



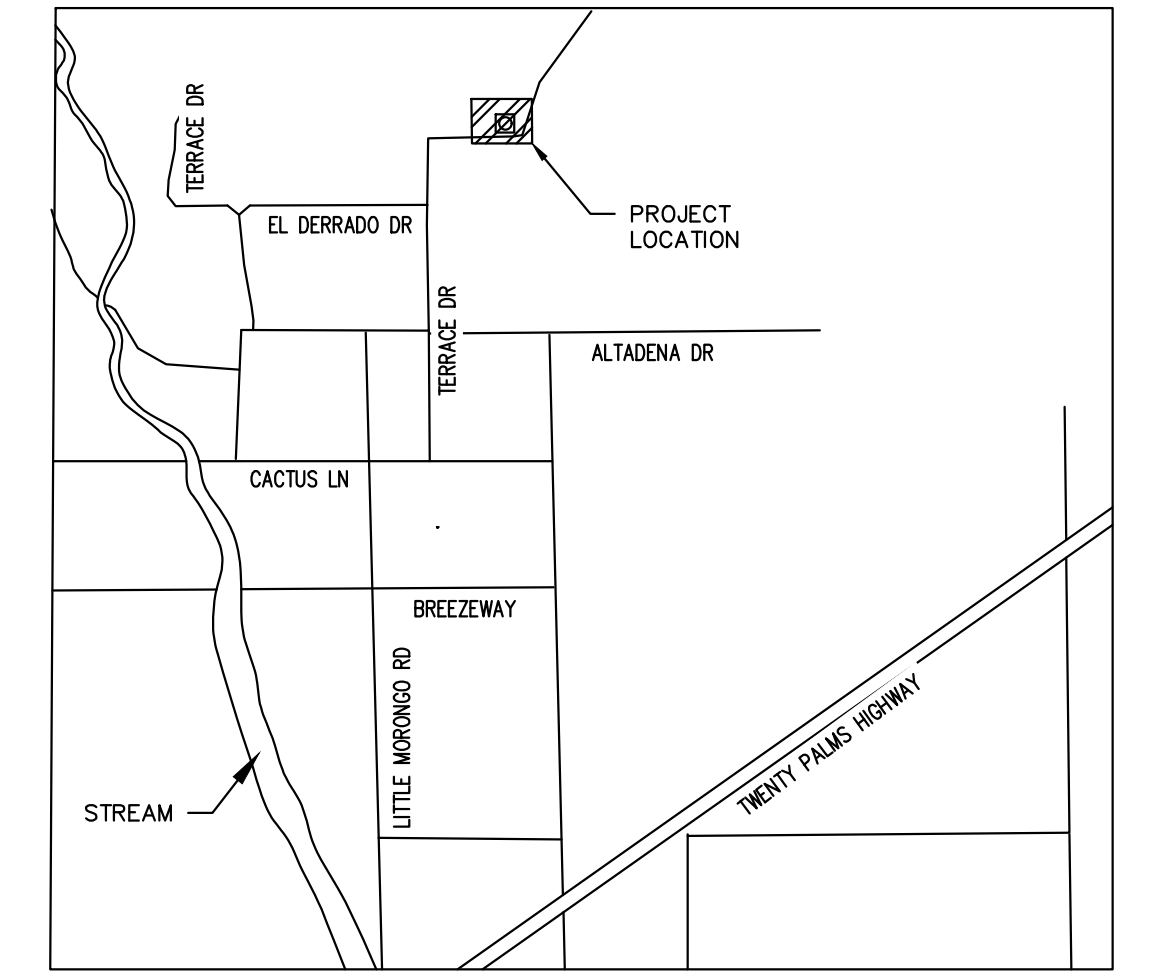
SAN BERNARDINO COUNTY DEPARTMENT OF PUBLIC WORKS SPECIAL DISTRICTS CSA 70F - MORONGO VALLEY MORONGO VALLEY WATER TANK REPLACEMENT

RE-BID SET

TANK SITE R1

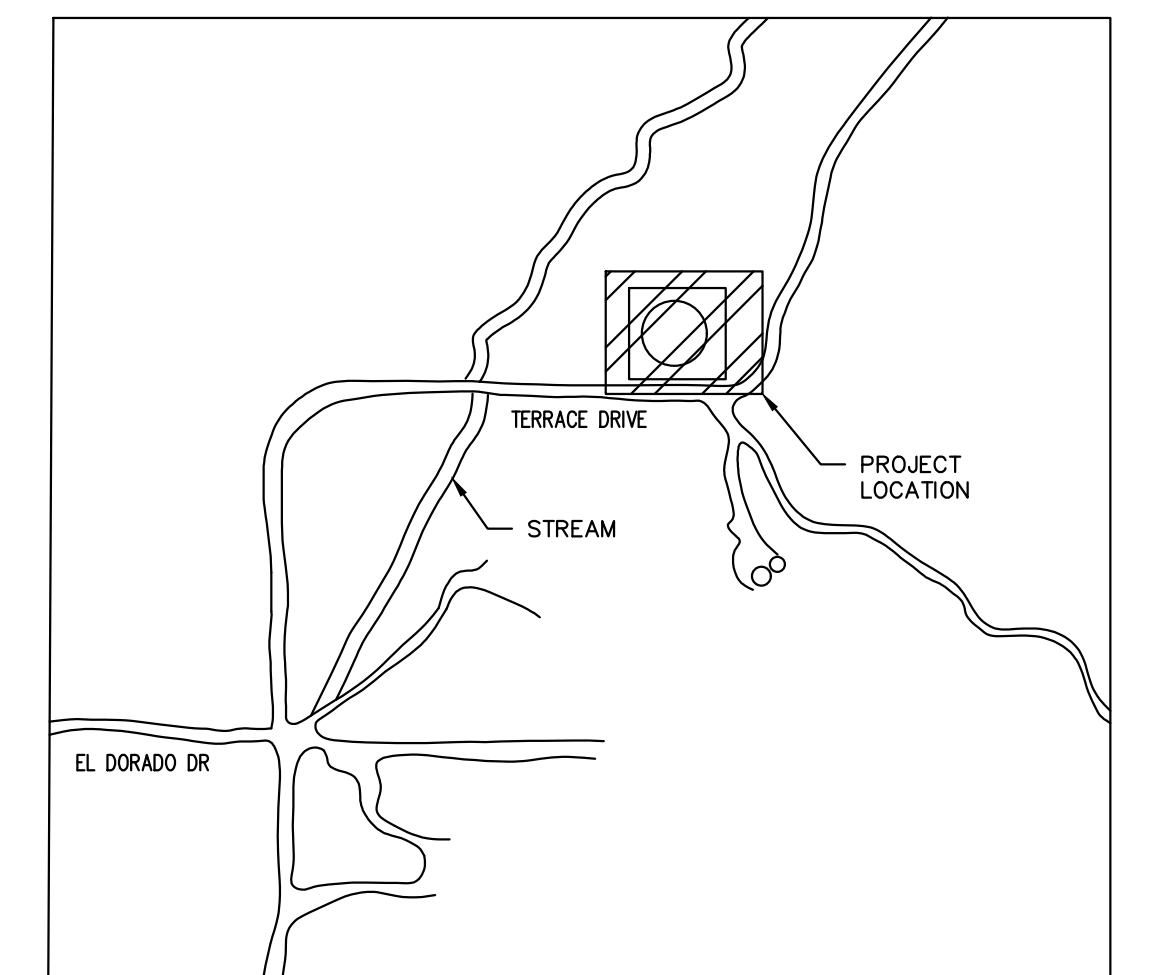
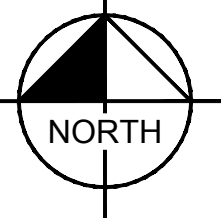
BID SET

APN: 0580-241-16-0000



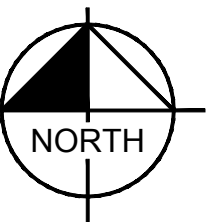
PROJECT VICINITY MAP

NOT TO SCALE



LOCATION MAP

NOT TO SCALE



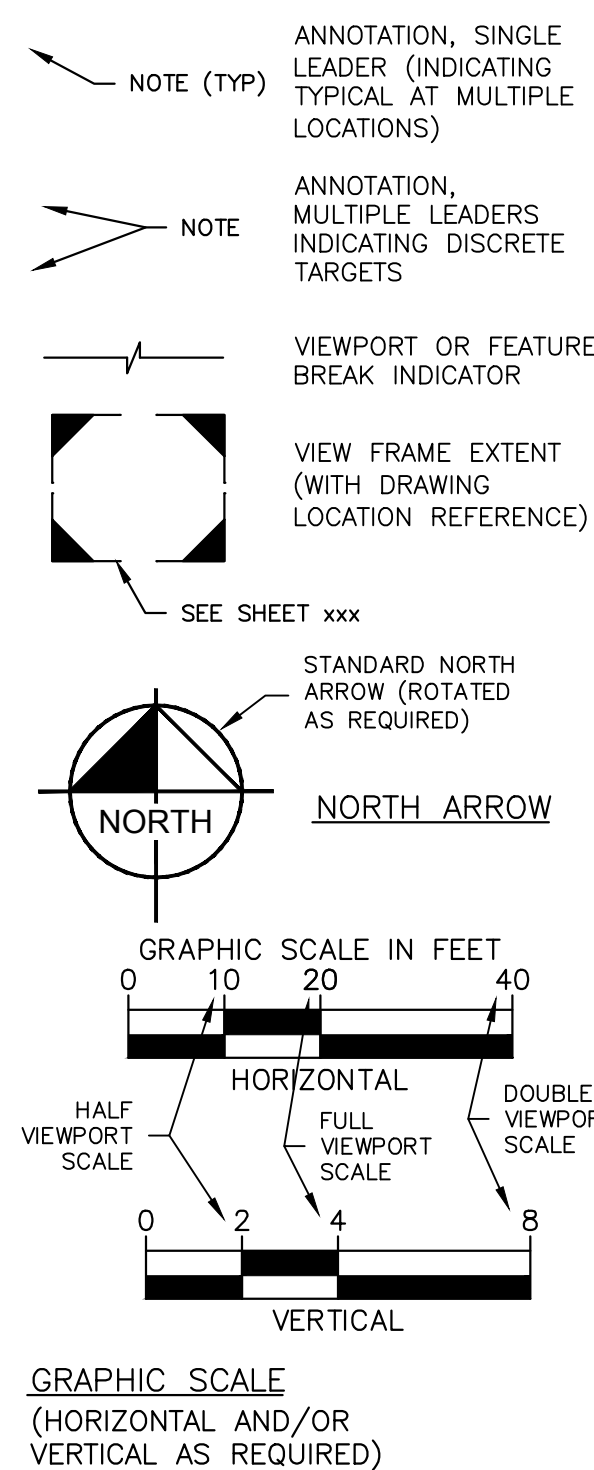
ABBREVIATIONS

AHJ	AUTHORITIES HAVING JURISDICTION	MJ	MECHANICAL JOINT
ANSI	AMERICAN NATIONAL STANDARDS INSTITUTE	NSF	NATIONAL SANITATION FOUNDATION
APPROX	APPROXIMATE	N	NORTHING
AVE	AVENUE	NPT	NATIONAL PIPE TAPERED
AWWA	AMERICAN WATER WORKS ASSOCIATION	NTS	NOT TO SCALE
CL	CEMENT LINED	O.D.	OUTER DIAMETER
DI	DUCTILE IRON	PROP	PROPOSED
E	EASTING	PSI	POUNDS PER SQUARE INCH
EX	EXISTING	PVC	POLYVINYL CHLORIDE
FF	FINISHED FLOOR	ROW	RIGHT OF WAY
FG	FINISHED GRADE	SBCSD	SAN BERNARDINO COUNTY SPECIAL DISTRICTS
FLG	FLANGE	SF	SQUARE FOOT
FNPT	FEMALE NATIONAL PIPE TAPERED	SCH	SCHEDULE
FR	FIBER ROLL	SPPWC	STANDARD PLANS FOR PUBLIC WORKS CONSTRUCTION
G	GAS	SS	SANITARY SEWER
GA	GAUGE	ST	STREET
GALV	GALVANIZED	STA	STATION
HDPE	HIGH DENSITY POLYETHYLENE	TEMP	TEMPORARY
HWL	HIGH WATER LEVEL	TYP	TYPICAL
I.D.	INNER DIAMETER	UG	UNDERGROUND
LF	LINEAR FEET		
LWL	LOW WATER LEVEL		
MAX	MAXIMUM		
MIN	MINIMUM		

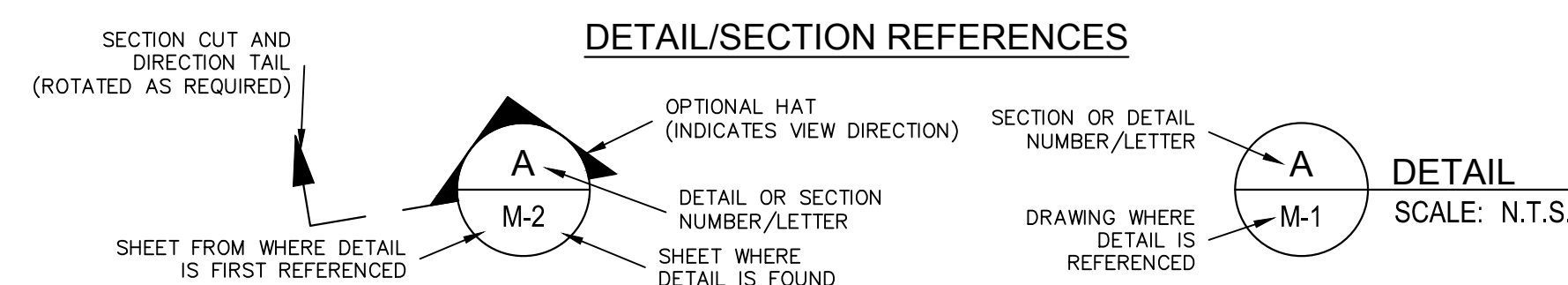
LEGEND

EXIST CONTOUR	---
EXIST WATER	---
EXIST GAS	---
EXIST OVERHEAD	---
EXIST FENCE	---
EXIST EASEMENT	---
PROPERTY LINE	---
RIGHT OF WAY	---
EXIST DIRT ROAD	---
EXIST GRAVEL	---
GRADING LIMITS	---
PROP WATER	---
TEMPORARY WATER	---
EXIST ELECTRICAL	---
PROP ELECTRICAL	---

DRAFTING LEGEND



DETAIL/SECTION REFERENCES



SHEET LIST TABLE	
SHEET NUMBER	SHEET TITLE
1	COVER SHEET
2	GENERAL NOTES
3	QUANTITIES
4	EXISTING CONDITIONS SITE PLAN
5	TEMPORARY TANK MECHANICAL PLAN
6	DEMOLITION PLAN
7	GRADING PLAN
8	SITE AND MECHANICAL PLAN
9	TANK SECTIONS
10	EROSION CONTROL PLAN
11	DETAILS
12	DETAILS
13	DETAILS
14	DETAILS
15	TEMPORARY ELECTRICAL PLAN
16	ELECTRICAL SITE PLAN
17	ELECTRICAL DETAILS

OWNER/DEVELOPER
SAN BERNARDINO COUNTY
DEPARTMENT OF PUBLIC WORKS, SPECIAL DISTRICTS
222 W. HOSPITALITY LANE, 2ND FLOOR
SAN BERNARDINO, CA 92415
PHONE: 909.386.8800

SCOPE OF WORK
THE PROPOSER TO DEMOLISH AN EXISTING BOLTED STEEL WATER TANK AND REPLACE IT WITH A NEW BOLTED STEEL WATER TANK.

SITE ADDRESS
8355 TERRACE DRIVE
MORONGO VALLEY, CA 92256

CIVIL ENGINEER
SARP SEKEROGLU, PE
KIMLEY-HORN AND ASSOCIATES
401 B STREET, SUITE 600
SAN DIEGO CA 92101

GEOTECHNICAL ENGINEER
JOSE TAPIA, PE
LEIGHTON CONSULTING
10532 ACACIA STREET, SUITE B-6
RANCHO CUCAMONGA, CALIFORNIA 91730

GEOTECHNICAL EXPORATION: PROPOSED MORONGO VALLEY WATER TANK REPLACEMENT PROJECT.
JANUARY 10, 2024
PROJECT SERVICE REQUEST: SD003
PROJECT NO: 038.0000020646

DECLARATION OF ENGINEER OF RECORD

I HEREBY DECLARE THAT THE DESIGN OF THE IMPROVEMENTS AS SHOWN ON THESE PLANS COMPLIES WITH PROFESSIONAL ENGINEERING STANDARDS AND PRACTICES. AS THE ENGINEER IN RESPONSIBLE CHARGE OF THE DESIGN OF THESE IMPROVEMENTS, I ASSUME FULL RESPONSIBLE CHARGE FOR SUCH DESIGN. I UNDERSTAND AND ACKNOWLEDGE THAT THE PLAN CHECK OF THESE PLANS BY SAN BERNARDINO COUNTY DEPARTMENT OF PUBLIC WORKS - SPECIAL DISTRICTS (SD) IS A REVIEW FOR THE LIMITED PURPOSE OF ENSURING THAT THE PLANS COMPLY WITH SD PROCEDURES, APPLICABLE POLICES AND ORDINANCES. THE PLAN CHECK IS NOT A DETERMINATION OF THE TECHNICAL ADEQUACY OF THE DESIGN OF THE IMPROVEMENTS. SUCH PLAN CHECK DOES NOT, THEREFORE, RELIEVE ME OF MY RESPONSIBILITY FOR THE DESIGN OF THESE IMPROVEMENTS. AS ENGINEER OF RECORD, I AGREE TO INDEMNIFY AND HOLD SD, ITS OFFICERS, AGENTS, AND EMPLOYEES HARMLESS FROM ANY AND ALL LIABILITY, CLAIMS, DAMAGES OR INJURIES TO ANY PERSON OR PROPERTY WHICH MIGHT ARISE FROM THE NEGLIGENT ACTS, ERRORS OR OMISSIONS OF THE ENGINEER OF RECORD. I HAVE READ AND INFORMED THE PROJECT APPLICANT/DEVELOPER THAT APPROVAL OF THESE PLANS DO NOT RELIEVE THEM FROM THE REQUIREMENTS OF THE DESIGN CONDITIONS.

BY: SARP SEKEROGLU C71474 12/31/2025

ENGINEER'S CERTIFICATION

I CERTIFY THAT THE DESIGN OF THE WATER SYSTEM HAS BEEN DISCUSSED WITH THE SAN BERNARDINO COUNTY FIRE DEPARTMENT, AND IS EXEMPT FROM THEIR REQUIREMENTS.

BY: SARP SEKEROGLU C71474 12/31/2025

NOTIFICATIONS

- AT LEAST 48 HOURS PRIOR TO COMMENCING CONSTRUCTION, CONTRACTOR SHALL NOTIFY:
- SPECIAL DISTRICTS - WATER AND SANITATION DIVISION: DEVELOPMENT SERVICES - (760) 955-9885
 - UNDERGROUND SERVICE ALERT (USA): 811
 - ALL OTHER AFFECTED AGENCIES THAT ARE NOT MEMBERS OF USA ALERT

UNDERGROUND SERVICE ALERT

Call: TOLL FREE
1-800-227-2600
OR
811

TWO WORKING DAYS BEFORE YOU DIG

BENCHMARK:
CCS83 ZONE 5, NAD83(2011), EPOCH 2010.0

BASIS OF BEARINGS:
FD GLO BRASS CAP UP 0.6', CN 1/16 COR S.12, PER RS 103/74.
ELEVATION DETERMINED VIA STATIC GPS OBSERVATION, PROCESSED THROUGH OPUS.
NAVD-88 ELEV = 3066.588'

Kimley»Horn

401 B STREET, SUITE 600, SAN DIEGO, CA 92101
PHONE: (619) 234-9411 WWW.KIMLEY-HORN.COM

PREPARED UNDER THE SUPERVISION OF:
 04/10/2024
SARP SEKEROGLU R.C.E. No. 71474 EXP. 12/31/2025

REVISIONS	
DESCRIPTION	APPR. DATE
ADDENDUM NO. 2	6/24
ADDENDUM NO. 5	6/24

WATER TANK REPLACEMENT PLANS APPROVED BY: SAN BERNARDINO COUNTY - PUBLIC WORKS SPECIAL DISTRICTS			
07/18/2024			
ASSISTANT DIRECTOR			
APPROVALS	REVIEWER	INITIAL	DATE
	PROJECT MANAGER		07/16/2024
	PM, DIVISION MANAGER		07/16/2024
	WAS, DIVISION MANAGER		07/17/2024

WATER TANK REPLACEMENT PLANS

APN: 0580-241-16-0000
MORONGO VALLEY WATER TANK
REPLACEMENT PROJECT

COVER SHEET

DWG NO.
30.30.00157

FILE NO.
SD003

SHEET 1 OF 17

RE-BID SET

GENERAL NOTES

- ALL WORK SHALL BE DONE IN ACCORDANCE WITH THESE PLANS AND TO THE LATEST SPECIAL DISTRICTS "STANDARDS FOR DOMESTIC WATER SYSTEMS" AS POSTED ON SPECIAL DISTRICTS WEBSITE AT: <https://specialdistricts.sbcounty.gov/project-management/water-sewer-standards/>
- IT IS THE CONTRACTOR'S RESPONSIBILITY TO MAINTAIN A CURRENT AND APPROVED SET OF SPECIAL DISTRICTS STANDARD SPECIFICATIONS ON THE JOB SITE AT ALL TIMES. STANDARD SPECIFICATIONS CAN BE PURCHASED AT THE SAN BERNARDINO COUNTY SPECIAL DISTRICTS OFFICE.
- THE CONTRACTOR SHALL BE RESPONSIBLE FOR MAKING ARRANGEMENTS FOR CONSTRUCTION INSPECTION AT LEAST 48 HOURS PRIOR TO BEGINNING WORK BY CALLING DEVELOPMENT SERVICES AT (760) 955-9885 OR BY EMAIL AT DEVSERVICES@SDD.SBCOUNTY.GOV
- IT SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR TO FAMILIARIZE ITSELF WITH THE JOB SITE AND THE LOCATION OF ALL UNDERGROUND FACILITIES SHOWN OR NOT SHOWN ON THESE PLANS. THE CONTRACTOR IS RESPONSIBLE FOR ALL DIG ALERT REQUESTS AND EXPLORATORY EFFORTS NECESSARY TO VERIFY ANY UNDERGROUND OBSTRUCTIONS. THE CONTRACTOR WILL BE UNILATERALLY RESPONSIBLE FOR ANY DAMAGE DONE TO EXISTING UTILITIES THAT ARE SHOWN OR NOT SHOWN ON THESE PLANS.
- THE CONTRACTOR SHALL BE RESPONSIBLE FOR ANY AND ALL DAMAGES TO PIPE INCURRED WHILE BACK FILLING AND COMPACTING.
- THE CONTRACTOR SHALL OBTAIN ALL NECESSARY STATE, COUNTY OR LOCAL PERMITS.
- CONTRACTOR SHALL OBTAIN AN EXCAVATION PERMIT AND ENCROACHMENT PERMIT OR OTHER REQUIRED PERMITS FROM THE SAN BERNARDINO COUNTY DEPARTMENT OF PUBLIC WORKS TRANSPORTATION, PRIOR TO ANY GRADING OR PIPELINE EXCAVATION WITHIN THE COUNTY RIGHT OF WAY BY CALLING (909) 387-7910.
- THRUST BLOCKS SHALL BE INSTALLED PER SPECIAL DISTRICTS "STANDARDS FOR DOMESTIC WATER SYSTEMS" PER STANDARD DRAWING H-3A AND H-3B.
- THE CONTRACTOR SHALL NOTIFY ALL SERVING UTILITY COMPANIES 48 HOURS PRIOR TO BEGINNING ANY DITCH EXCAVATION WHEN WORK IS TO BE PERFORMED NEAR THEIR FACILITIES BY CALLING 811.
- ALL PIPE SHALL BE CLASS 150 AND INSTALLED WITH LOCATION TAPE 18" BELOW FINISHED GRADE AND 14 GA. INSULATED WIRE TAPED TO PIPE AND BROUGHT TO SURFACE AT HYDRANTS, METER SERVICES, AIR VAC & BLOW OFFS.
- THE CONTRACTOR SHALL COORDINATE ALL TIE-INS OF NEW WATER MAINS IN COUNTY SERVICE AREAS WITH THE WATER AND SANITATION SUPERVISOR, 222 W. HOSPITALITY LANE, 2ND FLOOR, SAN BERNARDINO, CA 92415-0450; PHONE: (760) 955-9885 TO KEEP INTERRUPTIONS TO A MINIMUM. NO INTERRUPTIONS TO EXISTING SERVICES SHALL BE MADE UNLESS THE DISTRICT GRANTS PRIOR APPROVAL.
- CONTRACTOR SHALL ENSURE THAT UTILITY EASEMENTS HAVE BEEN RECORDED PRIOR TO START OF WORK.
- WATER MAIN SHALL HAVE A MINIMUM OF 48" OF COVER FROM TOP OF PIPE TO FINAL GRADE.
- HYDRO TEST AT 200 PSI MINIMUM FOR A 2 HOUR DURATION AT LOWEST POINT IN THE WATER LINE.
- METER BOXES SHALL BE PLACED WITHIN 1 FOOT MINIMUM, 3 FEET MAXIMUM FROM ADJACENT PROPERTY LINE. METER BOXES IN THE SIDEWALK SHALL HAVE CONCRETE LIDS.
- THE CONTRACTOR SHALL BE HELD RESPONSIBLE FOR ANY FIELD CHANGES MADE WITHOUT PRIOR WRITTEN AUTHORIZATION FROM THE UNDERSIGNED ENGINEER AND THE COUNTY OF SAN BERNARDINO SPECIAL DISTRICTS.
- THE CONTRACTOR AGREES THAT IT SHALL ASSUME SOLE AND COMPLETE RESPONSIBILITY FOR JOB SITE CONDITIONS DURING THE COURSE OF CONSTRUCTION OF THIS PROJECT, INCLUDING SAFETY OF ALL PERSONS AND PROPERTY; THAT THIS REQUIREMENT SHALL APPLY CONTINUALLY AND NOT BE LIMITED TO NORMAL WORKING HOURS; AND THAT CONTRACTOR SHALL DEFEND, INDEMNIFY AND HOLD THE OWNER AND THE ENGINEER HARMLESS FROM ANY AND ALL LIABILITY, REAL OR ALLEGED, IN CONNECTION WITH THE PERFORMANCE OF WORK ON THIS PROJECT EXCEPTING FOR LIABILITY ARISING FROM THE SOLE NEGLIGENCE OF THE OWNER OR THE ENGINEER.
- ALL STATIONING IS BASED ON THE CENTER LINE OF THE STREET.
- ALL EXCAVATIONS SHALL BE BACKFILLED AT THE END OF EACH WORKING DAY AND ROADS OPEN TO VEHICULAR TRAFFIC UNLESS OTHERWISE APPROVED BY THE SPECIAL DISTRICTS ENGINEER.
- ALL PIPE DISTANCES SHOWN ARE HORIZONTAL.
- ALL WORK SHALL BE CONSTRUCTED ACCORDING TO THE VERTICAL AND HORIZONTAL MEASUREMENTS OF THESE PLANS AND EXISTING DESIGN STANDARDS. ADEQUATE STAKES SHALL BE SET UNDER THE DIRECTION OF A LICENSED SURVEYOR/ENGINEER FOR THE CONSTRUCTOR. ALL CONSTRUCTION SURVEYING SHALL BE PERFORMED IN ACCORDANCE TO THE SURVEYING PROCEDURES OF THE SURVEYOR/ENGINEER OF RECORD. IF THIRD PARTY SUBCONTRACTORS PERFORM THE CONSTRUCTION LAYOUT AND SURVEYING FOR THIS PROJECT WITHOUT THE COORDINATION OF THE SURVEYOR/ENGINEER OF RECORD, THEY HAVE ASSUMED THE POSITION OF SURVEYOR/ENGINEER OF RECORD. THE FINAL CHECK OF THIS DESIGN IS TO BE THE CONSTRUCTION STAKING AS THE DESIGN MEETS THE EXISTING CONTROL AND ELEVATIONS. ALL EXISTING DISCREPANCIES TO THE STANDARD DESIGN CRITERIA SHALL BE BROUGHT TO THE SURVEYOR/ENGINEER OF RECORD'S ATTENTION PRIOR TO PROCEEDING WITH CONSTRUCTION. IF CONSTRUCTION CONTINUES WITHOUT VERIFICATION THE CONSTRUCTOR ASSUMES THE RESPONSIBILITY OF THE CORRECTNESS OF THE INTENDED DESIGN.
- THE METHOD AND LOCATION OF CONNECTION TO THE PUBLIC WATER SUPPLY AND REQUIREMENTS FOR BACKFLOW PROTECTION SHALL BE PROVIDED IN ACCORDANCE WITH LOCAL WATER SUPPLIES REQUIREMENTS.
- CONTRACTOR TO COORDINATE WITH OTHER UTILITIES, TRADES, AND ARCHITECTURAL PLANS TO AVOID CONFLICTS AND VERIFY BUILDING TIE-IN LOCATIONS.
- CONTRACTOR SHALL DISINFECT THE WATER LINE IN ACCORDANCE WITH THE AMERICAN WATER WORKS ASSOCIATION (AWWA) STANDARD C651 PRIOR TO PLACING LINE IN SERVICE.
- THESE PLANS WERE DESIGNED FOR THE IN-SERVICE CONDITIONS ONLY. THE METHODS, PROCEDURES AND SEQUENCES OF CONSTRUCTION ARE THE RESPONSIBILITY OF THE CONTRACTOR. THE CONTRACTOR SHALL TAKE ALL NECESSARY PRECAUTIONS TO MAINTAIN AND ENSURE THE INTEGRITY OF THE PIPELINE AND ASSOCIATED APPURTENANCES AT ALL STAGES OF CONSTRUCTION. THE CONTRACTOR SHALL MAINTAIN WATER SERVICE TO ALL CUSTOMERS AT ALL STAGES OF CONSTRUCTION.
- DRAWINGS DO NOT INDICATE TEMPORARY OR BYPASSING REQUIREMENTS. NEED FOR TEMPORARY SHORING AND BRACING, TEMPORARY DEWATERING, TEMPORARY BYPASSING OR OTHER TEMPORARY MEASURES MAY BE INDICATED ON DRAWINGS AT SELECTED AREAS AS SUGGESTIONS FOR THE CONTRACTOR'S CONVENIENCE. THE DRAWINGS DO NOT IDENTIFY ALL AREAS OR CONDITIONS REQUIRING TEMPORARY MEASURES. IT IS THE CONTRACTOR'S RESPONSIBILITY TO CONFIRM TEMPORARY MEASURES INDICATED ON THE DRAWINGS, IDENTIFY OTHER AREAS OR CONDITIONS REQUIRING TEMPORARY MEASURES, DETERMINE MOST EFFICIENT TEMPORARY SYSTEMS, AND DESIGN AND CONSTRUCT THE REQUIRED TEMPORARY SYSTEMS. ALL TEMPORARY SYSTEMS SHALL BE DESIGNED BY A CA LICENSED ENGINEER AND SUBMITTED TO THE COUNTY ENGINEER FOR REVIEW PRIOR TO CONSTRUCTION.

ENGINEER'S NOTE TO CONTRACTOR

- THE EXISTENCE AND LOCATION OF ANY UNDERGROUND UTILITY PIPES, CONDUITS, OR STRUCTURES SHOWN ON THESE PLANS ARE OBTAINED BY A SEARCH OF THE AVAILABLE RECORDS. TO THE BEST OF OUR KNOWLEDGE THERE ARE NO EXISTING UTILITIES EXCEPT AS SHOWN ON THESE PLANS. THE CONTRACTOR IS REQUIRED TO TAKE DUE PRECAUTIONARY MEASURES TO PROTECT THE UTILITIES SHOWN ON THESE DRAWINGS AND TO VERIFY ALL DIMENSIONS, PIPE SIZES, PIPE MATERIALS, FLANGE SIZES, AND BOLT CONFIGURATIONS PRIOR TO ORDERING PARTS AND BEGINNING WORK. THE CONTRACTOR FURTHER ASSUMES ALL LIABILITY AND RESPONSIBILITY FOR THE UTILITY PIPES, CONDUITS OR STRUCTURES SHOWN ON THESE DRAWINGS.
- CONTRACTOR AGREES THAT THEY SHALL ASSUME SOLE AND COMPLETE RESPONSIBILITY FOR JOB SITE CONDITIONS DURING THE COURSE OF CONSTRUCTION OF THIS PROJECT, INCLUDING SAFETY OF ALL PERSONS AND PROPERTY, THAT THIS REQUIREMENT SHALL APPLY CONTINUOUSLY AND NOT BE LIMITED TO NORMAL WORKING HOURS, AND THAT THE CONTRACTOR SHALL DEFEND, INDEMNIFY AND HOLD SAN BERNARDINO COUNTY, CSA 70F (DISTRICT), THE OWNER AND THE ENGINEER HARMLESS FROM ANY AND ALL LIABILITY, REAL OR ALLEGED, IN CONNECTION WITH THE PERFORMANCE OF WORK ON THIS PROJECT, EXCEPTING FOR LIABILITY ARISING FROM THE SOLE NEGLIGENCE OF THE OWNER OR THE ENGINEER.

DEFERRED SUBMITTAL

TANK FOUNDATION AND TANK STRUCTURAL DESIGN BY TANK MANUFACTURER. ALL SUBMITTED DOCUMENTS SHALL BE ACCEPTED BY THE ENGINEER OF RECORD AND APPROVED BY THE AUTHORITIES HAVING JURISDICTION (AHJ).

GEOTECHNICAL

GEOTECHNICAL REPORTS HAVE BEEN PROVIDED BY THE SAN BERNARDINO COUNTY SPECIAL DISTRICTS DEPARTMENT. DESIGN OF THE NEW TANK WAS BASED ON RECOMMENDATIONS CONTAINED IN THE GEOTECHNICAL INVESTIGATION REPORT PREPARED BY LEIGHTON. THESE RECOMMENDATIONS ARE NOTED ON THE INDIVIDUAL DESIGN DETAILS AND INCLUDE OVEREXCAVATION OF THE TANK FOUNDATION, OVEREXCAVATION OF THE TEMPORARY TANKS, SCARIFICATION OF SUBGRADE, BEDDING MATERIAL, BACKFILL MATERIAL, AND COMPACTION.

TOPOGRAPHY SOURCE

SOURCE PROVIDED BY THE SAN BERNARDINO COUNTY SPECIAL DISTRICTS DEPARTMENT DATE OF SURVEY AUGUST 9, 2023

TIME LIMITATION

THE TIME LIMIT ON DRAWING(S) APPROVAL SHALL BE TWELVE (12) MONTHS FROM THE DATE ON THE APPROVAL. IF CONSTRUCTION HAS NOT COMMENCED WITHIN STATED TIME, SD REQUIRES DRAWING(S) TO BE REVIEWED BY THE DEVELOPER/DESIGN ENGINEER AND RESUBMITTED TO SD FOR POSSIBLE CHANGES IN SPECIFICATIONS AND STANDARDS.

BASIS OF BEARINGS

CCS83 ZONE 5, NAD83(2011), EPOCH 2010.0

BENCHMARK

FD GLO BRASS CAP UP 0.6', CN 1/4 COR S.12, PER RS 103/74. ELEVATION DETERMINED VIA STATIC GPS OBSERVATION, PROCESSED THROUGH OPUS. NAVD-88 ELEV = 3066.588'

UTILITY PROVIDERS

TELECOMM:	FRONTIER COMMUNICATIONS	(855) 226-5799
WATER:	SAN BERNARDINO COUNTY - SPECIAL DISTRICTS DEPARTMENT	(909) 386-8800
ELECTRIC:	SOUTHERN CALIFORNIA EDISON	(800) 655-4555
GAS:	SOUTHERN CALIFORNIA GAS CO.	(213) 231-1840

PROJECT SPECIFIC DESIGN CRITERIA

DUE TO PROJECT CONSTRAINTS, THE FOLLOWING DESIGN DECISIONS WERE COORDINATED AND EVALUATED WITH PROJECT STAKEHOLDERS IN CONSULTATION WITH THE SAN BERNARDINO COUNTY SPECIAL DISTRICTS DEPARTMENT.

- FIRE WATER SUPPLY WILL NOT BE PROVIDED DURING CONSTRUCTION OF THE REPLACEMENT TANK. THE TEMPORARY WATER STORAGE PROVIDES DOMESTIC DEMAND ONLY.
- TANK SIZE WAS SELECTED BASED ON DOMESTIC USER DEMANDS, EXISTING HYDRAULIC PROFILE, AND WATER TURNOVER. THE TANK IS NOT SIZED TO PROVIDE FIRE STORAGE PER DISCUSSIONS WITH SAN BERNARDINO COUNTY FIRE DEPARTMENT.

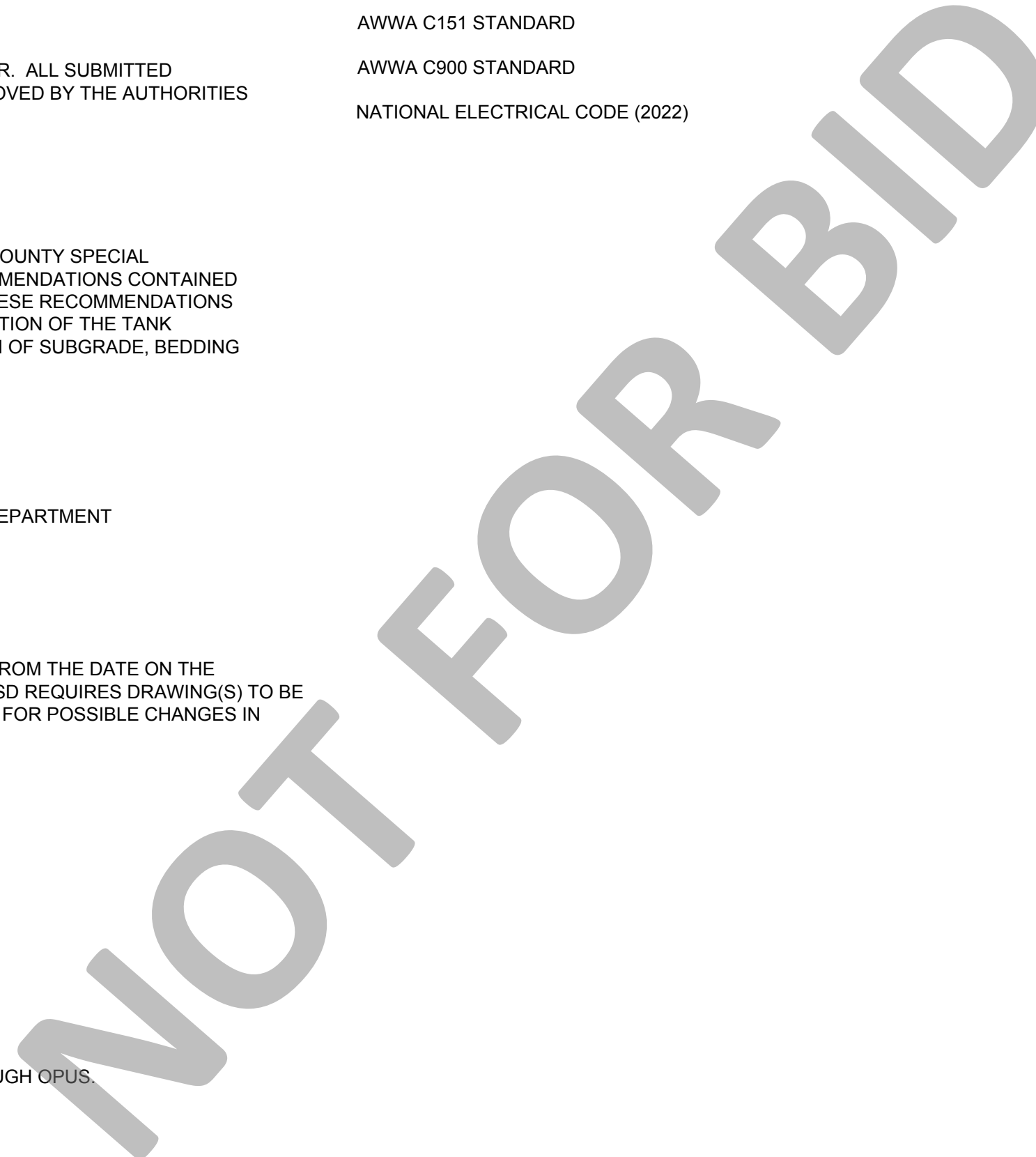
DESIGN STANDARDS

GOVERNING CODES

CALIFORNIA BUILDING CODE - VOLUMES 1 AND 2 (2022)
 AMERICAN WATER WORKS ASSOCIATION (AWWA) D103 STANDARD
 NATIONAL ELECTRICAL CODE (2022)
 AWWA C151 STANDARD
 AWWA C900 STANDARD
 NATIONAL ELECTRICAL CODE (2022)

SAN BERNARDINO COUNTY STANDARD DRAWINGS

H-3C	STANDARD RESTRAINT TEES, DEAD ENDS & BENDS FOR PVC C-900.
H-3D	STANDARD RESTRAINT TEES, DEAD ENDS & BENDS FOR PVC C-900.
H-19	CHAIN LINK FENCE DETAIL
H-20	CHAIN LINK GATE DETAIL



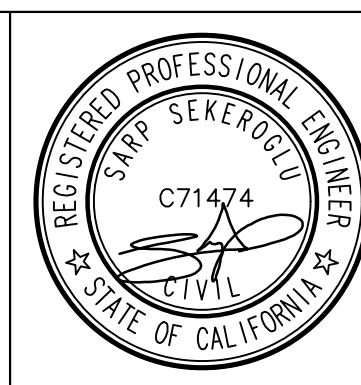
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 OR
 811

TWO WORKING DAYS BEFORE YOU DIG

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Kimley»Horn

401 B STREET, SUITE 600, SAN DIEGO, CA 92101
 PHONE: (619) 234-9411 WWW.KIMLEY-HORN.COM

PREPARED UNDER THE SUPERVISION OF:

 SARP SEKEROGLU R.C.E. No. 71474 EXP. 12/31/2025 04/10/2024

REVISIONS	
DESCRIPTION	APPR. DATE
ADDENDUM NO. 2	6/24
ADDENDUM NO. 5	6/24

WATER TANK REPLACEMENT PLANS APPROVED BY:
 SAN BERNARDINO COUNTY - PUBLIC WORKS SPECIAL DISTRICTS

07/18/2024

ASSISTANT DIRECTOR

REVIEWER	INITIAL	DATE
PROJECT MANAGER		07/16/2024
PM, DIVISION MANAGER		07/16/2024
WAS, DIVISION MANAGER		07/17/2024

WATER TANK REPLACEMENT PLANS

APN: 0580-241-16-0000
 MORONGO VALLEY WATER TANK REPLACEMENT PROJECT

GENERAL NOTES

DWG NO.
30.30.00157

FILE NO.
SD003

SHEET 2 OF 17

RE-BID SET

CONSTRUCTION NOTES AND QUANTITIES

BID ITEM NUMBER	CONSTRUCTION NOTE NUMBER	ITEM	UNITS	TOTAL
1	N/A	MOBILIZATION	LS	1
2	①	TEMPORARY POLYETHYLENE TANK (7,510 GALLONS)	EA	3
3	⑦	BOLTED STEEL WATER STORAGE TANK WITH OPERATIONAL VOLUME OF 139,112 GALLONS	EA	1
4	DEMO ②	DEMOLITION AND DISPOSAL OF EXISTING BOLTED STEEL WATER TANK	LS	1
5	⑭	EXCAVATION AND BACKFILL	LS	1
6	SEE EROSION CONTROL NOTES	EROSION AND SEDIMENTATION CONTROL	LS	1
7	⑭ ⑳	REINFORCED CAST IN PLACE CONCRETE FOR TANK FOUNDATION	CY	65*
8	⑭ ⑳	SAND AND CRUSHED AGGREGATE BASE FOR TANK FOUNDATION	LS	1
9	⑩	8" DI GV	EA	1
10	⑳	6" DI GV	EA	1
11	⑮	INSTALL 8" FORCE BALANCED FLEXIBLE EXPANSION JOINT	EA	1
12	⑮	INSTALL 6" FORCE BALANCED FLEXIBLE EXPANSION JOINT	EA	1
13	㉓	REMOVABLE PROTECTION POSTS	EA	15
14	㉔ & SEE ELECTRICAL PLANS	ELECTRICAL AND TRANSDUCER REINSTALLATION	LS	1
15	SEE TEMP TANK MECHANICAL PLAN	TEMPORARY PIPING AND VALVES AND TEMP DEMOBILIZATION	DAY	7
16	SEE SITE AND MECHANICAL PLAN	MISCELLANEOUS PIPING SPOOLS AND FITTINGS	LS	1
17	④	8 INCH THICK CONCRETE PAD, #4 BARS 18 INCH O.C. EACH WAY	CY	11

*NOTE: FIND QUANTITY TO BE DETERMINED BY TANK MANUFACTURER.

Remarks:

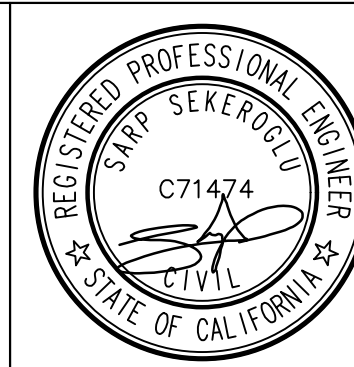
1. Bid line items 2, 15, and 17 are excluded from this scope, as they will be done "In-House" by Department of Public Works Special Districts - Water and Sanitation Division. RV 07-02-2024.

NOT FOR BID

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OR
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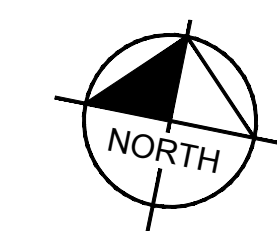
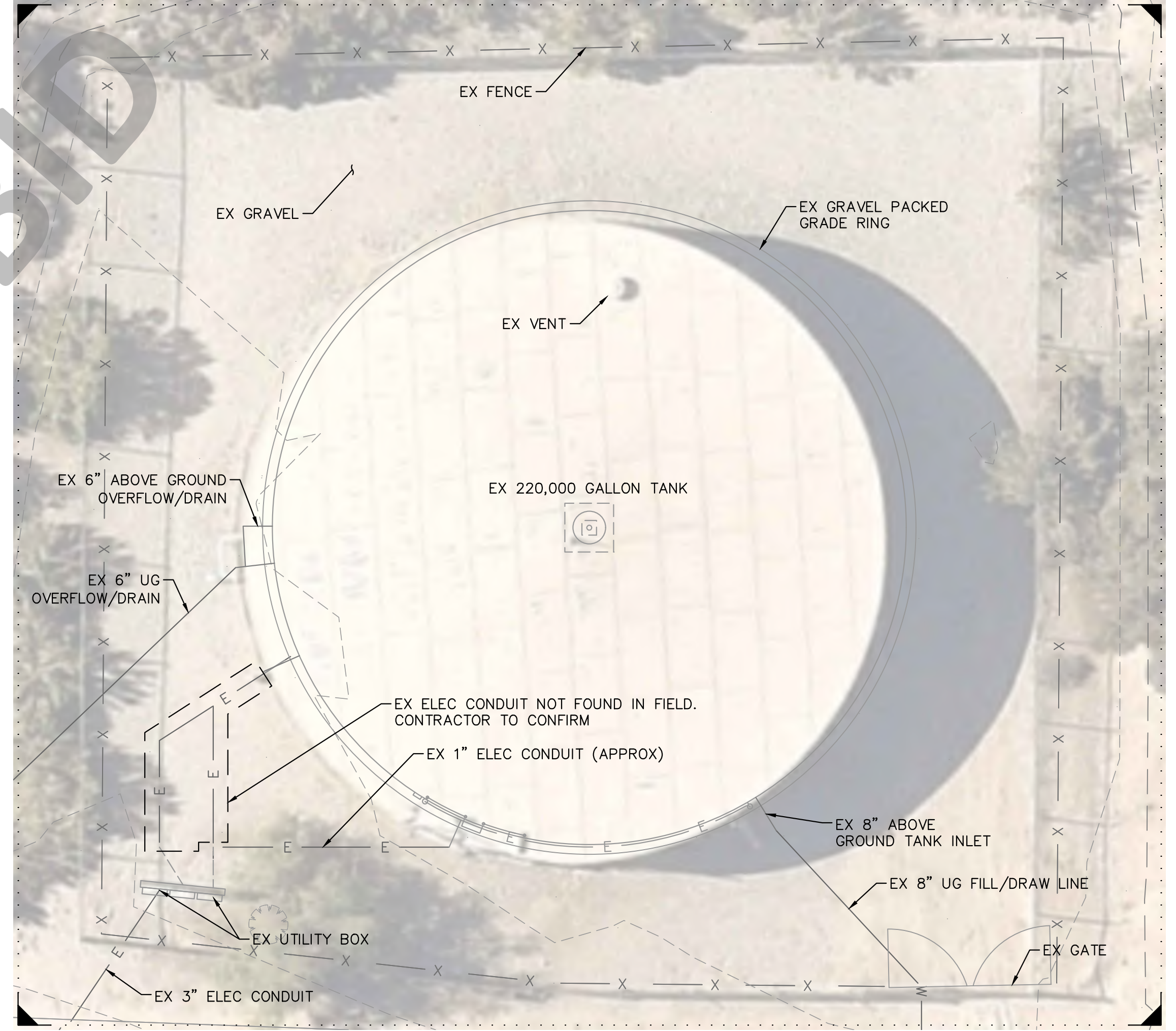
REVISIONS	
ADDENDUM NO. 2	6/24
ADDENDUM NO. 5	6/24
DESCRIPTION	APPR. DATE

WATER TANK REPLACEMENT PLANS APPROVED BY: SAN BERNARDINO COUNTY - PUBLIC WORKS SPECIAL DISTRICTS			
07/18/2024			
ASSISTANT DIRECTOR			
APPROVALS	REVIEWER	INITIAL	DATE
	PROJECT MANAGER		07/16/2024
	PM, DIVISION MANAGER		07/16/2024
	WAS, DIVISION MANAGER		07/17/2024

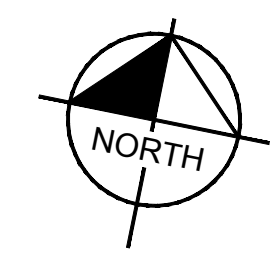
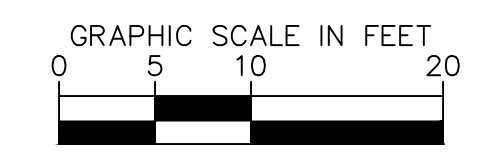
WATER TANK REPLACEMENT PLANS
APN: 0580-241-16-0000
MORONGO VALLEY WATER TANK
REPLACEMENT PROJECT
QUANTITIES

DWG NO. 30.30.00157
FILE NO. SD003
SHEET 3 OF 17

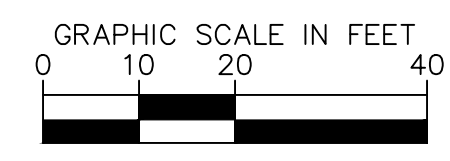
RE-BID SET



PROJECT SITE
SCALE: 1"=10'



PROJECT VICINITY
SCALE: 1"=20'



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BENCHMARK:
CCS83 ZONE 5, NAD83(2011), EPOCH 2010.0

BASIS OF BEARINGS:
FD GLO BRASS CAP UP 0.6', CN 1/16 COR S.12, PER RS 103/74.
ELEVATION DETERMINED VIA STATIC GPS OBSERVATION, PROCESSED THROUGH OPUS.
NAVD-88 ELEV = 3066.588'



Kimley»Horn
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PHONE: (619) 234-9411 WWW.KIMLEY-HORN.COM
PREPARED UNDER THE SUPERVISION OF:
SARP SEKEROGLU R.C.E. No. 71474 EXP. 12/31/2025 04/10/2024

REVISIONS	
DESCRIPTION	APPR. DATE
ADDENDUM NO. 2	6/24
ADDENDUM NO. 5	6/24

WATER TANK REPLACEMENT PLANS APPROVED BY:
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SPECIAL DISTRICTS

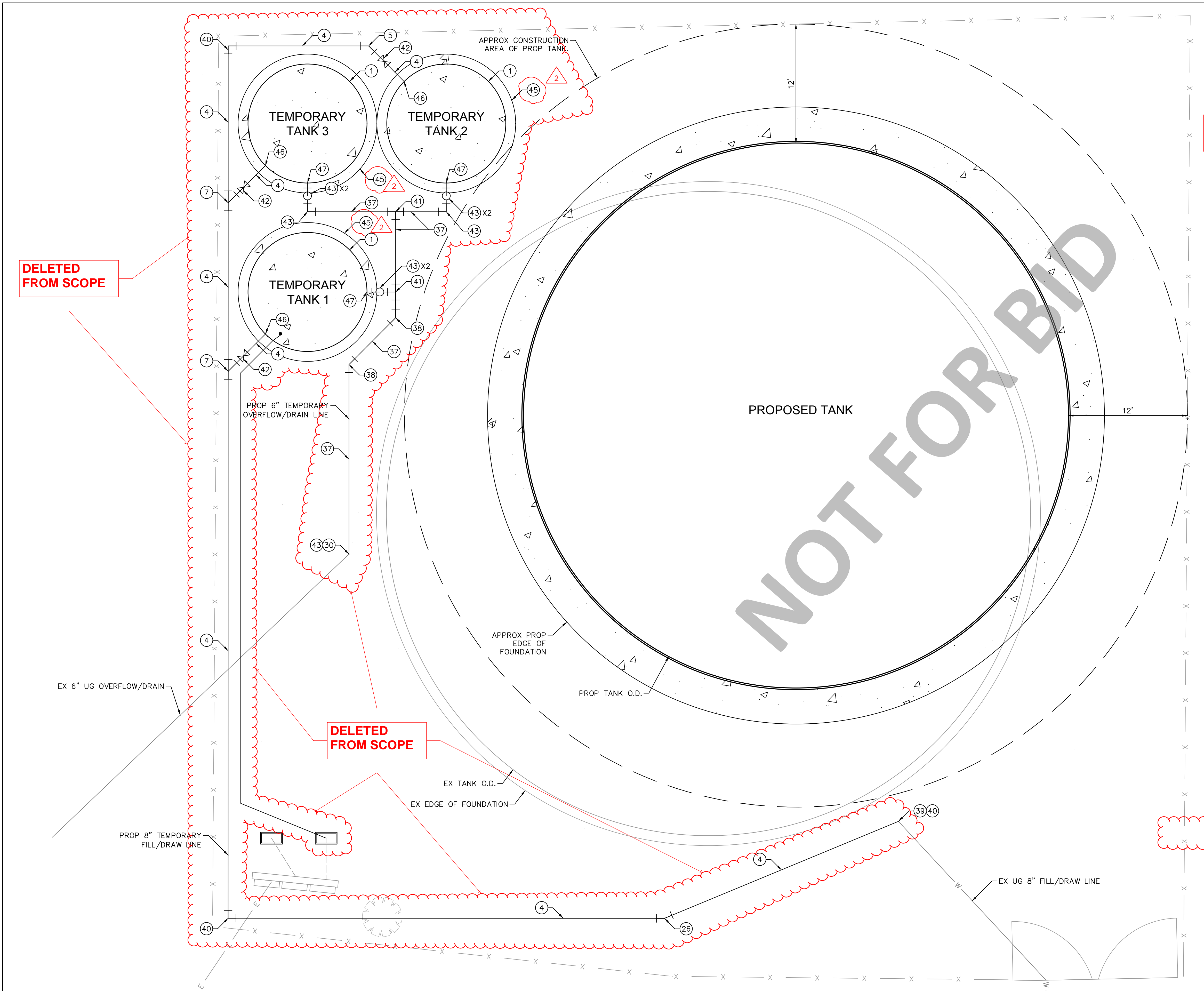
07/18/2024

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WATER TANK REPLACEMENT PLANS
APN: 0580-241-16-0000
MORONGO VALLEY WATER TANK
REPLACEMENT PROJECT
EXISTING CONDITIONS SITE PLAN

DWG NO.
30.30.00157
FILE NO.
SD003
SHEET 4 OF 17

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- ### CONSTRUCTION NOTES
- 1 INSTALL 12' DIA 10,500 GALLON TEMPORARY TANK (OPERATIONAL VOLUME: 7,510 GALLONS) WITH LADDER, SNYDER PRODUCT NO. 5330300449 OR APPROVED EQUAL. REFER TO MANUFACTURER GUIDELINES AND SHOP DRAWINGS FOR INSTALLATION OF TEMPORARY TANK LADDERS.
 - 4 INSTALL ABOVEGROUND 8" I.D. PLASTIC PIPING. PIPE MATERIAL TO BE HDPE OR CONTRACTOR'S CHOICE.
 - 5 INSTALL 8" I.D. PLASTIC 45° BEND. MATERIAL TO BE HDPE OR CONTRACTOR'S CHOICE. SEE NOTE 2 BELOW FOR PIPE RESTRAINTS.
 - 7 INSTALL 8" I.D. PLASTIC WYE. MATERIAL TO BE HDPE OR CONTRACTOR'S CHOICE. SEE NOTE 2 BELOW FOR PIPE RESTRAINTS.
 - 26 INSTALL 8" I.D. PLASTIC 22.5° BEND. MATERIAL TO BE HDPE OR CONTRACTOR'S CHOICE. SEE NOTE 2 BELOW FOR PIPE RESTRAINTS.
 - 30 CONNECT TEMPORARY PLASTIC PIPING TO EXISTING 6" DI OVERFLOW DRAIN PIPE WITH RESTRAINED FLANGE COUPLING ADAPTER (ROMAC ALPHA FC OR APPROVED EQUAL). ROLL EXISTING 90 DEGREE DI FITTING AS NEEDED TO CHANGE DIRECTION. SEE DETAIL E, SHEET 11.
 - 37 INSTALL ABOVEGROUND 6" I.D. PLASTIC PIPING. PIPE MATERIAL TO BE HDPE OR CONTRACTOR'S CHOICE.
 - 38 INSTALL 6" I.D. PLASTIC 45° BEND. MATERIAL TO BE HDPE OR CONTRACTOR'S CHOICE. SEE NOTE 2 BELOW FOR PIPE RESTRAINTS.
 - 39 CONNECT TEMPORARY PLASTIC PIPING TO EXISTING 8" DI FILL/DRAIN PIPE WITH RESTRAINED FLANGE COUPLING ADAPTER (ROMAC ALPHA FC OR APPROVED EQUAL). ROLL EXISTING 90 DEGREE DI FITTING AS NEEDED TO CHANGE DIRECTION. SEE DETAIL D, SHEET 11.
 - 40 INSTALL 8" I.D. PLASTIC 90° BEND. SEE NOTE 2 BELOW FOR PIPE RESTRAINTS.
 - 41 INSTALL 6" I.D. PLASTIC TEE. SEE NOTE 2 BELOW FOR PIPE RESTRAINTS.
 - 42 INSTALL 8" PLASTIC (HDPE OR CONTRACTOR CHOICE) BUTTERFLY VALVE FLG X FLG
 - 43 INSTALL 6" I.D. PLASTIC 90° BEND. SEE NOTE 2 BELOW FOR PIPE RESTRAINTS.
 - 45 CONSTRUCT 8-INCH THICK CONCRETE RAD. #4 BARS 18-INCH O.C. EACH WAY.
 - 46 CONNECT TEMPORARY PIPING TO BOTTOM OF TEMPORARY TANK.
 - 47 CONNECT TEMPORARY OVERFLOW PIPING TO TEMPORARY TANK 9' ABOVE TANK BOTTOM.
- ### NOTES
1. ANY PIPES, FITTINGS, AND HOSES SHALL MEET NSF/ANSI STANDARDS 61 WHENEVER THEY COME IN CONTACT WITH POTABLE WATER.
 2. TEMPORARY PIPING SHALL BE FULLY RESTRAINED AGAINST THRUST FORCES AND SHALL BE SECURED TO THE EXISTING GROUND. CONTRACTOR SHALL PROVIDE A SUBMITTAL OF THE TEMPORARY PIPING LAYOUT, CALCULATIONS, AND MATERIALS USED.
 3. CONTRACTOR SHALL PROVIDE A SUBMITTAL OF HOW THE TEMPORARY TANKS ARE SECURED, INCLUDING AND RELEVANT CALCULATIONS, AND MATERIALS USED.
 4. PREPARE SUBGRADE PER REPORT TITLED "GEOTECHNICAL EXPLORATION PROPOSED MORONGO VALLEY WATER TANK REPLACEMENT PROJECT" DATED JANUARY 10, 2024 BY LEIGHTON CONSULTING INC.
 5. TEMPORARY TANK OVEREXCAVATION MAY BE LIMITED TO 18 INCHES, BUT THE EXPOSED SUBGRADE SHOULD BE CONFIRMED TO BE FIRM AND UNYIELDING.
 6. ALL DIAMETERS OF PLASTIC PIPING REFER TO INNER DIAMETER (ID).

DELETED FROM SCOPE

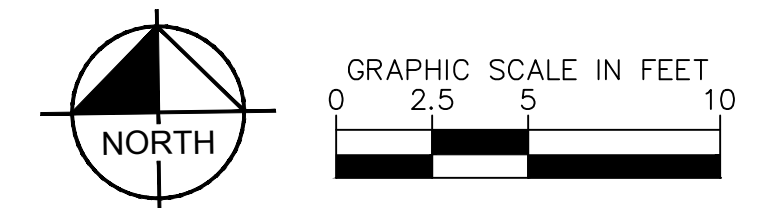
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Remarks:

All temporary tanks, piping, and accessories shown on this plan are excluded from this scope, as they will be handled "In-House" by the Department of Public Works Special Districts - Water and Sanitation Division. RV 07-02-2024.

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BENCHMARK: CCS83 ZONE 5, NAD83(2011), EPOCH 2010.0

BASIS OF BEARINGS: FD GLO BRASS CAP UP 0.6', CN 1/16 COR S.12, PER RS 103/74. ELEVATION DETERMINED VIA STATIC GPS OBSERVATION, PROCESSED THROUGH OPUS. NAVD-88 ELEV = 3066.588'



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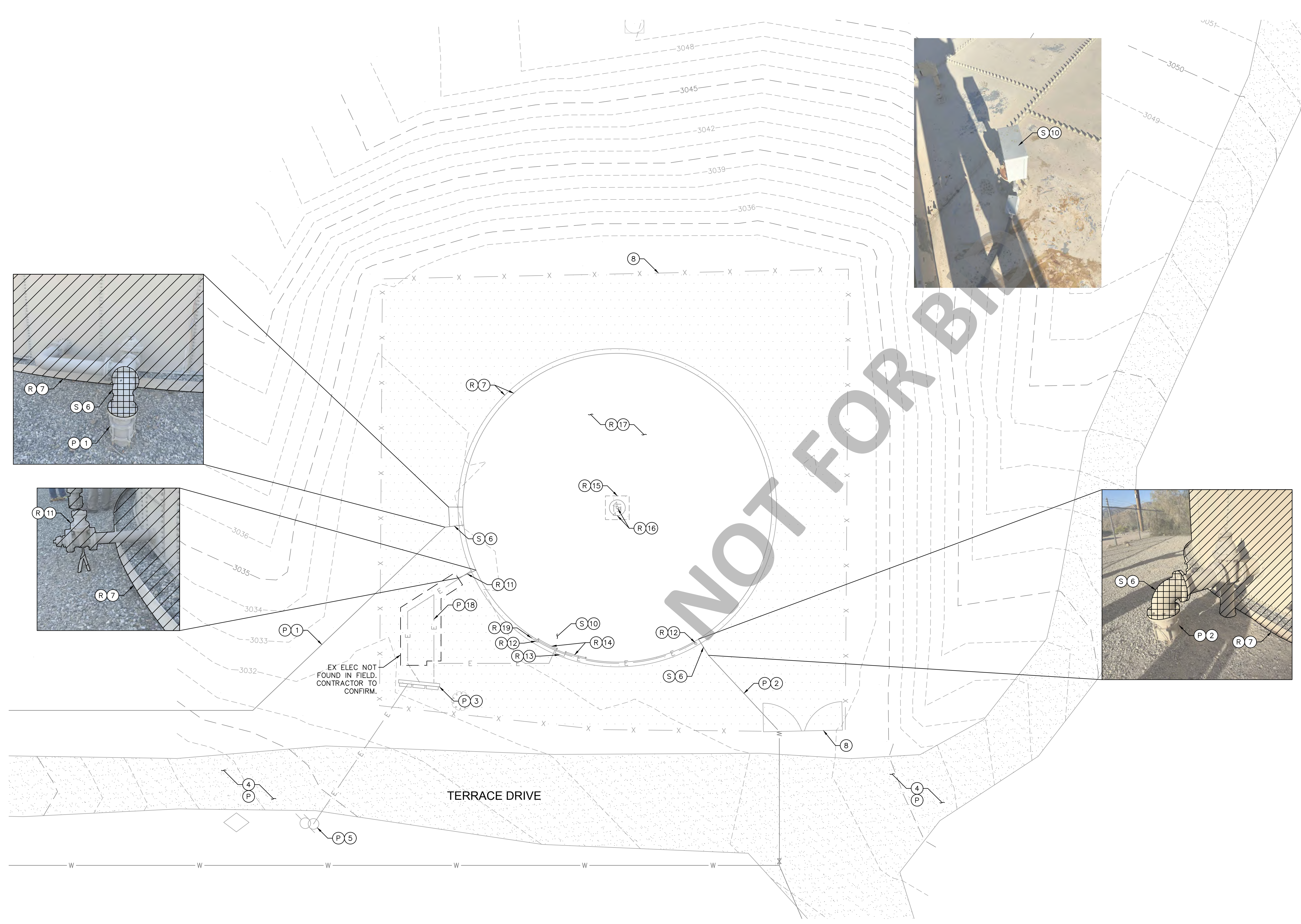
WATER TANK REPLACEMENT PLANS APPROVED BY:
SAN BERNARDINO COUNTY - PUBLIC WORKS SPECIAL DISTRICTS

07/18/2024

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WATER TANK REPLACEMENT PLANS		DWG NO.
APN: 0580-241-16-0000 MORONGO VALLEY WATER TANK REPLACEMENT PROJECT		30.30.00157
TEMPORARY TANK MECHANICAL PLAN		FILE NO.
		SD003
		SHEET 5 OF 17

RE-BID SET



DEMOLITION NOTES

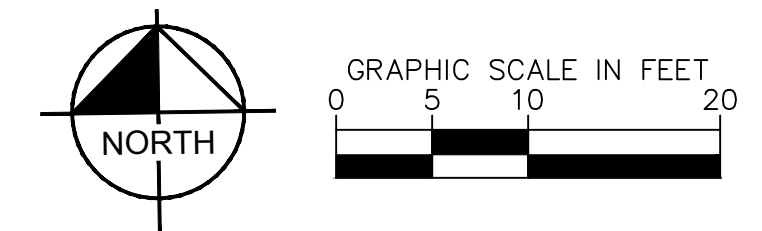
- (P) PROTECT IN PLACE
- (R) REMOVE AND DISPOSE
- (S) SALVAGE
- (1) OVERFLOW/DRAIN LINE
- (2) 8" FILL/DRAW LINE
- (3) ELECTRICAL BOX, LIGHT, TELEMTRY, AND CONDUIT
- (4) DIRT ROAD
- (5) POWER POLE
- (6) 90 DI BEND TO BE SALVAGED AND USED FOR TEMPORARY PIPING
- (7) 211,000 GALLON TANK AND GRAVEL PACKED GRADE RING
- (8) REMOVE AND REPLACE FENCE AS NEEDED FOR TANK CONSTRUCTION PER SBCSD STANDARD DRAWING H-19 AND H-20.
- (10) TRANSDUCER
- (11) 4" PIPING AND VALVE
- (12) LIGHT
- (13) ACCESS LADDER
- (14) HANDRAIL
- (15) 5'X5'X12" CONCRETE FOUNDATION UNDER CENTER COLUMN.
- (16) CENTER COLUMN AND RAFTER HAT
- (17) ROOF RAFTERS, ROOF GUSSET PLATES, TIE BAR, AND ACCESSORIES
- (18) ELECTRICAL LINE AND CONDUIT (APPROX)
- (19) LEVEL INDICATOR

GENERAL NOTES

1. CONTRACTOR TO VERIFY UTILITY LOCATIONS IN THE FIELD PRIOR TO START OF DEMOLITION ACTIVITIES.
2. EXISTING TRANSDUCER TO BE SALVAGED AND REUSED ON TEMPORARY TANK 1 DURING NEW TANK CONSTRUCTION.

EX ELEC NOT FOUND IN FIELD. CONTRACTOR TO CONFIRM.

TERRACE DRIVE



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WATER TANK REPLACEMENT PLANS APPROVED BY:
SAN BERNARDINO COUNTY - PUBLIC WORKS
SPECIAL DISTRICTS

07/18/2024

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WATER TANK REPLACEMENT PLANS

APN: 0580-241-16-0000
MORONGO VALLEY WATER TANK REPLACEMENT PROJECT

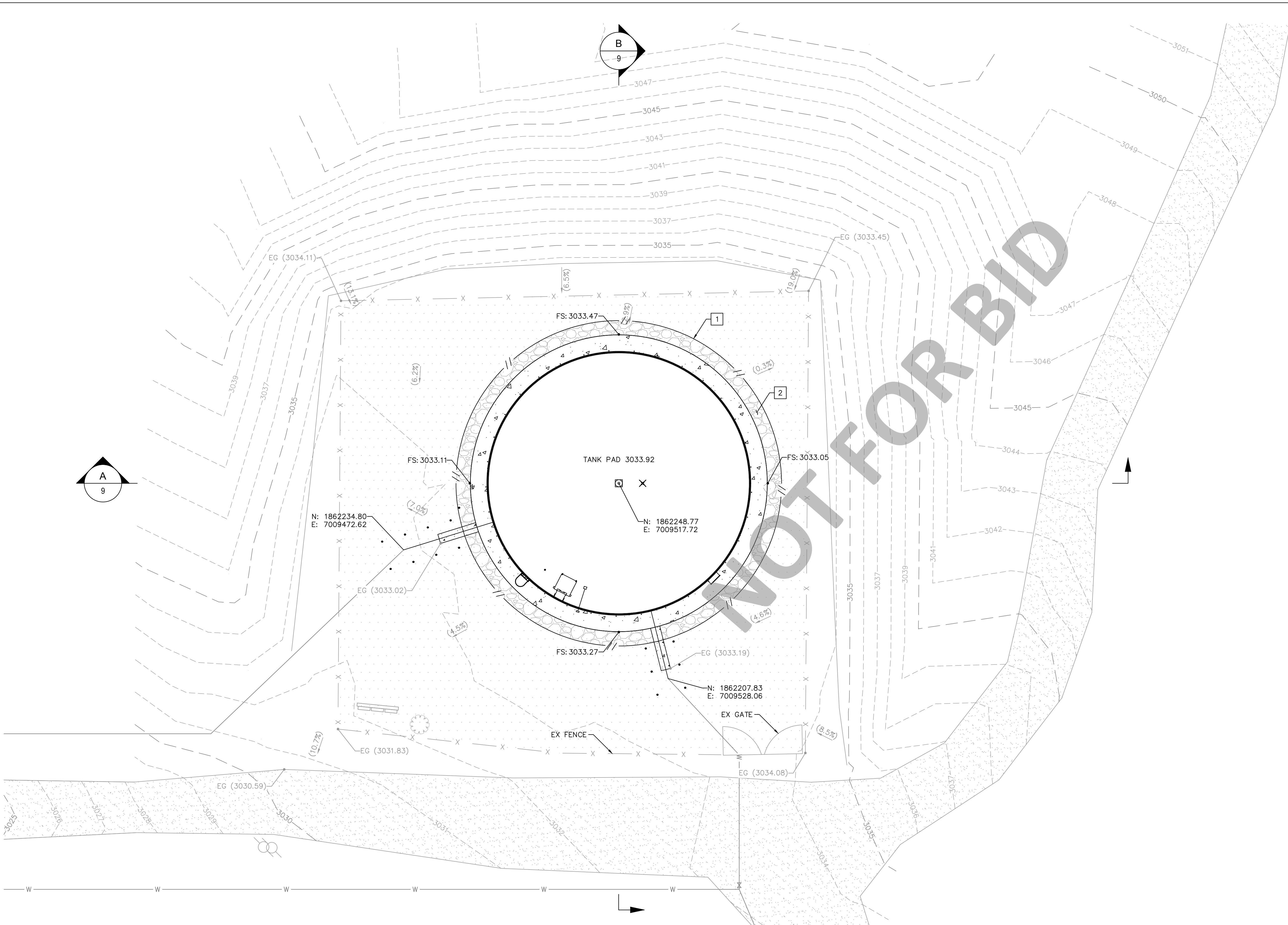
DEMOLITION PLAN

DWG NO.
30.30.00157

FILE NO.
SD003

SHEET 6 OF 17

RE-BID SET



GRADING NOTES

- 1 MATCH EXISTING GRADES AFTER EXCAVATION AND INSTALLATION OF TANK FOUNDATION
- 2 BACKFILL AND RECOMPACT THE AREA OF OVEREXCAVATION EXTENDING 3 FT BEYOND THE CONCRETE FOUNDATION. BACKFILL SHALL BE WITH ONSITE SOILS AND COMPACTED TO 95% PER RECOMMENDATIONS IN THE PROJECT'S GEOTECHNICAL REPORT.

NOTES

- 1. CONTRACTOR TO VERIFY ALL EXISTING TOPOGRAPHY AND STRUCTURES ON THE SITE AND IMMEDIATELY NOTIFY THE ENGINEER OF ANY DISCREPANCIES PRIOR TO STARTING WORK.
- 2. UTILITIES SHOWN FOR REFERENCE ONLY. SEE MECHANICAL PLAN FOR DETAILS.
- 3. NO SIGNIFICANT GRADING IS EXPECTED AS PART OF THIS PROJECT. CONTRACTOR TO GENERALLY MATCH GRADES IN KIND SUCH THAT STORMWATER DOES NOT DRAIN TOWARDS THE PROPOSED TANK
- 4. ALL GRADING OVEREXCAVATION AND RELATED WORK FOR THIS PROJECT SHALL BE DONE IN ACCORDANCE WITH THE RECOMMENDATIONS GIVEN IN THE GEOTECHNICAL EXPLORATION: PROPOSED MORONGO VALLEY WATER TANK REPLACEMENT PROJECT, DATED JANUARY 10, 2024.

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WATER TANK REPLACEMENT PLANS APPROVED BY:
 SAN BERNARDINO COUNTY - PUBLIC WORKS
 SPECIAL DISTRICTS

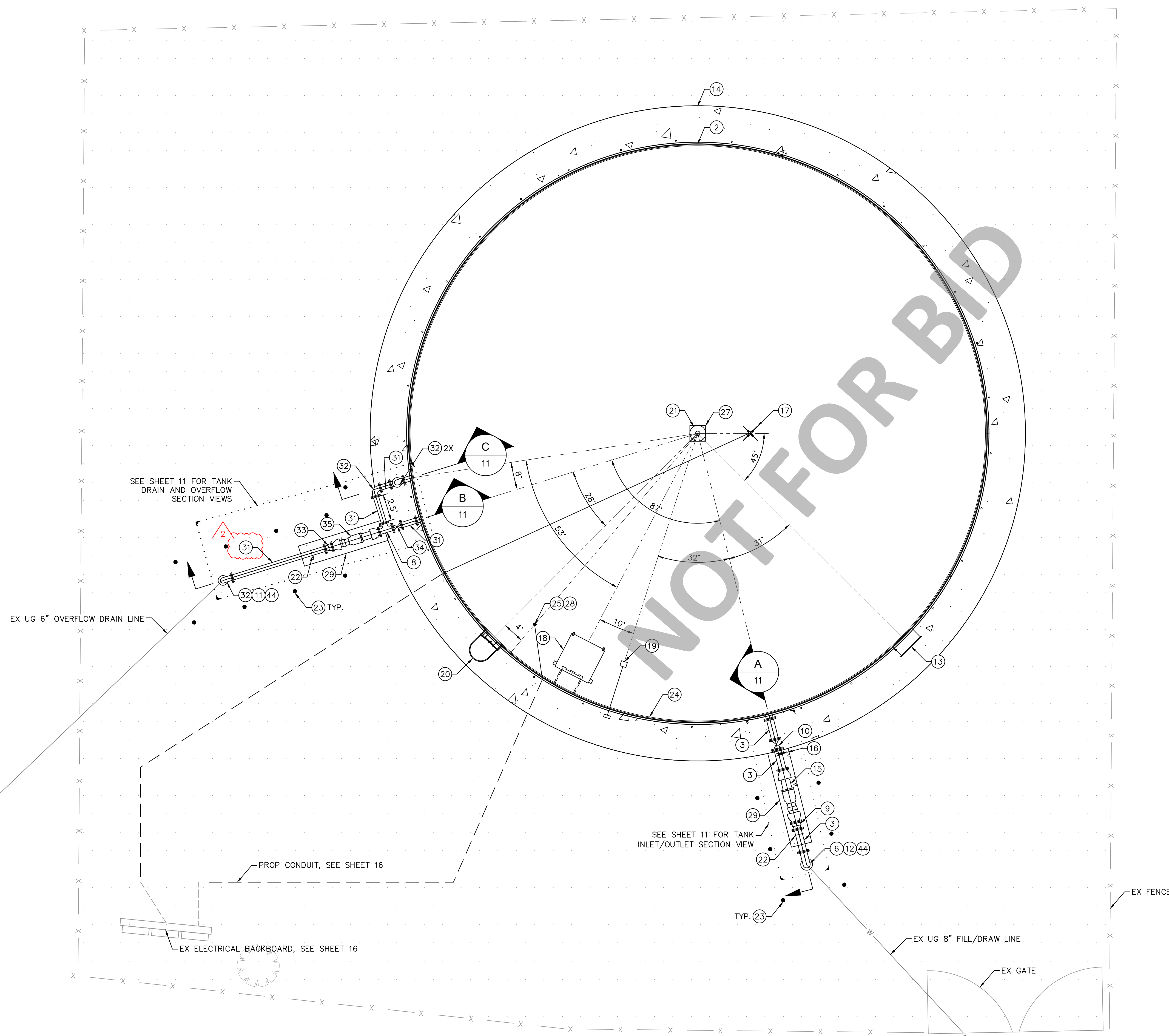
07/18/2024

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WATER TANK REPLACEMENT PLANS
 APN: 0580-241-16-0000
 MORONGO VALLEY WATER TANK
 REPLACEMENT PROJECT
 GRADING PLAN

DWG NO.
30.30.00157
 FILE NO.
SD003
 SHEET 7 OF 17

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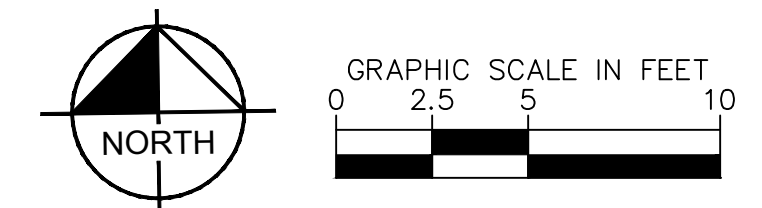


CONSTRUCTION NOTES

- 2 CONSTRUCT BOLTED STEEL STORAGE TANK WITH AN OPERATIONAL VOLUME OF 139,112 GALLONS. SEE DETAIL B, SHEET 12. TANK DESIGN TO BE FINALIZED BY TANK MANUFACTURER.
- 3 INSTALL 8" CL 350 DIP
- 6 INSTALL 8" DI 90° BEND
- 8 INSTALL 6" DI TEE
- 9 INSTALL 8" DISMANTLING JOINT
- 10 INSTALL 8" DI GV
- 11 TIE INTO EXISTING 6" OVERFLOW DRAIN PIPE
- 12 TIE INTO EXISTING 8" WATER PIPE
- 13 INSTALL 30" DIAMETER BOLTED MANWAY WITH HINGED DOOR OPENING WITH SHELL REINFORCING PER TANK MANUFACTURER. LOCATE THE MANWAY CENTER 3" ABOVE FROM TANK BOTTOM. SEE DETAIL F, SHEET 14.
- 14 CONSTRUCT TANK CONCRETE RINGWALL FOUNDATION PER TANK MANUFACTURER. SEE DETAIL A, SHEET 12.
- 15 INSTALL 8" DOUBLE BALL FLEXIBLE EXPANSION JOINT. EBAA IRON FORCE BALANCED FLEX TEND MODEL 440BF20B OR APPROVED EQUAL.
- 16 SAMPLE TAP. SEE DETAIL G, SHEET 13.
- 17 INSTALL TIDAL WAVE MIXER, 0.5 HP. OR APPROVED EQUAL. SEE DETAIL H, SHEET 13. FINAL LOCATION OF THE MIXER TO BE DETERMINED BY THE TANK MANUFACTURER DURING CONSTRUCTION.
- 18 INSTALL 24" TANK ACCESS HATCH AND INTERIOR LADDER PER TANK MANUFACTURER. SEE DETAIL C AND E, SHEET 14.
- 19 INSTALL TANK LEVEL INDICATOR. SEE DETAIL F, SHEET 13.
- 20 INSTALL EXTERIOR LADDER PER TANK MANUFACTURER. PAINT TO MATCH TANK COLOR. SEE DETAIL A, SHEET 14.
- 21 INSTALL TANK ROOF VENT PER TANK MANUFACTURER. SEE DETAIL C, SHEET 13.
- 22 INSTALL SADDLE PIPE SUPPORT. SEE DETAIL B, SHEET 13.
- 23 INSTALL PROTECTION POST. SEE DETAIL E, SHEET 13.
- 24 INSTALL 4" STEEL TOEBOARD PER TANK MANUFACTURER.
- 25 INSTALL LEVEL TRANSDUCER CONNECTION BY TANK MANUFACTURER.
- 27 INSTALL CENTER COLUMN AND FOUNDATION PER TANK MANUFACTURER. SEE DETAIL A, SHEET 12.
- 28 REINSTALL SALVAGED PRESSURE TRANSDUCER WHERE DIRECTED BY OWNER.
- 29 CONSTRUCT CONCRETE PAD PER SECTIONS A AND B ON SHEET 11.
- 31 INSTALL 6" DIP
- 32 INSTALL 6" DI 90° BEND
- 33 INSTALL 6" DISMANTLING JOINT
- 34 INSTALL 6" DI GV
- 35 INSTALL 6" DOUBLE BALL FLEXIBLE EXPANSION JOINT. EBAA IRON FORCE BALANCED FLEX TEND MODEL 440BF20B OR APPROVED EQUAL.
- 44 INSTALL INSULATING FLANGE AT CONNECTION WITH EXISTING FLANGE PER DETAIL C, SHEET 12.

NOTES

- 1. ALL ABOVE GROUND PIPING SHALL BE PAINTED WITH POLYURETHANE PAINT. PAINT COLOR TO BE APPROVED BY THE CLIENT.
- 2. ANY PIPES, FITTINGS, AND HOSES SHALL MEET NSF/ANSI STANDARDS 61 WHENEVER THEY COME IN CONTACT WITH POTABLE WATER
- 3. THE PROJECT'S GEOTECHNICAL INVESTIGATION FOUND THE ONSITE SOILS TO BE "MILDLY" CORROSIVE TO BURIED FERROUS METALS. AS A PRECAUTION, INSULATED FLANGE KITS ARE PROPOSED WHERE NEW METAL FLANGES CONNECT TO EXISTING METAL FLANGES. SEE THE PROJECT'S GEOTECHNICAL REPORT FOR MORE INFORMATION.



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 SPECIAL DISTRICTS

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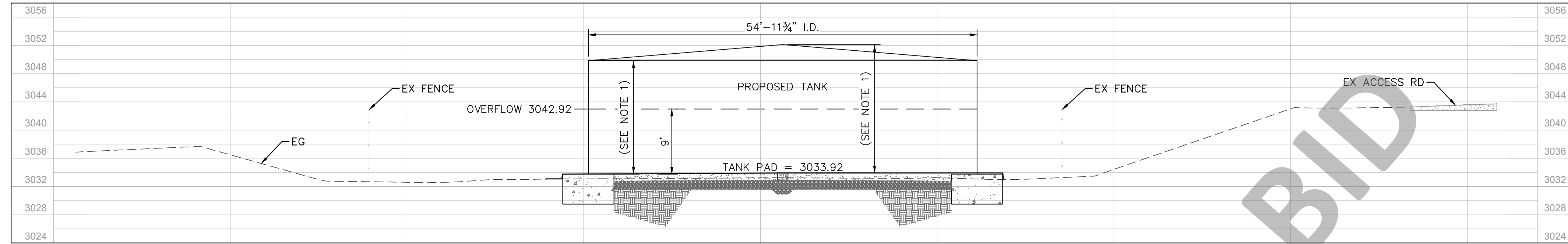
WATER TANK REPLACEMENT PLANS
 APN: 0580-241-16-0000
 MORONGO VALLEY WATER TANK
 REPLACEMENT PROJECT
 SITE AND MECHANICAL PLAN

DWG NO. 30.30.00157
 FILE NO. SD003
 SHEET 8 OF 17

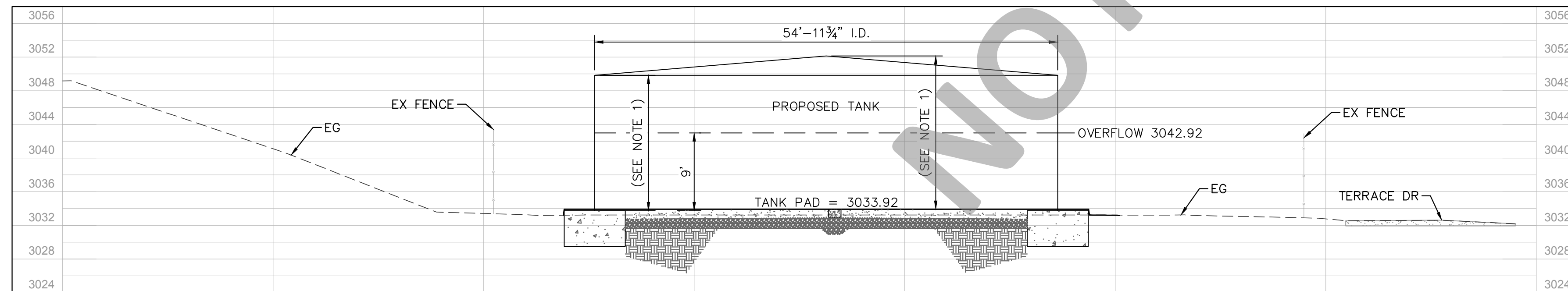
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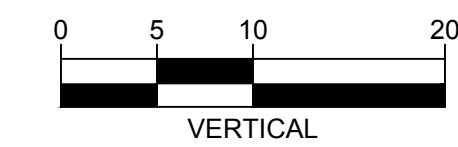
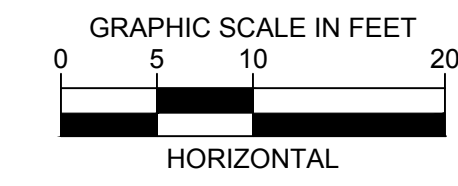
1. TANK HEIGHT SHALL BE CONFIRMED BY TANK SUPPLIER PRIOR TO FABRICATION. TANK HEIGHT IS SUBJECT TO CHANGE BASED ON SITE SPECIFIC SEISMIC DESIGN PARAMETERS TO BE DETERMINED BY TANK SUPPLIER



SECTION A
 HORZ: 1"=10'
 VERT: 1"=10'



SECTION B
 HORZ: 1"=10'
 VERT: 1"=10'



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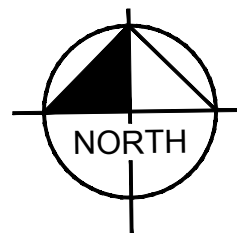
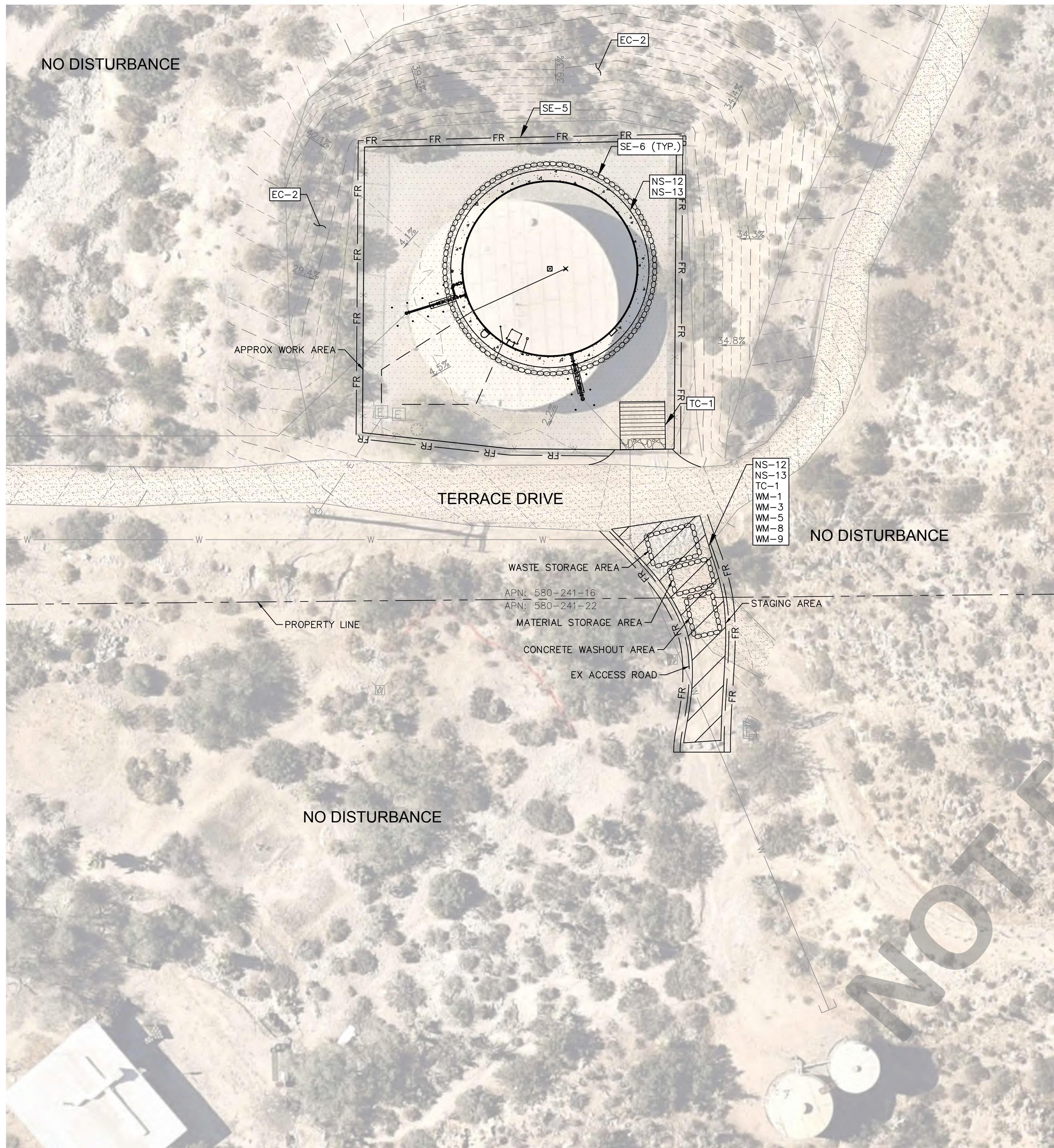
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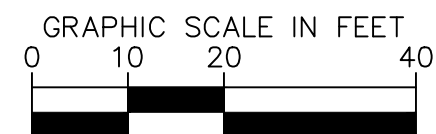
WATER TANK REPLACEMENT PLANS
 APN: 0580-241-16-0000
 MORONGO VALLEY WATER TANK
 REPLACEMENT PROJECT
 TANK SECTIONS

DWG NO.
 30.30.00157
 FILE NO.
 SD003
 SHEET 9 OF 17

RE-BID SET



PROJECT VICINITY
SCALE: 1"=20'



EROSION CONTROL NOTES

1. THE EROSION CONTROL SYSTEMS REQUIRE CERTIFICATION BY THE ENGINEER OF RECORD. SUCH CERTIFIED SYSTEMS SHALL BE COMPLETED, INSPECTED, AND IN PLACE NO LATER THAN OCTOBER 15. ALL EROSION CONTROL SYSTEMS SHALL REMAIN IN PLACE AT ALL TIMES FOR ALL AREAS IN WHICH CONSTRUCTION IS NOT SCHEDULED TO COMMENCE WITHIN THE NEXT SEVEN (7) DAYS. ALL EROSION CONTROL SYSTEMS SHALL REMAIN IN PLACE UNTIL (APRIL 15).
2. THE CONTRACTOR, PERMITEE, OR OWNER SHALL BE RESPONSIBLE FOR THE INSPECTION, MODIFICATION, AND PROPER MAINTENANCE OF THE EROSION CONTROL DEVICES NECESSARY. IN THE EVENT OF FAILURE OR REFUSAL TO PROPERLY MAINTAIN SAID DEVICES, THE CITY ENGINEER MAY CAUSE EMERGENCY MAINTENANCE WORK TO BE DONE TO PROTECT ADJACENT PRIVATE AND PUBLIC PROPERTY. THE COST (INCLUDING AN INITIAL MOBILIZATION AMOUNT) OF WHICH SHALL BE CHARGED TO THE OWNER.
3. ALL EROSION CONTROL MEASURES REQUIRED TO RETAIN SEDIMENT ON-SITE AND TO SAFELY DISCHARGE ANY ACCELERATED RUNOFF GENERATED BY THE PROJECT SHALL BE INSTALLED DURING THE INITIAL CONSTRUCTION PHASE OF THE PROJECT.
4. TEMPORARY EROSION CONTROL DEVICES SHOWN ON THE EROSION CONTROL PLAN WHICH INTERFERE WITH THE WORK SHALL BE RELOCATED OR MODIFIED AS THE WORK PROGRESSES AS RECOMMENDED BY THE ENGINEER OF WORK AND AS APPROVED BY THE COUNTY ENGINEER.
5. ALL REMOVABLE PROTECTION DEVICES SHOWN SHALL BE IN PLACE AT THE END OF EACH WORKING DAY WHEN THE 5-DAY RAIN PROBABILITY FORECAST EXCEEDS 40-PERCENT.
6. EROSION CONTROL SYSTEMS SHALL BE SERVICED AND MAINTAINED TO PROVIDE CONTINUOUS CAPACITY AND ADEQUACY TO FUNCTION AS DESIGNED. AFTER PRECIPITATION EXCEEDING ONE QUARTER (1/4) INCH IN ANY 12-HOUR PERIOD, OR UPON DIRECTION OF THE COUNTY ENGINEER, SILT AND DEBRIS SHALL BE REMOVED FROM CHECK DAMS AND DESILTING BASINS AND THE BASINS PUMPED DRY AND OTHERWISE RESTORED TO THE ORIGINAL DESIGN CONDITION.
7. PAVED STREETS, SIDEWALKS, AND OTHER IMPROVEMENTS SHALL BE MAINTAINED IN A NEAT AND CLEAN CONDITION, FREE OF LOOSE SOIL, CONSTRUCTION DEBRIS, AND TRASH. STREET SWEEPING OR OTHER EQUALLY EFFECTIVE MEANS SHALL BE USED ON A REGULAR BASIS TO CONTROL EROSION. WATERING SHALL NOT BE USED TO CLEAN STREETS EXCEPT FOR THE REMOVAL OF FINE MATERIAL NOT OTHERWISE REMOVED BY WEEPING OR OTHER MECHANICAL MEANS.
8. STAND-BY CREWS SHALL BE ALERTED BY THE CONTRACTOR, PERMITEE, OR OWNER FOR EMERGENCY WORK DURING RAINSTORMS.
9. GRAVEL BAGS AND NECESSARY MATERIALS IN ACCORDANCE WITH THE APPROVED PLANS, SHALL BE AVAILABLE ONSITE AND STOCKPILED AT CONVENIENT LOCATIONS TO FACILITATE RAPID CONSTRUCTION OF TEMPORARY DEVICES OR TO REPAIR ANY DAMAGED EROSION CONTROL MEASURES WHEN RAIN IS IMMINENT. A STAND-BY CREW SHALL BE MADE AVAILABLE AT ALL TIMES DURING THE RAINY SEASON.
10. ALL UTILITY TRENCHES SHALL BE BACKFILLED WITHIN 24 HOURS AND MUST BE BACKFILLED BEFORE THE END OF THE WORKDAY IF A 40-PERCENT CHANCE OF RAIN IS PREDICTED.
11. A GRAVEL BAG SILT BASIN OR TRAP SHALL BE PROVIDED AT EVERY STORM DRAIN INLET TO PREVENT SEDIMENT FROM ENTERING THE STORM DRAIN SYSTEM.
12. ALL EROSION CONTROL PLANS MUST PROVIDE A 24-HOUR TELEPHONE NUMBER AND THE NAME(S) OF THE PERSON(S) RESPONSIBLE FOR EMERGENCY WORK. A TELEPHONE ANSWERING MACHINE OR ANSWERING SERVICE IS UNACCEPTABLE.

EROSION CONTROL LEGEND

BMP FACT SHEET*	NAME	SYMBOL
SE-5	TYPE 1 TEMPORARY FIBER ROLLS	FR
SE-6	TEMPORARY GRAVEL BAGS	○○○○○○○○○○
WM-1	MATERIALS STORAGE AND STAGING AREA	▨▨▨▨▨▨
N/A	APPROX ACCESS AND BUILDING ENVELOPE LINE	---
N/A	DIRECTION OF FLOW	57.67% →
N/A	CONSTRUCTION ACCESS/EXIT	---
N/A	PROPERTY LINE	---

RELEVANT BMP FACT SHEETS

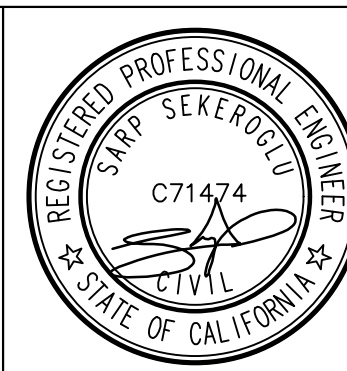
THE FOLLOWING BMPs AS OUTLINED IN, BUT NOT LIMITED TO, THE CASQA STORMWATER BMP HANDBOOK DATED JANUARY 2019, OR THE LATEST REVISED EDITION, MAY APPLY DURING THE CONSTRUCTION OF THE PROJECT. ADDITIONAL MEASURES MAY BE REQUIRED AS NEEDED.

CASQA ID	BMP DESCRIPTION
EC-1	SCHEDULING
EC-2	PRESERVATION OF EXISTING VEGETATION
NS-12	CONCRETE CURING
NS-13	CONCRETE FINISHING
SE-5	FIBER ROLLS
SE-6	GRAVEL BAG BERM
TC-1	STABILIZED CONSTRUCTION ENTRANCE/EXIT
	1. CONTRACTOR TO FIT CONSTRUCTION ENTRANCE LENGTH AND CORRUGATED STEEL SHAKER PLATE(S) AS NEEDED
WE-1	WIND EROSION CONTROL
WM-1	MATERIAL DELIVERY AND STORAGE
WM-3	STOCKPILE MANAGEMENT AREA
WM-5	SOLID WASTE MANAGEMENT
WM-8	CONCRETE WASTE MANAGEMENT
WM-9	SANITARY/SEPTIC WASTE MANAGEMENT

UNDERGROUND SERVICE ALERT
Call: TOLL FREE
1-800-227-2600
OR
811
TWO WORKING DAYS BEFORE YOU DIG

BENCHMARK:
CCS83 ZONE 5, NAD83(2011), EPOCH 2010.0

BASIS OF BEARINGS:
FD GLO BRASS CAP UP 0.6', CN 1/16 COR S.12, PER RS 103/74.
ELEVATION DETERMINED VIA STATIC GPS OBSERVATION, PROCESSED THROUGH OPUS.
NAVD-88 ELEV = 3066.588'



Kimley Horn
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PHONE: (619) 234-9411 WWW.KIMLEY-HORN.COM
PREPARED UNDER THE SUPERVISION OF:
SARP SEKEROGLU R.C.E. No. 71474 EXP. 12/31/2025 04/10/2024

REVISIONS	
ADDENDUM NO. 2	6/24
ADDENDUM NO. 5	6/24
DESCRIPTION	APPR. DATE

WATER TANK REPLACEMENT PLANS APPROVED BY:
SAN BERNARDINO COUNTY - PUBLIC WORKS
SPECIAL DISTRICTS

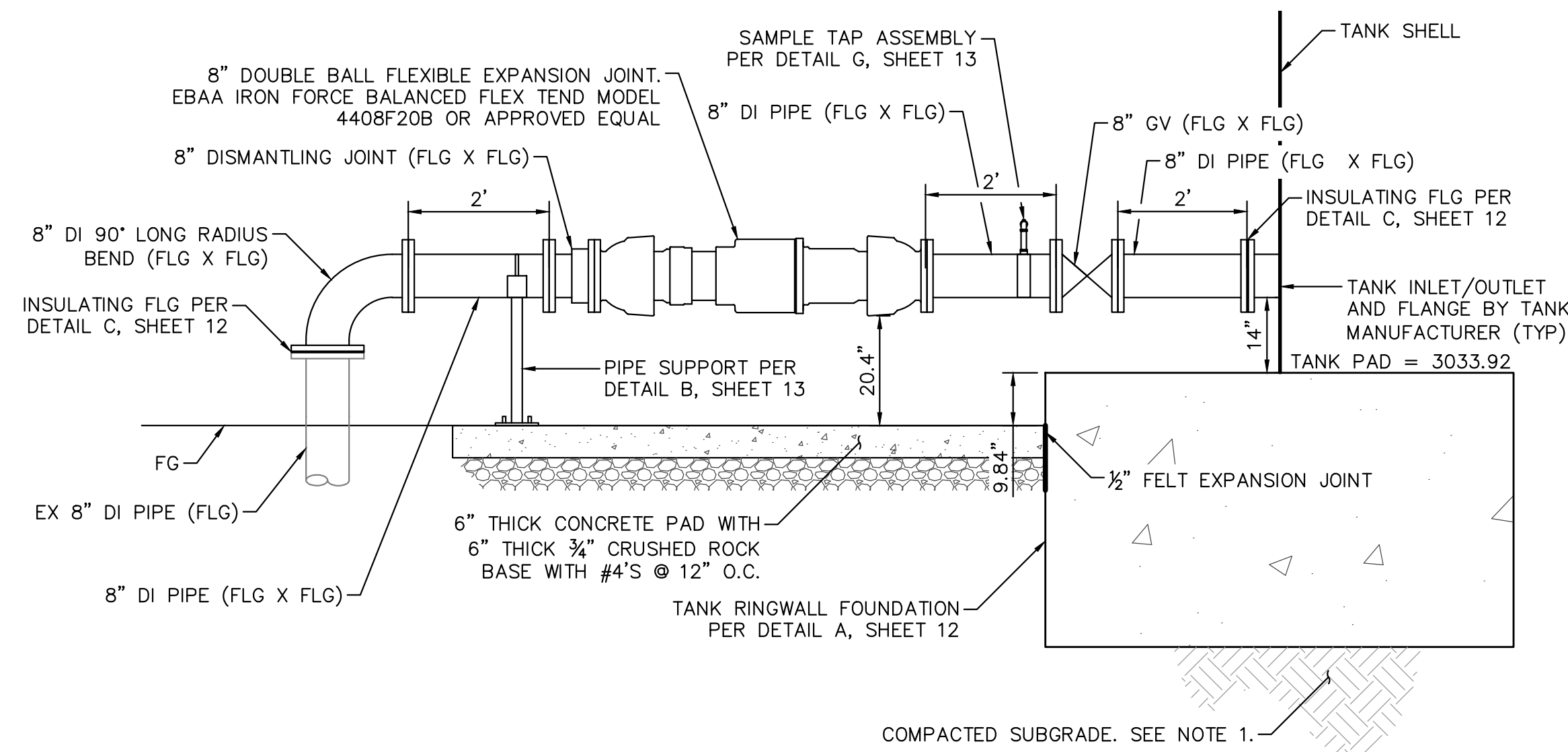
07/18/2024

ASSISTANT DIRECTOR	REVIEWER	INITIAL	DATE
	PROJECT MANAGER		07/16/2024
	PM, DIVISION MANAGER		07/16/2024
	WAS, DIVISION MANAGER		07/17/2024

WATER TANK REPLACEMENT PLANS
APN: 0580-241-16-0000
MORONGO VALLEY WATER TANK REPLACEMENT PROJECT
EROSION CONTROL PLAN

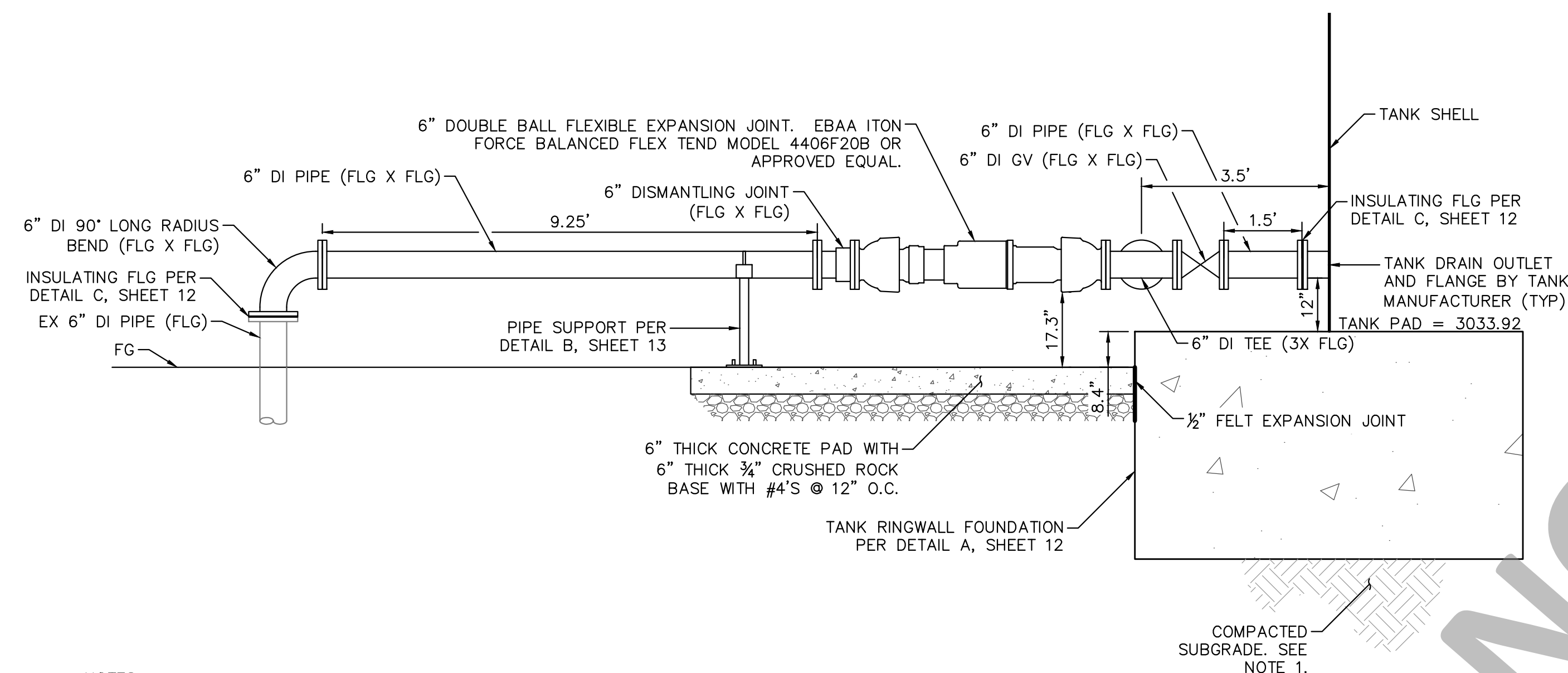
DWG NO.	30.30.00157
FILE NO.	SD003
SHEET	10 OF 17

RE-BID SET



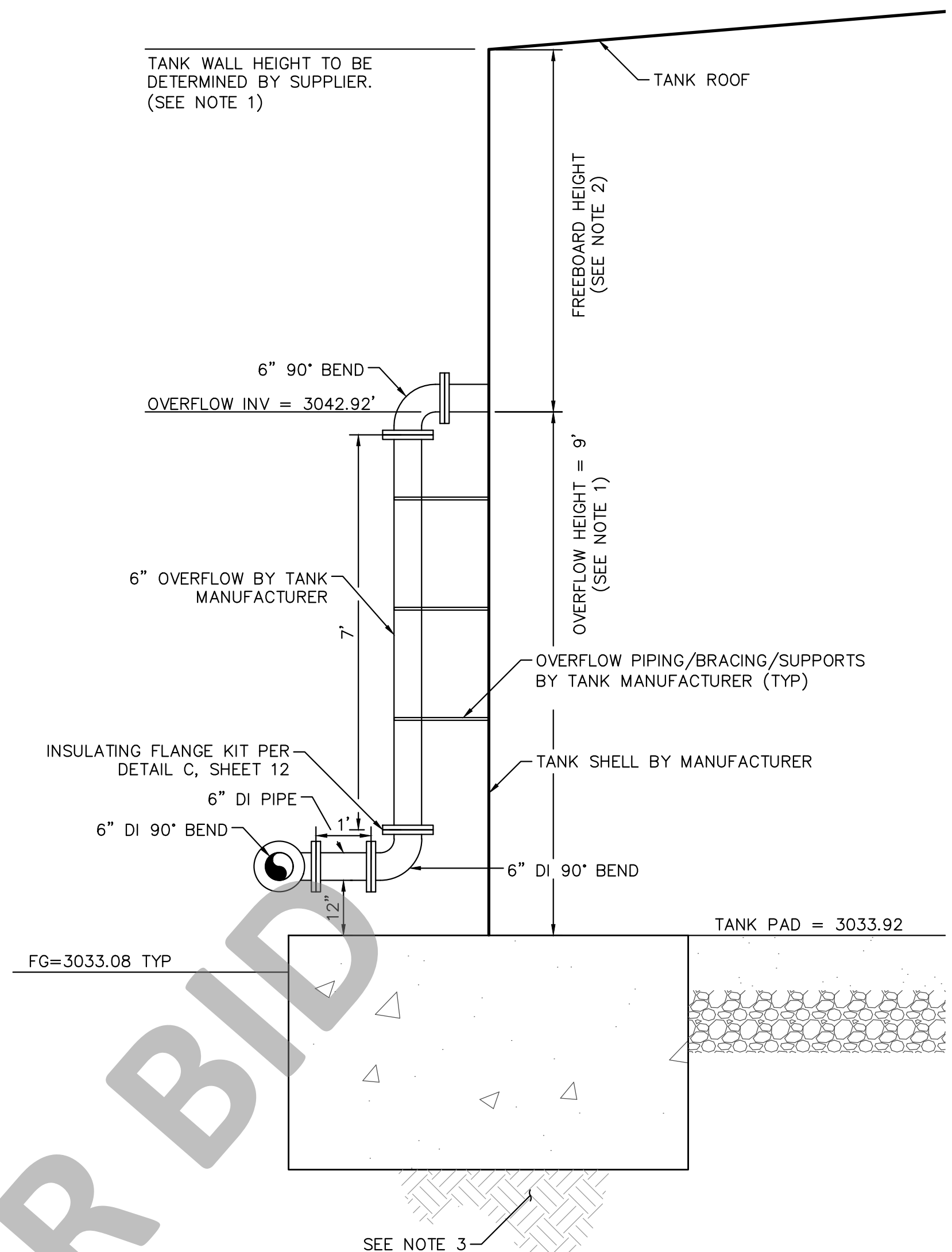
- NOTES:
1. PREPARE SUBGRADE PER REPORT TITLED "GEOTECHNICAL EXPLORATION PROPOSED MORONGO VALLEY WATER TANK REPLACEMENT PROJECT." DATED JANUARY 10, 2024 BY LEIGHTON CONSULTING INC.
 2. INSTALLATION OF THE FORCE BALANCED DOUBLE BALL FLEXIBLE EXPANSION JOINT SHALL BE IN STRICT CONFORMANCE TO THE REQUIREMENTS OF THE MANUFACTURER.

A TANK INLET/OUTLET SECTION
SCALE: 1" = 2'



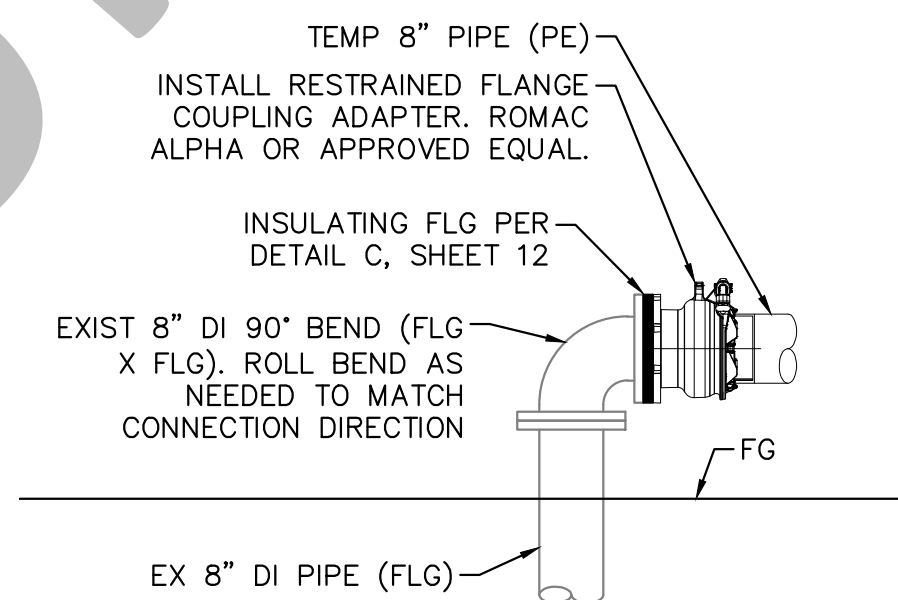
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B TANK DRAIN SECTION
SCALE: 1" = 2'

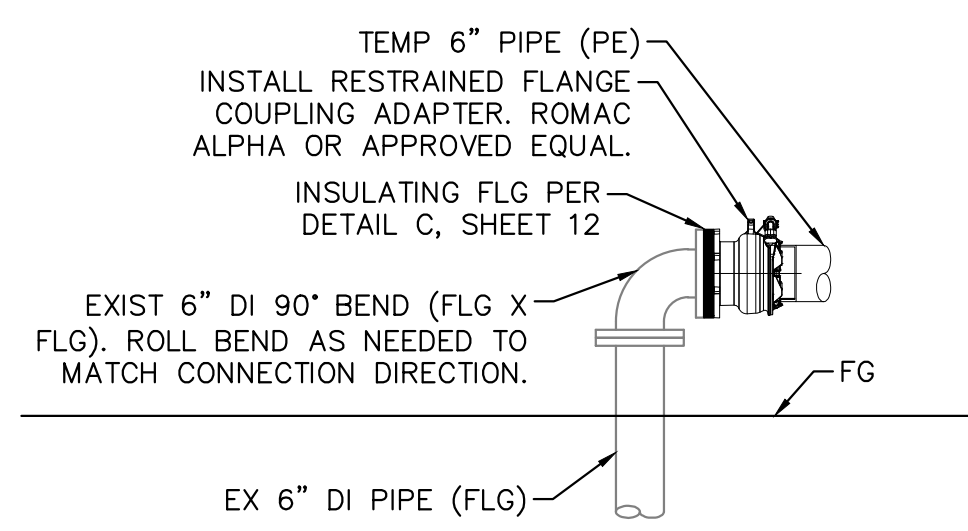


- NOTES:
1. TANK HEIGHT SHALL BE CONFIRMED BY TANK SUPPLIER PRIOR TO FABRICATION. TANK HEIGHT IS SUBJECT TO CHANGE BASED ON SITE SPECIFIC SEISMIC DESIGN PARAMETERS TO BE DETERMINED BY TANK SUPPLIER.
 2. THE MINIMUM FREEBOARD IS TO BE CONFIRMED BY TANK SUPPLIER PRIOR TO FABRICATION.
 3. PREPARE SUBGRADE PER REPORT TITLED "GEOTECHNICAL EXPLORATION PROPOSED MORONGO VALLEY WATER TANK REPLACEMENT PROJECT." DATED JANUARY 10, 2024 BY LEIGHTON CONSULTING INC.

C TANK OVERFLOW SECTION
SCALE: 1" = 2'



D TEMPORARY TANK FILL/DRAIN CONNECTION
SCALE: 1" = 2'



E TEMPORARY TANK OVERFLOW CONNECTION
SCALE: 1" = 2'

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04/10/2024

REVISIONS	
NO.	DESCRIPTION
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WATER TANK REPLACEMENT PLANS APPROVED BY:
SAN BERNARDINO COUNTY - PUBLIC WORKS
SPECIAL DISTRICTS

07/18/2024

APPROVALS	REVIEWER	INITIAL	DATE
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WATER TANK REPLACEMENT PLANS

APN: 0580-241-16-0000
MORONGO VALLEY WATER TANK
REPLACEMENT PROJECT

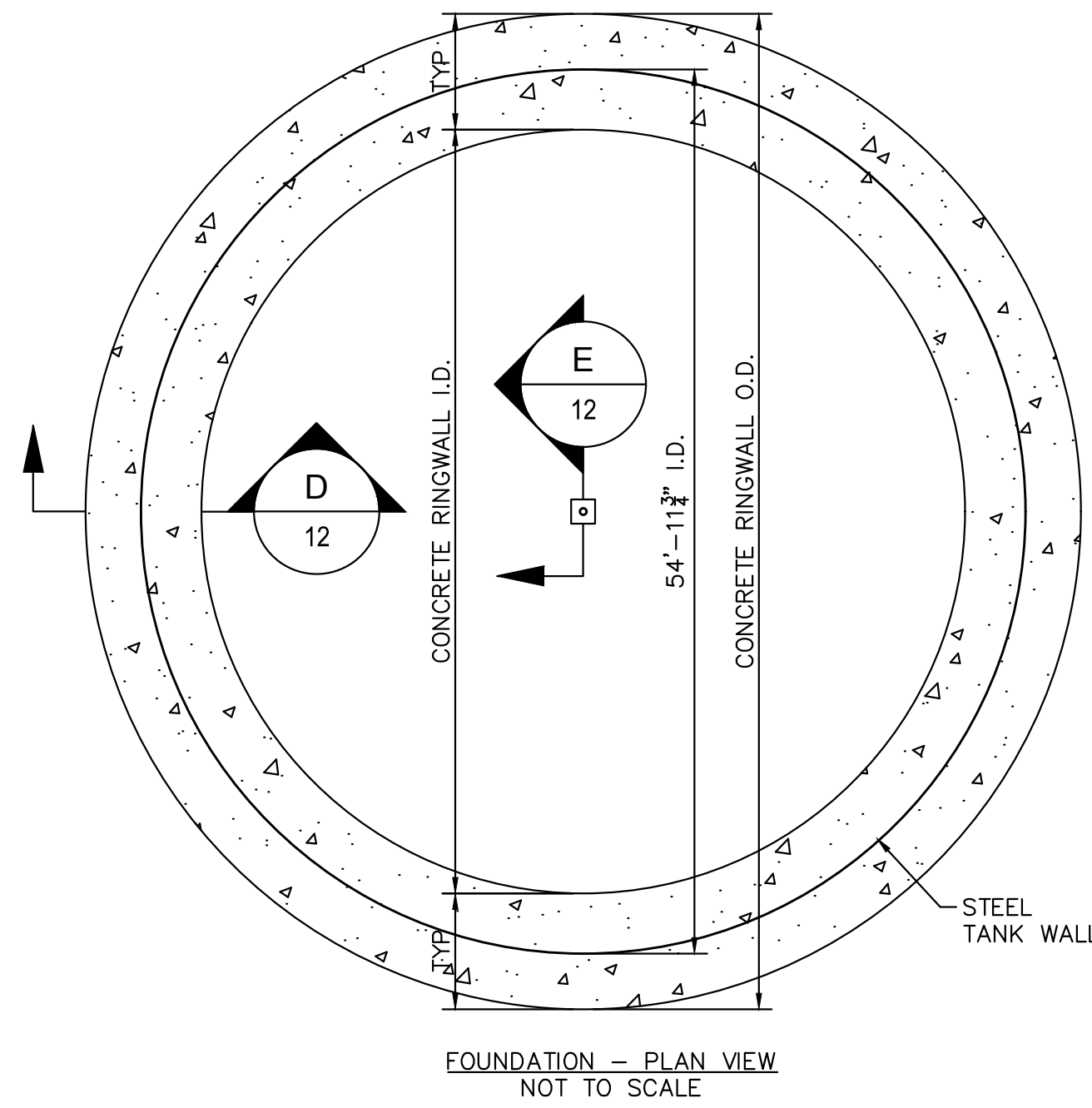
DETAILS

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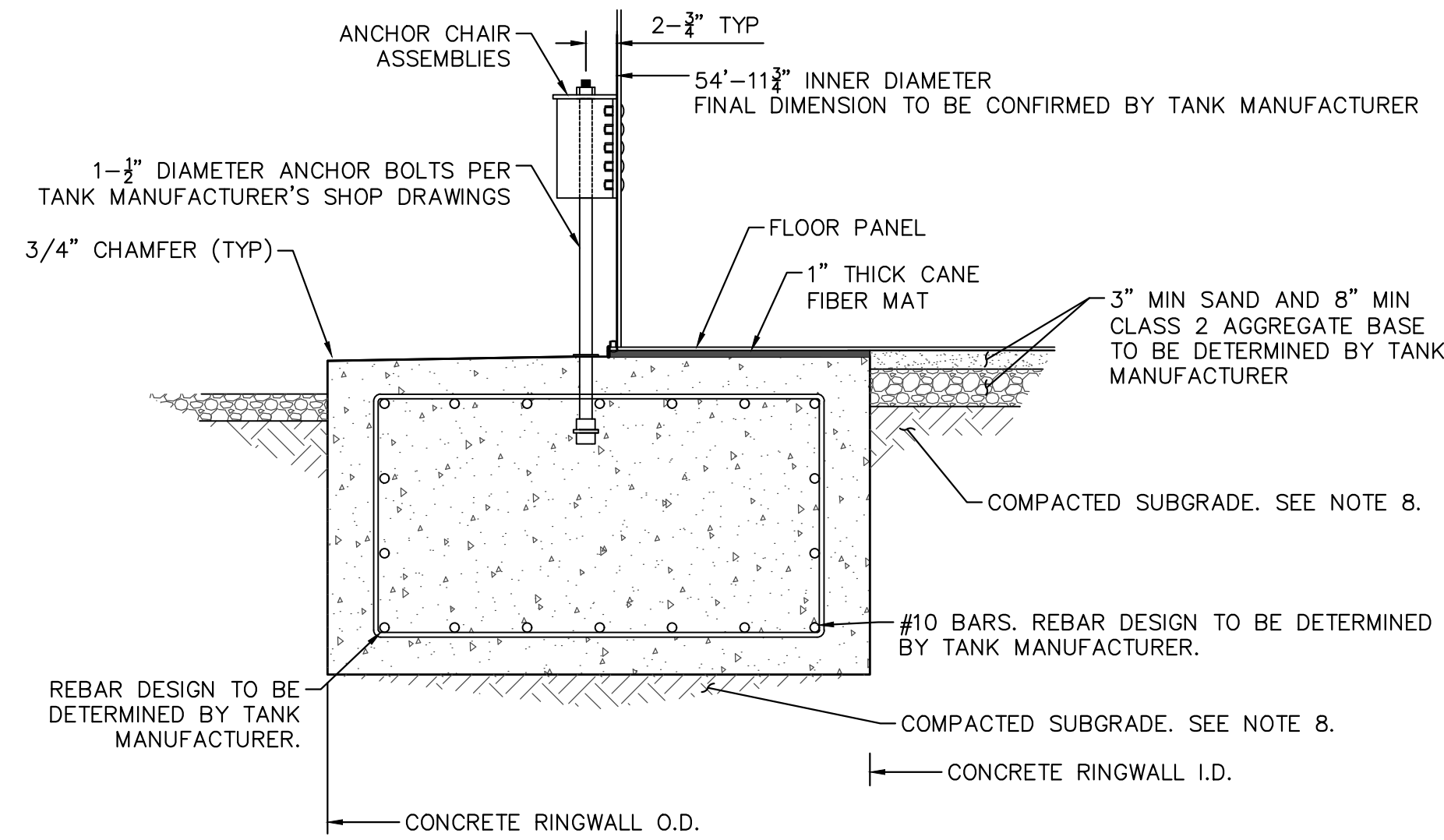
FILE NO.
SD003

SHEET 11 OF 17

RE-BID SET



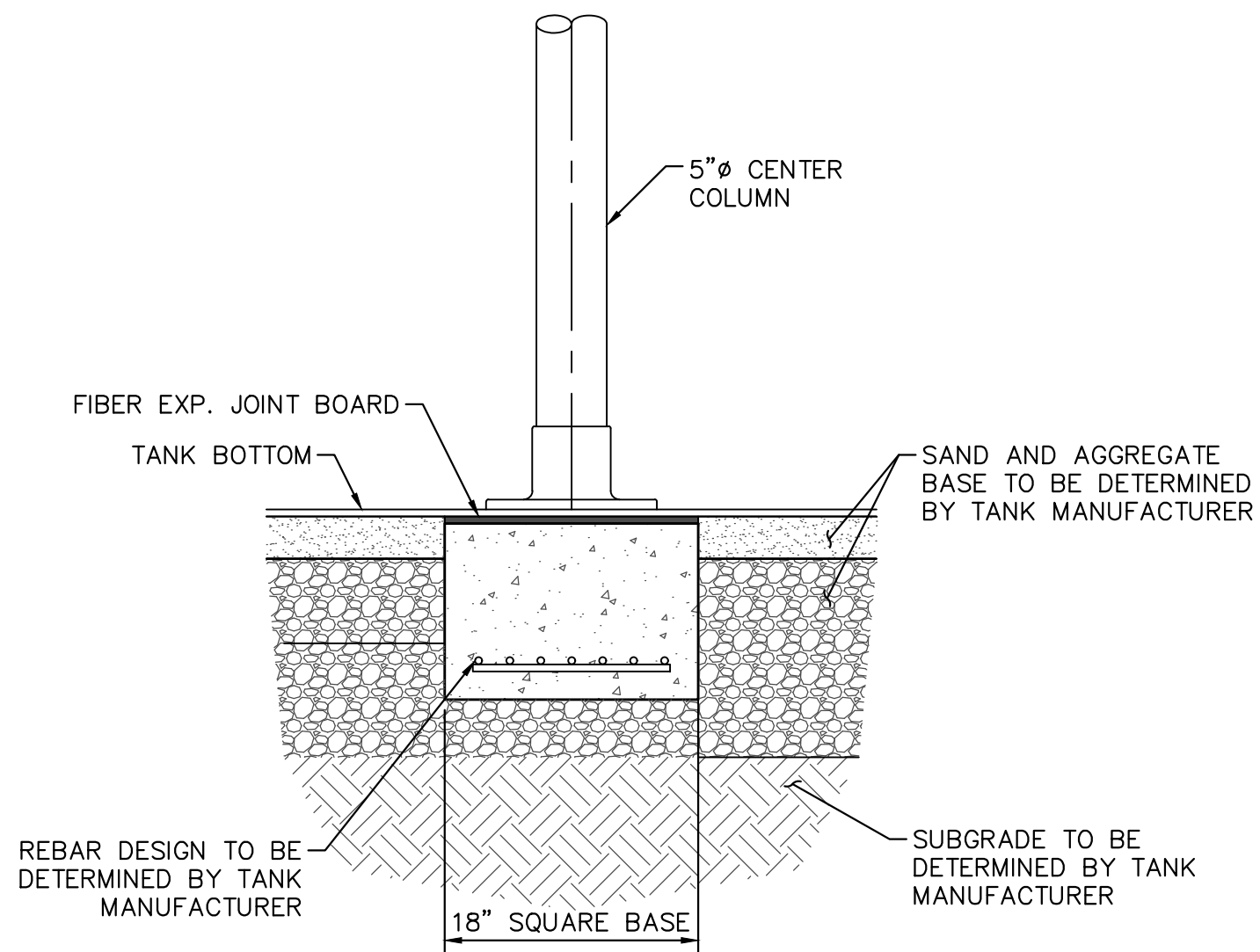
D FOUNDATION - PLAN VIEW
SCALE: NTS



D RINGWALL FOUNDATION
SCALE: NTS

NOTES:
TANK FOUNDATION IS SHOWN FOR REFERENCE ONLY. FOUNDATION DESIGN WILL BE DESIGNED BY TANK MANUFACTURER'S SHOP DRAWINGS.

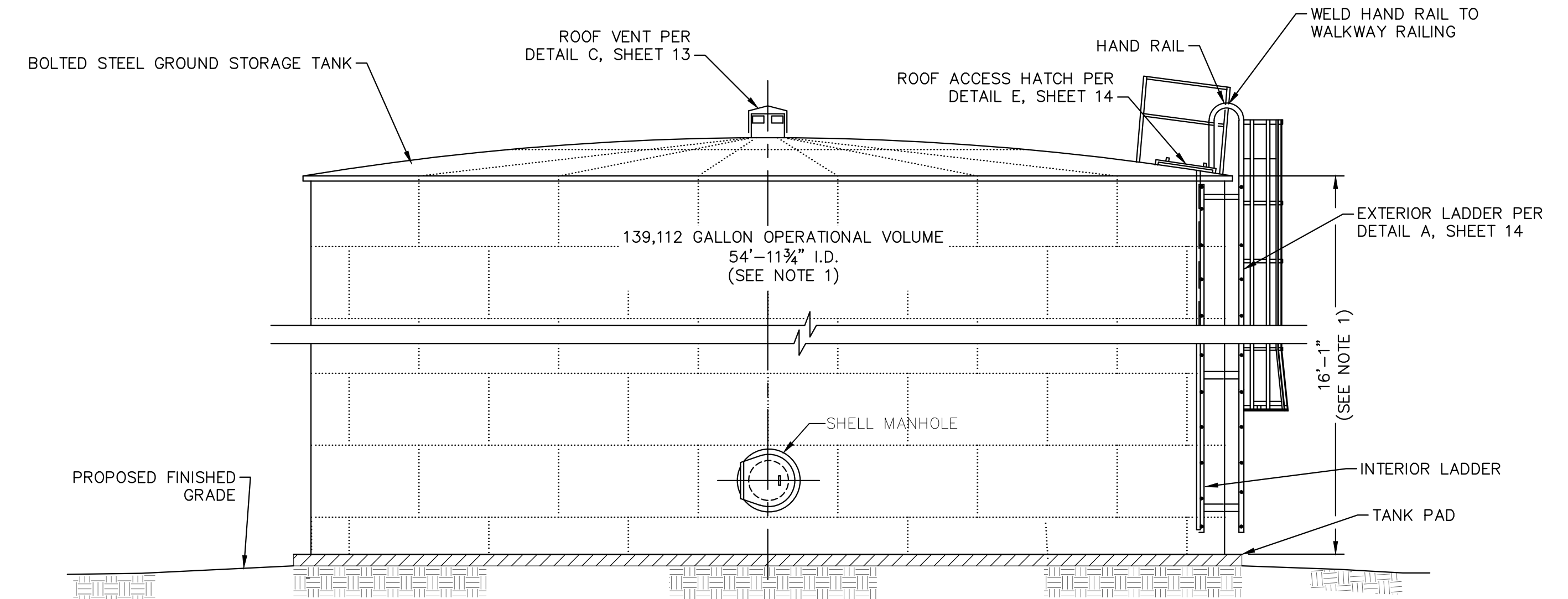
- NOTES:
- TANK MANUFACTURER: SUPERIOR TANKS OR APPROVED EQUAL.
 - CONCRETE DIMENSIONS SHOWN ARE APPROXIMATE.
 - CONCRETE RINGWALL FOUNDATION TO BE DESIGNED BY TANK MANUFACTURER'S STRUCTURAL ENGINEER AFTER SELECTION.
 - REBAR SIZE AND SPACING TO BE DETERMINED BY TANK MANUFACTURER.
 - ALL COSTS ASSOCIATED WITH THE STRUCTURAL DESIGN OF THE CONCRETE RINGWALL FOUNDATION SHALL BE INCLUDED IN THE COST OF THE STORAGE TANK.
 - TANK FOUNDATION PREPARATION SHALL BE INSPECTED AND APPROVED BY A GEOTECHNICAL ENGINEER.
 - TANK FOUNDATION SHALL BE INSPECTED BY A STRUCTURAL ENGINEER AND GEOTECHNICAL ENGINEER.
 - PREPARE SUBGRADE PER REPORT TITLED "GEOTECHNICAL EXPLORATION PROPOSED MORONGO VALLEY WATER TANK REPLACEMENT PROJECT" DATED JANUARY 10, 2024 BY LEIGHTON CONSULTING INC.
 - FOR AN AREA EXTENDING 3 FEET OUT RADIALLY (HORIZONTALLY) FROM THE TANK FOUNDATION EXTERIOR PERIMETER, OVEREXCAVATE 3 FEET BELOW BOTTOM OF THE RING WALL FOUNDATION, OR AT LEAST 5 FEET BELOW EXISTING GRADE, WHICHEVER IS DEEPER. AFTER OVEREXCAVATION IS COMPLETED, THE EXPOSED SUBGRADE SHOULD BE SCARIFIED, MOISTURE-CONDITIONED AND COMPACTED.
 - CONCRETE DESIGN TO BE PROVIDED BY TANK MANUFACTURER.
 - REINFORCING STEEL GRADE SHALL BE DETERMINED BY TANK MANUFACTURER.
 - THE FINAL TANK DIAMETER WILL BE CONFIRMED BY TANK MANUFACTURER.



E CENTER COLUMN FOUNDATION
SCALE: NTS

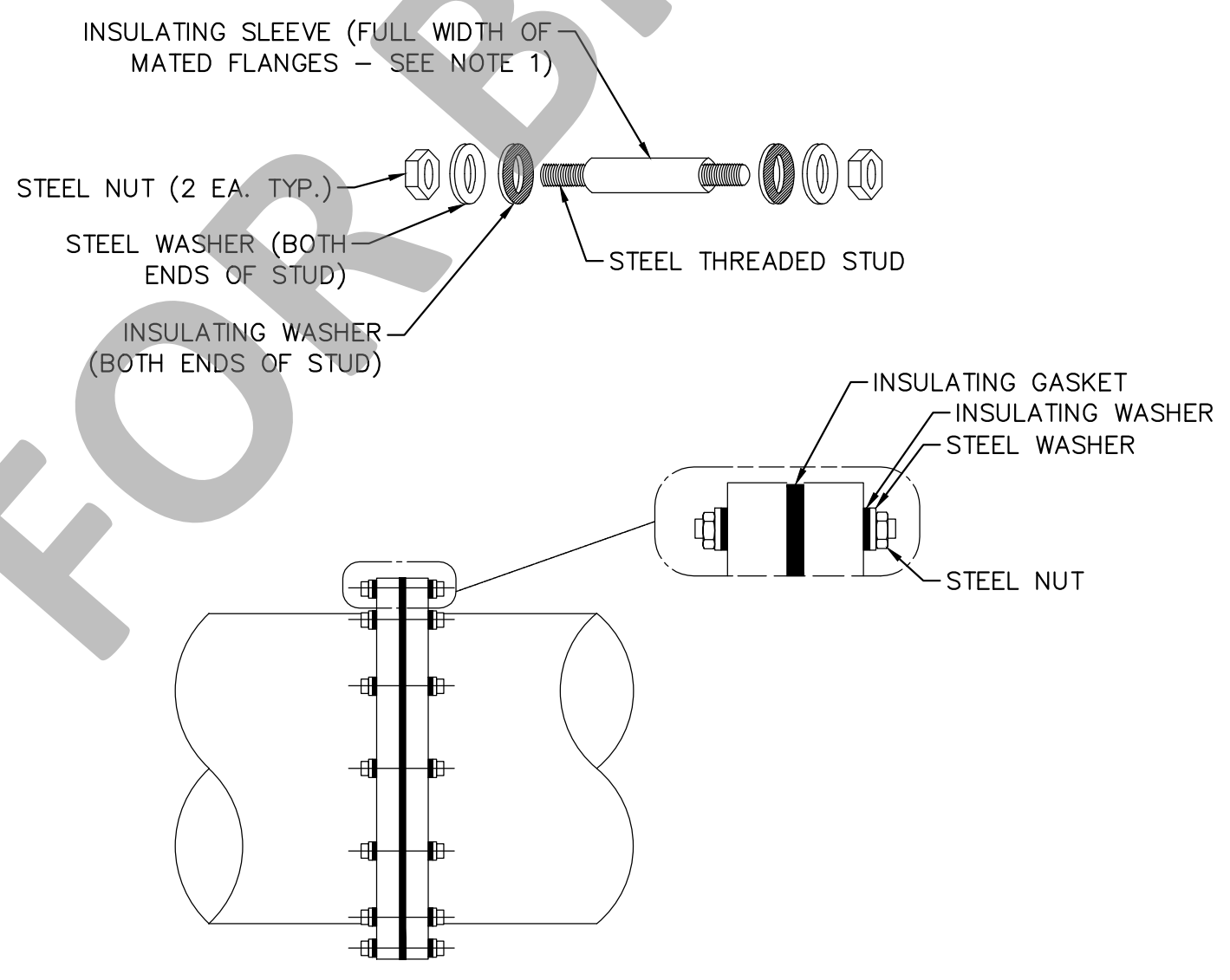
NOTES:
CENTER COLUMN FOUNDATION IS SHOWN FOR REFERENCE ONLY. CENTER COLUMN FOUNDATION WILL BE INSTALLED PER TANK MANUFACTURER'S SHOP DRAWINGS.

A TANK RINGWALL FOUNDATION
SCALE: NTS



- NOTES:
- TANK HEIGHT SHALL BE CONFIRMED BY TANK SUPPLIER PRIOR TO FABRICATION. TANK HEIGHT IS SUBJECT TO CHANGE BASED ON SITE SPECIFIC SEISMIC DESIGN PARAMETERS TO BE DETERMINED BY TANK SUPPLIER.
 - PLATES AND SHEETS USED IN THE CONSTRUCTION OF THE TANK SHELL, TANK FLOOR AND TANK ROOF, SHALL COMPLY WITH THE MINIMUM STANDARDS OF AWWA D103, LATEST EDITION

B BOLTED STEEL WATER STORAGE TANK
SCALE: NTS



- NOTES:
- USE HALF WIDTH SLEEVES AT THREADED FLANGE BOLTS.
 - INSULATING MATERIALS:
 - GASKET- 12" AND GREATER -TYPE "E" FULLFACED NEOPRENE WITH RECTANGULAR NITRILE OR VITON O-RING SEAL. (PSI LINEBACKER OR EQUAL).
 - 12" OR LESS-TYPE "E" FULLFACED NEOPRENE FACED PHENOLIC.
 - SLEEVE- 1/32-INCH THICK, FULL LENGTH TUBE, LAMINATED G-10 GLASS
 - WASHER- 1/8-INCH THICK LAMINATED G-10 GLASS.
 - ALIGN FLANGE PROPERLY AND FOLLOW GASKET MANUFACTURER BOLT TIGHTENING SEQUENCE INSTRUCTIONS.
 - DO NOT PAINT OUTER SURFACE OF FLANGE WITH METALLIC PIGMENTED OR CONDUCTIVE PAINTS.
 - TEST MATED FLANGE WITH GAS ELECTRONICS MODEL 601 INSULATION CHECKER (OR EQUIVALENT). PRIOR TO ACCEPTANCE.

C ABOVE-GRADE INSULATING FLANGE
SCALE: NTS

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DESCRIPTION	APPR. DATE
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ADDENDUM NO. 5	6/24

WATER TANK REPLACEMENT PLANS APPROVED BY:
SAN BERNARDINO COUNTY - PUBLIC WORKS
SPECIAL DISTRICTS

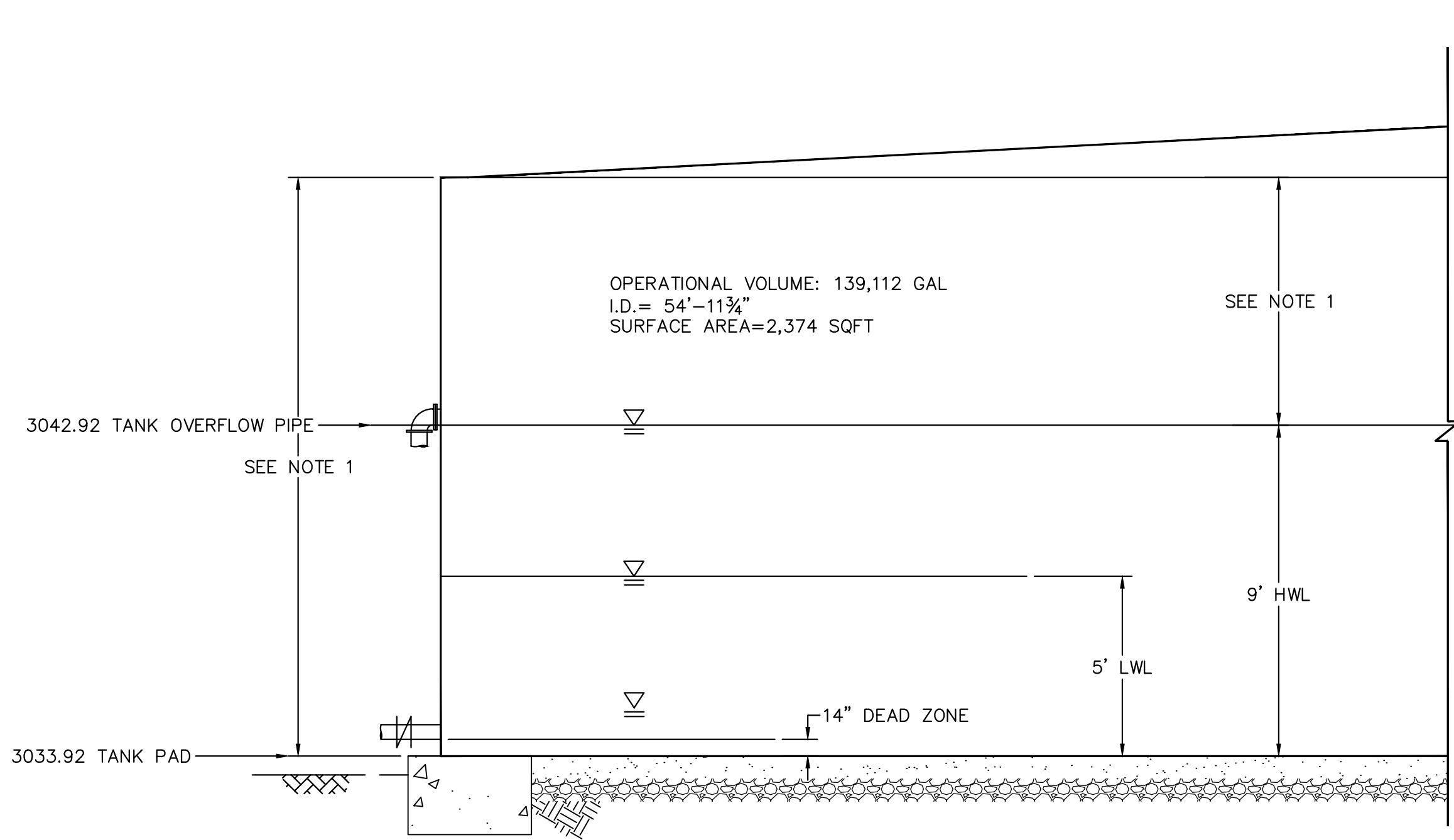
07/18/2024

ASSISTANT DIRECTOR	REVIEWER	INITIAL	DATE
	PROJECT MANAGER		07/16/2024
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WATER TANK REPLACEMENT PLANS
APN: 0580-241-16-0000
MORONGO VALLEY WATER TANK
REPLACEMENT PROJECT
DETAILS

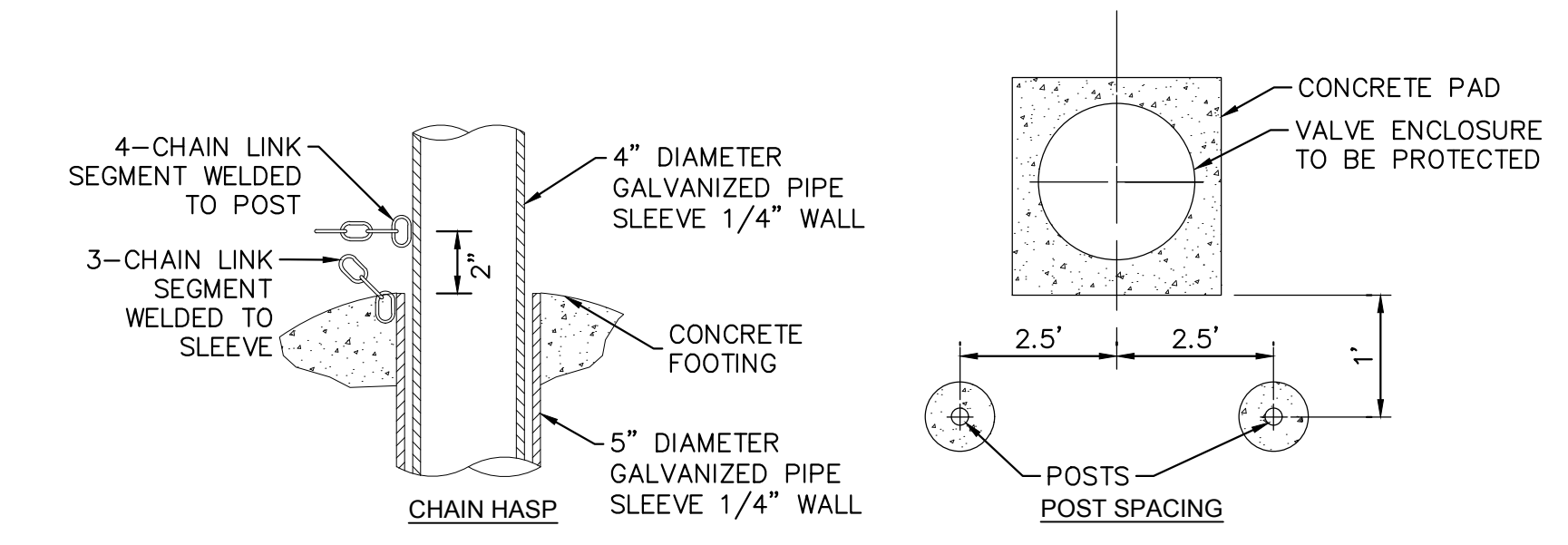
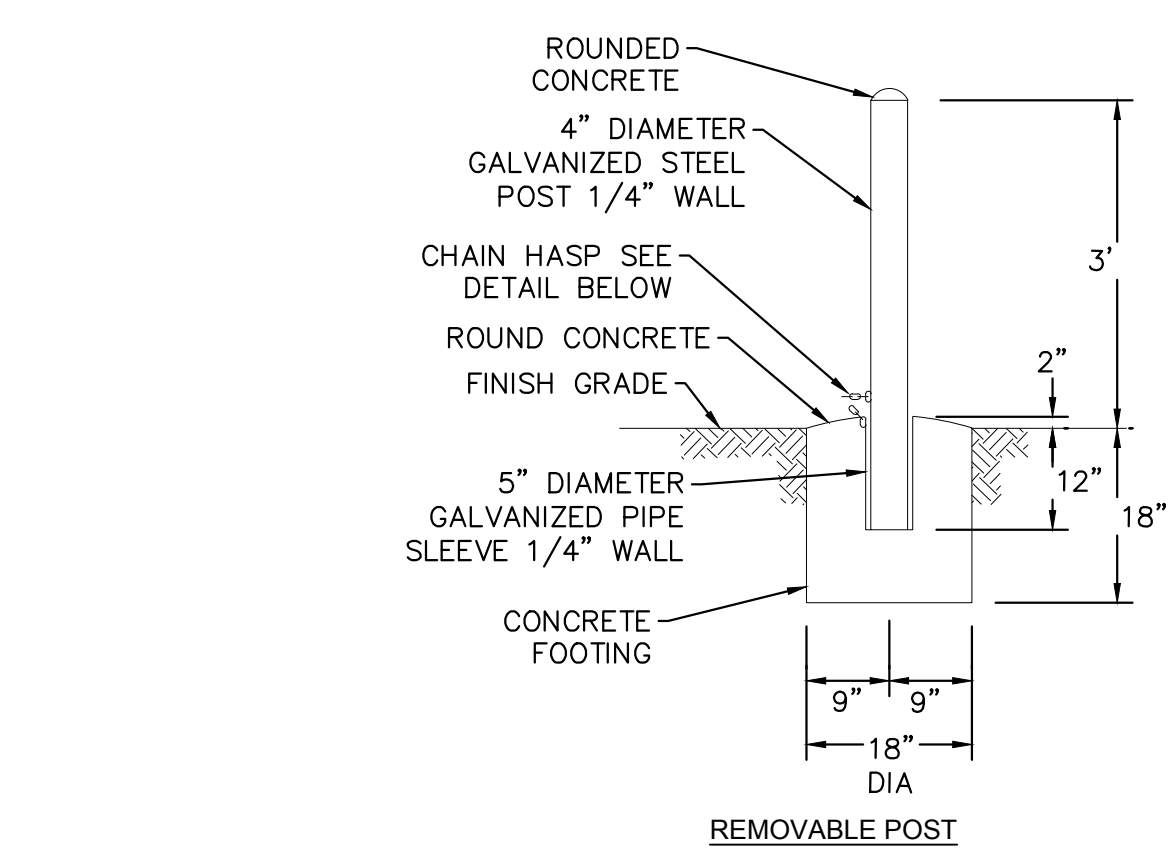
DWG NO.
30.30.00157
FILE NO.
SD003
SHEET 12 OF 17

RE-BID SET



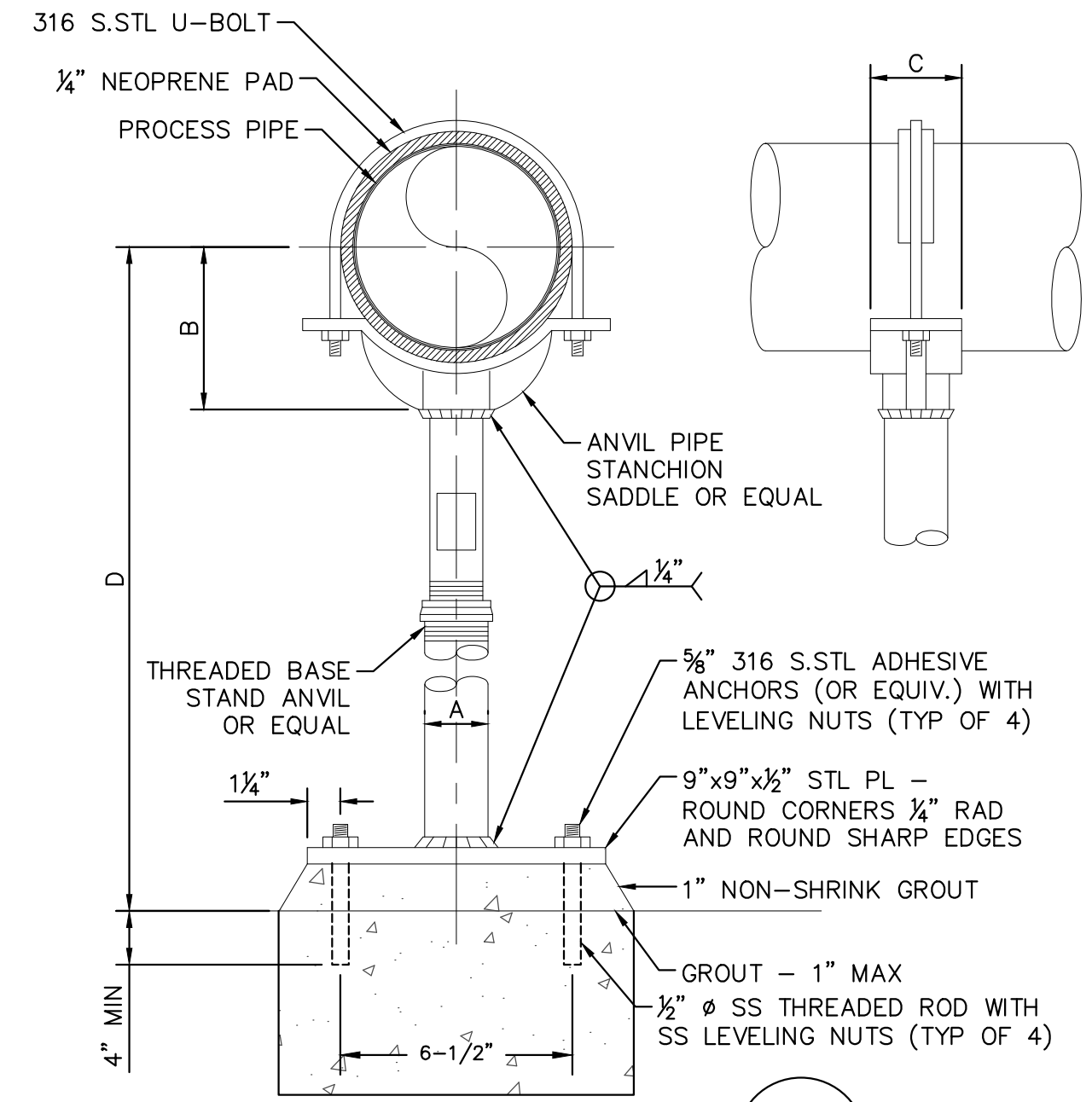
A TANK OPERATIONAL DIAGRAM
SCALE: NTS

NOTES:
1. TANK FREE BOARD AND HEIGHT SHALL BE CONFIRMED AND DESIGNED BY TANK SUPPLIER PRIOR TO FABRICATION. TANK FREE BOARD AND HEIGHT IS SUBJECT TO CHANGE BASED ON SITE SPECIFIC SEISMIC PARAMETERS TO BE DETERMINED BY TANK SUPPLIER.



NOTES:
1. CHAIN TO BE 1/4\"/>

E PROTECTION POST INSTALLATION
SCALE: NTS

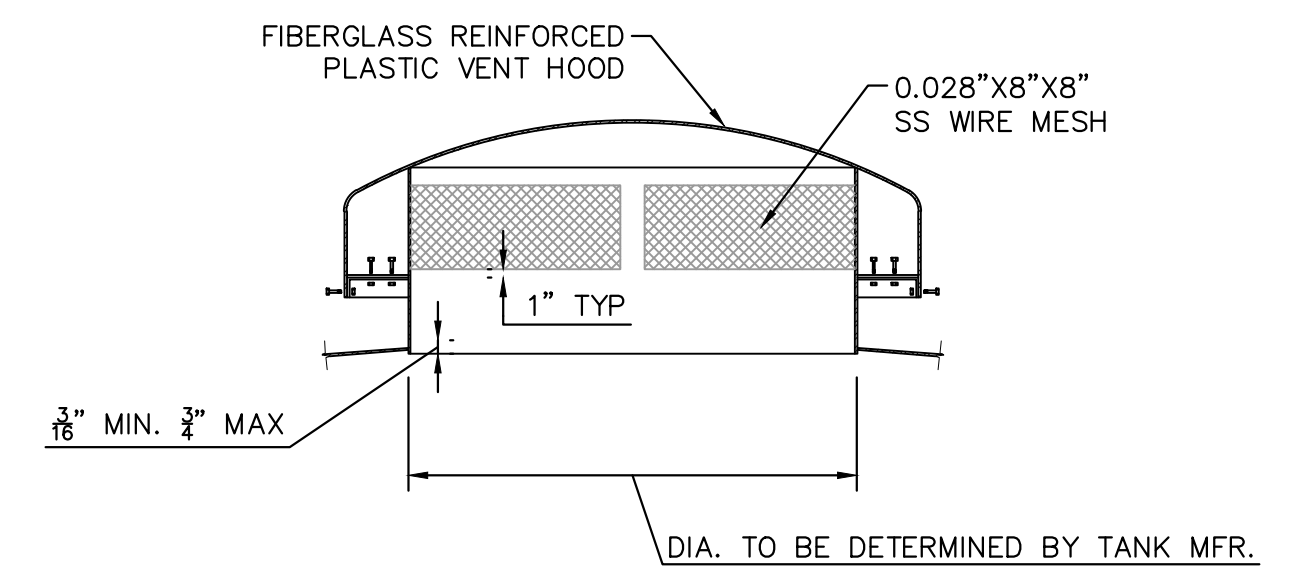


B SADDLE PIPE SUPPORT
SCALE: NTS

PIPE SIZE	A (NOM.)	B	C	D	
				MIN	MAX
4	3	4-3/16	3-5/8	6	60
5	3	4-13/16	3-5/8	6	60
6	3	5-7/16	3-5/8	8	60
8	3	6-15/16	3-5/8	8	60
10	3	8-7/16	3-5/8	10	60
12	3	9-15/16	3-5/8	12	60
14	3	10-1/2	6	6	60
16	3	11-1/2	6	8	60
18	4	13-1/2	6	8	60
20	4	14-1/2	6	10	60
24	4	17-1/2	6	12	60
26	4	18-1/2	6	6	60
30	4	20-5/8	6	8	60
32	4	21-5/8	6	8	60
36	4	23-5/8	6	10	60

* ALL DIMENSIONS IN INCHES

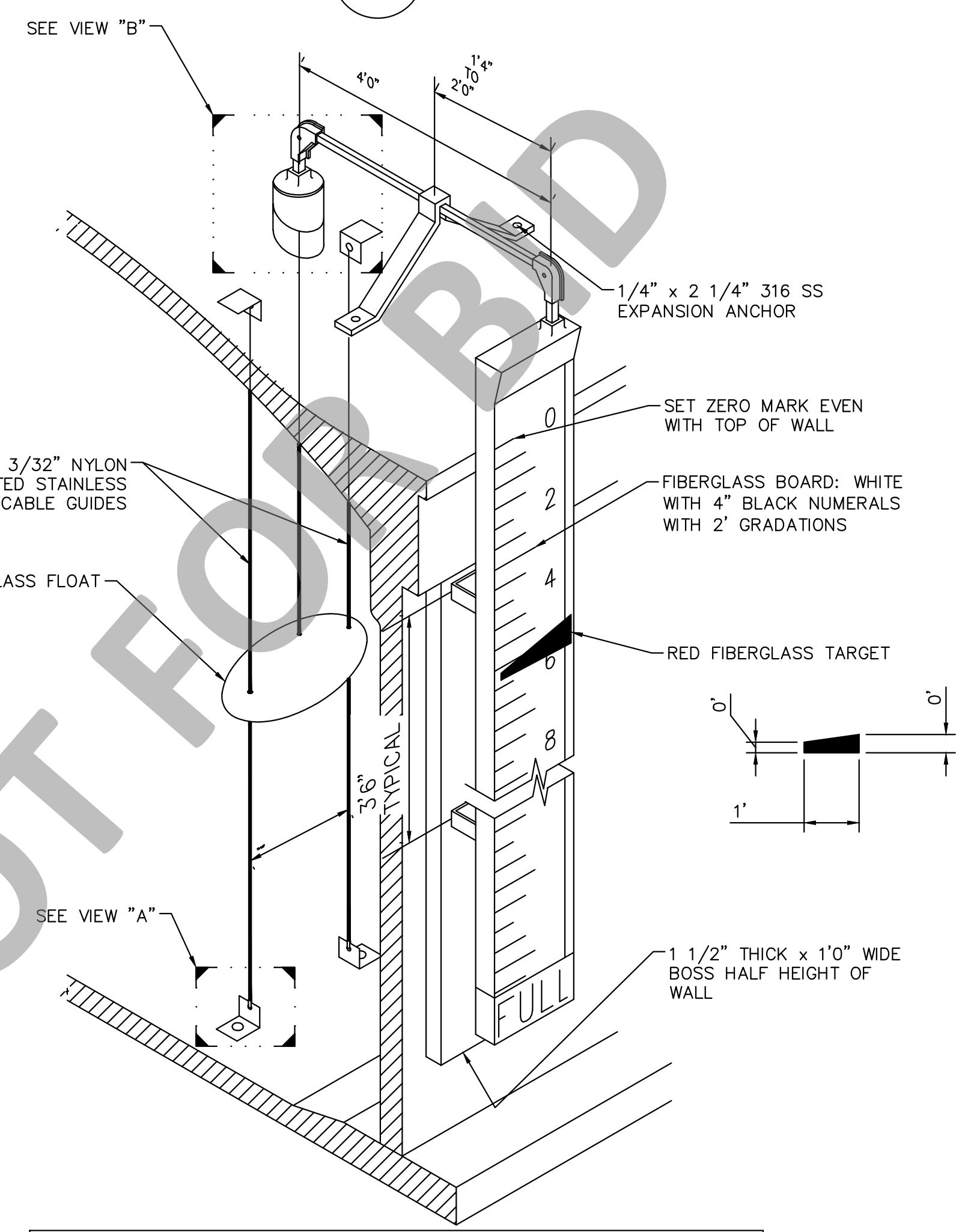
NOTES:
1. HOT-DIP GALVANIZE ENTIRE PIPE SUPPORT AFTER FABRICATION (EXCEPT FOR STAINLESS STEEL FASTENING HARDWARE), OR UNLESS OTHERWISE NOTED ON THE DRAWINGS AND SPECIFICATIONS.
2. SEE PLANS AND SECTIONS FOR PIPE GRADE REQUIREMENT.



C ROOF VENT
SCALE: NTS

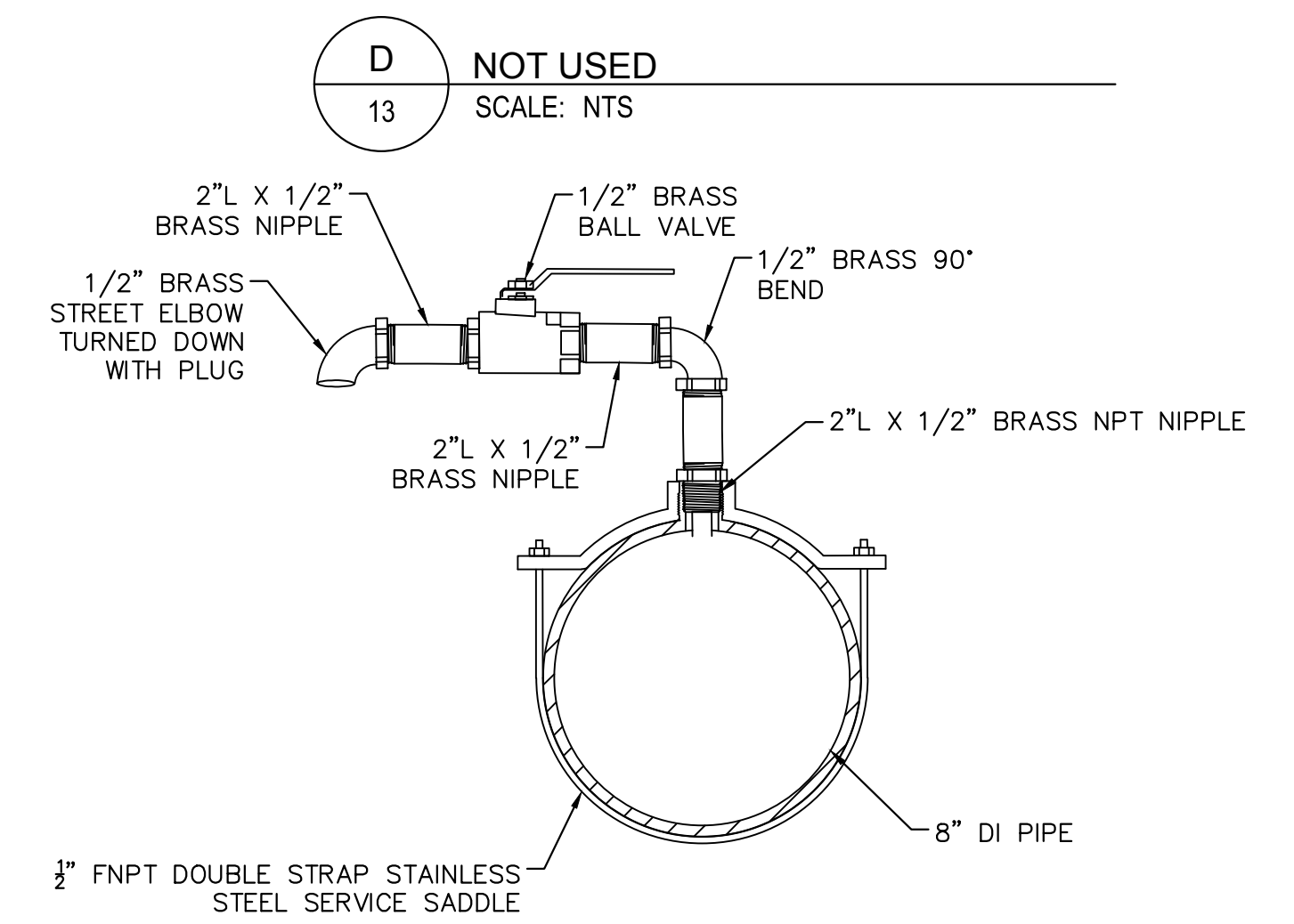
NOTES:
1. ROOF VENT ASSEMBLY SHALL BE IN ACCORDANCE WITH AWWA D103-09.
2. THE VENT SHALL BE DESIGNED TO PREVENT THE ENTRANCE OF BIRDS OR OTHER ANIMALS BY INCLUDING STAINLESS STEEL WIRE CLOTH OR MESH.

NOTES:
TANK APPURTENANCES SUCH AS LADDERS, HATCHES, PENETRATIONS, AND CONNECTIONS, ARE SHOWN FOR REFERENCE ONLY. TANK APPURTENANCES WILL BE INSTALLED PER TANK MANUFACTURER'S SHOP DRAWINGS.

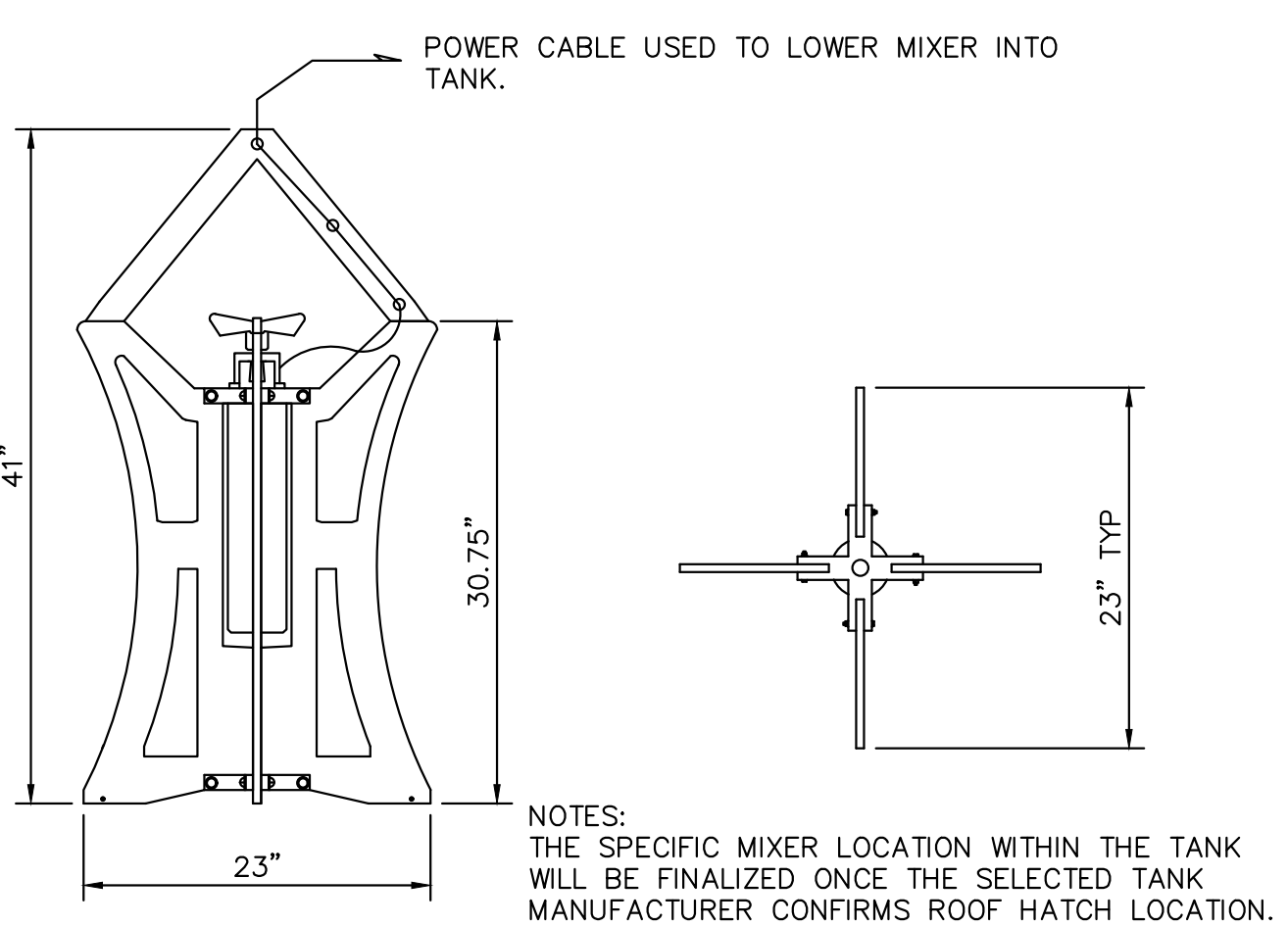


F TANK LEVEL INDICATOR
SCALE: NTS

NOTES:
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G SAMPLE TAP ASSEMBLY FOR DUCTILE IRON PIPE
SCALE: NTS



H TIDAL WAVE WATER MIXER
SCALE: NTS

NOTES:
THE SPECIFIC MIXER LOCATION WITHIN THE TANK WILL BE FINALIZED ONCE THE SELECTED TANK MANUFACTURER CONFIRMS ROOF HATCH LOCATION.

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WATER TANK REPLACEMENT PLANS

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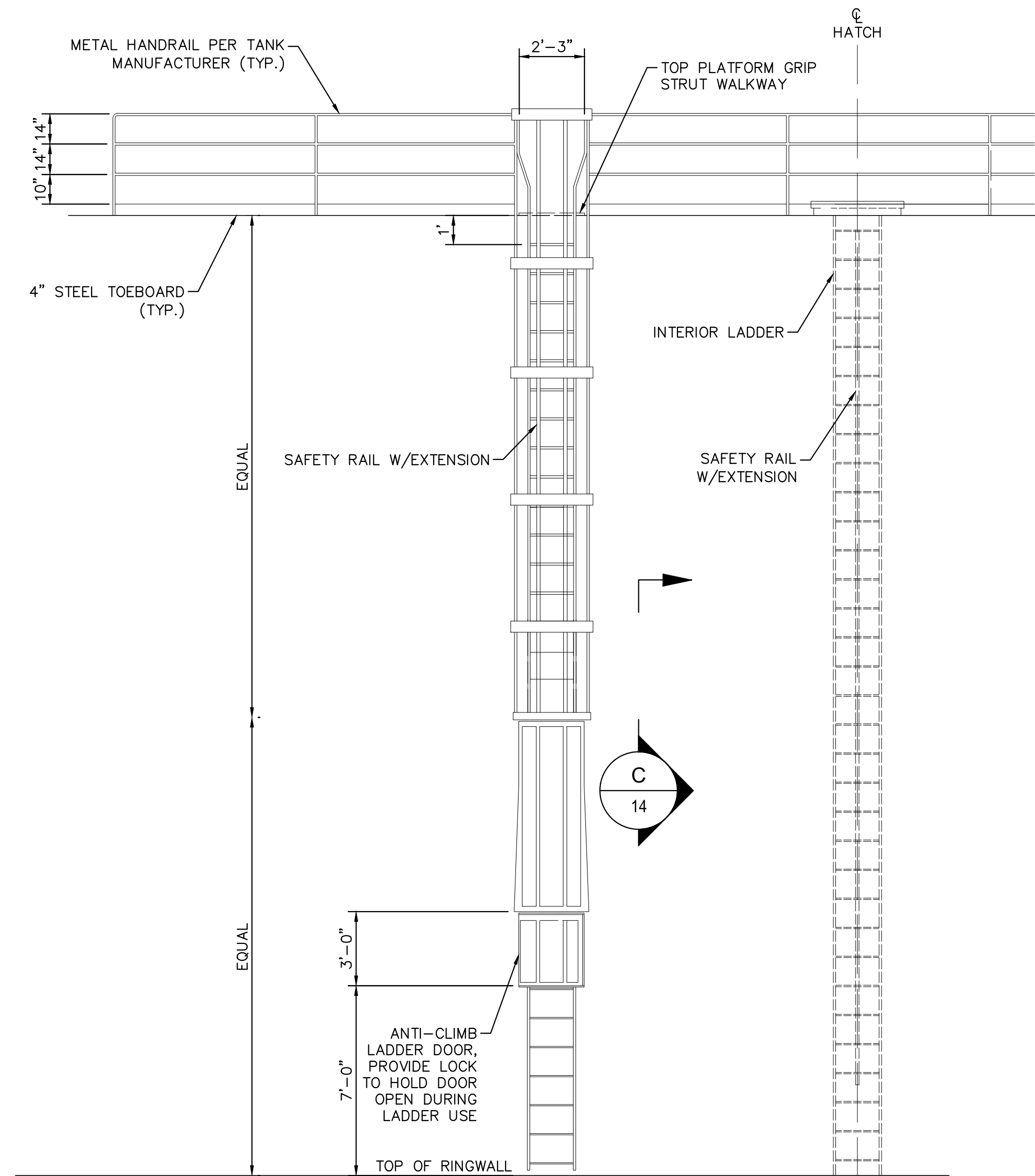
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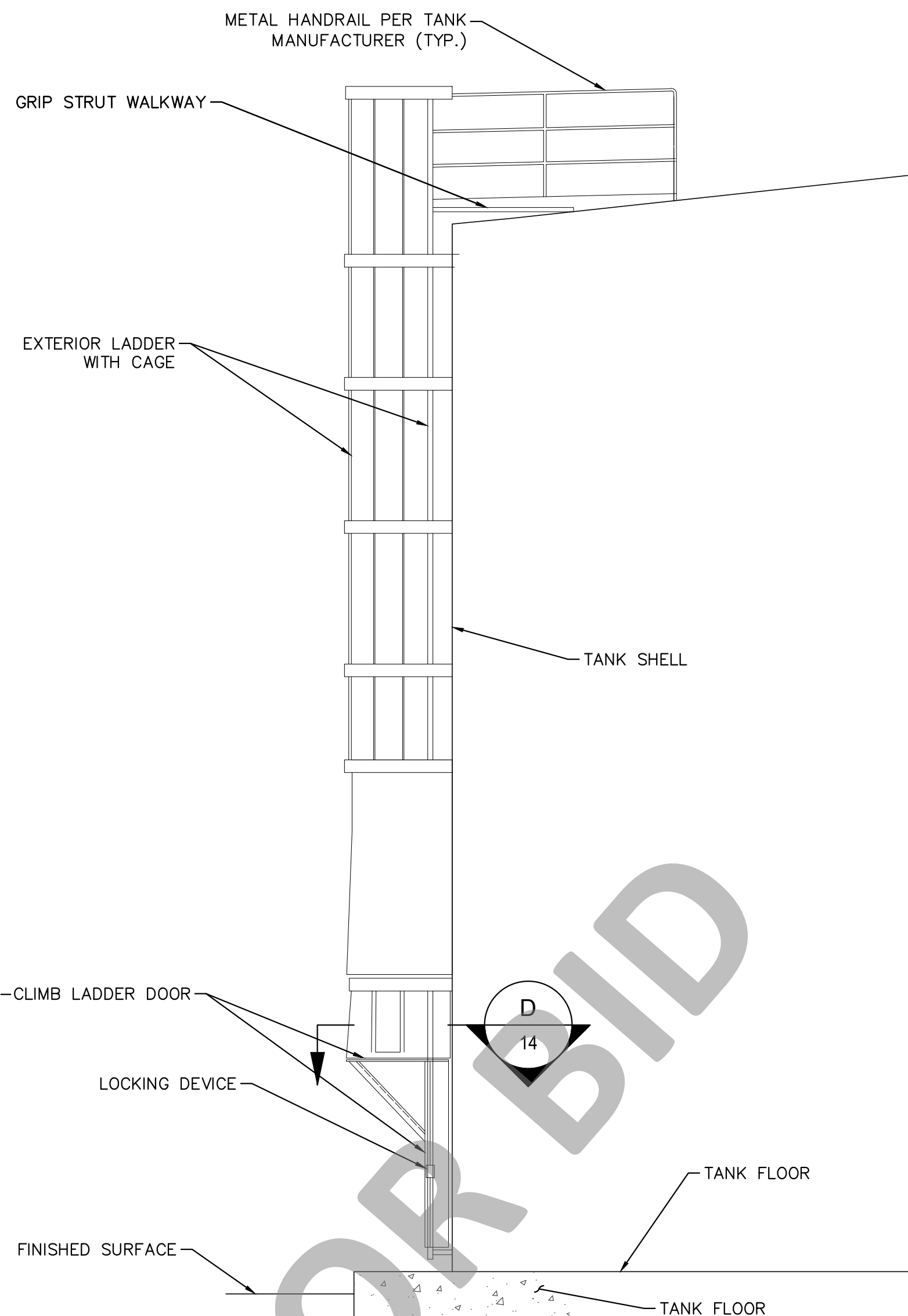
SHEET 13 OF 17

RE-BID SET



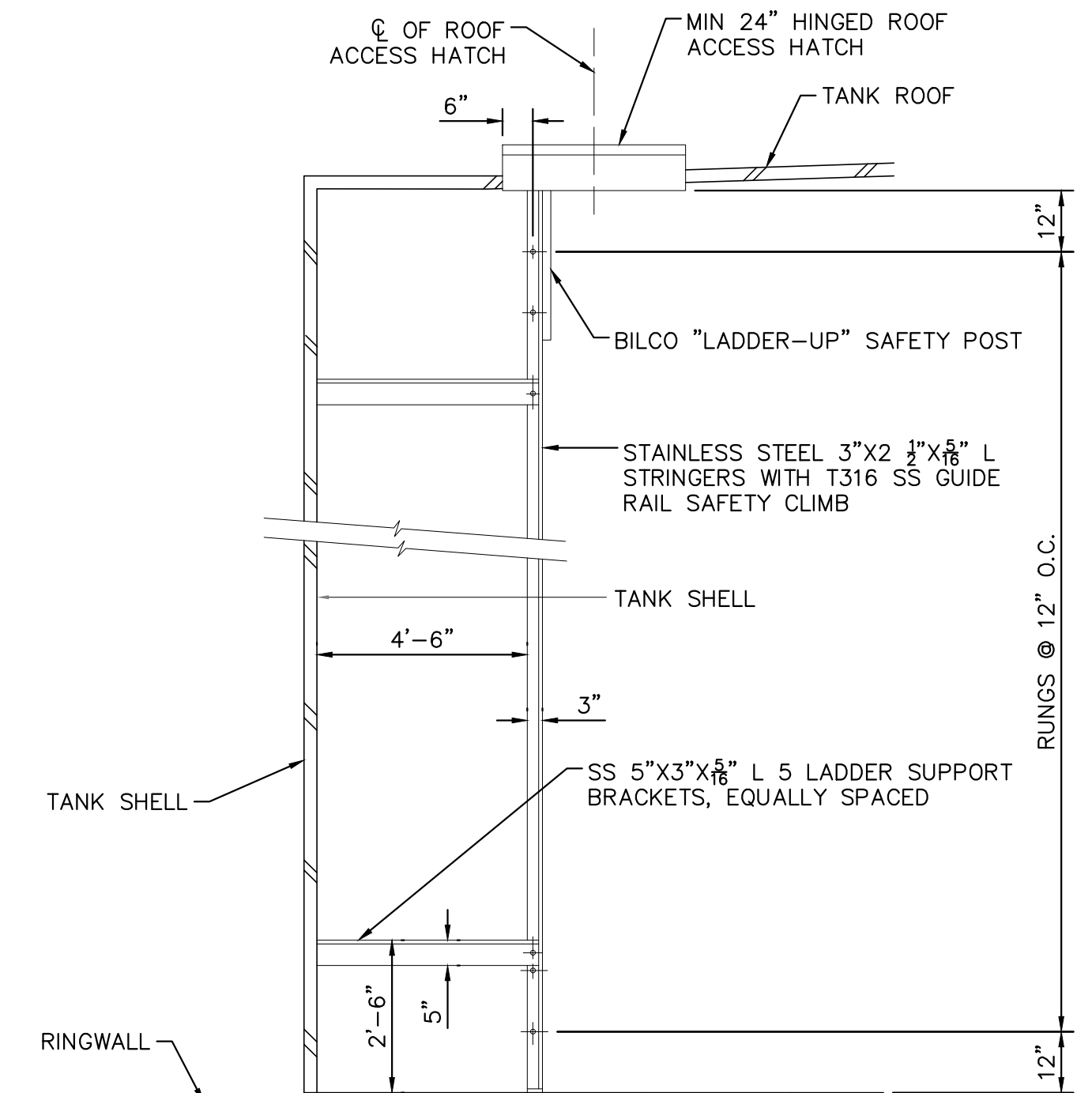
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A EXTERIOR LADDER
14 SCALE: NTS



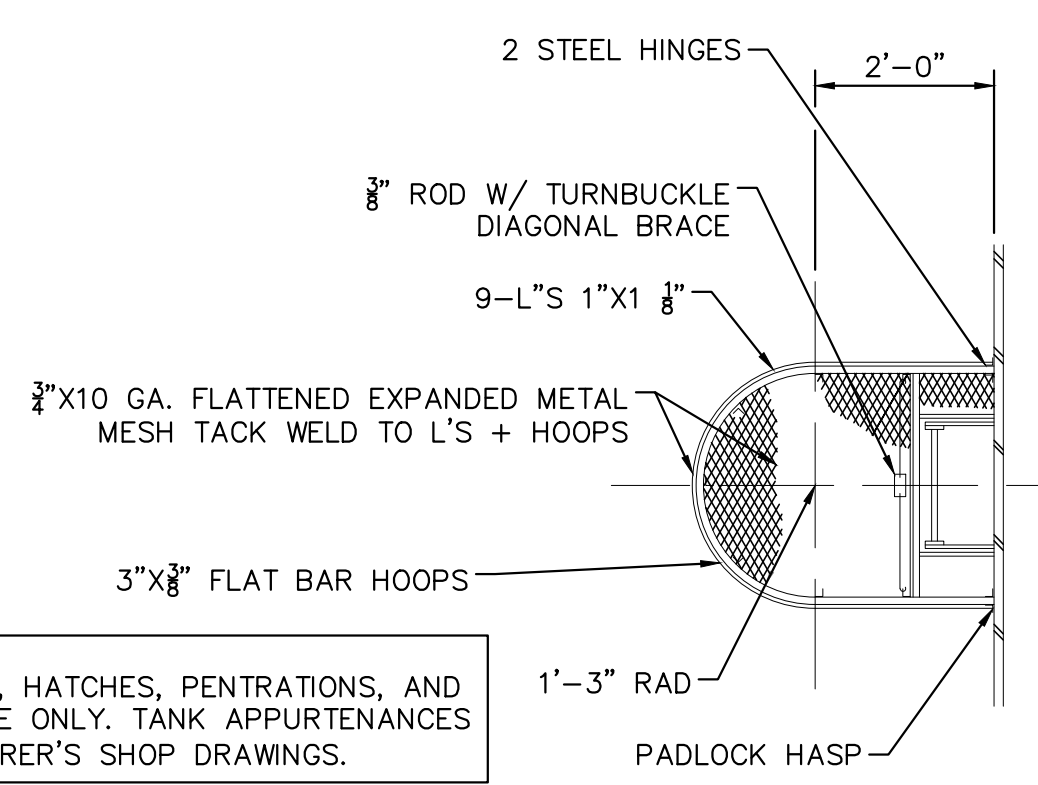
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B SECTION 1
14 SCALE: NTS



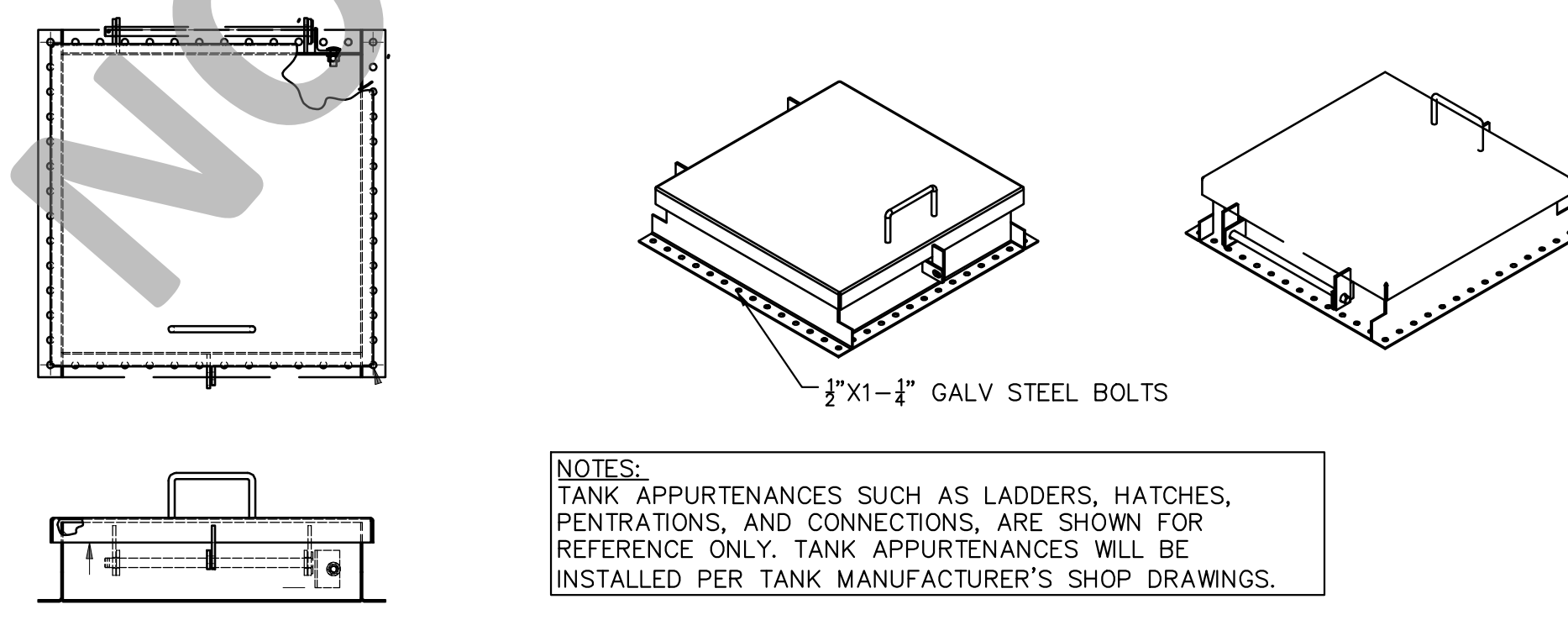
NOTES:
TANK APPURTENANCES SUCH AS LADDERS, HATCHES, PENETRATIONS, AND CONNECTIONS, ARE SHOWN FOR REFERENCE ONLY. TANK APPURTENANCES WILL BE INSTALLED PER TANK MANUFACTURER'S SHOP DRAWINGS.

C INTERIOR ACCESS LADDER
14 SCALE: NTS



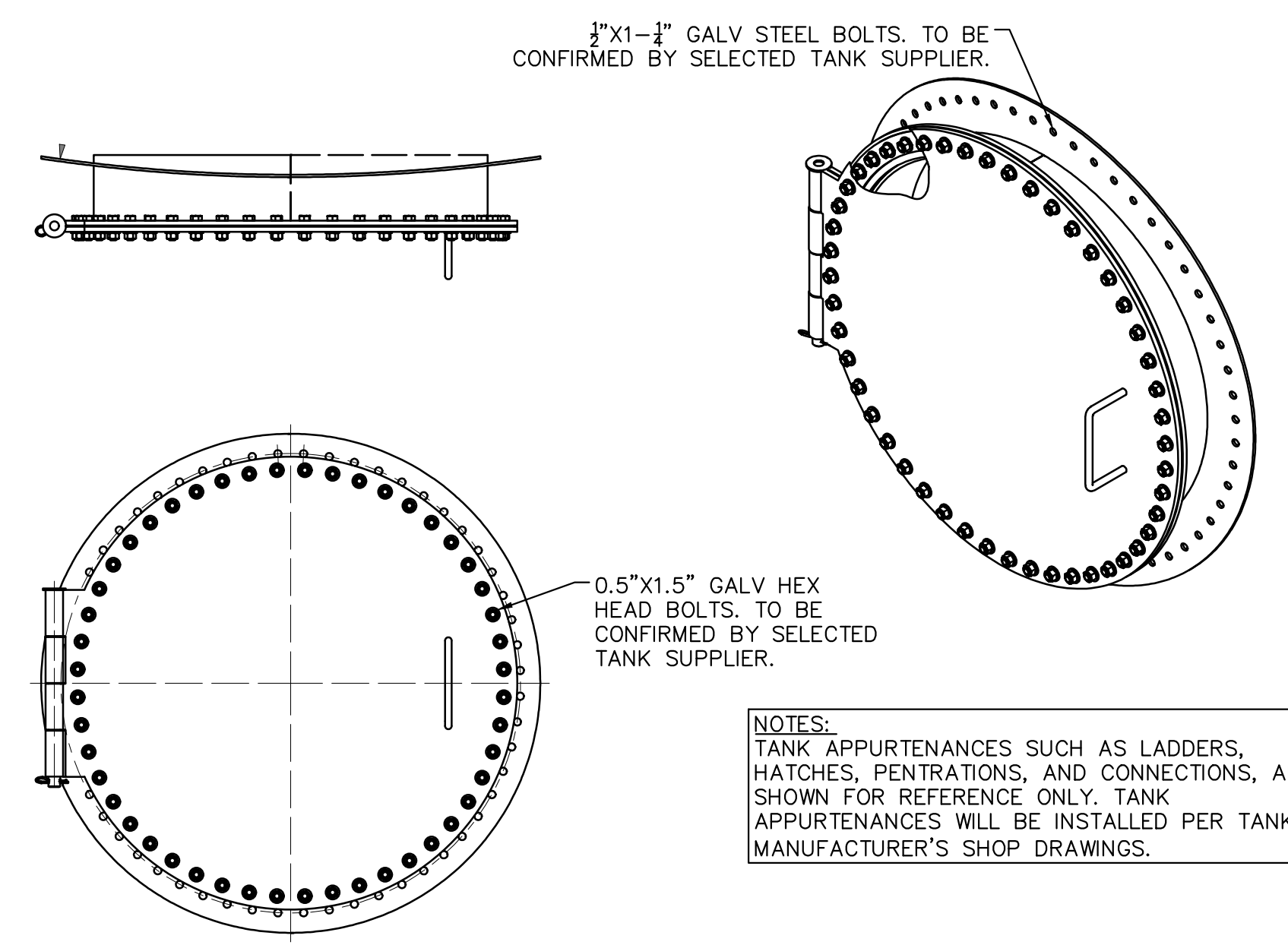
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D SECTION 2
14 SCALE: NTS



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E ACCESS HATCH
14 SCALE: NTS



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F TYPICAL HINGED MANWAY
14 SCALE: NTS

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OR
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TWO WORKING DAYS BEFORE YOU DIG

BENCHMARK:
CCS83 ZONE 5, NAD83(2011), EPOCH 2010.0

BASIS OF BEARINGS:
FD GLO BRASS CAP UP 0.6', CN 1/16 COR S.12, PER RS 103/74.
ELEVATION DETERMINED VIA STATIC GPS OBSERVATION, PROCESSED THROUGH OPUS.
NAVD-88 ELEV = 3066.588'



Kimley»Horn
401 B STREET, SUITE 600, SAN DIEGO, CA 92101
PHONE: (619) 234-9411 WWW.KIMLEY-HORN.COM
PREPARED UNDER THE SUPERVISION OF:
SARP SEKEROGLU R.C.E. No. 71474 EXP. 12/31/2025 04/10/2024

REVISIONS	
DESCRIPTION	APPR. DATE
ADDENDUM NO. 2	6/24
ADDENDUM NO. 5	6/24

WATER TANK REPLACEMENT PLANS APPROVED BY:
SAN BERNARDINO COUNTY - PUBLIC WORKS
SPECIAL DISTRICTS

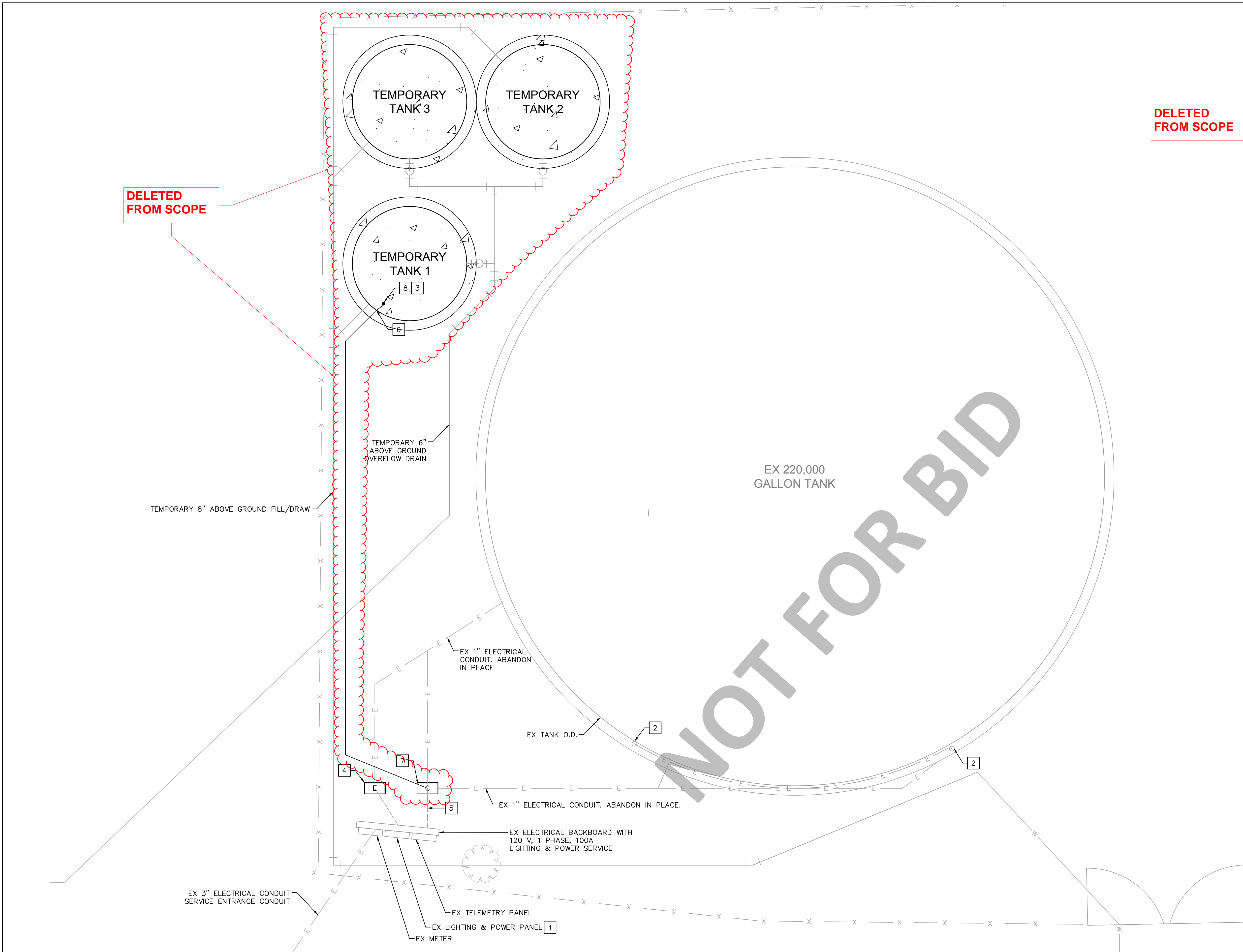
07/18/2024

ASSISTANT DIRECTOR	REVIEWER	INITIAL	DATE
	PROJECT MANAGER		07/16/2024
	PM, DIVISION MANAGER		07/16/2024
	WAS, DIVISION MANAGER		07/17/2024

WATER TANK REPLACEMENT PLANS
APN: 0580-241-16-0000
MORONGO VALLEY WATER TANK
REPLACEMENT PROJECT
DETAILS

DWG NO.
30.30.00157
FILE NO.
SD003
SHEET 14 OF 17

RE-BID SET



DELETED FROM SCOPE

DELETED FROM SCOPE

ELECTRICAL NOTES

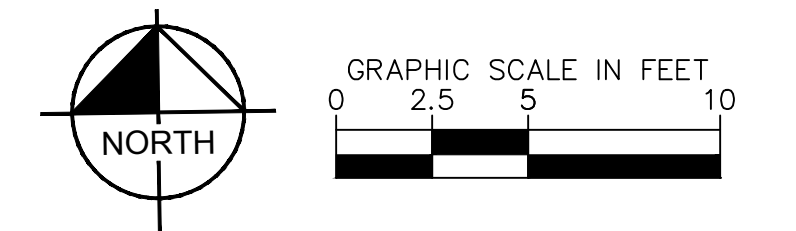
- 1 VERIFY POWER HAS BEEN DISCONNECTED PRIOR TO COMMENCING WORK. SEE PANEL SCHEDULE AND SINGLE LINE DIAGRAM ON DETAIL D, SHEET 17.
- 2 CONTRACTOR TO REMOVE TANK LIGHTING AND LIGHT FEEDERS.
- 3 DISTRICT PERSONNEL TO MAKE CONNECTION TO NEW TRANSDUCER AND CONFIRM SCADA CONNECTIVITY.
- 4 CONTRACTOR TO INTERCEPT POWER CONDUITS ENTERING TANK AND STUB THEM UP FOR FUTURE INTERCONNECTIONS. SEE SHEET 15. PLACE PULLBOX OVER CONDUIT INTERCONNECTION POINT. SEE DETAIL C, SHEET 17. INSTALL MULE TAPE IN TEMPORARY 1" PVC COATED RGS ABOVE GROUND CONDUIT.
- 5 REPLACE COMMUNICATION WIRES EXTENDING BACK TO TELEMETRY PANEL, AND EXTEND THEM TO TRANSDUCER RELOCATED TO THE TEMPORARY TANK.
- 6 MOUNT 1" RGS CONDUIT ALONG NEW TANK WALL AND MAKE FINAL CONNECTION TO 6"x6" JUNCTION BOX AT TOP OF TANK.
- 7 INSTALL 1" PVC COATED RGS ABOVE GROUND CONDUIT FROM PULLBOX TO BASE OF TEMPORARY TANK. SEE TRANSITION DETAIL B, SHEET 17. TERMINATE WIRE ON TRANSDUCER AT THE TOP OF THE TANK. REPLACE WIRE FEEDING TRANSDUCER WITH AN EQUAL. EXTEND CABLE FROM THE TELEMETRY PANEL TO THE TRANSDUCER'S NEW LOCATION.
- 8 RECONNECT RELOCATED TRANSDUCER TO THE TEMPORARY TANK. CONTRACTOR TO COMPLETE NECESSARY COMMUNICATION AND CONTROL TERMINATIONS FROM IN FIELD EQUIPMENT TO TELEMETRY PANEL AS NECESSARY FOR A COMPLETE WORKING SYSTEM.

LEGEND

- EXISTING UNDER GROUND ELECTRICAL CONDUIT - REUSE
- - - - - ABANDONED ELECTRICAL/COMMUNICATION CONDUIT
- ABOVE GROUND ELECTRICAL CONDUIT
- [E] PULL BOX (SIZE AS REQUIRED)
- [C]

NOTES

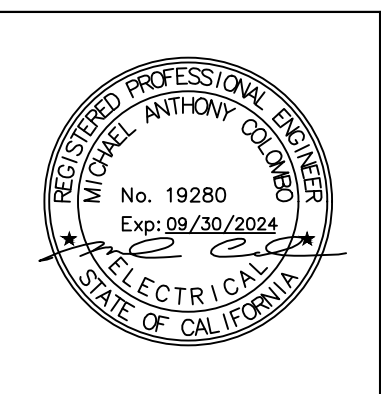
1. CONFIRM HOOKUP REQUIREMENTS FOR ELECTRICAL AND MECHANICAL EQUIPMENT PRIOR TO INSTALLING UNDERGROUND CONDUIT AND STUB-UPS. MISSING CONDUITS, INCORRECT SIZING, OR OTHER ISSUES MUST BE BROUGHT TO THE ATTENTION OF THE ENGINEER PRIOR TO BACKFILL.
2. CONDUIT ROUTING SHOWN IS GENERALLY DIAGRAMMATIC AND DOES NOT INDICATE TRENCH WIDTH OR TRENCH LAYOUT. FOR CONDUITS OUTSIDE OF BUILDINGS, IF THE CONTRACTOR WANTS TO RUN CONDUITS IN ROUTES OTHER THAN THOSE SHOWN, THEY SHALL SPECIFY THE REASON FOR THE CHANGE AND SUBMIT THE PLAN FOR APPROVAL PRIOR TO INSTALLATION.
3. ALL WORK SHALL CONFORM TO LOCAL CODES AND NATIONAL ELECTRIC CODE.
4. CONFIRM HOOKUP REQUIREMENTS FOR ELECTRICAL AND MECHANICAL EQUIPMENT PRIOR TO INSTALLING UNDERGROUND CONDUIT AND STUB-UPS. MISSING CONDUITS, INCORRECT SIZING, OR OTHER ISSUES MUST BE BROUGHT TO THE ATTENTION OF ENGINEER PRIOR TO BACKFILL.
5. INSTALL UNDERGROUND NON-DUCTBANK CONDUITS PER ELECTRICAL DETAIL A SHEET 17.
6. CONDUIT TRANSITIONS SHALL BE PER EXPOSED CONDUIT TRANSITION DETAIL B, SHEET 17.
7. REPAIR SURFACE TO PREVIOUS CONDITION FOR ALL UNDERGROUND CONDUIT ROUTES. GROUT, CAULK, AND PAINT ANY PENETRATIONS INTO STRUCTURES FOR WATER TIGHT SEAL.
8. USE SST EXPANSION WEDGE ANCHORS OR EPOXY ANCHORS AS NECESSARY FOR EQUIPMENT MOUNTING.
9. SEE SPECIFICATIONS AND EXPOSED TRANSITION DETAIL OR EQUIPMENT SPECIFIC DETAIL FOR CONDUIT TRANSITION MATERIALS AND METHODS FROM BELOW GROUND TO EXPOSED PORTIONS OF RUN.
10. CONDUITS OVER 15 FT LENGTH (EITHER EMPTY OR WITH CONDUITS SIZED LESS THAN #8 AWG). SHALL INCLUDE A POLY PULL STRING. STRING SHALL BE TIED OFF AT EACH END.
11. USE CONDUIT SPACERS TO SUPPORT CONDUITS AND MAINTAIN SPACING (3" INTERVALS).
12. MAXIMUM DEPTH OF TRENCH SHALL BE 42". DESIGN TRENCH AND INSTALL TO MAINTAIN 6" VERTICAL CLEARANCE AND 12" HORIZONTAL CLEARANCE FROM PIPES.



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BENCHMARK:
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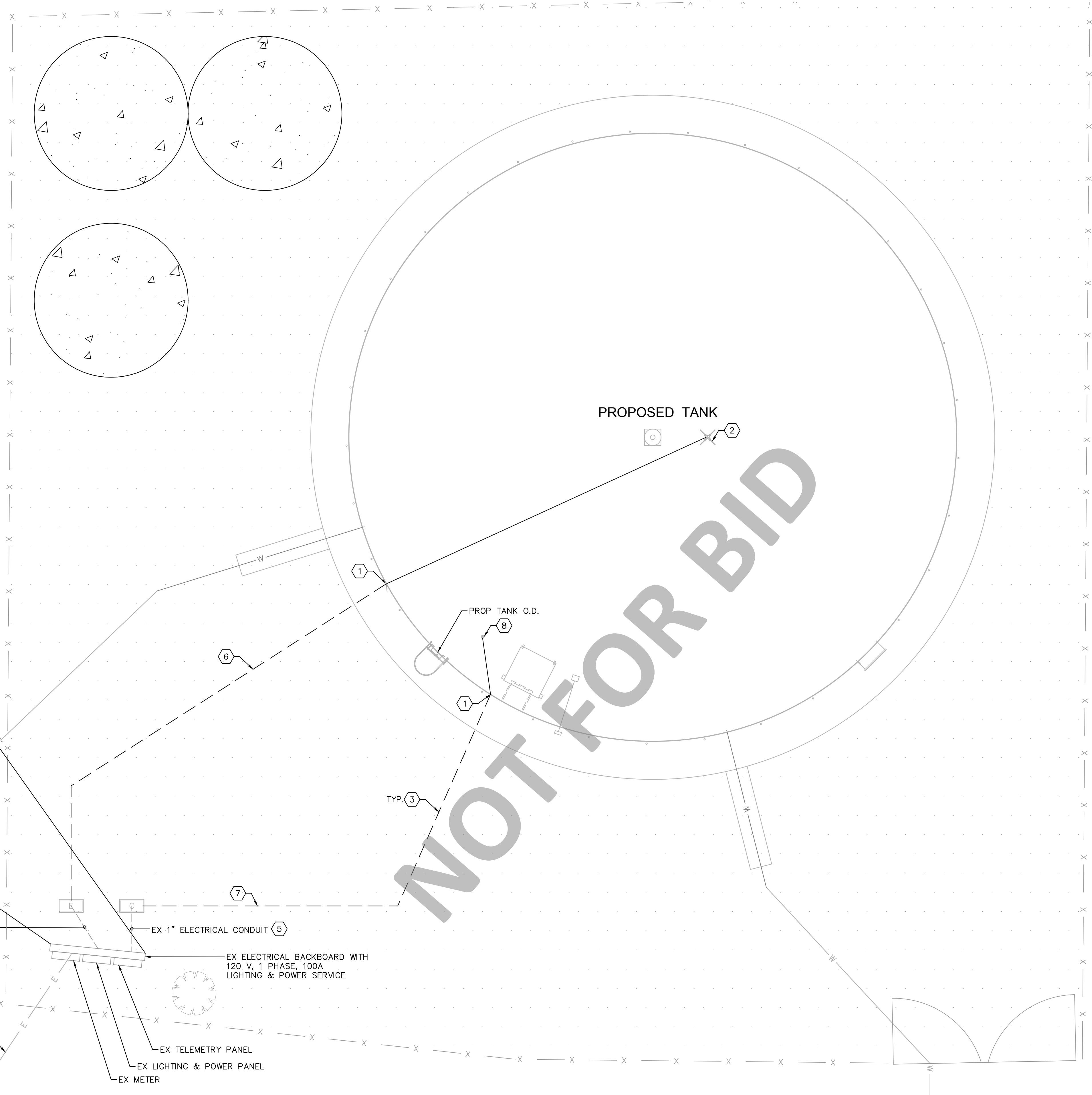
WATER TANK REPLACEMENT PLANS APPROVED BY:
 SAN BERNARDINO COUNTY - PUBLIC WORKS
 SPECIAL DISTRICTS

07/18/2024

ASSISTANT DIRECTOR	REVIEWER	INITIAL	DATE
	PROJECT MANAGER		07/16/2024
	PM, DIVISION MANAGER		07/16/2024
	WAS, DIVISION MANAGER		07/17/2024

WATER TANK REPLACEMENT PLANS	DWG NO. 30.30.00157
APN: 0580-241-16-0000 MORONGO VALLEY WATER TANK REPLACEMENT PROJECT	FILE NO. SD003
TEMPORARY ELECTRICAL PLAN	SHEET 15 OF 17

RE-BID SET



ELECTRICAL NOTES

- 1 CONNECT ELECTRICAL CONDUIT TO TANK
- 2 CONTRACTOR TO INSTALL TIDAL WAVE WATER MIXER PER MANUFACTURER SPECIFICATIONS FOR A COMPLETE WORKING SYSTEM. FINAL LOCATION OF THE MIXER TO BE DETERMINED BY THE TANK MANUFACTURER DURING CONSTRUCTION.
- 3 SEE DETAIL A SHEET 17 FOR BEDDING AND TRENCHING.
- 4 EXTEND FEEDER CONDUCTORS FROM THE LIGHTING AND POWER PANEL TO MIXER LOCATED AT THE TANK. REUSE EXISTING CONDUIT FROM PULLBOX TO LIGHTING AND POWER PANEL. SEE PANEL SCHEDULE ON SHEET 17, DETAIL E.
- 5 REPLACE COMMUNICATION WIRES EXTENDING BACK TO TELEMETRY PANEL, AND EXTEND THEM TO TRANSDUCER RELOCATED TO THE NEW TANK. REUSE EXISTING CONDUIT FROM PULLBOX TO TELEMETRY PANEL.
- 6 INSTALL 1" SCHED 40 PVC UNDERGROUND CONDUIT WITH (2) #12 AWG AND (1) #12 GND WIRE FROM PULLBOX TO BASE OF TANK AND TRANSITION TO PVC COATED RGS CONDUIT. SEE TRANSITION DETAIL B, 17. TERMINATE WIRE AT MIXER.
- 7 INSTALL 1" SCHED 40 PVC UNDERGROUND CONDUIT FROM PULLBOX TO BASE OF TANK, AND TRANSITION TO PVC COATED RGS CONDUIT. SEE TRANSITION DETAIL B, 17. REPLACE WIRE FEEDING EXISTING TRANSDUCER WITH EQUAL FROM THE TELEMETRY PANEL TO THE TRANSDUCER'S NEW LOCATION. TERMINATE WIRE ON TRANSDUCER AT THE TOP OF THE TANK.
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LEGEND

- EXISTING UNDER GROUND ELECTRICAL CONDUIT - REUSE
- ABOVE GROUND ELECTRICAL CONDUIT
- [E] [C] PULL BOX (SIZE AS REQUIRED)

NOTES

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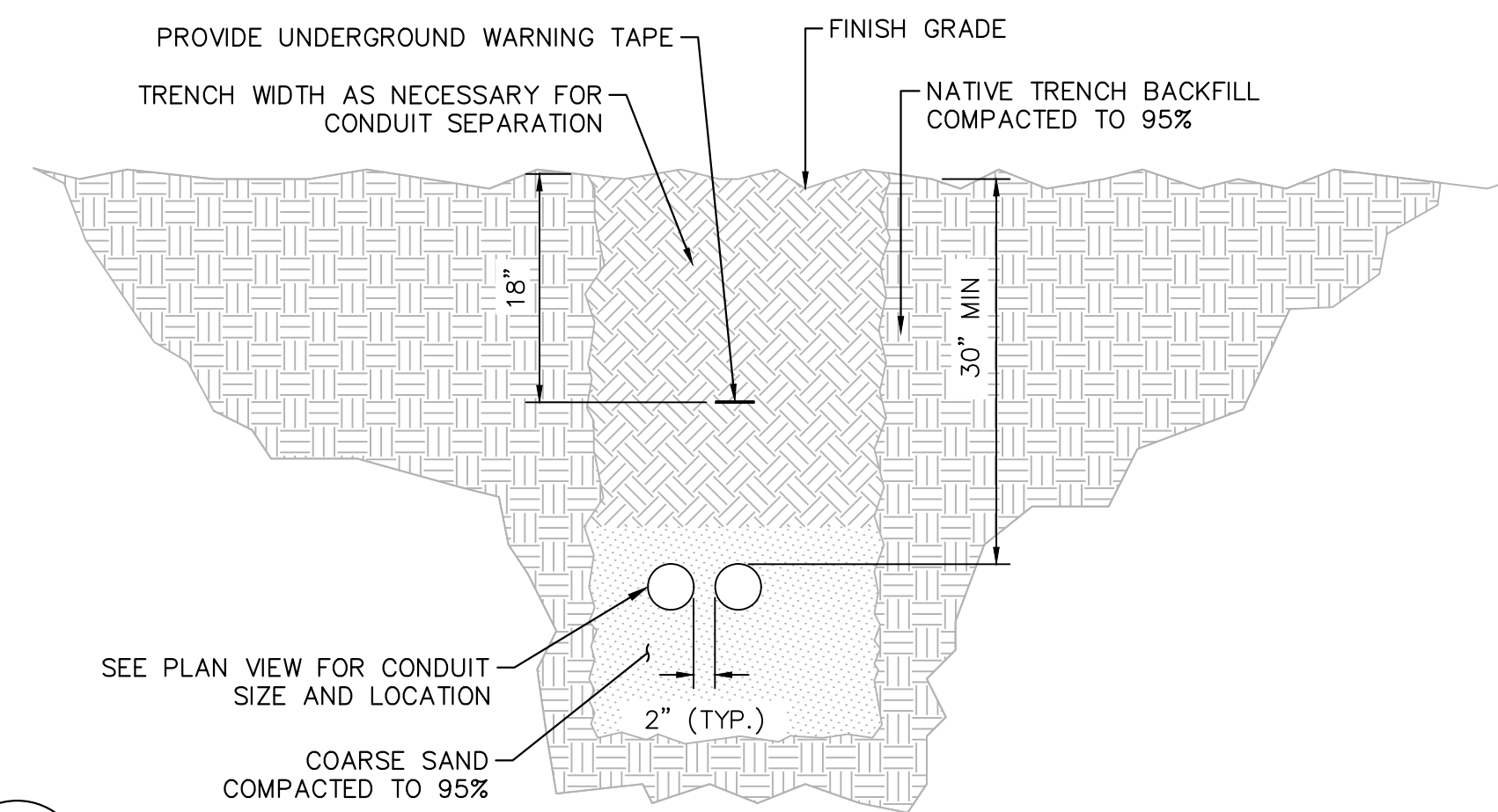
WATER TANK REPLACEMENT PLANS APPROVED BY:
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07/18/2024

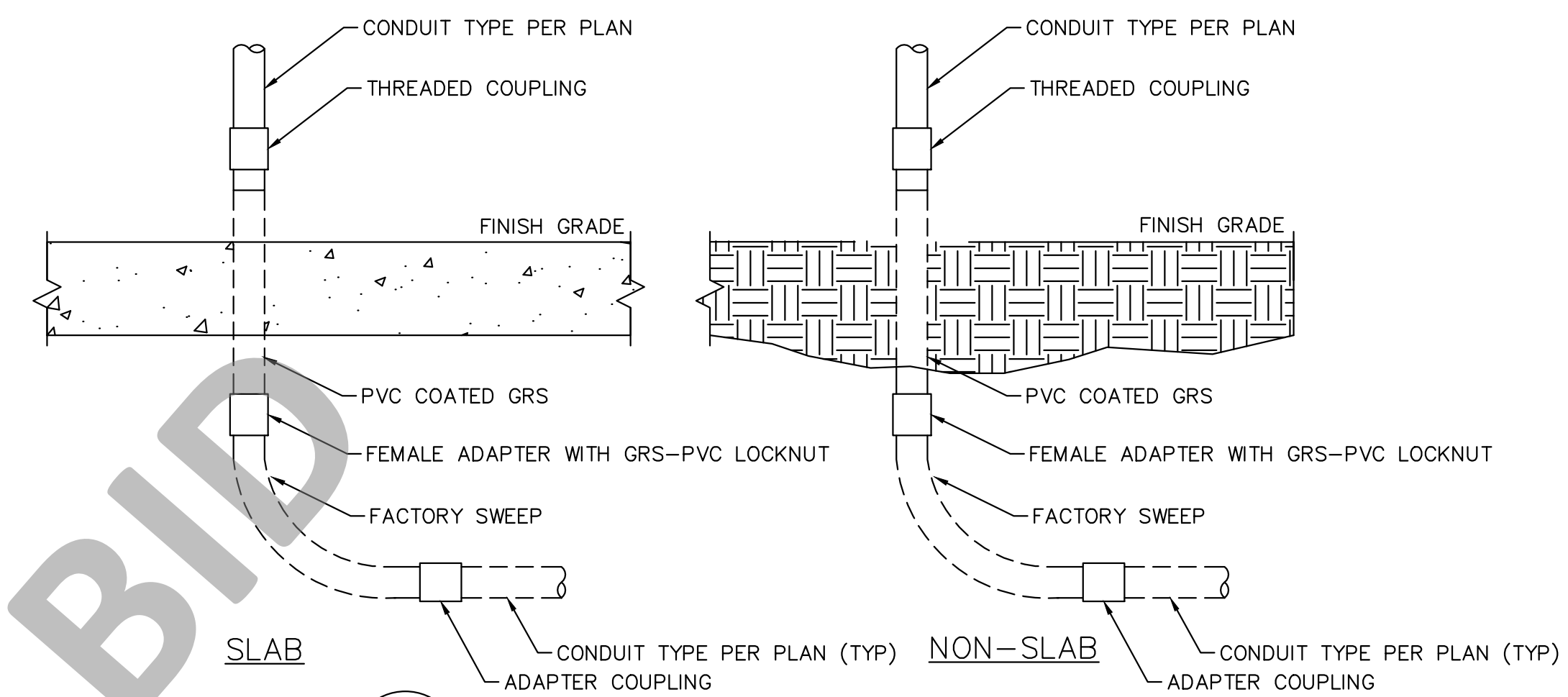
ASSISTANT DIRECTOR	REVIEWER	INITIAL	DATE
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WATER TANK REPLACEMENT PLANS		DWG NO.
APN: 0580-241-16-0000 MORONGO VALLEY WATER TANK REPLACEMENT PROJECT		30.30.00157
ELECTRICAL SITE PLAN		FILE NO. SD003
		SHEET 16 OF 17

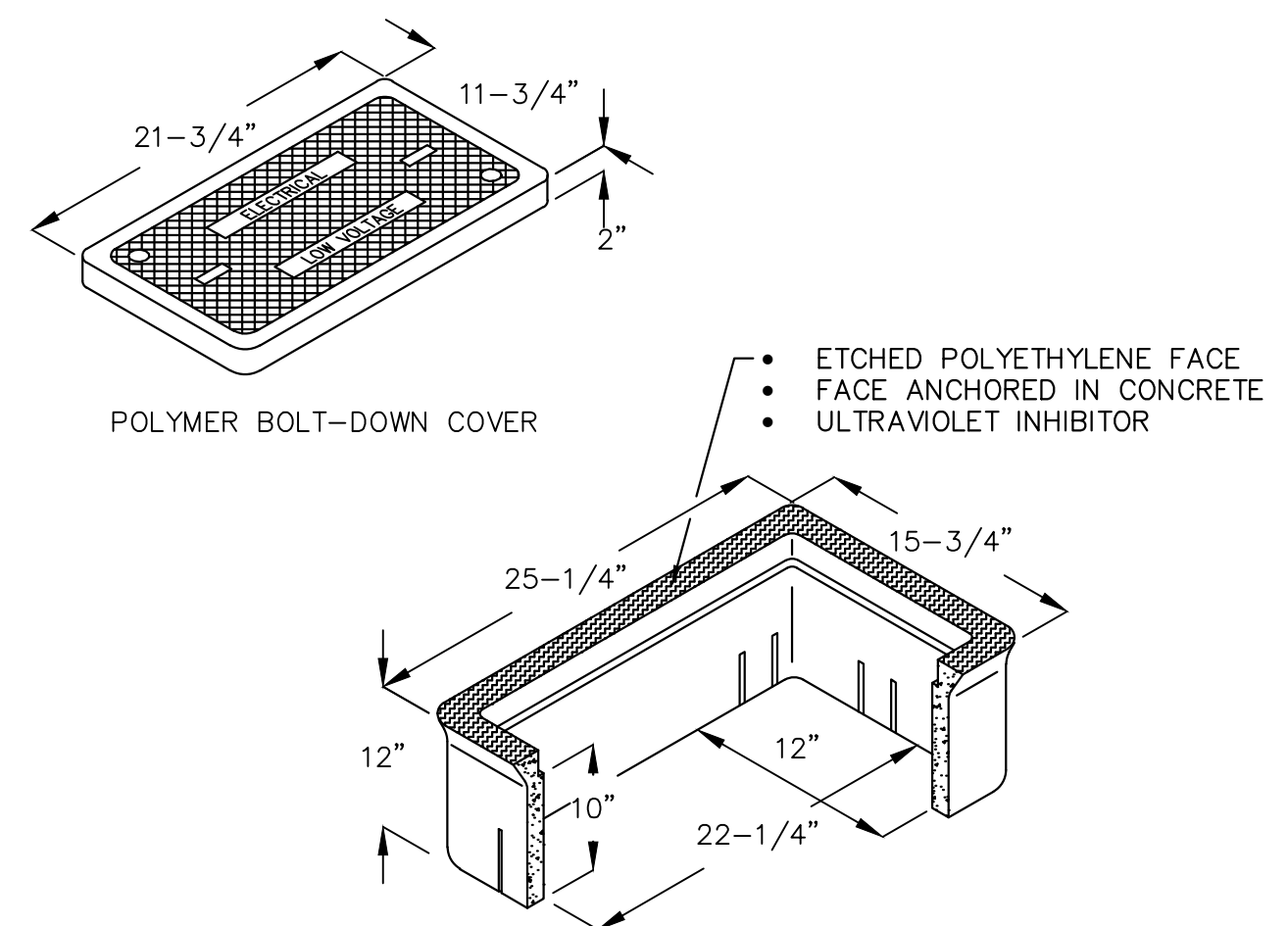
RE-BID SET



A
17
LOW VOLTAGE DUCT BANK TRENCH DETAIL
SCALE: N.T.S.



B
17
EXPOSED CONDUIT TRANSITION DETAIL
SCALE: N.T.S.



C
17
ELECTRICAL PULLBOX DETAIL
SCALE: N.T.S.

PANEL: "LP"

VOLTAGE: 120/240
PHASE WIRES: 1Ø, 3W
SCCR (AMPS): 10,000
SOURCE: SES

PANEL BUS: 100 AMPS
MAIN: 100 BREAKER

DESCRIPTION	VA	CB	CKT	A	B	CKT	CB	VA	DESCRIPTION
SPACE			1	0.0		2			SPACE
EXISTING	1920	20/1	3		21.6	4	20/1	670	MIXER
SPARE		20/1	5	16.0		6	20/1	1920	OUTLET
TELEMETRY POWER	1920	20/1	7		16.0	8			SPACE
SPACE			9	0.0		10			SPACE
SPACE			11		0.0	12			SPACE
SPACE			13	0.0		14			SPACE
SPACE			15		0.0	16			SPACE
SPACE			17	0.0		18			SPACE
SPACE			19		0.0	20			SPACE
			TOTALS	16.0		37.6		AMPS	

LOAD CALCULATIONS:
SUBTOTAL (VA): 6430
+25% PER NEC (VA): N/A
TOTAL (VA): 6430 @ 240V, 1Ø = 26.8 AMPS

D
17
PANEL SCHEDULE
SCALE: N.T.S.

NOT FOR BID

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WATER TANK REPLACEMENT PLANS

APN: 0580-241-16-0000
MORONGO VALLEY WATER TANK REPLACEMENT PROJECT

ELECTRICAL DETAILS

DWG NO.
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SHEET 17 OF 17

RE-BID SET