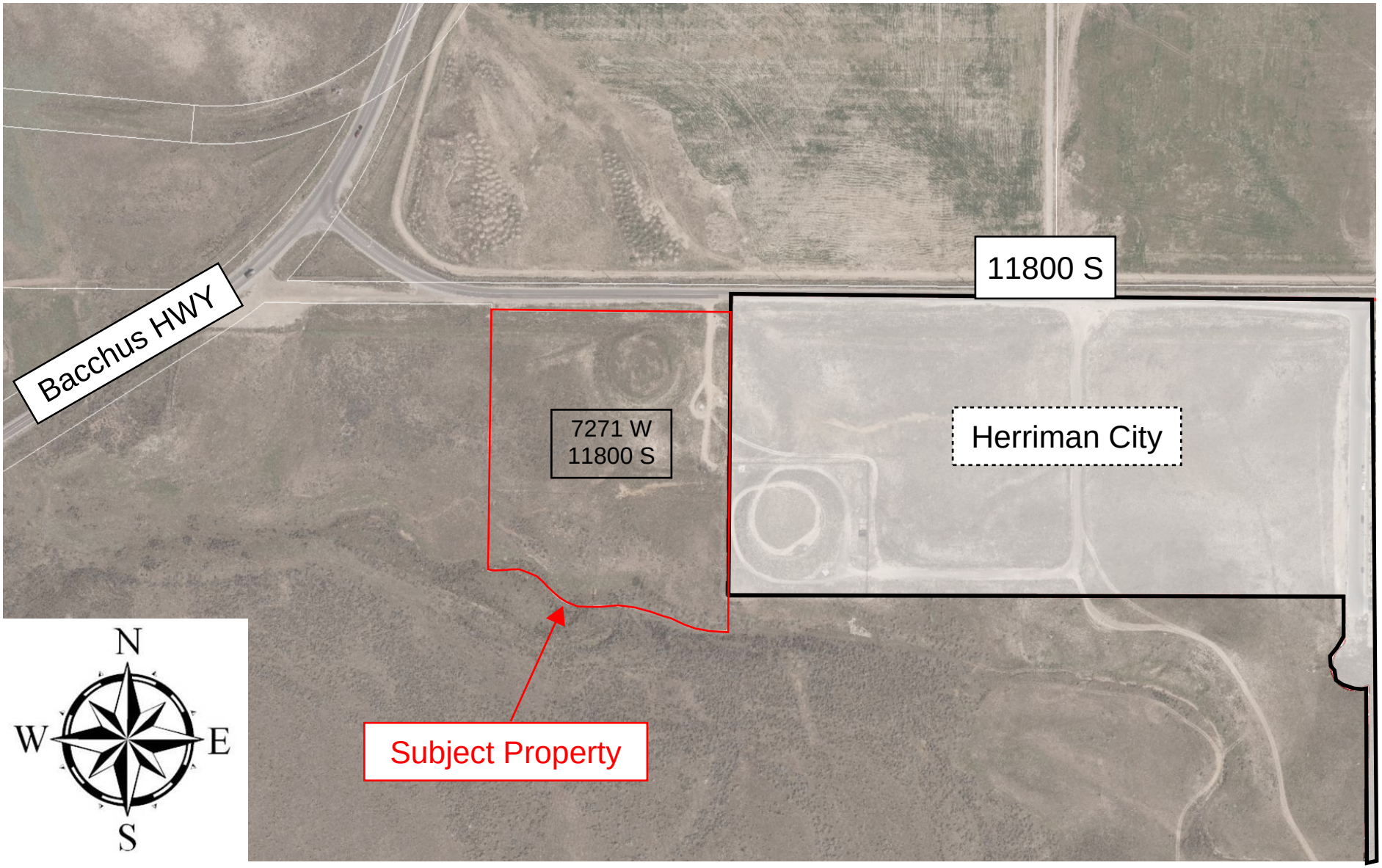
# Location Map

*City of South Jordan*

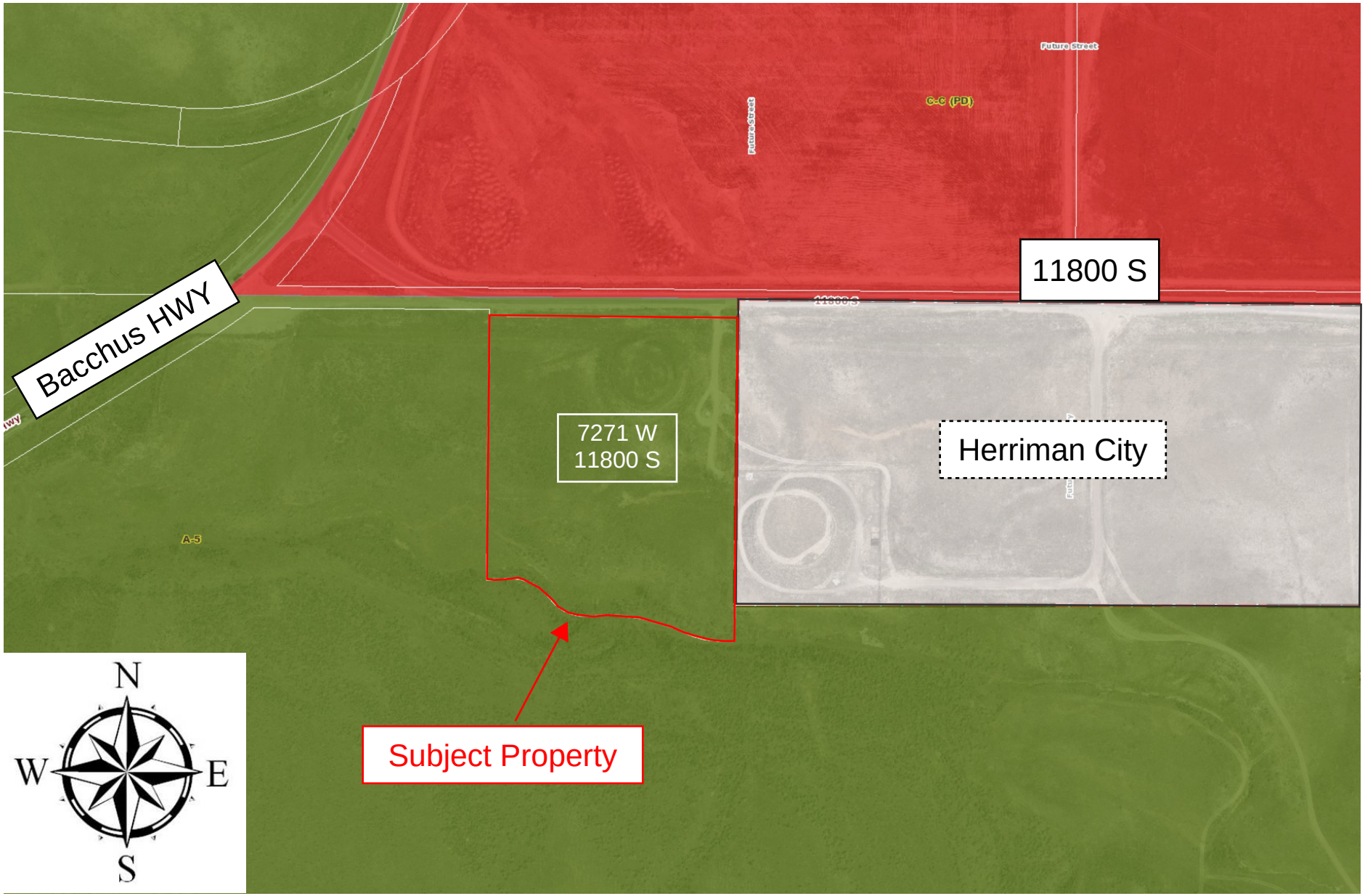
Jordan Valley Water Conservancy District



# Zoning Map

*City of South Jordan*

Jordan Valley Water Conservancy District

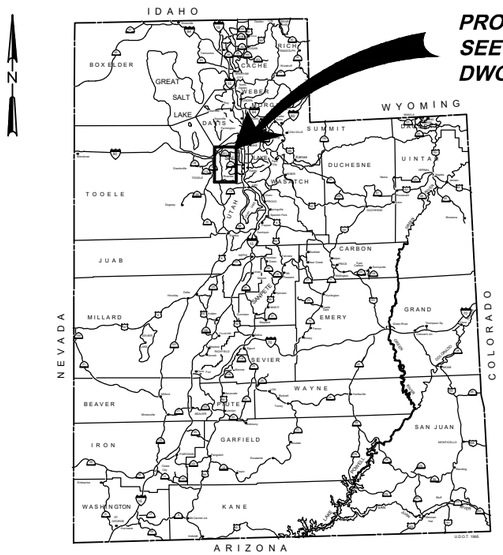


# 11800 SOUTH ZONE C RESERVOIRS

JORDAN VALLEY WATER CONSERVANCY DISTRICT

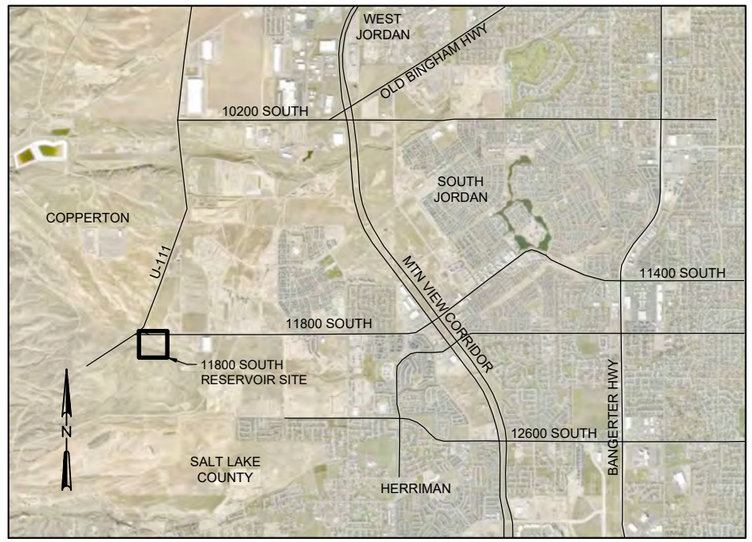
VOLUME 2 OF 3
100% CONFORMED DRAWINGS
JULY 2024

PROJECT #4276




***PROJECT LOCATION***
***SEE INDEX MAP***
***DWG G-04***

VICINITY MAP




LOCATION MAP
NTS

SITE LOCATED AT:
11800 SOUTH 7185 WEST,
SOUTH JORDAN CITY

## BOARD OF TRUSTEES

COREY L. RUSHTON
KAREN D. LANG
JOHN B. RICHARDSON
ANDY PIERUCCI
DAWN R. RAMSEY
MICK M. SUDBURY
ZACH JACOB
JOHN H. TAYLOR
BARBARA TOWNSEND

## PROJECT MANAGERS

JORDAN VALLEY WATER CONSERVANCY DISTRICT
KEVIN RUBOW, PE
8215 SOUTH 1300 WEST
WEST JORDAN, UT 84088

JACOBS ENGINEERING GROUP
RYAN WILLEITNER, PE
6440 MILLROCK DR.
HOLLADAY, UT 84121

LICENSED PROFESSIONAL ENGINEER
No. 12868179
BRADLEY JAMES PHELPS
STATE OF UTAH
DIGITALLY SIGNED: 07/18/2024

LICENSED PROFESSIONAL ENGINEER
No. 8760818-2202
RYAN WILLEITNER
STATE OF UTAH
DIGITALLY SIGNED: 07/18/2024

| NO. | DATE | DSGN | DR | CHK | APVD | BY | REVISION |
|---|---|---|---|---|---|---|---|
| | R WILLEITNER | C HOGGARD | B PHELPS | APVD | R WILLEITNER | | |



JORDAN VALLEY WATER CONSERVANCY DISTRICT
11800 SOUTH ZONE C RESERVOIRS

Jacobs

GENERAL
COVER SHEET, VICINITY MAP, AND LOCATION MAP

VERIFY SCALE
BAR IS ONE INCH ON ORIGINAL DRAWING.
0 1"

| | |
|---|---|
| DATE | JULY 2024 |
| PROJ | W7Y49600 |
| DWG | G-01 |
| SHEET | 1 of 79 |

100% CONFORMED

# GENERAL NOTES

1. EXISTING UTILITIES SHOWN ARE BASED ON AVAILABLE INFORMATION. THE CONTRACTOR SHALL VERIFY THE EXACT LOCATION, SIZE, TYPE, AND ELEVATION OF ALL UTILITIES PRIOR TO CROSSING UTILITY. THE CONTRACTOR SHALL CONTACT BLUE STAKES AT 1 (800) 662-4111 FOR LOCATING EXISTING UTILITIES.

2. FOR THE REPLACEMENT AND RECONSTRUCTION OF SOUTH JORDAN CITY AND CITY OF HERRIMAN FACILITIES DAMAGED DURING CONSTRUCTION, REFER TO SPECIFICATION SECTION 01 31 13, PROJECT COORDINATION.

3. EXCAVATION LIMITS SHOWN IN THE DETAILS ARE GRAPHICAL REPRESENTATIONS ONLY AND DO NOT REPRESENT ACTUAL EXCAVATION LIMITS OR SAFE TRENCH WORKING CONDITIONS NECESSARY TO COMPLETE THE WORK. THE CONTRACTOR IS SOLELY RESPONSIBLE FOR DETERMINING THE TRENCH LIMITS NEEDED FOR THE WORK AND CONFORMANCE WITH THE LOCAL, STATE, AND FEDERAL CODES GOVERNING SHORING, SHEETING, AND BRACING OF EXCAVATIONS AND TRENCHES, AND FOR PROTECTION AND SAFETY OF WORKERS AND OTHER CONSTRUCTION RELATED PERSONNEL. PROVIDE ADDITIONAL SHORING, SHEETING, AND BRACING AS REQUIRED TO PROTECT EXISTING FACILITIES AND WHERE SPECIFICALLY INDICATED ON THE DRAWINGS.

4. UNLESS OTHERWISE NOTED, ALL ELEVATIONS FOR NEW CONSTRUCTED PIPELINES ARE PIPE CENTERLINE ELEVATIONS. ELEVATIONS OF EXISTING UTILITIES ARE CALLED OUT TO INVERT ELEVATION FOR GRAVITY UTILITIES (I.E. STORM DRAIN, SEWER, ETC.) AND TOP OF PIPE FOR EXISTING PIPELINES OR CONDUITS AND FOR ALL OTHER BURIED UTILITIES.

5. ALL STATIONING AND DISTANCES SHOWN ON THE DRAWINGS ARE BASED ON HORIZONTAL MEASUREMENTS.

6. CONTRACTOR SHALL LOCATE AHEAD AND UNCOVER ALL UNDERGROUND UTILITY CROSSINGS A MINIMUM OF 2 WEEKS IN ADVANCE OF OPERATIONS IN ORDER TO VERIFY CLEARANCE OF EXISTING UTILITIES FROM THE PROPOSED RESERVOIRS AND PIPING. REPORT ANY CONFLICTS TO THE ENGINEER IMMEDIATELY.

7. CONTRACTOR SHALL LIMIT CONSTRUCTION ACTIVITIES TO STAY WITHIN THE WORK LIMITS SHOWN AND COMPLY WITH TRAFFIC CONTROL REQUIREMENTS. THIS SHALL INCLUDE, BUT NOT BE LIMITED TO, VEHICLES AND EQUIPMENT, LIMITS OF EXCAVATION, EXCAVATED MATERIAL, AND BACKFILL MATERIAL STORAGE. WHERE EASEMENTS ARE NOT SHOWN, LIMIT CONSTRUCTION ACTIVITIES TO STAY WITHIN ROAD RIGHTS-OF-WAY AND PERMANENT EASEMENTS UNLESS OTHERWISE SHOWN.

8. CONTRACTOR SHALL ENSURE THAT OPERATION OF EXISTING IRRIGATION, SEWER, DRAINAGE, DOMESTIC WATER, AND OTHER UTILITY SYSTEMS ARE CONTINUOUS THROUGHOUT CONSTRUCTION.

9. SURFACE RESTORATION SHALL BE AS SPECIFIED OR SHOWN ON THE DRAWINGS. RESTORE SURFACES TO EXISTING CONDITIONS UNLESS OTHERWISE SHOWN.

10. RIPARIAN VEGETATION DISTURBED BY CONSTRUCTION ACTIVITIES SHALL BE REPLACED AND MAINTAINED UNTIL ESTABLISHED. THE CONTRACTOR SHALL APPLY VEGETATIVE EROSION CONTROL PER SPECIFICATIONS AND DRAWINGS TO AREAS DISTURBED BY CONSTRUCTION ACTIVITIES AND NOT LANDSCAPED.

11. RESERVOIR AND PIPE CONSTRUCTION WHEN NEAR EXISTING UTILITIES, WITHOUT APPROPRIATE CONTRACTOR-PROVIDED SHEETING, SHORING, AND PROTECTION, COULD COLLAPSE INTO THE EXCAVATIONS REQUIRED FOR THE PROJECT WORK. THE CONTRACTOR IS REQUIRED TO PROVIDE ALL NECESSARY DESIGNS (SIGNED AND STAMPED BY A PROFESSIONAL ENGINEER IN THE STATE OF UTAH), FOR SHEETING, SHORING, AND OTHER PROTECTION TO PREVENT EXISTING UTILITIES FROM SHIFTING, LEAKING, COLLAPSING, OR OTHERWISE FAILING AS A RESULT OF THIS WORK.

12. ANY DAMAGE WHICH OCCURS TO EXISTING UTILITIES AS A RESULT OF THE CONTRACTOR'S WORK SHALL BE PROMPTLY REPAIRED OR REPLACED AT THE CONTRACTOR'S EXPENSE PER PROJECT REQUIREMENTS, AND TO THE SATISFACTION OF THE OWNER OF THE DAMAGED UTILITIES.

13. ITEMS DESIGNATED FOR DEMOLITION SHALL BE DEMOLISHED AND PROPERLY DISPOSED OFF SITE BY THE CONTRACTOR.

14. CONTRACTOR SHALL REPLACE TO ORIGINAL OR BETTER CONDITION ALL FENCES REMOVED OR DAMAGED BY ANY PROJECT RELATED WORK WITH NEW FENCING AT THE ORIGINAL HORIZONTAL LOCATION UNLESS OTHERWISE SHOWN ON THE DRAWINGS. NEW FENCING SHALL BE EQUAL TO OR BETTER THAN THE ORIGINAL FENCING.

15. CONTRACTOR SHALL COORDINATE CONSTRUCTION ACTIVITIES WITH LOCAL EMERGENCY SERVICES TO ENSURE ACCESS TO ALL RESIDENTIAL, COMMERCIAL, AND OCCUPIED FACILITIES AT ALL TIMES.

# DRAWING LIST




LICENSED PROFESSIONAL ENGINEER
No. 8760818-2202
RYAN WILLEITNER
STATE OF UTAH
DIGITALLY SIGNED: 07/18/2024




| NO. | DATE | DSGN | DR | CHK | APVD | REVISION | BY | APVD |
|---|---|---|---|---|---|---|---|---|
| | | R WILLEITNER | C HOGGARD | B PHELPS | R WILLEITNER | | | |

JORDAN VALLEY WATER CONSERVANCY DISTRICT

11800 SOUTH ZONE C RESERVOIRS



100% CONFORMED

Jacobs

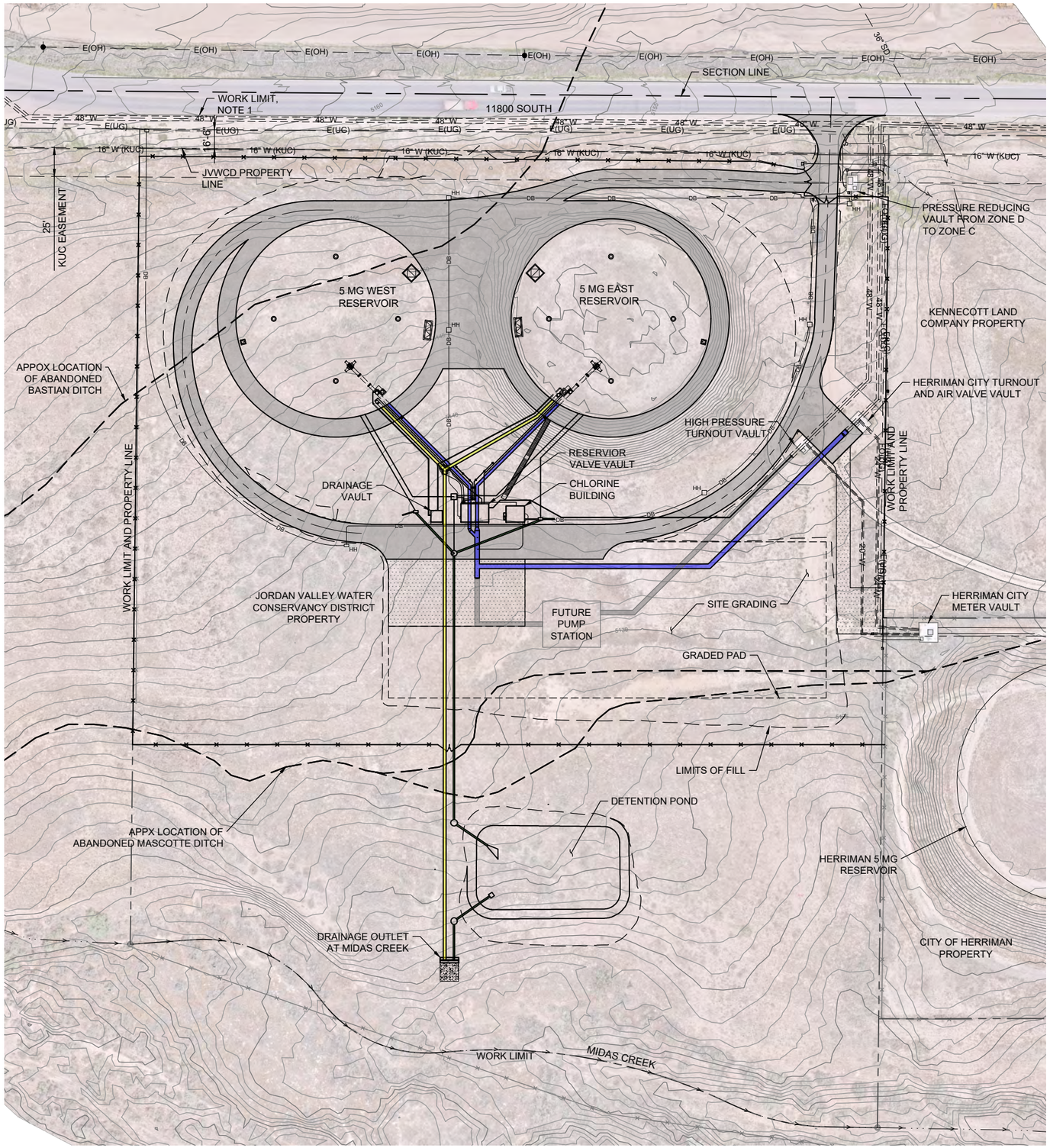
GENERAL

GENERAL NOTES AND DRAWING LIST

VERIFY SCALE

BAR IS ONE INCH ON ORIGINAL DRAWING.
0 1"

| | |
|---|---|
| DATE | JULY 2024 |
| PROJ | W7Y49600 |
| DWG | G-02 |
| SHEET | 2 of 79 |




LEGEND:

- INLET / OUTLET PIPELINE
- RESERVOIR OVERFLOW / DRAIN PIPING
- LEAK DETECTION AND SITE DRAINAGE

NOTES:

1. JVWCD HAS DEEDED THE NORTH 16.5' OF THE PROPERTY TO SALT LAKE CITY AS A SETBACK. CONTRACTOR MUST OBTAIN PROPER PERMITTING FOR USE OF THIS SPACE.

N

0 50 100 150

1"=50'

LICENSED PROFESSIONAL ENGINEER
No. 8760818-2202
RYAN WILLEITNER
STATE OF UTAH

DIGITALLY SIGNED: 07/18/2024



| NO. | DATE | DR | REVISION | CHK | APVD | BY | APVD |
|---|---|---|---|---|---|---|---|
| DSGN | R WILLEITNER | C HOGGARD | | B PHELPS | | R WILLEITNER | |

JORDAN VALLEY WATER CONSERVANCY DISTRICT

11800 SOUTH ZONE C RESERVOIRS



Jacobs

GENERAL

OVERALL SITE MAP
FINAL CONDITIONS

100% CONFORMED

VERIFY SCALE

BAR IS ONE INCH ON ORIGINAL DRAWING.
0 1"

| | |
|---|---|
| DATE | JULY 2024 |
| PROJ | W7Y49600 |
| DWG | G-03 |
| SHEET | 3 of 79 |

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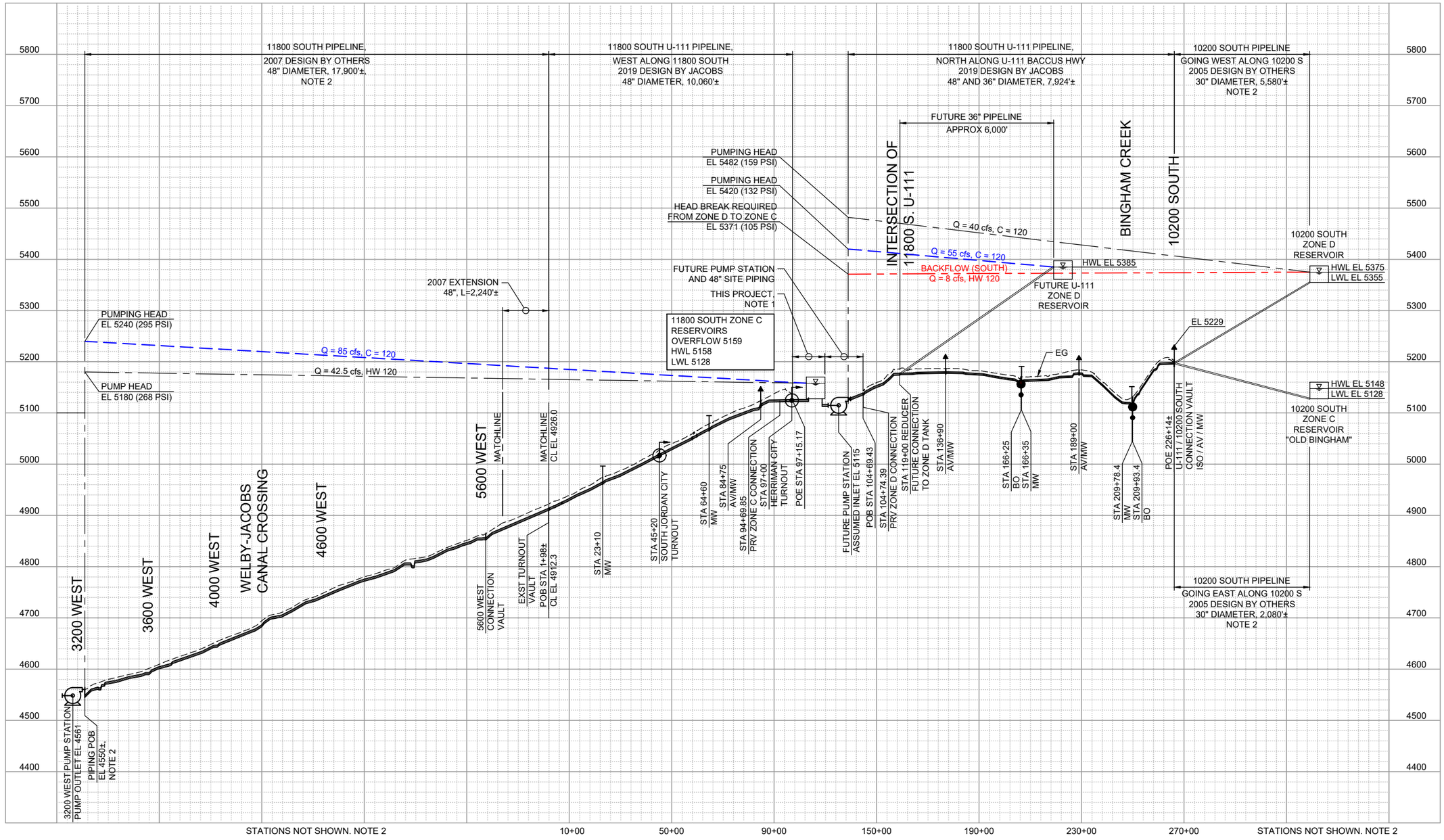
FILENAME: 118R-G-003_W7Y49600.dwg PLOT DATE: $PLOTDATE PLOT TIME: $PLOTTIME




SCALE: 1" = 2000' HORZ
1" = 100' VERT

NOTES:

1. PRESSURE TEST ZONE C PIPING TO 100 PSI, AND ZONE D PIPING TO 200 PSI. STATIC HYDRAULIC TEST RESERVOIRS AT 6" BELOW TOP OF OVERFLOW ELEVATION.
2. PROFILE IS APPROXIMATE AND IS BASED ON CURRENT PROJECT SURVEY DATUMS AND DISTRICT GIS DATA. THE 2007 PIPELINE WAS SHIFTED UP TO 3 FEET TO MATCH CURRENT DATUMS. HYDRAULIC CALCULATIONS ASSUMES THERE IS NO FLOW FROM PUMPING OR DEMANDS ALONG 10200 SOUTH. APPROXIMATE LENGTHS OF PIPELINES ARE PROVIDED AT THE TOP OF THE PROFILE.

## LEGEND

- EXISTING GROUND
- NON-TYPICAL OPERATING HGL
- MAXIMUM OPERATING HGL
- OPERATING HGL AT FLOWRATE SHOWN
- FINISHED WATER TANK
- PUMP STATION
- TURNOUT
- AIR VALVE
- BLOW OFF
- MANWAY

LICENSED PROFESSIONAL ENGINEER
No. 8760818-2202
RYAN WILLEITNER
STATE OF UTAH
DIGITALLY SIGNED: 07/18/2024

| NO. | DATE | DR | REVISION | CHK | APVD | BY | APVD |
|---|---|---|---|---|---|---|---|
| DSGN | R WILLEITNER | C HOGGARD | | B PHELPS | | R WILLEITNER | |



JORDAN VALLEY WATER CONSERVANCY DISTRICT

11800 SOUTH ZONE C RESERVOIRS

Jacobs

GENERAL

SYSTEM HYDRAULICS AND TESTING HGL REQUIREMENT

100% CONFORMED

VERIFY SCALE

BAR IS ONE INCH ON ORIGINAL DRAWING. 0 1"

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|---|---|
| DATE | JULY 2024 |
| PROJ | W7Y49600 |
| DWG | G-04 |
| SHEET | 4 of 79 |

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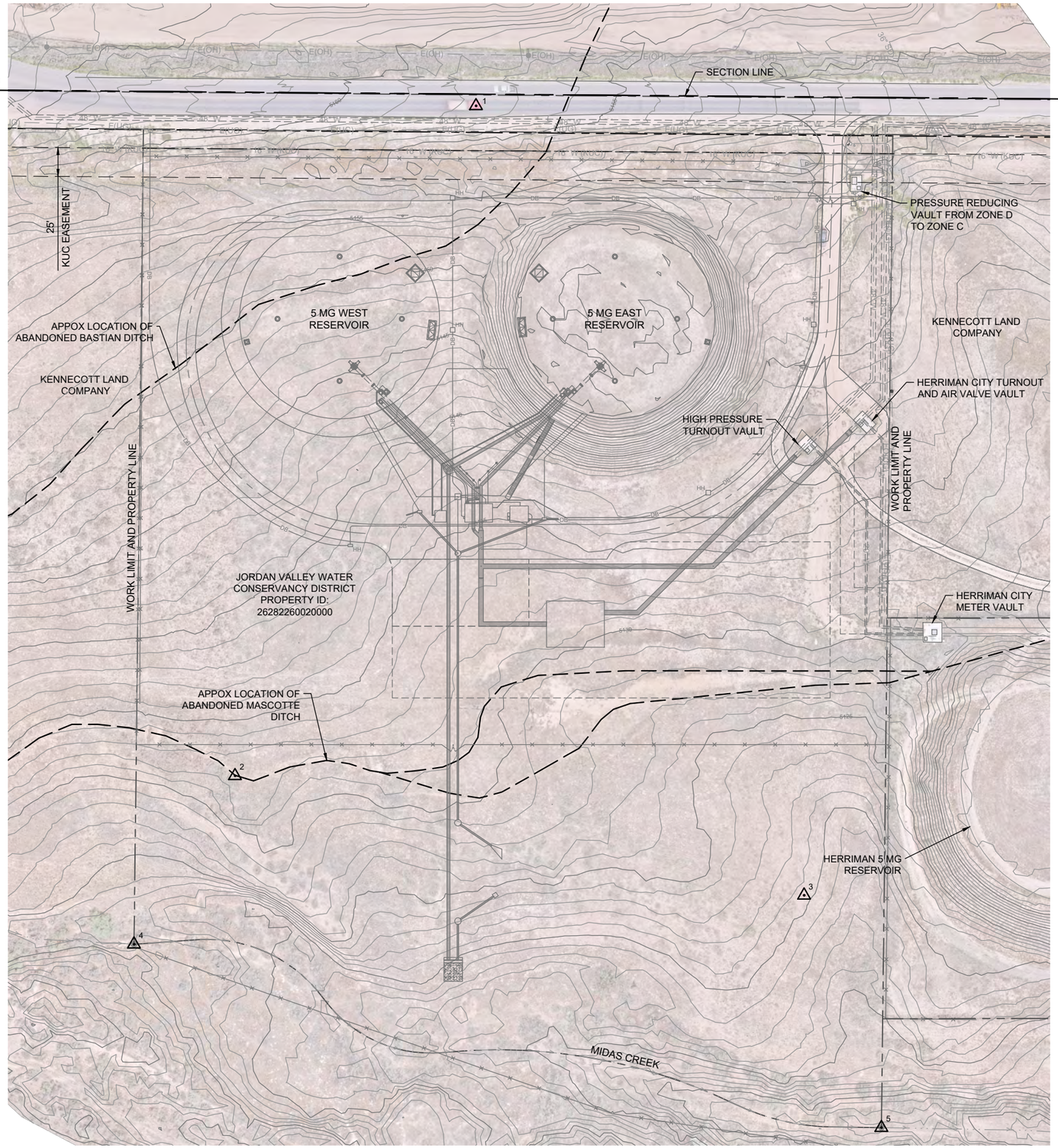


N

0 50 100 150

1"=50'

## SURVEYORS CERTIFICATE

*I, MATTHEW ABRAM MURDOCK, A LICENSED PROFESSIONAL LAND SURVEYOR IN THE STATE OF UTAH, DO HEREBY CERTIFY THAT THIS CONTROL DIAGRAM HAS BEEN CORRECTLY DRAWN TO THE DESIGNATED SCALE AND IS A TRUE AND CORRECT REPRESENTATION HEREIN BASED ON DATA COMPILED FROM THE RECORDS IN THE SALT LAKE COUNTY RECORDERS OFFICE. AND A SURVEY PERFORMED BY ME OR UNDER MY DIRECTION.*

PROFESSIONAL LAND SURVEYOR
NO. 6541909
MATTHEW ABRAM MURDOCK
07/19/2024
STATE OF UTAH

## CONTROL NOTES

THE LATITUDE AND LONGITUDES FOR THIS PROJECT ARE BASED ON NAD 83 STATE PLANE UTAH CENTRAL ZONE. FOUND SECTION CORNERS WERE USED AS PUBLISHED BY THE SALT LAKE COUNTY SURVEYORS OFFICE (ELEVATIONS IN METERS WERE THEN CONVERTED TO U.S. SURVEY FEET FOR THE PROJECT. 1 METER = 3.280833333 U.S. SURVEY FEET).

THE DATUM ELEVATION FOR THIS PROJECT WAS DERIVED FROM THE NAVD 88 ELEVATIONS PUBLISHED BY SALT LAKE COUNTY SURVEYORS OFFICE.

THIS PROJECT IS ON A GRID SYSTEM NOT A GROUND SYSTEM TO MATCH THE DATUM USED BY JORDAN VALLEY WATER CONSERVANCY DISTRICT. THE PROPERTY AND RIGHT OF WAY LINE WORK WAS SCALED FROM GROUND TO GRID USING A COMBINED SCALE FACTOR OF 0.99973393250

## LEGEND

- RIGHT-OF-WAY AND PROPERTY LINE
- SECTION LINE
- EASEMENT LINE
- 137 FOUND P.L.S.S. CORNER AS NOTED
- FOUND STREET MONUMENT
- 301 CONTROL POINT
- 201 AERIAL TARGET LOCATION SET BY WASATCH CIVIL ENGINEERING

## CONTROL TABLE

| CONTROL POINT | PROJECT COORDINATES | | GEODETIC COORDINATES | | ELEVATION | DESCRIPTION |
|---|---|---|---|---|---|---|
| | NORTHING | EASTING | LATITUDE | LONGITUDE | | |
| 1 | 7364818.595 | 1482795.655 | N40°32'12.98" | W112°04'01.52" | 5157.868 | GCP1 |
| 2 | 7364239.406 | 1482587.397 | N40°32'07.24" | W112°04'04.17" | 5131.931 | GCP2 |
| 3 | 7364136.194 | 1483079.206 | N40°32'06.25" | W112°03'57.79" | 5120.342 | GCP3 |
| 4 | 7364093.837 | 1482500.089 | N40°32'05.80" | W112°04'05.29" | 5122.891 | REBAR AND CAP |
| 5 | 7363935.375 | 1483146.106 | N40°32'04.27" | W112°03'56.91" | 5106.435 | REBAR AND CAP |
| 139 | 7364818.304 | 1484037.576 | N40°32'13.05" | W112°03'45.43" | 5125.59 | SE COR21 |
| 223 | 7364840.568 | 1481392.452 | N41° 03' 42.86" | N040° 32' 13.11" | 5170.35 | SQTR COR21-GPS |
| | | | | | | |
| | | | | | | |
| | | | | | | |

| NO. | DATE | DR | CHK | APVD | BY | REVISION |
|---|---|---|---|---|---|---|
| DSGN | T GOOD | T GOOD | R WILLEITNER | APVD | M MURDOCK | |



JORDAN VALLEY WATER CONSERVANCY DISTRICT

11800 SOUTH ZONE C RESERVOIRS

Jacobs

GENERAL

SURVEY CONTROL

100% CONFORMED

VERIFY SCALE

BAR IS ONE INCH ON ORIGINAL DRAWING. 0 1"

| | |
|---|---|
| DATE | JULY 2024 |
| PROJ | W7Y49600 |
| DWG | G-05 |
| SHEET | 5 of 79 |

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FILENAME: 118R-G-005_W7Y49600.dwg PLOT DATE: $PLOTDATE PLOT TIME: $PLOTTIME

# ABBREVIATIONS

| | |
|---|---|
| @ | AT |
| A | AREA |
| AB | ANCHOR BOLT |
| AC | ASPHALT CONCRETE |
| ACI | AMERICAN CONCRETE INSTITUTE |
| ADDL | ADDITIONAL |
| ADJ | ADJACENT OR ADJUSTABLE |
| AFF | ABOVE FINISH FLOOR |
| AFG | ABOVE FINISH GRADE |
| AGG | AGGREGATE |
| AH | AHEAD |
| AISC | AMERICAN INSTITUTE OF STEEL CONSTRUCTION |
| AL, ALUM | ALUMINUM |
| ALT | ALTERNATIVE, ALTERNATE |
| ANSI | AMERICAN NATIONAL STANDARDS INSTITUTE |
| APPROX | APPROXIMATE |
| APVD | APPROVED BY |
| ASME | AMERICAN SOCIETY OF MECHANICAL ENGINEERS |
| ASTM | AMERICAN SOCIETY FOR TESTING AND MATERIAL |
| AWG | AMERICAN WIRE GAGE |
| AWS | AMERICAN WELDING SOCIETY |
| AWWA | AMERICAN WATER WORKS ASSOCIATION |
| AV | AIR VALVE |
| AVE | AVENUE |
| AVG | AVERAGE |
| B | BELL, BOTTOM |
| BFV | BUTTERFLY VALVE |
| BH | BOREHOLE |
| BLD | BLIND |
| BK | BACK |
| BMP | BEST MANAGEMENT PRACTICE |
| BO | BLOW OFF ASSEMBLY |
| BOC | BACK OF CURB |
| BOT | BOTTOM |
| BPV | BOILER AND PRESSURE VESSEL |
| BV | BALL VALVE |
| BYP | BYPASS |
| C | CELSIUS, CHANNEL, COMBINED |
| C, CL | CENTERLINE |
| CHK | CHECKED BY |
| CIR | CIRCLE |
| CJ | CONSTRUCTION JOINT OR CONTROL JOINT |
| CJP | COMPLETE JOINT PENETRATION |
| CLR | CLEAR, CLEARANCE |
| CLSM | CONTROLLED LOW STRENGTH MATERIAL |
| COMB | COMBINED |
| CONC | CONCRETE |
| CONN | CONNECTION |
| CONSTR | CONSTRUCTION |
| CONT | CONTINUOUS OR CONTINUATION |
| COORD | COORDINATE |
| COR | CORNER |
| CP | CATHODIC PROTECTION, CONTROL POINT |
| CPLG | COUPLING |
| CRSI | CONCRETE REINFORCING STEEL INSTITUTE |
| CT | CATHODIC TEST |
| CTF | CUT TO FIT |
| CTR, CTRD | CENTER, CENTERED |
| CTV | CABLE TELEVISION |
| CU | CUBIC |
| CU FT | CUBIC FOOT |
| CU YD, CY | CUBIC YARD |
| CYL | CYLINDER |
| DEG | DEGREE |
| DET | DETAIL |
| DIA | DIAMETER |
| DIAG | DIAGONAL |
| DIP | DUCTILE IRON PIPE |
| DIST | DISTANCE |
| DIV | DIVISION |
| DN | DOWN, DECANT |
| DR | DOOR, DRAIN, DRIVE, DRAWN BY |
| DSGN | DESIGNED BY |
| DWG | DRAWING |
| E | EAST, ELECTRIC UTILITY, EASTING |
| EA | EACH |
| ECC | ECCENTRIC |
| EF | EACH FACE OR EXHAUST FAN |
| EG | EXISTING GRADE |
| EL | ELEVATION |
| ELB | ELBOW |
| ELEC | ELECTRIC OR ELECTRICAL |
| ENGR | ENGINEER |
| EOA | EDGE OF ASPHALT |
| EQ | EQUAL |
| EQN | EQUATION |
| EQUIV | EQUIVALENT |
| EW | EACH WAY |
| EXIST, EXST | EXISTING |
| EXP | EXPOSED, EXPANSION |
| EXP JT | EXPANSION JOINT |
| EXT | EXTERIOR OR EXTENSION |
| F | FAHRENHEIT, FLANGE |
| FDN | FOUNDATION |
| FG | FINISH GRADE |
| FIG | FIGURE |
| FLG | FLANGE |
| FO | FIBER OPTIC |
| FOC | FACE OF CONCRETE, FACE OF CURB |
| FOW | FACE OF WALL |
| FT | FEET OR FOOT |
| FWD | FORWARD |
| G | GAS |
| GA | GAGE OR GAUGE |
| GAL | GALLON |
| GALV | GALVANIZED |
| GC | GROOVED COUPLING |
| GE | GROOVED END |
| GPM | GALLONS PER MINUTE |
| GRD | GRADE OR GROUND |
| H | HEIGHT, HORIZONTAL |
| HDPE | HIGH DENSITY POLYETHYLENE |
| HGL | HYDRAULIC GRADE LINE |
| HORIZ, HORZ | HORIZONTAL |
| HP | HORSEPOWER |
| HPG | HIGH PRESSURE GAS |
| HV | HOSE VALVE |
| HVAC | HEATING, VENTILATING AND AIR CONDITIONING |
| HWY | HIGHWAY |
| HYD | HYDRANT |
| IBC | INTERNATIONAL BUILDING CODE |
| ID | INSIDE DIAMETER |
| IE | INVERT ELEVATION |
| I.F. | INSIDE FACE |
| IN | INCH |
| IRR | IRRIGATION |
| INV | INVERT |
| JVWCD | JORDAN VALLEY WATER CONSERVANCY DISTRICT |
| KUC | KENNECOTT UTAH COPPER |
| L | LITER, LENGTH OR ANGLE |
| LB, LBS | POUND(S) |
| LF | LINEAR FEET |
| LG | LONG |
| LN | LANE |
| LONGIT | LONGITUDINAL |
| MAG | ELECTROMAGNETIC |
| MAN | MANUAL |
| MAT'L | MATERIAL |
| MAX | MAXIMUM |
| MCC | MOTOR CONTROL CENTER |
| MECH | MECHANICAL |
| MFR | MANUFACTURER |
| MG | MILLION GALLONS |
| MGD | MILLION GALLONS PER DAY |
| MH | MANHOLE |
| MILS | 1/1,000 INCH |
| MIN | MINIMUM OR MINUTE |
| MJ | MECHANICAL JOINT |
| MK | MARK |
| MOD | MODEL OR MODIFY |
| MON | MONUMENT |
| MSP | MANUAL OF STANDARD PRACTICE |
| MW | MANWAY |
| N | NORTH, NORTHING |
| N/A | NOT APPLICABLE |
| NAD | NORTH AMERICAN DATUM |
| NAVD | NORTH AMERICAN VERTICAL DATUM |
| NBS | NATIONAL BUREAU OF STANDARDS |
| NC | NORMALLY CLOSED |
| NEC | NATIONAL ELECTRICAL CODE |
| NEMA | NATIONAL ELECTRICAL MANUFACTURERS ASSOCIATION |
| NIC | NOT IN CONTRACT |
| NO | NORMALLY OPEN OR NUMBER |
| NPS | NOMINAL PIPE SIZE |
| NPT | NATIONAL PIPE THREAD |
| NTS | NOT TO SCALE |
| NW | NORTHWEST |
| OC | ON CENTER |
| OD | OUTSIDE DIAMETER OR OVERFLOW DRAIN |
| OH | OVERHEAD |
| OPNG | OPENING |
| OSHA | OCCUPATIONAL SAFETY AND HEALTH ADMINISTRATION |
| PC | POINT OF CURVE, PORTLAND CEMENT, PIECE |
| PCF | POUNDS PER CUBIC FOOT |
| PE | PERPETUAL EASEMENT, PLAIN END |
| PH | POTHOLE |
| PI | POINT OF INTERSECTION, PRESSURE IRRIGATION |
| PL | PLATE OR PROPERTY LINE |
| PLCS | PLACES |
| PLS | PROFESSIONAL LAND SURVEYOR |
| PLSS | PUBLIC LAND SURVEY SYSTEM |
| POB | POINT OF BEGINNING |
| POE | POINT OF END |
| PP | POWER POLE |
| PREFAB | PREFABRICATED |
| PROP. | PROPERTY |
| PRV | PRESSURE REGULATING VALVE |
| PSF | POUNDS PER SQUARE FOOT |
| PSI | POUNDS PER SQUARE INCH |
| PVC | POLYVINYL CHLORIDE |
| QTY | QUANTITY |
| R, RAD | RADIUS |
| R/W, ROW, RW | RIGHT-OF-WAY |
| RCP | REINFORCED CONCRETE PIPE |
| RD | ROAD, ROOF DRAIN OR ROUND |
| RDCR | REDUCER |
| REF | REFER OR REFERENCE |
| REINF | REINFORCE OR REINFORCING |
| REQD | REQUIRED |
| RES | RESERVOIR |
| REV | REVISION |
| RJ | RESTRAINED JOINT |
| RR | RAILROAD |
| RS | RESILIENT SEATED |
| RT | RIGHT |
| S | SOUTH, SLOPE |
| SCH | SCHEDULE |
| SD | STANDARD DETAIL, STORM DRAIN |
| SHT | SHEET |
| SIM | SIMILAR |
| SJC | SOUTH JORDAN CITY |
| SP, SPG | SPACING |
| SPEC | SPECIFICATION |
| SQ | SQUARE |
| SQ FT | SQUARE FOOT |
| SS | SANITARY SEWER |
| SST | STAINLESS OR STAINLESS STEEL |
| ST | STREET |
| STA | STATION |
| STD | STANDARD |
| STL | STEEL |
| SW | SOUTHWEST |
| T | TOP |
| t | THICKNESS |
| T&B | TOP AND BOTTOM |
| TARG, TRG | TARGET |
| TBC | TOP BACK OF CURB |
| TCJ | TEMPERATURE CONTROL JOINT |
| TEL , T | TELEPHONE |
| TEMP | TEMPERATURE |
| TF | TOP FACE |
| THK | THICK OR THICKNESS |
| THRD | THREAD |
| TV | TELEVISION |
| TYP | TYPICAL |
| UDOT | UTAH DEPARTMENT OF TRANSPORTATION |
| UG | UNDERGROUND |
| UNK | UNKNOWN |
| UNO | UNLESS NOTED OTHERWISE |
| US | UNITED STATES |
| UT | ULTRASONIC TESTING |
| UTA | UTAH TRANSIT AUTHORITY |
| V, VERT | VERTICAL |
| VC | VERTICAL CURVE |
| VPI | VERTICAL POINT OF INTERSECTION |
| W | WATER, WEST OR WIDTH |
| W/ | WITH |
| W/O | WITHOUT |
| WS | WATER SURFACE, WATER STOP |
| WSE | WATER SURFACE ELEVATION |
| WSP | WELDED STEEL PIPE |
| WT | WEIGHT |
| WY | WAY |
| XS | EXTRA STRONG |
| XXS | DOUBLE EXTRA STRONG |
| YD | YARD |


LICENSED PROFESSIONAL ENGINEER
No. 8760818-2202
RYAN WILLEITNER
STATE OF UTAH
DIGITALLY SIGNED: 07/18/2024


| NO. | DATE | REVISION | DR | CHK | APVD |
|---|---|---|---|---|---|
| DSGN | R WILLEITNER | C HOGGARD | B PHELPS | R WILLEITNER | |



JORDAN VALLEY WATER CONSERVANCY DISTRICT

11800 SOUTH ZONE C RESERVOIRS

Jacobs

GENERAL

ABBREVIATIONS

VERIFY SCALE

BAR IS ONE INCH ON ORIGINAL DRAWING.
0 1"

| | |
|---|---|
| DATE | JULY 2024 |
| PROJ | W7Y49600 |
| DWG | G-06 |
| SHEET | 6 of 79 |

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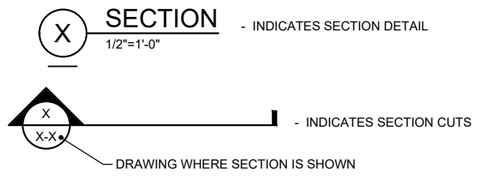
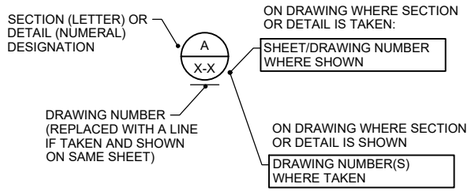
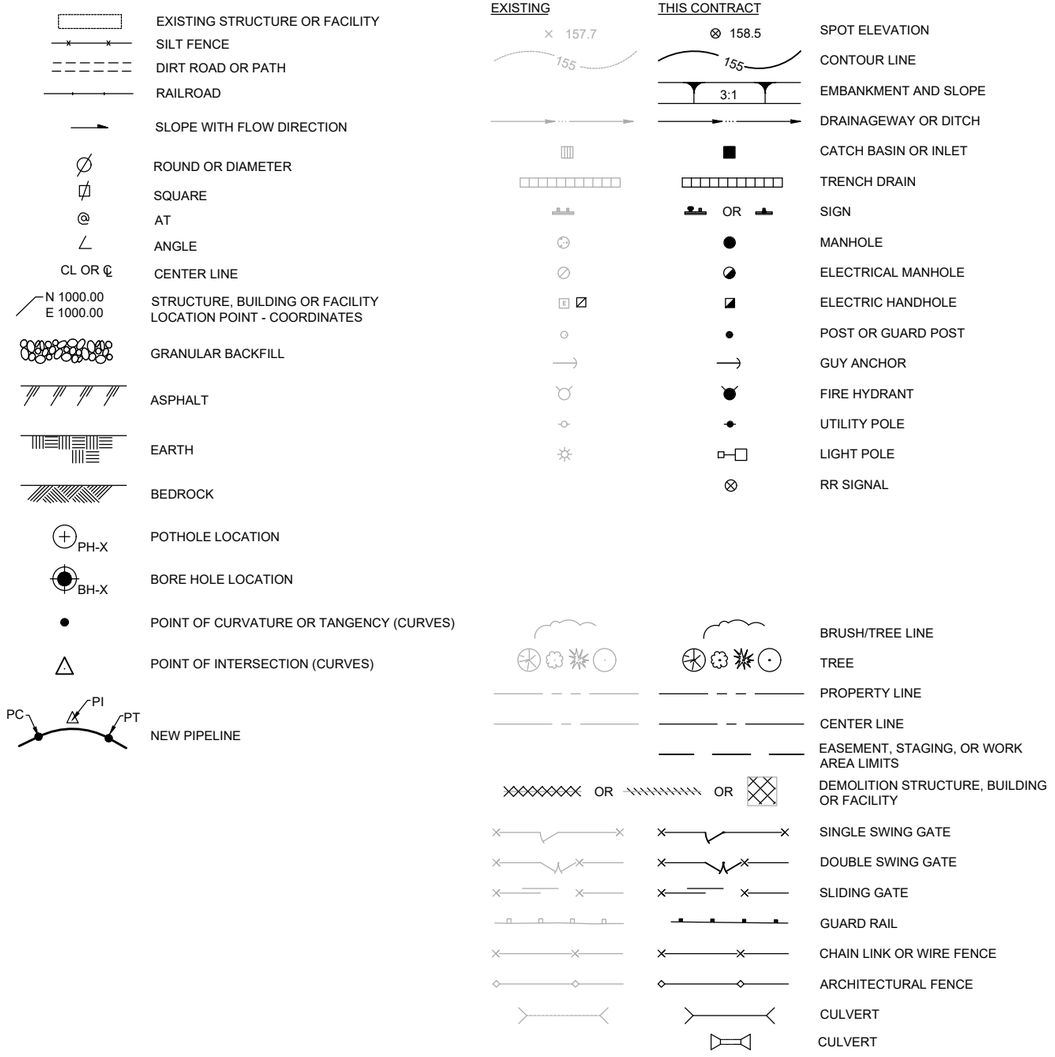
# STANDARD SYMBOLS




## DESIGN DETAIL DESIGNATION



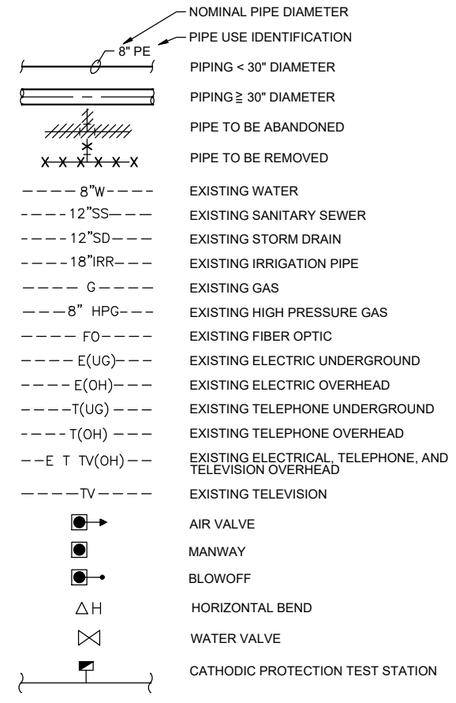

# CIVIL LEGEND




NOTES:

1. IN GENERAL ELEMENTS SHOWN WITH GREY TONE OR DASHED LINES, REPRESENT EXISTING FACILITIES OR FEATURES.
2. SCREENED BACKGROUNDS ON DRAWINGS CAN REPRESENT FACILITIES TO BE CONSTRUCTED UNDER THIS CONTRACT WHICH, IF DRAWN IN SOLID LINES WOULD OBSCURE THE PARTICULAR DETAILS BEING SHOWN. CONSULT THE ENGINEER FOR SCREENING THAT IS NOT SELF EXPLANATORY.

# PIPING LEGEND AND SYMBOLS




NOTE:

IN GENERAL ELEMENTS SHOWN WITH GREY TONE OR DASHED LINES, REPRESENT EXISTING FACILITIES OR FEATURES.


LICENSED PROFESSIONAL ENGINEER
No. 8760818-2202
RYAN WILLEITNER
STATE OF UTAH
DIGITALLY SIGNED: 07/18/2024


| NO. | DATE | DSGN | DR | CHK | APVD | REVISION | BY | APVD |
|---|---|---|---|---|---|---|---|---|
| | R WILLEITNER | R WILLEITNER | C HOGGARD | B PHELPS | APVD | | R WILLEITNER | |



JORDAN VALLEY WATER CONSERVANCY DISTRICT

11800 SOUTH ZONE C RESERVOIRS

Jacobs

GENERAL

STANDARD SYMBOLS AND CIVIL LEGEND

VERIFY SCALE

BAR IS ONE INCH ON ORIGINAL DRAWING.
0 1"

| | |
|---|---|
| DATE | JULY 2024 |
| PROJ | W7Y49600 |
| DWG | G-07 |
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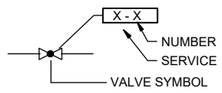
# MECHANICAL LEGEND AND NOTES

## GENERAL PIPING NOTES

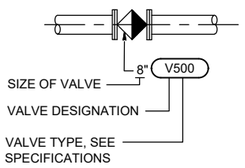
1. LAY PIPE TO UNIFORM GRADE BETWEEN INDICATED ELEVATION POINTS.
2. SIZE OF FITTINGS SHOWN ON DRAWINGS SHALL CORRESPOND TO ADJACENT STRAIGHT RUN OF PIPE, UNLESS OTHERWISE INDICATED. TYPE OF JOINT AND FITTING MATERIAL SHALL BE THE SAME AS SHOWN FOR ADJACENT STRAIGHT RUN OF PIPE.
3. LOCATION AND NUMBER OF PIPE HANGERS AND PIPE SUPPORTS SHOWN IS ONLY APPROXIMATE. CONTRACTOR SHALL DESIGN SUPPORTS AS SPECIFIED.
4. ALL JOINTS SHALL BE WATERTIGHT. WALL PIPES SHALL BE USED WHEREVER PIPING PASSES FROM A STRUCTURE TO BACKFILL, UNLESS OTHERWISE NOTED.
5. ALL FLEXIBLE CONNECTORS AND COUPLING ADAPTERS SHALL BE PROVIDED WITH THRUST TIES AND ANCHORS, UNLESS OTHERWISE NOTED. THRUST PROTECTION SHALL BE ADEQUATE FOR TEST PRESSURES SPECIFIED.
6. SYMBOLS, LEGENDS, AND PIPE USE IDENTIFICATIONS SHOWN SHALL BE FOLLOWED THROUGHOUT THE DRAWINGS, WHEREVER APPLICABLE. NOT ALL OF THE VARIOUS PIPING COMPONENTS ARE NECESSARILY USED IN THE PROJECT.
7. NUMBER AND LOCATION OF UNIONS SHOWN ON DRAWINGS IS ONLY APPROXIMATE. PROVIDE ADDITIONAL UNIONS NECESSARY TO FACILITATE CONVENIENT REMOVAL OF VALVES AND MECHANICAL EQUIPMENT.
8. WHERE A GROOVED END COUPLING IS SHOWN, IT SHALL BE THE RIGID JOINT TYPE, UNLESS OTHERWISE SPECIFIED. WHERE A FLANGED COUPLING ADAPTER IS SHOWN, A STANDARD FLANGE SHALL BE JOINED TO THE COUPLING ADAPTER. WAX TAPE COAT ALL BURIED FITTINGS, FLANGES, VALVES, ECT. PER SPECIFICATIONS.

# VALVE DESIGNATIONS

## CONTROL VALVES



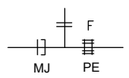

## MANUAL VALVES AND CHECK VALVES




## PIPE FITTING AND PATTERNS

| | | | |
|---|---|---|---|
| B | BELL | PE | PLAIN END |
| S | SPIGOT | GE | GROOVED END |
| F | FLANGE | MJ | MECHANICAL JOINT |

EXAMPLE:




# PIPE AND FITTING SYMBOLS

| DOUBLE LINE | SINGLE LINE | |
|---|---|---|
| | | EXISTING PIPE (SCREENED) |
| | | NEW PIPE |
| | | EXISTING PIPE TO BE ABANDONED |
| | | EXISTING PIPE TO BE REMOVED |
| | | WELDED JOINT |
| | | GROOVED END JOINT |
| | | FLANGED JOINT |
| | | MECHANICAL JOINT |
| | | BELL & SPIGOT JOINT (LEADED) |
| | | HUB & SPIGOT JOINT (RUBBER GASKET) |
| | | BALL JOINT |
| | | ADAPTER SIDE GROOVED END ADAPTER FLANGE |
| | | RESTRAINED DISMANTLING JOINT |
| | | FLEXIBLE COUPLING |
| | | METAL BELLOWS EXP JOINT |
| | | ELASTOMER BELLOWS EXP JOINT |
| | | ELBOW UP |
| | | ELBOW DOWN |
| | | TEE UP |
| | | TEE DOWN |
| | | LATERAL UP |
| | | LATERAL DOWN |
| | | CONCENTRIC REDUCER |
| | | ECCENTRIC REDUCER |

| DOUBLE LINE | SINGLE LINE | |
|---|---|---|
| | | REDUCING BUSHING |
| | | UNION |
| | | CAP |
| | | ANCHOR |
| | | ELBOW, 90 DEGREE |
| | | CROSS |
| | | TEE |
| | | ELBOW, 45 DEGREE |
| | | LATERAL |

NOTES:

1. ONLY FLANGED END CONNECTIONS ARE SHOWN HERE FOR DOUBLE LINE FITTINGS. FITTINGS WITH OTHER END PATTERNS ARE SHOWN SIMILARLY ON THE CONSTRUCTION DRAWINGS. ALSO SEE PIPING SPECIFICATIONS.
2. SYMBOLS SHOWN HERE FOR SINGLE LINE FITTINGS ARE GENERIC ONLY. REFER TO PIPING SPECIFICATIONS FOR SPECIFIC END CONNECTIONS FOR SINGLE LINE PIPE AND FITTINGS.
3. EXISTING PIPE AND EQUIPMENT IS SHOWN DASHED AND/OR SCREENED AND IS NOTED AS EXISTING. NEW PIPING AND EQUIPMENT IS SHOWN HEAVY-LINED.

# VALVE SYMBOLS

| SINGLE LINE | DOUBLE LINE |
|---|---|
| GATE | |
| KNIFE GATE | OR |
| BUTTERFLY | OR |
| GLOBE | OR |
| BALL | OR |
| VEE-BALL | OR |
| SEATING PORT | |
| ECCENTRIC PLUG | OR |
| PLUG OR COCK | OR |
| NEEDLE | OR |
| DIAPHRAGM | OR |
| PINCH | OR |
| SWING CHECK | OR |
| BALL CHECK | OR |

HOSE VALVE (HV- X) OR (V-X)
X = NO. IN SPECS

SAMPLE

MUD

PRESSURE RELIEF

AIR AND/OR VACUUM RELEASE

REGULATED SIDE
PRESSURE CONTROL

REGULATED SIDE
PRESSURE REGULATOR

MULTI-PORT VALVE, ARROWS INDICATE FLOW PATTERN. SEATING PORTS ARE IMPLIED BY INDICATED FLOW PATTERN.

TELESCOPING

ROTARY

ANGLE GATE



| NO. | DATE | DSGN | DR | CHK | APVD |
|---|---|---|---|---|---|
| REVISION | | R WILLEITNER | C HOGGARD | B PHELPS | APVD |
| BY | | | | | R WILLEITNER |



JORDAN VALLEY WATER CONSERVANCY DISTRICT

11800 SOUTH ZONE C RESERVOIRS

Jacobs

GENERAL

MECHANICAL NOTES AND PIPING LEGEND

VERIFY SCALE

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0 1"

| | |
|---|---|
| DATE | JULY 2024 |
| PROJ | W7Y49600 |
| DWG | G-08 |
| SHEET | 8 of 79 |

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# DESIGN CRITERIA

1. APPLICABLE CODE: 2021 INTERNATIONAL BUILDING CODE (IBC), AS AMENDED BY THE STATE OF UTAH AND ALL OTHER APPLICABLE LOCAL AGENCIES.

2. REFER TO THE DRAWINGS FOR ADDITIONAL AND SPECIFIC STRUCTURE LOADINGS AND REQUIREMENTS.

3. ALL LOADS SHOWN ARE SERVICE LEVEL (UNFACTORED) UNLESS SPECIFICALLY NOTED OTHERWISE.

4. DEAD LOADS:
   A. SELF WEIGHT

5. ROOF LOADS:

| | |
|---|---|
| GROUND SNOW LOAD, Pg | = 46 PSF |
| SNOW EXPOSURE FACTOR, Ce | = 0.9 |
| THERMAL FACTOR, Ct | = 1.2 |
| SLOPE FACTOR, Cs | = 1.0 |
| IMPORTANCE FACTOR, I | = 1.2 |
| MINIMUM FLAT ROOF SNOW LOAD, Pf | = 42 PSF |
| LIVE LOAD | = 20 PSF |
| COLLATERAL DEAD LOAD (SOLAR READY) | = 10 PSF |

6. FLOOR LIVE LOADS:

| | |
|---|---|
| CORRIDORS, EXITS, STAIRS | = 100 PSF |
| WALKWAYS AND ELEVATED PLATFORMS | = 100 PSF |

7. WIND LOADS:

| | |
|---|---|
| ASCE 7 METHOD | = MWFRS DIRECTIONAL PROCEDURE |
| BASIC WIND SPEED (3-SECOND GUST) | = 110 MPH |
| WIND SPEED, Vasd | = 85 MPH |
| EXPOSURE CATEGORY | = C |
| INTERNAL PRESSURE COEFFICIENT, GCpi | = +/- 0.18 |
| RISK CATEGORY | = III |
| IMPORTANCE FACTOR, Iw | = 1.0 |

8. SEISMIC LOADS:

| | |
|---|---|
| MAPPED SPECTRAL RESPONSE ACCELERATIONS | |
| $S_S$ | = 1.02g |
| $S_1$ | = 0.33g |
| DESIGN SPECTRAL RESPONSE ACCELERATIONS | |
| $S_{DS}$ | = 0.80g |
| $S_{D1}$ | = 0.54g |
| SITE CLASS | = D |
| RISK CATEGORY | = III |
| SEISMIC DESIGN CATEGORY | = D |
| IMPORTANCE FACTOR, Ie | = 1.25 |

   STRUCTURES HAVE BEEN ANALYZED USING THE EQUIVALENT LATERAL FORCE PROCEDURES OF ASCE 7.

9. LATERAL FORCE-RESISTING SYSTEMS: SEE FACILITY DRAWINGS.

10. SPECIAL LOADS: SEE PLANS FOR STRUCTURE SPECIFIC LOADS

11. HYDRAULIC LOADS: SEE PLANS FOR STRUCTURE SPECIFIC LOADS

12. SOIL DESIGN PARAMETERS:

| | | GRANULAR FILL | NATIVE FILL |
|---|---|---|---|
| A. | NET ALLOWABLE SOIL BEARING PRESSURES: | | |
| | RESERVOIRS: | 6000 PSF | |
| | ALL OTHERS: | 2000 PSF | |
| B. | GROUND WATER (GW) ELEVATION: | NONE ENCOUNTERED | |
| C. | EQUIVALENT DRAINED FLUID PRESSURES (ABOVE GW): | | |
| | ACTIVE: | 35 PCF | 50 PCF |
| | AT REST: | 55 PCF | 60 PCF |
| | PASSIVE: | 480 PCF | 300 PCF |
| D. | EQUIVALENT UNDRAINED FLUID PRESSURES (GRANULAR FILL BELOW GW): | | |
| | ACTIVE: | 80 PCF | |
| | AT REST: | 90 PCF | |
| | PASSIVE: | 310 PCF | |
| | WHERE H IS HEIGHT OF SOIL ADJACENT TO THE WALL | | |
| E. | VERTICAL SURCHARGE: | 2 FT OF SOIL WEIGHT | |
| F. | COEFFICIENT OF FRICTION: | 0.45 | |
| G. | MODULUS OF SUBGRADE REACTION | 400 PSI/IN | |
| H. | NATIVE SOIL UNIT WEIGHT | 120 PCF | |

13. FROST DEPTH: 30 IN

# GENERAL INFORMATION

1. FOR ABBREVIATIONS NOT LISTED, SEE ASME Y14.38 "ABBREVIATIONS AND ACRONYMS: PUBLICATION AS DISTRIBUTED BY THE AMERICAN SOCIETY OF MECHANICAL ENGINEERS (ASME).

2. DESIGN DETAILS ARE INTENDED TO BE TYPICAL AND SHALL APPLY TO SIMILAR SITUATIONS OCCURRING THROUGHOUT THE PROJECT, WHETHER OR NOT THEY ARE INDIVIDUALLY CALLED OUT.

3. VERIFY FINAL OPENING DIMENSIONS IN WALLS, SLABS, AND DECKS WITH OTHER DISCIPLINE DRAWINGS PRIOR TO CONSTRUCTION OF THESE ELEMENTS.

4. FOR NUMBER, TYPE, SIZE, ARRANGEMENT, AND/OR LOCATION OF EQUIPMENT PADS, SEE OTHER DISCIPLINE DRAWINGS. COORDINATE WITH EQUIPMENT SUPPLIER PRIOR TO PLACING SLABS, WALLS AND FOUNDATIONS. COORDINATE PIPING OPENINGS WITH OTHER DISCIPLINE DRAWINGS.

5. DO NOT CUT OR MODIFY STRUCTURAL MEMBERS FOR PIPES, DUCTS, ETC, UNLESS SPECIFICALLY DETAILED OR APPROVED IN WRITING BY THE ENGINEER.

6. VISITS TO THE JOB SITE BY THE ENGINEER TO OBSERVE THE CONSTRUCTION DO NOT IN ANY WAY MEAN THAT ENGINEER IS GUARANTOR OF CONSTRUCTOR'S WORK, NOR RESPONSIBLE FOR THE COMPREHENSIVE OR SPECIAL INSPECTIONS, COORDINATION, SUPERVISION, OR SAFETY AT THE JOB SITE.

# INSPECTION AND TESTING

1. SPECIAL INSPECTION DOES NOT INCLUDE OR WAIVE THE RESPONSIBILITY FOR INSPECTIONS REQUIRED BY THE BUILDING OFFICIAL. THE CONTRACTOR SHALL SCHEDULE BOTH INSPECTIONS.

2. SPECIFIED CONCRETE AND MASONRY AND OTHER MATERIAL TESTING RELATED TO SPECIAL INSPECTION DURING CONSTRUCTION WILL BE OWNER FURNISHED.

3. SPECIFIED LABORATORY TEST MIXES AND SIMILAR TEST RESULTS TO VERIFY MATERIAL QUALITY AND CONFORMANCE TO SPECIFICATIONS, AND SUBMITTED FOR REVIEW PRIOR TO ACCEPTANCE FOR USE ON THE PROJECT, SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR.

4. SPECIAL INSPECTION, TESTING AND OBSERVATION (OWNER FURNISHED) IS REQUIRED IN ACCORDANCE WITH IBC SECTIONS 110 AND 1704 AS INDICATED IN THE STATEMENT OF SPECIAL INSPECTIONS.

# FOUNDATIONS

1. FOR SOILS INFORMATION, REFER TO GEOTECHNICAL ENGINEERING REPORT BY TERRACON DATED NOVEMBER 8, 2023

2. EXCAVATIONS SHALL BE SHORED TO PREVENT SUBSIDENCE AND DAMAGE TO ADJACENT EXISTING STRUCTURES, ROADS, UTILITIES, ETC.

3. RESERVOIR FOUNDATION SLABS, SLABS-ON-GRADE AND WALL AND COLUMN FOUNDATIONS SHALL BEAR ON MATERIALS AS SHOWN ON THE DRAWINGS.

4. FOUNDATION BEARING SURFACES SHALL BE OBSERVED BY THE GEOTECHNICAL ENGINEER PRIOR TO PLACEMENT OF FORMWORK OR REINFORCING STEEL. THE OBSERVATION SHALL VERIFY IF THE ACTUAL EXPOSED SUBGRADE IS AS ANTICIPATED BY THE SITE SPECIFIC BORINGS, TESTING, AND DATA REPORTS.

5. NO BACKFILL SHALL BE PLACED BEHIND WALLS UNTIL THE WALL'S CONCRETE HAS ATTAINED 100 PERCENT AND TOP SUPPORTING SLAB'S CONCRETE HAS ATTAINED 80 PERCENT OF THEIR SPECIFIED 28 DAY COMPRESSIVE STRENGTH, OR UNTIL TOP-OF-WALL FRAMING SYSTEMS, INCLUDING STEEL OR WOOD DIAPHRAGMS, HAVE BEEN COMPLETED.

6. NO BACKFILL SHALL BE PLACED BEHIND CANTILEVERED, FREE TOP WALLS UNTIL THE CONCRETE HAS ATTAINED 100 PERCENT OF ITS SPECIFIED 28 DAY COMPRESSIVE STRENGTH.

7. USE OF EXPLOSIVES IS ONLY ALLOWED WITH WRITTEN PERMISSION FROM ENGINEER.

# FORMWORK, SHORING, AND BRACING

1. STRUCTURES SHOWN ON THE DRAWINGS HAVE BEEN DESIGNED FOR STABILITY UNDER FINAL CONDITIONS ONLY. DESIGN SHOWN DOES NOT INCLUDE NECESSARY COMPONENTS OR EQUIPMENT FOR STABILITY OF THE STRUCTURES DURING CONSTRUCTION. CONTRACTOR IS RESPONSIBLE FOR WORK RELATING TO CONSTRUCTION ERECTION METHODS, BRACING, SHORING, RIGGING, GUYS, SCAFFOLDING, FORMWORK, AND OTHER WORK AIDS REQUIRED TO SAFELY PERFORM THE WORK SHOWN.

2. TEMPORARY SHORING SHALL REMAIN IN PLACE UNTIL ELEVATED CONCRETE FLOOR OR SLABS HAVE REACHED 80 PERCENT OF THE 28 DAY COMPRESSIVE STRENGTH AS DETERMINED BY FIELD CYLINDER BREAKS.

3. "BURY" BARS OR "CARRIER" BARS ARE NOT ALLOWED FOR THE BOTTOM MATS OF REINFORCING IN ALL ELEVATED SLABS AND ARE NOT ALLOWED FOR THE TOP MATS OF REINFORCING IN ELEVATED SLABS LESS THAN 12 INCHES THICK.

# CONCRETE REINFORCING

1. REINFORCING STEEL:
   TYPICAL: ASTM A615, GRADE 60
   WELDED: ASTM A706, GRADE 60 (WELDING IS ONLY PERMITTED WITH WRITTEN PERMISSION FROM ENGINEER)

2. FABRICATION AND PLACEMENT OF REINFORCING STEEL SHALL BE IN ACCORDANCE WITH CRSI MSP-1 "MANUAL OF STANDARD PRACTICE" AND ACI 301 "SPECIFICATIONS FOR STRUCTURAL CONCRETE".

3. CONCRETE COVER FOR REINFORCING, UNLESS SHOWN OTHERWISE, SHALL BE:
   WHEN CAST AGAINST EARTH: 3"
   CONCRETE EXPOSED TO EARTH, LIQUID, WASHDOWN, OR WEATHER:
   WALLS AND SLABS 2"
   BEAM STIRRUPS AND COLUMN TIES 2"
   BEAM AND COLUMN PRIMARY REINFORCING 2 1/2"

4. REFER TO WALL CORNER AND WALL INTERSECTION REINFORCING DETAIL 0330-003. WALL CORNER REINFORCING SIZES AND SPACINGS SHALL BE AS SHOWN ON THE DRAWINGS AND REFERENCED TO THIS DETAIL. TYPICAL HORIZONTAL WALL REINFORCING SHALL LAP WITH THE CORNER HORIZONTAL REINFORCING.

5. 90 DEGREE BENDS, UNLESS OTHERWISE SHOWN, SHALL BE ACI 318 STANDARD HOOKS.

6. WALL CORNER AND WALL INTERSECTION REINFORCEMENT BARS SHALL BE CONTINUOUS AROUND CORNERS AND THROUGH COLUMNS OR PILASTERS. REINFORCEMENT SHALL BE EXTENDED INTO CONNECTING WALLS AND LAPPED ON THE OPPOSITE FACE OF THE CONNECTING WALLS, AS INDICATED IN DETAIL 0330-003.

7. WALL FOOTING CORNER AND INTERSECTION REINFORCEMENT BARS SHALL BE EXTENDED INTO CONNECTING FOOTINGS AND LAPPED ON THE OPPOSITE FACE OF THE CONNECTING FOOTING. OUTSIDE FACE WALL FOOTING REINFORCEMENT SHALL BE LAPPED WITH CORNER BARS. ALL WALL FOOTING REINFORCEMENT SHALL BE CONTINUOUS THROUGH COLUMNS OR PILASTERS FOOTINGS.

8. LAP VERTICAL WALL BARS WITH DOWELS FROM BASE SLABS AND EXTEND INTO TOP FACE OF ROOF SLABS AND LAP WITH TOP SLAB REINFORCEMENT. PROVIDE A MINIMUM OF FOUR FULL HEIGHT VERTICAL BARS WITH MATCHING DOWELS AT WALL ENDS, CORNERS AND INTERSECTIONS WITH SIZE TO MATCH TYPICAL VERTICAL REINFORCING STEEL SHOWN OR REQUIRED BY NOTES ABOVE.

9. LOCATE ELEVATED SLAB AND BEAM TOP BAR SPLICES AT MIDSPAN AND BOTTOM BAR SPLICES AT SUPPORTS.

10. REINFORCING STEEL FOR FOOTINGS AND SLABS ON GRADE SHALL BE ADEQUATELY SUPPORTED ON BAR SUPPORTS WITH SPACERS TO KEEP REINFORCING ABOVE THE PREPARED GRADE. LIFTING REINFORCING OFF GRADE DURING CONCRETE PLACEMENT IS NOT PERMITTED.

11. REFER TO OPENING REINFORCING DETAIL 0330-001.

12. REINFORCEMENT BENDS AND LAPS, UNLESS OTHERWISE NOTED, SHALL SATISFY THE FOLLOWING MINIMUM REQUIREMENTS:

CONCRETE DESIGN STRENGTH = 4,500 PSI MIN AT 28 DAYS[3] GRADE 60 REINFORCING STEEL

| BAR SIZE | | #3 | #4 | #5 | #6 | #7 | #8 | #9 | #10 | #11 |
|---|---|---|---|---|---|---|---|---|---|---|
| LAP SPLICE LENGTH | | | | | | | | | | |
| SPACING = 3" | TOP BAR [2] | 1'-4" | 1'-8" | 2'-1" | 3'-0" | 5'-2" | 6'-8" | 8'-6" | 10'-10" | 13'-4" |
| | OTHER BAR | 1'-4" | 1'-4" | 1'-8" | 2'-4" | 4'-0" | 5'-2" | 6'-7" | 8'-4" | 10'-3" |
| SPACING = 4" | TOP BAR [2] | 1'-4" | 1'-8" | 2'-0" | 2'-5" | 3'-10" | 5'-0" | 6'-5" | 8'-1" | 10'-0" |
| | OTHER BAR | 1'-4" | 1'-4" | 1'-7" | 1'-10" | 3'-0" | 3'-11" | 4'-11" | 6'-3" | 7'-8" |
| SPACING ≥ 6" | TOP BAR [2] | 1'-4" | 1'-8" | 2'-0" | 2'-5" | 3'-6" | 4'-0" | 5'-0" | 6'-2" | 7'-5" |
| | OTHER BAR | 1'-4" | 1'-4" | 1'-7" | 1'-10" | 2'-9" | 3'-1" | 3'-10" | 4'-9" | 5'-8" |
| EMBEDMENT LENGTH | | | | | | | | | | |
| SPACING = 3" | TOP BAR [2] | 1'-0" | 1'-3" | 1'-8" | 2'-4" | 4'-0" | 5'-2" | 6'-7" | 8'-4" | 10'-3" |
| | OTHER BAR | 1'-0" | 1'-0" | 1'-3" | 1'-10" | 3'-1" | 4'-0" | 5'-1" | 6'-5" | 7'-11" |
| SPACING = 4" | TOP BAR [2] | 1'-0" | 1'-3" | 1'-7" | 1'-10" | 3'-0" | 3'-11" | 4'-11" | 6'-3" | 7'-8" |
| | OTHER BAR | 1'-0" | 1'-0" | 1'-3" | 1'-5" | 2'-4" | 3'-0" | 3'-10" | 4'-10" | 5'-11" |
| SPACING ≥ 6" | TOP BAR [2] | 1'-0" | 1'-3" | 1'-7" | 1'-10" | 2'-9" | 3'-1" | 3'-10" | 4'-9" | 5'-8" |
| | OTHER BAR | 1'-0" | 1'-0" | 1'-3" | 1'-5" | 2'-1" | 2'-5" | 3'-0" | 3'-8" | 4'-5" |

1. LAP LENGTHS ARE BASED ON MINIMUM CONCRETE COVER OF 2". LONGER LENGTHS ARE REQUIRED FOR CONCRETE COVER LESS THAN 2".
2. TOP BARS SHALL BE DEFINED AS ANY HORIZONTAL BARS PLACED SUCH THAT MORE THAN 12 INCHES OF CONCRETE IS CAST IN THE MEMBER BELOW THE BAR IN ANY SINGLE POUR. HORIZONTAL WALL BARS ARE CONSIDERED TOP BARS.
3. WHERE 3000 PSI CONCRETE IS USED, INCREASE ABOVE LENGTHS BY 16 PERCENT. WHERE 3500 PSI CONCRETE IS USED, INCREASE ABOVE LENGTHS BY 7 PERCENT.

# CAST IN PLACE CONCRETE

1. 28-DAY COMPRESSIVE STRENGTHS (TO MEET STRUCTURAL STRENGTH REQUIREMENTS):

| | |
|---|---|
| HYDRAULIC STRUCTURES: | 4500 PSI |
| WALL SLURRY MIXTURE | SAME AS WALL CONCRETE |
| PRESTRESSED TANK CORE WALL: | 5500 PSI |
| CURBS AND SIDEWALKS: | 3500 PSI |
| DUCT BANKS AND PIPE ENCASEMENTS NOT INTEGRAL WITH FOUNDATIONS: | 3500 PSI |

2. DESIGN STRENGTHS ARE SAME AS 28-DAY COMPRESSIVE STRENGTHS.

3. CONTINUOUS WATERSTOP AS SPECIFIED SHALL BE INSTALLED IN CONSTRUCTION JOINTS OF HYDRAULIC STRUCTURES, CHANNELS, AND BELOW GRADE STRUCTURES, EXCEPT WHERE SPECIFICALLY NOTED OTHERWISE.

4. CONSTRUCTION JOINTS INDICATED ARE SUGGESTED LOCATIONS. CONTRACTOR MAY REVISE LOCATION OF JOINTS, SUBJECT TO SPECIFIED REQUIREMENTS. LAYOUT SHOWING ALL CONSTRUCTION JOINT LOCATIONS SHALL BE SUBMITTED FOR REVIEW BY ENGINEER.

5. ROUGHEN AND CLEAN CONSTRUCTION JOINTS IN WALLS AND SLABS AS SPECIFIED PRIOR TO PLACING ADJACENT CONCRETE.

6. COORDINATE PLACEMENT OF OPENINGS, PIPE PENETRATIONS, CURBS, DOWELS, SLEEVES, CONDUITS, BOLTS AND INSERTS PRIOR TO PLACEMENT OF CONCRETE.

7. NO ALUMINUM CONDUIT OR PRODUCTS CONTAINING ALUMINUM OR ANY OTHER MATERIAL INJURIOUS TO THE CONCRETE SHALL BE EMBEDDED IN THE CONCRETE.

8. EMBEDDED CONDUIT IS NOT PERMITTED UNLESS SPECIFICALLY INDICATED IN DRAWINGS.

9. PATCH FORM TIE HOLES IN ACCORDANCE WITH DETAILS 0310-051 AND/OR 0310-052.

# WELDING

1. WELDS SHALL CONFORM TO AMERICAN WELDING SOCIETY (AWS):
   D1.1, STRUCTURAL WELDING CODE STEEL
   D1.2, STRUCTURAL WELDING CODE ALUMINUM
   D1.3, STRUCTURAL WELDING CODE SHEET STEEL
   D1.4, STRUCTURAL WELDING CODE REINFORCING STEEL
   D1.6, STRUCTURAL WELDING CODE STAINLESS STEEL

2. REPAIR WELDS FOUND DEFECTIVE IN ACCORDANCE WITH AWS D1.1 SECTION 5.26.

3. USE INTERMITTENT WELDS AT FIELD WELDS OF EMBED PLATES AND ANGLES TO AVOID SPALLING OR CRACKING OF THE EXISTING CONCRETE.

4. BUTT JOINT WELDS SHALL BE COMPLETE JOINT PENETRATION (CJP) UNLESS INDICATED OTHERWISE.

PROFESSIONAL STRUCTURAL ENGINEER
No. 501404-2203
STERLING K. ROSE
STATE OF UTAH
DIGITALLY SIGNED: 07/18/2024

| NO. | DSGN | DATE | REVISION | CHK | DR |
|---|---|---|---|---|---|
| | | | | T STIMPSON | S ROSE |
| | | | | A FIRTH/B PHELPS | APVD |
| | | | | | BY |
| | | | | | APVD |



JORDAN VALLEY WATER CONSERVANCY DISTRICT
11800 SOUTH ZONE C RESERVOIRS

Jacobs

GENERAL

STRUCTURAL GENERAL NOTES - 1

100% CONFORMED

VERIFY SCALE
BAR IS ONE INCH ON ORIGINAL DRAWING. 0 1"

| | |
|---|---|
| DATE | JULY 2024 |
| PROJ | W7Y49600 |
| DWG | G-09 |
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# STRUCTURAL STEEL AND METAL FABRICATIONS

1. STRUCTURAL STEEL SHALL CONFORM TO THE FOLLOWING ASTM STANDARDS:

| | |
|---|---|
| W-SHAPES | A992 |
| MISCELLANEOUS SHAPES AND PLATES | A572, GRADE 50 |
| ANGLES AND SHAPES | A36 |
| MOMENT CONNECTION CONTINUITY PLATES | A572, GRADE 50 |
| HOLLOW STRUCTURAL SECTIONS (HSS) | A500, GRADE C |
| STEEL PIPE | A53, GRADE B |
| STAINLESS STEEL SHAPES | A276 |

2. ALUMINUM SHALL CONFORM TO THE FOLLOWING ASTM STANDARDS:

| | |
|---|---|
| STRUCTURAL SHAPES | B308 |
| PLATES | B209 |

3. STRUCTURAL STEEL SHALL BE FABRICATED AND ERECTED IN CONFORMANCE WITH THE AISC MANUAL OF STEEL CONSTRUCTION, CURRENT EDITION, AND CURRENT OSHA STANDARDS.

4. FASTENERS SHALL BE HIGH STRENGTH BOLTS CONFORMING TO THE FOLLOWING ASTM STANDARDS EXCEPT WHERE SPECIFICALLY INDICATED OTHERWISE:

| | |
|---|---|
| UNLESS SHOWN OTHERWISE | F3125 GRADE F1852 |
| ANCHOR BOLTS (AB) | |
| STAINLESS STEEL | F593, AISI TYPE 316, CONDITION CW |
| STEEL OR GALVANIZED STEEL | F1554, GR 55 / A153 |
| MACHINE BOLTS (MB) | |
| STEEL | A307 |
| STAINLESS STEEL | F593, AISI TYPE 316, CONDITION CW |
| GALVANIZED STEEL | A307 / A153 |
| ALUMINUM | F468, ALLOY 2024-T4 |

5. ITEMS TO BE EMBEDDED IN CONCRETE SHALL BE CLEAN AND FREE OF OIL, DIRT AND PAINT.

6. NO HOLES OTHER THAN THOSE SPECIFICALLY DETAILED SHALL BE ALLOWED THROUGH STRUCTURAL STEEL MEMBERS. NO CUTTING OR BURNING OF STRUCTURAL STEEL IS PERMITTED WITHOUT THE APPROVAL OF THE ENGINEER.

# 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 PREPARED BY THE CONTRACTOR TO BE SUBMITTED TO THE PERMITTING AGENCY FOR ACCEPTANCE PRIOR TO INSTALLATION OF THAT PORTION OF THE WORK OR ARE REQUIRED TO BE SUBMITTED FOR REVIEW ONLY BY THE ENGINEER.

2. WHERE DEFERRED SUBMITTALS INCLUDE ADDITIONAL MATERIALS, INSTALLATION, ANCHORAGE, OR CERTIFICATION OF COMPONENTS THAT REQUIRE SPECIAL INSPECTION AND/OR STRUCTURAL OBSERVATION TO MEET CODE REQUIREMENTS, THE DEFERRED SUBMITTAL SHALL INCLUDE SPECIFIC LINE ITEMS TO BE ADDED TO THE APPROPRIATE TABLES IN THE PROJECT'S STATEMENT OF SPECIAL INSPECTIONS PLAN IF THEY ARE NOT ALREADY IDENTIFIED.

3. THE FOLLOWING IS A LIST OF DEFERRED SUBMITTALS PER IBC SECTION 107.3.4.1 OF 2021 IBC THAT ARE EXPECTED TO CONTAIN STRUCTURAL CALCULATIONS OR SAFETY RELATED SYSTEM INFORMATION FOR REVIEW TO MEET BUILDING PERMITTING REQUIREMENTS FOR DESIGNED SYSTEMS. PRIOR TO INSTALLATION OF THE INDICATED STRUCTURAL ELEMENT, EQUIPMENT, DISTRIBUTION SYSTEM, OR COMPONENT OR ITS ANCHORAGE, THE CONTRACTOR SHALL SUBMIT THE REQUIRED CALCULATIONS AND SUPPORTING DATA AND DRAWINGS FOR REVIEW AND ACCEPTANCE BY THE ENGINEER. ADDITIONALLY, ACCEPTANCE INDICATED ON THE ENGINEER'S COMMENT FORM, ALONG WITH THE COMPLETED, FINAL SUBMITTAL SHALL THEN BE SUBMITTED BY THE CONTRACTOR TO THE PERMITTING AGENCY AND APPROVED PRIOR TO INSTALLATION OF THESE ITEMS.

| SPECIFICATION SECTION | CODE REQUIRED DEFERRED SUBMITTALS FOR REVIEW BY PERMITTING AGENCY |
|---|---|
| 01 88 15 | ANCHORAGE AND BRACING |
| 05 52 16 | ALUMINUM RAILINGS |
| 33 16 13.14 | PRESTRESSED TANK VERTICAL POST-TENSIONING |
| 40 05 15 | PIPING SUPPORT SYSTEMS |
| OTHER | ANY EQUIPMENT OR COMPONENT IN WHICH A TECHNICAL SPECIFICATION REQUIRES SUBMITTAL OF EQUIPMENT OR ANCHORAGE SYSTEM CALCULATIONS |

PROFESSIONAL STRUCTURAL ENGINEER
No. 501404-2203
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STATE OF UTAH

DIGITALLY SIGNED: 07/18/2024



| NO. | DATE | DSGN | DR | CHK | APVD |
|---|---|---|---|---|---|
| | | S ROSE | T STIMPSON | A FIRTH/B PHELPS | S ROSE |

REVISION

BY APVD

JORDAN VALLEY WATER CONSERVANCY DISTRICT

11800 SOUTH ZONE C RESERVOIRS

Jacobs

GENERAL

STRUCTURAL GENERAL NOTES - 2



100% CONFORMED

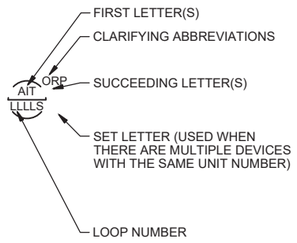
VERIFY SCALE

BAR IS ONE INCH ON ORIGINAL DRAWING.
0 1"

| | |
|---|---|
| DATE | JULY 2024 |
| PROJ | W7Y49600 |
| DWG | G-10 |
| SHEET | 10 of 79 |

# INSTRUMENT IDENTIFICATION

## EXAMPLE SYMBOLS




## DIGITAL SYSTEM INTERFACES

| | |
|---|---|
| AI | ANALOG INPUT |
| AO | ANALOG OUTPUT |
| DI | DISCRETE INPUT |
| DO | DISCRETE OUTPUT |
| ET | ETHERNET/IP |

## INSTRUMENT IDENTIFICATION LETTERS TABLE

| LETTER | FIRST-LETTER | | SUCCEEDING-LETTERS | | |
|---|---|---|---|---|---|
| | PROCESS OR INITIATING VARIABLE | MODIFIER | READOUT OR PASSIVE FUNCTION | READOUT OR PASSIVE FUNCTION | READOUT OR PASSIVE FUNCTION |
| A | ANALYSIS (+), AIR | | ALARM | | |
| B | BURNER, COMBUSTION | | USER'S CHOICE (*) | USER'S CHOICE (*) | USER'S CHOICE (*) |
| C | USER'S CHOICE (*) | | | CONTROL | |
| D | DENSITY (S.G.) | DIFFERENTIAL | | | |
| E | VOLTAGE | | PRIMARY ELEMENT, SENSOR | | |
| F | FLOW RATE | RATIO (FRACTION) | | | |
| G | USER'S CHOICE (*) | | GLASS, GAUGE VIEWING DEVICE | GATE | |
| H | HAND (MANUAL) | | | | HIGH |
| I | CURRENT (ELECTRICAL) | | INDICATE | | |
| J | POWER | SCAN | | | |
| K | TIME, TIME SCHEDULE | TIME RATE OF CHANGE | | CONTROL STATION | |
| L | LEVEL | | LIGHT (PILOT) | | LOW |
| M | MOTION | | | | MIDDLE, INTERMEDIATE |
| N | TORQUE | | USER'S CHOICE (*) | USER'S CHOICE (*) | USER'S CHOICE (*) |
| O | USER'S CHOICE (*) | | ORIFICE, RESTRICTION | | |
| P | PRESSURE, VACUUM | | POINT (TEST) CONNECTION | | |
| Q | QUANTITY | INTEGRATE, TOTALIZE | RELIEF | | |
| R | RADIATION | | RECORD OR PRINT | | |
| S | SPEED, FREQUENCY | SAFETY | | SWITCH | |
| T | TEMPERATURE | | | TRANSMIT | |
| U | MULTI VARIABLE | | MULTI FUNCTION | MULTI FUNCTION | MULTI FUNCTION |
| V | VIBRATION, MECHANICAL ANALYSIS | VACUUM | | VALVE, DAMPER, LOUVER | |
| W | WEIGHT, FORCE | | WELL | | |
| X | UNCLASSIFIED (*) | X AXIS | UNCLASSIFIED (*) | UNCLASSIFIED (*) | UNCLASSIFIED (*) |
| Y | EVENT, STATE OR PRESENCE | Y AXIS | | RELAY, COMPUTE, CONVERT | |
| Z | POSITION | Z AXIS | | DRIVE, ACTUATOR, UNCLASSIFIED FINAL CONTROL ELEMENT | |

TABLE BASED ON THE INSTRUMENTATION, SYSTEMS, AND AUTOMATION SOCIETY (ISA) STANDARD.

(+) WHEN USED, EXPLANATION IS SHOWN ADJACENT TO INSTRUMENT SYMBOL. SEE ABBREVIATIONS AND LETTER SYMBOLS.
(*) WHEN USED, DEFINE THE MEANING HERE FOR THE PROJECT.

## GENERAL INSTRUMENT OR FUNCTIONAL SYMBOLS

- FIELD MOUNTED
- REAR-OF-PANEL MOUNTED (OPERATOR INACCESSIBLE)
- PANEL MOUNTED (OPERATOR ACCESSIBLE)
- MCC MOUNTED
- COMPUTER FUNCTION
- PLC FUNCTION
- SHARED DISPLAY, SHARED CONTROL

## TRANSDUCERS

| | | | |
|---|---|---|---|
| A | ANALOG | I | CURRENT |
| D | DIGITAL | P | PNEUMATIC |
| E | VOLTAGE | PF | PULSE FREQUENCY |
| F | FREQUENCY | PD | PULSE DURATION |
| H | HYDRAULIC | R | RESISTANCE |

EXAMPLE


CURRENT TO PNEUMATIC TRANSDUCER (BACK OF PANEL, IN A FLOW LOOP)

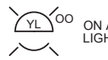
## ACCESSORY DEVICES

| | |
|---|---|
| A | ALARM |
| C | CONTROLLER |
| I | INDICATOR |
| R | RECORDER |
| S | SWITCH |
| T | TRANSMITTER |
| X | UNCLASSIFIED |

EXAMPLE


TRANSMITTER AS AN ACCESSORY TO A FLOW ELEMENT

## SPECIAL CASES




ON AND OFF EVENT LIGHTS


ON-OFF HAND SWITCH, MAINTAINED CONTACT SWITCH (CONTROLLED DEVICE WILL RESTART ON RETURN OF POWER AFTER POWER FAILURE).


STOP-START HAND SWITCH MOMENTARY CONTACT SWITCHES (CONTROLLED DEVICE WILL NOT RESTART ON RETURN OF POWER AFTER POWER FAILURE).

# LINE LEGEND

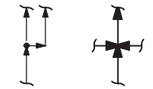
- PRIMARY PROCESS (CLOSED CONDUIT, DASHED LINE INDICATES ALTERNATE FLOW STREAM)
- SECONDARY PROCESS
- BYPASS PROCESS
- PROCESS (OPEN CHANNEL)
- ANALOG SIGNAL (4 TO 20 mAdc, ETC.)
- DISCRETE (ON/OFF, ETC.)
- PNEUMATIC SIGNAL
- FILLED SYSTEM SIGNAL
- HYDRAULIC SYSTEM SIGNAL
- DATA LINK
- BUILDING OR FACILITY BOUNDARY
- PACKAGE SYSTEM EQUIPMENT
- SIMILAR SYSTEMS
- HEAT-TRACED PIPE

PARALLELING LINES


(A) TOTAL OF 2 SIGNALS

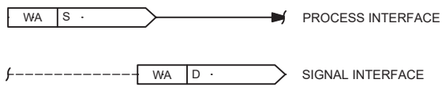
(B) 3 TYPICAL SETS OF 2 SIGNALS EACH. TOTAL OF 6 SIGNALS.

CONNECTING LINES



NON-CONNECTING LINES

# INTERFACE SYMBOLS

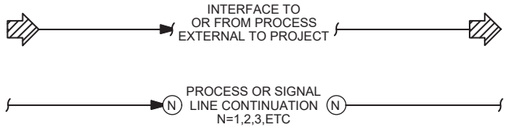



W SOURCE UNIT PROCESS NO. (1 OR 2 DIGITS)

A INTERFACE NO. (2 DIGITS)

D DESTINATION DRAWING NO.

S SOURCE DRAWING NO.




# INSTRUMENT AND EQUIPMENT TAG NUMBERS

TAG NUMBER = PER JVWCD STANDARDS

123 = FACILITY NUMBER

ABC = EQUIPMENT/INSTRUMENT IDENTIFIERS

45678 = LOOP NUMBER

# ABBREVIATIONS & LETTER SYMBOLS

| | |
|---|---|
| AC | ALTERNATING CURRENT |
| ACC | AREA CONTROL CENTER |
| AM | AUTO-MANUAL |
| CAM | COMPUTER-AUTO-MANUAL |
| CCS | CENTRAL CONTROL SYSTEM |
| $CL_2$ etc. | CHLORINE (TYPICAL; USE STANDARD CHEMICAL ELEMENT ABBREVIATIONS) |
| CLSD | CLOSED |
| CM | COMPUTER-MANUAL |
| COD | CHEMICAL OXYGEN DEMAND |
| CP-X | CONTROL PANEL NO. X |
| DC | DIRECT CURRENT |
| DCS | DISTRIBUTED CONTROL SYSTEM |
| DCU | DISTRIBUTED CONTROL UNIT |
| DO | DISSOLVED OXYGEN |
| $FCL_2$ | FREE CHLORINE RESIDUAL |
| FOS | FAST-OFF-SLOW |
| FOSA | FAST-OFF-SLOW-AUTO |
| FOSR | FAST-OFF-SLOW-REMOTE |
| FP-W-X | FIELD PANEL NO. WX (W=UNIT PROCESS NUMBER X=PANEL NUMBER) |
| FR | FORWARD-REVERSE |
| GNG | GO-NO GO |
| HOR | HAND-OFF-REMOTE |
| ISR | INTRINSICALLY SAFE RELAY |
| JB | JUNCTION BOX |
| LCP | LOCAL CONTROL PANEL |
| LEL | LOWER EXPLOSIVE LIMIT |
| LOS | LOCKOUT STOP |
| LR | LOCAL-REMOTE |
| MA | MANUAL-AUTO |
| MC | MODULATE-CLOSE |
| MCC-X | MOTOR CONTROL CENTER NO. X |
| MCP | MECHANICAL CONTROL PANEL |
| MSC | MANUFACTURER SUPPLIED CABLE |
| OC | OPEN-CLOSE(D) |
| OCA | OPEN-CLOSE-AUTO |
| OCR | OPEN-CLOSE-REMOTE |
| OO | ON-OFF |
| OOA | ON-OFF-AUTO |
| OOR | ON-OFF-REMOTE |
| ORP | OXIDATION REDUCTION POTENTIAL |
| OSC | OPEN-STOP-CLOSE |
| OPND | OPENED |
| pH | HYDROGEN ION CONCENTRATION |
| PLC | PROGRAMMABLE LOGIC CONTROLLER |
| REM | REMOTE |
| RIO | REMOTE I/O UNIT |
| RM-X | REMOTE MULTIPLEXING MODULE NO. X |
| RTU-X | REMOTE TELEMETRY UNIT NO. X |
| SF | SLOWER-FASTER |
| SHK | SPEED HAND CONTROL |
| SHWR | SHOWER |
| SS | START-STOP |
| SSC | SUPERVISORY SET POINT CONTROL |
| $TCL_2$ | TOTAL CHLORINE RESIDUAL |
| TOC | TOTAL ORGANIC CARBON |
| TOD | TOTAL OXYGEN DEMAND |
| TURB | TURBIDITY |
| VCP | VIBRATION CONTROL PANEL |
| VHC | VOLATILE HYDROCARBONS |
| VIB | VIBRATION |
| $\Delta$ | DIFFERENCE |
| $\Sigma$ | SUM |
| $\times$ | MULTIPLY |
| $\div$ | DIVIDE |
| F(X) | CHARACTERIZED |
| $X^n$ | RAISED TO THE Nth POWER |
| $\sqrt{\ }$ | SQUARE ROOT |
| AVG | AVERAGE |
| 1:1 | REPEAT OR BOOST |
| > | SELECT HIGHEST SIGNAL |
| < | SELECT LOWEST SIGNAL |
| } | BIAS |
| % | GAIN OR ATTENUATE |

# GENERAL NOTES

1. COMPONENTS AND PANELS SHOWN WITH A SINGLE ASTERISK (✳) ARE TO BE PROVIDED AS PART OF A PACKAGE SYSTEM.
2. COMPONENTS AND PANELS SHOWN WITH A DOUBLE ASTERISK (✳✳) ARE TO BE PROVIDED UNDER DIVISION 26, ELECTRICAL.
3. COMPONENTS SHOWN WITH A TRIPLE ASTERISK (✳✳✳) ARE OWNER FURNISHED.
4. THIS IS A STANDARD LEGEND. THEREFORE, NOT ALL OF THIS INFORMATION MAY BE USED ON THE PROJECT.

LICENSED PROFESSIONAL ENGINEER
No. 10416430-2202
JONATHAN JAMES
STATE OF UTAH
DIGITALLY SIGNED: 07/18/2024



| NO. | DATE | DSGN | DR | CHK | APVD | BY | REVISION |
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| | | H IDREES | A CUGLIAT | J JAMES | APVD | J JAMES | |

JORDAN VALLEY WATER CONSERVANCY DISTRICT
11800 SOUTH ZONE C RESERVOIRS



Jacobs

GENERAL

INSTRUMENTATION AND CONTROLS LEGEND - 1

100% CONFORMED

VERIFY SCALE

BAR IS ONE INCH ON ORIGINAL DRAWING. 0 1"

| | |
|---|---|
| DATE | JULY 2024 |
| PROJ | W7Y49600 |
| DWG | G-11 |
| SHEET | 11 of 79 |

# VALVE SYMBOLS

- GATE
- KNIFE GATE
- BUTTERFLY
- GLOBE
- BALL
- VENTED BALL
- PLUG
- SEAT PORT ECCENTRIC PLUG
- DIAPHRAGM
- DUCK BILL CHECK VALVE
- SLEEVE VALVE
- PINCH
- NEEDLE
- SWING CHECK
- BALL CHECK
- BACKFLOW PREVENTER
- ROTARY
- TELESCOPE
- SAMPLE
- MUD
- PRESSURE RELIEF
- AIR AND/OR VACUUM RELEASE
- REGULATED SIDE PRESSURE CONTROL
- PRESSURE REGULATION (CLAY-TYPE)
- MULTI-PORT VALVE (GATE VALVE SHOWN. FOR OTHER VALVE TYPES, APPROPRIATE VALVE SYMBOL SHOWN.) SEAT PORTS ARE IMPLIED BY INDICATED FLOW PATTERN.
- ANGLE GATE

# GATE SYMBOLS

- SLUICE / WEIR
- BUTTERFLY
- FABRICATED SLIDE
- FLAP
- STOP LOG
- SHEAR

# ACTUATOR SYMBOLS

- PNEUMATIC DIAPHRAGM SPRING-OPPOSED, SINGLE OR DOUBLE ACTING
- PNEUMATIC CYLINDER SINGLE OR DOUBLE ACTING ACTUATED BY ONE INPUT
- ELECTRIC MOTOR
- SOLENOID
- VALVE POSITIONER
- HYDRAULIC
- DIAPHRAGM, DIFFERENTIAL PRESSURE
- ELECTROHYDRAULIC
- MANUAL

NOTE:
ON LOSS OF PRIMARY POWER (PNEUMATIC, ELECTRICAL, OR HYDRAULIC)

XX: FO FAIL OPEN
FC FAIL CLOSED
FLP FAIL TO LAST POSITION

# PRIMARY ELEMENT SYMBOLS

- PARSHALL FLUME
- WEIR
- ORIFICE PLATE
- FLOW TUBE
- PITOT-STATIC
- VORTEX METER
- ULTRASONIC FLOWMETER
- ELECTROMAGNETIC FLOWMETER
- CORIOLIS FLOWMETER
- PROPELLER OR TURBINE METER
- THERMAL FLOWMETER
- LEVEL (BUBBLER TUBE)
- SUBMERSIBLE PRESSURE LEVEL SENSOR
- CAPACITANCE SWITCH
- LEVEL (FLOAT)
- ROTAMETER
- DENSITY METER
- GENERIC
- LEVEL (ULTRASONIC)
- LEVEL (RADAR)
- LEVEL (TUNING FORK)

# MISCELLANEOUS SYMBOLS

- VENT TO ATMOSPHERE
- AIR GAP
- DRIP TRAP
- PIG INSERT POINT
- PIG CATCH POINT
- SELF CONTAINED AIR SUPPLY
- AIR PURGE SET
- FLUSHING CONNECTION
- SEAL WATER SET SEAL PLAN XX (REFER TO STANDARD DETAIL 4027-207)
- WATER PURGE SET
- FLEXIBLE CONNECTION
- AERATOR
- DIAPHRAGM SEAL
- ANNULAR DIAPHRAGM SEAL
- COMPOSITE SAMPLER
- FLAME TRAP
- CALIBRATION COLUMN
- INLINE SILENCER
- DISMANTLING JOINT
- BLIND FLANGE
- PIPE CAP
- STRAINER
- FILTER
- PULSATION DAMPENER
- EXPANSION CHAMBER
- SAMPLE POINT
- DIGITAL POWER MONITOR
- POWER SUPPLY
- REDUNDANCY MODULE
- SURGE PROTECTION DEVICE
- UNINTERRUPTIBLE POWER SUPPLY
- BASKET STRAINER
- CARRIER PIPE

FFLCPLLLX — PANEL CONTINUED ON SAME OR OTHER DRAWING
PANEL OUTLINE
PANEL NAME

- 120V — 120 VOLT, 60 HZ POWER
- 120V UPS — 120 VOLT, UNINTERRUPTIBLE SUPPLY 60 HZ POWER
- 480V — 480 VOLT, 60 HZ POWER
- 24V — 24 VOLT, 60 HZ POWER
- XX — AIR SET XX = SUPPLY PRESSURE IN PSIG.
- PLUG
- RECEPTACLE
- RUPTURE DISK (VACUUM)
- RUPTURE DISK (PRESSURE)
- TV MONITOR
- TV CAMERA
- LOGIC ELEMENT: IF A AND NOT B THEN C
- LOGIC ELEMENT: IF A OR B THEN C
- RADIO ANTENNA
- INTERLOCK, SEE CONTROL DIAGRAMS
- VOICE COMMUNICATION POINT
- SKIMMING MECHANISM
- SCREW CONVEYOR
- MIXER (NON-SUBMERSIBLE)
- MIXER (SUBMERSIBLE)
- ELECTRIC MOTOR
- POLYMER BLENDING UNIT
- INJECTOR
- CHEMICAL DIFFUSER
- CO2 DIFFUSER

# PUMP AND COMPRESSOR SYMBOLS

- CENTRIFUGAL PUMP (DRY PIT)
- CENTRIFUGAL PUMP
- CENTRIFUGAL WET PIT PUMP OR TURBINE PUMP
- RECIPROCATING OR METERING PUMP (POSITIVE DISPLACEMENT)
- DIAPHRAGM PUMP
- GEAR PUMP OR BLOWER (POSITIVE DISPLACEMENT)
- VERTICAL TURBINE PUMP
- PROGESSING CAVITY PUMP
- COMPRESSOR (CENTRIFUGAL)
- COMPRESSOR (PISTON)
- BLOWER OR FAN (CENTRIFUGAL)
- ROTARY LOBE BLOWER
- DOUBLE DIAPHRAGM PUMP
- PISTON PUMP
- SUBMERSIBLE SUMP PUMP
- ROTARY LOBE PUMP
- VACUUM PUMP
- SCREW PUMP
- PERISTALTIC PUMP

XX: AS ADJUSTABLE SPEED
CS-1 CONSTANT SPEED (SINGLE SPEED)
CS-2 CONSTANT SPEED (TWO SPEED)
CS-R CONSTANT SPEED (REVERSING)

# LINE IDENTIFICATION

FLT — FLOW STREAM IDENTIFICATION

LICENSED PROFESSIONAL ENGINEER — No. 10416430-2202 — JONATHAN JAMES — STATE OF UTAH
DIGITALLY SIGNED: 07/18/2024



| NO. | DATE | DSGN | DR | CHK | REVISION | BY | APVD |
|---|---|---|---|---|---|---|---|
| | | H IDREES | A CUGLIAT | J JAMES | | J JAMES | APVD |

JORDAN VALLEY WATER CONSERVANCY DISTRICT
11800 SOUTH ZONE C RESERVOIRS

Jacobs

GENERAL

INSTRUMENTATION AND CONTROLS
LEGEND - 2

VERIFY SCALE
BAR IS ONE INCH ON ORIGINAL DRAWING.
0 1"

| | |
|---|---|
| DATE | JULY 2024 |
| PROJ | W7Y49600 |
| DWG | G-12 |
| SHEET | 12 of 79 |

100% CONFORMED

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FILENAME: 118R-G-012_W7Y49600.dwg PLOT DATE: $PLOTDATE PLOT TIME: $PLOTTIME

## POWER SYSTEMS PLANS - 1

| SYMBOL | DESCRIPTION |
|---|---|
| | CONNECTION POINT TO EQUIPMENT SPECIFIED. RACEWAY, CONDUCTOR,TERMINATION AND CONNECTION IN THIS DIVISION. |
| MCC-A | MAJOR ELECTRICAL COMPONENT OR DEVICE - NAME OR IDENTIFYING SYMBOL AS SHOWN. |
| LPXXA | PANELBOARD - SURFACE MOUNTED<br>PANELBOARD LETTER OR NUMBER<br>FACILITY NUMBER<br>LP - LOW VOLTAGE PANEL<br>DP - DISTRIBUTION PANEL |
| | TERMINAL JUNCTION BOX |
| M | MOTOR, SQUIRREL CAGE INDUCTION |
| LPXXA | HOME RUN - DESTINATION SHOWN |
| or G | EXPOSED CONDUIT AND CONDUCTORS* |
| or G | CONCEALED CONDUIT AND CONDUCTORS* |
| [A1] | CONDUIT AND CONDUCTOR CALLOUT, SEE LEGEND. |
| | CONDUIT DOWN |
| | CONDUIT UP |
| | CONDUIT, STUBBED AND CAPPED |
| CE | CONCRETE ENCASED CONDUIT |
| EX | EXISTING CONDUIT/DUCTBANK |
| DB | DIRECT BURIED CONDUIT |
| J or HH | GENERAL CONTROL OR WIRING DEVICE.<br>LETTER SYMBOLS OR ABBREVIATIONS<br>INDICATE TYPE OF DEVICE |
| CS | CONTROL STATION, SEE CONTROL DIAGRAMS FOR CONTROL DEVICE(S) REQUIRED. |
| 30 | NONFUSED DISCONNECT SWITCH, CURRENT RATING INDICATED, 3 POLE |
| XX 2 | CONVENIENCE RECEPTACLE - DUPLEX UNLESS NOTED OTHERWISE<br>WP - WEATHERPROOF<br>TL - TWIST LOCK<br>GFCI - GROUND FAULT CIRCUIT INTERRUPTER<br>SUBSCRIPT NUMBER AT RECEPTACLE INDICATES CIRCUIT |
| S | WALL SWITCH:<br>WP- WEATHERPROOF<br>M- MOTOR RATED<br>MS- MANUAL STARTER WITH OVERLOADS |
| | UTILITY POLE |
| 400 | CIRCUIT BREAKER, THERMAL MAGNETIC TRIP SHOWN, 3 POLE, UNO |
| 3 | MOTOR, SQUIRREL CAGE INDUCTION - HORSEPOWER INDICATED |
| | UTILITY REVENUE METER |
| | GROUND |
| | GROUND ROD |
| G | GROUNDING CONDUCTOR, SIZE AS INDICATED |
| | GROUND ROD IN TEST WELL |
| 100/40 | BREAKER, SEPARATELY MOUNTED, CURRENT RATING INDICATED<br>(100/40, 100 = FRAME SIZE, 40 = TRIP RATING)<br>3 POLE |

NOTE:
ALL UNMARKED CONDUIT RUNS CONSIST OF TWO NO. 12, ONE NO. 12 GROUND CONDUCTORS IN 3/4" CONDUIT. RUNS MARKED WITH CROSSHATCHES INDICATE NUMBER OF NO. 12 CONDUCTORS. CROSSHATCH WITH SUBSCRIPT "G" INDICATES GREEN GROUND WIRE.

## CONTROL DIAGRAMS

| SYMBOL | DESCRIPTION |
|---|---|
| | PUSH-BUTTON SWITCH, MOMENTARY CONTACT, NORMALLY OPEN |
| | PUSH-BUTTON SWITCH, MOMENTARY CONTACT, NORMALLY CLOSED |
| HAND OFF REMOTE<br>XOO<br>OOX | SELECTOR SWITCH - MAINTAINED CONTACT - CHART IDENTIFIES OPERATION WHEN NEEDED FOR CLARITY: |
| | MUSHROOM HEAD SWITCH |
| A | INDICATING LIGHT, PUSH-TO-TEST, LETTER INDICATES COLOR |
| A | INDICATING LIGHT - LETTER INDICATES COLOR<br>A - AMBER G - GREEN S - STROBE<br>B - BLUE R - RED<br>C - CLEAR W - WHITE |
| ETM | ELAPSED TIME METER |
| M | MOTOR STARTER CONTACTOR COIL |
| CRX | CONTROL RELAY, X INDICATES NUMERICAL ORDER IN CIRCUIT |
| TDR X | TIME DELAY RELAY, X INDICATES NUMERICAL ORDER IN CIRCUIT |
| | CONTACT - NORMALLY OPEN |
| | CONTACT - NORMALLY CLOSED |
| | REMOTE DEVICE |
| | TIME DELAY RELAY CONTACT, NORMALLY OPEN, CLOSES WHEN ENERGIZED AND TIMED OUT |
| | TIME DELAY RELAY CONTACT, NORMALLY CLOSED, OPENS WHEN ENERGIZED AND TIMED OUT |
| | TIME DELAY RELAY CONTACT, CLOSES WHEN ENERGIZED, OPENS WHEN DE-ENERGIZED AND TIMED OUT |
| | TIME DELAY RELAY CONTACT, OPENS WHEN ENERGIZED, CLOSES WHEN DE-ENERGIZED AND TIMED OUT |
| | TERMINAL BLOCK, REMOTE |
| | TERMINAL BLOCK, INTERNAL |
| CPT 120V | TRANSFORMER, CONTROL POWER |
| | FLOAT SWITCH, NORMALLY OPEN, CLOSES ON DESCENDING LEVEL |
| | FLOAT SWITCH, NORMALLY OPEN, CLOSES ON RISING LEVEL |
| | PRESSURE SWITCH, NORMALLY CLOSED, OPENS ON RISING PRESSURE |
| | PRESSURE SWITCH, NORMALLY OPEN, CLOSES ON RISING PRESSURE |

| | POSITION | |
|---|---|---|
| CKT | HAND | |
| 1 | X | |
| 2 | O | |

## LIGHTING SYSTEM PLAN

| SYMBOL | DESCRIPTION |
|---|---|
| L | LUMINAIRE, SEE SCHEDULE ON DRAWING |
| $a or (2a) | SMALL LETTER SUBSCRIPT AT SWITCH AND LUMINAIRE INDICATES SWITCHING. SUBSCRIPT NUMBER AT LUMINAIRE INDICATES CIRCUIT |
| $3 | WALL SWITCH:<br>2- DOUBLE POLE<br>3- THREE WAY<br>4- FOUR WAY<br>WP- WEATHERPROOF<br>EX- EXPLOSIONPROOF<br>M- MOTOR RATED<br>OS- OCCUPANCY SENSOR<br>P- PILOT LIGHT<br>K- KEY OPERATED<br>D- DIMMER<br>CRE- CORROSION RESISTANT<br>L- MOMENTARY 3-WAY<br>MS- MANUAL STARTER WITH OVERLOADS |

## ABBREVIATIONS

| | |
|---|---|
| A | AMPERE, AUTOMATIC |
| AC | ALTERNATING CURRENT |
| AFF | ABOVE FINISHED FLOOR |
| AIC | AMPERE INTERRUPTING CAPACITY |
| BKR | BREAKER |
| BLDG | BUILDING |
| C | CONDUIT, CONTACTOR, CONDUCTOR, CLOSE |
| CKT | CIRCUIT |
| CL | CHLORINE |
| CPT | CONTROL POWER TRANSFORMER |
| CR | CONTROL RELAY |
| CT | CURRENT TRANSFORMER |
| DC | DIRECT CURRENT |
| DCS | DISTRIBUTED CONTROL SYSTEM |
| DP | DISTRIBUTION PANEL |
| DPC | DEFINITE PURPOSE CONTACTOR |
| DS | DISCONNECT SWITCH |
| E | EMPTY |
| ENCL | ENCLOSURE |
| EX | EXHAUST |
| F, FU | FUSE |
| FIT | FLOW INDICATING TRANSMITTER |
| FREQ | FREQUENCY |
| FT | FLOW TRANSMITTER |
| G | GROUND |
| GFCI | GROUND FAULT CIRCUIT INTERRUPTER |
| GND | GROUND |
| HH | HANDHOLE |
| HOA | HAND-OFF-AUTO |
| HP | HORSEPOWER |
| HS | HAND SWITCH |
| HZ | HERTZ |
| IC | INTERRUPTING CAPACITY |
| I/O | INPUT / OUTPUT |
| J, JB | JUNCTION BOX |
| KA | KILOAMPERES |
| KV | KILOVOLT |
| KVA | KILOVOLT AMPERES |
| KW | KILOWATTS |
| LP | LIGHTING PANELBOARD |
| LSH | LEVEL SWITCH HIGH |
| M | MAGNETIC CONTACTOR COIL, MOTOR, MANUAL |
| MCC-X | MOTOR CONTROL CENTER NO. X |
| MFR | MANUFACTURER |
| MOV | MOTOR OPERATED VALVE |
| MPC | MINI-POWER CENTER |
| MSC | MANUFACTURER SUPPLIED CABLE |
| NC | NORMALLY CLOSED |
| NEMA | NATIONAL ELECTRICAL MANUFACTURERS ASSOCIATION |
| N.O. | NORMALLY OPEN |
| NTS | NOT TO SCALE |
| NW | NETWORK |
| OL | OVERLOAD RELAY |
| P | POLES |
| PB | PULL BOX |
| PIT | PRESSURE INDICATING TRANSMITTER |
| PLC | PROGRAMMABLE LOGIC CONTROLLER |
| PT | PRESSURE TRANSMITTER |
| RCPT | RECEPTACLE |
| RGS | RIGID GALVANIZED STEEL CONDUIT |
| RIO | REMOTE I/O UNIT |
| RTU | REMOTE TERMINAL UNIT |
| RTU-X | REMOTE TELEMETRY UNIT NO. X |
| S | SOUTH |
| SS | START STOP |
| SST | STAINLESS STEEL |
| SV | SOLENOID VALVE |
| TSP | TWISTED SHIELDED PAIR |
| TYP | TYPICAL |
| UON | UNLESS OTHERWISE NOTED |
| V | VOLTAGE, VOLTS |
| VA | VOLT-AMPERES |
| VFD | VARIABLE FREQUENCY DRIVE |
| W | WATTS |
| WIU | WHILE-IN-USE |
| WP | WEATHERPROOF |
| XFMR | TRANSFORMER |

## SECURITY SYSTEM PLAN AND RISER

| SYMBOL | DESCRIPTION |
|---|---|
| CR | CARD KEY ACCESS LOCATION |
| CS | CONTROL STATION |
| DS | DOOR SWITCH |
| EP | EGRESS PUSHBUTTON |
| | ELECTRONIC LOCK |
| | INTERCOM |
| | MONITOR |
| | MOTION SENSOR |
| | VIDEO CAMERA |

## POWER SYSTEMS PLANS - 2

| SYMBOL | DESCRIPTION |
|---|---|
| T | TRANSFORMER |
| 60/40 | FUSED DISCONNECT SWITCH, CURRENT RATING INDICATED (60/40, 60=SWITCH RATING / 40=FUSE RATING)<br>3 POLE |
| 2 | COMBINATION CIRCUIT BREAKER AND MAGNETIC STARTER, NEMA SIZE INDICATED |
| 2 | STARTER, MAGNETIC NEMA SIZE INDICATED |
| PB | PULLBOX |
| | POLE |

LICENSED PROFESSIONAL ENGINEER
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| | | | | | | | J JAMES |



JORDAN VALLEY WATER CONSERVANCY DISTRICT
11800 SOUTH ZONE C RESERVOIRS

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Jacobs

GENERAL

ELECTRICAL LEGEND - 1

100% CONFORMED

VERIFY SCALE
BAR IS ONE INCH ON ORIGINAL DRAWING.
0 1"

| | |
|---|---|
| DATE | JULY 2024 |
| PROJ | W7Y49600 |
| DWG | G-13 |
| SHEET | 13 of 79 |

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FILENAME: 118R-G-013_W7Y49600.dwg PLOT DATE: $PLOTDATE PLOT TIME: $PLOTTIME

| SYMBOL | DESCRIPTION |
|---|---|
| | DRAWOUT AIR CIRCUIT BREAKER, LOW VOLTAGE |
| 400 | CIRCUIT BREAKER, THERMAL MAGNETIC TRIP SHOWN, 3 POLE, UNO |
| AS/AF or AT/AF | CIRCUIT BREAKER, STATIC TRIP UNIT, SENSOR AMP TRIP AND FRAME RATINGS SHOWN, 3 POLE, UNO |
| 100/M | CIRCUIT BREAKER, MAGNETIC TRIP ONLY, TRIP RATING SHOWN, 3 POLE, UNO |
| 400 400 | CIRCUIT BREAKER WITH CURRENT LIMITING FUSES, TRIP AND FUSE RATING INDICATED, 3 POLE, UNO |
| 400 225 | FUSED SWITCH, SWITCH AND FUSE CURRENT RATING INDICATED, 3 POLE, UNO |
| 100 | SWITCH, CURRENT RATING INDICATED, 3 POLE, UNO |
| 60 (3) | FUSE, CURRENT RATING AND QUANTITY INDICATED |
| 1 | MAGNETIC STARTER WITH OVERLOAD, NEMA SIZE INDICATED, FVNR UNO |
| AFD | ELECTRONIC STARTER/SPEED CONTROL<br>RVSS = REDUCED VOLTAGE SOFT STARTER<br>AFD = AC ADJUSTABLE FREQUENCY DRIVE<br>DC = DC ADJUSTABLE SPEED DRIVE<br>RVAT = REDUCED VOLTAGE AUTO TRANSFORMER TYPE<br>RVRT = REDUCED VOLTAGE REACTOR TYPE |
| | CABLE OR BUS CONNECTION POINT |
| K | KEY INTERLOCK |
| | SURGE ARRESTER (GAP TYPE) |
| 10 | CAPACITOR - KVAR INDICATED, 3 PHASE |
| 3 | AC MOTOR, SQUIRREL CAGE INDUCTION - HORSEPOWER INDICATED |
| G 500/625 | GENERATOR, KW/KVA RATING SHOWN |
| VS V 0-600V | ANALOG METER WITH SWITCH - SCALE RANGE SHOWN<br>V = VOLTAGE KW = KILOWATTS<br>A = AMPERAGE KVAR = KILOVARS<br>PF = POWER FACTOR |
| DPM | DIGITAL POWER METER (MULTIFUNCTION) |
| | UTILITY REVENUE METER |
| | GROUND |
| 15 KVA 480-120/240V 1 PH | TRANSFORMER, SIZE, VOLTAGE RATINGS, AND PHASE INDICATED |
| | SHIELDED ISOLATION TRANSFORMER |
| 480-120V (3) | POTENTIAL TRANSFORMER, VOLTAGE RATING AND QUANTITY INDICATED |
| 100:5 (3) | CURRENT TRANSFORMER, RATIO(100:5) AND QUANTITY INDICATED (3) |
| | CONNECTION POINT TO EQUIPMENT SPECIFIED IN OTHER DIVISIONS. RACEWAY, CONDUCTOR AND CONNECTION IN THIS DIVISION |
| SPD | SURGE PROTECTIVE DEVICE |

| SYMBOL | DESCRIPTION |
|---|---|
| | DRAWOUT POWER CIRCUIT BREAKER, MEDIUM VOLTAGE |
| | NON DRAWOUT FUSED SWITCH, MEDIUM VOLTAGE |
| | DRAWOUT FUSED SWITCH AND CONTACTOR, MEDIUM VOLTAGE |
| | DRAWOUT FUSED SWITCH AND VACUUM CONTACTOR, MEDIUM VOLTAGE |
| | DRAWOUT VACUUM CONTACTOR, MEDIUM VOLTAGE |
| | MEDIUM VOLTAGE CABLE STRESS CONE TYPE TERMINATION, OPEN TERMINATOR OR ELBOW |
| | SWITCH - LOAD BREAK, GROUP OPERATED, MEDIUM VOLTAGE |
| | SWITCH W/ARCING HORNS, MEDIUM VOLTAGE |
| | DISCONNECTING FUSE - SOLID MATERIAL, MEDIUM VOLTAGE |
| | SWITCH - HOOK STICK OPERATED, SINGLE POLE, MEDIUM VOLTAGE |
| | FUSE - EXPULSION, HOOK STICK OPERATED, SINGLE POLE, MEDIUM VOLTAGE |
| | GROUND SWITCH, GANG OPERATED |
| | TERMINAL BLOCK LUG |
| △ | DELTA CONNECTION |
| | WYE GROUNDED CONNECTION, SOLID GROUND |
| R or Z | WYE NEUTRAL GROUND RESISTOR OR IMPEDANCE CONNECTION |
| 86 | RELAY OR DEVICE, FUNCTION NUMBER AS INDICATED |
| 50:5 (1) | CURRENT TRANSFORMER, ZERO SEQUENCE, RATIO AND QUANTITY INDICATED |
| 800/1200:5 (3) | BUSHING CURRENT TRANSFORMER, MULTI-RATIO AND QUANTITY INDICATED |
| MO | MOTOR OPERATOR, BREAKER OR SWITCH |
| EUM | ENERGY MONITORING UNIT |
| MRP | MOTOR PROTECTION RELAY |

NOTES:

1. THESE ARE STANDARD LEGEND SHEETS. SOME SYMBOLS AND ABBREVIATIONS MAY APPEAR ON THE LEGEND AND NOT ON THE DRAWINGS.
2. FOR ADDITIONAL ABBREVIATIONS OF OTHER DIVISIONS (HVAC, MECHANICAL, AND STRUCTURAL/ARCHITECTURAL) SEE OTHER LEGENDS.

CIRCUIT AND RACEWAY

# GENERAL CIRCUIT CONDUCTOR AND CONDUIT IDENTIFICATION

| POWER CIRCUIT CALLOUTS | | | |
|---|---|---|---|
| [P1] | [1/2"FLEX, 2#12,#12G] | [P24] | [1"C,3#8,3#14,1#10G] |
| [P2] | [3/4"C,2#12,1#12G] | [P25] | [1"C,3#8,4#14,1#10G] |
| [P3] | [3/4"C,3#12,1#12G] | [P26] | [1"C,3#8,5#14,1#10G] |
| [P4] | [3/4"C,4#12,1#12G] | [P27] | [1"C,2#6, 1#10G] |
| [P5] | [3/4"C,5#12,1#12G] | [P28] | [1"C,3#6, 1#8G] |
| [P6] | [3/4"C,6#12,1#12G] | [P29] | [1"C,3#6, 2#14,1#8G] |
| [P7] | [3/4"C,7#12,1#12G] | [P30] | [1 1/4"C,3#6, 3#14,1#8G] |
| [P8] | [3/4"C,8#12,1#12G] | [P31] | [1 1/4"C,3#6, 4#14,1#8G] |
| [P9] | [3/4"C,3#12,2#14,1#12G] | [P32] | [1 1/4"C,3#6, 5#14,1#8G] |
| [P10] | [3/4"C,3#12,3#14,1#12G] | [P33] | [1 1/4"C,3#4,1#8G] |
| [P11] | [3/4"C,3#12,4#14,1#12G] | [P34] | [1 1/4"C,3#4,3#14,1#8G] |
| [P12] | [3/4"C,3#12,5#14,1#12G] | [P35] | [1 1/4"C,3#4,5#14,1#8G] |
| [P13] | [3/4"C,3#12,6#14,1#12G] | [P36] | [1 1/4"C,3#3, 1#6G] |
| [P14] | [1"C,3#12,7#14,1#12G] | [P37] | [1 1/4"C,3#3, 3#14,1#6G] |
| [P15] | [2"C,2#10,1#10G] | [P38] | [1 1/4"C,3#2, 1#6G] |
| [P16] | [3/4"C,3#10,1#10G] | [P39] | [1 1/2"C,3#1, 1#6G] |
| [P17] | [3/4"C,3#10,2#14,1#10G] | [P40] | [2"C,3#1, 3#14,1#6G] |
| [P18] | [3/4"C,3#10,3#14,1#10G] | [P41] | [2"C,3#2/0, 1#4G] |
| [P19] | [3/4"C,3#10,4#14,1#10G] | [P42] | [2"C,3#3/0, 1#4G] |
| [P20] | [1"C,3#10,5#14,1#10G] | [P43] | [2"C,3#4/0, 1#3G] |
| [P21] | [1"C,2#8,1#10G] | [P44] | [1 1/2"C,4#1, 1#6G] |
| [P22] | [1"C,3#8,1#10G] | [P45] | [2"C,3#2 (15KV), 1#6G (600V)] |
| [P23] | [1"C,3#8,2#14,1#10G] | | |

| ANALOG CIRCUIT CALLOUTS | |
|---|---|
| [A1] | [3/4"C,1 TYPE 3] |
| [A2] | [3/4"C,2 TYPE 3] |
| [A3] | [1"C,3 TYPE 3] |
| [A4] | [1 1/4"C,4 TYPE 3] |
| [A5] | [1 1/4"C,5 TYPE 3] |
| [A6] | [1 1/4"C,6 TYPE 3] |
| [A7] | [1 1/2"C,7 TYPE 3] |
| [A8] | [1 1/2"C,8 TYPE 3] |
| [A9] | [1 1/2"C,9 TYPE 3] |
| [A10] | [2"C,10 TYPE 3] |
| [A11] | [2"C,11 TYPE 3] |
| [A12] | [2"C,12 TYPE 3] |
| [A13] | [2"C,13 TYPE 3] |
| [A14] | [2"C,14 TYPE 3] |
| [A15] | [3/4"C,1 TYPE 4] |
| [A16] | [3/4"C,2 TYPE 4] |
| [A17] | [1"C,3 TYPE 4] |
| [A18] | [1 1/4"C,4 TYPE 4] |
| [A19] | [1 1/4"C,5 TYPE 4] |
| [A20] | [1 1/4"C,6 TYPE 4] |
| [A21] | [1 1/2"C,7 TYPE 4] |
| [A22] | [1 1/2"C,8 TYPE 4] |
| [A23] | [2"C,9 TYPE 4] |
| [A24] | [3/4"C,1-4 pr. TYPE 5] |
| [A25] | [1"C,2-4 pr. TYPE 5] |

| CONTROL CIRCUIT CALLOUTS | |
|---|---|
| [C1] | [3/4"C,MSC] |
| [C2] | [3/4"C,2#14,1#14G] |
| [C3] | [3/4"C,3#14,1#14G] |
| [C4] | [3/4"C,4#14,1#14G] |
| [C5] | [3/4"C,5#14,1#14G] |
| [C6] | [3/4"C,6#14,1#14G] |
| [C7] | [3/4"C,7#14,1#14G] |
| [C8] | [3/4"C,8#14,1#14G] |
| [C9] | [3/4"C,9#14,1#14G] |
| [C10] | [3/4"C,10#14,1#14G] |
| [C11] | [3/4"C,11#14,1#14G] |
| [C12] | [3/4"C,12#14,1#14G] |
| [C13] | [3/4"C,13#14,1#14G] |
| [C14] | [1"C,14#14,1#14G] |
| [C15] | [1"C,15#14,1#14G] |
| [C16] | [1"C,16#14,1#14G] |
| [C17] | [1"C,17#14,1#14G] |
| [C18] | [1"C,18#14,1#14G] |
| [C19] | [1"C,19#14,1#14G] |
| [C20] | [1"C,20#14,1#14G] |
| [C21] | [1"C,21#14,1#14G] |
| [C22] | [1"C,22#14,1#14G] |
| [C23] | [1"C,23#14,1#14G] |
| [C24] | [1 1/4"C,24#14,1#14G] |
| [C25] | [1 1/4"C,25#14,1#14G] |

| MULTICONDUCTOR POWER CABLE CIRCUIT CALLOUTS | |
|---|---|
| [PC1] | [3/4"C,1 (3C#12,1#12G) TYPE 2] |
| [PC2] | [3/4"C,1 (3C#10,1#10G) TYPE 2] |
| [PC3] | [3/4"C,1 (3C#8,1#10G) TYPE 2] |
| [PC4] | [3/4"C,2 (3C#12,1#12G) TYPE 2] |
| [PC5] | [1"C,2 (3C#10,1#10G) TYPE 2] |
| [PC1A] | [3/4"C,1 (2C#12,1#12G) TYPE 2] |
| [PC2A] | [3/4"C,1 (2C#10,1#10G) TYPE 2] |

| EMPTY CONDUIT | |
|---|---|
| [EC-1] | [3/4"C,WITH PULL STRING] |
| [EC-2] | [1"C,WITH PULL STRING] |
| [EC-3] | [1 1/4"C,WITH PULL STRING] |
| [EC-4] | [1 1/2"C,WITH PULL STRING] |
| [EC-5] | [2"C,WITH PULL STRING] |
| [EC-6] | [3"C,WITH PULL STRING] |
| [EC-7] | [4"C,WITH PULL STRING] |
| [EC-8] | [5"C,WITH PULL STRING] |

| MULTICONDUCTOR CONTROL CABLE CIRCUIT CALLOUTS | |
|---|---|
| [CC3] | [3/4"C,1-3C TYPE 1] |
| [CC5] | [3/4"C,1-5C TYPE 1] |
| [CC7] | [3/4"C,1-7C TYPE 1] |
| [CC9] | [1"C,1-9C TYPE 1] |
| [CC12] | [1"C,1-12C TYPE 1] |
| [CC19] | [1 1/2"C, 1-19C TYPE 1] |
| [CC25] | [1 1/2"C,1-25C TYPE 1] |
| [CC37] | [2"C,1-37C TYPE 1] |
| [CCC1] | [1-7C #12 TYPE 1] |

NOTES:

1. FOR CABLE TYPES, SEE SPECIFICATIONS. TYPES 1 AND 5 NOT INCLUDED. ALL CONDUCTORS SHALL BE STRANDED COPPER. ALL POWER CIRCUITS SHALL HAVE THEIR OWN NEUTRAL CONDUCTOR.
2. POWER CIRCUIT CALLOUTS ARE BASED ON THE AREA OF THW CONDUCTORS. CONTROL CIRCUIT CALLOUTS ARE BASED ON THE AREAS OF SCHEDULE 40 PVC CONDUIT AND TYPES XHHW & XHHW-2 INSULATION.
3. SIZING OF CONDUCTORS #1AWG AND SMALLER BASED ON AMPACITIES AT 60 DEGREES C, SIZING OF CONDUCTORS #1/0AWG AND LARGER BASED ON AMPACITIES AT 75 DEGREES C.
4. WHERE CIRCUITS ARE UNDERGROUND, DIRECT BURIED OR CONCRETE ENCASED, MINIMUM CONDUIT SIZE SHALL BE 1".
5. FOR METRIC CONDUIT SIZES USE THE FOLLOWING CONVERSION:
   1/2" = 16 mm 1 1/4" = 35 mm
   3/4" = 21 mm 1 1/2" = 41 mm
   1" = 27 mm 2" = 53 mm

LICENSED PROFESSIONAL ENGINEER No. 10416430-2202 JONATHAN JAMES STATE OF UTAH

DIGITALLY SIGNED: 07/18/2024



| NO. | DATE | DSGN | DR | CHK | APVD | BY | REVISION |
|---|---|---|---|---|---|---|---|
| | | H IDREES | A CUGLIAT | J JAMES | APVD | J JAMES | |

JORDAN VALLEY WATER CONSERVANCY DISTRICT

11800 SOUTH ZONE C RESERVOIRS



Jacobs

GENERAL

ELECTRICAL LEGEND - 2

100% CONFORMED

VERIFY SCALE

BAR IS ONE INCH ON ORIGINAL DRAWING. 0 1"

| | |
|---|---|
| DATE | JULY 2024 |
| PROJ | W7Y49600 |
| DWG | G-14 |
| SHEET | 14 of 79 |

| CRITICAL ROADWAY COORDINATE TABLE | | | |
|---|---|---|---|
| POINT NO | NORTHING | EASTING | ELEVATION |
| 1 | 7364426.82 | 1482908.73 | 5136.60 |
| 2 | 7364441.74 | 1482929.23 | 5135.82 |
| 3 | 7364538.75 | 1483077.39 | 5137.30 |
| 4 | 7364509.13 | 1483107.06 | 5136.60 |
| 5 | 7364535.59 | 1483133.41 | 5137.00 |
| 6 | 7364566.78 | 1483102.08 | 5138.65 |
| 7 | 7364587.42 | 1483097.26 | 5139.49 |
| 8 | 7364771.68 | 1483112.54 | 5147.49 |
| 9 | 7364810.31 | 1483152.93 | 5148.00 |
| 10 | 7364811.26 | 1483060.29 | 5150.85 |
| 11 | 7364788.07 | 1483092.88 | 5148.45 |
| 12 | 7364759.91 | 1483072.30 | 5148.36 |
| 13 | 7364743.76 | 1483083.15 | 5147.18 |
| 14 | 7364731.34 | 1483095.14 | 5145.74 |
| 15 | 7364758.29 | 1482883.13 | 5160.49 |
| 16 | 7364736.69 | 1482753.46 | 5160.99 |
| 17 | 7364736.69 | 1482677.67 | 5160.99 |
| 18 | 7364702.98 | 1482601.82 | 5160.98 |
| 19 | 7364736.69 | 1482915.66 | 5160.98 |
| 20 | 7364591.44 | 1482770.62 | 5160.23 |
| 21 | 7364591.44 | 1482823.02 | 5160.23 |
| 22 | 7364456.82 | 1482708.08 | 5137.96 |
| 23 | 7364456.82 | 1482910.60 | 5135.60 |
| 24 | 7364441.04 | 1482699.55 | 5138.25 |
| 25 | 7364426.82 | 1482720.87 | 5137.87 |
| 26 | 7364418.25 | 1482723.20 | 5137.69 |
| 27 | 7364306.82 | 1482723.30 | 5135.50 |
| 28 | 7364306.82 | 1483101.66 | 5132.48 |
| 29 | 7364441.74 | 1483101.66 | 5135.82 |
| 30 | 7364730.79 | 1483111.13 | 5145.63 |
| 31 | 7364751.76 | 1483103.85 | 5146.73 |
| 32 | 7364736.69 | 1482874.90 | 5161.00 |
| 33 | 7364714.39 | 1482883.28 | 5161.30 |
| 34 | 7364720.35 | 1482857.28 | 5161.05 |
| 35 | 7364720.35 | 1482736.05 | 5161.05 |
| 36 | 7364714.39 | 1482710.05 | 5161.30 |
| 37 | 7364784.22 | 1482801.86 | 5153.67 |
| 38 | 7364591.44 | 1482787.65 | 5158.95 |
| 39 | 7364500.49 | 1482784.67 | 5137.92 |
| 40 | 7364484.10 | 1482775.14 | 5135.13 |
| 41 | 7364464.90 | 1482735.42 | 5135.99 |
| 42 | 7364506.26 | 1482599.16 | 5144.54 |
| 43 | 7364461.61 | 1482866.74 | 5133.88 |
| 44 | 7364466.65 | 1482958.51 | 5135.00 |
| 45 | 7364579.19 | 1483071.86 | 5135.00 |
| 46 | 7364368.82 | 1482723.29 | 5136.71 |
| 47 | 7364368.82 | 1482841.29 | 5135.86 |
| 48 | 7364426.82 | 1482841.29 | 5137.05 |
| 49 | 7364500.58 | 1483110.63 | 5136.32 |
| 50 | 7364362.18 | 1483110.63 | 5130.86 |
| 51 | 7364362.18 | 1483150.63 | 5130.25 |
| 52 | 7364402.18 | 1483150.63 | 5131.76 |
| 53 | 7364402.18 | 1483122.63 | 5132.16 |
| 54 | 7364524.76 | 1483122.63 | 5136.83 |

| NORTH ACCESS RD | | | | | | |
|---|---|---|---|---|---|---|
| SEGMENT | LINE/CHORD LENGTH | RADIUS | LINE/CHORD DIRECTION | DELTA | N/E START | N/E END |
| L1 | 23.7' | | S89° 59' 59.99"W | | STA. 0+00.00<br>N: 7364751.76<br>E: 1483103.85 | STA. 0+23.73<br>N: 7364751.76<br>E: 1483080.12 |
| C1 | 5.4' | 200' | N89° 13'W | 001° 33' 20" | STA. 0+23.73<br>N: 7364751.76<br>E: 1483080.12 | STA. 0+29.16<br>N: 7364751.83<br>E: 1483074.69 |
| L2 | 62.8' | | N86° 53' 18.38"W | | STA. 0+34.59<br>N: 7364752.05<br>E: 1483069.26 | STA. 0+97.42<br>N: 7364755.46<br>E: 1483006.53 |
| C2 | 5.4' | 200' | N87° 40'W | 001° 33' 20" | STA. 0+97.42<br>N: 7364755.46<br>E: 1483006.53 | STA. 1+02.85<br>N: 7364755.68<br>E: 1483001.10 |
| L3 | 81.3' | | S89° 59' 59.99"W | | STA. 1+08.28<br>N: 7364755.76<br>E: 1482995.67 | STA. 1+89.56<br>N: 7364755.76<br>E: 1482914.39 |
| C3 | 23.8' | 84' | S81° 52'W | 016° 15' 40" | STA. 1+89.56<br>N: 7364755.76<br>E: 1482914.39 | STA. 2+13.40<br>N: 7364752.40<br>E: 1482890.87 |
| L4 | 11.0' | | S57° 28' 37.65"W | | STA. 2+37.24<br>N: 7364742.58<br>E: 1482869.23 | STA. 2+48.20<br>N: 7364736.69<br>E: 1482859.99 |

| ENTRANCE ROAD | | | | | | |
|---|---|---|---|---|---|---|
| SEGMENT | LINE/CHORD LENGTH | RADIUS | LINE/CHORD DIRECTION | DELTA | N/E START | N/E END |
| L1 | 192.2' | | S01° 58' 05.34"W | | STA. 0+00.00<br>N: 7364826.12<br>E: 1483106.40 | STA. 1+92.22<br>N: 7364634.01<br>E: 1483099.80 |
| C1 | 31.7' | 108' | S10° 24'W | 016° 52' 40" | STA. 1+92.22<br>N: 7364634.01<br>E: 1483099.80 | STA. 2+24.03<br>N: 7364602.84<br>E: 1483094.08 |
| L2 | 31.8' | | S18° 50' 47.58"W | | STA. 2+24.03<br>N: 7364602.84<br>E: 1483094.08 | STA. 2+55.87<br>N: 7364572.71<br>E: 1483083.79 |
| C2 | 198.2' | 183' | S51° 38'W | 065° 33' 30" | STA. 2+55.87<br>N: 7364572.71<br>E: 1483083.79 | STA. 4+65.25<br>N: 7364449.69<br>E: 1482928.45 |

| EAST ACCESS ROAD | | | | | | |
|---|---|---|---|---|---|---|
| SEGMENT | LINE/CHORD LENGTH | RADIUS | LINE/CHORD DIRECTION | DELTA | N/E START | N/E END |
| C1 | 224.7' | 163' | N43° 34'W | 087° 08' 20" | STA. -0+00.00<br>N: 7364449.03<br>E: 1482699.95 | STA. 2+47.90<br>N: 7364611.82<br>E: 1482545.08 |
| L1 | 0.9' | | N00° 00' 00.00"E | | STA. 2+47.90<br>N: 7364611.82<br>E: 1482545.08 | STA. 2+48.77<br>N: 7364612.69<br>E: 1482545.08 |
| C2 | 164.0' | 116' | N45° 00'E | 090° 00' 00" | STA. 2+48.77<br>N: 7364612.69<br>E: 1482545.08 | STA. 4+30.98<br>N: 7364728.69<br>E: 1482661.08 |
| L2 | 14.4' | | N90° 00' 00.00"E | | STA. 4+30.98<br>N: 7364728.69<br>E: 1482661.08 | STA. 4+45.34<br>N: 7364728.69<br>E: 1482675.44 |

| INLET / OUTLET PIPING - EAST | | | |
|---|---|---|---|
| ELEMENT | STATION | NORTHING | EASTING |
| POB | 97+19.50 | 7364537.79 | 1483119.64 |
| PI | 98+86.53 | 7364420.68 | 1483000.55 |
| TEE | 100+87.16 | 7364420.68 | 1482799.91 |
| WYE | 101+12.00 | 7364445.52 | 1482799.91 |
| PI | 101+56.97 | 7364490.49 | 1482799.91 |
| POE | 102+56.68 | 7364561.00 | 1482870.42 |

| INLET / OUTLET PIPING - WEST | | | |
|---|---|---|---|
| ELEMENT | STATION | NORTHING | EASTING |
| WYE | 104+12.00 | 7364445.52 | 1482799.91 |
| PI | 104+21.20 | 7364452.02 | 1482793.41 |
| PI | 104+59.67 | 7364490.49 | 1482793.41 |
| POE | 105+59.38 | 7364561.00 | 1482722.91 |

| OVERFLOW PIPING - EAST | | | |
|---|---|---|---|
| ELEMENT | STATION | NORTHING | EASTING |
| POB | 207+64.44 | 7364564.09 | 1482865.74 |
| PI | 207+84.44 | 7364549.95 | 1482851.59 |
| OVERFLOW JUNCTION | 208+76.31 | 7364504.21 | 1482771.91 |

| OVERFLOW PIPING - WEST | | | |
|---|---|---|---|
| ELEMENT | STATION | NORTHING | EASTING |
| POB | 200+00.00 | 7364558.17 | 1482717.96 |
| OVERFLOW JUNCTION | 200+76.31 | 7364504.21 | 1482771.91 |
| POE | 205+00.00 | 7364080.52 | 1482771.91 |

| LEAK DETECTION / DRAINAGE PIPING - EAST | | | |
|---|---|---|---|
| ELEMENT | STATION | NORTHING | EASTING |
| POB | 219+80.56 | 7364552.84 | 1482887.72 |
| PI | 220+81.35 | 7364481.57 | 1482816.45 |
| PI | 221+18.02 | 7364480.82 | 1482779.91 |
| LEAK DETECTION BOX | 221+18.02 | 7364480.82 | 1482779.91 |

| LEAK DETECTION / DRAINAGE PIPING - WEST | | | |
|---|---|---|---|
| ELEMENT | STATION | NORTHING | EASTING |
| POB | 210+00.00 | 7364551.99 | 1482702.99 |
| PI | 210+82.17 | 7364480.82 | 1482744.07 |
| LEAK DETECTION BOX | 211+18.02 | 7364480.82 | 1482779.91 |
| 60" SD MH #1 | 211+67.02 | 7364431.82 | 1482779.91 |
| POE | 215+18.32 | 7364080.52 | 1482779.91 |

| HIGH PRESSURE WASHDOWN FROM 48" W TO VALVE VAULT | | | |
|---|---|---|---|
| ELEMENT | STATION | NORTHING | EASTING |
| POB | 120+00.00 | 7364516.07 | 1483072.04 |
| PI | 120+75.71 | 7364462.82 | 1483018.22 |
| PI | 122+21.05 | 7364462.82 | 1482872.89 |
| PI | 122+51.91 | 7364477.82 | 1482845.91 |
| PI | 122+77.91 | 7364477.82 | 1482819.91 |
| PI | 122+86.87 | 7364471.32 | 1482813.75 |
| POE | 122+90.70 | 7364471.32 | 1482809.91 |

LICENSED PROFESSIONAL ENGINEER
No. 8760818-2202
RYAN WILLEITNER
STATE OF UTAH
DIGITALLY SIGNED: 07/18/2024



| NO. | DATE | DR | REVISION | CHK | APVD | BY | APVD |
|---|---|---|---|---|---|---|---|
| DSGN | R WILLEITNER | C HOGGARD | | B PHELPS | | R WILLEITNER | |

JORDAN VALLEY WATER CONSERVANCY DISTRICT
11800 SOUTH ZONE C RESERVOIRS

Jacobs

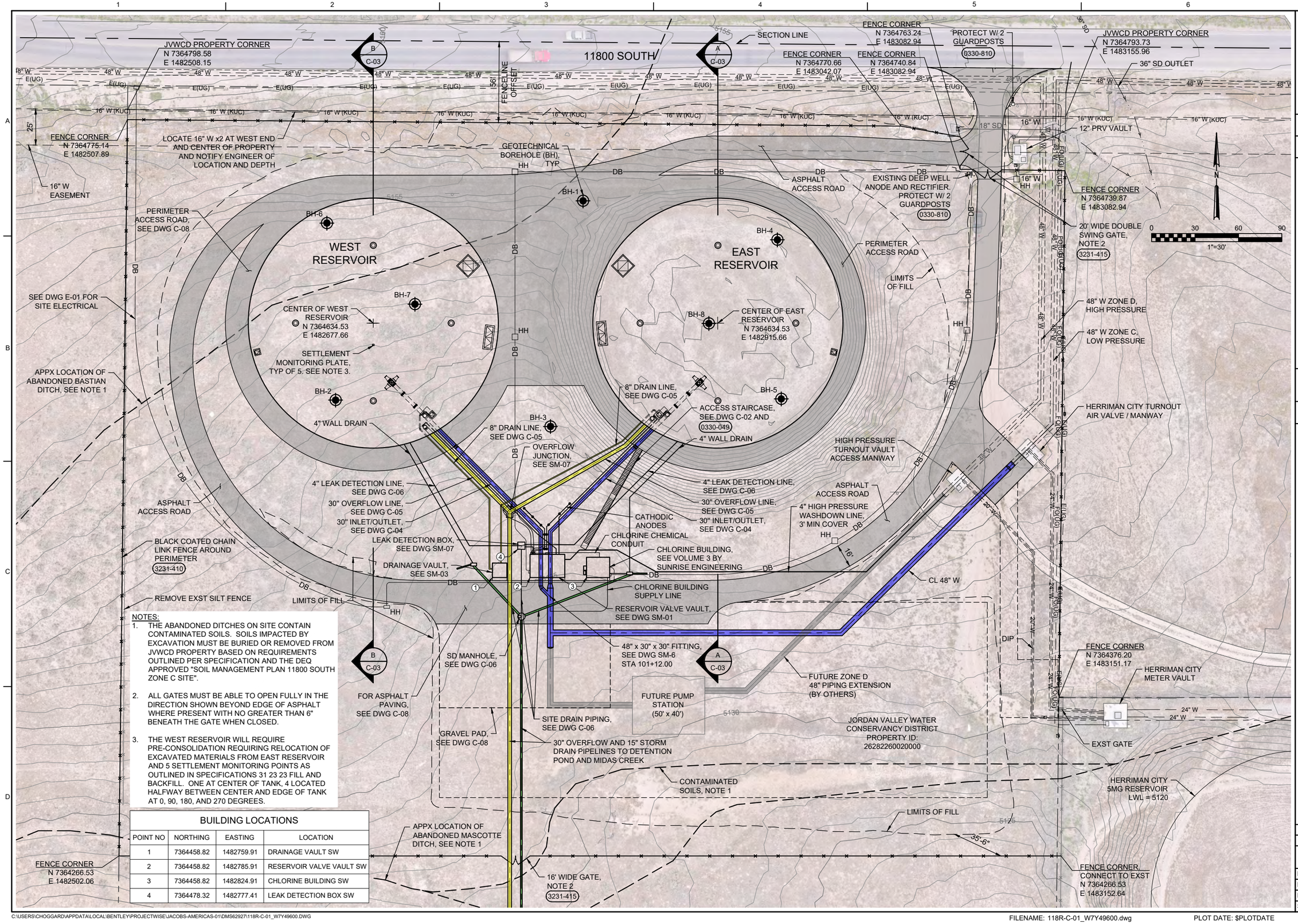
GENERAL

PIPELINE, ROADWAY, AND DRAINAGE ALIGNMENT AND COORDINATE TABLES

VERIFY SCALE
BAR IS ONE INCH ON ORIGINAL DRAWING.
0 1"

| | |
|---|---|
| DATE | JULY 2024 |
| PROJ | W7Y49600 |
| DWG | G-15 |
| SHEET | 15 of 79 |

100% CONFORMED




NOTES:

1. THE ABANDONED DITCHES ON SITE CONTAIN CONTAMINATED SOILS. SOILS IMPACTED BY EXCAVATION MUST BE BURIED OR REMOVED FROM JVWCD PROPERTY BASED ON REQUIREMENTS OUTLINED PER SPECIFICATION AND THE DEQ APPROVED "SOIL MANAGEMENT PLAN 11800 SOUTH ZONE C SITE".
2. ALL GATES MUST BE ABLE TO OPEN FULLY IN THE DIRECTION SHOWN BEYOND EDGE OF ASPHALT WHERE PRESENT WITH NO GREATER THAN 6" BENEATH THE GATE WHEN CLOSED.
3. THE WEST RESERVOIR WILL REQUIRE PRE-CONSOLIDATION REQUIRING RELOCATION OF EXCAVATED MATERIALS FROM EAST RESERVOIR AND 5 SETTLEMENT MONITORING POINTS AS OUTLINED IN SPECIFICATIONS 31 23 23 FILL AND BACKFILL. ONE AT CENTER OF TANK, 4 LOCATED HALFWAY BETWEEN CENTER AND EDGE OF TANK AT 0, 90, 180, AND 270 DEGREES.

BUILDING LOCATIONS

| POINT NO | NORTHING | EASTING | LOCATION |
|---|---|---|---|
| 1 | 7364458.82 | 1482759.91 | DRAINAGE VAULT SW |
| 2 | 7364458.82 | 1482785.91 | RESERVOIR VALVE VAULT SW |
| 3 | 7364458.82 | 1482824.91 | CHLORINE BUILDING SW |
| 4 | 7364478.32 | 1482777.41 | LEAK DETECTION BOX SW |

LICENSED PROFESSIONAL ENGINEER
No. 12561173
TYLER WITHERS
STATE OF UTAH
DIGITALLY SIGNED: 07/18/2024



| NO. | DATE | DSGN | DR | CHK | APVD | BY | REVISION | CHK | APVD | BY |
|---|---|---|---|---|---|---|---|---|---|---|
| | T WITHERS | | C HOGGARD | B PHELPS | | R WILLEITNER | | | | |

JORDAN VALLEY WATER CONSERVANCY DISTRICT

11800 SOUTH ZONE C RESERVOIRS



Jacobs

CIVIL

SITE PLAN

100% CONFORMED

VERIFY SCALE

BAR IS ONE INCH ON ORIGINAL DRAWING. 0 1"

| | |
|---|---|
| DATE | JULY 2024 |
| PROJ | W7Y49600 |
| DWG | C-01 |
| SHEET | 16 of 79 |

C:\USERS\CHOGGARD\APPDATA\LOCAL\BENTLEY\PROJECTWISE\JACOBS-AMERICAS-01\DMS62927\118R-C-01_W7Y49600.DWG

FILENAME: 118R-C-01_W7Y49600.dwg PLOT DATE: $PLOTDATE PLOT TIME: $PLOTTIME

11800 SOUTH

SECTION LINE

WEST RESERVOIR

EAST RESERVOIR

PERIMETER ACCESS ROAD

PROTECT EXST CATHODIC RECTIFIER AND WELL DURING CONSTRUCTION

3:1 SLOPES, TYP

36" SD OUTLET

12" PRV VAULT

48" W ZONE D, HIGH PRESSURE

48" W ZONE C, LOW PRESSURE

KENNECOTT LAND COMPANY

APPX LOCATION OF ABANDONED BASTIAN DITCH

VEHICLE VAULT ACCESS AREA, SEE LANDSCAPING PLAN

CHLORINE BUILDING

RESERVOIR VALVE VAULT

DRAINAGE VAULT

LEAK DETECTION VAULT

HH STORMWATER CATCHBASIN, TYP

FILL LIMITS

CL 48" W

JORDAN VALLEY WATER CONSERVANCY DISTRICT PROPERTY

FUTURE PUMP STATION (50' x 40')

HERRIMAN CITY METER VAULT

HERRIMAN CITY TURNOUT AIR VALVE / MANWAY

HIGH PRESSURE TURNOUT VAULT MANWAY

HERRIMAN CITY 5MG RESERVOIR

APPX LOCATION OF ABANDONED MASCOTTE DITCH

SEE DWG C-11 FOR DETENTION POND GRADING

NOTES:

1. SEE DWG G-15 FOR COORDINATE TABLES OF GRADING. GRADING DIGITAL MODEL FILES AVAILABLE UPON REQUEST.

0 30 60 90

1"=30'

LICENSED PROFESSIONAL ENGINEER
No. 12561173
TYLER WITHERS
STATE OF UTAH

DIGITALLY SIGNED: 07/18/2024



| NO. | DATE | DR | REVISION | CHK | APVD | BY | APVD |
|---|---|---|---|---|---|---|---|
| DSGN | T WITHERS | C HOGGARD | | B PHELPS | | R WILLEITNER | |

JORDAN VALLEY WATER CONSERVANCY DISTRICT

11800 SOUTH ZONE C RESERVOIRS

Jacobs

CIVIL

GENERAL GRADING PLAN



100% CONFORMED

VERIFY SCALE

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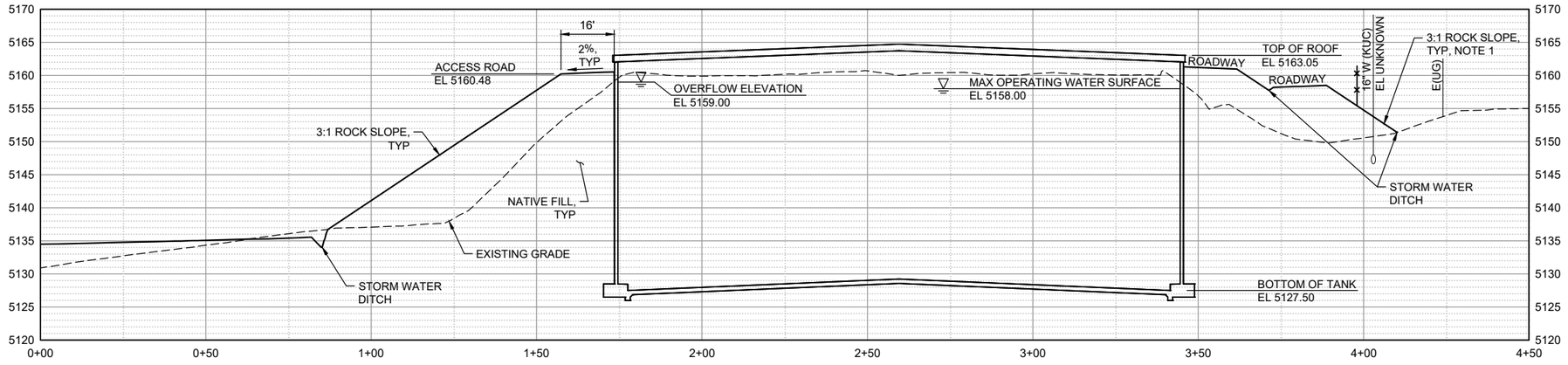
| | |
|---|---|
| DATE | JULY 2024 |
| PROJ | W7Y49600 |
| DWG | C-02 |
| SHEET | 17 of 79 |

C:\USERS\CHOGGARD\APPDATA\LOCAL\BENTLEY\PROJECTWISE\JACOBS-AMERICAS-01\DMS62927\118R-C-02_W7Y49600.DWG

FILENAME: 118R-C-02_W7Y49600.dwg PLOT DATE: $PLOTDATE PLOT TIME: $PLOTTIME



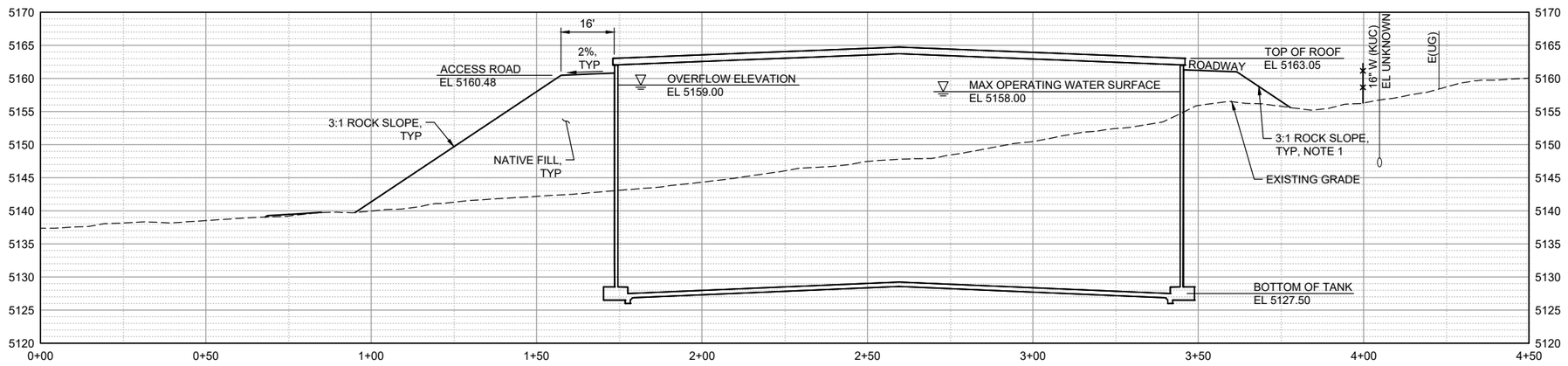

## A SECTION - EAST RESERVOIR

1" = 20'

C-1

NOTES:

1. LANDSCAPE AND VEGETATE SLOPES PER DWG C-10 AND SPECIFICATION SECTION 32 92 00.




## B SECTION - WEST RESERVOIR

1" = 20'

C-1

LICENSED PROFESSIONAL ENGINEER
No. 12561173
TYLER WITHERS
STATE OF UTAH

DIGITALLY SIGNED: 07/18/2024

| NO. | DATE | DR | REVISION | CHK | APVD | BY | APVD |
|---|---|---|---|---|---|---|---|
| DSGN | T WITHERS | C HOGGARD | | B PHELPS | | R WILLEITNER | |



JORDAN VALLEY WATER CONSERVANCY DISTRICT

11800 SOUTH ZONE C RESERVOIRS

Jacobs

CIVIL

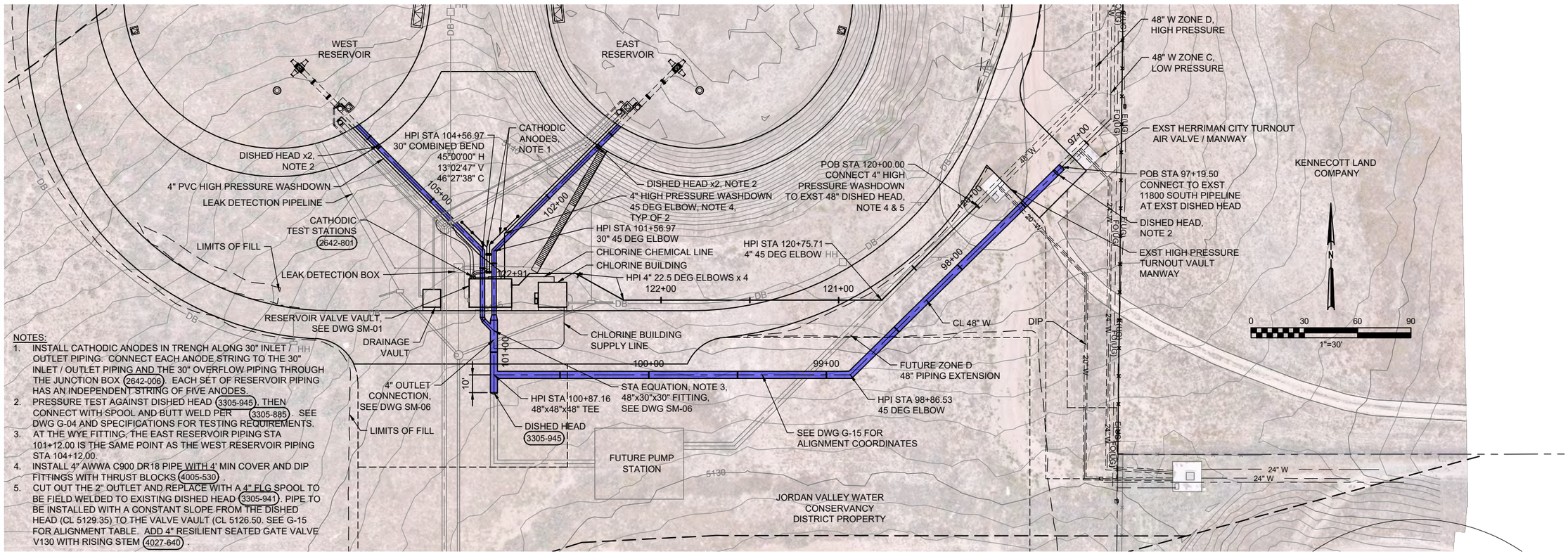
GENERAL GRADING CROSS SECTIONS

100% CONFORMED

VERIFY SCALE

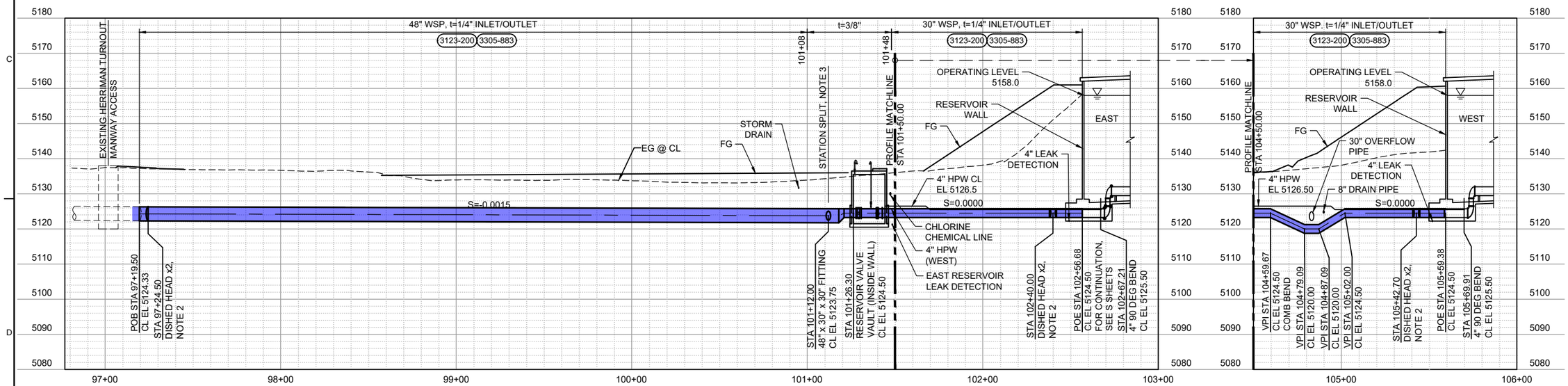
BAR IS ONE INCH ON ORIGINAL DRAWING. 0 1"

| | |
|---|---|
| DATE | JULY 2024 |
| PROJ | W7Y49600 |
| DWG | C-03 |
| SHEET | 18 of 79 |




# INLET / OUTLET PIPING PLAN

1" = 30'




## EAST RESERVOIR - 48" - 30" INLET / OUTLET PROFILE

1" = 30'

## WEST RESERVOIR - 30" INLET / OUTLET PROFILE

1" = 30'

LICENSED PROFESSIONAL ENGINEER
No. 12561173
TYLER WITHERS
STATE OF UTAH
DIGITALLY SIGNED: 07/18/2024



| NO. | DATE | DR | REVISION | CHK | APVD | BY | APVD |
|---|---|---|---|---|---|---|---|
| DSGN | T WITHERS | C HOGGARD | | B PHELPS | | R WILLEITNER | |

JORDAN VALLEY WATER CONSERVANCY DISTRICT

11800 SOUTH ZONE C RESERVOIRS



Jacobs

CIVIL

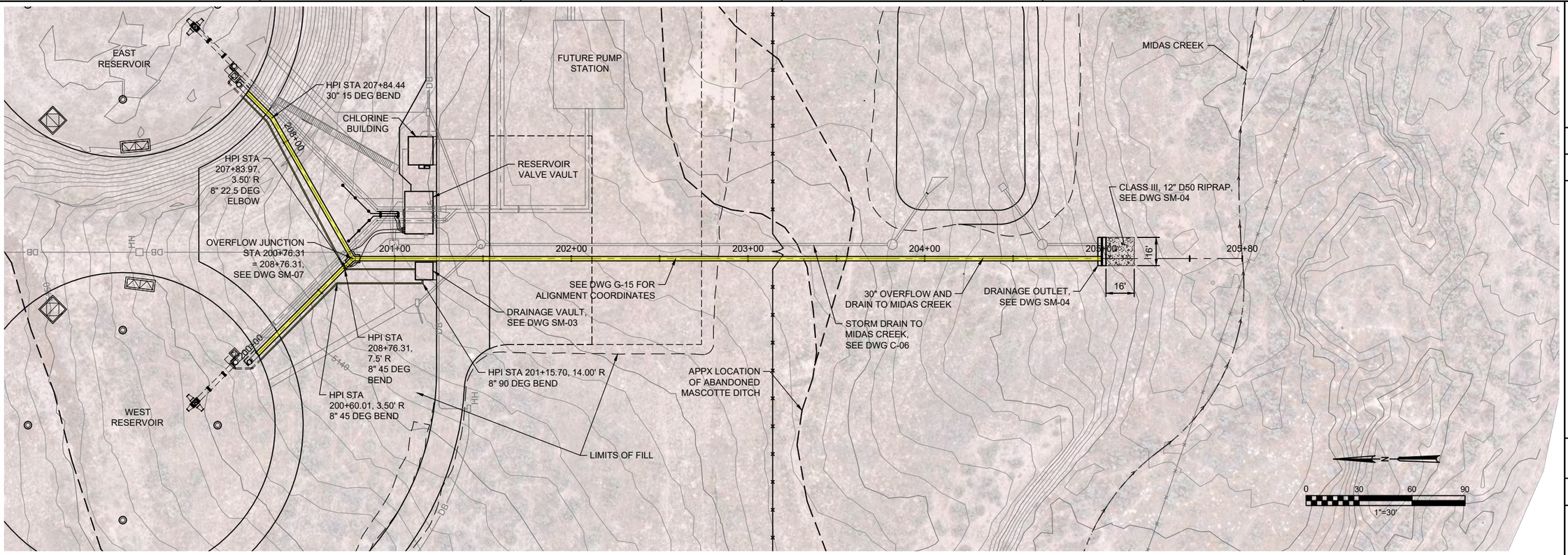
INLET / OUTLET PIPING PLAN AND PROFILE

VERIFY SCALE

BAR IS ONE INCH ON ORIGINAL DRAWING. 0 1"

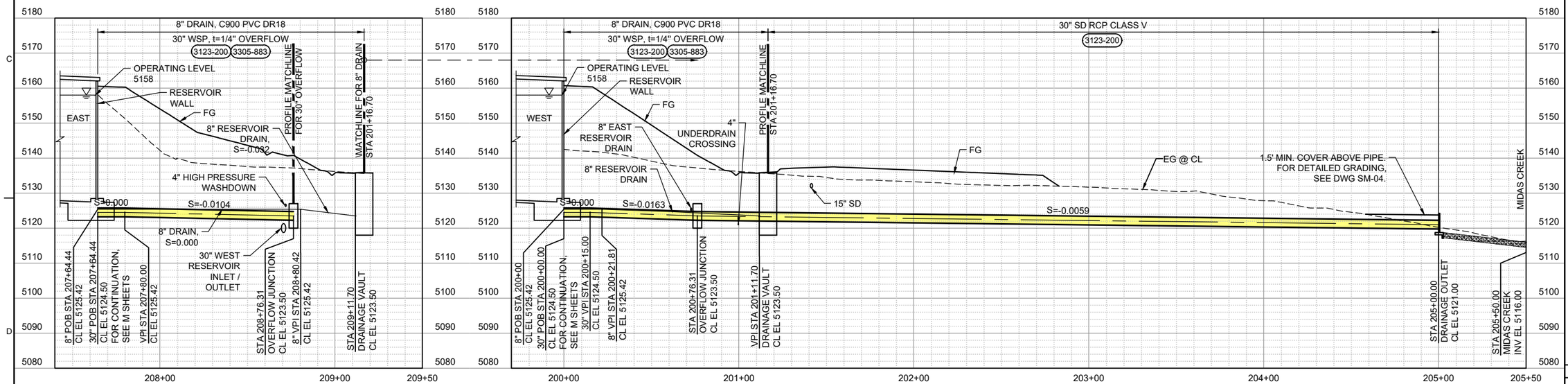
| | |
|---|---|
| DATE | JULY 2024 |
| PROJ | W7Y49600 |
| DWG | C-04 |
| SHEET | 19 of 79 |

100% CONFORMED




## OVERFLOW AND DRAIN PIPING PLAN

1" = 30'




## EAST RESERVOIR - 30" OVERFLOW AND 8" RESERVOIR DRAIN PIPES TO DRAINAGE VAULT PROFILE

1" = 30'

## WEST RESERVOIR - 30" OVERFLOW, 8" RESERVOIR DRAIN PIPES, AND 30" COMBINED DRAIN TO MIDAS CREEK PROFILE

1" = 30'

LICENSED PROFESSIONAL ENGINEER
No. 12561173
TYLER WITHERS
STATE OF UTAH
DIGITALLY SIGNED: 07/18/2024



| NO. | DATE | DSGN | DR | CHK | APVD | BY | REVISION |
|---|---|---|---|---|---|---|---|
| | | T WITHERS | C HOGGARD | B PHELPS | APVD | R WILLEITNER | |

JORDAN VALLEY WATER CONSERVANCY DISTRICT
11800 SOUTH ZONE C RESERVOIRS



Jacobs

CIVIL

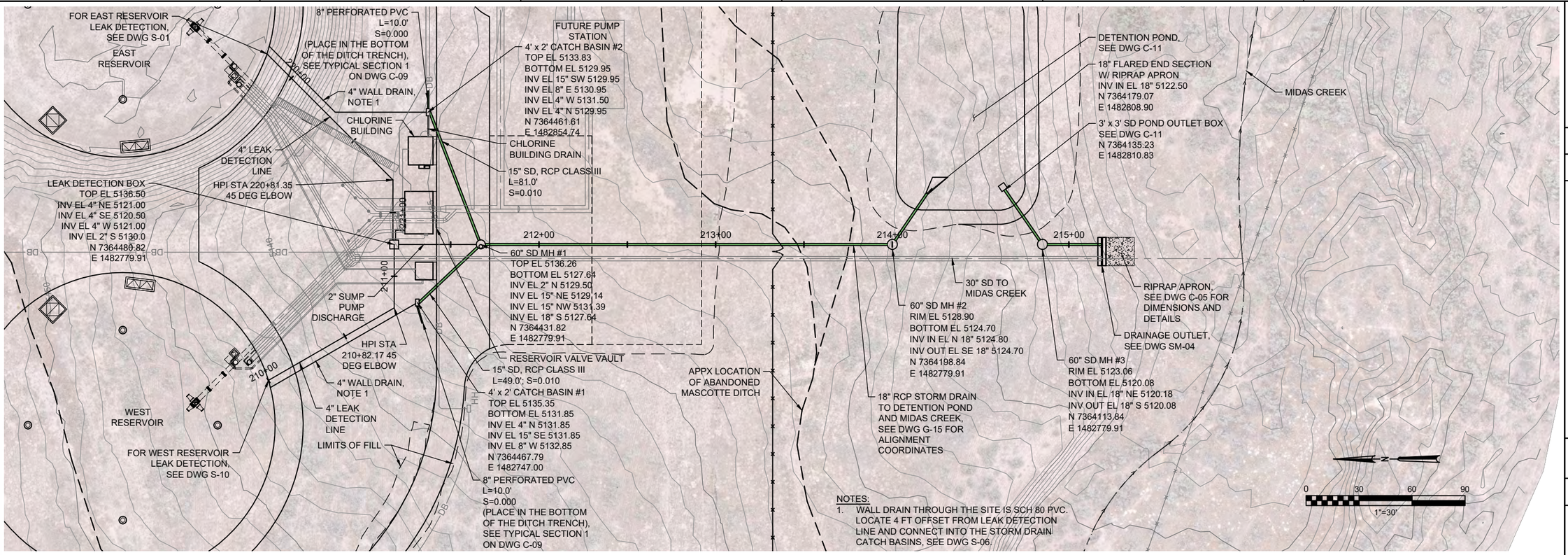
RESERVOIR OVERFLOW AND DRAIN PIPING PLAN AND PROFILE

100% CONFORMED

VERIFY SCALE

BAR IS ONE INCH ON ORIGINAL DRAWING.
0 1"

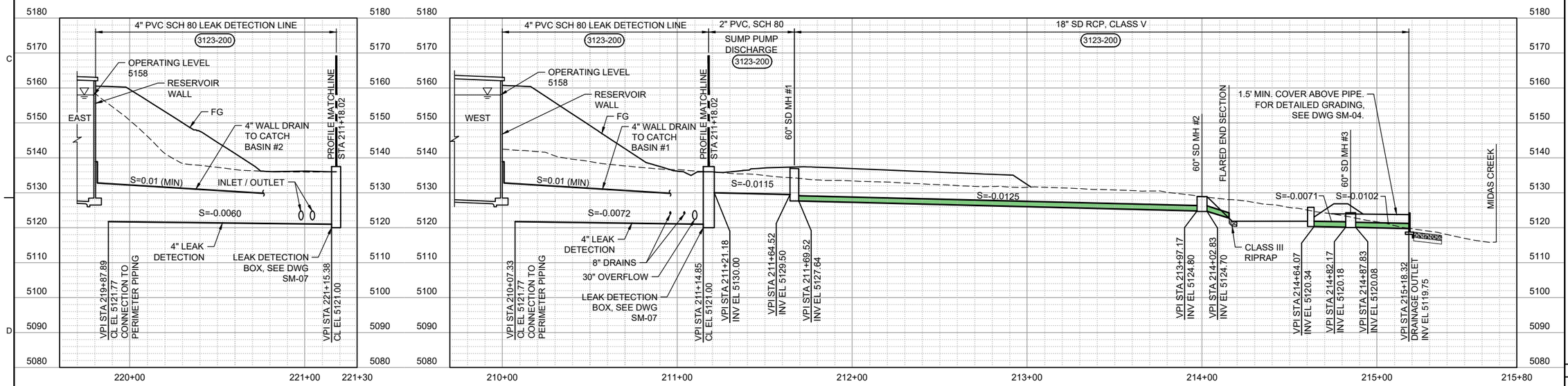
| | |
|---|---|
| DATE | JULY 2024 |
| PROJ | W7Y49600 |
| DWG | C-05 |
| SHEET | 20 of 79 |




NOTES:
1. WALL DRAIN THROUGH THE SITE IS SCH 80 PVC. LOCATE 4 FT OFFSET FROM LEAK DETECTION LINE AND CONNECT INTO THE STORM DRAIN CATCH BASINS, SEE DWG S-06.

## LEAK DETECTION AND SITE DRAINAGE PIPING PLAN

1" = 30'




## EAST RESERVOIR - 4" LEAK DETECTION PROFILE

1" = 30'

## WEST RESERVOIR - 4" LEAK DETECTION AND 18" STORM DRAIN TO MIDAS CREEK PROFILE

1" = 30'

LICENSED PROFESSIONAL ENGINEER No. 12561173 TYLER WITHERS STATE OF UTAH

DIGITALLY SIGNED: 07/18/2024



| NO. | DATE | DR | REVISION | CHK | APVD | BY | APVD |
|---|---|---|---|---|---|---|---|
| DSGN | T WITHERS | C HOGGARD | | B PHELPS | | R WILLEITNER | |

JORDAN VALLEY WATER CONSERVANCY DISTRICT

11800 SOUTH ZONE C RESERVOIRS



Jacobs

CIVIL

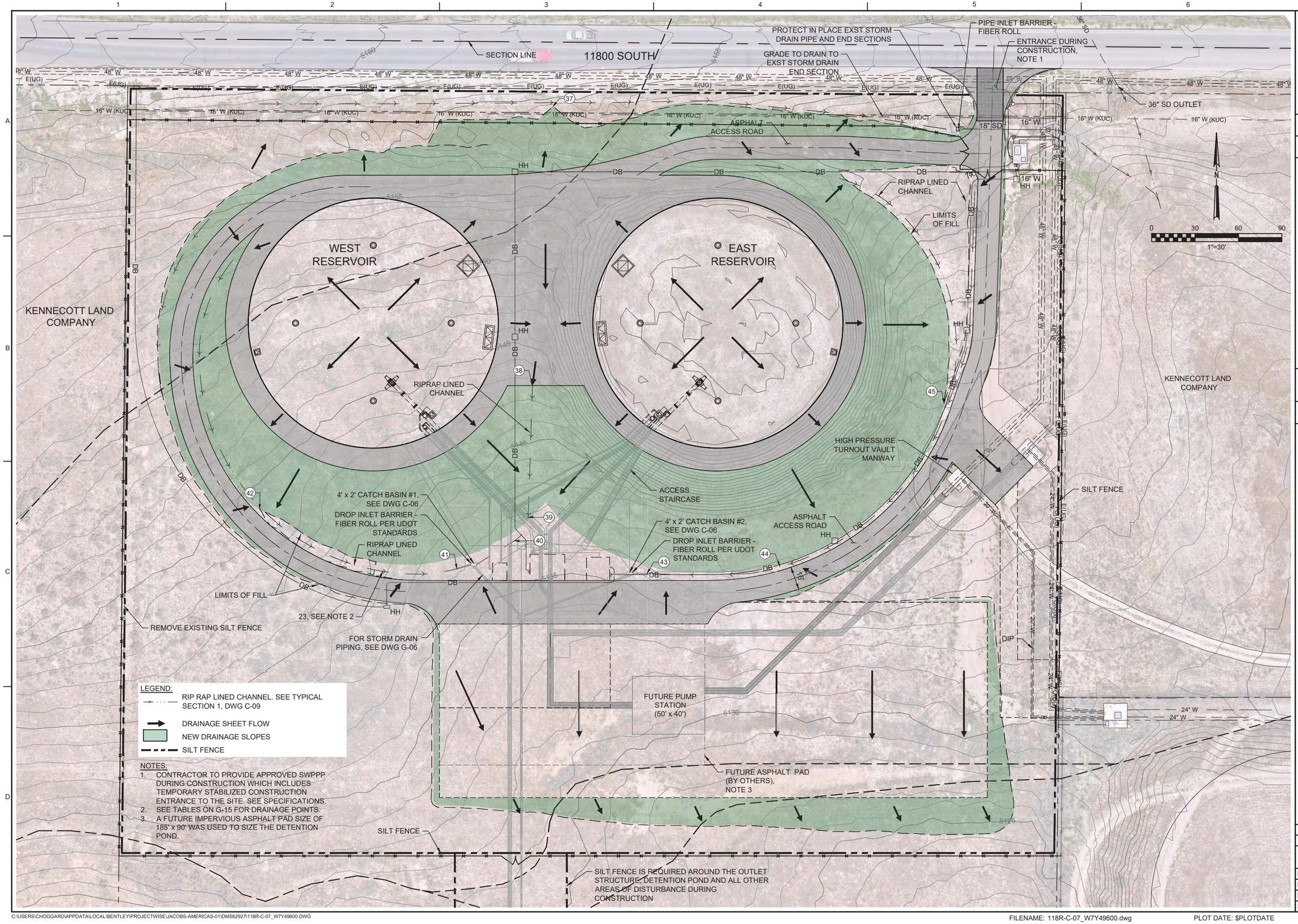
DRAIN PIPING PLAN AND PROFILE

VERIFY SCALE

BAR IS ONE INCH ON ORIGINAL DRAWING. 0 1"

| | |
|---|---|
| DATE | JULY 2024 |
| PROJ | W7Y49600 |
| DWG | C-06 |
| SHEET | 21 of 79 |

100% CONFORMED




LICENSED PROFESSIONAL ENGINEER
No. 179190
JAMES C. DAHL, JR.
STATE OF UTAH
DIGITALLY SIGNED: 07/18/2024



| NO. | DATE | DSGN | DR | CHK | APVD | BY | REVISION |
|---|---|---|---|---|---|---|---|
| | | J DAHL | C HOGGARD | B PHELPS | APVD | R WILLEITNER | |

JORDAN VALLEY WATER CONSERVANCY DISTRICT

11800 SOUTH ZONE C RESERVOIRS



Jacobs

CIVIL

SITE DRAINAGE AND EROSION CONTROL PLAN

100% CONFORMED

VERIFY SCALE

BAR IS ONE INCH ON ORIGINAL DRAWING. 0 1"

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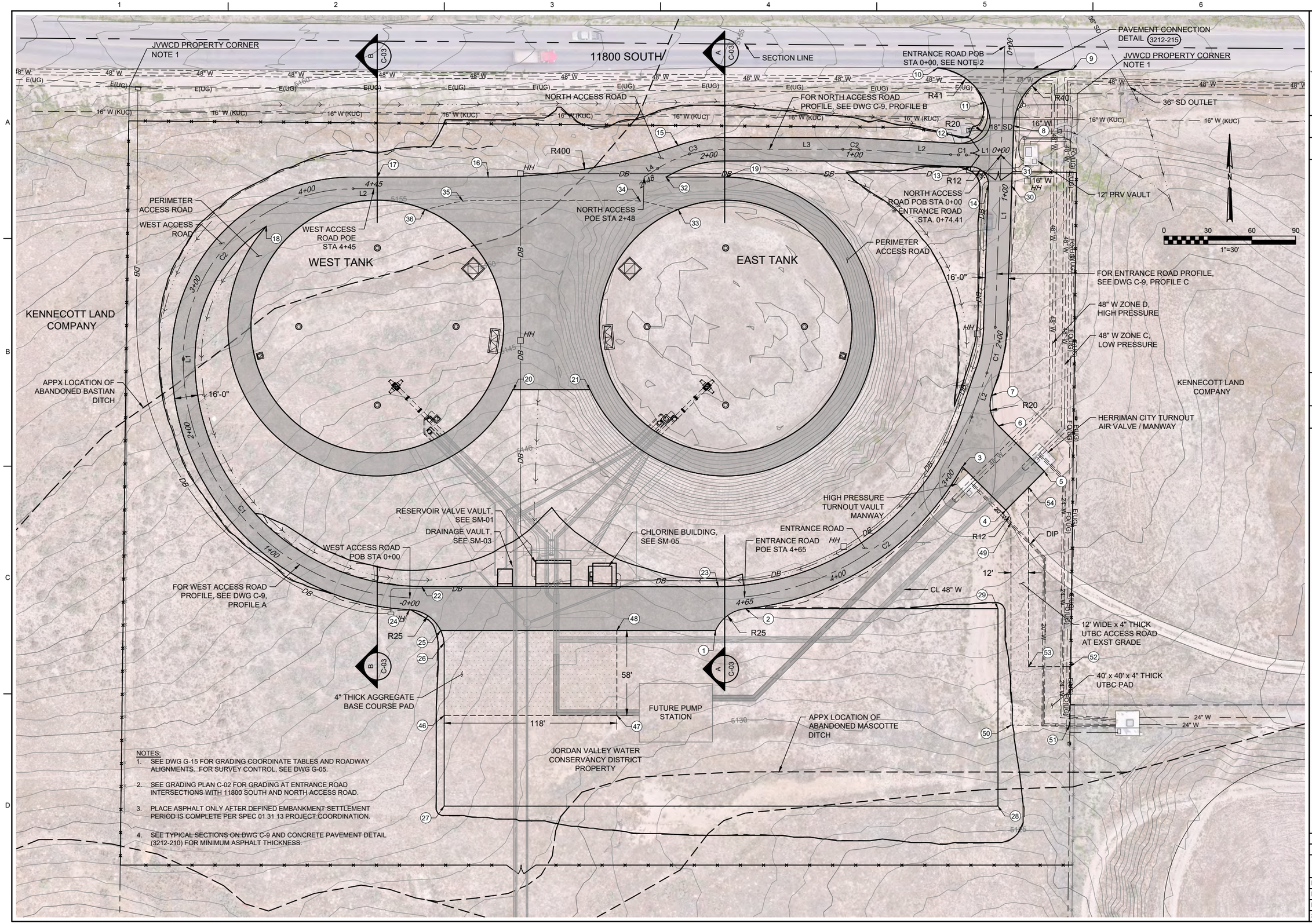
|---|---|
| DATE | JULY 2024 |
| PROJ | W7Y49600 |
| DWG | C-07 |
| SHEET | 22 of 79 |




NOTES:

1. SEE DWG G-15 FOR GRADING COORDINATE TABLES AND ROADWAY ALIGNMENTS. FOR SURVEY CONTROL, SEE DWG G-05.
2. SEE GRADING PLAN C-02 FOR GRADING AT ENTRANCE ROAD INTERSECTIONS WITH 11800 SOUTH AND NORTH ACCESS ROAD.
3. PLACE ASPHALT ONLY AFTER DEFINED EMBANKMENT SETTLEMENT PERIOD IS COMPLETE PER SPEC 01 31 13 PROJECT COORDINATION.
4. SEE TYPICAL SECTIONS ON DWG C-9 AND CONCRETE PAVEMENT DETAIL (3212-210) FOR MINIMUM ASPHALT THICKNESS.

LICENSED PROFESSIONAL ENGINEER
No. 188292
TYLER R. YORGASON
STATE OF UTAH
DIGITALLY SIGNED: 07/18/2024



| NO. | DATE | DR | REVISION | CHK | BY | APVD |
|---|---|---|---|---|---|---|
| DSGN | T YORGASON | C HOGGARD | | B PHELPS | R WILLEITNER | |

JORDAN VALLEY WATER
CONSERVANCY DISTRICT

11800 SOUTH ZONE C RESERVOIRS



Jacobs

CIVIL

ROADWAY PLAN

100% CONFORMED

VERIFY SCALE

BAR IS ONE INCH ON ORIGINAL DRAWING.
0 1"

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| DATE | JULY 2024 |
| PROJ | W7Y49600 |
| DWG | C-08 |
| SHEET | 23 of 79 |

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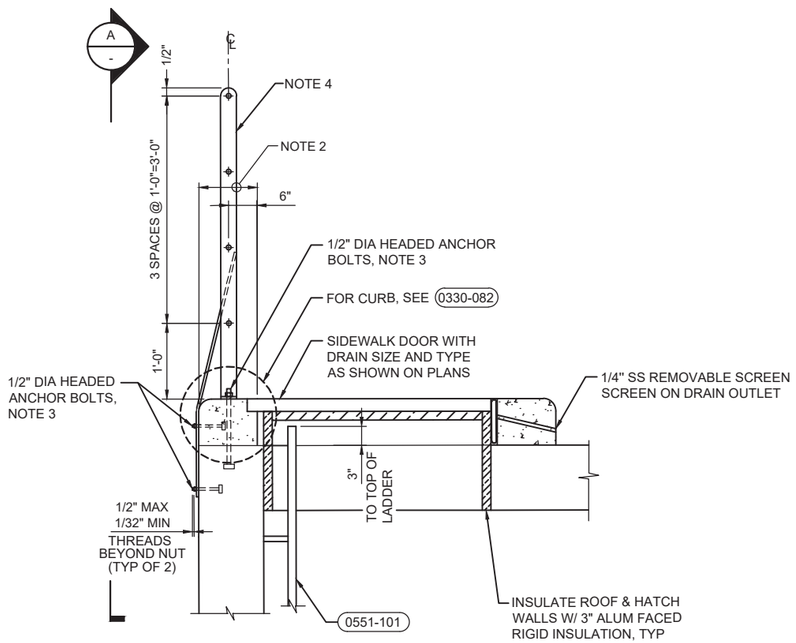
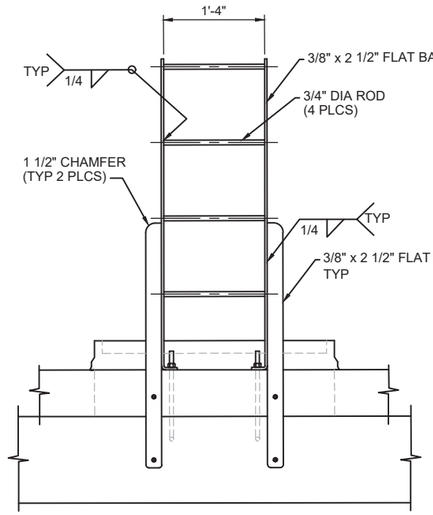



## EXTERIOR LADDER

NTS



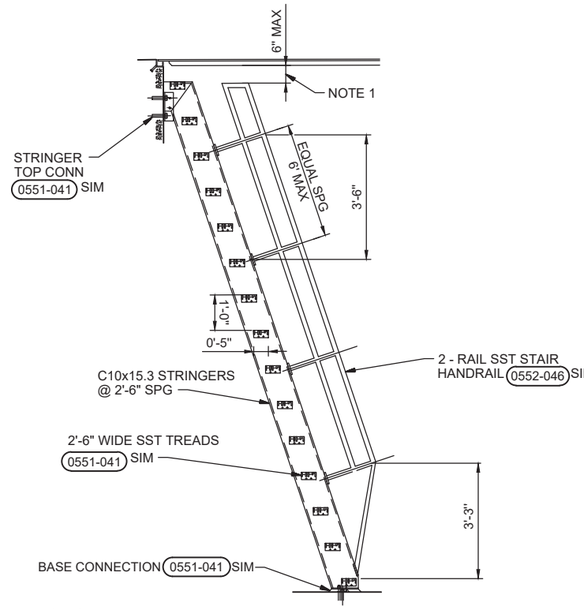

A VAULT HATCH SECTION

NTS

NOTES:

1. PROVIDE INTEGRAL SAFETY HATCH UNLESS SHOWN OTHERWISE
2. EXTEND WIDTH OF CURB TO BE FLUSH W/ OUTSIDE FACE OF WALL.
3. CONTRACTOR MAY FASTEN LADDER TO CONCRETE WITH 3/8" SST ADHESIVE ANCHORS IN LIEU OF CAST-IN-PLACE BOLTS.
4. LADDER SHALL BE HOT DIP GALVANIZED AFTER FABRICATION.

0551-143



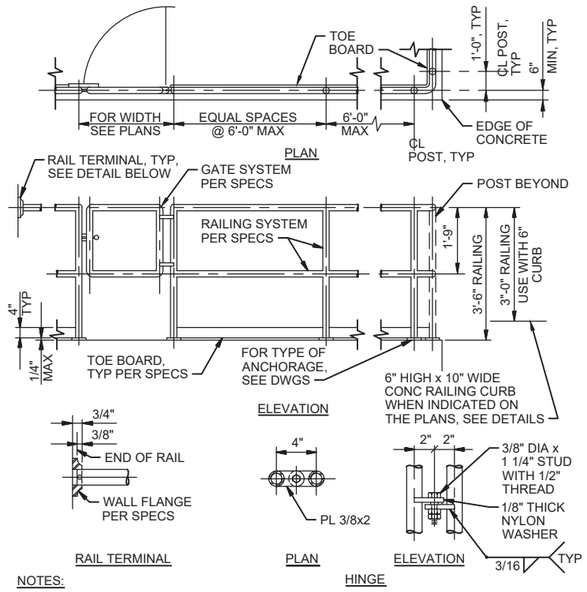

NOTES:

1. VERIFY MINIMUM AS REQUIRED TO CLEAR

## SHIPS LADDER

NTS

0551-151

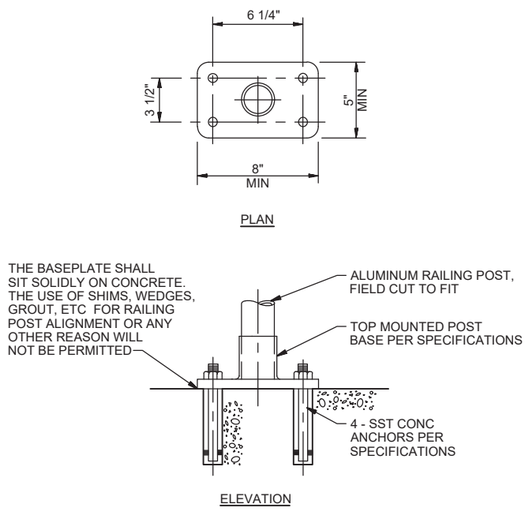



NOTES:

1. FASTEN RAIL TO WALL FLANGE PER MANUFACTURER'S RECOMMENDATIONS.
2. WALL FLANGE TO BE MOUNTED TO WALL WITH (2) 3/8" DIA SST WEDGE ANCHORS.
3. AT CONTRACTOR'S OPTION FABRICATE HINGES OR PROVIDE OTHER HINGES PER SPECIFICATIONS. ANODIZE FINISH AFTER ALL WELDING PER SPECIFICATIONS.

## RAILING - 2 RAIL AND RAILING POST ANCHORAGE- ALUMINUM

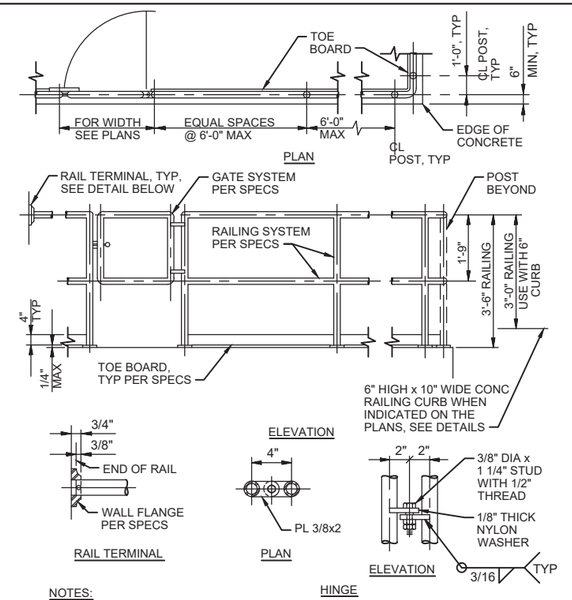
NTS




NOTE:

PROVIDE PROTECTION FOR DISSIMILAR METALS AND FOR ALUMINUM IN CONTACT WITH CONCRETE PER SPECIFICATIONS.

0552-001




NOTES:

1. FASTEN RAIL TO WALL FLANGE PER MANUFACTURER'S RECOMMENDATIONS.
2. WALL FLANGE TO BE MOUNTED TO WALL WITH (2) 3/8" DIA SST WEDGE ANCHORS.
3. AT CONTRACTOR'S OPTION FABRICATE HINGES OR PROVIDE OTHER HINGES PER SPECIFICATIONS. PASSIVATE AFTER ALL WELDING PER SPECIFICATIONS.
4. SEE DETAILS 0552-047 , 0552-048 , AND 0552-049 FOR BASE CONNECTIONS.

## RAILING - 2 RAIL - STAINLESS STEEL

NTS

0552-046



| NO. | DSGN | DATE | DR | REVISION | CHK | APVD | BY | APVD |
|---|---|---|---|---|---|---|---|---|
| | | | S ROSE | T STIMPSON | A FIRTH | | B PHELPS | |



JORDAN VALLEY WATER CONSERVANCY DISTRICT

11800 SOUTH ZONE C RESERVOIRS

Jacobs

STANDARD DETAILS

STANDARD DETAILS

100% CONFORMED

VERIFY SCALE

BAR IS ONE INCH ON ORIGINAL DRAWING.
0 1"

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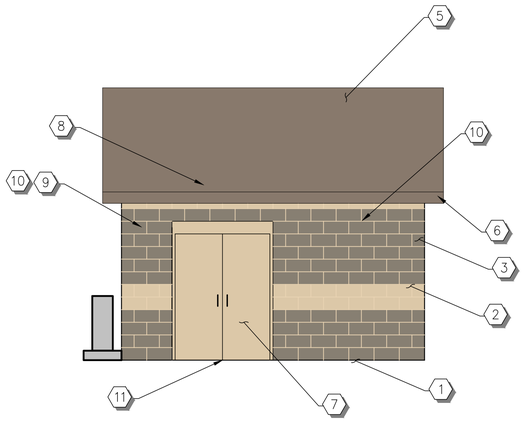
|---|---|
| DATE | JULY 2024 |
| PROJ | W7Y49600 |
| DWG | SD-10 |
| SHEET | 66 of 79 |

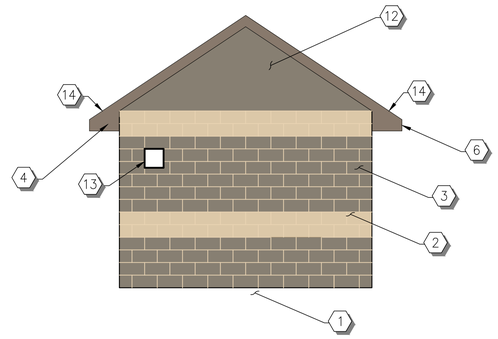



A ~ ELEVATION - SOUTH SIDE
NTS

TOP OF ROOF ELEVATION: 14'-5"

TOP OF WALL ELEVATION: 9'-4"

FINISHED FLOOR ELEVATION: 0'-0"

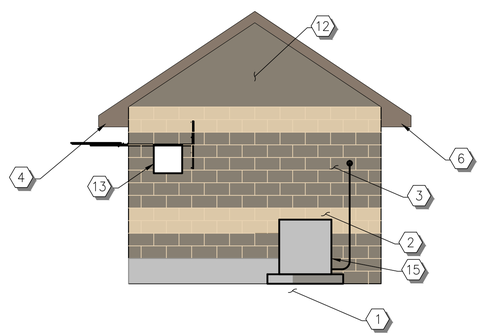



B ~ ELEVATION - EAST SIDE
NTS

## ARCHITECTURAL NOTES

1. CONCRETE FOUNDATION WALL WITH WATER-PROOFING MEMBRANE (ECO BASE II OR EQUAL) PER STRUCTURAL
2. 8X8X16 CENTER SCORE CMU. TAN COLOR PER COLOR SCHEME BELOW. PROVIDE CLEAR SURFACE WATER REPELLANT PER SPEC 07 19 00
3. 8X8X16 SPLIT FACE CMU. BRICK COLOR PER COLOR SCHEME BELOW. PROVIDE CLEAR SURFACE WATER REPELLANT PER SPEC 07 19 00
4. SOFFIT TO MATCH ROOFING
5. ROOF ASSEMBLY (B / A4)
6. RAIN GUTTER AND DOWN SPOUT
7. 5'-0" x 6'-8" DOUBLE DOOR (A / A4) (D / A4) (E / A4)
8. PROVIDE ICE AND WATER SHIELD AT ALL EAVES AND VALLEYS
9. EXTERIOR MOTION SENSORED FLOOD LIGHT
10. WALL-PACK EXTERIOR LIGHTING, SHIELDED DOWNWARD
11. CONCRETE PAD IN FRONT OF DOOR. PER CIVIL
12. STUCCO FINISH OVER PRE-FAB STRUSS
13. WALL VENT PER MECHANICAL AND ELECTRICAL
14. SNOW GAURD
15. HEAT PUMP

NOTES
1- COLOR SCHEME FOR ALL ITEMS CHOSEN BY DISTRICT. SIMILAR TO BUILDING BELOW

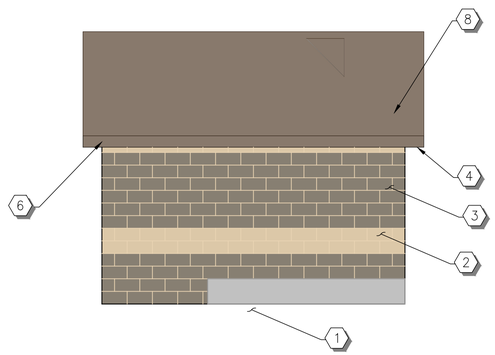



C ~ ELEVATION - WEST SIDE
NTS

TOP OF ROOF ELEVATION: 14'-5"

TOP OF WALL ELEVATION: 9'-4"

FINISHED FLOOR ELEVATION: 0'-0"




D ~ ELEVATION - NORTH SIDE
NTS

E ~ MATCH ROSECREST BOOSTER STATION STYLE
NTS

| REVISIONS | | | | | |
|---|---|---|---|---|---|
| ZONE | REV. | DESCRIPTION | BY | DATE | APP. |
| | | | | | |
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JORDAN VALLEY WATER CONSERVANCY DISTRICT

SUNRISE ENGINEERING

DESIGN: EL
DRAWING: EL
REVIEW: SH
APPROVAL: SH

PRELIMINARY DESIGN

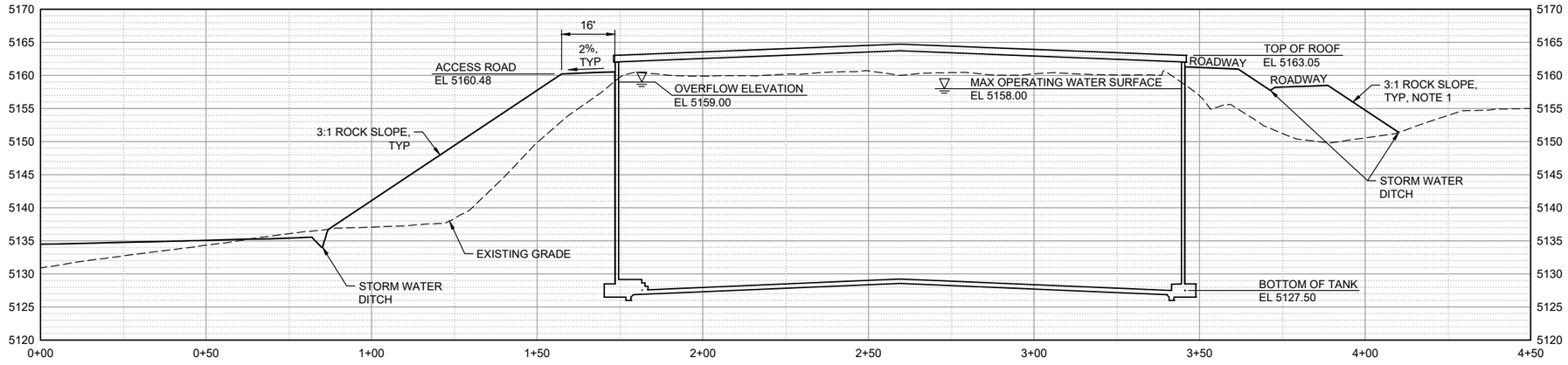
JORDAN VALLEY WATER CONSERVANCY DISTRICT

11800 SOUTH ZONE C RESERVOIRS
CHLORINE BUILDING
BUILDING ELEVATIONS

SCALE:
DATE 11/16/2023
PROJECT NUMBER S100330
DRAWING NUMBER A2
SHEET NUMBER 10 OF 43

3154039M

P:\JVWCD JORDAN VALLEY WATER CONSERVANCY DISTRICT\JORDAN VALLEY BOOSTER STATION\CIVIL DESIGN DRAWINGS\SHEETS\JVWCD-CB-A.DWG



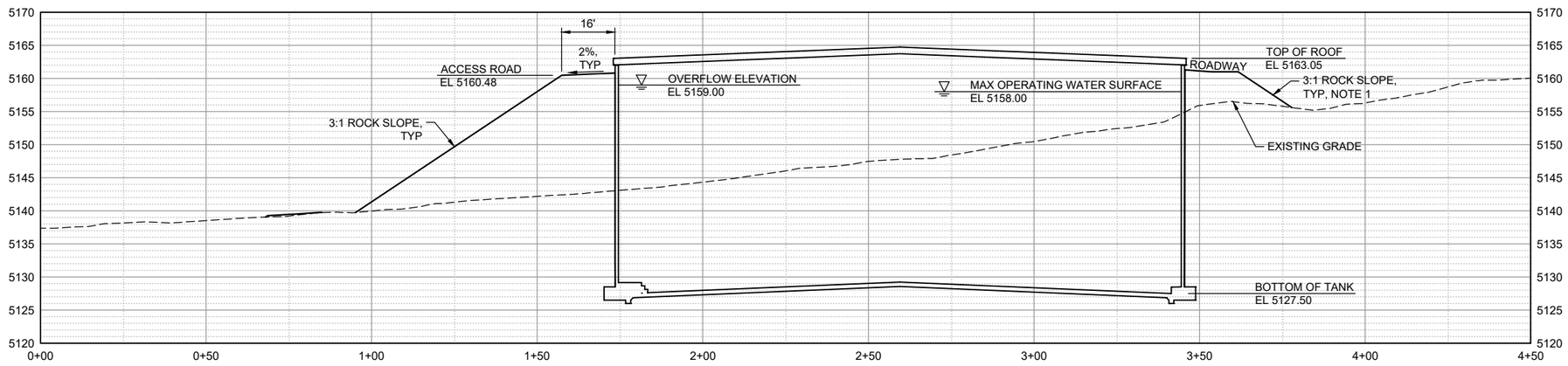

## A SECTION - EAST RESERVOIR

1" = 20'

C-1

NOTES:

1. LANDSCAPE AND VEGETATE SLOPES PER DWG C-10 AND SPECIFICATION SECTION 32 92 00.




## B SECTION - WEST RESERVOIR

1" = 20'

C-1

PRELIMINARY
NOT FOR CONSTRUCTION

| NO. | DATE | DSGN | DR | CHK | APVD | BY | REVISION |
|---|---|---|---|---|---|---|---|
| | T WITHERS | C HOGGARD | | B PHELPS | APVD | R WILLEITNER | |



JORDAN VALLEY WATER CONSERVANCY DISTRICT

11800 SOUTH ZONE C RESERVOIRS

Jacobs

CIVIL

GENERAL GRADING CROSS SECTIONS

VERIFY SCALE

BAR IS ONE INCH ON ORIGINAL DRAWING. 0 1"

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|---|---|
| DATE | APRIL 2024 |
| PROJ | |
| DWG | C-03 |
| SHEET | X of X |

100% DESIGN

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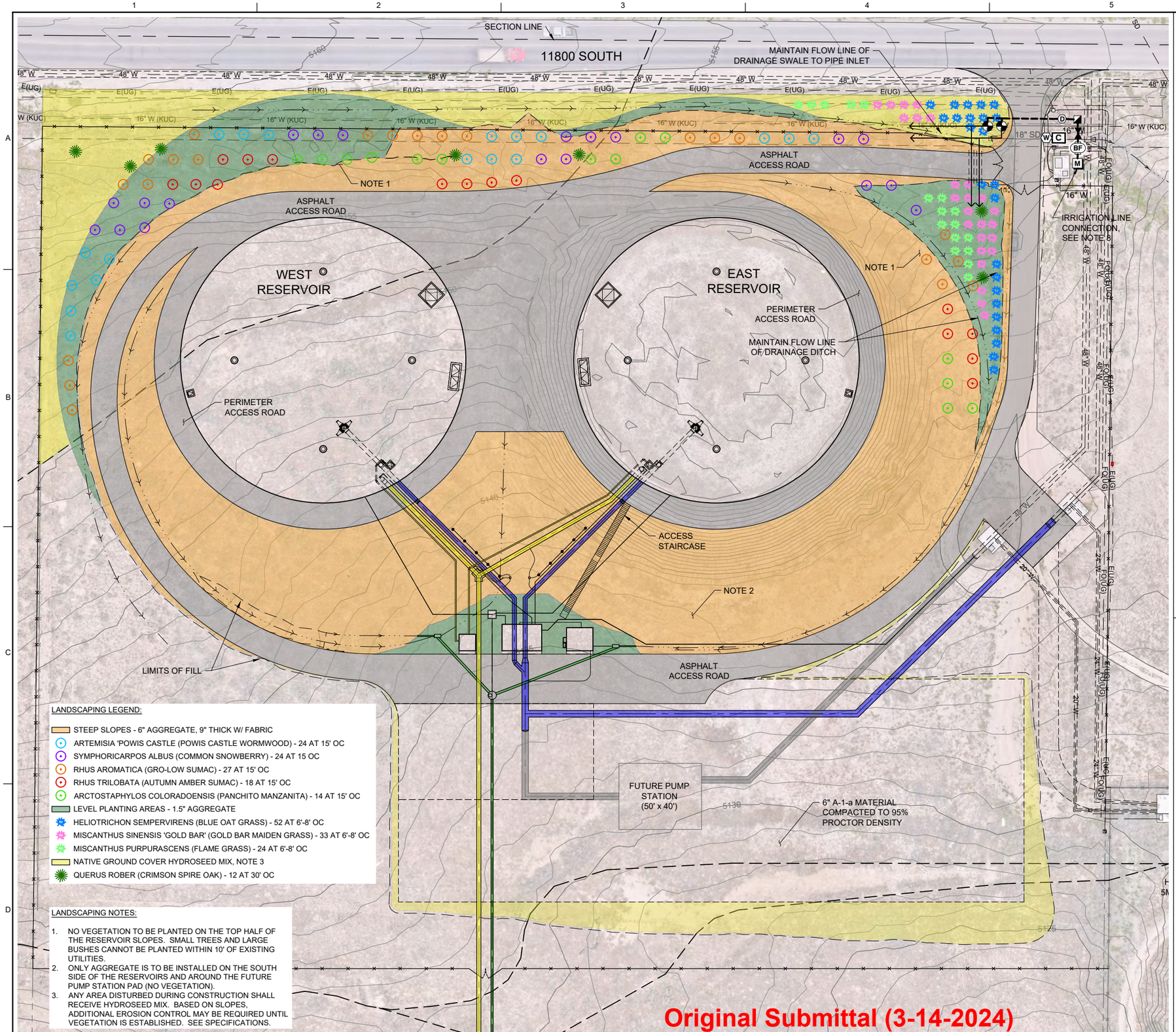


LANDSCAPING LEGEND:

- STEEP SLOPES - 6" AGGREGATE, 9" THICK W/ FABRIC
- ARTEMISIA 'POWIS CASTLE (POWIS CASTLE WORMWOOD) - 24 AT 15' OC
- SYMPHORICARPOS ALBUS (COMMON SNOWBERRY) - 24 AT 15 OC
- RHUS AROMATICA (GRO-LOW SUMAC) - 27 AT 15' OC
- RHUS TRILOBATA (AUTUMN AMBER SUMAC) - 18 AT 15' OC
- ARCTOSTAPHYLOS COLORADOENSIS (PANCHITO MANZANITA) - 14 AT 15' OC
- LEVEL PLANTING AREAS - 1.5" AGGREGATE
- HELIOTRICHON SEMPERVIRENS (BLUE OAT GRASS) - 52 AT 6'-8' OC
- MISCANTHUS SINENSIS 'GOLD BAR' (GOLD BAR MAIDEN GRASS) - 33 AT 6'-8' OC
- MISCANTHUS PURPURASCENS (FLAME GRASS) - 24 AT 6'-8' OC
- NATIVE GROUND COVER HYDROSEED MIX, NOTE 3
- QUERUS ROBER (CRIMSON SPIRE OAK) - 12 AT 30' OC

LANDSCAPING NOTES:

1. NO VEGETATION TO BE PLANTED ON THE TOP HALF OF THE RESERVOIR SLOPES. SMALL TREES AND LARGE BUSHES CANNOT BE PLANTED WITHIN 10' OF EXISTING UTILITIES.
2. ONLY AGGREGATE IS TO BE INSTALLED ON THE SOUTH SIDE OF THE RESERVOIRS AND AROUND THE FUTURE PUMP STATION PAD (NO VEGETATION).
3. ANY AREA DISTURBED DURING CONSTRUCTION SHALL RECEIVE HYDROSEED MIX. BASED ON SLOPES, ADDITIONAL EROSION CONTROL MAY BE REQUIRED UNTIL VEGETATION IS ESTABLISHED. SEE SPECIFICATIONS.

**Original Submittal (3-14-2024)**

IRRIGATION LEGEND:

| SYMBOL | MANUFACTURER/MODEL/DESCRIPTION |
|---|---|
| NOT SHOWN | RAIN BIRD 1800-1400 FLOOD<br>FIXED FLOW RATE, FULL CIRCLE BUBBLER, 1/2IN. FIPT. INSTALL ON FLEX RISER PER DETAIL. ONE 0.25 GPM BUBBLER PER TREE. |
| NOT SHOWN | RAIN BIRD XFS-04-18<br>XFS SUB-SURFACE PRESSURE COMPENSATING DRIPLINE W/COPPER SHIELD TECHNOLOGY. 0.4 GPH EMITTERS AT 18" O.C. UV RESISTANT. PLACE AROUND SHRUB LOCATIONS WITH 4 EMITTERS EQUALLY SPACED AROUND SHRUB. 1.6 GOH PER SHRUB. USE BLANK DRIP TUBING FOR STRETCHES BETWEEN SHRUBS. |
| | HUNTER IBV-FS<br>1", 1-1/2", 2", AND 3" BRASS ELECTRIC REMOTE CONTROL VALVE, GLOBE CONFIGURATION, WITH NPT THREADED INLET/OUTLET, FOR COMMERCIAL/MUNICIPAL USE. WITH FILTER SENTRY FACTORY INSTALLED OPTION. |
| | HUNTER HQ-44LRC<br>QUICK COUPLER VALVE, YELLOW RUBBER LOCKING COVER, RED BRASS AND STAINLESS STEEL, WITH 1" NPT INLET, 2-PIECE BODY. |
| | GATE VALVE<br>2" TO 12" CAST IRON GATE VALVE, SAME SIZE AS MAINLINE PIPE WHERE LOCATED. RESILIENT WEDGE NON-RISING STEM FLOW CONTROL WITH IPS PUSH-ON ENDS. USE RESILIENT WEDGE GATE VALVES FOR 3" AND LARGER. USE BRASS BALL VALVES FOR 2-1/2" AND SMALLER. |
| D | DRAIN VALVE<br>INSTALL PER DETAIL |
| BF | FEBCO 825Y<br>REDUCED PRESSURE BACKFLOW PREVENTER |
| C | HUNTER PHC-600<br>WI-FI ENABLED, FULL-FUNCTIONING CONTROLLER WITH TOUCHSCREEN, 6-STATION FIXED CONTROLLER, 120 VAC, OUTDOOR MODEL. INSTALL IN STAINLESS STEEL PEDESTAL. |
| W | HUNTER WSS<br>WIRELESS SOLAR, RAIN FREEZE SENSOR WITH OUTDOOR INTERFACE, CONNECTS TO HUNTER PCC, PRO-C, AND I-CORE CONTROLLERS, INSTALL AS NOTED. INCLUDES 10 YEAR LITHIUM BATTERY AND RUBBER MODULE COVER, AND GUTTER MOUNT BRACKET. |
| M | WATER METER 1"<br>1" METER ADJACENT TO VAULT - SEE CIVIL PLANS |
| | IRRIGATION LATERAL LINE: PVC CLASS 200 |
| | IRRIGATION MAINLINE: 2" PVC SCHEDULE 40 |
| | PIPE SLEEVE: PVC CLASS 200<br>TYPICAL PIPE SLEEVE FOR IRRIGATION PIPE. PIPE SLEEVE SIZE SHALL ALLOW FOR IRRIGATION PIPING AND THEIR RELATED COUPLINGS TO EASILY SLIDE THROUGH SLEEVING MATERIAL. EXTEND SLEEVES 18 INCHES BEYOND EDGES OF PAVING OR CONSTRUCTION. |

IRRIGATION NOTES:

4. THE IRRIGATION SYSTEMS ARE DESIGNED TO OPERATE AT WATER PRESSURE OF 60 PSI AT THE POINTS OF CONNECTION (IRRIGATION WATER METER), AND A MAXIMUM FLOW DEMAND OF 30 GPM (TO BE DETERMINED). THE CONTRACTOR SHALL VERIFY PRESSURE PRIOR TO INSTALLATION OF IRRIGATION EQUIPMENT. IF THERE IS A DISCREPANCY, THE IRRIGATION CONTRACTOR SHALL NOTIFY THE LANDSCAPE ARCHITECT, IMMEDIATELY, IN WRITING SO ADJUSTMENTS CAN BE MADE.
5. A PRESSURE REGULATING VALVE SHALL BE INSTALLED IF THE STATIC SERVICE PRESSURE EXCEEDS EIGHTY (80) POUNDS PER SQUARE INCH (PSI) AT THE POINT OF CONNECTION. THE PRESSURE REGULATING VALVE SHALL BE LOCATED BETWEEN THE LANDSCAPE WATER METER AND THE FIRST POINT OF WATER USE AND SHALL BE SET AT THE MANUFACTURER'S RECOMMENDED PRESSURE FOR SPRINKLERS.
6. PLANS ARE DIAGRAMMATIC. INSTALL PIPES IN PLANTING AREAS UNLESS A SLEEVE IS REQUIRED TO CROSS UNDER PAVEMENT.
7. ALL DIMENSIONS, QUANTITIES AND MATERIALS SHALL BE VERIFIED BY IRRIGATION CONTRACTOR. CONTRACTOR SHALL INSTALL ADDITIONAL HEADS, AS NEEDED, TO PROVIDE ADEQUATE COVERAGE AT NO ADDITIONAL COST TO THE OWNER.
8. CORE THROUGH PRV VAULT WALL 4' BELOW GRADE TO MAKE CONNECTION INSIDE OF THE VAULT TO THE HIGH PRESSURE SIDE. SUBMIT PLAN FOR APPROVAL.

N

0 30 60 90
1"=30'

PRELIMINARY
NOT FOR CONSTRUCTION

| NO. | DATE | DSGN | DR | CHK | APVD | REVISION | BY | APVD |
|---|---|---|---|---|---|---|---|---|
| | | T WITHERS | C HOGGARD | B PHELPS | | | R WILLEITNER | |



JORDAN VALLEY WATER CONSERVANCY DISTRICT

11800 SOUTH ZONE C RESERVOIRS

Jacobs

CIVIL

LANDSCAPING PLAN

100% DESIGN

VERIFY SCALE
BAR IS ONE INCH ON ORIGINAL DRAWING.
0 1"

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| DATE | APRIL 2024 |
| PROJ | |
| DWG | C-10 |
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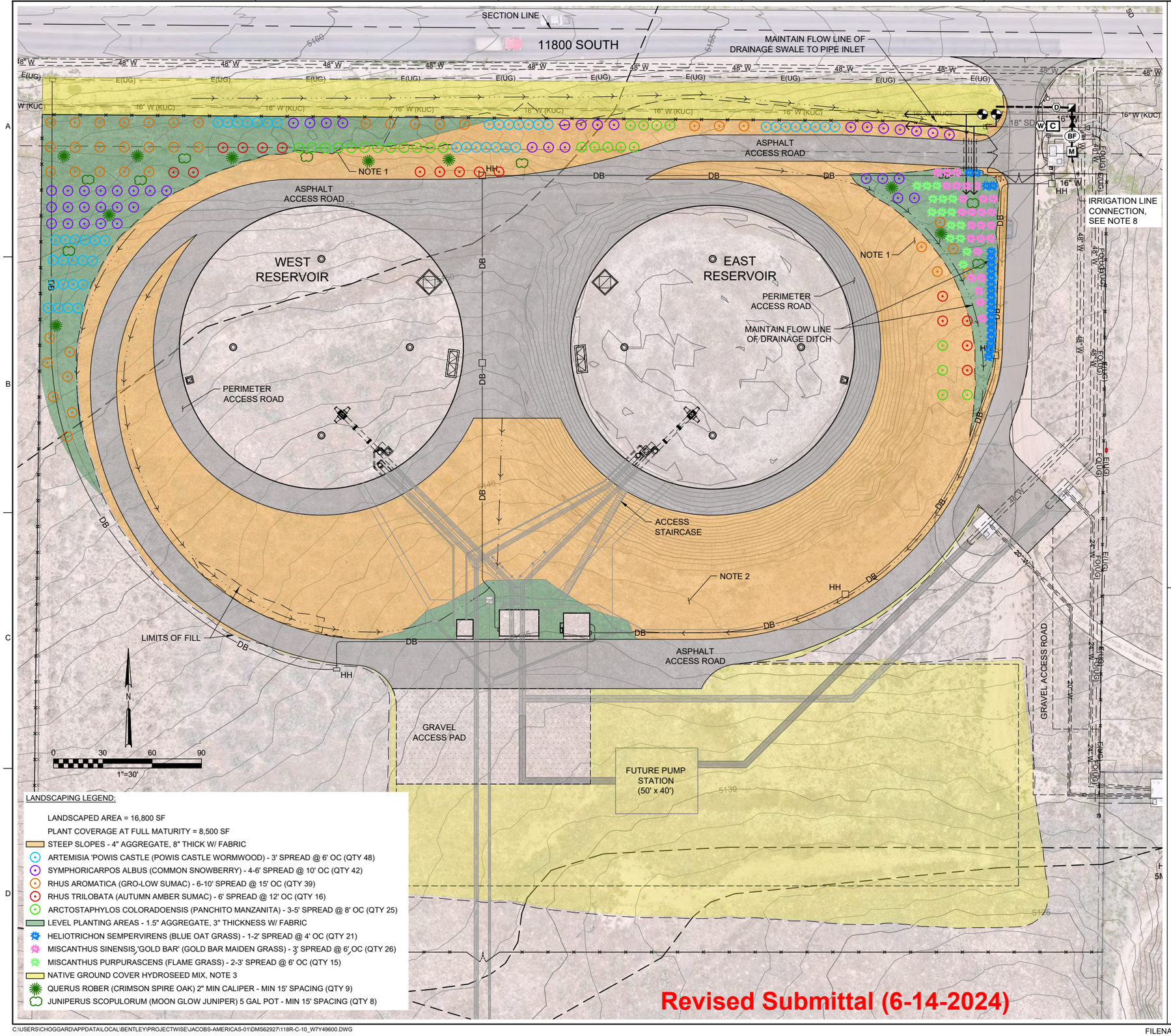



LANDSCAPING LEGEND:

LANDSCAPED AREA = 16,800 SF

PLANT COVERAGE AT FULL MATURITY = 8,500 SF

- STEEP SLOPES - 4" AGGREGATE, 8" THICK W/ FABRIC
- ARTEMISIA 'POWIS CASTLE (POWIS CASTLE WORMWOOD) - 3' SPREAD @ 6' OC (QTY 48)
- SYMPHORICARPOS ALBUS (COMMON SNOWBERRY) - 4-6' SPREAD @ 10' OC (QTY 42)
- RHUS AROMATICA (GRO-LOW SUMAC) - 6-10' SPREAD @ 15' OC (QTY 39)
- RHUS TRILOBATA (AUTUMN AMBER SUMAC) - 6' SPREAD @ 12' OC (QTY 16)
- ARCTOSTAPHYLOS COLORADOENSIS (PANCHITO MANZANITA) - 3-5' SPREAD @ 8' OC (QTY 25)
- LEVEL PLANTING AREAS - 1.5" AGGREGATE, 3" THICKNESS W/ FABRIC
- HELIOTRICHON SEMPERVIRENS (BLUE OAT GRASS) - 1-2' SPREAD @ 4' OC (QTY 21)
- MISCANTHUS SINENSIS 'GOLD BAR' (GOLD BAR MAIDEN GRASS) - 3' SPREAD @ 6' OC (QTY 26)
- MISCANTHUS PURPURASCENS (FLAME GRASS) - 2-3' SPREAD @ 6' OC (QTY 15)
- NATIVE GROUND COVER HYDROSEED MIX, NOTE 3
- QUERUS ROBER (CRIMSON SPIRE OAK) 2" MIN CALIPER - MIN 15' SPACING (QTY 9)
- JUNIPERUS SCOPULORUM (MOON GLOW JUNIPER) 5 GAL POT - MIN 15' SPACING (QTY 8)

**Revised Submittal (6-14-2024)**

IRRIGATION LEGEND:

| SYMBOL | MANUFACTURER/MODEL/DESCRIPTION |
|---|---|
| NOT SHOWN | TREE RING WITH THREE CONCENTRIC CIRCLES 3', 5', AND 7' DIAMETER. USE DRIP TUBING WITH ~0.9 GPH EMITTERS. KEEP TREES ON SEPARATE ZONE FROM THE PLANTS AND SHRUBS. ADDITIONAL ZONES MAY BE ADDED. |
| NOT SHOWN | RAIN BIRD XFS-04-18<br>XFS SUB-SURFACE PRESSURE COMPENSATING DRIPLINE W/COPPER SHIELD TECHNOLOGY. 0.4 GPH EMITTERS AT 18" O.C. UV RESISTANT. PLACE AROUND SHRUB LOCATIONS WITH 4 EMITTERS EQUALLY SPACED AROUND SHRUB. 1.6 GPH PER SHRUB. USE BLANK DRIP TUBING FOR STRETCHES BETWEEN SHRUBS. |
| | RAIN BIRD XCZ-100-PRB-COM DRIP CONTROL KIT, 1" PESB VALVE, BASKET FILTER, AND 40 PSI PRESSURE REGULATOR, SEE NOTE 9 |
| | RAIN BIRD 44RC<br>QUICK COUPLER VALVE, YELLOW RUBBER LOCKING COVER, RED BRASS AND STAINLESS STEEL, WITH 1" NPT INLET, 2-PIECE BODY. SEE NOTE 9 |
| | GATE VALVE<br>2" TO 12" CAST IRON GATE VALVE, SAME SIZE AS MAINLINE PIPE WHERE LOCATED. RESILIENT WEDGE NON-RISING STEM FLOW CONTROL WITH IPS PUSH-ON ENDS. USE RESILIENT WEDGE GATE VALVES FOR 3" AND LARGER. USE S.S. BALL VALVES FOR 2-1/2" AND SMALLER. |
| D | DRAIN VALVE<br>INSTALL PER OWNER DIRECTION |
| BF | FEBCO 825Y<br>REDUCED PRESSURE BACKFLOW PREVENTER |
| C | RAIN BIRD ESP-TM2 - 8 STATION FULL-FUNCTIONING CONTROLLER WITH TOUCHSCREEN, 120VAC (LNK WIFI-COMPATIBLE), SEE NOTE 9 |
| W | RAIN BIRD COMPATIBLE WSS<br>WIRELESS SOLAR, RAIN FREEZE SENSOR WITH OUTDOOR INTERFACE, CONNECTS TO RAIN BIRD CONTROLLERS, INSTALL AS NOTED. INCLUDES 10 YEAR LITHIUM BATTERY AND RUBBER MODULE COVER, AND GUTTER MOUNT BRACKET. |
| M | WATER METER 1"<br>1" METER ADJACENT TO VAULT - SEE CIVIL PLANS<br>USE METER SETTER FORD VBHC84W-4444QNLAND METER BOX DWF PLASTICS DWF1324WBC4_12-AF4F 63D JVW (2 BOXES, DOUBLE STACKED). METER SHALL BE SENSUS IPERAL, SEE NOTE 9 |
| ——— | IRRIGATION LATERAL LINE: 1" PVC SCHEDULE 40 |
| - - - - - | IRRIGATION MAINLINE: 1" PVC SCHEDULE 40 |
| - - - - - | PIPE SLEEVE: PVC CLASS 200<br>TYPICAL PIPE SLEEVE FOR IRRIGATION PIPE. PIPE SLEEVE SIZE SHALL ALLOW FOR IRRIGATION PIPING AND THEIR RELATED COUPLINGS TO EASILY SLIDE THROUGH SLEEVING MATERIAL. EXTEND SLEEVES 18 INCHES BEYOND EDGES OF PAVING OR CONSTRUCTION. |

LANDSCAPING NOTES:

1. NO VEGETATION TO BE PLANTED ON THE TOP HALF OF THE RESERVOIR SLOPES. SMALL TREES AND LARGE BUSHES CANNOT BE PLANTED WITHIN 10' OF EXISTING UTILITIES.
2. ONLY AGGREGATE IS TO BE INSTALLED ON THE SOUTH SIDE OF THE RESERVOIRS AND AROUND THE FUTURE PUMP STATION PAD (NO VEGETATION).
3. ANY AREA DISTURBED DURING CONSTRUCTION SHALL RECEIVE HYDROSEED MIX. BASED ON SLOPES, ADDITIONAL EROSION CONTROL MAY BE REQUIRED UNTIL VEGETATION IS ESTABLISHED. SEE SPECIFICATIONS.

IRRIGATION NOTES:

4. THE IRRIGATION SYSTEMS ARE DESIGNED TO OPERATE AT WATER PRESSURE OF 60 PSI AT THE POINTS OF CONNECTION (IRRIGATION WATER METER), AND A FLOW DEMAND AS DETERMINED BY JVWCD. THE CONTRACTOR SHALL VERIFY PRESSURE PRIOR TO INSTALLATION OF IRRIGATION EQUIPMENT. IF THERE IS A DISCREPANCY, THE IRRIGATION CONTRACTOR SHALL NOTIFY THE LANDSCAPE ARCHITECT, IMMEDIATELY, IN WRITING SO ADJUSTMENTS CAN BE MADE.
5. A PRESSURE REGULATING VALVE SHALL BE INSTALLED IF THE STATIC SERVICE PRESSURE EXCEEDS EIGHTY (80) POUNDS PER SQUARE INCH (PSI) AT THE POINT OF CONNECTION. THE PRESSURE REGULATING VALVE SHALL BE LOCATED BETWEEN THE LANDSCAPE WATER METER AND THE FIRST POINT OF WATER USE AND SHALL BE SET AT THE MANUFACTURER'S RECOMMENDED PRESSURE FOR SPRINKLERS.
6. PLANS ARE DIAGRAMMATIC. INSTALL PIPES IN PLANTING AREAS. SLEEVE IS REQUIRED TO CROSS UNDER PAVEMENT.
7. ALL DIMENSIONS, QUANTITIES AND MATERIALS SHALL BE VERIFIED BY IRRIGATION CONTRACTOR. CONTRACTOR SHALL INSTALL ADDITIONAL HEADS, AS NEEDED, TO PROVIDE ADEQUATE COVERAGE AT NO ADDITIONAL COST TO THE OWNER.
8. CORE THROUGH PRV VAULT WALL 4' BELOW GRADE TO MAKE CONNECTION INSIDE OF THE VAULT TO THE HIGH PRESSURE SIDE. CONNECTION WILL REQUIRE A SHUTOFF VALVE AND SADDLE TAP. SUBMIT PLAN FOR APPROVAL.
9. SET IRRIGATION BOXES ON 12" OF WASHED GRAVEL AND INSTALL WIRE MESH / RODENT SCREENS.

| NO. | DATE | REVISION | DR | CHK | APVD |
|---|---|---|---|---|---|
| 1 | 6/13/2024 | ADDENDUM 3 | T WITHERS | C HOGGARD | B PHELPS |

CEH RPW BY APVD R WILLEITNER

JORDAN VALLEY WATER CONSERVANCY DISTRICT

11800 SOUTH ZONE C RESERVOIRS

Jacobs

CIVIL

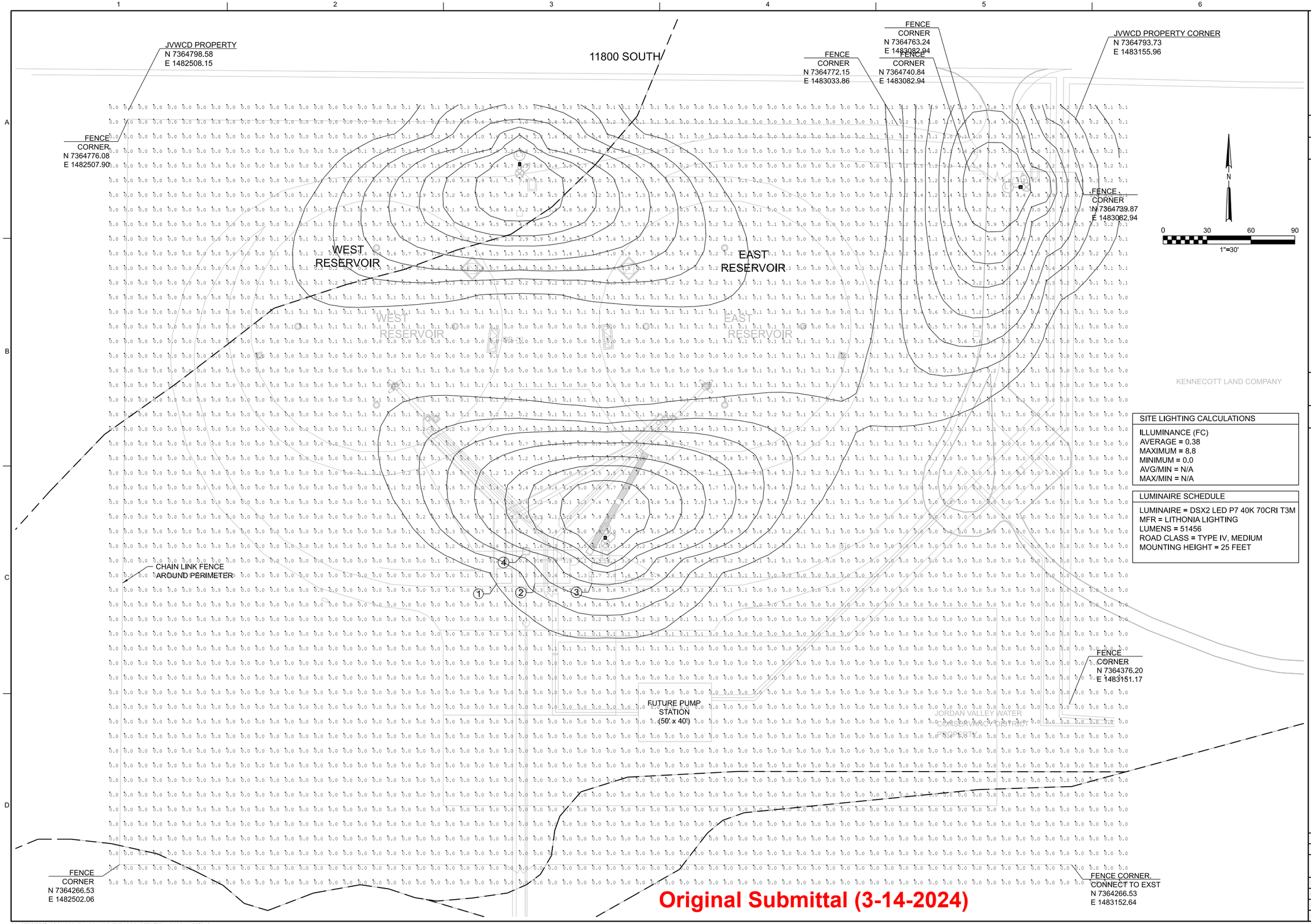
LANDSCAPING PLAN

VERIFY SCALE

BAR IS ONE INCH ON ORIGINAL DRAWING. 0 1"

| | |
|---|---|
| DATE | APRIL 2024 |
| PROJ | W7Y49600 |
| DWG | C-10 |
| SHEET | 25 of 79 |

100% DESIGN




| SITE LIGHTING CALCULATIONS |
|---|
| ILLUMINANCE (FC) |
| AVERAGE = 0.38 |
| MAXIMUM = 8.8 |
| MINIMUM = 0.0 |
| AVG/MIN = N/A |
| MAX/MIN = N/A |

| LUMINAIRE SCHEDULE |
|---|
| LUMINAIRE = DSX2 LED P7 40K 70CRI T3M |
| MFR = LITHONIA LIGHTING |
| LUMENS = 51456 |
| ROAD CLASS = TYPE IV, MEDIUM |
| MOUNTING HEIGHT = 25 FEET |

PRELIMINARY
NOT FOR CONSTRUCTION



| NO. | DATE | DSGN | DR | CHK | APVD | BY | APVD |
|---|---|---|---|---|---|---|---|
| | | H IDREES | A CUGLIAT | | | | R WILLEITNER |

REVISION

JORDAN VALLEY WATER CONSERVANCY DISTRICT

11800 SOUTH ZONE C RESERVOIRS



Jacobs

ELECTRICAL

# SITE LIGHTING CALCULATIONS PLAN

100% DESIGN

VERIFY SCALE

BAR IS ONE INCH ON ORIGINAL DRAWING.
0 1"

| | |
|---|---|
| DATE | APRIL 2024 |
| PROJ | W7Y49600 |
| DWG | E-XXXX |
| SHEET | X of X |

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FILENAME: 118R-E-SITE LIGHTING CALCS_W7Y49600.dwg PLOT DATE: 8-MAR-2024 PLOT TIME: 08:27

# D-Series LED Area Luminaires

Next Level Area Lighting Solutions

**Revised Submittal to show fixture type (6-14-2024)**

LITHONIA LIGHTING®

## A New Standard of Excellence and Performance

For over 10 years, the legacy D-Series family has been a favorite of industry professionals for use on exterior lighting projects. Now, the fully redesigned D-Series, is once again changing the game and bringing area lighting to a new level of excellence and performance.

D-Series blends seamlessly into any environment with its continuous body design and combination of fully integrated nLight® AIR network controls to create a refined and contemporary look while providing the lumens you need.

**DSX2**
20,000 to 60,000 lumens



**DSX1**
7,000 to 35,000 lumens



**DSX0**
5,000 to 21,000 lumens

# D-Series LED Area Luminaire Family

## An unmatched combination of features, options, and performance to take your design to the next level.

Available in three sizes with excellent scale to mounting height ratios, the D-Series family can meet the full range of application requirements and your projects most demanding needs.

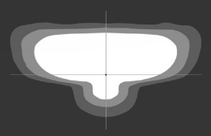
# Leading-Edge Optical Performance

Fifteen distribution patterns offering designers everything needed to effectively illuminate even the most challenging sites. The D-Series precision-designed optics provide wider pole spacings, superior uniformity and unmatched corner and backlight control near property lines.

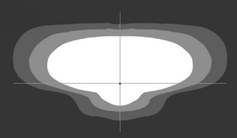
## Standard Optics

Largest light patterns that maximize pole spacings and provide exceptional uniformity.

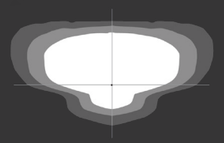
T1S



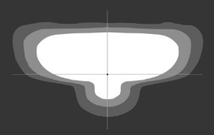
T2M



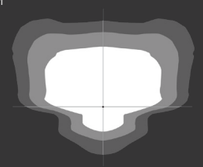
T3M



AFR

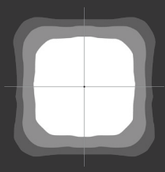


T4M

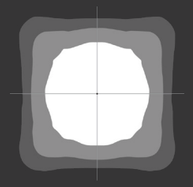


TFTM

T5M



T5W

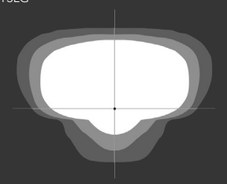




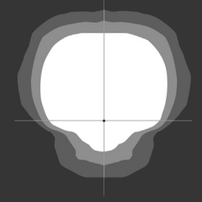
## Low G Optics

Controls high angle light and maximizes lumens while maintaining a Low G in the BUG rating.

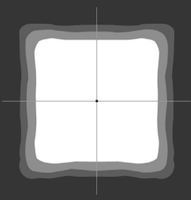
T3LG



T4LG



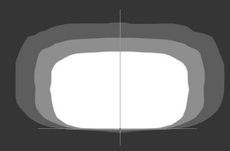
T5LG



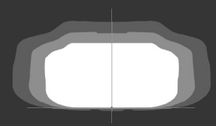
## Backlight and Corner Control Optics

Unmatched corner and backlight control solutions for applications where precision control is required behind the pole, at property lines and perimeters.

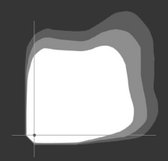
BLC4



BLC3



LCCO



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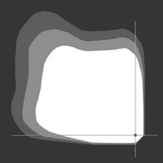


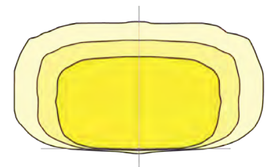
## Backlight Control

The state-of-the-art BLC optics reduce light behind poles while providing excellent forward and lateral projection. Poles can be strategically placed near adjacent property or boundary lines while achieving optimal curb line results.

**D-Series BLC Backlight Control Benefits**

- As little as 0.5% of total light behind pole
- Shortest distance to zero foot-candles
- BUG – B=0 with up to 43,000 lumens

BLC4



## Ultimate Configurability

Exterior lighting demands a product that can perform and be configured to exact needs. The fully configurable D-Series provides the necessary standard features and a large breadth of key options allowing industry professionals to tailor their designs to the needs of the project.

### Configurations

- Three sizes offering 5,000 to 60,000 lumens for front-to-back site design
- Fifteen photometric distributions provide solutions for a large array of standard and specialty applications
- Large range of standard CCT's available: 2700K/3000K/3500K/4000K/5000K
- Standard 70/80 CRI and optional 90 CRI
- Four standard colors with textured and non-textured finish and over 120 RAL colors and custom match options available

### Features and Specialty Options

- Durable and long-lasting silicone lens is resistant to elements and will not yellow
- Integral arm universal mount option fits a range of pole drillings
- Optional added corrosion protection for applications in coastal areas
- Two amber LED solutions available including turtle-friendly
- Solar configurations offer ability to reduce carbon footprint and placement of luminaires in remote areas

### Control Options

- NLTAIR2 PIRHN: nLight® AIR network based wireless controls offering group dimming
- PIR: Integral motion/ambient sensor
- DS: Dual switching provides luminaire wired with two circuits allowing for 50/50 operation
- BL30/BL50: Integral bi-level dimming device allows for a second circuit to switch the luminaire to either 30% or 50% light output
- FAO: Field adjustable output device allows dimming through an internal switch

### nLight™

- Site-wide controls solution
- Motion sensing dusk-to-dawn photocontrol
- Wireless grouping
- Smart phone commissioning

**From a trusted brand with over 75 years of lighting history, discover what's next with the all-new D-Series from Lithonia Lighting®.**

**To learn more about D-Series Area Luminaires, visit www.LithoniaLighting.com**

Join the conversation - follow us on social media.

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