

AGREEMENT
between
WEBER COUNTY
and
COLE CANYON WATER COMPNAY
for access and installation of a chlorinator and associated structure

This agreement (“Agreement”) is between **WEBER COUNTY**, a body corporate and politic of the State of Utah on behalf of the Weber County Culture, Parks, and Recreation Department (“County”) and **COLE CANYON WATER COMPANY** (“Cole Canyon”). County and Cole Canyon may be referred to jointly as the “parties.”

RECITALS

WHEREAS, County owns and operates the North Fork Park (the “Park”) located in Weber County’s upper valley; and

WHEREAS, Cole Canyon has petitioned the County for access through a portion of County’s Park for the purpose of installing a chlorinator and associated structure; and

WHEREAS, County has agreed to allow Cole Canyon temporary and limited access to construct or cause to be constructed a chlorinator and associated structure at a location specified in this agreement and subject to the term and conditions contained in this Agreement; and

THEREFORE, in exchange for valuable consideration, including the mutual covenants contained in this Agreement, the Parties covenant and agree as follows:

1. SCOPE OF AGREEMENT

Cole Canyon shall be permitted to access the County’s Park for the purpose of installing a chlorinator and associated structure as described in the engineering plans attached to this Agreement as **Exhibit A** and at the location specified in the engineering plans attached to this Agreement as **Exhibit A**.

Cole Canyon shall be responsible for restoration of any and all of the land disturbed by the installation of said chlorinator and associated structure. Any disturbance must be returned to an original or better than original condition. County, in County’s sole discretion, shall determine whether any disturbances have been reasonably restored to their original or better than original condition. In the event that County determines Cole Canyon has failed to restore any disturbance to the original or better than original condition, County shall notify Cole Canyon and Cole Canyon shall be responsible for the restoration or the costs of County’s endeavors to restore the disturbance to the original or better than original condition.

Cole Canyon shall notify County in advance and as soon reasonably possible of any construction work or disturbances of any kind that could interrupt the regular or daily use of the Park by any users or County personnel. County shall work with Cole Canyon to temporarily divert traffic, personnel, or users of the Park away from Cole Canyon's construction activities as necessary.

2. EFFECTIVE DATE/TERM

This Agreement shall be effective as of the 01 day of August, 2023 and will continue for a period of 1 year following the effective date ("Term"). County reserves the right to review this Agreement on a regular basis regarding performance and cost analysis and may negotiate price and service elements during the term of this Agreement.

3. TERMINATION

- a. Termination for Default. County may terminate this Agreement for an "Event of Default as defined, upon written notice from County to Cole Canyon.
- b. Termination by Cole Canyon for Default. Cole Canyon may terminate this Agreement for an Event of Default upon written notice from Cole Canyon to County.
- c. Event of Default. As used in this Agreement, the term "Event of Default" means a party hereto fails to perform any of its material obligations and such failure continues for a period of 30 (thirty) days after written notice to such defaulting party or any material representation or warranty of a party contained in this Agreement proves to be untrue or incorrect in any material respect when made.
- d. Force Majeure. Neither party shall be liable for any excess costs if the failure to perform arises from causes beyond the control and without the fault or negligence of that party, e.g., acts of God, fires, floods, strikes, or unusually severe weather. If such condition continues for a period in excess of 60 days, Cole Canyon or County shall have the right to terminate this Agreement without liability or penalty effective upon written notice to the other party.
- e. No Limitation of Rights. The rights and remedies of the parties hereto are in addition to any other rights and remedies provided by law or under this Agreement. The parties agree that the waiver of any breach of this Agreement by either party shall in no event constitute a waiver as to any future breach.
- f. Termination for Convenience. County reserves the right to terminate this Agreement, in whole or in part, at any time during the Term or any Additional Terms whenever County determines, in its sole discretion that it is in the County's interest to do so. If County elects to exercise this right, County shall provide written notice to Cole Canyon at least 30 (thirty) days prior to the date of termination for convenience. Upon such termination, Cole Canyon shall be paid for all services up to the date of termination. Cole Canyon agrees that the County's termination for convenience will not be deemed a termination for default nor will it entitle Cole Canyon to any rights or remedies provided by law

or this Agreement for breach of contract by the County or any other claim or cause of action.

4. INDEPENDENT CONTRACTOR AND TAXES

The relationship of County and Cole Canyon under this Agreement shall be that of an independent contractor status. Each party shall have the entire responsibility to discharge all of the obligations of an independent contractor under federal, state and local law, including but not limited to, those obligations relating to employee supervision, benefits and wages; taxes; unemployment compensation and insurance; social security; worker's compensation; disability pensions and tax withholdings, including the filing of all returns and reports and the payment of all taxes, assessments and contributions and other sums required of an independent contractor. Nothing contained in this Agreement shall be construed to create the relationship between County and Cole Canyon of employer and employee, partners or joint venturers.

5. INSURANCE

Cole Canyon shall, at its sole cost and expense, secure and maintain during the term of this Agreement, including all renewal or additional terms, the following minimum insurance coverage:

- A. Workers' compensation and employer's liability insurance as required by the State of Utah.
- B. Commercial general liability insurance in the minimum amount of \$1,000,000 per occurrence with a \$2,000,000 general policy aggregate.
- C. Professional liability insurance in the minimum amount of \$1,000,000 per occurrence with a \$2,000,000 annual policy aggregate limit.
- D. Commercial automobile liability insurance that provides coverage in the minimum amount of \$100,000 per occurrence per person/ \$300,000 per accident / \$50,000 property damage OR single combined limit of \$500,000.

6. AGENT

No agent, employee or servant of Cole Canyon or County is or shall be deemed to be an employee, agent or servant of the other party. None of the benefits provided by each party to its employees, including but not limited to workers' compensation insurance, health insurance and unemployment insurance, are available to the employees, agents, or servants of the other party. Cole Canyon and County shall each be solely and entirely responsible for its acts and for the acts of its agents, employees, and servants during the performance of this Agreement. Cole Canyon and County shall each make all commercially reasonable efforts to inform all persons with whom they are involved in connection with this Agreement that both are independent contractors.

7. SEVERABILITY

In the event that any condition, covenant or other provision hereof is held to be invalid or void, the same shall be deemed severable from the remainder of this Agreement and shall in no way affect any other covenant or condition herein contained. If such condition, covenant, or other provision shall be deemed invalid due to its scope or breadth, such provision shall be deemed valid to the extent of the scope or breadth permitted by law.

8. COMPLIANCE WITH LAWS

Each party agrees to comply with all federal, state and local laws, rules and regulations in the performance of its duties and obligations under this Agreement. Any violation by Cole Canyon of applicable law, rule or regulation, shall constitute an event of default under this Agreement. Cole Canyon is responsible, at its sole expense, to acquire, maintain and renew during the term of this Agreement, all necessary permits and licenses required for its lawful performance of its duties and obligations under this Agreement.

9. NON-ASSIGNMENT

Neither party shall assign, transfer, or contract for the furnishing of services to be performed under this Agreement without the prior written approval of the other.

10. GOVERNING LAW

It is understood and agreed by the Parties hereto that this Agreement shall be governed by the laws of the State of Utah and the ordinances of Weber County, both as to interpretation and performance. All actions, including but not limited to court proceedings, administrative proceedings, arbitration and mediation proceedings, shall be commenced, maintained, adjudicated and resolved within the jurisdiction of the State of Utah.

11. STANDARD OF PERFORMANCE/PROFESSIONALISM

Cole Canyon acknowledges the standard of performance and professionalism required in the performance of its services under this Agreement. Cole Canyon agrees to perform the services under this Agreement with the level of professionalism expected in its industry/profession in the community. Further, Cole Canyon, while performing its obligations under this Agreement, will conduct itself in such a manner that will promote the best interests of the County.

12. INDEMNIFICATION

Cole Canyon agrees to indemnify and hold harmless the County, its officers, agents, and employees from and against any and all actual or threatened claims, losses, damages, injuries,

and liabilities of, to, or by third Parties, including Cole Canyon, its subcontractors, or the employees of either, including claims for personal injury, death, or damage to personal property or profits and liens of workmen and material men (suppliers), however allegedly caused, resulting directly or indirectly from, or arising out of, Cole Canyon's breach of this Agreement or any acts or omissions of or by Cole Canyon, its agents, representatives, officers, employees, or subcontractors in connection with the performance of this Agreement. Cole Canyon agrees that its duty to indemnify the County under this Agreement includes all attorney's fees, litigation and court costs, expert witness fees, and any sums expended by or assessed against the County for the defense of any claim or to satisfy any settlement, arbitration award, or verdict paid or incurred on behalf of the County.

13. GOVERNMENTAL IMMUNITY

County is a body corporate and politic of the State of Utah, subject to the Governmental Immunity Act of Utah (the "Act"), Utah Code Ann. §§ 63G-7-101 to -904. The Parties agree that County shall only be liable within the parameters of the Governmental Immunity Act. Nothing contained in this Agreement shall be construed in any way, to modify the limits of liability set forth in that Act or the basis for liability as established in the Act.

14. COUNTERPARTS

This Agreement may be executed in several counterparts and all so executed shall constitute one agreement binding on all the Parties, notwithstanding that each of the Parties are not signatory to the original or the same counterpart. Further, executed copies of this Agreement delivered by facsimile shall be deemed an original signed copy of this Agreement.

15. ENTIRE AGREEMENT

County and Cole Canyon acknowledge and agree that this Agreement constitutes the entire integrated understanding between County and Cole Canyon, and that there are no other terms, conditions, representations or understanding, whether written or oral, concerning the rights and obligations of the Parties to this Agreement except as set forth in this Agreement. This Agreement may not be enlarged, modified or altered, except in writing, signed by the Parties.

16. INTERPRETATION

County and Cole Canyon agree that where possible, each provision of this Agreement shall be interpreted in such a manner as to be consistent and valid under applicable law; but if any provision of this Agreement shall be invalid, prohibited or unenforceable under applicable law, such provision shall be ineffective to the extent of such invalidity or prohibition, without invalidating the remainder of such provision or the remaining provisions of this Agreement.

In witness whereof, the Parties execute this Agreement.

BOARD OF COUNTY COMMISSIONERS
OF WEBER COUNTY

By _____
Gage Froerer, Chair

Commissioner Froerer voted _____

Commissioner Harvey voted _____

Commissioner Bolos voted _____

ATTEST

Ricky Hatch, CPA
Weber County Clerk/Auditor

COLE CANYON

By: David Wachman

Title: Board Member

Date: 8-23-2023

EXHIBIT A

COLE CANYON WATER COMPANY SYSTEM FILTRATION AND CHLORINATION PROJECT

NEAR 2300 NORTH FORK PARK RD
LIBERTY, UT 84310

PWS ID: UTAH29092

Sheet Number	Sheet Title
G-001	COVER SHEET
G-002	VICINITY MAP AND PROJECT LOCATION MAP
G-003	GENERAL NOTES AND ABBREVIATIONS
G-004	LINE AND SYMBOL LEGENDS AND SHEET AND DETAIL KEY
C-101	SITE PLAN
C-501	CIVIL DETAILS
M-101	PIPING PLAN AND SECTION
M-501	MECHANICAL DETAILS
S-001	GENERAL STRUCTURAL NOTES
S-002	GENERAL STRUCTURAL NOTES

Sheet Number	Sheet Title
S-101	STRUCTURAL PLANS
S-201	STRUCTURAL ELEVATIONS
S-501	TYPICAL FOUNDATION DETAILS
S-502	TYPICAL FOUNDATION DETAILS
E-001	ELECTRICAL LEGEND
E-002	ELECTRICAL TABLES
E-101	ELECTRICAL SITE PLAN
E-102	ELECTRICAL PLANS
E-501	ELECTRICAL DETAILS, SHF. 1
E-701	ONE-LINE DIAGRAMS



BID SET

PROJECT NO. 55-22-095

JULY 2023



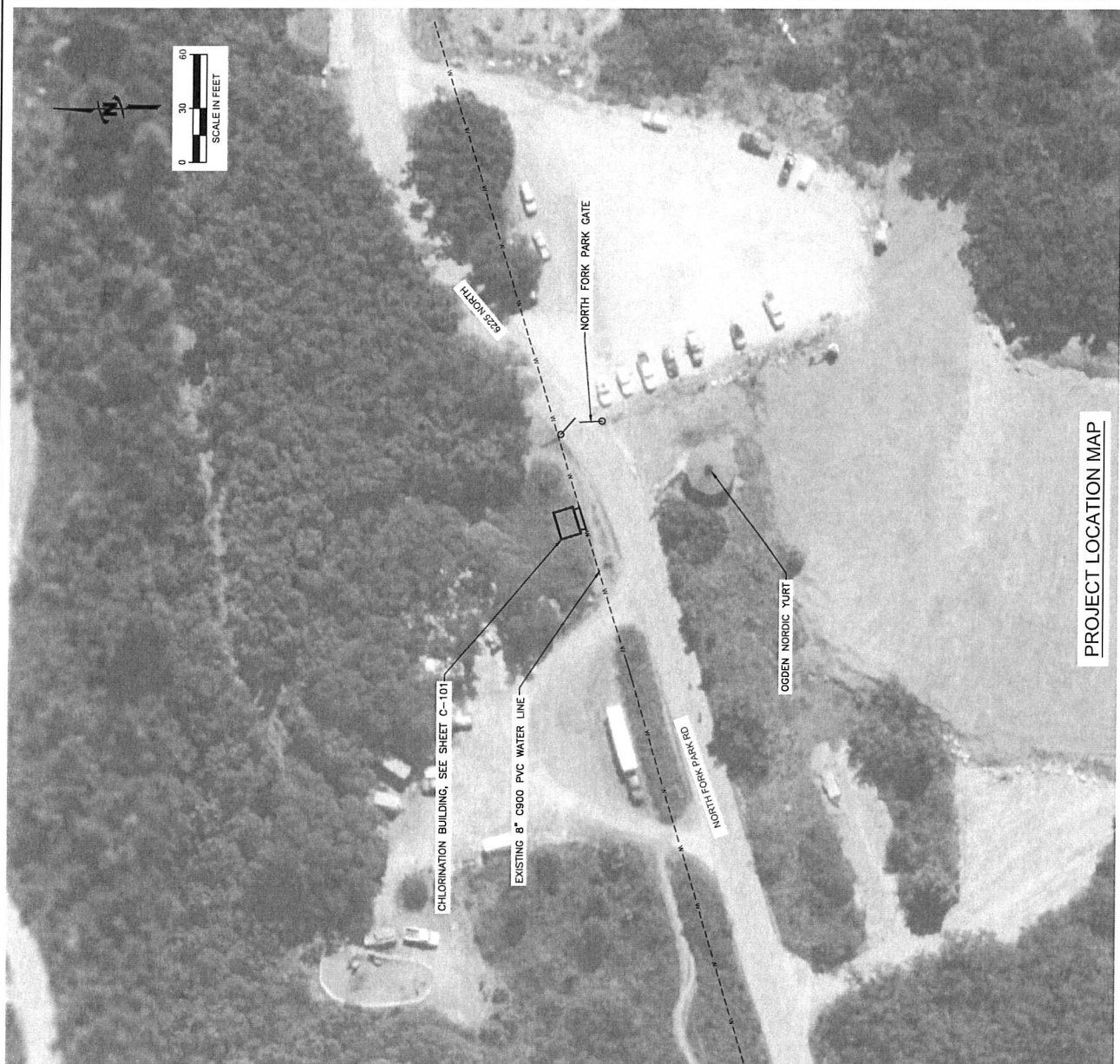
J-U-B ENGINEERS, INC.

NOTICE AND DISCLAIMER

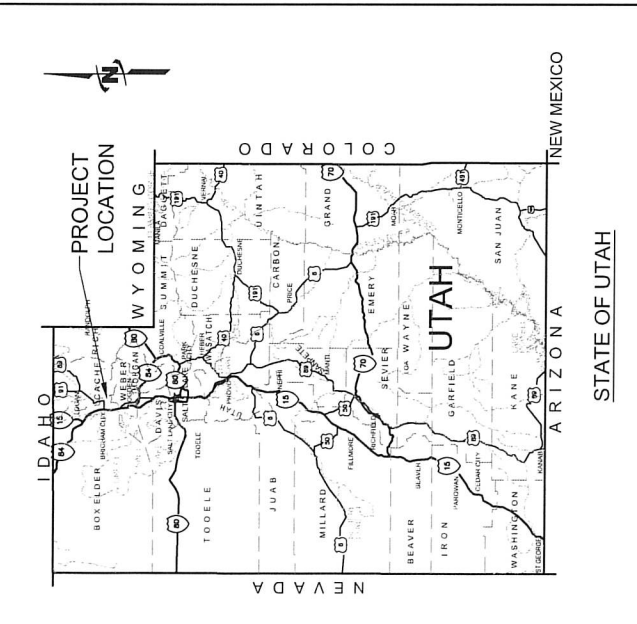
The plans and/or specifications (documents) are the property of J-U-B Engineers, Inc. ("J-U-B") and by using the documents you agree to be bound by the terms and conditions in the notice posted at the following URL: <http://www.jub.com>. The use of the documents creates no duty in contract, tort, negligence or otherwise of J-U-B to the user. The user shall not (i) disseminate the documents, or any part thereof, to others without the written consent of J-U-B, or (ii) use the documents, or any part thereof, for any use other than as designated herein for the intended project. The documents are not intended for use in such a manner as to constitute a warranty, layout (unless specifically identified as such in the documents), or property boundary layout. J-U-B and its agents shall not be liable for any damages or claims arising out of the unauthorized use or misuse of the documents, or any part thereof, whether such damage or claim is based in contract, tort or otherwise. The user hereby releases and shall defend, indemnify and hold J-U-B harmless from any damages or claims arising out of, or related in any way to, the user's unauthorized use or misuse of the documents, or any part thereof. If the documents are provided in electronic format, the electronic documents are subject to the provisions of J-U-B's "Electronic document/data limited license" found at edocs.jub.com.

NO.	DESCRIPTION	BY	DATE

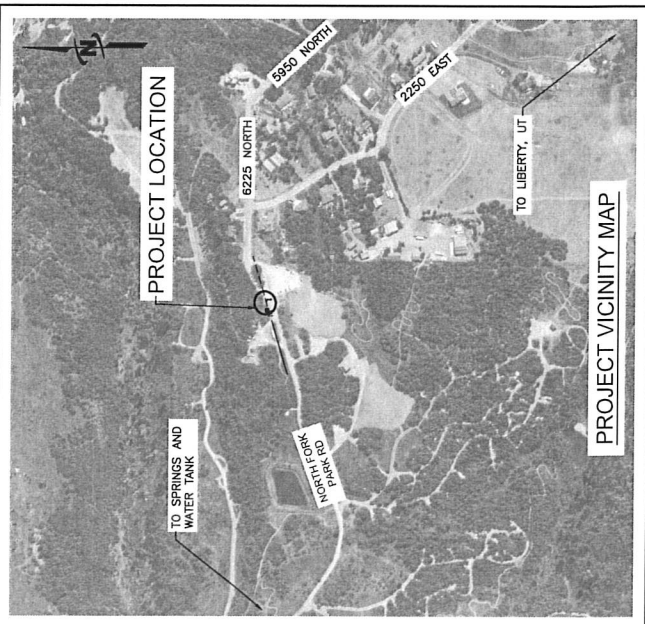
FILE NO.	15-0000
DATE	10/20/15
DESIGNED BY	CSA
CHECKED BY	CSA
DATE	10/20/15
SCALE	AS SHOWN
PROJECT NO.	15-0000
SHEET NUMBER	G-002



PROJECT LOCATION MAP



STATE OF UTAH



PROJECT VICINITY MAP

PLN DATE: 11/20/15 2:40 PM, PLOTTED BY: CSB, AREA: 15-0000, SHEET: G-002, SYSTEM: TRACING, PROJECT: 15-0000, SYSTEM: TRACING, SHEET: G-002, DATE: 11/20/15

GENERAL PROJECT NOTES

1. **GENERAL:**
 - A. THE GENERAL NOTES AND SPECIFICATIONS SUPPLEMENT THE PROJECT WRITTEN TECHNICAL SPECIFICATIONS AND THE PROJECT DRAWINGS.
 - B. THE CONTRACTOR IS RESPONSIBLE FOR ALL CONSTRUCTION BRACING, TEMPORARY SHORING, AND ALL OTHER CONSTRUCTION METHODS REQUIRED DURING CONSTRUCTION IN ACCORDANCE WITH ALL APPLICABLE LOCAL, STATE AND FEDERAL REGULATIONS, TO ENSURE THE SAFETY AND SAFETY OF ALL CONSTRUCTION UNTIL IT IS COMPLETED.
 - C. DETAILS ON THESE PLANS ARE INTENDED TO DEPICT THE GENERAL CONSTRUCTION DETAILS AND SIMILAR IN NATURE TO THOSE THAT ARE SPECIFIED. DETAILS NOT SPECIFICALLY SHOWN THAT ARE IF QUESTIONS REGARDING THE APPLICATION OF DETAILS ARE ENCOUNTERED, NOTIFY THE ENGINEER FOR CLARIFICATION OR INSTRUCTION.
 - D. 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 PROJECT 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. IT IS THE CONTRACTOR'S RESPONSIBILITY TO CAREFULLY STUDY AND COORDINATE THE CONSTRUCTION REQUIREMENTS SHOWN ON THESE DRAWINGS. WHEN CONFLICTS OR DISCREPANCIES ARE FOUND IN THESE DRAWINGS, THE CONTRACTOR SHALL REPORT THEM IMMEDIATELY TO THE PROJECT ENGINEER FOR DIRECTION AND/OR CLARIFICATION.
 - D. 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 CONTRACTOR'S OWN RISK AND COST.
3. **PROJECT NOTES:**
 - A. THE CONTRACTOR SHALL LIMIT ACTIVITIES TO IMMEDIATE PROJECT AREA TO FULLEST EXTENT POSSIBLE.
 - B. ANY DAMAGE TO PUBLIC OR PRIVATE PROPERTY RESULTING FROM CONSTRUCTION ACTIVITIES SHALL BE RESTORED TO EQUAL OR BETTER CONDITION AT THE CONTRACTOR'S EXPENSE.
 - C. THE ENGINEER MAY PROVIDE VERTICAL AND HORIZONTAL CONTROLS ON THE PROJECT SITE. ANY ADDITIONAL CONSTRUCTION STAKING REQUIRED TO COMPLETE THE PROJECT SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR.
 - D. THE CONTRACTOR SHALL LOCATE AND PROTECT ALL EXISTING UTILITIES AND BE RESPONSIBLE FOR DAMAGES TO EXISTING UTILITIES AND EXISTING IMPROVEMENTS AS A RESULT OF THE CONTRACTOR'S CONSTRUCTION ACTIVITIES.
4. **EARTHWORK:**
 - A. STRIP AND REMOVE EXISTING VEGETATION, DEBRIS, AND OTHER DELETERIOUS MATERIALS FROM THE EXCAVATION LIMITS.
 - B. IN THE EVENT THAT GROUNDWATER IS PRESENT, THE CONTRACTOR SHALL BE RESPONSIBLE FOR ALL Dewatering DURING THE CONSTRUCTION PERIOD.
 - C. THE CONTRACTOR IS RESPONSIBLE FOR DESIGNING AND CONSTRUCTING STABLE EXCAVATIONS AS REQUIRED TO INTERFERE WITH EXISTING SIDES AND BOTTOMS. ALL EXCAVATIONS SHOULD BE SLOPED OR SHORED TO MEET THE RELEVANT LOCAL, STATE, AND FEDERAL REGULATIONS, INCLUDING CURRENT USPA EXCAVATION AND TRENCH SAFETY STANDARDS.
 - D. THE CONTRACTOR SHALL EXCAVATE THE SITE TO THE LIMITS AND ELEVATIONS SHOWN ON THE PLANS.
5. **EXISTING UTILITIES:**
 - A. THE LOCATION OF EXISTING UTILITIES ARE SHOWN IN AN APPROXIMATE WAY ONLY.
 - B. DEPTHS AND ELEVATIONS OF UTILITIES ARE UNKNOWN UNLESS OTHERWISE SHOWN.
 - C. UNDERGROUND UTILITY LOCATION AND VERIFICATION IS TO BE AN ONGOING PROCESS.
 - D. THE CONTRACTOR IS RESPONSIBLE TO:
 - i. VERIFY EXACT LOCATIONS OF ALL UTILITIES PRIOR TO BEGINNING WORK IN THAT AREA
 - ii. FIELD VERIFY UTILITY LOCATION, DEPTHS, AND ELEVATIONS WHERE CONFLICTING UTILITIES MAY BE PRESENT A MINIMUM OF 500 FEET AHEAD OF TRENCHING OPERATIONS
 - iii. BRING ANY DISCREPANCIES AND/OR CONFLICTS TO THE ATTENTION OF THE ENGINEER IMMEDIATELY.
 - iv. NOTIFY APPROPRIATE UTILITY COMPANIES WHEN CONSTRUCTION MIGHT INTERFERE WITH NORMAL OPERATION OF ANY UTILITIES.
 - v. MAINTAIN SERVICE OF EXISTING UTILITIES.
 - vi. RESTORE ANY UTILITIES DAMAGED DUE TO CONSTRUCTION AT NO ADDITIONAL COST TO THE OWNER.
6. **INSPECTION AND TESTING:**
 - A. THE CONTRACTOR SHALL BE RESPONSIBLE FOR MATERIALS TESTING INCLUDING BUT NOT LIMITED TO CONCRETE, ASPHALT, AND COMPACTION. ALL TESTS SHALL MEET MINIMUM ENGINEER REQUIREMENTS. SEE THE CONTRACT DOCUMENTS AND DRAWINGS FOR FREQUENCY OF TESTING.

RESULTS ARE TO BE DELIVERED TO SPECIAL INSPECTOR, OWNER AND ENGINEER. THE CONTRACTOR IS RESPONSIBLE TO COORDINATE WITH ENGINEER AND SPECIAL INSPECTOR FOR PERMITS REQUIRED FOR STAKEOUT AND CONSTRUCTION PERMITS. IT SHALL BE THE CONTRACTOR'S RESPONSIBILITY TO WORK FOR ADDITIONAL INSPECTIONS THAT ARE THE RESULT OF HIS WORKMANSHIP.

7. PERMITTING AND COORDINATION:

- A. CONTRACTOR SHALL OBTAIN ALL NECESSARY PERMITS AND BUSINESS LICENSES PRIOR TO CONSTRUCTION.
- B. THE CONTRACTOR SHALL BE RESPONSIBLE FOR OBTAINING ALL LOCAL, STATE, AND FEDERAL PERMITS REQUIRED FOR STAKEOUT AND CONSTRUCTION PERMITS. IT SHALL BE THE CONTRACTOR'S RESPONSIBILITY TO WORK FOR ADDITIONAL INSPECTIONS THAT ARE THE RESULT OF HIS WORKMANSHIP.
- C. THE CONTRACTOR SHALL PREPARE A STORM WATER POLLUTION PREVENTION PLAN FOR APPROVAL BY THE ENGINEER AND FOR SUBMITTAL TO LOCAL AUTHORITIES FOR REVIEW AND APPROVAL. IF THE CONSTRUCTION WILL DISTURB MORE THAN ONE ACRE, CONTRACTOR SHALL FILE A "NOTICE OF INTENT" FOR PERMIT COVERAGE UNDER THE STATE'S UPDES STORM WATER GENERAL PERMIT FOR CONSTRUCTION ACTIVITIES (UTR300000) AND PAY ALL ASSOCIATED FEES. THE NOI MAY BE FILED ELECTRONICALLY AT THE FOLLOWING WEBSITE: [HTTP://WWW.WATERQUALITY.LUTAH.GOV/UPDES/STORMWATERCON-htm](http://www.waterquality.lutah.gov/UPDES/STORMWATERCON-htm) AND FOLLOWING THE DIRECTIONS GIVEN UNDER THE HEADING "ONLINE APPLICATION PROCESS AND SEARCH FOR EXISTING PERMITS". THE CSP DOES NOT RELIEVE CONTRACTOR FROM COMPLIANCE WITH OTHER REGULATIONS OR CONTRACT REQUIREMENTS REGARDING STORM WATER POLLUTION PREVENTION INCLUDING BUT NOT LIMITED TO: PROTECTION OF SURFACE WATERS, PREVENTION OF SOIL RUNOFF INTO DRAINS, DUST CONTROL, PREVENTION OF TRACKING SOILS TO ADJACENT STREETS, FUEL CONTAINMENT, SPILL CONTROL, ETC.
- D. ANY WORK DONE WITHIN A PUBLIC RIGHT-OF-WAY SHALL BE COORDINATED WITH THE APPROPRIATE TRANSPORTATION AGENCY AND SHALL MEET THE REQUIREMENTS OF THAT AGENCY AND IN ALL WORKS, THE CONTRACTOR SHALL MEET ALL CURRENT USPA REQUIREMENTS. WHERE WORK IS PERFORMED ON EASEMENTS, THE CONTRACTOR SHALL TAKE EVERY PRECAUTION TO ELIMINATE ANY ADVERSE EFFECTS ON THE ADJACENT PROPERTY AND/OR TO RESTORE IT TO ITS ORIGINAL CONDITION.

8. MISCELLANEOUS:

- A. CONTRACTOR IS RESPONSIBLE FOR DUST ABATEMENT AND ANY LIABILITY ISSUES RELATED TO DUST AT ANY LOCATION WHICH MAY BE CAUSED BY THIS PROJECT.
- B. THE CONTRACTOR IS RESPONSIBLE FOR TRAFFIC CONTROL AND PROTECTION OF PEDESTRIANS IN AND AROUND THIS WORK AREA. REFER TO THE MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES (MUTCD) LATEST EDITION FOR WORK ZONE TRAFFIC CONTROL.
- C. THE CONTRACTOR SHALL PRESERVE EXISTING CITY, COUNTY, STATE, AND FEDERAL LAND MONUMENTS WHENEVER POSSIBLE. IF PRESERVATION IS NOT FEASIBLE, THE ENGINEER SHALL BE CONTACTED 2 WEEKS PRIOR TO REMOVAL TO INCLEMENT WEATHER CONDITIONS. THE CONTRACTOR WILL COMPLETELY CLEAN UP ALL AREAS AND MAINTAIN THE SURFACE IN GOOD CONDITION DURING THE SHUT-DOWN PERIOD.

9. PROJECT CONTACT LIST:

J-U-B ENGINEERS, INC.	(801) 547-0393
AMAD	(801) 419-9007
AMAD	(503) 506-1418
BRANDON NIELSEN, P.E.	
KEVIN EVANS	
KEVIN@AMAD.COM	
DAN INMAN	
DAN.INMAN@AMAD.COM	

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

BID SET

NO.	DESCRIPTION	BY	DATE

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

DATE: 03-20-2024 08:57:29
PROJECT: 24-0000000000000000
CLIENT: JUB ENGINEERS, INC.
LOCATION: UTAH
SCALE: AS SHOWN
DATE: 03-20-2024 08:57:29

SHEET NUMBER: G-003

ABBREVIATION	TERM
HP	HIGH POINT
ID	INSIDE DIAMETER
IE	INVERT ELEVATION
IN. OR *	INCH
INV.	INVERT
K	CURVE COEFFICIENT
L	LEFT
LB	LINE BEGINNING
LC OR #	LINE
LC	LEVEL GROWN
LF	LINE END
LF	LINEAL FEET
LN	LINEAL
LP	LOW POINT
MAN	MANUAL
MAX	MAXIMUM
MIN	MINIMUM
NO. OR #	NUMBER
PC	POINT OF CURVATURE
PCC	POINT OF COMPOUND
PE	POLYETHYLENE
PI	TANGENT-TANGENT INTERSECT
PL OR R	PLATE OR PROPERTY LINE
PRC	POINT OF REVERSE CURVATURE
PT	POINT OF TANGENCY
PVC	POLYVINYL-CHLORIDE
PVI	POINT OF VERTICAL INTERSECTION
R	RADIUS OR RIGHT
RC	REVERSE CROWN
REQ'D	REQUIRED
REV	REVISION
R/W	RIGHT-OF-WAY
S	SLOPE
SPEC	SPECIFICATION
STA	STATION
STD	STANDARD
STL	STEEL
ST STL	STAINLESS STEEL
TBC	TOP BACK OF CURB
TFC	TOP FACE OF CONCRETE
TGB	TOP OF BEAM
TCC	TOP OF CONCRETE
TDF	TOP OF FOOTING
TOW	TOP OF WALL
TYP	TYPICAL
W/	WITH
W/D	WITHOUT
W/REQ'D	WHERE REQUIRED

ABBREVIATION	TERM
ALUM	ALUMINUM
ASSEMBLY	ASSEMBLY
ANGLE	ANGLE
AT (MEASUREMENTS)	AT (MEASUREMENTS)
B	BEGINNING OF CURVE
BDC	BUILDING
B.M.	BENCH MARK
BP	ALIGNMENT BEGINNING
BREAK	BREAK
BSC	BITUMINOUS SURFACE COURSE
BSW	BACK OF SIDEWALK
BVC	BEGIN VERTICAL CURVE
BVP	PROFILE START
B.W.	BOTH WAYS
C	CHANNEL (STRUCTURAL)
CJ	CONTROL JOINT
CL	CENTER LINE
CLR	CLEARANCE
CMP	CORRUGATED METAL PIPE
CO	CLEANOUT
CONC	CONCRETE
CONT	CONTINUOUS
CPGL	COUPLING
CTR	CENTER
CU FT	CUBIC FEET
CU YD	CUBIC YARD
DEG OR °	DEGREE
DI	DIAMETER
DI	DUCTILE IRON
DIST	DISTRIBUTION
DWG	DRAWING
EA	EACH
EA	END OF CURVE
ELB	ELBOW
ELEV OR EL	ELEVATION
EOA	EDGE OF ASPHALT
EP	ALIGNMENT END
EXP	PROFILE END
E.W.	EACH WAY
EXIST	EXISTING
EVC	END VERTICAL CURVE
FF	FINISH FLOOR
FG	FINISH GRADE
FH	FIRE HYDRANT
FL	FLOW LINE
FLG	FLANGE
FT OR ' FEET	FOOTING
FTG	FOOTING
GALV	GALVANIZED
GB	GRADE BREAK
HORIZ	HORIZONTAL



Know what's below. Call before you dig.

CALL 2 BUSINESS DAYS IN ADVANCE BEFORE YOU DIG, GRADE, OR EXCAVATE FOR THE MARKING OF UNDERGROUND MEMBER UTILITIES

BID SET

NO.	DESCRIPTION	BY	APP.	DATE

REVISIONS
 THE SCHEMATIC AND LEGENDS ARE SUBJECT TO CHANGE WITHOUT NOTICE. THE USER SHALL BE RESPONSIBLE FOR VERIFYING ALL DIMENSIONS AND CONDITIONS PRIOR TO CONSTRUCTION.
 PROPERTY OF JUB ENGINEERS, INC.
 ALL RIGHTS RESERVED. NO PART OF THIS DOCUMENT IS TO BE REPRODUCED OR TRANSMITTED IN ANY FORM OR BY ANY MEANS, ELECTRONIC OR MECHANICAL, WITHOUT THE WRITTEN AUTHORIZATION OF JUB ENGINEERS, INC.

SYSTEM FILTRATION AND CHLORINATION PROJECT
COLE CANYON WATER COMPANY
 LINE AND SYMBOL LEGENDS AND SHEET AND DETAIL KEY

DATE: 11/02/2023	BY: JUB
DATE: 11/02/2023	BY: JUB
DATE: 11/02/2023	BY: JUB
DATE: 11/02/2023	BY: JUB
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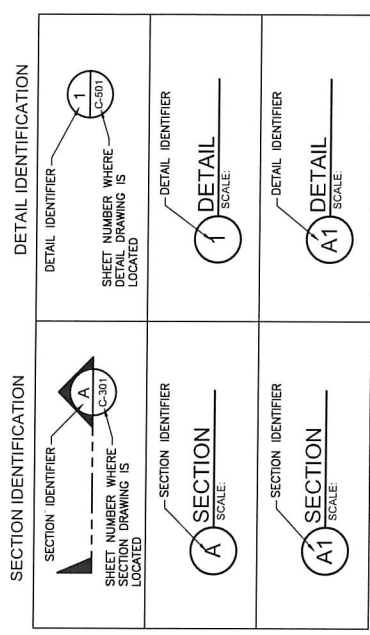
SHEET NUMBERING



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

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



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.

LINE LEGEND

DESCRIPTION	EXIST.	PROP.
STORM DRAIN	---	---
DRAIN LINE	---	---
SANITARY SEWER	---	---
WATER	---	---
IRRIGATION	---	---
NATURAL GAS	---	---
OVERHEAD POWER	---	---
UNDERGROUND POWER	---	---
OVERHEAD TELEPHONE	---	---
UNDERGROUND TELEPHONE	---	---
FIBER OPTIC	---	---
CABLE TELEVISION	---	---
FENCE	---	---
DITCH	---	---
MAJOR CONTOUR	---	---
MINOR CONTOUR	---	---
TOP OF BANK	---	---
TOE OF SLOPE	---	---
PROPERTY LINE	---	---
PROPERTY LINE (OPTIONAL)	---	---
RIGHT OF WAY	---	---
TEMPORARY EASEMENT	---	---
PERMANENT EASEMENT	---	---
ROAD SHOULDER	---	---
ROAD CENTERLINE	---	---
ROAD ASPHALT	---	---
ROAD GRAVEL	---	---
ROAD DIRT	---	---
CURB AND GUTTER	---	---

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	⊙	⊙

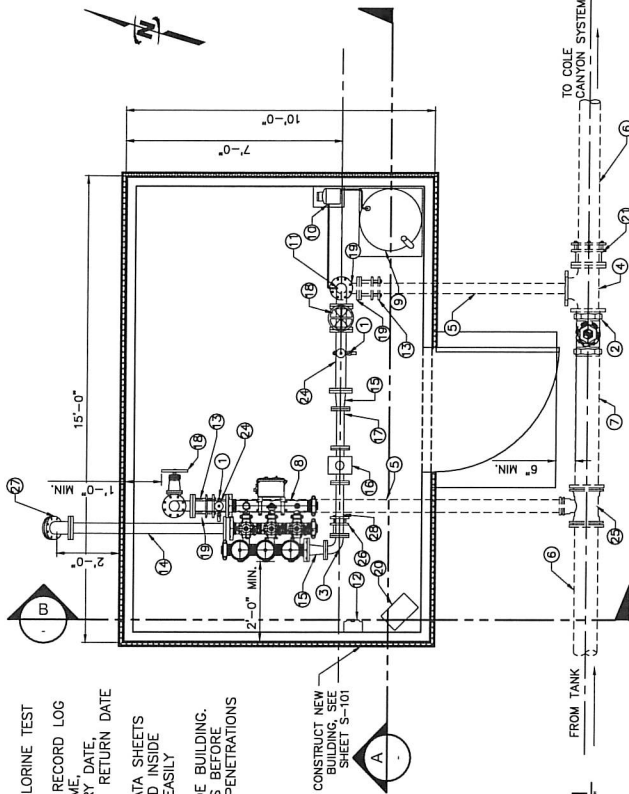
MATERIAL NOTES

- 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 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)

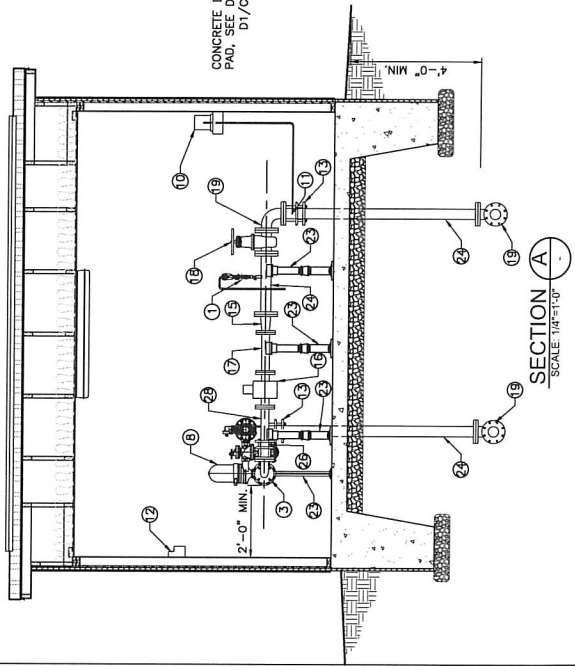
NOTES:

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.

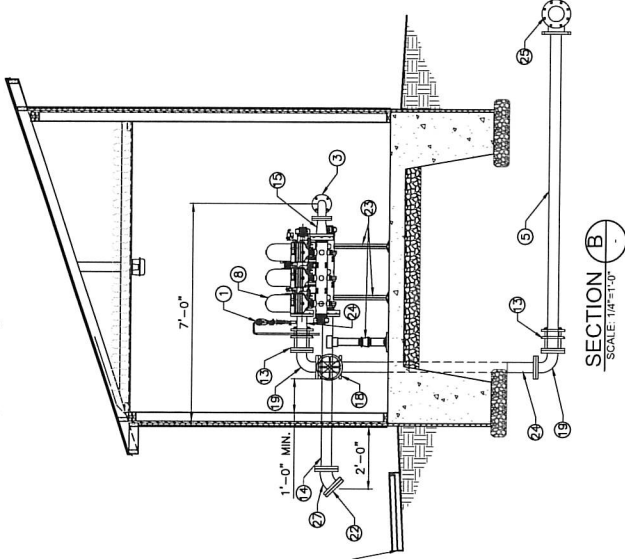
CONSTRUCT NEW BUILDING PER SHEET S-101



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



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



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

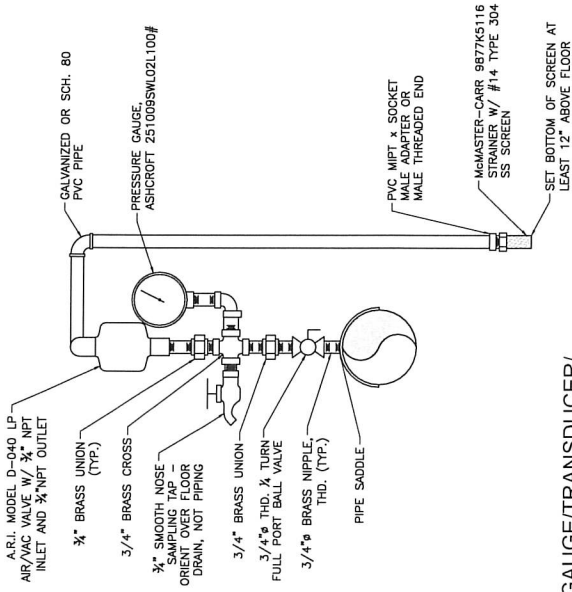
JUB-ENGINEERS, INC.
466 North 900 West
Keyville, Utah 84037
Phone: 801.547.0393
www.jub.com

BID SET

NO.	DESCRIPTION	REV.	DATE

SYSTEM FILTRATION AND CHLORINATION PROJECT
COLE CANYON WATER COMPANY
PIPING PLAN AND SECTION

DATE: 05-26-2016 10:13:13
DRAWN BY: JUB
CHECKED BY: JUB
SCALE: AS SHOWN
SHEET NUMBER: M-101



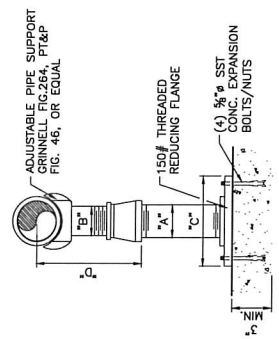
B1 PRESSURE GAUGE/TRANSDUCER/
SMOOTH NOSE SAMPLE TAP DETAIL
SCALE: 1/8" = 1'-0"

ADJUSTABLE PIPE SUPPORT
APPROXIMATE DIMENSIONS IN INCHES

PIPE SIZE	A			B			C			D		
	MINIMUM	MAXIMUM	MINIMUM	MAXIMUM	MINIMUM	MAXIMUM	MINIMUM	MAXIMUM	MINIMUM	MAXIMUM	MINIMUM	MAXIMUM
3"	2 1/2"	1 1/2"	9"	8 1/4"	13 1/2"	9"	8 1/4"	10"	10 1/4"	14 1/2"	9"	8 1/4"
4"	3"	2 1/2"	9"	9 1/4"	14 1/2"	10"	9 1/4"	11 1/4"	15 1/4"	16 1/2"	10"	9 1/4"
5"	3 1/2"	2 3/4"	9"	10 1/4"	15 1/4"	11 1/4"	10 1/4"	12 1/4"	16 1/4"	17 1/2"	11 1/4"	10 1/4"
6"	3 3/4"	2 3/4"	9"	11 1/4"	16 1/4"	11 3/4"	11 3/4"	13 1/4"	17 1/4"	18 1/2"	11 3/4"	11 3/4"
8"	4 1/4"	3 1/4"	9"	13 1/4"	18 1/4"	13 1/4"	13 1/4"	15 1/4"	19 1/4"	20 1/2"	13 1/4"	13 1/4"
10"	5 1/4"	4 1/4"	9"	15 1/4"	20 1/4"	15 1/4"	15 1/4"	17 1/4"	21 1/4"	22 1/2"	15 1/4"	15 1/4"
12"	6 1/4"	5 1/4"	9"	17 1/4"	22 1/4"	17 1/4"	17 1/4"	19 1/4"	23 1/4"	24 1/2"	17 1/4"	17 1/4"
14"	7 1/4"	6 1/4"	9"	19 1/4"	24 1/4"	19 1/4"	19 1/4"	21 1/4"	25 1/4"	26 1/2"	19 1/4"	19 1/4"
16"	8 1/4"	7 1/4"	9"	21 1/4"	26 1/4"	21 1/4"	21 1/4"	23 1/4"	27 1/4"	28 1/2"	21 1/4"	21 1/4"
18"	9 1/4"	8 1/4"	9"	23 1/4"	28 1/4"	23 1/4"	23 1/4"	25 1/4"	29 1/4"	30 1/2"	23 1/4"	23 1/4"
20"	10 1/4"	9 1/4"	9"	25 1/4"	30 1/4"	25 1/4"	25 1/4"	27 1/4"	31 1/4"	32 1/2"	25 1/4"	25 1/4"
22"	11 1/4"	10 1/4"	9"	27 1/4"	32 1/4"	27 1/4"	27 1/4"	29 1/4"	33 1/4"	34 1/2"	27 1/4"	27 1/4"
24"	12 1/4"	11 1/4"	9"	29 1/4"	34 1/4"	29 1/4"	29 1/4"	31 1/4"	35 1/4"	36 1/2"	29 1/4"	29 1/4"

NOTE:
PIPE SUPPORTS TO BE HOT DIP GALVANIZED AFTER FABRICATION.

B3 PIPE SUPPORT DETAIL
SCALE: 1/8" = 1'-0"



JUB ENGINEERS, INC.
466 North 900 West
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REVISIONS

NO.	DESCRIPTION	BY	APP.	DATE

MECHANICAL DETAILS
SYSTEM FILTRATION AND CHLORINATION PROJECT
COLE CANYON WATER COMPANY

DATE: 05/20/09 10:21 AM
DRAWN BY: JUB
CHECKED BY: JUB
SCALE: AS SHOWN
SHEET NUMBER: M-501

M-501

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, technical specifications, the more stringent requirement shall apply, unless otherwise specified.
- 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 codes and regulations. The Contractor shall ensure 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 protected from erosion and sedimentation. Details on these controls shall be included in the construction details and methods for this structure. Connection details and conditions not specifically shown on drawings shall be the responsibility of the Contractor.
- E. If any questions regarding the specifications 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. Any changes to the plans shall be approved by the Engineer in writing. Approval shall be given by the Engineer if any claim or liability resulting from that action 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 drawings and specifications with all other 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. The Contractor shall verify and coordinate the dimensions among all drawings and in the field. The Contractor shall verify and coordinate the dimensions among all drawings and in the field.
- D. It is the Contractor's responsibility to carefully study and coordinate the construction details and methods for this structure. Connection details and conditions not specifically shown on drawings shall be the responsibility of the Contractor.
- E. 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 is 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 Contractor's own risk and cost.

3. CODES

- A. Unless otherwise noted, all referenced building codes and standards refer to their most recent editions. The Contractor shall verify the date, the amendments or changes, as adopted in the Project of Engineer.
- B. International Building Code, ICC, International Building Code, IBC.
- C. Minimum Design Loads for Buildings and Other Structures, ASCE 7.
- D. American Concrete Institute, ACI 301, Specifications for Structural Concrete.
- E. American Concrete Institute, ACI 318, Building Code Requirements for Structural Concrete.
- F. 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: ASCE 7 Table 1.5-2:	U
C. Dead Load:	20 psf
D. Live Load:	40 psf
E. Roof:	20 psf
F. Snow Load:	Ps = 75.0 psf
G. Sloped Roof Snow Load:	P _s = 60.8 psf
H. Flat Roof Snow Load:	P _s = 1.0
I. Importance Factor:	C _i = 1.1
J. Thermal Factor:	V = 103 mph
K. Wind Load:	I = 1.00
L. Site Wind Exposure:	H = 1.00
M. Ice Thickness Factor - Wind:	W = 0.25 in.
N. Concurrent Temperature:	15°F
O. Rain Load - Minute Precipitation Intensity:	5.17 in./hr
P. Rain Load - 60-Minute Precipitation Intensity:	2.16 in./hr
Q. Seismic Load:	I _e = 1.00
R. Soil Site Classification:	D
S. Seismic Design Category:	S _s = 1.146
T. Mapped Spectral Response Acceleration Parameters:	S ₁ = 0.16
U. Short Period:	S _{0.2} = 0.817
V. Second:	S ₁ = 0.65
W. Design Spectral Response Acceleration Parameters:	S ₁ = 1.146
X. Long-period Transition Period:	S _{0.5} = 0.817
Y. Basic Seismic Force Resisting System(s):	S ₁ = 0.65
Z. Light-Frame Wood Walls Sheathed with Wood Structural Panels:	J ₁ = 3.0
AA. System Overstrength Factor:	C _d = 4.0
AB. Deflection Amplification Factor:	C _d = 4.0

- K. Mechanical
 - 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 the following:
 - A.1. Concrete mix designs and admixtures.
 - A.2. Epoxy anchors.
 - A.3. All 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. Reinforcing steel for all concrete.
 - B.1. Fabrication drawings for all reinforcing steel.
 - B.2. Deformed submittals shall be accompanied by design drawings, shop drawings and structural calculations, stamped and signed by a Professional Structural Engineer.
 - B.3. Pre-engineered and shop fabricated building.

7. FOUNDATIONS

- A. 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.
- B. 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.
- C. Local areas of soft and/or unacceptable material encountered at bottom of footing grade with compacted structural fill or lean concrete fill, including Unfilled Soils Classification GW, GM, or SW, maximum aggregate size of 3/4" in. and no more than 5% passing a number 20 sieve. Material shall be placed in lifts no greater than 10" in depth and compacted to 95% of maximum density as determined per ASTM D1557.
- D. 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 , of 3180 psi (225 MPa). Concrete shall be proportioned and furnished for the PROJECT CONCRETE MIX TYPES. Concrete shall be proportioned and furnished for the following project uses as indicated on the plans and as follows:
 - B.1. 65 (4-7-1) 3%.
 - B.2. 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 accordance with the manufacturer's instructions. The admixture shall be used in all concrete mix designs. At Contractor's option, a high-range water-reducing admixture (HRWR) conforming to ASTM C494, Type F or G, may be used.
 - C.2. High-range water-reducing admixture conforming to ASTM C494, used in strict accordance with the manufacturer's instructions. The admixture shall 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 in concrete mix designs. The replacement shall be substantiated by test data. Cement: ASTM C150 TYPE I OR II, ASTM C595 Type I, II, or III; ASTM C1157 Type GU.
 - C.4. Water: Clean & Potable.
 - C.5. Aggregate: 0.75-inch Maximum aggregate per ASTM C33. Unless noted otherwise.
 - C.6. Reinforcing Steel: ACI 211.1 and 308R.
- D. REINFORCING STEEL: Reinforcing steel shall conform to ASTM A615 Grade 60; #3 bars may be Grade 40. Reinforcing materials including expansion joints and sealants, shall be resistant to chemical attack for the life of the structure. Sealants shall conform to ASTM C 920 and Federal Specification facility. Sealants shall conform to ASTM C 920 and Federal Specification facility.
- E. CONCRETE PROPORTIONS. Concrete mix proportions shall be in accordance with ACI 308, ACI 309, and ACI 318.
- F. MIX VERIFICATION. Concrete mix designs shall be verified by standard 28-day cylinder tests per ASTM C39. Concrete shall be tested in accordance with the requirements of ACI 318.
- G. EVALUATION AND ACCEPTANCE OF CONCRETE. Concrete shall be tested in accordance with ACI 318 and as follows:
 - H.1. ACI 304; Guide for Measuring, Mixing, Transporting, and Placing Concrete.
 - H.2. ACI 308; Guide for Measuring, Mixing, Transporting, and Placing Concrete.
 - H.3. ACI 309; Guide for Consolidation of Concrete.
 - H.4. ACI 318; Building Code Requirements for Structural Concrete and in a moist condition for at least 7 days after placement, except when cured in accordance with ACI 318.
- J. Curing of concrete shall be per the recommendations given in ACI 308; Guide to Curing Concrete. Adequate equipment shall be provided for heating concrete materials and protecting concrete during freezing or near-freezing weather. The recommended procedures listed in ACI 308; Cold Weather Concreting shall be followed.
- K. Cold weather is defined as a period when, for more than 3 consecutive days, the following conditions exist:
 - J.1. The air temperature is less than 40-degrees F for more than one-half of any 24-hour period.
 - J.2. The air temperature is not greater than 50-degrees F for more than three consecutive days.
 - J.3. The air temperature is less than 40-degrees F and the concrete temperature is less than 40-degrees F for more than one-half of any 24-hour period.
- L. HOT WEATHER. Hot weather is defined as a period when, for more than 3 consecutive days, the following conditions exist:
 - K.1. The air temperature is greater than 90-degrees F for more than one-half of any 24-hour period.
 - K.2. The concrete temperature is greater than 90-degrees F for more than one-half of any 24-hour period.
 - K.3. The relative humidity is less than 30%.
 - K.4. The wind speed is greater than 15 mph.
 - K.5. 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.

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. Concrete shall be in accordance with ACI 307; Guide to Formwork for Concrete.
- B. Tolerances for finished concrete surfaces shall meet the following requirements, class B surfaces per Table 4-4:
 - B.1. Foundation walls: Class B
 - B.2. Foundation walls and columns: 24 hours
 - B.3. Foundation walls and columns: 24 hours
- 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. Foundation walls and columns: 67% at 7°F.
 - D.1.2. Foundation walls and columns: 67% at 7°F.
 - D.2. Where concrete cylinder tests are not available for strength verification the following curing guides may be used when permitted by the Project Engineer:
 - D.2.1. Foundation walls and columns: 24 hours
 - D.2.2. Foundation walls and columns: 24 hours
- E. EMBEDMENTS IN CONCRETE:
 - E.1. All pieces of any material not harmful to concrete and within the limitations of ACI 318 shall be permitted to be embedded in concrete. The approval of the Project Engineer, except they are not considered to replace structurally the displaced concrete, as provided in ACI 318.
 - E.2. All embedded materials shall be protected by a minimum of 1" of 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 Sawn Construction Joints.
- 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 of the following finishes:
 - H.1. Concrete Structures:
 - H.1.1. Concrete footings and foundations not exposed to view. Provide an interior finish.
 - H.1.2. Foundation walls 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.
 - H.2. Unfinished Concrete Surfaces: Unfinished concrete surfaces including the top surface of all concrete floor slabs shall be finished in accordance with ACI 301 and ACI 302.
 - H.3. Interior floor surfaces shall provide a "Scrubbed, finish".
 - H.4. Sawn construction joints. Conform to ACI 301.

10. DETAILS OF REINFORCEMENT

- A. Placement of all reinforcing steel within concrete structures shall be in accordance with ACI 318.
- B. Reinforcing steel hooks, bends, ties, splices and other reinforcement details shall be in accordance with ACI 318; Details and Detailing of Concrete Reinforcement.
- C. Concrete protection for reinforcement, unless noted elsewhere on the drawings, all reinforcing steel shall have the following concrete cover:
 - D.1. Concrete cast in place ACI 318:
 - D.1.1. Concrete exposed to earth, liquid or weather: 3.00 inch
 - D.1.2. No. 5 or smaller bars: 1.50-inch
 - D.1.3. No. 6 or larger bars: 1.50-inch
 - D.2. Concrete cast against formwork:
 - D.2.1. Concrete exposed to earth, liquid or weather: 1.50-inch
 - D.2.2. No. 5 or smaller bars: 1.50-inch
 - D.2.3. No. 6 or larger bars: 1.50-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 support be continuous. Metal clips or supports shall not be placed in contact with reinforcing steel. Metal clips or supports shall not be placed in contact with support be continuous. Metal clips or supports shall not be placed in contact with reinforcing steel. Metal clips or supports shall not be placed in contact with reinforcing steel.
- 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 embedded in freshly poured concrete. In no case shall dowels or anchor bolts be staked 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 to be adequate to all associated concrete work. The Project Engineer determines the concrete work to be adequate to all associated concrete work. The Project Engineer determines the concrete work to be adequate to all associated concrete work.
- H. All bar bends, hooks, splices and other reinforcing steel details shall conform to the requirements of ACI 318.
- I. All bar bends, hooks, splices and other reinforcing steel details shall conform to the requirements of ACI 318.
- J. All bar bends, hooks, splices and other reinforcing steel details shall conform to the requirements of ACI 318.
- K. All bar bends, hooks, splices and other reinforcing steel details shall conform to the requirements of ACI 318.

11. MECHANICAL OPENINGS

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



NO.	DESCRIPTION	BY	DATE

SYSTEM FILTRATION AND CHLORINATION PROJECT
 COLE CANYON WATER COMPANY
 GENERAL STRUCTURAL NOTES
 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 of pre-engineered buildings, who is duly licensed and bonded in the State of Utah, Liberty, Utah. Design the building and all appurtenances according to local design standards for Liberty, Utah. Submit calculated loads to ENGINEER for approval.
- B. All drawings and design calculations signed and stamped by the Design Engineer shall be submitted to the Engineer for approval.
- C. All necessary bracing, blocking, pre-matched or beveled plates, hangers, etc. shall be detailed or specified on the shop drawings and furnished by the manufacturer.
- D. 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 modification.
- E. Building shall not be field modified without written authorization from the manufacturer's Engineer of Record.
- F. Pre-engineered/fabricated buildings shall be constructed as follows:
 - 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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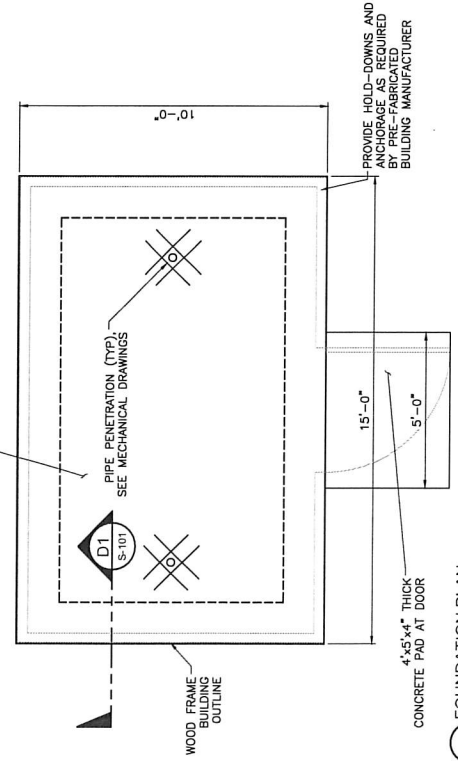
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SYSTEM FILTRATION AND CHLORINATION PROJECT
COLE CANYON WATER COMPANY
STRUCTURAL
GENERAL STRUCTURAL NOTES

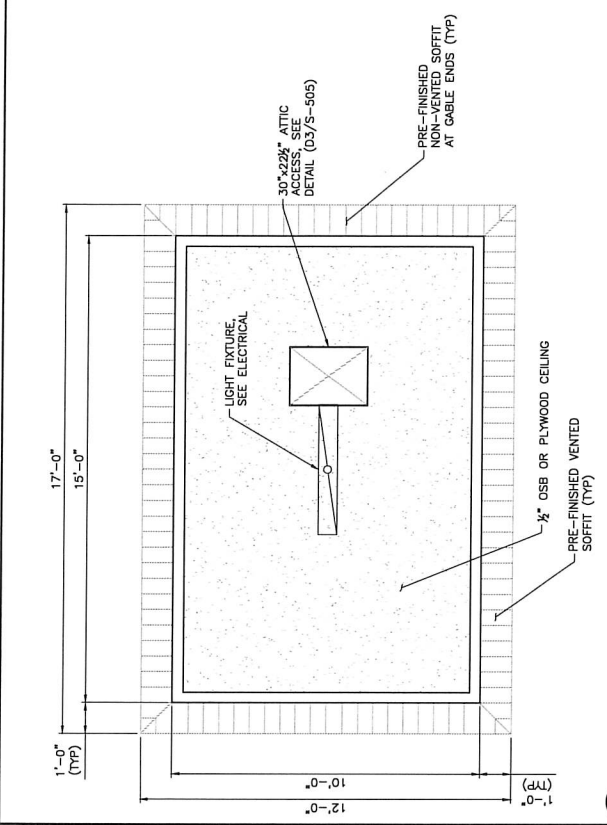
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DATE: 12-22-2016 1:58:21 PM
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CHECKED BY: JUB

SHEET NUMBER
S-002

- NOTES:**
- COORDINATE PLACEMENT OF FLOOR DRAINS AND EQUIPMENT PENETRATIONS WITH PIPING AND EQUIPMENT. SEE MECHANICAL DRAWINGS.
 - 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 NOTES FOR ADDITIONAL INFORMATION.
 - 4x4" CONCRETE SLAB ON GRADE OVER PREPARED SUBGRADE. REINFORCE WITH #4 AT 18" O.C. SEE TYPICAL DETAILS.
 - PIPE PENETRATION (TYP). SEE MECHANICAL DRAWINGS.



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



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

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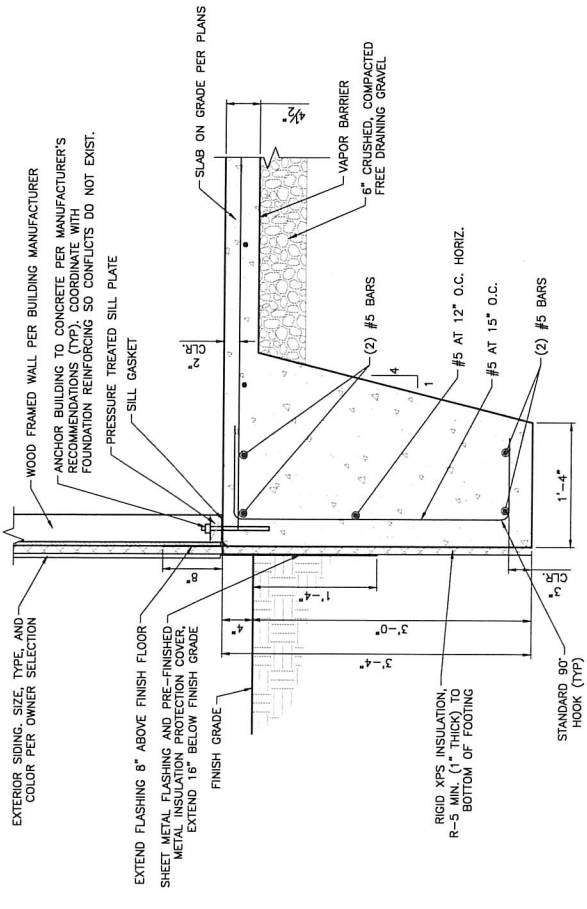


NO.	DESCRIPTION	BY	DATE

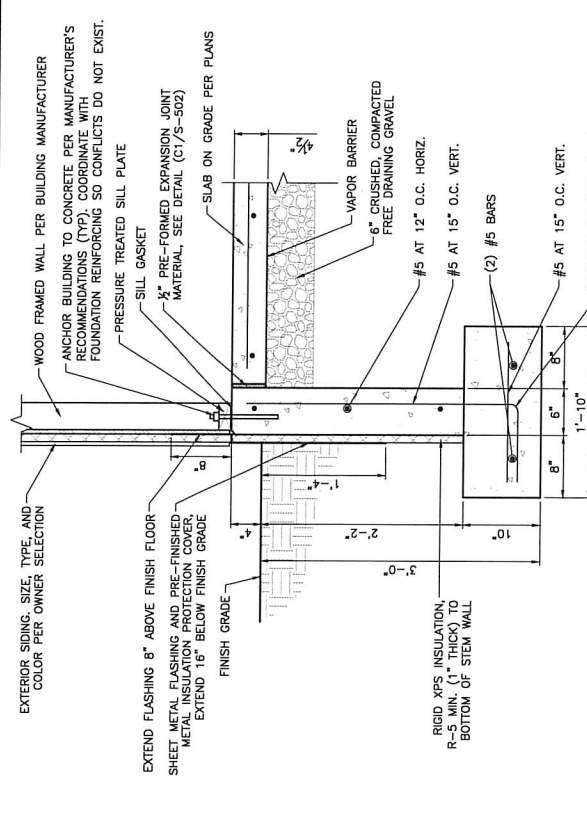
SYSTEM FILTRATION AND CHLORINATION PROJECT
COLE CANYON WATER COMPANY
STRUCTURAL PLANS

DATE: 06/20/2013	PROJECT: SYSTEM FILTRATION AND CHLORINATION PROJECT
DATE: 05/20/2013	PROJECT: SYSTEM FILTRATION AND CHLORINATION PROJECT
DATE: 05/20/2013	PROJECT: SYSTEM FILTRATION AND CHLORINATION PROJECT
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SHEET NUMBER: **S-101**

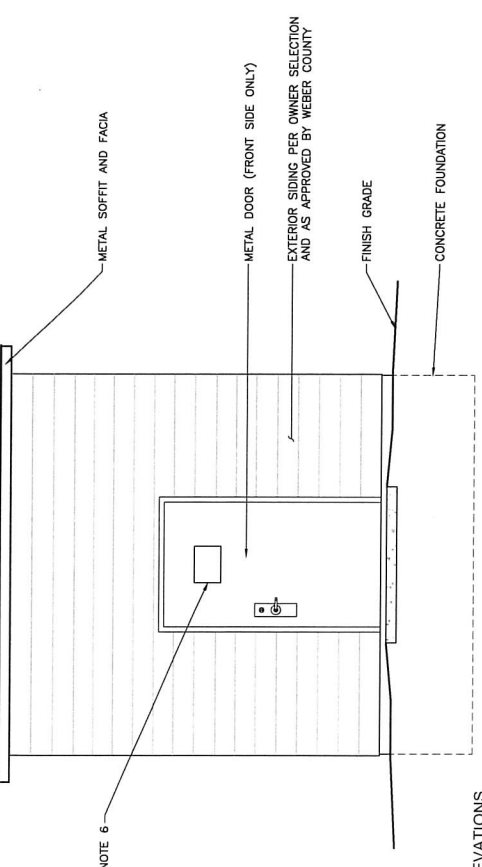


D1 FOOTING DETAIL
SCALE: NOT TO SCALE

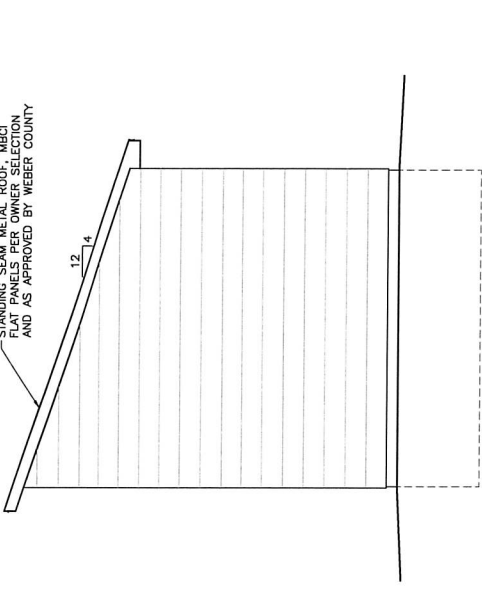


OPTION B

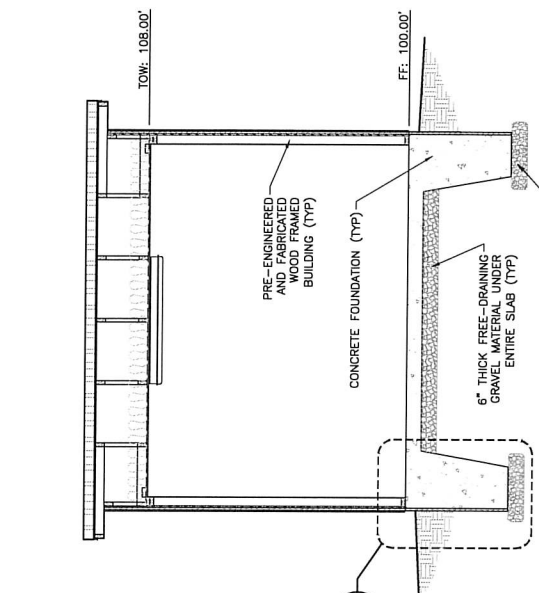
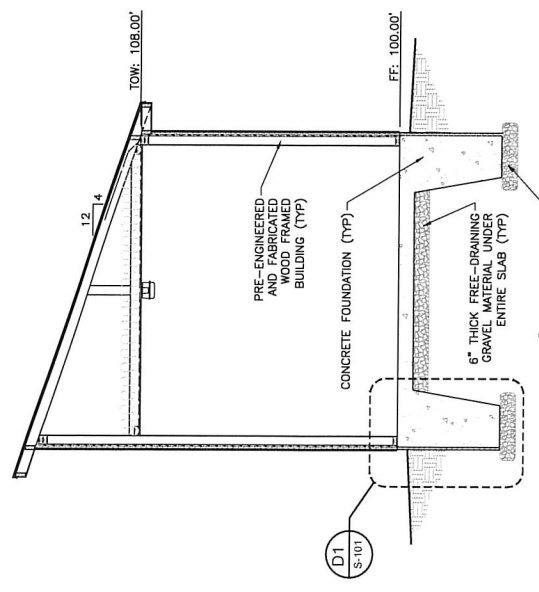
- NOTES:**
- CONTRACTOR TO PROVIDE PRE-ENGINEERED AND FABRICATED WOOD FRAME BUILDING MEETING THE DESIGN CRITERIA AS SPECIFIED IN THE PROJECT DRAWINGS AND SPECIFICATIONS. CONTRACTOR TO SUBMIT SHOP DRAWINGS AND STRUCTURAL CALCULATIONS FOR THE BUILDING STAMPED BY A LICENSED PROFESSIONAL ENGINEER WITH EXPERIENCE IN THE DESIGN OF STRUCTURES FOR REVIEW PRIOR TO FABRICATION.
 - CONTRACTOR TO PROVIDE A LICENSED PROFESSIONAL ENGINEER WITH EXPERIENCE IN THE DESIGN OF STRUCTURES FOR REVIEW PRIOR TO FABRICATION.
 - PROVIDE BROOM SURFACE FINISH TO ALL INTERIOR AND EXTERIOR SURFACES.
 - EPOXY PAINT OR PROVIDE PRE-FINISHED PROTECTIVE COATINGS TO ALL EXTERIOR METAL SURFACES TO PREVENT CORROSION.
 - CONTRACTOR SHALL FURNISH AND INSTALL TRIMS, FLASHING, AND FINISH PIECES TO PRESENT A FINISHED APPEARANCE.
 - PLACE ALUMINUM 14"X10" CHLORINE WARNING SIGN ON DOOR EXTERIOR. SafetySign.com ITEM #FB461-BK OR EQUIVALENT.
 - PROVIDE ADEQUATE ROOF VENTILATION PER THE 300 RULE.



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



B2 TYPICAL BUILDING ELEVATIONS
SCALE: 1/2" = 1'-0"



SYSTEM FILTRATION AND CHLORINATION PROJECT
COLE CANYON WATER COMPANY

STRUCTURAL ELEVATIONS

DATE: 08-26-2022
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CHECKED BY: JUB
SCALE: AS SHOWN

PROJECT NUMBER: S-201

DATE: 08-26-2022
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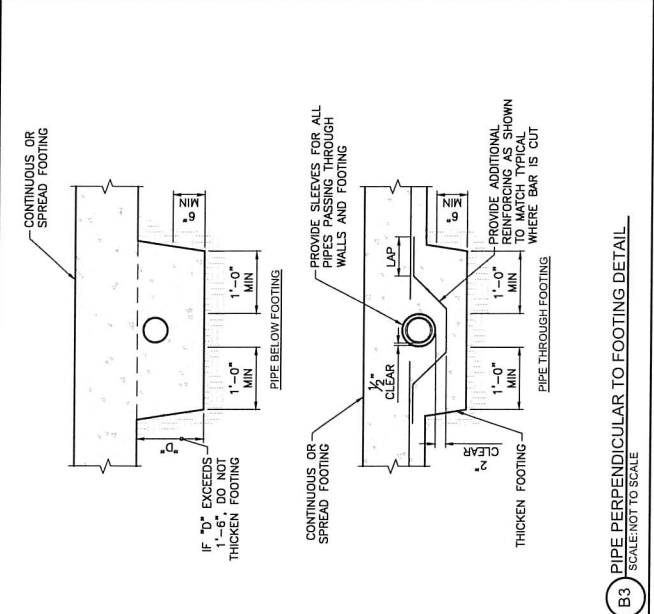
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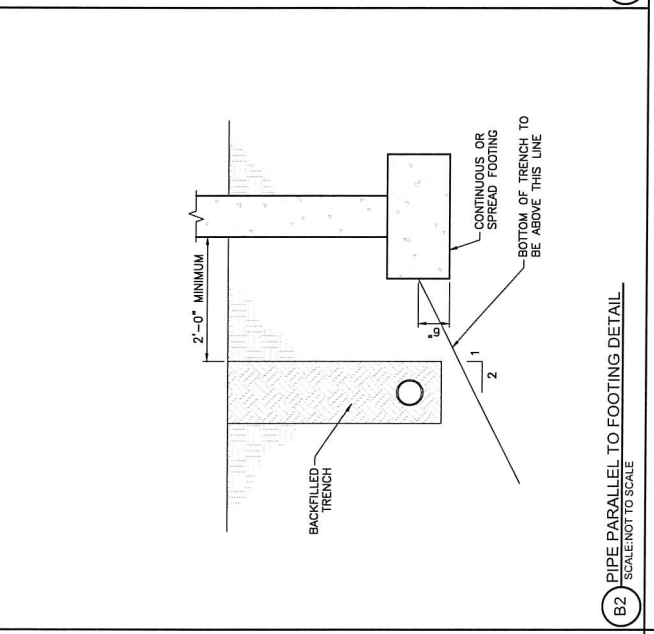
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SYSTEM FILTRATION AND CHLORINATION PROJECT
 COLE CANYON WATER COMPANY
 TYPICAL FOUNDATION DETAILS

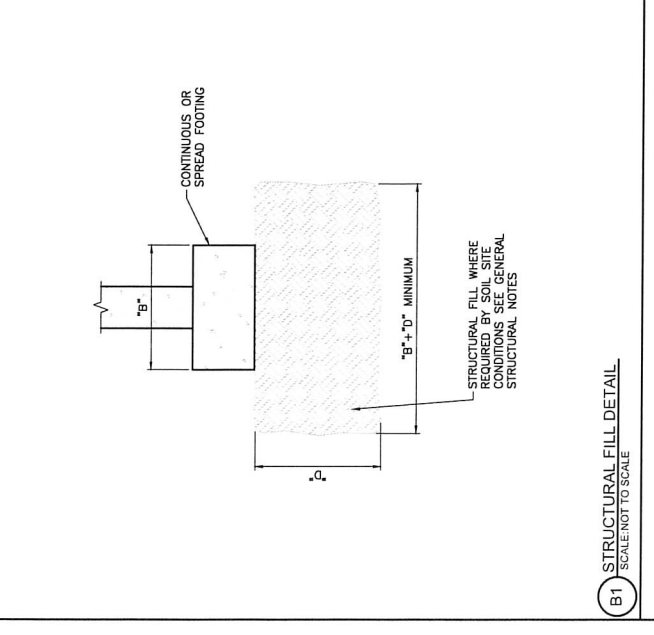
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DRAWN BY: DALLAC
CHECKED BY: JUB
SCALE: 1/8" = 1'-0"
DATE: 12-22-2020
PROJECT: SYSTEM FILTRATION AND CHLORINATION PROJECT
SHEET NUMBER: S-501



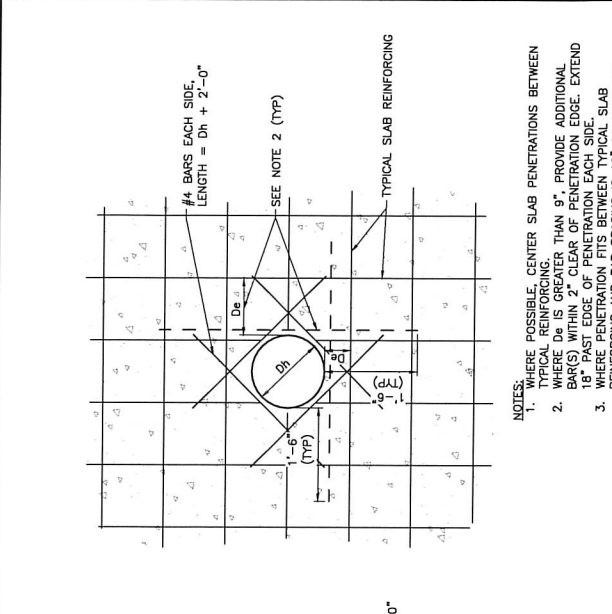
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 SCALE: NOT TO SCALE



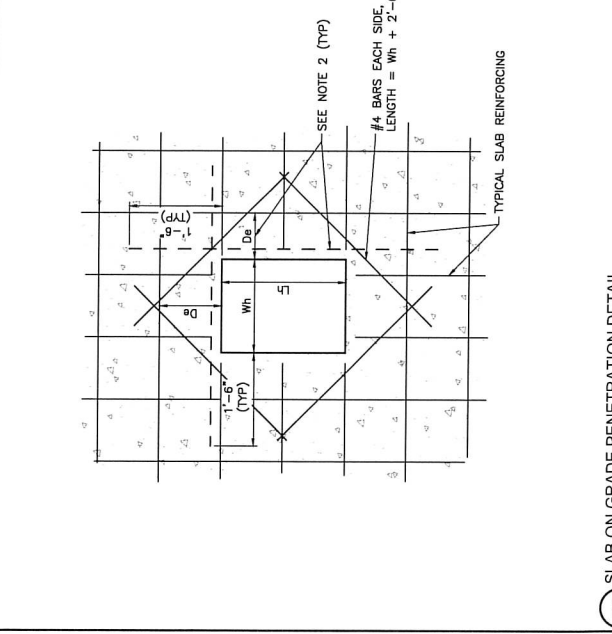
B2 PIPE PARALLEL TO FOOTING DETAIL
 SCALE: NOT TO SCALE



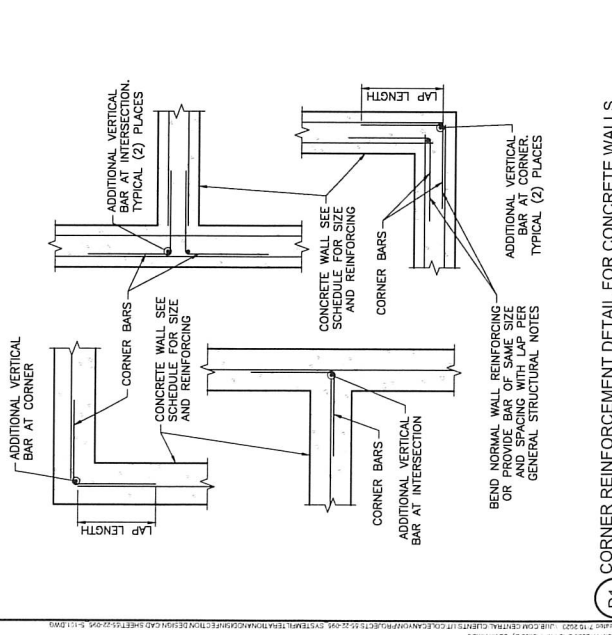
B3 PIPE PERPENDICULAR TO FOOTING DETAIL
 SCALE: NOT TO SCALE



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



D2 SLAB ON GRADE PENETRATION DETAIL
 SCALE: NOT TO SCALE



D3 SLAB ON GRADE PENETRATION DETAIL
 SCALE: NOT TO SCALE

- NOTES:**
- WHERE POSSIBLE, CENTER SLAB PENETRATIONS BETWEEN TYPICAL REINFORCING.
 - WHERE D_c 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.

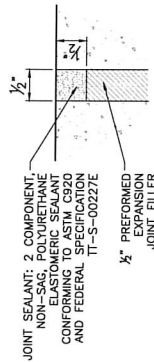
TYPICAL LAP SPLICE LENGTHS IN INCHES, PER ACI 318

BAR SIZE 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	22	33	19	28	18	27	17	25
#5	27	41	24	36	24	35	22	33
#6	33	49	28	43	27	41	25	38
#7	48	72	42	62	40	59	37	56
#8	55	82	47	71	45	68	42	64
#9	62	92	53	80	51	76	48	72
#10	80	120	69	104	66	99	62	93

- NOTES:
 1. FOR GRADE 60 REINFORCING STEEL BARS.
 2. ALL LAP SPLICES SHALL BE CLASS B UNLESS NOTED OTHERWISE.
 3. CATEGORY 1: CLEAR COVER ≥ 4_s AND CLEAR SPACING ≥ 4_s AND STIRRUPS OR TIES THROUGHOUT L_d ARE PROVIDED.
 CATEGORY 2: CLEAR COVER ≥ 4_s AND CLEAR SPACING ≥ 2d_s.
 CATEGORY 3: CLEAR COVER ≥ 4_s AND CLEAR SPACING < 2d_s.
 4. FOR TOP BARS, MULTIPLE LAP SPLICES SHALL BE USED FOR TOP BARS ARE HORIZONTAL BARS WITH MORE THAN 12" OF CONCRETE CAST BELOW THE BARS.
 5. FOR EPOXY COATED BARS, LAP LENGTHS SHALL BE MULTIPLIED BY 1.20.

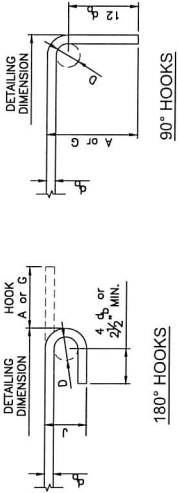
B1 TYPICAL REBAR LAP SPLICE SCHEDULE

SCALE: NOT TO SCALE



C1 EXPANSION JOINT SEALANT DETAIL

SCALE: NOT TO SCALE



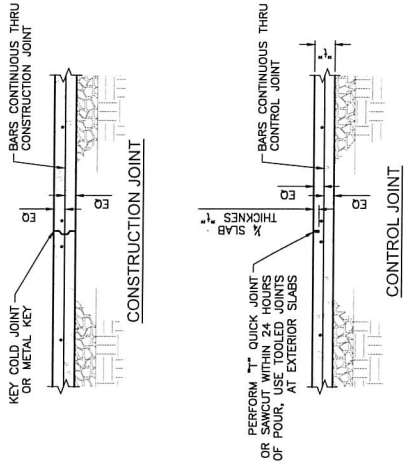
TYPICAL HOOK DIMENSIONS

BAR SIZE	180° HOOKS		90° HOOKS	
	D	A or G	J	A or G
#3	2 1/2"	5"	3"	6"
#4	3"	6"	4"	8"
#5	3 3/4"	7"	5"	10"
#6	4 1/2"	8"	6"	11"
#7	5 1/4"	10"	7"	12"
#8	6"	11"	8"	13"
#9	6 3/4"	11 3/4"	8 1/2"	14"
#10	7 1/2"	13"	9 1/2"	15"
#11	8 1/2"	14 1/2"	10 1/2"	16"
#12	9 1/2"	16"	11 1/2"	18"

- NOTES:
 1. D = NOMINAL BAR DIAMETER.
 2. J = FINISHED INSIDE BEND DIAMETER.
 3. MINIMUM D = 6 3/4" FOR #3 TO #8 BARS.
 4. MINIMUM D = 10 3/4" FOR #9 TO #11 BARS.
 5. MINIMUM D = 10 3/4" FOR #12 AND #16 BARS.

B2 TYPICAL REBAR HOOK DETAILS

SCALE: NOT TO SCALE



B3 SLAB ON GRADE JOINT DETAIL

SCALE: NOT TO SCALE

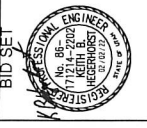
SYSTEM FILTRATION AND CHLORINATION PROJECT
 COLE CANYON WATER COMPANY
 TYPICAL FOUNDATION DETAILS

DATE:	NOV-20-2008 13:52
APPROVED BY:	05-20-2008
DESIGNED BY:	05-20-2008
CHECKED BY:	05-20-2008
SCALE:	AS SHOWN
SHEET NUMBER:	S-502

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GENERAL NOTES:

- VERIFY ALL EQUIPMENT DIMENSIONS AND LOCATIONS BEFORE BEGINNING ROUGH-IN. CONSULT ALL APPLICABLE CODES, REGULATIONS AND SHOP DRAWINGS TO ENSURE NEC CODE CLEARANCE REQUIRED AROUND ALL ELECTRICAL EQUIPMENT.
- CONTRACTOR SHALL VERIFY ALL ELECTRICAL LOADS (VOLTAGE, AMPERAGE, PHASE, FREQUENCY, 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 PENETRATE THROUGH ROOF, FLOOR, WALLS, OR ABOVE OR BELOW ELECTRICAL EQUIPMENT IN THE OTHER AGENCIES.
- 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 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 GENERAL 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 ELECTRICAL CONTRACTOR SHALL BE NOTIFIED AND ALL CHANGES SHALL BE BORNE BY THE ELECTRICAL CONTRACTOR.

GENERAL NOTES:

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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

SHORE PROTECTOR

TRANSFORMER

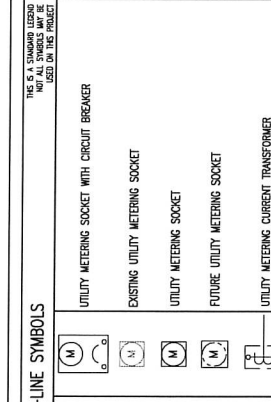
FUSED SWITCH

FUSE IN HOLDER

EXISTING POWER DISTRIBUTION PANEL

POWER DISTRIBUTION PANEL

FUTURE POWER DISTRIBUTION PANEL



GROUNDING SYMBOLS

GROUND ROD (5/8" x 10' COPPER COATED STEEL)

GROUND ROD (3/4" x 10' COPPER COATED STEEL) IN WELL

BOLTED GROUND CONNECTION (ABOVE GROUND)

WELDED GROUND CONNECTION (BELOW GRADE)

GROUND CONDUCTOR (#2/0 BARE COPPER)

LIGHT SWITCHES

SINGLE POLE SWITCH

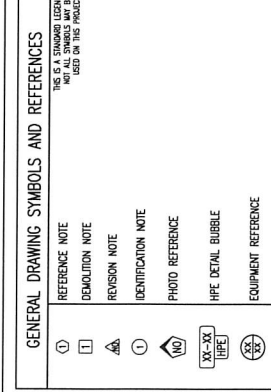
GAUGED SWITCHES IN COMMON BOX WITH COMMON COVER PLATE

SWITCH SUPERSUBSCRIPT MODIFIER, LOWER CASE LETTER INDICATES CIRCUIT CONTROLLER, e.g. c, etc. ETC. MAY BE COMBINED WITH CIRCUIT NUMBER, EXAMPLE: 1c, 3b

SWITCH SUBSCRIPT MODIFIER, UPPER CASE LETTER OR NUMBER:

1 = DOUBLE POLE
2 = FOUR WAY
3 = FOUR WAY
4 = FOUR WAY

OC = MOTION OCCUPANCY SWITCH
K = KEY OPERATED
M = HORSEPOWER RATED MANUAL STARTER
MS = MANUAL STARTER POSITION
D = DIMMER
S = SURFACE
F = FLUSH



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 ENCLOSURE

FLEX CONDUIT

RACEWAY OR WIRING SYSTEM ABOVE FLOOR LEVEL BELOW CEILING, EXPOSED

HOEMARK: DESIGNATIONS INDICATE A ONE-LINE DIAGRAM OR PANELBOARD SCHEDULE REFERENCE

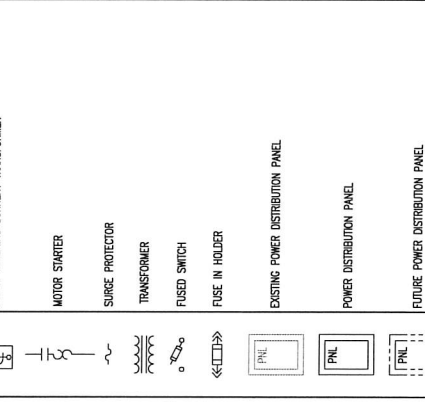
JUNCTION BOX

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 SLOPE AND CAP



PLAN SYMBOLS

CIRCUIT DISTRIBUTION PANELBOARD SURFACE MOUNTED

CIRCUIT DISTRIBUTION PANELBOARD RECESSED

POWER DISTRIBUTION PANELBOARD SURFACE OR FLOOR MOUNTED DOORS DISMOUNT FRONT OF PANEL

MOP DESIGNATES MAIN DISTRIBUTION PANEL

CONTROL PANEL ENCLOSURE

LIGHTING CONTROL PANEL

DISCONNECT

UNIT HEATER, WALL MOUNTED

UNIT HEATER, CEILING MOUNTED

CONDENSING UNIT, PAD MOUNTED, SIDE DISCHARGE

CONDENSING UNIT, PAD MOUNTED, UP FLOW

ROOFTOP MOUNTED EQUIPMENT

MOTOR AND EQUIPMENT

MOTOR (HP SHOWN)

FRACTIONAL HORSEPOWER MOTOR

MOTORS 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

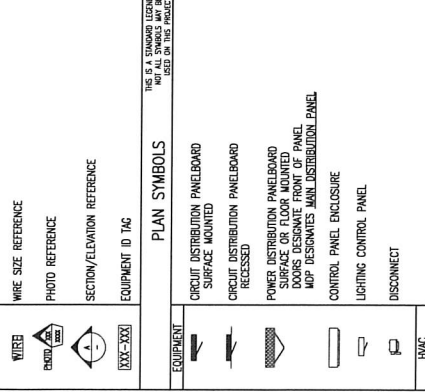
MAGNETIC CONTACTOR ASSEMBLY, NOT LOCATED IN AN MCC OR SIMILAR ASSEMBLY

DISCONNECT, NON-FUSED, 3 POLE, 100A RATED

FUSED DISCONNECT SWITCH

FIELD CONNECTION OR ELECTRICAL TERMINATION AT A FIELD DEVICE

EQUIPMENT DESIGNATION



GENERAL DRAWING SYMBOLS AND REFERENCES

REFERENCE NOTE

DEDUCTION NOTE

REVISION NOTE

IDENTIFICATION NOTE

PHOTO REFERENCE

HFE DETAIL BUBBLE

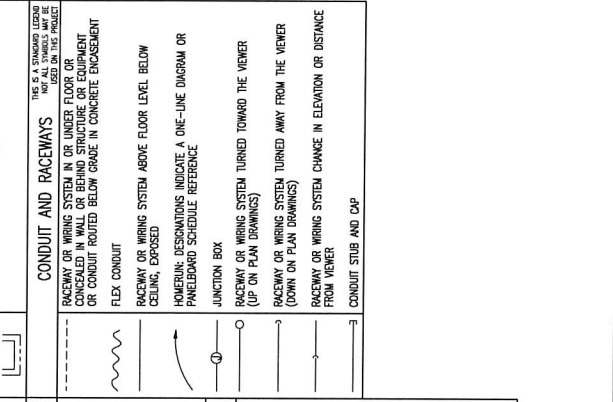
EQUIPMENT REFERENCE

WIRE SIZE REFERENCE

PHOTO REFERENCE

SECTION/ELEVATION REFERENCE

EQUIPMENT ID TAG



MOTOR AND EQUIPMENT

MOTOR (HP SHOWN)

FRACTIONAL HORSEPOWER MOTOR

MOTORS 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

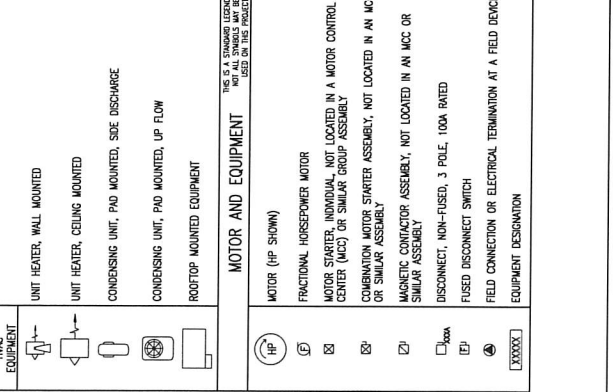
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DISCONNECT, NON-FUSED, 3 POLE, 100A RATED

FUSED DISCONNECT SWITCH

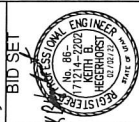
FIELD CONNECTION OR ELECTRICAL TERMINATION AT A FIELD DEVICE

EQUIPMENT DESIGNATION





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



NO.	DESCRIPTION	REV.	DATE

SYSTEM FILTRATION AND CHLORINATION PROJECT
 COLE CANYON WATER COMPANY
 ELECTRICAL TABLES

DATE: 11/11/13
 JOB NO.: 13-022-006
 UNIVERSITY: UHWT
 PROJECT: 13-022-006
 SHEET NUMBER: E-002

HELP, INC. - ELECTRICAL ENGINEERS
 POWER SYSTEMS CONTROL & INSTRUMENTATION SYSTEMS
 HEGERHORST POWER ENGINEERING INCORPORATED
 AMERICAN FORK, UT 84003
 HPE PROJECT: 23.04.3
 FOR INFORMATION ABOUT THIS JOB, PLEASE CONTACT KEITH HEGERHORST
 (801) 842-2051
 (801) 842-2154
 FAX (801) 842-2154
 C0021

GENERAL NOTES:
 1. NOT USED

SHEET KEYNOTES:
 1. NOT USED



CONDUIT/CONDUCTOR SCHEDULE *

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

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

WHERE:
 C1 = ELECTRICAL METALLIC TUBING
 C2 = FLEXIBLE 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 90°C
 * = RATED AMPACITY AT 75°C
 ** = USE 60°C CONDUCTOR RATINGS WHEN TERMINATION RATINGS ARE NOT PUBLISHED.

GROUNDING ELECTRODE CONDUCTOR SERVICE ENTRANCE OR SEPARATELY DERIVED SYSTEM

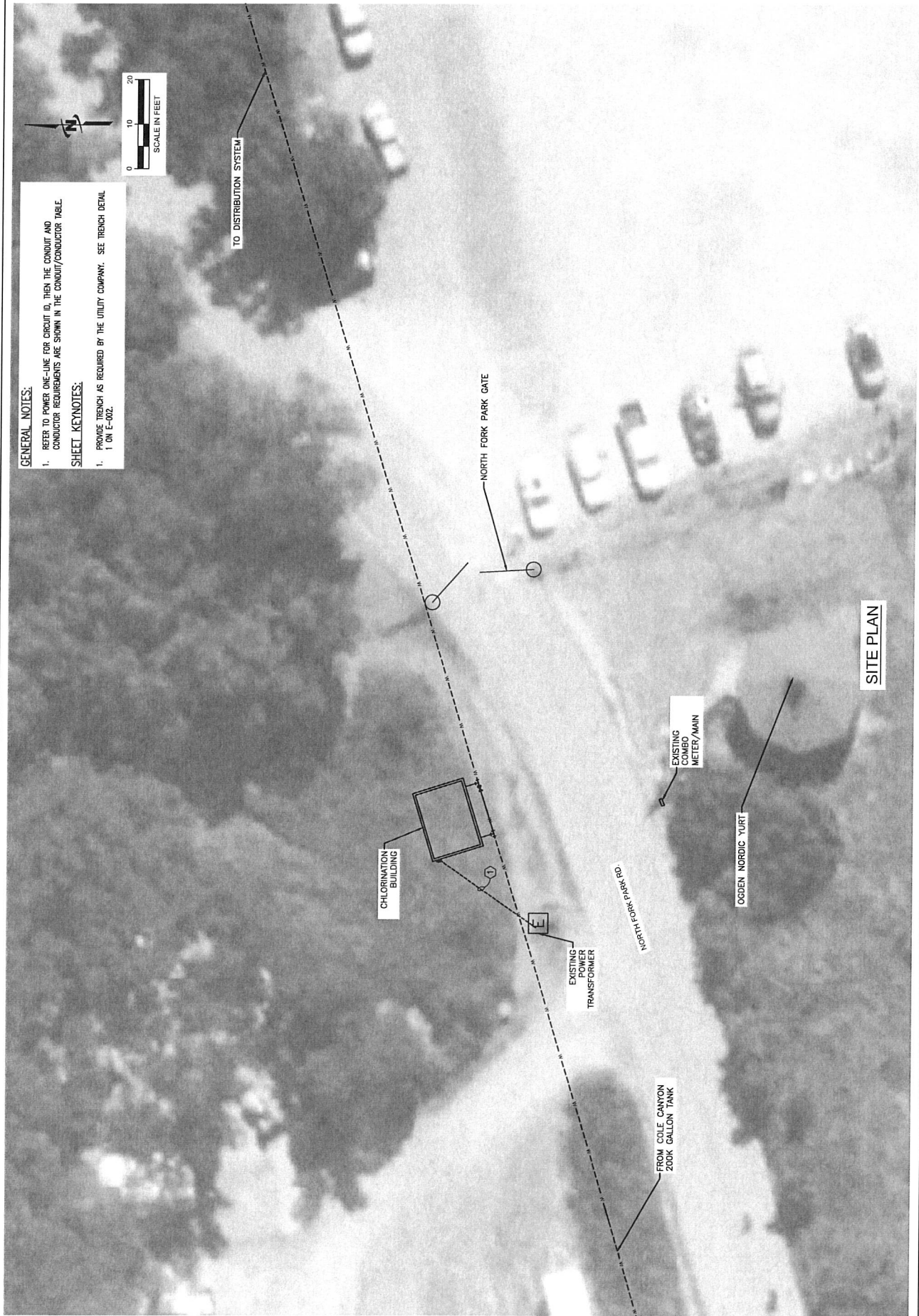
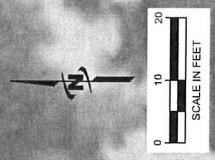
COPPER WIRE SIZE	WIRE SIZE	WIRE SIZE	WIRE SIZE
2	2	2	2
4	4	4	4
6	6	6	6
8	8	8	8
10	10	10	10
12	12	12	12
14	14	14	14
16	16	16	16
18	18	18	18
20	20	20	20
25	25	25	25
30	30	30	30
35	35	35	35
40	40	40	40
50	50	50	50
60	60	60	60
75	75	75	75
90	90	90	90
110	110	110	110
150	150	150	150
200	200	200	200
250	250	250	250
350	350	350	350
500	500	500	500
750	750	750	750
1000	1000	1000	1000
1500	1500	1500	1500
2000	2000	2000	2000
2500	2500	2500	2500

FOR INFORMATION ABOUT THIS JOB, PLEASE CONTACT KEITH HEGERHORST
 (801) 842-2051
 (801) 842-2154
 FAX (801) 842-2154
 C0021

NO.	DESCRIPTION	BY	DATE

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

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



SITE PLAN

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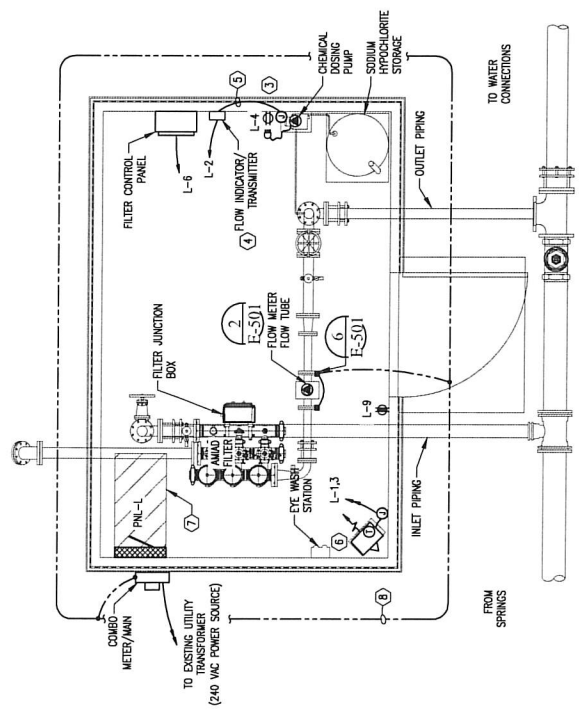
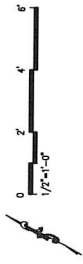
NO.	REVISION	BY	DATE

ELECTRICAL PLANS
SYSTEM FILTRATION AND CHLORINATION PROJECT
COLE CANYON WATER COMPANY

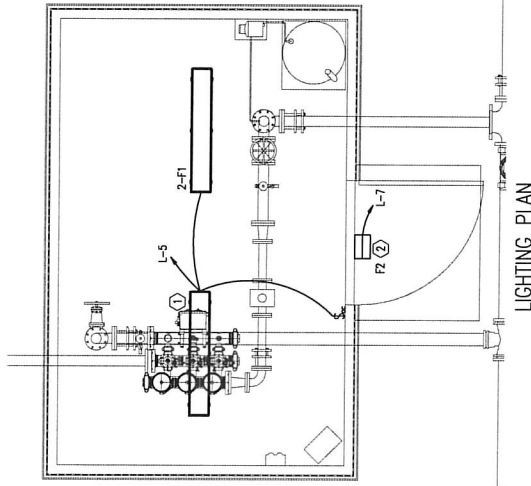
JUB ENGINEERS, INC.
 PROFESSIONAL ENGINEERS
 POWER SYSTEMS CONTROL DESIGN DIVISION
 466 NORTH 900 WEST
 KAYSVILLE, UTAH 84037
 PHONE: 801.547.0393
 FAX: 801.547.0393
 WWW.JUB.COM

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-102.
 2. INSTALL INTERIOR RECEPTACLES AT +36-IN ABOVE THE ROOM FLOOR.
 3. INSTALL EXTERIOR RECEPTACLES AT +18-IN ABOVE FINISHED SURFACE AND PROVIDE IN-SERVICE W/P COVER.
SHEET KEY NOTES:
 1. PROVIDE A 90-MINUTE BATTERY POWER SUPPLY IN THIS FUTURE.
 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 PUMP SIGNAL: INSTALL A J-BOX NEAR THE DOSING PUMP AND INSTALL A 3/4" WITH #18 TSP TO THE FLOW INDICATOR/TRANSMITTER.
 6. LOCATE WATER SUCH THAT AN OPERATOR CAN REACH THE BUILT-IN THERMISTAT.
 7. MAINTAIN NEC WORKING CLEARANCE TO PANELBOARD.
 8. AVG NO. 2 BC BURIED 18-IN DEEP AND 24-IN FROM BUILDING CONCRETE PAD.

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-102.
 2. INSTALL INTERIOR RECEPTACLES AT +36-IN ABOVE THE ROOM FLOOR.
 3. INSTALL EXTERIOR RECEPTACLES AT +18-IN ABOVE FINISHED SURFACE AND PROVIDE IN-SERVICE W/P COVER.
- SHEET KEY NOTES:**
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 7. MAINTAIN NEC WORKING CLEARANCE TO PANELBOARD.
 8. AVG NO. 2 BC BURIED 18-IN DEEP AND 24-IN FROM BUILDING CONCRETE PAD.



ELECTRICAL PLAN



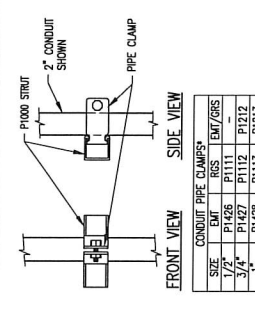
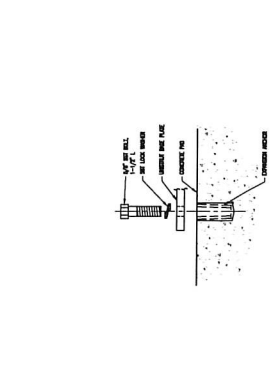
LIGHTING PLAN

E-102

NO.	DESCRIPTION	BY	DATE

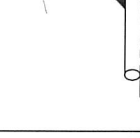
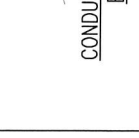
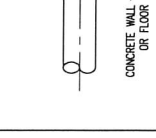
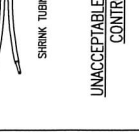
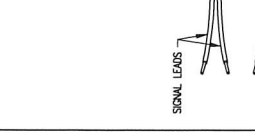
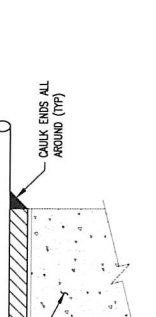
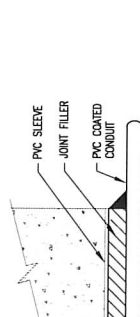
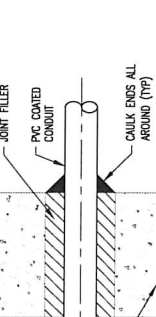
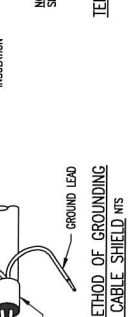
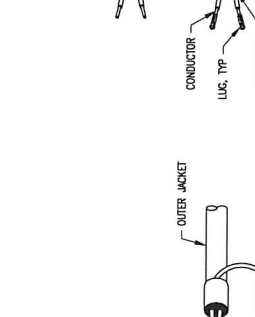
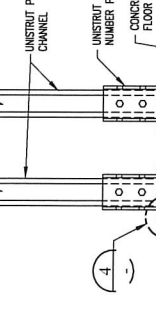
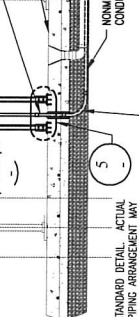
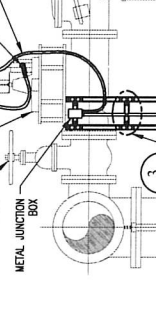
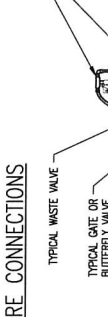
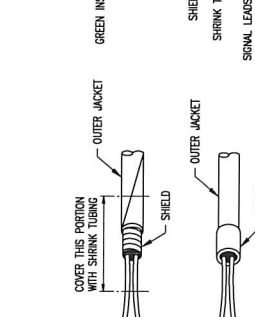
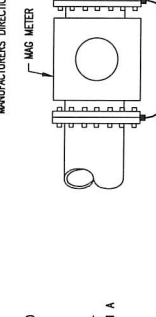
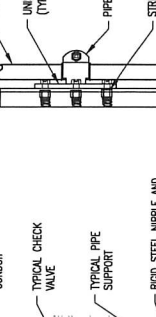
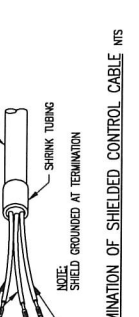
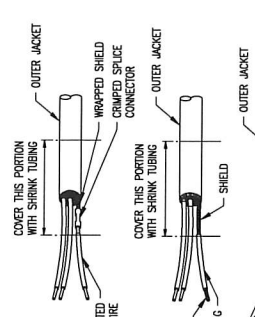
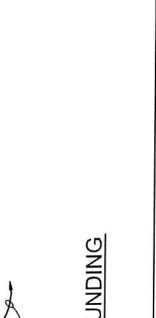
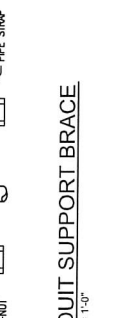
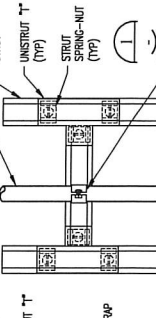
JUB ENGINEERS, INC.
 POWER SYSTEMS CONTROL ENGINEERS
 HEBERHORST POWER ENGINEERING INCORPORATED
 AMERICAN FORK, UT 84003
 HPE PROJECT 23.043
 FOR INFORMATION ABOUT THIS JOB, PLEASE CONTACT: KEITH HEBERHORST
 ©2014

SHEET KEYNOTES:
 1. NOT USED



CONDUIT PIPE CLAMPS*

SIZE	EMT	RGS	EMT/GRS
1/2"	P1426	P1111	P1212
3/4"	P1427	P1112	P1213
1"	P1428	P1113	P1214
1-1/4"	P1429	P1114	P1215
1-1/2"	P1430	P1115	P1216
2"	P1431	P1117	P1217
2-1/2"	P1118	P1118	-
3"	P1119	P1119	-
3-1/2"	P1120	P1120	-
4"	P1121	P1121	-





JUB ENGINEERS, INC.
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REVISIONS

NO.	DESCRIPTION	BY	DATE

ONE-LINE DIAGRAMS

SYSTEM FILTRATION AND CHLORINATION PROJECT
 COLE CANYON WATER COMPANY

E-701

H.P.E. INC. ELECTRICAL ENGINEERS
 POWER SYSTEMS, CONTROL & INSTRUMENTATION SYSTEMS
 HEBERHORST POWER ENGINEERING INCORPORATED
 AMERICAN FORK, UT 84003
 HPE PROJECT:23.043
 FOR INFORMATION ABOUT THIS JOB, PLEASE CONTACT KEITH HEBERHORST

GENERAL NOTES:

- NOT USED.
- SHEET KEYNOTES:**
 - EXISTING SERVICES TO REMAIN. MAINTAIN CIRCUIT INTEGRITY.
 - NEW COMBO METER/W/AN, WITH 40A/2P CIRCUIT BREAKER, INSTALL ON EXTERIOR OF CHEMICAL BUILDING. LABEL AS "MAIN SERVICE DISCONNECT" AND AS REQUIRED BY NEC 110.24.
 - 3" CONDUIT WITH RILL TIE. INSTALL CONDUIT FROM 2-3 FT NEAR TRANSFORMER TO COMBO METER/W/AN AS REQUIRED BY CODE. CONDUIT PROVIDED AND INSTALLED BY UTILITY COMPANY. RUP WILL MAKE THE CONNECTION AT THE TRANSFORMER.

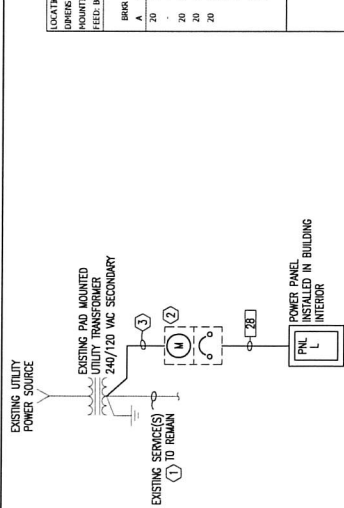
PANELBOARD L

PHASE	LOADS	WIRE	CONDUIT	NO.	CONDUIT	WIRE	CONDUIT	NO.	CONDUIT	WIRE	CONDUIT	NO.	CONDUIT	WIRE	CONDUIT	NO.	CONDUIT
PHASE 1	20 2 LAMP HEATER	212	1.750	3	1.750	0	1.600	180	2	212	1.750	3	1.750	0	1.600	180	230
PHASE 2	20 1 LITS. INTERIOR	212	1.650	7	1.650	0	1.600	180	4	212	1.650	7	1.650	0	1.600	180	230
PHASE 3	20 1 LITS. EXTERIOR	212	1.650	7	1.650	0	1.600	180	6	212	1.650	7	1.650	0	1.600	180	230
PHASE 4	20 1 RECPY. INTERIOR	212	1.650	9	1.650	0	1.600	180	8	212	1.650	9	1.650	0	1.600	180	230
PHASE 5	1 AVAILABLE SPACE	212	1.650	11	1.650	0	1.600	180	10	212	1.650	11	1.650	0	1.600	180	230
PHASE 6	1 AVAILABLE SPACE	212	1.650	15	1.650	0	1.600	180	12	212	1.650	15	1.650	0	1.600	180	230
PHASE 7	1 AVAILABLE SPACE	212	1.650	17	1.650	0	1.600	180	14	212	1.650	17	1.650	0	1.600	180	230
PHASE 8	1 AVAILABLE SPACE	212	1.650	18	1.650	0	1.600	180	16	212	1.650	18	1.650	0	1.600	180	230
TOTAL WATTS:	3,570		0		2,132		0		1,600		180		0		180		230
CONTINUOUS LOAD:	3,000		0		1,828		0		144		180		0		180		230
NON-CONTINUOUS LOAD:	470		0		304		0		156		0		0		0		230
DESIGN WATTS:	4,070		0		2,132		0		1,600		180		0		180		230
MIN. RATING (AMPS):	21		0		12		0		9		10		0		10		15

FIXTURE SCHEDULE

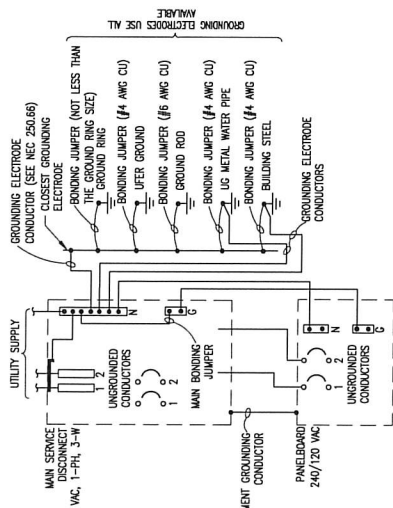
TYPE	DESCRIPTION	MANUFACTURER	WIRE	CONDUIT	NO.	CONDUIT	WIRE	CONDUIT	NO.	CONDUIT	WIRE	CONDUIT	NO.	CONDUIT	WIRE	CONDUIT	NO.	CONDUIT
F1	4 LED ENCLOSED RECESSED FIBERGLASS TROUSING LAMP LOCATION, MOULT	40772 LED-SPLITTING CONDUIT-10	212	1.750	3	1.750	0	1.600	180	2	212	1.750	3	1.750	0	1.600	180	230
F2	20 WATT INCANDESCENT BALL CUTOFF WITH AREA WALL SOCK W/ 1/2" (4" HIGH) AND PULL	LUMARK	212	1.750	3	1.750	0	1.600	180	2	212	1.750	3	1.750	0	1.600	180	230

NOTES: 1)



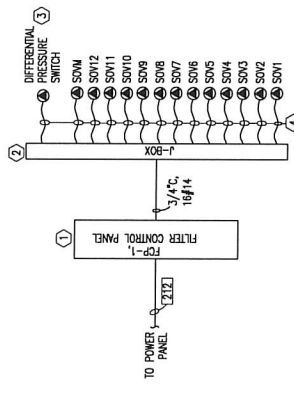
ELECTRICAL UTILITY INSTALLATION

UTILITY INFORMATION	UTILITY COMPANY	UTILITY CONTACT	UTILITY ADDRESS	UTILITY PHONE	UTILITY METER NUMBER
UTILITY COMPANY	SECKY MOUNTAIN POWER				
UTILITY CONTACT					
UTILITY ADDRESS					
UTILITY PHONE					
UTILITY METER NUMBER					
SUPPLIED BY:	EXISTING	CONTRACTOR	UTILITY COMPANY		
INSTALLED BY:	EXISTING	CONTRACTOR	UTILITY COMPANY		
SUPPLIED BY:	EXISTING	CONTRACTOR	UTILITY COMPANY		
INSTALLED BY:	EXISTING	CONTRACTOR	UTILITY COMPANY		
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INSTALLED BY:	EXISTING	CONTRACTOR	UTILITY COMPANY		
SUPPLIED BY:	EXISTING	CONTRACTOR	UTILITY COMPANY		
INSTALLED BY:	EXISTING	CONTRACTOR	UTILITY COMPANY		



GROUNDING DIAGRAM

- WIRING DIAGRAM NOTES:
- FILTER CONTROL PANEL SUPPLIED BY FILTER MANUFACTURER INSTALLED BY CONTRACTOR.
 - J-BOX PROVIDED BY FILTER MANUFACTURER WITH THE FILTER.
 - DIFFERENTIAL PRESSURE SWITCH PROVIDED BY FILTER MANUFACTURER. WIRE TO J-BOX AS REQUIRED.
 - WIRING ON FILTER PROVIDED/INSTALLED BY FILTER SUPPLIER.



FILTER CONNECTION DIAGRAM