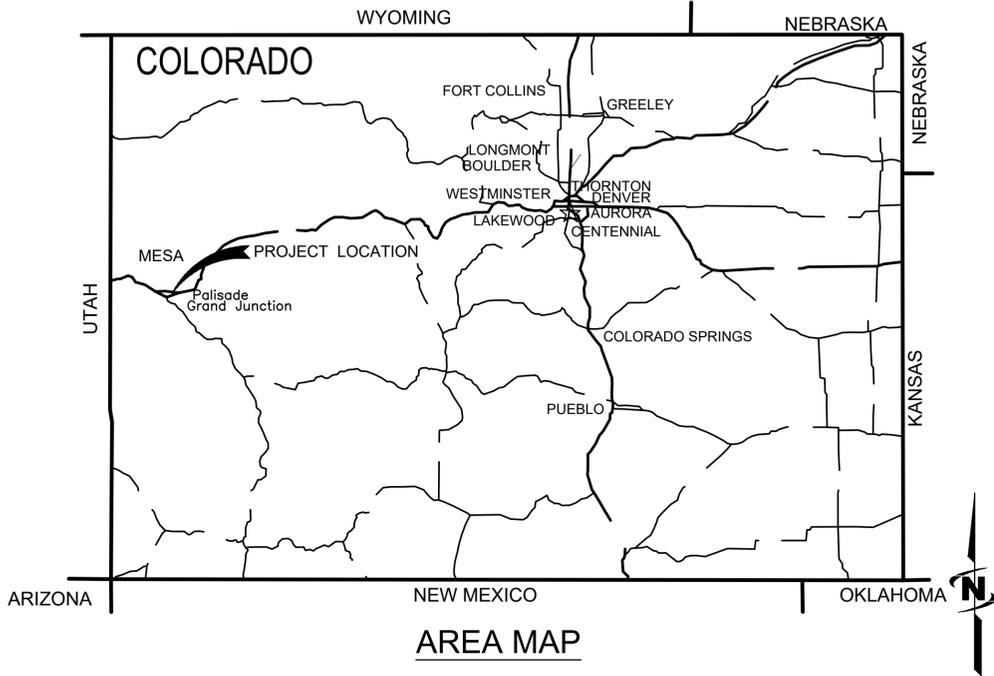


INFLUENT PUMP STATION UPGRADES

CLIFTON SANITATION DISTRICT

APRIL 2025



PROJECT NO. 81-18-024



J-U-B ENGINEERS, INC.

305 S. Main Street, Unit 6, Palisade, CO 81526
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J-U-B FAMILY OF COMPANIES



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GENERAL NOTES

- CLIFTON SANITATION DISTRICT AND THE ENGINEER HAVE JURISDICTION OVER THIS PROJECT. CONTRACTOR SHALL OBTAIN ALL NECESSARY PERMITS AND BUSINESS LICENSES PRIOR TO CONSTRUCTION.
- CONTRACTOR IS RESPONSIBLE FOR DUST ABATEMENT AND ANY LIABILITY ISSUES RELATED TO DUST AT ANY LOCATION WHICH MAY BE CAUSED BY THIS PROJECT.
- THE CONTRACTOR IS RESPONSIBLE FOR TRAFFIC CONTROL AND PROTECTION OF PEDESTRIANS IN AND AROUND THIS WORK. REFERENCE THE MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES (MUTCD LATEST EDITION FOR WORK ZONE TRAFFIC CONTROL).
- 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 PARTICULAR, REQUIREMENTS OF ANY RIGHT-OF-WAY SPECIAL USE PERMIT, OR OTHER PERMIT. ALL WORK SHALL MEET CURRENT OSHA 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.
- ALL DISTANCES AND DATA SHALL BE CHECKED BY THE CONTRACTOR PRIOR TO THE START OF CONSTRUCTION. IN CASE OF CONFLICT THE ENGINEER SHALL BE NOTIFIED IMMEDIATELY SO THAT CLARIFICATION MAY BE MADE PRIOR TO THE START OF THE WORK.
- THE CONTRACTOR SHALL ARRANGE FOR, SECURE AND PAY FOR DIRECTLY, ANY AND ALL TEMPORARY UTILITY SUPPLIES (E.G. WATER POWER, AND TELEPHONE) IT MAY REQUIRE FOR PROSECUTION OF ITS WORK. THE COST OF SUCH UTILITIES SHALL BE INCLUDED IN THE APPROPRIATE BID ITEM WITH WHICH IT IS ASSOCIATED.
- SHOULD CONSTRUCTION BE HALTED BECAUSE OF INCLEMENT WEATHER CONDITIONS, THE CONTRACTOR WILL COMPLETELY CLEAN UP ALL AREAS AND MAINTAIN THE SURFACE IN GOOD CONDITION DURING THE SHUT-DOWN PERIOD.
- THE CONTRACTOR'S PERSONNEL, EQUIPMENT, AND OPERATIONS SHALL COMPLY FULLY WITH ALL APPLICABLE STANDARDS, REGULATIONS, AND REQUIREMENTS OF EXISTING FEDERAL, COLORADO STATE, AND LOCAL GOVERNMENTAL AGENCIES.
- THE CONTRACTOR SHALL BE RESPONSIBLE FOR OBTAINING ALL LOCAL, STATE, AND FEDERAL PERMITS REQUIRED FOR STORMWATER POLLUTION PREVENTION AS A RESULT OF CONSTRUCTION ACTIVITIES. THE CONTRACTOR SHALL PREPARE A STORMWATER POLLUTION PREVENTION PLAN FOR APPROVAL BY THE ENGINEER. IF THE CONSTRUCTION WILL DISTURB MORE THAN ONE ACRE, THE CONTRACTOR SHALL OBTAIN A COPY OF THE U.S. ENVIRONMENTAL PROTECTION AGENCY'S NPDES GENERAL PERMIT FOR STORM WATER DISCHARGES ASSOCIATED WITH CONSTRUCTION ACTIVITY (OTHERWISE KNOWN AS THE CONSTRUCTION GENERAL PERMIT OR CGP) AND SUBMIT A "NOTICE OF INTENT" (NOI)[EPA FORM 3510-9 (6/03)] FOR PERMIT COVERAGE UNDER THE GENERAL PERMIT. THE CGP MAY BE FOUND ON THE INTERNET AT <HTTP://WWW.EPA.GOV/NPDES/STORMWATER/CGP> OR BY CONTACTING THE U.S. EPA OFFICE OF WATER DIRECTLY AT (800) 424-4372. THE NOI MAY BE FILED ELECTRONICALLY AT THE FOLLOWING WEBSITE: <HTTP://CFPUB.EPA.GOV/NPDES/STORMWATER/ENOLCFM>. THE CGP DOES NOT RELIEVE THE CONTRACTOR FROM COMPLIANCE WITH OTHER REGULATIONS OR CONTRACT REQUIREMENTS REGARDING STORMWATER 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.
- ALL WORK SHALL BE CONTAINED IN OR LIMITED TO THE DISTRICT'S PROPERTY, EASEMENTS, OR APPROVED STAGING AREAS.
- CONTRACTOR TO PROVIDE, CONSTRUCT, MAINTAIN AND REMOVE A TEMPORARY FENCE AROUND THE CONSTRUCTION SITE USED TO PROTECT NEIGHBORING PROPERTIES FROM DAMAGE. CONTRACTOR IS ALSO RESPONSIBLE TO PROTECTION TO SAFE GUARD WORK SITE. PAY ITEM TO BE INCLUDED IN MOBILIZATION.
- 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.
- DURING CONSTRUCTION, ALL OPEN ENDS OF ALL PIPE LINES AND WET WELL ACCESSES SHALL BE COVERED AND SEALED AT THE END OF THE WORK DAY.

- INTERIOR SURFACES OR COATINGS SHALL CONSIST OF PRODUCTS WHICH ARE CERTIFIED BY LABORATORIES APPROVED BY ANSI AND WHICH COMPLY WITH ANS/NSF STANDARD 61. THIS REQUIREMENT APPLIES TO ANY PIPES AND FITTINGS, PROTECTIVE MATERIALS (E.G. PAINTS, COATINGS, CONCRETE ADMIXTURES, CONCRETE RELEASE AGENTS, CONCRETE SEALERS), JOINING AND SEALING MATERIALS (E.G. ADHESIVES, CAULKS, GASKETS, PRIMERS, AND SEALANTS) AND MECHANICAL DEVICES (E.G. ELECTRICAL WIRE, SWITCHES, SENSORS, VALVES) WHICH ARE LOCATED AS TO COME IN CONTACT WITH THE DRINKING WATER.
- CONTRACTOR TO COORDINATE ALL WORK WITH OWNER AND MAINTAIN ALL EXISTING EQUIPMENT AND PIPING IN SERVICE THROUGHOUT PROJECT.

EXISTING UTILITIES

- APPROXIMATE LOCATIONS OF UTILITIES ARE SHOWN ON THE PLANS. THEY ARE TO BE USED FOR GENERAL INFORMATION ONLY. IT IS THE RESPONSIBILITY OF THE CONTRACTOR TO NOTIFY THE APPROPRIATE UTILITY COMPANIES WHEN CONSTRUCTION MIGHT INTERFERE WITH NORMAL OPERATION OF ANY UTILITIES. IT SHALL ALSO BE THE CONTRACTOR'S RESPONSIBILITY TO HAVE THE APPROPRIATE UTILITY COMPANY FIELD-LOCATE ANY UTILITY INSTALLATIONS WHICH MIGHT BE AFFECTED BY CONSTRUCTION PRIOR TO BEGINNING WORK IN THAT AREA. THE CONTRACTOR SHALL BE RESPONSIBLE FOR MAINTAINING SERVICE OF EXISTING UTILITIES AND FOR RESTORING ANY UTILITIES DAMAGED DUE TO CONSTRUCTION AT NO ADDITIONAL COST TO THE OWNER. DEPTHS AND ELEVATIONS OF UTILITIES ARE UNKNOWN UNLESS OTHERWISE SHOWN. CONTRACTOR SHALL FIELD VERIFY UTILITY DEPTHS, ELEVATIONS, ANY DISCREPANCIES AND/OR CONFLICTS SHALL BE BROUGHT TO THE ATTENTION OF THE ENGINEER IMMEDIATELY.

INSPECTION AND TESTING

- THE CONTRACTOR SHALL BE RESPONSIBLE FOR MATERIALS TESTING INCLUDING BUT NOT LIMITED TO CONCRETE, FLUSHING, DISINFECTION, LEAK, PRESSURE, BACTERIOLOGICAL, 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 INSPECTIONS OF WORK AT APPROPRIATE INTERVALS. IT SHALL BE THE CONTRACTOR'S RESPONSIBILITY TO PAY FOR ADDITIONAL INSPECTIONS THAT ARE THE RESULT OF HIS WORKMANSHIP.

CONTACT PHONE NUMBERS

DISTRICT -		
ELI JENNINGS	970-257-6587	DISTRICT MANAGER
DISTRICT OFFICE	970-434-7422	
ENGINEER -		
BRET GUILLORY	970-208-8508	



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**



J-U-B ENGINEERS, INC.

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www.jub.com



NO.	REVISION	DESCRIPTION	BY	DATE

INFLUENT LIFT STATION UPGRADES
CLIFTON SANITATION

GENERAL NOTES

FILE: 81-18-024_G-002
JUB PROJ. #: 81-18-024
DRAWN BY: TJG
DESIGN BY: KCY
CHECKED BY: SPJ
AT FULL SIZE, IF NOT ONE
INCH, SCALE ACCORDINGLY
LAST UPDATED: 4/8/2025

SHEET NUMBER:

G-002



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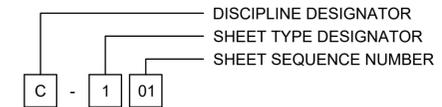
**INFLUENT LIFT STATION UPGRADES
 CLIFTON SANITATION**
LEGEND & ABBREVIATIONS

FILE: 81-18-024_G-003
JUB PROJ. #: 81-18-024
DRAWN BY: TJC
DESIGN BY: KQJ
CHECKED BY: SPJ
AT FULL SIZE, IF NOT ONE INCH SCALE ACCORDINGLY
LAST UPDATED: 4/8/2025

SHEET NUMBER:
G-003

SHEET NUMBERING

SAMPLE: C-101

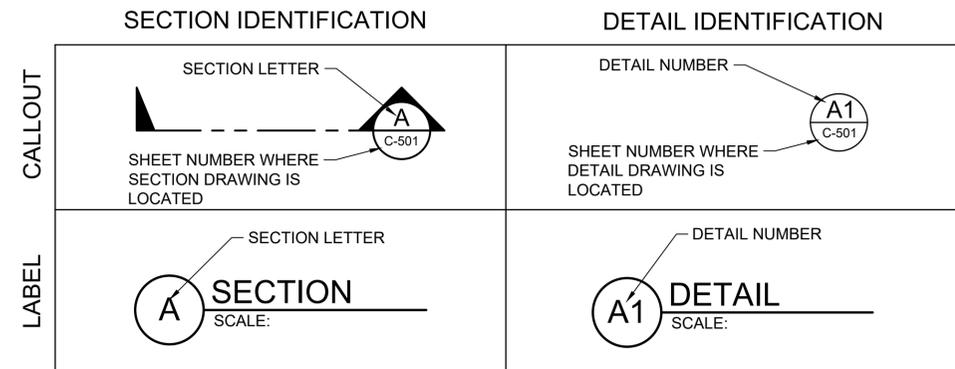


DISCIPLINE DESIGNATORS		
DISCIPLINE	DESIGNATOR	DESCRIPTION
GENERAL	G	ALL GENERAL
	GI	GENERAL INFORMATION
	GC	GENERAL CONTRACTUAL
	GR	GENERAL RESOURCE
SURVEY/MAPPING	V	ALL SURVEY
GEOTECHNICAL	B	ALL GEOTECHNICAL
CIVIL	C	ALL CIVIL
LANDSCAPE	L	ALL LANDSCAPE
STRUCTURAL	S	ALL STRUCTURAL
ARCHITECTURAL	A	ALL 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, ECT.)
5	DETAILS OR COMBINED DETAILS AND SECTIONS
6	SCHEDULES AND DIAGRAMS
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

LINE DESCRIPTION	PROPOSED LINE	EXISTING LINE
POWER / COMMUNICATIONS		
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 ---
UNDERGROUND POWER, TEL, CABLE TV		--- P,T,CTV ---
UNDERGROUND POWER, TEL, CABLE TV, GAS		--- P,T,CTV,G ---
STORM DRAIN		
STORM DRAIN (GENERAL)	—SD—	--- SD ---
STORM DRAIN	—X*SD—	--- X*SD ---
ROOF DRAIN	—RD—	--- RD ---
LAND DRAIN	—LD—	--- LD ---
SANITARY SEWER		
SANITARY SEWER (GENERAL)	—SS—	--- SS ---
SANITARY SEWER	—X*SS—	--- X*SS ---
SANITARY SEWER SERVICE	—SS— SS	--- SS --- SS ---
SEWER FORCE MAIN	—FM—	--- FM ---
WATER		
WATER (GENERAL)	—W—	--- W ---
WATER (SPECIFIED SIZE)	—X*W—	--- X*W ---
WATER SERVICE	—WS— WS	--- WS --- WS ---
IRRIGATION		
IRRIGATION	—IRR—	--- IRR ---
GRAVITY IRRIGATION	—GIRR—	--- GIRR ---
PRESSURE IRRIGATION	—PIRR—	--- PIRR ---
POTABLE WATER	—PW—	--- PW ---
NON-POTABLE WATER	—NPW—	--- NPW ---
GAS		
NATURAL GAS	—G—	--- G ---
NATURAL GAS SERVICE	—G— G	--- G --- G ---
HIGH PRESSURE GAS	—HPG—	--- HPG ---
LIQUID GAS	—LG—	--- LG ---
UTILITY		
CHLORINE LINE	—CHL—	--- CHL ---
INDUSTRIAL WASTE WATER	—IWW—	--- IWW ---
DRAIN LINE	—DL—	--- DL ---

LINE DESCRIPTION	PROPOSED LINE	EXISTING LINE
BOUNDARY		
PROPERTY LINE	—P/L—	--- P/L ---
PROPERTY LINE	— — — —	--- --- ---
RIGHT OF WAY	—R/W—	--- R/W ---
TEMPORARY EASEMENT	—T/E—	--- T/E ---
PERMANENT EASEMENT	—P/E—	--- P/E ---
TOWNSHIP AND RANGE		--- --- ---
SECTION LINE		--- --- ---
QUARTER SECTION LINE		--- --- ---
1/16 SECTION LINE		--- --- ---
STATE LINE		--- --- ---
COUNTY LINE		--- --- ---
SITE		
FENCE	—X—	--- X ---
MAJOR CONTOUR	—2521—	--- --- ---
MINOR CONTOUR		--- --- ---
GRADE BREAK		—GB—
TOP OF BANK		—TOB—
TOE OF SLOPE		—TOE—
CUT LIMITS	— — — —	--- --- ---
CUT LIMITS	—CUT—	--- --- ---
FILL LIMITS	--- --- ---
FILL LIMITS	—FILL—	--- --- ---
DITCH	— — — —	--- --- ---
STORM SWALE	— — — —	--- --- ---
EDGE OF WATER		--- --- ---
HIGH WATER		--- --- ---
WETLAND		—WET—
WETLAND BOG		—BOG—
WETLAND MARSH		—MRSH—
WETLAND SWAMP		—SWMP—
ROADWAY		
ROAD SHOULDER	— — — —	--- --- ---
ROAD CENTERLINE	— — — —	--- --- ---
ROAD ASPHALT		--- EP ---
ROAD GRAVEL	—EG—	--- EG ---
TOP BACK OF CURB		--- --- ---
LIP OF GUTTER		--- --- ---
LANDSCAPING LIMITS	—LS—	--- LS ---

Plot Date: 4/8/2025 3:42 PM Plotted By: Tamer Gommadden
 Date Created: 2/26/2025 J:\BENTON\CLIENTS\COCULIF\ONSANITATION\PROJECTS\SCREW PUMP FAILURE EVALUATION\CAD\SHEET\01-18-024-G-004.DWG

SYMBOL DESCRIPTION	EXISTING SYMBOL	PROPOSED SYMBOL
SURVEY		
CAP (ALUMINUM)		
CAP (BRASS)		
CHISELED X		
CTRL PT GENERIC		
CTRL PT 1/2" REBAR		
CTRL PT 5/8" REBAR		
CTRL PT 60D NAIL		
CTRL PT HUB & TACK		
CTRL PT PK NAIL		
CTRL PT TEMP BENCH MARK		
NAIL		
NAIL AND TAG		
NAIL (PK)		
BOLT		
DRILL STEEL		
REBAR (1/2")		
REBAR (5/8")		
STAINLESS STEEL ROD		
IRON PIPE		
RAILROAD SPIKE		
R/W MONUMENT		
STONE		
SECTION CORNER. MON.		
SECTION QUARTER MON.		
SITE		
BOLLARD		
BOULDER		
DRINKING FOUNTAIN		
FLAGPOLE		
GATE		
MAIL BOX		
PARKING METER		
POST		
SIGN		
SPOT ELEVATION		
TREE (SHRUB)		
TREE (STUMP)		
TREE (CONIFEROUS)		
TREE (DECIDUOUS)		
TEST HOLE		
WELL		
WELL (MONITORING)		

SYMBOL DESCRIPTION	EXISTING SYMBOL	PROPOSED SYMBOL
UTILITIES		
MANHOLE (GENERIC)		
PRESSURE CLEAN OUT AT GRADE		
THRUST BLOCK		
VAULT		
COMMUNICATION		
TELE. MANHOLE		
TELE. PEDESTAL		
TELE. POLE		
TV PEDESTAL		
GUY WIRE		
DOMESTIC WATER		
FIRE HYDRANT		
SPIGOT		
YARD HYDRANT		
WATER MANHOLE		
WATER METER		
WATER VALVE		
ELECTRIC		
ELEC. MANHOLE		
ELEC. METER		
ELEC. TRANS.		
JUNCTION BOX		
POWER POLE		
POWER STUB		
STREET LIGHT		
TRAFFIC SIGNAL POLE		
IRRIGATION		
IRRIGATION VALVE		
IRRIGATION VALVE BOX		
SPRINKLER		
NATURAL GAS		
GAS METER		
GAS VALVE		
SANITARY SEWER		
CLEANOUT		
SEWER STUB		
SS MANHOLE		
STORM DRAIN		
CATCH BASIN		
DRY WELL		
FLARE END		
GREASE TRAP		
SD MANHOLE		

SYMBOL DESCRIPTION	EXISTING SYMBOL	PROPOSED SYMBOL
FITTINGS		
BEND (11.25°)		
BEND (22.5°)		
BEND (45°)		
BEND (90°)		
CAP		
COUPLING		
CROSS		
REDUCER (CONCENTRIC)		
REDUCER (ECCENTRIC)		
TEE		
TRUE UNION		
WYE		
VALVES		
AIR VALVE		
BLOW OFF		
COMBO VALVE		
BALL VALVE (N.C.)		
BALL VALVE (N.O.)		
BUTTERFLY VALVE		
CHECK VALVE		
CHECK VALVE (FLANGE)		
CHECK VALVE (MJ)		
GATE VALVE		
PLUG VALVE (N.C.)		
PLUG VALVE (N.O.)		
ROAD MARKINGS		
TURN ARROW		
ARROW STRAIGHT		
ARROW STRAIGHT/TURN		
BICYCLE ROUTE		
CAR		
HANDICAP SYMBOL		
ROADWAY		
INTERSTATE ROUTE		
MAST ARM		
PEDESTRIAN SIGNAL		
STATE ROUTE		
TRAFFIC LIGHT		

SYMBOL DESCRIPTION	EXISTING SYMBOL	PROPOSED SYMBOL
ROADWAY (CONT.)		
TYPE 2 BARRICADE		
US ROUTE		
TRAFFIC ATTENUATOR		
JERSEY BARRIER		

ABBREVIATIONS	
ASSY	ASSEMBLY
>	ANGLE
@	AT (MEASUREMENTS)
BLDG	BUILDING
BM	BENCH MARK
BSC	BITUMINOUS SURFACE COURSE
BSW	BACK OF SIDEWALK
BW	BOTH WAYS
C	CHANNEL (STRUCTURAL)
C/L	CENTER LINE
CMP	CORRUGATED METAL PIPE
CO	CLEANOUT
CONC	CONCRETE
CONT	CONTINUOUS
CPLG	COUPLING
CU FT	CUBIC FEET
CU YD	CUBIC YARD
DEG OR °	DEGREE
DET	DETAIL
DIA OR Ø	DIAMETER
DIP	DUCTILE IRON PIPE
DIST	DISTRIBUTION
DWG	DRAWING
EA	EACH
ELB	ELBOW
ELEV	ELEVATION
EW	EACH WAY
EXIST	EXISTING
FG	FINISH GRADE
FH	FIRE HYDRANT
FLG	FLANGE
FT OR '	FEET
GV	GATE VALVE
HORIZ	HORIZONTAL
ID	INSIDE DIAMETER
IN OR "	INCH
LB OR #	POUND
LF	LINEAL FEET
LN	LINEAL
MAX	MAXIMUM
MIN	MINIMUM
NO OR #	NUMBER
PE	POLYETHYLENE
PL	PLATE
PL	PROPERTY LINE
PVC	POLYVINYL-CHLORIDE
R	RADIUS
RP	RADIUS POINT
R&R	REMOVE & REPLACE
REM	REMOVE
REQ'D	REQUIRED
REV	REVISION
R/W	RIGHT-OF-WAY

ABBREVIATIONS	
ASSY	ASSEMBLY
S	SLOPE
SPEC	SPECIFICATION
STA	STATION
STD	STANDARD
STL	STEEL
ST STL	STAINLESS STEEL
TBC	TOP BACK OF CURB
TYP	TYPICAL
TFC	TOP FACE OF CONCRETE
W/	WITH
W/O	WITHOUT
W/REQ'D	WHERE REQUIRED



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NO.	REVISION	DESCRIPTION	BY	DATE

INFLENT LIFT STATION UPGRADES
 CLIFTON SANITATION
 LEGEND & ABBREVIATIONS

FILE: 81-18-024_G-004
 JUB PROJ. #: 81-18-024
 DRAWN BY: TJG
 DESIGN BY: KCY
 CHECKED BY: SPJ
 AT FULL SIZE, IF NOT ONE
 INCH, SCALE ACCORDINGLY
 LAST UPDATED: 4/8/2025

SHEET NUMBER:

G-004

Plot Date: 4/8/2025 2:50 PM, Plotted By: Tamer Gommunden
 Date Created: 7/16/2024 10:58:11 AM, Project: SANITATION PROJECTS SCREW PUMP FAILURE EVALUATION, SHEET: 18-024-C-101.DWG

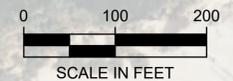


D ROAD

32 ROAD

PROJECT LOCATION

COLORADO RIVER



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INFLUENT LIFT STATION UPGRADES
 CLIFTON SANITATION

OVERALL PLAN VIEW

FILE: 81-18-024-C-101
 JUB PROJ. #: 81-18-024
 DRAWN BY: TJG
 DESIGN BY: KCJ
 CHECKED BY: SPJ
 AT FULL SIZE, IF NOT ONE INCH SCALE ACCORDINGLY
 LAST UPDATED: 4/8/2025

SHEET NUMBER:
C-101

GENERAL STRUCTURAL NOTES & SPECIFICATIONS

1. GENERAL.
 - A. THESE GENERAL STRUCTURAL NOTES AND SPECIFICATIONS SUPPLEMENT THE PROJECT WRITTEN TECHNICAL SPECIFICATIONS AND THE PROJECT STRUCTURAL DRAWINGS.
 - B. 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 ENSURE THE STABILITY AND SAFETY OF ALL CONSTRUCTION UNTIL IT IS COMPLETED AND SELF-SUPPORTING.
 - C. THE CONTRACTOR IS RESPONSIBLE FOR ALL WATER, BOTH ABOVE AND BELOW GROUND, RUNOFF AND OTHER ENVIRONMENTAL CONTROLS REQUIRED DURING CONSTRUCTION TO ENSURE THE SITE IS MAINTAINED IN COMPLIANCE WITH ALL APPLICABLE LOCAL, STATE AND FEDERAL REGULATIONS.
 - D. 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, NOTIFY THE ENGINEER FOR CLARIFICATION OR INSTRUCTION.
 - E. PRIOR TO IMPLEMENTING ANY CHANGES TO THESE PLANS, THE ENGINEER SHALL BE NOTIFIED IN WRITING FOR THEIR WRITTEN APPROVAL. CHANGES IMPLEMENTED WITHOUT THE ENGINEERS 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 BOTH THE ARCHITECTURAL AND THE STRUCTURAL DRAWINGS. WHEN CONFLICTS OR DISCREPANCIES ARE FOUND BETWEEN THESE PLAN SETS AND/OR WITHIN THESE DRAWINGS, THE CONTRACTOR SHALL REPORT THEM IMMEDIATELY TO THE PROJECT ARCHITECT/ENGINEER FOR DIRECTION AND/OR CLARIFICATION.
 - E. 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. INTERNATIONAL BUILDING CODE, IBC 2018 EDITION.
 - B. MINIMUM DESIGN LOADS FOR BUILDINGS AND OTHER STRUCTURES, ASCE 7-16.
 - C. AMERICAN CONCRETE INSTITUTE, ACI 318, BUILDING CODE REQUIREMENTS FOR STRUCTURAL CONCRETE; REFERENCED EDITION.
 - D. AMERICAN CONCRETE INSTITUTE, ACI 350, CODE REQUIREMENTS FOR ENVIRONMENTAL ENGINEERING CONCRETE STRUCTURES; CURRENT EDITION.
 - E. AMERICAN CONCRETE INSTITUTE, ACI 530, BUILDING CODE REQUIREMENTS AND SPECIFICATIONS FOR MASONRY STRUCTURES; CURRENT EDITION.
 - F. AMERICAN CONCRETE INSTITUTE, ACI 301, SPECIFICATIONS FOR STRUCTURAL CONCRETE.
 - G. AMERICAN INSTITUTE OF STEEL CONSTRUCTION, AISC 15TH EDITION, STEEL CONSTRUCTION MANUAL.
 - H. AMERICAN INSTITUTE OF STEEL CONSTRUCTION, AISC 360, SPECIFICATIONS FOR STRUCTURAL STEEL BUILDINGS; CURRENT EDITION.
4. SPECIAL INSPECTIONS. SPECIAL INSPECTIONS PER IBC CHAPTER 17 ARE REQUIRED FOR THE FOLLOWING ITEMS: C INDICATES CONTINUOUS, P INDICATES PERIODIC.

	FREQUENCY
A. CONCRETE.	
i REINFORCEMENT PLACEMENT:	P
ii PLACEMENT OF CAST-IN-PLACE ANCHORS:	P
iii VERIFICATION OF USE OF REQUIRED MIX:	P
iv CONCRETE PLACEMENT:	C
v VERIFICATION OF IN-SITU CONCRETE PRIOR TO REMOVAL OF FORMS AND SHORES FROM ELEVATED BEAMS AND SLABS	P
B. POST INSTALLED CONCRETE ANCHORS.	
i INSTALLATION:	C
C. STRUCTURAL MASONRY.	
i VERIFICATION OF SITE PROPORTIONED	

- ii MORTAR & GROUT: P
- iii OBSERVATION OF PRISM PREPARATION: C
- iv PLACEMENT OF MASONRY UNITS & MORTAR JOINTS P
- v VERIFICATION OF SIZE AND LOCATION OF STRUCTURAL ELEMENTS: P
- vi ANCHORAGE OF MASONRY TO FRAMES, STRUCTURAL MEMBERS AND DIAPHRAGMS INCLUDING TYPE, SIZE AND LOCATION OF ANCHORS P
- vii TYPE, GRADE AND SIZE OF REINFORCING STEEL: P
- viii REINFORCING STEEL AND CONNECTOR PLACEMENT: P
- ix COLD/HOT WEATHER MASONRY PROTECTION: P
- x VERIFY USE OF GROUT MIX DESIGN: P
- xi VERIFY GROUT SPACE IS CLEAN PRIOR TO GROUTING: C
- xii GROUT PLACEMENT: C
- xiii f'm VERIFICATION/GROUT STRENGTH PER ASTM C1019 P
- D. ALL SPECIAL INSPECTION SHALL BE PERFORMED BY ICC CERTIFIED INSPECTORS.
5. SUBMITTALS.
 - A. SUBMIT REQUIRED COPIES, FOUR (4) MINIMUM, OF PRODUCT OR MATERIAL DESIGN INFORMATION TO THE ENGINEER FOR REVIEW FOR THE FOLLOWING ITEMS:
 - i CONCRETE MIX DESIGNS AND ADMIXTURES.
 - ii NON-SHRINK GROUT.
 - iii STRUCTURAL MASONRY GROUT AND MORTAR MIX DESIGNS.
 - iv STRUCTURAL CONCRETE BLOCK.
6. SHOP DRAWINGS:
 - A. SUBMIT REQUIRED COPIES OF SHOP DRAWINGS, FOUR (4) MINIMUM, TO THE ARCHITECT/ENGINEER FOR REVIEW PRIOR TO FABRICATION OF THE FOLLOWING ITEMS:
 - i REINFORCING STEEL FOR ALL CONCRETE.
 - ii REINFORCING STEEL FOR MASONRY WALLS.
 - iii STRUCTURAL STEEL
 - iv MISCELLANEOUS METAL FABRICATIONS INCLUDING STAIRS, LADDERS, BAR-GRATING, FLOOR PLATE & HATCHES
7. DESIGN CRITERIA.
 - A. OCCUPANCY OR USE; IBC TABLE 1607.1: WASTE WATER PUMP BUILDING
 - B. LIVE LOADS:
 - i RISK CATEGORY; ASCE TABLE 1.5-2: III
 - ii LIVE LOADS:
 - i ROOF LIVE LOAD:
 - (a) FLAT ROOF SNOW LOAD, Pf= 30 PSF
 - (b) GROUND SNOW LOAD, PG= 30 PSF
 - (c) SNOW IMPORTANCE FACTOR, Is=1.10
 - (d) SNOW EXPOSURE FACTOR, Ce=1.00
 - (e) THERMAL FACTOR, Ct=1.00
 - (f) UNBALANCED SNOW PER ASCE-7, CHAPTER 7
 - C. DEAD LOADS:
 - i ROOF DEAD LOAD: 20 PSF
 - D. WIND:
 - i ULTIMATE DESIGN WIND SPEED, Vult=109 MPH
 - ii SITE WIND EXPOSURE: C
 - iii WIND IMPORTANCE FACTOR: 1.00
 - iv ENCLOSURE CLASSIFICATION: ENCLOSED BUILDING
 - v INTERNAL PRESSURE COEFFICIENTS: +0.18 TO -0.18
 - vi COMPONENT & CLADDING LOADS:
 - (a) DESIGN WIND PRESSURES: +25PSF; -31 PSF
 - E. EARTHQUAKE:
 - i SEISMIC IMPORTANCE FACTOR, Ie: 1.25
 - ii MAPPED SPECTRAL RESPONSE ACCELERATION:
 - (a) SHORT PERIOD, Ss: 24.5%
 - (b) 1-SECOND, S1: 6.6%
 - iii SOIL SITE CLASS: D (DEFAULT)
 - iv DESIGN SPECTRAL RESPONSE ACCELERATION PARAMETERS:
 - (a) SHORT PERIOD, Sds: 26.2%
 - (b) 1-SECOND, Sd1: 10.6%
 - v SEISMIC DESIGN CATEGORY: B
 - vi BASIC SEISMIC FORCE RESISTING SYSTEM(S):
 - (a) INTERMEDIATE REINFORCED MASONRY SHEAR WALLS
 - RESPONSE MODIFICATION COEFFICIENT, R=3.5
 - SEISMIC RESPONSE COEFFICIENT, Cs=0.093
 - SEISMIC DESIGN BASE SHEAR, V=4.67 KIPS (STRENGTH LEVEL)
 - (a) ANALYSIS PROCEDURE USED: EQUIVALENT LATERAL FORCE PROCEDURE
 - F. MECHANICAL LOADS: REFER TO FRAMING PLANS AND MECHANICAL PLANS FOR SPECIAL MECHANICAL EQUIPMENT LOADS.
 8. FOUNDATIONS.
 - A. ALL EXISTING FOUNDATIONS ARE SUPPORTED ON 18" DIAMETER DRILLED PIERS PER THE EXISTING BUILDING PLANS (SEE DETAIL H/SD-1)
 - B. ALLOWABLE END BEARING PRESSURE FOR PIERS: 30,000 PSF

- C. ALLOWABLE SKIN FRICTION IN BEDROCK: 2500 PSF
- D. REFER TO THE EXISTING FINAL PROJECT GEOTECHNICAL REPORT BY LYMAN-HENN INC. DATED OCTOBER 31, 2005 AND SUPPLEMENTAL REPORT DATED FEBRUARY 3, 2006
9. STRUCTURAL MATERIALS.
 - A. ALUMINUM:
 - i RAISED PATTERN FLOOR PLATE: ASTM B632 TYPE 6061-T6; Fy=35KSI.
 - ii STRUCTURAL PLATES & SHAPES: ASTM B221 TYPE 6061-T6; Fy=35KSI.
 - B. STAINLESS STEEL:
 - i ALL STEEL NOTES AS STAINLESS INCLUDING SHAPES, PLATES, BARS, PIPE TUBING, FASTENERS, ANCHOR RODS AND ASSOCIATED MISCELLANEOUS STEEL ITEMS SHALL BE STAINLESS STEEL, GRADE 316; UNLESS SPECIFICALLY NOTED OTHERWISE.
 - ii STRUCTURAL SHAPES, PLATES & BARS: ASTM A276 WITH Fy=30 KSI
 - iii STRUCTURAL BOLTS: ASTM A193 GRADE B8M, CLASS 1 OR 2, TYPE 316, MINIMUM Fy=30 KSI.
 - iv NUTS: ASTM A194 GRADE 8M, HEAVY HEX
 - v WASHERS: STAINLESS STEEL GRADE 316, MINIMUM Fy=30 KSI.
 - C. ANCHOR RODS: ANCHOR RODS (BOLTS SET INTO CONCRETE) SHALL BE ASTM F1554, Fy=36 KSI. NUTS FOR ANCHOR RODS SHALL CONFORM TO ASTM A563, GRADE A, HEAVY HEX. ANCHOR RODS, NUTS & WASHERS IN CONCRETE/GROUT SHALL BE HOT DIPPED GALVANIZED (HDG).
 - D. THREADED STEEL RODS: THREADED STEEL RODS SHALL CONFORM TO ASTM A36, Fy=36 KSI. NUTS FOR THREADED RODS SHALL CONFORM TO ASTM A563, GRADE A, HEAVY HEX. HOT DIPPED GALVANIZED
 - E. WASHERS: ALL WASHERS SHALL CONFORM TO ASTM F436.
 - F. BOLT PLACEMENT: ALL BOLTS SHALL BE ON MEMBER STANDARD GAGE LINES EXCEPT AS NOTED OTHERWISE.
 - G. PROJECT CONCRETE MIX TYPES: CONCRETE SHALL BE PROPORTIONED AND FURNISHED FOR THE VARIOUS PROJECT USES AS INDICATED ON THE PLANS AND AS FOLLOWS:
 - i M4500-STD: STANDARD EXTERIOR STRUCTURAL CONCRETE MIX FOR FOOTINGS, STEM WALLS AND ALL OTHER CONCRETE INCLUDING ABOVE GRADE STRUCTURAL WALLS, COLUMNS, SLABS AND BEAMS: F'c = 4,500 PSI, ABSOLUTE WATER-CEMENT RATIO BY WEIGHT = 0.45, AIR CONTENT = 6% (+/- 1.5%)
 - H. CONCRETE MIX COMPONENTS.
 - i A WATER-REDUCING ADMIXTURE CONFORMING TO ASTM C494, USED IN STRICT CONFORMANCE WITH THE MANUFACTURERS INSTRUCTIONS, SHALL BE INCORPORATED IN ALL CONCRETE MIX DESIGNS.
 - ii FOR ALL WATER-RETAINING CONCRETE STRUCTURAL WALLS AND SLABS, A HIGH-RANGE WATER-REDUCING (HRWR) ADMIXTURE CONFORMING TO ASTM C494, TYPE F OR G, SHALL BE USED. THE TOTAL SLUMP SHALL BE LESS THAN 10-IN.
 - iii HIGHER WATER-CEMENT RATIOS THAN SHOWN ABOVE MAY BE USED IF SUBSTANTIATED IN ACCORDANCE WITH ACI 318-89, CHAPTER 5.
 - iv 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.
 - v CEMENT: ASTM C595 TYPE 1L.
 - vi WATER: CLEAN & POTABLE.
 - vii AIR ENTRAINING AGENT: ASTM C260. EXCEPT WHERE NOTED NON-AIR ENTRAINED.
 - viii AGGREGATE: 0.75-INCH MAXIMUM AGGREGATE PER ASTM C33. UNLESS NOTED OTHERWISE.
 - ix MIX PROPORTIONING: ACI 211.1 AND 350R.
 - I. CONCRETE ACCESSORIES:
 - i REINFORCING STEEL: REINFORCING STEEL SHALL CONFORM TO ASTM A615 GRADE 60; #3 BARS MAY BE GRADE 40.
 - ii JOINTING MATERIALS: IN ACCORDANCE WITH ACI 350 SECTION 4.5.2. ALL JOINTING MATERIALS INCLUDING WATER-STOPS, 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 AND PVC WATER-STOP SHALL CONFORM TO ASTM D 570, ASTM D 746, ASTM D 1149 AND CRD-C572.
 - J. MASONRY: THE MASONRY ASSEMBLAGE SHALL HAVE A MINIMUM 28 DAY COMPRESSIVE STRENGTH OF f'm= 2,000 PSI. ASSEMBLY SHALL BE VERIFIED PER IBC STANDARDS USING THE UNIT STRENGTH METHOD.
 - K. NON-SHRINK GROUT: ALL NON-SHRINK GROUT NOTED ON THE PLANS SHALL BE NON-SHRINK, NON-METALLIC GROUT WITH A MINIMUM 28-DAY COMPRESSIVE STRENGTH OF 7,000 PSI.
 - L. STEEL ROOF DECKING: ALL STEEL ROOF DECKING SHALL BE FABRICATED FROM ASTM A653 STEEL, Fy=50 KSI, CLASS G90 COATING. DECKING SHALL HAVE THE FOLLOWING MINIMUM PROPERTIES:
 - i. ROOF: DEPTH=1.5", TYPE B, 22 GAGE. Ie=0.178 IN*4, Se=0.179IN*3



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3/28/25

NO.	DESCRIPTION	BY	DATE

CLIFTON REGIONAL WWTP
 INFLUENT PUMP STATION UPGRADES
 GENERAL STRUCTURAL NOTES

FILE: 81-18-024_S-001X
 JUB PROJ. #: 81-18-024
 DRAWN BY: TJG
 DESIGN BY: KCY
 CHECKED BY: SPJ
 ONE INCH
 AT FULL SIZE, IF NOT ONE INCH, SCALE ACCORDINGLY
 LAST UPDATED: 3/28/2025
 SHEET NUMBER:
S-001

Plot Date: 4/8/2025 2:50 PM. Plotted By: Tanner Germaine
Date Created: 2/24/2025. J:\BIBENTRAL\CLIENTS\COCLIF\TNSANITATION\PROJECTS\SCREW PUMP FAILURE EVALUATION\STRUCTURAL\81-18-024_S-001X.DWG

10. CONCRETE QUALITY AND DETAILS.

- A. GENERAL. CONCRETE SHALL BE PROPORTIONED TO PROVIDE AN AVERAGE COMPRESSIVE STRENGTH, FC, AS PRESCRIBED IN ACI 318/350 SECTION 5.3.2 AND SHALL SATISFY THE DURABILITY CRITERIA OF ACI 318/350 CHAPTER 4.
B. CONCRETE PROPORTIONS.
i CONCRETE MIX PROPORTIONING SHALL BE IN ACCORDANCE WITH ACI 211.1; STANDARD PRACTICE FOR SELECTING PROPORTIONS FOR NORMAL, HEAVYWEIGHT, AND MASS CONCRETE.
C. CONCRETE MIX VERIFICATION: CONCRETE MIX DESIGNS SHALL BE VERIFIED BY STANDARD 28-DAY CYLINDER TESTS PER ASTM C39.
D. EVALUATION AND ACCEPTANCE OF CONCRETE. CONCRETE SHALL BE TESTED IN ACCORDANCE WITH THE REQUIREMENTS OF ACI 318/350 SECTION 5.6.
E. MIXING & PLACING CONCRETE. CONCRETE SHALL BE PREPARED, MIXED, PLACED AND CONSOLIDATED IN ACCORDANCE WITH ACI 318/350 SECTIONS 5.7 THROUGH 5.10 AND AS FOLLOWS:
i ACI 304; GUIDE FOR MEASURING, MIXING, TRANSPORTING, AND PLACING CONCRETE.
ii ACI 309; GUIDE FOR CONSOLIDATION OF CONCRETE.
F. MINIMUM TIME BETWEEN ADJACENT PLACEMENTS:
i NON-LIQUID RETAINING STRUCTURES:
(a) CONSTRUCTION JOINTS: FIVE (5) DAYS WET CURE, OR SEVEN (7) DAYS DRY CURE.
(b) CONTROL JOINTS: TWO (2) DAYS.
(c) EXPANSION JOINTS: ONE (1) DAY.
ii FLOOR SLABS:
(d) CONSTRUCTION JOINTS: SEVEN (7) DAYS WET CURE, OR TEN (10) DAYS DRY CURE.
(e) CONTROL JOINTS: FOUR (4) DAYS.
(f) EXPANSION JOINTS: ONE (1) DAY.
G. 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 SECTION 5.11.3.
i CURING OF CONCRETE SHALL BE PER THE RECOMMENDATIONS GIVEN IN ACI 308; GUIDE TO CURING CONCRETE.
H. 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.
i COLD WEATHER IS DEFINED AS A PERIOD WHEN, FOR MORE THAN 3 CONSECUTIVE DAYS, THE FOLLOWING CONDITIONS EXIST:
(a) THE AVERAGE DAILY AIR TEMPERATURE IS LESS THAN 40-DEGREES F AND
(b) THE AIR TEMPERATURE IS NOT GREATER THAN 50-DEGREES F FOR MORE THAN ONE-HALF OF ANY 24-HOUR PERIOD.
I. 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 MEMBER OR STRUCTURE. THE RECOMMENDED PROCEDURES LISTED IN ACI 305; HOT WEATHER CONCRETING SHALL BE FOLLOWED.
i 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:
(a) HIGH AMBIENT TEMPERATURE.
(b) HIGH CONCRETE TEMPERATURE.
(c) LOW RELATIVE HUMIDITY.
(d) WIND SPEED.
(e) SOLAR RADIATION.

11. FORMWORK.

- 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.
i DESIGN OF FORMWORK SHALL BE IN ACCORDANCE WITH ACI 318/350 SECTION 6.1.
ii 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:
i FOOTINGS: CLASS C
ii FOUNDATION WALLS: CLASS B
iii ABOVE GRADE CONCRETE NOT VISIBLE TO SIGHT: CLASS B
iv ABOVE-GRADE CONCRETE VISIBLE TO SIGHT: CLASS A
C. REMOVAL OF FORMS.
i CONCRETE FORMS SHALL NOT BE REMOVED UNTIL THE RETAINED CONCRETE HAS REACHED THE FOLLOWING MINIMUM PERCENTAGE OF THE REQUIRED 28 DAY COMPRESSIVE STRENGTH:
(a) FOOTINGS AND BASE SLABS ON GRADE: 50% OF F'C.
(b) FOUNDATION WALLS AND COLUMNS: 67% OF F'C.
(c) ELEVATED STRUCTURAL SLABS, BEAMS AND JOISTS: 95% F'C.
ii WHERE CONCRETE CYLINDER TESTS ARE NOT AVAILABLE FOR STRENGTH VERIFICATION THE FOLLOWING GUIDE MAY

BE USED WHEN PERMITTED BY THE PROJECT ENGINEER:

- (a) FOOTINGS AND BASE SLABS ON GRADE: 12 HOURS.
(b) FOUNDATION WALLS AND COLUMNS: 24 HOURS.
E. EMBEDMENTS IN CONCRETE.
i CONDUITS, PIPES, AND SLEEVES OF ANY MATERIAL NOT HARMFUL TO CONCRETE AND WITHIN LIMITATIONS OF ACI 318/350 SECTION 6.3 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 SECTION 6.3.6.
ii 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.
i CONSTRUCTION JOINTS SHALL ONLY BE PLACED WHERE INDICATED ON THE PROJECT DRAWINGS OR AS APPROVED BY THE PROJECT ENGINEER.
ii CONSTRUCTION JOINTS SHALL BE CONSTRUCTED IN ACCORDANCE WITH ACI 318/350 SECTION 6.4.

12. DETAILS OF REINFORCEMENT.

- A. PLACEMENT OF ALL REINFORCING STEEL WITHIN CONCRETE STRUCTURES SHALL BE IN CONFORMANCE WITH ACI 318/350 CHAPTER 7.
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 318/350 SECTION 7.6.
D. CONCRETE PROTECTION FOR REINFORCEMENT. UNLESS NOTED ELSEWHERE ON THE DRAWINGS, ALL REINFORCING STEEL SHALL HAVE THE FOLLOWING CONCRETE COVER:
i FOR NON-LIQUID CONTAINING CONCRETE STRUCTURES; PER ACI 318 SECTION 7.7:
(a) CONCRETE CAST AGAINST EARTH: 3.00 INCH
(b) CONCRETE EXPOSED TO EARTH OR WEATHER;
• NO. 5 OR SMALLER BARS: 1.50-INCH
• NO. 6 OR LARGER BARS: 2.00-INCH
(a) CONCRETE NOT EXPOSED TO EARTH OR WEATHER;
• NO. 11 OR SMALLER BARS: 0.75-INCH
• NO. 14 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 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. PROVIDE DOWELS IN FOOTINGS AND AT CONSTRUCTION JOINTS TO MATCH VERTICAL REINFORCING BAR SIZE AND SPACING, UNLESS OTHERWISE NOTED ON THE DRAWINGS.
H. COORDINATE PLACEMENT OF DOWELS INTO MASONRY WALLS WITH THE MASONRY SHOP DRAWINGS.
I. WHERE DRILLED IN ANCHORS ARE TO BE POST-INSTALLED INTO CONCRETE SURFACES TAKE CARE TO LOCATE REINFORCING STEEL SO THAT IT WILL NOT INTERFERE WITH THE DRILLING OPERATIONS. MOVE BARS PLUS OR MINUS 1 TO 2 INCHES IN ORDER TO AVOID DRILLING CONFLICTS.
J. ALL BAR BENDS, HOOKS, SPLICES AND OTHER REINFORCING STEEL DETAILS SHALL CONFORM TO THE REQUIREMENTS OF ACI 315.
K. UNLESS OTHERWISE NOTED ON THE PLANS ALL BARS SHALL BE SPLICED WITH A MINIMUM CLASS B LAP SPLICE; LAP SPLICES OF DEFORMED BARS AND DEFORMED WIRE IN COMPRESSION ZONES MAY BE CLASS A SPLICES.
L. AT ALL CORNERS AND WALL INTERSECTIONS PROVIDE BENT BARS TO MATCH THE HORIZONTAL REINFORCING STEEL AND IN ACCORDANCE WITH THE TYPICAL CORNER REINFORCING DETAILS.
M. CHAMFER ALL EXPOSED CORNERS AND FILLET ENTRANT ANGLES 3/4" UNLESS OTHERWISE NOTED ON THE DRAWINGS.

13. STRUCTURAL MASONRY REQUIREMENTS.

- A. GENERAL. ALL STRUCTURAL MASONRY CONSTRUCTION SHALL BE IN ACCORDANCE WITH ACI 530.1, SPECIFICATIONS FOR MASONRY STRUCTURES; CURRENT EDITION.
B. STRUCTURAL MASONRY UNITS:
i CONCRETE MASONRY UNITS: ALL CONCRETE MASONRY UNITS (CMU) SHALL CONFORM TO ASTM C-90, WITH A MINIMUM NET AREA COMPRESSIVE STRENGTH OF 2,000 PSI.
ii ALL BLOCK SHALL BE LAID UP WITH A STANDARD RUNNING BOND UNLESS SPECIFICALLY NOTED OTHERWISE ON THE DRAWINGS.
iii PLACE MASONRY UNITS IN ACCORDANCE WITH ACI 530.1 SECTION 3.3, MASONRY ERECTION.
C. MORTAR:
i ALL MORTAR FOR USE WITH STRUCTURAL MASONRY UNITS SHALL CONFORM TO ASTM C270, CLASS S AND HAVE A MINIMUM 28 DAY COMPRESSIVE STRENGTH OF 1,900 PSI.
ii MORTAR SHALL BE IN ACCORDANCE WITH ACI 530.1, SECTION 2.1, MORTAR MATERIALS.
D. GROUT:
i ALL GROUT FOR USE WITH STRUCTURAL MASONRY UNITS SHALL CONFORM TO ASTM C476 AND HAVE A MINIMUM 28 DAY COMPRESSIVE STRENGTH OF 2,000 PSI.
ii GROUT SHALL BE IN ACCORDANCE WITH ACI 530.1, SECTION 2.2, GROUT MATERIALS.
iii PLACE GROUT IN ACCORDANCE WITH ACI 530.1, SECTION 3.5, GROUT PLACEMENT.
iv GROUT POUR HEIGHT. DO NOT EXCEED THE MAXIMUM GROUT POUR HEIGHT LISTED IN ACI 530.1, TABLE 7.
v GROUT LIFT HEIGHT. DO NOT EXCEED THE MAXIMUM GROUT LIFT HEIGHTS AS DEFINED BY ACI 530.1, SECTION 3.5 D.
E. CELLS: FILL ALL CELLS CONTAINING REINFORCING STEEL AND AS DIRECTED ON THE DRAWINGS SOLID FULL HEIGHT WITH GROUT.
F. BOND BEAMS: ALL BOND BEAMS SHALL BE GROUTED SOLID TO A MINIMUM HEIGHT OF 8-INCHES.
G. LINTELS: ALL MASONRY LINTELS (UNITS OVER WALL OPENINGS GREATER THAN 8-INCHES IN LENGTH) SHALL BE GROUTED SOLID FROM THE BOTTOM OF THE LINTEL TO A TOTAL STRUCTURAL DEPTH AS INDICATED ON THE PLANS, OR 16-IN. MINIMUM. EXTEND THE LENGTH OF SOLID GROUTING PAST THE EDGE OF EACH OPENING AS INDICATED ON THE PLANS OR 8" MINIMUM.
H. REINFORCING:
i FABRICATE BARS USED IN MASONRY REINFORCEMENT IN ACCORDANCE WITH THE FABRICATING TOLERANCES OF ACI 315, AND IN ACCORDANCE WITH ACI 530.1, SECTION 2.7.
ii PLACE REINFORCEMENT IN ACCORDANCE WITH ACI 530.1, SECTION 3.4 B.
iii ALL REINFORCING STEEL SHALL BE IN PLACE AND SECURED AGAINST DISPLACEMENT PRIOR TO GROUTING WITH WIRE TIES, SPACERS OR OTHER SUITABLE DEVICES AT TOPS AND BOTTOMS AND INTERVALS NOT EXCEEDING 192 BAR DIAMETERS NOR 10- FEET.
iv BAR PLACEMENT: WHERE ONE VERTICAL BAR IS CALLED FOR IN EACH VERTICAL CORE THE BAR IS TO BE PLACED IN THE CENTER OF THE MASONRY CORE. WHERE TWO VERTICAL BARS ARE CALLED FOR THEY SHALL BE PLACED NEAR EACH WALL FACE WITH 1/5-INCH OF CLEARANCE FOR FINE GROUT AND 1/2-IN. OF CLEARANCE FOR COURSE GROUT.
v LAPS: WHERE BARS ARE NOT CONTINUOUS LAP ALL BARS AS INDICATED ON THE DRAWINGS. WHERE NOT OTHERWISE INDICATED PROVIDE A MINIMUM VERTICAL LAP SPLICE OF 48 BAR DIAMETERS AND A MINIMUM HORIZONTAL LAP SPLICE OF 32 BAR DIAMETERS.
I. ANCHOR BOLTS: ANCHOR BOLTS SHALL BE ACCURATELY SET WITH TEMPLATES OR BY APPROVED EQUIVALENT MEANS AND HELD IN PLACE TO PREVENT MOVEMENT. CONFORM TO ACI 530.1, SECTION 3.4 D.
J. FOUNDATION DOWELS: IT IS THE CONTRACTOR'S RESPONSIBILITY TO COORDINATE PLACEMENT OF DOWELS PROJECTING FROM CONCRETE FOUNDATIONS INTO REINFORCED MASONRY OR BRICK WALLS.
K. BOND BEAMS WITH TWO (2) #5 BARS HORIZONTALLY SHALL BE PROVIDED AT ALL FLOOR AND ROOF LINES AND AT THE TOP OF WALLS. PROVIDE A BOND BEAM WITH TWO (2) #5 BARS HORIZONTALLY ABOVE AND BELOW ALL OPENINGS, AND EXTEND THESE BARS 2'-0" PAST THE OPENING EDGE. PROVIDE FULL HEIGHT VERTICAL REINFORCEMENT, MATCHING TYPICAL VERTICAL REINFORCING, EACH SIDE OF OPENINGS, AT WALL ENDS AND INTERSECTIONS.
L. COLD-WEATHER CONSTRUCTION. WHEN AMBIENT AIR TEMPERATURE IS BELOW 40-DEGREES F, IMPLEMENT COLD WEATHER PROCEDURES IN ACCORDANCE WITH ACI 530.1, SECTION 1.8 C.
M. FIELD QUALITY CONTROL: PROVIDE SPECIAL INSPECTION AND VERIFICATION IN ACCORDANCE WITH ACI 530.1, SECTION 3.7.
N. CLEANING: CLEAN ALL EXPOSED MASONRY SURFACES IN ACCORDANCE WITH ACI 530.1, SECTION 3.8.

14. PAINTING & COATING:

- A. ALL STRUCTURAL AND MISCELLANEOUS METALS SHALL BE PROTECTED/PAINTED PER SPECIFICATION SECTION 09900.
B. SUBMIT COLOR CHIPS TO THE PROJECT ENGINEER OR OWNER FOR THEIR APPROVAL PRIOR TO ORDERING MATERIALS.



J-U-B ENGINEERS, INC.

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3/28/25

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

CLIFTON REGIONAL WWTP
INFLUENT PUMP STATION UPGRADES

GENERAL STRUCTURAL NOTES

FILE: 81-18-024_S-001X
JUB PROJ. #: 81-18-024
DRAWN BY: TJG
DESIGN BY: KCY
CHECKED BY: SPJ
ONE INCH
AT FULL SIZE, IF NOT ONE INCH, SCALE ACCORDINGLY
LAST UPDATED: 3/28/2025

SHEET NUMBER:

S-002



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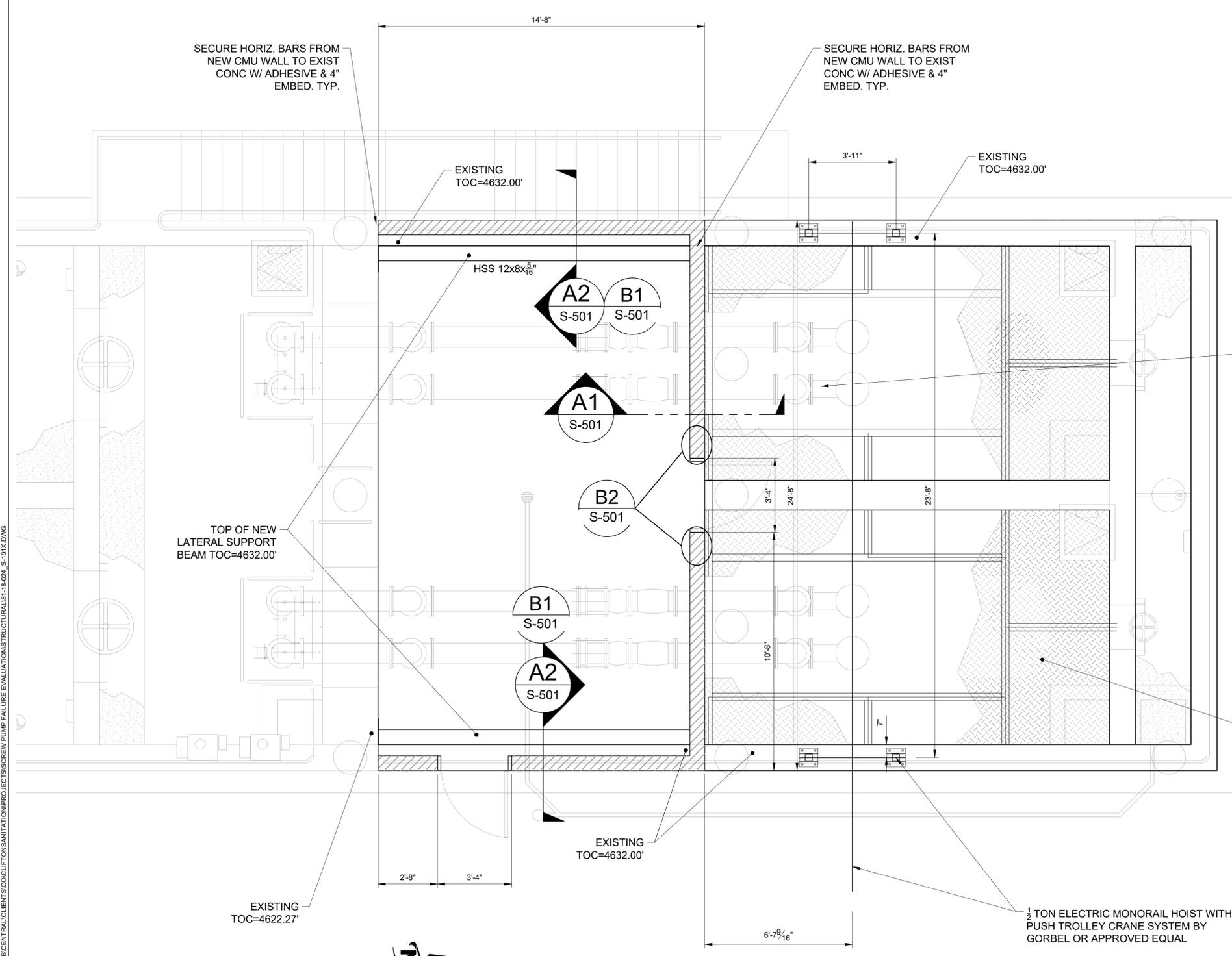
NO.	REVISION	DESCRIPTION	BY	APPR.	DATE

CLIFTON REGIONAL WWTP
 INFLUENT PUMP STATION UPGRADES
 GROUND LEVEL & LOWER LEVEL PLAN

FILE: 81-18-024_S-101X
 JUB PROJ. #: 81-18-024
 DRAWN BY: TJG
 DESIGN BY: KCY
 CHECKED BY: SPJ
 AT FULL SIZE, IF NOT ONE INCH SCALE ACCORDINGLY
 LAST UPDATED: 3/28/2025
 SHEET NUMBER:
S-101

INFLUENT PUMP BUILDING PLAN NOTES

1. VERIFY ALL DIMENSIONS WITH THE EXISTING PLANS AND IN-FIELD MEASUREMENTS.
2. DETAILS ON THESE PLANS ARE INTENDED TO DEPICT THE GENERAL CONSTRUCTION METHODS FOR THIS STRUCTURE. CONNECTIONS, DETAILS AND CONDITIONS NOT SPECIFICALLY SHOWN THAT ARE SIMILAR TO THOSE THAT ARE SPECIFIED SHALL BE ASSUMED ONE AND THE SAME. IF QUESTIONS REGARDING THE APPLICATION OF DETAILS ARE ENCOUNTERED, NOTIFY THE ARCHITECT/ENGINEER FOR CLARIFICATION IN A TIMELY MANNER PRIOR TO CONSTRUCTION.
3. SEE SITE/ARCH. DRAWINGS FOR WALKWAYS, DRIVEWAYS...ETC.
4. FINISHED FLOOR ELEVATION=100'-0" IS THE REFERENCE DATUM FOR THESE STRUCTURAL DRAWINGS. SEE SITE DRAWINGS FOR FINAL FINISH FLOOR ELEV. AND SITE GRADING INFORMATION.
5. SEE SHEETS S-001 & S-002 FOR GENERAL STRUCTURAL NOTES AND ADDN'L INFO.
6. SEE SHEET S-901 & S-902 FOR TYPICAL CONCRETE & MASONRY DETAILS.
7. INDICATES 8" MEDIUM WEIGHT CMU WALL, SOLID GROUTED



CONTRACTOR NOTE: ALL PIPING SHOWN IN EXISTING AND WILL BE IN USE DURING CONSTRUCTION.

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

Plot Date: 03/28/2025 2:51 PM Plotted By: Tamer Geremunden
 Date Created: 3/27/2025 \JUB\CENTRAL\Clients\CO\CLIFTON SANITATION\PROJECTS\SCREW PUMP FAILURE EVALUATION\STRUCTURAL\81-18-024_S-101X.DWG

INFLUENT PUMP BUILDING PLAN NOTES

1. VERIFY ALL DIMENSIONS WITH THE EXISTING PLANS AND IN-FIELD MEASUREMENTS.
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3. SEE SITE/ARCH. DRAWINGS FOR WALKWAYS, DRIVEWAYS...ETC.
4. FINISHED FLOOR ELEVATION=100'-0" IS THE REFERENCE DATUM FOR THESE STRUCTURAL DRAWINGS. SEE SITE DRAWINGS FOR FINAL FINISH FLOOR ELEV. AND SITE GRADING INFORMATION
5. SEE SHEETS S-001 & S-002 FOR GENERAL STRUCTURAL NOTES AND ADD'N'L INFO.
6. SEE SHEET S-901 & S-902 FOR TYPICAL CONCRETE & MASONRY DETAILS.
7.  INDICATES 8" MEDIUM WEIGHT CMU WALL, SOLID GROUTED
8. TYPICAL LINTEL REINF IS (2)#4 BARS BOTTOM. EXTEND 24" BEYOND MAN DOOR OPENING
9. RD-1 INDICATES 1 1/2" 22 GAGE TYPE 'B' STEEL ROOF DECK (3-SPAN MIN), W/ G-90 COATING. SECURE W/ (7) PUDDLE WELDS PER SHEET OR 6" O.C. AT PERIMETER AND BUTTON PUNCH SEAMS AT 12" O.C.
10. ALL EXPOSED STRUCTURAL STEEL TO BE PREPARED AND PAINTED PER SPECIFICATION SECTIONS 051200 AND 05500. SEE SECTION 099600 FOR FINISH COATINGS APPLICATION.



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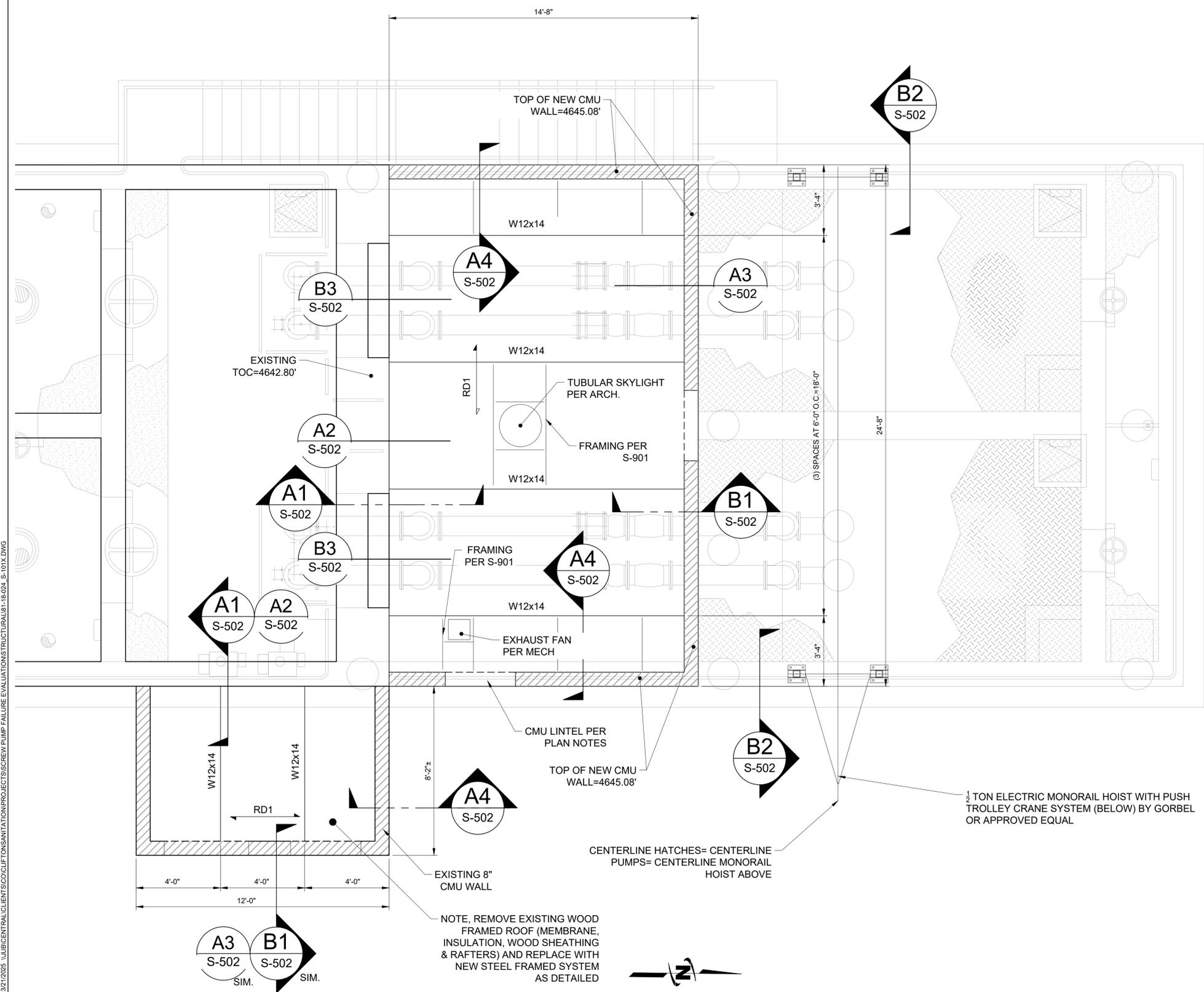
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CLIFTON REGIONAL WWTP
INFLUENT PUMP STATION UPGRADES
ROOF FRAMING PLAN

FILE: 81-18-024_S-101X
JUB PROJ. #: 81-18-024
DRAWN BY: TJG
DESIGN BY: KCY
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LAST UPDATED: 3/28/2025

SHEET NUMBER:
S-102



ROOF FRAMING PLAN
SCALE: 3/8"=1'-0"

Plot Date: 4/8/2025 2:51 PM Plotted By: Tamer Geremunden
 Date Created: 3/27/2025 JUB\CENTRAL\CLIENTS\COCULIF\TNSANITATION\PROJECTS\SCREW PUMP FAILURE EVALUATION\STRUCTURAL\81-18-024_S-101X.DWG



3/28/25

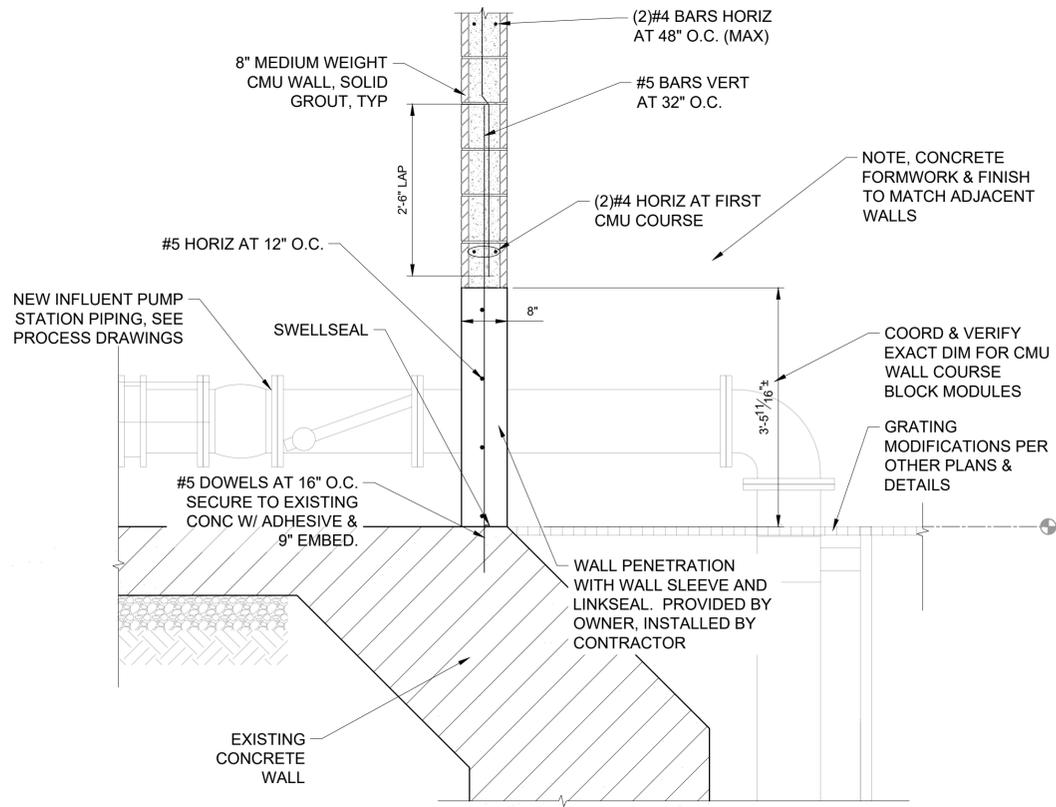
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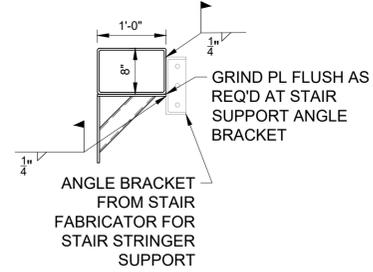
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 INFLUENT PUMP STATION UPGRADES
 STRUCTURAL DETAILS

FILE: 81-18-024_S-501X
 JUB PROJ. #: 81-18-024
 DRAWN BY: TJG
 DESIGN BY: KCY
 CHECKED BY: SPJ

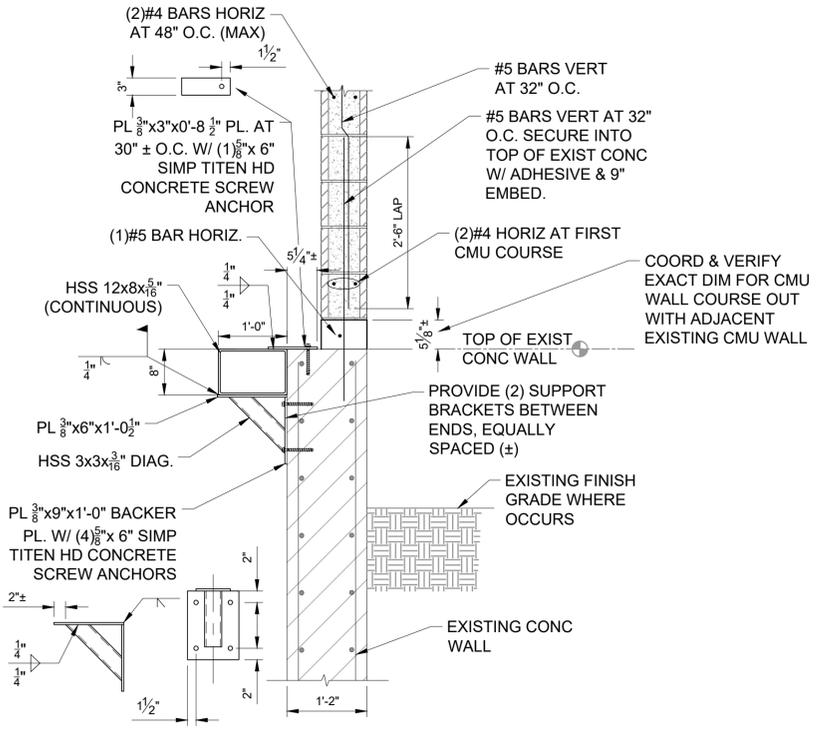
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S-501



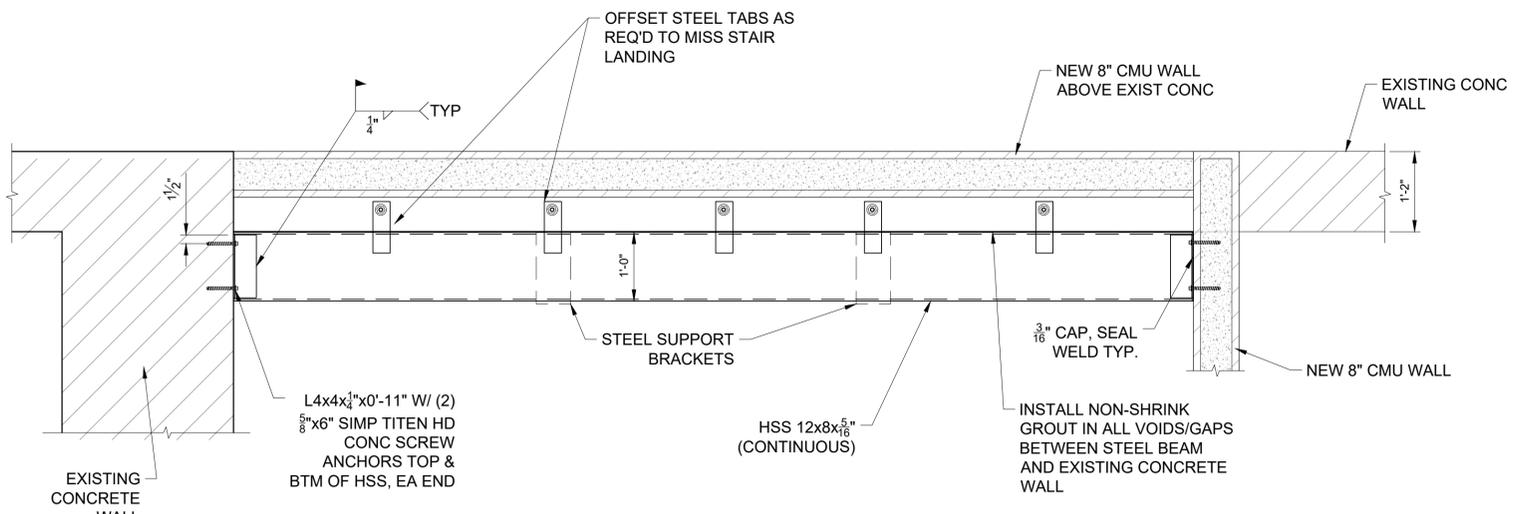
A1 NORTH WALL TO EXSITING CONCRETE DETAIL
 SCALE: 3/4"=1'-0"



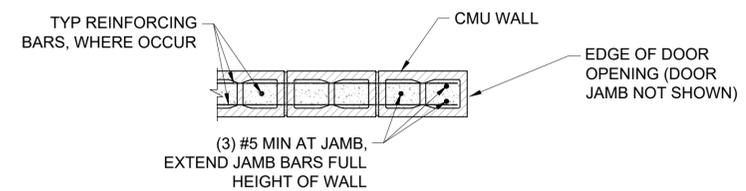
AT STAIR LANDING



A2 EAST/WEST WALL TO EXISTING CONCRETE DETAIL
 SCALE: 3/4"=1'-0"



B1 HORIZONTAL BEAM PLAN VIEW DETAIL
 SCALE: 3/4"=1'-0"



NOTE: REFER TO OTHER DETAILS & NOTES FOR REINFORCING.

B2 TYPICAL CMU WALL JAMB REINFORCING
 SCALE: 3/4"=1'-0"

Plot Date: 4/6/2025 2:51 PM Plotted By: Tanner Germaine
 Date Created: 3/28/2025 JUB\CENTRAL\CLIENTS\COCLIF\CLIF SANITATION\PROJECTS\SCREW PUMP FAILURE EVALUATION\STRUCTURAL\B1-18-024_S-501X.DWG



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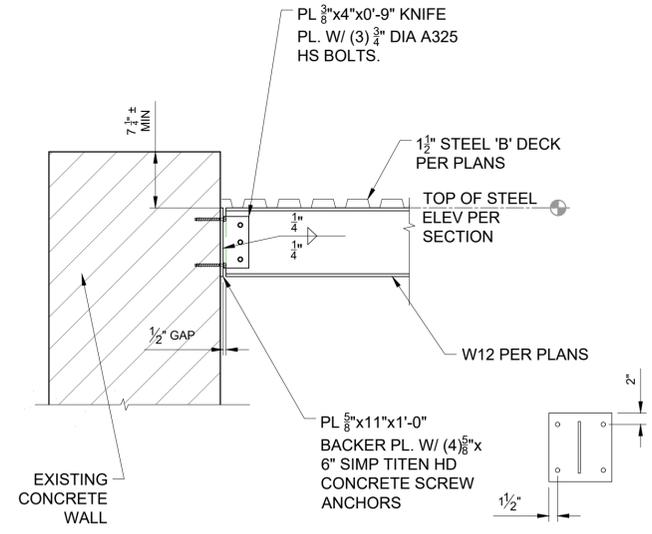
CLIFTON REGIONAL WWTP
 INFLUENT PUMP STATION UPGRADES
 STRUCTURAL DETAILS

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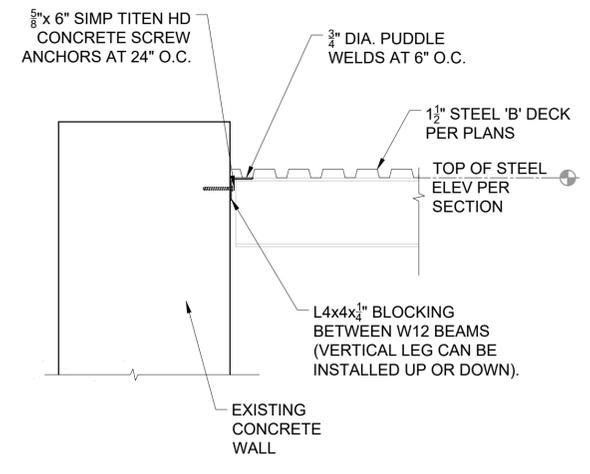
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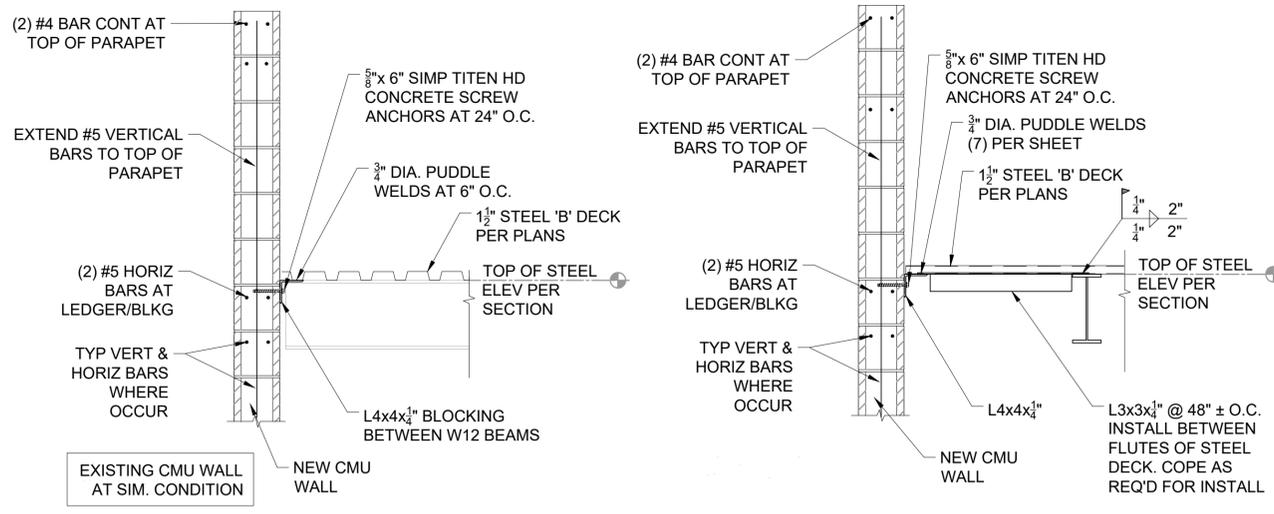
S-502



A1 NEW STEEL BEAM TO EXISTING CONCRETE WALL
 SCALE: 3/4"=1'-0"

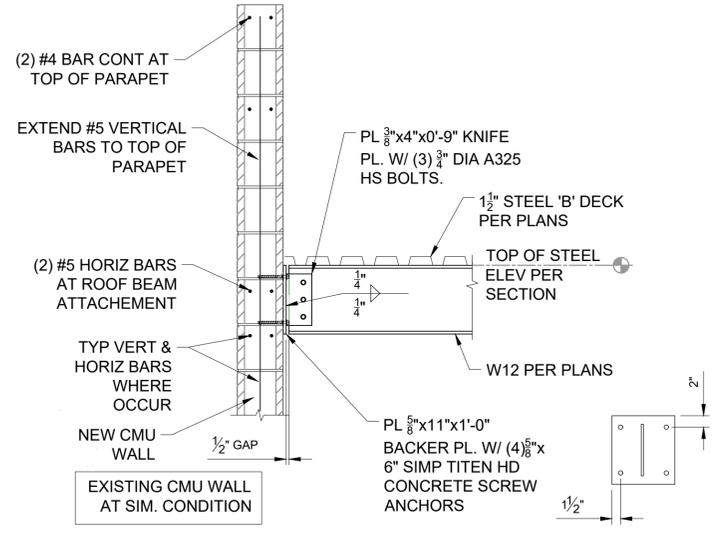


A2 NEW ROOF ANGLE TO EXISTING CONCRETE WALL
 SCALE: 3/4"=1'-0"

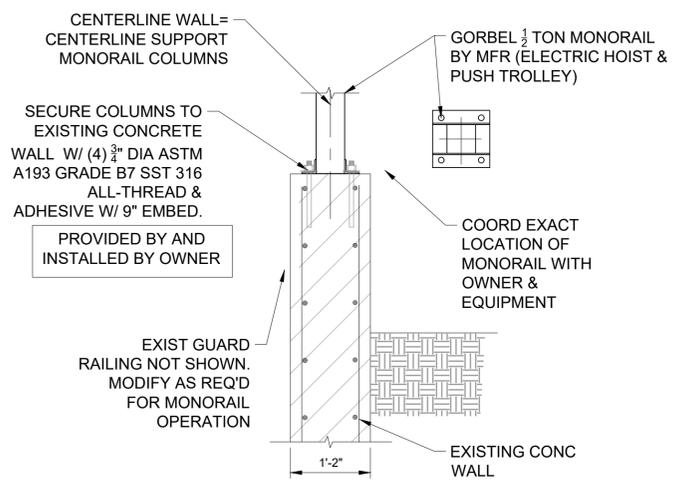


A3 NEW ANGLE TO CMU WALL
 SCALE: 3/4"=1'-0"

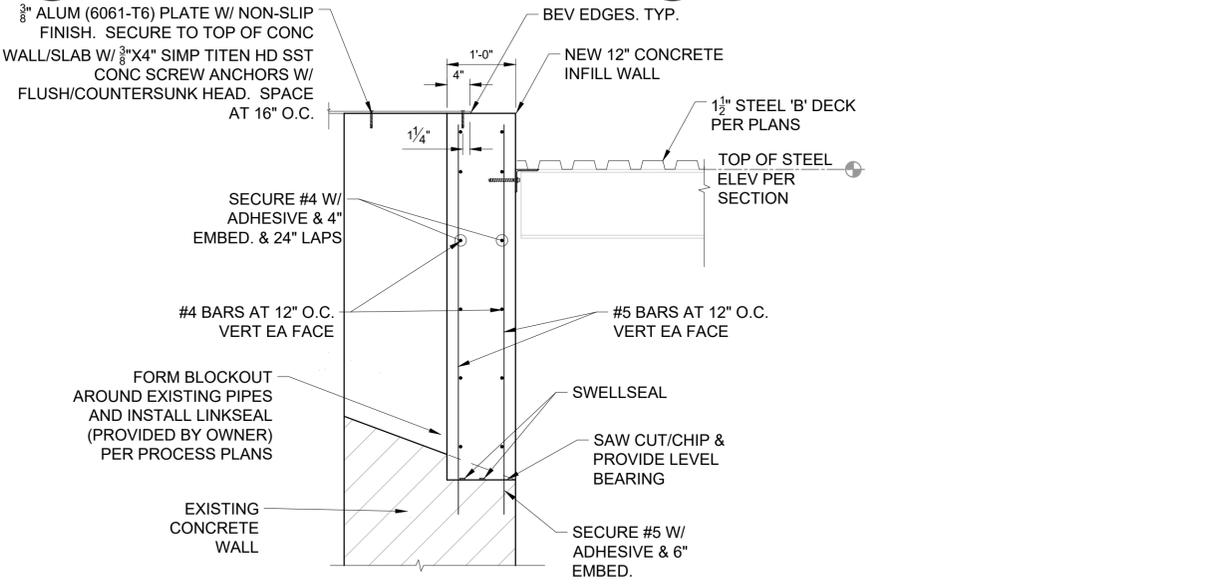
A4 ROOF LEDGER ANGLE TO CMU WALL
 SCALE: 3/4"=1'-0"



B1 NEW STEEL BEAM TO CMU WALL
 SCALE: 3/4"=1'-0"

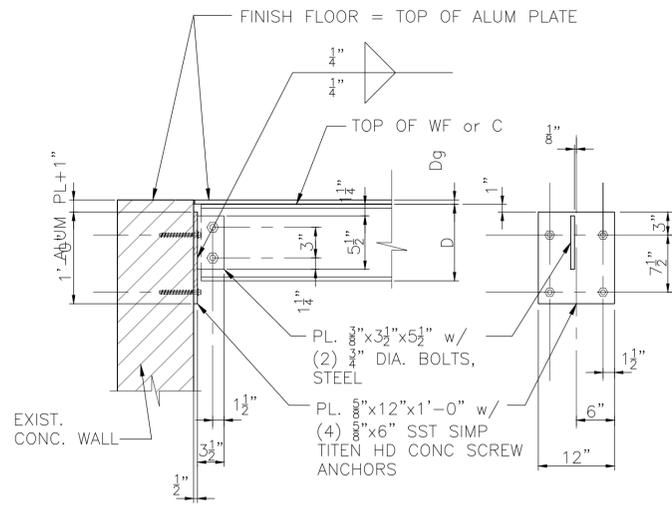


B2 NEW MONORAIL ATTACHMENT TO EXISTING CONC WALL
 SCALE: 3/4"=1'-0"



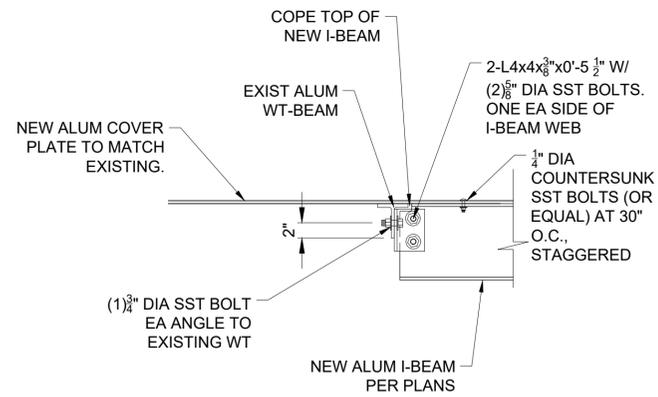
B3 CONCRETE INFILL AT EXISTING WALL DETAIL
 SCALE: 3/4"=1'-0"

Plot Date: 4/8/2025 2:51 PM, Plotted By: Tanner Germondien, Date Created: 3/28/2025, \\JUBCENTRAL\CLIENTS\COCLIF\INFLUENTPUMPSTATION\PROJECTS\SCREW PUMP FAILURE EVALUATION\STRUCTURAL\81-18-024_S-501X.DWG

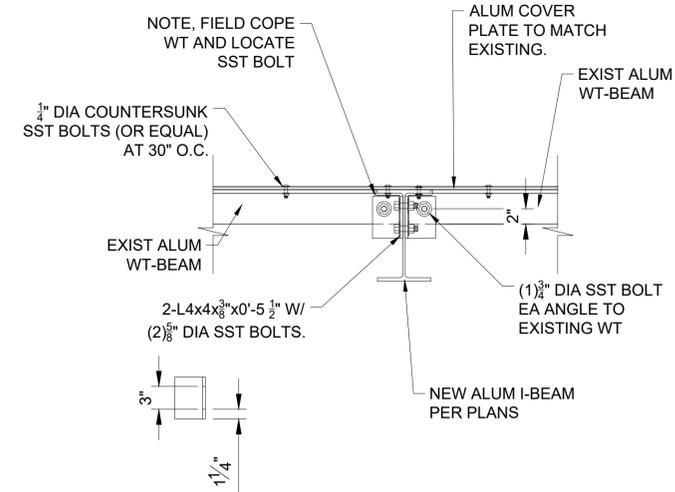


NOTE: ALL MATERIALS NOTED AS STEEL SHALL BE STAINLESS STEEL.
 COAT ALUMINUM SURFACES IN CONTACT WITH CONCRETE OR
 DISSIMILAR METALS w/ A COAT OF BITUMINOUS PAINT, TYPICAL.

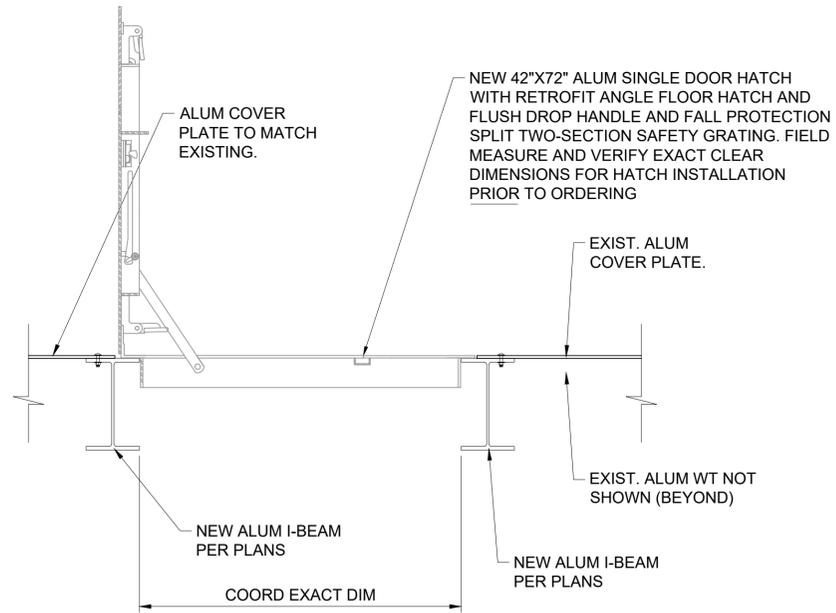
A1 TYP. ALUM W OR C SECTION WALL SHEAR PLATE DETAIL
 SCALE: 1"=1'-0"



A2 TYP. ALUM W TO EXISTING WT DETAIL
 SCALE: 1"=1'-0"



A3 EXIST ALUM WT TO NEW ALUM I-BEAM DETAIL
 SCALE: 1"=1'-0"



B1 NEW ALUM HATCH TO NEW WF BM DETAIL
 SCALE: 1"=1'-0"



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CLIFTON REGIONAL WWTP
 INFLUENT PUMP STATION UPGRADES

STRUCTURAL DETAILS

FILE: 81-18-024_S-501X
 JUB PROJ. #: 81-18-024
 DRAWN BY: TJG
 DESIGN BY: KCJ
 CHECKED BY: SPJ

ONE INCH
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 LAST UPDATED: 3/28/2025

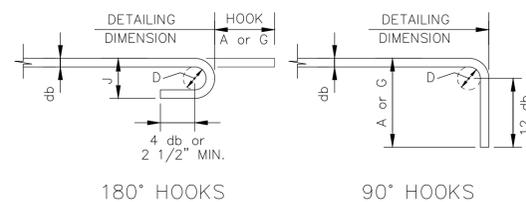
SHEET NUMBER:

S-503

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
#3	A	16	25	14	21	14	20	13	19
	B	21	32	19	28	18	27	17	25
#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 db & CLR. SPACING \geq db, AND STIRRUPS OR TIES THROUGHOUT Ld ARE PROVIDED.
CATEGORY 1: CLEAR COVER \geq db & CLR. SPACING \geq 2db.
CATEGORY 2: CLEAR COVER < db OR CLR. SPACING < 2db.
 - 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.

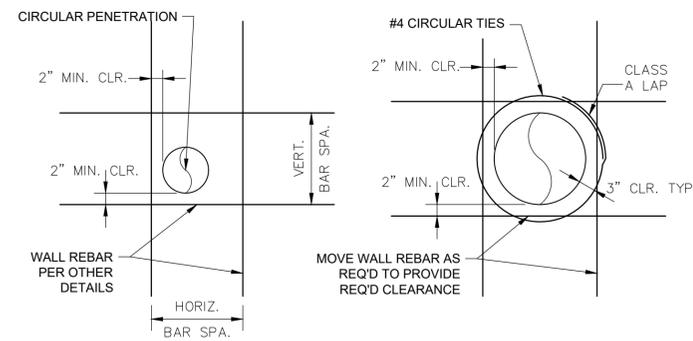
A1 TYPICAL CONCRETE REBAR LAP SPLICE SCHEDULE
SCALE:N.T.S.



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"

- NOTES:
- db = NOMINAL BAR DIAMETER.
 - D = FINISHED INSIDE BEND DIAMETER.
 - MINIMUM D = 6 db FOR #3 TO #8 BARS
 - MINIMUM D = 8 db FOR #9 TO #11 BARS
 - MINIMUM D = 10 db FOR #14 AND #18 BARS
 - TYPICAL MINIMUM END HOOKS, ALL GRADES OF STEEL.

A2 TYPICAL REBAR HOOKS DETAIL
SCALE:N.T.S.

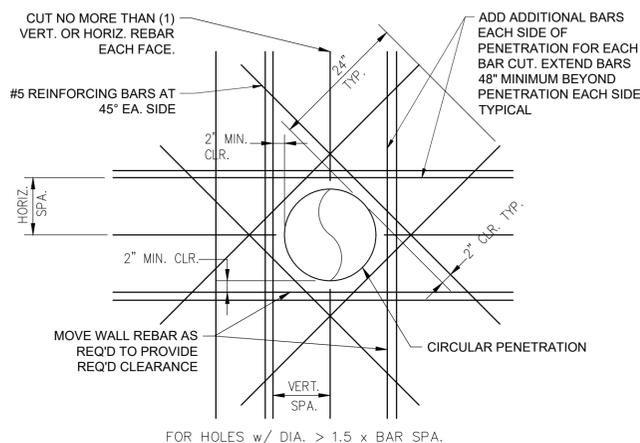


FOR HOLES w/ DIA. > BAR SPA. + 4" AND w/ DIA. < 1.5 x BAR SPA.

- NOTE: NO SPECIAL REINFORCEMENT IS REQUIRED AROUND THE PENETRATION.
- NOTE: PROVIDE (1) CIRCULAR TIE FOR WALLS w/ ONE MAT OF REBAR & (2) TIES FOR WALLS w/ TWO MATS OF REBAR

- NOTE: REFER TO GENERAL NOTES FOR REBAR CLEARANCE REQUIREMENTS. REFER TO OTHER DETAILS FOR WALL/SLAB REINFORCING SIZE AND SPACING. BAR SPACING REFERS TO THE LESSER OF THE VERT. OR HORIZ. BAR SPACING. DETAIL IS SIMILAR FOR EITHER VERTICAL WALL OR HORIZONTAL SLAB LOCATIONS.

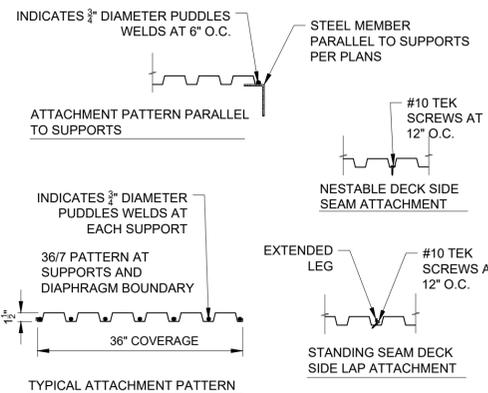
A3 TYP. CONCRETE WALL OR SLAB PENETRATION ON DETAIL
SCALE:N.T.S.



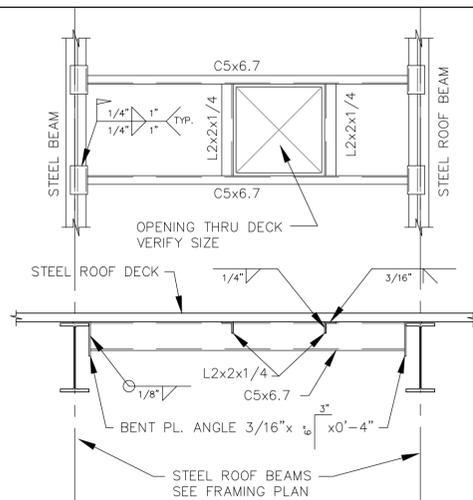
FOR HOLES w/ DIA. > 1.5 x BAR SPA.

- NOTE: PROVIDE (4) REINFORCING BARS FOR WALLS w/ ONE MAT OF REBAR & (4) REINFORCING BARS EA. FACE FOR WALLS w/ TWO MATS OF REBAR. REFER TO GENERAL NOTES FOR REBAR CLEARANCE REQUIREMENTS. REFER TO OTHER DETAILS FOR REBAR SIZE AND SPACING REQUIREMENTS. BAR SPACING REFERS TO THE LESSER OF THE VERT. OR HORIZ. BAR SPACING. DETAIL IS SIMILAR FOR VERTICAL WALL AND HORIZONTAL SLAB LOCATIONS.

B1 TYP. CONCRETE WALL OR SLAB PENETRATION ON DETAIL
SCALE:N.T.S.

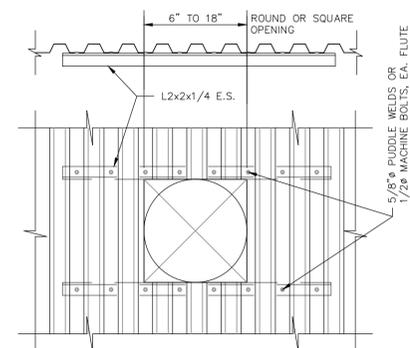


C1 TYP. STEEL DECK ATTACHMENT DETAIL
SCALE:N.T.S.



- NOTE: REFER TO MECHANICAL PLANS FOR OPENING SIZES AND LOCATIONS. TYP. FOR DECK OPENINGS 18" WIDE OR GREATER, U.N.O..

C2 TYPICAL MISCELLANEOUS STEEL FRAMING FOR ROOF DECK MECHANICAL OPENINGS
SCALE:3/4" = 1'-0"



- NOTE: REFER TO MECHANICAL PLANS FOR OPENING SIZES AND LOCATIONS. EXTEND L2x2x1/4 A MINIMUM OF (2) FLUTES PAST EACH SIDE OF OPENING. DETAIL IS TYPICAL FOR OPENINGS THROUGH ROOF DECKING 6" TO 18" IN SIZE, SUPPORTING LOADS OF LESS THAN 100 LBS.

C3 TYPICAL MISCELLANEOUS STEEL FRAMING FOR ROOF DECK MECHANICAL OPENINGS
SCALE:3/4" = 1'-0"



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INFLUENT PUMP STATION UPGRADES

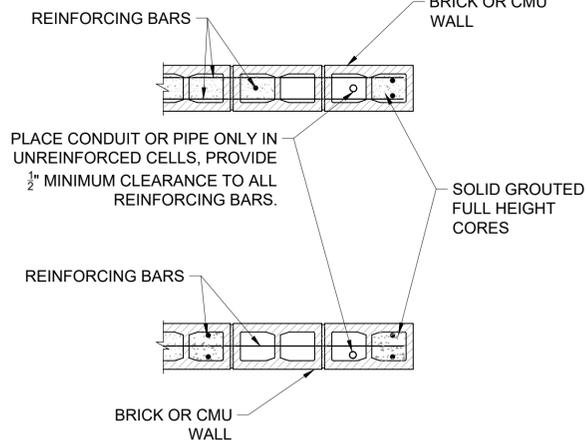
TYPICAL STRUCTURAL DETAILS

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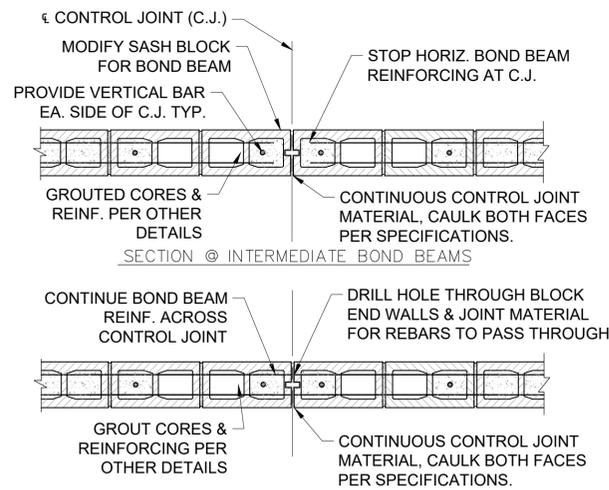
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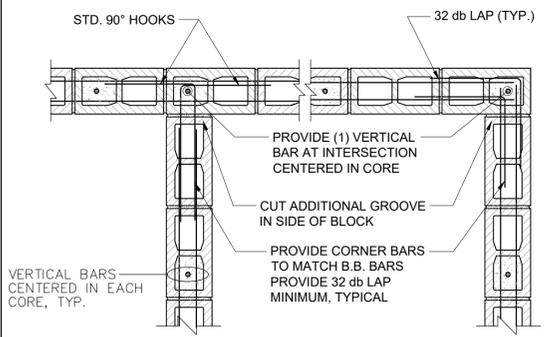
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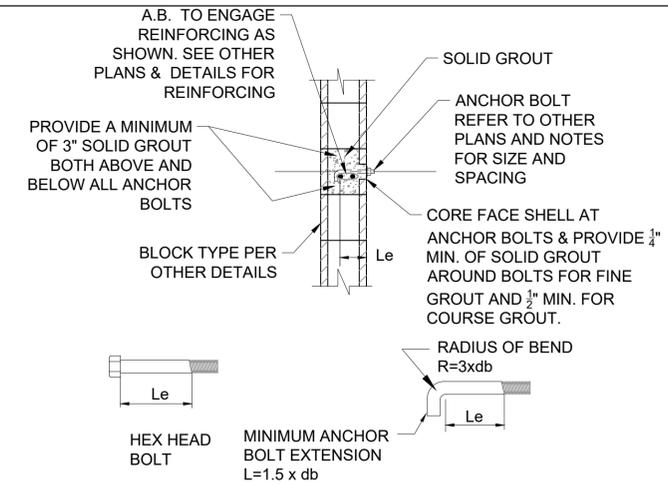
A1 TYP. MASONRY WALL CONSTRUCTION DETAIL
SCALE:N.T.S.



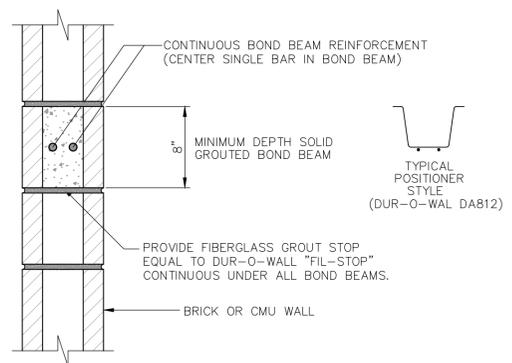
A2 TYP. MASONRY WALL CONTROL JOINT DETAILS
SCALE:N.T.S.



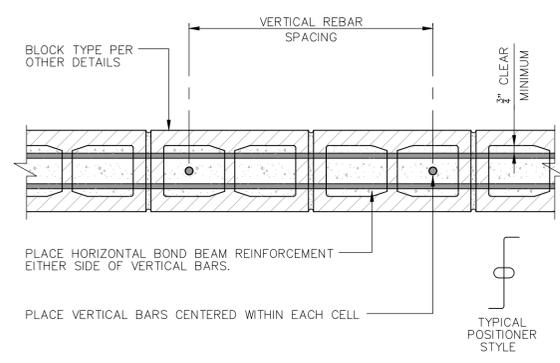
A4 TYP. MASONRY WALL INTERSECTION DETAILS
SCALE:N.T.S.



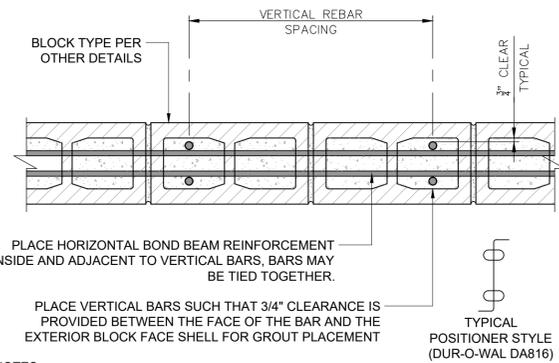
A4 TYP. MASONRY WALL ANCHOR BOLT EMBED DETAIL
SCALE:N.T.S.



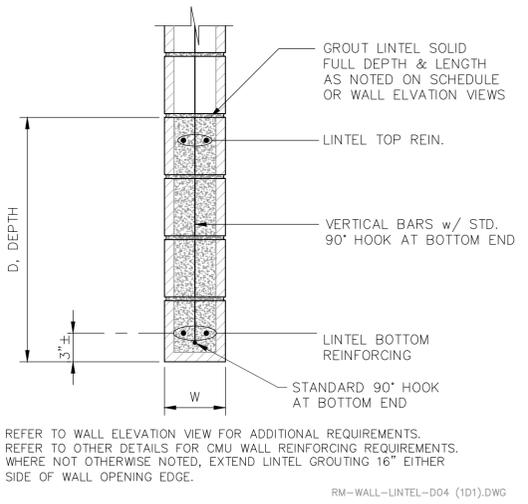
B1 TYP. MASONRY WALL BOND BEAM DETAIL
SCALE:N.T.S.



B2 TYP. MASONRY WALL REBAR PLACEMENT DETAIL
SCALE:N.T.S.



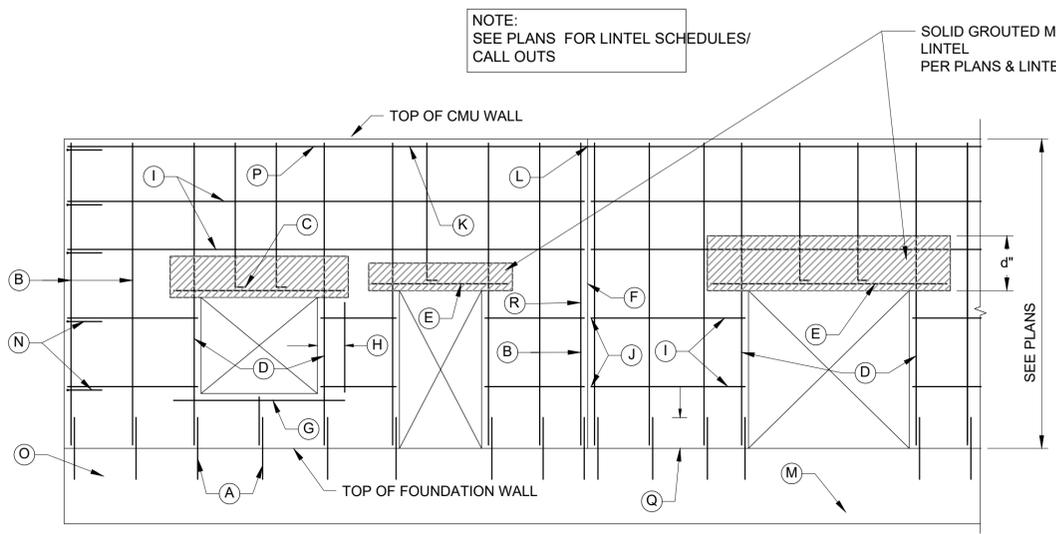
B3 TYP. MASONRY WALL LINTEL SECTION VIEW
SCALE:N.T.S.



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C1 TYP. REINFORCED CMU WALL ELEVATION
SCALE:N.T.S.

- (A) FOUND. DOWELS TO MATCH VERT. BAR LOCATIONS.
- (B) VERTICAL WALL BARS, 8" CMU: #5 VERT. @ 32" O.C. U.N.O.
- (C) STANDARD 90° HOOK.
- (D) 8" CMU: 2-#5 VERTICAL BARS, EA. SIDE OF OPENINGS TYP., U.N.O.
- (E) REFER TO LINTEL REINFORCING SCHEDULE
- (F) VERTICAL WALL CONTROL (C.J.) JOINTS. SEE PLANS
- (G) (2) #4 BAR UNDER EACH OPENING.
- (H) 48 BAR DIAMETERS MINIMUM.
- (I) HORIZ. B.B. REIN, 8" CMU: 2-#4 CONTINUOUS. USE (2)#5 BARS @ 12" CMU
- (J) STOP BOND BEAM BARS @ WALL CONTROL JOINT.
- (K) DIAPHRAGM CHORD B. B. W/ 2-#5 CONT.
- (L) CONTINUE BARS ACROSS WALL CONTROL JOINT.
- (M) CONC. STEM WALL, SEE OTHER DETAILS.
- (N) CORNER BARS AT EACH BOND BEAM.
- (O) FOUNDATION WALL, SEE OTHER DETAILS
- (P) LAP DIAPHRAGM B.B. BARS 72db MINIMUM.
- (Q) LAP 48 db MINIMUM.
- (R) VERT. BAR/BARS EA. SIDE OF C.J.

NOTES:
WALL SHOWN IS A REPRESENTATIVE SECTION OF TYPICAL MASONRY OR BRICK WALL. FOR ACTUAL WALL AND OPENING DIMENSIONS REFER TO THE PLANS AND ELEVATION VIEWS. REFER TO OTHER DETAILS AND STRUCTURAL NOTES FOR REINFORCING REQUIREMENTS

CLIFTON REGIONAL WWTP INFLUENT PUMP STATION UPGRADES

TYPICAL STRUCTURAL DETAILS

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LAST UPDATED: 3/28/2025
SHEET NUMBER: **S-902**

Plot Date: 4/6/2025 2:52 PM. Plotted By: Tamer Gommaden
Date Created: 2/21/2025. JUB CENTRAL CLIENTS\COCLIF\CONSANTATION\PROJECTS\SCREW PUMP FAILURE EVALUATION\STRUCTURE\81-18-024_S-901X.dwg

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REGISTERED PROFESSIONAL ENGINEER
46289
3/28/25

ARCHITECTURAL ABBREVIATIONS

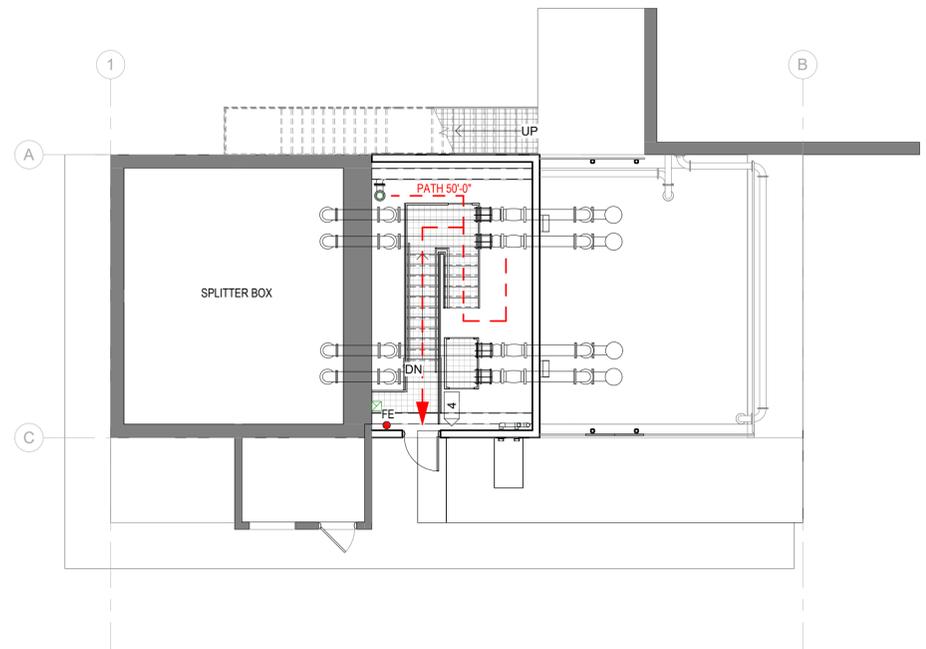
ABV above	EJF exterior insul finish sys	INCL include (d) (ing)	OPG opening	SHT sheet
ACC accessories	EJ expansion joint	INSUL insulate (d) (ing)	OPH oposite hand	SHTG sheathing
AFF above finished floor	EJ elevation	INT interior	OPP oposite	SIM similar
ALT alternate	ELEC electric (al)	INV invert	OSB oriented strand board	SND sanitary napkin disposal
AL aluminum	EM emergency	JST joint	OTS open to structure	SNV sanitary napkin vendor
APC acoustical panel ceiling	EWIC electric water cooler	JT joint	PB particle board	SPEC specification
ARCH architect (ural)	EQ end wall corner guard	L length, angle	PERF perforate (d)	SQ square
ASPH asphalt	EQ equal	LAM laminate (d)	PERIM perimeter	SS solid surface
A/C air conditioning	EXH exhaust	LAV lavatory	PLAM plastic laminate	SST stainless steel
BCS baby changing station	EXP exposed	LB pound	PLT plate	STD standard
BD board	EXT exterior	LF lineal foot	PNL panel	STL steel
BLDG building	FBO furnished by owner	LG laminated glass, glazing	PNT paint (ed)	STOR storage
BLKG blocking	FD floor drain	LT linoleum	PR pair	STR structural
BO bottom of	FDN foundation	LT light	PROJ projector, projection	SUSP suspended
BRG bearing	FE fire extinguisher	MA match	PT pressure treated	T tread
CBU cementitious backer unit	FEC fire extinguisher cabinet	MAS masonry	PTD paper towel dispenser	TB towel bar
CG corner guard	FEP finished end panel	MATL material	PTN partition	TD travel distance
CJ control joint	FFE finished floor elevation	MAX maximum	PVC polyvinyl chloride	TEL telephone
CLG ceiling	FIN finish	MB marker board	PVMT pavement	T.O. top of
CLR clear (ance)	FLG flashing	MECH mechanic (al)	PWD plywood	TOC top of concrete
CMU concrete masonry unit	FLR floor (ing)	MFR manufacture (f) (d)	QT quarry tile	TOS top of steel
COL column	FLUR fluorescent	MH manhole	R riser, radius	TOW top of wall
CONC concrete	FO face of	MIN minimum	RB rubber base	TPD toilet paper dispenser
CONT continuous or continue	FRMG framing	MISC miscellaneous	REC recycling	TS tube steel
CORR corridor	FRP fiber reinforced plastic	MLD molding, moulding	RCMD recommend (ed) (ations)	TYP typical
CPET common path of egress travel	FTG footing	MT metal	REF reference	T&G tongue and groove
CPT carpet (ed)	GA gage, gauge	N north	REIN reinforcement (d) (ing)	UNO unless noted otherwise
CSMT casement	GAL gallon	N/A not applicable	REV revision (s), revised	VB vapor barrier
CT ceramic tile	GALV galvanized	NIC not in contract	RD roof drain	VCT vinyl composition tile
CTR center	GB grab bar	NOM nominal	RFG roofing	VERT vertical
CWOG center wall on grid	GCL general contractor	NTS not to scale	RM robe hook	VIF verify in field
DBL double	GWB gypsum wallboard	NECY necessary	RO room	VM vending machine
DEMO demolish / demolition	GYP gypsum	OC on center (s)	ROW rough opening	VNL vinyl sheet
DF drinking fountain	HAS headed anchor stud	OD outside diameter	RR right of way	VTR vent through roof
DIM dimension (s)	HB hose bibb	OFCI owner furnished, contractor installed	RTU roof top unit	W west, wide, width
DIR direction	HCP handicap (ed)	OFOI owner furnished, owner installed	RUB rubber	WI with
DISP dispenser	HDR header	OH overhead	S south	WB wood base
DN down	HDW hardware	HT height	SAG susp acoustic grid	WC watercloset
DR door	HM hollow metal	HVAC heating /ventilation / air conditioning	SC shower curtain rod & hooks	WD wood
DS downspout	HOR horizontal	HWD hardwood	SCH schedule	WDW window
DWL detail	HSS hollow structural sections	INCL include (d) (ing)	SD soap dispenser	WF wide flange
DWG drawing	HT height	INSUL insulate (d) (ing)		WG wire glass
DWR drawer	HWD hardwood	INT interior		W/O without
E east		INV invert		WP waterproof (ing)
EA each		JST joint		WR waste receptacle
EC evaporative cooler		JT joint		WRB weather resistive barrier
EG etched glass/glazing		L length, angle		WWM welded wire mesh

LIFE SAFETY LEGEND

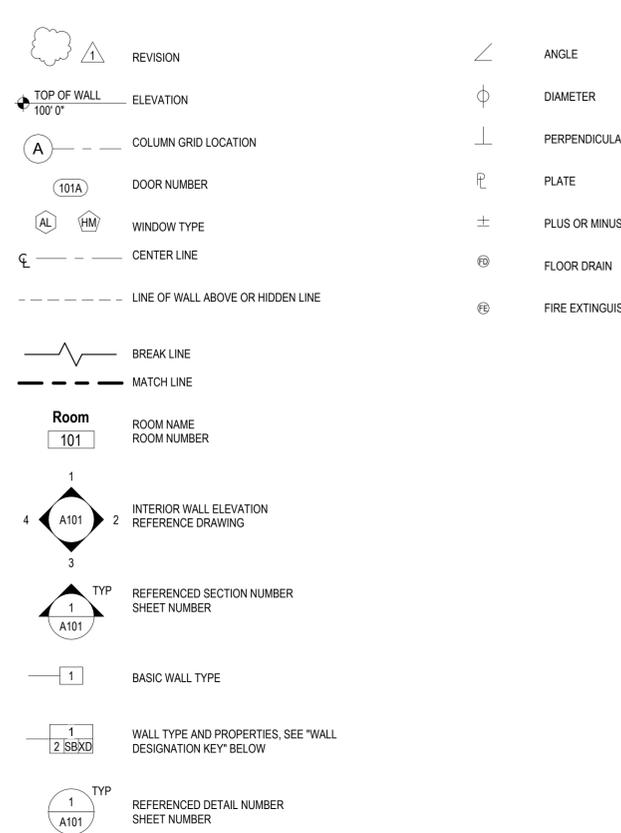


GENERAL LIFE SAFETY NOTES

- BUILDING WILL REMAIN OCCUPIED DURING CONSTRUCTION OPERATIONS SO FOLLOW INTERIM LIFE SAFETY MEASURES (ILSM) TO PROVIDE/MAINTAIN EGRESS ROUTES FROM THE BUILDING.



SYMBOLS



GENERAL NOTES

- COMPLY WITH ALL MANUFACTURERS RECOMMENDATIONS AND INDUSTRY STANDARDS RELEVANT TO THE WORK HEREIN.
- ALL DIMENSIONS ARE FROM FACE OF FINISH UNO.
- ALL ALIGNMENTS ARE FACE OF FINISH UNO.
- FIELD VERIFY ALL DIMENSIONS AND ROUGH OPENINGS PRIOR TO FABRICATION AND/OR INSTALLATION.

CODE CHECKLIST - ALTERNATE ORGANIZATION

CODES IN USE (PER "NAME" BUILDING DEPARTMENT):	2018 INTERNATIONAL BUILDING CODE (IBC)
	2018 INTERNATIONAL MECHANICAL CODE (IMC)
	2018 INTERNATIONAL PLUMBING CODE (IPC)
	2018 INTERNATIONAL FUEL GAS CODE (IFGC)
	2020 NATIONAL ELECTRICAL CODE (NEC)
	2018 INTERNATIONAL FIRE CODE (IFC)
	2018 INTERNATIONAL ENERGY CONSERVATION CODE (IECC)

CHAPTER 3: USE AND OCCUPANCY CLASSIFICATION	
TYPE OF OCCUPANCY (SECTION 312.1):	OCCUPANCY GROUP, U
CHAPTER 4: SPECIAL DETAILED REQUIREMENTS BASED ON USE AND OCCUPANCY	
UNDERGROUND BUILDINGS (SECTION 405.1)	N/A TO PUMP STATIONS AND OTHER SIMILAR MECHANICAL SPACES.

CHAPTER 5: GENERAL BUILDING HEIGHTS AND AREAS	
ALLOWABLE NUMBER OF STORIES (TABLE 504.4):	2
PROVIDED NUMBER OF STORIES:	1
TOTAL ALLOWABLE AREA	8500 SF
TOTAL PROVIDED AREA:	321 SF ADDITION 507 SF EXISTING 828 SF TOTAL

AUTOMATIC SPRINKLER SYSTEM	N/A
FIRE EXTINGUISHER:	1 WITHIN 75 FT OF TRAVEL

CHAPTER 6: TYPES OF CONSTRUCTION	
TYPE OF CONSTRUCTION (601):	TYPE IIB

CHAPTER 7: FIRE AND SMOKE PROTECTION FEATURES	
N/A	

CHAPTER 9: FIRE PROTECTION SYSTEMS	
AUTOMATIC SPRINKLER SYSTEM PROVIDED:	NONE

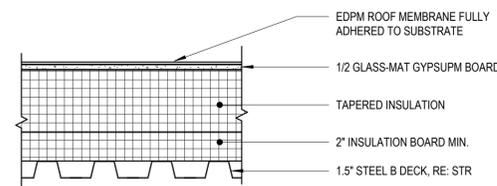
CHAPTER 10: MEANS OF EGRESS	
OCCUPANT LOAD:	312/100 GSF = 3.12 THEREFORE 4
WIDTH OF EXITS (SECTION 1010.1.1):	32 INCHES
PROVIDED EXIT WIDTH	36 INCHES

EXIT ACCESS TRAVEL DISTANCE (TABLE 1017.2):	200 FT (w/o SPRINKLER)
NUMBER OF EXITS REQUIRED FOR BUILDING (TABLE 1006.2.1):	1
EXITS PROVIDED:	1

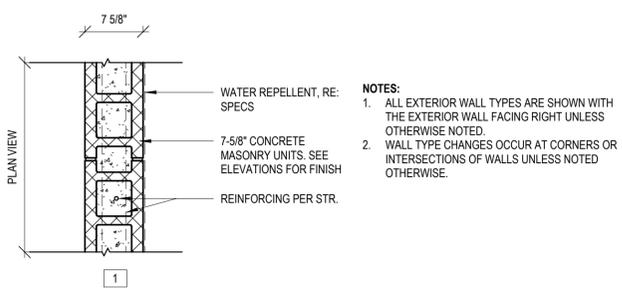
LADDERS (SECTION 1011.16)	ELEVATED LEVELS IN GROUP U NOT OPEN TO THE GENERAL PUBLIC.
ALTERNATE MEANS REQUEST (SECTION 104.11)	ALTERNATE MEANS JUSTIFICATION PER SECTION 1011.16 OF THE 2018 INTERNATIONAL BUILDING CODE (IBC), A LADDER IS PERMITTED FOR ACCESS TO ELEVATED LEVELS IN GROUP U SPACES NOT OPEN TO THE PUBLIC. THIS PROPOSAL SEEKS TO SUBSTITUTE A STAIR FOR THE LADDER, AS THE STAIR PROVIDES EQUIVALENT OR SUPERIOR SAFETY, FUNCTIONALITY, AND ACCESSIBILITY.

IECC - CHAPTER 5	
LOW-ENERGY BUILDINGS (SECTION C402.1.1)	THE ENCLOSURE WILL NOT BE A CONDITIONED SPACE

ROOF TYPE



WALL TYPE



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**CLIFTON REGIONAL WWTP
INFLUENT PUMP STATION UPGRADES**

NOTES, SYMBOLS, ABBREVIATIONS AND WALL TYPES

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DESIGN BY:	Kevin
CHECKED BY:	Eric T.
100% CD's	
LAST UPDATED:	3/28/25
SHEET NUMBER:	A001

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GENERAL DEMOLITION NOTES

- SEE PROJECT MANUAL SPECIFICATIONS AND REQUIREMENTS FOR DEMOLITION.
- THE DOCUMENTS SHOW THE OVERALL EXTENT OF DEMOLITION REQUIRED. ALTHOUGH EACH COMPONENT MAY NOT BE SHOWN OR REFERENCED, REMOVE ITEMS CONSISTENT WITH THE NATURE OF DEMOLITION INDICATED.
- ALL CONDITIONS ARE EXISTING, IT SHALL BE THE CONTRACTORS RESPONSIBILITY TO FAMILIARIZE THEMSELVES WITH THE PROJECT CONDITIONS. RECORD AND REPORT ALL DEVIATIONS TO THE ARCHITECT AS SOON AS POSSIBLE.
- DO NOT DEMOLISH STRUCTURAL ELEMENTS WITHOUT APPROVAL FROM STRUCTURAL ENGINEER. PROVIDE TEMPORARY SHORING AND BRACING AS NEEDED TO MAINTAIN STRUCTURAL INTEGRITY.
- REMOVE LOOSE OR CRACKED MATERIAL AT AREAS ADJACENT TO INDICATED DEMOLITION IF DAMAGED BY DEMOLITION OPERATIONS. PATCH AREAS WITH MATCHING MATERIAL AND WORKMANSHIP.
- AT WALLS, FLOORS AND CEILING AREAS INDICATED FOR DEMOLITION, REMOVE ALL INTEGRAL DEVICES AND EQUIPMENT PRESENT UNLESS OTHERWISE INDICATED.
- ITEMS NOT NOTED FOR DEMOLITION ARE TO BE PROTECTED FROM DAMAGE AND PREPARED TO RECEIVE NEW WORK. SURFACES TO REMAIN THAT ARE DAMAGED DURING THE PERFORMANCE OF REQUIRED DEMOLITION SHALL BE PATCHED AND/OR PAINTED TO MATCH EXISTING TO REMAIN ADJACENT SURFACES UNLESS NOTED OTHERWISE.
- RECYCLE MERCHANTABLE MATERIALS TO THE GREATEST EXTENT POSSIBLE, I.E. STEEL.



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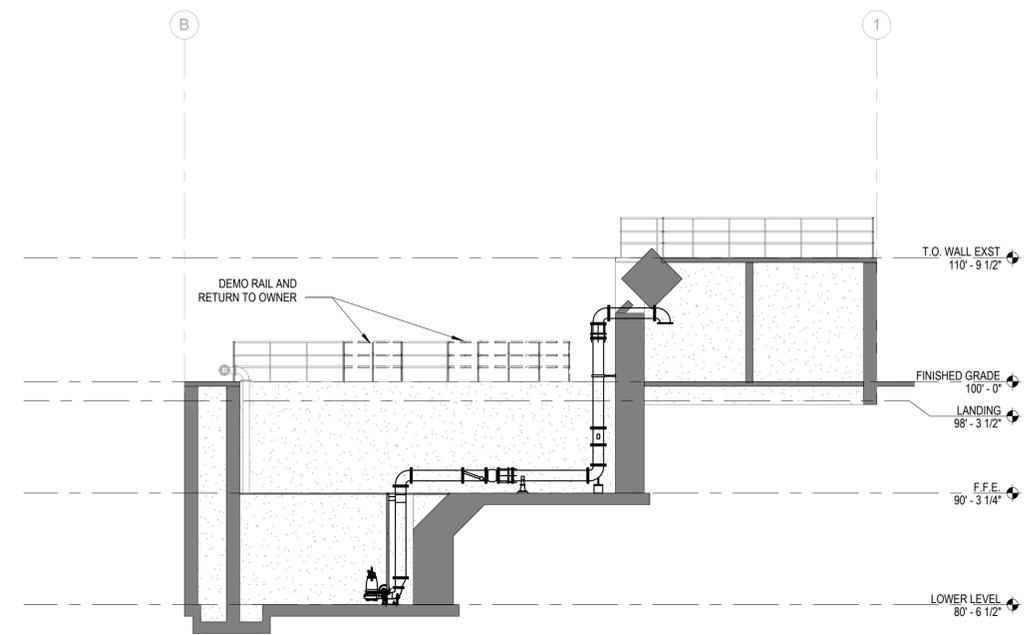
CLIFTON REGIONAL WWTP
INFLUENT PUMP STATION UPGRADES
DEMO PLANS

FILE:	JUB PROJ. #: 81-18-024
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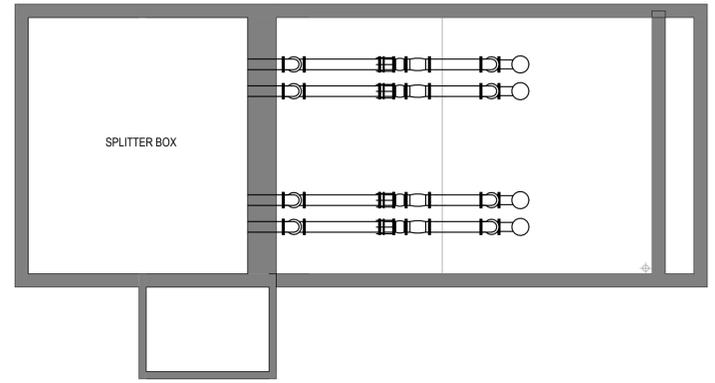
LEGEND

	EXISTING WALL TO BE DEMOLISHED
	EXISTING ITEM TO BE DEMOLISHED
	EXISTING WALL TO REMAIN
	EXISTING ITEM TO REMAIN

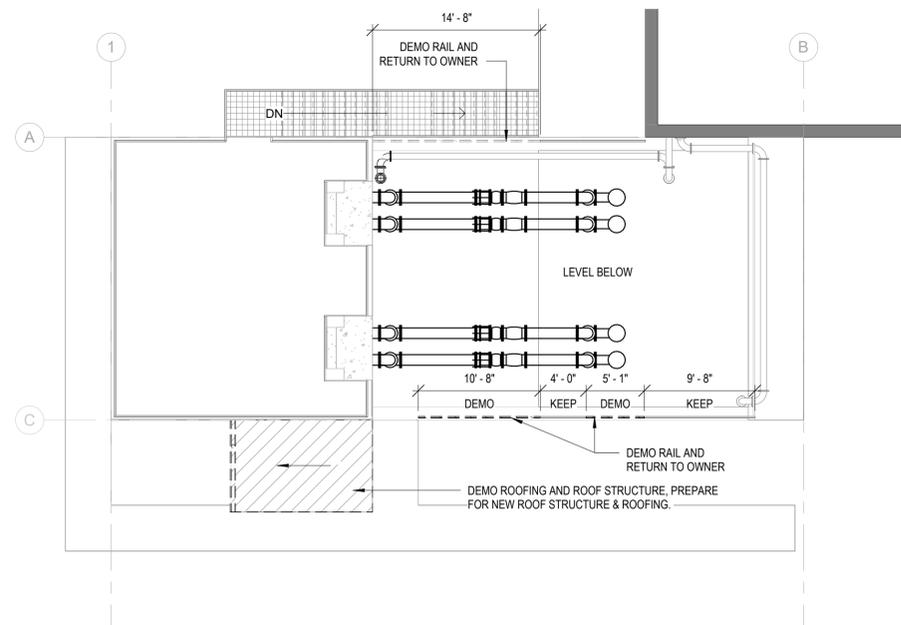
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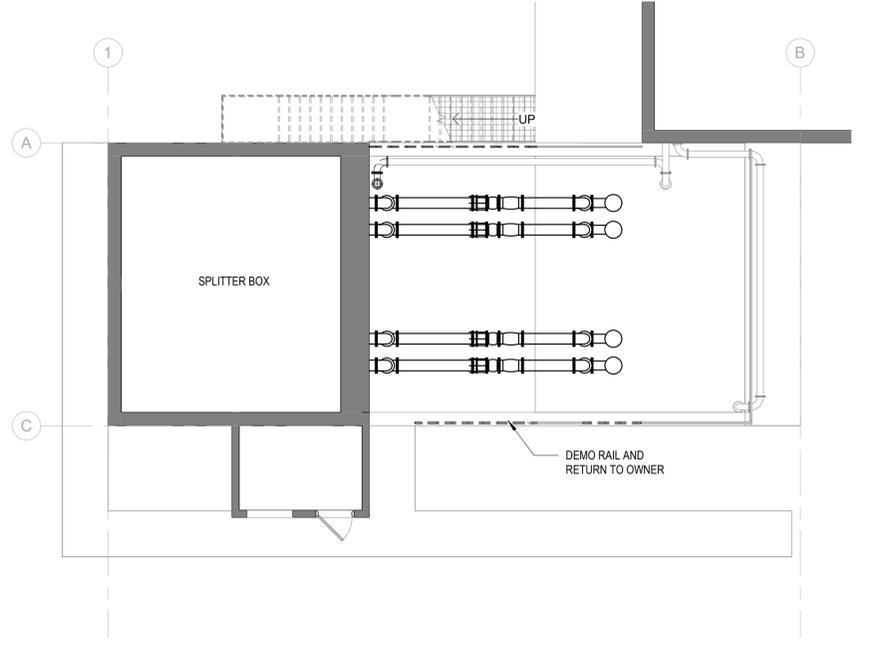
4 SECTION 2 - DEMO PLAN
A021



3 LOWER LEVEL - DEMO PLAN
A021



2 ROOF LEVEL - DEMO PLAN
A021



1 GRADE LEVEL - DEMO PLAN
A021

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**CLIFTON REGIONAL WWTP
 INFLUENT PUMP STATION UPGRADES**

CONSTRUCTION PLAN

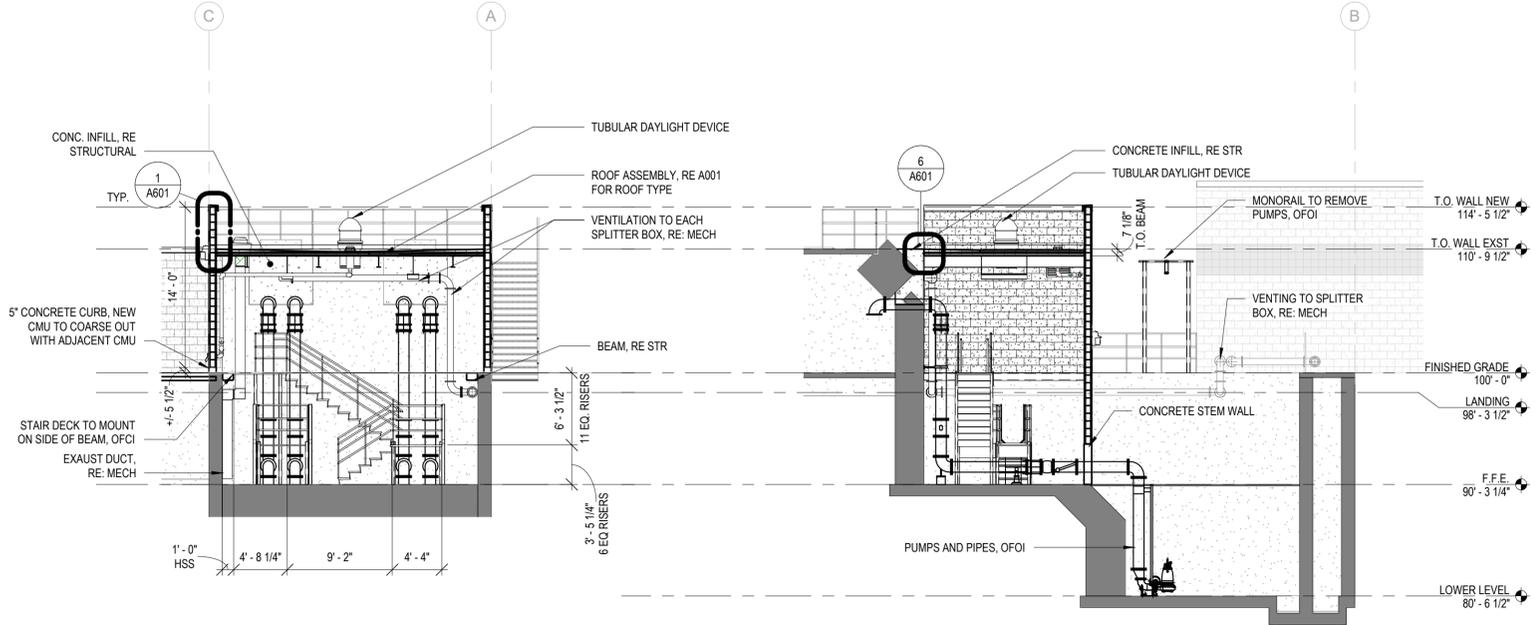
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SHEET NUMBER:	A101

GENERAL NEW CONSTRUCTION NOTES

- DO NOT SCALE DRAWINGS. IF DIMENSIONS ARE IN QUESTION THE CONTRACTOR SHALL BE RESPONSIBLE FOR OBTAINING CLARIFICATION FROM THE ARCHITECT PRIOR TO CONTINUING CONSTRUCTION.
- ITEMS NOT NOTED ON THE DRAWINGS SHALL BE CONSIDERED THE SAME AS NOTED ITEMS WHICH ARE GRAPHICALLY REPRESENTED IN THE SAME MANNER.
- CONTRACTOR SHALL CAULK AT THE INTERFACE OF INTERIOR FACES OF DOOR FRAMES WITH ADJACENT MATERIALS THOUGH JOINT MAY NOT BE VISIBLE.
- NEW HM DOOR FRAMES SHALL MATCH EXISTING FOR PROFILE AND CONSTRUCTION.
- FINISHES SHALL MATCH EXISTING UNLESS OTHERWISE NOTED. REFER TO THE MECHANICAL, ELECTRICAL, AND PLUMBING DRAWINGS FOR THE LOCATIONS OF PIPING, VENTS, DUCTS, CURBS, FANS AND OTHER ITEMS WHICH PENETRATE THE ROOF PLANE.

GENERAL ROOF NOTES

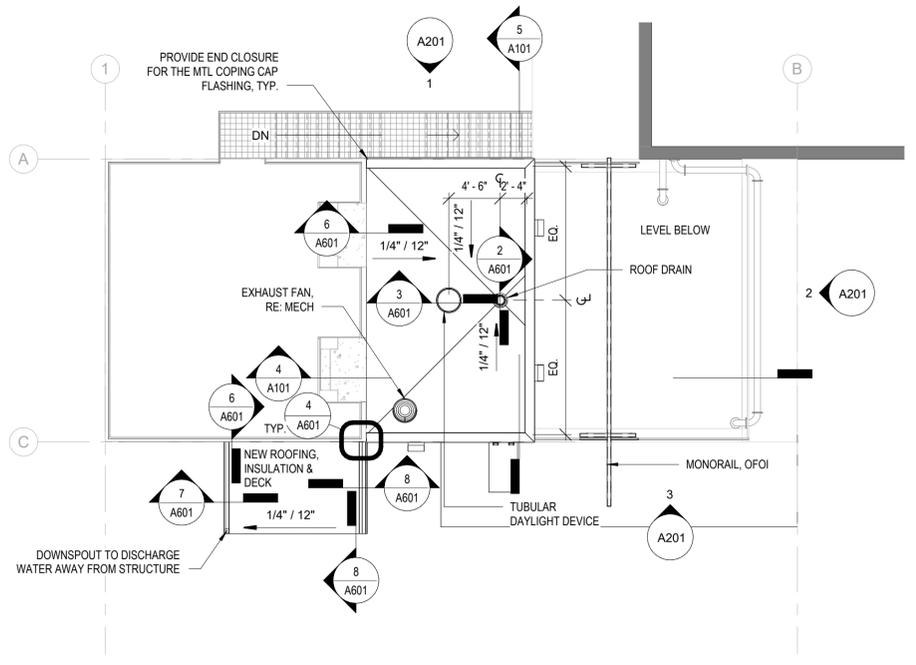
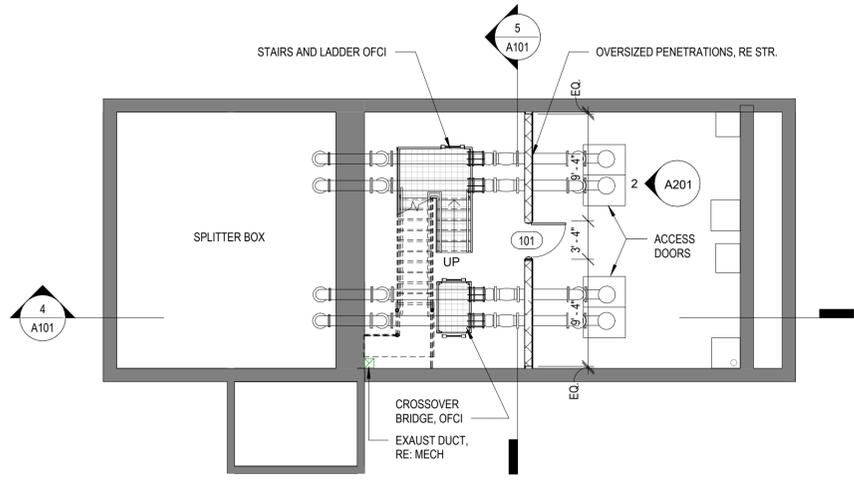
- MINIMUM INSULATION THICKNESS AT INTERNAL ROOF DRAINS SHALL BE 2 INCHES.
- PROVIDE POSITIVE DRAINAGE AT ALL AREAS OF ROOF. PONDING OF WATER IS NOT ACCEPTABLE.
- SEE REFLECTED CEILING PLANS FOR ADDITIONAL DIMENSIONS.
- SEE SPECIFICATIONS FOR ROOF ACCESSORY SIZES (LIGHT TUBES, ETC.).
- ALL EQUIPMENT CRICKETS SHALL BE SLOPED 1/2 INCH PER FOOT. IT SHALL BE THE LIGHT TUBE SUPPLIER'S RESPONSIBILITY TO DETERMINE AND PROVIDE THE APPROPRIATE LENGTH OF TUBING WITH OFFSETS / TRANSITIONS AS NEEDED TO FIT THE CEILING.
- REFER TO MEP SHEETS FOR ADDITIONAL INFORMATION ON THOSE WORK SCOPES AND FOR COORDINATION.



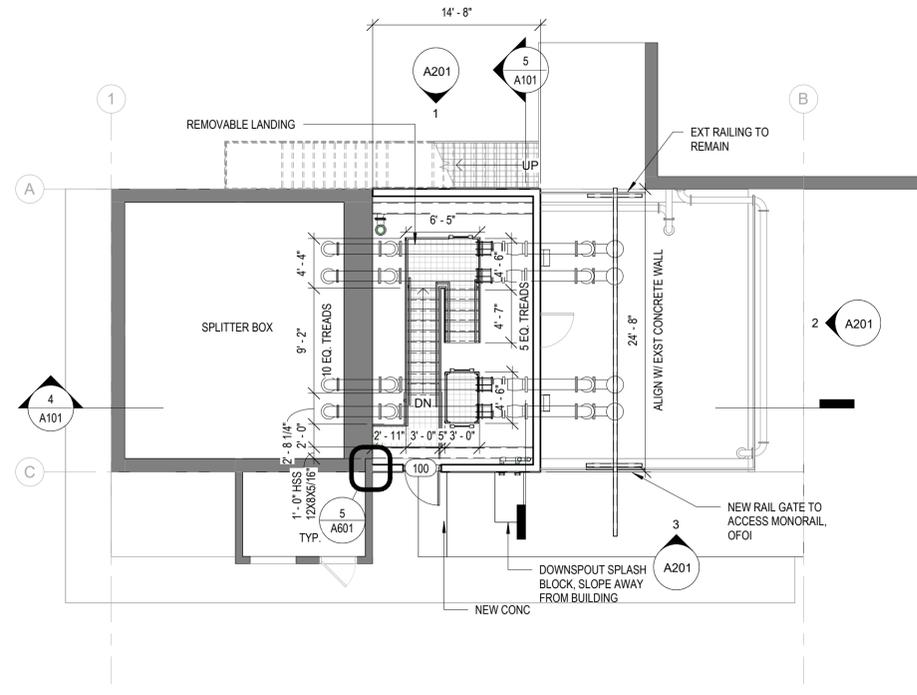
5 SECTION 1
 A101

4 SECTION 2
 A101

3 LOWER LEVEL - CONSTRUCTION PLAN
 A101



2 ROOF LEVEL - CONSTRUCTION PLAN
 A101



1 GRADE LEVEL - CONSTRUCTION PLAN
 A101

LEGEND

	EXISTING WALL TO REMAIN
	EXISTING ITEM TO REMAIN
	NEW WALL
	NEW ITEM

NOT FOR CONSTRUCTION

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**CLIFTON REGIONAL WWTP
 INFLUENT PUMP STATION UPGRADES**
 EXTERIOR ELEVATIONS, RCP & DOORS

FILE:	JUB PROJ. #: 81-18-024
DRAWN BY:	Kevin
DESIGN BY:	Kevin
CHECKED BY:	Eric T.

100% CD's
 LAST UPDATED: 3/28/25
 SHEET NUMBER:

A201

DOOR NO.	DOOR						FRAME			HDWR SET	NOTES		
	W	H	T	MATERIAL	TYPE	FIRE RATING	MATERIAL	TYPE	DETAIL				
									JAMB			HEAD	SILL
100	3'-0"	7'-5 1/2"	1 3/4"	HM	A		HM	1	9/A201	8/A201	4/A201	HW01	
101	3'-0"	7'-2"	1 3/4"	HM	A		HM	1	9/A201	8/A201	4/A201	HW02	

Abbreviation	Name
IVE	H.B. Ives
LCN	LCN Commercial Division
SCE	Schlage Electronic Security
SCH	Schlage Lock Company
VON	Von Duprin
ZER	Zero International Inc

Hardware Group No. 01 (#100)
 Provide each SGL door(s) with the following:

QTY	DESCRIPTION	CATALOG NUMBER	FINISH	MFR
1	SET HINGES	5BB1 NRP SERIES (QTY, WEIGHT, SIZE, AS REQ'D)	626	IVE
1	EA ELECTRONIC LOCKSET (STOREROOM)	AD200-CY70-MTK-RHO-L-CO6-5123-R114B-13-247-10425-134	626	SCH
1	EA SURFACE CLOSER (W/ HOLD OPEN)	4040XP HW/PA (3049-CNS)	626	LCN
1	EA KICK PLATE	8400 10" B-CS	630	IVE
1	EA RAIN DRIP	142	AA	ZER
1	EA DOOR SWEEP	39	A	ZER
1	EA SADDLE THRESHOLD	655 (5" wide x width as req'd)	AL	ZER
1	EA GASKETING	488S-CL @ HEAD & JAMBS	CL	ZER

Hardware Group No. 02 (#101)
 Provide each SGL door(s) with the following:

QTY	DESCRIPTION	CATALOG NUMBER	FINISH	MFR
1	SET HINGES	5BB1 NRP SERIES (QTY, WEIGHT, SIZE, AS REQ'D)	626	IVE
1	EA PASSAGE SET	ND10S RHO	626	SCH
1	EA SURFACE CLOSER (W/ HOLD OPEN)	4040XP HW/PA (3049-CNS)	626	LCN
1	EA KICK PLATE	8400 10" B-CS	630	IVE
1	EA RAIN DRIP	142	AA	ZER
1	EA DOOR SWEEP	39	A	ZER
1	EA SADDLE THRESHOLD	655 (5" wide x width as req'd)	AL	ZER
1	EA GASKETING	488S-CL @ HEAD & JAMBS	CL	ZER

KEYING: MATCH OWNERS EXISTING KEYWAY (6-pin Corbin Russwin KIL_L4) CONFIRM WITH OWNER PRIOR TO ORDERING.

END OF SECTION 08 7100
 DOOR HARDWARE 087100-1

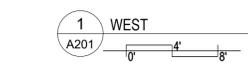
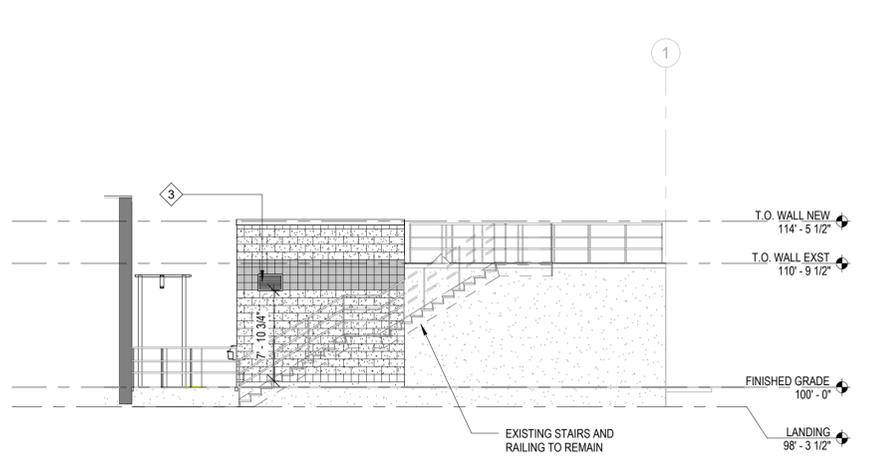
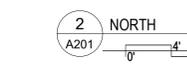
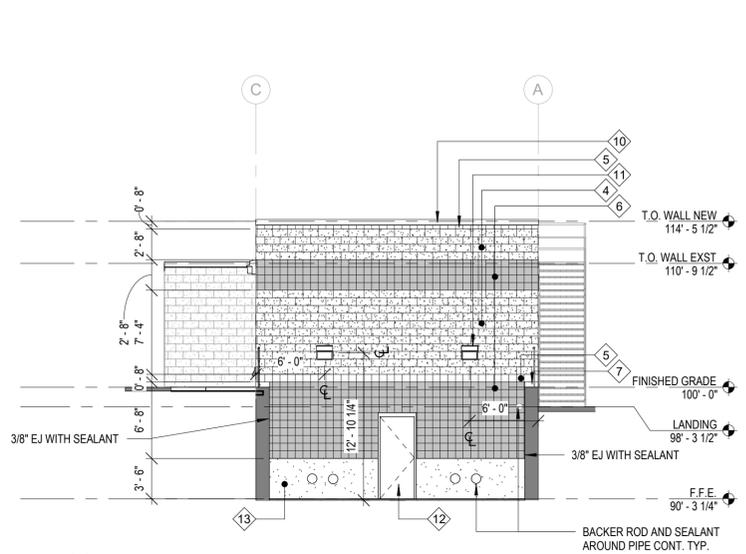
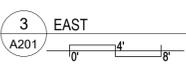
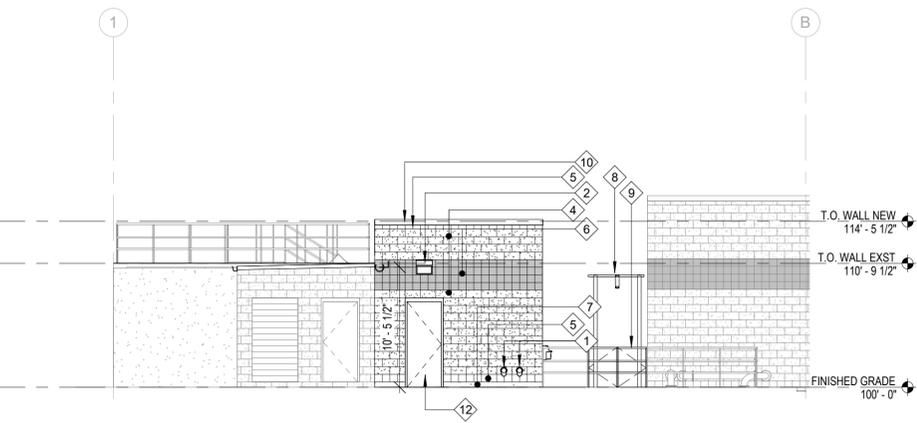
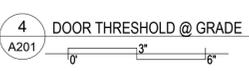
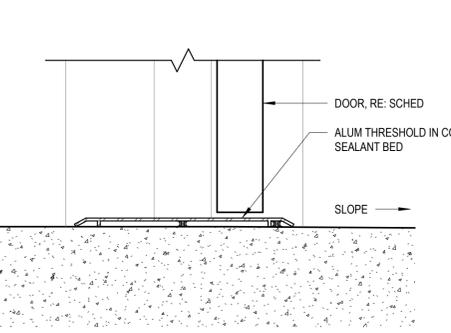
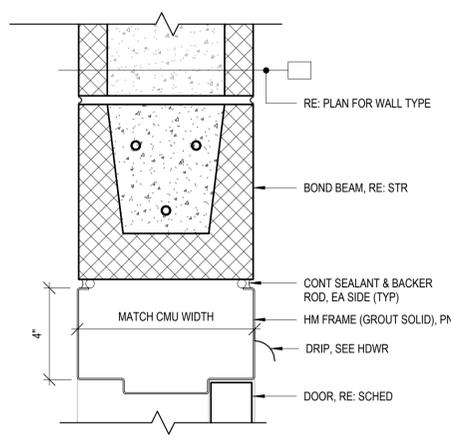
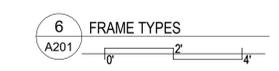
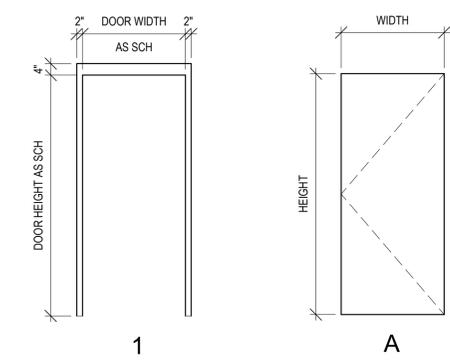
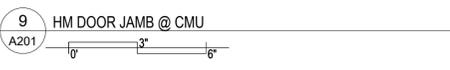
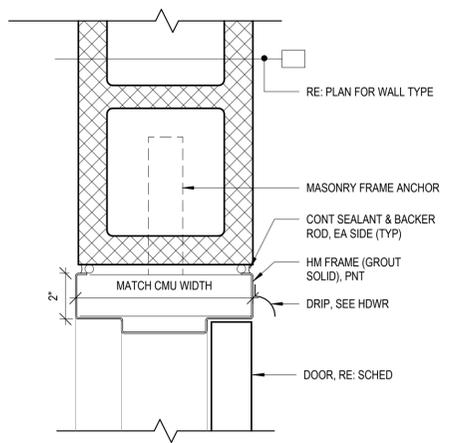
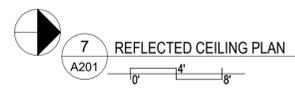
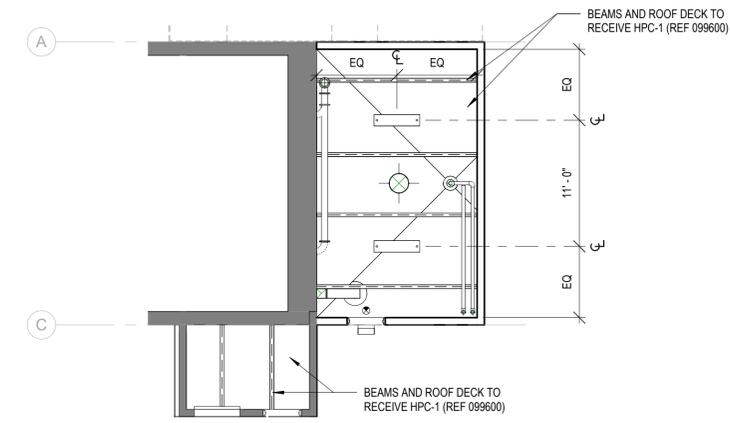
- GENERAL EXTERIOR MATERIAL KEYNOTES**
- ROOF DRAIN LAMBS TONGUE, CENTER IN CMU BLOCK. (RE: PLUMBING)
 - LIGHT TO BE CENTERED ABOVE DOOR. (RE: ELEC.)
 - LOUVER, RE MECH (MATCH EXST COLOR)
 - SPLIT FACE CMU, RUNNING BOND (MATCH EXST COLOR)
 - GROUND FACE CMU, SINGLE SCORE, LIGHT COLOR (MATCH EXST COLOR)
 - GROUND FACE CMU, SINGLE SCORE, DARK COLOR (MATCH EXST COLOR)
 - 5" CONCRETE STEM WALL TO ALIGN CMU COURSING WITH EXISTING CMU. (REF: STR)
 - MONORAIL, (RE STR) EXISTING
 - RAIL GATE TO ACCESS MONORAIL
 - PRE-FINISHED METAL COPING (SEE SPECS)
 - LIGHT FIXTURE, (RE: ELEC.)
 - HM DOOR AND FRAME, PAINT HPC-1
 - SMOOTH RUBBED CONCRETE FINISH

LEGEND

- LINEAR SUSPENDED LIGHT
- WALL PACK
- EXIT SIGN, INDICATING DIRECTIONAL ARROW & SIGN ORIENTATION
- OCCUPANCY SENSOR
- EXHAUST, RE MECHANICAL
- SOLATUBE

CEILING LEGEND NOTES:

- CENTER LIGHT FIXTURES IN SPACE AS SHOWN ON REFLECTED CEILING PLANS WHEN LIGHT FIXTURES ARE NOT DIMENSIONED.
- REFER TO ELECTRICAL DRAWINGS AND SPECIFICATIONS FOR SPECIFIC LIGHT FIXTURE TYPES AND ADDITIONAL INFORMATION ON ELECTRICAL DEVICES.
- REFER TO MECHANICAL DRAWINGS FOR HVAC GRILLE TYPES AND ADDITIONAL INFORMATION ON HVAC EQUIPMENT.



NOT FOR CONSTRUCTION

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NO.	REVISION	DESCRIPTION	BY	DATE

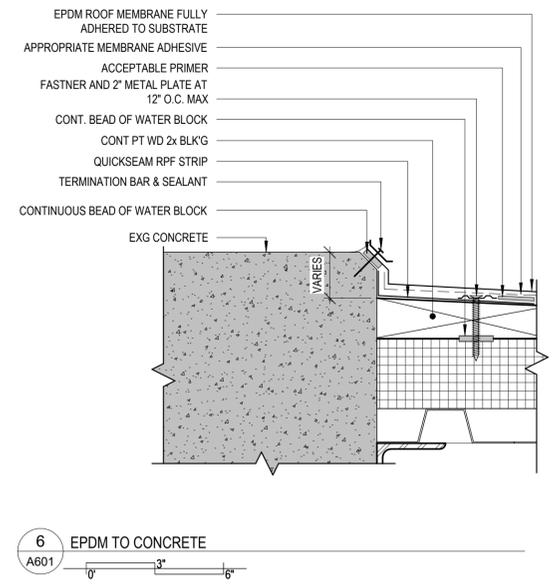
**CLIFTON REGIONAL WWTP
 INFLUENT PUMP STATION UPGRADES**

ARCHITECTURAL DETAILS

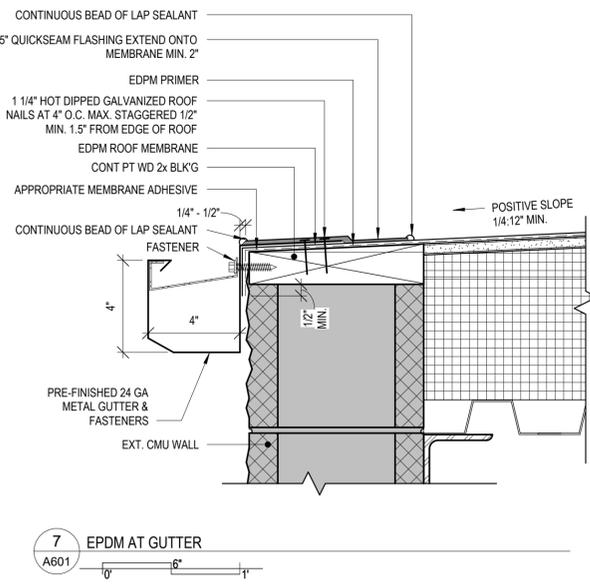
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DESIGN BY:	Designer
CHECKED BY:	Checker
100% CD's	

LAST UPDATED: 3/28/25
 SHEET NUMBER:

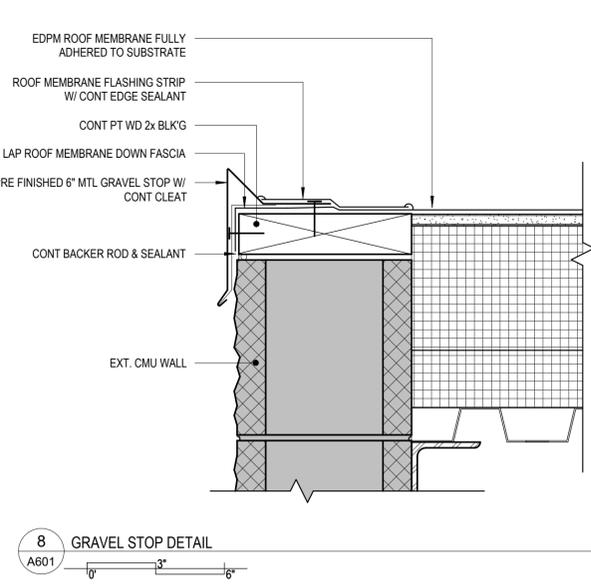
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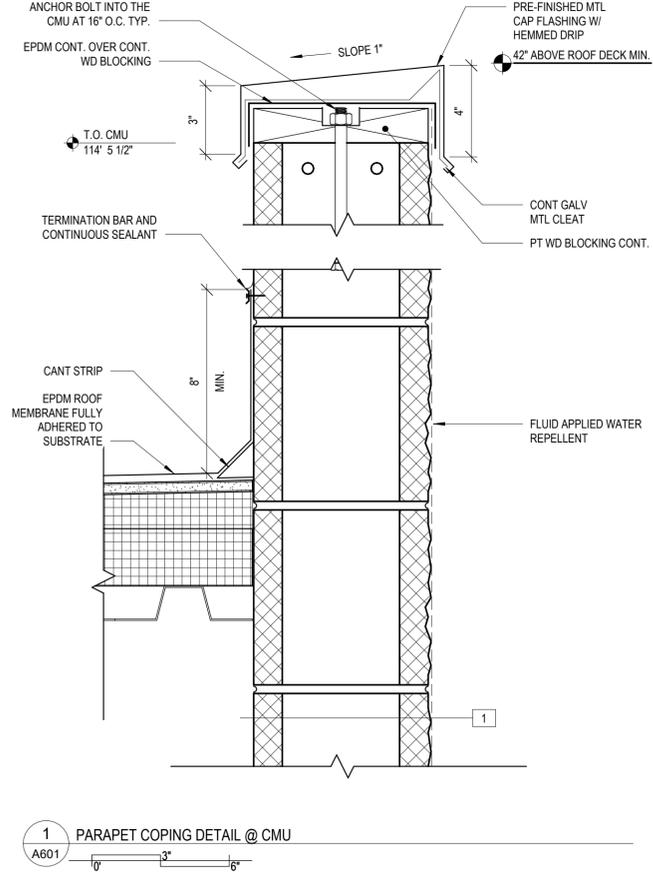
6 EPDM TO CONCRETE



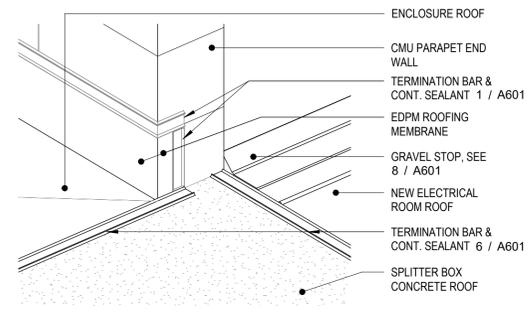
7 EPDM AT GUTTER



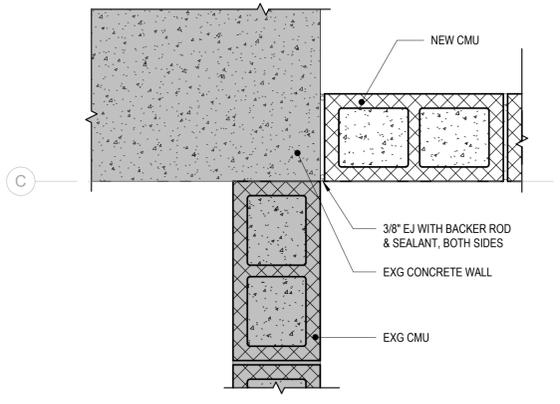
8 GRAVEL STOP DETAIL



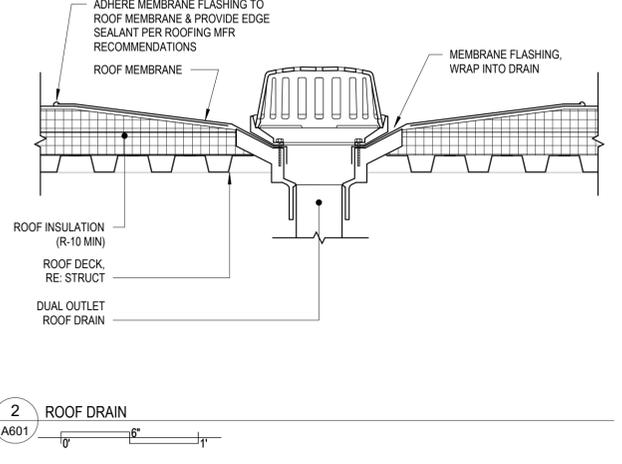
1 PARAPET COPING DETAIL @ CMU



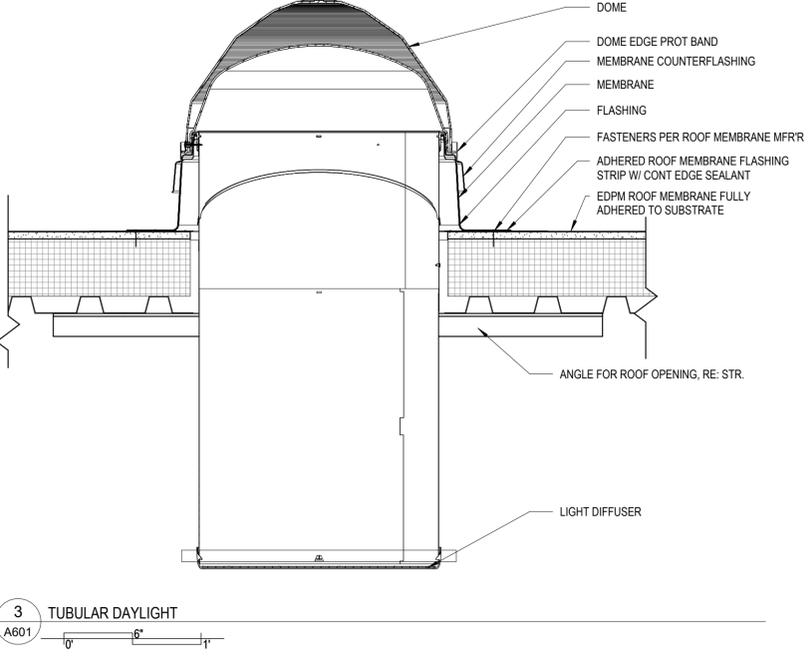
4 PARAPET TO WALL CORNER



5 CMU TO EXISTING CONC.



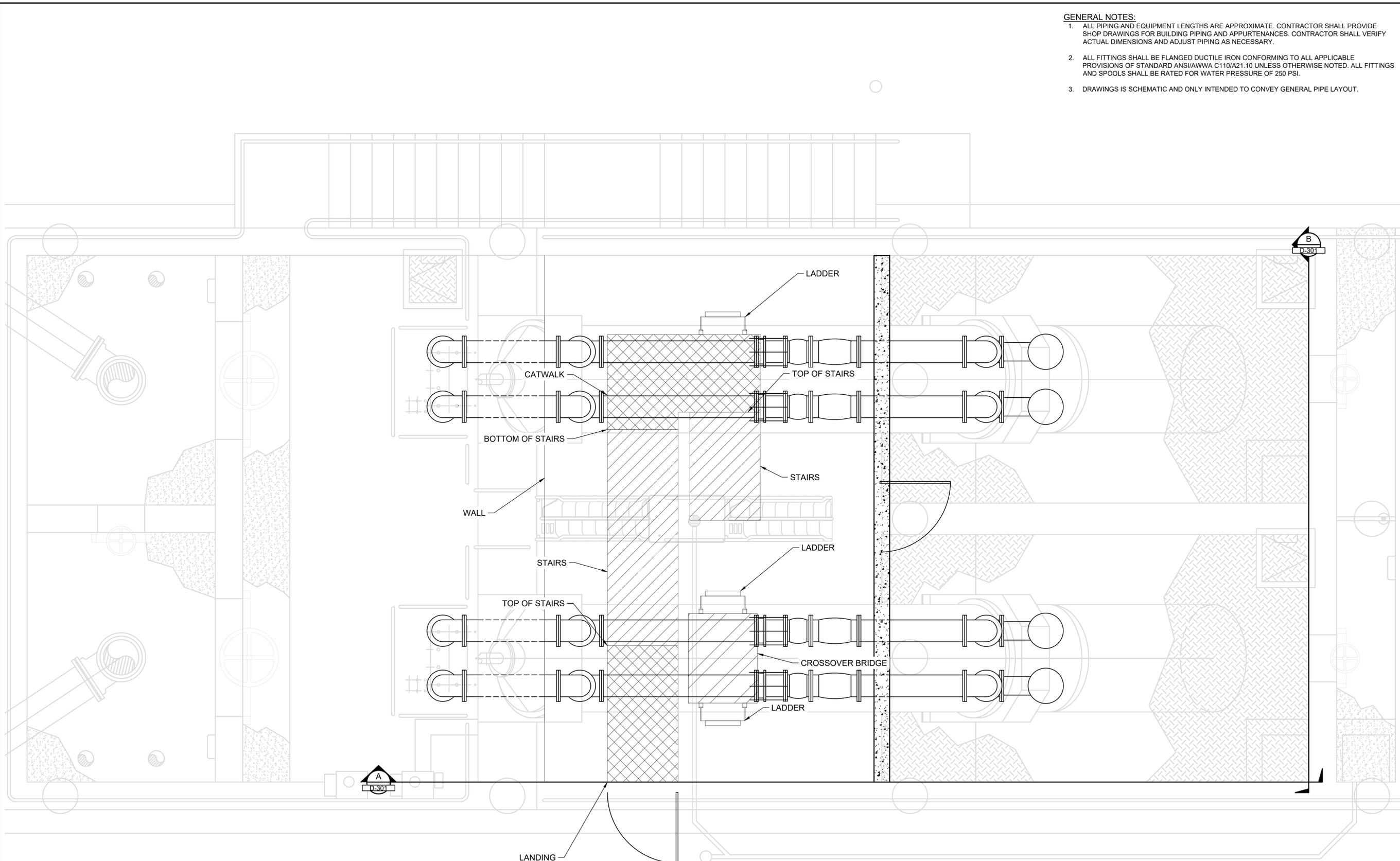
2 ROOF DRAIN



3 TUBULAR DAYLIGHT

NOT FOR CONSTRUCTION

Plot Date: 4/8/2025 2:52 PM, Plotted By: Tamer Geremunden
 Date Created: 1/27/2025 10:00 AM, Client: COCLIF, Project: SANITATION PROJECT, SCREW PUMP FAILURE EVALUATION, CAD SHEET: 18-024, D-101X.DWG



- GENERAL NOTES:**
1. ALL PIPING AND EQUIPMENT LENGTHS ARE APPROXIMATE. CONTRACTOR SHALL PROVIDE SHOP DRAWINGS FOR BUILDING PIPING AND APPURTENANCES. CONTRACTOR SHALL VERIFY ACTUAL DIMENSIONS AND ADJUST PIPING AS NECESSARY.
 2. ALL FITTINGS SHALL BE FLANGED DUCTILE IRON CONFORMING TO ALL APPLICABLE PROVISIONS OF STANDARD ANSI/AWWA C110/A21.10 UNLESS OTHERWISE NOTED. ALL FITTINGS AND SPOOLS SHALL BE RATED FOR WATER PRESSURE OF 250 PSI.
 3. DRAWINGS IS SCHEMATIC AND ONLY INTENDED TO CONVEY GENERAL PIPE LAYOUT.


J-U-B ENGINEERS, INC.
 305 S. Main Street
 Unit 6
 Palisade, CO 81526
 Phone: 970.208.8508
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NO.	REVISION	DESCRIPTION	BY	DATE

**INFLUENT LIFT STATION UPGRADES
 CLIFTON SANITATION**
 PROCESS MECHANICAL
 SECTION VIEW
 PRELIMINARY PIPING PLAN


BUILDING PIPING ROOM - PLAN VIEW
 SCALE: 0 1' 2' 4'
 1/2"=1'-0" at Full Scale

FILE: 81-18-024_D-101X
 JUB PROJ. #: 81-18-024
 DRAWN BY: TJG
 DESIGN BY: KCY
 CHECKED BY: SPJ
 AT FULL SIZE, IF NOT ONE INCH, SCALE ACCORDINGLY
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 SHEET NUMBER:
D-101





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NO.	REVISION	DESCRIPTION	BY	DATE

INFLUENT LIFT STATION UPGRADES
CLIFTON SANITATION
PROCESS MECHANICAL
SECTION VIEW
PRELIMINARY PIPING PLAN

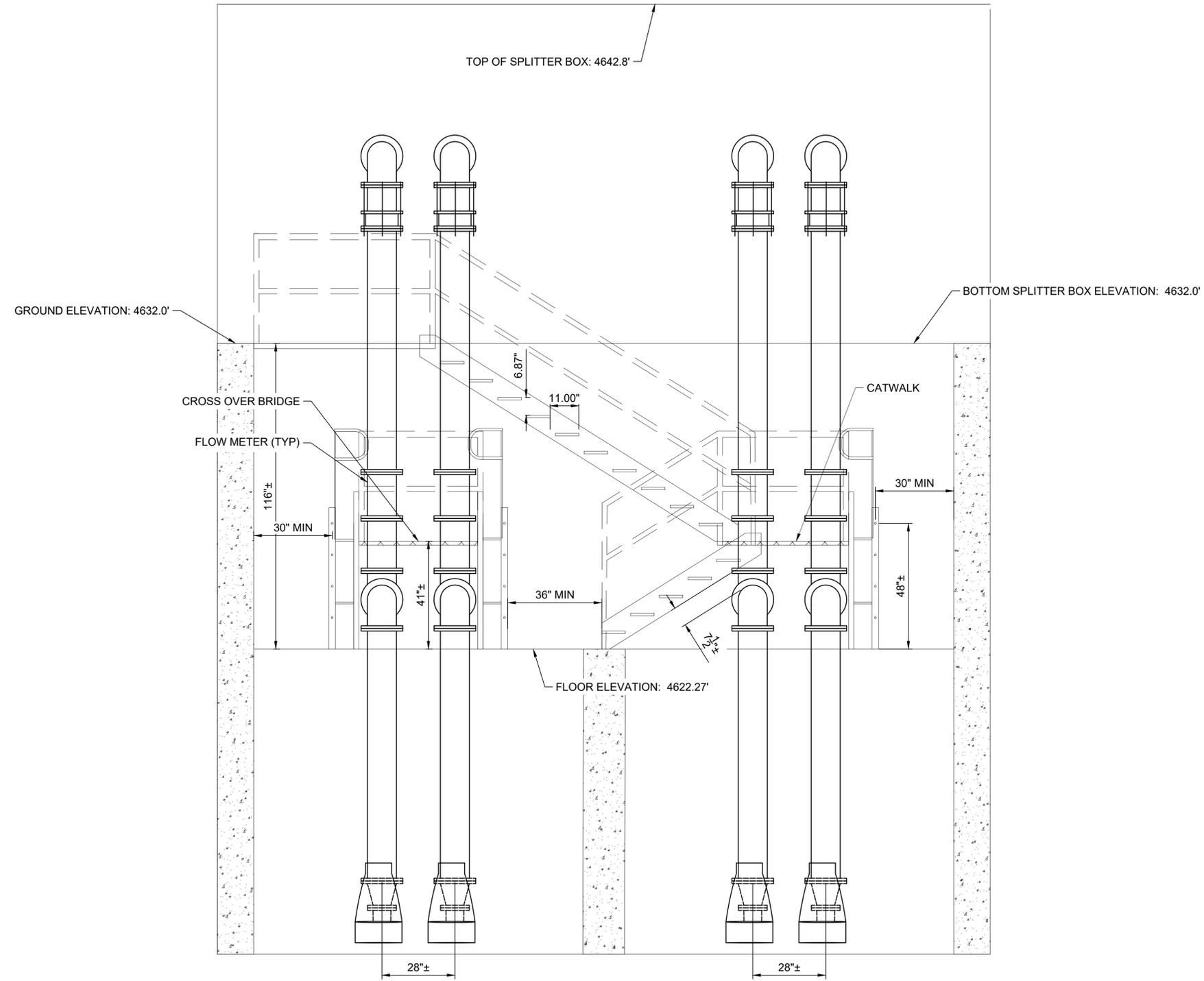
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JUB PROJ. #: 81-18-024
DRAWN BY: TJG
DESIGN BY: CKJ
CHECKED BY: SPJ

ONE INCH
AT FULL SIZE, IF NOT ONE
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LAST UPDATED: 4/8/2025

SHEET NUMBER:
D-302

GENERAL NOTES:

1. ALL PIPING AND EQUIPMENT LENGTHS ARE APPROXIMATE. CONTRACTOR SHALL PROVIDE SHOP DRAWINGS FOR BUILDING PIPING AND APPURTENANCES. CONTRACTOR SHALL VERIFY ACTUAL DIMENSIONS AND ADJUST PIPING AS NECESSARY.
2. ALL FITTINGS SHALL BE FLANGED DUCTILE IRON CONFORMING TO ALL APPLICABLE PROVISIONS OF STANDARD ANSI/AWWA C110/A21.10 UNLESS OTHERWISE NOTED. ALL FITTINGS AND SPOOLS SHALL BE RATED FOR WATER PRESSURE OF 250 PSI.
3. DRAWINGS IS SCHEMATIC AND ONLY INTENDED TO CONVEY GENERAL PIPE LAYOUT.



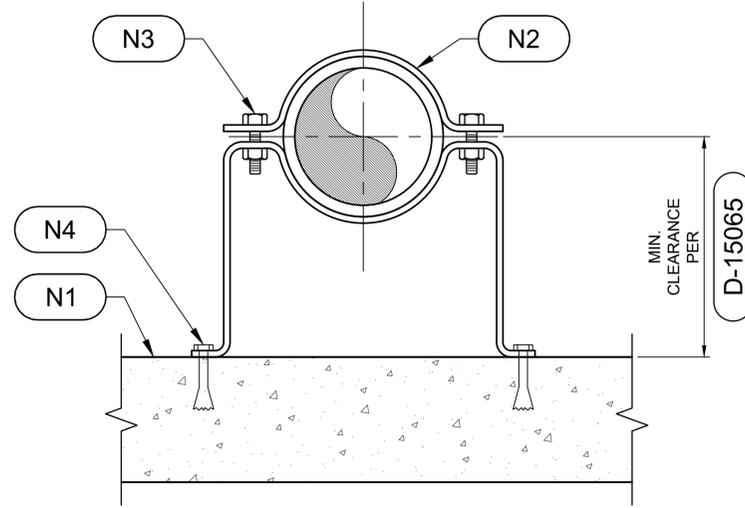
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 Date Created: 2/27/2025 10:58 AM, Client: CLIFTON SANITATION, Project: SCREW PUMP FAILURE EVALUATION, CAD SHEET: 81-18-024_D-101X.DWG

B BUILDING PIPE ROOM - SECTION VIEW
SCALE: 0 1' 2' 4'
1/2"=1'-0" at Full Scale



KEYED NOTES:

- N1 CONCRETE FLOOR OR WALL
- N2 STAINLESS STEEL FLAT BAR
- N3 STAINLESS STEEL BOLTS
- N4 STAINLESS STEEL ANCHOR BOLTS WITH 4" MINIMUM EMBEDMENT.



D-15100 TYPICAL PIPE SUPPORT
NOT TO SCALE

Plot Date: 4/8/2025 2:52 PM, Plotted By: Tamara Germaine
 Date Created: 7/27/2024 JUBCENTRALCLIENTS\COCUCLIF\ON SANITATION\PROJECTS\SREW PUMP FAILURE EVALUATION\CAD\SHEET01-18-024-D-101X.DWG



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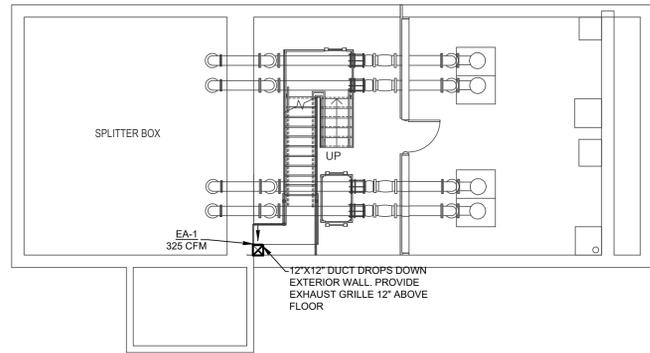
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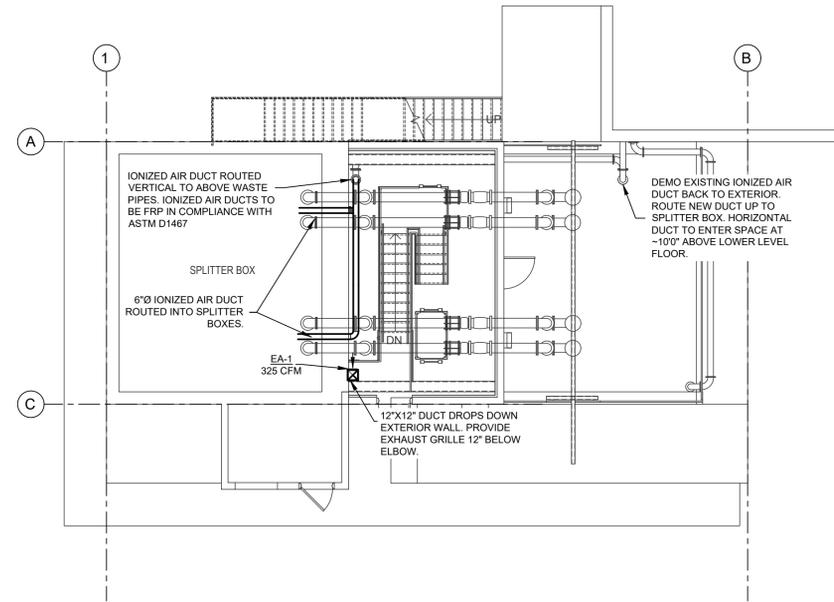
**INFLUENT LIFT STATION UPGRADES
 CLIFTON SANITATION**
 PROCESS MECHANICAL
 PROCESS MECHANICAL DETAILS
 PRELIMINARY PIPING PLAN

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 DRAWN BY: TJG
 DESIGN BY: CKJ
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 LAST UPDATED: 4/8/2025

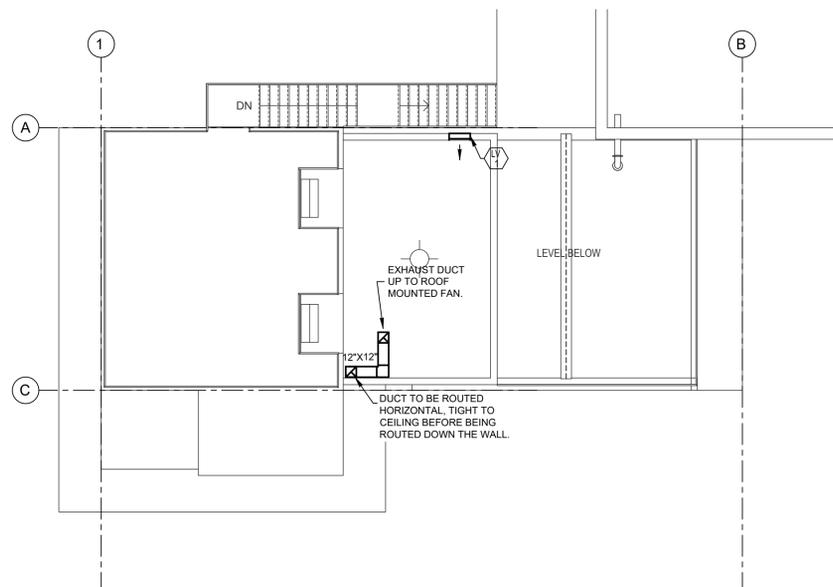
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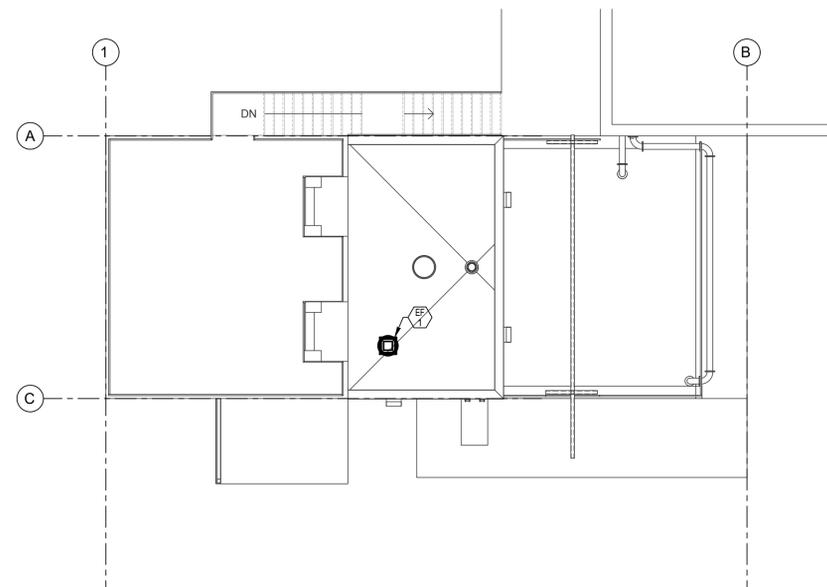
MECHANICAL - LOWER LEVEL CONSTRUCTION PLAN
SCALE: 1/8" = 1'-0"
NORTH



MECHANICAL - GRADE LEVEL CONSTRUCTION PLAN
SCALE: 1/8" = 1'-0"
NORTH



MECHANICAL - UPPER LEVEL CONSTRUCTION PLAN
SCALE: 1/8" = 1'-0"
NORTH



MECHANICAL - ROOF PLAN
SCALE: 1/8" = 1'-0"
NORTH

File Date: 4/8/2025, 9:47 AM, Plotted By: Ceng
 Date Created: 3/28/2025, 7:26:54 PM, Project: 25030 - CLIFTON SANITATION PLANT PROJECT, TOWN OF CLIFTON, COLORADO, PROJECT NO. 25030 - CLIFTON WW PUMP ENCLOSURE - MECH DWS



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NO.	REVISION	DESCRIPTION	BY	DATE
000026		CONSTRUCTION DOCUMENTS		

CLIFTON INFLUENT PUMP STATION UPGRADES PROJECT
MECHANICAL - CONSTRUCTION PLAN
3217 D ROAD
CLIFTON, COLORADO



FILE: 25030 - CLIFTON WW - MECH
JUB PROJ: 26000
DRAWN BY: GW
DESIGN BY: --
CHECKED BY: MH

AT FULL SIZE, IF NOT ONE INCH, SCALE ACCORDINGLY
LAST UPDATED: 4/8/2025

SHEET NUMBER:
M1-1

File Date: 4/8/2025, 9:57 AM, Printed By: Greg
 Date Created: 3/28/2025, 7:26:52 PM, Project: CLIFTON SANITATION PLANT PROJECT/AUTOGRADE WORKING PLANS/5030 - CLIFTON WW PUMP ENCLOSURE - MECH Dwg

EXHAUST FAN SCHEDULE										
EQUIPMENT NO.	SERVICE	LOCATION	CFM	EXTERNAL STATIC PRESS (IN. W.G.)	MOTOR				MANUFACTURER & MODEL	OPTIONS/ACCESSORIES
					WATTS	HP	RPM	VOLT/PH/Hz		
EF-1	SPACE VENTILATION	ROOF	650	0.3	-	1/10	1550	120/1/60	GREENHECK CUE-090-VG	NOTE-1

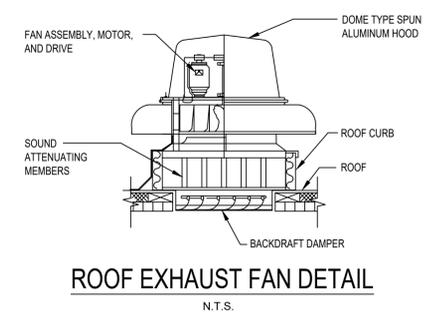
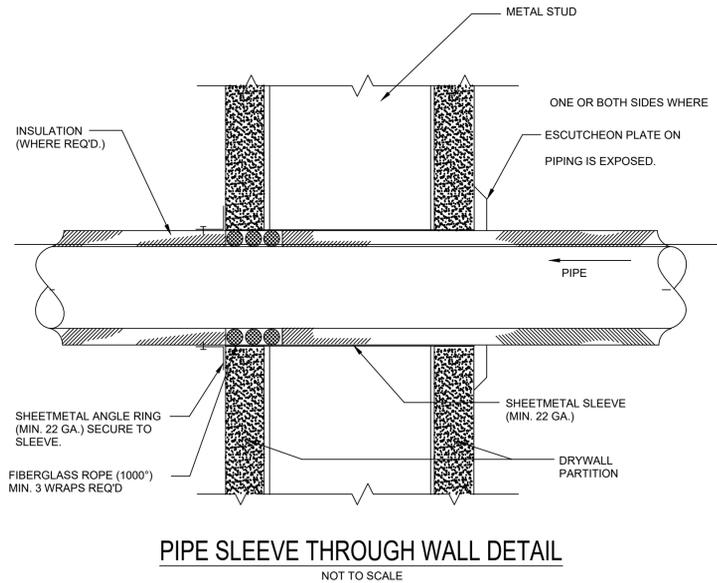
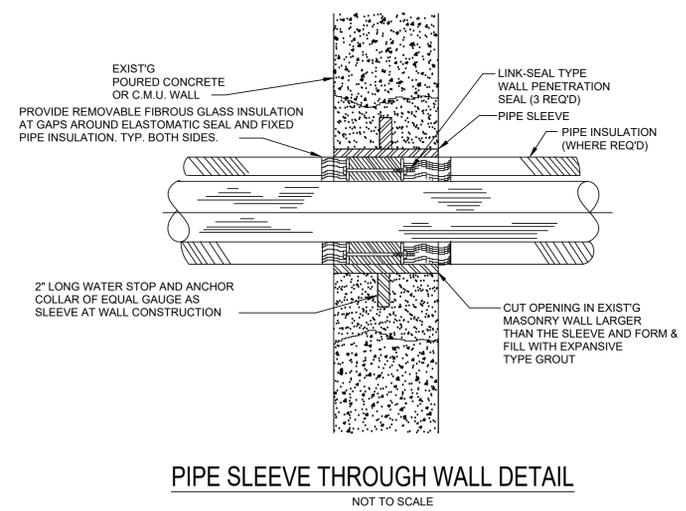
NOTES:
1. PROVIDE WITH ROOF CURB, FACTORY CONTROLS, VARI-GREEN MOTOR, SPEED CONTROLLER.

LOUVER SCHEDULE								
EQUIPMENT NO.	SERVICE	WIDTH (IN)	HEIGHT (IN)	THICKNESS OF WALL (IN)	MATERIAL	INSECT/BIRD SCREEN	MANUFACTURER & MODEL	OPTIONS/ACCESSORIES
LV-1	SPACE VENTILATION	24"	16"	8"	ALUMINUM	BIRD SCREEN	GREENHECK ESD635-24X16	NOTE-1

NOTES:
1. PROVIDE WITH WALL FRAME, MOTORIZED DAMPER, DRAINABLE BLADES, AND BIRD SCREEN. LOUVER FINISH TO MATCH EXISTING LOUVERS ON CAMPUS.

GRILLE-REGISTER-DIFFUSER SCHEDULE					
EQUIPMENT NO.	SIZE	MODEL	MANUFACTURER	FINISH	OPTIONS/ACCESSORIES
EA-1	10"X10"	500	PRICE	WHITE	NOTE-1

NOTES: PROVIDE WITH DUCT MOUNTING HARDWARE.



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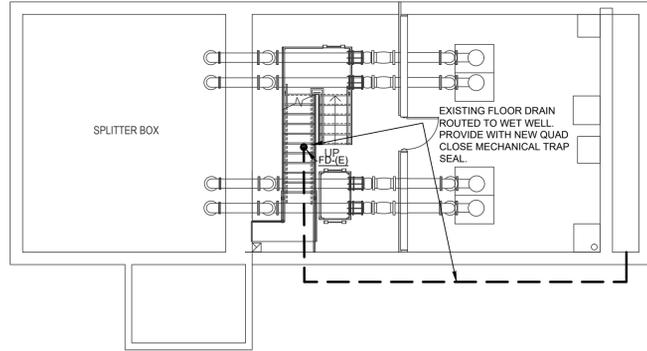
NO.	DESCRIPTION	BY	DATE



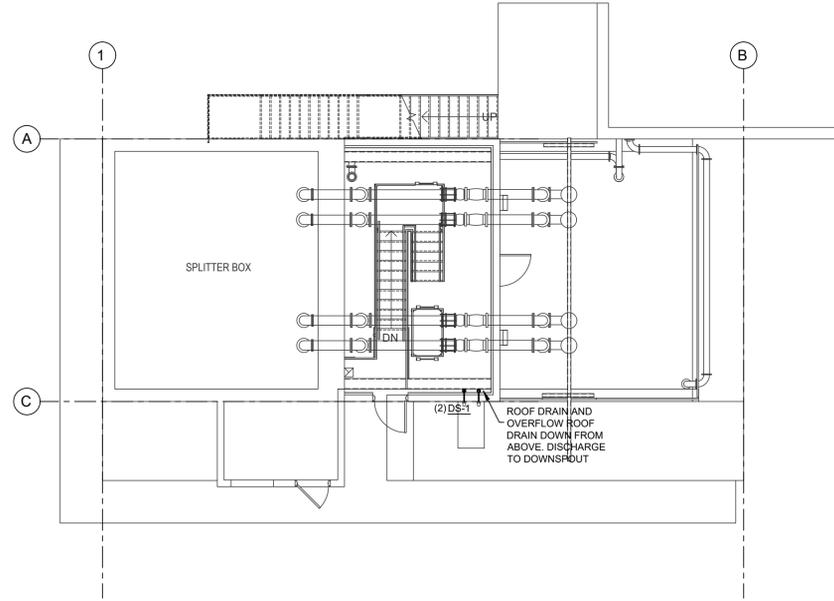
CLIFTON INFLUENT PUMP STATION
MECHANICAL - DETAILS
UPGRADES PROJECT
 3217 D ROAD
 CLIFTON, COLORADO

FILE : 25030 - CLIFTON WW - MECH
JUB PROJ #6000
DRAWN BY: GW
DESIGN BY: --
CHECKED BY: MH
AT FULL SIZE, IF NOT ONE INCH SCALE ACCORDINGLY
LAST UPDATED: 4/8/2025
SHEET NUMBER:
M2-1

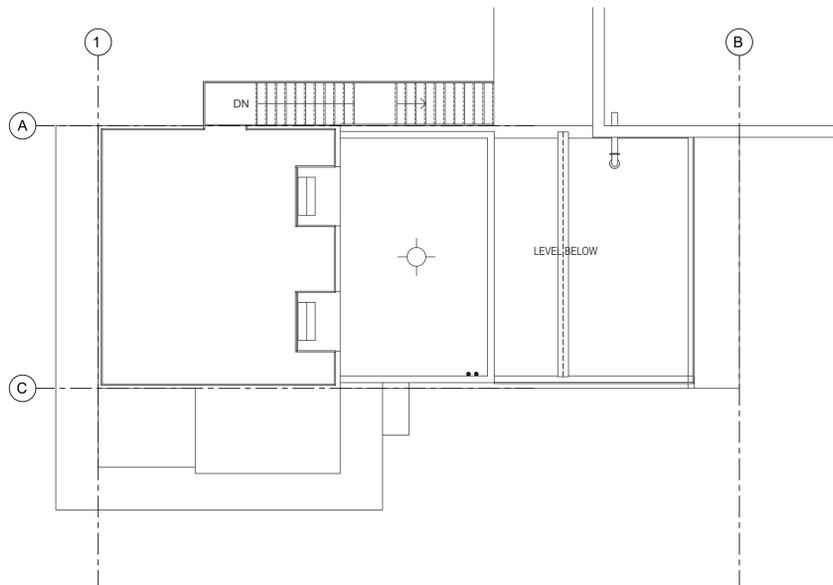
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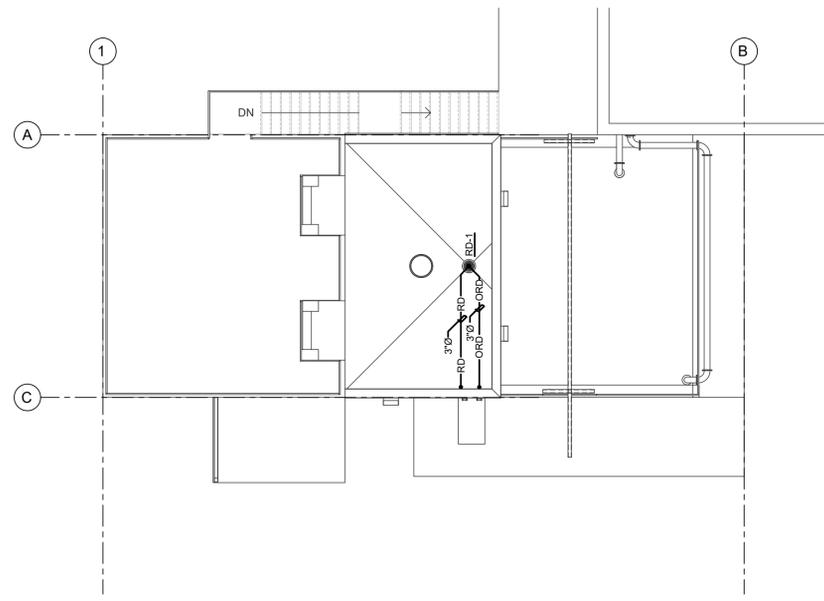
PLUMBING - LOWER LEVEL CONSTRUCTION PLAN
 SCALE: 1/8" = 1'-0"
 NORTH



PLUMBING - GRADE LEVEL CONSTRUCTION PLAN
 SCALE: 1/8" = 1'-0"
 NORTH



PLUMBING - UPPER LEVEL CONSTRUCTION PLAN
 SCALE: 1/8" = 1'-0"
 NORTH



PLUMBING - ROOF PLAN
 SCALE: 1/8" = 1'-0"
 NORTH



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NO.	DESCRIPTION	BY	DATE

CLIFTON INFLUENT PUMP STATION
UPGRADES PROJECT
 PLUMBING - CONSTRUCTION PLAN
 3217 D ROAD
 CLIFTON, COLORADO



FILE : 25030 - CLIFTON WW - MECH
 JUB PROJ #6000
 DRAWN BY: GW
 DESIGN BY: --
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 AT FULL SIZE, IF NOT ONE INCH, SCALE ACCORDINGLY
 LAST UPDATED: 4/8/2025

SHEET NUMBER:
P1-1

PLUMBING FIXTURE SCHEDULE									
FIXTURE NO.	DESCRIPTION	MANUFACTURER	MODEL	TRIM	PIPING CONNECTIONS				OPTIONS-ACCESSORIES
					S/W	VENT	C.W.	HW	
DS-1	LAMBS TONGUE DOWN SPOUT	ZURN	Z199		3"	-	-	-	
FD-1	FLOOR DRAIN	EXISTING TO REMAIN	E.T.R.		3"				RATE.
RD-1	PRIMARY/OVERFLOW ROOF DRAIN	ZURN	100C	PRIMARY/OVERFLOW ROOF DRAIN 3" OUTLET	3"	-	-	-	PROVIDE DOME



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NO.	DESCRIPTION	BY	DATE



**CLIFTON INFLUENT PUMP STATION
 UPGRADES PROJECT**
 PLUMBING - DETAILS
 3217 D ROAD
 CLIFTON, COLORADO

FILE : 25030 - CLIFTON WW - MECH
 JUB PROJ #6000
 DRAWN BY: GW
 DESIGN BY: --
 CHECKED BY: MH
 ONE INCH
 AT FULL SIZE, IF NOT ONE INCH, SCALE ACCORDINGLY
 LAST UPDATED: 4/8/2025
 SHEET NUMBER:
P2-1

FIRE ALARM EQUIPMENT LEGEND	
	FIRE ALARM CONTROL PANEL
	FIRE ALARM PULL STATION
	FIRE ALARM HORN
	FIRE ALARM STROBE
	FIRE ALARM HORN/STROBE
	CEILING MOUNTED SPEAKER
	DUCT DETECTOR
	REMOTE LAMP
	SMOKE DETECTOR - PHOTOELECTRIC
	135° STANDARD HEAT DETECTOR
	PIR DETECTOR
	DOOR HOLD - MAGNETIC HOLD
	FLOW SWITCH
	TAMPER SWITCH

COMMUNICATION LEGEND	
	CLOCK ONLY
	CLOCK / PA SPEAKER WALL MOUNTED
	ROUND CEILING MOUNTED SPEAKER
	SQUARE SPEAKER
	INTERCOM PUSH TO CALL SWITCH
	WIRELESS ACCESS POINT ABOVE THE CEILING
	PROJECTOR
	ABOVE THE CEILING PROJECTOR CONNECTION
	WALL MOUNTED HDMI
	PLAIN DATA OUTLET
	PLAIN DATA OUTLET WITH MOUNTING HEIGHT
	COMBINATION DATA/TELEPHONE
	FLOOR MOUNTED COMBINATION DATA/TELEPHONE
	CEILING MOUNTED COMBINATION DATA/TELEPHONE
	TELEVISION OUTLET

SECURITY SYSTEM LEGEND	
	SECURITY CAMERA
	ADA DOOR OPERATOR PUSH BUTTON
	ELECTRIC DOOR STRIKE
	CARD READER FOR DOOR OPERATOR

LIGHTING LEGEND	
NOTES:	
SYMBOLS SHOWN ARE STANDARD. VARIATION AND/OR COMBINATIONS MAY BE USED ON THE PLANS. THIS LIST SHOWS STANDARD SYMBOLS AND ALL MAY NOT APPEAR ON THE PROJECT DRAWINGS; HOWEVER, WHEREVER THE SYMBOL ON THE PROJECT DRAWINGS OCCUR, THE ITEM SHALL BE PROVIDED AND INSTALLED.	
VARIATION AND/OR COMBINATION MAY BE USED ON THE PLANS.	
A NUMBER NEXT TO A RECEPTACLE OR DEVICE INDICATES A CIRCUIT NUMBER.	
AN UPPER CASE LETTER NEXT TO A SWITCH INDICATES THE FUNCTION OF THE SWITCH. A LOWER CASE LETTER INDICATES THE SWITCH CIRCUIT.	
AN UPPER CASE LETTER NEXT TO A LIGHT FIXTURE INDICATES THE TYPE OF FIXTURE. REFER TO THE LUMINAIRE SCHEDULE FOR FIXTURE SPECIFICATIONS. A LOWER CASE LETTER NEXT TO A LIGHT CORRESPONDS TO THE SWITCH DESIGNATION.	

SWITCHES	
	SINGLE POLE SWITCH
	TWO POLE SWITCH
	THREE-WAY SWITCH
	FOUR-WAY SWITCH
	DIMMER SWITCH
	3 WAY DIMMER SWITCH - (4D INDICATES A 4WAY DIMMER)
	DOOR ACTIVATED SWITCH
	WALL MOUNTED DUAL TECHNOLOGY MANUAL ON / AUTO OFF VACANCY SENSOR SWITCH
	LOW VOLTAGE LIGHT SWITCH
	MANUAL MOTOR STARTER
	PILOT LIGHT SWITCH
	AUTO ON / AUTO OFF LIGHT SWITCH
	DUAL TECHNOLOGY MOTION / OCCUPANCY SENSOR LIGHT SWITCH
	MANUAL ON / AUTO OFF DIMMING LIGHT SWITCH
	KEY OPERATED LIGHT SWITCH
	MANUAL ON - TIMED OFF LIGHT SWITCH
	CEILING MOUNTED DUAL TECHNOLOGY OCCUPANCY SENSOR SWITCH
	CEILING MOUNTED DUAL TECHNOLOGY MANUAL ON / AUTO OFF VACANCY SENSOR
	CEILING MOUNTED DAYLIGHT HARVESTING SENSOR
	SCENE CONTROL STATION
	UNIT LIGHTING MANAGEMENT CONTROL STATION

LIGHT FIXTURES	
	1'x4' LED TROFFER OR DIRECT/INDIRECT TYPE FIXTURE GRID, FLANGE OR SURFACE MOUNTED
	2'x4' LED TROFFER OR DIRECT/INDIRECT TYPE FIXTURE GRID, FLANGE OR SURFACE MOUNTED
	2'x2' LED TROFFER OR DIRECT/INDIRECT TYPE FIXTURE GRID, FLANGE OR SURFACE MOUNTED
	OPEN STRIP FIXTURE
	WALL BRACKET LINEAR FIXTURE
	WALL MOUNTED SCONCE LIGHT FIXTURE
	RECESSED DOWNLIGHT CAN FIXTURE
	SURFACE CEILING OR PENDANT MOUNTED FIXTURE
	DOUBLE FACE EXIT SIGN, WALL AND CEILING MOUNTED
	SINGLE FACE EXIT SIGN, WALL AND CEILING MOUNTED
	WALL MOUNTED EMERGENCY LIGHT
	EMERGENCY EXTERIOR EGRESS FIXTURE

GENERAL ELECTRICAL NOTES:

- ALL ELECTRICAL WORK TO COMPLY WITH LATEST EDITION OF NEC, IEC AND ALL APPLICABLE GOVERNING CODES.
 - FIELD COORDINATION DURING CONSTRUCTION IS IMPERATIVE. CONTRACTORS BIDDING THIS WORK MUST MAKE REASONABLE ALLOWANCES FOR UNFORESEEN CONTINGENCIES.
 - ELECTRIC UTILITY TO ADVISE OWNER AND/OR THE ELECTRICAL ENGINEER PRIOR TO SERVICE MODIFICATION REQUIRING COST TO THE OWNER.
- WIRING:**
- ALL WIRING IS SHOWN DIAGRAMMATICALLY ON DRAWING. FIELD VERIFY ALL CONDITIONS PRIOR TO ROUGH-IN.
 - ALL CONDUITS AND CONVEYANCES SHALL BE CONCEALED. IN THE EVENT THAT A NEW DEVICE IS BEING INSTALLED IN AN EXISTING DRYWALL PARTITION, PROVIDE A CUT IN TYPE BOX AND FISH FLEXIBLE CONDUIT DOWN INSIDE THE WALL FROM ABOVE THE CEILING AND REPAIR THE DRYWALL AROUND THE CONDUIT. TRANSITION TO EMT ONCE ABOVE THE CEILING.
 - SIZES OF WIRE AND CABLES ARE BASED UPON COPPER CONDUCTORS, UNLESS OTHERWISE INDICATED. ALL CIRCUITS SHALL CONTAIN (2) #12 AWG WITH (1) #12 GND IN 1/2" CONDUIT UNLESS NOTED OTHERWISE.
 - ALL BRANCH CIRCUITS WITH HOME RUNS OVER 50 FEET, WILL BE SIZED ONE SIZE LARGER.
 - ALL PENETRATIONS IN OR THROUGH FIRE RATED PARTITIONS SHALL BE FIRE STOPPED IN SUCH A WAY THAT THE PENETRATION MATCHES THE FIRE RATING OF THE WALL.
 - THE ELECTRICAL CONTRACTOR IS RESPONSIBLE FOR ALL COORDINATION BETWEEN THE APPROPRIATE DISCIPLINES AND CONTRACTORS.
 - COORDINATE ALL DEVICE, FIXTURE AND HARDWARE COLOR SELECTIONS WITH THE ARCHITECT PRIOR TO MAKING SHOP DRAWING SUBMITTALS.
 - COORDINATE THE MOUNTING HEIGHTS OF ALL RECEPTACLES MOUNTED ABOVE COUNTERS, CASEWORK AND APPLIANCE RECEPTACLES WITH ARCHITECTURAL ELEVATIONS.
 - BRANCH CIRCUIT AND SPECIAL SYSTEMS WIRING FOR DEVICES ON WALLS IN FINISHED AREAS WHICH CANNOT BE CONCEALED SHALL BE INSTALLED IN SURFACE MOUNTED RACEWAY.
 - ALL EXPOSED CONDUITS, BOXES, ETC. IN ROOMS TO BE PAINTED SHALL BE PAINTED TO MATCH THE SURROUNDING SURFACE. EXPOSED CONDUITS, BOXES, ETC. IN ROOMS WHICH ARE NOT PAINTED MAY BE LEFT UNPAINTED. EXPOSED CONDUIT, BOXES, ETC. ON THE EXTERIOR OF BUILDINGS SHALL BE PAINTED TO MATCH THE SURROUNDING SURFACE AS CLOSELY AS POSSIBLE.
 - THE CONTRACTOR IS RESPONSIBLE FOR PATCHING, PAINTING, REPAIRING OR REPLACEMENT OF ALL WALLS, CEILING OR OTHER BUILDING ELEMENTS WHICH ARE DISTURBED AS PART OF THE DEMOLITION AND/OR INSTALLATION OF ELECTRICAL WORK.
 - PROVIDE ELECTRICAL CONNECTION TO ALL FIRE, SMOKE, AND FIRE / SMOKE DAMPERS INCLUDING POWER AND FIRE ALARM. VERIFY EXACT SIZE AND FINAL LOCATION OF ALL DAMPERS WITH THE MECHANICAL CONTRACTOR. ALL ROOFTOP UNITS RATED AT MORE THAN 2000 CFM WILL BE OUTFITTED WITH A DUCT DETECTOR IN THE RETURN DUCT. ALL ROOFTOP UNITS RATED AT MORE THAN 15000 CFM WILL BE OUTFITTED WITH A DUCT DETECTOR IN BOTH THE SUPPLY AND RETURN DUCT AT ROOFTOP LEVEL AND IN THE RETURN DUCT AT EVERY LEVEL THAT IS SERVED. ELECTRICAL CONTRACTOR WILL PROVIDE A REMOTE TEST STATION AND ALL WIRING NECESSARY TO COMPLETE INSTALLATION.
 - REFER TO THE MECHANICAL EQUIPMENT SCHEDULE FOR ADDITIONAL REQUIREMENTS ASSOCIATED WITH PLUMBING AND HVAC EQUIPMENT AND OWNER/GENERAL CONTRACTOR FURNISHED EQUIPMENT.

ELECTRICAL EQUIPMENT LEGEND	
	BRANCH CIRCUIT PANELBOARD
	TELEPHONE TERMINAL BOARD
	ELECTRIC MOTOR
	FUSED SAFETY SWITCH / DISCONNECT COMBINATION
	MOTOR STARTER
	CONTACTOR
	CIRCUITRY HOMERUN: PANEL LA - CIR. #7
	CONDUIT OR WIRE CONCEALED IN WALL/CLG. (SOLID LINE TYPE)
	CONDUIT OR WIRE UNDERFLOOR/UNDERGRND. (CENTER LINE TYPE)

MAIN DISTRIBUTION GEAR	
	CIRCUIT BREAKER IN A PANEL BOARD
	PAD MOUNTED UTILITY TRANSFORMER
	FUSED DISCONNECT 100A = AMP RATING 2P = NUMBER OF POLES
	7 POLE FUSED DISCONNECT
	ELECTRICAL METER SHOWN ON ONE-LINE DIAGRAMS
	ELECTRICAL POWER PANEL WITH MAIN LUG OR MAIN BREAKER
	225A MLO = MAIN LUG OR BREAKER SIZE 120/208V = PANEL VOLTAGE 3PH, 4W = PANEL PHASE, DISTRIBUTION TYPE
	PP1 225A MCB 120/208V 3PH, 4W
	PP1 225A MLO 120/208V 3PH, 4W

ELECTRICAL DEVICE LEGEND	
	CEILING JUNCTION BOX - SURFACE/FLUSH
	WALL JUNCTION BOX - SURFACE/FLUSH
	DUPLEX RECEPTACLE
	FLOOR MOUNTED RECEPTACLE
	SPLIT WIRED DUPLEX RECEPTACLE
	CEILING MOUNTED DUPLEX RECEPTACLE
	FLOOR MOUNTED FOURPLEX RECEPTACLE
	APPLIANCE RECEPTACLE - 3 WIRE
	DUPLEX RECEPTACLE
	FOURPLEX RECEPTACLE
ABBREVIATIONS PERTAIN TO ALL DUPLEX AND FOURPLEX RECEPTACLES:	
	ABOVE COUNTER
	AC GROUND FAULT CIRCUIT INTERRUPTER
	ABOVE COUNTER WITH USB PORT
	ARC FAULT PROTECTED
	ARC FAULT WITH GROUND FAULT CIRCUIT INTERRUPTER
	DEDICATED RECEPTACLE WITH USB PORT
	RECEPTACLE CIRCUITED TO THE EMERGENCY PANEL WITH RED COVER PLATE
	GROUND FAULT CIRCUIT INTERRUPTER
	WEATHER PROOF GROUND FAULT CIRCUIT INTERRUPTER
	PLUG LOAD WITH MOUNTING HEIGHT.
	ELECTRIC HAND DRYER
	THERMOSTAT
	OPEN/CLOSE/STOP PUSH BUTTON
	DRAWING KEY NOTES
	ROOM DESIGNATION

LUMINAIRES:

- COORDINATE THE LOCATION OF ALL LIGHTING EQUIPMENT INCLUDING BUT NOT LIMITED TO THE LUMINAIRES, SWITCHES WITH THE ARCHITECTURAL, STRUCTURAL AND MECHANICAL DRAWINGS AND ALL OTHER TRADES AS REQUIRED. REFER TO THE ARCHITECTURAL REFLECTED CEILING PLANS FOR DIMENSIONAL LOCATION OF LIGHT FIXTURES.
 - LIGHTING FIXTURES SHALL BE SUPPORTED FROM THE STRUCTURE ABOVE AND SHALL NOT BE SUPPORTED FROM THE T-BAR CEILING GRID.
 - THE ELECTRICAL CONTRACTOR IS TO CONFIRM THE LIGHT FIXTURES ORDERED WILL BE COMPATIBLE WITH THE CEILING TYPES AS SHOWN ON THE ARCHITECTURAL REFLECTED CEILING PLANS. NOTIFY THE ENGINEER OF ANY DISCREPANCIES PRIOR TO ORDERING THE FIXTURES.
 - VERIFY LUMINAIRE MOUNTING REQUIREMENTS AND OVERALL HEIGHT OF ALL PENDANT MOUNTED FIXTURES PRIOR TO ORDERING.
 - ALL LIGHT FIXTURES NEED TO BE COMPATIBLE WITH THE SWITCHES AND CONTROLS BEING PROVIDED.
 - THE LIGHTING PACKAGE SHALL BE APPROVED BY BOTH THE ARCHITECT AND ENGINEER AS APPROVED EQUAL BEFORE BID. NO LIGHT FIXTURE SHALL BE ORDERED UNTIL THE LIGHT FIXTURE SUBMITTAL PACKAGE HAS BEEN APPROVED IN WRITING BY THE ARCHITECT, GENERAL CONTRACTOR AND ELECTRICAL ENGINEER.
 - COORDINATE LUMINAIRE MOUNTING REQUIREMENTS PRIOR TO PLACING ORDER.
- | | |
|-------|------------------------------|
| CAF | CAPACITANCE |
| CB | CIRCUIT BREAKER |
| CBV | CIRCUIT BALANCING VALVE |
| CCT | CORRELATED COLOR TEMPERATURE |
| CKT | CIRCUIT |
| CFH | CUBIC FEET PER HOUR |
| CFM | CUBIC FEET PER MINUTE |
| CHWR | CHILLED WATER RETURN |
| CHWS | CHILLED WATER SUPPLY |
| CI | CAST IRON |
| CL | CENTER LINE |
| CLG | CEILING |
| CMU | CONCRETE MASONRY UNIT |
| CO | CLEAN OUT |
| COL | COLUMN |
| COMP | COMPRESSOR |
| CONC | CONCRETE |
| COND | CONDENSATE |
| CONN | CONNECTION |
| CONT | CONTINUATION |
| CONTR | CONTRACTOR |
| CRI | COLOR RENDERING INDEX |
| CT | COOLING TOWER |
| CT | CURRENT TRANSFORMER |
| CU | CONDENSING UNIT |
| CU | COPPER |
| CUH | CABINET UNIT HEATER |
| CVB | CONSTANT VOLUME BOX |
| CWS | CONDENSER WATER RETURN |
| CWS | CONDENSER WATER SUPPLY |
| DB | DRY BULB |
| DEPT | DEPARTMENT |
| DF | DRINKING FOUNTAIN |

RESPONSIBLE DIVISION:

UNLESS OTHERWISE INDICATED ALL HEATING, VENTILATING, AIR CONDITIONING, PLUMBING, AND OTHER MECHANICAL EQUIPMENT, MOTORS, AND CONTROLS SHALL BE FURNISHED, SET IN PLACE AND WIRED AS FOLLOWS:

ITEM	FURNISHED	SET	POWER WIRED	CONTROL WIRED
COMBINATION MAGNETIC MOTOR STARTERS, MAGNETIC MOTOR STARTERS, VFD'S AND CONTACTORS	23	23	26	--
FUSED AND UNFUSED DISCONNECT SWITCHES, THERMAL OVERLOAD SWITCHES AND HEATERS, MANUAL MOTOR STARTERS	26	26	26	--
MANUAL OPERATING AND MULTI-SPEED SWITCHES	23	26	26	26
CONTROLS, RELAYS, TRANSFORMERS	23	23	26	23
THERMOSTATS (LOW VOLTAGE) AND TIME SWITCHES	23	23	26	23
THERMOSTATS (LINE VOLTAGE)	23	23	26	26
TEMPERATURE CONTROL PANELS	23	23	26	23
MOTOR AND SOLENOID VALVES, DAMPER MOTORS, PE & EP SWITCHES	23	23(2)	--	23(2)
PUSH-BUTTON STATIONS AND PILOT LIGHTS	23	23(2)	--	23(2)
HEATING, COOLING, VENTILATION AND AIR CONDITIONING CONTROLS	23	23	26	23
EXHAUST FAN SWITCHES	23	26	26	23(2)

SUBSCRIPT FOOTNOTES:

- MOTOR STARTER TO INCLUDE CONTROL TRANSFORMER, HOA SWITCH, (1) NO AND (1) NC AUXILIARY CONTACT, AND 'ON' AND 'OFF' PILOT LIGHTS.
- IF ITEM IS FOR LINE VOLTAGE, SET IN PLACE AND CONNECT UNDER DIVISION 26. WHERE FACTORY MOUNTED ON EQUIPMENT OR ATTACHED TO PIPING OR DUCTS AND USING LINE VOLTAGE FURNISH AND SET UNDER DIVISION 23. CONNECT UNDER DIVISION 26.

ABBREVIATIONS:

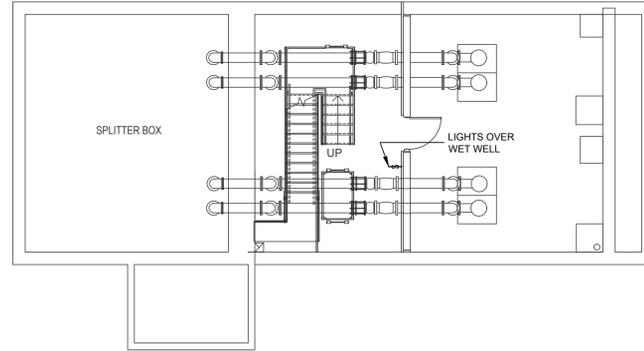
44" MOUNTING HEIGHT ABOVE FINISHED FLOOR TO CENTER OF DEVICE	DIA DIAMETER	HP HORSEPOWER	PTAC PACKAGED TERMINAL AIR CONDITIONER
A AMPS	DIAG DIAGRAM	HR HOUR	PV PLUG VALVE
A.D. ACCESS DOOR	DIFF DIFFERENTIAL	HT HEIGHT	PVC POLYVINYL CHLORIDE
AAV AIR ADMITTANCE VALVE	DISCH DISCHARGE	HTR HEATER	QTY QUANTITY
ABV ABOVE	DIV DIVISION	HWR HEATING WATER RETURN	RA RETURN AIR GRILLE / REGISTER
AC AIR CONDITIONING UNIT	DN DOWN	HWS HEATING WATER SUPPLY	RCF REFLECTED CEILING PLAN
AC ABOVE COUNTER	DS DUCT SILENCER	HX HEAT EXCHANGER	RD ROOF DRAIN
AD AREA DRAIN (SEE SYMBOLS)	DWG DRAWING	HZ HEATZ	REL RELIEF
A.F.C. ABOVE FINISHED CEILING	DX DIRECT EXPANSION	ID INSIDE DIAMETER	REQD REQUIRED
A.F.G. ABOVE FINISHED GRADE	(E) EXISTING	IG ISOLATED GROUND	RF RETURN FAN
AIC AMPERE INTERRUPTING CAPACITY	EA EXHAUST AIR GRILLE/REGISTER	IN INCHES	RH RELATIVE HUMIDITY
AFCI ARC FAULT CIRCUIT INTERRUPTERS	EAT ENTERING AIR TEMPERATURE	INV INVERT	RHC REHEAT COIL
A.F.F. ABOVE FINISHED FLOOR	EC ELECTRICAL CONTRACTOR	JBOX JUNCTION BOX	RLA RATED LOAD AMPS
AHU AIR HANDLING UNIT	ECC ECCENTRIC	K KELVIN	RM ROOM
ALUM ALUMINUM	EFF EFFICIENT FAN	KVA KILOWATT	RPV REVOLUTIONS PER MINUTE
ALUM ALUMINUM	EFF EFFICIENCY	L LENGTH	SA SUPPLY AIR GRILLE / REGISTER
ALUM ALUMINUM	EL ELEVATION	LAT LEAVING AIR TEMPERATURE	SCA SHORT CIRCUIT AVAILABLE
AP ACCESS PANEL OR DOOR	ELEV ELEVATOR	LB POUND	SCCR SHORT CIRCUIT CURRENT RATING
ATS AUTOMATIC TRANSFER SWITCH	EM EMERGENCY FUNCTION	LD LINEAR DIFFUSER	SCH SCHEDULE
AV AUDIO / VIDEO	ENT ENTERING	LF LINEAR FEET	SD SMOKE DAMPER
AVG AVERAGE	EQ EQUAL	LIN LINEAR	SEF SMOKE EXHAUST FAN
AWG AMERICAN WIRE GAGE	EQU EQUIP EQUIPMENT	LIQ LIQUID	SF SUPPLY FAN
BAS BUILDING AUTOMATION SYSTEM	EQUIV EQUIVALENT	LM LUMEN	SH SENSIBLE HEAT
BB BASEBOARD	ESP END SWITCH	LRA LOCKED ROTOR AMPS	SH SHOWER
BD BACK DRAFT DAMPER	ES EXTERNAL STATIC PRESSURE	LV LOUVER	SP STATIC PRESSURE
BFP BACK FLOW PREVENTOR	ET EXPANSION TANK	LVG LEAVING	SPD SURGE PROTECTION DEVICE
BL BOILER	EWC ELECTRIC WATER COOLER	LWT LEAVING WATER TEMPERATURE	SPEC SPECIFICATION
BLDG BUILDING	EWT ENTERING WATER TEMPERATURE	MBH THOUSANDS OF BTU PER HOUR	SQ SQUARE
BLW BELOW	EX EXHAUST	MC MECHANICAL CONTRACTOR	SS STAINLESS STEEL
BOB BOTTOM OF BEAM	EXN EXPANSION	MCA MINIMUM CIRCUIT AMPACITY	SS SAFETY SHOWER
BOD BOTTOM OF DUCT	EXT EXTERNAL	MCB MAIN CIRCUIT BREAKER	STD STANDARD
BOP BOTTOM OF PIPE	F DEGREES FAHRENHEIT	MD MOTORIZED DAMPER	STL STEEL
BSPM BASEMENT	FA FREE AREA	MDP MAIN DISTRIBUTION PANEL	SYS SYSTEM
BTU BRITISH THERMAL UNIT	FC FAN COIL UNIT	MD MED MEDIUM	TEMP TEMPERATURE
C CHILLER	FC FAN COIL UNIT	MFR MANUFACTURER	TR TRANSFER GRILLE / REGISTER
CAFCI COMBINATION ARC FAULT CIRCUIT INTERRUPTERS	FC FOOTCANDLE	MIN MINIMUM	TR TAMPER RESISTANT
CAP CAPACITY	FCV FLOW CONTROL VALVE	MISC MISCELLANEOUS	TT TEMPERATURE TRANSMITTER
CB CIRCUIT BREAKER	FD FIRE DAMPER	MLO MAIN LUG ONLY	TB TELECOMMUNICATIONS TERMINAL BACKBOARD
CBV CIRCUIT BALANCING VALVE	FD FLOOR DRAIN	MOC MAXIMUM OVERCURRENT PROTECTION	TYP TYPICAL
CCT CORRELATED COLOR TEMPERATURE	FIN FINISHED	MTD MOUNTED	TX TRANSFORMER
CKT CIRCUIT	FLA FULL LOAD AMPS	MUA MAKE-UP AIR UNIT	UC UNDERCUT DOOR
CFH CUBIC FEET PER HOUR	FLEX FLEXIBLE	N NEUTRAL	UH UNIT HEATER
CFM CUBIC FEET PER MINUTE	FLR FLOOR	NC NORMALLY CLOSED	UNO UNLESS NOTED OTHERWISE
CHWR CHILLED WATER RETURN	FOB FLAT ON TOP	NEG NEGATIVE	UNOCC UNOCCUPIED
CHWS CHILLED WATER SUPPLY	FP FIRE PROTECTION	NIC NOT IN CONTRACT	UR URINAL
CI CAST IRON	FP FIRE PUMP	NL NIGHT / SECURITY LIGHT - DO NOT SWITCH	V VOLT
CL CENTER LINE	FPM FEET PER MINUTE	NO NORMALLY OPEN	VA VOLT AMPERE
CLG CEILING	FPS FEET PER SECOND	NOM NOMINAL	VAV VARIABLE AIR VOLUME UNIT
CMU CONCRETE MASONRY UNIT	FS FLOW SWITCH	NTS NOT TO SCALE	VFD VARIABLE FREQUENCY DRIVE
CO CLEAN OUT	FSD FIRE/SMOKE DAMPER	OA OUTSIDE AIR	VRF VARIABLE REFRIGERANT FLOW
COL COLUMN	FT FEET	OC ON CENTER	VOLT VOLTAGE
COMP COMPRESSOR	FX FLEXIBLE CONNECTION	OCC OCCUPIED	VTR VENT THROUGH ROOF
CONC CONCRETE	GND GROUND	OCF OVER CURRENT PROTECTION	W WIDTH
COND CONDENSATE	GAL GALLON	OD OUTSIDE DIAMETER	W WATTS
CONN CONNECTION	GALV GALVANIZED	OL OVERLOAD	W/O WITHOUT
CONT CONTINUATION	GEC GROUND ELECTRODE CONDUCTOR	ORD OVERFLOW ROOF DRAIN	WB WET BULB
CONTR CONTRACTOR	GFCI / GFI GROUND FAULT CIRCUIT INTERRUPTER	OZ OUNCE	WC WATER COLUMN
CRI COLOR RENDERING INDEX	GC GENERAL CONTRACTOR	PBD PARALLEL BLADE DAMPER	WC WATER CLOSET
CT COOLING TOWER	GPH GALLONS PER HOUR	PD PRESSURE DROP	WF WATER GAUGE
CT CURRENT TRANSFORMER	GPM GALLONS PER MINUTE	PH PHASE	WP WEATHERPROOF
CU CONDENSING UNIT	GRS LB GRAMS PER POUND	POS POSITIVE PRESSURE	WPU WEATHERPROOF IN-SUE
CU COPPER	H2O WATER	POS POINT OF SALES	WSR WITHSTAND DATING
CUH CABINET UNIT HEATER	HO HOSE BIBB	PRV PRESSURE REDUCING VALVE	XS FIRE SWITCH
CVB CONSTANT VOLUME BOX	HD HOSE BIBB	PSI POUNDS PER SQUARE INCH	XFMR TRANSFORMER
CWS CONDENSER WATER RETURN	HD HEAD (SEE SCHEDULES)	PT PRESSURE TRANSMITTER	
CWS CONDENSER WATER SUPPLY	HP HEAT PUMP		

SUBSTITUTIONS:

A. SUBSTITUTIONS, SUBSTITUTION OF SPECIFIED EQUIPMENT WILL BE ALLOWED THROUGH A PRIOR APPROVAL PROCESS INITIATED BY THE CONTRACTOR. CONTRACTOR SHALL SUBMIT INTENDED SUBSTITUTION AT LEAST FIVE DAYS PRIOR TO BID FOR APPROVAL FROM ENGINEER. SUBMITTAL SHALL INCLUDE CAPACITIES, DIMENSIONS AND OPERATING INSTRUCTIONS FOR EACH PIECE OF EQUIPMENT. SUBSTITUTION SHALL OCCUR AT NO COST TO THE OWNER. CONTRACTOR IS RESPONSIBLE FOR COORDINATION OF APPROVED SUBSTITUTION AND SHALL INCUR ALL COSTS ASSOCIATED WITH THE SUBSTITUTION INCLUDING STRUCTURAL MODIFICATIONS, SPACE LAYOUT AND REDESIGN COSTS. SEE ALSO DIVISION I GENERAL REQUIREMENTS.

EXAMINATION OF SITE, DRAWINGS, SPECIFICATIONS:

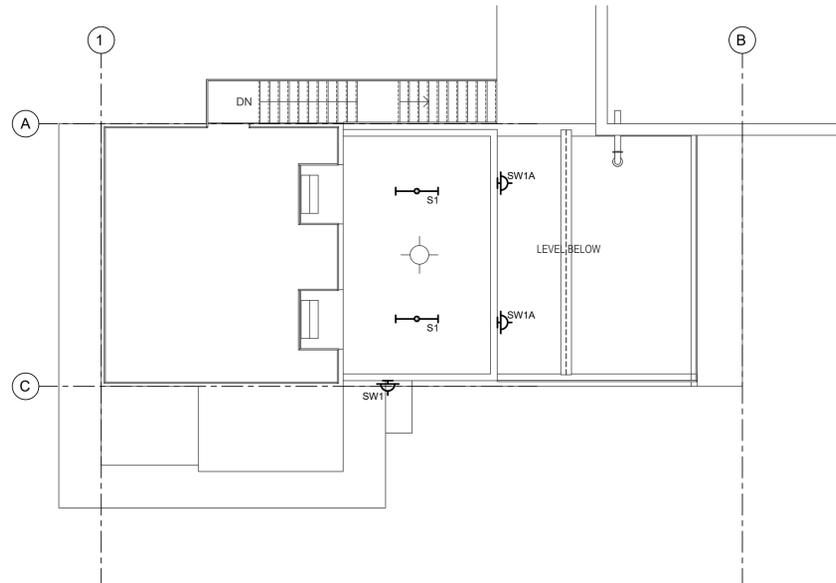
File Date: 4/10/2025 4:02 PM, Plotted By: Drew
 Date Created: 4/10/2025 7:26:54, Project: S56030, Clifton Sanitation Plant, Project: A TO ROAD WORKING PLANS S56030 - CLIFTON WW PUMP ENCLOSURE - LTG.DWG



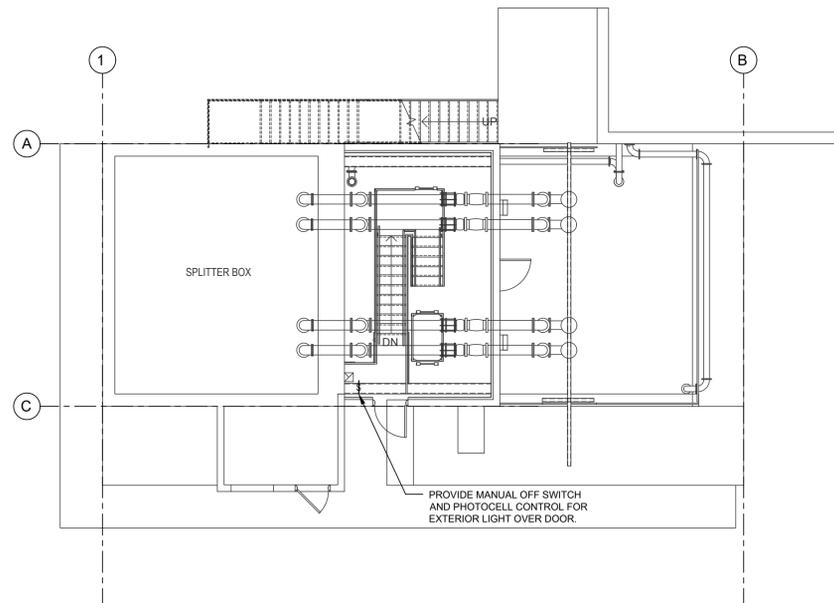
LIGHTING - LOWER LEVEL CONSTRUCTION PLAN
 SCALE: 1/8" = 1'-0"

LUMINAIRE SCHEDULE					
TYPE	MANUFACTURER CATALOG NO.	ALTERNATE CATALOG NO.	VOLTAGE MOUNTING	DRIVER LAMP SPECIFICATION	DESCRIPTION
S1	COOPER FAIL-SAFE 4VRVT3-LD5-5-G-UNV-L840-CD1-WL-MSWL20	APPROVED EQUIVALENT	120-277V SURFACE	0-10V LED DIMMING 4000K, 5000LM, 80CRI 44W	4' VAPORTITE LED, WET LISTED FIXTURE, UL LISTED
SW1	COOPER LUMARK AXCS4A-W-CBP	APPROVED EQUIVALENT	120-277V WALL	LED 3000K, 4648LM, 38W	AXCENT WALL PACK, UL LISTED, FULL CUT OFF
SW1A	COOPER LUMARK AXCS4A-W-MSP/DIM-L12	APPROVED EQUIVALENT	120/277V WALL	LED 3000K, 4648LM, 38W	AXCENT WALL PACK, UL LISTED, FULL CUT OFF

- NOTES:**
- OWNER/ARCHITECT TO SELECT ALL COLORS AND FINISHES.
 - PROVIDE ALL APPURTENANCES REQUIRED FOR A COMPLETE AND FUNCTIONING SYSTEM.
 - PROVIDE AUTOMATIC ON/OFF CONTROL FOR S1 FIXTURES WITH A MANUAL OVERRIDE TO TURN LIGHTS OFF.
 - PROVIDE PHOTOCELL CONTROL, ALONG WITH AUTOMATIC OFF VIA MOTION SENSOR FOR SW1 FIXTURE WITH A MANUAL OVERRIDE TO TURN LIGHTS OFF.
 - PROVIDE MANUAL ON/OFF CONTROL FOR SW1A FIXTURES THAT ARE FOR WORK/TASK LIGHTING OF WET WELL AREA.
 - ALL LIGHTING CONTROLS ARE PER 2018 IECC.



LIGHTING - UPPER LEVEL CONSTRUCTION PLAN
 SCALE: 1/8" = 1'-0"



LIGHTING - GRADE LEVEL CONSTRUCTION PLAN
 SCALE: 1/8" = 1'-0"



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REUSE OF DRAWINGS
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NO.	DESCRIPTION	BY	DATE
02/02/25	DESIGN DEVELOPMENT		
	REVISION		

CLIFTON INFLUENT PUMP STATION UPGRADES PROJECT
 LIGHTING - CONSTRUCTION PLAN
 3217 D ROAD
 CLIFTON, COLORADO

FILE : 25030 - CLIFTON WW - LTG
 JUB PROJ #6000
 DRAWN BY: DB
 DESIGN BY: DB
 CHECKED BY: DB



AT FULL SIZE, IF NOT ONE INCH, SCALE ACCORDINGLY
 LAST UPDATED: 4/10/2025
 SHEET NUMBER:
E1-1

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NO.	REVISION	DESCRIPTION	BY	DATE
02/025	DESIGN DEVELOPMENT			

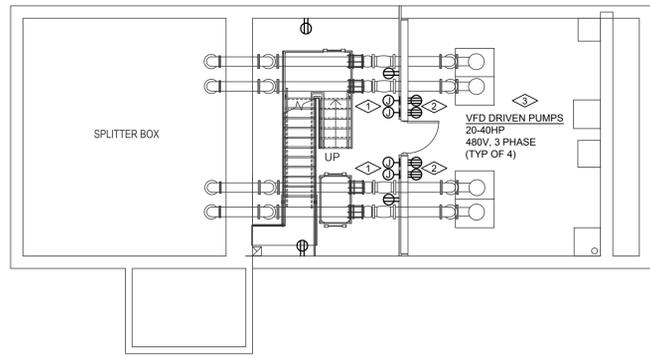
**CLIFTON INFLUENT PUMP STATION
 UPGRADES PROJECT**
 ELECTRICAL - CONSTRUCTION PLAN
 3217 D ROAD
 CLIFTON, COLORADO

FILE : 25030 - CLIFTON WW - ELEC
 JUB PROJ #6030
 DRAWN BY: DB
 DESIGN BY: DB
 CHECKED BY: DB

ONE INCH
 AT FULL SIZE, IF NOT ONE
 INCH, SCALE ACCORDINGLY
 LAST UPDATED: 4/10/2025

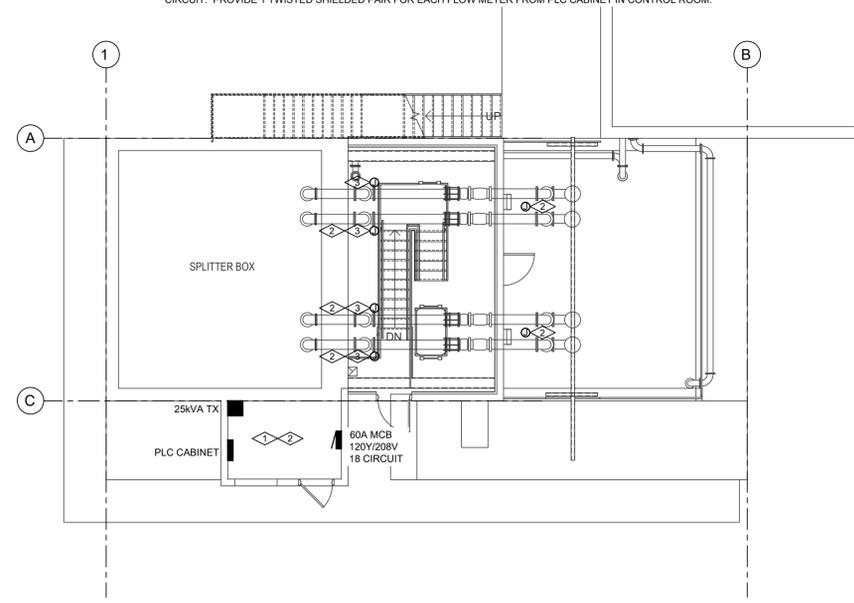
SHEET NUMBER:
E2-1

- KEYNOTES:**
1. PROVIDE JUNCTION BOX(ES) FOR CLASSIFIED RECEPTACLE(S) ON OTHER SIDE OF WALL. PROVIDE SEALING OF CONDUIT AS MAY BE NECESSARY FOR SEPARATION OF CLASSIFIED SPACE. INSTALL JUNCTION BOX AT 44" AFF. OR OWNER APPROVED HEIGHT.
 2. PROVIDE RECEPTACLES THAT ARE RATED FOR CLASS I DIVISION 1 SPACE FOR CONNECTION(S) TO IMMERSED PUMPS. PROVIDE PLUG THAT IS RATED FOR INSTALLATION IN A CLASS I DIVISION 1 SPACE ON EXISTING CABLE SERVING PUMPS). INSTALL RECEPTACLES AT 44" AFF. OR OWNER APPROVED HEIGHT. IN ADDITION PUMP CABLES ALSO INCLUDE TWO 18-GAUGE COMMUNICATION WIRES
 3. PUMP INSTALLATION PLAN IS TO INSTALL SMALLER (20HP, 480V/3P, 26A) PUMPS INITIALLY AND PROVIDE FOR THE ELECTRICAL CAPACITY TO UPGRADE/REPLACE THESE PUMPS WITH LARGER (35HP-40HP, 480V/3P, 52A) PUMPS. VFDS FOR INSTALLED PUMPS ARE PLANNED TO BE INSTALLED IN EQUIPMENT ROOM AT GRADE LEVEL.



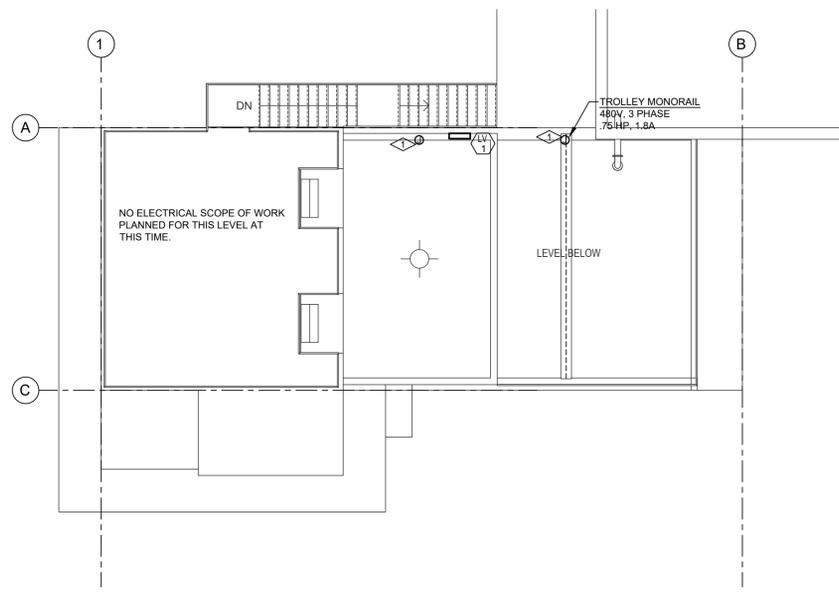
ELECTRICAL - LOWER LEVEL CONSTRUCTION PLAN
 SCALE: 1/8" = 1'-0"
 NORTH

- KEYNOTES:**
1. BY OWNER: EQUIPMENT ROOM FOR VFD, ELECTRICAL PANEL (60A MCB, 120Y/208V, 3P4W, 18 CIRCUIT), TRANSFORMER (25KVA, 480V PRI, 120Y/208V SEC), AND CONTROLS TO BE INSTALLED. POWER TRANSFORMER WITH A 40A/3P/480V (OR SMALLER) CIRCUIT FROM PANEL PPHW IN HEADWORKS BUILDING. PROVIDE 8AWG COPPER MINIMUM CONDUCTORS WITH 10AWG COPPER GROUND IN 1" CONDUIT FROM PPHW.
 2. PROVIDE CONDUIT AND CONDUCTOR ROUTING AS MAY BE NECESSARY FOR LIGHTING, CONVENIENCE POWER, AND EQUIPMENT POWER FOR NEW ENCLOSURE AND OPERATING EQUIPMENT. PROVIDE SEPARATION FROM CLASSIFIED SPACE AS MAY BE NECESSARY. SCADA AND LOW VOLTAGE WIRING WILL BE SIX 14-GAUGE TWISTED SHIELDED PAIRS. ONE FOR EACH FLOW METER AND TWO FOR LEVEL SENSORS, ONE IN EACH WET WELL. FLOW METERS AND LEVELS SENSORS TO BE PROVIDED BY OWNER.
 3. JUNCTION BOX FOR FLOW METER. CONNECT TO SAME CIRCUIT ON NEW PANEL. PROVIDE 20 AMP BREAKER FOR CIRCUIT. PROVIDE 1 TWISTED SHIELDED PAIR FOR EACH FLOW METER FROM PLC CABINET IN CONTROL ROOM.

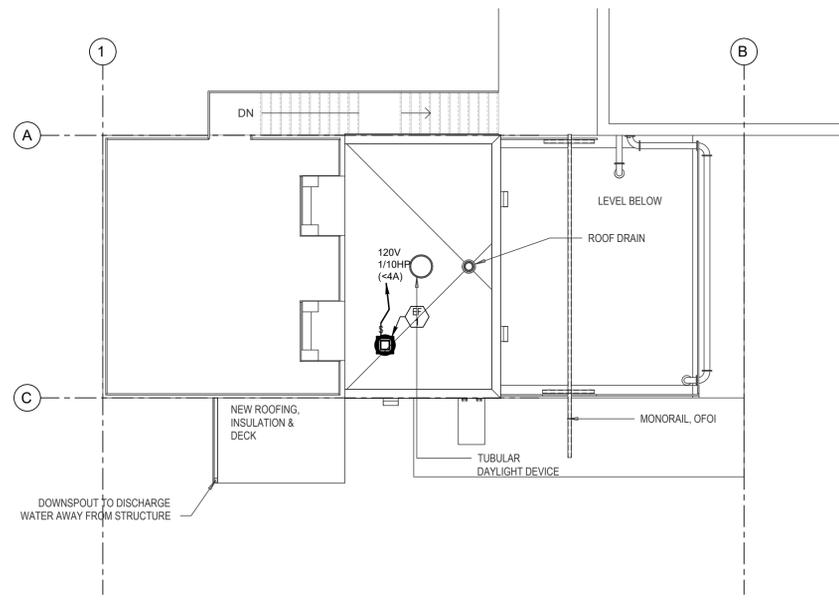


ELECTRICAL - GRADE LEVEL CONSTRUCTION PLAN
 SCALE: 1/8" = 1'-0"
 NORTH

- KEYNOTES:**
1. REUSE EXISTING FEED FROM EXISTING (OLD) OILER PANEL TO POWER NEW TROLLEY MOTOR (BY OWNER).



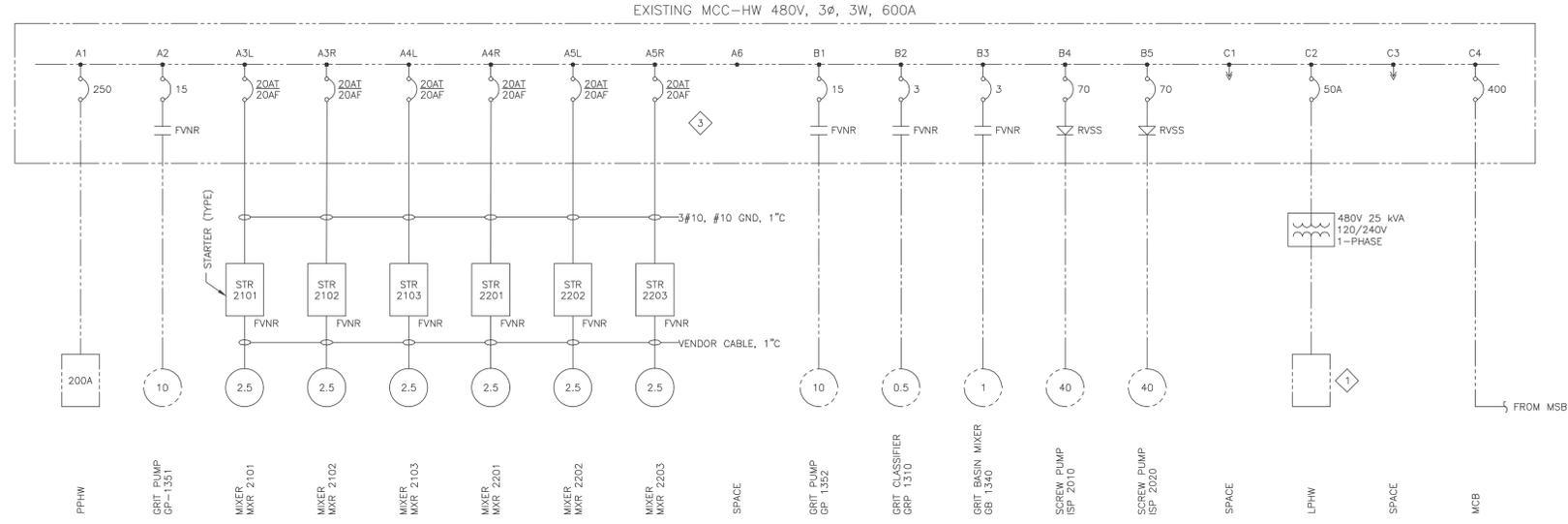
ELECTRICAL - UPPER LEVEL CONSTRUCTION PLAN
 SCALE: 1/8" = 1'-0"
 NORTH



ELECTRICAL - ROOF PLAN
 SCALE: 1/8" = 1'-0"
 NORTH

File Date: 4/10/2025, 4:02 PM, Plotted By: Drew
 Date Created: 4/10/2025, 2:02:55 PM, Project: 25030 - CLIFTON WW PUMP ENCLASURE - ELEC.DWG





EXISTING MCC-HW ONE-LINE DIAGRAM MODIFICATION

NOTES:

1. BY OWNER: EXISTING POWER CIRCUITS FOR SCREW PUMPS ARE REPURPOSED TO POWER NEW VFDS. EACH REPURPOSED CIRCUIT POWERS (2) NEW VFDS. 100A FEEDER CIRCUITS ARE TO BE WIRED WITH MINIMUM 3AWG COPPER CONDUCTORS AND NEUTRAL WITH A MINIMUM 8AWG COPPER GROUND IN A MINIMUM 1-1/4" CONDUIT.
2. BY OWNER: NEW POWER CIRCUIT IS TO BE PROVIDED FOR GENERAL POWER (RECEPTACLES, LIGHTING, HVAC, ETC.) FOR NEW CONSTRUCTION. PRELIMINARY PLAN IS TO PROVIDE A 40A/3P/480V (MAXIMUM) POWER CIRCUIT FROM PANEL PPHW TO FEED A 25KVA STEP-DOWN TRANSFORMER AND 60A 120V/208V PANEL.
3. NEW OWNER PROVIDED EQUIPMENT TO BE INSTALLED IN VFD CONTROL ROOM INCLUDES BUT IS NOT LIMITED TO:
 - 3.1. (4) VFDS FOR NEW PUMPS
 - 3.2. 25KVA STEP-DOWN TRANSFORMER
 - 3.3. 60A MAIN CIRCUIT BREAKER, 120V/208V, 3P 4W, 18 CIRCUIT BRANCH CIRCUIT PANEL
 - 3.4. PLC CABINET (SCADA CONTROL INTERFACE OR TERMINATION BOX)
 - 3.5. TAP GUTTER ABOVE NEW VFDS TO SPLIT 100A FEEDERS TO POWER NEW VFDS



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NO.	REVISION	DESCRIPTION	BY	DATE
02/025	DESIGN DEVELOPMENT			

CLIFTON INFLUENT PUMP STATION UPGRADES PROJECT
 ELECTRICAL - DETAILS
 3217 D ROAD
 CLIFTON, COLORADO

FILE :	25030 - CLIFTON WW - ELEC
JUB PROJ #	26030
DRAWN BY :	DB
DESIGN BY :	DB
CHECKED BY :	DB
SCALE	ONE INCH AT FULL SIZE, IF NOT ONE INCH, SCALE ACCORDINGLY
LAST UPDATED:	4/10/2025
SHEET NUMBER:	E3-1

