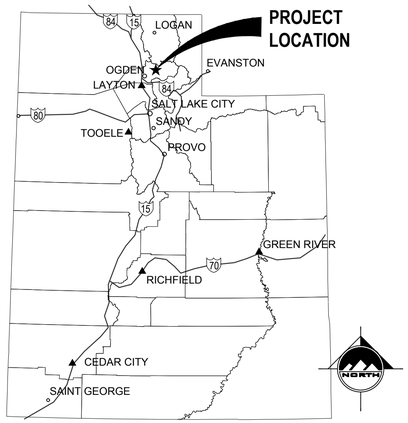
811 Know what's below. Call before you dig.

CALL BLUESTAKES @ 811 AT LEAST 48 HOURS PRIOR TO THE COMMENCEMENT OF ANY CONSTRUCTION.

COBABE RANCH 0.5 MG WATER TANK
EDEN CROSSING (PWS NO. 29132)



LOCATION MAP
NO SCALE

COBABE RANCH
EDEN, UTAH

FOR CONSTRUCTION

DATE PRINTED
July 9, 2025

DRAWING INDEX

NOTICE TO CONTRACTOR

ALL CONTRACTORS AND SUBCONTRACTORS PERFORMING WORK SHOWN ON OR RELATED TO THESE PLANS SHALL CONDUCT THEIR OPERATIONS SO THAT ALL EMPLOYEES ARE PROVIDED A SAFE PLACE TO WORK AND THE PUBLIC IS PROTECTED. ALL CONTRACTORS AND SUBCONTRACTORS SHALL COMPLY WITH THE "OCCUPATIONAL SAFETY AND HEALTH REGULATIONS OF THE U.S. DEPARTMENT OF LABOR AND THE STATE OF UTAH DEPARTMENT OF INDUSTRIAL RELATIONS CONSTRUCTION SAFETY ORDERS." THE CIVIL ENGINEER SHALL NOT BE RESPONSIBLE IN ANY WAY FOR THE CONTRACTORS AND SUBCONTRACTORS COMPLIANCE WITH SAID REGULATIONS AND ORDERS.

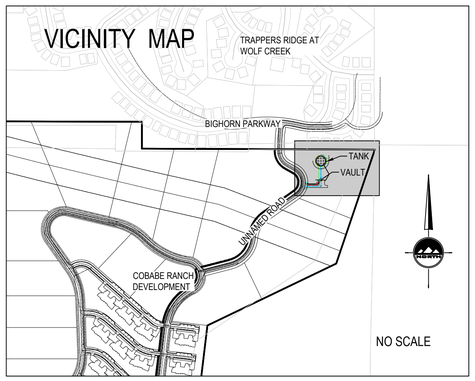
CONTRACTOR FURTHER AGREES TO ASSUME SOLE AND COMPLETE RESPONSIBILITY FOR JOB-SITE CONDITIONS DURING THE COURSE OF CONSTRUCTION OF THIS PROJECT, INCLUDING SAFETY OF ALL PERSONS AND PROPERTY, THAT THIS REQUIREMENT SHALL APPLY CONTINUOUSLY AND NOT BE LIMITED TO NORMAL WORKING HOURS, AND THAT THE CONTRACTOR SHALL DEFEND, INDEMNIFY AND HOLD THE OWNER AND THE CIVIL ENGINEER HARMLESS FROM ANY AND ALL LIABILITY, REAL OR ALLEGED IN CONNECTION WITH THE PERFORMANCE OF WORK ON THIS PROJECT, EXCEPTING FOR LIABILITY ARISING FROM THE SOLE NEGLIGENCE OF THE OWNER OR ENGINEER.

NOTICE TO DEVELOPER/CONTRACTOR

UNAPPROVED DRAWINGS REPRESENT WORK IN PROGRESS, ARE SUBJECT TO CHANGE, AND DO NOT CONSTITUTE A FINISHED ENGINEERING PRODUCT. ANY WORK UNDERTAKEN BY DEVELOPER OR CONTRACTOR BEFORE PLANS ARE APPROVED IS UNDERTAKEN AT THE SOLE RISK OF THE DEVELOPER, INCLUDING BUT NOT LIMITED TO BIDS, ESTIMATION, FINANCING, BONDING, SITE CLEARING, GRADING, INFRASTRUCTURE CONSTRUCTION, ETC.

UTILITY DISCLAIMER

THE CONTRACTOR IS SPECIFICALLY CAUTIONED THAT THE LOCATION AND / OR ELEVATIONS OF EXISTING UTILITIES AS SHOWN ON THESE PLANS IS BASED ON RECORDS OF THE VARIOUS UTILITY COMPANIES AND WHERE POSSIBLE, MEASUREMENTS TAKEN IN THE FIELD. THE INFORMATION IS NOT TO BE RELIED ON AS BEING EXACT OR COMPLETE. THE CONTRACTOR MUST CALL THE LOCAL UTILITY LOCATION CENTER AT LEAST 48 HOURS BEFORE ANY EXCAVATION TO REQUEST EXACT FIELD LOCATIONS OF UTILITIES. IT SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR TO RELOCATE ALL EXISTING UTILITIES WHICH CONFLICT WITH THE PROPOSED IMPROVEMENTS SHOWN ON THE PLANS.



GENERAL NOTES

1. ALL WORK SHALL CONFORM TO APWA STANDARDS & SPECIFICATIONS.
2. CALL BLUE STAKES AT LEAST 48 HOURS PRIOR TO THE COMMENCEMENT OF ANY CONSTRUCTION ACTIVITIES.

BENCHMARK ELEVATION = CONTROL POINT GE CAP, NEAR EAST QUARTER CORNER OF NORTHEAST QUARTER CORNER OF SECTION 26,TOWNSHIP 7 NORTH, RANGE 1 EAST SALT LAKE PRINCIPAL MERIDIAN ELEV. = 5321.77'.

811 Know what's below. Call before you dig.

CALL BLUESTAKES @ 811 AT LEAST 48 HOURS PRIOR TO THE COMMENCEMENT OF ANY CONSTRUCTION.

BENCHMARK

CONTROL POINT GE CAP
NEAR EAST QUARTER CORNER OF NORTHEAST QUARTER CORNER OF SECTION 26,TOWNSHIP 7 NORTH, RANGE 1 EAST SALT LAKE PRINCIPAL MERIDIAN

ELEV = 5321.77'

ENSIGN
THE STANDARD IN ENGINEERING

SANDY
45 W. 10000 S., Suite 500
Sandy, UT 84070
Phone: 801.255.0529

LAYTON
Phone: 801.547.1100

TOOELE
Phone: 435.843.3590

CEDAR CITY
Phone: 435.865.1453

RICHFIELD
Phone: 435.896.2983

WWW.ENSIGNENG.COM

FOR:
EDEN VALLEY OPPORTUNITY, LLC
3718 NORTH WOLF CREEK DRIVE
EDEN, UT 84310

CONTACT:
JOHN LEWIS
PHONE: 801.897.4880

COBABE RANCH 0.5 MG WATER TANK
EDEN CROSSING (PWS NO.29132)
COBABE RANCH
EDEN, UTAH

PROFESSIONAL ENGINEER
7885569-2202
ROBERT J. ROUSSELLE
EXP 9/30/2026
STATE OF UTAH

FOR CONSTRUCTION 7/9/2025

COVER

PROJECT NUMBER	PRINT DATE
14018A	2025-07-09
PROJECT MANAGER	DESIGNED BY
R. ROUSSELLE	C. DUNKEL

ABBREVIATIONS

@	AT
ø	DIAMETER
%	PERCENTAGE
'	FEET
"	INCHES
3PH	THREE PHASE POWER
AB	ANCHOR BOLT
ABUT	ABUTMENT
AC	ASBESTOS CEMENT PIPE OR ASPHALT CONCRETE
ADT	AVERAGE DAILY TRAFFIC
APPROX	APPROXIMATELY
APWA	AMERICAN PUBLIC WORKS ASSOCIATION
AL	AIR LINE
ALUM	ALUMINUM
AR	ACCESSIBLE ROUTE
ASPH	ASPHALT
ASTM	AMERICAN SOCIETY FOR TESTING AND MATERIALS
AWWA	AMERICAN WATER WORKS ASSOCIATION
AZ	AZIMUTH
BAL	BALANCE
BEG	BEGINNING / BEGIN
BFC	BACK FACE OF CURB
BLD FLG	BLIND FLANGE
BLDG	BUILDING
BLM	BUREAU OF LAND MANAGEMENT
BM	BENCHMARK
BLK	BLOCK
BOD	BIOCHEMICAL OXYGEN DEMAND
BOS	BOTTOM OF STEP
BOT	BOTTOM
BRG	BEARING
BSMT	BASEMENT
BTWN	BETWEEN
BVC	BEGIN VERTICAL CURVE
C	CURVE
C&G	CURB AND GUTTER
CALC	CALCULATED
CB	CATCH BASIN
C-C	CENTER TO CENTER
CCW	COUNTER CLOCKWISE
CF	CURB FACE
CFS	CUBIC FEET PER SECOND
CIP	CAST IRON PIPE
CJ	CONSTRUCTION JOINT
C	CENTER LINE
CLR	CLEARANCE
CMP	CORRUGATED METAL PIPE
CMP-A	CORRUGATED METAL PIPE - ARCH
CO	CLEAN OUT
COB	CLEAN OUT BOX
COL	COLUMN
COMM	COMMUNICATION
CONC	CONCRETE
CONN	CONNECT
CONT	CONTINUOUS
COP	CENTER OF PIPE
COR	CORNER
CTR	CENTER
CU FT	CUBIC FEET
CU YD	CUBIC YARD
CULV	CULVERT
CW	CLOCKWISE
D	DEGREE
DET	DETAIL
DIA	DIAMETER
DI	DUCTILE IRON
DIP	DUCTILE IRON PIPE
DIST	DISTANCE
DL	DRAIN LINE
DMH	DRAINAGE MANHOLE
DN	DOWN
DW	DRINKING WATER
DWG	DRAWINGS
DWV	DRAIN WASTE VENT
E	EAST
EA	EACH
EB	ELECTRICAL BOX
EG	EDGE OF GRAVEL
ELEC	ELECTRIC / ELECTRICAL
ELEV	ELEVATION
EMB	EMBANKMENT
EMH	ELECTRICAL MANHOLE
ENGR	ENGINEER
ENT	ENTRANCE
EO	EDGE OF OIL
EOA	EDGE OF ASPHALT
EQUIP	EQUIPMENT
ES	EDGE OF SHOULDER
EST	ESTIMATE
EVC	END OF VERTICAL CURVE
EW	EACH WAY
EXC	EXCAVATION
EX	EXISTING
EXIST	EXISTING
FD	FLOOR DRAIN
FDN	FOUNDATION
FEN COR	FENCE CORNER
FE	FIRE EXTINGUISHER
FF	FINISH FLOOR
FFC	FRONT FACE OF CURB
FG	FINISH GRADE
FH	FIRE HYDRANT
FIN	FINISH
FL	FLOW LINE / FLANGE
FLR	FLOOR
FRP	FIBERGLASS REINFORCED PIPE
FT	FEET
FTG	FOOTING
G	GAS
GA	GAGE / GAUGE
GALV	GALVANIZED
GB	GRADE BREAK
GEN	GENERAL
GF	GARAGE FLOOR
GLB	GLUED LAMINATED BEAM
GM	GAS METER
GSP	GALVANIZED STEEL PIPE
GV	GATE VALVE
HC	HANDICAP / HYPOCHLORITE
HDG	HOT DIPPED GALVANIZED
HDWL	HEADWALL
H&T	HUB & TACK
HORIZ	HORIZONTAL
HP	HIGH POINT
HSS	HOLLOW STRUCTURAL SECTION
HWL	HIGH WATER LEVEL
HWY	HIGHWAY
HX	HEAT EXCHANGER
HYD	HYDRANT
ID	INSIDE DIAMETER
IE	INVERT ELEVATION
IJ	ISOLATION JOINT
IN	INCH
INFO	INFORMATION
INV	INVERT
IRR	IRRIGATION
JCT	JUNCTION
K	RATE OF VERTICAL CURVATURE
L	LENGTH
LB	POUND
LD	LAND DRAIN
LF	LINEAR FEET
LIC	LICENSE
LIN	LINEAR / LINEAL
LP	LOW POINT / LIGHT POLE
LS	LAND SURVEYOR
LT	LEFT
LWL	LOW WATER LEVEL
MAG	MAGNETIC
MAINT	MAINTENANCE
MATL	MATERIAL
MAX	MAXIMUM
MB	MACHINE BOLT
MH	MANHOLE
MI	MILE
MIN	MINIMUM
MISC	MISCELLANEOUS
MJ	MECHANICAL JOINT
MKR	MARKER
ML	MIXED LIQUOR
MON	MONUMENT
MPH	MILES PER HOUR
N	NORTH
NG	NATURAL GROUND
NIC	NOT IN CONTRACT
NPW	NON-POTABLE WATER
NO OR #	NUMBER
NTS	NOT TO SCALE
OC	ON CENTER
OCEW	ON CENTER EACH WAY
OD	OUTSIDE DIAMETER
OFF REV	OFFICE REVISION
O-O	OUTSIDE TO OUTSIDE
OHP	OVERHEAD POWER
ORIG	ORIGINAL
OSB	ORIENTED STAND BOARD
PC	POINT OF CURVATURE / PRESSURE CLASS
PCC	POINT OF COMPOUND CURVATURE
PD	POND EFFLUENT
PE	PLANT EFFLUENT / PLAIN END
PERT	PERFORATED
PI	POINT OF INTERSECTION / PRIMARY INFLUENT
PIV	POST INDICATOR VALVE
PL	PROPERTY LINE
POB	POINT OF BEGINNING
POC	POINT ON CURVATURE
PP	POWER POLE
PRC	POINT OF REVERSE CURVATURE
PRO	PROPOSED
PROJ	PROJECT
PROP	PROPERTY
PS	PUMP STATION
PSF	POUNDS PER SQUARE FOOT
PSI	POUNDS PER SQUARE INCH
PT	POINT OF TANGENCY
PVC	POINT OF VERTICAL CURVATURE / POLYVINYL CHLORINE
PVI	POINT OF VERTICAL INTERSECTION
PVMT	PAVEMENT
PVT	POINT OF VERTICAL TANGENCY
PW	POTABLE WATER
QTY	QUANTITY
R	RADIUS / RANGE
RAS	RETURN ACTIVATED SLUDGE
RCP	REINFORCED CONCRETE PIPE
RCCP	REINFORCED CONCRETE CYLINDER PIPE
RD	ROOF DRAIN
REF	REFERENCE
REINF	REINFORCED
REQ'D	REQUIRED
REV	REVISION
RJ	RESTRAINED JOINT
ROW	RIGHT OF WAY
RP	REFERENCE POINT
RR	RAILROAD
RT	RIGHT / ROUTE
R/W	RIGHT OF WAY
S	SLOPE / SOUTH
SAN	SANITARY
SAN SWR	SANITARY SEWER
SCH	SCHEDULE
SD	STORM DRAIN
SE	SECONDARY EFFLUENT
SEC	SECONDARY
SEC COR	SECTION CORNER
SHT	SHEET
SJ	SAWED JOINT
SKT	SOCKET
SL	SOLIDS LINE
SOVFL	SURFACE OVERFLOW
SPECS	SPECIFICATIONS
SQ	SQUARE
SQ FT	SQUARE FEET
SQ YD	SQUARE YARDS
SS	SANITARY SEWER / STAINLESS STEEL
ST	STREET
STA	STATION
STD	STANDARD
STL	STEEL
STN STL	STAINLESS STEEL
STRUCT	STRUCTURE
SW	SIDEWALK
SWR	SEWER
SWL	SECONDARY WATER LINE
T	TOWNSHIP / TELEPHONE
TAN	TANGENT
TBC	TOP BACK OF CURB
TEMP	TEMPORARY
TELE	TELEPHONE / TELEGRAM
THD	THREADED
THK	THICK
TKN	TOTAL KIELDAHL NITROGEN
TOA	TOP OF ASPHALT
TOC	TOP OF CONCRETE
TOF	TOP OF FOUNDATION / TOP OF FOOTING
TOG	TOP OF GRATE / TOP OF GRAVEL
TOP	TOP OF PIER
TOW	TOP OF WALL
TOS	TOP OF STEP / TOP OF SLAB
TSS	TOTAL SUSPENDED SOLIDS
TYP	TYPICAL
UB	UTILITY BOX
UG	UNDERGROUND
UNO	UNLESS NOTED OTHERWISE
UW	UTILITY WATER
VC	VERTICAL CURVE
VERT	VERTICAL
VIC	VIC COUPLING
VOL	VOLUME
VPI	VERTICAL POINT OF INTERSECTION
VPC	VERTICAL POINT OF CURVE
VPT	VERTICAL POINT OF TANGENCY
VSS	VOLATILE SUSPENDED SOLIDS
W	WEST / WATER
WAS	WASTE ACTIVATED SLUDGE
WIV	WALL INDICATOR VALVE
WL	WATER LINE
WM	WATER METER
WO	WEIR OVERFLOW
W/	WITH
W/O	WITHOUT
XING	CROSSING
X-SEC	CROSS SECTION
YH	YARD HYDRANT

LEGEND

	SECTION CORNER
	EXISTING MONUMENT
	PROPOSED MONUMENT
	EXISTING REBAR AND CAP
	SET ENSIGN REBAR AND CAP
WM	EXISTING WATER METER
WM	PROPOSED WATER METER
	EXISTING WATER MANHOLE
W	PROPOSED WATER MANHOLE
W	EXISTING WATER BOX
WV	EXISTING WATER VALVE
WV	PROPOSED WATER VALVE
	PROPOSED WATER VALVE REDUCER
	EXISTING FIRE HYDRANT
	PROPOSED FIRE HYDRANT
	PROPOSED FIRE DEPARTMENT CONNECTION
	EXISTING SECONDARY WATER VALVE
SWV	PROPOSED SECONDARY WATER VALVE
IRR	EXISTING IRRIGATION BOX
	EXISTING IRRIGATION VALVE
IRR	PROPOSED IRRIGATION VALVE
	EXISTING SANITARY SEWER MANHOLE
S	PROPOSED SANITARY SEWER MANHOLE
	EXISTING SANITARY CLEAN OUT
	EXISTING STORM DRAIN CLEAN OUT BOX
	PROPOSED STORM DRAIN CLEAN OUT BOX
	EXISTING STORM DRAIN INLET BOX
	EXISTING STORM DRAIN CATCH BASIN
	PROPOSED STORM DRAIN CATCH BASIN
	EXISTING STORM DRAIN COMBO BOX
	PROPOSED STORM DRAIN COMBO BOX
	EXISTING STORM DRAIN CLEAN OUT
	EXISTING STORM DRAIN CULVERT
	PROPOSED STORM DRAIN CULVERT
	TEMPORARY SAG INLET PROTECTION
	TEMPORARY IN-LINE INLET PROTECTION
	ROOF DRAIN
E	EXISTING ELECTRICAL MANHOLE
E	EXISTING ELECTRICAL BOX
	EXISTING TRANSFORMER
	EXISTING UTILITY POLE
	EXISTING LIGHT
	PROPOSED LIGHT
	EXISTING GAS METER
G	EXISTING GAS MANHOLE
GV	EXISTING GAS VALVE
T	EXISTING TELEPHONE MANHOLE
	EXISTING TELEPHONE BOX
	EXISTING TRAFFIC SIGNAL BOX
	EXISTING CABLE BOX
	EXISTING BOLLARD
	PROPOSED BOLLARD
	EXISTING SIGN
	PROPOSED SIGN
	EXISTING SPOT ELEVATION
TBC XXXX XX	PROPOSED SPOT ELEVATION
	EXISTING FLOW DIRECTION
	EXISTING TREE
	DENSE VEGETATION
	EXISTING EDGE OF ASPHALT
	PROPOSED EDGE OF ASPHALT
	EXISTING STRIPING
	PROPOSED STRIPING
x	EXISTING FENCE
X	PROPOSED FENCE
	EXISTING FLOW LINE
	PROPOSED FLOW LINE
	GRADE BREAK
sd	EXISTING STORM DRAIN LINE
SD	PROPOSED STORM DRAIN LINE
RD	ROOF DRAIN LINE
	CATCHMENTS
HWL	HIGHWATER LINE
ss	EXISTING SANITARY SEWER
SS	PROPOSED SANITARY SEWER LINE
	PROPOSED SAN. SWR. SERVICE LINE
ld	EXISTING LAND DRAIN LINE
LD	PROPOSED LAND DRAIN LINE
	PROPOSED LAND DRAIN SERVICE LINE
w	EXISTING CULINARY WATER LINE
W	PROPOSED CULINARY WATER LINE
W	PROPOSED CULINARY WATER SERVICE LINE
swl	EXISTING SECONDARY WATER LINE
SWL	PROPOSED SECONDARY WATER LINE
SW	PROPOSED SEC. WATER SERVICE LINE
irr	EXISTING IRRIGATION LINE
IRR	PROPOSED IRRIGATION LINE
ohp	EXISTING OVERHEAD POWER LINE
e	EXISTING ELECTRICAL LINE
g	EXISTING GAS LINE
t	EXISTING TELEPHONE LINE
AR	ACCESSIBLE ROUTE
	SAW CUT LINE
	STRAW WATTLE
	TEMPORARY BERM
SF	TEMPORARY SILT FENCE
LOD	LIMITS OF DISTURBANCE
	EXISTING WALL
	PROPOSED WALL
	EXISTING CONTOURS
	PROPOSED CONTOURS
	BUILDABLE AREA WITHIN SETBACKS
	PUBLIC DRAINAGE EASEMENT
	EXISTING ASPHALT TO BE REMOVED
	PROPOSED ASPHALT
	EXISTING CURB AND GUTTER
	PROPOSED CURB AND GUTTER
	PROPOSED REVERSE PAN CURB AND GUTTER
	TRANSITION TO REVERSE PAN CURB
	CONCRETE TO BE REMOVED
	EXISTING CONCRETE
	PROPOSED CONCRETE
	BUILDING TO BE REMOVED
	EXISTING BUILDING
	PROPOSED BUILDING

NOTE: MAY CONTAIN SYMBOLS OR ABBREVIATIONS THAT ARE NOT USED IN THIS PLAN SET.

ENSIGN
THE STANDARD IN ENGINEERING

SANDY
45 W. 10000 S., Suite 500
Sandy, UT 84070
Phone: 801.255.0529

LAYTON
Phone: 801.547.1100

TOOELE
Phone: 435.843.3590

CEDAR CITY
Phone: 435.865.1453

RICHFIELD
Phone: 435.896.2983

WWW.ENSIGNENG.COM

FOR:
EDEN VALLEY OPPORTUNITY, LLC
3718 NORTH WOLF CREEK DRIVE
EDEN, UT 84310

CONTACT:
JOHN LEWIS
PHONE: 801.897.4880

COBABE RANCH 0.5 MG WATER TANK
EDEN CROSSING (PWS NO.29132)

COBABE RANCH
EDEN, UTAH

PROFESSIONAL ENGINEER
7885569-2202
ROBERT J. ROUSSELLE
EXP. 3/31/2027
STATE OF UTAH

FOR CONSTRUCTION 7/9/2025

ABBREVIATIONS AND LEGEND

PROJECT NUMBER 14018A
PRINT DATE 2025-07-09
PROJECT MANAGER R. ROUSSELLE
DESIGNED BY C. DUNKEL

C-001

GENERAL NOTES

1. ALL CONSTRUCTION MUST STRICTLY FOLLOW THE STANDARDS AND SPECIFICATIONS SET FORTH BY: DESIGN ENGINEER, LOCAL AGENCY JURISDICTION, APWA (LATEST EDITION), THE MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES (M.U.T.C.D.), AND OTHER REGULATORY AGENCIES EXERCISING AUTHORITY OVER ANY PORTION OF THE WORK WHERE APPLICABLE. THE ORDER LISTED ABOVE IS ARRANGED BY SENIORITY. THE LATEST EDITION OF ALL STANDARDS AND SPECIFICATIONS MUST BE ADHERED TO. IF A CONSTRUCTION PRACTICE IS NOT SPECIFIED BY ANY OF THE LISTED SOURCES, CONTRACTOR SHALL CONTACT DESIGN ENGINEER FOR DIRECTION.

2. ALL CONSTRUCTION AND MATERIALS SHALL BE IN ACCORDANCE WITH THESE CONTRACT DOCUMENTS, LOCAL JURISDICTION REQUIREMENTS, STATE REGULATIONS, AND THE MOST RECENT EDITIONS OF THE FOLLOWING: THE INTERNATIONAL PLUMBING CODE, UTAH DIVISION OF DRINKING WATER REGULATIONS, AND APWA MANUAL OF STANDARD PLANS AND SPECIFICATIONS. THE CONTRACTOR SHALL ADHERE TO ALL ABOVE-MENTIONED DOCUMENTS UNLESS OTHERWISE NOTED AND APPROVED BY THE ENGINEER.

3. SPECIFIC NOTES AND DETAILS SHALL TAKE PRECEDENCE OVER GENERAL NOTES, TYPICAL DETAILS, AND SPECIFICATIONS.

4. THE CONTRACTOR SHALL REFER TO THE TECHNICAL PROVISIONS FOR INFORMATION NOT COVERED BY THESE GENERAL NOTES OR DRAWINGS.

5. THE CONTRACTOR SHALL VERIFY ALL EXISTING CONDITIONS BEFORE SUBMITTING A BID OR PRICE TO THE OWNER AND SHALL NOTIFY OWNER OF ANY DISCREPANCIES OR CONFLICTS BEFORE PROCEEDING WITH THE WORK OR SUBMITTING THE BID.

6. PRIOR TO STARTING CONSTRUCTION, THE CONTRACTOR SHALL BE RESPONSIBLE FOR VERIFYING THAT ALL REQUIRED PERMITS AND APPROVALS HAVE BEEN OBTAINED. NO CONSTRUCTION OR FABRICATION SHALL BEGIN UNTIL THE CONTRACTOR HAS RECEIVED AND THOROUGHLY REVIEWED ALL PLANS AND OTHER DOCUMENTS APPROVED BY ALL OF THE PERMITTING AUTHORITIES.

7. ALL DIMENSIONS, GRADES, AND UTILITY DESIGN SHOWN ON THE PLANS SHALL BE VERIFIED BY THE CONTRACTOR PRIOR TO CONSTRUCTION. CONTRACTOR SHALL NOTIFY THE ENGINEER IF ANY DISCREPANCIES EXIST BETWEEN THE ACTUAL CONDITIONS AND INFORMATION SHOWN ON THE DRAWINGS, PRIOR TO PROCEEDING WITH CONSTRUCTION FOR NECESSARY PLAN OR GRADE CHANGES. NO EXTRA COMPENSATION SHALL BE PAID TO THE CONTRACTOR FOR WORK HAVING TO BE REDONE DUE TO THE DIMENSIONS OR GRADES SHOWN INCORRECTLY ON THESE PLANS, IF SUCH NOTIFICATION HAS NOT BEEN GIVEN.

8. CONTRACTOR SHALL PROVIDE A CONSTRUCTION SCHEDULE IN ACCORDANCE WITH LOCAL AGENCY JURISDICTION, STATE, OR COUNTY REGULATIONS FOR WORKING IN THE PUBLIC WAY.

9. THE CONTRACTOR SHALL PROVIDE AND BE RESPONSIBLE FOR THE TEMPORARY ERECTION OF BRACING AND SHORING AS REQUIRED FOR STABILITY OF STRUCTURES AND EXCAVATIONS DURING ALL PHASES OF CONSTRUCTION. THE CONTRACTOR IS SOLELY RESPONSIBLE FOR CONFORMING TO LOCAL AND FEDERAL CODES GOVERNING SHORING AND BRACING OF EXCAVATIONS AND TRENCHES AND FOR THE PROTECTION OF WORKERS.

10. THE CONTRACTOR SHALL TO KEEP ALL CONSTRUCTION ACTIVITIES WITHIN THE APPROVED PROJECT LIMITS. THIS INCLUDES, BUT IS NOT LIMITED TO VEHICLE AND EQUIPMENT STAGING, MATERIAL STORAGE AND LIMITS OF TRENCH EXCAVATION. IT IS THE CONTRACTOR'S RESPONSIBILITY TO OBTAIN PERMISSION AND/OR EASEMENTS FROM THE APPROPRIATE GOVERNING ENTITY AND/OR INDIVIDUAL PROPERTY OWNER(S) FOR WORK OR STAGING OUTSIDE OF THE PROJECT LIMITS.

11. PROJECT HORIZONTAL AND VERTICAL DATUM ARE SHOWN ON SHEET C-100.

12. CONTRACTOR SHALL BE RESPONSIBLE FOR ANY DAMAGE TO ADJACENT SURFACE IMPROVEMENTS.

13. CONTRACTOR SHALL BE RESPONSIBLE FOR CORRECTING ANY SETTLEMENT OF OR DAMAGE TO EXISTING UTILITIES.

14. THE CONTRACTOR SHALL FURNISH ALL MATERIALS TO COMPLETE THE PROJECT.

15. THE LOCATIONS OF UNDERGROUND FACILITIES SHOWN ON THESE PLANS ARE BASED ON FIELD SURVEYS AND LOCAL UTILITY COMPANY RECORDS. IT SHALL BE THE CONTRACTOR'S FULL RESPONSIBILITY TO CONTACT THE VARIOUS UTILITY COMPANIES TO LOCATE THEIR FACILITIES PRIOR TO PROCEEDING WITH CONSTRUCTION. NO ADDITIONAL COMPENSATION SHALL BE PAID TO THE CONTRACTOR FOR DAMAGE AND REPAIR TO THESE FACILITIES CAUSED BY THEIR WORK FORCE. CONTRACTOR SHALL START INSTALLATION AT LOW POINT OF ALL NEW GRAVITY UTILITY LINES.

16. NO CHANGE IN DESIGN LOCATION OR GRADE SHALL BE MADE BY THE CONTRACTOR WITHOUT THE WRITTEN APPROVAL OF THE PROJECT ENGINEER.

17. NATURAL VEGETATION AND SOIL COVER SHALL NOT BE DISTURBED PRIOR TO ACTUAL CONSTRUCTION OF A REQUIRED FACILITY OR IMPROVEMENT. MASS CLEARING OF THE SITE IN ANTICIPATION OF CONSTRUCTION SHALL BE AVOIDED.

18. CONTRACTOR SHALL BE RESPONSIBLE FOR FURNISHING, MAINTAINING, OR RESTORING ALL MONUMENTS AND MONUMENT REFERENCE MARKS WITHIN THE PROJECT SITE. THE CONTRACTOR SHALL CONTACT THE CITY OR COUNTY SURVEYOR FOR MONUMENT LOCATIONS AND CONSTRUCTION DETAILS.

19. CONTRACTOR TO LAY OUT AND POTHOLE FOR ALL POTENTIAL CONFLICTS WITH UTILITY LINES ON- OR OFF-SITE AS REQUIRED PRIOR TO ANY CONSTRUCTION, AND THE CONTRACTOR WILL VERIFY DEPTHS OF UTILITIES IN THE FIELD BY POTHOLING A MINIMUM OF 300 FEET AHEAD OF PIPELINE CONSTRUCTION TO AVOID CONFLICTS WITH DESIGNED PIPELINE GRADE AND ALIGNMENT. IF A CONFLICT ARISES DUE TO THE CONTRACTOR'S NEGLIGENCE TO POTHOLE UTILITIES, THE CONTRACTOR SHALL RESOLVE THE CONFLICT WITHOUT ADDITIONAL COST OR CLAIM TO THE OWNER OR ENGINEER.

20. ANY AREA OUTSIDE THE LIMIT OF WORK THAT IS DISTURBED SHALL BE RESTORED TO ITS ORIGINAL CONDITION AT NO COST TO OWNER.

21. THE CONTRACTOR SHALL CONSULT ALL OF THE DRAWINGS AND SPECIFICATIONS FOR COORDINATION REQUIREMENTS BEFORE COMMENCING CONSTRUCTION.

22. AT ALL LOCATIONS WHERE EXISTING PAVEMENT ABUTS NEW CONSTRUCTION, THE EDGE OF THE EXISTING PAVEMENT SHALL BE SAWCUT TO A CLEAN, SMOOTH EDGE.

23. ALL CONSTRUCTION AND MATERIALS SHALL BE IN ACCORDANCE WITH THE MOST RECENT, ADOPTED EDITION OF ADA ACCESSIBILITY GUIDELINES.

24. CONTRACTOR SHALL, AT THE TIME OF BIDDING AND THROUGHOUT THE PERIOD OF THE CONTRACT, BE LICENSED IN THE STATE OF UTAH AND SHALL BE BONDABLE FOR AN AMOUNT REQUIRED BY THE OWNER.

25. CONTRACTOR SHALL PROVIDE ALL WATER, POWER, SANITARY FACILITIES AND TELEPHONE SERVICES AS REQUIRED FOR THEIR USE DURING CONSTRUCTION.

26. CONTRACTOR SHALL ADEQUATELY SCHEDULE INSPECTION AND TESTING OF ALL FACILITIES CONSTRUCTED UNDER THIS CONTRACT. ALL TESTING SHALL CONFORM TO THE REGULATORY AGENCY'S STANDARD SPECIFICATIONS. ALL RE-TESTING AND/OR RE-INSPECTION SHALL BE PAID FOR BY THE CONTRACTOR.

27. IF EXISTING IMPROVEMENTS NEED TO BE DISTURBED AND/OR REMOVED FOR THE PROPER PLACEMENT OF IMPROVEMENTS TO BE CONSTRUCTED BY THESE PLANS, THE CONTRACTOR SHALL PROTECT EXISTING IMPROVEMENTS FROM DAMAGE. COST OF REPLACING OR REPAIRING EXISTING IMPROVEMENTS SHALL BE INCLUDED IN THE UNIT PRICE BID FOR ITEMS REQUIRING REMOVAL AND/OR REPLACEMENT. THERE SHALL BE NO EXTRA COST DUE TO THE CONTRACTOR FOR REPLACING OR REPAIRING EXISTING IMPROVEMENTS.

28. WHENEVER EXISTING FACILITIES ARE REMOVED, DAMAGED, BROKEN, OR CUT DURING THE INSTALLATION OF THE WORK COVERED BY THESE PLANS OR SPECIFICATIONS, SAID FACILITIES SHALL BE REPLACED AT THE CONTRACTOR'S EXPENSE WITH MATERIALS EQUAL TO OR BETTER THAN THE MATERIALS USED IN THE ORIGINAL EXISTING FACILITIES. THE FINISHED PRODUCT SHALL BE SUBJECT TO THE APPROVAL OF THE OWNER, THE ENGINEER, AND THE RESPECTIVE REGULATORY AGENCY.

29. CONTRACTOR SHALL MAINTAIN A NEATLY MARKED SET OF FULL-SIZE RECORD DRAWINGS SHOWING THE FINAL LOCATION AND LAYOUT OF ALL STRUCTURES AND OTHER FACILITIES. RECORD DRAWINGS SHALL REFLECT CHANGE ORDERS, ACCOMMODATIONS, AND ADJUSTMENTS TO ALL IMPROVEMENTS CONSTRUCTED. WHERE NECESSARY, SUPPLEMENTAL DRAWINGS SHALL BE PREPARED AND SUBMITTED BY THE CONTRACTOR. PRIOR TO ACCEPTANCE OF THE PROJECT, THE CONTRACTOR SHALL DELIVER TO THE ENGINEER ONE SET OF NEATLY MARKED RECORD DRAWINGS SHOWING THE INFORMATION REQUIRED ABOVE. RECORD DRAWINGS SHALL BE REVIEWED AND THE COMPLETE RECORD DRAWING SET SHALL BE CURRENT WITH ALL CHANGES AND DEVIATIONS REDLINED AS A PRECONDITION TO THE FINAL PROGRESS PAYMENT APPROVAL AND/OR FINAL ACCEPTANCE.

30. WHERE THE PLANS OR SPECIFICATIONS DESCRIBE PORTIONS OF THE WORK IN GENERAL TERMS BUT NOT IN COMPLETE DETAIL, IT IS UNDERSTOOD THAT ONLY THE BEST GENERAL PRACTICE SHALL PREVAIL AND THAT ONLY MATERIALS AND WORKMANSHIP OF THE HIGHEST QUALITY SHALL BE USED.

31. ALL EXISTING GATES AND FENCES SHALL REMAIN UNLESS OTHERWISE NOTED ON PLANS. THE CONTRACTOR SHALL PROTECT ALL GATES AND FENCES FROM DAMAGE.

32. ALL EXISTING TREES SHALL REMAIN UNLESS OTHERWISE NOTED ON PLANS. THE CONTRACTOR SHALL PROTECT ALL TREES FROM DAMAGE.

33. THE CONTRACTOR IS RESPONSIBLE FOR COMPLYING WITH ALL OSHA REQUIREMENTS ON THE PROJECT SITE.

34. THE CONTRACTOR SHALL PROVIDE AND MAINTAIN ANY EQUIPMENT NECESSARY TO DEWATER EXCAVATIONS AS NOTED ON THE PROJECT DRAWINGS.

35. THE CONTRACTOR SHALL NOTIFY BLUESTAKES 1-800-662-4111 AT LEAST 48 HOURS PRIOR TO BEGINNING EXCAVATION. THE CONTRACTOR SHALL LOCATE EXISTING WATER LINE AND OTHER UTILITIES BOTH VERTICALLY AND HORIZONTALLY. IF DISCREPANCIES, CONFLICTS OR UNFORESEEN CONDITIONS ARE DISCOVERED, THE CONTRACTOR SHALL IMMEDIATELY CONTACT ENGINEER FOR RESOLUTION.

36. ALL CONSTRUCTION SHALL CONFORM TO APPLICABLE SECTIONS OF THE UTAH DIVISION OF DRINKING WATER SERIES 500 RULES, DRINKING WATER FACILITY CONSTRUCTION, DESIGN AND OPERATION.

UTILITY NOTES

1. PRIOR TO COMMENCING ANY WORK, IT SHALL BE THE CONTRACTOR'S RESPONSIBILITY TO HAVE EACH UTILITY COMPANY LOCATE, IN THE FIELD, THEIR MAIN AND SERVICE LINES. THE CONTRACTOR SHALL NOTIFY BLUE STAKES AT 1-800-662-4111 AT LEAST 48 HOURS IN ADVANCE OF PERFORMING ANY EXCAVATION WORK. THE CONTRACTOR SHALL RECORD THE BLUE STAKES ORDER NUMBER AND FURNISH THE ORDER NUMBER TO OWNER AND ENGINEER PRIOR TO ANY EXCAVATION. IT SHALL BE THE CONTRACTOR'S SOLE RESPONSIBILITY TO DIRECTLY CONTACT ANY OTHER UTILITY COMPANIES THAT ARE NOT MEMBERS OF BLUE STAKES. IT SHALL BE THE CONTRACTOR'S SOLE RESPONSIBILITY TO PROTECT ALL EXISTING UTILITIES SO THAT NO DAMAGE RESULTS TO THEM DURING THE PERFORMANCE OF THIS CONTRACT. [ANY REPAIRS NECESSARY TO DAMAGED UTILITIES SHALL BE PAID FOR BY THE CONTRACTOR.] THE CONTRACTOR SHALL COOPERATE WITH OTHER CONTRACTORS AND UTILITY COMPANIES INSTALLING NEW STRUCTURES, UTILITIES AND SERVICE FOR THE PROJECT.

2. CARE SHALL BE TAKEN IN ALL EXCAVATIONS DUE TO POSSIBLE EXISTENCE OF UNRECORDED UTILITY LINES. EXCAVATION REQUIRED PROXIMITY OF EXISTING UTILITY LINES SHALL BE DONE BY HAND. [THE CONTRACTOR SHALL REPAIR ANY DAMAGE TO EXISTING UTILITY LINES OR STRUCTURES INCURRED DURING CONSTRUCTION OPERATIONS AT CONTRACTOR'S EXPENSE.]

3. TRENCH BACKFILL MATERIAL AND COMPACTION TESTS SHALL BE CONDUCTED TAKEN PER APWA STANDARD SPECIFICATIONS (LATEST EDITION), SECTION 02221 - BACKFILLING TRENCHES, OR AS REQUIRED BY THE GEOTECHNICAL REPORT IF NATIVE MATERIALS ARE USED. NO NATIVE MATERIALS ARE ALLOWED IN THE PIPE ZONE. THE MAXIMUM LIFT FOR BACKFILLING EXCAVATIONS IS 8-INCHES.

4. THE CONTRACTOR SHALL BE RESPONSIBLE FOR REPAIRING ANY DAMAGE, CAUSED BY ANY CONDITION INCLUDING SETTLEMENT, TO EXISTING UTILITIES FROM WORK PERFORMED AT OR NEAR EXISTING UTILITIES. THE CONTRACTOR SHALL TAKE ALL MEASURES NECESSARY TO PROTECT ALL EXISTING PUBLIC AND PRIVATE ROADWAY AND UTILITY FACILITIES. DAMAGE TO EXISTING FACILITIES CAUSED BY THE CONTRACTOR SHALL BE REPAIRED BY THE CONTRACTOR AT THEIR EXPENSE TO THE SATISFACTION OF THE OWNER OF SAID FACILITIES.

5. ALL WATER LINE AND SEWER LINE INSTALLATION AND TESTING SHALL COMPLY WITH LOCAL GOVERNING AGENCY'S STANDARDS OR APWA STANDARDS AND SPECIFICATIONS.

6. ALL MANHOLES, HYDRANTS, VALVES, CLEANOUT BOXES, CATCH BASINS, METERS, AND SIMILAR STRUCTURES SHALL BE RAISED OR LOWERED TO FINAL GRADE PER APWA (LATEST EDITION) STANDARDS AND INSPECTOR REQUIREMENTS. CONCRETE COLLARS SHALL BE CONSTRUCTED ON ALL MANHOLES, CLEANOUT BOXES, CATCH BASINS, AND VALVES PER APWA STANDARDS. ALL MANHOLE, CATCH BASIN, OR CLEANOUT BOX CONNECTIONS SHALL BE MADE WITH THE PIPE CUT FLUSH WITH THE INSIDE OF THE BOX AND GROUTED OR SEALED, WITH A CONCRETE COLLAR ON THE EXTERIOR OF THE BOX SURROUNDING PIPE PROVIDING A COMPLETE SEAL.

7. THE CONTRACTOR SHALL NOT ALLOW ANY GROUNDWATER OR DEBRIS TO ENTER THE NEW OR EXISTING PIPES DURING CONSTRUCTION.

8. SILT AND DEBRIS SHALL BE CLEANED OUT OF ALL STORM DRAIN BOXES. CATCH BASINS SHALL BE MAINTAINED IN A CLEAN CONDITION AS NEEDED UNTIL AFTER THE FINAL BOND RELEASE INSPECTION.

9. THE CONTRACTOR SHALL CLEAN ASPHALT, TAR OR OTHER ADHESIVES OFF ALL MANHOLE LIDS AND INLET GRATES TO ALLOW ACCESS.

10. EACH TRENCH SHALL BE EXCAVATED FOR PIPE TO BE LAID TO THE ALIGNMENT AND GRADE AS REQUIRED. THE TRENCH WALL SHALL BE BRACED SO THAT WORKERS MAY WORK SAFELY AND EFFICIENTLY. ALL TRENCHES SHALL BE DRAINED SO THAT PIPE LAYING MAY TAKE PLACE IN DEWATERED CONDITIONS.

11. THE CONTRACTOR SHALL PROVIDE AND MAINTAIN AT ALL TIMES AMPLE MEANS AND DEVICES TO PROMPTLY REMOVE AND PROPERLY DISPOSE OF ALL WATER ENTERING THE TRENCH EXCAVATION.

12. UTAH STATE REGULATIONS ON THE SEPARATION OF DRINKING WATER AND SEWER LINES SHALL BE FOLLOWED. THESE ARE LISTED UNDER UAC R317-3-2.9.B TO UAC R309-550-7.

13. ALL DUCTILE IRON PIPE SHALL BE PRESSURE CLASS OR SPECIAL THICKNESS CLASS CONFORMING TO ANSI/AWWA C150/A21.50 & C151/A21.51 AND AWWA C600 WITH AN 8 MIL. POLYETHYLENE WRAP FOR BURIED INSTALLATIONS.

14. ALL DUCTILE IRON FITTINGS SHALL BE RATED FOR WORKING PRESSURES AS SPECIFIED ON THE DRAWINGS.

15. POLYVINYL CHLORIDE PIPE SHALL CONFORM TO AWWA C900 (12-INCH DIAMETER OR LESS) OR AWWA C905 (DIAMETER LARGER THAN 12-INCHES) WITH A DIMENSION RATIO (DR) OF 18 OR LESS AND SHALL COMFORM TO ASTM D2774 AND AWWA M23.

16. ALL GATE VALVES SHALL BE RESILIENT WEDGE GATE VALVES AND SHALL CONFORM TO AWWA C-509 OR C-515. GATE VALVES INSTALLED IN VAULTS SHALL BE FURNISHED WITH HANDWHEEL OPERATORS. VALVES INSTALLED IN DIRECT BURY APPLICATIONS SHALL BE FURNISHED WITH A TWO-INCH SQUARE OPERATING NUT AND SLIP TYPE, CAST IRON VALVE BOX.

17. ALL BUTTERFLY VALVES FOR STANDARD PRESSURE APPLICATIONS SHALL BE TIGHT-CLOSING RUBBER SEAT BUTTERFLY VALVES AND SHALL MEET THE REQUIREMENTS OF AWWA C-504 FOR CLASS 150 B VALVES AND RATED FOR WORKING PRESSURE OF 150 PSI. HIGH PRESSURE BUTTERFLY VALVES SHALL BE RATED FOR WORKING PRESSURES AS SPECIFIED ON THE DRAWINGS.

18. ALL BOLTS FOR DIRECT BURY FITTINGS SHALL BE COATED WITH FM GREASE, AND THE ENTIRE FITTING SHALL BE WRAPPED WITH AN 8 MIL. POLYETHYLENE PRIOR TO BACKFILLING.

19. THE CONTRACTOR SHALL INSTALL TRACER WIRE AND MAGNETIC LOCATING TAPE CONTINUOUSLY OVER ALL PIPE UNLESS OTHERWISE NOTED ON THE DRAWINGS.

20. ALL DRINKING WATER LINES, TANKS, WELLS, FITTINGS AND APPURTENANCES SHALL BE INSTALLED, TESTED, AND DISINFECTED PER R309-500 THROUGH 550 PUBLIC DRINKING WATER FACILITY DESIGN AND OPERATION RULES. ALL MATERIAL THAT MAY CONTACT DRINKING WATER, INCLUDING PIPES, GASKETS, LUBRICANTS, O-RINGS, SHALL BE CERTIFIED PER ANSI/NSF 61, CERTIFIED DRINKING WATER SYSTEM COMPONENTS - HEALTH EFFECTS. TO PERMIT FIELD VERIFICATION OF THIS COMPLIANCE, ALL SUCH COMPONENTS SHALL BE APPROPRIATELY STAMPED WITH THE NSF LOGO. FLUSHING AND DISINFECTION OF DRINKING WATER LINES, TANKS, WELLS, FITTINGS AND APPURTENANCES SHALL BE IN ACCORDANCE WITH AWWA STANDARD C651. PRESSURE AND LEAK TESTING SHALL COMPLY WITH AWWA C600.

21. ALL BURIED MECHANICAL JOINTS SHALL BE RESTRAINED

22. ALL OPEN ENDS OF PIPE SHALL BE EFFECTIVELY SEALED AT THE END OF THE DAY'S WORK AND PIPE SHALL NOT BE DROPPED INTO THE TRENCH.

23. PVC PIPE SHALL BE PRESSURE TESTED ACCORDING TO AWWA C605.

24. THE WATER LINE TO BE LAID WITHOUT HIGH POINTS OR LOW POINTS, EXCEPT WHERE SHOWN ON THE PLAN AND PROFILE SHEETS.

25. DRINKING WATER LINES TO BE INSTALLED WITH MINIMUM OF 48-INCHES OF COVER.

26. HIGH DENSITY POLYETHLENE PIPE (HDPE) SHALL CONFORM TO AWWA M55 AND ASTM D2774.

27. THE CONTRACTOR SHALL OBSERVE THE REQUIRED SEPARATION BETWEEN WATER AND SEWER PIPELINES PER UAC R317-3-2.

28. ALL ELBOWS, TEES, CROSSES, CAPPED ENDS, VALVES AND OTHER APPURTENANCES SHALL BE FULLY RESTRAINED USING THRUST BLOCKS AND RESTRAINED JOINTS OR OTHER ACCEPTED METHODS UNLESS OTHERWISE NOTED ON THE PROJECT DRAWINGS. THE CONTRACTOR SHALL NOTIFY ENGINEER IF A THRUST BLOCK CANNOT BE POURED FOR A FITTING.

29. THE ENGINEER SHALL PROVIDE AN ELECTRONIC FILE SHOWING PIPELINE ALIGNMENT IN COORDINATES TO USE IN PIPELINE STAKING.

30. THE CONTRACTOR SHALL COORDINATE ALL RESTORATION EFFORTS WITH THE OWNER AND AGENCIES WITH JURISDICTION.

31. THE CONTRACTOR SHALL COORDINATE THE LOCATION OF NEW "DRY UTILITIES" WITH THE APPROPRIATE UTILITY COMPANY, INCLUDING BUT NOT LIMITED TO: TELEPHONE AND INTERNET SERVICE, GAS SERVICE, CABLE, AND POWER.

32. ALL UNDERGROUND UTILITIES SHALL BE IN PLACE PRIOR TO THEINSTALLATION OF CURB, GUTTER, SIDEWALK AND STREET PAVING.

CONCRETE NOTES

1. UNLESS OTHERWISE NOTED, ALL ON-GRADE CONCRETE SHALL BE PLACED ON A MINIMUM 6-INCH GRAVEL BASE OVER A WELL COMPACTED (95% DENSITY PER ASTM D-1557) SUB GRADE.

2. REFER TO THE GENERAL STRUCTURAL NOTES FOR ADDITIONAL CONCRETE NOTES.

TRAFFIC CONTROL AND SAFETY NOTES

1. THE CONTRACTOR SHALL PROVIDE ALL FLAGGING, BARRICADES, AND TRAFFIC CONTROL NECESSARY FOR ENSURE SAFETY TO THE GENERAL PUBLIC DURING CONSTRUCTION. A TRAFFIC CONTROL PLAN SHALL BE DEVELOPED BY THE CONTRACTOR AND SUBMITTED TO THE AGENCIES WITH JURISDICTION.

2. TRAFFIC CONTROL, BARRICADES, DETOURING, AND STRIPING SHALL CONFORM TO THE CURRENT MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES (M.U.T.C.D.).

3. NO STREET SHALL BE CLOSED TO TRAFFIC WITHOUT WRITTEN PERMISSION FROM THE APPROPRIATE AGENCY, EXCEPT WHEN DIRECTED BY LAW ENFORCEMENT OR FIRE OFFICIALS.

4. THE CONTRACTOR SHALL MAKE EVERY EFFORT TO PROVIDE SMOOTH TRAFFIC FLOW AND SAFETY. ACCESS SHALL BE MAINTAINED FOR ALL PROPERTIES ADJACENT TO THE WORK.

5. DETOURING OPERATIONS FOR A PERIOD OF SIX CONSECUTIVE CALENDAR DAYS, OR MORE, SHALL REQUIRE THE INSTALLATION OF TEMPORARY STREET STRIPING AND REMOVAL OF INTERFERING STRIPING BY SANDBLASTING. THE DETOURING STRIPING PLAN OR CONSTRUCTION TRAFFIC CONTROL PLAN SHALL BE SUBMITTED TO THE CITY TRAFFIC ENGINEER OR LOCAL JURISDICTION FOR REVIEW AND APPROVAL.

6. ALL TRAFFIC CONTROL DEVICES (TCDS) SHALL BE RESTORED TO THEIR ORIGINAL CONDITION AT THE END OF THE WORK TO THE SATISFACTION OF THE CITY TRAFFIC ENGINEER OR LOCAL JURISDICTION OF AUTHORITY.

7. TCDS SHALL REMAIN VISIBLE AND OPERATIONAL AT ALL TIMES.

8. ALL PERMANENT TRAFFIC CONTROL DEVICES (TCDS) CALLED FOR HEREIN SHALL BE IN PLACE AND IN THEIR FINAL POSITION PRIOR TO ALLOWING ANY PUBLIC TRAFFIC ONTO THE PORTIONS OF THE ROAD(S) BEING IMPROVED HEREUNDER, REGARDLESS OF THE STATUS OF COMPLETION OF PAVING OR OTHER OFF-SITE IMPROVEMENTS CALLED FOR BY THESE PLANS.

9. THE CONTRACTOR SHALL PROVIDE BARRICADES, SIGNS, FLASHERS, OTHER EQUIPMENT AND FLAG PERSONS NECESSARY TO ENSURE THE SAFETY OF WORKERS AND VISITORS.

GRADING AND DRAINAGE NOTES

1. SITE GRADING SHALL BE PERFORMED IN ACCORDANCE WITH THESE PLANS AND SPECIFICATIONS AND THE RECOMMENDATIONS SET FORTH IN THE GEOTECHNICAL REPORT AND ALL RELATED ADDENDUMS.

2. THE CONTRACTOR SHALL STRIP AND CLEAR THE TOPSOIL, MAJOR ROOTS AND ORGANIC MATERIAL FROM ALL PROPOSED BUILDING, PIPELINES, AND PAVEMENT AREAS PRIOR TO SITE GRADING. (TOPSOIL MAY BE STOCKPILED FOR LATER USE IN LANDSCAPED AREAS.)

3. THE CONTRACTOR SHALL REMOVE ALL ORGANIC MATERIAL AND OTHER DELETERIOUS MATERIALS PRIOR TO PLACING GRADING FILL OR BASE COURSE. THE AREA SHALL BE PROOF-ROLLED TO IDENTIFY ANY SOFT AREAS. WHERE SOFT AREAS ARE ENCOUNTERED, THE CONTRACTOR SHALL REMOVE IT AND REPLACE WITH COMPACTED FILL.

4. ALL DEBRIS PILES AND BERMS SHALL BE REMOVED AND HAULED AWAY FROM THE SITE OR USED AS GENERAL FILL IN LANDSCAPED AREAS.

5. THE CONTRACTOR SHALL CONSTRUCT THE BUILDING PAD ACCORDING TO THESE DESIGN PLANS AS PART OF THE SITE GRADING CONTRACT.

6. THE CONTRACTOR SHALL BE RESPONSIBLE FOR DAMAGE AND DEBRIS ON ADJACENT STREETS WHEN EQUIPMENT IS TRAVELING ON THOSE STREETS.

7. IT SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR TO PERFORM ALL NECESSARY CUTS AND FILLS WITHIN THE LIMITS OF THIS PROJECT AND THE RELATED OFF-SITE WORK TO GENERATE THE DESIRED SUBGRADE, FINISH GRADES, AND SLOPES SHOWN.

8. THE CONTRACTOR IS WARNED THAT AN EARTHWORK BALANCE WAS NOT NECESSARILY THE INTENT OF THIS PROJECT. ANY ADDITIONAL MATERIAL REQUIRED OR LEFTOVER MATERIAL FOLLOWING EARTHWORK OPERATIONS SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR AND CAN BE UTILIZED ONSITE AT LOCATIONS COORDINATED WITH OWNER.

9. ALL CUT AND FILL SLOPES SHALL BE PROTECTED UNTIL EFFECTIVE EROSION CONTROL HAS BEEN ESTABLISHED.

10. THE USE OF POTABLE WATER WITHOUT A SPECIAL PERMIT FOR BUILDING OR CONSTRUCTION PURPOSES INCLUDING CONSOLIDATION OF BACKFILL OR DUST CONTROL IS PROHIBITED. THE CONTRACTOR SHALL OBTAIN ALL NECESSARY PERMITS FOR CONSTRUCTION WATER FROM THE GOVERNING AGENCY.

11. THE CONTRACTOR SHALL MAINTAIN THE STREETS, SIDEWALKS, AND ALL OTHER PUBLIC RIGHTS-OF-WAY IN A CLEAN, SAFE AND USABLE CONDITION. ALL SPILLS OF SOIL, ROCK OR CONSTRUCTION DEBRIS SHALL BE PROMPTLY REMOVED AND DISPOSED OF IN A LAWFUL MANNER FROM THE PUBLICLY-OWNED PROPERTY DURING CONSTRUCTION AND UPON COMPLETION OF THE PROJECT. ALL ADJACENT PROPERTY, PRIVATE OR PUBLIC, SHALL BE MAINTAINED IN A CLEAN, SAFE, AND USABLE CONDITION.

12. TOPSOIL SHALL BE REPLACED AND GRADED PRIOR TO REVEGETATION. THE CONTRACTOR SHALL BE RESPONSIBLE FOR DETERMINING THE DEPTH OF EXISTING TOPSOIL AND REPLACING IT TO THE EXISTING TOPSOIL DEPTH. DISTURBED AREAS SHALL BE RESEEDED USING A SEED MIX SPECIFIED ON THE EROSION CONTROL PLAN AND DETAILS.

13. IMPROVEMENT ELEVATION LABELS AND ELEVATION CONTOURS REFERENCE FINISHED ELEVATIONS. REFER TO THE HABBREVIATIONS AND SYMBOL LEGEND INCLUDED HEREIN.

EROSION CONTROL NOTES

1. PER UDEQ, STORM WATER GENERAL PERMIT FOR CONSTRUCTION ACTIVITIES GENERAL PERMIT NO. UTR 300000, CONSTRUCTION ACTIVITY INCLUDING CLEARING, GRADING, EXCAVATION, AND DEMOLITION THAT DISTURBS ONE OR MORE ACRES OF LAND SHALL REQUIRE INCLUSION IN THE GENERAL PERMIT AND SHALL COMPLY WITH THE REQUIREMENTS THEREIN.

2. THE TOTAL PROJECT AREA OF DISTURBANCE IS GREATER THAN ONE ACRE; THEREFORE, AN UPDES STORM WATER PERMIT IS REQUIRED.

3. THE CONTRACTOR SHALL OBTAIN A STORM WATER PERMIT FOR THIS PROJECT, IF APPLICABLE, AND MAINTAIN A STORM WATER POLLUTION PREVENTION PLAN (SWPPP) ON SITE DURING ALL PHASES OF CONSTRUCTION.

4. THE PRIME CONTRACTOR SHALL ASSUME FULL RESPONSIBILITY FOR COMPLIANCE WITH THE GENERAL PERMIT.

5. THE EROSION CONTROL PLAN HEREIN IS FOR PERMITTING PURPOSES ONLY. THE CONTRACTOR SHALL REVISE THE EROSION CONTROL PLAN TO FIT SPECIFIC SITE CONDITIONS AS REQUIRED TO MEET THE REQUIREMENTS AND CONDITIONS OF THE PERMIT.

6. THE CONTRACTOR SHALL BE RESPONSIBLE FOR COMPLIANCE WITH THE PERMIT THROUGHOUT CONSTRUCTION AND UNTIL THE NOTICE OF TERMINATION (NOT) IS ISSUED BY UDEQ. THE CONTRACTOR SHALL BE FAMILIAR WITH ALL PERMIT REQUIREMENTS.

7. THE CONTRACTOR SHALL MAINTAIN DUST CONTROL WITH WATER AND/OR DUST PALLIATIVE AT ALL TIMES. THE CONTRACTOR SHALL PROVIDE SUFFICIENT LABOR, EQUIPMENT, AND MATERIALS ONSITE TO MAINTAIN DUST CONTROL WHEN CONDITIONS REQUIRE.

SPECIAL INSPECTION AS PER IBC

1. REFER TO THE STRUCTURAL SPECIAL INSPECTION SHEET FOR SPECIAL INSPECTIONS REQUIRED BY THE INTERNATIONAL BUILDING CODE.

DESIGN CRITERIA

1. REFER TO THE GENERAL STRUCTURAL NOTES SHEET FOR PROJECT DESIGN CRITERIA.

ENSIGN
THE STANDARD IN ENGINEERING

SANDY
45 W. 10000 S., Suite 500
Sandy, UT 84070
Phone: 801.255.0529

LAYTON
Phone: 801.547.1100

TOOELE
Phone: 435.843.3590

CEDAR CITY
Phone: 435.865.1453

RICHFIELD
Phone: 435.896.2983

WWW.ENSIGNENG.COM

FOR:
EDEN VALLEY OPPORTUNITY, LLC
3718 NORTH WOLF CREEK DRIVE
EDEN, UT 84310

CONTACT:
JOHN LEWIS
PHONE: 801.897.4880

COBABE RANCH 0.5 MG WATER TANK
EDEN CROSSING (PWS NO.29132)
COBABE RANCH BABE RANCH
EDEN, UTAH

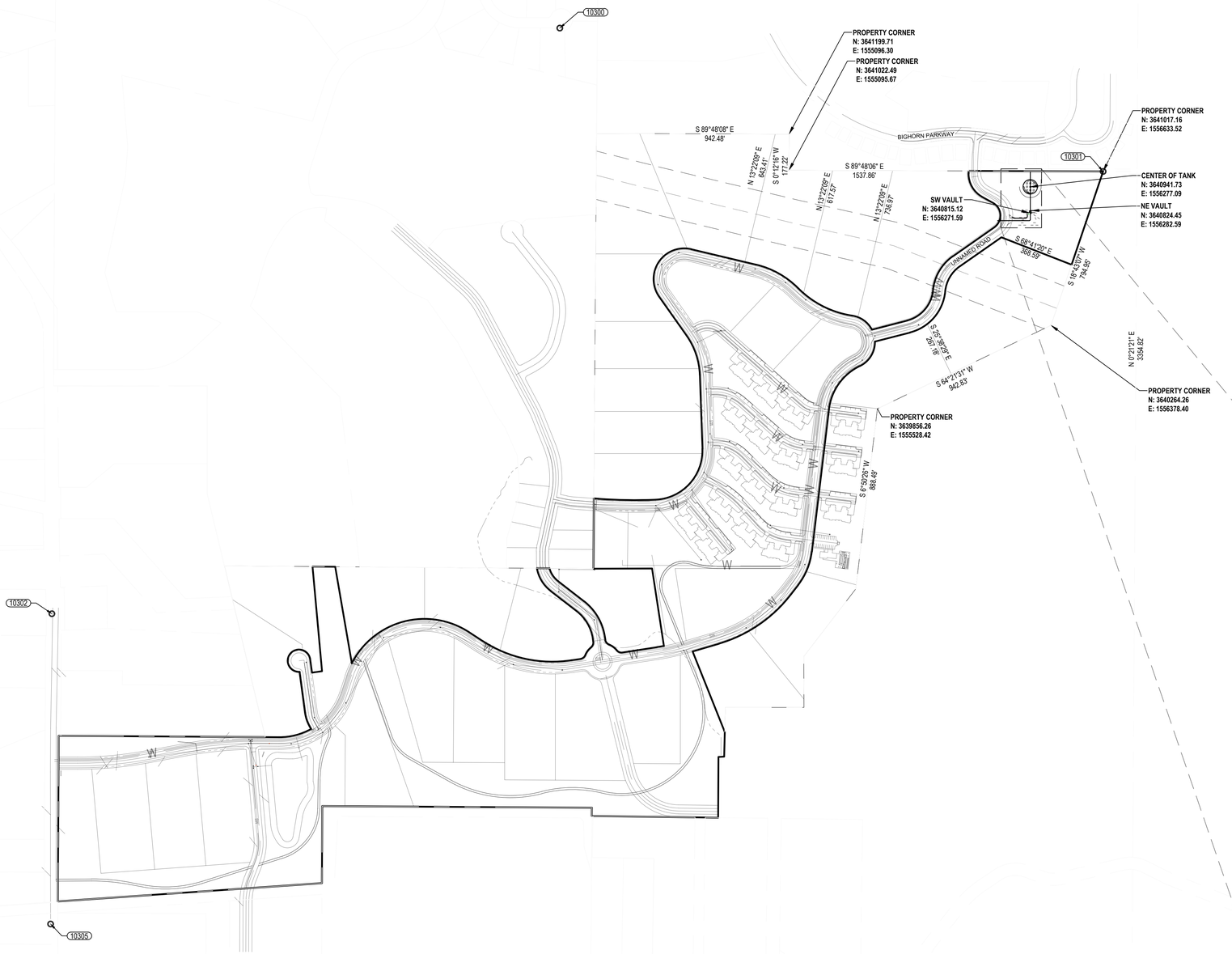
PROFESSIONAL ENGINEER
7885569-2202
ROBERT J. ROUSSELLE
EXP. 3/31/2026
STATE OF UTAH

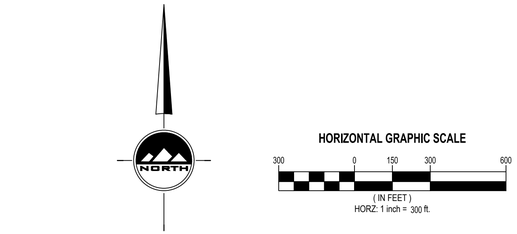
FOR CONSTRUCTION 7/9/2025

GENERAL NOTES

PROJECT NUMBER	PRINT DATE
14018A	2025-07-09
PROJECT MANAGER	DESIGNED BY
R. ROUSSELLE	C. DUNKEL

C-002





HORIZONTAL GRAPHIC SCALE

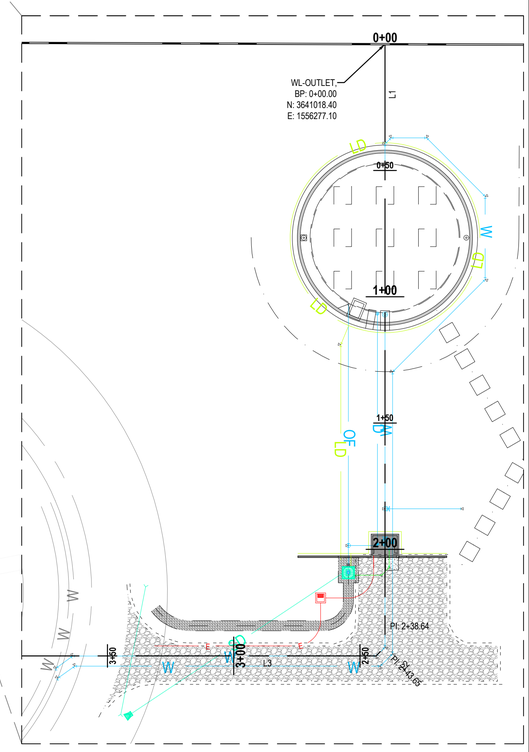
300 0 150 300 600

(IN FEET)

HORZ: 1 inch = 300 ft.

HORIZONTAL CONTROL POINT TABLE				
POINT #	DESCRIPTION	ELEVATION	NORTHING	EASTING
10300	CP MAGNAIL	5219.47	3641718.47	1553973.78
10301	CP GE CAP	5321.77	3641016.94	1556633.55
10302	CP MAGNAIL	5005.48	3638852.91	1551487.45
10305	CP MAGNAIL	4980.08	3637334.77	1551481.04

LINE TABLE: ALIGNMENTS				
LINE #	LENGTH	DIRECTION	START POINT	END POINT
L1	238.64	S0° 00' 04"W	(1556277.0974,3641018.3955)	(1556277.0923,3640779.7528)
L2	5.01	S45° 04' 18"W	(1556277.0923,3640779.7528)	(1556273.5443,3640776.2136)
L3	156.35	N90° 00' 00"W	(1556273.5443,3640776.2136)	(1556117.1984,3640776.2136)



811 Know what's below. Call before you dig.

CALL BLUESTAKES @ 811 AT LEAST 48 HOURS PRIOR TO THE COMMENCEMENT OF ANY CONSTRUCTION.

BENCHMARK

CONTROL POINT GE CAP
NEAR EAST QUARTER CORNER OF NORTHEAST QUARTER CORNER OF SECTION 26,TOWNSHIP 7 NORTH, RANGE 1 EAST SALT LAKE PRINCIPAL MERIDIAN

ELEV = 5321.77'

ENSIGN
THE STANDARD IN ENGINEERING

SANDY
45 W. 10000 S., Suite 500
Sandy, UT 84070
Phone: 801.255.0529

LAYTON
Phone: 801.547.1100

TOOELE
Phone: 435.843.3590

CEDAR CITY
Phone: 435.865.1453

RICHFIELD
Phone: 435.896.2983

WWW.ENSIGNENG.COM

FOR:
EDEN VALLEY OPPORTUNITY, LLC
3718 NORTH WOLF CREEK DRIVE
EDEN, UT 84310

CONTACT:
JOHN LEWIS
PHONE: 801.897.4880

COBABE RANCH 0.5 MG WATER TANK
EDEN CROSSING (PWS NO.29132)
COBABE RANCH
EDEN, UTAH

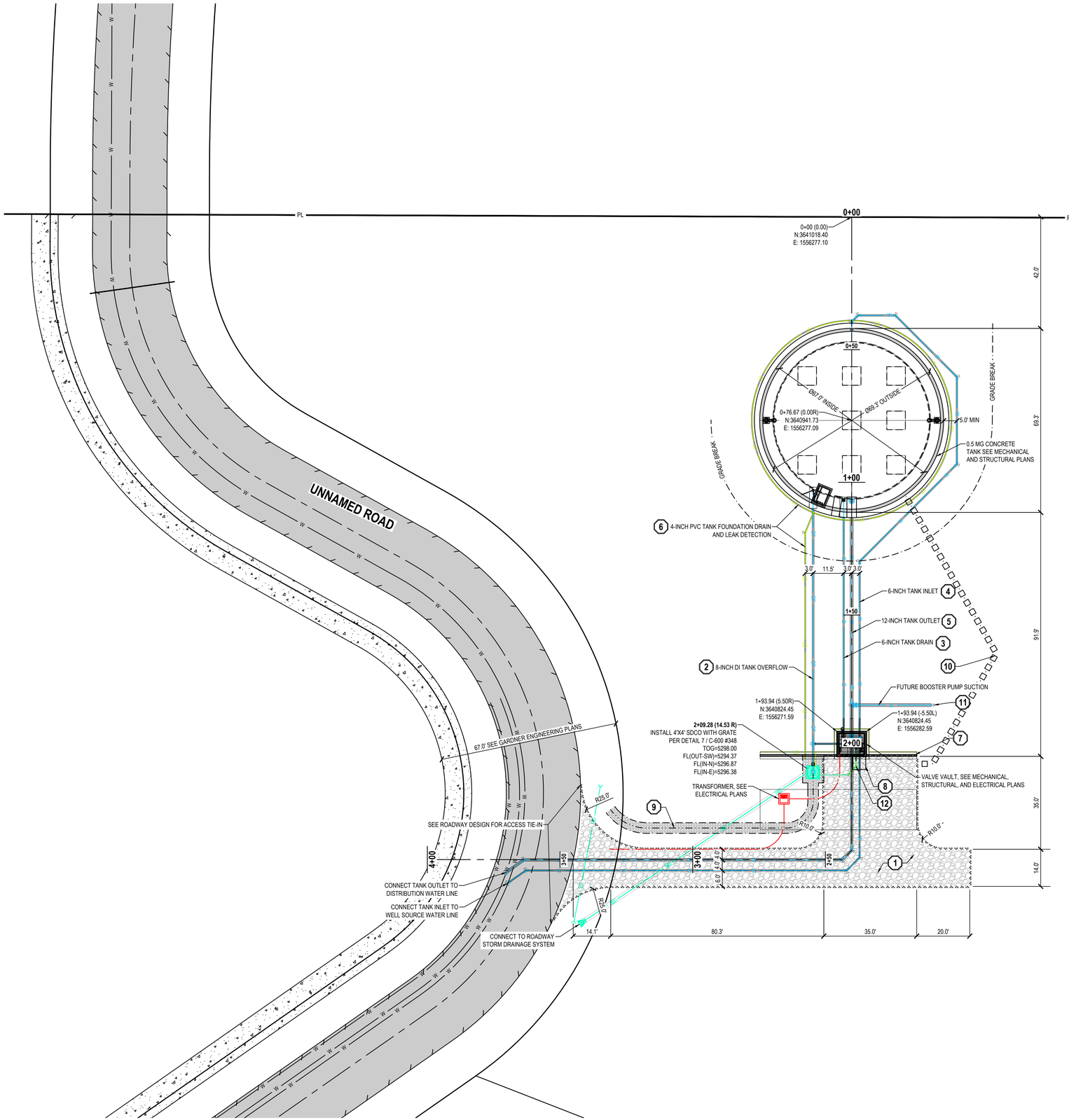
PROFESSIONAL ENGINEER
7885569-2202
ROBERT J. ROUSSELLE
EXP 9/30/2026
STATE OF UTAH

FOR CONSTRUCTION 7/9/2025

HORIZONTAL CONTROL PLAN

PROJECT NUMBER	PRINT DATE
14018A	2025-07-09
PROJECT MANAGER	DESIGNED BY
R. ROUSSELLE	C. DUNKEL

C-100



HORIZONTAL GRAPHIC SCALE

20 0 10 20 40

(IN FEET)

HORZ: 1 inch = 20 ft.

GENERAL NOTES

1. ALL WORK TO COMPLY WITH THE GOVERNING AGENCY'S STANDARDS AND SPECIFICATIONS.
2. ALL IMPROVEMENTS MUST COMPLY WITH ADA STANDARDS AND RECOMMENDATIONS.
3. SEE LANDSCAPE/ARCHITECTURAL PLANS FOR CONCRETE MATERIAL, COLOR, FINISH, AND SCORE PATTERNS THROUGHOUT SITE.
4. ALL SURFACE IMPROVEMENTS DISTURBED BY CONSTRUCTION SHALL BE RESTORED OR REPLACED, INCLUDING TREES AND DECORATIVE SHRUBS, SOD, FENCES, WALLS AND STRUCTURES, WHETHER OR NOT THEY ARE SPECIFICALLY SHOWN ON THE CONTRACT DOCUMENTS.
5. NOTIFY ENGINEER OF ANY DISCREPANCIES IN DESIGN OR STAKING BEFORE PLACING CONCRETE, ASPHALT, UTILITIES, OR STRUCTURES.
6. THE CONTRACTOR IS TO PROTECT AND PRESERVE ALL EXISTING IMPROVEMENTS, UTILITIES, AND SIGNS, ETC. UNLESS OTHERWISE NOTED ON THESE PLANS.
7. EXISTING UNDERGROUND UTILITIES AND IMPROVEMENTS ARE SHOWN IN THEIR APPROXIMATE LOCATIONS BASED UPON RECORD INFORMATION AVAILABLE AT THE TIME OF PREPARATION OF THESE PLANS. LOCATIONS MAY NOT HAVE BEEN VERIFIED IN THE FIELD AND NO GUARANTEE IS MADE AS TO THE ACCURACY OR COMPLETENESS OF THE INFORMATION SHOWN. IT SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR TO DETERMINE THE EXISTENCE AND LOCATION OF THE UTILITIES SHOWN ON THESE PLANS OR INDICATED IN THE FIELD BY LOCATING SERVICES. ANY ADDITIONAL COSTS INCURRED AS A RESULT OF THE CONTRACTOR'S FAILURE TO VERIFY THE LOCATIONS OF EXISTING UTILITIES PRIOR TO THE BEGINNING OF CONSTRUCTION IN THEIR VICINITY SHALL BE BORNE BY THE CONTRACTOR AND ASSUMED INCLUDED IN THE CONTRACT. THE CONTRACTOR IS TO VERIFY ALL CONNECTION POINTS WITH THE EXISTING UTILITIES. THE CONTRACTOR IS RESPONSIBLE FOR ANY DAMAGE CAUSED TO THE EXISTING UTILITIES AND UTILITY STRUCTURES THAT ARE TO REMAIN. IF CONFLICTS WITH EXISTING UTILITIES OCCUR, THE CONTRACTOR SHALL NOTIFY THE ENGINEER PRIOR TO CONSTRUCTION TO DETERMINE IF ANY FIELD ADJUSTMENTS SHOULD BE MADE.
8. ALL SANITARY SEWER INFRASTRUCTURE TO BE INSTALLED PER GOVERNING AGENCY STANDARD PLANS AND SPECIFICATIONS.
9. ALL WATER INFRASTRUCTURE TO BE INSTALLED PER GOVERNING AGENCY OR APWA STANDARD PLANS AND SPECIFICATIONS.
6. DEFLECT OR LOOP ALL WATERLINES TO AVOID CONFLICTS WITH OTHER UTILITIES PER GOVERNING AGENCY'S STANDARDS AND SPECIFICATIONS.
7. PROJECT SHALL COMPLY WITH ALL UTAH DIVISION OF DRINKING WATER RULES AND REGULATIONS INCLUDING, BUT NOT LIMITED TO, THOSE PERTAINING TO BACKFLOW PROTECTION AND CROSS CONNECTION PREVENTION.
8. THE CONTRACTOR IS TO COORDINATE ALL UTILITIES WITH MECHANICAL/PLUMBING PLANS.
9. THE CONTRACTOR SHALL ADJUST TO GRADE ALL EXISTING UTILITIES AS NEEDED PER LOCAL GOVERNING AGENCY'S STANDARDS AND SPECIFICATIONS.
10. THE CONTRACTOR IS TO PROTECT AND PRESERVE ALL EXISTING IMPROVEMENTS, UTILITIES, AND SIGNS, ETC. UNLESS OTHERWISE NOTED ON THESE PLANS.

SCOPE OF WORK:

PROVIDE. INSTALL AND/OR CONSTRUCT THE FOLLOWING PER THE SPECIFICATIONS GIVEN OR REFERENCED, THE DETAILS NOTED, AND/OR AS SHOWN ON THE CONSTRUCTION DRAWINGS:

1. GRAVEL ROAD/PARKING SECTION PER DETAIL 3 ON SHEET C-501.
2. 8" DUCTILE IRON TANK OVERFLOW. SEE C-303 AND MECHANICAL DRAWINGS FOR MORE INFORMATION. TRENCHING PER 3 / C-600.
3. 6" DUCTILE IRON TANK DRAIN. SEE C-302 AND MECHANICAL DRAWINGS FOR MORE INFORMATION. TRENCHING PER 3 / C-600.
4. 6" DUCTILE IRON TANK INLET. SEE C-301 AND MECHANICAL DRAWINGS FOR MORE INFORMATION. TRENCHING PER 3 / C-600.
5. 12" DUCTILE IRON TANK OUTLET. SEE C-300 AND MECHANICAL DRAWINGS FOR MORE INFORMATION. TRENCHING PER 3 / C-600.
6. 4" SCH 80 PVC TANK LEAK DETECTION AND FOUNDATION DRAIN. SEE C-304 AND MECHANICAL DRAWINGS FOR MORE INFORMATION. TRENCHING PER 3 / C-600 AND 6 / M-401.
7. RETAINING WALL PER DETAIL 1 / C-602.
8. CONCRETE APRON PER DETAIL 4 / C-600
9. DRAINAGE FLOW LINE RIPRAP PER DETAIL 2 / C-600.
10. OVERLAPING TIMBER STEPS PER DETAIL 1 / C-601.
11. CAP END AND INSTALL THRUST BLOCK. MARK END WITH BLUE CARSONITE POST
12. FLOOR DRAIN GRAVITY CLEANOUT PER DETAIL 8 / C-600.

811 Know what's below. Call before you dig.

CALL BLUESTAKES @ 811 AT LEAST 48 HOURS PRIOR TO THE COMMENCEMENT OF ANY CONSTRUCTION.

BENCHMARK

CONTROL POINT GE CAP
NEAR EAST QUARTER CORNER OF NORTHEAST QUARTER CORNER OF SECTION 26,TOWNSHIP 7 NORTH, RANGE 1 EAST SALT LAKE PRINCIPAL MERIDIAN

ELEV = 5321.77'

ENSIGN
THE STANDARD IN ENGINEERING

SANDY
45 W. 10000 S., Suite 500
Sandy, UT 84070
Phone: 801.255.0529

LAYTON
Phone: 801.547.1100

TOOELE
Phone: 435.843.3590

CEDAR CITY
Phone: 435.865.1453

RICHFIELD
Phone: 435.896.2983

WWW.ENSIGNENG.COM

FOR:
EDEN VALLEY OPPORTUNITY, LLC
3718 NORTH WOLF CREEK DRIVE
EDEN, UT 84310

CONTACT:
JOHN LEWIS
PHONE: 801.897.4880

COBABE RANCH 0.5 MG WATER TANK
EDEN CROSSING (PWS NO.29132)

COBABE RANCH
EDEN, UTAH

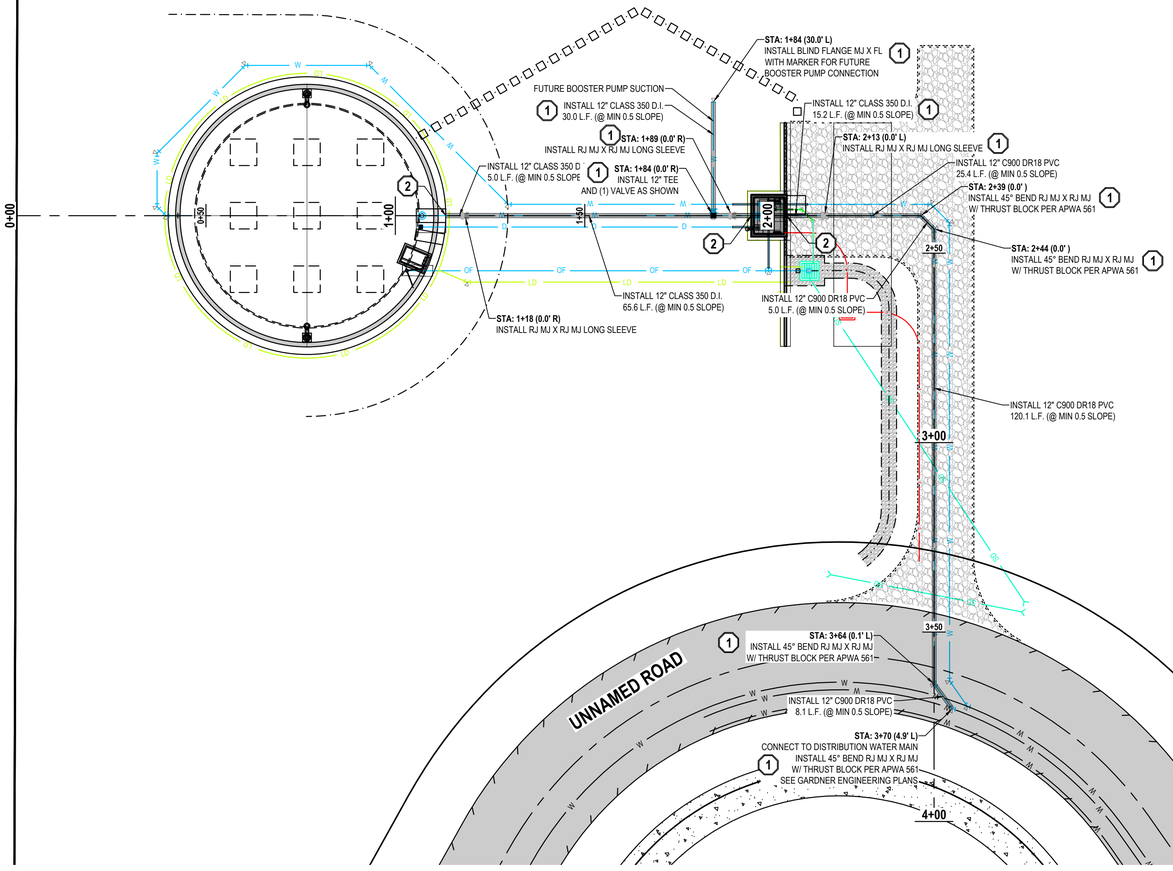
PROFESSIONAL ENGINEER
7885569-2202
ROBERT J. ROUSSELLE
EXP.9/31/2027
STATE OF UTAH

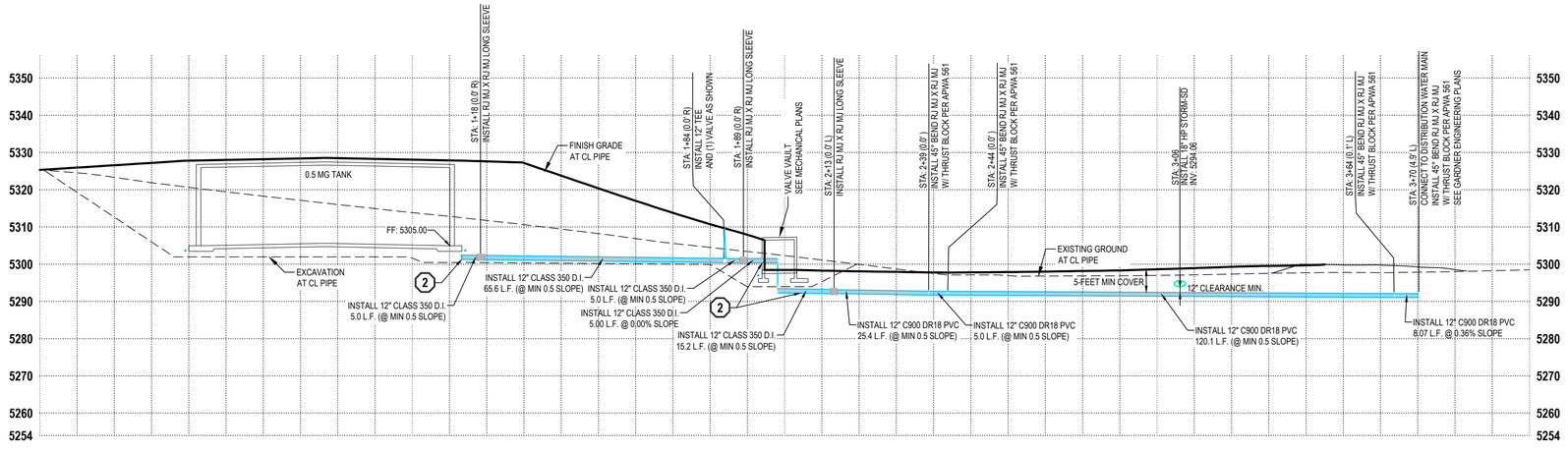
FOR CONSTRUCTION 7/9/2025

SITE AND UTILITY PLAN

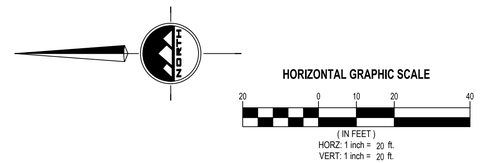
PROJECT NUMBER	PRINT DATE
14018A	2025-07-09
PROJECT MANAGER	DESIGNED BY
R. ROUSSELLE	C. DUNKEL

C-200





12-INCH TANK OUTLET PROFILE



GENERAL NOTES

1. ALL WORK TO COMPLY WITH THE GOVERNING AGENCY'S STANDARDS AND SPECIFICATIONS.
2. ALL IMPROVEMENTS MUST COMPLY WITH ADA STANDARDS AND RECOMMENDATIONS.
3. SEE LANDSCAPE/ARCHITECTURAL PLANS FOR CONCRETE MATERIAL, COLOR, FINISH, AND SCORE PATTERNS THROUGHOUT SITE.
4. ALL SURFACE IMPROVEMENTS DISTURBED BY CONSTRUCTION SHALL BE RESTORED OR REPLACED, INCLUDING TREES AND DECORATIVE SHRUBS, SOD, FENCES, WALLS AND STRUCTURES, WHETHER OR NOT THEY ARE SPECIFICALLY SHOWN ON THE CONTRACT DOCUMENTS.
5. NOTIFY ENGINEER OF ANY DISCREPANCIES IN DESIGN OR STAKING BEFORE PLACING CONCRETE, ASPHALT, UTILITIES, OR STRUCTURES.
6. THE CONTRACTOR IS TO PROTECT AND PRESERVE ALL EXISTING IMPROVEMENTS, UTILITIES, AND SIGNS, ETC. UNLESS OTHERWISE NOTED ON THESE PLANS.
7. EXISTING UNDERGROUND UTILITIES AND IMPROVEMENTS ARE SHOWN IN THEIR APPROXIMATE LOCATIONS BASED UPON RECORD INFORMATION AVAILABLE AT THE TIME OF PREPARATION OF THESE PLANS. LOCATIONS MAY NOT HAVE BEEN VERIFIED IN THE FIELD AND NO GUARANTEE IS MADE AS TO THE ACCURACY OR COMPLETENESS OF THE INFORMATION SHOWN. IT SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR TO DETERMINE THE EXISTENCE AND LOCATION OF THE UTILITIES SHOWN ON THESE PLANS OR INDICATED IN THE FIELD BY LOCATING SERVICES. ANY ADDITIONAL COSTS INCURRED AS A RESULT OF THE CONTRACTOR'S FAILURE TO VERIFY THE LOCATIONS OF EXISTING UTILITIES PRIOR TO THE BEGINNING OF CONSTRUCTION IN THEIR VICINITY SHALL BE BORNE BY THE CONTRACTOR AND ASSUMED INCLUDED IN THE CONTRACT. THE CONTRACTOR IS TO VERIFY ALL CONNECTION POINTS WITH THE EXISTING UTILITIES. THE CONTRACTOR IS RESPONSIBLE FOR ANY DAMAGE CAUSED TO THE EXISTING UTILITIES AND UTILITY STRUCTURES THAT ARE TO REMAIN. IF CONFLICTS WITH EXISTING UTILITIES OCCUR, THE CONTRACTOR SHALL NOTIFY THE ENGINEER PRIOR TO CONSTRUCTION TO DETERMINE IF ANY FIELD ADJUSTMENTS SHOULD BE MADE.
8. ALL SANITARY SEWER INFRASTRUCTURE TO BE INSTALLED PER GOVERNING AGENCY STANDARD PLANS AND SPECIFICATIONS.
9. ALL WATER INFRASTRUCTURE TO BE INSTALLED PER GOVERNING AGENCY OR APWA STANDARD PLANS AND SPECIFICATIONS.
6. DEFLECT OR LOOP ALL WATERLINES TO AVOID CONFLICTS WITH OTHER UTILITIES PER GOVERNING AGENCY'S STANDARDS AND SPECIFICATIONS.
7. PROJECT SHALL COMPLY WITH ALL UTAH DIVISION OF DRINKING WATER RULES AND REGULATIONS INCLUDING, BUT NOT LIMITED TO, THOSE PERTAINING TO BACKFLOW PROTECTION AND CROSS CONNECTION PREVENTION.
8. THE CONTRACTOR IS TO COORDINATE ALL UTILITIES WITH MECHANICAL/PLUMBING PLANS.
9. THE CONTRACTOR SHALL ADJUST TO GRADE ALL EXISTING UTILITIES AS NEEDED PER LOCAL GOVERNING AGENCY'S STANDARDS AND SPECIFICATIONS.
10. THE CONTRACTOR IS TO PROTECT AND PRESERVE ALL EXISTING IMPROVEMENTS, UTILITIES, AND SIGNS, ETC. UNLESS OTHERWISE NOTED ON THESE PLANS.

SCOPE OF WORK:

PROVIDE, INSTALL AND/OR CONSTRUCT THE FOLLOWING PER THE SPECIFICATIONS GIVEN OR REFERENCED, THE DETAILS NOTED, AND/OR AS SHOWN ON THE CONSTRUCTION DRAWINGS:

1. ALL BURIED DIP SHALL HAVE "TR FLEX" RESTRAINED JOINTS OR EQUAL.
   ALL MJ FITTINGS SHALL HAVE RESTRAINED JOINTS, "MEGA LUG" OR EQUAL.
2. SEE MECHANICAL DRAWINGS FOR CONTINUATION.
3. FLARED END SECTION PER DETAIL ON 6 ON SHEET C-600

811 Know what's below. Call before you dig.

CALL BLUESTAKES @ 811 AT LEAST 48 HOURS PRIOR TO THE COMMENCEMENT OF ANY CONSTRUCTION.

BENCHMARK

CONTROL POINT GE CAP
NEAR EAST QUARTER CORNER OF NORTHEAST QUARTER CORNER OF SECTION 28,TOWNSHIP 7 NORTH, RANGE 1 EAST SALT LAKE PRINCIPAL MERIDIAN

ELEV = 5321.77'

ENSIGN
THE STANDARD IN ENGINEERING

SANDY
45 W. 10000 S., Suite 500
Sandy, UT 84070
Phone: 801.255.0529

LAYTON
Phone: 801.547.1100

TOOELE
Phone: 435.843.3590

CEDAR CITY
Phone: 435.865.1453

RICHFIELD
Phone: 435.896.2983

WWW.ENSIGNENG.COM

FOR:
EDEN VALLEY OPPORTUNITY, LLC
3718 NORTH WOLF CREEK DRIVE
EDEN, UT 84310

CONTACT:
JOHN LEWIS
PHONE: 801.897.4880

COBABE RANCH 0.5 MG WATER TANK
EDEN CROSSING (PWS NO.29132)
COBABE RANCH
EDEN, UTAH

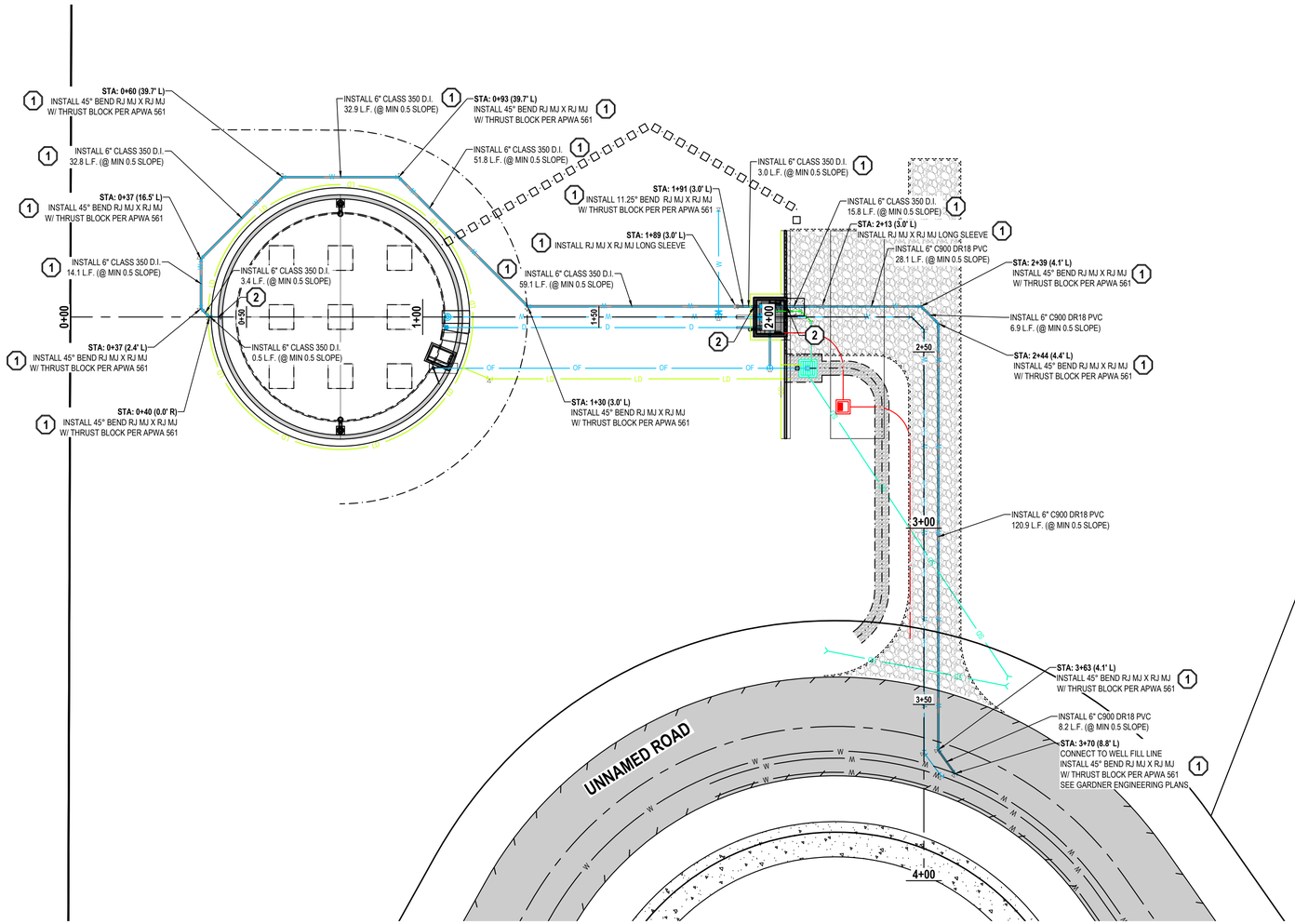
PROFESSIONAL ENGINEER 7885569-2202 ROBERT J. ROUSSELLE EXP 6/30/2027 07-09-2025 STATE OF UTAH

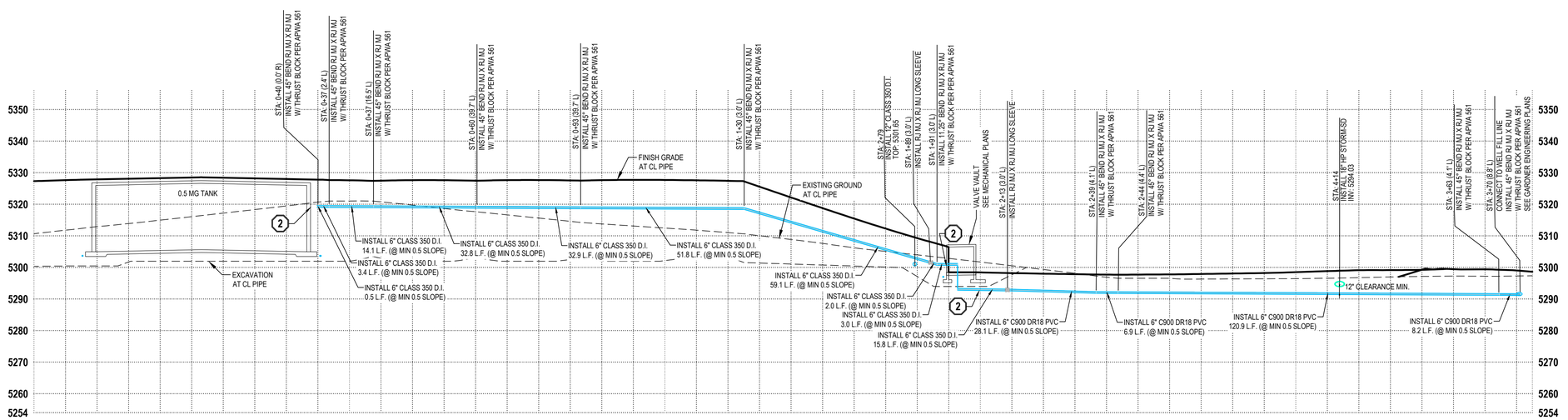
FOR CONSTRUCTION 7/9/2025

PLAN AND PROFILE
TANK OUTLET

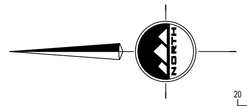
PROJECT NUMBER	PRINT DATE
14018A	2025-07-09
PROJECT MANAGER	DESIGNED BY
R. ROUSSELLE	C. DUNKEL

C-300





8-INCH INLET PROFILE



HORIZONTAL GRAPHIC SCALE

20 0 10 20 40

(IN FEET)

HORZ: 1 inch = 20 ft.
VERT: 1 inch = 20 ft.

GENERAL NOTES

1. ALL WORK TO COMPLY WITH THE GOVERNING AGENCY'S STANDARDS AND SPECIFICATIONS.
2. ALL IMPROVEMENTS MUST COMPLY WITH ADA STANDARDS AND RECOMMENDATIONS.
3. SEE LANDSCAPE/ARCHITECTURAL PLANS FOR CONCRETE MATERIAL, COLOR, FINISH, AND SCORE PATTERNS THROUGHOUT SITE.
4. ALL SURFACE IMPROVEMENTS DISTURBED BY CONSTRUCTION SHALL BE RESTORED OR REPLACED, INCLUDING TREES AND DECORATIVE SHRUBS, SOD, FENCES, WALLS AND STRUCTURES, WHETHER OR NOT THEY ARE SPECIFICALLY SHOWN ON THE CONTRACT DOCUMENTS.
5. NOTIFY ENGINEER OF ANY DISCREPANCIES IN DESIGN OR STAKING BEFORE PLACING CONCRETE, ASPHALT, UTILITIES, OR STRUCTURES.
6. THE CONTRACTOR IS TO PROTECT AND PRESERVE ALL EXISTING IMPROVEMENTS, UTILITIES, AND SIGNS, ETC. UNLESS OTHERWISE NOTED ON THESE PLANS.
7. EXISTING UNDERGROUND UTILITIES AND IMPROVEMENTS ARE SHOWN IN THEIR APPROXIMATE LOCATIONS BASED UPON RECORD INFORMATION AVAILABLE AT THE TIME OF PREPARATION OF THESE PLANS. LOCATIONS MAY NOT HAVE BEEN VERIFIED IN THE FIELD AND NO GUARANTEE IS MADE AS TO THE ACCURACY OR COMPLETENESS OF THE INFORMATION SHOWN. IT SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR TO DETERMINE THE EXISTENCE AND LOCATION OF THE UTILITIES SHOWN ON THESE PLANS OR INDICATED IN THE FIELD BY LOCATING SERVICES. ANY ADDITIONAL COSTS INCURRED AS A RESULT OF THE CONTRACTOR'S FAILURE TO VERIFY THE LOCATIONS OF EXISTING UTILITIES PRIOR TO THE BEGINNING OF CONSTRUCTION IN THEIR VICINITY SHALL BE BORNE BY THE CONTRACTOR AND ASSUMED INCLUDED IN THE CONTRACT. THE CONTRACTOR IS TO VERIFY ALL CONNECTION POINTS WITH THE EXISTING UTILITIES. THE CONTRACTOR IS RESPONSIBLE FOR ANY DAMAGE CAUSED TO THE EXISTING UTILITIES AND UTILITY STRUCTURES THAT ARE TO REMAIN. IF CONFLICTS WITH EXISTING UTILITIES OCCUR, THE CONTRACTOR SHALL NOTIFY THE ENGINEER PRIOR TO CONSTRUCTION TO DETERMINE IF ANY FIELD ADJUSTMENTS SHOULD BE MADE.
8. ALL SANITARY SEWER INFRASTRUCTURE TO BE INSTALLED PER GOVERNING AGENCY STANDARD PLANS AND SPECIFICATIONS.
9. ALL WATER INFRASTRUCTURE TO BE INSTALLED PER GOVERNING AGENCY OR APWA STANDARD PLANS AND SPECIFICATIONS.
6. DEFLECT OR LOOP ALL WATERLINES TO AVOID CONFLICTS WITH OTHER UTILITIES PER GOVERNING AGENCY'S STANDARDS AND SPECIFICATIONS.
7. PROJECT SHALL COMPLY WITH ALL UTAH DIVISION OF DRINKING WATER RULES AND REGULATIONS INCLUDING, BUT NOT LIMITED TO, THOSE PERTAINING TO BACKFLOW PROTECTION AND CROSS CONNECTION PREVENTION.
8. THE CONTRACTOR IS TO COORDINATE ALL UTILITIES WITH MECHANICAL/PLUMBING PLANS.
9. THE CONTRACTOR SHALL ADJUST TO GRADE ALL EXISTING UTILITIES AS NEEDED PER LOCAL GOVERNING AGENCY'S STANDARDS AND SPECIFICATIONS.
10. THE CONTRACTOR IS TO PROTECT AND PRESERVE ALL EXISTING IMPROVEMENTS, UTILITIES, AND SIGNS, ETC. UNLESS OTHERWISE NOTED ON THESE PLANS.

SCOPE OF WORK:

PROVIDE, INSTALL AND/OR CONSTRUCT THE FOLLOWING PER THE SPECIFICATIONS GIVEN OR REFERENCED, THE DETAILS NOTED, AND/OR AS SHOWN ON THE CONSTRUCTION DRAWINGS:

1. ALL BURIED DIP SHALL HAVE "TR FLEX" RESTRAINED JOINTS OR EQUAL.
   ALL MJ FITTINGS SHALL HAVE RESTRAINED JOINTS, "MEGA LUG" OR EQUAL.
2. SEE MECHANICAL DRAWINGS FOR CONTINUATION.
3. FLARED END SECTION PER DETAIL ON 6 ON SHEET C-600

811 Know what's below. Call before you dig.

CALL BLUESTAKES @ 811 AT LEAST 48 HOURS PRIOR TO THE COMMENCEMENT OF ANY CONSTRUCTION.

BENCHMARK

CONTROL POINT GE CAP
NEAR EAST QUARTER CORNER OF NORTHEAST QUARTER CORNER OF SECTION 26,TOWNSHIP 7 NORTH, RANGE 1 EAST SALT LAKE PRINCIPAL MERIDIAN

ELEV = 5321.77'

ENSIGN
THE STANDARD IN ENGINEERING

SANDY
45 W. 10000 S., Suite 500
Sandy, UT 84070
Phone: 801.255.0529

LAYTON
Phone: 801.547.1100

TOOELE
Phone: 435.843.3590

CEDAR CITY
Phone: 435.865.1453

RICHFIELD
Phone: 435.896.2983

WWW.ENSIGNENG.COM

FOR:
EDEN VALLEY OPPORTUNITY, LLC
3718 NORTH WOLF CREEK DRIVE
EDEN, UT 84310

CONTACT:
JOHN LEWIS
PHONE: 801.897.4880

COBABE RANCH 0.5 MG WATER TANK
EDEN CROSSING (PWS NO.29132)

COBABE RANCH
EDEN, UTAH

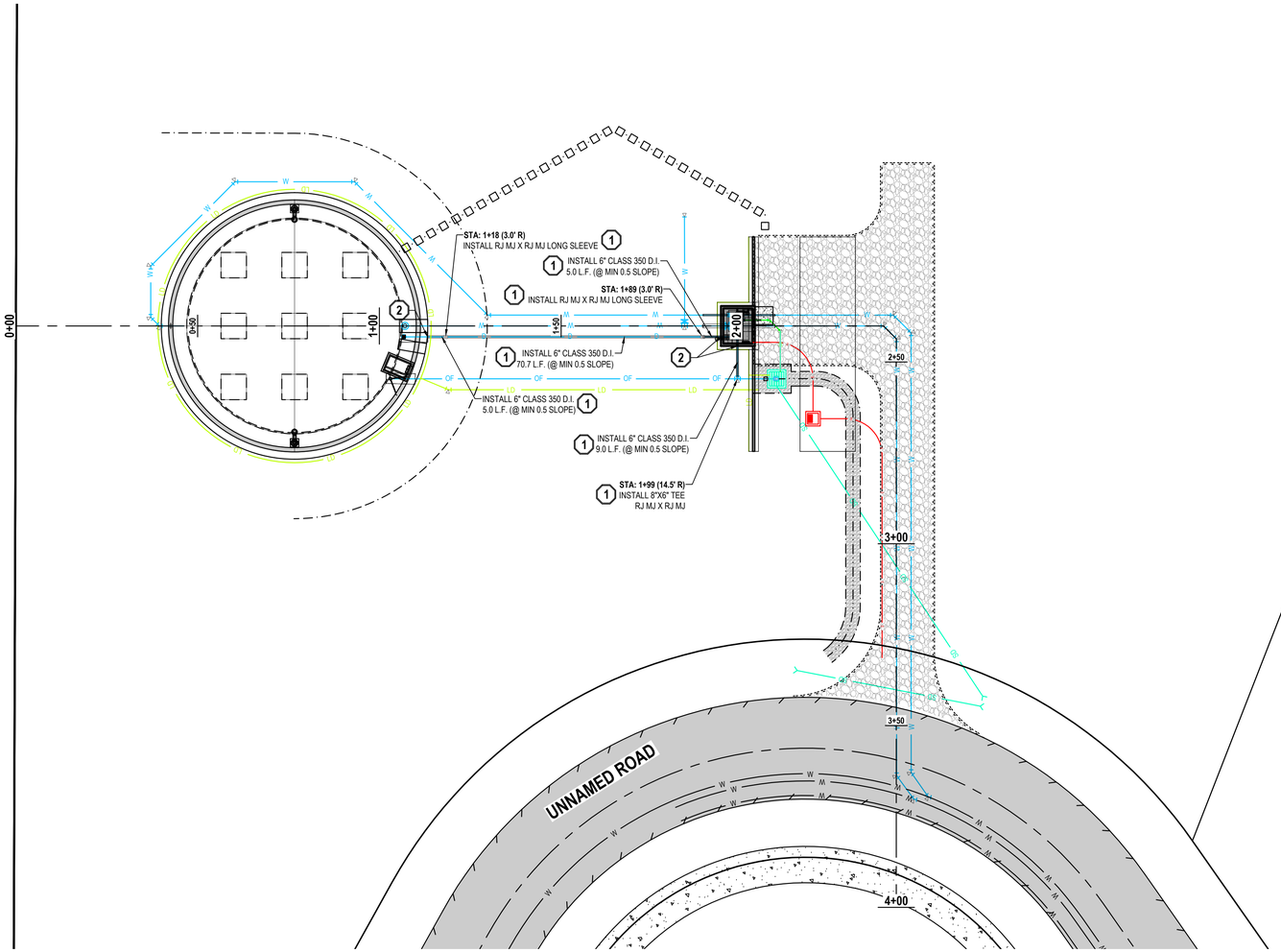
PROFESSIONAL ENGINEER
7885569-2202
ROBERT J. ROUSSELLE
EXP. 9/30/2025
STATE OF UTAH

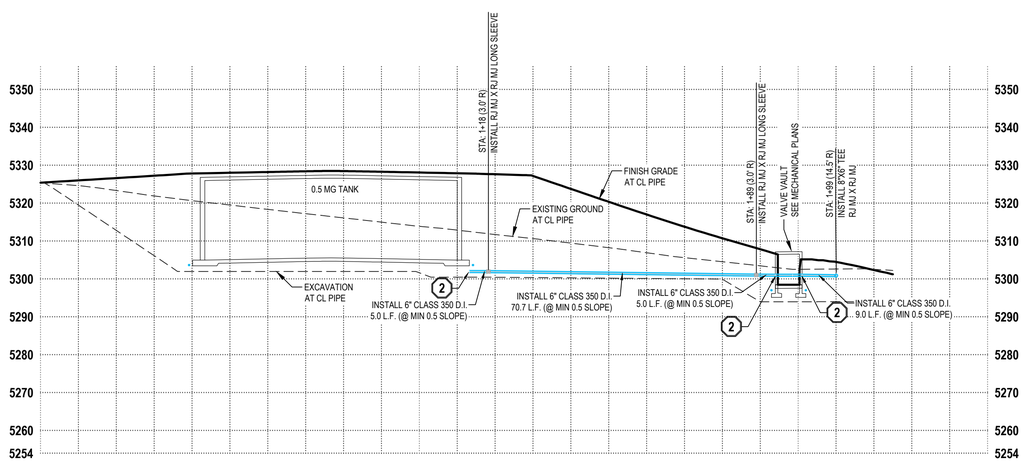
FOR CONSTRUCTION 7/9/2025

PLAN AND PROFILE TANK INLET

PROJECT NUMBER 14018A
PRINT DATE 2025-07-09
PROJECT MANAGER R. ROUSSELLE
DESIGNED BY C. DUNKEL

C-301





6-INCH DRAIN PROFILE

NORTH

HORIZONTAL GRAPHIC SCALE

20 0 10 20 40

(IN FEET)
HORZ: 1 inch = 20 ft.
VERT: 1 inch = 20 ft.

GENERAL NOTES

1. ALL WORK TO COMPLY WITH THE GOVERNING AGENCY'S STANDARDS AND SPECIFICATIONS.
2. ALL IMPROVEMENTS MUST COMPLY WITH ADA STANDARDS AND RECOMMENDATIONS.
3. SEE LANDSCAPE/ARCHITECTURAL PLANS FOR CONCRETE MATERIAL, COLOR, FINISH, AND SCORE PATTERNS THROUGHOUT SITE.
4. ALL SURFACE IMPROVEMENTS DISTURBED BY CONSTRUCTION SHALL BE RESTORED OR REPLACED, INCLUDING TREES AND DECORATIVE SHRUBS, SOD, FENCES, WALLS AND STRUCTURES, WHETHER OR NOT THEY ARE SPECIFICALLY SHOWN ON THE CONTRACT DOCUMENTS.
5. NOTIFY ENGINEER OF ANY DISCREPANCIES IN DESIGN OR STAKING BEFORE PLACING CONCRETE, ASPHALT, UTILITIES, OR STRUCTURES.
6. THE CONTRACTOR IS TO PROTECT AND PRESERVE ALL EXISTING IMPROVEMENTS, UTILITIES, AND SIGNS, ETC. UNLESS OTHERWISE NOTED ON THESE PLANS.
7. EXISTING UNDERGROUND UTILITIES AND IMPROVEMENTS ARE SHOWN IN THEIR APPROXIMATE LOCATIONS BASED UPON RECORD INFORMATION AVAILABLE AT THE TIME OF PREPARATION OF THESE PLANS. LOCATIONS MAY NOT HAVE BEEN VERIFIED IN THE FIELD AND NO GUARANTEE IS MADE AS TO THE ACCURACY OR COMPLETENESS OF THE INFORMATION SHOWN. IT SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR TO DETERMINE THE EXISTENCE AND LOCATION OF THE UTILITIES SHOWN ON THESE PLANS OR INDICATED IN THE FIELD BY LOCATING SERVICES. ANY ADDITIONAL COSTS INCURRED AS A RESULT OF THE CONTRACTOR'S FAILURE TO VERIFY THE LOCATIONS OF EXISTING UTILITIES PRIOR TO THE BEGINNING OF CONSTRUCTION IN THEIR VICINITY SHALL BE BORNE BY THE CONTRACTOR AND ASSUMED INCLUDED IN THE CONTRACT. THE CONTRACTOR IS TO VERIFY ALL CONNECTION POINTS WITH THE EXISTING UTILITIES. THE CONTRACTOR IS RESPONSIBLE FOR ANY DAMAGE CAUSED TO THE EXISTING UTILITIES AND UTILITY STRUCTURES THAT ARE TO REMAIN. IF CONFLICTS WITH EXISTING UTILITIES OCCUR, THE CONTRACTOR SHALL NOTIFY THE ENGINEER PRIOR TO CONSTRUCTION TO DETERMINE IF ANY FIELD ADJUSTMENTS SHOULD BE MADE.
8. ALL SANITARY SEWER INFRASTRUCTURE TO BE INSTALLED PER GOVERNING AGENCY STANDARD PLANS AND SPECIFICATIONS.
9. ALL WATER INFRASTRUCTURE TO BE INSTALLED PER GOVERNING AGENCY OR APWA STANDARD PLANS AND SPECIFICATIONS.
6. DEFLECT OR LOOP ALL WATERLINES TO AVOID CONFLICTS WITH OTHER UTILITIES PER GOVERNING AGENCY'S STANDARDS AND SPECIFICATIONS.
7. PROJECT SHALL COMPLY WITH ALL UTAH DIVISION OF DRINKING WATER RULES AND REGULATIONS INCLUDING, BUT NOT LIMITED TO, THOSE PERTAINING TO BACKFLOW PROTECTION AND CROSS CONNECTION PREVENTION.
8. THE CONTRACTOR IS TO COORDINATE ALL UTILITIES WITH MECHANICAL/PLUMBING PLANS.
9. THE CONTRACTOR SHALL ADJUST TO GRADE ALL EXISTING UTILITIES AS NEEDED PER LOCAL GOVERNING AGENCY'S STANDARDS AND SPECIFICATIONS.
10. THE CONTRACTOR IS TO PROTECT AND PRESERVE ALL EXISTING IMPROVEMENTS, UTILITIES, AND SIGNS, ETC. UNLESS OTHERWISE NOTED ON THESE PLANS.

SCOPE OF WORK:

PROVIDE. INSTALL AND/OR CONSTRUCT THE FOLLOWING PER THE SPECIFICATIONS GIVEN OR REFERENCED, THE DETAILS NOTED, AND/OR AS SHOWN ON THE CONSTRUCTION DRAWINGS:

1. ALL BURIED DIP SHALL HAVE "TR FLEX" RESTRAINED JOINTS OR EQUAL.
   ALL MJ FITTINGS SHALL HAVE RESTRAINED JOINTS, "MEGA LUG" OR EQUAL.
2. SEE MECHANICAL DRAWINGS FOR CONTINUATION.
3. FLARED END SECTION PER DETAIL ON 6 ON SHEET C-600

811 Know what's below. Call before you dig.

CALL BLUESTAKES @ 811 AT LEAST 48 HOURS PRIOR TO THE COMMENCEMENT OF ANY CONSTRUCTION.

BENCHMARK

CONTROL POINT GE CAP
NEAR EAST QUARTER CORNER OF NORTHEAST QUARTER CORNER OF SECTION 26,TOWNSHIP 7 NORTH, RANGE 1 EAST SALT LAKE PRINCIPAL MERIDIAN

ELEV = 5321.77'

ENSIGN
THE STANDARD IN ENGINEERING

SANDY
45 W. 10000 S., Suite 500
Sandy, UT 84070
Phone: 801.255.0529

LAYTON
Phone: 801.547.1100

TOOELE
Phone: 435.843.3590

CEDAR CITY
Phone: 435.865.1453

RICHFIELD
Phone: 435.896.2983

WWW.ENSIGNENG.COM

FOR:
EDEN VALLEY OPPORTUNITY, LLC
3718 NORTH WOLF CREEK DRIVE
EDEN, UT 84310

CONTACT:
JOHN LEWIS
PHONE: 801.897.4880

COBABE RANCH 0.5 MG WATER TANK
EDEN CROSSING (PWS NO.29132)
COBABE RANCH
EDEN, UTAH

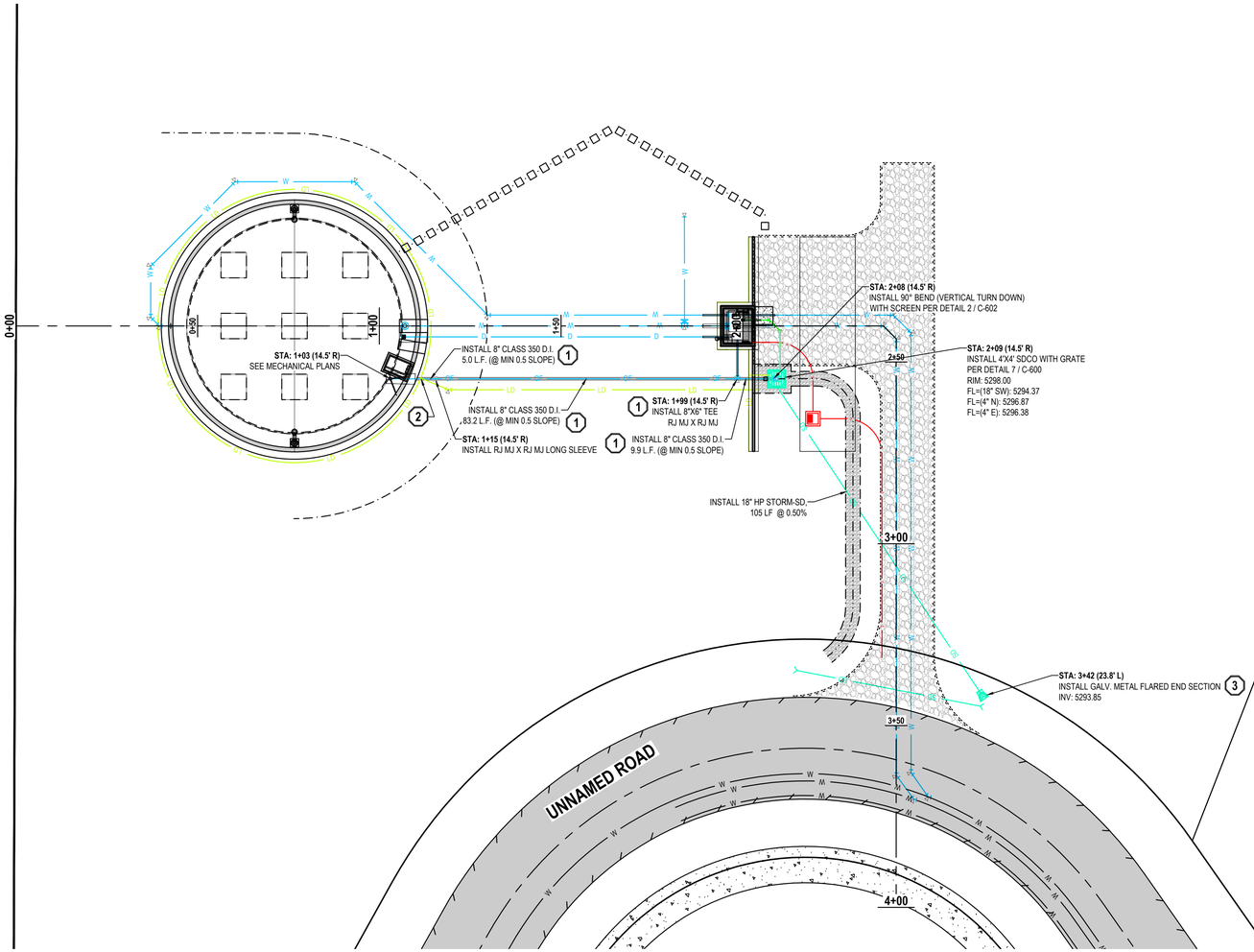
PROFESSIONAL ENGINEER
7885569-2202
ROBERT J. ROUSSELLE
EXP. 5/31/2027
EXP. 05/31/2027
STATE OF UTAH

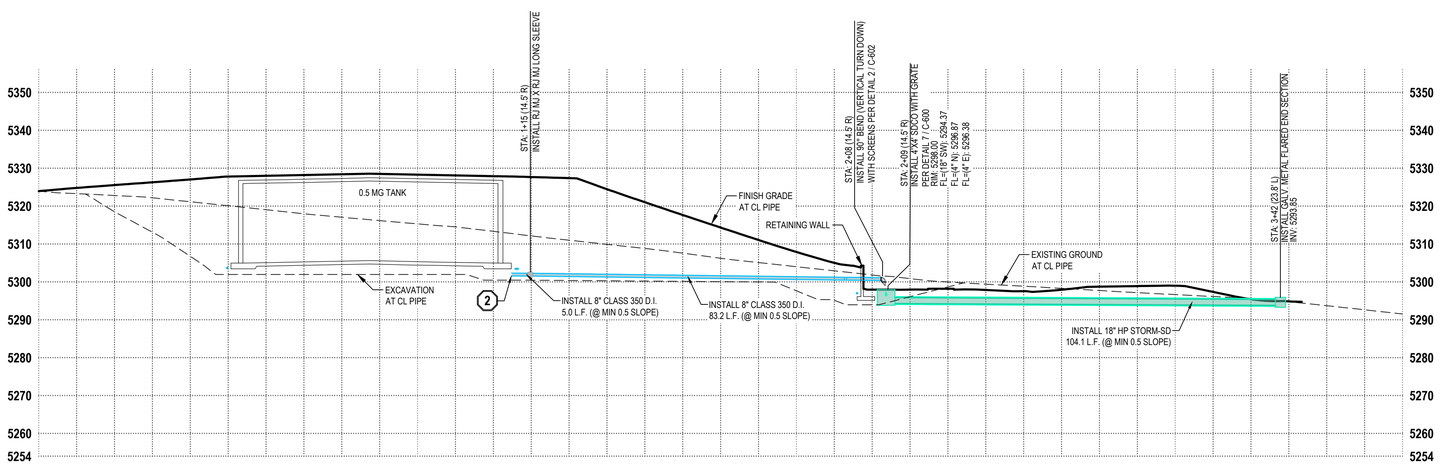
FOR CONSTRUCTION 7/9/2025

PLAN AND PROFILE TANK DRAIN

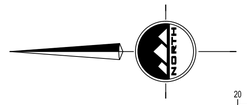
PROJECT NUMBER	PRINT DATE
14018A	2025-07-09
PROJECT MANAGER	DESIGNED BY
R. ROUSSELLE	C. DUNKEL

C-302





8-INCH OVERFLOW PROFILE



HORIZONTAL GRAPHIC SCALE

20 0 10 20 40

(IN FEET)
HORZ: 1 inch = 20 ft.
VERT: 1 inch = 20 ft.

GENERAL NOTES

1. ALL WORK TO COMPLY WITH THE GOVERNING AGENCY'S STANDARDS AND SPECIFICATIONS.
2. ALL IMPROVEMENTS MUST COMPLY WITH ADA STANDARDS AND RECOMMENDATIONS.
3. SEE LANDSCAPE/ARCHITECTURAL PLANS FOR CONCRETE MATERIAL, COLOR, FINISH, AND SCORE PATTERNS THROUGHOUT SITE.
4. ALL SURFACE IMPROVEMENTS DISTURBED BY CONSTRUCTION SHALL BE RESTORED OR REPLACED, INCLUDING TREES AND DECORATIVE SHRUBS, SOD, FENCES, WALLS AND STRUCTURES, WHETHER OR NOT THEY ARE SPECIFICALLY SHOWN ON THE CONTRACT DOCUMENTS.
5. NOTIFY ENGINEER OF ANY DISCREPANCIES IN DESIGN OR STAKING BEFORE PLACING CONCRETE, ASPHALT, UTILITIES, OR STRUCTURES.
6. THE CONTRACTOR IS TO PROTECT AND PRESERVE ALL EXISTING IMPROVEMENTS, UTILITIES, AND SIGNS, ETC. UNLESS OTHERWISE NOTED ON THESE PLANS.
7. EXISTING UNDERGROUND UTILITIES AND IMPROVEMENTS ARE SHOWN IN THEIR APPROXIMATE LOCATIONS BASED UPON RECORD INFORMATION AVAILABLE AT THE TIME OF PREPARATION OF THESE PLANS. LOCATIONS MAY NOT HAVE BEEN VERIFIED IN THE FIELD AND NO GUARANTEE IS MADE AS TO THE ACCURACY OR COMPLETENESS OF THE INFORMATION SHOWN. IT SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR TO DETERMINE THE EXISTENCE AND LOCATION OF THE UTILITIES SHOWN ON THESE PLANS OR INDICATED IN THE FIELD BY LOCATING SERVICES. ANY ADDITIONAL COSTS INCURRED AS A RESULT OF THE CONTRACTOR'S FAILURE TO VERIFY THE LOCATIONS OF EXISTING UTILITIES PRIOR TO THE BEGINNING OF CONSTRUCTION IN THEIR VICINITY SHALL BE BORNE BY THE CONTRACTOR AND ASSUMED INCLUDED IN THE CONTRACT. THE CONTRACTOR IS TO VERIFY ALL CONNECTION POINTS WITH THE EXISTING UTILITIES. THE CONTRACTOR IS RESPONSIBLE FOR ANY DAMAGE CAUSED TO THE EXISTING UTILITIES AND UTILITY STRUCTURES THAT ARE TO REMAIN. IF CONFLICTS WITH EXISTING UTILITIES OCCUR, THE CONTRACTOR SHALL NOTIFY THE ENGINEER PRIOR TO CONSTRUCTION TO DETERMINE IF ANY FIELD ADJUSTMENTS SHOULD BE MADE.
8. ALL SANITARY SEWER INFRASTRUCTURE TO BE INSTALLED PER GOVERNING AGENCY STANDARD PLANS AND SPECIFICATIONS.
9. ALL WATER INFRASTRUCTURE TO BE INSTALLED PER GOVERNING AGENCY OR APWA STANDARD PLANS AND SPECIFICATIONS.
6. DEFLECT OR LOOP ALL WATERLINES TO AVOID CONFLICTS WITH OTHER UTILITIES PER GOVERNING AGENCY'S STANDARDS AND SPECIFICATIONS.
7. PROJECT SHALL COMPLY WITH ALL UTAH DIVISION OF DRINKING WATER RULES AND REGULATIONS INCLUDING, BUT NOT LIMITED TO, THOSE PERTAINING TO BACKFLOW PROTECTION AND CROSS CONNECTION PREVENTION.
8. THE CONTRACTOR IS TO COORDINATE ALL UTILITIES WITH MECHANICAL/PLUMBING PLANS.
9. THE CONTRACTOR SHALL ADJUST TO GRADE ALL EXISTING UTILITIES AS NEEDED PER LOCAL GOVERNING AGENCY'S STANDARDS AND SPECIFICATIONS.
10. THE CONTRACTOR IS TO PROTECT AND PRESERVE ALL EXISTING IMPROVEMENTS, UTILITIES, AND SIGNS, ETC. UNLESS OTHERWISE NOTED ON THESE PLANS.

SCOPE OF WORK:

PROVIDE. INSTALL AND/OR CONSTRUCT THE FOLLOWING PER THE SPECIFICATIONS GIVEN OR REFERENCED, THE DETAILS NOTED, AND/OR AS SHOWN ON THE CONSTRUCTION DRAWINGS:

1. ALL BURIED DIP SHALL HAVE "TR FLEX" RESTRAINED JOINTS OR EQUAL.
   ALL MJ FITTINGS SHALL HAVE RESTRAINED JOINTS, "MEGA LUG" OR EQUAL.
2. SEE MECHANICAL DRAWINGS FOR CONTINUATION.
3. FLARED END SECTION PER DETAIL ON 6 ON SHEET C-600

ENSIGN
THE STANDARD IN ENGINEERING

SANDY
45 W. 10000 S., Suite 500
Sandy, UT 84070
Phone: 801.255.0529

LAYTON
Phone: 801.547.1100

TOOELE
Phone: 435.843.3590

CEDAR CITY
Phone: 435.865.1453

RICHFIELD
Phone: 435.896.2983

WWW.ENSIGNENG.COM

FOR:
EDEN VALLEY OPPORTUNITY, LLC
3718 NORTH WOLF CREEK DRIVE
EDEN, UT 84310

CONTACT:
JOHN LEWIS
PHONE: 801.897.4880

COBABE RANCH 0.5 MG WATER TANK
EDEN CROSSING (PWS NO.29132)
COBABE RANCH
EDEN, UTAH

FOR CONSTRUCTION 7/9/2025

PLAN AND PROFILE
TANK OVERFLOW

PROJECT NUMBER	PRINT DATE
14018A	2025-07-09
PROJECT MANAGER	DESIGNED BY
R. ROUSSELLE	C. DUNKEL

C-303

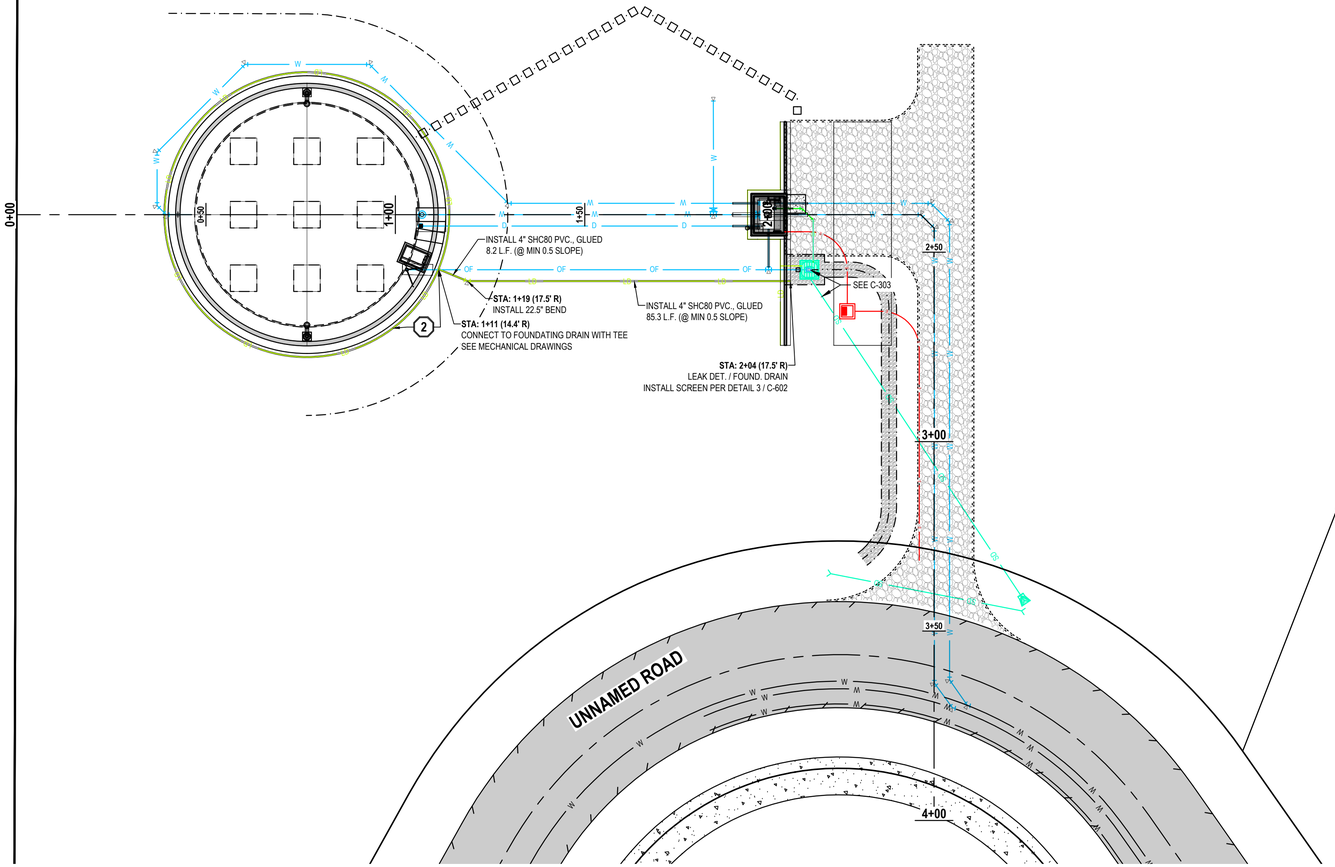
811 Know what's below. Call before you dig.

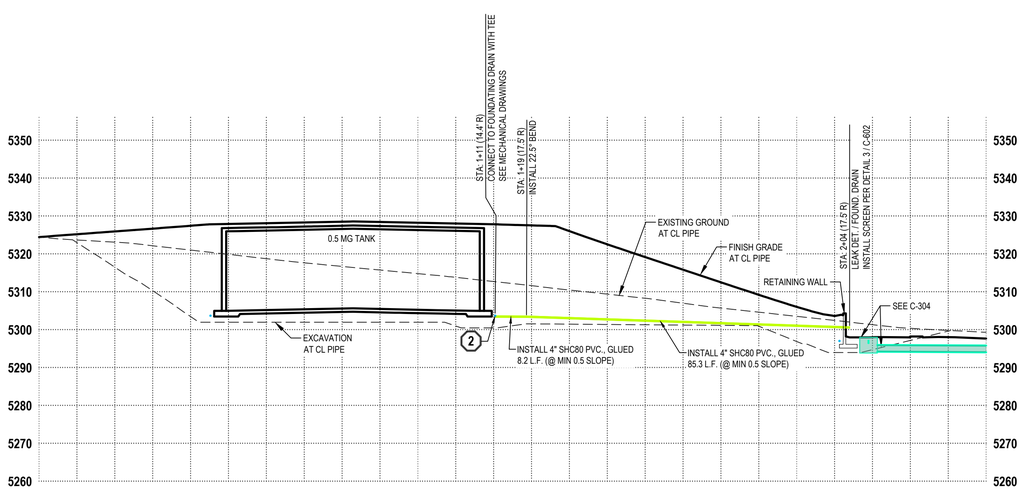
CALL BLUESTAKES @ 811 AT LEAST 48 HOURS PRIOR TO THE COMMENCEMENT OF ANY CONSTRUCTION.

BENCHMARK

CONTROL POINT GE CAP
NEAR EAST QUARTER CORNER OF NORTHEAST QUARTER CORNER OF SECTION 26,TOWNSHIP 7 NORTH, RANGE 1 EAST SALT LAKE PRINCIPAL MERIDIAN

ELEV = 5321.77'





4-INCH LEAK DETECTION AND FOUNDATION DRAIN PROFILE

HORIZONTAL GRAPHIC SCALE

20 0 10 20 40

(IN FEET)

HORZ: 1 inch = 20 ft.

VERT: 1 inch = 20 ft.

GENERAL NOTES

1. ALL WORK TO COMPLY WITH THE GOVERNING AGENCY'S STANDARDS AND SPECIFICATIONS.
2. ALL IMPROVEMENTS MUST COMPLY WITH ADA STANDARDS AND RECOMMENDATIONS.
3. SEE LANDSCAPE/ARCHITECTURAL PLANS FOR CONCRETE MATERIAL, COLOR, FINISH, AND SCORE PATTERNS THROUGHOUT SITE.
4. ALL SURFACE IMPROVEMENTS DISTURBED BY CONSTRUCTION SHALL BE RESTORED OR REPLACED, INCLUDING TREES AND DECORATIVE SHRUBS, SOD, FENCES, WALLS AND STRUCTURES, WHETHER OR NOT THEY ARE SPECIFICALLY SHOWN ON THE CONTRACT DOCUMENTS.
5. NOTIFY ENGINEER OF ANY DISCREPANCIES IN DESIGN OR STAKING BEFORE PLACING CONCRETE, ASPHALT, UTILITIES, OR STRUCTURES.
6. THE CONTRACTOR IS TO PROTECT AND PRESERVE ALL EXISTING IMPROVEMENTS, UTILITIES, AND SIGNS, ETC. UNLESS OTHERWISE NOTED ON THESE PLANS.
7. EXISTING UNDERGROUND UTILITIES AND IMPROVEMENTS ARE SHOWN IN THEIR APPROXIMATE LOCATIONS BASED UPON RECORD INFORMATION AVAILABLE AT THE TIME OF PREPARATION OF THESE PLANS. LOCATIONS MAY NOT HAVE BEEN VERIFIED IN THE FIELD AND NO GUARANTEE IS MADE AS TO THE ACCURACY OR COMPLETENESS OF THE INFORMATION SHOWN. IT SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR TO DETERMINE THE EXISTENCE AND LOCATION OF THE UTILITIES SHOWN ON THESE PLANS OR INDICATED IN THE FIELD BY LOCATING SERVICES. ANY ADDITIONAL COSTS INCURRED AS A RESULT OF THE CONTRACTOR'S FAILURE TO VERIFY THE LOCATIONS OF EXISTING UTILITIES PRIOR TO THE BEGINNING OF CONSTRUCTION IN THEIR VICINITY SHALL BE BORNE BY THE CONTRACTOR AND ASSUMED INCLUDED IN THE CONTRACT. THE CONTRACTOR IS TO VERIFY ALL CONNECTION POINTS WITH THE EXISTING UTILITIES. THE CONTRACTOR IS RESPONSIBLE FOR ANY DAMAGE CAUSED TO THE EXISTING UTILITIES AND UTILITY STRUCTURES THAT ARE TO REMAIN. IF CONFLICTS WITH EXISTING UTILITIES OCCUR, THE CONTRACTOR SHALL NOTIFY THE ENGINEER PRIOR TO CONSTRUCTION TO DETERMINE IF ANY FIELD ADJUSTMENTS SHOULD BE MADE.
8. ALL SANITARY SEWER INFRASTRUCTURE TO BE INSTALLED PER GOVERNING AGENCY STANDARD PLANS AND SPECIFICATIONS.
9. ALL WATER INFRASTRUCTURE TO BE INSTALLED PER GOVERNING AGENCY OR APWA STANDARD PLANS AND SPECIFICATIONS.
6. DEFLECT OR LOOP ALL WATERLINES TO AVOID CONFLICTS WITH OTHER UTILITIES PER GOVERNING AGENCY'S STANDARDS AND SPECIFICATIONS.
7. PROJECT SHALL COMPLY WITH ALL UTAH DIVISION OF DRINKING WATER RULES AND REGULATIONS INCLUDING, BUT NOT LIMITED TO, THOSE PERTAINING TO BACKFLOW PROTECTION AND CROSS CONNECTION PREVENTION.
8. THE CONTRACTOR IS TO COORDINATE ALL UTILITIES WITH MECHANICAL/PLUMBING PLANS.
9. THE CONTRACTOR SHALL ADJUST TO GRADE ALL EXISTING UTILITIES AS NEEDED PER LOCAL GOVERNING AGENCY'S STANDARDS AND SPECIFICATIONS.
10. THE CONTRACTOR IS TO PROTECT AND PRESERVE ALL EXISTING IMPROVEMENTS, UTILITIES, AND SIGNS, ETC. UNLESS OTHERWISE NOTED ON THESE PLANS.

SCOPE OF WORK:

PROVIDE, INSTALL AND/OR CONSTRUCT THE FOLLOWING PER THE SPECIFICATIONS GIVEN OR REFERENCED, THE DETAILS NOTED, AND/OR AS SHOWN ON THE CONSTRUCTION DRAWINGS:

1. ALL BURIED DIP SHALL HAVE "TR FLEX" RESTRAINED JOINTS OR EQUAL.
   ALL MJ FITTINGS SHALL HAVE RESTRAINED JOINTS, "MEGA LUG" OR EQUAL.
2. SEE MECHANICAL DRAWINGS FOR CONTINUATION.
3. FLARED END SECTION PER DETAIL ON 6 ON SHEET C-600

Know what's below. Call before you dig.

CALL BLUESTAKES @ 811 AT LEAST 48 HOURS PRIOR TO THE COMMENCEMENT OF ANY CONSTRUCTION.

BENCHMARK

CONTROL POINT GE CAP
NEAR EAST QUARTER CORNER OF NORTHEAST QUARTER CORNER OF SECTION 26,TOWNSHIP 7 NORTH, RANGE 1 EAST SALT LAKE PRINCIPAL MERIDIAN

ELEV = 5321.77'

ENSIGN
THE STANDARD IN ENGINEERING

SANDY
45 W. 10000 S., Suite 500
Sandy, UT 84070
Phone: 801.255.0529

LAYTON
Phone: 801.547.1100

TOOELE
Phone: 435.843.3590

CEDAR CITY
Phone: 435.865.1453

RICHFIELD
Phone: 435.896.2983

WWW.ENSIGNENG.COM

FOR:
EDEN VALLEY OPPORTUNITY, LLC
3718 NORTH WOLF CREEK DRIVE
EDEN, UT 84310

CONTACT:
JOHN LEWIS
PHONE: 801.897.4880

COBABE RANCH 0.5 MG WATER TANK
EDEN CROSSING (PWS NO.29132)
COBABE RANCH
EDEN, UTAH

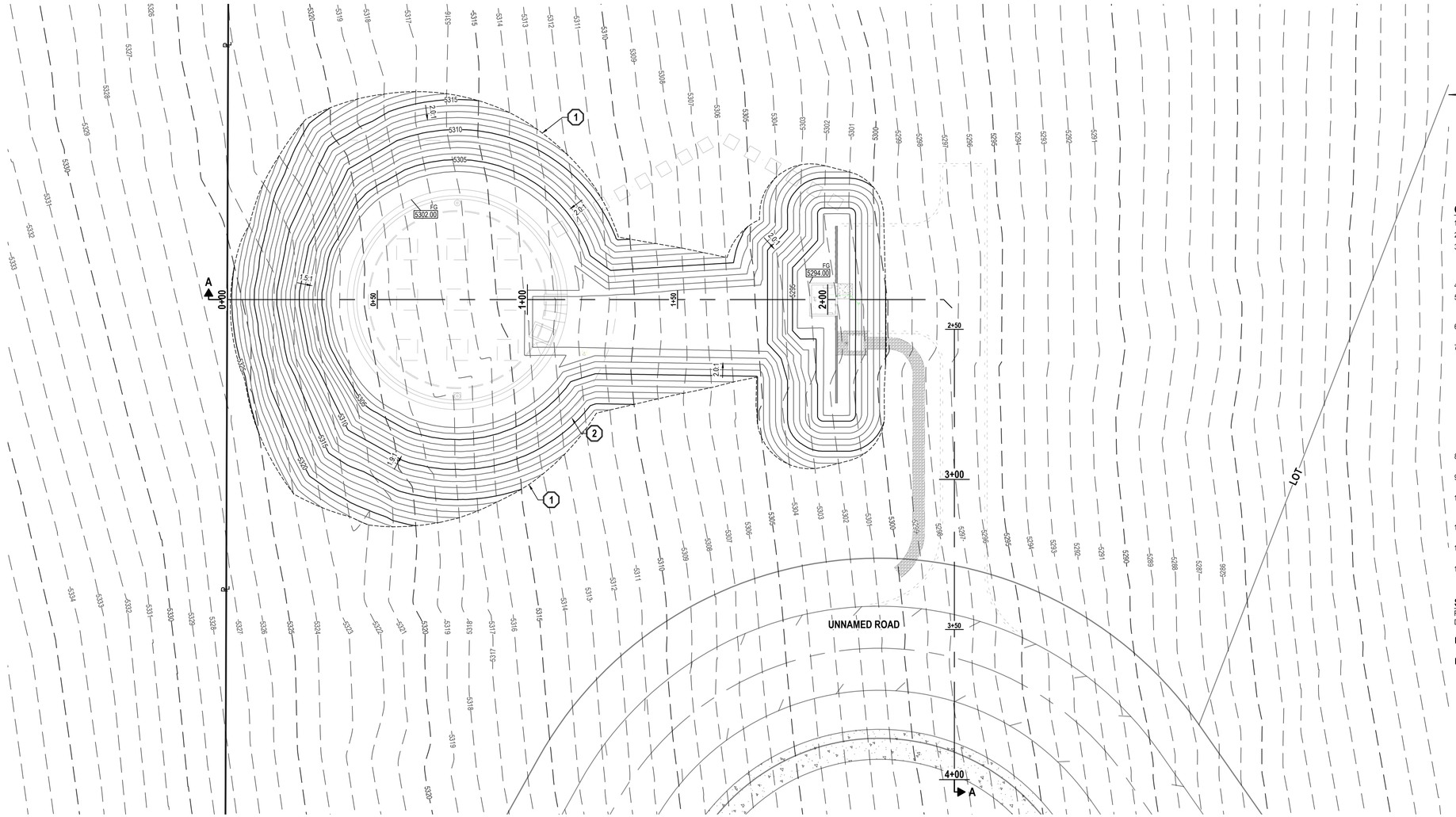
PROFESSIONAL ENGINEER
7885569-2202
ROBERT J. ROUSSELLE
EXP. 5/31/2027
STATE OF UTAH

FOR CONSTRUCTION 7/9/2025

PLAN AND PROFILE
LEAK DET. / FOUND. DRAIN

PROJECT NUMBER	PRINT DATE
14018A	2025-07-09
PROJECT MANAGER	DESIGNED BY
R. ROUSSELLE	C. DUNKEL

C-304



HORIZONTAL GRAPHIC SCALE

20 0 10 20 40

(IN FEET)
HORZ: 1 inch = 20 ft.
VERT: 1 inch = ft.

GENERAL NOTES

1. ALL WORK TO COMPLY WITH THE GOVERNING AGENCY'S STANDARDS AND SPECIFICATIONS.
2. ALL IMPROVEMENTS MUST COMPLY WITH ADA STANDARDS AND RECOMMENDATIONS.
3. ALL WORK SHALL COMPLY WITH THE RECOMMENDATIONS OF THE GEOTECHNICAL ENGINEER POSSIBLY INCLUDING, BUT NOT LIMITED TO, REMOVAL OF UNCONSOLIDATED FILL, ORGANICS, AND DEBRIS, PLACEMENT OF SUBSURFACE DRAIN LINES AND GEOTEXTILE, AND OVEREXCAVATION OF UNSUITABLE BEARING MATERIALS AND PLACEMENT OF ACCEPTABLE FILL MATERIAL.
4. THE CONTRACTOR SHALL BECOME FAMILIAR WITH THE EXISTING SOIL CONDITIONS.
5. LANDSCAPED AREAS REQUIRE SUBGRADE TO BE MAINTAINED AT A SPECIFIC ELEVATION BELOW FINISHED GRADE AND REQUIRE SUBGRADE TO BE PROPERLY PREPARED AND SCARIFIED. SEE LANDSCAPE PLANS FOR ADDITIONAL INFORMATION.
6. SLOPE ALL LANDSCAPED AREAS AWAY FROM BUILDING FOUNDATIONS TOWARD CURB AND GUTTER OR STORM DRAIN INLETS.
7. EXISTING UNDERGROUND UTILITIES AND IMPROVEMENTS ARE SHOWN IN THEIR APPROXIMATE LOCATIONS BASED UPON RECORD INFORMATION AVAILABLE AT THE TIME OF PREPARATION OF THESE PLANS. LOCATIONS MAY NOT HAVE BEEN VERIFIED IN THE FIELD AND NO GUARANTEE IS MADE AS TO THE ACCURACY OR COMPLETENESS OF THE INFORMATION SHOWN. IT SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR TO DETERMINE THE EXISTENCE AND LOCATION OF THE UTILITIES SHOWN ON THESE PLANS OR INDICATED IN THE FIELD BY LOCATING SERVICES. ANY ADDITIONAL COSTS INCURRED AS A RESULT OF THE CONTRACTOR'S FAILURE TO VERIFY THE LOCATIONS OF EXISTING UTILITIES PRIOR TO THE BEGINNING OF CONSTRUCTION IN THEIR VICINITY SHALL BE BORNE BY THE CONTRACTOR AND ASSUMED INCLUDED IN THE CONTRACT. THE CONTRACTOR IS TO VERIFY ALL CONNECTION POINTS WITH THE EXISTING UTILITIES. THE CONTRACTOR IS RESPONSIBLE FOR ANY DAMAGE CAUSED TO THE EXISTING UTILITIES AND UTILITY STRUCTURES THAT ARE TO REMAIN. IF CONFLICTS WITH EXISTING UTILITIES OCCUR, THE CONTRACTOR SHALL NOTIFY THE ENGINEER PRIOR TO CONSTRUCTION TO DETERMINE IF ANY FIELD ADJUSTMENTS SHOULD BE MADE.
8. ALL STORM DRAIN INFRASTRUCTURE TO BE INSTALLED PER GOVERNING AGENCY OR APWA STANDARD PLANS AND SPECIFICATIONS.
9. ENSURE MINIMUM COVER OVER ALL STORM DRAIN PIPES PER MANUFACTURER'S RECOMMENDATIONS. NOTIFY ENGINEER IF MINIMUM COVER CANNOT BE ATTAINED.
10. ALL FACILITIES WITH DOWNSPOUTS/ROOF DRAINS SHALL BE CONNECTED TO THE STORM DRAIN SYSTEM. SEE PLUMBING PLANS FOR DOWNSPOUT/ROOF DRAIN LOCATIONS AND SIZES. ALL ROOF DRAINS TO HAVE MINIMUM 1% SLOPE.
11. THE CONTRACTOR SHALL ADJUST TO GRADE ALL EXISTING UTILITIES AS NEEDED PER LOCAL GOVERNING AGENCY'S STANDARDS AND SPECIFICATIONS.
12. NOTIFY ENGINEER OF ANY DISCREPANCIES IN DESIGN OR STAKING BEFORE PLACING CONCRETE, ASPHALT, OR STORM DRAIN STRUCTURES OR PIPES.
13. THE CONTRACTOR IS TO PROTECT AND PRESERVE ALL EXISTING IMPROVEMENTS, UTILITIES, AND SIGNS, ETC. UNLESS OTHERWISE NOTED ON THESE PLANS.

SCOPE OF WORK:

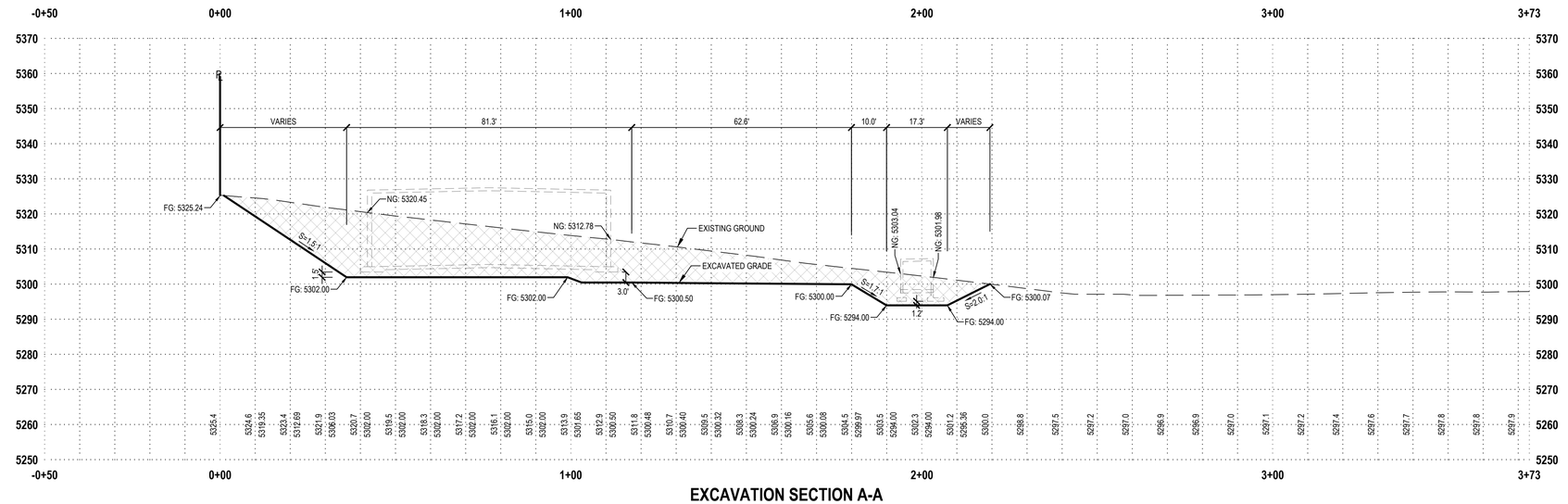
PROVIDE, INSTALL AND/OR CONSTRUCT THE FOLLOWING PER THE SPECIFICATIONS GIVEN OR REFERENCED, THE DETAILS NOTED, AND/OR AS SHOWN ON THE CONSTRUCTION DRAWINGS:

1. LIMITS OF DISTURBANCE
2. DAYLIGHT TO EXISTING GROUND WITH MAXIMUM 1.5:1 SLOPE, UNLESS NOTED OTHERWISE. REFER TO GEOTECHNICAL REPORT FOR SLOPE STABILITY REQUIREMENTS AND LIMITS.

EXCAVATION CUT/FILL QUANTITIES

AREA / DESCRIPTION	CUT (CY)
TOPSOIL	396
TANK EXCAVATION	5,060
VAULT EXCAVATION	590
PIPE TRENCH EXCAVATION	618
TOTAL EXCAVATION	6,664

- THIS TABLE DOES NOT USE A CUT/FILL FACTOR.
- QUANTITIES SHOWN DO NOT INCLUDE FINISH GRADE AT THE TANK.
- THESE QUANTITIES ARE NEAT LINE QUANTITIES. CONTRACTOR SHALL MAKE THEIR OWN DETERMINATION OF EARTHWORK QUANTITIES TO COMPLETE THE WORK.



EXCAVATION SECTION A-A

811 Know what's below. Call before you dig.

CALL BLUESTAKES @ 811 AT LEAST 48 HOURS PRIOR TO THE COMMENCEMENT OF ANY CONSTRUCTION.

BENCHMARK

CONTROL POINT GE CAP
NEAR EAST QUARTER CORNER OF NORTHEAST QUARTER CORNER OF SECTION 26,TOWNSHIP 7 NORTH, RANGE 1 EAST SALT LAKE PRINCIPAL MERIDIAN

ELEV = 5321.77'

ENSIGN
THE STANDARD IN ENGINEERING

SANDY
45 W. 10000 S., Suite 500
Sandy, UT 84070
Phone: 801.255.0529

LAYTON
Phone: 801.547.1100

TOOELE
Phone: 435.843.3590

CEDAR CITY
Phone: 435.865.1453

RICHFIELD
Phone: 435.896.2983

WWW.ENSIGNENG.COM

FOR:
EDEN VALLEY OPPORTUNITY, LLC
3718 NORTH WOLF CREEK DRIVE
EDEN, UT 84310

CONTACT:
JOHN LEWIS
PHONE: 801.897.4880

COBABE RANCH 0.5 MG WATER TANK
EDEN CROSSING (PWS NO.29132)

COBABE RANCH
EDEN, UTAH

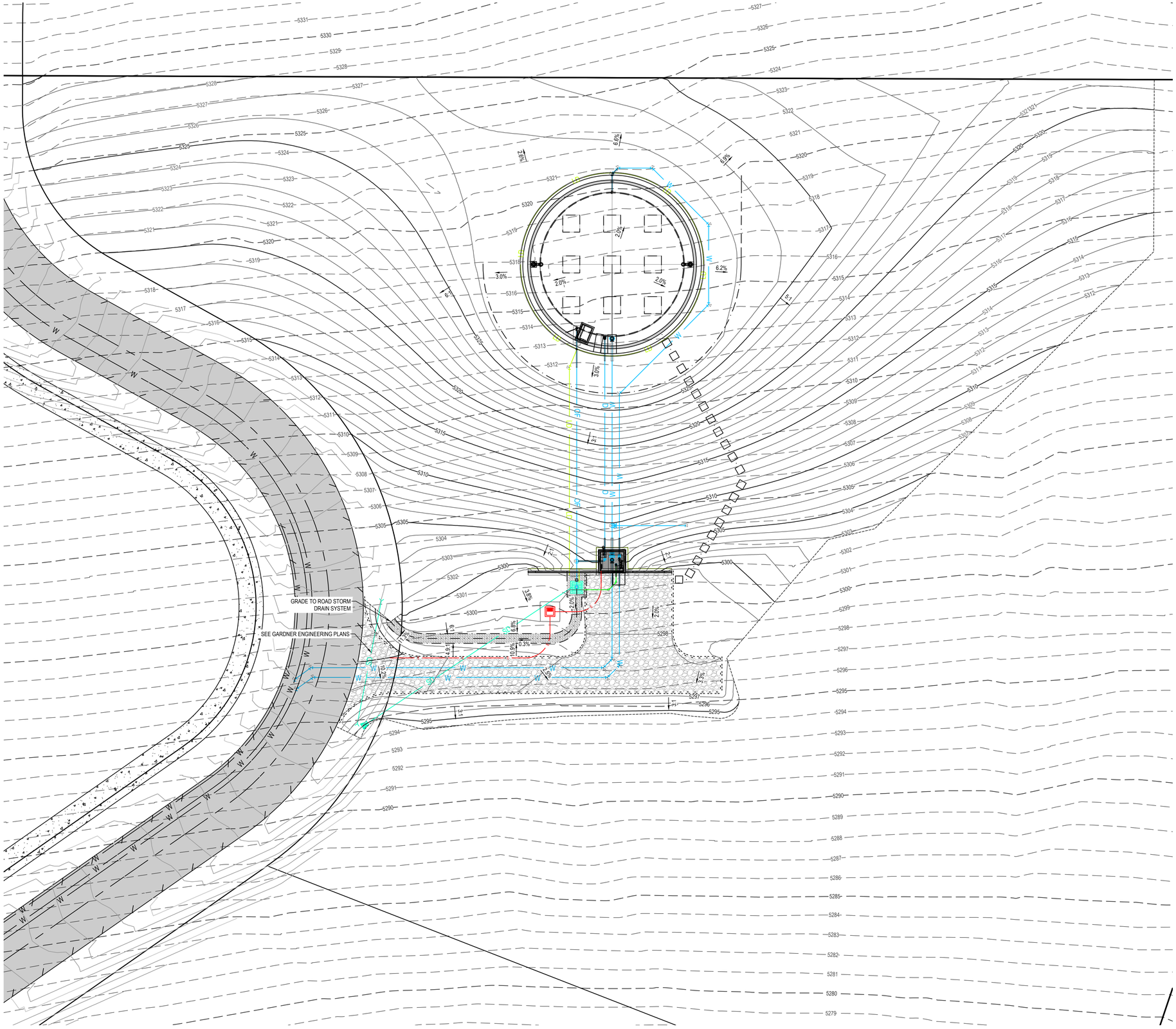
PROFESSIONAL ENGINEER
7885569-2202
ROBERT J. ROUSSELLE
EXP. 3/31/2027
STATE OF UTAH

FOR CONSTRUCTION 7/9/2025

EXCAVATION GRADING PLAN

PROJECT NUMBER	PRINT DATE
14018A	2025-07-09
PROJECT MANAGER	DESIGNED BY
R. ROUSSELLE	C. DUNKEL

C-400



NORTH

HORIZONTAL GRAPHIC SCALE

40 0 10 20 40

(IN FEET)
HORZ: 1 inch = 20 ft.

GENERAL NOTES

1. ALL WORK TO COMPLY WITH THE GOVERNING AGENCY'S STANDARDS AND SPECIFICATIONS.
2. ALL IMPROVEMENTS MUST COMPLY WITH ADA STANDARDS AND RECOMMENDATIONS.
3. ALL WORK SHALL COMPLY WITH THE RECOMMENDATIONS OF THE GEOTECHNICAL ENGINEER POSSIBLY INCLUDING, BUT NOT LIMITED TO, REMOVAL OF UNCONSOLIDATED FILL, ORGANICS, AND DEBRIS, PLACEMENT OF SUBSURFACE DRAIN LINES AND GEOTEXTILE, AND OVEREXCAVATION OF UNSUITABLE BEARING MATERIALS AND PLACEMENT OF ACCEPTABLE FILL MATERIAL.
4. THE CONTRACTOR SHALL BECOME FAMILIAR WITH THE EXISTING SOIL CONDITIONS.
5. LANDSCAPED AREAS REQUIRE SUBGRADE TO BE MAINTAINED AT A SPECIFIC ELEVATION BELOW FINISHED GRADE AND REQUIRE SUBGRADE TO BE PROPERLY PREPARED AND SCARIFIED. SEE LANDSCAPE PLANS FOR ADDITIONAL INFORMATION.
6. SLOPE ALL LANDSCAPED AREAS AWAY FROM BUILDING FOUNDATIONS TOWARD CURB AND GUTTER OR STORM DRAIN INLETS.
7. EXISTING UNDERGROUND UTILITIES AND IMPROVEMENTS ARE SHOWN IN THEIR APPROXIMATE LOCATIONS BASED UPON RECORD INFORMATION AVAILABLE AT THE TIME OF PREPARATION OF THESE PLANS. LOCATIONS MAY NOT HAVE BEEN VERIFIED IN THE FIELD AND NO GUARANTEE IS MADE AS TO THE ACCURACY OR COMPLETENESS OF THE INFORMATION SHOWN. IT SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR TO DETERMINE THE EXISTENCE AND LOCATION OF THE UTILITIES SHOWN ON THESE PLANS OR INDICATED IN THE FIELD BY LOCATING SERVICES. ANY ADDITIONAL COSTS INCURRED AS A RESULT OF THE CONTRACTOR'S FAILURE TO VERIFY THE LOCATIONS OF EXISTING UTILITIES PRIOR TO THE BEGINNING OF CONSTRUCTION IN THEIR VICINITY SHALL BE BORNE BY THE CONTRACTOR AND ASSUMED INCLUDED IN THE CONTRACT. THE CONTRACTOR IS TO VERIFY ALL CONNECTION POINTS WITH THE EXISTING UTILITIES. THE CONTRACTOR IS RESPONSIBLE FOR ANY DAMAGE CAUSED TO THE EXISTING UTILITIES AND UTILITY STRUCTURES THAT ARE TO REMAIN. IF CONFLICTS WITH EXISTING UTILITIES OCCUR, THE CONTRACTOR SHALL NOTIFY THE ENGINEER PRIOR TO CONSTRUCTION TO DETERMINE IF ANY FIELD ADJUSTMENTS SHOULD BE MADE.
8. ALL STORM DRAIN INFRASTRUCTURE TO BE INSTALLED PER GOVERNING AGENCY OR APWA STANDARD PLANS AND SPECIFICATIONS.
9. ENSURE MINIMUM COVER OVER ALL STORM DRAIN PIPES PER MANUFACTURER'S RECOMMENDATIONS. NOTIFY ENGINEER IF MINIMUM COVER CANNOT BE ATTAINED.
10. ALL FACILITIES WITH DOWNSPOUTS/ROOF DRAINS SHALL BE CONNECTED TO THE STORM DRAIN SYSTEM. SEE PLUMBING PLANS FOR DOWNSPOUT/ROOF DRAIN LOCATIONS AND SIZES. ALL ROOF DRAINS TO HAVE MINIMUM 1% SLOPE.
11. THE CONTRACTOR SHALL ADJUST TO GRADE ALL EXISTING UTILITIES AS NEEDED PER LOCAL GOVERNING AGENCY'S STANDARDS AND SPECIFICATIONS.
12. NOTIFY ENGINEER OF ANY DISCREPANCIES IN DESIGN OR STAKING BEFORE PLACING CONCRETE, ASPHALT, OR STORM DRAIN STRUCTURES OR PIPES.
13. THE CONTRACTOR IS TO PROTECT AND PRESERVE ALL EXISTING IMPROVEMENTS, UTILITIES, AND SIGNS, ETC. UNLESS OTHERWISE NOTED ON THESE PLANS.

811 Know what's below. Call before you dig.

CALL BLUESTAKES @ 811 AT LEAST 48 HOURS PRIOR TO THE COMMENCEMENT OF ANY CONSTRUCTION.

BENCHMARK

CONTROL POINT GE CAP
NEAR EAST QUARTER CORNER OF NORTHEAST QUARTER CORNER OF SECTION 26,TOWNSHIP 7 NORTH, RANGE 1 EAST SALT LAKE PRINCIPAL MERIDIAN

ELEV = 5321.77'

ENSIGN
THE STANDARD IN ENGINEERING

SANDY
45 W. 10000 S., Suite 500
Sandy, UT 84070
Phone: 801.255.0529

LAYTON
Phone: 801.547.1100

TOOELE
Phone: 435.843.3590

CEDAR CITY
Phone: 435.865.1453

RICHFIELD
Phone: 435.896.2983

WWW.ENSIGNENG.COM

FOR:
EDEN VALLEY OPPORTUNITY, LLC
3718 NORTH WOLF CREEK DRIVE
EDEN, UT 84310

CONTACT:
JOHN LEWIS
PHONE: 801.897.4880

COBABE RANCH 0.5 MG WATER TANK
EDEN CROSSING (PWS NO.29132)

COBABE RANCH
EDEN, UTAH

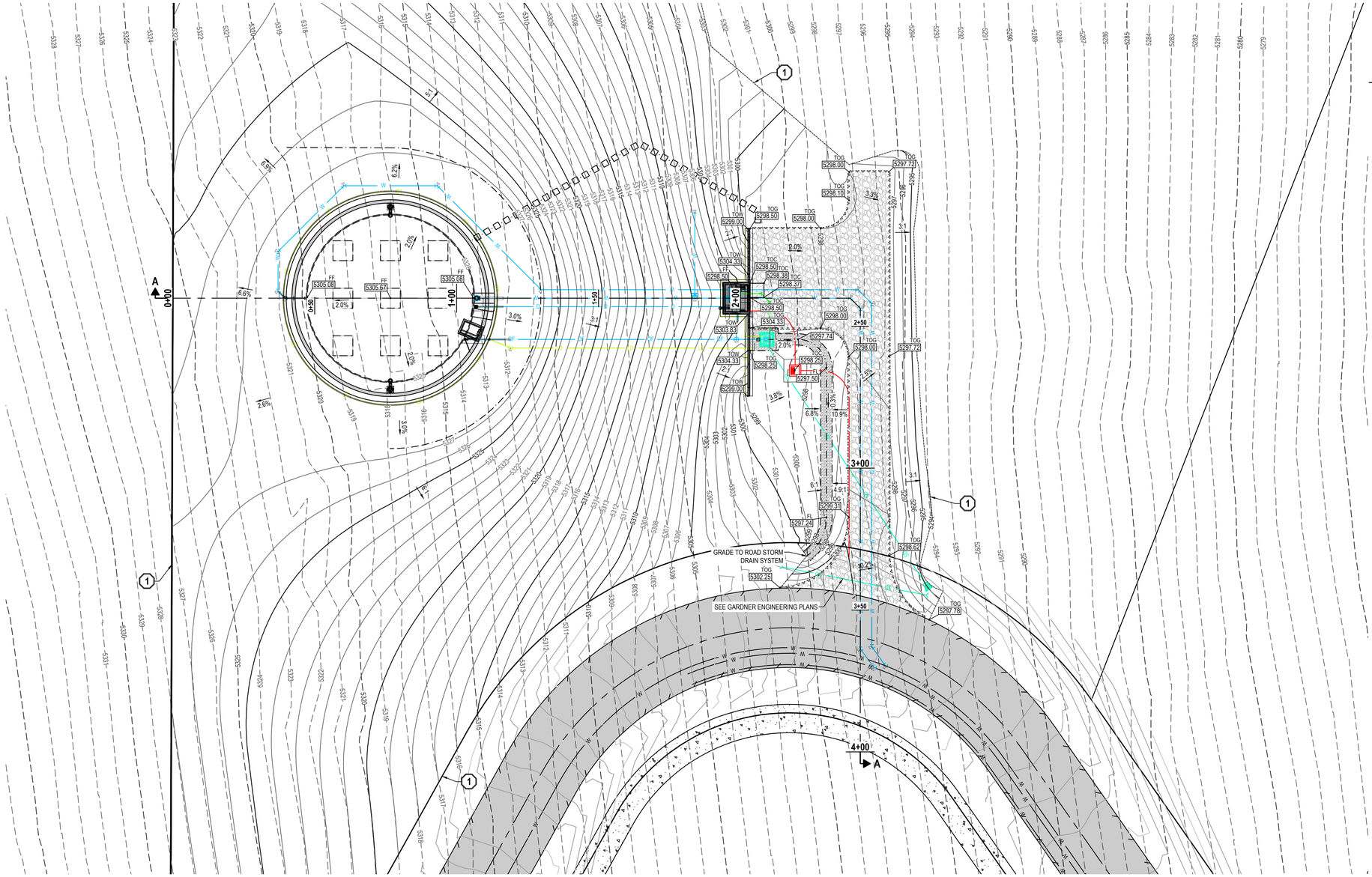
PROFESSIONAL ENGINEER
7885569-2202
ROBERT J. ROUSSELLE
EXP 5/31/2026
STATE OF UTAH

FOR CONSTRUCTION 7/9/2025

OVERALL GRADING PLAN

PROJECT NUMBER 14018A
PRINT DATE 2025-07-09
PROJECT MANAGER R. ROUSSELLE
DESIGNED BY C. DUNKEL

C-401



HORIZONTAL GRAPHIC SCALE

20 0 10 20 40

(IN FEET)
HORZ: 1 inch = 20 ft.
VERT: 1 inch = 5 ft.

GENERAL NOTES

1. ALL WORK TO COMPLY WITH THE GOVERNING AGENCY'S STANDARDS AND SPECIFICATIONS.
2. ALL IMPROVEMENTS MUST COMPLY WITH ADA STANDARDS AND RECOMMENDATIONS.
3. ALL WORK SHALL COMPLY WITH THE RECOMMENDATIONS OF THE GEOTECHNICAL ENGINEER POSSIBLY INCLUDING, BUT NOT LIMITED TO, REMOVAL OF UNCONSOLIDATED FILL, ORGANICS, AND DEBRIS, PLACEMENT OF SUBSURFACE DRAIN LINES AND GEOTEXTILE, AND OVEREXCAVATION OF UNSUITABLE BEARING MATERIALS AND PLACEMENT OF ACCEPTABLE FILL MATERIAL.
4. THE CONTRACTOR SHALL BECOME FAMILIAR WITH THE EXISTING SOIL CONDITIONS.
5. LANDSCAPED AREAS REQUIRE SUBGRADE TO BE MAINTAINED AT A SPECIFIC ELEVATION BELOW FINISHED GRADE AND REQUIRE SUBGRADE TO BE PROPERLY PREPARED AND SCARIFIED. SEE LANDSCAPE PLANS FOR ADDITIONAL INFORMATION.
6. SLOPE ALL LANDSCAPED AREAS AWAY FROM BUILDING FOUNDATIONS TOWARD CURB AND GUTTER OR STORM DRAIN INLETS.
7. EXISTING UNDERGROUND UTILITIES AND IMPROVEMENTS ARE SHOWN IN THEIR APPROXIMATE LOCATIONS BASED UPON RECORD INFORMATION AVAILABLE AT THE TIME OF PREPARATION OF THESE PLANS. LOCATIONS MAY NOT HAVE BEEN VERIFIED IN THE FIELD AND NO GUARANTEE IS MADE AS TO THE ACCURACY OR COMPLETENESS OF THE INFORMATION SHOWN. IT SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR TO DETERMINE THE EXISTENCE AND LOCATION OF THE UTILITIES SHOWN ON THESE PLANS OR INDICATED IN THE FIELD BY LOCATING SERVICES. ANY ADDITIONAL COSTS INCURRED AS A RESULT OF THE CONTRACTOR'S FAILURE TO VERIFY THE LOCATIONS OF EXISTING UTILITIES PRIOR TO THE BEGINNING OF CONSTRUCTION IN THEIR VICINITY SHALL BE BORNE BY THE CONTRACTOR AND ASSUMED INCLUDED IN THE CONTRACT. THE CONTRACTOR IS TO VERIFY ALL CONNECTION POINTS WITH THE EXISTING UTILITIES. THE CONTRACTOR IS RESPONSIBLE FOR ANY DAMAGE CAUSED TO THE EXISTING UTILITIES AND UTILITY STRUCTURES THAT ARE TO REMAIN. IF CONFLICTS WITH EXISTING UTILITIES OCCUR, THE CONTRACTOR SHALL NOTIFY THE ENGINEER PRIOR TO CONSTRUCTION TO DETERMINE IF ANY FIELD ADJUSTMENTS SHOULD BE MADE.
8. ALL STORM DRAIN INFRASTRUCTURE TO BE INSTALLED PER GOVERNING AGENCY OR APWA STANDARD PLANS AND SPECIFICATIONS.
9. ENSURE MINIMUM COVER OVER ALL STORM DRAIN PIPES PER MANUFACTURER'S RECOMMENDATIONS. NOTIFY ENGINEER IF MINIMUM COVER CANNOT BE ATTAINED.
10. ALL FACILITIES WITH DOWNSPOUTS/ROOF DRAINS SHALL BE CONNECTED TO THE STORM DRAIN SYSTEM. SEE PLUMBING PLANS FOR DOWNSPOUT/ROOF DRAIN LOCATIONS AND SIZES. ALL ROOF DRAINS TO HAVE MINIMUM 1% SLOPE.
11. THE CONTRACTOR SHALL ADJUST TO GRADE ALL EXISTING UTILITIES AS NEEDED PER LOCAL GOVERNING AGENCY'S STANDARDS AND SPECIFICATIONS.
12. NOTIFY ENGINEER OF ANY DISCREPANCIES IN DESIGN OR STAKING BEFORE PLACING CONCRETE, ASPHALT, OR STORM DRAIN STRUCTURES OR PIPES.
13. THE CONTRACTOR IS TO PROTECT AND PRESERVE ALL EXISTING IMPROVEMENTS, UTILITIES, AND SIGNS, ETC. UNLESS OTHERWISE NOTED ON THESE PLANS.

SCOPE OF WORK:

PROVIDE, INSTALL AND/OR CONSTRUCT THE FOLLOWING PER THE SPECIFICATIONS GIVEN OR REFERENCED, THE DETAILS NOTED, AND/OR AS SHOWN ON THE CONSTRUCTION DRAWINGS:

① LIMITS OF DISTURBANCE

② DAYLIGHT TO EXISTING GROUND WITH MAXIMUM 3:1 SLOPE, UNLESS NOTED OTHERWISE. REFER TO GEOTECHNICAL REPORT FOR SLOPE STABILITY REQUIREMENTS AND LIMITS.

FINAL GRADE CUT/FILL QUANTITIES

AREA / DESCRIPTION	CUT (CY)	FILL (CY)	NET (CY)	
TOPSOIL REMOVAL (6" NATIVE)	1,045	-	1,045	CUT
OVERALL SITE	121	6,872	6,751	FILL
TOPSOIL PLACEMENT (6")	-	1,440	1,440	FILL
TOTAL	1,166	8,312	7,146	FILL

- THIS TABLE DOES NOT USE A CUT/FILL FACTOR.
- QUANTITIES SHOWN DO NOT INCLUDE FINISH GRADE AT THE TANK.
- THESE QUANTITIES ARE NEAT LINE QUANTITIES. CONTRACTOR SHALL MAKE THEIR OWN DETERMINATION OF EARTHWORK QUANTITIES TO COMPLETE THE WORK.

FINAL GRADING SECTION A-A

CALL BLUESTAKES
@ 811 AT LEAST 48 HOURS
PRIOR TO THE
COMMENCEMENT OF ANY
CONSTRUCTION.

811 Know what's below. Call before you dig.

BENCHMARK

CONTROL POINT GE CAP
NEAR EAST QUARTER CORNER OF
NORTHEAST QUARTER CORNER OF SECTION
26,TOWNSHIP 7 NORTH, RANGE 1 EAST SALT
LAKE PRINCIPAL MERIDIAN

ELEV = 5321.77'

ENSIGN
THE STANDARD IN ENGINEERING

SANDY
45 W. 10000 S., Suite 500
Sandy, UT 84070
Phone: 801.255.0529

LAYTON
Phone: 801.547.1100

TOOELE
Phone: 435.843.3590

CEDAR CITY
Phone: 435.865.1453

RICHFIELD
Phone: 435.896.2983

WWW.ENSIGNENG.COM

FOR:
EDEN VALLEY OPPORTUNITY, LLC
3718 NORTH WOLF CREEK DRIVE
EDEN, UT 84310

CONTACT:
JOHN LEWIS
PHONE: 801.897.4880

COBABE RANCH 0.5 MG WATER TANK
EDEN CROSSING (PWS NO.29132)

COBABE RANCH
EDEN, UTAH

7885569-2202
ROBERT ROUSSELLE

FOR CONSTRUCTION 7/9/2025

FINAL GRADING PLAN

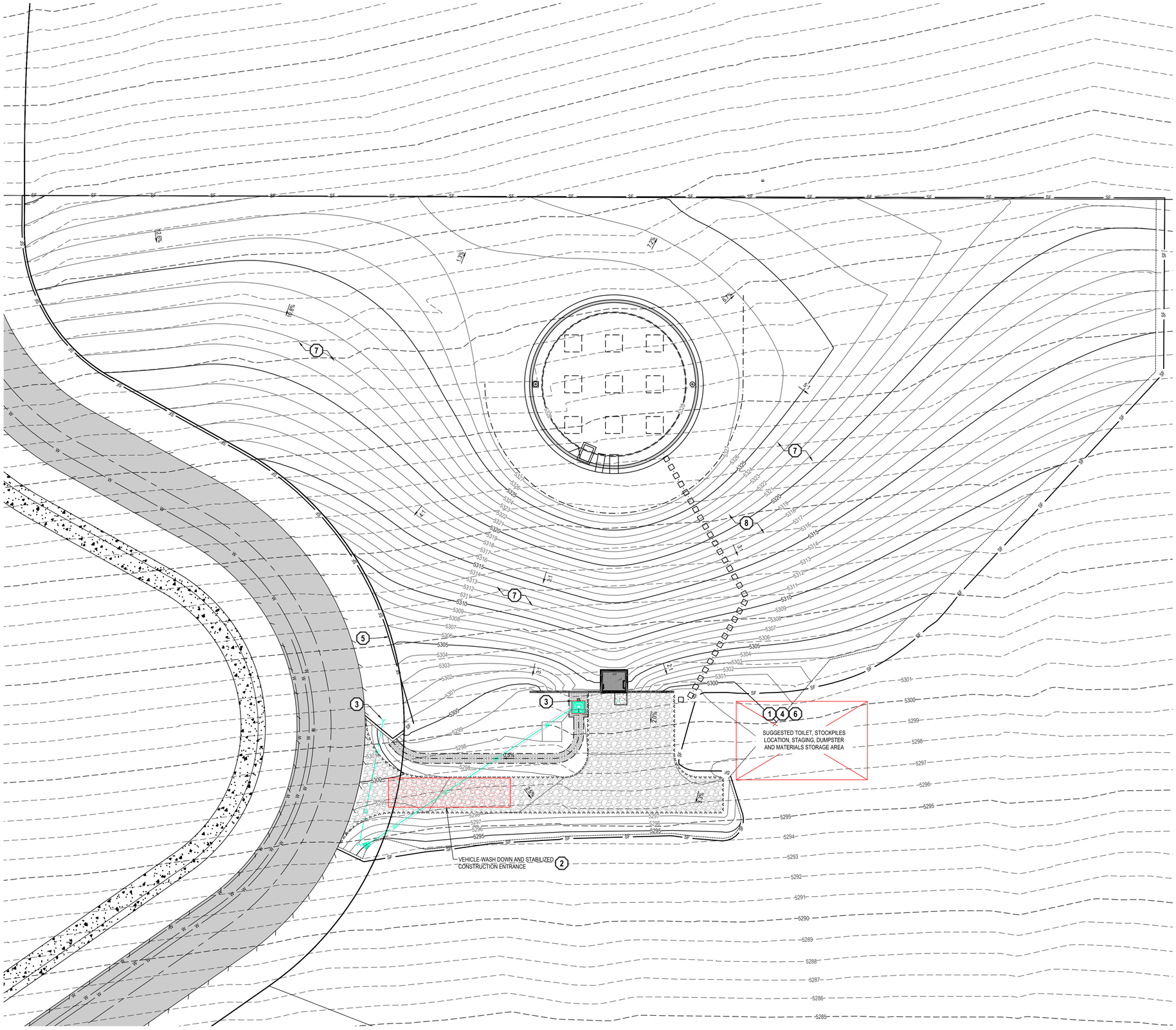
PROJECT NUMBER
14018A

PRINT DATE
2025-07-09

PROJECT MANAGER
R. ROUSSELLE

DESIGNED BY
C. DUNKEL

C-402



HORIZONTAL GRAPHIC SCALE

20 0 10 20 40

(IN FEET)
HORZ: 1 inch = 20 ft.
VERT: 1 inch = 5 ft.

GENERAL NOTES

1. THIS PLAN IS DESIGNED AS A FIRST APPRAISAL OF NECESSARY MEANS TO PROTECT THE WATERS OF THE STATE FROM POTENTIAL POLLUTION. IT IS THE RESPONSIBILITY OF THE OWNER/OPERATOR TO ADD WARRANTED BEST MANAGEMENT PRACTICES (BMP'S) AS NECESSARY, MODIFY THOSE SHOWN AS APPROPRIATE, AND DELETE FROM THE PROJECT THOSE FOUND TO BE UNNECESSARY. FEDERAL AND STATE LAW ALLOWS THESE UPDATES TO BE MADE BY THE OWNER/OPERATOR ONSITE AND RECORDED BY THE OWNER/OPERATOR ON THE COPY OF THE SWPPP KEPT ONSITE.
2. DISTURBED LAND SHALL BE KEPT TO A MINIMUM. STABILIZATION MEASURES SHALL BE INITIATED AS SOON AS PRACTICABLE IN PORTIONS OF THE SITE WHERE CONSTRUCTION ACTIVITIES HAVE TEMPORARILY OR PERMANENTLY CEASED, BUT IN NO CASE MORE THAN 14 DAYS AFTER THE CONSTRUCTION ACTIVITY IN THAT PORTION OF THE SITE HAS TEMPORARILY OR PERMANENTLY CEASED. HOWEVER, WHERE CONSTRUCTION ACTIVITY ON A PORTION OF THE SITE IS TEMPORARILY CEASED, AND EARTH DISTURBING ACTIVITIES WILL BE RESUMED WITHIN 21 DAYS, TEMPORARY STABILIZATION MEASURES DO NOT HAVE TO BE INITIATED ON THAT PORTION OF THE SITE.
3. RESEED DISTURBED LAND WITH NATIVE GRASS MIXTURE WITHIN 14 CALENDAR DAYS OF ACHIEVEMENT OF FINISH GRADE TO STABILIZE SOILS IF LAND IS NOT TO BE RE-WORKED WITHIN 14 CALENDAR DAYS OF THE CESSATION OF CONSTRUCTION ACTIVITIES AT THAT LOCATION.
4. DETAILS SHOWN ARE TO BE EMPLOYED TO PROTECT RUNOFF AS APPROPRIATE DURING CONSTRUCTION. NOT ALL DETAILS ARE NECESSARY AT ALL PHASES OF THE PROJECT. IT SHALL BE THE RESPONSIBILITY OF THE OWNER/OPERATOR TO USE APPROPRIATE BEST MANAGEMENT PRACTICES AT THE APPROPRIATE PHASE OF CONSTRUCTION. SEE SWPPP FOR BMP IMPLEMENTATION SCHEDULE.
5. VARIOUS BEST MANAGEMENT PRACTICES HAVE BEEN SHOWN ON THE PLANS AT SUGGESTED LOCATIONS. THE CONTRACTOR MAY MOVE AND RECONFIGURE THESE BMP'S TO OTHER LOCATIONS IF PREFERRED, PROVIDED THE INTENT OF THE DESIGN IS PRESERVED.
6. NOT ALL POSSIBLE BMP'S HAVE BEEN SHOWN. THE CONTRACTOR IS RESPONSIBLE TO APPLY CORRECT MEASURES TO PREVENT THE POLLUTION OF STORM WATER PER PROJECT SWPPP.
7. A UPDES (UTAH POLLUTANT DISCHARGE ELIMINATION SYSTEM) PERMIT IS REQUIRED FOR ALL CONSTRUCTION ACTIVITIES 1 ACRE OR MORE.

SCOPE OF WORK:

PROVIDE, INSTALL AND/OR CONSTRUCT THE FOLLOWING PER THE SPECIFICATIONS GIVEN OR REFERENCED, THE DETAILS NOTED, AND/OR AS SHOWN ON THE CONSTRUCTION DRAWINGS:

1. CONCRETE WASHOUT PER DETAIL 1 / C-501.
2. STABILIZED CONSTRUCTION ENTRANCE PER DETAIL 2 / C-501.
3. INLET PROTECTION PER DETAIL 3/C-501.
4. PORTABLE TOILET PER DETAIL 4 / C-501.
5. SILT FENCE PER DETAIL 5 / C-501.
6. SUGGESTED CONSTRUCTION SITE PARKING, STAGING, DUMPSTER, AND MATERIAL STORAGE AREA.
7. SLOPE TO BE SEEDED WITH SEED MIX PER DETAIL 6 / C-501 OR APPROVED BY OWNER.
8. TOPSOIL MUST BE STOCKPILED SEPARATELY PRIOR TO ANY EXCAVATION AND THEN REPLACED ON TOP OF ANY AREAS WHERE SPOILS ARE WASTED. WHERE POSSIBLE, LIMIT THE AREA OF DISTURBANCE.

811 Know what's below. Call before you dig.

CALL BLUESTAKES @ 811 AT LEAST 48 HOURS PRIOR TO THE COMMENCEMENT OF ANY CONSTRUCTION.

BENCHMARK

CONTROL POINT GE CAP
NEAR EAST QUARTER CORNER OF NORTHEAST QUARTER CORNER OF SECTION 26,TOWNSHIP 7 NORTH, RANGE 1 EAST SALT LAKE PRINCIPAL MERIDIAN

ELEV = 5321.77'

ENSIGN
THE STANDARD IN ENGINEERING

SANDY
45 W. 10000 S., Suite 500
Sandy, UT 84070
Phone: 801.255.0529

LAYTON
Phone: 801.547.1100

TOOELE
Phone: 435.843.3590

CEDAR CITY
Phone: 435.865.1453

RICHFIELD
Phone: 435.896.2983

WWW.ENSIGNENG.COM

FOR:
EDEN VALLEY OPPORTUNITY, LLC
3718 NORTH WOLF CREEK DRIVE
EDEN, UT 84310

CONTACT:
JOHN LEWIS
PHONE: 801.897.4880

COBABE RANCH 0.5 MG WATER TANK
EDEN CROSSING (PWS NO.29132)
COBABE RANCH
EDEN, UTAH

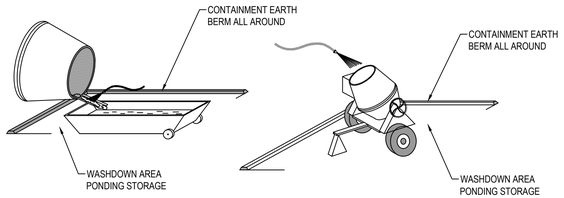
PROFESSIONAL ENGINEER
7885569-2202
ROBERT J. ROUSSELLE
EXP. 3/31/2027
STATE OF UTAH

FOR CONSTRUCTION 7/9/2025

EROSION CONTROL PLAN

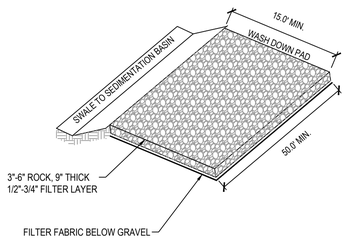
PROJECT NUMBER 14018A
PRINT DATE 2025-07-09
PROJECT MANAGER R. ROUSSELLE
DESIGNED BY C. DUNKEL

C-500



1 CONCRETE WASTE MANAGEMENT

SCALE: NONE

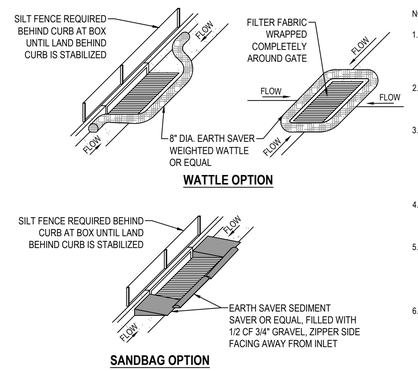


NOTE:

1. PLACE SIGN ADJACENT TO ENTRANCE " CONSTRUCTION TRAFFIC ONLY - ALL CONSTRUCTION TRAFFIC SHALL ENTER AND EXIT SITE AT THIS LOCATION"

2 STABILIZED CONSTRUCTION ENTRANCE

SCALE: NONE

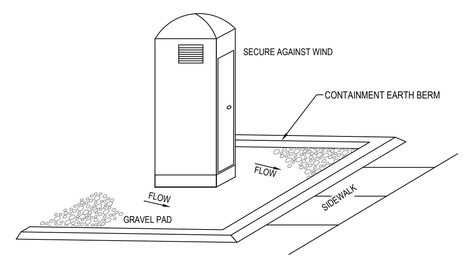


NOTES:

1. PLACE WATTLES OR GRAVEL BAGS TIGHT AGAINST CURB TO PREVENT SEDIMENT-LADEN WATER FROM GETTING BETWEEN CURB AND WATTLE/BAG.
2. PLACE WATTLES OR GRAVEL BAGS SUCH THAT FLOW DOES NOT OVERTOP CURB OR ROAD CENTERLINE.
3. INSPECT INLET PROTECTION AFTER EVERY LARGE STORM EVENT AND AT LEAST BI-WEEKLY, OR PER SWPPP REQUIREMENTS, WHICHEVER IS MORE STRINGENT, TO ENSURE THAT SEDIMENT CONTROL IS MEETING ITS DESIGN INTENT. MAINTAIN AND/OR REPLACE AS NEEDED.
4. REMOVE SEDIMENT ACCUMULATED WHEN IT REACHES 50% OF GRAVEL BAG OR WATTLE HEIGHT.
5. CONTRACTOR MAY SUBMIT AN ALTERNATIVE METHOD OF INLET PROTECTION. THE ALTERNATIVE METHOD SHALL BE APPROVED BY THE CITY INSPECTOR AND THE ENGINEER OF RECORD.
6. BEFORE PLACEMENT OF CURB, STABILIZATION OF LAND BEHIND CURB, AND/OR PAVING, MAINTAIN TOP OF INLET AT 6" ABOVE GRADE, AND SURROUND WITH SILT FENCE FOR SEDIMENTATION AROUND BOX. MAINTAIN SILT FENCE BEHIND BOX UNTIL LAND BEHIND CURB IS STABILIZED.

3 SAG INLET PROTECTION

SCALE: NONE



4 PORTABLE TOILET

SCALE: NONE

NOTES:

1. EXCAVATE 6"x6" TRENCH ALONG LIMITS OF DISTURBANCE AS SHOWN ON CONSTRUCTION DRAWINGS.
2. POSTS SHALL BE POSITIONED ON DOWNSTREAM SIDE OF FENCE.
3. LAY TOE-IN FABRIC FLAP IN BOTTOM OF TRENCH. BACKFILL TRENCH WITH FREE DRAINING GRANULAR MATERIAL. COMPACT TRENCH TO SATISFACTION OF THE ENGINEER OF RECORD.
4. SILT FENCE GEOTEXTILE SHALL MEET AASHTO M288-92 REQUIREMENTS.
5. REMOVE & DISPOSE OF SEDIMENT WHEN ACCUMULATION IS 50% OF EXPOSED FENCE HEIGHT.
6. 10' MAX. SPACING BETWEEN STAKES.
7. SILT FENCES SHALL BE INSTALLED ALONG CONTOURS, NOT UP AND DOWN SLOPES, WITH 10' OVERLAP AT BREAKS.

5 TEMPORARY SILT FENCE

SCALE: NONE

SEED MIX SPECIFICATION (RECOMMENDED):

SEED MIX : 25 LB./ACRE MIX OF CABIN BLEND, PER SUPPLIER'S RECOMMENDATIONS. (AVAILABLE FROM *GRANITE SEED*, LEHI, UTAH)

SPECIES	PLS (LBS./ACRE)	% BY WEIGHT	% BY SEEDS
MOUNTAIN BROME (BROMUS MARGINATUS)	7.5	30	9.0
SLENDER WHEATGRASS (ELYMUS TRACHYCAULUS SSP. TRACHYCAULUS)	6.25	25	18.6
SANDBERG BLUEGRASS (POA SECUNDA SSP. SANDBERGII)	1.25	5	24.5
IDAHO FESCUE (FESTUCA IDAHOENSIS)	1.25	5	10.5
WESTERN WHEATGRASS (PASCOPYRUM SMITHII)	5	20	10.3
BIG BLUEGRASS (POA SECUNDA SSP. AMPLA)	1.25	5	20.6
BLUEBUNCH WHEATGRASS (PSEUDOROEGNERIA SPIC ATA SSP. SPICATA)	2.5	10	6.5
TOTAL	25	100	100.0

BROADCAST METHOD

A. SEEDING OF NON-IRRIGATED AREAS IS REQUIRED ON OR AFTER OCTOBER 15, BUT BEFORE SNOW ACCUMULATES.
B. USE THE BROADCAST METHOD OF SEEDING UNDER THE FOLLOWING CONDITIONS:
   1. SLOPES STEEPER THAN 3:1, THAT REQUIRE GEOTEXTILE.
   2. SLOPES 3:1 AND FLATTER WHERE THE AREA TO BE SEEDED IS INACCESSIBLE TO DRILL.
   3. WHERE THE AREA TO BE SEEDED IS NOT LARGE ENOUGH TO JUSTIFY USING A DRILL.
   4. WHERE ROCKY SURFACE CONDITIONS WOULD DAMAGE A DRILL.
B. OBTAIN APPROVAL OF THE BROADCAST METHOD BY DEMONSTRATING THE PROCEDURE ON A 100 YD^2 AREA.
C. EVENLY BROADCAST SEED USING EITHER:
   1. A CYCLONE SEEDER OR OTHER APPROVED MECHANICAL SEEDER.
   2. A HYDROSEEDER
      a) APPLY SEED, WATER AND 300 LB OF CELLULOSE FIBER MULCH (TRACER) PER ACRE.
D. DO NOT SEED DURING WINDY WEATHER OR WHEN SOIL IS SATURATED.
E. INCORPORATE THE SEED INTO THE SOIL BY ONE OF THREE METHODS:
   1. CAT-TRACKING, RUNNING THE DOZER UP AND DOWN THE SLOPE, CREATING CONTINUOUS CLEAT TRACKS THAT RUN PARALLEL WITH THE CONTOURS.
   2. HAND RAKING THE SEED IN 1/2 INCH DEEP AND ALONG THE CONTOURS OF THE SLOPE. SLOPE CHAINING BY PULLING THE CHAIN ALONG THE CONTOUR UNTIL THE SEED IS COVERED
F. OBTAIN APPROVAL FROM THE ENGINEER THAT THE SEED HAS BEEN ADEQUATELY INCORPORATED INTO THE SOIL BEFORE APPLYING MULCH, BLANKET, OR OTHER TOPDRESSING.

6 SEED MIX SPECIFICATION

SCALE: NONE

ENSIGN
THE STANDARD IN ENGINEERING

SANDY
45 W. 10000 S., Suite 500
Sandy, UT 84070
Phone: 801.255.0529

LAYTON
Phone: 801.547.1100

TOOELE
Phone: 435.843.3590

CEDAR CITY
Phone: 435.865.1453

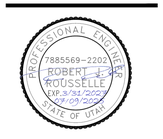
RICHFIELD
Phone: 435.896.2983

WWW.ENSIGNENG.COM

FOR:
EDEN VALLEY OPPORTUNITY, LLC
3718 NORTH WOLF CREEK DRIVE
EDEN, UT 84310

CONTACT:
JOHN LEWIS
PHONE: 801.897.4880

COBABE RANCH 0.5 MG WATER TANK
EDEN CROSSING (PWS NO.29132)
COBABE RANCH
EDEN, UTAH

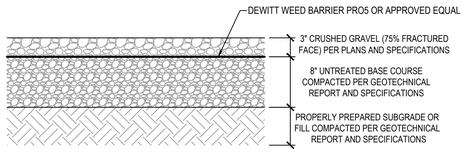


FOR CONSTRUCTION 7/9/2025

EROSION CONTROL DETAILS

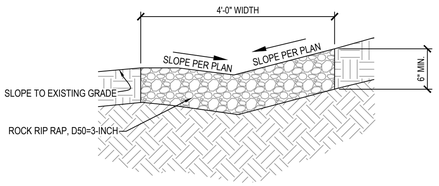
PROJECT NUMBER	PRINT DATE
14016A	2025-07-09
PROJECT MANAGER	DESIGNED BY
R. ROUSSELLE	C. DUNKEL

C-501



1 GRAVEL SECTION

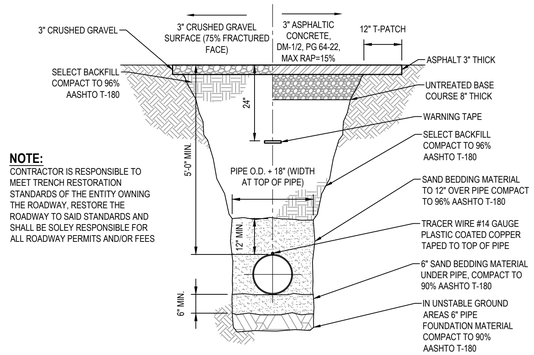
SCALE: NONE



NOTES:
1. PROTECT CHANNEL FROM EROSION AS NECESSARY WITH RIP RAP, EROSION CONTROL MATS AND /OR ROCK CHECK DAMS
2. SEDIMENT TRAPS REQUIRED AT 200' SPACING OR AS SHOWN ON PLANS, WHICHEVER IS MORE STRINGENT.
3. FOR SWALES STEEPER THAN 5%, STABILIZE SWALES WITH RIP RAP LINING IN SWALE AND ROCK CHECK DAMS SPACED AT EVERY THREE FEET OF DROP IN FLOWLINE.

2 DRAINAGE FLOW LINE RIP RAP

SCALE: NONE

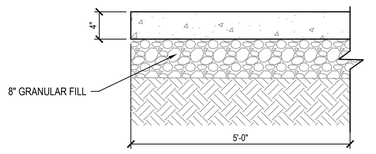


NOTE:
CONTRACTOR IS RESPONSIBLE TO MEET TRENCH RESTORATION STANDARDS OF THE ENTITY OWNING THE ROADWAY, RESTORE THE ROADWAY TO SAID STANDARDS AND SHALL BE SOLEY RESPONSIBLE FOR ALL ROADWAY PERMITS AND/OR FEES

NOTES:
1. WATER & SEWER LINES SHALL BE INSTALLED A MINIMUM OF 10 HORIZONTAL FEET FROM EACH OTHER.
2. WHERE A WATER LINE AND SEWER LINE MIST CROSS, THE WATER LINE SHALL BE AT LEASE 18" ABOVE THE SEWER LINE.
3. SEPARATION DISTANCES ARE TO BE MEASURED EDGE TO EDGE.
4. WATER LINES SHALL NOT BE INSTALLED IN THE SAME TRENCH WITH EITHER SEWER OR SECONDARY PIPES.
5. IF THESE STANDARDS CANNOT BE MET AN EXCEPTION TO THE STANDARD MAY BE POSSIBLE. THE ENTITY SEEKING THE EXCEPTION SHALL INITIATE AND PURSUE A REQUIEST FOR A SEPARATION EXEPTION WITH THE STATE DIVISION OF DRINKING WATER IN ACCORDANCE WITH R309-550-7 OF THE STATE OF UTAH ADMINISTRATIVE RULES.

3 TYPICAL TRENCH SECTION

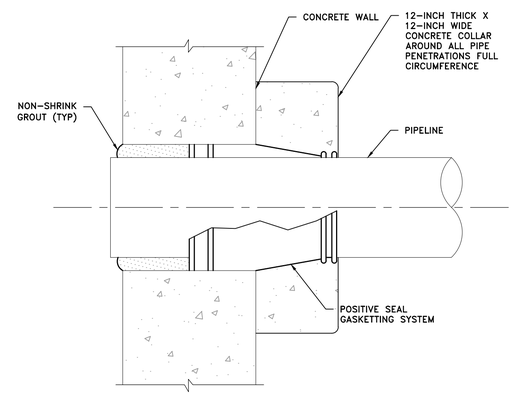
SCALE: 1/2" = 1'-0"



NOTES:
1. CONTRACTOR SHALL PROVIDE CONTROL JOINTS EVERY 5 FEET AND EXPANSION JOINTS EVERY 20 FEET.
2. SIDEWALK ADJACENT TO STRUCTURES SHALL HAVE 2% CROSS SLOPE AWAY FROM STRUCTURE UNLESS OTHERWISE NOTED.

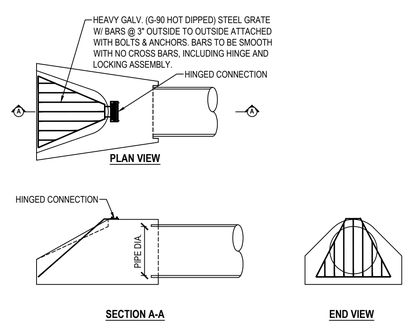
4 TYPICAL CONCRETE APRON DETAIL

SCALE: NONE



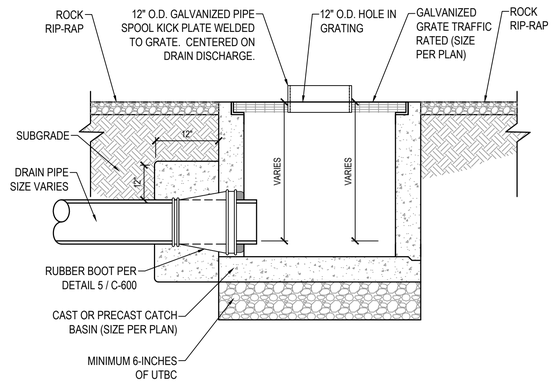
5 RUBBER BOOT

SCALE: NONE



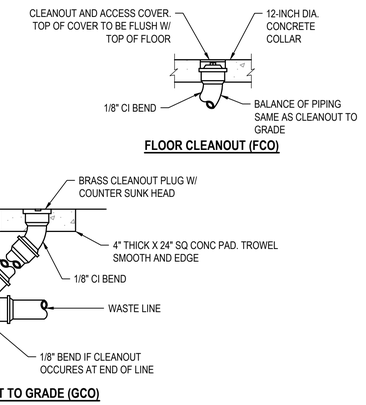
6 TRASH RACK GRATE, FLARED END SECTION

SCALE: NONE



7 STORM DRAIN CLEANOUT BOX

SCALE: NONE



8 TYPICAL GRAVITY CLEANOUT DETAIL

SCALE: NONE

ENSIGN
THE STANDARD IN ENGINEERING

SANDY
45 W. 10000 S., Suite 500
Sandy, UT 84070
Phone: 801.255.0529

LAYTON
Phone: 801.547.1100

TOOELE
Phone: 435.843.3590

CEDAR CITY
Phone: 435.865.1453

RICHFIELD
Phone: 435.896.2983

WWW.ENSIGNENG.COM

FOR:
EDEN VALLEY OPPORTUNITY, LLC
3718 NORTH WOLF CREEK DRIVE
EDEN, UT 84310

CONTACT:
JOHN LEWIS
PHONE: 801.897.4880

COBABE RANCH 0.5 MG WATER TANK
EDEN CROSSING (PWS NO.29132)
COBABE RANCH
EDEN, UTAH

FOR CONSTRUCTION 7/9/2025

CIVIL DETAILS

PROJECT NUMBER 14018A
PRINT DATE 2025-07-09
PROJECT MANAGER R. ROUSSELLE
DESIGNED BY C. DUNKEL

C-600

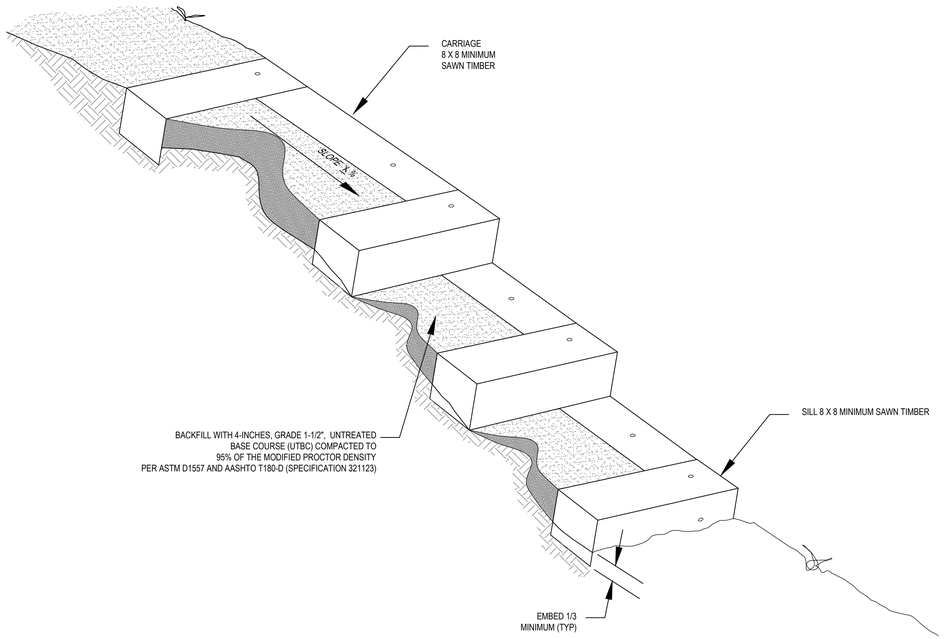
OVERLAPPING TIMBER STEP

TYPICAL ID	MATERIAL TYPE	OVERALL LENGTH	OVERALL WIDTH	STEP RUN	COMMENTS
OTS-1	M 1	5-FT	6-FT	12-IN	N/A
OTS-2	M 1	5-FT	6-FT	12-IN	N/A
OTS-3	M 1	5-FT	6-FT	12-IN	N/A
OTS-4	M 1	4-FT	6-FT	12-IN	N/A

N/A WHEN NOT APPLICABLE

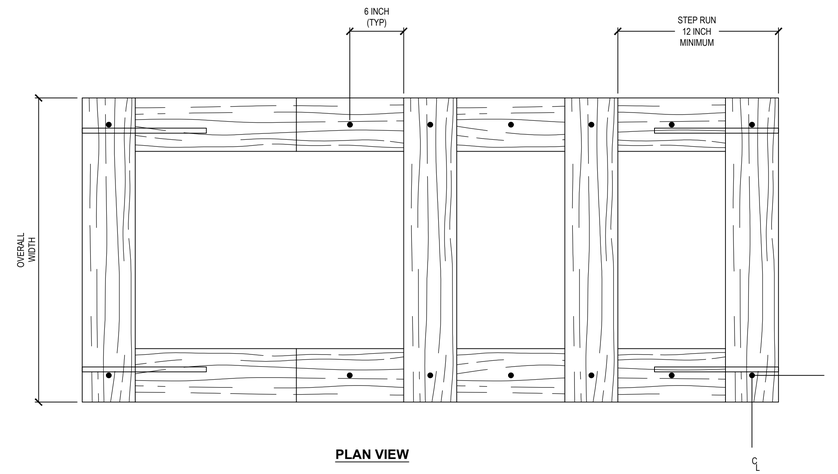
NOTES:

1. PRE-DRILL HOLES FOR REBAR AND PINS TO PREVENT SPLITTING OF LOGS.
2. RECESS END OF REBAR 1/2 INCH BELOW TOP OF TIMBER.
3. COMPACT BACKFILL IN 6 INCH LIFTS UNTIL NO VISUAL DISPLACEMENT.
4. ALL FIELD DRILLED HOLES AND CUTS SHALL BE FIELD TREATED.
5. REMOVE AND DISPOSE OF DUFF AND TOP ORGANIC LAYERS DOWN TO MINERAL SOIL.
6. MINIMUM OVERLAP OF BOTTOM CARRIAGE IS THE SAME AS THE STEP RUN LENGTH.
7. RISERS AND CARRIAGES SHALL BE THE SAME DIMENSIONS.
8. TIMBERS SHALL BE 8X8 CEDAR CLEAR GRADE:
   NLGA 203 b,c OR BETTER
   WCLIB 150 b,c OR BETTER
9. APPLY CEDAR STAIN TO POST PRIOR TO INSTALLATION.
10. IF POSTS ARE NOT CEDAR, THEY SHALL BE TREATED IN ACCODANCE WITH THE CURRENT AMERICAN WOOD PROTECTION ASSOCIATION (AWPA) SPECIFICAITON LISTED IN THE TABLE BELOW.
11. REFER TO SPECIFICATION 064314 FOR ADDITIONAL INFORMATION.

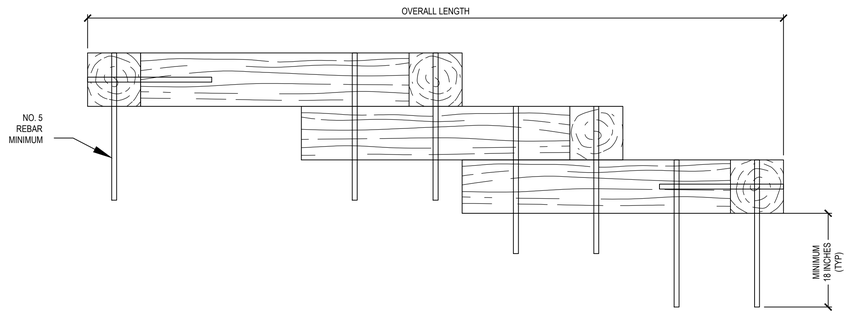


MATERIAL TYPE

TYPE	MATERIAL	SIZE	SPECIES/ GRADE	PRESERV. TYPE	COMMENTS
M1	SAWN TIMBER	8X8	DOUGLAS FIR/#2	WB	N/A



PLAN VIEW



ELEVATION VIEW

PRESERVATIVE TREATMENT - (REFER TO AWPA USE CATEGORY SYSTEM)			
PRESERVATIVE TYPE	TREATMENT TYPE	USE CATEGORY	COMMENTS
P1	WB	UC4B	N/A

TREATMENT TYPE

WB = WATERBORNE

OT = OIL-BORNE

USE CATEGORY

UC3B = ABOVE GROUND -EXPOSED

UC4A = GROUND CONTACT -GENERAL USE

UC4B = GROUND CONTACT -HEAVY DUTY

1 OVERLAPPING TIMBER STEPS DETAIL

SCALE: NONE

ENSIGN
THE STANDARD IN ENGINEERING

SANDY
45 W. 10000 S., Suite 500
Sandy, UT 84070
Phone: 801.255.0529

LAYTON
Phone: 801.547.1100

TOOELE
Phone: 435.843.3590

CEDAR CITY
Phone: 435.865.1453

RICHFIELD
Phone: 435.896.2983

WWW.ENSIGNENG.COM

FOR:
EDEN VALLEY OPPORTUNITY, LLC
3718 NORTH WOLF CREEK DRIVE
EDEN, UT 84310

CONTACT:
JOHN LEWIS
PHONE: 801.897.4880

COBABE RANCH 0.5 MG WATER TANK
EDEN CROSSING (PWS NO.29132)
COBABE RANCH
EDEN, UTAH

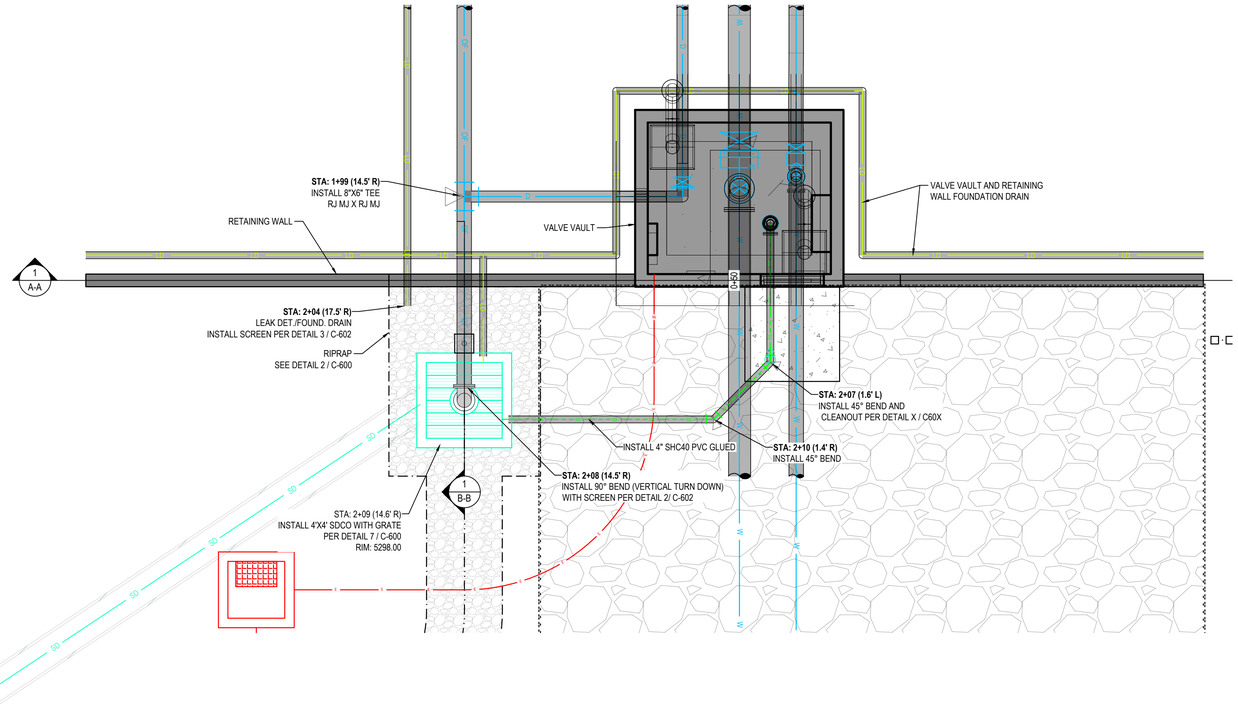
PROFESSIONAL ENGINEER
7885569-2202
ROBERT J. ROUSSELLE
EXP. 3/31/2027
07-09-2025
STATE OF UTAH

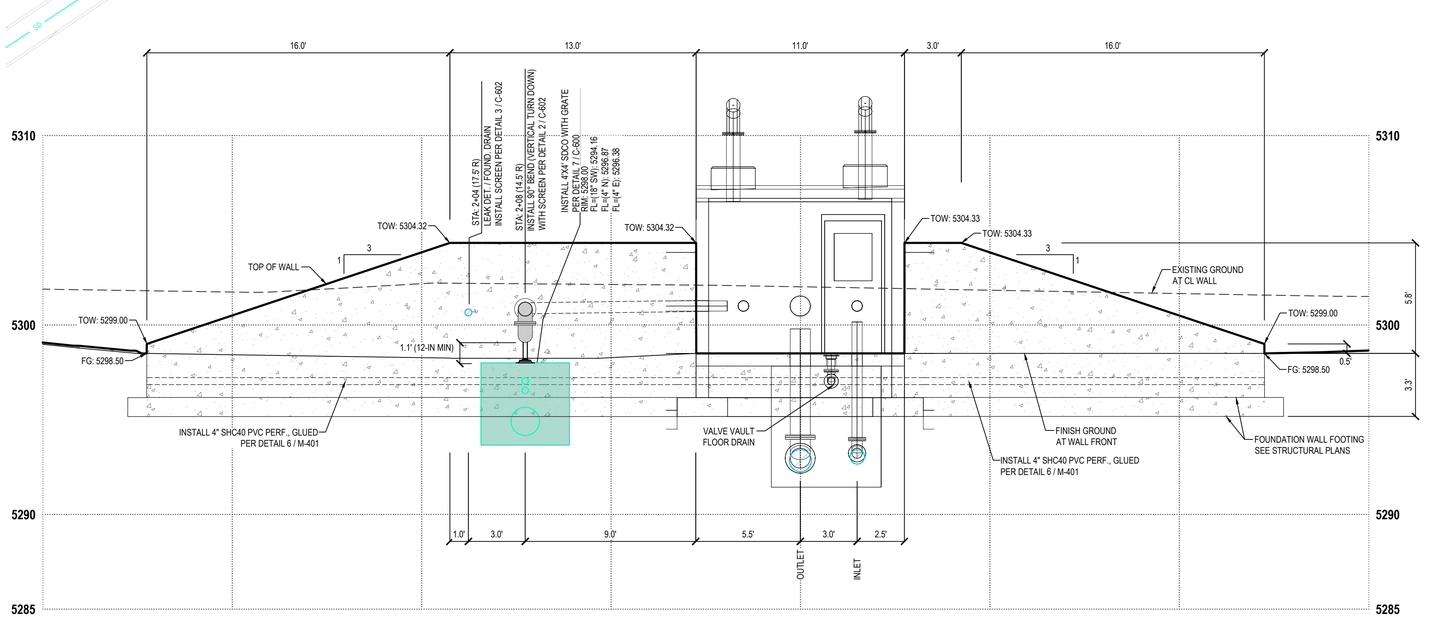
FOR CONSTRUCTION 7/9/2025

CIVIL DETAILS

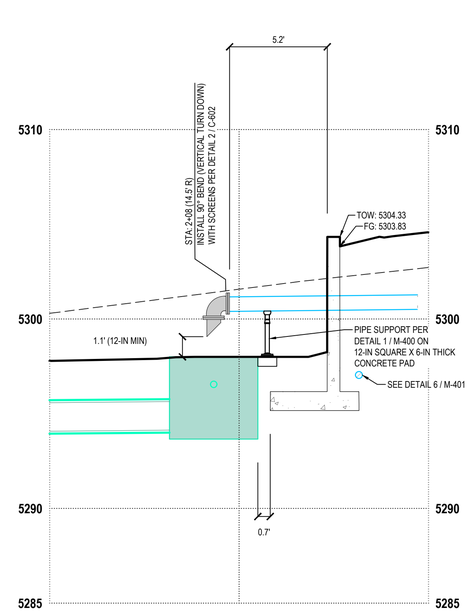
PROJECT NUMBER 14018A
PRINT DATE 2025-07-09
PROJECT MANAGER R. ROUSSELLE
DESIGNED BY C. DUNKEL

C-601



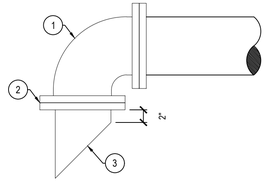


HEADWALL SECTION A-A



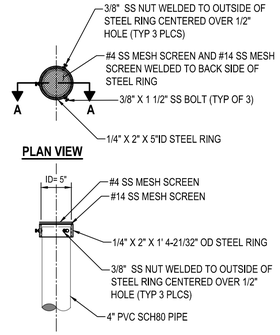
HEADWALL SECTION B-B

1 VALVE VAULT RETAINING WALL
SCALE: 1/8" = 1'



OVERFLOW DISCHARGE FITTINGS SCHEDULE					
ID	SIZE	SHORT DESCRIPTION	MATERIAL	FITTING	REMARKS
1	8"	90° BEND	DI	FL X FL	
2	8"	NO. 4 MESH SCREEN	SS	FL	INSERT BETWEEN FLANGES
3	8"	PIPE SPOOL	DI	FL	CUT @ 45° ANGLE

2 TANK OVERFLOW DISCHARGE
SCALE: NONE



SECTION A-A

NOTE:

PAINT EXPOSED PVC WITH LIGHT COLORED ACRYLIC OR LATEX PAINT.

3 TYPICAL 4 INCH DIA MESH SCREEN
SCALE: NONE

ENSIGN
THE STANDARD IN ENGINEERING

SANDY
45 W. 10000 S., Suite 500
Sandy, UT 84070
Phone: 801.255.0529

LAYTON
Phone: 801.547.1100

TOOELE
Phone: 435.843.3590

CEDAR CITY
Phone: 435.865.1453

RICHFIELD
Phone: 435.896.2983

WWW.ENSIGNENG.COM

FOR:
EDEN VALLEY OPPORTUNITY, LLC
3718 NORTH WOLF CREEK DRIVE
EDEN, UT 84310

CONTACT:
JOHN LEWIS
PHONE: 801.897.4880

COBABE RANCH 0.5 MG WATER TANK
EDEN CROSSING (PWS NO.29132)
COBABE RANCH
EDEN, UTAH

FOR CONSTRUCTION 7/9/2025

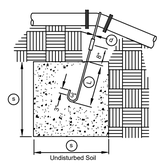
CIVIL DETAILS

PROJECT NUMBER	PRINT DATE
14018A	2025-07-09
PROJECT MANAGER	DESIGNED BY
R. ROUSSELLE	C. DUNKEL

C-602

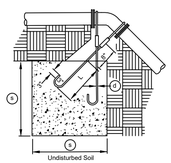
Tie-down thrust restraints

1. GENERAL
   - A. Thrust design for pipe sizes or configurations not shown require special design.
   - B. Bearing areas, volumes, and special thrust blocking details shown on Drawings take precedence over this plan.
   - C. Restraint sizing is based upon a maximum operating pressure of 150 psi and a test pressure of 200 psi, and a minimum soil bearing strength of 2,000 psf. Operating pressures in excess of 150 psi or soils with less than 2,000 pound bearing strength will require special design.
   - D. Before backfilling around thrust block, secure inspection of installation by ENGINEER
2. PRODUCTS
   - A. Base Course: Untreated base course, APWA Section 32 11 23. Do not use gravel as a base course without ENGINEER's permission.
   - B. Backfill: Common fill, APWA Section 31 05 13. Maximum particle size 2-inches.
   - C. Concrete: Class 4,000 minimum, APWA Section 03 30 04.
   - D. Reinforcement: Deformed, steel, ASTM A615. Give bars an epoxy coating at least 15 mils thick. Minimum stress yield strength of steel tie-down bars is 60 ksi.
   - E. Grease: Non-oxide poly-FM.
3. EXECUTION
   - A. Pour concrete against undisturbed soil. Concrete must be allowed to cure in thrust restraints for 5 days before pressurizing water lines or have additional approved thrust restraints installed before pressurizing the water line.
   - B. Pipe Joints: Do not cover with concrete. Leave completely accessible.
   - C. Grease: Apply grease to all buried metal surfaces. Wrap the pipe with polyethylene sheet encasement per AWWA C105 (and tape wrap) to act as a bond breaker.
   - D. Locking restraint devices may be used in conjunction with concrete thrust blocking (at discretion of ENGINEER).
   - E. Base Course and Backfill Placement: Maximum lift thickness is 8-inches before compaction. Compaction is 95 percent or greater relative to a modified proctor density, APWA Section 31 23 26.



Type A Restraint

For 11.25° - 22.5° Vertical Bends



Type B Restraint

For 45° Vertical Bends

Table of Dimensions

Pipe Size Nominal Diameter - Inch	Vertical Bend In Degrees	Concrete Blocking In Cubic Feet	S Side of Cube - Feet	d Nominal Bar Size	L Depth of Rod Concrete - Feet
4"	11.25°	5.07	1.72	3	1.5
	22.5°	9.95	2.15	3	2.0
6"	11.25°	11.41	2.25	3	2.0
	22.5°	22.39	2.82	3	2.0
8"	11.25°	20.29	2.73	3	2.0
	22.5°	39.80	3.41	3	2.0
12"	11.25°	45.65	3.57	3	2.0
	22.5°	89.55	4.47	3	3.0
16"	11.25°	81.16	4.33	3	3.0
	22.5°	159.19	5.42	3	3.0
18"	11.25°	102.71	4.68	3	3.0
	22.5°	201.48	5.86	3	3.0
20"	11.25°	126.81	5.02	3	3.5
	22.5°	248.74	6.29	3	4.0
24"	11.25°	182.60	5.67	3	4.0
	22.5°	358.18	7.10	4	4.0
30"	11.25°	285.31	6.58	3	4.0
	22.5°	559.66	8.24	5	4.0

Table of Dimensions

Pipe Size Nominal Diameter - Inch	Vertical Bend In Degrees	Concrete Blocking In Cubic Feet	S Side of Cube - Feet	d Nominal Bar Size	L Depth of Rod Concrete - Feet
4"	45°	18.38	2.64	3	2.0
6"	45°	41.36	3.46	3	2.5
8"	45°	73.54	4.19	3	3.0
12"	45°	165.46	5.49	3	4.0
16"	45°	294.15	6.65	4	4.0
18"	45°	372.28	7.19	4	4.0
20"	45°	459.61	7.72	4	4.0
24"	45°	661.84	8.71	4	4.0
30"	45°	1034.12	10.11	6	4.0

APWA Utah Chapter

Tie-down
Thrust Restraints

Plan
562
Revised January 2025

ENSIGN
THE STANDARD IN ENGINEERING

SANDY
45 W. 10000 S., Suite 500
Sandy, UT 84070
Phone: 801.255.0529

LAYTON
Phone: 801.547.1100

TOOELE
Phone: 435.843.3590

CEDAR CITY
Phone: 435.865.1453

RICHFIELD
Phone: 435.896.2983

WWW.ENSIGNENG.COM

FOR:
EDEN VALLEY OPPORTUNITY, LLC
3718 NORTH WOLF CREEK DRIVE
EDEN, UT 84310

CONTACT:
JOHN LEWIS
PHONE: 801.897.4880

COBABE RANCH 0.5 MG WATER TANK
EDEN CROSSING (PWS NO.29132)
COBABE RANCH
EDEN, UTAH

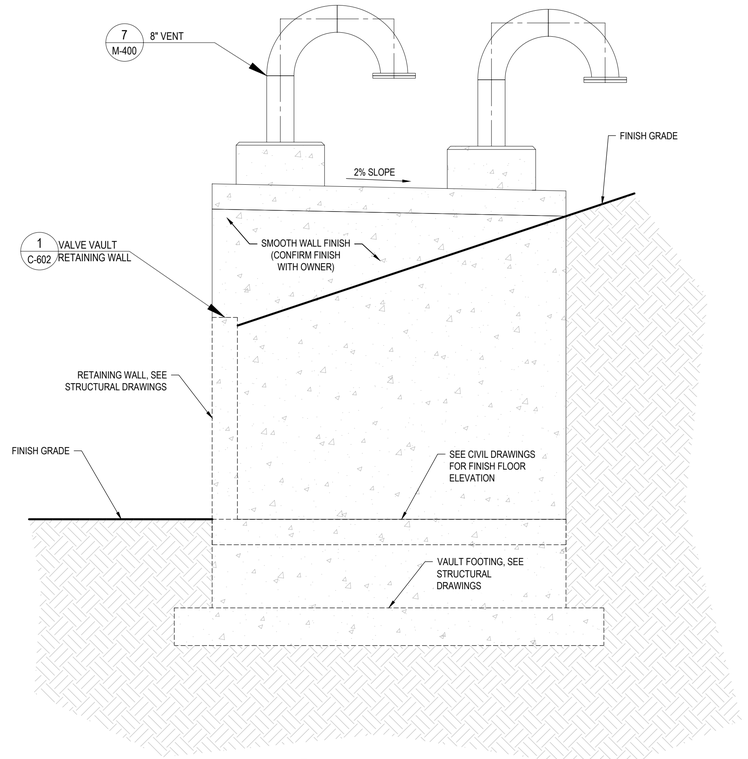
PROFESSIONAL ENGINEER
7885569-2202
ROBERT J. ROUSSELLE
EXP. 3/31/2025
EXP. 09/2026
STATE OF UTAH

FOR CONSTRUCTION 7/9/2025

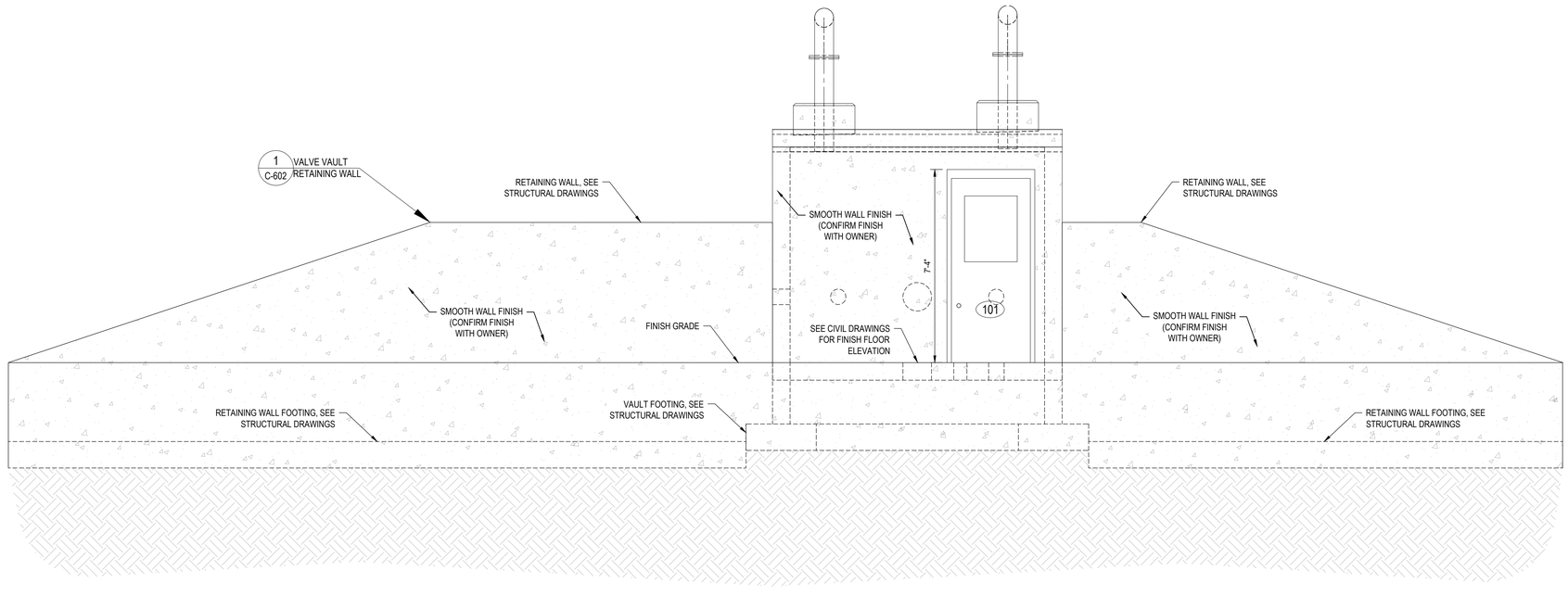
CIVIL DETAILS

PROJECT NUMBER 14018A
PRINT DATE 2025-07-09
PROJECT MANAGER R. ROUSSELLE
DESIGNED BY C. DUNKEL

C-603



1 **EAST ELEVATION**
SCALE: 1/2" = 1'-0"



2 **SOUTH ELEVATION**
SCALE: 3/8" = 1'-0"

ENSIGN
THE STANDARD IN ENGINEERING

SANDY
45 W. 10000 S., Suite 500
Sandy, UT 84070
Phone: 801.255.0529

LAYTON
Phone: 801.547.1100

TOOELE
Phone: 435.843.3590

CEDAR CITY
Phone: 435.865.1453

RICHFIELD
Phone: 435.896.2983

WWW.ENSIGNENG.COM

FOR:
EDEN VALLEY OPPORTUNITY, LLC
3718 NORTH WOLF CREEK DRIVE
EDEN, UTAH 84310

CONTACT:
JOHN LEWIS
PHONE: 801.897.4880

COBABE RANCH 0.5 MG WATER TANK
EDEN CROSSING (PWS NO. 29132)
COBABE RANCH
EDEN, UTAH

PROFESSIONAL ENGINEER
7885569-2202
ROBERT J. ROUSSELLE
EXP. 5/31/2027
07/09/2025
STATE OF UTAH

FOR CONSTRUCTION 7/9/2025

VALVE VAULT SOUTH AND EAST ELEVATIONS

PROJECT NUMBER	PRINT DATE
14018A	2025-07-09
PROJECT MANAGER	DESIGNED BY
R. ROUSSELLE	D. COOPER

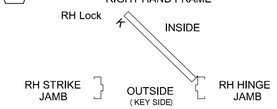
A-100

DOOR SCHEDULE									
VALVE VAULT									
TAG#	TYPE	SIZE	HINGE	CLOSER	LOCKSET	KICKPLATE	DOOR STOP	THRESHOLDS	DESCRIPTION
101	B	3'-0" X 7'-0"	C	YES	SEE SPECIFICATION 08 71 00	YES	YES	YES	INSULATED METAL DOOR W/ EXIT DEVICE

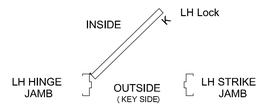
HINGE AND SWING SCHEDULE

K = KEY SIDE OF THE ACTIVE DOOR

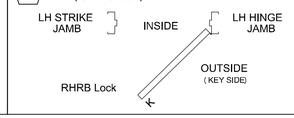
A RIGHT HAND DOOR (SWING IN)
RIGHT HAND FRAME



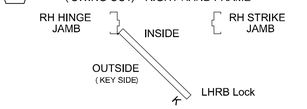
B LEFT HAND DOOR (SWING IN)
LEFT HAND FRAME



C RIGHT HAND REVERSE BEVEL DOOR
(SWING OUT) LEFT HAND FRAME



D LEFT HAND REVERSE BEVEL DOOR
(SWING OUT) RIGHT HAND FRAME



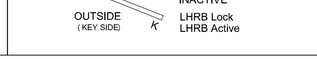
E PAIR OF DOOR - LH ACTIVE (SWING IN)
DOUBLE DOOR FRAME - LH ACTIVE

LH Lock
LH Active

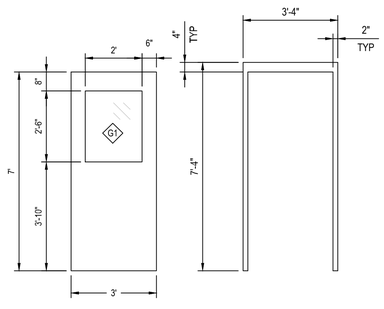
F PAIR OF DOOR - RH ACTIVE (SWING IN)
DOUBLE DOOR FRAME - RH ACTIVE

RH Lock
RH Active

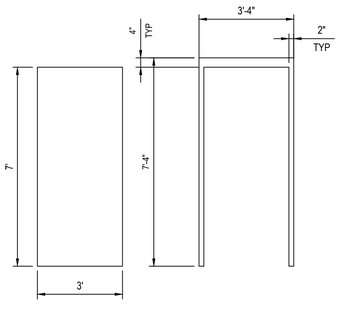
G PAIR OF DOOR - LHRB ACTIVE (SWING OUT)
DOUBLE DOOR FRAME - RH ACTIVE



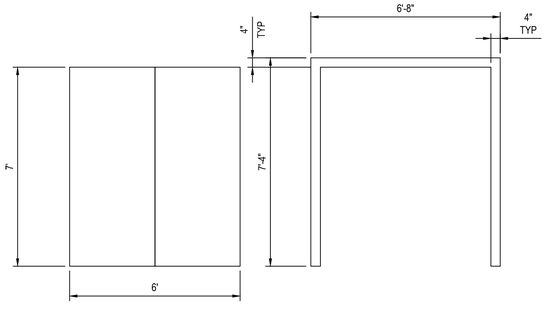
H PAIR OF DOOR - RHRB ACTIVE (SWING OUT)
DOUBLE DOOR FRAME - LH ACTIVE



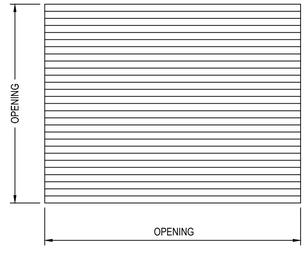
TYPE A **METAL W/ WINDOW**
METAL FRAME



TYPE B METAL W/OUT WINDOW
METAL FRAME



TYPE C METAL W/OUT WINDOW
METAL FRAME



TYPE D ROLL-UP OVERHEAD DOOR
INTERIOR FACE MOUNTED DOOR
12' W X 10' H OPENING

NOTE:

DIMENSIONS ON DOORS MAY VARY ACCORDING TO MANUFACTURER

DOOR SCHEDULE

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

ENSIGN
THE STANDARD IN ENGINEERING

SANDY
45 W. 10000 S., Suite 500
Sandy, UT 84070
Phone: 801.255.0529

LAYTON
Phone: 801.547.1100

TOOELE
Phone: 435.843.3590

CEDAR CITY
Phone: 435.865.1453

RICHFIELD
Phone: 435.896.2983

WWW.ENSIGNENG.COM

FOR:
EDEN VALLEY OPPORTUNITY, LLC
3718 NORTH WOLF CREEK DRIVE
EDEN, UTAH 84310

CONTACT:
JOHN LEWIS
PHONE: 801.897.4880

COBABE RANCH 0.5 MG WATER TANK
EDEN CROSSING (PWS NO. 29132)
COBABE RANCH
EDEN, UTAH

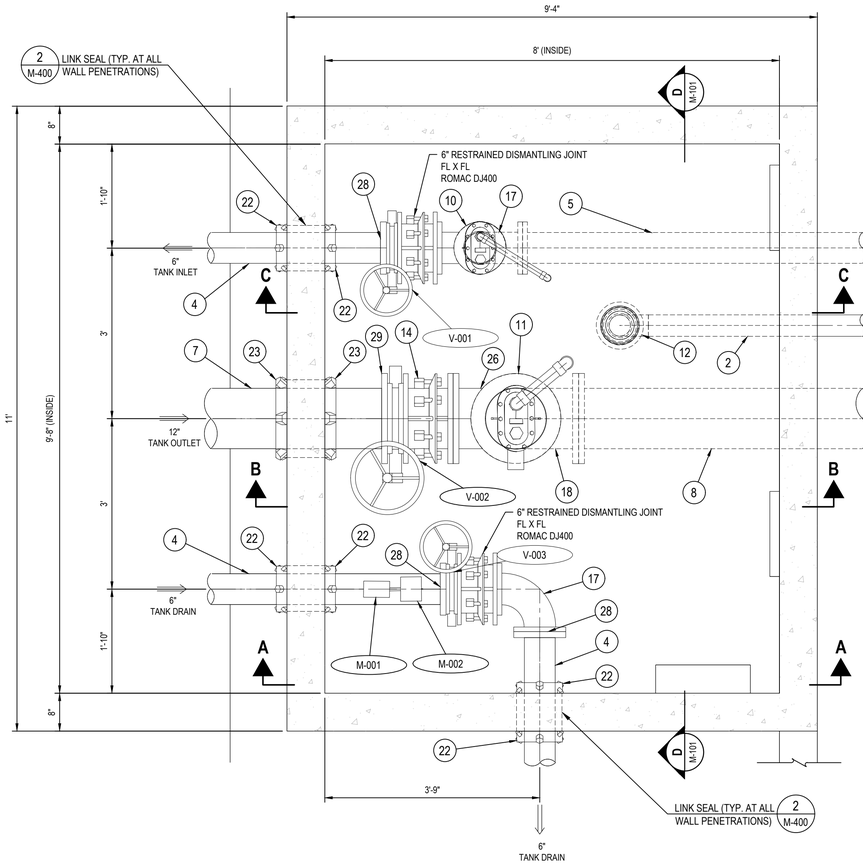
PROFESSIONAL ENGINEER
7885569-2202
ROBERT J. ROUSSELLE
EXP. 5/31/2027
07/09/2025
STATE OF UTAH

FOR CONSTRUCTION 7/9/2025

DOOR AND FINISH SCHEDULE

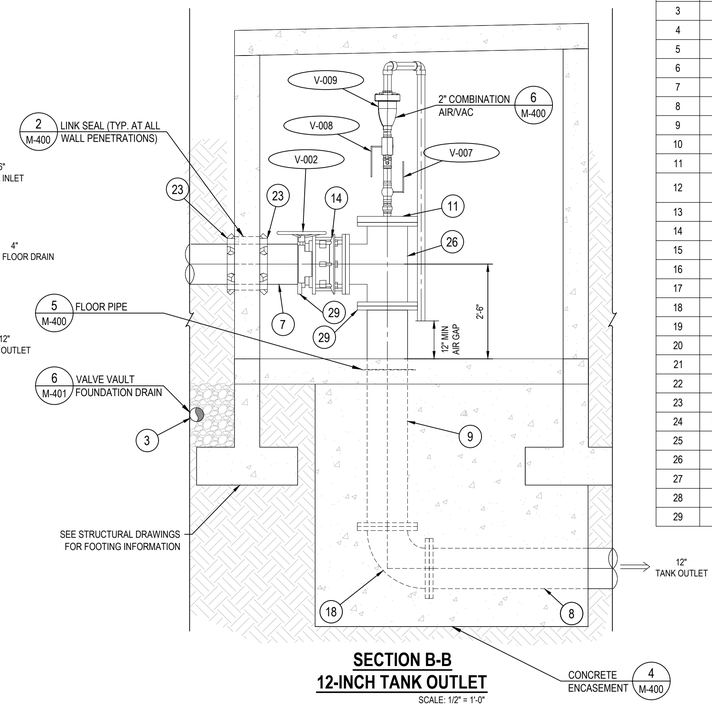
PROJECT NUMBER 14018A
PRINT DATE 2025-07-09
PROJECT MANAGER R. ROUSSELLE
DESIGNED BY D. COOPER

A-200

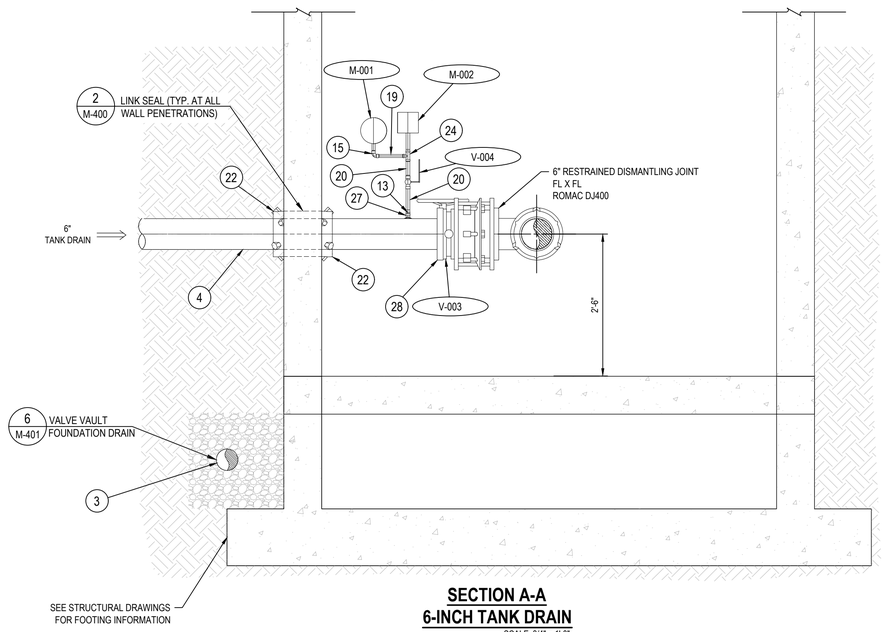


PLAN VIEW

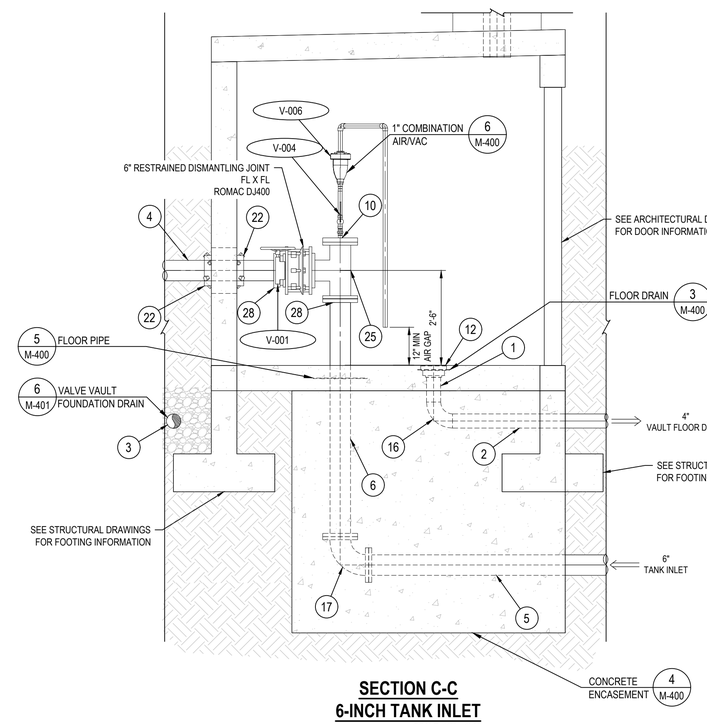
1 VALVE VAULT PLAN
SCALE: 3/4" = 1'-0"



SECTION B-B
12-INCH TANK OUTLET
SCALE: 1/2" = 1'-0"



SECTION A-A
6-INCH TANK DRAIN
SCALE: 3/4" = 1'-0"



SECTION C-C
6-INCH TANK INLET
SCALE: 1/2" = 1'-0"

BILL OF MATERIALS					
ID	SIZE	SHORT DESCRIPTION	MATERIAL	FITTING	REMARKS
1	4"	PIPE SPOOL	SCH 40 DWV	PE	
2	4"	PIPE SPOOL	SCH 40 DWV	GLUED	
3	4"	PERF PIPE	PERF SCH 80 PVC	GLUED	
4	6"	PIPE SPOOL	DI	VIC X PE	
5	6"	PIPE SPOOL	DI	FL X PE	
6	6"	PIPE SPOOL	DI	VIC X FL	
7	12"	PIPE SPOOL	DI	VIC X PE	
8	12"	PIPE SPOOL	DI	FL X PE	
9	12"	PIPE SPOOL	DI	VIC X FL	
10	6" X 1"	COMPANION FLANGE	DI	FL X THDF	
11	12" X 2"	COMPANION FLANGE	DI	FL X THDF	
12	4"	FLOOR DRAIN	DI	THDF	https://www.zurn.com/products/drainage-interceptors/floor-drains/area-drains/z508
13	1/2"	DIELECTRIC UNION	STEEL X BRASS	THDM X THDF	
14	12"	RESTRAINED DISMANTLING JOINT	DI	FL X FL	ROMAC DJ400
15	3/8"	90° ELBOW	BRASS	THDF	
16	4"	90° ELBOW	SCH 40 DWV	GLUED	
17	6"	90° ELBOW	DI	FL	
18	12"	90° ELBOW	DI	FL	
19	3/8"	PIPE NIPPLE	BRASS	THDM	
20	1/2"	PIPE NIPPLE, LONG TYPE	BRASS	THDM	
21	4"	PIPE BEND	SCH 80 PVC	GLUED	
22	6"	MEGALUG RESTRAINT	DI	RJ	
23	12"	MEGALUG RESTRAINT	DI	RJ	
24	1/2"x3/8"x1/2"	REDUCING TEE	DI	THDF	
25	6"	TEE	DI	FL	
26	12"	TEE	DI	FL	
27	6"x1/2"	WELDOLET	DI	THDF	
28	6"	VIC FLANGE ADAPTER	DI	VIC X FL	
29	12"	VIC FLANGE ADAPTER	DI	VIC X FL	

***NOTE:** NOT ALL PIPE AND FITTINGS LISTED SHOW UP ON THIS SHEET.

ABBREVIATIONS

ABBREVIATION	DESCRIPTION
DI	DUCTILE IRON
FL	FLANGE
GALV	GALVANIZED
RJ	RESTRAINED JOINT
SS	STAINLESS STEEL
THDF	THREADED FEMALE
THDM	THREADED MALE
VIC	VICTAULIC

NOTES:

1. REFER TO SHEET M-300 FOR MECHANICAL, PUMP AND VALVE SCHEDULES.
2. ALL BOLTS SHALL BE STAINLESS STEEL.
3. ALL PIPE, VALVES, FITTINGS, AND APPURTENANCES SHALL BE RATED FOR A MINIMUM PRESSURE OF 150 PSI.
4. ALL INTERIOR CONCRETE, PIPING AND VALVES SHALL BE PAINTED ACCORDING TO THE FOLLOWING PAINTING REQUIREMENTS FOR THE VAULT:

PAINTING REQUIREMENTS FOR EXPOSED VAULT PIPING, VALVES, AND FITTINGS:

SURFACE PREP	ABRASIVE BLAST OR CENTRIFUGAL WHEEL BLAST
PAINT PRIMER POLYAMIDE	ANTI CORROSIVE EPOXY PRIMER. 1 COAT, 2.5 MDFT (MINIMUM DRY FILM THICKNESS IN MILLS)
FINISH COAT	POLYURETHANE ENAMEL, 2 COATS, 4 MDFT. PIPING COLOR: BLUE (DRINKING WATER) FITTINGS COLOR: RED.

PAINTING REQUIREMENTS FOR CONCRETE VAULT INTERIOR WALLS AND CEILING:

SURFACE PREP	GRIND CONCRETE JOINTS AND FILL VOIDS WITH GROUT. APPLY RUB FINISH.
PAINT PRIMER POLYAMIDE	APPLY EPOXY SURFACE, FLOOR SOLIDS, TO FILL AND SMOOTH HOLES IN CONCRETE SURFACE
FINISH COAT	SINGLE COMPONENTS, INDUSTRIAL GRADE, HIGH MOLECULAR WEIGHT, ACRYLIC LATEX WITH MINIMUM SOLIDS CONTENT OF 35 PERCENT BY VOLUME. 2 COATS, 6 MDFT. COLOR TO BE APPROVED BY OWNER (OFF WHITE).

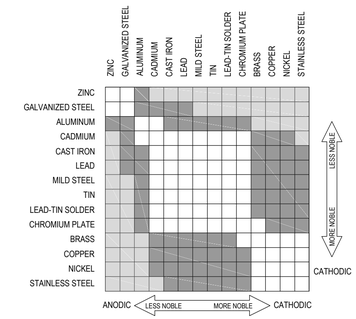
PAINTING REQUIREMENTS FOR CONCRETE VAULT INTERIOR FLOORS:

SURFACE PREP	GRIND CONCRETE JOINTS AND FILL VOIDS WITH GROUT. APPLY RUB FINISH.
PAINT PRIMER POLYAMIDE	APPLY EPOXY SURFACE, 100 PERCENT SOLIDS, TO FILL AND SMOOTH HOLES IN CONCRETE SURFACE
FINISH COAT	WATER BASED, LOW PROFILE, TWO COMPONENT, ANTI-SLIP, INDUSTRIAL GRADE, EPOXY FLOOR COATING WITH SOLIDS CONTENT OF 62 PERCENT +/- 2 PERCENT BY VOLUME, 1 COAT. COLOR TO BE APPROVED BY OWNER (GRAY).

5. PAINT SHALL BE WELL VENTILATED PER PAINT MANUFACTURER'S RECOMMENDATIONS DURING OFF GASSING PERIOD.
6. PROVIDE PIPE SUPPORTS AS SHOWN IN MECHANICAL DETAILS.
7. GALVANIZED AND DIP PIPE AND FITTINGS ARE SHOWN. CONTRACTOR MAY USE STEEL PIPE AND FITTINGS UPON APPROVAL OF PROJECT ENGINEER.
8. ALL MJ FITTINGS SHALL HAVE RESTRAINED JOINTS (RJ), EBBA IRON MEGALUG, OR APPROVED EQUAL.
9. CONTRACTOR SHALL DETERMINE FITTINGS WHEN CONNECTING TO INSTRUMENTS. NOT ALL FITTINGS TO INSTRUMENTS ARE SHOWN.
10. WHERE DISSIMILAR METALS CONNECT (EXAMPLE: BRASS OR COPPER AND GALVANIZED IRON), REFER TO GALVANIC CORROSION TABLE SHOWN ON THIS SHEET. PROVIDE A DIELECTRIC COUPLER, DIELECTRIC FLANGE KIT, OR OTHER METHOD TO KEEP DISSIMILAR METALS FROM CONTACTING. CATHODIC PROTECTION IS REQUIRED FOR ALL CONDITIONS WITHIN THE GALVANIC CORROSION TABLE WHICH STATE "ACTION MIGHT OCCUR" OR "GALVANIC ACTION WILL OCCUR".
11. ALL BURIED METAL PIPE, FITTINGS, BOLTS, NUTS, AND APPURTENANCES SHALL BE WRAPPED WITH 8 MIL. POLYETHYLENE. ALL BOLTS FOR DIRECT BURY FITTINGS SHALL BE COATED WITH FM GREASE.

KEY
= GALVANIC ACTION INSIGNIFICANT
= GALVANIC ACTION MIGHT OCCUR
= GALVANIC ACTION WILL OCCUR

GALVANIC CORROSION TABLE



ENSIGN
THE STANDARD IN ENGINEERING

SANDY
45 W. 10000 S., Suite 500
Sandy, UT 84070
Phone: 801.255.0529

LAYTON
Phone: 801.547.1100

TOOELE
Phone: 435.843.3590

CEDAR CITY
Phone: 435.865.1453

RICHFIELD
Phone: 435.896.2983

WWW.ENSIGNENG.COM

FOR:
EDEN VALLEY OPPORTUNITY, LLC
3718 NORTH WOLF CREEK DRIVE
EDEN, UTAH 84310

CONTACT:
JOHN LEWIS
PHONE: 801.897.4880

COBABE 0.5 MG WATER TANK
EDEN CROSSING (PWS NO. 29132)
COBABE RANCH
EDEN, UTAH

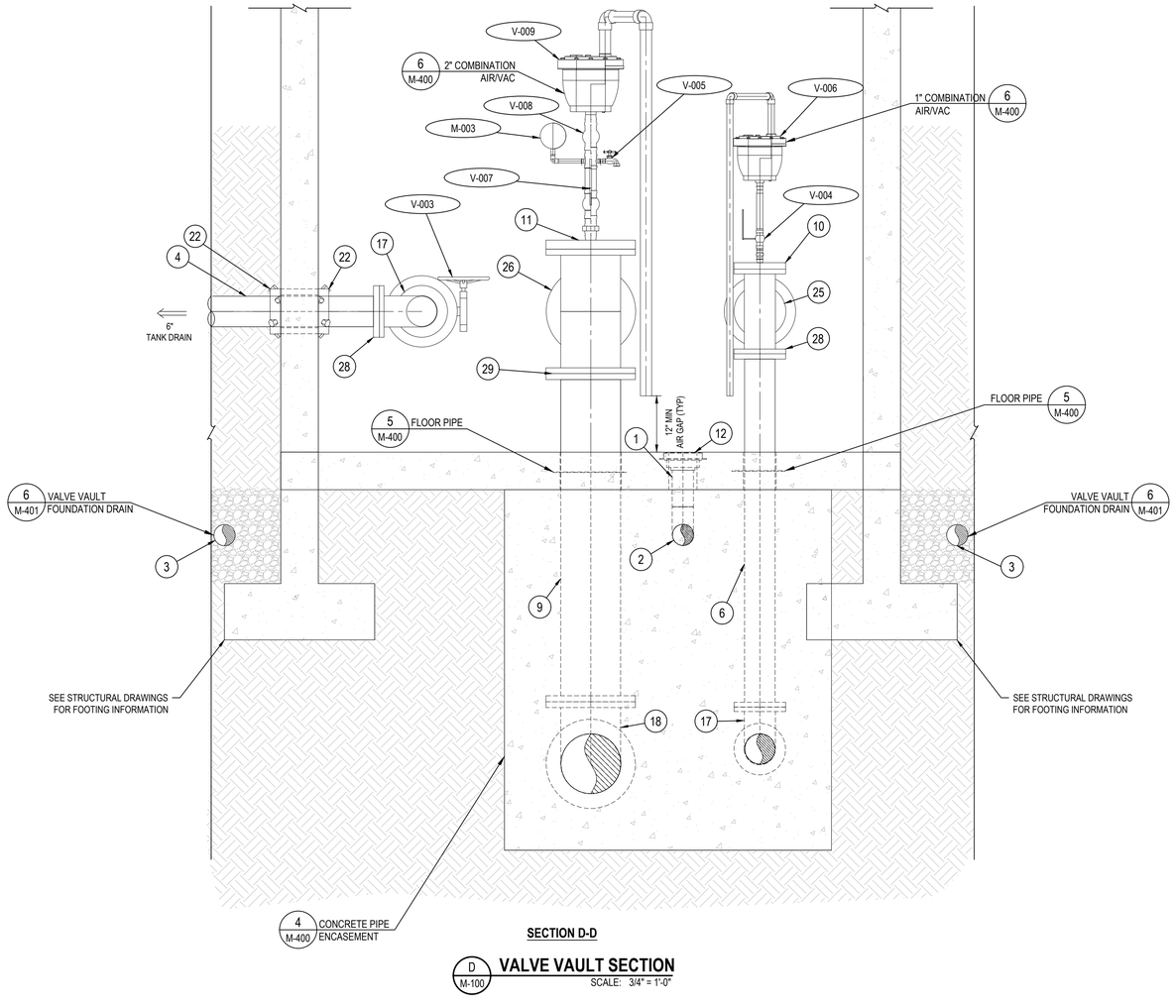
PROFESSIONAL ENGINEER
7885569-2202
ROBERT J. ROUSSELLE
EXP. 6/30/2026
STATE OF UTAH

FOR CONSTRUCTION 7/9/2025

VALVE VAULT MECHANICAL PLAN AND SECTIONS

PROJECT NUMBER	PRINT DATE
14018A	2025-07-09
PROJECT MANAGER	DESIGNED BY
R. ROUSSELLE	D. COOPER

M-100



SECTION D-D

D M-100 **VALVE VAULT SECTION**

SCALE: 3/4" = 1'-0"

BILL OF MATERIALS					
ID	SIZE	SHORT DESCRIPTION	MATERIAL	FITTING	REMARKS
1	4"	PIPE SPOOL	SCH 40 DWV	PE	
2	4"	PIPE SPOOL	SCH 40 DWV	GLUED	
3	4"	PERF PIPE	PERF SCH 80 PVC	GLUED	
4	6"	PIPE SPOOL	DI	VIC X PE	
5	6"	PIPE SPOOL	DI	FL X PE	
6	6"	PIPE SPOOL	DI	VIC X FL	
7	12"	PIPE SPOOL	DI	VIC X PE	
8	12"	PIPE SPOOL	DI	FL X PE	
9	12"	PIPE SPOOL	DI	VIC X FL	
10	6" X 1"	COMPANION FLANGE	DI	FL X THDF	
11	12" X 2"	COMPANION FLANGE	DI	FL X THDF	
12	4"	FLOOR DRAIN	DI	THDF	https://www.zurn.com/products/drainage-interceptors/floor-drains/area-drains/z508
13	1/2"	DIELECTRIC UNION	STEEL X BRASS	THDM X THDF	
14	12"	RESTRAINED DISMANTLING JOINT	DI	FL X FL	ROMAC DJ400
15	3/8"	90° ELBOW	BRASS	THDF	
16	4"	90° ELBOW	SCH 40 DWV	GLUED	
17	6"	90° ELBOW	DI	FL	
18	12"	90° ELBOW	DI	FL	
19	3/8"	PIPE NIPPLE	BRASS	THDM	
20	1/2"	PIPE NIPPLE, LONG TYPE	BRASS	THDM	
21	4"	PIPE BEND	SCH 80 PVC	GLUED	
22	6"	MEGALUG RESTRAINT	DI	RJ	
23	12"	MEGALUG RESTRAINT	DI	RJ	
24	1/2"x3/8"x1/2"	REDUCING TEE	DI	THDF	
25	6"	TEE	DI	FL	
26	12"	TEE	DI	FL	
27	6"x1/2"	WELDOLET	DI	THDF	
28	6"	VIC FLANGE ADAPTER	DI	VIC X FL	
29	12"	VIC FLANGE ADAPTER	DI	VIC X FL	

***NOTE:**

1. NOT ALL PIPE AND FITTINGS LISTED SHOW UP ON THIS SHEET.
2. REFER TO SHEET M-100 FOR VALVE VAULT MECHANICAL NOTES.

ABBREVIATIONS

ABBREVIATION	DESCRIPTION
DI	DUCTILE IRON
FL	FLANGE
GALV	GALVANIZED
RJ	RESTRAINED JOINT
SS	STAINLESS STEEL
THDF	THREADED FEMALE
THDM	THREADED MALE
VIC	VICTAULIC

ENSIGN
THE STANDARD IN ENGINEERING

SANDY
45 W. 10000 S., Suite 500
Sandy, UT 84070
Phone: 801.255.0529

LAYTON
Phone: 801.547.1100

TOOELE
Phone: 435.843.3590

CEDAR CITY
Phone: 435.865.1453

RICHFIELD
Phone: 435.896.2983

WWW.ENSIGNENG.COM

FOR:
EDEN VALLEY OPPORTUNITY, LLC
3718 NORTH WOLF CREEK DRIVE
EDEN, UTAH 84310

CONTACT:
JOHN LEWIS
PHONE: 801.897.4880

COBABE RANCH 0.5 MG WATER TANK
EDEN CROSSING (PWS NO. 29132)
COBABE RANCH
EDEN, UTAH

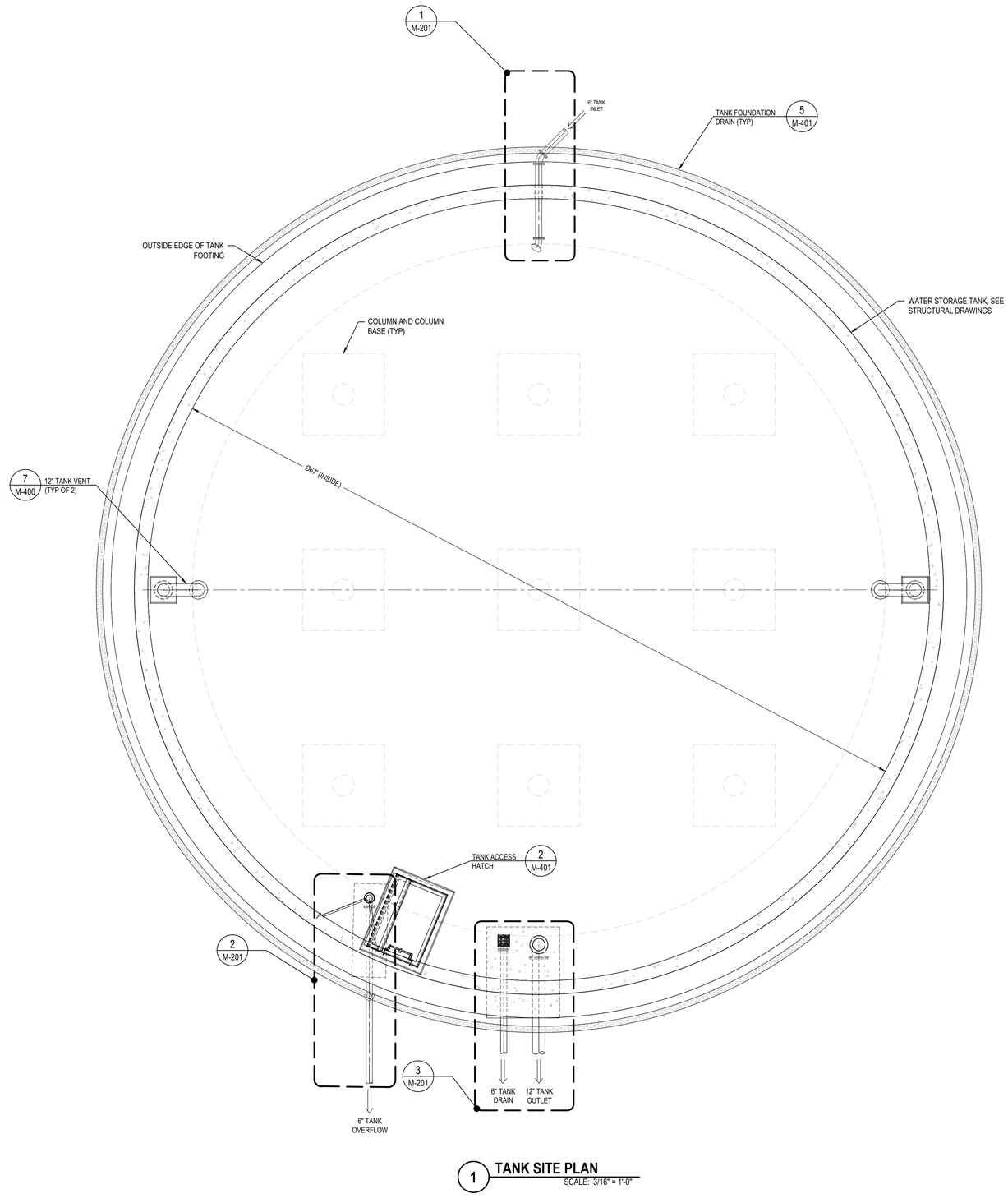
PROFESSIONAL ENGINEER
7885569-2202
ROBERT J. ROUSSELLE
EXP. 5/31/2027
STATE OF UTAH

FOR CONSTRUCTION 7/9/2025

VALVE VAULT MECHANICAL SECTIONS

PROJECT NUMBER 14018A
PRINT DATE 2025-07-09
PROJECT MANAGER R. ROUSSELLE
DESIGNED BY D. COOPER

M-101



1 **TANK SITE PLAN**
SCALE: 3/16" = 1'-0"

NORTH

ENSIGN
THE STANDARD IN ENGINEERING

SANDY
45 W. 10000 S., Suite 500
Sandy, UT 84070
Phone: 801.255.0529

LAYTON
Phone: 801.547.1100

TOOELE
Phone: 435.843.3590

CEDAR CITY
Phone: 435.865.1453

RICHFIELD
Phone: 435.896.2983

WWW.ENSIGNENG.COM

FOR:
EDEN VALLEY OPPORTUNITY, LLC
3718 NORTH WOLF CREEK DRIVE
EDEN, UTAH 84310

CONTACT:
JOHN LEWIS
PHONE: 801.897.4880

COBABE RANCH 0.5 MG WATER TANK
EDEN CROSSING (PWS NO. 29132)
COBABE RANCH
EDEN, UTAH

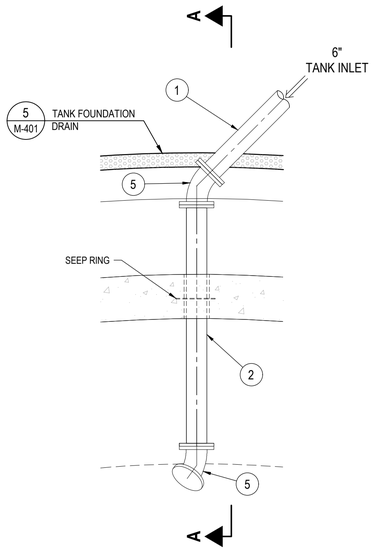
PROFESSIONAL ENGINEER
7885569-2202
ROBERT J. ROUSSELLE
EXP. 5/31/2027
STATE OF UTAH

FOR CONSTRUCTION 7/9/2025

TANK MECHANICAL PLAN

PROJECT NUMBER	PRINT DATE
14018A	2025-07-09
PROJECT MANAGER	DESIGNED BY
R. ROUSSELLE	D. COOPER

M-200



PLAN VIEW

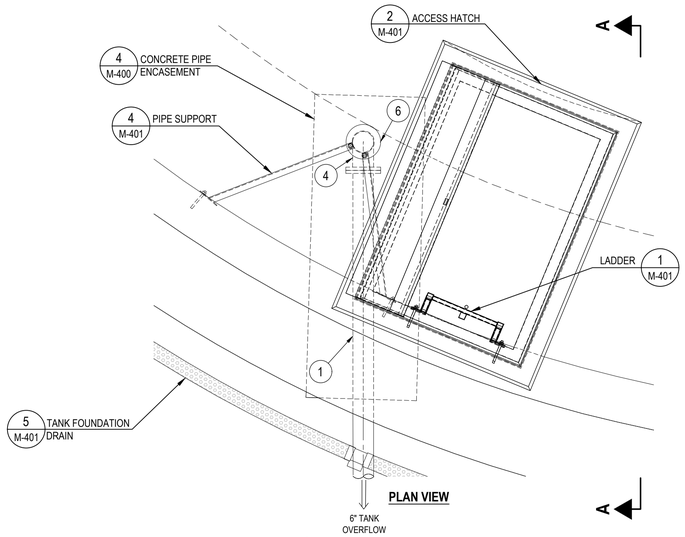
1 M-200 **BLOWUP DETAIL**

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

SECTION A-A

A - **6" TANK INLET SECTION**

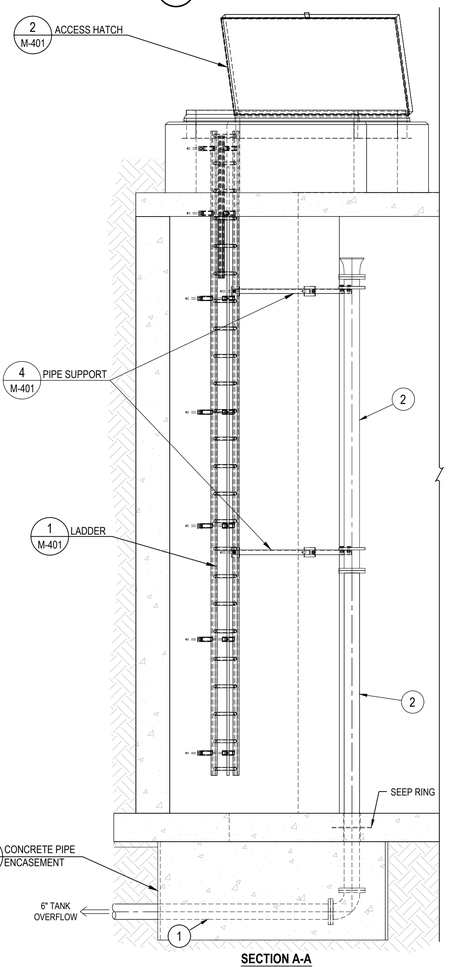
SCALE: 3/8" = 1'-0"



PLAN VIEW

2 M-200 **BLOWUP DETAIL**

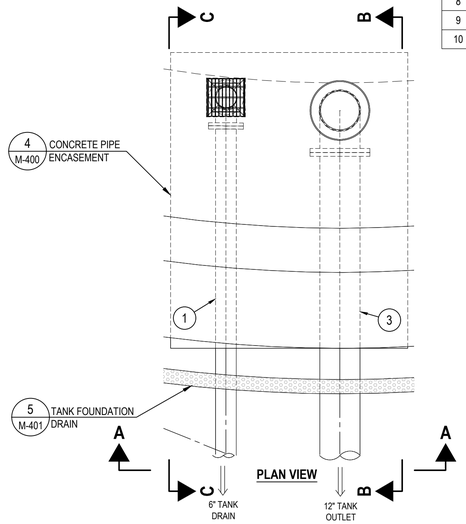
SCALE: 1/2" = 1'-0"



SECTION A-A

A - **6" TANK OVERFLOW SECTION**

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



PLAN VIEW

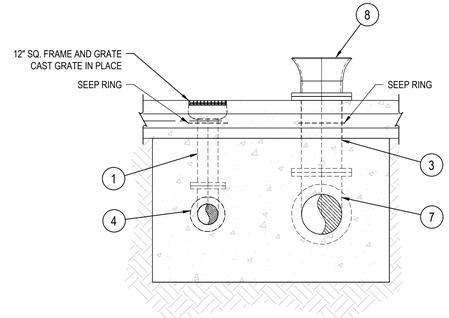
3 M-200 **BLOWUP DETAIL**

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

BILL OF MATERIALS					
ID	SIZE	SHORT DESCRIPTION	MATERIAL	FITTING	REMARKS
1	6"	PIPE SPOOL	DI	FL X PE	
2	6"	PIPE SPOOL	DI	FL X FL	
3	12"	PIPE SPOOL	DI	FL X PE	
4	6"	90° ELBOW	DI	FL	
5	6"	45° ELBOW	DI	FL	
6	6"	FLARE	DI	FL	
7	12"	90° ELBOW	DI	FL	
8	12"	FLARE	DI	FL	
9	4"	PERF PIPE	PERF SCH 80 PVC	GLUED	
10	4"	TEE	SCH 80 PVC	GLUED	

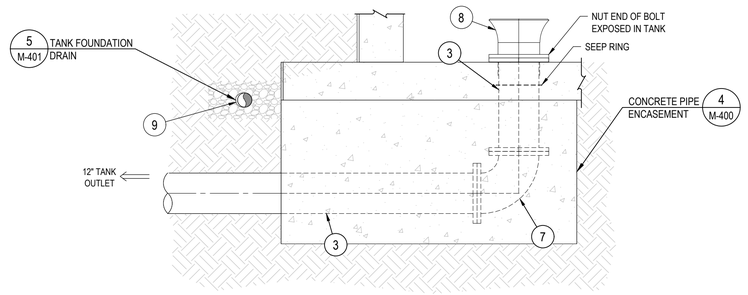
NOTES:

1. FOR PIPING INSIDE THE TANK, THE USE OF DIP WITH CEMENT MORTAR LINING ON THE INSIDE AND RED OXIDE PRIMED ON THE OUTSIDE AND THE EPOXY PAINTED AFTER INSTALLATION IS APPROVED.
2. AWWA DRINKING WATER PIPE IS REQUIRED FOR ALL PIPE EXCEPT THE TANK FOUNDATION DRAIN PIPE AND SHALL BE NSF-61 CERTIFIED.
3. ALL PIPE UNDER THE TANK THAT IS ENCASED IN CONCRETE SHOULD BE STANDARD DIP WITH STANDARD CEMENT MORTAR LINING INSIDE AND ASPHALTIC COATING ON THE OUTSIDE IS APPROVED. THE SPOOLS PENETRATING THE TANK FLOOR SHALL BE EITHER EPOXY LINED AND COATED CS OR STAINLESS STEEL.



SECTION A-A

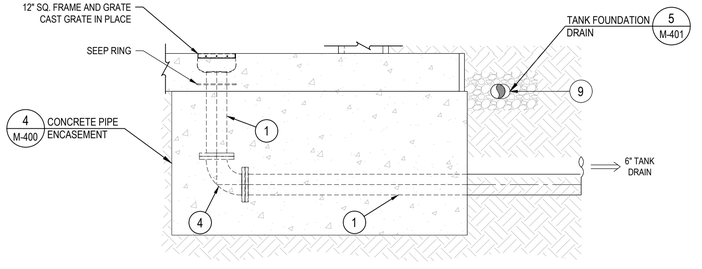
SCALE: 1/2" = 1'-0"



SECTION B-B

B - **12" TANK OUTLET PIPE**

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



SECTION C-C

C - **6" TANK DRAIN PIPE**

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

ENSIGN
THE STANDARD IN ENGINEERING

SANDY
45 W. 10000 S., Suite 500
Sandy, UT 84070
Phone: 801.255.0529

LAYTON
Phone: 801.547.1100

TOOELE
Phone: 435.843.3590

CEDAR CITY
Phone: 435.865.1453

RICHFIELD
Phone: 435.896.2983

WWW.ENSIGNENG.COM

FOR:
EDEN VALLEY OPPORTUNITY, LLC
3718 NORTH WOLF CREEK DRIVE
EDEN, UTAH 84310

CONTACT:
JOHN LEWIS
PHONE: 801.897.4880

COBABE RANCH 0.5 MG WATER TANK

COBABE RANCH
EDEN, UTAH

PROFESSIONAL ENGINEER
7885569-2202
ROBERT J. ROUSSELLE
EXP 3/31/2027
7/9/2025
STATE OF UTAH

FOR CONSTRUCTION 7/9/2025

TANK MECHANICAL SECTIONS AND DETAILS

PROJECT NUMBER	PRINT DATE
14018A	2025-07-09
PROJECT MANAGER	DESIGNED BY
R. ROUSSELLE	D. COOPER

M-201

Valve Schedule						
Valve Vault						
Tag #	**Description/Type**	**Size**	**Material**	**Operation**	**Connection**	**Remarks**
V-001	Butterfly Valve	6-INCH	DI	Handwheel	Wafer	Resilent Seat, Milliken, Bray, or Equal
V-002	Butterfly Valve	12-INCH	DI	Handwheel	Wafer	Resilent Seat, Milliken, Bray, or Equal
V-003	Butterfly Valve	6-INCH	DI	Handwheel	Wafer	Resilent Seat, Milliken, Bray, or Equal
V-004	Ball Valve	1-INCH	BRASS	Lever	Threaded	Apollo, Brass Model 77FLF-108-01, or Equal
V-005	Smooth Nosed Sampling Tap	1/2-INCH	BRASS	Lever	Threaded	Matco-Norca Model No. 646RLF, or Equal
V-006	Combination Air/Vac Valve	1-INCH	DI	Lever	Threaded	Val-Matic Model No. 202C.2, or Equal
V-007	Ball Valve	2-INCH	BRASS	Lever	Threaded	Apollo, Brass Model 77FLF-108-01, or Equal
V-008	Ball Valve	2-INCH	BRASS	Lever	Threaded	Apollo, Brass Model 77FLF-108-01, or Equal
V-009	Combination Air/Vac Valve	2-INCH	DI	Lever	Threaded	Val-Matic Model No. 202C.2, or Equal

Mechanical Equipment Schedule			
Valve Vault			
Tag #	Description/Type	HP/Size	Remarks
M-001	Pressure Gauge	3/8"	Ashcroft Model 1279 (0 to 20 psi) or Equal
M-002	Pressure Transmitter	N/A	See Electrical Instrumentation Drawings
M-003	Pressure Gauge	1/2"	Ashcroft Model 1279 (0 to 20 psi) or Equal

ENSIGN
THE STANDARD IN ENGINEERING

SANDY
45 W. 10000 S., Suite 500
Sandy, UT 84070
Phone: 801.255.0529

LAYTON
Phone: 801.547.1100

TOOELE
Phone: 435.843.3590

CEDAR CITY
Phone: 435.865.1453

RICHFIELD
Phone: 435.896.2983

WWW.ENSIGNENG.COM

FOR:
EDEN VALLEY OPPORTUNITY, LLC
3718 NORTH WOLF CREEK DRIVE
EDEN, UTAH 84310

CONTACT:
JOHN LEWIS
PHONE: 801.897.4880

COBABE RANCH 0.5 MG WATER TANK
EDEN CROSSING (PWS NO. 29132)

COBABE RANCH
EDEN, UTAH

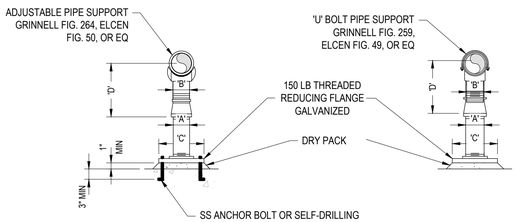
PROFESSIONAL ENGINEER
7885569-2202
ROBERT J. ROUSSELLE
STATE OF UTAH
EXP. 5/31/2026
7/9/2025

FOR CONSTRUCTION 7/9/2025

VALVE VAULT MECHANICAL SCHEDULES

PROJECT NUMBER 14018A
PRINT DATE 2025-07-09
PROJECT MANAGER R. ROUSSELLE
DESIGNED BY D. COOPER

M-300

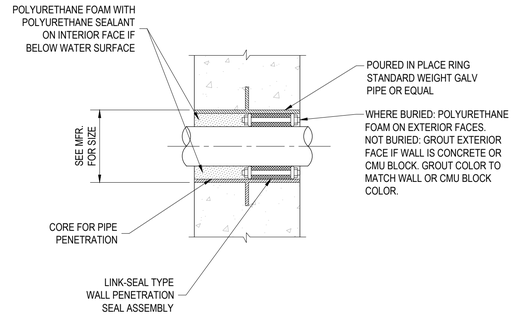


ADJUSTABLE PIPE SUPPORT APPROXIMATE DIMENSIONS IN INCHES					
PIPE DIA	'A'	'B'	'C'	'D' MINIMUM	'D' MAXIMUM
2 1/2	2 1/2	1 1/2	9	8	11 1/2
3	2 1/2	1 1/2	9	8 1/4	11 3/4
3 1/2	2 1/2	1 1/2	9	8 1/2	12
4	3	*2 1/2	9	10 1/4	14
6	3	*2 1/2	9	11 5/8	15 1/4
8	3	*2 1/2	9	13 5/8	16 1/2
10	3	*2 1/2	9	14 5/8	18 1/4
12	3	*2 1/2	9	15 5/8	19 3/4
14	4	3	11	18 7/8	20 3/4
16	4	3	11	19 7/8	22 1/4
18	6	3 1/2	13 1/2	21 1/4	24
20	6	3 1/2	13 1/2	23 1/4	25 1/2
24	6	4	13 1/2	26 1/2	28 1/1
30	6	4	13 1/2	29 5/8	31 1/2
32	6	4	13 1/2	30 5/8	32 3/4
36	6	4	13 1/2	32 5/8	34 3/4

*SEE MFR.

1 TYPICAL PIPE SUPPORT

SCALE: NONE

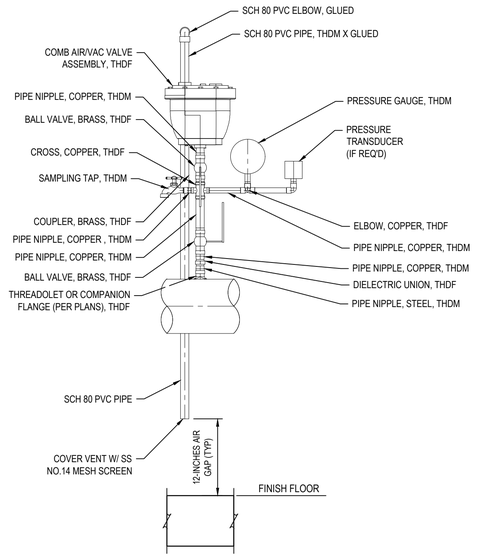


NOTES:

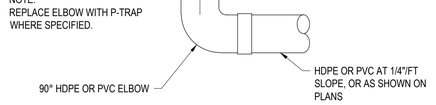
1. PIPE SLEEVE FOR WALL PENETRATION SEAL ASSEMBLY SIZED BY MFR.
2. BOLTS SHALL BE SS.

2 TYPICAL LINK SEAL

SCALE: NONE



NOTE: REFER TO PROJECT DRAWINGS FOR AIR/VAC, VALVES AND INSTRUMENTATION INFORMATION AND SIZING. CONTRACTOR SHALL DETERMINE PIPE FITTINGS AND APPURTENANCES REQ'D.

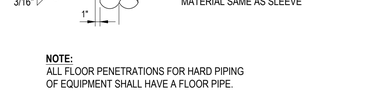


3 TYPICAL FLOOR DRAIN

SCALE: NONE

4 TYPICAL CONCRETE PIPE ENCASEMENT

SCALE: NONE



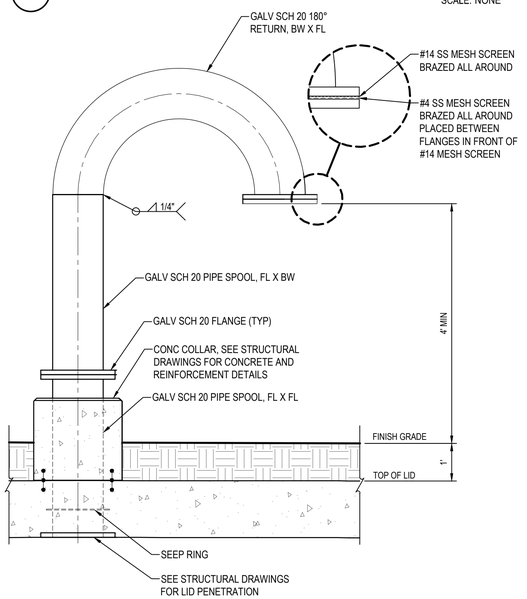
NOTE:
ALL FLOOR PENETRATIONS FOR HARD PIPING OF EQUIPMENT SHALL HAVE A FLOOR PIPE.

5 TYPICAL FLOOR PIPE

SCALE: NONE

6 TYPICAL COMBINATION AIR/VAC

SCALE: 1" = 1'-0"



NOTE: SEE MECHANICAL PLANS FOR VENT SIZE

7 TYPICAL VENT - LID PENETRATION

SCALE: NONE

ENSIGN
THE STANDARD IN ENGINEERING

SANDY
45 W. 10000 S., Suite 500
Sandy, UT 84070
Phone: 801.255.0529

LAYTON
Phone: 801.547.1100

TOOELE
Phone: 435.843.3590

CEDAR CITY
Phone: 435.865.1453

RICHFIELD
Phone: 435.896.2983

WWW.ENSIGNENG.COM

FOR:
EDEN VALLEY OPPORTUNITY, LLC
3718 NORTH WOLF CREEK DRIVE
EDEN, UTAH 84310

CONTACT:
JOHN LEWIS
PHONE: 801.897.4880

COBABE RANCH 0.5 MG WATER TANK
EDEN CROSSING (PWS NO. 29132)
COBABE RANCH
EDEN, UTAH

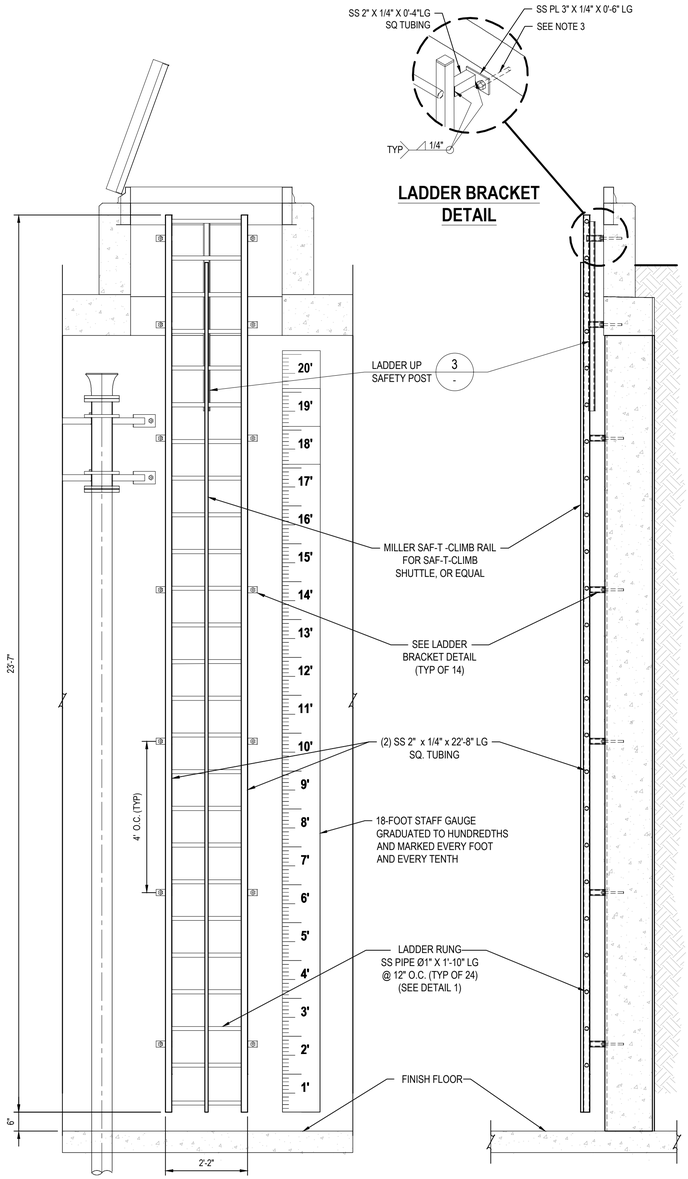
PROFESSIONAL ENGINEER
7885569-2202
ROBERT J. ROUSSELLE
STATE OF UTAH
TOP 9/30/2025
7/9/2025

FOR CONSTRUCTION 7/9/2025

MECHANICAL DETAILS

PROJECT NUMBER 14018A
PRINT DATE 2025-07-09
PROJECT MANAGER R. ROUSSELLE
DESIGNED BY D. COOPER

M-400

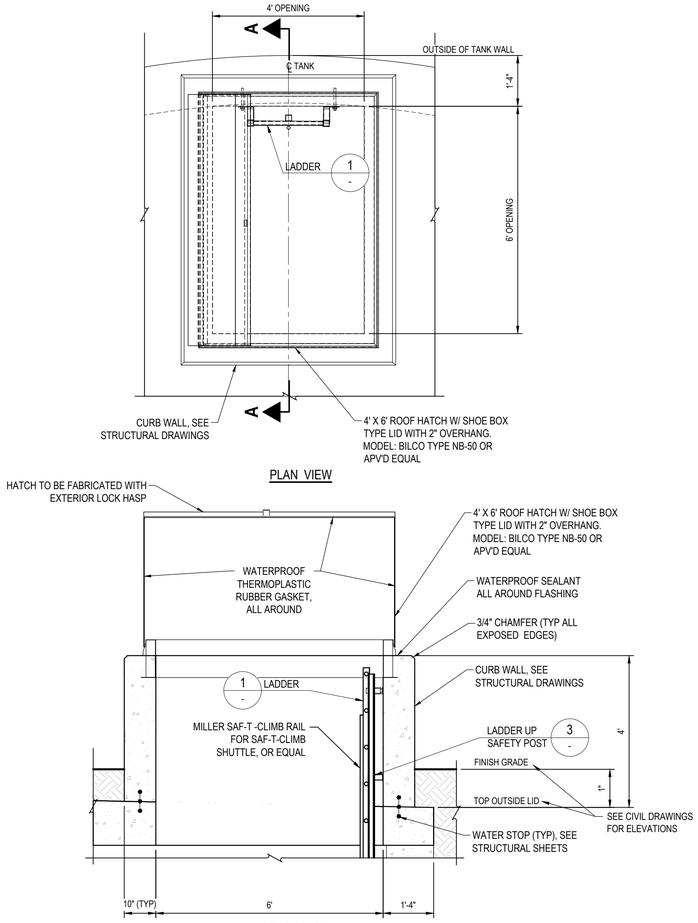


NOTES

1. ALL METALS SHALL BE 316 STAINLESS STEEL.
2. ALL JOINTS SHALL BE WELDED.
3. ALL ANCHOR BOLTS SHALL BE SS TITEN 5/8" X 4" LONG SCREW ANCHORS.
4. ALL SS FIELD WELDS SHALL BE TOUCHED UP AS DIRECTED BY THE ENGINEER.
5. CONTRACTOR TO FURNISH SAFETY HARNESS AND APPURTENANCES AND BILCO LADDER UP SAFETY SYSTEM.

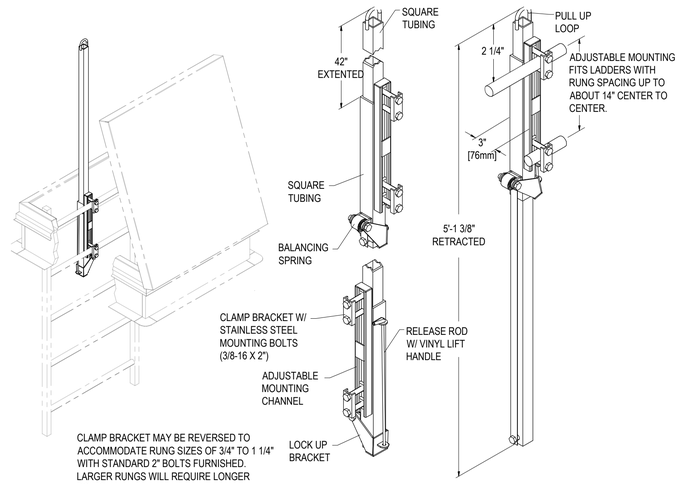
1 LADDER

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



2 TANK ACCESS HATCH

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

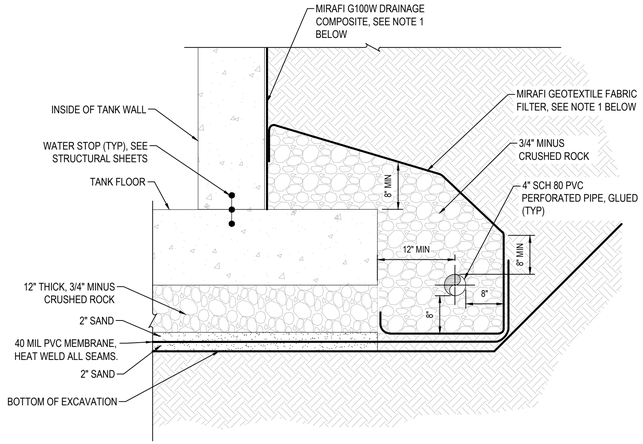


3 BILCO LADDER UP SAFETY POST

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

4 OVERFLOW PIPE SUPPORT

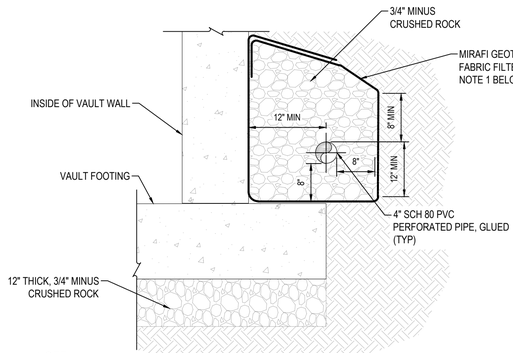
SCALE: NONE



NOTE:
1. INSTALL MIRAFI G100W DRAINAGE COMPOSITE WITH MIRAFI GEOTEXTILE FABRIC FILTER. ATTACH COMPOSITE PANELS WITH 1 1/4" - 1 1/2" CONCRETE NAILS OR ADHESIVE PER MFR'S RECOMENDATIONS. OVERLAP FILTER FABRIC AT SEAMS 2" MIN. TUCK FABRIC OVER AND BEHIND CORE EDGE TOP AND BOTTOM

5 TANK FOUNDATION DRAIN

SCALE: 3/4" = 1'-0"



NOTE:
1. INSTALL WITH MIRAFI GEOTEXTILE FABRIC FILTER. OVERLAP FILTER FABRIC AT SEAMS 2" MIN. TUCK FABRIC OVER AND BEHIND CORE EDGE TOP AND BOTTOM

6 VALVE VAULT FOUNDATION DRAIN

SCALE: 3/4" = 1'-0"

ENSIGN
THE STANDARD IN ENGINEERING

SANDY
45 W. 10000 S., Suite 500
Sandy, UT 84070
Phone: 801.255.0529

LAYTON
Phone: 801.547.1100

TOOELE
Phone: 435.843.3590

CEDAR CITY
Phone: 435.865.1453

RICHFIELD
Phone: 435.896.2983

WWW.ENSIGNENG.COM

FOR:
EDEN VALLEY OPPORTUNITY, LLC
3718 NORTH WOLF CREEK DRIVE
EDEN, UTAH 84310

CONTACT:
JOHN LEWIS
PHONE: 801.897.4880

COBABE RANCH 0.5 MG WATER TANK
EDEN CROSSING (PWS NO. 29132)
COBABE RANCH
EDEN, UTAH

PROFESSIONAL ENGINEER
7885569-2202
ROBERT J. ROUSSELLE
EXP. 3/31/2027
STATE OF UTAH

FOR CONSTRUCTION 7/9/2025

MECHANICAL DETAILS

PROJECT NUMBER	PRINT DATE
14016A	2025-07-09
PROJECT MANAGER	DESIGNED BY
R. ROUSSELLE	D. COOPER

M-401

DESIGN CRITERIA

1. GOVERNING BUILDING CODE: **2021 IBC**
   A. RISK CATEGORY = **IV**

2. TANK LID LOADING:
   A. LIVE LOAD = 50 PSF
   B. MEP DEAD LOAD ALLOWANCE = 10 PSF
   C. SOIL WEIGHT ON LID = 120 PSF
   D. LID SNOW LOAD = 55 PSF
   E. RAIN LOADS:
      a. RAIN INTENSITY, I = 2.1 IN/HR

3. VALVE VAULT LOADING:
   A. ROOF LIVE LOAD = 40 PSF
   B. ROOF DEAD LOAD = 110 PSF
   C. ROOF SNOW LOAD (FLAT), p_f = 55 PSF
      a. GROUND SNOW LOAD, p_g = 55 PSF
      b. SNOW EXPOSURE FACTOR, C_e = 1.0
      c. THERMAL FACTOR, C_t = 1.2
      d. SNOW LOAD IMPORTANCE FACTOR, I_s = 1.2
      e. SLOPE FACTOR, C_s = 1.0

4. SEISMIC LOADING:
   A. S_S = 0.897g
   B. S_1 = 0.316g
   C. S_{DS} = 0.718g
   D. S_{D1} = 0.316g
   E. SEISMIC DESIGN CATEGORY = D
   F. SITE CLASS = C
   G. IMPORTANCE FACTOR, I_e = 1.5

5. WIND LOADING:
   A. BASIC WIND SPEED, V = 114 MPH - 3 SEC GUST
   B. ASD WIND SPEED, V_{asd} = 89 MPH - 3 SEC GUST
   C. COMP. & CLADDING WIND PRESSURE:

COMPONENTS & CLADDING DESIGN WIND PRESSURE (PSF)

LOCATION		EFFECTIVE WIND AREA (FT^2)				
		< 10	20	50	100	>500
WALLS	ZONE 5: WITHIN 3-FT OF BUILDING CORNER	-28.5	-26.8	-24.1	-22.3	-17.8
	ZONE 4: ALL OTHER AREAS	-23.2	-22.3	-21.4	-20.1	-17.8
	ZONE 4 & 5: POSITIVE PRESSURES	16.0	16.0	16.0	16.0	16.0
ROOF	ZONE 3: L-SHAPE (6-FT LEG LENGTHS & 2-FT LEG THICKNESS) AT BUILDING CORNERS	-67.0	-61.0	-52.1	-46.2	-31.3
	ZONE 2: WITHIN 6-FT OF BUILDING EDGE	-49.1	-46.2	-42.2	-39.2	-31.3
	ZONE 1: BETWEEN 6-FT & 12-FT OF BUILDING EDGE	-37.3	-35.3	-31.3	-29.3	-23.4
	ZONE 1' DOES NOT APPLY	-	-	-	-	-
	ZONE 1, 2 & 3: POSITIVE PRESSURES	16.0	16.0	16.0	16.0	16.0

6. SERVICEABILITY CRITERIA:
   A. DEFLECTION LIMITS: TOTAL / LIVE / SNOW
      a. TANK LID L/360 L/480
      b. VALVE VAULT ROOF L/360 L/480

GENERAL

1. ALL CONSTRUCTION SHALL BE IN CONFORMANCE WITH THE GOVERNING BUILDING CODE AND SUPPLEMENTS UNLESS HIGHER STANDARD IS REQUIRED BY LOCAL BUILDING OFFICIAL.

2. THE CONTRACTOR SHALL FURNISH AND INSTALL ALL ELEMENTS AS SHOWN ON THE CONTRACT DOCUMENTS UNLESS SPECIFICALLY NOTED OTHERWISE.

3. THE CONTRACTOR SHALL VERIFY ALL DIMENSIONS AND CONDITIONS AT THE SITE.

4. THE CONTRACTOR IS RESPONSIBLE FOR MEETING ALL APPLICABLE OSHA SAFETY REQUIREMENTS DURING CONSTRUCTION AND SHALL BE RESPONSIBLE FOR SAFETY AND PROTECTION WITHIN AND ADJACENT TO THE SITE.

5. AT ANY GIVEN TIME DURING AND AFTER CONSTRUCTION, THE CONTRACTOR AND/OR OWNER SHALL ENSURE THE LOADS ON THE STRUCTURE DO NOT EXCEED THE SPECIFIED DESIGN LOADS. CONSTRUCTION MATERIAL SHALL BE SPREAD OUT IF PLACED ON FRAMED FLOORS OR ROOF.

6. DO NOT SCALE DRAWINGS. IF DIMENSIONS ARE IN QUESTION, THE CONTRACTOR SHALL BE RESPONSIBLE FOR OBTAINING CLARIFICATION FROM THE ENGINEER BEFORE CONTINUING WITH CONSTRUCTION.

7. THE TYPICAL DETAILS SHALL BE USED WHEREVER APPLICABLE UNLESS OTHERWISE NOTED ON THE DRAWINGS. SPECIFIC NOTES AND DETAILS ON DRAWINGS SHALL TAKE PRECEDENCE OVER GENERAL NOTES AND TYPICAL DETAILS.

8. ALL OMISSIONS OR CONFLICTS BETWEEN THE VARIOUS ELEMENTS OF THE WORKING DRAWINGS AND/OR SPECIFICATIONS SHALL BE BROUGHT TO THE ATTENTION OF THE STRUCTURAL ENGINEER BEFORE PROCEEDING WITH ANY WORK INVOLVED. IN CASE OF CONFLICT, FOLLOW MOST STRINGENT REQUIREMENT AS DETERMINED BY STRUCTURAL ENGINEER WITHOUT COST TO OWNER.

9. THE CONTRACT STRUCTURAL DRAWINGS AND SPECIFICATIONS REPRESENT THE FINISHED STRUCTURE. THEY DO NOT INDICATE THE METHOD OF CONSTRUCTION. THE CONTRACTOR IS RESPONSIBLE FOR CONSTRUCTION MEANS, METHODS, TECHNIQUES, SHORING, SEQUENCES, AND PROCEDURES.

10. WHERE REFERENCE IS MADE TO VARIOUS TEST STANDARDS FOR MATERIALS, SUCH STANDARDS SHALL BE THE LATEST EDITION AND/OR ADDENDUM.

11. ESTABLISH AND VERIFY ALL OPENINGS AND INSERTS FOR ARCHITECTURAL, MECHANICAL, ELECTRICAL, AND PLUMBING WITH APPROPRIATE TRADES, DRAWINGS, AND SUBCONTRACTORS PRIOR TO CONSTRUCTION.

12. **DO NOT PENETRATE ANY STRUCTURAL ELEMENTS** (BEAMS, COLUMNS, WALLS, SLABS, STEEL DECKS, ETC.) WITHOUT PRIOR WRITTEN APPROVAL OF STRUCTURAL ENGINEER THROUGH ARCHITECT.

13. ANY ENGINEERING DESIGN PROVIDED BY OTHERS AND SUBMITTED FOR REVIEW SHALL BEAR THE SEAL OF A CIVIL OR STRUCTURAL ENGINEER REGISTERED IN THE STATE IN WHICH THE PROJECT IS LOCATED.

PRE-CONSTRUCTION MEETINGS

1. A PRE-CONSTRUCTION MEETING IS RECOMMENDED PRIOR TO THE START OF CONSTRUCTION OF THE STRUCTURE. AT THE CONTRACTOR'S OPTION, THE PRE-CONSTRUCTION MEETING MAY TAKE PLACE PRIOR TO THE START OF SHOP DRAWING PRODUCTION.

2. IT IS THE RESPONSIBILITY OF THE CONTRACTOR TO SCHEDULE THE PRE-CONSTRUCTION MEETING WITH ALL APPLICABLE PARTIES INCLUDING (BUT NOT LIMITED TO) THE CONTRACTOR, SUB-CONTRACTORS, ARCHITECT, STRUCTURAL ENGINEER, AND SPECIAL INSPECTOR.

CONCRETE

1. CONCRETE SHALL CONFORM TO ALL REQUIREMENTS OF ACI 318-19 "BUILDING CODE REQUIREMENTS FOR STRUCTURAL CONCRETE", EXCEPT AS MODIFIED BY THE SUPPLEMENTAL REQUIREMENTS BELOW:

NO WATER TO BE ADDED TO CONCRETE ON SITE EITHER BEFORE OR AFTER PLACEMENT

ELEMENT TYPE	MINIMUM COMP. STRENGTH, f'c (psi)	EXPOSURE CLASSES F	S	W	C	CEMENT TYPE	MAX. W/C RATIO	AIR CONTENT %	MAX. AGG. SIZE	MAX. FLY ASH %	SHRINKAGE LIMIT	APPLICABLE *SPECIFIC INSTRUCTION NOTES
VALVE VAULT FOOTINGS & RETAINING WALL FOOTINGS	3000	F0	S0	W0	C1	II OR IL	0.45	--	3/4"	25	--	--
TANK	5000	F2	S0	W1	C2	II OR IL	0.40	6	3/4"	25	0.03%	A
TANK COLUMNS	5000	F2	S0	W1	C2	II OR IL	0.40	6	3/4"	25	0.03%	--
EXTERIOR SUSPENDED SLABS	5000	F3	S0	W0	C2	II OR IL	0.40	6	3/4"	25	--	--
INTERIOR SLAB ON GRADE	4000	F0	S0	W0	C0	II OR IL	0.45	--	1 1/2"	25	--	--
VALVE VAULT FOUNDATION WALLS, RETAINING WALLS	5000	F2	S0	W1	C2	II OR IL	0.40	6	3/4"	25	--	--

***SPECIFIC INSTRUCTION NOTES:**

A. XYPEX NOTE: XYPEX MIXTURE TO BE ADDED TO CONCRETE MIX FOR WATER PROOFING REQUIREMENT, AT A RATE OF 2% BY WEIGHT OF CEMENTITIOUS MATERIAL. CONTACT MANUFACTURER FOR MIX DESIGN REQUIREMENTS AND PLACEMENT. <http://www.imxtechnologies.com/>

2. CONCRETE SHALL ATTAIN THE LISTED MINIMUM COMPRESSIVE STRENGTH AT 28 DAYS.

3. AIR CONTENT TOLERANCE IS +/- 1-1/2% AT THE TIME OF FINAL PLACEMENT.

4. AIR ENTRAINMENT SHALL BE ADJUSTED FOR THE USE OF ADMIXTURES AND FLY ASH.

5. SUPERPLASTICIZER MAY BE ADDED TO INCREASE SLUMP AS REQUIRED FOR PLACEMENT.

6. CALCIUM CHLORIDE SHALL NOT BE ADDED TO THE CONCRETE MIX.

7. FOR EXPOSURE CLASS F3, THE MAXIMUM PERCENTAGE OF POZZOLAN IN CONCRETE MIX SHALL BE IN ACCORDANCE WITH SECTION 26.4.2.2 (B) OF ACI 318-19.

8. USE TYPE V CEMENT WHEN HIGH SULFATE RESISTANCE IS REQUIRED BY THE GEOTECHNICAL REPORT OR WHEN THE 'S' EXPOSURE CLASS IS DESIGNATED AS S2 OR S3. IF S3 IS REQUIRED, POZZOLAN OR SLAG CEMENT IN ACCORDANCE WITH ASTM C1012 IS ALSO REQUIRED.

9. MATERIAL DESIGNATIONS:
   A. CEMENT = ASTM C150 OR ASTM C595
   B. NORMAL WEIGHT AGGREGATES = ASTM C33
   C. LIGHTWEIGHT AGGREGATES = ASTM C330
   D. FLY ASH, CLASS F POZZOLAN = ASTM C618
   E. DEFORMED BAR ANCHORS (DBA) = ASTM A496
   F. HEADED STUD ANCHORS (HSA) = ASTM A108
   G. AIR ENTRAINMENT ADMIXTURES = ASTM C260
   H. WATER REDUCING ADMIXTURES = ASTM C494, TYPE 'A'
   I. RETARDING ADMIXTURES = ASTM C494, TYPE 'B'
   J. WATER REDUCING & RETARDING ADMIXTURES = ASTM C494, TYPE 'D'
   K. HIGH RANGE WATER REDUCING ADMIXTURES = ASTM C494, TYPE 'F'
   L. HIGH RANGE WATER REDUCING & RETARDING ADMIXTURES = ASTM C494, TYPE 'G'
   M. ADMIXTURES ARE TO COME FROM AN ISO9001 QUALITY CERTIFIED MANUFACTURER. ALL ADMIXTURES ARE TO COME FROM THE SAME MANUFACTURER TO ENSURE COMPATIBILITY.
   N. NO ALUMINUM CONDUIT OR PRODUCTS CONTAINING ALUMINUM OR ANY OTHER PRODUCTS THAT REACT ADVERSELY WITH THE CONCRETE SHALL BE EMBEDDED IN THE CONCRETE.

10. A STATEMENT OF MIX DESIGN FOR ALL CONCRETE SHALL BE SUBMITTED AND APPROVED BY THE ENGINEER PRIOR TO COMMENCING WORK. WHERE A SHRINKAGE LIMIT REQUIREMENT IS LISTED IN THE SCHEDULE ABOVE, TESTING PER ASTM C157 SHALL BE PERFORMED.

11. PLACEMENT, CURING, AND PROTECTION OF CONCRETE SHALL CONFORM TO ACI 318-19. THE USE OF CHEMICALS OR ADDITIVES TO PREVENT FREEZING SHOULD NOT BE PERMITTED, REFER TO SPECIFICATIONS AND TO DIRECTIVES BY STRUCTURAL ENGINEER FOR ADDITIONAL COLD WEATHER REQUIREMENTS. ALL CONCRETE SHALL BE PROPERLY VIBRATED IN PLACE USING INTERNAL VIBRATING RODS (MECHANICAL OR ELECTRICAL).

12. ALL SLABS ON GRADE (EXCLUDING MAT SLAB FOUNDATIONS) SHALL BE PLACED WITH CONTROL JOINTS OR SAW CUTS AT NO MORE THAN 30 TIMES THE SLAB THICKNESS ON CENTER (MAXIMUM) OR AS SHOWN/NOTED ON DRAWINGS. LENGTH TO WIDTH RATIO OF THE SLAB BETWEEN CONTROL JOINTS EACH WAY SHALL BE NO MORE THAN 1.25. COMPLETE CONTROL JOINTS WITHIN 12 HOURS OF CONCRETE PLACEMENT. TOOLED CONTROL JOINTS ARE TO BE AT MINIMUM 1/4 OF THE SLAB THICKNESS AND NO MORE THAN 1/3 OF THE SLAB THICKNESS. FOR SAW CUT CONTROL JOINTS, SEE THE TYPICAL SLAB ON GRADE JOINT DETAILS.

13. SLAB ON GRADE CONSTRUCTION JOINTS SHALL NOT EXCEED 125' - 0" O.C. IN ANY DIRECTION. CONSTRUCTION JOINTS MAY BE EITHER A DOWEL TYPE CONSTRUCTION JOINT OR A KEYWAY TYPE CONSTRUCTION JOINT. SEE THE SLAB JOINT TYPICAL DETAILS FOR MORE INFORMATION. CONSTRUCTION JOINTS SHALL NOT OCCUR IN MAT SLAB FOUNDATIONS.

14. CONCRETE TESTS WILL BE MADE ON MAJOR POURS AND AT SUCH OTHER TIMES AS MAY BE REQUIRED BY THE ENGINEER. EACH TEST SHALL CONSIST OF (4) CYLINDERS OF WHICH ONE SHALL BE TESTED AT SEVEN DAYS, TWO TESTED AT TWENTY-EIGHT DAYS AND ONE RETAINED IN RESERVE FOR LATER TESTS, IF REQUIRED. IN GENERAL, ONE TEST SHALL BE MADE FOR EACH 150 CUBIC YARDS OF CONCRETE OR EVERY 5000 SQUARE FEET OF SURFACE AREA FOR SLABS OR WALLS ON EACH DAY'S POUR. SPECIMENS SHALL BE MADE AND TESTED IN ACCORDANCE WITH ASTM C31 & C39 STANDARDS. SLUMP AND AIR ENTRAINMENT TESTS SHALL ALSO BE MADE WITH EACH SET OF CYLINDERS TAKEN.

15. BEFORE CONCRETE IS POURED, CHECK WITH ALL TRADES TO INSURE PROPER PLACEMENT OF ALL OPENINGS, SLEEVES, CURBS, CONDUITS, BOLTS, INSERTS, ETC., RELATED TO THE WORK.

16. THE CONTRACTOR IS RESPONSIBLE FOR THE PLACEMENT, REMOVAL, AND DESIGN OF ALL FORMWORK AND SHORING.

17. SUSPENDED CONCRETE STRUCTURAL MEMBERS SHALL NOT BE STRIPPED OF FORMS UNTIL CONCRETE HAS REACHED ITS DESIGN STRENGTH.

18. FOR LAP SPLICE LENGTH, SEE CONCRETE REINFORCING LAP SPLICE LENGTH SCHEDULE.

19. SEE CIVIL DRAWINGS FOR SITE CONCRETE REQUIREMENTS.

SHEET INDEX

FOUNDATIONS

1. GEOTECHNICAL CONSULTANT: CHRISTENSEN GEOTECHNICAL
   REPORT NUMBER: 133-024
   REPORT DATE: JULY 2, 2025

   ANY ADDENDUMS, ALTERATIONS, OR FIELD CHANGES TO THE ABOVE REFERENCED GEOTECHNICAL REPORT SHALL BE SUBMITTED TO THE STRUCTURAL ENGINEER OF RECORD FOR REVIEW AND INCORPORATION INTO THE STRUCTURAL DESIGN. ANY CONSTRUCTION COMPLETED BEFORE THE REVIEW IS COMPLETED IS PERFORMED AT THE CONTRACTOR'S RISK.

2. SPREAD FOOTINGS SHALL BEAR ON UNDISTURBED, UNIFORM, NATIVE SOILS OR ENTIRELY ON PROPERLY PLACED AND COMPACTED STRUCTURAL FILL, AS SPECIFIED IN THE GEOTECHNICAL REPORT. DESIGN SOIL BEARING VALUE IS 1700 PSF. BOTTOM OF FOOTINGS SHALL BEAR AT A MINIMUM OF 40-INCHES BELOW LOWEST ADJACENT FINAL GRADE EXCEPT THAT BOTTOM OF INTERIOR FOOTINGS NOT SUBJECT TO ANY FREEZING MAY BEAR AT A MINIMUM OF 18-INCHES BELOW TOP OF INTERIOR SLAB.

3. A 1.33 ALLOWABLE SOIL BEARING PRESSURE INCREASE IS ALLOWED FOR WIND & SEISMIC LOADING.

4. ANY FILL TO BE PLACED UNDER THE BUILDING AND FOOTINGS SHALL MEET THE SOIL PROPERTY AND COMPACTION REQUIREMENTS SPECIFIED IN THE GEOTECHNICAL REPORT. EXTENT OF THE FILL BEYOND THE EDGE OF THE FOOTINGS SHALL BE PLACED IN ACCORDANCE WITH THE GEOTECHNICAL REPORT.

5. ALL FILL AND BACK FILL SHALL BE COMPACTED AS REQUIRED BY THE GEOTECHNICAL ENGINEER OF RECORD.

6. ALL WATER SHALL BE REMOVED FROM FOUNDATION EXCAVATION PRIOR TO PLACING OF CONCRETE. DO NOT PLACE CONCRETE UNDER WATER OR ON FROZEN GROUND.

7. ANY UNUSUAL SOIL CONDITIONS (WATER, SOFT LAYERS, ROCK OUTCROPPINGS, ETC.) ENCOUNTERED DURING EXCAVATION FOR FOOTINGS SHOULD BE IMMEDIATELY BROUGHT TO THE ATTENTION OF THE STRUCTURAL AND GEOTECHNICAL ENGINEERS PRIOR TO PROCEEDING.

DEFERRED SUBMITTALS

1. DEFERRED SUBMITTALS ARE THOSE PORTIONS OF THE DESIGN WHICH ARE NOT SUBMITTED AT THE TIME OF PERMIT APPLICATION AND WHICH ARE TO BE SUBMITTED TO THE BUILDING OFFICIAL WITHIN A SPECIFIED PERIOD.

2. SUBMITTAL DOCUMENTS FOR DEFERRED SUBMITTAL ITEMS SHALL BE SUBMITTED TO THE ENGINEER OF RECORD THROUGH THE ARCHITECT AND GENERAL CONTRACTOR WITHIN 6 WEEKS OF AWARD OF CONTRACT TO THE GENERAL CONTRACTOR. ONCE THE SUBMITTAL DOCUMENTS HAVE BEEN FOUND TO BE IN GENERAL CONFORMANCE TO THE CONTRACT DOCUMENTS, THE ENGINEER OF RECORD WILL FORWARD THEM TO THE ARCHITECT WITH A NOTATION INDICATING THAT THEY ARE IN GENERAL CONFORMANCE WITH THE DESIGN OF THE BUILDING. THE ARCHITECT WILL FORWARD THE DEFERRED SUBMITTAL DOCUMENTS TO THE GENERAL CONTRACTOR WHO WILL MAINTAIN ONE SET ON SITE FOR REFERENCE BY THE CITY INSPECTOR. THE DEFERRED SUBMITTAL ITEMS SHALL NOT BE INSTALLED UNTIL THE SUBMITTAL DOCUMENTS HAVE BEEN APPROVED BY THE BUILDING OFFICIAL.

3. ITEMS THAT ARE SUBMITTED FOR CONSIDERATION AS DEFERRED SUBMITTALS ARE AS FOLLOWS:
   A. PREFABRICATED STEEL STAIRS, HANDRAILS, GUARDRAILS, LADDERS, ETC.
   B. TANK HATCH

SHOP DRAWINGS

1. SHOP DRAWINGS SHALL BE SUBMITTED TO THE GENERAL CONTRACTOR PRIOR TO FABRICATION OR ERECTION FOR THE FOLLOWING ITEMS:
   A. CONCRETE MIX DESIGNS
   B. REINFORCING STEEL
   C. MISCELLANEOUS METALS (INCLUDING BUT NOT LIMITED TO PREFABRICATED STEEL STAIRS, HANDRAILS, GUARDRAILS, LADDERS, ETC.)
   D. TANK HATCH

2. THE GENERAL CONTRACTOR SHALL SUBMIT ELECTRONIC COPIES OF ALL SHOP DRAWINGS TO THE STRUCTURAL ENGINEER FOR REVIEW PRIOR TO FABRICATION OR ERECTION. FIVE (5) WORKING DAYS (MINIMUM) SHALL BE ALLOWED FOR THE REVIEW OF THESE SHOP DRAWINGS BY THE STRUCTURAL ENGINEER.

3. THE GENERAL CONTRACTOR WILL REVIEW AND STAMP ALL SHOP DRAWINGS AND PRODUCT DATA FOR CONFORMANCE WITH THE CONSTRUCTION DOCUMENTS PRIOR TO SUBMISSION. ANY SHOP DRAWINGS OR PRODUCT DATA NOT REVIEWED AND STAMPED BY THE GENERAL CONTRACTOR WILL BE RETURNED WITHOUT REVIEW.

4. ANY SHOP DRAWING NOT CHECKED AND INITIALED BY THE SUPPLIER/DETAILER PRIOR TO SUBMITTING FOR ARCHITECTURAL AND ENGINEERING REVIEW, WILL BE RETURNED WITHOUT REVIEW.

5. THE CONSTRUCTION DOCUMENTS MAY NOT BE REPRODUCED AND USED TO CREATE SHOP DRAWINGS WITHOUT THE PERMISSION FROM THE ARCHITECT OR ENGINEER.

DRYPACK / FLOWABLE GROUT

1. THE SPACE BENEATH ALL BASE PLATES AND BEARING PLATES SHALL BE THOROUGHLY CLEANED BEFORE DRYPACKING OR GROUTING. DRYPACK / GROUT SOLID BENEATH ALL BASE PLATES AND BEARING PLATES. NO VOIDS ARE PERMISSIBLE. USE OF DRYPACK OR FLOWABLE GROUT IS AT THE CONTRACTORS OPTION UNLESS SPECIFICALLY NOTED ON THE PLANS OR DETAILS. DRYPACK / GROUT PER THE FOLLOWING:

   A. DRYPACK: PORTLAND CEMENT, ASTM C150, TYPE I AND CLEAN, NATURAL SAND, ASTM C404, SIZE NO. 2. MIX AT RATIO OF 1 PART CEMENT TO 2-1/2 PARTS SAND, BY VOLUME, WITH MINIMUM WATER REQUIRED FOR PLACEMENT AND HYDRATION. MINIMUM COMPRESSIVE STRENGTH SHALL BE 5,000 PSI AT 28 DAYS WHEN TESTED IN ACCORDANCE WITH ASTM C1107.

   B. FLOWABLE GROUT: PREMIXED, NONMETALLIC, NONCORROSIVE, NONSTAINING GROUT CONTAINING SELECTED SILICA SANDS, PORTLAND CEMENT, SHRINKAGE COMPENSATING AGENTS, PLASTICIZING AND WATER-REDUCING AGENTS, COMPLYING WITH ASTM C1107, OF CONSISTENCY SUITABLE FOR APPLICATION, AND A 30-MINUTE WORKING TIME. MINIMUM COMPRESSIVE STRENGTH SHALL BE 5000 PSI AT 28 DAYS WHEN TESTED IN ACCORDANCE WITH ASTM C1107.

STEEL REINFORCING

1. TYPICAL REINFORCING BAR STRENGTHS:
   A. REINFORCING (NON-WELDABLE) = ASTM A615, DEFORMED, Fy = 60 KSI (420 MPa)
   B. REINFORCING (WELDABLE) = ASTM A706, DEFORMED, Fy = 60 KSI (420 MPa)

2. TYPICAL CLEAR CONCRETE COVERAGES:
   A. CONCRETE CAST AGAINST AND PERMANENTLY EXPOSED TO EARTH = 3"
   B. FORMED CONCRETE EXPOSED TO EARTH OR WEATHER = 2" (#6 AND LARGER)
      = 2" (#5 AND SMALLER)
   C. ALL OTHERS PER LATEST EDITION OF ACI 318.

3. ALL BARS PER CRSI SPECIFICATIONS AND HANDBOOK. LATEST ACI CODE AND DETAILING MANUAL APPLY. SECURELY TIE ALL BARS IN LOCATION BEFORE PLACING CONCRETE OR MASONRY. REINFORCING BAR SPACINGS GIVEN ARE MAXIMUM ON CENTERS.

4. ALL REINFORCING TO BE WELDED SHALL BE WELDED IN ACCORDANCE WITH AWS D1.4. NO TACK WELDING OF REINFORCING BARS IS ALLOWED WITHOUT PRIOR REVIEW OF PROCEDURE BY STRUCTURAL ENGINEER.

ENSIGN
THE STANDARD IN ENGINEERING

SANDY
45 W 10000 S, Suite 500
Sandy, UT 84070
Phone: 801.255.0529

LAYTON
Phone: 801.547.1100

TOOELE
Phone: 435.843.3590

CEDAR CITY
Phone: 435.865.1453

RICHFIELD
Phone: 435.896.2983

WWW.ENSIGNENG.COM

FOR:
EDEN VALLEY OPPORTUNITY, LLC
3718 NORTH WOLF CREEK DRIVE
EDEN, UT 84310

CONTACT:
JOHN LEWIS
PHONE: 801.897.4880

COBABE RANCH 0.5 MG WATER TANK
EDEN CROSSING (PWS NO. 29132)
COBABE RANCH
EDEN, UTAH

PROFESSIONAL STRUCTURAL ENGINEER
7-9-2025
No. 9062337
CODY J. SANTOS
STATE OF UTAH

FOR CONSTRUCTION 7/9/2025

NO.	DATE	REVISION

GENERAL STRUCTURAL NOTES

PROJECT NUMBER 14018
DATE 07-09-2025
PROJECT MANAGER CJS
DESIGNED BY QTL

S-001

STRUCTURAL ABBREVIATIONS

AB.	ANCHOR BOLT(S)
ABV.	ABOVE
ADD.	ADDITION (AL)
@	AT
ALT.	ALTERNATE
APPROX.	APPROXIMATE
ARCH.	ARCHITECT (URAL)
BM.	BEAM
BLK'G.	BLOCKING
BLW.	BELOW
BPL.	BASE PLATE
BRG.	BEARING
BTWN.	BETWEEN
BLDG.	BUILDING
BOT.	BOTTOM
CFS	COLD-FORMED STEEL
C.J.	CONSTRUCTION JOINT OR CONTROL JOINT
CJP.	COMPLETE JOINT PENETRATION
CMU	CONCRETE MASONRY UNIT
COL.	COLUMN
CONC.	CONCRETE
CONST.	CONSTRUCTION
CONT.	CONTINUOUS
CTR.	CENTER
DB.	DECK BEARING
DBA	DEFORMED BAR ANCHORS
DBL.	DOUBLE
DET.	DETAIL
DF	DOUGLAS FIR-LARCH
DIA.	DIAMETER
DIM.	DIMENSION
DWG.	DRAWING
DWL.	DOWEL
EA.	EACH
E.J.	EXPANSION JOINT (SEISMIC SEPARATION JOINT)
ELEV.	ELEVATION
ELEC.	ELECTRICAL
EQUIP.	EQUIPMENT
EQ.	EQUAL
EXIST.	EXISTING
EXP.	EXPANSION / EXPOSED
EXT.	EXTERIOR
E.F.	EACH FACE
E.W.	EACH WAY
F.D.	FLOOR DRAIN
FDTN.	FOUNDATION
F.F.	FINISH FLOOR
FIN.	FINISH
FL.	FLOOR
FT.	FOOT
FTG.	FOOTING
FV.	FIELD VERIFY
GA.	GAUGE
GALV.	GALVANIZED
GFRC	GLASS FIBER REINFORCED CONCRETE
GLB.	GLU-LAMINATED BEAM
GR.	GRADE
GSN	GENERAL STRUCTURAL NOTES
HB.	HORIZONTAL BRIDGING
HT.	HEIGHT
HORIZ.	HORIZONTAL
HSA	HEADED STUD ANCHORS
IBC	INTERNATIONAL BUILDING CODE
ICBO	INTERNATIONAL CONFERENCE OF BUILDING OFFICIALS
IN.	INCH
INSUL.	INSULATION
INT.	INTERIOR
I.F.	INSIDE FACE
JT.	JOINT
JST.	JOIST
KLF	KIPS PER LINEAL FOOT
KSF	KIPS PER SQUARE FOOT
KSI	KIPS PER SQUARE INCH
K	KIPS
LF.	LINEAL FOOT
LBS	POUNDS
LLH	LONG LEG HORIZONTAL
LLV	LONG LEG VERTICAL
MAS.	MASONRY
MAX.	MAXIMUM
MCJ.	MASONRY CONTROL JOINT
MECH.	MECHANICAL
MFR.	MANUFACTURER
MIN.	MINIMUM
MISC.	MISCELLANEOUS
N.I.C.	NOT IN CONTRACT
N.T.S.	NOT TO SCALE
OPN'G.	OPENING
OPP.	OPPOSITE
O.C.	ON CENTER
O.F.	OUTSIDE FACE
OWSJ.	OPEN WEB STEEL JOIST
PAF	POWDER ACTUATED FASTENER
PCF	POUNDS PER CUBIC FOOT
PEMB	PRE-ENGINEERED METAL BUILDING
PL.	PLATE
PNL	PANEL
PSF	POUNDS PER SQUARE FOOT
PSI	POUNDS PER SQUARE INCH
PT	POST-TENSIONED
REINF.	REINFORCING
RBS	REDUCED BASE STUD
R.D.	ROOF DRAIN
REQ'D.	REQUIRED
SHT.	SHEET
SHT'G.	SHEATHING
SI	SPECIAL INSPECTION
S.O.G.	SLAB ON GRADE
STD.	STANDARD
STIFF.	STIFFENER
STL.	STEEL
SQ.	SQUARE
SIM.	SIMILAR
STRC.	STRUCTURAL
STAG.	STAGGERED
T&B	TOP AND BOTTOM
TEMP.	TEMPORARY
T.O.	TOP OF
TOC	TOP OF CONCRETE
TOF	TOP OF FOOTING
TOS	TOP OF SLAB
TOW	TOP OF WALL
TYP.	TYPICAL
U.N.O.	UNLESS NOTED OTHERWISE
VERT.	VERTICAL
w/	WITH
WWF	WELD WIRE FABRIC
WWM	WELD WIRE MESH
WT.	WEIGHT
WP	WOOD POST

SYMBOLS & MARKS LEGEND

CONTINUOUS CONCRETE FOOTING

SPOT / MAT CONCRETE FOOTING

S S FOOTING STEP

STEP IN TOP OF CONCRETE

BLOCK OUT AT COLUMN

HAIRPIN TENSION BAR

TIE ROD

CONCRETE WALL

CONCRETE WALL BLOCK OUT

CONCRETE COLUMN IN WALL

BEAM IN WALL BELOW

MASONRY WALL

MASONRY COLUMN IN WALL

BEAM IN WALL BELOW

WOOD SHEAR WALL

WOOD POST IN WALL

BEAM IN WALL BELOW

WOOD WALL (NON-SHEAR WALL)

COLD-FORMED STEEL WALL

BEAM IN WALL BELOW

WALL THAT STOPS AT BOTTOM OF FLOOR OR ROOF (FLOOR OR ROOF STRUCTURE BEARS ON WALL)

BEAM IN WALL THAT STOPS AT BOTTOM OF FLOOR OR ROOF

CONCRETE OR MASONRY BEAM (NOT WITHIN A WALL) AT OR BELOW FLOOR OR ROOF

NON-STRUCTURAL WALL THAT STOPS BELOW BOTTOM OF FLOOR OR ROOF (AIR GAP OCCURS BETWEEN WALL AND FLOOR OR ROOF STRUCTURE)

COLUMN THAT STOPS AT BOTTOM OF FLOOR OR ROOF

COLUMN THAT EITHER STARTS AT OR CONTINUES THROUGH FLOOR OR ROOF STRUCTURE

WOOD POST (SOLID OR BUILT-UP)

HSS TUBE STEEL COLUMN

WIDE FLANGE STEEL COLUMN

PIPE/ROUND HSS STEEL COLUMN

CONCRETE OR MASONRY COLUMN

STEEL COLUMN TAG:

SC-# E-# C-#

STEEL COLUMN MARK

STEEL COLUMN CAP PLATE MARK

STEEL COLUMN BASE PLATE MARK

STEEL BEAM TAG:

SIZE (##) C=##"

BEAM SIZE

HSA QUANTITY ON BEAM

PRE-CAMBER AT MID-SPAN OF BEAM

MOMENT CONNECTION (SFRS)

MOMENT CONNECTION (GRAVITY)

COLLECTOR CONNECTION IDENTIFICATION (SFRS)

BEAM SPLICE

BRACED FRAME ELEMENT

KICKER BRACE

OPENING

XX CONCRETE SUSPENDED SLAB, SEE KEYED NOTES FOR REQUIREMENTS

CONCRETE OVER STEEL DECK, SEE PLAN FOR ORIENTATION, AND GSN & SCHEDULE FOR REQUIREMENTS

STEEL DECK, SEE PLAN FOR ORIENTATION, AND GSN & SCHEDULE FOR REQUIREMENTS

HORIZONTAL BRIDGING

CROSS BRIDGING

XX WOOD SHEATHING (FLOOR OR ROOF), SEE PLAN FOR ORIENTATION & REQUIREMENTS

STRAPPING

Dx SNOW DRIFT, SEE SCHEDULE

XX'-XX" ELEVATION

INDICATES SPAN DIRECTION OF CONCRETE ELEMENTS

EXTENT OF CONDITION SPECIFIED

CONTINUATION OF CONDITION SPECIFIED

DETAIL # / S### SHEET

X KEYED NOTE

AB#	ANCHOR BOLT
AT-#	ANCHOR TIE DOWN SYSTEM
B-#	STEEL COLUMN BASE PLATE
BRGPL-#	STEEL BEARING PLATE
C-#	STEEL COLUMN CAP PLATE
CB-#	CONCRETE BEAM
CC-#	CONCRETE COLUMN
CFSB-#	COLD-FORMED STEEL BEAM
CP-#	CONCRETE PEDESTAL
CTW-#	CONCRETE TILT WALL
CW-#	CONCRETE WALL
FC#	CONTINUOUS FOOTING
FS#	SPOT FOOTING
FTAO-#	FORCE TRANSFER AROUND OPENING
GB-#	GRADE BEAM
H-#	HOLDOWN
HCMC-#	HOLLOW CLAY MASONRY COLUMN
HCML-#	HOLLOW CLAY MASONRY LINTEL
HCMW-#	HOLLOW CLAY MASONRY WALL
HP-#	HAIRPIN TENSION BAR
L-#	STEEL LEDGER
MC-#	MASONRY COLUMN
ML-#	MASONRY LINTEL
MW-#	MASONRY WALL
RW-#	RETAINING WALL
SC-#	STEEL COLUMN
SD-#	STEEL DECK
SW-#	WOOD SHEAR WALL
T-#	FLOOR-TO-FLOOR TIE
WB-#	WOOD BEAM
WL-#	WOOD LEDGER
WP-#	WOOD POST
WW-#	WOOD WALL

ENSIGN
THE STANDARD IN ENGINEERING

SANDY
45 W 10000 S, Suite 500
Sandy, UT 84070
Phone: 801.255.0529

LAYTON
Phone: 801.547.1100

TOOELE
Phone: 435.843.3590

CEDAR CITY
Phone: 435.865.1453

RICHFIELD
Phone: 435.896.2983

WWW.ENSIGNENG.COM

FOR:
EDEN VALLEY OPPORTUNITY, LLC
3718 NORTH WOLF CREEK DRIVE
EDEN, UT 84310

CONTACT:
JOHN LEWIS
PHONE: 801.897.4880

COBABE RANCH 0.5 MG WATER TANK
EDEN CROSSING (PWS NO. 29132)
COBABE RANCH
EDEN, UTAH

PROFESSIONAL STRUCTURAL ENGINEER
7-9-2025
No. 9062337
CODY J. SANTOS
STATE OF UTAH

FOR CONSTRUCTION 7/9/2025

NO.	DATE	REVISION

GENERAL STRUCTURAL NOTES

PROJECT NUMBER	DATE
14018	07-09-2025
PROJECT MANAGER	DESIGNED BY
CJS	QTL

S-002

SPECIAL INSPECTION

SPECIAL INSPECTIONS:

1. SPECIAL INSPECTIONS ARE REQUIRED AS DESCRIBED IN CHAPTER 17 OF THE 2021 IBC. THE OWNER OR OWNER'S AGENT, OTHER THAN THE CONTRACTOR, SHALL EMPLOY ONE OR MORE APPROVED AGENCIES TO PROVIDE SPECIAL INSPECTIONS AND TESTS DURING CONSTRUCTION ON THE TYPES OF WORK SPECIFIED IN SECTION 1705 AND IDENTIFY THE APPROVED AGENCIES TO THE BUILDING OFFICIAL. THESE SPECIAL INSPECTIONS AND TESTS ARE IN ADDITION TO THE INSPECTIONS BY THE BUILDING OFFICIAL THAT ARE IDENTIFIED IN SECTION 110.

2. THE SPECIAL INSPECTION REQUIREMENTS OF THIS SECTION OF THE GENERAL STRUCTURAL NOTES SERVE AS THE ENGINEER OF RECORD'S STATEMENT OF SPECIAL INSPECTIONS REQUIRED BY CHAPTER 17 OF THE 2021 IBC.

SPECIAL INSPECTOR QUALIFICATIONS & RESPONSIBILITIES:

1. PRIOR TO THE START OF CONSTRUCTION, THE APPROVED AGENCIES SHALL PROVIDE WRITTEN DOCUMENTATION TO THE BUILDING OFFICIAL DEMONSTRATING THE COMPETENCE AND RELEVANT EXPERIENCE OR TRAINING OF THE SPECIAL INSPECTORS WHO WILL PERFORM THE SPECIAL INSPECTIONS AND TESTS DURING CONSTRUCTION.

2. APPROVED AGENCIES SHALL KEEP RECORDS OF ALL SPECIAL INSPECTIONS AND TESTS. THE APPROVED AGENCY SHALL SUBMIT REPORTS OF SPECIAL INSPECTIONS AND TEST TO THE BUILDING OFFICIAL AND TO THE ARCHITECT / ENGINEER OF RECORD.
   A. REPORTS SHALL INDICATE THAT WORK INSPECTED OR TESTED WAS OR WAS NOT COMPLETED IN CONFORMANCE TO THE APPROVED CONSTRUCTION DOCUMENTS.
   B. ANY DISCREPANCIES SHALL BE BROUGHT TO THE IMMEDIATE ATTENTION OF THE CONTRACTOR FOR CORRECTION.
   C. ANY DISCREPANCIES THAT ARE NOT CORRECTED SHALL BE BROUGHT TO THE ATTENTION OF THE BUILDING OFFICIAL AND THE ARCHITECT/ENGINEER OF RECORD PRIOR TO COMPLETION OF THAT PHASE OF WORK.
   D. THE INSPECTOR SHALL KEEP A MARKED-UP SET OF DRAWINGS SHOWING THE EXTENT AND TIME OF ALL INSPECTIONS AND TESTING.
   E. A FINAL SIGNED REPORT DOCUMENTING ALL REQUIRED SPECIAL INSPECTIONS AND CORRECTION OF ANY DISCREPANCIES NOTED IN THE INSPECTIONS SHALL BE SUBMITTED TO THE BUILDING OFFICIAL AND ARCHITECT/ENGINEER OF RECORD AT A POINT IN TIME AGREED UPON PRIOR TO THE START OF WORK BY THE OWNER OR OWNER'S AGENT. THE REPORT SHALL INCLUDE THE MARKED-UP SET OF DRAWINGS OUTLINED ABOVE.

CONTRACTOR RESPONSIBILITIES:

1. EACH CONTRACTOR RESPONSIBLE FOR THE CONSTRUCTION OF A MAIN WIND/SEISMIC FORCE RESISTING SYSTEM, DESIGNATED WIND/SEISMIC SYSTEM, OR A WIND/SEISMIC FORCE RESISTING COMPONENT SHALL SUBMIT A WRITTEN STATEMENT OF RESPONSIBILITY TO THE BUILDING OFFICIAL AND THE OWNER PRIOR TO THE COMMENCEMENT OF WORK ON THAT SYSTEM OR COMPONENT. THIS STATEMENT SHALL CONTAIN ACKNOWLEDGEMENT OF AWARENESS OF THE SPECIAL INSPECTION REQUIREMENTS.

2. THE CONTRACTOR SHALL COORDINATE AND COOPERATE WITH ALL REQUIRED INSPECTIONS, TESTING AND STRUCTURAL OBSERVATIONS. THE CONTRACTOR SHALL NOT PROCEED WITH SUBSEQUENT WORK UNTIL REQUIRED INSPECTIONS, TESTING AND STRUCTURAL OBSERVATIONS HAVE BEEN COMPLETED.

3. ALL WORK REQUIRING SPECIAL INSPECTION SHALL REMAIN ACCESSIBLE AND EXPOSED UNTIL COMPLETION OF THE REQUIRED SPECIAL INSPECTIONS.

4. THE CONTRACTOR SHALL NOTIFY THE ENGINEER OF RECORD AT LEAST (2) DAYS PRIOR TO ANY REQUIRED STRUCTURAL OBSERVATIONS.

SPECIAL INSPECTION OF FABRICATED ITEMS:

1. ALL FABRICATION OF STRUCTURAL, LOAD-BEARING OR LATERAL LOAD-RESISTING MEMBERS OR ASSEMBLIES PERFORMED OFFSITE SHALL BE SPECIAL INSPECTED PER SECTION 1704.2.5.

2. WHERE THE FABRICATOR IS REGISTERED AND APPROVED IN ACCORDANCE WITH SECTION 1704.2.5.1, THEY SHALL SUBMIT A CERTIFICATE OF COMPLIANCE TO THE OWNER OR THE OWNER'S AGENT FOR SUBMITTAL TO THE BUILDING OFFICIAL AT THE COMPLETION OF FABRICATION STATING THE WORK WAS PERFORMED IN ACCORDANCE WITH THE APPROVED CONSTRUCTION DOCUMENTS.

SUBMITTALS TO THE BUILDING OFFICIAL:

1. IN ADDITION TO THE SUBMITTAL OF REPORTS OF SPECIAL INSPECTIONS AND TESTS IN ACCORDANCE WITH SECTION 1704.2.4, REPORTS AND CERTIFICATES SHALL BE SUBMITTED BY THE OWNER OR OWNER'S AGENT TO THE BUILDING OFFICIAL FOR EACH OF THE FOLLOWING:
   A. CERTIFICATES OF COMPLIANCE FOR APPROVED FABRICATORS.
   B. CERTIFICATES OF COMPLIANCE FOR SEISMIC QUALIFICATIONS OF NON-STRUCTURAL COMPONENTS, SUPPORTS, AND ATTACHMENTS.
   C. CERTIFICATES OF COMPLIANCE FOR DESIGNATED SEISMIC SYSTEMS.
   D. REPORTS OF PRE-CONSTRUCTION TESTS FOR SHOTCRETE.
   E. CERTIFICATES OF COMPLIANCE FOR OPEN-WEB STEEL JOISTS AND JOIST GIRDERS.
   F. REPORTS OF MATERIAL COMPLIANCE FOR WELDABILITY OF REINFORCING BARS IN CONCRETE.
   G. REPORTS OF MILL TESTS FOR REINFORCING BARS USED IN SPECIAL CONCRETE MOMENT FRAMES, SPECIAL STRUCTURAL WALLS OR COUPLING BEAMS.

STRUCTURAL OBSERVATIONS:

1. STRUCTURAL OBSERVATIONS ARE REQUIRED PER SECTION 1704.6.1 OF THE 2021 IBC. STRUCTURAL OBSERVATIONS SHALL BE PERFORMED BY A REPRESENTATIVE FROM ENSIGN ENGINEERING AS REQUIRED FOR CRITICAL PHASES OF CONSTRUCTION. THE STRUCTURAL OBSERVER SHALL VISUALLY OBSERVE REPRESENTATIVE LOCATIONS OF STRUCTURAL SYSTEMS, DETAILS, AND LOAD PATHS FOR GENERAL CONFORMANCE TO THE APPROVED CONSTRUCTION DOCUMENTS. THIS INCLUDES, BUT IS NOT LIMITED TO, MAT FOUNDATIONS, FOOTINGS, FOUNDATION WALLS, CONCRETE COLUMNS, CONCRETE SUSPENDED SLABS, AND CONCRETE SHEAR WALLS.

2. COPIES OF THE STRUCTURAL OBSERVATION REPORT WILL BE DISTRIBUTED TO THE OWNER, ARCHITECT, CONTRACTOR AND BUILDING OFFICIAL.

3. STRUCTURAL OBSERVATION DOES NOT INCLUDE OR WAIVE THE SPECIAL INSPECTIONS REQUIRED BY THE 2021 IBC AND SHALL NOT BE CONSTRUED AS APPROVAL OF CONSTRUCTION.

REQUIRED SPECIAL INSPECTION OR TESTING:

THE FOLLOWING MATERIALS, SYSTEMS AND COMPONENTS REQUIRE SPECIAL INSPECTION OR TESTING PER CHAPTER 17 OF THE 2021 IBC:

1. SPECIAL CASES (SECTION 1705.1.1)
   A. SPECIAL INSPECTION AND TESTING SHALL BE PROVIDED FOR POST INSTALLED ANCHORS PER THE ICC OR IAPMO REPORT.

2. CONCRETE CONSTRUCTION (SECTION 1705.3):
   A. SPECIAL INSPECTION AND TESTS FOR CONCRETE CONSTRUCTION SHALL BE IN ACCORDANCE WITH THE CONCRETE CONSTRUCTION SPECIAL INSPECTION TABLE AND SECTION 1705.3 OF THE 2021 IBC.
   B. SEE TABLE 1705.3 OF THE 2021 IBC FOR APPLICABLE REFERENCE STANDARDS.
   C. WELDING OF REINFORCING BARS. SPECIAL INSPECTION OF WELDING AND QUALIFICATIONS OF SPECIAL INSPECTORS FOR REINFORCING BARS SHALL BE IN ACCORDANCE WITH THE REQUIREMENTS OF AWS D1.4 FOR SPECIAL INSPECTION AND FOR SPECIAL INSPECTOR QUALIFICATIONS.
   D. IN THE ABSENCE OF SUFFICIENT DATA OR DOCUMENTATION PROVIDING EVIDENCE OF CONFORMANCE TO QUALITY STANDARDS FOR MATERIAL IN CHAPTERS 19 AND 20 OF ACI 318, THE BUILDING OFFICIAL SHALL REQUIRE TESTING OF MATERIALS IN ACCORDANCE WITH THE APPROPRIATE STANDARDS AND CRITERIA FOR THE MATERIAL IN CHAPTERS 19 AND 20 OF ACI 318.

3. SOILS (SECTION 1705.6):
   A. SPECIAL INSPECTIONS AND TESTS OF EXISTING SITE SOIL CONDITIONS, FILL PLACEMENT AND LOAD-BEARING REQUIREMENTS SHALL BE IN ACCORDANCE WITH THE SOILS SPECIAL INSPECTION TABLE AND THE FOLLOWING:
      a. THE APPROVED GEOTECHNICAL REPORT AND APPROVED CONSTRUCTION DOCUMENTS SHALL BE USED TO DETERMINE COMPLIANCE.
      b. DURING FILL PLACEMENT, THE SPECIAL INSPECTOR SHALL DETERMINE THAT PROPER MATERIALS AND PROCEDURES ARE USED IN ACCORDANCE WITH THE PROVISIONS OF THE APPROVED GEOTECHNICAL REPORT.
      c. WHERE A GEOTECHNICAL REPORT IS NOT PROVIDED, THE SPECIAL INSPECTOR SHALL VERIFY THAT THE IN-PLACE DRY DENSITY OF THE COMPACTED FILL IS NOT LESS THAN 90 PERCENT OF THE MAXIMUM DRY DENSITY AT OPTIMUM MOISTURE CONTENT DETERMINED IN ACCORDANCE WITH ASTM D 1557.

DEFINITIONS:

1. THE FOLLOWING DEFINITIONS APPLY TO ALL SPECIAL INSPECTION TABLES (WHERE APPLICABLE) UNLESS SPECIFICALLY NOTED OTHERWISE:
   A. CONTINUOUS – FULL-TIME OBSERVATION OF WORK REQUIRING SPECIAL INSPECTION BY AN APPROVED SPECIAL INSPECTOR.
   B. PERIODIC – AN APPROVED SPECIAL INSPECTOR MUST OBSERVE THE WORK REQUIRING SPECIAL INSPECTION PRIOR TO COMMENCEMENT OF WORK, INTERMITTENTLY DURING THE WORK, AND AT COMPLETION OF THE WORK.

CONCRETE CONSTRUCTION SPECIAL INSPECTION PER SECTION 1705.3 OF IBC 2021

VERIFICATION AND INSPECTION	CONTINUOUS	PERIODIC
REINFORCEMENT, INCLUDING PRE-STRESSING TENDONS AND VERIFYING PLACEMENT		X
REINFORCING BAR WELDING:		
VERIFICATION OF WELDABILITY OF REINFORCING BARS OTHER THAN ASTM A706		X
INSPECT SINGLE-PASS FILLET WELDS, MAXIMUM 5/16"		X
INSPECT ALL OTHER WELDS	X	
CAST-IN-PLACE ANCHORS		X
POST-INSTALLED ANCHORS IN HARDENED CONCRETE MEMBERS[NOTE 1]		
ADHESIVE ANCHORS INSTALLED IN HORIZONTALLY OR UPWARDLY INCLINED ORIENTATIONS TO RESIST SUSTAINED TENSION LOADS	X	
MECHANICAL ANCHORS AND ADHESIVE ANCHORS NOT DEFINED ABOVE		X
USE OF REQUIRED MIX DESIGN		X
PRIOR TO CONCRETE PLACEMENT, FABRICATE SPECIMENS FOR STRENGTH TEST, PERFORM SLUMP AND AIR CONTENT TESTS, AND DETERMINE CONCRETE TEMPERATURE	X	
CONCRETE AND SHOTCRETE PLACEMENT FOR PROPER APPLICATION TECHNIQUES	X	
MAINTENANCE OF SPECIFIED CURING TEMPERATURE AND TECHNIQUES		X
INSPECT PRE-STRESSED CONCRETE FOR:		
APPLICATION OF PRE-STRESSING FORCES	X	
GROUTING OF BONDED PRE-STRESSING TENDONS	X	
ERECTION OF PRECAST CONCRETE		X
FOR PRECAST CONCRETE DIAPHRAGM CONNECTIONS OR REINFORCMENT AT JOINTS CLASSIFIED AS MODERATE OR HIGH DEFORMABILITY ELEMENTS (MDE OR HDE) IN STRUCTURES ASSIGNED TO SEISMIC DESIGN CATEGORY C, D, E, OR F, INSPECT SUCH CONNECTIONS AND REINFORCEMENT IN THE FIELD FOR:		
INSTALLATION OF THE EMBEDDED PARTS	X	
COMPLETION OF THE CONTINUITY OF REINFORCEMENT ACROSS JOINTS	X	
COMPLETION OF CONNECTIONS IN THE FIELD	X	
INSPECT INSTALLATION TOLERANCES OF PRECAST CONCRETE DIAPHRAGM CONNECTIONS FOR COMPLIANCE WITH ACI 550.5		X
IN-SITU CONCRETE STRENGTH, PRIOR TO STRESSING OF TENDONS IN POST-TENSIONED CONCRETE AND PRIOR TO REMOVAL OF SHORES AND FORMS FROM BEAMS AND STRUCTURAL SLABS		X
FORMWORK FOR SHAPE, LOCATION, AND DIMENSIONS OF CONCRETE MEMBER BEING FORMED		X

NOTES:

1. SPECIFIC REQUIREMENTS FOR SPECIAL INSPECTION SHALL BE INCLUDED IN THE RESEARCH REPORT FOR THE ANCHOR ISSUED BY AN APPROVED SOURCE IN ACCORDANCE WITH SECTION 17.8.2 OF ACI 318, OR OTHER QUALIFICATION PROCEDURES. WHERE SPECIFIC REQUIREMENTS ARE NOT PROVIDED, SPECIAL INSPECTION REQUIREMENTS SHALL BE SPECIFIED BY THE REGISTERED DESIGN PROFESSIONAL AND SHALL BE APPROVED BY THE BUILDING OFFICIAL PRIOR TO COMMENCEMENT OF THE WORK.

SOIL SPECIAL INSPECTION PER SECTION 1705.6 OF IBC 2021

VERIFICATION AND INSPECTION	CONTINUOUS	PERIODIC
VERIFY MATERIALS BELOW SHALLOW FOUNDATIONS ARE ADEQUATE TO ACHIEVE DESIGN BEARING CAPACITY		X
VERIFY EXCAVATIONS ARE EXTENDED TO PROPER DEPTH AND HAVE REACHED PROPER MATERIAL		X
PERFORM CLASSIFICATION AND TESTING OF COMPACTED FILL MATERIALS		X
DURING FILL PLACEMENT, VERIFY PROPER MATERIALS AND PROCEDURES IN ACCORDANCE w/ THE PROVISIONS OF THE APPROVED GEOTECHNICAL REPORT. VERIFY DENSITIES AND LIFT THICKNESSES DURING PLACEMENT AND COMPACTION OF COMPACTED FILL.	X	
PRIOR TO PLACEMENT OF COMPACTED FILL, INSPECT SUBGRADE AND VERIFY SITE HAS BEEN PREPARED PROPERLY		X

ENSIGN
THE STANDARD IN ENGINEERING

SANDY
45 W 10000 S, Suite 500
Sandy, UT 84070
Phone: 801.255.0529

LAYTON
Phone: 801.547.1100

TOOELE
Phone: 435.843.3590

CEDAR CITY
Phone: 435.865.1453

RICHFIELD
Phone: 435.896.2983

WWW.ENSIGNENG.COM

FOR:
EDEN VALLEY OPPORTUNITY, LLC
3718 NORTH WOLF CREEK DRIVE
EDEN, UT 84310

CONTACT:
JOHN LEWIS
PHONE: 801.897.4880

COBABE RANCH 0.5 MG WATER TANK
EDEN CROSSING (PWS NO. 29132)
COBABE RANCH
EDEN, UTAH

PROFESSIONAL STRUCTURAL ENGINEER
No. 9062337
CODY J. SANTOS
STATE OF UTAH
9-9-2025

FOR CONSTRUCTION 7/9/2025

NO.	DATE	REVISION

SPECIAL INSPECTIONS

PROJECT NUMBER	DATE
14018	07-09-2025
PROJECT MANAGER	DESIGNED BY
CJS	QTL

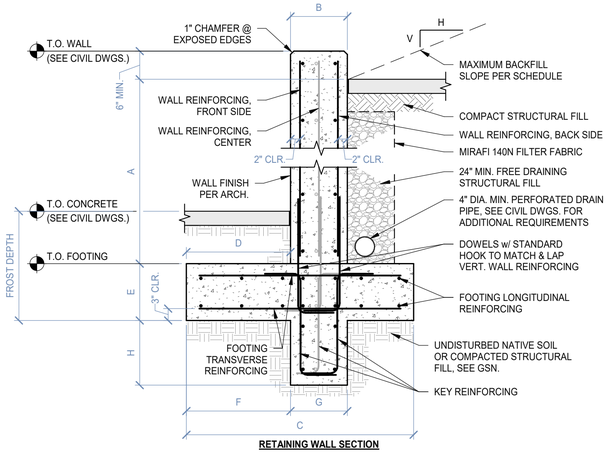
S-011

RETAINING WALL SCHEDULE

MARK	DIMENSIONS								WALL REINFORCING									FOOTING REINFORCING						KEY REINFORCING (IF APPLICABLE)						BACKFILL SLOPE (H:V)	COMMENTS
	WALL		FOOTING			KEY (IF APPLICABLE)			VERTICAL						HORIZONTAL			LONGITUDINAL			TRANSVERSE			VERTICAL			HORIZONTAL				
									FRONT SIDE		CENTER		BACK SIDE																			
	A	B	C	D	E	F	G	H	SIZE	SPACING	SIZE	SPACING	SIZE	SPACING	SIZE	SPACING	LOCATION	QUANTITY	SIZE	SPACING	SIZE	SPACING	LOCATION	SIZE	SPACING	LOCATION	SIZE	SPACING	LOCATION		
RW-8A																															
RW-8A	7' - 8" MAX.	8"	5' - 6"	3' - 0"	12"	--	--	--	--	--	#5	6" O.C.	--	--	#5	18" O.C.	CENTERED	(5) TOP & (5) BOTTOM	#5	EVENLY	#5	12" O.C.	TOP & BOTTOM	--	--	--	--	--	--	3:1	--

NOTES:

1. CONTRACTOR TO DETERMINE WHICH WALL TYPE WITHIN MARK RW-xx SHALL BE USED BASED ON MAXIMUM RETAINED HEIGHT OF SOIL ABOVE TOP OF FOOTING (WALL DIMENSION "A"), TYPICAL, U.N.O.
2. **WHERE ELEMENTS OCCUR ABOVE RETAINING WALL (i.e. FENCE, ETC.):**
   - **SEE ARCHITECTURAL DRAWINGS FOR REQUIREMENTS, TYPICAL U.N.O.**
   - **WHERE ONLY ONE MAT OF WALL REINFORCING IS DESIGNATED, INSTALL (1) #4 HORIZONTAL BAR EACH FACE MINIMUM AT TOP OF WALL IN LIEU OF CENTERED HORIZONTAL BAR.**
   - **ATTACHMENT OF ELEMENTS TO TOP OF RETAINING WALL SHALL BE DESIGNED BY OTHERS.**
   - **IF FENCE IS PRESENT, FENCE SHALL BE AT LEAST 70% OPEN AND NO MORE THAN 6-FT IN HEIGHT. NOTIFY ENGINEER IF THESE LIMITS ARE EXCEEDED.**



RETAINING WALL SECTION

CONCRETE REINFORCING LAP SPLICE LENGTH SCHEDULE

BAR SIZE	BAR DIAMETER (IN.)	f'c = 3,000 PSI				f'c = 4,000 PSI				f'c = 5,000 PSI			
		TYPICAL SPLICE (IN)		TOP BAR SPLICE (IN)		TYPICAL SPLICE (IN)		TOP BAR SPLICE (IN)		TYPICAL SPLICE (IN)		TOP BAR SPLICE (IN)	
		CLASS A	CLASS B	CLASS A	CLASS B	CLASS A	CLASS B	CLASS A	CLASS B	CLASS A	CLASS B	CLASS A	CLASS B
3	0.375	17	22	22	29	15	20	20	25	13	17	17	22
4	0.500	22	29	29	38	19	25	25	33	17	23	23	30
5	0.625	28	36	36	47	24	31	31	40	22	29	29	36
6	0.750	33	43	43	56	29	38	38	48	26	34	34	44
7	0.875	48	63	63	82	42	55	55	70	38	49	49	64
8	1.000	55	72	72	94	48	62	62	81	43	56	56	73
9	1.128	62	81	81	105	54	70	70	91	48	63	63	82
10	1.270	70	91	91	118	61	79	79	103	54	71	71	92
11	1.410	78	101	101	131	67	87	87	113	60	78	78	101

NOTES:

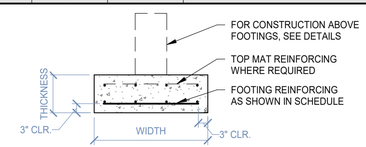
1. ALL LAP SPLICE LENGTHS ARE CLASS B UNLESS NOTED OTHERWISE ON PLANS.
2. HORIZONTAL BARS ARE CLASSIFIED AS TOP BARS WHERE 12" OR MORE OF FRESH CONCRETE IS CAST BELOW THE LAP SPLICE.
3. FOR ALL EPOXY-COATED BARS, LAP SPLICE LENGTHS SHALL BE MULTIPLIED BY:
   - 1.5 WHEN CLEAR COVER IS LESS THAN 3 BAR DIAMETERS & CLEAR SPACING IS LESS THAN 6 BAR DIAMETERS, OR
   - 1.2 FOR ALL OTHER EPOXY-COATED BARS.
4. FOR ALL LIGHT-WEIGHT CONCRETE, LAP SPLICE LENGTHS SHALL BE MULTIPLIED BY 1.33.

CONCRETE CONTINUOUS FOOTING SCHEDULE

MARK	FOOTING TYPE	WIDTH	THICKNESS	LONGITUDINAL REINFORCING		TRANSVERSE REINFORCING		COMMENTS
				QUANTITY	SIZE	SIZE	SPACING	
FC2.0	CONTINUOUS	2' - 0"	12"	(2)	#5	--	--	--

NOTES:

1. CONTRACTOR TO DETERMINE REQUIRED DEPTH OF FOOTINGS TO MEET FROST PROTECTION. SEE FOUNDATION SECTION OF GSN FOR MINIMUM REQUIREMENTS.
2. AT CONTINUOUS FOOTINGS, SPACE LONGITUDINAL REINFORCING EVENLY, TYPICAL UNLESS NOTED OTHERWISE.
3. AT SPOT FOOTINGS, SPACE LONGITUDINAL & TRANSVERSE REINFORCING EVENLY, TYPICAL UNLESS NOTED OTHERWISE.
4. SEE GENERAL STRUCTURAL NOTES FOR ADDITIONAL REQUIREMENTS.



CONCRETE WALL SCHEDULE

MARK	WALL THICKNESS	REINFORCING						COMMENTS
		VERTICAL			HORIZONTAL			
		SIZE	SPACING	LOCATION	SIZE	SPACING	LOCATION	
CW-8A	8"	#5	8" O.C.	CENTER	#5	15" O.C.	CENTER	TYPICAL U.N.O.

NOTES:

1. EXTEND VERTICAL BARS FROM THE FOOTING TO WITHIN 3" OF TOP OF WALL.
2. DOWELS MATCHING VERTICAL REINFORCING SIZE & SPACING SHALL EXTEND INTO FOOTING & TERMINATE WITH A 90-DEGREE STANDARD HOOK. ENSURE VERTICAL DOWEL HOOKS AROUND BOTTOM MAT OF FOOTING REINFORCING.
3. EXTEND VERTICAL LEG OF DOWEL MIN. LAP SPLICE LENGTH INTO WALL.
4. ALTERNATE DIRECTION OF STANDARD HOOK AT EVERY OTHER BAR.
5. INSTALL SCHEDULED HORIZONTAL REINFORCING WITHIN 4" OF TOP & BOTTOM OF WALL, U.N.O.
6. INSTALL CORNER REINFORCING SO AS TO LAP HORIZONTAL REINFORCING. SEE "TYPICAL CONCRETE WALL INTERSECTION REINFORCING" STRUCTURAL DETAIL.
7. INSTALL (2) REBAR ABOVE, (1) REBAR @ EACH SIDE, & (1) REBAR BELOW ALL OPENINGS. PLACE STEEL WITHIN 2" OF OPENINGS, VERTICAL BARS AROUND OPENINGS SHALL EXTEND FROM THE FOOTING TO WITHIN 3" OF TOP OF WALL & EXTEND HORIZONTAL BARS MIN. LAP SPLICE LENGTH BEYOND EDGE OF OPENINGS.
8. ALL CONCRETE WALL TYPES MAY NOT BE USED, SEE PLAN FOR REQUIREMENTS.
9. SEE GENERAL STRUCTURAL NOTES FOR ADDITIONAL REQUIREMENTS.

ENSIGN
THE STANDARD IN ENGINEERING

SANDY
45 W 10000 S, Suite 500
Sandy, UT 84070
Phone: 801.255.0529

LAYTON
Phone: 801.547.1100

TOOELE
Phone: 435.843.3590

CEDAR CITY
Phone: 435.865.1453

RICHFIELD
Phone: 435.896.2983

WWW.ENSIGNENG.COM

FOR:
EDEN VALLEY OPPORTUNITY, LLC
3718 NORTH WOLF CREEK DRIVE
EDEN, UT 84310

CONTACT:
JOHN LEWIS
PHONE: 801.897.4880

COBABE RANCH 0.5 MG WATER TANK
EDEN CROSSING (PWS NO. 29132)

COBABE RANCH
EDEN, UTAH

PROFESSIONAL STRUCTURAL ENGINEER
9-2025
No. 9062337
CODY J. SANTOS
STATE OF UTAH

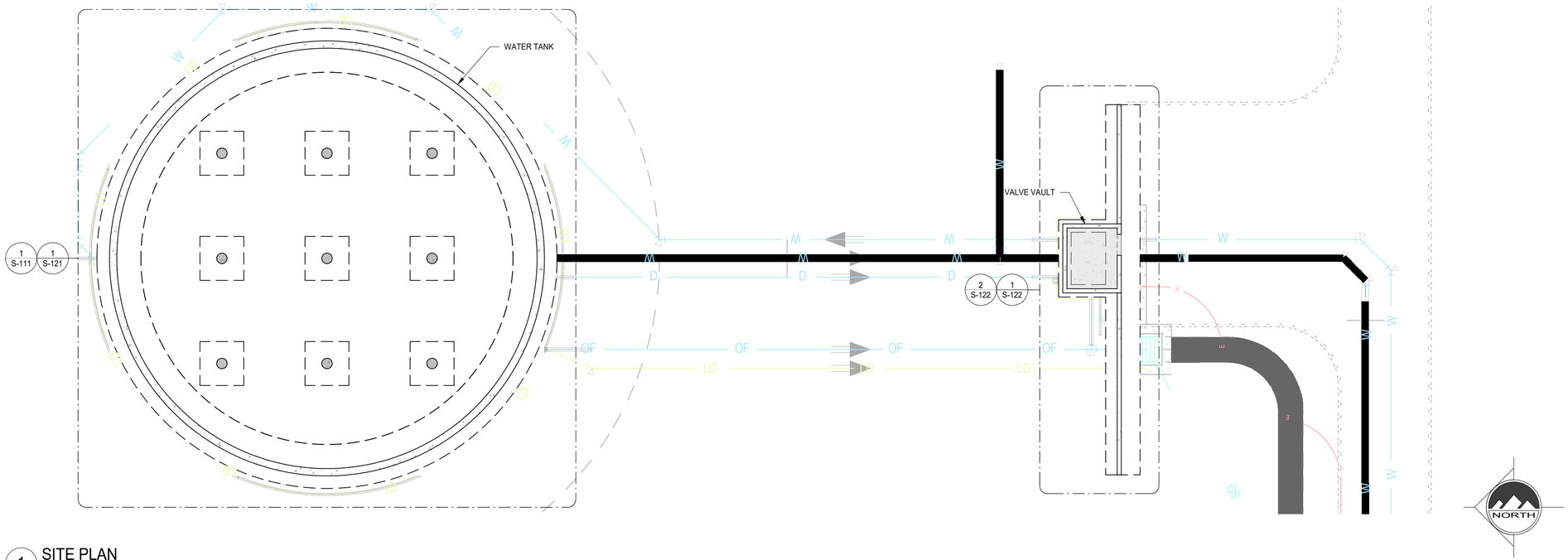
FOR CONSTRUCTION 7/9/2025

NO.	DATE	REVISION

STRUCTURAL SCHEDULES

PROJECT NUMBER 14018
DATE 07-09-2025
PROJECT MANAGER CJS
DESIGNED BY QTL

S-021



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

ENSIGN
THE STANDARD IN ENGINEERING

SANDY
45 W 10000 S, Suite 500
Sandy, UT 84070
Phone: 801.255.0529

LAYTON
Phone: 801.547.1100

TOOELE
Phone: 435.843.3590

CEDAR CITY
Phone: 435.865.1453

RICHFIELD
Phone: 435.896.2983

WWW.ENSIGNENG.COM

FOR:
EDEN VALLEY OPPORTUNITY, LLC
3718 NORTH WOLF CREEK DRIVE
EDEN, UT 84310

CONTACT:
JOHN LEWIS
PHONE: 801.897.4880

COBABE RANCH 0.5 MG WATER TANK
EDEN CROSSING (PWS NO. 29132)

COBABE RANCH
EDEN, UTAH

PROFESSIONAL STRUCTURAL ENGINEER
No. 9062337
CODY J. SANTOS
STATE OF UTAH
7-9-2025

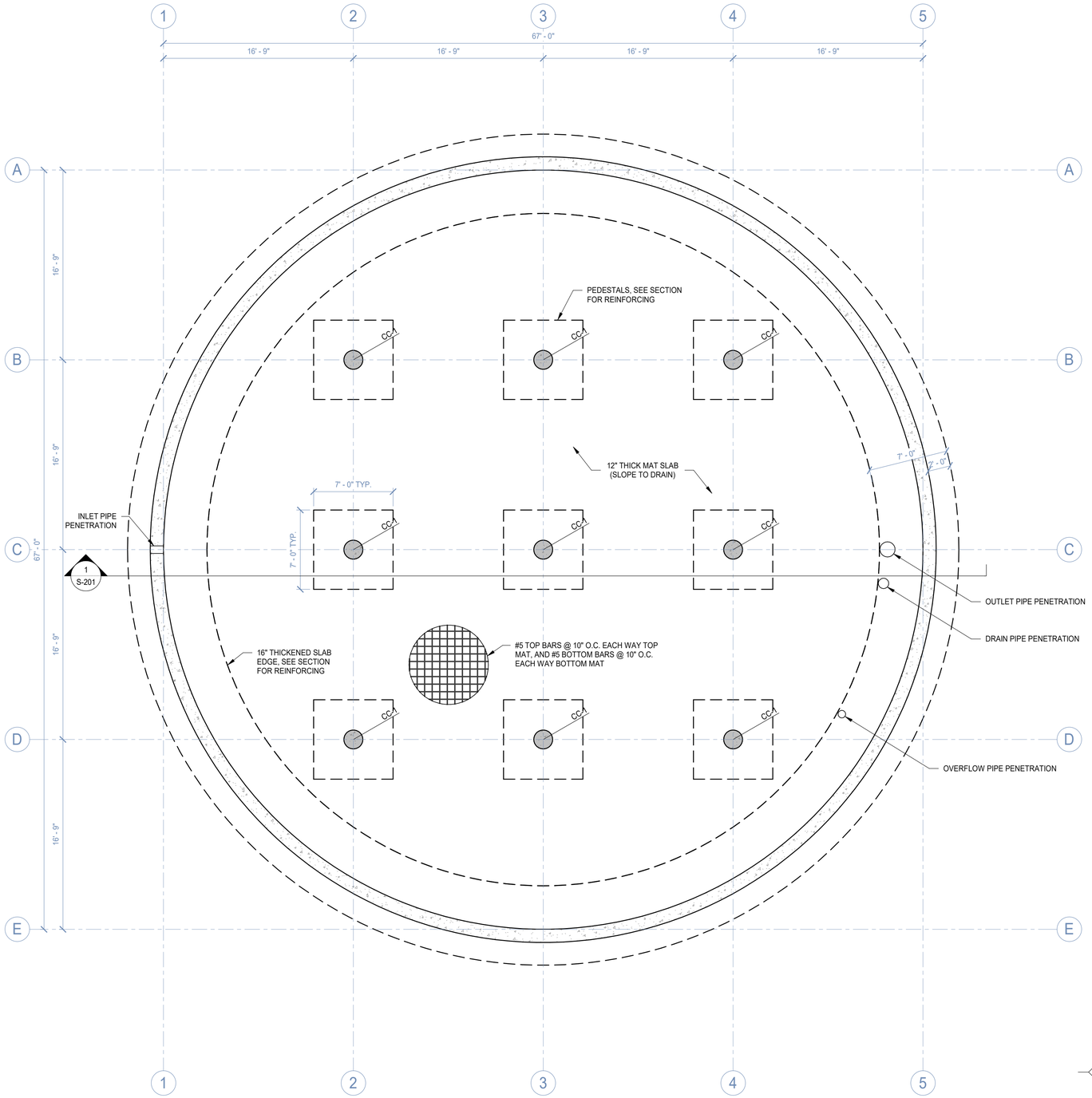
FOR CONSTRUCTION 7/9/2025

NO.	DATE	REVISION

SITE PLAN

PROJECT NUMBER 14018
DATE 07-09-2025
PROJECT MANAGER CJS
DESIGNED BY QTL

S-100



1 STRUCTURAL PLAN - LEVEL 01
SCALE: 3/16" = 1'-0"

CONCRETE TANK GENERAL NOTES

1. DIMENSIONS INDICATED IN CIVIL / MECHANICAL DRAWINGS GOVERN. CONTRACTOR TO VERIFY ALL DIMENSIONS BEFORE STARTING CONSTRUCTION. ANY DISCREPANCY SHALL BE ADDRESSED IMMEDIATELY. DO NOT SCALE DRAWINGS.
2. SEE GENERAL STRUCTURAL NOTES FOR ADDITIONAL INFORMATION.
3. COORDINATE STRUCTURAL REQUIREMENTS AT WALLS AND FOOTINGS WITH TYPICAL STRUCTURAL DETAILS.
4. COORDINATE LOCATIONS OF UTILITY TRENCHES (IF APPLICABLE) WITH RESPECTIVE DRAWINGS AND SUB-CONTRACTORS. SLAB REINFORCING SHALL BE CONTINUOUS OVER TRENCH.
5. PROVIDE FROST DEPTH PER GENERAL STRUCTURAL NOTES. COORDINATE FOOTING STEPS (IF APPLICABLE) WITH CIVIL PLANS. SEE TYPICAL CONCRETE STEPPED FOOTING DETAIL IN STRUCTURAL DETAILS.
6. CONTRACTOR SHALL COORDINATE MAT SLAB DEPRESSIONS, AND SLAB SLOPES WITH MECHANICAL PLANS.
7. ALL OPENINGS THROUGH MAT SLAB, WALLS & LID ARE NOT SHOWN. COORDINATE PENETRATION REQUIREMENTS (ADDITIONAL FRAMING ELEMENTS OR REINFORCING) AND LOCATIONS WITH MECHANICAL, ELECTRICAL, AND TYPICAL STRUCTURAL DETAILS.
8. CENTER ALL SPOT FOOTINGS UNDER COLUMNS AS SHOWN ON PLAN, TYPICAL U.N.O.
9. COORDINATE ALL PIPE PENETRATIONS WITH MECHANICAL DRAWINGS. COORDINATE REINFORCING REQUIREMENTS AT ALL PENETRATIONS WITH TYPICAL STRUCTURAL DETAILS.
10. ALL COLD JOINTS IN THE TANK (INCLUDING BUT NOT LIMITED TO COLD JOINTS IN THE TANK WALL, COLD JOINT BETWEEN TANK WALL AND MAT FOUNDATION SLAB, COLD JOINT BETWEEN TANK WALL AND TANK LID) SHALL BE SEALED WITH SIKA FLEX 2C NSF61 OR APPROVED EQUIVALENT, TYPICAL UNLESS NOTED OTHERWISE.
11. ALL FORM TIE HOLES IN THE TANK SHALL BE APPROPRIATELY PATCHED USING METHODS AND MATERIALS MEETING THE REQUIREMENTS OF ACI 350.
12. **MAXIMUM HEIGHT OF FILL OVER TOP OF TANK LID SHALL NOT EXCEED 12" IN HEIGHT. ELEVATION OF TANK AND FINISH GRADE SHALL BE COORDINATED WITH CIVIL DRAWINGS.**
13. **TANK LID LOAD LIMITATIONS:**
    - A. **MAXIMUM TOTAL WEIGHT OF EQUIPMENT USED TO PLACE BACKFILL MATERIAL ON TANK ROOF SHALL NOT EXCEED 6,000-LBS.**
    - B. **MAXIMUM TOTAL WEIGHT OF OPERATIONS & MAINTENANCE VEHICLES AND/OR EQUIPMENT ON TANK LID SHALL NOT EXCEED 6,000-LBS.**

AT ALL FLOOR PENETRATIONS:

A. INSTALL ADDITIONAL REINFORCING PER "TYPICAL SLAB REINFORCING AT OPENINGS" DETAIL.
B. INSTALL SEEP RING ON PIPE.

AT ALL WALL PENETRATIONS:

A. INSTALL ADDITIONAL REINFORCING PER "TYPICAL ADDITIONAL REINFORCING @ CONCRETE WALL OPENING" DETAIL.
B. INSTALL SEEP RING ON PIPE.

ENSIGN
THE STANDARD IN ENGINEERING

SANDY
45 W 10000 S, Suite 500
Sandy, UT 84070
Phone: 801.255.0529

LAYTON
Phone: 801.547.1100

TOOELE
Phone: 435.843.3590

CEDAR CITY
Phone: 435.865.1453

RICHFIELD
Phone: 435.896.2983

WWW.ENSIGNENG.COM

FOR:
EDEN VALLEY OPPORTUNITY, LLC
3718 NORTH WOLF CREEK DRIVE
EDEN, UT 84310

CONTACT:
JOHN LEWIS
PHONE: 801.897.4880

COBABE RANCH 0.5 MG WATER TANK
EDEN CROSSING (PWS NO. 29132)
COBABE RANCH
EDEN, UTAH

PROFESSIONAL STRUCTURAL ENGINEER
7-9-2025
No. 9062337
CODY J. SANTOS
STATE OF UTAH

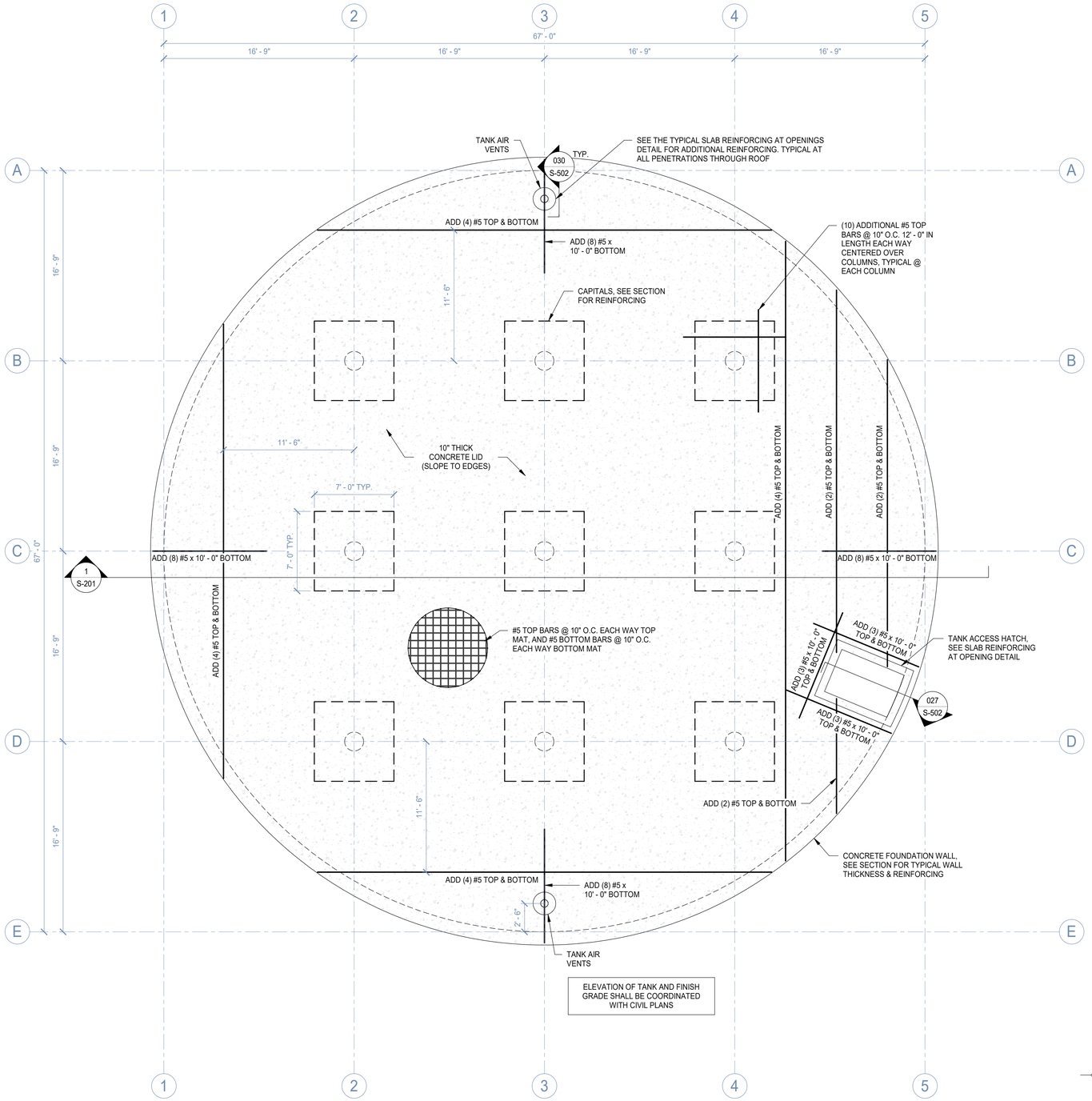
FOR CONSTRUCTION 7/9/2025

NO.	DATE	REVISION

TANK FOUNDATION PLAN

PROJECT NUMBER 14018
DATE 07-09-2025
PROJECT MANAGER CJS
DESIGNED BY QTL

S-111



1 STRUCTURAL PLAN - LEVEL 02
SCALE: 3/16" = 1'-0"

CONCRETE TANK GENERAL NOTES

1. DIMENSIONS INDICATED IN CIVIL / MECHANICAL DRAWINGS GOVERN. CONTRACTOR TO VERIFY ALL DIMENSIONS BEFORE STARTING CONSTRUCTION. ANY DISCREPANCY SHALL BE ADDRESSED IMMEDIATELY. DO NOT SCALE DRAWINGS.
2. SEE GENERAL STRUCTURAL NOTES FOR ADDITIONAL INFORMATION.
3. COORDINATE STRUCTURAL REQUIREMENTS AT WALLS AND FOOTINGS WITH TYPICAL STRUCTURAL DETAILS.
4. COORDINATE LOCATIONS OF UTILITY TRENCHES (IF APPLICABLE) WITH RESPECTIVE DRAWINGS AND SUB-CONTRACTORS. SLAB REINFORCING SHALL BE CONTINUOUS OVER TRENCH.
5. PROVIDE FROST DEPTH PER GENERAL STRUCTURAL NOTES. COORDINATE FOOTING STEPS (IF APPLICABLE) WITH CIVIL PLANS. SEE TYPICAL CONCRETE STEPPED FOOTING DETAIL IN STRUCTURAL DETAILS.
6. CONTRACTOR SHALL COORDINATE MAT SLAB DEPRESSIONS, AND SLAB SLOPES WITH MECHANICAL PLANS.
7. ALL OPENINGS THROUGH MAT SLAB, WALLS & LID ARE NOT SHOWN. COORDINATE PENETRATION REQUIREMENTS (ADDITIONAL FRAMING ELEMENTS OR REINFORCING) AND LOCATIONS WITH MECHANICAL, ELECTRICAL, AND TYPICAL STRUCTURAL DETAILS.
8. CENTER ALL SPOT FOOTINGS UNDER COLUMNS AS SHOWN ON PLAN, TYPICAL U.N.O.
9. COORDINATE ALL PIPE PENETRATIONS WITH MECHANICAL DRAWINGS. COORDINATE REINFORCING REQUIREMENTS AT ALL PENETRATIONS WITH TYPICAL STRUCTURAL DETAILS.
10. ALL COLD JOINTS IN THE TANK (INCLUDING BUT NOT LIMITED TO COLD JOINTS IN THE TANK WALL, COLD JOINT BETWEEN TANK WALL AND MAT FOUNDATION SLAB, COLD JOINT BETWEEN TANK WALL AND TANK LID) SHALL BE SEALED WITH SIKA FLEX 2C NSF61 OR APPROVED EQUIVALENT, TYPICAL UNLESS NOTED OTHERWISE.
11. ALL FORM TIE HOLES IN THE TANK SHALL BE APPROPRIATELY PATCHED USING METHODS AND MATERIALS MEETING THE REQUIREMENTS OF ACI 350.
12. **MAXIMUM HEIGHT OF FILL OVER TOP OF TANK LID SHALL NOT EXCEED 12" IN HEIGHT. ELEVATION OF TANK AND FINISH GRADE SHALL BE COORDINATED WITH CIVIL DRAWINGS.**
13. **TANK LID LOAD LIMITATIONS:**
    - A. **MAXIMUM TOTAL WEIGHT OF EQUIPMENT USED TO PLACE BACKFILL MATERIAL ON TANK ROOF SHALL NOT EXCEED 6,000-LBS.**
    - B. **MAXIMUM TOTAL WEIGHT OF OPERATIONS & MAINTENANCE VEHICLES AND/OR EQUIPMENT ON TANK LID SHALL NOT EXCEED 6,000-LBS.**

AT ALL FLOOR PENETRATIONS:

A. INSTALL ADDITIONAL REINFORCING PER "TYPICAL SLAB REINFORCING AT OPENINGS" DETAIL.
B. INSTALL SEEP RING ON PIPE.

AT ALL WALL PENETRATIONS:

A. INSTALL ADDITIONAL REINFORCING PER "TYPICAL ADDITIONAL REINFORCING @ CONCRETE WALL OPENING" DETAIL.
B. INSTALL SEEP RING ON PIPE.

ENSIGN
THE STANDARD IN ENGINEERING

SANDY
45 W 10000 S, Suite 500
Sandy, UT 84070
Phone: 801.255.0529

LAYTON
Phone: 801.547.1100

TOOELE
Phone: 435.843.3590

CEDAR CITY
Phone: 435.865.1453

RICHFIELD
Phone: 435.896.2983

WWW.ENSIGNENG.COM

FOR:
EDEN VALLEY OPPORTUNITY, LLC
3718 NORTH WOLF CREEK DRIVE
EDEN, UT 84310

CONTACT:
JOHN LEWIS
PHONE: 801.897.4880

COBABE RANCH 0.5 MG WATER TANK
EDEN CROSSING (PWS NO. 29132)
COBABE RANCH
EDEN, UTAH

PROFESSIONAL STRUCTURAL ENGINEER
No. 9062337
CODY J. SANTOS
STATE OF UTAH
9-9-2025

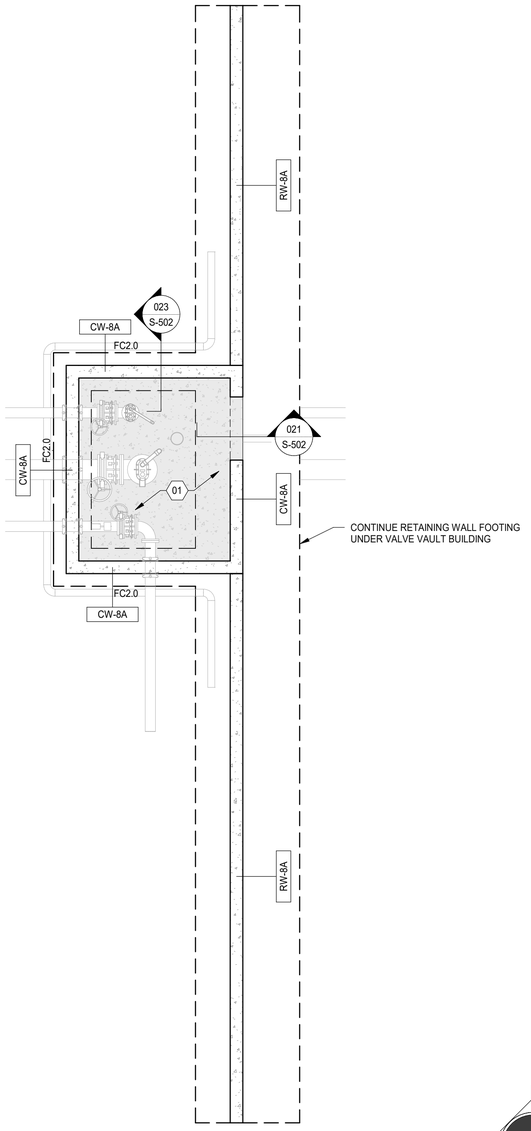
FOR CONSTRUCTION 7/9/2025

NO.	DATE	REVISION

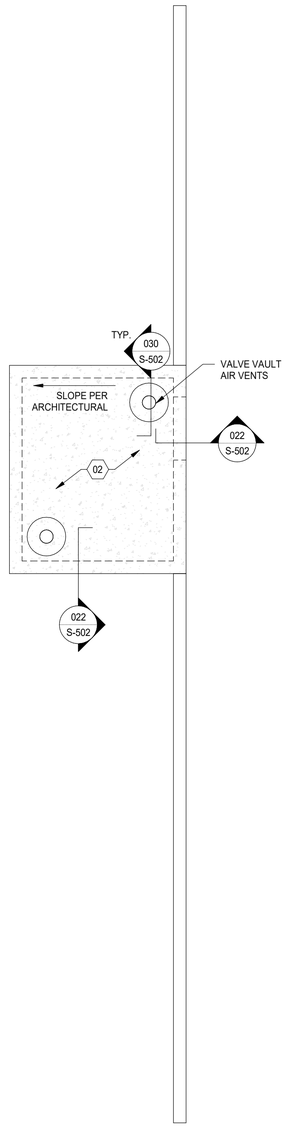
TANK LID PLAN

PROJECT NUMBER 14018
DATE 07-09-2025
PROJECT MANAGER CJS
DESIGNED BY QTL

S-121



1 VALVE VAULT - FOOTING & FOUNDATION PLAN
SCALE: 1/4" = 1'-0"



2 VALVE VAULT - ROOF PLAN
SCALE: 1/4" = 1'-0"

CONCRETE VAULT GENERAL NOTES

1. DIMENSIONS INDICATED IN CIVIL / MECHANICAL DRAWINGS GOVERN. CONTRACTOR TO VERIFY ALL DIMENSIONS BEFORE STARTING CONSTRUCTION. ANY DISCREPANCY SHALL BE ADDRESSED IMMEDIATELY. DO NOT SCALE DRAWINGS.
2. SEE GENERAL STRUCTURAL NOTES FOR ADDITIONAL INFORMATION.
3. COORDINATE STRUCTURAL REQUIREMENTS AT WALLS AND FOOTINGS WITH TYPICAL STRUCTURAL DETAILS.
4. COORDINATE LOCATIONS OF UTILITY TRENCHES (IF APPLICABLE) WITH RESPECTIVE DRAWINGS AND SUB-CONTRACTORS. SLAB REINFORCING SHALL BE CONTINUOUS OVER TRENCH.
5. PROVIDE FROST DEPTH PER GENERAL STRUCTURAL NOTES. COORDINATE FOOTING STEPS (IF APPLICABLE) WITH CIVIL PLANS. SEE TYPICAL CONCRETE STEPPED FOOTING DETAIL IN STRUCTURAL DETAILS.
6. CONTRACTOR SHALL COORDINATE MAT SLAB DEPRESSIONS, AND SLAB SLOPES WITH MECHANICAL PLANS.
7. ALL OPENINGS THROUGH MAT SLAB, WALLS & LID ARE NOT SHOWN. COORDINATE PENETRATION REQUIREMENTS (ADDITIONAL FRAMING ELEMENTS OR REINFORCING) AND LOCATIONS WITH MECHANICAL, ELECTRICAL, AND TYPICAL STRUCTURAL DETAILS.
8. CENTER ALL SPOT FOOTINGS UNDER COLUMNS AS SHOWN ON PLAN, TYPICAL U.N.O.
9. COORDINATE ALL PIPE PENETRATIONS WITH MECHANICAL DRAWINGS. COORDINATE REINFORCING REQUIREMENTS AT ALL PENETRATIONS WITH TYPICAL STRUCTURAL DETAILS.

CONCRETE VAULT KEYED NOTES

01 8" CONCRETE SLAB w/ #5 @ 12" O.C. EACH WAY CENTERED IN SLAB OVER 4" LAYER OF FREE-DRAINING STRUCTURAL FILL.

02 8" CONCRETE SUSPENDED ROOF SLAB w/ #5 @ 12" O.C. EACH WAY CENTERED IN SLAB.

ENSIGN
THE STANDARD IN ENGINEERING

SANDY
45 W 10000 S, Suite 500
Sandy, UT 84070
Phone: 801.255.0529

LAYTON
Phone: 801.547.1100

TOOELE
Phone: 435.843.3590

CEDAR CITY
Phone: 435.865.1453

RICHFIELD
Phone: 435.896.2983

WWW.ENSIGNENG.COM

FOR:
EDEN VALLEY OPPORTUNITY, LLC
3718 NORTH WOLF CREEK DRIVE
EDEN, UT 84310

CONTACT:
JOHN LEWIS
PHONE: 801.897.4880

COBABE RANCH 0.5 MG WATER TANK
EDEN CROSSING (PWS NO. 29132)
COBABE RANCH
EDEN, UTAH

PROFESSIONAL STRUCTURAL ENGINEER
No. 9062337
CODY J. SANTOS
STATE OF UTAH
9-9-2025

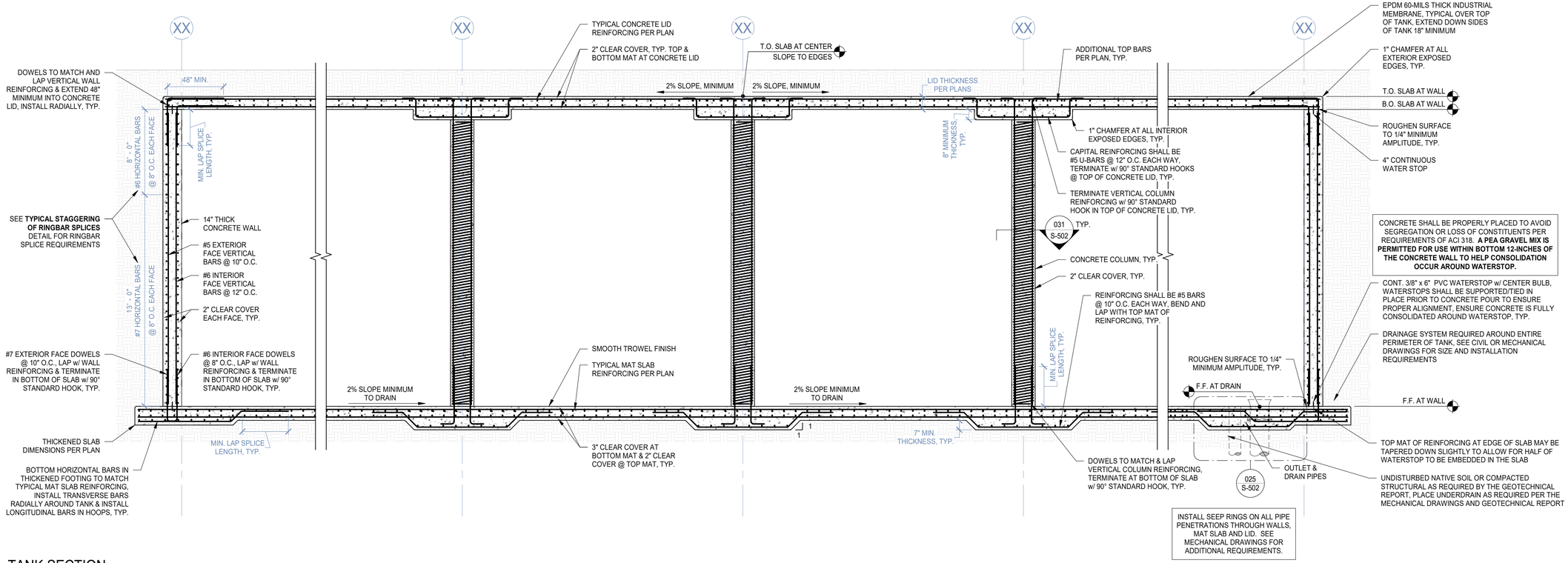
FOR CONSTRUCTION 7/9/2025

NO.	DATE	REVISION

VALVE VAULT PLAN

PROJECT NUMBER	DATE
14018	07-09-2025
PROJECT MANAGER	DESIGNED BY
CJS	QTL

S-122



1 TANK SECTION

SCALE: N.T.S.

ENSIGN
THE STANDARD IN ENGINEERING

SANDY
45 W 10000 S, Suite 500
Sandy, UT 84070
Phone: 801.255.0529

LAYTON
Phone: 801.547.1100

TOOELE
Phone: 435.843.3590

CEDAR CITY
Phone: 435.865.1453

RICHFIELD
Phone: 435.896.2983

WWW.ENSIGNENG.COM

FOR:
EDEN VALLEY OPPORTUNITY, LLC
3718 NORTH WOLF CREEK DRIVE
EDEN, UT 84310

CONTACT:
JOHN LEWIS
PHONE: 801.897.4880

COBABE RANCH 0.5 MG WATER TANK
EDEN CROSSING (PWS NO. 29132)

COBABE RANCH
EDEN, UTAH

PROFESSIONAL STRUCTURAL ENGINEER
9-9-2025
No. 9062337
CODY J. SANTOS
STATE OF UTAH

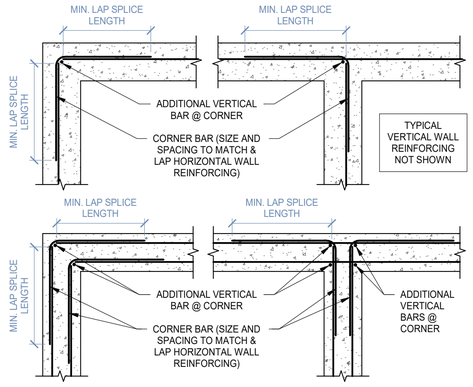
FOR CONSTRUCTION 7/9/2025

NO.	DATE	REVISION

TANK SECTION

PROJECT NUMBER 14018
DATE 07-09-2025
PROJECT MANAGER CJS
DESIGNED BY QTL

S-201



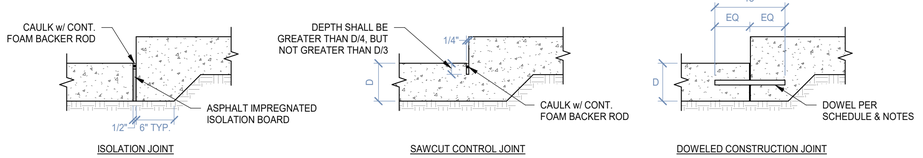
010 TYPICAL CONC. WALL INTERSECTION REINF.

SCALE: N.T.S.

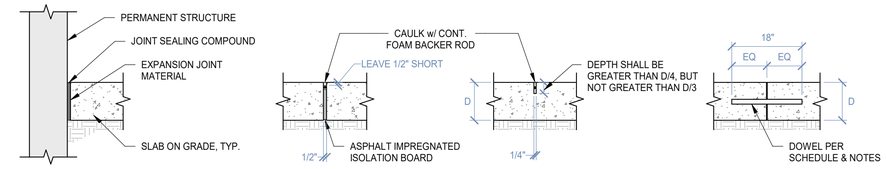
DOWELED CONSTRUCTION JOINT - DOWEL REQUIREMENTS	
SLAB THICKNESS	**DOWEL DIAMETER**
UP TO 6"	3/4"
6" < D ≤ 8"	1"
8" < D ≤ 10"	1-1/4"

NOTES:

1. DOWELS SHALL BE SPACED AT 12" O.C.
2. DOWELS SHALL BE SMOOTH AND ROUND. AT CONTRACTOR'S OPTION, DIAMOND DOWELS ARE PERMITTED FOR USE IN LIEU OF ROUND DOWELS.
3. INSTALL DOWELS USING A POCKET FORMER, THIN BOND BREAKER, COAT OR GREASE AT ONE END OF EACH DOWEL TO PREVENT BOND.
4. ALIGN DOWELS STRAIGHT AND TRUE. MISALIGNED DOWELS MAY CAUSE CRACKING.
5. STAINLESS STEEL OR EPOXY COATED DOWELS SHALL BE USED IN EXTERIOR OR CORROSIVE ENVIRONMENTS.
6. WHEN DOWELS ARE USED IN EXPANSION JOINTS, EXPANSION END CAPS SHALL BE USED AT EACH DOWEL END.



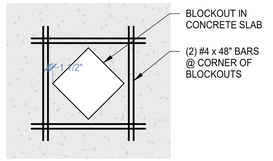
TYPICAL DEPRESSED JOINTS



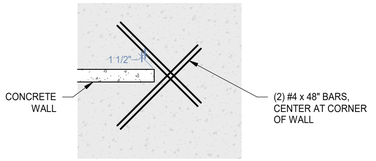
TYPICAL FLAT JOINTS

008 TYPICAL SLAB ON GRADE JOINT DETAILS

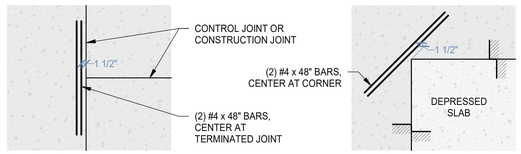
SCALE: N.T.S.



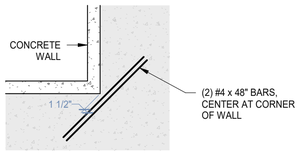
BLOCKOUT



END OF WALL



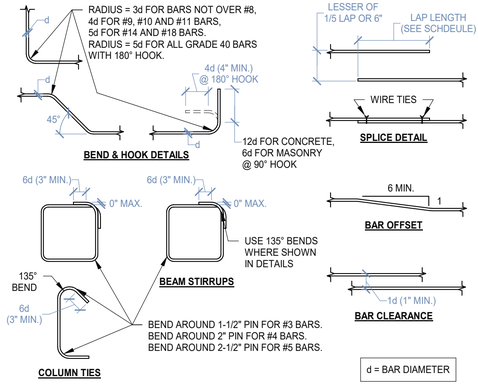
SLAB JOINT INTERSECTION **DEPRESSED SLAB**



INSIDE CORNER OF WALL

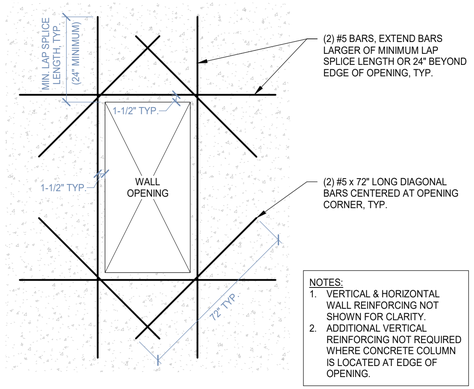
009 TYPICAL ADDITIONAL REINFORCING IN SLAB ON GRADE

SCALE: N.T.S.



001 TYPICAL REINFORCING BAR DETAILS

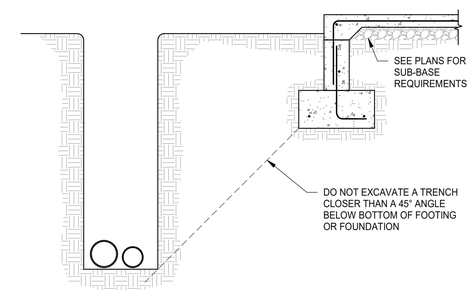
SCALE: N.T.S.



NOTES:
1. VERTICAL & HORIZONTAL WALL REINFORCING NOT SHOWN FOR CLARITY.
2. ADDITIONAL VERTICAL REINFORCING NOT REQUIRED WHERE CONCRETE COLUMN IS LOCATED AT EDGE OF OPENING.

002 TYP. ADD'L REINF. @ CONC. WALL OPENING

SCALE: N.T.S.



003 TYPICAL TRENCH PARALLEL TO FOUNDATION

SCALE: N.T.S.

ENSIGN
THE STANDARD IN ENGINEERING

SANDY
45 W 10000 S, Suite 500
Sandy, UT 84070
Phone: 801.255.0529

LAYTON
Phone: 801.547.1100

TOOELE
Phone: 435.843.3590

CEDAR CITY
Phone: 435.865.1453

RICHFIELD
Phone: 435.896.2983

WWW.ENSIGNENG.COM

FOR:
EDEN VALLEY OPPORTUNITY, LLC
3718 NORTH WOLF CREEK DRIVE
EDEN, UT 84310

CONTACT:
JOHN LEWIS
PHONE: 801.897.4880

COBABE RANCH 0.5 MG WATER TANK
EDEN CROSSING (PWS NO. 29132)
COBABE RANCH
EDEN, UTAH

PROFESSIONAL STRUCTURAL ENGINEER
9-9-2025
No. 9062337
CODY J. SANTOS
STATE OF UTAH

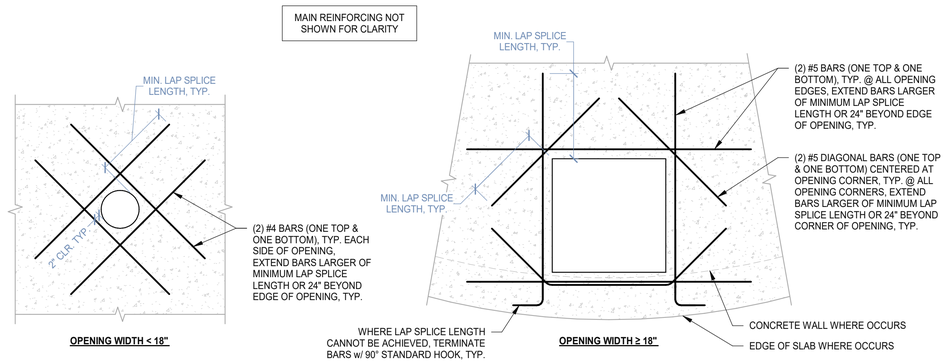
FOR CONSTRUCTION 7/9/2025

NO.	DATE	REVISION

STRUCTURAL DETAILS

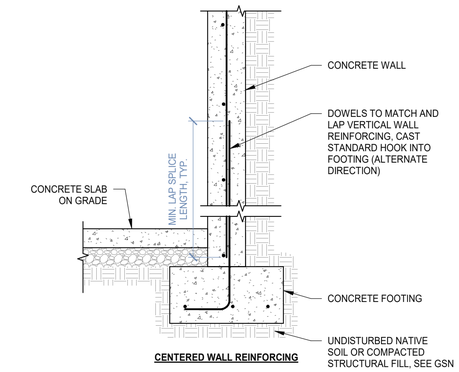
PROJECT NUMBER 14018
DATE 07-09-2025
PROJECT MANAGER CJS
DESIGNED BY QTL

S-501



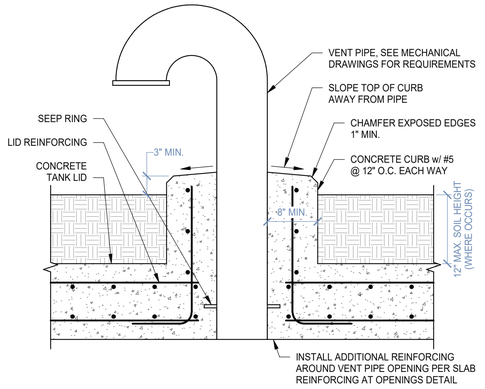
029 TYPICAL SLAB REINFORCING AT OPENINGS

SCALE: N.T.S.



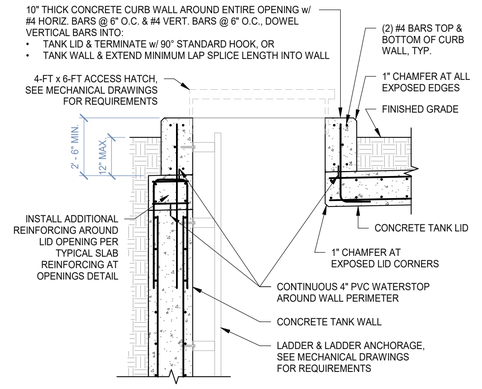
023 CONCRETE WALL (BELOW GRADE) @ EXTERIOR FOOTING

SCALE: N.T.S.



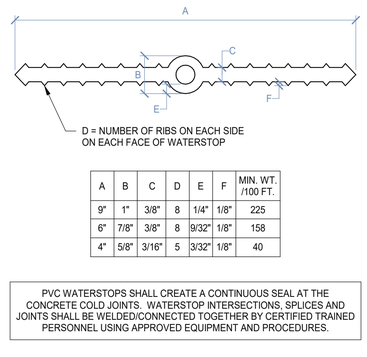
030 VENT PIPE CURB

SCALE: N.T.S.



027 CURB WALL REINFORCING @ ACCESS HATCH

SCALE: N.T.S.

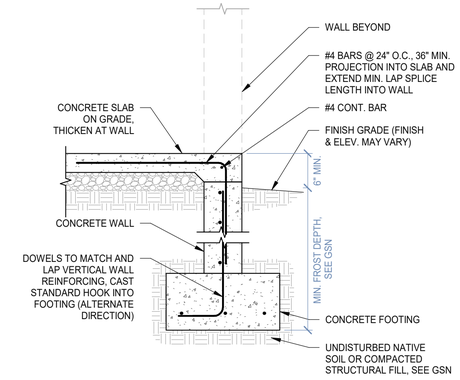


A	B	C	D	E	F	MIN. WT. /100 FT.
9"	1"	3/8"	8	1/4"	1/8"	225
6"	7/8"	3/8"	8	9/32"	1/8"	158
4"	5/8"	3/16"	5	3/32"	1/8"	40

PVC WATERSTOPS SHALL CREATE A CONTINUOUS SEAL AT THE CONCRETE COLD JOINTS. WATERSTOP INTERSECTIONS, SPLICES AND JOINTS SHALL BE WELDED/CONNECTED TOGETHER BY CERTIFIED TRAINED PERSONNEL USING APPROVED EQUIPMENT AND PROCEDURES.

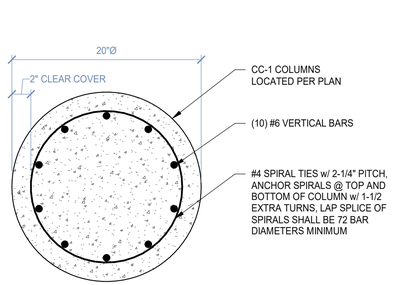
024 TYPICAL WATERSTOP SCHEDULE

SCALE: N.T.S.



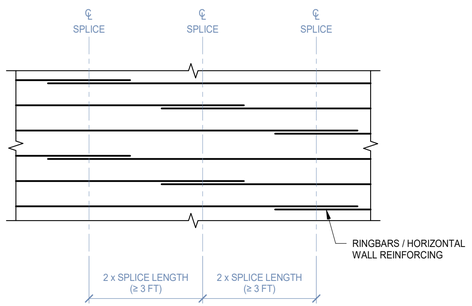
021 CONCRETE WALL @ WALL OPENING

SCALE: N.T.S.



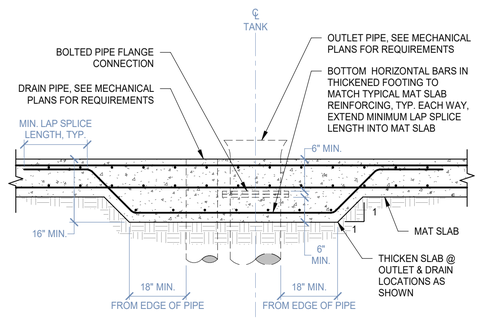
031 CONCRETE COLUMN SECTION

SCALE: N.T.S.



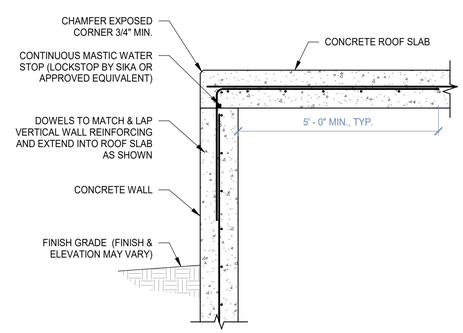
028 TYPICAL STAGGERING OF RINGBAR SPLICES

SCALE: N.T.S.



025 THICKENED SLAB @ OUTLET DRAIN

SCALE: N.T.S.



022 ROOF SLAB @ WALL CONNECTION

SCALE: N.T.S.

ENSIGN
THE STANDARD IN ENGINEERING

SANDY
45 W 10000 S, Suite 500
Sandy, UT 84070
Phone: 801.255.0529

LAYTON
Phone: 801.547.1100

TOOELE
Phone: 435.843.3590

CEDAR CITY
Phone: 435.865.1453

RICHFIELD
Phone: 435.896.2983

WWW.ENSIGNENG.COM

FOR:
EDEN VALLEY OPPORTUNITY, LLC
3718 NORTH WOLF CREEK DRIVE
EDEN, UT 84310

CONTACT:
JOHN LEWIS
PHONE: 801.897.4880

COBABE RANCH 0.5 MG WATER TANK
EDEN CROSSING (PWS NO. 29132)
COBABE RANCH
EDEN, UTAH

PROFESSIONAL STRUCTURAL ENGINEER
9-9-2025
No. 9062337
CODY J. SANTOS
STATE OF UTAH

FOR CONSTRUCTION 7/9/2025

NO.	DATE	REVISION

STRUCTURAL DETAILS

PROJECT NUMBER 14018
DATE 07-09-2025
PROJECT MANAGER CJS
DESIGNED BY QTL

S-502

SCHEMATICS & DIAGRAMS

SYMBOL	DESCRIPTION
■	TERMINAL LUG OR STRIP
	TRANSFORMER
	GROUND CONNECTION
	BOND TO METALLIC WATER PIPE
	BOND TO METALLIC WATER PIPE
	BOND TO BUILDING STEEL
	GENERATOR

LIGHTING

SYMBOL	DESCRIPTION
	FLUORESCENT LIGHT FIXTURE, SEE FIXTURE SCHEDULE.
	EMERGENCY LIGHTING, SEE FIXTURE SCHEDULE.
F#	LIGHTING FIXTURE TYPE - SEE FIXTURE SCHEDULE.
$	SINGLE POLE SWITCH
$3	3 WAY SWITCH
$m	WALL MOUNTED MOTION SWITCH - DUAL TECHNOLOGY
$T	MOTOR RATED TOGGLE SWITCH
$D	DIGITAL OVERRIDE SWITCH
$P	SINGLE POLE SWITCH WITH PILOT LIGHT
SP	RECESSED CEILING MOUNTED SPEAKER BY OTHERS
	WALL MOUNTED MOTION SENSOR
	CEILING MOUNTED MOTION SENSOR
	CEILING-MOUNTED EXIT LIGHT, SEE FIXTURE SCHEDULE
	WALL-MOUNTED EXIT LIGHT, SEE FIXTURE SCHEDULE
	RECESSED CAN LIGHT, SEE FIXTURE SCHEDULE

CONTROLS & INSTRUMENTS

SYMBOL	DESCRIPTION
AE	ANALYZER ELEMENT
AIT	ANALYZING INDICATING TRANSMITTER
CGD	COMBUSTIBLE GAS DETECTOR
CIT	CONDUCTIVITY INDICATING TRANSMITTER
FE	FLOW ELEMENT
FIT	FLOW INDICATING TRANSMITTER
FS	FLOW SWITCH
LE	LEVEL ELEMENT
LIT	LEVEL INDICATING TRANSMITTER
LS	LEVEL SWITCH
LT	LEVEL TRANSMITTER
ME	MOISTURE ELEMENT
MV	MOTOR OPERATED VALVE OR GATE
OS	OVER TORQUE SWITCH
PIT	PRESSURE INDICATING TRANSMITTER
PS	PRESSURE SWITCH
SV	SOLENOID OPERATED VALVE
TE	TEMPERATURE ELEMENT
TS	TEMPERATURE SWITCH
TT	TEMPERATURE TRANSMITTER
ZS	LIMIT OR POSITION SWITCH
DS	DOOR SWITCH

SCHEMATICS & DIAGRAMS

SYMBOL	DESCRIPTION
	EMERGENCY STOP PUSH BUTTON (MAINTAINED)
	NORMALLY CLOSED PUSH BUTTON
	LOCKOUT STOP PUSH BUTTON
	NORMALLY OPEN PUSH BUTTON
T.C.	CONTACT - TIME DELAY T.C. = NORMALLY OPEN W/TIME DELAY CLOSING. I.C. - T.O. = NORMALLY OPEN WITH INSTANT CLOSING AND TIME DELAY OPENING. T.C.-T.O. = NORMALLY OPEN W/TIME DELAY CLOSING AND TIME DELAY OPENING AFTER DEENERGIZATION.
T.O.	CONTACT - TIME DELAY T.C. = NORMALLY CLOSED WITH TIME DELAY OPENING. T.O.-T.C. = NORMALLY CLOSED WITH TIME DELAY OPENING AND TIME DELAY CLOSING AFTER DEENERGIZATION. I.O.-T.C. = NORMALLY CLOSED WITH INSTANT OPENING AND TIME DELAY CLOSING.
	NORMALLY OPEN CONTACT
	NORMALLY CLOSED CONTACT
	LIMIT SWITCH
	PRESSURE SWITCH LOW
	PRESSURE SWITCH HIGH
	FLOW SWITCH
	LEVEL FLOAT SWITCH
	TEMPERATURE SWITCH
AMPS / POLES	DISCONNECT SWITCH SHOWN WITH RATING AND NUMBER OF POLES.
	FUSEHOLDER OR FUSEBLOCK
AMPS POLES	CIRCUIT BREAKER OR MOTOR CIRCUIT PROTECTOR, SHOWN WITH TRIP RATING AND NUMBER OF POLES.
H O A OOX	3 POSITION SELECTOR SWITCH HAND - OFF - AUTO, POSITION LEGEND: X=CLOSED O=OPEN
ON OFF XO	2 POSITION SELECTOR SWITCH, POSITION LEGEND: X=CLOSED O=OPEN
ICTO	TIMER RELAY CONTACT INSTANTANEOUS CLOSE TIME DELAY OPEN.
NOTC	TIMER RELAY CONTACT NORMALLY OPEN TIME DELAY CLOSE.
5	FULL VOLTAGE NONREVERSING (FVNR) MOTOR STARTER OR CONTACTER NUMBER DESIGNATES NEMA SIZE.
	RTU, PLC, OR RIO CONTACT
UM	UTILITY METER
X	BEACON ALARM LIGHT. LETTER INDICATES COLOR: R=RED, A=AMBER, B=BLUE, G=GREEN
X	PILOT LIGHT. LETTER INDICATES COLOR: R=RED, A=AMBER, B=BLUE, G=GREEN
R	RELAY
TD	TIME DELAY RELAY
AR	ALARM RELAY
ETM ETM	ELAPSED TIME METER
M	MOTOR STARTER OR CONTACTOR COIL
EOL	ELECTRONIC OVERLOAD RELAY
SSRV	SOLID STATE REDUCED VOLTAGE STARTER
VFD	VARIABLE FREQUENCY DRIVE
HF	HARMONIC FILTER
CT'S	CURRENT TRANSFORMER
	THERMAL OVERLOAD RELAY
	LTC CONNECTION
	MC CONNECTION
X	MOTOR, X = HORSEPOWER
▲	DEVICE LOCATED AT REMOTE LOCATION.
	FUSE
●	NODE OR CONNECTION

POWER

SYMBOL	DESCRIPTION
	DUPLEX RECEPTACLE
	DUPLEX RECEPTACLE, RECESSED FLOOR MOUNTED
	DUPLEX RECEPTACLE, RECESSED CEILING MOUNTED
	QUADRAPLEX RECEPTACLE
	QUADRAPLEX RECEPTACLE, RECESSED FLOOR MOUNTED
	QUADRAPLEX RECEPTACLE, RECESSED CEILING MOUNTED
	ISOLATED GROUND TYPE DUPLEX RECEPTACLE
	SPECIAL PURPOSE OR WELDING OUTLET.
GFCI	GROUND FAULT CIRCUIT INTERRUPTER RECEPTACLE.
WP	WEATHERPROOF CONVENIENCE OUTLET
	FLUSH FLOOR DEVICE BOX
	HOME RUN TO PANEL - INDICATING 2 #12, #12 GND, 3/4" CONDUIT OR AS SHOWN.
	HOME RUN TO PANEL - INDICATING NUMBER OF CONDUCTORS - #12 OR AS SHOWN.
X-1,3,5	HOME RUN TO PANEL SHOWING BRANCH CIRCUIT NUMBERS.
	HATCH MARKS IN CONDUIT RUN DENOTES NUMBER OF CONDUCTORS IN CONDUIT. LONG HATCH MARK DENOTES GROUND CONDUCTOR. SIZE OF CONDUCTORS TO BE #12 AWG CONDUCTORS IN CONDUIT UNLESS NOTED OTHERWISE. UNMARKED CONDUITS SHALL BE 3/4" WITH 3 #12.
(E)	DENOTES EXISTING EQUIPMENT OR DEVICES
T	THERMOSTAT
X M	MOTOR, X = HORSE POWER
F	CEILING EXHAUST FAN
J	JUNCTION BOX
	ELECTRICAL PANEL, POWER OR LIGHTING
	METER BASE
	COMBINATION MOTOR STARTER, SEE SPECS
	DISCONNECT SWITCH. (VOLTAGE RATING, NEMA ENCLOSURE, FUSE (NF-NO FUSE), POLES, SIZE (AMPS))
+0'-0"	THIS NOTATION ADJACENT TO WALL OUTLET SYMBOL DENOTES MOUNTING HEIGHT ABOVE FINISHED FLOOR TO CENTER OF OUTLET DEVICE. IF NOT NOTED, THE MOUNTING HEIGHT TO CENTER SHALL BE AS DETAILED OR SPECIFIED.
$M	MANUAL MOTOR STARTER
$T	MANUAL MOTOR STARTER WITH OVERLOADS
DM	DAMPER MOTOR
F#	LIGHTING FIXTURE TYPE - SEE FIXTURE SCHEDULE.
$	SINGLE POLE SWITCH
$3	3 WAY SWITCH
$4	4 WAY SWITCH
	COMMUNICATION/DATA JACK. CONDUIT TO ABOVE CEILING. OWNER TO RUN WIRING.
2	DATA OR CATHODE RAY TUBE (CRT) TERMINAL OUTLET. +1'-6". (SINGLE, DOUBLE)
2 4	TELEPHONE JACK OUTLET. 1'-6". (SINGLE, DOUBLE, QUAD)

FEEDER DESIGNATION LOGIC

6	1	P: 2 N: 3 G: 4	5

1. NUMBER OF CONDUITS
2. P: NUMBER - SIZE OF PHASE CONDUCTORS PER CONDUIT
3. N: NUMBER - SIZE OF NEUTRAL CONDUCTOR(S) PER CONDUIT
4. G: NUMBER- SIZE OF GROUND CONDUCTOR(S) PER CONDUIT
5. SIZE OF EACH CONDUIT IN INCHES
6. CONDUIT NUMBER

KEY TO CONDUCTOR SIZE & TYPE

14 = #14 AWG COPPER	6 = #6 AWG COPPER	1/0 = 1/0 AWG COPPER	250 = 250 KCMIL COPPER
12 = #12 AWG COPPER	4 = #4 AWG COPPER	2/0 = 2/0 AWG COPPER	350 = 350 KCMIL COPPER
10 = #10 AWG COPPER	2 = #2 AWG COPPER	3/0 = 3/0 AWG COPPER	500 = 500 KCMIL COPPER
8 = #8 AWG COPPER		4/0 = 4/0 AWG COPPER	750 = 750 KCMIL COPPER

ABBREVIATIONS

A	AMPERE	N	NEUTRAL
AFF	ABOVE FINISHED FLOOR	NEC	NATIONAL ELECTRICAL CODE
AI	ANALOG INPUT	NECA	NATIONAL ELECTRICAL CONTRACTOR ASSOCIATION
AIC	AMPS INTERRUPTING CAPACITY	NOTC	NORMALLY OPEN TIMED CLOSED
AFD	ADJUSTABLE FREQUENCY DRIVES	NPW	NON-POTABLE WATER
AO	ANALOG OUTPUT	NS	NITROGEN SUPPLY
AS	AIR SUPPLY	NTS	NOT TO SCALE
ATS	AUTOMATIC TRANSFER SWITCH	NTU	TURBIDITY
BC	BYPASS CONTACTOR	O.C.	ON CENTER
C	CONDUIT	OF	OVERFLOW
CB	CIRCUIT BREAKER	OIT	OPERATOR INTERFACE TERMINAL
CL2	CHLORINE	OL	OVERLOAD
CON	CONTACTOR	OO	ON/OFF (MAINTAINED)
CPM	CUSTOMER POWER MONITORING	OR	OFF-REMOTE
CPT	CONTROL POWER TRANSFORMER	P	PHASE OR POLE
CU	COPPER, BARE	PB	PULL BOX
CV	CONTROL VALVE	PCP	PROCESS CONTROL PANEL
DCS	DISTRIBUTED CONTROL SYSTEM	PFR	PHAS/POWER FAILURE RELAY
DI	DISCRETE INPUT	PI	PULSE INPUT
DO	DISCRETE OUTPUT	PLC	PROGRAMMABLE LOGIC CONTROLLER
DV/DT	DIFFERENTIAL VOLTAGE/TIME	PLI	PLANT INFLUENT
DWG	DRAWING	PKG	PACKAGE
ELR	END OF LINE RESISTER	PMP	PUMP
ETM	ELAPSED TIME METER	PNL	PANEL
EOL	ELECTRONIC OVERLOAD	PO	PULSE OUTPUT
ES	EMERGENCY STOP	PPG	POUNDS PER GALLON
EXIST	EXISTING	PPH	POUNDS PER HOUR
FA	FOUL AIR	PPM	PARTS PER MILLION
FC	FAIL CLOSED	PR	PAIR
FE	FLOW ELEMENT	PRES	PRESSURE
FLA	FULL LOAD AMPS	PS	PRESSURE SWITCH
FS	FLOW SWITCH	PSH	PRESSURE SWITCH, HIGH
FVNR	FULL VOLTAGE NON-REVERSING	PSI	POUNDS PER SQUARE INCH
FW	FINISHED WATER	PV	PROCESS VARIABLE
G	GROUND	RAS	RETURN ACTIVATED SLUDGE
GES	GROUNDING ELECTRODE SYSTEM	RW	RAW WATER
GFCI	GROUND FAULT CIRCUIT INTERRUPTER	RCL	REMOTE I/O
GFP	GROUND FAULT PROTECTION	RF	RADIO FREQUENCY
GND	GROUND	RIO	REMOTE INPUT/OUTPUT
GPD	GALLONS PER DAY	RS	RAW SEWAGE
GPH	GALLONS PER HOUR	RSP	RAW SEWAGE PUMP
GPM	GALLONS PER MINUTE	RST	RESET
GRS	GALVANIZED RIGID STEEL	RTD	RESISTANCE TEMPERATURE DETECTOR
H, HI	HIGH	RTU	REMOTE TELEMETRY UNIT
H2S	HYDROGEN SULFIDE	RWT	REFLECTED WAVE TRAP
HMI	HUMAN MACHINE INTERFACE	SEQ	SERVICE ENTRANCE EQUIPMENT
HOA	HAND-OFF-AUTO	SES	SERVICE ENTRANCE SECTION
HOR	HAND-OFF-REMOTE	SLC	SINGLE LOOP CONTROLLER
I	CURRENT	SLOS	START-LOCK-OFF-STOP
IC	INSTRUMENTATION CABLE	SMC	SUBMERSIBLE MANUFACTURER CABLE
ICR	INTERMITTENT CYCLE REACTOR	SO2	SULFUR DIOXIDE
IO	INPUT/OUTPUT	SP	SET POINT
ISC	SHORT CIRCUIT CURRENT	SPC	SPARE CONDUIT
ISR	INTRINSICALLY SAFE RELAY	SPR	SPARE
JB	JUNCTION BOX	SS	START/STOP
L, LO	LOW	SSS	SOLID STATE STARTER (SOFT START)
LAN	LOCAL AREA NETWORK	ST	SHUNT TRIP
LC	LOOP CONTROLLER	TC	TELEPHONE CABLE
LCL	LEVEL CONTROL, LOW	TDOE	TIME DELAY ON ENERGIZE
LCP	LOCAL CONTROL PANEL	TS	TEMPERATURE SWITCH
LOS	LOCK-OUT-STOP	TSP	TWISTED SHIELDED PAIR
LR	LOCAL/REMOTE	TVSS	TRANSIENT VOLTAGE SURGE SUPPRESSION
LS	LEVEL SWITCH	TYP	TYPICAL
LTC	LIQUID TIGHT FLEXIBLE CONDUIT	UG	UNDERGROUND
M	MOTOR	V	VOLT
MA	MANUAL/AUTO, MILLIAMP	VFD	VARIABLE FREQUENCY DRIVE
MAX	MAXIMUM	W	WATT, WIRE
MC	MANUFACTURER'S CABLE	WAS	WASTE ACTIVATED SLUDGE
MCB	MAIN CIRCUIT BREAKER	WP	WEATHERPROOF
MCC	MOTOR CONTROL CENTER	XFMR	TRANSFORMER
MCP	MOTOR CIRCUIT PROTECTOR	XMTR	TRANSMITTER
MFR(S)	MANUFACTURER(S)	ZS	POSITION SWITCH
MGD	MILLION GALLONS PER DAY		
MGL	MILLIGRAMS PER LITER		
MH	MANHOLE		
MIN	MINIMUM		
ML	MIXED LIQUOR		
MOV	MOTOR OPERATED VALVE		
MTU	MASTER TELEMETRY UNIT		

ELECTRICAL LINETYPES

SYMBOL	DESCRIPTION
———	EXPOSED CONDUIT
– – – –	UNDERGROUND CONDUIT
—·—·—	BARE COPPER GROUND CONDUCTOR
———	EXISTING EXPOSED CONDUIT
– – – –	EXISTING UNDERGROUND CONDUIT
– – – –⊣	CAPPED UNDERGROUND CONDUIT OR STUBBUP
———	NEW ELECTRICAL EQUIPMENT
—– —–	DETAIL VIEW OR MATCHING
--------	FUTURE
———○	CONDUIT DROP
———○	CONDUIT RISE

ENSIGN
THE STANDARD IN ENGINEERING

SANDY
45 W. 10000 S., Suite 500
Sandy, UT 84070
Phone: 801.255.0529

LAYTON
Phone: 801.547.1100

TOOELE
Phone: 435.843.3590

CEDAR CITY
Phone: 435.865.1453

RICHFIELD
Phone: 435.896.2983

WWW.ENSIGNENG.COM

FOR:
EDEN VALLEY OPPORTUNITY, LLC
3718 NORTH WOLF CREEK DRIVE
EDEN, UT 84310

CONTACT:
JOHN LEWIS
PHONE: 801.897.4880

COBABE RANCH 0.5 MG WATER TANK
EDEN CROSSING (PWS NO.29132)
COBABE RANCH
EDEN, UTAH

PROFESSIONAL ENGINEER
11573207-2202
ROBERT J. HILLYER
7/9/2025
STATE OF UTAH

FOR CONSTRUCTION 7/9/2025

ELECTRICAL SYMBOL LEGEND

PROJECT NUMBER	PRINT DATE
14018A	6-24-2025
PROJECT MANAGER	DESIGNED BY

E-001

LIGHTING FIXTURE SCHEDULE

TYPE	MANUFACTURER	CATALOG NUMBER	DESCRIPTION	SOURCE			ELECTRICAL		NOTES
				LUMENS	CCT	CRI	WATTS	VOLTS	
F1	LITHONIA	FEM L48 6000LM IMAFD WD MVOLT GZ10 50K 80CRI	GASKETED INDUSTRIAL, 48" LINEAR, ACRYLIC, DEEP FROSTED LENS, WIDE DISTRIBUTION, 0-10V DIMMING	6000	5000K	80+	38	120-277	1,2

KEYED NOTES:

1 - MOUNT AT 8'-0" A.F.F. UNLESS OTHERWISE NOTED.

2 - FIXTURE BY LITHONIA, METALUX, DAY-BRITE ORACLE, COLUMBIA, HIGH5LED, HE WILLIAMS OR BEGHELLI. EQUAL DISTRIBUTION, LUMENS, AND SPECIFICATIONS.

PANEL L

VOLTAGE:	120/240 V 1Ø 3W							BUS AMPS:	125				
ENCLOSURE:	NEMA 3R							MLO					
CIRCUIT BREAKER TYPE:	BOLT-ON							MOUNTING:	SURFACE				
INTERRUPTING CAPACITY:	10 KAIC							COVER TYPE:	DOOR-IN-DOOR				
								LOCATION:	AS INDICATED				

BRANCH CIRCUIT BREAKER				CONNECTION	DESCRIPTION	PHASE			DESCRIPTION	CONNECTION	BRANCH CIRCUIT BREAKER			
NOTES	#	AMP	P.	LOAD (VA)		L1		L2		LOAD (VA)	P.	AMP	#	NOTES
	1	20	1	500	MISSION RTU	2000			WALL HEATER EWH-1	1500	2	20	2	
	3	20	1	38	LIGHTING			1538	------	1500	--	--	4	
	5	20	1	540	RECEPTACLES	540			SPARE		1	20	6	
	7	20	1		SPARE			0	SPARE		1	20	8	
	9	20	1		SPARE	0			SPARE		1	20	10	
	11	20	1		SPARE			0	SPARE		1	20	12	
	13	20	1		SPARE	0			SPARE		1	20	14	
	15	20	1		SPARE			0	SPARE		1	20	16	
	17	20	1		SPARE	0			SPARE		1	20	18	
	19	20	1		SPARE			0	SPARE		1	20	20	
	21	20	1		SPARE	0			SPARE		1	20	22	
	23	20	1		SPARE			0	SPARE		1	20	24	
					PHASE SUBTOTALS (VA)	2540		1538						
					PHASE TOTALS (KVA)	2.5		1.5						
					PHASE TOTALS @ 120V (AMPS)	21.2		12.8						

NOTES:

G PROVIDE WITH INTEGRAL SURGE PROTECTOR

1

2

3

I/O SCHEDULE

TYPE	I/O NUMBER	PREFIX	NUMBER	DESCRIPTION	NARRATIVE
DI	DI-01	NS	001	INSTRUSION SWITCH	VALVE VAULT. ALARM ONLY
DI	DI-02	NS	002	INSTRUSION SWITCH	TANK ROOF HATCH. ALARM ONLY
DI	DI-03	LS	001	LEVEL SWITCH	FLOOD LEVEL ALARM
DI	DI-04	YA	001	POWER ALARM	POWER QUALITY ALARM
AI	AI-01	PT	001	PRESSURE TRANSMITTER	LEVEL VALUE
AI	AI-02	TT	001	TEMPERATURE TRANSMITTER	TEMPERATURE VALUE. ALARM LOW
	COMM		001	CELLUALR ANTENNA	

NOTES

1. OPERATIONS AND CONTROLS NARRATIVE.

CONTROLS CONDUIT SCHEDULE

C002	1	2 -#16 TSP G: 1 -#14	3/4"
C102	1	4 -#14 G: 1 -#14	3/4"
C201	1	 ANTENNA WIRE 	1"
C301	1	 PULLSTRING 	1"

POWER CONDUIT SCHEDULE

P001		CONDUIT AND WIRE BY UTILITY		
P002	1	WIRE BY UTILITY		3"
P100	1	P:	2 - #12	3/4"
		N:	NONE	
		G:	1 - #12	
P101	1	P:	2 - #6	1"
		N:	1 - #6	
		G:	1 - #10	

ENSIGN
THE STANDARD IN ENGINEERING

SANDY
45 W. 10000 S., Suite 500
Sandy, UT 84070
Phone: 801.255.0529

LAYTON
Phone: 801.547.1100

TOOELE
Phone: 435.843.3590

CEDAR CITY
Phone: 435.865.1453

RICHFIELD
Phone: 435.896.2983

WWW.ENSIGNENG.COM

FOR:
EDEN VALLEY OPPORTUNITY, LLC
3718 NORTH WOLF CREEK DRIVE
EDEN, UT 84310

CONTACT:
JOHN LEWIS
PHONE: 801.897.4880

COBABE RANCH 0.5 MG WATER TANK
EDEN CROSSING (PWS NO.29132)
COBABE RANCH
EDEN, UTAH

PROFESSIONAL ENGINEER
11573207-2202
ROBERT J. HILLYER
1/4/2026
STATE OF UTAH

FOR CONSTRUCTION 7/9/2025

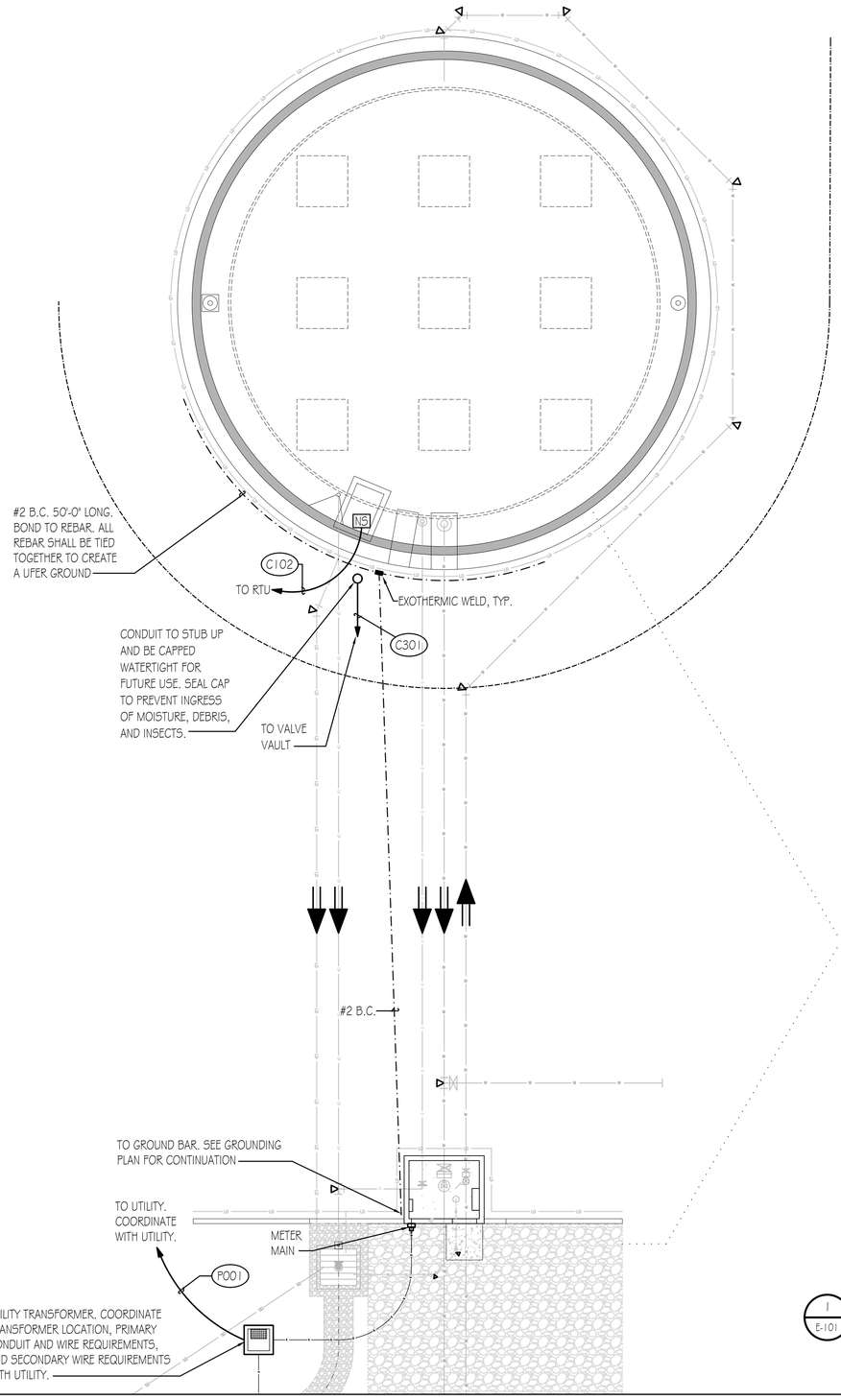
ELECTRICAL SCHEDULES

PROJECT NUMBER 14018A
PRINT DATE 6-24-2025
PROJECT MANAGER
DESIGNED BY

E-002

GENERAL NOTE:

A. SEE CIVIL PLANS FOR UTILITY TRANSFORMER AND PRIMARY VOLTAGE SOURCE LOCATIONS.



1 / E-101 SITE ELECTRICAL PLAN

SCALE: 1"=10'-0"

10 5 0 10 20

ENSIGN
THE STANDARD IN ENGINEERING

SANDY
45 W. 10000 S., Suite 500
Sandy, UT 84070
Phone: 801.255.0529

LAYTON
Phone: 801.547.1100

TOOELE
Phone: 435.843.3590

CEDAR CITY
Phone: 435.865.1453

RICHFIELD
Phone: 435.896.2983

WWW.ENSIGNENG.COM

FOR:
EDEN VALLEY OPPORTUNITY, LLC
3718 NORTH WOLF CREEK DRIVE
EDEN, UT 84310

CONTACT:
JOHN LEWIS
PHONE: 801.897.4880

COBABE RANCH 0.5 MG WATER TANK
EDEN CROSSING (PWS NO.29132)
COBABE RANCH
EDEN, UTAH

PROFESSIONAL ENGINEER
11573207-2202
ROBERT J. HILLYER
7/9/2025
STATE OF UTAH

FOR CONSTRUCTION 7/9/2025

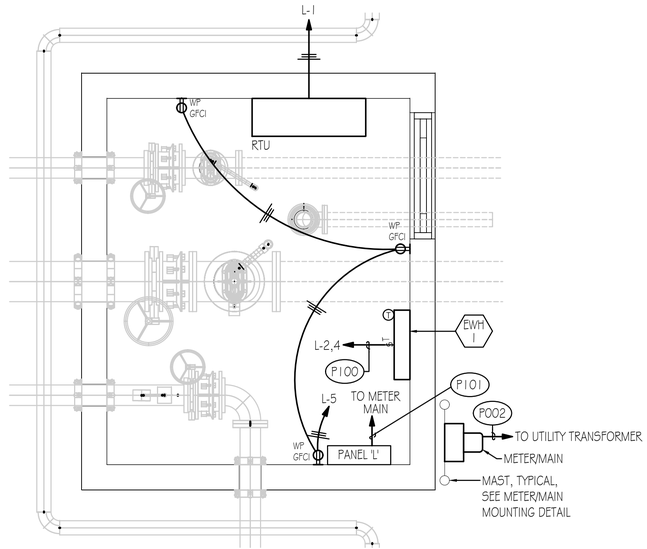
SITE ELECTRICAL PLAN

PROJECT NUMBER	PRINT DATE
14018A	6-24-2025
PROJECT MANAGER	DESIGNED BY

E-101

DRAWING NOTES

1



1 / E-102 **VALVE VAULT POWER PLAN**

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

2 0 5

ENSIGN
THE STANDARD IN ENGINEERING

SANDY
45 W. 10000 S., Suite 500
Sandy, UT 84070
Phone: 801.255.0529

LAYTON
Phone: 801.547.1100

TOOELE
Phone: 435.843.3590

CEDAR CITY
Phone: 435.865.1453

RICHFIELD
Phone: 435.896.2983

WWW.ENSIGNENG.COM

FOR:
EDEN VALLEY OPPORTUNITY, LLC
3718 NORTH WOLF CREEK DRIVE
EDEN, UT 84310

CONTACT:
JOHN LEWIS
PHONE: 801.897.4880

COBABE RANCH 0.5 MG WATER TANK
EDEN CROSSING (PWS NO.29132)
COBABE RANCH
EDEN, UTAH

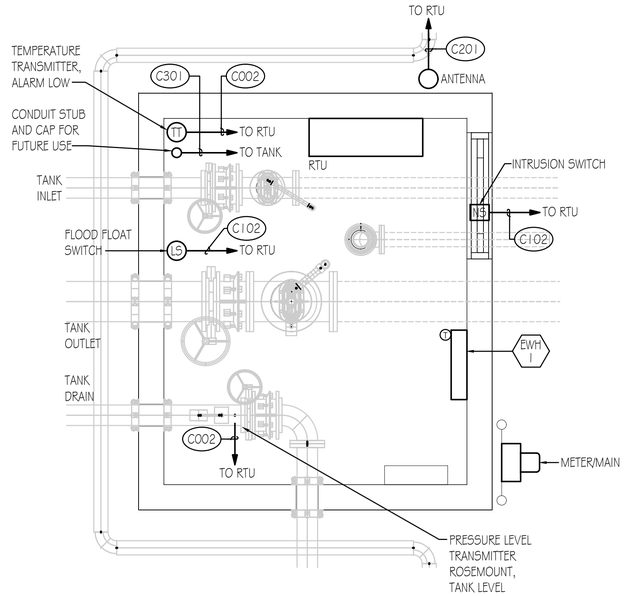
PROFESSIONAL ENGINEER
11573207-2202
ROBERT J. HILLYER
7/9/2025
STATE OF UTAH

FOR CONSTRUCTION 7/9/2025

POWER PLAN

PROJECT NUMBER	PRINT DATE
14018A	6-24-2025
PROJECT MANAGER	DESIGNED BY

E-102



1 / E-103 VALVE VAULT CONTROLS PLAN

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

2 0 5

ENSIGN
THE STANDARD IN ENGINEERING

SANDY
45 W. 10000 S., Suite 500
Sandy, UT 84070
Phone: 801.255.0529

LAYTON
Phone: 801.547.1100

TOOELE
Phone: 435.843.3590

CEDAR CITY
Phone: 435.865.1453

RICHFIELD
Phone: 435.896.2983

WWW.ENSIGNENG.COM

FOR:
EDEN VALLEY OPPORTUNITY, LLC
3718 NORTH WOLF CREEK DRIVE
EDEN, UT 84310

CONTACT:
JOHN LEWIS
PHONE: 801.897.4880

COBABE RANCH 0.5 MG WATER TANK
EDEN CROSSING (PWS NO.29132)
COBABE RANCH
EDEN, UTAH

PROFESSIONAL ENGINEER
11573207-2202
ROBERT J. HILLYER
7/9/2025
STATE OF UTAH

FOR CONSTRUCTION 7/9/2025

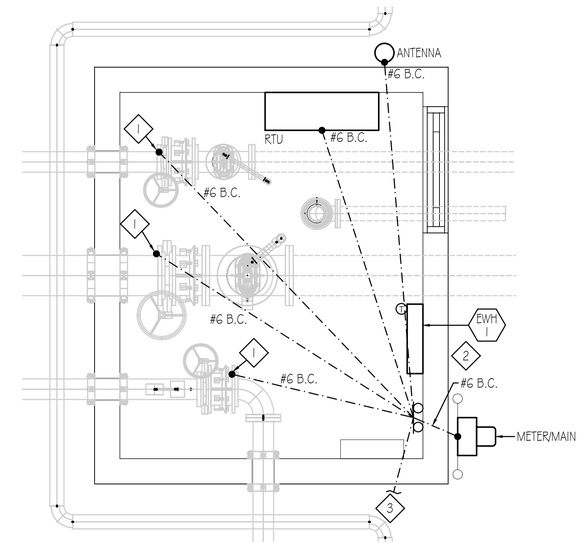
CONTROLS PLAN

PROJECT NUMBER	PRINT DATE
14018A	6-24-2025
PROJECT MANAGER	DESIGNED BY

E-103

DRAWING NOTES

1. SEE FLANGE GROUND RING CONNECTION DETAIL.
2. GROUND BAR. BOND TO TANK GROUND. SEE DETAIL.
3. TO TANK GROUND. SEE SITE PLAN FOR CONTINUATION.



1 / E-104 VALVE VAULT GROUNDING PLAN

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

2 0 5

ENSIGN
THE STANDARD IN ENGINEERING

SANDY
45 W. 10000 S., Suite 500
Sandy, UT 84070
Phone: 801.255.0529

LAYTON
Phone: 801.547.1100

TOOELE
Phone: 435.843.3590

CEDAR CITY
Phone: 435.865.1453

RICHFIELD
Phone: 435.896.2983

WWW.ENSIGNENG.COM

FOR:
EDEN VALLEY OPPORTUNITY, LLC
3718 NORTH WOLF CREEK DRIVE
EDEN, UT 84310

CONTACT:
JOHN LEWIS
PHONE: 801.897.4880

COBABE RANCH 0.5 MG WATER TANK
EDEN CROSSING (PWS NO.29132)
COBABE RANCH
EDEN, UTAH

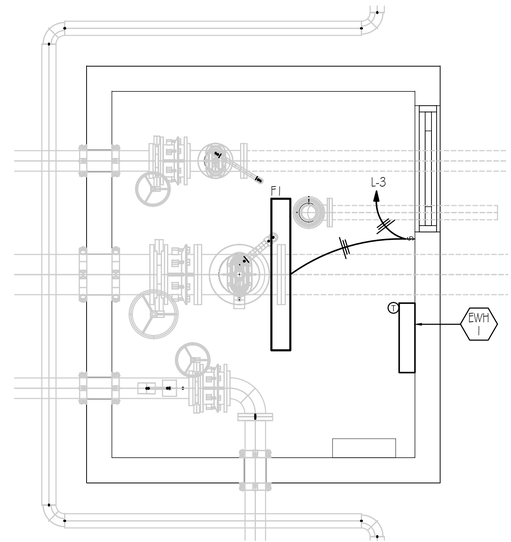
PROFESSIONAL ENGINEER
11573207-2202
ROBERT J. HILLYER
7/9/2025
STATE OF UTAH

FOR CONSTRUCTION 7/9/2025

GROUNDING PLAN

PROJECT NUMBER	PRINT DATE
14018A	6-24-2025
PROJECT MANAGER	DESIGNED BY

E-104



1 E-105 VALVE VAULT LIGHTING PLAN

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

2 0 5

ENSIGN
THE STANDARD IN ENGINEERING

SANDY
45 W. 10000 S., Suite 500
Sandy, UT 84070
Phone: 801.255.0529

LAYTON
Phone: 801.547.1100

TOOELE
Phone: 435.843.3590

CEDAR CITY
Phone: 435.865.1453

RICHFIELD
Phone: 435.896.2983

WWW.ENSIGNENG.COM

FOR:
EDEN VALLEY OPPORTUNITY, LLC
3718 NORTH WOLF CREEK DRIVE
EDEN, UT 84310

CONTACT:
JOHN LEWIS
PHONE: 801.897.4880

COBABE RANCH 0.5 MG WATER TANK
EDEN CROSSING (PWS NO.29132)

COBABE RANCH
EDEN, UTAH

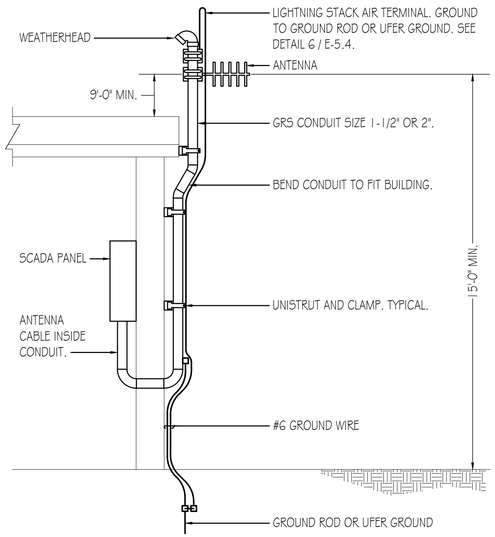
PROFESSIONAL ENGINEER
11573207-2202
ROBERT J. HILLYER
7/9/2025
STATE OF UTAH

FOR CONSTRUCTION 7/9/2025

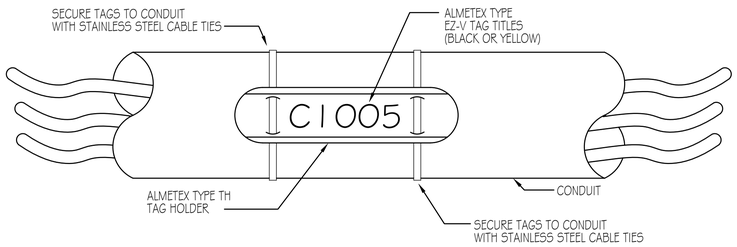
LIGHTING PLAN

PROJECT NUMBER	PRINT DATE
14018A	6-24-2025
PROJECT MANAGER	DESIGNED BY

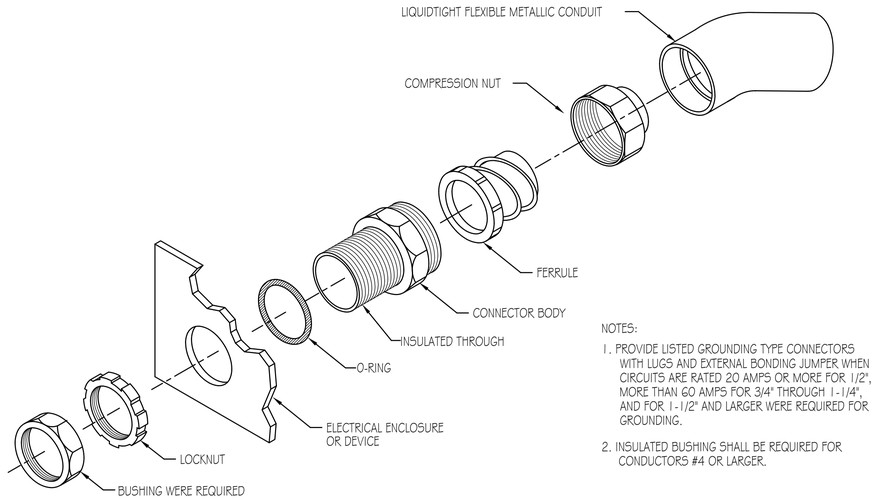
E-105



7 E-501 **ANTENNA SUPPORT DETAIL**
SCALE: NONE

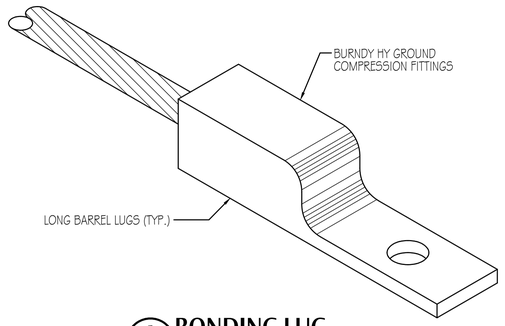


4 E-501 **CONDUIT MARKING SYSTEM**
SCALE: NONE
TYPICAL OF ALL CONDUITS

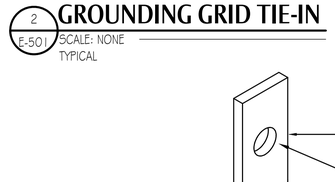


NOTES:
1. PROVIDE LISTED GROUNDING TYPE CONNECTORS WITH LUGS AND EXTERNAL BONDING JUMPER WHEN CIRCUITS ARE RATED 20 AMPS OR MORE FOR 1/2", MORE THAN 60 AMPS FOR 3/4" THROUGH 1-1/4", AND FOR 1-1/2" AND LARGER WERE REQUIRED FOR GROUNDING.
2. INSULATED BUSHING SHALL BE REQUIRED FOR CONDUCTORS #4 OR LARGER.

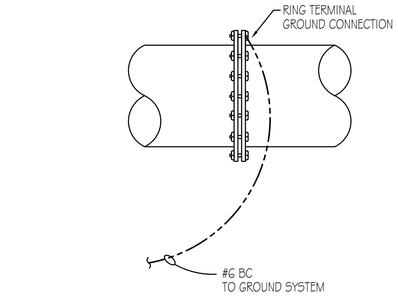
1 E-501 **TYPICAL FLEXIBLE CONDUIT CONNECTION DETAIL**
SCALE: NONE



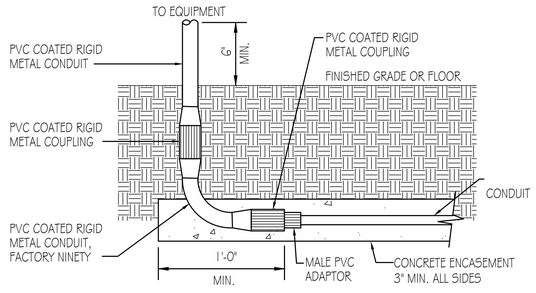
5 E-501 **BONDING LUG**
SCALE: NONE



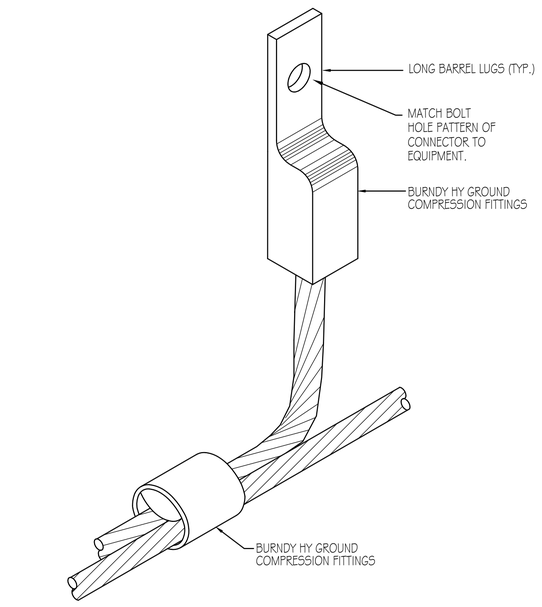
2 E-501 **GROUNDING GRID TIE-IN**
SCALE: NONE
TYPICAL



8 E-501 **FLANGE GROUND RING CONNECTION**
SCALE: NONE



6 E-501 **CONDUIT RISER**
SCALE: NONE
TYPICAL



3 E-501 **EQUIPMENT GROUNDING CONNECTION**
SCALE: NONE
TYPICAL

ENSIGN
THE STANDARD IN ENGINEERING

SANDY
45 W. 10000 S., Suite 500
Sandy, UT 84070
Phone: 801.255.0529

LAYTON
Phone: 801.547.1100

TOOELE
Phone: 435.843.3590

CEDAR CITY
Phone: 435.865.1453

RICHFIELD
Phone: 435.896.2983

WWW.ENSIGNENG.COM

FOR:
EDEN VALLEY OPPORTUNITY, LLC
3718 NORTH WOLF CREEK DRIVE
EDEN, UT 84310

CONTACT:
JOHN LEWIS
PHONE: 801.897.4880

COBABE RANCH 0.5 MG WATER TANK
EDEN CROSSING (PWS NO.29132)
COBABE RANCH
EDEN, UTAH

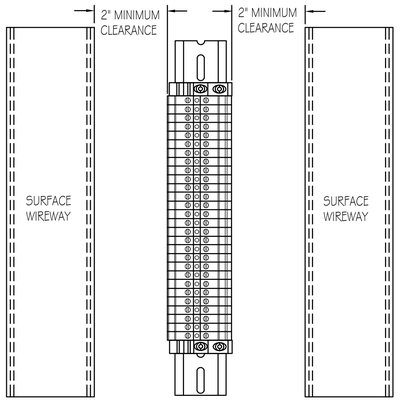
PROFESSIONAL ENGINEER
11573207-2202
ROBERT J. HILLYER
1/9/2025
STATE OF UTAH

FOR CONSTRUCTION 7/9/2025

ELECTRICAL DETAILS

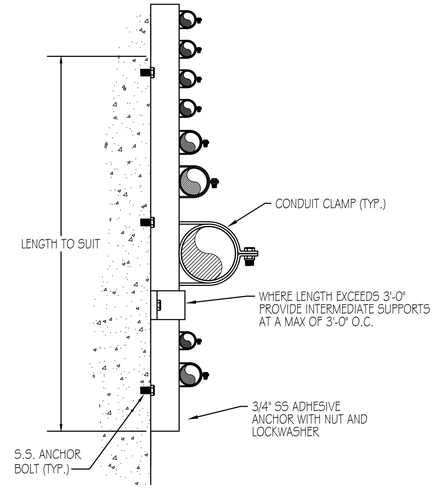
PROJECT NUMBER	PRINT DATE
14018A	6-24-2025
PROJECT MANAGER	DESIGNED BY

E-501



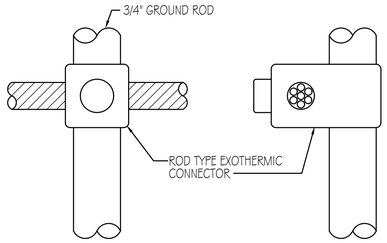
6 E-502 TERMINAL BLOCK CLEARANCE DETAIL

NO SCALE



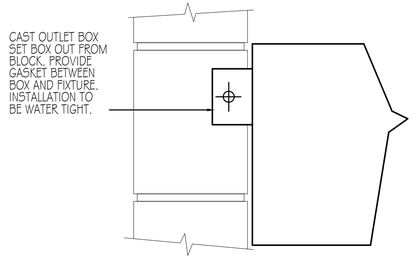
3 E-502 CONDUIT SUPPORT DETAIL

SCALE: NONE
TYPICAL



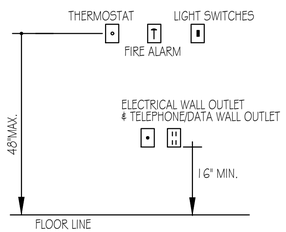
7 E-502 CABLE TO ROD CONNECTION DETAIL

SCALE: NONE
TYPICAL



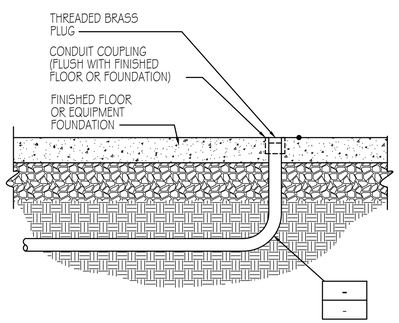
WALL HUNG FIXTURE MOUNTING DETAIL

4 E-502 SCALE: NONE
TYPICAL OF ALL WALL HUNG FIXTURES



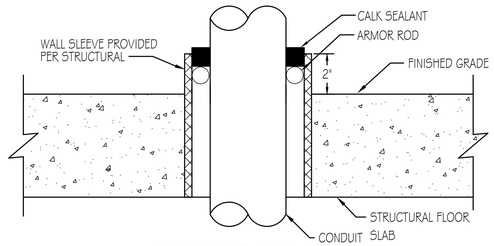
MOUNTING HEIGHTS FOR ELECTRICAL DEVICES

8 E-502 SCALE: NONE

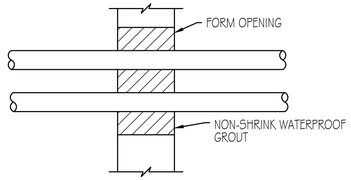


5 E-502 FLUSH CONDUIT TERMINATION

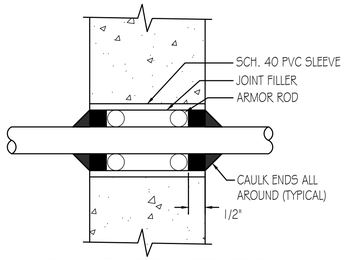
SCALE: NONE
TYPICAL



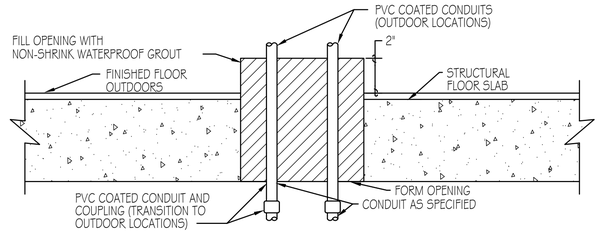
CONCRETE SLAB



CONCRETE WALL LOCATIONS



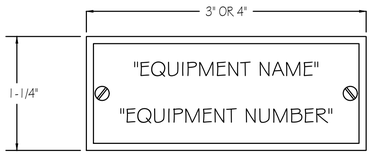
SINGLE CONDUIT PENETRATION FOR ABOVE GRADE PENETRATIONS ONLY



CONCRETE SLAB WET LOCATIONS

TYPICAL ABOVE GROUND CONDUIT PENETRATIONS FOR NEW WALLS/FLOORS

1 E-502 SCALE: NONE



NOTES:

1. ALL LETTERS TO BE 1/4" UNLESS NOTED OTHERWISE.
2. ALL NAMEPLATES TO BE MOUNTED ON THE VERTICAL CENTERLINE OF THE CUBICAL OR DEVICE.
3. ATTACH ALL NAMEPLATES WITH STAINLESS STEEL SCREWS.
4. PROVIDE BLANK NAMEPLATES FOR ALL SPARE AND FUTURE DEVICES.

2 E-502 NAMEPLATE DETAIL

SCALE: NONE
TYPICAL OF ALL EQUIPMENT

ENSIGN
THE STANDARD IN ENGINEERING

SANDY
45 W. 10000 S., Suite 500
Sandy, UT 84070
Phone: 801.255.0529

LAYTON
Phone: 801.547.1100

TOOELE
Phone: 435.843.3590

CEDAR CITY
Phone: 435.865.1453

RICHFIELD
Phone: 435.896.2983

WWW.ENSIGNENG.COM

FOR:
EDEN VALLEY OPPORTUNITY, LLC
3718 NORTH WOLF CREEK DRIVE
EDEN, UT 84310

CONTACT:
JOHN LEWIS
PHONE: 801.897.4880

COBABE RANCH 0.5 MG WATER TANK
EDEN CROSSING (PWS NO.29132)

COBABE RANCH
EDEN, UTAH

PROFESSIONAL ENGINEER
11573207-2202
ROBERT J. HILLYER
7/9/2025
STATE OF UTAH

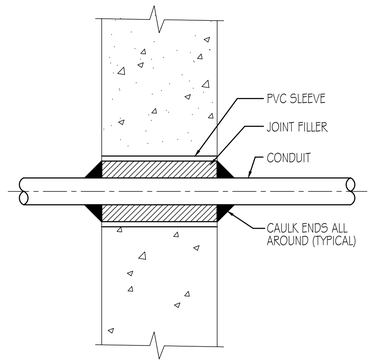
FOR CONSTRUCTION 7/9/2025

ELECTRICAL DETAILS

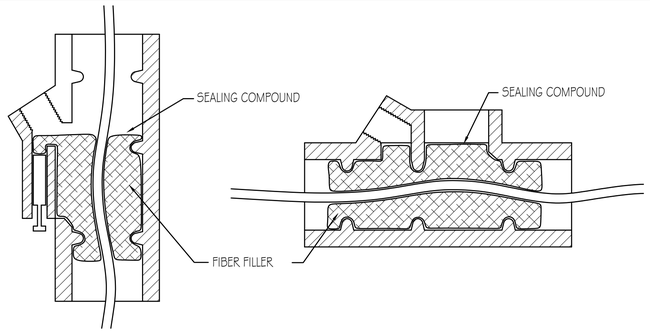
PROJECT NUMBER	PRINT DATE
14018A	6-24-2025
PROJECT MANAGER	DESIGNED BY

E-502

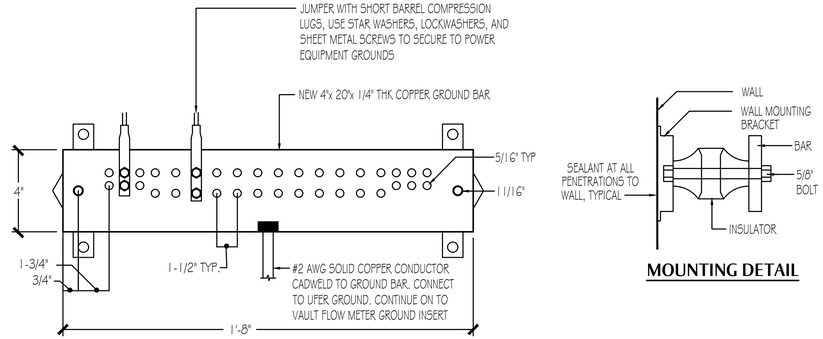
I:\25069\01 DWG\ELEC\SHEET\25069-E-502.dwg, 7/9/2025 4:45:37 PM, kbrown



9 E-503 **CONDUIT PENETRATION AT NEW WALL OR SLAB**
SCALE: NONE

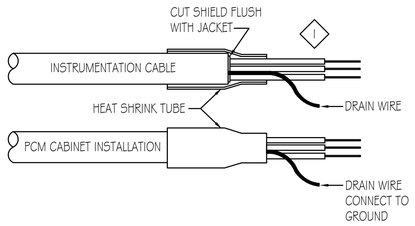


6 E-503 **TYPICAL CONDUIT SEAL DAMMING AND POURING**
SCALE: NONE



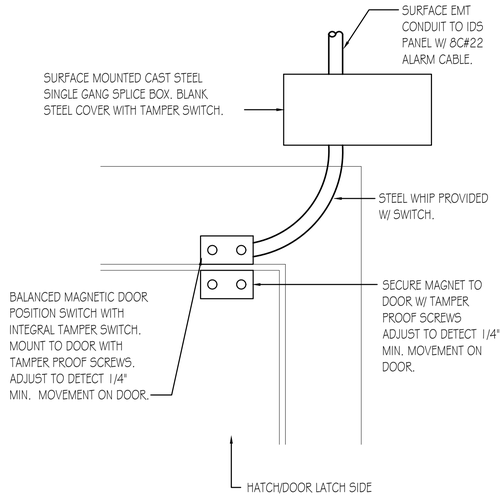
NOTES:
1. ALL HARDWARE STAINLESS STEEL INCLUDING BELLEVILLES COAT ALL SURFACE WITH KOPR-SHIELD BEFORE MATING.
2. FOR GROUND BOND TO STEEL ONLY: INSERT A TOOTH WASHER BETWEEN LUG AND STEEL, COAT ALL SURFACES WITH KOPR-SHIELD.
3. ALL HOLES ARE COUNTERSUNK 1/16".

4 E-503 **GROUND BAR DETAIL**
SCALE: NONE

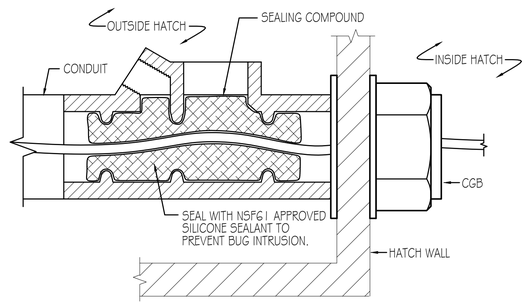


NOTES:
1. SIMILAR FOR 2-CONDUCTOR SHILDED CABLE.

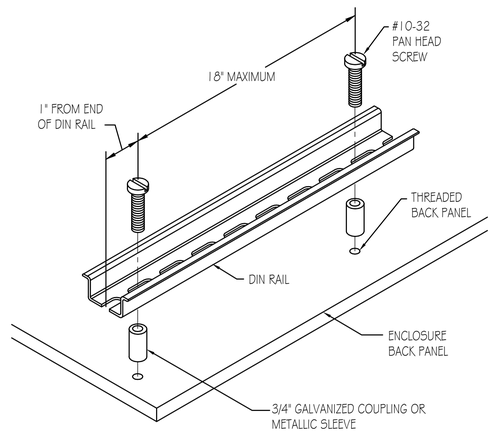
10 E-503 **INSTRUMENTATION SHIELDED CABLE TERMINATION DETAILS**
SCALE: NONE



7 E-503 **HATCH/DOOR SWITCH MOUNTING DETAIL**
SCALE: NONE



8 E-503 **HATCH PENETRATION DETAIL**
SCALE: 1/4"=1'-0"



5 E-503 **DIN RAIL MOUNTING DETAIL**
NO SCALE

ENSIGN
THE STANDARD IN ENGINEERING

SANDY
45 W. 10000 S., Suite 500
Sandy, UT 84070
Phone: 801.255.0529

LAYTON
Phone: 801.547.1100

TOOELE
Phone: 435.843.3590

CEDAR CITY
Phone: 435.865.1453

RICHFIELD
Phone: 435.896.2983

WWW.ENSIGNENG.COM

FOR:
EDEN VALLEY OPPORTUNITY, LLC
3718 NORTH WOLF CREEK DRIVE
EDEN, UT 84310

CONTACT:
JOHN LEWIS
PHONE: 801.897.4880

COBABE RANCH 0.5 MG WATER TANK
EDEN CROSSING (PWS NO.29132)
COBABE RANCH
EDEN, UTAH

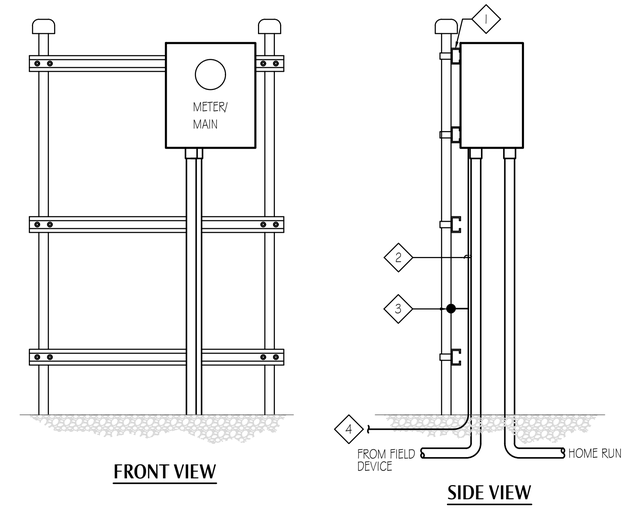
PROFESSIONAL ENGINEER
11573207-2202
ROBERT J. HILLYER
7/9/2025
STATE OF UTAH

FOR CONSTRUCTION 7/9/2025

ELECTRICAL DETAILS

PROJECT NUMBER 14018A
PRINT DATE 6-24-2025
PROJECT MANAGER
DESIGNED BY

E-503



FRONT VIEW

SIDE VIEW

DETAIL NOTES

1. CONDUIT CLAMPS
2. #6 B.C. SOLID COPPER GROUND.
3. BOND TO MAST.
4. TO GROUND GRID. SEE ONE-LINE DIAGRAM.

1 / E-504 METER/MAIN MOUNTING DETAIL

SCALE: NONE

ENSIGN
THE STANDARD IN ENGINEERING

SANDY
45 W. 10000 S., Suite 500
Sandy, UT 84070
Phone: 801.255.0529

LAYTON
Phone: 801.547.1100

TOOELE
Phone: 435.843.3590

CEDAR CITY
Phone: 435.865.1453

RICHFIELD
Phone: 435.896.2983

WWW.ENSIGNENG.COM

FOR:
EDEN VALLEY OPPORTUNITY, LLC
3718 NORTH WOLF CREEK DRIVE
EDEN, UT 84310

CONTACT:
JOHN LEWIS
PHONE: 801.897.4880

COBABE RANCH 0.5 MG WATER TANK
EDEN CROSSING (PWS NO.29132)

COBABE RANCH
EDEN, UTAH

PROFESSIONAL ENGINEER
11573207-2202
ROBERT J. HILLYER
7/9/2025
STATE OF UTAH

FOR CONSTRUCTION 7/9/2025

ELECTRICAL DETAILS

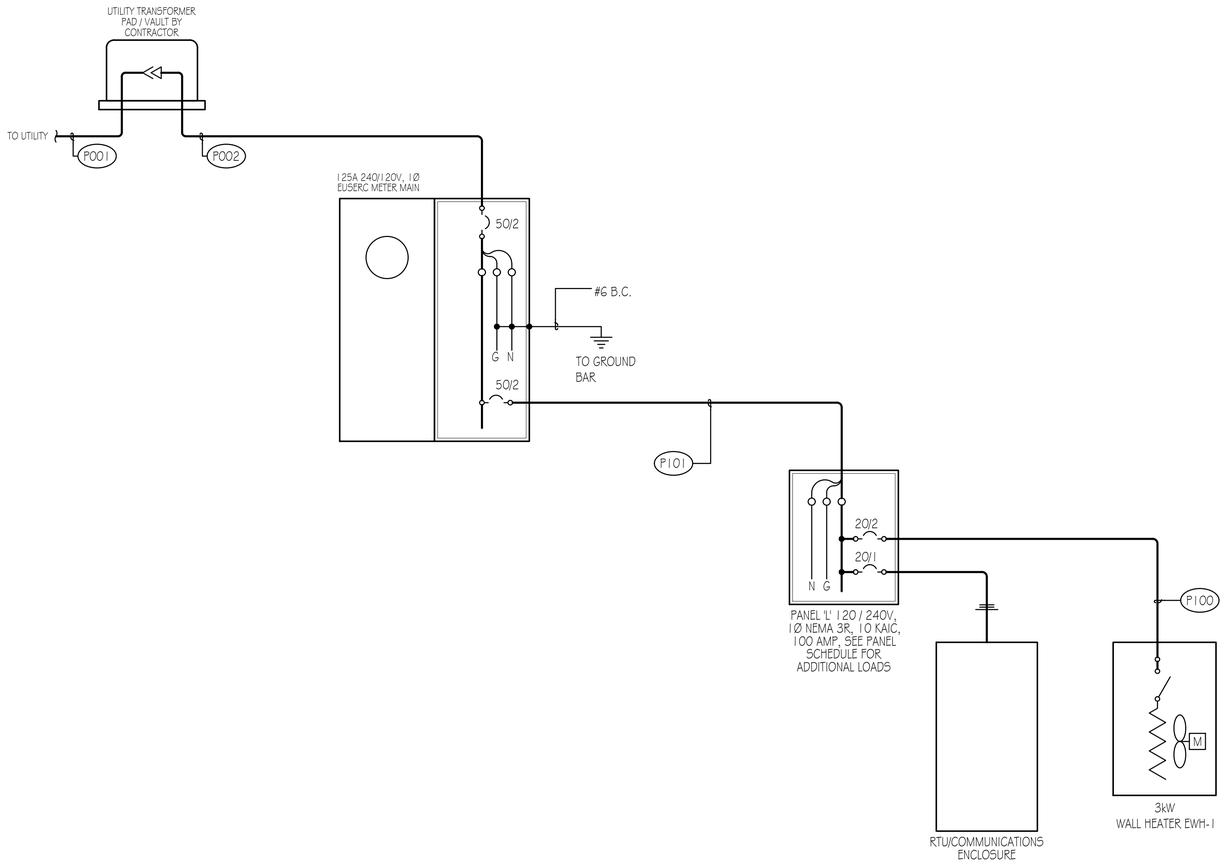
PROJECT NUMBER	PRINT DATE
14018A	6-24-2025
PROJECT MANAGER	DESIGNED BY

E-504

I:\25069\01 DWG\ELEC\SHEET\25069-E-504.dwg, 7/9/2025 4:45:41 PM, kbrown

DRAWING NOTES

1. UTILITY TRANSFORMER, PAD / VAULT BY CONTRACTOR. COORDINATE WITH ROCKY MOUNTAIN POWER ALL UTILITY REQUIREMENTS.



1 E-601 **VALVE VAULT ONE-LINE DIAGRAM**
SCALE: NONE

ENSIGN
THE STANDARD IN ENGINEERING

SANDY
45 W. 10000 S., Suite 500
Sandy, UT 84070
Phone: 801.255.0529

LAYTON
Phone: 801.547.1100

TOOELE
Phone: 435.843.3590

CEDAR CITY
Phone: 435.865.1453

RICHFIELD
Phone: 435.896.2983

WWW.ENSIGNENG.COM

FOR:
EDEN VALLEY OPPORTUNITY, LLC
3718 NORTH WOLF CREEK DRIVE
EDEN, UT 84310

CONTACT:
JOHN LEWIS
PHONE: 801.897.4880

COBABE RANCH 0.5 MG WATER TANK
EDEN CROSSING (PWS NO.29132)
COBABE RANCH
EDEN, UTAH

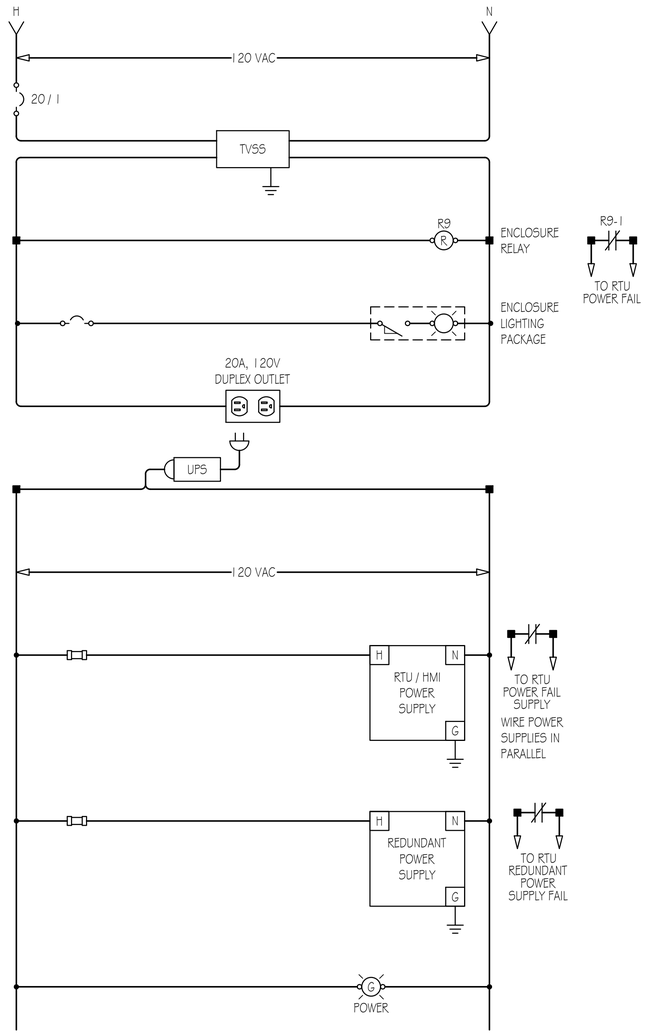
PROFESSIONAL ENGINEER
11573207-2202
ROBERT J. HILLYER
7/9/2025
STATE OF UTAH

FOR CONSTRUCTION 7/9/2025

ELECTRICAL ONE-LINE DIAGRAM

PROJECT NUMBER	PRINT DATE
14018A	6-24-2025
PROJECT MANAGER	DESIGNED BY

E-601



* LABEL FRONT WITH:
"CAUTION - MULTIPLE SOURCES OF POWER WITHIN CABINET"

1 E-602 **RTU CONTROL DIAGRAM**
SCALE: NONE

ENSIGN
THE STANDARD IN ENGINEERING

SANDY
45 W. 10000 S., Suite 500
Sandy, UT 84070
Phone: 801.255.0529

LAYTON
Phone: 801.547.1100

TOOELE
Phone: 435.843.3590

CEDAR CITY
Phone: 435.865.1453

RICHFIELD
Phone: 435.896.2983

WWW.ENSIGNENG.COM

FOR:
EDEN VALLEY OPPORTUNITY, LLC
3718 NORTH WOLF CREEK DRIVE
EDEN, UT 84310

CONTACT:
JOHN LEWIS
PHONE: 801.897.4880

COBABE RANCH 0.5 MG WATER TANK
EDEN CROSSING (PWS NO.29132)

COBABE RANCH
EDEN, UTAH

PROFESSIONAL ENGINEER
11573207-2202
ROBERT J. HILLYER
7/9/2025
STATE OF UTAH

FOR CONSTRUCTION 7/9/2025

RTU CONTROL DIAGRAM

PROJECT NUMBER	PRINT DATE
14018A	6-24-2025
PROJECT MANAGER	DESIGNED BY

E-602

I:\25069\01 DWG\ELEC\SHEET\25069-E-602.dwg, 7/9/2025 4:45:45 PM, kbrown

HVAC SYMBOL LEGEND

	RETURN AIR OR EXHAUST DIRECTION		SUPPLY DUCT (CROSS SECTION)
	OPPOSED BLADE DAMPER		RETURN AIR OR EXHAUST DUCT (CROSS SECTION)
	PARALLEL BLADE DAMPER		ROUND DUCT (CROSS SECTION)
O.A.	OUTSIDE AIR	24"x12"	DUCT SIZE, INSIDE CLEAR DIMENSION IN INCHES
S.A.	SUPPLY AIR		DROP OR RISE IN SUPPLY DUCT
E.A.	EXHAUST AIR		SUPPLY AIR OR OUTSIDE AIR DIRECTION
V.A.	VENTILATION AIR	T	THERMOSTAT
	NEW CONNECTION	S	WALL SENSOR

ELECTRIC WALL HEATERS

SYMBOL	NOMINAL CFM	KW	ELECTRICAL			REZNOR MODEL	DUTY	REMARKS
			VOLTS	HERTZ	PHASE			
EH-1	160	3	240	60	1	EHC3	VALVE VAULT	(1) (2) (3)

NOTES:

(1) SURFACE MOUNT CONFIGURATION, EXTRUDED ALUMINUM FRONT GRILLE, HIGH-LIMIT TEMPERATURE CONTROL WITH AUTOMATIC RESET.

(2) FURNISH WITH INTEGRAL TAMPER-RESISTANCE THERMOSTAT.

(3) OR EQUAL BY QMARK, KING OR MARKEL.

DRAWING NOTES

(1) FIELD COORDINATE EXACT LOCATION OF ELECTRICAL WALL HEATER EH-1. INSTALL APPROXIMATELY 24" A.F.F. TO BOTTOM OF HEATER. INSTALL PER MANIFACTURER'S REQUIREMENTS.

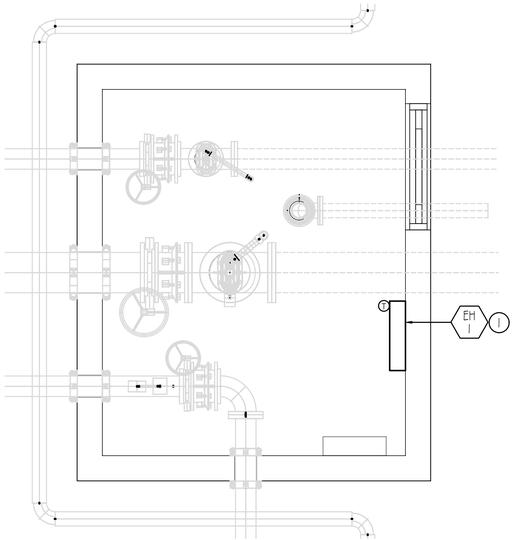
GENERAL NOTES

1. EQUIPMENT MANUFACTURERS AND MODEL NUMBERS ON DRAWING SCHEDULES ARE PROVIDED FOR REFERENCE ONLY IN ORDER TO AID THE CONTRACTOR ESTABLISH SIZES. DO NOT LIMIT EQUIPMENT SELECTION TO SHOWN MAKES.

CONTROL SEQUENCES

ELECTRICAL WALL HEATER (EH-1):

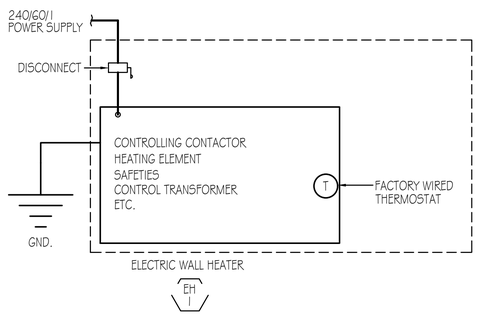
WHEN THE LOCAL BUILT IN SPACE THERMOSTAT CALLS FOR HEATING THE RESPECTIVE WALL HEATER SHALL BE ENERGIZED TO RUN TO SATISFY THE LOCAL SPACE TEMPERATURE THROUGH ITS FACTORY WIRED CONTROLS. THE UNIT OPERATES UNTIL THE ROOM TEMPERATURE IS SATISFIED AND THEN POWERS OFF. SET BUILT IN THERMOSTAT SET POINT TO 45° (ADJUSTABLE).



1 / H-101 VALVE VAULT HVAC PLAN

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

2 0 5



2 / H-101 ELECTRIC WALL HEATER CONTROL DIAGRAM

SCALE NONE: TYP. FOR EH-1

ENSIGN
THE STANDARD IN ENGINEERING

SANDY
45 W. 10000 S., Suite 500
Sandy, UT 84070
Phone: 801.255.0529

LAYTON
Phone: 801.547.1100

TOOELE
Phone: 435.843.3590

CEDAR CITY
Phone: 435.865.1453

RICHFIELD
Phone: 435.896.2983

WWW.ENSIGNENG.COM

FOR:
EDEN VALLEY OPPORTUNITY, LLC
3718 NORTH WOLF CREEK DRIVE
EDEN, UT 84310

CONTACT:
JOHN LEWIS
PHONE: 801.897.4880

COBABE RANCH 0.5 MG WATER TANK
EDEN CROSSING (PWS NO.29132)
COBABE RANCH
EDEN, UTAH

PROFESSIONAL ENGINEER
6647772-2202
KARSON DAVID HALVERSON
7/9/25
STATE OF UTAH

FOR CONSTRUCTION 7/9/2025

VALVE VAULT HVAC PLAN

PROJECT NUMBER	PRINT DATE
14018A	6-24-2025
PROJECT MANAGER	DESIGNED BY

H-101

HEATH Engineering Company