

COLE CANYON WATER COMPANY SYSTEM FILTRATION AND CHLORINATION PROJECT

NEAR 2300 NORTH FORK PARK RD
LIBERTY, UT 84310

PWS ID: UTAH29092

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CONSTRUCTION PLANS

PROJECT NO. 55-22-095

OCTOBER 2023



J-U-B ENGINEERS, INC.

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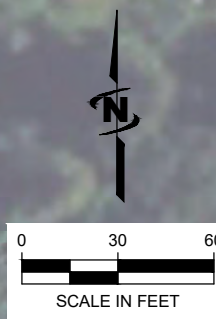
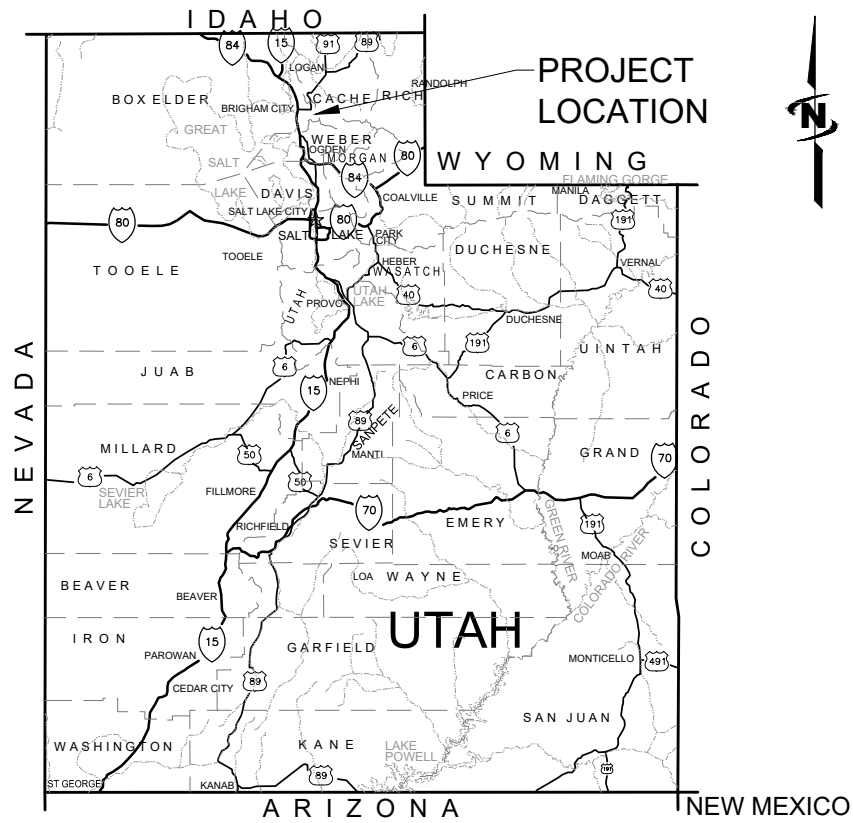
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Plot Date: 10/23/2023 \\JUB-COM\CENTRAL\CLIENTS\UT\COLE CANYON\PROJECTS\55-22-095 - SYSTEM FILTRATION AND DISINFECTION\DESIGN\CAD\SHEET\55-22-095_G-001X.DWG

LAST UPDATED: 10/23/2023

SHEET NUMBER:

G-001



JUB
 J-U-B ENGINEERS, INC.
 466 North 900 West
 Kaysville, Utah 84037
 Phone: 801.547.0393
 Fax: 801.547.0397
 www.jub.com

CONSTRUCTION

SET

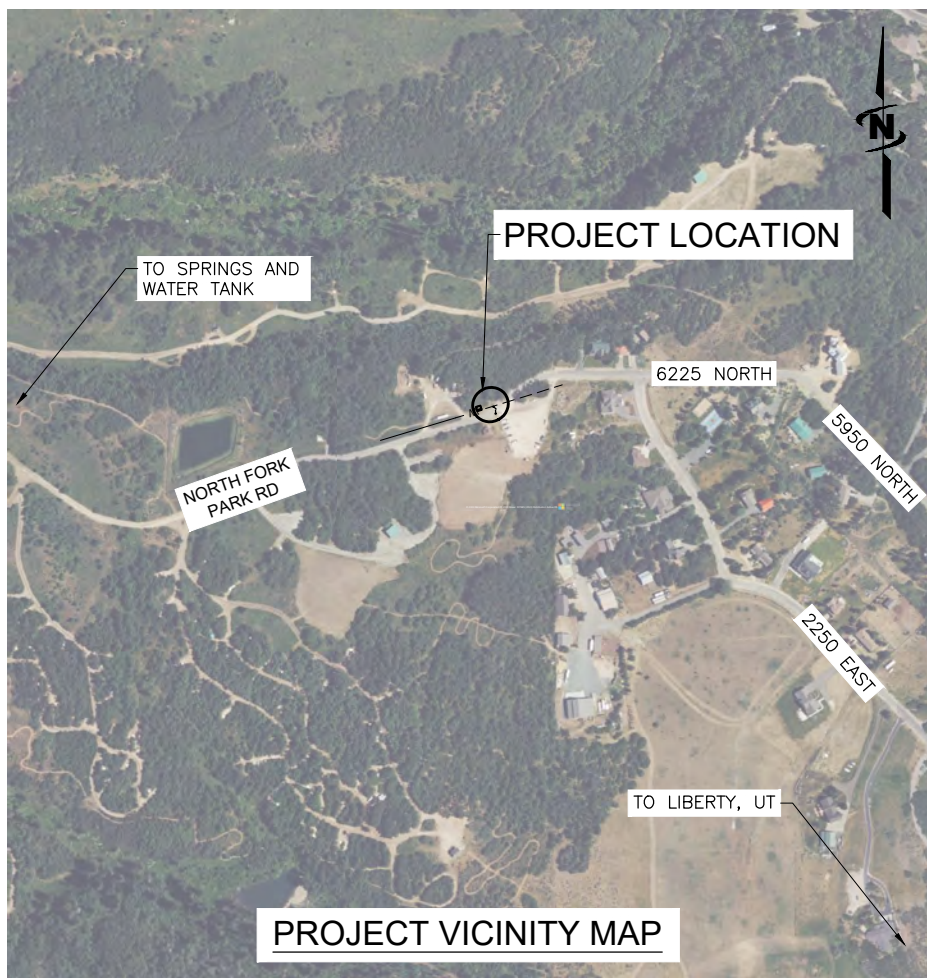
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NO.	REVISION	DESCRIPTION	BY	DATE

SYSTEM FILTRATION AND CHLORINATION PROJECT
 COLE CANYON WATER COMPANY
 VICINITY MAP AND PROJECT LOCATION MAP

FILE: 55-22-095_G-001X
 JUB PROJ. #: 55-22-095
 DRAWN BY: CRA
 DESIGN BY: BRN
 CHECKED BY: BRN
 AT FULL SIZE, IF NOT ONE INCH SCALE ACCORDINGLY
 LAST UPDATED: 10/23/2023

SHEET NUMBER:
G-002



Plot Date: 10/23/2023 3:10 PM Plotted By: Caitlin Arnold
 Date Created: 07/10/2023 JUB.COM\CENTRAL\Clients\UT COLE CANYON\PROJECTS\55-22-005 - SYSTEM FILTERATION\DESIGN\CAD\SHEET\55-22-005-G-004.DWG

SYMBOL LEGEND					
DESCRIPTION	EXIST.	PROP.	DESCRIPTION	EXIST.	PROP.
SANITARY SEWER			IRRIGATION		
CLEANOUT	⊙	⊙	IRRIGATION VALVE	⊗	⊗
SS MANHOLE	⊙	⊙	IRRIGATION VALVE BOX	⊙	⊙
SS VALVE	⊗	⊗	SPRINKLER	△	△
SS METER	⊗	⊗	IRRIGATION GATE	⊗	⊗
SEWER STUB	⊙	⊙	NATURAL GAS		
STORM DRAIN			GAS METER		
CATCH BASIN	⊞	⊞	GAS VALVE	⊗	⊗
DRY WELL	⊙	⊙	GAS MANHOLE	⊙	⊙
SD MANHOLE	⊙	⊙	UTILITIES		
FLARE END	∇	∇	MANHOLE (GENERIC)	○	●
GREASE TRAP	⊙	⊙	PRESSURE CLEAN OUT AT GRADE	⊙	⊙
COMMUNICATION			THRUST BLOCK	▲	▲
TELE. MANHOLE	⊙	⊙	VAULT	⊞	⊞
TELE. PEDESTAL	⊙	⊙	VALVE (GENERIC)	⊗	⊗
TELE. POLE	⊙	●	UTILITY POLE	⊙	●
TV PEDESTAL	⊞	⊞	SITE		
GUY WIRE	↑	↑	BOLLARD	⊞	⊞
DOMESTIC WATER			BOULDER	⊙	⊙
FIRE HYDRANT	⊙	⊙	DRINKING FOUNTAIN	⊞	⊞
SPIGOT	⊙	⊙	FLAGPOLE	⊙	⊙
WATER MANHOLE	⊙	⊙	GATE	⊞	⊞
WATER METER	⊞	⊞	MAIL BOX	⊞	⊞
WATER VALVE	⊗	⊗	PARKING METER	⊞	⊞
YARD HYDRANT	⊙	⊙	POST	○	●
ELECTRIC			SIGN	⊙	⊙
ELEC. MANHOLE	⊙	⊙	SPOT ELEVATION	⊗	⊗
ELEC. METER	⊞	⊞	TREE (SHRUB)	⊙	⊙
ELEC. TRANS.	⊞	⊞	TREE	⊙	⊙
JUNCTION BOX	⊞	⊞	TEST HOLE	⊞	⊞
GUY WIRE	↑	↑	WELL	⊞	⊞
POWER STUB	⊙	⊙	WELL (MONITORING)	⊞	⊞
POWER POLE	⊙	⊙	SURVEY		
STREET LIGHT	⊙	⊙	CAP	⊙	⊙
STREET LIGHT WITH ARM	⊙	⊙	CTRL PT	△	△
TRAFFIC SIGNAL POLE	⊙	⊙	NAIL	⊙	⊙
			BOLT	●	●
			REBAR	○	●

LINE LEGEND		
DESCRIPTION	EXIST.	PROP.
STORM DRAIN	----SD----	—SD—
DRAIN LINE	----DL----	—DL—
SANITARY SEWER	----SS----	—SS—
WATER	----W----	—W—
IRRIGATION	----IRR----	—IRR—
NATURAL GAS	----G----	—G—
OVERHEAD POWER	----OHP----	—OHP—
UNDERGROUND POWER	----UP----	—UP—
OVERHEAD TELEPHONE	----OHT----	—OHT—
UNDERGROUND TELEPHONE	----UT----	—UT—
FIBER OPTIC	----F/O----	—F/O—
CABLE TELEVISION	----CTV----	—CTV—
FENCE	----X----	—X—
DITCH
MAJOR CONTOUR	--- 2520 ---	—2520—
MINOR CONTOUR	-----	-----
TOP OF BANK	---TOB---	—TOB—
TOE OF SLOPE	---TOE---	—TOE—
PROPERTY LINE	---P/L---	—P/L—
PROPERTY LINE (OPTIONAL)	-----	-----
RIGHT OF WAY	---R/W---	—R/W—
TEMPORARY EASEMENT	---T/E---	—T/E—
PERMANENT EASEMENT	---P/E---	—P/E—
ROAD SHOULDER	-----	-----
ROAD CENTERLINE	-----	-----
ROAD ASPHALT	-----	-----
ROAD GRAVEL	---EG---	—EG—
ROAD DIRT	-----	-----
CURB AND GUTTER	-----	-----

SHEET NUMBERING

EXAMPLE: SHEET NUMBER: **C1-101**

C
1
-
1
0
1

DISCIPLINE DESIGNATOR
 COMPONENT CODE (OPTIONAL)
 SHEET TYPE DESIGNATOR
 SHEET SEQUENCE NUMBER

DISCIPLINE DESIGNATORS		
DISCIPLINE	DESIGNATOR	DESCRIPTION
GENERAL	G	ALL GENERAL
	GI	GENERAL INFORMATION
	GC	GENERAL CONTRACTUAL
	GR	GENERAL RESOURCE
SURVEY/MAPPING	V	ALL SURVEY
GEOTECHNICAL	B	ALL GEOTECHNICAL
CIVIL	C	ALL CIVIL
LANDSCAPE	L	ALL LANDSCAPE
STRUCTURAL	S	ALL STRUCTURAL
ARCHITECTURAL	A	ALL ARCHITECTURE
EQUIPMENT	Q	ALL EQUIPMENT
MECHANICAL	M	ALL MECHANICAL
ELECTRICAL	E	ALL ELECTRICAL
PLUMBING	P	ALL PLUMBING
PROCESS	D	ALL PROCESS
RESOURCE	R	ALL RESOURCE

SHEET TYPE DESIGNATORS	
DESIGNATOR	SHEET TYPE
0	GENERAL (SYMBOLS, LEGENDS, NOTES, ETC.)
1	PLANS (HORIZONTAL VIEWS)
2	ELEVATIONS, PROFILES, COMBINED PLAN & PROFILES
3	SECTIONS (SECTIONAL VIEWS)
4	LARGE-SCALE VIEWS (PLANS, ELEVATIONS, ETC.)
5	DETAILS OR COMBINED DETAILS AND SECTIONS
6	USER DEFINED
7	USER DEFINED
8	USER DEFINED
9	3D REPRESENTATIONS (ISOMETRICS, PERSPECTIVES, PHOTOS)

SECTION AND DETAIL IDENTIFIERS

	SECTION IDENTIFICATION	DETAIL IDENTIFICATION
CALLOUT	<p>SECTION IDENTIFIER: A SHEET NUMBER WHERE SECTION DRAWING IS LOCATED: C-301</p>	<p>DETAIL IDENTIFIER: 1 SHEET NUMBER WHERE DETAIL DRAWING IS LOCATED: C-501</p>
LABEL	<p>SECTION IDENTIFIER: A SCALE: _____</p>	<p>DETAIL IDENTIFIER: 1 SCALE: _____</p>
ALTERNATE	<p>SECTION IDENTIFIER: A1 SCALE: _____</p>	<p>DETAIL IDENTIFIER: A1 SCALE: _____</p>

NOTE:
 A DASH MAY BE PLACED IN THE LOWER PORTION OF THE IDENTIFIER IF THE DETAIL DRAWING OR SECTION VIEW IS LOCATED ON THE SAME SHEET.

J-U-B ENGINEERS, INC.

466 North 900 West
 Kayville, Utah 84037
 Phone: 801.547.0393
 Fax: 801.547.0397
 www.jub.com

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NO.	REVISION	DESCRIPTION	BY	DATE

SYSTEM FILTRATION AND CHLORINATION PROJECT
 COLE CANYON WATER COMPANY

LINE AND SYMBOL LEGENDS AND SHEET AND DETAIL KEY

FILE: 55-22-005-G-004X
 JUB PROJ. #: 55-22-005
 DRAWN BY: CRA
 DESIGN BY: BRN
 CHECKED BY: BRN

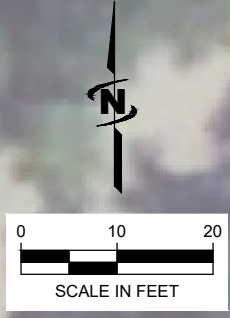
ONE INCH
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 LAST UPDATED: 10/23/2023

SHEET NUMBER:
G-004

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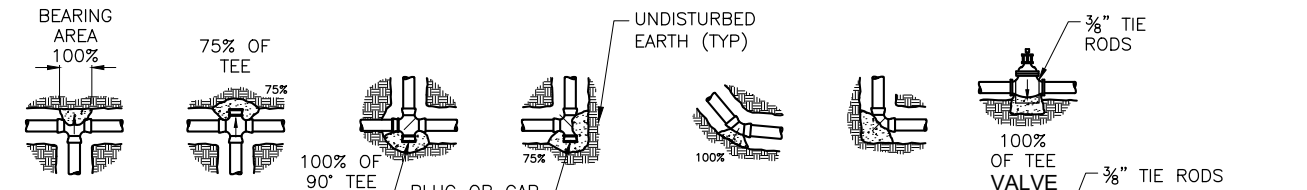
SYSTEM FILTRATION AND CHLORINATION PROJECT
 COLE CANYON WATER COMPANY
 SITE PLAN



- NOTES:**
1. ALL MATERIALS IN CONTACT WITH DRINKING WATER SHALL MEET REQUIREMENTS OF ANSI/NSF 61.
 2. PIPE AND PIPE FITTINGS SHALL BE LEAD FREE AND MEET REQUIREMENTS OF ANSI/NSF 372 OR ANSI/NSF 61 ANNEX G.
 3. DUCTILE IRON PIPE SHALL BE INSTALLED IN ACCORDANCE WITH AWWA C600.
 4. INSTALLED PIPE SHALL PASS PRESSURE TESTING IN ACCORDANCE WITH AWWA C600.
 5. ALL NEW WATERLINES SHALL BE DISINFECTED PER AWWA C651 AND PASS BACTERIOLOGIC TESTING REQUIRED BY DDW.
 6. OPEN ENDS OF ALL PIPE SHALL BE SEALED AT THE END OF THE DAY'S WORK
 7. A SPARE DOSING PUMP SHALL BE IN THE OWNER'S INVENTORY TO FACILITATE TIMELY REPLACEMENT.

Plot Date: 10/23/2023 3:16 PM Plotted By: Caitlin Arnold
 Date Created: 10/23/2023 JUB.COM\CENTRAL\Clients\UT COLE CANYON\PROJECT\55-22-095 SYSTEM\FILTRATION\DISINFECTION\DESIGN\CAD\SHEET\55-22-095_C-101X.DWG

NO.	REVISION	DESCRIPTION	BY	DATE



NOTE:
 ALL MJ AND FLANGED FITTINGS TO BE WRAPPED WITH POLYETHYLENE WRAP PRIOR TO POURING THRUST BLOCK.

DETAIL NOTES:
 FIGURE (100%) AT THRUST BLOCK INDICATES PERCENT OF TOTAL THRUST TO BE APPLIED FOR BEARING AREA. ARROW (→) INDICATES THRUST DIRECTION. CONCRETE FOR THRUST BLOCKS TO BE 3000 P.S.I.

PIPE SIZE	GRAVITY BLOCK SIZE (CY)		
	11.25° BEND	22.5° BEND	45° BEND
4"	0.2	0.5	0.9
6"	0.5	0.9	1.8
8"	0.8	1.6	3.2
10"	1.2	2.4	4.8
12"	1.7	3.4	6.7
14"	2.3	4.6	9.0

DESIGN PRESSURE = 200 PSI
 SOIL BEARING CAPACITY = 2000 LB/SF
 WEIGHT OF CONCRETE TO RESIST 100% OF TOTAL THRUST

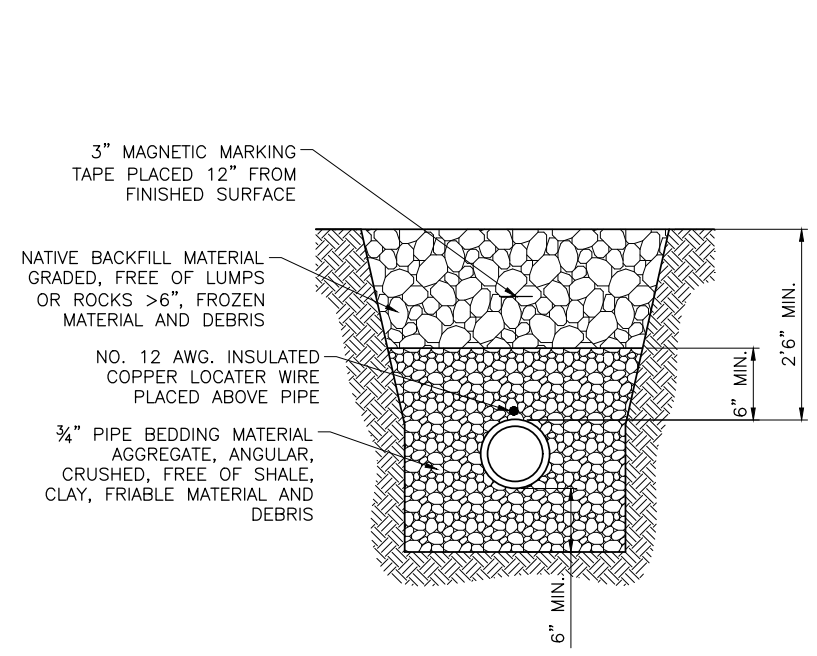
- TABLE NOTES:
- IN USING THE CURVE THRUST BLOCKING TABLE, USE THE MAXIMUM INTERNAL PRESSURE ANTICIPATED (i.e. HYDROSTATIC TEST PRESSURE, POSSIBLE SURGE PRESSURE DUE TO PUMP SHUT-OFF, ETC.)
 - SEE SOILS REPORT FOR BEARING STRENGTH OF SOIL IN THE ABSENCE OF A SOILS REPORT, AND AVERAGE SOIL (SPADABLE MEDIUM CLAY) CAN BE ASSUMED TO HAVE A BEARING STRENGTH OF 2000 P.S.F.

PIPE SIZE	DEAD END OR TEE	90° ELBOW	45° ELBOW	22½° ELBOW
4"	25	35	20	10
6"	51	72	39	20
8"	88	123	64	34
10"	142	201	110	56
12"	202	284	155	80
14"	273	385	210	107
16"	354	498	272	142
18"	351	494	269	137
20"	565	795	433	220
24"	810	1142	622	318

*(SF=1.5)

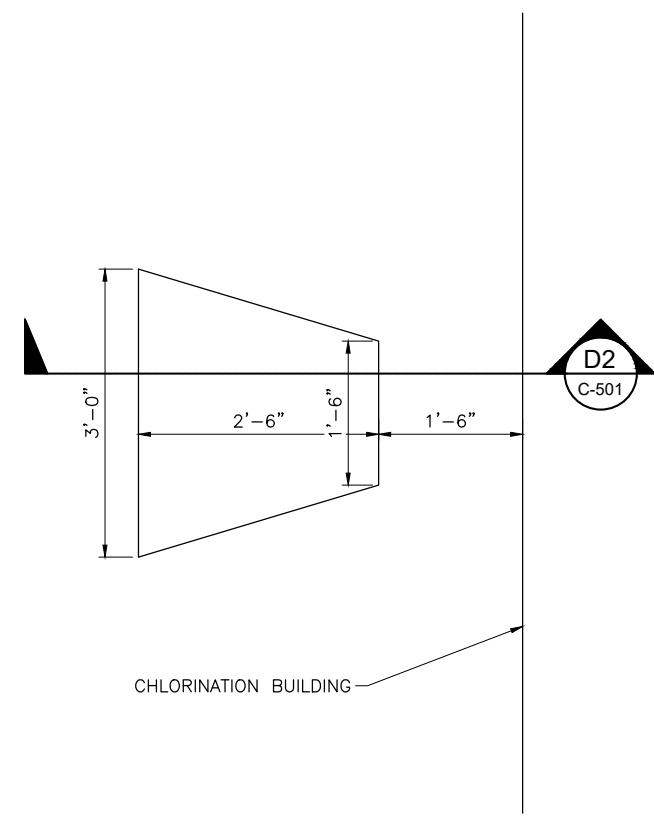
EXAMPLE:
 8-INCH 90° ELBOW, PRESSURE = 200 lb./SQ. IN.
 FROM TABLE: THRUST = 94 x 200 = 18,800 lb.
 ASSUME BEARING STRENGTH OF SOIL = 2000 lb./SQ. FT.
 $\frac{18800}{2000} = 9.4$ SQ. FT. = AREA OF BEARING REQUIRED FOR THRUST BLOCK.

B1 THRUST BLOCK DETAIL
 SCALE: N.T.S.

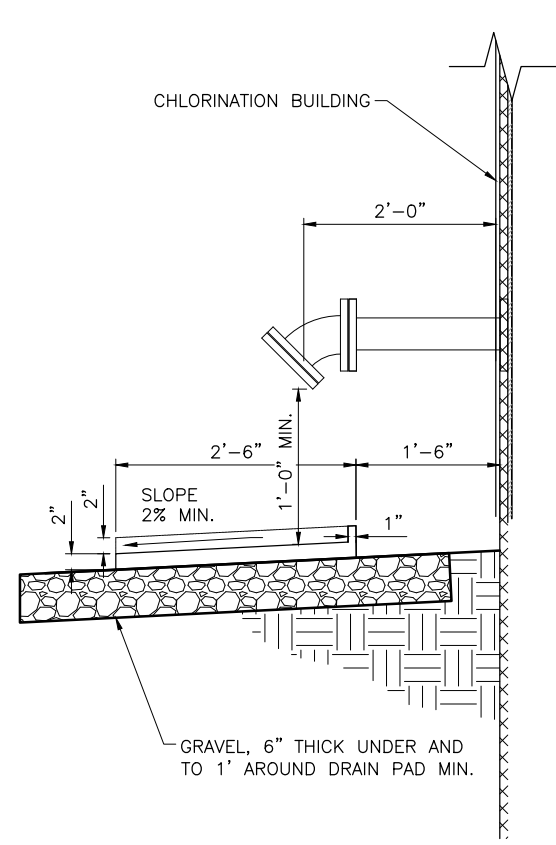


- NOTES:
- TRENCH WIDTH SHALL BE O.D. + 12".
 - BACKFILL TO BE COMPACTED TO 95% MODIFIED PROCTOR PER ASTM D1557 IN ROADWAYS AND 93% IN LANDSCAPED AREAS.

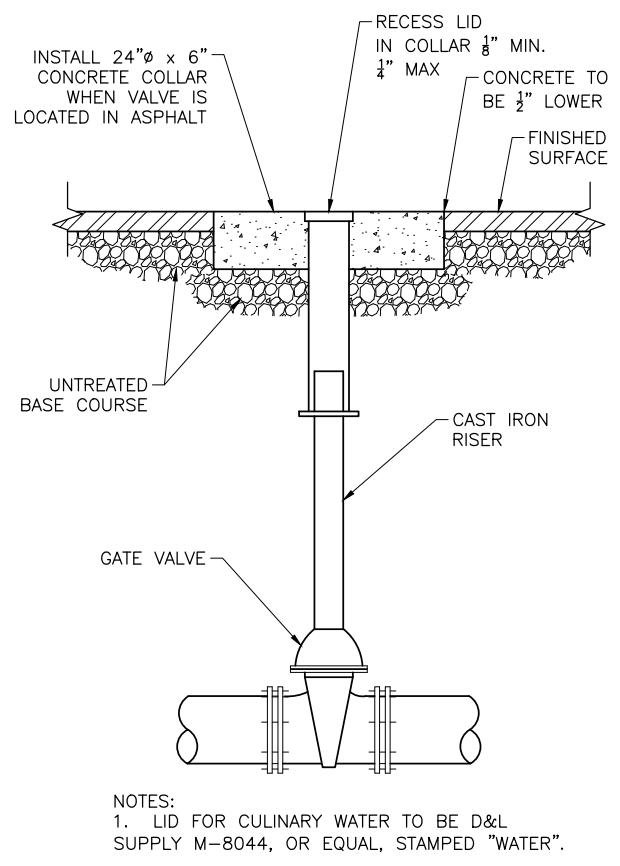
B3 TYPICAL TRENCH SECTION
 SCALE: NOT TO SCALE



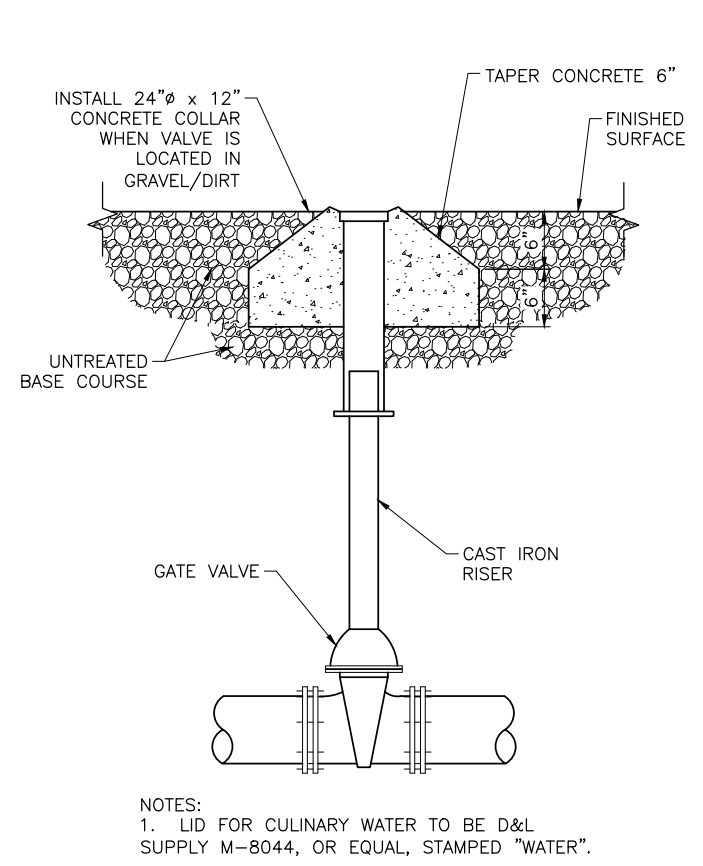
D1 DRAIN CONCRETE PAD DETAIL
 SCALE: 1" = 1'-0"



D2 DRAIN CONCRETE PAD SECTION
 SCALE: 1" = 1'-0"



D3 VALVE DETAIL
 SCALE: 1" = 10"



D3 VALVE DETAIL
 SCALE: 1" = 10"

Plot Date: 10/23/2023 3:15 PM Plotted By: Caitlin Ahmad
 Date Created: 10/23/2023 JUB.COM\CENTRAL\CALCULATORS\IT\COLE\CANYON\PROJECTS\55-22-095_SYSTEMFILTRATIONANDCHLORINATION\DESIGN\CAD\SHEET\55-22-095_C-501X.DWG

MATERIAL NOTES

- ① SAMPLING TAP, PRESSURE GAUGE, AIR VENT & ISOLATION VALVE. SEE DETAIL B1, SHEET M-501
- ② 8" GATE VALVE (FLxMJ)
- ③ 3" 90° D.I. BEND (FL)
- ④ 8"x8"x4" D.I. TEE (FLxFLxMJ)
- ⑤ 4" C900 DR 18 PVC PIPE
- ⑥ EXISTING 8" PVC WATERLINE
- ⑦ 8" C900 DR 18 PVC PIPE
- ⑧ AMIAD 4" OPAL 2"x(3)x4" 40 MICRON FILTER SYSTEM WITH POD ISOLATION B-FLY VALVES, AND CONTROL PANEL, SEE E-102 FOR PANEL LOCATION
- ⑨ 55 GAL POLYETHYLENE SODIUM HYPOCHLORITE DRUM - 12.5% FREE CHLORINE, NSF 60 CERTIFIED. PROVIDE WITH EPDM RUBBER GASKET TO SEAL FEED HOSE, RECEIVING BASIN, AND INVERTED "J" AIR VENT WITH #14 SCREEN. OWNER TO PROVIDE MEANS TO MEASURE AND RECORD LEVEL.
- ⑩ BLUE-WHITE FLEXFLO PERISTALTIC FLOW-PACED METERING PUMP, MODEL M14-6T, FLOW RANGE 0.0001-1.35 GALLONS PER HOUR. SUPPLY WITH WALL MOUNT BRACKET (PART NO. KIT-PSM), SUCTION TUBING (PART NO. C-334-6), DISCHARGE TUBING (PART NO. C-335-6), AND NECESSARY ACCESSORIES. CONNECT SIGNAL FROM FLOW METER TO DOSING PUMP.
- ⑪ BLUE-WHITE PVDF INJECTION QUILL (PART NO. A-01NK-6A)
- ⑫ EYE WASH WALL STATION- HONEYWELL EYE SALINE 32000462000.
- ⑬ 4" FLANGE COUPLING ADAPTER
- ⑭ 4" AWWA C151 PC 350 D.I. PIPE (FL)
- ⑮ 4"x3" D.I. CONCENTRIC REDUCER (FL)
- ⑯ 3" SIEMENS SITRANS MAG 5100 W FLOW METER WITH EBONITE LINING AND MAG 5000 TRANSMITTER (115 VAC). MOUNT TRANSMITTER ON WALL. CONNECT 4-20 mA OUTPUT TO DOSING PUMP. MINIMUM OF 15" STRAIGHT PIPE UPSTREAM AND MINIMUM OF 9" STRAIGHT PIPE DOWNSTREAM OF FLOW METER. SEE E-102 FOR TRANSMITTER LOCATION.
- ⑰ 3" AWWA C151 PC 350 D.I. PIPE (FL)
- ⑱ 4" GATE VALVE (FLxMJ)
- ⑲ 4" 90° D.I. BEND (FL)
- ⑳ ELECTRIC HEATER, SEE ELECTRICAL SHEETS
- ㉑ 8" FLANGE COUPLING ADAPTER
- ㉒ 4" FLANGE WITH #4 SCREEN AND 3/4" EXPANDED STAINLESS STEEL SCREEN BETWEEN FLANGES. PLACE #4 SCREEN UPSTREAM OF 3/4" SCREEN. SEE DETAIL D2, C-501 FOR AIR GAP REQUIREMENTS.
- ㉓ PIPE SUPPORT, SEE DETAIL B3, SHEET M-501. SUPPORTS UNDER FILTER SHALL BE PER MANUFACTURER'S RECOMMENDATIONS.
- ㉔ 4" AWWA C151 PC 350 DI PIPE (FLxPE)
- ㉕ 8"x8"x4" DI TEE (MJxMJxMJ)
- ㉖ 3" FLANGE COUPLING ADAPTER
- ㉗ 4" 45° D.I. BEND (FL)
- ㉘ 3" AWWA C151 PC 350 D.I. PIPE (FLxPE)

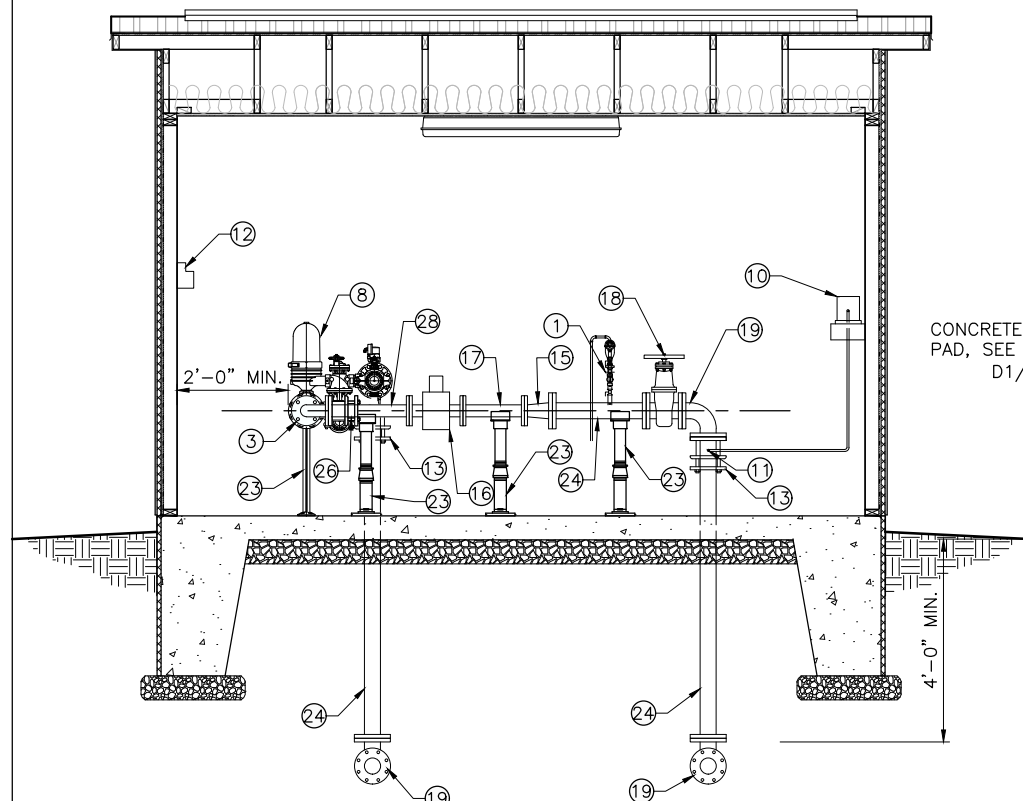
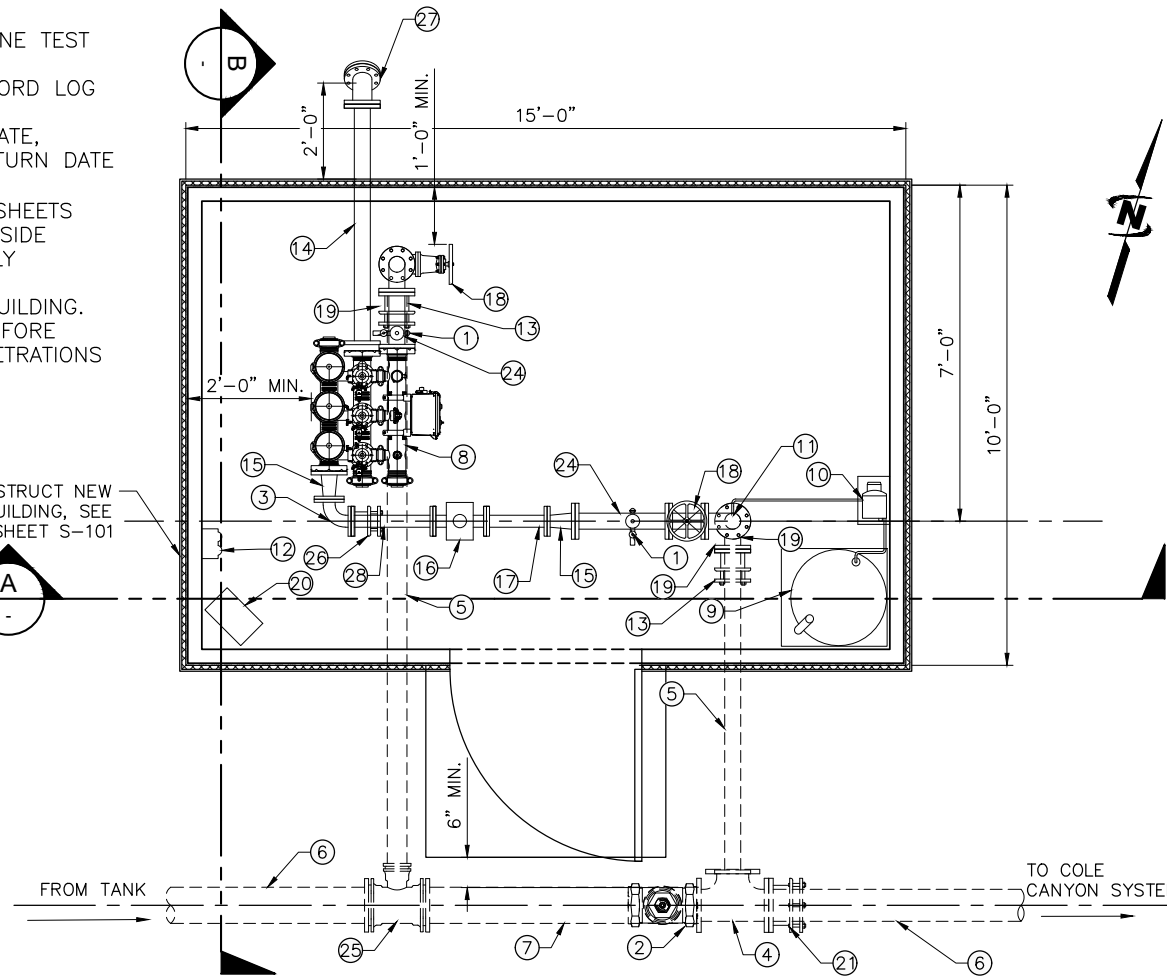
NOTES:

1. PROVIDE HACH MODEL CN-80 CHLORINE TEST KIT.
2. OWNER TO MAINTAIN A CHEMICAL RECORD LOG ON SITE INCLUDING CHEMICAL NAME, CONCENTRATION, VOLUME, DELIVERY DATE, EXPIRATION DATE, AND CONTAINER RETURN DATE (IF APPLICABLE).
3. SODIUM HYPOCHLORITE SAFETY DATA SHEETS SHALL BE PROMINENTLY DISPLAYED INSIDE CHLORINATION BUILDING AND BE EASILY ACCESSIBLE.
4. PROVIDE FIRE EXTINGUISHER INSIDE BUILDING.
5. VERIFY DIMENSIONS OF ALL PARTS BEFORE CONSTRUCTION TO ENSURE PIPE PENETRATIONS ARE AT THE CORRECT LOCATION.

CONSTRUCT NEW BUILDING, SEE SHEET S-101

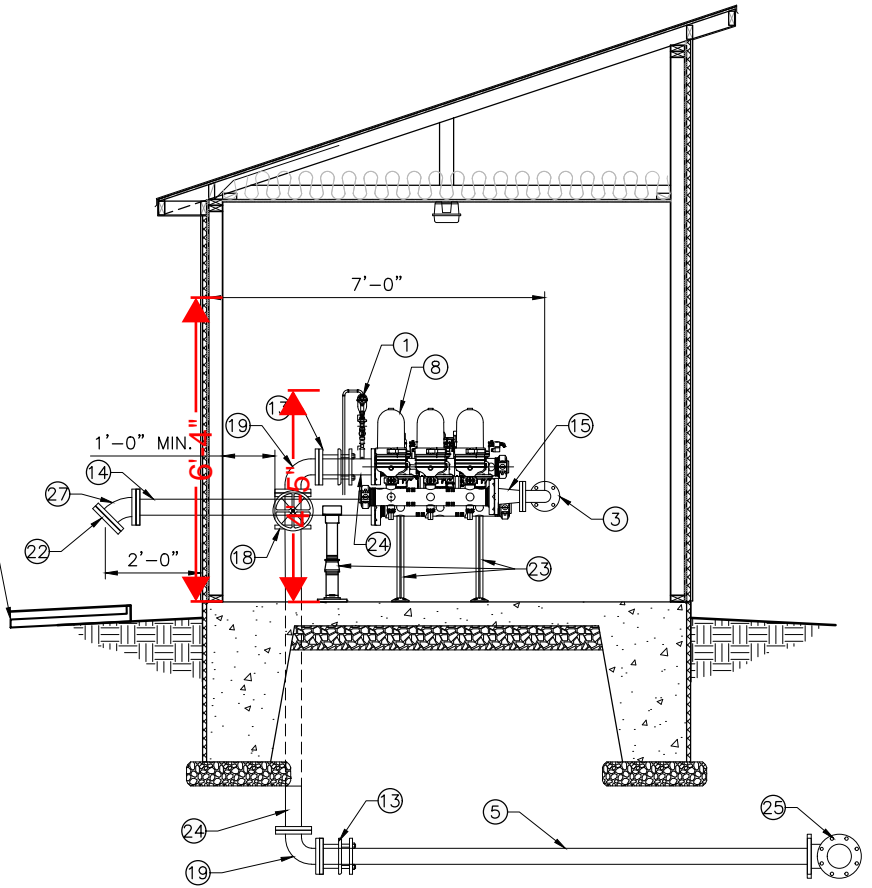
CHLORINATION PLAN

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



SECTION A

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



SECTION B

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



J-U-B ENGINEERS, INC.
466 North 900 West
Kaysville, Utah 84037
Phone: 801.547.0393
www.jub.com

CONSTRUCTION

NO.	REVISION	DESCRIPTION	BY	DATE

SET

NO.	REVISION	DESCRIPTION	BY	DATE

SYSTEM FILTRATION AND CHLORINATION PROJECT COLE CANYON WATER COMPANY

PIPING PLAN AND SECTION

FILE: 55-22-095_M-101X
JUB PROJ. #: 55-22-095
DRAWN BY: CRA
DESIGN BY: BRN
CHECKED BY: BRN
AT FULL SIZE, IF NOT ONE INCH SCALE ACCORDINGLY
LAST UPDATED: 10/23/2023

SHEET NUMBER:
M-101

GENERAL STRUCTURAL NOTES AND SPECIFICATIONS

1. GENERAL

- A. These General Structural Notes and Specifications supplement the project written technical specifications and the project structural drawings.
B. Where conflicts or discrepancies exist between the project drawings, the contract documents, and/or technical specifications, the more stringent requirement shall apply, unless specifically approved in writing by the Engineer.
C. The Contractor is responsible for all construction bracing, temporary shoring, and other site safety controls required during construction in accordance with all applicable local, state and federal regulations, to insure the stability and safety of all construction until it is completed and self-supporting.
D. The Contractor is responsible for all water, both above and below ground, runoff and other environmental controls required during construction to insure the site is maintained in compliance with all applicable local, state and federal regulations.
E. Details on these plans are intended to depict the general construction details and methods for this structure. Connection details and conditions not specifically shown that are similar in nature to those that are specified shall be assumed one and the same. If questions regarding the application of details are encountered, the Contractor shall notify the Engineer for clarification or instruction.
F. Prior to implementing any changes to these plans, the Engineer shall be notified in writing for their written approval. Changes implemented without the Engineer's written approval shall relieve the Engineer of any claim or liability resulting from that portion of the structure changed or affected by the change.

2. CONTRACTOR RESPONSIBILITY FOR COORDINATION

- A. It is the Contractor's prime responsibility to coordinate the work shown on all of the project drawings, general, special and technical specifications.
B. The Contractor is responsible to verify all existing construction material types dimensions, elevations and conditions.
C. The Contractor shall verify and coordinate the dimensions among all drawings and in the field prior to proceeding with any work or fabrication, any discrepancy shall be immediately reported to the Engineer.
D. It is the Contractor's responsibility to carefully study and coordinate the construction requirements shown on all the drawings of the various disciplines. When conflicts or discrepancies are found between these plan sets and/or within these drawings, the Contractor shall report them immediately to the project Engineer for direction and/or clarification. Any construction work done by the Contractor before obtaining such clarification from the project Engineer shall be at the Contractor's own risk and cost. Furthermore; any work required to correct, replace and/or restore the work as directed by the Engineer shall be at the contractors own risk and cost.

3. CODES

- A. Unless otherwise noted, all referenced building codes and standards refer to their current editions, including any local, state, or federal amendments or changes, as adopted in the locality of the Project on the date these drawings are signed and sealed by the Project Engineer.
B. GENERAL:
B.1. International Code Council, ICC, International Building Code, IBC.
B.2. Minimum Design Loads for Buildings and Other Structures, ASCE 7.
C. CONCRETE:
C.1. American Concrete Institute, ACI 301, Specifications for Structural Concrete.
C.2. American Concrete Institute, ACI 318, Building Code Requirements for Structural Concrete.
D. WOOD:
D.1. American Wood Council, AWC, National Design Specification for Wood Construction, NDS.

4. DESIGN CRITERIA

- A. Occupancy or Use; IBC Table 1607.1: Chlorination Shed
B. Occupancy Category; U
C. Risk Category; ASCE 7 Table 1.5-2: II
D. Dead Load:
D.1. Roof: 20 psf
E. Live Load:
E.1. Floor: 40 psf
E.2. Roof: 20 psf
F. Snow Load:
F.1. Ground Snow Load P_g = 79.0 psf
F.2. Sloped Roof Snow Load P_s = 60.8 psf
F.3. Flat Roof Snow Load P_f = 60.8 psf
F.4. Importance Factor I_s = 1.0
F.5. Snow Exposure Factor C_e = 1.0
F.6. Thermal Factor: C_t = 1.1
G. Wind Load:
G.1. Basin Design Wind Speed: V = 103 mph
G.2. Site Wind Exposure: B
H. Ice Load:
H.1. Ice Importance Factor - Thickness: I_t = 1.00
H.2. Ice Importance Factor - Wind: I_w = 1.00
H.3. Ice Thickness: 0.25 in.
H.4. Concurrent Temperature: 15 °F
I. Rain Load:
I.1. 15-Minute Precipitation Intensity: 5.17 in./hr
I.2. 60-Minute Precipitation Intensity: 2.16 in./hr
J. Seismic Load:
J.1. Seismic Importance Factor: I_s = 1.00
J.2. Soil Site Class: D
J.3. Seismic Design Category: D
J.4. Mapped Spectral Response Acceleration Parameters:
J.4.1. Short Period: S_s = 1.146
J.4.2. 1-second: S_1 = 0.418
J.5. Design Spectral Response Acceleration Parameters:
J.5.1. Short Period: S_DS = 0.917
J.5.2. 1-second: S_1 = 0.65
J.6. Long-period Transition Period: T_L = 8
J.7. Basic Seismic Force Resisting System(s):
J.7.1. Light-frame Wood Walls Sheathed with Wood Structural Panels
J.7.1.1. Response Modification Coefficient: R = 6.5
J.7.1.2. System Overstrength Factor: Omega_o = 3.0
J.7.1.3. Deflection Amplification Factor: C_d = 4.0
K. Mechanical Loads:
K.1. Refer to mechanical plans for special mechanical equipment loads.

- 5. SPECIAL INSPECTIONS. Special Inspections per IBC Chapter 17 are not required for the project as per the exceptions listed in Section 1704.2.

6. SUBMITTALS

- A. Submit required copies, one (1) electronic .pdf file or three (3) minimum hardcopy, of product or material design information to the Engineer for review for the following items:
A.1. Concrete mix designs and admixtures.
A.2. Epoxy anchors.
B. Submit required copies of shop drawings, one (1) electronic .pdf file or three (3) minimum hardcopy, to the Engineer for review prior to fabrication of the following items:
B.1. Reinforcing steel for all concrete.
C. The following items to be designed by others are considered "Deferred Submittals". Deferred submittals shall be accompanied by design drawings, shop drawings and structural calculations, stamped and signed by a Professional Structural Engineer currently registered in the State of Utah.
C.1. Pre-engineered and shop fabricated building.

7. FOUNDATIONS

- B. All footings to be placed on firm undisturbed, inorganic material. Proof roll sub-grade prior to placing concrete where the material has been disturbed by the excavating equipment.
C. All footings outside or at the perimeter of the structure, or in other unheated areas shall be set to a depth of at least 36" below finish grade, unless otherwise noted on the plans.
D. Allowable bearing pressure for all footings Q_a = 1,500 psf
E. Local areas of soft and/or unacceptable material encountered at bottom of footing elevations indicated on the plans must be over-excavated and brought up to design grade with compacted "structural fill" or "lean concrete fill".
F. All structural fill and/or backfill shall be granular, free draining, material; Unified Soils Classification GW, GP, GM or SW; maximum aggregate size of 3-in. and no more than 5% passing a number 200 sieve. Material shall be placed in lifts no greater than 8-in. in depth and compacted to 95% of maximum density as determined per ASTM D1557.
G. The Engineer shall be notified in writing if any ground water, clay type soils, debris or unconsolidated materials are encountered during excavations for foundations.

8. CONCRETE

- A. GENERAL. Concrete shall be proportioned to provide an average compressive strength, f'c, as prescribed in ACI 318 and shall satisfy the durability criteria of ACI 318.
B. PROJECT CONCRETE MIX TYPES: Concrete shall be proportioned and furnished for the various project uses as indicated on the plans and as follows:
B.1. f'c = 4,000 psi, Absolute water-cement ratio by weight = 0.45, Air Content = 6% (+/- 1.5%). For all structural concrete and exterior slabs on grade.
C. CONCRETE MIX COMPONENTS.
C.1. A water-reducing admixture conforming to ASTM C494, used in strict conformance with the manufacturer's instructions, shall be incorporated in all concrete mix designs. At Contractor's option, a high-range water-reducing (HRWR) admixture conforming to ASTM C494, Type F or G, may be used provided the total slump is less than 10".
C.2. Higher water-cement ratios than shown above may be used if substantiated in accordance with ACI 318.
C.3. Fly-ash conforming to ASTM C618 Type F or C, may replace up to 20% of the cement content, provided that the mix strength is substantiated by test data.
C.4. Cement: ASTM C150 TYPE I OR II; ASTM C595 Type IP, IL, or IT; ASTM C1157 Type GU.
C.5. Water: Clean & Potable.
C.6. Air entraining agent: ASTM C260. Except where noted non-air entrained.
C.7. Aggregate: 0.75-inch Maximum aggregate per ASTM C33. Unless noted otherwise.
C.8. Mix Proportioning: ACI 211.1 and 350R.
D. CONCRETE ACCESSORIES:
D.1. REINFORCING STEEL: Reinforcing steel shall conform to ASTM A615 Grade 60; #3 bars may be Grade 40.
D.2. JOINTING MATERIALS: All jointing materials including expansion joints and sealants, shall be resistant to chemical attack for the design life of the facility. Sealants shall conform to ASTM C 920 and Federal Specification TT-S-00277E.
E. CONCRETE PROPORTIONS. Concrete mix proportioning shall be in accordance with ACI 211.1; Standard Practice for Selecting Proportions for Normal, Heavyweight, and Mass Concrete.
F. CONCRETE MIX VERIFICATION: Concrete mix designs shall be verified by standard 28-day cylinder tests per ASTM C39.
G. EVALUATION AND ACCEPTANCE OF CONCRETE. Concrete shall be tested in accordance with the requirements of ACI 318.
H. MIXING & PLACING CONCRETE. Concrete shall be prepared, mixed, placed and consolidated in accordance with ACI 318 and as follows:
H.1. ACI 304; Guide for Measuring, Mixing, Transporting, and Placing Concrete.
H.2. ACI 309; Guide for Consolidation of Concrete.
I. CONCRETE CURING. Concrete shall be maintained above 50-degrees F and in a moist condition for at least 7 days after placement, except when cured in accordance with ACI 318.
I.1. Curing of concrete shall be per the recommendations given in ACI 308; Guide to Curing Concrete.
J. COLD WEATHER REQUIREMENTS. Adequate equipment shall be provided for heating concrete materials and protecting concrete during freezing or near-freezing weather. The recommended procedures listed in ACI 306; Cold Weather Concreting shall be followed.
J.1. Cold weather is defined as a period when, for more than 3 consecutive days, the following conditions exist:
J.1.1. The average daily air temperature is less than 40-degrees F and
J.1.2. The air temperature is not greater than 50-degrees F for more than one-half of any 24-hour period.
K. HOT WEATHER REQUIREMENTS. During hot weather, proper attention shall be given to ingredients, production methods, handling, placing, protection, and curing to prevent excessive concrete temperatures or water evaporation that could impair required strength or serviceability of the ember or structure. The recommended procedures listed in ACI 305; Hot Weather Concreting shall be followed.
K.1. Hot weather is any combination of the following conditions that tends to impair the quality of freshly mixed or hardened concrete by accelerating the rate of moisture loss and rate of cement hydration, or otherwise causing detrimental results:

- K.1.1. High ambient temperature.
K.1.2. High concrete temperature.
K.1.3. Low relative humidity.
K.1.4. Wind speed.
K.1.5. Solar radiation.

9. FORMWORK AND FINISHING

- A. Forms shall result in a final structure that conforms to shapes, lines, and dimensions of the members as required by the design drawings and specifications.
A.1. Design of formwork shall be in accordance with ACI 318.
A.2. Formwork shall be in accordance with ACI 347; Guide to Formwork for Concrete.
B. Tolerances for finished concrete surfaces shall meet the following requirements, class of surface is per Table 3.4:
B.1. Footings: Class C
B.2. Foundation walls: Class B
C. Chamfer all exposed corners and fillet entrant angles 3/4" unless otherwise noted on the drawings.
D. REMOVAL OF FORMS.
D.1. Concrete forms shall not be removed until the retained concrete has reached the following minimum percentage of the required 28 day compressive strength:
D.1.1. Footings and base slabs on grade: 50% of f'c.
D.1.2. Foundation walls and columns: 67% of f'c.
D.2. Where concrete cylinder tests are not available for strength verification the following guide may be used when permitted by the Project Engineer:
D.2.1. Footings and base slabs on grade: 12 hours.
D.2.2. Foundation walls and columns: 24 hours.
E. EMBEDMENTS IN CONCRETE.
E.1. Conduits, pipes, and sleeves of any material not harmful to concrete and within limitations of ACI 318 shall be permitted to be embedded in concrete with approval of the Project Engineer, provided they are not considered to replace structurally the displaced concrete, except as provided in ACI 318.
E.2. Conduits and pipes of aluminum shall not be embedded in structural concrete unless effectively coated or covered to prevent aluminum-concrete reaction or electrolytic action between aluminum and steel.
F. CONSTRUCTION JOINTS.
F.1. Construction joints shall only be placed where indicated on the project drawings or as approved by the Project Engineer.
F.2. Construction joints shall be constructed in accordance with ACI 318 Sawed contraction joints. Conform to ACI 301.
G. CONCRETE FINISHING. All concrete surfaces shall be finished in accordance with ACI 301.
H. Formed Concrete Surfaces. After removal of forms, give each formed surface one or more of the following finishes:
H.1. Concrete Structures:
H.1.1. Concrete footings and foundations not exposed to view. Provide an As-cast finish.
H.1.2. Foundation wall and other surfaces below grade and not exposed to view. Provide a Rough-form finish.
H.1.3. Interior, exterior and top surfaces exposed to view to 6" below grade. Provide a Smooth-form finish.
H.2. Unformed Concrete Surfaces. Unformed concrete surfaces including the top surface of all concrete floor slabs shall be finished in accordance with ACI 301 and ACI 302.
H.2.1. For the top surfaces of walls, provide a "Scratched finish".
H.2.2. Interior floor surfaces shall receive a Troweled finish.
H.3. Provide a Nonslip finish for exterior surfaces and where indicated on the plans.
H.4. Sawed contraction joints. Conform to ACI 301.

10. DETAILS OF REINFORCEMENT

- A. Placement of all reinforcing steel within concrete structures shall be in conformance with ACI 318.
B. Reinforcing steel hooks, bends, ties, splices and other reinforcement details shall be in accordance with ACI 315; Details and Detailing of Concrete Reinforcement.
C. Spacing limits for reinforcement shall be in conformance with ACI 318.
D. Concrete protection for reinforcement. Unless noted elsewhere on the drawings, all reinforcing steel shall have the following concrete cover:
D.1. For concrete structures; per ACI 318:
D.1.1. Concrete cast against earth: 3.00 inch
D.1.2. Concrete exposed to earth, liquid or weather;
D.1.2.1. No. 5 or smaller bars: 1.50-inch
D.1.2.2. No. 6 or larger bars: 2.00-inch
E. Concrete blocks or plastic-coated bar chairs shall be provided for support of all slab reinforcing steel, sufficient in number to prevent settlement or sagging, but in no case shall such support be continuous. Metal clips or supports shall not be placed in contact with the forms or the sub-grade.
F. Dowels and anchor bolts shall be wired or otherwise held in correct position prior to placing concrete. Care shall be taken to insure that dowels and anchor bolts remain plum after concrete is poured and vibrated. In no case shall dowels or anchor bolts be stabbed into freshly poured concrete.
G. If the Contractor fails to properly tie reinforcing and anchors before concrete is cast in place, the Contractor shall remove all substandard work and reconstruct the concrete work at his own expense. However, if the Project Engineer determines the concrete work to be adequate to remain in place, the substandard work shall be paid out at a 50% pay deduction for all associated concrete work.
H. Provide dowels in footings and at construction joints to match vertical reinforcing bar size and spacing, unless otherwise noted on the drawings.
I. All bar bends, hooks, splices and other reinforcing steel details shall conform to the requirements of ACI 315.
J. Unless otherwise noted on the plans all bars shall be spliced with a Class B lap splice.
K. At all corners and wall intersections provide bent bars to match the horizontal reinforcing steel and in accordance with the typical corner reinforcing details.

11. MECHANICAL OPENINGS

- A. Mechanical openings are not shown on the structural drawings; refer to mechanical plans for size and locations.
B. Openings through concrete greater than 6-inch square or 8-inch round shall be reinforced with a minimum of 1-#5 bar, each of four sides, extending 24" past the opening edge.



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466 North 900 West
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Phone: 801.547.0383
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CONSTRUCTION



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Table with columns: NO., DESCRIPTION, REVISION, DATE

SYSTEM FILTRATION AND CHLORINATION PROJECT
COLE CANYON WATER COMPANY
STRUCTURAL
GENERAL STRUCTURAL NOTES

FILE: 55-22-005_S-001
JUB PROJ #: 55-22-005
DRAWN BY: CRA
DESIGN BY: ELC
CHECKED BY: BRN
AT FULL SIZE, IF NOT ONE INCH SCALE ACCORDINGLY
LAST UPDATED: 10/23/2023

SHEET NUMBER:

S-001

GENERAL STRUCTURAL NOTES AND SPECIFICATIONS CONTINUED

12. PRE-ENGINEERED/FABRICATED BUILDING

- A. The pre-engineered/fabricated building indicated on the drawings shall be a wood framed structure designed by a Professional Engineer experienced in structural design registered in the State of Utah per these notes and the specifications.
- B. Design the building and all appurtenances according to local design standards for Liberty, Utah. Submit calculated loads to ENGINEER for approval.
- C. Shop drawings and design calculations signed and stamped by the Design Engineer shall be submitted to the Engineer for review prior to fabrication.
- D. All necessary bridging, blocking, pre-notched or beveled plates, hangers, etc. shall be detailed or specified on the shop drawings and furnished by the manufacturer.
- E. Manufacturer shall verify all setbacks, dimensions, overhangs, vertical controls and dimensions prior to fabrication.
- F. Alteration of the layout shown on the plans may require supporting structural and foundation changes, therefore, prior approval by the Engineer is required for any proposed layout change.
- G. Building shall not be field modified without written authorization from the manufacturer's Engineer of Record.
- H. Building shall be handled, erected, and braced as directed by the manufacturer.
- I. Pre-engineered/fabricated building shall include the following:
 - 1.1. Door centered on the side with a longer dimension.
 - 1.2. Ventilation shall be provided through wall louvers near the ceiling.



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**SYSTEM FILTRATION AND CHLORINATION PROJECT
COLE CANYON WATER COMPANY**

**STRUCTURAL
GENERAL STRUCTURAL NOTES**

FILE: 55-22-095_S-001
 JUB PROJ. #: 55-22-095
 DRAWN BY: CRA
 DESIGN BY: ELC
 CHECKED BY: BRN

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LAST UPDATED: 10/23/2023

SHEET NUMBER:
S-002



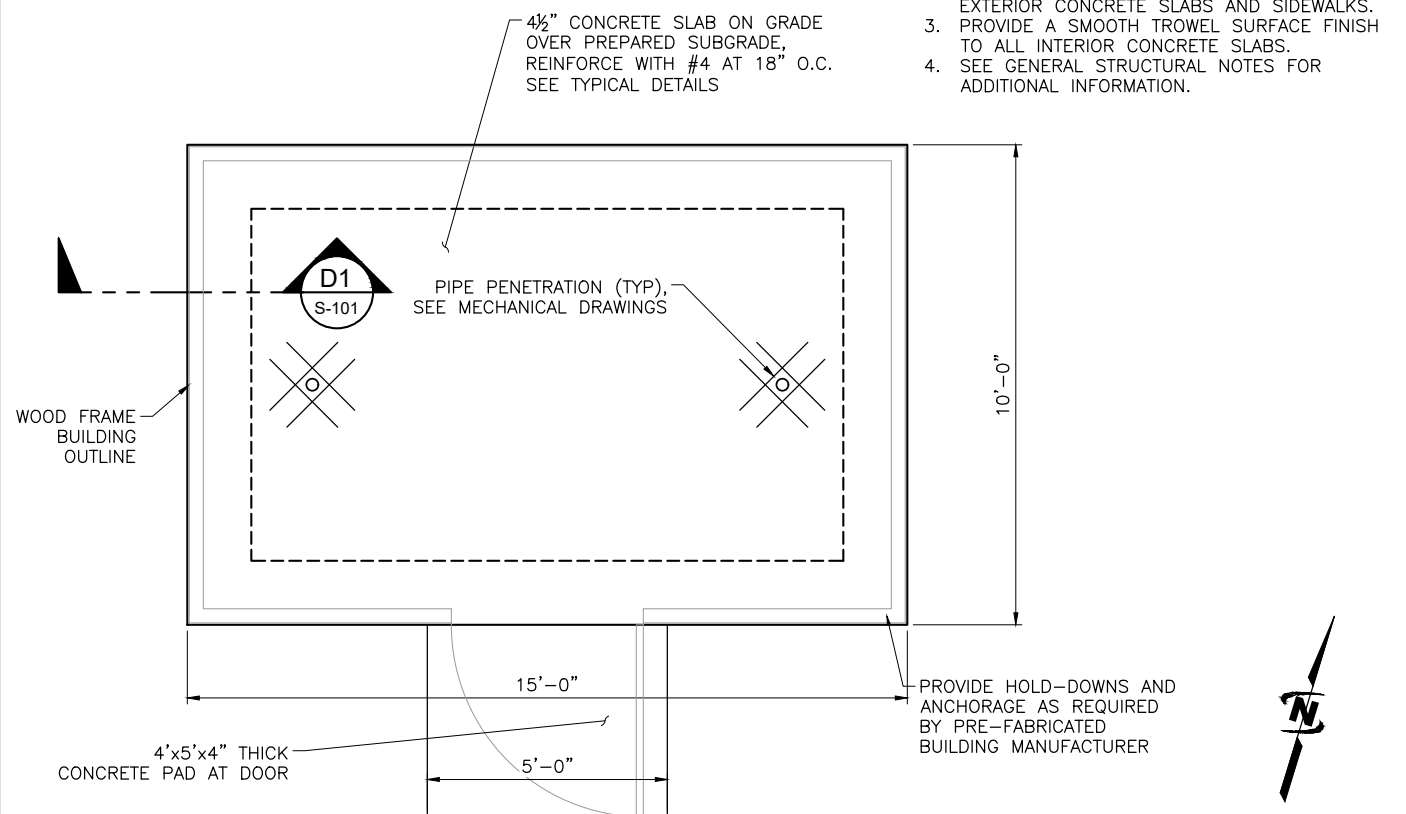
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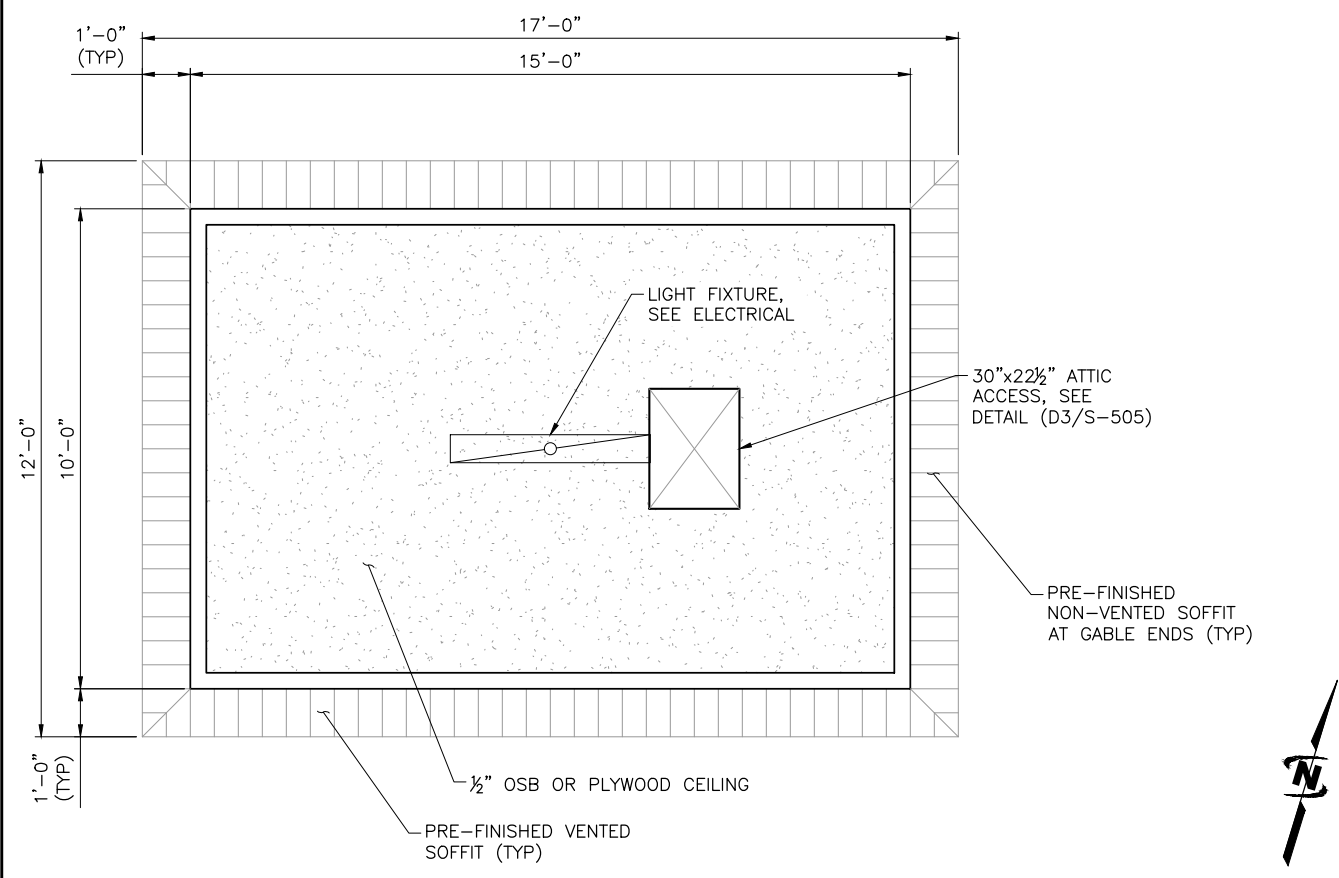
NO.	REVISION	DESCRIPTION	BY	DATE

SYSTEM FILTRATION AND CHLORINATION PROJECT
COLE CANYON WATER COMPANY
STRUCTURAL PLANS

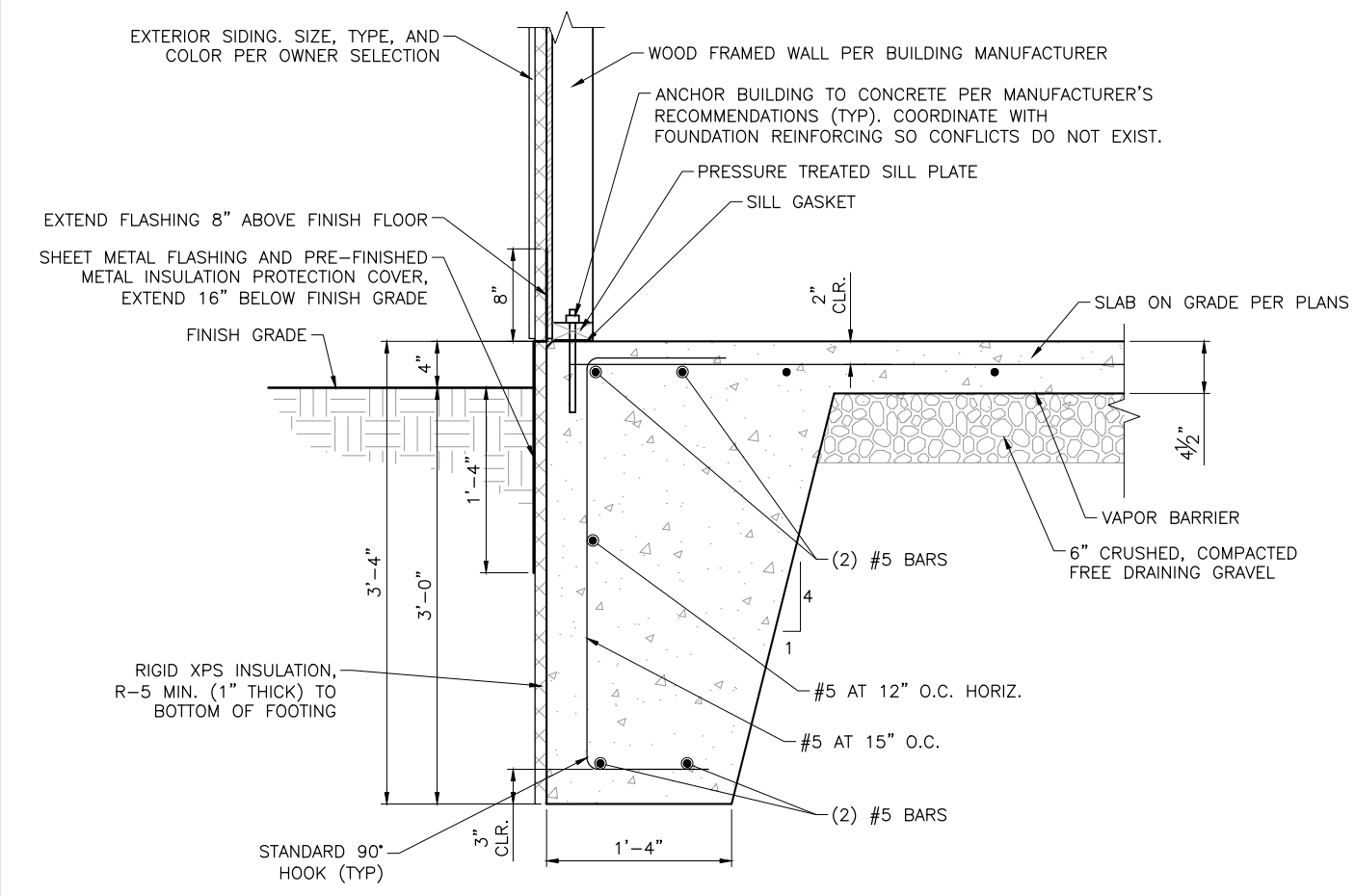
- NOTES:
- COORDINATE PLACEMENT OF FLOOR DRAINS AND OTHER FLOOR PENETRATIONS WITH PIPING AND EQUIPMENT. SEE MECHANICAL PLANS.
 - PROVIDE A BROOM SURFACE FINISH TO ALL EXTERIOR CONCRETE SLABS AND SIDEWALKS. PROVIDE A SMOOTH TROWEL SURFACE FINISH TO ALL INTERIOR CONCRETE SLABS.
 - SEE GENERAL STRUCTURAL NOTES FOR ADDITIONAL INFORMATION.



B1 FOUNDATION PLAN
SCALE: 1/2" = 1'-0"

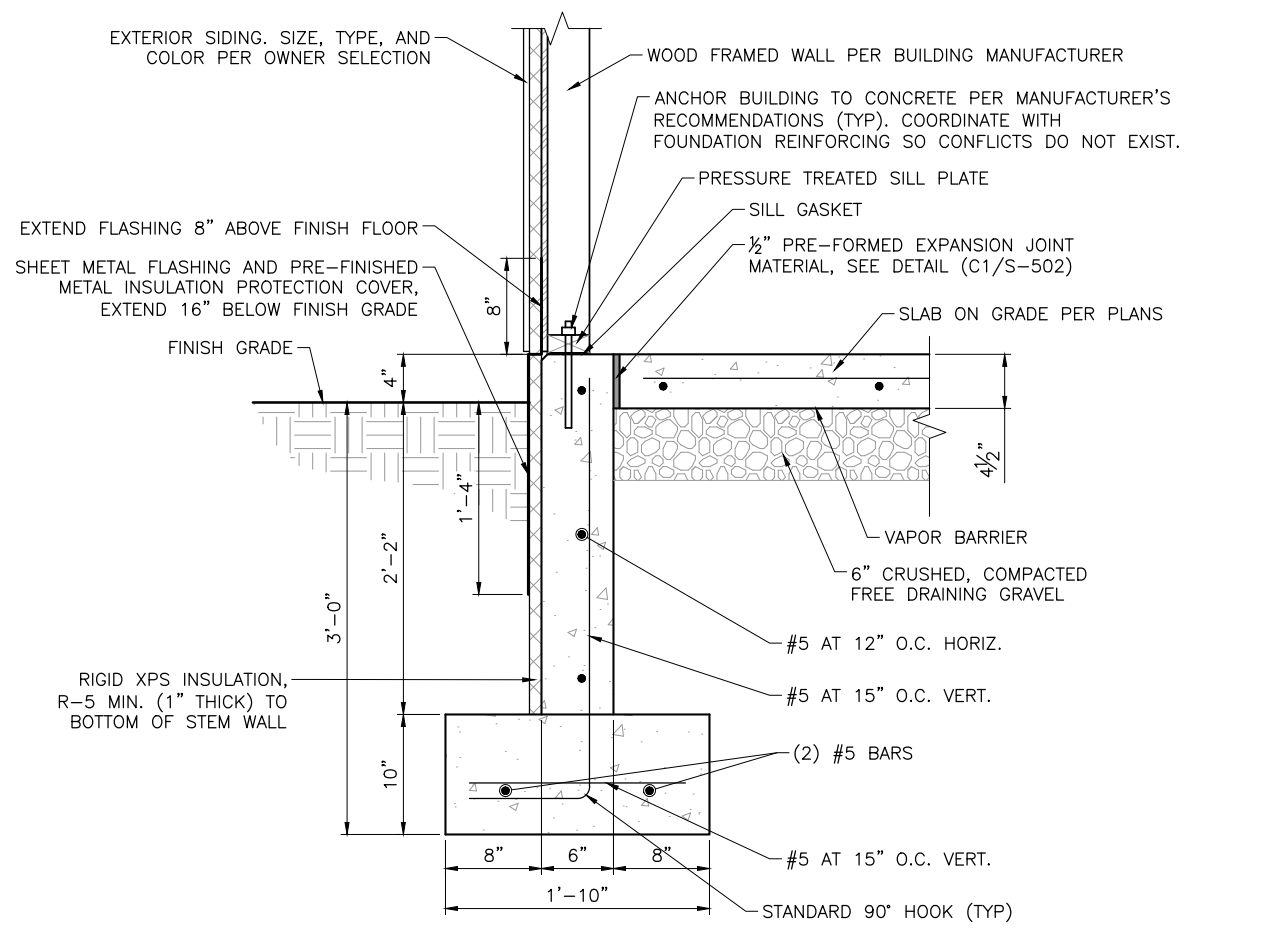


B3 REFLECTED CEILING PLAN
SCALE: 1/2" = 1'-0"



D1 FOOTING DETAIL
SCALE: NOT TO SCALE

OPTION A

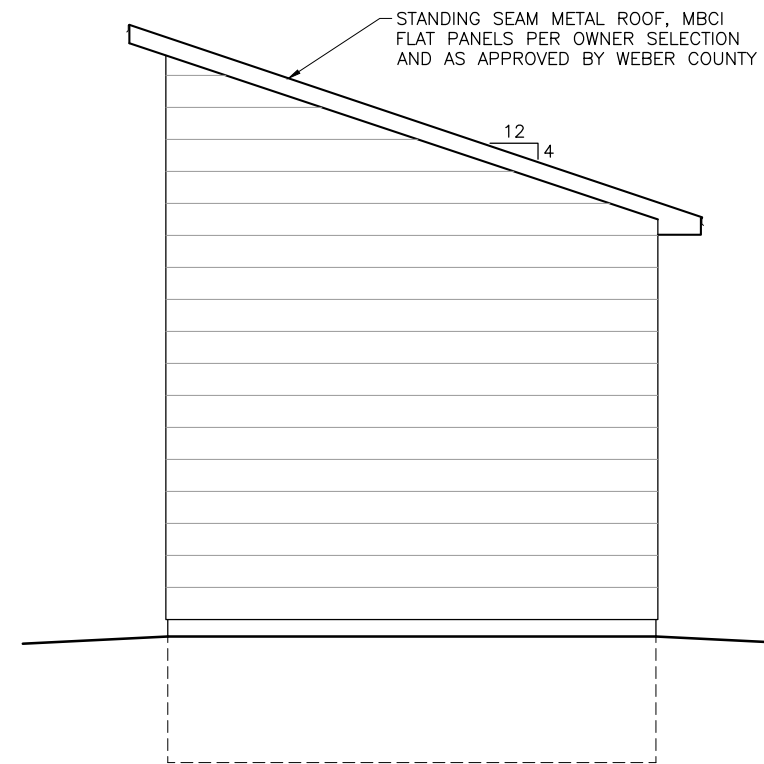
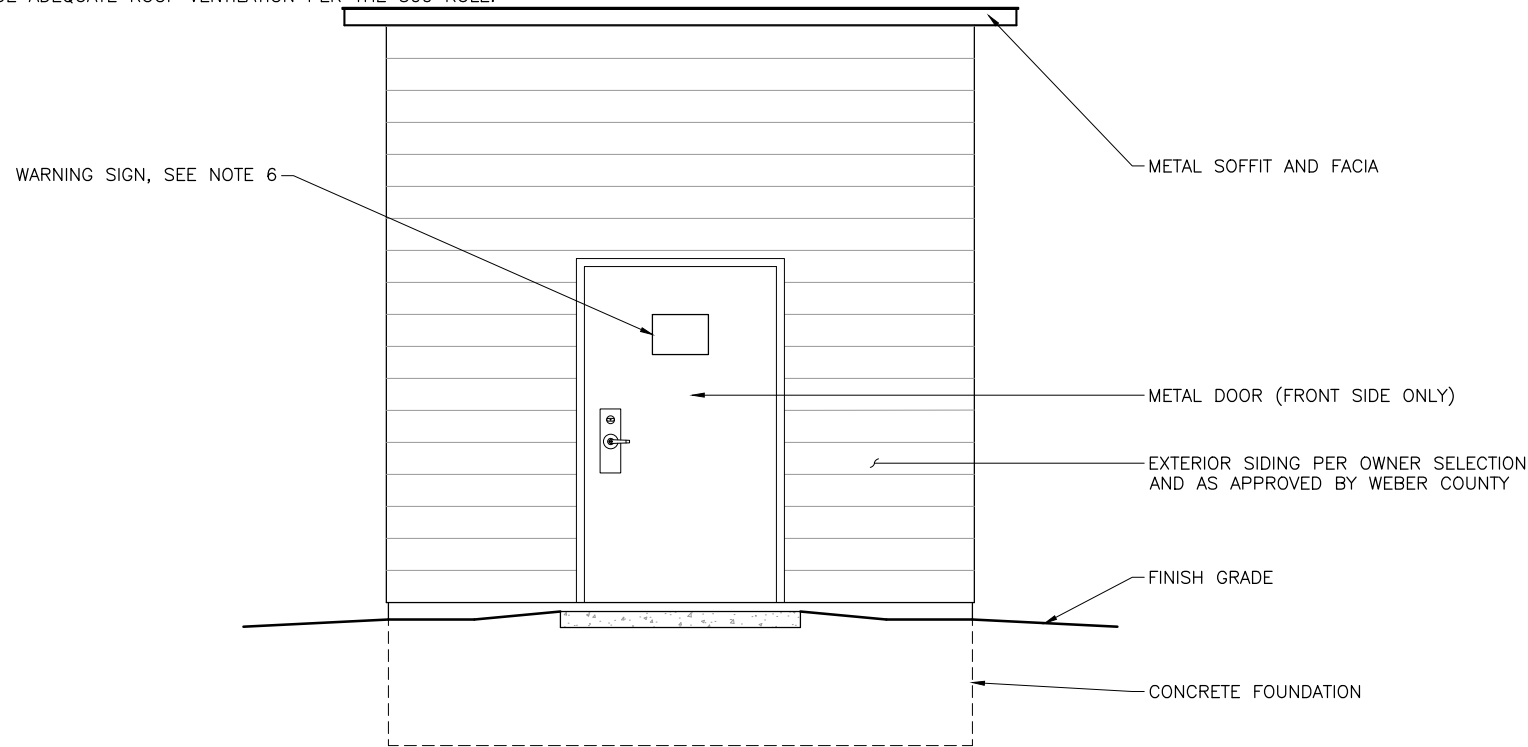


OPTION B

Plot Date: 10/23/2023 3:15 PM Plotted By: Caitlin Ahmad
 Date Created: 10/23/2023 JUB: COMERCIAL CLIENTS/UT/COLE CANYON PROJECT/55-22-005 SYSTEM FILTRATION AND CHLORINATION DESIGN/CAD SHEET/55-22-005_S-101.DWG

NOTES:

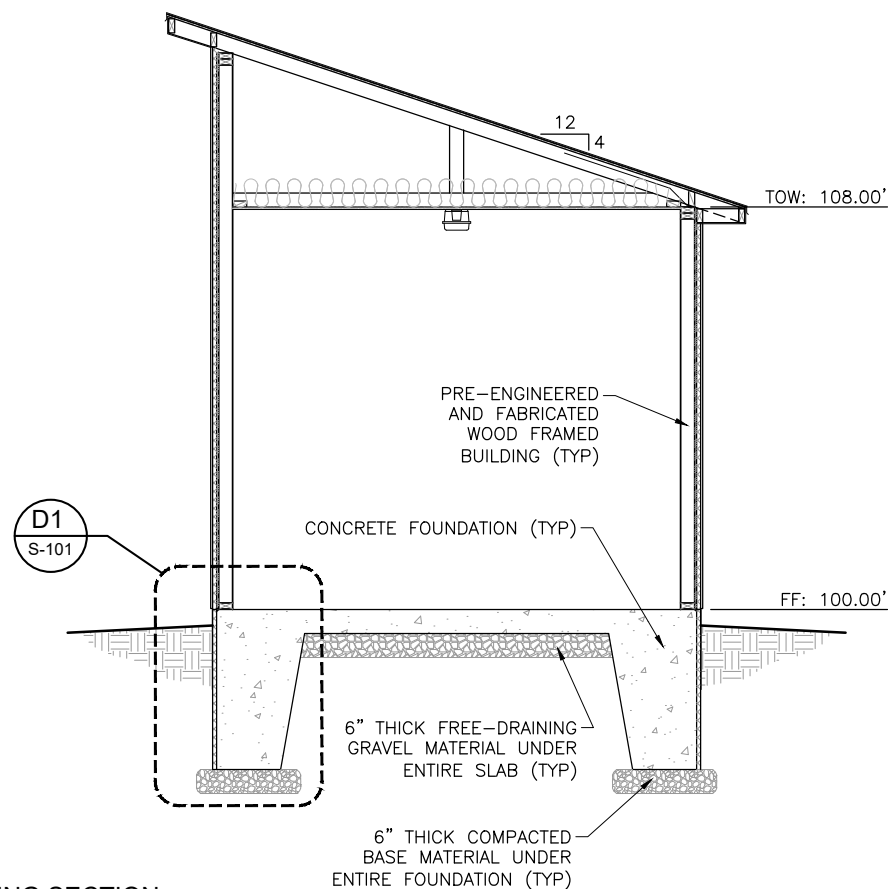
1. CONTRACTOR TO PROVIDE PRE-ENGINEERED AND FABRICATED WOOD FRAME BUILDING MEETING THE DESIGN CRITERIA AS SPECIFIED IN THE PROJECT DRAWINGS AND SPECIFICATIONS. CONTRACTOR TO SUBMIT SHOP DRAWINGS AND STRUCTURAL CALCULATIONS FOR THE BUILDING STAMPED BY A LICENSED PROFESSIONAL ENGINEER WITH EXPERIENCE IN THE DESIGN OF STRUCTURES FOR REVIEW PRIOR TO FABRICATION.
2. ALL COLORS AND TEXTURES FOR BUILDING SHALL BE VERIFIED AND APPROVED WITH OWNER. PROVIDE SAMPLES TO VERIFY COLOR.
3. PROVIDE A BROOM SURFACE FINISH TO ALL EXTERIOR CONCRETE SLABS AND SIDEWALKS.
4. EPOXY PAINT OR PROVIDE PRE-FINISHED PROTECTIVE COATINGS TO ALL EXTERIOR METAL SURFACES TO PREVENT CORROSION.
5. CONTRACTOR SHALL FURNISH AND INSTALL TRIMS, FLASHING, AND FINISH PIECES TO PRESENT A FINISHED APPEARANCE.
6. PLACE ALUMINUM 14"x10" CHLORINE WARNING SIGN ON DOOR EXTERIOR. Safetysign.com ITEM #F8461-BK OR EQUIVALENT.
7. PROVIDE ADEQUATE ROOF VENTILATION PER THE 300 RULE.



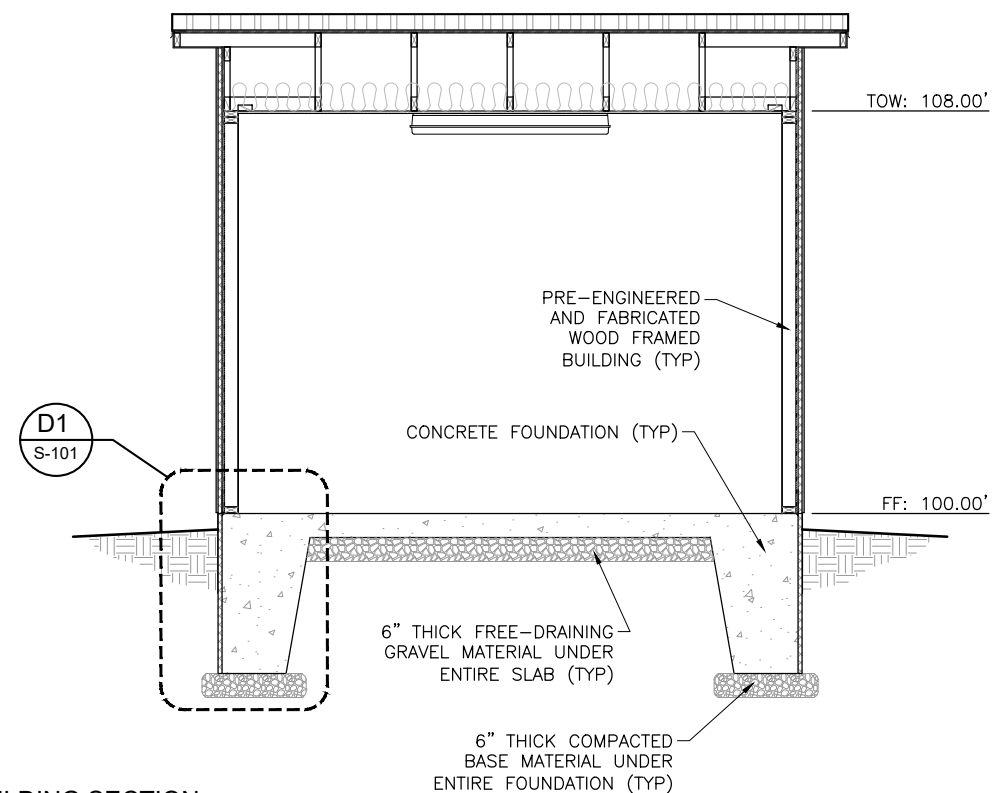
B1 TYPICAL BUILDING ELEVATIONS
SCALE: 1/2" = 1'-0"

SOUTH ELEVATION

EAST ELEVATION



D1 TYPICAL BUILDING SECTION
SCALE: 1/2" = 1'-0"



D3 TYPICAL BUILDING SECTION
SCALE: 1/2" = 1'-0"



J-U-B ENGINEERS, INC.
466 North 900 West
Kayville, Utah 84037
Phone: 801.547.0393
Fax: 801.547.0397
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CONSTRUCTION



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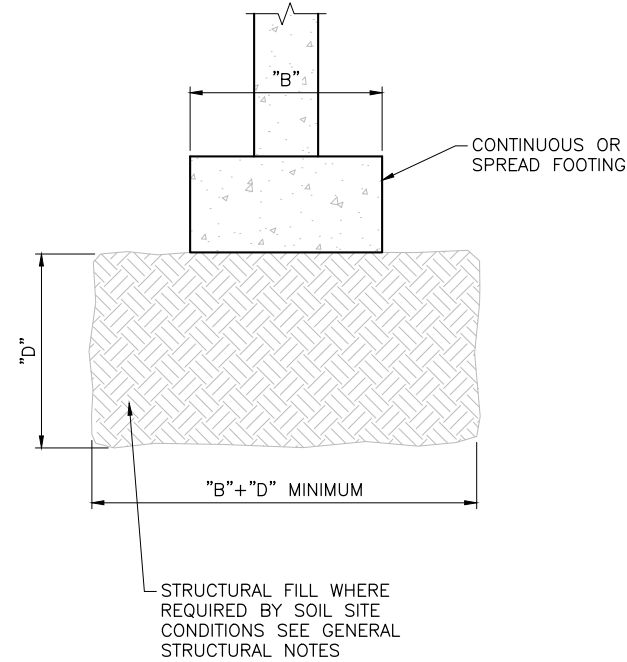
NO.	REVISION	DESCRIPTION	BY	DATE

SYSTEM FILTRATION AND CHLORINATION PROJECT
COLE CANYON WATER COMPANY
STRUCTURAL ELEVATIONS

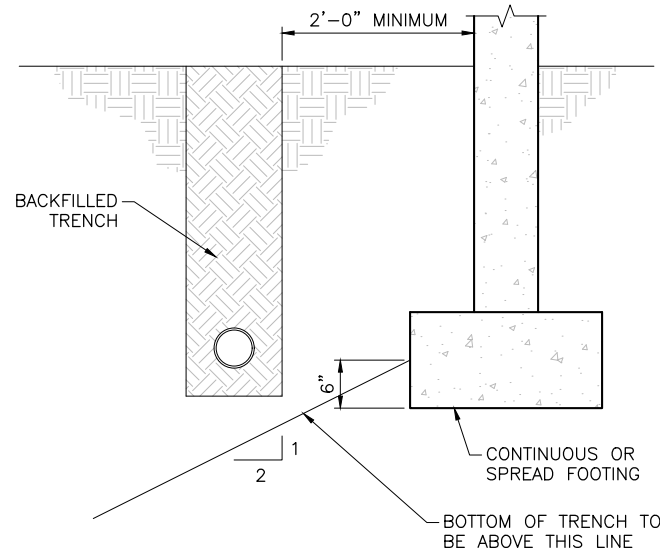
FILE: 55-22-095_S-101
JUB PROJ. #: 55-22-095
DRAWN BY: CRA/ELC
DESIGN BY: ELC
CHECKED BY: BRN
AT FULL SIZE, IF NOT ONE INCH SCALE ACCORDINGLY
LAST UPDATED: 10/23/2023

SHEET NUMBER:
S-201

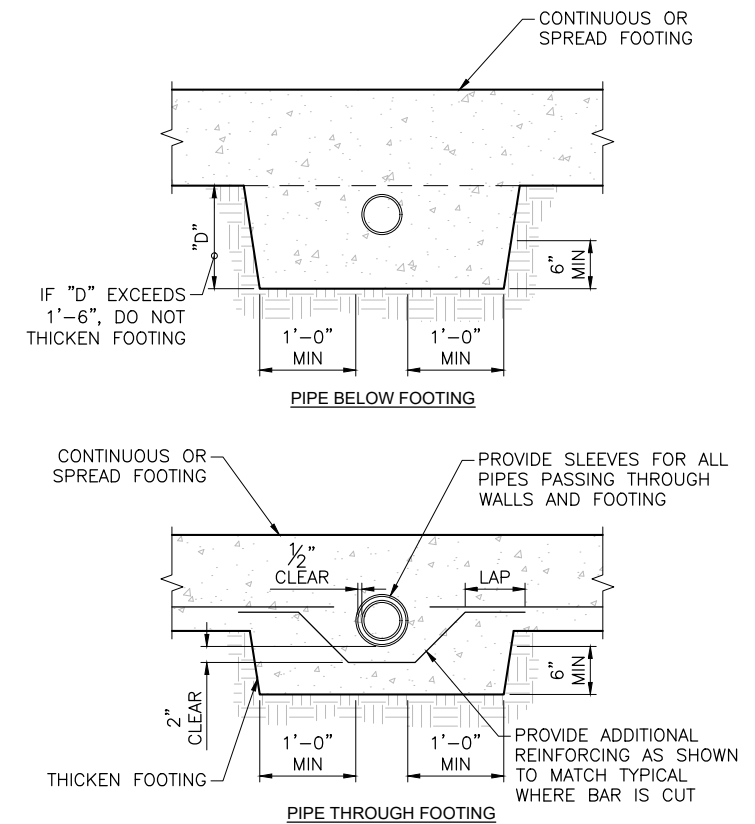
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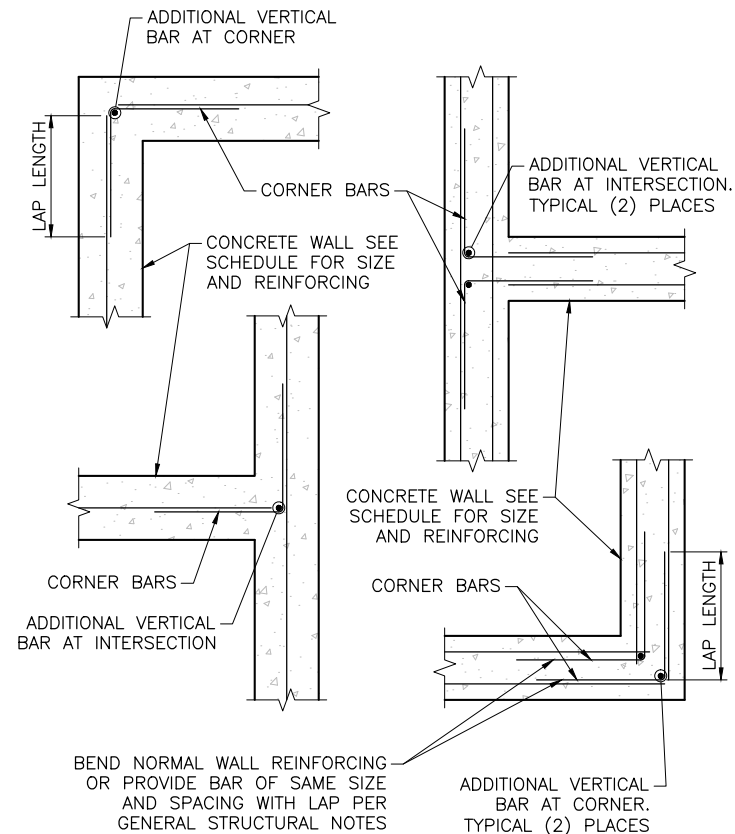
B1 STRUCTURAL FILL DETAIL
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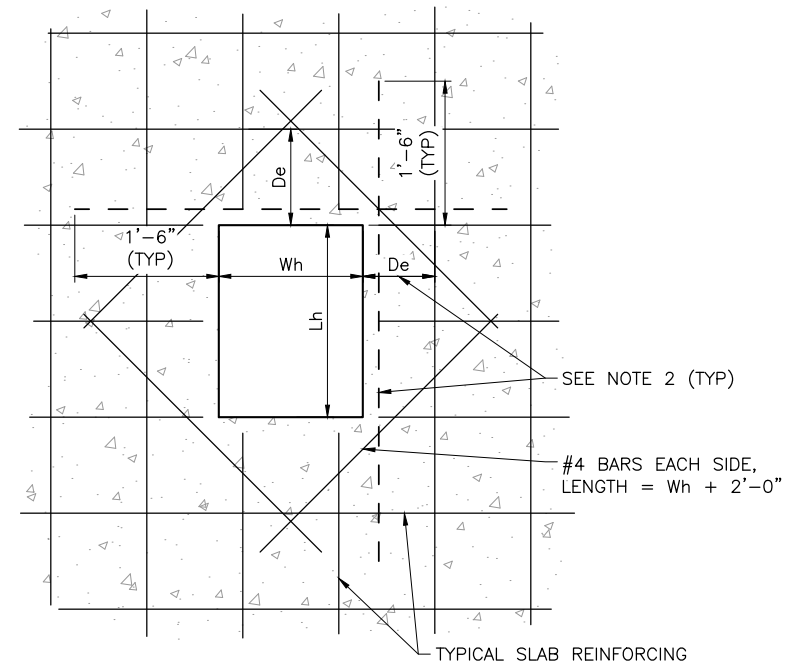
B2 PIPE PARALLEL TO FOOTING DETAIL
SCALE: NOT TO SCALE



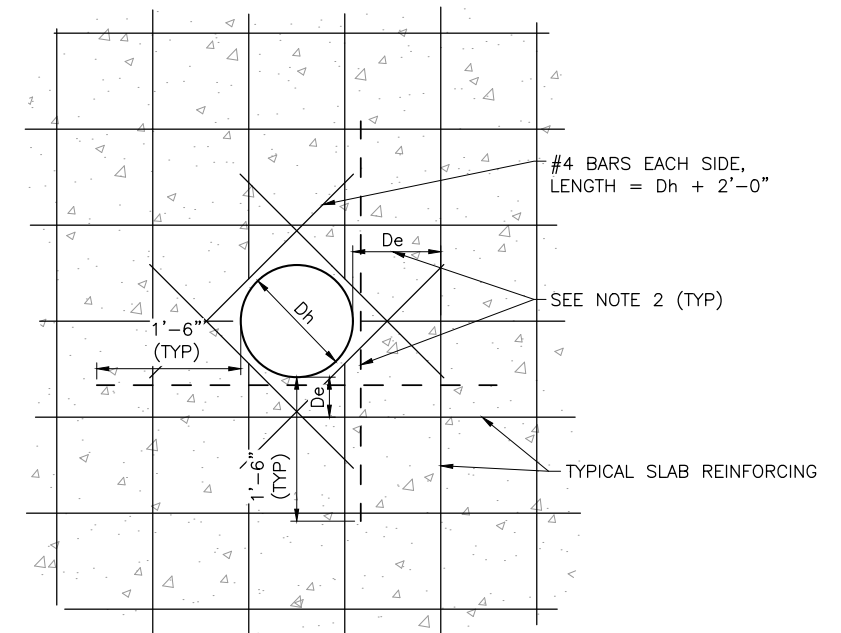
B3 PIPE PERPENDICULAR TO FOOTING DETAIL
SCALE: NOT TO SCALE



D1 CORNER REINFORCEMENT DETAIL FOR CONCRETE WALLS
SCALE: NOT TO SCALE



D2 SLAB ON GRADE PENETRATION DETAIL
SCALE: NOT TO SCALE



- NOTES:**
- WHERE POSSIBLE, CENTER SLAB PENETRATIONS BETWEEN TYPICAL REINFORCING.
 - WHERE D_e IS GREATER THAN 9", PROVIDE ADDITIONAL BAR(S) WITHIN 2" CLEAR OF PENETRATION EDGE. EXTEND 18" PAST EDGE OF PENETRATION EACH SIDE.
 - WHERE PENETRATION FITS BETWEEN TYPICAL SLAB REINFORCING AND BAR SPACING IS 12" OR LESS, NO ADDITIONAL REINFORCING IS REQUIRED.



J-U-B ENGINEERS, INC.

J-U-B ENGINEERS, INC.
466 North 900 West
Keyville, Utah 84037
Phone: 801.547.0393
Fax: 801.547.0397
www.jub.com

CONSTRUCTION



SET

NO.	REVISION	DESCRIPTION	BY	APPR.	DATE

SYSTEM FILTRATION AND CHLORINATION PROJECT
COLE CANYON WATER COMPANY
TYPICAL FOUNDATION DETAILS

FILE: 55-22-095_S-101
JUB PROJ. #: 55-22-095
DRAWN BY: CRA/ELC
DESIGN BY: ELC
CHECKED BY: BRN
ONE INCH
AT FULL SIZE, IF NOT ONE INCH SCALE ACCORDINGLY
LAST UPDATED: 10/23/2023

SHEET NUMBER:

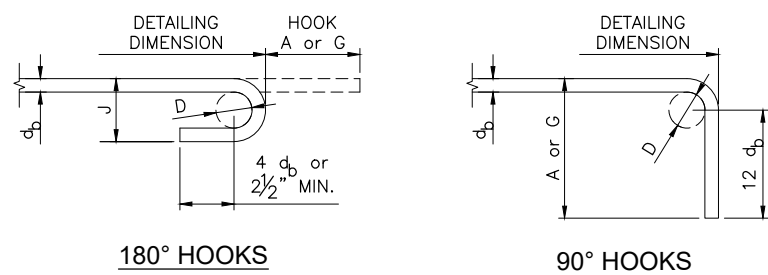
S-501

TYPICAL LAP SPLICE LENGTHS IN INCHES, PER ACI 318

BAR SIZE	LAP CLASS	f'c=3,000 psi		f'c=4,000 psi		f'c=4,500 psi		f'c=5,000 psi	
		CAT. 1	CAT. 2	CAT. 1	CAT. 2	CAT. 1	CAT. 2	CAT. 1	CAT. 2
#4	A	22	33	19	28	18	27	17	25
	B	28	43	25	37	24	35	22	33
#5	A	27	41	24	36	23	34	21	32
	B	36	53	31	46	30	44	28	41
#6	A	33	49	28	43	27	41	25	38
	B	43	64	37	55	36	53	33	50
#7	A	48	72	42	62	40	59	37	56
	B	62	93	54	81	51	77	48	72
#8	A	55	82	47	71	45	68	42	64
	B	71	106	61	92	58	88	55	83
#9	A	62	92	53	80	51	76	48	72
	B	80	120	69	104	66	99	62	93

- NOTES:
- FOR GRADE 60 REINFORCING STEEL BARS.
 - ALL LAP SPLICES SHALL BE CLASS B, UNLESS NOTED OTHERWISE.
 - CATEGORY 1: CLEAR COVER $\geq d_b$ AND CLEAR SPACING $\geq d_b$, AND STIRRUPS OR TIES THROUGHOUT L_d ARE PROVIDED.
CATEGORY 2: CLEAR COVER $\geq d_b$ AND CLEAR SPACING $\geq 2d_b$.
CATEGORY 1: CLEAR COVER $\geq d_b$ OR CLEAR SPACING $< 2d_b$.
CATEGORY 2: CLEAR COVER $< d_b$ OR CLEAR SPACING $< 2d_b$.
 - FOR TOP BARS, MULTIPLY LAP LENGTH LISTED BY 1.30. TOP BARS ARE HORIZONTAL BARS WITH MORE THAN 12" OF CONCRETE CAST BELOW THE BARS.
 - FOR EPOXY COATED BARS, LAP LENGTHS SHALL BE MULTIPLIED BY 1.20.

B1 TYPICAL REBAR LAP SPLICE SCHEDULE
SCALE: NOT TO SCALE



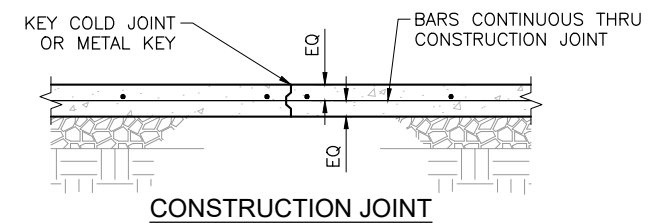
180° HOOKS **90° HOOKS**

TYPICAL HOOK DIMENSIONS

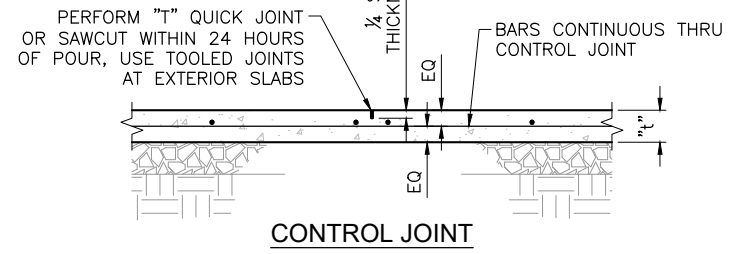
BAR SIZE	D	180° HOOKS		90° HOOKS
		A or G	J	A or G
#3	2 1/4"	5"	3"	6"
#4	3"	6"	4"	8"
#5	3 3/4"	7"	5"	10"
#6	4 1/2"	8"	6"	1'-0"
#7	5 1/4"	10"	7"	1'-2"
#8	6"	11"	8"	1'-4"
#9	9 1/2"	1'-3"	11 3/4"	1'-7"
#10	10 3/4"	1'-5"	1'-1 1/4"	1'-10"
#11	12"	1'-7"	1'-2 3/4"	2'-0"

- NOTES:
- d_b = NOMINAL BAR DIAMETER.
 - D = FINISHED INSIDE BEND DIAMETER.
 - MINIMUM D = 6 d_b FOR #3 TO #8 BARS.
 - MINIMUM D = 8 d_b FOR #9 TO #11 BARS.
 - MINIMUM D = 10 d_b FOR #14 AND #18 BARS.

B2 TYPICAL REBAR HOOK DETAILS
SCALE: NOT TO SCALE

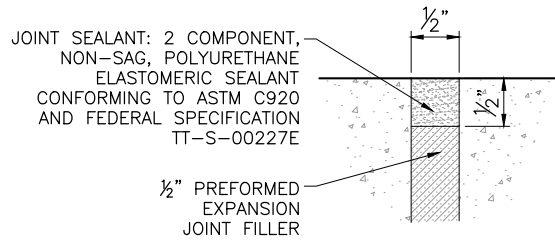


CONSTRUCTION JOINT



CONTROL JOINT

B3 SLAB ON GRADE JOINT DETAIL
SCALE: NOT TO SCALE



C1 EXPANSION JOINT SEALANT DETAIL
SCALE: NOT TO SCALE



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466 North 900 West
Keyville, Utah 84037
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Fax: 801.547.0397
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CONSTRUCTION



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NO.	REVISION	DESCRIPTION	BY	DATE

SYSTEM FILTRATION AND CHLORINATION PROJECT
COLE CANYON WATER COMPANY
TYPICAL FOUNDATION DETAILS

FILE: 55-22-005_S-101
JUB PROJ. #: 55-22-005
DRAWN BY: CRA/ELC
DESIGN BY: ELC
CHECKED BY: BRN
ONE INCH
AT FULL SIZE, IF NOT ONE INCH SCALE ACCORDINGLY
LAST UPDATED: 10/23/2023
SHEET NUMBER:
S-502

Date Created: 7/6/2023 \HFILES\SERVER\PC\HPE PROJECTS\23.043 - COLE CANYON FILTRATION\DRAWINGS\E-001.DWG

GENERAL DRAWING SYMBOLS AND REFERENCES	
	REFERENCE NOTE
	DEMOLITION NOTE
	REVISION NOTE
	IDENTIFICATION NOTE
	PHOTO REFERENCE
	HPE DETAIL BUBBLE
	EQUIPMENT REFERENCE
	WIRE SIZE REFERENCE
	PHOTO REFERENCE
	SECTION/ELEVATION REFERENCE
	EQUIPMENT ID TAG
THIS IS A STANDARD LEGEND NOT ALL SYMBOLS MAY BE USED ON THIS PROJECT	
PLAN SYMBOLS	
	CIRCUIT DISTRIBUTION PANELBOARD SURFACE MOUNTED
	CIRCUIT DISTRIBUTION PANELBOARD RECESSED
	POWER DISTRIBUTION PANELBOARD SURFACE OR FLOOR MOUNTED DOORS DESIGNATE FRONT OF PANEL MDP DESIGNATES MAIN DISTRIBUTION PANEL
	CONTROL PANEL ENCLOSURE
	LIGHTING CONTROL PANEL
	DISCONNECT
HVAC EQUIPMENT	
	UNIT HEATER, WALL MOUNTED
	UNIT HEATER, CEILING MOUNTED
	CONDENSING UNIT, PAD MOUNTED, SIDE DISCHARGE
	CONDENSING UNIT, PAD MOUNTED, UP FLOW
	ROOFTOP MOUNTED EQUIPMENT
THIS IS A STANDARD LEGEND NOT ALL SYMBOLS MAY BE USED ON THIS PROJECT	
MOTOR AND EQUIPMENT	
	MOTOR (HP SHOWN)
	FRACTIONAL HORSEPOWER MOTOR
	MOTOR STARTER, INDIVIDUAL, NOT LOCATED IN A MOTOR CONTROL CENTER (MCC) OR SIMILAR GROUP ASSEMBLY
	COMBINATION MOTOR STARTER ASSEMBLY, NOT LOCATED IN AN MCC OR SIMILAR ASSEMBLY
	MAGNETIC CONTACTOR ASSEMBLY, NOT LOCATED IN AN MCC OR SIMILAR ASSEMBLY
	DISCONNECT, NON-FUSED, 3 POLE, 100A RATED
	FUSED DISCONNECT SWITCH
	FIELD CONNECTION OR ELECTRICAL TERMINATION AT A FIELD DEVICE
	EQUIPMENT DESIGNATION

POWER ONE-LINE SYMBOLS	
	ANTENNA
	EQUIPMENT GROUND CONNECTION
	TRANSFER SWITCH ATS: AUTOMATIC TRANSFER SWITCH MTS: MANUAL TRANSFER SWITCH
	VARIABLE FREQUENCY DRIVE MOTOR CONTROLLER
	FUSED DISCONNECT SWITCH
	NON-FUSED DISCONNECT SWITCH
	COMBINATION STARTER
	MAGNETIC CONTROLLER
	MOTOR (HP SHOWN)
	GENERATOR
	CONDUCTOR WITH CALLOUT REFERENCE (SEE CONDUIT/CONDUCTOR SCHEDULE)
	POWER FACTOR CAPACITOR
	CIRCUIT BREAKER
	POWER FEED
	CONNECTION POINT
	LUG
	DELTA WYE
THIS IS A STANDARD LEGEND NOT ALL SYMBOLS MAY BE USED ON THIS PROJECT	
GROUNDING SYMBOLS	
	GROUND ROD (3/4" x 10' COPPER COATED STEEL)
	GROUND ROD (3/4" x 10' COPPER COATED STEEL) IN WELL
	BOLTED GROUND CONNECTION (ABOVE GRADE)
	WELDED GROUND CONNECTION (BELOW GRADE)
	GROUND CONDUCTOR (#2/0 BARE COPPER)
THIS IS A STANDARD LEGEND NOT ALL SYMBOLS MAY BE USED ON THIS PROJECT	
LIGHT SWITCHES	
	SINGLE POLE SWITCH
	GANGED SWITCHES IN COMMON BOX WITH COMMON COVER PLATE
	SWITCH SUPERScript MODIFIER, LOWER CASE LETTER INDICATES CIRCUIT CONTROLLER -- a,b,c ETC. MAY BE COMBINED WITH CIRCUIT NUMBER. EXAMPLE: 1a, 3b
	SWITCH SUBSCRIPT MODIFIER, UPPER CASE LETTER OR NUMBER: 2 = DOUBLE POLE 3 = THREE WAY 4 = FOUR WAY OC = MOTION OCCUPANCY SWITCH K = KEY OPERATED M = HORSEPOWER RATED MANUAL STARTER MC = MOMENTARY CONTACT, THREE POSITION MS = MANUAL (STARTER) OR SWITCH D = DIMMER S = SURFACE F = FLUSH

POWER ONE-LINE SYMBOLS	
	UTILITY METERING SOCKET WITH CIRCUIT BREAKER
	EXISTING UTILITY METERING SOCKET
	UTILITY METERING SOCKET
	FUTURE UTILITY METERING SOCKET
	UTILITY METERING CURRENT TRANSFORMER
	MOTOR STARTER
	SURGE PROTECTOR
	TRANSFORMER
	FUSED SWITCH
	FUSE IN HOLDER
	EXISTING POWER DISTRIBUTION PANEL
	POWER DISTRIBUTION PANEL
	FUTURE POWER DISTRIBUTION PANEL
THIS IS A STANDARD LEGEND NOT ALL SYMBOLS MAY BE USED ON THIS PROJECT	
CONDUIT AND RACEWAYS	
	RACEWAY OR WIRING SYSTEM IN OR UNDER FLOOR OR CONCEALED IN WALL OR BEHIND STRUCTURE OR EQUIPMENT OR CONDUIT ROUTED BELOW GRADE IN CONCRETE ENCASMENT
	FLEX CONDUIT
	RACEWAY OR WIRING SYSTEM ABOVE FLOOR LEVEL BELOW CEILING, EXPOSED
	HOMERUN: DESIGNATIONS INDICATE A ONE-LINE DIAGRAM OR PANELBOARD SCHEDULE REFERENCE
	JUNCTION BOX
	RACEWAY OR WIRING SYSTEM TURNED TOWARD THE VIEWER (UP ON PLAN DRAWINGS)
	RACEWAY OR WIRING SYSTEM TURNED AWAY FROM THE VIEWER (DOWN ON PLAN DRAWINGS)
	RACEWAY OR WIRING SYSTEM CHANGE IN ELEVATION OR DISTANCE FROM VIEWER
	CONDUIT STUB AND CAP

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708 EAST 50 SOUTH AMERICAN FORK, UT 84003 FAX (801) 642-2154
HPE PROJECT: 23.043 ©2022
FOR INFORMATION ABOUT THIS JOB, PLEASE CONTACT: KEITH HEGERHORST

- GENERAL NOTES:**
- VERIFY ALL EQUIPMENT DIMENSIONS AND LOCATIONS BEFORE BEGINNING ROUGH-IN. CONSULT ALL APPLICABLE CONTRACT DRAWINGS AND SHOP DRAWINGS TO ENSURE NEC CODE CLEARANCE REQUIRED AROUND ALL ELECTRICAL EQUIPMENT.
 - CONTRACTOR SHALL VERIFY ALL ELECTRICAL LOADS (VOLTAGE, PHASE, CONNECTION REQUIREMENTS, ETC.) OF EQUIPMENT FURNISHED BEFORE BEGINNING ROUGH-IN.
 - SEE APPLICABLE SHOP DRAWINGS FOR ROUGH-IN LOCATION OF ALL EQUIPMENT, WIRING DEVICES, ETC.
 - THE ELECTRICAL CONTRACTOR SHALL NOTIFY AND COOPERATE WITH THE MECHANICAL CONTRACTOR SUCH THAT NO PIPING, OR EQUIPMENT FOREIGN TO THE OPERATION OF THE ELECTRICAL EQUIPMENT SHALL BE PERMITTED TO BE INSTALLED IN, ENTER OR PASS THROUGH ELECTRICAL ROOMS OR SPACES; OR ABOVE OR BELOW ELECTRICAL EQUIPMENT IN THE OTHER AREAS.
 - ALL PENETRATIONS OF FLOORS, WALLS AND CEILINGS SHALL BE SEALED WITH APPROVED MATERIAL.
 - FOR PACKAGE EQUIPMENT PROVIDED ON THE PROJECT, SOME CONDUITS AND WIRES ARE SHOWN ON THE DRAWINGS, BUT IT IS EXPECTED THAT SOME ADDITIONAL CONDUITS AND WIRES MAY BE REQUIRED BY EQUIPMENT MANUFACTURERS TO COMPLETE INSTALLATION. IT IS INCUMBENT UPON THE GENERAL CONTRACTOR TO COORDINATE THIS REQUIREMENT WITH HIS SUBCONTRACTORS TO MAKE SURE THAT EQUIPMENT SUPPLIER PROVIDED ALL NECESSARY ELECTRICAL INFORMATION TO ELECTRICAL SUBCONTRACTOR FOR INCLUSION WHETHER SHOWN OR NOT SHOWN ON THE DRAWINGS.
 - IF OTHER THAN FIRST NAMED EQUIPMENT IS USED, IT SHALL BE CAREFULLY CHECKED FOR ELECTRICAL REQUIREMENTS AND CONTROL REQUIREMENTS OF ALTERNATE EQUIPMENT. SHOULD CHANGES OR ADDITIONS OCCUR IN ELECTRICAL WORK, OR THE WORK OF OTHER CONTRACTORS BE REVISED BY THE ALTERNATE EQUIPMENT, THE COST OF ALL CHANGES SHALL BE BORNE BY THE ELECTRICAL CONTRACTOR.

JUB
J-U-B ENGINEERS, INC.

J-U-B ENGINEERS, INC.
466 North 900 West
Kaysville, Utah 84037
Phone: 801.547.0393
Fax: 801.547.0397
www.jub.com

CONSTRUCTION

REGISTERED PROFESSIONAL ENGINEER
No. 86-171214-2202
KEITH B. HEGERHORST
02/02/22
STATE OF UTAH

SET

NO.	REVISION	DESCRIPTION	BY	DATE

SYSTEM FILTRATION AND CHLORINATION PROJECT
COLE CANYON WATER COMPANY

ELECTRICAL LEGEND

FILE: E-001
JUB PROJ #: 55-22-095
DRAWN BY: KBH
DESIGN BY: KBH
CHECKED BY: KBH
AT FULL SIZE, IF NOT ONE INCH SCALE ACCORDINGLY
LAST UPDATED: 10/24/2023
SHEET NUMBER:
E-001

CONDUIT/CONDUCTOR SCHEDULE *

THHN, THWN, THWN-2

AMP RATING	DRAWING ID TAG.	CONDUCTOR QTY.	CONDUCTOR SIZE	MIN. CONDUIT SIZE	EXCEPTIONS
20** 20+	212	2	#12	3/4"	
	312	3		3/4"	
	412	4		3/4"	
30** 30+	20	2	#10	3/4"	
	30	3		3/4"	
	40	4		3/4"	
40** 50+	28	2	#8	3/4"	
	38	3		3/4"	
	48	4		3/4"	
55** 65+	26	2	#6	3/4"	
	36	3		3/4"	
	46	4		3/4"	1*(C9)
70** 85+	24	2	#4	3/4"	1*(C2,C9)
	34	3		1"	3/4*(C4), 1-1/4*(C9)
	44	4		1"	1-1/4*(C9)
95** 115+	22	2	#2	1"	
	32	3		1"	1-1/4*(C9)
	42	4		1-1/4"	
110** 130+	21	2	#1	1-1/4"	1*(C3,C4)
	31	3		1-1/4"	1*(C3)
	41	4		1-1/4"	1-1/2*(C2,C9,C10)
150	210	2	1/0	1-1/4"	
	310	3		1-1/4"	1-1/2*(C3,C9)
	410	4		1-1/2"	2*(C9)
175	220	2	2/0	1-1/4"	1-1/2*(C3,C4,C9)
	320	3		1-1/2"	
	420	4		2"	
200	230	2	3/0	1-1/2"	1-1/4*(C4)
	330	3		1-1/2"	2*(C3,C9)
	430	4		2"	
230	240	2	4/0	1-1/2"	2*(C3)
	340	3		2"	
	440	4		2"	2-1/2*(C9)
255	225	2	250 KCMIL	2"	1-1/2*(C4)
	325	3		2"	2-1/2*(C1,C8)
	425	4		2-1/2"	2*(C4)
310	235	2	350 KCMIL	2"	2-1/2*(C9)
	335	3		2-1/2"	2*(C4)
	435	4		3"	2-1/2*(C1,C4)
380	250	2	500 KCMIL	2-1/2"	2*(C4)
	350	3		3"	2-1/2*(C1,C4)
	450	4		3"	3-1/2*(C9)
475	275	2	750 KCMIL	3"	
	375	3		3-1/2"	3*(C1,C7,C8)
	475	4		4"	3-1/2*(C1,C4,C8)

* CONDUCTOR QUANTITY DOES NOT INCLUDE GROUNDING CONDUCTOR. SEE EQUIPMENT GROUNDING CONDUCTORS FOR WIRE SIZE.

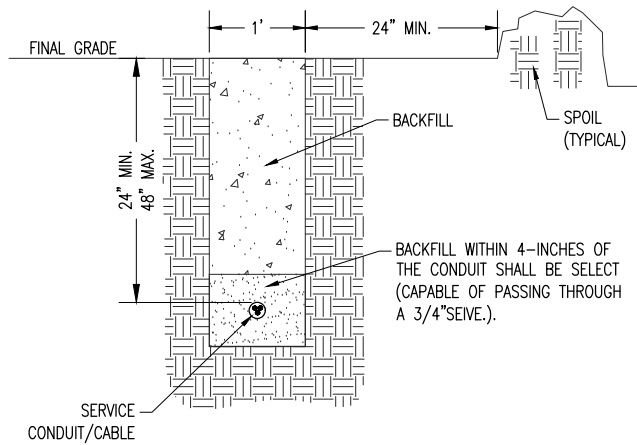
- WHERE:
- C1 = ELECTRICAL METALLIC TUBING
 - C2 = ELECTRICAL NON-METALLIC TUBING
 - C3 = FLEXIBLE STEEL CONDUIT
 - C4 = INTERMEDIATE METALLIC CONDUIT
 - C7 = LIQUIDTIGHT FLEXIBLE METAL CONDUIT
 - C8 = RIGID METALLIC CONDUIT
 - C9 = PVC SCHEDULE 80 CONDUIT
 - C10 = PVC SCHEDULE 40 CONDUIT
 - ** = RATED AMPACITY AT 60°C
 - + = RATED AMPACITY AT 75°C
 - USE 60°C CONDUCTOR RATING WHEN TERMINATION RATINGS ARE NOT PUBLISHED.

GROUNDING ELECTRODE CONDUCTOR SERVICE ENTRANCE OR SEPARATELY DERIVED SYSTEM

COPPER CONDUCTOR	WIRE SIZE
#2 OR SMALLER	#8
1 OR 1/0	#6
2/0 OR 3/0	#4
>3/0 THRU 350 KCMIL	#2
>350 KCMIL THRU 600 KCMIL	1/0
>600 KCMIL THRU 1100 KCMIL	2/0
>1100 KCMIL	3/0

EQUIPMENT GROUNDING CONDUCTORS

FUSE OR CB SIZE	SIZE (COPPER)
15	14
20	12
30	10
40	10
60	10
100	8
200	6
300	4
400	3
500	2
600	1
800	1/0
1000	2/0
1200	3/0
1600	4/0
2000	250
2500	350



1 RMP SERVICE TRENCH
SCALE: 1" = 1'-0"

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HEGERHORST POWER ENGINEERING INCORPORATED (801) 642-2051
708 EAST 50 SOUTH AMERICAN FORK, UT 84003 FAX (801) 642-2154
HPE PROJECT:23.043 ©2021
FOR INFORMATION ABOUT THIS JOB, PLEASE CONTACT: KEITH HEGERHORST

GENERAL NOTES:

1. NOT USED

SHEET KEYNOTES:

1. NOT USED

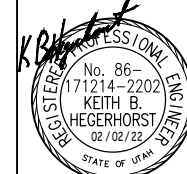


J-U-B ENGINEERS, INC.

J-U-B ENGINEERS, INC.
466 North 900 West
Kaysville, Utah 84037

Phone: 801.547.0393
Fax: 801.547.0397
www.jub.com

CONSTRUCTION



SET

NO.	REVISION	DESCRIPTION	BY	DATE

SYSTEM FILTRATION AND CHLORINATION PROJECT
COLE CANYON WATER COMPANY

ELECTRICAL TABLES

FILE: E-002
JUB PROJ. #: 55-22-095
DRAWN BY: KBH
DESIGN BY: KBH
CHECKED BY: KBH
AT FULL SIZE, IF NOT ONE INCH, SCALE ACCORDINGLY
LAST UPDATED: 10/24/2023

SHEET NUMBER:

E-002

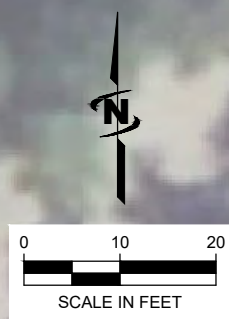


GENERAL NOTES:

- REFER TO POWER ONE-LINE FOR CIRCUIT ID, THEN THE CONDUIT AND CONDUCTOR REQUIREMENTS ARE SHOWN IN THE CONDUIT/CONDUCTOR TABLE.

SHEET KEYNOTES:

- PROVIDE TRENCH AS REQUIRED BY THE UTILITY COMPANY. SEE TRENCH DETAIL 1 ON E-002.



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 Kaysville, Utah 84037
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NO.	REVISION	DESCRIPTION	BY	DATE

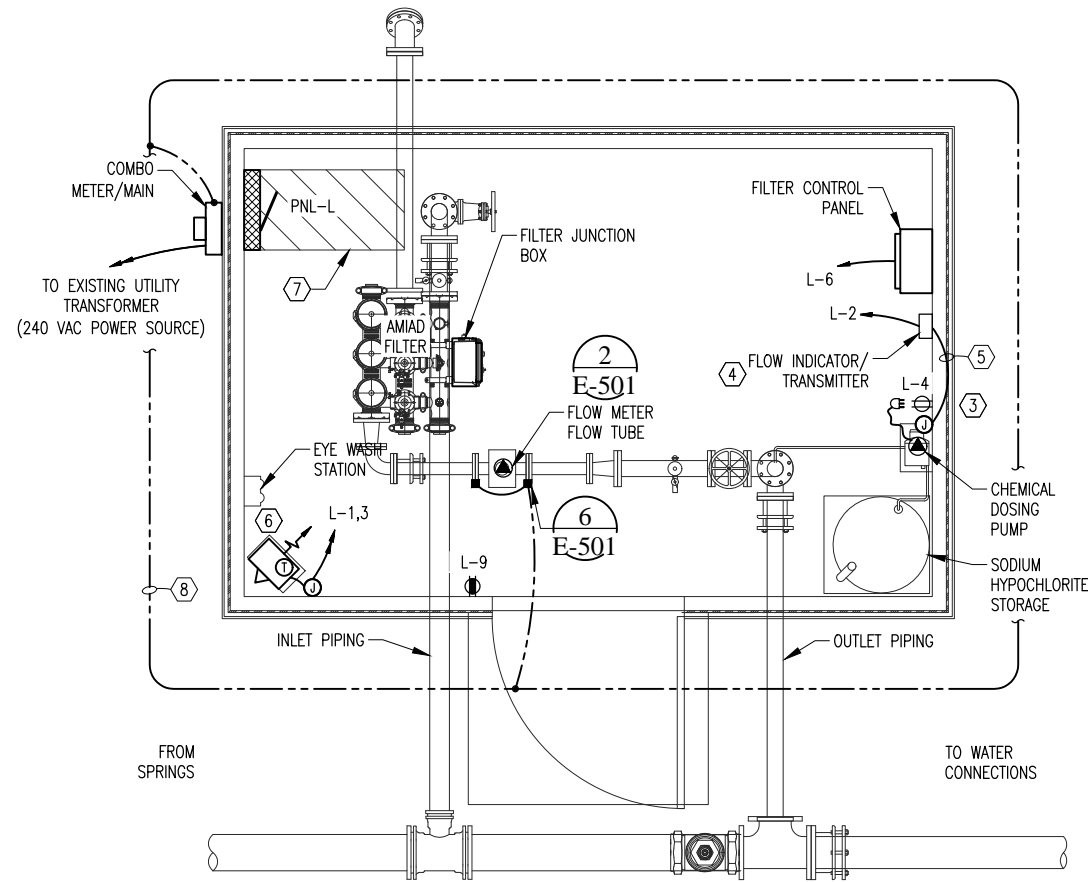
SYSTEM FILTRATION AND CHLORINATION PROJECT
 COLE CANYON WATER COMPANY

ELECTRICAL SITE PLAN

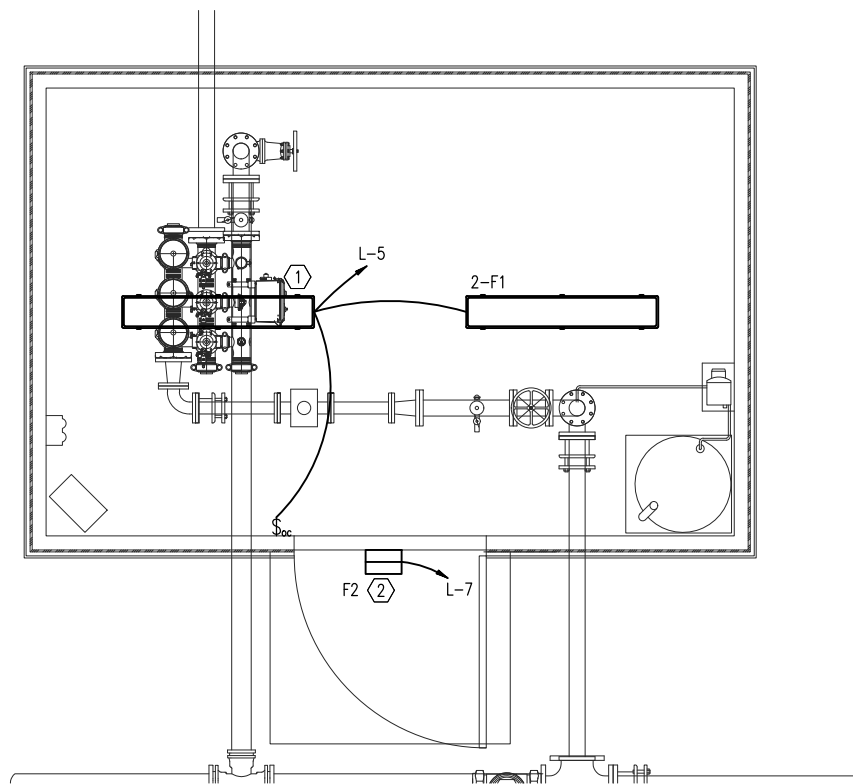
FILE: E-101
 JUB PROJ. #: 55-22-095
 DRAWN BY: KBH
 DESIGN BY: KBH
 CHECKED BY: KBH
 ONE INCH
 AT FULL SIZE, IF NOT ONE INCH SCALE ACCORDINGLY
 LAST UPDATED: 10/24/2023
 SHEET NUMBER:
E-101

Date Created: 7/6/2023 M:\23_043_COLE CANYON FILTRATION\DRAWINGS\RESOURCE\101.DWG

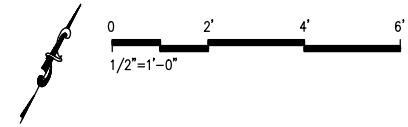
SITE PLAN



ELECTRICAL PLAN



LIGHTING PLAN



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 HPE PROJECT:23.043 ©2021
 FOR INFORMATION ABOUT THIS JOB, PLEASE CONTACT: KEITH HEGERHORST

GENERAL NOTES:

1. REFER TO PANELBOARD SCHEDULE OR POWER ONE-LINE DIAGRAM FOR THE CIRCUIT ID. THEN, THE WIRE AND CONDUIT REQUIREMENTS ARE LISTED IN THE CONDUIT/CONDUCTOR TABLE ON E-002.
2. INSTALL INTERIOR RECEPTACLES AT +36-IN ABOVE THE ROOM FLOOR. INSTALL EXTERIOR RECEPTACLES AT +18-IN ABOVE FINISHED SURFACE AND PROVIDE IN-SERVICE W/P COVER.

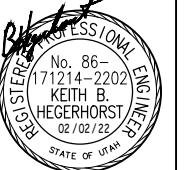
SHEET KEYNOTES:

1. PROVIDE A 90-MINUTE BATTERY POWER SUPPLY IN THIS FIXTURE.
2. INSTALL FIXTURE 6-IN ABOVE CENTER OF DOOR.
3. INSTALL OUTLET FOR CHEMICAL PUMP 6-IN ABOVE TOP OF PUMP.
4. INSTALL FLOW INDICATOR/TRANSMITTER +60" ABOVE FINISHED FLOOR.
5. DOSING PACING SIGNAL: INSTALL A J-BOX NEAR THE DOSING PUMP AND INSTALL A 3/4" WITH #18 TSP TO THE FLOW INDICATOR/TRANSMITTER.
6. LOCATE HEATER SUCH THAT AN OPERATOR CAN REACH THE BUILT-IN THERMOSTAT.
7. MAINTAIN NEC WORKING CLEARANCE TO PANELBOARD.
8. AWG NO. 2 BC BURIED 18-IN DEEP AND 24-IN FROM BUILDING CONCRETE PAD.



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 Kaysville, Utah 84037
 Phone: 801.547.0393
 Fax: 801.547.0397
 www.jub.com

CONSTRUCTION



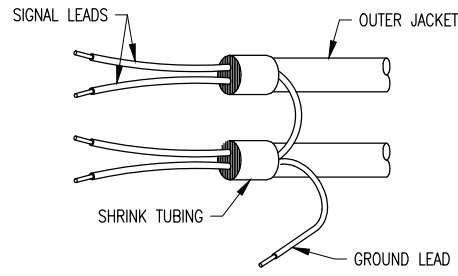
SET

NO.	REVISION	DESCRIPTION	BY	DATE

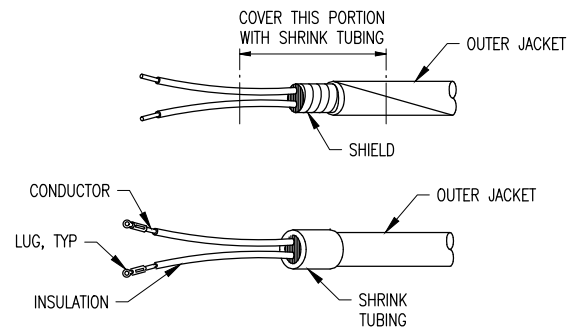
SYSTEM FILTRATION AND CHLORINATION PROJECT
 COLE CANYON WATER COMPANY
 ELECTRICAL PLANS

FILE: E-102
 JUB PROJ. #: 55-22-095
 DRAWN BY: KBH
 DESIGN BY: KBH
 CHECKED BY: KBH
 ONE INCH
 AT FULL SIZE, IF NOT ONE INCH SCALE ACCORDINGLY
 LAST UPDATED: 10/24/2023
 SHEET NUMBER:

E-102

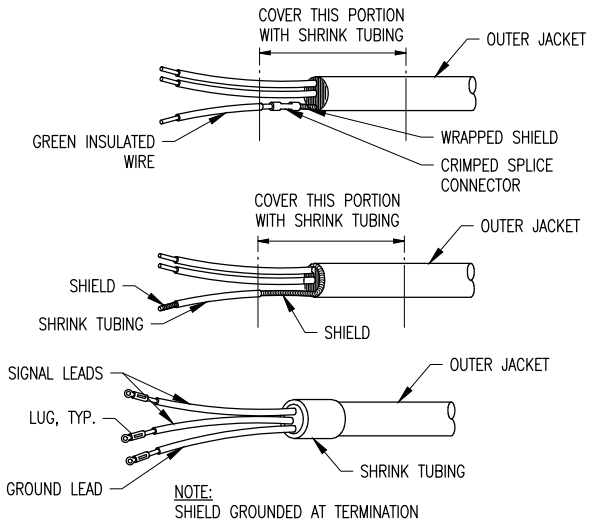


UNACCEPTABLE METHOD OF GROUNDING CONTROL CABLE SHIELD NTS



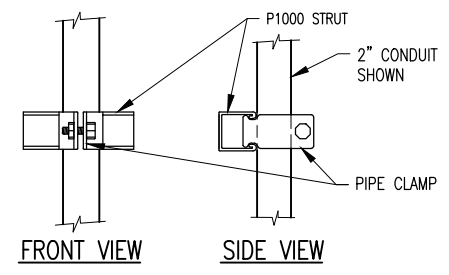
NOTE: SHIELD NOT GROUNDED AT TERMINATION.

TERMINATION OF SHIELDED CONTROL CABLE NTS



NOTE: SHIELD GROUNDED AT TERMINATION

TERMINATION OF SHIELDED CONTROL CABLE NTS

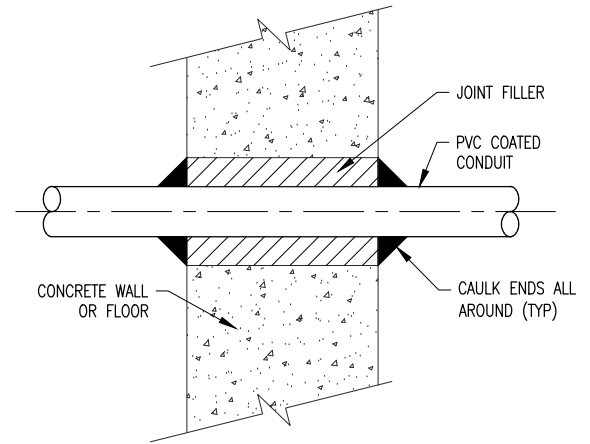


CONDUIT PIPE CLAMPS*			
SIZE	EMT	RGS	EMT/GRS
1/2"	P1426	P1111	-
3/4"	P1427	P1112	P1212
1"	P1428	P1113	P1213
1-1/4"	P1429	P1114	P1214
1-1/2"	P1430	P1115	P1215
2"	P1431	P1117	P1217
2-1/2"	P1118	P1118	-
3"	P1119	P1119	-
3-1/2"	P1120	P1120	-
4"	P1121	P1121	-

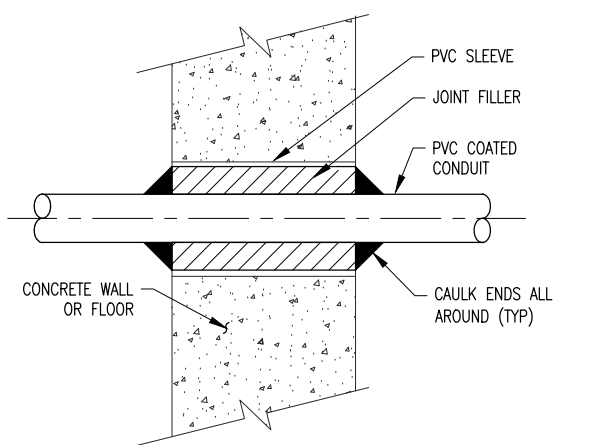
* = SUPPLIED WITH SLOTTED HEAD SCREW AND NUT

1 TYPICAL CONDUIT CLAMP
SCALE: 3" = 1'-0"

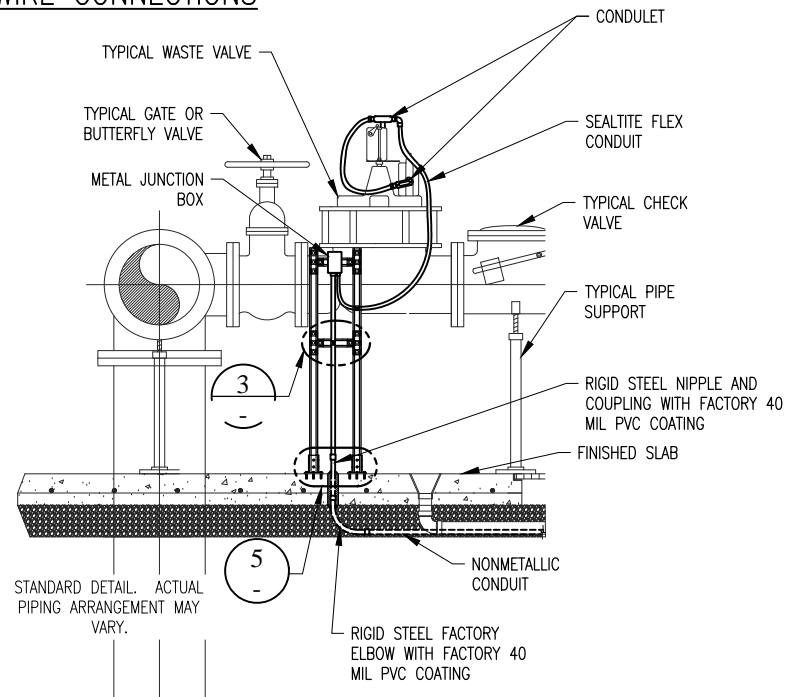
SIGNAL WIRE CONNECTIONS



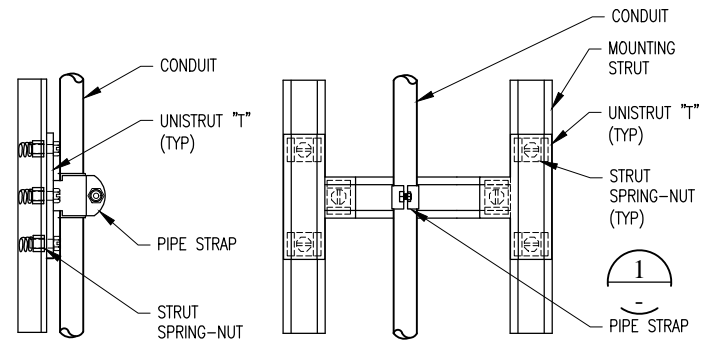
CONDUIT INSTALLATION THROUGH EXISTING CONCRETE



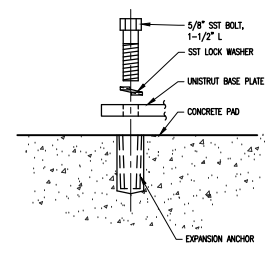
CONDUIT INSTALLATION THROUGH NEW CONCRETE



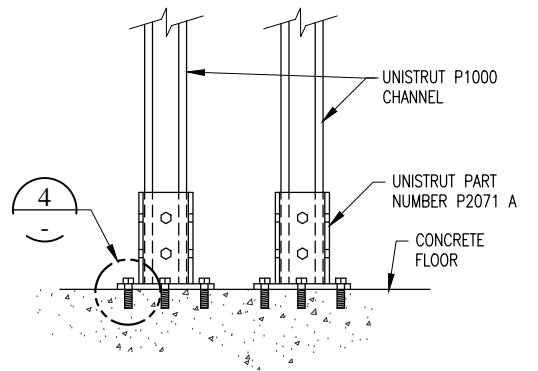
2 CONDUIT INSTALLATION
SCALE: 3/4" = 1'-0"



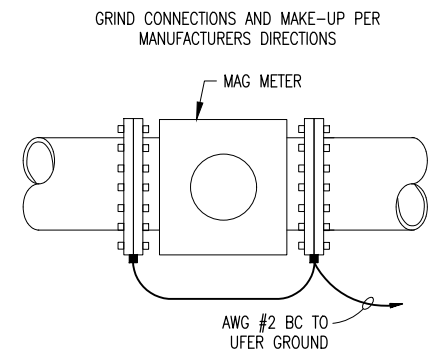
3 CONDUIT SUPPORT BRACE
SCALE: 3" = 1'-0"



4 BASE ANCHOR
SCALE: 3" = 1'-0"



5 SUPPORT BASE INSTALLATION
SCALE: 3" = 1'-0"



6 MAG METER GROUNDING
SCALE: 1 1/2" = 1'-0"

H.P.E. INC. ELECTRICAL ENGINEERS
POWER SYSTEMS, CONTROL & INSTRUMENTATION SYSTEMS
HEGERHORST POWER ENGINEERING INCORPORATED (801) 642-2051
708 EAST 50 SOUTH AMERICAN FORK, UT 84003 FAX (801) 642-2154
HPE PROJECT: 23.043 ©2021
FOR INFORMATION ABOUT THIS JOB, PLEASE CONTACT: KEITH HEGERHORST

GENERAL NOTES:

1. NOT USED

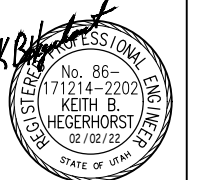
SHEET KEYNOTES:

1. NOT USED



J-U-B ENGINEERS, INC.
466 North 900 West
Kaysville, Utah 84037
Phone: 801.547.0393
Fax: 801.547.0397
www.jub.com

CONSTRUCTION

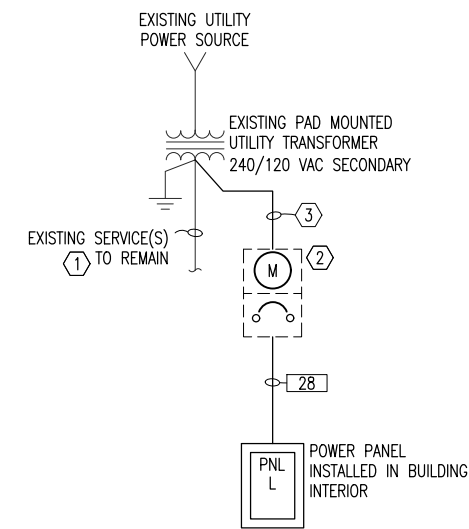


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NO.	REVISION	DESCRIPTION	BY	DATE

SYSTEM FILTRATION AND CHLORINATION PROJECT
COLE CANYON WATER COMPANY
ELECTRICAL DETAILS, SHT. 1

FILE: E-501
JUB PROJ. #: 55-22-095
DRAWN BY: KBH
DESIGN BY: KBH
CHECKED BY: KBH
ONE INCH
AT FULL SIZE, IF NOT ONE INCH, SCALE ACCORDINGLY
LAST UPDATED: 10/24/2023
SHEET NUMBER:
E-501



POWER ONE-LINE DIAGRAM

ELECTRICAL UTILITY INSTALLATION

UTILITY COMPANY:	ROCKY MOUNTAIN POWER	
UTILITY COMPANY CONTACT:		
CONTACT INFORMATION: PHONE:		
WORK ORDER NUMBER:		

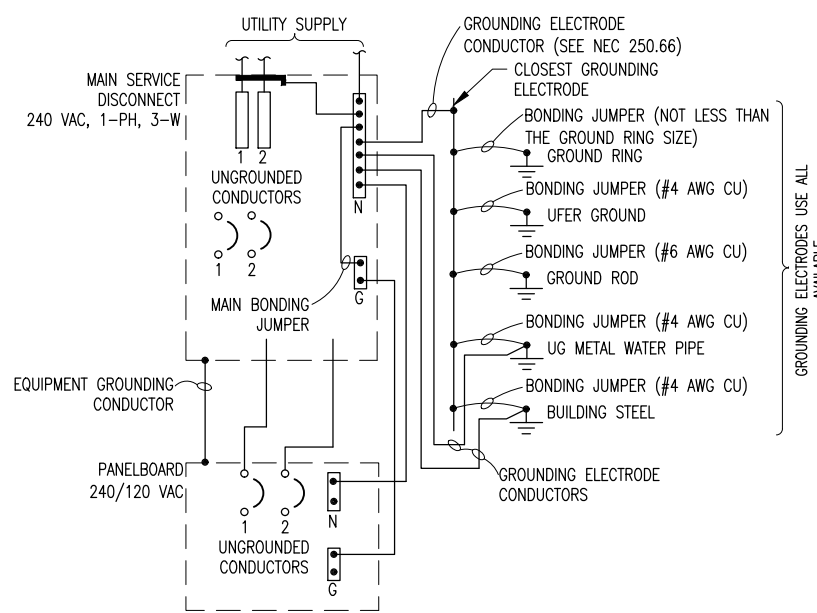
SERVICE PRIMARY	SUPPLIED BY:	INSTALLED BY:
PRIMARY TRENCHING/BACKFILL	EXISTING	
PRIMARY CONDUIT	EXISTING	
PRIMARY CONDUCTOR	EXISTING	

SERVICE TRANSFORMER	SUPPLIED BY:	INSTALLED BY:
TRANSFORMER PAD	EXISTING	
TRANSFORMER	EXISTING	

SERVICE SECONDARY	SUPPLIED BY:	INSTALLED BY:
SECONDARY TRENCHING/BACKFILL		CONTRACTOR
SECONDARY CONDUIT	CONTRACTOR	CONTRACTOR
SECONDARY CONDUCTOR	UTILITY COMPANY	UTILITY COMPANY

METERING EQUIPMENT	SUPPLIED BY:	INSTALLED BY:
METER	UTILITY COMPANY	UTILITY COMPANY
METER SOCKET	CONTRACTOR	CONTRACTOR
COMBO MTRR/MAIN	CONTRACTOR	CONTRACTOR
CURRENT TRANSFORMER ENCL.		
MAIN SERVICE DISCONNECT		
CT ENCL. TO METER SOCKET WIRING		
CT ENCL. TO METER SOCKET CONDUIT		

MAIN SERVICE DISCONNECT	SUPPLIED BY:	INSTALLED BY:
CIRCUIT BREAKER	CONTRACTOR	CONTRACTOR
FUSED DISCONNECT SWITCH		



GROUNDING DIAGRAM

PANELBOARD L

LOCATION: DOSING BUILDING	MFR: SQUARE D	100 AMPS	VOLTS: 240/120
DIMENSIONS: 20"W x 5.75"D x 26"H	TYPE: NQ	X M.L.O.	PHASE: 1
MOUNTING: SURFACE	NEMA: 1	10,000 A.I.C.	WIRES: 3
FED: BOTTOM		X SPD	FED FROM: SERVICE DISCONNECT

		PHASE LOADS													
BRKR		WIRE SIZE	CONT. WATTS	N-CONT. WATTS	NO	A		B		N-CONT. NO	CONT. WATTS	WIRE SIZE	DESCRIPTION	BRKR	
A	P					CONT.	N-CONT.	CONT.	N-CONT.					A	P
20	2		1,650	1	1,700	0				2	50	212	FLOW METER	20	1
-	-		1,650	3				1,650	180	4	180	212	DOSING PUMP	20	1
20	1	212	72	5	252	0				6		180	AMMAD FILTER CP	15	1
20	1	212	18	7				18	0	8			SPARE	20	1
20	1	212	180	9	180	0				10			SPARE	20	1
				11		0	0			12			AVAILABLE SPACE		1
				13	0	0				14			AVAILABLE SPACE		1
				15		0	0			16			AVAILABLE SPACE		1
				17	0	0				18			AVAILABLE SPACE		1
TOTAL WATTS:			3,570	0	2,132	0	1,668	180		180	230				
CONTINUOUS LOAD:			3,800												
CONTINUOUS LOAD * 125%:			4,750												
NON-CONTINUOUS LOAD:			180												
DESIGN WATTS:			4,930												
MIN. RATING (AMPS):			21												

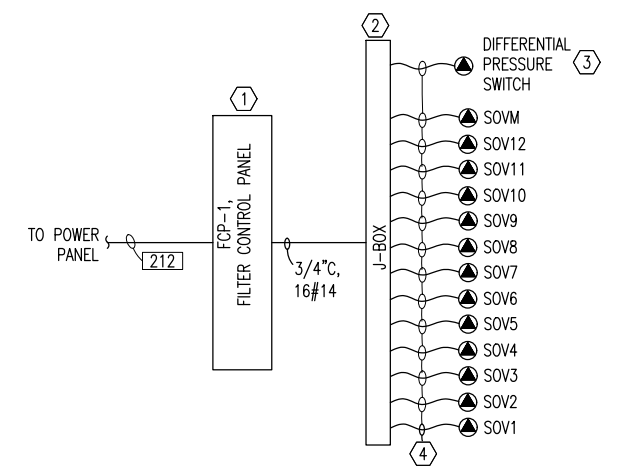
FIXTURE SCHEDULE

TYPE	DESCRIPTION	MANUFACTURER		FIX VA	LAMP	LUMENS	KELVIN	MOUNTING	NOTES:
		NAME	CATALOG NO.						
F1	4' LED ENCLOSED INDUSTRIAL, FIBERGLASS HOUSING, DAMP LOCATION, MVOLT	METALUX	4VT2-LD5-6-DR-UNV-L840-CD-1-U	53	LED	6,000	4,000	SURFACE	
F2	LED WALL MOUNTED FULL CUTOFF MINI AREA WALL PACK FOR WET LOCATIONS, PHOTOCELL	LUMARK	AXCS1A-PC	14	LED	1,806	4,000	WALL	

NOTES: 1)

WIRING DIAGRAM NOTES:

1. FILTER CONTROL PANEL SUPPLIED BY FILTER MANUFACTURER INSTALLED BY CONTRACTOR.
2. J-BOX PROVIDED BY FILTER MANUFACTURER WITH THE FILTER.
3. DIFFERENTIAL PRESSURE SWITCH PROVIDED BY FILTER MANUFACTURER. WIRE TO J-BOX AS REQUIRED.
4. WIRING ON FILTER PROVIDED/INSTALLED BY FILTER SUPPLIER.



FILTER CONNECTION DIAGRAM

H.P.E. INC. ELECTRICAL ENGINEERS
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HEGERHORST POWER ENGINEERING INCORPORATED (801) 642-2051
708 EAST 50 SOUTH AMERICAN FORK, UT 84003 FAX (801) 642-2154
HPE PROJECT:23.043 ©2021
FOR INFORMATION ABOUT THIS JOB, PLEASE CONTACT: KEITH HEGERHORST

GENERAL NOTES:

1. NOT USED.

SHEET KEYNOTES:

1. EXISTING SERVICE(S) TO REMAIN. MAINTAIN CIRCUIT INTEGRITY.
2. NEW COMBO METER/MAIN, WITH 40A/2P CIRCUIT BREAKER. INSTALL ON EXTERIOR OF CHEMICAL BUILDING. LABEL AS "MAIN SERVICE DISCONNECT" AND AS REQUIRED BY NEC 110.24.
3. 3" CONDUIT WITH PULL TAPE. INSTALL CONDUIT FROM 2-3 FT NEAR TRANSFORMER TO COMBO METER/MAIN AS REQUIRED. CONDUCTOR PROVIDED AND INSTALLED BY UTILITY COMPANY. RMP WILL MAKE THE CONNECTION AT THE TRANSFORMER.

JUB
J-U-B ENGINEERS, INC.

J-U-B ENGINEERS, INC.
466 North 900 West
Kaysville, Utah 84037
Phone: 801.547.0393
Fax: 801.547.0397
www.jub.com

CONSTRUCTION

REGISTERED PROFESSIONAL ENGINEER
No. 86-171214-2202
KEITH B. HEGERHORST
02/02/22
STATE OF UTAH

SET

NO.	REVISION	DESCRIPTION	BY	DATE

SYSTEM FILTRATION AND CHLORINATION PROJECT
COLE CANYON WATER COMPANY

ONE-LINE DIAGRAMS

FILE: E-701
JUB PROJ #: 55-22-095
DRAWN BY: KBH
DESIGN BY: KBH
CHECKED BY: KBH
AT FULL SIZE, IF NOT ONE INCH SCALE ACCORDINGLY
LAST UPDATED: 10/24/2023
SHEET NUMBER:

E-701

Date Created: 7/19/2023 M:\23.043 - COLE CANYON FILTRATION\DRAWINGS\E-701.DWG