Conceptual Review Agenda

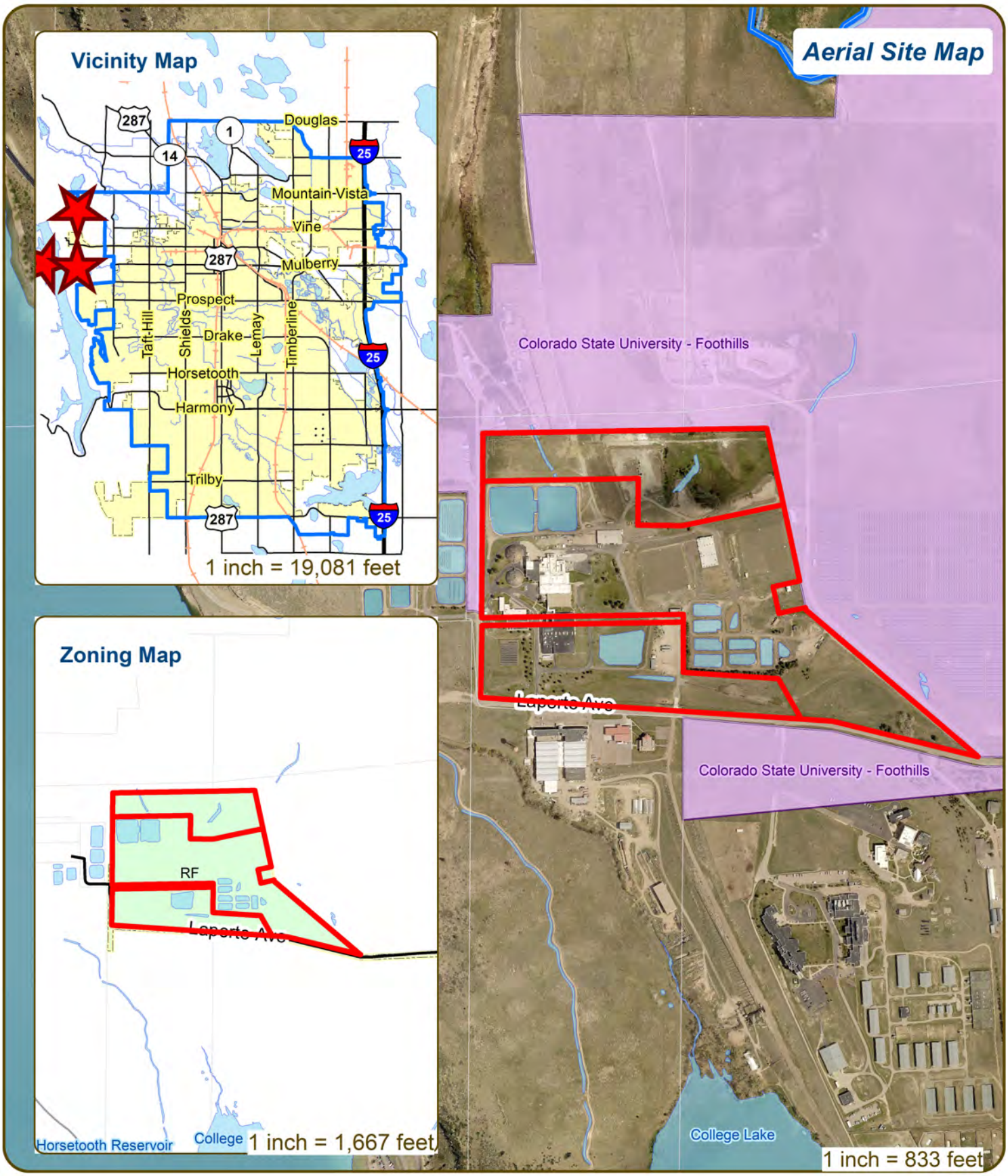
Schedule for 06/03/21

Meetings hosted via Zoom Web Conferencing

Thursday, June 3, 2021

Time	Project Name	Applicant Info	Project Description	
11:15	**4316 W Laporte Ave Water Treatment Facility** **CDR210044**	Amy Johnson 970-286-5337 ajohnson@fcgov.com	This is a request to construct a Belt Press Building for the existing City of Fort Collins Water Treatment Facility located at 4316 Laporte Ave (parcel #970700913; 9707000904; 9707000908). This structure will house a belt filter press to receive and mechanically thicken sludge byproduct from the Water Treatment Facility. The proposed building at is approximately 3,250 sf. There are two attached, covered settling (water) tanks with a footprint of 2,000 sf and an attached covered exterior bay that will be approximately 700 sf. Access is taken from the interior access drive and Laporte Ave to the south. The site is within the Residential Foothills (RF) zone district and is subject to Planning & Zoning Board (Type 2) Review.	Planner: Clark Mapes Engineer: Spencer Smith DRC: Todd Sullivan

4316 Laporte Ave
COFC Water Treatment Facility - Belt Press Building



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City of Fort Collins GIS

Development Review Guide – STEP 2 of 8

CONCEPTUAL REVIEW:
APPLICATION

General Information
All proposed development projects begin with Conceptual Review. Anyone with a development idea can schedule a Conceptual Review meeting to get feedback on prospective development ideas. At this stage, the development idea does not need to be finalized or professionally presented. However, a sketch plan and this application must be submitted to City Staff prior to the Conceptual Review meeting. The more information you are able to provide, the better feedback you are likely to get from the meeting. Please be aware that any information submitted may be considered a public record, available for review by anyone who requests it, including the media. The applicant acknowledges that they are acting with the owner's consent.

Conceptual Reviews are scheduled on three Thursday mornings per month on a "first come, first served" basis and are a free service. One 45 meeting is allocated per applicant and only three conceptual reviews are done each Thursday morning. A completed application must be submitted to reserve a Conceptual Review time slot. **Complete applications and sketch plans must be submitted to City Staff on Thursday, no later than end of day, two weeks prior to the meeting date.** Application materials must be e-mailed to currentplanning@fcgov.com. If you do not have access to e-mail, other accommodations can be made upon request.

At Conceptual Review, you will meet with Staff from a number of City departments, such as Community Development and Neighborhood Services (Zoning, Current Planning, and Development Review Engineering), Light and Power, Stormwater, Water/Waste Water, Advance Planning (Long Range Planning and Transportation Planning) and Poudre Fire Authority. Comments are offered by staff to assist you in preparing the detailed components of the project application. There is no approval or denial of development proposals associated with Conceptual Review. At the meeting you will be presented with a letter from staff, summarizing comments on your proposal.

BOLDED ITEMS ARE REQUIRED *The more info provided, the more detailed your comments from staff will be.*

Contact Name(s) and Role(s) (Please identify whether Consultant or Owner, etc) _____

Amy Johnson, Special Project Manager, Water Systems Engineering, Utilities (owner)

Business Name (if applicable) *City of Fort Collins, Utilities*

Your Mailing Address *700 Wood St., Fort Collins, CO 80521*

Phone Number *970-286-5337* Email Address *ajohnson@fcgov.com*

Site Address or Description (parcel # if no address) _____

Water Treatment Facility (WTF), 4316 West Laporte Ave., Fort Collins, CO 80521

Description of Proposal (attach additional sheets if necessary) _____

See attached description

Proposed Use *Solids Handling Facility* **Existing Use** *None (new facility proposed)*

Total Building Square Footage *3,250 SF* S.F. Number of Stories *2* Lot Dimensions *Whole WTF = 89 acres*

Age of any Existing Structures *Original Water Treatment Plant facilities built in 1967 with expansions in 1986 and 2000*

Info available on Larimer County's Website: http://www.co.larimer.co.us/assessor/query/search.cfm
If any structures are 50+ years old, good quality, color photos of all sides of the structure are required for conceptual.

Is your property in a Flood Plain? ☐ Yes ☒ No If yes, then at what risk is it? _____

Info available on FC Maps: http://gisweb.fcgov.com/redirect/default.aspx?layerTheme=Floodplains.

Increase in Impervious Area *41,553* S.F.
(Approximate amount of additional building, pavement, or etc. that will cover existing bare ground to be added to the site)

Suggested items for the Sketch Plan:
Property location and boundaries, surrounding land uses, proposed use(s), existing and proposed improvements (buildings, landscaping, parking/drive areas, water treatment/detention, drainage), existing natural features (water bodies, wetlands, large trees, wildlife, canals, irrigation ditches), utility line locations (if known), photographs (helpful but not required). Things to consider when making a proposal: How does the site drain now? Will it change? If so, what will change?

Description of Proposal

The new Belt Press Building will house a belt filter press to receive and mechanically thicken the alum sludge byproduct from the Water Treatment Facility sedimentation basins. The process will separate the solids into a filtrate and a solid cake. The filtrate will be discharged into the existing lagoons and then pumped to the backwash ponds. The solid cake residual will be conveyed into a container or dump truck and hauled away.

The new belt filter press system will be designed to take all or part of the sludge flow from the water treatment process to supplement and improve the current lagoon system operation, as both processes will be required during peak demands and at future production rates.

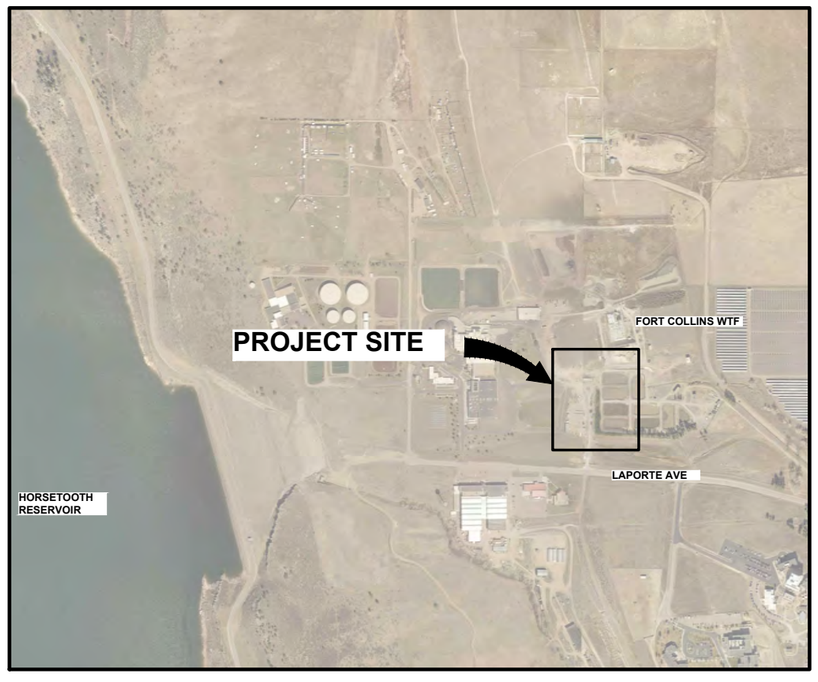
This system will prevent taste and odor issues in the drinking water, enhance the water treatment process, ensure the continued supply of clean drinking water, prevent the overflow or spill of solids to the environment, and prevent the violation of water quality and solid waste regulations.

The proposed two-story process building is 3,250 SF. There are two attached, covered settling (water) tanks with a footprint of 2,000 SF and an attached covered exterior bay (700 SF).

Contract Drawings For

FORT COLLINS WATER TREATMENT FACILITY BELT PRESS BUILDING

50% Design Project



Vicinity Map

N

400 200 0 400 800

SCALE IN FEET

ISSUED FOR PRELIMINARY DESIGN 50%

CITY OF FORT COLLINS
UTILITIES DEPARTMENT

HDR PROJECT NO: 10258885
UTILITY DEPARTMENT PROJECT NUMBER: 5020100009

Larimer County Colorado
May, 2021

KEY PROJECT PERSONNEL

CITY OF FORT COLLINS, UTILITIES

AMY JOHNSON, PE, PMP
(970) 286-5337
AJOHNSON@FCGOV.COM

HDR ENGINEERING

MARK BEEBE, P.E.
(303) 318-6353 (OFFICE)
(303) 868-7731 (MOBILE)
MARK.BEEBE@HDRINC.COM

SHEET NO.	SHEET TITLE

00 - GENERAL

00G001	COVER SHEET
00G002	INDEX OF DRAWINGS & DESIGN CRITERIA
00G003	ABBREVIATIONS AND NOTES
00G004	GENERAL LEGEND AND NOTES
00G005	INSTRUMENTATION LEGEND
00G006	CIVIL LEGENDS AND NOTES
00G007	GENERAL STRUCTURAL NOTES
00G008	MECHANICAL/PLUMBING LEGEND
00G009	ELECTRICAL LEGEND
00G010	ELECTRICAL ABBREVIATIONS
00G011	PROCESS & INSTRUMENTATION CONTROL SYMBOLS
00G012	INSTRUMENTATION WATER UTILITY P&ID TAG LEGEND
00G013	INSTRUMENTATION PHYSICAL LOCATION AND CONTROL LEGEND
00G014	INSTRUMENTATION LEGEND
00G015	INSTRUMENTATION SYMBOLS & ABBREVIATIONS
00S001	STRUCTURAL NOTES
00S501	CONCRETE DETAILS
00S502	CONCRETE DETAILS
00S503	MASONRY DETAILS
00S504	MASONRY DETAILS
00S505	STEEL DETAILS
00S506	STAIR AND RAILING DETAILS
00D101	PROCESS FLOW DIAGRAM
00D102	HYDRAULIC PROFILE
00E601	ELECTRICAL DISTRIBUTION OVERVIEW
00E602	MEDIUM VOLTAGE - PRIMARY DISTRIBUTION

01 - PROCESS & INSTRUMENTATION DIAGRAMS

01Y601	VALVE VAULT
01Y602	SLUDGE EQ AND PUMPING
01Y603	BELT FILTER PRESS
01Y604	POLYMER STORAGE AND FEED
01Y605	CONVEYOR AND MISCELLANEOUS
01Y610	NETWORK DIAGRAM

02 - SITEWORK

02C101	OVERALL SITE PLAN AND STAGING AREA
02C401	SITE PAVING AND GRADING PLAN
02C402	YARD PIPING AND UTILITY PLAN
02C501	CIVIL DETAILS

03 - BELT PRESS BUILDING

03S101	BELT PRESS BUILDING FOUNDATION PLAN
03S102	BELT PRESS BUILDING MEZZANINE PLAN
03S103	BELT PRESS BUILDING ROOF PLAN
03S301	BELT PRESS BUILDING SECTIONS
03S302	BELT PRESS BUILDING SECTIONS
03S501	BELT PRESS BUILDING STRUCTURAL DETAILS
03A001	ARCHITECTURAL CODE SUMMARY
03A101	ARCHITECTURAL FLOOR PLAN
03A102	ARCHITECTURAL MEZZANINE PLAN
03A103	ARCHITECTURAL ROOF PLAN
03A201	ARCHITECTURAL EXTERIOR ELEVATIONS
03A202	ARCHITECTURAL EXTERIOR ELEVATIONS
03A301	ARCHITECTURAL BUILDING SECTIONS
03A302	ARCHITECTURAL WALL SECTIONS
03A401	ARCHITECTURAL ENLARGED PLANS & DETAILS
03A501	ARCHITECTURAL DOOR AND WINDOW DETAILS
03A502	ARCHITECTURAL DETAILS
03A503	ARCHITECTURAL DETAILS
03A601	ARCHITECTURAL SCHEDULES & WALL TYPES

GREY SHEETS NOT INCLUDED IN 50% SUBMITTAL

SHEET NO.	SHEET TITLE

03 - BELT PRESS BUILDING (CONT.)

03D101	PROCESS PLAN
03D301	PROCESS SECTIONS
03D501	PROCESS DETAILS
03M101	MECHANICAL FLOOR PLAN
03M601	HVAC EQUIPMENT SCHEDULES
03P101	PLUMBING FLOOR PLAN
03M601	PLUMBING EQUIPMENT SCHEDULES
03E101	POWER PLAN
03E601	MCC176 ONE-LINE DIAGRAM 1
03E602	MCC176 ONE-LINE DIAGRAM 2

DESIGN CRITERIA

PRE-SEDIMENTATION BASIN FLOW RATES TO BELT PRESS BUILDING

AVERAGE DAY (1)	51,600 GPD
PEAK WEEK (1)	124,300 GPD
PEAK DAY (1)	240,900 GPD
MAXIMUM INSTANTANEOUS FLOW RATE FROM PRE-SED TRAINS	1,000 GPM
NOTES: (1) CURRENT OPERATING CONDITIONS	

EQUALIZATION TANKS

NUMBER OF TANKS	2
VOLUME	
TANK VOLUME (EA)	90,000 GAL
TANK VOLUME (TOTAL)	180,000 GAL
MIXERS	
NUMBER	1 PER TANK
TYPE	VERTICAL TURBINE
HORSEPOWER	5
DRIVE TYPE	VFD
RPM (MAXIMUM)	25

SLUDGE FEED PUMPS

NUMBER OF PUMPS	1 DUTY, 1 STANDBY
PUMP TYPE	PROGRESSIVE CAVITY
PUMP CAPACITY AT DESIGN POINT (EA)	325 GPM
TOTAL DYNAMIC HEAD AT DESIGN POINT (TDH)	85 FT
DRIVE TYPE	VFD
HORSEPOWER	15

POLYMER FEED SYSTEM

POLYMER SYSTEM	
POLYMER CONCENTRATION- DILUTED TO PROCESS	0.25% - 0.50%
DILUTION WATER FLOW RATE	3 – 25 GPM
STORAGE	
TYPE OF STORAGE	BULK LIQUID
TOTAL WORKING VOLUME	1,200 GAL
NUMBER OF TANKS	1
CHEMICAL METERING PUMPS	
NUMBER OF UNITS	1
DOSAGE RATE (NEAT SOLUTION, MAXIMUM)	4.0 GPH
TYPE	PROGRESSIVE CAVITY
HORSEPOWER	3
DRIVE TYPE	VFD

BELT FILTER PRESS

BELT FILTER PRESS UNIT	
NUMBER OF UNITS	1
BELT SIZE	2.0 – 2.2 METERS
FEED FLOW RATE	325 GPM
SOLIDS CHARACTERISTICS	0.5 – 1.0% SOLIDS
CONVEYOR SYSTEM	
DESIGN CAKE LOADING RATE	
TYPE	SHAFTLESS SPIRAL CONVEYOR

ISSUE	DATE	DESCRIPTION
	03/08/2021	30% DESIGN REVIEW

PROJECT MANAGER	MARK H. BEEBE
PROJECT ENGINEER	J. LIMKE
STRUCTURAL	J. CORONADO
ARCHITECTURAL	R. MCKINLEY
PROCESS	S. FOX
I & C	C. AUDO
ELECTRICAL	T. MOORE
DRAWN	E. PAZ
PROJECT NUMBER	10258885

PRELIMINARY
NOT FOR
CONSTRUCTION
OR
RECORDING

City of Fort Collins

UTILITIES DEPARTMENT
BELT PRESS BUILDING

GENERAL
INDEX OF DRAWINGS & DESIGN CRITERIA

0 1" 2"

FILENAME 00G002.dwg
SCALE NO SCALE

SHEET
00G002

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A/C	AIR CONDITIONING
A/E	ARCHITECT/ENGINEER
A	AMPERE
AB	ANCHOR BOLT
ABAN	ABANDON
ABC	AGGREGATE BASE COURSE
ABT	ABOUT
AC	ALTERNATING CURRENT
ACK	ACKNOWLEDGE
ACP	ACOUSTIC CEILING PANEL, ASPHALTIC CONCRETE PAVEMENT
ACST	ACOUSTIC
AD	ADDENDUM, AREA DRAIN
ADDL	ADDITIONAL
ADH	ADHESIVE
ADJ	ADJUSTABLE, ADJACENT
AF	AMP FRAME, AMP FUSE
AFF	ABOVE FINISH FLOOR
AFG	ABOVE FINISH GRADE
AGGR	AGGREGATE
AI	AREA INLET, ANALOG INPUT
AIC	AMPS INTERRUPTING CAPACITY
ALIG	ALIGNMENT
ALT	ALTERNATE, ALTITUDE
ALUM	ALUMINUM
AM	ACOUSTICAL MATERIAL
AMB	AMBIENT
ANC	ANCHOR
AO	ANALOG OUTPUT
AP	ACCESS PANEL
APRX	APPROXIMATE
APVD	APPROVED
ARCH	ARCHITECTURAL
ASSY	ASSEMBLY
AT	ACOUSTICAL TILE, AMP TRIP
ATC	ACOUSTICAL TILE CEILING
ATM	ATMOSPHERE
AUTO	AUTOMATIC
AUX	AUXILIARY
AVE	AVENUE
AVG	AVERAGE
AWG	AMERICAN WIRE GAGE
AWT	ACOUSTICAL WALL TILE
B TO B	BACK TO BACK
BAL	BALANCE
BBD	BULLETIN BOARD
BC	BASE CABINET, BOTTOM CHORD, BOLT CENTER, BOLT CIRCLE
BD	BOARD
BE	BOTH ENDS, BELL END
BF	BOTH FACES, BOTTOM FACE, BLIND FLANGE, BOARD FEET
BITUM	BITUMINOUS
BKG	BACKING
BL	BASE LINE
BLDG	BUILDING
BLK	BLOCK
BLKG	BLOCKING
BM	BENCHMARK, BEAM
BOC	BACK OF CURB
BOD	BOTTOM OF DUCT
BOG	BOTTOM OF GRILLE
BOL	BOTTOM OF LOUVER, BOLLARD
BOP	BOTTOM OF PIPE
BOR	BOTTOM OF REGISTER
BOT	BOTTOM
BOU	BOTTOM OF UNIT
BP	BASE PLATE
BRG	BEARING
BRGP	BEARING PLATE
BRKT	BRACKET
BS	BOTH SIDES
BTU	BRITISH THERMAL UNIT
BTW	BETWEEN
BTWLD	BUTT WELD
BU	BELL UP, BUILT-UP
BUR	BUILT-UP ROOFING
BW	BOTH WAYS
BYP	BYPASS
C TO C	CENTER TO CENTER
C&G	CURB AND GUTTER
C	CHANNEL SHAPE, CENTIGRADE, CONDUIT
CAB	CABINET
CAP	CAPACITY
CAT	CATALOG, CATALOGIORY
CAV	CAVITY
CB	CATCH BASIN
CCB	CONCRETE BLOCK
CCW	COUNTER CLOCKWISE
CDF	CONTROLLED-DENSITY FILL
CE	CONCRETE EDGE
CER	CERAMIC
CF	CUBIC FEET (FOOT)
CFL	COUNTER FLASHING
CHBD	CHALKBOARD
CHD	CHORD
CHFR	CHAMFER
CHH	COMMUNICATION HANDHOLE
CI	CURB INLET
CIP	CAST-IN-PLACE
CIPB	CONCRETE INTERLOCKING PAVER BALLAST
CIRC	CIRCULATION, CIRCULAR
CJ	CONSTRUCTION JOINT
CKT	CIRCUIT
CL	CENTERLINE, CLASS, CLOSE
CLG	CEILING
CLKG	CAULKING
CLR	CLEAR
CMH	COMMUNICATION MANHOLE
CMP	CORRUGATED METAL PIPE
CMU	CONCRETE MASONRY UNIT
CO	CLEANOUT, CONCRETE OPENING
COL	COLUMN
COM	COMMON
COMB	COMBINATION
COMM	COMMUNICATION
COMP	COMPOSITION, COMPRESSIBLE, COMPOSITE
CON	CONCENTRIC
CONC	CONCRETE
CONN	CONNECTION
CONST	CONSTRUCTION
CONT	CONTINUOUS
COOR	COORDINATE
CORR	CORROSIVE, CORRUGATED
CP	CHECKER PLATE, CONTROL POINT
CPLG	COUPLING
CRL	CORROSION-RESISTANT LINING
CSC	COMPRESSION SLEEVE COUPLING
CSK	COUNTERSINK
CSS	CLINIC SERVICE SINK
CT	CERAMIC TILE
CTJ	CONTRACTION JOINT
CTR	CENTER
CTRL	CONTROL
CVT	CULVERT
CU	COPPER, CUBIC
CW	CLOCKWISE
CY	CUBIC YARD
d	PENNY (NAIL MEASURE)
D	DEEP, DIFFUSER, DRAIN
DB	DUCT BANK, DECIBEL, DRY BULB
DBA	DEFORMED BAR ANCHOR
DBL	DOUBLE
DC	DIRECT CURRENT
DEG	DEGREE
DEG C	DEGREE CENTIGRADE
DEG F	DEGREE FAHRENHEIT
DEMO	DEMOLITION
DEP	DEPRESSED
DEPT	DEPARTMENT
DET	DETAIL
DI	DROP INLET, DUCTILE IRON, DIGITAL INPUT
DIA	DIAMETER
DIAG	DIAGONAL, DIAGRAM
DIFF	DIFFERENTIAL, DIFFERENCE
DIM	DIMENSION
DISCH	DISCHARGE
DIST	DISTANCE, DISTRIBUTION
DIV	DIVISION
DL	DEAD LOAD
DMJ	DOUBLE MECHANICAL JOINT, DISMANTLING JOINT
DMPF	DAMP PROOFING
DN	DOWN
DO	DISSOLVED OXYGEN, DIGITAL OUTPUT, DITTO
DP	DEPTH
DPDT	DOUBLE POLE, DOUBLE THROW
DPST	DOUBLE POLE, SINGLE THROW
DS	DOWN SPOUT
DT	DOUBLE TEE, DRIP TRAP ASSEMBLY
DUP	DUPLICATE
DWG	DRAWING
DWL	DOWEL
DWR	DRAWER
E	EAST
EA	EACH, EXHAUST AIR
EC	ELECTRICAL CONTRACTOR
ECC	ECCENTRIC
ED	EQUIPMENT DRAIN
EDB	ELECTRICAL DUCT BANK
EE	EACH END
EF	EACH FACE
EFF	EFFLUENT, EFFICIENCY
EHH	ELECTRICAL HANDHOLE
EIFS	EXTERIOR INSULATION & FINISH SYSTEM
EJ	EXPANSION JOINT
EL	ELBOW, ELEVATION
ELEC	ELECTRICAL
EMBD	EMBEDDED
EMER	EMERGENCY
EMH	ELECTRICAL MANHOLE
ENCL	ENCLOSURE
ENGR	ENGINEER
ENTR	ENTRANCE
EOP	EDGE OF PAVEMENT
EQ	EQUAL
EQUIP	EQUIPMENT
EQUIV	EQUIVALENT
ES	EACH SIDE, EQUAL SPACE, EMERGENCY SHOWER
ESEW	EMERGENCY SHOWER AND EYE WASH
EST	ESTIMATE
EW	EACH WAY, EMERGENCY EYE/FACE WASH
EWC	ELECTRIC WATER COOLER
EWEF	EACH WAY, EACH FACE
EWTB	EACH WAY, TOP AND BOTTOM
EXC	EXCAVATION
EXH	EXHAUST
EXP	EXPANSION, EXPOSED
EXST	EXISTING
EXT	EXTERIOR, EXTERNAL, EXTENSION
F	FLANGE
F&B	FACE AND BYPASS
FAB	FABRICATE
FB	FLOOR BEAM
FBD	FIBERBOARD
FBG	FIBERGLASS
FBM	BOARD FOOT MEASURE
FBO	FURNISHED BY OWNER
FC	FLUSHING CONNECTION
FCA	FLANGED COUPLING ADAPTER
FD	FLOOR DRAIN
FDC	FLEXIBLE DUCT CONNECTION
FDR	FEEDER
FDTN	FOUNDATION
FE	FLANGED END
FEC	FIRE EXTINGUISHER CABINET
FES	FLARED END SECTION
FEXT	FIRE EXTINGUISHER
FF	FAR FACE, FACTORY FINISH, FLAT FACE
FG	FINISHED GRADE
FH	FIRE HYDRANT
FIG	FIGURE
FIN	FINISH
FJT	FLUSH JOINT
FL	FLOW, FLOW LINE
FLEX	FLEXIBLE
FLOR	FLUORESCENT
FLR	FLOOR
FLS	FLASHING, FLUSH
FN	FENCE
FO	FINISHED OPENING, FIBER OPTIC
FOB	FLAT ON BOTTOM
FOC	FACE OF CONCRETE, FACE OF CURB
FOF	FACE OF FINISH
FOM	FACE OF MASONRY
FOS	FACE OF STUDS
FOT	FLAT ON TOP
FPT	FEMALE PIPE THREAD
FR	FRAME
FRP	FIBERGLASS REINFORCED PLASTIC
FRTM	FIRE RETARDANT TREATED MATERIAL
FS	FLOOR SINK, FAR SIDE
FT	FEET, FOOT
FTG	FOOTING, FITTING
FUR	FURRED, FURRING
FURN	FURNITURE, FURNISH
FUT	FUTURE
FV	FACE VELOCITY
FW	FIELD WELD, FIRE WALL
FWD	FORWARD
FWE	FURNISHED WITH EQUIPMENT
FXTR	FIXTURE
G	GRILLE, GROUND
GA	GAGE (METAL THICKNESS)
GAL	GALLON
GALV	GALVANIZED
GB	GRAB BAR, GRADE BREAK
GC	GROOVED COUPLING
GD	GUARD
GEN	GENERAL
GFCI	GROUND FAULT CIRCUIT INTERRUPTER
GFMU	GROUND FACE MASONRY UNIT
GG	GUTTER GRADE
GJ	GROOVED JOINT
GL	GLASS
GLB	GLASS BLOCK, GLULAM BEAM
GND	GROUND
GP	GUY POLE
GR	GRADE
GRTG	GRATING
GSB	GYPSUM SHEATHING BOARD
GT	GREASE TRAP
GVL	GRAVEL
GW	GUY WIRE
GWB	GYPSUM WALLBOARD
GYP	GYPSUM HARDBOARD
H	HIGH
HB	HOSE BIBB
HBD	HARDBOARD
HC	HANDICAPPED, HOLLOW CORE, HORIZONTAL CURVE, HORIZONTAL CENTERLINE
HD	HEAD, HOT DIP
HDR	HEADER
HDW	HARDWARE
HEX	HEXAGONAL
HGR	HANGER
HH	HANDHOLE
HID	HIGH-INTENSITY DISCHARGE
HM	HOLLOW METAL
HORIZ	HORIZONTAL
HP	HIGH POINT, HORSEPOWER
HPC	HORIZONTAL POINT OF CURVATURE
HPS	HIGH-PRESSURE SODIUM
HPT	HORIZONTAL POINT OF TANGENCY
HR	HOSE REEL, HOUR
HS	HEADED STUD, HIGH STRENGTH
HSS	HOLLOW STRUCTURAL SHAPE
HT	HEIGHT
HTG	HEATING
HV	HIGH VOLTAGE
HVAC	HEATING, VENTILATING AND AIR CONDITIONING
HWD	HARDWOOD
HWL	HIGH WATER LEVEL
HYD	HYDRAULIC
HZ	HERTZ, CYCLES PER SECOND
ID	INSIDE DIAMETER, INTERIOR DIMENSION
IE	INVERT ELEVATION, FOR EXAMPLE
IF	INSIDE FACE
IH	INTAKE HOOD
IMP	IMPACT
IN	INCH
INC	INCLUDE, INCANDESCENT
INF	INFLUENT
INSTR	INSTRUMENTATION
INSUL	INSULATION
INT	INTERIOR, INTERSECTION
INTR	INTERMEDIATE, INTERIOR
INV	INVERT
IPS	IRON PIPE SIZE
IPT	INTERNAL PIPE THREAD
IR	INSIDE RADIUS, IRON ROD
IRR	IRRIGATION
ISO	ISOMETRIC
JB	JUNCTION BOX
JCT	JUNCTION
JF	JOINT FILLER
JST	JOIST
JT	JOINT
K	KIP
KB	KNEE BRACE
KCMIL	THOUSAND CIRCULAR MILS
KD	KNOCK DOWN
KO	KNOCK OUT
KSI	KIPS PER SQUARE INCH
KW	KILOWATT
L	ANGLE, LENGTH, LAVATORY, LINTEL
LAD	LADDER
LAM	LAMINATE
LATL	LATERAL
LB	LAG BOLT, POUND
LCTB	LIQUID CHALK AND TACK BOARD
LDG	LANDING
LDR	LEADER
LE	LIFTING EYE
LF	LINEAR FOOT
LG	LONG
LH	LEFT HAND
LIN	LINEAR
LIQ	LIQUID
LLH	LONG LEG HORIZONTAL
LLV	LONG LEG VERTICAL
LMLU	LIQUID MARKER LECTURE UNIT
LNG	LONGITUDINAL
LOC	LOCATION
LP	LOW POINT
LPS	LOW-PRESSURE SODIUM
LR	LONG RADIUS
LT	LEFT
LTD	LIMITED
LTG	LIGHTING
LTL	LINTEL
LTNG	LIGHTNING
LV	LOW VOLTAGE
LVL	LAMINATED VENEER LUMBER
LVR	LOUVER
LW	LIGHTWEIGHT
LWC	LIGHTWEIGHT CONCRETE
LWL	LOW WATER LEVEL
MA	MIXED AIR
MACH	MACHINED
MAINT	MAINTENANCE
MAN	MANUAL
MATL	MATERIAL
MAX	MAXIMUM
MB	MACHINE BOLT
MBR	MEMBER
MC	MECHANICAL CONTRACTOR, MECHANICAL COUPLING, MOMENT CONNECTION
MCB	METAL CORNER BEAD
MCJ	MASONRY CONTROL JOINT
MDMJ	MODIFIED DOUBLE MECHANICAL JOINT
MECH	MECHANICAL
MED	MEDIUM
MFR	MANUFACTURER
MGD	MILLION GALLONS PER DAY (FLOW RATE)
MH	MANHOLE, METAL HALIDE
MIN	MINIMUM
MIR	MIRROR
MISC	MISCELLANEOUS
MJ	MECHANICAL JOINT
ML	MASONRY LINTEL
MLO	MAIN LUGS ONLY
MMB	MEMBRANE
MO	MASONRY OPENING
MOD	MODULAR, MODIFY
MON	MONUMENT
MPT	MALE PIPE THREAD
MRGWB	MOISTURE-RESISTANT GYPSUM WALLBOARD
MS	MOP SINK
MSL	MEAN SEA LEVEL
MT	MOUNT
MU	MASONRY UNIT
MULL	MULLION
MUTCD	MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES
MV	MEDIUM VOLTAGE
MW	MONITORING WELL
N	NORTH, NEUTRAL
NA	NOT APPLICABLE
NAT	NATURAL, NATIONAL
NC	NORMALLY CLOSED
NEG	NEGATIVE
NF	NEAR FACE, NON-FUSED
NIC	NOT IN CONTRACT
NO	NORMALLY OPEN, NUMBER
NOM	NOMINAL
NPS	NOMINAL PIPE SIZE
NPT	NATIONAL PIPE THREAD
NS	NEAR SIDE
NTS	NOT TO SCALE
NWL	NORMAL WATER LEVEL
O TO O	OUT TO OUT
OA	OUTSIDE AIR, OVERALL
OC	ON CENTER
OCPD	OVER CURRENT PROTECTION DEVICE
OD	OUTSIDE DIAMETER
OED	OPEN END DUCT
OF	OUTSIDE FACE, OFFICE FURNISHING
OFCI	OWNER FURNISHED CONTRACTOR INSTALLED
OFOI	OWNER FURNISHED OWNER INSTALLED
OG	ORIGINAL GROUND
OH	OVERHEAD
OPNG	OPENING
OPP	OPPOSITE
OPT	OPTIONAL
OR	OUTSIDE RADIUS
ORD	OVERFLOW ROOF DRAIN
ORIG	ORIGINAL
OVFL	OVERFLOW
OVHG	OVERHANG
OWL	OPERATING WATER LEVEL
OZ	OUNCE
P	PAINT
PA	PUBLIC ADDRESS
PAR	PARALLEL, PARAPET
PB	PANIC BAR, PULL BOX
PBD	PARTICLE BOARD
PC	POINT OF CURVE, PIECE, PRECAST
PCC	POINT OF COMPOUND CURVATURE
PCF	POUNDS PER CUBIC FOOT
PCT	PERCENT
PE	PLAIN END, POLYETHYLENE, POLISHED EFFLUENT
PED	PEDESTAL
PEN	PENETRATION
PERF	PERFORATED
PERM	PERMANENT
PERP	PERPENDICULAR
PF	POWER FACTOR
PFMU	PREFACED MASONRY UNIT
PH	PHASE
PI	POINT OF INTERSECTION
PKG	PACKAGE
PL	PLATE, PROPERTY LINE, PRECAST LINTEL
PLAS	PLASTER
PLAT	PLATFORM
PLBG	PLUMBING
PLF	POUNDS PER LINEAR FOOT
PNEU	PNEUMATIC
POL	POLISH
POS	POSITIVE, POSITION
PP	POLYPROPYLENE, POWER POLE
PRC	POINT OF REVERSE CURVATURE
PREF	PREFINISHED
PREFAB	PREFABRICATED
PRELIM	PRELIMINARY
PREP	PREPARE
PRES	PRESSURE
PRI	PRIMARY
PROP	PROPERTY, PROPOSED
PROT	PROTECTION
PS	PIPE SUPPORT
PSF	POUNDS PER SQUARE FOOT
PSI	POUNDS PER SQUARE INCH
PSIA	POUNDS PER SQUARE INCH ABSOLUTE
PSIG	POUNDS PER SQUARE INCH GAGE
PST	PRESTRESSED
PT	POINT, POINT OF TANGENCY
PTN	PARTITION
PVC	POLYVINYL CHLORIDE, POINT OF VERTICAL CURVE
PVMT	PAVEMENT
PW	POTABLE WATER
PWD	PLYWOOD
PWJ	PLYWOOD WEB JOIST
PWL	PEAK DAY WATER LEVEL
PZ	PIEZOMETER
Q	RATE OF FLOW
QT	QUARRY TILE
QTR	QUARTER
QTY	QUANTITY
QUAL	QUALITY
R&R	REMOVE AND REPLACE
R&S	REMOVE AND SALVAGE
R	RADIUS, REGISTER, RISER
RA	RETURN AIR
RB	RESILIENT BASE, ROCK BERM
RCPT	RECEPTACLE
RD	ROOF DRAIN
REC	RECESS
RECD	RECEIVED
RECT	RECTANGULAR
RED	REDUCER
REF	REFERENCE
REINF	REINFORCING
REM	REMOVE
REQD	REQUIRED
RESIL	RESILIENT
RET	RETAINING, RETURN
REV	REVISION, REVERSE
RF	RESILIENT FLOORING
RFG	ROOFING
RFL	REFLECTED, REFLECTOR
RGH	ROUGH
RGS	RIGID GALVANIZED STEEL
RGS-PVC	PVC COATED RGS
RH	RELIEF HOOD, RIGHT HAND, RELATIVE HUMIDITY
RJT	RESTRAINED JOINT
RL	REQUIRED LAP
RLFA	RELIEF AIR
RND	ROUND
RNG	RUNNING
RO	ROUGH OPENING
ROW	RIGHT-OF-WAY
RPM	REVOLUTIONS PER MINUTE
RR	RAILROAD
RSP	ROCK SLOPE PROTECTION
RST	E - STOP RESET
RT	RIGHT
RVT	RESILIENT VINYL TILE
RY	READY
S	SOUTH, SINK
SA	SUPPLY AIR
SAMU	SOUND-ABSORBING MASONRY UNIT
SAN	SANITARY
SB	SPLASH BLOCK
SC	SOLID CORE
SCE	SECONDARY CLARIFIER EFFLUENT
SCH	SCHEDULE
SCHEM	SCHEMATIC
SCN	SCREEN
SE	STEEL/ALUMINUM EDGE
SEC	SECONDARY, SECONDS
SECT	SECTION
SEP	SEPARATE
SF	SQUARE FOOT, SILT FENCE
SG	SHEET GLASS, SEALANT GROOVE
SH	SHOWER
SHT	SHEET
SHTG	SHEATHING
SIL	SILENCE
SIM	SIMILAR
SJ	SLAB JOINT
SL	SLOPE, STEEL LINTEL
SLTD	SLOTTED
SLV	SLEEVE
SMLS	SEAMLESS
SOG	SLAB ON GRADE
SP	SOUNDPROOF, STANDPIPE
SPA	SPACING
SPEC	SPECIFICATION
SPLY	SUPPLY
SPST	SINGLE POLE SINGLE THROW
SPT	SET POINT
SQ	SQUARE
SR	SHORT RADIUS
SS	SERVICE SINK
SST	STAINLESS STEEL
ST	STREET
STA	STATION
STD	STANDARD
STF	STIFFENER
STIR	STIRRUP
STL	STEEL
STOR	STORAGE
STR	STRUCTURAL, STRAIGHT
SUB	SUBSTITUTE
SUC	SUCTION
SUSP	SUSPENDED
SY	SQUARE YARD
SYM	SYMBOL
SYMM	SYMMETRICAL
SYN	SYNTHETIC
SYS	SYSTEM
T&B	TOP AND BOTTOM
TB	THRUST BLOCK
T&G	TONGUE AND GROOVE
T	TILE, TREAD
TA	TOILET ACCESSORY, TEMPERED AIR
TAN	TANGENT
TBM	TEMPORARY BENCHMARK
TCE	TEMPORARY CONSTRUCTION EASEMENT
TEF	TROWELED EPOXY FLOORING
TEMP	TEMPORARY, TEMPERATURE
THD	THREAD
THK	THICK
THRESH	THRESHOLD
TKBD	TACK BOARD
TOB	TOP OF BOLT, TOP OF BANK, TOP OF BEAM, TOP OF BERM
TOC	TOP OF CURB, TOP OF CONCRETE
TOD	TOP OF DUCT
TOF	TOP OF FOOTING
TOG	TOP OF GRATING
TOL	TOLERANCE, TOP OF LEDGER
TOM	TOP OF MASONRY
TOP	TOP OF PLATE
TOPO	TOPOGRAPHY
TOS	TOP OF SLAB, TOP OF STEEL, TOE OF SLOPE
TOW	TOP OF WALL
TP	TOILET PARTITION, TELEPHONE POLE, TOE PLATE, TRAP PRIMER
TPD	TOILET PAPER DISPENSER
TPG	TOPPING, THROUGH PLATE GIRDER
TR	TRANSOM
TRANS	TRANSITION
TRD	TRENCH DRAIN
TYP	TYPICAL
U	URINAL
UG	UNDERGROUND
ULT	ULTIMATE
UNFN	UNFINISHED
UNO	UNLESS NOTED OTHERWISE
UTIL	UTILITY
V	VENT, VELOCITY, VOLT
VA	VOLT AMPERE
VAC	VACUUM
VAR	VARNISH, VARIABLE, VOLT AMPERES REACTIVE
VB	VAPOR BARRIER, VINYL BASE, VALVE BOX
VC	VERTICAL CURVE
VCP	VITRIFIED CLAY PIPE
VCT	VINYL COMPOSITION TILE, VERTICAL CENTERLINE
VEL	VELOCITY
VENT	VENTILATION
VERT	VERTICAL
VERTS	VERTICAL REINFORCING
VG	VERTICAL GRAIN
VIF	VERIFY IN FIELD
VIN	VINYL
VOL	VOLUME
VPC	VERTICAL POINT OF CURVATURE
VPI	VERTICAL POINT OF INTERSECTION
VPT	VERTICAL POINT OF TANGENCY
VS	VERSUS, VAPOR SEAL
VTR	VENT THROUGH ROOF
VWC	VINYL WALL COVERING
W/	WITH
W/O	WITHOUT
W	WATT, WEST, WIDE, WINDOW, WIRE, WIDE FLANGE BEAM
WB	WOOD BASE
WC	WATER CLOSET, WATER COLUMN
WD	WOOD, WIDTH
WF	WIDE FLANGE, WASH FOUNTAIN
WG	WIRE GLASS, WATER GAGE
WH	WALL HYDRANT, WEEP HOLE
WI	WROUGHT IRON
WL	WATER LEVEL
WLD	WELDED
WM	WIRE MESH
WP	WEATHERPROOF
WS	WATERSTOP, WATER SURFACE
WSCT	WAINSCOT
WT	WEIGHT, WATER TIGHT
WTHP	WATERPROOF, WORKING POINT
WWF	WELDED WIRE FABRIC
XP	EXPLOSION-PROOF
XS	EXTRA STRONG
XSECT	CROSS SECTION
XXS	DOUBLE EXTRA STRONG
YH	YARD HYDRANT
YS	YIELD STRENGTH

GENERAL NOTES:

1. THESE ABBREVIATIONS APPLY TO THE ENTIRE SET OF CONTRACT DRAWINGS.
2. LISTING OF ABBREVIATIONS DOES NOT IMPLY THAT ALL ABBREVIATIONS ARE USED IN THE CONTRACT DRAWINGS.
3. ABBREVIATIONS SHOWN ON THIS SHEET INCLUDE VARIATIONS OF A WORD. FOR EXAMPLE, "MOD" MAY MEAN MODIFY OR MODIFICATION; "INC" MAY MEAN INCLUDED OR INCLUDING AND "REINF" MAY MEAN EITHER REINFORCE OR REINFORCING.
4. SEE SHEET 00G004 FOR PROJECT-SPECIFIC EQUIPMENT SYMBOLS, EQUIPMENT ABBREVIATIONS, AND PIPING SYSTEM ABBREVIATIONS.

HDR

ISSUE	DATE	DESCRIPTION
	03/08/2021	30% DESIGN REVIEW

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PROJECT ENGINEER	J. LIMKE
STRUCTURAL	J. CORONADO
ARCHITECTURAL	R. MCKINLEY
PROCESS	S. FOX
I & C	C. AUDO
ELECTRICAL	T. MOORE
DRAWN	E. PAZ
PROJECT NUMBER	10258885

PRELIMINARY
NOT FOR
CONSTRUCTION
OR
RECORDING

City of Fort Collins

UTILITIES DEPARTMENT
BELT PRESS BUILDING

GENERAL ABREVIATIONS AND NOTES

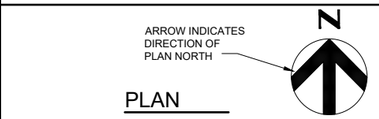
0 1" 2"

FILENAME	00G003.dwg
SCALE	NO SCALE
SHEET	00G003

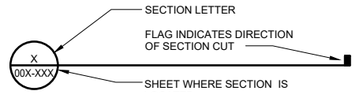
MATERIALS IN PLAN/SECTION

- ACOUSTICAL CEILING TILE (SECTION)
- ASPHALT (PLAN OR SMALL-SCALE SECTION)
- ASPHALT (LARGE-SCALE SECTION)
- BATT INSULATION (SECTION)
- BRICK MASONRY (PLAN AND/OR SECTION)
- CHECKERED PLATE (PLAN)
- CONCRETE (PLAN AND/OR SECTION)
- CONCRETE MASONRY (PLAN AND/OR SECTION)
- DEMOLITION (PLAN AND/OR SECTION)
- EARTH (SECTION)
- FILTER POINT MAT (PLAN)
- FINISHED WOOD (SECTION)
- GLULAM LUMBER (SECTION)
- GRANULAR FILL (SECTION)
- GRATING (SECTION)
- GRATING (PLAN)
- GROUT (SECTION)
- GYPSUM BOARD (SECTION)
- METAL (SECTION)
- ORIENTED STRAND BOARD (SECTION)
- PARTICLE BOARD (SECTION)
- PLYWOOD (LARGE-SCALE SECTION)
- PLYWOOD (SMALL-SCALE SECTION)
- PRECAST CONCRETE (PLAN AND/OR SECTION)
- RIGID INSULATION (SECTION)
- RIPRAP (PLAN AND/OR SECTION)
- SAND (SECTION)
- SOD (SECTION)
- WEEP JOINT MORTAR PROTECTION SYSTEM (SECTION)
- WOOD - CONTINUOUS (SECTION)
- WOOD BLOCKING (SECTION)

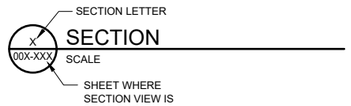
GENERAL SYMBOLOGY



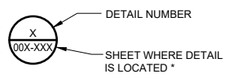
PLAN
1/4" = 1'-0"
PLAN TITLE



SECTION CUT MARKER



SECTION TITLE

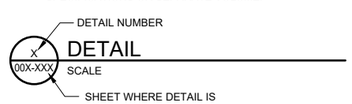


DETAIL MARKER

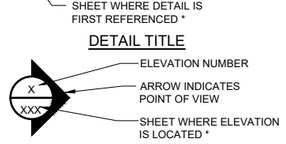
FOR REFERENCING DETAILS INCLUDED IN DRAWING SET.

DETAIL MARKER

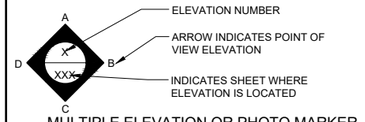
FOR REFERENCING DETAILS BOUND IN SPECIFICATIONS OR SEPARATE VOLUME.



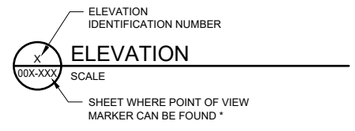
DETAIL TITLE



SINGLE ELEVATION OR PHOTO MARKER

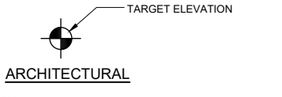


MULTIPLE ELEVATION OR PHOTO MARKER

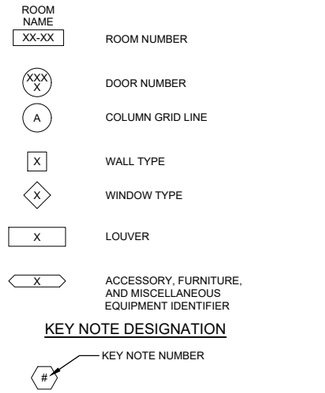


ELEVATION TITLE

* EXCEPTIONS WHERE THE SHEET NUMBER IS REPLACED BY A DASH (-).
1) FOR COMMON DETAILS, SECTIONS, ELEVATIONS OR DETAILS THAT ARE CUT OR CALLED OUT ON MULTIPLE SHEETS.
2) SECTIONS, ELEVATIONS OR DETAILS THAT ARE LOCATED ON THE SAME SHEET THEY ARE CUT OR CALLED OUT ON.

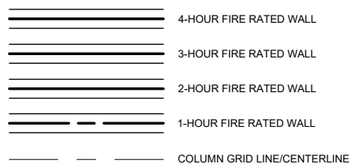


ARCHITECTURAL



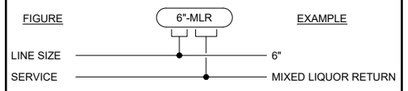
KEY NOTE DESIGNATION

GENERAL LINE SYMBOLOGY

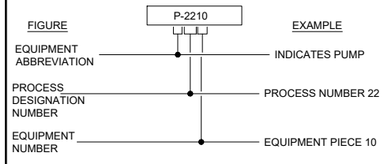


IDENTIFICATION SYMBOLOGY

PIPING



EQUIPMENT IDENTIFICATION



PROCESS DESIGNATION NUMBER

SERVICE ABBREVIATIONS

ABBREVIATION	PROCESS
DEC	DECANT
DRN	PROCESS DRAIN
FLT	FILTRATE FROM BELT PRESS
PLN	POLYMER NEAT
PLS	POLYMER SOLUTION
PRW	PROCESS WATER
OVF	OVERFLOW
SAN	SANITARY SEWER
SLG	SLUDGE

EQUIPMENT ABBREVIATIONS

NEW ABBREVIATION	NAME
AC	AIR COMPRESSOR
ARV	AIR RELEASE VALVE
BFV	BUTTERFLY VALVE
BPV	BACK PRESSURE VALVE
BV	BALL VALVE
CV	CHECK VALVE
FE	FLOW ELEMENT
FBD	FINE BUBBLE DIFFUSERS
FLT	FILTER
FSL	FLOW SPLITTER
GD	GEAR DRIVE
HV	HAND OPERATED VALVE
MP	MOTIVE PUMP
MXR	MIXER
NV	NEEDLE VALVE
P	PUMP
PRV	PRESSURE REDUCING VALVE
PSF	PRESSURE SAFETY (RELIEF) VALVE
PV	PLUG VALVE
RM	ROTAMETER
SPT	STOP PLATE
SV	SOLENOID VALVE
T	TANK
WG	WEIR GATE

SHEET NAMING CONVENTION

AREA DESIGNATION

00	GENERAL
01	P&ID
02	SITE WORK
03	BELT PRESS BUILDING

DISCIPLINE DESIGNATOR & DISCIPLINE ORDER

G	GENERAL
V	SURVEYING/MAPPING
X	DEMOLITION
C	CIVIL
L	LANDSCAPING
U	MULTI-DISCIPLINE
S	STRUCTURAL
A	ARCHITECTURAL
D	PROCESS
M	MECHANICAL (HVAC)
P	PLUMBING
F	FIRE PROTECTION
E	ELECTRICAL
Y	INSTRUMENTATION

DRAWING TYPE DESIGNATOR

0	GENERAL (SYMBOLS, LEGENDS)
1	PLANS
2	ELEVATIONS
3	SECTIONS
4	LARGE SCALE VIEWS
5	DETAILS
6	SCHEDULES AND DIAGRAMS
8	PROFILES
9	3D REPRESENTATIONS

EXAMPLE

BELT PRESS BUILDING ARCHITECTURAL ELEVATION, SHEET 01

0	3				

AREA DESIGNATION

		A			

DISCIPLINE DESIGNATOR

			2		

SHEET TYPE DESIGNATOR

				0	1

SHEET NUMBER

GENERAL NOTES:

1. THIS IS A STANDARD SHEET SHOWING COMMON SYMBOLOGY. ALL SYMBOLS ARE NOT NECESSARILY USED ON THIS PROJECT.
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PROJECT ENGINEER	J. LIMKE
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ARCHITECTURAL	R. MCKINLEY
PROCESS	S. FOX
I & C	C. AUDO
ELECTRICAL	T. MOORE
DRAWN	E. PAZ
PROJECT NUMBER	10258885

PRELIMINARY NOT FOR CONSTRUCTION OR RECORDING

City of Fort Collins

UTILITIES DEPARTMENT
BELT PRESS BUILDING

GENERAL LEGEND AND NOTES

0 1" 2"

FILENAME 00G004.dwg
SCALE NO SCALE

SHEET 00G004

c:\pwworking\central\d1\d0862625\00G004.dwg, Plot: 4/23/2021 4:25:31 PM, EPAZ

CIVIL MAPPING SYMBOLOGY

- EMBANKMENT SLOPE (CUT)
- EMBANKMENT SLOPE (FILL)
- H:V EMBANKMENT SLOPE RIGHT ARROW RIGHT
- H:V EMBANKMENT SLOPE LEFT ARROW LEFT
- SPOT ELEVATION/POINT #
- SURVEY BENCHMARK
- CP-X SURVEY CONTROL POINT
- HORIZONTAL CONTROL POINT
- VERTICAL CONTROL POINT
- SECTION CORNER MONUMENT
- SECTION CORNER NO MONUMENT
- IDENTIFICATION AND APPROXIMATE LOCATION OF SOIL TEST HOLE
- TEST PIT
- SOIL BORING
- BUOY
- FLOW ARROW
- WATER LEVEL IN SECTION/PROFILE
- TIDE GAUGE
- EXISTING UTILITY POLE
- DOWNGUY
- EXTERIOR UTILITY JUNCTION BOX
- INTERSTATE HIGHWAY SYMBOL
- US HIGHWAY SYMBOL
- STATE HIGHWAY SYMBOL
- HAY BALE SILT CHECK
- TEMPORARY SEDIMENT TRAP
- PIEZOMETER
- RAIL SIGNAL
- RAIL SWITCH
- SIGN
- TIRE TREDDLE
- TRAFFIC ARM WITH CARD READER
- TRAFFIC ARM MECHANICAL SWING

- CLEANOUT
- CULVERT END SYMBOL (WITH CULVERT SHOWN BETWEEN SYMBOLS)
- FIRE HYDRANT
- FUEL OIL METER
- FUEL OIL MANHOLE
- FUEL OIL VAULT
- GREASE TRAP
- GRIT CHAMBER
- HEADWALL
- INDUSTRIAL WASTE WATER METER
- INDUSTRIAL WASTE WATER MANHOLE
- NATURAL GAS METER
- NATURAL GAS RECEIVER
- NATURAL GAS TRAP
- NATURAL GAS LINE VAULT
- MONITORING WELL
- POST INDICATOR VALVE
- PUMP STATION
- SANITARY MANHOLE
- SEPTIC TANK
- TANK BELOW GROUND
- TANK HORIZONTAL ABOVE GROUND
- TANK VERTICAL ABOVE GROUND
- HYDRANT
- BOLLARD
- ELECTRIC BOX
- ELECTRIC MANHOLE
- ELECTRIC SWITCH
- ELECTRIC TRANSFORMER
- FLOOD LIGHT POLE
- LIGHT POLE
- MARKER POST
- SIGN
- TELEPHONE PEDESTAL
- UNKNOWN CLEANOUT
- UNKNOWN MANHOLE
- WATER 2-1/2" DIA. VERTICAL SEET PIPE
- WATER CATHODIC PROTECTION
- WATER MANHOLE

- WATER MARKER POST
- WATER RISER
- WATER VALVE
- WATER VENT
- STORM CATCH BASIN
- STORM ROUND CATCH BASIN
- STORM DRAINAGE MANHOLE
- WATER/AIR VENT
- WATER BACKFLOW PREVENTER
- WATER BLOWOFF
- WATER METER
- WATER SHUTOFF
- WATER SOFTENER
- WATER VALVE VAULT
- VALVE
- CONTROL POINT

UTILITY LINE SYMBOLOGY

CIVIL LINE SYMBOLOGY

- RAILROAD
- CENTERLINE
- BOTTOM OF DITCH
- PROPERTY LINE
- EASEMENT
- LIMITS OF CONSTRUCTION
- ROW
- EXISTING CONTOUR (MINOR)
- 25 EXISTING CONTOUR W/ELEVATION (MAJOR)
- EXISTING FENCE
- EXISTING VEGETATION/BRUSH LINE
- FENCE - BARB WIRE
- FENCE - CHAIN LINK
- FENCE - FIELD
- FENCE - OTHER
- FENCE - WOOD
- FENCE - WOVEN WIRE
- FLOOD LIMIT (25 YEAR)
- FLOOD LIMIT (50 YEAR)
- FLOOD LIMIT (100 YEAR)
- FLOOD LIMIT (200 YEAR)
- FLOOD LIMIT (500 YEAR)
- DRIVEWAY GUARDRAIL
- LEVEE TOP
- LEVEE TOE
- NEW CONTOUR (MINOR)
- 25 NEW CONTOUR (MAJOR)
- ROCK BERM
- SILT FENCE
- TOE OF SLOPE
- TOP OF SLOPE
- EXISTING FENCE
- EXISTING EDGE OF ROAD
- EXISTING PIPE

GENERAL NOTES:

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ELECTRICAL	T. MOORE
DRAWN	E. PAZ
PROJECT NUMBER	10258885

PRELIMINARY NOT FOR CONSTRUCTION OR RECORDING

UTILITIES DEPARTMENT
BELT PRESS BUILDING

GENERAL CIVIL LEGEND AND NOTES

0 1" 2"

FILENAME 00G006.dwg
SCALE NO SCALE

SHEET **00G006**

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GENERAL STRUCTURAL NOTES (GSN)

GENERAL

G1. SCOPE
THE NOTES ON THIS SHEET AND THE STANDARD STRUCTURAL DETAILS ARE GENERAL AND APPLY TO THE ENTIRE PROJECT WHETHER SPECIFICALLY CALLED OUT OR NOT, EXCEPT WHERE THERE ARE SPECIFIC INDICATIONS TO THE CONTRARY ON STRUCTURAL SHEETS. IF THERE ARE QUESTIONS, THEY SHALL BE SUBMITTED TO THE STRUCTURAL ENGINEER AND ANSWERED IN WRITING PRIOR TO CONSTRUCTION.

G2. APPLICABLE SPECIFICATIONS AND CODES
A. INTERNATIONAL BUILDING CODE 2015 (IBC 2015), WITH APPLICABLE EDITIONS OF THE CODE REFERENCED STANDARDS.
B. ACI 350-06 FOR WATER BEARING CONCRETE STRUCTURES, ACI 318-14 FOR ALL OTHER CONCRETE STRUCTURES
C. BOULDER COUNTY AMENDMENTS

G3. DESIGN CRITERIA
1. APPLIES TO ALL STRUCTURES (UNO)
A. DEAD LOAD:
1. ACTUAL TRIBUTARY STRUCTURE WEIGHT
2. SUPERIMPOSED DEAD LOAD: ROOF: 15 PSF
STRUCTURAL FLOORS: 20 PSF
B. LIVE LOAD:
1. ELECTRICAL EQUIP RM FLOOR: 250 PSF
2. STORAGE RM FLOOR: 200 PSF
3. PROCESS EQUIP RM FLOOR: 150 PSF + EQUIPMENT WEIGHT
4, ALL OTHER FLOOR: 150 PSF
5. WALKWAYS, STAIRS, GRATING: 100 PSF
6. ROOF: 20 PSF (NOT REDUCIBLE)
500 LB CONCENTRATED (NONCONCURRENT)
C. WIND:
1. BASIC WIND SPEED: 180 mph (ASCE 7-10, 3 SEC GUST)
2. EXPOSURE: C
3. ALL STRUCTURES ARE ENCLOSED EXCEPT AS FOLLOWS: NO EXCEPTIONS
D. SEISMIC:
1. ABOVE GRADE, NON WATER BEARING STRUCTURES:
a. OCCUPANCY CATEGORY = III
b. IMPORTANCE FACTOR: = 1.25
c. SPECTRAL RESPONSE ACCELERATION, SS = 0.205 (g)
d. SPECTRAL RESPONSE ACCELERATION, S1 = 0.062 (g)
e. SITE CLASS: C
f. SEISMIC DESIGN CATEGORY: B
g. SPECTRAL RESPONSE COEFFICIENT, SDS = 0.164 (g)
h. SPECTRAL RESPONSE COEFFICIENT, SD1 = 0.070 (g)
i. BASIC SEISMIC FORCE RESISTING SYSTEM: ORDINARY PRECAST SHEAR WALLS
j. ANALYSIS PROCEDURE: EQUIVALENT LATERAL FORCE
k. DESIGN BASE SHEAR: SEE PLANS
l. SEISMIC RESPONSE COEFFICIENT, Cs = 0.068
m.RESPONSE MODIFICATION FACTOR, R = 3
E. SNOW LOAD:
1. GROUND SNOW LOAD = 45 PSF
2. FLAT ROOF SNOW LOAD = 50 PSF
3. EXPOSURE FACTOR = 1.0
4. IMPORTANCE FACTOR = 1.1
5. THERMAL FACTOR = 1.1
F. RISK CATEGORY: III

G4. THE FOLLOWING NON-CONTRACTUAL GEOTECHNICAL REPORT WAS DEVELOPED FOR THIS PROJECT AND IS THE BASIS OF THIS STRUCTURAL DESIGN:
GEOTECHNICAL FIRM NAME: TERRACON CONSULTANTS, INC
ADDRESS: WHEAT RIDGE, CO
REPORT NUMBER: 25155190
REPORT DATE: JANUARY 8, 2016
ALLOWABLE [NET] SOIL BEARING = 3000 PSF: NATIVE SOILS/ NEW ENGINEERED FILL
2000 PSF: <4 FT EXISTING FILL

G5. SAFETY
SAFETY AND STRUCTURE STABILITY DURING CONSTRUCTION ARE THE SOLE RESPONSIBILITY OF THE CONTRACTOR. STRUCTURES HAVE BEEN DESIGNED TO RESIST THE DESIGN LIVE LOADS ONLY AS A COMPLETED STRUCTURE.

G6. OPENINGS
OPENINGS FOR PIPES, DUCTS, CONDUITS, ETC. ARE NOT ALL SHOWN ON THE STRUCTURAL DRAWINGS. COORDINATE AND PROVIDE OPENINGS AS REQUIRED TO ACCOMMODATE ALL WORK SHOWN OR SPECIFIED IN THE CONTRACT DOCUMENTS AND OTHERWISE REQUIRED FOR THE FURNISHING OF A FUNCTIONALLY COMPLETE PROJECT. REINFORCE AROUND OPENINGS PER STANDARD STRUCTURAL DETAILS UNLESS OTHERWISE SHOWN.

G7. SPECIAL INSPECTIONS
SPECIAL INSPECTIONS ARE REQUIRED IN ACCORDANCE WITH CHAPTER 1 AND CHAPTER 17 OF THE IBC. PAYMENT FOR THESE INSPECTIONS IS NOT THE RESPONSIBILITY OF THE CONTRACTOR. THE CONTRACTOR SHALL PROVIDE FOR FULL ACCESS TO THE WORK BY THE SPECIAL INSPECTOR AND SHALL PROVIDE FOR THESE INSPECTIONS IN HIS CONSTRUCTION SCHEDULE IN ACCORDANCE WITH THE SPECIFICATIONS.

GENERAL STRUCTURAL NOTES (GSN)(CONTINUED)

G8. STANDARD DETAILS
THE STANDARD DETAILS DEPICT TYPICAL DETAILING TO BE USED ON THIS PROJECT. IF CONDITIONS ARE NOT EXPLICITLY SHOWN ON THE DRAWINGS THEY SHALL BE MADE SIMILAR TO THE STANDARD DETAILS. OBTAIN APPROVAL OF ENGINEER IN WRITING FOR SIMILAR CONDITIONS PRIOR TO CONSTRUCTION.

G9. THE CONTACTOR SHALL FIELD VERIFY ALL DIMENSIONS AND ELEVATIONS OF EXISTING CONSTRUCTION AS REQUIRED TO COORDINATE NEW CONSTRUCTION. SUBMIT REQUIRED CHANGES FOR APPROVAL.

G10. CONTRACTOR TO SUBMIT FOR REVIEW ALL EQUIPMENT SIZES, OPERATING WEIGHTS, VIBRATION FORCES, SUPPORT LOCATIONS, ALONG WITH ANY FLOOR OPENINGS, NOTCHES, AND RECESSES REQUIRED BY SUCH EQUIPMENT. CONCRETE SUPPORT PADS AND/OR FRAMING REQUIRED TO SUPPORT SAID EQUIPMENT SHALL NOT BE FABRICATED AND PLACED UNTIL THE CONCRETE SUPPORT PADS AND/OR FRAMING IS APPROVED TO SUPPORT THE EQUIPMENT.

CONCRETE

C1. DESIGN STRENGTHS:
F'c CONCRETE FILL AND UTILITY ENCASEMENT = 3,000 PSI
F'c CONCRETE TOPPING = 4,000 PSI
F'c PRECAST CONCRETE = 5,000 PSI
F'c CONCRETE SLABS ON GRADE (EXCLUDING WATER BEARING) = 4,000 PSI
F'c WATER BEARING STRUCTURES = 4,500 PSI
F'c SELF CONSOLIDATING CONCRETE = 4,500 PSI
F'c ALL OTHER CONCRETE = 4,000 PSI
Fy REINFORCING STEEL = 60,000 PSI

C2. CONCRETE COVER
UNLESS OTHERWISE NOTED, PROVIDE CONCRETE COVER FOR REINFORCING AS FOLLOWS:
CONCRETE DEPOSITED AGAINST EARTH: 3"
TIE REINFORCING AT COLS & PILASTERS: 1½"
ALL OTHER: 2"
SEE DRAWINGS FOR EXCEPTIONS

C3. SEE SPECIFICATIONS FOR REINFORCING PLACEMENT REQUIREMENTS.

C4. REFER TO OTHER DISCIPLINE DRAWINGS PRIOR TO CONSTRUCTION FOR EMBEDDED ITEMS AND PENETRATIONS NOT SHOWN ON STRUCTURAL DRAWINGS. AS REQUIRED TO ACCOMMODATE ALL WORK SHOWN OR SPECIFIED IN THE CONTRACT DOCUMENTS AND OTHERWISE REQUIRED FOR THE FURNISHING OF A FUNCTIONALLY COMPLETE PROJECT. REINFORCE AROUND OPENINGS PER STANDARD STRUCTURAL DETAILS UNLESS OTHERWISE SHOWN.

C5. PROVIDE 3/4" CHAMFERS AT ALL EXPOSED EDGES. NOT ALL CHAMFERS MAY BE SHOWN ON DRAWINGS.

C6. FIELD ADJUST REINFORCING AT OPENINGS AND EMBEDDED ITEMS AS INDICATED.

C7. ANCHOR BOLTS NOT SPECIFIED BY ENGINEER SHALL BE DESIGNED AND CERTIFIED BY A REGISTERED PROFESSIONAL ENGINEER, RETAINED BY THE CONTRACTOR, IN ACCORDANCE WITH APPLICABLE PROJECT AND CODE REQUIREMENTS. SUBMIT AS A SHOP DRAWING FOR REVIEW AND APPROVAL BY THE ENGINEER. COORDINATE LOCATION, SIZE AND EMBEDMENT PRIOR TO CASTING CONCRETE.

C8. CONTINUOUS WATERSTOP SHALL BE INSTALLED IN JOINTS SUBJECT TO STATIC WATER PRESSURE.

C9. ABSOLUTELY NO WELDING OF REINFORCING BARS OR TORCHING TO BEND REINFORCING BARS SHALL BE ALLOWED WITHOUT SPECIFIC APPROVAL FROM THE STRUCTURAL ENGINEER.

C10. CONTRACTOR SHALL SUBMIT A CONCRETE PLACEMENT PLAN PER SPECIFICATION 03311 IDENTIFYING JOINT TYPES, JOINT LOCATIONS AND CONCRETE PLACEMENT SEQUENCE.

C11. ALL CAST IN PLACE AND POST-INSTALLED ANCHORS INDICATED IN THE STRUCTURAL DOCUMENTS SHALL COMPLY WITH APPENDIX D OF ACI 318 AND CHAPTER 19 OF THE IBC. ALL EXPANSION AND ADHESIVE ANCHORS SHALL HAVE THE ICC REPORT SHOWING EQUIVALENT LOAD CAPACITY. SUBMIT AND INSTALL PER THE ICC EVALUATION REPORT.

MASONRY

M1. DESIGN STRENGTHS:
F'm= 1500 PSI
Fy = 60,000 PSI

M2. GROUT FOR FILLING MASONRY CAVITIES TO BE COARSE GROUT UNO, MAXIMUM COARSE AGGREGATE SIZE IS 3/8 INCH.

M3. GROUT POURS SHALL NOT EXCEED 4 FEET IN HEIGHT UNLESS CLEANOUTS ARE PROVIDED IN THE BOTTOM COURSE OF THE CELL(S) TO BE GROUTED AND WRITTEN PERMISSION IS OBTAINED FOR HIGH LIFT GROUTING.

M4. RESTRICTED BAR ANCHORAGE:
IN CASES WHERE REINFORCING BARS CANNOT BE EXTENDED AS FAR AS REQUIRED, THE BARS SHALL EXTEND AS FAR AS POSSIBLE AND END IN STANDARD HOOK. SHOW ON SHOP DRAWINGS AND HIGHLIGHT WITH A BOX TO BRING TO ENGINEER'S ATTENTION.

M5. ANCHOR BOLTS:
ALL EXPANSION AND ADHESIVE ANCHORS SHALL HAVE THE ICC REPORT SHOWING EQUIVALENT LOAD CAPACITY. SUBMIT AND INSTALL PER THE ICC EVALUATION REPORT.

M6. IF BOND BEAMS AT INTERSECTING WALLS ARE SHOWN ON THE DRAWINGS TO MEET AT DIFFERENT ELEVATIONS, EXTEND REIFORCING OF BOTH BOND BEAMS AROUND INTERSECTING CORNER NOT LESS THAN 4 FEET IN EACH DIRECTION.

M7. LINTEL BLOCKS SHALL NOT BE USED AS BOND BEAM BLOCKS EXCEPT AT OPENINGS WHERE BOND BEAMS AND LINTELS COINCIDE.

STEEL

S1. DESIGN STRENGTHS:
WIDE FLANGE AND TEES: Fy=50 KSI
PIPES: Fy=35 KSI
STAINLESS STEEL: Fy=30 KSI
HSS SECTIONS: Fy=46 KSI
ALL OTHER PLATES AND SHAPES: Fy=36 KSI

S2. DIMENSIONS:
TO CENTERLINES OF COLUMNS AND BEAMS, TOP SURFACES OF BEAMS AND TUBES AND BACKS OF CHANNELS AND ANGLES UNO.

S3. ELEVATIONS:
TOP OF STEEL REFERS TO TOP SURFACE OF MEMBER OR FLANGE UNO.

S4. WHEN FILLET WELD SIZE IS NOT INDICATED, PROVIDE MAXIMUM WELD SIZE BASED ON MATERIAL THICKNESS IN ACCORDANCE WITH AISC SPECIFICATIONS.

S5. ALL BOLTED STRUCTURAL CONNECTIONS ARE BEARING TYPE CONNECTIONS UNLESS OTHERWISE SPECIFIED TO BE SLIP-CRITICAL. PROVIDE LOAD INDICATING WASHERS AT SLIP-CRITICAL CONNECTIONS.

S6. CONFORM TO AISC 360, STEEL CONSTRUCTION MANUAL AND AISC 341, SEISMIC DESIGN MANUAL.

S7. ALL CAST-IN AND POST INSTALLED ANCHORS SHALL BE TYPE 316 SST.

ALUMINUM

A1. STRUCTURAL ALUMINUM YIELD STRENGTHS
STRUCTURAL ALUMINUM: Fy=35 KSI
STRUCTURAL ALUMINUM IS ALLOY 6061-T6 UNO

A2. DIMENSIONS:
TO CENTERLINES OF COLUMNS AND BEAMS, TOP SURFACES OF BEAMS AND TUBES AND BACKS OF CHANNELS AND ANGLES UNO.

A3. ELEVATIONS:
TOP OF ALUMINUM REFERS TO TOP SURFACE OR FLANGE OF MEMBER UNO.

A4. WHEN FILLET WELD SIZE IS NOT INDICATED, PROVIDE MAXIMUM WELD SIZE FOR THE MATERIAL THICKNESS IN ACCORDANCE WITH THE LATEST EDITION OF THE "ALUMINUM DESIGN MANUAL" BY THE ALUMINUM ASSOCIATION.

A5. ALUMINUM IN CONTACT WITH DISSIMILAR MATERIALS OR CONCRETE:
CONTACT SURFACES SHALL BE PROVIDED WITH GALVANIC SEPERATION PER SPECIFICATIONS.

DEFERRED SUBMITTALS

D1. PORTIONS OF THE STRUCTURE HAVE ELEMENTS OF PROPERTY DESIGN AND FABRICATION, WHICH SHALL BE SUBMITTED BY THE SUPPLIER FOR APPROVAL. THESE ITEMS SHALL CONFORM TO THE REQUIREMENTS OF PRE-ENGINEERED BUILDINGS AND OTHER STRUCTURES SPECIFIED ON THIS SHEET.

D2. DEFERRED SUBMITTAL WILL BE REVIEWED BY THE STRUCTURAL ENGINEER OF RECORD FOR COMPLIANCE WITH THE SPECIFIED DESIGN REQUIREMENTS, STAMPED AS REVIEWED, AND FORWARDED TO THE BUILDING DEPARTMENT FOR APPROVAL.

D3. FINAL ISSUANCE OF THE BUILDING PERMIT MAY BE CONTINGENT ON BUILDING DEPARTMENT APPROVAL OF THE DEFERRED SUBMITTAL DOCUMENTS.

D4. DEFERRED SUBMITTAL ITEMS SHALL NOT BE INSTALLED UNTIL THEIR DESIGN AND SUBMITTAL DOCUMENTS HAVE BEEN APPROVED BY THE BUILDING DEPARTMENT.

D5. DEFERRED SUBMITTAL INCLUDE:
1. PRECAST/PRESTRESSED CONCRETE STRUCTURES
2. PRE-ENGINEERED LADDERS AND RAILINGS
3. PRE-FABRICATED METAL PANELS

PRECAST/ PRE-ENGINEERED CONCRETE NOTES:

P1. CONNECTION DETAILS SHOWN ARE MINIMUM REQUIRED. FINAL DESIGN BY PRECAST MANUFACTURER. ALTERNATIVE DETAILS MAY BE PROPOSED SUBJECT TO APPROVAL BY ENGINEER.

P2. PRECASTER TO DESIGN CONNECTIONS FROM SUPPORTED TO SUPPORTING ELEMENTS AND DIAPHRAGMS AS REQUIRED TO TRANSFER ALL FORCES. FORCES INCLUDE, BUT NOT LIMITED TO, GRAVITY LOADS, UPLIFT LOADS, IN PLANE LATERAL LOADS, OUT OF PLANE LATERAL LOADS AND DIAPHRAGM LOADS. LOADS ARE INDICATED ON DRAWINGS OR ARE TO BE DETERMINED BY PRECASTER FROM PROJECT LOADING CRITERIA. MINIMUM TWO LATERAL CONNECTIONS PER WALL.

P3. THE PRECAST MANUFACTURING PLANT SHALL BE CERTIFIED BY THE PRECAST/PRESTRESSED CONCRETE INSTITUTE (PCI) CERTIFICATION PROGRAM.

P4. MANUFACTURER SHALL BE CERTIFIED AT THE TIME OF BIDDING FOR ALL PRODUCT GROUPS AND CATEGORIES TO BE SUPPLIED.

P5. PRECAST CONCRETE MEMBERS SHALL BE DESIGNED AND CALCULATIONS STAMPED BY A REGISTERED ENGINEER EMPLOYED BY THE PRECAST SUPPLIER TO SATISFY THE REQUIREMENTS SHOWN ON THE DRAWINGS AS A DEFERRED SUBMITTAL ITEM.

P6. MEMBERS SHALL BE DESIGNED TO SUPPORT THE FULL DEAD LOADS AND THE SUPERIMPOSED DESIGN LOADS ON THIS SHEET OR ON THE DRAWING.

P7. LIVE LOAD REDUCTIONS MAY BE TAKEN WHERE PERMITTED BY CODE.

P8. SEISMIC RESPONSE COEFFICIENT MAY BE MODIFIED TO THE APPROPRIATE LATERAL FORCE RESISTING SYSTEM.

P9. MEMBERS SHALL HAVE A MINIMUM 28-DAY COMPRESSIVE STRENGTH OF 5000 PSI.

P10. SHOP DRAWINGS SHALL INDICATE ALL DIMENSIONS AND ALL ELEMENTS, INCLUDING FLEXURE AND SHEAR REINFORCING, CORBELS, BEARING PLATES AND OTHER EMBEDDED ITEMS.

P11. ERECTION DRAWINGS SHALL INDICATE ALL CONNECTING ELEMENTS AND FIELD WELDING.

P12. CALCULATIONS FOR ALL PRECAST MEMBERS SHALL ACCOMPANY THE SHOP DRAWINGS. DRAWINGS AND CALCULATIONS SHALL BE SEALED AND SIGNED BY A COLORADO REGISTERED PROFESSIONAL ENGINEER.

P13. CONNECTIONS WHICH ARE EXPOSED TO SOIL OR WEATHERING SHALL BE PROTECTED FROM CORROSION WITH TNEMIC SERIES L59.

P14. SUBMIT COLUMN AND BASE REACTIONS TO THE ENGINEER TO VERIFY FOUNDATION DESIGN PRIOR TO FABRICATION OF FOUNDATION REINFORCING.

ISSUE	DATE	DESCRIPTION
	03/08/2021	30% DESIGN REVIEW

PROJECT MANAGER	MARK H. BEEBE
PROJECT ENGINEER	J. LIMKE
STRUCTURAL	J. CORONADO
ARCHITECTURAL	R. MCKINLEY
PROCESS	S. FOX
I & C	C. AUDO
ELECTRICAL	T. MOORE
DRAWN	E. PAZ
PROJECT NUMBER	10258885

PRELIMINARY
NOT FOR
CONSTRUCTION
OR
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City of Fort Collins
UTILITIES DEPARTMENT
BELT PRESS BUILDING

GENERAL STRUCTURAL NOTES

0 1" 2"

FILENAME 00G007.dwg
SCALE NO SCALE

SHEET
00G007

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HVAC SYMBOLOGY

- 12x12 — RECTANGULAR DUCT
- 12Ø — ROUND DUCT
- SUPPLY DUCT SECTION, RECTANGULAR
- RETURN DUCT SECTION, RECTANGULAR
- EXHAUST DUCT SECTION, RECTANGULAR
- 90° ELBOW TURNED UP, RECTANGULAR
- 90° ELBOW TURNED UP, RECTANGULAR
- 90° ELBOW TURNED UP, ROUND
- 90° ELBOW TURNED UP, ROUND
- TRANSITION - DOUBLE SIDED
- TRANSITION - ONE SIDED
- TRANSITION - RECTANGULAR TO ROUND DUCT
- STANDARD BRANCH - FOR SUPPLY AIR W/EXTRACTOR AND RETURN AIR W/O EXTRACTOR
- R — RECTANGULAR DUCT INCLINE - RISE OR DROP IN RESPECT TO THE AIR FLOW
- R — ROUND DUCT INCLINE - RISE OR DROP IN RESPECT TO THE AIR FLOW
- ELBOW - W/TURNING VANE (RECTANGULAR)
- ELBOW - W/TURNING VANES (RECTANGULAR), SMOOTH RADIUS

- 24x18 — HIDDEN DUCT
- T 9'-10" / B 9'-0" / 18x10 — DUCT ELEVATION TAG ABOVE FINISH FLOOR
- PRESSURE/TEMPERATURE TEST PLUG (PETE PLUG OR EQUAL)
- SA — SOUND ATTENUATOR
- SUPPLY DIFFUSER (ROUND)
- SUPPLY AIR REGISTER OR GRILLE
- EXHAUST/RETURN AIR REGISTER OR GRILLE

SIZE / SA12Ø,250 / TAG — OR — FLOW RATE / SA,250 12Ø

DIFFUSER, GRILLE OR REGISTER DESIGNATION TAG

- 12x12 — RETURN AIR GRILLE
- 12x12 — EXHAUST AIR GRILLE
- 12Ø — SUPPLY DIFFUSER

- BALANCING DAMPER
- M — MOTOR OPERATED DAMPER
- 24x12 — FIRE DAMPER
- 24x12 — SMOKE DAMPER
- 24x12 — SMOKE AND FIRE DAMPER
- FLEXIBLE CONNECTION
- FLEXIBLE DUCT
- AD PLAN / AD SECTION — ACCESS DOOR
- UC 3/4" — UNDERCUT DOOR 3/4"
- NEW CONNECTION TO EXISTING
- PIPE SIZE / 6" RD-1 (4,500) — ROOF DRAIN TAG
- AREA COVERED BY ROOF DRAIN IN SQ. FT.

ABBREVIATIONS

AD	ACCESS DOOR
ADJ	ADJUSTABLE
AFF	ABOVE FINISHED FLOOR
AFR	ABOVE FINISHED ROOF
AHU	AIR HANDLING UNIT
AI	ANALOG INPUT
ALT	ALTERNATIVE
AMB	AMBIENT
AO	ANALOG OUTPUT
APD	AIR PRESSURE DROP
ARF	ABOVE RAISED FLOOR
AV	AIR VALVE
AVG	AVERAGE
BDD	BACK DRAFT DAMPER
BFP	BACKFLOW PREVENTER
BHP	BRAKE HORSE POWER
BOD	BOTTOM OF DUCT
BOE	BOTTOM OF EQUIPMENT
BOP	BOTTOM OF PIPE
BTUH	BRITISH THERMAL UNITS PER HOUR
CAV	CONSTANT AIR VOLUME
CFH	CUBIC FEET PER HOUR
CFM	CUBIC FEET PER MINUTE
CLG	CEILING, COOLING
CO	CLEAN OUT
CONN	CONNECTION
CONT	CONTINUOUS
CRAC	COMPUTER ROOM AIR CONDITIONER
CU	CONDENSING UNIT
DB	DRY BULB
dB	DECIBEL(S)
DDC	DIRECT DIGITAL CONTROL
DEG F	DEGREES FAHRENHEIT
DH	DEHUMIDIFIER
DIA	DIAMETER
DN	DOWN
DX	DIRECT EXPANSION
E	EXISTING
EA	EXAUST AIR
EAT	ENTERING AIR TEMPERATURE
EDH	ELECTRIC DUCT HEATER
EER	ENERGY EFFICIENCY RATIO
EF	EXHAUST FAN
EFF	EFFICIENCY
EMCS	ENERGY MANAGEMENT CONTROL SYSTEM
ESP	EXTERNAL STATIC PRESSURE
EWT	ENTERING WATER TEMPERATURE
F	FUTURE
FA	FREE AREA
FCP	FAN CONTROL PANEL
FCU	FAN COIL UNIT
FL	FILTER, FLOOR
FLA	FULL LOAD AMPS
FPB	FAN POWERED BOX
FPM	FEET PER MINUTE
GAL	GALLONS
GPH	GALLONS PER HOUR
GPM	GALLONS PER MINUTE
HP	HORSE POWER
HR	HOUR
HTG	HEATING
HVAC	HEATING, VENTILATION, & AIR CONDITIONING
HZ	HERTZ
IAQ	INDOOR AIR QUALITY
ID	INSIDE DIAMETER
IE	INVERT ELEVATION
IN	INCHES
I/O	INPUT/OUTPUT
I/P	CURRENT TO PNEUMATIC
KEF	KITCHEN EXHAUST FAN
KW	KILOWATT
LAT	LEAVING AIR TEMPERATURE
LB	POUNDS
LV	LOUVER
LWT	LEAVING WATER TEMPERATURE
MAU	MAKE-UP AIR UNIT
MAX	MAXIMUM
MBH	THOUSAND BTUH
MCC	MOTOR CONTROL CENTER
MISC	MISCELLANEOUS
MIN	MINIMUM, MINUTES
MFG	MANUFACTURING
MOD	MOTOR OPERATED DAMPER
NC	NORMALLY CLOSED, NOISE CRITERIA
NIC	NOT IN CONTRACT
NO	NORMALLY OPEN, NUMBER
NRC	NOISE REDUCTION COEFFICIENT
NTS	NOT TO SCALE
OA	OUTSIDE AIR
OD	OUTSIDE DIAMETER
OFCI	OWNER FURNISHED CONTRACTOR INSTALLED
OFOI	OWNER FURNISHED OWNER INSTALLED
OS&Y	OUTSIDE SCREW AND YOKE
PD	PRESSURE DROP
PH	PHASE
PLBG	PLUMBING
PPH	POUNDS PER HOUR
PSI	POUNDS PER SQUARE INCH
PSIA	POUNDS PER SQUARE INCH ABSOLUTE
PSIG	POUNDS PER SQUARE INCH GAUGE
QTY	QUANTITY
RA	RETURN AIR
REQD	REQUIRED
RH	RELATIVE HUMIDITY
RPM	REVOLUTIONS PER MINUTE
RTU	ROOFTOP UNIT
S	SIGNAL PORT
SA	SUPPLY AIR, SOUND ATTENUATOR
SCFM	STANDARD CUBIC FEET PER MINUTE
SF	SUPPLY FAN, SQUARE FEET
SP	STATIC PRESSURE
SQ	SQUARE
TCP	TEMPERATURE CONTROL PANEL
TD	TEMPERATURE DIFFERENTIAL
TEMP	TEMPERATURE, TEMPORARY
TES	THERMAL ENERGY STORAGE
TYP	TYPICAL
UNO	UNLESS NOTED OTHERWISE
UH	UNIT HEATER
V	VOLTS
VAV	VARIABLE AIR VOLUME
V&C	VALVE AND CAP
VFD	VARIABLE FREQUENCY DRIVE
VRF	VARIABLE REFRIGERANT FLOW
VTR	VENT THROUGH ROOF
W	WATTS
WB	WET BULB
WG	WATER GAUGE
WPD	WATER PRESSURE DROP

PIPING

- HWS — HEATING WATER SUPPLY
- HWR — HEATING WATER RETURN
- CHWS — CHILLED WATER SUPPLY
- CHWR — CHILLED WATER RETURN
- ST — STORM
- SST — SECONDARY STORM
- TW — TEMPERED WATER (80°)
- NPTW — NON-POTABLE TEMPERED WATER (80°)
- CW — DOMESTIC COLD WATER
- HW — DOMESTIC HOT WATER (140°)
- HWC — DOMESTIC HOT WATER RECIRC (140°)
- NPW — NON-POTABLE WATER
- SAN — SANITARY SEWER
- DRN — PROCESS DRAINAGE
- CD — CONDENSATE DRAIN
- FLW — FILTERED WATER

PIPING FITTINGS

- CONCENTRIC REDUCER
- ECCENTRIC REDUCER
- ELBOW, 90°
- ELBOW, 90° TURN DOWN
- ELBOW, 90° TURN UP
- ELBOW, 45° TURN DOWN
- ELBOW, 45° TURN UP
- TEE
- TEE, OUTLET UP
- TEE, OUTLET DOWN
- TEE, OUTLET UP W/ 90° TURN
- TEE, OUTLET DOWN W/ 90° TURN
- PIPE BREAK
- CAP
- BLIND FLANGE
- UNION
- FLOW ARROW

PIPING VALVES

- SHUTOFF VALVE
- HOSE VALVE WITH CAP
- CHECK VALVE
- BALANCING VALVE
- S — SOLENOID VALVE
- SAFETY OR PRESSURE RELIEF, ANGLE VALVE
- SAFETY OR PRESSURE RELIEF, STRAIGHT THROUGH VALVE
- PRESSURE REDUCING VALVE (PRV)
- AUTOMATIC CONTROL VALVE, 2-WAY
- AUTOMATIC CONTROL VALVE, 3-WAY
- BACKFLOW PREVENTOR
- FLOW MEASURING & BALANCING VALVE W/ 100% SHUT OFF
- WATER HAMMER ARRESTOR

PIPING SPECIALTIES

- PA — PIPE ANCHOR
- PG — PIPE GUIDE
- EXPANSION JOINT
- VENTURI
- PT — PRESSURE/TEMPERATURE PORT
- THERMOMETER
- THERMOWELL
- PRESSURE GAGE
- T — TEMPERATURE GAGE
- FLEXIBLE PIPE CONNECTION
- STRAINER
- BLIND FLANGE
- MANUAL AIR VENT
- A — AUTOMATIC AIR VENT

SCHEMATIC SYMBOLS

- E — ELECTRIC ACTUATOR OR PNEUMATIC ACTUATOR
- F — FLOW SWITCH
- P — PRESSURE SENSOR
- ΔP — DIFFERENTIAL PRESSURE SENSOR
- CT — CURRENT TRANSMITTER
- T — TEMPERATURE TRANSMITTER
- TS — TEMPERATURE SWITCH
- TC — TEMPERATURE CONTROLLER
- FM — FLOW METER
- FLOW LIMITER

AIR FLOW SCHEMATIC AND TEMPERATURE CONTROL DIAGRAM SYMBOLOGY

- C / C — CHILLED WATER COOLING COIL
- H / C — HOT WATER HEATING COIL
- EP / R — DIRECT EVAPORATIVE COOLER
- D / X — DIRECT EXPANSION COOLING COIL
- EH / C — ELECTRIC HEATING COIL
- FB / C — FACE & BYPASS COIL
- GAS-FIRED DUCT FURNACE
- VFD — VFD (VARIABLE FREQUENCY DRIVE)
- CAV / H / C — CONSTANT AIR VOLUME BOX WITH REHEAT COIL
- VAV / H / C — VARIABLE AIR VOLUME BOX WITH REHEAT COIL

- EF — EXHAUST FAN
- SF — SUPPLY FAN
- GAS — GAS
- ELECT — ELECTRIC
- AI — ANALOG INPUT
- AO — ANALOG OUTPUT
- DI — DIGITAL INPUT
- DO — DIGITAL OUTPUT
- COMM — COMMUNICATION
- CT — CURRENT TRANSMITTER
- STARTER — MOTOR STARTER
- VFD — VARIABLE FREQUENCY DRIVE
- HP — DIRECT EXPANSION HEAT PUMP
- DX — DIRECT EXPANSION
- M — MOTOR
- T — THERMOSTAT
- H — HUMIDISTAT
- CO — CARBON MONOXIDE SENSOR
- NO2 — NITROGEN DIOXIDE SENSOR
- S — SMOKE DETECTOR
- NG — NATURAL GAS DETECTOR

- S — SMOKE/DUCT DETECTOR
- T — TEMPERATURE SENSOR
- FRZ — FREEZE STAT
- ΔP — FILTER SENSOR
- M — MOTORIZED OPPOSED BLADE DAMPER
- GRAVITY DAMPER
- CO2 — CO2 SENSOR
- LOUVER

GENERAL NOTES (APPLY TO ALL SHEETS)

1. PROVIDE AND INSTALL ALL MECHANICAL/PLUMBING SYSTEMS IN ACCORDANCE WITH THE 2012 INTERNATIONAL MECHANICAL/PLUMBING CODES AND ALL OTHER APPLICABLE STATE AND LOCAL CODES.
2. CONTRACT DOCUMENT DRAWINGS FOR MECHANICAL/PLUMBING WORK ARE DIAGRAMMATIC AND ARE INTENDED TO CONVEY SCOPE AND GENERAL ARRANGEMENT ONLY. PLANS SHOULD NOT BE SCALED.
3. INSTALL ALL MECHANICAL/PLUMBING EQUIPMENT AND APPURTENANCES IN ACCORDANCE WITH MANUFACTURERS' RECOMMENDATIONS.
4. VERIFY ALL CLEARANCES BEFORE FABRICATING AND INSTALLING WORK. COORDINATE WITH ALL OTHER TRADES.
5. DRAWINGS REFLECT DIMENSIONS OF DESIGN MFG. EQUIPMENT. ALLOWABLE ALTERNATES, WHILE EQUAL IN OUTPUT CAPACITY WILL BE THE RESPONSIBILITY OF THE CONTRACTOR TO MEET THE SPACE REQUIREMENTS AND PROVE EQUALITY WITH DESIGN MFG. EQUIPMENT.
6. TESTING, ADJUSTING, AND BALANCING AGENCY SHALL BE A MEMBER OF THE ASSOCIATED AIR BALANCE COUNCIL (AABC) OR THE NATIONAL ENVIRONMENTAL BALANCING BUREAU (NEBB). TESTING ADJUSTING AND BALANCING SHALL BE PERFORMED IN ACCORDANCE WITH THE AABC STANDARDS.
7. COORDINATE ALL EQUIPMENT CONNECTIONS WITH MANUFACTURER'S CERTIFIED DRAWINGS. COORDINATE AND PROVIDE ALL DUCT AND PIPING TRANSITIONS REQUIRED FOR FINAL EQUIPMENT CONNECTIONS TO FURNISHED EQUIPMENT. FIELD VERIFY AND COORDINATE ALL DUCT AND PIPING DIMENSIONS BEFORE FABRICATION.
8. ALL CONTROL WIRE AND CONDUIT SHALL COMPLY WITH THE INTERNATIONAL ELECTRICAL CODE (IEC) AND NFPA 70.
9. ALL MISCELLANEOUS STEEL REQUIRED TO ENSURE PROPER INSTALLATION AND AS SHOWN IN DETAILS FOR PIPING, DUCTWORK, AND EQUIPMENT (UNLESS OTHERWISE NOTED) SHALL BE FURNISHED AND INSTALLED BY THE MECHANICAL/PLUMBING CONTRACTOR RESPECTIVELY.
10. PROVIDE ACCESS PANELS FOR INSTALLATION IN DUCTWORK, WALLS AND CEILINGS, WHERE REQUIRED, TO SERVICE CONTROLS DEVICES, DAMPERS, VALVES, DUCTWORK, SMOKE DETECTORS, AND OTHER CONCEALED MECHANICAL/PLUMBING EQUIPMENT. ACCESS PANEL INSTALLATION SHALL BE COORDINATED WITH PROCESS REQUIREMENTS, ARCHITECTURAL WORK TO MATCH MATERIALS AND FINISHES.
11. ALL DUCTWORK, PIPING, AND EQUIPMENT SUPPORTED FROM STRUCTURAL STEEL SHALL BE COORDINATED WITH ALL TRADES. ALL ATTACHMENTS TO STEEL BAR JOISTS, TRUSSES, OR JOIST GIRDERS SHALL BE AT PANEL POINTS OR AS SHOWN ON THE MECHANICAL, PLUMBING, AND STRUCTURAL DRAWINGS. PROVIDE BEAM CLAMPS MEETING MSS STANDARDS. WELDING TO STRUCTURAL MEMBERS SHALL NOT BE PERMITTED.
12. PROVIDE FLEXIBLE CONNECTIONS IN ALL DUCTWORK AND PIPING SYSTEMS CONNECTED TO FANS, PUMPS AND OTHER EQUIPMENT WHICH REQUIRE VIBRATION ISOLATION.
13. DUCTWORK SHALL BE FABRICATED AND INSTALLED PER LATEST SMACNA STANDARDS.

ISSUE	DATE	DESCRIPTION
	03/08/2021	30% DESIGN REVIEW

PROJECT MANAGER	MARK H. BEEBE
PROJECT ENGINEER	J. LIMKE
STRUCTURAL	J. CORONADO
ARCHITECTURAL	R. MCKINLEY
PROCESS	S. FOX
I & C	C. AUDO
ELECTRICAL	T. MOORE
DRAWN	N. LYNCH
PROJECT NUMBER	10258885

PRELIMINARY NOT FOR CONSTRUCTION OR RECORDING

City of Fort Collins

UTILITIES DEPARTMENT
BELT PRESS BUILDING

GENERAL MECHANICAL/PLUMBING LEGEND

0 1" 2"

FILENAME 00G008.dwg
SCALE NO SCALE

SHEET **00G008**

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ELECTRICAL PLAN SYMBOLS

IDENTIFICATION SYMBOLS

EQUIP # — EQUIPMENT IDENTIFICATION

INSTRUMENT IDENTIFICATION

EQUIPMENT/INSTRUMENT LOCATOR

LUMINAIRE IDENTIFICATION
a = DEVICE SWITCHED FROM
b = CIRCUIT DESIGNATION
c = MOUNTING HEIGHT IN FEET TO BOTTOM OF FIXTURE

XXXX — CONDUIT IDENTIFICATION
XXXX = CONDUIT NUMBER,
REFER TO CONDUIT SCHEDULE
UNLESS OTHERWISE NOTED, GROUPED CONDUITS ARE LABELED LEFT TO RIGHT OR TOP TO BOTTOM.

1 — INDICATES KEYNOTE 1
(PERTAINS ONLY TO SHEET WHERE NOTE IS FOUND)

OPERATOR INTERFACE STATION
1 = STATION TYPE

EQUIPMENT ENCLOSURE

GROUNDING

UNDERGROUND GROUND CABLE #4/0 SDBC
UNLESS OTHERWISE NOTED

GROUND ROD

GROUND ROD AND GROUND WELL

GROUND CABLE TEE OR CROSS CONNECTION

LUMINAIRES

2', 4', OR 8' FLUORESCENT STRIP

2' X 2' LAY-IN TROFFER
REFER TO LUMINAIRE SCHEDULE

2' X 4' LAY-IN TROFFER
REFER TO LUMINAIRE SCHEDULE

LUMINAIRE POLE MOUNTED

STROBE
a = COLOR
R = RED
G = GREEN
A = AMBER

LUMINAIRE, EMERGENCY BATTERY-POWERED

LUMINAIRE, EMERGENCY/EXIT BATTERY-POWERED

LUMINAIRE, EMERGENCY
BATTERY-POWERED REMOTE

LUMINAIRE, SURFACE OR PENDANT MOUNTED

LUMINAIRE, WALL MOUNTED

LUMINAIRE, FLOOD/SPOT

LUMINAIRE, EXIT ONE OR TWO FACES AS INDICATED. ARROW POINTS IN DIRECTION OF EGRESS.

LUMINAIRE, WALL WASHER

SWITCHES/RECEPTACLES

SINGLE POLE SWITCH
a= DEVICE SWITCHED DESIGNATION
b = CIRCUIT DESIGNATION

IF c =

2 = DOUBLE POLE SWITCH
3 = THREE-WAY SWITCH
4 = FOUR-WAY SWITCH
K = KEY OPERATED SWITCH
F = SWITCH AND FUSESTAT HOLDER
P = SWITCH AND PILOT LIGHT
T = THERMOSTAT
D = DIMMER SWITCH
L = LOW VOLTAGE LIGHT SWITCH
M = MANUAL MOTOR STARTER

OCCUPANCY SENSOR
a = CIRCUIT DESIGNATION
b = DEVICE SWITCHED DESIGNATION

SWITCH AND SINGLE RECEPTACLE
a = CIRCUIT DESIGNATION
b = DEVICE TYPE DESIGNATION
S = SWITCH AND SINGLE RECEPTACLE

DUPLEX RECEPTACLE
a = CIRCUIT DESIGNATION
b = DEVICE TYPE DESIGNATION

QUADRUPLEX RECEPTACLE
a = CIRCUIT DESIGNATION
b = DEVICE TYPE DESIGNATION

IN FLOOR DUPLEX RECEPTACLE
a = CIRCUIT DESIGNATION
b = DEVICE TYPE DESIGNATION

IN FLOOR QUADRUPLEX RECEPTACLE
a = CIRCUIT DESIGNATION
b = DEVICE TYPE DESIGNATION

DUPLEX RECEPTACLE w/SPLIT WIRE
a = CIRCUIT DESIGNATION
b = DEVICE TYPE DESIGNATION

WELDING OR APPLIANCE RECEPTACLE
a = CIRCUIT DESIGNATION
b = DEVICE TYPE DESIGNATION

WELDING RECEPTACLE
a = CIRCUIT DESIGNATION
b = DISCONNECT TYPE

SPECIAL PURPOSE RECEPTACLE
a = CIRCUIT DESIGNATION
b = DEVICE TYPE DESIGNATION

CLOCK RECEPTACLE
a = MOUNTING HEIGHT

FAN RECEPTACLE
a = MOUNTING HEIGHT

TWIST LOCK RECEPTACLE
a = AMP RATING

TELEPHONE OUTLET
a = MOUNTING HEIGHT

DATA COMMUNICATIONS OUTLET
a = MOUNTING HEIGHT

DISCONNECT SWITCH
a = TYPE, REFER TO DISCONNECT SCHEDULE

PE — PHOTOCELL

SMOKE DETECTOR
a = TYPE
I = IONIZATION
P = PHOTOELECTRIC
d = DUCT DETECTOR

FACP — FIRE ALARM CONTROL PANEL

F — FIRE ALARM PULL STATION

FIRE ALARM HORN/STROBE COMBINATION

FIRE ALARM STROBE

FIRE SPRINKLER
F = FLOW SWITCH
T = TAMPER SWITCH

RACEWAY

EXPOSED CONDUIT

INDICATES BREAK IN CONDUIT RUN

EXPOSED CONDUIT HIDDEN BEHIND WALLS, FLOORS OR OTHER STRUCTURES

UNDERGROUND CONDUIT, DIRECT BURIED OR IN DUCTBANK

CONDUIT IN SLAB

CONDUIT VERTICAL CHANGE IN DIRECTION

J — JUNCTION BOX

CONDUIT SEAL

DUCTBANK
APPROXIMATE DIMENSIONS
SHOWN ON DUCTBANK SCHEDULE

CONDUIT SIZE AND CONDUCTORS

INDIVIDUAL CONDUCTORS

W"C-(3-X (Ø), 1-Y (N) & 1-Z (G))

W"C (WHERE INDICATED): W = CONDUIT TRADE SIZE

3-X TYPE (Ø):
3 = QUANTITY
X = SIZE OF CONDUCTORS
(Ø) = DESIGNATES PHASE CONDUCTORS

1-Y TYPE (N)(WHERE INDICATED):
1 = QUANTITY
Y = SIZE OF CONDUCTORS
(N) = DESIGNATES NEUTRAL CONDUCTORS

1-Z TYPE (G)(WHERE INDICATED):
1 = QUANTITY
Z = SIZE OF CONDUCTORS
(G) = DESIGNATES GROUND CONDUCTORS

U{3-X TYPE (Ø) & 1-X TYPE (G)}
U = NUMBER OF PARALLEL RUNS

MULTI CONDUCTOR CABLES

K/2/C#16S
K (WHERE INDICATED) = NUMBER OF PAIRS
2/C#16S = TWO CONDUCTOR, 16 GAUGE, TWISTED SHIELDED PAIR

K/3/C#16S
K (WHERE INDICATED) = NUMBER OF TRIPLETS
3/C#16S = THREE CONDUCTOR, 16 GAUGE, TWISTED SHIELDED TRIPLETS

N/CX TYPE
N = NUMBER OF CONDUCTORS IN THE CABLE
X = SIZE OF CONDUCTORS

FIBER OPTIC CABLES

FO/N
N = NUMBER OF INDIVIDUAL FIBERS

ELECTRICAL ONE-LINE SYMBOLS

MEDIUM VOLTAGE

CIRCUIT BREAKER, MEDIUM VOLTAGE
a = CIRCUIT BREAKER NUMBER
b = FRAME SIZE

ANSI RELAY DEVICE
a = ANSI DEVICE FUNCTION
b = QUANTITY

MEDIUM VOLTAGE
DISCONNECT SWITCH
NON-FUSED CUT OUT

MEDIUM VOLTAGE
DISCONNECTING FUSE
SINGLE FUSE CUT OUT

MEDIUM VOLTAGE
DISCONNECTING FUSE
DOUBLE FUSE CUT OUT

MEDIUM VOLTAGE SINGLE FUSE

MEDIUM VOLTAGE DOUBLE FUSE

MEDIUM VOLTAGE
LIVE FRONT TERMINATOR

MEDIUM VOLTAGE ELBOW

MEDIUM VOLTAGE T

MEDIUM VOLTAGE CONTACTOR

MEDIUM VOLTAGE STARTER

MOV-ELBOW ARRESTER

LOW VOLTAGE

LOW VOLTAGE CIRCUIT BREAKER
a = TYPE
MCP = MOTOR CIRCUIT PROTECTOR
TM = THERMAL MAGNETIC
SS = SOLID STATE
b = FRAME SIZE (MANUFACTURER TO DETERMINE FRAME SIZE UNLESS INDICATED)
c = NUMBER OF POLES
d = TRIP SETTING (AT = AMP TRIP)
(AC = MCP CONTINUOUS RATING)
e = DESIGNATION
f = INTERRUPTING RATING

LOW VOLTAGE CIRCUIT BREAKER
AUXILIARY OPERATOR
* = S = SHUNT TRIP
= K = KIRK KEY INTERLOCK
= G = GROUND FAULT INTERRUPTER
= V = SOLENOID KEY RELEASE

DISCONNECT SWITCH
a = TYPE, REFER TO DISCONNECT SCHEDULE

FUSED DISCONNECT SWITCH
a = TYPE, REFER TO DISCONNECT SCHEDULE
b = FUSE RATING

FUSE

COMBINATION STARTER
WITH CONTROL POWER TRANSFORMER
a = CIRCUIT BREAKER DISCONNECT, TYPE AS NOTED
b = STARTER TYPE
c = NEMA STARTER SIZE
d = OVERLOAD HEATERS

VARIABLE FREQUENCY DRIVE
WITH FEATURES AS SHOWN
a = INPUT CONTACTOR
b = OUTPUT CONTACTOR
c = BYPASS STARTER
d = INPUT CIRCUIT BREAKER
LR — LINE REACTOR
LL — LOAD REACTOR

REDUCED VOLTAGE SOLID STATE STARTER
WITH FEATURES AS SHOWN
BC = BYPASS CONTACTOR

MISCELLANEOUS

MOTOR
HP = HORSEPOWER RATING
FULL LOAD AMPS AS NOTED

PACKAGED EQUIPMENT
LOAD RATING AS INDICATED
a = RATED LOAD
b = UNIT(HP, KW, KVA) AS INDICATED

TRANSFORMER
a = DEVICE I.D.
b = KVA RATING
c = NUMBER OF PHASES
d = PRIMARY VOLTAGE
e = SECONDARY VOLTAGE
f,g = CONNECTION TYPE SYMBOL
h = IMPEDANCE

GROUNDED WYE CONNECTION

DELTA CONNECTION

ENGINE-GENERATOR RATINGS AS INDICATED ON THE DRAWINGS
a = KVA/KW
b = VOLTAGE/CONNECTION
c = PHASE
d = WIRE
e = PF

CURRENT TRANSFORMER WITH SHORTING TERMINAL BLOCK
a = QUANTITY
b = RATIO

POTENTIAL TRANSFORMER
a = QUANTITY
b = RATIO
c,d = CONNECTION TYPE SYMBOL

SSM — SOLID STATE MULTIFUNCTION METER

ATP — AMPERE TEST POINT

VTP — VOLTAGE TEST POINT

UTILITY METER

LIGHTNING ARRESTER

SPD — SURGE PROTECTIVE DEVICE

DRAWOUT CONNECTION

GROUND

CAPACITOR

BATTERY

K — KIRK KEY INTERLOCK

DEMOLITION BY CONTRACTOR

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PROCESS	S. FOX
I & C	C. AUDO
ELECTRICAL	T. MOORE
DRAWN	P. VELEZ
PROJECT NUMBER	10258885

PRELIMINARY
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City of Fort Collins

UTILITIES DEPARTMENT
BELT PRESS BUILDING

ELECTRICAL LEGEND

0 1" 2"

FILENAME 00G009.dwg
SCALE NO SCALE

SHEET
00G009

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GENERAL

G1. SCOPE
THE NOTES ON THIS SHEET AND THE STANDARD STRUCTURAL DETAILS ARE GENERAL AND APPLY TO THE ENTIRE PROJECT WHETHER SPECIFICALLY CALLED OUT OR NOT, EXCEPT WHERE THERE ARE SPECIFIC INDICATIONS TO THE CONTRARY ON STRUCTURAL SHEETS. IF THERE ARE QUESTIONS, THEY SHALL BE SUBMITTED TO THE STRUCTURAL ENGINEER AND ANSWERED IN WRITING PRIOR TO CONSTRUCTION.

G2. APPLICABLE SPECIFICATIONS AND CODES
A. INTERNATIONAL BUILDING CODE, IBC 2021 WITH APPLICABLE EDITIONS OF THE CODE REFERENCED STANDARDS.
B. ACI 350-06 FOR WATER BEARING CONCRETE STRUCTURES, ACI 318-19 FOR ALL OTHER CONCRETE STRUCTURES.
C. CITY OF FORT COLLINS AMENDMENTS.

G3. DESIGN CRITERIA
1. APPLIES TO ALL STRUCTURES (UNO)
A. DEAD LOAD:
1. ACTUAL TRIBUTARY STRUCTURE WEIGHT

B. LIVE LOAD:

1.	ELECTRICAL EQUIP ROOM FLOOR:	250 PSF
2.	PROCESS EQUIP ROOM FLOOR:	150 PSF + EQUIPMENT WEIGHT
3.	ALL OTHER FLOOR:	150 PSF
4.	ROOF:	20 PSF (NOT REDUCIBLE) 500 LB CONCENTRATED (NONCONCURRENT)

C. WIND:

1.	RISK CATEGORY:	III
2.	ULTIMATE WIND SPEED. V(ULT):	150 MPH
3.	NOMINAL WIND SPEED. V(ASD):	116 MPH
4.	EXPOSURE:	C
5.	ALL STRUCTURES ARE ENCLOSED (UNO)	

D. SEISMIC:
1. ABOVE GRADE, NON WATER BEARING STRUCTURES:

a.	RISK CATEGORY:	= III
b.	IMPORTANCE FACTOR:	= 1.25
c.	SPECTRAL RESPONSE ACCELERATION, SS	= 0.21
d.	SPECTRAL RESPONSE ACCELERATION, S1	= 0.058
e.	SITE CLASS:	= D
f.	SEISMIC DESIGN CATEGORY:	= B
g.	SPECTRAL RESPONSE COEFFICIENT, SDS	= 0.224
h.	SPECTRAL RESPONSE COEFFICIENT, SD1	= 0.092
i.	BASIC SEISMIC FORCE RESISTING SYSTEM:	ORDINARY REINFORCED MASONRY SHEAR WALL
j.	ANALYSIS PROCEDURE:	EQUIVALENT LATERAL FORCE
k.	DESIGN BASE SHEAR:	=
l.	SEISMIC RESPONSE COEFFICIENT,	=
m.	RESPONSE MODIFICATION FACTOR,	=

E. SNOW LOAD:

1.	GROUND SNOW LOAD	= 35 PSF
2.	MINIMUM FLAT ROOF SNOW LOAD	= 38.5 PSF
3.	EXPOSURE FACTOR	= 1.0
4.	IMPORTANCE FACTOR	= 1.1
5.	THERMAL FACTOR	= 1.1

G4. THE FOLLOWING NON-CONTRACTUAL GEOTECHNICAL REPORT WAS DEVELOPED FOR THIS PROJECT AND IS THE BASIS OF THIS STRUCTURAL DESIGN:
GEOTECHNICAL FIRM NAME: KUMAR & ASSOCIATES, INC
ADDRESS: 5205 S. COLLEGE AVENUE, SUITE B, FORT COLLINS, CO, 80525
REPORT NUMBER: 20117
REPORT DATE: APRIL 8, 2021
ALLOWABLE NET SOIL BEARING = 2500 PSF

G5. SAFETY
SAFETY AND STRUCTURE STABILITY DURING CONSTRUCTION ARE THE SOLE RESPONSIBILITY OF THE CONTRACTOR. STRUCTURES HAVE BEEN DESIGNED TO RESIST THE DESIGN LIVE LOADS ONLY AS A COMPLETED STRUCTURE.

G6. OPENINGS
OPENINGS FOR PIPES, DUCTS, CONDUITS, ETC. ARE NOT ALL SHOWN ON THE STRUCTURAL DRAWINGS. COORDINATE AND PROVIDE OPENINGS AS REQUIRED TO ACCOMMODATE ALL WORK SHOWN OR SPECIFIED IN THE CONTRACT DOCUMENTS AND OTHERWISE REQUIRED FOR THE FURNISHING OF A FUNCTIONALLY COMPLETE PROJECT. REINFORCE AROUND OPENINGS PER STANDARD STRUCTURAL DETAILS UNLESS OTHERWISE SHOWN.

G7. SPECIAL INSPECTIONS
SPECIAL INSPECTIONS ARE REQUIRED IN ACCORDANCE WITH CHAPTER 1 AND CHAPTER 17 OF THE IBC 2015. THE CONTRACTOR SHALL PROVIDE FOR FULL ACCESS TO THE WORK BY THE SPECIAL INSPECTOR AND SHALL PROVIDE FOR THESE INSPECTIONS IN THE CONSTRUCTION SCHEDULE IN ACCORDANCE WITH THE SPECIFICATIONS.

G8. STANDARD DETAILS
THE STANDARD DETAILS DEPICT TYPICAL DETAILING TO BE USED ON THIS PROJECT. IF CONDITIONS ARE NOT EXPLICITLY SHOWN ON THE DRAWINGS THEY SHALL BE MADE SIMILAR TO THE STANDARD DETAILS. OBTAIN APPROVAL OF ENGINEER IN WRITING FOR SIMILAR CONDITIONS PRIOR TO CONSTRUCTION.

G9. THE CONTACTOR SHALL FIELD VERIFY ALL DIMENSIONS AND ELEVATIONS OF EXISTING CONSTRUCTION AS REQUIRED TO COORDINATE NEW CONSTRUCTION. SUBMIT REQUIRED CHANGES FOR APPROVAL.

G10. CONTRACTOR TO SUBMIT FOR REVIEW ALL EQUIPMENT SIZES, OPERATING WEIGHTS, VIBRATION FORCES, SUPPORT LOCATIONS, ALONG WITH ANY FLOOR OPENINGS, NOTCHES, AND RECESSES REQUIRED BY SUCH EQUIPMENT. CONCRETE SUPPORT PADS AND/OR FRAMING REQUIRED TO SUPPORT SAID EQUIPMENT SHALL NOT BE FABRICATED AND PLACED UNTIL THE CONCRETE SUPPORT PADS AND/OR FRAMING IS APPROVED TO SUPPORT THE EQUIPMENT.

CONCRETE

C1. DESIGN STRENGTHS:
F'c CAST-IN-PLACE = 4500 PSI
F'c PRECAST = 5000 PSI
Fy = 60,000 PSI

C2. CONCRETE COVER
UNLESS OTHERWISE NOTED, PROVIDE CONCRETE COVER FOR REINFORCING AS FOLLOWS:
CONCRETE DEPOSITED AGAINST EARTH: 3"
TIE REINFORCING AT COLS & PILASTERS: 2"
ALL OTHER: 2"
SEE DRAWINGS FOR EXCEPTIONS

C3. SEE SPECIFICATIONS FOR REINFORCING PLACEMENT REQUIREMENTS.

C4. REFER TO OTHER DISCIPLINE DRAWINGS PRIOR TO CONSTRUCTION FOR EMBEDDED ITEMS AND PENETRATIONS NOT SHOWN ON STRUCTURAL DRAWINGS. AS REQUIRED TO ACCOMMODATE ALL WORK SHOWN OR SPECIFIED IN THE CONTRACT DOCUMENTS AND OTHERWISE REQUIRED FOR THE FURNISHING OF A FUNCTIONALLY COMPLETE PROJECT. REINFORCE AROUND OPENINGS PER STANDARD STRUCTURAL DETAILS UNLESS OTHERWISE SHOWN.

C5. PROVIDE 3/4" CHAMFERS AT ALL EXPOSED EDGES. NOT ALL CHAMFERS MAY BE SHOWN ON DRAWINGS.

C6. FIELD ADJUST REINFORCING AT OPENINGS AND EMBEDDED ITEMS AS INDICATED.

C7. ANCHOR BOLTS NOT SPECIFIED BY ENGINEER SHALL BE DESIGNED AND CERTIFIED BY A REGISTERED PROFESSIONAL ENGINEER, RETAINED BY THE CONTRACTOR, IN ACCORDANCE WITH APPLICABLE PROJECT AND CODE REQUIREMENTS. SUBMIT AS A SHOP DRAWING FOR REVIEW AND APPROVAL BY THE ENGINEER. COORDINATE LOCATION, SIZE AND EMBEDMENT PRIOR TO CASTING CONCRETE.

C8. CONTINUOUS WATERSTOP SHALL BE INSTALLED IN JOINTS SUBJECT TO STATIC WATER PRESSURE.

C9. ABSOLUTELY NO WELDING OF REINFORCING BARS OR TORCHING TO BEND REINFORCING BARS SHALL BE ALLOWED WITHOUT SPECIFIC APPROVAL FROM THE STRUCTURAL ENGINEER.

C10. CONTRACTOR SHALL SUBMIT A CONCRETE PLACEMENT PLAN IDENTIFYING JOINT TYPES, JOINT LOCATIONS AND CONCRETE PLACEMENT SEQUENCE.

C11. ALL CAST IN PLACE AND POST-INSTALLED ANCHORS INDICATED IN THE STRUCTURAL DOCUMENTS SHALL COMPLY WITH CHAPTER 17 OF ACI 318 AND CHAPTER 19 OF THE IBC. ALL EXPANSION AND ADHESIVE ANCHORS SHALL HAVE THE ICC REPORT SHOWING EQUIVALENT LOAD CAPACITY. SUBMIT AND INSTALL PER THE ICC EVALUATION REPORT.

MASONRY

M1. DESIGN STRENGTHS:
F'm= 1500 PSI
Fy = 60,000 PSI

M2. GROUT FOR FILLING MASONRY CAVITIES TO BE COARSE GROUT UNO, MAXIMUM COARSE AGGREGATE SIZE IS 3/8 INCH.

M3. GROUT POURS SHALL NOT EXCEED 4 FEET IN HEIGHT UNLESS CLEANOUTS ARE PROVIDED IN THE BOTTOM COURSE OF THE CELL(S) TO BE GROUTED AND WRITTEN PERMISSION IS OBTAINED FOR HIGH LIFT GROUTING.

M4. RESTRICTED BAR ANCHORAGE:
IN CASES WHERE REINFORCING BARS CANNOT BE EXTENDED AS FAR AS REQUIRED, THE BARS SHALL EXTEND AS FAR AS POSSIBLE AND END IN STANDARD HOOK. SHOW ON SHOP DRAWINGS AND HIGHLIGHT WITH A BOX TO BRING TO ENGINEER'S ATTENTION.

M5. ANCHOR BOLTS:
ALL EXPANSION AND ADHESIVE ANCHORS SHALL HAVE THE ICC REPORT SHOWING EQUIVALENT LOAD CAPACITY. SUBMIT AND INSTALL PER THE ICC EVALUATION REPORT.

M6. IF BOND BEAMS AT INTERSECTING WALLS ARE SHOWN ON THE DRAWINGS TO MEET AT DIFFERENT ELEVATIONS, EXTEND REIFORCING OF BOTH BOND BEAMS AROUND INTERSECTING CORNER NOT LESS THAN 4 FEET IN EACH DIRECTION.

M7. LINTEL BLOCKS SHALL NOT BE USED AS BOND BEAM BLOCKS EXCEPT AT OPENINGS WHERE BOND BEAMS AND LINTELS COINCIDE.

STEEL

S1. DESIGN STRENGTHS:

WIDE FLANGE AND TEES:	Fy=50 KSI
PIPES:	Fy=35 KSI
STAINLESS STEEL	Fy=33 KSI
HSS SECTIONS	Fy=46 KSI
ALL OTHER PLATES AND SHAPES:	Fy=36 KSI

S2. DIMENSIONS:
TO CENTERLINES OF COLUMNS AND BEAMS, TOP SURFACES OF BEAMS AND TUBES AND BACKS OF CHANNELS AND ANGLES UNO.

S3. ELEVATIONS:
TOP OF STEEL REFERS TO TOP SURFACE OF MEMBER OR FLANGE UNO.

S4. WHEN FILLET WELD SIZE IS NOT INDICATED, PROVIDE MAXIMUM WELD SIZE BASED ON MATERIAL THICKNESS IN ACCORDANCE WITH AISC SPECIFICATIONS.

S5. ALL BOLTED STRUCTURAL CONNECTIONS ARE BEARING TYPE CONNECTIONS UNLESS OTHERWISE SPECIFIED TO BE SLIP-CRITICAL. PROVIDE LOAD INDICATING WASHERS AT SLIP-CRITICAL CONNECTIONS.

S6. CONFORM TO AISC 360, STEEL CONSTRUCTION MANUAL AND AISC 341, SEISMIC DESIGN MANUAL.

ALUMINUM

A1. STRUCTURAL ALUMINUM YIELD STRENGTHS
STRUCTURAL ALUMINUM: Fy=35 KSI
STRUCTURAL ALUMINUM IS ALLOY 6061-T6 UNO

A2. DIMENSIONS:
TO CENTERLINES OF COLUMNS AND BEAMS, TOP SURFACES OF BEAMS AND TUBES AND BACKS OF CHANNELS AND ANGLES UNO.

A3. ELEVATIONS:
TOP OF ALUMINUM REFERS TO TOP SURFACE OR FLANGE OF MEMBER UNO.

A4. WHEN FILLET WELD SIZE IS NOT INDICATED, PROVIDE MAXIMUM WELD SIZE FOR THE MATERIAL THICKNESS IN ACCORDANCE WITH THE LATEST EDITION OF THE "ALUMINUM DESIGN MANUAL" BY THE ALUMINUM ASSOCIATION.

A5. ALUMINUM IN CONTACT WITH DISSIMILAR MATERIALS OR CONCRETE:
CONTACT SURFACES SHALL BE PROVIDED WITH GALVANIC SEPERATION PER SPECIFICATIONS.

STEEL DECK:

SD1. THE DESIGN, FABRICATION, AND ERECTION OF METAL DECKING SHALL BE IN ACCORDANCE WITH THE CURRENT EDITION OF THE SDI SPECIFICATIONS AND THE SDI DIAPHRAGM MANUAL

SD2. STEEL FLOOR DECK IS 1-1/2 INCH X 20 GUAGE OR 22 GAUGE GALVANIZED DECK, DESIGNED FOR THE DEAD AND LIVE LOADS INDICATED.

SD3. STEEL FLOOR DECK IS TO BE A STRUCTURAL DIAPHRAGM AND SHALL BE FASTENED AS SHOWN ON THE DRAWINGS OR IN THE SPECIFICATIONS.

SD4. THE PLANS INDICATE DECK SPAN DIRECTION.

SD5. SUSPENDED CEILINGS, LIGHT FIXTURES, DUCTS, AND OTHER UTILITIES SHALL NOT BE SUPPORTED FROM THE STEEL DECK.

DEFERRED SUBMITTALS

D1. PORTIONS OF THE STRUCTURE HAVE ELEMENTS OF PROPRIETARY DESIGN AND FABRICATION, WHICH SHALL BE SUBMITTED BY THE SUPPLIER FOR APPROVAL. THESE ITEMS SHALL CONFORM TO THE REQUIREMENTS OF PRE-ENGINEERED OTHER STRUCTURES SPECIFIED ON THIS SHEET.

D2. DEFERRED SUBMITTAL WILL BE REVIEWED BY THE STRUCTURAL ENGINERER OF RECORD FOR COMPLIANCE WITH THE SPECIFIED DESIGN REQUIREMENTS, STAMPED AS REVIEWED, AND FORWARDED TO THE BUILDING DEPARTMENT FOR APPROVAL.

D3. FINAL ISSUANCE OF THE BUILDING PERMIT MAY BE CONTINGENT ON BUILDING DEPARTMENT APPROVAL OF THE DEFERRED SUBMITTAL DOCUMENTS.

D4. DEFERRED SUBMITTAL ITEMS SHALL NOT BE INSTALLED UNTIL THEIR DESIGN AND SUBMITTAL DOCUMENTS HAVE BEEN APPROVED BY THE BUILDING DEPARTMENT.

D5. DEFERRED SUBMITTAL INCLUDE:
1. PRE-ENGINEERED PRECAST DOUBLE TEES.
2. PRE-ENGINEERED STAIRS, WALKWAYS, AND PLATFORMS.

PRE-ENGINEERED STRUCTURES

P1. PRE-ENGINEERED STRUCTURES SHALL BE DESIGNED FOR THE STRUCTURAL DESIGN CRITERIA NOTED ON THESE DRAWINGS. APPLIED LOADS AND LOAD COMBINATIONS SHALL BE IN ACCORDANCE WITH 2021 INTERNATIONAL BUILDING CODE. SEISMIC RESPONSE COEFFICIENT MAY BE MODIFIED TO THE APPROPRIATE LATERAL FORCE RESISTING SYSTEM.

P2. SUBMIT DRAWINGS AND CALCULATIONS FOR THE PRE-ENGINEERED STRUCTURES TO THE ENGINEER FOR APPROVAL. DRAWINGS AND CALCULATIONS SHALL BE PREPARED UNDER THE CONTROL AND SUPERVISION OF A COLORADO REGISTERED PROFESSIONAL ENGINEER AND SHALL BE SEALED AND SIGNED.

P3. CONTRACTOR'S ENGINEER OR PRE-ENGINEERED STRUCTURE SUPPLIER SHALL BE RESPONSIBLE FOR THE DESIGN OF ANY BASE PLATES AND ANCHORAGE TO EXISTING STRUCTURE ALONG WITH ALL OTHER STRUCTURAL MEMBERS AND CONNECTIONS.

BIM 360://10258885_FTC-Residual_Handling_2020/10258885_03-S.rvt
4/23/2021 4:30:09 PM

ISSUE	DATE	DESCRIPTION

PROJECT MANAGER	MARK H. BEEBE
PROJECT ENGINEER	J. LIMKE
STRUCTURAL	J. CORONADO
ARCHITECTURAL	R. MCKINLEY
PROCESS	S. FOX
I & C	C. AUDO
ELECTRICAL	T. MOORE
TEAM 7	R. NELSON
PROJECT NUMBER	10258885

PRELIMINARY NOT FOR CONSTRUCTION OR RECORDING

City of Fort Collins

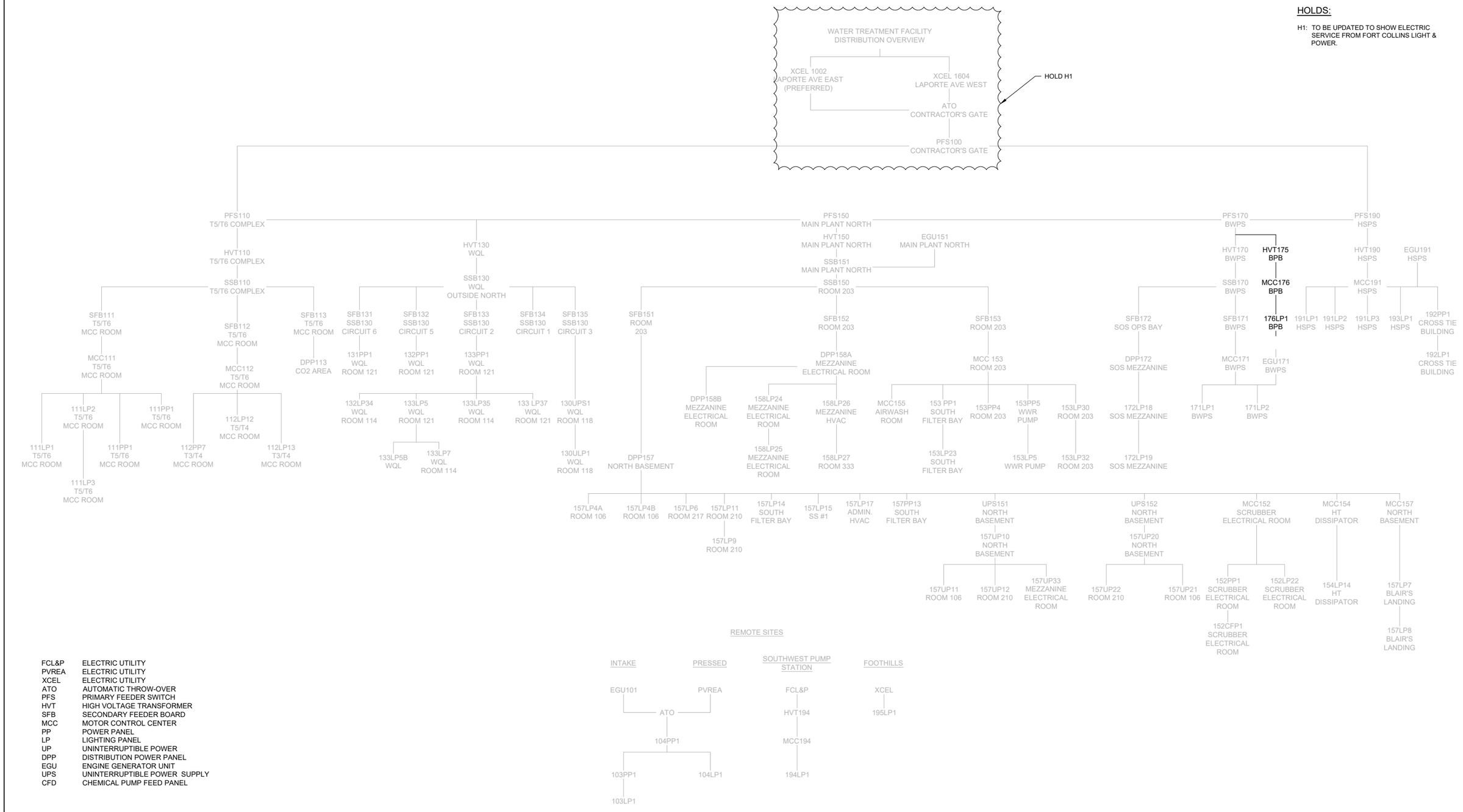
BELT PRESS BUILDING PROJECT DESCRIPTION

GENERAL STRUCTURAL NOTES

0 1" 2"

FILENAME 10258885_03-S.RVT
SCALE 12" = 1'-0"

SHEET 00S001



ISSUE	DATE	DESCRIPTION
	03/08/2021	30% DESIGN REVIEW

PROJECT MANAGER	MARK H. BEEBE
PROJECT ENGINEER	J. LIMKE
STRUCTURAL	J. CORONADO
ARCHITECTURAL	R. MCKINLEY
PROCESS	S. FOX
I & C	C. AUDO
ELECTRICAL	T. MOORE
DRAWN	E. PAZ
PROJECT NUMBER	10258885

PRELIMINARY
NOT FOR
CONSTRUCTION
OR
RECORDING

City of Fort Collins

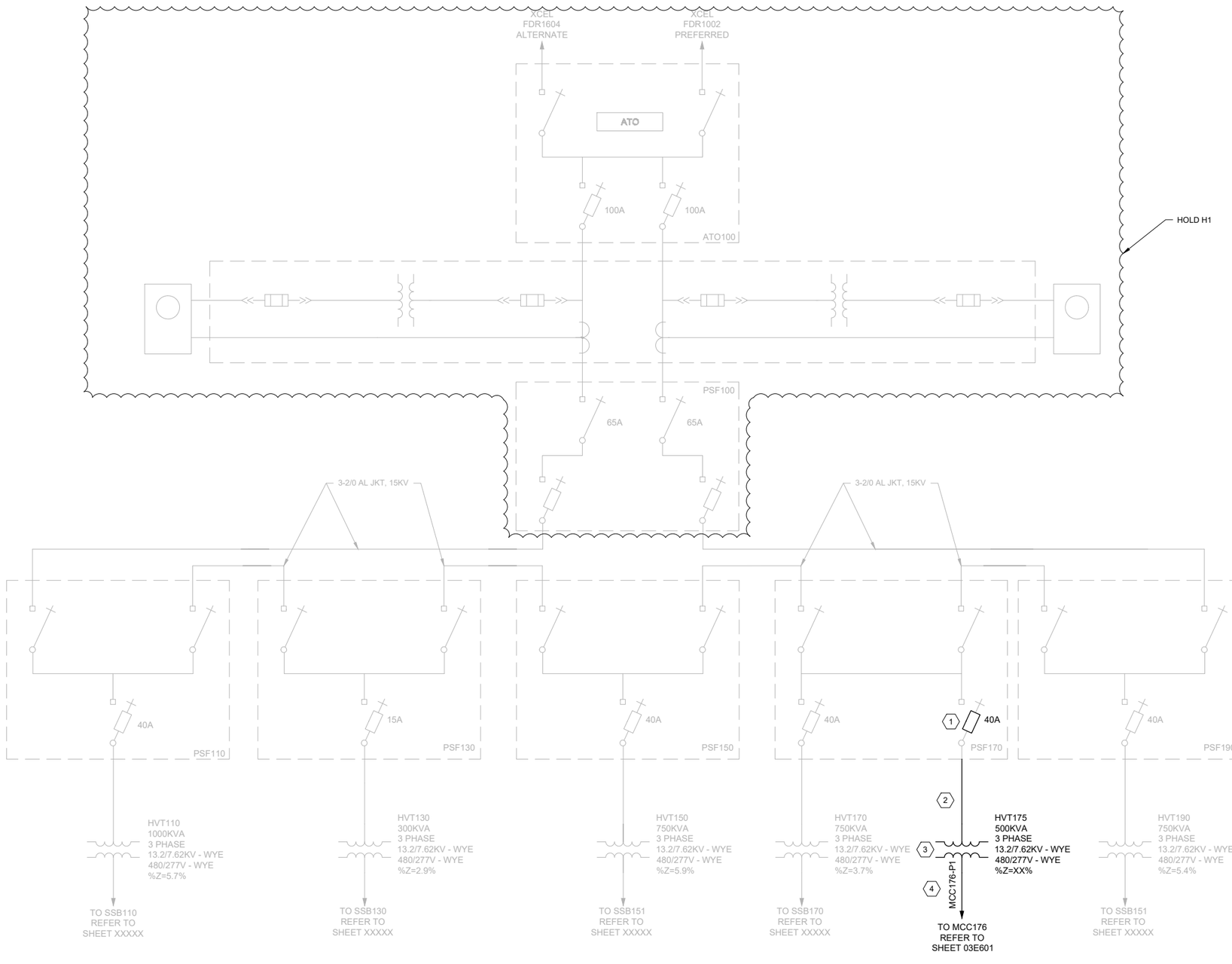
UTILITIES DEPARTMENT
BELT PRESS BUILDING

GENERAL
ELECTRICAL DISTRIBUTION OVERVIEW

0 1" 2"

FILENAME 00E601.dwg
SCALE NO SCALE

SHEET
00E601



KEY NOTES: (X)

1. NEW FUSES BY FORT COLLINS LIGHT & POWER. FUSE SIZE TO BE DETERMINED BY FORT COLLINS LIGHT & POWER.
2. UNDERGROUND MEDIUM-VOLTAGE CIRCUIT BY FORT COLLINS LIGHT & POWER, INCLUDING TRENCHING, CONDUITS, CABLE, AND INSTALLATION.
3. TRANSFORMER AND FOUNDATION BY FORT COLLINS LIGHT & POWER.
4. TRANSFORMER SECONDARY CIRCUITS AND DUCT BANK BY CONTRACTOR.

HOLDS:

H1: TO BE UPDATED TO SHOW ELECTRIC SERVICE FROM FORT COLLINS LIGHT & POWER.

ISSUE	DATE	DESCRIPTION
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PROCESS	S. FOX
I & C	C. AUDO
ELECTRICAL	T. MOORE
DRAWN	E. PAZ
PROJECT NUMBER	10258885

PRELIMINARY
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OR
RECORDING

City of Fort Collins

UTILITIES DEPARTMENT
BELT PRESS BUILDING

GENERAL
MEDIUM VOLTAGE
PRIMARY DISTRIBUTION

0 1" 2"

FILENAME 00E602.dwg
SCALE NO SCALE

SHEET
00E602

1	2	3	4	5	6	7	8

N

GENERAL NOTES

1. VERTICAL CONTROL: NAVD88, FORT COLLINS BENCHMARK 35-97 (2" DIA. ALUM CAP) EL = 5,128.41.
2. HORIZONTAL CONTROL: CITY OF FORT COLLINS GROUND MASTER COORDINATE BASE POINT 714 (NE CORNER SEC 7) N 1459921.017 E 3096452.63
3. DRAINAGE FROM SITE WILL FOLLOW HISTORIC PATTERNS TO THE DETENTION POND LOCATED SOUTHWEST OF SITE.
4. SEE SHEET 02C402 FOR THE YARD PIPING PLAN.

KEY NOTES: (X)

1. HOT MIX ASPHALT: SEE SHEET 02C401.
2. GUTTER TYPE 2: SEE SHEET 02C401.
3. INSTALL CONCRETE SIDEWALK: 190 SY. SEE DETAIL 1, SHEET 02C502.
4. INSTALL CURB AND GUTTER TYPE 2 SECTION IIB: 127 LF. SEE DETAIL 8 ON SHEET 02C501.
5. INSTALL CURB AND GUTTER TYPE 2 SECTION IB: 262 LF. SEE DETAIL 7 ON SHEET 02C501.
6. INSTALL CONCRETE DRIVEWAY ENTRANCE TYPE 2. SEE DETAIL 2, SHEET 02C502.

BELT PRESS BUILDING COORDINATE TABLE

POINT NO.	NORTHING	EASTING	REMARK
1	132693.85	173616.11	NW CORNER
2	132693.85	173674.11	NE CORNER
3	132606.02	173616.11	SW CORNER
4	132606.02	173674.11	SE CORNER

D	C	B	A

HDR

ISSUE	DATE	DESCRIPTION
	03/08/2021	30% DESIGN REVIEW

PROJECT MANAGER	MARK H. BEEBE
PROJECT ENGINEER	J. LIMKE
STRUCTURAL	J. CORONADO
CIVIL	R. MOORE
PROCESS	S. FOX
I & C	M. HUTSON
ELECTRICAL	T. MOORE
DRAWN	R. MOORE
PROJECT NUMBER	10258885

PRELIMINARY NOT FOR CONSTRUCTION OR RECORDING

City of Fort Collins

UTILITIES DEPARTMENT
BELT PRESS BUILDING

CIVIL
OVERALL SITE, CONTROL PLAN AND STAGING AREA

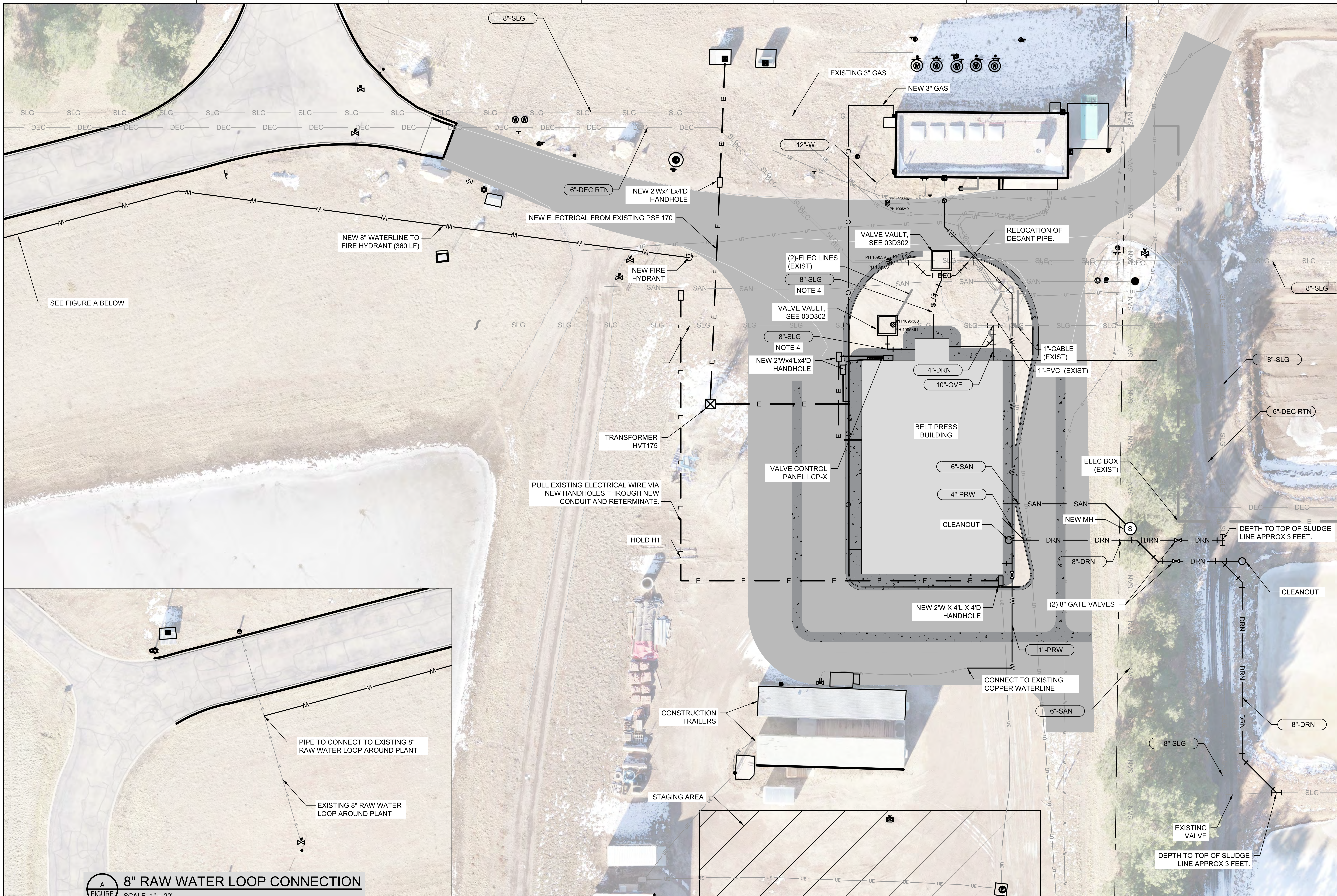
0 1" 2"

FILENAME 02C101.dwg

SCALE 1" = 40'

SHEET 02C101

1	2	3	4	5	6	7	8



GENERAL NOTES:

1. SEE TRENCH PIPE BEDDING DETAIL ON SHEET 02C500, DETAIL 1.
2. EXISTING UTILITIES SHOWN ARE A MIXTURE BETWEEN QUALITY B AND QUALITY LEVEL D. FOR QUALITY B, UTILITY LOCATES WERE COORDINATED. FOR QUALITY D, UTILITIES SHOWN ARE BASED ON THEIR RELATIVE POSITION IN RECORD DRAWINGS PROVIDED BY THE CITY.
3. HOLDS:
   3.1. H1: TO BE UPDATED TO SHOW NUMBER AND SIZE OF EXISTING ELECTRICAL WIRE AND NEW CONDUIT SIZE.
4. MINERAL-INSULATED HEAT TRACE FOR BURIED 8" SLG LINE AND VALVES; CONTROLLER AND TERMINATION LOCATED ADJACENT TO VALVE CONTROL PANEL. SEE DETAIL 3, SHEET 02C502.

LEGEND:

PH 1095360 = POT HOLE LOCATIONS FROM 5/19/21 & 5/20/21.

D C B A

HDR

ISSUE	DATE	DESCRIPTION
	03/08/2021	30% DESIGN REVIEW

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CIVIL	R. MOORE
PROCESS	S. FOX
I & C	M. HUTSON
ELECTRICAL	T. MOORE
DRAWN	R. MOORE
PROJECT NUMBER	10258885

PRELIMINARY NOT FOR CONSTRUCTION OR RECORDING

City of Fort Collins

UTILITIES DEPARTMENT
BELT PRESS BUILDING

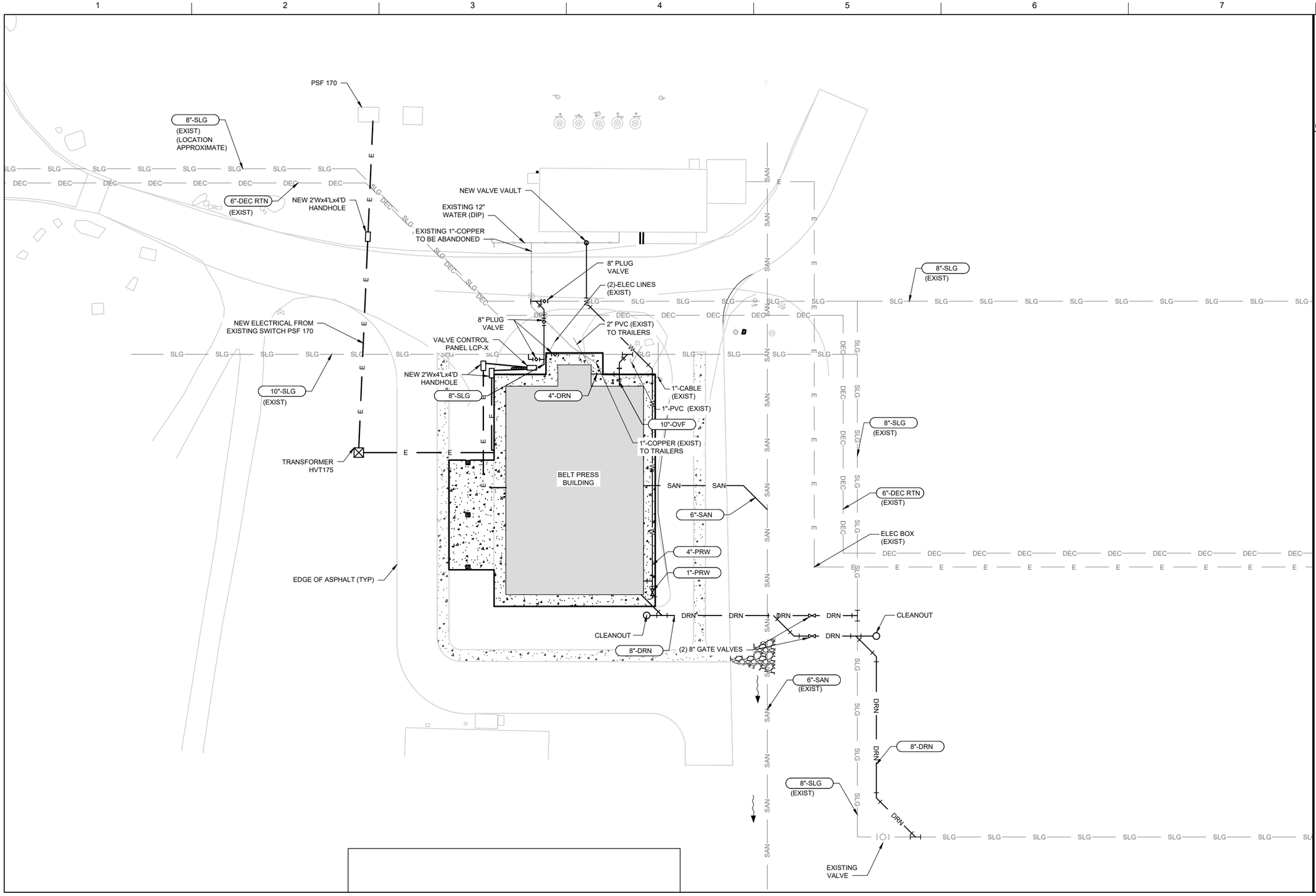
CIVIL YARD PIPING AND UTILITY PLAN

0 1" 2"

FILENAME 02C402.dwg

SCALE 1" = 20'

SHEET 02C402



GENERAL NOTES:

1. SEE TRENCH PIPE BEDDING DETAIL ON SHEET 02C500, DETAIL 1.
2. EXISTING UTILITIES SHOWN ARE QUALITY LEVEL D AND SHOWN BASED ON THEIR RELATIVE POSITION IN RECORD DRAWINGS PROVIDED BY THE CITY.

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City of Fort Collins

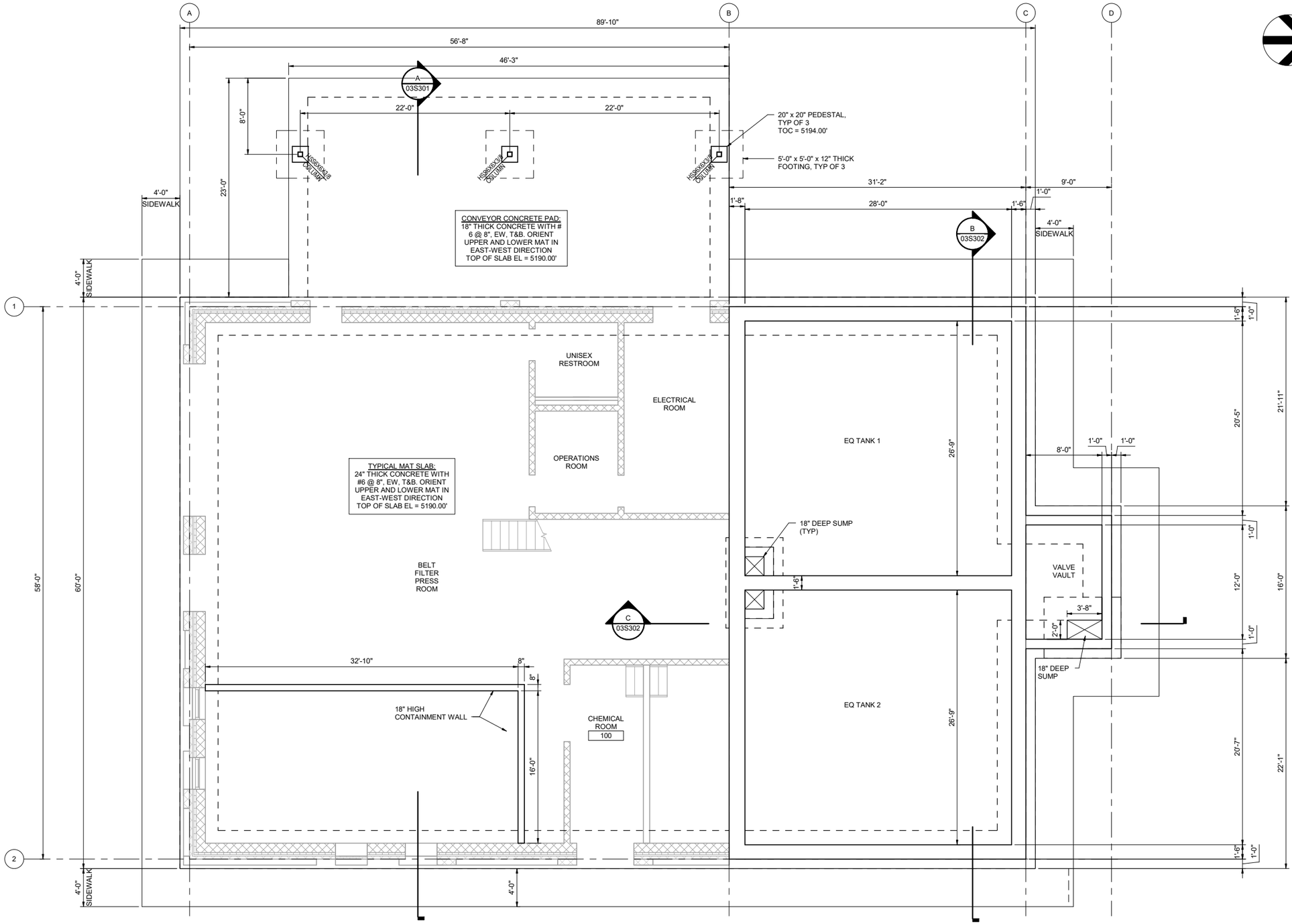
UTILITIES DEPARTMENT
BELT PRESS BUILDING

CIVIL
YARD PIPING AND UTILITY PLAN

0 1" 2"

FILENAME 02C402.dwg
SCALE 1" = 20'

SHEET
02C402



GENERAL SHEETS:

A. REFER TO SHEETS 00S001 THRU 00S506 FOR GENERAL STRUCTURAL NOTES AND TYPICAL DETAILS.

B. COORDINATE THE STRUCTURAL DRAWINGS WITH ALL OTHER DISIPLINE DRAWINGS FOR PIPING, EQUIPMENT, ANCHORS, CONDUITS, HOUSEKEEPING SLABS, AND ANY OTHER ITEMS ATTACHED TO OR EMBEDDED IN STRUCTURAL ELEMENTS THAT MAY NOT BE SHOWN.

ISSUE	DATE	DESCRIPTION
	02/24/2021	30% DESIGN REVIEW

PROJECT MANAGER	MARK H. BEEBE
PROJECT ENGINEER	J. LIMKE
STRUCTURAL	J. CORONADO
ARCHITECTURAL	R. MCKINLEY
PROCESS	S. FOX
I & C	C. AUDO
ELECTRICAL	T. MOORE
TEAM 7	R. NELSON
PROJECT NUMBER	10258885

PRELIMINARY NOT FOR CONSTRUCTION OR RECORDING

City of Fort Collins

BELT PRESS BUILDING PROJECT DESCRIPTION

BELT PRESS BUILDING FOUNDATION PLAN

0 1" 2"

FILENAME 10258885_03-S.RVT

SCALE 3/16" = 1'-0"

SHEET **03S101**

BIM 360://10258885_FTC-Residual_Handling_2020/10258885_03-S.rvt
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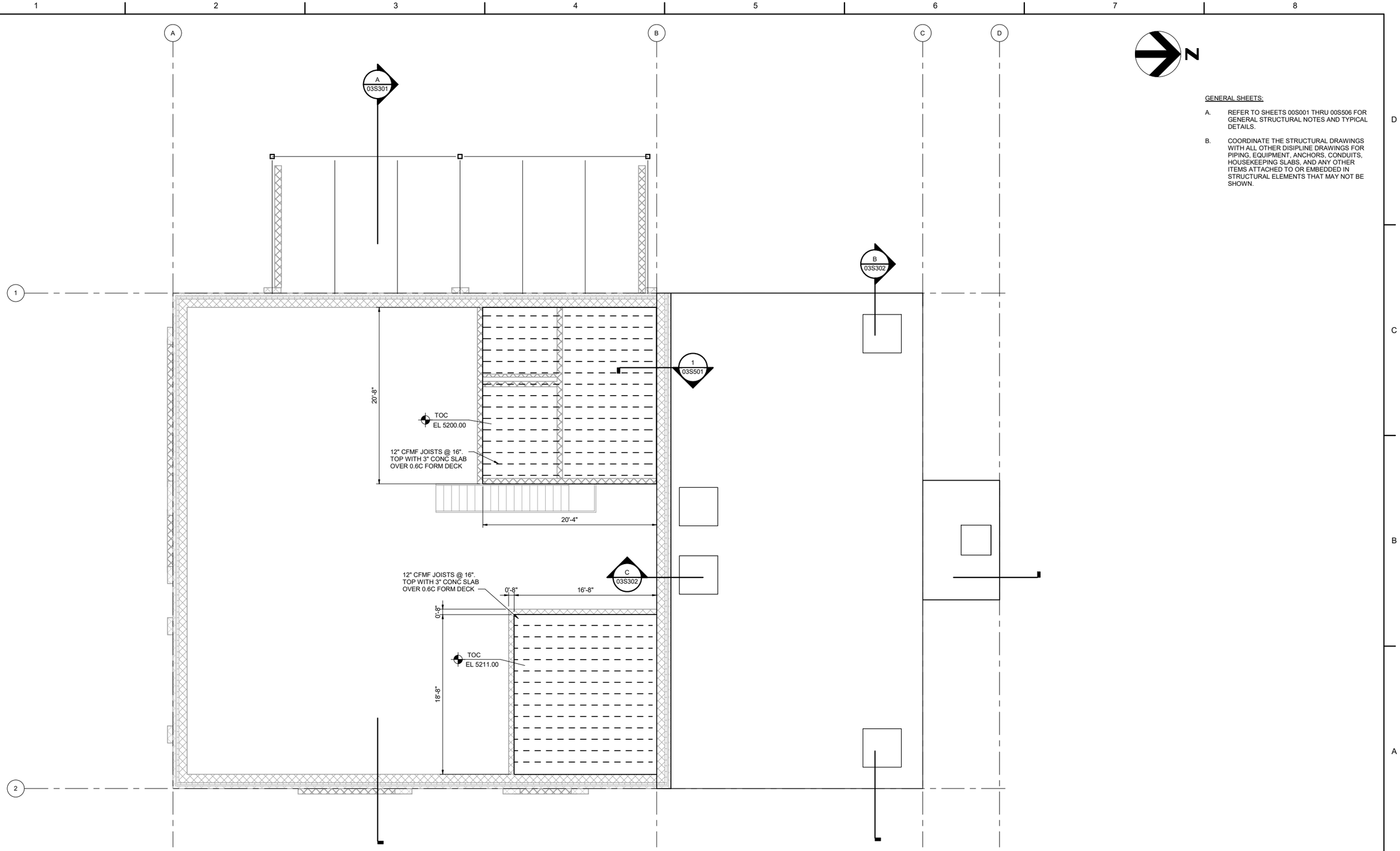


GENERAL SHEETS:

A. REFER TO SHEETS 00S001 THRU 00S506 FOR GENERAL STRUCTURAL NOTES AND TYPICAL DETAILS.

B. COORDINATE THE STRUCTURAL DRAWINGS WITH ALL OTHER DISIPLINE DRAWINGS FOR PIPING, EQUIPMENT, ANCHORS, CONDUITS, HOUSEKEEPING SLABS, AND ANY OTHER ITEMS ATTACHED TO OR EMBEDDED IN STRUCTURAL ELEMENTS THAT MAY NOT BE SHOWN.

ISSUE	DATE	DESCRIPTION

PROJECT MANAGER	MARK H. BEEBE
PROJECT ENGINEER	J. LIMKE
STRUCTURAL	J. CORONADO
ARCHITECTURAL	R. MCKINLEY
PROCESS	S. FOX
I & C	C. AUDO
ELECTRICAL	T. MOORE
TEAM 7	R. NELSON
PROJECT NUMBER	10258885

PRELIMINARY NOT FOR CONSTRUCTION OR RECORDING

City of Fort Collins

BELT PRESS BUILDING PROJECT DESCRIPTION

BELT PRESS BUILDING MEZZANINE LEVEL PLAN

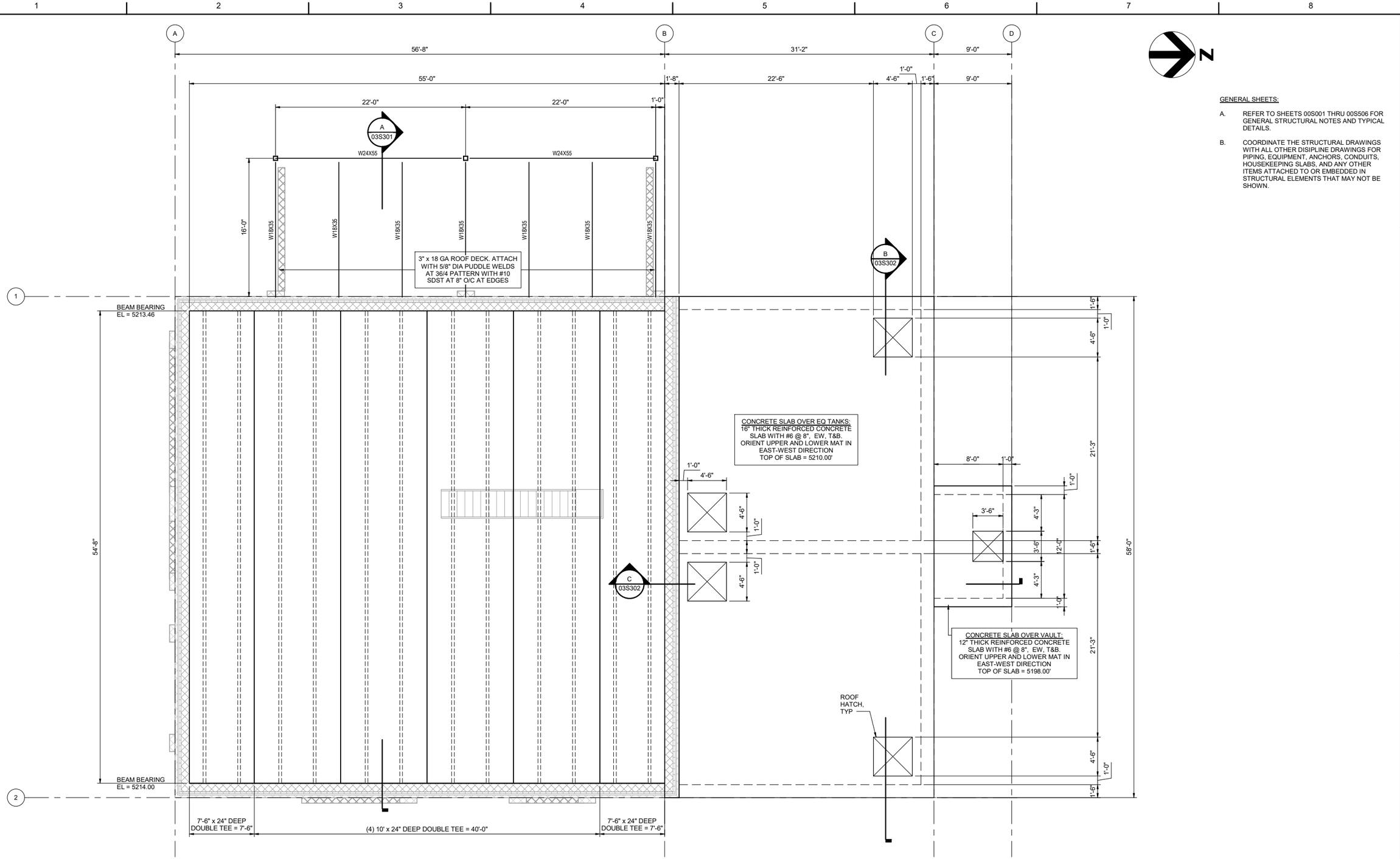
0 1" 2"

FILENAME 10258885_03-S.RVT

SCALE 3/16" = 1'-0"

SHEET 03S102

BIM 360://10258885_FTC-Residual_Handling_2020/10258885_03-S.rvt
4/23/2021 4:30:17 PM



GENERAL SHEETS:

A. REFER TO SHEETS 00S001 THRU 00S506 FOR GENERAL STRUCTURAL NOTES AND TYPICAL DETAILS.

B. COORDINATE THE STRUCTURAL DRAWINGS WITH ALL OTHER DISIPLINE DRAWINGS FOR PIPING, EQUIPMENT, ANCHORS, CONDUITS, HOUSEKEEPING SLABS, AND ANY OTHER ITEMS ATTACHED TO OR EMBEDDED IN STRUCTURAL ELEMENTS THAT MAY NOT BE SHOWN.

ISSUE	DATE	DESCRIPTION
	02/24/2021	30% DESIGN REVIEW

PROJECT MANAGER	MARK H. BEEBE
PROJECT ENGINEER	J. LIMKE
STRUCTURAL	J. CORONADO
ARCHITECTURAL	R. MCKINLEY
PROCESS	S. FOX
I & C	C. AUDO
ELECTRICAL	T. MOORE
TEAM 7	R. NELSON
PROJECT NUMBER	10258885

PRELIMINARY NOT FOR CONSTRUCTION OR RECORDING

City of Fort Collins

BELT PRESS BUILDING PROJECT DESCRIPTION

BELT PRESS BUILDING ROOF PLAN

0 1" 2"

FILENAME 10258885_03-S.RVT

SCALE 3/16" = 1'-0"

SHEET **03S103**

BIM 360://10258885_FTC-Residual_Handling_2020/10258885_03-S.rvt
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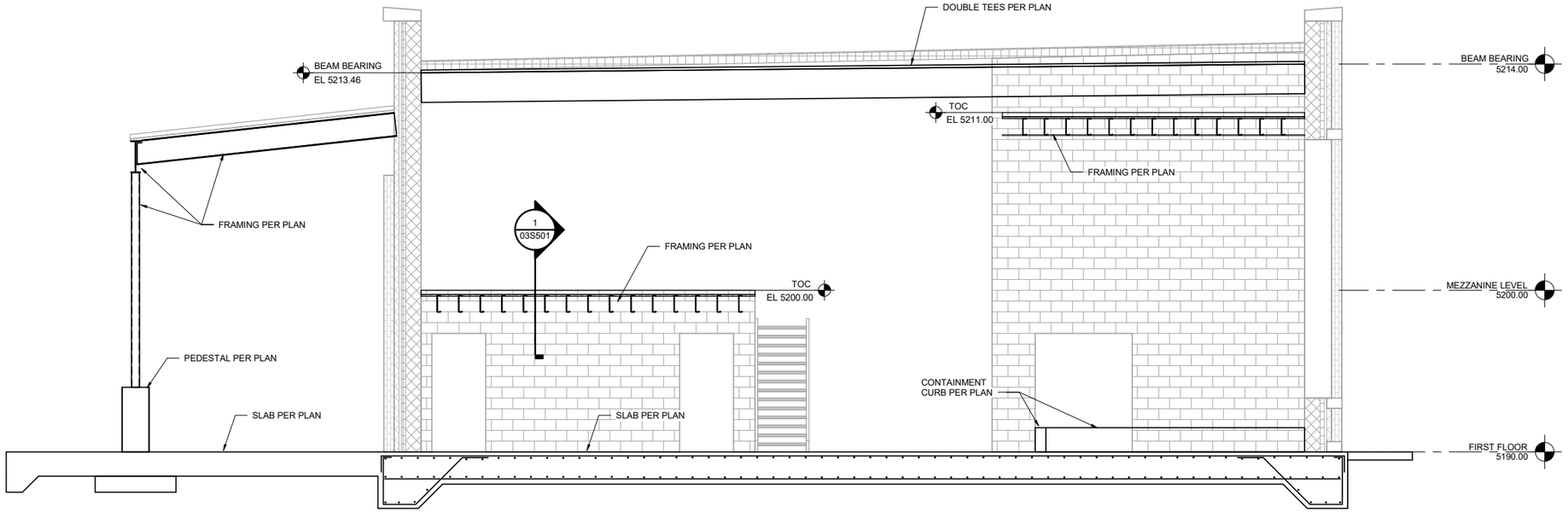


A 03S101 SECTION
1/4" = 1'-0"

BIM 360://10258885_FTC-Residual_Handling_2020/10258885_03-S.rvt
4/23/2021 4:30:18 PM

ISSUE	DATE	DESCRIPTION
	02/24/2021	30% DESIGN REVIEW

PROJECT MANAGER	MARK H. BEEBE
PROJECT ENGINEER	J. LIMKE
STRUCTURAL	J. CORONADO
ARCHITECTURAL	R. MCKINLEY
PROCESS	S. FOX
I & C	C. AUDO
ELECTRICAL	T. MOORE
TEAM 7	R. NELSON
PROJECT NUMBER	10258885

PRELIMINARY NOT FOR CONSTRUCTION OR RECORDING

City of Fort Collins

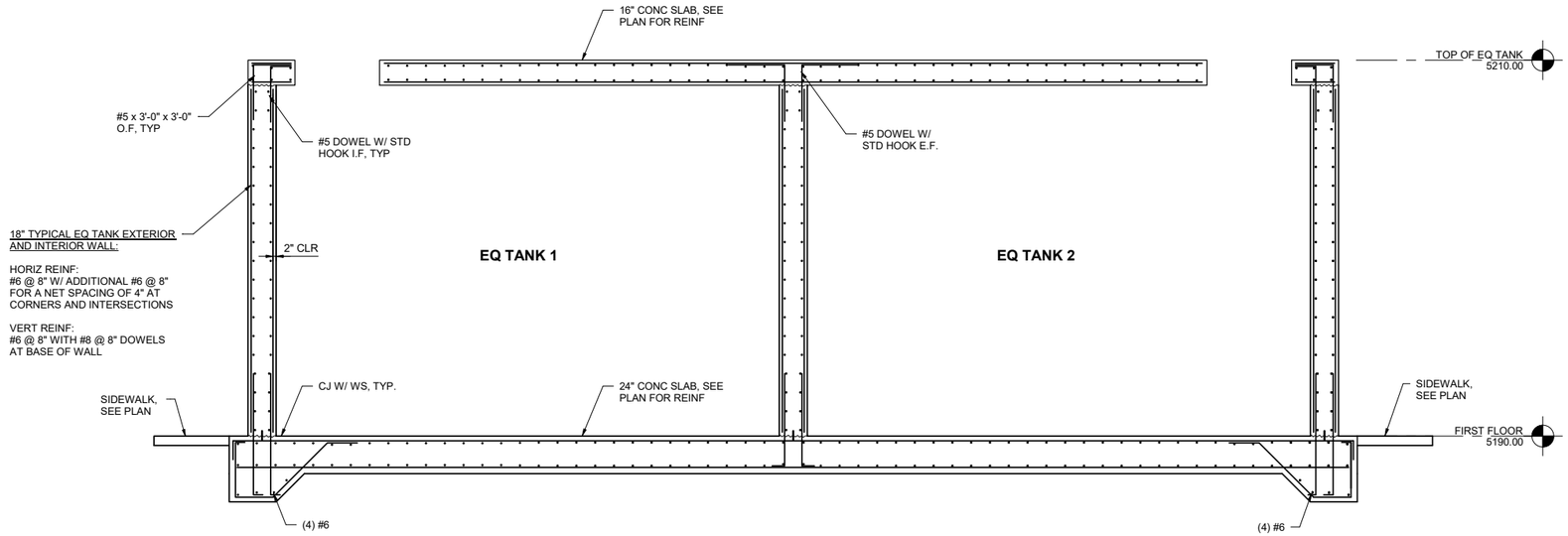
BELT PRESS BUILDING PROJECT DESCRIPTION

BELT PRESS BUILDING STRUCTURAL SECTIONS

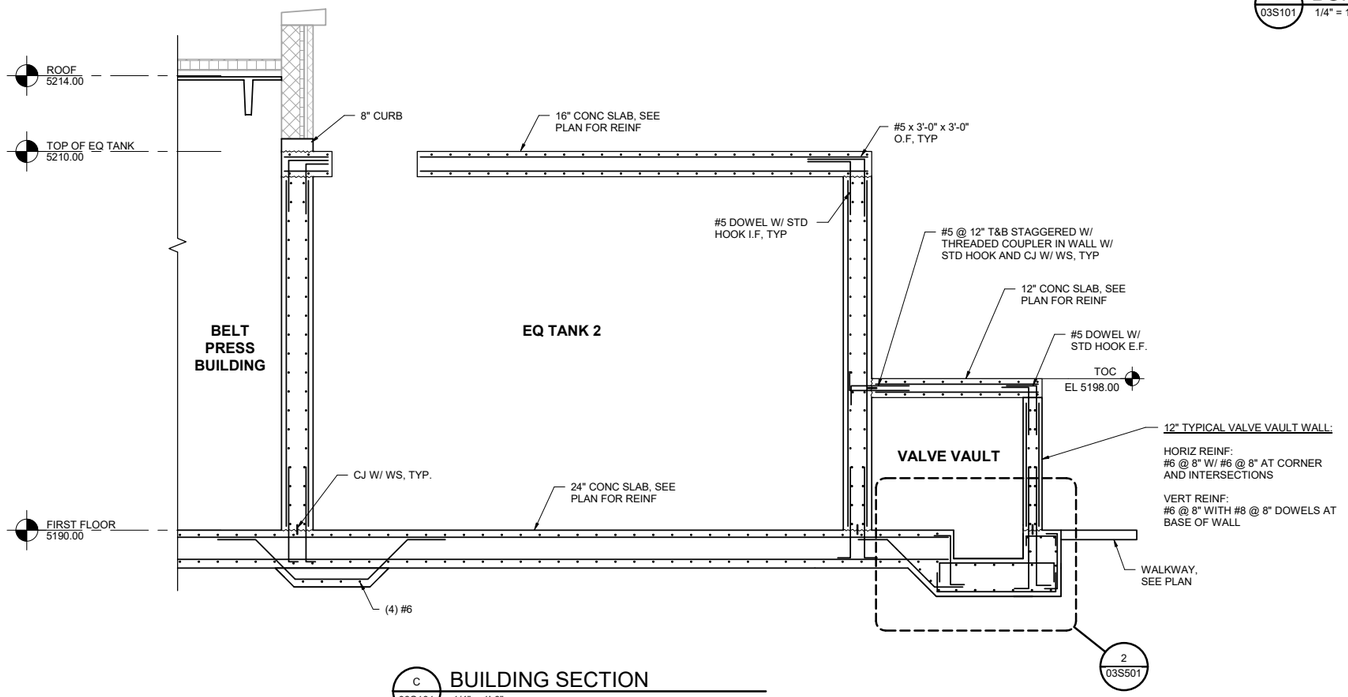
0 1" 2"

FILENAME 10258885_03-S.RVT
SCALE 1/4" = 1'-0"

SHEET 03S301



B 03S101 BUILDING SECTION
1/4" = 1'-0"



C 03S101 BUILDING SECTION
1/4" = 1'-0"

BIM 360://10258885_FTC-Residual_Handling_2020/10258885_03-S.rvt
4/23/2021 4:30:19 PM

ISSUE	DATE	DESCRIPTION

PROJECT MANAGER	MARK H. BEEBE
PROJECT ENGINEER	J. LIMKE
STRUCTURAL	J. CORONADO
ARCHITECTURAL	R. MCKINLEY
PROCESS	S. FOX
I & C	C. AUDO
ELECTRICAL	T. MOORE
TEAM 7	R. NELSON
PROJECT NUMBER	10258885

PRELIMINARY NOT FOR CONSTRUCTION OR RECORDING

City of Fort Collins

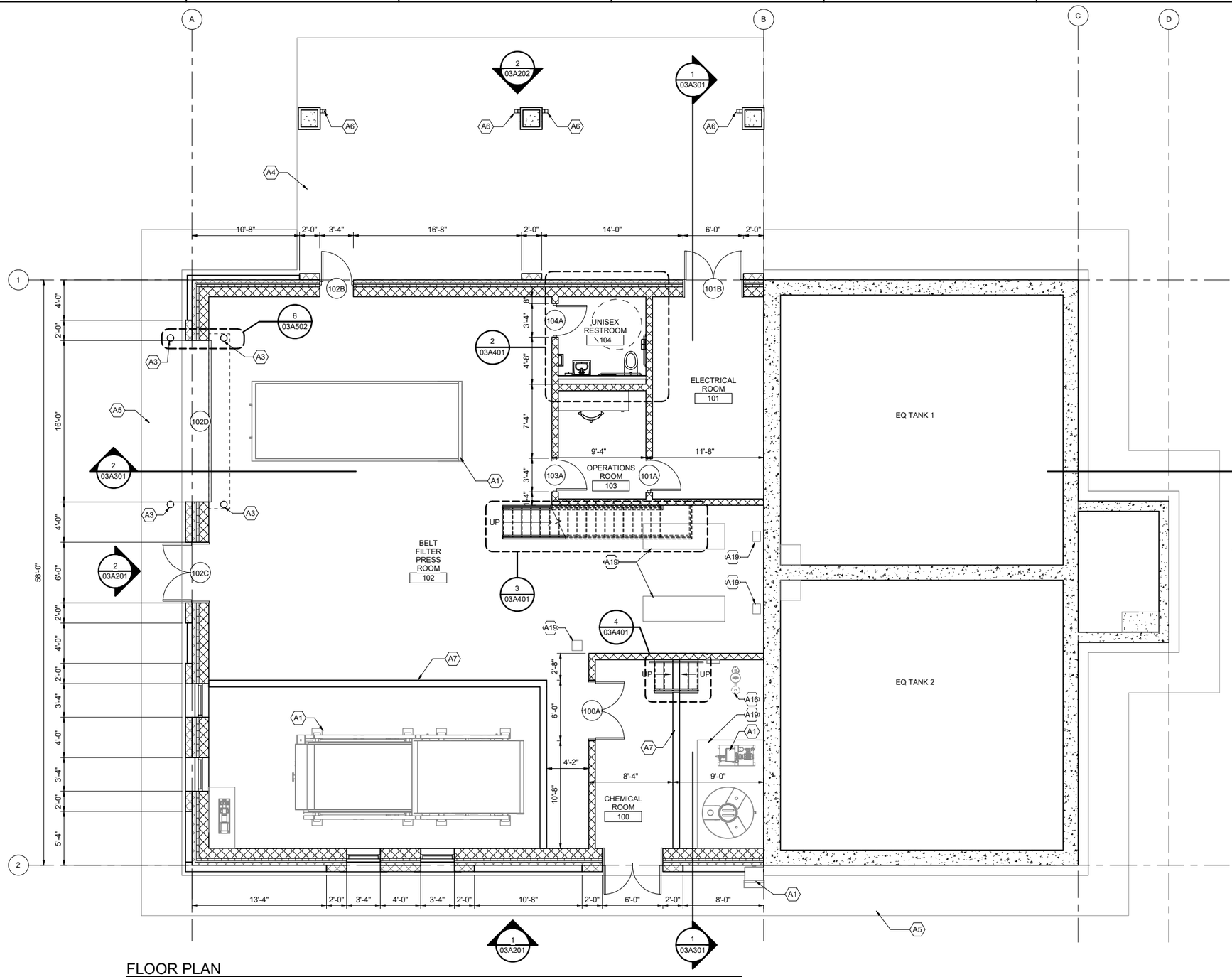
BELT PRESS BUILDING PROJECT DESCRIPTION

BELT PRESS BUILDING STRUCTURAL SECTIONS

0 1" 2"

FILENAME 10258885_03-S.RVT
SCALE 1/4" = 1'-0"

SHEET 03S302



FLOOR PLAN
3/16" = 1'-0"

ARCHITECTURAL GENERAL NOTES

1. ALL GYPSUM WALL BOARD IS 5/8" THICK UNLESS NOTED OTHERWISE.
2. ALL ANGLES ON PLAN ARE 45 OR 90 DEGREES UNLESS NOTED OTHERWISE.
3. ALL DIMENSIONS ARE ACTUAL AND ARE TO FACE OF MASONRY,OUTSIDE FACE OF METAL FRAME, CENTERLINE OF COLUMN OR CENTERLINE OF BEAM UNLESS NOTED OTHERWISE. ALL DIMENSIONS ARE FOR BIDDING PURPOSES ONLY. ACTUAL FIELD DIMENSIONS SHALL BE VERIFIED PRIOR TO SUBMITTAL OF SHOP DRAWINGS, ORDERING RELATED MATERIALS AND PERFORMING DEMOLITION OR CONSTRUCTION WORK. ALL DIMENSIONS ALIGNING WITH OR RELATED TO EXISTING CONDITIONS ARE TO BE LAID OUT PRIOR TO COMMENCING WORK AND VERIFIED.
10. VERIFY MECHANICAL AND ELECTRICAL DRAWINGS FOR SCOPE AND INTERFACE. CONTRACTOR SHALL COORDINATE LOCATION FOR ALL MECHANICAL AND ELECTRICAL ITEMS WITH GENERAL CONSTRUCTION. REVIEW ANY DISCREPANCIES WITH THE ENGINEER PRIOR TO I NSTALLATION AND/OR FABRICATION.
4. SEE MECHANICAL DRAWINGS FOR ALL ROOF PENETRATIONS WHICH MUST BE FLASHED/ROOFED AROUND.
5. LOCATE INTERIOR CONTROL JOINTS WHERE SHOWN ON THE PLANS.
6. AT LARGE SCALE COLUMN/PLAN DETAILS, WALL TYPES ARE INDICATED. FOR CLARITY, IN SOME INSTANCES NOT ALL STUDS AND/OR FURRING ARE SHOWN ON THE DETAILS. CONTRACTOR SHALL FRAME USING NORMAL FRAMING METHODS AND SHALL ALSO COMPLY WITH INSTRUCTIONS OUTLINED IN THE SPECIFICATIONS.
7. ALL NEW WALLS SHALL EXTEND 4" THRU CEILING, UNLESS NOTED OTHERWISE ON FLOOR PLANS OR REFLECTED CEILING PLANS.
8. ANY WOOD BLOCKING ABOVE CEILING WHICH IS LOCATED IN PLENUM SPACES USED FOR RETURN AIR MOVEMENT SHALL BE FIRE-RETARDANT TREATED OR SHALL BE COVERED WITH 5/8" FIRE-CODE GWB.
9. IT IS THE INTENT OF THIS CONTRACT THAT ALL AREAS AFFECTED BY CONSTRUCTION BE A FINISHED & COMPLETE PROJECT. CONTRACTOR SHALL PATCH, REPAIR & ADJUST AS REQUIRED TO ACHIEVE THIS FINISHED PROJECT.
10. ARCHITECTURAL FINISH FLOOR 100'-0" IS EQUAL TO CIVIL {___?___}.

KEYNOTES (#)

A1 PROCESS EQUIPMENT; SEE PROCESS

A3 BOLLARD

A4 APPROACH SLAB; SEE STRUCTURAL

A5 SIDEWALK; SEE STRUCTURAL

A6 PREFINISHED GUTTER & DOWNSPOUT

A7 CIP CONTAINMENT CURB; SEE STRUCTURAL

A16 EMERGENCY EYE WASH; SEE MECHANICAL

A19 EQUIPMENT PAD; SEE STRUCTURAL

ISSUE	DATE	DESCRIPTION
	3/01/2021	30% DESIGN REVIEW

PROJECT MANAGER	MARK H. BEEBE
PROJECT ENGINEER	J. LIMKE
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ARCHITECTURAL	R. MCKINLEY
PROCESS	S. FOX
I & C	C. AUDO
ELECTRICAL	T. MOORE
TEAM 7	F. M. LAST
PROJECT NUMBER	10258885

PRELIMINARY NOT FOR CONSTRUCTION OR RECORDING

City of Fort Collins

UTILITIES DEPARTMENT
BELT PRESS BUILDING

FLOOR PLAN

0 1" 2"

FILENAME 10258885_03_A.rvt
SCALE 3/16" = 1'-0"

SHEET **03A101**

BIM 360://10258885_FTC-Residual_Handling_2020/10258885_03-A.rvt
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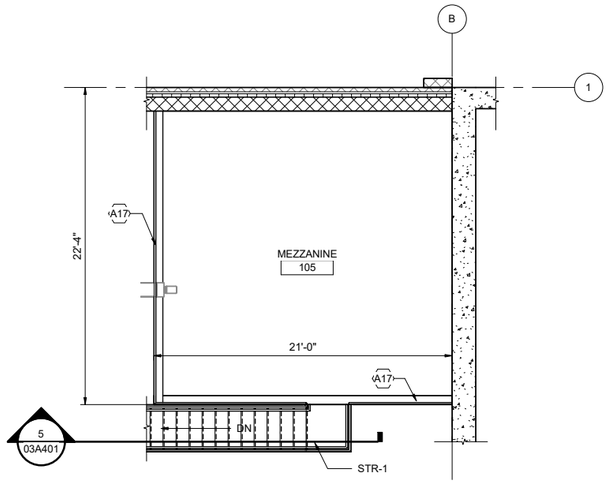

MEZZANINE LEVEL

3/16" = 1'-0"

KEYNOTES

A17 ALUMINUM RAILING

ISSUE	DATE	DESCRIPTION

PROJECT MANAGER	MARK H. BEEBE
PROJECT ENGINEER	J. LIMKE
STRUCTURAL	J. CORONADO
ARCHITECTURAL	R. MCKINLEY
PROCESS	S. FOX
I & C	C. AUDO
ELECTRICAL	T. MOORE
TEAM 7	F. M. LAST
PROJECT NUMBER	10258885

PRELIMINARY
NOT FOR
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OR
RECORDING

City of Fort Collins

UTILITIES DEPARTMENT
BELT PRESS BUILDING

MEZZANINE PLAN

0 1" 2"

FILENAME 10258885_03_A.rvt

SCALE 3/16" = 1'-0"

SHEET **03A102**

BIM 360://10258885_FTC-Residual_Handling_2020/10258885_03-A.rvt
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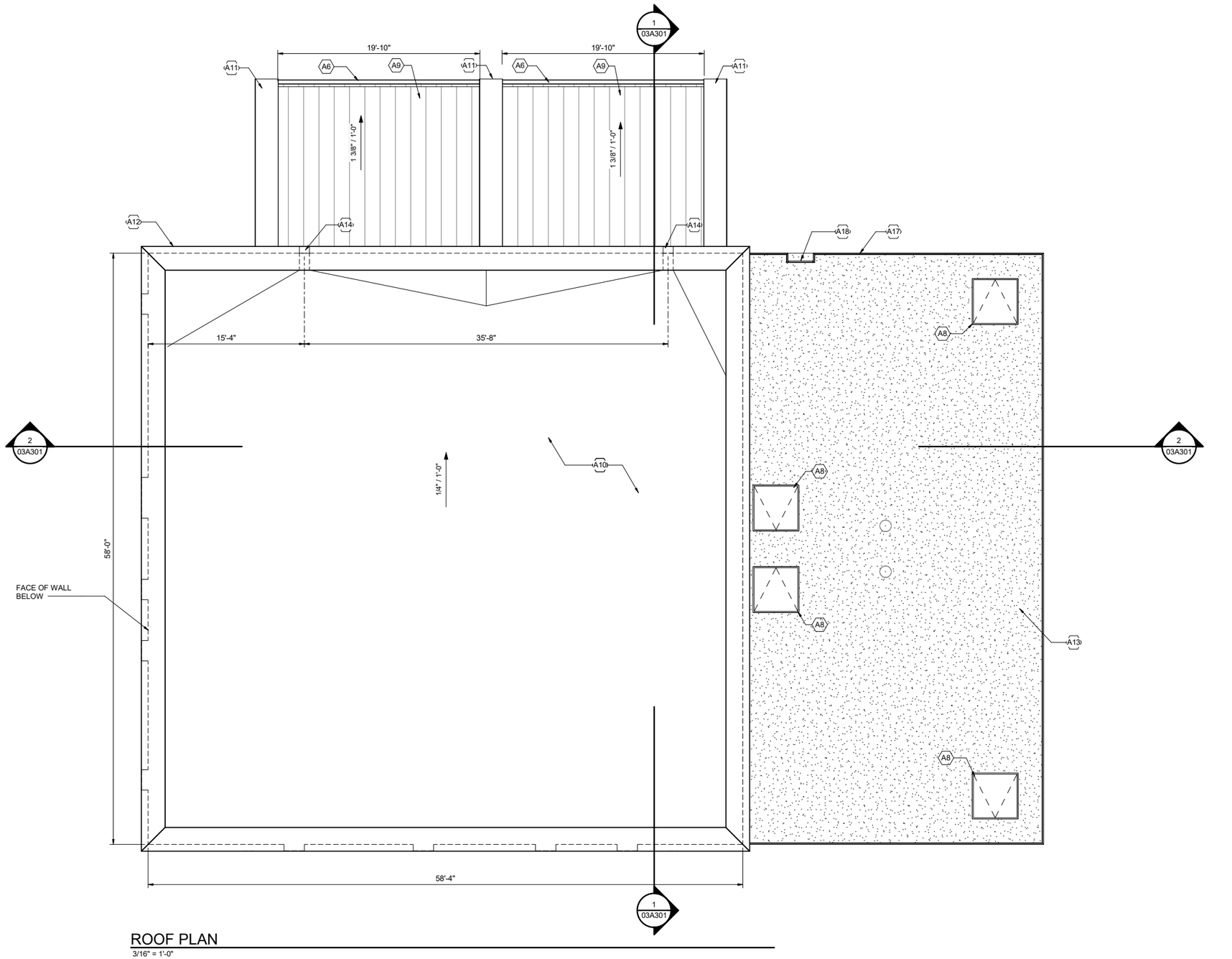

ROOF PLAN

3/16" = 1'-0"

KEYNOTES (#)

A8	FLOOR HATCH
A10	PVC MEMBRANE ROOF
A12	CAST STONE COPING
A13	CONCRETE TANKS; SEE STRUCTURAL
A14	PREFINISHED SCUPPER & DOWNSPOUT
A17	ALUMINUM RAILING
A18	ALUMINUM GATE

ISSUE	DATE	DESCRIPTION
	3/01/2021	30% DESIGN REVIEW

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PROJECT ENGINEER	J. LIMKE
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ARCHITECTURAL	R. MCKINLEY
PROCESS	S. FOX
I & C	C. AUDO
ELECTRICAL	T. MOORE
TEAM 7	F. M. LAST
PROJECT NUMBER	10258885

PRELIMINARY NOT FOR CONSTRUCTION OR RECORDING

City of Fort Collins

UTILITIES DEPARTMENT
BELT PRESS BUILDING

ROOF PLAN

0 1" 2"

FILENAME	10258885_03_A.rvt
SCALE	3/16" = 1'-0"

SHEET 03A103

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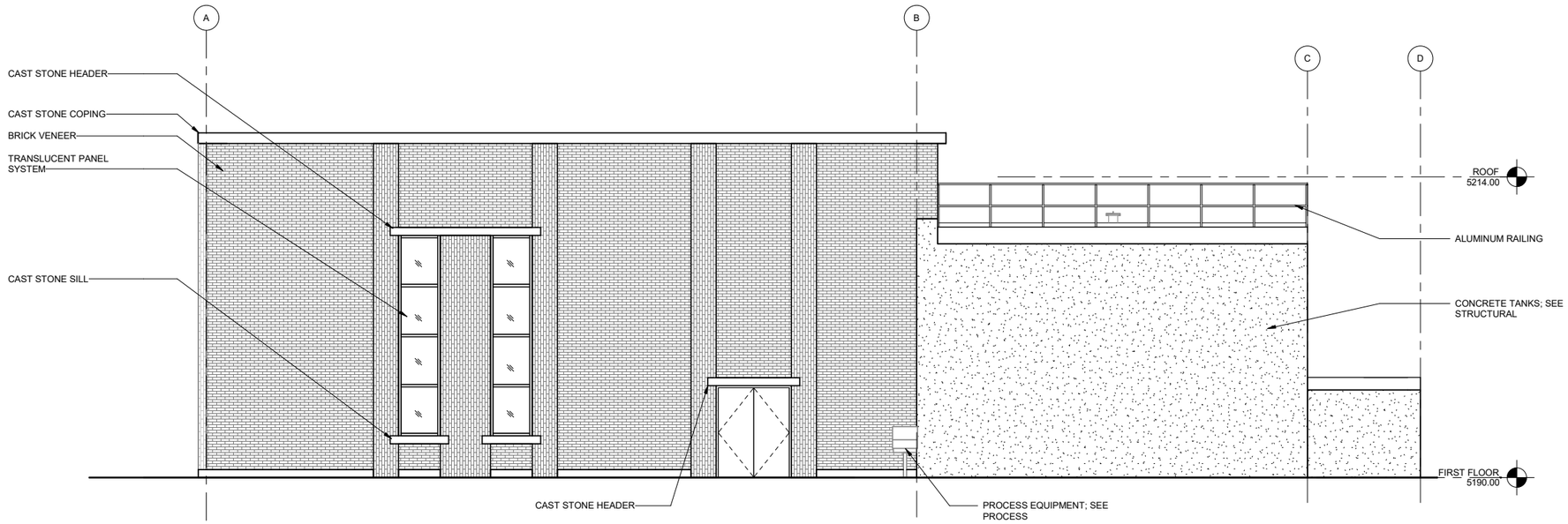
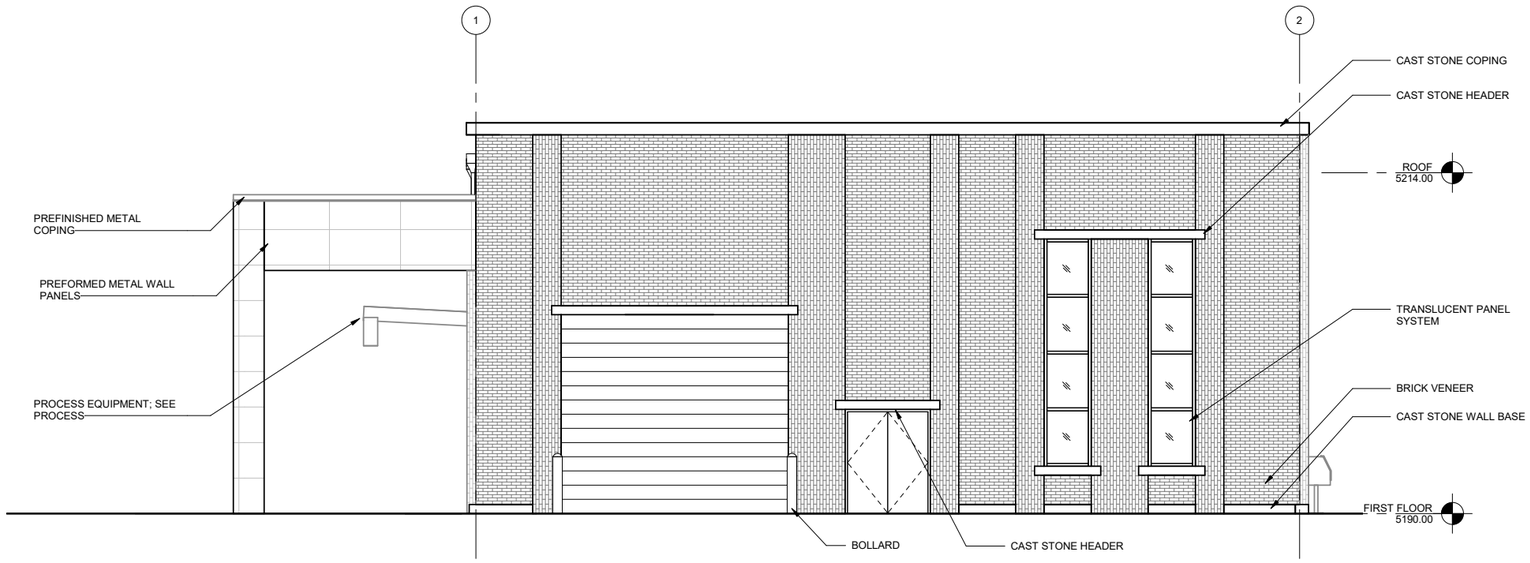


1 03A101 EXTERIOR ELEVATION - EAST
3/16" = 1'-0"



2 03A101 EXTERIOR ELEVATION - SOUTH
3/16" = 1'-0"

ISSUE	DATE	DESCRIPTION
	3/01/2021	30% DESIGN REVIEW

PROJECT MANAGER	MARK H. BEEBE
PROJECT ENGINEER	J. LIMKE
STRUCTURAL	J. CORONADO
ARCHITECTURAL	R. MCKINLEY
PROCESS	S. FOX
I & C	C. AUDO
ELECTRICAL	T. MOORE
TEAM 7	F. M. LAST
PROJECT NUMBER	10258885

PRELIMINARY NOT FOR CONSTRUCTION OR RECORDING

City of Fort Collins

UTILITIES DEPARTMENT
BELT PRESS BUILDING

EXTERIOR ELEVATIONS

0 1" 2"

FILENAME 10258885_03_A.rvt
SCALE 3/16" = 1'-0"

SHEET 03A201

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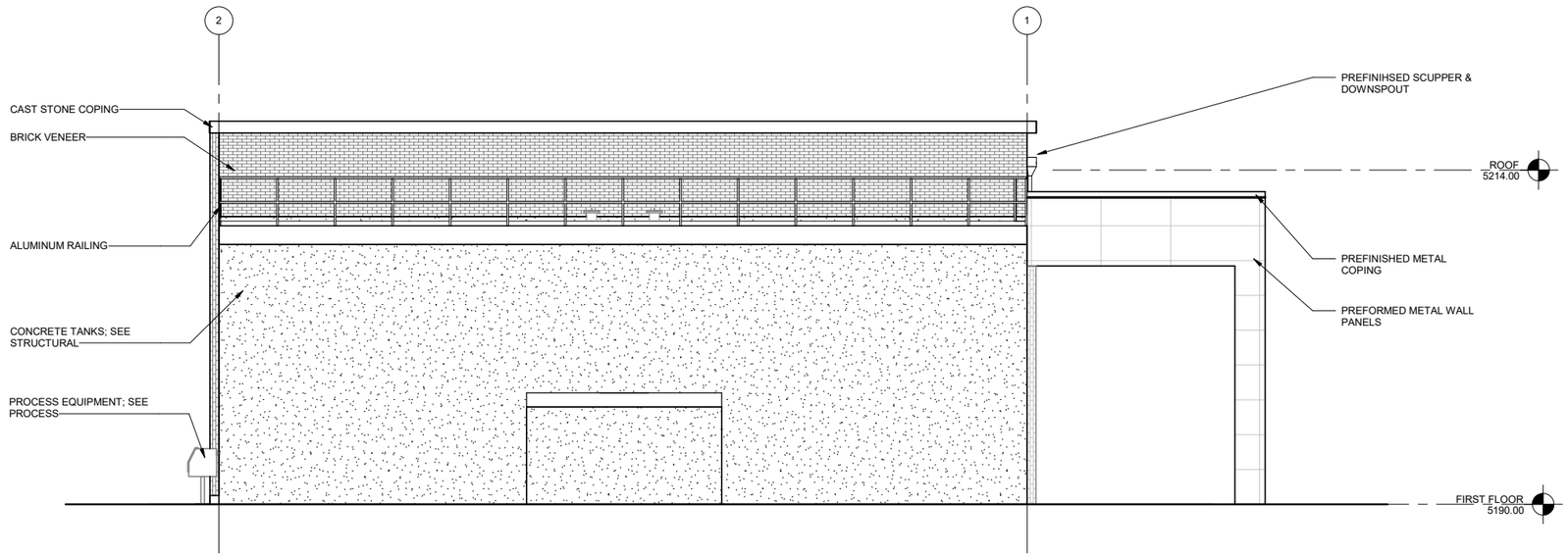
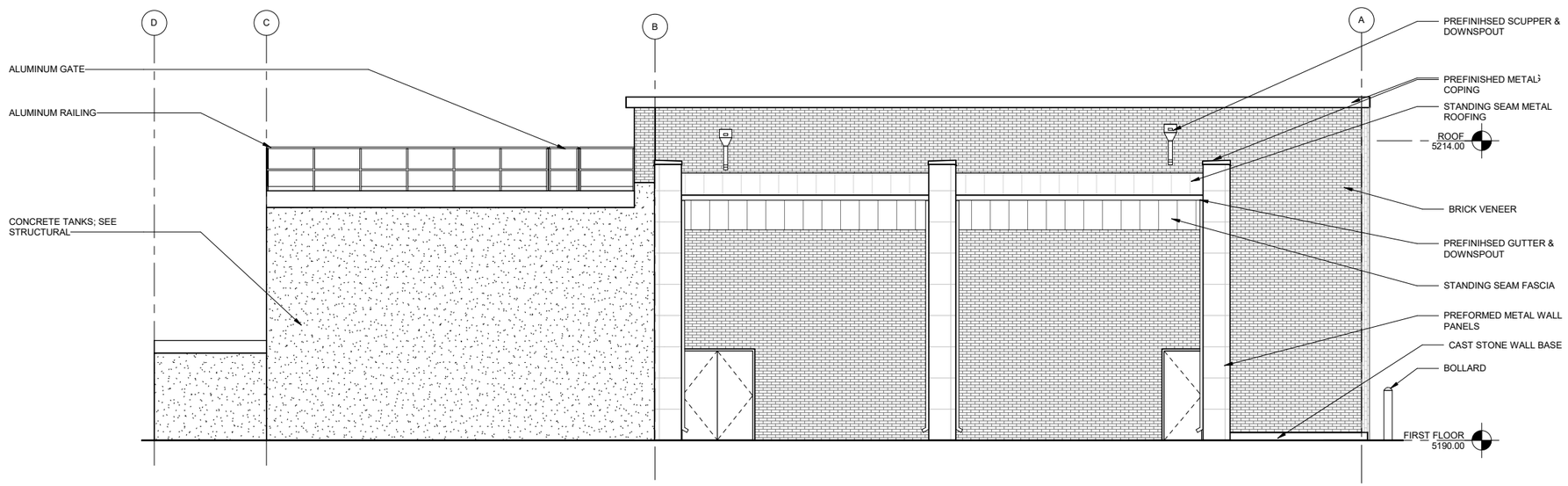


1 03A101 EXTERIOR ELEVATION - NORTH

3/16" = 1'-0"



2 03A101 EXTERIOR ELEVATION - WEST

3/16" = 1'-0"

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4/23/2021 4:37:41 PM

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	3/01/2021	30% DESIGN REVIEW

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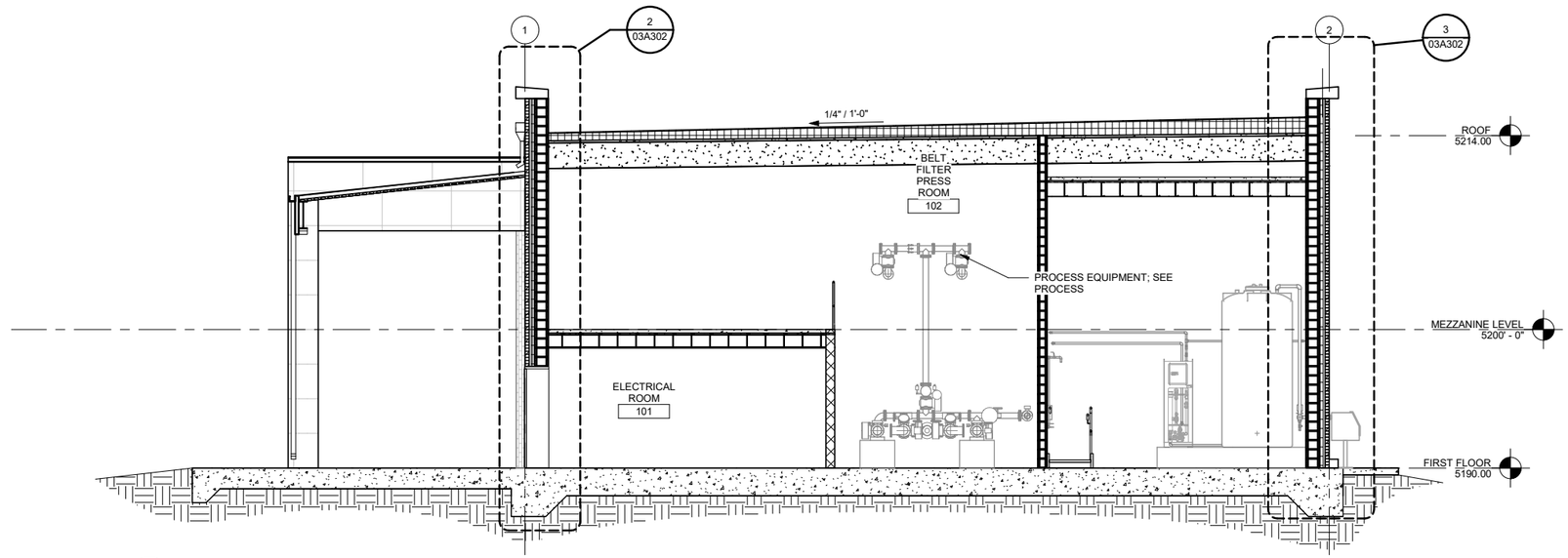
UTILITIES DEPARTMENT
BELT PRESS BUILDING

EXTERIOR ELEVATIONS

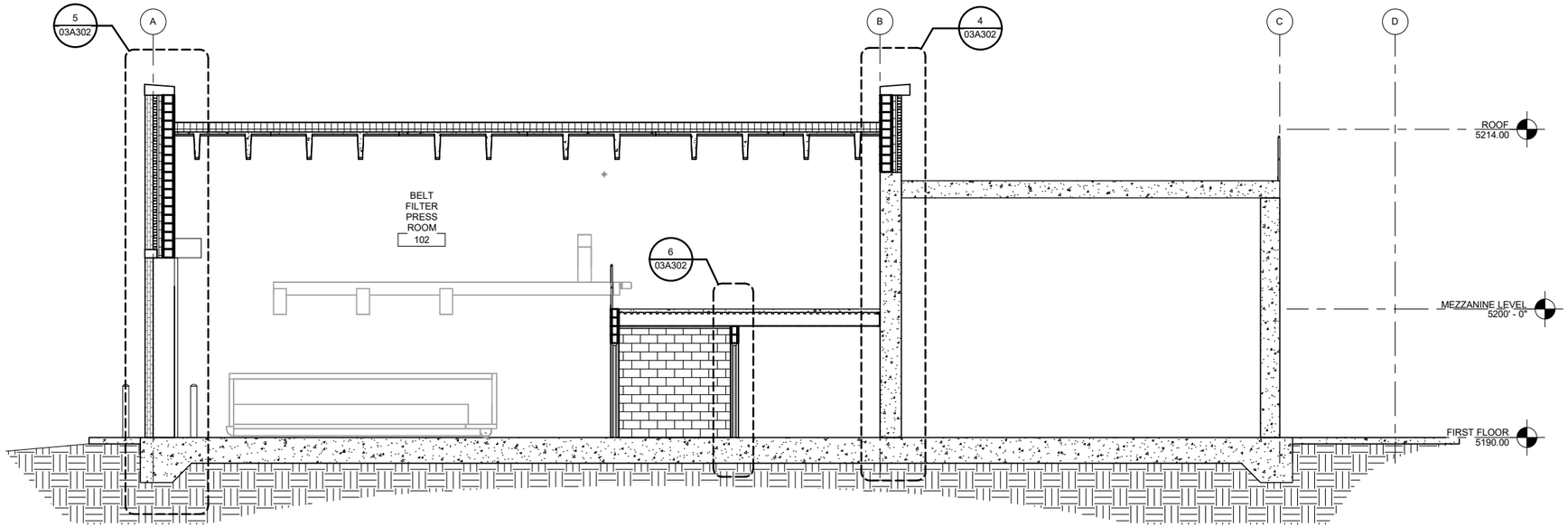
0 1" 2"

FILENAME 10258885_03_A.rvt
SCALE 3/16" = 1'-0"

SHEET 03A202



1 03A101 BUILDING SECTION
3/16" = 1'-0"



2 03A101 BUILDING SECTION
3/16" = 1'-0"

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BELT PRESS BUILDING

BUILDING SECTIONS

0 1" 2"

FILENAME 10258885_03_A.rvt
SCALE 3/16" = 1'-0"

SHEET 03A301

ROOM FINISH SCHEDULE

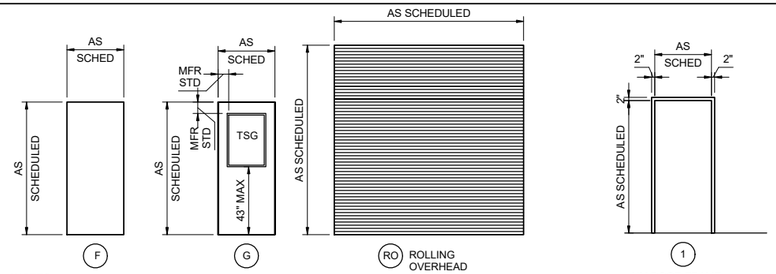
ROOM NUMBER	ROOM NAME	FLOOR	BASE	WALLS				CEILING		*REMARKS
				NORTH	EAST	SOUTH	WEST	HEIGHT	FINISH	
100	CHEMICAL ROOM	S	N	EXP	EXP	EXP	EXP	9' - 0"	GWB	
101	ELECTRICAL ROOM	S	N	EXP	EXP	EXP	EXP	9' - 0"	GWB	
102	BELT FILTER PRESS ROOM	S	N	EXP	EXP	EXP	EXP		ES	
103	OPERATIONS ROOM	S	N	EXP	EXP	EXP	EXP	9' - 0"	GWB	
104	UNISEX RESTROOM									
105	MEZZANINE									
106	EQ TANK 1									

MATERIAL AND FINISH LEGEND

FLOOR		BASE	
		N	NONE
S	CHEMICAL FLOOR SEALER	RB	RESILIENT BASE
HPIC-#	HIGH PERFORMANCE INDUSTRIAL COATING		
VCT	VINYL COMPOSITE TILE		
WALLS		CEILING	
AP-#	ARCHITECTURAL PAINT NO. #	ACT	ACOUSTICAL CEILING TILE
BRK	BRICK	C	CONCRETE - NO PAINT
CF-#	CONCRETE FINISH NO. #	ES	EXPOSED STRUCTURE - NO PAINT
EXP	CONCRETE MASONRY UNITS - NO PAINT	GWB	GYPSUM WALL BOARD
GFMU	GROUND FACE CONCRETE MASONRY UNITS	HPIC-#	PAINTED STRUCTURE WITH HPIC NO. #
HPIC-#	HIGH PERFORMANCE INDUSTRIAL COATING NO. #		
VWC	VINYL WALL COVERING		

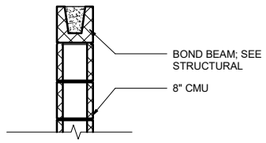
NOTES:
1. SEE DRAWINGS FOR WALL TYPES.

REMARKS:
1. PROVIDE CONCRETE FINISH NO. 5 WHERE CONCRETE WALLS ARE INDICATED TO BE PAINTED; SEE SPECIFICATION SECTION 03348.
2. PAINTED STEEL STRUCTURE. SEE DRAWINGS FOR HEIGHT.



`NOTES:
1. ALL GLASS IN DOORS SHALL BE TEMPERED SAFETY GLAZING.

DOOR TYPES
NOT TO SCALE

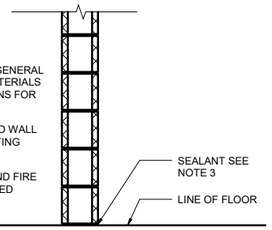


GENERAL WALL TYPE NOTES

1. WALL TYPES SHOWN ARE GENERAL DEPICTIONS TO INDICATE MATERIALS OF CONSTRUCTION; SEE PLANS FOR ADDITIONAL DETAILS.

2. SEE PLANS FOR FIRE RATED WALL LOCATIONS AND HOURLY RATING REQUIREMENTS.

3 PROVIDE FIRE STOPPING AND FIRE RATED SEALANT AT FIRE RATED WALLS.



WALL TYPES
NOT TO SCALE

FRAME TYPES
NOT TO SCALE

DOOR SCHEDULE

DOOR NUMBER		WIDTH	HEIGHT	DOOR			FRAME			GLASS	RATING	HARDWARE SET	DETAILS			*REMARKS
				TYPE	MATERIAL	FINISH	TYPE	MATERIAL	FINISH				HEAD	JAMB	SILL	
100A		3' - 0"	7' - 2"	F	AL	AN	1	AL	AN	-	-					
100B		3' - 0"	7' - 2"				1									
101A		3' - 0"	7' - 2"	F	AL	AN	1	AL	AN	-	-					
101B		3' - 0"	7' - 2"	F	AL	AN	1	AL	AN	-	-					
102B		3' - 0"	7' - 2"	F	AL	AN	1	AL	AN	-	-					
102C		3' - 0"	7' - 2"	F	AL	AN	1	AL	AN	-	-					
102D		16' - 0"	14' - 0"	RO	ST	FAP	-	GS	PT	-	-					
103A		3' - 0"	7' - 2"	F	AL	AN	1	AL	AN	-	-					
104A		3' - 0"	7' - 2"	F	AL	AN	1	AL	AN	-	-					
xxx			1' - 6"													

MATERIAL AND FINISH LEGEND

MATERIAL		FINISH	
AL	ALUMINUM	ANO	ANODIZED
HM	HOLLOW METAL	PT	PAINT
GS	GALVANIZED STEEL		
ST	STEEL		

NOTES:
1. SEE DOOR TYPES DETAIL THIS SHEET FOR DOOR ELEVATIONS.
2. SEE FRAME TYPES DETAIL THIS SHEET FOR FRAME ELEVATIONS.

REMARKS:
1. COORDIATE POWER, CONDUIT AND DOOR CONTROL MOUNTING WITH ELECTRICAL

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I & C	C. AUDO
ELECTRICAL	T. MOORE
TEAM 7	F. M. LAST
PROJECT NUMBER	10258885

PRELIMINARY NOT FOR CONSTRUCTION OR RECORDING

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UTILITIES DEPARTMENT
BELT PRESS BUILDING

SCHEDULES & WALL TYPES

0 1" 2"

FILENAME 10258885_03_A.rvt
SCALE As indicated

SHEET 03A601

BIM 360://10258885_FTC-Residual_Handling_2020/10258885_03-A.rvt
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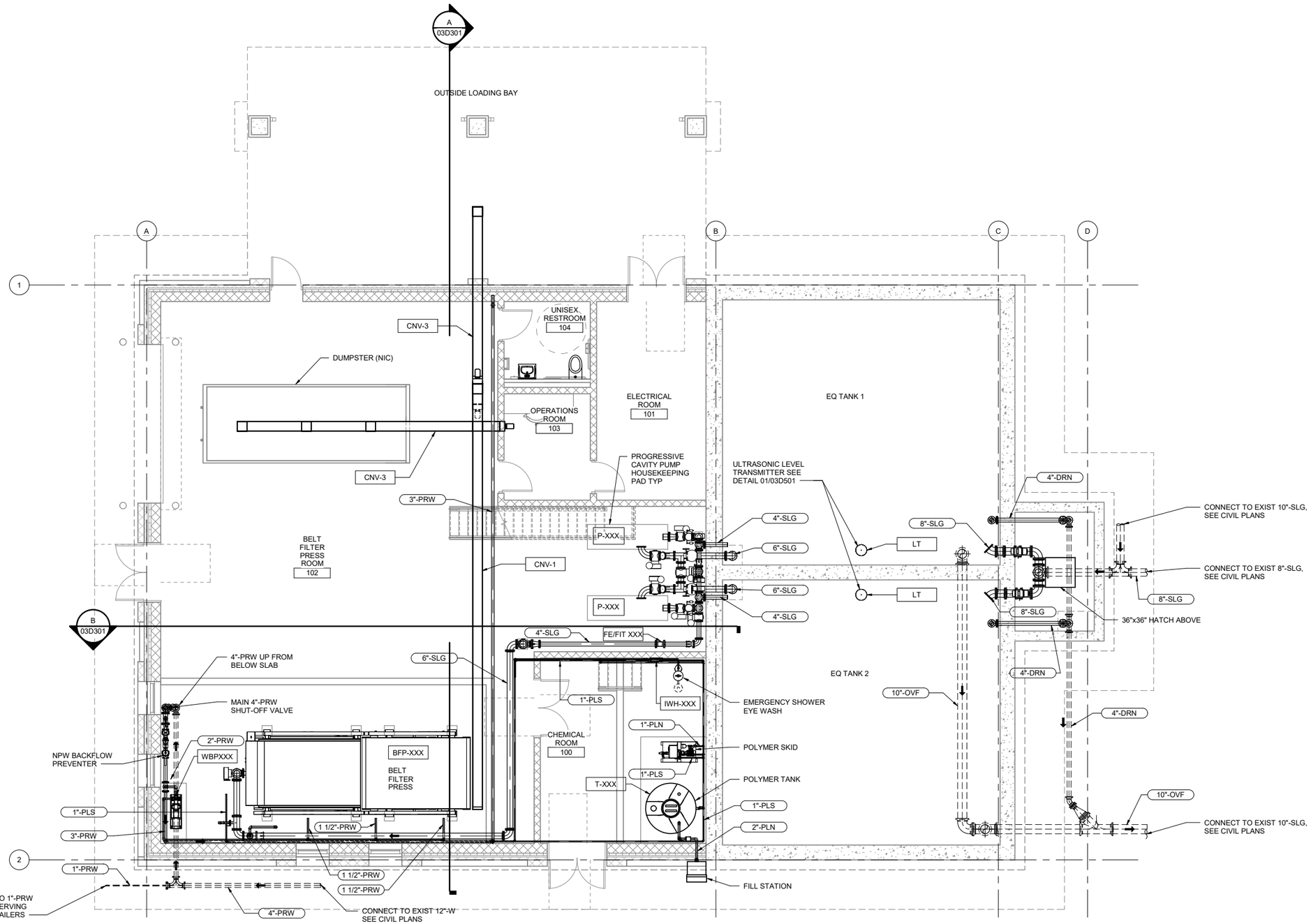

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	03/08/2021	30% DESIGN REVIEW

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ARCHITECTURAL	R. MCKINLEY
PROCESS	S. FOX
I & C	C. AUDO
ELECTRICAL	T. MOORE
DRAWN	P. VELEZ
PROJECT NUMBER	10258885

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UTILITIES DEPARTMENT
BELT PRESS BUILDING

BELT PRESS BUILDING PROCESS PLAN

0 1" 2"

FILENAME	10258885_03_D.rvt
SCALE	3/16" = 1'-0"
SHEET	03D101

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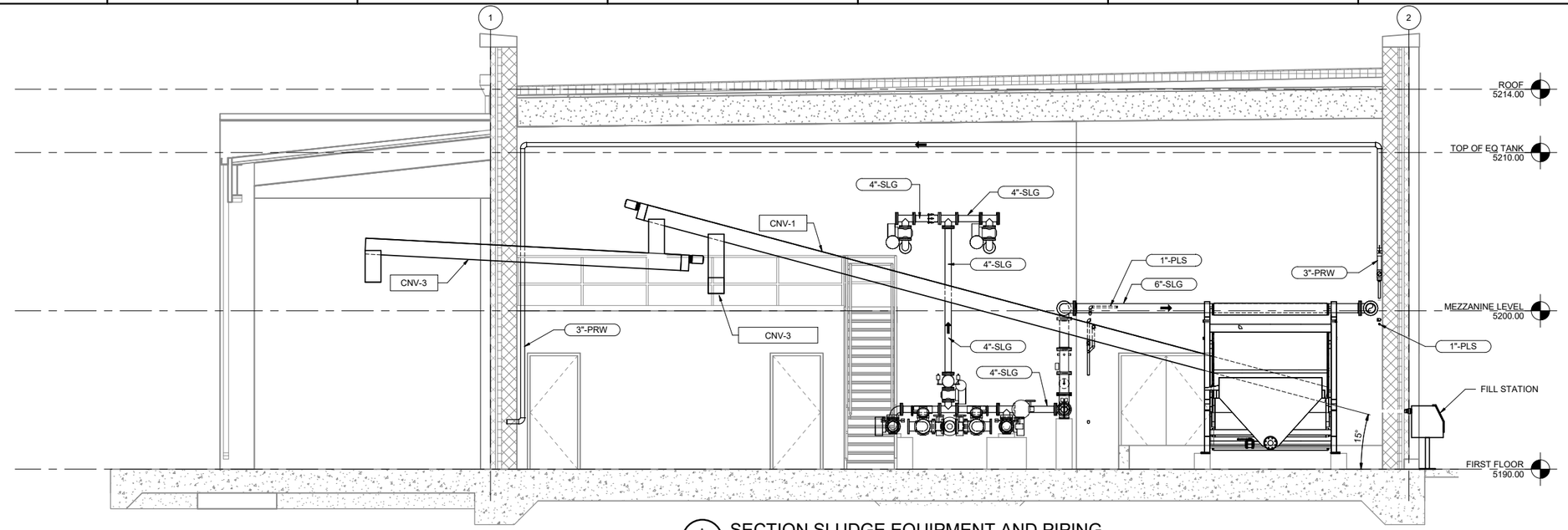
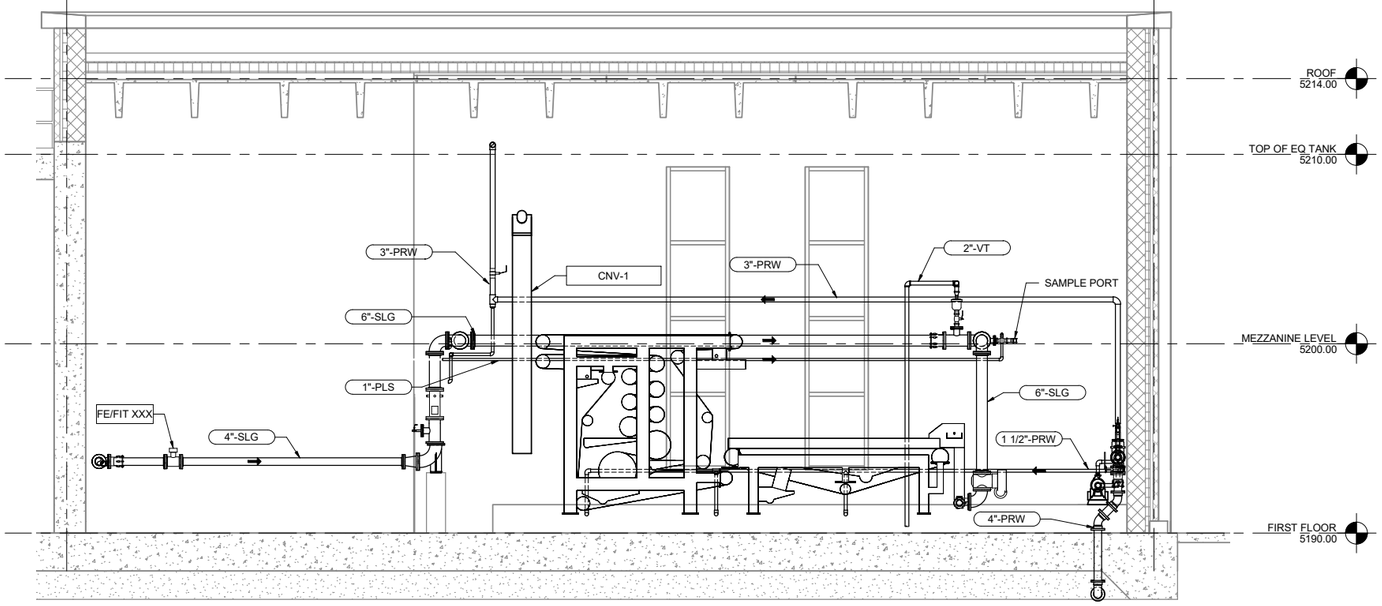


A 03D101 SECTION SLUDGE EQUIPMENT AND PIPING
1/4" = 1'-0"



B 03D101 SECTION BELT FILTER PRESS AND PIPING
1/4" = 1'-0"

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	03/08/2021	30% DESIGN REVIEW

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UTILITIES DEPARTMENT
BELT PRESS BUILDING

BELT PRESS BUILDING PROCESS SECTION

0 1" 2"

FILENAME 10258885_03_D.rvt
SCALE 1/4" = 1'-0"

SHEET 03D301

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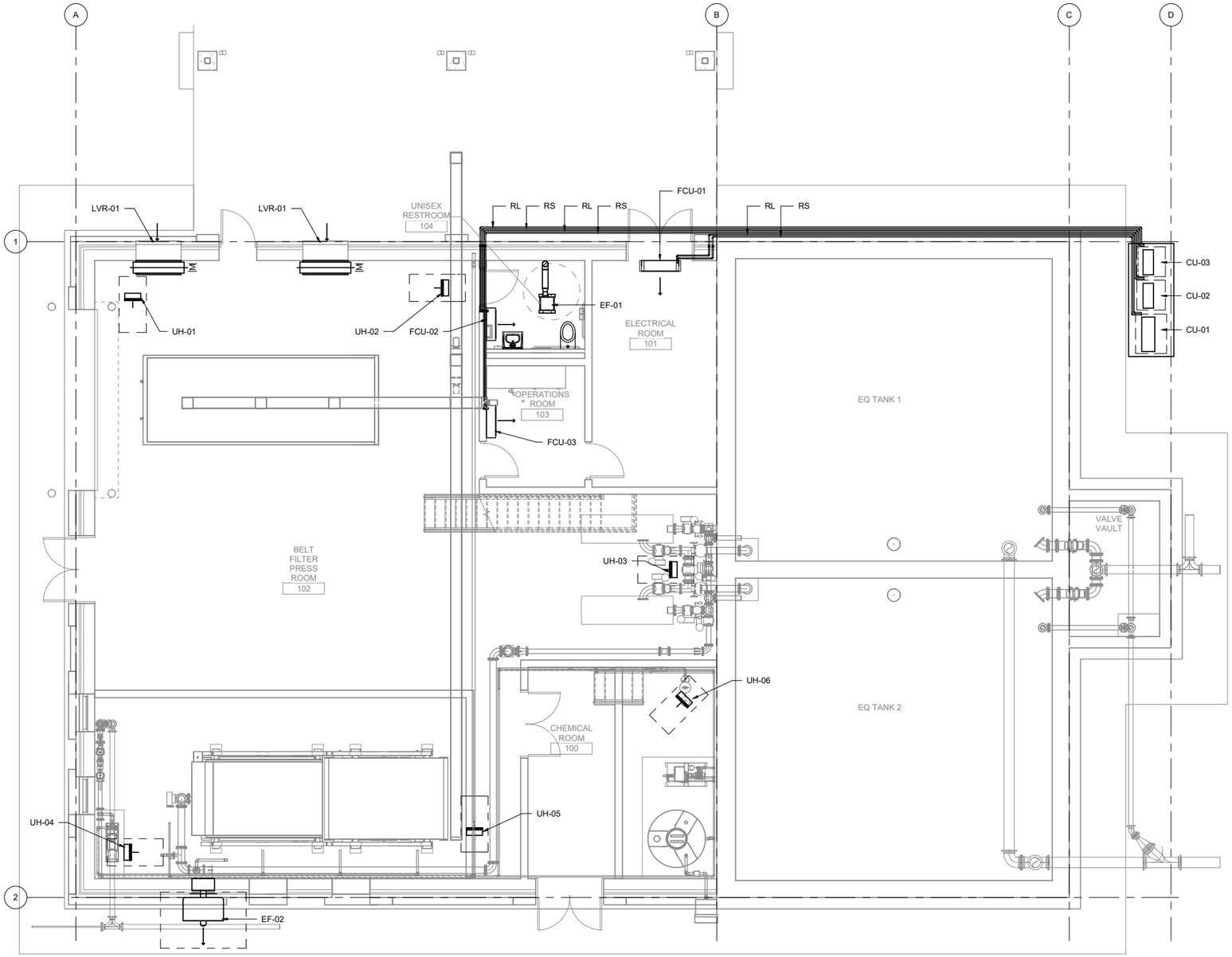

PRT-00M-PP01

3/16" = 1'-0"

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PROJECT MANAGER	MARK H. BEEBE
PROJECT ENGINEER	J. LIMKE
STRUCTURAL	J. CORONADO
ARCHITECTURAL	R. MCKINLEY
PROCESS	S. FOX
MECHANICAL	J. GREEN
ELECTRICAL	T. MOORE
DRAWN BY	D. CANNON
PROJECT NUMBER	10258885

PRELIMINARY NOT FOR CONSTRUCTION OR RECORDING

City of Fort Collins

UTILITIES DEPARTMENT
BELT PRESS BUILDING

MECHANICAL FLOOR PLAN

0 1" 2"

FILENAME 10258885_03_M.rvt

SCALE 3/16" = 1'-0"

SHEET 03M101

BIM 360://10258885_FTC-Residual_Handling_2020/10258885_03_M.rvt
4/23/2021 4:41:01 PM

HEAT PUMP CONDENSING UNIT SCHEDULE

IDENTIFICATION	MFR.	MODEL	MATCHED SYSTEM COMPONENT	COOLING CAPACITY BTUH	HEATING CAPACITY BTUH	REFRIGERANT	EER	AMBIENT TEMP. °F	APPROX. OPER. WEIGHT	ELEC MCA	ELEC VOLTAGE	LOW AMB. CONTROL °F	REMARKS
CU-01	DAIKIN	RX18AXVJU	FCU-01	18,000	12,700	R-410-A	12.5	95	100	16.4	208/1/60	0	
CU-02	DAIKIN	RX09AXVJU	FCU-02	8,900	5,700	R-410-A	12.5	95	60	8.7	208/1/60	0	
CU-03	DAIKIN	RX09AXVJU	FCU-03	8,900	5,700	R-410-A	12.5	95	60	8.7	208/1/60	0	

FAN SCHEDULE

IDENTIFICATION	SERVICE AREA	MFG.	MODEL	RATED AIRFLOW-HIGH (CFM)	RATED AIRFLOW - LOW (CFM)	ESP (IN. WG)	DRIVE	RPM	ELEC. HP OR W	ELEC. V/PH/HZ	MOUNTING	REMARKS
EF-01	RESTROOM	GREENHECK	SP-B110ES	75	-	0.30	DIRECT	650	10 W	120/1/60	CEILING	2
EF-02	BFP MAIN EQUIPMENT AREA	GREENHECK	CUE-200-VG	5,940	2,970	0.35	DIRECT	1165	2 HP	460/3/60	WALL	1

Notes

1. WALL MOUNTED EXHAUST FAN SHALL BE PROVIDED WITH:
   A. BACKDRAFT DAMPER
   B. REMOTE WALL-MOUNTED FAN SPEED CONTROLLER WITH CLEAR PLASTIC GUARD
   C. FAN-MOUNTED DISCONNECT

2. INTERLOCK FAN WITH LIGHT SWITCH

HEATER SCHEDULE

IDENTIFICATION	SERVICE AREA	MFG.	MODEL	HEATER TYPE	MOUNTING HEIGHT (FT)	HEAT OUTPUT (KW)	ELEC. V/PH/HZ	AMP DRAW	REMARKS
UH-01	BFP MAIN EQUIPMENT AREA	INDEECO	UHIR	ELECTRIC	10	15	460/3/60	18.44	1, 2
UH-02	BFP MAIN EQUIPMENT AREA	INDEECO	UHIR	ELECTRIC	10	15	460/3/60	18.44	1, 2
UH-03	BFP MAIN EQUIPMENT AREA	INDEECO	UHIR	ELECTRIC	10	15	460/3/60	18.44	1, 2
UH-04	BFP MAIN EQUIPMENT AREA	INDEECO	UHIR	ELECTRIC	10	15	460/3/60	18.44	1, 2
UH-05	BFP MAIN EQUIPMENT AREA	INDEECO	UHIR	ELECTRIC	10	15.0	460/3/60	18.44	1, 2
UH-06	CHEMICAL ROOM	INDEECO	UHIR	ELECTRIC	8	7.5	460/3/60	9.39	1, 2

Notes
1. PROVIDE WALL-MOUNTED THERMOSTAT/CONTROLLER
2. PROVIDE WITH NON-FUSED DISCONNECT

LOUVER SCHEDULE

IDENTIFICATION	SERVICE AREA	MFG.	SIZE (W"xH")	FLOW RATE (CFM)	MODEL	DAMPER	FREE AREA (%)	DEPTH (IN)	NOTES
LVR-01	BFP MAIN EQUIPMENTE AREA	RUSKIN	48 X 36	2,970	ELF6375DX	MOTORIZED	57		1
LVR-02	BFP MAIN EQUIPMENTE AREA	RUSKIN	48 X 36	2,970	ELF6375DX	MOTORIZED	57		1

NOTES
1. PROVIDE INSECT SCREEN

FAN COIL UNIT SCHEDULE

IDENTIFICATION	MFR.	MODEL	LOCATION	CFM (HI/LOW)	COIL DATA			REMARKS
					SERVICE	EAT °F DB	EAT °F WB	CAPACITY (BTUH)	
FCU-01	DAIKIN	FTX18AXVJU	ELEC ROOM	716/467	HEATING	80		12,700	
					COOLING	80		1,800	
FCU-02	DAIKIN	FTX09AXVJU	RESTROOM	431/249	HEATING	70		5,700	
					COOLING	75		8,900	
FCU-03	DAIKIN	FTX09AXVJU	OPS ROOM	431/249	HEATING	70		5,700	
					COOLING	75		8,900	

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DRAWN BY	D. CANNON
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City of Fort Collins

UTILITIES DEPARTMENT
BELT PRESS BUILDING

MECHANICAL SCHEDULES

0 1" 2"

FILENAME 10258885_03_M.rvt
SCALE 12" = 1'-0"

SHEET **03M601**

BIM 360://10258885_FTC-Residual_Handling_2020/10258885_03_M.rvt
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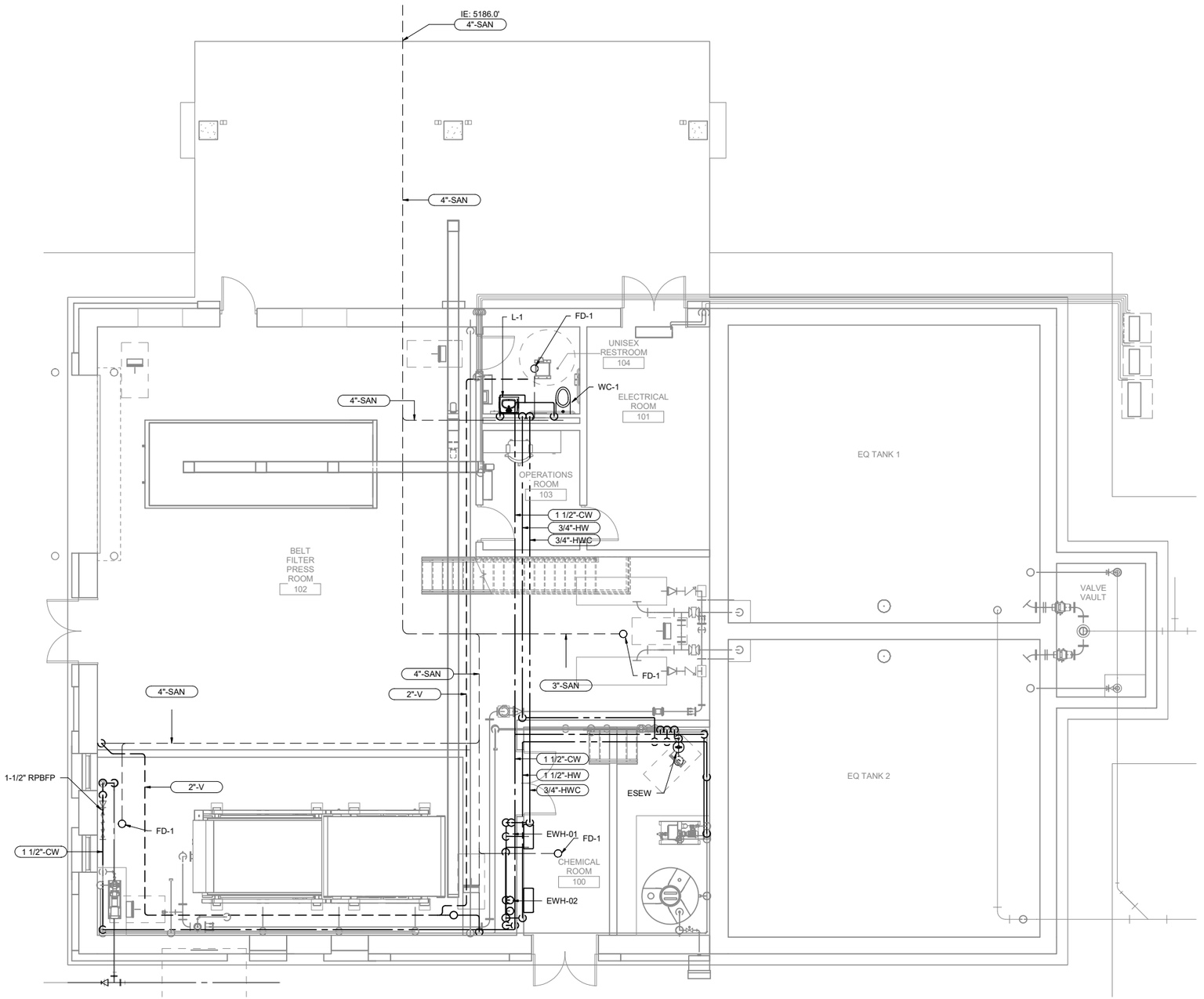

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PROJECT NAME
PROJECT DESCRIPTION

PLUMBING FLOOR PLAN

0 1" 2"

FILENAME	10211085_03_P.rvt
SCALE	3/16" = 1'-0"

SHEET **03P101**

BIM 360://10258885_FTC-Residual_Handling_2020/10211085_03_P.rvt
4/23/2021 4:43:04 PM

TANKLESS ELECTRIC WATER HEATER SCHEDULE

IDENTIFICATION	MFR.	MODEL	MBH OUTPUT	KILOWATTS	RECOVERY RATE (GPM)	WATER TEMP. RISE (°F)	REMARKS
EWH-01	EEMAX	AP072480	245,674	72	5.0	88	
EWH-02	EEMAX	AP072480	245,674	72	5.0	88	

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PROJECT NAME
PROJECT DESCRIPTION

PLUMBING SCHEDULES

0 1" 2"

FILENAME 10211085_03_P.rvt

SCALE 12" = 1'-0"

SHEET 03P601

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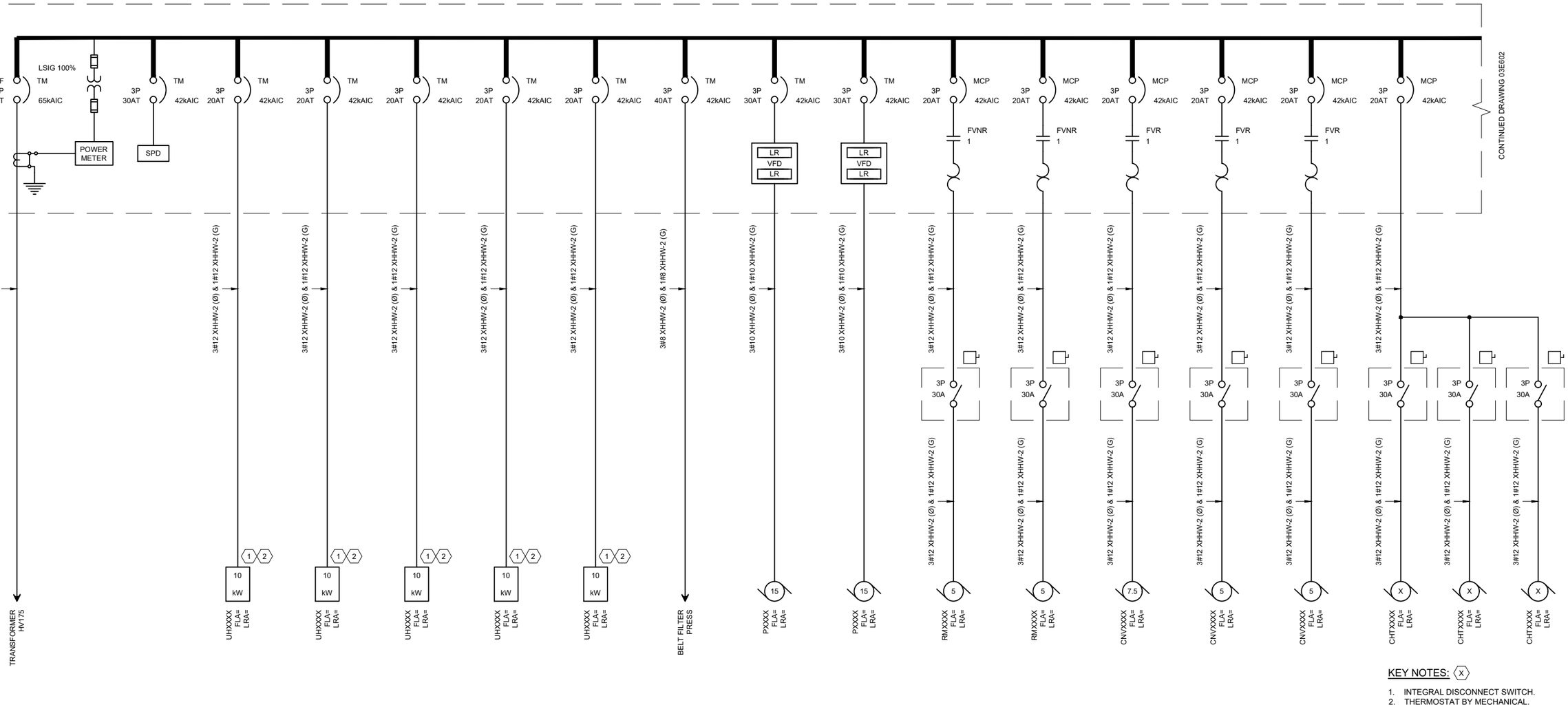

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DRAWN	E. PILAPIL
PROJECT NUMBER	10258885

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City of Fort Collins

UTILITIES DEPARTMENT
BELT PRESS BUILDING

ELECTRICAL
MCC176 ONE-LINE DIAGRAM 1

0 1" 2"

FILENAME 03E601.dwg
SCALE NO SCALE

SHEET
03E601

CONTINUED DRAWING 03E601

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												FVNR 1		FVNR 1											
3#12 XHHW-2 (Ø) & 1#12 XHHW-2 (G)		3#12 XHHW-2 (Ø) & 1#12 XHHW-2 (G)		3#12 XHHW-2 (Ø) & 1#12 XHHW-2 (G)		3#12 XHHW-2 (Ø) & 1#12 XHHW-2 (G)		3#10 XHHW-2 (Ø) & 1#4 XHHW-2 (G)		3#6 XHHW-2 (Ø) & 1#10 XHHW-2 (G)		3#12 XHHW-2 (Ø) & 1#12 XHHW-2 (G)											
3P 30A	3P 30A	3P 30A	3P 30A	3P 30A	3P 30A	3P 30A		3P 200A			LVT-176LP1 30kVA 3Ø 480V 208/120V												
3#12 XHHW-2 (Ø) & 1#12 XHHW-2 (G)	3#12 XHHW-2 (Ø) & 1#12 XHHW-2 (G)	3#12 XHHW-2 (Ø) & 1#12 XHHW-2 (G)	3#12 XHHW-2 (Ø) & 1#12 XHHW-2 (G)	3#12 XHHW-2 (Ø) & 1#12 XHHW-2 (G)	3#12 XHHW-2 (Ø) & 1#12 XHHW-2 (G)	3#12 XHHW-2 (Ø) & 1#12 XHHW-2 (G)		3#10 XHHW-2 (Ø) & 1#4 XHHW-2 (G)		4#2 XHHW-2 (Ø) & 1#8 XHHW-2 (G)													
1/2	1/2	1/2	1/2	1/2	1/2	1/2	5	90 kW				1	1 2										
YDVXXXX FLA= LRA=	YDVXXXX FLA= LRA=	YDVXXXX FLA= LRA=	YDVXXXX FLA= LRA=	YDVXXXX FLA= LRA=	YDVXXXX FLA= LRA=	YDVXXXX FLA= LRA=	RDXXXX FLA= LRA=	HWHXXXX FLA= LRA=	176LP1			EFXXXX FLA= LRA=	SPARE	SPARE	SPARE	SPARE	SPARE	SPARE	SPARE				

KEY NOTES: (X)

1. INTEGRAL DISCONNECT SWITCH.
2. THERMOSTAT BY MECHANICAL.

ISSUE	DATE	DESCRIPTION
	03/08/2021	30% DESIGN REVIEW

PROJECT MANAGER	MARK H. BEEBE
PROJECT ENGINEER	J. LIMKE
STRUCTURAL	J. CORONADO
ARCHITECTURAL	R. MCKINLEY
PROCESS	S. FOX
I & C	C. AUDO
ELECTRICAL	T. MOORE
DRAWN	E. PILAPIL
PROJECT NUMBER	10258885

PRELIMINARY
NOT FOR
CONSTRUCTION
OR
RECORDING

City of Fort Collins

UTILITIES DEPARTMENT
BELT PRESS BUILDING

ELECTRICAL
MCC176 ONE-LINE DIAGRAM 2

0 1" 2"

FILENAME 03E602.dwg
SCALE NO SCALE

SHEET
03E602

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