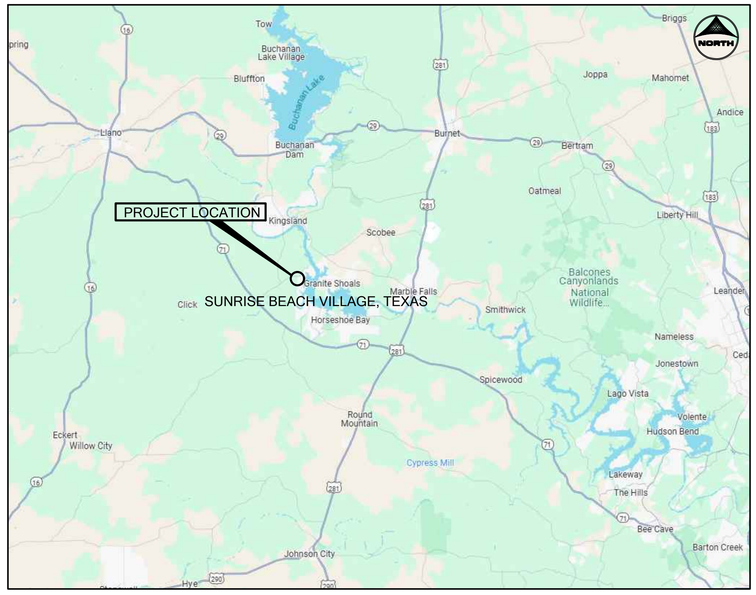
CITY OF SUNRISE BEACH VILLAGE, TEXAS
PHASE 1 WATER SYSTEM IMPROVEMENTS
DRINKING WATER STORAGE (CLEARWELLS)

HRG PROJECT NO. 2303375

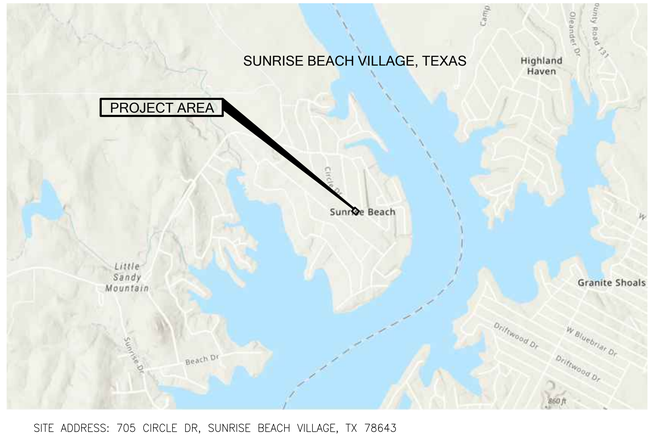
MARCH 2026

90% SUBMITTAL



VICINITY MAP

NOT TO SCALE



SITE ADDRESS: 705 CIRCLE DR, SUNRISE BEACH VILLAGE, TX 78643

PROJECT AREA MAP

NOT TO SCALE

ISSUED FOR REVIEW
NOT FOR CONSTRUCTION

BY: LEIGH A. THOMAS
P.E. REGISTRATION NO. 86887
DATE: MARCH 2025

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SUITE 150
AUSTIN, TX 78735
FIRM NO. F-11278

NOTE: PLAN SET SCALE BASED ON 22x34 PRINTS. IF OTHER PRINTS ARE USED, CONVERSION OF SCALE WOULD BE REQUIRED.

DRAFT (90%) - FOR CITY REVIEW ONLY

SHEET INDEX

TCEQ GROUND STORAGE TANK CONSTRUCTION NOTES

1. THE WATER STORAGE TANK MUST BE CONSTRUCTED IN ACCORDANCE WITH THE CURRENT TEXAS COMMISSION ON ENVIRONMENTAL QUALITY (TCEQ) RULES AND REGULATIONS FOR PUBLIC WATER SYSTEMS 30 TEXAS ADMINISTRATIVE CODE (TAC) CHAPTER 290 SUBCHAPTER D. WHEN CONFLICTS ARE NOTED WITH LOCAL STANDARDS, THE MORE STRINGENT REQUIREMENT SHALL BE APPLIED. AT A MINIMUM, CONSTRUCTION FOR PUBLIC WATER SYSTEMS MUST ALWAYS MEET TCEQ'S "RULES AND REGULATIONS FOR PUBLIC WATER SYSTEMS."

2. ALL FACILITIES FOR POTABLE WATER STORAGE SHALL BE COVERED AND DESIGNED, FABRICATED, ERECTED, TESTED AND DISINFECTED IN STRICT ACCORDANCE WITH CURRENT AMERICAN WATER WORKS ASSOCIATION (AWWA) STANDARDS AND SHALL BE PROVIDED WITH THE MINIMUM NUMBER, SIZE AND TYPE OF ROOF VENTS, MAN WAYS, DRAINS, SAMPLE CONNECTIONS, ACCESS LADDERS, OVERFLOWS, LIQUID LEVEL INDICATORS ON-SITE, AND OTHER APPURTENANCES AS SPECIFIED IN THESE RULES. DISINFECTION OF WATER STORAGE FACILITIES SHALL BE IN STRICT ACCORDANCE WITH CURRENT AWWA STANDARD C652-11 OR MOST RECENT.

3. DISINFECTION OF WATER STORAGE FACILITIES SHALL BE IN STRICT ACCORDANCE WITH CURRENT AWWA STANDARD C652-11 OR MOST RECENT.

4. DECHLORINATION OF DISINFECTING WATER SHALL BE IN STRICT ACCORDANCE WITH CURRENT AWWA STANDARD C655-09 OR MOST RECENT.

5. BOLTED TANKS SHALL BE DESIGNED, FABRICATED, ERECTED AND TESTED IN STRICT ACCORDANCE WITH CURRENT AWWA STANDARD D103. WELDED TANKS SHALL BE DESIGNED, FABRICATED, ERECTED AND TESTED IN STRICT ACCORDANCE WITH CURRENT AWWA STANDARD D100. THE ROOF OF ALL METAL TANKS SHALL BE DESIGNED AND ERECTED SO THAT NO WATER PONDS AT ANY POINT ON THE ROOF AND, IN ADDITION, NO AREA OF THE ROOF SHALL HAVE A SLOPE OF LESS THAN 0.75 INCH PER FOOT. CONCRETE TANK ROOFS SHALL BE CONSTRUCTED IN STRICT COMPLIANCE WITH THEIR RESPECTIVE AWWA STANDARD.

6. ROOF VENTS SHALL BE INSTALLED IN STRICT ACCORDANCE WITH CURRENT AWWA STANDARDS AND SHALL BE EQUIPPED WITH APPROVED SCREENS TO PREVENT ENTRY OF ANIMALS, BIRDS, INSECTS AND HEAVY AIR CONTAMINANTS. SCREENS SHALL BE FABRICATED OF STAINLESS STEEL MATERIAL AND SHALL BE 16 MESH OR FINER. SCREENS SHALL BE SECURELY CLAMPED IN PLACE WITH STAINLESS STEEL BANDS OR WIRES AND SHALL BE DESIGNED TO WITHSTAND WINDS OF NOT LESS THAN TANK DESIGN CRITERIA (UNLESS SPECIFIED OTHERWISE BY THE ENGINEER).

7. ALL ROOF OPENINGS SHALL BE DESIGNED IN ACCORDANCE WITH CURRENT AWWA STANDARDS. IF AN ALTERNATE 30 INCH DIAMETER ACCESS OPENING IS NOT PROVIDED IN A STORAGE TANK, THE PRIMARY ROOF ACCESS OPENING SHALL NOT BE LESS THAN 30 INCHES IN DIAMETER. OTHER ROOF OPENINGS REQUIRED ONLY FOR VENTILATING PURPOSES DURING CLEANING, REPAIRING OR PAINTING OPERATIONS SHALL BE NOT LESS THAN 24 INCHES IN DIAMETER OR AS SPECIFIED BY THE LICENSED PROFESSIONAL ENGINEER. AN EXISTING TANK WITHOUT A 30-INCH IN DIAMETER ACCESS OPENING MUST BE MODIFIED TO MEET THIS REQUIREMENT WHEN MAJOR REPAIR OR MAINTENANCE IS PERFORMED ON THE TANK. EACH ACCESS OPENING SHALL HAVE A RAISED CURBING AT LEAST FOUR INCHES IN HEIGHT WITH A LOCKABLE COVER THAT OVERLAPS THE CURBING AT LEAST TWO INCHES IN A DOWNWARD DIRECTION. WHERE NECESSARY, A GASKET SHALL BE USED TO MAKE A POSITIVE SEAL WHEN THE HATCH IS CLOSED. ALL HATCHES SHALL REMAIN LOCKED EXCEPT DURING INSPECTIONS AND MAINTENANCE.

8. OVERFLOWS SHALL BE DESIGNED IN STRICT ACCORDANCE WITH CURRENT AWWA STANDARDS AND SHALL TERMINATE WITH A GRAVITY-HINGED AND WEIGHTED COVER, AN ELASTOMERIC DUCKBILL VALVE, OR OTHER APPROVED DEVICE TO PREVENT THE ENTRANCE OF INSECTS AND OTHER NUISANCES. THE COVER SHALL FIT TIGHTLY WITH NO GAP OVER 1/16 INCHES. IF THE OVERFLOW TERMINATES AT ANY POINT OTHER THAN THE GROUND LEVEL, IT SHALL BE LOCATED NEAR ENOUGH AND AT A POSITION ACCESSIBLE FROM A LADDER OR THE BALCONY FOR INSPECTION PURPOSES. THE OVERFLOW(S) SHALL BE SIZED TO HANDLE THE MAXIMUM POSSIBLE FILL RATE WITHOUT EXCEEDING THE CAPACITY OF THE OVERFLOW(S). THE DISCHARGE OPENING OF THE OVERFLOW(S) SHALL BE ABOVE THE SURFACE OF THE GROUND AND SHALL NOT BE SUBJECT TO SUBMERGENCE.

9. ALL CLEARWELLS AND WATER STORAGE TANKS SHALL HAVE A LIQUID LEVEL INDICATOR LOCATED AT THE TANK SITE. THE INDICATOR CAN BE A FLOAT WITH A MOVING TARGET, AN ULTRASONIC LEVEL INDICATOR, OR A PRESSURE GAUGE CALIBRATED IN FEET OF WATER. IF AN ELEVATED TANK OR STANDPIPE HAS A FLOAT WITH MOVING TARGET INDICATOR, IT MUST ALSO HAVE A PRESSURE INDICATOR LOCATED AT GROUND LEVEL. PRESSURE GAUGES MUST NOT BE LESS THAN THREE INCHES IN DIAMETER AND CALIBRATED AT NOT MORE THAN TWO-FOOT INTERVALS. REMOTE READING GAUGES AT THE OWNER'S TREATMENT PLANT OR PUMPING STATION WILL NOT ELIMINATE THE REQUIREMENT FOR A GAUGE AT THE TANK SITE UNLESS THE TANK IS LOCATED AT THE PLANT OR STATION.

10. INLET AND OUTLET CONNECTIONS SHALL BE LOCATED SO AS TO PREVENT SHORT CIRCUITING OR STAGNATION OF WATER.

11. CLEARWELLS AND POTABLE WATER STORAGE TANKS SHALL BE THOROUGHLY TIGHT AGAINST LEAKAGE, SHALL BE LOCATED ABOVE THE GROUND WATER TABLE AND SHALL HAVE NO WALLS IN COMMON WITH ANY OTHER PLANT UNITS CONTAINING WATER IN THE PROCESS OF TREATMENT. ALL ASSOCIATED APPURTENANCES INCLUDING VALVES, PIPES AND FITTINGS SHALL BE TIGHT AGAINST LEAKAGE.

12. EACH CLEARWELL OR POTABLE WATER STORAGE TANK SHALL BE PROVIDED WITH A MEANS OF REMOVING ACCUMULATED SILT AND DEPOSITS AT ALL LOW POINTS IN THE BOTTOM OF THE TANK. DRAINS SHALL NOT BE CONNECTED TO ANY WASTE OR SEWAGE DISPOSAL SYSTEM AND SHALL BE CONSTRUCTED SO THAT THEY ARE NOT A POTENTIAL AGENT IN THE CONTAMINATION OF THE STORED WATER.

13. ALL CLEAR WELLS, GROUND STORAGE TANKS, STANDPIPES, AND ELEVATED TANKS SHALL BE PAINTED, DISINFECTED, AND MAINTAINED IN STRICT ACCORDANCE WITH CURRENT AWWA STANDARDS. HOWEVER, NO TEMPORARY COATINGS, WAX GREASE COATINGS, OR COATING MATERIALS CONTAINING LEAD WILL BE ALLOWED. NO OTHER COATINGS WILL BE ALLOWED WHICH ARE NOT APPROVED FOR USE (AS A CONTACT SURFACE WITH POTABLE WATER) BY THE UNITED STATES ENVIRONMENTAL PROTECTION AGENCY (EPA), NSF INTERNATIONAL, OR THE UNITED STATES FOOD AND DRUG ADMINISTRATION (FDA). ALL NEWLY INSTALLED COATINGS MUST CONFORM TO ANSI/NSF INTERNATIONAL STANDARD 61 AND MUST BE CERTIFIED BY AN ORGANIZATION ACCREDITED BY ANSI.

14. NO TANKS OR CONTAINERS SHALL BE USED TO STORE POTABLE WATER THAT HAS PREVIOUSLY BEEN USED FOR ANY NON-POTABLE PURPOSE. WHERE A USED TANK IS PROPOSED FOR USE, A LETTER FROM THE PREVIOUS OWNER OR OWNERS MUST BE SUBMITTED TO THE COMMISSION WHICH STATES THE USE OF THE TANK.

15. ACCESS MANWAYS IN THE RISER PIPE, SHELL AREA, ACCESS TUBE, BOWL AREA OR ANY OTHER LOCATION OPENING DIRECTLY INTO THE WATER COMPARTMENT SHALL BE LOCATED IN STRICT ACCORDANCE WITH CURRENT AWWA STANDARDS. THESE OPENINGS SHALL NOT BE LESS THAN 24 INCHES IN DIAMETER. HOWEVER, IN THE CASE OF A RISER PIPE OR ACCESS TUBE OF 36 INCHES IN DIAMETER OR SMALLER, THE ACCESS MANWAY MAY BE 18 INCHES TIMES 24 INCHES WITH THE VERTICAL DIMENSION NOT LESS THAN 24 INCHES. THE PRIMARY ACCESS MANWAY IN THE LOWER RING OR SECTION OF A GROUND STORAGE TANK SHALL BE NOT LESS THAN 30 INCHES IN DIAMETER. WHERE NECESSARY, FOR ANY ACCESS MANWAY WHICH ALLOWS DIRECT ACCESS TO THE WATER COMPARTMENT, A GASKET SHALL BE USED TO MAKE A POSITIVE SEAL WHEN THE ACCESS MANWAY IS CLOSED.

16. SERVICE PUMP INSTALLATION TAKING SUCTION FROM STORAGE TANKS SHALL PROVIDE AUTOMATIC LOW WATER LEVEL CUTOFF DEVICES TO PREVENT DAMAGE TO THE PUMPS. THE SERVICE PUMP CIRCUITRY SHALL ALSO RESUME PUMPING AUTOMATICALLY ONCE THE MINIMUM WATER LEVEL IS REACHED IN THE TANK.

17. PURSUANT TO 30 TAC §290.44(B)(1), THE MAXIMUM ALLOWABLE LEAD CONTENT OF PIPES, PIPE FITTINGS, PLUMBING FITTINGS, AND FIXTURES IS 0.25 PERCENT.

DRAFT (90%) - FOR CITY REVIEW ONLY

DRAWN BY: OK JOB DATE: MARCH 2026
APPROVED: LT JOB NUMBER: 2303375
CAD DATE: 03/04/26
CAD FILE: J:\2023\2303375\CAD\DWGS - WATER PLANT FACILITY\G\02 INDEX SHEET.DWG

BAR IS ONE INCH ON OFFICIAL DRAWINGS. 0 1"
IF NOT ONE INCH, ADJUST SCALE ACCORDINGLY.

NO.	DATE	BY	REVISION DESCRIPTION
0	6/25/2025	LT	60% DESIGN PLANS SUBMISSION
1	3/4/2025	LT	90% DESIGN PLANS SUBMISSION

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TBPE FIRM NO. F-11278

ISSUED FOR REVIEW
NOT FOR CONSTRUCTION
BY: LEIGH A. THOMAS
P.E. REGISTRATION NO. 86887
DATE: MARCH 2026

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SUNRISE BEACH VILLAGE, TEXAS

GENERAL
INDEX SHEET & TCEQ NOTES

SHEET NO.
02 OF 23

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ABBREVIATIONS

@	AT
A	AMPS, AMPERES
AB	ANCHOR BOLT
ABDND	ABANDONED
AC	ALTERNATING CURRENT
ACC	ASPHALTIC CEMENT CONCRETE
AD	ACCESS DOOR, AIR DRYER
ADP	AUTO DIALER PNL
ADH	ADHESIVE
A/E	ARCHITECTURAL / ENGINEERING FIRM
AF	AMPERE FRAME
AFD	ADJUSTABLE FREQUENCY DRIVE
AFF	ABOVE FINISHED FLOOR
AFG	ABOVE FINISHED GRADE
AFUE	ANNUAL FUEL UTILIZATION EFFICIENCY
AH	ACCESS HATCH
AHU	AIR HANDLING UNIT
AIC	AMPERES INTERRUPTING CAPACITY
ALT	ALTERNATE
ALUM, AL	ALUMINUM
AMB	AMBIENT
ANCH	ANCHOR
ANOD	ANODIZED
ANSI	AMERICAN NATIONAL STANDARDS INSTITUTE
APPROX	APPROXIMATE, APPROXIMATELY
ARCH	ARCHITECT, ARCHITECTURAL
AS	AIR SEPARATOR
ASHRAE	AMERICAN SOCIETY OF HEATING, REFRIGERATING, AND AIR CONDITIONING ENGINEERS
ASTM	AMERICAN SOCIETY FOR TESTING AND MATERIALS
AT	AMPERE TRIP
ATS	AUTOMATIC TRANSFER SWITCH
AVG	AVERAGE
BC	BARE COPPER, BACK OF CURB
BD BM	BOND BEAM
BDD	BACKDRAFT DAMPER
BF	BLIND FLANGE
BFP	BACKFLOW PREVENTOR
BFV	BUTTERFLY VALVE
BHP	BRAKE HORSEPOWER
BLDG	BUILDING
BLK	BLOCK
B/	BOTTOM OF
BOD	BOTTOM OF DUCT
BOP	BOTTOM OF PIPE
BOT	BOTTOM
BOW	BOTTOM OF WALL
BRG	BEARING
BRK	BRICK
BTU	BRITISH THERMAL UNIT
BTUH	BTU PER HOUR
BTWN	BETWEEN
BV	BALL VALVE
C	CONDUIT, CELSIUS, C STRUCTURAL SHAPE
CAP	CAPACITY
CB	CIRCUIT BREAKER
CC	COILING COIL, CONSTRUCTION CASTING
CFH	CUBIC FEET PER HOUR
CFM	CUBIC FEET PER MINUTE
CH	CONCRETE HARDENER
CI	CAST IRON
CIP	CAST IN PLACE, CLEAN IN PLACE, CAST IRON PIPE
CJ	CONTROL OR CONSTRUCTION JOINT
CKT	CIRCUIT
CL	CENTER LINE
CLG	CEILING, COOLING
CLR	CLEAR, CLEARANCE
CMPR	COMPRESSOR
CMU	CONCRETE MASONRY UNIT
CND	CONDENSATE
CO	CLEAN OUT
COL	COLUMN
COMP	COMPRESSION
CONC	CONCRETE
COND	CONDENSER, CONDUIT
CONT	CONTINUE (OUS)
CONTR	CONTRACTOR
COORD	COORDINATE
CORP	CORPORATION
CP	CONTROL POINT
CPT	CONTROL POWER TRANSFORMER, CARPET
CRS	COURSES
CT	CURRENT TRANSFORMER
CTRS	CENTERS
CU	CONDENSING UNIT, COPPER
CU FT	CUBIC FEET
CU IN	CUBIC INCH
CY	CUBIC YARD
D	DECANT
DB	DRY BULB TEMPERATURE, DIRECT BURIED
DC	DIRECT CURRENT
DEG	DEGREE
DEMO	DEMOLITION
DEPT	DEPARTMENT
DI	DUCTILE IRON
DIA,ø	DIAMETER
DIM	DIMENSION
DIP	DUCTILE IRON PIPE
DL	DEAD LOAD
DN	DOWN
DPR	DAMPER
DRN	DRAIN
DS	DOWN SPOUT
DTL	DETAIL(S)
DWG	DRAWING(S)
DWL	DOWEL
DX	DIRECT EXPANSION
E	EAST
EA	EACH, EXHAUST AIR
ECC	ECCENTRIC
ECP	ENVIRONMENTAL CONTROL PANEL
EER	ENERGY EFFICIENCY RATIO
EF	EXHAUST FAN, EACH FACE
EFF	EFFICIENCY, EFFLUENT
EG	EXHAUST GRILLE, EQUIPMENT GENERATOR
EJ	EXPANSION JOINT
EJB	ELECTRICAL JUNCTION BOX
EL	ELEVATION
ELEC	ELECTRICAL
EMBED	EMBEDMENT
ENCL	ENCLOSURE
ENG	ENGINEER
EP	EXPLOSION PROOF, EPOXY PAINT
EQ, EQUIP	EQUAL, EQUIPMENT
EQMT	EQUIPMENT
ESP	EXTERNAL STATIC PRESSURE
ETM	ELAPSED TIME METER
EUH	ELECTRIC UNIT HEATER
EVAP	EVAPORATOR
EW	EACH WAY
EWEF	EACH WAY EACH FACE
EX, EXIST	EXISTING
EXP	EXPANSION
EXT	EXTERIOR, EXTERNAL
F	DEGREES FAHRENHEIT, FLUORIDE
FAC	FLANGED ADAPTOR COUPLING
FCA	FLANGE COUPLING ADAPTOR
FD	FIRE DAMPER, FLOOR DRAIN
FDN	FOUNDATION
FE	FLANGED END, FIRE EXTINGUISHER
FF	FINISHED FLOOR
FH	FIRE HYDRANT
FIL	FILTRATE
FIN	FINISH
FL	FLOW LINE, FLUORESCENT
FLA	FULL LOAD AMPS
FLEX	FLEXIBLE
FLG	FLANGE
FLR	FLOOR
FM	FORCEMAIN
FN	FENCE
FO	FIBER OPTICS
FPM	FEET PER MINUTE
FPS	FEET PER SECOND
FR	FLOOR REGISTER
FRP	FIBERGLASS REINFORCED PLASTIC OR PNL
FT	FEET, FLOW TRANSMITTER
FTG	FOOTING
FV	FIELD VERIFY
G	GATE, GROUND
GA	GAUGE, GAGE
GAL	GALLONS
GALV	GALVANIZED
GB	GYPSUM BOARD
GC	GAS CHROMATOGRAPH (FLOW COMPUTER)
GEN	GENERATOR
GFI	GROUND FAULT INTERRUPTER
GFR	GROUND FAULT RELAY
GFS	GROUND FAULT SLAVE (PROTECTED UPSTREAM)
GL	GLASS
GPD	GALLONS PER DAY
GPH	GALLONS PER HOUR
GPM	GALLONS PER MINUTE
GRTG	GRATING
GV	GATE VALVE
HB	HOSE BIBB
HC	HEATING COIL, HANDICAP (PED)
HCAP	HANDICAP (PED)
HD	HEAD
HDPE	HIGH DENSITY POLYETHYLENE
HDR	HEADER
HG	MERCURY
HH	HANDHOLE
HID	HIGH INTENSITY DISCHARGE
HMA	HOT MIX ASPHALT
HOA	HAND OFF AUTOMATIC
HORZ	HORIZONTAL
HP	HORSEPOWER, HIGH POINT, HIGH PRESSURE
HPG	HIGH PRESSURE GAS
HR	HOUR
HT	HEIGHT
HTG	HEATING
HVAC	HEATING, VENTILATING, AIR CONDITIONING
HZ	HERTZ
IBC	INTERNATIONAL BUILDING CODE
IFC	INTERNATIONAL FIRE CODE
IPC	INTERNATIONAL PLUMBING CODE
IMC	INTERNATIONAL MECHANICAL CODE
ID	INSIDE DIAMETER
IE	INVERT ELEVATION
I/F, IF	INSIDE FACE
IN	INCHES
INSUL	INSULATION
INT	INTERIOR
INVT	INVERT
IP	INTERMEDIATE PRESSURE
JB	JUNCTION BOX
JT, JNT	JOINT
K	STRUCTURAL BAR JOIST SHAPE
KCMIL	THOUSAND CIRCULAR MILS
KVA	KILOVOLT – AMPERES
KW	KILOWATTS
KWH	KILOWATT – HOUR
L	LOUVER, ANGLE
LA	LIGHTNING ARRESTOR
LAB	LABORATORY
LAP	LEVEL ALARM PNL
LAT	LEAVING AIR TEMP, LATENT, LATITUDE
LB(S)	POUND(S)
LD	LINEAR DIFFUSER
LF	LINEAR FEET
LIN	LINEAR
LL	LIVE LOAD
LPG	LOW PRESSURE GAS
LS	LIMIT SWITCH, LIFT STATION
LT	LEVEL TRANSDUCER, LEFT
LTG	LIGHTING
M	METER
MA	MILLIAMPERES
MAINT	MAINTENANCE
MAS	MASONRY
MAX	MAXIMUM
MBH	ONE THOUSAND BTUH
MCA	MINIMUM CIRCUIT AMPACITY
MCC	MOTOR CONTROL CENTER
MD	MOTORIZED DAMPER
MECH	MECHANICAL
MFR	MANUFACTURER
MG	MILLION GALLON
MGD	MILLION GALLONS PER DAY
MH	MANHOLE, METAL HALIDE
MIN	MINIMUM
MISC	MISCELLANEOUS
MJ	MECHANICAL JOINT
MK	MARK
MM	MAG METER
MO	MASONRY OPENING
MOCP	MAXIMUM OVERCURRENT PROTECTION
MTD	MOUNTED
MTL	METAL
MW	MASONRY WALL
N	NEUTRAL, NORTH
N/A	NOT APPLICABLE
NC	NOISE CRITERIA, NORMALLY CLOSED
NEC	NATIONAL ELECTRICAL CODE
NEG	NEGATIVE
NFPA	NATIONAL FIRE PROTECTION ASSOCIATION
NFV	NEEDS FIELD VERIFICATION
NIC	NOT IN CONTRACT
NO	NORMALLY OPEN, NUMBER
NOM	NOMINAL
NPT	NATIONAL PIPE THREAD
NRP	NON–REMOVABLE PIN
NTS	NOT TO SCALE
OA	OUTSIDE AIR
OAT	OUTDOOR AIR TEMPERATURE
OC	ON CENTER
OD	OUTSIDE DIAMETER
OED	OPEN END DUCT
OFS	OFFSET
O/F, OF	OUTSIDE FACE, OPEN FACE, OVERFLOW
OH	OVERHEAD
OHE	OVERHEAD ELECTRIC
OPNG	OPENING
OPP	OPPOSITE
OSB	STRAN BOARD
P	POLE, PUMP
PART	PARTIAL
PB	PUSHBUTTON, PULL BOX, PANEL BOARD
PBD	PARALLEL BLADE DAMPER
PC	PRECAST CONCRETE
PCC	PORTLAND CEMENT CONCRETE
PCST	PRECAST
PD	PRESSURE DROP
PE	PLAIN END, POLYETHYLENE
PERF	PERFORATED
PERP	PERPENDICULAR
PH	PHASE
PJF	PREFORMED JOINT FILLER
PL	PLATE, PURGE LINE, PROPERTY LINE
PLWD	PLYWOOD
PNL	PANEL
POJ	PUSH ON JOINT
PP	POWER POLE
PPM	PARTS PER MILLION
PR	PAIR
PROP	PROPOSED
PROJ	PROJECTION
PRV	PRESSURE REDUCING VALVE
PS	PRESSURE SWITCH, PUMP STA.
PSF	POUNDS PER SQUARE FOOT
PSI	POUNDS PER SQUARE INCH
PSIA	PSI, ABSOLUTE
PSIG	PSI, GAGE
PSW	PLANT SERVICE WATER
PTAC	PACKAGED TERMINAL AIR CONDITIONER
PT	POTENTIAL TRANSFORMER, PAINT, PRESSURE TANK
PV	PLUG VALVE
PVC	POLYVINYL CHLORIDE
PVMT	PAVEMENT
QTY	QUANTITY
R	RISER(S), RADIUS
RA	RETURN AIR
RAD	RADIUS
RB	ROOF BEAM, RESILIENT BASE
RCP	REINFORCED CONCRETE PIPE
RCMD	RECOMMENDED
RD	ROOF DRAIN
RED	REDUCER
REF	REFERENCE
REINF	REINFORCE
REQ(D)	REQUIRE(D)
REV	REVISED
RJ	RESTRAINED JOINT
RM	ROOM
RO	ROUGH OPENING, REVERSE OSMOSIS
ROW	RIGHT OF WAY
RPM	REVOLUTIONS PER MINUTE
RR	RETURN REGISTER, RAILROAD
RS	RAW SEWAGE
RT	RIGHT
RTU	ROOFTOP UNIT
RW	RESILIENT WEDGE
S	SOUTH
S&F	SECURITY & FIRE PNL
SA	SUPPLY AIR
SAN	SANITARY
SAN SWR	SANITARY SEWER
SAT	SATURATION
SB	SOIL BORING
SCFM	CFM, AT STANDARD CONDITIONS
SCH	SCHEDULE
SD	SMOKE DAMPER
SEN	SENSIBLE
SF	SUPPLY FAN, SQUARE FOOT
SG	SUPPLY GRILLE, SLIDE/SLUICE GATE
SH	SHIELDED, SHOWER, SHEET
SHR	SENSIBLE HEAT RATIO
SHT	SHEET
SIM	SIMILAR
SK	SINK
SP	STATIC PRESSURE, SUMP PUMP, SPACE(S)
SPEC	SPECIFICATION
SQ	SQUARE
SQ FT	SQUARE FEET
SR	SUPPLY REGISTER
SS	STAINLESS STEEL
SSH	SAFETY SHOWER
ST	STREET
STA	STATION
STD	STANDARD
STL	STEEL
STM	STORM, STORM SEWER
SUCT	SUCTION
SW	SWITCH, SAMPLING
T	TEMPERATURE, THREAD
T&B	TOP AND BOTTOM
TACH	TACHOMETER
TB	TERMINAL BOARD
TCP	TEMP CONTROL PNL
TD	TEMPERATURE DIFFERENCE
TDH	TOTAL DYNAMIC HEAD
TEL	TELEPHONE
TEMP	TEMPERATURE, TEMPORARY, TEMPERED
T/	TOP OF
TR	TREAD(S), TOP OF RIM
TSG	TEMPERED SAFETY GLASS
TSP	TOTAL STATIC PRESSURE, TWISTED SHIELDED PAIR
TST	TWISTED SHIELDED TRIAD
TSTAT	THERMOSTAT
TYP	TYPICAL
U	HEAT TRANSFER COEFFICIENT
UBC	UNIFORM BUILDING CODE
UFC	UNIFORM FIRE CODE
UG	UNDERGROUND
UGE	UNDERGROUND ELECTRIC
UGT	UNDERGROUND TELEPHONE
UH	UNIT HEATER
UMC	UNIFORM MECHANICAL CODE
UNO	UNLESS NOTED OTHERWISE
UPC	UNIFORM PLUMBING CODE
UR	URINAL
V	VALVE, VENT, VOLTS
VA	VOLT – AMPERES
VAC	VACUUM
VAV	VARIABLE AIR VOLUME
VB	VINYL BASE, VALVE BOX, VAPOR BARRIER
VC	VICTAULIC COUPLING
VCP	VITRIFIED CLAY PIPE
VCT	VINYL COMPOSITION TILE
VD	VOLUME DAMPER
VEL	VELOCITY
VENT	VENTILATION
VERT	VERTICAL
VFD	VARIABLE FREQUENCY DRIVE
VLV	VALVE
VOL	VOLUME
VS	VARIABLE SPEED
VTR	VENT THRU ROOF
W	WATER, WATTS, WIDE FLANGE, WINDOW, WEST
W/	WITH
W/O	WITHOUT
WAP	WALL PIPE
WAS	WASTE ACTIVATED SLUDGE
WB	WET BULB
WC	WATER CLOSET, WATER COLUMN, WATER COOLER
WD	WOOD, WATER DISTILLED
WF	WIDE FLANGE
WG	WATER GAUGE
WH	WATER HEATER, WALL HYDRANT
WNDW	WINDOW, WINDOWS
WL	WATER LINE, WIND LOAD
WM	WATER METER
WT	WATER TANK
WW	WARM WATER, WASTE WATER
WWF	WELDED WIRE FABRIC
XDCR	TRANSDUCER
XFMR	TRANSFORMER
XMTR	TRANSMITTER
YD	YARD
YH	YARD HYDRANT
ZS	POSITION SWITCH

LEGEND

STAMP ●	1/2" IRON ROD WITH PLASTIC STAMPED AS NOTED FOUND
●	1/2" IRON ROD FOUND
◕	BENCHMARK
•	BOLLARD
——oo——	CHAIN LINK FENCE
E	ELECTRIC JUNCTION BOX
⊗	WATER VALVE
W	WATER METER
ICV⊗	IRRIGATION CONTROL VALVE
O.P.R.L.C.TX.	OFFICIAL PUBLIC RECORDS OF LLANO COUNTY, TEXAS
O.P.R.R.P.L.C.TX.	OFFICIAL PUBLIC RECORDS OF REAL PROPERTY OF LLANO COUNTY, TEXAS
P.R.L.C.TX.	PLAT RECORDS OF LLANO COUNTY, TEXAS
——EA——	EDGE OF ASPHALT
NG	NATURAL GROUND
PVC	PLASTIC PIPE
CPP	CORRUGATED PLASTIC PIPE
FL	FLOW LINE
{ }	RECORD INFORMATION PER DOCUMENT NO. 23–60104, O.P.R.L.C.TX., DESCRIPTION PER DOCUMENT NO. 21–01144. O.P.R.L.C.TX.
( )	RECORD INFORMATION PER VOL. 1533, PG. 2916, O.P.R.L.C.TX. DESCRIPTION PER CHAIN OF TITLE DEED VOL. 1103, PG. 153, O.P.R.L.C.TX.
[ ]	RECORD INFORMATION PER VOL. 19, PG. 43, P.R.L.C.TX.
(( ))	RECORD INFORMATION PER VOL. 1103, PG. 171, O.P.R.L.C.TX.
x 100.0'	SPOT ELEVATION
100	TREE LOCATION AND NUMBER
——OU——	OVERHEAD ELECTRIC
●——oo——●	GATE
——FF——	FILTER FABRIC BARRIER
——W——	WATER LINE
——X——	BARB WIRE FENCE
——//——	VINYL FENCE

LEGEND NOTE:
"SCREENED" (LIGHT) DELINEATION SHOWN DENOTES EXISTING CONDITIONS. "SCREENED" INFORMATION WAS TAKEN FROM PREVIOUS CONSTRUCTION DRAWINGS AND FIELD SURVEY, IS FOR REFERENCE ONLY, AND SHALL BE VERIFIED BY THE CONTRACTOR PRIOR TO ORDERING OF MATERIALS AND BEGINNING CONSTRUCTION. BOLD DELINEATION IS NEW WORK TO BE CONSTRUCTED UNDER THIS CONTRACT.

ROW/LOT LINES ARE SHOWN IN BLACK.

DRAWN BY: OK JOB DATE: MARCH 2026
APPROVED: LT JOB NUMBER: 2303375
CAD DATE: 03/04/26
CAD FILE: J:\2023\2303375\CAD\DWGS – WATER PLANT FACILITY\G\03 LEGEND AND ABBREVIATIONS.DWG

BAR IS ONE INCH ON OFFICIAL DRAWINGS. 0 — 1"
IF NOT ONE INCH, ADJUST SCALE ACCORDINGLY.

NO.	DATE	BY	REVISION DESCRIPTION
0	6/25/2025	LT	60% DESIGN PLANS SUBMISSION
1	3/4/2025	LT	90% DESIGN PLANS SUBMISSION

HRGreen
5508 W US HWY 290
SERVICE RD SUITE 150
AUSTIN, TX 78735
PHONE: 512.872.6696
FAX: 713.965.0044
TBPE FIRM NO. F-11278

ISSUED FOR REVIEW
NOT FOR CONSTRUCTION
BY: LEIGH A. THOMAS
P.E. REGISTRATION NO. 86887
DATE: MARCH 2026

PHASE 1 WATER SYSTEM IMPROVEMENTS
DRINKING WATER STORAGE
SUNRISE BEACH VILLAGE, TEXAS

GENERAL
LEGEND & ABBREV

SHEET NO.
03 OF 23

DRAFT (90%) - FOR CITY REVIEW ONLY

GENERAL NOTES:

1. IT IS THE CONTRACTOR'S RESPONSIBILITY TO DETERMINE THE DEPTH, LOCATION AND EXISTENCE OF ALL EXISTING UTILITIES WHICH MAY CONFLICT WITH THE PROPOSED CONSTRUCTION, WHETHER SHOWN ON THESE PLANS OR NOT.
2. CONTRACTOR SHALL CONTACT ALL PERTINENT UTILITY COMPANIES AND UTILITY LOCATION SERVICES 48 HOURS (MINIMUM) PRIOR TO EXCAVATION IN AREA BY CALLING 811 OR TEXAS ONE CALL AT 1-800-545-6005.
3. CONTRACTOR SHALL VERIFY ALL DIMENSIONS AND CONDITIONS IN THE FIELD BEFORE COMMENCING WORK. IT SHALL BE THE CONTRACTOR'S RESPONSIBILITY TO REPORT ANY AND ALL DISCREPANCIES TO THE OWNER IN A TIMELY MANNER.
4. THE CITY RESERVES THE RIGHT TO DELETE ANY BID ITEMS.
5. CONTRACTOR SHALL ADEQUATELY PROTECT EXISTING STRUCTURES, UTILITIES, TREES, SHRUBS, STREET SIGNS, TRAFFIC SIGNS, MAILBOXES, FENCING, AND OTHER PERMANENT OBJECTS. CONTRACTOR SHALL REINSTALL, REPLACE AND/OR REPAIR DAMAGE CAUSED TO THESE ITEMS BY CONSTRUCTION AT NO ADDITIONAL COST.
6. CONTRACTOR SHALL MAINTAIN ACCESS TO RESIDENTIAL AND COMMERCIAL PROPERTIES ADJACENT TO WORK AREAS AT ALL TIMES.
7. CONTRACTOR SHALL CONDUCT OPERATIONS IN A MANNER SUCH THAT TRUCKS AND OTHER VEHICLES DO NOT CREATE A DIRT NUISANCE OR SAFETY HAZARD IN ANY STREETS, PUBLIC OR PRIVATE. CLEAN UP OF STREETS SHALL BE DONE DAILY AT A MINIMUM. (COST TO BE INCIDENTAL TO WORK AND NOT PAID SEPARATELY.)
8. ANY AREA OF GRASS WITHIN CITY RIGHT-OF-WAY OR CONSTRUCTION EASEMENT WHICH IS DISTURBED OR DUG UP DURING THE CONSTRUCTION SHALL BE REPLACED WITH GRASS WHICH MATCHES THE GRASS REMOVED. PAYMENT FOR REPLACEMENT OF GRASSES AND SOD SHALL NOT BE PAID FOR SEPARATELY BUT WILL BE CONSIDERED INCIDENTAL TO THE WORK, UNLESS OTHERWISE NOTED IN THE BID FORM.
9. EXISTING PAVEMENTS, CURBS, SIDEWALKS AND DRIVEWAYS DAMAGED OR REMOVED DURING CONSTRUCTION DUE TO THE CONTRACTORS NEGLIGENCE SHALL BE SAWCUT FULL DEPTH AND REPLACED TO MATCH EXISTING OR BETTER CONDITIONS BY THE CONTRACTOR AT NO COST TO OWNER. CONTRACTOR TO FOLLOW CITY OF SUNRISE BEACH VILLAGE DIRECTION AND GUIDANCE FOR REPAIRS. CONTRACTOR SHALL FOLLOW ENGINEER'S DIRECTION AND GUIDANCE.
10. IN THE EVENT THE CONTRACTOR MUST CLOSE A STREET TO TRAFFIC, CONTRACTOR SHALL OBTAIN PRIOR PERMISSION FROM THE CITY OF SUNRISE BEACH VILLAGE DEPARTMENT AND HE SHALL PROVIDE A MINIMUM OF 48 HOURS NOTICE TO THE ENGINEER, PUBLIC WORKS DEPARTMENT, FIRE DEPARTMENT AND POLICE DEPARTMENT. WHEN ANY STREET OR ANY SECTION OF A STREET IS CLOSED, THE CONTRACTOR SHALL FURNISH AND MAINTAIN ADEQUATE BARRICADES, WARNING AND DIRECTING SIGNS, RED FLAGS AND LIGHTS AT THE END OF EVERY STREET AND AT ALL INTERSECTIONS ALONG THE STREET WITHIN THE LIMIT OF THE WORK AREA. CONTRACTOR SHALL APPLY TO THE CITY FOR ROAD CLOSING PERMITS WHEN APPROPRIATE. ALL EXPENSE INCURRED FOR THE ABOVE REQUIREMENTS SHALL BE BORNE BY THE CONTRACTOR.
11. THE CONTRACTOR IS RESPONSIBLE FOR MAINTAINING ALL TRAFFIC BARRICADES, PLATES, FENCING AND OTHER PROTECTIVE DEVICES DURING CONSTRUCTION HOURS AND NON-CONSTRUCTION HOURS SUCH AS WEEKENDS, HOLIDAYS AND NIGHTS. UPON NOTIFICATION OF THE NEED FOR MAINTENANCE OF THE BARRICADED AREAS, EITHER BY THE CONTRACTOR'S OWN PERSONNEL, THE CITY OF SUNRISE BEACH VILLAGE OR ITS REPRESENTATIVES, THE CONTRACTOR SHALL PROMPTLY TAKE THE REQUIRED CORRECTIVE MEASURES.
12. ALL EXCAVATION AREAS MUST BE COMPLETELY BARRICADED OFF FROM PUBLIC WITH A MINIMUM OF ORANGE PLASTIC FENCING, ACCEPTABLE TO THE CITY. THE FENCE SHALL BE SUPPORTED WITH ENOUGH INTERMEDIATE SUPPORTS TO AVOID EXCESSIVE SAGGING. THE FENCE MAY BE TIED TO TRAFFIC BARRICADES WITH FLASHING YELLOW LIGHTS AND WOODEN LATHE FOR SUPPORT. WHERE EXCAVATIONS EXTEND BEYOND THE EXISTING BACK OF CURB EDGE OF PAVEMENT, ADEQUATE BARRICADES WITH FLASHING YELLOW LIGHTS SHALL BE INSTALLED TO PROTECT PUBLIC.
13. CONTRACTOR SHALL NOT USE RESIDENT'S WATER. THE CONTRACTOR SHALL OBTAIN A METER FROM THE CITY OF SUNRISE BEACH VILLAGE AND USE FIRE HYDRANTS AS THE CITY DIRECTS.
14. CONTRACTOR IS RESPONSIBLE FOR FIELD VERIFYING THE LOCATION OF ALL UNDERGROUND UTILITIES PRIOR TO CONSTRUCTION AND WILL BE IS FULLY RESPONSIBLE FOR ANY DAMAGES CAUSED BY HIS FAILURE TO EXACTLY LOCATE AND PRESERVE THESE UNDERGROUND FACILITIES.
15. CONTRACTOR IS RESPONSIBLE FOR ALL UTILITIES NECESSARY FOR CONSTRUCTION AT NO ADDITIONAL COST TO OWNER.
16. PROVIDE TWENTY-FOUR (24"), MINIMUM CLEARANCE BETWEEN GAS LINES AND ALL OTHER UTILITIES (NEW OR EXISTING), UNLESS OTHERWISE SHOWN ON DRAWINGS.
17. IN THE EVENT OF DAMAGE TO UNDERGROUND UTILITIES OR FACILITIES, WHETHER SHOWN OR NOT ON THE DRAWINGS, THE CONTRACTOR SHALL MAKE THE NECESSARY REPAIRS TO PLACE THE UTILITY OR FACILITY BACK IN SERVICE AT NO INCREASE IN THE CONTRACT PRICE AND ALL SUCH REPAIRS SHALL CONFORM TO THE REQUIREMENTS OF THE COMPANY OR THE AGENCY OWNING THE SERVICE.
18. DO NOT DISTURB SURVEY BENCHMARKS ESTABLISHED AS PART OF THE VERTICAL MONUMENT PROGRAM. IF ANY MONUMENTS ARE DISTURBED, THEY WILL BE REPLACED BY THE CITY AT THE CONTRACTOR'S EXPENSE.
19. NO EQUIPMENT, MATERIAL OR EXCAVATED MATERIAL SHALL BE STORED OR DEPOSITED ON STREETS, LAWNS, DRIVEWAYS, SIDEWALKS, GARDENING OR SHRUBBERY. THE CITY OF SUNRISE BEACH VILLAGE PROHIBITS THE CONTRACTOR FROM STORING ANY EQUIPMENT AND MATERIAL IN THE YARDS OF RESIDENTIAL ZONED AREAS WITHIN THE CITY LIMITS, WITHOUT PRIOR WRITTEN PERMISSION FROM THE OWNER. A COPY OF THE CONTRACTOR/OWNER AGREEMENT SHALL BE PROVIDED TO THE CITY'S ENGINEER.
20. CONTRACTOR SHALL SALVAGE, REMOVE AND REPLACE EXISTING IMPROVEMENTS AS NECESSARY TO ACCOMPLISH THE WORK AT NO ADDITIONAL COST TO THE PROJECT. IN THE EVENT DAMAGES TO FENCES OR OTHER IMPROVEMENT, STRUCTURES, PLANTS, ETC. NOT INTENDED FOR DEMOLITION OCCUR, THE CONTRACTOR WILL REPLACE WITH EQUAL OR BETTER PRODUCT, ALL AT NO COST TO THE PROJECT. THE CITY OR THE ENGINEER HAS THE OPTION OF DIRECTING THE CONTRACTOR TO UTILIZE TEMPORARY FENCING AT NO ADDITIONAL COST TO THE PROJECT.
21. NO SEPARATE PAY FOR ITEMS COVERED IN THESE NOTES UNLESS SPECIFICALLY ESTABLISHED IN THE BID FORM. INCLUDE COST OF SAME IN THE CONTRACT UNIT PRICE BID FOR ITEMS OF WHICH WORK IS A COMPONENT PART OR AS INCIDENTAL TO WORK.
22. A STORM WATER POLLUTION PREVENTION PLAN (SW3P), IS THE CONTRACTOR'S RESPONSIBILITY. CONTRACTOR TO OBTAIN ANY REQUIRED PERMITS ASSOCIATED WITH CONSTRUCTION DISCHARGE.
23. CONTRACTOR SHALL KEEP EXISTING STREETS AND ROADS OPEN TO ALL TRAFFIC BY AT LEAST ONE LANE DURING THE DAY AND CLEANED DAILY OF MATERIAL DEPOSITED BY CONSTRUCTION VEHICLES. NO EXCAVATIONS SHALL BE LEFT OPEN OVERNIGHT. ALL EXCAVATIONS WHICH CANNOT BE BACKFILLED OVERNIGHT FOR THE INSTALLATION OF MANHOLES, WASTEWATER LINES, AND OTHER UTILITIES SHALL BE COVERED WITH STEEL PLATES, WHEN IN PAVED AREAS; ¾" PLYWOOD, WOOD PLANKING OR SOME OTHER MATERIAL APPROVED BY THE CITY IN CONSTRUCTION FENCING. ALL STREETS SHALL BE FULLY OPENED OVERNIGHT AND ON WEEKENDS
24. DURING CONSTRUCTION THE CONTRACTOR SHALL MAINTAIN ADEQUATE DRAINAGE AND SAFE ACCESS TO ADJACENT PROPERTIES, REGARDLESS OF THE WEATHER CONDITIONS. DO NOT OBSTRUCT ROADWAYS, DRAINAGE WAYS, SIDEWALKS OR PASSAGEWAYS ADJACENT TO THE CONSTRUCTION AREA.
25. CONTRACTOR TO GRADE DITCHES IF DISTURBED DURING CONSTRUCTION TO MIN. SLOPE OF 2% TO MAINTAIN PRE-CONSTRUCTION FLOW DIRECTION.
26. CONTRACTOR SHALL UNDERSTAND AND FOLLOW GEOTECHNICAL REPORT. ANY CONFLICTING INFORMATION BETWEEN CONTRACT DOCUMENT & GEOTECHNICAL REPORT SHALL BE BROUGHT TO ENGINEER ATTENTION PRIOR TO BID. CONTRACTOR SHALL BID PER MOST STRINGENT REQUIREMENTS IF NO DIRECTION IS SOUGHT.
26. THE CONTRACTOR SHALL BE FULLY RESPONSIBLE FOR ANY AND ALL DAMAGE TO THE EXISTING PUBLIC OR PRIVATE UTILITY LINES, INCLUDING BUT NOT LIMITED TO WATER LINES, AND STORM SEWERS, DURING CONSTRUCTION. ALL DAMAGES SHALL BE REPAIRED TO THE SATISFACTION OF THE OWNER AT NO COST TO THE OWNER. FOR WATERLINE: CONTRACTOR SHALL REPAIR ANY DAMAGE TO WATERLINES CAUSED BY CONSTRUCTION ACTIVITIES. FOR WATERLINES WHICH ARE SHOWN ON THE PLANS, REPAIR WILL BE AT NO COST TO OWNER. FOR DAMAGE TO ANY WATERLINES NOT SHOWN ON PLANS, CONTRACTOR SHALL REPAIR DAMAGE USING REIMBURSEMENT FROM THE OWNER.
27. ALL QUANTITIES SHOWN ARE FOR ESTIMATING PURPOSES ONLY. THE CONTRACTOR WILL BE PAID FOR THE ACTUAL AMOUNT OF WORK COMPLETED AS MEASURED BY THE CITY, BUT IN NO CASE SHALL EXCEED THE PLAN QUANTITY UNLESS AUTHORIZED IN WRITING PRIOR TO COMMENCEMENT OF WORK TO BE PERFORMED UNDER THAT ITEM. NO PAYMENT WILL BE MADE FOR UNAUTHORIZED WORK.
28. WHEN CONSTRUCTION OCCURS IN THE CITY RIGHT-OF-WAYS AND EASEMENTS ON RESIDENTIAL YARD AREAS, CARE SHALL BE TAKEN TO MINIMIZE CONSTRUCTION DAMAGE TO YARD AREAS. ANY DAMAGE REPAIRED OR REPLACED WILL NOT TO BE PAID FOR SEPARATELY.
29. THE DRAWINGS SHOW INFORMATION OBTAINED FROM ON THE GROUND OBSERVATION, SURVEY AND EXISTING CONSTRUCTION DRAWINGS REGARDING THE TOPOGRAPHIC FEATURES AND ELEVATIONS AS WELL AS THE LOCATION AND NATURE OF PIPELINES, NATURAL GAS PIPELINES, UNDERGROUND CABLES, UTILITIES, ETC.; HOWEVER, THE ACCURACY OF OR COMPLETENESS OF SUCH INFORMATION IS NOT GUARANTEED. THE PLANS DO NOT SHOW ALL LANDSCAPING. IT IS THE CONTRACTOR'S RESPONSIBILITY TO THOROUGHLY VISIT THE SITE AND INCLUDE COSTS AND REPAIR FOR DAMAGE WHICH MAY OCCUR ON THESE SYSTEMS. NO ADDITIONAL PAYMENT WILL BE MADE.
30. OBTAIN CITY ENGINEER'S APPROVAL TO PERMANENTLY RELOCATE EXISTING UTILITIES NOT SHOWN ON THE DRAWINGS PRIOR TO RELOCATION. CONFORM TO APPLICABLE STANDARDS AND SPECIFICATIONS OF CITY OF SUNRISE BEACH VILLAGE AND UTILITY COMPANY.
31. USE APPROPRIATE COMPACTION EQUIPMENT FOR THE TYPE OF SOIL ENCOUNTERED. CLAY BACKFILLS NORMALLY REQUIRE CONSOLIDATION BY SHEEPS FOOT ROLLER WHEREAS SAND AND GRAVEL CAN BE COMPACTED WITH VIBRATORY EQUIPMENT. CITY ENGINEER MAY REJECT SPECIFIC TYPES OF EQUIPMENT ON SITE AS SOIL CONDITIONS MAY VARY.
32. TEST MATERIALS TO BE USED FOR BACKFILL AND ADJUST MOISTURE CONTENT TO SPECIFIED LEVELS BY ADDING WATER AND DRYING SOILS AS NECESSARY AND AS SPECIFIED. CONFORM TO GEOTECHNICAL REPORT AND PROJECT CONTRACT DOCUMENTS.
33. ALL CONSTRUCTION STORM RUNOFF SHALL COMPLY WITH THE STORM WATER MANAGEMENT HANDBOOK FOR CONSTRUCTION ACTIVITIES AND SHALL BE IN COMPLIANCE WITH THE TEXAS POLLUTANT DISCHARGE ELIMINATION SYSTEM (TPDES) REQUIREMENTS.
34. CONTRACTOR SHALL OBTAIN ALL APPLICABLE CITY, STATE AND FEDERAL PERMITS, INCLUDING ALL PERMITS REQUIRED BY THE REGULATIONS OF THE CITY OF SUNRISE BEACH VILLAGE, LLANO COUNTY, TCEQ, STATE OF TEXAS, OR FLOOD PLAIN MANAGEMENT DISTRICTS PRIOR TO STARTING CONSTRUCTION.
35. CONTRACTOR SHALL COMPLY WITH O.S.H.A. REGULATIONS AND TEXAS STATE LAW CONCERNING TRENCH SAFETY SYSTEMS, EXCAVATION, AND CONFINED SPACE, AS APPLICABLE.
36. FOR EXCAVATIONS OVER 5 FT DEEP, CONTRACTOR SHALL PROVIDE EARTH RETENTION SYSTEM OR SHEET PILES TO SECURE TRENCH. DESIGN OF RETENTION SYSTEM SHOULD BE BY LICENSED STRUCTURAL ENGINEER AND SHALL BE SUBMITTED TO ENGINEER FOR APPROVAL PRIOR TO INSTALLATION OR USE.
37. THE CONTRACTOR IS RESPONSIBLE FOR PROVIDING RED LINE AS-BUILT DRAWINGS AT THE COMPLETION OF THIS PROJECT AS PER SPECIFICATIONS.
38. CONTRACTOR NORMAL WORKING HOURS SHALL BE BETWEEN 7 AM THROUGH 6 PM MONDAY THROUGH FRIDAY, UNLESS APPROVED IN WRITING BY THE CITY. ANY WEEKEND WORK MUST BE REQUESTED IN WRITING AT LEAST THREE DAYS IN ADVANCE (I.E., WEDNESDAY FOR WORK ON SATURDAY) TO THE DIRECTOR OF PUBLIC WORKS.
39. STORAGE OF STAGING SHALL BE LOCATED IN OWNER/ENGINEER APPROVED AREAS ONLY.

CITY OF SUNRISE BEACH VILLAGE ELECTRICAL LINES

OVERHEAD LINES MAY EXIST ON THE PROPERTY. THE LOCATION OF OVERHEAD LINES HAS NOT BEEN SHOWN ON THESE DRAWINGS AS THE LINES ARE CLEARLY VISIBLE, BUT YOU SHOULD LOCATE THEM PRIOR TO BEGINNING ANY CONSTRUCTION. TEXAS LAW, SECTION 752, HEALTH & SAFETY CODE FORBIDS ACTIVITIES THAT OCCUR IN CLOSE PROXIMITY TO HIGH VOLTAGE LINES, SPECIFICALLY:

- ANY ACTIVITY WHERE PERSON OR THINGS MAY COME WITHIN SIX (6) FEET OF LIVE OVERHEAD VOLTAGE LINES; AND
- OPERATING A CRANE, DERRICK, POWER SHOVEL, DRILLING RIG, PILE DRIVER, HOISTING EQUIPMENT, OR SIMILAR APPARATUS WITHIN 10 FEET OF LIVE OVERHEAD HIGH VOLTAGE LINES.

PARTIES RESPONSIBLE FOR THE WORK, INCLUDING CONTRACTORS ARE LEGALLY RESPONSIBLE FOR THE SAFETY OF CONSTRUCTION WORKERS UNDER THIS LAW. THIS LAW CARRIES BOTH CRIMINAL AND CIVIL LIABILITY. TO ARRANGE FOR LINES TO BE TURNED OFF OR REMOVED CALL CITY OF SUNRISE BEACH AT (325)-388-6438.

CITY OF SUNRISE BEACH VILLAGE EMERGENCY UTILITY CONTACT INFORMATION:

1. THE CONTRACTOR SHALL NOTIFY THE CITY OF SUNRISE BEACH VILLAGE AT 325-388-6438 AT LEAST 48 HOURS PRIOR TO BEGINNING ANY CONSTRUCTION SO THAT REPRESENTATIVES FROM CITY OWNED UTILITIES MAY CONFIRM LOCATION OF UTILITIES. CITY OWNED UTILITIES HAVE BEEN INDICATED ON THE CONTRACT DRAWING AND SHALL ACT AS A GUIDE TO THE CONTRACTOR IN VERIFYING THE ACTUAL LOCATION OF THESE UTILITIES. THE CONTRACTOR WILL BE REQUIRED TO OBSERVE WATER AND GAS METERS NECESSARY TO DETERMINE THEIR SUITABLE MEANS TO VERIFY THEIR LOCATIONS AND TO PREVENT UNNECESSARY DAMAGE TO THESE UTILITIES. THE CONTRACTOR SHALL PHYSICALLY VERIFY THE HORIZONTAL AND VERTICAL LOCATIONS OF GAS AND ELECTRICAL MAINS AND LATERALS, IN CASE OF DAMAGE TO PRIVATE UTILITIES, THE CONTRACTOR SHALL IMMEDIATELY NOTIFY THE PRIVATE UTILITY COMPANY AND THE FOLLOWING APPROPRIATE AGENCY:
   A. SUNRISE BEACH VILLAGE FIRE DEPARTMENT (GAS, ALL PIPELINES, ELECTRICAL): 325-388-6880
   B. SUNRISE BEACH VILLAGE PUBLIC WORKS: 325-388-6438

DRAWING NOTES:

1. BASELINES ARE NOT FIELD ESTABLISHED UNLESS NOTED ON PLANS.
2. ROW INFORMATION IS APPROXIMATE ONLY. CONTRACTOR SHALL WORK WITHIN OCCUPIED ROW UNLESS NOTED ON PLANS.

TRAFFIC MARKING NOTES:

1. ANY METHODS, STREET MARKINGS AND SIGNAGE NECESSARY FOR WARNING MOTORISTS, WARNING PEDESTRIANS, OR DIVERTING TRAFFIC DURING CONSTRUCTION SHALL CONFORM TO THE TEXAS MANUAL OF UNIFORM TRAFFIC CONTROL DEVICES FOR STREETS AND HIGHWAYS (TMUTCD), LATEST EDITION.
2. ALL PAVEMENT MARKINGS, MARKERS, PAINT, TRAFFIC BUTTONS, TRAFFIC CONTROLS, AND SIGNS SHALL BE INSTALLED IN ACCORDANCE WITH THE TEXAS DEPARTMENT OF TRANSPORTATION STANDARD SPECIFICATIONS FOR CONSTRUCTION OF HIGHWAYS, STREETS AND BRIDGES AND, THE TEXAS MANUAL OF UNIFORM TRAFFIC CONTROL DEVICES FOR STREETS AND HIGHWAYS, LATEST EDITIONS.

DRAWN BY: OK JOB DATE: MARCH 2026
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IF NOT ONE INCH, ADJUST SCALE ACCORDINGLY.

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0	6/25/2025	LT	60% DESIGN PLANS SUBMISSION
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ISSUED FOR REVIEW
NOT FOR CONSTRUCTION
BY: LEIGH A. THOMAS
P.E. REGISTRATION NO. 86887
DATE: MARCH 2026

PHASE 1 WATER SYSTEM IMPROVEMENTS
DRINKING WATER STORAGE
SUNRISE BEACH VILLAGE, TEXAS

GENERAL
GENERAL NOTES & UTILITY NOTES

SHEET NO.
04 OF 23

TREE PROTECTION CONSTRUCTION NOTES

1. ALL TREES NOT LOCATED WITHIN THE LIMITS OF CONSTRUCTION AND OUTSIDE OF DISTURBED AREAS SHALL BE PRESERVED. THE CONTRACTOR IS RESPONSIBLE FOR PROTECTING ALL TREES TO BE PRESERVED FROM HIS ACTIVITIES.

2. ALL TREES SHOWN TO BE RETAINED ON THE PLANS, SHALL BE PROTECTED DURING CONSTRUCTION WITH FENCING. SEE: TREE PROTECTION TREE WELLS (06), TREE PROTECTION TREE LOCATION (06), AND TREE PROTECTION FENCE–CHAIN LINK (06).

3. TREE PROTECTION FENCES SHALL BE ERECTED ACCORDING TO CITY STANDARDS FOR TREE PROTECTION. INCLUDING TYPES OF FENCING AND SIGNAGE.

4. TREE PROTECTION FENCES SHALL BE INSTALLED PRIOR TO THE COMMENCEMENT OF ANY SITE PREPARATION WORK (CLEARING, GRUBBING, OR GRADING) AND SHALL BE MAINTAINED THROUGHOUT ALL PHASES OF THE CONSTRUCTION PROJECT.

5. EROSION AND SEDIMENTATION CONTROL BARRIERS SHALL BE INSTALLED OR MAINTAINED IN A MANNER WHICH DOES NOT RESULT IN SOIL BUILD–UP WITHIN TREE DRIPLINES.

6. FENCES SHALL COMPLETELY SURROUND THE TREE, OR CLUSTERS OF TREES, LOCATED AT THE OUTERMOST LIMITS OF THE TREE BRANCHES (DRIPLINE) OR CRITICAL ROOT ZONE (CRZ), WHICHEVER IS GREATER; AND SHALL BE MAINTAINED THROUGHOUT THE CONSTRUCTION PROJECT IN ORDER TO PREVENT THE FOLLOWING:

   6A. SOIL COMPACTION IN CRZ AREA RESULTING FROM VEHICULAR TRAFFIC OR STORAGE OF EQUIPMENT OR MATERIAL.

   6B. CRZ DISTURBANCES DUE TO GRADE CHANGES (GREATER THAN 6 INCHES CUT OR FILL) OR TRENCHING NOT REVIEWED AND AUTHORIZED BY THE FORESTRY MANAGER.

   6C. WOUNDS TO EXPOSED ROOTS, TRUNK, OR LIMBS BY MECHANICAL EQUIPMENT

   6D. OTHER ACTIVITIES DETRIMENTAL TO TREES SUCH AS CHEMICAL STORAGE, CONCRETE TRUCK CLEANING, AND FIRES.

7. EXCEPTIONS TO INSTALLING TREE FENCES AT THE TREE DRIPLINES OR CRZ, WHICHEVER IS GREATER. MAY BE PERMITTED IN THE FOLLOWING CASES:

   7A. WHERE THERE IS TO BE AN APPROVED GRADE CHANGE, IMPERMEABLE PAVING SURFACE, OR TREE WELL;

   7B. WHERE PERMEABLE PAVING IS TO BE INSTALLED, ERECT THE FENCE AT THE OUTER LIMITS OF THE PERMEABLE PAVING AREA.

   7C. WHERE TREES ARE CLOSE TO PROPOSED BUILDINGS, ERECT THE FENCE NO CLOSER THAN 6 FEET TO THE BUILDING.

   7D. WHERE THERE ARE SEVERE SPACE CONSTRAINTS DUE TO TRACT SIZE. OR OTHER SPECIAL REQUIREMENTS, CONTACT THE FORESTRY MANAGER TO DISCUSS ALTERNATIVES.

8. WHERE ANY OF THE ABOVE EXCEPTIONS RESULT IN A FENCE THAT IS CLOSER THAN 5 FEET TO A TREE TRUNK. THE TRUNK SHALL BE PROTECTED BY STRAPPED–ON PLANKING TO A HEIGHT OF 8 FEET (OR TO THE LIMITS OF LOWER BRANCHING) IN ADDITION TO THE REDUCED FENCING PROVIDED.

9. WHERE ANY OF THE ABOVE EXCEPTIONS RESULT IN AREAS OF UNPROTECTED ROOT ZONES UNDER THE DRIPLINE OR CRZ, WHICHEVER IS GREATER, THOSE AREAS SHOULD BE COVERED WITH 4 INCHES OF ORGANIC MULCH TO MINIMIZE SOIL COMPACTION.

10. ALL GRADING WITHIN CRZ AREAS SHALL BE DONE BY HAND OR WITH SMALL EQUIPMENT TO MINIMIZE ROOT DAMAGE. PRIOR TO GRADING, RELOCATE PROTECTIVE FENCING TO 2 FEET BEHIND THE GRADE CHANGE AREA.

11. ANY ROOTS EXPOSED BY CONSTRUCTION ACTIVITY SHALL BE PRUNED FLUSH WITH THE SOIL AND BACKFILLED WITH GOOD QUALITY TOP SOIL WITHIN TWO DAYS. IF EXPOSED ROOT AREAS CANNOT BE BACKFILLED WITHIN 2 DAYS, AN ORGANIC MATERIAL WHICH REDUCES SOIL TEMPERATURE AND MINIMIZES WATER LOSS DUE TO EVAPORATION SHALL BE PLACED TO COVER THE ROOTS UNTIL BACKFILL CAN OCCUR.

12. PRIOR TO EXCAVATION OR GRADE CUTTING WITHIN TREE DRIPLINES, A CLEAN CUT SHALL BE MADE BETWEEN THE DISTURBED AND UNDISTURBED ROOT ZONES WITH A ROCK SAW OR SIMILAR EQUIPMENT, IN A LOCATION AND TO A DEPTH APPROVED BY THE FORESTRY MANAGER, TO MINIMIZE DAMAGE TO REMAINING ROOTS.

13. TREES MOST HEAVILY IMPACTED BY CONSTRUCTION ACTIVITIES WILL BE WATERED DEEPLY ONCE A WEEK DURING PERIODS OF HOT, DRY WEATHER. TREE CROWNS ARE TO BE SPRAYED WITH WATER PERIODICALLY TO REDUCE DUST ACCUMULATION ON LEAVES.

14. WHEN INSTALLING CONCRETE ADJACENT TO THE ROOT ZONE OF A TREE, A PLASTIC VAPOR BARRIER SHALL BE PLACED BEHIND THE CONCRETE TO PROHIBIT LEACHING OF LIME INTO THE CRZ.

15. ANY TRENCHING REQUIRED FOR THE INSTALLATION OF LANDSCAPE IRRIGATION SHALL BE PLACED AS FAR FROM EXISTING TREE TRUNKS AS POSSIBLE.

16. NO LANDSCAPE TOPSOIL DRESSING GREATER THAN FOUR (4) INCHES SHALL BE PERMITTED WITHIN THE DRIPLINE OR CRZ OF TREES, WHICHEVER IS GREATER. NO TOPSOIL IS PERMITTED ON ROOT FLARES OF ANY TREE.

17. PRUNING TO PROVIDE CLEARANCE FOR STRUCTURES, VEHICULAR TRAFFIC, AND CONSTRUCTION EQUIPMENT SHALL TAKE PLACE BEFORE CONSTRUCTION BEGINS. ALL PRUNING MUST BE DONE ACCORDING TO CITY STANDARDS AND AS OUTLINED IN LITERATURE PROVIDED BY THE INTERNATIONAL SOCIETY OF ARBORICULTURE (ISA PRUNING TECHNIQUES).

18. ALL OAK TREE CUTS, INTENTIONAL OR UNINTENTIONAL, SHALL BE SEALED WITH AN APPROVED PRUNING SEALER IMMEDIATELY (WITHIN 10 MINUTES). PRUNING SEAL OR TREE PAINT MUST BE KEPT ON SITE AT ALL TIMES.

19. THE FORESTRY MANAGER HAS THE AUTHORITY TO REQUIRE ADDITIONAL TREE PROTECTION BEFORE OR DURING CONSTRUCTION.

20. TREES APPROVED FOR REMOVAL SHALL BE REMOVED IN A MANNER WHICH DOES NOT IMPACT TREES TO BE PRESERVED. REFER TO THE CITY OF ROUND ROUND ROCK TREE TECHNICAL MANUAL FOR APPROPRIATE REMOVAL METHODS.

21. PRIOR TO CONSTRUCTION, ALL LOWER TREE LIMBS OVER ROADWAYS MUST BE PRUNED TO A HEIGHT OF 14 FEET USING THE TECHNIQUES DESCRIBED IN THE CITY OF ROUND ROCK TREE TECHNICAL MANUAL.

22. DEVIATIONS FROM THE ABOVE NOTES MAY BE CONSIDERED ORDINANCE VIOLATIONS IF THERE IS NON COMPLIANCE OR IF A TREE SUSTAINS DAMAGE AS A RESULT.

23. TREES SHALL NOT BE REMOVED OR DISTURBED UNLESS OTHERWISE NOTED ON PLANS. CONTRACTOR SHALL COMPLY WITH THE TREE PRESERVATION SCHEDULE AND SPECIFICATIONS.

EROSION AND SEDIMENTATION CONTROL NOTES

1. EROSION CONTROL MEASURES, SITE WORK, AND RESTORATION WORK SHALL BE IN ACCORDANCE WITH THE CITY OF ROUND ROCK DESIGN AND CONSTRUCTION STANDARDS (DACS) AND CODE OF ORDINANCES.

2. ALL SLOPES SHALL BE SODDED OR SEEDED WITH APPROVED GRASS, GRASS MIXTURES, OR GROUND COVER THAT IS SUITABLE TO THE AREA AND THE SEASON IN WHICH THEY ARE APPLIED.

3. SILT FENCES, ROCK BERMS, SEDIMENTATION BASINS, AND SIMILARLY RECOGNIZED TECHNIQUES AND MATERIALS SHALL BE EMPLOYED DURING CONSTRUCTION TO PREVENT POINT SOURCE SEDIMENTATION LOADING OF DOWNSTREAM FACILITIES. INSTALLATION AND CONDITION SHALL BE REGULARLY INSPECTED BY THE CITY OF ROUND ROCK FOR EFFECTIVENESS. ADDITIONAL MEASURES MAY BE REQUIRED IF, IN THE OPINION OF THE CITY ENGINEER, THEY ARE WARRANTED.

4. ALL TEMPORARY EROSION CONTROL MEASURES SHALL NOT BE REMOVED UNTIL REVEGETATION HAS BEEN ESTABLISHED AND APPROVAL RECEIVED FROM THE CIVIL INSPECTOR. IT SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR TO MAINTAIN ALL TEMPORARY EROSION CONTROL STRUCTURES AND TO REMOVE ALL ONCE APPROVED TO DO SO BY THE CIVIL INSPECTOR.

5. ALL MUD, DIRT, ROCKS, DEBRIS, ETC. SPILLED, TRACKED, OR OTHERWISE DEPOSITED ON EXISTING PAVED STREETS, DRIVES AND AREAS USED BY THE PUBLIC SHALL BE CLEANED UP IMMEDIATELY.

ENVIRONMENTAL NOTES

DEWATERING:

CONTRACTOR IS RESPONSIBLE FOR DEWATERING OF WORK AREA. CONTRACTOR MUST SECURE ENGINEER'S APPROVAL OF PROPOSED DEWATERING PROCEDURES PRIOR TO INSTALLATION OR USE. CONTRACTOR MUST PROVIDE COMPLETE SUBMITTAL TO ENGINEER AND OWNER, AND ALLOW AN ONE WEEK (MIN.) COMMENT PERIOD FOR EACH REVIEW.

FUEL STORAGE:

FUEL STORAGE IS PROHIBITED ON THIS PROJECT. ADDITIONALLY, THE CONTRACTOR IS REQUIRED TO NOTIFY OWNER IMMEDIATELY FOLLOWING ANY SPILL OF FUEL OR OTHER TOXIC MATERIAL. CONTRACTOR IS REQUIRED TO FOLLOW–UP WITH WRITTEN DOCUMENTATION, INCLUDING A COMPLETE DESCRIPTION OF THE INCIDENT, MATERIAL SPILLED, AND ACTIONS TAKEN TO CONTAIN AND CLEAN–UP MATERIAL.

FUGITIVE DUST CONTROL:

CONTRACTOR SHALL CONTROL AIRBORNE DUST AT THE PROJECT SITES AND COMPLIANCE IS REQUIRED FOR ENTIRE PROJECT SITE AS WELL AS ASSOCIATED OPERATIONS. CONTACT THE ENGINEER FOR RECOMMENDED CONTROL METHODS.

SPOILS STORAGE:

NO SPOIL STORAGE IS ALLOWED WITHIN A CRITICAL WATER QUALITY ZONE, A 100–YEAR FLOODPLAIN, OR ON A SLOPE WITH A GRADIENT OF MORE THAN 15 PERCENT.

E/S CONTROLS FOR BORE / RECEIVING PIT LOCATIONS:

TEMPORARY E/S CONTROLS MUST SURROUND THE ENTIRETY OF BORING OPERATIONS, INCLUDING PIT, EQUIPMENT, ETC. FOR LOCATIONS WITHIN IMPERVIOUS AREAS, TEMPORARY CONTROL WILL BE TRIANGULAR FILTER DIKE. DIKE FLAP WILL BE CONTINUOUSLY WEIGHTED DOWN THROUGH THE USE OF 1" BY 4" WOOD STRIPS NAILED TO THE PAVEMENT, EXCEPT FOR THE ACCESS POINT. PLACEMENT OF TEMPORARY E/S CONTROLS ACROSS ACCESS POINT WILL BE REQUIRED WHENEVER THE SITE IS NOT ACTIVELY USED. FOR LOCATIONS WITHIN PREVIOUS AREAS, TEMPORARY CONTROL WILL BE SILT FENCE OR MULCH SOCKS, AS INDICATED ON APPROVED PLANS.

SOIL RETENTION BLANKET:

UNLESS OTHERWISE INDICATED IN THE PROJECT DOCUMENTS, INSTALLATION OF SOIL RETENTION BLANKET WILL BE REQUIRED FOR ALL IMPACTED SLOPES GREATER THAN 3:1 AND ALL IMPACTED AREAS WITHIN DRAINAGE CONVEYANCES. SOIL RETENTION BLANKET SUBMITTAL MUST BE APPROVED BY PROJECT ENGINEER AND WILLIAMSON COUNTY REPRESENTATIVE PRIOR TO USE AND MUST INCLUDE PRODUCT AND INSTALLATION DETAILS PROVIDED BY MANUFACTURER. FINISH GRADING MUST BE INSPECTED AND APPROVED BY ENGINEER PRIOR TO BLANKET INSTALLATION. INSTALLATION MUST BE IN ACCORDANCE WITH MANUFACTURER'S RECOMMENDATIONS AND MUST BE INSPECTED AND APPROVED BY ENGINEER PRIOR TO ACCEPTANCE.

SOD INSTALLATION:

REVEGETATION WITHIN MANAGED TURF AREAS MUST BE ACCOMPLISHED THROUGH THE INSTALLATION OF SOLID BLOCK GRASS SOD. SOD TYPE MUST MATCH ADJACENT GRASS TYPE.

DRAFT (90%) - FOR CITY REVIEW ONLY

DRAWN BY: OK JOB DATE: MARCH 2026
APPROVED: LT JOB NUMBER: 2303375
CAD DATE: 03/04/26
CAD FILE: J:\2023\2303375\CAD\DWGS – WATER PLANT FACILITY\G\E&S CONTROL & AND TREE PROTECTION NOTES.DWG

BAR IS ONE INCH ON OFFICIAL DRAWINGS.
0 1"
IF NOT ONE INCH, ADJUST SCALE ACCORDINGLY.

NO.	DATE	BY	REVISION DESCRIPTION
0	6/25/2025	LT	60% DESIGN PLANS SUBMISSION
1	3/4/2025	LT	90% DESIGN PLANS SUBMISSION

HRGreen
5508 W US HWY 290
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AUSTIN, TX 78735
PHONE: 512.872.6696
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TBPE FIRM NO. F-11278

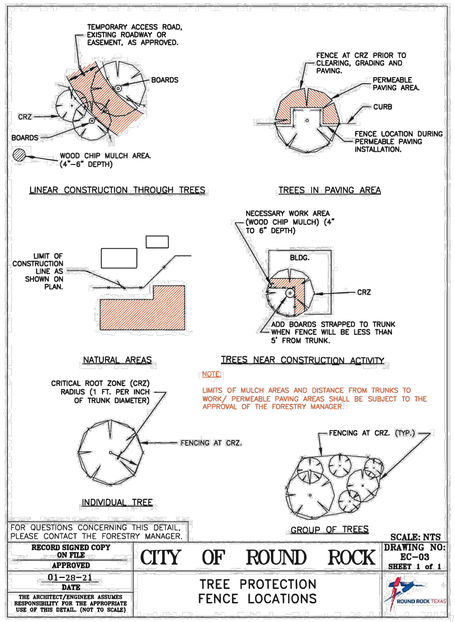
ISSUED FOR REVIEW
NOT FOR CONSTRUCTION
BY: LEIGH A. THOMAS
P.E. REGISTRATION NO. 86887
DATE: MARCH 2026

PHASE 1 WATER SYSTEM IMPROVEMENTS
DRINKING WATER STORAGE
SUNRISE BEACH VILLAGE, TEXAS

GENERAL
EROSION & SEDIMENTATION PLAN AND TREE PROTECTION NOTES

SHEET NO.
05 OF 23

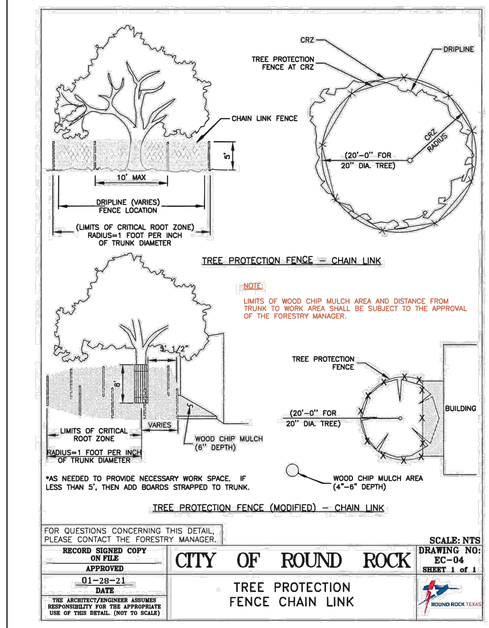
DRAFT (90%) - FOR CITY REVIEW ONLY



FOR QUESTIONS CONCERNING THIS DETAIL, PLEASE CONTACT THE FORESTRY MANAGER.

SCALE: NTS

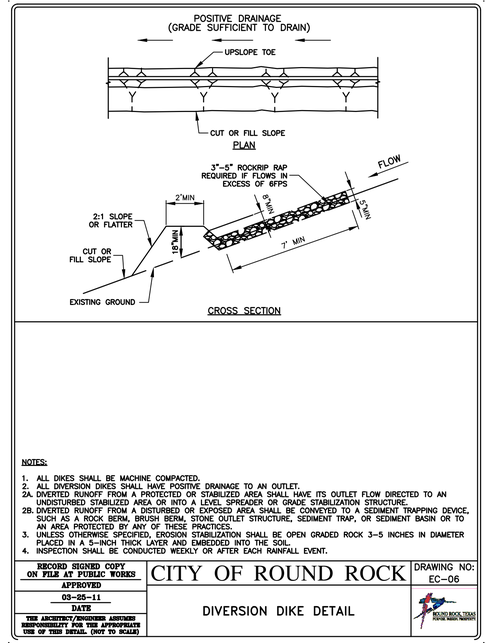
RECORD SIGNED COPY ON FILE AT PUBLIC WORKS	CITY OF ROUND ROCK	DRAWING NO: EC-03
APPROVED 01-28-21 DATE	TREE PROTECTION FENCE LOCATIONS	SHEET 1 of 1
THE ARCHITECT/ENGINEER ASSUMES RESPONSIBILITY FOR THE APPROPRIATE USE OF THIS DETAIL. (NOT TO SCALE)		ROUND ROCK TEXAS



FOR QUESTIONS CONCERNING THIS DETAIL, PLEASE CONTACT THE FORESTRY MANAGER.

SCALE: NTS

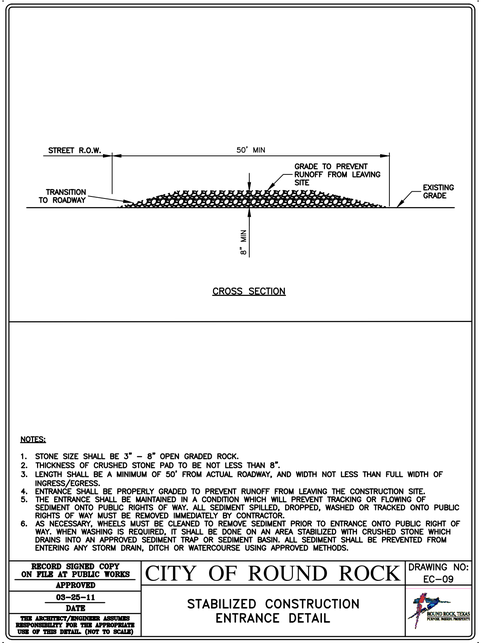
RECORD SIGNED COPY ON FILE AT PUBLIC WORKS	CITY OF ROUND ROCK	DRAWING NO: EC-04
APPROVED 01-28-21 DATE	TREE PROTECTION FENCE CHAIN LINK	SHEET 1 of 1
THE ARCHITECT/ENGINEER ASSUMES RESPONSIBILITY FOR THE APPROPRIATE USE OF THIS DETAIL. (NOT TO SCALE)		ROUND ROCK TEXAS



NOTES:

1. ALL DIKES SHALL BE MACHINE COMPACTED.
2. ALL DIVERSION DIKES SHALL HAVE POSITIVE DRAINAGE TO AN OUTLET.
2A. DIVERTED RUNOFF FROM A PROTECTED OR STABILIZED AREA SHALL HAVE ITS OUTLET FLOW DIRECTED TO AN UNDISTURBED STABILIZED AREA OR INTO A LEVEL SPREADER OR GRADE STABILIZATION STRUCTURE.
2B. DIVERTED RUNOFF FROM A DISTURBED OR EXPOSED AREA SHALL BE CONVEYED TO A SEDIMENT TRAPPING DEVICE, SUCH AS A ROCK BERM, BRUSH BERM, STONE OUTLET STRUCTURE, SEDIMENT TRAP, OR SEDIMENT BASIN OR TO AN AREA PROTECTED BY ANY OF THESE PRACTICES.
3. UNLESS OTHERWISE SPECIFIED, EROSION STABILIZATION SHALL BE OPEN GRADED ROCK 3–5 INCHES IN DIAMETER PLACED IN A 5–INCH THICK LAYER AND EMBEDDED INTO THE SOIL.
4. INSPECTION SHALL BE CONDUCTED WEEKLY OR AFTER EACH RAINFALL EVENT.

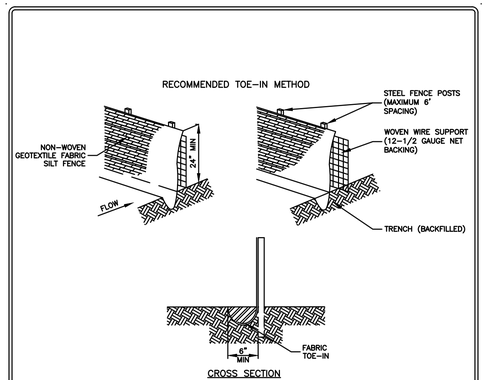
RECORD SIGNED COPY ON FILE AT PUBLIC WORKS	CITY OF ROUND ROCK	DRAWING NO: EC-06
APPROVED 03-25-11 DATE	DIVERSION DIKE DETAIL	
THE ARCHITECT/ENGINEER ASSUMES RESPONSIBILITY FOR THE APPROPRIATE USE OF THIS DETAIL. (NOT TO SCALE)		ROUND ROCK TEXAS



NOTES:

1. STONE SIZE SHALL BE 3" – 8" OPEN GRADED ROCK.
2. THICKNESS OF CRUSHED STONE PAD TO BE NOT LESS THAN 8".
3. LENGTH SHALL BE A MINIMUM OF 50' FROM ACTUAL ROADWAY, AND WIDTH NOT LESS THAN FULL WIDTH OF INGRESS/EGRESS.
4. ENTRANCE SHALL BE PROPERLY GRADED TO PREVENT RUNOFF FROM LEAVING THE CONSTRUCTION SITE.
5. THE ENTRANCE SHALL BE MAINTAINED IN A CONDITION WHICH WILL PREVENT TRACKING OR FLOWING OF SEDIMENT ONTO PUBLIC RIGHTS OF WAY. ALL SEDIMENT SPILLED, DROPPED, WASHED OR TRACKED ONTO PUBLIC RIGHTS OF WAY MUST BE REMOVED IMMEDIATELY BY CONTRACTOR.
6. AS NECESSARY, WHEELS MUST BE CLEANED TO REMOVE SEDIMENT PRIOR TO ENTRANCE ONTO PUBLIC RIGHT OF WAY. WHEN WASHING IS REQUIRED, IT SHALL BE DONE ON AN AREA STABILIZED WITH CRUSHED STONE WHICH DRAINS INTO AN APPROVED SEDIMENT TRAP OR SEDIMENT BASIN. ALL SEDIMENT SHALL BE PREVENTED FROM ENTERING ANY STORM DRAIN, DITCH OR WATERCOURSE USING APPROVED METHODS.

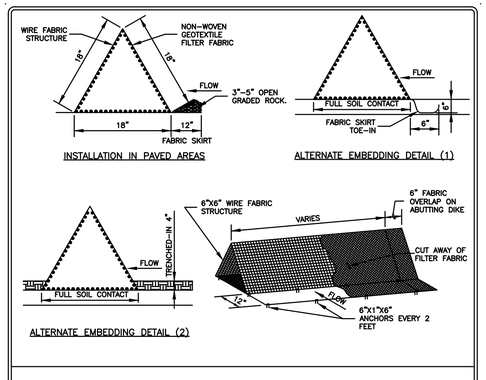
RECORD SIGNED COPY ON FILE AT PUBLIC WORKS	CITY OF ROUND ROCK	DRAWING NO: EC-09
APPROVED 03-25-11 DATE	STABILIZED CONSTRUCTION ENTRANCE DETAIL	
THE ARCHITECT/ENGINEER ASSUMES RESPONSIBILITY FOR THE APPROPRIATE USE OF THIS DETAIL. (NOT TO SCALE)		ROUND ROCK TEXAS



NOTES:

1. STEEL POSTS WHICH SUPPORT THE SILT FENCE SHALL BE INSTALLED ON A SLIGHT ANGLE TOWARD THE ANTICIPATED RUNOFF SOURCE. POST MUST BE EMBEDDED A MIN. OF ONE (1') FOOT.
2. THE TOE OF THE SILT FENCE SHALL BE TRENCHED IN WITH A SPADE OR MECHANICAL TRENCHER, SO THAT THE DOWNSLOPE FACE OF THE TRENCH IS FLAT AND PERPENDICULAR TO THE LINE OF FLOW. WHERE FENCE CANNOT BE TRENCHED IN (E.G. PAVEMENT) WEIGHT FABRIC FLAP WITH WASHED GRAVEL ON UPHILL SIDE TO PREVENT FLOW UNDER FENCE.
3. THE TRENCH MUST BE A MINIMUM OF 6 INCHES DEEP AND 6 INCHES WIDE TO ALLOW FOR THE SILT FENCE FABRIC TO BE LAID IN THE GROUND AND BACKFILLED WITH COMPACTED MATERIAL.
4. SILT FENCE SHALL BE SECURELY FASTENED TO EACH STEEL SUPPORT POST OR TO WOVEN WIRE, WHICH IN TURN IS SECURELY FASTENED TO THE STEEL FENCE POSTS.
5. INSPECTION SHALL BE MADE WEEKLY OR AFTER EACH RAINFALL EVENT AND REPAIR OR REPLACEMENT SHALL BE MADE PROMPTLY AS NEEDED.
6. SILT FENCE SHALL BE REMOVED WHEN THE SITE IS COMPLETELY STABILIZED SO AS NOT TO BLOCK OR IMPEDE STORM FLOW OR DRAINAGE.
7. ACCUMULATED SILT SHALL BE REMOVED WHEN IT REACHES A DEPTH OF 6 INCHES. THE SILT SHALL BE DISPOSED OF IN AN APPROVED SITE AND IN SUCH A MANNER AS TO NOT CONTRIBUTE TO ADDITIONAL SILTATION.
8. SILT FENCE SHALL BE REMOVED AS SOON AS THE SOURCE OF SEDIMENT IS STABILIZED

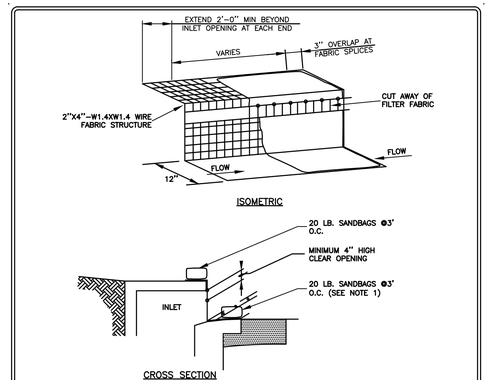
RECORD SIGNED COPY ON FILE AT PUBLIC WORKS	CITY OF ROUND ROCK	DRAWING NO: EC–10
APPROVED 03–25–11 DATE	SILT FENCE DETAIL	
THE ARCHITECT/ENGINEER ASSUMES RESPONSIBILITY FOR THE APPROPRIATE USE OF THIS DETAIL. (NOT TO SCALE)		ROUND ROCK TEXAS



NOTES:

1. DIKES SHALL BE PLACED IN A ROW WITH ENDS TIGHTLY ABUTTING.
2. FABRIC COVER AND SKIRT SHALL BE A CONTINUOUS WRAPPING OF GEOTEXTILE. THE SKIRT SHALL BE A CONTINUOUS EXTENSION OF THE UPSTREAM FACE FABRIC.
3. DIKES AND SKIRT SHALL BE SECURELY ANCHORED IN PLACE WITH WIRE STAPLES AT 2' INTERVALS ON BOTH EDGES AND SKIRT OR WITH 3/8" DIAMETER REBAR WITH TEE ENDS.
4. FILTER MATERIAL SHALL BE LAPPED OVER ENDS 6" TO COVER DIKE–TO–DIKE JOINTS. JOINTS SHALL BE FASTENED WITH GALVANIZED SHOAT RINGS.
5. INSPECTION SHALL BE MADE WEEKLY OR AFTER EACH RAINFALL EVENT AND REPAIR OR REPLACEMENT SHALL BE MADE PROMPTLY AS REQUIRED.
6. ACCUMULATED SILT SHALL BE REMOVED WHEN IT REACHES A DEPTH OF 4" AND DISPOSED OF IN A MANNER WHICH WILL NOT CAUSE ADDITIONAL SILTATION.
7. AFTER THE DEVELOPMENT SITE IS COMPLETELY STABILIZED, THE DIKES AND ANY REMAINING SILT SHALL BE REMOVED. SILT SHALL BE DISPOSED OF AS INDICATED IN NOTE #6 ABOVE.

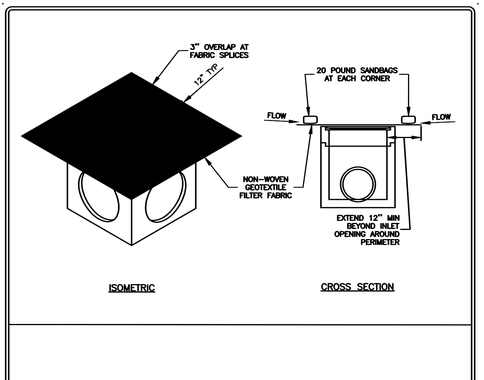
RECORD SIGNED COPY ON FILE AT PUBLIC WORKS	CITY OF ROUND ROCK	DRAWING NO: EC–11
APPROVED 03–25–11 DATE	TRIANGULAR SEDIMENT FILTER DIKE DETAIL	
THE ARCHITECT/ENGINEER ASSUMES RESPONSIBILITY FOR THE APPROPRIATE USE OF THIS DETAIL. (NOT TO SCALE)		ROUND ROCK TEXAS



NOTES:

1. WHERE MINIMUM CLEARANCES CAUSE TRAFFIC TO DRIVE IN THE GUTTER, THE CONTRACTOR MAY SUBSTITUTE A 1" X 4" BOARD SECURED WITH CONCRETE NAILS 3' O.C. NAILED INTO THE GUTTER IN LIEU OF SANDBAGS TO HOLD THE FILTER DIKE IN PLACE. UPON REMOVAL, CLEAN ANY DIRT/DEBRIS FROM NAILING LOCATIONS, APPLY CHEMICAL SANDING AGENT AND APPLY NON–SHRINK GROUT FLUSH WITH SURFACE OF GUTTER.
2. A SECTION OF FILTER FABRIC SHALL BE REMOVED AS SHOWN ON THIS DETAIL OR AS DIRECTED BY THE ENGINEER OR DESIGNATED REPRESENTATIVE. FABRIC MUST BE SECURED TO WIRE BACKING WITH CLIPS OR HOG RINGS AT THIS LOCATION.
3. DAILY INSPECTION SHALL BE MADE BY THE CONTRACTOR AND SILT ACCUMULATION MUST BE REMOVED WHEN DEPTH REACHES 2".
4. CONTRACTOR SHALL MONITOR THE PERFORMANCE OF INLET PROTECTION DURING EACH RAINFALL EVENT AND IMMEDIATELY REMOVE THE INLET PROTECTIONS IF THE STORM–WATER BEGINS TO OVERTOP THE CURB.
5. INLET PROTECTIONS SHALL BE REMOVED AS SOON AS THE SOURCE OF SEDIMENT IS STABILIZED.

RECORD SIGNED COPY ON FILE AT PUBLIC WORKS	CITY OF ROUND ROCK	DRAWING NO: EC–14
APPROVED 03–25–11 DATE	CURB INLET PROTECTION DETAIL	
THE ARCHITECT/ENGINEER ASSUMES RESPONSIBILITY FOR THE APPROPRIATE USE OF THIS DETAIL. (NOT TO SCALE)		ROUND ROCK TEXAS



NOTES:

1. DAILY INSPECTION SHALL BE MADE BY THE CONTRACTOR AND SILT ACCUMULATION MUST BE REMOVED WHEN DEPTH REACHES 2".
2. CONTRACTOR SHALL MONITOR THE PERFORMANCE OF INLET PROTECTION DURING EACH RAINFALL EVENT AND IMMEDIATELY CLEAN THE INLET PROTECTION IF EXCESSIVE PONDING OCCURS.
3. INLET PROTECTIONS SHALL BE REMOVED AS SOON AS THE SOURCE OF SEDIMENT IS STABILIZED.

RECORD SIGNED COPY ON FILE AT PUBLIC WORKS	CITY OF ROUND ROCK	DRAWING NO: EC–15
APPROVED 03–25–11 DATE	AREA INLET PROTECTION DETAIL	
THE ARCHITECT/ENGINEER ASSUMES RESPONSIBILITY FOR THE APPROPRIATE USE OF THIS DETAIL. (NOT TO SCALE)		ROUND ROCK TEXAS

DRAWN BY: OK JOB DATE: MARCH 2026
APPROVED: LT JOB NUMBER: 2303375
CAD DATE: 03/04/26
CAD FILE: J:\2023\2303375\CAD\DWGS – WATER PLANT FACILITY\G\E&S PLAN AND TREE PROTECTION DETAILS.DWG

BAR IS ONE INCH ON OFFICIAL DRAWINGS. 0 1"
IF NOT ONE INCH, ADJUST SCALE ACCORDINGLY.

NO.	DATE	BY	REVISION DESCRIPTION
0	6/25/2025	LT	60% DESIGN PLANS SUBMISSION
1	3/4/2025	LT	90% DESIGN PLANS SUBMISSION

HRGreen
5508 W US HWY 290
SERVICE RD SUITE 150
AUSTIN, TX 78735
PHONE: 512.872.6696
FAX: 713.965.0044
TBPE FIRM NO. F-11278

ISSUED FOR REVIEW
NOT FOR CONSTRUCTION
BY: LEIGH A. THOMAS
P.E. REGISTRATION NO. 86887
DATE: MARCH 2026

PHASE 1 WATER SYSTEM IMPROVEMENTS
DRINKING WATER STORAGE
SUNRISE BEACH VILLAGE, TEXAS

GENERAL
E & S CONTROL & TREE PROTECTION DETAILS
(1 OF 2)

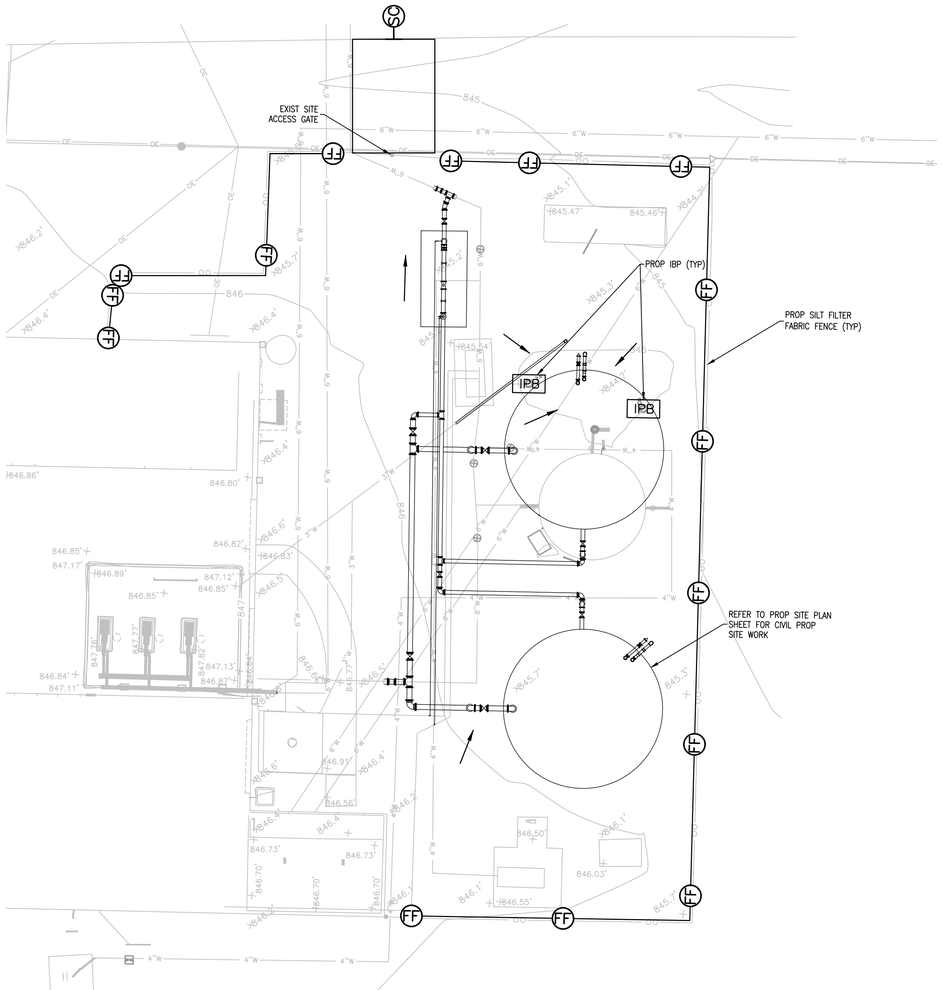
SHEET NO.
06 OF 23

DRAFT (90%) - FOR CITY REVIEW ONLY

LEGEND:

- FF — FILTER FABRIC BARRIER
- DRAINAGE DIRECTION
- SC — STABILIZED CONSTRUCTION ACCESS
- IPB — INLET PROTECTION BARRIER (IPB)

NOTE: CONTRACTOR TO PROVIDE TEMPORARY MEANS TO DRAIN STORMWATER PER SWPPP REQUIREMENTS AS MENTIONED IN SECTION 01 5700 AWAY FROM ADJACENT RESIDENTIAL PROPERTIES AND AIRPORT RUNWAY



NORTH

1 WATER PLANT SITE – SWPPP

SCALE: 1"=10'-0"

0 20
10

DRAWN BY:	OK	JOB DATE:	MARCH 2026
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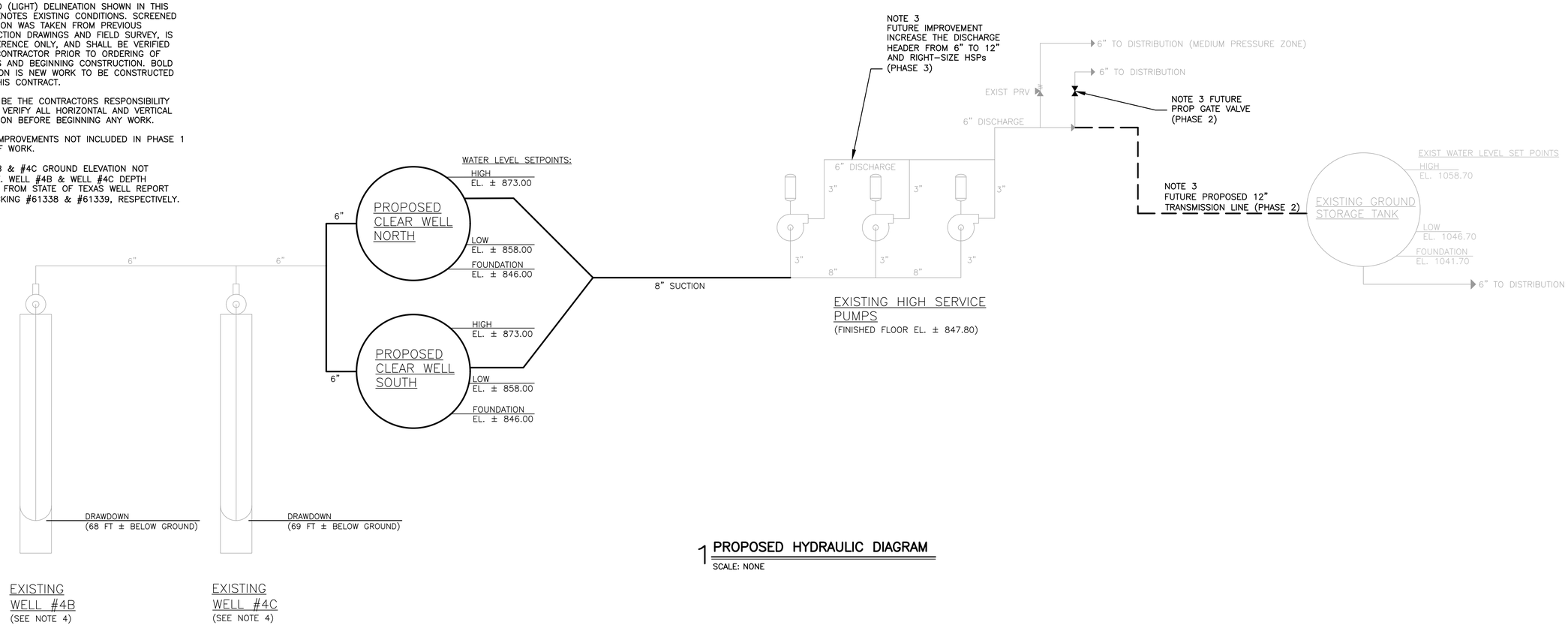
PHASE 1 WATER SYSTEM IMPROVEMENTS
DRINKING WATER STORAGE
SUNRISE BEACH VILLAGE, TEXAS

GENERAL
E & S CONTROL & TREE PROTECTION DETAILS (2 OF 2)

SHEET NO.
07 OF 23

NOTES:

1. SCREENED (LIGHT) DELINEATION SHOWN IN THIS SHEET DENOTES EXISTING CONDITIONS. SCREENED INFORMATION WAS TAKEN FROM PREVIOUS CONSTRUCTION DRAWINGS AND FIELD SURVEY, IS FOR REFERENCE ONLY, AND SHALL BE VERIFIED BY THE CONTRACTOR PRIOR TO ORDERING OF MATERIALS AND BEGINNING CONSTRUCTION. BOLD DELINEATION IS NEW WORK TO BE CONSTRUCTED UNDER THIS CONTRACT.
2. IT SHALL BE THE CONTRACTORS RESPONSIBILITY TO FIELD VERIFY ALL HORIZONTAL AND VERTICAL INFORMATION BEFORE BEGINNING ANY WORK.
3. FUTURE IMPROVEMENTS NOT INCLUDED IN PHASE 1 SCOPE OF WORK.
4. WELL #4B & #4C GROUND ELEVATION NOT AVAILABLE. WELL #4B & WELL #4C DEPTH OBTAINED FROM STATE OF TEXAS WELL REPORT FOR TRACKING #61338 & #61339, RESPECTIVELY.



1 PROPOSED HYDRAULIC DIAGRAM
SCALE: NONE

DRAFT (90%) - FOR CITY REVIEW ONLY

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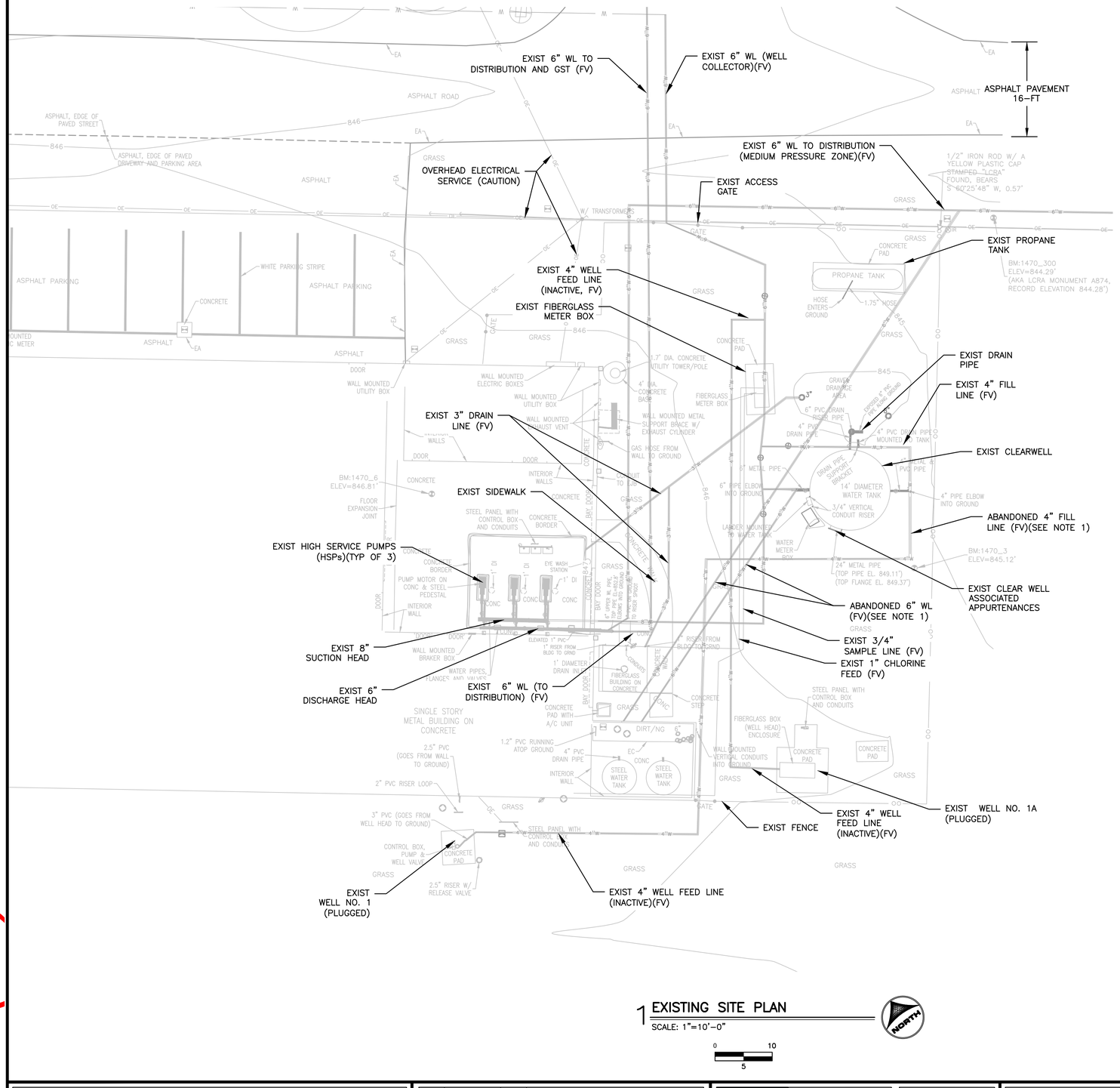
PHASE 1 WATER SYSTEM IMPROVEMENTS
DRINKING WATER STORAGE
SUNRISE BEACH VILLAGE, TEXAS

CIVIL& PROCESS
HYDRAULIC DIAGRAM

SHEET NO.
08 OF 23



1 EXISTING SITE PLAN

SCALE: 1"=10'-0"

0 10

5

NOTES:

1. SCREENED (LIGHT) DELINEATION SHOWN IN THIS SHEET DENOTES EXISTING CONDITIONS. SCREENED INFORMATION WAS TAKEN FROM PREVIOUS CONSTRUCTION DRAWINGS ("GROUNDWATER CONVERSION AND CAPACITY EXPANSION PROJECT – PROJECT NO. 00057-029-036, PRODUCED BY HDR TO LCRA, DATED MAY 12, 2023") AND FIELD SURVEY, IS FOR REFERENCE ONLY, AND SHALL BE VERIFIED BY THE CONTRACTOR PRIOR TO ORDERING OF MATERIALS AND BEGINNING CONSTRUCTION. BOLD DELINEATION IS NEW WORK TO BE CONSTRUCTED UNDER THIS CONTRACT.
2. SEE SPECIFICATION SECTION 01 1000 "SUMMARY" SEE SHEET 14 FOR CONSTRUCTION SEQUENCING.
3. SEE GENERAL CONSTRUCTION NOTES AND TCEQ CONSTRUCTION NOTES FOR ADDITIONAL INFORMATION.
4. UTILITIES ARE SHOWN IN APPROXIMATE LOCATION ONLY. THE CONTRACTOR SHALL DETERMINE THE EXACT LOCATION PRIOR TO COMMENCING WORK.

BENCHMARK:

NAVD 88 (GEOID 12B)
SITE BENCHMARK ELEVATIONS DETERMINED BY NATIONAL GEODETIC SURVEY ONLINE POSITION SERVICE (NGS OPUS) RESULTS FROM STATIC SESSIONS RAN ON SITE CONTROL POINT #99 IN JUNE, 2024 AND VERIFIED BY LEVEL LOOP THROUGH LOWER COLORADO RIVER AUTHORITY (LCRA) MONUMENTS A874 AND AZG7.

LCRA MONUMENT A874
ELEVATION = 844.29' (LCRA PUBLISHED ELEVATION 844.28')

LCRA MONUMENT AZG7
ELEVATION = 844.50' (LCRA PUBLISHED ELEVATION 844.51')

PUBLISHED LCRA MONUMENT ELEVATIONS WERE OBTAINED JUNE 19, 2024 THROUGH http://harn.lcra.org.

BM:1470_1:
1/2" IRON ROD WITH A PLASTIC CAP STAMPED "HR GREEN" SET ON THE NORTH SIDE OF CIRCLE STREET, APPROXIMATELY 3.5' NORTH OF THE PAVEMENT EDGE OF CIRCLE STREET, AND ALSO BEING APPROXIMATELY 130 FEET WEST OF THE INTERSECTION OF CHANNEL STREET AND CIRCLE STREET.
ELEVATION = 845.48'

BM:1470_3:
1/2" IRON ROD WITH A PLASTIC CAP STAMPED "HR GREEN" SET ALONG THE EAST LOT LINE OF LOT 52, APPROXIMATELY 60 SOUTH OF THE NORTHEAST CORNER OF LOT 52; SAID BENCHMARK BEING APPROXIMATELY 3 FEET WEST OF A CHAIN-LINK FENCE.
ELEVATION = 845.12'

BM:1470_6:
"X" SCRIBED ON CONCRETE FLOOR IN THE PUMP ROOM OF THE WATER TREATMENT PLANT.
ELEVATION = 846.81'

DRAFT (90%) - FOR CITY REVIEW ONLY

DRAWN BY:	OK	JOB DATE:	MARCH 2026
APPROVED:	LT	JOB NUMBER:	2303375
CAD DATE:	03/04/26		
CAD FILE:	J:\2023\2303375\CAD\DWGS – WATER PLANT FACILITY\C\ EXISTING SITE.DWG		

BAR IS ONE INCH ON OFFICIAL DRAWINGS. 0 1" IF NOT ONE INCH, ADJUST SCALE ACCORDINGLY.

NO.	DATE	BY	REVISION DESCRIPTION
0	6/25/2025	LT	60% DESIGN PLANS SUBMISSION
1	3/4/2025	LT	90% DESIGN PLANS SUBMISSION

HRGreen
5508 W US HWY 290
SERVICE RD SUITE 150
AUSTIN, TX 78735
PHONE: 512.872.6696
FAX: 713.965.0044
TBPE FIRM NO. F-11278

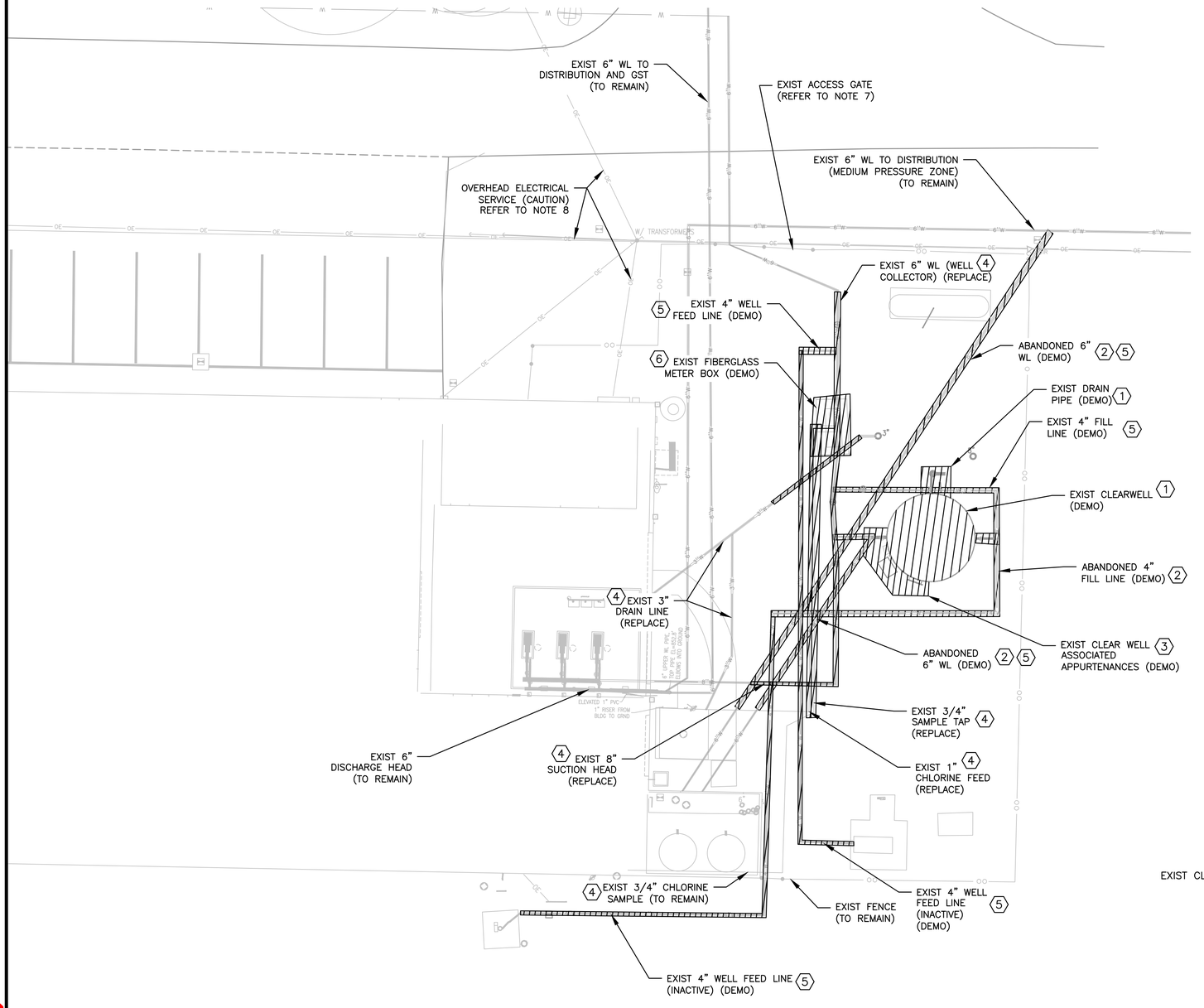
ISSUED FOR REVIEW
NOT FOR CONSTRUCTION
BY: LEIGH A. THOMAS
P.E. REGISTRATION NO. 86887
DATE: MARCH 2026

PHASE 1 WATER SYSTEM IMPROVEMENTS
DRINKING WATER STORAGE
SUNRISE BEACH VILLAGE, TEXAS

GENERAL
EXISTING SITE PLAN

SHEET NO.
09 OF 23

DRAFT (90%) - FOR CITY REVIEW ONLY



1 DEMO PLAN
SCALE: 1"=10'-0"

0 10
5

NOTES:

1. SCREENED (LIGHT) DELINEATION SHOWN IN THIS SHEET DENOTES EXISTING CONDITIONS. SCREENED INFORMATION WAS TAKEN FROM PREVIOUS CONSTRUCTION DRAWINGS AND FIELD SURVEY, IS FOR REFERENCE ONLY, AND SHALL BE VERIFIED BY THE CONTRACTOR PRIOR TO ORDERING OF MATERIALS AND BEGINNING CONSTRUCTION. BOLD DELINEATION IS NEW WORK TO BE CONSTRUCTED UNDER THIS CONTRACT.
2. THIS DRAWING IS INTENDED TO PROVIDE GENERAL INFORMATION FOR DEMOLITION WORK. CONTRACTOR IS RESPONSIBLE FOR DEMOLITION AND REMOVAL SHOWN HEREIN, AND AS NEEDED FOR NEW CONSTRUCTION.
3. CONTRACTOR IS RESPONSIBLE FOR LEAD AND ASBESTOS ABATEMENT REFER SPEC 02133 – LEAD BASED PAINT ABATEMENT AND TANK DEMOLITION. LEAD/ASBESTOS REPORT AND TANK INSPECTION REPORT ARE PROVIDED IN PROJECT MANUAL AS SUPPLEMENTAL ATTACHMENT.
4. RESTORE SITE TO SURROUNDING GRADE. CONTRACTOR TO SEED/HYDROMULCH PER SPECIFICATIONS.
5. FIELD VERIFY EXACT LOCATION AND FLOWLINE ELEVATION OF PIPE FOR DEMOLITION AND PROPOSED IMPROVEMENTS. UNDERGROUND UTILITIES SHALL BE PROTECTED UNLESS OTHERWISE NOTED ON THIS SHEET.
6. PROVIDE ENGINEER A "DEMOLITION" PLAN FOR APPROVAL PRIOR TO REMOVING TANK AND OTHER MATERIAL FROM SITE.
7. CONTRACTOR TO USE EXISTING ACCESS GATE FROM CIRCLE DRIVE FOR ACCESS DURING CONSTRUCTION. CONTRACTOR TO RESTORE PATHWAY TO PREVIOUS OR BETTER CONDITIONS UPON COMPLETION OF WORK.
8. CONTRACTOR TO CONTACT LOCAL UTILITIES COMPANIES TO TEMPORARILY DE-ENERGIZE OVERHEAD POWER LINES AND ASSOCIATED ACCESSORIES AS REQUIRED TO PERFORM DEMOLITION WORK AT NO ADDITIONAL COST TO OWNER.
9. TEMPORARY FENCING MUST BE INSTALLED BY CONTRACTOR DURING NON-WORK HOURS.
10. SEE SHEET 27 FOR EXISTING UNDERGROUND AND ABOVEGROUND ELECTRICAL; TO BE PROTECTED.
11. SEE SPECIFICATION SECTION 01 1000 "SUMMARY" AND SHEET 14 FOR CONSTRUCTION SEQUENCING.
12. SEE GENERAL CONSTRUCTION NOTES AND TCEQ CONSTRUCTION NOTES FOR ADDITIONAL INFORMATION.
13. UTILITIES ARE SHOWN IN APPROXIMATE LOCATION ONLY. THE CONTRACTOR SHALL DETERMINE THE EXACT LOCATION PRIOR TO COMMENCING WORK.

LEGEND

TO BE REMOVED/REPLACED

DEMOLITION KEY NOTES:

1. DEMOLISH EXISTING 19,000 GALLON CLEAR WELL (14' DIAMETER AND 17' HIGH) TANK, FOUNDATION, AND ASSOCIATED ABOVE GRADE PIPE AND VALVES. SEE SHEET 14 FOR CONSTRUCTION SEQUENCING.
2. REMOVE EXISTING (PREVIOUSLY ABANDONED) 4" AND 6" WATER LINES AND ASSOCIATED VALVES AND FITTINGS TO APPROXIMATE EXTENTS SHOWN AND AS NEEDED FOR NEW CONSTRUCTION.
3. REMOVE ALL OTHER CLEAR WELL ASSOCIATED APPURTENANCES.
4. TO REMAIN, REMOVE AND REPLACE EXISTING PIPE, VALVES, BENDS, AND FITTINGS TO EXTENT NECESSARY FOR PROPOSED IMPROVEMENTS.
5. REMOVE AND PLUG EXISTING PIPE, VALVES, BENDS, AND FITTINGS TO THE MINIMUM EXTENT SHOWN FOR PROPOSED IMPROVEMENTS.
6. DEMOLISH EXISTING FIBERGLASS METER BOX. REFER TO SHEET 16 FOR PROPOSED TIE-IN.

2 CLEARWELL DEMO DETAIL
SCALE: NTS

3 METER BOX DEMO DETAIL
SCALE: NTS

DRAWN BY: OK
APPROVED: LT
CAD DATE: 03/04/26
CAD FILE: J:\2023\2303375\CAD\DWGS - WATER PLANT FACILITY\C\DEMO PLAN.DWG
JOB DATE: MARCH 2026
JOB NUMBER: 2303375
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HRGreen
5508 W US HWY 290
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AUSTIN, TX 78735
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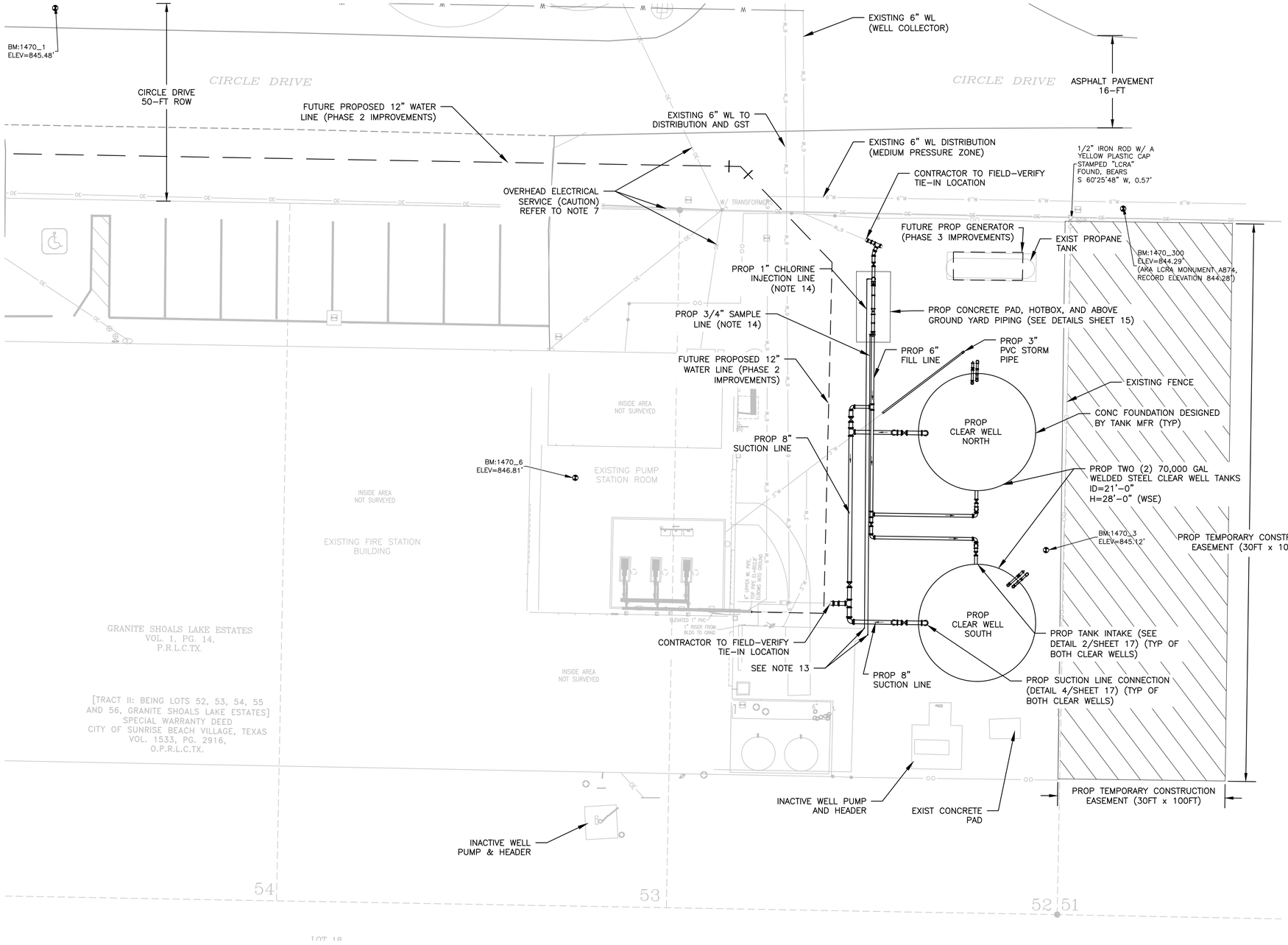
DATE: MARCH 2026

PHASE 1 WATER SYSTEM IMPROVEMENTS
DRINKING WATER STORAGE
SUNRISE BEACH VILLAGE, TEXAS

GENERAL
DEMOLITION PLAN

SHEET NO.
10 OF 23



1 PROPOSED SITE PLAN

SCALE: 1"=10'–0"

NORTH

0 10

5

NOTES:

1. SCREENED (LIGHT) DELINEATION SHOWN IN THIS SHEET DENOTES EXISTING CONDITIONS, EXCLUDING EXTENT OF DEMOLITION (SHEET 10). SCREENED INFORMATION SHALL BE VERIFIED BY THE CONTRACTOR PRIOR TO ORDERING OF MATERIALS AND BEGINNING CONSTRUCTION. BOLD DELINEATION IS NEW WORK TO BE CONSTRUCTED UNDER THIS CONTRACT.
2. EXISTING UTILITIES TO BE DEMOLISHED/REMOVED AS INDICATED ON SHEETS 09 AND 10 ARE NOT HEREIN SHOWN FOR CLARITY.
3. IT SHALL BE CONTRACTOR'S RESPONSIBILITY TO FIELD VERIFY ALL HORIZONTAL AND VERTICAL INFORMATION BEFORE BEGINNING ANY WORK.
4. SEE DEMOLITION ON SHEET 10. SEE PROPOSED GRADING PLAN ON SHEET 13. SEE SHEET 05 FOR STORMWATER POLLUTION PREVENTION PLAN. SEE 12 FOR YARD PIPING PLAN AND DETAILS.
5. CONTRACTOR SHALL COORDINATE WITH CITY TO ESTABLISH CONSTRUCTION STAGING AND STORAGE AREAS.
6. CITY IS NOT RESPONSIBLE FOR SECURED/UNSECURED STORED MATERIAL ON SITE.
7. ALL WORK INVOLVED IN THIS PROJECT SHALL BE CONSTRUCTED ON CITY PROPERTY, RIGHT–OF–WAY OR ON EASEMENT OBTAINED BY THE CITY. CONTRACTOR SHALL RESTRICT CONSTRUCTION OPERATIONS TO CONSTRUCTION LIMITS. NOTHING SHALL BE STORED ON, PARKED ON, DEPOSITED ON, OR DRIVEN OVER ANY PRIVATE PROPERTY UNLESS WRITTEN AUTHORIZATION IS OBTAINED FROM THE PROPERTY OWNER BY THE CONTRACTOR. A COPY OF SUCH WRITTEN AGREEMENT SHALL BE PROVIDED TO THE CITY AND THE ENGINEER. UPON FINAL COMPLETION, CONTRACTOR SHALL PROVIDE THE CITY AND THE ENGINEER A WRITTEN RELEASE SIGNED BY THE PROPERTY OWNER.
8. CONTRACTOR TO TAKE CAUTION AND MAINTAIN MINIMUM 12–FEET CLEARANCE FOR CONSTRUCTION ACTIVITIES NEAR OVERHEAD POWERLINES AND FOLLOW OSHA CLEARANCE REQUIREMENTS (REFER TO GENERAL NOTES).
9. CONTRACTOR IS RESPONSIBLE FOR FIELD VERIFYING LOCATION OF WATER LINE AND TIE–INS FOR PROPOSED CLEAR WELL.
10. NO TREE WITH A TRUNK DIAMETER MEASURING 8 INCHES OR BIGGER WAS OBSERVED ON THE SITE SHOWN HEREON.
11. REFER TO GEOTECHNICAL REPORT IN SUPPLEMENTAL ATTACHMENTS FOR SOIL BORING AND CPT LOCATIONS.
12. NOT ALL PROPOSED PIPE APPURTENANCES ARE SHOWN. REFER TO SHEET 12 FOR ALL APPURTENANCES.
13. CONTRACTOR TO VERIFY CONNECTION LOCATION & DEPTH. CONNECTION TO INCLUDE, BUT NOT LIMITED TO, 1"x1" TEE AND COUPLINGS TO CONNECT EXISTING BURIED CHEMICAL INJECTION LINE, AND 3/4"x3/4" TEE AND COUPLINGS TO CONNECT EXISTING SAMPLE LINE.
14. 1" AND 3/4" SCH 80 PVC INJECTION AND SAMPLE LINES, SEE SPEC SECTION 46 3383. CONTRACTOR TO FIELD ROUTE A MINIMUM DEPTH OF 12". ANY ABOVE GRADE CHEMICAL FEED AND SAMPLE LINES SHALL BE INSULATED WITH ALUMINUM CLADDING. CONTRACTOR MAY CHOOSE TO BORE LINE UNDER SURFACE FEATURES TO MINIMIZE SURFACE DISTURBANCE.

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JOB DATE: MARCH 2026
JOB NUMBER: 2303375
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AUSTIN, TX 78735
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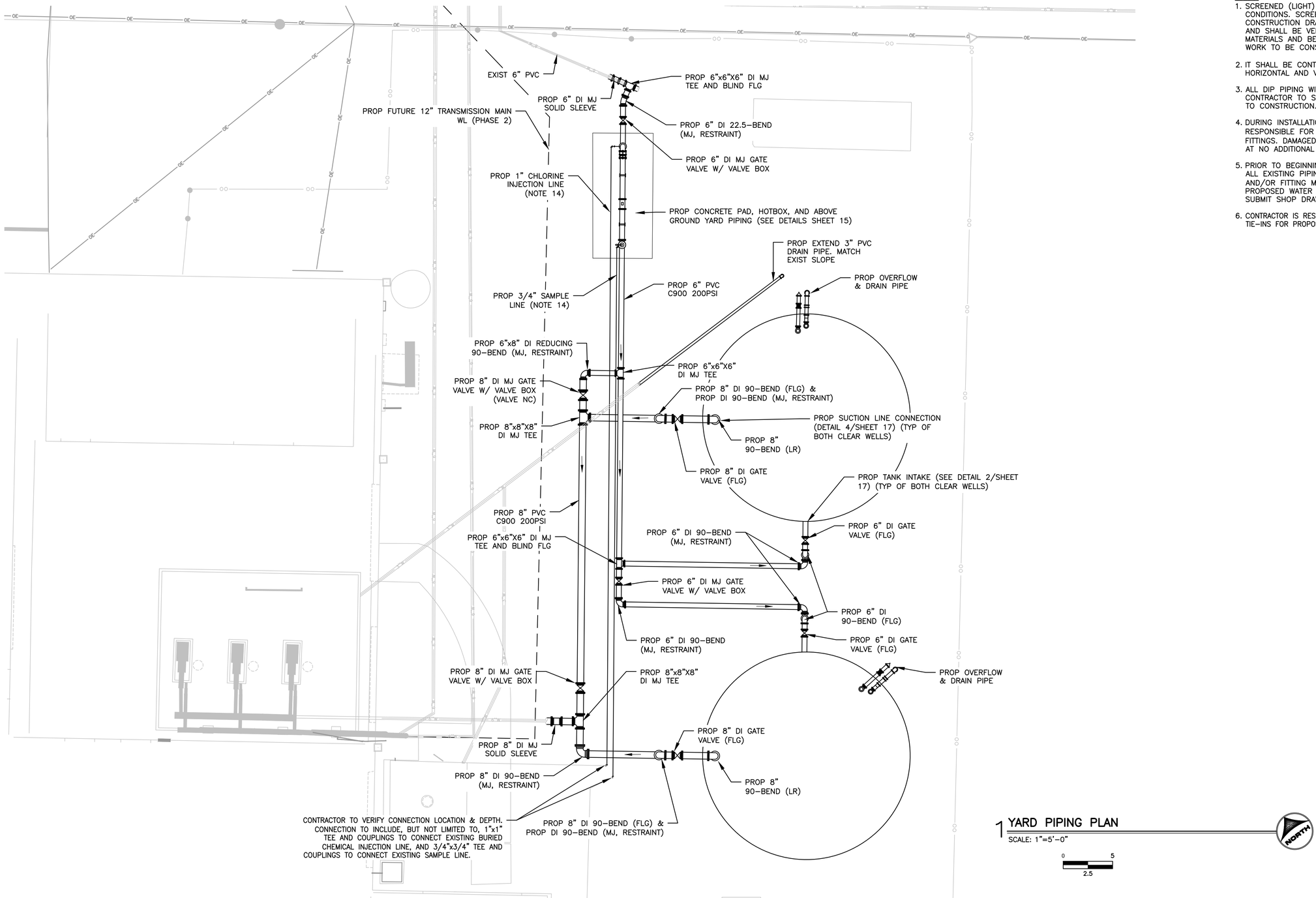
NOT FOR CONSTRUCTION
BY: LEIGH A. THOMAS
P.E. REGISTRATION NO. 86887
DATE: MARCH 2026

PHASE 1 WATER SYSTEM IMPROVEMENTS
DRINKING WATER STORAGE
SUNRISE BEACH VILLAGE, TEXAS

GENERAL
PROPOSED SITE PLAN

SHEET NO.
11 OF 23



1 YARD PIPING PLAN
SCALE: 1"=5'-0"

0 5
2.5

NORTH

NOTES:

1. SCREENED (LIGHT) DELINEATION SHOWN IN THIS SHEET DENOTES EXISTING CONDITIONS. SCREENED INFORMATION WAS TAKEN FROM PREVIOUS CONSTRUCTION DRAWINGS AND FIELD SURVEY, IS FOR REFERENCE ONLY, AND SHALL BE VERIFIED BY THE CONTRACTOR PRIOR TO ORDERING OF MATERIALS AND BEGINNING CONSTRUCTION. BOLD DELINEATION IS NEW WORK TO BE CONSTRUCTED UNDER THIS CONTRACT.
2. IT SHALL BE CONTRACTOR'S RESPONSIBILITY TO FIELD VERIFY ALL HORIZONTAL AND VERTICAL INFORMATION BEFORE BEGINNING ANY WORK.
3. ALL DIP PIPING WITHIN THE PLANT SITE SHALL BE RESTRAINED. CONTRACTOR TO SUBMIT ALL YARD PIPING FOR REVIEW TO ENGINEER PRIOR TO CONSTRUCTION.
4. DURING INSTALLATION OF PROPOSED WATER LINES CONTRACTOR IS RESPONSIBLE FOR ANY DAMAGE CAUSED TO EXISTING PIPING AND/OR FITTINGS. DAMAGED PIPING AND/OR FITTINGS SHALL BE ENTIRELY REPLACED AT NO ADDITIONAL COST TO THE OWNER.
5. PRIOR TO BEGINNING CONSTRUCTION, CONTRACTOR SHALL FIELD LOCATE ALL EXISTING PIPING AND UNDERGROUND UTILITIES IN THIS AREA. IF PIPE AND/OR FITTING MODIFICATIONS ARE REQUIRED TO ACCOMMODATE PROPOSED WATER LINES, CONTRACTOR SHALL NOTIFY ENGINEER AND SUBMIT SHOP DRAWINGS FOR REVIEW PRIOR TO CONSTRUCTION.
6. CONTRACTOR IS RESPONSIBLE FOR FIELD VERIFYING LOCATION OF WATER AND TIE-INS FOR PROPOSED CLEAR WELL.

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APPROVED: LT
CAD DATE: 03/04/26
CAD FILE: J:\2023\2303375\CAD\DWGS - WATER PLANT FACILITY\C\YARD PIPING PLAN.DWG
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HRGreen
5508 W US HWY 290
SERVICE RD SUITE 150
AUSTIN, TX 78735
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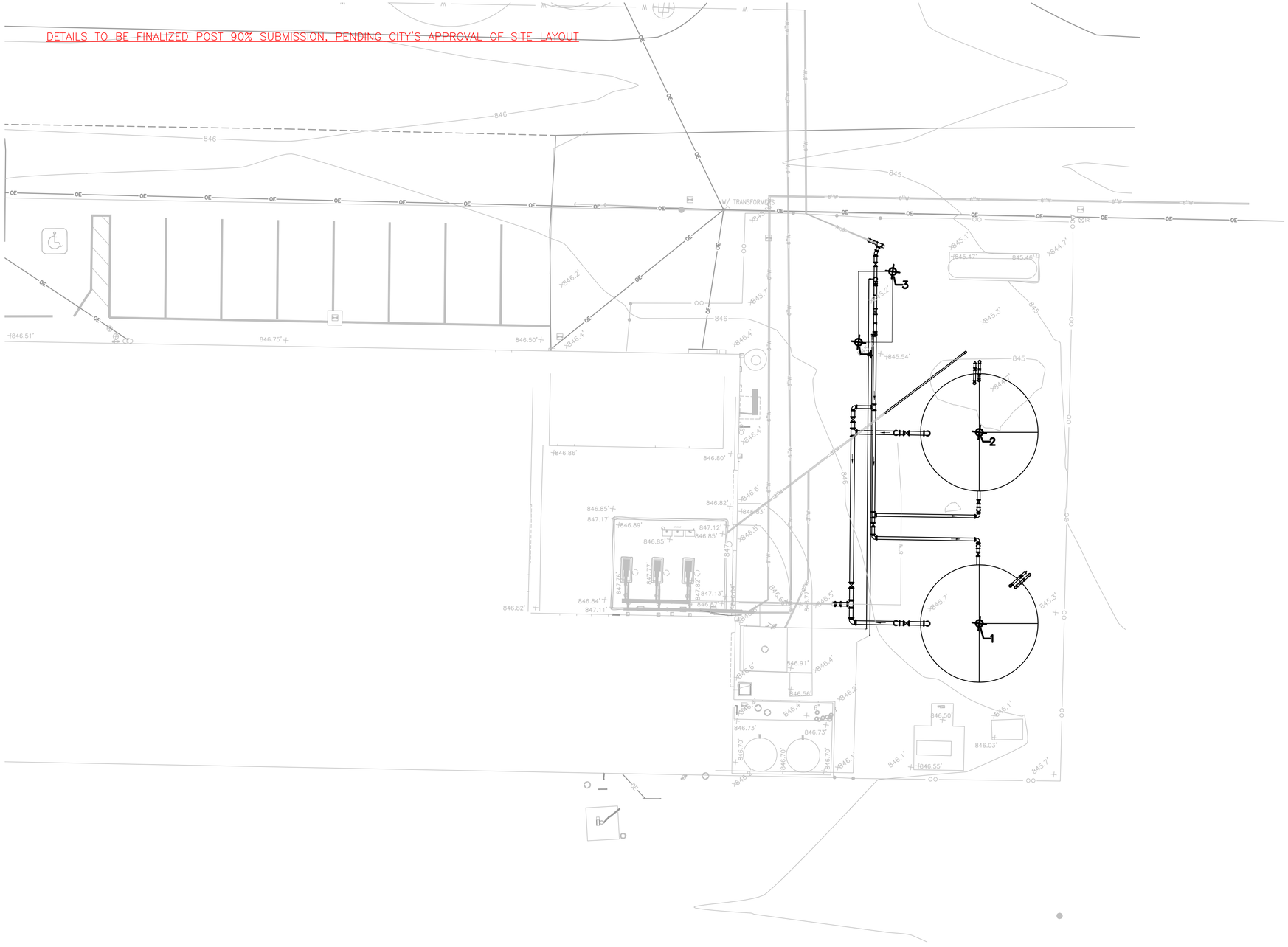
DATE: MARCH 2026

PHASE 1 WATER SYSTEM IMPROVEMENTS
DRINKING WATER STORAGE
SUNRISE BEACH VILLAGE, TEXAS

GENERAL
YARD PIPING PLAN

SHEET NO.
12 OF 23

DETAILS TO BE FINALIZED POST 90% SUBMISSION, PENDING CITY'S APPROVAL OF SITE LAYOUT



NOTES:
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2. GRADE SITE TO HAVE DRAINAGE FLOW AS SHOWN IN DRAWING. CONTRACTOR TO SEED/HYDROMULCH PER SPECIFICATIONS.
3. CONTRACTOR TO SUBMIT PAVING PLAN FOR WTP IF THE EXISTING PAVING IS DAMAGED DURING CONSTRUCTION.

LEGEND:

FLOW DIRECTION

PROP ELEVATION

POINTS TABLE		
POINT #	NORTHING	EASTING
1	10186756.81	2902365.40
2	10186784.13	2902386.00
3	10186816.44	2902390.93
4	10186810.02	2902378.44

1 GRADING PLAN
SCALE: 1"=10'-0"

0 10
5

NORTH

DRAFT (90%) - FOR CITY REVIEW ONLY

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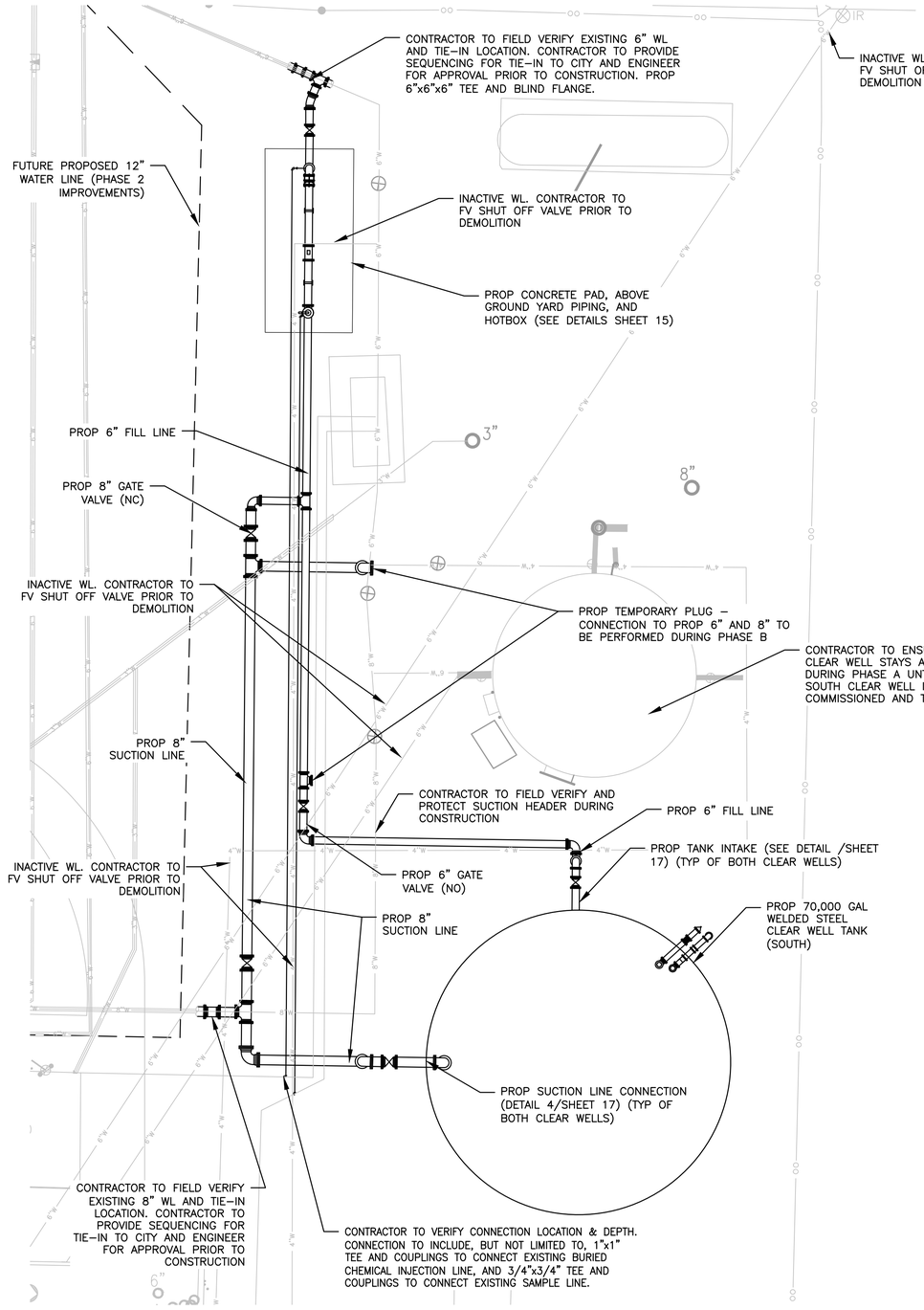
PHASE 1 WATER SYSTEM IMPROVEMENTS
DRINKING WATER STORAGE
SUNRISE BEACH VILLAGE, TEXAS

GENERAL
PROP GRADING PLAN

SHEET NO.
13 OF 23

DRAFT (90%) - FOR CITY REVIEW ONLY

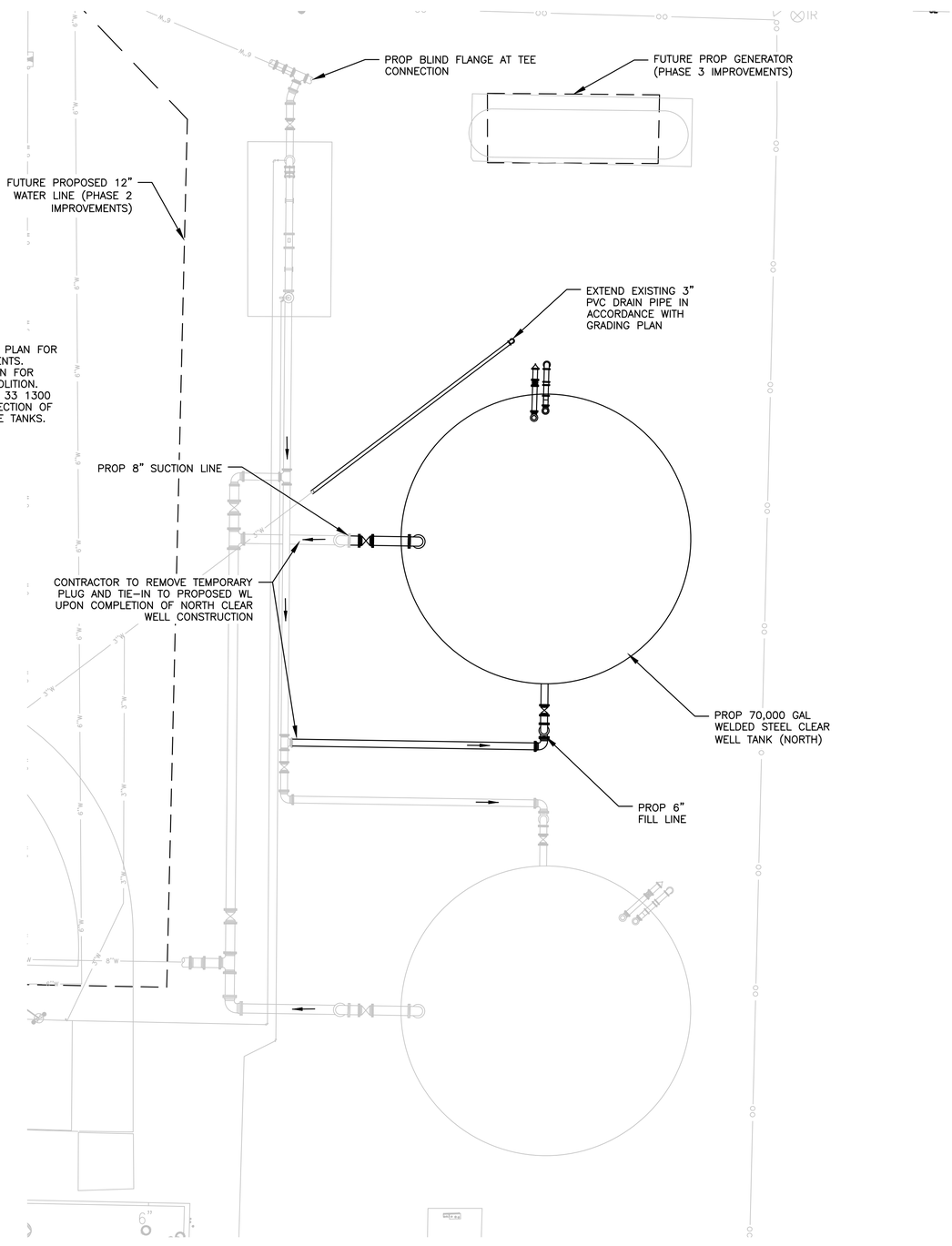


1 PHASE A – CLEAR WELL SOUTH

SCALE: 1"=5'–0"

GENERAL NOTES:

1. REFER TO PROPOSED SITE PLAN FOR ALL PROPOSED IMPROVEMENTS.
2. REFER TO DEMOLITION PLAN FOR LIMITS OF PROPOSED DEMOLITION.
3. REFER TO SPEC SECTIONS 33 1300 AND 33 1313 FOR DISINFECTION OF WATER LINES AND STORAGE TANKS.



2 PHASE B – CLEAR WELL NORTH

SCALE: 1"=5'–0"

DRAWN BY:	OK	JOB DATE:	MARCH 2026
APPROVED:	LT	JOB NUMBER:	2303375
CAD DATE:	03/04/26		
CAD FILE:	J:\2023\2303375\CAD\DWGS – WATER PLANT FACILITY\C\CONSTRUCTION SEQUENCING.DWG		

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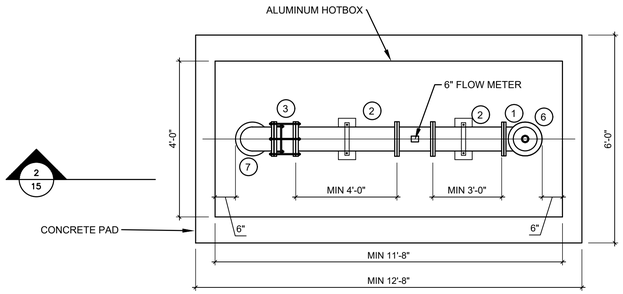
PHASE 1 WATER SYSTEM IMPROVEMENTS
DRINKING WATER STORAGE
SUNRISE BEACH VILLAGE, TEXAS

GENERAL
CONSTRUCTION SEQUENCING

SHEET NO.
14 OF 23



1 WELL PIPING PLAN

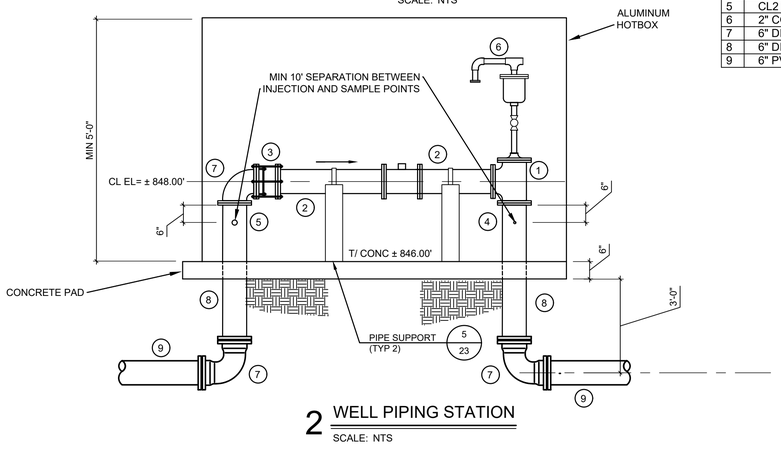
SCALE: NTS

NOTE:

1. CONTRACTOR SHALL COORDINATE CONSTRUCTION OF ALL PIPING & VALVES AS SHOWN WITH CLEAR WELL CONTRACTOR TO ENSURE A COMPLETE AND FUNCTIONAL INSTALLATION. CONTRACTOR SHALL SUBMIT SHOP DRAWINGS SUBMITTAL FOR ALL PIPING, VALVES, AND FITTINGS AS SHOWN HEREIN PRIOR TO ORDERING MATERIAL.
2. ALL ABOVE GROUND PIPING SHALL BE RESTRAINED DUCTILE IRON PIPE, UNLESS OTHERWISE NOTED.
3. 1" AND 3/4" SCH 80 PVC INJECTION AND SAMPLE LINES, SEE SPEC SECTION 46 3383. ANY ABOVE GRADE CHEMICAL FEED AND SAMPLE LINES SHALL BE INSULATED WITH ALUMINUM CLADDING.
4. FINAL CONCRETE PAD DIMENSIONS TO BE DETERMINED PENDING AVAILABLE HOTBOX SIZES AND FINAL PIPING CONFIGURATION. CONTRACTOR TO SUBMIT HOTBOX SHOP DRAWINGS DURING SUBMITTAL PHASE FOR APPROVAL.

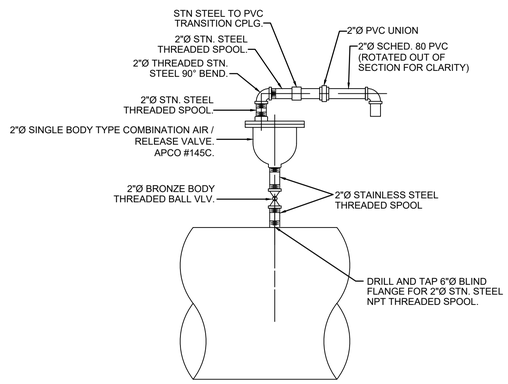
DETAILS 1 AND 2 PIPE AND FITTING SCHEDULE (1)

1	6" DI TEE AND BLIND FLANGE
2	6" DI SPOOL, FLxFL
3	6" DISMANTLING JOINT
4	SAMPLE TAP, PER DETAIL 5
5	CL2 INJECTION POINT, PER DETAIL 6
6	2" COMBINATION AIR RELEASE VALVE, PER DETAIL 4
7	6" DI MJ 90 DEGREE BEND
8	6" DI SPOOL, FLxPE
9	6" PVC



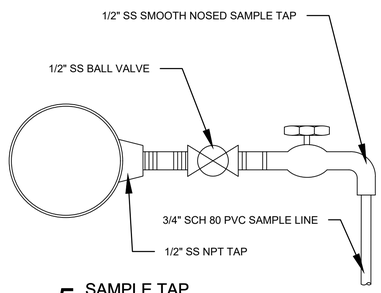
2 WELL PIPING STATION

SCALE: NTS



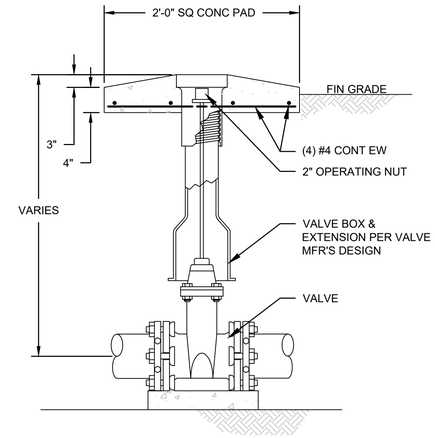
4 COMBINATION AIR VALVE DETAIL

SCALE: NTS



5 SAMPLE TAP

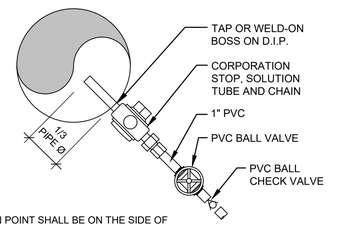
SCALE: NTS



NOTE: PROVIDE BOX WITH ALL BURIED VALVES UNLESS OTHERWISE NOTED.

3 VALVE WITH VALVE BOX

SCALE: NTS



NOTES:

1. INJECTION POINT SHALL BE ON THE SIDE OF THE PIPE.
2. PROVIDE METAL CLADDED INSULATION OVER ALL ABOVE GRADE PVC FEED LINES.

6 CHEMICAL FEED INJECTOR DETAIL

SCALE: NTS

DRAFT (90%) - FOR CITY REVIEW ONLY

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APPROVED: LT
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CAD FILE: J:\2023\2303375\CAD\DWGS – WATER PLANT FACILITY\C\SPECIAL DETAILS (1 OF 4).DWG

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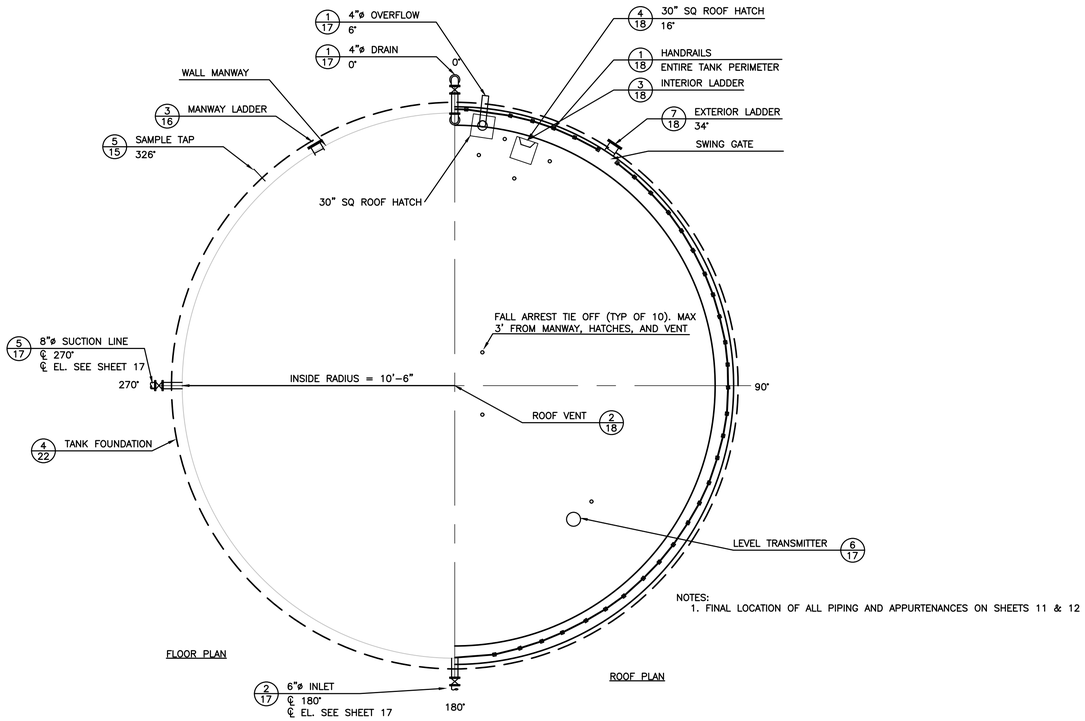
PHASE 1 WATER SYSTEM IMPROVEMENTS
DRINKING WATER STORAGE
SUNRISE BEACH VILLAGE, TEXAS

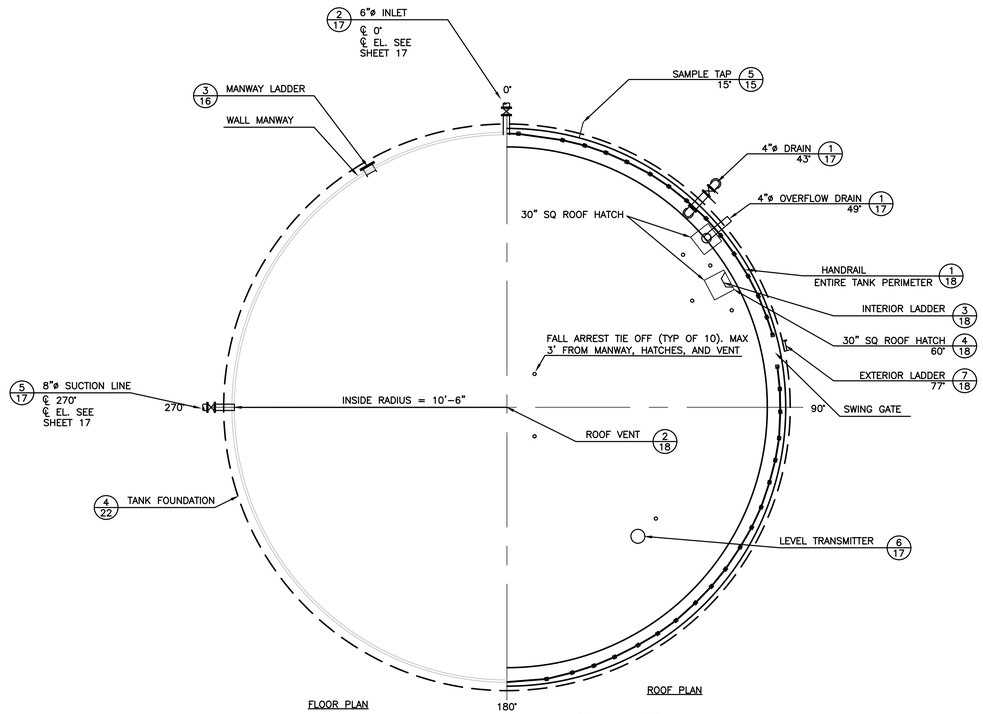
GENERAL
SPECIAL DETAILS (1 OF 4)

SHEET NO.
15 OF 23

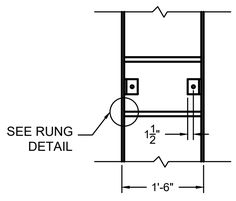


NOTES:
1. FINAL LOCATION OF ALL PIPING AND APPURTENANCES ON SHEETS 11 & 12

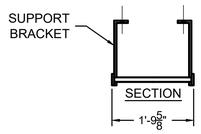
1 PLAN NORTH TANK
SCALE: NTS

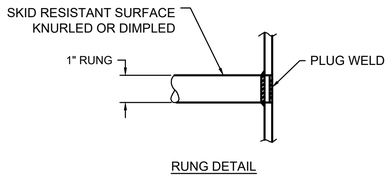


2 PLAN SOUTH TANK
SCALE: NTS



ELEVATION





RUNG DETAIL

NOTES:
1. LADDER SHALL BE 6061-T6 ALUMINUM.
2. ALL ALUMINUM SURFACES IN CONTACT WITH CONCRETE SHALL RECEIVE A PVC SHIM.
3. LADDERS SHALL BE CONNECTED TO TANK USING STAINLESS STEEL WEDGE ANCHORS.

3 MANWAY LADDER
SCALE: NTS

DRAFT (90%) - FOR CITY REVIEW ONLY

DRAWN BY: OK JOB DATE: MARCH 2026
APPROVED: LT JOB NUMBER: 2303375
CAD DATE: 03/04/26
CAD FILE: J:\2023\2303375\CAD\DWGS - WATER PLANT FACILITY\C\SPECIAL DETAILS (4 OF 4).DWG

BAR IS ONE INCH ON OFFICIAL DRAWINGS. 0 1"
IF NOT ONE INCH, ADJUST SCALE ACCORDINGLY.

NO.	DATE	BY	REVISION DESCRIPTION
0	6/25/2025	LT	60% DESIGN PLANS SUBMISSION
1	3/4/2025	LT	90% DESIGN PLANS SUBMISSION

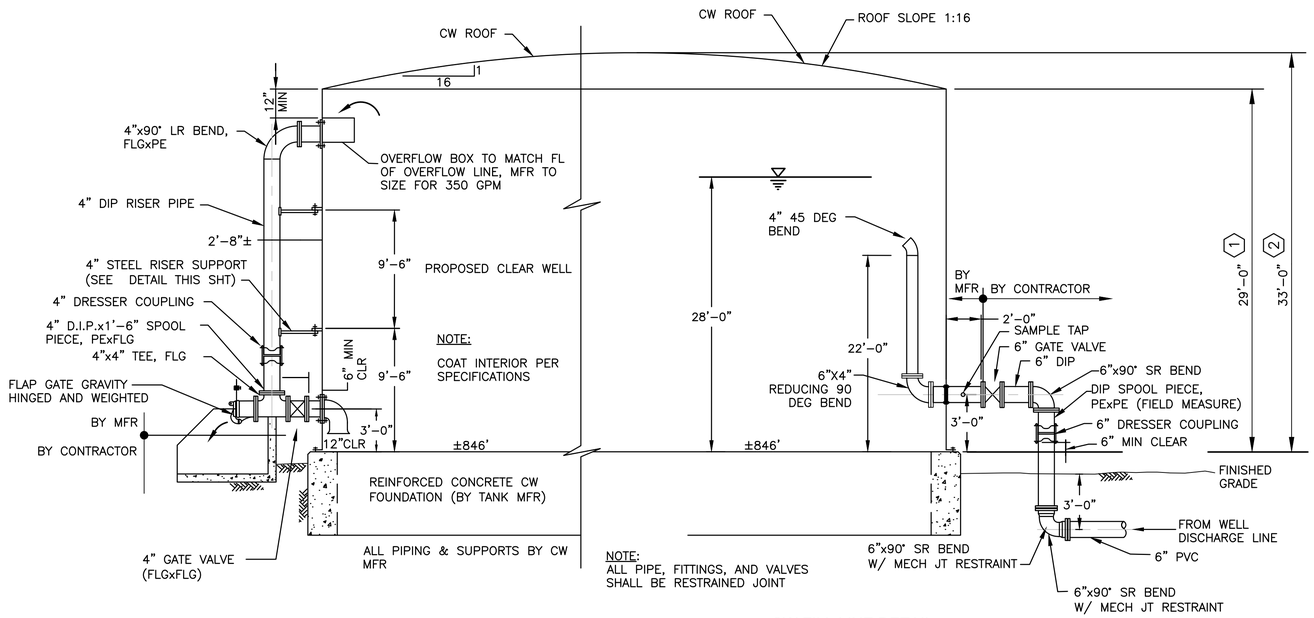
HRGreen
5508 W US HWY 290
SERVICE RD SUITE 150
AUSTIN, TX 78735
PHONE: 512.872.6696
FAX: 713.965.0044
TBPE FIRM NO. F-11278

ISSUED FOR REVIEW
NOT FOR CONSTRUCTION
BY: LEIGH A. THOMAS
P.E. REGISTRATION NO. 86887
DATE: MARCH 2026

PHASE 1 WATER SYSTEM IMPROVEMENTS
DRINKING WATER STORAGE
SUNRISE BEACH VILLAGE, TEXAS

CIVIL& PROCESS
SPECIAL DETAILS (2 OF 4)

SHEET NO.
16 OF 23

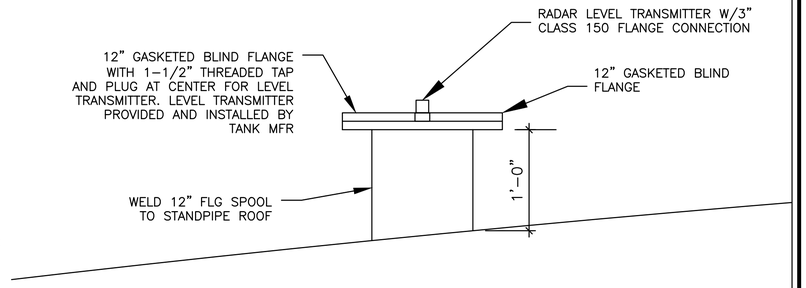


KEY NOTES: (X)

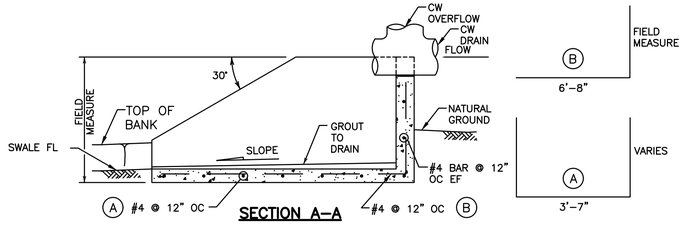
1. TANK DIMENSION TO BE VERIFIED WITH TANK MANUFACTURER. CW AND CONTRACTOR SHALL COORDINATE SCOPE FOR COMPATIBILITY
2. AS PER FAA AERONAUTICAL STUDY NO. 2025-ASW-8155-OE ISSUED ON 8/8/2025, MAXIMUM CLEAR WELL FINISHED ELEVATION (INCLUDING ROOF VENT, HANDRAIL, AND APPURTANCES) SHALL NOT EXCEED 879.00'. CONTRACTOR MAY CHOOSE TO REDUCE ROOF SLOPE TO NO LESS THAN TCEQ MINIMUM REQUIREMENT OF 0.75 INCH PER FOOT

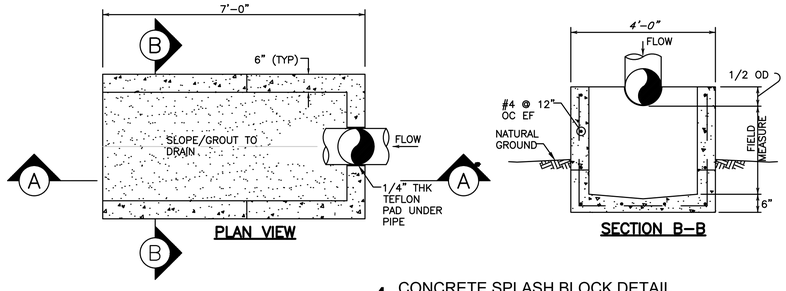
1 CW OVERFLOW/DRAIN LINE DETAIL
SCALE: NTS

2 CW FILL LINE DETAIL
SCALE: NTS

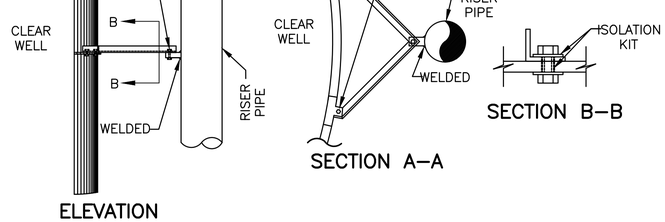


3 LEVEL TRANSMITTER CONNECTION DETAIL
SCALE: NTS

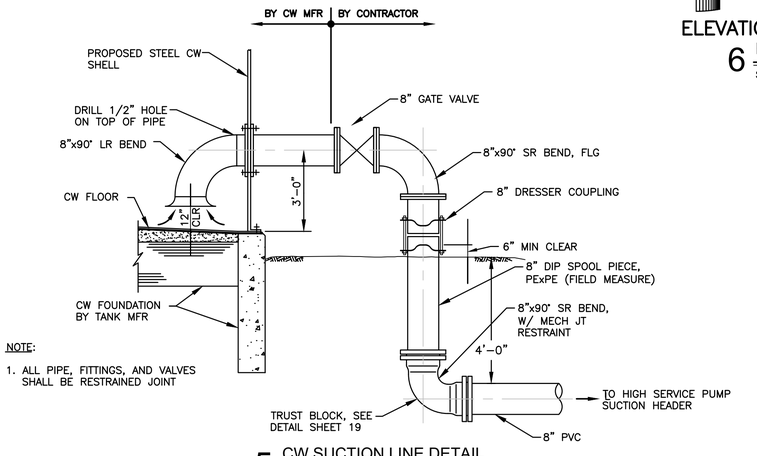




4 CONCRETE SPLASH BLOCK DETAIL
SCALE: NTS



6 RISER SUPPORT DETAIL
SCALE: NTS



NOTE:

1. ALL PIPE, FITTINGS, AND VALVES SHALL BE RESTRAINED JOINT

5 CW SUCTION LINE DETAIL
SCALE: NTS

DRAFT (90%) - FOR CITY REVIEW ONLY

DRAWN BY:	OK	JOB DATE:	MARCH 2026
APPROVED:	LT	JOB NUMBER:	2303375
CAD DATE:	03/04/26		
CAD FILE:	J:\2023\2303375\CAD\DWGS - WATER PLANT FACILITY\C\SPECIAL DETAILS (4 OF 4).DWG		

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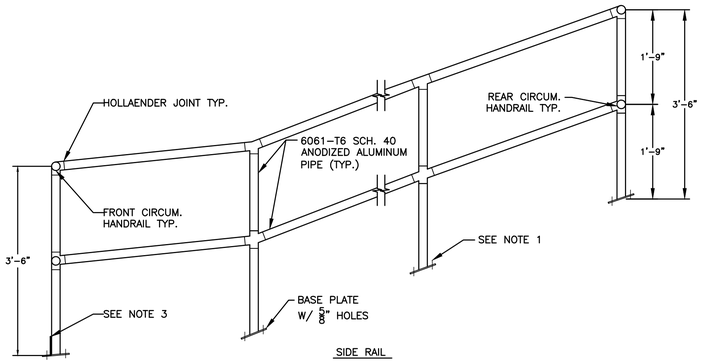
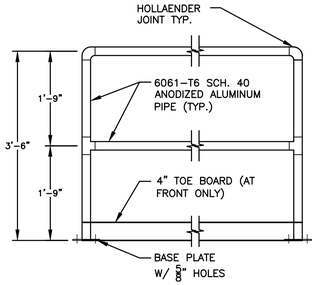
PHASE 1 WATER SYSTEM IMPROVEMENTS
DRINKING WATER STORAGE
SUNRISE BEACH VILLAGE, TEXAS

CIVIL& PROCESS
SPECIAL DETAILS (3 OF 4)

SHEET NO.
17 OF 23



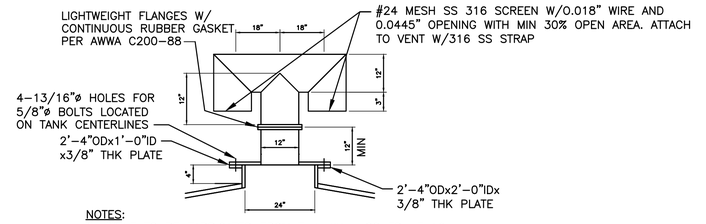
SIDE RAIL



FRONT AND REAR RAIL

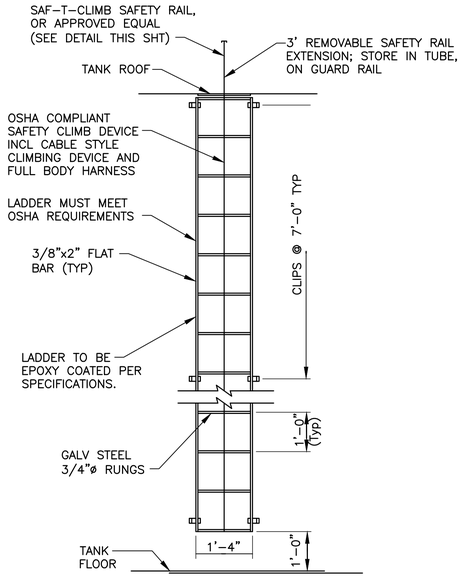
NOTES:
1. S.S. WEDGE ANCHORS TO BE USED AT EACH HANDRAIL/TANK CONNECTION.
2. ALL ALUMINUM TO BE ISOLATED FROM CONCRETE USING NEOPRENE GASKETS.
3. FOUR INCH TOE BOARD TO BE PROVIDED ON FRONT CIRCUMFERENTIAL HANDRAIL.

1 ROOF HANDRAIL
SCALE: NTS

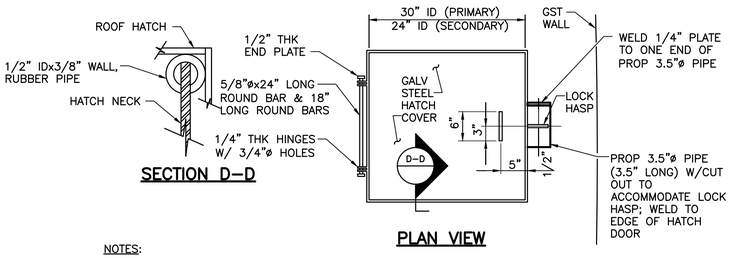


NOTES:
1. VENT TO BE FABRICATED FROM THIN WALL SCHEDULE 10 STEEL PIPE.
2. VENT TO BE COATED INSIDE WITH SAME SYSTEM SPECIFIED FOR INSIDE OF TANK.
3. VENT TO BE COATED ON OUTSIDE WITH SAME SYSTEM SPECIFIED FOR TANK EXTERIOR.

2 ROOF VENT DETAIL
SCALE: NTS



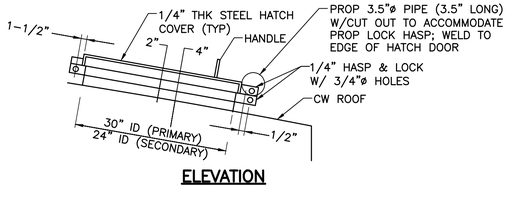
3 INTERIOR CW LADDER DETAIL
SCALE: NTS



SECTION D-D

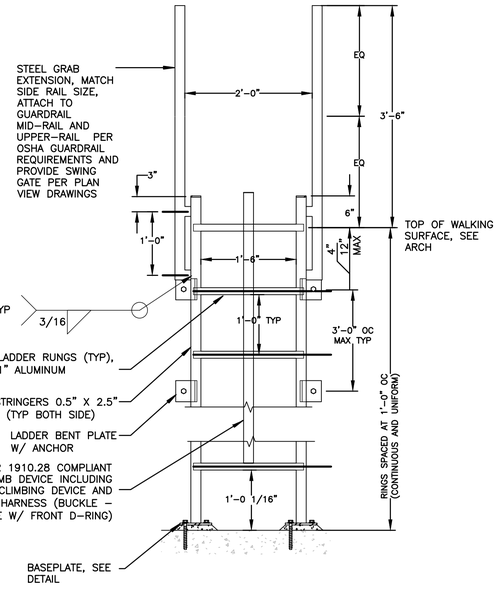
PLAN VIEW

NOTES:
1. THE LARGER DIMENSIONS ARE FOR THE INTERIOR LADDER ROOF HATCH (PRIMARY) AND THE SMALLER DIMENSIONS ARE FOR THE OVERFLOW ROOF HATCH (SECONDARY).
2. ROOF HATCHES TO BE LOCATED SO THAT HATCH OPENS AWAY FROM TANK ROOF ACCESSORIES.



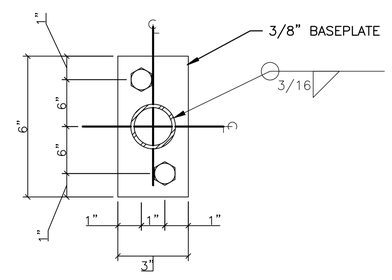
ELEVATION

4 ROOF HATCH DETAIL
SCALE: NTS

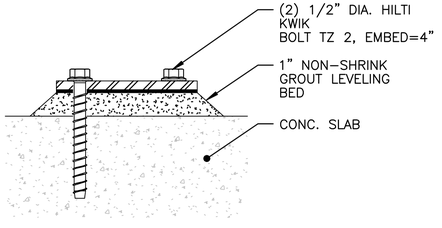


NOTES:
1. ALL OUTSIDE LADDER MATERIAL EXCEPT ANCHOR PLATES, TO BE ALUMINUM 6061-T6.
2. ANCHOR PLATES & HARDWARE TO BE 304 STAINLESS STEEL.
3. DISSIMILAR MATERIALS TO BE SEPERATED WITH NEOPRENE WASHERS.
4. ALL ALUMINUM SURFACES IN CONTRACT WITH CONCRETE SHALL RECEIVE A PVC SHIM.
5. LADDER FOR ILLUSTRATION PURPOSES ONLY. CONTRACTOR/MANUFACTURER SHALL DESIGN TO CURRENT OSHA FALL PROTECTION REQUIREMENTS AS SPECIFIED IN 29 CRF 1910.23. SUBMIT SHOP DRAWINGS FOR EXTERIOR LADDER AND PLATFORM SIGNED BY LICENSED PROFESSIONAL ENGINEER IN THE STATE OF TEXAS FOR ENGINEER'S REVIEW.
6. LADDER CLIMBING DEVICE SHALL COMPLY WITH 29 CFR 1910.140 AND ANSI/ASSP Z359.16 AND FULL BODY HARNESS WITH 29 CFR 1910.140 AND ANSI/ASSP Z359.11.

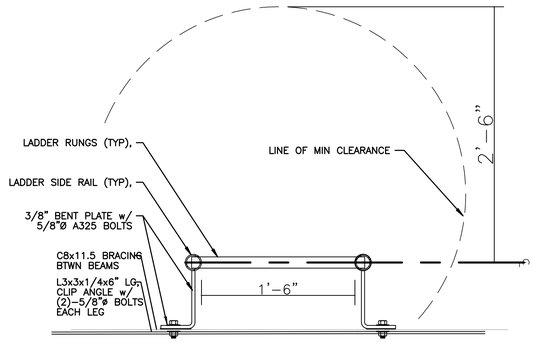
5 TYPICAL EXTERIOR LADDER ELEVATION - OSHA
SCALE: NTS



PLAN VIEW



6 EXTERIOR LADDER BASE DETAIL
SCALE: NTS



7 EXTERIOR LADDER PLAN VIEW AND ANCHORING
SCALE: NTS

DRAFT (90%) - FOR CITY REVIEW ONLY

DRAWN BY: OK | JOB DATE: MARCH 2026
APPROVED: LT | JOB NUMBER: 2303375
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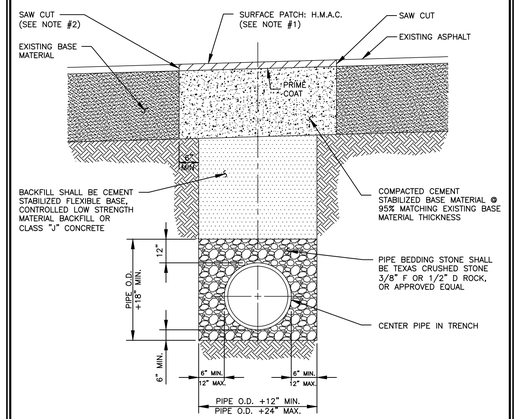
PHASE 1 WATER SYSTEM IMPROVEMENTS
DRINKING WATER STORAGE
SUNRISE BEACH VILLAGE, TEXAS

CIVIL& PROCESS
SPECIAL DETAILS (4 OF 4)

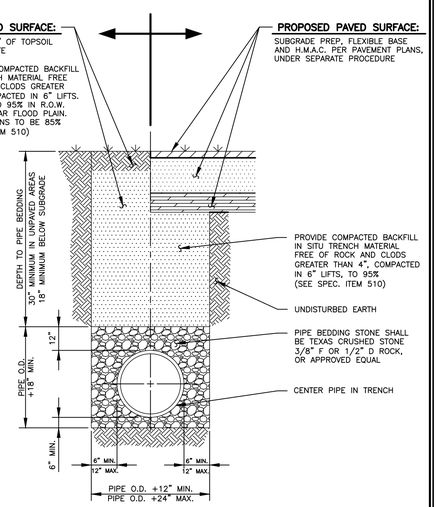
SHEET NO.
18 OF 23



NOTES:

1. H.M.A.C. THICKNESS SHALL MATCH EXISTING ASPHALT THICKNESS AND NOT LESS THAN 2".
2. THE CONTRACTOR SHALL SAW CUT, REMOVE AND REPLACE EXISTING PAVEMENT AND FLEXIBLE BASE A MINIMUM OF 6" BEYOND EITHER THE EDGE OF THE WATERLINE TRENCH OR THE POINT WHERE EXISTING PAVEMENT IS DAMAGED DUE TO TRENCHING OPERATIONS, WHICHEVER IS GREATER. FINISHED PATCH SHALL BE NEAT AND UNIFORM.
3. INSTALLATION OF BACKFILL, SAW CUTTING AND REMOVAL OF EXISTING PAVEMENT AND SURFACE PATCH SHALL NOT BE PAID FOR SEPARATELY. COSTS FOR THESE ITEMS SHALL BE INCLUDED IN UNIT PRICE BID FOR WATERLINE PIPE.
4. THE CONTRACTOR SHALL PROVIDE STEEL PLATES TO SPAN THE TRENCH AS NECESSARY OR TO ALLOW BACKFILL TO CURE. SUCH PLATES SHALL BE SUITABLE FOR VEHICLE PASSAGE OVER THE TRENCH AND SHALL BE SATISFACTORILY ANCHORED IN PLACE. COSTS FOR THIS ITEM SHALL BE INCLUDED IN UNIT PRICE BID FOR WATERLINE PIPE.
5. ALL TRENCHING AND TRENCH SAFETY SHALL COMPLY WITH APPLICABLE FEDERAL, STATE AND LOCAL REGULATIONS.

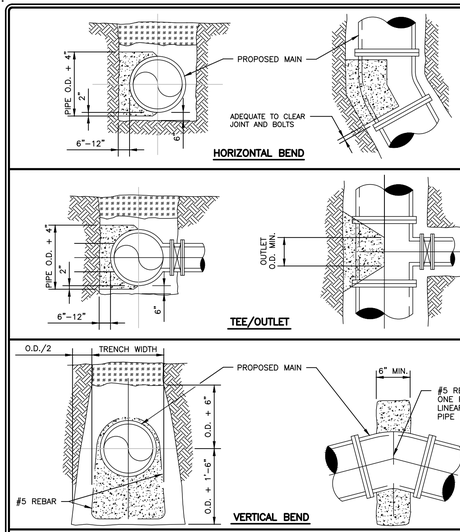
RECORD SIGNED COPY ON FILE AT U&ES DEPARTMENT	CITY OF ROUND ROCK	DRAWING NO: WT-07
APPROVED 03-01-18 DATE	WATERLINE BEDDING AND SURFACE REPAIR DETAIL (EXISTING PAVED SURFACE)	
THE ARCHITECT/ENGINEER ASSUMES RESPONSIBILITY FOR THE APPROPRIATE USE OF THIS DETAIL. (NOT TO SCALE)		



NOTE:

1. ALL TRENCHING AND TRENCH SAFETY SHALL COMPLY WITH APPLICABLE FEDERAL, STATE AND LOCAL REGULATIONS.

RECORD SIGNED COPY ON FILE AT U&ES DEPARTMENT	CITY OF ROUND ROCK	DRAWING NO: WT-08
APPROVED 03-01-18 DATE	WATERLINE BEDDING AND SURFACE REPAIR DETAIL (NON-PAVED & PROPOSED PAVED SURFACE)	
THE ARCHITECT/ENGINEER ASSUMES RESPONSIBILITY FOR THE APPROPRIATE USE OF THIS DETAIL (NOT TO SCALE)		

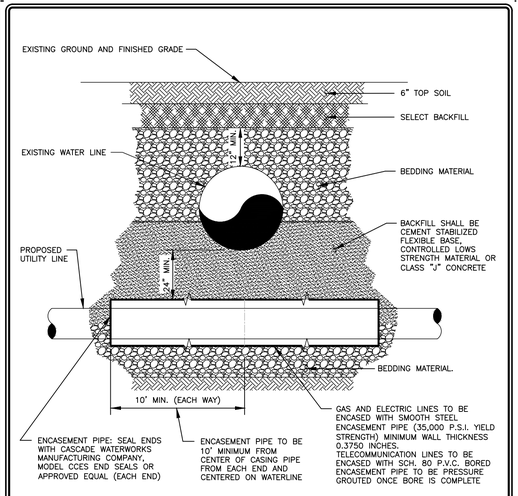


THRUST BLOCK DESIGN AS FOLLOWS:

A. PRESSURE OF 150 P.S.I. (ACTUAL IF HIGHER) + 50% SURGE ALLOWANCE
B. MAXIMUM SOIL BEARING:
C. ALL PIPE & FITTING TO BE WRAPPED WITH 40 PLASTIC MIL.

SOIL TYPE	PRESSURE
LIMESTONE	4000 LBS./SQ. FT.
UNDISTURBED SOIL, CALICHE	2000 LBS./SQ. FT.
LOOSE OR SPONGY SOIL	1500 LBS./SQ. FT.

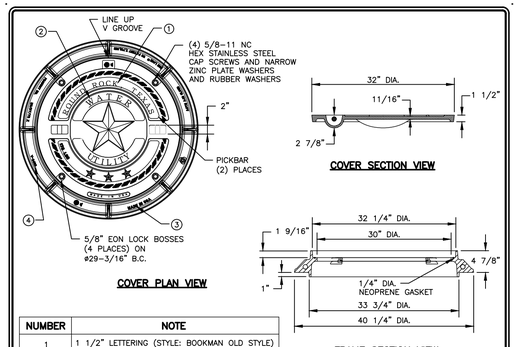
RECORD SIGNED COPY ON FILE AT U&ES DEPARTMENT	CITY OF ROUND ROCK	DRAWING NO: WT-25
APPROVED 03-01-18 DATE	THRUST BLOCK DETAIL	
THE ARCHITECT/ENGINEER ASSUMES RESPONSIBILITY FOR THE APPROPRIATE USE OF THIS DETAIL (NOT TO SCALE)		



NOTES:

1. A CITY OF ROUND ROCK REPRESENTATIVE SHALL BE PRESENT DURING ANY EXCAVATION NEAR THE CITY'S WATER LINE. (48 HOUR NOTICE IS REQUIRED)
2. A CITY OF ROUND ROCK INSPECTOR SHALL INSPECT AND APPROVE CROSSING BEFORE AND AS IT IS BEING BACKFILLED PER THIS DETAIL.
3. TOP 6" OF TRENCH BACKFILL SHALL BE TOP SOIL, UNLESS PROPERTY OWNER REQUIRES SOMETHING DIFFERENT.
4. DRY UTILITIES TO BE ENCASED UNDER EXISTING WATERLINES WITH A MINIMUM SEPARATION OF 24" BETWEEN ENCASEMENT PIPE AND THE WATERLINE.

RECORD SIGNED COPY ON FILE AT U&ES DEPARTMENT	CITY OF ROUND ROCK	DRAWING NO: WT-26
APPROVED 03-01-18 DATE	WATERLINE AND DRY UTILITY LINE CROSSING DETAIL	
THE ARCHITECT/ENGINEER ASSUMES RESPONSIBILITY FOR THE APPROPRIATE USE OF THIS DETAIL. (NOT TO SCALE)		

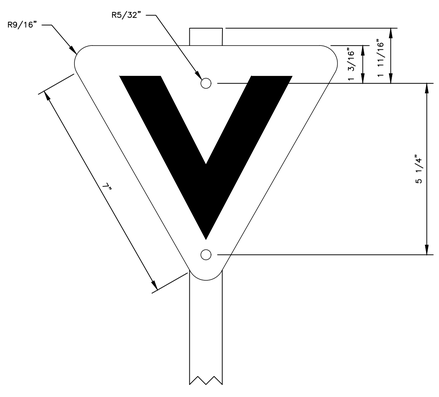


NUMBER	NOTE
1	1 1/2" LETTERING (STYLE: BOOKMAN OLD STYLE)
2	1" LETTERING (STYLE: BOOKMAN OLD STYLE)
3	1/2" FLAT FACE GOTHIC LETTERS
4	3/8" FLAT FACE GOTHIC LETTER

NOTES:

1. COVER AND FRAME SHALL COMPLY WITH STANDARD SPECIFICATIONS FOR DRAINAGE, SEWER, UTILITY AND RELATED CASTINGS: AASHTO DESIGNATION M306-04.
2. MANHOLE COVER AND FRAME ASSEMBLY SHALL BE MODEL NUMBER: V-2432 (PRODUCT NUMBER: 42432074), AS MANUFACTURED BY EAST JORDAN IRON WORKS, INCORPORATED, OR APPROVED EQUAL.
3. ALL CORNERS AND EDGES SHALL HAVE A 1/16" MINIMUM AND 1/8" MAXIMUM RADIUS.
4. MANHOLE COVERS SHALL BE CAST WITH TWO 1" DIAMETER STEEL PICKBARS.
5. MANHOLE COVER WEIGHT SHALL BE 175 LBS. FOR DUCTILE IRON. WEIGHT SHALL BE CAST ON BOTH TOP AND BOTTOM OF COVER.
6. MANUFACTURER SHALL CERTIFY THAT EACH MANHOLE COVER MEETS HS-20 LOADING.
7. FILLETS SHALL BE 1/4" RADIUS UNLESS OTHERWISE SPECIFIED.
8. MANUFACTURER SHALL REMOVE EXCESS IRON AND MACHINE FINISH SEATING SURFACES TO NOTED DIMENSIONS.
9. COVER SHALL BE DIPPED IN A WATER-BASED ASPHALTIC COATING, PRIOR TO SHIPMENT FROM FOUNDRY.
10. BOLTS SHALL BE 5/8"-11NC X 2" LONG HEX STAINLESS STEEL WITH WASHER.
11. MANUFACTURER SHALL DRILL 2-3/16" X 1/2" DEEP HOLES FOR A MANHOLE NUMBER PLATE TO BE PROVIDED BY THE CITY OF ROUND ROCK. THE TOP HOLE SHALL BE DRILLED 1" O.C. FROM THE BOTTOM OF THE PICKBAR AND THE BOTTOM HOLE SHALL BE DRILLED 4" O.C. FROM THE TOP HOLE.

RECORD SIGNED COPY ON FILE AT U&ES DEPARTMENT	CITY OF ROUND ROCK	DRAWING NO: WT-28
APPROVED 03-01-18 DATE	BOLTED WATER MANHOLE COVER AND FRAME DETAIL	
THE ARCHITECT/ENGINEER ASSUMES RESPONSIBILITY FOR THE APPROPRIATE USE OF THIS DETAIL (NOT TO SCALE)		



NOTES:

1. SIGN MATERIAL TO BE ALUMINUM.
2. SIGN TO BE ATTACHED TO 48" GALVANIZED STEEL ANGLE POST WITH DIMENSIONS 1" X 1" X 1/8".
3. COLORS:
   BACKGROUND – ORANGE
   V – BLACK
4. VALVE MARKING SIGNAGE TO BE INSTALLED IN AREAS DEEMED NECESSARY BY CITY STAFF.

RECORD SIGNED COPY ON FILE AT U&ES DEPARTMENT	CITY OF ROUND ROCK	DRAWING NO: WT-27
APPROVED 03-01-18 DATE	WATER VALVE SIGN DETAIL	
THE ARCHITECT/ENGINEER ASSUMES RESPONSIBILITY FOR THE APPROPRIATE USE OF THIS DETAIL (NOT TO SCALE)		

DRAWN BY: OK
APPROVED: LT
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JOB NUMBER: 2303375
CAD FILE: J:\2023\2303375\CAD\DWGS – WATER PLANT FACILITY\C\STANDARD DETAIL
SHEETS DWG:

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IF NOT ONE INCH, ADJUST SCALE ACCORDINGLY.

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1	3/4/2025	LT	90% DESIGN PLANS SUBMISSION

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P.E. REGISTRATION NO. 86887
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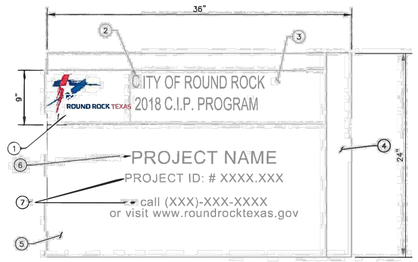
PHASE 1 WATER SYSTEM IMPROVEMENTS
DRINKING WATER STORAGE
SUNRISE BEACH VILLAGE, TEXAS

DETAILS
STANDARD DETAILS (1 OF 2)

SHEET NO.
19 OF 23

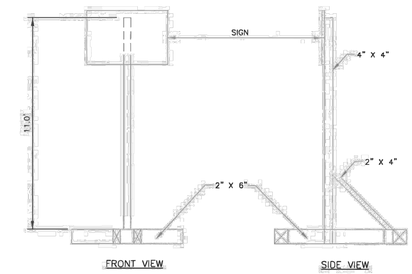


SIGN 24" X 36"

1. 9" CITY LOGO (4 COLOR PROCESS)
2. 2" – WHITE LETTERS
3. TRANSPARENT BLUE PAINT
4. 3" WIDE – TRANSPARENT YELLOW PAINT STRIPE
5. HIGH INTENSITY WHITE REFLECTIVE SHEETING, .080 ALUMINUM 2290, 3M CO. OR EQUAL
6. 2 1/2" – BLUE LETTERS
7. 1" – BLUE LETTERS

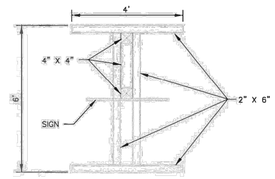
SCALE: NTS

RECORD SIGNED COPY ON FILE APPROVED 01-28-21 DATE THE ARCHITECT/ENGINEER ASSUMES RESPONSIBILITY FOR THE APPROPRIATE USE OF THIS DETAIL.	CITY OF ROUND ROCK C.I.P. MOVABLE SIGN TYPE II 24" X 36"	DRAWING NO: ST-09 SHEET 1 of 1 ROUND ROCK TEXAS



FRONT VIEW

SIDE VIEW

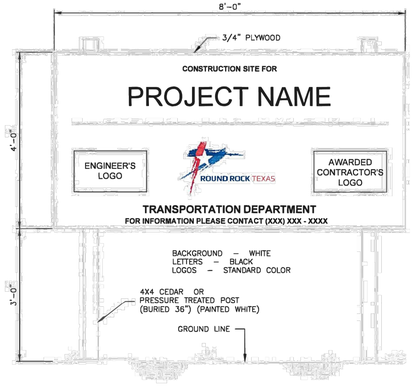


TOP VIEW

NOTES:
1. ALL MATERIALS SHALL BE FURNISHED BY THE CONTRACTOR.
2. LUMBER DIMENSIONS ARE NOMINAL. PAINT ALL LUMBER WHITE.
3. SIGN MUST BE IN COLORS SPECIFIED.

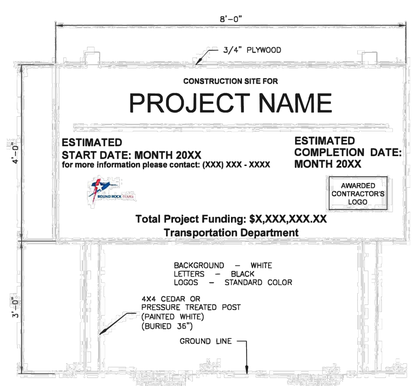
SCALE: NTS

RECORD SIGNED COPY ON FILE APPROVED 01-28-21 DATE THE ARCHITECT/ENGINEER ASSUMES RESPONSIBILITY FOR THE APPROPRIATE USE OF THIS DETAIL.	CITY OF ROUND ROCK C.I.P. MOVABLE SIGN TYPE II 24" X 36"	DRAWING NO: ST-10 SHEET 1 of 1 ROUND ROCK TEXAS



SCALE: NTS

RECORD SIGNED COPY ON FILE APPROVED 01-28-21 DATE THE ARCHITECT/ENGINEER ASSUMES RESPONSIBILITY FOR THE APPROPRIATE USE OF THIS DETAIL.	CITY OF ROUND ROCK CONSTRUCTION SITE SIGN (TYPE 1)	DRAWING NO: ST-11.1 SHEET 1 of 2 ROUND ROCK TEXAS



SCALE: NTS

RECORD SIGNED COPY ON FILE APPROVED 01-28-21 DATE THE ARCHITECT/ENGINEER ASSUMES RESPONSIBILITY FOR THE APPROPRIATE USE OF THIS DETAIL.	CITY OF ROUND ROCK CONSTRUCTION SITE SIGN (TYPE 2)	DRAWING NO: ST-11.2 SHEET 2 of 2 ROUND ROCK TEXAS

DRAWN BY: OK JOB DATE: MARCH 2026
APPROVED: LT JOB NUMBER: 2303375
CAD DATE: 03/04/26
CAD FILE: J:\2023\2303375\CAD\DWGS – WATER PLANT FACILITY\C\STANDARD DETAIL
SHEETS DWG:

BAR IS ONE INCH ON OFFICIAL DRAWINGS.
0 1"
IF NOT ONE INCH, ADJUST SCALE ACCORDINGLY.

NO.	DATE	BY	REVISION DESCRIPTION
0	6/25/2025	LT	60% DESIGN PLANS SUBMISSION
1	3/4/2025	LT	90% DESIGN PLANS SUBMISSION

HRGreen
5508 W US HWY 290
SERVICE RD SUITE 150
AUSTIN, TX 78735
PHONE: 512.872.6696
FAX: 713.965.0044
TBPE FIRM NO. F-11278

ISSUED FOR REVIEW
NOT FOR CONSTRUCTION
BY: LEIGH A. THOMAS
P.E. REGISTRATION NO. 86887
DATE: MARCH 2026

PHASE 1 WATER SYSTEM IMPROVEMENTS
DRINKING WATER STORAGE
SUNRISE BEACH VILLAGE, TEXAS

DETAILS
STANDARD DETAILS (2 OF 2)

SHEET NO.
20 OF 23

DRAFT (90%) - FOR CITY REVIEW ONLY

GENERAL STRUCTURAL NOTES:

G1. SCOPE
THE NOTES ON THIS SHEET AND DETAILS ON THIS SHEET ARE TYPICAL AND APPLY TO ALL CLEAR WELL EQUIPMENT STRUCTURES WHETHER SPECIFICALLY CALLED OUT OR NOT, EXCEPT WHERE THERE ARE SPECIFIC INDICATIONS TO THE CONTRARY ON STRUCTURAL SHEETS. IF THERE ARE QUESTIONS, THEY SHALL BE SUBMITTED TO THE STRUCTURAL ENGINEER AND ANSWERED IN WRITING PRIOR TO CONSTRUCTION.

G2. APPLICABLE SPECIFICATIONS AND CODE
- BUILDING CODE OF TEXAS: 2015 INTERNATIONAL BUILDING CODE WITH AMENDMENTS.
- ACI 318–14
- AISC STEEL MANUAL 14TH EDITION
- AWS D1.1 – STRUCTURAL WELDING CODE – STEEL
- ASCE – 7–10 MINIMUM DESIGN LOADS FOR BUILDINGS AND OTHER STRUCTURES
- OSHA – 1910 & 1926 STANDARDS

G3. DESIGN CRITERIA
APPLIES TO ALL STRUCTURES WITHIN THE "S" SERIES SHEETS (UNO)

1.	DEAD LOAD:	
1.1.1.	ACTUAL TRIBUTARY STRUCTURE WEIGHT	
2.	LIVE LOAD:	
2.1.1.	WALKWAYS, STAIRS, GRATING	
2.1.1.1.	UNIFORM LOAD	100 PSF
2.1.1.2.	CONCENTRATED LOAD (12"x12")	300 LB
2.1.2.	GUARDRAIL LOAD RATING (ANY DIRECTION)	
2.1.2.1.	LINE LOAD	50 PLF
2.1.2.2.	CONCENTRATED LOAD	200 LB
3.	WIND:	
3.1.1.	BASIC WIND SPEED (ULTIMATE):	140 MPH
3.1.2.	EXPOSURE:	C
3.1.3.	RISK CATEGORY:	IV
3.1.4.	EXPOSURE VALUE	ENCLOSED
3.1.5.	CLEAR WELL EQUIPMENT WIND SURFACE AREA (VERIFY)	21' DIAMETER x 33' TALL MAX
4.	SEISMIC:	
4.1.	ABOVE GRADE AND BELOW GRADE STRUCTURES/BUILDINGS:	
4.1.1.	RISK CATEGORY:	III
4.1.2.	IMPORTANCE FACTOR, Ie:	1.50
4.1.3.	SPECTRAL RESPONSE ACCELERATION, SS:	0.07
4.1.4.	SPECTRAL RESPONSE ACCELERATION, S1:	0.037
4.1.4.1.	SITE CLASS:	D
4.1.4.2.	SEISMIC DESIGN CATEGORY:	A
4.1.4.3.	SPECTRAL RESPONSE COEFFICIENT, SDS:	0.075
4.1.4.4.	SPECTRAL RESPONSE COEFFICIENT, SD1:	0.059
4.1.4.5.	MAIN FORCE RESISTING SYSTEM:	ORDINARY STEEL FRAME
4.1.4.6.	RESPONSE MODIFICATION FACTOR, R:	3
4.1.4.7.	ANALYSIS PROCEDURE:	EQUIVALENT FORCE
5.	SNOW LOAD:	
5.1.	GROUND SNOW LOAD, Pg:	0 PSF
5.2.	RISK CATEGORY:	IV
5.3.	IMPORTANCE FACTOR, Is:	1.2
5.4.	EXPOSURE FACTOR, Ce:	1.0
5.5.	THERMAL FACTOR, Ct:	1.2
6.	HYDROSTATIC LOAD:	63 PSF / FT

G4. GEOTECHNICAL
THE FOLLOWING GEOTECHNICAL VALUES IN SECTION G5 ARE THE BASIS OF THIS STRUCTURAL DESIGN. CONTRACTOR MUST VERIFY THE REQUIRED VALUES COMPLY WITH THE SOILS ADJACENT AND UNDERNEATH THE STRUCTURES. THIS MUST BE VALIDATED WITH A SITE GEOTECHNICAL REPORT AND/OR LOCAL GEOTECHNICAL INSPECTION FOR EACH STRUCTURE. DO NOT BEAR FOUNDATIONS ON UNSUITABLE FILL INCLUDING, BUT NOT LIMITED TO: MUD, ORGANIC SILT, ORGANIC CLAYS, PEAT, UNPREPARED FILL, OR EXPANSIVE SOILS. VALIDATE SUITABLE SUBGRADE WITH GEOTECHNICAL FIRM. OVEREXCAVATE AND REPLACE WITH SUITABLE STRUCTURAL FILL AS DIRECTED BY THE GEOTECHNICAL FIRM. ALL GEOTECHNICAL WORK MUST BE PERFORMED BY A GEOTECHNICAL ENGINEER LICENSED WITHIN THE STATE OF THE PROJECT. REFERENCE SITE GEOTECHNICAL REPORT: TERRACON: PROJECT NO. AC255005; DATED MAY 29, 2025. FOLLOW ALL GEOTECHNICAL RECOMMENDATIONS FOR THE STRUCTURES. IN THE EVENT OF CONFLICT WITH DESIGN DOCUMENTS THEN FOLLOW THE MOST STRINGENT DESIGN CRITERIA AND VERIFY WITH ENGINEER IN WRITING PER NOTE G1.

G5. SOIL CHARACTERISTICS
- NET ALLOWABLE SOIL BEARING CAPACITY :
- SOIL/CONCRETE FRICTION FACTOR:
- DESIGN SOIL UNIT WEIGHT:
- ALL BACKFILL ADJACENT TO AND UNDERNEATH STRUCTURES MUST BE:
- ALL BACKFILL UNDERNEATH STRUCTURES MUST BE COMPACTED TO:
- ALL BACKFILL ADJACENT TO STRUCTURES MUST BE COMPACTED TO:
- MAXIMUM BACKFILL LIFT HEIGHT:

G6. SAFETY
SAFETY AND STRUCTURE STABILITY DURING CONSTRUCTION ARE THE SOLE RESPONSIBILITY OF THE CONTRACTOR. STRUCTURES HAVE BEEN DESIGNED TO RESIST THE DESIGN LIVE LOADS ONLY AS A COMPLETED STRUCTURE. TEMPORARY SHORING AND BRACING MUST BE PROVIDED BY THE CONTRACTOR DURING CONSTRUCTION ACTIVITIES. CONTRACTOR MUST PROVIDE TEMPORARY SHORING AND BRACING SHOP DRAWINGS FOR REVIEW BY HR GREEN AND THE CLIENT. SHOP DRAWINGS FOR TEMPORARY SHORING AND BRACING MUST BE DESIGNED BY A LICENSED TEXAS PROFESSIONAL ENGINEER, RETAINED BY THE CONTRACTOR.

G7. UNDERGROUND UTILITIES
CONTRACTOR MUST LOCATE ALL UNDERGROUND UTILITIES, PER OSHA REQUIREMENTS, TO ENSURE ALLUTILITIES ARE NOT DAMAGED. CONTRACTOR TO COORDINATE AND COMMUNICATE WITH THE OWNER AS OUTLINED WITHIN OSHA STANDARDS. REFERENCE SHEET G–11 FOR ADDITIONAL DETAILS.

G8. OPENINGS
OPENINGS FOR PIPES, DUCTS, CONDUITS, ETC, ARE NOT ALL SHOWN ON THE STRUCTURAL DRAWINGS. COORDINATE AND PROVIDE OPENINGS AS REQUIRED TO ACCOMMODATE ALL WORK SHOWN OR SPECIFIED IN THE CONTRACT DOCUMENTS AND OTHERWISE REQUIRED FOR THE FURNISHING OF A FUNCTIONALLY COMPLETE PROJECT. REINFORCE AROUND OPENINGS PER STANDARD STRUCTURAL DETAILS.

G9. FIELD VERIFICATION:
THE CONTRACTOR SHALL FIELD VERIFY ALL DIMENSIONS AND ELEVATIONS OF EXISTING CONSTRUCTION AS REQUIRED TO COORDINATE NEW CONSTRUCTION. SUBMIT REQUIRED CHANGES FOR APPROVAL.

G10. TEMPORARY SUPPORT:
PROVIDE ANY TEMPORARY BRACING OR GUYS TO PROVIDE LATERAL SUPPORT OF THE STRUCTURES AND INDIVIDUAL ELEMENTS UNTIL PERMANENT FRAME IS COMPLETELY INSTALLED.

G11. GROUT: NON–SHRINK, NON–METALLIC AGGREGATE TYPE, COMPLYING WITH ASTM C 1107 AND CAPABLE OF DEVELOPING A MINIMUM COMPRESSIVE STRENGTH OF 7,000 PSI AT 28 DAYS.

G12. TYPICAL DETAILS: THE TYPICAL DETAILS DEPICT TYPICAL DETAILING TO BE USED ON THIS PROJECT. IF CONDITIONS ARE NOT EXPLICITLY SHOWN ON THE DRAWINGS THEY SHALL BE MADE SIMILAR TO THE TYPICAL DETAILS. OBTAIN APPROVAL OF ENGINEER IN WRITING FOR SIMILAR CONDITIONS PRIOR TO CONSTRUCTION.

SPECIAL INSPECTIONS:

SP1. STATEMENT OF SPECIAL INSPECTIONS:
SPECIAL INSPECTIONS AND STRUCTURAL TESTING SHALL BE PROVIDED BY AN INDEPENDENT AGENCY EMPLOYED BY THE OWNER FOR THE ITEMS IDENTIFIED IN THIS SECTION AND IN OTHER AREAS OF THE APPROVED CONSTRUCTION PLANS AND SPECIFICATIONS. THE FOLLOWING SPECIAL STRUCTURAL INSPECTIONS SHALL BE PERFORMED IN ACCORDANCE WITH CHAPTER 17 OF THE INTERNATIONAL BUILDING CODE AND THE SPECIFICATIONS. THE CONTRACTOR SHALL NOTIFY AND ACCOMMODATE THE APPLICABLE INSPECTOR DURING APPROPRIATE PHASES OF THE WORK AS REQUIRED BY EACH INSPECTION. NOTE THAT SPECIAL INSPECTIONS ARE IN ADDITION TO THE CONTRACTOR REQUIRED QUANTITY CONTROL ITEMS LISTED WITHIN THE DRAWINGS AND SPECIFICATIONS. THE NAME AND CREDENTIALS OF THE SPECIAL INSPECTORS TO BE USED SHALL BE SUBMITTED TO THE BUILDING OFFICIAL FOR APPROVAL.

SP2: SPECIAL INSPECTION DEFINITIONS:
- CONTINUOUS SPECIAL INSPECTION: SPECIAL INSPECTION BY THE SPECIAL INSPECTOR WHO IS PRESENT WHEN AND WHERE THE WORK IS TO BE INSPECTED IS BEING PERFORMED. THE FULL–TIME OBSERVATION OF WORK REQUIRING SPECIAL INSPECTION BY AN APPROVED SPECIAL INSPECTOR WHO IS PRESENT IN THE AREA WHERE WORK IS BEING PERFORMED.
- PERIODIC SPECIAL INSPECTION: SPECIAL INSPECTION BY THE SPECIAL INSPECTOR WHO IS INTERMITTENTLY PRESENT WHERE THE WORK TO BE INSPECTED HAS BEEN OR IS BEING PERFORMED. THE PART–TIME OR INTERMITTENT OBSERVATION OF WORK REQUIRING SPECIAL INSPECTION BY AN APPROVED SPECIAL INSPECTOR WHO IS PRESENT IN THE AREA WHERE THE WORK HAS BEEN OR IS BEING PERFORMED AND AT THE COMPLETION OF WORK. UNLESS OTHERWISE INDICATED PERIODIC SPECIAL INSPECTIONS SHALL BE PERFORMED ON A RANDOM BASIS. UNLESS NOTED OTHERWISE, A MINIMUM OF 10% OF ASSOCIATED ELEMENTS (CONNECTIONS, MEMBERS, WORK ETC. SCHEDULED TO BE INSPECTED PERIODICALLY) SHALL BE INSPECTED. THE ELEMENTS SELECTED ARE TO BE REPRESENTATIVE OF ALL OF THE ELEMENTS THAT ARE SCHEDULED TO BE INSPECTED PERIODICALLY WITHIN AN INSPECTION TASK OR TEST. NO FEWER THAN 1 ELEMENT OF EACH INSPECTION TASK OR TEST SHALL BE OBSERVED OR TESTED AS REQUIRED FOR SPECIAL INSPECTIONS.
- SPECIAL INSPECTOR: A QUALIFIED PERSON EMPLOYED OR RETAINED BY AN APPROVED AGENCY AND APPROVED BY THE BUILDING OFFICIAL AS HAVING THE COMPETENCE NECESSARY TO INSPECT A PARTICULAR TYPE OF CONSTRUCTION REQUIRING SPECIAL INSPECTION.
- AUTHORITY HAVING JURISDICTION (AHJ): AN ORGANIZATION, OFFICE, OR INDIVIDUAL RESPONSIBLE FOR ENFORCING THE REQUIREMENTS OF A CODE OR STANDARD, OR FOR APPROVING EQUIPMENT, MATERIALS, AN INSTALLATION, OR A PROCEDURE.

SP3. SPECIAL INSPECTION SUBMITTALS & REPORTS:
- THE STRUCTURAL INSPECTION AGENCY SHALL SUBMIT REPORTS OF SPECIAL INSPECTIONS AND TESTS TO THE ENGINEER AND CONTRACTOR FOR REVIEW AND SUBSEQUENT SUBMISSION TO THE AHJ. THE STRUCTURAL SPECIAL INSPECTION AGENCY SHALL KEEP RECORDS OF SPECIAL INSPECTIONS AND TESTS.
- STATEMENT OF RESPONSIBILITY: THE CONTRACTOR AND EACH SUB–CONTRACTOR RESPONSIBLE FOR THE CONSTRUCTION OF A LATERAL–FORCE–RESISTING SYSTEM OR COMPONENTS NOTED IN THE SCHEDULE OF SPECIAL INSPECTIONS SHALL SUBMIT A WRITTEN STATEMENT OF RESPONSIBILITY TO THE ENGINEER AND CONTRACTOR FOR REVIEW AND SUBSEQUENT SUBMISSION TO THE AHJ PRIOR TO THE COMMENCEMENT OF WORK ON THE SYSTEM OR COMPONENT. EACH STATEMENT OF RESPONSIBILITY SHALL CONTAIN ACKNOWLEDGEMENT OF THE AWARENESS OF THE SPECIAL REQUIREMENTS CONTAINED IN THE STATEMENT OF SPECIAL INSPECTION.
- PROVIDE CERTIFICATES OF COMPLIANCE PER APPLICABLE BUILDING CODE.
- SPECIAL INSPECTOR TO PROVIDE WRITTEN CONFIRMATION THAT THEY HAVE IN THEIR POSSESSION ALL APPLICABLE CODES AND STANDARDS INCLUDING, BUT NOT LIMITED TO: IBC, ACI 318, AISC 360, SDI, AWS D1.1, AWS D1.2, AWS D1.3 AND AWS D1.6.
- THE STRUCTURAL SPECIAL INSPECTION AGENCY SHALL NOTIFY THE CONTRACTOR OF NONCONFORMING CONSTRUCTION OR WORK FOR CORRECTION. IF DISCREPANCIES ARE NOT CORRECTED THE ENGINEER AND STRUCTURAL ENGINEER SHALL BE NOTIFIED. NONCONFORMANCE REPORTS AND REPORTS OF REPAIR, REPLACEMENT, OR ACCEPTANCE OF NONCONFORMING ITEMS SHALL BE SUBMITTED BY THE STRUCTURAL SPECIAL INSPECTION AGENCY TO THE ENGINEER, STRUCTURAL ENGINEER AND CONTRACTOR FOR REVIEW AND SUBSEQUENT SUBMISSION TO THE AHJ. NONCONFORMANCES SHALL BE BROUGHT INTO CONFORMANCE AT NO COST TO THE OWNER.

SP4: SPECIAL INSPECTIONS REQUIREMENTS FOR CONCRETE:
- COMPLY WITH AND CONFORM TO IBC SECTION 1705.3 AND TABLE 1705.3
- TESTING OF COMPOSITE SAMPLES OF FRESH CONCRETE OBTAINED ACCORDING TO ASTM C 172. OBTAIN ONE COMPOSITE SAMPLE FOR EACH DAY'S POUR OF EACH CLASS OF CONCRETE, PLUS ONE SET FOR EACH ADDITIONAL 50 CU. YD. OR FRACTION THEREOF.
- CONCRETE SAMPLING CONCURRENT WITH STRENGTH TEST SAMPLING: EACH TIME FRESH CONCRETE IS SAMPLED FOR STRENGTH TESTS, VERIFY COMPLIANCE WITH ASTM C172/C172M, ASTM C31/C31M AND ACI 318, CHAPTER 26.5, 26.12, AND RECORD THE FOLLOWING, CONTINUOUS: SLUMP, AIR CONTENT, AND TEMPERATURE OF CONCRETE.

SP5. SPECIAL INSPECTION REQUIREMENTS FOR SOIL:
- COMPLY WITH AND CONFORM TO IBC SECTION 1705.6 AND TABLE 1705.6.
- ALLOW TESTING AGENCY TO INSPECT AND TEST SUBGRADES AND EACH FILL OR BACKFILL LAYER. PROCEED WITH SUBSEQUENT EARTH MOVING ONLY AFTER TEST RESULTS FOR PREVIOUSLY COMPLETED WORK COMPLY WITH REQUIREMENTS.
- FOOTING SUBGRADE: AT FOOTING SUBGRADES, AT LEAST ONE TEST OF EACH SOIL STRATUM WILL BE PERFORMED TO VERIFY DESIGN BEARING CAPACITIES. SUBSEQUENT VERIFICATION AND APPROVAL OF OTHER FOOTING SUBGRADES MAY BE BASED ON A VISUAL COMPARISON OF SUBGRADE WITH TESTED SUBGRADE WHEN APPROVED BY ENGINEER.
- TESTING AGENCY WILL TEST COMPACTION OF SOILS IN PLACE ACCORDING TO ASTM D 1556, ASTM D 2167, ASTM D 2922, AND ASTM D 2937, AS APPLICABLE. TESTS WILL BE PERFORMED AT THE FOLLOWING LOCATIONS AND FREQUENCIES:
  - ** STRUCTURAL FOOTINGS AND/OR SLAB AREAS: AT SUBGRADE AND AT EACH COMPACTED FILL AND BACKFILL LAYER, AT LEAST ONE TEST FOR EVERY 2000 SQ. FT. (186 SQ. M) OR LESS OF PAVED AREA OR BUILDING SLAB, BUT IN NO CASE FEWER THAN THREE TESTS.
  - ** FOUNDATION WALL BACKFILL: AT EACH COMPACTED BACKFILL LAYER, AT LEAST ONE TEST FOR EVERY 100 FEET (30 M) OR LESS OF WALL LENGTH, BUT NO FEWER THAN TWO TESTS.
- WHEN TESTING AGENCY REPORTS THAT SUBGRADES, FILLS, OR BACKFILLS HAVE NOT ACHIEVED DEGREE OF COMPACTION SPECIFIED, SCARIFY AND MOISTEN OR AERATE, OR REMOVE AND REPLACE SOIL MATERIALS TO DEPTH REQUIRED; RECOMPACT AND RETEST UNTIL SPECIFIED COMPACTION IS OBTAINED.

SP6. SPECIAL INSPECTION REQUIREMENTS FOR STEEL:
- COMPLY WITH AND CONFORM TO IBC SECTION 1705.2; ALONG WITH THE PROVISIONS BELOW.
- SPECIAL INSPECTIONS AND NONDESTRUCTIVE TESTING OF STRUCTURAL STEEL ELEMENTS SHALL BE IN ACCORDANCE WITH THE QUALITY ASSURANCE INSPECTION REQUIREMENTS OF THE IBC AND AISC 360 (REFER TO AISC 360, CHAPTER N – QUALITY CONTROL AND QUALITY ASSURANCE).
- COLD–FORMED METAL DECK: METAL DECKS SHALL BE TESTED AND INSPECTED ACCORDING TO THE REQUIREMENTS OF THE SDI QA/QC.
- BOLTED CONNECTIONS: BOLTED CONNECTIONS SHALL BE TESTED AND INSPECTED ACCORDING TO RCSC'S "SPECIFICATION FOR STRUCTURAL JOINTS USING ASTM A 325 OR A 490 BOLTS".
- WELDED CONNECTIONS: FIELD WELDS SHALL BE VISUALLY INSPECTED ACCORDING TO IBC, AWS D1.1/D1.1M, AND AISC 360 (REFER TO AISC 360, CHAPTER N – QUALITY CONTROL AND QUALITY ASSURANCE). IN ADDITION TO VISUAL INSPECTION, FIELD WELDS SHALL BE TESTED AND INSPECTED ACCORDING TO AWS D1.1 AND THE FOLLOWING INSPECTION PROCEDURES, AT STRUCTURAL SPECIAL INSPECTION AGENCY'S OPTION:
  - ** LIQUID PENETRANT INSPECTION: ASTM E 165.
  - ** MAGNETIC PARTICLE INSPECTION: ASTM E 709; PERFORMED ON ROOT PASS AND ON FINISHED WELD. CRACKS OR ZONES OF INCOMPLETE FUSION OR PENETRATION WILL NOT BE ACCEPTED.
  - ** ULTRASONIC INSPECTION: ASTM E 164.
  - ** RADIOGRAPHIC INSPECTION: ASTM E 94.

SP7. SPECIAL INSPECTION REQUIREMENTS FOR FABRICATED ITEMS:
- COMPLY WITH AND CONFORM TO IBC SECTION 1705.10 AND 1704.2.5.

CONCRETE

C1. REINFORCING AND CONCRETE PLACEMENT REQUIREMENTS TO BE WITH ACI 117 TOLERANCES, UNO.

C2. REFER TO OTHER DISCIPLINE DRAWINGS PRIOR TO CONSTRUCTION FOR EMBEDDED ITEMS AND PENETRATIONS NOT SHOWN ON STRUCTURAL DRAWINGS. AS REQUIRED TO ACCOMMODATE ALL WORK SHOWN OR SPECIFIED IN THE CONTRACT DOCUMENTS AND OTHERWISE REQUIRED FOR THE FURNISHING OF A FUNCTIONALLY COMPLETE PROJECT. REINFORCE AROUND OPENINGS PER STANDARD STRUCTURAL DETAILS UNLESS OTHERWISE SHOWN.

C3. PROVIDE 1" CHAMFERS AT ALL EXPOSED EDGES. NOT ALL CHAMFERS ARE SHOWN ON DRAWINGS.

C4. FIELD ADJUST REINFORCING AT OPENINGS AND EMBEDDED ITEMS AS INDICATED.

C5. ANCHOR BOLTS NOT SPECIFIED BY ENGINEER SHALL BE DESIGNED AND CERTIFIED BY A REGISTERED PROFESSIONAL ENGINEER, RETAINED BY THE CONTRACTOR, IN ACCORDANCE WITH APPLICABLE PROJECT AND CODE REQUIREMENTS. SUBMIT AS A SHOP DRAWING FOR REVIEW AND APPROVAL BY THE ENGINEER. COORDINATE LOCATION, SIZE AND EMBEDMENT PRIOR TO CASTING CONCRETE.

C6. NOT USED.

C7. ABSOLUTELY NO WELDING OF REINFORCING BARS OR TORCHING TO BEND OR CUT REINFORCING BARS SHALL BE ALLOWED.

C8. CONTRACTOR SHALL SUBMIT A CONCRETE PLACEMENT PLAN IDENTIFYING JOINT TYPES, JOINT LOCATIONS AND CONCRETE PLACEMENT SEQUENCE. CONTRACTOR SHALL ALSO SUBMIT "ACI COMPLIANT" CONCRETE MIX DESIGN (WITH HISTORICAL COMPRESSION BREAK RESULTS) AND REBAR SHOP DRAWINGS FOR REVIEW PRIOR TO CONSTRUCTION.

C9. ALL CAST–IN–PLACE AND POST–INSTALLED ANCHORS INDICATED IN THE STRUCTURAL DOCUMENTS SHALL COMPLY WITH ACI 318 DESIGN REQUIREMENTS AND CHAPTER 19 OF THE IBC. ALL EXPANSION AND ADHESIVE ANCHORS SHALL HAVE THE ICC REPORT SHOWING EQUIVALENT LOAD CAPACITY. SUBMIT AND INSTALL PER THE ICC EVALUATION REPORT.

C10. CONCRETE CYLINDERS MUST BE TAKEN FOR TESTING TO VALIDATE ADEQUATE COMPRESSION STRENGTH. AT LEAST ONE SET OF CYLINDERS SHALL BE TAKEN FOR EACH STRUCTURE. STRUCTURES GREATER THAN 50 CY OF CONCRETE MUST HAVE AN ADDITIONAL SET OF CYLINDER TAKEN FOR EACH ADDITIONAL 50 CY OF CONCRETE. A SET OF CYLINDERS WILL CONSIST OF THREE 6–INCH CYLINDERS TO TEST AT 7–DAY AND 28–DAY; WITH ONE RESERVE CYLINDER TO BE TESTED IF THE 28–DAY TEST DOES NOT PROVIDE ADEQUATE RESULTS. RESULTS OF THE COMPRESSION TESTS MUST BE SUBMITTED FOR OWNER AND ENGINEER REVIEW.

C11. ALL REINFORCING CONTINUOUS THROUGH CONSTRUCTION JOINTS UNLESS NOTED OTHERWISE.

C12. ALL BARS INDICATED AS BEING HOOKED SHALL HAVE AN ACI STANDARD 90 DEGREE OR 180 DEGREE HOOK AS SHOWN.

C13. CONCRETE PLACEMENT AND CURING MUST FOLLOW ALL APPLICABLE ACI STANDARDS INCLUDING, BUT NOT LIMITED TO ACI 305R "GUIDE TO HOT WEATHER CONCRETING" AND ACI 306.1 "GUIDE TO COLD WEATHER CONCRETING". NO WATER MAY BE ADDED ON SITE UNLESS WRITTEN APPROVAL HAS BEEN GRANTED BY THE ENGINEER IN ADVANCE OF THE CONCRETE POUR.

C14. CONCRETE FORMS MUST BE CLEAR OF DEBRIS AND CONCRETE MUST BE PROPERLY VIBRATED DURING PLACEMENT TO PREVENT HONEYCOMBS, CRACKS, DEFECTS, EMBEDDED DEBRIS, OR VOIDS; AS DEFINED BY ACI CT–13. CONTRACTOR WILL BE REQUIRED TO FIX ALL DEFECTIVE AREAS TO THE SATISFACTION OF THE ENGINEER AND OWNER.

CONCRETE PROTECTION FOR REINFORCEMENT CLEAR CONCRETE COVER DISTANCES

CONCRETE CAST AGAINST AND PERMANENTLY EXPOSED TO EARTH	3"
CONCRETE IN CONTACT WITH OR IMMEDIATELY ABOVE OR ADJACENT TO WATER/WASTEWATER	2"
CONCRETE EXPOSED TO EARTH OR WEATHER	
#6 THROUGH #11 BARS	2"
#5 AND SMALLER, W31 OR D31 WIRE	1 1/2"
CONCRETE NOT EXPOSED TO WEATHER, CONTACT WITH GROUND, OR WASTEWATER	
SLABS, WALLS, AND JOISTS: #11 AND LARGER BARS	1 1/2"
#10 AND SMALLER BARS	LARGER OF 1" OR BAR DIA.
BEAMS AND COLUMNS: PRIMARY REINFORCEMENT, TIES, STIRRUPS AND SPIRALS	1 1/2"

DETAIL NOTE: SEE SPECIFICATIONS OR GENERAL NOTES FOR TOLERANCES.

CONCRETE MATERIAL SCHEDULE

PROPERTIES/MATERIALS \ PROJECT USE	MIX 1 GENERAL STRUCTURES
COMPRESSIVE STRENGTH – MINIMUM	4,500 psi
PORTLAND CEMENT – ASTM C150	TYPE I/II
FLYASH – ASTM C618	15% MAX
AGGREGATE – COARSE – ASTM C33	1" MAX
AIR ENTRAINMENT – ASTM C260	6% ± 1%
SUPER PLASTICIZER – ASTM C494	(OPTIONAL) TYPE F
WATER TO CEMENT RATIO – MAX	0.45 MAX
SYNTHETIC FIBERS	NOT REQUIRED
SLUMP	3" ± 1"
WATERPROOFING	NOT REQUIRED

DETAIL NOTES:
1. ALL CONCRETE IS MIX 1 UNLESS NOTED OTHERWISE.

POST–INSTALLED ANCHORS:

PA1. POST–INSTALLED ANCHORS SHALL ONLY BE USED WHERE SPECIFIED ON THE CONTRACT DRAWINGS. THE CONTRACTOR SHALL OBTAIN APPROVAL FROM THE ENGINEER OF RECORD (EOR) BEFORE INSTALLING POST–INSTALLED ANCHORS FOR MISSING OR MISPLACED CAST–IN–PLACE ANCHORS.

PA2. CARE SHALL BE TAKEN IN PLACING POST–INSTALLED ANCHORS TO AVOID CONFLICTS WITH EXISTING REBAR. HOLES SHALL BE DRILLED AND CLEANED IN ACCORDANCE WITH THE MANUFACTURER'S WRITTEN INSTRUCTIONS.

PA3. SPECIAL INSPECTION SHALL BE PROVIDED FOR ALL ADHESIVE AND MECHANICAL ANCHOR INSTALLATIONS AS REQUIRED BY THE BUILDING CODE.

PA4. SUBSTITUTION REQUESTS, FOR PRODUCTS OTHER THAN THOSE SPECIFIED BELOW, SHALL BE SUBMITTED BY THE CONTRACTOR TO THE EOR ALONG WITH CALCULATIONS THAT ARE PREPARED AND SEALED BY A REGISTERED PROFESSIONAL ENGINEER. THE CALCULATIONS SHALL DEMONSTRATE THAT THE SUBSTITUTED PRODUCT IS CAPABLE OF ACHIEVING THE PERTINENT EQUIVALENT PERFORMANCE VALUES (MINIMUM) OF THE SPECIFIED PRODUCT USING THE APPROPRIATE DESIGN PROCEDURE AND/OR STANDARD(S) AS REQUIRED BY THE BUILDING CODE. PRODUCT ICC–ES REPORTS SHALL BE INCLUDED WITH THE SUBMITTAL PACKAGE.

PA5. ADHESIVE ANCHORS CAN ONLY BE INSTALLED IN CONCRETE THAT HAS REACHED FULL DESIGN STENGTH. CONTRACTOR MUST VERIFY CONCRETE DESIGN STRENGTH PRIOR TO ADHESIVE ANCHOR INSTALLATION.

PA6. OVERHEAD AND HORIZONTAL ADHESIVE ANCHORS MUST BE INSTALLED BY AN ACI CERTIFIED INSTALLER.

STRUCTURAL STEEL:

S1. FABRICATION AND ERECTION OF STRUCTURAL STEEL SHALL CONFORM TO THE AMERICAN INSTITUTE OF STEEL CONSTRUCTION, "MANUAL OF STEEL CONSTRUCTION", LATEST EDITION.

S2. ALL STEEL DETAILS AND CONNECTIONS SHALL BE IN ACCORDANCE WITH THE REQUIREMENTS OF THE AISC "SPECIFICATION FOR STRUCTURAL STEEL BUILDINGS", LATEST EDITION.

S3. ALL STEEL MATERIAL GRADES TO CONFORM TO THE STRUCTURAL STEEL AND METAL FABRICATION SPECIFICATIONS.

S4. ALL STEEL SHALL BE HOT DIP GALVANIZED, UNLESS NOTED OTHERWISE.

S5. ALL STEEL SHOP OR FIELD BOLTED CONNECTIONS SHALL BE BOLTED USING 3/4 INCH DIAMETER ASTM A325 BOLTS IN STANDARD HOLES, UNLESS SPECIFICALLY NOTED OTHERWISE.

S6. OVERSIZED OR SLOTTED HOLES SHALL NOT BE USED FOR ANY CONNECTIONS UNLESS SPECIFICALLY INDICATED ON THE DRAWINGS OR APPROVED IN WRITING BY THE ENGINEER.

S7. ALL BUTT AND FULL PENETRATION WELDS SHALL BE MADE USING RUN OFF TABS WHICH SHALL BE REMOVED AND GROUND SMOOTH AFTER WELD IS COMPLETED, UNLESS NOTED OTHERWISE.

S8. ALL WELDS SHALL MEET THE MINIMUM WELD SIZE SPECIFIED BY THE AISC MANUAL OF STEEL DESIGN.

S9. ALL WELDS SHALL BE PERFORMED BY QUALIFIED WELDERS IN ACCORDANCE WITH AWS SPECIFICATIONS. STEEL WELDS SHALL BE E70XX ELECTRODES, UNLESS NOTED OTHERWISE. ALL WELDS SHALL BE PERFORMED BY QUALIFIED WELDERS IN ACCORDANCE WITH AWS SPECIFICATIONS

S10. ALTERNATIVE CONNECTIONS WILL BE ACCEPTED ONLY WITH THE WRITTEN APPROVAL OF THE ENGINEER. HOWEVER, THE ENGINEER SHALL BE THE SOLE JUDGE OF THE ACCEPTABILITY AND THE CONTRACTOR'S BID SHALL ANTICIPATE THE USE OF THE THOSE SPECIFIC DETAILS SHOWN ON THE DRAWINGS. IN ANY EVENT THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE DESIGN OF SUCH ALTERNATE DETAILS WHICH THEY PROPOSE.

S11. SHOP AND FIELD CONNECTIONS NOT SPECIFICALLY DETAILED ON THE DRAWINGS SHALL BE BOLTED OR WELDED.

S12. WHEN NOT SPECIFICALLY DETAILED ELSEWHERE ON THE DRAWINGS, ALL BEAM TO BEAM AND BEAM TO COLUMN CONNECTIONS SHALL BE DETAILED AS SHOWN IN THE TYPICAL BEAM CONNECTION DETAILS.

S13. ALL HOLES AND CUTS SHALL BE SHOWN ON THE SHOP DRAWINGS AND MADE IN THE SHOP. CUTS OR BURNING OF HOLES IN THE STRUCTURAL STEEL MEMBERS IN THE FIELD WILL NOT BE PERMITTED.

S14. STEEL IN CONTACT WITH DISSIMILAR METAL SHALL INCLUDE A DIELECTRIC ISOLATION ELEMENT THAT DOES NOT AFFECT STRUCTURAL PROPERTIES. EXAMPLE INCLUDE HIGH BUILD EPOXY PAINT, COMPOSITE WASHERS, AND COMPONENT SLEEVES.

S15. BAR GRATING SHALL BE 1–1/2" THICK SERRATED 19–W–4 BAR GRATING, UNLESS NOTED OTHERWISE. BAR GRATING MUST BE PROPERLY SECURED PER PROJECT STANDARDS. ALL GRATING PENETRATIONS MUST BE SUBMITTED TO THE ENGINEER FOR REVIEW. NOTE THAT PENETRATION WILL REQUIRE 1/4"x4" STEEL BANDING WELDED TO THE BAR GRATING; AND MAY REQUIRE SUPPLEMENTAL STEEL DEPENDING UPON OPENING SIZE.

S16. GUARDRAIL IS REQUIRED PER OSHA 1910 REGULATIONS FOR FALL PROTECTION. THE AERATOR STRUCTURE SHOWS GUARDRAIL AROUND THE PERIMETER OF THE BAR GRATING SURFACE AT +30'–0" FROM GRADE. ADDITIONAL GUARDRAIL MAY NEED TO FURNISHED BY THE CONTRACTOR DEPENDING UPON THE FINAL SHAPE OF THE AERATOR EQUIPMENT TO ENSURE THERE IS NOT A FALL HAZARD PER OSHA REGULATIONS.

S17. LADDER SWING GATES MUST BE SPRING–LOADED TO ENSURE IT IS PROVIDING PROPER OSHA FALL PROTECTION WHEN IT IS AT REST; WHILE ALLOW PROPER PASSAGE OF PERSONNEL, AS REQUIRED.

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APPROVED: JW
CAD DATE: 03/04/26
CAD FILE: J:\2023\2303375\CAD\DWGS – WATER PLANT FACILITY\S\STRUCTURAL GENERAL INFORMATION.DWG
JOB DATE: MARCH 2026
JOB NUMBER: 2303375
BAR IS ONE INCH ON OFFICIAL DRAWINGS. 0 1"
IF NOT ONE INCH, ADJUST SCALE ACCORDINGLY.

NO.	DATE	BY	REVISION DESCRIPTION
0	6/25/2025	LT	60% DESIGN PLANS SUBMISSION
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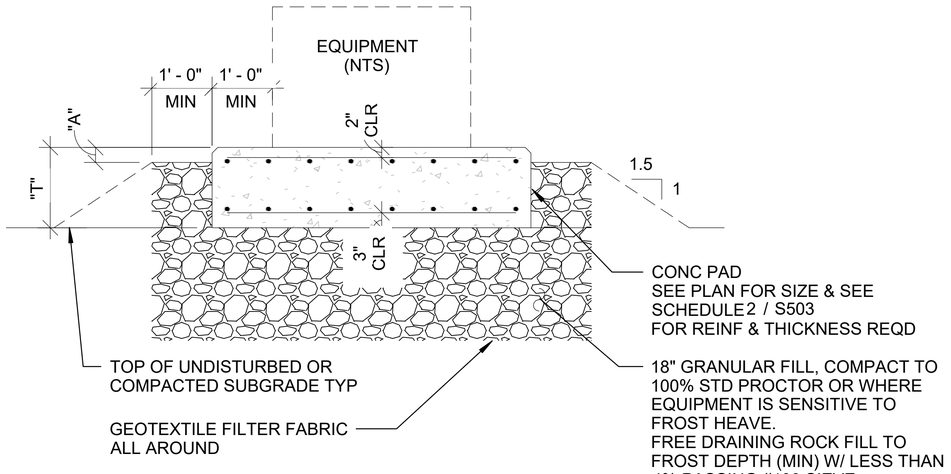
TBPE FIRM NO. F-11278

ISSUED FOR REVIEW
NOT FOR CONSTRUCTION
BY: JASON WHYTE
P.E. REGISTRATION NO. 100904
DATE: MARCH 2026

PHASE 1 WATER SYSTEM IMPROVEMENTS
DRINKING WATER STORAGE
SUNRISE BEACH VILLAGE, TEXAS

STRUCTURAL
STRUCTURAL GENERAL INFORMATION

SHEET NO.
21 OF 23



DETAIL NOTES

1. SURFACE-COMPACT EXISTING SOIL, PROOF ROLL, REMOVE AND REPLACE WEAK SOILS AND INSTALL GEOTEXTILE.
2. CONCRETE SHALL BE MIX 4 UNO WITH LIGHT BROOM FINISH.
3. PROVIDE FOR DRAINAGE OF FREE DRAINING ROCK FILL.

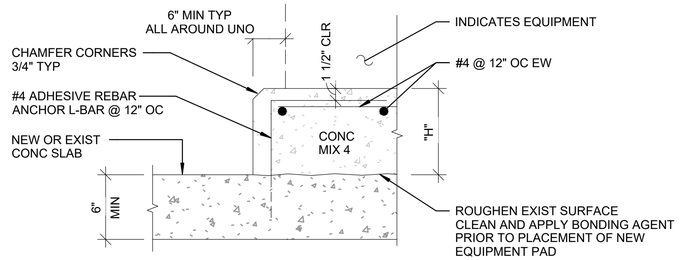
1 EXTERIOR EQUIPMENT PAD WITH EXCAVATION TO FROST DEPTH
SCALE: NTS

TYPICAL CONCRETE PAD REINFORCING SCHEDULE UNO		
"T"	**REBAR**	**"A"**
6"	#3@8" OC (CENTERED)	2"
8"	#5@12" OC (CENTERED)	4"
12" - 18"	#4@8" OC (TOP&BOT)	6"
24"	#5@8" OC (TOP&BOT)	6"

DETAIL NOTES

1. CHAMFER EXPOSED CONCRETE CORNERS (3/4" TYP).
2. EXCAVATE DOWN TO UNDISTURBED STABLE SOIL MEETING DESIGN BEARING PRESSURE CONSTRAINTS.
3. COORDINATE ALL LOCATIONS OF PENETRATIONS IN SLAB AND WALL AS NEEDED FOR PIPING, CONDUIT, WIRING, AND CONTROLS.
4. EPOXY REINFORCEMENT WHERE CALLED OUT ON PLANS.

2 PAD REINFORCING SCHEDULE
SCALE: NTS



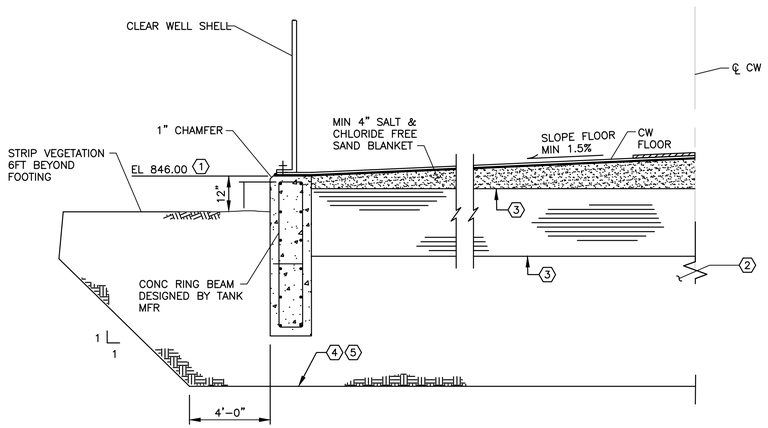
DETAIL NOTES

1. "H" TO BE DETERMINED BY MOUNTING HEIGHT OF EQUIPMENT.
2. "H" SHALL NOT BE LESS THAN 3 1/2" OR GREATER THAN 8" WITHOUT ENGINEERS APPROVAL.
3. PAD SIZE SHALL BE MINIMUM INDICATED OR AS SHOWN ON THE PLANS OR AS INDICATED BY THE MANUFACTURER AND APPROVED BY THE ENGINEER.
4. THE SIZE, NUMBER, TYPE, LOCATION, AND THREAD PROJECTION OF THE ANCHOR BOLTS SHALL BE DETERMINED BY THE EQUIPMENT MANUFACTURER, AND SHALL BE HELD IN POSITION WITH A ONE PIECE TEMPLATE, MATCHING THE BASE PLATE, WHILE PAD IS BEING POURED.
5. EQUIPMENT BASES SHALL BE INSTALLED LEVEL UNLESS SPECIFIED OTHERWISE.
6. WHEN ANCHORAGE OF EQUIPMENT TO SLAB IS REQUIRED, USE SPECIFIED STAINLESS STEEL WEDGE ANCHORS.

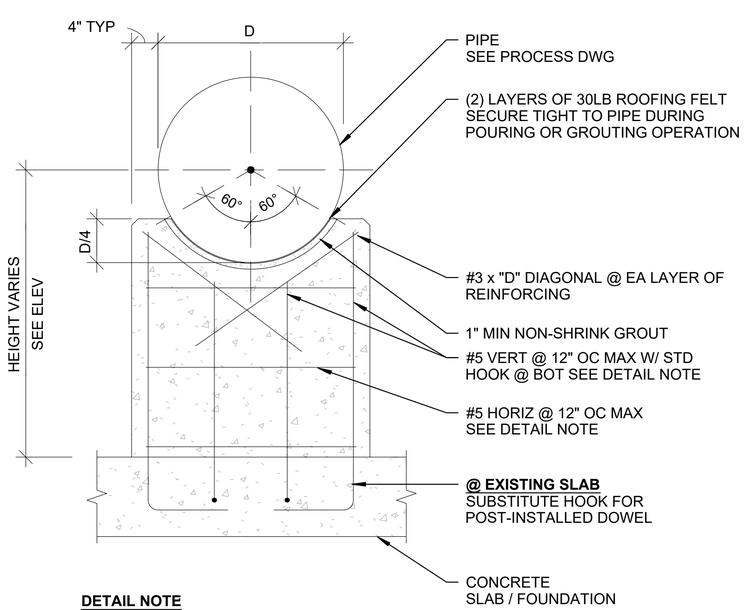
3 EQUIPMENT PAD
SCALE: NTS

KEY NOTES:

1. VERIFY ELEVATION WITH TANK MANUFACTURER PRIOR TO CONSTRUCTION.
2. VERIFY WITH TANK MANUFACTURER SOILS REPORT IS UTILIZED FOR STRUCTURAL CALCULATIONS.
3. GEOMEMBRANE MOISTURE VAPOR BARRIER AS REQUIRED BY TANK MANUFACTURER.
4. EXCAVATION, BACKFILL, COMPACTION TO BE DIRECTED BY TANK MANUFACTURER.
5. THE FILLING TEST AND PERFORMANCE TEST SHALL BE COMPLETED BY CONTRACTOR IN ITS ENTIRETY AND DOCUMENTED AND REPORTED TO ENGINEER.



4 CLEAR WELL FOUNDATION
SCALE: NTS



DETAIL NOTE

THICKNESS "B" OF SADDLE:
B = 8" WHEN D < 24", REINFORCING CENTERED.
B = 10" WHEN D >24", REINFORCING EA FACE.
B = 12" WHEN D > 42", REINFORCING EA FACE

5 CONCRETE PIPE SUPPORT
SCALE: NTS

DRAFT (90%) - FOR CITY REVIEW ONLY

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PHASE 1 WATER SYSTEM IMPROVEMENTS
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SUNRISE BEACH VILLAGE, TEXAS

STRUCTURAL
STRUCTURAL DETAILS (1 OF 2)

SHEET NO.
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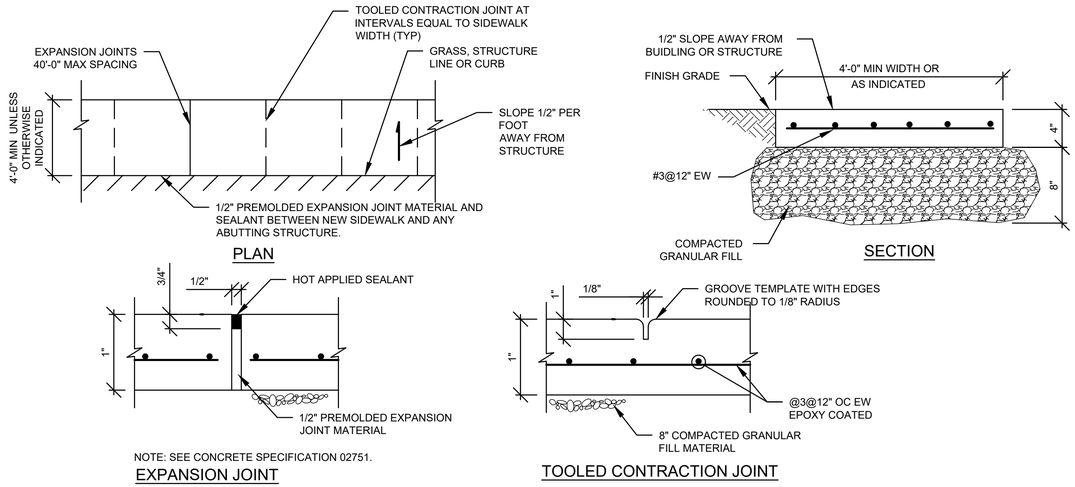

1 SIDEWALK DETAIL

SCALE: NTS

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23 OF 23