23	FILL STATION PUMP	STARTER PANEL	FILL STATION PUMP	PVC	1 INCH	MANUFACTURE CABLE	
P-24	SPARE	PANEL-B	FILL STATION	PVC	1 INCH	PULL STRING	PROVIDE STUB UP AND CAP BELOW STARTER PANEL.
P-25	SCADA POWER	PANEL-B	SCADA ENCLOSURE	RGS	1 INCH	MATCH EXISTING	PROVIDE POWER CONDUCTORS TO MATCH EXISTING. FINAL CONNECTION TO SCADA BY COUNTY.
C-20	FLOW METER SIGNAL	FLOW METER	SCADA ENCLOSURE	PVC	1 INCH	3- #12 AWG	PROVIDE 6FT OF EXTRA CABLE AT PULL BOX. SCADA CONNECTION BY OTHERS. PROVIDE 3/4" SS CONDUIT AT TANK.
C-21	TANK PRESSURE SIGNAL	PRESSURE TRANSMITTER (JUNCTION BOX)	SCADA ENCLOSURE	PVC	1 INCH	3- #12 AWG	PROVIDE 6FT OF EXTRA CABLE AT PULL BOX. SCADA CONNECTION BY OTHERS. PROVIDE 3/4" SS CONDUIT AT TANK.
C-22	LEVEL FLOAT SWITCH	FLOAT SWITCHES (JUNCTION BOX)	AUTODIALER	PVC	3/4 INCH	EXISTING	PROVIDE 3/4" SS CONDUIT AT TANK.SPLICE AND EXTEND AS NEEDED.
C-23	SPARE	PULL BOX A	SCADA ENCLOSURE	PVC	2 INCH	PULL STRING	
C-24	ANTENNA	SCADA ENCLOSURE	ANTENNA	PVC	1 INCH	MATCH EXISTING	PROVIDE ANTENNA CABLE WITH 6FT OF EXTRA CABLE AT PULL BOX. SCADA CONNECTION BY OTHERS. PROVIDE 2" SS CONDUIT AT TANK.

NOTE: WIRING TYPE SHALL BE PER SPECIFICATION SECTION 260519.

No.	Issue	Checked	Approved	Date
	Conformed Drawings	GT	GT	07/18/2024

Author **EAO** | Drafting Check **MGK** | Project Manager **G. TOMASINO**
Designer **EAO** | Design Check **RPG** | Project Director **M. KENNEDY**

CONFORMED DRAWINGS

Bar is one inch on original size sheet
0 1"

REGISTERED PROFESSIONAL ENGINEER
ERICK A. OSORIO
No. E23871
ELECTRICAL
STATE OF CALIFORNIA
7/18/2024

GHD Inc.
2235 Mercury Way Suite 150
Santa Rosa California 95407 USA
T 1 707 523 1010 **F** 1 707 527 8679
www.ghd.com

Client **COUNTY OF SONOMA**
Project **LEACHATE TANK REPLACEMENT**
Title **ELECTRICAL SCHEDULES**
Size **ANSI D**

Project No. **12558724** | Date **7/18/2024** | Scale **AS SHOWN**
Drawing No. **E-602**

Plot Date: 18 July 2024 - 3:29 PM Plotted By: Steven Toft Filename: \\ghdnet\ghd\US\San Francisco\Projects\561\12558724\Digital_Design\ACAD\Sheets\Leachate Tanks\12558724-GHD-0001-DWG-EL-0602.dwg