

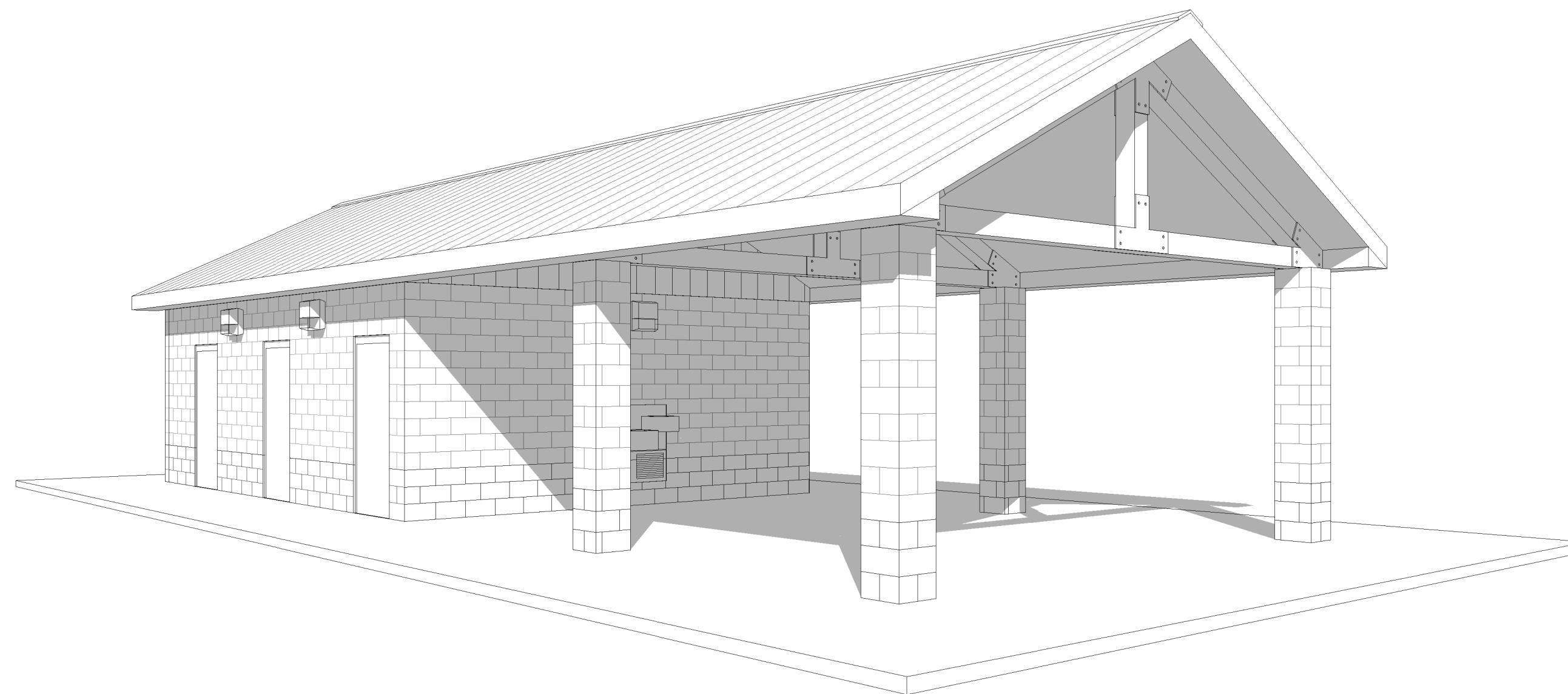
VICINITY MAP



REED PARK RESTROOM & BUILDING FACILITIES

PROJECT # 23038
ADDRESS FRUITA, CO

09/15/23 CONSTRUCTION DOCUMENTS



BUILDING CODE ANALYSIS

CODE JURISDICTION:
2018 IBC, IMC
2021 IPC
2023 NEC
2009 ICC/ANSI 117.1

OCCUPANCY:
UTILITY AND MISCELLANEOUS (U)

OCCUPANT LOADS:
STORAGE = WAREHOUSE PER TABLE 1004.5 = 500 GROSS
FLOOR AREA = 220 GSF
OCCUPANT LOAD = 1

SINGLE-USE RESTROOMS = QUANTITY: 5
OCCUPANT LOAD = 5

CONSTRUCTION TYPE:
CONSTRUCTION TYPICAL OF TYPE I-A STIPULATED BY ARCHITECT.

AUTOMATIC SPRINKLER SYSTEM:
NOT SPRINKLED

BUILDING AREA:
ACTUAL TOTAL BUILDING: 1,180 SF
ALLOWED [IBC 506.2] UNLIMITED SF

BUILDING HEIGHT:
ACTUAL HEIGHT: 16'-3" AFF. 1 STORY
ALLOWABLE HEIGHT: UNLIMITED HEIGHT [IBC 504.2]

FIRE RESISTANCE RATING REQUIREMENTS
(FOR TYPE I-A CONSTRUCTION) [IBC TABLE 601]
STRUCTURAL FRAME: 3 HRS
BEARING WALLS, EXTERIOR: 3 HRS
BEARING WALLS, INTERIOR: 3 HRS
NON-BEARING WALLS, EXTERIOR: 1 HR*
*1 HR IF < 10 FT FIRE SEPARATION DISTANCE [IBC TABLE 602]
NON-BEARING WALLS, INTERIOR: 0 HRS
FLOOR CONSTRUCTION: 2 HRS
ROOF CONSTRUCTION: 1 1/2 HRS

EXIT TRAVEL DISTANCE:
FOR (U) OCCUPANCY: 27'-8" FT [WITHOUT SPRINKLER SYSTEM, IBC TABLE 1004.2.4]



PRELIMINARY
NOT FOR CONSTRUCTION

REED PARK RESTROOM &
BUILDING FACILITIES

TITLE SHEET

FOR CONSTRUCTION

REV. DESC. DATE:

DATE: 09/15/2023

PROJECT #: 23038

SHEET #:

T1-1

MATERIALS LEGEND

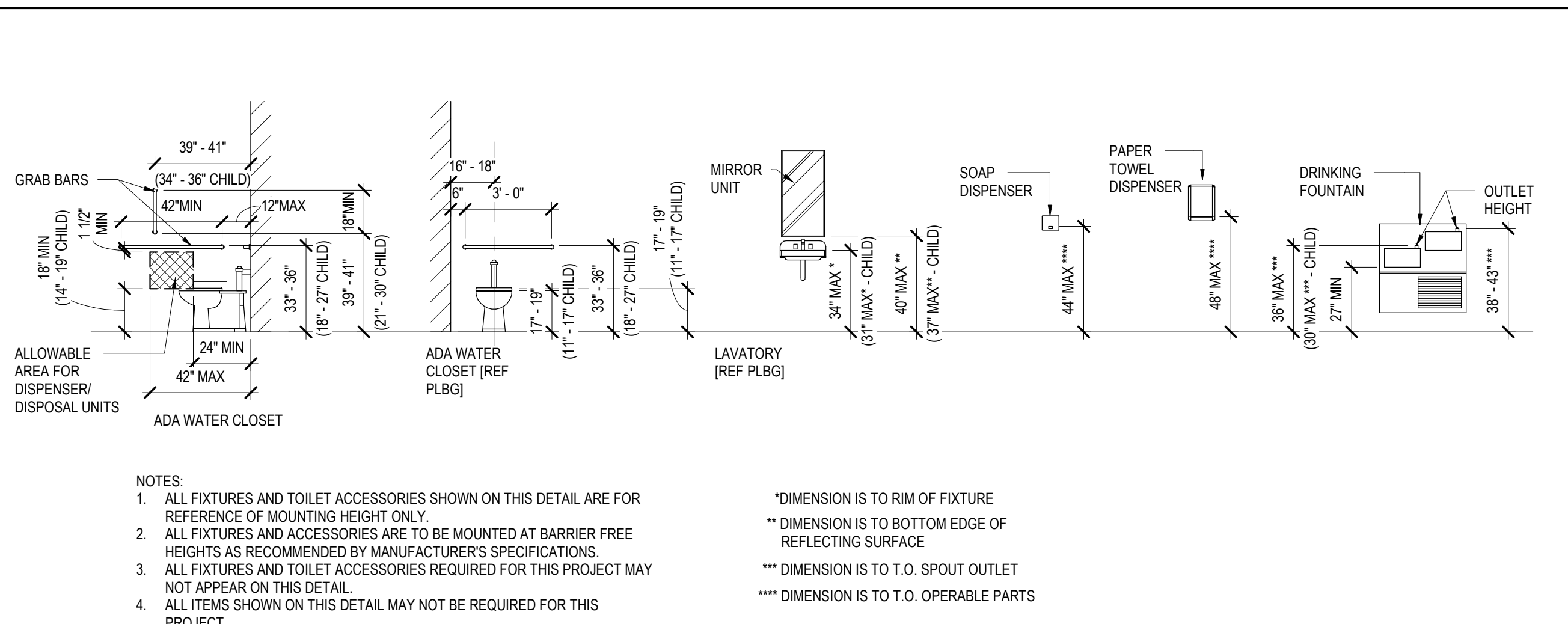
	EXISTING CONSTRUCTION (PLAN AND SECTION)
	ASPHALT PAVING (SECTION)
	EARTH (PLAN & SECTION)
	GRANULAR FILL (SECTION)
	STRUCTURAL FILL (SECTION)
	SAND (SECTION)
	CONCRETE (PLAN & SECTION)
	BRICK VENEER
	CONCRETE MASONRY UNITS (CMU) (PLAN & SECTION)
	ENGINEERED STONE (SECTION)
	MORTAR NET (SECTION)
	STEEL (SECTION)
	WOOD BLOCKING (CONTINUOUS) (SECTION)
	WOOD BLOCKING (INTERMITTENT) (SECTION)
	WOOD SHEATHING
	WOOD (FINISH) (SECTION & ELEVATION)
	INSULATION (FIBROUS) (PLAN & SECTION)
	INSULATION (RIGID) (PLAN & SECTION)
	STUCCO (SECTION)
	STUCCO (ELEVATION)
	GYPSUM WALL BOARD (GWB) (REFLECTED CEILING PLAN)

SYMBOLS LEGEND

	ROOM NUMBER (PLAN AND SECTION)		ROOM NAME
	DOOR NUMBER (MATCHES ROOM NO., WITH LETTER SUFFIX FOR MULTIPLE DOORS) (PLAN)		WALL TYPE (PLAN)
	NEW COLUMN GRID LINE (PLAN, SECTION, DETAIL OR ELEVATION)		EXISTING COLUMN GRIDLINE (PLAN, SECTION, DETAIL OR ELEVATION)
	KEY NOTE		WINDOW / FRAME TYPE
	SECTION PAGE REFERENCE (PLAN, SECTION, DETAIL OR ELEVATION)		BUILDING SECTION INDICATOR REFERENCE (PLAN, SECTION, OR ELEVATION)
	WALL SECTION INDICATOR REFERENCE (PLAN, SECTION, OR ELEVATION)		ELEVATION INDICATOR REFERENCE (SECTION, & ELEVATION)
	DIMENSION LINES		NEW CONTOUR
	EXISTING CONTOUR		HIDDEN LINE (PLAN, SECTION, DETAIL OR ELEVATION)
	OVERHEAD OBJECT (PLAN)		CENTER LINE (PLAN, SECTION, DETAIL OR ELEVATION)
	MATCH LINE (PLAN, SECTION, DETAIL OR ELEVATION)		LIMITS OF CONSTRUCTION (PLAN, SECTION, DETAIL OR ELEVATION)
	DEMOLISHED ITEMS (PLAN OR DETAIL)		

INDEX TO DRAWINGS

GENERAL INFORMATION SHEETS T1-1 TITLE SHEET	FLUMBING SHEETS P1-1 FLUMBING COVER SHEET P1-1 FLUMBING PLAN P2-1 FLUMBING SCHEDULES
ARCHITECTURAL SHEETS A1-1 FLOOR PLAN, ROOF PLAN, SECTION, ELEVATIONS AND SCHEDULES	ELECTRICAL SHEETS E0-1 ELECTRICAL COVER SHEET E2-1 ELECTRICAL FLOOR PLAN E3-1 ELECTRICAL DETAILS AND SCHEDULES E3-2 ELECTRICAL SPECIFICATIONS
STRUCTURAL SHEETS S1-0 GENERAL NOTES AND DETAILS S1-1 FOUNDATION PLAN S1-2 ROOF FRAMING PLAN	
MECHANICAL SHEETS M0-1 MECHANICAL COVER SHEET M1-1 MECHANICAL PLAN M2-1 MECHANICAL SCHEDULES	



2 T1-1
1/4" = 1'-0"

PRELIMINARY
 NOT FOR CONSTRUCTION

REED PARK RESTROOM &
 BUILDING FACILITIES

FLOOR PLAN, ROOF PLAN,
 SECTION, ELEVATIONS AND
 SCHEDULES

FOR CONSTRUCTION

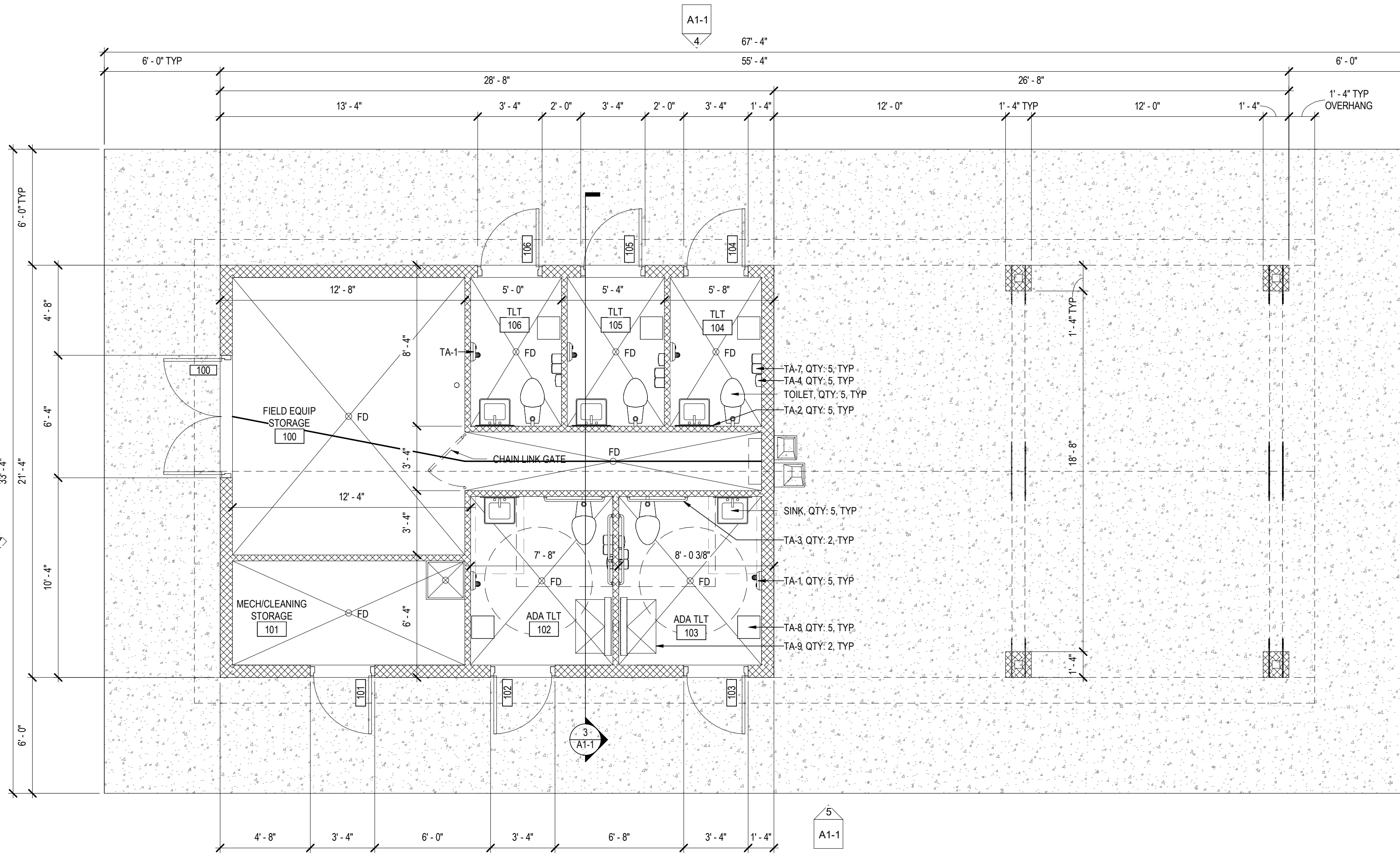
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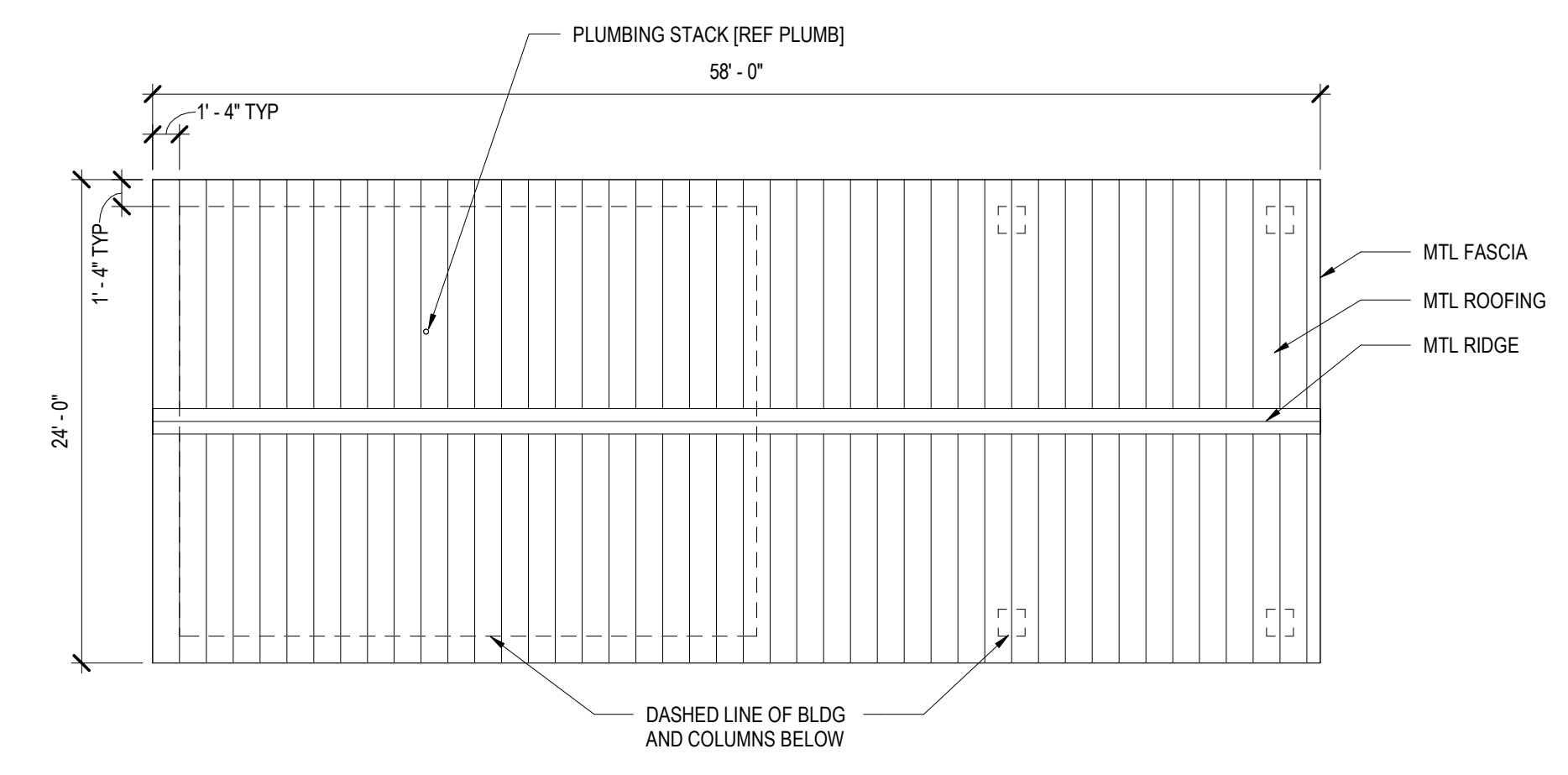
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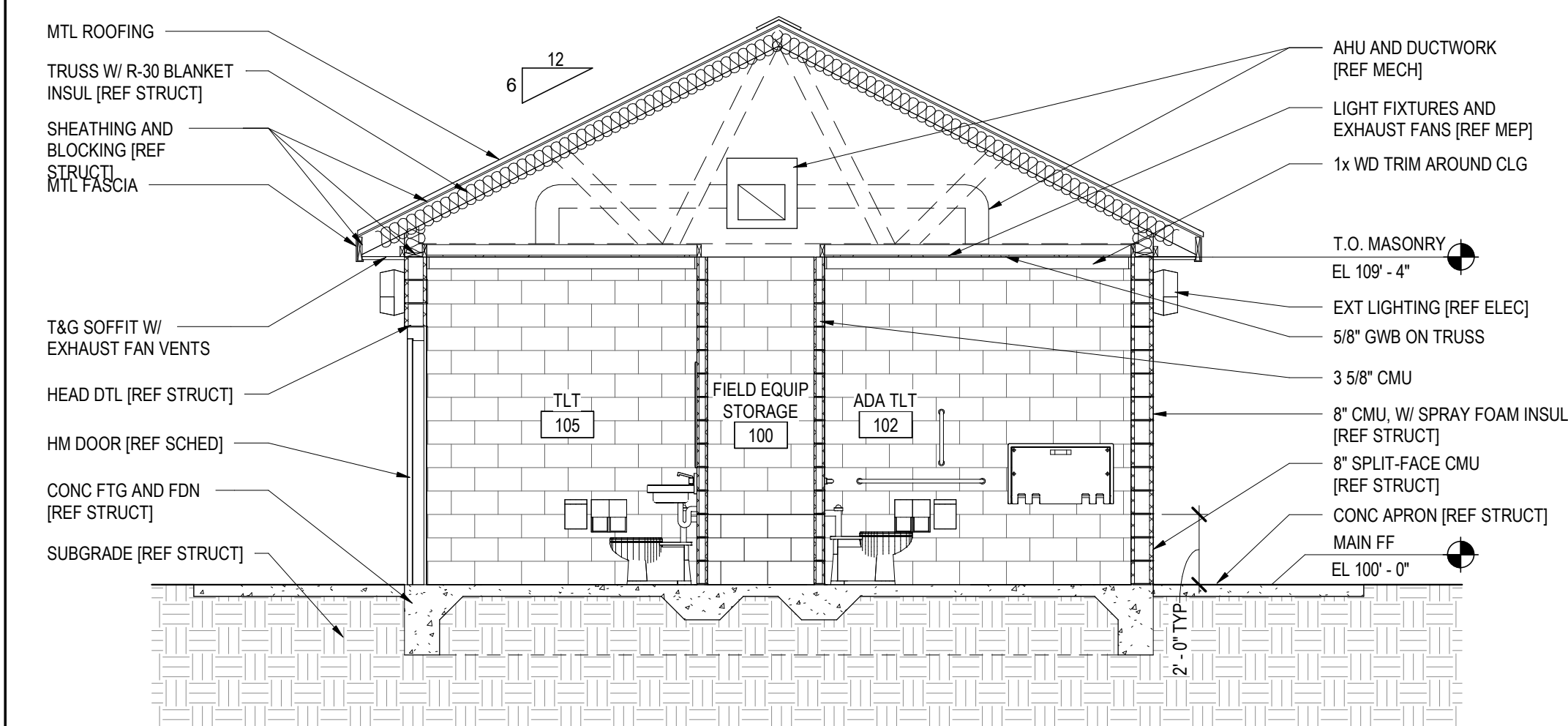
A1-1



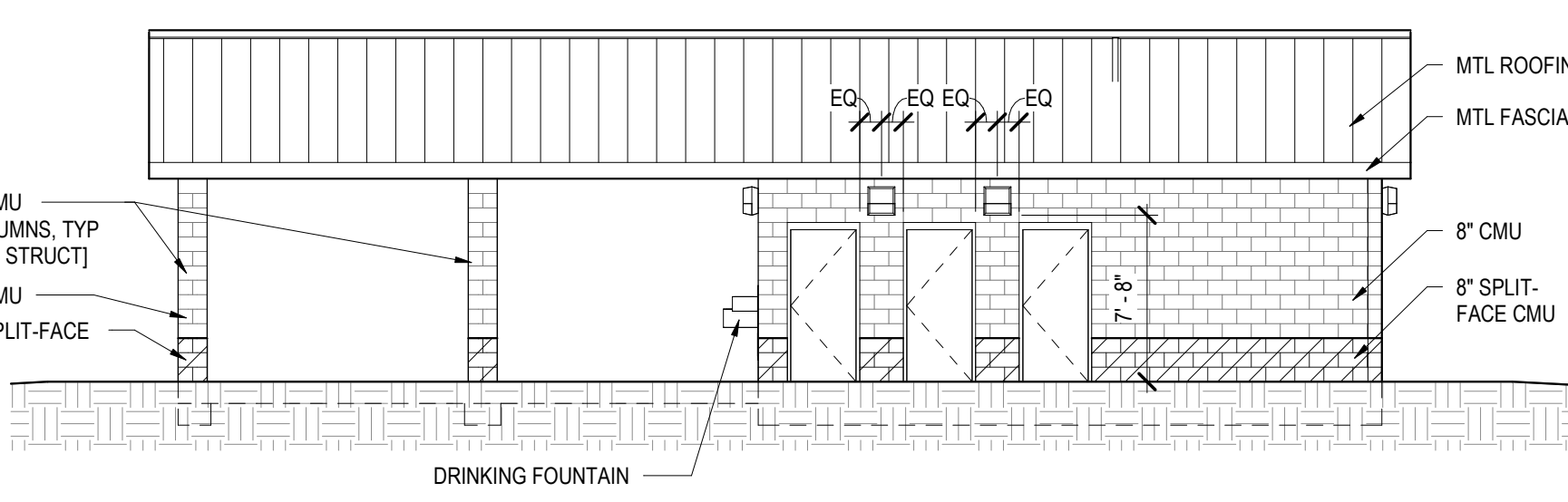
1 FLOOR PLAN
 1/4" = 1'-0"



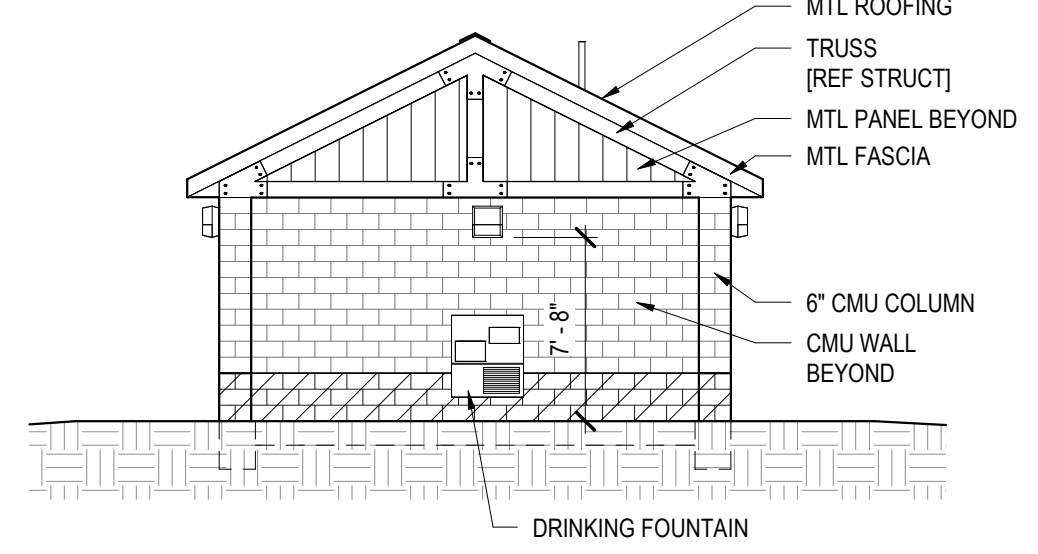
2 ROOF PLAN
 1/8" = 1'-0"



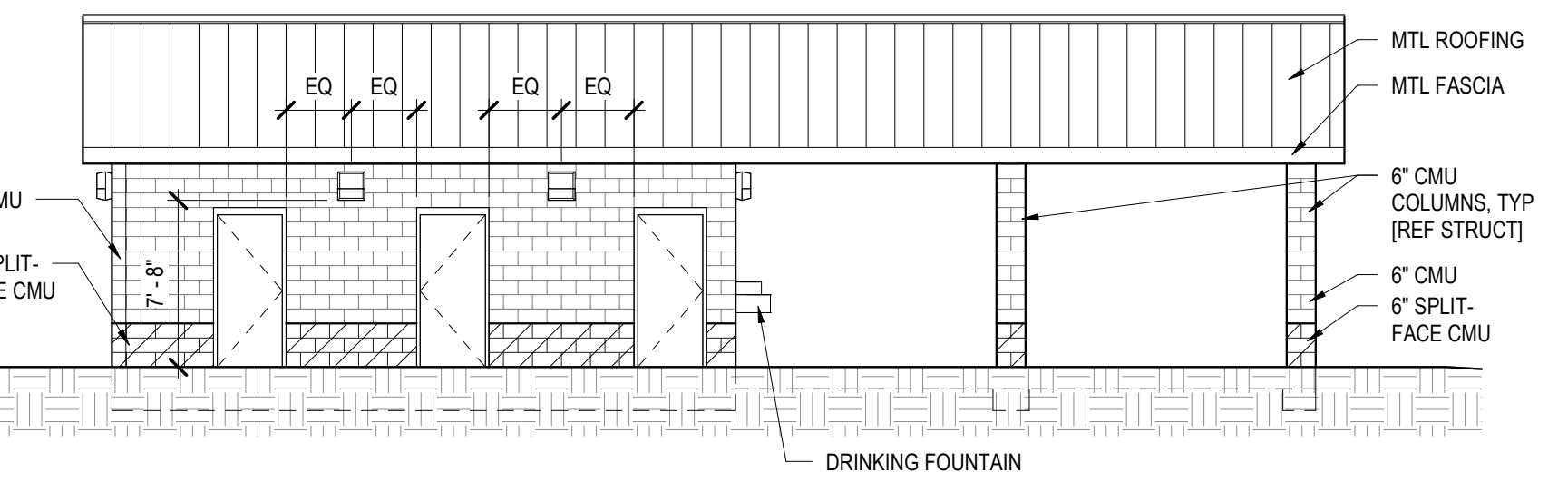
3 BUILDING SECTION
 1/4" = 1'-0"



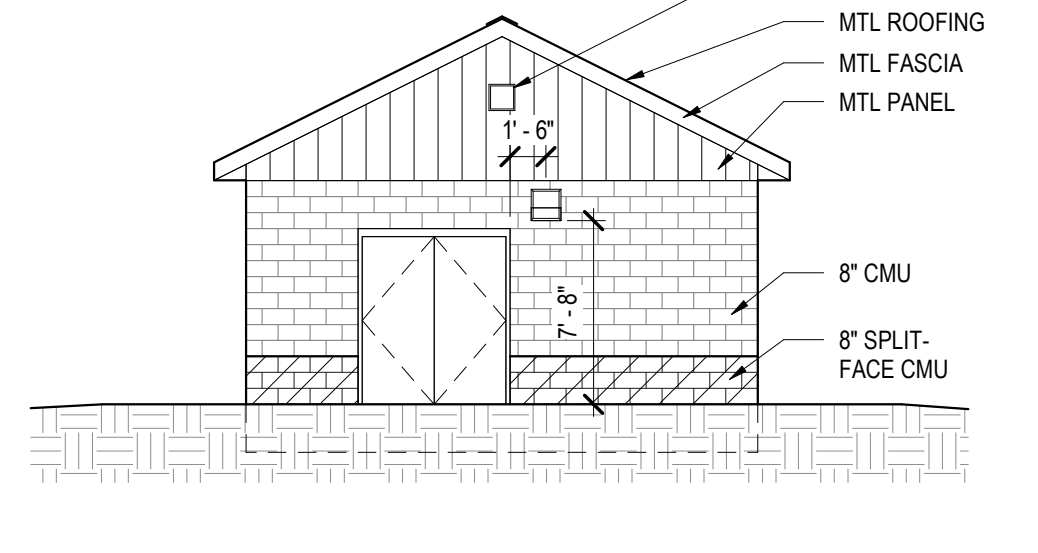
4 NORTH ELEVATION
 1/8" = 1'-0"



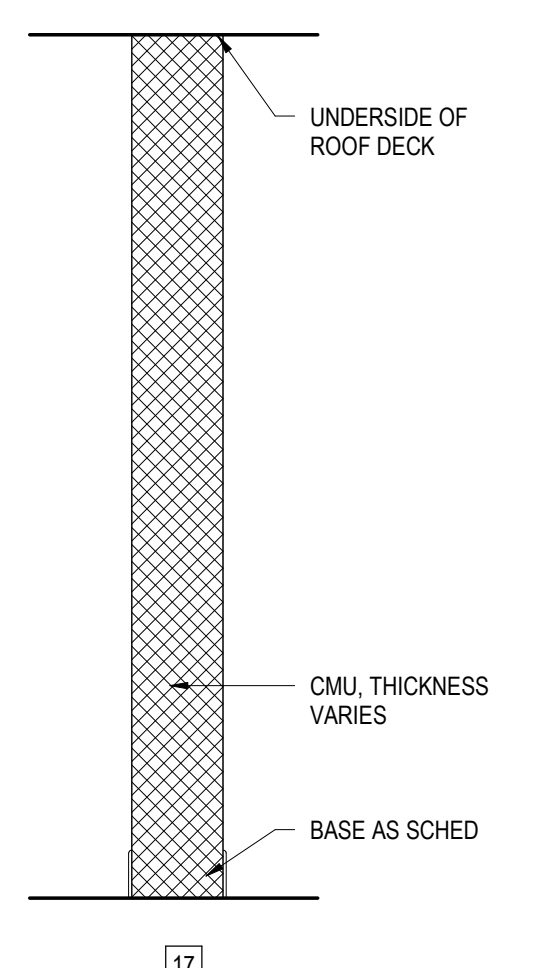
6 EAST ELEVATION
 1/8" = 1'-0"



5 SOUTH ELEVATION
 1/8" = 1'-0"



7 WEST ELEVATION
 1/8" = 1'-0"

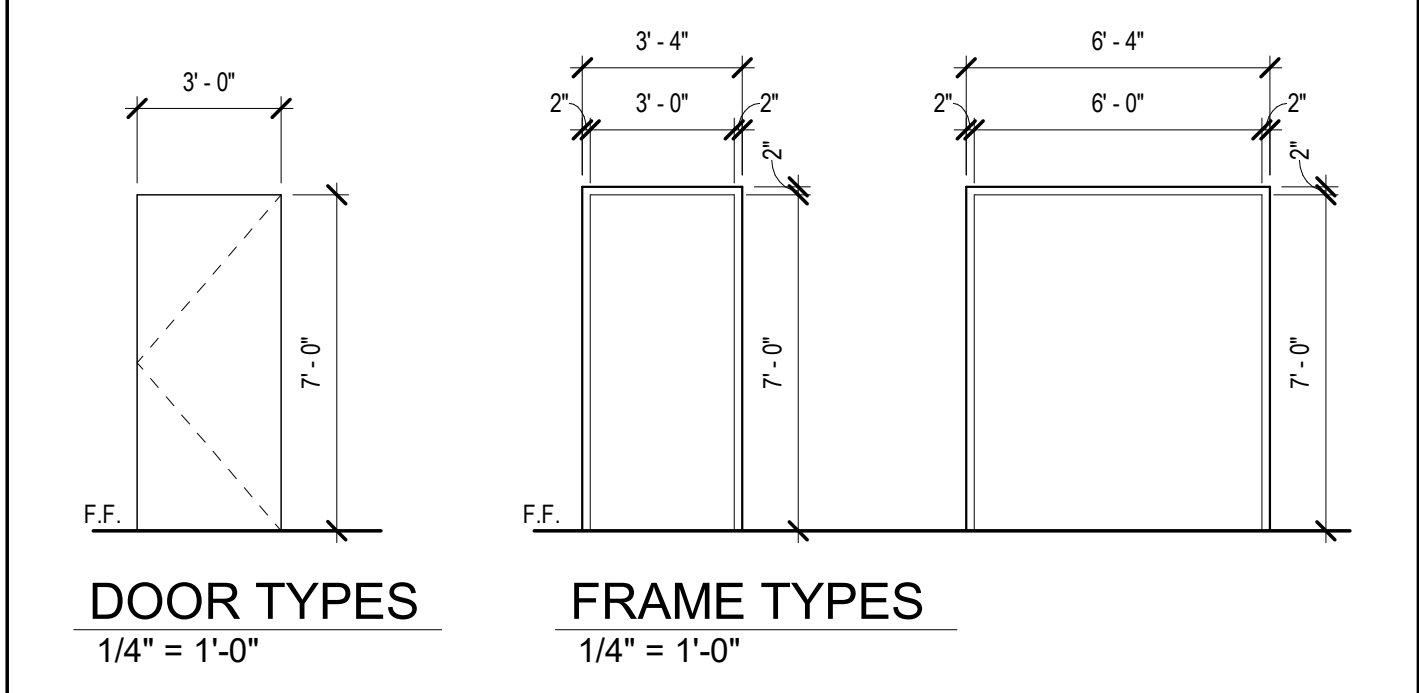


WALL TYPES
 3/4" = 1'-0"

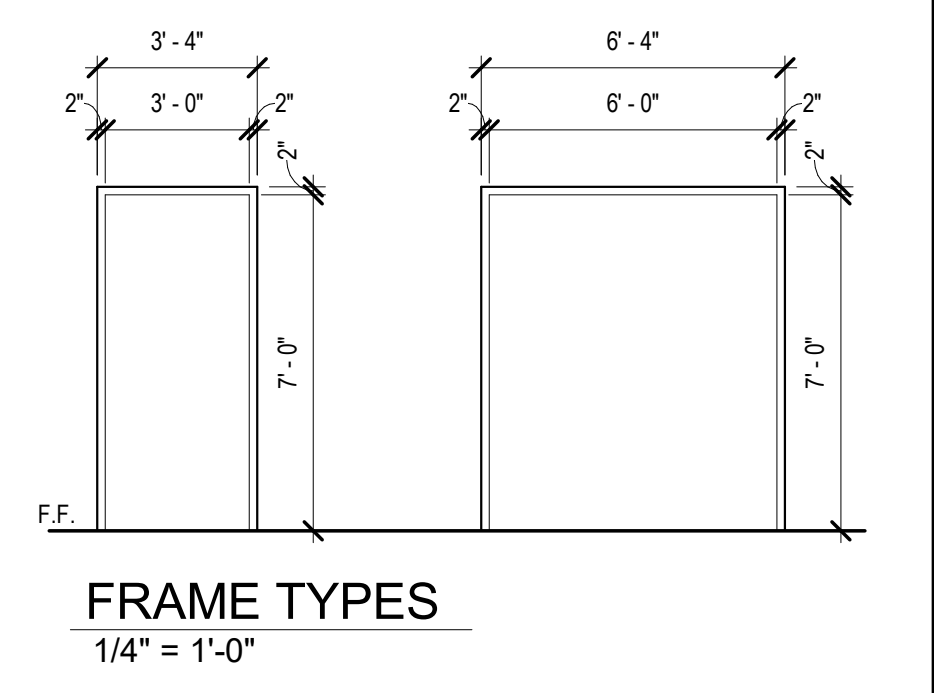
ROOM FINISH SCHEDULE									
ROOM NUMBER	ROOM NAME	FLOOR FINISH	WALLS				CEILING		CEILING HEIGHT
			BASE	NORTH	EAST	SOUTH	WEST	MATERIAL	
100	FIELD EQUIP STORAGE	SC	--	--	--	--	--	--	EXP
101	MECH/CLEANING STORAGE	SC	--	--	--	--	--	--	EXP
102	ADA TLT	SC	--	PNT-1	PNT-1	PNT-1	PNT-1	GWB	PNT-2 9'-0"
103	ADA TLT	SC	--	PNT-1	PNT-1	PNT-1	PNT-1	GWB	PNT-2 9'-0"
104	TLT	SC	--	PNT-1	PNT-1	PNT-1	PNT-1	GWB	PNT-2 9'-0"
105	TLT	SC	--	PNT-1	PNT-1	PNT-1	PNT-1	GWB	PNT-2 9'-0"
106	TLT	SC	--	PNT-1	PNT-1	PNT-1	PNT-1	GWB	PNT-2 9'-0"

DOOR SCHEDULE								
DOOR NUMBER	DOOR SIZE			DOOR TYPE	FRAME TYPE		COMMENTS	
	WIDTH	HEIGHT	THICKNESS		MATL	FINISH		
100	6'-0"	7'-0"	1 3/4"	HM	PNT	HM	PNT	
101	3'-0"	7'-0"	1 3/4"	HM	PNT	HM	PNT	
102	3'-0"	7'-0"	1 3/4"	HM	PNT	HM	PNT	
103	3'-0"	7'-0"	1 3/4"	HM	PNT	HM	PNT	
104	3'-0"	7'-0"	1 3/4"	HM	PNT	HM	PNT	
105	3'-0"	7'-0"	1 3/4"	HM	PNT	HM	PNT	
106	3'-0"	7'-0"	1 3/4"	HM	PNT	HM	PNT	

- GENERAL NOTES**
- INTERIOR DIMENSIONS ARE TO F.O. MASONRY, UNO.
 - EXTERIOR DIMENSIONS ARE TO F.O. MASONRY, UNO.
 - REFERENCE ROOM FINISH SCHEDULE, FOR INTERIOR FINISHES. PNT TO BE SELECTED.
 - SMOOTH FACE AND SPLIT FACE CMU COLOR TO BE SELECTED.
 - T.O. MASONRY 9'-4" TYP (REF STRUCT)
 - ALL EXT MTL PRODUCTS TO MATCH IN COLOR.
 - EXT MASONRY WALLS INSUL W/ SPRAY FOAM INSUL.
 - ATTACH R-30 BLANKET INSUL TO UNDERSIDE OF ROOF AT HEATED SPACE.
 - INSUL FRAMED GABLES W/ R-19 BLANKET INSUL.
 - INSTALL ANTI-BIRD DEVICES ON EXPOSED GL TRUSSES.



DOOR TYPES
 1/4" = 1'-0"



FRAME TYPES
 1/4" = 1'-0"

TOILET ACCESSORIES SCHEDULE

- TA-1 ELECTRIC HAND DRYER
- TA-2 MIRROR UNIT
- TA-3 ADA GRAB BARS
- TA-4 SANITARY-NAPKIN DISPOSAL UNIT
- TA-7 TOILET TISSUE DISPENSER
- TA-8 WASTE RECEPTACLE
- TA-9 BABY CHANGING STATION

ABBREVIATIONS

A.B.	-ANCHOR BOLT	F.O.B.	-FACE OF BRICK	P.T.	-PRESSURE TREATED
ADD'L	-ADDITIONAL	F.O. CONC.	-FACE OF CONCRETE	R.	-RADIUS
ADJ.	-ADJACENT	F.O.W.	-FACE OF WALL	REIN.F.	-REINFORCEMENT
A.I.S.C.	-AMERICAN INSTITUTE OF STEEL CONSTRUCTION	FS.	-FLAT SLAB	REQ'D	-REQUIRED
ALT.	-ALTERNATE	FT.	-FOOT	RM.	-ROOM
ARCH.	-ARCHITECTURAL	FTG.	-FOOTING	SCHED.	-SCHEDULE
A.S.T.M.	-AMERICAN SOCIETY FOR TESTING & MATERIALS	F.W.	-FILLET WELD	SECT.	-SECTION
B.LDG.	-BUILDING	GA.	-GAUGE	SHT.	-SHEET
BM.	-BEAM	GAL.	-GALVANIZED	s.d.l.	-SUPERIMPOSED DEAD LOAD
B.O.	-BOTTOM OF	G.L.	-GLULAM BEAM	SIM.	-SIMILAR
BOT.	-BOTTOM	GR.	-GRADE	S.L.	-SNOW LOAD
BSMT.	-BASEMENT	GR. BM.	-GRADE BEAM	S.L.V.	-SHORT LEG VERTICAL
BTWN.	-BETWEEN	H.A.S.	-HEADED ANCHOR STUD	SPC.	-SPACE
CANT.	-CANTILEVER	H.D.G.	-HOT DIPPED GALVANIZED	SPEC.	-SPECIFICATION
CB.	-CARDBOARD	HORIZ.	-HORIZONTAL	STD.	-STANDARD
CH.	-CHAMFER	H.S.B.	-HIGH STRENGTH BOLT	STIFF.	-STIFFENER
C.J.	-CONTROL/CONSTRUCTION JOINT	HSS	-HOLLOW STRUCTURAL SECTION	STL	-STEEL
CJP	-COMPLETE JOINT PENETRATION	I.D.	-INSIDE DIAMETER	STOR.	-STORAGE
CLR.	-CLEAR, CLEARANCE	I.F.	-INSIDE FACE	SYM.	-SYMMETRICAL
C.M.U.	-CONCRETE MASONRY UNIT	IN.	-INCH	T.&B.	-TOP & BOTTOM
COL.	-COLUMN	INT.	-INTERIOR	THK.	-THICKNESS
CONC.	-CONCRETE	JNT.	-JOINT	T.O.	-TOP OF
CONN.	-CONNECTION	K	-KIP (1,000 lbs.)	TYP.	-TYPICAL
CONST.	-CONSTRUCTION	K.C.I.	-KIP PER CUBIC INCH	UN.L.O.	-UNLESS NOTED OTHERWISE
CONT.	-CONTINUOUS	L.B.	-LOAD	VAR.	-VARIES
CONTR.	-CONTRACTOR	LIN. FT.	-LINEAL FEET	VERT.	-VERTICAL
CTRD.	-CENTERED	L.I.	-LIVE LOAD	V.I.F.	-VERIFY IN FIELD
C.W.	-CURTAIN WALL	L.L.V.	-LONG LEG VERTICAL	WT.	-WEIGHT
DET.	-DETAIL	L.S.L.	-LAMINATED STRAND LUMBER		
DIAG.	-DIAGONAL	L.V.L.	-LAMINATED VENEER LUMBER	C	SYMBOLS CENTER LINE
DIAM.	-DIAMETER	MATL.	-MATERIAL	Ø	DIAMETER
DIM.	-DIMENSION	MECH.	-MECHANICAL	MID.	-MIDDLE
DISCONT.	-DISCONTINUOUS	MIN.	-MINIMUM	MISC.	-MISCELLANEOUS
d.l.	-DEAD LOAD	MISC.	-MISCELLANEOUS	Ø	ELEVATION
DWG.	-DRAWING	MTL.	-METAL	&	AND
EA.	-EACH	N.I.C.	-NOT IN CONTRACT	W/	WITH
E.F.	-EACH FACE	NO.	-NUMBER	R/	PLATE
EL.	-ELEVATION	NOM.	-NOMINAL	X	BY
ELECT.	-ELECTRICAL	N.T.S.	-NOT TO SCALE	#	NUMBER
ELEV.	-ELEVATOR	O.C.	-ON CENTER	@	AT
EQ.	-EQUAL	O.F.	-OUTSIDE FACE	PL	-PLATE
E.W.B.	-END WALL BARS	O.D.	-OUTSIDE DIAMETER	P.A.F.	-POWDER ACTUATED FASTENERS
E.W.	-EACH WAY	O.H.	-OPPOSITE HAND	PL	-PLATE
EXIST.	-EXISTING	OPNG.	-OPENING	P.S.F.	-POUND PER SQUARE FOOT
EXP. JNT.	-EXPANSION JOINT	P.A.F.	-POWDER ACTUATED FASTENERS	P.S.I.	-POUND PER SQUARE INCH
FDN.	-FOUNDATION	PL	-PLATE	P.S.L.	-PARALLEL STRAND LUMBER
EXT.	-EXTERIOR	P.S.F.	-POUND PER SQUARE FOOT		
FLR.	-FLOOR	P.S.I.	-POUND PER SQUARE INCH	L	ANGLE
		P.S.L.	-PARALLEL STRAND LUMBER		

PLYWOOD NAILING SCHEDULE

USE	PLYWOOD THICKNESS	SPAN/INDE XRATIO	EDGE NAILING	INTERIOR NAILING	HOLD DOWN
WALL	1/2"	24/0	8d @ 6" O.C.	8d @ 12" O.C.	--
SLOPED ROOF	5/8"	32/16	8d @ 6" O.C.	8d @ 12" O.C.	--

- PLYWOOD FOR ROOFS AND WALL SHEATHING SHALL BE APA GRADE TRADEMARKED CDX W/ EXTERIOR GLUE. LAY UP PLYWOOD W/ FACE GRAIN PERPENDICULAR TO SUPPORTS AND STAGGER JOINTS. ALL NAILING COMMON RING SHANKED NAILS. REFER TO TABLE ABOVE FOR USE REQUIREMENTS.
- OSB SHEATHING MAY BE USED AS AN ALTERNATE TO PLYWOOD W/ PRIOR APPROVAL OF OWNER AND CONTRACTOR. OSB SHEATHING SHALL COMPLY WITH THE APA PLYWOOD DESIGN SPECIFICATION AND SHALL HAVE A SPAN RATING EQUIVALENT TO, OR BETTER, THAN THE PLYWOOD IT REPLACES. ATTACHMENT AND THICKNESS (WITHIN 1/32") SHALL BE THE SAME AS THE PLYWOOD IT REPLACES.

C.M.U. REINFORCING SCHEDULE

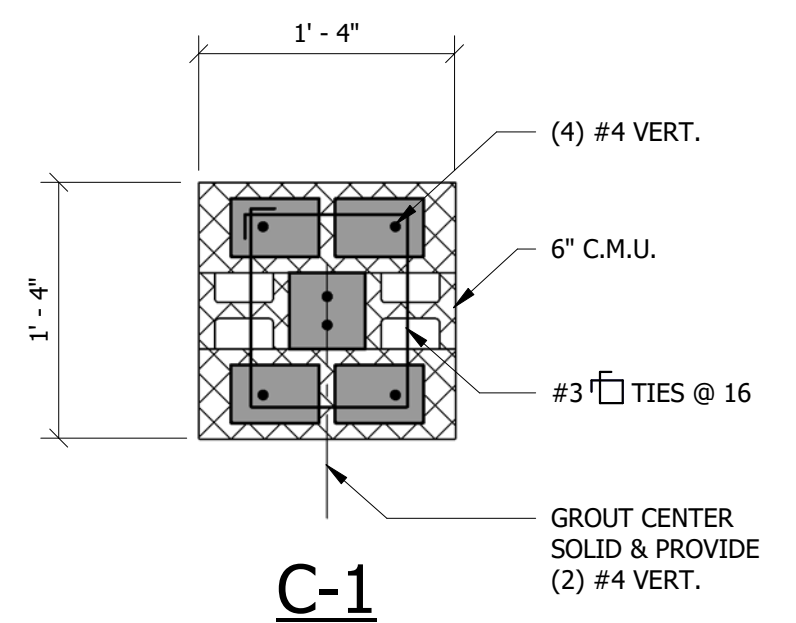
- PROVIDE #5 @ 32 VERTICAL REINFORCING AT 8" C.M.U. GROUT ALL VERTICAL REINFORCING SOLID. VERTICAL REINFORCEMENT SHALL EXTEND THROUGH BOND BEAMS TO 2" CLR. BELOW TOP OF C.M.U. USE STANDARD "DUR-O-WALL" "LADUR TYPE" @ 16" O.C. HORIZONTAL REINFORCING.
- PROVIDE #4 @ 24 VERTICAL REINFORCEMENT AT 6" C.M.U. WALLS. GROUT ALL REINFORCEMENT SOLID. PROVIDE BOND BEAM WITH (1) #6 CONT. AT TOP OF 6" C.M.U. WALLS, AND REINFORCE HORIZONTAL JOINTS WITH STANDARD LADDER TYPE REINFORCEMENT.
- PROVIDE (2) #5 CONT. VERTICAL EACH SIDE OF ALL OPENINGS AND CONTROL JOINTS. EXTEND 2'-0" MINIMUM EACH SIDE OF OPENING. GROUT SOLID.
- LAP ALL VERTICAL REINFORCING AS FOLLOWS:
 - #4 - MINIMUM OF 2'-0"
 - #5 - MINIMUM OF 2'-4"
 - #6 - MINIMUM OF 3'-4"
- PROVIDE #5 x 4'-0" DOWELS @ 24 FROM STEMWALLS TO 8" C.M.U. LAP 2'-4" WITH WALL VERTICAL REINFORCEMENT AND GROUT SOLID.

- ### GENERAL NOTES CONT.
- WOOD:
 - ALL BEAMS AND HEADERS 2 TO 4 INCHES THICK SHALL BE HEM-FIR NO. 2 AND BETTER WITH $F_b = 850$ PSI AND $E = 1,300,000$ PSI.
 - ALL BEAMS 5" AND THICKER SHALL BE HEM-FIR NO. 2 WITH $F_b = 850$ PSI AND $E = 1,300,000$ PSI.
 - ALL POSTS AND COLUMNS 5" AND THICKER SHALL BE HEM-FIR NO. 2 WITH $F_b = 850$ PSI AND $E = 1,300,000$ PSI.
 - WALL STUDS AND PLATES SHALL BE HEM-FIR IN STUD GRADE OR BETTER W/ $F_c = 800$ PSI, AND $E = 1,200,000$ PSI.
 - GLUE LAMINATED BEAMS:
 - ALL LAMINATED MEMBERS SHALL BE FABRICATED WITH ONE OF THE FOLLOWING SPECIES: DOUGLAS FIR, HEMLOCK, LARCH, OR SOUTHERN PINE.
 - LAMINATED MEMBERS SHALL BE DETAILED AND FABRICATED IN ACCORDANCE WITH THE STANDARD SPECIFICATIONS FOR THE DESIGN AND FABRICATION OF STRUCTURAL GLUED LAMINATED LUMBER. PUBLISHED BY THE A.I.T.C. AND THE APPROPRIATE LUMBER PRODUCER'S ASSOCIATION.
 - LAMINATED MEMBERS SHALL BE FABRICATED AS FOLLOWS:
 - BEAMS:
 - SIMPLE SPAN24F-V4
 - CONTINUOUS AND CANTILEVERS24F-V8
 - COLUMNS:
 - COMBINATION SYMBOL4
 - LAMINATED MEMBERS SHALL BE BUILT UP USING 2" NOMINAL MATERIAL. LAMINATED MEMBER SIZES NOTED ARE NET.
 - MEMBERS EXPOSED TO VIEW SHALL BE FINISHED IN "ARCHITECTURAL" APPEARANCE GRADE. MEMBERS TO BE CONCEALED BY FINISH MATERIALS OR CEILING SHALL BE "INDUSTRIAL" GRADE.
 - ADHESIVES USED SHALL COMPLY WITH THE SPECIFICATIONS AS CONTAINED IN VOLUNTARY PRODUCT STANDARD P556-73, STRUCTURAL GLUED LAMINATED TIMBER. WET-USE ADHESIVES ARE TO BE USED FOR ALL MEMBERS EXPOSED TO THE WEATHER.
 - STEEL:
 - ALL STRUCTURAL STEEL ANGLES, CHANNELS, S SHAPES, AND PLATES SHALL CONFORM TO ASTM 36 ($F_y = 36$ ksi)
 - ALL RECTANGULAR OR SQUARE HSS (HOLLOW STRUCTURAL SECTIONS) MEMBERS SHALL CONFORM TO ASTM A500 (GRADE B). ALL ROUND HSS MEMBERS SHALL CONFORM TO ASTM A53 (GRADE B) OR A500 (GRADE B), LATEST EDITIONS.
 - STRUCTURAL STEEL SHALL BE DETAILED AND FABRICATED IN ACCORDANCE WITH LATEST PROVISION OF THE A.I.S.C. STEEL CONSTRUCTION MANUAL.
 - ALL WELDERS SHALL HAVE EVIDENCE OF PASSING THE A.W.S. STANDARD QUALIFICATION TESTS.
 - MASONRY:
 - ALL REINFORCING IN MASONRY WALLS SHALL BE FULLY ENCLOSED WITH GROUT. USE PEA GRAVEL WITH $f_c = 3,000$ PSI.
 - CONCRETE MASONRY SHALL CONSIST OF LIGHTWEIGHT CONCRETE BLOCK WITH A COMPRESSIVE STRENGTH OF 1,900 PSI.
 - FILL ALL VOIDS AND BLOCK CELLS SOLID WITH MORTAR FOR A DISTANCE OF 24" BENEATH AND 12" EACH SIDE OF ALL BEAM REACTIONS OR OTHER CONCENTRATED LOADS, UNLESS OTHERWISE SHOWN OR NOTED.
 - MASONRY IS TO BE LAID IN TYPE "M" OR "S" MORTAR IN ACCORDANCE WITH SECTION 2103 OF THE INTERNATIONAL BUILDING CODE. TYPE "N" MASONRY CEMENT MORTAR IS NOT ACCEPTABLE.
 - MASONRY WALLS MUST BE ADEQUATELY BRACED DURING CONSTRUCTION TO WITHSTAND WIND AND SEISMIC LOADS. BRACING MUST REMAIN IN PLACE UNTIL ROOF (AND FLOOR) DIAPHRAGMS ARE FULLY CAPABLE OF PROVIDING LATERAL SUPPORT.
 - FOUNDATIONS:

FOUNDATION DESIGN IS BASED UPON RECOMMENDATIONS BY HUDDLESTON BERRY, L.L.C., JOB #00207-0013. RECOMMENDATIONS IN THIS REPORT SHOULD BE FOLLOWED.

 - ALLOWABLE SOILS BEARING PRESSURE1,500 PSF

SOILS ENGINEER OF RECORD SHALL EXAMINE EXCAVATION TO VERIFY ALLOWABLE BEARING PRESSURE AND SOILS CONDITIONS PRIOR TO CONSTRUCTION.
 - ALL DIMENSIONS ON STRUCTURAL DRAWINGS TO BE CHECKED AGAINST ARCHITECTURAL. NOTIFY ARCHITECT AND STRUCTURAL ENGINEER OF ANY DISCREPANCIES BEFORE PROCEEDING WITH CONSTRUCTION.
 - VERIFY ALL OPENINGS THROUGH FLOORS, ROOF, AND WALLS WITH MECHANICAL AND ELECTRICAL REQUIREMENTS.



C-1
TYPICAL MASONRY COLUMN
1" = 1'-0"

- ### GENERAL NOTES
- LIVE LOADS USED IN DESIGN:
 - ROOF:
 - FLAT ROOF SNOW LOAD P_f 30 PSF
 - GROUND SNOW LOAD P_g 49 PSF
 - SNOW EXPOSURE FACTOR C_e 1.0
 - SNOW LOAD IMPORTANCE FACTOR I_s 1.0
 - THERMAL FACTOR C_t 1.0
 - FLOOR:
 - RESTROOM125 PSF
 - WIND:
 - EXPOSUREC
 - RISK CATEGORYII
 - V_{50} 115 MPH
 - V_{30} 89 MPH
 - SEISMIC:
 - RISK CATEGORYII
 - IMPORTANCE FACTOR (I_e)1.0
 - SPECTRAL RESPONSE COEFFICIENTS:
 - S_s 0.235
 - S_1 0.066
 - $S_{0.5}$ 0.251
 - $S_{0.1}$ 0.105
 - SEISMIC RESPONSE COEFFICIENTS:
 - C_s 0.086
 - SITE CLASSD
 - SEISMIC DESIGN CATEGORYB
 - BASIC SEISMIC:
 - FORCE RESISTING SYSTEMREINFORCED MASONRY SHEAR WALLS
 - DESIGN BASE SHEARSK
 - ANALYSIS PROCEDUREEQUIVALENT LATERAL FORCE PROCEDURE
 - CONCRETE:
 - CONCRETE MIX TABLE (NORMAL WEIGHT CONCRETE):

INTENDED USE	28 DAY STRENGTH F'_c (KSI)	MAX W/C (INCLUDING FLY ASH)	MAX AGGR. (IN)	SLUMP LIMITS (IN)	TOTAL AIR LIMITS (%) (2)	CEMENT TYPE	CONCRETE TYPE NORMAL WEIGHT-NW LIGHT WEIGHT-LW	REQ'D ADMIXTURES (3)	OTHER REQUIREMENTS (4)
SLABS ON GRADE	3.5	0.62	1	4	N	II	NW	WRA	SOG
- NOTES:
- FOR THE MAXIMUM COURSE AGGREGATE SIZE INDICATED, USE THE FOLLOWING AGGREGATE SIZE NUMBERS PER ASTM C33:
 - 3/4" - #67 AGGREGATE
 - 1" - #57 AGGREGATE
 - TOTAL AIR CONTENT LIMITS INCLUDE BOTH ENTRAINED AND ENTRAPPED AIR +/- 1 1/2%. "N" IN COLUMN INDICATES ADDITION OF ENTRAINED AIR IS NOT PERMITTED.
 - ABBREVIATIONS FOR REQUIRED ADMIXTURES AS FOLLOWS:
 - AE = AIR-ENTRAINING ADMIXTURE. DO NOT USE ENTRAINED AIR FOR STEEL TROWELED FINISHED FLOORS.
 - WRA = WATER REDUCING ADMIXTURE.
 - ABBREVIATIONS FOR OTHER REQUIREMENTS AS FOLLOWS:
 - FAR = 20% CLASS F FLY ASH REQUIRED.
 - SOG = CONTRACTOR TO VERIFY ALKALINITY OF CONCRETE SURFACE, SLAB VAPOR TRANSMISSION, AND SLAB FLATNESS/LEVELNESS ARE COMPATIBLE WITH FLOORING SYSTEM AND ADHESIVES PRIOR TO INSTALLING FLOORING. AMOUNT OF CEMENTITIOUS MATERIALS LISTED SHALL BE PROVIDED, DO NOT USE LESS AND DO NOT SUPPLY OVER 5% MORE.
 - (5) FOR CONCRETE PLACED BY PUMPING, PROVIDE CONCRETE MIX FLOWABILITY TO FACILITY PUMPING.
- ALL REINFORCING SHALL CONFORM TO ASTM A615, GRADE 60, EXCEPT COLUMN TIES, BEAM STIRRUPS, AND DOWELS TO SLAB ON GRADE WHICH MAY BE GRADE 40.
 - NO SPLICES OF REINFORCEMENT SHALL BE MADE EXCEPT AS DETAIL OR AUTHORIZED BY THE STRUCTURAL ENGINEER. LAP SPLICES, WHERE PERMITTED, SHALL BE A MINIMUM OF 40 BAR DIAMETERS UNLESS OTHERWISE SHOWN OR NOTED. MAKE ALL BARS CONTINUOUS AROUND CORNERS.
 - STAGGER SPLICES A MINIMUM OF 4'-0" FOR TOP AND BOTTOM CONTINUOUS BARS IN FOUNDATIONS, UNLESS OTHERWISE SHOWN OR NOTED.
 - DETAIL BARS IN ACCORDANCE WITH A.C.I. DETAILING MANUAL AND A.C.I. BUILDING CODE REQUIREMENTS FOR REINFORCED CONCRETE, LATEST EDITIONS.
 - PROVIDE ALL ACCESSORIES NECESSARY TO SUPPORT REINFORCING (INCLUDING W.W.F.) AT POSITIONS SHOWN ON THE DRAWINGS. DO NOT ATTEMPT TO POSITION ANY REINFORCEMENT BY LIFTING DURING CONCRETE PLACEMENT.
 - REINFORCEMENT PROTECTION SHALL BE AS FOLLOWS:
 - (1) CONCRETE POURED AGAINST EARTH3"
 - (2) FORMED CONCRETE EXPOSED TO EARTH OR WEATHER2"
 - (3) FORMED STAIRS OR WALLS NOT EXPOSED TO WEATHER3/4"
 - PLACE 2-#5 (ONE EACH FACE) WITH 2'-0" PROJECTION AROUND ALL OPENINGS IN CONCRETE UNLESS OTHERWISE SHOWN OR NOTED.
 - SLABS, BEAMS, AND GRADE BEAMS SHALL NOT HAVE JOINTS IN A HORIZONTAL PLANE. ANY STOP IN CONCRETE WORK MUST BE MADE AT MIDDLE OF SPAN WITH VERTICAL BULKHEADS AND KEYS AS SHOWN PER THE TYPICAL CONCRETE WALL CONSTRUCTION JOINT DETAIL. ALL CONSTRUCTION JOINTS SHALL BE AS DETAILED OR AS APPROVED BY THE ARCHITECT AND THE STRUCTURAL ENGINEER.
 - WIRE FABRIC REINFORCEMENT MUST LAP ONE FULL MESH +2" AT SIDE AND END LAPS, AND SHALL BE TIED TOGETHER.



REED PARK
RESTROOM & BUILDING
FACILITIES

250 S. ELM ST.
FRUITA, CO 81521

GENERAL NOTES & DETAILS

FOR CONSTRUCTION

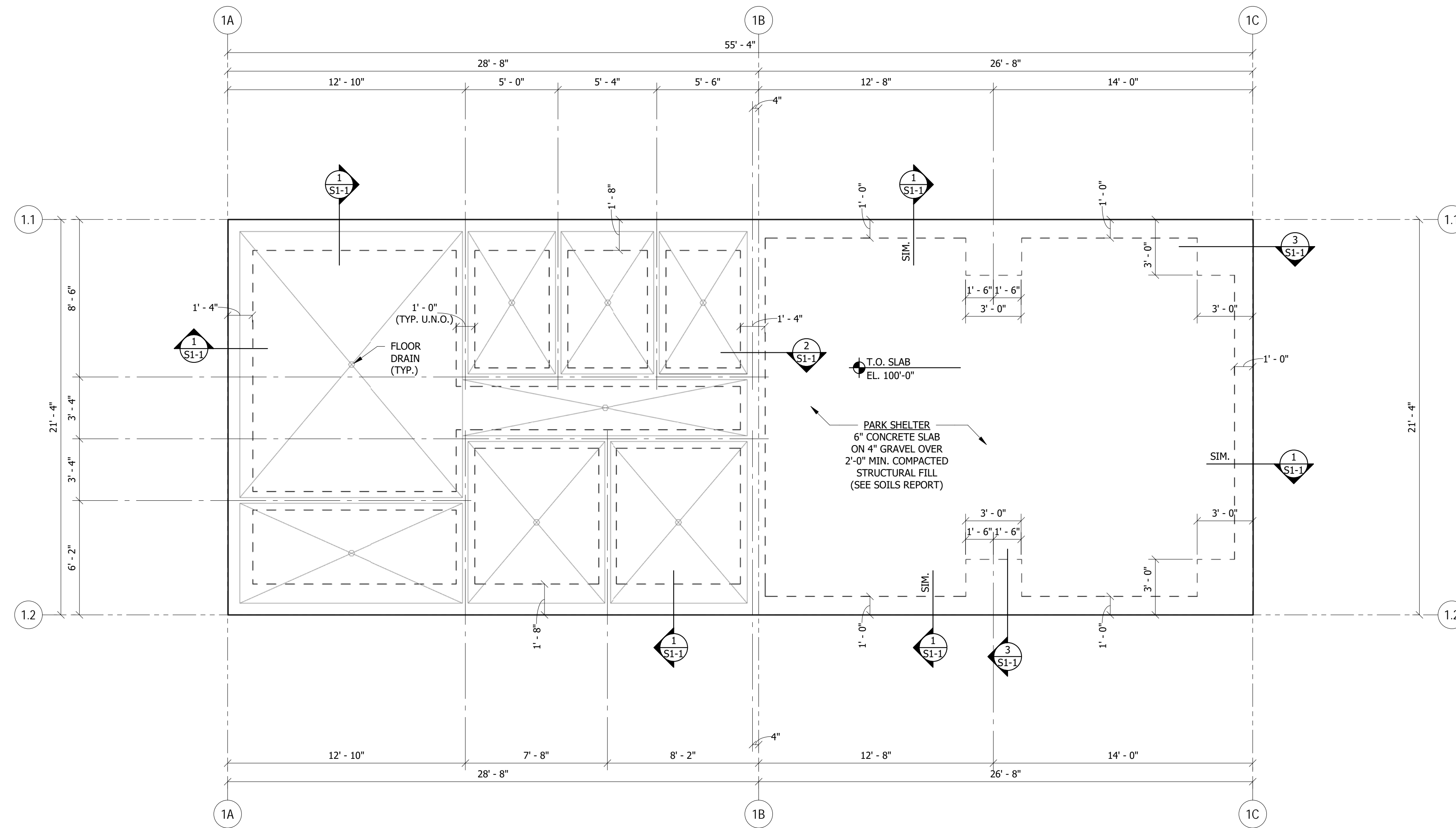
REV. DESC. DATE:

DATE: 09/14/23

PROJECT #: 23.048

SHEET #:

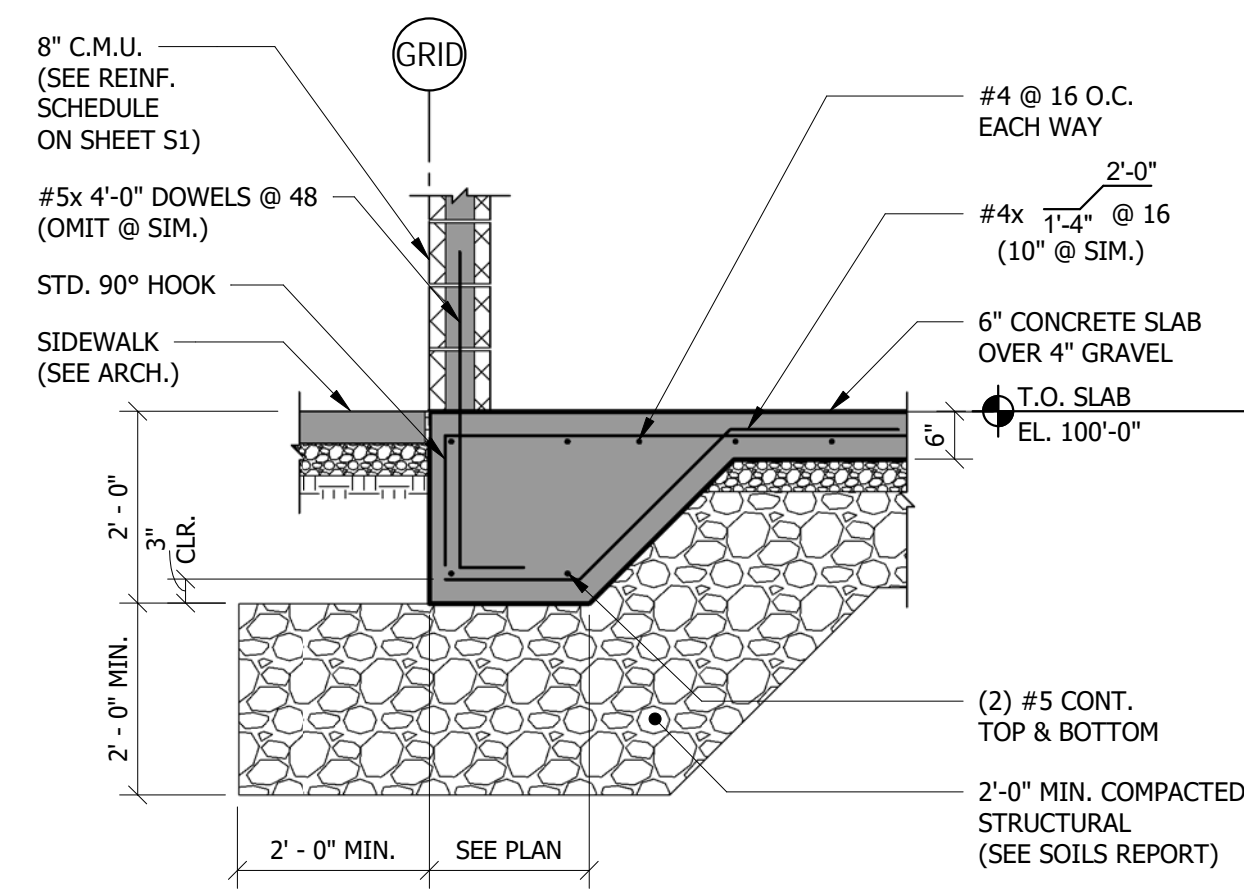
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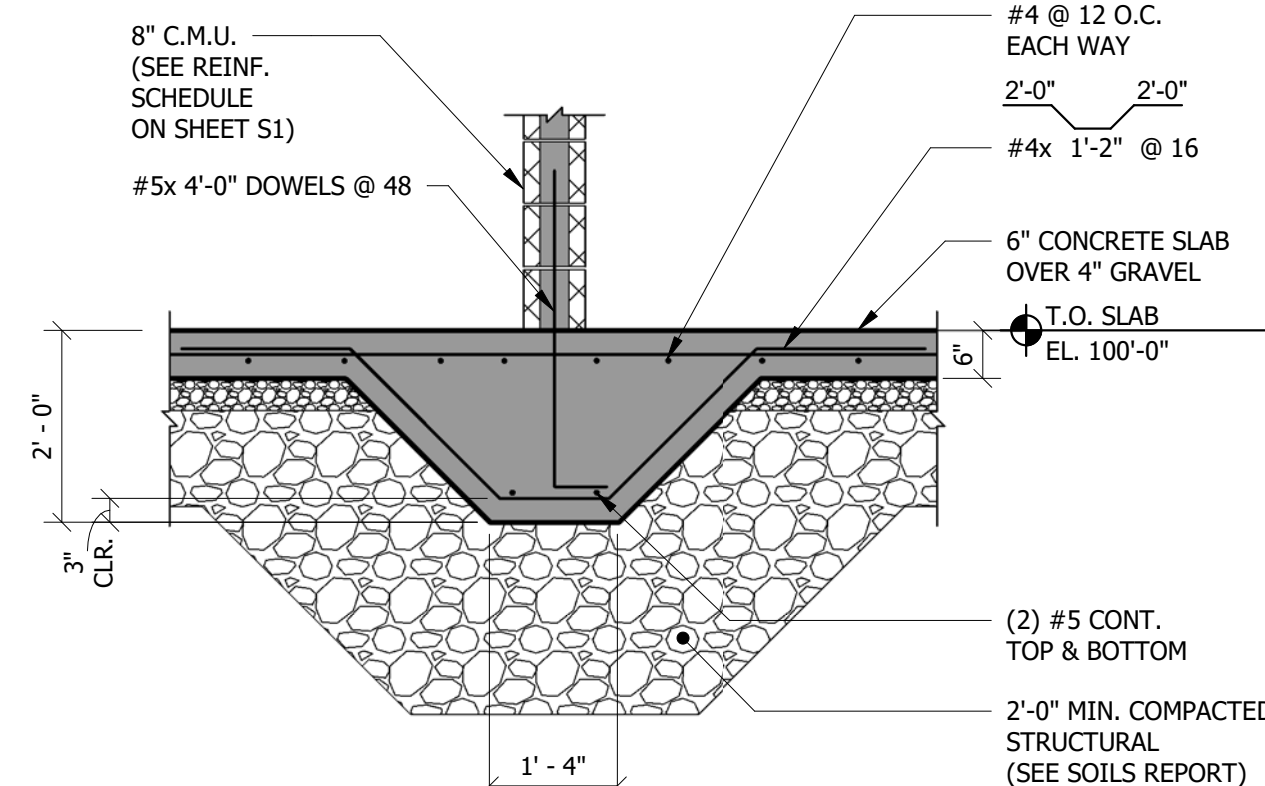
FOUNDATION PLAN - BLDG 1

1/4" = 1'-0" NORTH

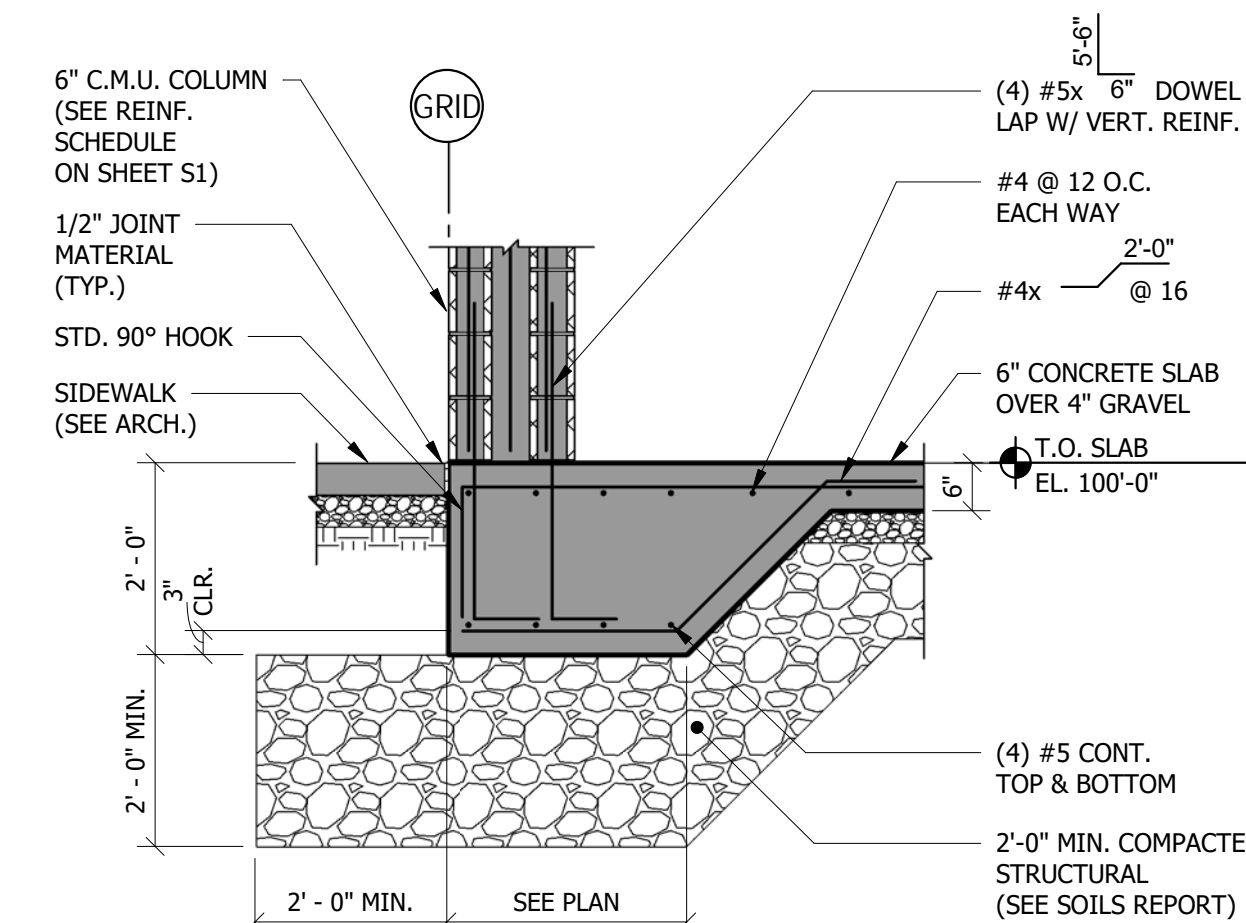
1. REINFORCE CONCRETE SLAB W/ #4 @ 12 EACH WAY. PLACE IN MIDDLE OF SLAB.
2. DO NOT CUT CONTROL JOINTS IN SLAB.



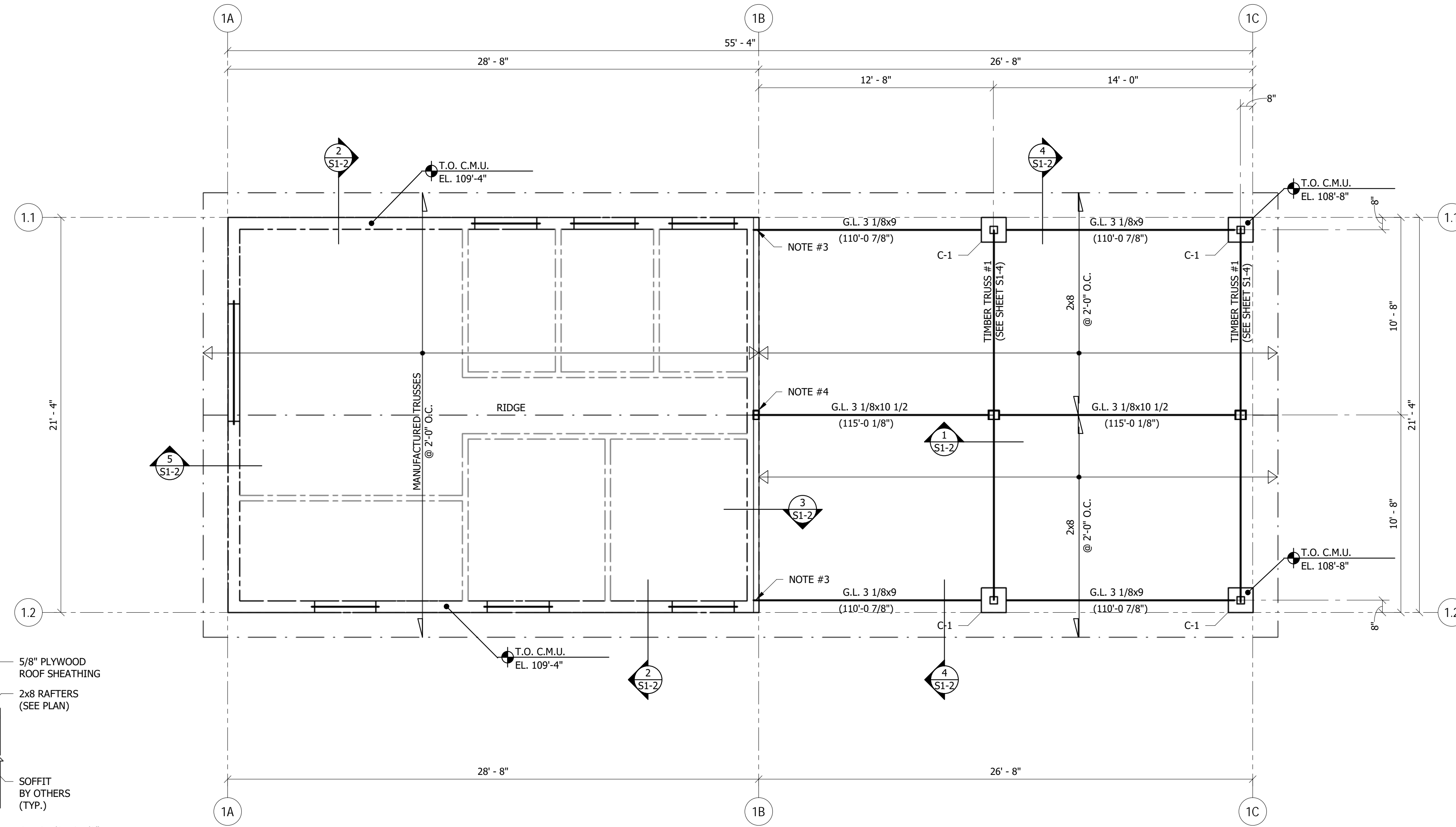
SECTION 1/S1-1 1/2" = 1'-0"



SECTION 2/S1-1 1/2" = 1'-0"



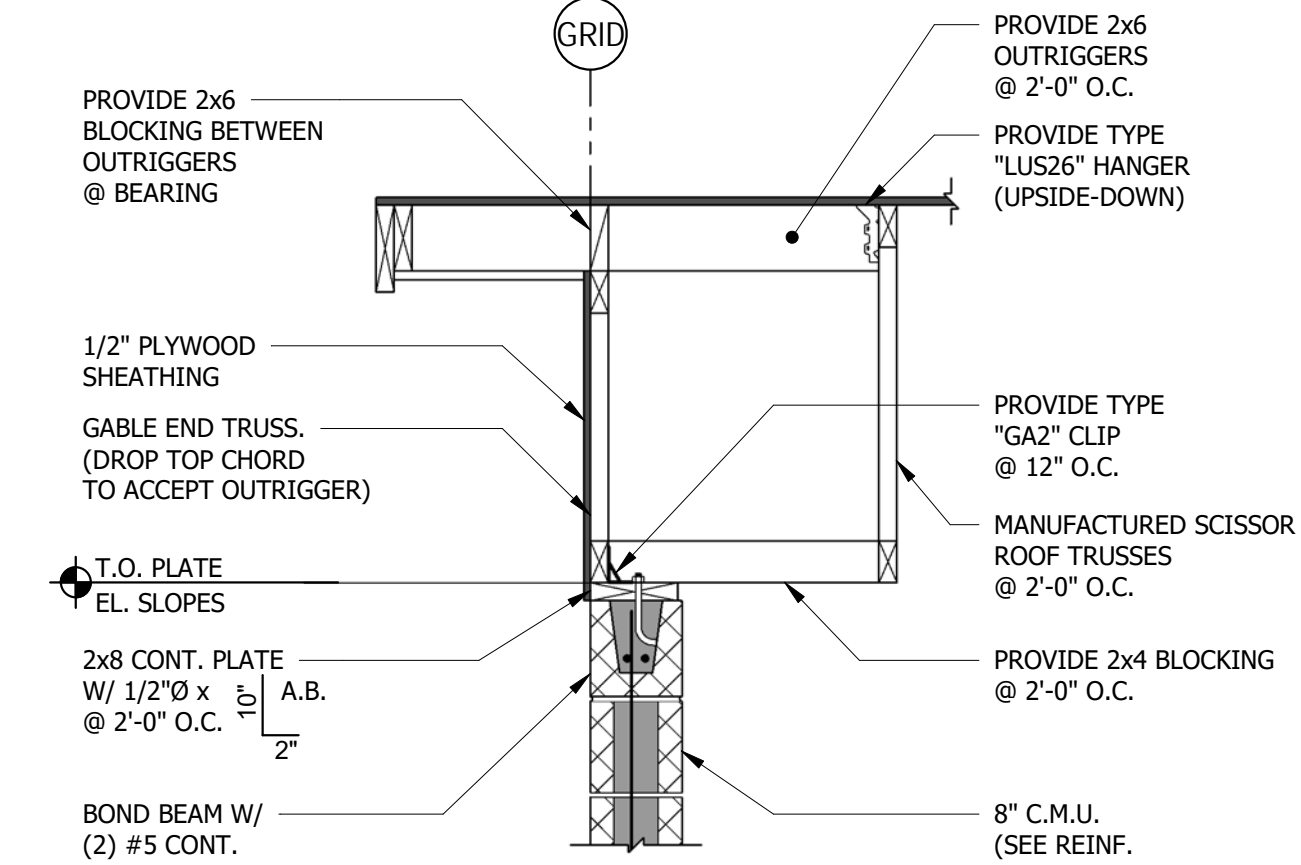
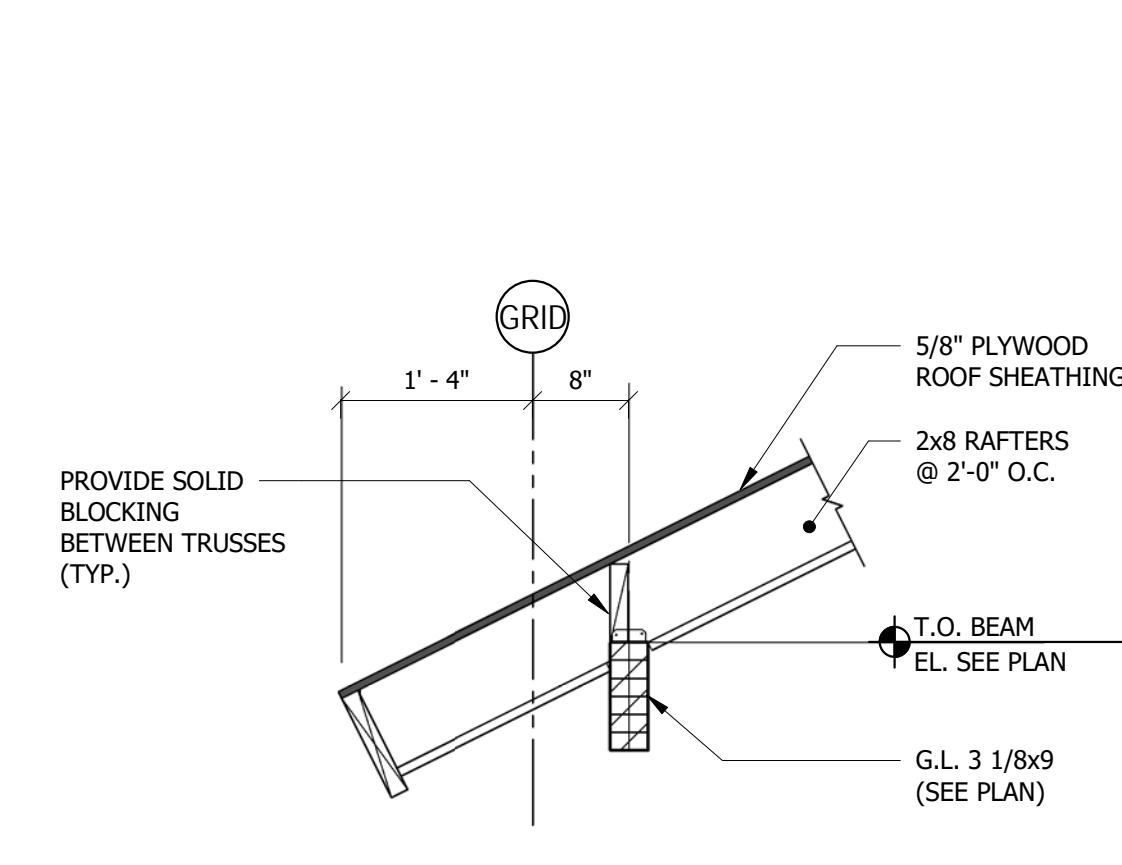
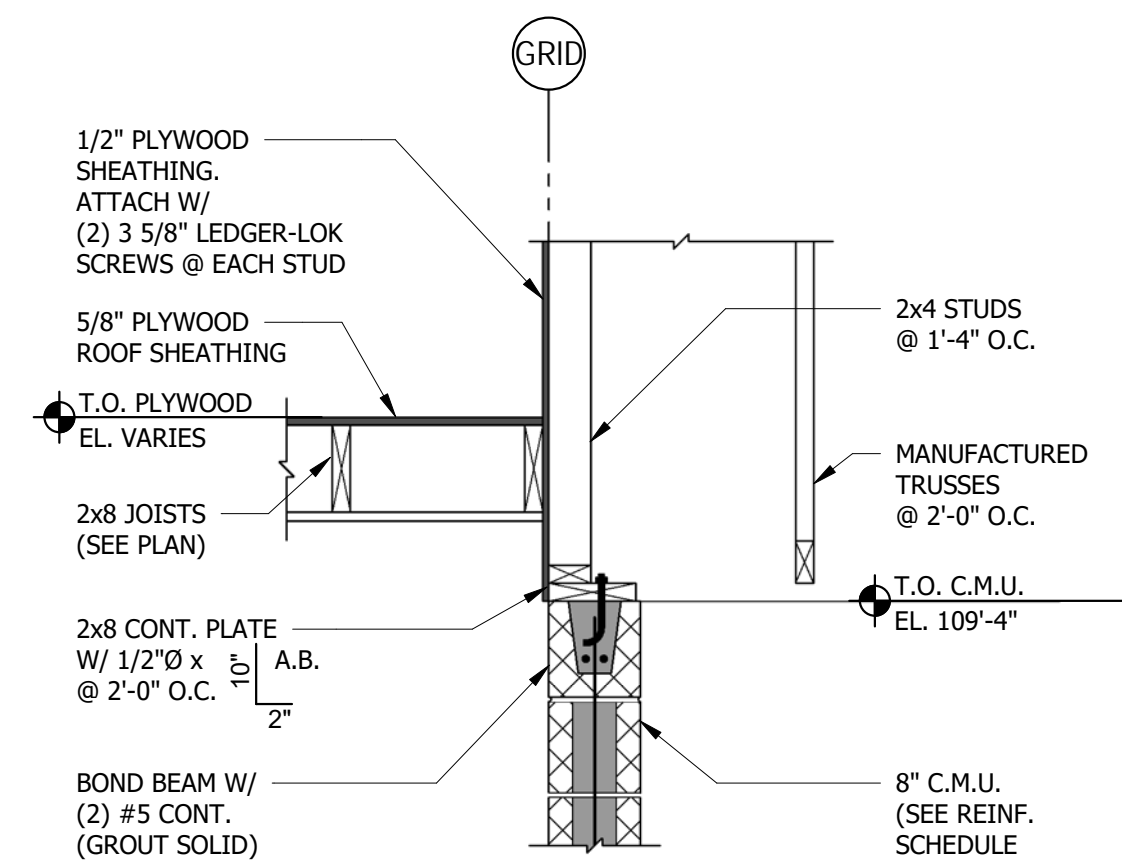
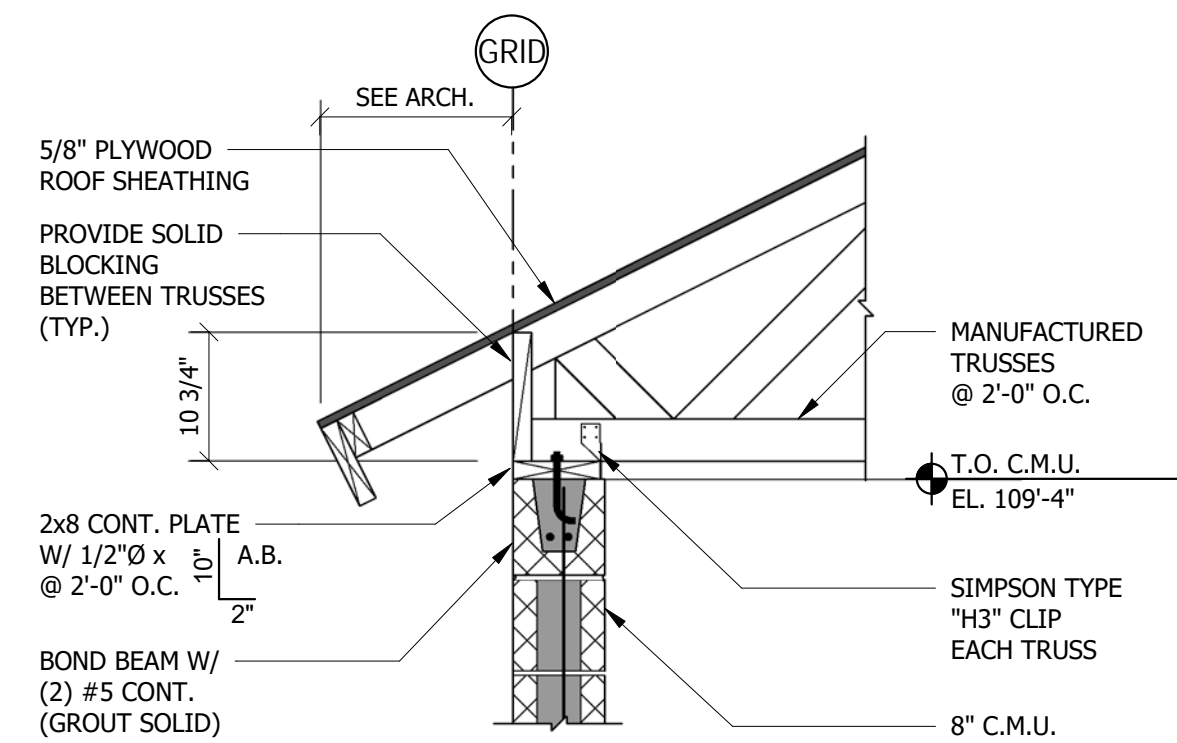
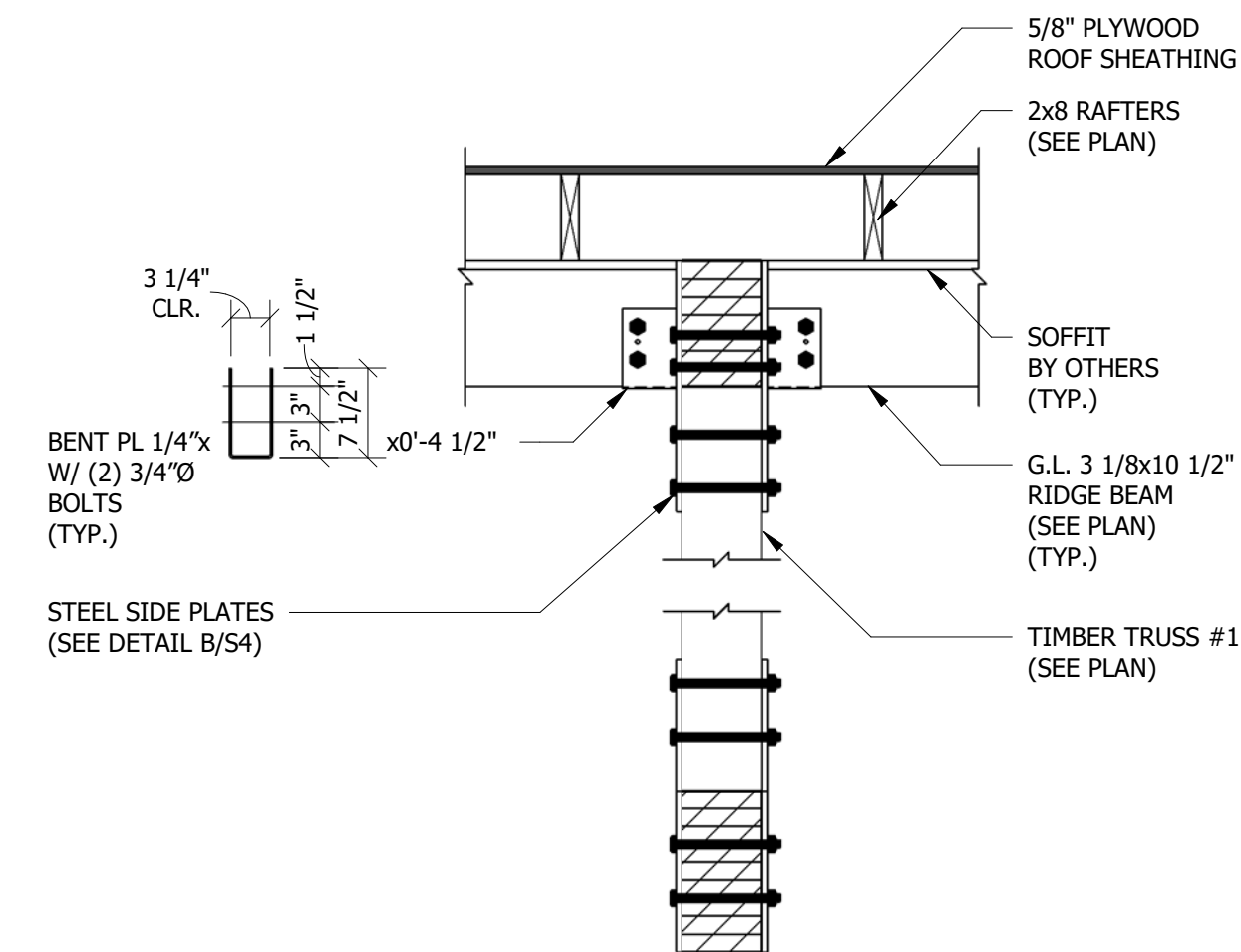
SECTION 3/S1-1 1/2" = 1'-0"

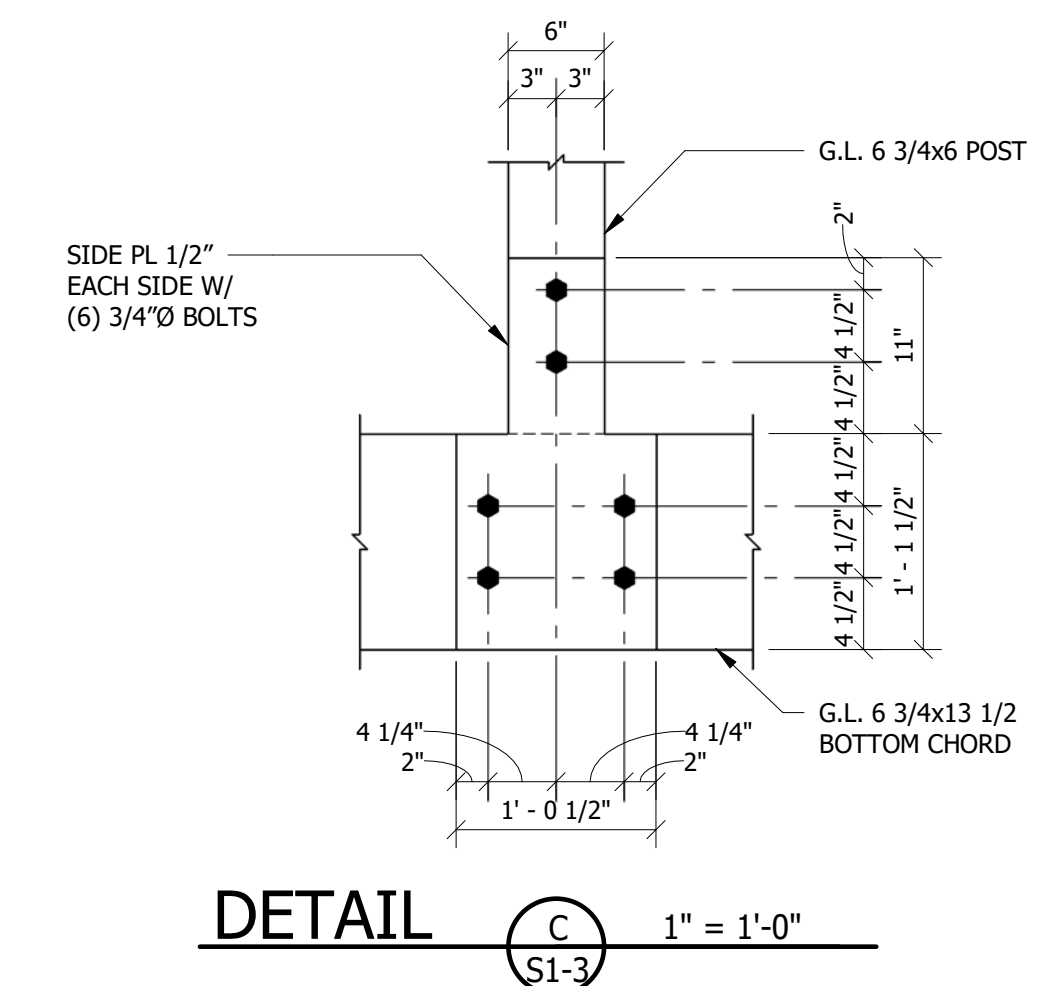
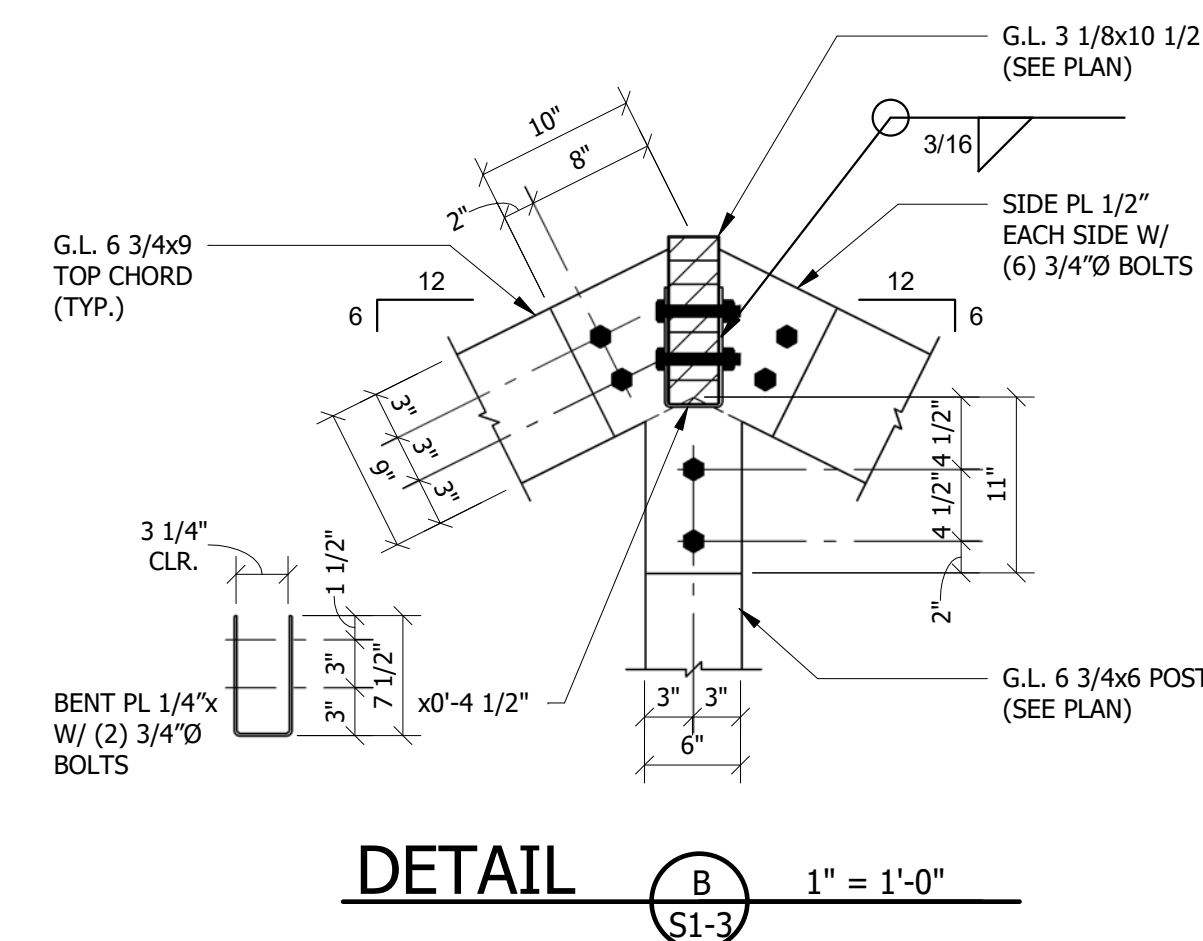
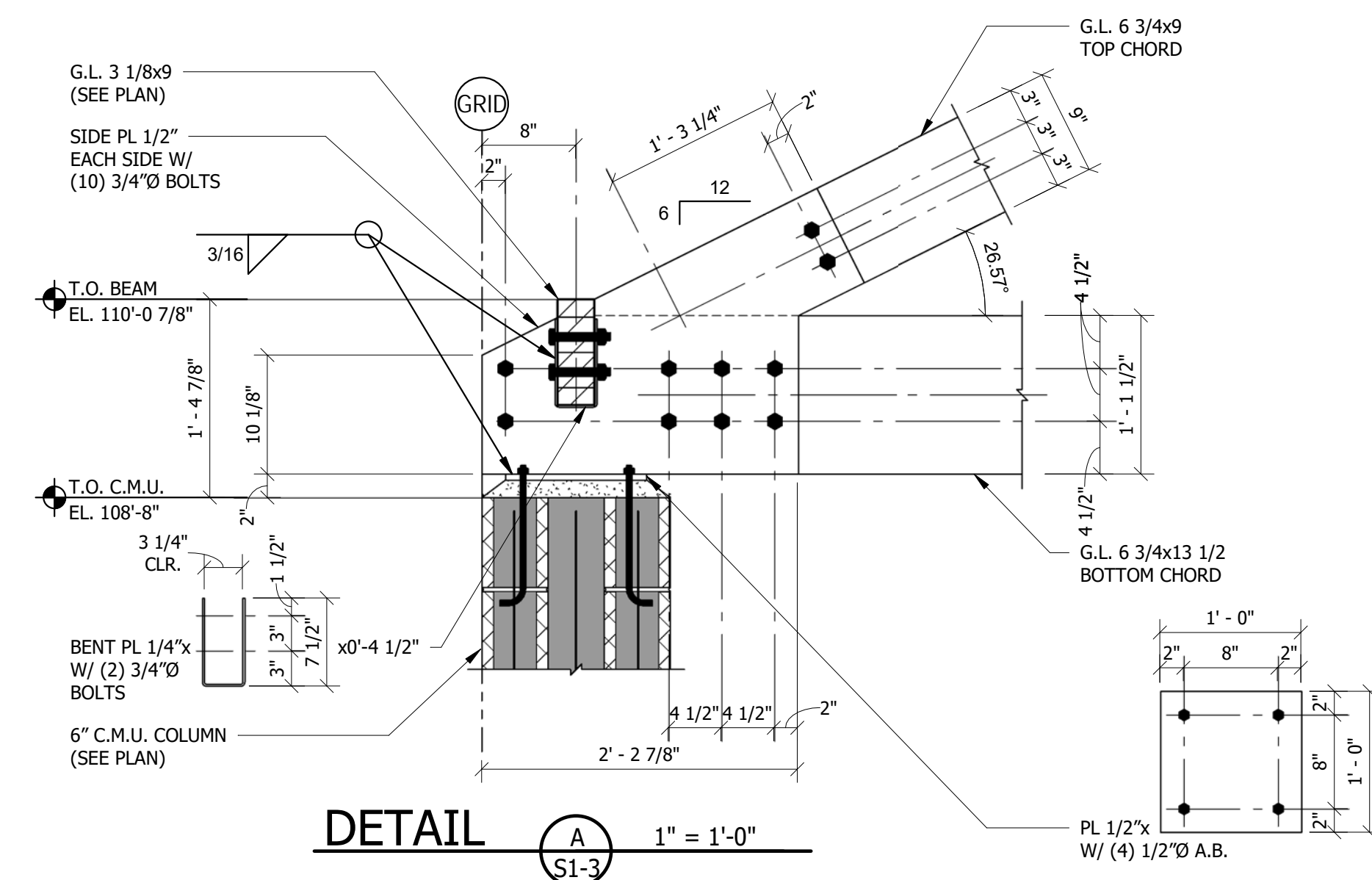
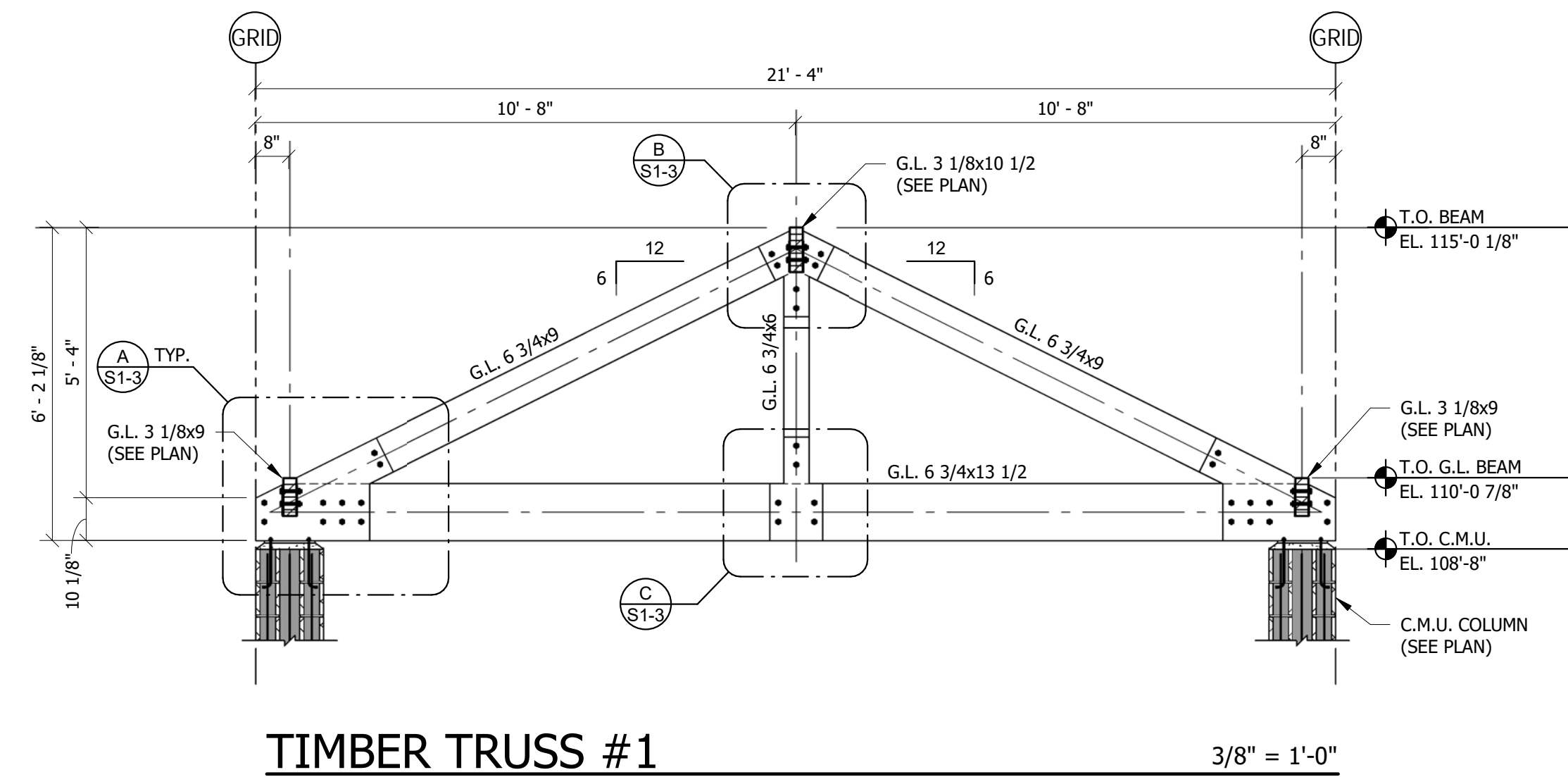


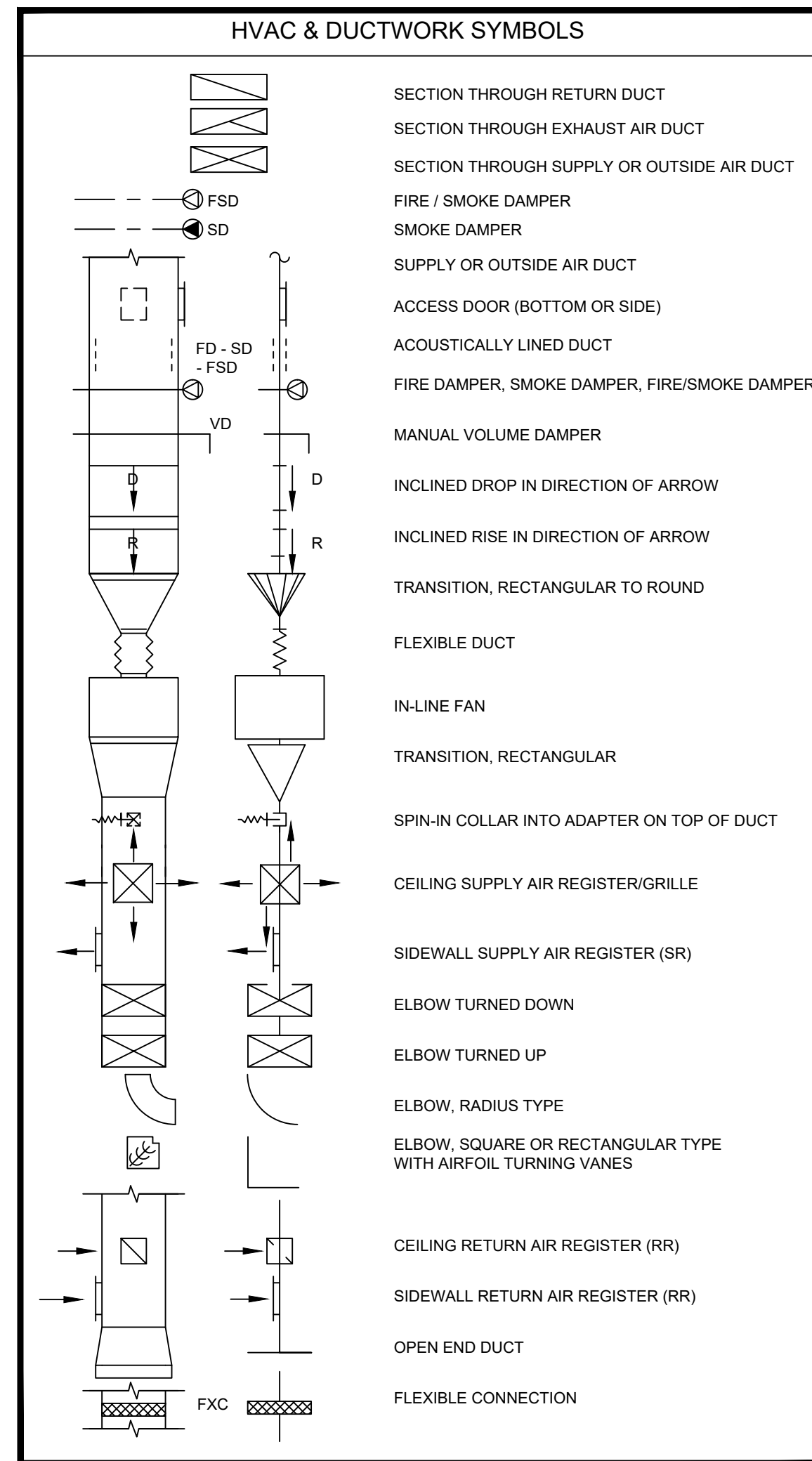
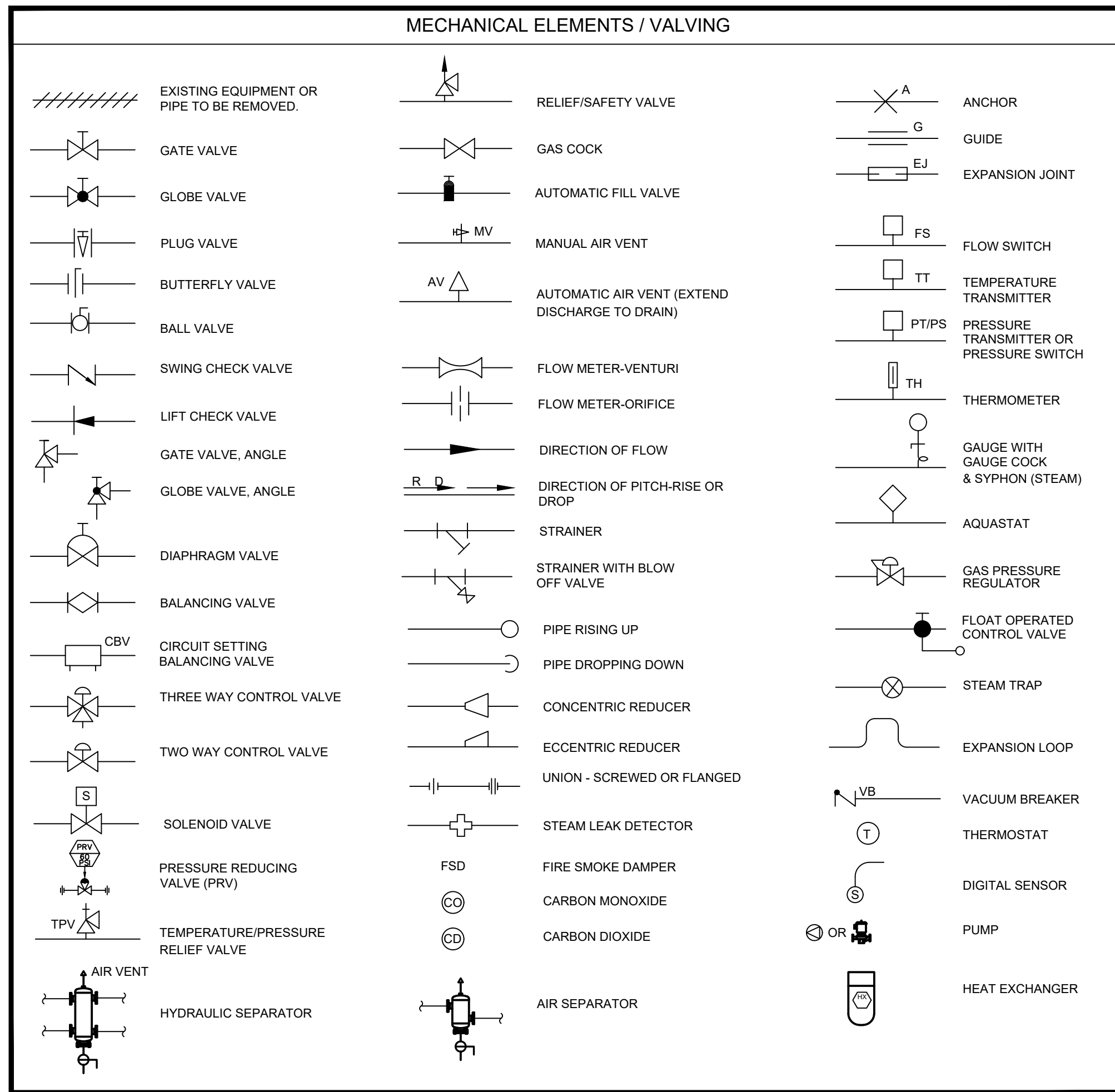
ROOF FRAMING PLAN - BLDG 1

1/4" = 1'-0" NORTH

1. SEE LINTEL SCHEDULE ON SHEET S1-0.
2. T.O. BEAM ELEVATION NOTED THUS: (XXX'-XX").
3. PROVIDE TYPE "HGLB" BEM SEAT CONNECTION.
4. BEAR ON (4) 2x4 STUDS.







LINE DESIGNATION SYMBOLS

CHWR	CHILLED WATER RETURN
CHWS	CHILLED WATER SUPPLY
CA	COMPRESSED AIR
CR	CONDENSER WATER RETURN
CS	CONDENSER WATER SUPPLY
D	DRAIN
HPR	HEAT PUMP RETURN
BOD	BOTTOM OF DUCT
HPS	HEAT PUMP SUPPLY
HWR	HOT WATER RETURN
HWS	HOT WATER SUPPLY
G	NATURAL GAS
RH	REFRIGERANT HIGH PRESSURE VAPOR
R	REFRIGERANT LIQUID AND VAPOR LINE
RS	REFRIGERANT SUCTION / VAPOR
SMR	SNOWMELT RETURN
SMS	SNOWMELT SUPPLY
CHWR	CHILLED WATER RETURN
CHWS	CHILLED WATER SUPPLY
CI	CAST IRON
CL	CENTER LINE
CLG	CEILING
CMU	CONCRETE MASONRY UNIT
CO	CLEAN OUT
COL	COLUMN
COMP	COMPRESSOR
CONC	CONCRETE
COND	CONDENSATE
CONN	CONNECTION
CONT	CONTINUATION
CONTR	CONTRACTOR
CRI	COLOR RENDERING INDEX
CT	COOLING TOWER
CT	CURRENT TRANSFORMER
CJ	CONDENSING UNIT
CU	COPPER
CUH	CABINET UNIT HEATER
CVB	CONSTANT VOLUME BOX
CHR	CONDENSER WATER RETURN
CHS	CONDENSER WATER SUPPLY
DB	DRY BULB
DEPT	DEPARTMENT
DF	DRINKING FOUNTAIN
DIAG	DIAMETER
DIFF	DIFFERENTIAL
DISCH	DISCHARGE
DIV	DIVISION
DN	DOWN
DS	DUCT SILENCER
DWG	DRAWING
DX	DIRECT EXPANSION
EA	EXISTING
EA	EXHAUST AIR GRILLE/REGISTER
EAT	ENTERING AIR TEMPERATURE
EC	ELECTRICAL CONTRACTOR
ECC	ECCENTRIC
EF	EXHAUST FAN
EFF	EFFICIENCY
EL	ELEVATION
ELEC	ELECTRIC
ELEV	ELEVATOR
EM	EMERGENCY FUNCTION
ENT	ENTERING
EMT	ELECTRIC METALLIC TUBE
EQ	EQUAL
EQUIP	EQUIPMENT
EQUIV	EQUIVALENT
ES	END SWITCH
ESP	EXTERNAL STATIC PRESSURE
ET	EXPANSION TANK
EW	ELECTRIC WATER COOLER
EW	ENTERING WATER TEMPERATURE
EX	EXHAUST
EXPAN	EXPANSION
EXT	EXTERNAL
F	DEGREES FAHRENHEIT
FA	FREE AREA
FC	FAN COIL UNIT
FC	FOOTCANDLE
FCV	FLOW CONTROL VALVE
FD	FIRE DAMPER
FD	FLOOR DRAIN
FIN	FINISHED
FLA	FULL LOAD AMPS
FLEX	FLEXIBLE
FLR	FLOOR
FOT	FLAT ON TOP
FP	FIRE PROTECTION
FP	FIRE PUMP
FPM	FEET PER MINUTE
FPS	FEET PER SECOND
FS	FLOW SWITCH
FSD	FIRE/SMOKE DAMPER
FT	FEET
FXC	FLEXIBLE CONNECTION
GND	GROUND
GA	GAUGE
GAL	GALLON
GALV	GALVANIZED
GE	GROUND ELECTRODE CONDUCTOR
GFCI	GROUND FAULT CIRCUIT INTERRUPTER
GC	GENERAL CONTRACTOR
GPH	GALLONS PER HOUR
GPM	GALLONS PER MINUTE
GRS/LB	GRAINS PER POUND
H2O	WATER
HB	HOSE BIBB
HD	HEAD (SEE SCHEDULES)
HP	HEAT PUMP
HP	HORSEPOWER
HR	HOUR
HT	HEIGHT
HTR	HEATER
HWR	HEATING WATER RETURN
HWS	HEATING WATER SUPPLY
HX	HEAT EXCHANGER
HZ	HERTZ
ID	INSIDE DIAMETER
IG	ISOLATED GROUND
IN	INCHES
INV	INVERT
JBOX	JUNCTION BOX
K	KELVIN
KW	KILOWATT
KVA	KILO VOLT - AMPS
L	LENGTH
LAT	LEAVING AIR TEMPERATURE
L	ELEVATION
LAV	LAVATORY
LB	POUND
LD	LINEAR DIFFUSER
LF	LINEAR FEET
LIN	LINEAR
LIQ	LIQUID
LM	LUMEN
LRA	LOCKED ROTOR AMPS
LV	LOUVER
LVG	LEAVING
LWT	LEAVING WATER TEMPERATURE
MBH	THOUSANDS OF BTU PER HOUR
MC	MECHANICAL CONTRACTOR
MCA	MINIMUM CIRCUIT AMPACITY
MCB	MAIN CIRCUIT BREAKER
MD	MOTORIZED DAMPER
MDP	MAIN DISTRIBUTION PANEL
MED	MEDIUM
MFR	MANUFACTURER
MIN	MINIMUM
MISC	MISCELLANEOUS
MLO	MAIN LUG ONLY
MOCP	MAXIMUM OVERCURRENT PROTECTION
MTD	MOUNTED
MUA	MAKE-UP AIR UNIT
N	NEUTRAL
NC	NORMALLY CLOSED
NEG	NEGATIVE
NIC	NOT IN CONTRACT
NL	NIGHT / SECURITY LIGHT - DO NOT SWITCH
NO	NORMALLY OPEN
NOM	NOMINAL
NTS	NOT TO SCALE
OA	OUTSIDE AIR
OBD	OPPOSED BLADE DAMPER
OC	ON CENTER
OCC	OCCUPIED
OCF	OVER CURRENT PROTECTION
OD	OUTSIDE DIAMETER
OL	OVERLOAD
ORD	OVERFLOW ROOF DRAIN
OZ	OUNCE
PBD	PARALLEL BLADE DAMPER
PD	PRESSURE DROP
PH	PHASE
POS	POSITIVE PRESSURE
POS	POINT OF SALES
PRV	PRESSURE REDUCING VALVE
PS	PRESSURE SWITCH
PSI	POUNDS PER SQUARE INCH
PT	PRESSURE TRANSMITTER
PTAC	PACKAGED TERMINAL AIR CONDITIONER
PV	PLUG VALVE
PVC	POLYVINYL CHLORIDE
QTY	QUANTITY
RA	RETURN AIR GRILLE / REGISTER
RCP	REFLECTED CEILING PLAN
RD	ROOF DRAIN
REL	RELIEF
REQD	REQUIRED
RF	RETURN FAN
RH	RELATIVE HUMIDITY
RHC	REHEAT COIL
RLA	RATED LOAD AMPS
RM	ROOM
RPM	REVOLUTIONS PER MINUTE
SA	SUPPLY AIR GRILLE / REGISTER
SC	SHORT CIRCUIT
SCA	SHORT CIRCUIT AVAILABLE
SCCR	SHORT CIRCUIT CURRENT RATING
SCH	SCHEDULE
SD	SMOKE DAMPER
SEF	SMOKE EXHAUST FAN
SF	SUPPLY FAN
SH	SENSIBLE HEAT
SH	SHOWER
SP	STATIC PRESSURE
SPD	SURGE PROTECTION DEVICE
SPEC	SPECIFICATION
SQ	SQUARE
SS	STAINLESS STEEL
SS	SAFETY SHOWER
STD	STANDARD
STL	STEEL
SYS	SYSTEM
TEMP	TEMPERATURE
TR	TRANSFER GRILLE / REGISTER
TR	TAMPER RESISTANT
TT	TEMPERATURE TRANSMITTER
TTB	TELECOMMUNICATIONS TERMINAL BACKBOARD
TYP	TYPICAL
TX	TRANSFORMER
UC	UNDERCUT DOOR
UH	UNIT HEATER
UNO	UNLESS NOTED OTHERWISE
UNOCC	UNOCCUPIED
UR	URINAL
V	VOLTS
VA	VOLT AMPERE
VA	VALVE
VAV	VARIABLE AIR VOLUME UNIT
VFD	VARIABLE FREQUENCY DRIVE
VRF	VARIABLE REFRIGERANT FLOW
VOLT	VOLTAGE
VTR	VENT THROUGH ROOF
W	WIDTH
W	WATTS
W	WITH
W/O	WITHOUT
WB	WET BULB
WC	WATER CLOSET
WC	WATER CLOSET
WG	WATER GAUGE
WP	WEATHERPROOF
WPIU	WEATHERPROOF IN-SUE
WSR	WITHSTAND RATING
XFMR	TRANSFORMER

RESPONSIBLE DIVISION:

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

EQUIPMENT	FURNISHED	SET	POWER WIRED	CONTROL WIRED
COMBINATION MAGNETIC MOTOR STARTERS, MAGNETIC MOTOR STARTERS, VFD'S AND CONTACTORS	23(1)	26	26(2)	23
FUSED AND UNFUSED DISCONNECT SWITCHES, THERMAL OVERLOAD SWITCHES AND HEATERS, MANUAL MOTOR STARTERS	26	26	26	--
MANUAL-OPERATING AND MULTI-SPEED SWITCHES	23	26	26	26
CONTROLS, RELAYS, TRANSFORMERS	23	23	26	23
THERMOSTATS (LOW VOLTAGE) AND TIME SWITCHES	23	23	26	23
THERMOSTATS (LINE VOLTAGE)	23	23	26	26
TEMPERATURE CONTROL PANELS	23	23	26	23
MOTOR AND SOLENOID VALVES, DAMPER MOTORS, PE & EP SWITCHES	23	23(2)	--	23(2)
PUSH-BUTTON STATIONS AND PILOT LIGHTS	23	23(2)	--	23(2)
HEATING, COOLING, VENTILATION AND AIR CONDITIONING CONTROLS	23	23	26	23
EXHAUST FAN SWITCHES	23	26	26	23(2)

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

ABBREVIATIONS:

44"	MOUNTING HEIGHT ABOVE FINISHED FLOOR TO CENTER OF DEVICE
A	AMPS
A.D.	ACCESS DOOR
AAV	AIR ADMITTANCE VALVE
ABV	ABOVE
AC	AIR CONDITIONING UNIT
AC	ABOVE COUNTER
AD	AREA DRAIN (SEE SYMBOLS)
A.F.C.	ABOVE FINISHED CEILING
A.F.G.	ABOVE FINISHED GRADE
AIC	AMPERE INTERRUPTING CAPACITY
AFCI	ARC FAULT CIRCUIT INTERRUPTERS
A.F.F.	ABOVE FINISHED FLOOR
AHU	AIR HANDLING UNIT
ALUM	ALUMINUM
AP	ACCESS PANEL OR DOOR
ATS	AUTOMATIC TRANSFER SWITCH
AV	AUDIO / VIDEO
AVG	AVERAGE
AWG	AMERICAN WIRE GAGE
BAS	BUILDING AUTOMATION SYSTEM
BB	BASEBOARD
BD	BACK DRAFT DAMPER
BFP	BACK FLOW PREVENTOR
BL	BOILER
BLDG	BUILDING
BLW	BELOW
BOB	BOTTOM OF BEAM
BOD	BOTTOM OF DUCT
BOP	BOTTOM OF PIPE
BSMT	BASEMENT
BTU	BRITISH THERMAL UNIT
C	CHILLER
CAFCI	COMBINATION ARC FAULT CIRCUIT INTERRUPTERS
CAP	CAPACITY
CB	CIRCUIT BREAKER
CBV	CIRCUIT BALANCING VALVE
CCT	CORRELATED COLOR TEMPERATURE
CKT	CIRCUIT
CFH	CUBIC FEET PER HOUR
CFM	CUBIC FEET PER MINUTE
CHWR	CHILLED WATER RETURN
CHWS	CHILLED WATER SUPPLY
CI	CAST IRON
CL	CENTER LINE
CLG	CEILING
CMU	CONCRETE MASONRY UNIT
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CONC	CONCRETE
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CT	CURRENT TRANSFORMER
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DIFF	DIFFERENTIAL
DISCH	DISCHARGE
DIV	DIVISION
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DS	DUCT SILENCER
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ELEC	ELECTRIC
ELEV	ELEVATOR
EM	EMERGENCY FUNCTION
ENT	ENTERING
EMT	ELECTRIC METALLIC TUBE
EQ	EQUAL
EQUIP	EQUIPMENT
EQUIV	EQUIVALENT
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FLA	FULL LOAD AMPS
FLEX	FLEXIBLE
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FP	FIRE PUMP
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GFCI	GROUND FAULT CIRCUIT INTERRUPTER
GC	GENERAL CONTRACTOR
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HD	HEAD (SEE SCHEDULES)
HP	HEAT PUMP
HP	HORSEPOWER
HR	HOUR
HT	HEIGHT
HTR	HEATER
HWR	HEATING WATER RETURN
HWS	HEATING WATER SUPPLY
HX	HEAT EXCHANGER
HZ	HERTZ
ID	INSIDE DIAMETER
IG	ISOLATED GROUND
IN	INCHES
INV	INVERT
JBOX	JUNCTION BOX
K	KELVIN
KW	KILOWATT
KVA	KILO VOLT - AMPS
L	LENGTH
LAT	LEAVING AIR TEMPERATURE
L	ELEVATION
LAV	LAVATORY
LB	POUND
LD	LINEAR DIFFUSER
LF	LINEAR FEET
LIN	LINEAR
LIQ	LIQUID
LM	LUMEN
LRA	LOCKED ROTOR AMPS
LV	LOUVER
LVG	LEAVING
LWT	LEAVING WATER TEMPERATURE
MBH	THOUSANDS OF BTU PER HOUR
MC	MECHANICAL CONTRACTOR
MCA	MINIMUM CIRCUIT AMPACITY
MCB	MAIN CIRCUIT BREAKER
MD	MOTORIZED DAMPER
MDP	MAIN DISTRIBUTION PANEL
MED	MEDIUM
MFR	MANUFACTURER
MIN	MINIMUM
MISC	MISCELLANEOUS
MLO	MAIN LUG ONLY
MOCP	MAXIMUM OVERCURRENT PROTECTION
MTD	MOUNTED
MUA	MAKE-UP AIR UNIT
N	NEUTRAL
NC	NORMALLY CLOSED
NEG	NEGATIVE
NIC	NOT IN CONTRACT
NL	NIGHT / SECURITY LIGHT - DO NOT SWITCH
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NOM	NOMINAL
NTS	NOT TO SCALE
OA	OUTSIDE AIR
OBD	OPPOSED BLADE DAMPER
OC	ON CENTER
OCC	OCCUPIED
OCF	OVER CURRENT PROTECTION
OD	OUTSIDE DIAMETER
OL	OVERLOAD
ORD	OVERFLOW ROOF DRAIN
OZ	OUNCE
PBD	PARALLEL BLADE DAMPER
PD	PRESSURE DROP
PH	PHASE
POS	POSITIVE PRESSURE
POS	POINT OF SALES
PRV	PRESSURE REDUCING VALVE
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PSI	POUNDS PER SQUARE INCH
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PTAC	PACKAGED TERMINAL AIR CONDITIONER
PV	PLUG VALVE
PVC	POLYVINYL CHLORIDE
QTY	QUANTITY
RA	RETURN AIR GRILLE / REGISTER
RCP	REFLECTED CEILING PLAN
RD	ROOF DRAIN
REL	RELIEF
REQD	REQUIRED
RF	RETURN FAN
RH	RELATIVE HUMIDITY
RHC	REHEAT COIL
RLA	RATED LOAD AMPS
RM	ROOM
RPM	REVOLUTIONS PER MINUTE
SA	SUPPLY AIR GRILLE / REGISTER
SC	SHORT CIRCUIT
SCA	SHORT CIRCUIT AVAILABLE
SCCR	SHORT CIRCUIT CURRENT RATING
SCH	SCHEDULE
SD	SMOKE DAMPER
SEF	SMOKE EXHAUST FAN
SF	SUPPLY FAN
SH	SENSIBLE HEAT
SH	SHOWER
SP	STATIC PRESSURE
SPD	SURGE PROTECTION DEVICE
SPEC	SPECIFICATION
SQ	SQUARE
SS	STAINLESS STEEL
SS	SAFETY SHOWER
STD	STANDARD
STL	STEEL
SYS	SYSTEM
TEMP	TEMPERATURE
TR	TRANSFER GRILLE / REGISTER
TR	TAMPER RESISTANT
TT	TEMPERATURE TRANSMITTER
TTB	TELECOMMUNICATIONS TERMINAL BACKBOARD
TYP	TYPICAL
TX	TRANSFORMER
UC	UNDERCUT DOOR
UH	UNIT HEATER
UNO	UNLESS NOTED OTHERWISE
UNOCC	UNOCCUPIED
UR	URINAL
V	VOLTS
VA	VOLT AMPERE
VA	VALVE
VAV	VARIABLE AIR VOLUME UNIT
VFD	VARIABLE FREQUENCY DRIVE
VRF	VARIABLE REFRIGERANT FLOW
VOLT	VOLTAGE
VTR	VENT THROUGH ROOF
W	WIDTH
W	WATTS
W	WITH
W/O	WITHOUT
WB	WET BULB
WC	WATER CLOSET
WC	WATER CLOSET
WG	WATER GAUGE
WP	WEATHERPROOF
WPIU	WEATHERPROOF IN-SUE
WSR	WITHSTAND RATING
XFMR	TRANSFORMER

SUBSTITUTIONS:

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

EXAMINATION OF SITE, DRAWINGS, SPECIFICATIONS:

A. EXAMINE CAREFULLY THE SITE AND CONDITIONS OF THE SITE. PROVIDE ALL NECESSARY EQUIPMENT AND LABOR TO INSTALL A COMPLETE WORKING SYSTEM WITHIN THE SITE CONDITIONS.
 B. EXAMINE THE DRAWINGS AND SPECIFICATIONS AND 5 DAYS PRIOR TO BIDDING REPORT ANY ERRORS, OMISSIONS, INCONSISTENCIES, AND CONFLICTS TO THE ENGINEER TO BE REMEDIED IN AN ADDENDUM TO THE PROJECT PRIOR TO BID TIME.
 C. DRAWINGS ARE DIAGRAMMATIC AND CATALOG NUMBERS GIVEN ARE FOR REFERENCE ONLY. THE CONTRACT



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FLOOR PLAN, ROOF PLAN, SECTION, ELEVATIONS AND SCHEDULES

100% CD

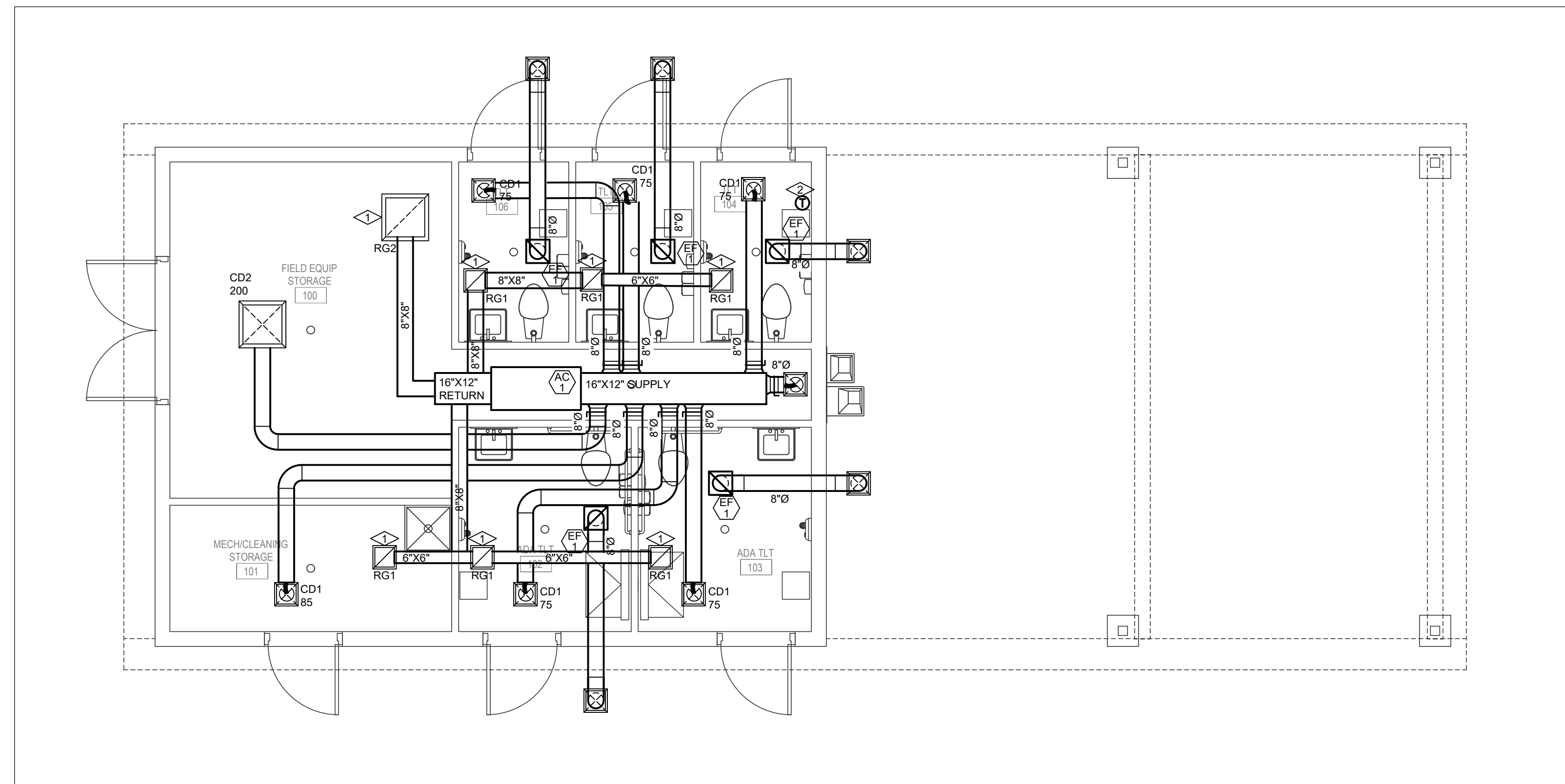
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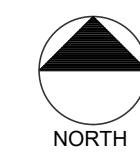
SHEET #:

M1-1



FLAG NOTES:

- ROUTE 8"Ø RETURN DUCT TO THE AIR HANDLER AH-1 RETURN.
- LOCATE A TRAMPER PROOF THERMOSTAT ON A NORTH WALL.



MECHANICAL FLOOR PLAN

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

MECHANICAL PROVISIONS

1. SCOPE OF WORK

- A. THE CONTRACTOR IS RESPONSIBLE FOR ALL WORK, MATERIALS, AND LABOR TO SATISFY A COMPLETE WORKING SYSTEM WHETHER SPECIFIED OR IMPLIED.
- B. ALL WORK IS TO BE PERFORMED IN STRICT COMPLIANCE WITH ALL LOCAL CODES AND ALL OTHER REGULATION GOVERNING WORK OF THIS NATURE.
- C. THE CONTRACTOR SHALL, BEFORE SUBMITTING ANY PROPOSAL, EXAMINE THE PROPOSED SITE AND SHALL DETERMINE FOR HIMSELF THE CONDITIONS THAT MAY AFFECT THE WORK. NO ALLOWANCE SHALL BE MADE IF THE CONTRACTOR FAILS TO MAKE SUCH EXAMINATIONS.
- D. ALL EQUIPMENT AND MATERIALS SHALL BE AS SPECIFIED OR "APPROVED EQUAL" BY THE ENGINEER OR ARCHITECT.

2. PERMITS

- A. THE CONTRACTOR SHALL SECURE ALL PERMITS OR APPLICATIONS AND PAY ANY AND ALL FEES.

3. SHOP DRAWINGS

- A. SUBMIT MATERIAL LIST AND SHOP DRAWINGS FOR MAJOR EQUIPMENT TO THE ARCHITECT/ENGINEER FOR APPROVAL. THE CONTRACTOR SHALL SUBMIT FIVE SETS OF SHOP DRAWINGS AND THEY SHALL BE CLEARLY LABELED.

4. FLEXIBLE DUCT WORK

- A. FLEXIBLE TYPE DUCT SHALL BE OF TWO ELEMENT SPIRAL CONSTRUCTION COMPOSED OF A CORROSION RESISTANT METAL SUPPORTING SPIRAL AND COATED FABRIC WITH A MINERAL BASE. FLEXIBLE DUCT CONNECTORS SHALL BE LISTED BY U.L. CLASS 1 DUCTS, AND SHALL HAVE A FLAME SPREAD RATING NOT EXCEEDING 25 AND A SMOKE DEVELOPED RATING NOT EXCEEDING 50.
- B. USE OF FLEXIBLE DUCTWORK SHALL BE LIMITED TO NO MORE THAN 6 LINEAR FEET PER RUN.
- C. CONTRACTOR SHALL BE CAREFUL SO AS NOT TO KINK OR COLLAPSE FLEXIBLE DUCT.

5. REFRIGERANT

- A. PIPING CONTRACTOR SHALL PROVIDE AND INSTALL REFRIGERANT PIPING IN ACCORDANCE WITH THE MANUFACTURER'S RECOMMENDATIONS AND IN SUCH A WAY AS TO BE INCONSPICUOUS AND FREE FROM ANY POSSIBLE CONDENSATION.
- B. INSULATE REFRIGERANT LINES WITH ARMOUR-FLEX TYPE INSULATION, SHALL BE TYPE "K" COPPER TUBING, WITH WROUGHT COPPER SOLDER TYPE FITTINGS SUITABLE FOR CONNECTION WITH SILVER SOLDER.

6. DUCTWORK

- A. THE DUCTWORK SHALL BE CONSTRUCTED IN ACCORDANCE WITH THE "SMACNA" APPLICABLE MANUALS.
- B. ALL DUCTWORK SHALL BE THE LOW VELOCITY TYPE, UNLESS SPECIFIED OTHERWISE.
- C. CONTRACTOR SHALL PROVIDE AND INSTALL APPROVED FIRE DAMPERS AND ACCESS PANELS IN ANY AND ALL DUCTWORK WHICH PENETRATES A HORIZONTAL OR VERTICAL FIRE PARTITION, OR AS OTHERWISE SHOWN ON DRAWINGS.
- D. ALL BRANCH DUCTS TO HAVE VOLUME DAMPERS, SMOOTH TURN RADIUS DUCTWORK OR TURNING VANES SHALL BE USED THROUGHOUT WHERE FLOW EXCEEDS 150 CFM.
- E. ALL DUCT JOINTS TO BE SEALED IN ACCORDANCE WITH "SMACNA" STANDARDS AND ACCEPTED GOOD PRACTICE.
- F. ALL DUCT DIMENSIONS SHOWN ARE NET INSIDE VALUES. DIMENSIONS MAY BE CHANGED SO LONG AS THE NET FREE FACE AREA IS MAINTAINED.
- G. ALL CONCEALED DUCTWORK SHALL BE INSULATED WITH 1-1/2" FIBERGLASS INSULATING BLANKET WITH ALUMINUM FOIL FACING.
- H. ALL SUPPLY AND RETURN DUCTWORK 15 FEET DOWNSTREAM OF THE HVAC UNIT SHALL BE INTERNALLY LINED WITH A 1/2" ACOUSTICAL DUCT LINER UNLESS OTHERWISE NOTED ON THE DRAWINGS.

7. DRAINAGE PIPING

- A. (CONDENSATE) SHALL BE SCHEDULE 40 PVC PIPE WITH SOLVENT JOINTS. PITCH HORIZONTAL LINES 1" IN 10'-0". CONDENSATE DRAINS SHALL BE ROUTED TO FLOOR DRAIN, ROOF DRAIN OR INDIRECT WASTE DRAIN.

8. HVAC CONTROLS

- A. CONTRACTOR TO SUPPLY AND INSTALL ALL CONTROL WIRING AND THERMOSTATS AS REQUIRED.

9. ELECTRICAL

- A. CONTRACTOR TO COORDINATE WITH ELECTRICAL CONTRACTOR FOR LOCATION OF WIRING FOR EACH HVAC UNIT.

10. PIPE SUPPORTS

- A. ALL PIPE SHALL BE SUPPORTED FROM THE BUILDING STRUCTURE IN A NEAT AND WORKMANLIKE MANNER. THE USE OF WIRE OR METAL STRAP TO SUPPORT PIPES WILL NOT BE PERMITTED. SPACING OF PIPE SUPPORTS SHALL NOT EXCEED 8 FEET FOR ALL PIPING. PLASTIC PIPING TO BE SUPPORTED EVERY 4 FEET.

11. GAS PIPING

- A. PIPING SHALL BE SCHEDULE 40 BLACK STEEL PIPE WITH MALLEABLE IRON FITTINGS. WHERE GAS PIPE CONNECTS TO EQUIPMENT, IT SHALL BE PROVIDED WITH A DRIP LEG THE FULL SIZE OF THE RUNOUT. A 100% SHUT-OFF VALVE AND A UNION. GAS PIPING CONTAINING PRESSURE GREATER THAN 9" W.G. SHALL BE SCHEDULE 40 BLACK STEEL PIPE WITH WELDED JOINTS.

12. MISCELLANEOUS

- A. ALL EXTERIOR OPENINGS TO BE PROPERLY CAULKED AND SEALED WITH A SEALANT OF HIGH QUALITY AND LONG LIFE, TO PREVENT INFILTRATION OF OUTSIDE AIR INTO CONDITIONED SPACE.
- B. COORDINATE INSTALLATION OF ALL ROOF FLASHING AT ROOF PENETRATION.
- C. DO NOT SCALE THIS DRAWING FOR EXACT DIMENSIONS.
- D. VERIFY ALL FIGURES, CONDITIONS, AND DIMENSIONS AT THE JOB SITE.
- E. THE MECHANICAL PLANS ARE INTENDED TO BE DIAGRAMMATIC AND ARE BASED ON ONE MANUFACTURER'S EQUIPMENT. THEY ARE NOT INTENDED TO SHOW EVERY ITEM IN ITS EXACT LOCATION, THE EXACT DIMENSIONS, OR ALL THE DETAILS OF THE EQUIPMENT.
- F. THE CONTRACTOR SHALL VERIFY THE ACTUAL DIMENSIONS OF THE EQUIPMENT PROPOSED TO ENSURE THAT THE EQUIPMENT WILL FIT IN THE AVAILABLE SPACE.
- G. PEX TUBING, IF PEX TUBING IS USED AS AN APPROVED ALTERNATE FOR APPLICATIONS WHERE METALLIC PIPING IS THE BASIS OF DESIGN, THE PEX MANUFACTURER SHALL SUBMIT SHOP DRAWINGS CLEARLY INDICATING THAT THE DESIGN HAS BEEN ANALYZED AND MODIFIED, AS REQUIRED TO MAINTAIN SCHEDULED HYDRONIC SYSTEM PARAMETERS. ANY DESIGN RESULTING IN INCREASED SYSTEM PRESSURE DROP AS A RESULT OF IMPROPER PEX SIZING OR DESIGN SHALL NOT BE PERMITTED.

13. TESTING AND BALANCING

- A. THE HVAC SYSTEM SHALL BE TESTED AND BALANCED BY AN INDEPENDENT AGENCY UNDER THE SUPERVISION OF A LICENSED PROFESSIONAL ENGINEER. A SEALED TYPE WRITTEN REPORT SHALL BE SUBMITTED TO THE ARCHITECT/ENGINEER FOR REVIEW AND APPROVAL.

14. GUARANTEE

- A. MATERIALS, EQUIPMENT AND INSTALLATION SHALL BE GUARANTEED FOR A PERIOD OF ONE(1) YEAR FROM DATE OF ACCEPTANCE. DEFECTS WHICH APPEAR DURING THAT PERIOD SHALL BE CORRECTED AT THIS CONTRACTOR'S EXPENSE.
- B. FOR THE SAME PERIOD, THE MECHANICAL CONTRACTOR SHALL BE RESPONSIBLE FOR ANY DAMAGE TO PREMISES CAUSED BY DEFECTS IN WORKMANSHIP OR IN THE WORK OR EQUIPMENT FURNISHED AND/OR INSTALLED BY HIM.

ELECTRIC AIR HANDLER SCHEDULE													
EQUIPMENT NO.	SERVICE	SUPPLY AIR (CFM)	SUPPLY AIR E.S.P. (IN. W.G.)	HEATING		COOLING	ELECTRICAL				UNIT WEIGHT (LBS.)	MANUFACTURER & MODEL	OPTIONS /ACCESSORIES
				(MBH)	KW	(MBH)	V./PH./HZ.	HP	MCA	MOCP			
AH-1	HANGING IN MECH/PLUMBING CHASE	840	0.3	25600	7.5	NA	208/1/60	1/4	28.6	45.00	131	AIREA SE BCS 2M24	NOTE-1

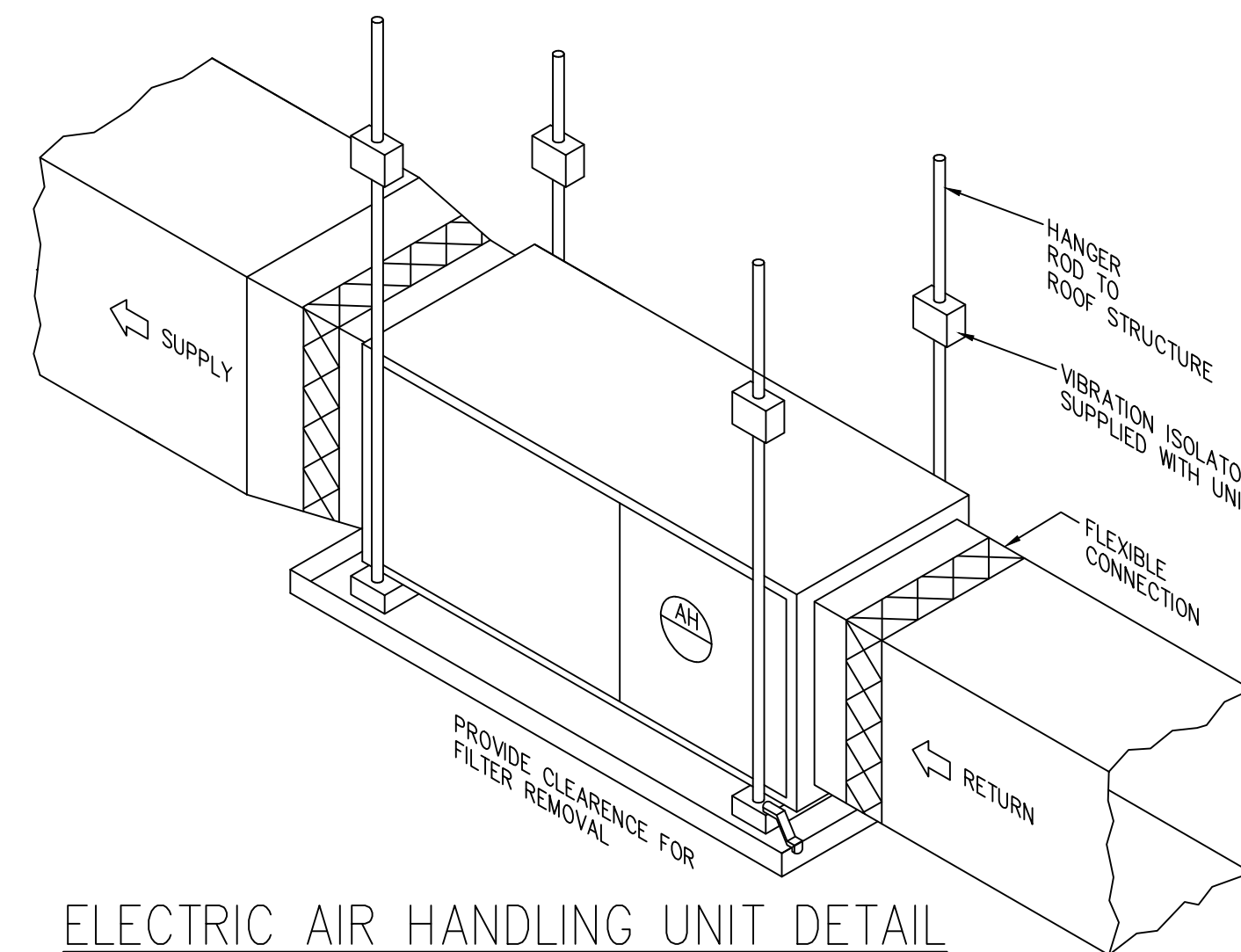
NOTES:
1. PROVIDE ELECTRIC HEAT KIT AEHCC07CSA-1 AND TAMPER PROOF THERMOSTAT.

EXHAUST FAN SCHEDULE										
EQUIPMENT NO.	SERVICE	LOCATION	CFM	EXTERNAL STATIC PRESS (IN. W.G.)	MOTOR				MANUFACTURER & MODEL	OPTIONS/ACCESSORIES
					WATTS	HP	RPM	VOLT/PH/HZ		
EF-1	TOILET ROOMS	CEILING	75	0.03	54.00	-	900	110/1/60	GREENHECK #SPB80	NOTE-1

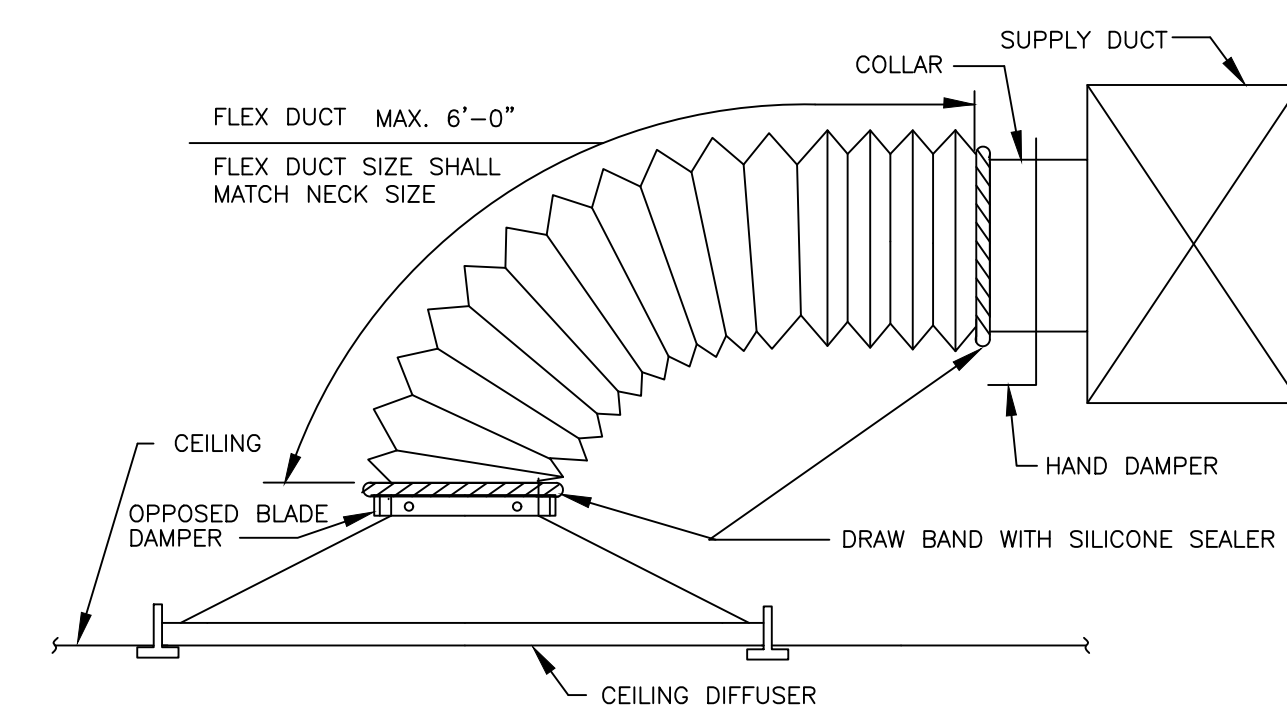
NOTES:
1. MOTION SENSOR ON/OFF, BACK DRAFT DAMPER, STEEL INTERIOR GRILLE.

GRILLE-REGISTER-DIFFUSER SCHEDULE					
EQUIPMENT NO.	SIZE	MODEL	MANUFACTURER	FINISH	OPTIONS/ACCESSORIES
CD1	12"X12"	SHR W/OBD	KRUEGER	BY ARCH	SEE DRAWING FOR NECK SIZE
CD2	24"X24"	SHR W/OBD	KRUEGER	BY ARCH	SEE DRAWING FOR NECK SIZE
RG1	12"X12"	SHR - OPEN	KRUEGER	BY ARCH	SEE DRAWING FOR NECK SIZE
EG1	8"X8"	EGC - HEAVY	KRUEGER	BY ARCH	SEE DRAWING FOR NECK SIZE

NOTES: COORDINATE ALL MOUNTING TYPES WITH CEILING.



ELECTRIC AIR HANDLING UNIT DETAIL
N.T.S.



TYPICAL DIFFUSER CONNECTION
(SIDE OF DUCT CONNECTION)
NOT TO SCALE



Bighorn Consulting Engineers, Inc.
Mechanical & Electrical Engineers
386 Indian Road
Grand Junction, CO 81501
Phone (970) 241-8709

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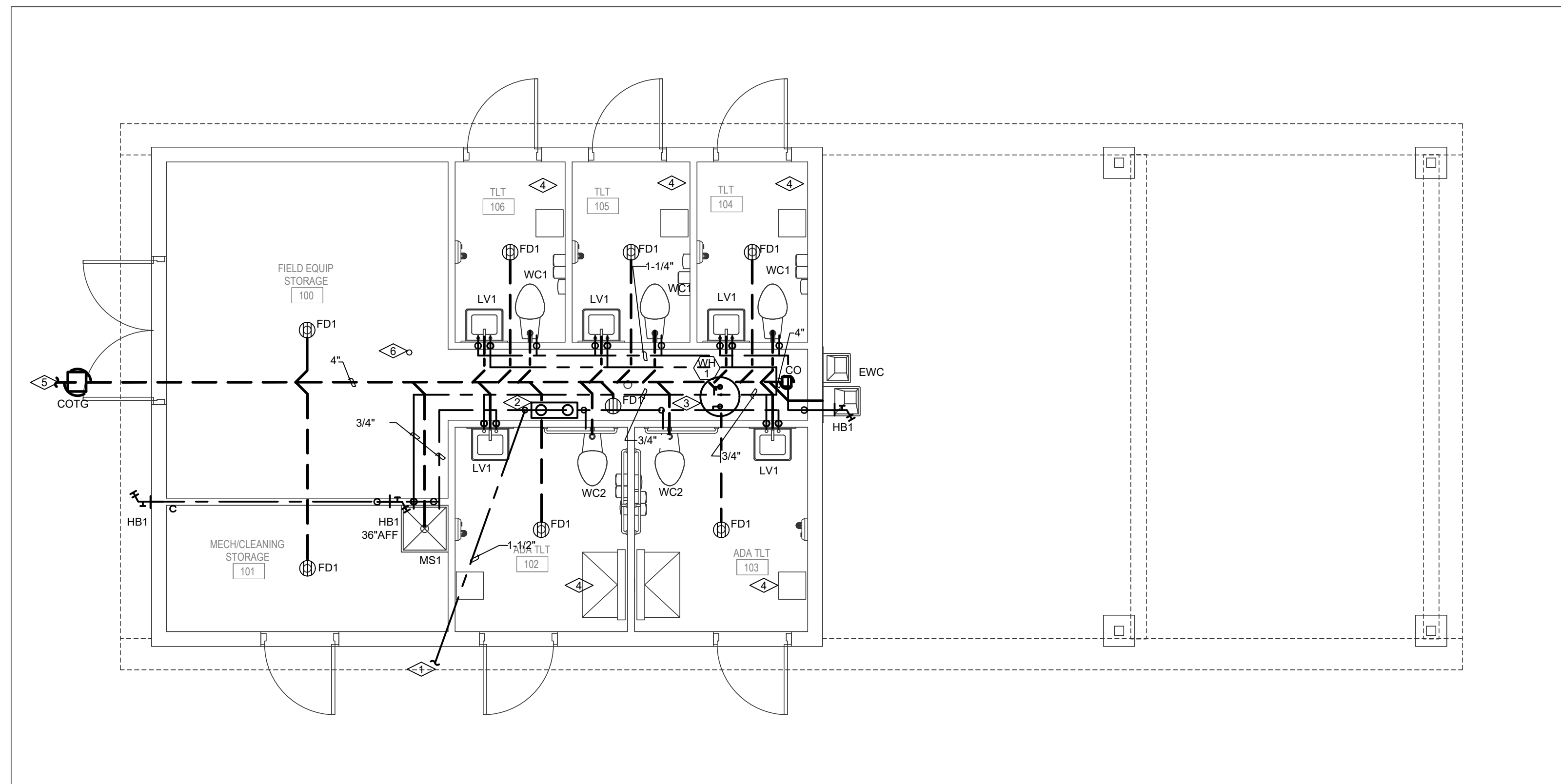
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COMBINED MECHANICAL AND PLUMBING FLAG NOTES:

1. 1-1/2" DOMESTIC WATER SERVICE TO METER. ROUTE PIPING A MINIMUM OF 48" BELOW FINISHED GRADE AND SLEEVE THROUGH EXTERIOR WALL. REFER TO CIVIL DRAWINGS FOR CONTINUATION.
2. PROVIDE AND INSTALL LINE SIZE REDUCED PRESSURE BACK FLOW PREVENTER. ROUTE DRAIN FROM CONNECTION AT AIR GAP DRAIN FITTING TO FLOOR DRAIN. SEE DETAIL.
3. ROUTE TO WATER HEATER. SEE WATER HEATER DETAIL.
4. SEE PLUMBING EQUIPMENT SCHEDULE. CONNECT NEW FIXTURES TO COLD, HOT, WASTE AND VENT LINES PER MANUFACTURER'S INSTALLATION GUIDE. PROVIDE SHUT OFF VALVES TO ALL PLUMBING FIXTURE GROUPS AND INDIVIDUAL PLUMBING FIXTURES. PROVIDE SHOCK ABSORBER HAMMER FOR ALL TOILET ROOMS.
5. EXTEND WASTE TO 5'-0" BEYOND BUILDING EXCAVATION LINE. INSTALL GRADE CLEAN-OUT. CONNECT TO SANITARY SEWER EXTENDED TO BUILDING IN SITE UTILITIES PORTION OF WORK. PROVIDE SLEEVE THROUGH STRUCTURE. REFERENCE CIVIL DRAWINGS FOR CONTINUATION.
6. ROUTE 3" VENT THRU ROOF. VENT LINE FROM WASTE FIXTURE UP WALL TO ABOVE CEILING.

PLUMBING FIXTURE SCHEDULE									
FIXTURE NO.	DESCRIPTION	MANUFACTURER	MODEL	TRIM	PIPING CONNECTIONS				OPTIONS-ACCESSORIES
					S/W	VENT	C.W.	HW	
DF-1	BARRIER FREE DUAL WALL MOUNT FOUNTAIN	ELKAY	VRCTL8SC		1 1/2"	1 1/2"	1/2"	-	PROVIDE MOUNTING FRAME # MTGFR.DF2
FD-1	FLOOR DRAIN	ZURN	Z415S	CAST IRON HOUSING, NICKEL BRONZE STRAINER	3"	2"	-	-	PROVIDE NICKEL BRONZE STRAINER, ASSE 1017 RATED J.R. SMITH QUAD-CLOSE MECHANICAL TRAP SEAL. PROVIDE ACID RESISTING EPOXY COATED CAST IRON AT FLOOR DRAINS WHICH RECEIVE CONDENSATE DISCHARGE FROM HIGH EFFICIENCY GAS EQUIPMENT.
HB-1	FREEZE PROOF HOSE BIB	WOODFORD	B67	-	-	-	3/4"	-	PROVIDE ANTI SIPHON, FREEZEPROOF, LOCKING ENCLOSURE EXTERIOR RATED HOSE BIB.
LV-1	WALL MOUNTED BATHROOM SINK	AMERICAN STANDARD, LUCERNE	356.015	PROVIDE WITH AMERICAN STANDARD	1 1/2"	1 1/2"	1/2"	1/2"	GRID DRAIN K-7129-A-CP
MS-1	UTILITY SINK	STERN WILLIAMS	MTB	PROVIDE WITH T10VB SERVICE FAUCET	1 1/2"	1 1/2"	1/2"	1/2"	COMPOSITE BASIN WITH T4024SS MOP HANGER AND T10VB SERVICE FAUCET
WC-1	WATER CLOSET	AMERICAN STANDARD, MADERA ELONGATED	2234.105	1.6/1.1 GPF SELECTRONIC, DUAL FLUSH VALVE	4"	2"	1-1/2"	-	VITREOUS CHINA, ADA 1.6GPH, ELONGATED, OPEN FRONT SEAT, SLOAN #8110 FLUSH VALVE, BATTERY POWERED.
WC-2	ADA WATER CLOSET	AMERICAN STANDARD, MADERA ELONGATED	3043.102	1.6/1.1 GPF SELECTRONIC, DUAL FLUSH VALVE	4"	2"	1-1/2"	-	ADA VITREOUS CHINA, ADA 1.6GPH, ELONGATED, OPEN FRONT SEAT, SLOAN #8110 FLUSH VALVE, BATTERY POWERED.

PLUMBING SPECIFICATION

1. SCOPE OF WORK

A. THE CONTRACTOR IS RESPONSIBLE FOR ALL WORK, MATERIALS, AND LABOR TO SATISFY A COMPLETE WORKING SYSTEM WHETHER SPECIFIED OR IMPLIED.

B. ALL WORK IS TO BE PERFORMED IN STRICT COMPLIANCE WITH THE INTERNATIONAL PLUMBING CODE (LATEST EDITION), ALL LOCAL CODES AND ALL OTHER REGULATION GOVERNING WORK OF THIS NATURE.

C. THE CONTRACTOR SHALL, BEFORE SUBMITTING ANY PROPOSAL, EXAMINE THE PROPOSED SITE AND SHALL DETERMINE FOR HIMSELF THE CONDITIONS THAT MAY AFFECT THE WORK. NO ALLOWANCE SHALL BE MADE IF THE CONTRACTOR FAILS TO MAKE SUCH EXAMINATIONS.

D. ALL EQUIPMENT AND MATERIALS SHALL BE AS SPECIFIED OR "APPROVED AS EQUAL" BY THE ENGINEER OR ARCHITECT.

2. PERMITS

A. THE CONTRACTOR SHALL SECURE ALL PERMITS OR APPLICATIONS AND PAY ANY AND ALL FEES.

3. SHOP DRAWINGS

A. SUBMIT MATERIAL LIST AND SHOP DRAWINGS FOR MAJOR EQUIPMENT TO THE ARCHITECT/ENGINEER FOR APPROVAL. THE CONTRACTOR SHALL SUBMIT FIVE SETS OF SHOP DRAWINGS AND THEY SHALL BE CLEARLY LABELED.

4. DOMESTIC WATER SUPPLY PIPING

A. UNDERGROUND: PROVIDE TYPE "K" SOFT DRAWN COPPER TUBING WITH BRAZED CONNECTIONS.

B. ABOVE GROUND: PROVIDE TYPE "L" HARD DRAWN COPPER TUBING WITH 125 PSI SOLDER JOINTS, COPPER OR BRASS FITTINGS. ALL SOLDER TO BE "NO LEAD" TYPE.

C. ALL HOT WATER PIPING TO BE INSULATED WITH 1" FIBERGLASS INSULATION.

D. ALL COLD WATER PIPING TO BE INSULATED WITH 1/2" FOAM INSULATION.

5. SANITARY/STORM DRAINAGE AND VENT PIPING

A. ABOVE GRADE:

-2" BELOW: SCHEDULE 40 GALV. STEEL PIPE WITH SCREWED ENDS OR SOLID CORE SCHEDULE 40 PVC WITH SOLVENT JOINTS OR DWV COPPER WITH SOLDER JOINTS. ALL SOLDER TO BE "NO LEAD" TYPE.

-3" AND ABOVE: SERVICE WT. CAST IRON WITH NO-HUB OR BELL AND SPIGOT JOINTS; OR SOLID CORE SCHEDULE 40 PVC WITH SOLVENT JOINTS.

B. BELOW GRADE: SERVICE WT. CAST IRON WITH NO-HUB OR BELL AND SPIGOT JOINTS; OR SOLID CORE SCHEDULE 40 PVC WITH SOLVENT JOINTS.

C. PVC PIPING SHALL NOT BE USED IN AIR PLENUM CEILINGS AND SHALL NOT CROSS FIRE RATED WALLS, CEILINGS, OR FLOORS.

D. DRAINAGE PIPING SHALL BE RUN AS STRAIGHT AS POSSIBLE AND SHALL HAVE LONG TURN FITTINGS.

E. DRAINAGE PIPING 3" SIZE AND SMALLER SHALL RUN AT A UNIFORM GRADE OF AT LEAST 1/8" PER FOOT. AND PIPING LARGER THAN 3" SHALL BE RUN AT A GRADE OF NO LESS THAN 1/8" PER FOOT.

F. ALL VENT PIPING SHALL BE SLOPED TO DRAIN BACK TO FIXTURES.

G. CONTRACTOR SHALL BE RESPONSIBLE FOR THE PROPER FLASHING OF THE VENT PIPING RUN THROUGH THE ROOF.

H. PVC USED TO BE SOLID CORE TYPE SCHEDULE 40 PVC.

7. PIPE SUPPORTS

A. ABOVE GRADE: ALL PIPE SHALL BE SUPPORTED FROM THE BUILDING STRUCTURE IN A NEAT AND WORKMANLIKE MANNER. THE USE OF WIRE AND PERFORATED METAL TO SUPPORT PIPES WILL NOT BE PERMITTED. SPACING OF PIPE SUPPORTS SHALL BE AS SPECIFIED IN INTERNATIONAL PLUMBING CODE (LATEST EDITION).

B. BELOW GRADE: EARTH SHALL BE EXCAVATED TO A MINIMUM DEPTH WITH AN EVEN SURFACE TO INSURE SOLID BEARING OF PIPE FOR ITS ENTIRE LENGTH.

-INTERIOR: THE PIPE SHALL BE INSTALLED (UNLESS OTHERWISE SPECIFIED) A MINIMUM OF 4 INCHES BELOW THE BOTTOM OF THE SLAB AND SHALL NOT BE IN ANY DIRECT CONTACT WITH THE CONCRETE AT ANY POINT.

-EXTERIOR: THE WATER PIPE SHALL HAVE A MINIMUM OF 60" OF COVER AND THE SANITARY WASTE PIPE SHALL HAVE A MINIMUM OF 24" OF COVER.

8. MISCELLANEOUS

A. COORDINATE INSTALLATION OF ALL ROOFS FLASHING AT ROOF PENETRATIONS.

B. DO NOT SCALE THIS DRAWING FOR EXACT DIMENSIONS. VERIFY ALL FIGURES, CONDITIONS AND DIMENSIONS AT THE JOB SITE.

C. THE PLUMBING PLANS ARE INTENDED TO BE DIAGRAMMATIC AND ARE BASED ON ONE MANUFACTURER'S EQUIPMENT. THEY ARE NOT INTENDED TO SHOW EVERY ITEM IN ITS EXACT LOCATION. THE EXACT DIMENSIONS OR ALL THE DETAILS OF THE EQUIPMENT. THE CONTRACTOR SHALL VERIFY THE ACTUAL DIMENSIONS OF THE EQUIPMENT PROPOSED TO ENSURE THAT THE EQUIPMENT WILL FIT THE AVAILABLE SPACE.

9. TESTING

A. PLUMBING SYSTEM SHALL BE FLOW AND PRESSURE TESTED IN ACCORDANCE WITH THE INTERNATIONAL PLUMBING CODE (LATEST EDITION).

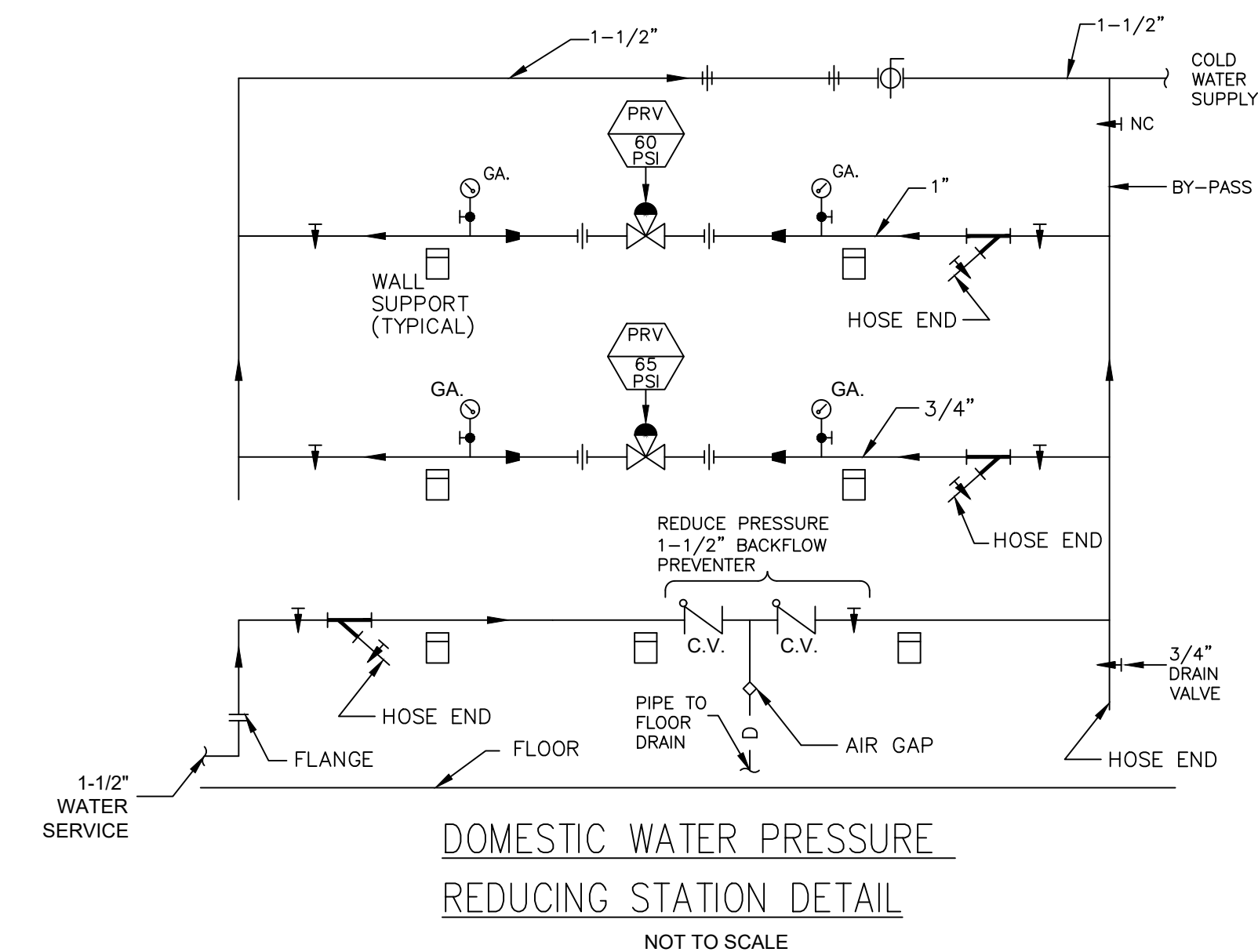
10. GUARANTEE

A. MATERIALS, EQUIPMENT AND INSTALLATION SHALL BE GUARANTEED FOR A PERIOD OF ONE (1) YEAR FROM DATE OF ACCEPTANCE. DEFECTS WHICH APPEAR DURING THAT PERIOD SHALL BE CORRECTED AT THIS CONTRACTORS EXPENSE.

B. FOR THE SAME PERIOD THE PLUMBING CONTRACTOR SHALL BE RESPONSIBLE FOR ANY DAMAGE TO PREMISES CAUSED BY DEFECTS IN WORKMANSHIP OR IN THE WORK OR EQUIPMENT FURNISHED AND/OR INSTALLED BY HIM.

ELECTRIC WATER HEATER SCHEDULE								
EQUIPMENT NO.	CAPACITY	RECOVERY @ 90 DEG. F. RISE	BTU/H	WATER CONN.	HEATING ELEMENT KW	V/PH/Hz	MANUFACTURER & MODEL	OPTIONS/ACCESSORIES
WH-1	12	7	10236	3/4"	3	120/1/60	BRADFORD WHITE M-1-12UT6SS	NOTE-1

NOTES:
1. PROVIDE WITH AQUASTAT, ASME TEMPERATURE AND PRESSURE RELIEF VALVE, EXPANSION TANK, AND FACTORY CONTROLS.



Bighorn Consulting Engineers, Inc.
Mechanical & Electrical Engineers

386 Indian Road
Grand Junction, CO 81501
Phone (970) 241-8709

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

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

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

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

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

LIGHT FIXTURES	
	1'x4' LED TROFFER OR DIRECT/INDIRECT TYPE FIXTURE GRID, FLANGE OR SURFACE MOUNTED
	2'x4' LED TROFFER OR DIRECT/INDIRECT TYPE FIXTURE GRID, FLANGE OR SURFACE MOUNTED
	2'x2' LED TROFFER OR DIRECT/INDIRECT TYPE FIXTURE GRID, FLANGE OR SURFACE MOUNTED
	OPEN STRIP FIXTURE
	WALL BRACKET LINEAR FIXTURE
	WALL MOUNTED DOWNLIGHT LIGHT FIXTURE
	RECESSED SOUNGLIGHT CAN FIXTURE
	SURFACE CEILING OR PENDANT MOUNTED FIXTURE
	EX2 DOUBLE FACE EXIT SIGN, WALL AND CEILING MOUNTED
	EX1 SINGLE FACE EXIT SIGN, WALL AND CEILING MOUNTED
	EM WALL MOUNTED EMERGENCY LIGHT
	EMR EMERGENCY EXTERIOR EGRESS FIXTURE

- GENERAL ELECTRICAL NOTES:**
- ALL ELECTRICAL WORK TO COMPLY WITH LATEST EDITION OF NEC, IECC AND ALL APPLICABLE GOVERNING CODES.
 - FIELD COORDINATION DURING CONSTRUCTION IS IMPERATIVE. CONTRACTORS BIDDING THIS WORK MUST MAKE REASONABLE ALLOWANCES FOR UNFORESEEN CONTINGENCIES.
 - ELECTRIC UTILITY TO ADVISE OWNER AND/OR THE ELECTRICAL ENGINEER PRIOR TO SERVICE MODIFICATION REQUIRING COST TO THE OWNER.
- WIRING:**
- ALL WIRING IS SHOWN DIAGRAMMATICALLY ON DRAWING, FIELD VERIFY ALL CONDITIONS PRIOR TO ROUGH-IN.
 - ALL CONDUITS AND CONVEYANCES SHALL BE CONCEALED. IN THE EVENT THAT A NEW DEVICE IS BEING INSTALLED IN AN EXISTING DRYWALL PARTITION, PROVIDE A CUT IN TYPE BOX AND FISH FLEXIBLE CONDUIT DOWN INSIDE THE WALL FROM ABOVE THE CEILING AND REPAIR THE DRYWALL AROUND THE CONDUIT. TRANSITION TO EMT ONCE ABOVE THE CEILING.
 - SIZES OF WIRE AND CABLES ARE BASED UPON COPPER CONDUCTORS, UNLESS OTHERWISE INDICATED. ALL CIRCUITS SHALL CONTAIN (2) #12 AWG WITH (1) #12 GND IN 1/2" CONDUIT UNLESS NOTED OTHERWISE.
 - ALL BRANCH CIRCUITS WITH HOME RUNS OVER 50 FEET, WILL BE SIZED ONE SIZE LARGER.
 - ALL PENETRATIONS IN OR THROUGH FIRE RATED PARTITIONS SHALL BE FIRE STOPPED IN SUCH A WAY THAT THE PENETRATION MATCHES THE FIRE RATING OF THE WALL.
 - THE ELECTRICAL CONTRACTOR IS RESPONSIBLE FOR ALL COORDINATION BETWEEN THE APPROPRIATE DISCIPLINES AND CONTRACTORS.
 - COORDINATE ALL DEVICE, FIXTURE AND HARDWARE COLOR SELECTIONS WITH THE ARCHITECT PRIOR TO MAKING SHOP DRAWING SUBMITTALS.
 - COORDINATE THE MOUNTING HEIGHTS OF ALL RECEPTACLES MOUNTED ABOVE COUNTERS, CASEWORK AND APPLIANCE RECEPTACLES WITH ARCHITECTURAL ELEVATIONS.
 - BRANCH CIRCUIT AND SPECIAL SYSTEMS WIRING FOR DEVICES ON WALLS IN FINISHED AREAS WHICH CANNOT BE CONCEALED SHALL BE INSTALLED IN SURFACE MOUNTED RACEWAY.
 - ALL EXPOSED CONDUITS, BOXES, ETC. IN ROOMS TO BE PAINTED SHALL BE PAINTED TO MATCH THE SURROUNDING SURFACE. EXPOSED CONDUITS, BOXES, ETC. IN ROOMS WHICH ARE NOT PAINTED MAY BE LEFT UN-PAINTED. EXPOSED CONDUIT, BOXES, ETC. ON THE EXTERIOR OF BUILDINGS SHALL BE PAINTED TO MATCH THE SURROUNDING SURFACE AS CLOSELY AS POSSIBLE.
 - THE CONTRACTOR IS RESPONSIBLE FOR PATCHING, PAINTING, REPAIRING OR REPLACEMENT OF ALL WALLS, CEILING OR OTHER BUILDING ELEMENTS WHICH ARE DISTURBED AS PART OF THE DEMOLITION AND/OR INSTALLATION OF ELECTRICAL WORK.
 - PROVIDE ELECTRICAL CONNECTION TO ALL FIRE, SMOKE, AND FIRE / SMOKE DAMPERS INCLUDING POWER AND FIRE ALARM. VERIFY EXACT SIZE AND FINAL LOCATION OF ALL DAMPERS WITH THE MECHANICAL CONTRACTOR. ALL ROOFTOP UNITS RATED AT MORE THAN 2000 CFM WILL BE OUTFITTED WITH A DUCT DETECTOR IN THE RETURN DUCT. ALL ROOFTOP UNITS RATED AT MORE THAN 1500 CFM WILL BE OUTFITTED WITH A DUCT DETECTOR IN BOTH THE SUPPLY AND RETURN DUCT AT ROOFTOP LEVEL AND IN THE RETURN DUCT AT EVERY LEVEL THAT IS SERVED. ELECTRICAL CONTRACTOR WILL PROVIDE A REMOTE TEST STATION AND ALL WIRING NECESSARY TO COMPLETE INSTALLATION.
 - REFER TO THE MECHANICAL EQUIPMENT SCHEDULE FOR ADDITIONAL REQUIREMENTS ASSOCIATED WITH PLUMBING AND HVAC EQUIPMENT AND OWNER/GENERAL CONTRACTOR FURNISHED EQUIPMENT.

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

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

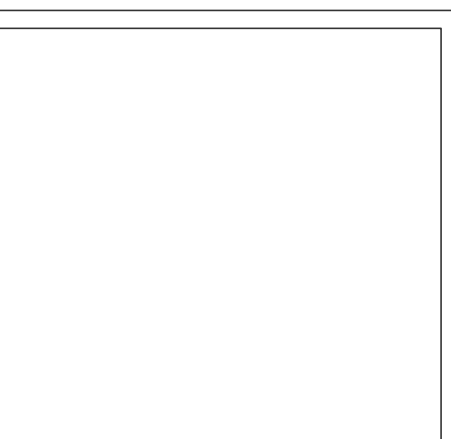
ELECTRICAL DEVICE LEGEND	
	CEILING JUNCTION BOX - SURFACE/FLUSH
	WALL JUNCTION BOX - SURFACE/FLUSH
	DUPLEX RECEPTACLE
	FLOOR MOUNTED RECEPTACLE
	SPLIT WIRE DUPLEX RECEPTACLE
	CEILING MOUNTED DUPLEX RECEPTACLE
	FLOOR MOUNTED FOURPLEX RECEPTACLE
	APPLIANCE RECEPTACLE - 3 WIRE
	DUPLEX RECEPTACLE
	FOURPLEX RECEPTACLE
	ABBREVIATIONS PERTAIN TO ALL DUPLEX AND FOURPLEX RECEPTACLES ABOVE COUNTER
	AC GF ABOVE COUNTER WITH USB PORT
	AC USB ARC FAULT PROTECTED
	AF GF ARC FAULT WITH GROUND FAULT CIRCUIT INTERRUPTER
	AF USB ARC FAULT PROTECTED WITH USB PORT
	AF GF DEDICATED RECEPTACLE
	D USB DEDICATED RECEPTACLE WITH USB PORT
	EM RECEPTACLE CIRCUITED TO THE EMERGENCY PANEL WITH RED COVER PLATE
	GF GROUND FAULT CIRCUIT INTERRUPTER
	GF WP WEATHER PROOF GROUND FAULT CIRCUIT INTERRUPTER
	PL PLUG LOAD
	7Z GENERAL PURPOSE WITH MOUNTING HEIGHT.
	ELECTRIC HAND DRYER
	THERMOSTAT
	OPEN/CLOSE/STOP PUSH BUTTON
	DRAWING KEY NOTES
	ROOM DESIGNATION

- LUMINAIRES:**
- COORDINATE THE LOCATION OF ALL LIGHTING EQUIPMENT INCLUDING BUT NOT LIMITED TO THE LUMINAIRES, SWITCHES WITH THE ARCHITECTURAL, STRUCTURAL AND MECHANICAL DRAWINGS AND ALL OTHER TRADES AS REQUIRED. REFER TO THE ARCHITECTURAL REFLECTED CEILING PLANS FOR DIMENSIONAL LOCATION OF LIGHT FIXTURES.
 - LIGHTING FIXTURES SHALL BE SUPPORTED FROM THE STRUCTURE ABOVE AND SHALL NOT BE SUPPORTED FROM THE T-BAR CEILING GRID.
 - THE ELECTRICAL CONTRACTOR IS TO CONFIRM THE LIGHT FIXTURES ORDERED WILL BE COMPATIBLE WITH THE CEILING TYPES AS SHOWN ON THE ARCHITECTURAL REFLECTED CEILING PLANS. NOTIFY THE ENGINEER OF ANY DISCREPANCIES PRIOR TO ORDERING THE FIXTURES.
 - VERIFY LUMINAIRE MOUNTING REQUIREMENTS AND OVERALL HEIGHT OF ALL PENDANT MOUNTED FIXTURES PRIOR TO ORDERING.
 - ALL LIGHT FIXTURES NEED TO BE COMPATIBLE WITH THE SWITCHES AND CONTROLS BEING PROVIDED.
 - THE LIGHTING PACKAGE SHALL BE APPROVED BY BOTH THE ARCHITECT AND ENGINEER AS APPROVED EQUAL BEFORE BID. NO LIGHT FIXTURE SHALL BE ORDERED UNTIL THE LIGHT FIXTURE SUBMITTAL PACKAGE HAS BEEN APPROVED IN WRITING BY THE ARCHITECT, GENERAL CONTRACTOR AND ELECTRICAL ENGINEER.
 - COORDINATE LUMINAIRE MOUNTING REQUIREMENTS PRIOR TO PLACING ORDER.

RESPONSIBLE DIVISION:				
ITEM	FURNISHED	SET	POWER WIRED	CONTROL WIRED
EQUIPMENT	23	23	26	--
COMBINATION MAGNETIC MOTOR STARTERS, MAGNETIC MOTOR STARTERS, VFD'S AND CONTACTORS	23(1)	26	26(2)	23
FUSED AND UNFUSED DISCONNECT SWITCHES, THERMAL OVERLOAD SWITCHES AND HEATERS, MANUAL MOTOR STARTERS	26	26	26	--
MANUAL-OPERATING AND MULTI-SPEED SWITCHES	23	26	26	26
CONTROLS, RELAYS, TRANSFORMERS	23	23	26	23
THERMOSTATS (LOW VOLTAGE) AND TIME SWITCHES	23	23	26	23
THERMOSTATS (LINE VOLTAGE)	23	23	26	26
TEMPERATURE CONTROL PANELS	23	23	26	23
MOTOR AND SOLENOID VALVES, DAMPER MOTORS, PE & EP SWITCHES	23	23(2)	--	23(2)
PUSH-BUTTON STATIONS AND PILOT LIGHTS	23	23(2)	--	23(2)
HEATING, COOLING, VENTILATION AND AIR CONDITIONING CONTROLS	23	23	26	23
EXHAUST FAN SWITCHES	23	26	26	23(2)

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

ABBREVIATIONS:			
44"	MOUNTING HEIGHT ABOVE FINISHED FLOOR TO CENTER OF DEVICE	DIA	DIAMETER
DIAG	DIAGRAM	HP	HORSEPOWER
A	AMPS	HR	HOUR
A.D.	ACCESS DOOR	HT	HEIGHT
AAV	AIR ADMITTANCE VALVE	HTR	HEATER
ABV	ABOVE	HWR	HEATING WATER RETURN
AC	AIR CONDITIONING UNIT	HWS	HEATING WATER SUPPLY
AC	ABOVE COUNTER	HX	HEAT EXCHANGER
AD	AREA DRAIN (SEE SYMBOLS)	HZ	HERTZ
A.F.C.	ABOVE FINISHED CEILING	ID	INSIDE DIAMETER
A.F.G.	ABOVE FINISHED GRADE	IG	ISOLATED GROUND
AIC	AMPERE INTERRUPTING CAPACITY	IN	INCHES
AFCI	ARC FAULT CIRCUIT INTERRUPTERS	INV	INVERT
A.F.F.	ABOVE FINISHED FLOOR	JBOX	JUNCTION BOX
AHU	AIR HANDLING UNIT	K	KELVIN
ALUM	ALUMINUM	KW	KILOWATT
AP	ACCESS PANEL OR DOOR	KVA	KILO VOLT - AMPS
ATS	AUTOMATIC TRANSFER SWITCH	L	LENGTH
AV	AUDIO / VIDEO	LAT	LEAVING AIR TEMPERATURE
AVG	AVERAGE	LV	LAVATORY
AWG	AMERICAN WIRE GAGE	LB	POUND
BAS	BUILDING AUTOMATION SYSTEM	LD	LINEAR DIFFUSER
BB	BASEBOARD	LF	LINEAR FEET
BD	BACK DRAFT DAMPER	LIN	LINEAR
BFP	BACK FLOW PREVENTOR	LIQ	LIQUID
BL	BOILER	LM	LUMEN
BLDG	BUILDING	LRA	LOCKED ROTOR AMPS
BLW	BELOW	LV	LOUVER
BOB	BOTTOM OF BEAM	LWG	LEAVING WATER TEMPERATURE
BOD	BOTTOM OF DUCT	LWT	LEAVING WATER TEMPERATURE
BOP	BOTTOM OF PIPE	MBH	THOUSANDS OF BTU PER HOUR
BSMT	BASEMENT	MC	MECHANICAL CONTRACTOR
BTU	BRITISH THERMAL UNIT	MCA	MINIMUM CIRCUIT AMPACITY
C	CHILLER	MCB	MAIN CIRCUIT BREAKER
CAPCI	COMBINATION ARC FAULT CIRCUIT INTERRUPTERS	MD	MOTORIZED DAMPER
CAP	CAPACITY	MDP	MAIN DISTRIBUTION PANEL
CB	CIRCUIT BREAKER	MED	MEDIUM
CBV	CIRCUIT BALANCING VALVE	MFR	MANUFACTURER
CCT	CORRELATED COLOR TEMPERATURE	MIN	MINIMUM
CKT	CIRCUIT	MISC	MISCELLANEOUS
CFH	CUBIC FEET PER HOUR	MLO	MAIN LUG ONLY
CFM	CUBIC FEET PER MINUTE	MNCP	MAXIMUM OVERCURRENT PROTECTION
CHWR	CHILLED WATER RETURN	MTD	MOUNTED
CHWS	CHILLED WATER SUPPLY	MUA	MAKE-UP AIR UNIT
CI	CAST IRON	N	NEUTRAL
CL	CENTER LINE	NC	NORMALLY CLOSED
CLG	CEILING	NEG	NEGATIVE
CMU	CONCRETE MASONRY UNIT	NIC	NOT IN CONTRACT
CO	CLEAN OUT	NL	NIGHT / SECURITY LIGHT - DO NOT SWITCH
COL	COLUMN	NO	NORMALLY OPEN
COMP	COMPRESSOR	NOM	NOMINAL
CONC	CONCRETE	NTS	NOT TO SCALE
COND	CONDENSATE	OA	OUTSIDE AIR
CONN	CONNECTION	OBD	OPPOSED BLADE DAMPER
CONT	CONTINUATION	OC	ON CENTER
CONTR	CONTRACTOR	OCC	OCCUPIED
CRI	COLOR RENDERING INDEX	ODP	OVER CURRENT PROTECTION
CT	COOLING TOWER	OZ	OUNCE
CT	CURRENT TRANSFORMER	PD	PARALLEL BLADE DAMPER
CU	CUPPER	PH	PHASE
CU	COPPER	POS	POSITIVE PRESSURE
CUH	CABINET ULT HEATER	POS	POINT OF SALES
CVB	CONSTANT VOLUME BOX	PRV	PRESSURE REDUCING VALVE
CWR	CONDENSER WATER RETURN	PS	PRESSURE SWITCH
CWS	CONDENSER WATER SUPPLY	PSI	POUNDS PER SQUARE INCH
DB	DRY BULB	PT	PRESSURE TRANSMITTER
DEPT	DEPARTMENT		
DF	DRINKING FOUNTAIN		
		PTAC	PACKAGED TERMINAL AIR CONDITIONER
		HR	HOUR
		PV	PLUG VALVE
		PVC	POLYVINYL CHLORIDE
		QTY	QUANTITY
		RA	RETURN AIR GRILLE / REGISTER
		RCP	REFLECTED CEILING PLAN
		RD	ROOF DRAIN
		REL	RELIEF
		REQD	REQUIRED
		RF	RETURN FAN
		RH	RELATIVE HUMIDITY
		RHC	REHEAT COIL
		RLA	RATED LOAD AMPS
		RM	ROOM
		RPM	REVOLUTIONS PER MINUTE
		SA	SUPPLY AIR GRILLE / REGISTER
		SC	SHORT CIRCUIT
		SCA	SHORT CIRCUIT AVAILABLE
		SCCR	SHORT CIRCUIT CURRENT RATING
		SCH	SCHEDULE
		SD	SMOKE DAMPER
		SEF	SMOKE EXHAUST FAN
		SF	SUPPLY FAN
		SH	SENSIBLE HEAT
		SH	SHOWER
		SP	STATIC PRESSURE
		SPD	SURGE PROTECTION DEVICE
		SPEC	SPECIFICATION
		SO	SQUARE
		SS	STAINLESS STEEL
		SS	SAFETY SHOWER
		STD	STANDARD
		STL	STEEL
		SYS	SYSTEM
		TEMP	TEMPERATURE
		TR	TRANSFER GRILLE / REGISTER
		TR	TAMPER RESISTANT
		TT	TEMPERATURE TRANSMITTER
		TTB	TELECOMMUNICATIONS TERMINAL BACKBOARD
		TYP	TYPICAL
		TX	TRANSFORMER
		UC	UNDERCUT DOOR



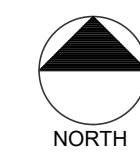
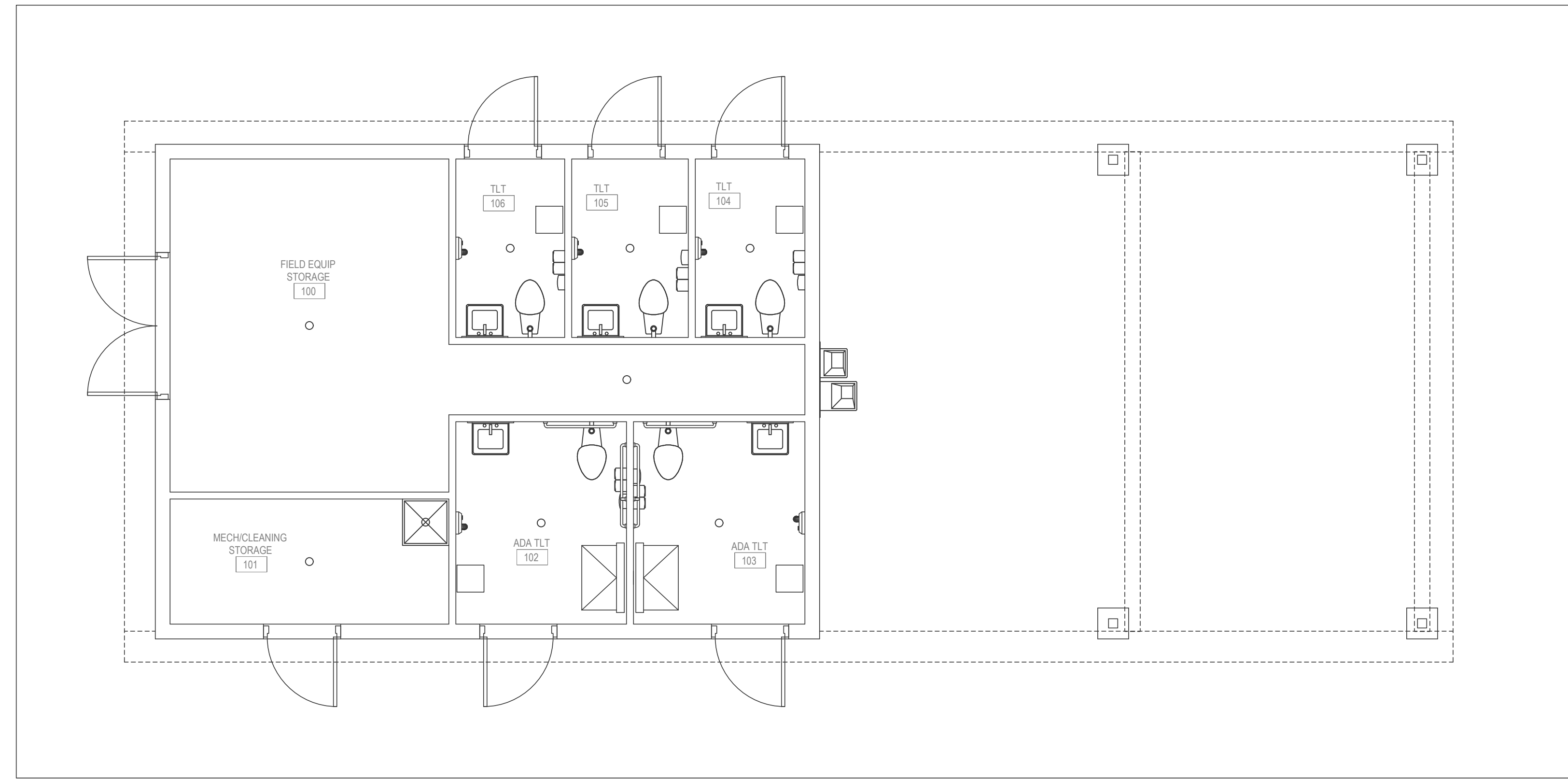
REV. DESC. DATE:

DATE: 09/15/2023

PROJECT #: 23234

SHEET #:

E1-1



LIGHTING FLOOR PLAN

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

NORTH



REED PARK RESTROOM & BUILDING FACILITIES

ELECTRICAL ROOF AND FLOOR PLAN

100% CD

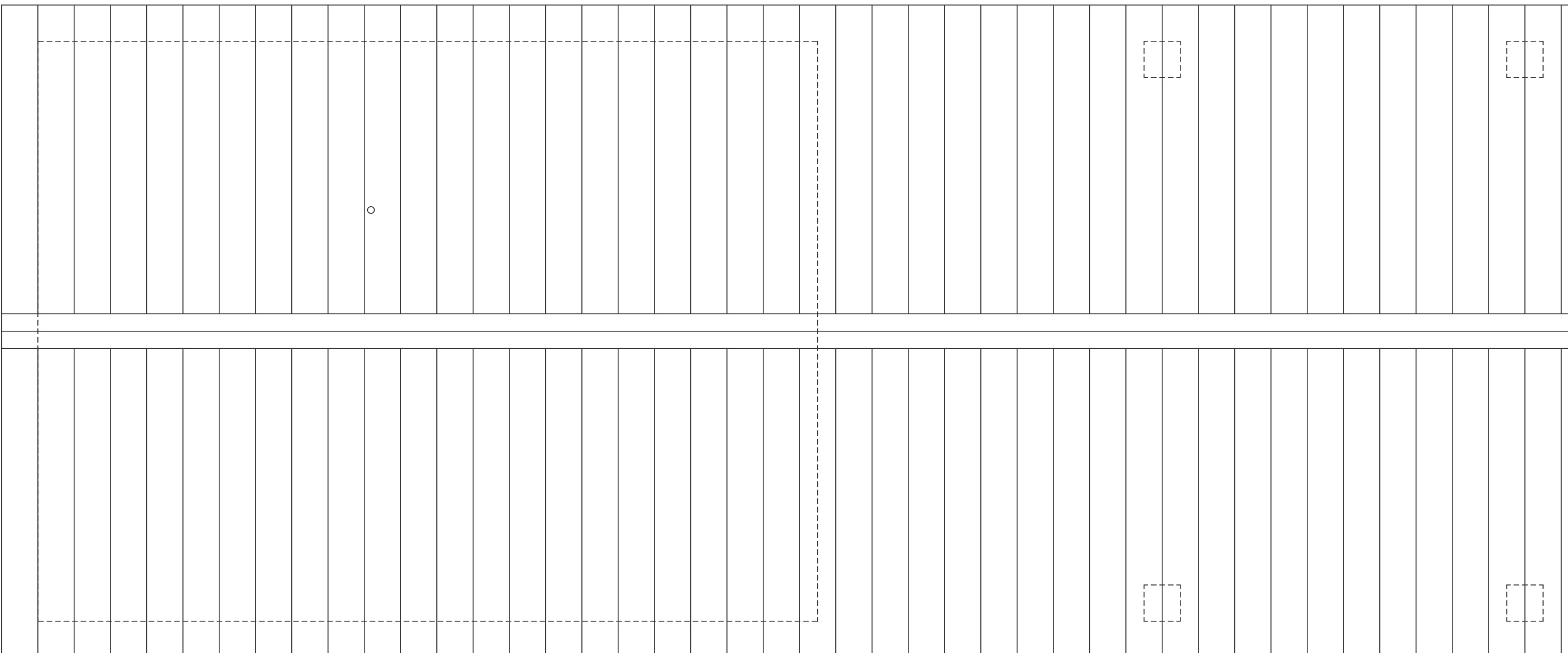
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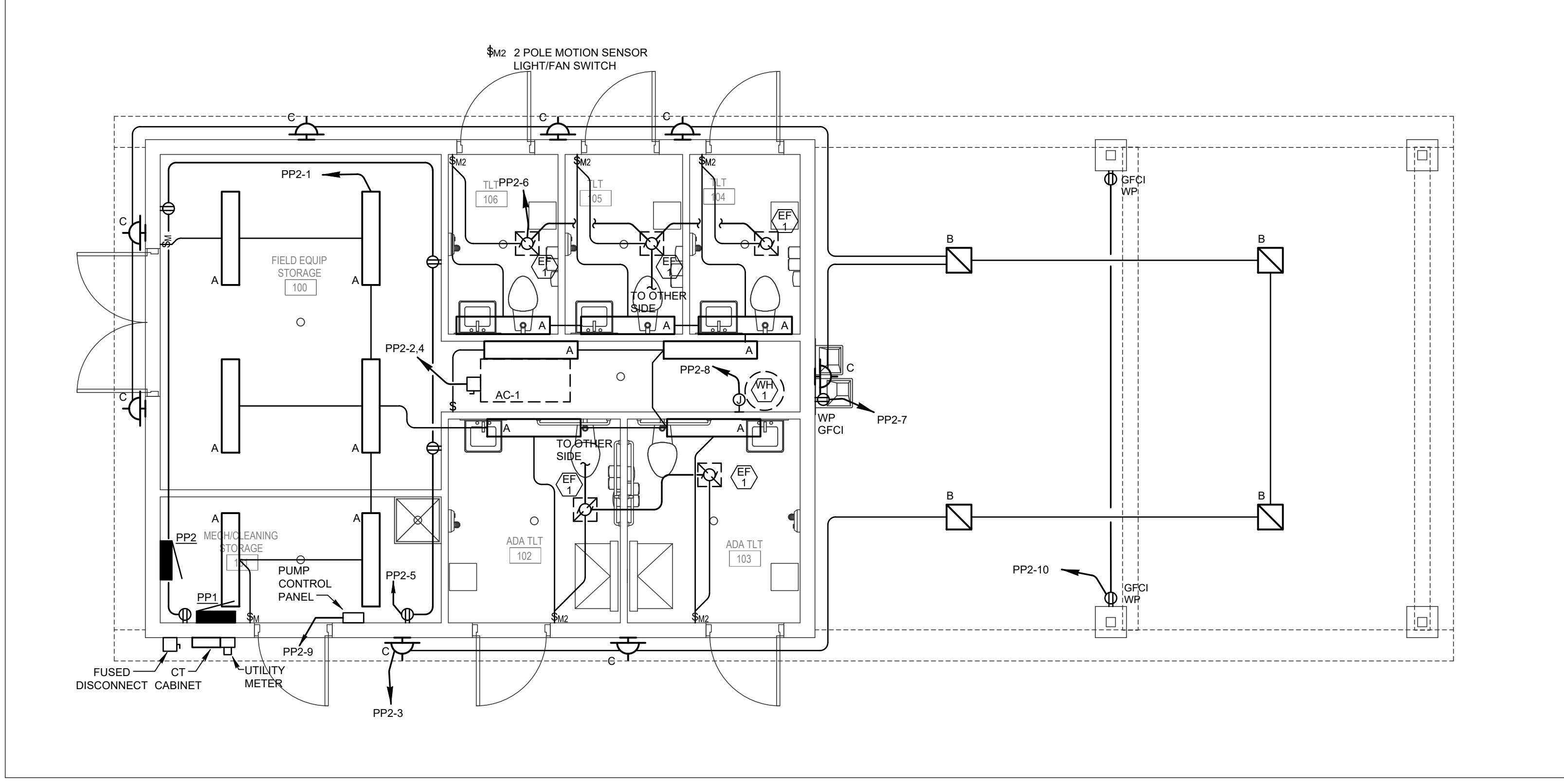
PROJECT #: 23234

SHEET #:

E2-1



ELECTRICAL ROOF PLAN
 SCALE: 1/4"=1'-0"
 NORTH



ELECTRICAL FLOOR PLAN
 SCALE: 1/4"=1'-0"
 NORTH

PANEL SCHEDULE - PP1		TYPE:	PANELBOARD	BUS SIZE:	200	PHASES:	3	NEUTRAL BUS:	YES
		VOLTAGE:	277/480	MAIN BRKR:	200	WIRES:	4	GROUND BUS:	NO
		ENCLOSURE:	NEMA1	MOUNTING:	SURFACE	SC RATING:	22000		
LOAD TYPE	LOAD DESCRIPTION	AMPS POLES	CKT# LOAD	0	CKT# LOAD	AMPS POLES	LOAD TYPE	LOAD DESCRIPTION	
PROCESS	---	---	1	12500	A	2	25000	PROCESS	
PROCESS	SITE POWER SP	40A 3P	3	12500	B	4	100A 3P	PROCESS	
PROCESS	---	---	5	12500	C	6	25000	PROCESS	
SPACE	---	---	7	0	A	8	0	SPACE	
SPACE	---	---	9	0	B	10	0	SPACE	
SPACE	---	---	11	0	C	12	0	SPACE	
SPACE	---	---	13	0	A	14	0	SPACE	
SPACE	---	---	15	0	B	16	0	SPACE	
SPACE	---	---	17	0	C	18	0	SPACE	
SPACE	---	---	19	0	A	20	0	SPACE	
SPACE	---	---	21	0	B	22	0	SPACE	
SPACE	---	---	23	0	C	24	0	SPACE	

LOADS BY TYPE:				LOADS BY PHASE:			
LOAD TYPE	CONNECTED LOAD (VA)	DEMAND FACTOR	DEMAND LOAD (VA)	PHASE	CONNECTED LOAD (VA)	CONNECTED LOAD (AMPS)	BALANCE (PERCENT)
LIGHTING	0.00	1.25	0.00	A	37500.00	135.38	A-B: 100
KITCHEN	0.00	0.00	0.00	B	37500.00	135.38	B-C: 100
PROCESS	112500.00	1.00	112500.00	C	37500.00	135.38	C-A: 100
RECEPTACLES	0.00	1.00	0.00				
MECH HEATING	0.00	1.00	0.00				
MECH COOLING	0.00	1.00	0.00				
MECH YEAR ROUND	0.00	1.00	0.00				
APPLIANCE	0.00	1.00	0.00				
MISCELLANEOUS	0.00	1.00	0.00				
MOTOR	0.00	1.00	0.00				
SPARE	0.00	1.00	0.00				
LARGEST MOTOR	ABOVE	0.25	0.00				
TOTAL	112500.00		112500.00				

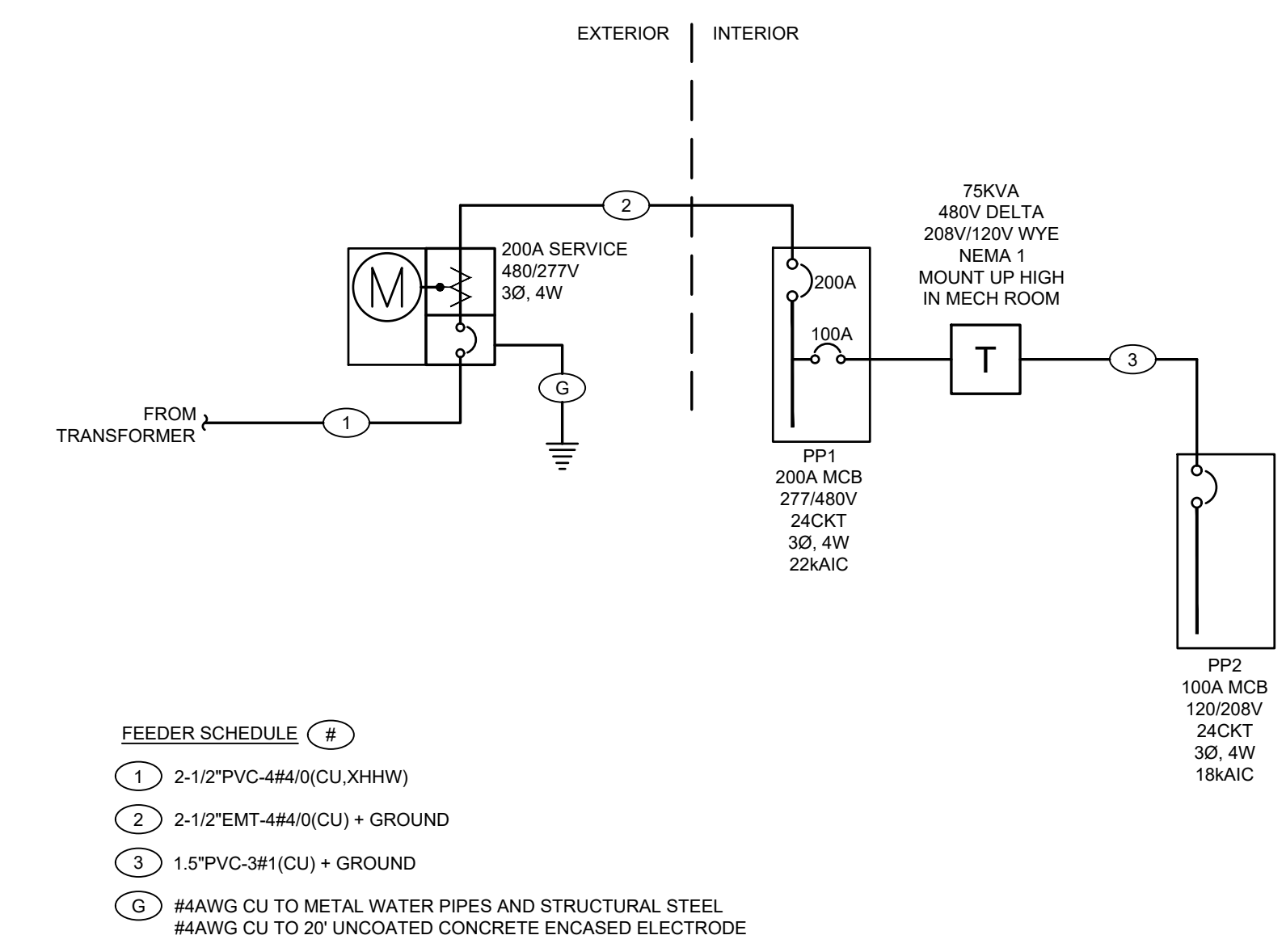
PANEL SCHEDULE - PP2		TYPE:	PANELBOARD	BUS SIZE:	100	PHASES:	1	NEUTRAL BUS:	YES
		VOLTAGE: <td>120/240</td> <td>MAIN BRKR: <td>100</td> <td>WIRES: <td>3</td> <td>GROUND BUS: <td>YES</td> </td></td></td>	120/240	MAIN BRKR: <td>100</td> <td>WIRES: <td>3</td> <td>GROUND BUS: <td>YES</td> </td></td>	100	WIRES: <td>3</td> <td>GROUND BUS: <td>YES</td> </td>	3	GROUND BUS: <td>YES</td>	YES
		ENCLOSURE: <td>NEMA1</td> <td>MOUNTING: <td>FLUSH</td> <td>SC RATING: <td>18000</td> <td colspan="2"></td> </td></td>	NEMA1	MOUNTING: <td>FLUSH</td> <td>SC RATING: <td>18000</td> <td colspan="2"></td> </td>	FLUSH	SC RATING: <td>18000</td> <td colspan="2"></td>	18000		
LOAD TYPE	LOAD DESCRIPTION	AMPS POLES	CKT# LOAD	0	CKT# LOAD	AMPS POLES	LOAD TYPE	LOAD DESCRIPTION	
LIGHTING	INTERIOR AREA	20A 1P	1	638	A	2	4077	MECH YEAR ROUND	
LIGHTING	EXTERIOR BUILDING	20A 1P	3	500	B	4	4077	MECH YEAR ROUND	
RECEPTACLE	INTERIOR AREA	20A 1P	5	1080	A	6	270	MOTOR	
RECEPTACLE	DRINKING FOUNTAIN GROUND FAULT BREAKER 5 MA	20A 1P	7	800	B	8	3000	MECH HEATING	
MOTOR	PUMP CONTROL PANEL	20A 1P	9	300	A	10	360	RECEPTACLE	
LIGHTING	SITE LIGHTS	20A 1P	11	75	B	12	0	SPACE	
SPACE	---	---	13	0	A	14	0	SPACE	
SPACE	---	---	15	0	B	16	0	SPACE	
SPACE	---	---	17	0	A	18	0	SPACE	
SPACE	---	---	19	0	B	20	0	SPACE	
SPACE	---	---	21	0	A	22	0	SPACE	
SPACE	---	---	23	0	B	24	0	SPACE	

LOADS BY TYPE:				LOADS BY PHASE:			
LOAD TYPE	CONNECTED LOAD (VA)	DEMAND FACTOR	DEMAND LOAD (VA)	PHASE	CONNECTED LOAD (VA)	CONNECTED LOAD (AMPS)	BALANCE (PERCENT)
LIGHTING	1213.00	1.25	1516.25	A	8725.00	56.04	A-B: 79.6
KITCHEN	0.00	0.00	0.00	B	8452.00	70.43	B-A: 79.6
PROCESS	0.00	1.00	0.00	C	---	---	---
RECEPTACLES	2240.00	1.00	2240.00				
MECH HEATING	3000.00	1.00	3000.00				
MECH COOLING	0.00	1.00	0.00				
MECH YEAR ROUND	8154.00	1.00	8154.00				
APPLIANCE	0.00	1.00	0.00				
MISCELLANEOUS	0.00	1.00	0.00				
MOTOR	570.00	1.00	855.00				
SPARE	0.00	1.00	0.00				
LARGEST MOTOR	ABOVE	0.25	2038.50				
TOTAL	15177.00		17519.00				

LUMINAIRE SCHEDULE					
TYPE	MANUFACTURER CATALOG NO.	MANUFACTURER CATALOG NO.	VOLTAGE MOUNTING # OF LAMPS	BALLAST LAMP TYPE LAMP CAT. #	DESCRIPTION
A	RAB LIGHTING SEAL4-50N/D10/LC	APPROVED EQUIVALENT	120V SURFACE CEILING	LED 0-10V DIMMING 26.4W, 4000K	4' LED STRIP LIGHT, UL LISTED, DAMP LOCATIONS, HIGH IMPACT POLYCARBONATE LENS
B	COOPER LUMARK AP CLCS15	APPROVED EQUIVALENT	120-277V SURFACE CEILING	40W LED, 4000K, 80CRI, 5671LM	10' SQUARE CANOPY LIGHT, UL LISTED, IP65 RATED
C	COOPER STREETWORKS WKP4BLEDEDFC-7040	APPROVED EQUIVALENT	120-277V EXTERIOR WALL	32W LED, 4000K, 2239LM	10'X16.625' LED WALL PACK WITH FULL CUTOFF, IP66 RATED, UL LISTED
D	LITHONIA DSX1-LED-P3-30K-BLC3-120-NLTAIR2	APPROVED EQUIVALENT	120V POLE	102W LED, 9750 LM, 70CRI,	10'X16.625' LED WALL PACK WITH FULL CUTOFF, IP66 RATED, UL LISTED
EM	COOPER - SURE-LITES APEL	APPROVED EQUIVALENT	120-277V SURFACE	LED EMERGENCY 0.33W	UL924 DAMP LOCATION LISTED LED EMERGENCY LIGHT, NFPA101 COMPLIANT. FOLLOW MANUFACTURER'S SPACING REQUIREMENTS; PROVIDE ALL REQUIRED ACCESSORIES.

- NOTES:
- CONTRACTOR TO PROVIDE ALL APPURTENANCES REQUIRED FOR A COMPLETE AND FUNCTIONING SYSTEM.
 - LIGHTING CONTROLS ARE BASED UPON 2018 IECC REQUIREMENTS.
 - ARCHITECT/OWNER TO SELECT COLORS/FINISHES AND ROUND OR SQUARE POLE FOR LIGHTS.

MECHANICAL EQUIPMENT SCHEDULE												
COMB: COMBINATION MOTOR STARTER		NR: NONE REQUIRED		CONT: CONTRACTOR								
MAG: MAGNETIC MOTOR STARTER		PIR: PLUS-IN UNIT		MAN: MANUAL MOTOR STARTER								
				WU: SUPPLIED WITH UNIT:								
UNIT NO	FUNCTION (NOTES)	LOAD	VOLTS	Ø	FULL LOAD AMPS	BRANCH CIRCUIT CONDUIT SIZE	CIRCUIT NO.	WIRE SIZE	GRND WIRE SIZE	BRKR SIZE	START	DISC FUSE
EA	ELECTRIC AIR HANDLING UNIT		208	1	39.2A	1"	3	6	10	50	W/U	60 50
EF	EXHAUST FAN EF-1	54W	120	1	0.45A	3/4"	2	12	12	15	\$	
WH	ELECTRIC WATER HEATER WH-1	3kW	120	1	25.0A	3/4"	2	10	10	30	\$	



ONE LINE DIAGRAM
NOT TO SCALE



Bighorn Consulting Engineers, Inc.
Mechanical & Electrical Engineers

386 Indian Road
Grand Junction, CO 81501
Phone (970) 241-8709

REED PARK RESTROOM & BUILDING FACILITIES

ELECTRICAL SCHEDULES AND DETAILS

100% CD

REV. DESC. DATE:

DATE: 09/15/2023

PROJECT #: 23234

SHEET #:

E3-1

SECTION 26000
GENERAL PROVISIONS

SECTION 26010
GENERAL PROVISIONS

- A. THE ARCHITECTURAL GENERAL AND SPECIAL CONDITIONS FOR THE CONSTRUCTION OF THIS PROJECT SHALL BE A PART OF THE ELECTRICAL SPECIFICATIONS. THE ELECTRICAL CONTRACTOR SHALL DEFINE THE GENERAL AND SPECIAL CONDITIONS BEFORE SUBMITTING THEIR PROPOSAL.
- B. THE GENERAL CONTRACTOR SHALL BE RESPONSIBLE FOR ALL WORK INCLUDED IN THIS SECTION. THE DIVISION OF WORK TO THE ELECTRICAL CONTRACTOR SHALL NOT RELIEVE THEM OF THIS RESPONSIBILITY. THE ELECTRICAL CONTRACTOR AND THEIR SUBCONTRACTORS WHO PERFORM WORK UNDER THIS SECTION SHALL BE RESPONSIBLE TO THE GENERAL CONTRACTOR.
- C. WHERE ITEMS OF THE GENERAL CONDITIONS OR OF THE SPECIAL CONDITIONS ARE REPEATED IN THIS SECTION OF THE SPECIFICATIONS, IT IS INTENDED TO CALL PARTICULAR ATTENTION TO OR QUALIFY THEM. IT IS NOT INTENDED THAT ANY OTHER PARTS OF THE GENERAL CONDITIONS OR SPECIAL CONDITIONS SHALL BE ASSUMED TO BE OMITTED IF NOT REPEATED HEREIN.
- D. THE NAMING OF A CERTAIN BRAND OR MAKE OR MANUFACTURER IN THE SPECIFICATIONS IS TO ESTABLISH A QUALITY STANDARD FOR THE ARTICLE DESCRIBED. THE CONTRACTOR IS RESTRICTED TO THE USE OF THE SPECIFIC BRAND OF THE MANUFACTURER NAMED UNLESS SO INDICATED IN THE SPECIFICATIONS.
- E. THE ELECTRICAL CONTRACTOR SHALL FURNISH AND PRESENT FIVE (5) COPIES OF SHOP DRAWINGS OR BROCHURES FOR ALL FIXTURES, EQUIPMENT, AND ACCESSORIES TO THE ARCHITECT AND OWNER FOR APPROVAL. CHECKING IS ONLY FOR GENERAL CONFORMANCE WITH THE DESIGN CONCEPT OF THE PROJECT AND GENERAL COMPLIANCE SHOWN IS SUBJECT TO THE REQUIREMENTS OF THE PLANS AND SPECIFICATIONS. CONTRACTOR IS RESPONSIBLE FOR: DIMENSIONS WHICH SHALL BE CONFIRMED AND CORRELATED AT THE JOB SITE; FABRICATION PROCESSES AND TECHNIQUES; CONSTRUCTION COORDINATION OF THEIR WORK WITH THAT OF ALL OTHER TRADES AND THE SAFETY OF THEIR WORK.
- F. THE ELECTRICAL CONTRACTOR SHALL EXAMINE DRAWINGS RELATING TO WORK OF ALL TRADES AND BECOME FULLY INFORMED AS TO EXTENT AND CHARACTER OF WORK RELATING TO THE DIVISION OF THE PROJECT.
- G. BEFORE SUBMITTING BID, CONTRACTOR SHALL VISIT THE SITE AND EXAMINE ALL ADJOINING EXISTING BUILDINGS, EQUIPMENT AND SPACE CONDITIONS ON WHICH THEIR WORK IS IN ANY WAY DEPENDENT FOR THE BEST WORKMANSHIP AND OPERATION ACCORDING TO THE INTENT OF SPECIFICATIONS AND DRAWINGS. THEY SHALL REPORT TO THE ARCHITECT ANY CONDITION WHICH MIGHT PREVENT THEM FROM INSTALLING THEIR EQUIPMENT IN THE MANNER INTENDED.
- H. NO CONSIDERATION WILL BE GRANTED FOR DELAY OR FAILURE TO VISIT SITE, OR FOR ANY ALLEGED MISUNDERSTANDING OF MATERIALS TO BE FURNISHED OR WORK TO BE DONE. CERTIFYING ENGINEER RESERVES THE RIGHT TO PROVIDE INTERPRETATION OF DESIGN DRAWINGS AND THE INTENT OF WHAT IS BEING SHOWN AND THIS INTERPRETATION SHALL BE FINAL.
- I. REFER TO DIVISION I FOR ADDITIONAL REQUIREMENTS. EXISTING CONDUITS, PIPES, UTILITY LINES, TANKS, EQUIPMENT, OR OTHER OBSTRUCTIONS WHETHER UNDERGROUND OR EXPOSED ARE NOT IN GENERAL TO BE REMOVED OR COVERED ON DRAWINGS. PRIOR TO START OF WORK, HAVE EXISTING UTILITY OBSTRUCTIONS CLEARLY MARKED BY UTILITIES LOCATOR SERVICE. PLAN WORK SO AS TO ROUTE AND LOCATE ALL UTILITIES AND OTHER TRADES FOR EXACT DIMENSIONS, CLEARANCES AND ROUGH-IN LOCATIONS. THIS CONTRACTOR SHALL COOPERATE WITH ALL OTHER TRADES IN ORDER TO MAKE MINOR FIELD ADJUSTMENTS TO POSITION THE WORK OR OTHER TRADES ACCORDING TO THE SCALE OF THE DRAWINGS FOR ROUGH-IN MEASUREMENTS, NOR USE THEM AS SHOP DRAWINGS.
- B. THE DRAWINGS AND SPECIFICATIONS ARE COMPLEMENTARY. EACH TO THE OTHER, AND THE WORK REQUIRED BY EITHER SHALL BE INCLUDED IN THE CONTRACT AS IF CALLED FOR BY BOTH.
- C. IF DIRECTED BY THE ARCHITECT, THE CONTRACTOR SHALL, WITHOUT EXTRA CHARGE, MAKE REASONABLE MODIFICATIONS IN THE LAYOUT AS NEEDED TO PREVENT CONFLICT WITH WORK OF OTHER TRADES OR FOR PROPER EXECUTION OF THE WORK.
- D. ELECTRICAL SYMBOLS USED ON THIS PROJECT ARE SHOWN IN A SYMBOL LIST ON THE ACCOMPANYING ENDING DRAWINGS STANDARD SYMBOLS. ALL SYMBOLS AND ALL MAY NOT APPEAR ON THE PROJECT DRAWINGS; HOWEVER, WHEREVER THE SYMBOL ON PROJECT DRAWINGS OCCURS, THE ITEM SHALL BE PROVIDED AND INSTALLED.

END OF SECTION 26010

SECTION 26015
ELECTRICAL DRAWINGS AND REFERENCE SYMBOLS

- A. THE DRAWINGS ARE DIAGRAMMATIC AND INDICATE GENERALLY THE LOCATIONS OF MATERIAL AND EQUIPMENT. THESE DRAWINGS SHALL BE FOLLOWED AS CLOSELY AS POSSIBLE. THE ELECTRICAL CONTRACTOR SHALL COORDINATE THE WORK UNDER THIS SECTION WITH THE ARCHITECTURAL, STRUCTURAL, PLUMBING, HEATING AND AIR CONDITIONING, AND THE DRAWINGS OF OTHER TRADES FOR EXACT DIMENSIONS, CLEARANCES AND ROUGH-IN LOCATIONS. THIS CONTRACTOR SHALL COOPERATE WITH ALL OTHER TRADES IN ORDER TO MAKE MINOR FIELD ADJUSTMENTS TO POSITION THE WORK OR OTHER TRADES ACCORDING TO THE SCALE OF THE DRAWINGS FOR ROUGH-IN MEASUREMENTS, NOR USE THEM AS SHOP DRAWINGS.
- B. THE DRAWINGS AND SPECIFICATIONS ARE COMPLEMENTARY. EACH TO THE OTHER, AND THE WORK REQUIRED BY EITHER SHALL BE INCLUDED IN THE CONTRACT AS IF CALLED FOR BY BOTH.
- C. IF DIRECTED BY THE ARCHITECT, THE CONTRACTOR SHALL, WITHOUT EXTRA CHARGE, MAKE REASONABLE MODIFICATIONS IN THE LAYOUT AS NEEDED TO PREVENT CONFLICT WITH WORK OF OTHER TRADES OR FOR PROPER EXECUTION OF THE WORK.
- D. ELECTRICAL SYMBOLS USED ON THIS PROJECT ARE SHOWN IN A SYMBOL LIST ON THE ACCOMPANYING ENDING DRAWINGS STANDARD SYMBOLS. ALL SYMBOLS AND ALL MAY NOT APPEAR ON THE PROJECT DRAWINGS; HOWEVER, WHEREVER THE SYMBOL ON PROJECT DRAWINGS OCCURS, THE ITEM SHALL BE PROVIDED AND INSTALLED.

END OF SECTION 26015

SECTION 26020
WORK INCLUDED

- A. THE SCOPE OF THE WORK CONSISTS OF ELECTRICAL INSTALLATION AND MODIFICATION AT THE PROJECT LOCATION INDICATED ON THE ACCOMPANYING WORKING DRAWINGS. THIS SHALL INCLUDE, BUT NOT BE LIMITED TO, ELECTRICAL DISTRIBUTION INSTALLATION, POWERING OF MECHANICAL EQUIPMENT, POWERING OF OWNER PROVIDED EQUIPMENT, AND OTHER ITEMS AS CALLED OUT ON THE DRAWINGS. THE ELECTRICAL CONTRACTOR SHALL PROVIDE ALL SUPERVISION, LABOR MATERIALS, TOOLS, MACHINERY, AND ANY AND ALL OTHER ITEMS NECESSARY TO COMPLETE THE INSTALLATION OF SYSTEMS WITHIN SCOPE OF WORK. THE ELECTRICAL CONTRACTOR SHALL NOTE THAT ALL ITEMS OF EQUIPMENT ARE SPECIFIED IN THE SINGULAR, HOWEVER, THE CONTRACTOR SHALL PROVIDE AND INSTALL THE NUMBER OF ITEMS OF EQUIPMENT AS INDICATED ON THE DRAWINGS AND AS REQUIRED FOR COMPLETE SYSTEMS.
- B. IT IS THE INTENTION OF THE SPECIFICATIONS AND DRAWINGS TO CALL FOR FURNISHED WORK, TESTED AND READY FOR OPERATION.
- C. ANY APPARATUS, APPLIANCE, MATERIAL OR WORK NOT SHOWN ON THE DRAWINGS BUT MENTIONED IN THE SPECIFICATIONS, OR VICE VERSA, OR ANY INCIDENTAL ACCESSORIES NECESSARY TO MAKE THE WORK COMPLETE AND PROFESSIONAL IN ALL RESPECTS AND READY FOR OPERATION, EVEN IF NOT PARTICULARLY SPECIFIED, SHALL BE FURNISHED, DELIVERED, AND INSTALLED BY THE CONTRACTOR WITHOUT ADDITIONAL EXPENSE TO THE OWNER, WITH SUBMISSION OF BID. THE ELECTRICAL CONTRACTOR SHALL GIVE WRITTEN NOTICE TO THE ARCHITECT OF ANY MATERIALS OR APPARATUS BELIEVED INADEQUATE OR UNSUITABLE IN VIOLATION OF LAWS, ORDINANCES, RULES, ANY NECESSARY ITEMS OR WORK OMITTED. IN THE ABSENCE OF SUCH WRITTEN NOTICE, IT IS MUTUALLY AGREED THAT THE CONTRACTOR HAS INCLUDED THE COST OF ALL REQUIRED ITEMS IN THEIR PROPOSAL, AND THAT THEY WILL BE RESPONSIBLE FOR THE APPROVED SATISFACTORY FUNCTIONING OF THE ENTIRE SYSTEM WITHOUT EXTRA COMPENSATION.

END OF SECTION 26020

SECTION 26030
CODES AND FEES

- A. ALL MATERIALS AND WORKMANSHIP SHALL COMPLY WITH ALL APPLICABLE CODES, SPECIFICATIONS, LOCAL ORDINANCES, INDUSTRY STANDARDS, UTILITY COMPANY AND FIRE INSURANCE CARRIERS REQUIREMENTS, CONTACT PROPER AUTHORITIES, OBTAIN AND PAY FOR REQUIRED PERMITS, INSPECTIONS AND UTILITY SERVICE CONNECTIONS. DO NOT INCLUDE ANY UTILITY COMPANY CHARGES THAT CAN BE BILLED DIRECTLY TO THE OWNER.
- B. IN CASE OF DIFFERENCE BETWEEN THE BUILDING CODES, SPECIFICATIONS, STATE LAWS, LOCAL ORDINANCES, INDUSTRY STANDARDS, UTILITY COMPANY REGULATIONS, FIRE INSURANCE CARRIERS REQUIREMENTS, AND THE CONTRACT DOCUMENTS, THE MOST STRINGENT SHALL GOVERN. THE CONTRACTOR SHALL PROMPTLY NOTIFY THE ARCHITECT IN WRITING OF ANY SUCH DIFFERENCE.
- C. NON-COMPLIANCE: SHOULD THE CONTRACTOR PERFORM ANY WORK THAT DOES NOT COMPLY WITH THE REQUIREMENTS OF THE APPLICABLE BUILDING CODES, STATE LAWS, LOCAL ORDINANCES, INDUSTRY STANDARDS, FIRE INSURANCE CARRIERS REQUIREMENTS, AND UTILITY COMPANY REGULATIONS, THEY SHALL BEAR THE COST ARISING IN CORRECTING ANY SUCH DEFICIENCY.

END OF SECTION 26030

SECTION 26100
BASIC METHODS AND MATERIALS

SECTION 26101
GENERAL

- A. PROTECTION: ALL WORK, MATERIALS AND EQUIPMENT SHALL BE COMPLETELY AND ADEQUATELY PROTECTED AT ALL TIMES. PAY FOR ALL DAMAGE, INJURY OR LOSS, EXCEPT SUCH AS MAY BE DIRECTLY DUE TO ERRORS IN THE CONTRACT DOCUMENTS OR BE CAUSED BY AGENTS OR EMPLOYEES OF THE OWNER. POST EFFECTIVE DANGER SIGNS WARNING AGAINST HAZARDS CREATED BY THE WORK.
- B. TRENCHING AND BACKFILLING: PERFORM ALL TRENCHING AND BACKFILLING REQUIRED BY WORK UNDER THIS DIVISION OF THE SPECIFICATIONS. TRENCHING AND BACKFILLING SHALL BE DONE IN ACCORDANCE WITH THE "SITE WORK" DIVISION OF THE SPECIFICATIONS AND AS HEREIN SPECIFIED. THIS PORTION OF THE WORK SHALL BE EXECUTED UNDER THE DIRECT SUPERVISION OF THE GENERAL CONTRACTOR. TRENCHES SHALL BE EXCAVATED TO THE DEPTH REQUIRED FOR THE UTILITIES INVOLVED. THE TRENCH BOTTOM SHALL BE GRADED TRUE AND FREE FROM DEBRIS, STONES AND SOFT SPOTS. WHERE DIRECT BURIAL CABLES ARE USED FOUR INCHES OF FINE SAND SHALL BE PLACED IN THE BOTTOM OF THE TRENCH PRIOR TO CABLE PLACEMENT.

C. EQUIPMENT, MATERIALS, INSTALLATION:

1. ALL EQUIPMENT, ACCESSORIES, AND SPECIALTIES CONNECTED TO EQUIPMENT, AND ALL ITEMS OF MATERIAL SHALL BE INSTALLED AS RECOMMENDED BY THEIR MANUFACTURERS UNLESS SPECIFICALLY STATED OTHERWISE. PROVIDE PROPER SUPPORTS, MOUNTING, ETC., AS REQUIRED.
2. COORDINATE WITH THE GENERAL CONTRACTOR.
3. OBTAIN INSTRUCTIONS FROM THE ARCHITECT FOR INSTALLATION OF ITEMS NOT COMPLETELY COVERED BY CONTRACT DOCUMENTS OR PUBLISHED MANUFACTURER'S RECOMMENDATIONS.
- D. EQUIPMENT FINISH: ALL ELECTRICAL EQUIPMENT SHALL BE FURNISHED FACTORY FINISHED OR FINISHED WITH TWO COATS OF PAINT OR APPROVED EQUAL IN THE MANUFACTURER'S STANDARD COLORS UNLESS OTHERWISE SPECIFIED.
1. UNPAINTED EQUIPMENT AND MATERIALS, EXCEPT CONDUIT IN CONCEALED SPACES, SHALL BE CLEANED AND PRIMED TO BE PAINTED BY THE PAINTING CONTRACTOR IN ACCORDANCE WITH THE PAINTING SECTION OF THE SPECIFICATIONS.
2. THE COLORS OF ALL EXPOSED ELECTRICAL MATERIAL AND APPARATUS SHALL BE AS SELECTED BY THE OWNER.
- E. CHASES, SLEEVES, PATCHING
1. PROVIDE FOR NECESSARY CHASES, HOLES, SLEEVES, BOXES, INSERTS AND HANGERS BY ARRANGEMENT WITH CONTRACTORS OF THE OTHER APPROPRIATE TRADES. PROVIDE "FLAMESEAL" OR OTHER APPROVED AND RATED FIRESTOPPING MATERIAL AT ALL PENETRATIONS THROUGH WALLS, FLOORS AND CEILINGS.
2. PROVIDE FOR ALL CUTTING AND PATCHING OF HOLES, OPENINGS, AND NOTCHES. OBTAIN WRITTEN APPROVAL OF THE ARCHITECT BEFORE NOTCHING, BORING, CHIPPING, NOTCHING, DRILLING, OR WELDING TO STRUCTURAL MEMBERS.
- F. INSPECTION
1. ALL WORK AND MATERIALS COVERED BY DRAWINGS AND SPECIFICATIONS SHALL BE SUBJECT TO INSPECTION AT ANY AND ALL TIMES BY REPRESENTATIVES OF THE ARCHITECT AND OWNER. IF MATERIAL OR INSTALLATION DOES NOT CONFORM TO THE DRAWINGS AND SPECIFICATIONS, WITHIN THREE DAYS AFTER BEING NOTIFIED BY THE ARCHITECT, REMOVE THE MATERIALS FROM THE PREMISES AND CORRECT THE INSTALLATION TO THE SATISFACTION OF THE ARCHITECT. ASSUME THE ENTIRE COST OF REMOVING AND REPLACING THE MATERIAL AND CORRECTING THE INSTALLATION, INCLUDING CUTTING AND PATCHING THAT MAY BE NECESSARY.
2. WORK SHALL NOT BE COVERED UNTIL AFTER INSPECTION AND APPROVAL BY THE ARCHITECT. PROVIDE FOR UNCOVERING AND MAKING REPAIRS, AT NO EXTRA COST, WHEN UNINSPECTED WORK HAS BEEN CLOSED IN. NOTIFY THE ARCHITECT WHEN WORK IS READY FOR INSPECTION.
3. NOTIFY THE ARCHITECT IMMEDIATELY IN WRITING FOR ANY INSPECTIONS REQUIRED BY APPLICABLE CODES, RULES AND REGULATIONS, ALLOWING SUFFICIENT TIME FOR INSPECTIONS TO BE MADE WITHOUT HINDERING PROGRESS OF THE WORK. THE ARCHITECT SHALL BE RESPONSIBLE FOR THE COSTS, PROPER CERTIFICATES OF ACCEPTANCE FROM SUCH AUTHORITIES.
4. UPON COMPLETION OF ALL WORK AND ADJUSTMENT OF ALL EQUIPMENT, FINAL INSPECTION SHALL BE MADE UNDER DIRECTION OF THE ARCHITECT. THE CONTRACTOR SHALL TEST AND OPERATE ALL DEVICES, EQUIPMENT AND SYSTEMS TO DEMONSTRATE THAT THE ELECTRICAL SYSTEM IS COMPLETE AND FUNCTIONAL IN THE MANNER REQUIRED.

- G. UNPAINTED OR EXPOSED ARE NOT IN GENERAL TO BE REMOVED OR COVERED ON DRAWINGS. PRIOR TO START OF WORK, HAVE EXISTING UTILITY OBSTRUCTIONS CLEARLY MARKED BY UTILITIES LOCATOR SERVICE. PLAN WORK SO AS TO ROUTE AND LOCATE ALL UTILITIES AND OTHER TRADES FOR EXACT DIMENSIONS, CLEARANCES AND ROUGH-IN LOCATIONS. THIS CONTRACTOR SHALL COOPERATE WITH ALL OTHER TRADES IN ORDER TO MAKE MINOR FIELD ADJUSTMENTS TO POSITION THE WORK OR OTHER TRADES ACCORDING TO THE SCALE OF THE DRAWINGS FOR ROUGH-IN MEASUREMENTS, NOR USE THEM AS SHOP DRAWINGS.
- H. RECORD DRAWINGS: AT COMPLETION OF THE WORK FURNISH TO THE ARCHITECT TWO COMPLETE SETS OF ELECTRICAL PRINTS MARKED TO SHOW THE WORK "AS-BUILT".
- I. MAINTENANCE AND OPERATING PROCEDURES: UPON COMPLETION OF ALL WORK AND ADJUSTMENT OF ALL EQUIPMENT INSTRUCT THE OWNER ON THE CORRECT OPERATION AND MAINTENANCE PROCEDURE FOR THE ELECTRICAL SYSTEM IN TOTAL. FURNISH SETS OF TYPED MAINTENANCE MANUALS CONTAINING CUT SHEETS ON ALL EQUIPMENT, TABLES OF FUSES AND FOR WHAT EQUIPMENT, TABLE OF LAMPS AND BALLASTS AND FOR WHAT FIXTURES. INCLUDE A LIST OF CONTACTS WITH PHONE NUMBERS FOR ALL TRADES AND SUPPORTS UNDER THIS DIVISION OF THE ELECTRICAL SYSTEM REQUIRES SERVICE WORK WITH THE WARRANTY PERIOD.
- J. GUARANTEE: GUARANTEE THAT ALL WORK GOVERNED BY THIS DIVISION SHALL BE NEW AND FREE OF DEFECTIVE WORK, MATERIALS, AND COMPONENTS FOR A PERIOD OF ONE YEAR AFTER WRITTEN ACCEPTANCE. REPAIR, REVERSE AND REPLACE DEFECTS AS DIRECTED, WITH NO ADDITIONAL COST TO THE OWNER. (INCANDESCENT LAMPS, FUSES AND ANY EXISTING EQUIPMENT ARE EXEMPT).

END OF SECTION 26101

SECTION 26111
CONDUITS

- A. PVC CONDUIT SHALL BE USED FOR ALL UNDERGROUND FEEDERS AND BRANCH CIRCUITS UNLESS OTHERWISE DIRECTED ON PLANS OR AS APPROVED BY NEC. ALL CONDUIT SHALL BE APPROVED.
- B. CONDUIT SIZES SHALL BE AS INDICATED ON THE DRAWINGS, OR MINIMUM IN ACCORDANCE WITH THE NEC, INCLUDING PROVISION FOR GREEN EQUIPMENT GROUNDING CONDUCTOR USING 3/4 INCH MINIMUM CONDUIT. THE USE OF 1/2 INCH CONDUIT ELSEWHERE MAY BE APPROVED IF CONDITIONS WARRANT.
- C. SPECIAL CONDUIT FITTINGS SHALL BE APPROPRIATE FOR EACH APPLICATION AND SHALL BE MANUFACTURED BY T & B OR APPROVED EQUAL.
- D. CONDUIT SYSTEMS SHALL BE INSTALLED IN ACCORDANCE WITH THE LATEST EDITION OF THE NEC AND SHALL BE INSTALLED IN A NEAT, WORKMANLIKE MANNER.
- E. THE ENTIRE CONDUIT SYSTEM SHALL BE INSTALLED TO PROVIDE A CONTINUOUS FUSE LINK SERVICE.
- F. ELECTRICAL METALLIC TUBING (EMT) MAY BE USED FOR BRANCH CIRCUITS AND RACEWAYS OTHER THAN FOR SERVICE ENTRANCE AND MAIN FEEDERS UNLESS PROHIBITED BY THE NEC OR LOCAL ORDINANCES. EMT SHALL BE UL APPROVED. GALVANIZED INSIDE AND OUTSIDE COATING WITH A ZINC COATED EMT WITH FITTINGS OF THE SAME TYPE MATERIAL AND FINISH. OF THE PRESSURE CONNECTED TYPE FOR EXTERIOR INSTALLATION AND OF THE SET SCREW TYPE FOR INTERIOR INSTALLATION.
- G. ALL CONDUIT JOINTS SHALL BE CUT SQUARE, REAMED SMOOTH, AND DRAWN UP TIGHT. BENDS OR OFFSETS SHALL BE MADE WITH AN APPROVED BENDER OR HICKY, OR HUB-TYPE CONDUIT FITTINGS. NUMBER OF BENDS PER RUN SHALL CONFORM TO THE NEC LIMITATIONS.
- H. CONCEALED CONDUITS SHALL BE RUN IN A DIRECT LINE WITH LONG SWEEP BENDS AND OFFSETS. EXPOSED CONDUITS SHALL BE PARALLEL TO AND AT RIGHT ANGLES TO BUILDING LINES. CONCEALED FITTINGS FOR ALL TURNS AND OFFSETS.
- I. TRANSITIONS BETWEEN NONMETALLIC CONDUITS AND CONDUITS OF OTHER MATERIALS SHALL BE MADE WITH THE MANUFACTURER'S STANDARD ADAPTERS DESIGNED FOR SUCH PURPOSE.
- J. EXPOSED CONDUITS SHALL BE SECURELY FASTENED IN PLACE ON MAXIMUM 10 FOOT INTERVALS (OR AS DIRECTED BY MANUFACTURERS INSTALLATION GUIDELINES); AND HANGERS, SUPPORTS OR FASTENERS SHALL BE PROVIDED AT EACH ELBOW AND AT THE END OF EACH STRAIGHT RUN TERMINATING AT A BOX OR CABINET.

END OF SECTION 26111

SECTION 26120
WIRES AND CABLES

- A. WIRE AND CABLE SHALL MEET ALL STANDARDS AND SPECIFICATIONS APPLICABLE AND SHALL BE IN CONFORMANCE WITH THE LATEST EDITION OF THE NEC.
- B. INSULATION: WIRE AND CABLE SHALL HAVE THE INSULATION, VOLTAGE AND MANUFACTURER'S NAME PERMANENTLY MARKED ON OUTER COVERING AT REGULAR INTERVALS NOT EXCEEDING FOUR FEET. WIRE AND CABLE SHALL BE DELIVERED IN COMPLETE COILS OR REELS WITH IDENTIFYING TAGS, STATING SIZE, TYPE OF INSULATION, ETC.
- C. WIRE AND CABLE SHALL BE SUITABLY PROTECTED FROM WEATHER AND OTHER DAMAGE DURING STORAGE AND HANDLING AND SHALL BE IN FIRST CLASS CONDITION AFTER INSTALLATION.
- D. WIRE AND CABLE SHALL BE FACTORY COLOR CODED WITH A SEPARATE COLOR FOR EACH PHASE AND NEUTRAL USED CONSISTENTLY THROUGHOUT THE SYSTEM. COLOR CODING SHALL BE AS RECOMMENDED BY THE NEC.
- E. ALL CONDUCTORS SHALL BE RATED 600 VOLTS, UNLESS OTHERWISE SPECIFIED OR SHOWN ON THE DRAWINGS, OR FOR ELECTRONIC OR COMMUNICATION USE.
1. WIRE AND CABLE FOR VARIOUS APPLICATIONS SHALL BE AS FOLLOWS UNLESS OTHERWISE DESIGNATED:
- 1. WIRE #10 AND SMALLER SHALL BE SOLID; WIRE #8 AND LARGER SHALL BE STRANDED.
 - 2. #12 THRU #6 DRY LOCATIONS: TYPE THHN, 90 DEGREES C.
 - 3. #12 THRU #6 IN SLABS, UNDERGROUND, OR WET LOCATIONS: TYPE THWN OR TYPE XHHW, 75 DEGREES C.
 - 4. #4 AND LARGER: TYPE XHHW OR TYPE THWN 75 DEGREES C.
- F. WIRE AND CABLE SHALL BE AS MANUFACTURED BY GENERAL ELECTRIC, ANACONDA WIRE & CABLE, ROME CABLE TRIANGLE CONDUIT & CABLE, OR APPROVED EQUAL. SUBSTITUTION OF WIRE AND CABLE MANUFACTURER SHALL BE ONLY WITH THE APPROVAL OF THE ARCHITECT/ENGINEER.
- G. FOR ANY SPECIFIC USE NOT COVERED HERE ABOVE, COMPLY WITH THE NEC IN CONDUCTOR USE.
- H. ALL CIRCUITS SHALL BE 2012-06 UNLESS OTHERWISE NOTED ON DRAWINGS OR IN SCHEDULES.
- I. ALL 15- AND 20-AMP CIRCUITS WITH LENGTHS OVER 100 FT. SHALL HAVE THEIR CONDUCTOR SIZE INCREASED TO #10 FOR VOLTAGE DROP.

END OF SECTION 26120

SECTION 26121
WIRE CONNECTIONS

- A. JOINTS ON BRANCH CIRCUITS SHALL OCCUR ONLY WHERE SUCH CIRCUIT DIVIDE AS

- INDICATED ON PLANS AND SHALL CONSIST OF ONE THROUGH CIRCUIT TO WHICH SHALL BE SPLICED THE BRANCH FROM THE CIRCUIT. IN NO CASE SHALL JOINTS IN BRANCH CIRCUITS BE LEFT FOR THE FIXTURE HANGER TO MAKE. NO SPLICES SHALL BE MADE IN CONDUCTOR EXCEPT AT OUTLET BOXES, JUNCTION BOXES, OR SPLICE BOXES.
- B. ALL JOINTS OR SPLICES FOR #10 AWG OR SMALLER SHALL BE MADE WITH UL APPROVED WIRE NUTS OR COMPRESSION TYPE CONNECTORS.
- C. ALL JOINTS OR SPLICES FOR #8 AWG OR LARGER SHALL BE MADE WITH A MECHANICAL COMPRESSION CONNECTOR. AFTER THE CONDUCTORS HAVE BEEN MADE MECHANICALLY AND ELECTRICALLY SECURE, THE ENTIRE JOINT OR SPLICE POINT SHALL BE COVERED WITH SCOTCH TAPE OR APPROVED EQUAL TO MAKE THE INSULATION OF THE JOINT OR SPLICE EQUAL TO THE INSULATION OF THE CONDUCTORS. THE CONNECTOR SHALL BE UL APPROVED.

END OF SECTION 26121

SECTION 26125
PULLING CABLES

- A. INSTALL CONDUCTORS IN ALL RACEWAYS AS REQUIRED, UNLESS OTHERWISE NOTED, IN A NEAT AND WORKMANLIKE MANNER. ALL EMPTY CONDUITS SHALL HAVE A #14 GALVANIZED PULL WIRE OR NYLON PULLCORD LEFT IN PLACE FOR FUTURE USE.
- B. CONDUCTORS SHALL BE COLOR CODED IN ACCORDANCE WITH THE NEC. MAINS, FEEDERS, SUBCIRCUITS SHALL BE TAGGED IN ALL PULL JUNCTIONS AND OUTLET BOXES AND IN THE GUTTER OF PANELS WITH APPROVED CODE TYPE WIRE MARKERS.
- C. NO LUBRICANT OTHER THAN POWDERED SOAPSTONE OR APPROVED PULLING COMPOUND MAY BE USED TO PULL CONDUCTORS.
- D. AT LEAST EIGHT (8) INCHES OF SLACK WIRE SHALL BE LEFT IN EVERY OUTLET BOX WHETHER IT BE IN USE OR LEFT FOR FUTURE USE.
- E. ALL CONDUCTORS AND CONNECTIONS SHALL BE TEST FREE OF GROUNDS SHORTS AND OPEN CIRCUITS AND SHALL BE TESTED BEFORE INSPECTION AND APPROVAL.
- F. PULL BOXES SHALL BE REQUIRED IN RUNS OVER 100 FEET OR WHEN MORE THAN THREE 90-DEGREE BENDS ARE USED, OR AS INDICATED ON THE DRAWINGS.
- G. FEEDERS ARE TO BE RUN ABOVE GROUND TO ALL POWER PANELS AND LIGHTING PANELS, UNLESS INDICATED OTHERWISE ON DRAWINGS.
- H. WORK SHALL NOT BE COVERED UNTIL AFTER INSPECTION AND APPROVAL BY THE ARCHITECT. PROVIDE FOR UNCOVERING AND MAKING REPAIRS, AT NO EXTRA COST, WHEN UNINSPECTED WORK HAS BEEN CLOSED IN. NOTIFY THE ARCHITECT WHEN WORK IS READY FOR INSPECTION.
- I. ALL MOTORS WITH SLIDING BASE MOUNTINGS SHALL HAVE NOT LESS THAN 18 INCHES NOR MORE THAN 6 FEET OF CONDUIT CONNECTING RIGID CONDUIT FEED TO MOTOR TERMINAL BOX.
- J. CONDUCTOR SPLICES SHALL BE MADE ONLY IN JUNCTION BOXES, TERMINAL BOXES, OR PULL BOXES.

END OF SECTION 26125

SECTION 26133
OUTLET BOXES

- A. ALL OUTLET BOXES FOR CONCEALED WIRING SHALL BE SHEET METAL.
- B. GALVANIZED OR CADMIUM PLATED, AT LEAST 1 1/8 INCHES DEEP, SINGLE OR GANGED, OF SIZE TO ACCOMMODATE DEVICES AND NUMBER OF CONDUCTORS NOTED.
- C. BOXES SHALL BE EQUIPPED WITH PLASTER RING OR COVER AS NECESSARY. ALL OUTLET BOXES SHALL BE MANUFACTURED BY STEEL CITY OR APPROVED EQUAL.
- D. BOXES FOR EXPOSED WIRING SHALL BE MALLEABLE IRON, CADMIUM FINISH, OR CAST ALUMINUM. FEEDERS SHALL BE MANUFACTURED BY STEEL CITY, AND SHALL NOT BE LESS THAN 4 INCHES SQUARE BY 1 1/8 INCHES DEEP UNLESS OTHERWISE NOTED.
- C. FIXTURE OUTLET BOXES SHALL BE MINIMUM 4 IN OCTAGONAL AND, WHERE REQUIRED AS OUTLET AND JUNCTION BOXES, THEY SHALL BE 4 1/16 INCHES BY 2 1/8 INCHES DEEP.

END OF SECTION 26133

SECTION 26190
SUPPORTING DEVICES

- A. THE ELECTRICAL CONTRACTOR SHALL PROVIDE AND INSTALL METALLIC SUPPORTS AS REQUIRED FOR THE PROPER INSTALLATION OF RACEWAYS SYSTEMS AND ALL OTHER EQUIPMENT INSTALLED UNDER THIS DIVISION OF THE CONTRACT CONFORMING TO THE LATEST EDITION OF THE NEC.
- B. CONDUIT SHALL BE SUPPORTED ON APPROVED TYPES OF WALL-BRACKETS, CEILING BRACKETS, AND OTHER TYPES OF SUPPORTS, SECURED BY MEANS OF TOGGLE BOLTS IN HOLLOW MASONRY WALLS OR NAILS. EXPANSION BOLTS WILL BE USED IN CONCRETE OR BLOCK MASONRY SCREWS ON METAL SURFACES AND WOOD SCREWS ON WOOD CONSTRUCTION.
- C. CONDUIT SHALL BE SECURELY FASTENED TO ALL SHEET METAL OUTLETS, JUNCTION AND PULL BOXES WITH TWO GALVANIZED LOCKWAS AND BUSHING, CARE BEING TAKEN TO SEE THAT THE FULL NUMBER OF THREADS PROJECT THROUGH TO PERMIT THE BUSHING TO BE DRAWN TIGHT AGAINST THE END OF THE CONDUIT AFTER WHICH THE LOCKWAS SHALL BE MADE TIGHT SUFFICIENTLY TO DRAW THEM INTO FIRM ELECTRICAL CONTACT WITH THE OUTLET BOX. INSTALL A PLASTIC BUSHING OVER THE BUSHING PROTRUDING INTO JUNCTION BOXES AND OTHER ENCLOSURES TO PROTECT CABLEING.
- D. THE ELECTRICAL CONTRACTOR SHALL BE RESPONSIBLE FOR ALL SUPPORTS REQUIRED FOR THE ELECTRICAL EQUIPMENT AND CONDUIT.

END OF SECTION 26190

SECTION 26195
ELECTRICAL IDENTIFICATION

- A. THE ELECTRICAL CONTRACTOR SHALL MAINTAIN ACCURATE RECORDS OF ALL DEVIATIONS IN WORK AS ACTUALLY INSTALLED FROM WORK INDICATED ON THE DRAWINGS. UPON COMPLETION OF THE PROJECT, TWO (2) COMPLETE SETS OF WORKING DRAWINGS SHALL BE DELIVERED TO THE ARCHITECT.
- B. IDENTIFICATION OF EQUIPMENT
1. PROVIDE AND INSTALL LAMINATED BLACK AND WHITE LAMACOD NAMEPLATES FOR ALL ELECTRICAL DISTRIBUTION SWITCHES, DISTRIBUTION SWITCHBOARDS, BRANCH CIRCUIT PANELBOARDS, SAFETY SWITCHES, CABINETS, STARTERS, AND OTHER EQUIPMENT WITH THEIR CORRECT DESIGNATION. LABEL ON THE EQUIPMENT IN AREAS ACCESSIBLE TO THE PUBLIC ON INSIDE OF ENCLOSURE ONLY. NAMEPLATES SHALL BE FIRMLY SECURED TO FRONT COVER OR DOOR WITH TWO PROPERLY SIZED POP RIVETS.
2. MOUNT A TYPED WRITTEN DIRECTORY BEHIND PLASTIC ON THE INSIDE OF EACH BRANCH CIRCUIT PANEL DOOR, GIVING THE NUMBER, DESCRIPTION AND LOCATION OF THE CIRCUIT CONTROLLED BY EACH CIRCUIT BREAKER. REVISE EXISTING DIRECTORIES TO REFLECT CIRCUIT MODIFICATIONS UNDER THIS CONTRACT.
3. ALL ELECTRICAL SWITCHES AND TIE BREAKER SWITCH UNITS IN SWITCHBOARDS SHALL INDIVIDUALLY BEAR A FUSE LABEL SHOWING PROPER SIZE AND TYPE OF FUSE TO BE USED.
4. INSTALL WIRING DIAGRAMS ON THE INSIDE COVER OF ALL STARTERS, SWITCHES AND TIE BREAKER SWITCH UNITS. THE DIAGRAMS SHALL NOT BE HIDDEN BY A LABEL.
5. ALL JUNCTION BOXES WITH BLANK COVERS SHALL HAVE CIRCUITS CONTAINED THEREIN IDENTIFIED BY MEANS OF PERMANENT BLACK "MAGIC MARKER" ON THE COVER.

END OF SECTION 26195

SECTION 26199
ELECTRONIC EQUIPMENT

- A. THE ELECTRICAL CONTRACTOR SHALL BE RESPONSIBLE FOR THE INSTALLATION AND CONNECTION OF A PROPER POWER SUPPLY TO ALL ELECTRONIC EQUIPMENT MARKED BY OTHERS. HE SHALL VERIFY ALL VOLTAGE, FREQUENCY, ETC., REQUIREMENTS PRIOR TO ENERGIZING THE CIRCUIT. THOSE INSTALLING THE EQUIPMENT WILL BE RESPONSIBLE FOR THE PROPER OPERATION OF THE EQUIPMENT PROVIDED THE PROPER POWER SUPPLY CIRCUIT IS INSTALLED BY THE ELECTRICAL CONTRACTOR.
- B. PROVIDE TELEPHONE LINES TO EQUIPMENT CONTROL PANELS WITH MODEM ACCESS. COORDINATE WITH MECHANICAL CONTRACTOR.

END OF SECTION 26199

SECTION 26400
SERVICE AND DISTRIBUTION

SECTION 26401
GENERAL

- A. THE ELECTRICAL CONTRACTOR SHALL FURNISH AND INSTALL RELATED DISTRIBUTION EQUIPMENT AS INDICATED ON THE FLOOR PLAN, DIAGRAMS, SCHEDULES, AND NOTES. ALL EQUIPMENT SHALL BE NEW AND UL LISTED.
- B. WIRE AND CABLE FOR VARIOUS APPLICATIONS SHALL BE AS FOLLOWS ON THE CONTRACT, INCLUDING GENERAL AND SUPPLEMENTARY CONDITIONS AND DIVISION I SPECIFICATIONS SECTION, APPLY TO WORK OF THIS SECTION.

END OF SECTION 26401

SECTION 26440
DISCONNECT SWITCHES

- A. THE ELECTRICAL CONTRACTOR SHALL FURNISH AND INSTALL SAFETY SWITCHES AS INDICATED ON THE DRAWINGS OR AS REQUIRED. ALL SAFETY SWITCHES SHALL BE UL LISTED.
1. SAFETY SWITCHES SHALL BE FUSED SAFETY SWITCHES (FSS) OR NON-FUSED SAFETY SWITCHES (NFSS) AS SHOWN ON THE DRAWINGS OR REQUIRED AND SHALL BE MANUFACTURED BY SIEMENS, SQUARE D, OR APPROVED EQUAL.
2. SWITCHES SHALL HAVE A QUICK-MAKE AND QUICK-BREAK OPERATING HANDLE AND A RELEASE BUTTON WHICH SHALL BE AN INTEGRAL PART OF THE BOX. PADLOCKING PROVISIONS SHALL BE PROVIDED FOR PADLOCKING IN THE OFF POSITION WITH AT LEAST THREE PADLOCKS. SWITCHES SHALL BE HORSEPOWER RATED FOR 250 VOLTS AND SHALL BE RATED FOR USE WITH 600 VOLT AC AS REQUIRED. LUGS SHALL BE UL LISTED FOR COPPER AND ALUMINUM CABLE.
3. SWITCHES SHALL BE FURNISHED IN NEMA J GENERAL PURPOSE ENCLOSURES WITH KNOCKOUTS UNLESS OTHERWISE NOTED OR REQUIRED. SWITCHES LOCATED ON THE EXTERIOR OF THE BUILDING OR IN "WET" LOCATIONS SHALL HAVE NEMA 3R

- ENCLOSURES (WP).
4. THE SAFETY SWITCHES SHALL BE SECURELY MOUNTED IN ACCORDANCE WITH THE NEC. THE CONTRACTOR SHALL PROVIDE ALL MOUNTING MATERIALS AND INSTALL FUSES IN THE FSS. THE FUSES SHALL BE DUAL ELEMENT TIME DELAY ON MOTOR CIRCUIT.

END OF SECTION 26440

SECTION 26450
GROUNDING

- A. THE CONDUIT SYSTEMS AND NEUTRAL CONDUCTOR FOR THE WIRING SYSTEM, AND THE TELEPHONE SYSTEM SHALL BE SECURELY GROUNDED. THE GROUNDS SHALL BE NEG GROUNDS IN EACH CASE.
- B. A GROUND SHALL BE ESTABLISHED AND TESTS CARRIED OUT TO INDICATE THAT SATISFACTORY GROUND HAS BEEN ESTABLISHED IN ACCORDANCE WITH THE NEC.
- C. THE DESIGN OF THE TESTS SHALL BE FORWARDED TO THE ENGINEER BEFORE CONNECTION TO THE SERVICE.

END OF SECTION 26450

SECTION 26470
PANELBOARDS

- A. FURNISH AND INSTALL DISTRIBUTION AND POWER PANELBOARDS AS INDICATED IN THE DRAWINGS AND SCHEDULES AND WHERE SHOWN ON THE DRAWINGS. PANELBOARDS SHALL BE DEAD-FRONT SAFETY TYPE, EQUIPPED WITH QUICK-MAKE, QUICK-BREAK FUSIBLE BRANCH SWITCHES AND APPROVED FOR SERVICE ENTRANCE. THE ACCEPTABLE MANUFACTURERS OF THE PANELBOARD ARE SIEMENS, SQUARE D, AND GE. PROVIDED THEY ARE FULLY EQUAL TO THE TYPE LISTED ON THE DRAWINGS. THE PANELBOARD SHALL BE UL LISTED AND BEAR THE UL LABEL.
- B. ALL FUSIBLE BRANCH SWITCHES SHALL BE QUICK-MAKE, QUICK-BREAK, WITH VISIBLY INDICATED TRIP POSITION AND OPERATING HANDLE. SWITCH HANDLES SHALL PHYSICALLY INDICATE ON AND OFF POSITIONS. SUCH HANDLES SHALL ALSO BE ABLE TO ACCEPT THREE PADLOCKS HAVING HEAVY-DUTY INDUSTRIAL TYPE SHACKLES. COVERS SHALL BE INTERLOCKED WITH THE SWITCH HANDLES TO PREVENT OPENING IN THE ON POSITION. A MEANS SHALL BE PROVIDED TO ALLOW AUTHORIZED PERSONNEL TO RELEASE THE INTERLOCK FOR INSPECTION PURPOSES WHEN A SWITCH IS STARTED IN THE OFF POSITION. THE INTERLOCK SHALL BE REMOVED BY THE PERSONNEL ON EACH BRANCH SWITCH. SWITCHES SHALL BE PROVIDED WITH FUSES OR AS NOTED ON THE DRAWINGS.
- C. PANELBOARD BUS STRUCTURE AND MAIN LUGS OR MAIN SWITCH SHALL HAVE A MINIMUM OF TWO INCHES OF CLEARANCE FROM THE PANELBOARD BUS STRUCTURE SHALL ACCOMMODATE PLUG-ON OR BOLTED BRANCH SWITCHES AND MOTOR STARTERS AS INDICATED IN THE PANELBOARD SCHEDULE WITHOUT MODIFICATION TO THE FURNISHED PANELBOARD.
- D. SWITCHES AND PANELBOARD BUS STRUCTURE SHALL SAFELY AND WITHOUT FAILURE WITHSTAND SHORT CIRCUITS ON THE SYSTEMS CAPABLE OF DELIVERING UP TO 100,000 AMPERES RMS SYMMETRICAL, UNLESS OTHERWISE NOTED.
- E. PANELBOARD ASSEMBLY SHALL BE ENCLOSED IN A STEEL CABINET. THE RIGIDITY AND GAUGE OF STEEL TO BE AS SPECIFIED IN UL STANDARD FOR CABINETS. THE SIZE OF WIRING GUTTERS SHALL BE IN ACCORDANCE WITH UL STANDARD. CABINETS SHALL BE PROVIDED WITH A FRONT PANEL AND A REAR PANEL. THE BUS STRUCTURE SHALL BE SELF-ALIGNING TRIM CLAMPS. FRONTS SHALL BE FULL-FINISHED STEEL WITH RUST INHIBITING PRIMER AND BAKED ENAMEL FINISH.
- F. TERMINAL AND FEEDER CONNECTIONS TO THE PANELBOARD MAINS AND NEUTRAL SHALL BE SUITABLE FOR THE TYPE OF CONDUCTOR SPECIFIED. TERMINALS FOR BRANCH CIRCUIT WIRING, BOTH BREAKER AND NEUTRAL, SHALL BE SUITABLE FOR THE TYPE OF CONDUCTOR SPECIFIED.
- G. BEFORE INSTALLING PANELBOARDS CHECK ALL OF THE ARCHITECTURAL DRAWINGS FOR POSSIBLE CONFLICT OF SPACE AND ADJUST THE LOCATION OF THE PANELBOARD TO PREVENT SUCH CONFLICT WITH OTHER ITEMS.
- H. THE PANELBOARD SHALL BE IDENTIFIED WITH THE NEC. THE ELECTRICAL CONTRACTOR SHALL FURNISH ALL MATERIAL FOR MOUNTING THE PANELBOARDS.

END OF SECTION 26470

SECTION 26471
BRANCH CIRCUIT PANELBOARD

- A. BRANCH CIRCUIT PANELBOARD SHALL BE OF THE DEAD-FRONT, SAFETY TYPE, WITH THERMAL MAGNETIC, QUICKMAKE, QUICK-BREAK, TRIP FUSE, BOLTED-TYPE MOLDED CASE CIRCUIT BREAKERS. VOLTAGE RATING, NUMBER OF POLES, FRAME SIZE, TRIP RATINGS, MAIN BREAKER OR LUGS, NEUTRAL BUS, AND GROUND BUS ARE ALL AS SHOWN ON THE DRAWINGS. BUS BARS SHALL BE RECTANGULAR, SOLID COPPER, SECURELY BOLTED. CABINET BOXES SHALL BE CONSTRUCTED OF CODE GRADE PAINTED STEEL, SIZED TO PROVIDE MINIMUM 4 INCH WIDE WIRING GUTTERS ON SIDES, TOP AND BOTTOM. FRONTS SHALL BE CONSTRUCTED OF CODE GRADE STEEL, ADJUSTABLE INDICATING TRIM CLAMPS AND WITH DOOR PROVIDED WITH A LOCK. ALL PANELBOARDS SHALL BE IDENTIFIED WITH THE NEC. THE PANELBOARD SHALL BE FURNISHED, AND ALL LOCKS KEYS ALIKE. FRONT SHALL BE FINISH PAINTED BLUE-GRAY.
- B. POWER PANELS SHALL BE SIEMENS, TYPE S1, S2, S3, SE, OR ENGINEER APPROVED WITH UL STANDARDS AND SHALL CONFORM TO NEMA STANDARDS. THEY SHALL BEAR THE UL LABEL. PANELS SHALL MEET USASI SPECIFICATIONS WP-115A, TYPE 1, CLASS I.
- D. ALL PANEL DIRECTORIES SHALL BE TYPED AND TERMINOLOGY APPROVED BY THE OWNER.

END OF SECTION 26471

SECTION 26475
OVERCURRENT PROTECTIVE DEVICES

- A. THE ELECTRICAL CONTRACTOR SHALL FURNISH AND INSTALL WHERE INDICATED ON THE DRAWINGS OR AS REQUIRED BY THE NEC MOLDED CASE CIRCUIT BREAKERS IN A NEMA TYPE 1 ENCLOSURE. BREAKERS SHALL BE MANUALLY OPERATED, TRIP-FREE AND DESIGNED SO THAT ALL POLES OPEN SIMULTANEOUSLY. TRIPPING MECHANISM SHALL BE (THERMALLY, MAGNETICALLY) OPERATED, SHALL OPEN INSTANTANEOUSLY ON SHORT CIRCUITS AND HAVE TIME DELAY ON OVERLOADS AND HAVE EFFECTIVE SCALING AGAINST TAMPERING. BREAKERS SHALL BE AS CALLED FOR ON THE DRAWINGS OR IN THE PANELBOARD SCHEDULE AND AS MANUFACTURED BY THE MANUFACTURER SPECIFIED ON THE DRAWINGS.
- B. FUSES, UNLESS INDICATED OTHERWISE, SHALL BE DUAL ELEMENT, TIME LAG, CARTRIDGE TYPE AS MANUFACTURED BY BUSSMAN. FUSES FOR MOTOR CIRCUITS SHALL BE SIZED IN ACCORDANCE WITH THE NEC. LABELS INDICATING THE SIZE AND RATING OF FUSES SHALL BE GLUED TO INSIDE OF DOOR ON ALL FUSIBLE SWITCHES AND PANELBOARDS.
- C. ALL FUSES SHALL BE OF THE CURRENT AND VOLTAGE RATING AS REQUIRED OR NOTED ELSEWHERE IN THE CONSTRUCTION DOCUMENTS. THE INSTALLATION OF
- D. SPARES: SPARE FUSES AMOUNTING TO 10% (MINIMUM THREE) OF EACH TYPE AND RATING SHALL BE SUPPLIED BY THE ELECTRICAL CONTRACTOR. THESE SHALL BE TURNED OVER TO THE OWNER UPON PROJECT COMPLETION.

END OF SECTION 26475

SECTION 26800
ELECTRIC RESISTANCE HEATING

SECTION 26851
GENERAL

- A. THE ELECTRICAL CONTRACTOR SHALL FURNISH AND INSTALL ELECTRIC HEATING EQUIPMENT AS INDICATED ON THE DRAWINGS, IN THE ELECTRIC HEATING SCHEDULES OR NOTED ELSEWHERE IN THE CONSTRUCTION DOCUMENTS. THE INSTALLATION OF ALL SUCH EQUIPMENT SHALL BE IN STRICT CONFORMANCE TO THE NEC AND APPLICABLE LOCAL ORDINANCES.
- B. ALL CIRCUITS FEEDING THE ELECTRIC HEATING EQUIPMENT SHALL AS INDICATED ON THE DRAWINGS AND ALL CONNECTIONS TO THE HEATER JUNCTION BOX SHALL BE MADE WITH AN APPROVED TYPE OF CONNECTOR.
- C. UNLESS OTHERWISE SPECIFIED, ALL ELECTRIC HEATING EQUIPMENT SHALL BE MANUFACTURED BY BUSSMAN. THE EQUIPMENT SHALL BE AS CALLED FOR OPERATION ON A 208 VOLT, 3 PHASE, WIRE DISTRIBUTION SYSTEM.
- D. ALL EQUIPMENT SHALL BE FURNISHED COMPLETE WITH REQUIRED BLANK SECTIONS, CORNERS AND TRIM ACCESSORIES TO PROVIDE AN INSTALLATION AS SHOWN ON THE DRAWINGS.
- E. ALL ELECTRIC HEATING EQUIPMENT SHALL BE AUTOMATICALLY CONTROLLED BY THERMOSTATS INSTALLED WHERE INDICATED ON THE PLANS OR IN SOME CASES BUILT INTO THE INDIVIDUAL UNITS AS CALLED FOR IN THE SCHEDULE.

END OF SECTION 26851

SECTION 26900
CONTROLS AND INSTRUMENTATION

SECTION 26901
GENERAL

- A. ALL EQUIPMENT AND MATERIALS USED IN RELATION TO CONTROL WORK FOR THE PROJECT SHALL BE NEW AND SHALL BEAR THE MANUFACTURER'S NAME AND TRADE NAME AND BE MANUFACTURED BY THE MANUFACTURER SPECIFIED ON THE DRAWINGS. PRODUCT OF A MANUFACTURER REGULARLY ENGAGED IN THE PRODUCTION OF THE REQUIRED TYPE OF EQUIPMENT AND SHALL BE THE MANUFACTURER'S LATEST AVAILABLE TYPE.
- B. THE ELECTRICAL CONTRACTOR SHALL RECEIVE AND PROPERLY STORE THE EQUIPMENT AND MATERIAL PERTAINING TO THE ELECTRICAL WORK. THE EQUIPMENT SHALL BE TIGHTLY COVERED AND PROTECTED AGAINST DIRT, WATER, CHEMICAL OR MECHANICAL INJURY AND THEFT. THE MANUFACTURER'S DIRECTIONS SHALL BE

- FOLLOWED COMPLETELY IN THE DELIVERY, STORAGE, PROTECTION AND INSTALLATION OF ALL EQUIPMENT AND MATERIALS.
- C. THE ELECTRICAL CONTRACTOR SHALL PROVIDE AND INSTALL ALL ITEMS NECESSARY FOR THE COMPLETE INSTALLATION OF THE EQUIPMENT AS RECOMMENDED OR AS FURNISHED BY THE MANUFACTURER OF THE EQUIPMENT OR REQUIRED BY CODE WITHOUT ADDITIONAL COST TO THE OWNER, REGARDLESS OF WHETHER THE ITEMS ARE SHOWN ON THE PLANS OR COVERED IN THE SPECIFICATIONS.
- D. IT SHALL BE THE RESPONSIBILITY OF THE ELECTRICAL CONTRACTOR TO CLEAN THE ELECTRICAL EQUIPMENT, MAKE NECESSARY ADJUSTMENTS AND PLACE THE EQUIPMENT INTO OPERATION BEFORE TURNING EQUIPMENT OVER TO OWNER. ANY PAINT THAT WAS SCRATCHED DURING CONSTRUCTION SHALL BE "TOUCHED-UP" WITH FACTORY COLOR PAINT TO THE SATISFACTION OF THE ARCHITECT. ANY ITEMS THAT WERE DAMAGED DURING CONSTRUCTION SHALL BE REPLACED.
- E. UNLESS OTHERWISE INDICATED ALL HEATING, VENTILATING, AIR CONDITIONING, PLUMBING, AND OTHER MECHANICAL EQUIPMENT, MOT