TCSD WAREHOUSE 649 REMODEL

TOOELE COUNTY SCHOOL DISTRICT
PROJECT ADDRESS: 180 GARNET ST. TOOELE, UTAH 84074
CLIENT PROJECT NUMBER: -

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000.000.000

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8/17/2021 3:58:44 PM 2089 TCSD WAREHOUSE 649 REMODEL CONSTRUCTION DOCUMENT

CONSTRUCTION DOCUMENT
2021-08-16

ABBREVIATIONS

NOT ALL ABBREVIATIONS MAY BE USED

&	AND	LAV	LAVATORY
@	AT	LB / LBS	POUND (S)
ACT	ACOUSTICAL CEILING TILE	MAT	MATERIAL (S)
ADJ	ADJUSTABLE	MAX	MAXIMUM
AFF	ABOVE FINISH FLOOR	MDF	MEDIUM DENSITY
ALT	ALTERNATE	MECH	MECHANICAL
AL / ALUM	ALUMINUM	MEMB	MEMBRANE
APPROX	APPROXIMATE	MEZZ	MEZZANINE
ARCH	ARCHITECTURAL	MFR	MANUFACTURER
		MGR	MANAGER
BD	BOARD	MIN	MINIMUM
BLDG	BUILDING	MIR	MIRROR
BLK	BLOCK(ING)	MISC	MISCELANEOUS
BO	BOTTOM OF	MO	MASONRY OPENING
BRG	BEARING	MTD	MOUNT (ED)
BSMT	BASEMENT	MTL	METAL
BS	BOTH SIDES	MW	MICROWAVE
BW	BOTH WAYS		
		N	NORTH
CAB	CABINET	NIC	NOT IN CONTRACT
CB	CATCH BASIN	NO.	NUMBER
CCSA	CUSTOM COLOR SELECTED BY	NOM	NOMINAL
	ARCHITECT	NRC	NOISE REDUCTION COEFFICIENT
CG	CORNER GUARD	NTS	NOT TO SCALE
CHAM	CHAMFER		
CJ	CONTROL JOINT	OC	ON CENTER
CL	CENTER LINE	OD	OUTSIDE DIAMETER
CLG	CEILING	OFCI	OWNER FURNISHED/ CONTRACTOR
CLR	CLEAR		INSTALLED
CM	CONSTRUCTION MANAGER	OFD	OVERFLOW DRAIN
COL	COLUMN	OH	OVERHEAD
COMP	COMPUTER	OPG	OPENING
CONC	CONCRETE	OPP	OPPOSITE
CONT	CONTINUOUS	OSB	ORIENTED STRAND BOARD
CMU	CONCRETE MASONRY UNIT	OZ	OUNCE
CSBA	COLOR SELECTED BY ARCHITECT		
CT	CERAMIC TILE	PERI	PERIMETER
		PERM	PERMANENT
D	DEPTH	PL	PLATE
DB	DECK BEARING	PLAM	PLASTIC LAMINATE
DBL	DOUBLE	PNL	PANEL
DEPT	DEPARTMENT	PNT	PAINT (ED)
DF	DRINKING FOUNTAIN	P.O.	POINT OF
DIA	DIAMETER	PR	PAIR
DIM	DIMENSION	PT	POST TENSIONED
DN	DOWN	PART	PARTITION
DRN	DRAIN	PLY	PLYWOOD
DTL/DET	DETAIL		
DW	DISHWASHER	QT	QUARRY TILE
DWG	DRAWING		
		R / RAD	RADIUS
E	EAST	RCP	REFLECTED CEILING PLAN
(E)	EXISTING	REC	RECESSED
EA	EACH	REF	REFERENCE
EIFS	EXTERIOR INSULATION SYSTEM	REFG	REFRIGERATOR
EJ	EXPANSION JOINT	REINF	REINFORCE (ED)
ELEC	ELECTRICAL	REM	REMOVE (ED)
ELEV	ELEVATION	REPL	REPLACE
EQ	EQUAL	REQD	REQUIRED
EQUIP	EQUIPMENT	REV	REVISION (S)
EVAP	EVAPORATIVE	RM	ROOM
EXIST	EXISTING	RO	ROUGH OPENING
EXP	EXPANSION		
EXT	EXTERIOR	S	SOUTH
EWC	ELECTRIC WATER COOLER	SALV	SALVAGE (ED)
		SECT	SECTION
FA	FIRE ALARM	SF	SQUARE FOOT
FD	FLOOR DRAIN	SIM	SIMILAR
FDN	FOUNDATION	SLNT	SEALANT
FE	FIRE EXTINGUISHER	SPEC	SPECIFICATION (S)
FEC	FIRE EXTINGUISHER CABINET	SQ	SQUARE
FG	FINISH GRADE	SS	STAINLESS STEEL
FH	FIRE HYDRANT	STC	SOUND TRANSMISSION CLASS
FIN	FINISHED	STD	STANDARD
FLR	FLOOR	STL	STEEL
F.O.	FACE OF	STOR	STORAGE
FT	FOOT, FEET	STRUC	STRUCTURE (AL)
FRP	FIBER REINFORCED PANEL	SUSP	SUSPENDED
FRT	FIRE RETARDANT TREATED WOOD	SYM	SYMMETRY (ICAL)
FTG	FOOTING		
FV	FIELD VERIFY	T	THICKNESS
		T & B	TOP AND BOTTOM
GA	GAUGE	T & G	TONGUE AND GROOVE
GALV	GALVANIZED	TBD	TO BE DETERMINED
GB	GRAB BAR	TEMP	TEMPORARY
GC	GENERAL CONTRACTOR	THRU	THROUGH
GFRC	GLASSFIBER REINFORCED PANEL	T.O.	TOP OF
GYP	GYPSUM	TRANS	TRANSFORMER
GWB	GYPSUM WALLBOARD	TS	TUBE STEEL
		TYP	TYPICAL
HB	HOSE BIB		
HC	HANDICAP ACCESSIBLE	UNF	UNFINISHED
HDW	HARDWARE	UNO	UNLESS OTHERWISE NOTED
HDF	HIGH DENSITY FIBERBOARD		
HM	HOLLOW METAL	VAR	VARIES
H	HEIGHT	VB	VAPOR BARRIER
HOR	HORIZONTAL	VCT	VINYL COMPOSITION TILE
		VERT	VERTICAL
ID	INSIDE DIAMETER	VEST	VESTIBULE
ICF	INSULATED CONCRETE FORM	VWC	VINYL WALL COVERING
IN	INCH		
INCL	INCLUDE	W	WEST
INFO	INFORMATION	W	WIDTH
INT	INTERIOR	W/	WITH
INSUL	INSULATE, (D), (ION)	WC	WATER CLOSET
INV	INVERT	WD	WOOD
		W/O	WITHOUT
JST	JOIST	WSCT	WAINSCOT
JT	JOINT	WWF	WELDED WIRE FABRIC

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SHEET NUMBERING + NAMING

THIS IS A QUICK REFERENCE GUIDE TO THE SHEET NUMBERING AND NAMING SYSTEM USED IN VCBO CONSTRUCTION DOCUMENTS.

DISCIPLINE DESIGNATOR / SHEET TYPE / LEVEL / SEQUENCE / PLAN TYPE

X X 0 0 0 . 0

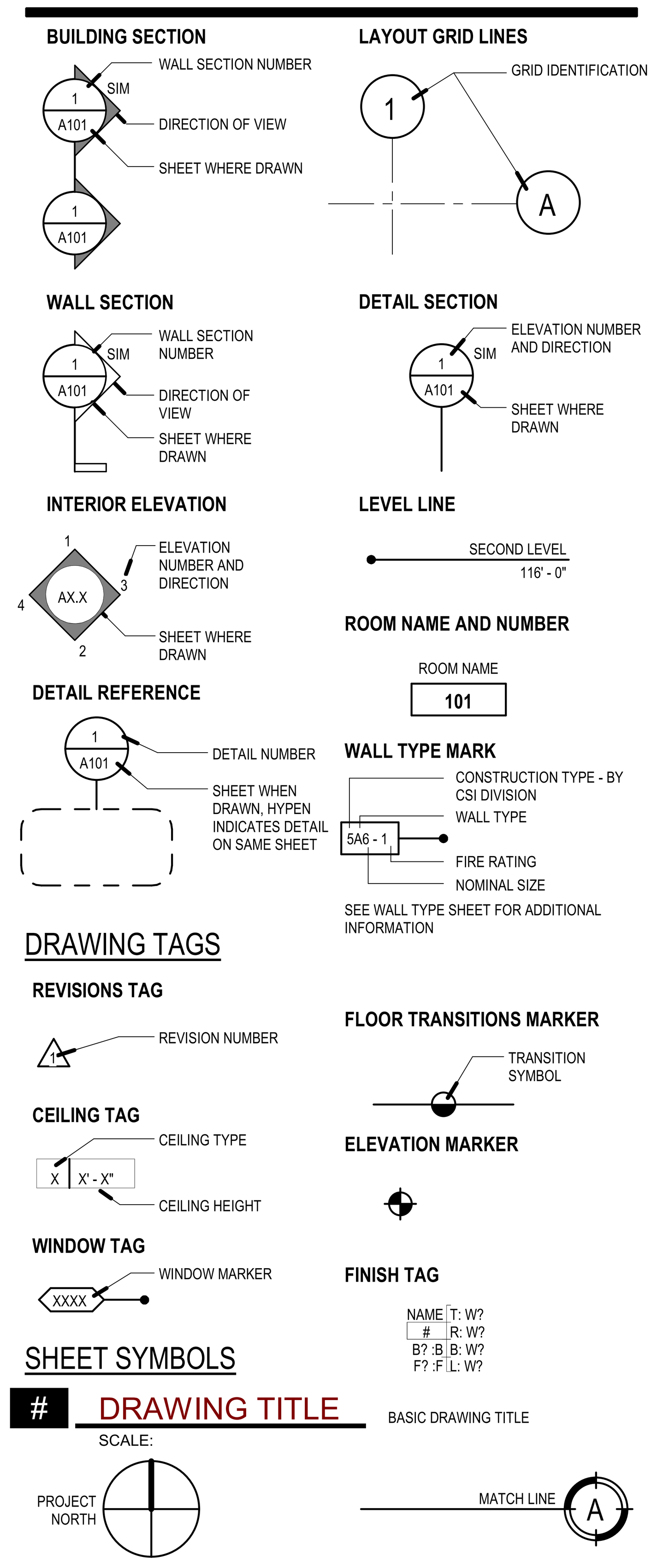
PLAN TYPE
.0 SLAB PLAN
.1 ANNOTATED PLAN
.2 DIMENSION + WALL TYPE PLAN
.3 FINISH PLAN
.4 REFLECTED CEILING PLAN

SEQUENCE
DENOTES AREA SEQUENCE IN PLAN, AND NUMERIC SEQUENCE IN NON-PLAN SHEETS

LEVEL
DENOTES LEVEL IN A MULTI-STORY BUILDING. ALSO BECOMES A SEQUENCE NUMBER DENOTING DIVISIONS IN NON-PLAN SHEETS

SHEET TYPE SEQUENCE
0 GENERAL NOTES + LEGENDS
1 FLOOR PLANS
2 ELEVATIONS
3 SECTIONS
4 ENLARGED PLANS, ELEVATIONS, SECTIONS
5 DETAILS
6 DOOR, WINDOW, OTHER SCHEDULES
7 SIGNAGE
8 USER DEFINED
9 3D DRAWINGS + PERSPECTIVES

REFERENCE SYMBOL LEGEND



GENERAL NOTES

1. IT IS THE CONTRACTORS RESPONSIBILITY TO REVIEW AND COORDINATE THE WORK OF ALL SUB-CONTRACTORS, TRADES AND SUPPLIERS WITH THE REQUIREMENTS OF THE CONTRACT DOCUMENTS BEFORE COMMENCING CONSTRUCTION, AND TO ASSURE THAT ALL PARTIES ARE AWARE OF ALL REQUIREMENTS, REGARDLESS OF WHERE THE REQUIREMENTS OCCUR IN THE CONTRACT DOCUMENTS, WHICH MIGHT AFFECT THE WORK OF THAT PARTY.
2. AS PART OF THE CONTRACTOR'S RESPONSIBILITY TO COORDINATE THE WORK OF ALL SUB-CONTRACTORS, TRADES AND SUPPLIERS, THE CONTRACTOR SHALL ENDEAVOR TO IDENTIFY AND NOTIFY THE ARCHITECT OF ANY CONFLICTS BETWEEN THE WORK OF DIFFERENT PARTIES AT THE EARLIEST POSSIBLE DATE SO AS TO ALLOW REASONABLE AND ADEQUATE TIME FOR THE CONFLICT TO BE RESOLVED WITHOUT DELAYING THE WORK. ALL DEVIATIONS FROM THAT WHICH IS REQUIRED BY THE CONTRACT DOCUMENTS MUST BE APPROVED IN ADVANCE BY THE ARCHITECT.
3. THE ARCHITECTURAL DRAWINGS ESTABLISH AND COORDINATE THE FINISHED APPEARANCE AND EXACT LOCATION OF ALL EXPOSED ELEMENTS OF THE WORK OF ALL THE TRADES, INCLUDING THAT WORK WHICH IS ILLUSTRATED PRIMARILY ON DRAWINGS OF OTHER DISCIPLINES. QUANTITIES ARE TO BE PROVIDED AS SHOWN ON DRAWINGS OF OTHER DISCIPLINES BUT LOCATIONS SHOWN ON OTHER DRAWINGS ARE SCHEMATIC, UNLESS OTHERWISE NOTED ON THE ARCHITECTURAL DRAWINGS. THE ARCHITECTURAL DRAWINGS TAKE PRECEDENCE FOR THE FINISHED APPEARANCE AND EXACT LOCATION OF ALL PARTS OF THE WORK.
4. EXCEPT WHERE DIRECTED TO PLACE ITEMS OF WORK AT THE APPROXIMATE LOCATION SHOWN; DO NOT SCALE DRAWINGS FOR DIMENSIONAL INFORMATION. ALL ELEMENTS OF THE DRAWINGS MAY NOT BE DRAWN TO EXACT SCALE. ALL DIMENSIONS REQUIRED ARE SHOWN OR MAY BE DERIVED FROM THOSE SHOWN ON THE FLOOR PLANS, DETAIL PLANS, ELEVATIONS, SECTIONS, DETAILS, SCHEDULES AND SPECIFICATIONS. IF DIMENSIONS ARE NOT PRESENT, THE ARCHITECT IS TO BE NOTIFIED SO THAT A CLARIFICATION CAN BE ISSUED.
5. CONTRACTOR TO FOLLOW CURRENT ANSI 117-1 STANDARDS AS REPRESENTED ON SHEET G301, GENERAL ACCESSIBILITY GUIDELINES. NOTIFY ARCHITECT IF THE DESIGN DRAWINGS CONFLICT WITH THIS SHEET.

VICINITY MAP

SHEET INDEX

NOTES TO BIDDERS

1. THIS SHEET CONTAINS A LIST OF DRAWINGS WHICH COMPRISE A FULL SET OF DRAWINGS FOR THIS PROJECT. ANY CONTRACTOR, SUBCONTRACTOR, VENDOR OR ANY OTHER PERSON PARTICIPATING IN OR BIDDING ON THIS PROJECT SHALL BE RESPONSIBLE FOR THE INFORMATION CONTAINED IN ANY AND ALL SHEETS OF DRAWINGS AND SPECIFICATIONS. IF ANY PERSON, PARTY OR ENTITY ELECTS TO SUBMIT BIDS FOR ANY PORTION, OR ALL, OF THIS PROJECT, THAT PERSON, PARTY OR ENTITY SHALL BE RESPONSIBLE FOR ANY AND ALL INFORMATION CONTAINED IN THESE DRAWINGS AND SPECIFICATIONS, INCLUDING, BUT NOT LIMITED TO, ANY SUBSEQUENT ADDENDUMS OR CLARIFICATIONS THAT MAY BE ISSUED.
2. THESE DOCUMENTS SHOW THE DESIGN INTENT. IT IS THE CONTRACTORS RESPONSIBILITY TO PROVIDE EVERYTHING SHOWN ON THE DRAWINGS OR SPECIFIED REGARDLESS OF WHERE IT IS SHOWN ON THE DRAWINGS OR IN THE SPECIFICATIONS. FOR EXAMPLE; SOME MILLWORK DETAILS HAVE STEEL FRAMES WHICH MAY BE PROVIDED BY DIVISION 05 OR WITH THE MILLWORK AT THE CONTRACTOR'S DISCRETION, BUT IT SHALL BE PROVIDED AS PART OF THE CONTRACT.
3. EVERYTHING CALLED FOR IN THESE DOCUMENTS SHALL BE "NEW" AND PROVIDED BY THE CONTRACTOR, SUBCONTRACTOR, VENDOR OR ANY OTHER PERSON PARTICIPATING IN OR BIDDING ON THIS PROJECT UNLESS NOTED OTHERWISE AS EXISTING (EXIST), NOT IN CONTRACT (NIC) OR FOR REFERENCE ONLY. FURNISHINGS SHOWN DASHED SHALL BE FOR REFERENCE ONLY.

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REV	DATE	DESCRIPTION

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CLIENT NUMBER: -
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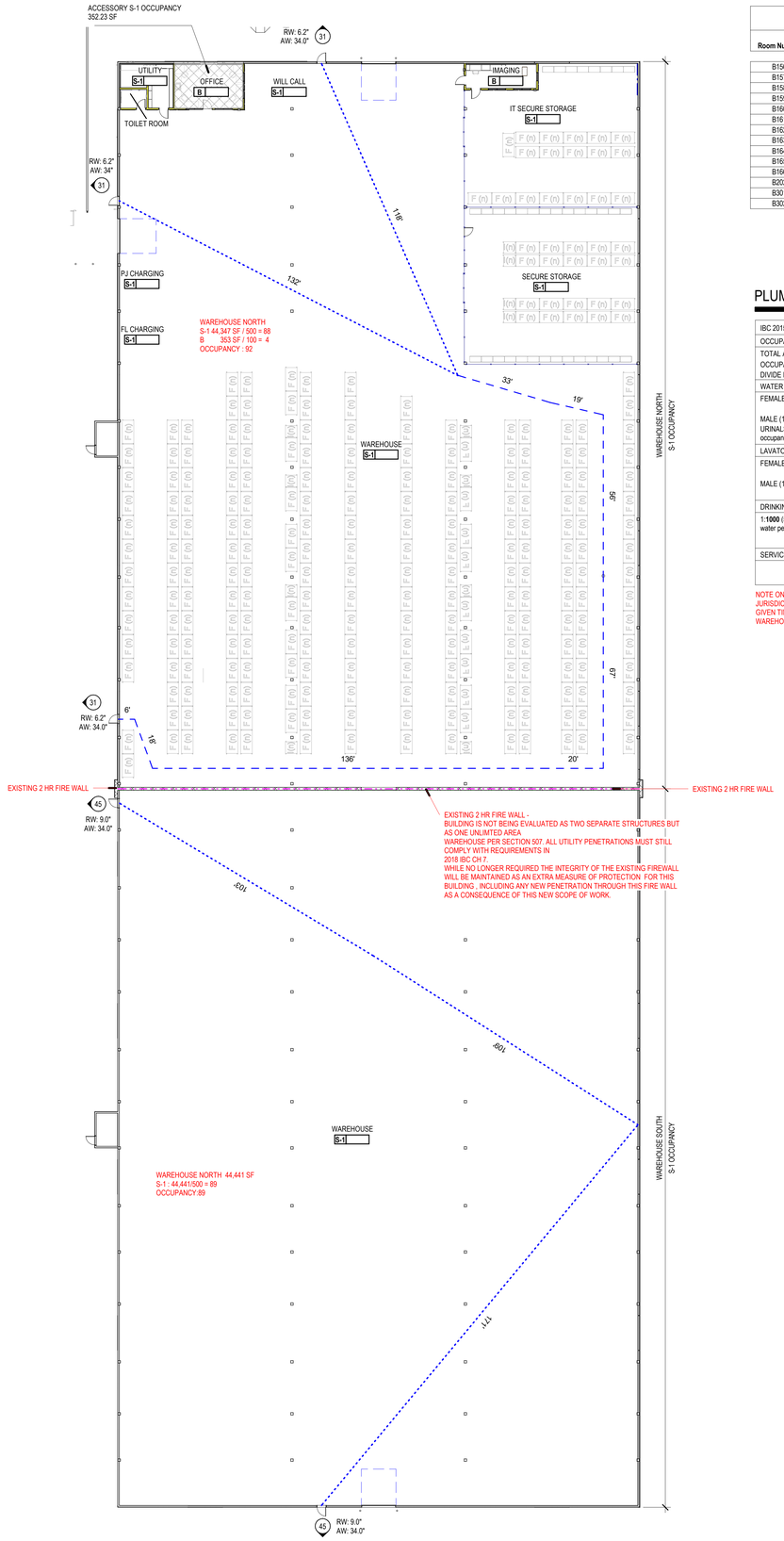
TOOELE COUNTY SCHOOL DISTRICT
PROJECT ADDRESS: 180 GARNET ST. TOOELE, UTAH 84074

CONSTRUCTION DOCUMENT

GENERAL INFORMATION + INDEX



02 PLAN - LEVEL 01 - CODE + LIFE SAFETY - 649

SCALE: 1" = 20'-0"

OCCUPANCY LOAD - WAREHOUSE 649 TABLE 1004.5

Room Number	Name	Area	Occupancy Category	Occupant Load Factor	Compare Occ Load Calculated
B156	TOILET ROOM	57.43 SF		0	
B157	UTILITY	204.97 SF	S-1	500	1
B158	OFFICE	352.54 SF	B	100	4
B159	WILL CALL	362.68 SF	S-1	500	1
B160	WAREHOUSE	37231.19 SF	S-1	500	75
B161	SECURE STORAGE	3274.92 SF	S-1	500	7
B162	IT SECURE STORAGE	2755.62 SF	S-1	500	6
B163	IMAGING	200.59 SF	B	100	3
B164	FL CHARGING	256.41 SF	S-1	500	1
B165	PJ CHARGING	153.41 SF	S-1	500	1
B166	WAREHOUSE	44440.30 SF	S-1	500	89
B202	DUMPSTER	436.80 SF		0	
B301	FIRE RISER	84.64 SF		0	
B302	FIRE RISER	84.64 SF		0	

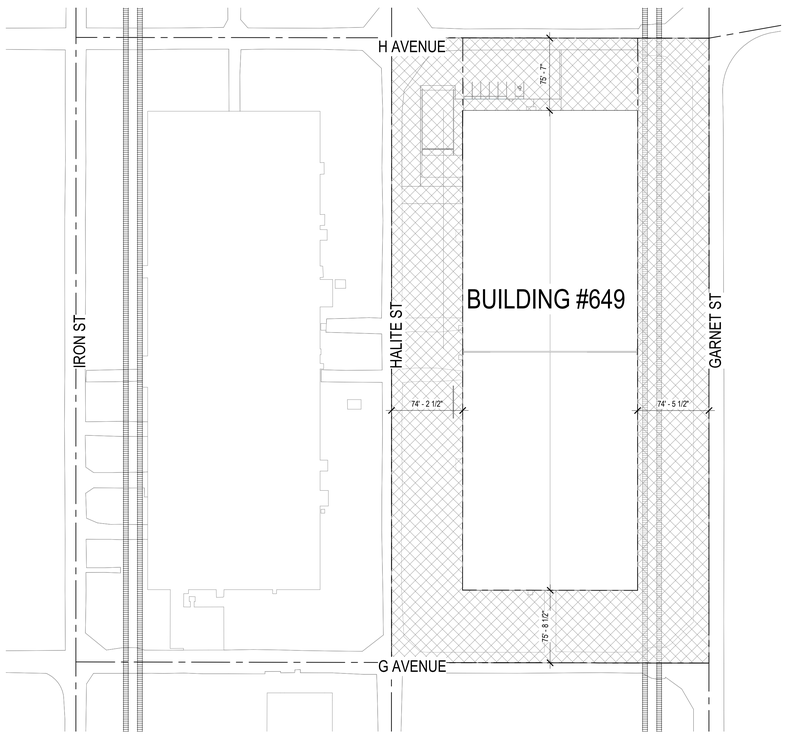
PLUMBING FIXTURE ANALYSIS

IBC 2015 2902.1		
OCCUPANCY TYPE	**S-1**	
TOTAL APPLICABLE S.F. OCCUPANTS DIVIDE BY 2	**88,939.78 SF** **178** **89**	EA. MALE & FEMALE
WATER CLOSETS		
FEMALE (1:**100**) MALE (1:**100**) URINALS (67% of WC in A and E, 50% all other occupancies)	1 1 1 1 **0**	REQUIRED PROVIDED REQUIRED WC PROVIDED URINAL PROVIDED
LAVATORIES		
FEMALE (1:**100**) MALE (1:**100**)	1 1 1 1	REQUIRED PROVIDED REQUIRED PROVIDED
DRINKING FOUNTAINS (HIGH/LOW PER 1109.5.1)		
1:**1000** (50% may be water coolers or bottled water per IPC 2012 410.3 Substitution)	1 1	REQUIRED WATER COOLER PROVIDED
SERVICE SINK		
	1 1	REQUIRED PROVIDED

NOTE ON PLUMBING FIXTURE COUNT:
JURISDICTION HAVING AUTHORITY HAS INDICATED THAT THE MAX NUMBER OF EMPLOYEES AT ANY GIVEN TIME WILL BE 5. THEREFORE THEY HAVE APPROVED A SINGLE TOILET ROOM TO SERVE THIS WAREHOUSE FACILITY.

PLUMBING FIXTURE ANALYSIS

IBC 2015 2902.1		
OCCUPANCY TYPE	**B**	
TOTAL APPLICABLE S.F. OCCUPANTS DIVIDE BY 2	**553.13 SF** **6** **3**	EA. MALE & FEMALE
WATER CLOSETS		
FEMALE (1:**25** for the first 50 and 1:**50** for the remainder exceeding 50) MALE (1:1:**25** for the first 50 and 1:**50** for the remainder exceeding 50) URINALS (67% of WC in A and E, 50% all other occupancies)	1 1 1 1 1	REQUIRED PROVIDED REQUIRED PROVIDED WC PROVIDED URINAL PROVIDED
LAVATORIES		
FEMALE (1:**40** for the first 80 and 1:**80** for the remainder exceeding 80) MALE (1:**40** for the first 80 and 1:**80** for the remainder exceeding 80)	1 1 1 1	REQUIRED PROVIDED REQUIRED PROVIDED
DRINKING FOUNTAINS (HIGH/LOW PER 1109.5.1)		
1:**100** (50% may be water coolers or bottled water per IPC 2012 410.3 Substitution)	1 1	REQUIRED WATER COOLER PROVIDED
SERVICE SINK		
	1 1	REQUIRED PROVIDED



1 OVERALL - PLAN - SITE 60' SIDEYARD EXHIBIT

SCALE: 1/64" = 1'-0"

FIRE RATING LEGEND

- SMOKE PARTITION - WALL CONSTRUCTION
- 1 HOUR FIRE BARRIER - WALL CONSTRUCTION
- 2 HOUR FIRE BARRIER - WALL CONSTRUCTION
- 2 HOUR FIRE WALL - WALL CONSTRUCTION
- 3 HOUR FIRE BARRIER - WALL CONSTRUCTION
- DRAFT CURTAIN W/ AUTOMATIC SPRINKLER HEAD @ 6'-0" O.C. MAX. EACH SIDE
- OPENINGS REQUIRING WATER CURTAIN SPRINKLER DESIGN
- PATH OF TRAVEL TO EXIT
- COMMON PATH OF TRAVEL TO EXIT

DESIGN DATA

GOVERNING BUILDING CODES:
IBC 2018, to include Appendix J; ANSI 117-1 2009; NFPA 101 LIFE SAFETY 2015; IMC 2018; IPC 2018; IECC 2018, for commercial projects; IFGC 2018; NEC 2014

OCCUPANCY TYPE - CH.3
- **S-1**
- **O**

CONSTRUCTION TYPE- CH. 5: **VA**

ALLOWABLE BUILDING HEIGHT: PER TABLE 504.3: **40' -0"**
- EXCEPTION: TOWERS, SPIRES, STEEPLES AND OTHER ROOF STRUCTURES.
- THE STRUCTURES SHALL BE UNLIMITED IN HEIGHT WHERE OF NONCOMBUSTIBLE MATERIALS AND SHALL NOT EXTEND MORE THAN 20 FEET ABOVE THE ALLOWABLE BUILDING HEIGHT WHERE OF COMBUSTIBLE MATERIALS (SEE CHAPTER 15 FOR ADDITIONAL REQUIREMENTS).
- **ACTUAL HEIGHT - 27'-8"**

ALLOWABLE STORIES ABOVE GRADE PLANE: PER TABLE 504.4: **2**
- **ACTUAL STORIES - 1**

UNLIMITED AREA BUILDINGS: PER SECTION 507
- 60' SIDEYARDS
- ONE STORY ABOVE GRADE PLANE
- FULLY SPRINKLED

INCIDENTAL USE AREAS: PER TABLE 509
- NONE

OCCUPANCY SEPARATION: PER TABLE 508.4 AND ACCESSORY USES 507.1.1
- NO SEPARATION REQUIRED

FIRE RESISTANCE RATING REQUIREMENTS FOR BUILDING ELEMENTS:
PER TABLE 601
- PRIMARY STRUCTURAL FRAME - **0** HOUR
- BEARING WALLS
  - EXTERIOR - **0** HOUR
  - INTERIOR - **0** HOUR
- NON-BEARING WALLS & PARTITION
  - INTERIOR - **0** HOUR
- FLOOR CONSTRUCTION & ASSOCIATED SECONDARY MEMBERS - **0** HOUR
- ROOF CONSTRUCTION & ASSOCIATED SECONDARY MEMBERS -0 HOUR

AUTOMATIC SPRINKLER SYSTEM: PER SECTION 903 - **YES**

DESIGN OCCUPANCY LOAD: PER SECTION 1004
- MAIN LEVEL - **179** OCCUPANTS

EGRESS WIDTH FOR OCCUPANCY SERVED: PER 1005
- MAIN LEVEL: **179** OCCS. x 0.2 = **35.8'** REQUIRED (DOORS, CORRIDOR, ETC)
  PROVIDED: **170'** (NOT INCL. MECH. RM. EXIT DOORS)

EXIT ACCESS - CH. 10

COMMON PATH OF EGRESS TRAVEL: PER TABLE 1006.2.1
- (Measured from the most remote point within a story to that point where the occupants have separate access to two exits or exit access doorways) **100** FEET
- **1006.2.1** Where the design occupant load or the common path of egress travel distance exceeds the values listed in Table 1006.2.1

2 EXITS REQUIRED - PER 1006.3.1
- WHERE THE OCCUPANCY LOAD TOTALS MORE THAN 50
- PLACE FAR ENOUGH APART - NOT LESS THAT 1/2 MAXIMUM DIAGONAL DIMENSION OF AREA SERVED (MEASURED STRAIGHT LINE BETWEEN EXITS)
- 5 EXITS PROVIDED

THROUGH INTERVENING SPACES PER 1016.2
- PERMITTED WHERE ADJOINING ROOMS OR AREAS ACCESSORY TO THE AREAS SERVED, IS NOT HIGH HAZARD OCCUPANCY, AND PROVIDE A DISCERNIBLE PATH OF EGRESS TRAVEL TO AN EXIT.

TRAVEL DISTANCE: PER TABLE 1017.2
- WITHOUT SPRINKLER SYSTEM - 200' MAXIMUM LENGTH OF EXIT ACCESS TRAVEL DISTANCE
- WITH SPRINKLER SYSTEM - **250'** MAXIMUM LENGTH OF EXIT ACCESS TRAVEL
- SEE MEASUREMENT 1017.3 (INCLUDES COMMON PATH DISTANCE)

MINIMUM CORRIDOR WIDTH: PER TABLE 1020.2 IN INCHES
- 44 UNLESS NOTED OTHERWISE
- 36 WITH AN OCCUPANT LOAD OF LESS THAN 50
- 72 AMBULATORY CARE AND AREAS SERVING STRETCHERS
- 72 GROUP E WITH OCCUPANT LOAD OF 100 OR MORE

DEAD ENDS: PER 1020.4
- MUST BE LESS THAN 20' WHERE MORE THAN ONE EXIT IS REQUIRED;
- OR 50' IN SPRINKLERED BUILDING (EXCEPTION 2)
- OR THE LENGTH IS 2.5 TIMES THE WIDTH (EXCEPTION 3)

INTERIOR WALL & CEILING FINISH REQUIREMENTS: PER TABLE 803.11
- IN SPRINKLERED BUILDING :
- EXIT ENCLOSURES AND EXIT PASSAGEWAYS - CLASS B
- CORRIDORS AND OTHER EXIT WAYS - CLASS C
- ROOMS AND ENCLOSED SPACES - CLASS C

INTERIOR FLOORS FINISH: PER 804
- IN SPRINKLERED BUILDING - CLASS I & II

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G101

Firestop Schedule of Through Penetration Systems. Basis of Design: Hilti, Inc.

TYPE OF PENETRANT	F-RATING (HR)	CONCRETE FLOORS	CONCRETE OR BLOCK WALLS	GYPSUM WALLS	WOOD FLOORS	Hilti Products
		BASIS OF DESIGN UL SYSTEM		BASIS OF DESIGN UL SYSTEM		
CIRCULAR BLANK OPENINGS	1	F-A-0006, C-AJ-0055, C-AJ-0090	C-AJ-0055, C-AJ-0090	--	--	CP 680, CP 618, FS-ONE MAX, CFS-BL
	2	F-A-0006, C-AJ-0055, C-AJ-0090	C-AJ-0055, C-AJ-0090	--	--	
	3	F-A-0006, C-AJ-0055, C-AJ-0086, F-A-0014	C-AJ-0055, C-AJ-0086	--	--	
METAL PIPES OR CONDUIT	1	C-AJ-1226, F-A-1028, F-A-1017	C-AJ-1226, W-J-1067, W-J-1020	W-L-1054, W-L-1058, W-L-1164, W-L-1506	F-C-1009, F-C-1059, F-C-1168	CP 680, FS-ONE MAX, CP 606, CFS-S SIL GG, CFS-D, Mineral Wool
	2	C-AJ-1226, F-A-1028, F-A-1017	C-AJ-1226, W-J-1067, W-J-1020, W-J-1248	W-L-1054, W-L-1058, W-L-1164, W-L-1506	F-C-1009, F-C-1059, F-C-1168	
	3	C-AJ-1226, F-A-1017	C-AJ-1226, W-J-1041, W-J-1068	--	--	
	4	C-BJ -1037, C-BJ-1034	C-BJ-1034, C-BJ-1037, W-J-1041, W-J-1042, W-J-1068	W-L-1110, W-L-1111, W-L-1165	--	
NON-METALLIC PIPE OR CONDUIT (I.E. PVC, CPVC, ABS, FRP, ENT)	1	F-A-2053, F-A-2025, C-AJ-2109, C-AJ-2098, C-AJ-2271, C-AJ-2167, C-BJ-2021, C-AJ-2342	C-AJ-2109, C-AJ-2098, C-AJ-2167, C-AJ-2371, C-AJ-2342	W-L-2078, W-L-2075, W-L-2128	F-C-2232, F-C-2030, F-C-2160, F-C-2389	CP 680, CP 643N, Mineral Wool, CP 644, FS-ONE MAX, CFS-S SIL SL, CFS-S SIL GG, CP 648
	2	F-A 2053, F-A 2025, C-AJ-2109, C-AJ-2098, C-AJ-2271, C-AJ-2167, C-BJ-2021, C-AJ-2371, C-AJ-2342	C-AJ-2109, C-AJ-2098, C-AJ-2167, C-AJ-2371, C-AJ-2342	W-L-2078, W-L-2075, W-L-2128	F-C-2029, F-C-2030, F-C-2128, F-C-2160	
	3	F-A-2054, C-AJ-2109, C-AJ-2098, C-AJ-2371, C-AJ-2342	C-AJ-2109, C-AJ-2098, C-AJ-2371, C-AJ-2342	--	--	
	4	C-BJ-2016, C-AJ-2017	W-J-2057, W-J-2091	W-L-2184, W-L-2245	--	
SINGLE OR BUNDLED CABLES	1	F-A-3007,C-AJ-3095,C-AJ-3180, C-AJ-3283	W-J-3036, C-AJ-3095, C-AJ-3180, W-J-3060, W-J-3167	W-L-3065, W-L-3111, W-L-3112, W-L-3334, W-L-3414, W-L-3396	F-C-3012, F-C-3110, F-C-3044	CP 680, CP 653, FS-ONE MAX, CP 618, CP 606, CFS-D, CFS-CC
	2	F-A-3007,C-AJ-3095,C-AJ-3334, F-A-3060	W-J-3036, C-AJ-3095, C-AJ-3180, W-J-3060, W-J-3167, W-J-3189	W-L-3065, W-L-3111, W-L-3112, W-L-3334, W-L-3414, W-L-3396	F-C-3012, F-C-3110	
	3	F-A-3007, C-AJ 3095, C-AJ-3285	C-AJ-3095, C-AJ-3180, W-J-3167	--	--	
	4	N/A**	W-J-3050	W-L-3139, W-L-3334	--	
CABLE TRAY	1	C-AJ-4034, C-AJ-4035	W-J-4027, C-AJ-4034, C-AJ-4035	W-L-4011, W-L-4019, W-L-4081	--	CFS-BL, FS-ONE MAX, CP 620, CP 618
	2	C-AJ-4034, C-AJ-4035	W-J-4027, C-AJ-4034, C-AJ-4035	W-L-4011, W-L-4019, W-L-4081	--	
	3	C-AJ-4034, C-AJ-4035	C-AJ-4034, C-AJ-4035	W-L-3385, W-L-3277	--	
	4	N/A**	W-J-8007	W-L 8014	--	
INSULATED PIPES	1	F-A 5015, F-A 5017, C-AJ-5090, C-AJ-5091, C-AJ-5090, C-AJ-5048	C-AJ-5090, C-AJ-5091, C-AJ 5061, W-J-5042	W-L-5028, W-L-5029, W-L-5047	F-C-5004, F-C-5037, F-C-5036	CP 680, FS-ONE MAX, Mineral Wool
	2	F-A 5015, F-A 5017, C-AJ-5090, C-AJ-5091, C-AJ-5090	C-AJ-5090, C-AJ-5091, C-AJ-5061, W-J-5042	W-L-5028, W-L-5029, W-L-5047	F-C-5004, F-C-5037	
	3	F-A 5016, C-AJ-5090, F-A-5018	C-AJ-5090, C-AJ-5061	--	--	
	4	C-BJ-5006	C-BJ-5006, W-J-5028	W-L-5073	--	
ELECTRICAL BUSWAY	1	C-AJ-6006, C-AJ-6017, F-A-6002, C-AJ-6036	C-AJ-6006, C-AJ-6017, C-AJ-6036	--	--	CP 637, FS-ONE MAX, CP 620, CFS-BL, Mineral Wool, CFS-S SII GG, CFS-S SIL SL
	2	C-AJ-6006, C-AJ-6017, F-A 6042, C-AJ-6036	C-AJ-6006, C-AJ-6017, C-AJ-6036	--	--	
	3	C-AJ-6006, C-AJ-6017	C-AJ-6006, C-AJ-6017	--	--	
MECHANICAL DUCTWORK WITHOUT DAMPERS (NON-INSULATED)	1	C-AJ-7046, C-AJ-7051, C-AJ-7084	C-AJ-7046, C-AJ-7051, W-J-7021, W-J-7022	W-L-7017, W-L-7040, W-L-7042, W-L-7155	F-C-7013	CFS-S SIL GG, CP 606, FS-ONE MAX
	2	C-AJ-7046, C-AJ-7051, C-AJ-7085	C-AJ-7046, C-AJ-7051, W-J-7021, W-J-7022	W-L-7040, W-L-7042, W-L-7155	--	
	3	C-AJ-7046, C-AJ-7051	C-AJ-7046, C-AJ-7051	--	--	
MECHANICAL DUCTWORK WITHOUT DAMPERS (INSULATED)	1	N/A**	W-J-7029, W-J-7124	W-L-7059, W-L-7153, W-L-7156, W-L-7151	N/A**	FS-ONE MAX, Mineral Wool
	2	N/A**	W-J-7091, W-J-7112, W-J-7124	W-L-7059, W-L-7153, W-L-7156, W-L-7151	N/A**	
MIXED PENETRANTS	1	C-AJ-8099, C-AJ-8056, C-AJ-8143	C-AJ-8099, C-AJ-8056, W-J-8007, C-AJ-8143	W-L-1095, W-L-8013	F-C-8009, F-C-8014, F-C-8026	FS-ONE MAX, CFS-BL, CP 620, CP 618
	2	C-AJ-8099, C-AJ-8056, C-AJ-8143, C-AJ-8252	C-AJ 8099, C-AJ-8056, W-J-8007, C-AJ-8143, C-AJ-8252	W-L-1095, W-L-8013	--	
	3	C-AJ-8099, C-AJ-8056	C-AJ-8041, C-AJ-8056, W-J-8007, C-AJ-8099	--	--	
	4	C-AJ-8095	C-AJ-8095, W-J-8007	W-L-8014	--	

**CONTACT HILTI FOR CURRENT UL-CLASSIFIED SYSTEM OR ENGINEERING JUDGMENT DRAWING: 800-879-6000

NOTES:

1. Jobsite conditions of each through-penetration firestop system must meet ALL details of the UL-Classified System selected.
2. If jobsite conditions do not match any UL-classified systems in the schedules above, contact Hilti for alternative systems or Engineer Judgment Drawings - 800-879-8000
3. Where more than one applicable UL-Classified System is listed in the schedules, choose the UL System which is most economical for each through-penetration firestop system.
4. Coordinate work with other trades to assure that penetration opening sizes are appropriate for penetrant locations, and vice versa.

VCBO ARCHITECTURE
524 SOUTH 600 EAST
SALT LAKE CITY, UT 84102
801.575.8800
VCBO.COM

REV	DATE	DESCRIPTION

VCBO NUMBER: 20385
CLIENT NUMBER: -
DATE: 2021-08-16

TCSD WAREHOUSE 649 REMODEL

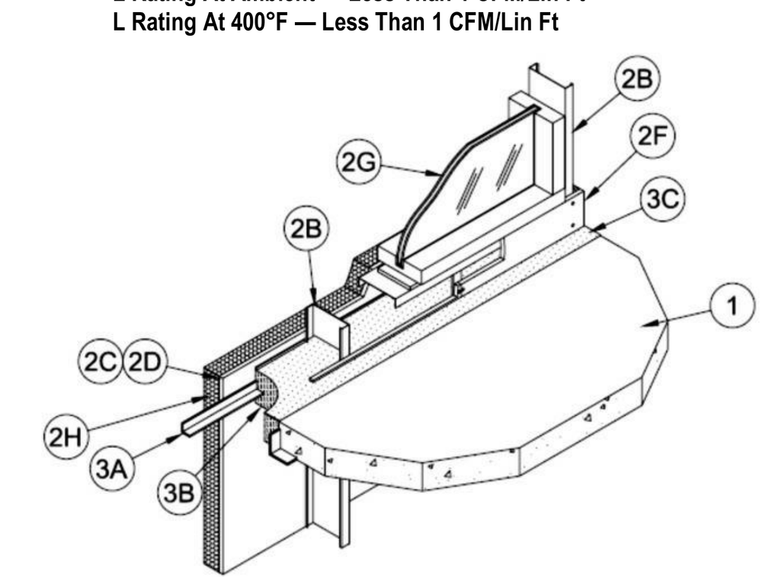
TOOELE COUNTY SCHOOL DISTRICT
PROJECT ADDRESS: 180 GARNET ST. TOOELE, UTAH 84074
CONSTRUCTION DOCUMENT

UL RATED COMMON THROUGH-PENETRATION FIRESTOP SYSTEMS

G203

UL DESIGN No. CW-S-1022

Design System No. CW-S-1022
F Rating — 2 Hr
T Rating — 0 Hr
Linear Opening Width — 2-1/2 In. Max
L Rating At Ambient — Less Than 1 CFM/Lin Ft
L Rating At 400°F — Less Than 1 CFM/Lin Ft



1. **Floor Assembly —** Min 4-1/2 in. (114 mm) thick reinforced lightweight or normal weight (100-150 pcf or 1600-2400 kg/m^3) structural concrete. Perimeter of floor assembly to be provided with min 3 by 3 by 1/4 in. (76 by 76 by 6 mm) thick cast-in-place structural steel angle for weld-attachment of mounting angles (Item 2A).

2. **Curtain Wall Assembly —** The curtain wall assembly shall incorporate the following construction features:

A. **Mounting Angles —** (Not Shown) — Nom 3 in. (76 mm) long angles with one nom 3 in. (76 mm) leg for attachment to edge of floor assembly and with one leg approx 2-1/2 to 3 in. (64 to 76 mm) longer than distance to interior face of steel studs. Angles to be formed of min 1/8 in. (3.2 mm) thick steel. Angles welded to cast-in-place structural steel angle at edge of floor assembly (Item 1) on one side of each steel stud (Item 2B) at each floor level. Top edge of each mounting angle to be recessed 1/2 to 1 in. (13 to 25 mm) below top surface of floor.

B. **Steel Studs —** C-shaped studs formed from min 0.059 in. (1.5 mm) thick galv steel. The steel studs shall be min 6 in. (152 mm) wide by 1-1/4 in. (31 mm) deep with 5/16 in. (8 mm) wide stiffening flanges and shall be assembled using runner channels formed from min 0.059 in. (1.5 mm) thick galv steel. Studs spaced max 16 in. (406 mm) OC and welded, bolted or screwed to mounting angles (Item 2A) at each floor level. Interior face of studs to be max 2-1/2 in. (64 mm) from edge of floor assembly. Studs reinforced by means of nom 1-1/2 in. (38 mm) wide by 9/16 in. (14 mm) deep min 0.059 in. (1.5 mm) thick cold rolled steel channels inserted through steel stud keyways on max 48 in. (1.2 m) centers and welded to steel studs.

B1. **King Studs —** (Optional, Not Shown) - Where required, king studs may be substituted for Item 2B. King studs to consist of two min 6 in. (152 mm) wide by 1-1/4 in. (31 mm) deep C-shaped studs formed from min 0.059 in. (1.5 mm) thick galv steel secured together by welds. See Item 3C.

C. **Gypsum Board* —** One layer of nom 5/8 in. (16 mm) thick, 48 in. (1.2 m) wide gypsum sheathing installed to cover entire exterior surface of wall. Sheathing applied with joints centered over studs and secured to steel studs with min 1 in. (25 mm) long bugle head steel screws spaced max 8 in. (204 mm) OC along the edges and max 12 in. (305 mm) OC in the field of each sheet.

See **Gypsum Board** (CKNX) category for names of Classified Companies and product types.

D. **Cementitious Backer Units* —** As an alternate to the gypsum sheathing (Item 2C), nom 1/2 in. or 5/8 in. (13 or 16 mm) thick square-edge boards attached to studs with 1-1/4 in. (31 mm) long corrosion resistant self-tapping wafer-head steel screws spaced 6 in. (152 mm) OC. Joints covered with glass fiber mesh tape.
UNITED STATES GYPSUM CO — Type DCB

E. **Batts and Blankets* —** (Optional, Not Shown) - Any glass fiber insulation bearing the UL Classification Marking as to fire resistance or surface burning characteristics, of a width and thickness to completely fill stud cavity. Insulation batts friction fit to completely fill all stud cavities of curtain wall above the top of the fill material (Item B) and below the forming material (Item 3A).

See **Batts and Blankets** (BZJZ) category for names of manufacturers.

E1. **Batts and Blankets* —** (Optional, Not Shown) - As an alternate to Item 2E, insulation batts friction fit to completely fill all stud cavities of curtain wall above the top of the fill material (Item 3B) and below the forming material (Item 3A).
THERMAFIBER INC — FIRESPAN 40 or FIRESPAN 90
ROCKWOOL MALAYSIA SDN BHD — Type AFB
ROCKWOOL — Type AFB

F. **Gypsum Board* —** One layer of nom 5/8 in. (16 mm) thick, 48 in. (1.2 m) wide gypsum board applied with joints centered over studs. Gypsum board secured to steel studs on interior surface of curtain wall with min 1 in. (25 mm) long bugle head steel screws spaced max 8 in. (204 mm) OC along the edges and max 12 in. (305 mm) OC in the field of each sheet. Gypsum board installed to cover interior surface of wall above the top of the fill material (Item 3C) for a min distance of 6 in. (152 mm). Gypsum board is optional below floor assembly.

See **Gypsum Board** (CKNX) category for names of Classified Companies and product types.

G. **Framed Window —** Metal-framed window with nom 1 in. (25 mm) thick (double pane) transparent heat-strengthened or tempered glass panels. Sill of window to be min 6 in. (152 mm) above top of floor slab. Vertical separation between window punch-outs to be min 36 in. (914 mm). Top of window to be min 22-1/2 in. (572 mm) below bottom of floor slab.
H. **Exterior Insulation and Finish System (EIFS) —** Nom 2 in. (51 mm) thick extruded polystyrene Foamed Plastic* insulation bearing the UL Classification Marking, attached over sheathing and finished with coating system, or Portland cement or synthetic stucco systems, in accordance with manufacturer's instructions.

See **Foamed Plastic** (BRYX or CCVW) category for names of Classified companies.

I. **Siding, Brick or Stucco —** (Not Shown) - Aluminum siding, steel siding, brick veneer or stucco installed over gypsum sheathing or cementitious backer units and meeting the requirements of local code agencies. Brick veneer wall attached to studs with corrugated metal wall ties attached to each stud with steel screws.

J. **Glass Fiber Reinforced Concrete (GFRC) Panels —** (Not Shown) - Min 1/2 in. (13 mm) thick glass fiber reinforced concrete (GFRC) panels installed over gypsum sheathing or cementitious backer units and meeting the requirements of local code agencies.

3. **Safing System —** The safing system shall incorporate the following construction features:

A. **Steel Support Angle —** Nom 1-1/2 by 1-1/2 in. (38 by 38 mm) steel angle formed from min 0.031 in. (0.79 mm) thick galv steel. Support angle to be installed laterally between steel studs (Item 2B) directly against the gypsum sheathing (Item 2C or 2D). Nom 1-1/2 by 1-1/2 in. by 1-1/2 in. (38 by 38 by 38 mm) support legs attached to steel stud by means of two No. 10 steel screws. Steel support angle fastened to support leg by means of two No. 10 steel screws. As an option, the support angle may be notched to install against the flat side of the stud prior to installation of gypsum sheathing (Item 2C or 2D) and secured by means of two No. 10 steel screws.

B. **Forming Material* —** Nom 4 pcf (64 kg/m^3) density mineral wool batt insulation supplied in min 2-1/2 in. (64 mm) thickness. Batt sections to be cut to a min width of 4 in. (102 mm) and stacked to a thickness which is min 25 percent greater than the width of the linear gap between the gypsum sheathing and the edge of the concrete floor to attain a min 20 percent compression in the thickness direction when installed. The forming material is compressed and inserted cut-edge-first into linear gap between edge of floor slab and sheathing material such that its top surface is flush with the top surface of the floor assembly. Length of batt to be equal to on-center spacing of steel studs such that it is friction-fitted between studs and mounting angles without seams. Additional pieces of mineral wool batt to be stuffed inside the channel of each steel stud throughout the thickness of the forming material. Batt sections installed between vertical studs shall be slit at the mid-height to accommodate the horizontal leg of the steel support angle (Item 3A).
THERMAFIBER INC — SAF
ROCKWOOL MALAYSIA SDN BHD — Safe
ROCKWOOL — Safe

C. **Fill, Void or Cavity Material* - Spray —** Min 1/8 in. (3.2 mm) wet thickness (min 1/16 in. or 1.6 mm dry thickness) of fill material spray-applied over top of forming material and lapping min 1/2 in. (13 mm) onto the top surface of the floor and onto the gypsum sheathing and steel studs. When SpecSeal Fast Tack Spray is used, wet and dry thickness of spray is min 5/64 in. (2 mm).
SPECIFIED TECHNOLOGIES INC — SpecSeal AS200 Elastomeric Spray, SpecSeal Safing Spray or SpecSeal Fast Tack Spray

D. **Fill, Void or Cavity Material* - Pillows —** (Not Shown) - Where king studs (Item 2B1) are located, channel within stud to be sealed with pillows. Max 9 in. long by 6 in. wide by 3 in. thick plastic covered intumescent pillows compressed and tightly packed into channel at each floor line.
SPECIFIED TECHNOLOGIES INC — SpecSeal Firestop Pillows

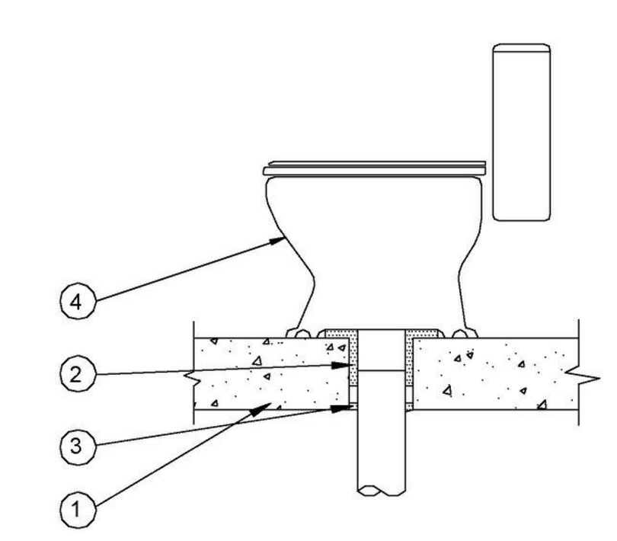
*** Indicates such products shall bear the UL or cUL Certification Mark for jurisdictions employing the UL or cUL Certification (such as Canada), respectively.**

 Last Updated on 2018-04-24

UL DESIGN No. No. F-A-2136

2 HR FLOOR PENETRATION

Design System No. F-A-2136
F Rating — 2 Hr
T Rating — 2 Hr



1. **Floor Assembly —** Min 4-1/2 in. (114 mm) thick lightweight or normal weight concrete (100-150 pcf (1600-2400 kg/cu meter)). Max diam of opening is 6 in. (152 mm).

2. **Nonmetallic Pipe —** One nonmetallic drain pipe with max 4 in. (102 mm) diam toilet flange installed either concentrically or eccentrically within the firestop system. The annular space between drain pipe and periphery of opening shall be min 0 in. (point contact) to max 1-1/2 in. (38 mm). Pipe to be rigidly supported on lower side of floor assembly. The following types and sizes of nonmetallic pipes, fittings and flanges may be used:

A. **Polyvinyl Chloride (PVC) Pipe —** Nom 4 in. (102 mm) diam (or smaller) Schedule 40 solid core or cellular core PVC pipe for use in vented (drain, waste or vent) piping system.

B. **Acrylonitrile Butadiene Styrene (ABS) Pipe —** Nom 4 in. (102 mm) diam (or smaller) Schedule 40 cellular core or solid core ABS pipe for use in vented (drain, waste or vent) piping systems.

3. **Fill, Void or Cavity Material* - Sealant —** Min 1 in. (25 mm) thickness of fill material applied within the annulus, flush with bottom surface of floor. At point contact location between concrete and pipe, a min 1/2 in. (13 mm) diam bead of fill material shall be applied at the pipe/concrete interface on bottom surface of floor assembly. A min 1/2 in. (13 mm) diam bead of fill material shall also be applied around top edge of toilet flange. Prior to placement of water closet, a min 1/2 in. (13 mm) diam bead of fill material shall be applied to the bottom surface of the outer rim of the water closet.
TREMCO INC — TREMstop Intumescent Acrylic, FyreCaulk or TREMstop IA+

4. **Water Closet —** Floor mounted vitreous china water closet.

*** Indicates such products shall bear the UL or cUL Certification Mark for jurisdictions employing the UL or cUL Certification (such as Canada), respectively.**

 Last Updated on 2008-08-12

VCBO ARCHITECTURE
524 SOUTH 600 EAST
SALT LAKE CITY, UT 84102
801.575.8800
VCBO.COM

REV	DATE	DESCRIPTION

VCBO NUMBER:	20385
CLIENT NUMBER:	-
DATE:	2021-08-16

TCSD WAREHOUSE 649 REMODEL

TOOELE COUNTY SCHOOL DISTRICT
PROJECT ADDRESS: 180 GARNET ST. TOOELE, UTAH 84074

CONSTRUCTION DOCUMENT

UL LISTINGS - PERIMETER JOINTS + FLOORS

8/17/2021 3:56:51 PM

WALLS AND INTERIOR PARTITIONS, NONCOMBUSTIBLE

GA FILE NO. WP 1052	GENERIC	1 HOUR FIRE	50 to 54 STC SOUND

GYPSUM WALLBOARD, STEEL STUDS

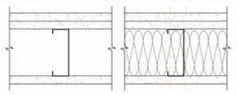
Fire Design:

One layer 5/8" type X gypsum wallboard or gypsum veneer base applied parallel or at right angles to each side of 3-5/8", 18 mil steel studs 24" o.c. with 1" Type S screws 8" o.c. at vertical joints and 12" o.c. at wall perimeter and intermediate studs. **Face** layer 5/8" type X gypsum wallboard or gypsum veneer base applied parallel or at right angles to ONE SIDE with 1-5/8" Type S screws 12" o.c.

Joints staggered 24" each layer and side. **(NLB)**

Sound Design:

Sound tested with 3-1/2" glass fiber friction fit in stud space.



Thickness: 5-1/2" (Fire and Sound)
Approx. Weight: 8 psf (Fire and Sound)
Fire Test: See WP 1350 (FM WP-45, 6-19-68; OSU T-1770, 8-61; ULC 79T484, 79T500, 79T497, 8-21-81, ULC Design W415)
Sound Test: RAL-TL11-075, 3-23-11

** Contact the manufacturer for more detailed information on proprietary products.*

WALLS AND INTERIOR PARTITIONS, NONCOMBUSTIBLE

GA FILE NO. WP 1072	GENERIC	1 HOUR FIRE	45 to 49 STC SOUND

GYPSUM WALLBOARD, STEEL STUDS

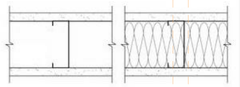
Fire Design:

One layer 5/8" type X gypsum wallboard or gypsum veneer base applied parallel or at right angles to each side of 3-5/8", 18 mil steel studs 24" o.c. with 1" Type S screws 8" o.c. at vertical joints and 12" o.c. at floor and ceiling runners and intermediate studs.

Joints staggered 24" on each side and on OPPOSITE SIDES. **(NLB)**

Sound Design:

Sound tested with 3-1/2" glass fiber friction fit in stud space.



Thickness: 4-7/8" (Fire and Sound)
Approx. Weight: 6 psf (Fire and Sound)
Fire Test: See WP 1350 (FM WP-45, 6-19-68; OSU T-1770, 8-61; ULC 79T484, 9T500,79T497, 8-12-81, ULC Design W415)
Sound Test: RAL TL11-074, 3-23-11

** Contact the manufacturer for more detailed information on proprietary products.*

WALLS AND INTERIOR PARTITIONS, NONCOMBUSTIBLE

GA FILE NO. WP 1522	GENERIC	2 HOUR FIRE	55 to 59 STC SOUND

GYPSUM WALLBOARD, STEEL STUDS

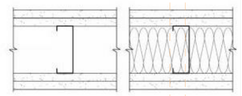
Fire Design:

Base layer 5/8" type X gypsum wallboard or gypsum veneer base applied parallel or at right angles to each side of 3-5/8", 18 mil steel studs 24" o.c. with 1" Type S screws 24" o.c. **Face** layer 5/8" type X gypsum wallboard or gypsum veneer base applied parallel or at right angles to each side with 1-5/8" Type S screws 12" o.c.

Joints staggered 24" each layer and side. **(NLB)**

Sound Design:

Sound tested with 3-1/2" glass fiber friction fit in stud space.



Thickness: 6-1/8" (Fire and Sound)
Approx. Weight: 12 psf (Fire and Sound)
Fire Test: See WP 1548 (WHI-495-0236 & 237, 1-30-80)
Sound Test: NRCC TL-92-369

** Contact the manufacturer for more detailed information on proprietary products.*

WALLS AND INTERIOR PARTITIONS, NONCOMBUSTIBLE

GA FILE NO. WP 1546	GENERIC	2 HOUR FIRE	50 to 54 STC SOUND

GYPSUM WALLBOARD, STEEL STUDS

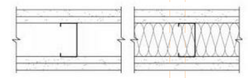
Fire Design:

Base layer 1/2" type X gypsum wallboard or gypsum veneer base applied parallel to each side of 2-1/2", 18 mil steel studs 24" o.c. with 1" Type S screws 24" o.c. **Face** layer 1/2" type X gypsum wallboard or gypsum veneer base applied parallel to each side with 1-5/8" Type S screws 12" o.c.

Joints staggered 24" each layer and side. **(NLB)**

Sound Design:

Sound tested with 2-1/2" glass fiber friction fit in stud space.



Thickness: 4-1/2" (Fire and Sound)
Approx. Weight: 9 psf (Fire and Sound)
Fire Test: UC, 9-7-64; ULC 80T499, 3-26-81, ULC Design W414
Sound Test: NRCC TL-93-046

** Contact the manufacturer for more detailed information on proprietary products.*

VCBO ARCHITECTURE
524 SOUTH 600 EAST
SALT LAKE CITY, UT 84102
801.575.8800
VCBO.COM

REV	DATE	DESCRIPTION

VCBO NUMBER: 20385
CLIENT NUMBER: -
DATE: 2021-08-16

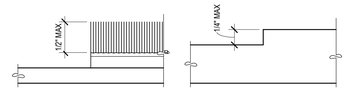
TCSD WAREHOUSE 649 REMODEL

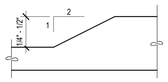
TOOELE COUNTY SCHOOL DISTRICT
PROJECT ADDRESS: 180 GARNET ST. TOOELE, UTAH 84074

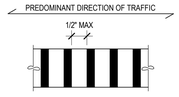
CONSTRUCTION DOCUMENT

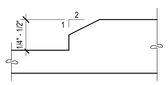
GYPSUM ASSOCIATION RATED ASSEMBLIES

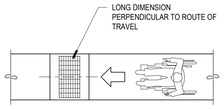
G205



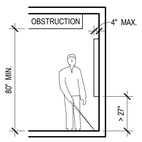




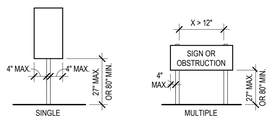




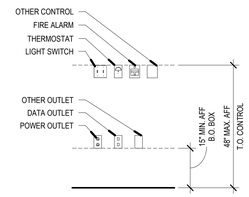
303. CHANGES IN LEVEL



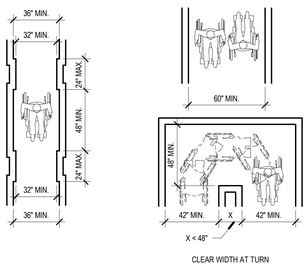
307.3 POST-MOUNTED OBJECTS. OBJECTS ON POSTS OR PYLONS SHALL BE PERMITTED TO OVERHANG 4 INCHES MAXIMUM WHERE MORE THAN 27 INCHES AND NOT MORE THAN 80 INCHES ABOVE THE FLOOR. OBJECTS ON MULTIPLE POSTS OR PYLONS WHERE THE CLEAR DISTANCE BETWEEN THE POSTS OR PYLONS IS GREATER THAN 12 INCHES SHALL HAVE THE LOWEST EDGE OF SUCH OBJECT EITHER 27 INCHES MAXIMUM OR 80 INCHES MIN ABOVE THE FLOOR.



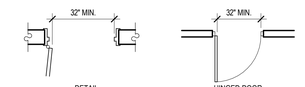
307. PROTRUDING OBJECTS

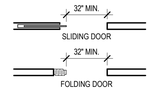


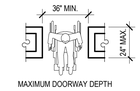
308. REACH RANGES



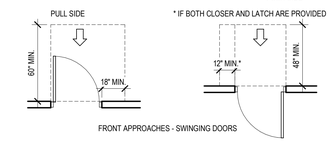
403. ACCESSIBLE ROUTES

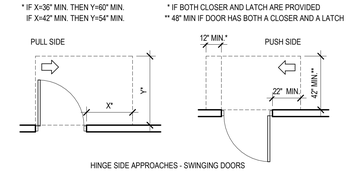


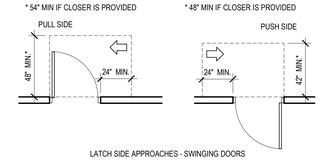


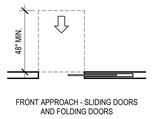


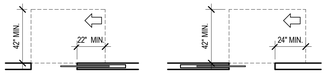
CLEAR DOORWAY WIDTH AND DEPTH



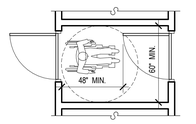


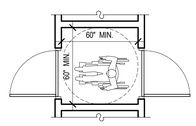


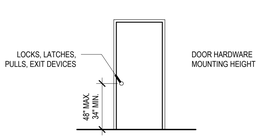




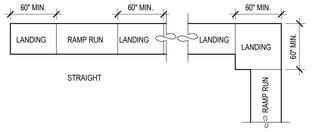
NOTE: ALL DOORS IN ALCOVES SHALL COMPLY W/ THE CLEARANCES FOR FRONT APPROACHES



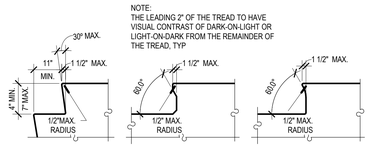




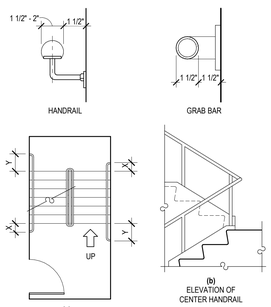
404. DOORS AND DOORWAYS

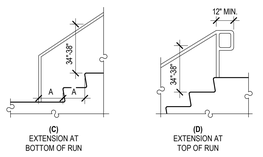


405. RAMP LANDINGS



504.5. STAIR NOSINGS



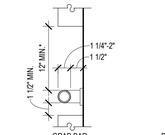


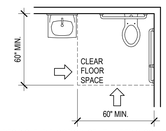
NOTE: X IS THE 12" MINIMUM HANDRAIL EXTENSION REQ'D AT EACH TOP RISER IN THE DIRECTION OF TRAVEL

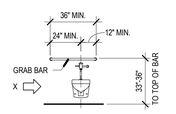
AT THE BOTTOM OF A STAIR FLIGHT THE HANDRAIL SHALL EXTEND AT THE SLOPE OF THE STAIR FLIGHT FOR ONE HORIZONTAL TREAD DEPTH BEYOND THE TREAD NOSING (A).

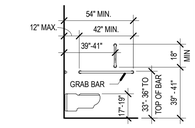
505. HANDRAILS

* THE SPACE BETWEEN THE GRAB BARS AND SHOWER CONTROLS, SHOWER FITTINGS, AND OTHER GRAB BARS ABOVE THE GRAB BAR TO BE 1 1/2" MIN.



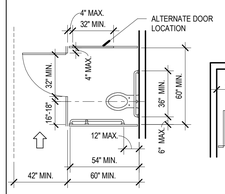


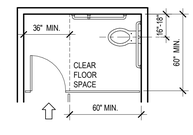




X-PROVIDE 36" LENGTH FOR SIDE TRANSFER TOILETS

GRAB BARS AT WATER CLOSETS

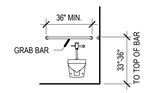


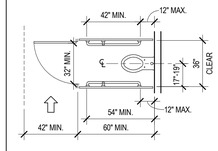


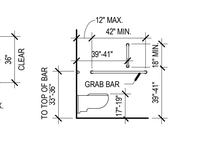
42" MIN. LATCH APPROACH ONLY, OTHER APPROACHES 48" MIN.

STANDARD WHEELCHAIR STALL DOOR SWING OUT

STANDARD WHEELCHAIR STALL DOOR SWING IN (END OF ROW)

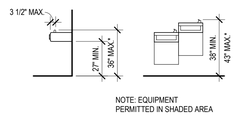


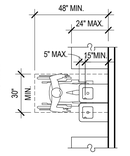


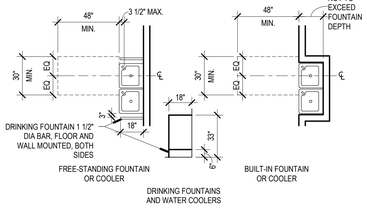


604. TOILETS AND TOILET COMPARTMENTS

* MAX. HEIGHT IS 36" FOR WHEEL-CHAIR ACCESSIBLE DRINKING FOUNTAIN. HEIGHT FOR STANDING PERSONS DRINKING FOUNTAIN IS 38" MIN. AND 43" MAX. MAX. HEIGHT FOR DRINKING FOUNTAINS PRIMARILY USED BY CHILDREN IS 30" .







602. DRINKING FOUNTAINS

604.7 ACCESSORIES AND EQUIPMENT

605. URINALS

NOTE:
WHERE ENHANCED REACH RANGE IS REQ'D AT LAVATORIES, FAUCETS AND SOAP DISPENSER CONTROLS TO HAVE A REACH DEPTH OF 11" MAX. OR IF AUTOMATIC TO BE ACTIVATED WITH IN A REACH OF 11" MAX. WATER AND SOAP FLOW TO BE PROVIDED W/ A REACH DEPTH OF 11" MAX.

606. LAVAATORIES AND SINKS

SHOWER COMPARTMENT

SHOWER SEAT DESIGN

608. SHOWER COMPARTMENTS

612. SAUNA AND STEAM ROOMS

VCBO ARCHITECTURE
524 SOUTH 600 EAST
SALT LAKE CITY, UT 84102
801.575.8800
VCBO.COM

REV	DATE	DESCRIPTION

VCBO NUMBER: 20385
CLIENT NUMBER: -
DATE: 2021-06-16

TCSD WAREHOUSE 649 REMODEL

TOOELE COUNTY SCHOOL DISTRICT
PROJECT ADDRESS: 180 GARNET ST. TOOELE, UTAH 84074
CONSTRUCTION DOCUMENT

TYP ANSI ACCESSIBILITY STANDARDS

G301

GENERAL NOTES

1. ALL CONSTRUCTION MUST STRICTLY FOLLOW THE STANDARDS AND SPECIFICATIONS SET FORTH BY: THE DESIGN ENGINEER, LOCAL AGENCY JURISDICTION, APWA (CURRENT EDITION), AND THE MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES (M.U.T.C.D.). THE ORDER LISTED ABOVE IS ARRANGED BY SENIORITY. THE LATEST EDITION OF ALL STANDARDS AND SPECIFICATIONS MUST BE ADHERED TO. IF A CONSTRUCTION PRACTICE IS NOT SPECIFIED BY ANY OF THE LISTED SOURCES, CONTRACTOR MUST CONTACT DESIGN ENGINEER FOR DIRECTION.
2. CONTRACTOR TO STRICTLY FOLLOW THE MOST CURRENT COPY OF THE SOILS REPORT FOR THIS PROJECT. ALL GRADING INCLUDING BUT NOT LIMITED TO CUT, FILL, COMPACTION, ASPHALT SECTION, SUBBASE, TRENCH EXCAVATION/BACKFILL, SITE GRUBBING, AND FOOTINGS MUST BE COORDINATED DIRECTLY WITH SOILS REPORT.
3. CONTRACTOR MUST VERIFY ALL EXISTING CONDITIONS BEFORE BIDDING, AND BRING UP ANY QUESTIONS BEFORE SUBMITTING BID.
4. CONTRACTOR SHALL PROVIDE A CONSTRUCTION SCHEDULE IN ACCORDANCE WITH THE CITY, STATE, OR COUNTY REGULATIONS FOR WORKING IN THE PUBLIC WAY.
5. CONTRACTOR SHALL BE RESPONSIBLE FOR DUST CONTROL ACCORDING TO TOOELE CITY STANDARDS. WET DOWN DRY MATERIALS AND RUBBISH TO PREVENT BLOWING.
6. CONTRACTOR SHALL BE RESPONSIBLE FOR ANY DAMAGE TO ADJACENT SURFACE IMPROVEMENTS.
7. CONTRACTOR SHALL BE RESPONSIBLE FOR CORRECTING ANY SETTLEMENT OF OR DAMAGE TO EXISTING UTILITIES.
8. THE CONTRACTOR IS RESPONSIBLE TO FURNISH ALL MATERIALS TO COMPLETE THE PROJECT.
9. ALL EXPOSED SURFACES WILL HAVE A TEXTURED FINISH, RUBBED, OR BROOMED. ANY "PLASTERING" OF NEW CONCRETE WILL BE DONE WHILE IT IS STILL "GREEN".
10. PRIOR TO STARTING CONSTRUCTION, THE CONTRACTOR SHALL BE RESPONSIBLE FOR VERIFYING THAT ALL REQUIRED PERMITS AND APPROVALS HAVE BEEN OBTAINED. NO CONSTRUCTION OR FABRICATION SHALL BEGIN UNTIL THE CONTRACTOR HAS RECEIVED AND THOROUGHLY REVIEWED ALL PLANS AND OTHER DOCUMENTS APPROVED BY ALL OF THE PERMITTING AUTHORITIES.
11. THE LOCATIONS OF UNDERGROUND FACILITIES SHOWN ON THESE PLANS ARE BASED ON FIELD SURVEYS AND LOCAL UTILITY COMPANY RECORDS. IT SHALL BE THE CONTRACTOR'S FULL RESPONSIBILITY TO CONTACT THE VARIOUS UTILITY COMPANIES TO LOCATE THEIR FACILITIES PRIOR TO PROCEEDING WITH CONSTRUCTION. NO ADDITIONAL COMPENSATION SHALL BE PAID TO THE CONTRACTOR FOR DAMAGE AND REPAIR TO THESE FACILITIES CAUSED BY HIS WORK FORCE. CONTRACTOR SHALL START INSTALLATION AT LOW POINT OF ALL NEW GRAVITY UTILITY LINES.
12. ALL DIMENSIONS, GRADES, AND UTILITY DESIGN SHOWN ON THE PLANS SHALL BE VERIFIED BY THE CONTRACTOR PRIOR TO CONSTRUCTION. CONTRACTOR SHALL NOTIFY THE ENGINEER IF ANY DISCREPANCIES EXIST, PRIOR TO PROCEEDING WITH CONSTRUCTION FOR NECESSARY PLAN OR GRADE CHANGES. NO EXTRA COMPENSATION SHALL BE PAID TO THE CONTRACTOR FOR WORK HAVING TO BE REDONE DUE TO THE DIMENSIONS OR GRADES SHOWN INCORRECTLY ON THESE PLANS, IF SUCH NOTIFICATION HAS NOT BEEN GIVEN.
13. NO CHANGE IN DESIGN LOCATION OR GRADE WILL BE MADE BY THE CONTRACTOR WITHOUT THE WRITTEN APPROVAL OF THE PROJECT ENGINEER.
14. NATURAL VEGETATION AND SOIL COVER SHALL NOT BE DISTURBED PRIOR TO ACTUAL CONSTRUCTION OF A REQUIRED FACILITY OR IMPROVEMENT. MASS CLEARING OF THE SITE IN ANTICIPATION OF CONSTRUCTION SHALL BE AVOIDED.
15. CONTRACTOR SHALL BE RESPONSIBLE FOR FURNISHING, MAINTAINING, OR RESTORING ALL MONUMENTS AND MONUMENT REFERENCE MARKS WITHIN THE PROJECT SITE. CONTACT THE CITY OR COUNTY SURVEYOR FOR MONUMENT LOCATIONS AND CONSTRUCTION DETAILS.
16. EXISTING UTILITY INFORMATION SHOWN IS FOR INFORMATIONAL PURPOSES ONLY. IT IS DERIVED FROM ON-SITE SURVEY AND/OR UTILITY MAPPING PROVIDED TO THE ENGINEER, AND THEREFORE UTILITIES MAY NOT BE LOCATED CORRECTLY, EITHER HORIZONTALLY OR VERTICALLY, AND MAY NOT BE ALL INCLUSIVE. CONTRACTOR IS REQUIRED TO FOLLOW THE PROCEDURE OUTLINED BELOW:
    - 16.1. CONTRACTOR IS REQUIRED TO LOCATE AND POTHOLE ALL EXISTING UTILITY LINES (BOTH HORIZONTALLY AND VERTICALLY) THAT AFFECT THE PROJECT CONSTRUCTION, EITHER ON-SITE OR OFF-SITE, AND DETERMINE IF THERE ARE ANY CONFLICTS WITH THE DESIGN OF THE SITE AS SHOWN ON THE APPROVED PLANS PRIOR TO ANY CONSTRUCTION. IF IT IS DETERMINED THAT CONFLICTS EXIST BETWEEN EXISTING UTILITIES AND DESIGN UTILITIES (OR ANOTHER ASPECT OF PROPOSED CONSTRUCTION) THE ENGINEER MUST BE NOTIFIED IMMEDIATELY TO CORRECT THE CONFLICTS BEFORE ANY WORK CAN BEGIN. IF THE CONTRACTOR FAILS TO FOLLOW THIS ABSOLUTE REQUIREMENT AND CONFLICTS ARISE DURING CONSTRUCTION THE CONTRACTOR WILL BEAR THE SOLE RESPONSIBILITY TO FIX THE CONFLICTS.
    - 16.2. CONTRACTOR IS REQUIRED TO VERIFY THAT PROPER COVER AND PROTECTION OF EXISTING UTILITY LINES IS MAINTAINED OR ATTAINED WITHIN THE DESIGN ONCE VERIFICATION OF THE EXISTING UTILITIES IS COMPLETED AS OUTLINED IN 16.1 ABOVE.
    - 16.3. IN ADDITION TO 16.1 AND 16.2 ABOVE THE CONTRACTOR WILL VERIFY DEPTHS OF UTILITIES IN THE FIELD BY "POTHOLING" A MINIMUM OF 300 FEET AHEAD OF PROPOSED PIPELINE CONSTRUCTION TO AVOID POTENTIAL CONFLICTS WITH DESIGNED PIPELINE ALIGNMENT AND GRADE AND EXISTING UTILITIES.
    - 16.4. IF A CONFLICT ARISES BETWEEN EXISTING UTILITIES AND DESIGN UTILITIES (OR ANOTHER ASPECT OF PROPOSED CONSTRUCTION) AS DETERMINED UNDER 16.1, 16.2 OR 16.3 THE CONTRACTOR WILL NOTIFY THE ENGINEER IMMEDIATELY TO RESOLVE THE CONFLICT.
    - 16.5. IF A CONFLICT ARISES BETWEEN EXISTING UTILITIES AND DESIGN UTILITIES (OR ANOTHER ASPECT OF PROPOSED CONSTRUCTION) RESULTING FROM THE CONTRACTOR'S NEGLIGENCE TO IDENTIFY AND/OR "POTHOLE" EXISTING UTILITIES AS REQUIRED IN 16.1, 16.2 AND 16.3 ABOVE, THE CONTRACTOR WILL BE REQUIRED TO RESOLVE THE CONFLICT WITHOUT ADDITIONAL COST OR CLAIM TO THE OWNER OR ENGINEER.
17. ANY AREA OUTSIDE THE LIMIT OF WORK THAT IS DISTURBED SHALL BE RESTORED TO ITS ORIGINAL CONDITION AT NO COST TO OWNER.
18. CONSULT ALL OF THE DRAWINGS AND SPECIFICATIONS FOR COORDINATION REQUIREMENTS BEFORE COMMENCING CONSTRUCTION.
19. AT ALL LOCATIONS WHERE EXISTING PAVEMENT ABUTS NEW CONSTRUCTION, THE EDGE OF THE EXISTING PAVEMENT SHALL BE SAWCUT TO A CLEAN, SMOOTH EDGE.
20. ALL CONSTRUCTION AND MATERIALS SHALL BE IN ACCORDANCE WITH THE MOST RECENT, ADOPTED EDITION OF ADA ACCESSIBILITY GUIDELINES.
21. CONTRACTOR SHALL, AT THE TIME OF BIDDING AND THROUGHOUT THE PERIOD OF THE CONTRACT, BE LICENSED IN THE STATE OF UTAH AND SHALL BE BONDABLE FOR AN AMOUNT REQUIRED BY THE OWNER.
22. CONTRACTOR SHALL BE RESPONSIBLE TO PROVIDE ALL WATER, POWER, SANITARY FACILITIES AND TELEPHONE SERVICES AS REQUIRED FOR THE CONTRACTOR'S USE DURING CONSTRUCTION.
23. CONTRACTOR SHALL BE RESPONSIBLE FOR ADEQUATELY SCHEDULING INSPECTION AND TESTING OF ALL FACILITIES CONSTRUCTED UNDER THIS CONTRACT. ALL TESTING SHALL CONFORM TO THE REGULATORY AGENCY'S STANDARD SPECIFICATIONS. ALL RE-TESTING AND/OR RE-INSPECTION SHALL BE PAID FOR BY THE CONTRACTOR.
24. IF EXISTING IMPROVEMENTS NEED TO BE DISTURBED AND/OR REMOVED FOR THE PROPER PLACEMENT OF IMPROVEMENTS TO BE CONSTRUCTED BY THESE PLANS, THE CONTRACTOR SHALL BE RESPONSIBLE FOR PROTECTING EXISTING IMPROVEMENTS FROM DAMAGE. COST OF REPLACING OR REPAIRING EXISTING IMPROVEMENTS SHALL BE INCLUDED IN THE UNIT PRICE BID FOR ITEMS REQUIRING REMOVAL AND/OR REPLACEMENT. THERE WILL BE NO EXTRA COST DUE TO THE CONTRACTOR FOR REPLACING OR REPAIRING EXISTING IMPROVEMENTS.
25. WHENEVER EXISTING FACILITIES ARE REMOVED, DAMAGED, BROKEN, OR CUT IN THE INSTALLATION OF THE WORK COVERED BY THESE PLANS OR SPECIFICATIONS, SAID FACILITIES SHALL BE REPLACED AT THE CONTRACTOR'S EXPENSE WITH MATERIALS EQUAL TO OR BETTER THAN THE MATERIALS USED IN THE ORIGINAL EXISTING FACILITIES. THE FINISHED PRODUCT SHALL BE SUBJECT TO THE APPROVAL OF THE OWNER, THE ENGINEER, AND THE RESPECTIVE REGULATORY AGENCY.
26. CONTRACTOR SHALL MAINTAIN A NEATLY MARKED SET OF FULL-SIZE RECORD DRAWINGS SHOWING THE FINAL LOCATION AND LAYOUT OF ALL STRUCTURES AND OTHER FACILITIES. RECORD DRAWINGS SHALL REFLECT CHANGE ORDERS, ACCOMMODATIONS, AND ADJUSTMENTS TO ALL IMPROVEMENTS CONSTRUCTED. WHERE NECESSARY, SUPPLEMENTAL DRAWINGS SHALL BE PREPARED AND SUBMITTED BY THE CONTRACTOR. PRIOR TO ACCEPTANCE OF THE PROJECT, THE CONTRACTOR SHALL DELIVER TO THE ENGINEER ONE SET OF NEATLY MARKED RECORD DRAWINGS SHOWING THE INFORMATION REQUIRED ABOVE. RECORD DRAWINGS SHALL BE REVIEWED AND THE COMPLETE RECORD DRAWING SET SHALL BE CURRENT WITH ALL CHANGES AND DEVIATIONS REDLINED AS A PRECONDITION TO THE FINAL PROGRESS PAYMENT APPROVAL AND/OR FINAL ACCEPTANCE.
27. WHERE THE PLANS OR SPECIFICATIONS DESCRIBE PORTIONS OF THE WORK IN GENERAL TERMS BUT NOT IN COMPLETE DETAIL, IT IS UNDERSTOOD THAT ONLY THE BEST GENERAL PRACTICE IS TO PREVAIL AND THAT ONLY MATERIALS AND WORKMANSHIP OF THE FIRST QUALITY ARE TO BE USED.
28. ALL EXISTING GATES AND FENCES TO REMAIN UNLESS OTHERWISE NOTED ON PLANS. PROTECT ALL GATES AND FENCES FROM DAMAGE.
29. ALL EXISTING TREES ARE TO REMAIN UNLESS OTHERWISE NOTED ON PLANS. PROTECT ALL TREES FROM DAMAGE.
30. ASPHALT MIX DESIGN MUST BE SUBMITTED AND APPROVED BY TOOELE CITY PRIOR TO THE PLACEMENT.
31. CONTRACTORS ARE RESPONSIBLE FOR ALL OSHA REQUIREMENTS ON THE PROJECT SITE.
32. A UPDES (UTAH POLLUTANT DISCHARGE ELIMINATION SYSTEM) PERMIT IS REQUIRED FOR ALL CONSTRUCTION ACTIVITIES 1 ACRE OR MORE AS WELL AS A STORM WATER POLLUTION PREVENTION PLAN.

UTILITY NOTES

1. ALL CONSTRUCTION AND MATERIALS SHALL BE IN ACCORDANCE WITH THESE CONTRACT DOCUMENTS, CITY AND STATE REQUIREMENTS AND THE MOST RECENT EDITIONS OF THE FOLLOWING: THE INTERNATIONAL PLUMBING CODE, UTAH DRINKING WATER REGULATIONS, APWA MANUAL OF STANDARD PLANS AND SPECIFICATIONS. THE CONTRACTOR IS REQUIRED TO ADHERE TO ALL OF THE ABOVE-MENTIONED DOCUMENTS UNLESS OTHERWISE NOTED AND APPROVED BY THE ENGINEER.
2. CONTRACTOR SHALL COORDINATE LOCATION OF NEW "DRY UTILITIES" WITH THE APPROPRIATE UTILITY COMPANY, INCLUDING BUT NOT LIMITED TO: TELEPHONE & INTERNET SERVICE, GAS SERVICE, CABLE, AND POWER.
3. EXISTING UTILITIES HAVE BEEN SHOWN ON THE PLANS BASED ON ON-SITE SURVEY. PRIOR TO COMMENCING ANY WORK, IT SHALL BE THE CONTRACTOR'S RESPONSIBILITY TO HAVE EACH UTILITY COMPANY LOCATE, IN THE FIELD, THEIR MAIN AND SERVICE LINES. THE CONTRACTOR SHALL NOTIFY BLUE STAKES AT 1-800-662-4111 48 HOURS IN ADVANCE OF PERFORMING ANY EXCAVATION WORK. THE CONTRACTOR SHALL RECORD THE BLUE STAKES ORDER NUMBER AND FURNISH ORDER NUMBER TO OWNER AND ENGINEER PRIOR TO ANY EXCAVATION. IT WILL BE THE CONTRACTOR'S SOLE RESPONSIBILITY TO DIRECTLY CONTACT ANY OTHER UTILITY COMPANIES THAT ARE NOT MEMBERS OF BLUE STAKES. IT SHALL BE THE CONTRACTOR'S SOLE RESPONSIBILITY TO PROTECT ALL EXISTING UTILITIES SO THAT NO DAMAGE RESULTS TO THEM DURING THE PERFORMANCE OF THIS CONTRACT. ANY REPAIRS NECESSARY TO DAMAGED UTILITIES SHALL BE PAID FOR BY THE CONTRACTOR. THE CONTRACTOR SHALL BE REQUIRED TO COOPERATE WITH OTHER CONTRACTORS AND UTILITY COMPANIES INSTALLING NEW STRUCTURES, UTILITIES AND SERVICE TO THE PROJECT.
4. CARE SHOULD BE TAKEN IN ALL EXCAVATIONS DUE TO POSSIBLE EXISTENCE OF UNRECORDED UTILITY LINES. EXCAVATION REQUIRED WITHIN PROXIMITY OF EXISTING UTILITY LINES SHALL BE DONE BY HAND. CONTRACTOR SHALL REPAIR ANY DAMAGE TO EXISTING UTILITY LINES OR STRUCTURES INCURRED DURING CONSTRUCTION OPERATIONS AT CONTRACTOR'S EXPENSE.
5. TRENCH BACKFILL MATERIAL AND COMPACTION TESTS ARE TO BE TAKEN PER APWA STANDARD SPECIFICATIONS (CURRENT EDITION), SECTION 02320 - BACKFILLING TRENCHES. NO NATIVE MATERIALS ARE ALLOWED IN THE PIPE ZONE. THE MAXIMUM LIFT FOR BACKFILLING EXCAVATIONS IS DETERMINED BY TOOELE CITY'S RECOMMENDATIONS.
6. THE CONTRACTOR IS SOLELY RESPONSIBLE FOR CONFORMING TO LOCAL AND FEDERAL CODES GOVERNING SHORING AND BRACING OF EXCAVATIONS AND TRENCHES AND FOR THE PROTECTION OF WORKERS.
7. THE CONTRACTOR IS REQUIRED TO KEEP ALL CONSTRUCTION ACTIVITIES WITHIN THE APPROVED PROJECT LIMITS. THIS INCLUDES, BUT IS NOT LIMITED TO VEHICLE AND EQUIPMENT STAGING, MATERIAL STORAGE AND LIMITS OF TRENCH EXCAVATION. IT IS THE CONTRACTOR'S RESPONSIBILITY TO OBTAIN PERMISSION AND/OR EASEMENTS FROM THE APPROPRIATE GOVERNING ENTITY AND/OR INDIVIDUAL PROPERTY OWNER(S) FOR WORK OR STAGING OUTSIDE OF THE PROJECT LIMITS.
8. THE CONTRACTOR IS RESPONSIBLE FOR REPAIRING ANY DAMAGE, CAUSED BY ANY CONDITION INCLUDING SETTLEMENT, TO EXISTING UTILITIES FROM WORK PERFORMED AT OR NEAR EXISTING UTILITIES. THE CONTRACTOR SHALL TAKE ALL MEASURES NECESSARY TO PROTECT ALL EXISTING PUBLIC AND PRIVATE ROADWAY AND UTILITY FACILITIES. DAMAGE TO EXISTING FACILITIES CAUSED BY THE CONTRACTOR MUST BE REPAIRED BY THE CONTRACTOR AT HIS/HER EXPENSE TO THE SATISFACTION OF THE OWNER OF SAID FACILITIES.
9. ALL WATER LINE AND SEWER LINE INSTALLATION AND TESTING TO BE IN ACCORDANCE WITH TOOELE CITY'S STANDARDS AND SPECIFICATIONS.
10. ALL MANHOLES, HYDRANTS, VALVES, CLEANOUT BOXES, CATCH BASINS, METERS, ETC. MUST BE RAISED OR LOWERED TO FINAL GRADE PER APWA (CURRENT EDITION) STANDARDS AND INSPECTOR REQUIREMENTS. CONCRETE COLLARS MUST BE CONSTRUCTED ON ALL MANHOLES, CLEANOUT BOXES, CATCH BASINS, AND VALVES PER APWA STANDARDS. ALL MANHOLE, CATCH BASIN, OR CLEANOUT BOX CONNECTIONS MUST BE MADE WITH THE PIPE CUT FLUSH WITH THE INSIDE OF THE BOX AND GROUTED OR SEALED.
11. CONTRACTOR SHALL NOT ALLOW ANY GROUNDWATER OR DEBRIS TO ENTER THE NEW OR EXISTING PIPE DURING CONSTRUCTION.
12. SILT AND DEBRIS ARE TO BE CLEANED OUT OF ALL STORM DRAIN BOXES. CATCH BASINS ARE TO BE MAINTAINED IN A CLEANED CONDITION AS NEEDED UNTIL AFTER THE FINAL BOND RELEASE INSPECTION.
13. CONTRACTOR SHALL CLEAN ASPHALT, TAR OR OTHER ADHESIVES OFF OF ALL MANHOLE LIDS AND INLET GRATES TO ALLOW ACCESS.
14. EACH TRENCH SHALL BE EXCAVATED SO THAT THE PIPE CAN BE LAID TO THE ALIGNMENT AND GRADE AS REQUIRED. THE TRENCH WALL SHALL BE SO BRACED THAT THE WORKMEN MAY WORK SAFELY AND EFFICIENTLY. ALL TRENCHES SHALL BE DRAINED SO THE PIPE LAYING MAY TAKE PLACE IN DEWATERED CONDITIONS.
15. CONTRACTOR SHALL PROVIDE AND MAINTAIN AT ALL TIMES AMPLE MEANS AND DEVICES WITH WHICH TO REMOVE PROMPTLY AND TO PROPERLY DISPOSE OF ALL WATER ENTERING THE TRENCH EXCAVATION.
16. ALL SEWER LINES AND SEWER SERVICES SHALL HAVE A MINIMUM SEPARATION OF 10 FEET, EDGE TO EDGE, FROM THE WATER LINES. IF A 10 FOOT SEPARATION CAN NOT BE MAINTAINED, CONSTRUCT PER TOOELE CITY'S MINIMUM SEPARATION STANDARDS.
17. CONTRACTOR SHALL INSTALL THRUST BLOCKING AT ALL WATERLINE ANGLE POINTS AND TEES.
18. ALL UNDERGROUND UTILITIES SHALL BE IN PLACE PRIOR TO INSTALLATION OF CURB, GUTTER, SIDEWALK AND STREET PAVING.
19. CONTRACTOR SHALL INSTALL MAGNETIC LOCATING TAPE CONTINUOUSLY OVER ALL NONMETALLIC PIPE.

TRAFFIC CONTROL AND SAFETY NOTES

1. TRAFFIC CONTROL AND STRIPING TO CONFORM TO THE CURRENT MANUAL OF UNIFORM TRAFFIC CONTROL DEVICES (M.U.T.C.D.).
2. BARRICADING AND DETOURING SHALL BE IN CONFORMANCE WITH THE REQUIREMENTS OF THE CURRENT M.U.T.C.D.
3. NO STREET SHALL BE CLOSED TO TRAFFIC WITHOUT WRITTEN PERMISSION FROM THE APPROPRIATE AGENCY, EXCEPT WHEN DIRECTED BY LAW ENFORCEMENT OR FIRE OFFICIALS.
4. THE CONTRACTOR SHALL MAKE EVERY EFFORT TO PROVIDE FOR SMOOTH TRAFFIC FLOW AND SAFETY. ACCESS SHALL BE MAINTAINED FOR ALL PROPERTIES ADJACENT TO THE WORK.
5. DETOURING OPERATIONS FOR A PERIOD OF SIX CONSECUTIVE CALENDAR DAYS, OR MORE, REQUIRE THE INSTALLATION OF TEMPORARY STREET STRIPING AND REMOVAL OF INTERFERING STRIPING BY SANDBLASTING. THE DETOURING STRIPING PLAN OR CONSTRUCTION TRAFFIC CONTROL PLAN MUST BE SUBMITTED TO TOOELE CITY FOR REVIEW AND APPROVAL.
6. ALL TRAFFIC CONTROL DEVICES SHALL BE RESTORED TO THEIR ORIGINAL CONDITION AT THE END OF THE WORK TO THE SATISFACTION OF THE TOOELE CITY.
7. TRAFFIC CONTROL DEVICES (TCDs) SHALL REMAIN VISIBLE AND OPERATIONAL AT ALL TIMES.
8. ALL PERMANENT TRAFFIC CONTROL DEVICES CALLED FOR HEREON SHALL BE IN PLACE AND IN FINAL POSITION PRIOR TO ALLOWING ANY PUBLIC TRAFFIC ONTO THE PORTIONS OF THE ROAD(S) BEING IMPROVED HEREUNDER, REGARDLESS OF THE STATUS OF COMPLETION OF PAVING OR OTHER OFF-SITE IMPROVEMENTS CALLED FOR BY THESE PLANS.
9. THE CONTRACTOR SHALL PROVIDE BARRICADES, SIGNS, FLASHERS, OTHER EQUIPMENT AND FLAG PERSONS NECESSARY TO INSURE THE SAFETY OF WORKERS AND VISITORS.
10. THE CONTRACTOR SHALL BE RESPONSIBLE FOR NOTIFYING UTAH TRANSIT AUTHORITY (UTA) IF THE CONSTRUCTION INTERRUPTS OR RELOCATES A BUS STOP OR HAS AN ADVERSE EFFECT ON BUS SERVICE ON THAT STREET TO ARRANGE FOR TEMPORARY RELOCATION OF STOP.

DEMOLITION NOTES

1. EXISTING UTILITY INFORMATION SHOWN IS FOR INFORMATIONAL PURPOSES ONLY. IT IS DERIVED FROM ON-SITE SURVEY AND MAY NOT BE LOCATED CORRECTLY AND IS NOT ALL INCLUSIVE. CONTRACTOR SHALL FIELD LOCATE ALL UTILITIES WITHIN THE PROJECT LIMITS BEFORE BEGINNING DEMOLITION/CONSTRUCTION.
2. THERE MAY BE BURIED UTILITIES WITHIN THE LIMITS OF DISTURBANCE THAT ARE NOT SHOWN ON THE PLANS DUE TO LACK OF MAPPING OR RECORD INFORMATION. CONTRACTOR SHALL NOTIFY THE ENGINEER WHEN UNEXPECTED UTILITIES ARE DISCOVERED.
3. THE CONTRACTOR SHALL BE FULLY RESPONSIBLE FOR LOCATING AND PROTECTING FROM DAMAGE ALL EXISTING UTILITIES AND IMPROVEMENTS WHETHER OR NOT SHOWN ON THESE PLANS. THE FACILITIES AND IMPROVEMENTS ARE BELIEVED TO BE CORRECTLY SHOWN BUT THE CONTRACTOR IS REQUIRED TO SATISFY HIMSELF AS TO THE COMPLETENESS AND ACCURACY OF THE LOCATIONS. ANY CONTRACTOR PERFORMING WORK ON THIS PROJECT SHALL FAMILIARIZE HIMSELF WITH THE SITE AND SHALL BE HELD SOLELY RESPONSIBLE FOR ANY DAMAGE TO EXISTING FACILITIES RESULTING DIRECTLY, OR INDIRECTLY, FROM HIS OPERATIONS, WHETHER OR NOT SAID FACILITIES ARE SHOWN ON THESE PLANS.

GRADING AND DRAINAGE NOTES

1. SITE GRADING SHALL BE PERFORMED IN ACCORDANCE WITH THESE PLANS AND SPECIFICATIONS AND ALL RELATED ADDENDUMS.
2. THE CONTRACTOR SHALL STRIP AND CLEAR THE TOPSOIL, MAJOR ROOTS AND ORGANIC MATERIAL FROM ALL PROPOSED BUILDING AND PAVEMENT AREAS PRIOR TO SITE GRADING. (THE TOPSOIL MAY BE STOCKPILED FOR LATER USE IN LANDSCAPED AREAS.)
3. THE CONTRACTOR SHALL REMOVE ALL ORGANIC MATERIAL AND OTHER DELETERIOUS MATERIALS PRIOR TO PLACING GRADING FILL OR BASE COURSE. THE AREA SHOULD BE PROOF-ROLLED TO IDENTIFY ANY SOFT AREAS. WHERE SOFT AREAS ARE ENCOUNTERED, THE CONTRACTOR SHALL REMOVE THE SOIL AND REPLACE WITH COMPACTED FILL.
4. ALL DEBRIS PILES AND BERMS SHOULD BE REMOVED AND HAULED AWAY FROM SITE OR USED AS GENERAL FILL IN LANDSCAPED AREAS.
5. THE CONTRACTOR SHALL GRADE THE PROJECT SITE TO PROVIDE A SMOOTH TRANSITION BETWEEN NEW AND EXISTING ASPHALT, CURB AND GUTTER, AND ADJOINING SITE IMPROVEMENTS.
6. THE CONTRACTOR SHALL BE RESPONSIBLE FOR DAMAGE AND DEBRIS ON ADJACENT STREETS WHEN EQUIPMENT IS TRAVELING THOSE STREETS.
7. THE CONTRACTOR SHALL BE FAMILIAR WITH ALL CONDITIONS AND RECOMMENDATIONS AND TAKE ALL NECESSARY PRECAUTIONS AND RECOMMENDED PROCEDURES TO ASSURE SOUND GRADING PRACTICES.
8. THE CONTRACTOR SHALL TAKE APPROPRIATE GRADING MEASURES TO DIRECT STORM SURFACE RUNOFF TOWARDS CATCH BASINS.
9. THE LOCATIONS OF UNDERGROUND FACILITIES SHOWN ON THESE PLANS ARE BASED ON ON-SITE SURVEY. IT SHALL BE THE CONTRACTORS' FULL RESPONSIBILITY TO CONTACT THE VARIOUS UTILITY COMPANIES TO LOCATE THEIR FACILITIES PRIOR TO PROCEEDING WITH CONSTRUCTION. NO ADDITIONAL COMPENSATION SHALL BE PAID TO THE CONTRACTOR FOR DAMAGE AND REPAIR TO THESE FACILITIES CAUSED BY HIS WORK FORCE.
10. IT SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR TO PERFORM ALL NECESSARY CUTS AND FILLS WITHIN THE LIMITS OF THIS PROJECT AND THE RELATED OFF-SITE WORK, SO AS TO GENERATE THE DESIRED SUBGRADE, FINISH GRADES, AND SLOPES SHOWN.
11. THE CONTRACTOR IS WARNED THAT AN EARTHWORK BALANCE WAS NOT NECESSARILY THE INTENT OF THIS PROJECT. ANY ADDITIONAL MATERIAL REQUIRED OR LEFTOVER MATERIAL FOLLOWING EARTHWORK OPERATIONS BECOMES THE RESPONSIBILITY OF THE CONTRACTOR.
12. THE GRADING CONTRACTOR IS RESPONSIBLE TO COORDINATE WITH THE OWNER TO PROVIDE FOR THE REQUIREMENTS OF THE PROJECT STORM WATER POLLUTION PREVENTION PLAN (SWPPP) AND ASSOCIATED PERMIT. ALL CONTRACTOR ACTIVITIES 1 ACRE OR MORE IN SIZE ARE REQUIRED TO PROVIDE A STORM WATER POLLUTION PREVENTION PLAN.
13. ALL CUT AND FILL SLOPES SHALL BE PROTECTED UNTIL EFFECTIVE EROSION CONTROL HAS BEEN ESTABLISHED.
14. THE USE OF POTABLE WATER WITHOUT A SPECIAL PERMIT FOR BUILDING OR CONSTRUCTION PURPOSES INCLUDING CONSOLIDATION OF BACKFILL OR DUST CONTROL IS PROHIBITED. THE CONTRACTOR SHALL OBTAIN ALL NECESSARY PERMITS FOR CONSTRUCTION WATER FROM TOOELE CITY.
15. THE CONTRACTOR SHALL MAINTAIN THE STREETS, SIDEWALKS, AND ALL OTHER PUBLIC RIGHT-OF-WAYS IN A CLEAN, SAFE AND USABLE CONDITION. ALL SPILLS OF SOIL, ROCK OR CONSTRUCTION DEBRIS SHALL BE PROMPTLY REMOVED FROM THE PUBLICLY-OWNED PROPERTY DURING CONSTRUCTION AND UPON COMPLETION OF THE PROJECT. ALL ADJACENT PROPERTY, PRIVATE OR PUBLIC, SHALL BE MAINTAINED IN A CLEAN, SAFE, AND USABLE CONDITION.

ABBREVIATIONS

APWA	AMERICAN PUBLIC WORKS ASSOCIATION
AR	ACCESSIBLE ROUTE
ASTM	AMERICAN SOCIETY FOR TESTING AND MATERIALS
AWWA	AMERICAN WATER WORKS ASSOCIATION
BOS	BOTTOM OF STEP
BVC	BEGIN VERTICAL CURVE
C	CURVE
CB	CATCH BASIN
CF	CURB FACE OR CUBIC FEET
CL	CENTER LINE
CO	CLEAN OUT
COMM	COMMUNICATION
CONC	CONCRETE
CONT	CONTINUOUS
DIA	DIAMETER
DIP	DUCTILE IRON PIPE
ELEC	ELECTRICAL
ELEV	ELEVATION
EOA	EDGE OF ASPHALT
EVC	END OF VERTICAL CURVE
EW	EACH WAY
EXIST	EXISTING
FF	FINISH FLOOR
FG	FINISH GRADE
FH	FIRE HYDRANT
FL	FLOW LINE OR FLANGE
GB	GRADE BREAK
GF	GARAGE FLOOR
GV	GATE VALVE
HC	HANDICAP
HP	HIGH POINT
IRR	IRRIGATION
K	RATE OF VERTICAL CURVATURE
LD	LAND DRAIN
LF	LINEAR FEET
LP	LOW POINT
MEX	MATCH EXISTING
MH	MANHOLE
MJ	MECHANICAL JOINT
NG	NATURAL GROUND
NIC	NOT IN CONTRACT
NO	NUMBER
OC	ON CENTER
OCEW	ON CENTER EACH WAY
OHP	OVERHEAD POWER
PC	POINT OF CURVATURE OR PRESSURE CLASS
PCC	POINT OF COMPOUND CURVATURE
PI	POINT OF INTERSECTION
PIV	POST INDICATOR VALVE
PL	PROPERTY LINE
PRC	POINT OF REVERSE CURVATURE
PRO	PROPOSED
PT	POINT OF TANGENCY
PVC	POINT OF VERTICAL CURVATURE
PVI	POINT OF VERTICAL INTERSECTION
PVT	POINT OF VERTICAL TANGENCY
R	RADIUS
RD	ROOF DRAIN
ROW	RIGHT OF WAY
S	SLOPE
SAN SWR	SANITARY SEWER
SD	STORM DRAIN
SEC	SECONDARY
SS	SANITARY SEWER
STA	STATION
SW	SECONDARY WATER LINE
TBC	TOP BACK OF CURB
TOG	TOP OF GRATE
TOA	TOP OF ASPHALT
TOC	TOP OF CONCRETE
TOF	TOP OF FOUNDATION
TOW	TOP OF WALL
TOS	TOP OF STEP
TYP	TYPICAL
VC	VERTICAL CURVE
WIV	WALL INDICATOR VALVE
W	WATER LINE

NOTE: MAY CONTAIN ABBREVIATIONS THAT ARE NOT USED IN THIS PLAN SET.

LEGEND

Symbol	Description	Line	Description
	SECTION CORNER		EXISTING EDGE OF ASPHALT
	EXISTING MONUMENT		PROPOSED EDGE OF ASPHALT
	PROPOSED MONUMENT		EXISTING STRIPING
	EXISTING REBAR AND CAP		PROPOSED STRIPING
	SET ENSIGN REBAR AND CAP	x	EXISTING FENCE
WM	EXISTING WATER METER	X	PROPOSED FENCE
WM	PROPOSED WATER METER		EXISTING FLOW LINE
W	EXISTING WATER MANHOLE		PROPOSED FLOW LINE
W	PROPOSED WATER MANHOLE		GRADE BREAK
W	EXISTING WATER BOX	sd	EXISTING STORM DRAIN LINE
WV	EXISTING WATER VALVE	SD	PROPOSED STORM DRAIN LINE
WV	PROPOSED WATER VALVE	RD	ROOF DRAIN LINE
	EXISTING FIRE HYDRANT		CATCHMENTS
	PROPOSED FIRE HYDRANT	HWL	HIGHWATER LINE
	PROPOSED FIRE DEPARTMENT CONNECTION	ss	EXISTING SANITARY SEWER
SWV	EXISTING SECONDARY WATER VALVE	SS	PROPOSED SANITARY SEWER LINE
SWV	PROPOSED SECONDARY WATER VALVE		PROPOSED SAN. SWR. SERVICE LINE
IRR	EXISTING IRRIGATION BOX	ld	EXISTING LAND DRAIN LINE
IRR	EXISTING IRRIGATION VALVE	LD	PROPOSED LAND DRAIN LINE
IRR	PROPOSED IRRIGATION VALVE		PROPOSED LAND DRAIN SERVICE LINE
S	EXISTING SANITARY SEWER MANHOLE	w	EXISTING CULINARY WATER LINE
S	PROPOSED SANITARY SEWER MANHOLE	W	PROPOSED CULINARY WATER LINE
CO	EXISTING SANITARY CLEAN OUT		PROPOSED CULINARY WATER SERVICE LINE
D	EXISTING STORM DRAIN CLEAN OUT BOX	sw	EXISTING SECONDARY WATER LINE
D	PROPOSED STORM DRAIN CLEAN OUT BOX	SW	PROPOSED SECONDARY WATER LINE
	EXISTING STORM DRAIN INLET BOX		PROPOSED SEC. WATER SERVICE LINE
	EXISTING STORM DRAIN CATCH BASIN	irr	EXISTING IRRIGATION LINE
	PROPOSED STORM DRAIN CATCH BASIN	IRR	PROPOSED IRRIGATION LINE
	EXISTING STORM DRAIN COMBO BOX	ohp	EXISTING OVERHEAD POWER LINE
	PROPOSED STORM DRAIN COMBO BOX	e	EXISTING ELECTRICAL LINE
CO	EXISTING STORM DRAIN CLEAN OUT	g	EXISTING GAS LINE
	EXISTING STORM DRAIN CULVERT	t	EXISTING TELEPHONE LINE
	PROPOSED STORM DRAIN CULVERT	AR	ACCESSIBLE ROUTE
	TEMPORARY SAG INLET PROTECTION		SAW CUT LINE
	TEMPORARY IN-LINE INLET PROTECTION		STRAW WATTLE
	ROOF DRAIN		TEMPORARY BERM
E	EXISTING ELECTRICAL MANHOLE	SF	TEMPORARY SILT FENCE
E	EXISTING ELECTRICAL BOX	LOD	LIMITS OF DISTURBANCE
	EXISTING TRANSFORMER		EXISTING WALL
	EXISTING UTILITY POLE		PROPOSED WALL
	EXISTING LIGHT		EXISTING CONTOURS
	PROPOSED LIGHT		PROPOSED CONTOURS
	EXISTING GAS METER		BUILDABLE AREA WITHIN SETBACKS
G	EXISTING GAS MANHOLE		PUBLIC DRAINAGE EASEMENT
GV	EXISTING GAS VALVE		EXISTING ASPHALT TO BE REMOVED
T	EXISTING TELEPHONE MANHOLE		PROPOSED ASPHALT
	EXISTING TELEPHONE BOX		EXISTING CURB AND GUTTER
	EXISTING TRAFFIC SIGNAL BOX		PROPOSED CURB AND GUTTER
CABLE	EXISTING CABLE BOX		PROPOSED REVERSE PAN CURB AND GUTTER
	EXISTING BOLLARD		TRANSITION TO REVERSE PAN CURB
	PROPOSED BOLLARD		CONCRETE TO BE REMOVED
	EXISTING SIGN		EXISTING CONCRETE
	PROPOSED SIGN		PROPOSED CONCRETE
XXXX.XX TBC	EXISTING SPOT ELEVATION		BUILDING TO BE REMOVED
TBC XXXX.XX	PROPOSED SPOT ELEVATION		EXISTING BUILDING
	EXISTING FLOW DIRECTION		PROPOSED BUILDING
	EXISTING TREE		
	DENSE VEGETATION		

NOTE: MAY CONTAIN SYMBOLS THAT ARE NOT USED IN THIS PLAN SET.

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LICENSED PROFESSIONAL ENGINEER
JACOB M. CLEGG
8/16/2021
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REV	DATE	DESCRIPTION

VCBO NUMBER: 21515
CLIENT NUMBER: 20385
DATE ISSUED: AUGUST 16, 2021

TCSD WAREHOUSE REMODEL - BLDG. 649

TOOELE COUNTY SCHOOL DISTRICT
180 GARNET STREET, TOOELE, UTAH 84074

BID SET

GENERAL NOTES

C-001

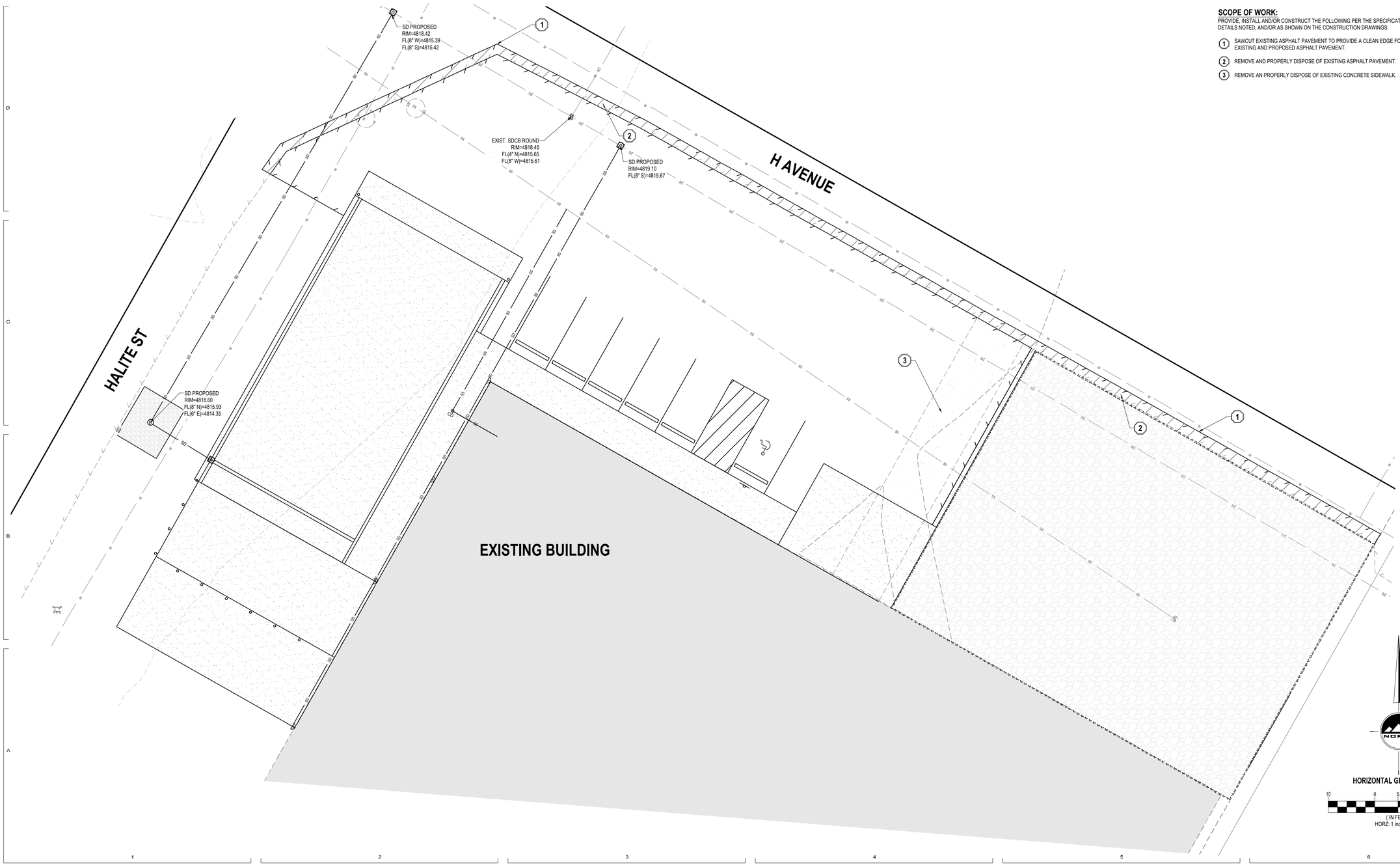
811 Know what's below. Call before you dig.

CALL BLUESTAKES @ 811 AT LEAST 48 HOURS PRIOR TO THE COMMENCEMENT OF ANY CONSTRUCTION.

BENCHMARK

NORTHWEST QUARTER CORNER OF SECTION 30, TOWNSHIP 3 SOUTH, RANGE 4 WEST SALT LAKE BASE AND MERIDIAN

ELEV = 4762.70'



GENERAL NOTES

1. ALL WORK TO COMPLY WITH THE GOVERNING AGENCY'S STANDARDS AND SPECIFICATIONS.
2. EXISTING UNDERGROUND UTILITIES AND IMPROVEMENTS ARE SHOWN IN THEIR APPROXIMATE LOCATIONS BASED UPON RECORD INFORMATION AVAILABLE AT THE TIME OF PREPARATION OF THESE PLANS. LOCATIONS MAY NOT HAVE BEEN VERIFIED IN THE FIELD AND NO GUARANTEE IS MADE AS TO THE ACCURACY OR COMPLETENESS OF THE INFORMATION SHOWN. IT SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR TO DETERMINE THE EXISTENCE AND LOCATION OF THE UTILITIES SHOWN ON THESE PLANS OR INDICATED IN THE FIELD BY LOCATING SERVICES. ANY ADDITIONAL COSTS INCURRED AS A RESULT OF THE CONTRACTOR'S FAILURE TO VERIFY THE LOCATIONS OF EXISTING UTILITIES PRIOR TO THE BEGINNING OF CONSTRUCTION IN THEIR VICINITY SHALL BE BORNE BY THE CONTRACTOR AND ASSUMED INCLUDED IN THE CONTRACT. THE CONTRACTOR IS TO VERIFY ALL CONNECTION POINTS WITH THE EXISTING UTILITIES. THE CONTRACTOR IS RESPONSIBLE FOR ANY DAMAGE CAUSED TO THE EXISTING UTILITIES AND UTILITY STRUCTURES THAT ARE TO REMAIN. IF CONFLICTS WITH EXISTING UTILITIES OCCUR, THE CONTRACTOR SHALL NOTIFY THE ENGINEER PRIOR TO CONSTRUCTION TO DETERMINE IF ANY FIELD ADJUSTMENTS SHOULD BE MADE.
3. ALL SURFACE IMPROVEMENTS DISTURBED BY CONSTRUCTION SHALL BE RESTORED OR REPLACED, INCLUDING TREES AND DECORATIVE SHRUBS, SOD, FENCES, WALLS AND STRUCTURES, WHETHER OR NOT THEY ARE SPECIFICALLY SHOWN ON THE CONTRACT DOCUMENTS.
4. ALL CONSTRUCTION SIGNAGE, BARRICADES, TRAFFIC CONTROL DEVICES, ETC. SHALL CONFORM TO THE LATEST EDITION OF THE M.U.T.C.D. THE CONTRACTOR WILL MAINTAIN SUCH SO THAT THEY ARE PROPERLY PLACED AND VISIBLE AT ALL TIMES.
5. SIDEWALKS AND CURBS DESIGNATED TO BE DEMOLISHED SHALL BE DEMOLISHED TO THE NEAREST EXPANSION JOINT, MATCHING THESE PLANS AS CLOSELY AS POSSIBLE.
6. THE CONTRACTOR IS TO PROTECT AND PRESERVE ALL EXISTING IMPROVEMENTS, UTILITIES, AND SIGNS, ETC. UNLESS OTHERWISE NOTED ON THESE PLANS.

SCOPE OF WORK:

PROVIDE, INSTALL AND/OR CONSTRUCT THE FOLLOWING PER THE SPECIFICATIONS GIVEN OR REFERENCED, THE DETAILS NOTED, AND/OR AS SHOWN ON THE CONSTRUCTION DRAWINGS:

1. SAWCUT EXISTING ASPHALT PAVEMENT TO PROVIDE A CLEAN EDGE FOR THE TRANSITION BETWEEN EXISTING AND PROPOSED ASPHALT PAVEMENT.
2. REMOVE AND PROPERLY DISPOSE OF EXISTING ASPHALT PAVEMENT.
3. REMOVE AN PROPERLY DISPOSE OF EXISTING CONCRETE SIDEWALK.

NORTH

HORIZONTAL GRAPHIC SCALE

10 0 5 10 20

(IN FEET)
HORZ: 1 inch = 10 ft.

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VCBO.COM

LICENSED PROFESSIONAL ENGINEER
No. 7427-2202
JACOB M. CLEGG
8/16/2021
STATE OF UTAH

ENSIGN
THE STANDARD IN ENGINEERING
TOOELE
169 N. MAIN ST., STE 1
TOOELE, UT 84074
Phone: 435.843.3590
WWW.ENSIGNENG.COM

REV	DATE	DESCRIPTION

VCBO NUMBER: 21515
CLIENT NUMBER: 20385
DATE ISSUED: AUGUST 16, 2021

TCSD WAREHOUSE REMODEL - BLDG. 649

TOOELE COUNTY SCHOOL DISTRICT
180 GARNET STREET, TOOELE, UTAH 84074

BID SET

DEMOLITION PLAN

C-100

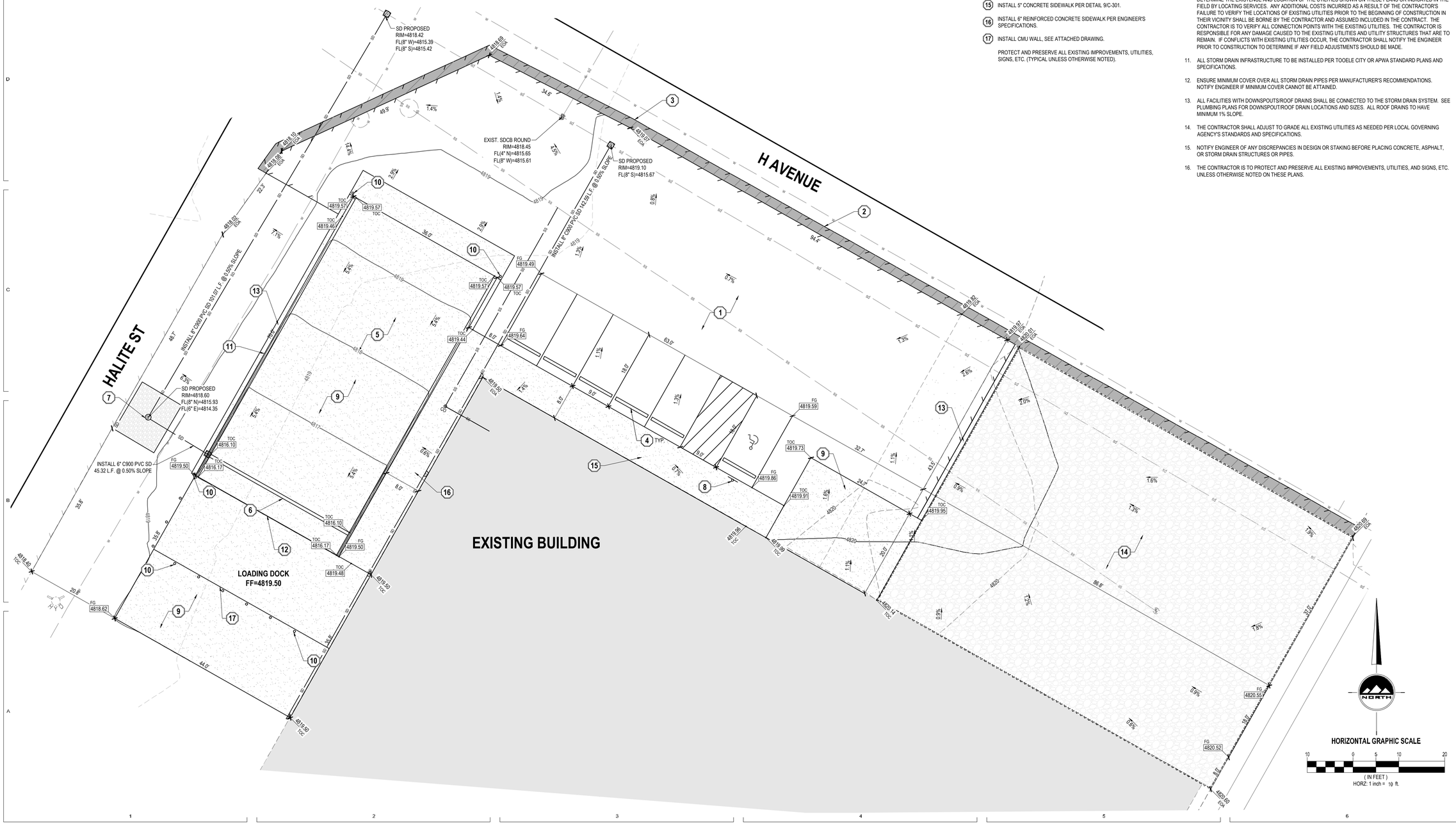
CALL BLUESTAKES @ 811 AT LEAST 48 HOURS PRIOR TO THE COMMENCEMENT OF ANY CONSTRUCTION.

811 Know what's below. Call before you dig.

BENCHMARK

NORTHWEST QUARTER CORNER OF SECTION 30, TOWNSHIP 3 SOUTH, RANGE 4 WEST SALT LAKE BASE AND MERIDIAN

ELEV = 4762.70'



SCOPE OF WORK:

PROVIDE, INSTALL AND/OR CONSTRUCT THE FOLLOWING PER THE SPECIFICATIONS GIVEN OR REFERENCED, THE DETAILS NOTED, AND/OR AS SHOWN ON THE CONSTRUCTION DRAWINGS:

1. ASPHALT PAVEMENT PER DETAIL 1/C-301.
2. SAWCUT EXISTING ASPHALT PAVEMENT TO PROVIDE A CLEAN EDGE FOR THE TRANSITION BETWEEN EXISTING AND PROPOSED ASPHALT PAVEMENT.
3. REMOVE AND PROPERLY DISPOSE OF EXISTING ASPHALT PAVEMENT.
4. INSTALL CONCRETE WHEEL STOPS PER DETAIL 6/C-301.
5. INSTALL RECESSED CONCRETE LOADING DOCK.
6. INSTALL STORM DRAIN AT BASE OF RAMP.
7. INSTALL SUMP BASIN PER DETAIL 2/C-301.
8. INSTALL ADA VAN ACCESSIBLE SIGN PER DETAIL 3/C-301.
9. INSTALL 5" CONCRETE DRIVE APPROACH PER DETAIL 7/C-301.
10. INSTALL BOLLARDS PER DETAIL 4/C-301.
11. INSTALL RAILING PER ARCHITECTURAL DRAWINGS.
12. INSTALL RAILING WITH GATE.
13. INSTALL CONCRETE MOW STRIP PER DETAIL 5/C-301.
14. INSTALL 6" GRAVEL AREA.
15. INSTALL 5" CONCRETE SIDEWALK PER DETAIL 9/C-301.
16. INSTALL 6" REINFORCED CONCRETE SIDEWALK PER ENGINEER'S SPECIFICATIONS.
17. INSTALL CMU WALL, SEE ATTACHED DRAWING.

PROTECT AND PRESERVE ALL EXISTING IMPROVEMENTS, UTILITIES, SIGNS, ETC. (TYPICAL UNLESS OTHERWISE NOTED).

GENERAL NOTES

1. ALL WORK TO COMPLY WITH TOOELE CITY'S STANDARDS AND SPECIFICATIONS.
2. ALL IMPROVEMENTS MUST COMPLY WITH ADA STANDARDS AND RECOMMENDATIONS.
3. SEE LANDSCAPE/ARCHITECTURAL PLANS FOR CONCRETE MATERIAL, COLOR, FINISH, AND SCORE PATTERNS THROUGHOUT SITE.
4. ALL PAVEMENT MARKINGS SHALL CONFORM TO THE LATEST EDITION OF THE M.U.T.C.D. (MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES).
5. ALL SURFACE IMPROVEMENTS DISTURBED BY CONSTRUCTION SHALL BE RESTORED OR REPLACED, INCLUDING TREES AND DECORATIVE SHRUBS, SOD, FENCES, WALLS AND STRUCTURES, WHETHER OR NOT THEY ARE SPECIFICALLY SHOWN ON THE CONTRACT DOCUMENTS.
6. ALL WORK SHALL COMPLY WITH THE RECOMMENDATIONS OF APWA POSSIBLY INCLUDING, BUT NOT LIMITED TO, REMOVAL OF UNCONSOLIDATED FILL, ORGANICS, AND DEBRIS, PLACEMENT OF SUBSURFACE DRAIN LINES AND GEOTEXTILE, AND OVEREXCAVATION OF UNSUITABLE BEARING MATERIALS AND PLACEMENT OF ACCEPTABLE FILL MATERIAL.
7. THE CONTRACTOR SHALL BECOME FAMILIAR WITH THE EXISTING SOIL CONDITIONS.
8. LANDSCAPED AREAS REQUIRE SUBGRADE TO BE MAINTAINED AT A SPECIFIC ELEVATION BELOW FINISHED GRADE AND REQUIRE SUBGRADE TO BE PROPERLY PREPARED AND SCARIFIED. SEE LANDSCAPE PLANS FOR ADDITIONAL INFORMATION.
9. SLOPE ALL LANDSCAPED AREAS AWAY FROM BUILDING FOUNDATIONS TOWARD CURB AND GUTTER OR STORM DRAIN INLETS.
10. EXISTING UNDERGROUND UTILITIES AND IMPROVEMENTS ARE SHOWN IN THEIR APPROXIMATE LOCATIONS BASED UPON RECORD INFORMATION AVAILABLE AT THE TIME OF PREPARATION OF THESE PLANS. LOCATIONS MAY NOT HAVE BEEN VERIFIED IN THE FIELD AND NO GUARANTEE IS MADE AS TO THE ACCURACY OR COMPLETENESS OF THE INFORMATION SHOWN. IT SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR TO DETERMINE THE EXISTENCE AND LOCATION OF THE UTILITIES SHOWN ON THESE PLANS OR INDICATED IN THE FIELD BY LOCATING SERVICES. ANY ADDITIONAL COSTS INCURRED AS A RESULT OF THE CONTRACTOR'S FAILURE TO VERIFY THE LOCATIONS OF EXISTING UTILITIES PRIOR TO THE BEGINNING OF CONSTRUCTION IN THEIR VICINITY SHALL BE BORNE BY THE CONTRACTOR AND ASSUMED INCLUDED IN THE CONTRACT. THE CONTRACTOR IS TO VERIFY ALL CONNECTION POINTS WITH THE EXISTING UTILITIES. THE CONTRACTOR IS RESPONSIBLE FOR ANY DAMAGE CAUSED TO THE EXISTING UTILITIES AND UTILITY STRUCTURES THAT ARE TO REMAIN. IF CONFLICTS WITH EXISTING UTILITIES OCCUR, THE CONTRACTOR SHALL NOTIFY THE ENGINEER PRIOR TO CONSTRUCTION TO DETERMINE IF ANY FIELD ADJUSTMENTS SHOULD BE MADE.
11. ALL STORM DRAIN INFRASTRUCTURE TO BE INSTALLED PER TOOELE CITY OR APWA STANDARD PLANS AND SPECIFICATIONS.
12. ENSURE MINIMUM COVER OVER ALL STORM DRAIN PIPES PER MANUFACTURER'S RECOMMENDATIONS. NOTIFY ENGINEER IF MINIMUM COVER CANNOT BE ATTAINED.
13. ALL FACILITIES WITH DOWNSPOUTS/ROOF DRAINS SHALL BE CONNECTED TO THE STORM DRAIN SYSTEM. SEE PLUMBING PLANS FOR DOWNSPOUT/ROOF DRAIN LOCATIONS AND SIZES. ALL ROOF DRAINS TO HAVE MINIMUM 1% SLOPE.
14. THE CONTRACTOR SHALL ADJUST TO GRADE ALL EXISTING UTILITIES AS NEEDED PER LOCAL GOVERNING AGENCY'S STANDARDS AND SPECIFICATIONS.
15. NOTIFY ENGINEER OF ANY DISCREPANCIES IN DESIGN OR STAKING BEFORE PLACING CONCRETE, ASPHALT, OR STORM DRAIN STRUCTURES OR PIPES.
16. THE CONTRACTOR IS TO PROTECT AND PRESERVE ALL EXISTING IMPROVEMENTS, UTILITIES, AND SIGNS, ETC. UNLESS OTHERWISE NOTED ON THESE PLANS.

VCBO ARCHITECTURE
324 SOUTH 400 EAST, SUITE 100 SALT LAKE CITY, UT 84111
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TOOELE COUNTY SCHOOL DISTRICT
180 GARNET STREET, TOOELE, UTAH 84074

BID SET

GRADING AND DRAINAGE PLAN

C-200

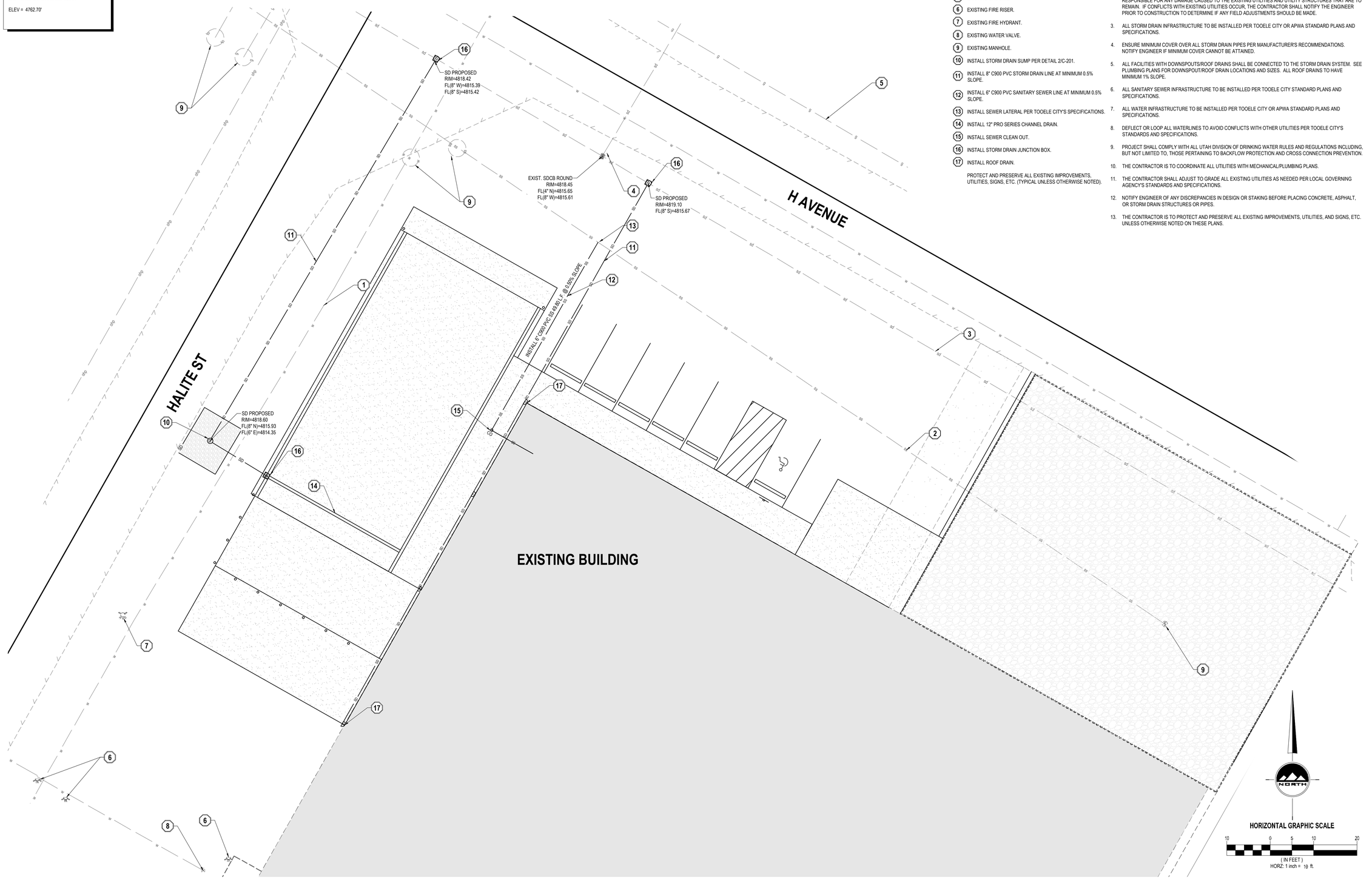
811 Know what's below. Call before you dig.

CALL BLUESTAKES @ 811 AT LEAST 48 HOURS PRIOR TO THE COMMENCEMENT OF ANY CONSTRUCTION.

BENCHMARK

NORTHWEST QUARTER CORNER OF SECTION 30, TOWNSHIP 3 SOUTH, RANGE 4 WEST SALT LAKE BASE AND MERIDIAN

ELEV = 4762.70'



SCOPE OF WORK:

PROVIDE, INSTALL AND/OR CONSTRUCT THE FOLLOWING PER THE SPECIFICATIONS GIVEN OR REFERENCED, THE DETAILS NOTED, AND/OR AS SHOWN ON THE CONSTRUCTION DRAWINGS:

1. EXISTING 8" C900 PVC WATER LINE.
2. EXISTING 6" SANITARY SEWER LINE.
3. EXISTING 8" STORM DRAIN LINE.
4. EXISTING STORM DRAIN CATCH BASIN.
5. EXISTING GAS LINE.
6. EXISTING FIRE RISER.
7. EXISTING FIRE HYDRANT.
8. EXISTING WATER VALVE.
9. EXISTING MANHOLE.
10. INSTALL STORM DRAIN SUMP PER DETAIL 2/C-201.
11. INSTALL 8" C900 PVC STORM DRAIN LINE AT MINIMUM 0.5% SLOPE.
12. INSTALL 6" C900 PVC SANITARY SEWER LINE AT MINIMUM 0.5% SLOPE.
13. INSTALL SEWER LATERAL PER TOOELE CITY'S SPECIFICATIONS.
14. INSTALL 12" PRO SERIES CHANNEL DRAIN.
15. INSTALL SEWER CLEAN OUT.
16. INSTALL STORM DRAIN JUNCTION BOX.
17. INSTALL ROOF DRAIN.

PROTECT AND PRESERVE ALL EXISTING IMPROVEMENTS, UTILITIES, SIGNS, ETC. (TYPICAL UNLESS OTHERWISE NOTED).

GENERAL NOTES

1. ALL WORK TO COMPLY WITH TOOELE CITY'S AND SPECIFICATIONS.
2. EXISTING UNDERGROUND UTILITIES AND IMPROVEMENTS ARE SHOWN IN THEIR APPROXIMATE LOCATIONS BASED UPON RECORD INFORMATION AVAILABLE AT THE TIME OF PREPARATION OF THESE PLANS. LOCATIONS MAY NOT HAVE BEEN VERIFIED IN THE FIELD AND NO GUARANTEE IS MADE AS TO THE ACCURACY OR COMPLETENESS OF THE INFORMATION SHOWN. IT SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR TO DETERMINE THE EXISTENCE AND LOCATION OF THE UTILITIES SHOWN ON THESE PLANS OR INDICATED IN THE FIELD BY LOCATING SERVICES. ANY ADDITIONAL COSTS INCURRED AS A RESULT OF THE CONTRACTOR'S FAILURE TO VERIFY THE LOCATIONS OF EXISTING UTILITIES PRIOR TO THE BEGINNING OF CONSTRUCTION IN THEIR VICINITY SHALL BE BORNE BY THE CONTRACTOR AND ASSUMED INCLUDED IN THE CONTRACT. THE CONTRACTOR IS TO VERIFY ALL CONNECTION POINTS WITH THE EXISTING UTILITIES. THE CONTRACTOR IS RESPONSIBLE FOR ANY DAMAGE CAUSED TO THE EXISTING UTILITIES AND UTILITY STRUCTURES THAT ARE TO REMAIN. IF CONFLICTS WITH EXISTING UTILITIES OCCUR, THE CONTRACTOR SHALL NOTIFY THE ENGINEER PRIOR TO CONSTRUCTION TO DETERMINE IF ANY FIELD ADJUSTMENTS SHOULD BE MADE.
3. ALL STORM DRAIN INFRASTRUCTURE TO BE INSTALLED PER TOOELE CITY OR APWA STANDARD PLANS AND SPECIFICATIONS.
4. ENSURE MINIMUM COVER OVER ALL STORM DRAIN PIPES PER MANUFACTURER'S RECOMMENDATIONS. NOTIFY ENGINEER IF MINIMUM COVER CANNOT BE ATTAINED.
5. ALL FACILITIES WITH DOWNSPOUTS/ROOF DRAINS SHALL BE CONNECTED TO THE STORM DRAIN SYSTEM. SEE PLUMBING PLANS FOR DOWNSPOUT/ROOF DRAIN LOCATIONS AND SIZES. ALL ROOF DRAINS TO HAVE MINIMUM 1% SLOPE.
6. ALL SANITARY SEWER INFRASTRUCTURE TO BE INSTALLED PER TOOELE CITY STANDARD PLANS AND SPECIFICATIONS.
7. ALL WATER INFRASTRUCTURE TO BE INSTALLED PER TOOELE CITY OR APWA STANDARD PLANS AND SPECIFICATIONS.
8. DEFLECT OR LOOP ALL WATERLINES TO AVOID CONFLICTS WITH OTHER UTILITIES PER TOOELE CITY'S STANDARDS AND SPECIFICATIONS.
9. PROJECT SHALL COMPLY WITH ALL UTAH DIVISION OF DRINKING WATER RULES AND REGULATIONS INCLUDING, BUT NOT LIMITED TO, THOSE PERTAINING TO BACKFLOW PROTECTION AND CROSS CONNECTION PREVENTION.
10. THE CONTRACTOR IS TO COORDINATE ALL UTILITIES WITH MECHANICAL/PLUMBING PLANS.
11. THE CONTRACTOR SHALL ADJUST TO GRADE ALL EXISTING UTILITIES AS NEEDED PER LOCAL GOVERNING AGENCY'S STANDARDS AND SPECIFICATIONS.
12. NOTIFY ENGINEER OF ANY DISCREPANCIES IN DESIGN OR STAKING BEFORE PLACING CONCRETE, ASPHALT, OR STORM DRAIN STRUCTURES OR PIPES.
13. THE CONTRACTOR IS TO PROTECT AND PRESERVE ALL EXISTING IMPROVEMENTS, UTILITIES, AND SIGNS, ETC. UNLESS OTHERWISE NOTED ON THESE PLANS.

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TCSD WAREHOUSE REMODEL - BLDG. 649

TOOELE COUNTY SCHOOL DISTRICT
180 GARNET STREET, TOOELE, UTAH 84074

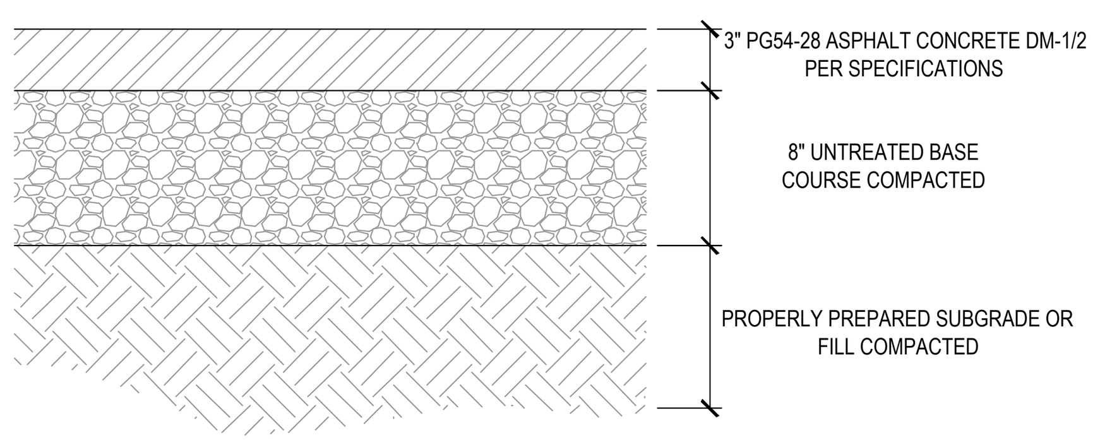
BID SET

UTILITY PLAN

C-300

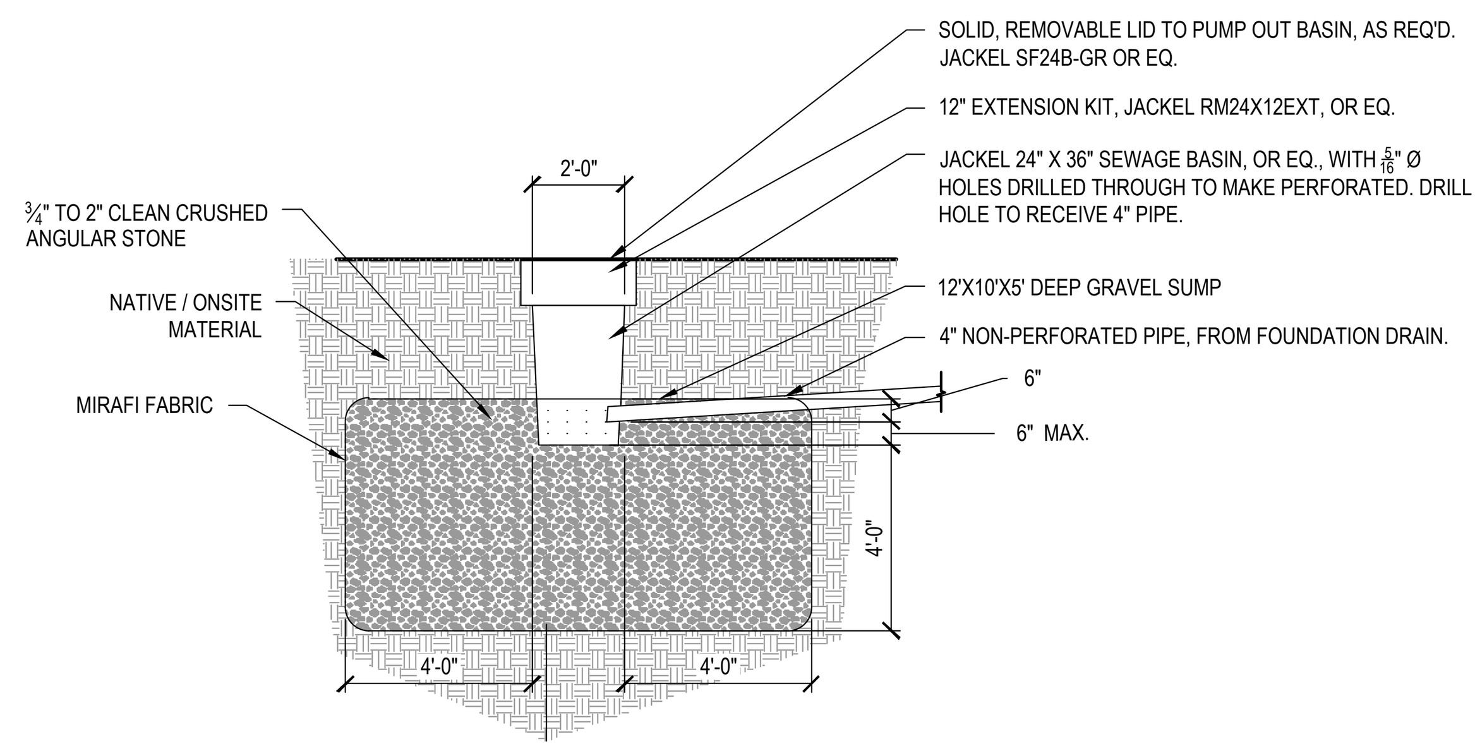
ASPHALT NOTES

1. ALL PAVING TO BE PLACED OVER PROPERLY PREPARED NATURAL SOILS AND/OR PROPERLY PREPARED EXISTING FILL SOILS AND AND PROPERLY COMPACTED STRUCTURAL FILL WHERE SPECIFIED.
2. ALL STRUCTURAL FILL TO BE COMPACTED TO A MINIMUM OF 95% OF THE MAXIMUM DRY DENSITY AS DETERMINED BY THE AASHTO T-180 (D-1557) METHOD OF COMPACTION. LIFTS SHOULD NOT EXCEED 8" IN LOOSE THICKNESS.
3. REMOVE SURFACE VEGETATION AND OTHER DELETRIOUS MATERIALS OVER THE ENTIRE SITE IN PREPARATION OF PROPOSED IMPROVEMENTS.



1 ASPHALT SECTION

SCALE: NONE

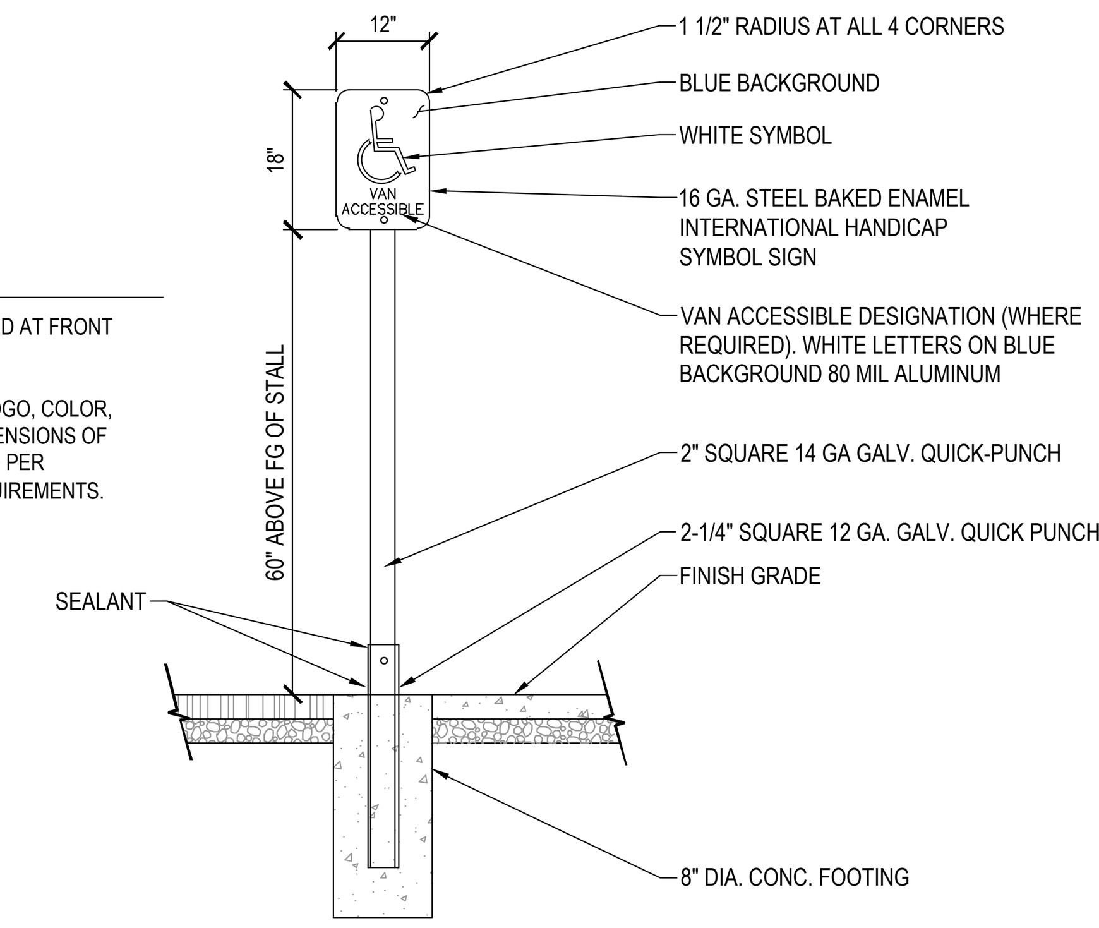


2 ATTACH PROPOSED FOUNDATION DRAIN TO EX. BASIN IN YARD, IF PRESENT. OTHERWISE, CONSTRUCT BASIN PER THIS DETAIL.

SCALE: NONE

NOTES:

1. SIGNS TO BE CENTERED AT FRONT OF PARKING SPACE.
2. HANDICAP PARKING LOGO, COLOR, HEIGHT, OF POLE, DIMENSIONS OF SIGN TO BE INSTALLED PER GOVERNMENTAL REQUIREMENTS.

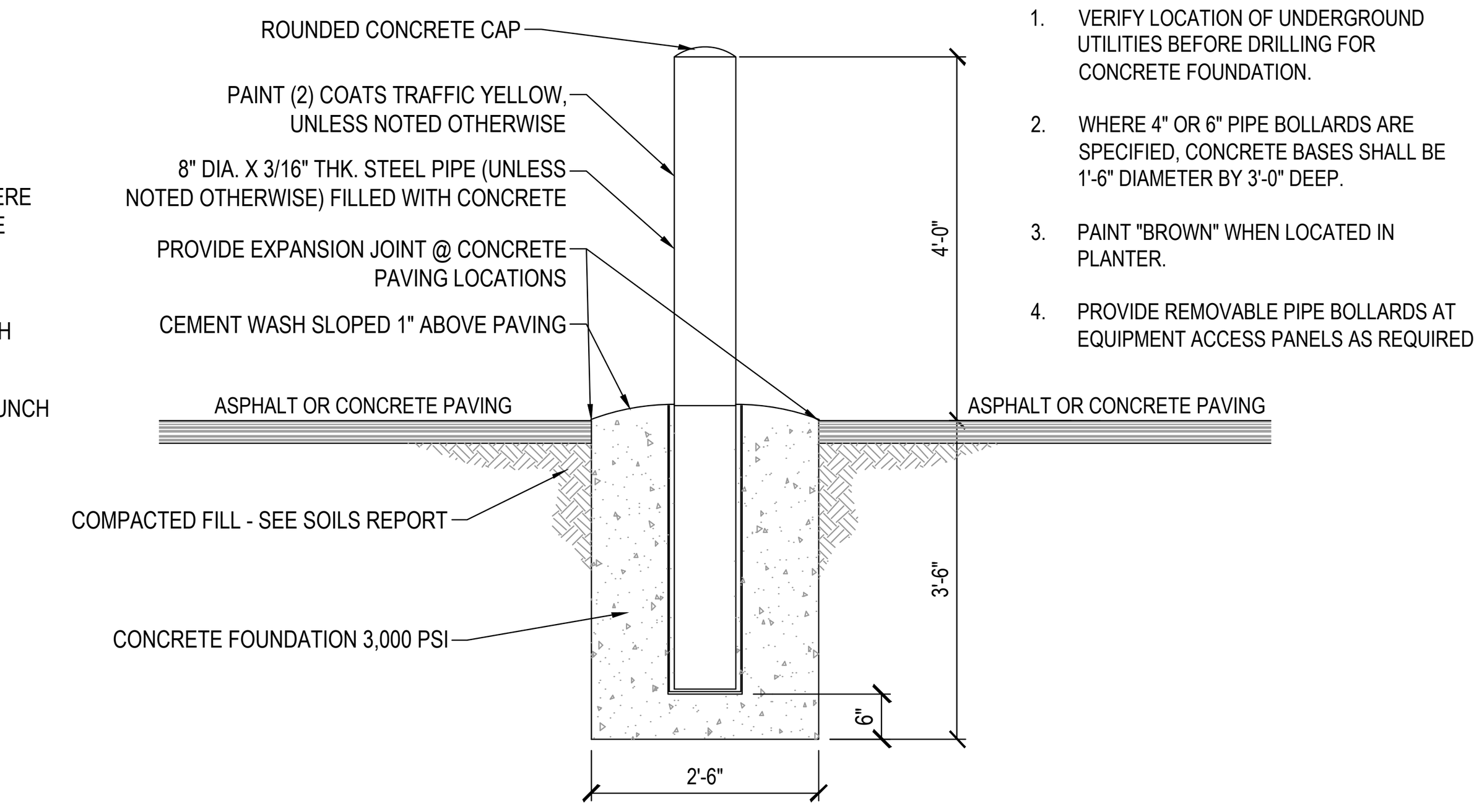


3 ACCESIBLE PARKING SIGN

SCALE: NONE

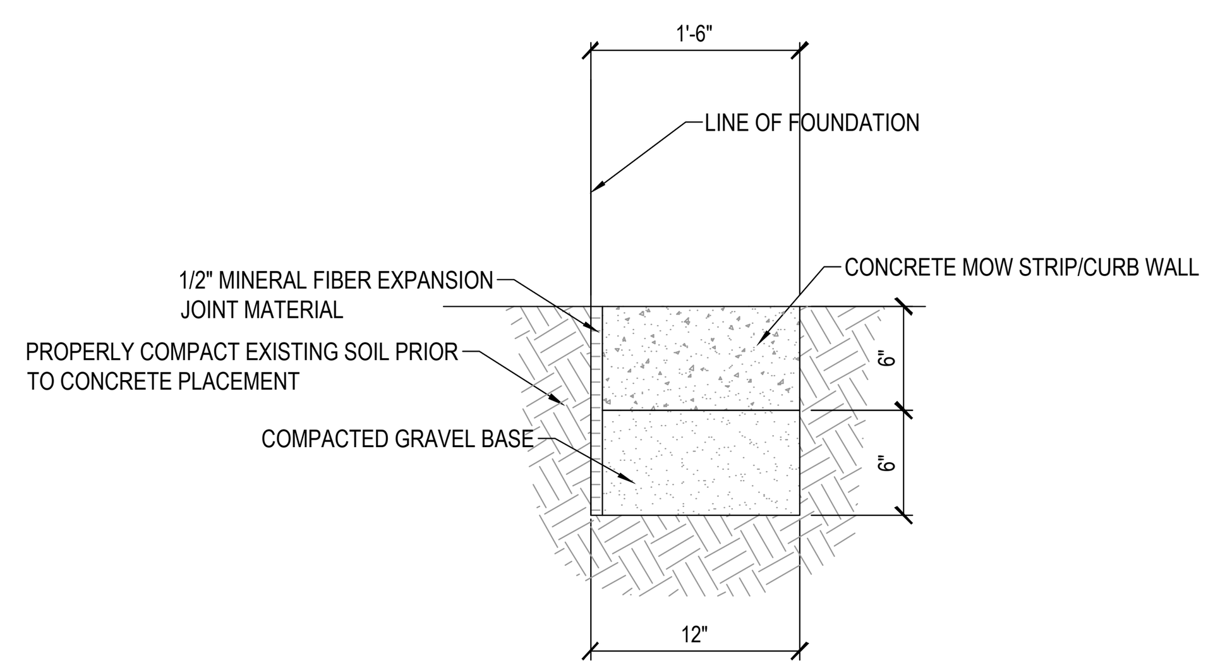
NOTES

1. VERIFY LOCATION OF UNDERGROUND UTILITIES BEFORE DRILLING FOR CONCRETE FOUNDATION.
2. WHERE 4" OR 6" PIPE BOLLARDS ARE SPECIFIED, CONCRETE BASES SHALL BE 1'-6" DIAMETER BY 3'-0" DEEP.
3. PAINT "BROWN" WHEN LOCATED IN PLANTER.
4. PROVIDE REMOVABLE PIPE BOLLARDS AT EQUIPMENT ACCESS PANELS AS REQUIRED.



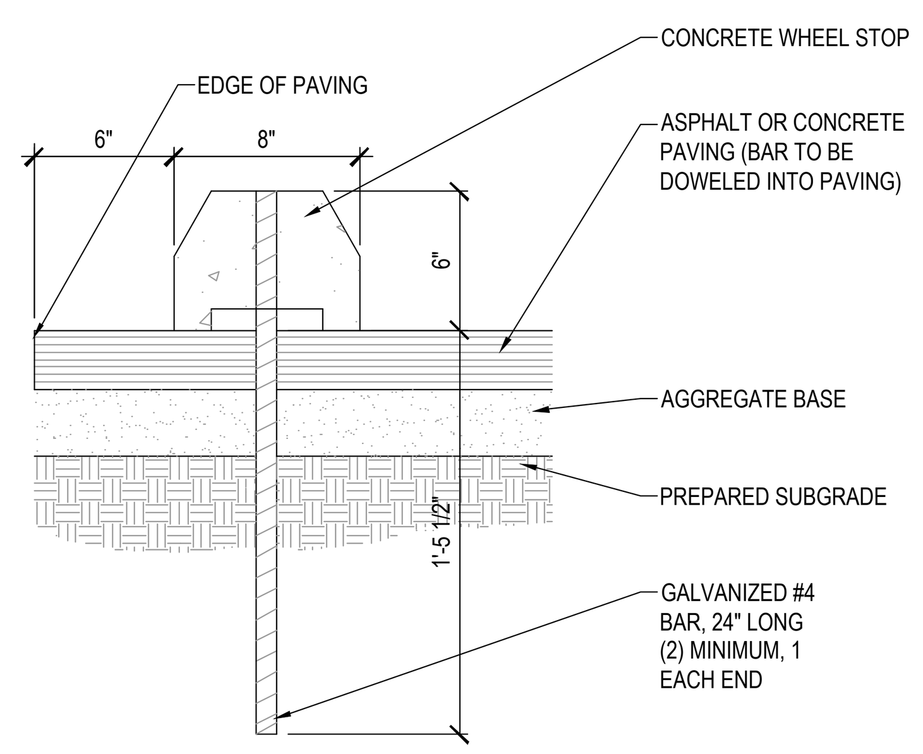
4 BOLLARD

SCALE: NONE



5 CONCRETE MOW STRIP DETAIL

SCALE: NONE

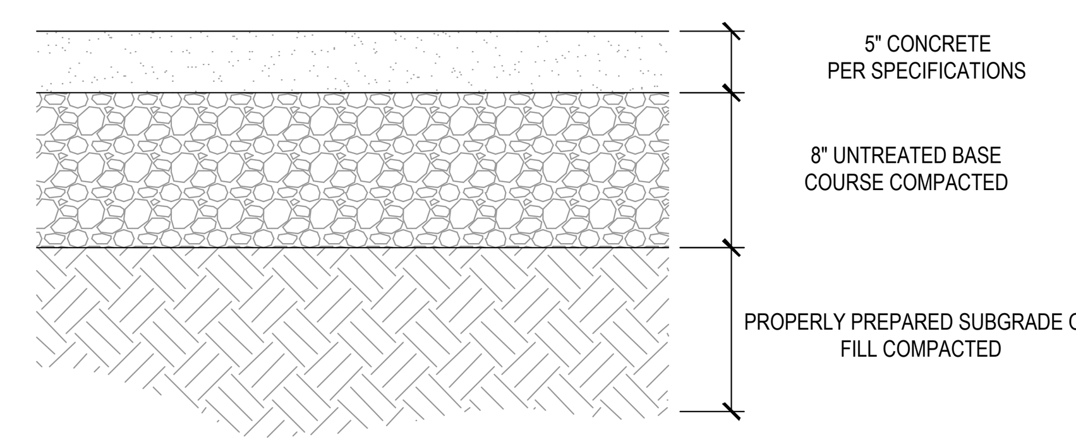


6 CONCRETE WHEEL STOP

SCALE: NONE

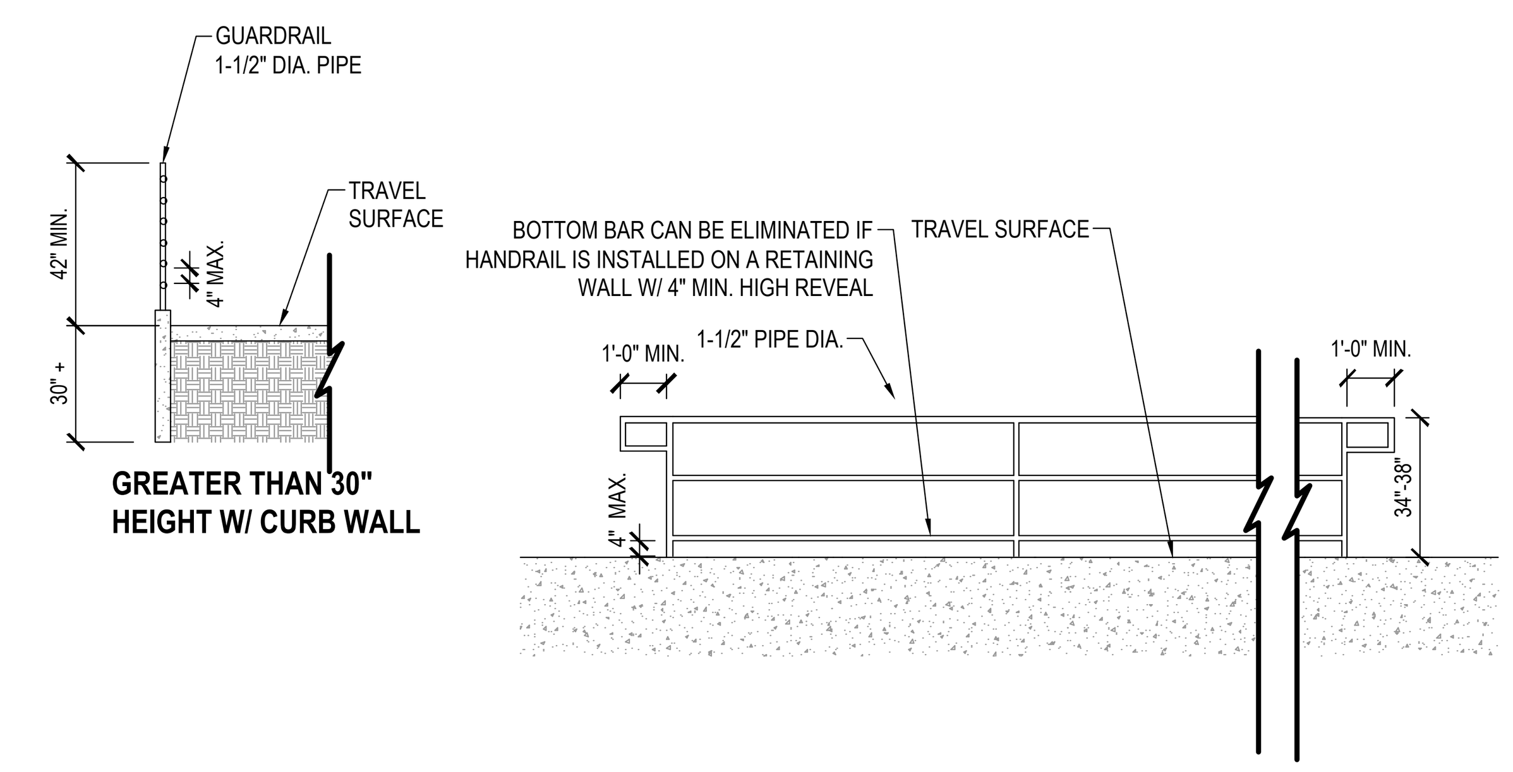
CONCRETE NOTES

1. ALL CONCRETE TO BE PLACED OVER PROPERLY PREPARED NATURAL SOILS AND/OR PROPERLY PREPARED EXISTING FILL SOILS AND AND PROPERLY COMPACTED STRUCTURAL FILL WHERE SPECIFIED.
2. ALL STRUCTURAL FILL TO BE COMPACTED TO A MINIMUM OF 95% OF THE MAXIMUM DRY DENSITY AS DETERMINED BY THE AASHTO T-180 (D-1557) METHOD OF COMPACTION. LIFTS SHOULD NOT EXCEED 8" IN LOOSE THICKNESS.
3. REMOVE SURFACE VEGETATION AND OTHER DELETRIOUS MATERIALS OVER THE ENTIRE SITE IN PREPARATION OF PROPOSED IMPROVEMENTS.
4. PROVIDE #4 REBAR AT 18" O.C. EACH WAY CENTERED IN SLAB.



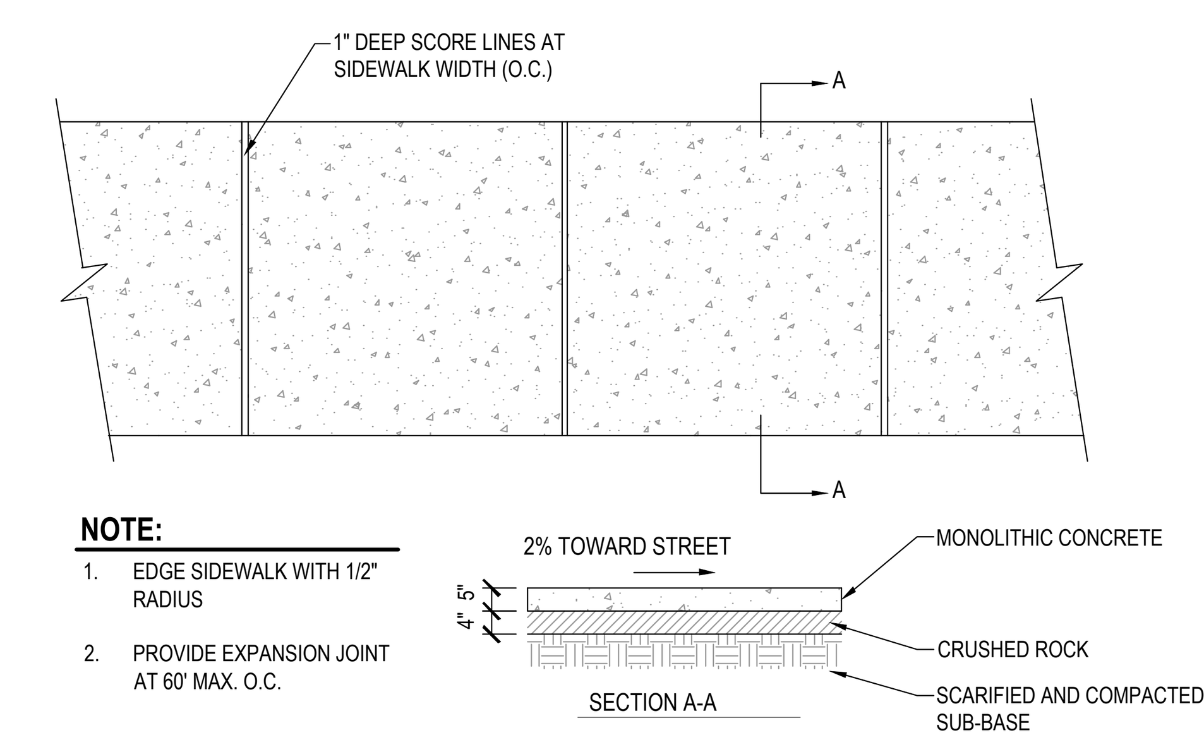
7 CONCRETE SECTION

SCALE: NONE



8 RAILING

SCALE: NONE



NOTE:

1. EDGE SIDEWALK WITH 1/2" RADIUS
2. PROVIDE EXPANSION JOINT AT 60' MAX. O.C.

9 CONCRETE SIDEWALK

SCALE: NONE

NDS® We put water in its place

12" PRO SERIES CHANNEL™ DRAINS (DEEP PROFILE)
Part #: 8001, 8002, 8003

CHANNEL FLOW CAPACITIES

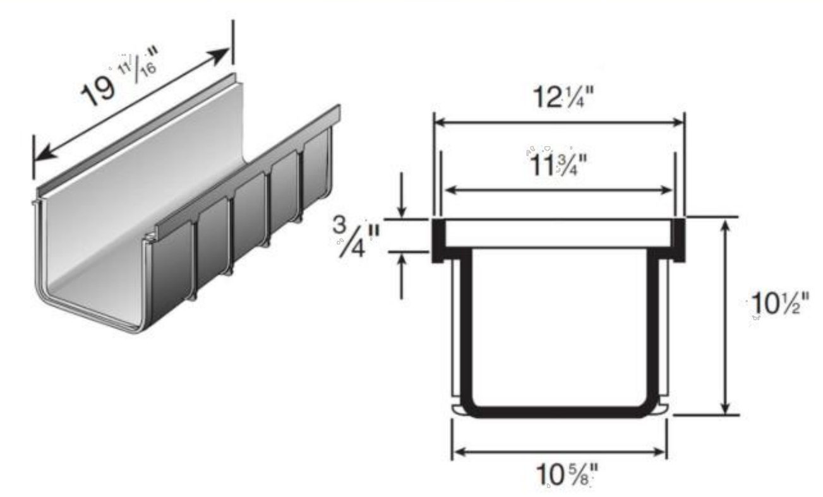
Slope (%)	Flow Velocity (ft/sec)	Flow Discharge (ft^3/sec)	Flow Discharge (GPM)
0.1	0.72	0.45	202
0.25	3.58	2.23	1001
0.5	5.06	3.16	1418
0.75	6.19	3.87	1737
1	7.15	4.46	2002
2	10.12	6.31	2832
3	12.39	7.73	3469

FLOW RATES THROUGH THE GRATE WITH ½" HEAD PRESSURE

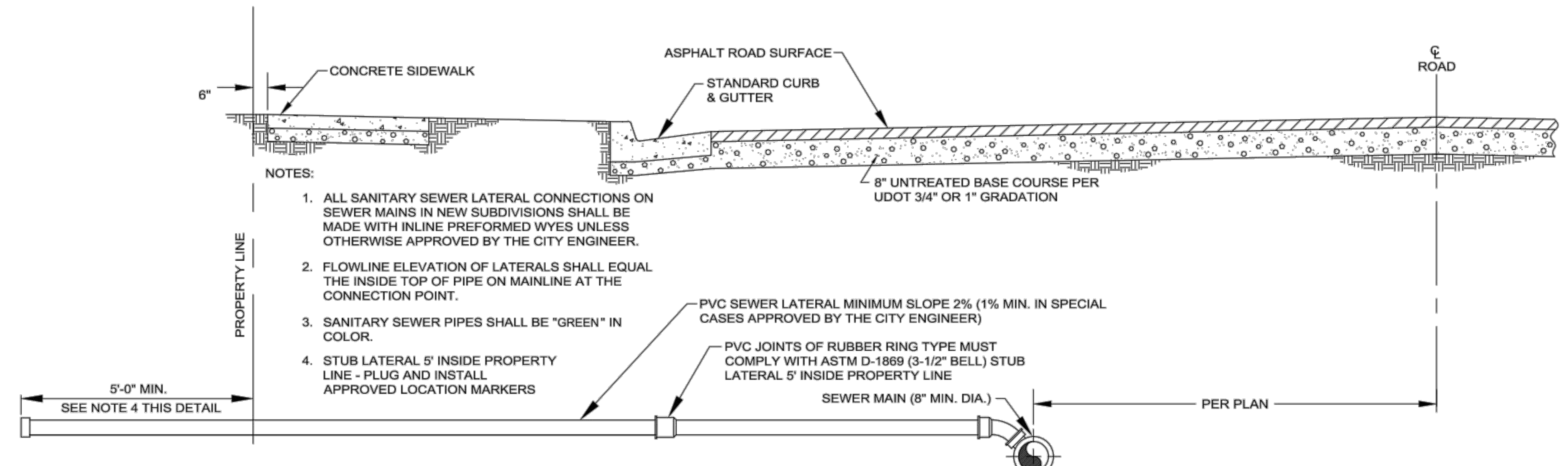
Part #	Load Capacity	Flow Rate (GPM per linear foot
847	Class B	210.99
845	Class C	142.86

OUTLET FLOW CAPACITY

Part #	Flow Rate (GPM)	Pipe Connection
844	3.9" O.D.: 114.04 4.3" O.D.: 136.71 4.8" O.D.: 174.28	4" S&D Fittings



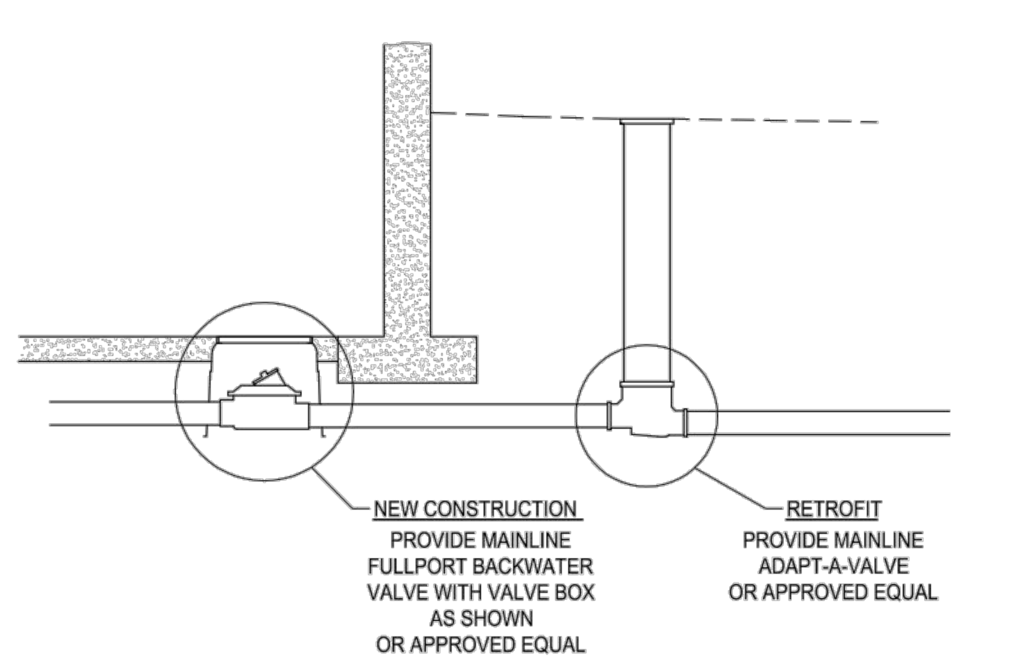
NDS Channel Drain – Rev. June 2019 10



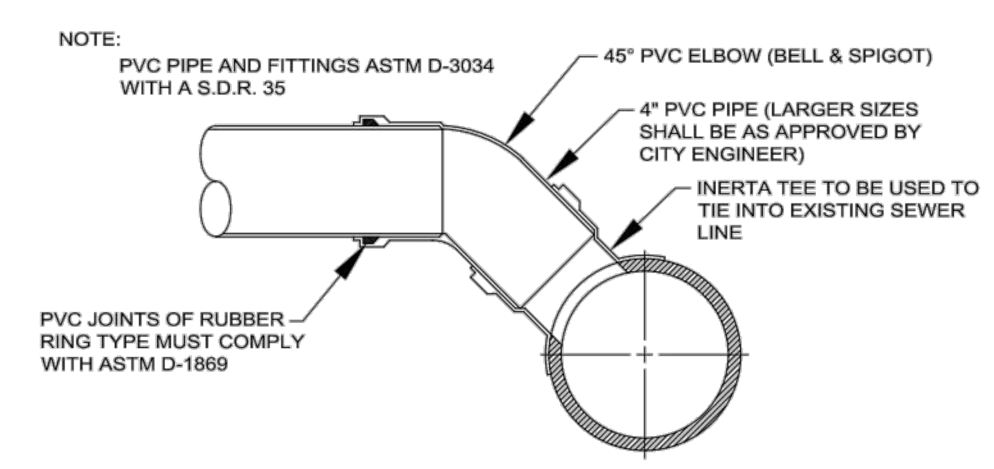
NOTES:

1. ALL SANITARY SEWER LATERAL CONNECTIONS ON SEWER MAINS IN NEW SUBDIVISIONS SHALL BE MADE WITH INLINE PREFORMED WYES UNLESS OTHERWISE APPROVED BY THE CITY ENGINEER.
2. FLOWLINE ELEVATION OF LATERALS SHALL EQUAL THE INSIDE TOP OF PIPE ON MAINLINE AT THE CONNECTION POINT.
3. SANITARY SEWER PIPES SHALL BE "GREEN" IN COLOR.
4. STUB LATERAL 5' INSIDE PROPERTY LINE - PLUG AND INSTALL APPROVED LOCATION MARKERS

TYPICAL SEWER LATERAL CONNECTION



BACKFLOW PREVENTION



TAPPING INTO EXISTING PVC PIPE

Tooele City

SEWER LATERAL CONNECTION

Plan No. 431 R

8/2016

VCBO ARCHITECTURE

524 SOUTH 600 EAST
SALT LAKE CITY, UT 84102
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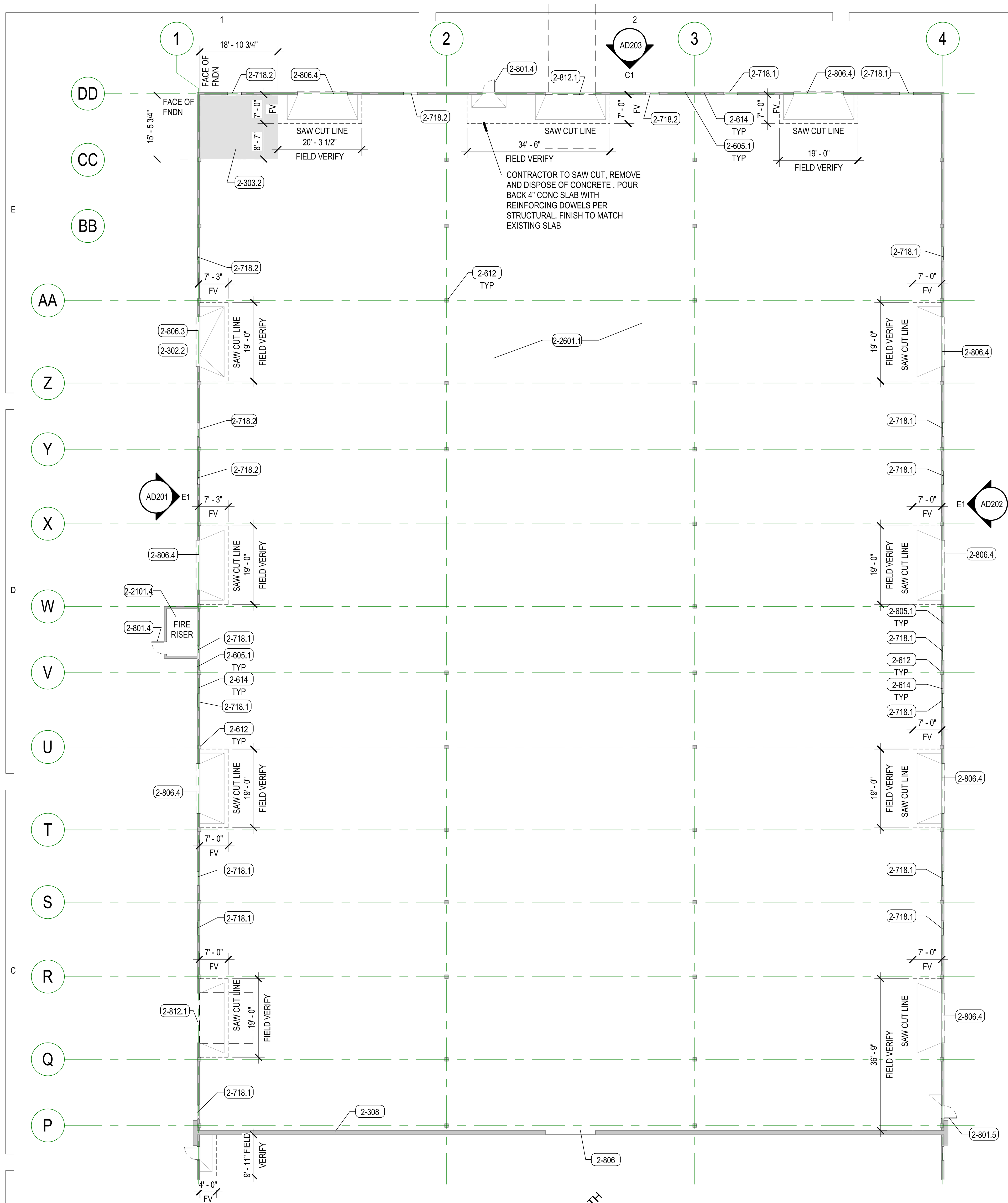
TCSD WAREHOUSE REMODEL - BLDG. 649

TOOELE COUNTY SCHOOL DISTRICT
180 GARNET STREET, TOOELE, UTAH 84074

BID SET

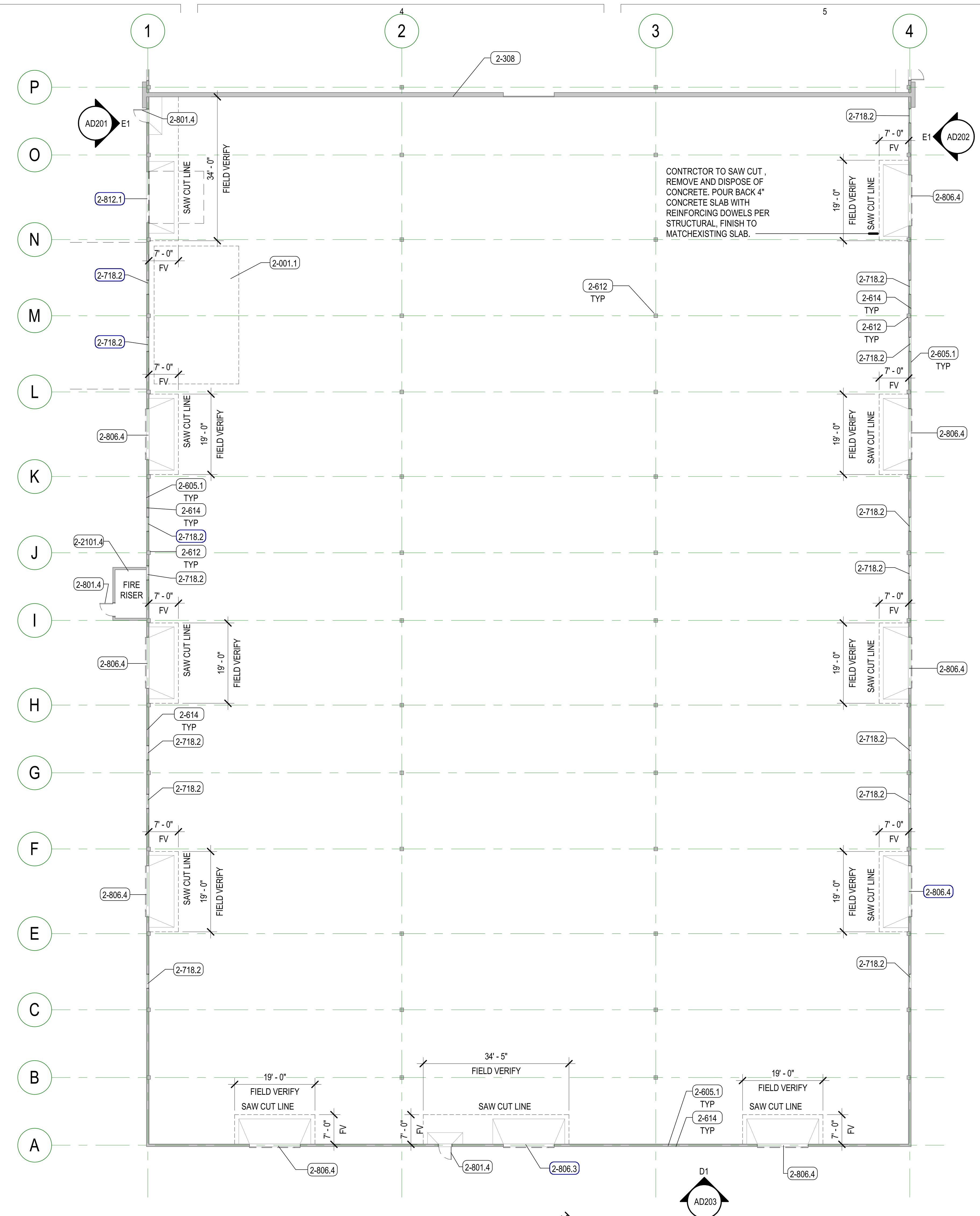
DETAILS

C-301



A1 DEMOLITION - PLAN - LEVEL 01 - 649A

SCALE: 1/16" = 1'-0"



A4 DEMOLITION - PLAN - LEVEL 01 - 649B

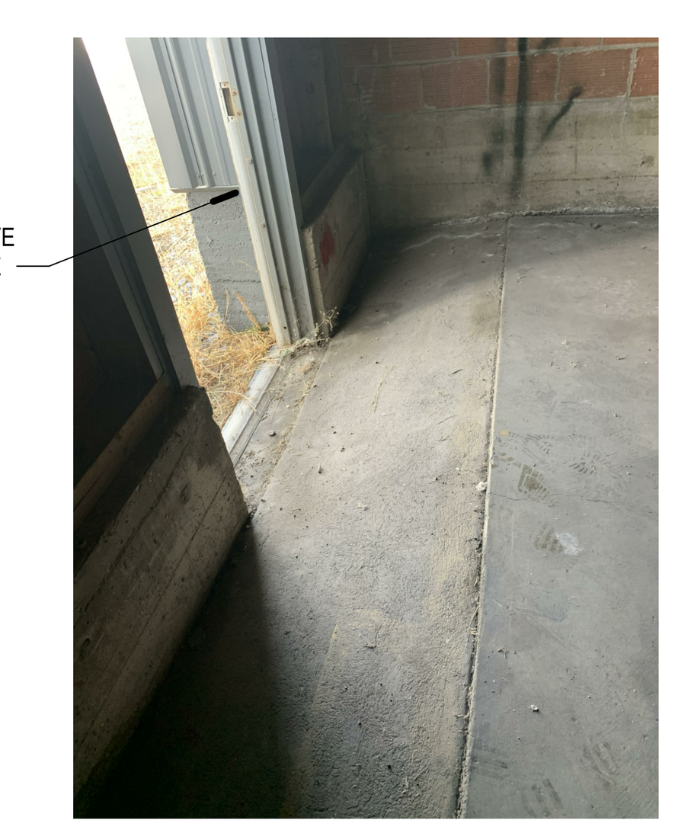
SCALE: 1/16" = 1'-0"

EXISTING 1x6 DIAGONAL WOOD SHEATHING, PROTECT AS NECESSARY, REPAIR AS REQUIRED

EXISTING WOOD COLUMN, PROTECT AS NECESSARY, REPAIR AS REQUIRED

EXISTING CONCRETE FOUNDATION WALL, PROTECT AS NECESSARY, REPAIR AS REQUIRED

EXISTING DOOR & FRAME, REMOVE & DISPOSE IN ITS ENTIRETY, PREPARE OPENING TO RECEIVE NEW DOOR & FRAME



EXISTING WOOD HEADER TO REMAIN, PROTECT AS NECESSARY, REPAIR AS REQUIRED

EXISTING SLIDING DOOR & FRAME, REMOVE & DISPOSE IN ITS ENTIRETY, PREPARE OPENING TO RECEIVE NEW INFILL / NEW DOOR & FRAME

GENERAL DEMOLITION NOTES

1. FIELD VERIFY DIMENSIONS AND CONDITIONS INCLUDING EXISTING UTILITIES PRIOR TO BIDDING. BRING DIFFERING DIMENSIONS AND CONDITIONS TO ARCHITECT'S ATTENTION PRIOR TO BIDDING.
2. A HAZARDOUS MATERIAL SURVEY IS AVAILABLE FROM THE OWNER. ABATEMENT MUST BE COMPLETED PRIOR TO DEMOLITION OF BUILDINGS OR BUILDING ELEMENTS.
3. PROVIDE DUSTPROOF ENCLOSURES AT PERIMETER OF CONSTRUCTION & DEMOLITION FOR PROTECTION OF ADJACENT SPACES.
4. COORDINATE MAINTENANCE OF FIRE EGRESS FOR OCCUPANTS IN EXISTING BUILDING WITH THE OWNER AND FIRE MARSHAL. PROVIDE NECESSARY TEMPORARY WALLS OR ENCLOSURES, EMERGENCY LIGHTS, ETC., FOR THE DURATION OF CONSTRUCTION.
5. BRING TO ARCHITECT'S ATTENTION EXISTING CONDITIONS THAT PRESENT ANY CODE VIOLATIONS, INCORRECT CONSTRUCTION OR SAFETY PROBLEMS.
6. MAINTAIN EXISTING FIRE RATINGS, AND ASSOCIATED FIRE PROTECTION SYSTEMS (I.E. FIRE SPRINKLERS AND FIRE ALARM SYSTEMS) THROUGHOUT CONSTRUCTION. COORDINATE ANY INTERRUPTION TO THESE SYSTEMS WITH THE OWNER AND FIRE MARSHAL. PROVIDE FIRE WATCH REQUIREMENTS ASSOCIATED WITH INTERRUPTIONS TO THESE SYSTEMS.
7. PROTECT EXISTING STRUCTURE, FINISHES, AND SITE ELEMENTS NOT SCHEDULED FOR DEMOLITION. RESTORE DAMAGED ITEMS TO THEIR ORIGINAL CONDITION OR REPLACE AT CONTRACTOR'S EXPENSE.
8. REMOVE BUILDINGS TO BE DEMOLISHED IN THEIR ENTIRETY, INCLUDING CONCRETE FOOTINGS AND FOUNDATIONS. DISPOSE PER CITY REQUIREMENTS.
9. REMOVE AND DISPOSE SELECTIVE DEMOLITION MATERIAL PER CITY REQUIREMENTS.
10. SALVAGE MATERIAL WHERE INDICATED. REMOVE ITEMS FROM CURRENT LOCATIONS & PREPARE FOR TRANSPORT BY THE OWNER.

GENERAL SITE DEMOLITION NOTES

1. REFER TO CIVIL, LANDSCAPE AND ELECTRICAL SITE PLANS FOR ADDITIONAL DEMOLITION WHICH IS REQUIRED.
2. MAINTAIN EXISTING UTILITY SERVICES FOR EXISTING FACILITIES. COORDINATE REQUIRED DISRUPTION OF THESE SERVICES WITH OWNER PRIOR TO DISCONNECTING. PROVIDE TEMPORARY UTILITY SERVICES TO KEEP FACILITIES IN OPERATION DURING UTILITY RELOCATION INCLUDING BUT NOT LIMITED TO FIRE WATCHES, ELECTRICAL GENERATORS, ETC.
3. "FOR EXISTING UTILITIES TO BE REMOVED OR ABANDONED, CAP OR PLUG AND SEAL ENDS OF REMAINING PIPES OR OTHER CONDUITS.
   - SANITARY SEWER: CAP OR PLUG AND SEAL AT PROPERTY LINE.
   - CULINARY WATER: CAP OR PLUG AND SEAL AT MAIN PER CITY REQUIREMENTS; WORK SHALL BE WITNESSED BY AUTHORIZED CITY REPRESENTATIVE.
   - OVERHEAD POWER AND PHONE LINES: TERMINATE AT POLE PER UTILITY COMPANY REQUIREMENTS. "
4. REMOVING OR ABANDONING UTILITIES IN THE STREET SHALL INCLUDE NECESSARY TRAFFIC CONTROL, PAVEMENT SAW CUTTING, PAVEMENT DISPOSAL AND PAVEMENT RESTORATION AS PER CITY STANDARDS.
5. WHERE EXISTING DRIVEWAYS AND APRONS ARE REMOVED, SAW CUT SIDEWALK AT NEAREST JOINT. REPLACE SIDEWALK, CURB AND GUTTER PER CITY STANDARDS.
6. REMOVE EXISTING LAWN AND TREES, SHRUBS AND PLANTER BEDS LOCATED WITHIN THE EXTENTS OF CONSTRUCTION, UNLESS NOTED OTHERWISE.
7. FIELD VERIFY LOCATION OF EXISTING SPRINKLER LINES AND CONTROLS IN LANDSCAPED AREAS AFFECTED BY DEMOLITION CONSTRUCTION. CAP OR REROUT LINES TO ACCOMMODATE LANDSCAPING UNAFFECTED BY CONSTRUCTION.

GENERAL PLAN DEMOLITION NOTES

1. REFER TO ELECTRICAL AND MECHANICAL PLANS FOR REQUIRED ADDITIONAL DEMOLITION
2. MAINTAIN EXISTING FIRE RATINGS THROUGHOUT CONSTRUCTION
3. DO NOT DISTURB EXISTING FIRE RATED ELEMENTS INCLUDING FIREPROOFING. PATCH/REPAIR DAMAGED OR DISTURBED ITEMS.
4. AFTER DEMOLITION, PRIOR TO FINISH, PATCH AND REPAIR EXISTING WALLS TO PROVIDE SMOOTH SURFACE SUITABLE FOR PAINTING OR WALL COVERING.
5. PATCH & LEVEL EXISTING CONCRETE SLABS FOR NEW FINISHES WITH FLOOR LEVELING COMPOUND.
6. FIELD VERIFY AND COORDINATE SAW CUTTING OF THE CONCRETE FLOOR SLAB WITH PLUMBING AND ELECTRICAL.
7. REPLACE SLAB AND TRENCH BY COMPACTING CLEAN GRAVEL IN 8 INCH LIFTS. DRILL #4 EPOXY-COATED REBAR INTO EXISTING SLAB @ 12 INCHES OC. POUR SLAB TO PROVIDE A SMOOTH EVEN FLOOR.
8. WHERE ELECTRICAL CIRCUIT CONTINUITY IS INTERRUPTED, BUT MUST BE MAINTAINED, MAKE NECESSARY MODIFICATIONS TO MAINTAIN CIRCUIT INTEGRITY.
9. REMOVE ELECTRICAL BOXES BEHIND RELOCATED MILLWORK AND CAP AS REQUIRED.
10. CAP EXISTING DUCT WORK FOR DUST CONTROL.

DEMOLITION LEGEND

HALF-TONE LINE DENOTES ITEMS TO REMAIN

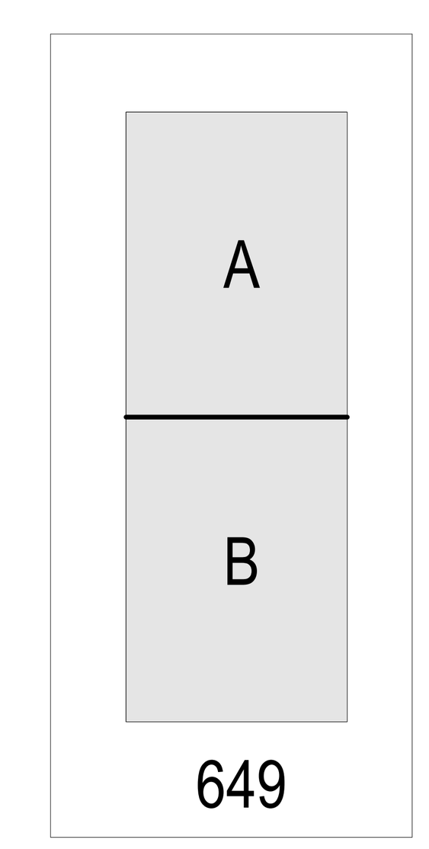
DASHED LINE DENOTES ITEMS TO BE DEMOLISHED

EXISTING CONC. SLAB TO BE REMOVED

KEYED NOTES

2-001.1	EXISTING BUILDING, REMOVE & DISPOSE IN ITS ENTIRETY
2-302.2	EXISTING CONCRETE FOUNDATION WALL, REMOVE & DISPOSE AS SHOWN
2-303.2	EXISTING CONCRETE SLAB ON GRADE, REMOVE & DISPOSE AS SHOWN
2-308	EXISTING MASONRY FIRE WALL, PROTECT AS NECESSARY, REPAIR AS REQUIRED
2-605.1	EXISTING TRANSITE SIDING TO BE REMOVED BY OWNER
2-612	EXISTING WOOD COLUMN, PROTECT AS NECESSARY, REPAIR AS REQUIRED
2-614	EXISTING 1x6 DIAGONAL WOOD SHEATHING, PROTECT AS NECESSARY, REPAIR AS REQUIRED
2-718.1	EXISTING WINDOW & FLASHING, REMOVE & DISPOSE IN ITS ENTIRETY, PREPARE OPENING TO RECEIVE NEW INFILL
2-718.2	EXISTING WINDOW & FLASHING, REMOVE & DISPOSE IN ITS ENTIRETY, PREPARE OPENING TO RECEIVE NEW WINDOW
2-801.4	EXISTING DOOR AND FRAME, REMOVE & DISPOSE IN ITS ENTIRETY, PREPARE OPENING TO RECEIVE NEW DOOR & FRAME
2-801.5	EXISTING DOOR AND FRAME, REMOVE & DISPOSE IN ITS ENTIRETY, PREPARE OPENING TO RECEIVE NEW INFILL
2-806	EXISTING FIRE RATED SLIDING DOOR, PROTECT AS NECESSARY, REPAIR AS REQUIRED
2-806.3	EXISTING SLIDING DOOR & FRAME, REMOVE & DISPOSE IN ITS ENTIRETY. PREPARE OPENING TO RECEIVE NEW DOOR & FRAME
2-806.4	EXISTING SLIDING DOOR & FRAME, REMOVE & DISPOSE IN ITS ENTIRETY. PREPARE OPENING TO RECEIVE NEW INFILL
2-812.1	EXISTING OVERHEAD SECTIONAL DOOR, REMOVE & DISPOSE IN ITS ENTIRETY, PREPARE OPENING TO RECEIVE NEW DOOR & FRAME
2-2101.4	EXISTING FIRE RISER, PROTECT AS NECESSARY, REPAIR AS REQUIRED
2-2601.1	EXISTING LIGHTING FIXTURES, REMOVE & DISPOSE IN ITS ENTIRETY

KEY PLAN



VCBO ARCHITECTURE
524 SOUTH 600 EAST
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REV	DATE	DESCRIPTION

VCBO NUMBER: 20385
CLIENT NUMBER: -
DATE: 2021-08-16

TCSD WAREHOUSE 649 REMODEL

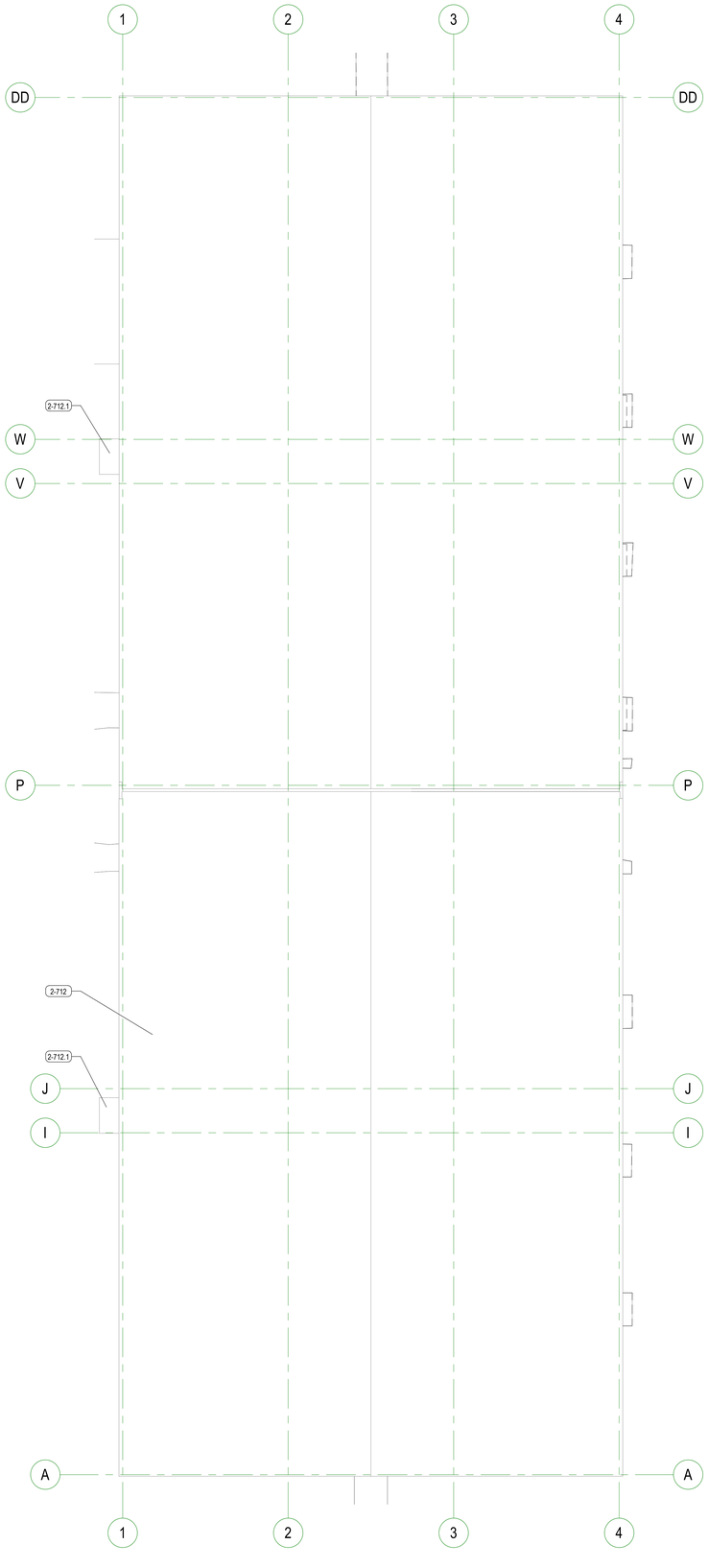
TOOELE COUNTY SCHOOL DISTRICT
PROJECT ADDRESS: 180 GARNET ST. TOOELE, UTAH 84074

CONSTRUCTION DOCUMENT

DEMOLITION PLAN - LEVEL 01

8/17/2021 3:56:38 PM

AD100



A4 DEMOLITION PLAN - ROOF

SCALE: 3/64" = 1'-0"

GENERAL DEMOLITION NOTES

1. FIELD VERIFY DIMENSIONS AND CONDITIONS INCLUDING EXISTING UTILITIES PRIOR TO BIDDING. BRING DIFFERING DIMENSIONS AND CONDITIONS TO ARCHITECT'S ATTENTION PRIOR TO BIDDING.
2. A HAZARDOUS MATERIAL SURVEY IS AVAILABLE FROM THE OWNER. ABATEMENT MUST BE COMPLETED PRIOR TO DEMOLITION OF BUILDINGS OR BUILDING ELEMENTS.
3. PROVIDE DUSTPROOF ENCLOSURES AT PERIMETER OF CONSTRUCTION & DEMOLITION FOR PROTECTION OF ADJACENT SPACES.
4. COORDINATE MAINTENANCE OF FIRE EGRESS FOR OCCUPANTS IN EXISTING BUILDING WITH THE OWNER AND FIRE MARSHAL. PROVIDE NECESSARY TEMPORARY WALLS OR ENCLOSURES, EMERGENCY LIGHTS, ETC., FOR THE DURATION OF CONSTRUCTION.
5. BRING TO ARCHITECT'S ATTENTION EXISTING CONDITIONS THAT PRESENT ANY CODE VIOLATIONS, INCORRECT CONSTRUCTION OR SAFETY PROBLEMS.
6. MAINTAIN EXISTING FIRE RATINGS, AND ASSOCIATED FIRE PROTECTION SYSTEMS (I.E. FIRE SPRINKLERS AND FIRE ALARM SYSTEMS) THROUGHOUT CONSTRUCTION. COORDINATE ANY INTERRUPTION TO THESE SYSTEMS WITH THE OWNER AND FIRE MARSHAL. PROVIDE FIRE WATCH REQUIREMENTS ASSOCIATED WITH INTERRUPTIONS TO THESE SYSTEMS.
7. PROTECT EXISTING STRUCTURE, FINISHES, AND SITE ELEMENTS NOT SCHEDULED FOR DEMOLITION. RESTORE DAMAGED ITEMS TO THEIR ORIGINAL CONDITION OR REPLACE AT CONTRACTOR'S EXPENSE.
8. REMOVE BUILDINGS TO BE DEMOLISHED IN THEIR ENTIRETY, INCLUDING CONCRETE FOOTINGS AND FOUNDATIONS. DISPOSE PER CITY REQUIREMENTS.
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10. SALVAGE MATERIAL WHERE INDICATED. REMOVE ITEMS FROM CURRENT LOCATIONS & PREPARE FOR TRANSPORT BY THE OWNER.

GENERAL SITE DEMOLITION NOTES

1. REFER TO CIVIL, LANDSCAPE AND ELECTRICAL SITE PLANS FOR ADDITIONAL DEMOLITION WHICH IS REQUIRED.
2. MAINTAIN EXISTING UTILITY SERVICES FOR EXISTING FACILITIES. COORDINATE REQUIRED DISRUPTION OF THESE SERVICES WITH OWNER PRIOR TO DISCONNECTING. PROVIDE TEMPORARY UTILITY SERVICES TO KEEP FACILITIES IN OPERATION DURING UTILITY RELOCATION INCLUDING BUT NOT LIMITED TO FIRE WATCHES, ELECTRICAL GENERATORS, ETC.
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   - OVERHEAD POWER AND PHONE LINES: TERMINATE AT POLE PER UTILITY COMPANY REQUIREMENTS. "
4. REMOVING OR ABANDONING UTILITIES IN THE STREET SHALL INCLUDE NECESSARY TRAFFIC CONTROL, PAVEMENT SAW CUTTING, PAVEMENT DISPOSAL AND PAVEMENT RESTORATION AS PER CITY STANDARDS.
5. WHERE EXISTING DRIVEWAYS AND APRONS ARE REMOVED, SAW CUT SIDEWALK AT NEAREST JOINT. REPLACE SIDEWALK, CURB AND GUTTER PER CITY STANDARDS.
6. REMOVE EXISTING LAWN AND TREES, SHRUBS AND PLANTER BEDS LOCATED WITHIN THE EXTENTS OF CONSTRUCTION, UNLESS NOTED OTHERWISE.
7. FIELD VERIFY LOCATION OF EXISTING SPRINKLER LINES AND CONTROLS IN LANDSCAPED AREAS AFFECTED BY DEMOLITION CONSTRUCTION. CAP OR REROUT LINES TO ACCOMMODATE LANDSCAPING UNAFFECTED BY CONSTRUCTION.

GENERAL PLAN DEMOLITION NOTES

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4. AFTER DEMOLITION, PRIOR TO FINISH, PATCH AND REPAIR EXISTING WALLS TO PROVIDE SMOOTH SURFACE SUITABLE FOR PAINTING OR WALL COVERING.
5. PATCH & LEVEL EXISTING CONCRETE SLABS FOR NEW FINISHES WITH FLOOR LEVELING COMPOUND.
6. FIELD VERIFY AND COORDINATE SAW CUTTING OF THE CONCRETE FLOOR SLAB WITH PLUMBING AND ELECTRICAL.
7. REPLACE SLAB AND TRENCH BY COMPACTING CLEAN GRAVEL IN 8 INCH LIFTS. DRILL #4 EPOXY-COATED REBAR INTO EXISTING SLAB @ 12 INCHES OC. POUR SLAB TO PROVIDE A SMOOTH EVEN FLOOR.
8. WHERE ELECTRICAL CIRCUIT CONTINUITY IS INTERRUPTED, BUT MUST BE MAINTAINED, MAKE NECESSARY MODIFICATIONS TO MAINTAIN CIRCUIT INTEGRITY.
9. REMOVE ELECTRICAL BOXES BEHIND RELOCATED MILLWORK AND CAP AS REQUIRED.
10. CAP EXISTING DUCT WORK FOR DUST CONTROL.

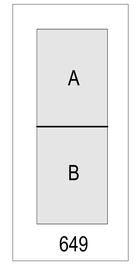
DEMOLITION LEGEND

- HALF-TONE LINE DENOTES ITEMS TO REMAIN
- DASHED LINE DENOTES ITEMS TO BE DEMOLISHED
- EXISTING CONC. SLAB TO BE REMOVED

KEYED NOTES

2-712	EXISTING ROOF SYSTEM, PROTECT AS NECESSARY
2-712.1	EXISTING ROOF SYSTEM, REMOVE & DISPOSE IN ITS ENTIRETY

KEY PLAN



VCBO ARCHITECTURE
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REV	DATE	DESCRIPTION

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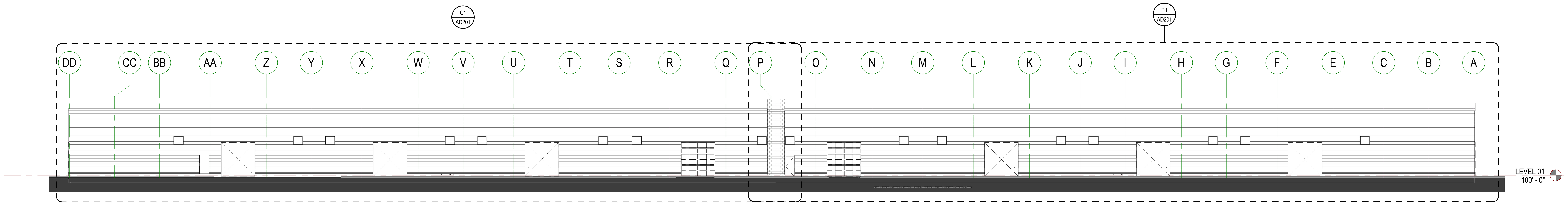
CLIENT NUMBER:	-
DATE:	2021-08-16

TCSD WAREHOUSE 649 REMODEL

TOOELE COUNTY SCHOOL DISTRICT
PROJECT ADDRESS: 180 GARNET ST. TOOELE, UTAH 84074
CONSTRUCTION DOCUMENT

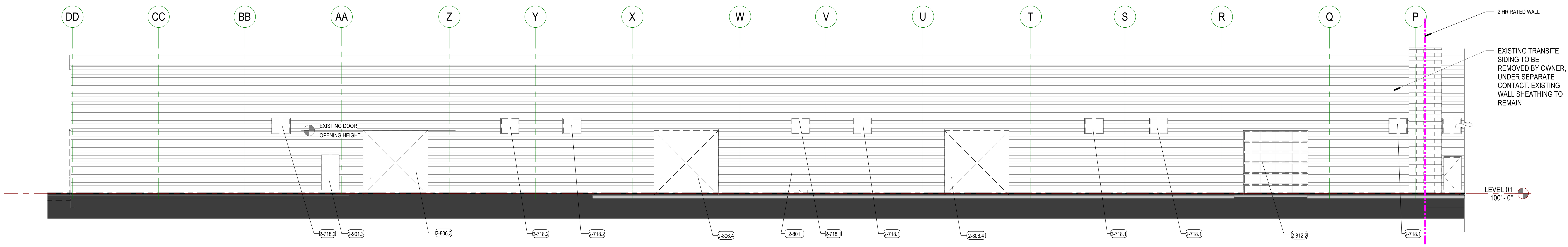
DEMOLITION PLAN - ROOF

AD120



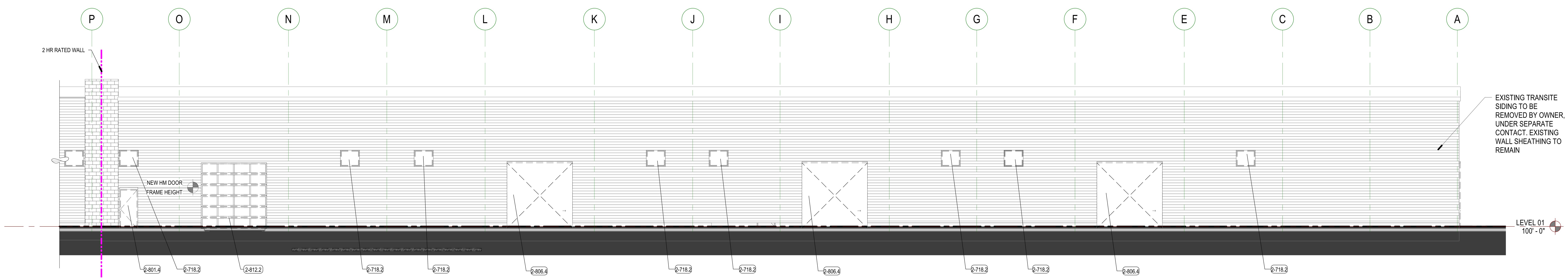
E1 DEMO ELEV - 649 WEST

SCALE: 1/16" = 1'-0"



C1 DEMO ELEV - ENLARGED - 649 WEST 01

SCALE: 1/8" = 1'-0"



B1 DEMO ELEV - ENLARGED - 649 WEST 02

SCALE: 1/8" = 1'-0"

GENERAL DEMOLITION NOTES

1. FIELD VERIFY DIMENSIONS AND CONDITIONS INCLUDING EXISTING UTILITIES PRIOR TO BIDDING. BRING DIFFERING DIMENSIONS AND CONDITIONS TO ARCHITECT'S ATTENTION PRIOR TO BIDDING.
2. A HAZARDOUS MATERIAL SURVEY IS AVAILABLE FROM THE OWNER. ABATEMENT WILL BE COMPLETED BY THE OWNER UNDER SEPARATE CONTACT PRIOR TO DEMOLITION OF BUILDINGS OR BUILDING ELEMENTS.
3. BRING TO ARCHITECT'S ATTENTION EXISTING CONDITIONS THAT PRESENT ANY CODE VIOLATIONS, OR INCORRECT CONSTRUCTION.
4. MAINTAIN EXISTING FIRE RATINGS, AND ASSOCIATED FIRE PROTECTION SYSTEMS (I.E. FIRE SPRINKLERS AND FIRE ALARM SYSTEMS) THROUGHOUT CONSTRUCTION. COORDINATE ANY INTERRUPTION TO THESE SYSTEMS WITH THE OWNER AND FIRE MARSHAL. PROVIDE FIRE WATCH REQUIREMENTS ASSOCIATED WITH INTERRUPTIONS TO THESE SYSTEMS.
5. PROTECT EXISTING STRUCTURE, FINISHES, AND SITE ELEMENTS NOT SCHEDULED FOR DEMOLITION. RESTORE DAMAGED ITEMS TO THEIR ORIGINAL CONDITION OR REPLACE AT CONTRACTOR'S EXPENSE.
6. REMOVE AND DISPOSE SELECTIVE DEMOLITION MATERIAL PER CITY REQUIREMENTS.
7. SALVAGE MATERIAL WHERE INDICATED. REMOVE ITEMS FROM CURRENT LOCATIONS & PREPARE FOR TRANSPORT BY THE OWNER.

GENERAL SITE DEMOLITION NOTES

8. REFER TO CIVIL AND ELECTRICAL SITE PLANS FOR ADDITIONAL DEMOLITION WHICH IS REQUIRED.
9. "FOR EXISTING UTILITIES TO BE REMOVED OR ABANDONED, CAP OR PLUG AND SEAL ENDS OF REMAINING PIPES OR OTHER CONDUITS.
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   - OVERHEAD POWER AND PHONE LINES: TERMINATE AT POLE PER UTILITY COMPANY REQUIREMENTS. "
10. REMOVING OR ABANDONING UTILITIES IN THE STREET SHALL INCLUDE NECESSARY TRAFFIC CONTROL, PAVEMENT SAW CUTTING, PAVEMENT DISPOSAL AND PAVEMENT RESTORATION AS PER CITY STANDARDS.
11. WHERE EXISTING DRIVEWAYS AND APRONS ARE REMOVED, SAW CUT SIDEWALK AT NEAREST JOINT. REPLACE SIDEWALK, CURB AND GUTTER PER CITY STANDARDS.

GENERAL PLAN DEMOLITION NOTES

12. DO NOT DISTURB EXISTING FIRE RATED ELEMENTS. PATCH/REPAIR DAMAGED OR DISTURBED ITEMS.
13. AFTER DEMOLITION, PRIOR TO FINISH, PATCH AND REPAIR EXISTING WALLS TO PROVIDE SMOOTH SURFACE SUITABLE FOR PAINTING OR WALL COVERING.
14. PATCH & LEVEL EXISTING CONCRETE SLABS FOR NEW FINISHES WITH FLOOR LEVELING COMPOUND.
15. FIELD VERIFY AND COORDINATE SAW CUTTING OF THE CONCRETE FLOOR SLAB WITH PLUMBING AND ELECTRICAL. FIELD VERIFY FINAL DIMESIONS W/ MECH AND ELEC.
16. ALL REPLACEMENT CONCRETE SLABS TO BE PLACED OVER COMPACTED ENGINNERED FILL. DRILL #4 EPOXY-COATED REBAR INTO EXISTING SLAB @ 12 INCHES OC. POUR SLAB TO PROVIDE A SMOOTH EVEN FLOOR.
17. WHERE ELECTRICAL CIRCUIT CONTINUITY IS INTERRUPTED, BUT MUST BE MAINTAINED, MAKE NECESSARY MODIFICATIONS TO MAINTAIN CIRCUIT INTEGRITY.
18. REMOVE ELECTRICAL BOXES BEHIND RELOCATED MILLWORK AND CAP AS REQUIRED.
19. CAP EXISTING DUCT WORK FOR DUST CONTROL.

DEMOLITION LEGEND

HALF-TONE LINE DENOTES ITEMS TO REMAIN

DASHED LINE DENOTES ITEMS TO BE DEMOLISHED

AREA TO REMAIN UNDISTURBED DURING CONSTRUCTION

KEYED NOTES

2-718.1	EXISTING WINDOW & FLASHING, REMOVE & DISPOSE IN ITS ENTIRETY, PREPARE OPENING TO RECEIVE NEW INFILL
2-718.2	EXISTING WINDOW & FLASHING, REMOVE & DISPOSE IN ITS ENTIRETY, PREPARE OPENING TO RECEIVE NEW WINDOW
2-801	EXISTING DOOR AND FRAME, PROTECT AS NECESSARY, REPAIR AS REQUIRED
2-801.4	EXISTING DOOR AND FRAME, REMOVE & DISPOSE IN ITS ENTIRETY, PREPARE OPENING TO RECEIVE NEW DOOR & FRAME
2-806.3	EXISTING SLIDING DOOR & FRAME, REMOVE & DISPOSE IN ITS ENTIRETY. PREPARE OPENING TO RECEIVE NEW DOOR & FRAME
2-806.4	EXISTING SLIDING DOOR & FRAME, REMOVE & DISPOSE IN ITS ENTIRETY. PREPARE OPENING TO RECEIVE NEW INFILL
2-812.2	EXISTING OVERHEAD SECTIONAL DOOR, REMOVE & DISPOSE IN ITS ENTIRETY, PREPARE OPENING TO RECEIVE NEW INFILL
2-901.3	EXISTING NON-STRUCTURAL WALL ASSEMBLY, REMOVE & DISPOSE AS SHOWN, PROVIDE OPENING TO RECEIVE NEW DOOR & FRAME

VCBO ARCHITECTURE
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SALT LAKE CITY, UT 84102
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REV | DATE | DESCRIPTION

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TCSD WAREHOUSE 649 REMODEL

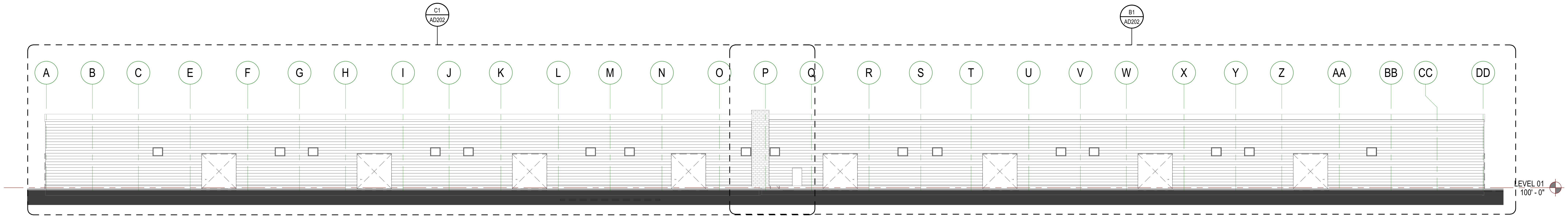
TOOELE COUNTY SCHOOL DISTRICT
PROJECT ADDRESS: 180 GARNET ST. TOOELE, UTAH 84074

CONSTRUCTION DOCUMENT

DEMOLITION ELEVATION - WEST

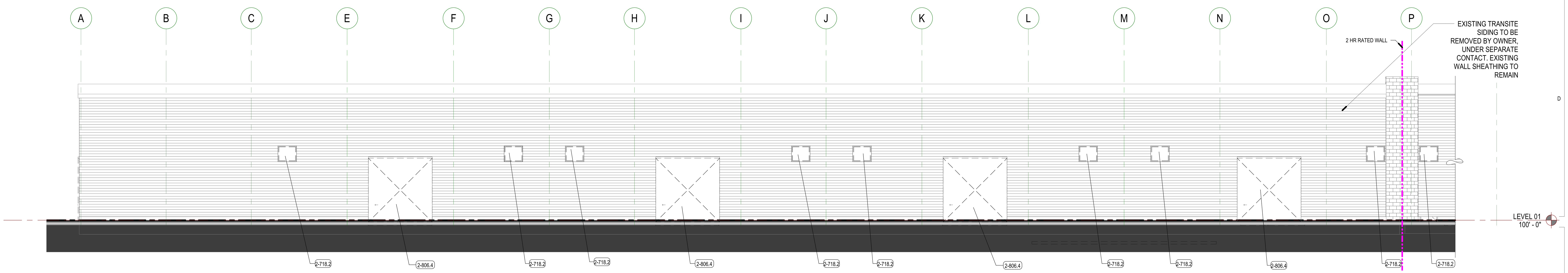
8/17/2021 3:56:40 PM

AD201



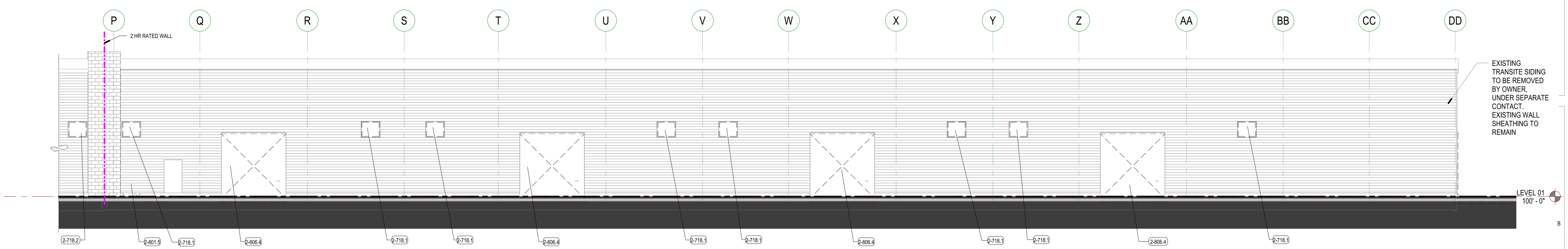
E1 DEMO ELEV - 649 EAST

SCALE: 1/16" = 1'-0"



C1 DEMO ELEV - ENLARGED - 649 EAST 01

SCALE: 1/8" = 1'-0"



B1 DEMO ELEV - ENLARGED - 649 EAST 02

SCALE: 1/8" = 1'-0"

GENERAL DEMOLITION NOTES

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GENERAL PLAN DEMOLITION NOTES

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13. AFTER DEMOLITION, PRIOR TO FINISH, PATCH AND REPAIR EXISTING WALLS TO PROVIDE SMOOTH SURFACE SUITABLE FOR PAINTING OR WALL COVERING.
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DEMOLITION LEGEND

HALF-TONE LINE DENOTES ITEMS TO REMAIN

DASHED LINE DENOTES ITEMS TO BE DEMOLISHED

AREA TO REMAIN UNDISTURBED DURING CONSTRUCTION

KEYED NOTES

2-718.1	EXISTING WINDOW & FLASHING, REMOVE & DISPOSE IN ITS ENTIRETY, PREPARE OPENING TO RECEIVE NEW INFILL
2-718.2	EXISTING WINDOW & FLASHING, REMOVE & DISPOSE IN ITS ENTIRETY, PREPARE OPENING TO RECEIVE NEW WINDOW
2-801.5	EXISTING DOOR AND FRAME, REMOVE & DISPOSE IN ITS ENTIRETY, PREPARE OPENING TO RECEIVE NEW INFILL
2-806.4	EXISTING SLIDING DOOR & FRAME, REMOVE & DISPOSE IN ITS ENTIRETY. PREPARE OPENING TO RECEIVE NEW INFILL

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TCSD WAREHOUSE 649 REMODEL

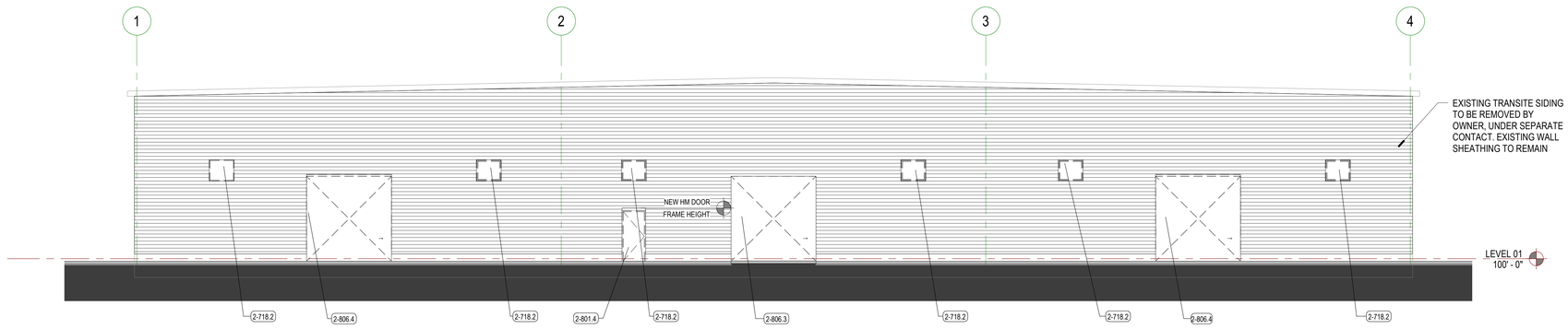
TOOELE COUNTY SCHOOL DISTRICT

PROJECT ADDRESS: 180 GARNET ST. TOOELE, UTAH 84074

CONSTRUCTION DOCUMENT

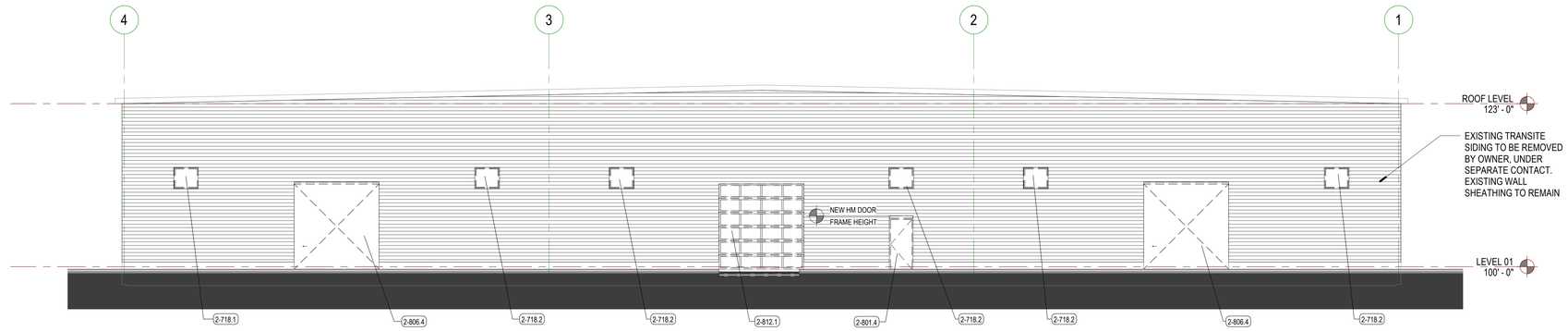
DEMOLITION ELEVATION - EAST

AD202



D1 DEMO ELEV - 649 SOUTH

SCALE: 1/8" = 1'-0"



C1 DEMO ELEV - 649 NORTH

SCALE: 1/8" = 1'-0"

GENERAL DEMOLITION NOTES

1. FIELD VERIFY DIMENSIONS AND CONDITIONS INCLUDING EXISTING UTILITIES PRIOR TO BIDDING. BRING DIFFERING DIMENSIONS AND CONDITIONS TO ARCHITECT'S ATTENTION PRIOR TO BIDDING.
2. A HAZARDOUS MATERIAL SURVEY IS AVAILABLE FROM THE OWNER. ABATEMENT WILL BE COMPLETED BY THE OWNER UNDER SEPARATE CONTACT PRIOR TO DEMOLITION OF BUILDINGS OR BUILDING ELEMENTS.
3. BRING TO ARCHITECT'S ATTENTION EXISTING CONDITIONS THAT PRESENT ANY CODE VIOLATIONS, OR INCORRECT CONSTRUCTION.
4. MAINTAIN EXISTING FIRE RATINGS, AND ASSOCIATED FIRE PROTECTION SYSTEMS (I.E. FIRE SPRINKLERS AND FIRE ALARM SYSTEMS) THROUGHOUT CONSTRUCTION. COORDINATE ANY INTERRUPTION TO THESE SYSTEMS WITH THE OWNER AND FIRE MARSHAL. PROVIDE FIRE WATCH REQUIREMENTS ASSOCIATED WITH INTERRUPTIONS TO THESE SYSTEMS.
5. PROTECT EXISTING STRUCTURE, FINISHES, AND SITE ELEMENTS NOT SCHEDULED FOR DEMOLITION. RESTORE DAMAGED ITEMS TO THEIR ORIGINAL CONDITION OR REPLACE AT CONTRACTOR'S EXPENSE.
6. REMOVE AND DISPOSE SELECTIVE DEMOLITION MATERIAL PER CITY REQUIREMENTS.
7. SALVAGE MATERIAL WHERE INDICATED. REMOVE ITEMS FROM CURRENT LOCATIONS & PREPARE FOR TRANSPORT BY THE OWNER.

GENERAL SITE DEMOLITION NOTES

8. REFER TO CIVIL AND ELECTRICAL SITE PLANS FOR ADDITIONAL DEMOLITION WHICH IS REQUIRED.
9. *FOR EXISTING UTILITIES TO BE REMOVED OR ABANDONED, CAP OR PLUG AND SEAL ENDS OF REMAINING PIPES OR OTHER CONDUITS.
   - SANITARY SEWER: CAP OR PLUG AND SEAL AT PROPERTY LINE.
   - CULINARY WATER: CAP OR PLUG AND SEAL AT MAIN PER CITY REQUIREMENTS; WORK SHALL BE WITNESSED BY AUTHORIZED CITY REPRESENTATIVE.
   - OVERHEAD POWER AND PHONE LINES: TERMINATE AT POLE PER UTILITY COMPANY REQUIREMENTS. *
10. REMOVING OR ABANDONING UTILITIES IN THE STREET SHALL INCLUDE NECESSARY TRAFFIC CONTROL, PAVEMENT SAW CUTTING, PAVEMENT DISPOSAL AND PAVEMENT RESTORATION AS PER CITY STANDARDS.
11. WHERE EXISTING DRIVEWAYS AND APRONS ARE REMOVED, SAW CUT SIDEWALK AT NEAREST JOINT. REPLACE SIDEWALK, CURB AND GUTTER PER CITY STANDARDS.

GENERAL PLAN DEMOLITION NOTES

12. DO NOT DISTURB EXISTING FIRE RATED ELEMENTS. PATCH/REPAIR DAMAGED OR DISTURBED ITEMS.
13. AFTER DEMOLITION, PRIOR TO FINISH, PATCH AND REPAIR EXISTING WALLS TO PROVIDE SMOOTH SURFACE SUITABLE FOR PAINTING OR WALL COVERING.
14. PATCH & LEVEL EXISTING CONCRETE SLABS FOR NEW FINISHES WITH FLOOR LEVELING COMPOUND.
15. FIELD VERIFY AND COORDINATE SAW CUTTING OF THE CONCRETE FLOOR SLAB WITH PLUMBING AND ELECTRICAL. FIELD VERIFY FINAL DIMESIONS W/ MECH AND ELEC.
16. ALL REPLACEMENT CONCRETE SLABS TO BE PLACED OVER COMPACTED ENGINNERED FILL. DRILL #4 EPOXY-COATED REBAR INTO EXISTING SLAB @ 12 INCHES OC. POUR SLAB TO PROVIDE A SMOOTH EVEN FLOOR.
17. WHERE ELECTRICAL CIRCUIT CONTINUITY IS INTERRUPTED, BUT MUST BE MAINTAINED, MAKE NECESSARY MODIFICATIONS TO MAINTAIN CIRCUIT INTEGRITY.
18. REMOVE ELECTRICAL BOXES BEHIND RELOCATED MILLWORK AND CAP AS REQUIRED.
19. CAP EXISTING DUCT WORK FOR DUST CONTROL.

DEMOLITION LEGEND

- HALF-TONE LINE DENOTES ITEMS TO REMAIN
- DASHED LINE DENOTES ITEMS TO BE DEMOLISHED
- AREA TO REMAIN UNDISTURBED DURING CONSTRUCTION

KEYED NOTES

2-718.1	EXISTING WINDOW & FLASHING, REMOVE & DISPOSE IN ITS ENTIRETY, PREPARE OPENING TO RECEIVE NEW INFILL
2-718.2	EXISTING WINDOW & FLASHING, REMOVE & DISPOSE IN ITS ENTIRETY, PREPARE OPENING TO RECEIVE NEW WINDOW
2-801.4	EXISTING DOOR AND FRAME, REMOVE & DISPOSE IN ITS ENTIRETY, PREPARE OPENING TO RECEIVE NEW DOOR & FRAME
2-806.3	EXISTING SLIDING DOOR & FRAME, REMOVE & DISPOSE IN ITS ENTIRETY. PREPARE OPENING TO RECEIVE NEW DOOR & FRAME
2-806.4	EXISTING SLIDING DOOR & FRAME, REMOVE & DISPOSE IN ITS ENTIRETY. PREPARE OPENING TO RECEIVE NEW INFILL
2-812.1	EXISTING OVERHEAD SECTIONAL DOOR, REMOVE & DISPOSE IN ITS ENTIRETY, PREPARE OPENING TO RECEIVE NEW DOOR & FRAME

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REV	DATE	DESCRIPTION

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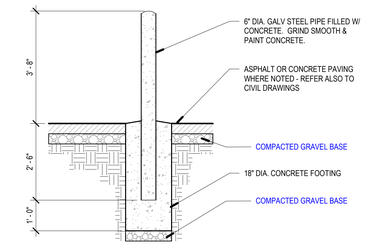
TCSD WAREHOUSE 649 REMODEL

TOOELE COUNTY SCHOOL DISTRICT
PROJECT ADDRESS: 180 GARNET ST. TOOELE, UTAH 84074

CONSTRUCTION DOCUMENT

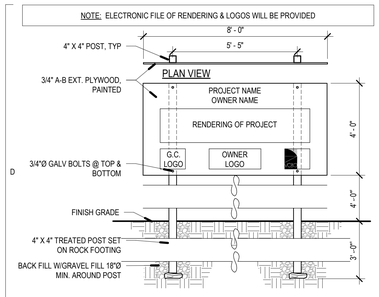
DEMOLITION ELEVATION - NORTH / SOUTH

AD203



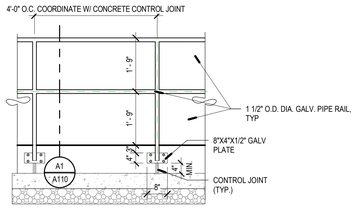
E1 PIPE BOLLARD

SCALE: 1/2" = 1'-0"



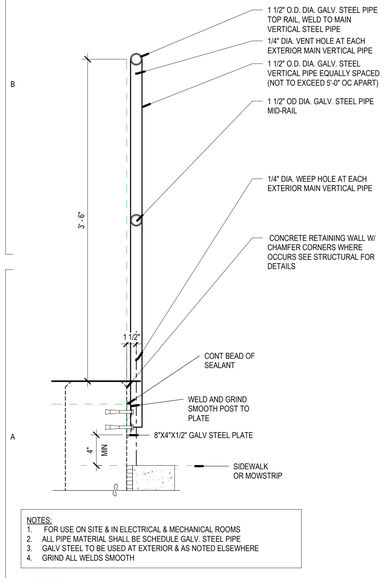
D1 CONSTRUCTION SIGN

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



C1 GUARDRAIL - ELEV - TYP - 2

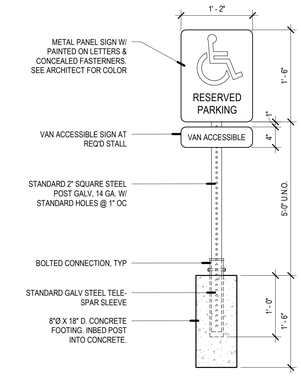
SCALE: 1/2" = 1'-0"



NOTES:
1. FOR USE ON SITE & IN ELECTRICAL & MECHANICAL ROOMS
2. ALL PIPE MATERIAL SHALL BE SCHEDULE GALV. STEEL PIPE
3. GALV STEEL TO BE USED AT EXTERIOR & AS NOTED ELSEWHERE
4. GRIND ALL WELDS SMOOTH

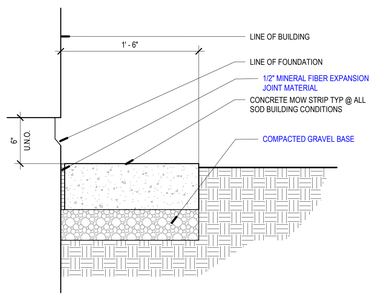
A1 GUARDRAIL - 2

SCALE: 1 1/2" = 1'-0"



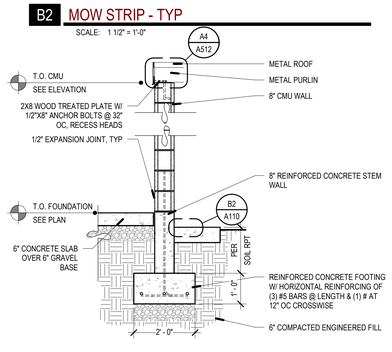
C2 SITE SIGNAGE

SCALE: 1" = 1'-0"



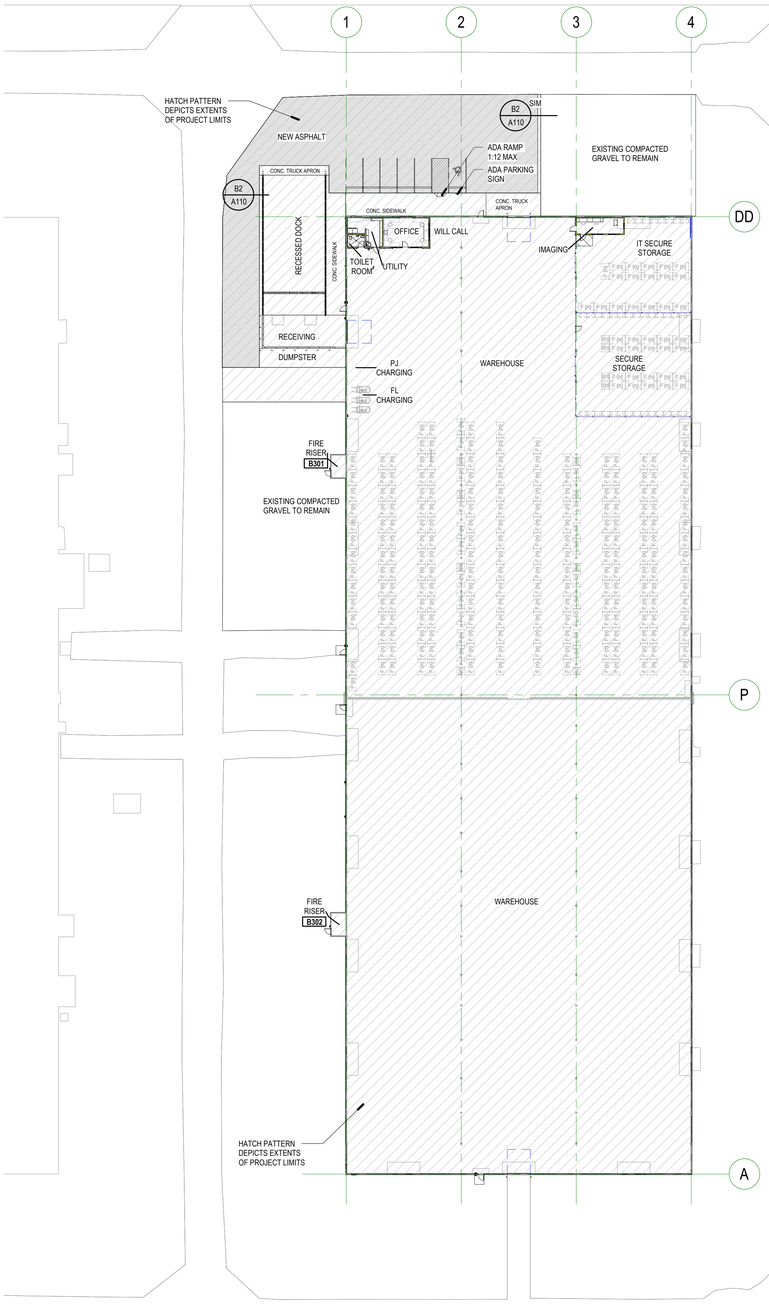
B2 MOW STRIP - TYP

SCALE: 1 1/2" = 1'-0"



A2 CMU ENCLOSURE

SCALE: 1/2" = 1'-0"



A4 PLAN - OVERALL

SCALE: 1/32" = 1'-0"

NORTH

GENERAL SITE PLAN NOTES

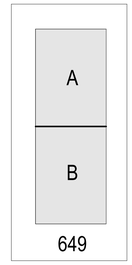
1. GRADING AT THE BUILDING SHALL HAVE A 5% MINIMUM SLOPE AWAY FROM THE BUILDING FOR A MINIMUM OF 10'-0", UNO. CONCRETE SHALL BE SLOPED 2% AWAY FROM BUILDING. IBC 2012 SECTION 1804.3
2. FOUNDATION TO BE 6" ABOVE FINISHED GRADE UNO.
3. ALL CONNECTIONS FROM CITY STREETS TO THE BUILDING ARE TO BE PROVIDED UNDER THIS CONTRACT. CONTRACTOR TO VERIFY CITY STANDARDS FOR ROAD, CURB, UTILITY AND SIGNAGE REQUIREMENTS.
4. ALL EXTERIOR SIDEWALKS, STAIRS AND LANDINGS TO HAVE POSITIVE DRAINAGE BUT NO MORE THAN A MAXIMUM OF 1/4" SLOPE PER FOOT TO ALLOW POSITIVE DRAINAGE. ALL STAIRS AND RAMPS TO HAVE A LANDING OF 48 INCHES LONG AT THE TOP AND BOTTOM WITH A MAXIMUM SLOPE OF 1/4" PER FOOT. ALL REBAR IN EXTERIOR APPLICATIONS TO BE EPOXY COATED.
5. ALL HARDSCAPE TO BE A MINIMUM OF 4" THICK AIR ENTRAINED CONCRETE OVER 6" ROAD BASE, UNO, AND ALL SIDEWALKS SHALL BE NO LESS THAN 5'-0" WIDE.
6. COORDINATE ORIENTATION OF FIRE HYDRANT OUTLETS WITH THE FIRE MARSHALL'S OFFICE PRIOR TO THE FINAL INSTALLATION OF THE HYDRANT ASSEMBLY.

SITE LEDGE

PROJECT LIMITS

NEW ASPHALT

KEY PLAN



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TOOELE COUNTY SCHOOL DISTRICT
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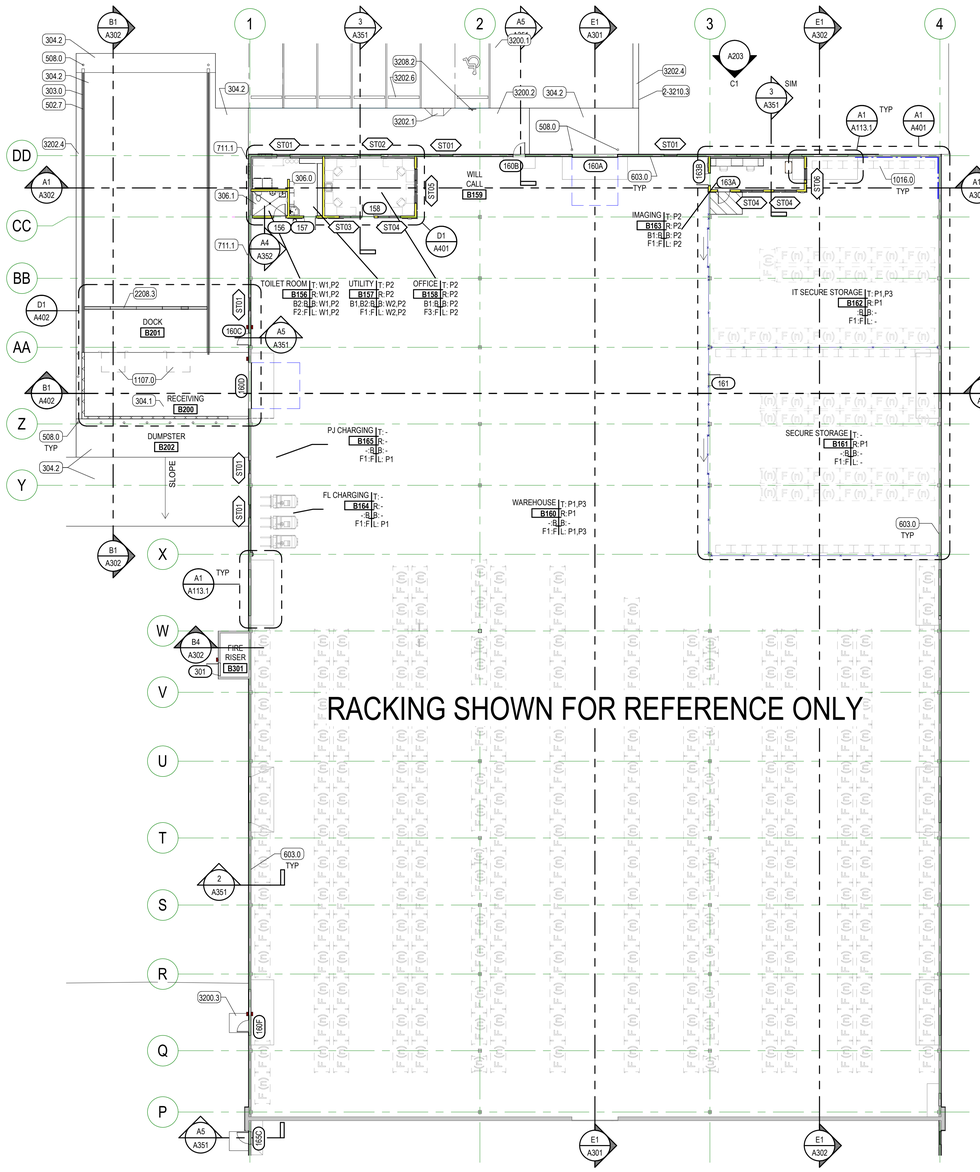
CONSTRUCTION DOCUMENT

OVERALL PLAN - LEVEL 01

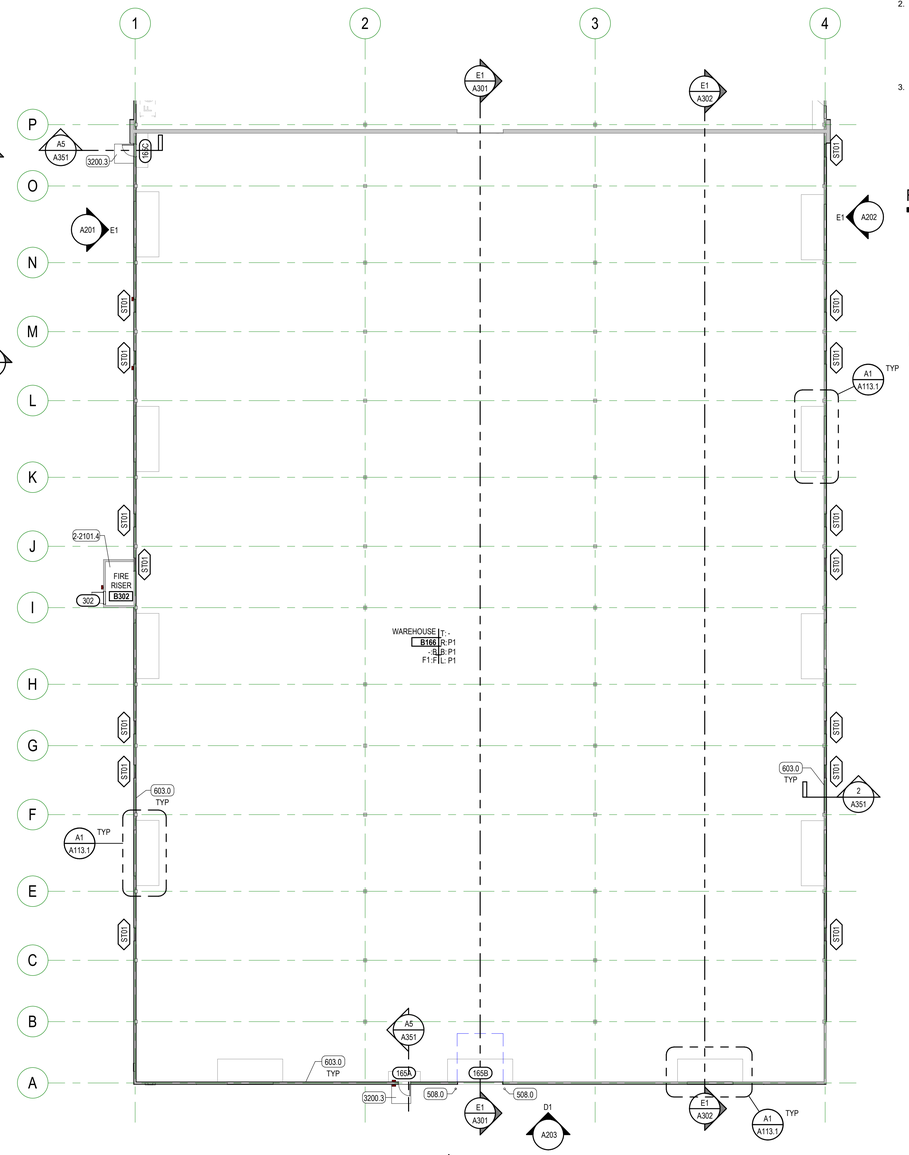
A110

8/20/2021 4:45 PM



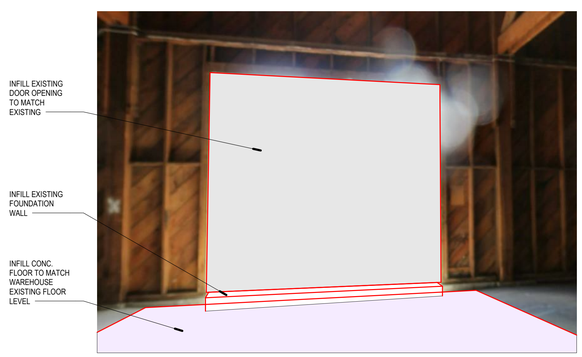
B1 PLAN - ANNOTATED - A

SCALE: 1/16" = 1'-0"



B3 PLAN - ANNOTATED - B

SCALE: 1/16" = 1'-0"



A1 INFILL @FOUNDATION / SLAB / WALL

SCALE: 1/8" = 1'-0"

PLAN NOTES

1. WHERE FLOOR DRAINS ARE INSTALLED THE FLOOR IS TO SLOPE TO THE DRAIN. THE MAXIMUM SLOPE IS NOT TO EXCEED 2% WHILE THE MINIMUM SLOPE IS NOT TO BE LESS THAN 1%.
2. THE CONTRACTOR IS TO ENSURE THAT BETWEEN ANY FINISH FLOOR ELEVATION TO 36" A.F.F. ALL GUARDRAILS ARE TO BE CONSTRUCTED AND INSTALLED SO THAT A 4 3/8" SPHERE WILL NOT PASS BETWEEN ANY TWO ADJACENT GUARDRAIL COMPONENTS OR BETWEEN THE EDGE OF A GUARDRAIL AND ALL ADJACENT BUILDING ELEMENT SUCH AS A WALL OR FLOOR. AN 4 3/8" DIAMETER SPHERE IS NOT TO PASS BETWEEN THE ABOVE MENTIONED COMPONENTS AND ELEMENTS FROM AN ELEVATION 36" A.F.F. AND HIGHER.
3. SEE DETAIL **C1** ON SHEET **A510** FOR TYPICAL FIRE EXTINGUISHER CABINET INSTALLATION DETAILS

FINISH PLAN SYMBOLS

NOTE: REFER TO FINISH SCHEDULE FOR ROOM FINISHES

- CHANGE OF FLOOR MATERIAL, SEE A535
- 101 / PUSH XX XX / PULL XX XX — DOOR NUMBER: SEE DOOR SCHEDULE ON A600
- CASING AND PLINTH AT PUSH AND PULL SIDES OF DOOR: SEE TRIM PROFILE DETAILS ON A576
- FLOOR TRANSITION AT STONE THRESHOLD: SEE DETAILS ON A535
- A — WINDOW NUMBER: SEE WINDOW SCHEDULE ON A600
- BASE / FLOOR — NAME T: W1 / F R: W1 / B1: B: W1 / F2: FL: W1 — WALL WALL WALL WALL
- F — SINGLE FINISH SYMBOLS INDICATE WHERE FINISHES ARE DIFFERENT FROM GENERAL ROOM FINISHES, OR PROVIDE ADDITIONAL FINISH INFORMATION
- CHANGE AT FLOOR MATERIAL
- XXXX — SIGNAGE TAG- SEE SIGNAGE SHEETS FOR DETAILS

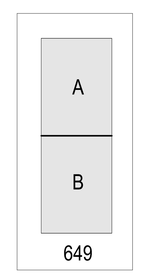
GENERAL FINISH NOTES

1. PROVIDE EPOXY PAINT AT ALL RESTROOMS, SHOWERS, AND JANITOR CLOSETS.
2. ALL EXPOSED GYP CEILINGS TO BE PAINTED WITH PAINT P2.
3. ALL FLOOR TRANSITIONS TO BE LOCATED AT CENTER OF DOOR, U.N.O. ALL FLOOR TRANSITIONS AT FLOOR TILE (T1) LOCATIONS TO BE LOCATED AT INSIDE CORNER OF DOOR.
4. PROVIDE A SMOOTH TRANSITION AT ALL FLOOR MATERIALS - CONTRACTOR TO INSTALL ALL FLOOR FINISHES AT SAME LEVEL, DESPITE DIFFERENT THICKNESS. PROVIDE FLOOR TRANSITION WHERE OCCURS.
5. SEE ELEVATION SHEETS FOR ALL WALL TILE PATTERNS.
6. PROVIDE 4"X4" CERAMIC WALL TILE AT ALL JANITOR SINKS UNLESS NOTED OTHERWISE. PROVIDE TILE BULLNOSE TO FINISH OFF ALL EXPOSED EDGES.
7. ALL WALLS RECEIVING TILE WAINSCOT TO RECEIVE PAINT P2 ABOVE, U.N.O. SEE FINISH PLANS FOR ACCENT WALL LOCATIONS.
8. ALL GROUT JOINTS TO BE NO LARGER THAN 1/8".
9. PROVIDE 'CG: CORNER GUARD' AT ALL LOCATIONS WHERE TILE WAINSCOT WRAPS GYP. BD. CORNERS. CAP ALL TILE WAINSCOT WITH SCHLUTER STRIP (SL).
10. AT ALL TILE WAINSCOT, SCRIBE BOTTOM TILE TO MATCH FINISH FLOOR SURFACE AND CAULK WITH BASE 'NB'.
11. FIELD VERIFY ALL DIMENSIONS BEFORE FABRICATION OF MILLWORK.
12. COORDINATE ALL MILLWORK WITH APPLIANCES BEFORE FABRICATION.
13. ALL COUNTERTOP, BACKSPLASHES, AND EDGE BANDING TO HAVE COORDINATING FINISHES.
14. CONTRACTOR TO ENSURE TO CLEAN AND PREP CONCRETE FLOOR TO RECEIVE FINISH PER FINISH MFR RECOMMENDED PRACTICE AND PROCEDURES.
15. FOR ALL LIGHTING DETAILS REFER TO EL101, EL501, ELC101.
16. FOR ALL POWER CONTROLS SEE EP101
17. FOR SYSTEMS PLAN AND DETAILS EY101

KEYED NOTES

2-2101.4	EXISTING FIRE RISER, PROTECT AS NECESSARY, REPAIR AS REQUIRED
2-3210.3	EXISTING COMPACTED GRAVEL TO REMAIN
303.0	REINFORCED CONCRETE WALL, ARCHITECTURAL GRADE FINISH WHERE EXPOSED
304.1	REINFORCED CONCRETE SLAB, 6"
304.2	6" REINFORCED CONCRETE SLAB/SIDEWALK PER ENGINEER'S SPECIFICATIONS
306.0	4" REINFORCED CONCRETE SLAB ON GRADE
306.1	4" REINFORCED CONCRETE SLAB ON GRADE, 2" RECESSED
502.7	1 1/2" METAL PIPE GUARDRAIL GALV. U.N.O.
508.0	METAL BOLLARD
603.0	PLYWOOD SHEATHING
711.1	METAL ROOF DOWNSPOUT
1016.0	18'x 48'x 3 TIER RACKING BY OWNER
1107.0	MANUAL LOADING DOCK LEVELER
2208.3	DRAIN, TRENCH
3200.1	4" THICK CONCRETE SIDEWALK WITH SUBBASE
3200.2	5" THICK CONCRETE SIDEWALK - SEE CIVIL
3200.3	4" CONCRETE PAD ON 4" COMPACTED BASE
3202.1	ACCESSIBLE RAMP
3202.4	CONCRETE MOW STRIP
3202.6	CONCRETE WHEEL STOP
3208.2	HANDICAP PARKING STALL SIGN

KEY PLAN



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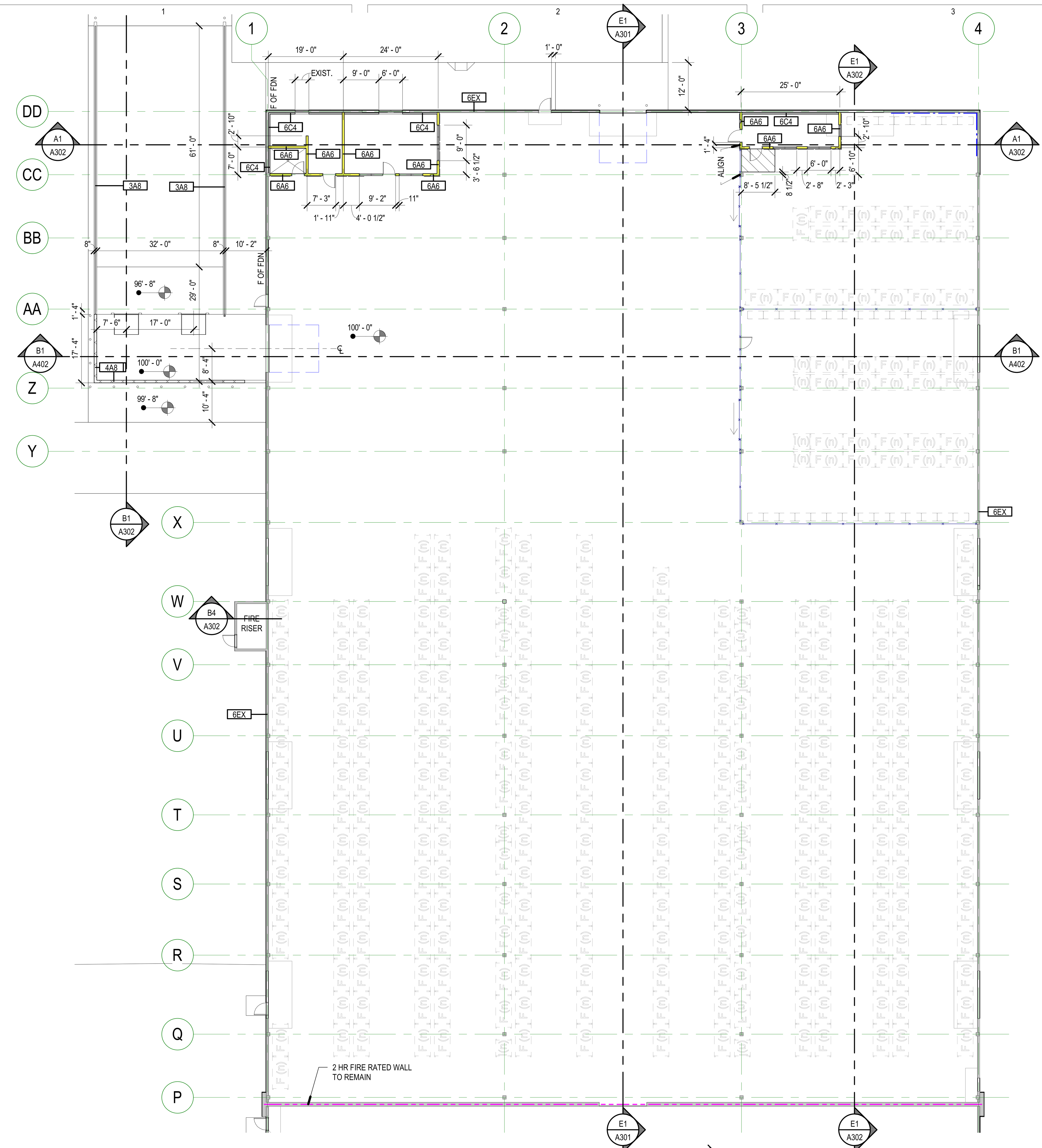
TOOELE COUNTY SCHOOL DISTRICT
PROJECT ADDRESS: 180 GARNET ST. TOOELE, UTAH 84074
CONSTRUCTION DOCUMENT

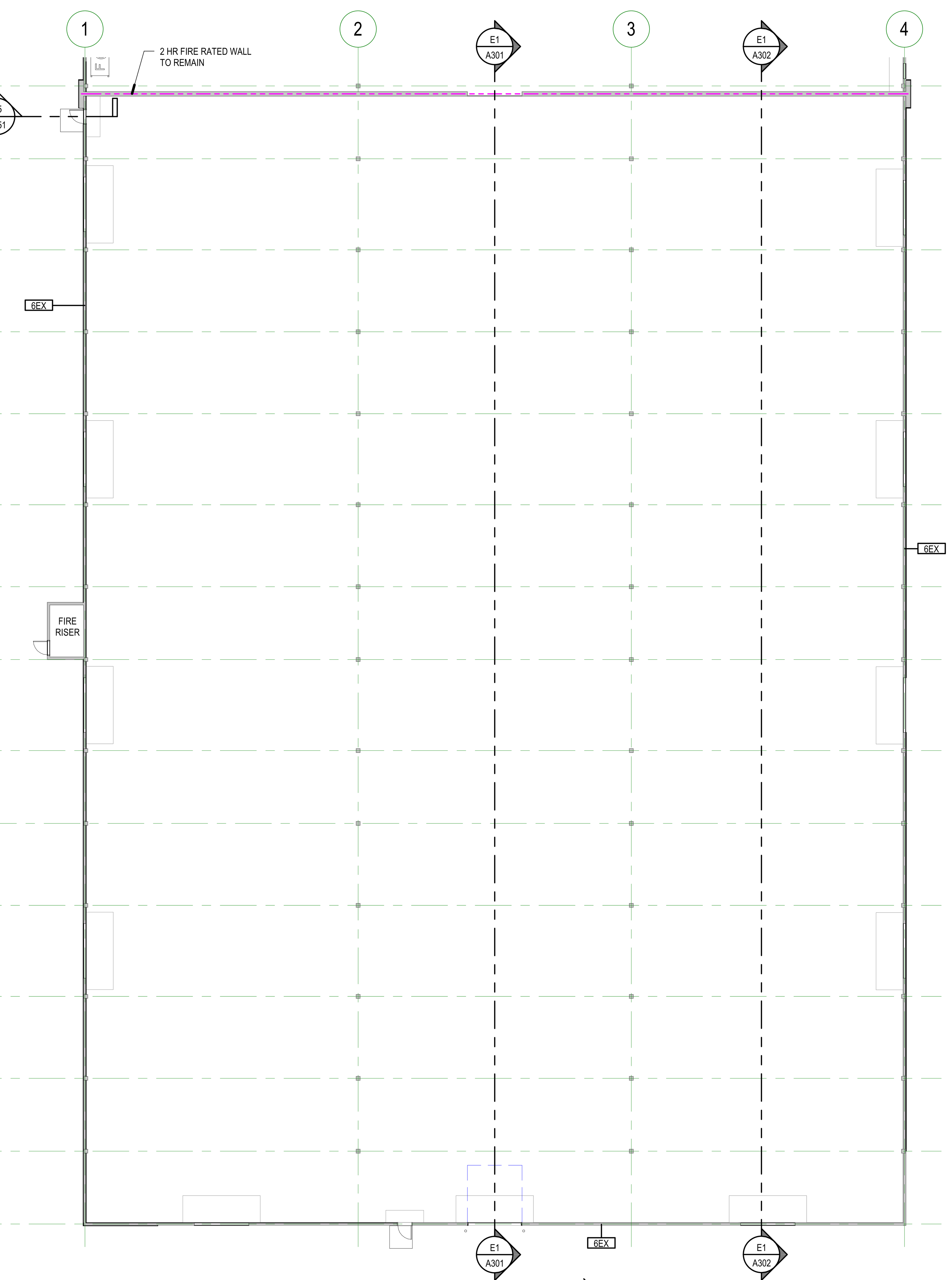
ANNOTATED PLAN - LEVEL 01

A113.1



1 PLAN - DIMENSION - A

SCALE: 1/16" = 1'-0"



2 PLAN - DIMENSION - B

SCALE: 1/16" = 1'-0"

KEY FOR PARTITION TYPES

DENOTES TYPE OF CONSTRUCTION (SPEC. DIVISION) — WALL

4A8

3X 0 SERIES CONCRETE
4X 0 SERIES MASONRY
5X 0 SERIES COLD FORMED METAL STUDS, 16 GA MIN.
6X 0 SERIES WOOD STUDS

NOMINAL SIZES:
V = VARIABLE/MATCHEXISTING
1 = 1 5/8" STUDS
2 = 2 1/2" STUDS
3 = 3 5/8" STUDS
4 = 4" STUDS / 4" (NOM.) C.M.U.
6 = 6" STUDS / 6" (NOM.) C.M.U.
8 = 8" STUDS / 8" (NOM.) C.M.U.
10 = 10" (NOM.) C.M.U. OR CONC.
12 = 12" (NOM.) C.M.U. OR CONC.

EXAMPLE: WALL TYPE 9A3 IS A 3 5/8" METAL STUD WITH 5/8" GYPSUM BOARD ON BOTH SIDES.

NOTE: SEE GENERAL NOTES BELOW FOR ADDITIONAL ELEMENTS IN THE INDIVIDUAL WALL TYPES AND SPECIFIC DETAILS, INCLUDING UL RATINGS.

RATED WALL LEGEND

INCIDENTAL USE AREAS
1 HOUR SEPARATION
2 HOUR SEPARATION
3 HOUR SEPARATION

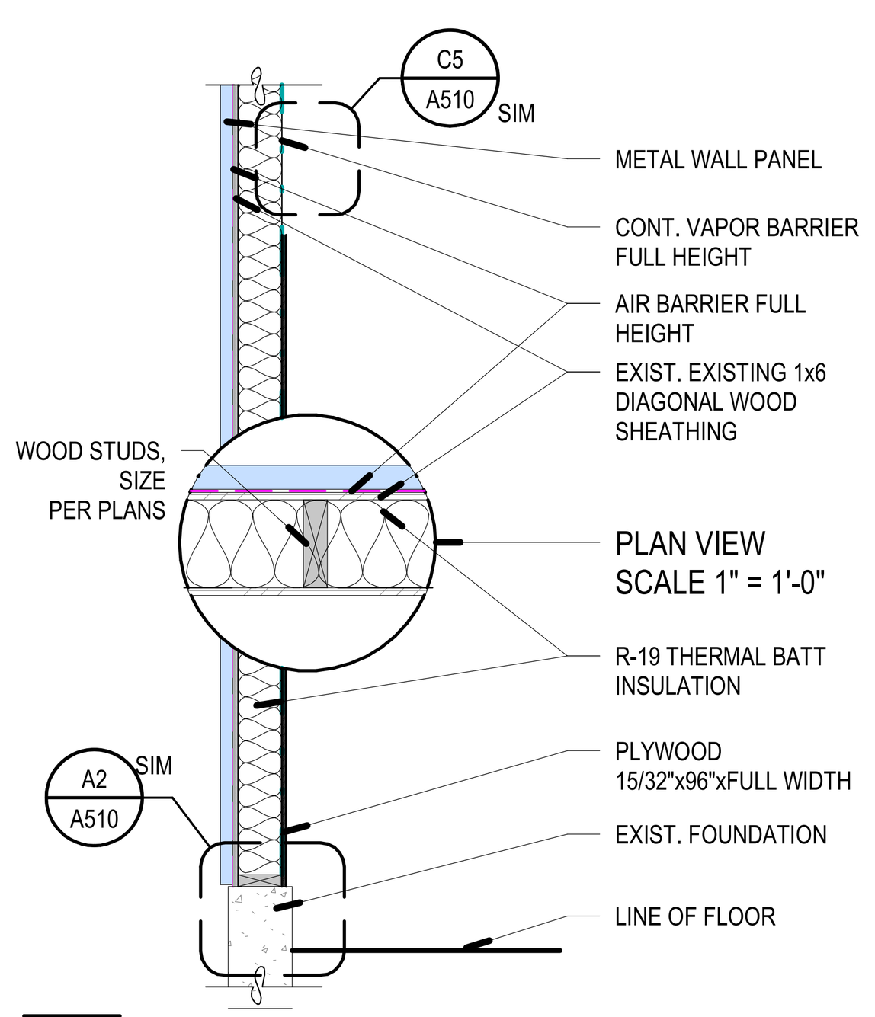
EXAMPLE: WALL TYPE 9A3-1 IS A ONE HOUR RATED, 3 5/8" METAL STUD WALL WITH 5/8" GYPSUM BOARD ON BOTH SIDES, PER ASSEMBLY REQUIREMENTS.

90X-R SERIES

FIRE RATING (ONLY WHEN NOTED): 1 = 1 HOUR RATED ASSEMBLY
2 = 2 HOUR RATED ASSEMBLY
3 = 3 HOUR RATED ASSEMBLY

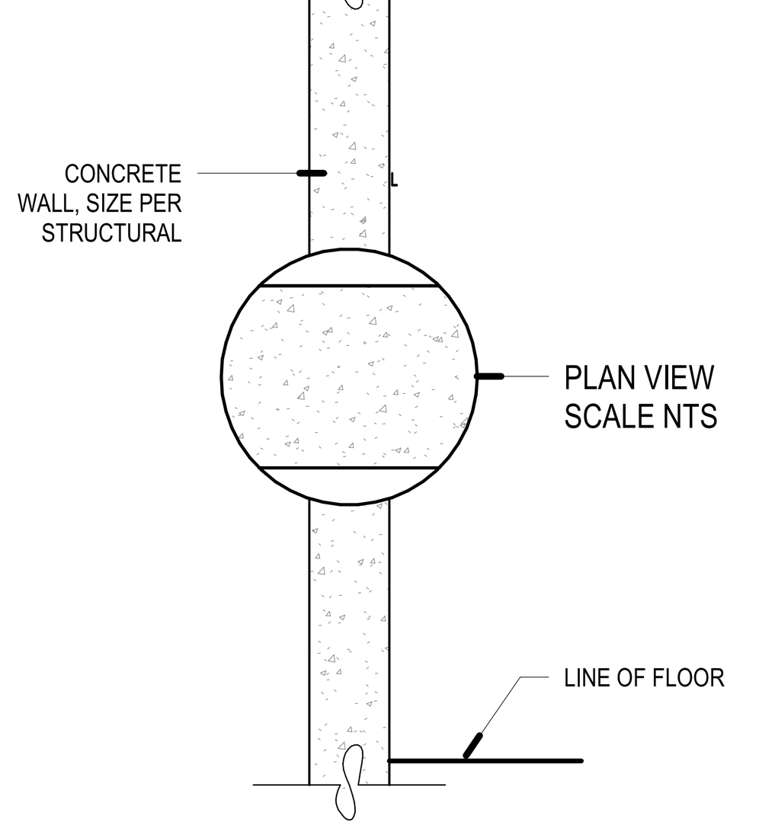
DIMENSION NOTES

1. ALL DIMENSIONS ARE TO CENTER OF STUD WALL OR FACE OF CONCRETE, MASONRY OR ROUGH OPENING UNLESS NOTED OTHERWISE. WHERE THE END OF A WALL IS INDICATED THE DIMENSION IS TO THE FINISH SURFACE OF THE WALL END.
2. UNLESS DIMENSIONED OTHERWISE, THE DIMENSION FROM THE BUCK OF A DOOR FRAME IS TO BE 4" TO THE WALL CORNER.
3. EXCEPT WHERE DIRECTED TO PLACE ITEMS OF WORK AT THE APPROXIMATE LOCATION SHOWN, DO NOT SCALE DRAWINGS FOR DIMENSIONAL INFORMATION. ALL ELEMENTS OF THE DRAWINGS MAY NOT BE DRAWN TO EXACT SCALE. ALL DIMENSIONS REQUIRED ARE SHOWN OR MAY BE DERIVED FROM THOSE SHOWN ON THE FLOOR PLANS, DETAIL PLANS, ELEVATIONS, SECTIONS, DETAILS, SCHEDULES AND SPECIFICATIONS. IF DIMENSIONS ARE NOT PRESENT, THE ARCHITECT IS TO BE NOTIFIED SO THAT A CLARIFICATION CAN BE ISSUED.
4. SMOKE AND FIRE RATED WALLS SHALL PERMANENTLY BE IDENTIFIED WITH SIGNS OR STENCILING IN THE CONCEALED SPACE. SUCH IDENTIFICATION SHALL: BE LOCATED WITHIN 15 FEET OF THE END OF EACH WALL AND AT INTERVALS NOT EXCEEDING 30 FEET MEASURED HORIZONTALLY ALONG THE WALL OR PARTITION; INCLUDE LETTERING NOT LESS THAN 3 INCHES IN HEIGHT WITH A MINIMUM 3/8-INCH STROKE IN A CONTRASTING COLOR INCORPORATING THE WORDING, “FIRE AND/OR SMOKE BARRIER—PROTECT ALL OPENINGS”



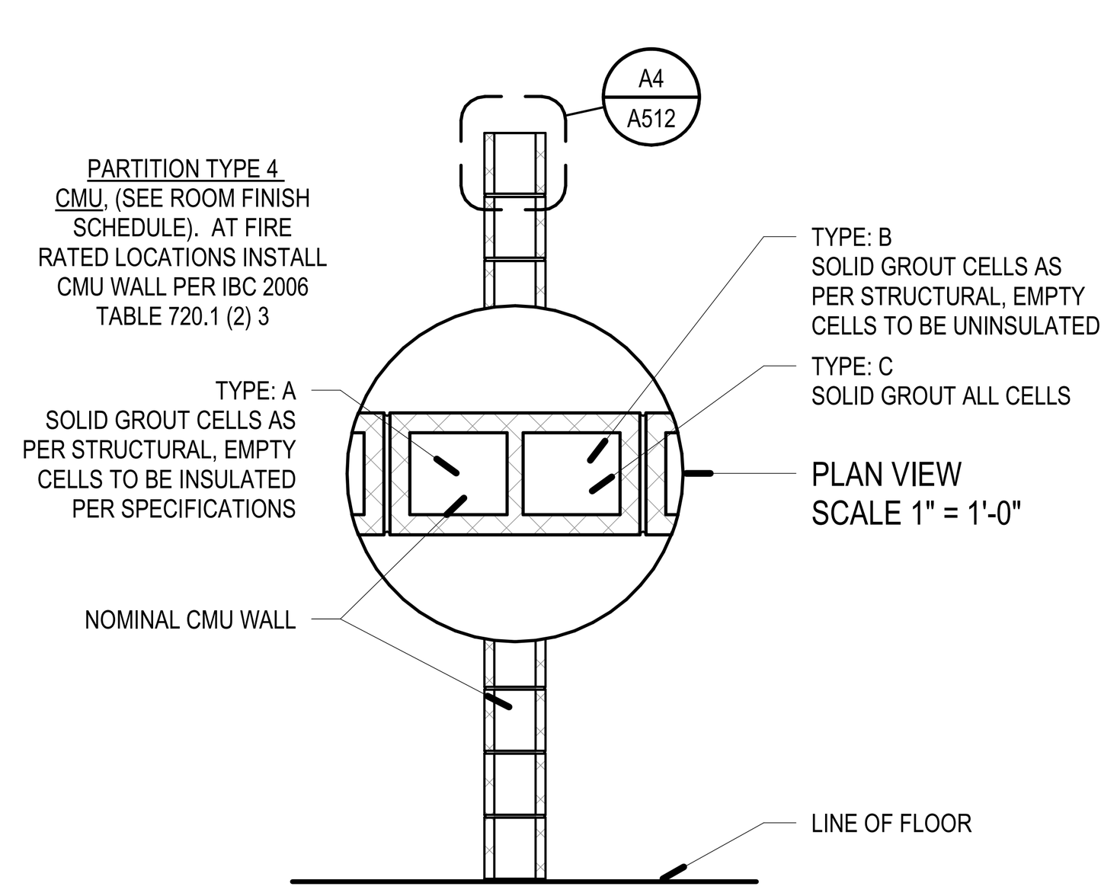
A1 6EX - EXTERIOR WALL

SCALE: 1/2" = 1'-0"



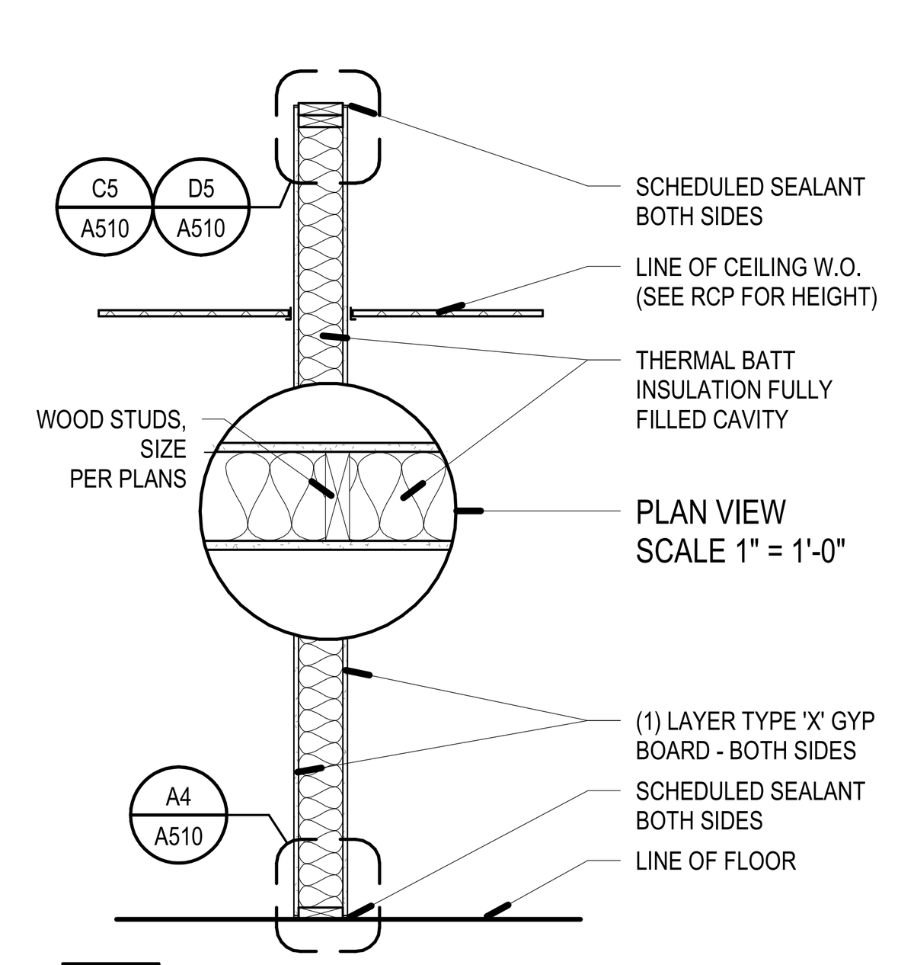
A2 3Xx - CONCRETE WALL

SCALE: 1/2" = 1'-0"



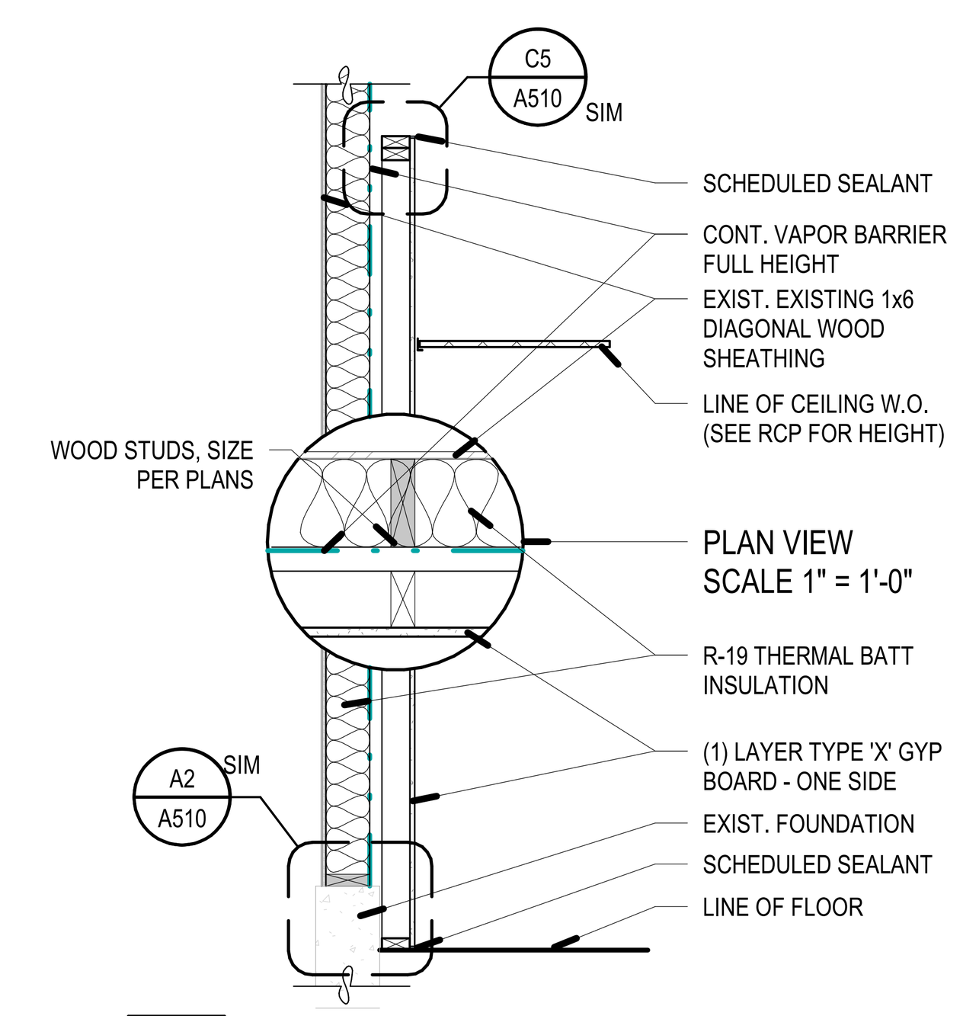
A3 4Xx - MASONRY WALL - SINGLE WYTHE

SCALE: 1/2" = 1'-0"



A4 PARTITION - 6A6

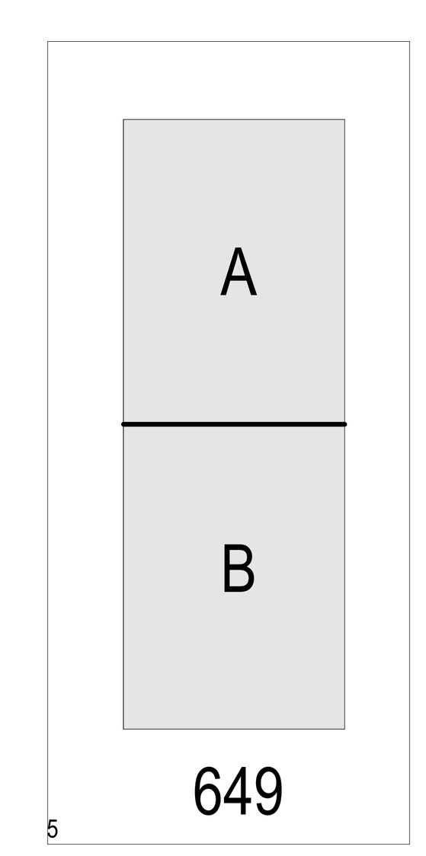
SCALE: 1/2" = 1'-0"



A5 PARTITION - 6C4

SCALE: 1/2" = 1'-0"

KEY PLAN



PARTITION + FRAMING GENERAL NOTES

FRAMED WALL PARTITIONS

1. PARTITION TYPE INDICATIONS ARE INDEPENDENT OF APPLIED FINISHES. SEE FINISH SHEETS AND INTERIOR ELEVATIONS FOR WALL FINISHES INCLUDING TILE COURSING AND LAYOUT AND/OR THE DESIGNATIONS ON THE PLANS FOR ADDITIONAL INFORMATION REGARDING APPLIED FINISHES.
2. WHERE PARTITION TYPE DESIGNATION ON FLOOR PLANS IS INTERRUPTED BY DOOR OPENING, GLAZED PARTITION, ETC., CONSTRUCTION ABOVE INTERRUPTION (AND WHERE APPLICABLE BELOW) IS TO BE THE SAME AS THAT DESIGNATED FOR THE PARTITION IN WHICH THE INTERRUPTION OCCURRED.
3. THE MINIMUM REQUIREMENTS FOR CONSTRUCTION OF EACH PARTITION TYPE AS EXPRESSED BY THE INDICATED REFERENCE ARE INCORPORATED BY REFERENCE AND ARE APPLICABLE TO THE WORK OF THIS PROJECT. HOWEVER, ADDITIONAL AND/OR MORE RESTRICTIVE REQUIREMENTS MAY BE INDICATED BY THE SPECIFICATIONS AND DRAWINGS. SUCH REQUIREMENTS ALSO APPLY AND SHALL GOVERN. SUCH REQUIREMENTS INCLUDE BUT ARE NOT LIMITED TO:
   a. USE 5/8" THICK GYPSUM BOARD THROUGHOUT UNLESS NOTED OTHERWISE.
   b. USE 16" OC MAX STUD SPACING UNLESS NOTED OTHERWISE IN THESE DOCUMENTS. THE SPACING STATED BY THE REFERENCED APPROVAL OR EST REPORT IS THE MAX SPACING IF ALLOWED IN THESE DOCUMENTS.
4. USE STUDS OF DEPTH INDICATED BY THIS SET OF DOCUMENTS. THE DEPTH STATED BY THE REFERENCED APPROVAL OR TEST REPORT IS THE MINIMUM DEPTH TESTED DEPTH ALLOWED IN THESE DOCUMENTS. SEE STRUCTURAL DOCUMENTS FOR ADDITIONAL INFORMATION PERTAINING TO THE CONSTRUCTION OF CONCRETE, MASONRY AND STUD WALLS
5. PROVIDE FIRE RATED CONSTRUCTION ASSEMBLIES WHERE INDICATED ON SHEETS G100's AND FLOOR PLAN DRAWINGS.
6. ALL DIMENSIONS ARE CENTER OF STUD OR FACE OF CONCRETE, MASONRY OR ROUGH OPENING UNLESS NOTED OTHERWISE. FACE OF FINISHED WALL WILL BE NOTED AS FOW.
7. AT ALL INTERIOR WALLS, STUDS, INSULATION AND GYPSUM BOARD ARE TO EXTEND TO THE DECK ABOVE. UNLESS NOTED OTHERWISE.
8. WALL TYPES NOT NOTED ARE ASSUMED TO MATCH ADJACENT ROOMS. SEE SHEETS FOR FINISHES, NOTIFY ARCHITECT OF ANY DISCREPANCIES.
9. ALL STUD PARTITIONS ARE CONSIDERED ACOUSTIC PARTITIONS AND ARE TO RECEIVE THERMAL BATT INSULATION. THICKNESS TO MATCH STUD DEPTH.
10. REFER TO SHEET **AXXX** FOR TYPICAL INTERIOR WALL CONDITIONS ASSOCIATED WITH ALL METAL STUD PARTITIONS.
11. PROVIDE CONTROL JOINTS IN FRAMED WALLS AT APPROXIMATELY 30 FEET ON CENTER. LOCATE AT CORNER ABOVE DOORS OR INSIDE CORNER OF PILASTERS OR OTHER INCONSPICUOUS LOCATION WHERE POSSIBLE. **CONSULT WITH ARCHITECT PRIOR TO COMMENCING FRAMING.** INSTALL PER DETAILS **C4/ A510** FOR CONTROL JOINTS.
12. AT WALL OPENINGS FOR PENETRATION OF PIPES, DUCTS, DEVICES, ETC., GYPSUM BOARD IS TO BE CUT TO MATCH THE SHAPE AND DIMENSION OF THE PENETRATING OBJECT AND THE GAP BETWEEN THE OBJECT AND THE WALL IS TO BE SEALED W/ ACOUSTICAL OR FIRE SEALANT ON ALL SIDES WITH A 3/4" JOINT AT ALL SIDES, MAXIMUM. THE OPENING FOR DUCTS OR LARGE PENETRATIONS SHALL BE FRAMED WITH A HEADER, ADD AN ANGLED CORNER BRACE IF THE GAP EXCEEDS 3" FROM FRAMING TO THE OPENING.
13. PROVIDE BLOCKING / BACKING FOR ALL WALL MOUNTED EQUIPMENT. SEE FLOOR PLANS AND INTERIOR ELEVATIONS FOR CABINETS, GRAB BARS ETC. INSTALL BLOCKING AS DETAILED OR AS REQUIRED TO MOUNT SUCH DEVICES. ALL BLOCKING IS TO BE FIRE RETARDANT TREATED. INSTALL PER SHEET **D1/A510**.
14. **WHERE THERE IS LIMITED WATER EXPOSURE:** INSTALL ONE LAYER OF 5/8" TYPE X WATER RESISTANT GYPSUM BOARD PER ASTM C1396 (WHERE GYPSUM BOARD OCCURS) OF BASIC PARTITION AT THE FOLLOWING LOCATIONS:
   a. WITHIN 2 FEET HORIZONTALLY AND 4 FEET VERTICALLY OF JANITORS SINKS
   b. AT OTHER LOCATIONS, I.E. TOILET ROOMS AND KITCHENS, AND AS INDICATED ON THE ARCHITECTURAL FINISH PLANS AND ELEVATIONS.
15. INSTALL ONE LAYER OF 5/8" GLASS MAT TILE BACKER BOARD IN LIEU OF GYPSUM BOARD (WHERE GYPSUM BOARD OCCURS) OF BASIC PARTITION WHERE THERE IS NO FIRE RATING AND OVER GYPSUM BOARD FACE LAYER AT FIRE RATED PARTITIONS AT THE FOLLOWING LOCATIONS.
16. AT WET LOCATIONS, SUCH AS SHOWER STALLS AND TUB SURROUNDS.
   a. WHERE CERAMIC TILE FINISHES ARE INDICATED PER THE FINISH PLANS AND/OR INTERIOR ELEVATIONS.
   b. AT OTHER LOCATIONS AS INDICATED BY THE ARCHITECTURAL FINISH PLANS AND ELEVATIONS.
17. WHERE NEW WALLS OR FURRING ARE INDICATED TO BE DIMENSIONED OFF OF AN EXISTING WALL, THE NEW WALL SHALL BE STRAIGHT AND PLUMB REGARDLESS OF THE CONDITION OF THE EXISTING WALL.
18. ALL EXTERIOR STUD WALLS TO HAVE CONTINUOUS INSULATION, VAPOR BARRIER AND AIR INFILTRATION BARRIER FOR THE FULL HEIGHT AND LENGTH OF THE WALL,SEAL ALL PENETRATIONS. SEE DETAILS ON SHEET **AXXX** FOR TYPICAL TOP OF WALL CONDITION
19. THE AIR INFILTRATION BARRIER IS TO WRAP INTO ALL WINDOW AND DOOR OPENINGS.
20. SEE DETAIL **XX** AND **XX** ON SHEET **AXXX** FOR TYPICAL FIRE EXTINGUISHER CABINET INSTALLATION DETAILS

MASONRY OR CONCRETE WALLS

1. SEE STRUCTURAL PLANS FOR ADDITIONAL CONCRETE AND MASONRY WALL INFORMATION.
2. SEE EXTERIOR ELEVATIONS FOR COURSING, MASONRY TYPES AND METAL PANEL ORIENTATION PER **XX** ELEVATION SHEETS.
3. ALL MASONRY WALLS ARE TO BE REINFORCED AND ARE TO BE SET ON REINFORCED FOOTINGS. SEE THE **XX** ELEVATION SHEETS FOR LOCATION OF CONTROL JOINTS. WHERE NOT NOTED, CONTROL JOINTS TO BE LOCATED AS PER THE REQUIREMENTS FOUND IN THE STRUCTURAL DOCUMENTS BUT ARE NOT TO EXCEED 30' OC. SEE THE STRUCTURAL DRAWINGS FOR REINFORCING AND OTHER DETAILS PERTAINING TO MASONRY WALLS. IF NOT OTHERWISE NOTED, LOCATE CONTROL JOINTS AT CORNER ABOVE DOORS, INSIDE CORNER OF PILASTERS OR OTHER INCONSPICUOUS LOCATION WHERE POSSIBLE. CONSULT WITH ARCHITECT PRIOR TO INSTALLING PER DETAIL **XX/ AXXX**.
4. SEE IBC 2009, CHAPTER 7 FOR FIRE RESISTIVE REQUIREMENTS ON NEW CONCRETE AND CONCRETE MASONRY UNIT WALLS.
   - CMU WALLS (IBC TABLE 720.1(2), ITEM 3)
   - CAST IN PLACE CONCRETE WALLS (IBC TABLE 721.2.1.2(1))
5. REFER TO DETAIL SHEET **AXXX** FOR TYPICAL WALL CONDITIONS ASSOCIATED WITH ALL AND MASONRY PARTITIONS.
6. AT WALL OPENINGS FOR PENETRATION OF PIPES, DUCTS, DEVICES, ETC., MASONRY IS TO BE CUT TO MATCH THE SHAPE AND DIMENSION OF THE PENETRATING OBJECT AND THE GAP BETWEEN THE OBJECT AND THE WALL IS TO BE SEALED W/ ACOUSTICAL OR FIRE SEALANT ON ALL SIDES WITH A 3/4" JOINT AT ALL SIDES, MAXIMUM.
7. **PROTECTION OF MASONRY:** DURING CONSTRUCTION, COVER TOPS OF WALLS, PROJECTIONS, AND SILLS WITH WATERPROOF SHEETING AT END OF EACH DAY'S WORK, EXCEPT WHEN THE AMBIENT TEMPERATURE IS EXPECTED TO REMAIN ABOVE 65 DEG F AND NO PRECIPITATION IS FORECAST FOR THE NEXT 24 HOURS. (THIS IS TO PREVENT CONDENSATION FROM COVERED WALLS CAUSING A MOISTURE PROBLEM.) COVER PARTIALLY COMPLETED MASONRY EACH DAY THAT CONSTRUCTION IS NOT IN PROGRESS. WALLS ARE TO BE PROTECTED UNTIL THEY ARE PERMANENTLY PROTECTED BY THE ROOFING MEMBRANE OVER THE CAP PLATE. THE GENERAL CONTRACTOR IS TO PROVIDE TEMPORARY PROTECTION IMMEDIATELY FOLLOWING THE TOPPING OUT OF EACH SECTION OF WALL BY INSTALLING WATERPROOF SHEETING OVER A CONTINUOUS CAP PLATE UNTIL THE ROOFING MEMBRANE IS INSTALLED. **A SOLID GROUTED TOP BOND BEAM SHALL NOT BE CONSIDERED ADEQUATE PROTECTION FOR THE WALL.**
8. IT IS ACCEPTABLE TO PLACE NON-INTEGRAL COLORED CMU IN PORTIONS OF WALLS INDICATED TO BE CONSTRUCTED OF INTEGRAL COLOR CMU IF THE DOCUMENTS SHOW THESE PORTIONS OF WALL PAINTED OR COVERED WITH TILE, STUD FURRING, ABOVE CEILINGS OR UNDER ROOFING MEMBRANE. IT IS NOT ACCEPTABLE TO UTILIZE NON INTEGRAL COLORED CMU BEHIND CABINETS, FURNISHINGS AND EQUIPMENT INCLUDING BUT NOT LIMITED TO CLIMBING WALLS AND LOCKERS.
9. AT ALL SPLIT FACE AND PAINTED CMU THE HORIZONTAL AND VERTICAL MORTAR JOINTS ARE TO BE CONCAVE. AT ALL HONED BLOCK THE HORIZONTAL MORTAR JOINT IS TO BE A WEATHERED JOINT AND ALL VERTICAL JOINTS ARE TO BE RAKED.
10. PROVIDE A 3/4" CHAMFER ALL INTERIOR EXPOSED VERTICAL MASONRY CORNERS FROM 8" AFF TO BOTTOM OF MASONRY LINTEL OR IF NO LINTEL EXISTS, STOP CHAMFER @ FIRST MASONRY JOINT BELOW CEILING. NOTE THAT THIS CHAMFER IS NOT TO BE PROVIDED AT CORNERS SHOWN IN THESE DOCUMENTS AS COVERED WITH WALL TILE. SEE DETAIL
11. **PROVIDE SPECIAL SHAPES**, SUCH AS “U” SHAPED CHANNEL FOR LINTELS OR HEADERS AND CAPPING UNITS FOR SASH AND OTHER SPECIAL CONDITIONS.
12. WHERE SPLIT FACE BLOCK IS SHOWN EXTENDING TO THE TOP OF A PARAPET, PROVIDE AN INTEGRAL COLOR SMOOTH FACE BLOCK AT THE TOP COURSE TO ALLOW THE CAP FLASHING TO FIT TIGHT AGAINST THE WALL.
13. CONTRACTOR TO COORDINATE AND PROVIDE SMOOTH MASONRY AT ALL FLASHING, REGLETS, GUTTERS, EDGES OF CEILING AND BASE AND OTHER ITEMS REQUIRING A SMOOTH FINISH THAT ARE HIDDEN. AT VISIBLE LOCATIONS SUCH AS DOOR AND WINDOW FRAMES, PERPENDICULAR WALLS, GRIND SPLIT FACED BLOCK PER DETAIL **XX/ AXXX**.

VCBO ARCHITECTURE
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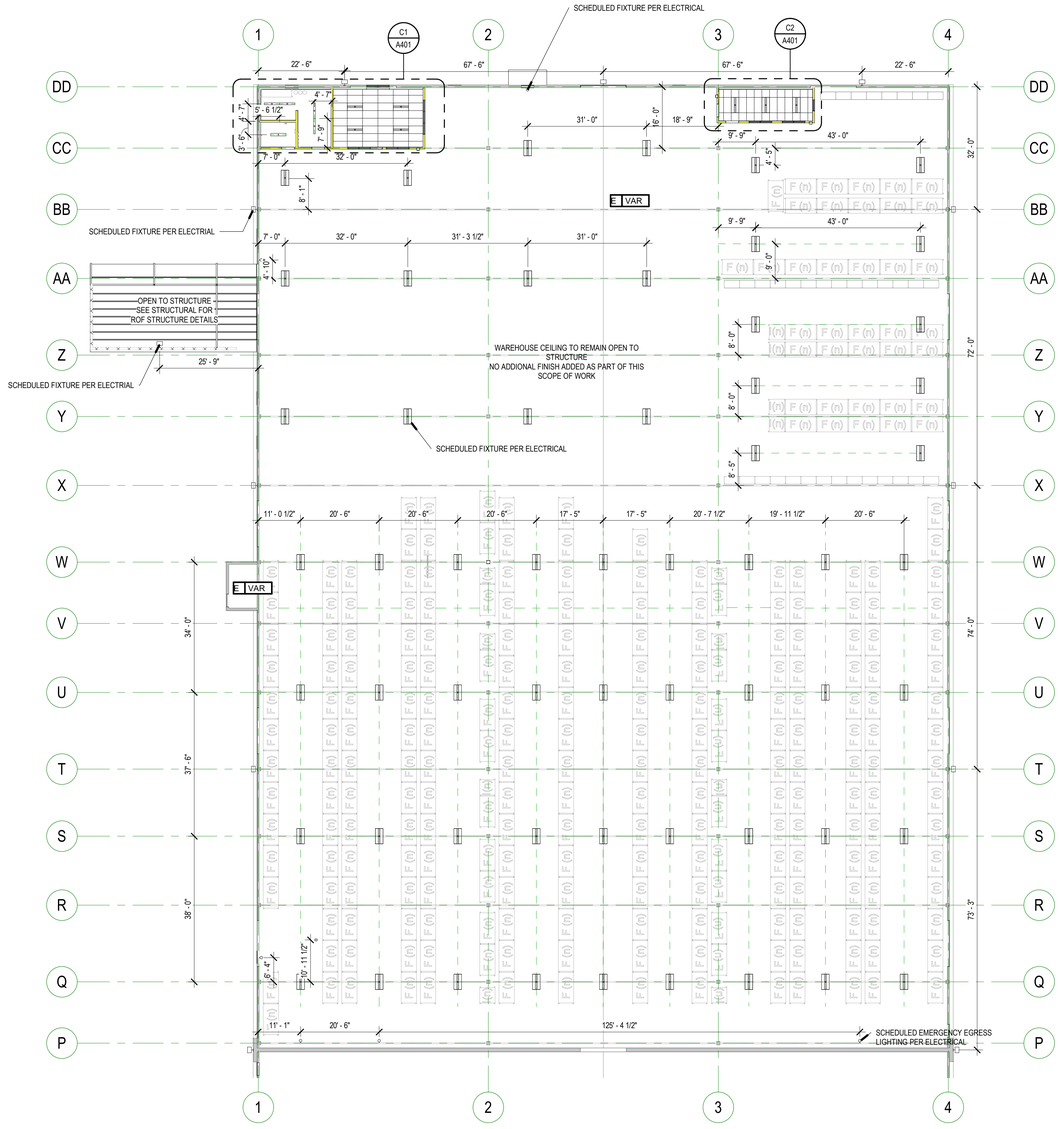
TCSD WAREHOUSE 649 REMODEL

TOOELE COUNTY SCHOOL DISTRICT
PROJECT ADDRESS: 180 GARNET ST. TOOELE, UTAH 84074

CONSTRUCTION DOCUMENT

DIMENSION PLAN + WALL TYPES

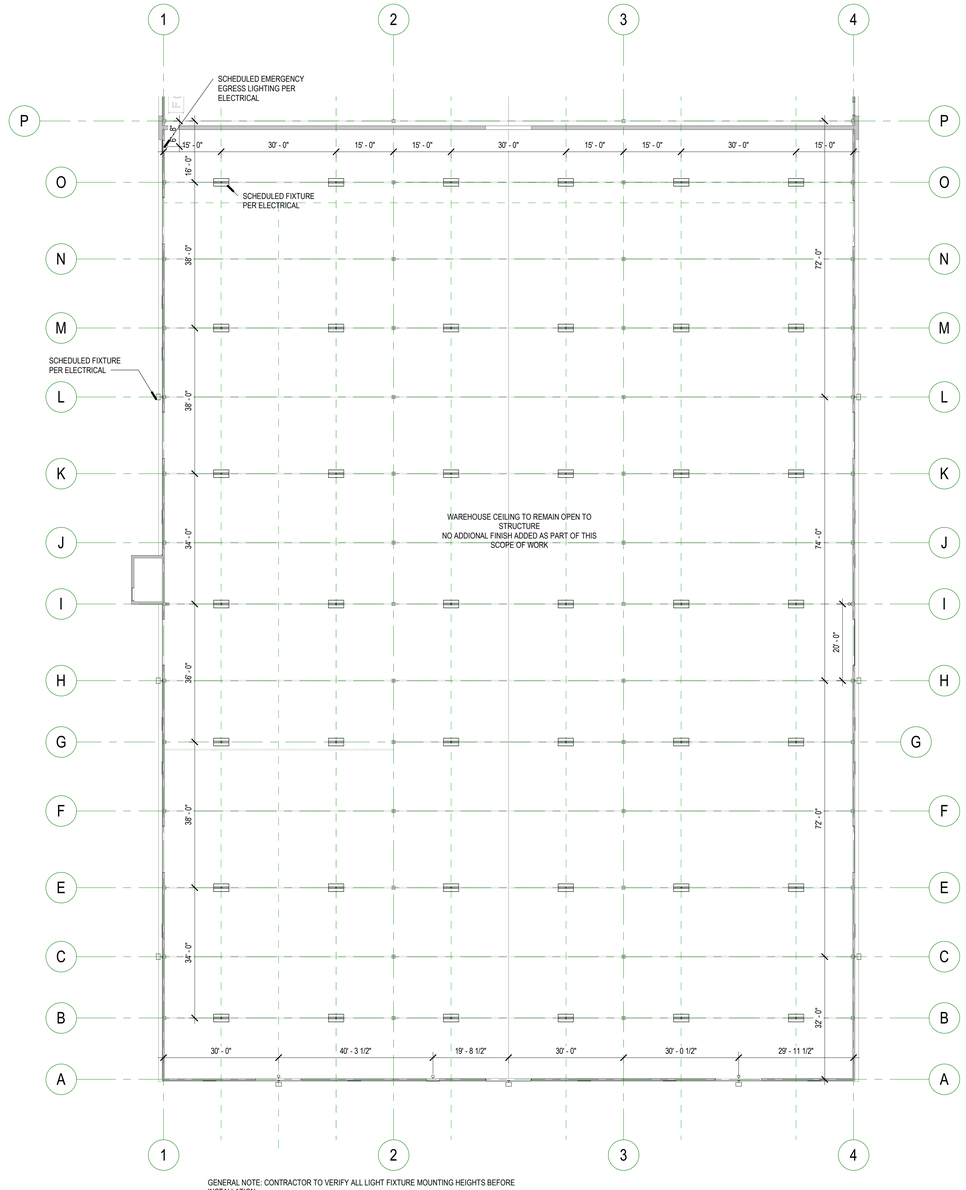
A113.2



GENERAL NOTE: CONTRACTOR TO VERIFY ALL LIGHT FIXTURE MOUNTING HEIGHTS BEFORE INSTALLATION

1 REFECTED CEILING PLAN - LEVEL 01 - 649A

SCALE: 1/16" = 1'-0"



GENERAL NOTE: CONTRACTOR TO VERIFY ALL LIGHT FIXTURE MOUNTING HEIGHTS BEFORE INSTALLATION

2 REFECTED CEILING PLAN - LEVEL 01 - 649B

SCALE: 1/16" = 1'-0"

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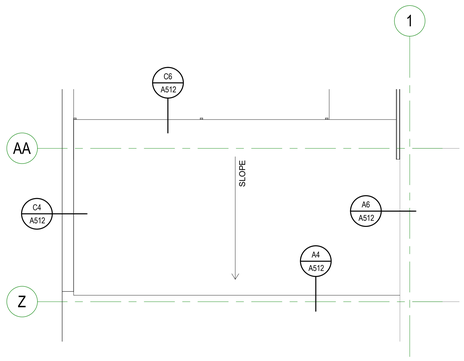
TCSD WAREHOUSE 649 REMODEL

TOOELE COUNTY SCHOOL DISTRICT
PROJECT ADDRESS: 180 GARNET ST. TOOELE, UTAH 84074

CONSTRUCTION DOCUMENT

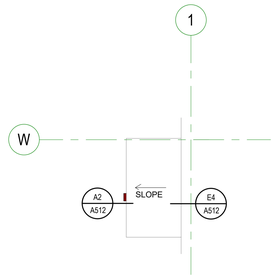
REFLECTED CEILING PLAN
AREA A AND B

A113.3



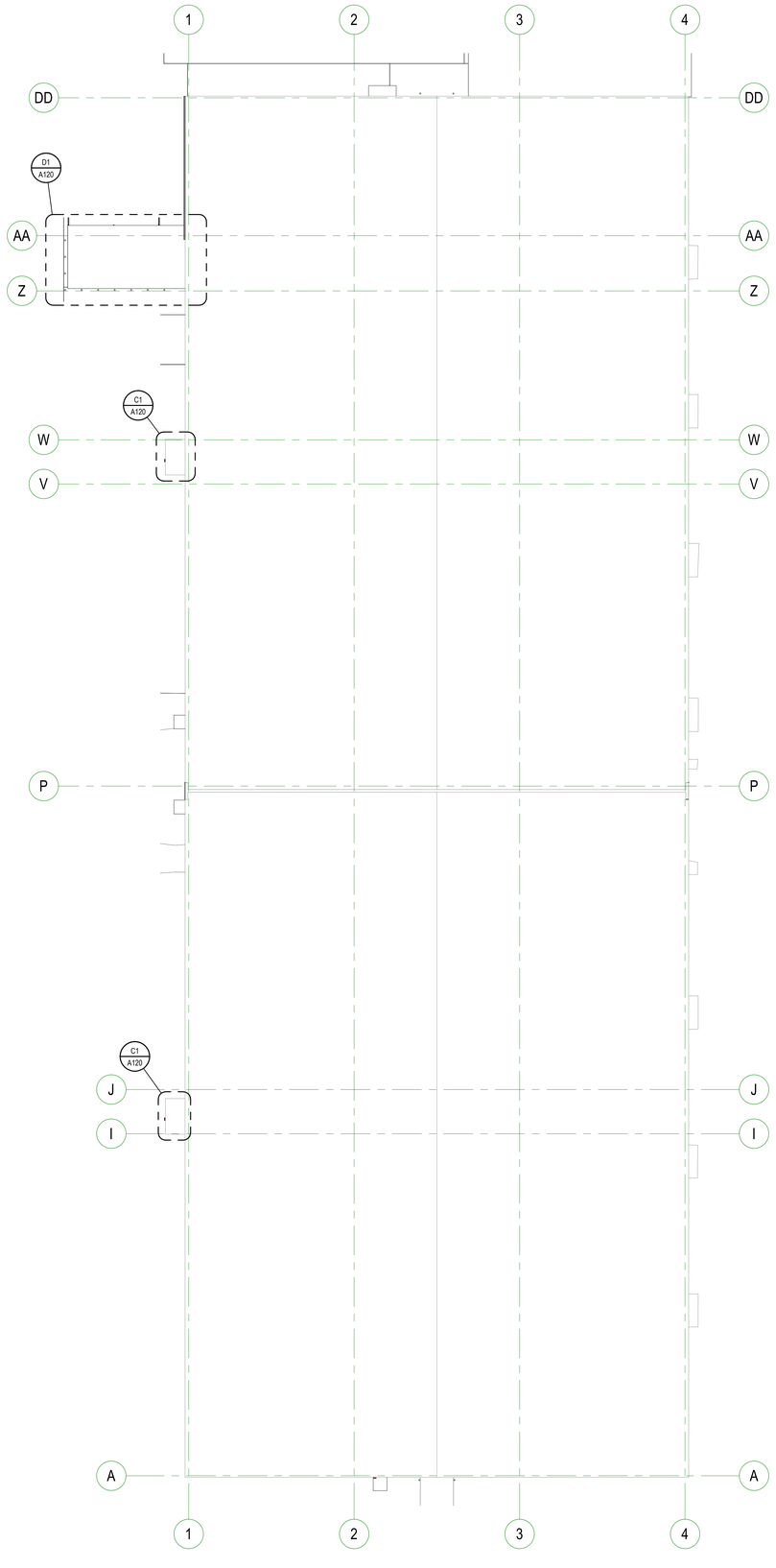
D1 ROOF PLAN - RECEIVING

SCALE: 1/8" = 1'-0"



C1 ROOF PLAN ROOF - FIRE RISER ROOM

SCALE: 1/8" = 1'-0"



A2 PLAN - ROOF - OVERALL

SCALE: 3/64" = 1'-0"

GENERAL ROOF NOTES

1. ALL ROOF DECK IS TO BE COVERED IN R-30 INSULATION AND SPECIFIED ROOFING SYSTEM.
2. THE CONTRACTOR IS TO ASSURE THAT THE MINIMUM ROOF SLOPE IS NOT LESS THAN 1/2" PER FOOT. ANY AREA THAT IS LESS THAN 1/2" PER FOOT SLOPE SHALL BE ADJUSTED AT THE CONTRACTORS EXPENSE WITH CRICKETING TO PROVIDE THE REQUIRED SLOPE.
3. DECK BEARING ELEVATIONS SHOWN ON THIS SHEET ARE TO BE INCLUDED FOR ARCHITECT'S REFERENCE ON ALL STEEL SHOP DRAWINGS.
4. ALL ROOFING CRICKETS ARE TO BE CONSTRUCTED OF TAPERED INSULATION. CRICKETS ARE TO BE INSTALLED SO THAT A SLOPE OF 1/4" PER FOOT IS MAINTAINED ACROSS THE FACE OF THE CRICKET.
5. PROVIDE CRICKETS AT **ALL** ROOF TOP MOUNTED EQUIPMENT (I.E. SKYLIGHTS, ROOF HATCHES, ETC.) TO ASSURE POSITIVE DRAINAGE AROUND SUCH ELEMENTS.
6. ALL FLASHING, COUNTER FLASHING AND SHEET METAL WORK TO COMPLY WITH THE MINIMUM STANDARDS PER THE CURRENT EDITION OF SMACNA.
7. NOT ALL ROOF MOUNTED EQUIPMENT AND ROOF PENETRATIONS ARE SHOWN ON THE ARCHITECTURAL ROOF PLAN SHEETS. IN ADDITION TO THE ARCHITECTURAL, THE CONTRACTOR IS RESPONSIBLE FOR REFERENCING THE STRUCTURAL, MECHANICAL AND ELECTRICAL DOCUMENTS FOR ALL SUCH OCCURRENCES. ALL PENETRATIONS OF THE ROOF SHALL MEET WITH THE ROOFING MANUFACTURER'S RECOMMENDATIONS TO MAINTAIN INTEGRITY OF ROOFING SYSTEMS.
8. THE CONTRACTOR IS RESPONSIBLE AT BIDDING, FOR PROVIDING A MANUFACTURER'S APPROVED ROOFING DETAIL FOR ALL ROOFING CONDITIONS SO THAT THE SPECIFIED WARRANTY IS OBTAINED. IF A CONDITION SHOWN IN THESE CONSTRUCTION DOCUMENTS DOES NOT MEET THE REQUIREMENTS OF THE ROOFING MANUFACTURER THESE CONDITIONS ARE TO BE BROUGHT TO THE ATTENTION OF THE ARCHITECT PRIOR TO BIDDING AND INSTALLATION OF THE APPROVED DETAIL.
9. THE CONTRACTOR IS TO CONFIRM THE ROOFING SYSTEM THICKNESS, INCLUDING THE RIGID INSULATION PRIOR TO INSTALLING CURB AND PARAPET BLOCKING. BLOCKING AND CURB HEIGHTS ARE TO BE ADJUSTED AS NEEDED TO CONFORM TO THE ROOFING THICKNESS TO MEET REQUIREMENTS FOR WARRANTY.
10. WHERE ROOFING MEMBRANE IS SHOWN EXTENDING UP TO THE TOP OF THE PARAPET, THE MEMBRANE IS TO WRAP UP, OVER AND DOWN THE WOOD BLOCKING. THE AIR INFILTRATION BARRIER IS TO EXTEND UP EXTERIOR FACE OF WALL AND FULLY OVER THE TOP OF THE PARAPET WALL AND UNDER THE SILL BLOCK FLASHING. VERIFY WALL TYPE FOR PARAPET CAP WIDTH. SEE DETAILS ON SHEET **A520**. CONTRACTOR TO SEQUENCE WORK TO MEET THIS REQUIREMENT.
11. ALL TOPS OF PARAPETS TO BE PROVIDED WITH 1/2" PER FOOT MINIMUM POSITIVE SLOPE TOWARD THE ROOF FOR ADEQUATE DRAINAGE.
12. ALL PRE-MANUFACTURED MECHANICAL CURBS ARE TO BE MANUFACTURED TO ACCOMMODATE ROOF SLOPE. THEY MUST BE OF ADEQUATE HEIGHT TO ALLOW FOR THE DEPTH OF THE ROOF INSULATION, INCLUDING CRICKETS AND HAVE 8" HEIGHT ABOVE THE ROOF MEMBRANE, SEE DETAIL **XX/AXXX**.
13. SKYLIGHTS ARE TO BE INSTALLED SO THE TOP OF SKYLIGHT SLOPES 1/2" PER FOOT MINIMUM. THIS SLOPE IS TO SLOPE IN THE DIRECTION OF THE ROOF BELOW. FOR TYPICAL SKYLIGHT CURB, SEE DETAIL **XX/AXXX**.
14. ALL REGLETS ARE TO BE PREFINISHED AND ARE TO BE HELD AS LOW TO THE ROOF AS POSSIBLE, BUT HAVE 8" HEIGHT ABOVE THE ROOF MEMBRANE SO THE VISIBILITY OF THE MEMBRANE FROM THE GROUND BELOW IS MINIMIZED. AT CERTAIN LOCATIONS A SHEET METAL COVER SHEET HAS BEEN DETAILED TO COVER THIS EXPOSED VERTICAL MEMBRANE. **ALL REGLETS AT MASONRY WALLS ARE TO BE EMBEDDED INTO MORTAR JOINTS.** FOR TYPICAL EMBEDDED MASONRY REGLET, SEE DETAIL **XX/AXXX**. FOR TYPICAL SURFACE MOUNTED FLASHING ON A STUD WALL, SEE DETAIL **XX/AXXX**.
15. ROOF DRAINS ARE TO BE INSTALLED IN A TWO LEVEL DRAIN BASIN. THE BASIN IS TO BE CONSTRUCTED USING LAYERS OF ROOFING INSULATION. SEE DETAILS E4, E5 AND E6/A520.
16. FOR TYPICAL ROOF HATCH AND LADDER, SEE DETAILS **XX**, **XX**, AND **XX/AXXX**.
17. FOR TYPICAL ROOF PIPE PENETRATIONS, SEE DETAIL **XX/AXXX**.
18. FOR TYPICAL ROOF SCUPPERS SEE DETAILS **XX** AND **XX/AXXX**.

ROOF LEGEND

- EXISTING ROOF SYSTEMS
- SINGLE PLY MEMBRANE ROOFING SYSTEM
- STANDING SEAM METAL ROOFING SYSTEM, W/ SELF-AHERED ROOFING UNDERLAYMENT OVER ENTIRE ROOF AREA U.N.O., SNOW GUARDS FULL LENGTH AND HEIGHT OF ROOF, SPACED 36" UP RAKE AND CONTINUOUS HORIZONTAL
- TAPERED INSULATION CRICKET MINIMUM SLOPES: 1/8" ALONG VALLEY, 1/4" ACROSS CRICKET
- TRANSLUCENT PANEL SKYLIGHT SYSTEM
- PROTECTIVE WALKABLE SURFACE
- DECK RIDGE OR VALLEY
- IMAGINARY VALLEY WITH WARPED DECKING
- AREAS HATCHED AS SUCH SHALL NOT HAVE ANY PENETRATIONS THRU THE ROOF IN ORDER TO MAINTAIN THE 2 HOUR FIRE WALL ASSEMBLY LOCATED BELOW THE DECK (AS PER 2006 IBC SECTION 705.6.3).

KEYED NOTES

VCBO ARCHITECTURE
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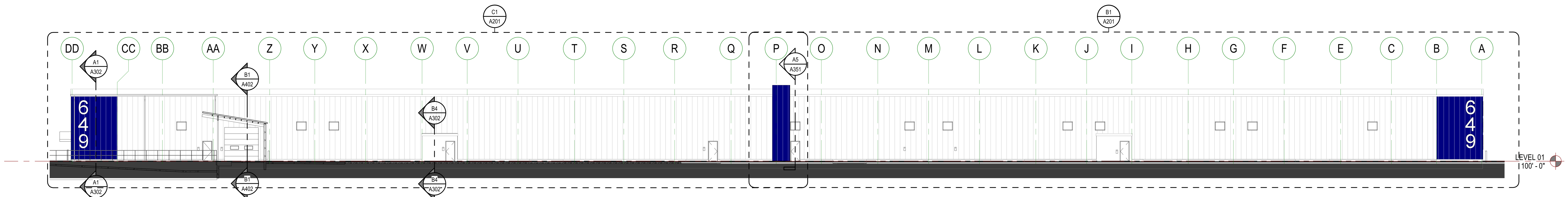
TCSD WAREHOUSE 649 REMODEL

TOOELE COUNTY SCHOOL DISTRICT
PROJECT ADDRESS: 180 GARNET ST. TOOELE, UTAH 84074

CONSTRUCTION DOCUMENT

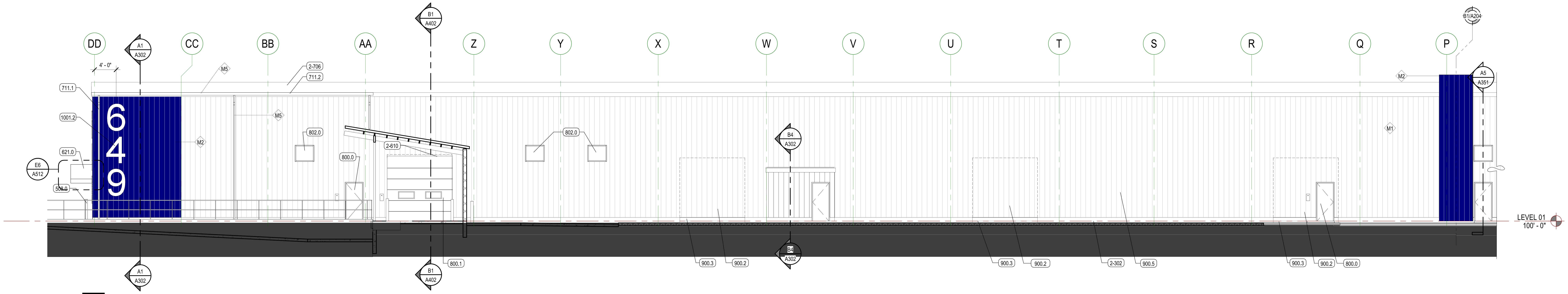
OVERALL ROOF PLAN

A120



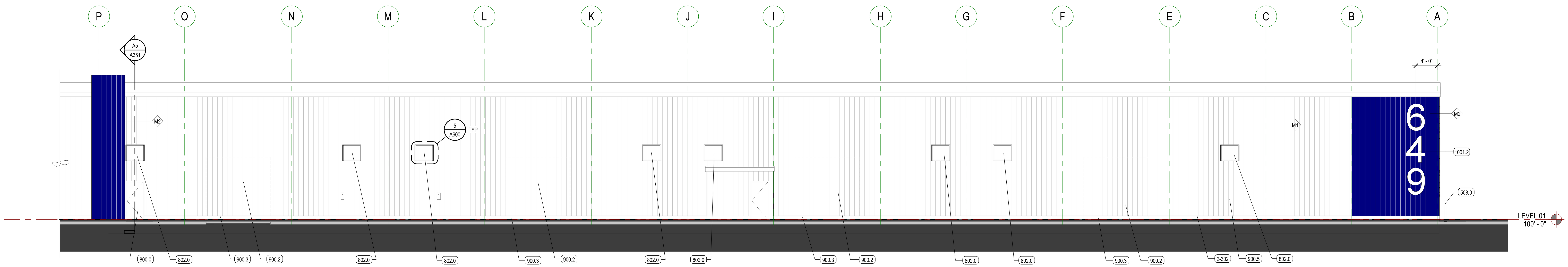
E1 EXT ELEV - 649 WEST

SCALE: 1/16" = 1'-0"



C1 EXT ELEV - ENLARGED - 649 WEST 01

SCALE: 1/8" = 1'-0"



B1 EXT ELEV - ENLARGED - 649 WEST 02

SCALE: 1/8" = 1'-0"

KEY - FINISH

Key Name	Finish - Description	Finish - Manufacturer	Finish - Name	Finish - Color	Finish - Comments
FLOOR					
F1	SEALED CONCRET	SHERWIN WILLIAMS	LIGHT GRAY TINTED SEALER	SW 7658 GRAY CLOUDS	OR EQUAL
F2	PORCELAIN TILE - FIELD	DALTILE	2"X2" MOSAICS	D200 DESERT GRAY SPECKLE	GROUT: MAPLE 107 IRON
F3	CARPET TILE	SHAW	COLLECTION: IN SYNC	STYLE: 5T353	24x24 CARPET TILE
BASE					
B1	RUBBER BASE	ROPPE	4" RUBBER BASE, CUT TO FIT	114 LUNAR DUST	OR EQUAL
B2	TILE BASE	DALTILE	TO MATCH ADJACENT WALL TILE	TO MATCH ADJACENT WALL TILE	
PAINT					
P1	GENERAL - FIELD	SHERWIN WILLIAMS	LIGHT GRAY	SW 7658 GRAY CLOUDS	
P2	GENERAL - FIELD	SHERWIN WILLIAMS	WHITE	SW 7005 PURE WHITE	EPOXY PAINT IN TOILET ROOM
P3	CLEAR SEALED				
P4	HOLLOW METAL DOORS & FRAMES	SHERWIN WILLIAMS	MEDIUM GRAY	SW 7673 PEWTER CAST	OR EQUAL
P5	OVERHEAD DOORS	SHERWIN WILLIAMS	MEDIUM GRAY	SW 7673 PEWTER CAST	OR EQUAL
SURFACE					
S1	PLASTIC LAMINATE COUNTER TOPS	WILSONART	PEARL SOAPSTONE	COLOR: 4886-38	OR EQUAL
S2	PLASTIC LAMINATE CABINETS	WILSONART	FUSION MAPLE	COLOR: 7909-60	OR EQUAL
S3	SOLID SURFACE WINDOW SILLS	STARON	ASPEN CONCRETE	COLOR: AC629	OR EQUAL
WALL					
W1	PORCELAIN TILE - FIELD	DALTILE	12"X24"	FABRIC ART MK73 MODERN KALEIDOSCOPE	GROUT: MAPLE 107 IRON
W2	CERAMIC TILE - FIELD	DALTILE	4"X4"	MT PEARL WHITE DT - 0799	OR EQUAL
EXTERIOR					
M1	METAL WALL PANEL	MBCI	WHITE	COLOR:SIGNATURE 200 POLAR WHITE	OR EQUAL
M2	METAL WALL PANEL	MBCI	GRAY	COLOR:SIGNATURE 200 ASH GRAY	OR EQUAL
M3	METAL WALL PANEL	MBCI	BLUE	COLOR:SIGNATURE 200 COBALT BLUE	OR EQUAL
M4	METAL WALL PANEL	MBCI		COLOR:	OR EQUAL
M5	RAIN GUTTER & DOWNSPOUTS	MBCI	GRAY	COLOR:SIGNATURE 200 ASH GRAY	OR EQUAL

KEYED NOTES

2-302	EXISTING CONCRETE FOUNDATION WALL, PROTECT AS NECESSARY, REPAIR AS REQUIRED
2-610	EXISTING WOOD HEADER, PROTECT AS NECESSARY, REPAIR AS REQUIRED
2-706	EXISTING MEMBRANE ROOFING SYSTEM, PROTECT AS NECESSARY, REPAIR AS REQUIRED
508.0	METAL BOLLARD
621.0	WOOD AWNING
711.1	METAL ROOF DOWNSPOUT
711.2	METAL GUTTER
800.0	DOOR AND FRAME
800.1	SCHEDULED OVERHEAD DOOR
802.0	STOREFRONT SYSTEM
900.2	INFILL EXISTING DOOR OPENING TO MATCH EXISTING WALL TYPE
900.3	INFILL EXISTING CONC. FLOOR / FOUNDATION TO MATCH EXISTING
900.5	METAL SIDING SYSTEM
1001.2	SIGNAGE, CUT ALUMINUM LETTERING

VCBO ARCHITECTURE

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TCSD WAREHOUSE 649 REMODEL

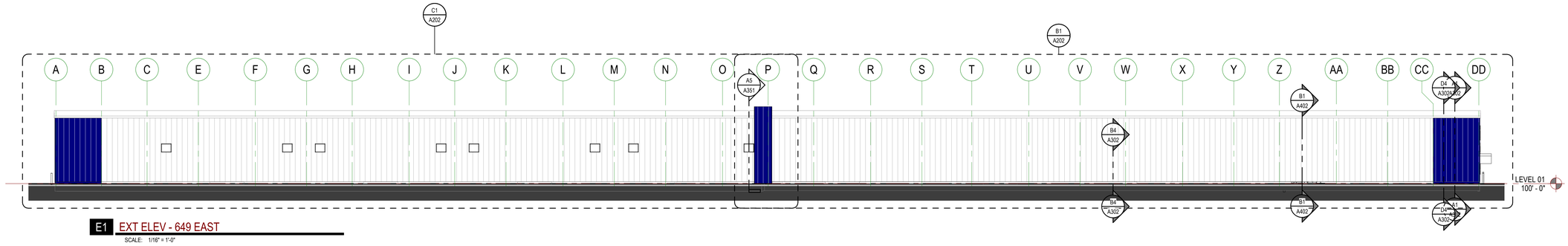
TOOELE COUNTY SCHOOL DISTRICT

PROJECT ADDRESS: 180 GARNET ST. TOOELE, UTAH 84074

CONSTRUCTION DOCUMENT

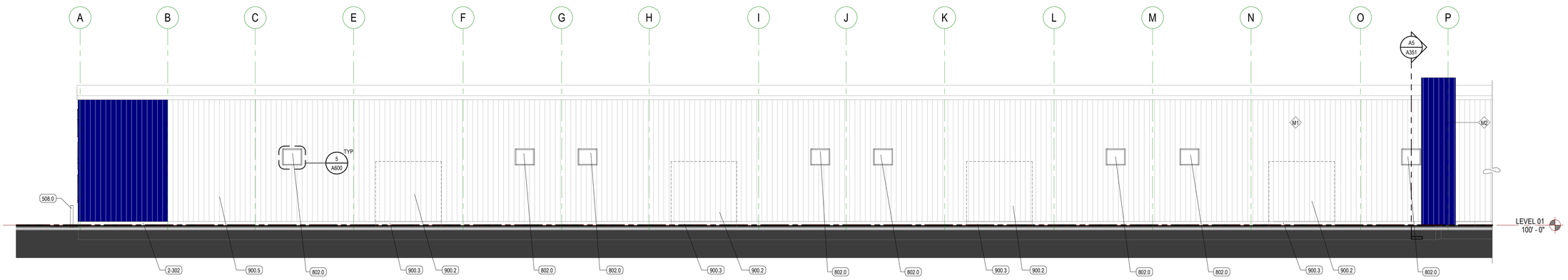
EXTERIOR ELEVATIONS WEST

A201



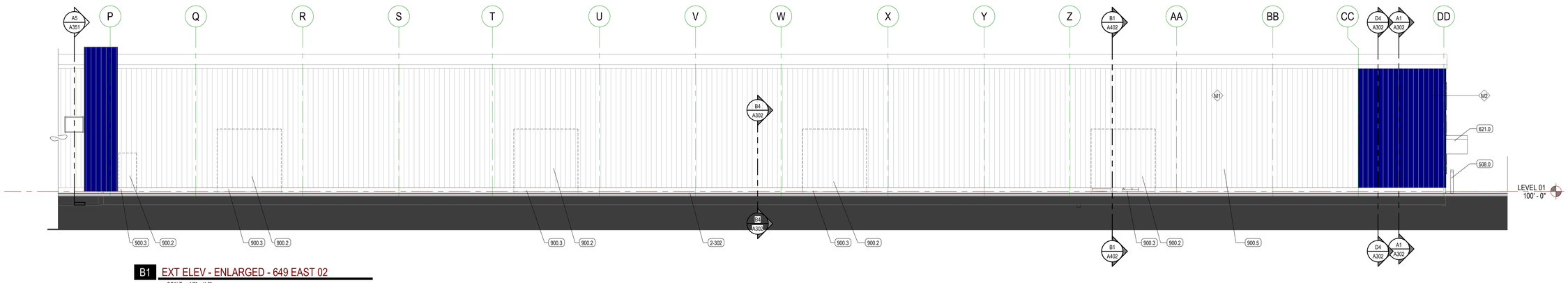
E1 EXT ELEV - 649 EAST

SCALE: 1/16" = 1'-0"



C1 EXT ELEV - ENLARGED - 649 EAST 01

SCALE: 1/8" = 1'-0"



B1 EXT ELEV - ENLARGED - 649 EAST 02

SCALE: 1/8" = 1'-0"

KEY - FINISH

Key Name	Finish - Description	Finish - Manufacturer	Finish - Name	Finish - Color	Finish - Comments
FLOOR					
F1	SEALED CONCRET	SHERWIN WILLIAMS	LIGHT GRAY TINTED SEALER	SW 7658 GRAY CLOUDS	OR EQUAL
F2	PORCELAIN TILE - FIELD	DALTILE	2"X2" MOSAICS	D200 DESERT GRAY SPECKLE	GROUT: MAPLE 107 IRON
F3	CARPET TILE	SHAW	COLLECTION: IN SYNC	STYLE: 5T353	24x24 CARPET TILE
BASE					
B1	RUBBER BASE	ROPPE	4" RUBBER BASE, CUT TO FIT	114 LUNAR DUST	OR EQUAL
B2	TILE BASE	DALTILE	TO MATCH ADJACENT WALL TILE	TO MATCH ADJACENT WALL TILE	
PAINT					
P1	GENERAL - FIELD	SHERWIN WILLIAMS	LIGHT GRAY	SW 7658 GRAY CLOUDS	
P2	GENERAL - FIELD	SHERWIN WILLIAMS	WHITE	SW 7005 PURE WHITE	EPOXY PAINT IN TOILET ROOM
P3	CLEAR SEALED				
P4	HOLLOW METAL DOORS & FRAMES	SHERWIN WILLIAMS	MEDIUM GRAY	SW 7673 PEWTER CAST	OR EQUAL
P5	OVERHEAD DOORS	SHERWIN WILLIAMS	MEDIUM GRAY	SW 7673 PEWTER CAST	OR EQUAL
SURFACE					
S1	PLASTIC LAMINATE COUNTER TOPS	WILSONART	PEARL SOAPSTONE	COLOR: 4886-38	OR EQUAL
S2	PLASTIC LAMINATE CABINETS	WILSONART	FUSION MAPLE	COLOR: 7909-60	OR EQUAL
S3	SOLID SURFACE WINDOW SILLS	STARON	ASPEN CONCRETE	COLOR: AC629	OR EQUAL
WALL					
W1	PORCELAIN TILE - FIELD	DALTILE	12"X24"	FABRIC ART MK73 MODERN KALEIDOSCOPE	GROUT: MAPLE 107 IRON
W2	CERAMIC TILE - FIELD	DALTILE	4"X4"	MT PEARL WHITE DT - 0799	OR EQUAL
EXTERIOR					
M1	METAL WALL PANEL	MBCI	WHITE	COLOR:SIGNATURE 200 POLAR WHITE	OR EQUAL
M2	METAL WALL PANEL	MBCI	GRAY	COLOR:SIGNATURE 200 ASH GRAY	OR EQUAL
M3	METAL WALL PANEL	MBCI	BLUE	COLOR:SIGNATURE 200 COBALT BLUE	OR EQUAL
M4	METAL WALL PANEL	MBCI		COLOR:	OR EQUAL
M5	RAIN GUTTER & DOWNSPOUTS	MBCI	GRAY	COLOR:SIGNATURE 200 ASH GRAY	OR EQUAL

KEYED NOTES

2-302	EXISTING CONCRETE FOUNDATION WALL, PROTECT AS NECESSARY, REPAIR AS REQUIRED
508.0	METAL BOLLARD
621.0	WOOD AWNING
802.0	STOREFRONT SYSTEM
900.2	INFILL EXISTING DOOR OPENING TO MATCH EXISTING WALL TYPE
900.3	INFILL EXISTING CONC. FLOOR / FOUNDATION TO MATCH EXISTING
900.5	METAL SIDING SYSTEM

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REV DATE DESCRIPTION

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DATE: 2021-08-16

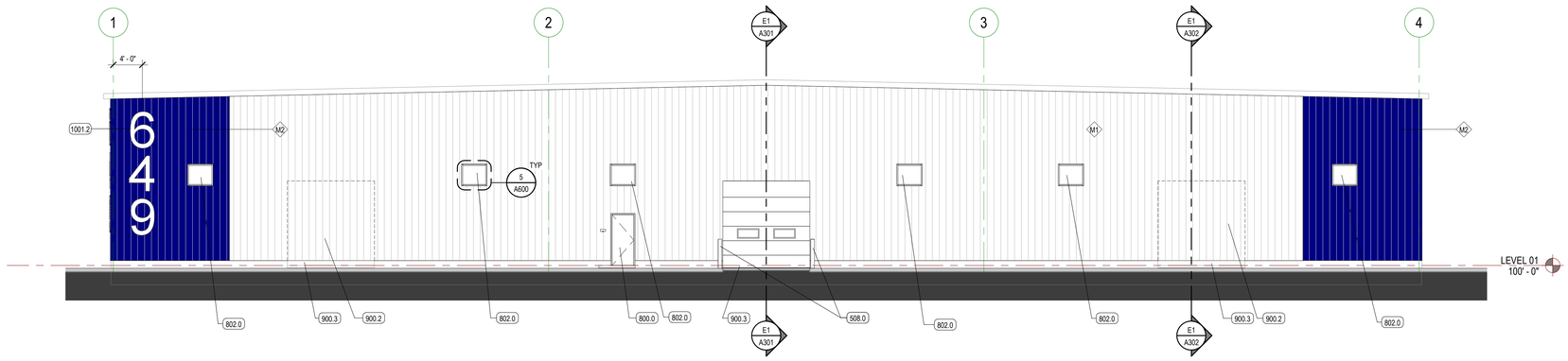
TCSD WAREHOUSE 649 REMODEL

TOOELE COUNTY SCHOOL DISTRICT
PROJECT ADDRESS: 180 GARNET ST. TOOELE, UTAH 84074

CONSTRUCTION DOCUMENT

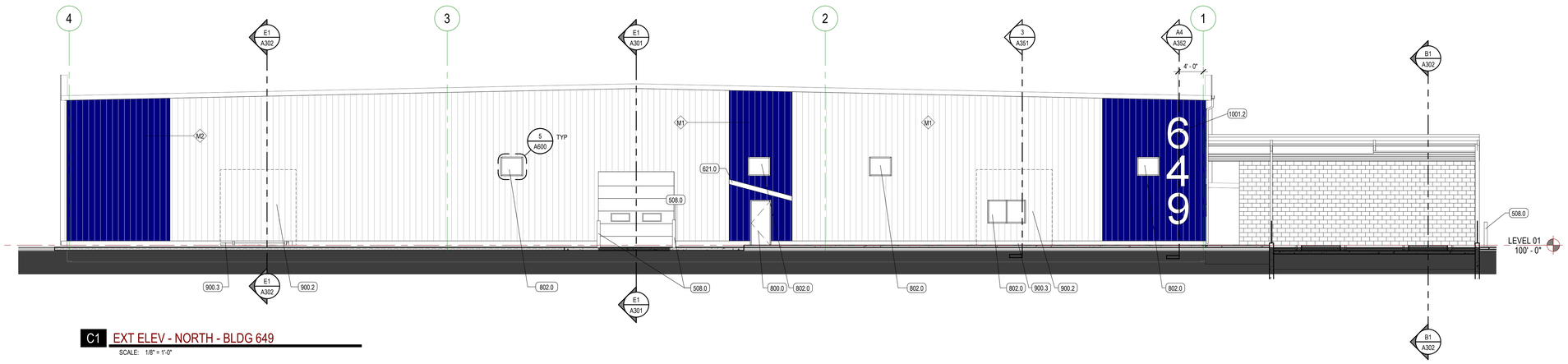
EXTERIOR ELEVATIONS - EAST

A202



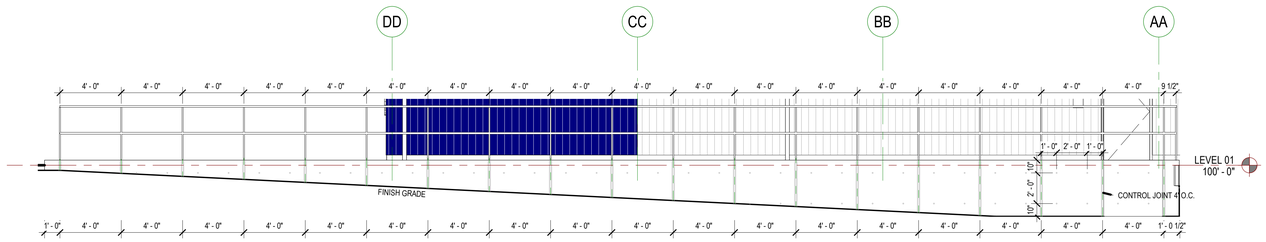
D1 EXT ELEV - 649 SOUTH

SCALE: 1/8" = 1'-0"



C1 EXT ELEV - NORTH - BLDG 649

SCALE: 1/8" = 1'-0"



1 DOCK WELL WALL ELEVATION

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

KEY - FINISH

Key Name	Finish - Description	Finish - Manufacturer	Finish - Name	Finish - Color	Finish - Comments
FLOOR					
F1	SEALED CONCRET	SHERWIN WILLIAMS	LIGHT GRAY TINTED SEALER	SW 7658 GRAY CLOUDS	OR EQUAL
F2	PORCELAIN TILE - FIELD	DALTILE	2"X2" MOSAICS	D200 DESERT GRAY SPECKLE	GROUT: MAPLE 107 IRON
F3	CARPET TILE	SHAW	COLLECTION: IN SYNC	STYLE: 5T353	24x24 CARPET TILE
BASE					
B1	RUBBER BASE	ROPPE	4" RUBBER BASE, CUT TO FIT	114 LUNAR DUST	OR EQUAL
B2	TILE BASE	DALTILE	TO MATCH ADJACENT WALL TILE	TO MATCH ADJACENT WALL TILE	
PAINT					
P1	GENERAL - FIELD	SHERWIN WILLIAMS	LIGHT GRAY	SW 7658 GRAY CLOUDS	
P2	GENERAL - FIELD	SHERWIN WILLIAMS	WHITE	SW 7005 PURE WHITE	EPOXY PAINT IN TOILET ROOM
P3	CLEAR SEALED				
P4	HOLLOW METAL DOORS & FRAMES	SHERWIN WILLIAMS	MEDIUM GRAY	SW 7673 PEWTER CAST	OR EQUAL
P5	OVERHEAD DOORS	SHERWIN WILLIAMS	MEDIUM GRAY	SW 7673 PEWTER CAST	OR EQUAL
SURFACE					
S1	PLASTIC LAMINATE COUNTER TOPS	WILSONART	PEARL SOAPSTONE	COLOR: 4886-38	OR EQUAL
S2	PLASTIC LAMINATE CABINETS	WILSONART	FUSION MAPLE	COLOR: 7909-60	OR EQUAL
S3	SOLID SURFACE WINDOW SILLS	STARON	ASPEN CONCRETE	COLOR: AC629	OR EQUAL
WALL					
W1	PORCELAIN TILE - FIELD	DALTILE	12"X24"	FABRIC ART MK73 MODERN KALEIDOSCOPE	GROUT: MAPLE 107 IRON
W2	CERAMIC TILE - FIELD	DALTILE	4"X4"	MT PEARL WHITE DT - 0799	OR EQUAL
EXTERIOR					
M1	METAL WALL PANEL	MBCI	WHITE	COLOR:SIGNATURE 200 POLAR WHITE	OR EQUAL
M2	METAL WALL PANEL	MBCI	GRAY	COLOR:SIGNATURE 200 ASH GRAY	OR EQUAL
M3	METAL WALL PANEL	MBCI	BLUE	COLOR:SIGNATURE 200 COBALT BLUE	OR EQUAL
M4	METAL WALL PANEL	MBCI		COLOR:	OR EQUAL
M5	RAIN GUTTER & DOWNSPOUTS	MBCI	GRAY	COLOR:SIGNATURE 200 ASH GRAY	OR EQUAL

KEYED NOTES

508.0	METAL BOLLARD
621.0	WOOD AWNING
800.0	DOOR AND FRAME
802.0	STOREFRONT SYSTEM
900.2	INFILL EXISTING DOOR OPENING TO MATCH EXISTING WALL TYPE
900.3	INFILL EXISTING CONC. FLOOR / FOUNDATION TO MATCH EXISTING
1001.2	SIGNAGE; CUT ALUMINUM LETTERING

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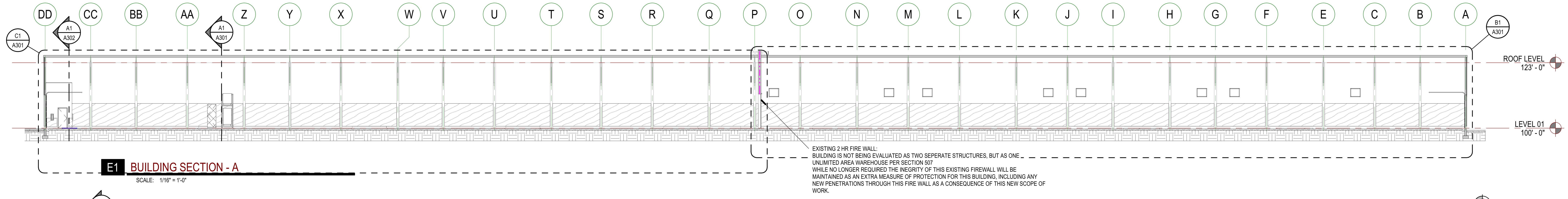
TCSD WAREHOUSE 649 REMODEL

TOOELE COUNTY SCHOOL DISTRICT
PROJECT ADDRESS: 180 GARNET ST. TOOELE, UTAH 84074

CONSTRUCTION DOCUMENT

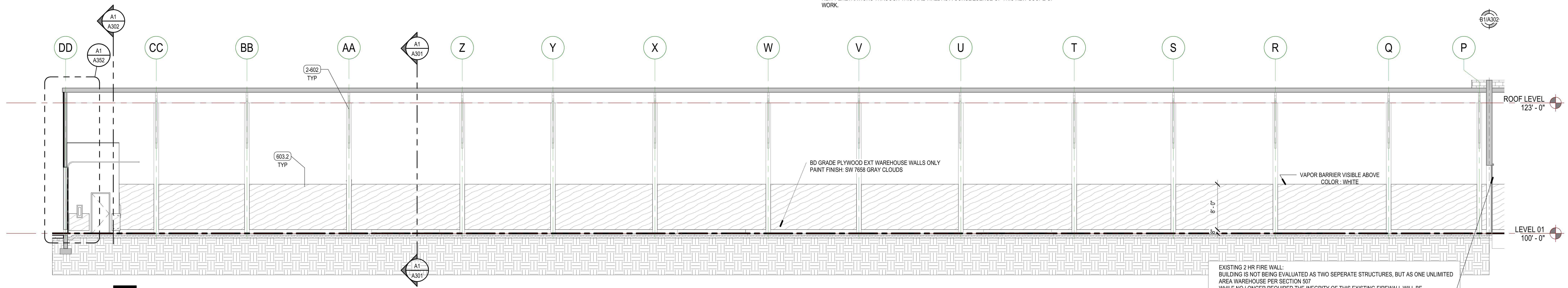
EXTERIOR ELEVATIONS - NORTH / SOUTH

A203



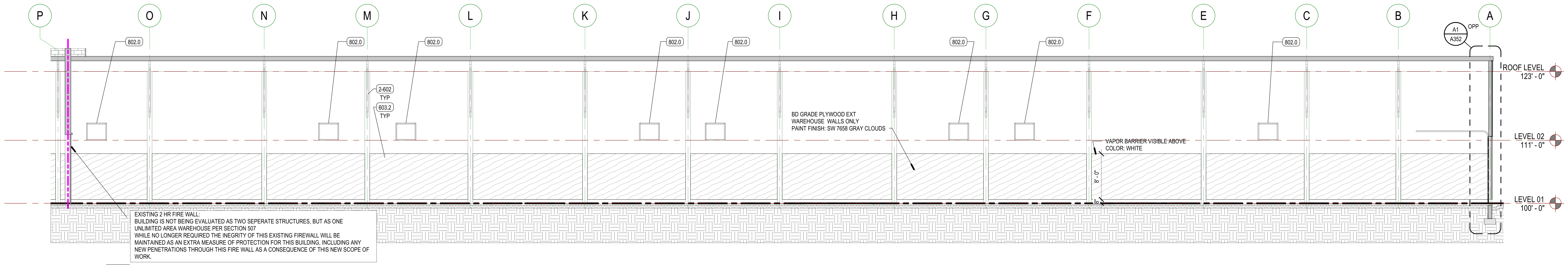
E1 BUILDING SECTION - A

SCALE: 1/16" = 1'-0"



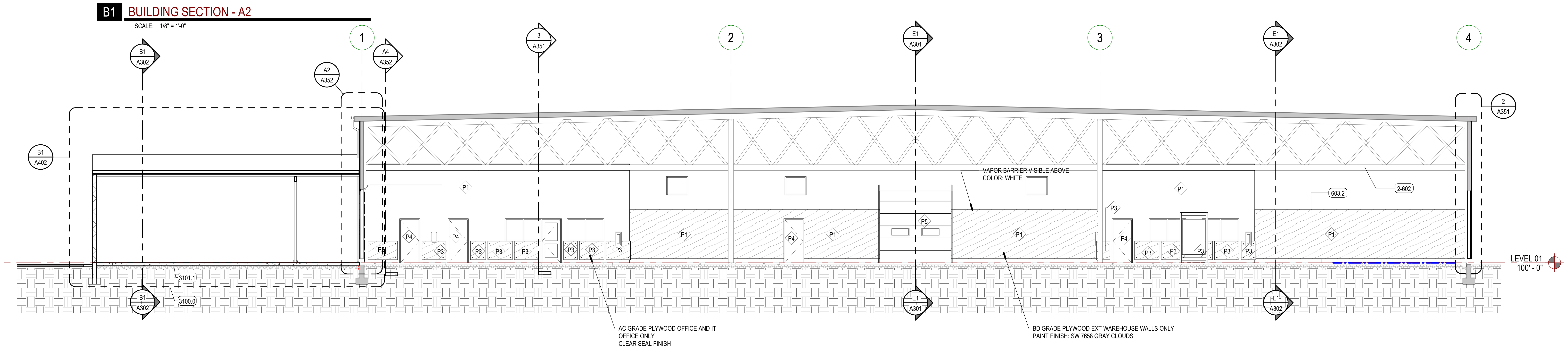
C1 BUILDING SECTION - A1

SCALE: 1/8" = 1'-0"



B1 BUILDING SECTION - A2

SCALE: 1/8" = 1'-0"



A1 BUILDING SECTION - B

SCALE: 1/8" = 1'-0"

KEYED NOTES

2-602	EXISTING WOOD JOIST/GIRDERS, PROTECT AS NECESSARY, REPAIR AS REQUIRED
603.2	PLYWOOD SHEET, DIMESIONS AS SHOWN
802.0	STOREFRONT SYSTEM
3100.0	ENGINEERED FILL
3101.1	6" MINIMUM X 3/4" MINUS CRUSHED FREE DRAINING GRAVEL BASE. INSTALL OVER WEED BARRIER AT SERVICE YARD AREA, ALL OTHER LOCATIONS DO NOT REQUIRE WEED BARRIER, TYP.

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TCSD WAREHOUSE 649 REMODEL

TOOELE COUNTY SCHOOL DISTRICT
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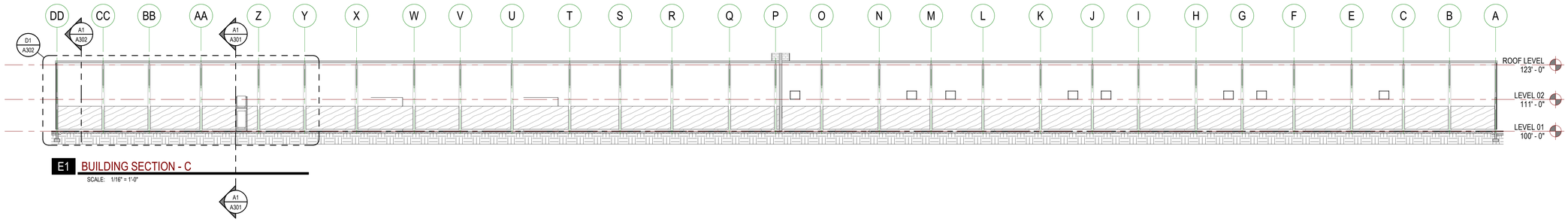
CONSTRUCTION DOCUMENT

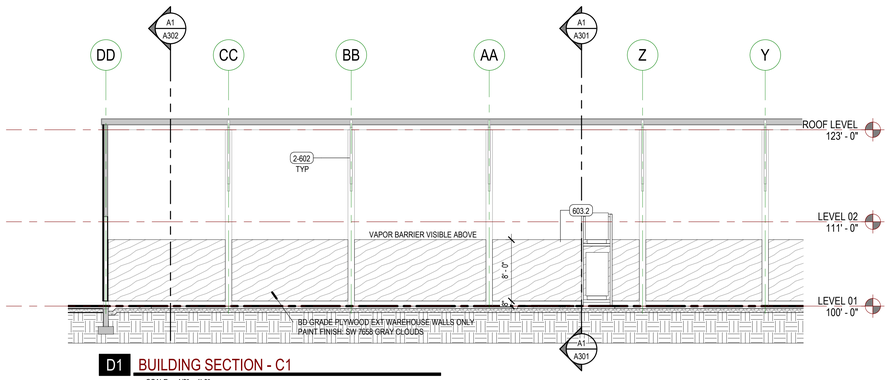
BUILDING SECTIONS

A301



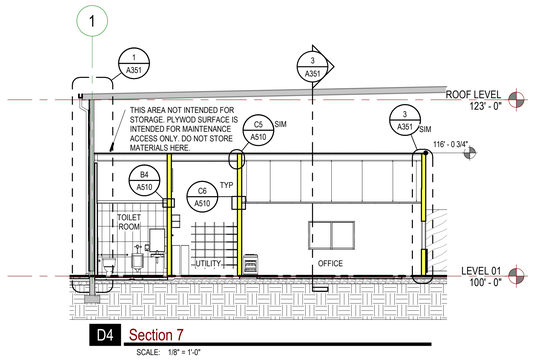
E1 BUILDING SECTION - C

SCALE: 1/16" = 1'-0"



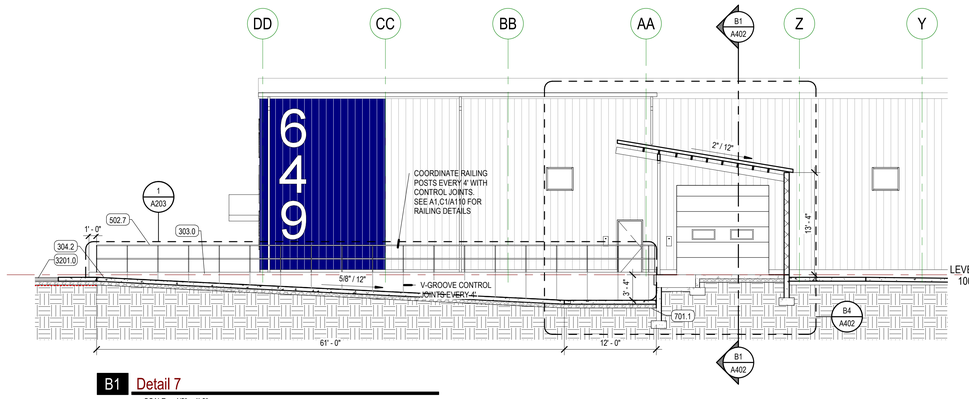
D1 BUILDING SECTION - C1

SCALE: 1/8" = 1'-0"



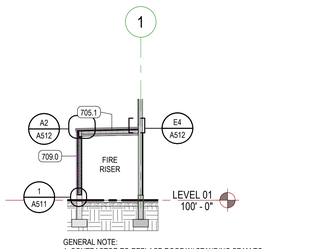
D4 Section 7

SCALE: 1/8" = 1'-0"



B1 Detail 7

SCALE: 1/8" = 1'-0"



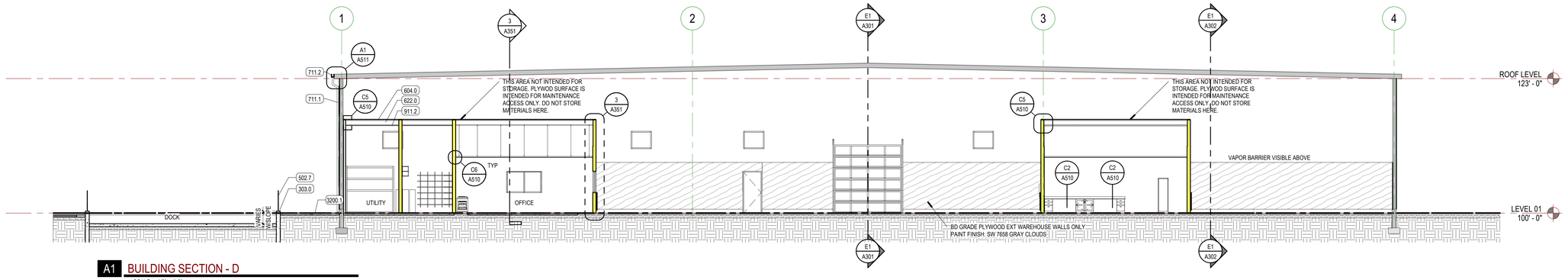
GENERAL NOTE:
1. CONTRACTOR TO REPLACE ROOF W/ STANDING SEAM TO MATCH THE DOCK ROOF.
2. CONTRACTOR TO REPLACE THE SIDING TO MATCH WAREHOUSE WALLS
3. VERIFY ALL EXISTING CONDITIONS

B4 EW SECT @ FIRE RISER ROOM

SCALE: 1/8" = 1'-0"

KEYED NOTES

2-602	EXISTING WOOD JOIST/GIRDERS, PROTECT AS NECESSARY, REPAIR AS REQUIRED
303.0	REINFORCED CONCRETE WALL, ARCHITECTURAL GRADE FINISH WHERE EXPOSED
304.2	6" REINFORCED CONCRETE SLAB/SIDEWALK PER ENGINEER'S SPECIFICATIONS
502.7	1 1/2" METAL PIPE GUARDRAIL GALV. U.N.O.
603.2	PLYWOOD SHEET, DIMESIONS AS SHOWN
604.0	PLYWOOD DECKING
622.0	WOOD JOIST, SEE STRUCTURAL
701.1	UNDERSLAB VAPOR BARRIER. LOCATE BELOW 6" FREE DRAINING GRAVEL BED, TYP.
705.1	ROOF SYSTEM, METAL SEAM
709.0	PRE-FINISHED EXTERIOR METAL PANEL
711.1	METAL ROOF DOWNSPOUT
711.2	METAL GUTTER
911.2	SUSPENDED GYPSUM BOARD CEILING, PAINTED WHERE EXPOSED
3200.1	4" THICK CONCRETE SIDEWALK WITH SUBBASE
3201.0	PAVING, ASPHALT WITH SUBBASE



A1 BUILDING SECTION - D

SCALE: 1/8" = 1'-0"

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TCSD WAREHOUSE 649 REMODEL

TOOELE COUNTY SCHOOL DISTRICT
PROJECT ADDRESS: 180 GARNET ST. TOOELE, UTAH 84074

CONSTRUCTION DOCUMENT

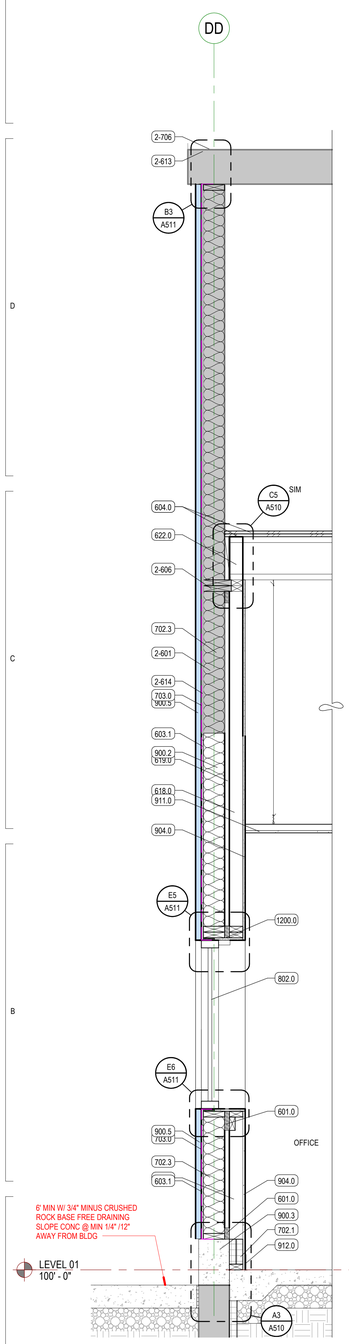
BUILDING SECTIONS

A302

8/20/2021 8:40 PM

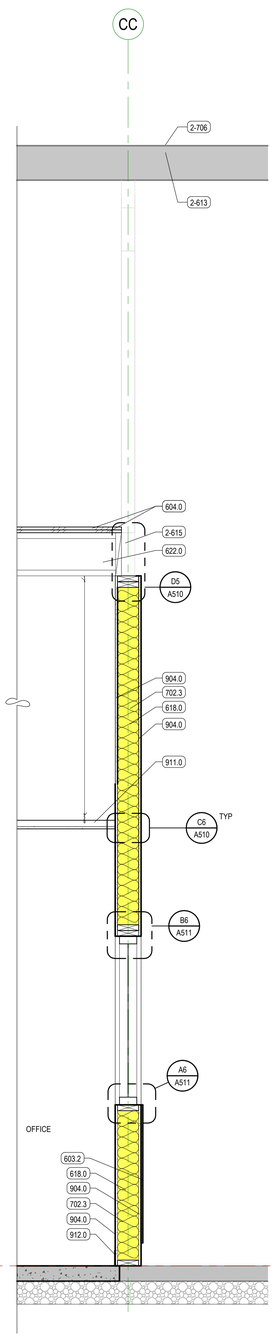
KEYED NOTES

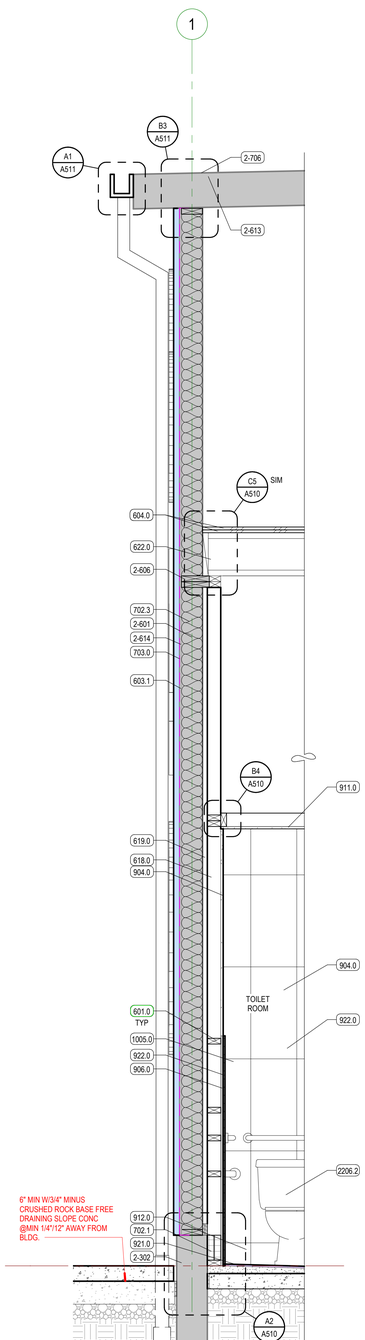
2-302	EXISTING CONCRETE FOUNDATION WALL, PROTECT AS NECESSARY, REPAIR AS REQUIRED
2-601	EXISTING WOOD FRAMED WALL, PROTECT AS NECESSARY, REPAIR AS REQUIRED, F.V.
2-606	EXISTING WOOD TOP PLATE, PROTECT AS NECESSARY, REPAIR AS REQUIRED
2-610	EXISTING WOOD HEADER, PROTECT AS NECESSARY, REPAIR AS REQUIRED
2-613	EXISTING WOOD STRUCTURAL DECK, PROTECT AS NECESSARY, REPAIR AS REQUIRED
2-614	EXISTING 1x6 DIAGONAL WOOD SHEATHING, PROTECT AS NECESSARY, REPAIR AS REQUIRED
2-615	EXISTING WOOD TRUSS TO REMAIN, PROTECT AS NECESSARY, REPAIR AS REQUIRED
2-706	EXISTING MEMBRANE ROOFING SYSTEM, PROTECT AS NECESSARY, REPAIR AS REQUIRED
2-711	EXISTING FASCIA, PROTECT AS NECESSARY
306.0	4" REINFORCED CONCRETE SLAB ON GRADE
600.0	2X WOOD BLOCKING
601.0	WOOD BLOCKING, BACKING, OR CONT. NAILER
603.1	PLYWOOD SHEATHING TO MATCH THE THICKNESS OF EXISTING
603.2	PLYWOOD SHEET, DIMESIONS AS SHOWN
604.0	PLYWOOD DECKING
618.0	2x WOOD FRAMING, SEE PLAN FOR WALL TYPE
619.0	WOOD FURRING STRIP
620.0	SCHEDULED WOOD HEADER
622.0	WOOD JOIST, SEE STRUCTURAL
702.1	ADDED RIGID INSULATION @FOUNDATION 3 1/2"
702.3	BATT INSULATION FULL THICKNESS
703.0	AIR/MOISTURE BARRIER
703.1	VAPOR BARRIER
800.0	DOOR AND FRAME
802.0	STOREFRONT SYSTEM
900.2	INFILL EXISTING DOOR OPENING TO MATCH EXISTING WALL TYPE
900.3	INFILL EXISTING CONC. FLOOR / FOUNDATION TO MATCH EXISTING
900.5	METAL SIDING SYSTEM
904.0	GYPSUM BOARD PAINTED WHERE EXPOSED
906.0	TILE BACKER BOARD
911.0	SCHEDULED CEILING
912.0	SCHEDULED BASE
921.0	2"X2" MOSAIC TILE
922.0	CERAMIC TILE, FIELD COLOR
1005.0	GRAB BAR
1200.0	MANUAL ROLLER SHADES
2206.2	TOILET, ADA COMFORT HEIGHT



3 WALL SECTION - 1

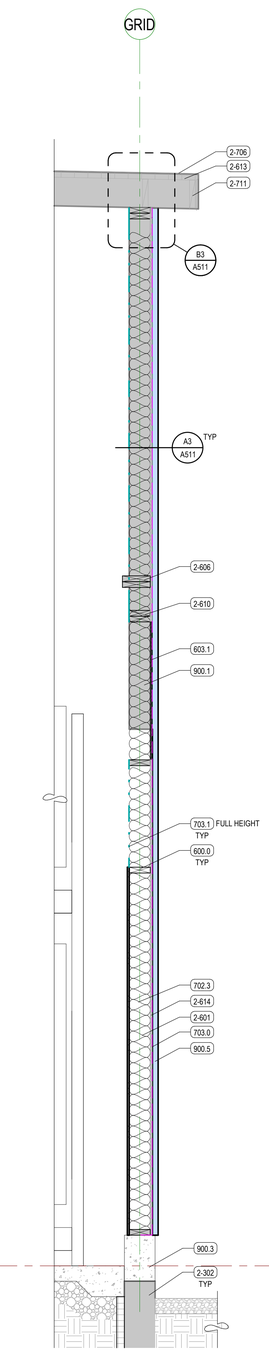
SCALE: 3/4" = 1'-0"





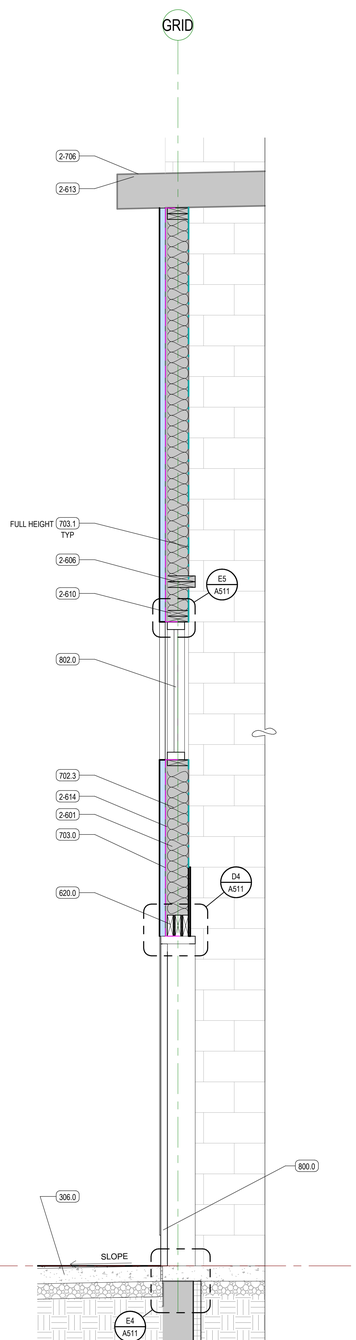
1 WALL SECTION - 2

SCALE: 3/4" = 1'-0"



2 WALL SECTION - 3

SCALE: 3/4" = 1'-0"



A5 WALL SECTION - 4

SCALE: 3/4" = 1'-0"

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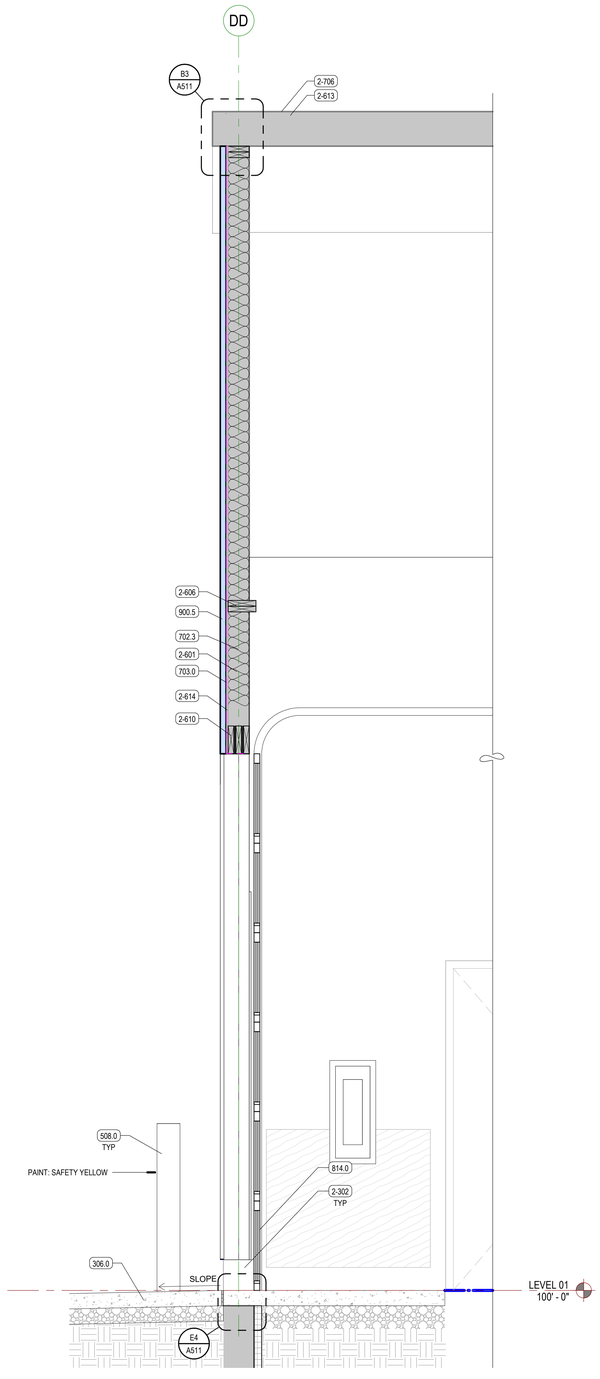
TCSD WAREHOUSE 649 REMODEL

TOOELE COUNTY SCHOOL DISTRICT
PROJECT ADDRESS: 180 GARNET ST. TOOELE, UTAH 84074

CONSTRUCTION DOCUMENT

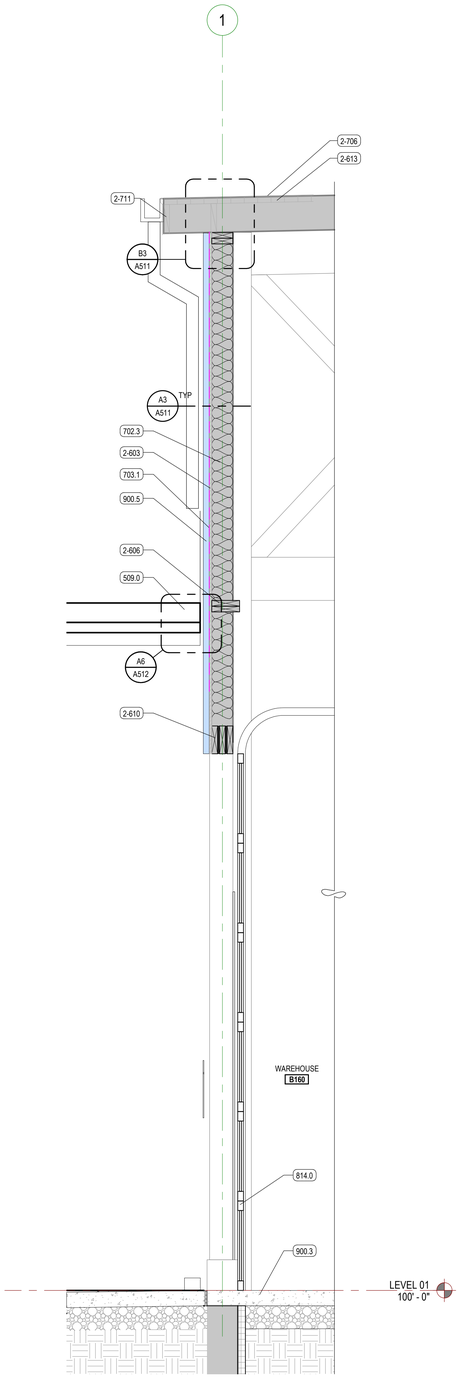
WALL SECTIONS

A351



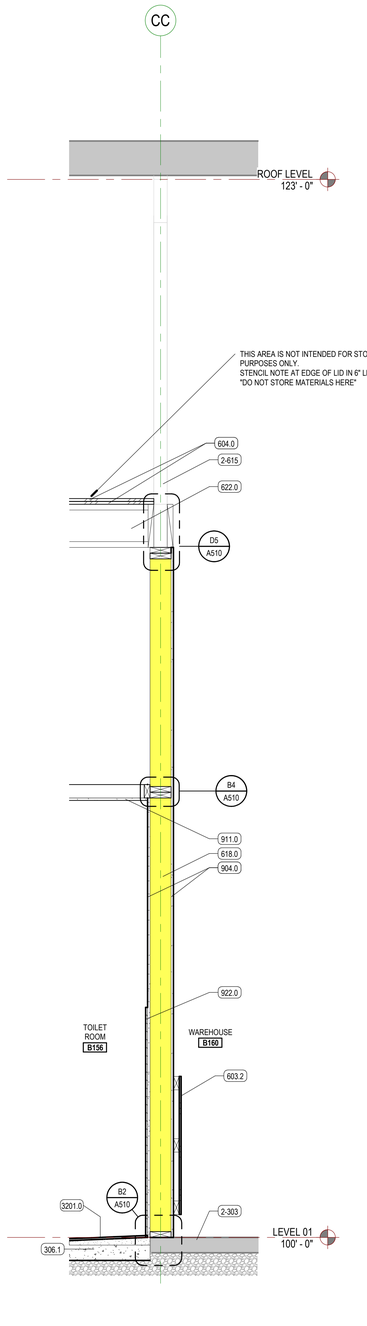
A1 WALL SECTION - 5

SCALE: 3/4" = 1'-0"



A2 WALL SECTION - 6

SCALE: 3/4" = 1'-0"



A4 WALL SECTION - 7

SCALE: 3/4" = 1'-0"

KEYED NOTES

2-302	EXISTING CONCRETE FOUNDATION WALL, PROTECT AS NECESSARY, REPAIR AS REQUIRED
2-303	EXISTING CONCRETE SLAB ON GRADE, PROTECT AS NECESSARY, REPAIR AS REQUIRED
2-601	EXISTING WOOD FRAMED WALL, PROTECT AS NECESSARY, REPAIR AS REQUIRED, F.V.
2-603	EXISTING WOOD SHEATHING, PROTECT AS NECESSARY, REPAIR AS REQUIRED
2-606	EXISTING WOOD TOP PLATE, PROTECT AS NECESSARY, REPAIR AS REQUIRED
2-610	EXISTING WOOD HEADER, PROTECT AS NECESSARY, REPAIR AS REQUIRED
2-613	EXISTING WOOD STRUCTURAL DECK, PROTECT AS NECESSARY, REPAIR AS REQUIRED
2-614	EXISTING 1x6 DIAGONAL WOOD SHEATHING, PROTECT AS NECESSARY, REPAIR AS REQUIRED
2-615	EXISTING WOOD TRUSS TO REMAIN, PROTECT AS NECESSARY, REPAIR AS REQUIRED
2-706	EXISTING MEMBRANE ROOFING SYSTEM, PROTECT AS NECESSARY, REPAIR AS REQUIRED
2-711	EXISTING FASCIA, PROTECT AS NECESSARY
306.0	4" REINFORCED CONCRETE SLAB ON GRADE
306.1	4" REINFORCED CONCRETE SLAB ON GRADE, 2" RECESSED
508.0	METAL BOLLARD
509.0	SCHEDULED METAL ROOF
603.2	PLYWOOD SHEET, DIMESIONS AS SHOWN
604.0	PLYWOOD DECKING
618.0	2x WOOD FRAMING, SEE PLAN FOR WALL TYPE
622.0	WOOD JOIST, SEE STRUCTURAL
702.3	BATT INSULATION FULL THICKNESS
703.0	AIR/MOISTURE BARRIER
703.1	VAPOR BARRIER
814.0	SECTIONAL OVERHEAD DOOR @EXISTING OPENING, TYP.
900.3	INFILL EXISTING CONC. FLOOR / FOUNDATION TO MATCH EXISTING
900.5	METAL SIDING SYSTEM
904.0	GYPSUM BOARD PAINTED WHERE EXPOSED
911.0	SCHEDULED CEILING
922.0	CERAMIC TILE, FIELD COLOR
3201.0	PAVING, ASPHALT WITH SUBBASE

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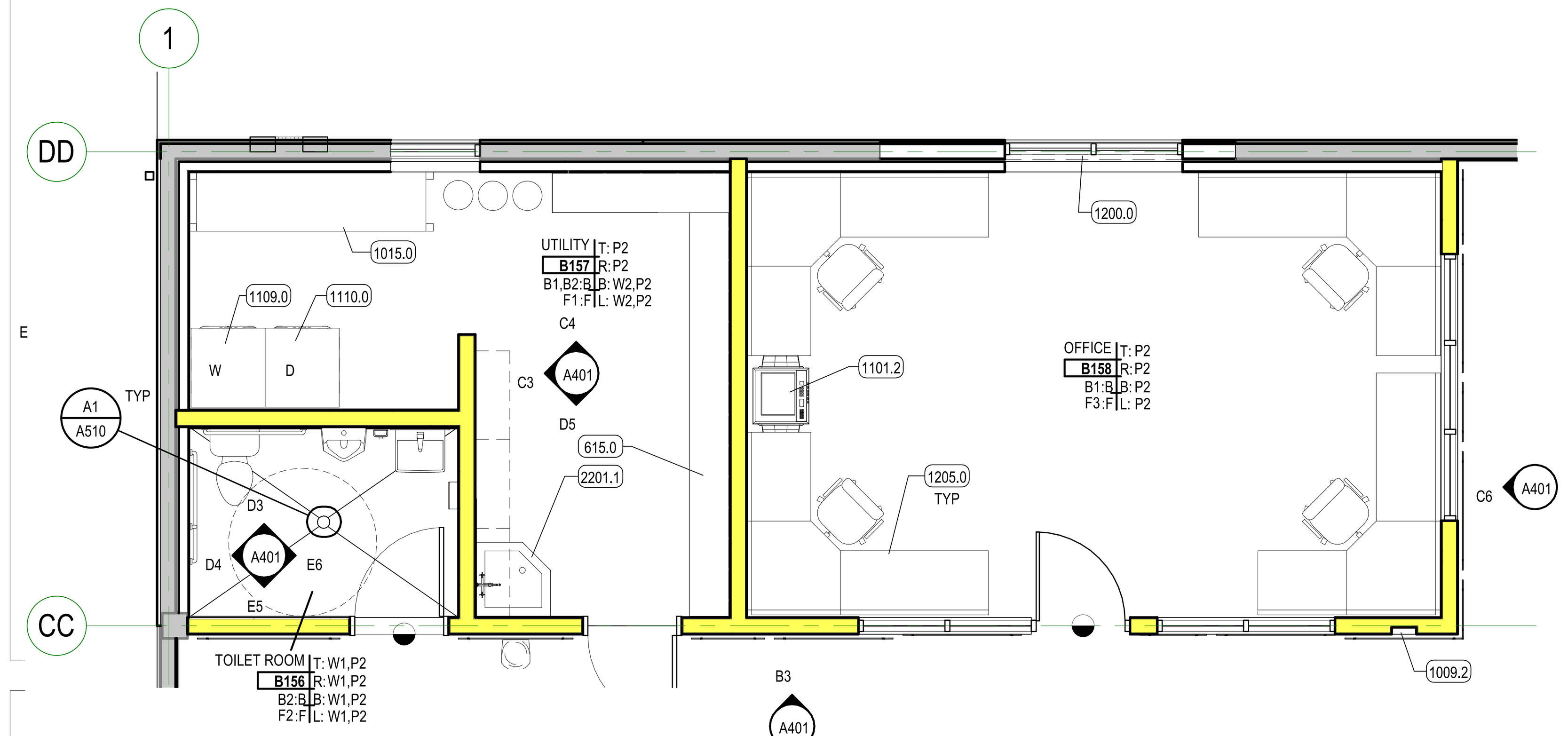
TCSD WAREHOUSE 649 REMODEL

TOOELE COUNTY SCHOOL DISTRICT
PROJECT ADDRESS: 180 GARNET ST. TOOELE, UTAH 84074

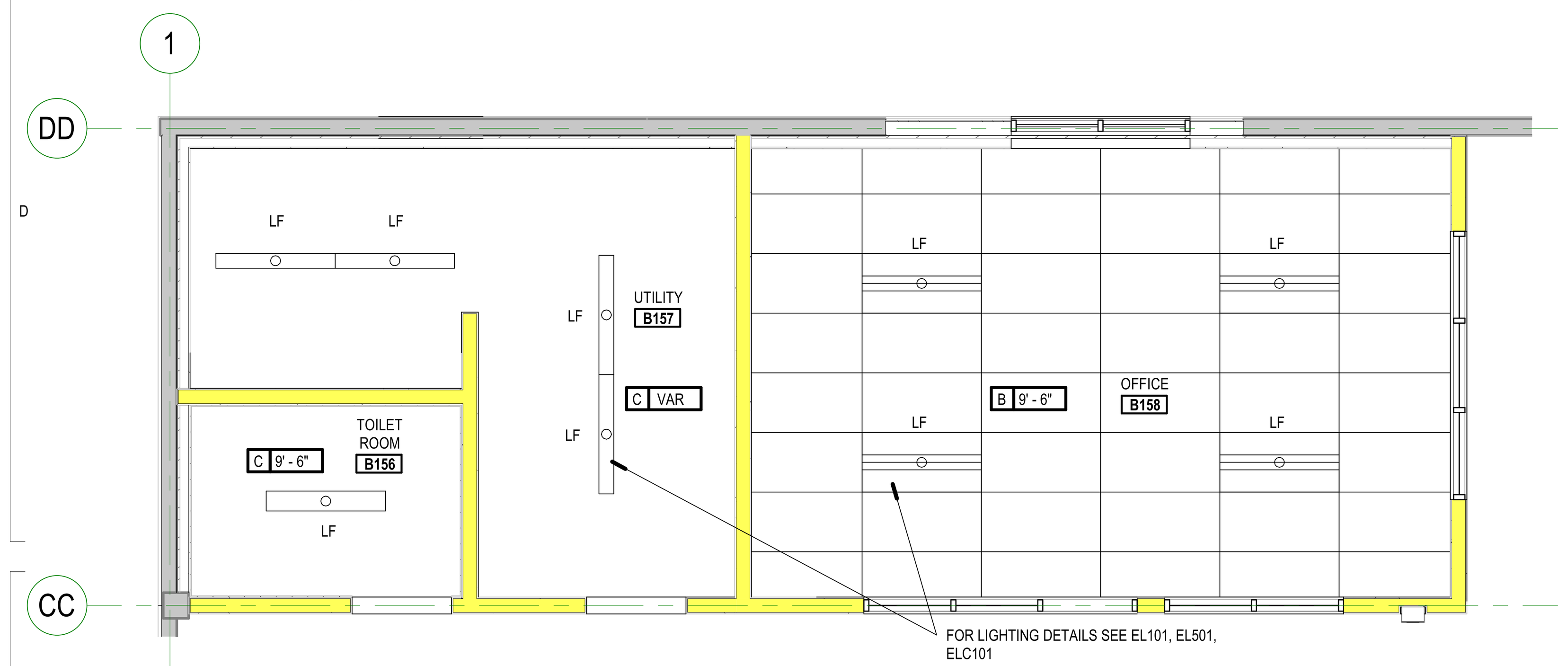
CONSTRUCTION DOCUMENT

WALL SECTIONS

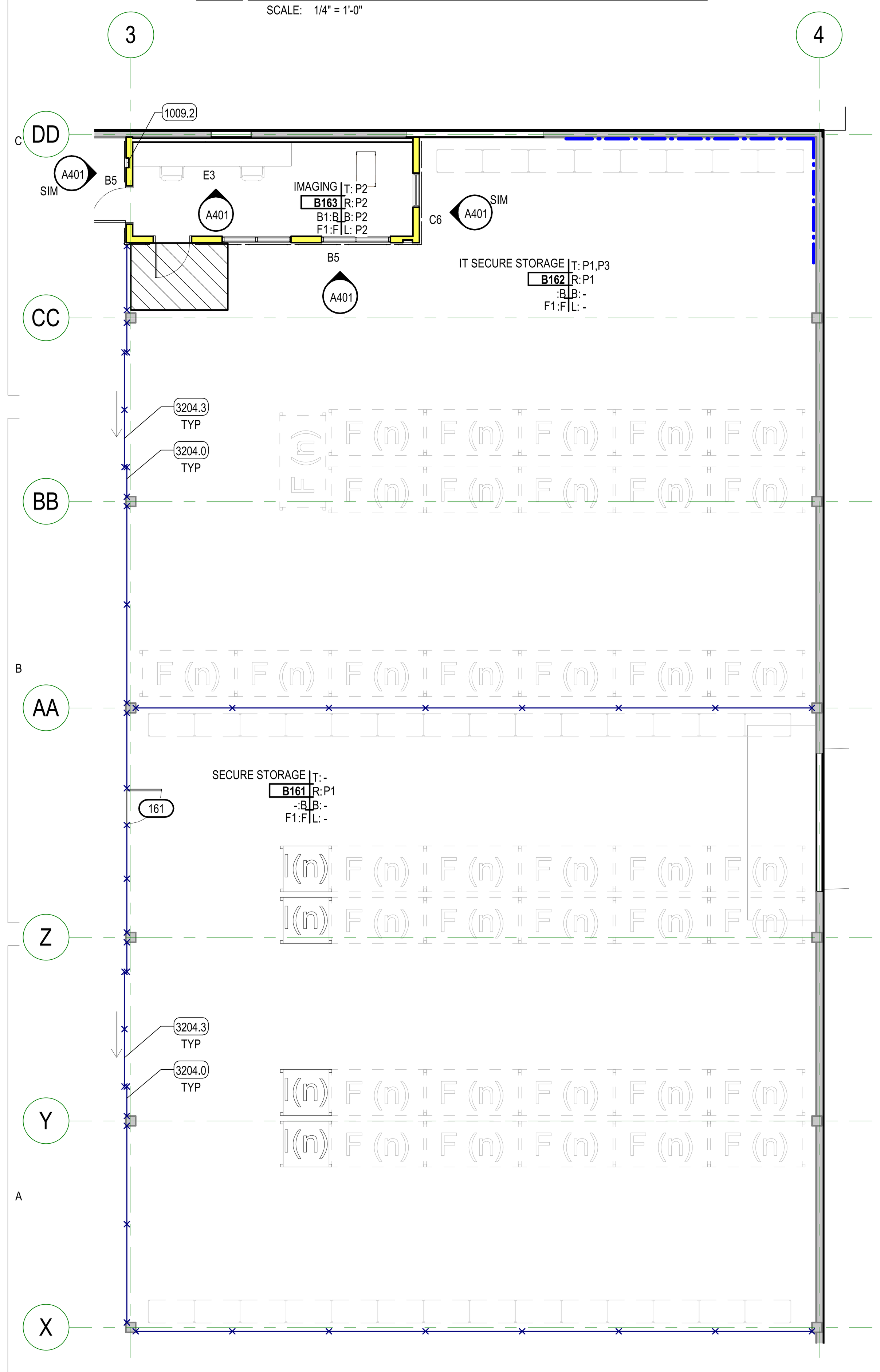
A352



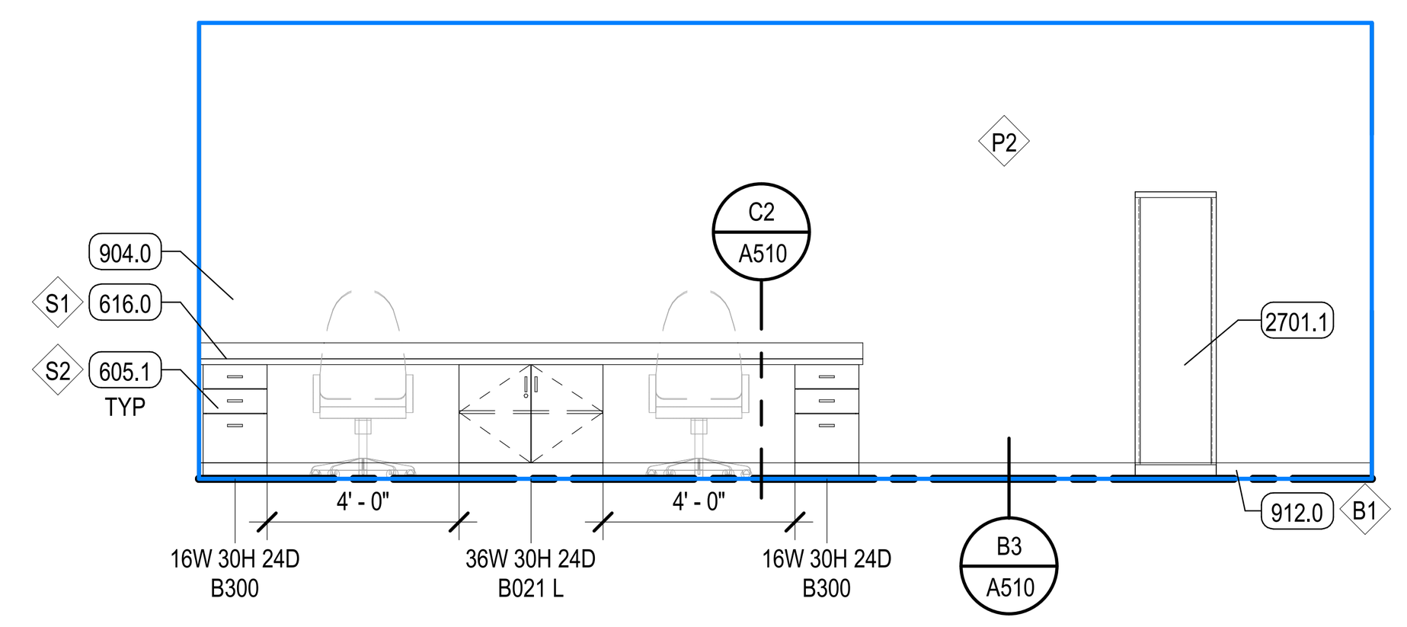
D1 ENLARGED PLAN
SCALE: 1/4" = 1'-0"



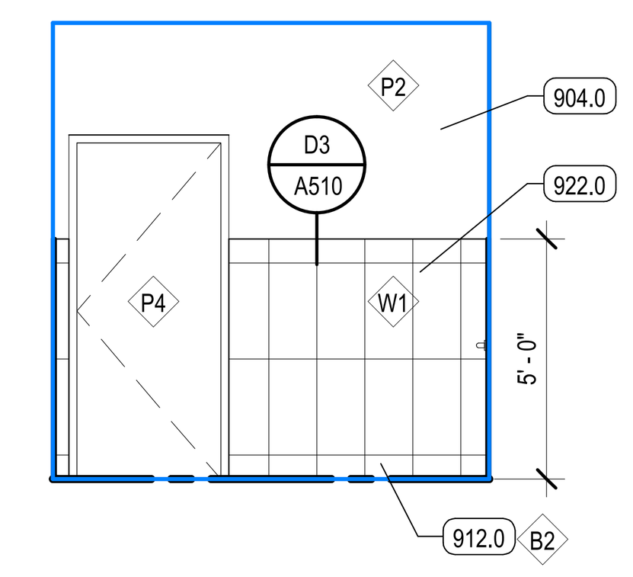
C1 ENLARGED RCP
SCALE: 1/4" = 1'-0"



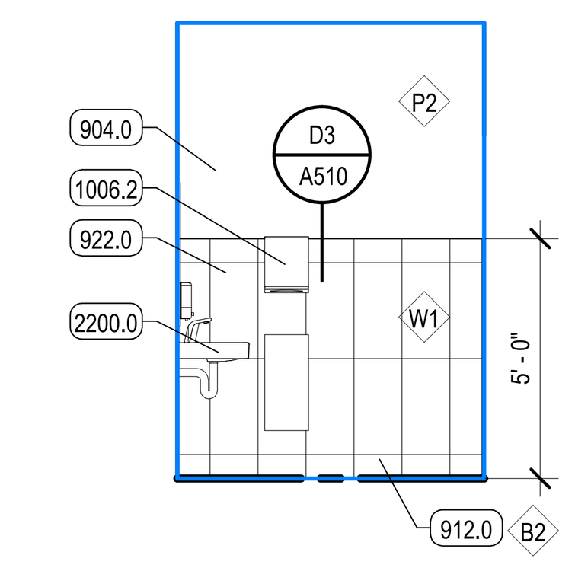
A1 ENLARGED PLAN - STORAGES
SCALE: 1/8" = 1'-0"



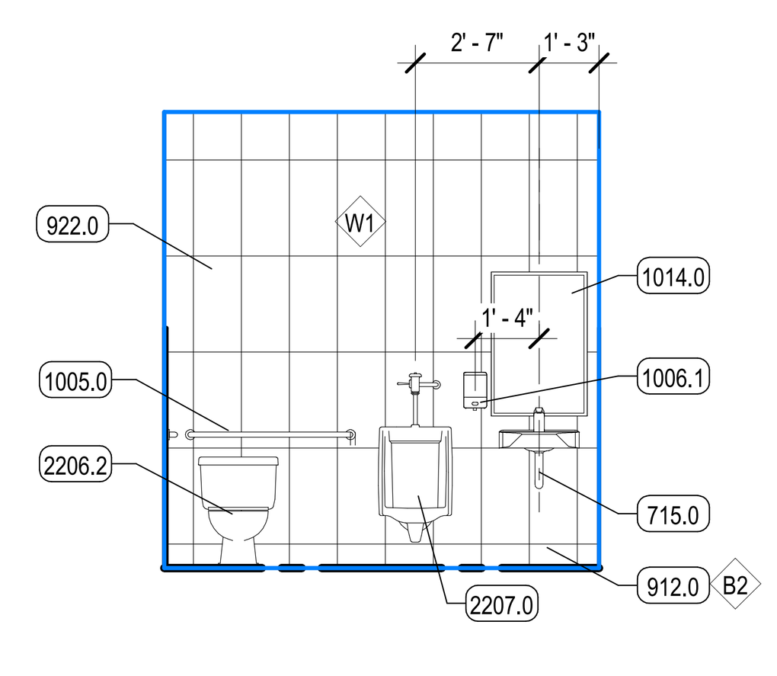
E3 NORTH ELEVATION - IMAGING
SCALE: 1/4" = 1'-0"



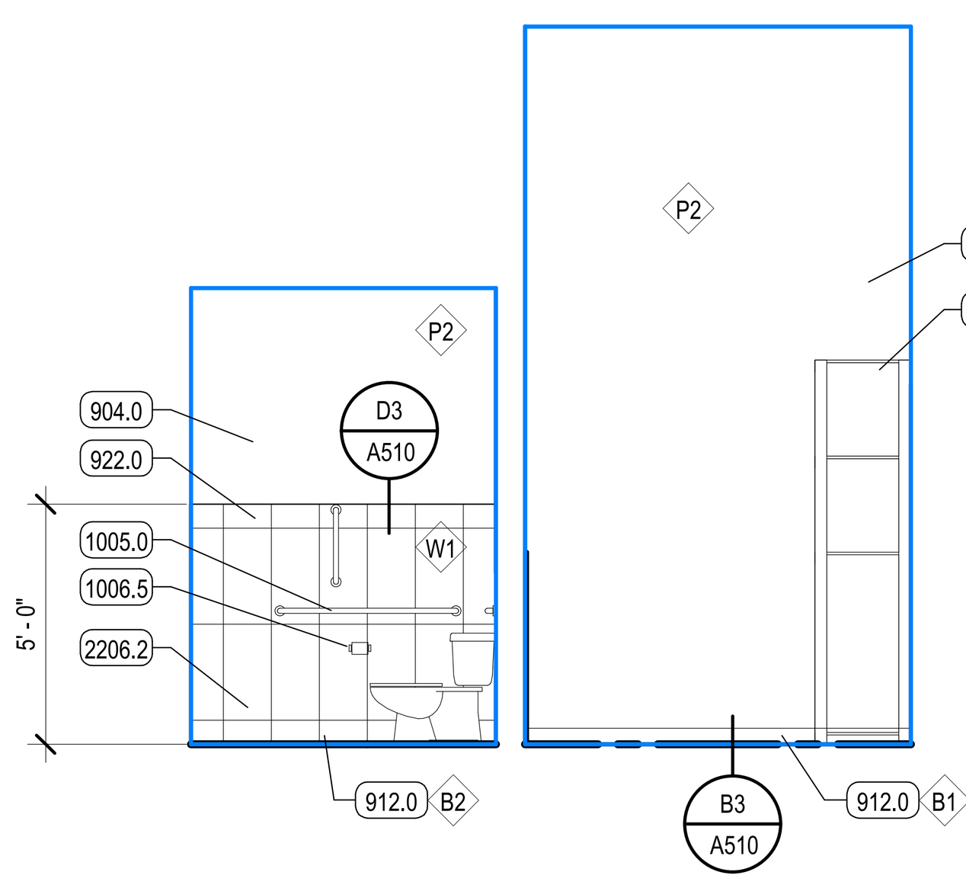
E5 SOUTH ELEVATION - TR
SCALE: 1/4" = 1'-0"



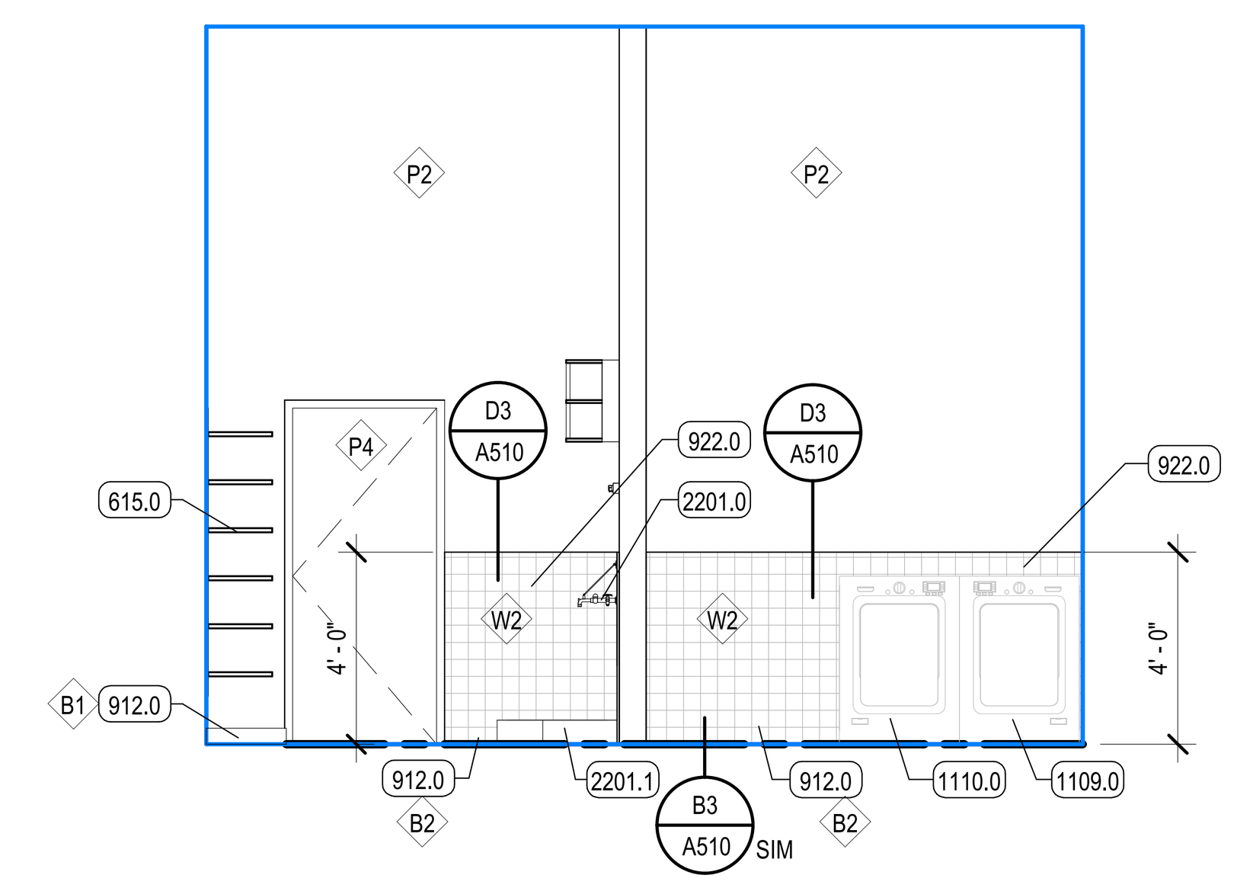
E6 EAST ELEVATION - TR
SCALE: 1/4" = 1'-0"



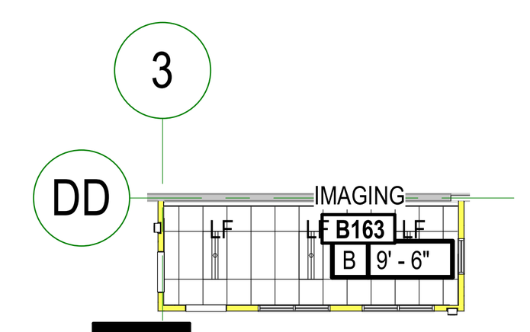
D3 NORTH ELEVATION - TR
SCALE: 1/4" = 1'-0"



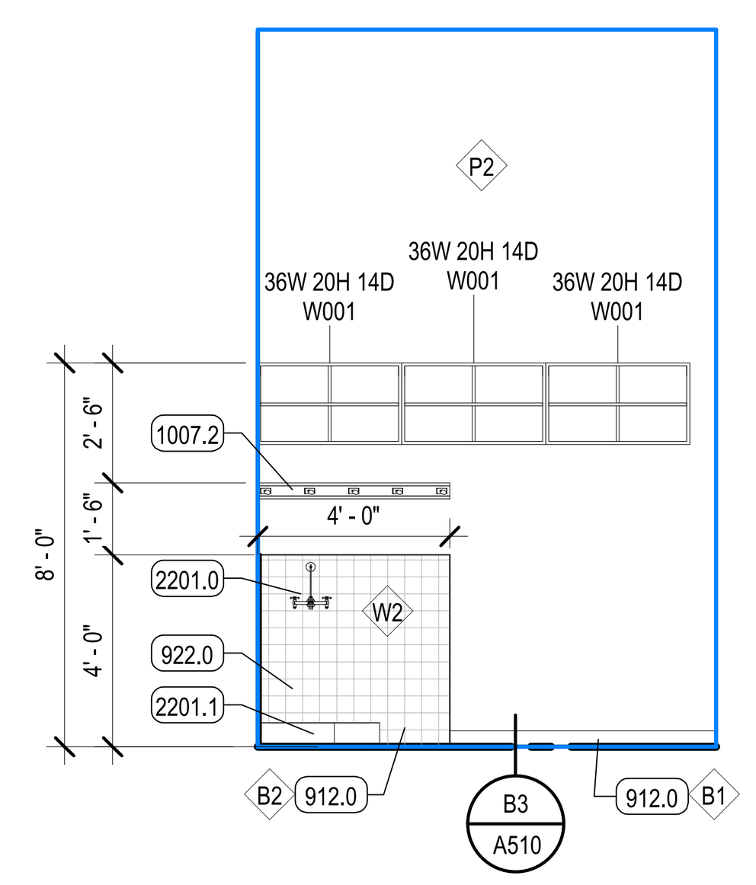
D4 WEST ELEVATION - TR
SCALE: 1/4" = 1'-0"



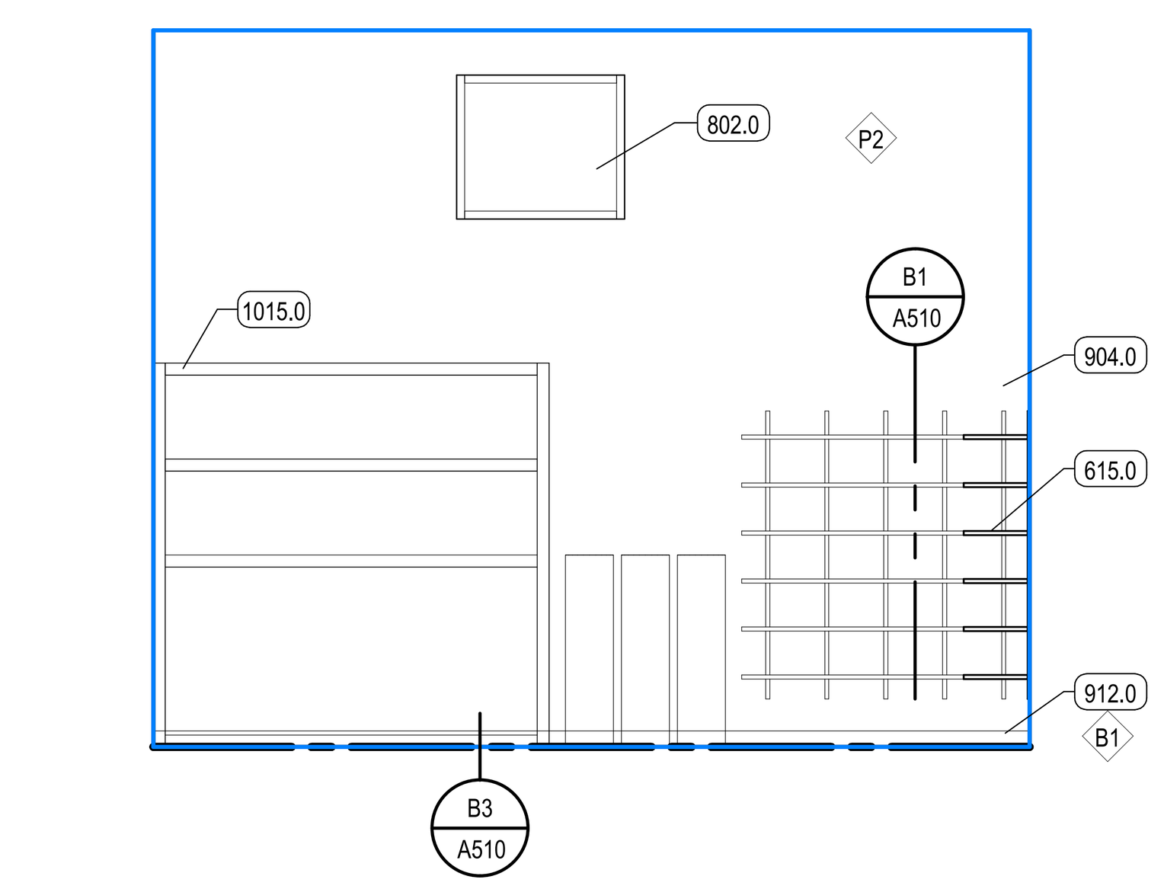
D5 SOUTH ELEVATION - UTILITY
SCALE: 1/4" = 1'-0"



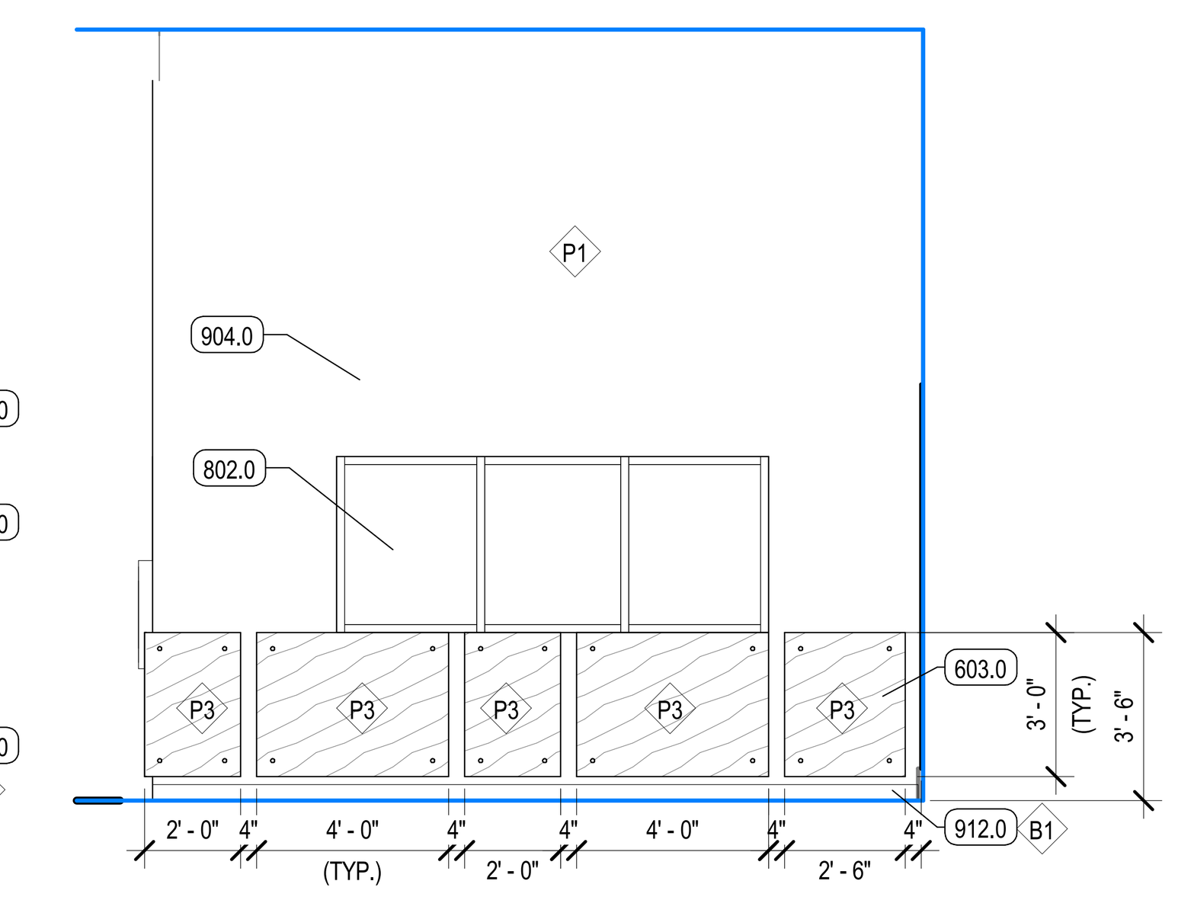
C2 RCP - IMAGING
SCALE: 1/16" = 1'-0"



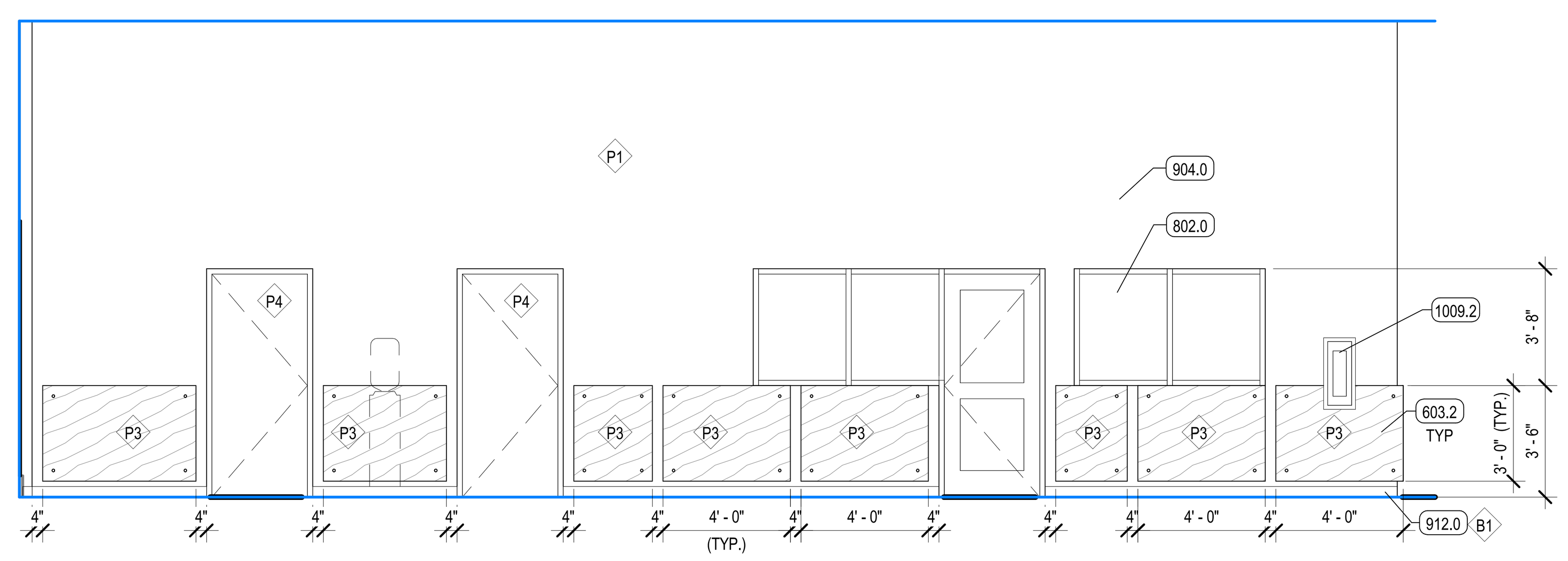
C3 WEST ELEV. - UTILITY
SCALE: 1/4" = 1'-0"



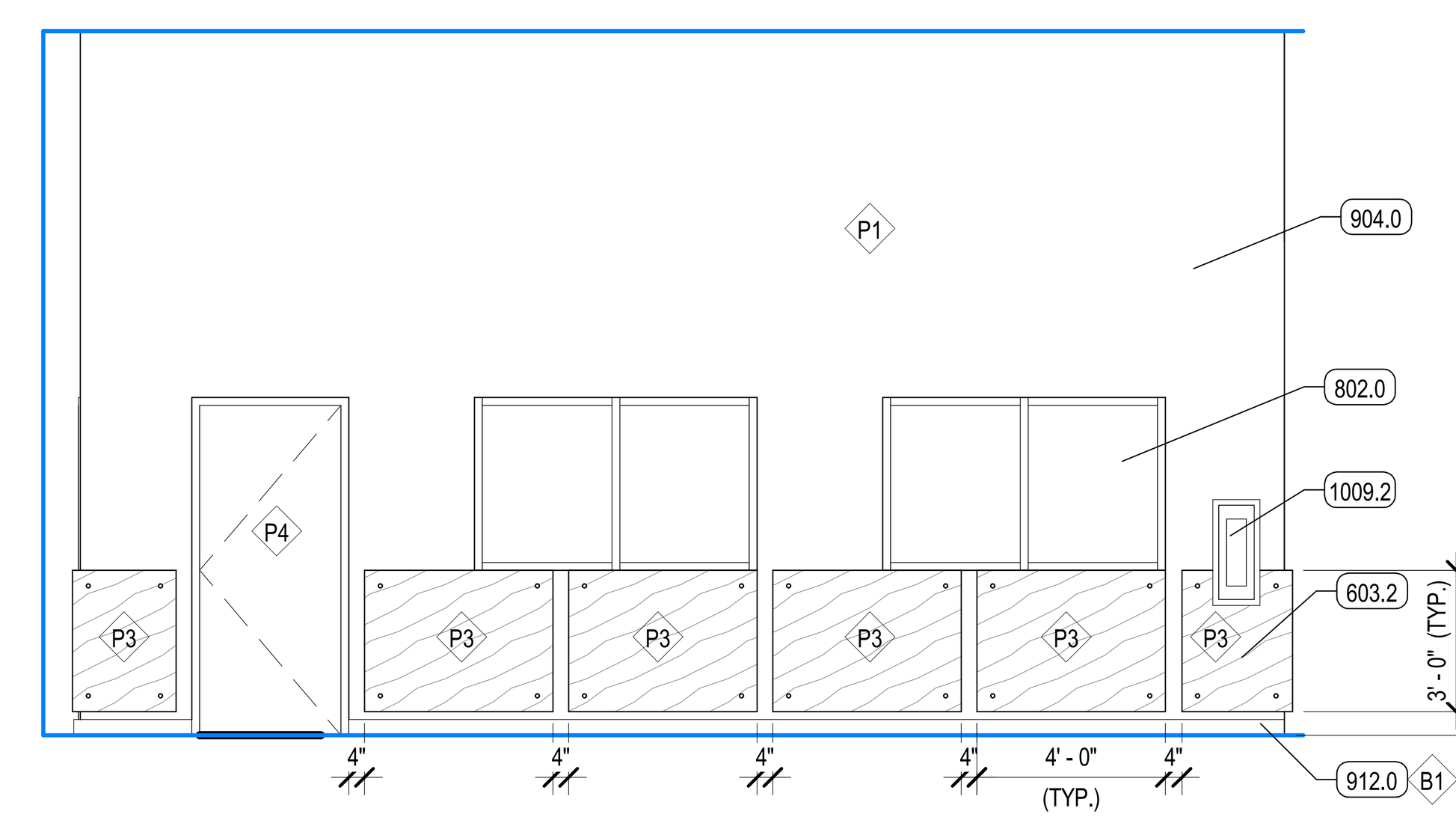
C4 NORTH ELEVATION - UTILITY
SCALE: 1/4" = 1'-0"



C6 INTERIOR ELEVATION - 2
SCALE: 1/4" = 1'-0"



B3 INTERIOR ELEVATION - 1
SCALE: 1/4" = 1'-0"



B5 INTERIOR ELEVATION - IMAGING
SCALE: 1/4" = 1'-0"

KEY - FINISH

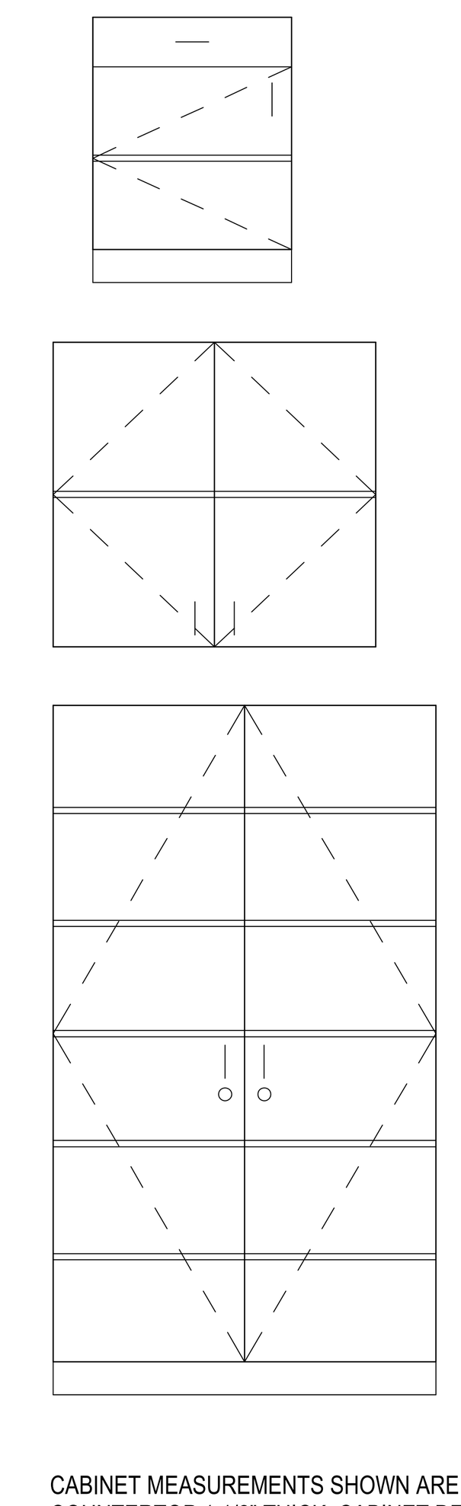
Key Name	Finish - Description	Finish - Manufacturer	Finish - Name	Finish - Color	Finish - Comments
FLOOR					
F1	SEALED CONCRET	SHERWIN WILLIAMS	LIGHT GRAY TINTED SEALER	SW 7658 GRAY CLOUDS	OR EQUAL
F2	PORCELAIN TILE - FIELD	DALTILE	2"X2" MOSAICS	D200 DESERT GRAY SPECKLE	GROUT: MAPLE 107 IRON
F3	CARPET TILE	SHAW	COLLECTION: IN SYNC	STYLE: 5T353	24x24 CARPET TILE
BASE					
B1	RUBBER BASE	ROPPE	4" RUBBER BASE, CUT TO FIT	114 LUNAR DUST	OR EQUAL
B2	TILE BASE	DALTILE	TO MATCH ADJACENT WALL TILE	TO MATCH ADJACENT WALL TILE	
PAINT					
P1	GENERAL - FIELD	SHERWIN WILLIAMS	LIGHT GRAY	SW 7658 GRAY CLOUDS	
P2	GENERAL - FIELD	SHERWIN WILLIAMS	WHITE	SW 7005 PURE WHITE	EPOXY PAINT IN TOILET ROOM
P3	CLEAR SEALED				
P4	HOLLOW METAL DOORS & FRAMES	SHERWIN WILLIAMS	MEDIUM GRAY	SW 7673 PEWTER CAST	OR EQUAL
P5	OVERHEAD DOORS	SHERWIN WILLIAMS	MEDIUM GRAY	SW 7673 PEWTER CAST	OR EQUAL
SURFACE					
S1	PLASTIC LAMINATE COUNTER TOPS	WILSONART	PEARL SOAPSTONE	COLOR: 4886-38	OR EQUAL
S2	PLASTIC LAMINATE CABINETS	WILSONART	FUSION MAPLE	COLOR: 7909-60	OR EQUAL
S3	SOLID SURFACE WINDOW SILLS	STARON	ASPEN CONCRETE	COLOR: AC629	OR EQUAL
WALL					
W1	PORCELAIN TILE - FIELD	DALTILE	12"X24"	FABRIC ART MK73 MODERN KALEIDOSCOPE	GROUT: MAPLE 107 IRON
W2	CERAMIC TILE - FIELD	DALTILE	4"X4"	MT PEARL WHITE DT - 0799	OR EQUAL
EXTERIOR					
M1	METAL WALL PANEL	MBCI	WHITE	COLOR:SIGNATURE 200 POLAR WHITE	OR EQUAL
M2	METAL WALL PANEL	MBCI	GRAY	COLOR:SIGNATURE 200 ASH GRAY	OR EQUAL
M3	METAL WALL PANEL	MBCI	BLUE	COLOR:SIGNATURE 200 COBALT BLUE	OR EQUAL
M4	METAL WALL PANEL	MBCI		COLOR:	OR EQUAL
M5	RAIN GUTTER & DOWNSPOUTS	MBCI	GRAY	COLOR:SIGNATURE 200 ASH GRAY	OR EQUAL

KEYED NOTES

603.0	PLYWOOD SHEATHING
603.2	PLYWOOD SHEET, DIMESIONS AS SHOWN
605.1	MILLWORK, WALL MOUNTED BASE CABINET WITH BLOCKING
615.0	ADJUSTABLE SHELVING
616.0	COUNTERTOP, PLASTIC LAMINATE
715.0	INSULATED LAVATORY DRAIN GUARD @ ACCESSIBLE LOCATIONS
802.0	STOREFRONT SYSTEM
904.0	GYPSUM BOARD PAINTED WHERE EXPOSED
912.0	SCHEDULED BASE
922.0	CERAMIC TILE, FIELD COLOR
1005.0	GRAB BAR
1006.1	DISPENSER, SOAP, NIC
1006.2	DISPENSER, PAPER TOWELS, NIC
1006.5	DISPENSER, TOILET PAPER
1007.2	RACK, MOP
1009.2	SEMI RECESSED FIRE EXTINGUISHER CABINET
1014.0	MIRROR, 24X36
1015.0	OPEN RACK STORAGE RACKING, NIC
1101.2	COPIER, NIC
1109.0	WHASER, NIC
1110.0	DRYER, NIC
1200.0	MANUAL ROLLER SHADES
1205.0	SYSTEM FURNITURE, NIC
2200.0	SINK + FAUCET
2201.0	MOP SINK FAUCET
2201.1	MOP SINK CONT. CURB W/ INTEGRAL DRAIN
2206.2	TOILET, ADA COMFORT HEIGHT
2207.0	URINAL
2701.1	COMMUNICATIONS RACK BY OWNER
3204.0	CHAIN LINK FENCE
3204.3	CHAIN LINK FENCING GATE

ARCHITECTURAL MILLWORK KEY

EXAMPLE:



B 1 1 1 **
- ACCESSORY (IF NOTED)
- ONE ADJUSTABLE SHELF
- ONE DOOR
- ONE DRAWER
- BASE CABINET *

W 0 2 1 **
- ACCESSORY (IF NOTED)
- ONE ADJUSTABLE SHELF
- TWO DOORS
- ZERO DRAWERS
- WALL CABINET *

T 0 2 5 L
- ACCESSORY (IF NOTED)
- FIVE ADJUSTABLE SHELVES
- TWO DOORS
- ZERO DRAWERS
- TALL CABINET *

* NOTE:

SB	DENOTES SINK BASE CABINET
TW	DENOTES TALL WARDROBE CABINET
FMD	DENOTES FRAMED PERFORATED METAL PANEL DOOR
FGD	DENOTES FRAMED GLASS PANEL DOOR

** NOTE:

L	DENOTES LOCKS AT DOOR (S) / DRAWER (S)
F	DENOTES FILE DRAWER (S)

CABINET MEASUREMENTS SHOWN ARE ACTUAL SIZES. BASE CABINET HEIGHTS ALLOW FOR A COUNTERTOP 1 1/2" THICK. CABINET DEPTHS ARE MEASURED FROM THE BACK TO THE FACE OF THE DOOR OR DRAWER FRONT (WHERE APPLICABLE)

ALL CABINET INTERIORS, WHETHER CONCEALED BEHIND DOORS OR OPEN, ARE STANDARD MELAMINE LAMINATE AS PER SPECIFICATIONS.

MILLWORK LEGEND

1. MILLWORK DIMENSION NUMBERS ARE WIDTH X HEIGHT X DEPTH.
2. ALL MILLWORK DIMENSIONED FROM BASE TO TOP OF IDENTIFIED COUNTERTOP, TYP
3. CABINET DEPTHES ARE MEASURED FROM THE WALL TO THE FACE OF THE DOOR OR DRAWER FRONT (WHERE APPLICABLE).
4. PROVIDE BASE AT ALL CABINET TOE SPACE, UNLESS NOTED OTHERWISE.
5. PROVIDE GROMMET WHERE "G" IS LABELED ON PLANOS OR ELEVATIONS.
6. ALL COUNTERTOPS TO HAVE A 4" BACKSPLASH, UNLESS NOTED OTHERWISE, TO MATCH COUNTERTOP, ON BACK AND SIDE WALLS.
7. PROVIDE FILLER PANELS TO SEAL SIDES AND TOPS OF ALL CABINETS PLACED AT AN ANGLE TO ADJACENT WALL(S).
8. ALL MILLWORK TO FINISHED ON ENDS, TYP.
9. CONTRACTOR TO PROVIDE BLOCKING BEHIND ALL CABINETS, COAT RACKS, PENCIL SHARPENER BLOCKS, T.V. BRACKETS AND PROJECTION SCREENS AS WELL AS ALL WALL MOUNTED ACCESSORIES, INCLUDING WHITE BOARDS, TACKBOARDS, TOILET AND URINAL PARTITIONS AND TOILET ROOM ACCESSORIES, ETC.... NOTE: ONLY 2X WOOD BLOCKING IS ACCESPTABLE BEHIND MILLWORK AND TOILET ROOM PARTITIONS.
10. REFER TO SHEET **A400** FOR FINISH COLORS ON ALL MILLWORK AND CASEWORK.

CEILING LEGEND

- B- SUSPENDED 2' X 4' ACOUSTICAL LAY-IN TILE CEILING
- C- SUSPENDED 5/8" GYP. BD. CEILING SYSTEM - (1 LAYER) PAINTED
- J- EXTERIOR METAL SOFFIT SYSTEM

CEILING SYMBOLS

ELECTRICAL

- 2'X4' FLUORESCENT FIXTURE
- 2'X2' FLUORESCENT FIXTURE
- FLUORESCENT STRIP FIXTURE
- EXIT SIGN, SINGLE-SIDED
- EXIT SIGN, DOUBLE-SIDED
- FIRE ALARM
- SPEAKER
- SMOKE DETECTOR
- WIRELESS INTERNET

MECHANICAL

- SUPPLY GRILLE
- RETURN GRILLE
- EXHAUST GRILLE
- LINEAR DIFFUSER
- SPRINKLER HEAD - CEILING MOUNT
- SPRINKLER HEAD - WALL MOUNT

GENERAL CEILING NOTES

1. REFER TO DETAIL **C6/A530** FOR TYPICAL CEILING SUSPENSION & SEISMIC BRACING
2. REFER TO DETAIL **A6/A530** FOR TYPICAL SUSPENDED GYP. BOARD CEILINGS
3. ALL UNIDENTIFIED CEILING TYPES ON THE PLANS SHALL BE TYPE " A" AT 9'-4" A.F.F.
4. GRID SUSPENSION SYSTEMS SHALL BE CENTERED WITHIN AREAS INDICATED, UNLESS NOTED OTHERWISE
5. PAINT ALL EXPOSED STRUCTURE, MECHANICAL, DUCTS, ELECTRICAL WORK, PIPING, ETC. ALL VISIBLE ELEMENTS TO BE PAINTED
6. REFER TO ARCHITECTURAL DRAWINGS FOR LOCATION OF MECHANICAL GRILLES, AND TO MECHANICAL DRAWINGS FOR QUANTITIES AND TYPES
7. REFER TO ARCHITECTURAL DRAWINGS FOR LOCATIONS OF LIGHT FIXTURES AND TO ELECTRICAL DRAWINGS FOR QUANTITY AND TYPES
8. MECHANICAL AND ELECTRICAL CONTRACTORS TO COORDINATE WORK WITH SPRINKLER CONTRACTOR TO AVOID CONFLICTS IN FIELD
9. ALL CEILING HEIGHTS ARE ELEVATION ABOVE TOP OF CONCRETE FLOOR SLAB
10. ALL TYPE C CEILINGS IN RESTROOMS, LOCKER ROOMS, SHOWERS, AND WET AREAS TO BE EPOXY PAINTED

VCBO ARCHITECTURE
524 SOUTH 600 EAST
SALT LAKE CITY, UT 84102
801.575.8800
VCBO.COM

REV	DATE	DESCRIPTION

VCBO NUMBER: 20385
CLIENT NUMBER: -
DATE: 2021-08-16

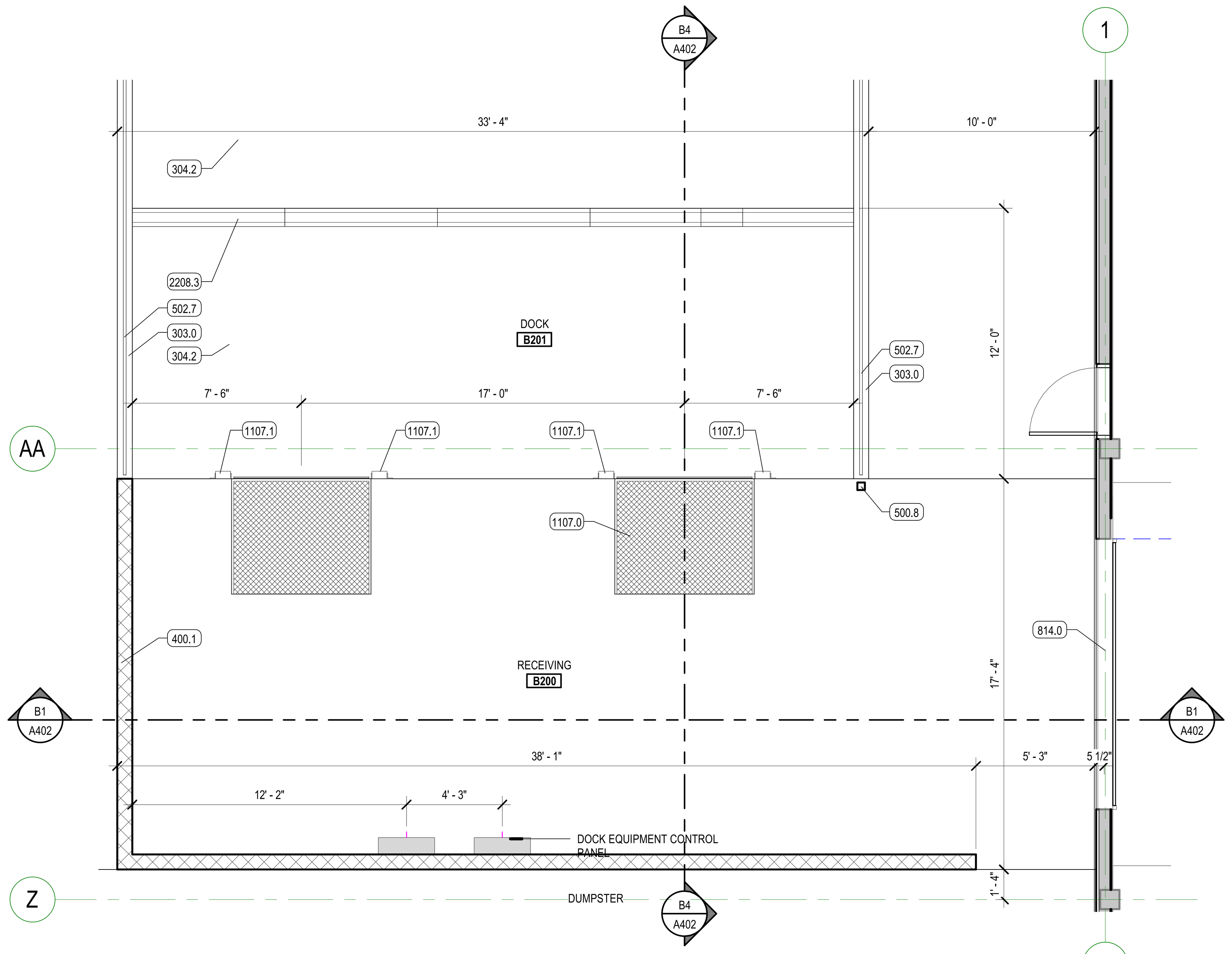
TCSD WAREHOUSE 649 REMODEL

TOOELE COUNTY SCHOOL DISTRICT
PROJECT ADDRESS: 180 GARNET ST. TOOELE, UTAH 84074
CONSTRUCTION DOCUMENT

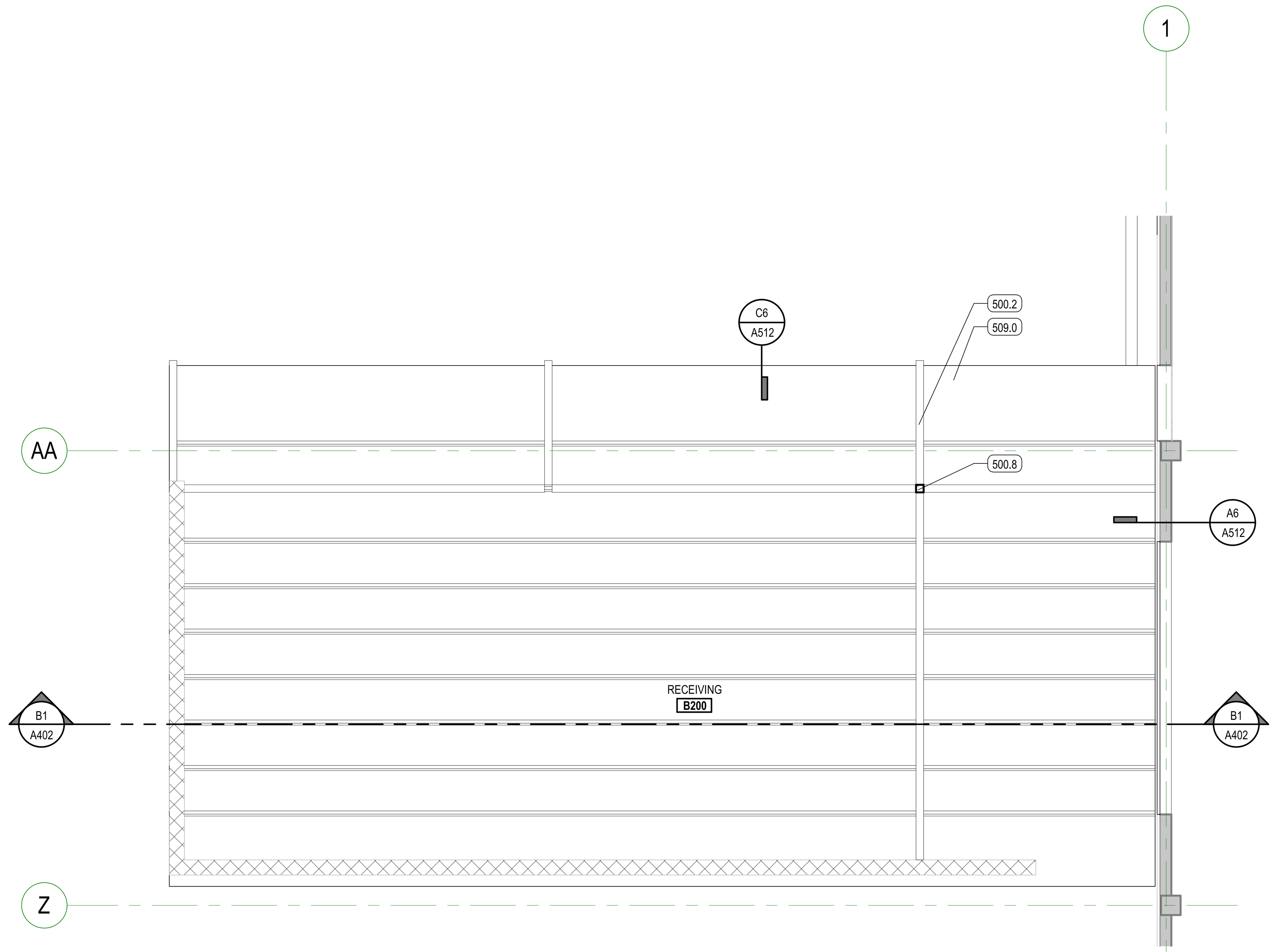
ENLARGED PLANS + ELEVATIONS

KEYED NOTES

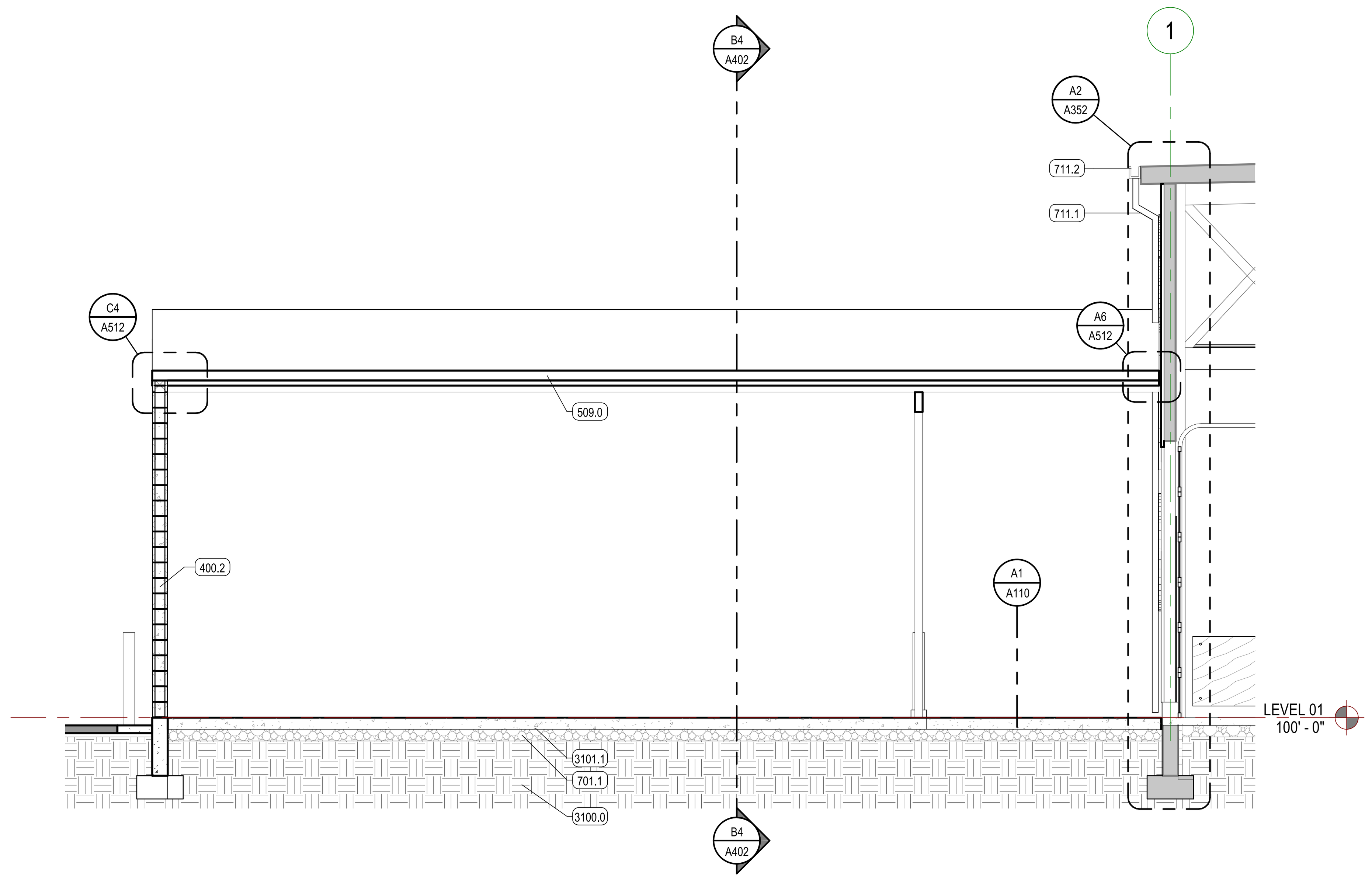
301.0	REINFORCED CONCRETE FOOTING
302.0	REINFORCED CONCRETE FOUNDATION WALL, ARCHITECTURAL GRADE FINISH WHERE EXPOSED
303.0	REINFORCED CONCRETE WALL, ARCHITECTURAL GRADE FINISH WHERE EXPOSED
304.2	6" REINFORCED CONCRETE SLAB/SIDEWALK PER ENGINEER'S SPECIFICATIONS
400.1	4"X8"X16" CMU
400.2	8"X8"X16" CMU
500.2	STEEL BEAM GALV. U.N.O.
500.8	STEEL COLUMN PAINTED WHERE EXPOSED
502.7	1 1/2" METAL PIPE GUARDRAIL GALV. U.N.O.
509.0	SCHEDULED METAL ROOF
509.1	METAL PURLIN
701.1	UNDERSLAB VAPOR BARRIER. LOCATE BELOW 6" FREE DRAINING GRAVEL BED, TYP.
711.1	METAL ROOF DOWNSPOUT
711.2	METAL GUTTER
814.0	SECTIONAL OVERHEAD DOOR @EXISTING OPENING, TYP.
1107.0	MANUAL LOADING DOCK LEVELER
1107.1	LOADING DOCK BUMPER
2208.3	DRAIN, TRENCH
3100.0	ENGINEERED FILL
3101.0	FREE DRAINING GRAVEL BASE
3101.1	6" MINIMUM X 3/4" MINUS CRUSHED FREE DRAINING GRAVEL BASE. INSTALL OVER WEED BARRIER AT SERVICE YARD AREA, ALL OTHER LOCATIONS DO NOT REQUIRE WEED BARRIER, TYP.



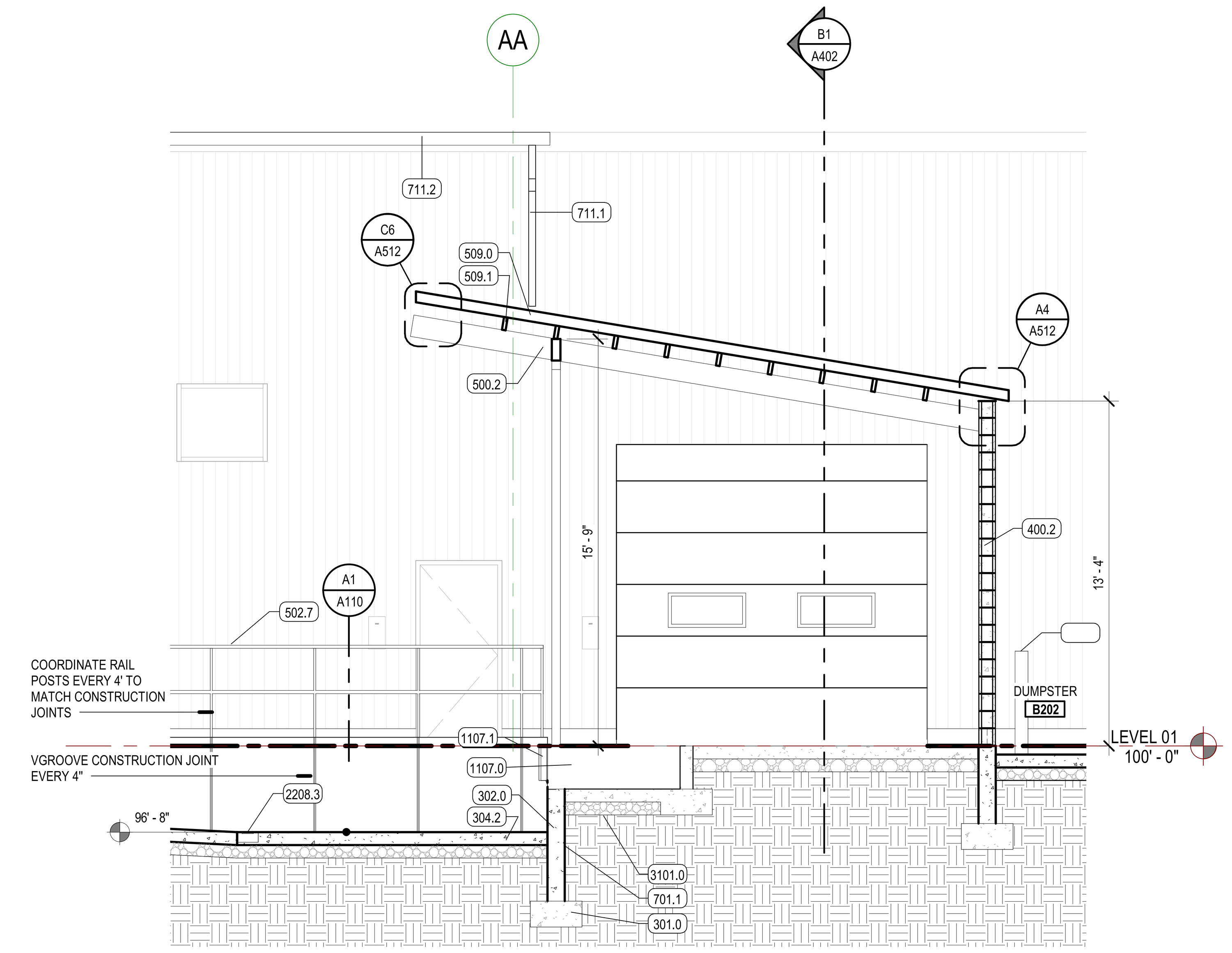
D1 PLAN - ANNOTATED - RECEIVING
SCALE: 1/4" = 1'-0"



D4 ENLARGED RCP - RECEIVING
SCALE: 1/4" = 1'-0"



B1 SECTION A - RECEIVING
SCALE: 1/4" = 1'-0"



B4 SECTION B - RECEIVING
SCALE: 1/4" = 1'-0"

VCBO ARCHITECTURE
524 SOUTH 600 EAST
SALT LAKE CITY, UT 84102
801.575.8800
VCBO.COM

REV | DATE | DESCRIPTION

VCBO NUMBER: 20385
CLIENT NUMBER: -
DATE: 2021-08-16

TCSD WAREHOUSE 649 REMODEL

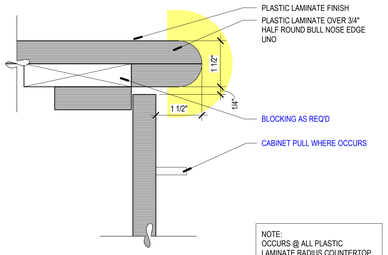
TOOELE COUNTY SCHOOL DISTRICT
PROJECT ADDRESS: 180 GARNET ST. TOOELE, UTAH 84074

CONSTRUCTION DOCUMENT

PLANS + SECTIONS - RECEIVING

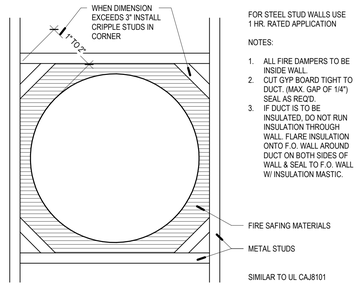
8/17/2021 3:56:22 PM

A402



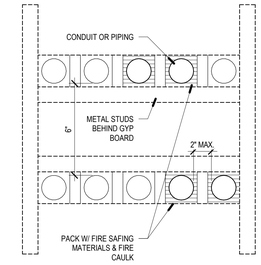
E2 COUNTER EDGE - PLASTIC LAMINATE

SCALE: 6" = 1'-0"



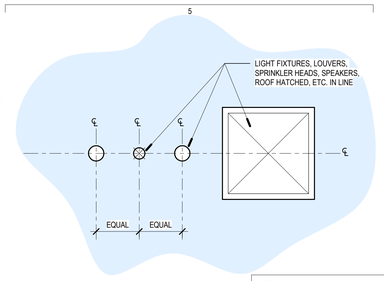
E3 DUCT OPENING - RATED WALL

SCALE: 3/4" = 1'-0"



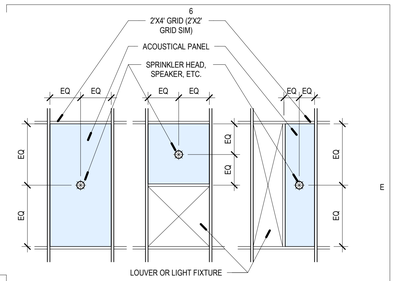
E4 CONDUIT PENETRATION

SCALE: 3" = 1'-0"



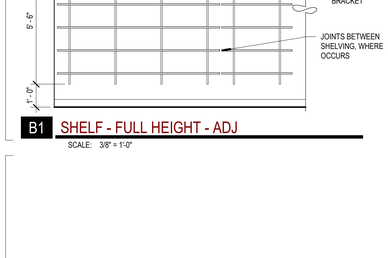
E5 GYP BOARD CEILING - FIXUTRE - TYP

SCALE: 3/4" = 1'-0"



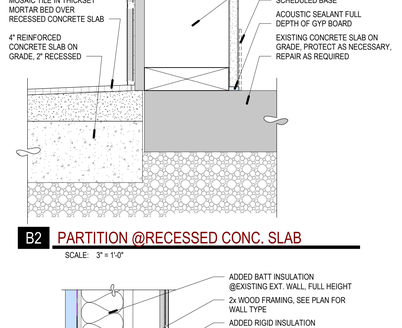
E6 CEILING TILE - PENETRATION - TYP

SCALE: 1/2" = 1'-0"



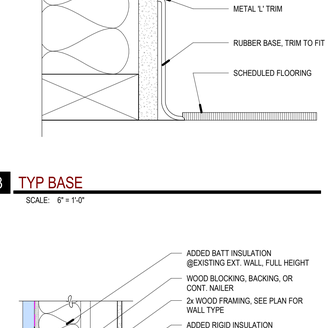
D1 MILLWORK ANCHOR - TYP

SCALE: 1/2" = 1'-0"



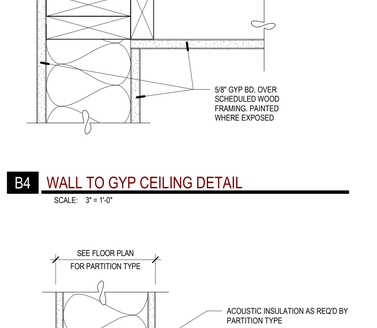
D2 COUNTER - WALL HUNG - DRAWER

SCALE: 1 1/2" = 1'-0"



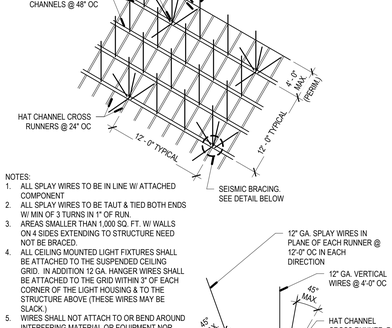
D3 TILE - EXPOSED EDGE - TYP

SCALE: 12" = 1'-0"



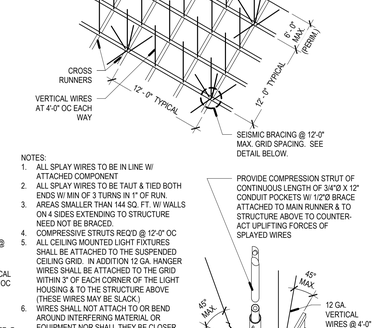
D4 ELECTRICAL DEVICE - TYP

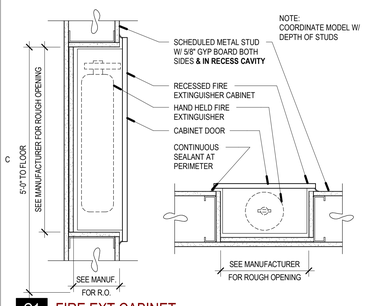
SCALE: 3" = 1'-0"



D5 PARTITION HEAD

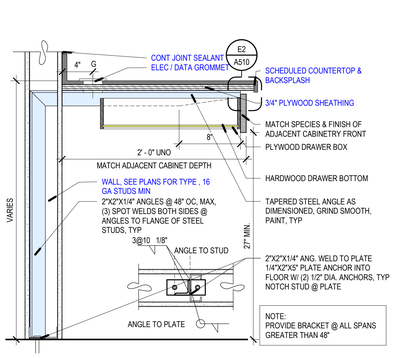
SCALE: 3" = 1'-0"





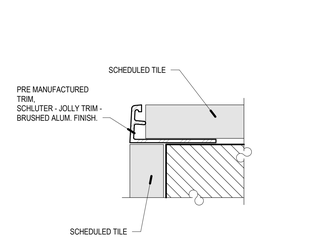
C1 FIRE EXT CABINET

SCALE: 1 1/2" = 1'-0"



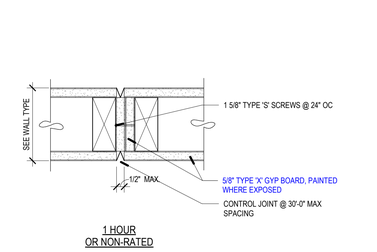
C2 COUNTER - WALL HUNG - DRAWER 1

SCALE: 1 1/2" = 1'-0"



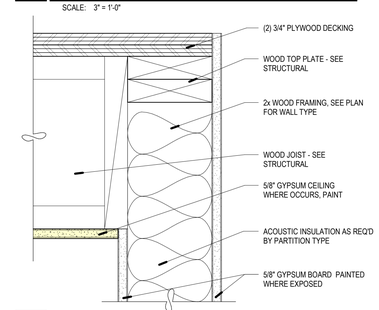
C3 TILE - OUTSIDE CORNER - 2

SCALE: 12" = 1'-0"



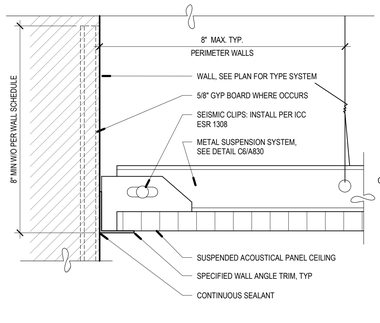
C4 CONTROL JOINT - STUD

SCALE: 3" = 1'-0"



C5 PARTITION HEAD 2

SCALE: 3" = 1'-0"



C6 SUSPENDED CEILING - TYP

SCALE: 6" = 1'-0"

B1 SHELF - FULL HEIGHT - ADJ

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

B2 PARTITION @RECESSED CONC. SLAB

SCALE: 3" = 1'-0"

B3 TYP BASE

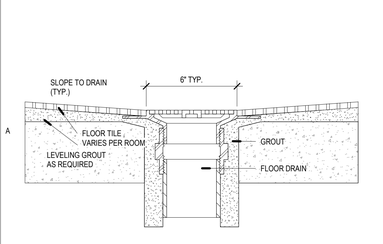
SCALE: 6" = 1'-0"

B4 WALL TO GYP CEILING DETAIL

SCALE: 3" = 1'-0"

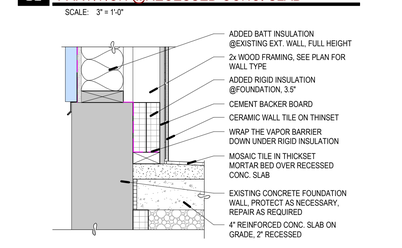
B5 SUSPENDED CEILING - SEISMIC BRACING

SCALE: 6" = 1'-0"



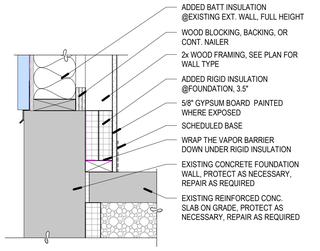
A1 FLOOR DRAIN - TYP

SCALE: 3" = 1'-0"



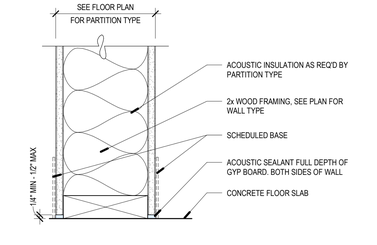
A2 EXT. WALL @RECESSED CONC. SLAB

SCALE: 1 1/2" = 1'-0"



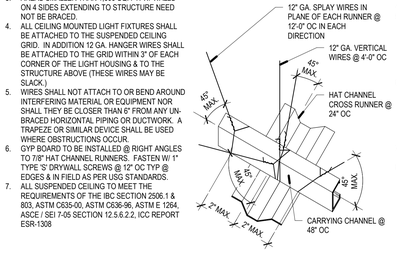
A3 FURRING WALL DETAIL

SCALE: 1 1/2" = 1'-0"



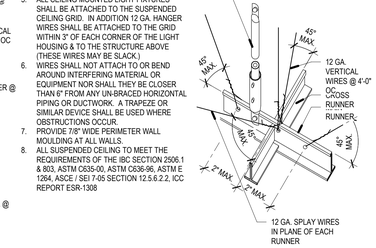
A4 PARTITION BASE - NON-RATED

SCALE: 3" = 1'-0"



A5 SUSPENDED CEILING - GYP BRACING - TYP

SCALE: 6" = 1'-0"



A6 SUSPENDED CEILING - SEISMIC BRACING

SCALE: 6" = 1'-0"

VCBO ARCHITECTURE
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SALT LAKE CITY, UT 84102
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REV DATE DESCRIPTION

VCBO NUMBER: 20385
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DATE: 2021-06-16

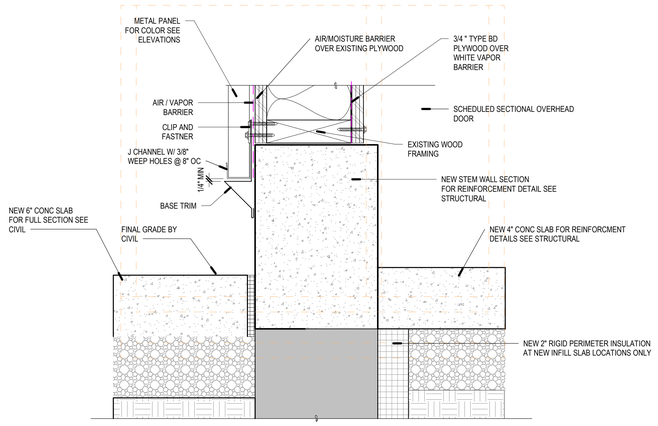
TCSD WAREHOUSE 649 REMODEL

TOOELE COUNTY SCHOOL DISTRICT
PROJECT ADDRESS: 180 GARNET ST. TOOELE, UTAH 84074

CONSTRUCTION DOCUMENT

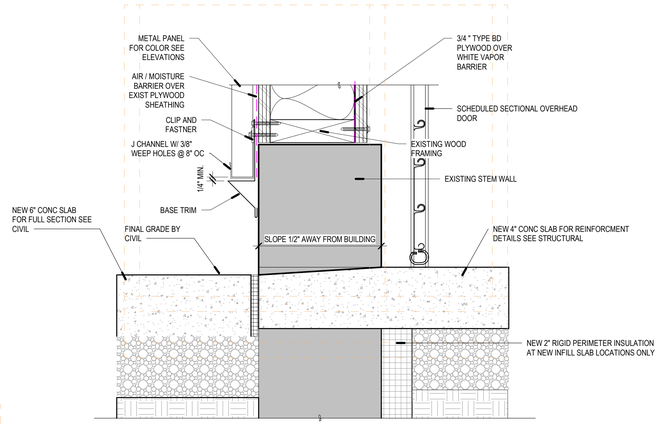
DETAILS - CEILING + MISCELLANEOUS

A510



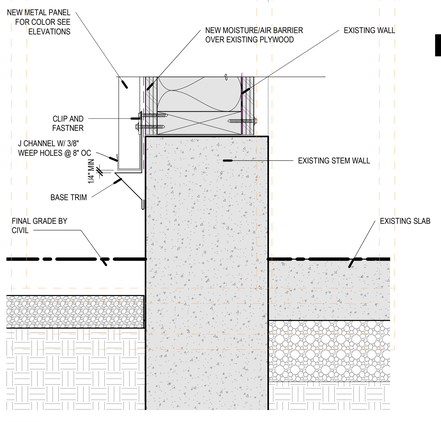
D3 SLAB REPLACEMENT@EXISTING STEM WALL

SCALE: 3" = 1'-0"



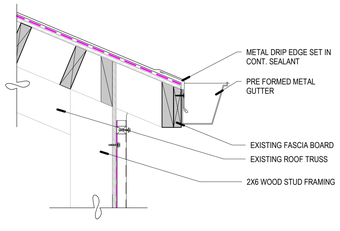
C3 SLAB REPLACEMENT@SECTIONAL OVERHEAD

SCALE: 3" = 1'-0"



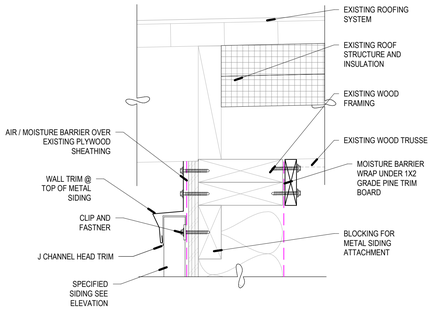
1 METAL PANEL @ FIRE RISER BASE

SCALE: 3" = 1'-0"



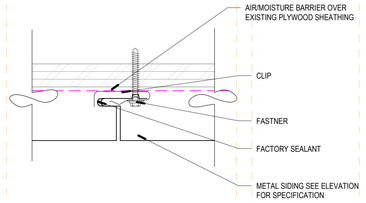
A1 GUTTER @EXISTING ROOF EAVE

SCALE: 1 1/2" = 1'-0"



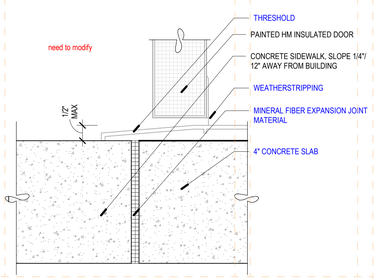
B3 METAL PANEL EAVES DETAIL TYP.

SCALE: 3" = 1'-0"



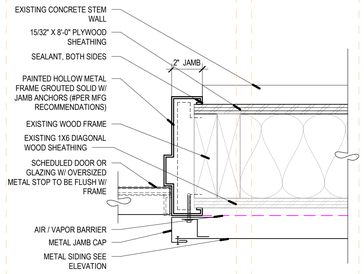
A3 METAL PANELVERTICAL JOINT DETAIL TYP.

SCALE: 6" = 1'-0"



E4 HM DOOR - EXT - THRESHOLD

AS/ A351 SCALE: 6" = 1'-0"

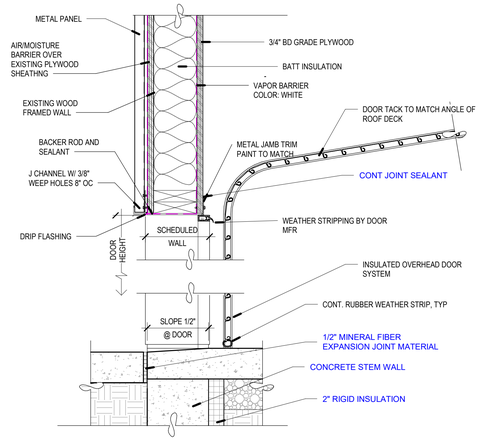


D4 HM DOOR - JAMB - EXT. WOOD DOOR (HEAD SIM)

SCALE: 3" = 1'-0"

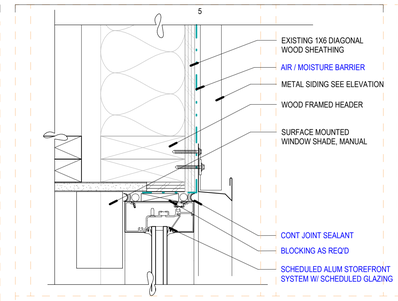
C4 SECTIONAL DOOR - JAMB

SCALE: 3" = 1'-0"



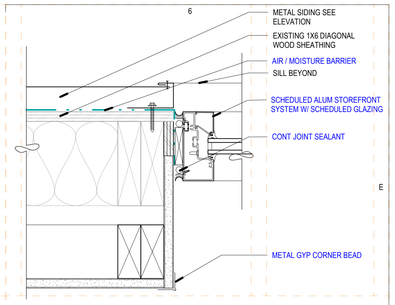
A4 SECTION DETAIL @ OVERHEAD SECTIONAL DOOR1

SCALE: 1 1/2" = 1'-0"



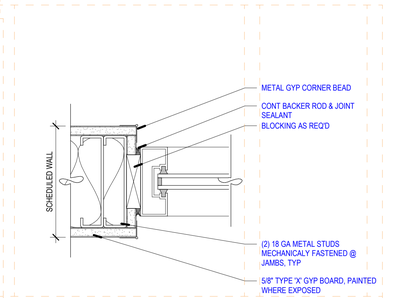
E5 6AX - STOREFRONT - HEAD

SCALE: 3" = 1'-0"



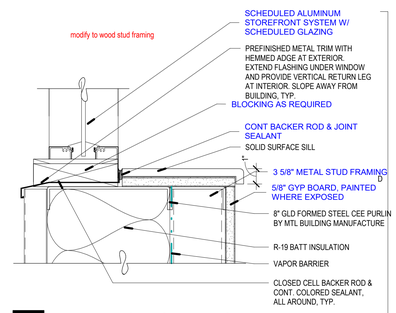
E6 6AX - STOREFRONT - JAMB / SILL

SCALE: 3" = 1'-0"



D5 STOREFRONT - INT - JAMB

SCALE: 3" = 1'-0"

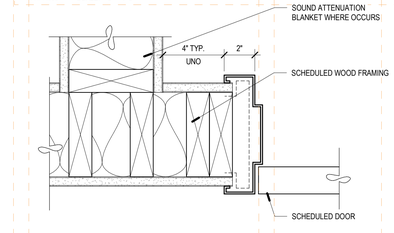


D6 ALUMINUM SILL @ EXTERIOR

SCALE: 3" = 1'-0"

C5 HM DOOR - INT - HEAD

A4/ A600 SCALE: 3" = 1'-0"



B5 HM DOOR - INT - CORNER JAMB

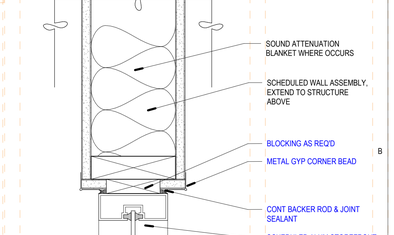
A4/ A600 SCALE: 3" = 1'-0"

A5 HM FRAME - TYP

SCALE: 3" = 1'-0"

C6 STOREFRONT - INT - JAMB - DOOR

SCALE: 3" = 1'-0"



B6 STOREFRONT - INT - HEAD / JAMB

SCALE: 3" = 1'-0"

A6 STOREFRONT - INT - SILL

SCALE: 3" = 1'-0"

VCBO ARCHITECTURE
524 SOUTH 600 EAST
SALT LAKE CITY, UT 84102
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REV DATE DESCRIPTION

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DATE: 2021-06-16

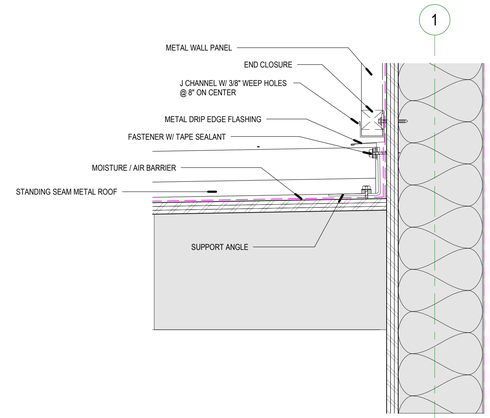
TCSD WAREHOUSE 649 REMODEL

TOOELE COUNTY SCHOOL DISTRICT
PROJECT ADDRESS: 180 GARNET ST. TOOELE, UTAH 84074

CONSTRUCTION DOCUMENT

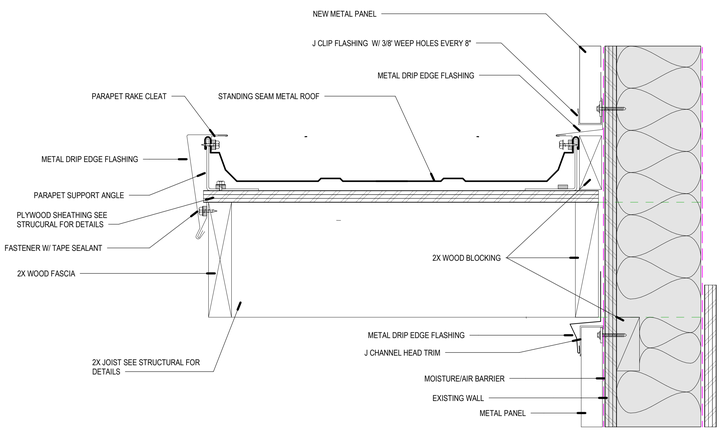
DETAILS - DOOR + WINDOW + EXTERIOR

A511



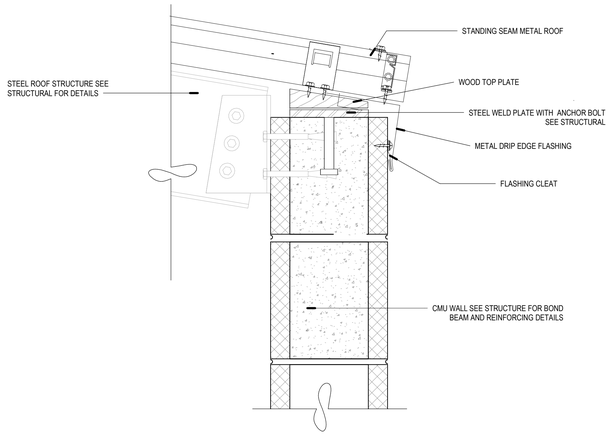
E4 FIRE RISER ROOF TO WALL

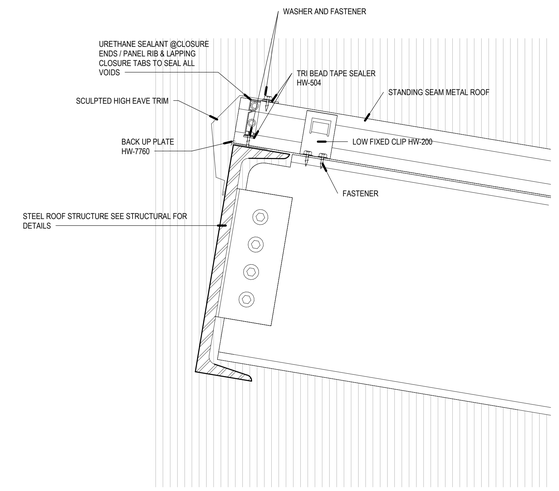
SCALE: 3" = 1'-0"

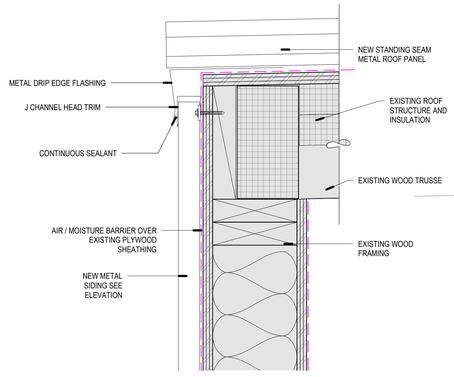


E6 ENTRY CANOPY CROSS SECTION

SCALE: 3" = 1'-0"





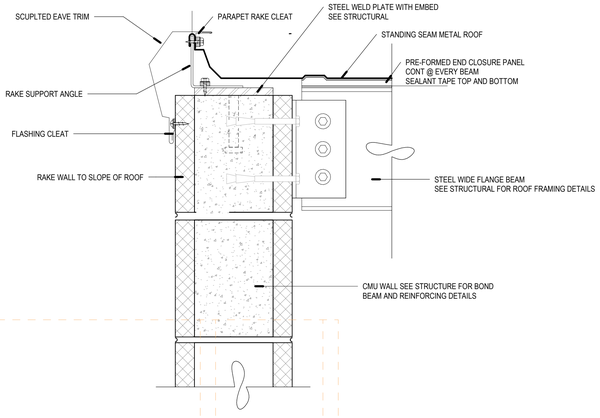


A2 FIRE RISER ROOF @ LOW END

SCALE: 3" = 1'-0"

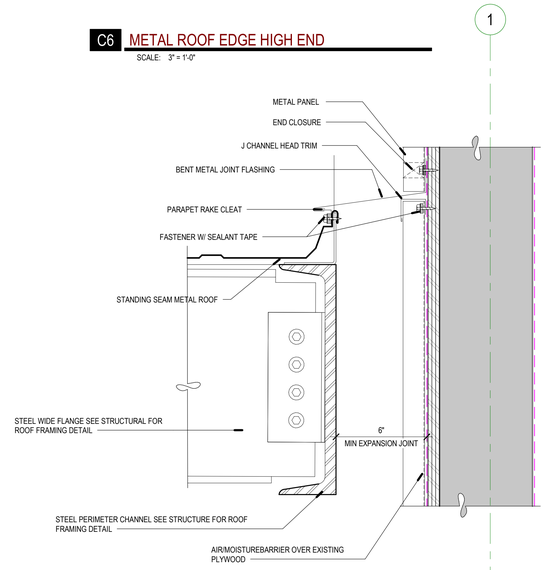
C4 METAL ROOF EDGE LOW END @ CMU

SCALE: 3" = 1'-0"



A4 METAL ROOF EDGE @CMU

SCALE: 3" = 1'-0"



C6 METAL ROOF EDGE HIGH END

SCALE: 3" = 1'-0"

A6 METAL ROOF RAKE EDGE @ SEISMIC JOINT

SCALE: 3" = 1'-0"

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524 SOUTH 600 EAST
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REV	DATE	DESCRIPTION

VCBO NUMBER: 20385
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DATE: 2021-08-16

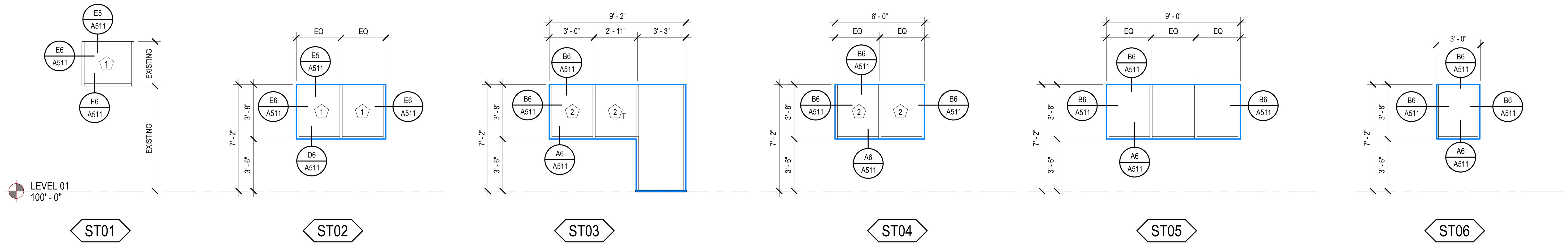
TCSD WAREHOUSE 649 REMODEL

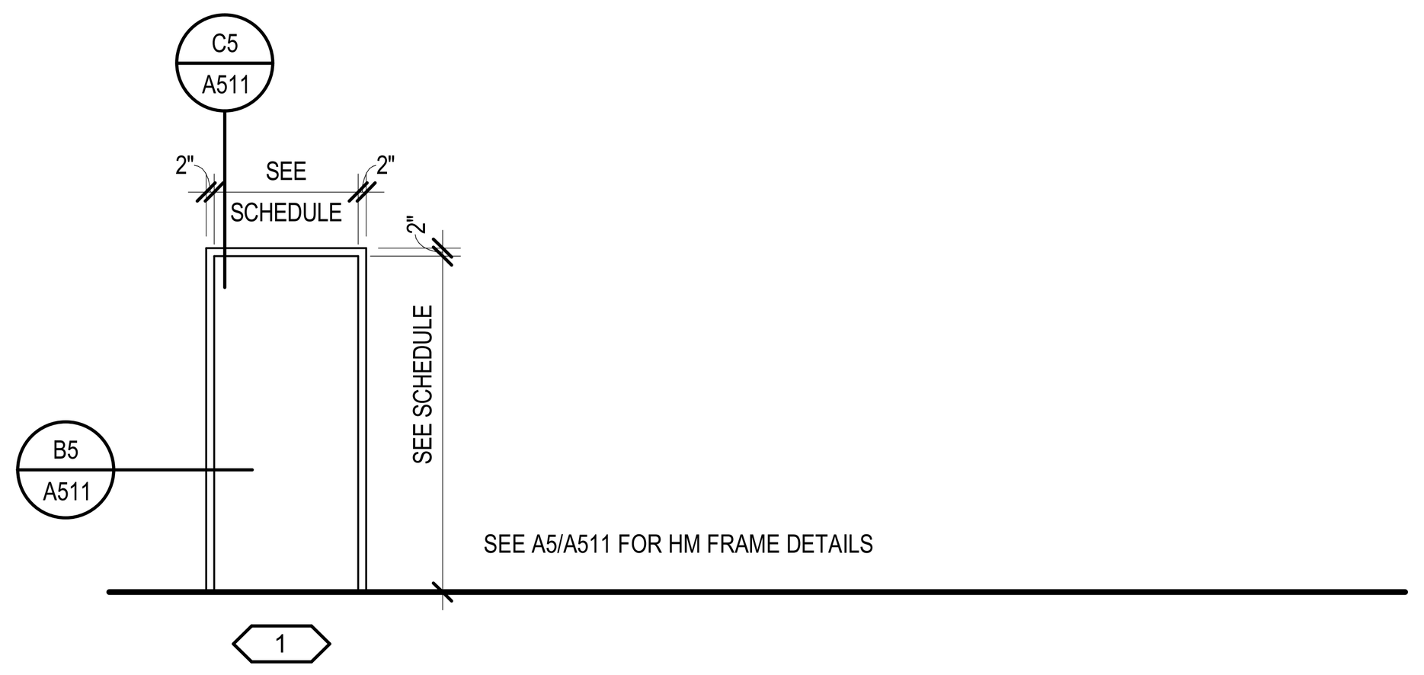
TOOELE COUNTY SCHOOL DISTRICT
PROJECT ADDRESS: 180 GARNET ST. TOOELE, UTAH 84074

CONSTRUCTION DOCUMENT

DETAILS - EXTERIOR

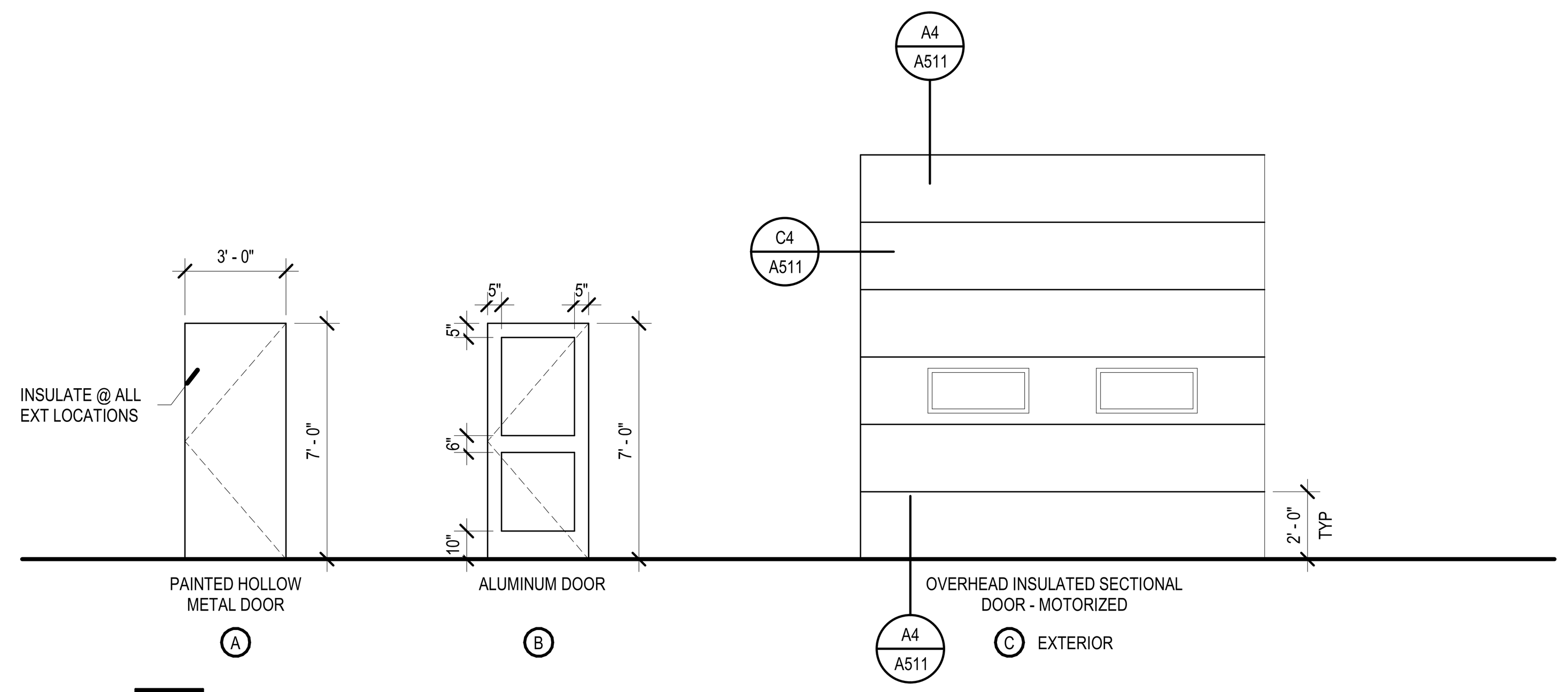
A512





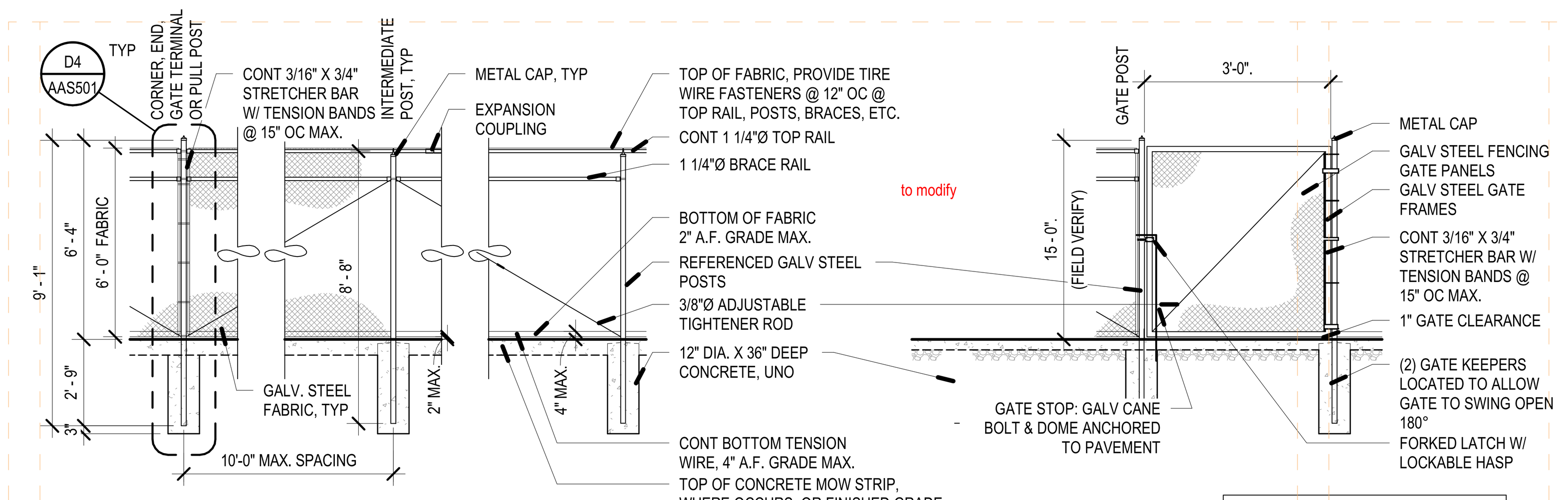
A4 HM DOOR FRAMES

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



A1 DOOR TYPES

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



NOTE: ALL STEEL TO BE GALV

HEIGHT OF FABRIC	DEPTH OF POSTS	LENGTH OF END CORNER OR PULL POSTS	LENGTH OF LINE POSTS	SIZE OF POSTS: END, CORNER & PULL POSTS — NOM. SIZE	OUTSIDE DIA.	PIPE WEIGHT ASTM A-120	PIPE WEIGHT TRIPLE COAT	LINE POST MIN. SIZE — NOM. SIZE	OUTSIDE DIA.	PIPE WEIGHT ASTM A-120	PIPE WEIGHT TRIPLE COAT	GATE POST MIN. SIZE FOR GATE 18' TO 24' WIDE — NOM. SIZE	OUTSIDE DIA.	PIPE WEIGHT ASTM A-120	PIPE WEIGHT TRIPLE COAT
6'	3'	9'	8'-8"	2"	2.375"	3.65	3.11	1 1/2"	1.900"	2.72	2.23	1 1/2"	1.625"	2.72	2.23

D

SCHEDULE - 649 DOOR AND FRAME

DOOR NUMBER	DOOR SIZE WIDTH	DOOR SIZE HEIGHT	DOOR SIZE THICK	DOOR ELEV. TYPE	DOOR MATERIAL	DOOR FINISH/ FACING	FRAME ELEV. TYPE	FRAME MATERIAL	FRAME FINISH/ FACING	HARD WARE GROUP	GLAZING TYPE	LABLE (MIN.)	NOTES	DOOR NUMBER
156	3' - 0"	7' - 0"	1 3/4"	A	HM	PT	1	HM	PT					156
157	3' - 0"	7' - 0"	1 3/4"	A	HM	PT	1	HM	PT					157
158	3' - 0"	7' - 0"	2"	B	AL	ANODIZED	ST03	AL	AL		2T			158
160A	11' - 8"	11' - 8"	1 1/2"	C	STL	PT	-	STL	PT			-		160A
160B	3' - 0"	7' - 0"	1 3/4"	A	HM	PT	1	HM	PT					160B
160C	3' - 0"	7' - 0"	1 3/4"	A	HM	PT	1	HM	PT					160C
160D	11' - 8"	11' - 8"	1 1/2"	C	STL	PT	-	STL	PT			-		160D
160F	3' - 0"	7' - 0"	1 3/4"	A	HM	PT	1	HM	PT					160F
161	3' - 0"	8' - 0"	1 3/4"	D	STL	GALV	-	STL	GALV					161
163A	3' - 0"	7' - 0"	1 3/4"	A	HM	PT	1	HM	PT					163A
163B	3' - 0"	7' - 0"	1 3/4"	A	HM	PT	1	HM	PT					163B
163D	3' - 0"	8' - 0"	1 3/4"	D	STL	GALV	-	STL	GALV					163D
165A	3' - 0"	7' - 0"	1 3/4"	A	HM	PT	1	HM	PT					165A
165B	11' - 8"	11' - 8"	1 1/2"	C	STL	PT	-	STL	PT			-		165B
165C	3' - 0"	7' - 0"	1 3/4"	A	HM	PT	1	HM	PT					165C
301	3' - 0"	7' - 0"	1 3/4"										EXISTING DOOR	301
302	3' - 0"	7' - 0"	1 3/4"										EXISTING DOOR	302

DOOR & FRAME NOTES

1. MATERIAL ABBREVIATIONS:
   WD = WOOD
   AL = ALUMINUM
   HM = HOLLOW METAL
2. SEE SPECIFICATION FOR HARDWARE GROUP DEFINITION
3. ALL HOLLOW METAL FRAMES OPENING TO THE EXTERIOR ARE TO BE GALVANIZED
4. ALL HOLLOW METAL DOORS OPENING TO THE EXTERIOR ARE TO BE INSULATED AND GALVANIZED
5. OVERALL ALUMINUM FRAME DIMENSIONS ARE GIVEN FOR REFERENCE, REFER TO DETAILS FOR JAMB AND SILL CONDITIONS. OVERALL DIMENSIONS ARE TO BE FIELD VERIFIED.
6. GENERAL CONTRACTOR TO COORDINATE WORK BETWEEN DOOR INSTALLER AND SECURITY SYSTEM INSTALLER
7. WHERE A DOOR IS SHOWN ON THE FLOORS PLANS BUT IS NOT NUMBERED AND/OR DOES NOT APPEAR IN THE DOOR SCHEDULE, THE FOLLOWING DOOR, FRAME AND HARDWARE ARE TO BE BID FOR THIS OPENING: DOOR TYPES **X**, FRAME TYPE **XX**, HARDWARE TYPE **XX**.

GLAZING TYPE LEGEND

MARK	DESCRIPTION
1	1" INSULATED , LOW-E SOLAR BAN 60
2	1/4" CLEAR GLASS (INTERIOR)
#T	"T" INDICATES TEMPERED GLASS

NOTE:
WINDOW TYPE QUANTITIES PROVIDED FOR CONVENIENCE, THE CONTRACTOR IS RESPONSIBLE TO VERIFY THE QUANTITIES OF EACH WINDOW TYPE.

KEYED NOTES

VCBO ARCHITECTURE
524 SOUTH 600 EAST
SALT LAKE CITY, UT 84102
801.575.8800
VCBO.COM

REV	DATE	DESCRIPTION

VCBO NUMBER: 20385
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TCSD WAREHOUSE 649 REMODEL

TOOELE COUNTY SCHOOL DISTRICT
PROJECT ADDRESS: 180 GARNET ST. TOOELE, UTAH 84074

CONSTRUCTION DOCUMENT

DOOR SCHEDULE + ELEVATIONS

1. Design Criteria

1.1. Governing Building Code ....2018 International Building Code (IBC)
A. Risk Category...II

1.2. Floor Live Loading
A. Maintenance Access Mezzanine ....40 psf Live Load

1.3. Roof Live Loading
A. Roof Live Load..20 psf
B. Roof Snow Load Warehouse 649...........................23 psf + Drift per IBC
1. Ground Snow Load, P_g......................................30 psf
2. Snow Exposure Factor, C_e 0.9
3. Importance Factor, I_s 1.0
4. Thermal Factor, C_t 1.2
5. Slope Factor, C_s...1.0
C. Roof Snow Load Dock ....26 psf + Drift per IBC
1. Ground Snow Load, P_g......................................30 psf
2. Snow Exposure Factor, C_e 1.0
3. Importance Factor, I_s 1.0
4. Thermal Factor, C_t 1.2
5. Slope Factor, C_s...1.0
D. Roof Rain Load Intensity
1. 15-min duration/100-year return period, i_{15}.........1.0 in. per hour
2. 60-min duration/100-year return period, i_{60}.........1.68 in. per hour

1.4. Earthquake
A. Seismic Design Category..D
B. Spectral Response Accelerations
S_S = 0.695 g S_{DS} = 0.576 g
S_1 = 0.250 g S_{D1} = 0.350 g
C. Soil Site Class...D - Default
F_a = 1.244 F_v = 2.100
D. Basic Seismic-Force-Resisting System at the Mezzanine
1. Light Frame Walls Sheathed with Wood Structural Panels
R = 6 1/2 Ω_0 = 3 C_d = 4
E. Basic Seismic-Force-Resisting System at the Dock
1. Special Reinforced Masonry Shear Walls
R = 3 1/2 Ω_0 = 2 1/2 C_d = 2 ¼
1. Steel Special Moment Frame
R = 8 Ω_0 = 3 C_d = 5 1/2
B. Importance Factor, I_e...1.0
C. Redundancy Factor, ρ..1.0 for Mezzanine, 1.3 for Dock
D. Analysis Procedure ....Equivalent Lateral Force (Static)
E. Seismic Design Coefficient
1. Mezzanine, C_s..0.089
2. Dock, C_s..0.165 (X-Dir) 0.072 (Y-Dir)
F. Design Base Shear
1. Mezzanine...2 kips
2. Dock..7.85 kips (X-Dir) 6.00kip (Y-Dir Wind)
G. Building Seismic Movement – Dock
1. Maximum Inelastic Drift: 0.135in X-Dir and 1.843in Y-Dir

1.2. Wind
A. Basic Design Wind Speed, V..................................102 mph
B. Velocity pressure exponent coefficient, K_d..............0.85
C. Ground elevation factor, K_e.....................................0.84
D. Exposure category C
E. Internal Pressure Coefficient, GC_{pi} 0.18
F. Topographic Factor, K_{zt}...1.0
G. Components and Cladding Design Pressure for Warehouse 649

Design Wind Pressure - LRFD (psf)					
Location		Tributary Area (ft^2)			
		< 10	50	100	> 500
Walls	Within 9 ft of building corner	25.5	21.6	19.9	16
	All other areas	20.7	18.8	17.9	16
Roof	Within 14.4 ft of building exterior perimeter	59.9	46.8	41.2	41.2
	Between 14.4 ft and 28.8 ft of building exterior perimeter	44	37.4	34.6	28
	All other areas	33.3	28.2	26	20.9

H. Components and Cladding Design Pressure for Dock

Design Wind Pressure - LRFD (psf)					
Location		Tributary Area (ft^2)			
		< 10	50	200	> 500
Walls	Within 3 ft of building corner	23.4	19.8	16.7	14.6
	All other areas	19.0	17.2	16.0	16.0

Roof	Zone 3: Within 9.3ft of building corner and 3ft of building edge	55.0	37.8	32.6	25.7
	Zone 2: Within 9.3 ft of building edge	40.3	31.7	29.1	25.7
	Zone 1: All other areas	30.6	23.9	21.9	19.2

1.3. Foundation
A. Subsurface Conditions:
Soils report and log of borings was obtained by the Owner for the Engineer's use in the design of the foundation, and is not a part of the Contract Documents. This report and log of borings is available for the Contractor's information, but is not a warranty of the subsurface conditions. The Contractor may use the report at their own risk.
B. Soils Report by GSH Geotechnical, Inc., dated March 8, 2021.
C. Soil Bearing Pressure: ....3000 psf on compacted fill.
D. Lateral Soil Pressure Fluid Equivalent Density.
1. Active: ....50 pcf (retaining walls)
2. At Rest: ....60 pcf (rigid foundation walls)
3. Passive: ....300 pcf
4. Increase for Seismic: ....52pcf (active) or 83 pcf (at rest)
E. Coefficient of Friction: 0.40

2. Earthwork

2.1. Clearing: The entire building area shall be scraped to remove the top 4 inches of soil, including all vegetation and debris.

2.2. Remove all deleterious and non-engineered fills from below footings and extending out at least 5 feet from the perimeter of the new foundations and replace it with compacted structural fill. Remove a depth that is equal to 2 feet.

2.3. Proof rolling: The natural undisturbed soil below all footings shall be proof rolled prior to placing concrete per the Geotechnical Report. Remove all soft spots and replace with compacted structural fill.

2.4. Compacted structural fill: Structural fill shall be provided at all locations and extents described by the TYPICAL COMPACTED STRUCTURAL FILL DETAIL. All fill material shall be a well-graded granular material with a maximum size less than 4 inches and with not more than 10 percent passing a No. 200 sieve. It shall be compacted to 95 percent of the maximum laboratory density as determined by ASTM D1557. All fill shall be tested (See Specifications and the Quality Assurance section of the GSN).

2.5. It shall be the responsibility of the Contractor to brace and shore excavations as required.

3. Concrete

3.1. Materials shall comply with the Standards specified in American Concrete Institute (ACI) 318-14, "Building Code Requirements for Structural Concrete."
A. Concrete mix design requirements shall be as follows:

Location	f'c at 28 days (psi)	Max W/C Ratio	Air Content (%)	Max Aggregate Size	Exposure Classes* F	S	C
Footings	3000	0.50	-	1"	F0	S0	C0
Interior Slabs on Grade	4000	0.45	-	1"	F0	S0	C0
Exterior Walls	4500	0.45	6	¾"	F2	S0	C1
Exterior Columns	4500	0.45	6	¾"	F2	S0	C1
All other site cast concrete	4500	0.45	6	1"	F1	S0	C1

* Exposure Classes are per ACI 318, Section 19.3.1.1, where F, S and C are exposure categories for freezing and thawing, sulfate, and corrosion protection of reinforcement, respectively.

B. Cementitious Materials:
1. Portland Cement (ASTM C150):
a. Type I or II for exposure class S0.
2. Fly Ash (ASTM C618, Class C or F): maximum fly ash content as a percentage of total weight of cementitious materials shall be 25 percent.
C. Concrete Density (Maximum Air Dry Weight):
1. Normal weight concrete shall be approximately 145 to 155 pounds per cubic foot. Aggregate shall be ASTM C33.
D. Steel Reinforcement:
1. ASTM A615 Grade 60, fy = 60,000 psi min. unless noted otherwise.
E. Admixtures:
1. Air-entraining admixtures, comply with ASTM C 260 (when used).
a. Tolerance on air content as delivered shall be +/- 1.5%.
b. When air content of a trowel finished floor slab exceeds 3%, there is an increased risk for delaminations and blistering to occur. When this situation is present, the Contractor shall pay special attention to the finishing procedures to help minimize such risks. Refer to ACI 302.1R-15 "Guide for Concrete Floor and Slab Construction" for proper finishing guidelines.
2. The use of super plasticizers and water reducers is allowed, but not required.
3. Calcium chloride or admixtures containing calcium chloride shall not be added to the concrete mix.

F. Chloride Ion: Maximum water soluble chloride ion concentrations in hardened concrete at age between 28 and 42 days contributed from the ingredients including water, aggregates, cementitious materials, and admixtures shall not exceed a maximum, by weight of cement, of 1.00% for concrete with exposure class C0, 0.30% for concrete with exposure class C1, 0.15% for concrete with exposure class C2, and 0.06% for all prestressed concrete.
G. Slump Limit: 4 inches, maximum for all concrete prior to the addition of plasticizers and water reducing admixtures. The concrete supplier shall indicate the final slump of each concrete mix in the submitted mix design.
H. Shrinkage Limit: Interior slabs on grade shall have a drying shrinkage limit of 0.040 percent tested in accordance with ASTM C157. Drying shrinkage test results shall be submitted with mix designs.
I. Only one grade or type of concrete shall be poured on the site at any given time.

3.2. Formwork shall comply with ACI Standards Publication 347 and the project specifications. The Contractor shall be responsible for the design, detailing, care, placement and removal of the formwork and shores.

3.3. Concrete cover requirements for deformed bar reinforcing steel shall comply with ACI 318, "Building Code Requirements for Structural Concrete".
A. Cast-in-place Concrete: Specified Cover
1. Cast against and permanently exposed to earth: .... 3"
2. Formed concrete exposed to earth or weather:
#6 thru #18 bars .... 2"
#5 and smaller bars.. 1.1/2"
3. Concrete not exposed to weather or in contact with ground:
Slabs, Walls, Joists; #11 bars and smaller .... 3/4"
Beams, Columns: primary reinforcement, ties, stirrups, spirals .... 1.1/2"

3.4. Construction Joints and Control Joints:
A. Provide a surface intentionally roughened to ¼" amplitude in all wall footings. A continuous keyway shall not be used for concrete shear wall to footing connections, unless specifically indicated. Refer to project plans, schedules and details for the shear wall to footing connection requirements.
B. All horizontal and vertical construction joints shall have a surface intentionally roughened to ¼" amplitude. A continuous 2 X 4 keyway may be used on elements other than shear walls.
C. Provide reinforcement dowels to match the member reinforcement across the joint, unless noted otherwise. For dowels across construction joints and wall to footing connections of concrete shear walls, refer to specific project plans, schedules, and details.
D. Construction joints in suspended concrete pours shall be made at the center of spans.
E. Slabs on grade shall have construction or control joints spaced not to exceed 30 times the slab thickness in any direction.
F. Control joints shall be installed in slabs on grade so the length to width ratio of the slab is no more than 1.25:1. Control joints shall be completed within 12 hours of concrete placement. See typical details for joint configuration. Match control joints with existing joints where occurs.
G. Control joints in visually exposed walls, unless noted otherwise: (Joints shall line up with masonry and architectural joints, see drawings.)
1. Vertical control joints at 10'-0" on center.
2. Reinforcing shall be continuous through control and construction joints, unless noted otherwise.
3. Control joints in concrete foundation walls shall line up with masonry control joints.

3.5. Detailing: All reinforcing, shall be detailed, bolstered & supported to comply with ACI 315, "Details and Detailing of Concrete Reinforcement" and the Concrete Reinforcing Steel Institute (CRSI) recommendations. Reinforcing bars shall not be welded unless specifically shown on drawings.
A. All reinforcing shall be developed in compliance with the CONCRETE REINFORCING BAR DEVELOPMENT AND LAP SPLICE SCHEDULE. As indicated in the drawings or upon approval of the engineer of record, standard tension hooks or headed bars described by the TENSION HOOK DEVELOPMENT SCHEDULE or the TENSION HEADED BAR DEVELOPMENT SCHEDULE may be used in lieu of straight bars.
B. All mechanical splices shall have the capacity to develop at least 1.25fy of the bar in tension or compression. Type 2 couplers have the capacity to develop the full tension capacity of the bar. Type 1 couplers shall not be used in moment frames and shear wall jamb columns. Mechanical splices shall have a current ICC or IAPMO code evaluation report; "Lenton" (IAPMO No. 0129), "Taper-Lock" (IAPMO No. 0319) or "SAS Stressteel" (ICC ESR-1163), "Bar-Lock" (ICC ESR-2495) or approved equivalent may be used. Mechanical couplers on adjacent bars shall be staggered a minimum of 24" apart along the longitudinal axis of the reinforcing bars.
C. All embedded elements and dowels shall be securely tied to formwork or to adjacent reinforcing prior to the placement of concrete.
D. Use chairs or other support devices recommended by CRSI to support and tie reinforcement bars prior to placing concrete.
E. See typical details for reinforcing at wall intersections and ends, reinforcing around wall openings and suspended slab openings, vertical wall dowels, concrete column ties and splices in vertical column reinforcing.
F. See typical details for column cross-ties. The 90-degree hooks of two successive crossties engaging the same longitudinal bars shall be alternated end for end.
G. Where required, reinforcement is to be terminated in a standard hook or headed bar anchor. Refer to the TENSION HOOK DEVELOPMENT SCHEDULE, the TENSION HEADED BAR DEVELOPMENT SCHEDULE and the REINFORCEMENT END HOOK SCHEDULE as appropriate. Unless otherwise noted, a standard hook or headed bar are equivalent and may be substituted at the Contractor's option.
H. Contractor shall coordinate placement of all openings, curbs, dowels, sleeves, conduits, bolts, inserts and other embedded items prior to concrete placement.
I. All reinforcement shall be bent cold, and shall be bent only once at the same location. All reinforcement shall be shop bent, unless otherwise permitted by the Engineer.

3.6. Minimum Reinforcing: Wall reinforcing shall be as follows, unless noted otherwise:

Wall Thickness	Horizontal Reinforcing	Vertical Reinforcing
6"	#4 @ 13" o.c.	#4 @ 18" o.c.
8"	#5 @ 15" o.c.	#4 @ 16" o.c.
10"	#5 @ 12" o.c.	#4 @ 13" o.c.
12"	#4 @ 13" o.c. Each Face	#4 @ 18" o.c. Each Face
Others	0.25% of Wall Area	0.15% of Wall Area

Spacing shall exceed neither three times the wall thickness nor 18". In addition to the above reinforcing, 2 - #5 x continuous horizontal bars shall be placed at the bottom of the wall (near the footing) and at each floor level, at the roof level and at the top of wall.

3.7. No aluminum conduit or product containing aluminum or any other material injurious to concrete shall be embedded in concrete.

3.8. Unless otherwise noted, all slabs on grade shall be 4" thick.

4. Masonry

4.1. Materials shall comply with the Standards specified in TMS 402-16 and TMS 602-16, "Building Code Requirements and Specification for Masonry Structures."
A. Materials, unless noted otherwise:
1. Concrete Masonry Units: ASTM C 90, Medium Weight.
2. Material Strength: The Prism Test Method or the Unit Strength Method according to TMS 602-16 Section 1.4B may be used to determine the compressive strength of masonry assemblies. The contractor shall select the desired method and meet the required material strengths as follows:
a. Prism Test Method, TMS 602-16 Section 1.4B.3:
1) Concrete Masonry Unit Assembly, f'm = 2000 psi.
b. Unit Strength Method, TMS 602-16 Section 1.4B.2:
1) Concrete Masonry Units, minimum unit strength of 2000 psi average or better. (f'm = 2000 psi)
3. Mortar: Use Type "S" according to ASTM C270, proportion specification. Admixtures shall not be added to the mortar mix.
4. Grout: For masonry assemblies with f'm = 2,000 psi or less conform to ASTM C476, proportion specification. Grout that does not meet the requirements of ASTM C476 proportion specification or that is used in masonry assemblies with f'm > 2,000 psi shall meet the following requirements: Meet the material requirements of ASTM C476, obtain a minimum compressive strength of f'm or 2,000 psi, whichever is larger, at 28 days tested according to ASTM C1019, and a slump of 8 in. to 11 in. as determined by ASTM C143.
a. Self-Consolidating Grout: Conform to the material requirements of ASTM C476, obtain a minimum compressive strength of f'm or 2,000 psi, whichever is larger, at 28 days tested according to ASTM C1019, obtain a slump flow of 24 in. to 30 in. as determined by ASTM C1611, and shall have a Visual Stability Index less than or equal to 1 as determined in accordance with ASTM C1611 Appendix X.1. Field addition of admixtures is not permitted.
5. Reinforcing: Grade 60 reinforcing steel shall comply with ASTM A615. Wire joint reinforcing shall comply with ASTM A951.
6. Deformed Bar Anchors (DBA): All DBAs shall comply with ASTM A496.
7. Anchor Bolts (AB): ASTM A307 with ASTM A563 heavy hex nuts and hardened washers, Grade A, unless noted otherwise.
8. Headed Stud Anchors (HSA): Manufacture all HSAs in conformance with ASTM A108 with dimensions complying with AISC specifications.

4.2. Construction Requirements:
A. Mortar Joints: Joints shall be "concave", "V-joint" or "weathered raked" for structural members unless noted otherwise on architectural drawings.
B. Masonry walls, beams and columns shall be constructed with running bond, unless noted otherwise.
C. Grouting Requirements: Comply with IBC Section 2104 and TMS 602 Section 3.5. Grout shall be mechanically consolidated and mechanically reconsolidated according to TMS 602 Section 3.5 E.
1. Grout Pour Heights that exceed 4 feet shall meet the following requirements:
a. Provide cleanouts in the bottom course of masonry for each grout pour in accordance with TMS 602 Section 3.2 F.
b. For grout other than Self Consolidating Grout a demonstration panel representative of the proposed wall construction and construction procedures shall be provided and approved by the Architect. The demonstration panel may be a part of the completed construction as approved by the Architect.
c. For Self-Consolidating Grout placed in masonry that has cured for at least 4 hours, place in lifts not exceeding the Maximum Grout Pour Height in listed in TMS 602 Section 3.5C.
2. When grouting, form grout keys between grout pours. Form grout keys between grout lifts when the first lift is permitted to set prior to placement of the subsequent lift.
a. Form a grout key by terminating the grout a minimum of 1.1/2 in. below a mortar joint.
b. Do not form grout keys within beams.
c. At beams or lintels laid with closed bottom units, terminate the grout pour at the bottom of the beam or lintel without forming a grout key.
D. Reinforcing Bars shall not be welded unless specifically shown on drawings. In such cases, use only AWS standards. Do not substitute reinforcing bars for DBAs or HSAs.
E. Control Joints: Spacing shall not exceed 40'-0" or 2.5 times the wall height, whichever is less. Joints shall not be located over masonry openings, and shall be a minimum of the schedule masonry column width away from masonry openings. See architectural drawings for locations.
F. Grout all beam and joist pockets solid after installation of beams and joists.

4.3. Detailing Requirements:
A. Standards: Reinforcing detailing shall comply with American Concrete Institute (ACI) Standard 315, "Details and Detailing of Concrete Reinforcement."
B. Reinforcement Protection (cover):
1. Joint reinforcement shall have not less than 5/8" mortar coverage from the exposed face.
2. Other reinforcement shall have a minimum coverage of one bar diameter over all the bars, but not less than 3/4". When masonry is exposed to soil, minimum coverage shall be 1.5".
C. Vertical steel reinforcement shall be placed and secured against displacement prior to grouting by wire positioners or other suitable devices: at intervals not exceeding the least dimension of the grout lift height, or bar splice locations, or 64". Vertical reinforcing shall be located at the center of the wall, unless noted otherwise.
D. Lap Splice Lengths: Lap all masonry reinforcing bars per the "Masonry Reinforcing Bar Lap Splice Schedule." Joint reinforcement shall lap a minimum of 6".
E. Corner Bars: Horizontal reinforcement shall be continuous at all corners and at intersecting walls. Provide corner bars with the required lap splice length.
F. Dowels: All vertical reinforcing shall be doweled to the foundation wall, footing (structure below) and to the structure above with the same size dowel, spacing (and in the same core) as the vertical wall reinforcing unless noted otherwise.
G. Wall Openings 24" wide and wider: Provide reinforced masonry lintels per Masonry Lintel Schedule over the top of, and 2 - #5 bars, in grouted spaces, on all sides and adjacent to every unscheduled opening, unless noted otherwise. Bars for all openings shall extend a minimum of 24" beyond the corners of the opening. Vertical bars shall extend from floor level below to the floor, or roof, level above. Where a 24" extension is not possible, extend bars as far beyond the opening as possible and terminate them with a 90 degree standard ACI hook.
H. Horizontal wall reinforcing shall be continuous through joining concrete walls, masonry walls, columns, and pilasters. Provide a key between the wall and the column or pilaster. Horizontal wall reinforcing shall be placed inside the column vertical reinforcing.
I. Anchor bolts and headed stud anchors shall be set in a grouted cell. Anchor bolts and headed stud anchors shall have 1" grout surrounding the shank at its penetration. Grout shall be flush with the face or top of the masonry.
J. The exposed face of all embed plates shall be set flush with the face of masonry wall or column.

4.4. Minimum Reinforcing:
All masonry walls shall be reinforced as follows, unless shown otherwise on the drawings. Reinforcing shall be placed in grouted cells.

Wall Thickness	Horizontal Reinforcing	Vertical Reinforcing
6"	#4 @ 48" o.c.	#5 @ 32" o.c.
8"	#5 @ 48" o.c.	#5 @ 32" o.c.
10"	#6 @ 48" o.c.	#6 @ 32" o.c.
12"	2 - #5 @ 48" o.c.	#6 @ 32" o.c.

5. Structural Steel

5.1. Material:
A. W-Shapes: ASTM A992, (F_y = 50 ksi), except as noted otherwise
B. All Other Shapes and Plates: ASTM A36 (Fy = 36 ksi), except as noted otherwise
C. Steel Deck:
1. Galvanized Steel Sheet: ASTM A653 or A1063, Grade 50 with G60 galvanized coating.
D. High-Strength Bolts:
1. Group A: ASTM F3125 Grades A325 & F1852
E. Deformed Bar Anchors (DBA): ASTM A496 or ASTMA1064, 70 ksi minimum yield strength.
F. Headed Stud Anchors (HSA): ASTM A108, with dimensions complying with AISC specifications
G. Anchor Rods: ASTM F1554, Grade 36, unless noted otherwise, with ASTM A563 heavy hex nuts and ASTM F436 hardened washers
H. Structural steel that is part of the seismic force resisting system shall be supplied with minimum Charpy V-Notch impact test results of 20 ft-lbs. absorbed energy at 70 degrees Fahrenheit, indicated below:
1. Hot rolled shapes with flanges 1.1/2" thick and thicker tested in the alternate core location as described in ASTM A6 Supplementary requirement S30
2. Plates 2" and thicker measured at any location permitted by ASTM A673
3. Test Frequency: Each heat

5.2. Fabrication and construction shall comply with the following Codes and Standards:
A. American Institute of Steel Construction (AISC) 360-16, "Specification for Structural Steel Buildings"
B. AISC 341-16, "Seismic Provisions for Structural Steel Buildings"
C. AISC 303-16, "Code of Standard Practice for Steel Buildings and Bridges" excluding the following: Section 3.3 (last two sentences of first paragraph), Section 4.4, Section 4.4.1, Section 4.4.2, Section 4.5, and Section 7.13.3
1. The architectural drawings are the prime contract drawings. Consultants' drawings by other disciplines are supplementary to the architectural drawings. The structural drawings shall be used in conjunction with the architectural drawings. Detailing and shop drawing production for structural elements will require information (including dimensions) contained in architectural, structural, and/or other consultants' drawings. Refer to the Special Instructions section of the general notes, below.
D. AISC 358-16, "Prequalified Connections for Special and Intermediate Steel Moment Frames for Seismic Applications."
E. AISC/RCSC 2014, "Specification for Structural Joints Using High-Strength Bolts"
F. American Welding Society (AWS) D1.1:2015, "Structural Welding Code – Steel" (specific items do not apply when they conflict with the AISC requirements)
G. American Welding Society (AWS) D1.8:2016, "Structural Welding Code – Seismic Supplement" (specific items do not apply when they conflict with the AISC requirements)

5.3. Structural shapes and plates shall be fabricated from newly rolled (milled) one-piece sections without splices, unless specifically noted otherwise on the structural drawings. Connections for structural steel shall comply with the structural drawings, unless written approval is given by the Structural Engineer.

5.4. Welding:
A. It is recommended the steel erection contractor and steel fabricator contact the Quality Assurance Agency prior to beginning any welds. A program of joint preparation and welding procedures should be worked out between the two parties before the welding is started so that correct welds will be made from the beginning.
B. Certification of Welders: All shop and field welding shall be executed by AWS certified welders who have been specifically certified for the process of welding being performed. The welder's certification will be considered as being current unless the welder is not engaged in the process of welding being performed for a period exceeding six months or there is a specific reason to question a welder's ability as required by AWS. Certification and records must comply with AWS Standards. Certification and appropriate records must be provided to the Architect prior to beginning work.
C. Electrodes: E-70 XX or as noted otherwise. E60 XX may be used for welding steel floor and roof decks.
D. Minimum Welds: All intersecting steel shapes that are not bolted shall be connected by a fillet weld all around, unless noted otherwise. Fillet weld sizes that are not shown shall be 1/16" less than the thinnest of the connected parts for thicknesses 1/4" and larger. Fillet welds on plates less than 1/4" shall be of the same size as the thinnest of the connected parts.
E. Reinforcing Bars: Do not weld rebar except as specifically detailed in the drawings. In such cases, use only AWS standards. Do not substitute reinforcing bars for deformed bar anchors (DBAs), machine bolts, or headed stud anchors (HSAs).
F. Bolts: Do not apply any welds, including "tack" welds to bolts, including anchor bolts, except as specifically detailed in the drawings.
G. Headed Stud Anchor (HSA) welding and Deformed Bar Anchor (DBA) welding shall conform to the manufacturer's specifications. Welding shall comply with AWS D1.1 Section 7.6 through 7.9 and Annex G.
H. Special Provisions for Welds in the SFRS (Seismic Force Resisting System): Welds used in members and connections of moment frames, braced frames, and collector elements shall comply with these requirements. Welding methods, procedures and quality control shall comply with AISC 341 Chapter J, AWS D1.1, AWS D1.8 and the following:
1. Demand Critical Welds: The following CJP groove welds are demand critical and shall comply with the special requirements for Demand Critical Welds.
a. Beam flanges to columns, single plate shear connections to columns, and beam webs to columns in moment frames.
b. Column splice welds including column bases in moment frames and braced frames.
c. Link beams to columns in Eccentrically Braced Frames.
d. Web plate to flange plate welds in built-up Eccentrically Braced Frame link beams.
e. Other welds designated as demand critical in the drawings.
2. Welding shall be performed in accordance with AISC 341 Chapter J and a welding procedure specification (WPS) as required in AWS D1.1. WPS variables shall be within the parameters established by the filler metal manufacturer. WPS for demand critical welds shall also comply with AWS D1.8 Section 6.1.
3. Consumables for Welding:
a. Welds used in members and connections of the SFRS shall be made with filler metals meeting the requirements specified in section 6.3 of AWS D1.8.
b. Filler metal properties shall be as follows:

Property	70 ksi Classification	80 ksi Classification
Yield Strength, ksi	58 min	68 min
Tensile Strength, ksi	70 min	80 min
Elongation (%)	22 min	19 min
CVN Toughness, ft-lbf	20 min @ 0 degrees F	20 min @ 20 degrees F

c. Filler metals in Demand Critical Welds shall receive Heat Input Testing that achieves the properties listed above with CVN toughness of 40 ft-lbf min @ 70 degrees F and shall comply with AWS D1.8 section 6.3.5 to 6.3.8.
d. Diffusible Hydrogen: Welding electrodes and electrode-flux combinations shall meet the requirements of AWS D1.8 Table 6.3. The manufacturer's Certificate of Conformance shall be considered adequate proof of this requirement.
e. Intermixed filler metals shall meet the requirements of AWS D1.8 section 6.3.4.
4. Backer bars shall be removed from the beam bottom flange to columns. The root of the weld shall be back gouged to sound metal to remove all slag and cracks. Weld the back gouged region and finish welding using a reinforcing fillet weld. Comply with AWS D1.8 sections 6.7 and 6.8. This requirement also applies to all non-fusible backing used at beam to column CJP welds. Comply with AWS D1.8 section 6.9.
5. Steel backer bars need not be removed from the beam top flange connections to columns or at continuity plate connections to columns provided that the backer bars are welded to the column flange with a continuous 5/16 inch fillet weld on the edge below the CJP groove weld for the entire length of the backer bar.
6. Backing at beam flange to column flange joints shall not be welded to the underside of the beam flange, nor tack welded at this location. If fillet welds or tack welds are placed between the backing and the beam flange in error, they shall be repaired per AWS D1.8 Section 6.9.3.
7. Details and treatment of weld tabs shall be per AWS D1.8 Section 6.11. Use weld tabs as specified in AWS D1.1 Section 5.31 except at the end of CJP welds adjacent to the column web/flange juncture at continuity plates. Remove weld tabs to within 1/8 inch of the base metal surface after welding. Where weld tabs are used at continuity plates, remove them to within 1/4 inch of the base metal surface after welding. Finish the edge where weld tabs are removed to a surface roughness of 500 micro-inches.
8. CJP joints in members with different thickness or widths (such as column splices) shall be transitioned in a manner that the slope in the transition does not exceed 1 in 2.1/2. The transition shall be accomplished by chamfering the thicker part, tapering the wider part, sloping the weld metal, or by a combination of these.
9. Quality requirements for weld access holes for all demand critical welds shall comply with AWS D1.8 Section 6.10. Weld access hole shape shall be per AWS D1.8 Figure 6.2.
10. Beam bottom flange welding sequence shall comply with AWS D1.8 Section 6.14.
11. Preheat, and interpass temperatures shall comply with AWS D1.1 Section 3.5 and AWS D1.8 Section 6.5.
12. Additional welding provisions applicable to demand critical welds only are as follows:
a. Welding processes shall comply with AWS D1.8 Section 6.2.
b. Filler metal packaging and exposure limitations shall comply with AWS D1.8 Section 6.4.
13. Tack welds shall comply with AWS D1.1 Section 5.18 and AWS D1.8 Section 6.6 and 6.16. Tack welds attaching backing bars and weld tabs at demand critical welds shall be placed where they are incorporated into a final weld.
14. Imperfections such as cracks, gouges, grooves, arch strikes and notches will not be permitted within the Protected Zone. Imperfections within the Protected Zone shall be repaired or removed in accordance with AWS D1.8 Section 6.15.4.
15. Braced Frame Welding: Lengths shown for fillet welds at brace-to-gusset, gusset-to-baseplate, and column-to-gusset connections are minimums, intended for establishing gusset plate dimensions. Weld entire contact length at these joints, typical.

5.5. Bolted Connections:
A. Provide snug tightened joints with Group A (threads not excluded) bolts for steel to steel connections, unless noted otherwise. Snug tightened joints shall be used in connections for simple span framing and beam (or girder) to bearing plate connections. Snug tight is the condition that exists when all of the plies in a connection have been pulled into firm contact by the bolts in the joint and all of the bolts in the joint have been tightened sufficiently to prevent the removal of the nuts without the use of a wrench. The snug tightened condition is typically achieved with a few impacts of an impact wrench, application of an electric torque wrench until the wrench begins to slow, or the full effort of a worker on an ordinary spud wrench.
B. Provide pretensioned joints with Group A (threads not excluded) Type 1 bolts for all steel to steel connections that are part of the Lateral Force Resisting System (LFRS). Faying surfaces shall meet the requirements of a slip-critical Class A surface except for faying surfaces of end plate moment connections. Tighten bolts by the turn of the nut, calibrated wrench, or direct tension indicator method. Alternate fastener designs as defined by AISC shall be submitted to the Engineer for review and acceptability prior to installation. Provide hardened washers beneath turned element.
C. Provide pretensioned joints with Group A (threads excluded) Type 1 bolts for all steel to steel connections, unless noted otherwise. Tighten bolts by the turn of the nut, calibrated wrench, or direct tension indicator method. Alternate fastener designs as defined by AISC shall be submitted to the Engineer for review and acceptability prior to installation. Provide hardened washers beneath turned element.
D. Provide pretensioned joints with Group A (threads not excluded) Type 1 bolts for steel to steel connections subject to significant load reversal, fatigue with no load reversal, tensile fatigue, and the conditions listed in AISC 360 Section J.1.10. Tighten bolts by the turn of the nut, calibrated wrench, or direct tension indicator method. Alternate fastener designs as defined by AISC shall be submitted to the Engineer for review and acceptability prior to installation.
E. Provide slip critical joints with Group A Type 1 bolts for steel to steel connections subject to fatigue with load reversal, joints that utilize oversized holes, and joints that utilize slotted holes not loaded perpendicular to the long direction of the slot. Faying surfaces shall meet the requirements of a slip-critical Class A surface. Tighten bolts by the turn of the nut, calibrated wrench, or direct tension indicator method. Alternate fastener designs as defined by AISC shall be submitted to the Engineer for review and acceptability prior to installation.
F. Provide hardened washers beneath the turned element of all bolts or nuts. Provide hardened beveled washers, to compensate for the lack of parallelism, where the outer face of the bolted parts has a slope greater than one in twenty with respect to the plane normal to the bolt axis. Hardened washers or plates installed over oversized holes or slotted holes shall be at least 5/16" thick and shall conform to ASTM F436. Plates or bars installed at slotted holes shall have a size sufficient to completely cover the slot after installation.
G. Where a steel to steel beam connection is not detailed in the drawings, provide a standard AISC framed connection with the capacity to support one half of the total uniform load capacity of the given shape for the span and for the steel specified.
H. Bolts, nuts and washers shall not be reused.

5.6. Beam Web Stiffener Plates:
A. Provide full-height web stiffener plates to each side of all beams above all bearing points. Unless noted otherwise, stiffener plates shall be the thickness indicated in the typical stiffener plate detail.

6. Wood

6.1. Fabrication and construction shall comply with the following Codes and Standards:

A. American Wood Council National Design Specification for Wood Construction 2018 Edition and Supplement (NDS and NDS Supplement)
B. American Wood Council Special Design Provisions for Wind and Seismic 2015 Edition (SDPWS)

6.2. Materials:
A. Sawn Lumber: Members shall be identified by the grade mark and shall conform to the requirements of DOC PS 20.
1. Dimension Lumber: Members shall be Number 2 Douglas Fir-Larch or better or as noted otherwise.
2. Heavy Timber: Timbers larger than 5"x5" shall be Douglas-Fir Larch Number 1 or better or as noted otherwise, as graded by WWPA.
C. Prefabricated Wood I-Joists: I-joists shall conform to ASTM D 5055. I-joists specified on the drawings are intended to be the basis of design. Prefabricated wood I-joists that are equivalent to or better than the specified products shall be submitted for approval, and shall include EI values, moment capacities, and maximum vertical shear capacities.
D. Wood Structural Panel Sheathing: All panels shall be rated by the American Plywood Association (APA). Panels shall bear the stamp of an approved testing and grading agency. Panels shall be grade DOC PS 1 or PS 2 with exterior glue with the following panel span rating, unless noted otherwise.

Area to be sheathed	Span Rating	Minimum Thickness (in)
Roofs	40/20	19/32
Floors	24 o.c. or 48/24	23/32
Walls	24/0	3/8

E. Nails as referenced in these documents shall meet the tolerances in ASTM F1667 and have the following properties:

Nail Size	Length	Minimum Penetration	Common: Shank Diameter	Common: Dowel Bending Yield Strength (psi)	Galvanized Box: Shank Diameter	Galvanized Box: Dowel Bending Yield Strength (psi)
6d	2"	1.1/8"	0.113"	100,000	0.099"	100,000
8d	2.1/2"	1.3/8"	0.131"	100,000	0.113"	100,000
10d	3"	1.1/2"	0.148"	90,000	0.128"	100,000
16d	3.1/2"	1.5/8"	0.162"	90,000	0.135"	100,000
20d	4"	2"	0.192"	80,000	0.148"	90,000

When used to attach structural sheathing nails shall be common or galvanized box type nails. All other nails shall be common type nails.
F. Bolts for connections: ASTM A307 with ASTM A563 heavy hex nuts and standard washers unless noted otherwise.
G. Lag screws for connections: SAE J429 Grade 1 or ASTM A307 Grade A with dimensions per ANSI/ASME B18.2.1. Minimum dowel bending yield strength to be 45,000 psi

6.3. Special Treatments:
A. Preservative Treatment:
1. The following conditions require that wood members be either naturally durable or preservative treated:
a. All wood in contact with concrete or masonry which is less than 8 in from exposed earth or below grade.
b. Sleepers, sills, posts or columns on floor slabs in direct contact with earth. Wood members and siding less than 2 vertical inches from any horizontal surface exposed to the weather
c. Any wood member exposed to the weather without covering or protection to prevent water or moisture accumulation.
2. Preservative-treated wood shall meet the requirements in IBC Section 2303.1.9. Preservative-treated wood shall be treated to meet the requirements of AWPA Standard U1 and M4 according to species, use, and preservative. Preservatives used shall be listed in AWPA U1, Section 4. Preservative-treated wood shall be identified by the mark of an accredited inspection agency. Preservative treated wood shall have a moisture content of less than 19% prior to being enclosed or covered.
B. Fasteners, including nuts and washers, in contact with treated wood shall meet the following criteria as per IBC Section 2304.10.5:
1. Fasteners in contact with preservative-treated wood shall be hot-dipped galvanized steel, stainless steel, silicon bronze or copper. Fasteners other than nails, wood screws, timber rivets, and lag screws may be mechanically-deposited zinc-coated steel with coatings meeting ASTM B 695, Class 55 minimum. Fasteners used in exterior applications shall be per fastener manufacturer's recommendations.

6.4. General Framing and Carpentry
A. Minimum Nailing Requirements (See drawings for areas with greater requirements):
1. RoofUse two plyclips between each support for spans of 48" o.c. and one plyclip between each support for lesser spans at all unsupported panel edges.Provide 1/8" gap between panels. Typical diaphragm nailing shall be 10d common nails. Nail all diaphragm boundaries at 6" o.c. Nail all supported sheathing panel edges to a common framing member at 6" o.c. At sheathing supports away from panel edges nailing shall be at 12" o.c.
2. Floor: Nail all sheathing panels to common framing members with 10d common nails at 6" o.c. at all supported edges and 10d at 12" o.c. at all intermediate supports.
3. Walls: All sheathing panel edges shall be nailed with 8d common nails at 6" o.c. to common framing members or panel edge blocking, unless noted otherwise. Sheathing shall be nailed at 12" o.c. at all intermediate supports (3/8" or 7/16" panels on studs spaced at 24" o.c. requires 6" spacing at all intermediate supports). All abutting shear wall panel edges shall be blocked with panel edge blocking. Where nominal 3 in members are required at panel edges, panel edge blocking shall also be 3 in nominal thickness if placed perpendicular to sheathing.
4. All nailing through structural wood panels shall be 3/8 in minimum from panel edges.
B. Connect all items as per the "Minimum Nailing Schedule" contained within the contract drawings and IBC Table 2304.10.1, "Fastening Schedule", unless noted otherwise.

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REV	DATE	DESCRIPTION

VCBO NUMBER: 21515
CLIENT NUMBER: 20385
DATE: 2021-08-16

TCSD WAREHOUSE REMODEL - BLDGS 649

TOOELE COUNTY SCHOOL DISTRICT
PROJECT ADDRESS: 180 GARNET ST. TOOELE, UTAH 84074

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STRUCTURAL GENERAL NOTES

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C. All blocking shall, unless noted otherwise, be nominally 2 in thick minimum and fit tight against adjacent framing members.
   1. Full-depth blocking shall match the depth of adjacent framing member depths. Full-depth blocking shall be shaped to match diaphragm slope. Full-depth blocking cut from I-joist material of the same depth as the I-joists used in floor/roof construction may be used for flat floors or roofs.
   2. Panel edge blocking and solid blocking may be turned flat against sheathing or other framing, unless noted otherwise.
   3. Where required, squash blocking shall match wall stud nominal thickness, spacing, and shall align with wall studs.

D. Provide full-depth blocking between all framing members that bear directly on walls.

E. Full-depth blocking between joists shall be nailed to the wood plate at the top of shear walls with one Simpson "A35" framing anchor per each piece of blocking, unless noted otherwise.

F. All required bridging and bracing for prefabricated wood I-joists shall be provided by joist manufacturer and installed by Contractor. All penetrations through the joists shall be done per manufacturers' recommendations and requirements.

G. Lateral support of non-bearing walls shall be provided per TYPICAL WOOD NON-BEARING WALL BRACING DETAIL. Framing members shall not bear on non-bearing walls.

6.5. Framing Connections

A. Simpson Strong Tie Connectors are used as the basis of design. Alternate connectors are permitted with approval of the Engineer. The Contractor shall submit the proposed product data and code evaluation report demonstrating the connector is equivalent or exceeds the capacity of the specified connector.

B. Framing connections not indicated shall be connected in a manner similar to typical details in the drawings and the Engineer shall be notified prior to the procurement of connector materials.

C. Where framing connection type is specified without reference to a specific model no. the highest capacity model hanger of that type which is compatible with the member to be supported shall be used unless noted otherwise in the drawings.

D. All framing connectors supporting roof members where additional uplift capacity is available shall be fastened to achieve such.

E. Fill holes in the framing anchors per manufacturer's requirements, unless noted otherwise.

7. Miscellaneous

7.1. Post-Installed Anchors in Concrete and Masonry

F. Anchorage to hardened concrete and grout-filled masonry shall include all mechanical and adhesive anchors and epoxy doweled reinforcing bars of size, quantity, spacing, and embedment as shown on the drawings. Additional anchors shall not be used without approval from the Engineer prior to installation.

G. Special inspection is required during the installation of all post-installed anchors. Refer to applicable code evaluation reports and the Quality Assurance and Statement of Special Inspections sections of the General Structural Notes.

H. Anchorage to Concrete:
   1. All post-installed anchors into hardened concrete shall be selected from the following pre-approved products, unless noted otherwise:

Steel Screw Anchor	Evaluation Report
Hilti KWIK HUS-EZ	ICC ESR-3027
DeWalt Screw-Bolt+	ICC ESR-3889
Simpson Titen HD	ICC ESR-2713

Steel Expansion/Wedge Anchor	Evaluation Report
Hilti KWIK Bolt TZ	ICC ESR-1917
DeWalt Power-Stud+ SD2	ICC ESR-2502
Simpson Strong-Bolt 2	ICC ESR-3037

Adhesive Anchor System	Evaluation Report
Hilti HIT-HY 200	ICC ESR-3187
Hilti HIT-RE 500 V3	ICC ESR-3814
DeWalt AC200+	ICC ESR-4027
DeWalt Pure 110+	ICC ESR-3298
Simpson SET-3G	ICC ESR-4057

   2. Adhesive anchors shall be installed into concrete having a minimum age of 21 days. For installations sooner than 21 days, consult the adhesive manufacturer.

I. Anchorage to Masonry:
   1. All post-installed anchors into grout-filled masonry shall be selected from the following pre-approved products, unless noted otherwise:

Steel Screw Anchor	Evaluation Report
Hilti KWIK HUS-EZ	ICC ESR-3056
DeWalt Screw-Bolt+	ICC ESR-4042
Simpson Titen HD	ICC ESR-1056

Steel Expansion/Wedge Anchor	Evaluation Report
Hilti KWIK Bolt TZ	ICC ESR-3785
DeWalt Power-Stud+ SD1	ICC ESR-2966
Simpson Wedge-All	ICC ESR-1396

Adhesive Anchor System	Evaluation Report
Hilti HIT-HY 270	ICC ESR-4143
DeWalt AC100+ Gold	ICC ESR-3200

J. Alternate anchors or adhesives are permitted with approval of the Engineer. The Contractor shall submit the proposed anchor product data and code evaluation report demonstrating the anchor is equivalent to or exceeds the capacity of the specified anchor.

K. Installation of adhesive anchors horizontally or upwardly inclined to support sustained tension loads shall be performed by personnel certified by an applicable certification program. Certification shall include written and performance tests in accordance with the ACI/CRSI Adhesive Anchor Installer Certification program, or equivalent. Proof of current certification shall be submitted to the Engineer for approval prior to commencement of installation.

L. Anchors shall be installed according to the Manufacturer's Printed Installation Instructions and applicable code evaluation reports including:
   1. Hole diameter, depth, and cleaning procedure
   2. Adhesive mixing, preparation, and placement
   3. Installation torque

M. Locate all existing reinforcement and embedded items prior to drilling into concrete or masonry elements. Do not damage rebar or embeds while drilling or installing anchors.

N. Grout all defective or abandoned holes with non-shrink grout or an injectable epoxy adhesive matching the surrounding concrete compressive strength. Consult the Architect for additional requirements at architecturally exposed concrete.

O. Carbon steel anchors are limited to use in dry, interior locations.

P. Holes for post-installed anchors may not be core drilled unless specifically allowed by the manufacturer's installation instructions and the code evaluation report.

8. Existing conditions

A. The contract structural drawings represent the reconfigured structure and do not indicate the method or means of construction. The Contractor shall supervise and direct the work and shall be solely responsible for all construction means, methods, procedures, techniques, and sequence.

B. The Contractor is responsible for being knowledgeable on information presented in available new drawings and shall field verify all relevant information. Contractor shall familiarize themselves with the existing information and new drawings, and shall field verify all pertinent information.

C. Contractor shall field verify all existing conditions prior to performing any work, including but not limited to: bidding and estimating, shoring, detailing, fabricating, manufacturing, erecting, or installing any given structural element indicated in the contract drawings.

D. Information on existing conditions provided in the contract drawings are based on information gathered from limited site information. If conditions shown do not match existing conditions, contact architect/engineer prior to performing any work. Do not proceed until instructions in writing are provided by the architect/engineer.

E. Dimensional information provided in the contract drawings on existing conditions are for general information and reference purposes only, and shall not be used for detailing and construction.

F. Contractor shall provide dust, odor, and noise protection, and safety measures as necessary to protect the existing structure, vehicles, building interior, building patrons and other persons for the duration of demolition and construction operations.

G. Contractor shall safely shore existing construction to allow the installation of new work. Selected demolition sequencing and shoring methods used shall be the responsibility of the Contractor and their engineer.

H. Demolition, cutting, drilling, etc. work shall be performed as to not damage existing structure that is to remain and shall not jeopardize the structural integrity of the existing building. If any architectural, structural, or MEP members not designated for removal interfere with the new work, the Owner, Architect, and Engineer shall be notified immediately and approval obtained prior to their removal.

I. Contractor shall coordinate location, number and sizes of openings through existing roofs, and walls for air shafts, ducts, piping, and/or conduit with the Architectural, Mechanical, Electrical, Plumbing, and Fire Protection drawings and the respective subcontractors.
   1. Contractor shall repair all damage caused during construction or demolition. All damage shall be repaired and restored with similar materials and workmanship to levels acceptable to the Owner.

9. Special Instructions

9.1. The project specifications are not superseded by the General Structural Notes but are intended to be complementary to them. Consult the specifications for additional requirements in each section. Notes and specific details on the drawings shall take precedence over General Structural Notes and typical details.

9.2. The architectural drawings are the prime contract drawings. Consultant drawings by other disciplines are supplementary to the architectural drawings. All omissions or conflicts, including dimensions, between the various elements of the consultants' drawings and/or specifications shall be brought to the attention of the Architect before proceeding with any work involved. In case of conflict, follow the most stringent requirement as directed by the Architect without additional cost to the Owner. Any work done by the Contractor after discovery of such discrepancy shall be done at the Contractor's risk.

9.3. The structural drawings shall be used in conjunction with the architectural drawings. Primary structural elements and overall structural layout are indicated within the structural plans and details. Some secondary elements, architectural layouts, alcoves, elevations, slopes, depressions, curbs, mechanical equipment and electrical equipment, are not indicated within the structural drawings. Detailing and shop drawing production for structural elements will require information (including dimensions) contained in the architectural, structural and/or other consultants' drawings.

9.4. Shoring and Bracing Requirements:

A. Floor and Roof Structures -- The General Contractor is responsible for the method and sequence of all structural erection. The Contractor shall provide temporary shoring and bracing as the method of erection requires to provide adequate vertical and lateral support. Shoring and bracing shall remain in place as the chosen method requires until all permanent members are in place and all final connections are completed, including all roof and floor attachments. The building shall not be considered stable until all connections are complete.

B. Foundation walls must be braced until the complete floor or roof systems is completed. Do not backfill until floor or roof systems are in place.

C. Walls above grade shall be braced until the structural system is complete. Walls shall not be considered to be self-supporting.

9.5. All expansion joints (E.J.) shown in the structural drawings shall be considered seismic separation joints, unless noted otherwise.

9.6. Submittals: A copy of all shop drawings that have been submitted for review must be kept at the construction site for reference. These drawings must bear the appropriate review stamps. The shop drawing review shall not relieve the Contractor of the responsibility of completing the project according to the contract documents. The General Contractor shall review and mark all shop drawings prior to submitting them to the Architect for review. Shop Drawings made from reproductions of (these) contract drawings will be rejected.

9.7. Project Coordination: It shall be the responsibility of the General Contractor to coordinate with all trades any and all items that are to be integrated into the structural system. Openings or penetrations through, or attachments to the structural system that are not indicated on these drawings shall be the responsibility of the General Contractor and shall be coordinated with the Architect/Engineers. The order of construction is the responsibility of the General Contractor. It is the Contractor's obligation to provide all items necessary for the chosen procedure.

9.8. Contractor shall field verify all dimensions, and conditions. If the contract drawings do not represent actual conditions, Contractor shall notify Architect/Engineer prior to fabrication or construction within that area.

9.9. Notice of Copyright: The structural drawings, plans, schedules, notes and details are hereby copyrighted by Reaveley Engineers. Submission or distribution of documents to meet official regulatory requirements or for similar purposes in connection with the project is not to be construed as publication in derogation of Reaveley Engineers' reserved rights. The documents defining the structure are instruments of service prepared by Reaveley Engineers for one use only. Furthermore, these documents shall not be reproduced, or copied, in whole or in part by the Contractor or subcontractors for preparation of shop drawings or other submittals.

10. Quality Assurance

10.1. Quality Assurance Agency Requirements:

A. The Owner shall engage a qualified Quality Assurance Agency (QAA) to provide all special inspection and quality assurance testing for the project. The QAA shall provide all information necessary for the building official to determine that the agency meets the applicable requirements.
   1. The QAA shall be objective, competent and independent from the Contractor responsible for the work being inspected. The agency shall disclose to the building official and the registered design professional in responsible charge possible conflicts of interest so that objectivity can be confirmed.
   2. The QAA shall have adequate equipment to perform required tests. The equipment shall be periodically calibrated.
   3. The QAA shall employ experienced personnel educated in conducting, supervising and evaluating tests and special inspections. Experience or training shall be considered relevant where the documented experience or training is related in complexity to the same type of special inspection or testing activities for projects of similar complexity and material qualities.
   4. The QAA shall send copies of all inspection and testing reports to the building official, Owner, Architect, Engineer and Contractor. Reports shall indicate that the work inspected was or was not completed in conformance to the approved construction documents. Discrepancies shall be brought to the immediate attention of the Contractor for correction. If they are not corrected, the discrepancies shall be brought to the attention of the, Architect and Engineer.
   5. The QAA shall submit a final report documenting required special inspections and tests, and correction of any discrepancies noted in the inspections or tests. The final report shall be distributed to the building official, Owner, Architect and Engineer in a timely manner prior to the completion of the project.

10.2. Contractor Responsibilities:

A. The Contractor shall submit a written statement of responsibility to the building official and the Owner or the owner's authorized agent prior to the commencement of work on the systems or components listed in the statement of special inspections. The Contractor's statement of responsibility shall contain acknowledgement or awareness of the special requirements contained in the statement of special inspections.

B. Notification of QAA: The Contractor shall notify the QAA in a timely manner so that inspection and testing may be performed as outlined in the statement of special inspections.

10.3. Structural Observations by the Engineer of Record.

A. The Engineer of Record will perform structural observations at critical phases of the project. Observations will be made on a periodic basis throughout the construction of the structural system. Copies of the Engineer's report will be distributed to the Architect, Contractor, Owner, and building official.

B. Observation visits to the site by the Engineer's field representatives shall not be construed as inspection or approval of construction.

11. Statement of Special Inspections

11.1. The following materials, systems and components require special inspection or testing per Chapter 17 of the International Building Code (IBC).

11.2. For items requiring continuous inspection, a special inspector must be present onsite during the performance of that task. In most cases, periodic inspections/tests shall be performed prior to commencing the task, intermittently during the task, and at the completion of the task. Frequency marked with (E) designates periodic inspections that must be performed prior to or upon completion of every task.

Structural Steel per IBC Section 1705.2.1, 1705.12.1 & 1705.13.1

Item	Frequency	Detailed Instructions
Prior to Welding (Table N5.4-1, AISC 360-16):		
Verify welding procedures (WPS) and consumable certificates	Periodic (E)	
Material identification	Periodic	Verify type and grade of material.
Welder identification	Periodic	A system shall be maintained by which a welder who has welded a joint or member can be identified.
Fit-up groove welds	Periodic	Verify joint preparation, dimensions, cleanliness, tacking, and backing.
Access holes	Periodic	Verify configuration and finish.
Fit-up of fillet welds	Periodic	Verify alignment, gaps at root, cleanliness of steel surfaces, and tack weld quality and location.
During Welding (Table N5.4-2, AISC 360-16):		
Use of qualified welders	Periodic	Verify that welders are appropriately qualified.
Control and handling of welding consumables	Periodic	Verify packaging and exposure control.
Cracked tack welds	Periodic	Verify that welding does not occur over cracked tack welds.
Environmental conditions	Periodic	Verify wind speed is within limits as well as precipitation and temperature.
WPS followed	Periodic	Verify items such as settings on welding equipment, travel speed, welding materials, shielding gas type/flow rate, preheat applied, interpass temperature maintained, and proper position.
Welding techniques	Periodic	Verify interpass and final cleaning, each pass is within profile limitations, and each pass meets quality requirements.
Steel headed stud anchors	Periodic (E)	Verify placement and installation of steel headed stud anchors.
After Welding (Table N5.4-3, AISC 360-16):		
Welds cleaned	Periodic	Verify that welds have been properly cleaned.
Size, length, and location of welds	Periodic (E)	
Welds meet visual acceptance criteria	Periodic (E)	Verify weld meets visual acceptance criteria based upon crack prohibition, weld/base-metal fusion, crater cross section, weld profiles, weld size, undercut, and porosity.
Arc strikes	Periodic (E)	
k-area	Periodic (E)	When welding of doubler plates, continuity plates or stiffeners has been performed in the k-area, visually inspect the web k-area for cracks within 3 in. of the weld.
Weld access holes in rolled heavy shapes and built-up heavy shapes (flange >2")	Periodic (E)	After rolled heavy shapes and built-up heavy shapes are welded, visually inspect the weld access holes for cracks.
Backing & weld tabs removed	Periodic (E)	
Repair activities	Periodic (E)	
Document acceptance or rejection of welded joint/member	Periodic (E)	
No prohibited welds	Periodic (E)	Verify no prohibited welds have been added without approval of the EOR.
Nondestructive Testing (Section N5.5, AISC 360-16):		

Item	Frequency	Detailed Instructions
CJP welds (Risk Cat. II)	Periodic	Ultrasonic testing shall be performed on 10% of CJP groove welds in butt, T- and corner joints subject to transversely applied tension loading in materials 5/16-inch thick or greater per Section N5.5b. Testing rate must be increased to 100% if > 5% of welds tested have unacceptable defects per Section N5.5f.
CJP welds (Risk Cat. III or IV)	Periodic (E)	Ultrasonic testing shall be performed on 100% of CJP groove welds in butt, T- and corner joints subject to transversely applied tension loading in materials 5/16-inch thick or greater per Section N5.5b. A reduction in the rate of ultrasonic testing is allowed per Section N5.5e.
Welded joints subject to fatigue	Periodic (E)	Reduction of ultrasonic testing is prohibited.
After Bolting (Table N5.6-3, AISC 360-16):		
Document acceptance or rejection of bolted connections	Periodic (E)	
Other Steel Inspections (Section N5.8, AISC 360-16: Table J8-1, J10-1, AISC 341-16):		
Structural steel details	Periodic	All fabricated steel or steel frames shall be inspected to verify compliance with the details shown in the construction documents, such as braces, stiffeners, member locations, and proper application of joint details at each connection.
Anchor rods and other embedments supporting structural steel	Periodic	Shall be on the premises during the placement of anchor rods and other embedments supporting structural steel for compliance with construction documents. Verify the diameter, grade, type, and length of the anchor rod or embedded item, and the extent or depth of embedment prior to placement of concrete.
Galvanized steel members	Periodic	Exposed cut surfaces of galvanized structural steel main members and exposed corners of rectangular HSS shall be visually inspected for cracks subsequent to galvanizing. Cracks shall be repaired or the member shall be rejected.
Reduced beam sections (RBS)	Periodic	Verify contour and finish as well as dimensional tolerances *(see Table J8-1 of AISC 341-16)*.
Protected zones	Periodic	Verify that no holes or unapproved attachments are made within the protected zone *(see Table J8-1 of AISC 341-16)*.

Concrete Construction per IBC Sections 1705.3 &1705.12

Item	Frequency	Detailed Instructions
Reinforcing steel	Periodic	Verify prior to placing concrete that reinforcing is of specified type, grade and size; that it is free of oil, dirt and rust; that it is located and spaced properly; that hooks, bends, ties, stirrups and supplemental reinforcement are placed correctly; that lap lengths, stagger and offsets are provided; and that all mechanical connections are installed per the manufacturer's instructions and/or evaluation report.
Cast-in bolts & embeds	Periodic	
Post-installed mechanical anchors and adhesive anchors	Periodic	All post-installed anchors/dowels shall be special inspected in accordance with the approved code evaluation report and with ACI Section 17.8.2.
Use of required mix design	Periodic	Verify that all mixes used comply with the approved construction documents; ACI 318: Ch. 19, 26.4.3-26.4.4; and IBC 1904.1, 1908.2, 1908.3.

Item	Frequency	Detailed Instructions
Concrete sampling for strength tests, slump, air content, and temperature	Continuous	Samples for strength tests shall be taken in accordance with ASTM C172, cured per ASTM C31 and tested in accordance with ASTM C39 by a testing agency complying with ASTM C1077. Acceptance criteria for strength tests shall be per ACI 318 Section 26.12.3. For each mix placed, samples shall be taken not less than once a day, nor less than once for each 150 yd^3 of concrete, nor less than once for each 5000 ft^2 of surface area for slabs or walls. At the time fresh concrete is sampled to fabricate specimens for strength tests, perform slump and air content tests and determine the temperature of the concrete.
Curing temperature and techniques	Periodic	Verify that concrete is maintained at a temperature of at least 50°F and in a moist condition for at least 7 days after placement. Verify that high-early-strength concrete is maintained at a temperature of at least 50°F and in a moist condition for at least 3 days after placement. Accelerated curing methods may be used (see ACI 318: 26.5.3.2(c)). Shotcrete shall be maintained at a temperature of at least 40°F for the same period of time as noted for concrete and kept in the moist condition during curing periods in accordance to IBC 1908.9 All concrete materials, reinforcement, forms, fillers, and ground shall be free from frost. In hot weather conditions ensure that appropriate measures are taken to avoid plastic shrinkage cracking and that the specified water/cement ratio is not exceeded.
In-situ strength verification	Periodic	Verify that adequate strength has been achieved prior to the removal of shores and forms
Formwork	Periodic	Verify that the forms are placed plumb and conform to the shapes, lines, and dimensions of the members as required by the approved construction documents.

Masonry Construction per IBC Section 1705.4

Item	Frequency	Detailed Instructions
Prior to Construction (Article 3.1.1, TMS-402/ACI 530.1-13):		
Review material certificates, mix designs, test results and construction procedures	Periodic	Verify that materials conform to the requirements of the approved construction documents. Mix design, test results, material certificates, and construction procedures should be submitted for review. Mortar mix designs shall conform to ASTM C 270 while grout shall comply with the proportion or strength requirements of ASTM C 476 or be based upon compressive strength tests in accordance with ASTM C1019. Material certificates shall be provided for the following: reinforcement; anchors, ties, fasteners, and metal accessories; masonry units; mortar and grout materials. Construction procedures for cold-weather or hot-weather construction shall be reviewed.
Verify f'_m and f'_{AAC} prior to construction	Periodic	Determine the compressive strength for each wythe by the "unit strength method" or by the "prism test method" as specified in Section 1.4B of ACI 530.1-13 prior to construction.
Proportions of site-prepared mortar	Periodic	Verify that mortar is of the type and color specified on the construction documents, that it conforms to ASTM C 270, and that it is mixed in accordance with Article 2.6 A of TMS-602/ACI 530.1-13.
Construction of mortar joints	Periodic	Verify that mortar joints comply with Article 3.3 B of TMS-602/ACI 530.1-13.
Properties of thin-bed mortar for AAC masonry	Periodic	Verify that mortar complies with Article 2.1 C of TMS-602/ACI 530.1-13.
Preparation of required grout specimens, mortar specimens and/or prisms shall be observed	Periodic	If the prism test method is used a minimum of three prisms shall be constructed in accordance with ASTM C1314. If the unit strength method is selected the compressive strength of the grout shall be determined per ASTM C1019 (not required if grout complies with ASTM C476).
Prior to Grouting (Table 3.1.2, TMS-402/ACI 530-13):		
Grout space	Periodic	Verify that grout space is free of mortar droppings, debris, loose aggregate, and other deleterious materials and that cleanouts are provided per Article 3.2 D and 3.2 F of TMS-602/ACI 530.1-13.
Grade, type, and size of reinforcement and anchor bolts	Periodic	Verify that reinforcement, joint reinforcement, wall ties, anchor bolts and veneer anchors comply with the approved construction documents and Section 1.6 of TMS 402/ACI 530-13.
Placement of reinforcement and connectors	Periodic	Verify that reinforcement, joint reinforcement, wall ties, anchor bolts and veneer anchors are installed in accordance with the approved construction documents and Articles 3.2 E, 3.4, and 3.6 A of TMS 602/ACI 530.1-13.
Proportions of site-prepared grout	Periodic	Verify that grout is proportioned per ASTM C 476 and has a slump between 8-11 inches. Self-consolidated grout shall not be proportioned onsite. (see Articles 2.6 B and 2.4 G.1.b of TMS 602/ACI 530.1-13. *Continuous inspection is required for Risk Category IV buildings*.
Placement of masonry units and construction of mortar joints	Periodic	Verify that face shells and head joints are fully mortared and that vertical cells are aligned and unobstructed openings for grout are provided. All units are to be clean and placed while mortar is soft and plastic. Verify that mortar joints are placed in accordance with Article 3.3 B of TMS 602/ACI 530.1-13.
During Masonry Construction (Table 3.1.2, TMS-402/ACI530-13):		
Size and location of structural elements	Periodic	Verify that structural elements are placed in locations specified on the approved construction documents and to the tolerances noted in Section 3.3F of TMS 602/ACI 530.1-13.
Type, size, and location of anchors, including other details of anchorage of masonry to structural members, frames, or other construction	Periodic	Verify that correct anchorages and connections are provided per the approved plans and Sections 1.16.4.3 and 1.17.1 of TMS 402/ACI 530-13. Verify that structural elements are placed in locations specified on the approved construction documents. Headed or bent bar anchor bolts shall be embedded in grout.
Welding of reinforcement	Continuous	
Preparation, construction, and protection of masonry during cold weather (<40°F) or hot weather (>90°F)	Periodic	Verify that cold-weather construction is performed in accordance with Article 1.8 C of TMS 602/ACI 530.1-13 and hot weather construction per Article 1.8 D of TMS 602/ACI 530.1-13.
Placement of grout	Continuous	
Self-consolidating grout	Continuous	
Placement of AAC masonry units and construction of thin-bed mortar joints	Periodic	Verify that mortar is placed in accordance with Article 3.3 B.8 of TMS-602/ACI 530.1-13.
Observation of grout specimens, mortar specimens, and/or prisms	Periodic	Confirm that specimens/prisms are performed as required by Article 1.4 of TMS-602/ACI 530.1-13. *Continuous inspection is required for Risk Category IV buildings.*
Minimum Testing:		
Verification of Slump Flow and Visual Stability Index (VSI) for self-consolidating grout	Periodic	Compressive strength tests should be performed in accordance with ASTM C 1019 for slump flow and ASTM C 1611 for VSI.
Verification of f'_m and f'_{AAC}	Periodic	Determine the compressive strength for each wythe by the "unit strength method" or by the "prism test method" as specified in Article 1.4 B of TMS 602/ACI 530.1-13 prior to construction. *For Risk Category IV buildings this should be verified at every 5,000ft² of construction.*

Verification of proportions of materials in premixed or pre-blended mortar and grout	Periodic	Verify that proportions for mortar meet ASTM C 270 and proportions for grout meet ASTM C 476. This applies to *Risk Category IV buildings only.*
Post-installed anchors or dowels		All post-installed anchors/dowels shall be specially inspected as required by the approved ICC-ES report.

Soils per IBC Section 1705.6

Item	Frequency	Detailed Instructions
Verify subgrade is adequate to achieve design bearing capacity	Periodic	Prior to placement of concrete.
Verify excavations extend to proper depth and material	Periodic	Prior to placement of compacted fill or concrete.
Verify that subgrade has been appropriately prepared prior to placing compacted fill	Periodic	Prior to placement of compacted fill.
Perform classification and testing of compacted fill materials	Periodic	All materials shall be checked at each lift for proper classifications and gradations not less than once for each 10,000ft² of surface area.
Verify proper materials, densities and lift thicknesses during placement and compaction.	Continuous	

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VCBO NUMBER: 21515
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DATE: 2021-08-16

TCSD WAREHOUSE REMODEL - BLDGS 649

TOOELE COUNTY SCHOOL DISTRICT
PROJECT ADDRESS: 180 GARNET ST. TOOELE, UTAH 84074

BID SET

STRUCTURAL GENERAL NOTES

8/16/2021 7:57:43 PM

SE002

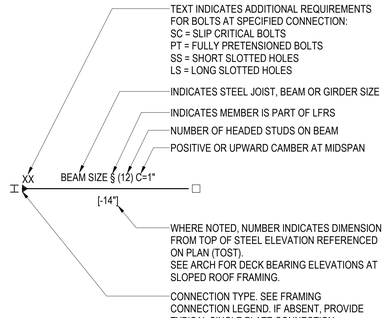
PLAN LEGEND

- FOOTING STEP
- FOOTING - CONTINUOUS
- FOOTING - THICKENED SLAB
- FOOTING - SQUARE FOOTING - RECTANGULAR FOOTING - MAT FOOTING
- 0" CHANGE IN ELEVATION
- SLAB BLOCK-OUT AT COLUMN
- CJ SLAB CONTROL/CONSTRUCTION JOINT
- SPECIAL SLAB OR DECK AREA
- SPECIAL SLAB OR DECK AREA
- SPECIAL SLAB OR DECK AREA
- RECESSED/DEPRESSED SLAB
- OPENING
- CONCRETE HOUSEKEEPING PAD
- INDICATES ROOF DAVIT ARM BASE
- INDICATES WINDOW WASHING TIE-BACK
- CONCRETE BEAM
- CONCRETE JOIST - ONE WAY PANS
- CONCRETE JOIST - TWO WAY PANS
- CONCRETE SUSPENDED SLAB
- CONCRETE OVER STEEL DECK
- STEEL DECK — STEEL GRATE
- WOOD DIAPHRAGM SHEATHING

- CONCRETE WALL
- CONCRETE WALL - RECESSED (FDTN PLAN)
- CONCRETE LINTEL (FRAMING PLAN)
- CONCRETE WALL - RECESSED AT DOOR
- CONCRETE PIER IN CONCRETE WALL. TOP OF PIER RECESSED BELOW SLAB.
- CONCRETE COLUMN
- CONCRETE JAMB COLUMN POURED MONOLITHIC WITH CONCRETE WALL
- MASONRY WALL
- MASONRY WALL - RECESSED (FDTN PLAN)
- MASONRY LINTEL (FRAMING PLAN)
- MASONRY COLUMN IN MASONRY WALL
- STEEL STUD WALL - STRUCTURAL
- STEEL HEADER IN STEEL STUD WALL
- BRICK WALL
- BRICK WALL - RECESSED (FDTN PLAN)
- BRICK LINTEL (FRAMING PLAN)
- BRICK COLUMN IN BRICK WALL
- WOOD STUD WALL
- WOOD HEADER IN WOOD STUD WALL
- NON-BEARING WOOD WALL. SEE ARCH
- STEEL/WOOD BEAM OR GIRDER
- STEEL/WOOD JOIST OR PURLIN
- STEEL BRACED FRAME - ABOVE
- STEEL BRACED FRAME
- STEEL BEAM OR GIRDER
- STEEL JOIST OR PURLIN
- STEEL ANGLE BRACE / KICKER. SEE __/__ FOR SLAB EDGE KICKER. SEE __/__ FOR FRAME BRACE
- CROSS BRIDGING
- HORIZONTAL BRIDGING
- STEEL COLUMN - TUBE (HSS)
- STEEL COLUMN - WIDE FLANGE
- STEEL COLUMN - PIPE (HSS)
- WOOD COLUMN

- EXISTING FOOTING - CONTINUOUS
- EXISTING FOOTING - THICKENED SLAB
- EXISTING FOOTING - SQUARE, RECTANGULAR, OR MAT
- EXISTING CONCRETE SHEAR WALL, FOUNDATION WALL OR RETAINING WALL
- EXISTING OPENING THROUGH CONCRETE WALL
- EXISTING CONCRETE PIER IN CONCRETE WALL. PIER RECESSED BELOW SLAB.
- EXISTING CONCRETE COLUMN
- NEW OPENING THROUGH EXISTING CONCRETE WALL
- EXISTING MASONRY WALL
- EXISTING OPENING THROUGH MASONRY WALL
- NEW OPENING THROUGH EXISTING MASONRY WALL
- EXISTING MASONRY COLUMN IN MASONRY WALL
- EXISTING STEEL COLUMN - TUBE
- EXISTING STEEL COLUMN - WIDE FLANGE
- EXISTING STEEL COLUMN - PIPE
- EXISTING STEEL BRACED FRAME
- EXISTING SLAB BLOCK-OUT AT COLUMN
- CJ EXISTING SLAB CONTROL/CONSTRUCTION JOINT
- EXISTING STEEL BEAM OR GIRDER
- EXISTING STEEL JOIST OR PURLIN
- EXISTING CROSS BRIDGING
- EXISTING HORIZONTAL BRIDGING
- EXISTING TO BE REMOVED
- EXISTING OPENING

STEEL FRAMING MEMBER DESIGNATION



STEEL FRAMING CONNECTION LEGEND

- MOMENT FRAME CONNECTION (LFRS) B1/SF201
- GRAVITY BEAM MOMENT CONNECTION A3/SF601

ABBREVIATIONS

@	AT
AB	ANCHOR BOLT (S)
ABV	ABOVE
ALT	ALTERNATE
APPROX	APPROXIMATE
ARCH	ARCHITECT(URAL)
BLDG	BUILDING
BLW	BELOW
BM	BEAM
BOT	BOTTOM
BRG	BEARING
BTWN	BETWEEN
CJ	CONSTRUCTION JOINT OR CONTROL JOINT
CJP	COMPLETE JOINT PENETRATION
CMU	CONCRETE MASONRY UNIT
COL	COLUMN
CONC	CONCRETE
CONST	CONSTRUCTION
CONT	CONTINUOUS
CONTR	CONTRACTOR
CTR	CENTER
D.B.	DECK BEARING
db	DIAMETER OF REINFORCING BAR
DBA	DEFORMED BAR ANCHORS
DBL	DOUBLE
DET	DETAIL
DIA (OR Ø)	DIAMETER
DIAG	DIAGONAL
DIM	DIMENSION
DK	DECK
DN	DOWN
DWG	DRAWING
DWL	DOWEL
E.F.	EACH FACE
E.J.	EXPANSION JOINT (SEISMIC SEPARATION JOINT)
E.W.	EACH WAY
EA	EACH
EL	ELEVATION
ELEC	ELECTRICAL
ELEV	ELEVATOR
ENG	ENGINEER
EQ	EQUAL
EQUIP	EQUIPMENT
EXIST (E)	EXISTING
EXP	EXPANSION / EXPOSED
EXT	EXTERIOR
F.D.	FLOOR DRAIN
F.F.	FINISH FLOOR
F.V.	FIELD VERIFY
FDTN	FOUNDATION
FIN	FINISH
FL	FLOOR
FT	FOOT
FTG	FOOTING
GA	GAUGE
GALV	GALVANIZED
GLB	GLU-LAMINATED BEAM
GR	GRADE
GSN	GENERAL STRUCTURAL NOTES
HB	HORIZONTAL BRIDGING
HORIZ	HORIZONTAL
HSA	HEADED STUD ANCHORS
HSS	HOLLOW STRUCTURAL STEEL
HT	HEIGHT
I.F.	INSIDE FACE
IBC	INTERNATIONAL BUILDING CODE
ICC	INTERNATIONAL CODE COUNCIL
IN	INCH
INSUL	INSULATION
INT	INTERIOR
JST	JOIST
JT	JOINT
K	KIPS - 1,000 POUNDS
KLF	KIPS PER LINEAL FOOT
KSF	KIPS PER SQUARE FOOT
KSI	KIPS PER SQUARE INCH
LBS	POUNDS
Ld, Lt, Lsb, Lsbt, Ldc, Lsc	SEE CONCRETE REINFORCING BAR DEVELOPMENT AND LAP LENGTH SCHEDULE
LF	LINEAL FOOT
LFRS	LATERAL FORCE RESISTING SYSTEM (SFRS & WFRS)
LLH	LONG LEG HORIZONTAL
LLV	LONG LEG VERTICAL
LSH	LONG SIDE HORIZONTAL
LSV	LONG SIDE VERTICAL
MAS	MASONRY
MAX	MAXIMUM
MCJ	MASONRY CONTROL JOINT
MECH	MECHANICAL
MFGR	MANUFACTURER
MIN	MINIMUM
MISC	MISCELLANEOUS
NIC	NOT IN CONTRACT
NORM	NORMAL
NTS	NOT TO SCALE
O.C.	ON CENTER
O.F.	OUTSIDE FACE
OPNG	OPENING
OPP	OPPOSITE
OWSJ	OPEN WEB STEEL JOIST
P.T.	POST-TENSIONED
PCF	POUNDS/CUBIC FOOT
PJP	PARTIAL JOINT PENETRATION
PL	PLATE
PLF	POUNDS/LINEAL FOOT
PNL	PANEL
PSF	POUNDS/SQ FOOT
PSI	POUNDS/SQ INCH
R.D.	ROOF DRAIN
REINF	REINFORCING

ABBREVIATIONS

REQD	REQUIRED
SFRS	SEISMIC FORCE RESISTING SYSTEM
SHT	SHEET
SI	SPECIAL INSPECTION (SP. INSP.)
SIM	SIMILAR
SOG	SLAB ON GRADE
SQ	SQUARE
STAG	STAGGERED
STD	STANDARD
STIFF	STIFFENER
STL	STEEL
STRUCT	STRUCTURAL
T & B	TOP AND BOTTOM
T.O.	TOP OF
TEMP	TEMPERATURE
THDS	THREADS
TOC	TOP OF CONCRETE
TOCP	TOP OF CONCRETE PIER
TOF	TOP OF FOOTING
TOS	TOP OF SLAB
TOST	TOP OF STEEL
TOW	TOP OF WALL
TYP	TYPICAL
UNO	UNLESS NOTED OTHERWISE
VERT	VERTICAL
W.P.	WORK POINT
W/	WITH
WF	WIDE FLANGE
WFRS	WIND FORCE RESISTING SYSTEM
WT	WEIGHT
WWF	WELDED WIRE FABRIC
YD	YARD

PLAN MARKS

BF-#	BRACED FRAME
CB-#	CONCRETE BEAM
CC-#	CONCRETE COLUMN
CCSS-#	CANTILEVERED CONCRETE SUSPENDED SLAB
CDP-#	CONCRETE DRILLED PIER
CFW-#	CONCRETE FOUNDATION WALL
CGB-#	CONCRETE GRADE BEAM
CJ-#	CONCRETE JOIST
CJC-#	CONCRETE JAMB COLUMN
CL-#	CONCRETE LINTEL
CP-#	CONCRETE PIER
CRW-#	CONCRETE RETAINING WALL
CSG-#	CONCRETE SLAB ON GRADE
CSH-#	CONCRETE SHEAR HEAD
CSS-#	CONCRETE SUSPENDED SLAB
CSW-#	CONCRETE SHEAR WALL
CW-#	CONCRETE WALL
FC#	CONTINUOUS FOOTING
FM#	MAT FOOTING
FR#	RECTANGULAR FOOTING
FS#	SQUARE FOOTING
FTS#	THICKENED SLAB FOOTING
HD-#	HOLD DOWN ANCHOR
MC-#	MASONRY COLUMN
MF-#	MOMENT FRAME
ML-#	MASONRY LINTEL
MP-#	MASONRY PIER
MW-#	MASONRY WALL
PTB-#	POST-TENSIONED CONCRETE BEAM
SBP-#	STEEL BASE PLATE
SC-#	STEEL COLUMN
SCP-#	STEEL CAP PLATE
SD-#	STEEL DECK
SDA-#	STEEL DECK ATTACHMENT
SG-#	STEEL GIRDER
SJ-#	STEEL JOIST
SND-#	SNOW DRIFT
WB-#	WOOD BEAM
WBW-#	WOOD BEARING WALL
WC-#	WOOD COLUMN
WD-#	WOOD DIAPHRAGM
WJ-#	WOOD JOIST
WSW-#	WOOD SHEAR WALL

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CLIENT NUMBER: 20385
DATE: 2021-08-16

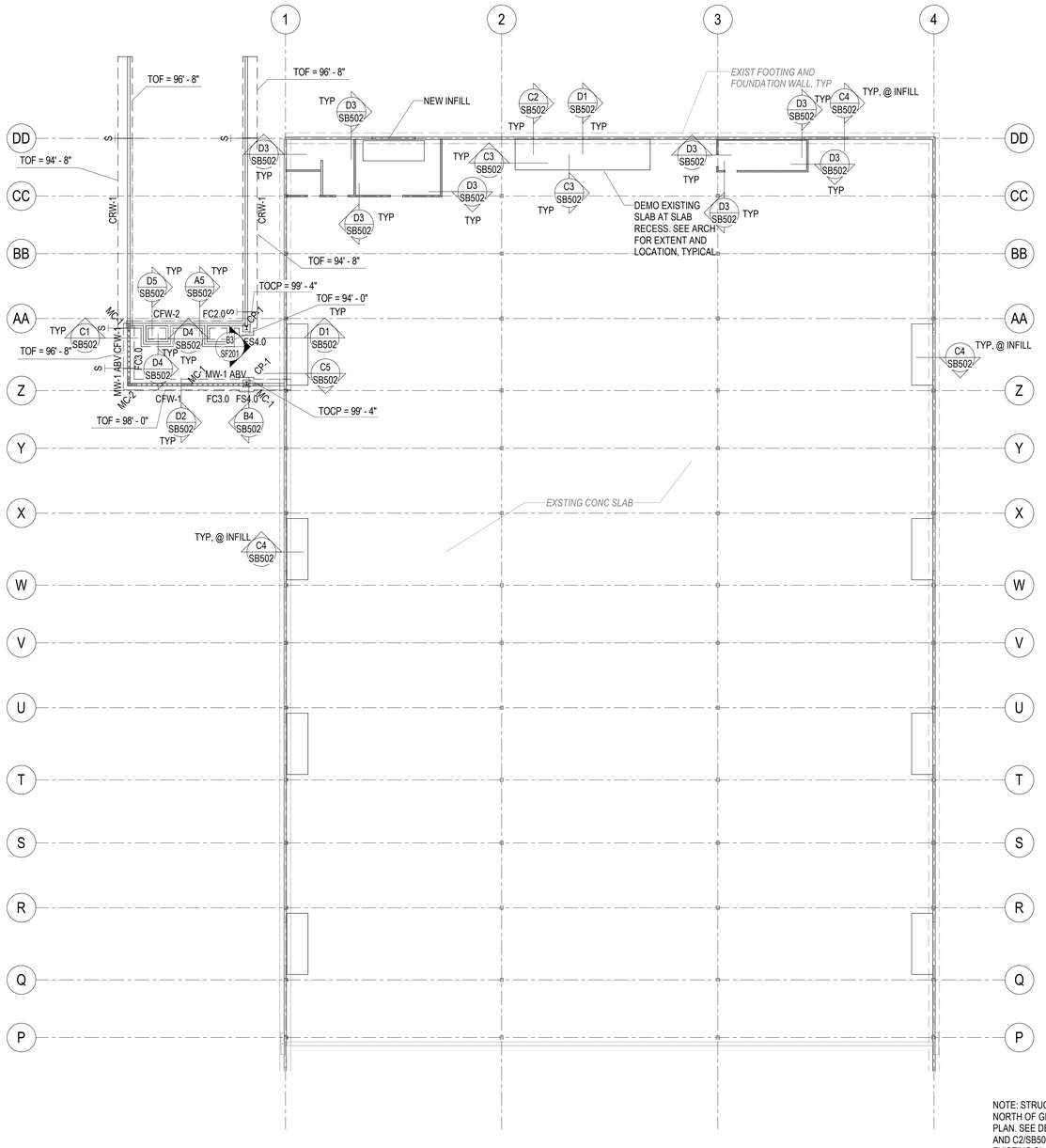
TCSD WAREHOUSE REMODEL - BLDGS 649

TOOELE COUNTY SCHOOL DISTRICT
PROJECT ADDRESS: 180 GARNET ST. TOOELE, UTAH 84074

BID SET

LEGENDS & ABBREVIATIONS

SE003



NOTE: STRUCTURE ONLY SHOWN FOR BUILDING NORTH OF GRIDLINE P. SEE ARCH FOR ENTIRE PLAN. SEE DETAILS D1/SB502, C3/SB502, C4/SB502 AND C2/SB502 FOR NEW CONCRETE SLAB AT EXISTING SLAB RECESSES. SEE ARCH FOR ALL LOCATIONS.

1 SB101 FOOTING AND FOUNDATION PLAN

SCALE: 1/16" = 1'-0"

EXISTING BUILDING NOTES

1. THE CONTRACTOR SHALL FIELD VERIFY ALL EXISTING CONDITIONS PRIOR TO DETAILING, FABRICATING, ERECTING OR INSTALLING ANY STRUCTURAL ELEMENT. ALL DISCREPANCIES SHALL BE BROUGHT TO THE ATTENTION OF THE DESIGN TEAM IN A TIMELY MANNER SUCH THAT WORK WILL NOT BE DELAYED.

2. THE CONTRACTOR SHALL PROVIDE ADEQUATE SHORING OF EXISTING STRUCTURE DURING CONSTRUCTION.

FOOTING & FOUNDATION PLAN NOTES

1. SEE ARCHITECTURAL, CIVIL AND LANDSCAPE DRAWINGS FOR EXTERIOR CONCRETE RETAINING AND / OR SITE WALLS NOT SHOWN ON THE STRUCTURAL DRAWINGS.

2. SEE TYPICAL STEP DETAIL AT CONTINUOUS FOOTING FOR REINFORCING REQUIREMENTS C1/SB501.

3. PROVIDE REINFORCEMENT AT WALL ENDS, INTERSECTIONS AND OPENINGS PER TYPICAL DETAILS D1/SB501 AND D4/SB501.

4. DOWEL ALL CONCRETE WALLS TO FOOTING PER TYPICAL DETAIL C3/SB501.

SLAB ON GRADE PLAN NOTES

1. ALL SLABS ON GRADE SHALL BE 4 INCHES THICK, UNLESS NOTED OTHERWISE. SEE TYPICAL CONCRETE SLAB ON GRADE PROFILE DETAIL B5/SB501 FOR SUBGRADE REQUIREMENTS.

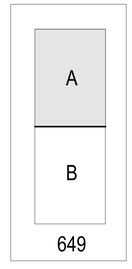
2. SEE ARCHITECTURAL, CIVIL AND LANDSCAPE DRAWINGS FOR EXTERIOR CONCRETE WORK AT DOORS, SIDEWALKS, ETC.

3. SEE ARCHITECTURAL DRAWINGS AND FINISH SCHEDULE FOR SLAB DEPRESSIONS, SLOPES TO DRAINS AND SLAB AREAS TO RECEIVE FLOOR TILE.

4. SEE TYPICAL CONCRETE SLAB ON GRADE DETAILS FOR CONSTRUCTION JOINTS, CONTROL JOINTS AND ADDITIONAL SLAB REINFORCING B1/SB501.

5. SUBMIT SLAB ON GRADE CONTROL JOINT PLAN FOR REVIEW.

KEY PLAN



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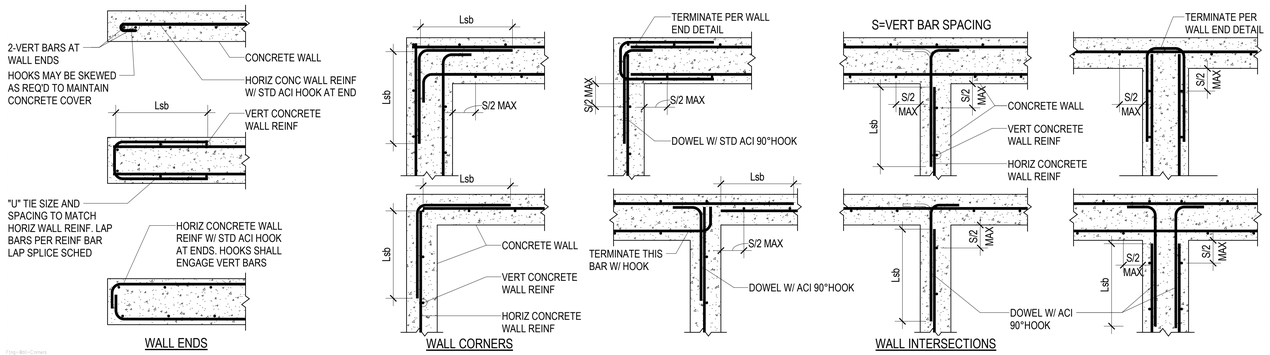
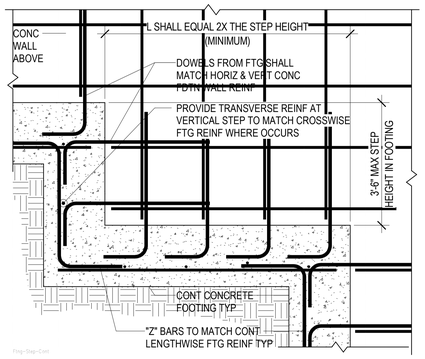
FOOTING AND FOUNDATION PLAN

SB101



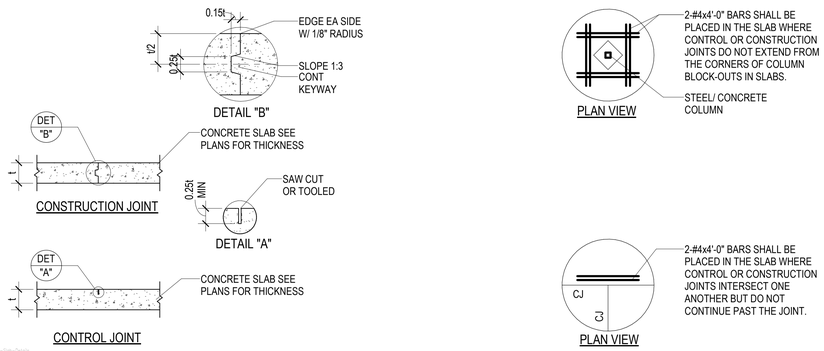
D1 SB501 TYPICAL CONCRETE WALL REINFORCING AT ENDS, CORNERS AND INTERSECTIONS (PLAN VIEWS)

NO SCALE



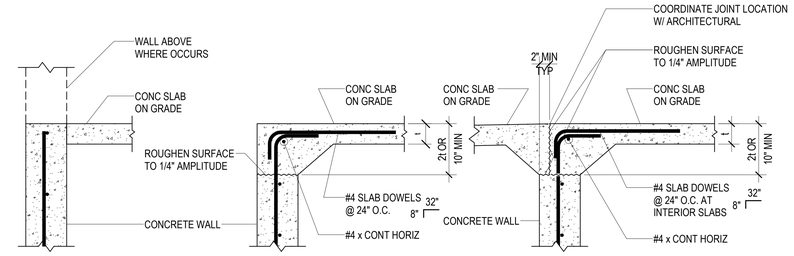
C1 SB501 TYPICAL STEP DETAIL AT CONTINUOUS FOOTING

NO SCALE



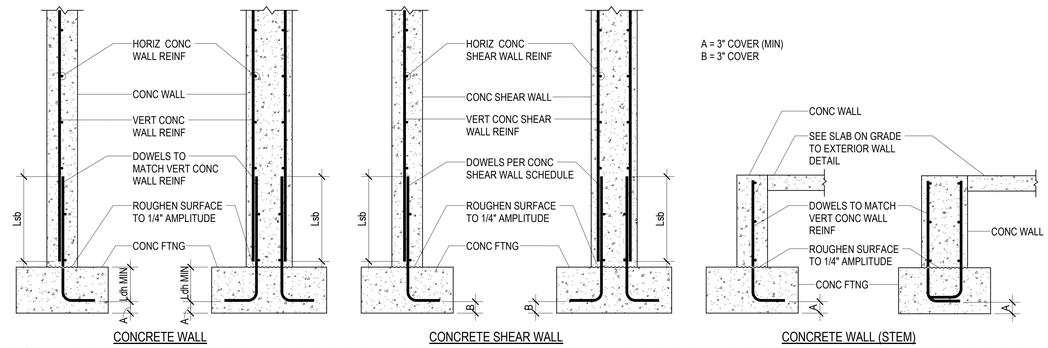
B1 SB501 TYPICAL CONCRETE SLAB ON GRADE DETAILS

NO SCALE



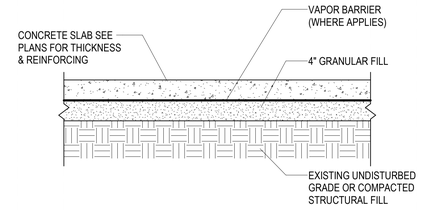
D4 SB501 TYPICAL CONCRETE SLAB ON GRADE TO CONCRETE WALL

NO SCALE



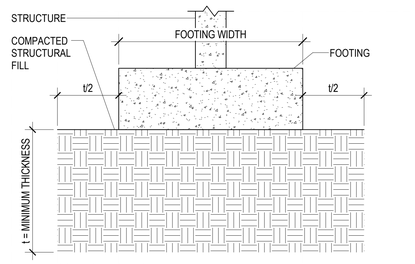
C3 SB501 TYPICAL CONCRETE WALL CONNECTION TO CONCRETE FOOTING

NO SCALE



B5 SB501 TYPICAL CONCRETE SLAB ON GRADE PROFILE

NO SCALE



A5 SB501 TYPICAL COMPACTED STRUCTURAL FILL DETAIL

NO SCALE

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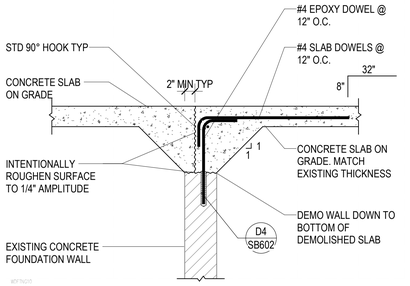
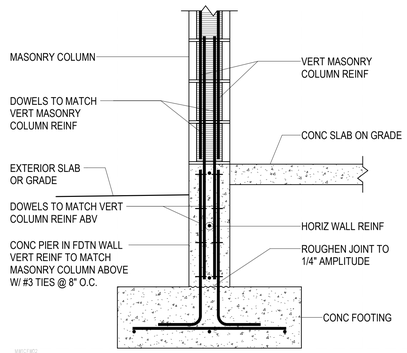
TYPICAL FOOTING & FOUNDATION DETAILS

SB501



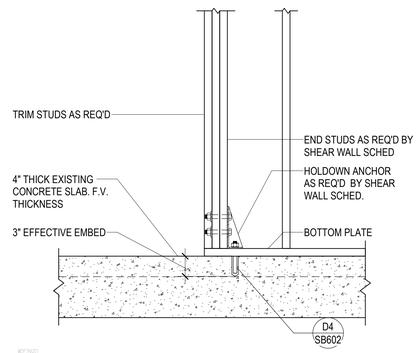
D1 / SB502 — TYPICAL CONCRETE SLAB ON GRADE TO EXISTING CONCRETE WALL AT DOOR

NO SCALE



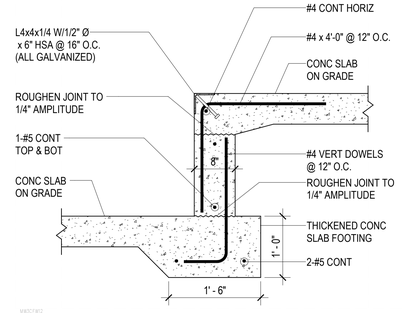
D2 / SB502 — TYPICAL MASONRY COLUMN ON CONCRETE FOUNDATION WALL

NO SCALE



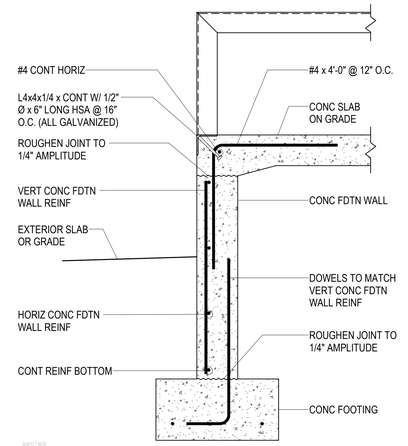
D3 / SB502 — TYPICAL HOLDOWN ANCHOR DETAIL

NO SCALE



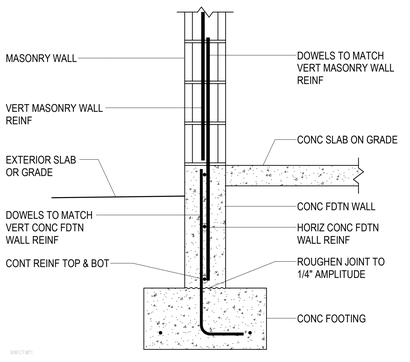
D4 / SB502 — TYPICAL DOCK LEVELER PIT DETAIL

NO SCALE



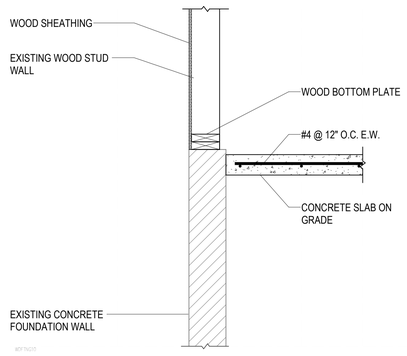
D5 / SB502 — TYP CONCRETE FOUNDATION WALL AT DOCK LEVELER

NO SCALE



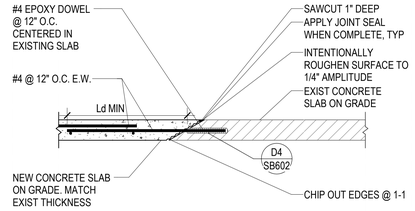
C1 / SB502 — TYPICAL MASONRY WALL ON FOUNDATION WALL

NO SCALE



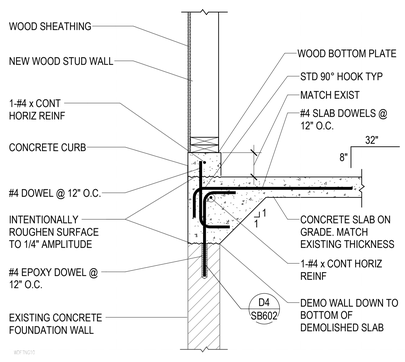
C2 / SB502 — TYPICAL CONC SLAB ON GRADE TO EXIST CONC WALL

NO SCALE



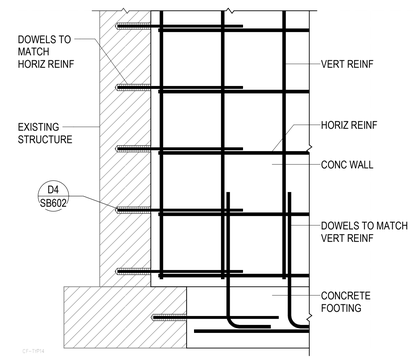
C3 / SB502 — TYPICAL CONCRETE SLAB ON GRADE TO EXISTING DETAIL

NO SCALE



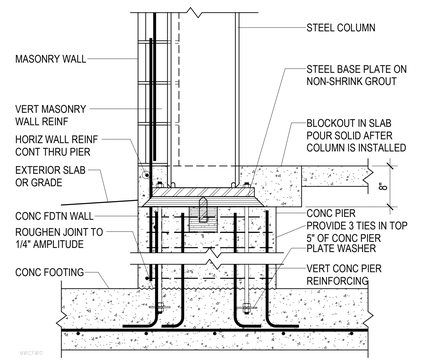
C4 / SB502 — TYPICAL CONC SLAB ON GRADE TO EXIST CONC WALL

NO SCALE



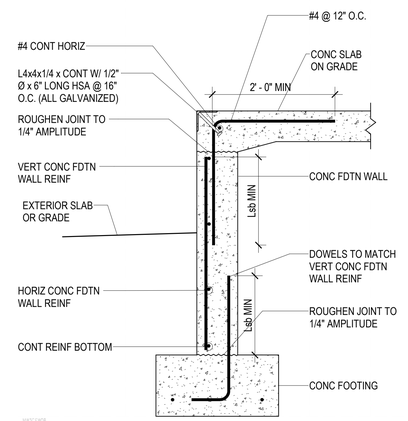
C5 / SB502 — NEW WALL & FOOTING TO EXISTING STRUCTURE

NO SCALE



B4 / SB502 — TYPICAL STEEL COLUMN ON CONCRETE PIER AT MASONRY WALL

NO SCALE



A5 / SB502 — TYP CONCRETE FOUNDATION WALL AT DOCK LEVELER

NO SCALE

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REV	DATE	DESCRIPTION

VCBO NUMBER: 21515
CLIENT NUMBER: 20385
DATE: 2021-08-16

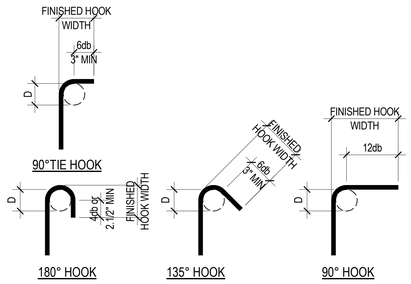
TCSD WAREHOUSE REMODEL - BLDGS 649

TOOELE COUNTY SCHOOL DISTRICT
PROJECT ADDRESS: 180 GARNET ST. TOOELE, UTAH 84074

BID SET

FOOTING AND FOUNDATION DETAILS

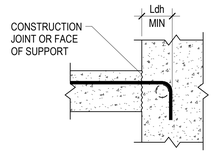
SB502



END HOOK SCHEDULE					
BAR SIZE	D	FINISHED HOOK WIDTH			
		180° HOOK	135° HOOK	90° HOOK	90° TIE HOOK
#3	2.1/4"	3"	4.1/4"	6"	4"
#4	3"	4"	4.1/2"	8"	4.1/2"
#5	3.1/4"	5"	5.1/2"	10"	6"
#6	4.1/2"	6"	8"	12"	--
#7	5.1/4"	7"	9"	14"	--
#8	6"	8"	10.1/2"	16"	--
#9	9.1/2"	11.3/4"	--	19"	--
#10	10.3/4"	13.1/4"	--	22"	--
#11	12"	14.3/4"	--	24"	--
#14	18.1/4"	21.3/4"	--	31"	--
#18	24"	28.1/2"	--	41"	--

D1 SB601 REINFORCEMENT END HOOK SCHEDULE

NO SCALE



TENSION HOOK DEVELOPMENT LENGTH (Ldh)					
BAR SIZE	NORMAL WEIGHT CONCRETE, f'c = PSI				
	3,000	4,000	4,500	5,000	6,000
#3	6"	6"	6"	6"	6"
#4	8"	7"	7"	7"	7"
#5	10"	9"	8"	8"	7"
#6	12"	10"	10"	9"	8"
#7	14"	12"	11"	11"	10"
#8	16"	14"	13"	12"	11"
#9	18"	15"	14"	14"	13"
#10	20"	17"	16"	15"	14"
#11	22"	19"	18"	17"	16"
#14	37"	32"	31"	29"	27"
#18	50"	43"	41"	39"	35"

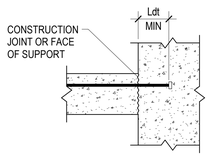
NOTES:
1. VALUES HERE VALID FOR ALL CASES IF:
   SIDE COVER ≥ 2.1/2"
   END COVER ≥ 2"

2. MULTIPLY VALUES IN SCHEDULE BY 1.33 FOR LIGHTWEIGHT CONCRETE

3. MULTIPLY VALUES IN SCHEDULE BY 1.2 FOR USE WITH EPOXY COATED REBAR

D2 SB601 TENSION HOOK DEVELOPMENT SCHEDULE

NO SCALE



TENSION HEADED BAR DEVELOPMENT LENGTH (Ldt)					
BAR SIZE	NORMAL WEIGHT CONCRETE, f'c = PSI				
	3,000	4,000	4,500	5,000	6,000
#3	7"	6"	6"	6"	6"
#4	9"	8"	8"	7"	7"
#5	11"	10"	9"	9"	8"
#6	14"	12"	11"	11"	10"
#7	16"	14"	13"	12"	11"
#8	18"	16"	15"	14"	13"
#9	20"	18"	17"	16"	14"
#10	23"	20"	19"	18"	16"
#11	25"	22"	21"	20"	18"

NOTES:
1. VALUES HERE VALID FOR ALL CASES IF:
   A. CLEAR COVER OF BAR ≥ 2*db. WHERE db IS BAR DIAMETER IN INCHES
   B. CLEAR SPACING BETWEEN BARS ≥ 4*db
   C. NET BEARING AREA OF HEAD Abrg ≥ 4*Ab, WHERE Ab IS AREA OF BAR

2. MULTIPLY VALUES IN SCHEDULE BY 1.2 FOR USE WITH EPOXY COATED REBAR.

3. FOR GRADE 60 REINFORCING ONLY.

D3 SB601 TENSION HEADED BAR DEVELOPMENT SCHEDULE

NO SCALE

CONCRETE REINFORCING BAR DEVELOPMENT AND LAP SPLICE LENGTH SCHEDULE																							
BAR SIZE	f'c = 3000 PSI				f'c = 4000 PSI				f'c = 4500 PSI				f'c = 5000 PSI				f'c = 6000 PSI				f'c = ALL	
	Ld	Lt	Lsb	Lsbt	Ld	Lt	Lsb	Lsbt	Ld	Lt	Lsb	Lsbt	Ld	Lt	Lsb	Lsbt	Ld	Lt	Lsb	Lsbt	Ldc	Lsc
#3	17"	22"	22"	28"	15"	19"	19"	25"	14"	18"	18"	23"	13"	17"	17"	22"	12"	16"	16"	20"	8"	12"
#4	22"	29"	29"	38"	19"	25"	25"	33"	18"	24"	24"	31"	17"	23"	23"	29"	16"	21"	21"	27"	10"	15"
#5	28"	36"	36"	47"	24"	31"	31"	41"	23"	30"	30"	38"	22"	28"	28"	36"	20"	26"	26"	33"	12"	19"
#6	33"	43"	43"	56"	29"	37"	37"	49"	27"	35"	35"	46"	26"	34"	34"	44"	24"	31"	31"	40"	15"	23"
#7	48"	63"	63"	81"	42"	54"	54"	71"	40"	51"	51"	67"	38"	49"	49"	63"	34"	45"	45"	58"	17"	27"
#8	55"	72"	72"	93"	48"	62"	62"	81"	45"	59"	59"	76"	43"	56"	56"	72"	39"	51"	51"	66"	19"	30"
#9	62"	81"	81"	105"	54"	70"	70"	91"	51"	66"	66"	86"	48"	63"	63"	81"	44"	57"	57"	74"	22"	34"
#10	70"	91"	91"	118"	61"	79"	79"	102"	57"	74"	74"	96"	54"	71"	71"	92"	50"	64"	64"	84"	24"	39"
#11	78"	101"	101"	131"	67"	87"	87"	114"	64"	82"	82"	107"	60"	78"	78"	102"	55"	71"	71"	93"	27"	43"
#14	93"	121"	NA	NA	81"	105"	NA	NA	76"	99"	NA	NA	72"	94"	NA	NA	66"	86"	NA	NA	33"	NA
#18	124"	161"	NA	NA	108"	140"	NA	NA	101"	132"	NA	NA	96"	125"	NA	NA	88"	114"	NA	NA	43"	NA

NOTES:
1. DEFINITIONS:
   Ld: TENSION DEVELOPMENT LENGTH FOR REINFORCEMENT SATISFYING THE FOLLOWING CONDITIONS:
   SLABS AND WALLS: CLEAR SPACING > 2db AND CONCRETE CLEAR COVER > db
   BEAMS AND COLUMNS: CLEAR COVER SPACING > db AND CONCRETE CLEAR COVER > db
   Lt: DEVELOPMENT LENGTH FOR TOP BARS IN TENSION
   Lsb: TENSION LAP SPLICE LENGTH FOR OTHER THAN TOP BARS (CLASS B)
   Lsbt: TENSION LAP SPLICE LENGTH OF TOP BARS.
   Ldc: DEVELOPMENT LENGTH FOR BARS IN COMPRESSION
   Lsc: TIED COLUMN LAP SPLICE IN COMPRESSION
   db: NOMINAL BAR DIAMETER (INCHES)
   TOP BARS: HORIZONTAL BEAM REINFORCEMENT WITH MORE THAN 12 INCHES OF CONCRETE CAST BELOW

2. MULTIPLY VALUES IN SCHEDULE BY 1.5 IF CLEAR SPACING OR CONCRETE COVER DO NOT MEET REQUIREMENTS FOR Ld IN NOTE 1.

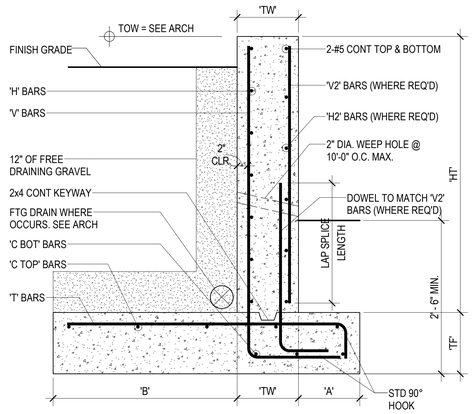
3. MULTIPLY VALUES IN SCHEDULE BY 1.3 FOR USE IN LIGHTWEIGHT AGGREGATE CONCRETE.

4. FOR EPOXY COATED BAR: MULTIPLY VALUES IN SCHEDULE BY 1.5 FOR BARS WITH CLEAR COVER < 3db OR CLEAR SPACING < 6db. OTHERWISE MULTIPLY VALUES BY 1.2.

5. a. FOR BUNDLED BARS OF THREE OR LESS MULTIPLY LENGTHS BY 1.2.
   b. FOR BUNDLED BARS OF FOUR OR MORE MULTIPLY LENGTHS BY 1.33.
   c. INDIVIDUAL BAR SPLICES WITHIN A BUNDLE SHALL NOT OVERLAP. ENTIRE BUNDLES SHALL NOT BE LAP SPLICED.

6. SCHEDULE LENGTHS ARE FOR fy=60ksi REINFORCING, MULTIPLY LENGTHS BY 1.25 FOR fy=75ksi REINFORCING.

7. LAP SPLICES ARE NOT PERMITTED FOR #14 & #18 BARS. USE BAR COUPLERS PER G.S.N.



CONCRETE RETAINING WALL SCHEDULE																			
MARK	"HT"	'A'	'B'	'TW'	'TF'	'V' BARS		'H' BARS		'V2' BARS		'H2' BARS		'T' BARS		'C TOP' BARS		'C BOT' BARS	
						SIZE	SPACE	SIZE	SPACE	SIZE	SPACE	SIZE	SPACE	SIZE	SPACE	SIZE	SPACE	SIZE	SPACE
CRW-1	5' - 6"	8"	2' - 8"	8"	1' - 0"	#4	12.0"	#4	12.0"	-	-	-	-	#5	12.0"	6-#4	8.3"	2-#4	9.9"
1. 'V' BARS SHALL NOT BE SPLICED BELOW MID-HEIGHT OF WALL																			

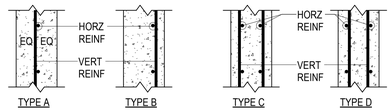
A1 SB601 TYPICAL CONCRETE RETAINING WALL SCHEDULE AND DETAIL

NO SCALE

CONCRETE FOUNDATION WALL SCHEDULE					
MARK	THICK	HORIZONTAL REINFORCING	VERTICAL REINFORCING	T & B HORIZ. BARS	PLACEMENT
CFW-1	8"	#4 @ 12" O.C.	#4 @ 12" O.C.	1- #5	TYPE A
CFW-2	8"	#4 @ 12" O.C.	#4 @ 12" O.C.	1- #5	TYPE B I.F.

NOTES:
1. HORIZONTAL WALL REINFORCING SHALL BE CONTINUOUS THRU CONSTRUCTION & CONTROL JOINTS.
2. SPLICES IN HORIZONTAL WALL REINFORCING SHALL BE TYPE Lsb, STAGGERED SUCH THAT SPLICES DO NOT OVERLAP. SPLICES IN TWO CURTAINS SHALL NOT OCCUR IN THE SAME LOCATION.

PLACEMENT TYPE

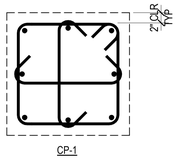


E.F. = EACH FACE
O.F. = OUTSIDE FACE (AGAINST SOIL)
I.F. = INSIDE FACE
3L = THREE LAYERS

CONCRETE FOOTING SCHEDULE													
MARK	WIDTH	LENGTH	THICK	CROSSWISE REINFORCING				LENGTHWISE REINFORCING				REMARKS
				NO.	SIZE	LENGTH	SPACE	NO.	SIZE	LENGTH	SPACE	
FC2.0	2' - 0"	CONT.	1' - 0"	--	NONE	REQ'D	--	3	#4	CONT.	9"	
FC3.0	3' - 0"	CONT.	1' - 0"	--	#5	2' - 6"	14"	3	#5	CONT.	15"	
FS4.0	4' - 0"	4' - 0"	1' - 0"	6	#4	3' - 6"	8.4"	6	#4	3' - 6"	8.4"	

1. PLACE ALL FOOTING REINFORCING IN BOTTOM OF FOOTING WITH 3" CLEAR CONCRETE COVER UNLESS NOTED OTHERWISE.
2. TOP REINFORCING, WHERE SPECIFIED, SHALL BE PLACED IN THE TOP OF THE FOOTING WITH 2" CLEAR CONCRETE COVER.
3. SPOT FOOTINGS SHALL BE CENTERED UNDER COLUMNS AND CONTINUOUS FOOTINGS SHALL BE CENTERED UNDER WALLS, UNLESS NOTED OTHERWISE.
4. ALL FOOTINGS SHALL BE FORMED. FOOTINGS SHALL NOT BE EARTH FORMED OR OVERSIZED WITHOUT WRITTEN PERMISSION FROM THE STRUCTURAL ENGINEER.

CONCRETE PIER SCHEDULE					
MARK	DIMENSIONS		REINFORCING		REMARKS
	DEPTH	WIDTH	VERTICAL	TIES	
CP-1	2' - 0"	2' - 0"	8-#8	#3 @ 16" O.C.	



CP-1

A3 SB601 TYPICAL CONCRETE PIER REINFORCEMENT/TIE DIAGRAM

NO SCALE

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REV	DATE	DESCRIPTION

VCBO NUMBER: 21515
CLIENT NUMBER: 20385
DATE: 2021-08-16

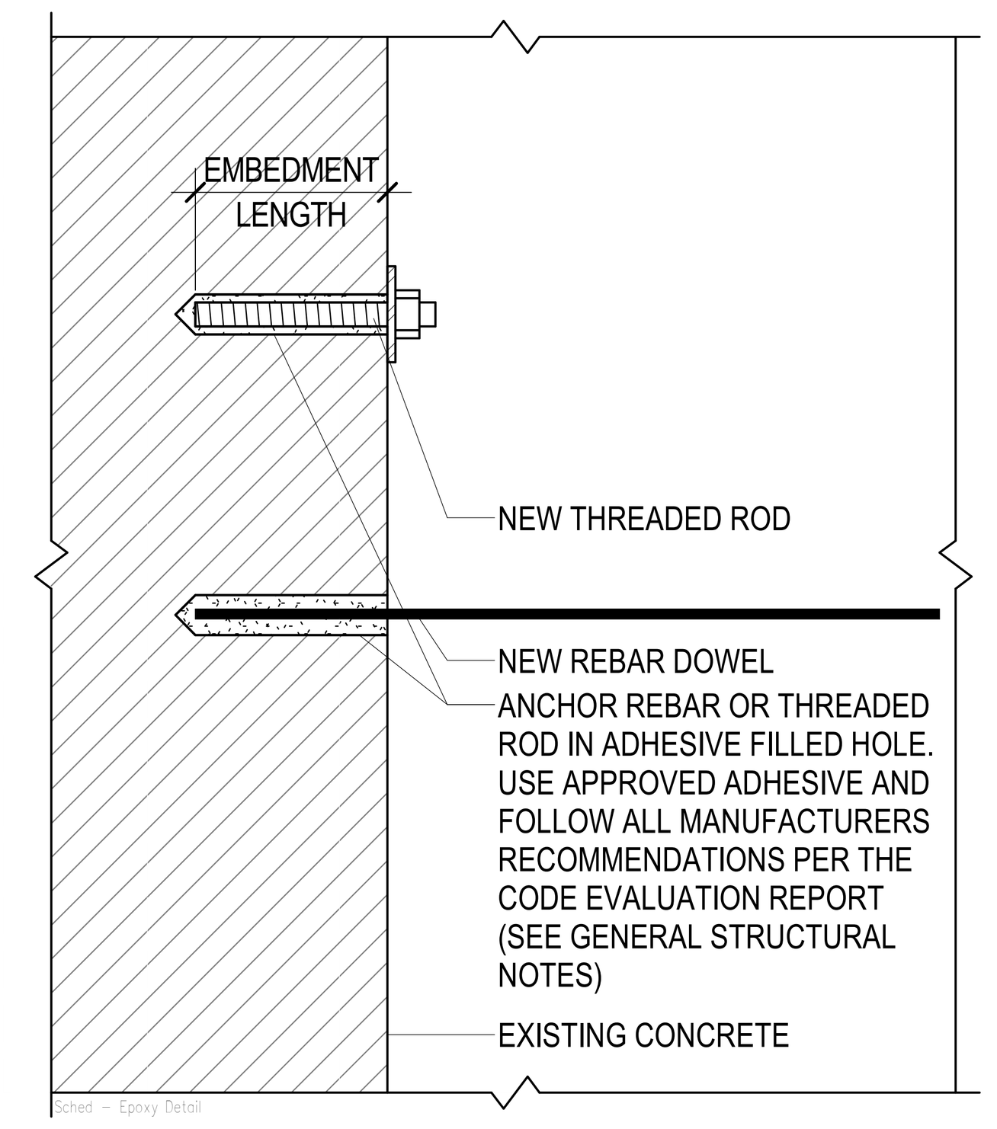
TCSD WAREHOUSE REMODEL - BLDGS 649

TOOELE COUNTY SCHOOL DISTRICT
PROJECT ADDRESS: 180 GARNET ST. TOOELE, UTAH 84074

BID SET

CONCRETE SCHEDULES

SB601



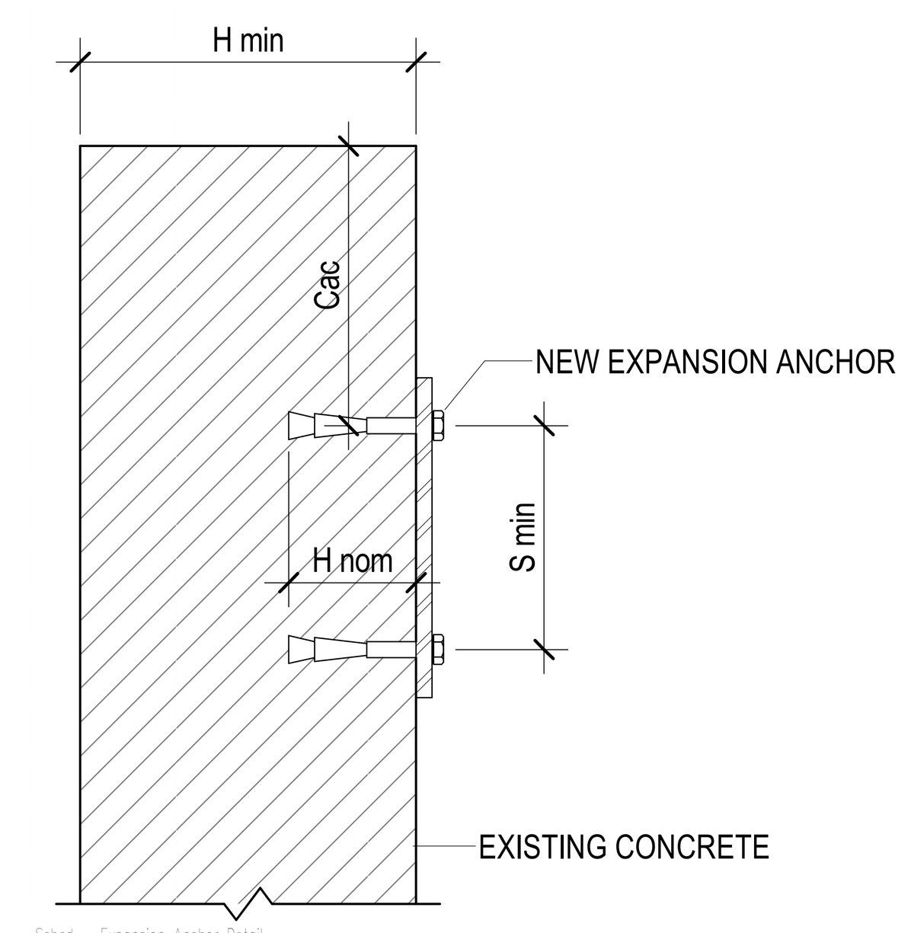
ADHESIVE ANCHORS IN CONCRETE SCHEDULE			
REINFORCING BAR		THREADED ROD	
DOWEL SIZE	EMBEDMENT LENGTH (SEE NOTE #2)	SIZE	EMBEDMENT LENGTH (SEE NOTE #2)
#3	4"	3/8"Ø	4 1/2"
#4	6"	1/2"Ø	6"
#5	9"	5/8"Ø	7 1/2"
#6	10"	3/4"Ø	9"
#7	12 1/2"	7/8"Ø	10 1/2"
#8	13"	1"Ø	12"
#9	14"	1 1/4"Ø	15"
#10	18"		
#11	19"		

NOTES:

1. THIS SCHEDULE SHALL BE USED ONLY WHERE SPECIFICALLY REFERENCED ON THE DRAWINGS AND AT OTHER LOCATIONS WITH APPROVAL OF THE STRUCTURAL ENGINEER.
2. EMBEDMENT LENGTHS SPECIFIED ON PLANS OR DETAILS TAKE PRECEDENCE OVER EMBEDMENT LENGTHS IN THIS SCHEDULE.
3. WHERE THE THICKNESS OF THE EXISTING CONCRETE MEMBER IS NOT SUFFICIENT TO ACHIEVE SCHEDULED EMBEDMENT AND SPECIFIED CLEAR COVER FOR THE ANCHOR, CONTACT THE STRUCTURAL ENGINEER.
4. SEE GENERAL STRUCTURAL NOTES FOR LIST OF APPROVED ADHESIVES AND OTHER REQUIREMENTS FOR ADHESIVE ANCHORING.

D4 SB602 ADHESIVE ANCHORS IN CONCRETE SCHEDULE

NO SCALE



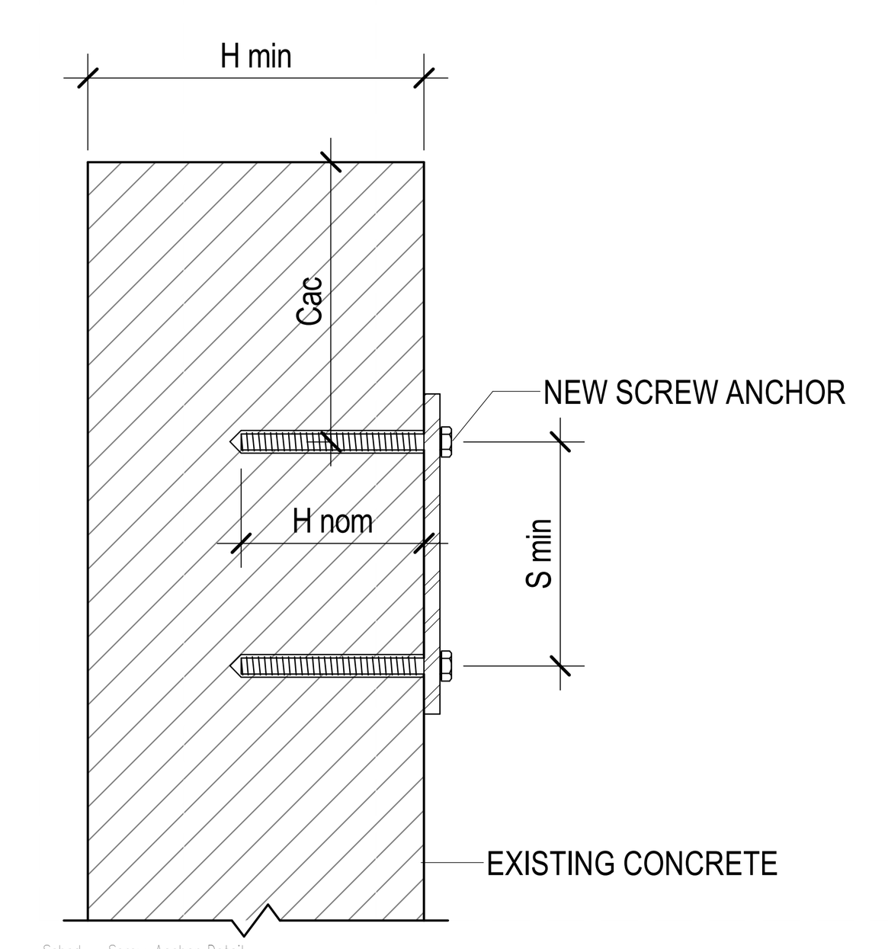
EXPANSION ANCHORS IN CONCRETE SCHEDULE				
ANCHOR SIZE	MINIMUM EDGE DISTANCE (Cac)	EMBEDMENT LENGTH (H nom)	MINIMUM CONCRETE THICKNESS (H min)	MINIMUM ANCHOR SPACING (S min)
3/8"Ø	6.1/2"	2.7/8"	4.1/2"	3.3/4"
1/2"Ø	10"	3.7/8"	6"	5"
5/8"Ø	10"	5.1/8"	8"	6"
3/4"Ø	16"	5.3/4"	10"	7"

NOTES:

1. THIS SCHEDULE SHALL BE USED ONLY WHERE SPECIFICALLY REFERENCED ON THE DRAWINGS. ANCHORS AT OTHER LOCATIONS MUST BE APPROVED BY THE ENGINEER PRIOR TO INSTALLATION.
2. EDGE DISTANCE, Cac, AND EMBEDMENT LENGTHS, H nom, AND ANCHOR SPACING SPECIFIED ON PLANS OR DETAILS TAKE PRECEDENCE OVER VALUES IN THIS SCHEDULE.
3. ANCHORS LOCATED WHERE THE THICKNESS OF THE EXISTING CONCRETE MEMBER DOES NOT MEET THE REQUIRED MINIMUM CONCRETE THICKNESS MUST BE APPROVED BY THE STRUCTURAL ENGINEER PRIOR TO INSTALLATION.
4. SEE GENERAL STRUCTURAL NOTES FOR LIST OF APPROVED ANCHORS AND OTHER REQUIREMENTS FOR USING EXPANSION ANCHORS.

C4 SB602 EXPANSION ANCHORS IN CONCRETE SCHEDULE

NO SCALE



SCREW ANCHORS IN CONCRETE SCHEDULE				
ANCHOR SIZE	MINIMUM EDGE DISTANCE (Cac)	EMBEDMENT LENGTH (H nom)	MINIMUM CONCRETE THICKNESS (H min)	MINIMUM ANCHOR SPACING (S min)
3/8"Ø	3.3/4"	3.1/4"	5"	3"
1/2"Ø	4.1/2"	4"	6.1/4"	3.1/2"
5/8"Ø	6.3/8"	5.1/2	8.1/2"	3.3/4"
3/4"Ø	7.5/16"	6.1/4"	10"	4.1/2"

NOTES:

1. THIS SCHEDULE SHALL BE USED ONLY WHERE SPECIFICALLY REFERENCED ON THE DRAWINGS AND AT OTHER LOCATIONS WITH APPROVAL OF THE STRUCTURAL ENGINEER.
2. EDGE DISTANCE, Cac, AND EMBEDMENT LENGTHS, H nom, AND ANCHOR SPACING SPECIFIED ON PLANS OR DETAILS TAKE PRECEDENCE OVER VALUES IN THIS SCHEDULE.
3. ANCHORS LOCATED WHERE THE THICKNESS OF THE EXISTING CONCRETE MEMBER DOES NOT MEET THE REQUIRED MINIMUM CONCRETE THICKNESS MUST BE APPROVED BY THE STRUCTURAL ENGINEER PRIOR TO INSTALLATION..
4. SPECIAL INSPECTION IS REQUIRED DURING INSTALLATION OF ALL SCREW ANCHORS PER THE CODE EVALUATION REPORT FOR THE ANCHOR AND THE QUALITY ASSURANCE SECTION OF THE GENERAL STRUCTURAL NOTES.
5. SEE GENERAL STRUCTURAL NOTES FOR LIST OF APPROVED ANCHORS AND OTHER REQUIREMENTS FOR USING SCREW ANCHORS.
6. SCREW ANCHORS SHALL ONLY BE USED IN INTERIOR DRY LOCATIONS

B4 SB602 SCREW ANCHORS IN CONCRETE SCHEDULE

NO SCALE

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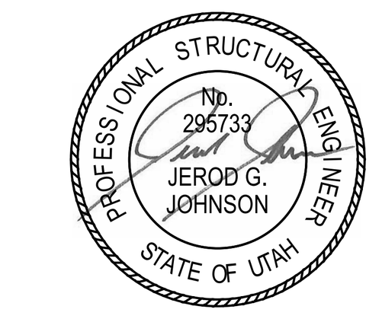

8/16/2021

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REV	DATE	DESCRIPTION

VCBO NUMBER: 21515
CLIENT NUMBER: 20385
DATE: 2021-08-16

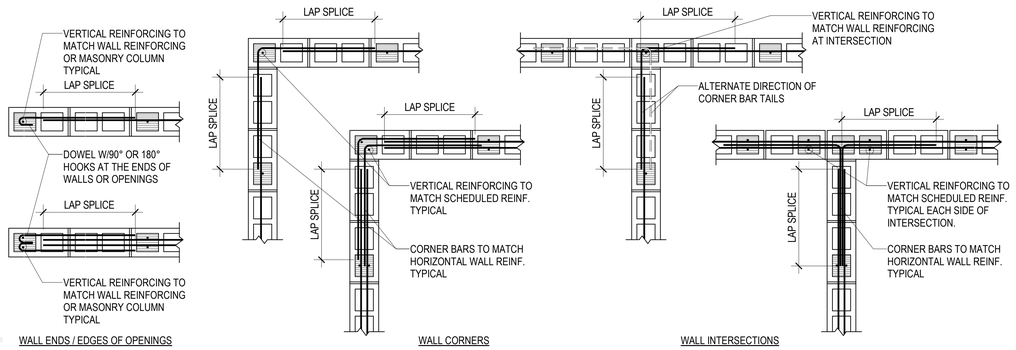
TCSD WAREHOUSE REMODEL - BLDGS 649

TOOELE COUNTY SCHOOL DISTRICT
PROJECT ADDRESS: 180 GARNET ST. TOOELE, UTAH 84074

BID SET

CONCRETE ANCHOR SCHEDULES

SB602



D1 / SB611 — TYPICAL MASONRY WALL END, CORNER AND INTERSECTION DETAILS

NO SCALE

MASONRY WALL SCHEDULE						
			REINFORCING			
MARK	THICK	MATERIAL	VERTICAL	HORIZONTAL	TYPE	REMARKS
MW-1	8"	CMU	#4 @ 24" O.C.	#4 @ 24" O.C.	TYPE 1	

NOTES
1. SEE PLANS, DETAILS AND GENERAL STRUCTURAL NOTES FOR ADDITIONAL REINFORCING REQUIREMENTS.
2. GROUT SOLID ALL CELLS BELOW GRADE, CELLS CONTAINING EMBEDS (HSA'S, DBA'S, ANCHOR BOLTS, ETC.), AND CELLS CONTAINING REINFORCING. CONSOLIDATE GROUT AS PER THE GENERAL STRUCTURAL NOTES.
3. HORIZONTAL WALL REINFORCING SHALL CONTINUE THROUGH MASONRY LINTELS. WHERE BOTH HORIZONTAL WALL REINFORCING AND LINTEL REINFORCING OCCUR IN THE SAME COURSE, THE LARGER BARS ARE TO REPLACE THE SMALLER BARS.

MASONRY REINFORCING BAR LAP SPLICE SCHEDULE											
BAR SIZE	f'm = 2000 psi								f'm = 2500 psi		
	6" CMU	8" CMU		10" CMU		12" CMU		6" BRICK	8" BRICK	
	CLASS	CLASS		CLASS		CLASS		CLASS	CLASS	
	A	A	B	A	B	A	B	A	A	B
#3	12"	12"	12"	12"	12"	12"	12"	12"	12"	12"
#4	18"	13"	21"	12"	20"	12"	20"	16"	12"	20"
#5	28"	20"	35"	16"	32"	13"	32"	25"	18"	33"
#6	**	38"	54"	29"	54"	24"	54"	**	34"	54"
#7	-	52"	**	40"	**	33"	63"	-	47"	-
#8	-	**	-	61"	**	50"	**	-	**	-
#9	-	-	-	79"	-	64"	-	-	-	-

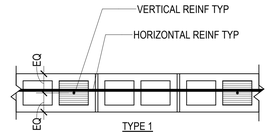
NOTES:
1. CLASS A SPLICES MAY BE USED WHEN ONLY ONE BAR IS CONTINUOUS IN THE MASONRY CELL OR COURSE.

2. CLASS B SPLICES SHALL BE USED WHEN TWO BARS ARE CONTINUOUS IN THE MASONRY CELL OR COURSE.

3. ** INDICATES THAT A LAP SPLICE IS NOT ALLOWED AND MECHANICAL BAR COUPLERS ARE REQUIRED FOR THE BAR SPLICES. SPLICES SHALL BE OFFSET 2'-0" TO AVOID CONGESTION.

4. WHERE VERTICAL BARS HAVE A REQUIRED LAP SPLICE GREATER THAN THE HEIGHT OF THE GROUT POUR, THE BAR SPLICE SHALL BE MADE WITH A MECHANICAL BAR COUPLER. WHERE THE HEIGHT OF THE GROUT POUR EXCEEDS 60 INCHES, HIGH LIFT GROUTING PROCEDURES SHALL BE FOLLOWED.

5. WHERE MECHANICAL BAR COUPLERS ARE USED, THE CONNECTOR SHALL DEVELOP 125% OF THE SPECIFIED YIELD STRENGTH OF THE BAR IN TENSION AND COMPRESSION.



C3 / SB611 — TYPICAL MASONRY WALL TYPES - PLAN VIEW

NO SCALE

MASONRY LINTEL SCHEDULE						
MARK	DIMENSIONS		REINFORCING		MAXIMUM SPAN	REMARKS
	DEPTH	WIDTH	HORIZONTAL	STIRRUPS		
ML-1	8"	8"	1- #4 CONT.	--	3'-4"	

NOTES:
1. MASONRY LINTEL ML-1 SHALL BE USED OVER OPENINGS IN MASONRY WALLS WHEN A SPECIFIC MASONRY LINTEL IS NOT OTHERWISE SPECIFIED. THE MASONRY LINTEL TO BE USED SHALL BE DETERMINED BY THE MAXIMUM SPAN AS SPECIFIED IN THIS SCHEDULE. WHEN A SPECIFIC MASONRY LINTEL IS CALLED OUT ON THE PLAN, THE MAXIMUM SPAN AS NOTED IN THIS SCHEDULE SHALL NOT APPLY

2. MASONRY LINTEL ML-1 SHALL NOT BE LOCATED BELOW ANY FLOOR, OR ROOF BEAM, OR GIRDER, OR ANY OTHER CONCENTRATED LOAD UNLESS SHOWN SPECIFICALLY ON THE PLAN SHEET. JOISTS SHALL NOT BEAR ON ANY LINTEL LESS THAN 16" DEEP.

3. FOR MASONRY LINTELS NOT SHOWN ON THE DRAWINGS THAT CARRY ANY FLOOR, OR ROOF BEAM, OR GIRDER, OR ANY OTHER CONCENTRATED LOAD, OR THAT SPAN GREATER THAN 10'-0" CONSULT THE STRUCTURAL ENGINEER.

4. EXTEND ALL HORIZONTAL REINFORCING 48 BAR DIAMETERS BEYOND THE EDGE OF THE OPENING. IF HORIZONTAL REINFORCING CANNOT BE EXTENDED 48 BAR DIAMETERS BEYOND THE EDGE OF THE OPENING, PROVIDE 90 DEGREE STANDARD HOOK.

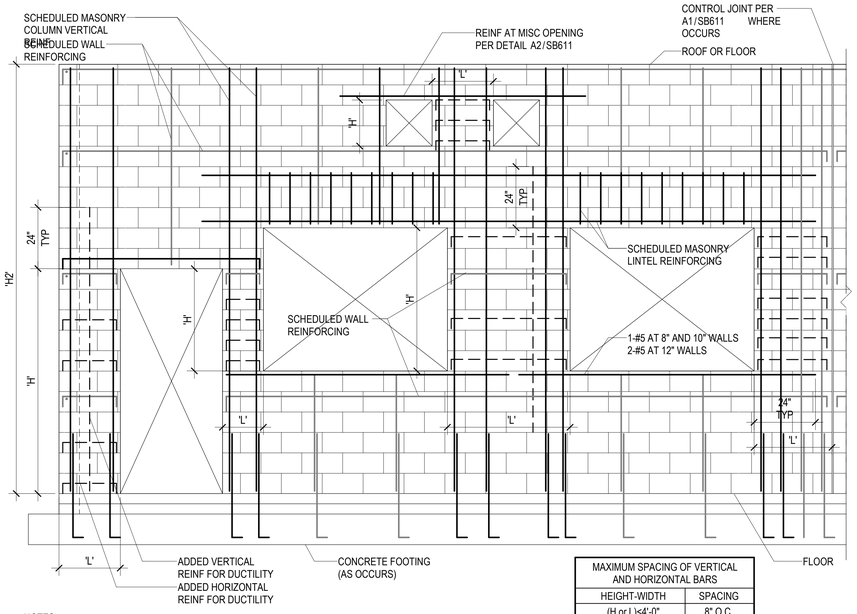
5. GROUT MASONRY LINTELS MONOLITHICALLY WITH THE SUPPORT WALL OR COLUMN AT EACH END.

6. SPLICE TOP BARS AT MIDSPAN OF LINTEL ONLY.

7. SPLICE BOTTOM BARS OVER SUPPORTS ONLY.

8. FOR WALL ABOVE LINTEL, DOWEL VERTICAL REINFORCING INTO FULL DEPTH OF THE LINTEL OR 48 BAR DIAMETERS, WHICHEVER IS LESS.

9. HORIZONTAL WALL REINFORCING SHALL CONTINUE THROUGH MASONRY LINTELS. WHERE BOTH HORIZONTAL WALL REINFORCING AND LINTEL REINFORCING WOULD OCCUR IN THE SAME COURSE, THE LARGER BARS ARE TO REPLACE THE SMALLER BARS.



MAXIMUM SPACING OF VERTICAL AND HORIZONTAL BARS	
HEIGHT-WIDTH	SPACING
(H or L)<4'-0"	8" O.C.
4'-0"≤(H or L)<6'-0"	16" O.C.
6'-0"≤(H or L)<8'-0"	24" O.C.
8'-0"≤(H or L)<10'-0"	32" O.C.
10'-0"≤(H or L)<12'-0"	40" O.C.
12'-0"≤(H or L)	48" O.C.

NOTES:
1. ADDED BAR SIZE SHALL BE 1-#4 MINIMUM.
2. ALL ADDED BARS SHALL BE EMBEDDED IN GROUT.
3. ALL ADDED HORIZONTAL REINFORCING SHALL BE TERMINATED WITH A 90° OR 180° STANDARD HOOK AROUND THE VERTICAL REINFORCING.
4. FOR WALLS WITH 'H2' AND 'L'≥12'-0" OR LARGER ADDITIONAL REINFORCING FOR DUCTILITY IS NOT REQUIRED.

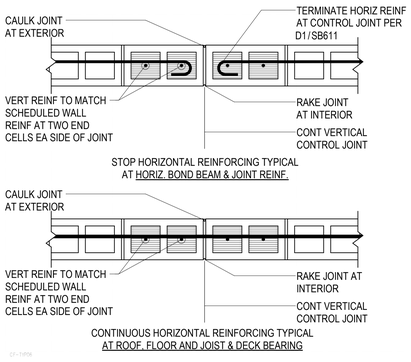
WALL REINFORCING LEGEND
- SCHEDULED WALL REINF
- SCHEDULED OPENING REINF
- ADDED REINF FOR DUCTILITY

B1 / SB611 — TYPICAL MASONRY WALL OPENINGS WITH ADDITIONAL DUCTILITY REINFORCMENT FOR MASONRY SHEAR WALLS

NO SCALE

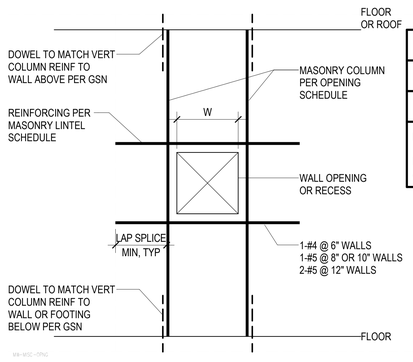
MASONRY COLUMN SCHEDULE						
	DIMENSIONS		REINFORCING			
MARK	WIDTH	DEPTH	VERTICAL	TIES	TYPE	REMARKS
MC-1	8"	2' - 0"	6-#4		TYPE 2	
MC-2	8"	2'-0" EA WAY	10-#4		TYPE 2	CORNER

NOTES
1. HORIZONTAL WALL REINFORCING BARS SHALL BE CONTINUOUS THROUGH MASONRY COLUMNS. AT WALL ENDS OR OPENINGS TERMINATE HORIZONTAL WALL REINFORCING WITH A 90° OR 180° HOOK.
2. FOR TYPE 2 & 2A COLUMNS, HORIZONTAL WALL REINFORCING SHALL BE LOCATED TO THE INSIDE OF VERTICAL COLUMN BARS..
3. UNLESS NOTED OTHERWISE, VERTICAL COLUMN REINFORCING AND TIES SHALL EXTEND THE FULL STORY HEIGHT OF THE WALL.
4. MASONRY COLUMN VERTICAL BARS OR DOWELS IN CONCRETE FOUNDATION WALLS SHALL HAVE TIES TO MATCH MASONRY COLUMN TIES.
5. VERTICAL REINFORCING IN TYPE 1 & 2 COLUMNS SHALL BE DISTRIBUTED EQUALLY IN EACH CELL.
6. PLACE VERTICAL COLUMN BARS IN EACH END CELL FOR TYPE 1A & 2A COLUMNS. REMAINING REINFORCING SHALL BE SPACED EQUALLY THROUGHOUT THE COLUMN WITH ONE BAR PER CELL FOR TYPE 1A AND TWO BARS PER CELL FOR TYPE 2A.
7. ALL CELLS IN COLUMNS SHALL BE GROUTED SOLID.



A1 / SB611 — TYPICAL CONTROL JOINTS IN MASONRY WALLS

NO SCALE

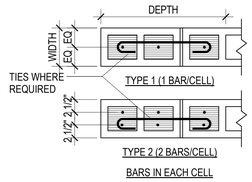


OPENING SCHEDULE	
OPENING WIDTH	COLUMN SIZE
W≤3'-4"	8" LONG W/1-#5 @ 6" & 8" WALLS 8" LONG W/2-#5 @ 10" & 12" WALLS

NOTES:
1. COLUMNS AND LINTELS NOTED ON THE PLANS TAKE PRECEDENCE OVER COLUMNS AND LINTELS SHOWN IN THIS DETAIL.

A2 / SB611 — TYPICAL REINFORCING AROUND MISCELLANEOUS OR RECESSED MASONRY OPENINGS

NO SCALE



A3 / SB611 — TYPICAL MASONRY COLUMN TYPES - PLAN VIEW

NO SCALE

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REV	DATE	DESCRIPTION

VCBO NUMBER: 21515
CLIENT NUMBER: 20385
DATE: 2021-08-16

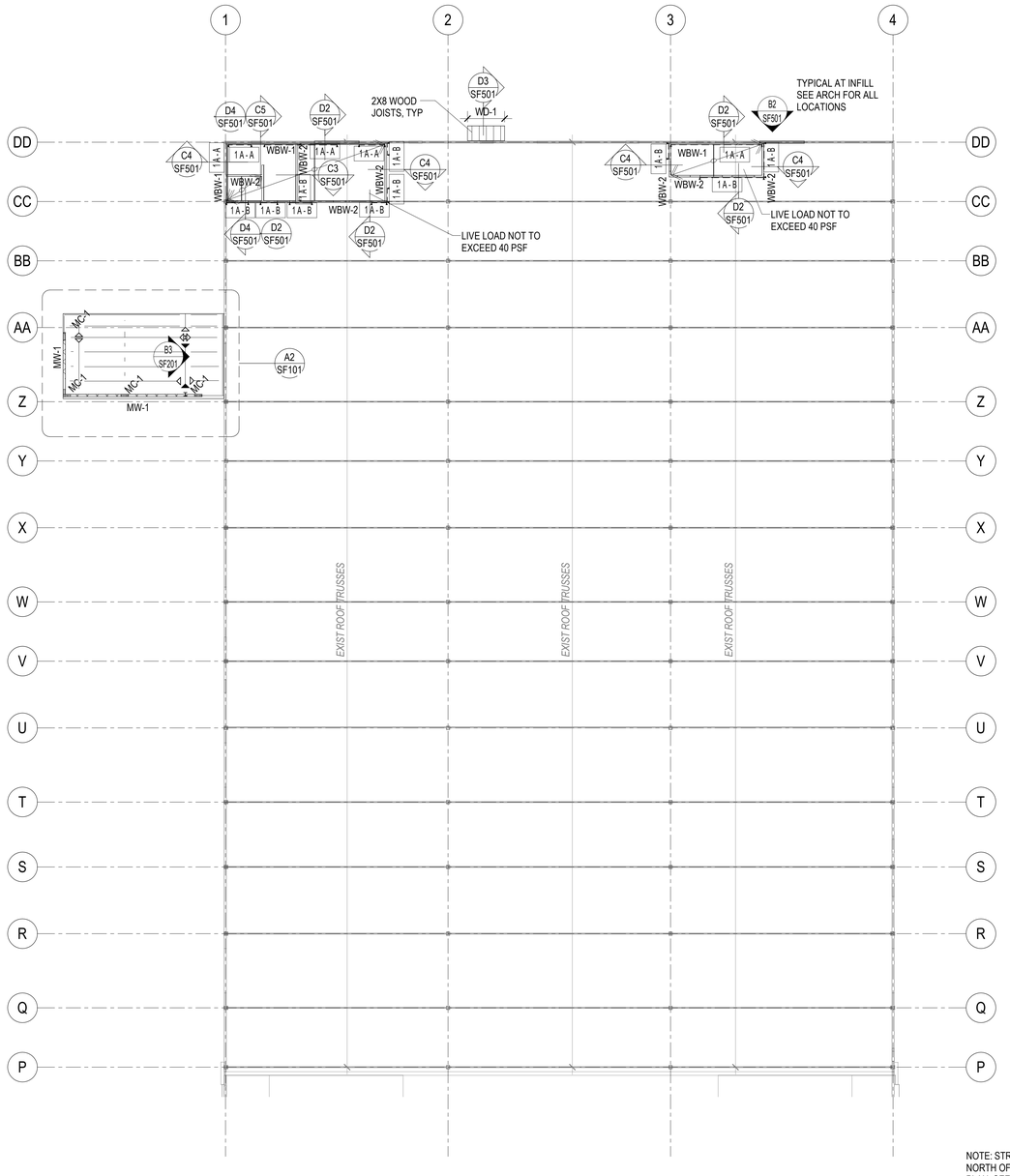
TCSD WAREHOUSE REMODEL - BLDGS 649

TOOELE COUNTY SCHOOL DISTRICT
PROJECT ADDRESS: 180 GARNET ST. TOOELE, UTAH 84074

BID SET

MASONRY SCHEDULES

SB611

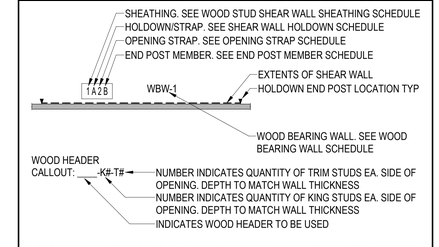


NOTE: STRUCTURE ONLY SHOWN FOR BUILDING NORTH OF GRIDLINE P. SEE ARCH FOR ENTIRE PLAN. SEE DETAILS B2/SF501 AND B4/SF501 FOR STRUCTURAL WOOD WALL INFILL DETAILS. SEE ARCH ELEVATIONS FOR ALL LOCATIONS. REFER TO SF602 FOR OPENINGS IN INFILL.

A1 / SF101 ROOF FRAMING PLAN

SCALE: 1/16" = 1'-0"

WOOD WALL LEGEND



WHERE HEADER SIZES ARE NOT CALLED OUT ON PLANS THE SCHEDULE DETAIL B2/SF602 SHALL GOVERN. IF HEADER LENGTH IS NOT COVERED IN SCHEDULE CONTACT ENGINEER.

EXISTING BUILDING NOTES

1. THE CONTRACTOR SHALL FIELD VERIFY ALL EXISTING CONDITIONS PRIOR TO DETAILING, FABRICATING, ERECTING OR INSTALLING ANY STRUCTURAL ELEMENT. ALL DISCREPANCIES SHALL BE BROUGHT TO THE ATTENTION OF THE DESIGN TEAM IN A TIMELY MANNER SUCH THAT WORK WILL NOT BE DELAYED.

2. THE CONTRACTOR SHALL PROVIDE ADEQUATE SHORING OF EXISTING STRUCTURE DURING CONSTRUCTION.

WOOD SHEAR WALL NOTES

1. ALL SHEAR WALL SHEATHING SHALL BE A.P.A. RATED SHEATHING, EXPOSURE 1.

2. WHERE STUD MUST BE CUT DUE TO THE PLACEMENT OF ANCHOR BOLTS OR OTHER PRODUCTS, AN ADDITIONAL STUD SHALL BE INSERTED ALONG SIDE.

3. ALL PANEL EDGES SHALL BE SOLID BLOCKED WITH 2x FRAMING MEMBER, EXCEPT USE 3x MEMBER AT NAIL SPACING OF 2" O.C. OR LESS.

4. DISTANCE FROM PANEL EDGE TO NAILING SHALL BE NOT LESS THAN 3/8".

5. SHEATHING SHALL BE APPLIED WITH EDGES 1/8" APART AT SIDE JOINTS AND 1/16" APART AT END JOINTS.

6. SEE DETAIL D4/SF602 FOR TYPICAL SHEAR WALL CONSTRUCTION.

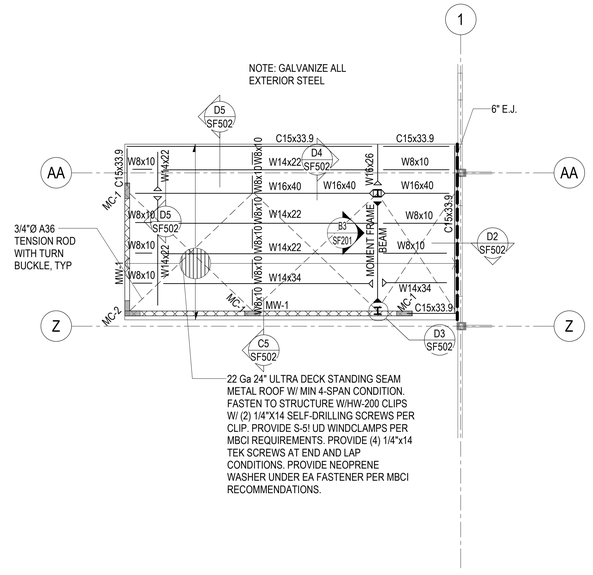
7. ALL NAILS AS SPECIFIED SHALL BE COMMON NAILS PRE-DRILLED HOLES ARE REQUIRED FOR 20d NAILS.

WOOD FLOOR FRAMING PLAN NOTES

1. TYPICAL FLOOR FRAMING SHALL BE 11-7/8" TJI 210 @ 16" O.C. UNO.

2. TYPICAL CEILING FRAMING SHALL BE 2x6 DF#2 @ 16" O.C. UNO.

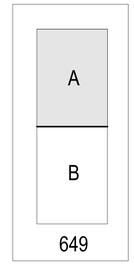
3. TYPICAL FLOOR DIAPHRAGM SHALL BE TYPE WD-2 PER WOOD DIAPHRAGM SCHEDULE.



A2 / SF101 ROOF FRAMING ENLARGED PLAN

SCALE: 1/8" = 1'-0"

KEY PLAN



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TCSD WAREHOUSE REMODEL - BLDGS 649

TOOELE COUNTY SCHOOL DISTRICT
PROJECT ADDRESS: 180 GARNET ST. TOOELE, UTAH 84074

BID SET

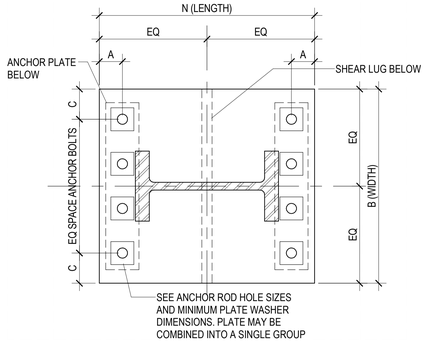
ROOF FRAMING PLAN

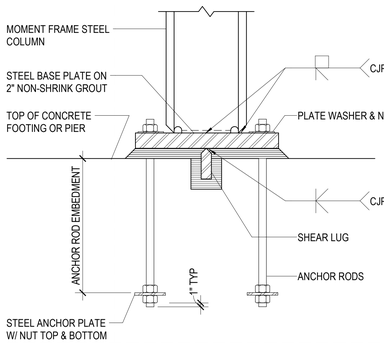
SF101

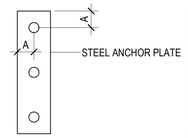
MOMENT FRAME COLUMN BASE PLATE SCHEDULE

MARK	BASE PLATE					ANCHOR RODS				ANCHOR PLATE THICKNESS	SHEAR LUG
	N LENGTH	B WIDTH	THICKNESS	A DIM	C DIM	TOTAL NUMBER	DIAMETER	EMBED DEPTH	GRADE		
A	20	12	1"	2"	2"	4	3/4"	9"	36	1/2"	3"X1/2"

NOTES:
1. ALL STEEL BASE PLATES, ANCHOR PLATES AND SHEAR LUGS SHALL BE ASTM A572 GRADE 50, U.N.O.
2. ANCHOR RODS SHALL BE ASTM F1554 WITH GRADE AS INDICATED IN SCHEDULE.



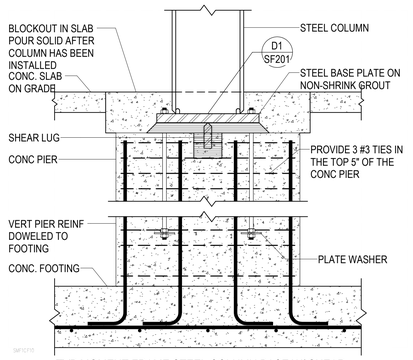




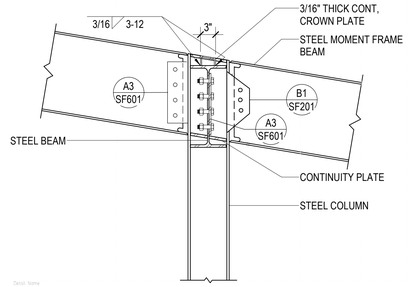
ANCHOR PLATE PLAN VIEW

ANCHOR ROD HOLE SIZES AND MINIMUM PLATE WASHER DIMENSION		
ANCHOR ROD DIAMETER	MAX HOLE DIAMETER	PLATE WASHER
3/4"	1.9/16"	3"x3/8"x3"

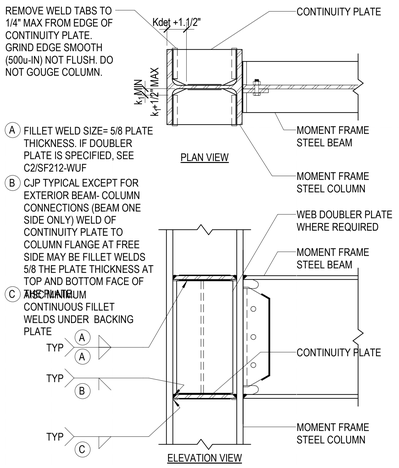
D1 / SF201 — TYPICAL MOMENT FRAME BASE PLATE DETAIL AND SCHEDULE
NO SCALE



C1 / SF201 — TYP MOMENT FRAME STEEL COLUMN BASE W/ SHEAR LUG ON CONCRETE PIER
NO SCALE



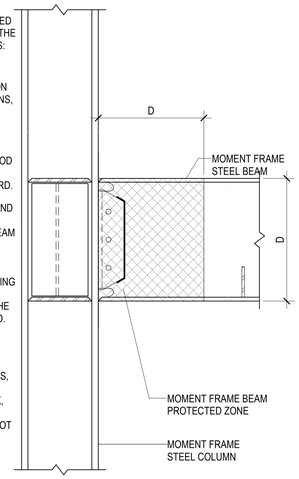
C2 / SF201 — CANTILEVERED STEEL BEAM AT MOMENT FRAME
NO SCALE



C3 / SF201 — TYPICAL CONTINUITY PLATE CONFIGURATION AND WELDING AT MOMENT FRAME COLUMN
NO SCALE

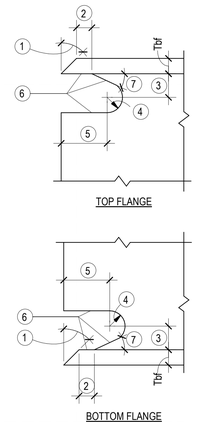
AREA MARKED AS PROTECTED ZONE SHALL COMPLY WITH THE FOLLOWING REQUIREMENTS:

1. WITHIN THE PROTECTED ZONE, DISCONTINUITIES CREATED BY FABRICATION OR ERECTION OPERATIONS, SUCH AS TACK WELDS, ERECTION AIDS, AIR-ARC GOUGING AND THERMAL CUTTING SHALL BE REPAIRED. REPAIR METHOD SHALL BE APPROVED BY THE ENGINEER OF RECORD.
2. WELDED SHEAR STUDS AND DECKING ATTACHMENTS THAT PENETRATE THE BEAM FLANGE SHALL NOT BE PLACED ON THE BEAM FLANGES WITHIN THE PROTECTED ZONE. DECKING ARC SPOT WELDS AS REQUIRED TO SECURE THE DECKING ARE PERMITTED.
3. WELDING, BOLTING, SCREWING OR SHOT IN ATTACHMENTS FOR PERIMETER EDGE ANGLES, EXTERIOR FACADES, PARTITIONS, DUCT WORK, PIPING OR OTHER CONSTRUCTION SHALL NOT BE PLACED WITHIN THE PROTECTED ZONE.

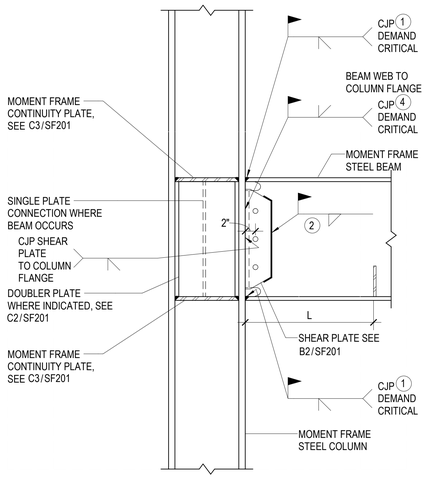


C4 / SF201 — PROTECTED ZONE DETAIL FOR MOMENT FRAMES
NO SCALE

NOTES:
1. BEVEL AS REQUIRED PER THE WELD PROCEDURE SPECIFICATION..
2. Tbf OR 1/2", WHICHEVER IS LARGER (PLUS 1/2 Tbf, OR MINUS 1/4 Tbf).
3. THE MINIMUM DIMENSION SHALL BE 3/4 Tbf, OR 3/4", WHICHEVER IS GREATER. THE MAXIMUM DIMENSION SHALL BE Tbf (+1/4").
4. 3/8" MINIMUM RADIUS (-0,+UNLIMITED).
5. 3 Tbf (± 1/2").
6. SURFACE ROUGHNESS OF WELD ACCESS HOLE SHALL COMPLY WITH REQUIREMENTS OF AWS SECTION 6.11.2.1.
7. TOLERANCES SHALL NOT ACCUMULATE TO THE EXTENT THAT THE ANGLE OF THE ACCESS HOLE CUT TO THE FLANGE SURFACE EXCEEDS 25°.



C5 / SF201 — TYPICALWELD ACCESS HOLE DETAIL (WUF-W) MOMENT CONNECTION
NO SCALE



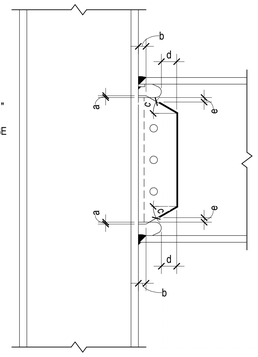
MOMENT FRAME CONNECTION SCHEDULE (WUF-W)

BEAM SIZE	ERECTION BOLTS		PLASTIC HINGE BRACE 3	
	NUMBER	SIZE	SIZE	L
W16	3	7/8"Ø	-	-

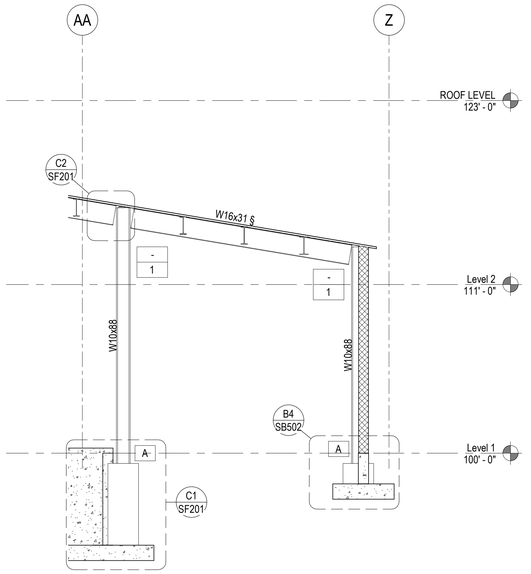
NOTES:
1. WELD ACCESS HOLE GEOMETRY SHALL BE PER DETAIL C5/SF201.
2. THICKNESS OF SHEAR PLATE MINUS 1/16". EXTEND ALONG ANGLED TOP & BOTTOM, TERMINATE AS SHOWN PER DETAIL B2/SF201.
3. WELD TABS NOT REQ'D BUT MUST BE REMOVED AFTER WELDING TO WITHIN 1/8" OF THE BASE METAL & FINISHED TO 500 MICRO-INCHES OR BETTER W/ SMOOTH CONTOUR PER AISC 358-10 SECTION 3.4. WHEN WELD TABS ARE NOT USED THE USE OF CASCADED WELD ENDS WITHIN THE WELD GROVE ARE PERMITTED AT A MAX ANGLE 0F 45°.

B1 / SF201 — TYPICAL WELDED UNREINFORCED FLANGE-WELDED WEB (WUF-W) MOMENT CONNECTION
NO SCALE

NOTES:
a = 1/4" MINIMUM, 1/2" MAXIMUM
b = 1" MINIMUM
c = 30° (±10°)
d = 2" MINIMUM
e = 1/2" MINIMUM DISTANCE, 1" MAXIMUM DISTANCE FROM END OF FILLET WELD TO EDGE OF ACCESS HOLE



B2 / SF201 — TYPICAL SHEAR PLATE DETAIL (WUF-W) MOMENT CONNECTION
NO SCALE



MOMENT FRAME ELEVATION NOTES AND LEGEND

1. ALL MOMENT FRAME HORIZONTAL FRAMING MEMBERS (BEAMS) SHALL BE ASTM A992 (Fy = 50KSI) STEEL U.N.O.
2. ALL MOMENT FRAME VERTICAL FRAMING MEMBERS (COLUMNS) SHALL BE ASTM A992 (Fy = 50KSI) STEEL U.N.O.
3. X / Y — X = DOUBLER PLATE THICKNESS (IN) ASTM A572 GRADE 50 U.N.O. Y = CONTINUITY PLATE THICKNESS (IN) ASTM A572 GRADE 50 U.N.O.
4. Z — STEEL BASE PLATE MARK
5. VERIFY ALL DATUM ELEVATIONS W/ ARCHITECTURAL DRAWINGS.

B3 / SF201 — MOMENT FRAME ELEVATION
SCALE: 1/4" = 1'-0"

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REV	DATE	DESCRIPTION

VCBO NUMBER: 21515
CLIENT NUMBER: 20385
DATE: 2021-08-16

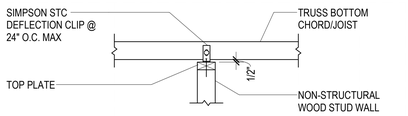
TCSD WAREHOUSE REMODEL - BLDGS 649

TOOELE COUNTY SCHOOL DISTRICT
PROJECT ADDRESS: 180 GARNET ST, TOOELE, UTAH 84074

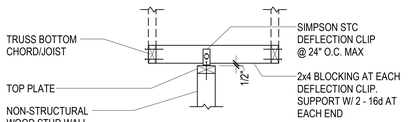
BID SET

MOMENT FRAME ELEVATION, DETAILS & SCHEDULES

SF201



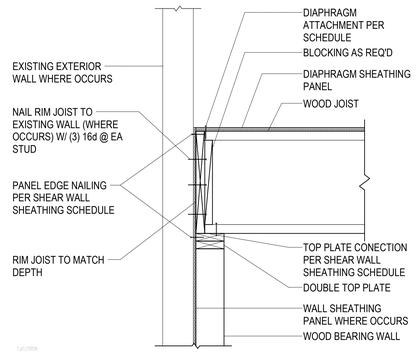
WALLS PERPENDICULAR TO TRUSS/JOIST



WALLS PARALLEL TO TRUSS/JOIST

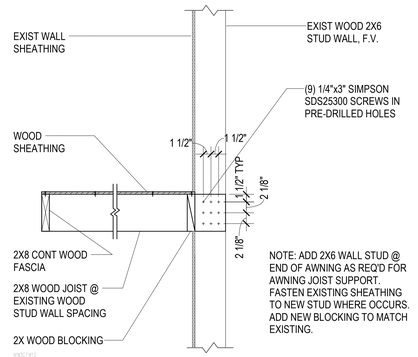
D1 / SF501 — TYPICAL LATERAL SUPPORT AT NON-STRUCTURAL WOOD STUD WALLS

NO SCALE



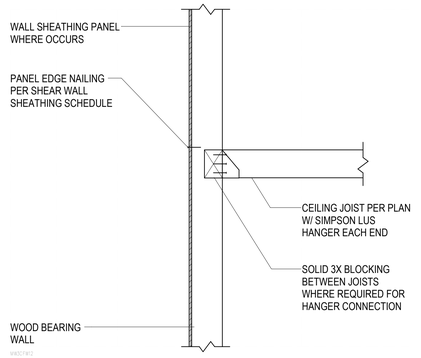
D2 / SF501 — TYPICAL JOIST BEARING AT EXTERIOR WALL

NO SCALE



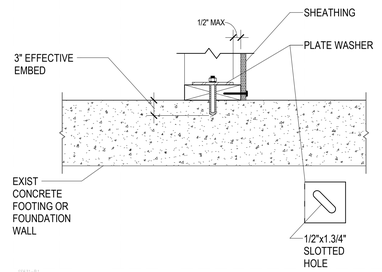
D3 / SF501 — TYPICAL AWNING DETAIL

NO SCALE



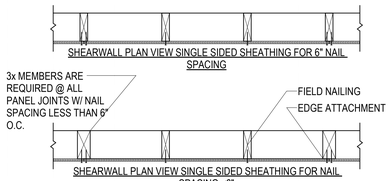
D4 / SF501 — TYPICAL CEILING JOIST ATTACHMENT DETAIL

NO SCALE



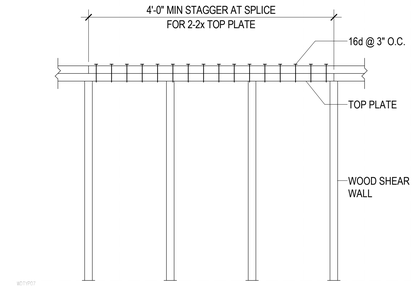
D5 / SF501 — SHEAR WALL BOTTOM PLATE ANCHORAGE

NO SCALE



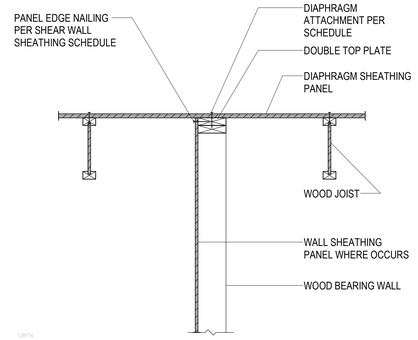
C1 / SF501 — SHEARWALL NAILED FACE OF FRAMING MEMBERS - PLAN VIEW

NO SCALE



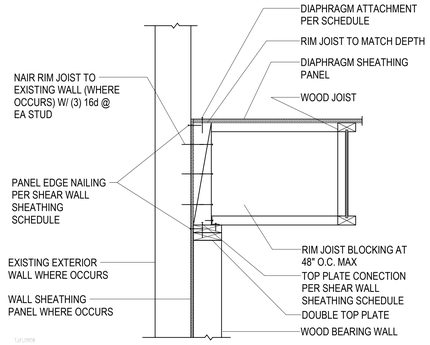
C2 / SF501 — TYPICAL TOP PLATE (CHORD) SPLICE AT WOOD SHEAR WALL

NO SCALE



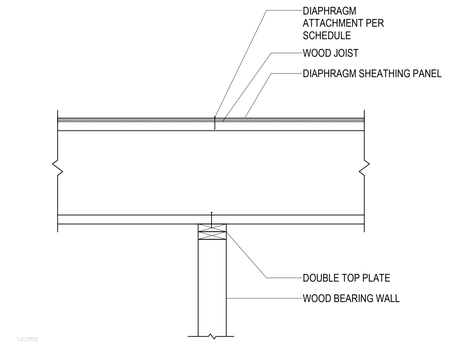
C3 / SF501 — TYPICAL JOIST BEARING AT INTERIOR WALL

NO SCALE



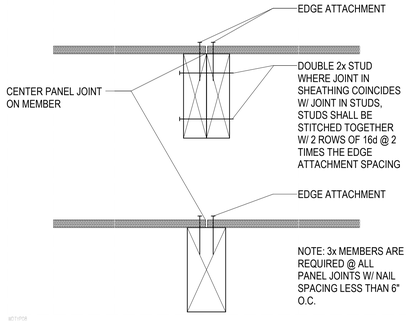
C4 / SF501 — TYPICAL JOIST BEARING AT EXTERIOR WALL

NO SCALE



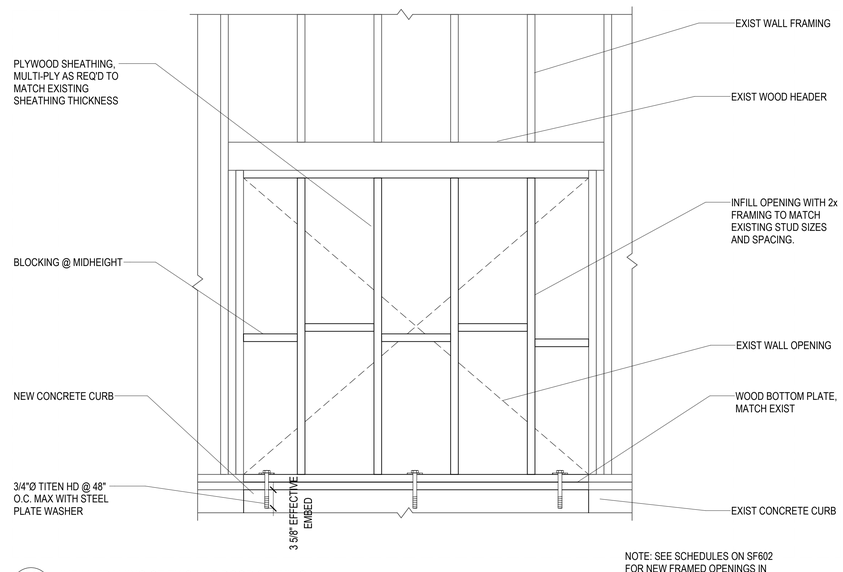
C5 / SF501 — TYPICAL JOIST BEARING AT INTERIOR WALL

NO SCALE



B1 / SF501 — TYPICAL WOOD SHEAR WALL PANEL JOINT DETAIL

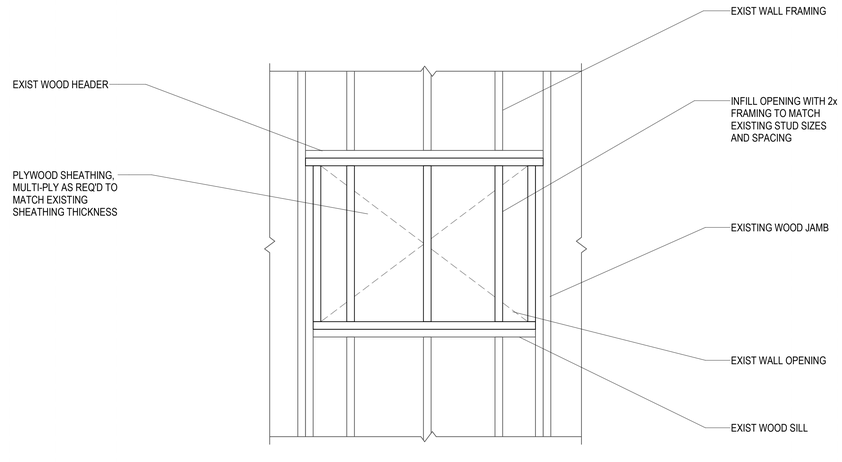
NO SCALE



NOTE: SEE SCHEDULES ON SF602 FOR NEW FRAMED OPENINGS IN INFILL FRAMING

B2 / SF501 — INFILL FRAMING OF EXISTING DOOR OPENING

NO SCALE



B4 / SF501 — INFILL FRAMING OF EXISTING WINDOW OPENING

NO SCALE

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TCSD WAREHOUSE REMODEL - BLDGS 649

TOOELE COUNTY SCHOOL DISTRICT
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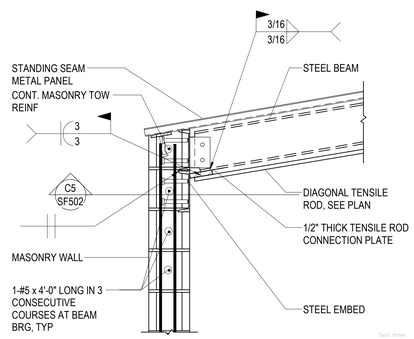
BID SET

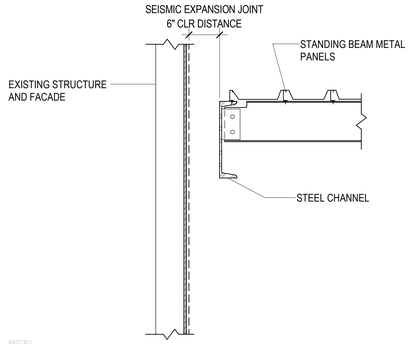
STRUCTURAL FRAMING DETAILS

SF501



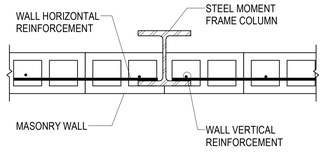
D1 SF502 STEEL BEAM TO MASONRY WALL CONNECTION

NO SCALE



D2 SF502 TYPICAL STEEL ROOF AT SEISMIC EXPANSION JOINT

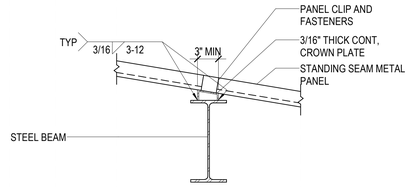
NO SCALE



NOTE: WELD 1/2"x36" DBA AT TOW TO COLUMN FLANGE EA SIDE

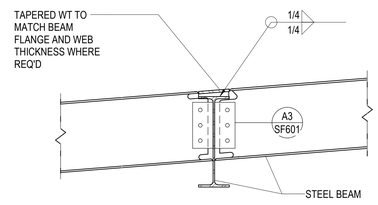
D3 SF502 STEEL MOMENT FRAME COLUMN EMBEDDED IN MASONRY WALL

NO SCALE



D4 SF502 STANDING SEAM METAL PANEL CONNECTION DETAIL

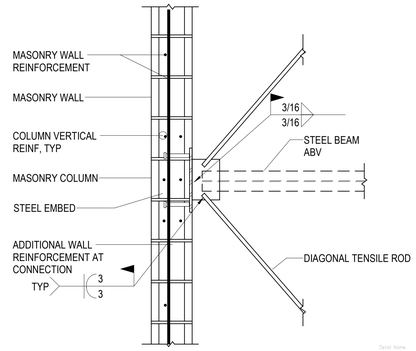
NO SCALE



NOTE: STANDING SEAM METAL PANEL NOT SHOWN

D5 SF502 CANTILEVERED STEEL BEAM CONNECTION

NO SCALE



C5 SF502 CANTILEVERED STEEL BEAM AT MOMENT FRAME

NO SCALE

VCBO ARCHITECTURE
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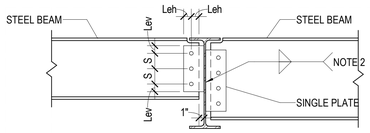
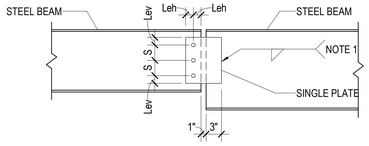
BID SET

STRUCTURAL FRAMING DETAILS

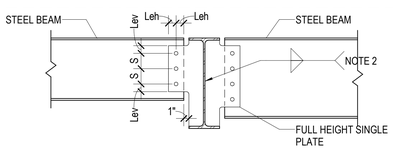
SF502



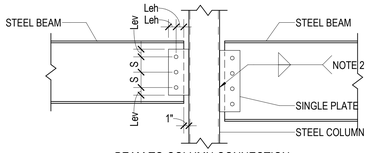
BEAM TO BEAM CONNECTION



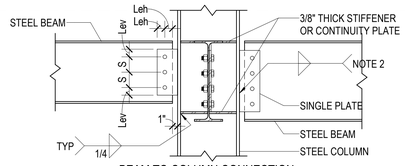
BEAM TO BEAM CONNECTION



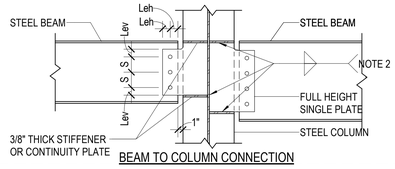
BEAM TO BEAM CONNECTION AT FULL HEIGHT STIFFENER



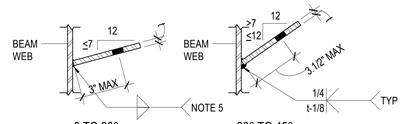
BEAM TO COLUMN CONNECTION

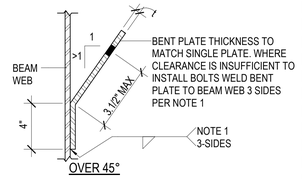


BEAM TO COLUMN CONNECTION



BEAM TO COLUMN CONNECTION





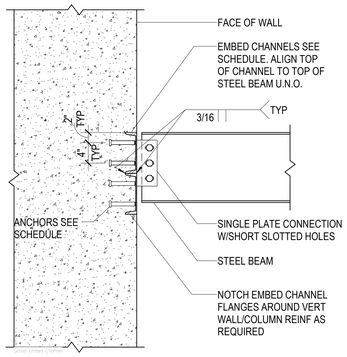
SKEWED CONNECTION (PLAN VIEW)

SINGLE PLATE CONNECTION SCHEDULE			
BEAM SIZE	WEB PLATE THICKNESS (t)	A325N BOLTS	
		NUMBER	SIZE
W8 AND W10	3/8"	2	7/8"Ø
W12 AND W14	3/8"	3	7/8"Ø
W16	3/8"	4	7/8"Ø
W18 AND W21	3/8"	5	7/8"Ø
W24	3/8"	6	7/8"Ø
W27	3/8"	7	7/8"Ø
W30	3/8"	8	7/8"Ø
W33	3/8"	9	7/8"Ø
W36	3/8"	10	7/8"Ø
W40	3/8"	11	7/8"Ø
W44	3/8"	12	7/8"Ø

NOTES:
1. FILLET WELDS ONE SIDE SHALL EQUAL THE PLATE THICKNESS MINUS 1/16" (1/4" MIN.)
2. FILLET WELDS TWO SIDES SHALL BE 5/8 THE PLATE THICKNESS (1/4" MIN.) EACH SIDE
3. BOLT EDGE DISTANCE SHALL BE AS FOLLOWS: Leh = 2 x BOLT DIAMETER; Lev = 1.1/2".
4. BOLT SPACING (S) SHALL BE 3".
5. AT SKEWED JOINTS PROVIDE AN EQUIVALENT LEG SIZE TO NOTE 2 PER AWS D1.1.
6. PROVIDE SHORT SLOTTED HOLES WHEN 6 OR MORE BOLTS ARE REQUIRED AND BOLT DIAMETER IS ≤ 3/4".

D1 / SF601 TYPICAL SINGLE PLATE CONNECTION DETAILS AND SCHEDULE

NO SCALE



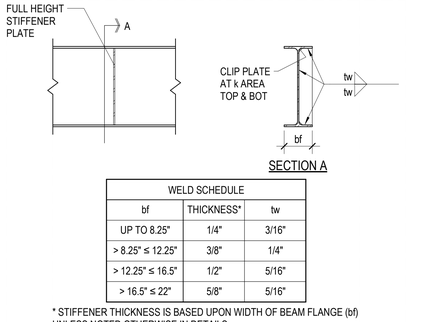
CONNECTION SCHEDULE		
BEAM DEPTH	EMBED CHANNEL	ANCHORS
TO 10"	1-C8x18.75x12"	4-3/4"Ø x 5" LONG HSA
TO 16"	2-C8x18.75x12"	8-3/4"Ø x 5" LONG HSA
TO 24"	3-C8x18.75x12"	12-3/4"Ø x 5" LONG HSA

NOTES:
1. WELD MULTIPLE EMBEDS TOGETHER WITH BUTT WELD EACH SIDE, FULL LENGTH.

2. PROVIDE 2" EDGE DISTANCE FROM END OF CHANNEL EMBED TO CENTER OF HSA, TYPICAL.

C4 / SF601 TYPICAL EMBED CHANNEL CONNECTION SCHEDULE

NO SCALE



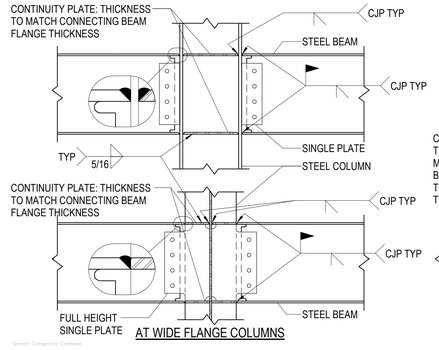
SECTION A

WELD SCHEDULE		
bf	THICKNESS*	tw
UP TO 8.25"	1/4"	3/16"
> 8.25" ≤ 12.25"	3/8"	1/4"
> 12.25" ≤ 16.5"	1/2"	5/16"
> 16.5" ≤ 22"	5/8"	5/16"

* STIFFENER THICKNESS IS BASED UPON WIDTH OF BEAM FLANGE (bf) UNLESS NOTED OTHERWISE IN DETAILS

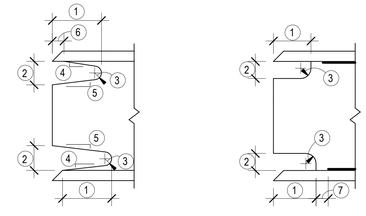
A1 / SF601 TYPICAL STIFFENER PLATE DETAIL

NO SCALE



A3 / SF601 TYPICAL GRAVITY BEAM MOMENT CONNECTION

NO SCALE



NOTES:

1. LENGTH: NOT LESS THAN THE GREATER OF 1.5 x WEB THICKNESS OR 1.1/2"
2. HEIGHT: NOT LESS THAN THE GREATER OF 1.0 x WEB THICKNESS OR 3/4" BUT NEED NOT EXCEED 2"
3. RADIUS: 3/8" MIN. GRIND THE THERMALLY CUT SURFACES OF WELD ACCESS HOLES IN HEAVY SHAPES AS DEFINED IN AISC 360-16 SECTIONS A3.1(c) AND (d).
4. SLOPE FORMS A TRANSITION FROM WEB TO THE FLANGE.
5. SLOPE MAY BE HORIZONTAL.
6. THE BOTTOM OF THE TOP FLANGE IS TO BE CONTOURED TO PERMIT THE TIGHT FIT BACKING BARS WHERE THEY ARE TO BE USED.
7. THE WEB-TO-FLANGE WELD OF BUILT-UP MEMBERS IS TO BE HELD BACK A DISTANCE OF AT LEAST THE WELD SIZE FROM THE EDGE OF THE ACCESS HOLE.

A5 / SF601 TYPICAL WELD ACCESS HOLE DETAIL

NO SCALE

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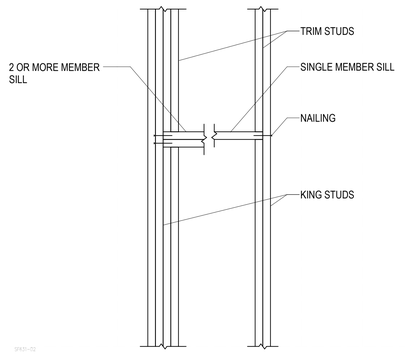
TCSD WAREHOUSE REMODEL - BLDGS 649

TOOELE COUNTY SCHOOL DISTRICT
PROJECT ADDRESS: 180 GARNET ST. TOOELE, UTAH 84074

BID SET

TYPICAL STEEL FRAMING SCHEDULES

SF601

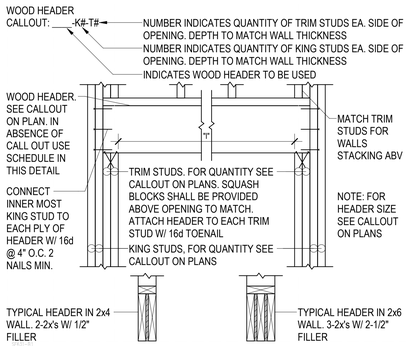


WINDOW SILL SCHEDULE				
	WINDOW WIDTH			
WINDOW HEIGHT	≤ 3'	≤ 6'	≤ 9'	REMARKS
UP TO 4'	DOUBLE 2x	DOUBLE 2x	DOUBLE 2x	
>4' TO 6'	DOUBLE 2x	DOUBLE 2x	DOUBLE 2x	
>6' TO 8'	DOUBLE 2x	DOUBLE 2x	DOUBLE 2x	

NOTES:
1. SEE TYPICAL WINDOW SILL DETAIL FOR FRAMING.
2. ALL SILL MEMBERS SHALL BE ANCHORED TO KING STUDS W/ 3-16d NAILS PER SILL MEMBER

D2 / SF602 TYPICAL WINDOW SILL DETAIL

NO SCALE

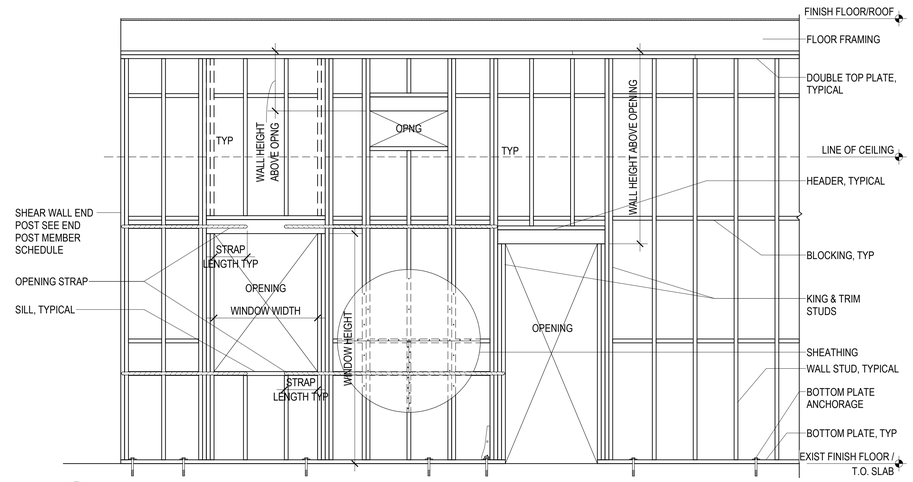


B2 / SF602 TYPICAL WOOD HEADER AND JAMB

NO SCALE

HEADER NAILING SCHEDULE				
SIZE	FASTENERS	ROWS	SPACING	REMARKS
2-2x6	16d	2	8" O.C.	
3-2x6	16d	2	8" O.C.	EACH FACE
2-2x8	16d	3	6" O.C.	
3-2x8	16d	3	6" O.C.	EACH FACE
2-2x10	16d	4	4" O.C.	
3-2x10	16d	4	4" O.C.	EACH FACE

2x4 WALLS			
WALL FRAMING PLAN	L ≤ 3' - 0"	L ≤ 6' - 0"	L ≤ 9' - 0"
LEVEL 1	2 - 2x6 - K3 - T1	2 - 2x8 - K3 - T1	-
2x6 WALLS			
WALL FRAMING PLAN	L ≤ 3' - 0"	L ≤ 6' - 0"	L ≤ 9' - 0"
LEVEL 1	3 - 2x6 - K2 - T1	3 - 2x8 - K2 - T1	3 - 2x10 - K2 - T1



D4 / SF602 TYPICAL WOOD STUD WALL ELEVATION

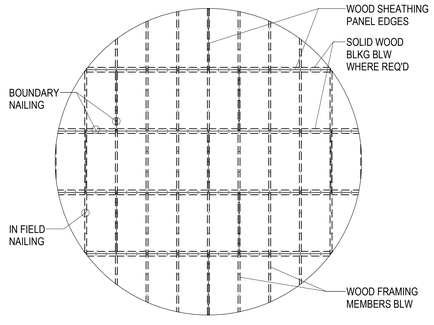
NO SCALE

WOOD SHEAR WALL SHEATHING SCHEDULE								
MARK	WALL SHEATHING THICKNESS	SIDES	PANEL EDGE NAILING SIZE	PANEL EDGE NAILING SPACING	BOTTOM PLATE ANCHORAGE: ANCHOR BOLTS IN CONCRETE	BOTTOM PLATE ANCHORAGE: FASTENING TO WOOD	RIM JOIST TO TOP PLATE CONNECTION	REMARKS
1	1/2" OR 15/32" (2 PLY)	ONE SIDE	10d	6"	1/2"Ø @ 48" O.C.*	16d @ 6" O.C.	SIMPSON A34 @ 24" O.C.	*USE SIMPSON SET-3G EPOXY TO EXISTING CONCRETE

NOTES:
1. SEE WOOD BEARING WALL SCHEDULE FOR WALL STUDS AND TOP AND BOTTOM PLATE SIZES.
2. WHERE STUDS MUST BE CUT DUE TO THE PLACEMENT OF ANCHOR BOLTS OR OTHER PRODUCTS, AN ADDITIONAL STUD SHALL BE INSERTED ALONG SIDE.
3. THE WIDTH OF THE NAILED FACE OF FRAMING MEMBERS AND BLOCKING SHALL BE 3" NOMINAL FOR ALL PANEL EDGE NAIL SPACING LESS THAN 6" O.C. SEE DETAIL B1/SF501 FOR ADDITIONAL INFORMATION.
4. NAILS SHALL BE LOCATED AT LEAST 3/8" FROM PANEL EDGES
5. SHEATHING SHALL BE INSTALLED WITH 1/8" GAP BETWEEN SIDE JOINTS AND 1/16" GAP AT END JOINTS.
6. ALL ANCHOR BOLTS FOR BOTTOM PLATE ANCHORAGE INTO CONCRETE OR MASONRY SHALL HAVE 6" MIN EMBEDMENT, TYPICAL UNO.
7. ALL NAILS SHALL MEET THE REQUIREMENTS FOUND IN THE GSN. IF USED, BOX NAILS SHALL BE GALVANIZED.
8. ANCHOR BOLTS SHALL HAVE A 3"x1/4"x3" PLATE WASHER BELOW THE NUT. THE MAXIMUM DISTANCE FROM THE PLATE WASHER TO THE SHEAR WALL SHEATHING SHALL BE 1/2". THE PLATE SHALL BE PERMITTED TO HAVE A DIAGONAL SLOT NO MORE THAN 1.3/4" LONG AND 3/16" LARGER THAN THE BOLT DIAMETER PROVIDED A STANDARD CUT WASHER IS INSTALLED BETWEEN THE PLATE AND THE NUT. SEE DETAIL D5/SF501
9. STUDS IN SHEAR WALL SHALL BE SPACED AT A MAXIMUM OF 16" O.C.
10. ALL PANEL NAILING AT INTERMEDIATE FRAMING MEMBERS SHALL BE 12" O.C. MAXIMUM.
11. SOME SHEATHING MARKS IN THIS SCHEDULE MAY BE ABSENT FROM PLAN MARKS.

MINIMUM NAILING SCHEDULE			
	DESCRIPTION OF BUILDING ELEMENTS	NUMBER AND TYPE OF FASTENER	SPACING AND LOCATION
	WALL		
1.	STUD TO STUD (NOT AT BRACED WALL PANELS)	16d COMMON	24" O.C. FACE NAIL
		10d BOX	16" O.C. FACE NAIL
2.	STUD TO STUD AND ABUTTING STUDS AT INTERSECTING WALL CORNERS (AT BRACED WALL PANELS)	16d COMMON	16" O.C. FACE NAIL
		16d BOX	12" O.C. FACE NAIL
3.	BUILT-UP HEADER (2" TO 2" HEADER)	16d COMMON	16" O.C. EACH EDGE, FACE NAIL
		16d BOX	12" O.C. EACH EDGE, FACE NAIL
4.	CONTINUOUS HEADER TO STUD	4-8d COMMON OR 4-10d BOX	TOENAIL
5.	TOP PLATE TO TOP PLATE	16d COMMON	16" O.C. FACE NAIL
		10d BOX	12" O.C. FACE NAIL
6.	TOP PLATE TO TOP PLATE, AT END JOINTS	8-16d COMMON OR 12-10d BOX	EACH SIDE OF END JOINT, FACE NAIL (MINIMUM 24" LAP SPLICE LENGTH EACH SIDE OF END JOINT)
7.	BOTTOM PLATE TO JOIST, RIM JOIST, BAND JOIST OR BLOCKING (NOT AT BRACED WALL PANELS)	16d COMMON	16" O.C. FACE NAIL
		16d BOX	12" O.C. FACE NAIL
8.	BOTTOM PLATE TO JOIST, RIM JOIST, BAND JOIST OR BLOCKING AT BRACED WALL PANELS	2-16d COMMON OR 3-16d BOX	16" O.C. FACE NAIL
9.	STUD TO TOP OR BOTTOM PLATE	4-8d COMMON OR 4-10d BOX	TOENAIL
		2-16d COMMON OR 3-10d BOX	END NAIL
10.	TOP OR BOTTOM PLATE TO STUD	2-16d COMMON OR 3-10d BOX	END NAIL
11.	TOP PLATES, LAPS AT CORNERS AND INTERSECTIONS	2-16d COMMON OR 3-10d BOX	END NAIL
12.	1" BRACE TO EACH STUD AND PLATE	2-8d COMMON OR 2-10d BOX	FACE NAIL
13.	1"x6" SHEATHING TO EACH BEARING	2-8d COMMON OR 2-10d BOX	FACE NAIL
14.	1"x8" AND WIDER SHEATHING TO EACH BEARING	3-8d COMMON OR 3-10d BOX	FACE NAIL
	FLOOR		
15.	JOIST TO SILL, TOP PLATE, OR GIRDER	3-8d COMMON OR 3-10d BOX	TOENAIL
16.	RIM JOIST, BAND JOIST, OR BLOCKING TO TOP PLATE, SILL OR OTHER FRAMING BELOW	8d COMMON OR 10d BOX	6" O.C. TOENAIL
17.	1"x6" SUBFLOOR OR LESS TO EACH JOIST	2-8d COMMON OR 2-10d BOX	FACE NAIL
18.	2" SUBFLOOR TO JOIST OR GIRDER	2-16d COMMON	FACE NAIL
19.	2" PLANKS (PLAN & BEAM - FLOOR & ROOF)	2-16d COMMON	FACE NAIL
20.	BUILT-UP GIRDERS AND BEAMS, 2" LUMBER LAYERS		32" O.C., FACE NAIL AT TOP AND BOTTOM STAGGERED ON OPPOSITE SIDES
			24" O.C., FACE NAIL AT TOP AND BOTTOM STAGGERED ON OPPOSITE SIDES
21.	LEDGER STRIP SUPPORTING JOISTS OR RAFTERS	3-16d COMMON OR 4-10d BOX	EACH JOIST OR RAFTER, FACE NAIL
22.	JOIST TO BAND JOIST OR RIM JOIST	3-16d COMMON OR 4-10d BOX	END NAIL
23.	BRIDGING OR BLOCKING TO JOIST, RAFTER OR TRUSS	2-8d COMMON OR 2-10d BOX	EACH END, TOENAIL

WOOD BEARING WALL SCHEDULE							
MARK	WALL FRAMING: STUDS	WALL FRAMING: SPACING	WALL FRAMING: BOTTOM PLATE	WALL FRAMING: TOP PLATE	BOTTOM PLATE ANCHORAGE: ANCHOR BOLTS IN CONCRETE	BOTTOM PLATE ANCHORAGE: FASTENING TO WOOD	REMARKS
WBW-1	2x4	12"	2x4	2-2x4	1/2"Ø @ 48" O.C.	16d @ 8" O.C.	
WBW-2	2x6	16"	2x6	2-2x6	1/2"Ø @ 48" O.C.	16d @ 8" O.C.	



WOOD DIAPHRAGM SCHEDULE						
LEVEL	WOOD SHEATHING THICKNESS	WOOD SHEATHING EDGES	COMMON NAIL SPACING: A	COMMON NAIL SPACING: B	COMMON NAIL SPACING: C	NAIL SIZE
WD-1	3/4" OR 19/32"	NO BLOCKING REQ'D	6"	6"	12"	10d
WD-2	3/4" OR 19/32" (2 PLY)	NO BLOCKING REQ'D	6"	6"	12"	10d

NOTES:
1. SEE DETAIL A1/SF602 FOR TYPICAL WOOD DIAPHRAGM SHEATHING PANEL LAYOUT.
2. SEE DETAIL A1/SF602 FOR TYPICAL WOOD DIAPHRAGM SHEATHING PANEL EDGE BLOCKING.
3. COMMON NAIL SPACING CRITERIA:
   A. CONTINUOUS WOOD SHEATHING PANEL EDGES AND DIAPHRAGM BOUNDRY EDGES.
   B. ALL OTHER WOOD SHEATHING PANEL EDGES.
   C. INTERMEDIATE WOOD SHEATHING PANEL SUPPORTS (IN FIELD NAILING).
   D. ALL SHEATHING SHALL BE A.P.A. RATED EXPOSURE 1.

A1 / SF602 TYPICAL WOOD DIAPHRAGM SHEATHING PANEL LAYOUT - PLAN VIEW

NO SCALE

WOOD SHEAR WALL HOLDOWN SCHEDULE				
MARK	BASIS-OF-DESIGN HOLDOWN	ANCHOR BOLT: SIZE	ANCHOR BOLT: CONCRETE EMBEDMENT	REMARKS
A	SIMPSON DTT2Z	1/2"Ø	3"	USE SIMPSON SET-3G EPOXY TO EXISTING CONCRETE

NOTES:
1. SOME SHEAR WALL HOLDOWNS MARKS IN THE SCHEDULE MAY BE ABSENT FROM PLAN MARKS.

OPENING STRAP SCHEDULE				
MARK	BASIS-OF-DESIGN HOLDOWN	STRAP LENGTH (EA. END)	NAILING (EA. END)	REMARKS
1	SIMPSON CS20	9"	14-8d	

NOTES:
1. SOME OPENING STRAP MARKS IN THE SCHEDULE MAY BE ABSENT FROM THE PLAN MARKS.
2. A DASHED PLACE HOLDER IS SHOWN IN PLACE OF A NUMBER FROM THIS SCHEDULE FOR SHEAR WALLS THAT DO NOT HAVE OPENINGS WITHIN THEM.

END POST MEMBER SCHEDULE	
MARK	SIZE
A	2-2x4
B	2-2x6

NOTES:
1. ATTACH ALL COLUMNS TO BOTTOM PLATE W/ 4-16d TOE NAILS, TYPICAL UNO.

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REV	DATE	DESCRIPTION

VCBO NUMBER: 21515
CLIENT NUMBER: 20385
DATE: 2021-08-16

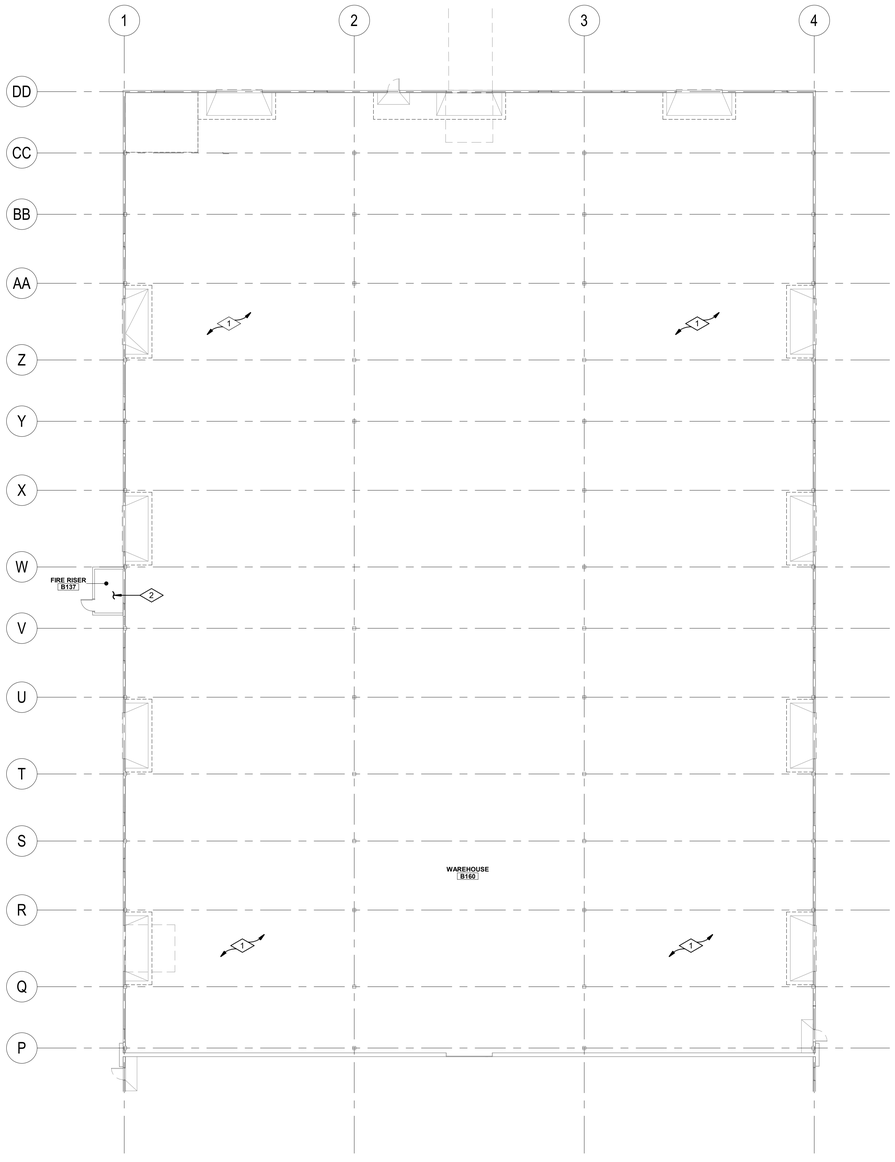
TCSD WAREHOUSE REMODEL - BLDGS 649

TOOELE COUNTY SCHOOL DISTRICT
PROJECT ADDRESS: 180 GARNET ST. TOOELE, UTAH 84074

BID SET

STRUCTURAL SCHEDULES

SF602

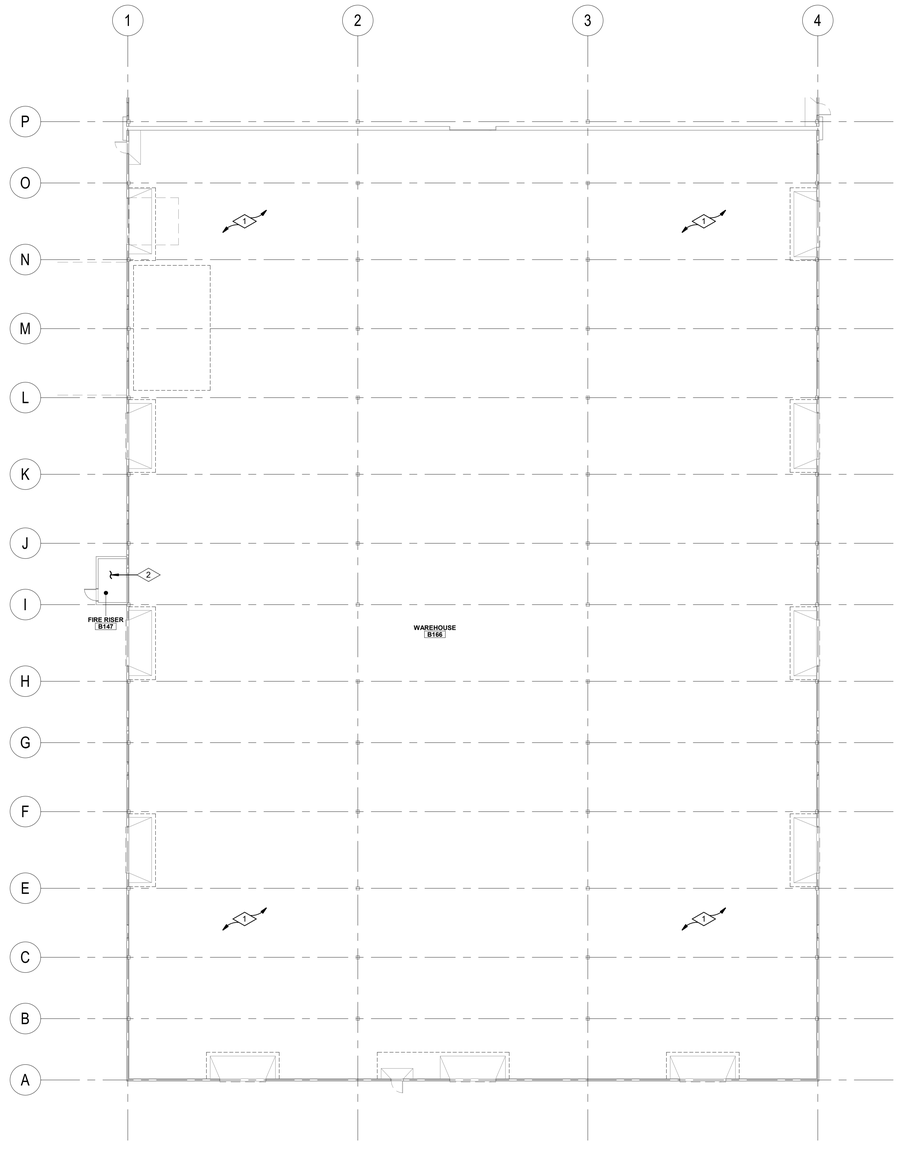


LEVEL 1 MECHANICAL DEMOLITION PLAN - 649A

0 8' - 0" 16' - 0" 32' - 0"

SCALE: 1/16" = 1'-0"

NORTH



LEVEL 1 MECHANICAL DEMOLITION PLAN - 649B

0 8' - 0" 16' - 0" 32' - 0"

SCALE: 1/16" = 1'-0"

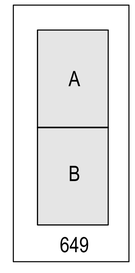
NORTH

REFERENCE NOTES

1 REMOVE ALL MECHANICAL DEVICES, FANS AND LOUVERS. COORDINATE WITH GENERAL CONTRACTOR FOR EXTENT OF DEMOLITION IN REGARDS TO NEW ENVOLOPE.

2 REMOVE ANY MECHANICAL DEVICES FROM INSIDE BOTH RISER ROOMS.

KEY PLAN



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REV	DATE	DESCRIPTION

VCBO NUMBER:	21515
CLIENT NUMBER:	20385
DATE:	2021-08-18

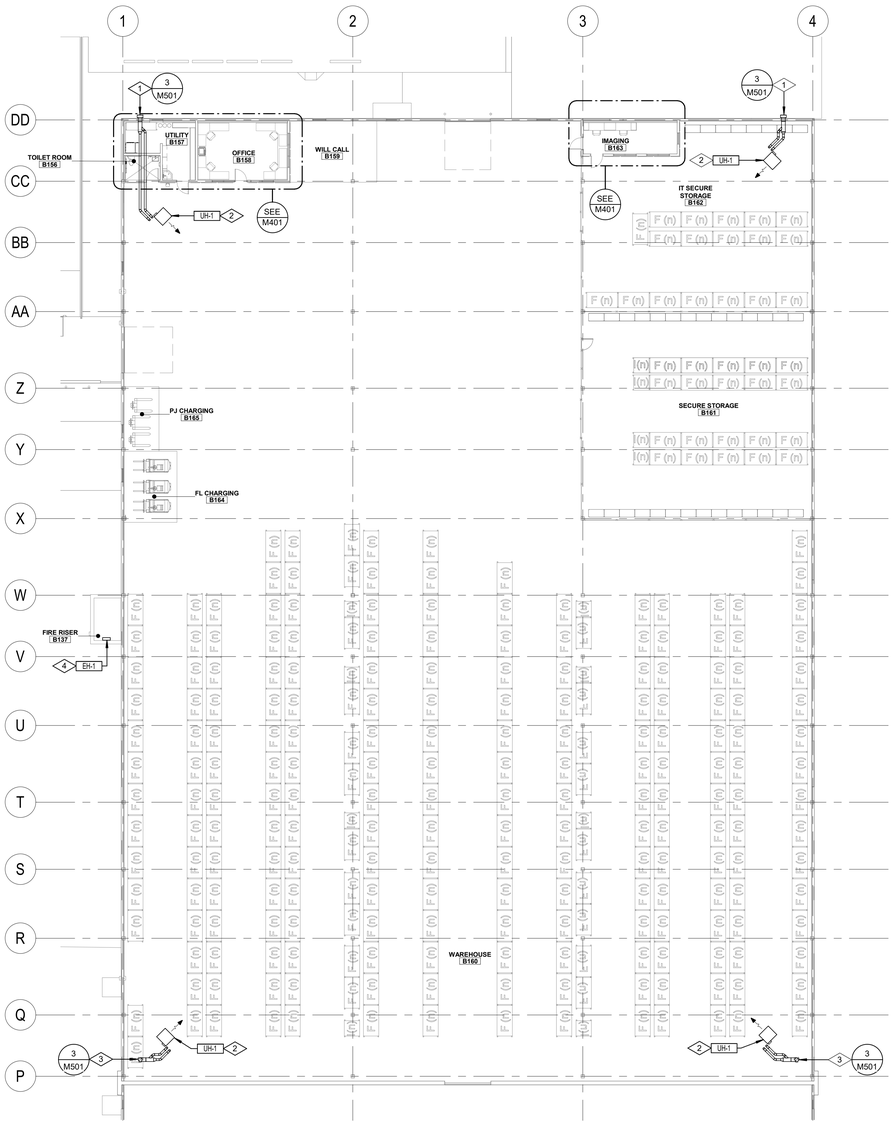
TCSD WAREHOUSE REMODEL - BLDGS 649

TOOELE COUNTY SCHOOL DISTRICT
PROJECT ADDRESS: 180 GARNET ST. TOOELE, UTAH 84074

BID SET

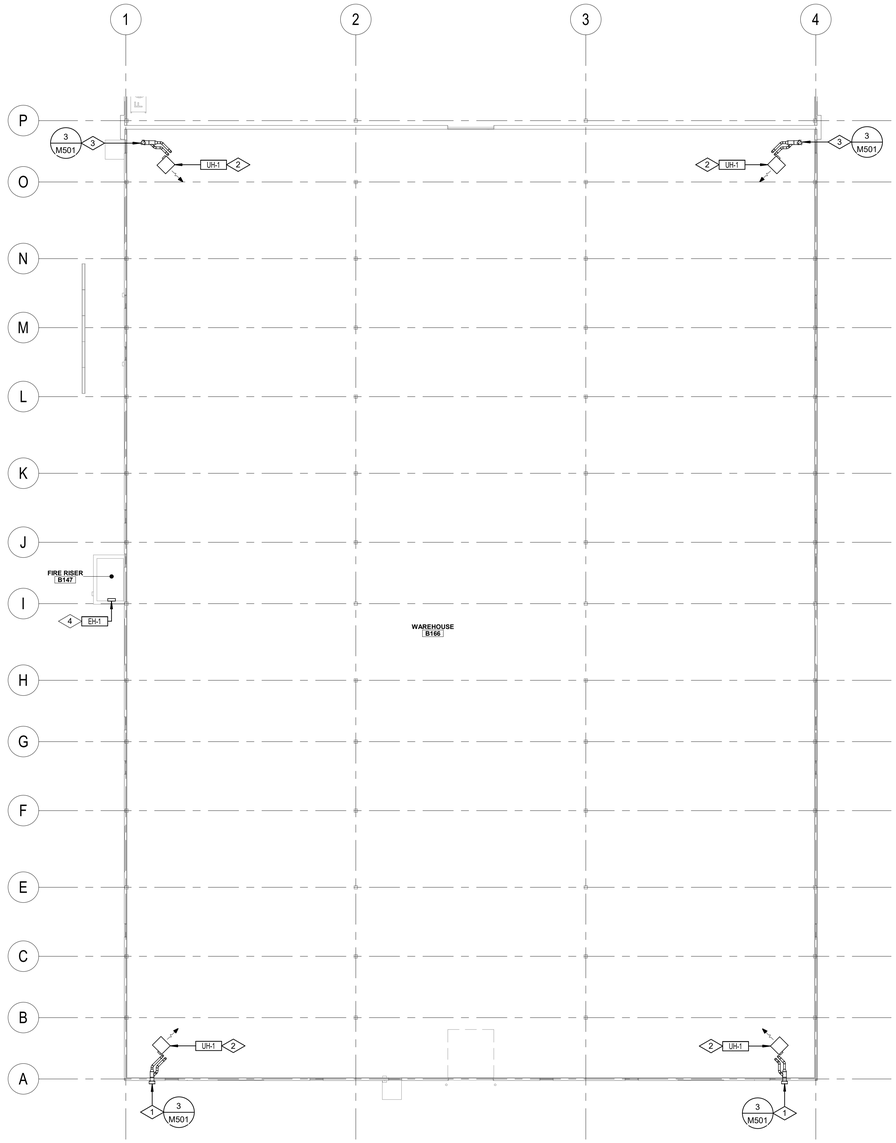
MECHANICAL DEMOLITION

MD100



LEVEL 1 MECHANICAL PLAN - 649A

SCALE: 1/16" = 1'-0"



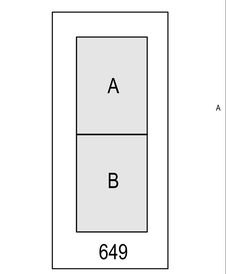
LEVEL 1 MECHANICAL PLAN - 649B

SCALE: 1/16" = 1'-0"

REFERENCE NOTES

1. HORIZONTAL CONCENTRIC KIT; (2) 6" DIA. COMBUSTION AIR AND EXHAUST AIR DUCTS TO CONCENTRIC KIT, THROUGH WALL AND SEALED AIR TIGHT. COORDINATE KIT WITH NEW WALLS PRIOR TO COMMENCEMENT OF WORK.
2. MOUNT GAS FIRED UNIT HEATER AWAY FROM COMBUSTIBLE MATERIALS AS PER MANUFACTURER'S INSTRUCTIONS. PROVIDE ALL MOUNTING MATERIALS AND SEISMIC BRACING AS REQUIRED IN SPECIFICATIONS OR MANUFACTURER'S RECOMMENDATIONS.
3. VERTICAL CONCENTRIC KIT; (2) 6" DIA. COMBUSTION AIR AND EXHAUST AIR DUCTS TO CONCENTRIC KIT, THROUGH ROOF AND SEALED WATER TIGHT. COORDINATE KIT WITH NEW ROOF PRIOR TO COMMENCEMENT OF WORK.
4. EUH-1; MOUNT AS PER MANUFACTURERS' SPECIFICATIONS. COORDINATE WITH CONTROLS CONTRACTOR FOR ANY REQUIRED CONTROL POINTS.

KEY PLAN



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REV	DATE	DESCRIPTION

VCBO NUMBER:	21515
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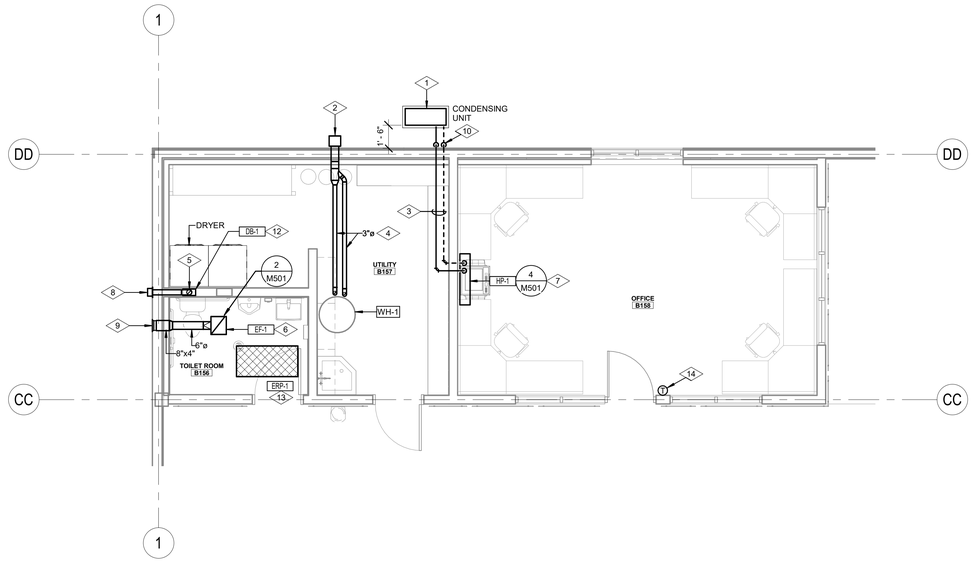
TCSD WAREHOUSE REMODEL - BLDGS 649

TOOELE COUNTY SCHOOL DISTRICT
PROJECT ADDRESS: 180 GARNET ST. TOOELE, UTAH 84074

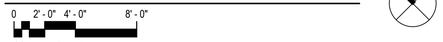
BID SET

MECHANICAL PLAN

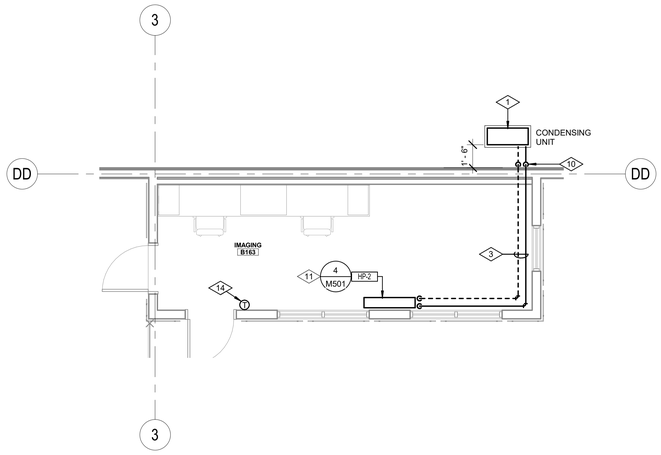
M113



ENLARGED MECHANICAL PLAN



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



ENLARGED MECHANICAL PLAN

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

REFERENCE NOTES

1. CONDENSING UNIT ON 4" HIGH CONCRETE HOUSEKEEPING PAD.
2. WATER HEATER COMBUSTION AIR/EXHAUST AIR CONCENTRIC KIT. COORDINATE WITH GENERAL FOR EXIT REQUIREMENTS.
3. REFRIGERANT PIPING; SIZED BY MANUFACTURER; CONTRACTOR TO PROVIDE SHOP DRAWINGS FOR LENGTHS AND SLOPE REQUIREMENTS. PROVIDE REFRIGERANT PIPE SUPPORTS ABOVE 10'-0" OR ABOVE CEILING AS PER SPECIFICATIONS. COORDINATE ROUTING PRIOR TO COMMENCEMENT OF WORK.
4. COMBUSTION AIR AND EXHAUST AIR DUCTS FOR WATER HEATER. PROVIDE SECURE SUPPORTS ACROSS ROOM AT 10'-0" ABOVE FINISHED FLOOR.
5. DRYER VENT; SIZED AS PER DRYER MANUFACTURER'S INSTRUCTIONS. COORDINATE WITH LOCATION OF WALL BOX IF WASHER AND DRYER ARE FLIPPED.
6. CEILING MOUNTED EXHAUST FAN; PROVIDE MATCHING GRILLE. SEE SCHEDULE FOR CONTROLS.
7. WALL MOUNTED HEAT PUMP INDOOR UNIT; PROVIDE INTEGRAL CONDENSATE PUMP AND ROUTE PER DRAWINGS ON SHEET P401; MOUNT JUST BELOW CEILING LEVEL.
8. TYPICAL DRYER VENT CAP.
9. 8"x4" BRICK VENT STYLE EXHAUST CAP. COORDINATE WALL OPENING REQUIREMENTS WITH ARCHITECT.
10. SECURE REFRIGERANT PIPING DOWN EXTERIOR WALL WITH UNISTRUT; COORDINATE LOCATION OF PIPE DROPS WITH LOCATION OF CONDENSING UNIT PIPE CONNECTIONS FOR STRAIGHT RUN FROM WALL TO UNIT CONNECTION.
11. WALL MOUNT HEAT PUMP HP-2 BELOW CEILING AND ABOVE WINDOW LEVEL; ROUTE CONDENSATE DRAIN THROUGH WALL TO WAREHOUSE SIDE; MOUNT CONDENSATE PUMP CP-2 ON WALL NEXT TO HEAT PUMP; ROUTE CONDENSATE DRAIN THRU WALL TO WAREHOUSE SIDE; SEE SHEET P113 FOR FURTHER INSTRUCTION. COORDINATE CONDENSATE PUMP WITH PLUMBING CONTRACTOR.
12. COORDINATE INSTALLATION OF DRYER-BOX DB-1 WITH GENERAL CONTRACTOR PRIOR TO COMMENCEMENT OF WORK.
13. PROVIDE HARD WIRED THERMOSTAT FOR ERP-1; MOUNT NEXT TO LIGHT SWITCH.
14. PROVIDE HARD WIRED THERMOSTAT; LOCATE AS SHOWN ON PLANS.

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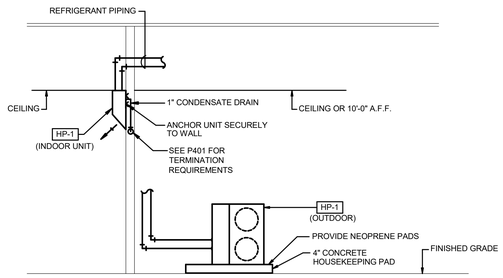
TCSD WAREHOUSE REMODEL - BLDGS 649

TOOELE COUNTY SCHOOL DISTRICT
PROJECT ADDRESS: 180 GARNET ST. TOOELE, UTAH 84074

BID SET

ENLARGED MECHANICAL PLANS

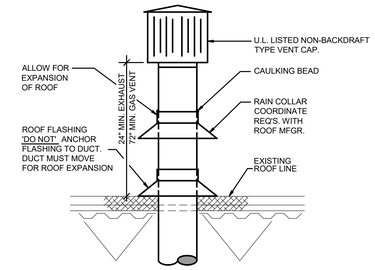
M401



HEAT PUMP UNIT DETAIL

NOT TO SCALE (HP-2 SIMILAR)

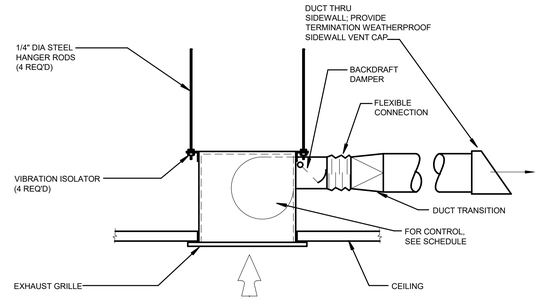
4 / M501



TYPICAL DUCT PENETRATION AT ROOF DETAIL

NOT TO SCALE

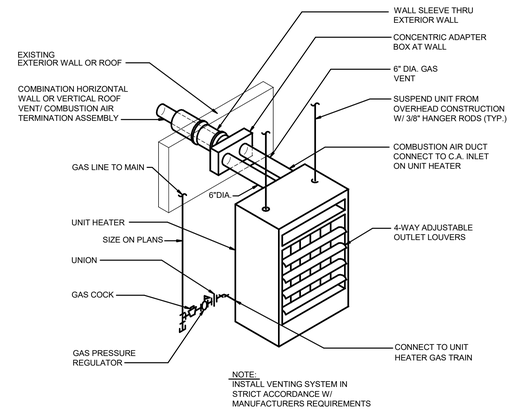
1 / M501



CEILING EXHAUST FAN DETAIL

NOT TO SCALE

2 / M501



GAS UNIT HEATER SCHEMATIC

NOT TO SCALE (SIMILAR FOR ROOF MOUNTED VENTING)

3 / M501

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TOOELE COUNTY SCHOOL DISTRICT
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BID SET

MECHANICAL DETAILS

M501

8/20/2021 8:44:24 AM

EXHAUST FAN SCHEDULE

SYMBOL	TYPE	CFM	ESP	RPM	MOTOR	DRIVE	MAKE & MODEL
EF-1	CABINET CEILING	100	.35"	769	129 WATTS 115/60/1	DIRECT	GREENHECK SP-B150 (1)(2)

NOTES:

(1) CEILING MOUNTED EXHAUST FANS TO BE COMPLETE WITH SIGHT TIGHT BAR-TYPE CEILING GRILLE, BACKDRAFT DAMPERS AND FLEXIBLE CONNECTION ON DISCHARGE DUCT.

(2) CONTROLLED BY OCCUPANCY SENSORS (BY E.C.) COORDINATE WIRING WITH E.C.

GAS FIRED UNIT HEATER SCHEDULE

SYMBOL	TYPE	MBH INPUT	MBH OUTPUT	FLUES	CFM	MOTOR	MAKE & MODEL (1)(2)(3)
UH-1	HORIZONTAL	300	249	6" Ø	3843	1/2 HP, 115/60/1, 11.0 AMPS	REZNOR MODEL UDAS-300

NOTE:

(1) WITH THERMOSTAT & OUTLET LOUVERS EQUIPPED FOR HIGH ALTITUDE.
(2) TWO-STAGE GAS CONTROL.
(3) PROVIDE HORIZONTAL OR VERTICAL VENTILATION/COMBUSTION AIR ARRANGEMENT KIT. VERIFY WITH DRAWINGS WHICH KIT IS REQUIRED FOR EACH UNIT LOCATION.

ELECTRIC RADIANT HEATING PANEL SCHEDULE

SYMBOL	SIZE	WATTS HEATING CAPACITY	BTUH OUTPUT	AMPS	VOLTAGE	WEIGHT (LBS)	MAKE & MODEL
ERP-1	24" x 48"	1000	3,410	3.7	120/1/60	30	ENERJOY II RPF SHD (1)(2)

NOTES:

(1) PANEL SHALL BE COMPLETE WITH SURFACE MOUNTING FRAME.
(2) HARD WIRED THERMOSTAT.

MECHANICAL EQUIPMENT SCHUEDULES

HP-1 HEAT PUMP, DUCT FREE, SPLIT SYSTEM.

FAN-COIL INDOOR UNIT : DX SPLIT SYSTEM HEAT PUMP UNIT. STANDARD WALL MOUNT, 29,515 BTU/HR COOLING CAPACITY AT 95°F AMBIENT (73°F DB/61°F WB INDOOR), 19,300 BTU/HR HEATING CAPACITY AT 6°F AMBIENT, 706 CFM, PROVIDE INTEGRAL CONDENSATE PUMP, AND HARD WIRED THERMOSTAT FOR WALL MOUNTING.
12.6 EER. 21.5 SEER

MANUFACTURER: LG
MODEL: LS180HSV5
ELECTRICAL: SEE OUTDOOR UNIT
DIMENSIONS: 40"W x 8"D x 9"H
WEIGHT: 32 LBS

HEAT PUMP OUTDOOR UNIT : GRADE MOUNTED, 29,515 MAX BTU/HR COOLING CAPACITY AT 95°F AMBIENT (73°F DB/61°F WB INDOOR), 19,300 BTU/HR HEATING CAPACITY AT 6°F AMBIENT. OPERATION TO 0°F AMBIENT, CRANKCASE HEATER, WIND BAFFLE, AND LOW AMBIENT CONTROLS. EFFICIENCY = 12.6 EER. 21.5 SEER

MANUFACTURER: LG
MODEL: LS180HSV5
ELECTRICAL: MCA = 13.0 @ 208/1/60
DIMENSIONS: 32"W x 13"D x 34"H
WEIGHT: 126 LBS

HP-2 HEAT PUMP, DUCT FREE, SPLIT SYSTEM.

FAN-COIL INDOOR UNIT : DX SPLIT SYSTEM HEAT PUMP UNIT. STANDARD WALL MOUNT, 29,515 BTU/HR COOLING CAPACITY AT 95°F AMBIENT (73°F DB/61°F WB INDOOR), 19,300 BTU/HR HEATING CAPACITY AT 6°F AMBIENT, 706 CFM, AND HARD WIRED THERMOSTAT FOR WALL MOUNTING.
12.6 EER. 21.5 SEER

MANUFACTURER: LG
MODEL: LS180HSV5
ELECTRICAL: SEE OUTDOOR UNIT
DIMENSIONS: 40"W x 8"D x 9"H
WEIGHT: 32 LBS

HEAT PUMP OUTDOOR UNIT : GRADE MOUNTED, 29,515 MAX BTU/HR COOLING CAPACITY AT 95°F AMBIENT (73°F DB/61°F WB INDOOR), 19,300 BTU/HR HEATING CAPACITY AT 6°F AMBIENT. OPERATION TO 0°F AMBIENT, CRANKCASE HEATER, WIND BAFFLE, AND LOW AMBIENT CONTROLS. EFFICIENCY = 12.6 EER. 21.5 SEER

MANUFACTURER: LG
MODEL: LS180HSV5
ELECTRICAL: MCA = 13.0 @ 208/1/60
DIMENSIONS: 32"W x 13"D x 34"H
WEIGHT: 126 LBS

EH-1 WALL MOUNTED ELECTRIC UNIT HEATER:
3.0 KW, 208V/3 PHASE, 310 CFM, 40 LBS SHIPPING WEIGHT, 24 VOLT RELAY WITH TRANSFORMER, WITH WALL MOUNTED THERMOSTAT SINGLE POLE LOW VOLTAGE, ADJUSTABLE AIR LOUVERS, HIGH LIMIT TEMPERATURE CONTROL WITH AUTOMATIC RESET, FACTORY INSTALLED CONTACTOR.

REZNOR MODEL EGEB, SIZE 3

DB-1 DRYER BOX FITTING; SEE SPECS.

CP-2 CONDENSATE PUMP: PROVIDED BY MECHANICAL CONTRACTOR, INSTALLED BY PLUMBING CONTRACTOR; SERVES HP-2.
LITTLE GIANT MODEL VCMX NXTGEN # 554530; 1/30 HP, 120V/60HZ, 1.5 AMPS, 93 WATTS;
3/8" DISCHARGE TO 3/4" CONDENSATE DRAIN LINE; PROVIDE OVERFLOW PROTECTION SWITCH;
RATED FOR MINIMUM OF 10' HEAD LIFT; 5 LBS, SUPPORT WITH UNISTRUT AT APPROXIMATELY 10'-0" A.F.F. AS SHOWN ON PLANS. COORDINATE LOCATION OF PUMP WITH ELECTRICAL FOR OUTLET LOCATION.

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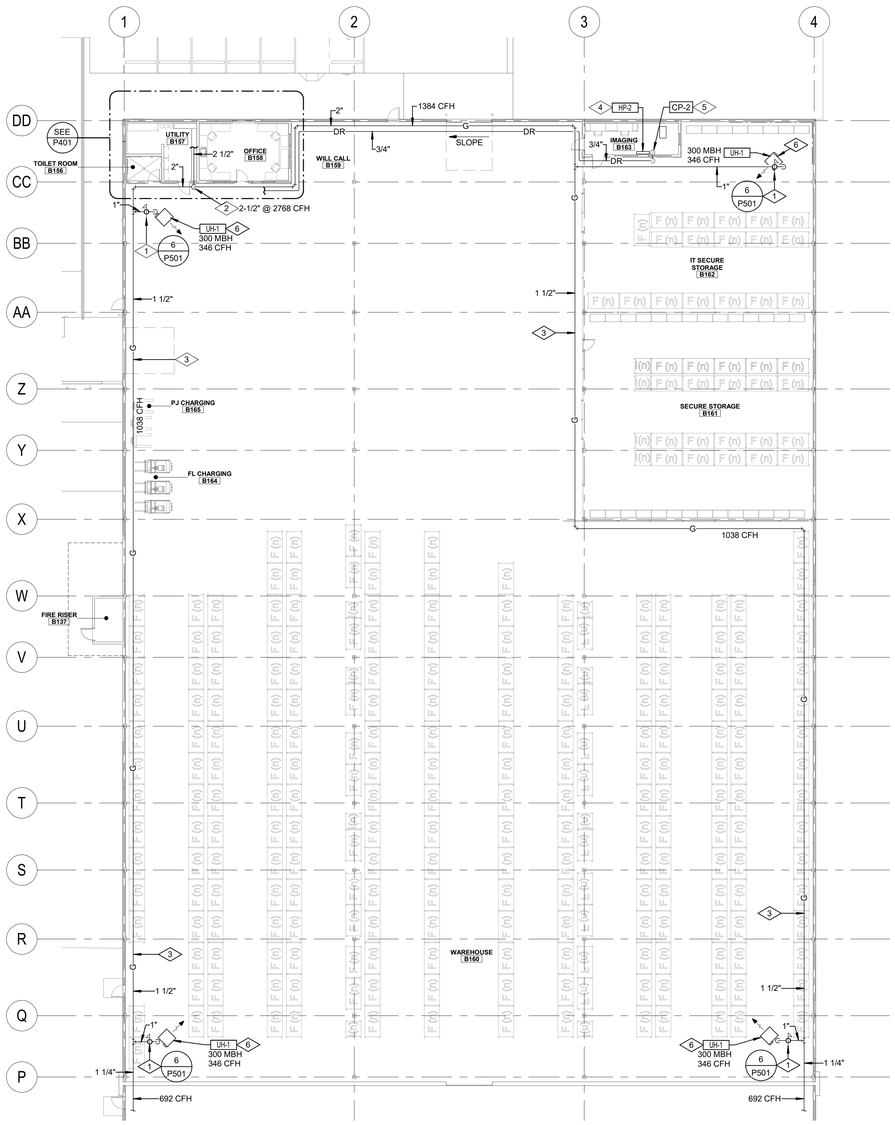
REV	DATE	DESCRIPTION

VCBO NUMBER: 21515
CLIENT NUMBER: 20385
DATE: 2021-08-18

TCSD WAREHOUSE REMODEL - BLDGS 649
TOOELE COUNTY SCHOOL DISTRICT
PROJECT ADDRESS: 180 GARNET ST. TOOELE, UTAH 84074
BID SET

MECHANICAL SCHEDULES

M601

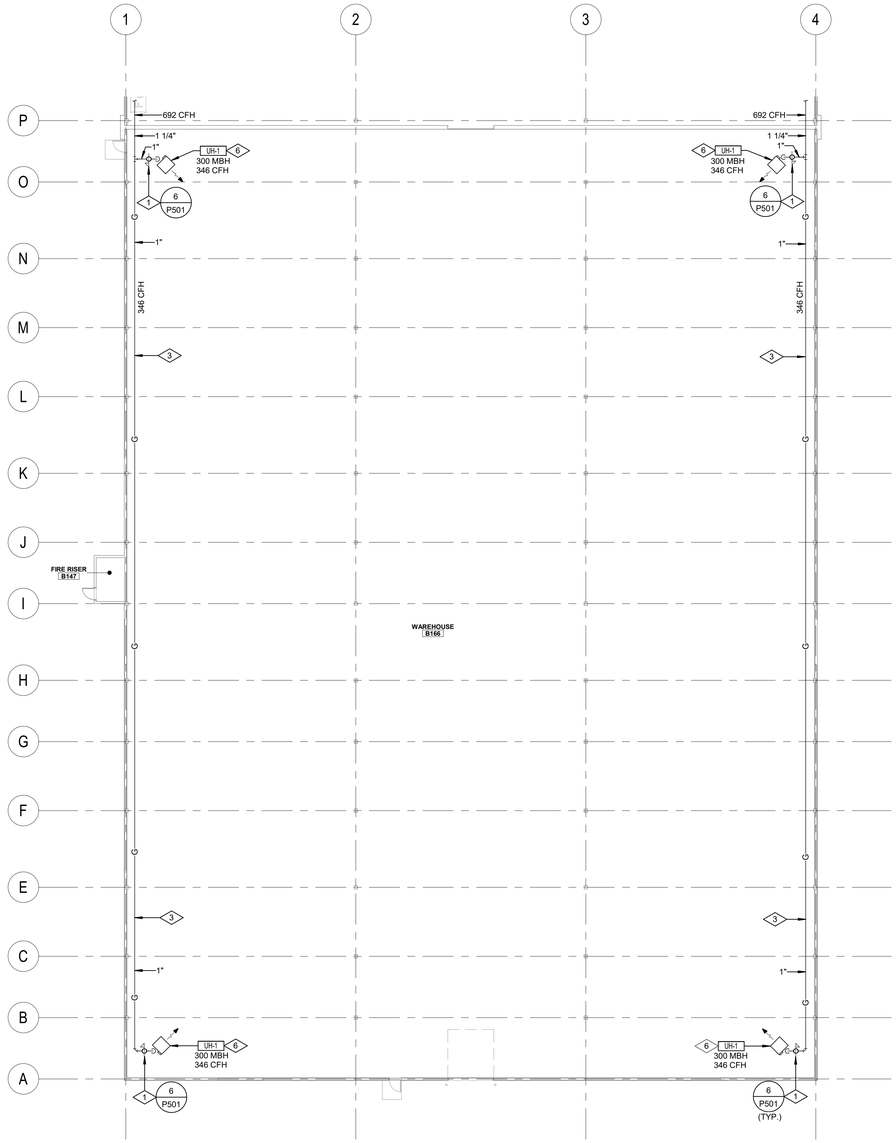


LEVEL 1 PLUMBING PLAN - 649A

0 8' - 0" 16' - 0" 32' - 0"

SCALE: 1/16" = 1'-0"

NORTH



LEVEL 1 PLUMBING PLAN - 649B

0 8' - 0" 16' - 0" 32' - 0"

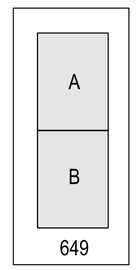
SCALE: 1/16" = 1'-0"

NORTH

REFERENCE NOTES

1. PROVIDE LINE SIZED GAS SHUTOFF VALVE AND 2LBS TO 4 OZ GAS PRESSURE REGULATOR. VENT AS REQUIRED BY CODE. CONTRACTOR TO MATCH SIZE OF PIPE WITH CONNECTION SIZE OF EQUIPMENT DOWNSTREAM OF PRESSURE REGULATOR.
2. GAS LINE UP TO BOTTOM OF STRUCTURE. FIELD VERIFY LENGTHS AND ELEVATION.
3. ROUTE GAS PIPING BELOW STRUCTURE.
4. SEE SHEET M401.
5. CONDENSATE PUMP CP-2: MOUNT ON WALL NEXT TO HEAT PUMP HP-2. COORDINATE WITH ELECTRICAL CONTRACTOR FOR REQUIRED 120V CIRCUIT AND OUTLET. ROUTE CONDENSATE DRAIN THRU WALL TO WAREHOUSE SIDE; ROUTE DRAIN UP TO 15-0" A.F.F. TO BOTTOM OF TRUSSES; SLOPE DRAIN LINE BACK TO UTILITY ROOM AS SHOWN ON PLANS.
6. MOUNT UH-1 AS PER MANUFACTURER'S INSTRUCTIONS.

KEY PLAN



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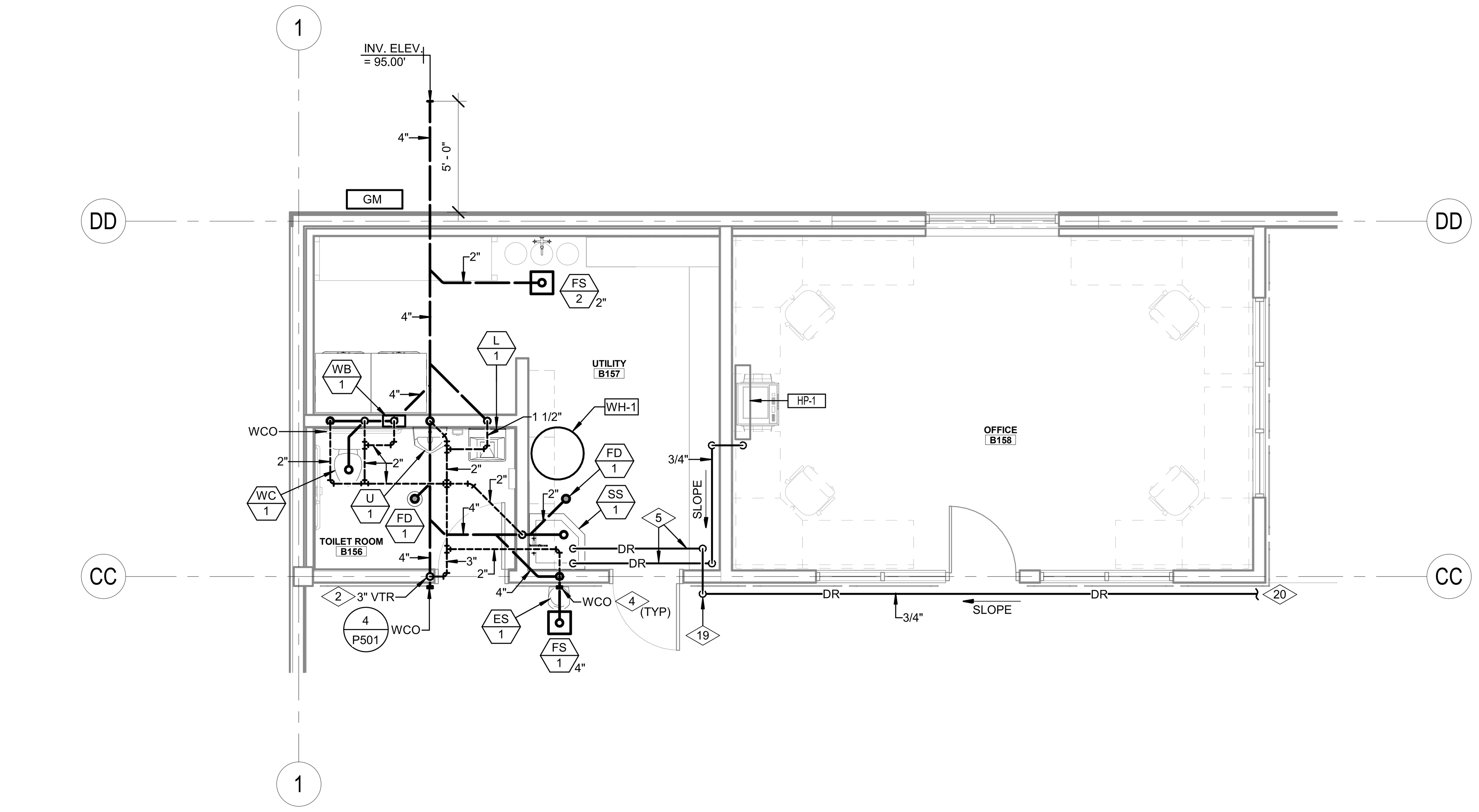
TCSD WAREHOUSE REMODEL - BLDGS 649

TOOELE COUNTY SCHOOL DISTRICT
PROJECT ADDRESS: 180 GARNET ST. TOOELE, UTAH 84074

BID SET

PLUMBING PLAN

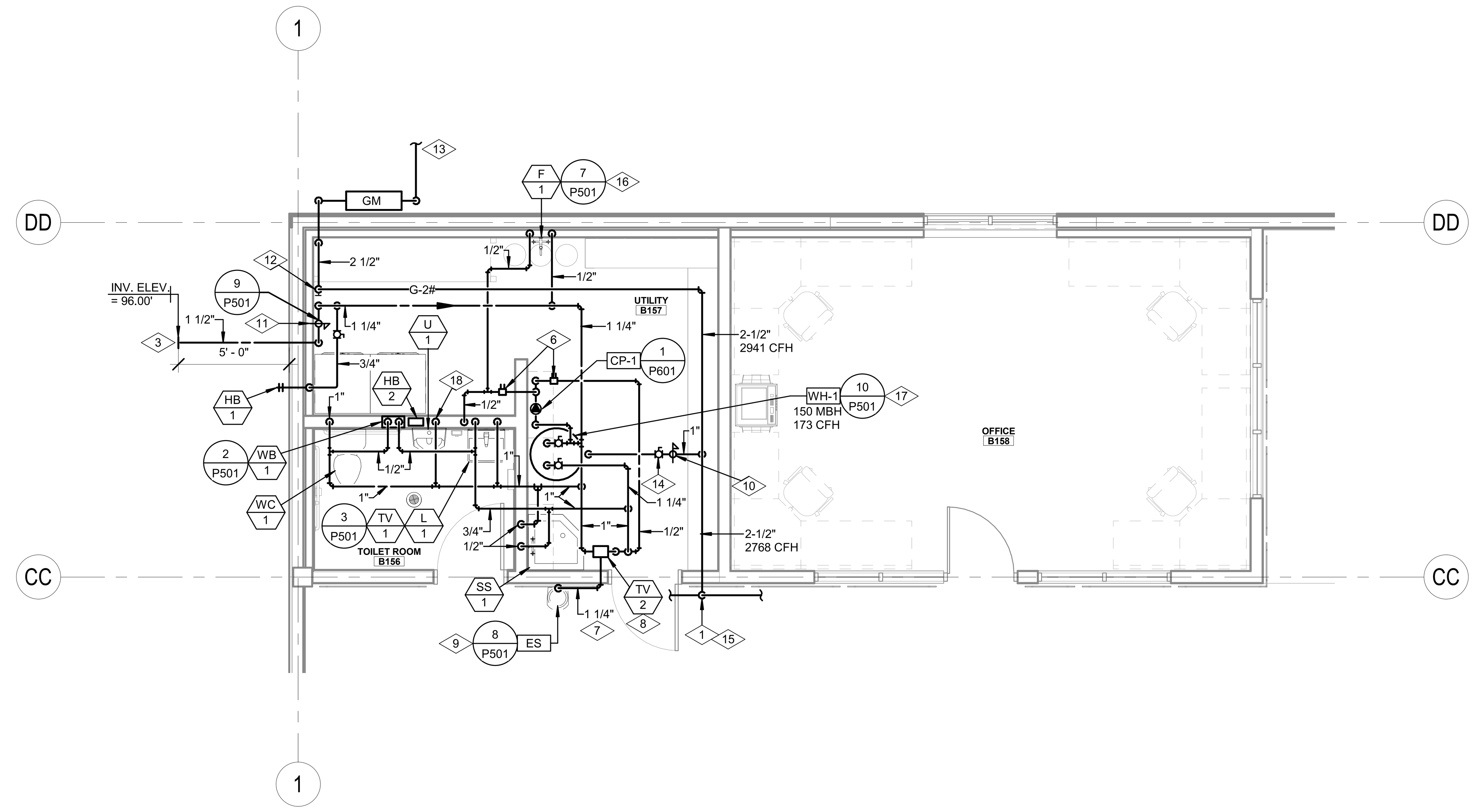
P113



ENLARGED PLUMBING PLAN

WASTE & VENT

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



ENLARGED PLUMBING PLAN

WATER SUPPLY & GAS

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

REFERENCE NOTES

1 FOR CONTINUATION OF PIPING SEE SHEET P113.

2 VENT THRU ROOF. (VTR) MAINTAIN A MINIMUM OF 15'-0" FROM ALL F.A. INTAKES. SEE DETAIL 5/P501.

3 PIPING TO TERMINATE 5'-0" BEYOND BUILDING LINE. DIVISION 22 CONTRACTOR TO MAKE FINAL CONNECTION TO SITE UTILITIES. COORDINATE WITH CIVIL DRAWINGS.

4 WALL CLEANOUT. SEE DETAIL 4/P501.

5 PIPE PUMPED CONDENSATE INDIRECT TO SERVICE SINK. MAINTAIN ELEVATION NEEDED FOR GRAVITY SLOPE BACK TO SERVICE SINK; COORDINATE HEIGHT WITH DOOR TRANSOM.

6 CIRCUIT SETTER; SET FOR 0.5 GPM.

7 1-1/4" TEMPERED WATER TO ES-1.

8 TEMPERING VALVE FOR EMERGENCY SHOWER. SET VALVE OUTLET FOR 75 DEGREES F.

9 EMERGENCY SHOWER AND EYEWASH; STAND MOUNTED, COORDINATE LOCATION OF FLOOR SINK IN FRONT OF SHOWER.

10 2LBS TO 4OZ GAS PRESSURE REGULATOR AND GAS SHUTOFF VALVE. SEE DETAIL 6/P501.

11 BUILDING WATER MAIN AND PRESSURE REDUCING VALVE STATION; SEE DETAIL 9/501.

12 LINE SIZED GAS SHUTOFF VALVE; LOCATE IN ACCESSIBLE LOCATION AND PROVIDE HARD LABEL THAT STATES "BUILDING GAS SHUTOFF VALVE".

13 GAS SERVICE AND METER FROM LOCAL GAS AUTHORITY; CONTRACTOR TO PICK UP LINE FROM METER INTO BUILDING. COORDINATE AVAILABLE GAS PRESSURE PRIOR TO COMMENCEMENT OF WORK.

14 PROVIDE LINE SIZED GAS SHUTOFF VALVE AND 2LBS TO 4 0Z GAS PRESSURE REGULATOR. VENT AS REQUIRED BY CODE. CONTRACTOR TO MATCH SIZE OF PIPE WITH CONNECTION SIZE OF EQUIPMENT DOWNSTREAM OF PRESSURE REGULATOR.

15 GAS LINE UP TO BOTTOM OF STRUCTURE. FIELD VERIFY LENGTHS AND ELEVATION.

16 WALL MOUNTED FAUCET; FOR CHEMICAL MIXING. SEE DETAIL 7/P501 FOR PIPING REQUIREMENTS.

17 1-1/2" CW AND HW CONNECTIONS TO WATER HEATER.

18 3/4" CW DOWN; PROVIDE (2) 3/4" BRANCHES, (1) TO U-1 AND (1) TO HB-2.

19 3/4" CONDENSATE DRAIN FROM HP-2; ROUTE AT 10" A.F.F AND INTO UTILITY ROOM ABOVE DOOR. SLOPE AS REQUIRED.

20 SEE SHEET P113 FOR CONTINUATION.

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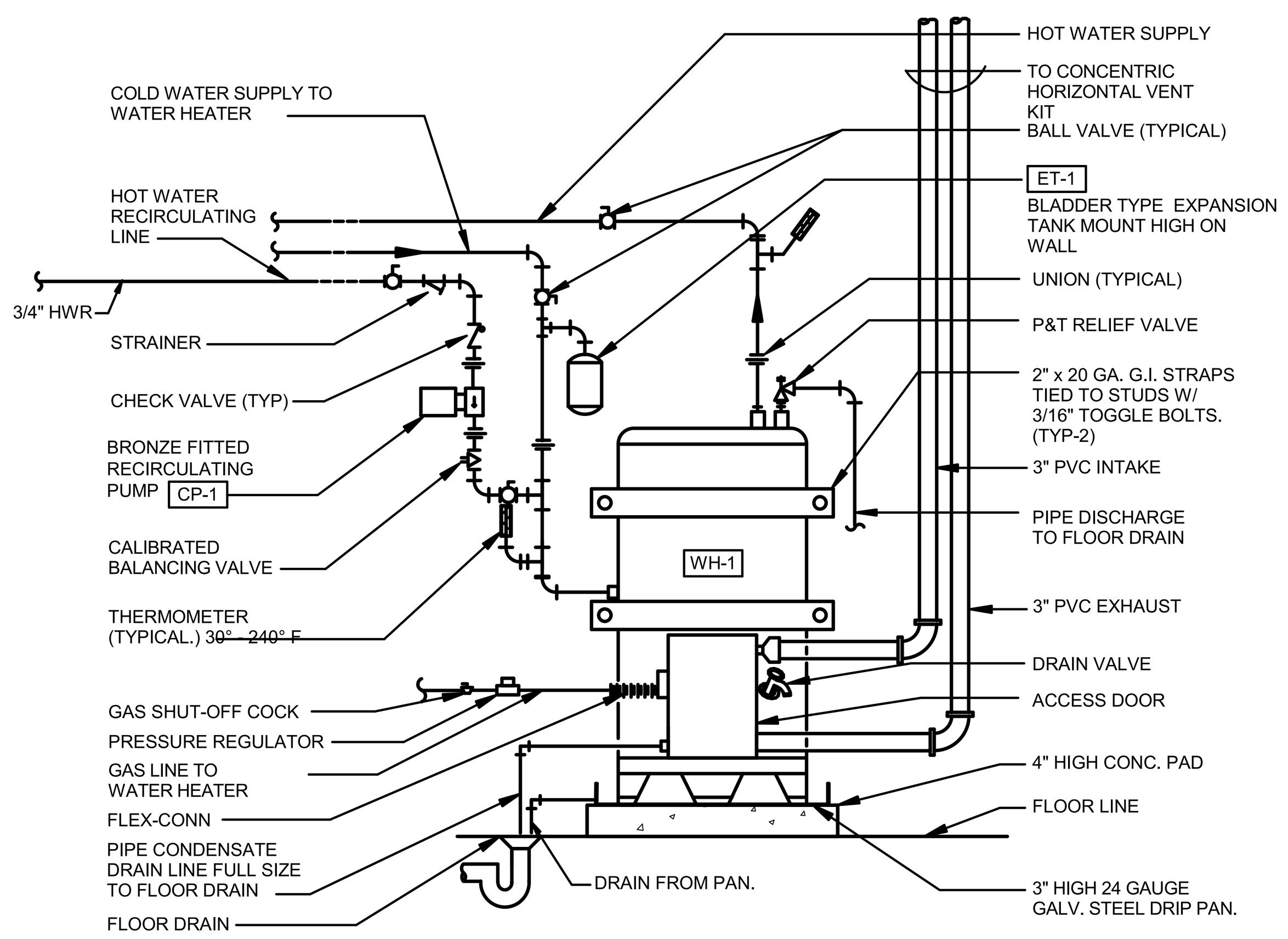
BID SET

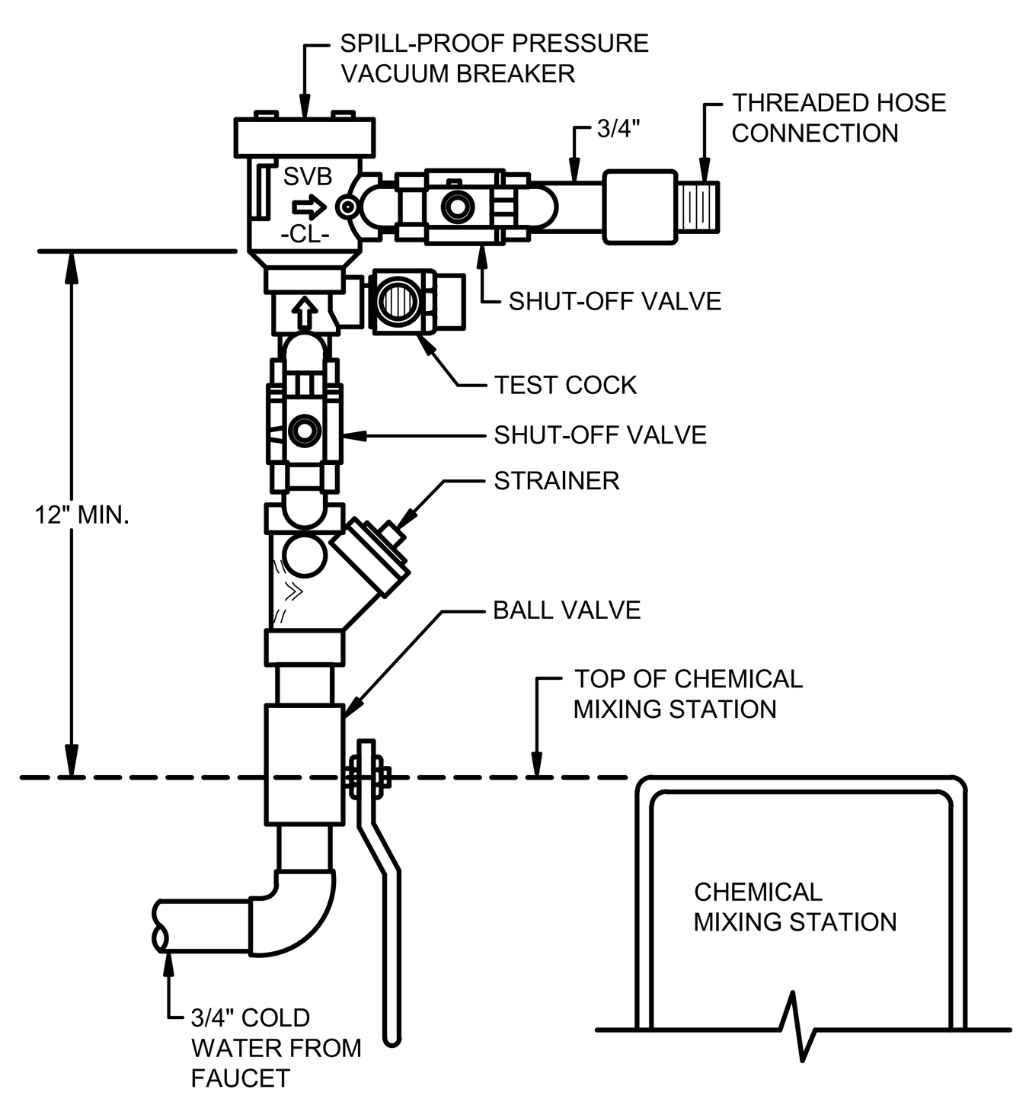
ENLARGED PLUMBING PLANS

P401



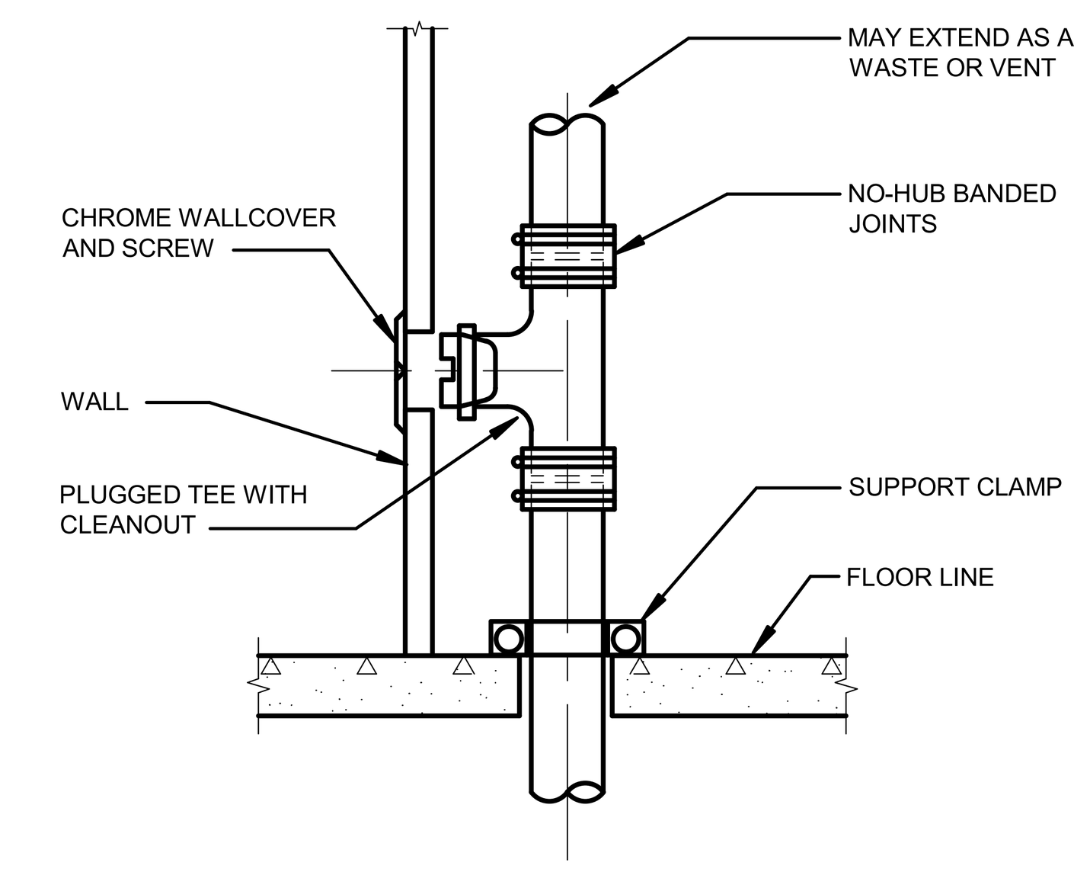
WATER HEATER PIPING DETAIL (10 / P501)

NOT TO SCALE (DOMESTIC WATER)



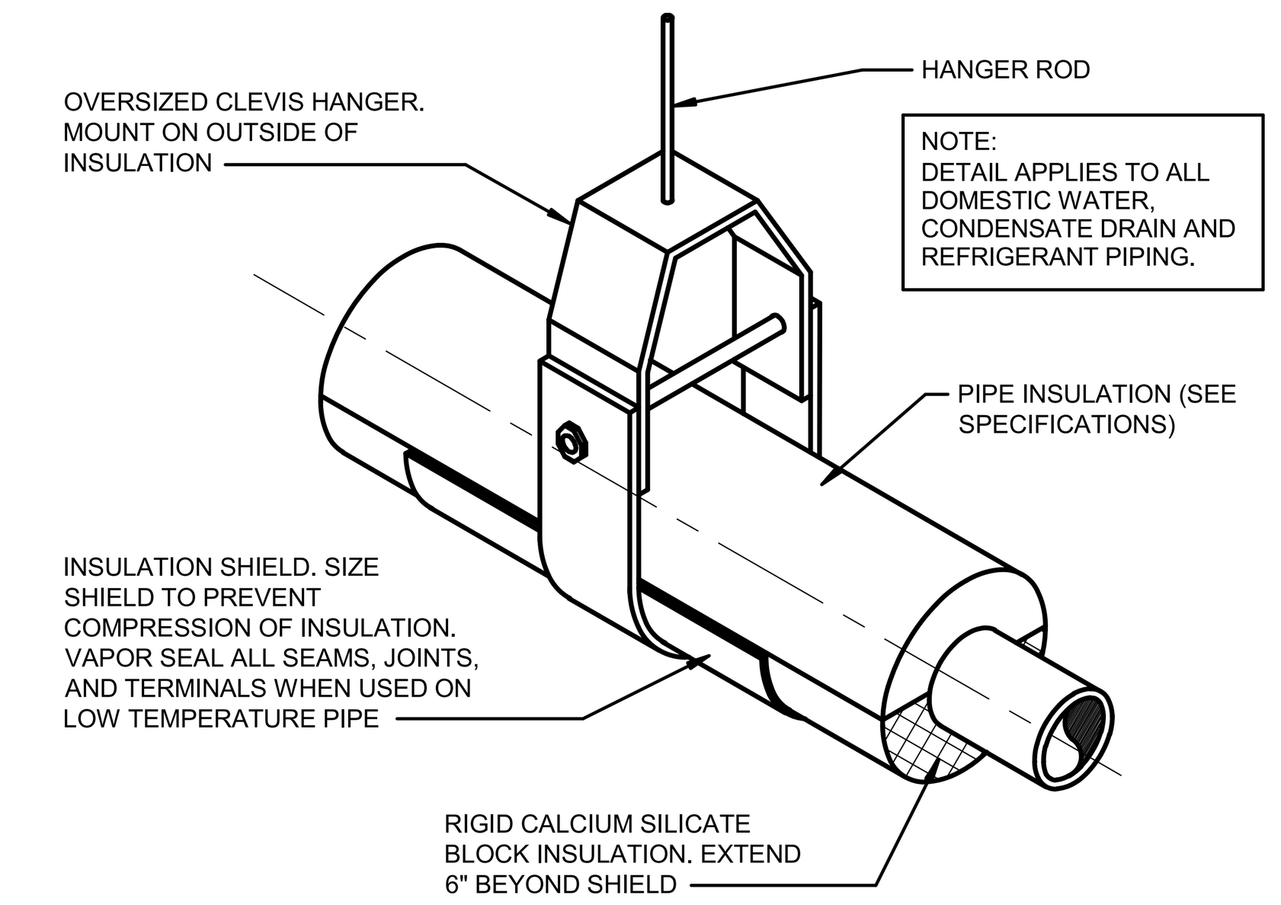
SPILL-PROOF VACUUM BREAKER AT UTILITY ROOM (7 / P501)

NOT TO SCALE



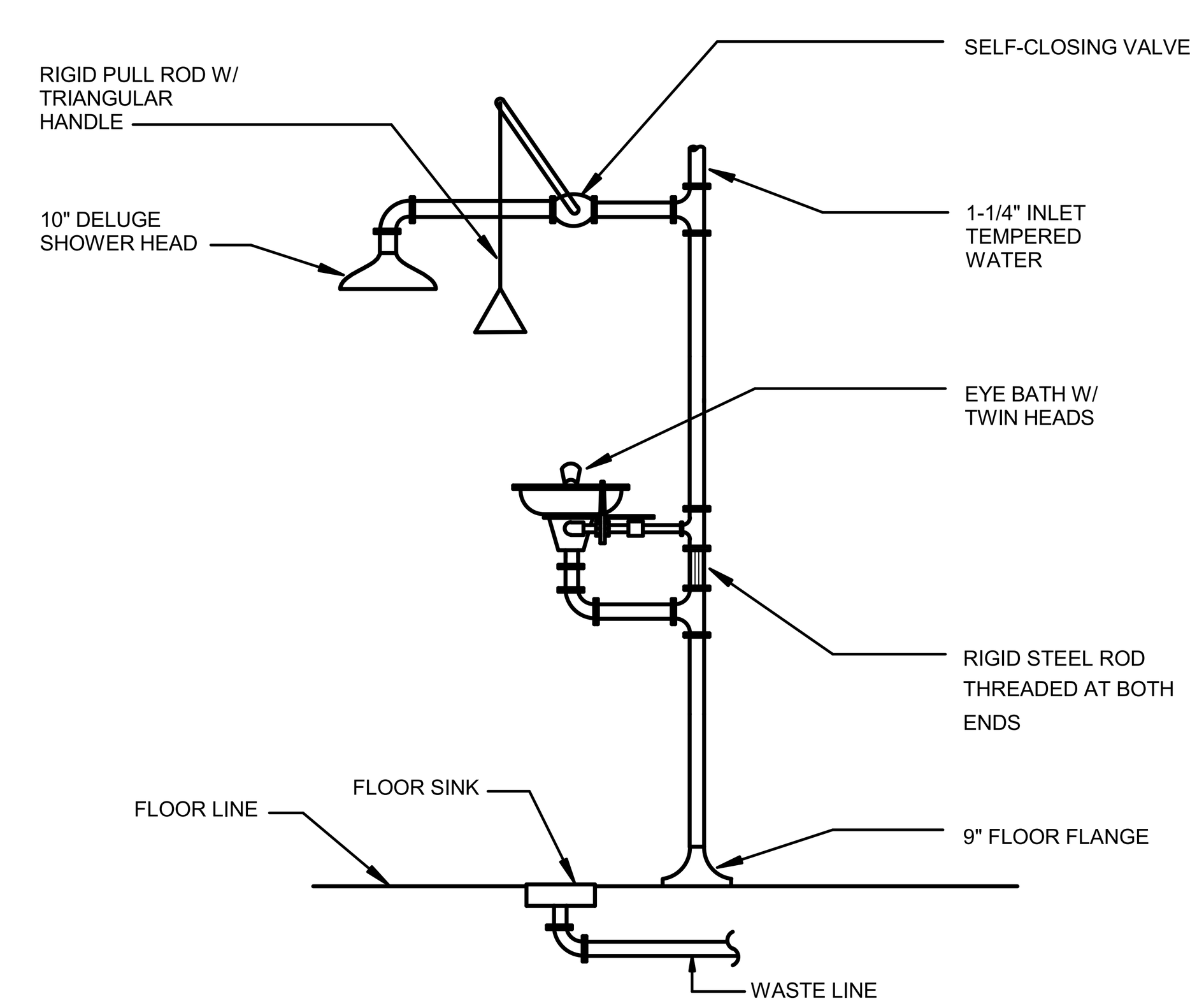
WALL CLEANOUT DETAIL (4 / P501)

NOT TO SCALE



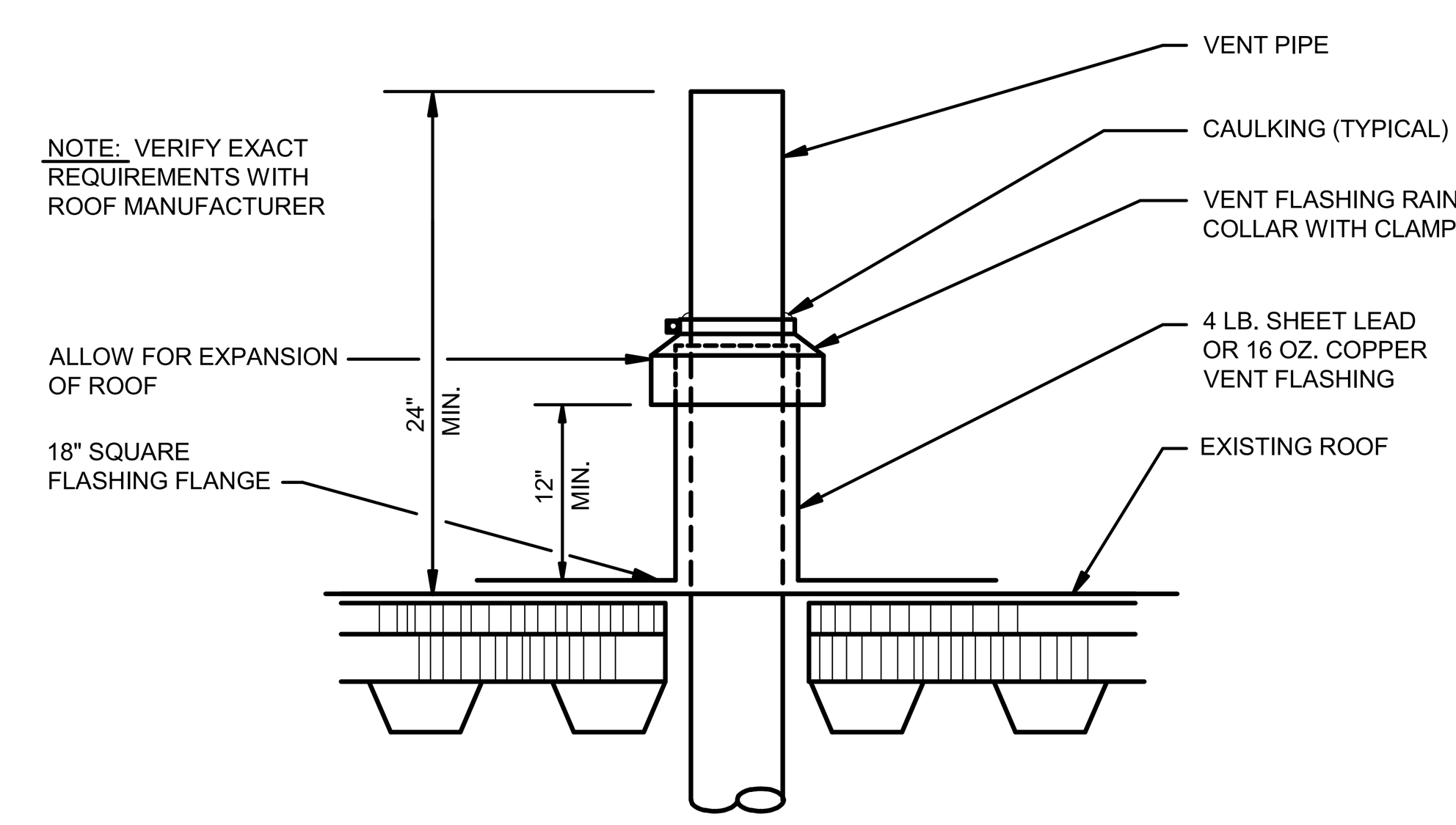
PIPE SUPPORT DETAIL (1 / P501)

NOT TO SCALE



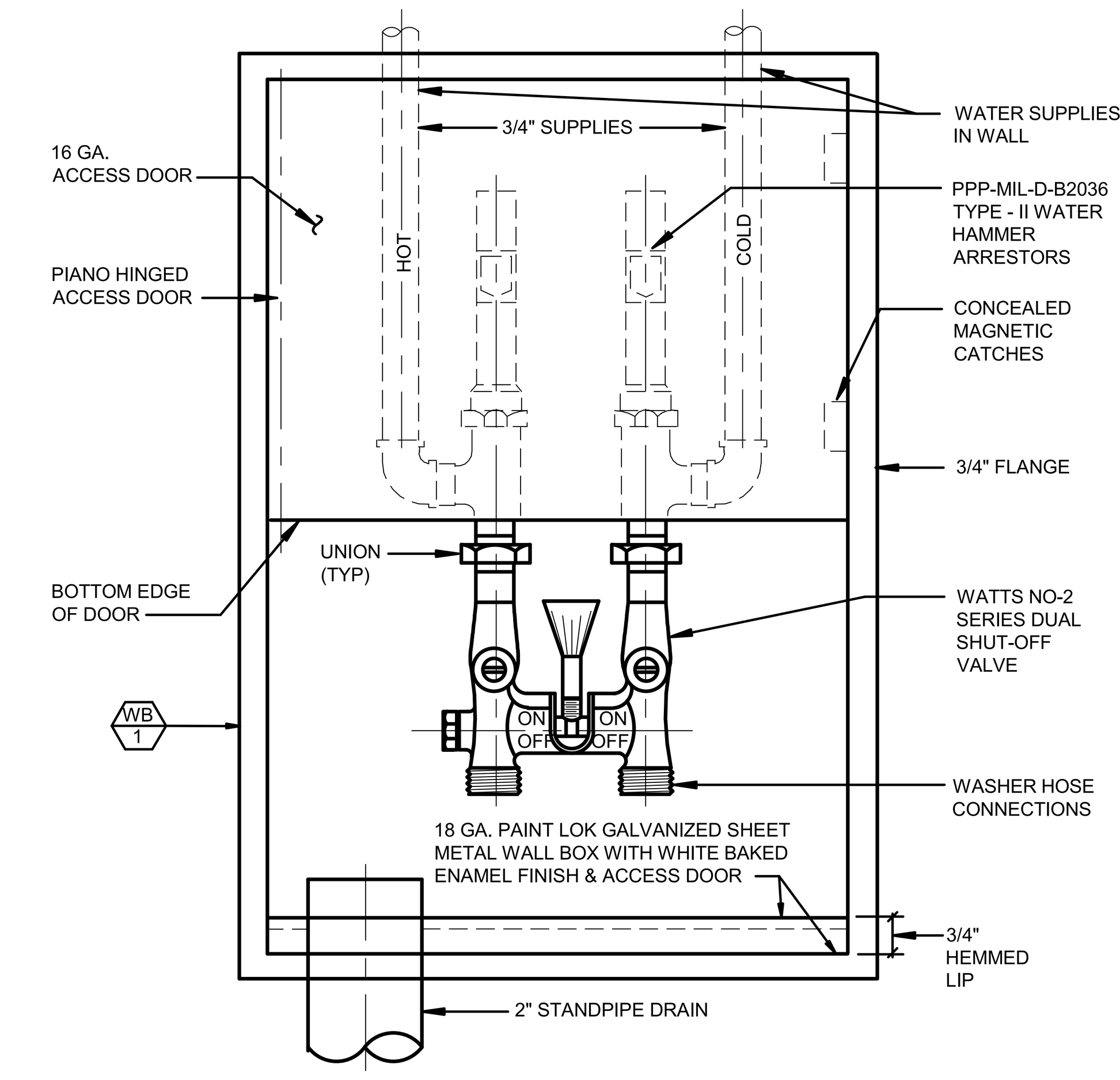
EMERGENCY SHOWER & EYEWASH DETAIL (8 / P501)

NOT TO SCALE



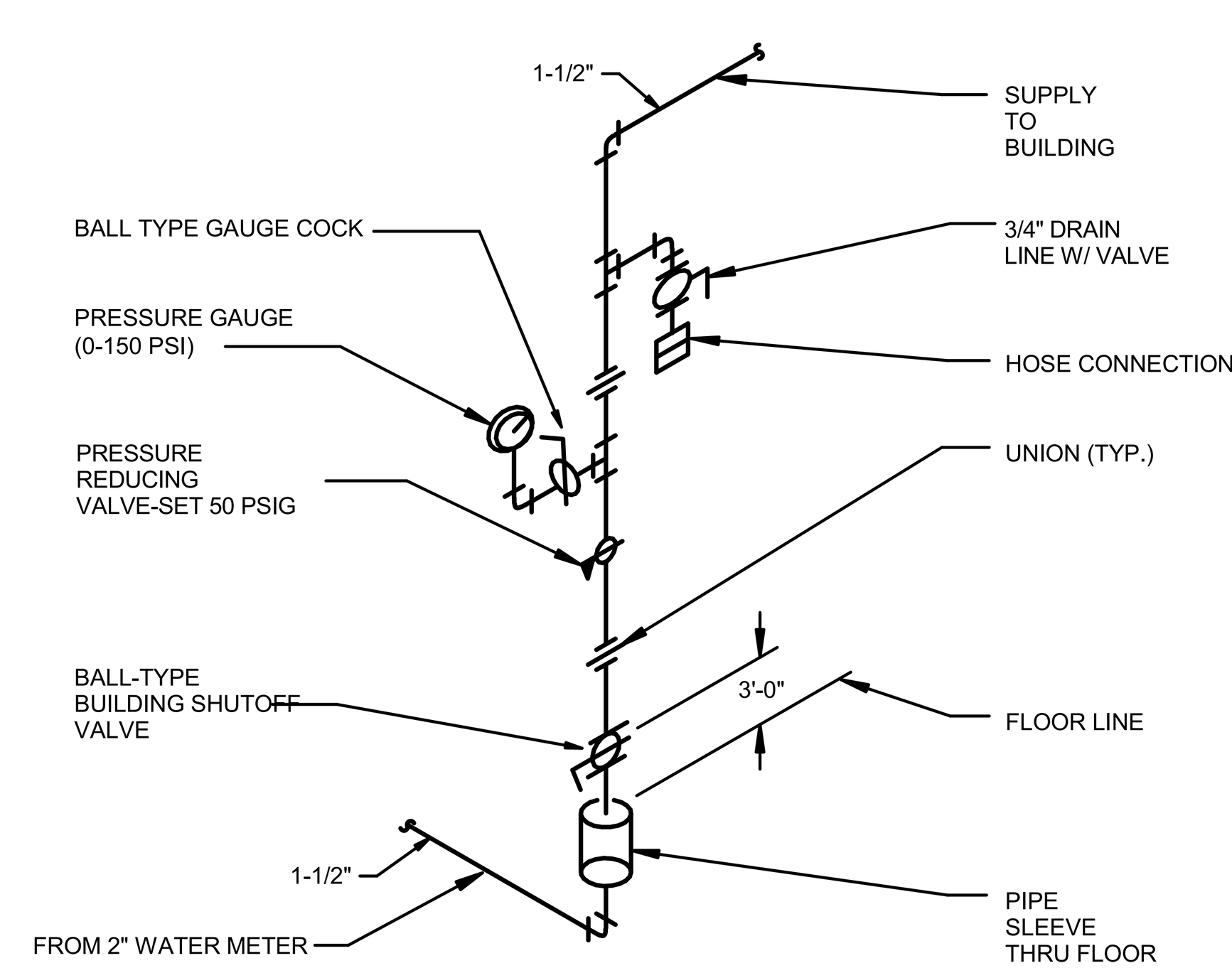
VENT THRU ROOF DETAIL (5 / P501)

NOT TO SCALE



WASHER BOX DETAIL (2 / P501)

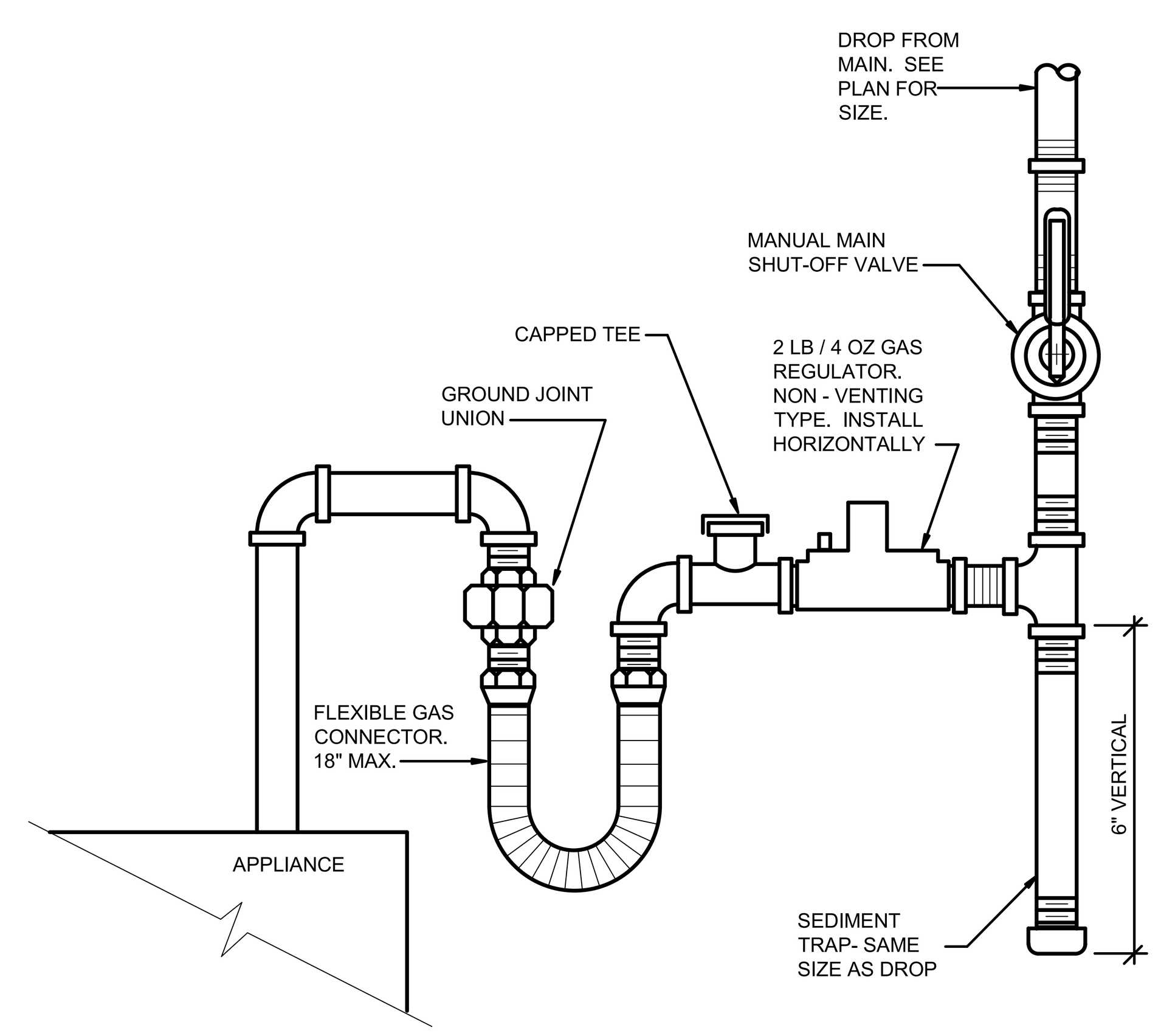
NOT TO SCALE



BUILDING WATER CONTROL VALVE (9 / P501)

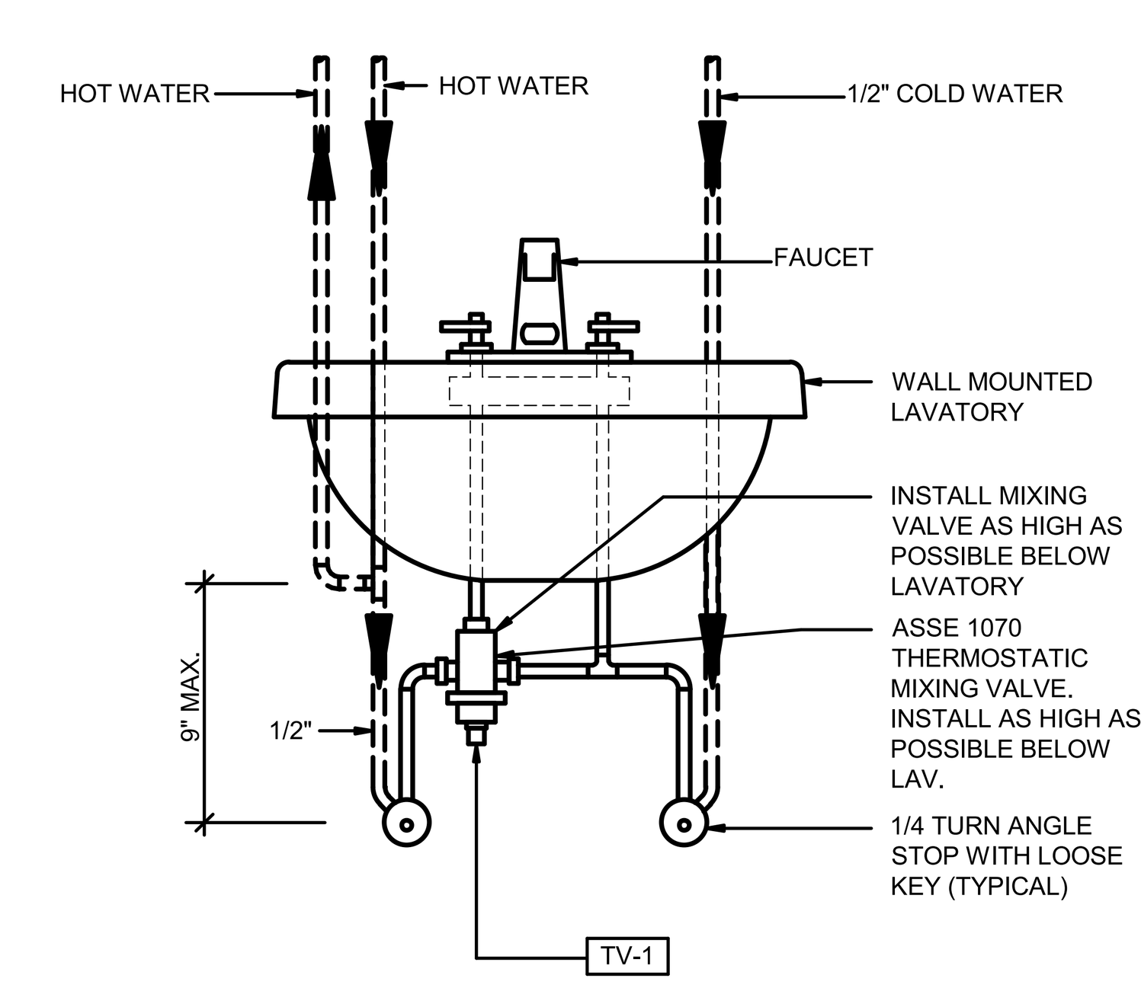
NOT TO SCALE

NOTE: WATER LINE FROM METER OVERSIZED FOR FUTURE EXPANSION-
METER SIZED FOR CURRENT LOAD.



GAS LINE CONNECTION DETAIL (6 / P501)

NOT TO SCALE



PUBLIC LAVATORY PIPING DETAIL (3 / P501)

NOT TO SCALE

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REV | DATE | DESCRIPTION

VCBO NUMBER:	21515
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TCSD WAREHOUSE REMODEL - BLDGS 649

TOOELE COUNTY SCHOOL DISTRICT
PROJECT ADDRESS: 180 GARNET ST. TOOELE, UTAH 84074

BID SET

PLUMBING DETAILS

P501

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PLUMBING EQUIPMENT SCHEDULES

WH-1 WATER HEATER: 120 DEG. F., GAS FIRED, WITH AGA APPROVED BURNER. 150,000 BTUH INPUT, 145,500 BTUH OUTPUT AT 97% EFFICIENCY. 176 GPH RECOVERY THRU 100 DEG. F. TEMP. RISE, 3" PVC INTAKE AND EXHAUST PIPES. WITH HORIZONTAL CONCENTRIC TERMINATION KIT, 100 GALLON GLASS LINED STORAGE TANK WITH P & T RELIEF VALVE, MAGNESIUM ANODES, ASME RATED CONSTRUCTION, INSULATED JACKET CSD-1, COMPLETE WITH ALL CONTROLS FOR AUTOMATIC OPERATION. 120V/60HZ @ 15 AMP SUPPLY.
MANUFACTURER: BRADFORD WHITE
MODEL: EF-100T-150E
NOMINAL SIZE: 28-1/4" DIA. X 74-1/4" H.
WEIGHT: 900 LBS.

EX-1 EXPANSION TANK: BLADDER TYPE, DOMESTIC HOT WATER, 6.4 GAL. TOTAL VOLUME, 3.2 GALLONS ACCEPTANCE VOLUME. FACTORY AIR CHARGE 55 PSI, 12" DIA. x 15-5/8" HIGH. COMPLETE WITH STEEL SHELL AND HEAVY DUTY BUTYL DIAPHRAGM.
MANUFACTURER: AMTROL
MODEL: ST-12-C

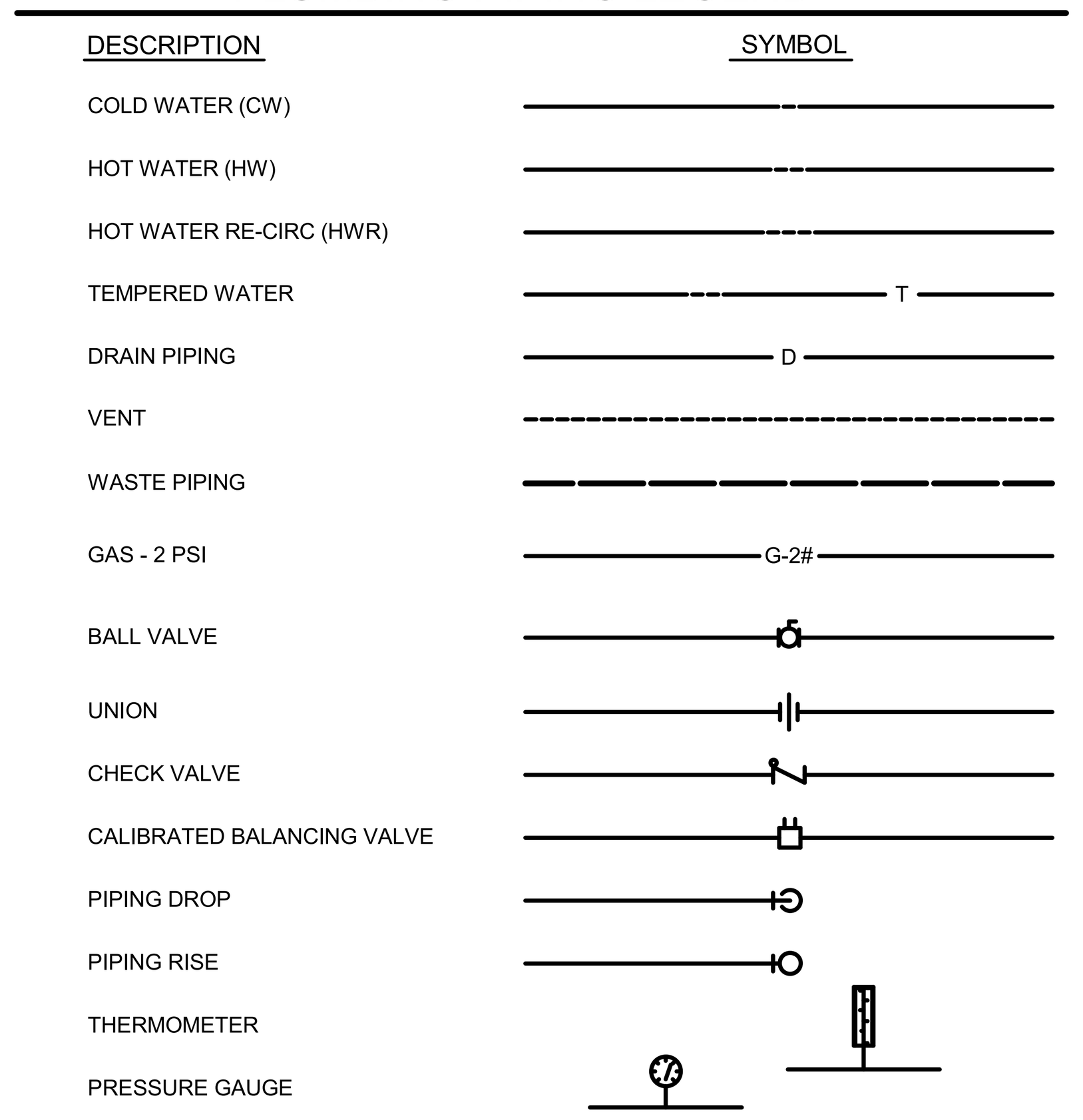
CP-1 PUMP: WET ROTOR, IN-LINE RECIRCULATING, 120°F. WATER, 1.0 GPM AT 10 FT. HEAD, 55 WATTS, 120/1/60, 0.48 FLA, 2800 RPM, 3/4" CONNECTIONS. ALL BRONZE CONSTRUCTION.
MANUFACTURER: BELL & GOSSETT
MODEL: NBF-12F/LW

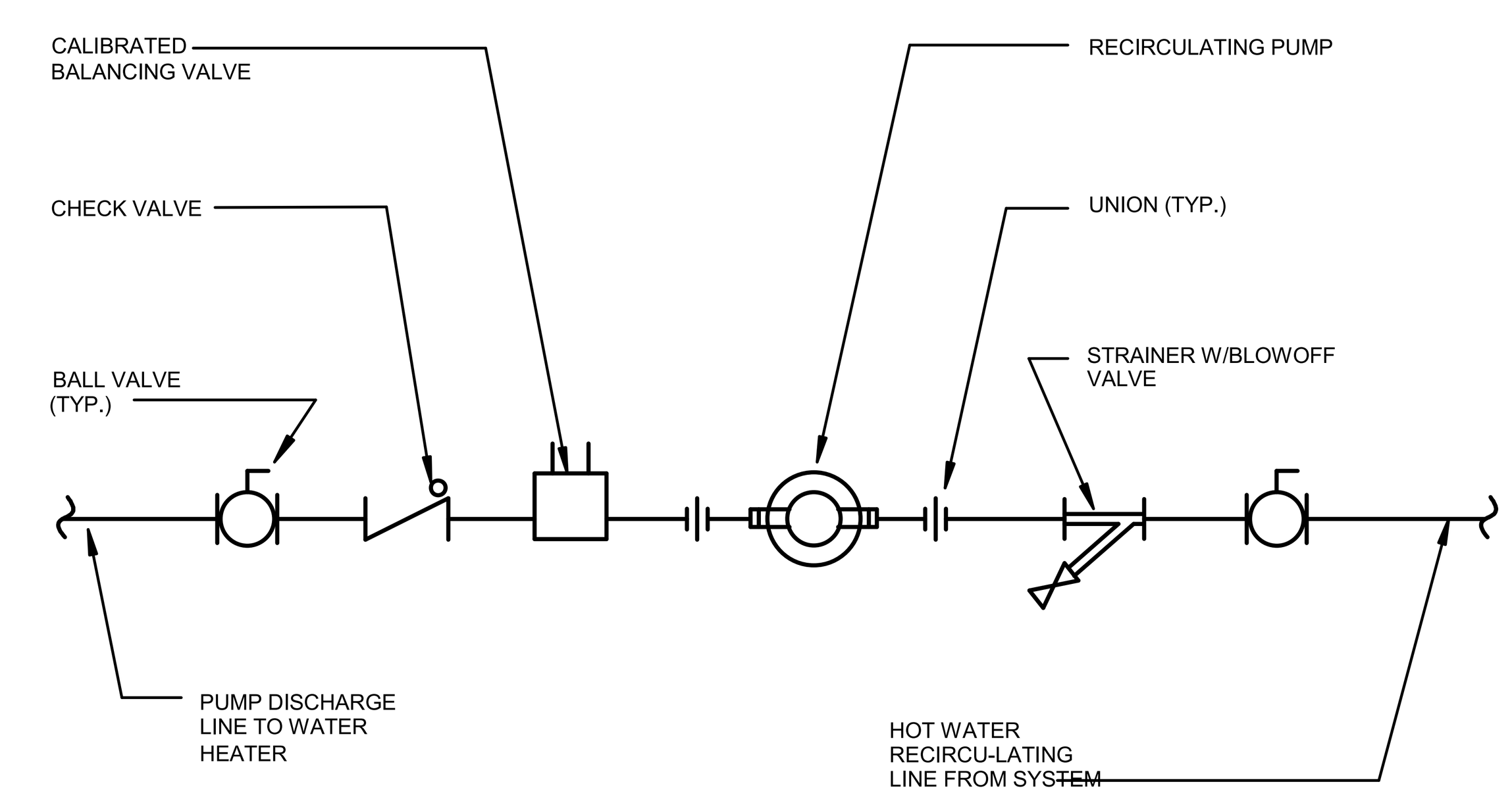
CP-2 CONDENSATE PUMP: PROVIDED BY MECHANICAL CONTRACTOR, INSTALLED BY PLUMBING CONTRACTOR; SERVES HP-2.
LITTLE GIANT MODEL VCMX NXTGEN # 554530; 1/30 HP, 120V/60HZ, 1.5 AMPS, 93 WATTS;
3/8" DISCHARGE TO 3/4" CONDENSATE DRAIN LINE; PROVIDE OVERFLOW PROTECTION SWITCH;
RATED FOR MINIMUM OF 10' HEAD LIFT; 5 LBS, SUPPORT WITH UNISTRUT AT APPROXIMATELY 10'-0" A.F.F. AS SHOWN ON PLANS. COORDINATE LOCATION OF PUMP WITH ELECTRICAL FOR OUTLET LOCATION.

PLUMBING FIXTURE SCHEDULE

SYMBOL	FIXTURE	WASTE	VENT	C.W.	H.W.	TEMPERED WATER	NOTES
WC 1	WATER CLOSET	4"	2"	1"	--	--	FLOOR MOUNTED - FLUSH VALVE ADA SENSOR OPERATED
U 1	URINAL (ADA)	2"	2"	3/4"	--	--	WALL MOUNTED - AUTO FLUSH
L 1	LAVATORY	1 1/2"	1 1/2"	--	--	1/2"	WALL HUNG - ADA
F 1	FAUCET	--	--	1/2"	1/2"	--	WALL MOUNTED- CHEM MIX W/HOSE END
SS 1	SERVICE SINK	3"	2"	3/4"	3/4"	--	CORNER FLOOR TYPE
HB 1	HOSE BIBB	--	--	3/4"	--	--	NON-FREEZE TYPE
HB 2	HOSE BIBB	--	--	3/4"	--	--	INTERIOR WALL BOX WITH VACUUM BREAKER
WB 1	WASHER BOX	2"	-	1/2"	1/2"	--	SEE DETAIL 7/P5.3
FD 1	FLOOR DRAIN	2"	2"	--	--	--	WITH DEEP SEAL P-TRAP
FS 1	FLOOR SINK	4"	2"	--	--	--	WITH DEEP SEAL P-TRAP INSTALL FLUSH WITH FLOOR
FS 2	FLOOR SINK	2"	-	--	--	--	WITH DEEP SEAL P-TRAP INSTALL FLUSH WITH FLOOR
ES 1	EMERGENCY SHOWER AND EYEWASH	--	--	--	--		BRADLEY S19-310 BF COMBINATION EMERGENCY SHOWER/EYEWASH, BARRIER FREE, 10" DIA. SHOWER HEAD, 10" DIA. EYEWASH BOWL, 1" STAY OPEN BALL VALVE WITH STAINLESS STEEL SHOWER PULL ROD, 1/2" STAY OPEN BALL VALVE WITH PVC PUSH HANDLE.
TV 1	TEMPERING VALVE	--	--	1/2"	1/2"	--	UNDER LAV MOUNTED ASSE 1070
TV 2	TEMPERING VALVE FOR ES-1	--	--	1"	1"	1-1/4"	BRADLEY S19-2200 EMERGENCY FIXTURE THERMOSTATIC MIXING VALVE, ADJUSTABLE SET POINT, BUILT-IN CW BYPASS, DIAL THERMOMETER, POSITIVE SHUT-OFF OF HOT SUPPLY WHEN COLD SUPPLY IS LOST. 1-1/4" OUTLET

PLUMBING PIPING LEGEND





HOT WATER RECIRCULATING PUMP PIPING CP-1

1 / P601

NOT TO SCALE

PROFESSIONAL ENGINEER #334524-2202 JAMES AUSTIN BERRETT 8-16-2021 LICENSED UTAH

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TCSD WAREHOUSE REMODEL - BLDGS 649

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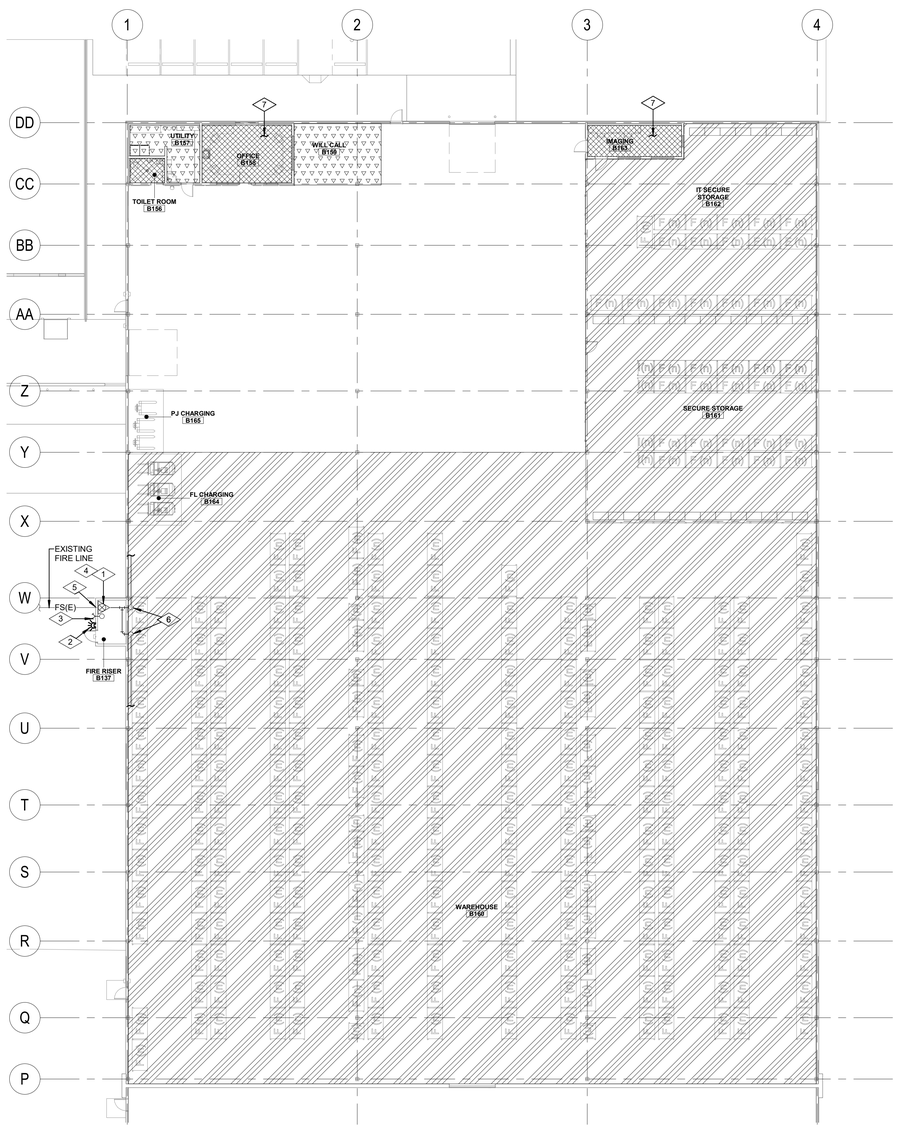
PLUMBING SCHEDULES

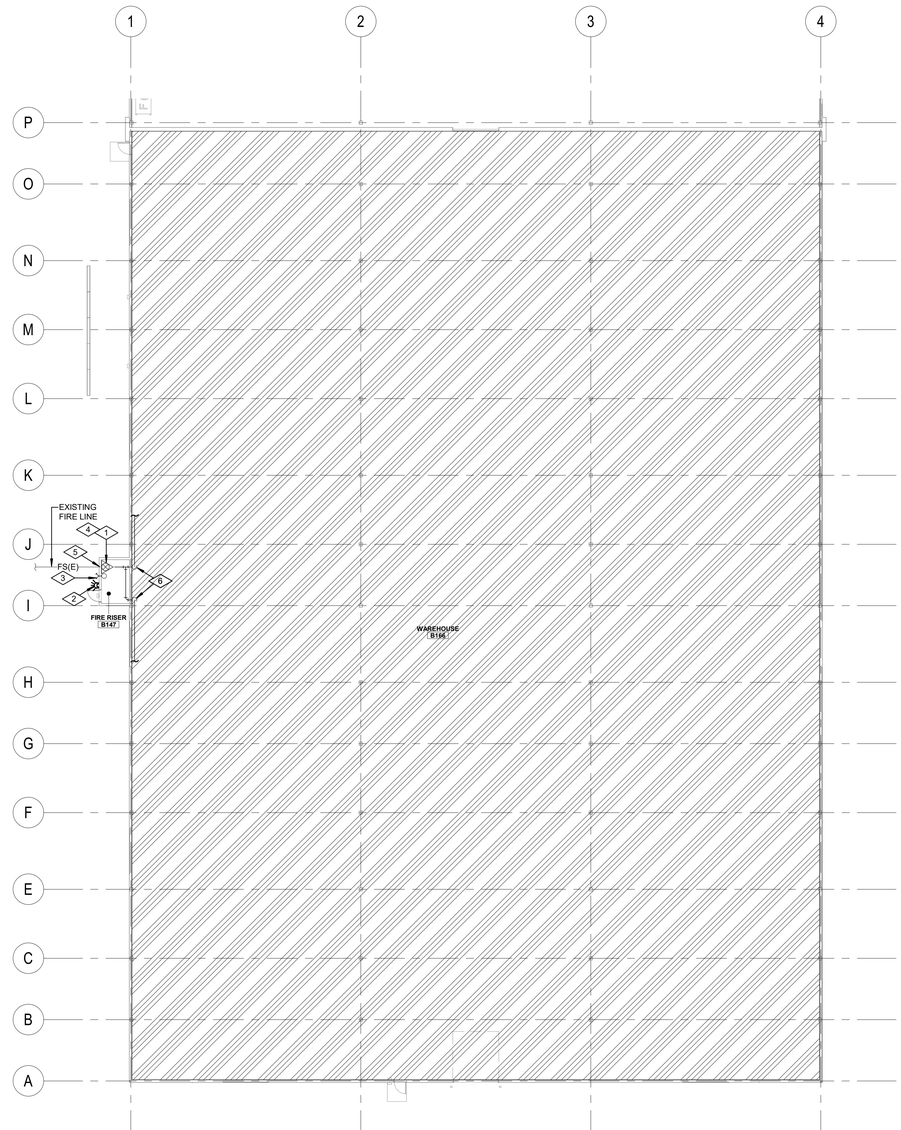


Level 1 FIRE PROTECTION PLAN - 649A

NORTH

0 8' - 0" 16' - 0" 32' - 0"

SCALE: 1/16" = 1'-0"



Level 1 FIRE PROTECTION PLAN - 649B

NORTH

0 8' - 0" 16' - 0" 32' - 0"

SCALE: 1/16" = 1'-0"

REFERENCE NOTES

1. FIRE SPRINKLER RISER. SEE DETAIL 4/FP501. CONTRACTOR TO REMOVE EXISTING RISER DOWN TO FLOOR FLANGE. RE-CONNECT NEW RISER AT THIS LOCATION.
2. SPRINKLER SYSTEM ALARM BELL MOUNTED HIGH ON OUTSIDE WALL.
3. WALL MOUNTED SIAMESE FIRE DEPARTMENT CONNECTION.
4. PROVIDE BALL DRIP WITH INSPECTION BOX AT BASE OF FIRE DEPARTMENT CONNECTION.
5. EXISTING FIRE LINE STUBBED UP AT THIS APPROXIMATE LOCATION. FIELD VERIFY LOCATION AND SIZE AND EXTEND INTO SPACE AT THIS LOCATION. CONNECT TO PIPING BY SITE UTILITY CONTRACTOR. FIELD VERIFY EXISTING INVERT ELEVATION.
6. (2) RISERS HIGH IN RISER ROOM; THRU EXISTING WALL AND THEN HIGH TO STRUCTURE.
7. WOOD CONSTRUCTION - PROVIDE HEADS ABOVE CEILING, ORDINARY HAZARD GROUP 1, OR AS REQUIRED BY CODE.

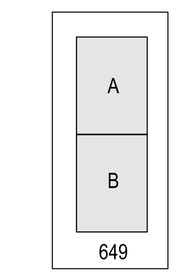
FIRE PROTECTION LEGEND

- HIGH RACK/ HIGH PILE STORAGE AND PRODUCTION AREA. EXPOSED WOOD STRUCTURE. 26' TO DECK. BRASS PENDANT ESFR HEADS ON EXPOSED PIPING (K-FACTOR = 17).
- LIGHT HAZARD LAY-IN OR GYP. BOARD OR PLASTER CEILING, CONCEALED HEADS WITH BRIGHT WHITE COVERS. UPRIGHT BRASS HEADS ON EXPOSED PIPING FOR STRUCTURE ABOVE.
- ORDINARY HAZARD, GROUP 1 EXPOSED STRUCTURE. UPRIGHT BRASS HEADS ON EXPOSED PIPING.
- NO MARK — ORDINARY HAZARD GROUP 2 EXPOSED STRUCTURE. UPRIGHT BRASS HEADS ON EXPOSED PIPING

GENERAL DEMOLITION NOTES:

1. EXISTING FIRE RISERS TO BE DEMOLISHED DOWN TO EXISTING FLANGE AT SLAB IN EXISTING FIRE RISER ROOMS.
2. ALL EXISTING RISER SYSTEMS, ALL ASSOCIATES ITEMS, ALARMS AND CONTROLS TO BE REMOVED.
3. REMOVE ALL EXISTING AIR COMPRESSORS.
4. REMOVE ALL EXISTING PIPING, FIRE HEADS, HANGARS, SUPPORTS AND BRACING COMPLETE.

KEY PLAN



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REV	DATE	DESCRIPTION

VCBO NUMBER:	21515
CLIENT NUMBER:	20385
DATE:	2021-08-18

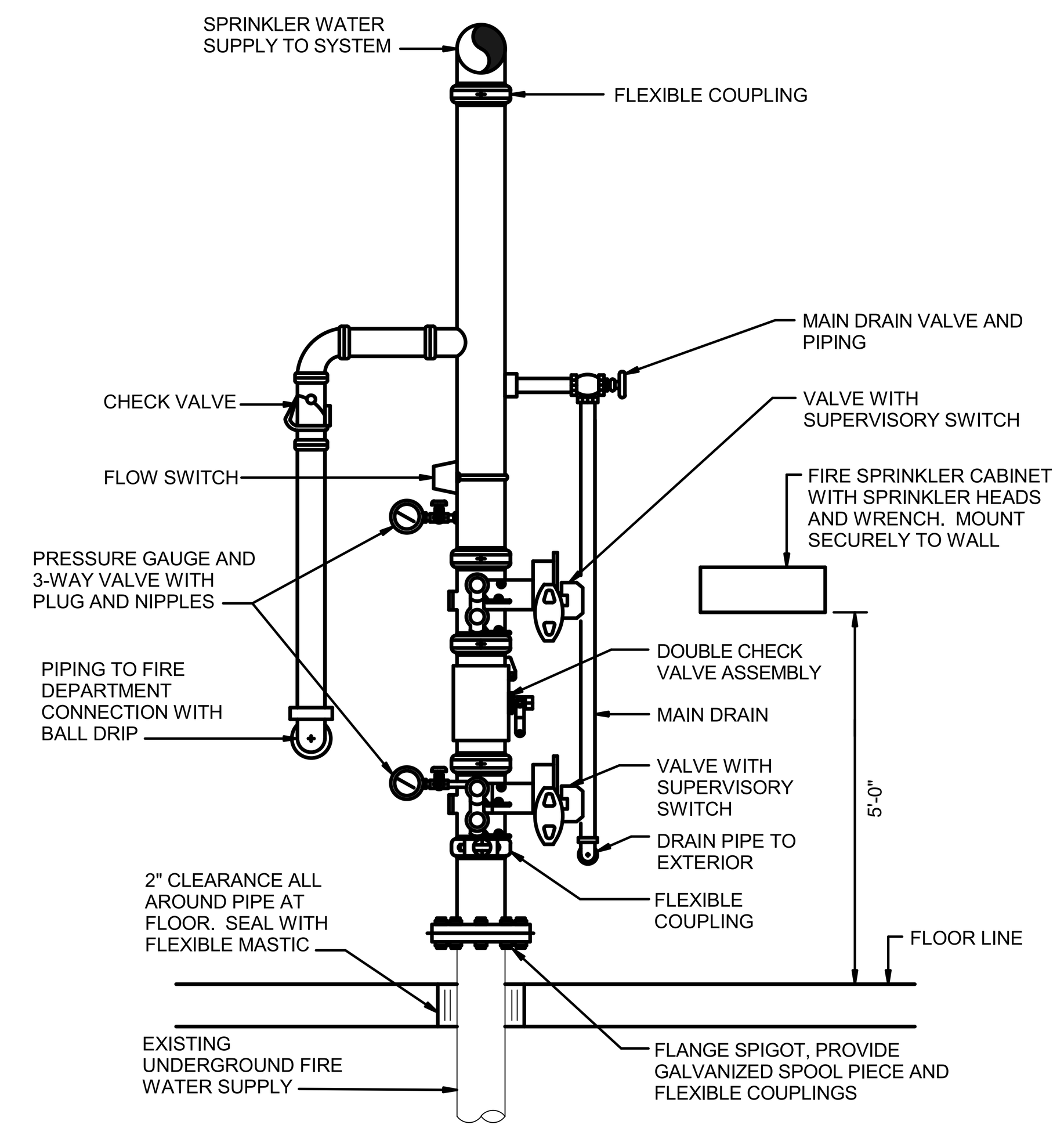
TCSD WAREHOUSE REMODEL - BLDGS 649

TOOELE COUNTY SCHOOL DISTRICT
PROJECT ADDRESS: 180 GARNET ST. TOOELE, UTAH 84074

BID SET

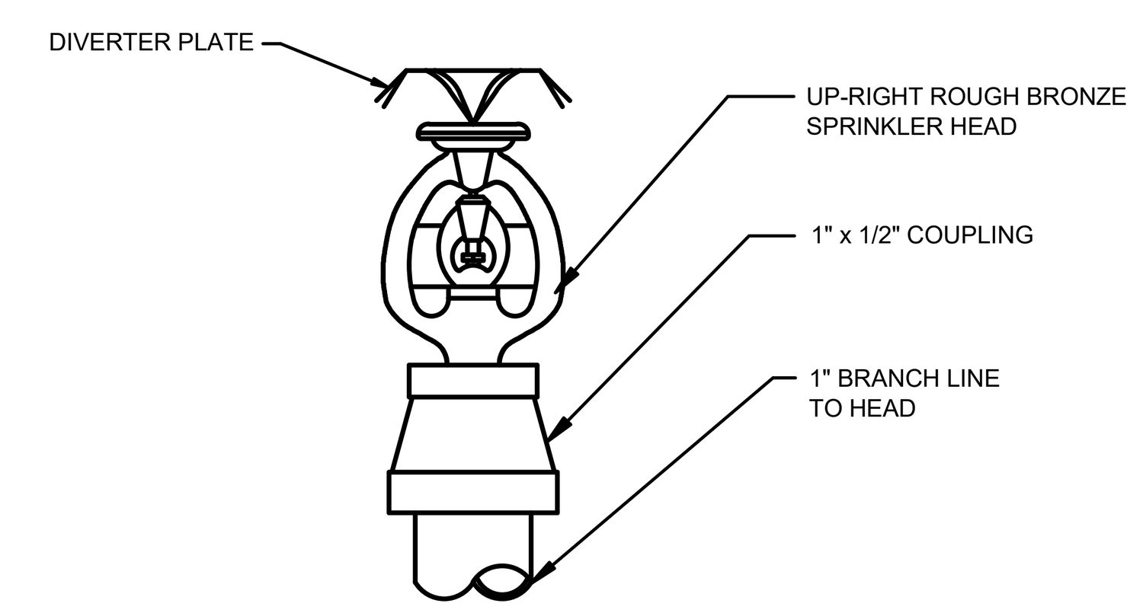
FIRE PROTECTION PLAN

FP113



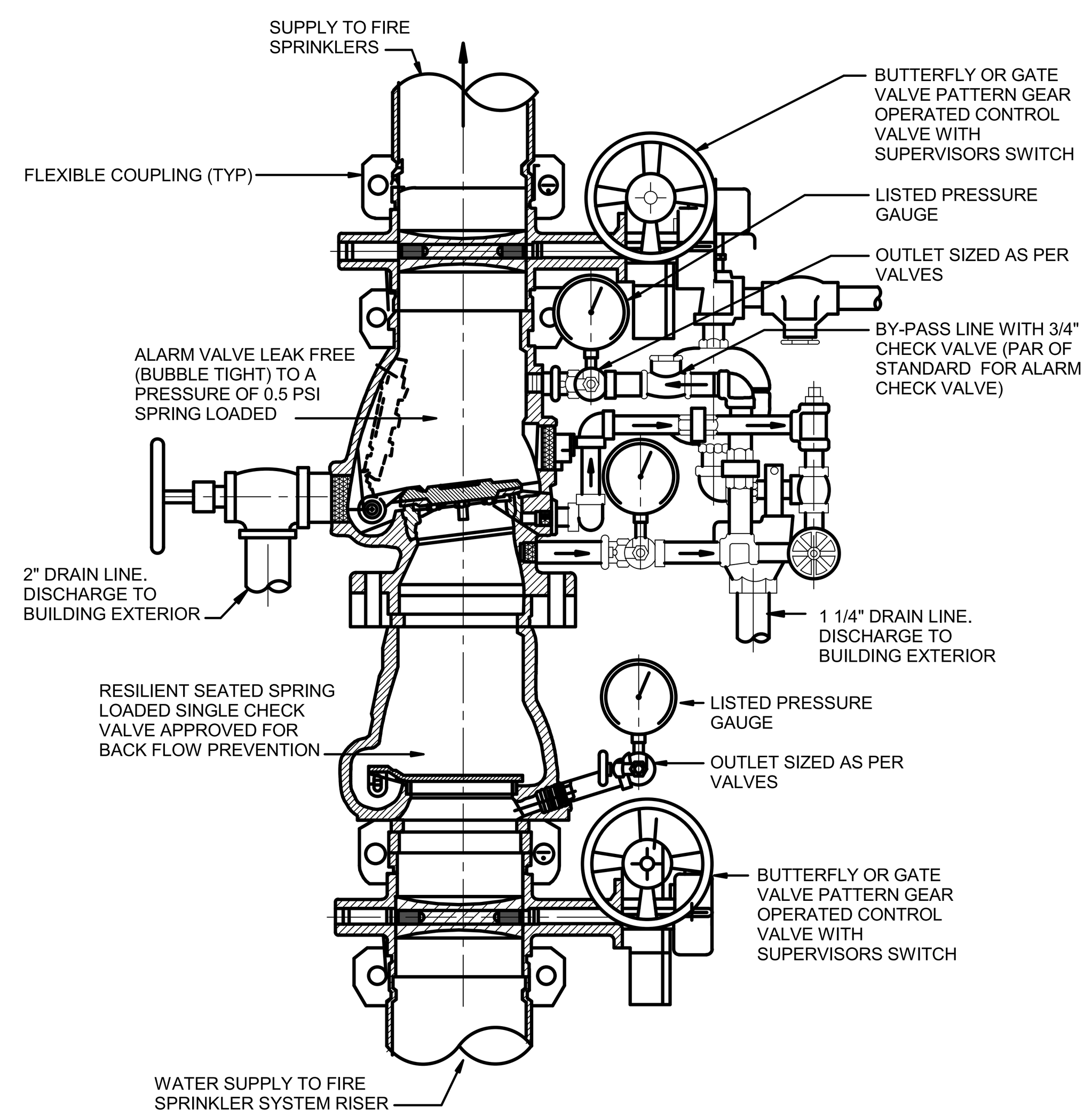
FIRE SPRINKLER RISER DETAIL (4 / FP501)

NOT TO SCALE (2 RISERS REQUIRED)



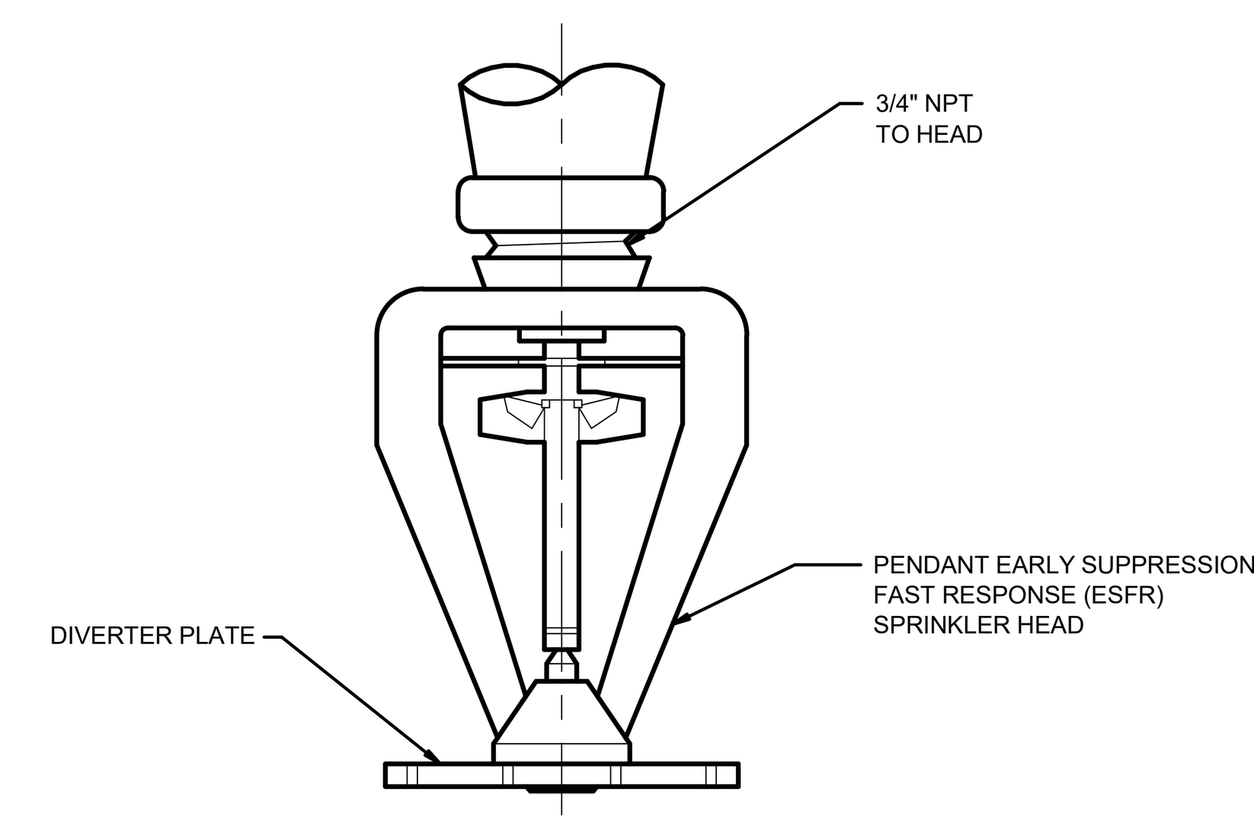
UPRIGHT ROUGH BRONZE OR CHROME SPRINKLER HEAD DETAIL (1 / FP501)

NOT TO SCALE



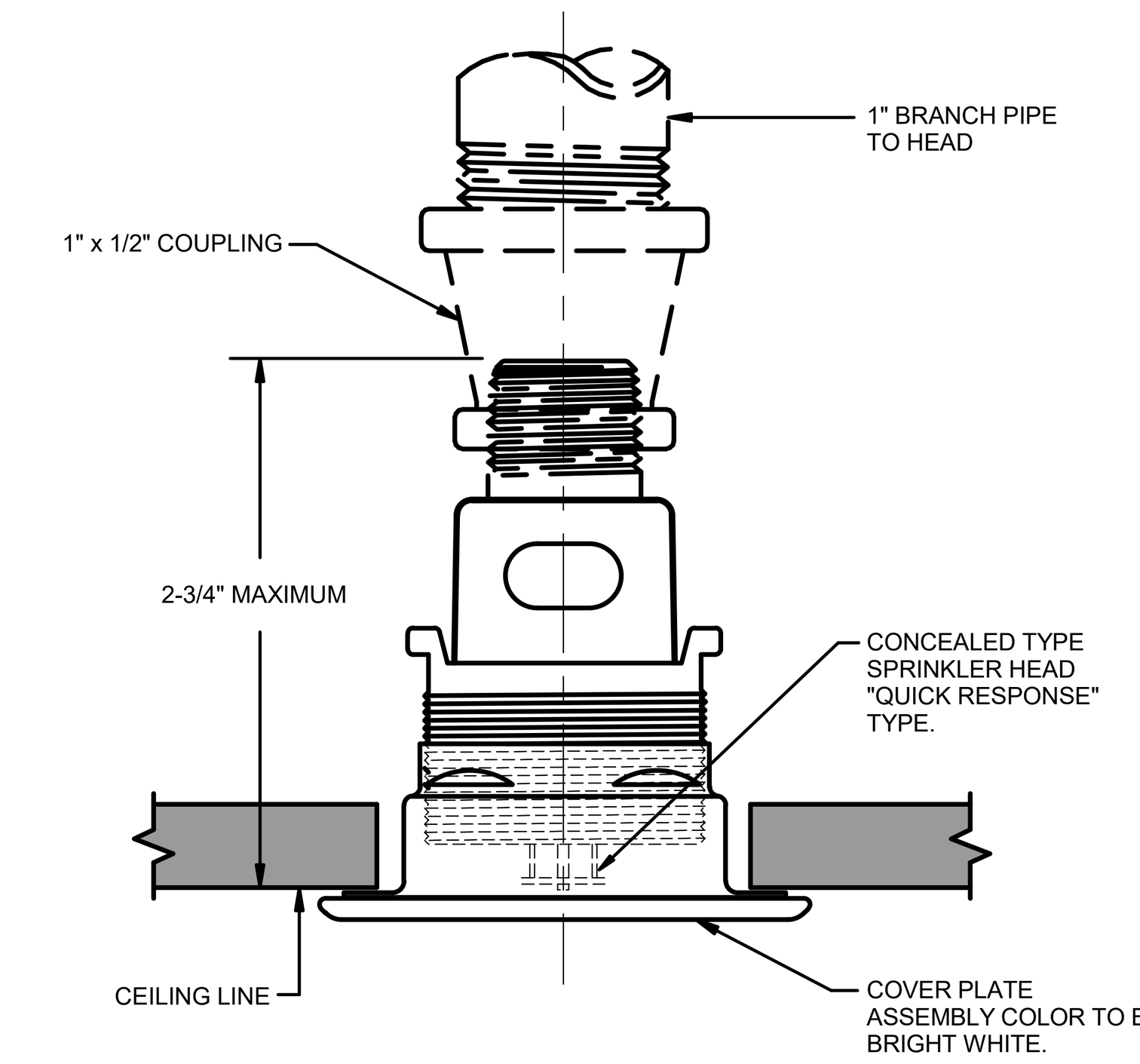
DOUBLE CHECK VALVE DETAIL (5 / FP501)

NOT TO SCALE



BRASS PENDANT ESFR HEAD DETAIL (2 / FP501)

NOT TO SCALE



CONCEALED SPRINKLER HEAD DETAIL (3 / FP501)

NOT TO SCALE

GENERAL FIRE PROTECTION NOTES

1. THE FIRE SPRINKLER CONTRACTOR SHALL COORDINATE HIS WORK WITH THE ELECTRICAL, SHEET METAL, PLUMBING, AND CEILING CONTRACTORS TO AVOID ANY CONFLICTS IN PIPE ROUTING OR HEAD LOCATIONS.
2. RUN SPRINKLING PIPING AS HIGH AS POSSIBLE IN JOIST SPACE.
3. FIRE SPRINKLER PLANS SHALL BE APPROVED BY ALL GOVERNING AGENCIES PRIOR TO SUBMITTING PLANS TO THE ARCHITECT.
4. THE FIRE PROTECTION CONTRACTOR SHALL PROVIDE COMPLETE FIRE SPRINKLER SYSTEMS, INCLUDING ALL ITEMS AS REQUIRED OR RECOMMENDED BY ALL GOVERNING AGENCIES.
5. FIRE SPRINKLER SYSTEM SHALL COMPLY WITH N.F.P.A. 13, AND ALL GOVERNING AGENCIES.
6. PIPE SLEEVES THROUGH FIRE-RATED WALLS, PARTITIONS, AND CEILINGS SHALL BE OF FIRE RATED CONSTRUCTION. SPACE BETWEEN PIPE AND SLEEVE SHALL BE PACKED WITH FIREPROOF MATERIAL, U.L. LISTED. (FIRE SHIELDS, INC. MODEL DFB-CS)
7. FIRE SPRINKLER HEADS IN INDIVIDUAL ROOMS TO BE RUN IN STRAIGHT LINES AND COORDINATED WITH CEILING AND LIGHTS.
8. FIRE SPRINKLER CONTRACTOR SHALL COORDINATE HIS LOCATION OF PIPING VERY CAREFULLY WITH THE ARCHITECTURAL AND STRUCTURAL PLANS AND AS APPROVED BY THE ARCHITECT.
9. HEAD GUARDS TO BE PROVIDED IN ACCORDANCE WITH N.F.P.A.
10. FIRE SPRINKLER TEST VALVES TO BE LOCATED IN AREAS CONVENIENT TO MAINTENANCE PERSONNEL, BUT AWAY FROM PUBLIC ACCESS.
11. THE UTAH STATE FIRE MARSHALS OFFICE SHALL BE NOTIFIED (IN WRITING) AT LEAST THREE DAYS IN ADVANCE OF THE FOLLOWING:
    - A. HYDROSTATIC TEST AND FINAL INSPECTION OF OVERHEAD SYSTEMS PRIOR TO INSTALLATION OF CEILINGS.
    - B. FLUSHING OF UNDERGROUND PRIOR TO CONNECTION OF OVERHEAD.
    - C. HYDROSTATIC TEST AND FINAL INSPECTION OF UNDERGROUND PRIOR TO BACKFILLING.
12. CONTRACTOR SHALL FIELD VERIFY ALL PIPE LOCATIONS PRIOR TO FABRICATION OF PIPE SYSTEMS.
13. FIRE PROTECTION DRAWINGS ARE DIAGRAMMATIC ONLY.
14. FIRE PROTECTION CONTRACTOR SHALL COORDINATE ROUTING, HANGING AND BRACING WITH ROOF STRUCTURE. ALL FIRE SPRINKLER PIPING SHALL COMPLY WITH THE FOLLOWING.
    - A. ALL PIPING CONCENTRATED LOADS GREATER THAN 100 POUNDS SUPPORTED BY OPEN WEB STEEL JOISTS AND GIRDERS SHALL BE LOCATED WITHIN 6 INCHES OF JOIST OR GIRDER PANEL POINTS OR THE JOIST OR GIRDER SHALL BE REINFORCED WITH AN ADDITIONAL WEB MEMBER. REFER TO GENERAL STRUCTURAL NOTES AND THE "TYPICAL DETAIL AT ADDITIONAL CONCENTRATED POINT LOAD" ON THE STRUCTURAL DRAWINGS.
    - B. CONCENTRATED POINT LOADS, SINGLE OR MULTIPLE, TOTALING 100 POUNDS OR LESS CAN BE LOCATED AT ANY POINT ALONG THE BOTTOM CHORD OF AN OPEN WEB JOIST OR GIRDER BETWEEN ADJACENT PANEL POINTS WITHOUT MEETING THE REQUIREMENTS ABOVE. A LIMIT OF (4) CONCENTRATED 100# MAXIMUM POINT LOADS PER JOIST OR GIRDER SHALL BE PERMITTED UNLESS SPECIFICALLY NOTED OTHERWISE ON THE STRUCTURAL DRAWINGS.
    - C. JOIST BRIDGING SHALL NEVER BE USED TO SUPPORT HANGING LOADS.
    - D. BRACING OF FIRE SPRINKLER PIPING TO THE BOTTOM CHORD OF JOISTS OR GIRDERS WILL NOT BE ALLOWED IN ANY INSTANCE. ALL LATERAL BRACES MUST CONNECT CONNECT TO THE TOP FLANGE/TOP CHORD OF THE FRAMING MEMBER ABOVE UNLESS NOTED OTHERWISE ON THE STRUCTURAL DRAWINGS.
15. STEEL ROOF DECKING SHALL NOT BE USED TO SUPPORT LOADS FROM FIRE SPRINKLER ELEMENTS OR EQUIPMENT OF ANY KIND.
16. ALL FIRE SPRINKLER PIPING RUNNING IN OCCUPIED AREAS WITH EXPOSED STRUCTURE SHALL RUN WITH SLOPE OF ROOF DECK.
17. THE FIRE SPRINKLER CONTRACTOR SHALL COORDINATE PIPING & HEAD LOCATIONS WITH HVAC ARCHITECTURAL REFLECTED CEILING PLANS, DUCTWORK, DIFFUSERS AND ALL LIGHTING LAYOUTS.
18. ALL PIPE PENETRATIONS OF CONCRETE, CMU OR BRICK WALLS SHALL BE SLEEVED OR CORE CUT.
19. ALL PIPE PENETRATIONS OF SHEETROCK WALLS SHALL BE SAWCUT.
20. ALL PENETRATIONS AT 1 HOUR AND 2 HOUR WALLS SHALL BE FIRE CAULKED PER RATING REQUIRED. COORDINATE WITH LIFE SAFETY PLAN.

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FIRE PROTECTION SCHEDULES & DETAILS

LIGHTING SYMBOLS

1. LIGHT FIXTURE SYMBOLS ARE GENERAL IN NATURE AND MAY BE SHOWN ON THE DRAWINGS IN VARIOUS SIZES AND SHAPES. REFER TO THE LIGHT FIXTURE SCHEDULE FOR SPECIFICATION INFORMATION.
2. ARROWS INDICATE AIMING DIRECTION.

SYMBOL	DESCRIPTION	MOUNTING	REMARKS
	ARM-MOUNTED SINGLE-HEAD LIGHT FIXTURE AND POLE	AS SPECIFIED OR DETAILED	
	ARM-MOUNTED DOUBLE-HEAD LIGHT FIXTURE AND POLE	AS SPECIFIED OR DETAILED	
	POST-TOP SINGLE-HEAD, LIGHT FIXTURE AND POLE	AS SPECIFIED OR DETAILED	
	WALL-MOUNTED FIXTURE	AS SPECIFIED OR DETAILED	REFER TO ARCHITECTURAL EXTERIOR ELEVATIONS FOR MOUNTING HEIGHT
	LIGHT BOLLARD	AS SPECIFIED OR DETAILED	
	FLOOD LIGHT	AS SPECIFIED OR DETAILED	
	RECESSED WALL FIXTURE OR STEP LIGHT	AS SPECIFIED OR DETAILED	REFER TO ARCHITECTURAL EXTERIOR ELEVATIONS FOR MOUNTING HEIGHT
	LIGHT FIXTURES	AS SPECIFIED OR DETAILED	
	WALL-MOUNTED LINEAR LIGHT FIXTURE	AS SPECIFIED OR DETAILED	
	LINEAR WALL WASHER	AS SPECIFIED OR DETAILED	
	RECESSED DOWN LIGHT	AS SPECIFIED OR DETAILED	
	RECESSED WALL-WASHER OR DIRECTIONAL DOWNLIGHT	AS SPECIFIED OR DETAILED	
	SURFACE OR PENDANT-MOUNTED LIGHT FIXTURE	AS SPECIFIED OR DETAILED	
	TRACK OR MONO-POINT LIGHT FIXTURE	AS SPECIFIED OR DETAILED	
	WALL SCONCE	AS SPECIFIED OR DETAILED	
	LINEAR PENDANT LIGHT FIXTURE	CEILING	
	EGRESS LIGHT FIXTURE	AS SPECIFIED OR DETAILED	THIS IS AN EXAMPLE OF AN EGRESS LIGHT FIXTURE. EGRESS LIGHT FIXTURES ARE HALF-SHADED DIAGONALLY
	EMERGENCY (NON-EGRESS) LIGHT FIXTURE	AS SPECIFIED OR DETAILED	THIS IS AN EXAMPLE OF AN EMERGENCY (NON-EGRESS) LIGHT FIXTURE. EMERGENCY FIXTURES ARE FULLY-SHADED.
	CEILING MOUNTED EXIT SIGN	CEILING	DARKENED PORTION OF SIGN INDICATES FACE(S); ARROW(S) INDICATE CHEVRON DIRECTION(S)
	WALL-MOUNTED EXIT SIGN	WALL ABOVE DOOR	
	WALL-MOUNTED EXIT SIGN W/ EMERGENCY LIGHT FIXTURE	WALL ABOVE DOOR	
IN	CEILING MOUNTED IN USE SIGN	CEILING	
IN	WALL-MOUNTED IN USE SIGN	WALL ABOVE DOOR	
TC	TIME CLOCK		
	EMERGENCY LIGHT FIXTURE	AS NOTED	
P	ELECTRIC PHOTOCELL	N/A	MOUNT ON ROOF FACING NORTH SKY
XXXX	LIGHT FIXTURE CALLOUT (LETTER DENOTES FIXTURE TYPE)		

FIRE ALARM SYMBOLS

SYMBOL	DESCRIPTION	MOUNTING	REMARKS
T	BEAM DETECTOR - TRANSMITTER	4" BELOW CEILING TO TOP OF DETECTOR	
R	BEAM DETECTOR - RECEIVER	4" BELOW CEILING TO TOP OF DETECTOR	
EOL	END OF LINE RESISTOR	PER MANUF. REC.	
T	TAMPER SWITCH	AT VALVE	
W	WATER FLOW INDICATOR	ON FIRE RISER	
FSD	FIRE/SMOKE DAMPER		
X	HEAT DETECTOR	CEILING	SUBSCRIPT INDICATES SPECIFIC REQUIREMENTS/OPTIONS: 'SB' DEVICE WITH SOUNDER BASE 'R' DEVICE WITH ADDRESSABLE RELAY 'RES' DEVICE HAS 120V. SMOKE ALARM W/BATTERY BACKUP
CO X	CARBON MONOXIDE DETECTOR		
X	SMOKE DETECTOR		
X	HEAT DETECTOR	WALL MOUNTED: MAX 12" FROM BOTTOM OF CEILING	
CO X	CARBON MONOXIDE DETECTOR		
X	SMOKE DETECTOR		
D	DUCT SMOKE DETECTOR	SIDE OF DUCT	
F	FIRE ALARM MANUAL STATION		
Z	CONTROL MODULE	AT DEVICE(S) TO BE CONTROLLED	
I	MONITOR MODULE	AT DEVICE(S) TO MONITOR	
R	FAN SHUTDOWN RELAY	AT CONTROL PANEL	
D	MAGNETIC DOOR HOLDER	COORDINATE WITH DOOR INSTALLER	COORDINATE WITH DOOR INSTALLER; SUBSCRIPT 'F' INDICATES TO MOUNT AT FLOOR LEVEL
WF	WATER FLOOD CONTROL	FLOOR	
H	AUDIO HORN	INDOOR - 96" FROM FINISH FLOOR TO TOP OF DEVICE. OUTDOOR - 120" FROM FINISH FLOOR TO TOP OF DEVICE.	SUBSCRIPT 'WP' INDICATES THAT A WEATHER PROOF BACK BOX IS REQ. NUMERIC SUBSCRIPT INDICATES CANDELA RATING OF STROBE (I.E. - 15, 75, 110)
	FIRE ALARM VISUAL STROBE		
	CONCEAL FIRE ALARM VISUAL STROBE		
	FIRE ALARM AUDIO/VISUAL HORN/STROBE		
	CONCEAL FIRE ALARM AUDIO/VISUAL HORN/STROBE		
	CEILING MOUNTED FIRE ALARM AUDIO/VISUAL HORN/STROBE		
S	FIRE ALARM AUDIO SPEAKER		
S	CEILING MOUNTED FIRE ALARM AUDIO SPEAKER		
	FIRE ALARM AUDIO/VISUAL SPEAKER/STROBE		
	CONCEAL FIRE ALARM AUDIO/VISUAL SPEAKER/STROBE		
	CEILING MOUNTED FIRE ALARM AUDIO/VISUAL SPEAKER/STROBE		
F	FIRE FIGHTERS TELEPHONE JACK	+48"	
	FIRE PROTECTION SPRINKLER RISER BELL	+90"	FURNISHED BY FIRE PROTECTION CONTRACTOR AND INSTALLED AND CONNECTED BY DIV. 26
FACP	FIRE ALARM CONTROL PANEL		
ASD	FIRE ALARM CONTROL PANEL		

INTRUSION DETECTION SYMBOLS

SYMBOL	DESCRIPTION	MOUNTING	REMARKS
MD	MOTION DETECTOR	CEILING	SUBSCRIPT DENOTES DEGREES OF MONITORED AREA
D	DURESS PUSH-BUTTON	BELOW DESK	
OHS	OVERHEAD MAGNETIC CONTACT DOOR SWITCH	DOOR	
D	MAGNETIC CONTACT DOOR SWITCH	DOOR	
G	GLASS BREAK DETECTOR	CEILING	
S	SIREN	+90"	
REX	REQUEST FOR EXIT	DOOR	

WIRING DEVICE SYMBOLS

SYMBOL	DESCRIPTION	MOUNTING	REMARKS
	SPLIT-WIRED DUPLEX RECEPTACLE	+18"	
	SIMPLEX RECEPTACLE	+18"	
	DUPLEX RECEPTACLE	+18"	
	FOURPLEX RECEPTACLE	+18"	
	125/250V RECEPTACLE	+18"	RANGE -- NEMA 14-50R DRYER -- NEMA 14-30R
	GROUND FAULT CIRCUIT INTERRUPTER DUPLEX RECEPTACLE	+18"	
	GROUND FAULT CIRCUIT INTERRUPTER FOURPLEX RECEPTACLE	+18"	
	EMERGENCY DUPLEX RECEPTACLE	+18"	
	EMERGENCY FOURPLEX RECEPTACLE	+18"	
J	MULTI-OUTLET ASSEMBLY	4" ABOVE BACKSPLASH	
	POWER / TELEPHONE POLE	FLOOR/CEILING	
(4-PLEX)	CORD DROP	REFER TO FLOOR PLANS	REFER TO DETAIL. REFER TO PLANS.
(4-PLEX)	CORD REEL	REFER TO FLOOR PLANS	REFER TO DETAIL. REFER TO PLANS.
(5-20R)	SPECIAL PURPOSE OUTLET	+18"	SUBSCRIPT IN PARENTHESIS INDICATES NEMA CONFIGURATION IF SHOWN. REFER TO DRAWINGS AND/OR EQUIPMENT SCHEDULES. CONFIRM EXACT CONFIGURATION WITH OWNER PRIOR TO INSTALLATION.

LIGHTING CONTROLS

SYMBOL	DESCRIPTION	MOUNTING	REMARKS
$\$$	SINGLE-POLE TOGGLE SWITCH	+48"	
$\$^{a}$	SINGLE-POLE TOGGLE SWITCH	+48"	SUBSCRIPT KEYS SWITCH TO FIXTURES CONTROLLED.
$\$_{2}$	DOUBLE-POLE TOGGLE SWITCH	+48"	
$\$_{3}$	THREE-WAY TOGGLE SWITCH	+48"	
$\$_{4}$	FOUR-WAY TOGGLE SWITCH	+48"	
$\$_{K}$	KEY-OPERATED SINGLE-POLE TOGGLE SWITCH	+48"	
$\$_{P}$	SINGLE-POLE TOGGLE SWITCH WITH PILOT LIGHT	+48"	
$\$_{DIM}$	DIMMER SWITCH	+48"	RATE DIMMER SWITCH FOR MAXIMUM POSSIBLE WATTAGE
$\$_{TIM}$	TIMER SWITCH	+48"	
$\$^{x}_{OS}$	OCCUPANCY SENSOR	+48"	REFER TO OCCUPANCY SENSOR SCHEDULE FOR MORE INFORMATION "#" SPECIFIES TYPE
$\$\$$	(2) SINGLE-POLE TOGGLE SWITCH	+48"	DUAL LEVEL SWITCH OUTBOARD LAMPS SEPARATELY FROM INBOARD LAMPS.
$\$^{\#}_{LV}$	LOW VOLTAGE SWITCH	+48"	REFER TO LOW VOLTAGE SWITCH SCHEDULE FOR MORE INFORMATION "#" SPECIFIES TYPE
$\$_{3PM}$	3-POSITION MOMENTARY CONTACT SWITCH	+48"	REFER TO DETAIL UP-ON; CENTER-NEUTRAL; DOWN-OFF
$\$_{3PN}$	3-POSITION MAINTAINED CONTACT SWITCH	+48"	UP-ON; CENTER-OFF; DOWN-ON
a #	OCCUPANCY SENSOR	CEILING	"a" LOWER CASE SPECIFIES ZONE "#" SPECIFIES TYPE REFER TO OCCUPANCY SCHEDULE
a #	DIGITAL DAYLIGHT SENSOR	CEILING	"a" LOWER CASE LETTER SPECIFIES ZONE "#" SPECIFIES THE FOOTCANDLE SETTING THE SENSOR SHALL BE SET TO
TP	WALL MOUNT GRAPHIC TOUCH PAD CONTROLLER	+48"	
EC	EMERENCY CONTROLLER	ACCESSIBLE ABOVE CEILING	
LC	LOAD CONTROLLER	ACCESSIBLE ABOVE CEILING	
PP	POWER PACK	ACCESSIBLE ABOVE CEILING	
RC	ROOM CONTROLLER	ACCESSIBLE ABOVE CEILING	

ACCESS CONTROL SYMBOLS

SYMBOL	DESCRIPTION	MOUNTING	REMARKS
REX	REQUEST-TO-EXIT MOTION DETECTOR	CEILING	
S	ELECTROMAGNETIC DOOR STRIKE	DOOR	
D	MAGNETIC DOOR CONTACT SWITCH	DOOR	
M	MAGNETIC LOCK	DOOR	
OHS	OVERHEAD SECURITY	DOOR	
OHD	OVERHEAD DOOR CONTACT	DOOR	
EL	ELECTRIFIED LEVER	DOOR	
EP	ELECTRIFIED PANIC HARDWARE	DOOR	
G	GLASS BREAK HARDWARE	CEILING/WALL	
PS	POWER SUPPLY	CEILING/WALL	
IL	INTEGRATED LOCK	+46"	
PP	PUSH PLATE FOR AUTOMATIC DOOR OPERATOR	+46"	
ADO	AUTOMATIC DOOR OPERATOR	DOOR	
KP	KEYPAD	+48"	
CK	CARD READER / KEYPAD	+48"	
MK	MAGNETIC STRIP CARD READER / KEYPAD	+48"	
CR	CARD READER	+48"	
MR	MAGNETIC STRIP CARD READER	+48"	
AUTO	AUTOMATIC SLIDING DOOR	DOOR	

TELEPHONE / DATA SYMBOLS

SYMBOL	DESCRIPTION	MOUNTING	REMARKS
	TELEPHONE OUTLET	+18"	
	DATA OUTLET	+18"	
	COMBINATION TELEPHONE/DATA OUTLET	+18"	
	TELEPHONE TERMINAL BOARD	TOP AT 72"	
	WIRELESS ACCESS POINT	CEILING	
W	WIRELESS ACCESS POINT	SEE PLANS	
	EMERGENCY PHONE	SEE PLANS	

CLOSED CIRCUIT TELEVISION SYMBOLS

SYMBOL	DESCRIPTION	MOUNTING	REMARKS
	BULLET STYLE CLOSED CIRCUIT TELEVISION CAMERA	SEE PLANS	SUBSCRIPT DENOTES DEGREES OF MONITORED AREA
	BULLET STYLE CLOSED CIRCUIT TELEVISION CAMERA	WALL	
	DOME STYLE CLOSED CIRCUIT TELEVISION CAMERA	SEE PLANS	
	DOME STYLE CLOSED CIRCUIT TELEVISION CAMERA	WALL	

GENERAL SYMBOLS

SYMBOL	DESCRIPTION	REMARKS
XX	KEYED NOTE	
1 E-1	DETAIL REFERENCE	TOP NUMBER INDICATES DETAIL NUMBER; BOTTOM LETTER-NUMBER INDICATES DRAWING SHEET WHERE DETAIL IS SHOWN; WHERE NOT SPECIFICALLY REFERENCED, DETAIL IS GENERAL IN NATURE AND SHALL APPLY WHERE APPLICABLE.
2 E-2	ELEVATION REFERENCE	TOP NUMBER INDICATES ELEVATION NUMBER; BOTTOM LETTER-NUMBER INDICATES WHERE ELEVATION IS SHOWN.
3 E-2	SECTION REFERENCE	TOP NUMBER INDICATES ELEVATION NUMBER; BOTTOM LETTER-NUMBER INDICATES WHERE ELEVATION IS SHOWN.
100	ARCHITECTURAL ROOM NUMBER	
AHU 1	EQUIPMENT NAME / NUMBER	TOP NUMBER ABBREVIATES EQUIPMENT NAME OR TYPE; BOTTOM NUMBER INDICATES EQUIPMENT NUMBER. REFER TO EQUIPMENT SCHEDULE.
1	REVISION NUMBER	USED TO DENOTE CHANGES EITHER ISSUED BY ADDENDUM OR DURING CONSTRUCTION AND TO DENOTE RECORD DRAWING CHANGES.
	REVISION CLOUD	USED TO DENOTE AREAS, DEVICES, EQUIPMENT DETAILS, ETC. AFFECTED BY THE REVISION.
	BREAKLINE	USED TO BREAK DRAWINGS.
LCD-###	LIGHTING CONTROL WIRING DIAGRAM CALLOUT	

BRANCH CIRCUITING SYMBOLS

SYMBOL	DESCRIPTION	REMARKS
	BRANCH CIRCUIT HOME RUN TO PANEL	ARROWS: NUMBER OF ARROWS INDICATES NUMBER OF CIRCUITS REQUIRED.
	BRANCH CIRCUITING (U.N.O.) CONTINUATION	
	CONDUIT STUB-IN	CAP AND MARK
	INCOMING SERVICE	
	UNDERGROUND FEEDER	
J	JUNCTION BOX	MOUNT AS NOTED. SUBSCRIPT 'F' INDICATES TO PROVIDE A FLOOR BOX WITH BLANK COVERPLATE.
	BRANCH CIRCUITING (U.N.O.) TURNED UP OR TOWARDS OBSERVER.	
	BRANCH CIRCUITING (U.N.O.) TURNED DOWN OR AWAY FROM OBSERVER.	
	2 CIRCUIT, BRANCH CIRCUIT HOME RUN TO PANEL	ARROWS: NUMBER OF ARROWS INDICATES NUMBER OF CIRCUITS REQUIRED.
	3 CIRCUIT, 4 WIRE BRANCH CIRCUIT HOME RUN TO PANEL	ARROWS: NUMBER OF ARROWS INDICATES NUMBER OF CIRCUITS REQUIRED.

ELECTRONIC SYSTEM GENERAL SYMBOLS

SYMBOL	DESCRIPTION	MOUNTING	REMARKS
PANEL NAME	ELECTRONIC SYSTEM PANELBOARD (SURFACE MOUNT)	TOP AT 72"	ELECTRONIC SYSTEMS MAY INCLUDE BUT ARE NOT SPECIFICALLY LIMITED TO, TELEPHONE, DATA, TELEVISION, LIGHTING CONTROL, CLOCKS, FIRE ALARM, ACCESS CONTROL, SECURITY, CCTV, SOUND SYSTEM, NURSE CALL, OR INTERCOM.
PANEL NAME	ELECTRONIC SYSTEM PANELBOARD (FLUSH MOUNT)	TOP AT 72"	
	ELECTRONIC SYSTEM TERMINAL BOARD	TOP AT 72"	
	TWO POST DATA RACK		
	FOUR POST DATA RACK		
	FLOOR MOUNTED DATA CABINET		
	LARGE DATA CABINET		
	WALL MOUNTED DATA CABINET		

EQUIPMENT AND CONTROL SYMBOLS

SYMBOL	DESCRIPTION	MOUNTING	REMARKS
$\$_{T}$	MANUAL STARTER WITH THERMAL OVERLOAD(S)	AT EQUIPMENT	
	ELECTRIC MOTOR		
	NON-FUSED DISCONNECT SWITCH	+60"	
F	FUSED DISCONNECT SWITCH	+60"	
	CIRCUIT BREAKER AND ENCLOSURE	+60"	
	MAGNETIC STARTER	+60"	
	COMBINATION MAGNETIC STARTER / FUSED DISCONNECT	+60"	
	COMBINATION MAGNETIC STARTER / NON-FUSED DISCONNECT	+60"	
	COMBINATION MAGNETIC STARTER / MOTOR CIRCUIT PROTECTOR (MCP)	+60"	
VFD	COMBINATION VARIABLE FREQUENCY DRIVE / MOTOR CIRCUIT PROTECTOR (MCP)	FLOOR OR WALL AS SPECIFIED	TOP AT +72" IF WALL MOUNTED
	LOAD CENTER (SURFACE-MOUNTED)	TOP AT +72"	14"W X 3"D
	LOAD CENTER (FLUSH-MOUNTED)	TOP AT +72"	14"W X 3"D
	LIGHTING AND APPLIANCE PANELBOARD (SURFACE-MOUNTED)	TOP AT +72"	20"W X 6"D
	LIGHTING AND APPLIANCE PANELBOARD (FLUSH-MOUNTED)	TOP AT +72"	20"W X 6"D
	POWER DISTRIBUTION PANELBOARD	WALL	THESE SYMBOLS ARE GENERAL IN NATURE AND MAY VARY IN SIZE AND SHAPE TO SUIT APPLICATION. CROSS HATCHING INDICATES "MAIN PANELBOARD OR SWITCHBOARD" NAME IS INDICATED IN SEMI-QUOTES (I.E. 'L2A', 'MDP')
	SWITCHBOARD	FLOOR	
T-#	WET TYPE TRANSFORMER	PAD MOUNT	
T-#	DRY TYPE TRANSFORMER	PAD MOUNT	
T-#	DRY TYPE TRANSFORMER	WALL MOUNT	
	METER BASE	TOP AT +72"	
PB	PULL BOX		
	UTILITY POLE		
	OPEN - STOP - CLOSE SWITCH	+60"	FURNISH SWITCH UNLESS FURNISHED BY ANOTHER DIVISION. INSTALL AND CONNECT COMPLETE. REFER TO RELATED SPECIFICATION SECTIONS.
T	HVAC THERMOSTAT	+60"	PROVIDED BY DIVISION 23
	HAND - OFF - AUTO SWITCH	+60"	
GF	GROUND FAULT PROTECTION		
E	ELECTRIC VEHICLE CAR CHARGING STATION	FLOOR	
S	PAD MOUNTED UTLITY SWITCHGEAR		
SE	PAD MOUNTED UTILITY SECTIONALIZER		

ELECTRICAL SYMBOL SCHEDULE GENERAL NOTES

1. MOUNT ALL OUTLETS, DEVICES, AND EQUIPMENT AT HEIGHTS INDICATED BELOW, UNLESS NOTED OTHERWISE ON THE DRAWINGS. UNLESS NOTED OTHERWISE, HEIGHTS ARE GIVEN FROM FINISHED FLOOR TO CENTER OF OUTLET BOX.
2. WHERE OUTLETS, DEVICES, AND EQUIPMENT ARE NOTED BY SUBSCRIPTS, REFER TO ABBREVIATION SCHEDULE FOR DEFINED REQUIREMENTS.
3. WHERE OUTLETS, DEVICES AND EQUIPMENT ARE NOTED BY THE SUBSCRIPT 'A', MOUNT AT 4" ABOVE COUNTER. IF COUNTER HAS A BACK SPLASH, MOUNT AT 4" ABOVE BACK SPLASH. REFER TO ARCHITECTURAL INTERIOR ELEVATIONS AND COORDINATE WITH CASEWORK SUPPLIER.
4. NOT ALL ELECTRICAL SYMBOLS MAY BE USED.

ABBREVIATION SCHEDULE

NOTE: NOT ALL ABBREVIATIONS MAY BE USED.

A	ABOVE COUNTER	LSI	LONG-TIME, SHORT-TIME INSTANTANEOUS
A	AMP OR AMPS	LSIG	LONG-TIME, SHORT-TIME INSTANTANEOUS GROUND FAULT
ACC	ACCESS CONTROL	LTG	LIGHTING
ADJ	ADJACENT	MCA	MINIMUM CIRCUIT AMPS
AFF	ABOVE FINISHED FLOOR	MCB	MAIN CIRCUIT BREAKER
AHJ	AUTHORITY HAVING JURISDICTION	MLO	MAIN LUGS ONLY
AL	ALUMINUM	MV	MEDIUM VOLTAGE
ATS	AUTOMATIC TRANSFER SWITCH	MW	MICROWAVE
AUX	AUXILIARY	NC	NORMALLY CLOSED
BAS	BUILDING AUTOMATION SYSTEM	NEC	NATIONAL ELECTRIC CODE
BLDG	BUILDING	NIC	NOT IN CONTRACT
C	CONDUIT	NL	NIGHT LIGHT
CB	CIRCUIT BREAKER	NO	NORMALLY OPEN
CKT	CIRCUIT	OC	ON CENTER(S)
CLG	CEILING	OCP	OVER CURRENT PROTECTION
CO	CONVENIENCE OUTLETS	OCPD	OVER CURRENT PROTECTION DEVICE
CU	COPPER	PA	PUBLIC ADDRESS
DAS	DISTRIBUTED ANTENNA SYSTEM	PH	PHASE
(E)	EXISTING	PV	PHOTOVOLTAIC
EA	EACH	PWR	POWER
ELEC	ELECTRICAL	QTY	QUANTITY
EM	EMERGENCY	R	REMOVE
EMT	ELECTRIC METALLIC TUBING	REF	REFRIGERATOR
ENT	ELECTRIC NONMETALLIC TUBING	REQ	REQUIREMENTS
EQUIP	EQUIPMENT	RGC	RIGID GALVANIZED CONDUIT
EWC	ELECTRIC WATER COOLER	RMC	RIGID METAL CONDUIT
EXP	EXPLOSION PROOF	RMP	ROCKY MOUNTAIN POWER
FA	FIRE ALARM	RNC	RIGID NONMETALLIC CONDUIT
FACP	FIRE ALARM CONTROL PANEL	RR	REMOVE AND RELOCATE
FLA	FULL LOAD AMPS	SCP	SECURITY CONTROL PANEL
FMC	FLEXIBLE METAL CONDUIT	SFL	SUB-FEED LUGS
FO	FIBER OPTIC	SPD	SURGE PROTECTIVE DEVICE
FOB	FREIGHT ON BOARD	SS	SURGE SUPPRESSION
FTL	FEED-THROUGH LUGS	TTB	TELEPHONE TERMINAL BOARD
GND	GROUND CONDUCTOR	TR	TAMPER RESISTANT
HOA	HAND-OFF-AUTO	TYP	TYPICAL
HP	HORSE POWER	UF	UNDER FLOOR
ID	INTRUSION DETECTION	UG	INTERMEDIATE METAL CONDUIT
IG	ISOLATED GROUND	UNO	UNLESS NOTED OTHERWISE
IMC	INTERMEDIATE METAL CONDUIT	USB	UNIVERSAL SERIAL BUS
INS	INSULATED	VSS	VIDEO SURVEILLANCE SYSTEM
ISO	ISOLATED	W/	WITH
KVA	KILO VOLT AMPERES	WO/	WITHOUT
KW	KILOWATTS	WP	WEATHER PROOF
LFNC	LIQUID-TIGHT NONMETAL CONDUIT	XFMR	TRANSFORMER
LS	LONG-TIME, SHORT-TIME		

SHEET INDEX

GENERAL PROJECT NOTES

1. DIVISION 26000 CONTRACTOR IS RESPONSIBLE FOR READING AND APPLYING WHAT IS IN THE SPECIFICATIONS TO THIS PROJECT. ANYTHING THAT IS NOT INCLUDED ON THE PROJECT THAT IS CALLED OUT IN THE SPECIFICATION SHALL BE LISTED ON THE SUBSTANTIAL COMPLETION PUNCHLIST. THE CONTRACTOR WILL BE REQUIRED TO REMEDY THESE DEFICIENCIES WITHOUT ADDITIONAL COSTS TO OWNER. THERE WILL BE NO EXCEPTIONS.
2. THE CONTRACTOR MAY SCHEDULE A PRE-CONSTRUCTION MEETING. AT THEIR DISCRETION, WITH THE ELECTRICAL ENGINEER TO REVIEW THE DRAWINGS AND SPECIFICATIONS. THE MEETING SHALL BE A MAXIMUM OF ONE HOUR AND SHALL TAKE PLACE AT THE ENGINEER'S OFFICE.
3. THE FOLLOWING ITEMS ARE SOME OF THE REQUIREMENTS THAT ARE LISTED IN THE SPECIFICATIONS. THESE ITEMS ARE NOT ALL INCLUSIVE AND THE CONTRACTOR IS RESPONSIBLE FOR COMPLIANCE TO ALL REQUIREMENTS OF THE SPECIFICATIONS:
   A. INSULATED THROAT CONNECTORS OR PLASTIC BUSHINGS SHALL BE UTILIZED FOR ALL CONDUIT SIZED USED ON THIS PROJECT.
   B. THE CONTRACTOR IS RESPONSIBLE FOR UPSIZING CONDUCTORS FOR VOLTAGE DROP PER THE NEC REGARDLESS OF WHETHER IT IS SHOWN ON THE PLANS OR NOT.
   C. THE CONTRACTOR SHALL LABEL ALL ELECTRICAL EQUIPMENT AS IT IS CALLED OUT IN THE SPECIFICATIONS.
   D. THE CONTRACTOR SHALL PROVIDE SEISMIC SUPPORT AND BRACING FOR ALL LIGHT FIXTURES AND ELECTRICAL EQUIPMENT AS REQUIRED BY APPLICABLE LOCAL AND NATIONAL CODES.
4. THE CONTRACTOR SHALL FOLLOW THE PANELBOARD SCHEDULES AS INDICATED IN THE DRAWINGS. EACH CIRCUIT BREAKER HAS BEEN ASSIGNED TO SPECIFIC AREA OF THE BUILDING. NO DEVIATION WILL BE ALLOWED WITHOUT WRITTEN APPROVAL FROM THE ELECTRICAL ENGINEER.
5. AT A MINIMUM THE CONTRACTOR SHALL INSTALL THE WIRE SIZE AS CALLED OUT ON THE ONE-LINE DIAGRAM. HOWEVER, THE CONTRACTOR IS RESPONSIBLE TO ENSURE THE WIRE IS SIZED LARGE ENOUGH TO ALLOW FOR VOLTAGE DROP.
6. THE CONTRACTOR SHALL VERIFY ALL MECHANICAL OVERCURRENT DEVICES FOR THE ACTUAL MECHANICAL EQUIPMENT SUPPLIED ON THE JOB, PRIOR TO RELEASE OF ANY ELECTRICAL DISTRIBUTION EQUIPMENT. CONTACT THE ELECTRICAL ENGINEER WITH ANY DISCREPANCIES.
7. THE CONTRACTOR SHALL VISIT THE SITE BEFORE SUBMITTING THE BID, AND SHALL EXAMINE ALL PHYSICAL CONDITIONS WHICH MAY BE MATERIAL TO THE PERFORMANCE OF HIS WORK. NO ADDITIONAL PAYMENTS WILL BE ALLOWED TO THE CONTRACTOR AS A RESULT OF EXTRA WORK MADE NECESSARY BY HIS FAILURE TO DO SO. ANY CASE OF DISCREPANCY OR LACK OF CLARITY SHALL BE PROMPTLY IDENTIFIED TO THE OWNER'S REPRESENTATIVE AND THE ENGINEER FOR CLARIFICATION.

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REV	DATE	DESCRIPTION

VCBO NUMBER: 21515
CLIENT NUMBER: 20385
DATE: 2021-08-16

TCSD WAREHOUSE REMODEL - BLDGS 649

TOOELE COUNTY SCHOOL DISTRICT
PROJECT ADDRESS: 180 GARNET ST. TOOELE, UTAH 84074
BID SET

GENERAL NOTES AND SYMBOLS LISTS

EG001

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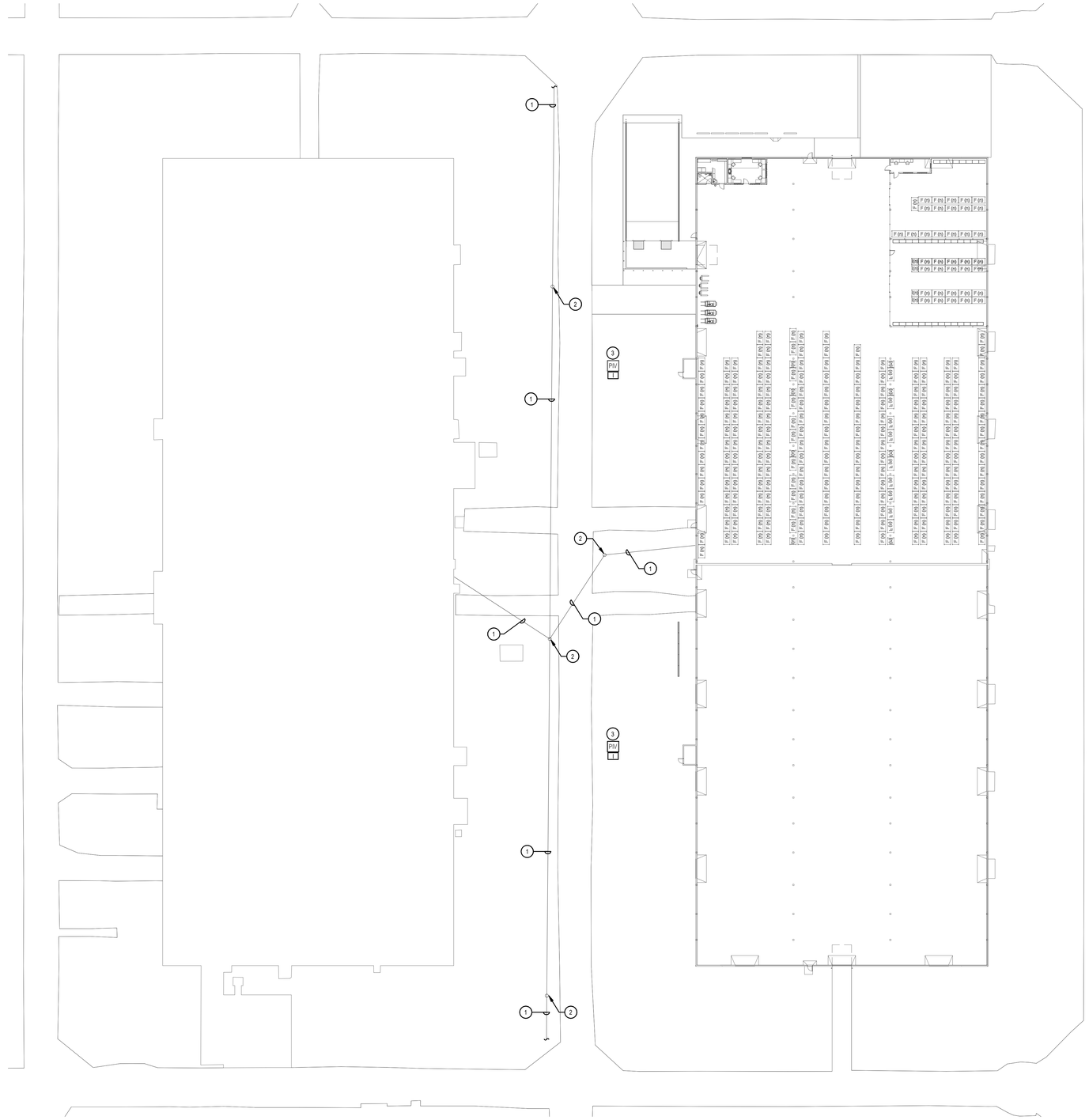

1 ELECTRICAL SITE PLAN
SCALE: 1" = 30'-0"

NORTH

SITE GENERAL NOTES:

1. PROVIDE ALL REQUIRED BACKFILLING, ETC. FOR ALL CONDUITS. PROVIDE REQUIRED BACKFILL MATERIAL AS DIRECTED BY EACH UTILITY.
2. COORDINATE ALL LOCATIONS AND ROUTING WORK IN THE FIELD.
3. ROUTE CONDUITS A MINIMUM OF 2' BELOW THE BUILDING FLOOR SLAB.
4. MINIMUM CONDUIT FOR SITE WORK SHALL BE 1".
5. CONDUIT ROUTING SHOWN IS SCHEMATIC AND FOR CLARIFICATION COORDINATE LOCATION WITH ALL AFFECTED TRADES.
6. PROVIDE A MINIMUM OF 12" SEPARATION BETWEEN POWER AND COMMUNICATION CONDUITS.
7. ALL CONDUITS THAT EXTEND THROUGH CONCRETE SHALL BE GALVANIZED RIGID CONDUIT AND WRAPPED WITH TWO (2) LAYERS OF PVC TAPE.
8. ALL ELBOWS THAT ARE UNDER THE FINISHED GRADE SHALL BE GALVANIZED RIGID CONDUIT AND WRAPPED WITH TWO (2) LAYERS OF PVC TAPE.

UTILITY COORDINATION REQUIREMENTS:

THE ELECTRICAL CONTRACTOR SHALL COORDINATE AND VERIFY ALL REQUIREMENTS AND LOCATIONS TO EXTEND CONDUITS FOR UTILITY USE WITHIN 2 WEEKS OF THE CONTRACT AWARD. THE CONTRACTOR SHALL NOT ROUGH-IN ANY CONDUITS UNTIL THE UTILITY COORDINATION IS COMPLETE AND ALL LOCATIONS ARE KNOWN. THE CONTRACTOR SHALL PROVIDE THE ARCHITECT AND THE ENGINEER A WRITTEN SIGNED STATEMENT, INCLUDING A SKETCH OF LOCATIONS, FROM THE UTILITY COMPANY NOTIFYING THEM THAT THEY HAVE COORDINATED AND VERIFIED ALL REQUIREMENTS. IF THE CONTRACTOR DOES NOT COORDINATE AND VERIFY THE REQUIREMENTS WITH THE UTILITIES OR PROVIDE A WRITTEN STATEMENT FROM THE UTILITY COMPANY TO THE ARCHITECT AND ENGINEER ALL CHANGES DO TO LACK OF COORDINATION WILL BE DONE AT NO ADDITIONAL EXPENSE TO THE OWNER.

THE ELECTRICAL CONTRACTOR SHALL ORGANIZE A PRE-CONSTRUCTION MEETING INCLUDING THE UTILITY AND GENERAL CONTRACTOR TO COORDINATE AND VERIFY ALL REQUIREMENTS. WITHIN 2 WEEKS OF THE CONTRACT AWARD. COORDINATION ITEMS INCLUDE BUT ARE NOT LIMITED TO:

- GENERAL UTILITY REQUIREMENTS AND DIVISION OF SCOPE OF WORK
- CONDUIT AND TRENCHING REQUIREMENTS
- CONDUIT ROUTING
- UTILITY EQUIPMENT PADS AND SUB-BASE REQUIREMENTS
- UTILITY CLEARANCE REQUIREMENTS
- EQUIPMENT SCREEN WALLS, EQUIPMENT ENCLOSURES, AND EQUIPMENT YARDS
- COORDINATION WITH OTHER UTILITIES OR EXISTING CONDITIONS
- AVAILABLE FAULT CURRENT CALCULATIONS (POWER UTILITY ONLY)
- UTILITY REQUIRED SITE OBSERVATIONS
- SCHEDULING OF UTILITY INSTALLATIONS

THE CONTRACTOR SHALL NOT ROUGH-IN ANY CONDUITS, EQUIPMENT PADS, OR SIMILAR ITEMS UNTIL THE UTILITY COORDINATION IS COMPLETE AND ALL THE LOCATIONS ARE KNOWN. THE CONTRACTOR SHALL PROVIDE THE ARCHITECT AND ENGINEER A WRITTEN, SIGNED STATEMENT, INCLUDING A SKETCH OF EQUIPMENT AND CONDUIT LOCATIONS, FROM THE UTILITY COMPANY NOTIFYING THEM THAT THEY HAVE COORDINATED AND VERIFIED ALL REQUIREMENTS WITH THE UTILITIES AND PROVIDE A WRITTEN STATEMENT FROM THE UTILITY COMPANY TO THE ARCHITECT AND ENGINEER, ALL CHANGES DUE TO LACK OF COORDINATION WILL BE PROVIDED AT NO ADDITIONAL EXPENSE TO THE OWNER.

UTILITY REQUIREMENTS:

1. BURY CONDUITS PER UTILITY REQUIREMENTS. REFER TO SITE DETAIL SHEETS FOR TRENCHING REQUIREMENTS.
2. VERIFY AND COMPLY WITH ALL ROCKY MOUNTAIN POWER AND COMMUNICATIONS SYSTEM PROVIDER REQUIREMENTS. CONFIRM PRIOR TO BID.
3. INCLUDE IN BID ALL LINE EXTENSION FEES, UNDERGROUND FEES, AND ALL MISC. FEES CHARGED BY ROCKY MOUNTAIN POWER AND COMMUNICATIONS SYSTEM PROVIDER. CONFIRM PRIOR TO BID.

KEYED NOTES (#)

1. EXISTING ROCKY MOUNTAIN POWER OVERHEAD POWER LINE TO REMAIN IN PLACE. PROTECT FROM DAMAGE.
2. EXISTING ROCKY MOUNTAIN POWER POLE TO REMAIN IN PLACE. PROTECT FROM DAMAGE.
3. EXISTING FIRE SPRINKLER SYSTEM P/V. PROVIDE NEW FIRE ALARM SYSTEM MONITOR MODULE AT P/V TO MONITOR THE STATUS. CONTRACTOR TO VERIFY WHICH P/V SERVES THIS BUILDING. IT IS ASSUMED THAT ONE P/V SERVES THIS BUILDING AND ONE P/V SERVES BUILDING 647 TO THE EAST.

ROCKY MOUNTAIN POWER:
LISA BAKER
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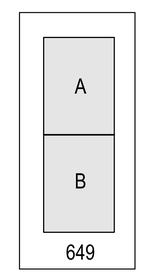
Email: lisa.baker@rockymountainpower.net

KEY PLAN



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TOOELE COUNTY SCHOOL DISTRICT
PROJECT ADDRESS: 180 GARNET ST. TOOELE, UTAH 84074

BID SET

ELECTRICAL SITE PLAN

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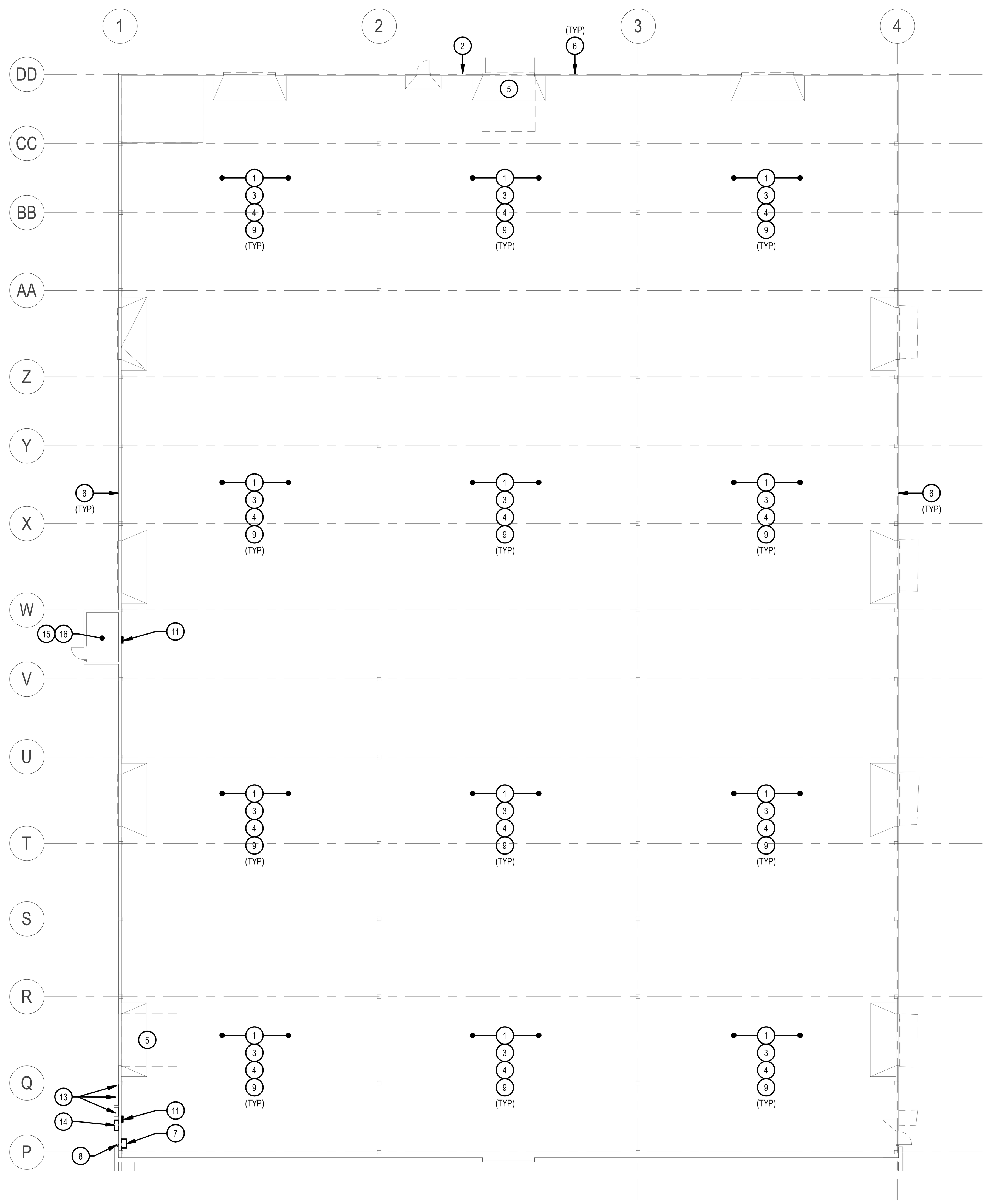
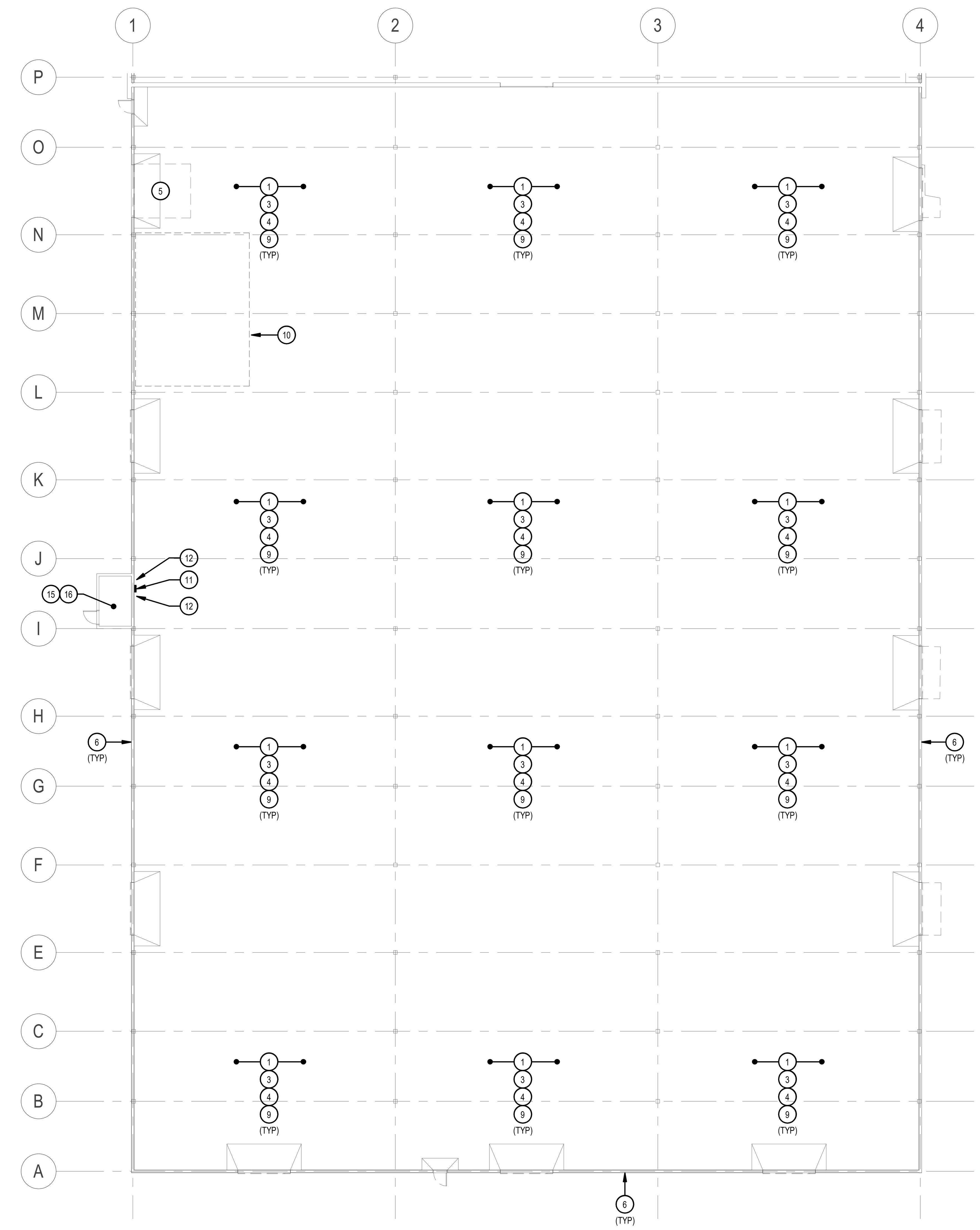


1 ELECTRICAL DEMOLITION PLAN - 649A

SCALE: 1/16" = 1'-0"

NORTH



2 ELECTRICAL DEMOLITION PLAN - 649B

SCALE: 1/16" = 1'-0"

NORTH

GENERAL DEMOLITION NOTES:

1. UNLESS SPECIFICALLY NOTED OTHERWISE, REMOVE ALL ELECTRICAL ITEMS SHOWN IN DARK AND DASHED LINES. LIGHT AND SOLID ITEMS ARE TO REMAIN. DEMOLITION ITEMS ARE SHOWN TO GIVE A BASIC DESCRIPTION OF THE EXTENT OF DEMOLITION WORK, BUT MAY NOT BE INCLUSIVE. PROVIDE DEMOLITION WORK IN ACCORDANCE WITH THE FOLLOWING REQUIREMENTS:
   - A. DISCONNECT AND REMOVE ANY/ALL FIXTURES, DEVICES, EQUIPMENT, ETC. REQUIRED FOR PROPER COMPLETION OF THE WORK WHETHER SHOWN OR NOT.
   - B. RELOCATE, REWIRE, AND/OR RECONNECT ANY/ALL FIXTURES, DEVICES, EQUIPMENT, ETC. THAT FOR ANY REASON OBSTRUCTS CONSTRUCTION.
   - C. LEAVE ALL EXISTING FIXTURES, DEVICES, EQUIPMENT, ETC. IN PORTIONS OF THE BUILDING NOT BEING REMODELED, IN WORKING CONDITION. RESTORE ALL INTERRUPTED BRANCH CIRCUITS, FEEDERS, ETC.
   - D. REMOVE AND DISPOSE OF ALL RACEWAYS, CONDUCTORS, BOXES, DEVICES, EQUIPMENT, ETC. THAT ARE NOT TO BE REUSED. TERMINATE AT ACCESSIBLE JUNCTION BOX BY PROVIDING PROPER KNOCK-OUT CLOSURE, TAPE CONDUCTORS, LABEL AS "SPARE" WITH CIRCUIT NO., ZONE NO, OR OTHER CHARACTERISTIC IDENTIFYING SOURCE.
   - E. EXISTING RACEWAYS MAY BE REUSED, IF IN PLACE, WHERE POSSIBLE, AND WHERE IN COMPLIANCE WITH THE SPECIFICATIONS AND THE INTENT OF THE CONTRACT DOCUMENTS. UPGRADE AND OR PROVIDE NEW CONDUIT SUPPORTS WHERE NECESSARY FOR ALL RACEWAYS BEING REUSED. ENSURE INTEGRITY OF EXISTING RACEWAYS BEFORE REUSE.
   - F. CONCEAL ALL RACEWAY AND WIRING IN EXISTING WALLS, CEILINGS, FLOORS, ETC. THE USE OF WIREMOLD IS PERMITTED ONLY WHERE SPECIFICALLY NOTED ON DRAWING.
   - G. DO NOT PENETRATE STRUCTURAL ELEMENTS OF FLOORS, WALLS, CEILINGS, ROOFS, ETC.
   - H. COORDINATE WITH OWNER WHAT EQUIPMENT SHOULD BE DISPOSED OF AND WHAT EQUIPMENT IS TO BE RETURNED TO OWNER.
   - I. FIRE ALARM SYSTEM MUST REMAIN OPERATIONAL DURING ALL PHASES OF CONSTRUCTION.
2. THIS AND ANY OTHER DEMOLITION DRAWINGS ARE NOT INTENDED TO BE ALL-INCLUSIVE, NOR TO DEFINE THE SCOPE OF ALL DEMOLITION WORK REQUIRED FOR THIS PROJECT. DEMOLITION DRAWINGS ARE SHOWN ONLY TO AID THE CONTRACTOR IN PREPARING THE BID AND PERFORMING THE WORK. CONTRACTOR SHALL EXAMINE ALL CONTRACT DOCUMENTS AND VISIT THE SITE DURING BIDDING TO DETERMINE THE TOTAL EXTENT AND SCOPE OF THE DEMOLITION WORK REQUIRED TO CARRY OUT THE WORK AS SHOWN IN THE CONTRACT DOCUMENTS.

KEYED NOTES (#)

1. DISCONNECT, REMOVE AND DISPOSE OF THE EXISTING LIGHT FIXTURES IN THIS AREA. REMOVE ALL CONDUIT AND CONDUCTORS BACK TO THE SOURCE COMPLETELY.
2. DISCONNECT, REMOVE AND DISPOSE OF ALL EXTERIOR LIGHTING. REMOVE ALL CONDUIT AND CONDUCTORS BACK TO THE SOURCE COMPLETELY.
3. DISCONNECT, REMOVE AND DISPOSE OF ALL EXISTING RECEPTACLES, CABLING, JUNCTION BOXES, ETC IN THIS AREA. REMOVE ALL CONDUIT, CONDUCTORS, CABLING, ETC BACK TO THE SOURCE COMPLETELY.
4. DISCONNECT, REMOVE AND DISPOSE OF ALL EXISTING COMMUNICATIONS / DATA CABLING IN THIS AREA. REMOVE ALL CABLING BACK TO THE SOURCE COMPLETELY.
5. DISCONNECT POWER FROM EXISTING OVERHEAD DOOR. REMOVE ALL DEVICES, CONDUIT AND CONDUCTORS BACK TO THE SOURCE COMPLETELY.
6. REMOVE ALL EXISTING CONDUIT / CABLING ON THE EXTERIOR OF THE BUILDING. REMOVE CONDUIT, CONDUCTORS AND OR CABLING BACK TO THE SOURCE COMPLETELY.
7. DISCONNECT, REMOVE AND DISPOSE OF EXISTING COMMUNICATION CABINET. REMOVE ALL CABLING WITHIN THE BUILDING COMPLETELY. COORDINATE REMOVAL OF SERVICE CABLING WITH THE SERVICE PROVIDER. CONFIRM SERVICE PROVIDER WITH TOOELE SCHOOL DISTRICT IT DEPARTMENT.
8. EXISTING COMMUNICATIONS CONDUITS TO REMAIN IN PLACE. PROTECT FROM DAMAGE DURING ALL PHASES OF THE CONSTRUCTION.
9. DISCONNECT, REMOVE AND DISPOSE OF OR RETURN EXISTING SECURITY SYSTEM TO THE OWNER, CONFIRM WITH THE OWNER PRIOR TO ANY DEMOLITION. REMOVE ALL PANELS, KEYPADS, DEVICES AND CABLING COMPLETELY.
10. DISCONNECT, REMOVE AND DISPOSE OF ALL ELECTRICAL DEVICES, CONDUIT AND CONDUCTORS, ETC COMPLETELY IN THE OFFICE SPACE.
11. DISCONNECT, REMOVE AND DISPOSE OF EXISTING ELECTRICAL PANEL. REMOVE ALL CONDUITS AND CONDUCTORS ASSOCIATED WITH THE PANEL COMPLETELY. SEE DEMOLITION ONE-LINE DIAGRAM.
12. DISCONNECT, REMOVE AND DISPOSE OF ALL EXISTING DISCONNECTS LOCATED AT THE ELECTRICAL PANEL. REMOVE ALL CONDUIT, CONDUCTORS, DEVICES, ETC COMPLETELY.
13. EXISTING 400 AMP, 208V, 3 PHASE CT CABINET, DISCONNECT AND METER BASE TO REMAIN IN PLACE. COORDINATE MODIFICATIONS WITH ROCKY MOUNTAIN POWER PRIOR TO ANY WORK BEING DONE. PLUG ALL OPEN HOLES IN THE CT CABINET.
14. DISCONNECT, REMOVE AND DISPOSE OF EXISTING 200 AMP, 208V, 3 PHASE METER / MAIN DISCONNECT. REMOVE ALL CONDUIT AND CONDUCTORS COMPLETELY. METER TO BE REMOVED BY ROCKY MOUNTAIN POWER. COORDINATE ALL WORK AND REQUIREMENTS WITH ROCKY MOUNTAIN POWER PRIOR TO ANY WORK BEING DONE. SEE DEMOLITION ONE-LINE DIAGRAM.
15. DISCONNECT, REMOVE AND DISPOSE OF ALL ELECTRICAL EQUIPMENT, CONNECTIONS, DEVICES, HEATERS, LIGHTS, ETC. REMOVE ALL CONDUIT, CONDUCTORS, CABLING ETC BACK TO THE SOURCE COMPLETELY. COORDINATE WORK WITH THE MECHANICAL AND PLUMBING CONTRACTORS.
16. DISCONNECT, REMOVE AND DISPOSE OF OR RETURN EXISTING SECURITY SYSTEM AND FIRE RISER MONITORING SYSTEM TO THE OWNER, CONFIRM WITH THE OWNER PRIOR TO ANY DEMOLITION. REMOVE ALL DEVICES, CONDUIT CABLING, ETC COMPLETELY.

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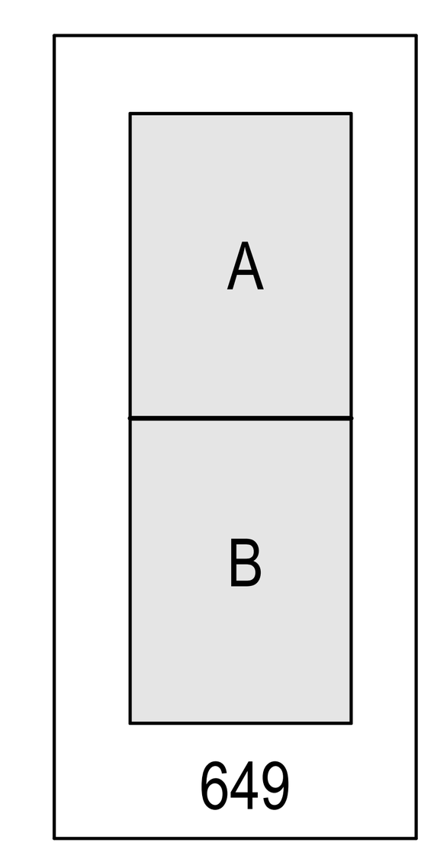
KEY PLAN



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TOOELE COUNTY SCHOOL DISTRICT
PROJECT ADDRESS: 180 GARNET ST. TOOELE, UTAH 84074

BID SET

ELECTRICAL DEMOLITION PLAN

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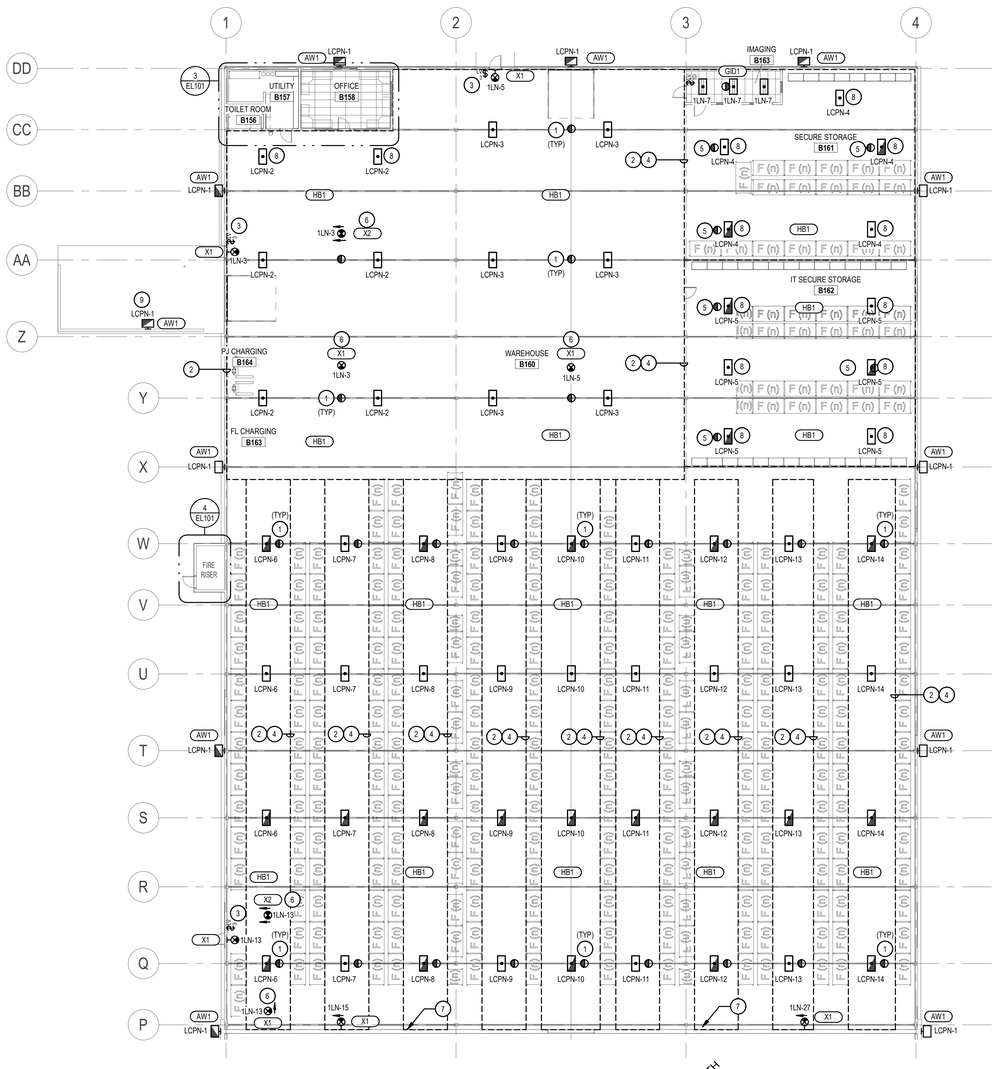
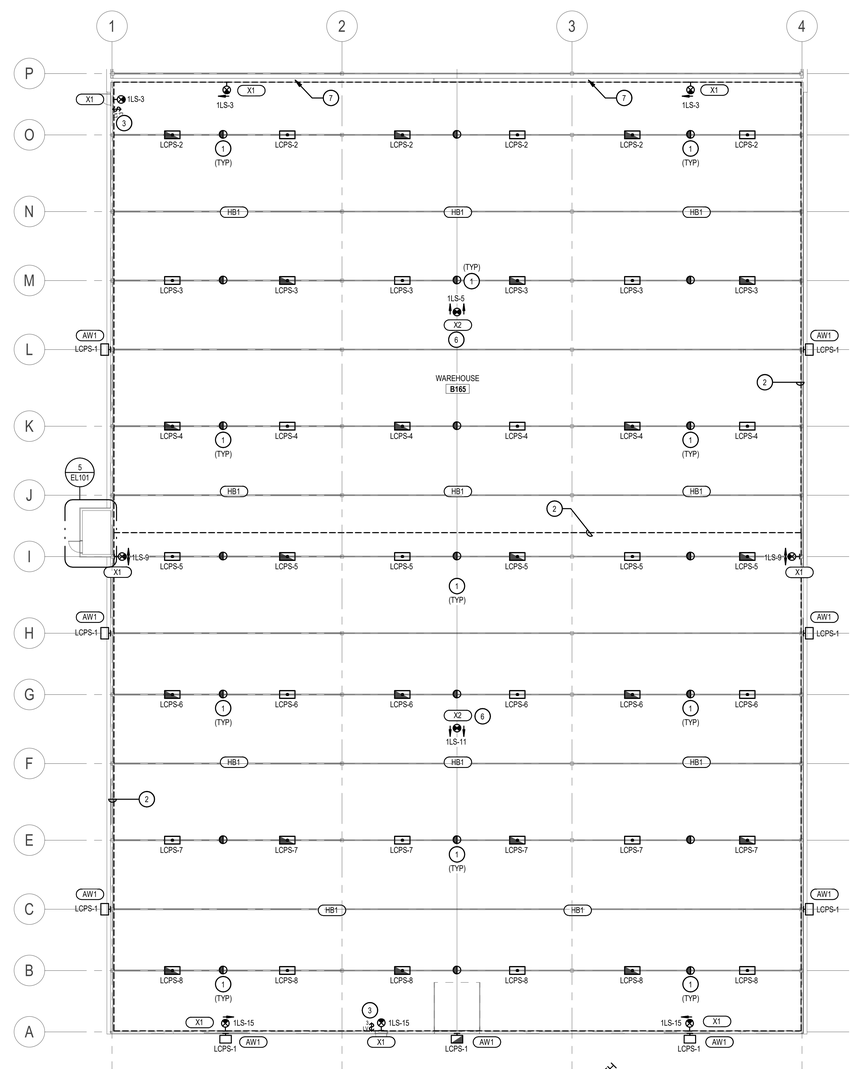


1 LIGHTING PLAN - 649A

SCALE: 1/16" = 1'-0"



2 LIGHTING PLAN - 649B

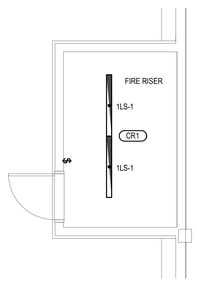
SCALE: 1/16" = 1'-0"

LIGHTING GENERAL NOTES:

1. REFER TO LIGHTING DETAILS SHEETS FOR TYPICAL CONTROL WIRING DIAGRAMS. PROVIDE COMPLETE SYSTEM WITH ALL REQUIRED CONDUIT, WIRING, SWITCHES, SENSORS, POWER PACK, ETC.
2. LOCATE POWER PACKS AND ROOM CONTROLLERS ABOVE ACCESSIBLE CEILING NEAR ROOM ENTRANCES.
3. CONFIRM ALL LOCATIONS OF LIGHT FIXTURES WITH ARCHITECT PRIOR TO INSTALLATION.
4. PROVIDE UNSWITCHED HOT FOR ALL EMERGENCY LIGHTS AND BATTERY PACKS.

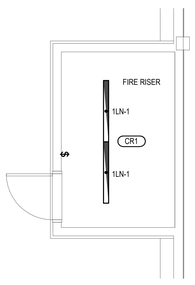
KEYED NOTES (#)

1. MOUNT OCCUPANCY SENSOR TO THE BOTTOM OF THE TRUSS SO SENSOR HAS A CLEAR VIEW OF THE SPACE. COORDINATE INSTALLATION REQUIREMENTS WITH THE LIGHTING CONTROLS SYSTEM SUPPLIER.
2. DASHED LINE INDICATES LIGHTING THAT IS CONTROLLED BY THE OCCUPANCY SENSORS IN THE SPACE. ONCE AREA IS UNOCCUPIED FOR 10 MINUTES, THE SENSOR SHALL REDUCE THE LIGHTING IN THE DASHED AREA BY NOT LESS THAN 50 PERCENT FOR 10 ADDITIONAL MINUTES. IF NO OCCUPANTS ARE DETECTED AFTER 20 MINUTE TIME LIMIT THE LIGHTS SHALL TURN OFF UNTIL OCCUPANTS ARE DETECTED. OCCUPANCY SENSORS IN THIS SPACE SHALL BE SET TO AUTO ON/AUTO OFF WITH A 20-MINUTE MAXIMUM DELAY TO TURN LIGHT FIXTURES OFF ONCE THE SPACE IS UNOCCUPIED.
3. LOW VOLTAGE MANUAL SWITCH. SWITCH TO TURN ON/OFF ALL LIGHTS WITHIN THE WAREHOUSE AREAS. SEE LIGHTING CONTROL DRAWINGS FOR ADDITIONAL INFORMATION AND SWITCHING REQUIREMENTS.
4. OCCUPANCY SENSOR FOR AISLEWAYS LIGHTING SHALL ONLY CONTROL THE LIGHTS WITHIN EACH AISLEWAY INDEPENDENTLY AND SHALL NOT CONTROL ANY LIGHTS OUTSIDE THE AISLEWAY PER THE REQUIREMENT OF IECC.
5. PENDANT MOUNT OCCUPANCY SENSOR AS NECESSARY TO HAVE A CLEAR VIEW OF THE AISLEWAY AND BE BELOW THE LIGHT FIXTURES.
6. PENDANT MOUNT EXIST SIGN AS NECESSARY TO HAVE A CLEAR VIEW OF THE EXIT SIGN AND BE BELOW THE LIGHTS.
7. ANY AND ALL PENETRATIONS THROUGH THIS WALL SHALL BE FIRE CALKED AND SEALED PER ALL REQUIREMENTS AND STANDARDS FOR RATING OF WALL. SEE ARCHITECTURAL DRAWINGS FOR WALL RATING REQUIREMENTS.
8. PROVIDE UNISTRUT MOUNT FOR FIXTURES. SEE 2/EL501. ADJUST FIXTURES TO BE EVEN WITH THE OTHER LIGHT FIXTURES IN THE SPACE.
9. MOUNT AS HIGH AS POSSIBLE. CONFIRM HEIGHT AND LOCATION WITH THE ARCHITECT.



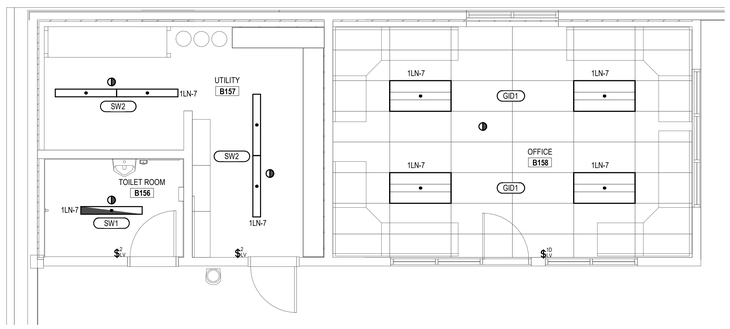
5 SOUTH FIRE RISER ROOM LIGHTING PLAN

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



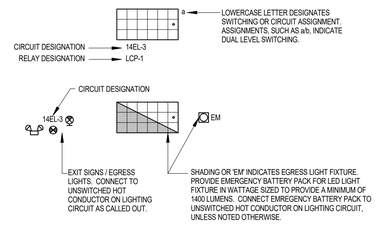
4 NORTH FIRE RISER ROOM LIGHTING PLAN

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



3 OFFICE LIGHTING PLAN

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



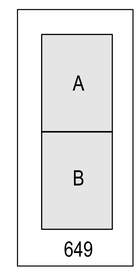
TYPICAL LIGHT FIXTURE CONVENTION

SCALE: NONE

NOTE:

1. SEE ELC SHEETS FOR LIGHTING CONTROL REQUIREMENTS.

KEY PLAN



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REV	DATE	DESCRIPTION

VCBO NUMBER: 21515
CLIENT NUMBER: 20385
DATE: 2021-08-16

TCSD WAREHOUSE REMODEL - BLDGS 649

TOOELE COUNTY SCHOOL DISTRICT
PROJECT ADDRESS: 180 GARNET ST. TOOELE, UTAH 84074

BID SET

LIGHTING PLAN

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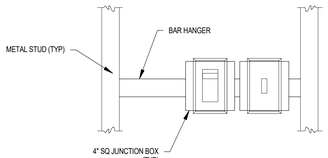
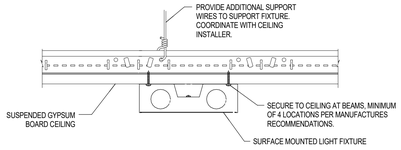
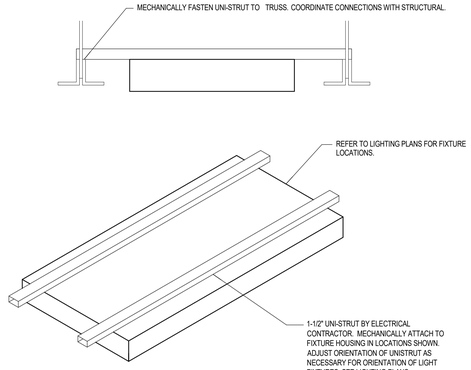
NOTE:
WHERE SHOWN ON THE DRAWINGS MOUNT JUNCTION BOXES FOR LIGHT SWITCHES AND DIMMERS NEXT TO EACH OTHER (TYPICAL ALL LOCATIONS), JUNCTION BOXES THAT ARE MOUNTED IN SEPARATE STUD SPACES WILL BE RELOCATED.



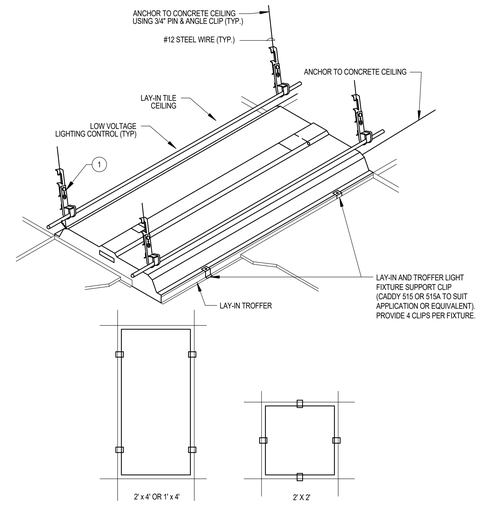
4 TYPICAL JUNCTION BOX MOUNTING DETAIL
SCALE: NONE



3 SURFACE MOUTED LIGHT FIXTURE DETAIL
SCALE: NONE



2 LIGHT FIXTURE MOUNTING DETAIL
SCALE: NONE



SUPPORT CLIP ARRANGEMENT DIAGRAMS

(1) PROVIDE J-HOOKS WITH ROD/WIRE CLIP (CADDY 124Z34 OR APPROVED EQUIVALENT) IN QUANTITIES AS MAY BE REQUIRED FOR ROUTING OF LOW VOLTAGE LIGHTING CONTROL CABLES. INSTALL SUPPORTS AND CLIPS 12" ABOVE RECESSED LAY-IN LIGHT FIXTURES. SECURE CABLES AT A SPACING OF NOT MORE THAN 60" ON CENTERS. SUPPLEMENT WITH J-HOOKS SUSPENDED BY ALL-THREAD AS MAY BE REQUIRED TO MEET SPACING CRITERIA. INSTALLATION SHALL MEET ALL APPLICABLE REQUIREMENTS OF THE NEC 300.11. ALL CABLES SHALL BE ROUTED IN A NEAT WORKMANLIKE MANNER PARALLEL AND PERPENDICULAR TO CEILING GRIDS.

1 LAY-IN LIGHT FIXTURE MOUNTING DETAIL
SCALE: NONE

LIGHT FIXTURE SCHEDULE

TYPE	MANUFACTURER	SERIES	DESCRIPTION	VOLTAGE	LOAD (VA)	MOUNTING	LAMPS NUMBER	LAMPS TYPE	LAMPS WATTS	LAMPS COLOR (KELVIN)	LAMPS CRI	REMARKS
AW1	LITHONIA	WDGE2 LED	EXTERIOR WALL SCONCE VISUAL COMFORT WIDE DISTRIBUTION 3,000 LUMENS / 0-10V DIMMING MOTION / AMBIENT SENSOR CUSTOM COLOR BY ARCHITECT	120	23	WALL AT 16'-0" AFF	A/R	LED	23	4000	80	CONFIRM MOUNTING HIGHT WITH ARCHITECT
GID1	LITHONIA	2BLT4	2'x4' INDIRECT CURVED ACRYLIC LINEAR PRISMATIC DIFFUSER 4,800 LUMENS HIGH EFFICIENCY 0-10 VOLT DIMMING - 1%	120	35	LAY-IN	A/R	LED	35	3500	80	
HB1	LITHONIA	IBG	HIGH BAY ACRYLIC FROSTED LENS / WIRE GUARD WIDE DISTRIBUTION / 48,000 LUMENS 0-10 VOLT DIMMING - 10%	120	290	SURFACE ON TRUSS OR UNISTRUT	A/R	LED	290	4000	80	MOUNT TO BOTTOM OF TRUSS, UNLESS NOTED OTHERWISE. SEE LIGHTING PLANS
SW1	LITHONIA	STL4	1X4 ACRYLIC WRAP AROUND 0-10 VOLT DIMMING TO 10% / 4,800 LUMENS	120	45	SURFACE	A/R	LED	45	3500	85	
SW2	LITHONIA	STL4	1X4 ACRYLIC WRAP AROUND 0-10 VOLT DIMMING TO 10% / 6,000 LUMENS	120	53	SURFACE	A/R	LED	53	3500	85	
X1	LITHONIA	LV	DIE-CAST ALUMINUM VANDAL RESISTANT EXIT SIGN SINGLE FACE / GREEN LETTERS NICKEL CADMIUM BATT / STANDARD COLOR BY ARCHITECT	120	1.9	UNIVERSAL	A/R	LED	1.9	N/A	N/A	PROVIDE PENDAT KIT IF EXIT IS CALLED OUT TO BE PENDANT MOUNTED SEE LIGHTING PLANS
X2	LITHONIA	LV	DIE-CAST ALUMINUM VANDAL RESISTANT EXIT SIGN DOUBLE FACE / GREEN LETTERS NICKEL CADMIUM BATT / STANDARD COLOR BY ARCHITECT	120	3.8	UNIVERSAL	A/R	LED	3.8	N/A	N/A	PROVIDE PENDAT KIT IF EXIT IS CALLED OUT TO BE PENDANT MOUNTED SEE LIGHTING PLAN

BIDDING REQUIREMENTS

1. BID ONLY PRODUCTS THAT ARE SPECIFIED OR APPROVED BY ADDENDUM.
2. PACKAGING OF LIGHT FIXTURES WITH OTHER SYSTEMS IS NOT ALLOWED.
3. WHEN ONLY ONE PRODUCT IS APPROVED FOR BIDDING, THE PRICE FOR THAT ITEM SHALL BE BROKEN OUT SEPARATELY WHEN SUBMITTING PRICING TO VARIOUS DISTRIBUTORS AND/OR CONTRACTORS.
4. WHEN A CONTRADICTION EXISTS BETWEEN A SPECIFIC MODEL NUMBER AND THE DESCRIPTION, THE DESCRIPTION SHALL GOVERN.

LIGHT FIXTURE GENERAL NOTES

1. REFER TO THE ARCHITECTURAL REFLECTED CEILING PLANS FOR LOCATIONS OF LIGHT FIXTURES. BRING ALL DISCREPANCIES OF LOCATIONS AND QUANTITIES TO THE ATTENTION OF THE ARCHITECT AND ELECTRICAL ENGINEER PRIOR TO BIDDING.
2. REFER TO ARCHITECTURAL ELEVATIONS FOR MOUNTING HEIGHTS AND LOCATIONS OF LIGHT FIXTURES. BRING ALL DISCREPANCIES TO THE ATTENTION OF THE ARCHITECT PRIOR TO BIDDING.
3. REFER TO THE SPECIFICATIONS FOR OTHER LIGHT FIXTURE, BALLAST, AND LAMP REQUIREMENTS AND ACCEPTABLE MANUFACTURERS.
4. REFER TO ARCHITECTURAL DRAWINGS FOR LOUVER REQUIREMENTS (IF ANY).
5. CONFIRM AVAILABLE MOUNTING DEPTHS OF ALL LIGHT FIXTURES AND COMPARE WITH DEPTHS SHOWN ON SHOP DRAWING. BRING ALL POTENTIAL CONFLICT AREAS TO THE ATTENTION OF THE ARCHITECT AND ELECTRICAL ENGINEER PRIOR TO RELEASE.
6. PROVIDE DISCONNECTING MEANS FOR EACH BALLAST PER THE REQUIREMENTS OF NEC 410.130(G) AND THE SPECIFICATIONS.

LIGHT FIXTURE PRIOR APPROVAL REQUIREMENTS

1. PRIOR APPROVAL IS REQUIRED BEFORE BIDDING THIS PROJECT.
2. PRIOR APPROVALS SHALL BE SUBMITTED TO THE ELECTRICAL ENGINEER'S OFFICE A MINIMUM (5) FIVE WORKING DAYS BEFORE THE BID. PRIOR APPROVALS RECEIVED AFTER THIS TIME PERIOD SHALL BE REJECTED.
3. PRIOR APPROVALS SHALL BE SIGNED BY A PRINCIPAL OF THE SUBMITTING ORGANIZATION STATING THAT THEY HAVE PREPARED AND/OR REVIEWED THE SUBMITTAL AND THAT THE PRODUCTS PROPOSED ARE EQUIVALENT TO THOSE SPECIFIED. ANY EXCEPTIONS SHALL BE SO NOTED.
4. ITEMS THAT ARE SUBMITTED AND HAVE BEEN APPROVED WILL BE LISTED IN THE ADDENDUM(S). VERBAL APPROVAL WILL NOT BE GIVEN ON ANY ITEM.
5. IT IS NOT THE RESPONSIBILITY OF THE ELECTRICAL ENGINEER TO NOTIFY THE SUBMITTING PARTY OF ERRORS IN THE SUBMITTAL. NOTIFICATION OF ERRORS BY THE ELECTRICAL ENGINEER PRIOR TO ISSUANCE OF THE ADDENDUM(S) MAY NOT BE GIVEN.
6. PRIOR APPROVALS SHALL CONSIST OF TWO SETS OF CUT SHEETS DESCRIBING THE PRODUCTS BEING SUBMITTED AS EQUIVALENTS. FAXES ARE NOT ACCEPTABLE. ALL SPECIFICATION INFORMATION SHALL BE CLEARLY MARKED, WITH NON-APPLICABLE INFORMATION CROSSED OUT. COMPLETE PHOTOMETRIC DATA SHALL BE PROVIDED. PRODUCTS WITHOUT PHOTOMETRIC DATA WILL BE NOT BE APPROVED.

LIGHT FIXTURE ABBREVIATION SCHEDULE

NOTE: NOT ALL ABBREVIATIONS WILL NECESSARILY BE USED.

A.F.F.	ABOVE FINISHED FLOOR
WALL@CLG.	WALL MOUNT AT CORNER OF WALL AND CEILING
CCBA	CUSTOM PAINTED COLOR AS SELECTED BY THE ARCHITECT
SCBA	STANDARD PAINTED COLOR AS SELECTED BY THE ARCHITECT
CFBA	CUSTOM FINISH AS SELECTED BY THE ARCHITECT
SFBA	STANDARD FINISH AS SELECTED BY THE ARCHITECT
MOD	MODIFY STANDARD LIGHT FIXTURE AS INDICATED

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TCSD WAREHOUSE REMODEL - BLDGS 649

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PROJECT ADDRESS: 180 GARNET ST. TOOELE, UTAH 84074

BID SET

LIGHTING DETAILS AND FIXTURE SCHEDULE

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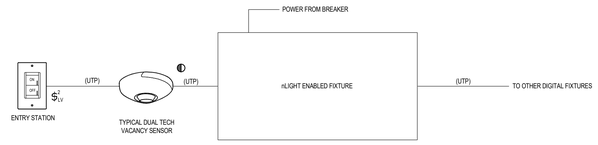
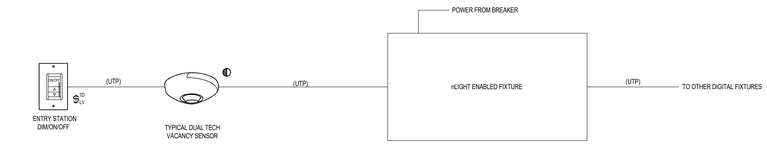
Notes
ALL nLIGHT DEVICES IN EACH ZONE INTERCONNECT IN A DAISY CHAIN TOPOLOGY. ORDER OF DEVICES SHOWN IS NOT REQUIRED. DEVICES CAN BE CHAINED IN ANY ORDER. EACH NETWORKED ZONE CONNECTS TO BACKBONE DEVICES (BRIDGE). CAT5 SHALL BE TERMINATED WITH NON-BOOTED RJ45 CONNECTORS. RJ45 CONNECTORS SHALL UTILIZE "8" STANDARD FOR CONDUCTOR ORDER. ALL CONTROL WIRING BY OTHERS UNLESS OTHERWISE NOTED.

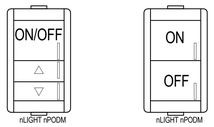
Wire Designations				
+ UTP UNSHIELDED TWISTED PAIR (1) Belden 1583A (CAT 5)	+ AO ANALOG 0-10v DIMMING (1) GRAY #18 AWG Stranded (1) VIOLET #18 AWG Stranded	+ D DMX (1) BELDEN 9729	+ CC DRY CONTACT CLOSURE (2) #16 AWG Stranded	+ N ETHERNET (1) Belden 1583A



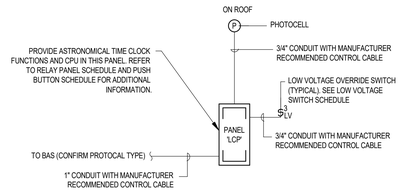
2 TYPICAL ROOM LIGHTING CONTROLS
SCALE: NONE



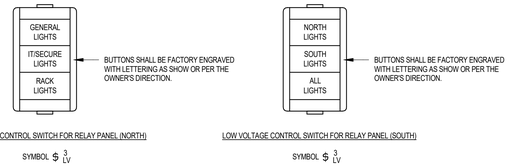
1 TYPICAL OFFICE LIGHTING CONTROLS
SCALE: NONE



4 LOW VOLTAGE LIGHTING CONTROL WALL SWITCH DETAILS
SCALE: NONE



3 LIGHTING CONTROL RISER DIAGRAM
SCALE: NONE



4 LOW VOLTAGE LIGHTING CONTROL WALL SWITCH DETAILS
SCALE: NONE

GENERAL NOTES:

1. THE LIGHTING CONTROLS AS SHOW ARE nLIGHT LIGHTING CONTROLS (BASE BID). WATTSTOPPER IS AN APPROVED ALTERNATE. NO OTHERS WILL BE ALLOWED. SEE SPECIFICATIONS.
2. COORDINATE ALL REQUIREMENTS, CONNECTIONS AND CABLE TYPE WITH THE SUPPLIER PRIOR TO ANY INSTALLATION.
3. THE LIGHTING CONTROLS SYSTEM SUPPLIER SHALL PROVIDE COMPUTER DRAFTED SHOP DRAWINGS OF THE ENTIRE LIGHTING CONTROL SYSTEM USING FLOOR PLANS PROVIDED BY THE ENGINEER. SHOP DRAWINGS TO INCLUDE PLANS, SECTIONS, ELEVATIONS, FINAL DEVICE LOCATIONS, CONDUIT SIZE AND ROUTING AND ALL CONDUCTOR SIZES. TYPICAL RISERS AND COPYING AND SUBMITTING THE CONTRACT DOCUMENTS WILL NOT BE ACCEPTED.
4. PROVIDE CABLE SUPPORTS FROM DROP WIRE SUPPORTS (CADDY PCS2 OR APPROVED EQUIVALENT) AND SECURING CLIPS IN QUANTITIES AS MAY BE REQUIRED FOR ROUTING OF LOW VOLTAGE LIGHTING CONTROL CABLES. INSTALL SUPPORTS ABOVE LIGHT FIXTURES. SECURE CABLES AT A SPACING OF NOT MORE THAN 60" ON CENTERS. SUPPLEMENT WITH J-HOOKS SUSPENDED BY ALL-THREAD AS MAY BE REQUIRED TO MEET SPACE CRITERIA. INSTALLATION SHALL MEET ALL APPLICABLE REQUIREMENTS OF THE NEC 300.11. ALL CABLES SHALL BE ROUTED IN A NEAT WORKMANLIKE MANNER PARALLEL AND PERPENDICULAR TO STRUCTURE.
5. NOT ALL SPACES SHOWN. LIGHTING CONTROL SUPPLIER TO PROVIDE INSTALLATION DRAWINGS INDICATING ALL REQUIRED WIRING FOR ALL SPACES CONTROLLED.

CONTRACTOR SHALL PROVIDE DIMMING LEADS AND CONTROL MODULES FOR ALL LED LIGHT FIXTURES SHOWN OR NOT FOR TASK TUNNING OF FIXTURES.

LIGHTING CONTROLS DIAGRAMS AS SHOWN ARE FOR BASIC CONCEPT AND LAYOUT. LIGHTING CONTROLS SYSTEM SUPPLIER TO PROVIDE INSTALLATION DRAWINGS THAT REFLECT THE ACTUAL INSTALLATION REQUIREMENTS, WIRING AND ALL REQUIRED DEVICES. SEE ELC102 AND LIGHTING PLANS FOR ADDITIONAL INFORMATION AND REQUIREMENTS.

LIGHTING CONTROL PANEL SCHEDULE

Manuf / Cat Number:	NLIGHT
Panel Name:	LCPN
Location:	SEE DRAWINGS
Transformer Voltage:	120V
Mounting:	SURFACE
NEMA Type:	1

Relay No.	Circuit Breaker	Load Controlled	Input Device	Programming Requirements
1	1LN-1	NORTH EXTERIOR LIGHTS	PHOTOCELL	A
2	1LN-3	GENERAL LIGHITNG	LV SWITCH	C
3	1LN-5	GENERAL LIGHITNG	LV SWITCH	C
4	1LN-9	IT STORAGE LIGHTS	LV SWITCH	C
5	1LN-11	SECURE STORAGE LIGHTS	LV SWITCH	C
6	1LN-13	RACK LIGHTS	LV SWITCH	C
7	1LN-15	RACK LIGHTS	LV SWITCH	C
8	1LN-17	RACK LIGHTS	LV SWITCH	C
9	1LN-19	RACK LIGHTS	LV SWITCH	C
10	1LN-21	RACK LIGHTS	LV SWITCH	C
11	1LN-23	RACK LIGHTS	LV SWITCH	C
12	1LN-25	RACK LIGHTS	LV SWITCH	C
13	1LN-27	RACK LIGHTS	LV SWITCH	C
14	1LN-29	RACK LIGHTS	LV SWITCH	C
15		SPARE		
16		SPARE		
17		SPARE		
18		SPARE		

Programming Requirements

A	EXTERIOR BUILDING LIGHTS - DUSK ON - 11:00PM OFF / 6:00 AM ON - DAWN OFF
B	PARKING LOT LIGHTS - DUSK ON - 9:00 PM DIM TO 50% / 11:00 PM OFF 6:00 AM ON - DAWN OFF
C	MANUAL ON - TIME OFF (6:30 PM), 2 HOUR OVERRIDE AT LOW VOLTAGE SWITCH
D	FLAG POLE LIGHT - DUSK ON / DAWN OFF

1	PROGRAM SYSTEM TO MEET THE REQUIEMENTS OF 2009 IBC & 2009 IECC.
2	CONFIRM SWITCHING SCHEME WITH OWNER PRIOR TO PROGRAMMING
3	INCLUDE A FINE TUNE VISIT WITHIN 3 MONTHS OF BUILDING OCCUPANCY AT OWNERS REQUEST TO MAKE MONOR ADJUSTMENTS
4	PROVIDE METAL STRIP BARRIER TO DEVIDE THE EMERGENCY LIGHTING FROM NORMAL LIGHTING
5	PROVIDE NLIGHT EMERGENCY POWER PACK(S) AS MAY BE REQUIRED FOR SWITCHING OF EMERGENCY LOADS

LIGHTING CONTROL PANEL SCHEDULE

Manuf / Cat Number:	NLIGHT
Panel Name:	LCPS
Location:	SEE DRAWINGS
Transformer Voltage:	120V
Mounting:	SURFACE
NEMA Type:	1

Relay No.	Circuit Breaker	Load Controlled	Input Device	Programming Requirements
1	1LS-1	SOUTH EXTERIOR LIGHTS	PHOTOCELL	A
2	1LS-3	WAREHOUSE LIGHTS	LV SWITCH	C
3	1LS-5	WAREHOUSE LIGHTS	LV SWITCH	C
4	1LS-7	WAREHOUSE LIGHTS	LV SWITCH	C
5	1LS-9	WAREHOUSE LIGHTS	LV SWITCH	C
6	1LS-11	WAREHOUSE LIGHTS	LV SWITCH	C
7	1LS-13	WAREHOUSE LIGHTS	LV SWITCH	C
8	1LS-15	WAREHOUSE LIGHTS	LV SWITCH	C
9		SPARE		
10		SPARE		
11		SPARE		
12		SPARE		

Programming Requirements

A	EXTERIOR BUILDING LIGHTS - DUSK ON - 11:00PM OFF / 6:00 AM ON - DAWN OFF
B	PARKING LOT LIGHTS - DUSK ON - 9:00 PM DIM TO 50% / 11:00 PM OFF 6:00 AM ON - DAWN OFF
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TOOELE COUNTY SCHOOL DISTRICT
PROJECT ADDRESS: 180 GARNET ST. TOOELE, UTAH 84074

BID SET

LIGHTING CONTROLS

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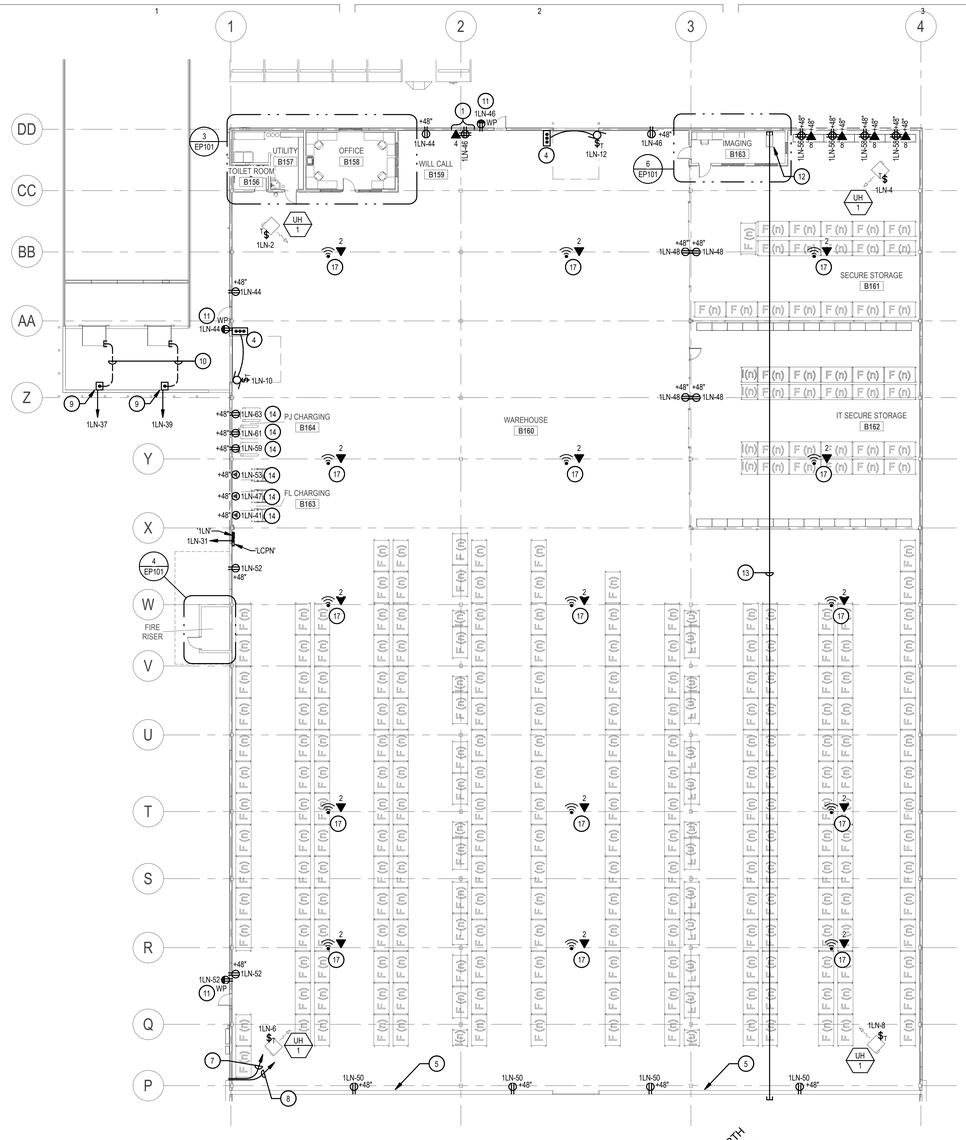
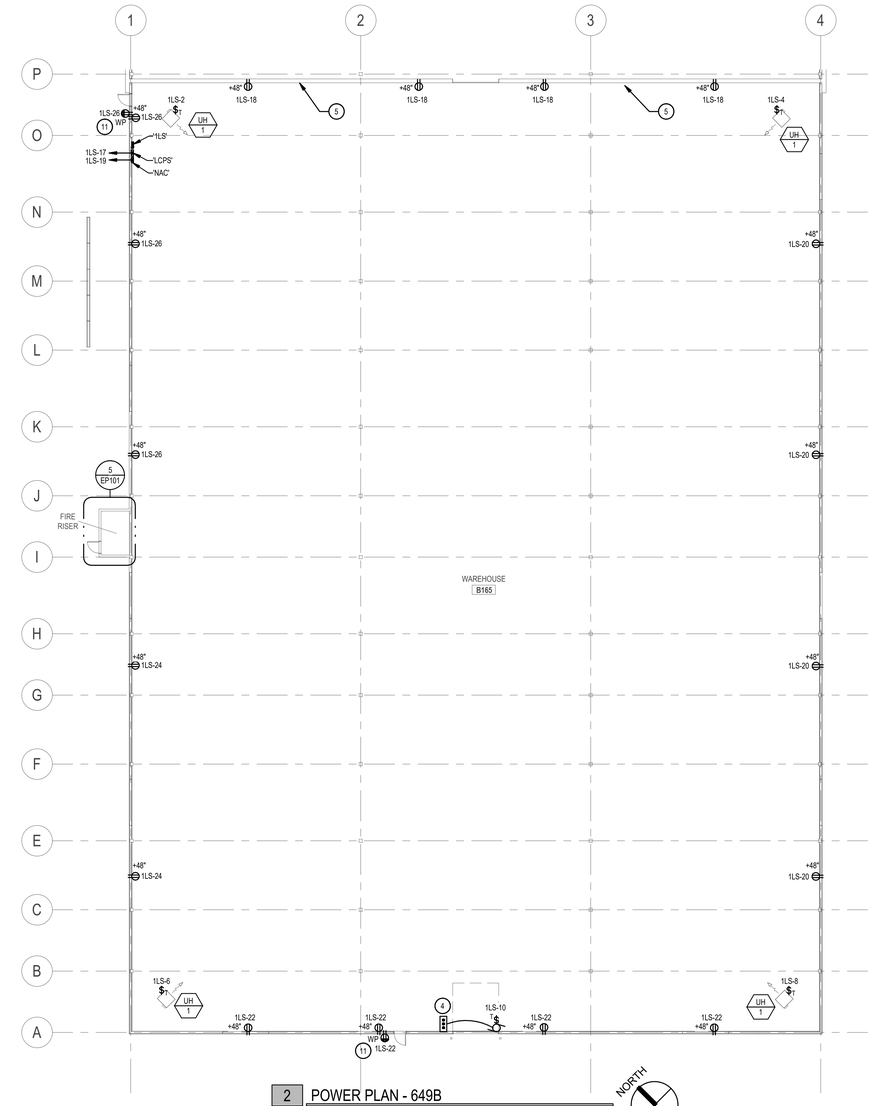


1 POWER PLAN - 649A

SCALE: 1/16" = 1'-0"



2 POWER PLAN - 649B

SCALE: 1/16" = 1'-0"

POWER GENERAL NOTES:

1. PROVIDE A MINIMUM OF 12" SEPARATION BETWEEN POWER AND COMMUNICATIONS CONDUITS.
2. ALL CONDUITS THAT EXTEND THROUGH CONCRETE SHALL BE GALVANIZED RIGID CONDUIT AND SHALL BE WRAPPED WITH TWO (2) LAYERS OF PVC TAPE.
3. ALL ELBOWS THAT EXTEND THROUGH CONCRETE SHALL BE GALVANIZED RIGID CONDUIT AND WRAPPED WITH TWO (2) LAYERS OF PVC TAPE.
4. ALL 120V, 20AMP OUTLETS THAT ARE WITHIN 6' OF ANY SINK SHALL BE GFCI.
5. THE DIVISION 26 CONTRACTOR SHALL DETERMINE THE EXACT ROUTING OF ALL CONDUITS IN THE FIELD.
6. CONTRACTOR SHALL PROVIDE ALL RACEWAYS AND JUNCTION BOXES FOR HVAC CONTROLS THERMOSTATS, ETC. REFER TO THE MECHANICAL DRAWINGS AND SPECIFICATIONS. COORDINATE WORK WITH THE MECHANICAL CONTRACTOR PRIOR TO ROUGH-IN.
7. ROUTE CONDUIT A MINIMUM OF 6" BELOW THE GRAVEL BASE.
8. CONTRACTOR SHALL COORDINATE ALL WALL MOUNTED DEVICE, FIXTURE AND EQUIPMENT HEIGHTS AND LOCATIONS WITH THE ARCHITECT PRIOR TO ANY ROUGH-IN.

KEYED NOTES (#)

1. POWER AND DATA FOR WILL CALL WORK STATION. CONFIRM EXACT MOUNTING LOCATION WITH THE OWNER PRIOR TO ANY ROUGH-IN.
2. PROVIDE A 208V, SINGLE PHASE, 30 AMP RECEPTACLE FOR DRYER. CONFIRM ALL REQUIREMENTS WITH THE OWNER PRIOR TO ANY ROUGH-IN.
3. SWITCH WITH THE LIGHTS. SEE LIGHTING PLAN FOR CIRCUIT AND CONTROLS.
4. DOOR CONTROLS ARE FURNISHED BY THE DOOR SUPPLIER AND INSTALLED AND CONNECTED BY THE CONTRACTOR. CONFIRM EXACT MOUNTING LOCATION WITH THE OWNER PRIOR TO ANY ROUGH-IN.
5. ANY AND ALL PENETRATIONS THROUGH THIS WALL SHALL BE FIRE CALKED AND SEALED PER ALL REQUIREMENTS AND STANDARDS FOR RATING OF WALL. SEE ARCHITECTURAL DRAWINGS FOR WALL RATING REQUIREMENTS.
6. POWER TO CHEMICAL MIXING STATION. CONFIRM EXACT LOCATION AND REQUIREMENTS WITH THE OWNER AND OTHER TRADES PRIOR TO ANY ROUGH-IN.
7. INTERCEPT THE EXISTING 2" COMMUNICATIONS CONDUIT AND EXTEND TO NEW TELEPHONE TERMINAL BOARD LOCATION. PROVIDE PULL ROPE IN NEW CONDUIT. PROVIDE ALL REQUIRED JUNCTION BOXES AND PULL BOXES PER ALL REQUIREMENTS OF THE SERVICE PROVIDER. UTILIZE LONG SWEEP ELBOWS TO COMPLY WITH FIBER OPTIC BENDING RADIUS. ROUTE CONDUIT IN TRUSS SPACE. DO NOT INSTALL CONDUIT BELOW THE BOTTOM CORD OF THE CEILING TRUSSES. CONFIRM ALL REQUIREMENTS WITH THE SERVICE PROVIDER PRIOR TO ANY ROUGH-IN.
8. INTERCEPT THE EXISTING 4" COMMUNICATIONS CONDUIT AND EXTEND TO NEW TELEPHONE TERMINAL BOARD LOCATION. PROVIDE PULL ROPE IN NEW CONDUIT. PROVIDE ALL REQUIRED JUNCTION BOXES AND PULL BOXES PER ALL REQUIREMENTS OF THE SERVICE PROVIDER. UTILIZE LONG SWEEP ELBOWS TO COMPLY WITH FIBER OPTIC BENDING RADIUS. ROUTE CONDUIT IN TRUSS SPACE. DO NOT INSTALL CONDUIT BELOW THE BOTTOM CORD OF THE CEILING TRUSSES. CONFIRM ALL REQUIREMENTS WITH THE SERVICE PROVIDER PRIOR TO ANY ROUGH-IN.
9. DOCK LEVELER CONTROLLER IS FURNISHED BY THE DOCK LEVELER SUPPLIER AND INSTALLED AND CONNECTED BY THE CONTRACTOR. CONFIRM EXACT MOUNTING LOCATION WITH THE OWNER PRIOR TO ANY ROUGH-IN. ADJUST CONDUIT ROUGH-IN AS NECESSARY IF CONTROL LOCATIONS ARE MOVED. IF THE CONTRACTOR FAILS TO COORDINATE WITH THE OWNER ALL CHANGES WILL BE MADE AT NO ADDITIONAL COST TO THE OWNER. CONFIRM ALL INSTALLATION REQUIREMENTS WITH THE DOCK LEVELER SUPPLIER / INSTALLER PRIOR TO ANY ROUGH-IN.
10. EXTEND A 1" CONDUIT FROM THE DOCK LEVELER CONTROLLER TO THE DOCK LEVELER PIT. CONTRACTOR TO MAKE ALL REQUIRED CONNECTIONS FROM THE CONTROLLER TO THE DOCK LEVELER MOTOR. CONFIRM EXACT CONDUIT STUB LOCATION AND ALL INSTALLATION REQUIREMENTS WITH THE DOCK LEVELER SUPPLIER / INSTALLER PRIOR TO ANY ROUGH-IN.
11. PROVIDE RED DOT #CKMGV CAST ALUMINUM (OR APPROVED EQUIVALENT) WEATHER PROOF IN-USE COVER.
12. DATA RACK. SEE 1/EP6-1 FOR ADDITIONAL INFORMATION.
13. EXTEND A 4" CONDUIT WITH ONE (1) 1" INNERDUCT FROM THE TELEPHONE TERMINAL BOARD TO THE CEILING SPACE OF THE SOUTH WAREHOUSE FOR FUTURE USE. PROVIDE PULL ROPE IN CONDUIT AND INNERDUCT. UTILIZE LONG SWEEP ELBOWS TO COMPLY WITH FIBER OPTIC BENDING RADIUS. ROUTE CONDUIT IN TRUSS SPACE. DO NOT INSTALL CONDUIT BELOW THE BOTTOM CORD OF THE CEILING TRUSSES.
14. POWER TO CHARGING STATION. CONTRACTOR SHALL COORDINATE ALL POWER REQUIREMENTS AND CONNECTIONS WITH THE CHARGING STATION SYSTEM SUPPLIER PRIOR TO ANY ROUGH-IN. CONTRACTOR TO PROVIDE ALL REQUIRED TERMINATIONS AND CONNECTIONS TO THE CHARGING STATIONS. IF THE POWER / CONNECTIONS ARE DIFFERENT THAN WHAT IS SHOWN THE CONTRACTOR SHALL PROVIDE THE ACTUAL CHARGING EQUIPMENT REQUIREMENTS TO THE ENGINEER FOR REVIEW AND COMMENT.
15. RECEPTACLES FOR DATA RACK. CONFIRM EXACT MOUNTING LOCATION AND HEIGHT WITH THE OWNERS IT DEPARTMENT PRIOR TO ANY ROUGH-IN.
16. EXTEND THREE (3) 4" CONDUITS FROM THE TELEPHONE TERMINAL BOARD TO ABOVE THE EXISTING ROOF TRUSSES FOR DATA CABLING. TERMINATE ALL CONDUITS WITH NYLON BUSHINGS ON BOTH ENDS. PROVIDE PULL ROPES IN ALL CONDUITS. ALL DATA CABLING SHALL BE RUN ABOVE THE BOTTOM CORD OF THE EXISTING ROOF TRUSSES.
17. WIRELESS ACCESS POINT AND MOUNTING HARDWARE IS FURNISHED BY THE OWNER AND INSTALLED AND CONNECTED BY THE CONTRACTOR. MOUNT TO BOTTOM OF TRUSS. CONFIRM EXACT MOUNTING LOCATION AND SPACING PRIOR TO PULLING ANY CABLING. IF THE CONTRACTOR FAILS TO COORDINATE WITH THE OWNER ALL CHANGES WILL BE MADE AS NECESSARY AT NO ADDITIONAL COST TO THE OWNER.
18. CONFIRM EXACT MOUNTING LOCATION WITH THE PLUMBING CONTRACTOR PRIOR TO ANY ROUGH-IN.

WIFI ACCESS POINT LOCATION — QTY. OF CAT. 6A SHIELDED CABLES. PROVIDE 15' LOOP ABOVE CEILING

DATA LOCATION — QTY. OF CAT. 6A CABLES (TYP).

DATA LOCTION - ELEVATION VIEW

DATA/COMMUNICATIONS SYMBOLS LEGEND:

A1-40 — DESIGNATION OF CIRCUIT. WIRE COMPLETE.

A1-40/IG — ISOLATED GROUND CIRCUIT.

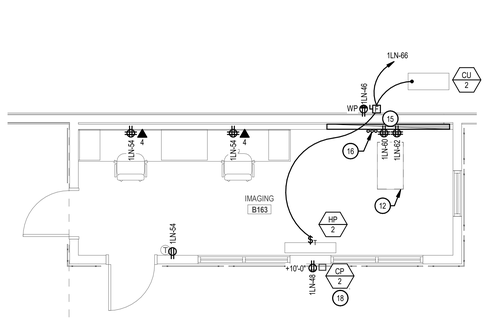
A1-40 / L6-30 — DESIGNATION OF CIRCUIT. WIRE COMPLETE. PLUG TYPE. VERIFY EXACT PLUG TYPE WITH OWNER / EQUIPMENT SUPPLIER.

PROVIDE 4" SQUARE, 2-1/8" DEEP JUNCTION BOX WITH SINGLE GANG PLASTER RING AND EXTEND 1" CONDUIT TO THE ACCESSIBLE CEILING SPACE TERMINATE CONDUIT IN CEILING SPACE WITH A NYLON BUSHING.

RECEPTACLE ELEVATION - TYP.

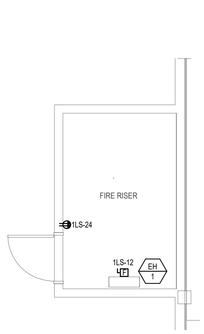
TYPICAL OUTLET CONVENTION

SCALE: NONE



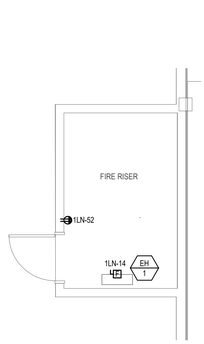
6 IMAGING POWER PLAN

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



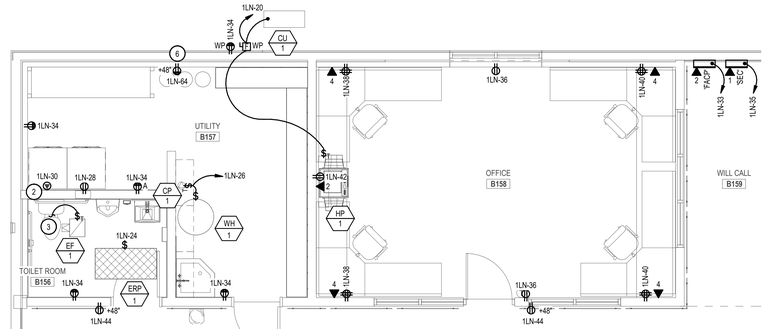
5 SOUTH FIRE RISER ROOM POWER PLAN

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



4 NORTH FIRE RISER ROOM POWER PLAN

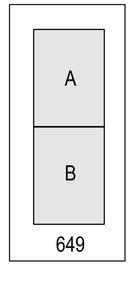
SCALE: 1/4" = 1'-0"



3 OFFICE POWER PLAN

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

KEY PLAN



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REGISTERED PROFESSIONAL ENGINEER — JEFFREY R. OWEN — No.177411 — STATE OF UTAH
08/16/21

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REV	DATE	DESCRIPTION

VCBO NUMBER:	21515
CLIENT NUMBER:	20385
DATE:	2021-08-16

TCSD WAREHOUSE REMODEL - BLDGS 649

TOOELLE COUNTY SCHOOL DISTRICT
PROJECT ADDRESS: 180 GARNET ST. TOOELE, UTAH 84074

BID SET

POWER PLAN

EP101

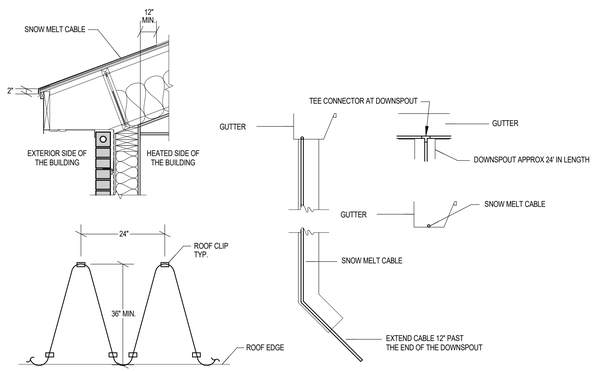
3/3/2021 2:05:45 PM

POWER GENERAL NOTES:

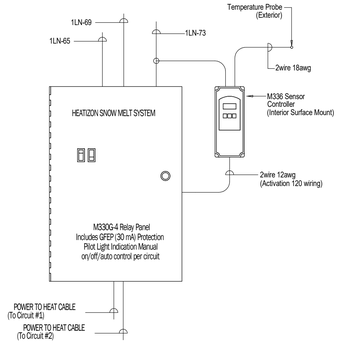
1. PROVIDE A MINIMUM OF 12" SEPARATION BETWEEN POWER AND COMMUNICATIONS CONDUITS.
2. ALL CONDUITS THAT EXTEND THROUGH CONCRETE SHALL BE GALVANIZED RIGID CONDUIT AND SHALL BE WRAPPED WITH TWO (2) LAYERS OF PVC TAPE.
3. ALL ELBOWS THAT EXTEND THROUGH CONCRETE SHALL BE GALVANIZED RIGID CONDUIT AND WRAPPED WITH TWO (2) LAYERS OF PVC TAPE.
4. ALL 120V, 20AMP OUTLETS THAT ARE WITHIN 6' OF ANY SINK SHALL BE GFCI.
5. THE DIVISION 26 CONTRACTOR SHALL DETERMINE THE EXACT ROUTING OF ALL CONDUITS IN THE FIELD.
6. CONTRACTOR SHALL PROVIDE ALL RACEWAYS AND JUNCTION BOXES FOR HVAC CONTROLS, THERMOSTATS, ETC. REFER TO THE MECHANICAL DRAWINGS AND SPECIFICATIONS. COORDINATE WORK WITH THE MECHANICAL CONTRACTOR PRIOR TO ROUGH-IN.
7. ROUTE CONDUIT A MINIMUM OF 6" BELOW THE GRAVEL BASE.
8. CONTRACTOR SHALL COORDINATE ALL WALL MOUNTED DEVICE, FIXTURE AND EQUIPMENT HEIGHTS AND LOCATIONS WITH THE ARCHITECT PRIOR TO ANY ROUGH-IN.

KEYED NOTES (#)

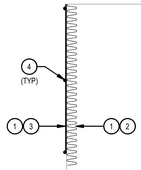
1. PROVIDE HEAT CABLE ON ROOF, IN GUTTER AND DOWNSPOUT. CONFIRM EXACT LOCATION AND LENGTHS PRIOR TO ANY ROUGH-IN. SEE DETAILS 1/EP201 AND 2/EP201 FOR ADDITIONAL INFORMATION.
2. SNOW MELT CIRCUIT #1 (ROOF). SEE HEAT CABLE RISER DIAGRAM 2/EP201 FOR CIRCUITING REQUIREMENTS AND ADDITIONAL INFORMATION. CONFIRM CIRCUIT QUANTITY WITH THE MANUFACTURE PRIOR TO ANY ROUGH-IN OR INSTALLATION. PROVIDE ADDITIONAL CIRCUIT IF NEEDED.
3. SNOW MELT CIRCUIT #2 (GUTTER/DOWNSPOUTS). SEE HEAT CABLE RISER DIAGRAM 2/EP201 FOR CIRCUITING REQUIREMENTS AND ADDITIONAL INFORMATION. CONFIRM CIRCUIT QUANTITY WITH THE MANUFACTURE PRIOR TO ANY ROUGH-IN OR INSTALLATION. PROVIDE ADDITIONAL CIRCUIT IF NEEDED.
4. DOWNSPOUT. CONFRIM EXACT LOCATION PRIOR TO ANY ROUGH-IN.



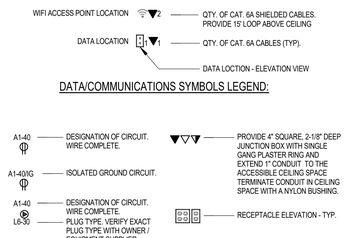
1 HEAT CABLE INSTALLATION DETAIL
SCALE: NONE



2 HEAT CABLE RISER DIAGRAM
SCALE: NONE



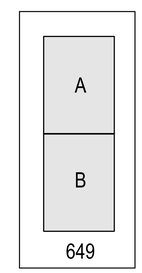
1 ROOF POWER PLAN
SCALE: 3/64" = 1'-0"



DATA/COMMUNICATIONS SYMBOLS LEGEND:

TYPICAL OUTLET CONVENTION
SCALE: NONE

KEY PLAN



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REV	DATE	DESCRIPTION

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DATE: 2021-08-16

TCSD WAREHOUSE REMODEL - BLDGS 649

TOOELE COUNTY SCHOOL DISTRICT
PROJECT ADDRESS: 180 GARNET ST. TOOELE, UTAH 84074

BID SET

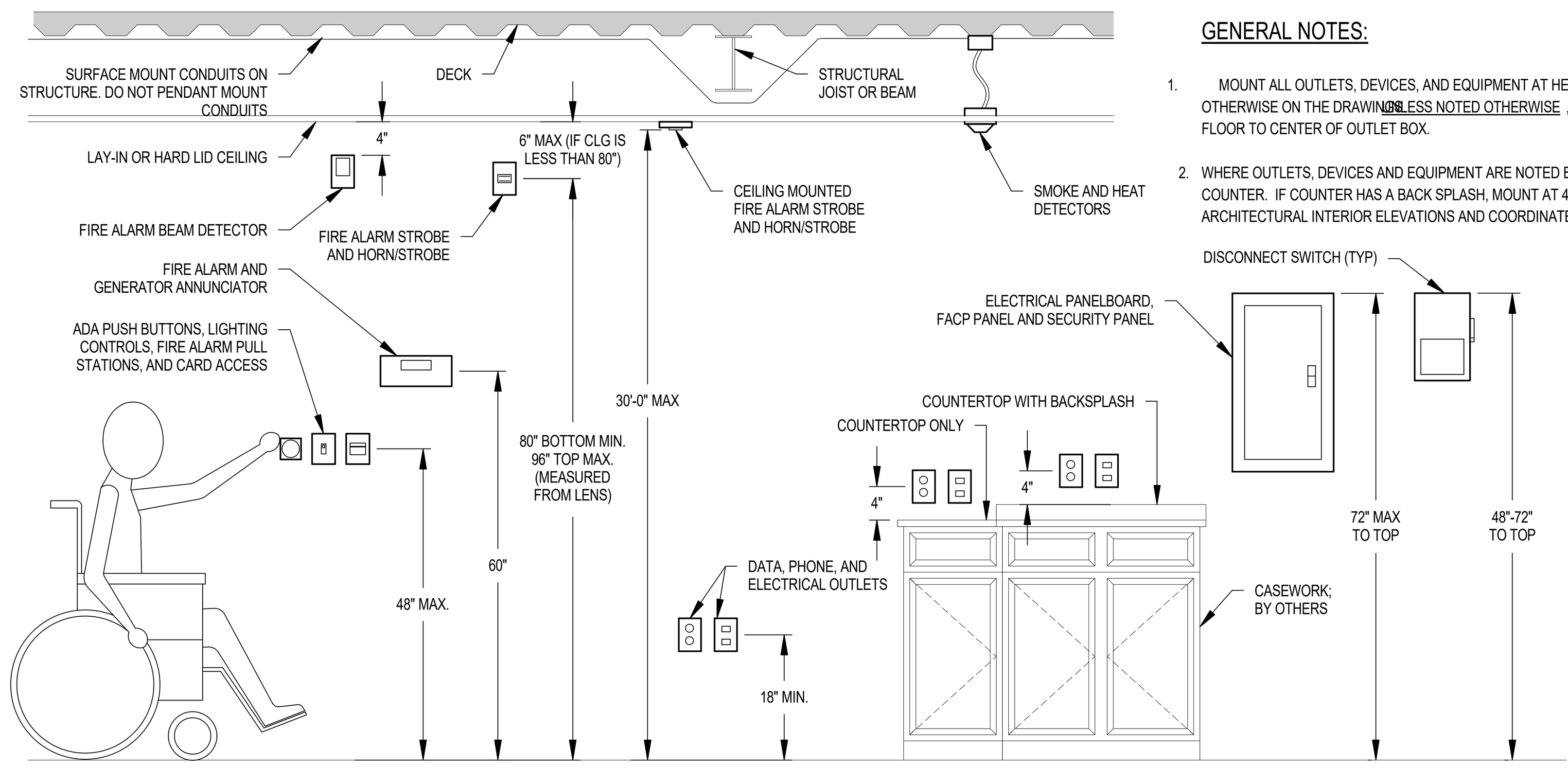
ROOF POWER PLAN

EP201

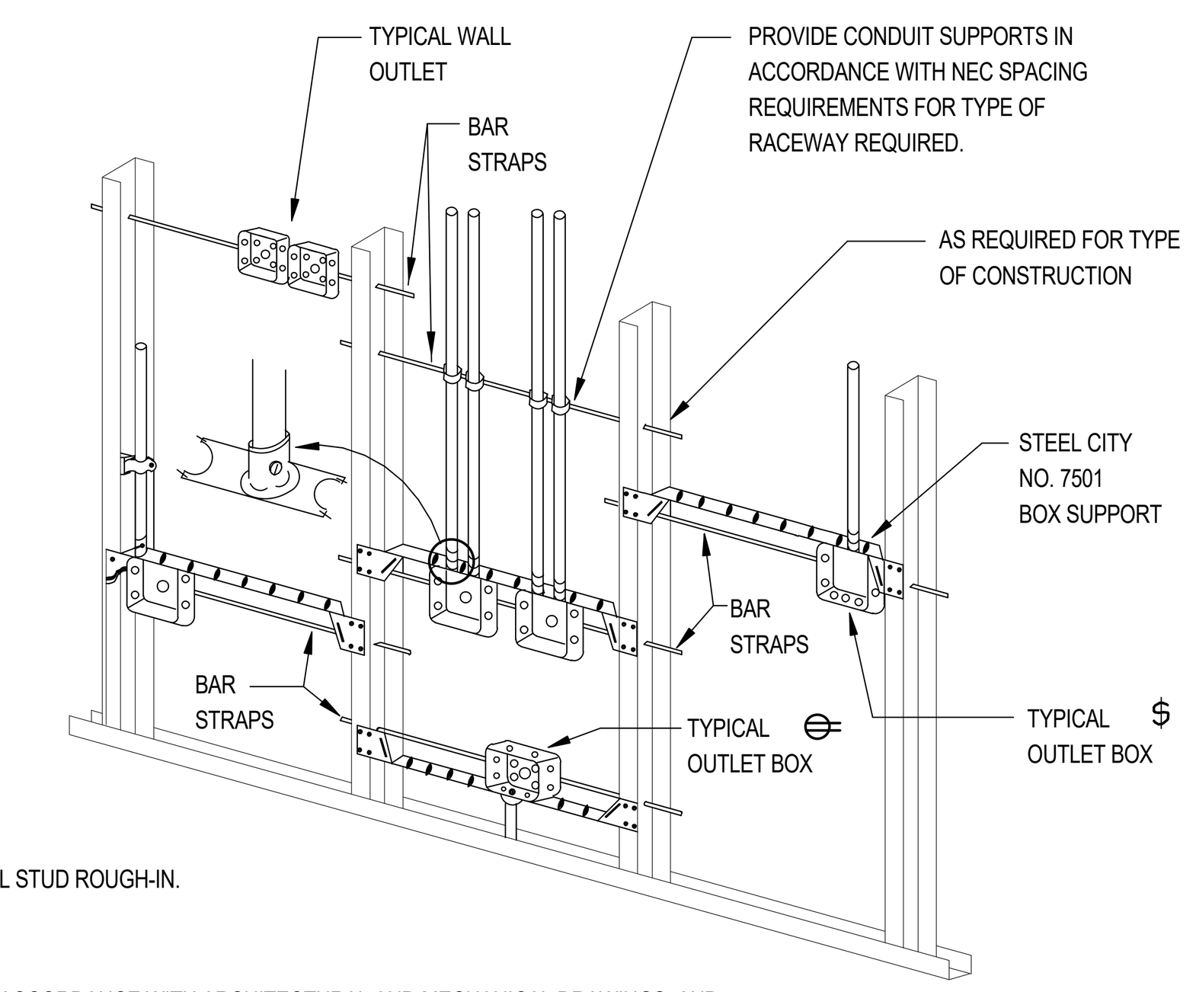
8/16/2021 2:29:48 PM

GENERAL NOTES:

1. MOUNT ALL OUTLETS, DEVICES, AND EQUIPMENT AT HEIGHTS INDICATED BELOW, UNLESS NOTED OTHERWISE ON THE DRAWINGS. UNLESS NOTED OTHERWISE, HEIGHTS ARE GIVEN FROM FINISHED FLOOR TO CENTER OF OUTLET BOX.
2. WHERE OUTLETS, DEVICES AND EQUIPMENT ARE NOTED BY THE SUBSCRIPT 'A', MOUNT AT 4" ABOVE COUNTER. IF COUNTER HAS A BACK SPLASH, MOUNT AT 4" ABOVE BACK SPLASH. REFER TO ARCHITECTURAL INTERIOR ELEVATIONS AND COORDINATE WITH CASEWORK SUPPLIER.



3 ADA AND EQUIPMENT MOUNTING HEIGHT DETAIL
SCALE: NONE



NOTES:

1. TYPICAL FOR WOOD AND METAL STUD ROUGH-IN.
2. PLASTER RINGS NOT SHOWN.
3. LOCATE ALL OUTLET BOXES IN ACCORDANCE WITH ARCHITECTURAL AND MECHANICAL DRAWINGS, AND WITH ALL APPLICABLE SHOP DRAWINGS.
4. IN ACCORDANCE WITH UBC 4303 OUTLETS ON OPPOSITE SIDES OF WALLS OR PARTITIONS IN THE SAME STUD SPACE MUST BE SEPARATED BY A MINIMUM OF 24" HORIZONTAL DISTANCE.

2 TYPICAL ROUGH-IN REQUIREMENTS
SCALE: NONE

IF PANEL BOARD IS FEED FROM A TRANSFORMER LOCATED IN THE SAME ROOM AS THE PANEL. THE TOTAL LENGTH OF BRANCH CIRCUITS SHALL NOT EXCEED THE FOLLOWING:

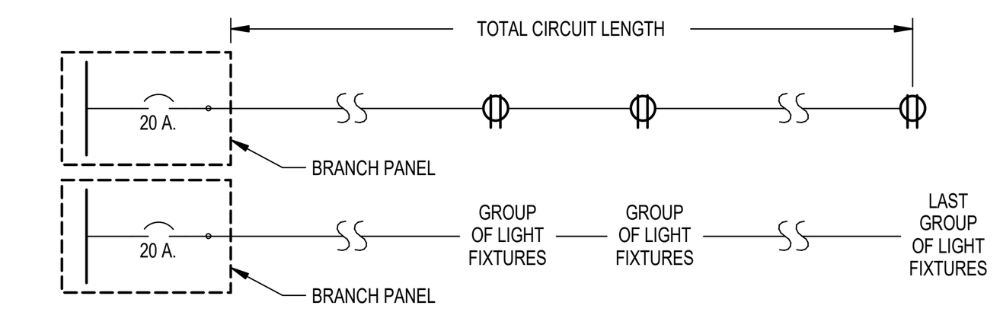
	120 VOLTS	277 VOLTS
a - USING #12 AWG	90 FT.	180 FT.
b - USING #10 AWG	150 FT.	300 FT.
c - USING #8 AWG	250 FT.	450 FT.
d - USING #6 AWG	380 FT.	700 FT.

THE ABOVE CIRCUIT LENGTHS ARE BASED ON 4% VOLTAGE DROP AT 16 AMPS LOAD AT THE END OF THE CIRCUIT. SAME WIRE SIZE SHALL BE USED FOR THE ENTIRE CIRCUIT.

IF PANELBOARD IS FEED FROM A TRANSFORMER LOCATED REMOTELY FROM THE PANEL. THE TOTAL LENGTH OF BRANCH CIRCUITS SHALL NOT EXCEED THE FOLLOWING:

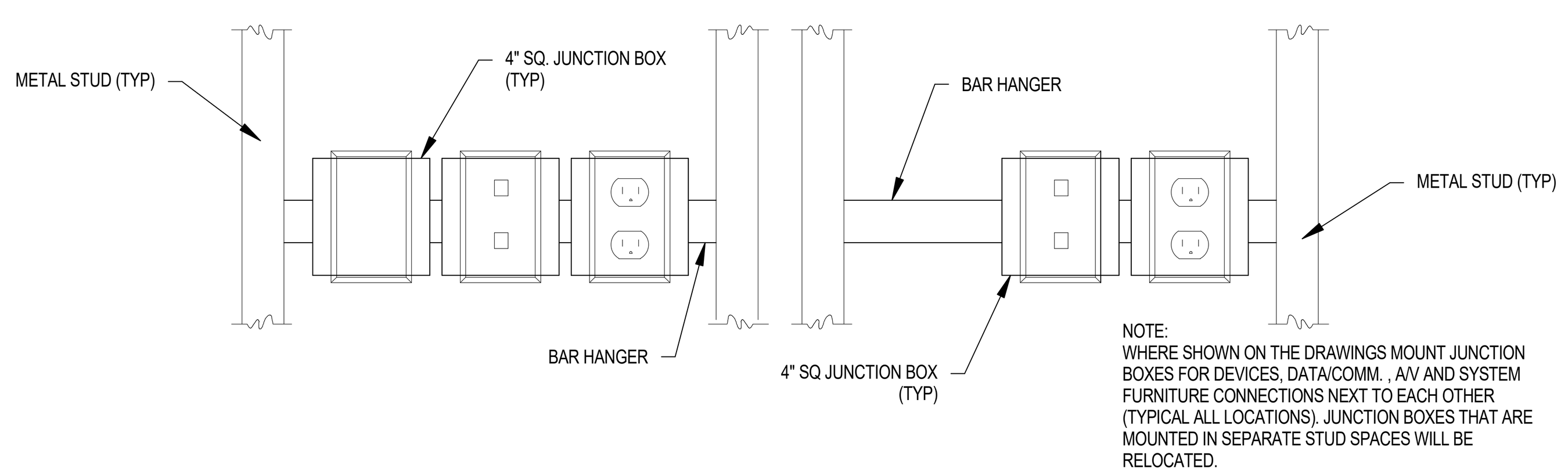
	120 VOLTS	277 VOLTS
a - USING #12 AWG	75 FT.	180 FT.
b - USING #10 AWG	125 FT.	260 FT.
c - USING #8 AWG	205 FT.	420 FT.
d - USING #6 AWG	325 FT.	660 FT.

THE ABOVE CIRCUIT LENGTHS ARE BASED ON 3% VOLTAGE DROP AT 16 AMPS LOAD AT THE END OF THE CIRCUIT. SAME WIRE SIZE SHALL BE USED FOR THE ENTIRE CIRCUIT.



BRANCH CIRCUIT DEFINITION.
CIRCUIT ORIGINATING FROM A 20 AMP CIRCUIT BREAKER IN A BRANCH PANEL AND ENDING AT THE LAST DUPLEX OUTLET ON THE CIRCUIT OR ENDS AT THE LAST LIGHT FIXTURE.

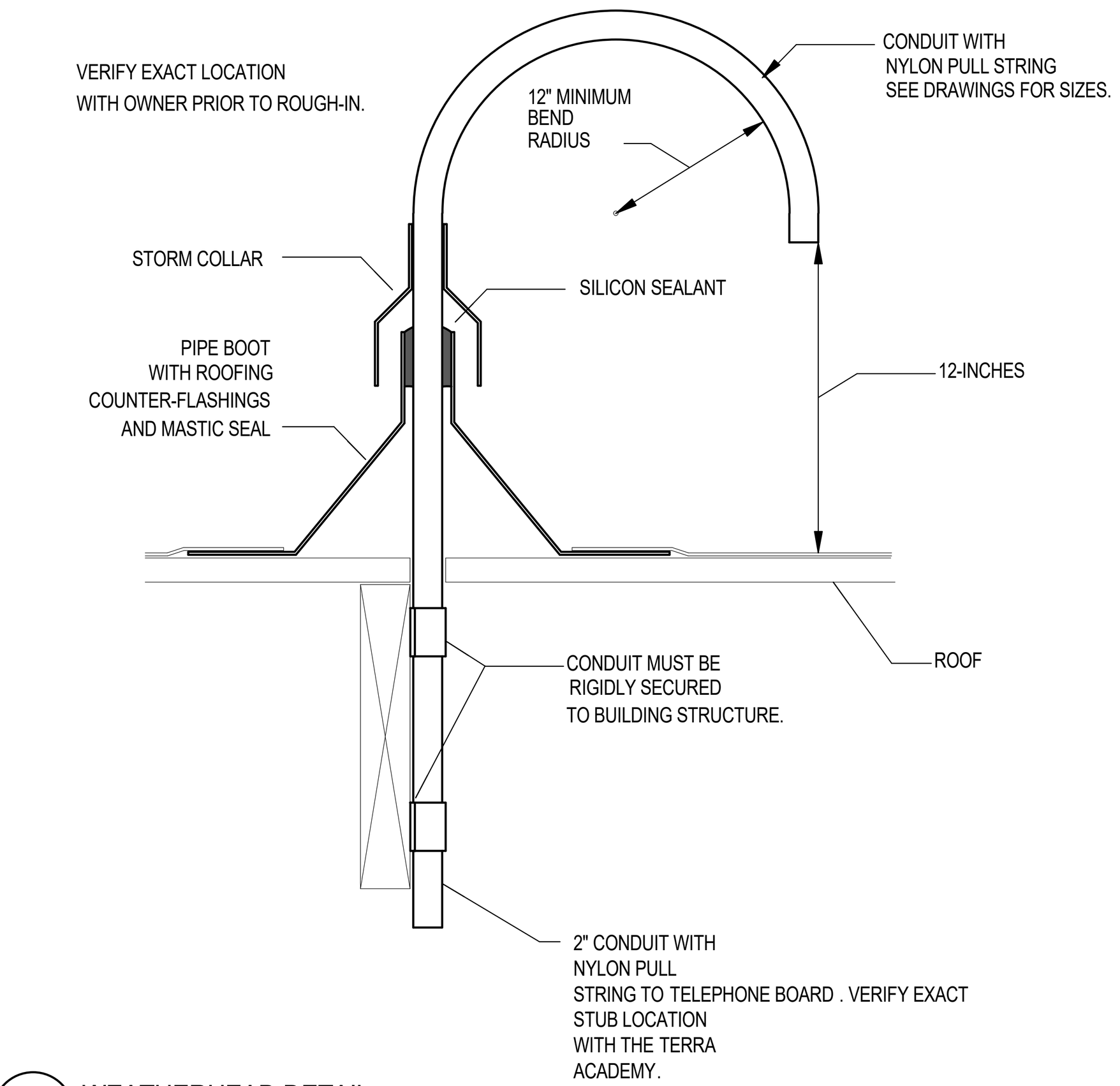
1 TYPICAL BRANCH CIRCUIT LENGTH DETAIL
SCALE: SCHEMATIC



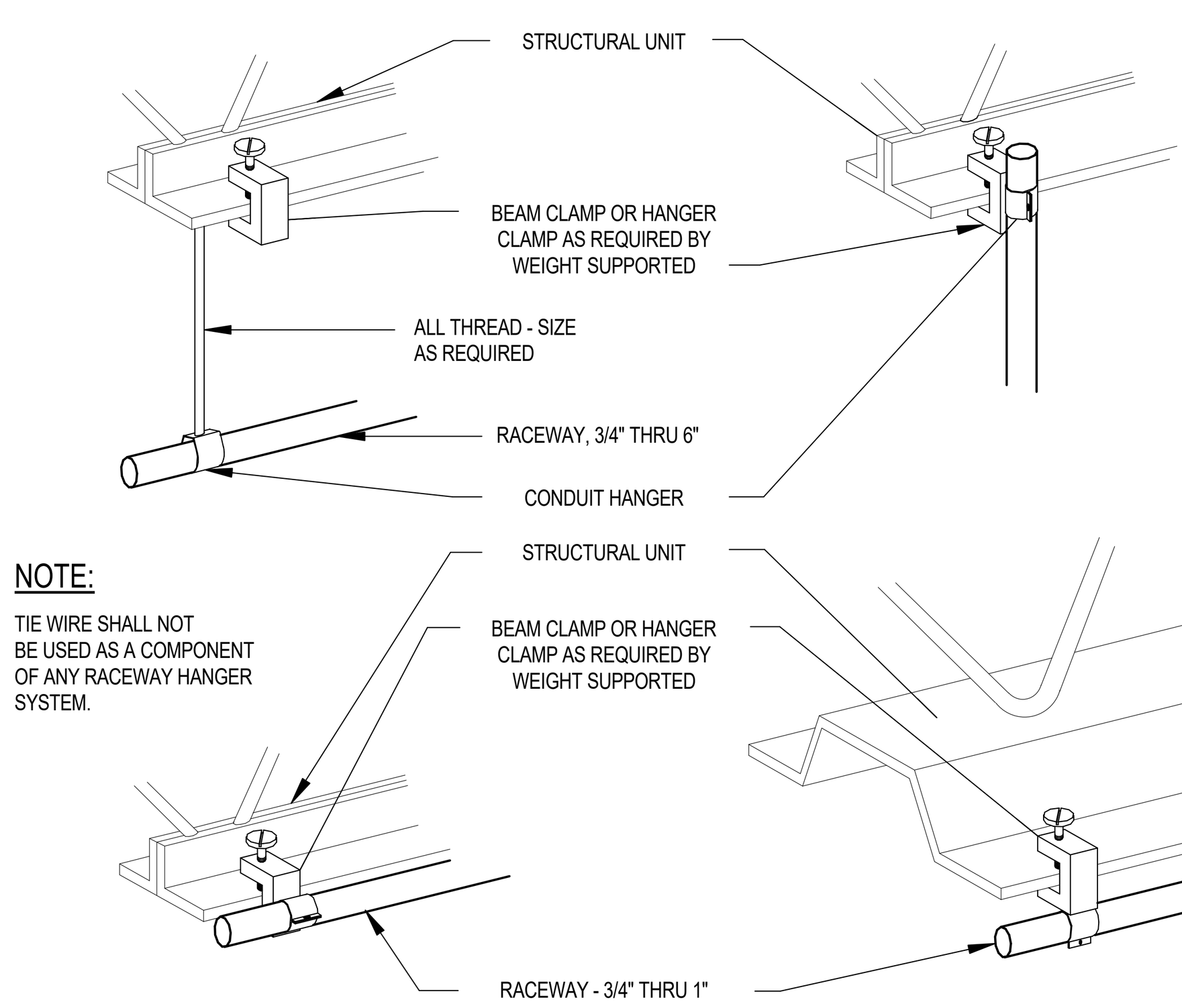
NOTE:
WHERE SHOWN ON THE DRAWINGS MOUNT JUNCTION BOXES FOR DEVICES, DATA/COMM., A/V AND SYSTEM FURNITURE CONNECTIONS NEXT TO EACH OTHER (TYPICAL ALL LOCATIONS). JUNCTION BOXES THAT ARE MOUNTED IN SEPARATE STUD SPACES WILL BE RELOCATED.

7 TYPICAL JUNCTION BOX MOUNTING DETAIL
SCALE: NONE

VERIFY EXACT LOCATION WITH OWNER PRIOR TO ROUGH-IN.

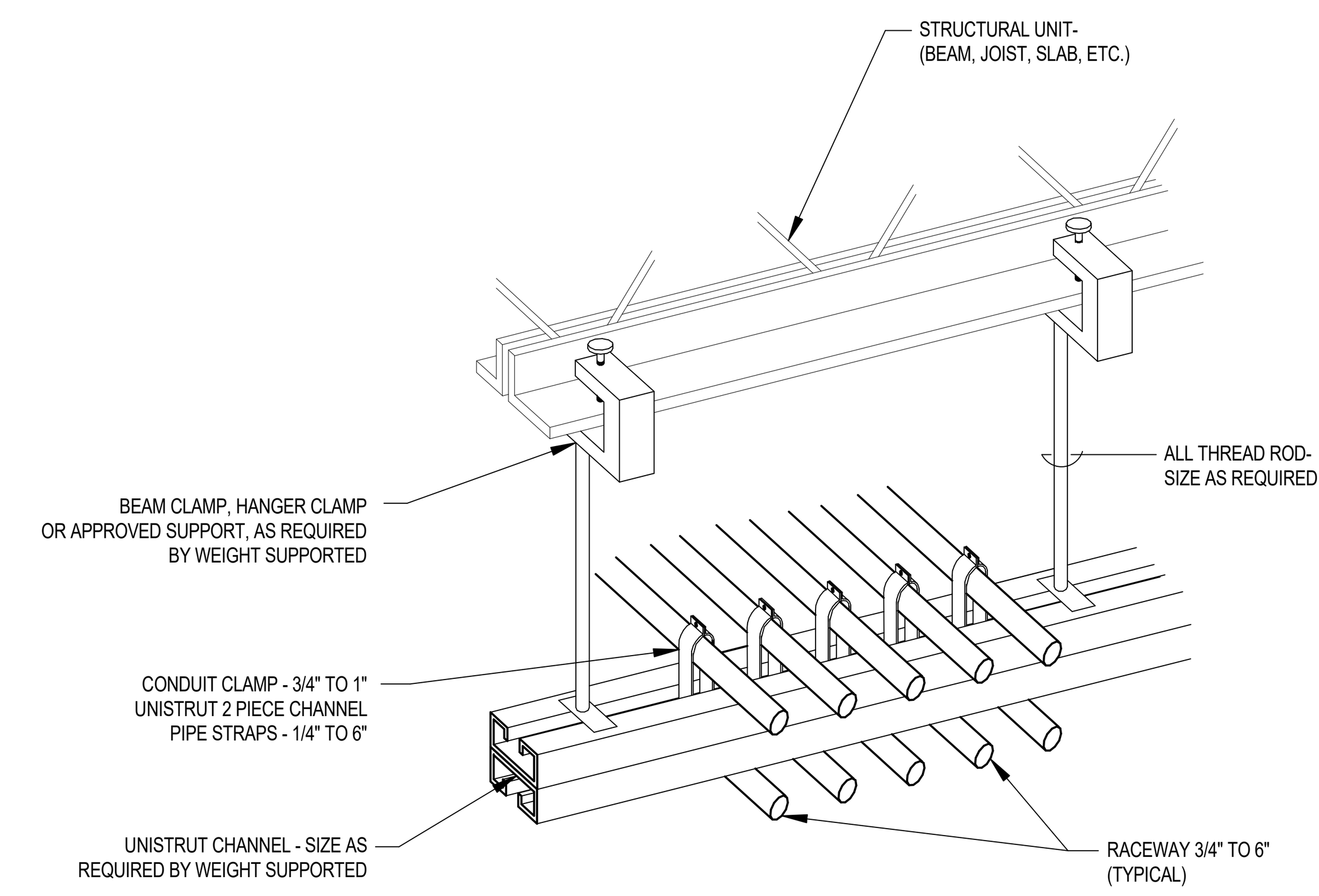


6 WEATHERHEAD DETAIL
SCALE: NONE

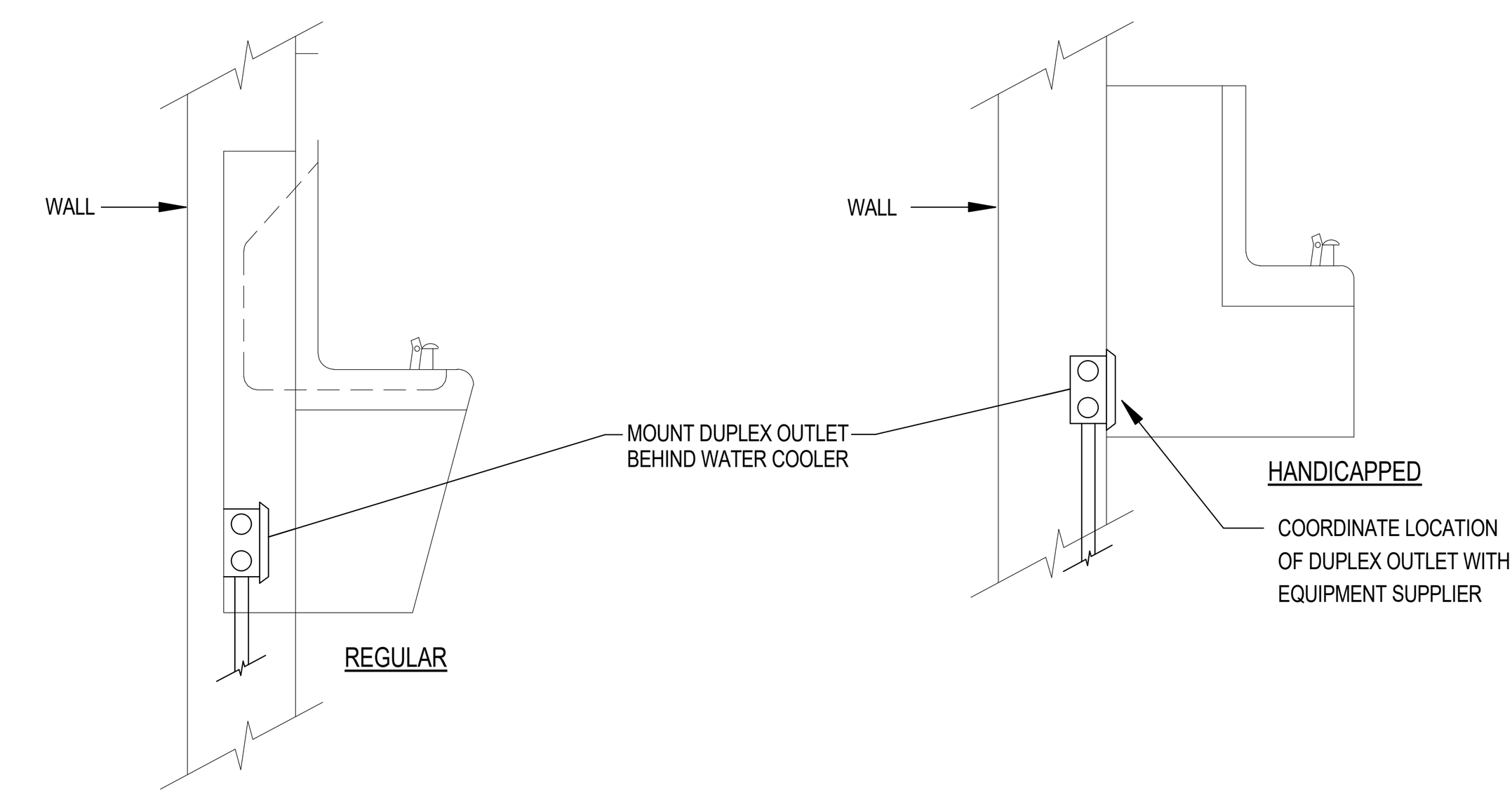


NOTE:
TIE WIRE SHALL NOT BE USED AS A COMPONENT OF ANY RACEWAY HANGER SYSTEM.

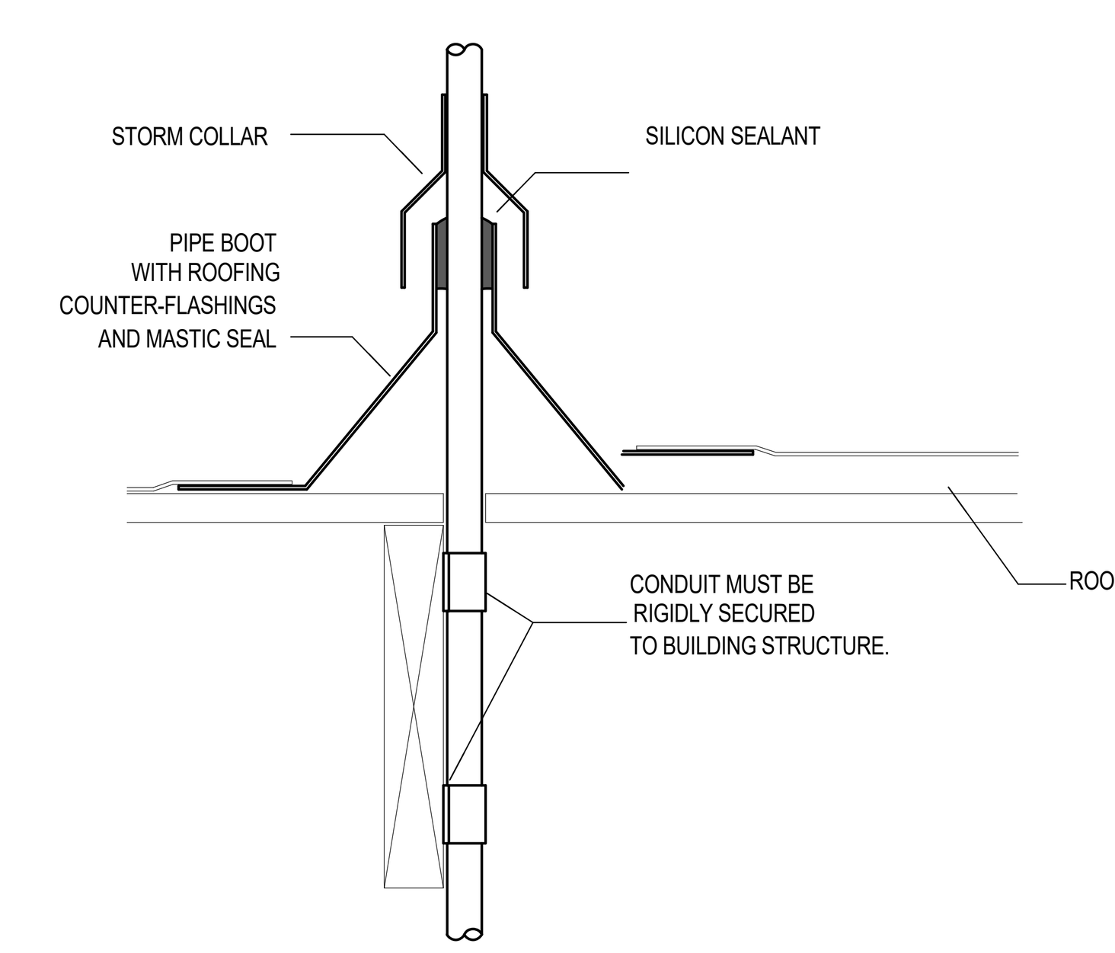
5 TYPICAL RACEWAY DETAILS
SCALE: NONE



4 MULTIPLE RACEWAY SUPPORT DETAIL
SCALE: NONE



9 ELECTRIC WATER COOLER
SCALE: NONE



8 CONDUIT THROUGH ROOF FLASHING DETAIL
SCALE: NONE

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REV	DATE	DESCRIPTION

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TCSD WAREHOUSE REMODEL - BLDGS 649

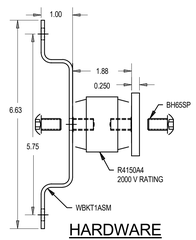
TOOELE COUNTY SCHOOL DISTRICT
PROJECT ADDRESS: 180 GARNET ST. TOOELE, UTAH 84074

BID SET

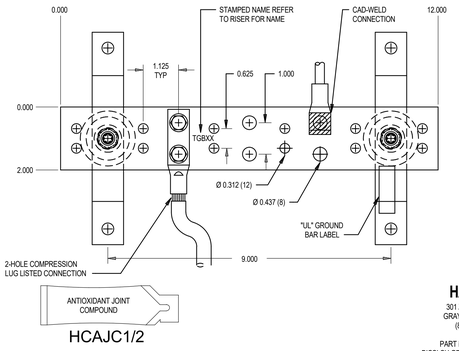
POWER DETAILS

NOTES:

1. SUPPORT FROM WALL 12 INCHES ABOVE FINISHED GRADE, UNLESS NOTED OTHERWISE.
2. PROVIDE IN EACH TELECOMMUNICATIONS ROOM.
3. EXTEND BONDING CONDUCTOR BACK TO 'TMGB' AND CONNECT TO TELECOMMUNICATIONS BONDING BACKBONE.
4. SEE SPECIFICATION SECTION 260452 FOR DETAILS. PROVIDE MANUFACTURER AND PART NUMBER INDICATED OR APPROVED EQUIVALENT.



HARDWARE DETAIL



HCAJC1/2

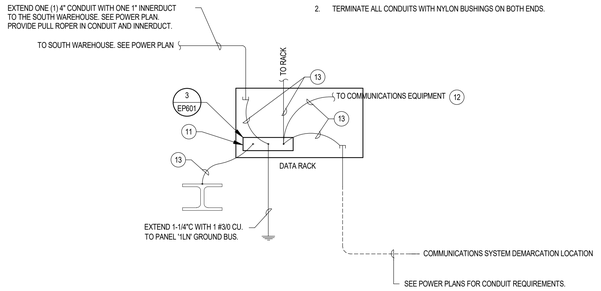
HARGER
301 ZIEGLER DRIVE
GRAYSLAKE, IL 60030
(847) 548-8700

PART NO. GBI14212TGB
BICSI CU GROUND BAR ASSEMBLY

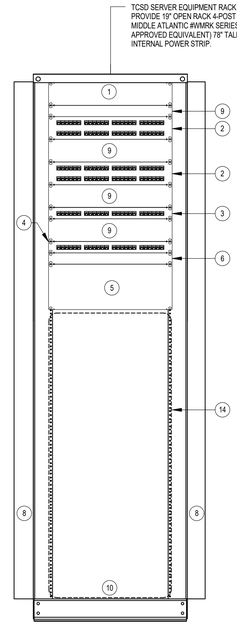
3 TYP. GROUNDING BAR - 'TGBXX'
SCALE: NONE

GROUNDING GENERAL NOTES:

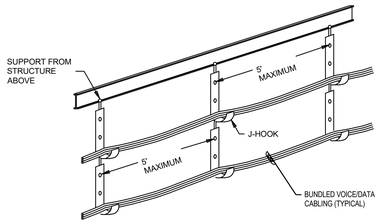
1. PROVIDE GROUNDING AND BONDING OF I.T. ROOMS, SERVER ROOM, RACKS AND CABLE TRAY PER THE FOLLOWING STANDARDS AND REQUIREMENTS: ANSI J-STD-607-A, ANSI/TIA/EIA-568-B-1.2, NEC, IEEE, BICSI AND OWNERS IT DEPARTMENT.
2. TERMINATE ALL CONDUITS WITH NYLON BUSHINGS ON BOTH ENDS.

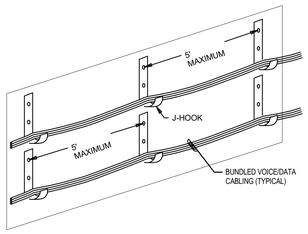


2 GROUNDING RISER DIAGRAM
SCALE: NONE

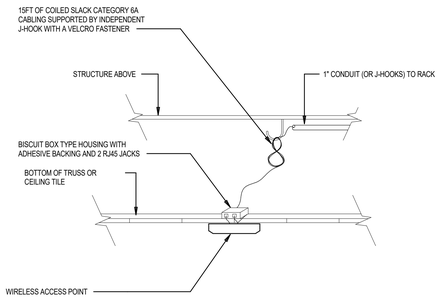


1 DATA RACK DETAIL
SCALE: NONE





5 J-HOOK INSTALLTION DETAIL
SCALE: NONE



4 TYPICAL WIRELESS ACCESS POINT INSTLALATION DETAIL
SCALE: NONE

DATA GENERAL NOTES:

1. CONTRACTOR TO VERIFY ALL COMMUNICATIONS AND DATA REQUIREMENTS WITH TOOELE SCHOOL DISTRICT.
2. CONTRACTOR TO PROVIDE ALL RACKS, PATCH PANELS AND PATCH CABLES AS REQUIRED FOR A COMPLETE INSTALLATION.
3. CONTRACTOR TO PROVIDE FIBER BREAK OUT BOXES AS DIRECTED BY TOOELE SCHOOL DISTRICT. MOUNT IN LOCATION AS DIRECTED BY TOOELE SCHOOL DISTRICT. CONTRACTOR TO TERMINATE ALL FIBERS IN THE BREAKOUT BOX IN THE MDF AND IDF ROOMS.
4. CONTRACTOR IS RESPONSIBLE FOR TESTING ALL CABLES AND CONNECTIONS TO ENSURE EIA/TIA STANDARDS ARE MET. PROVIDE A WRITTEN REPORT TO TOOELE SCHOOL DISTRICT FOR EACH CABLE TESTED.
5. CONTRACTOR TO PROVIDE PATCH CABLES AS FOLLOWS:

   VLAN (ORANGE) 6"
   ROUTER TO SWITCH, SWITCH TO SWITCH (YELLOW) 6"
   TELEPHONES TO PORT, POE PORT TO PUNCH DOWN (GREEN) 7'
   TEACHER MACHINE TO PORT (BLUE) 7'
   CCTV CAMERAS (PURPLE/VILOT) 6"
   STUDENT MACHINE TO PORT (BLACK) 7'
   SERVER TO SWITCH (WHITE) 7'
   LCD OR PROJECTOR (BROWN) 7'
   CONTRACTOR TO PROVIDE 1 PATCH CABLE, AS NOTED ABOVE, PER JACK +10% SPARE
   COORDINATE ALL REQUIREMENTS WITH TOOELE SCHOOL DISTRICT.
6. THE DATA/COMM. SYSTEM SUPPLIER SHALL PROVIDE COMPUTER DRAFTED SHOP DRAWINGS OF THE ENTIRE DATA/COMM. SYSTEM USING FLOOR PLANS PROVIDED BY THE ENGINEER. SHOP DRAWINGS TO INCLUDE PLANS, SECTIONS, ELEVATIONS, FINAL DEVICE LOCATIONS, CONDUIT SIZE AND ROUTING AND ALL CABLE TYPES. TYPICAL RISERS WILL NOT BE ACCEPTED.
7. CABLE LABELING SHALL BE AS FOLLOWS:
   D = DATA
   W = WIFI
   C = CCTV
   (e.g. D01, W05, C07)
   CONFIRM ALL LABELING WITH TOOELE SCHOOL DISTRICT PRIOR TO PULLING AND LABELING CABLES.
8. ALL DATA AND COMMUNICATION CABLES SHALL BE TERMINATED AND LABELED AT BOTH ENDS. PROVIDE LABELING AS DIRECTED BY TOOELE SCHOOL DISTRICT.
9. ALL CABLING THAT IS NOT IN CONDUIT OR CABLE TRAY SHALL BE A MINIMUM OF 5' FROM ANY LIGHT FIXTURE.
10. SECURE AND SUPPORT CABLES WITH J-HOOKS AT INTERVALS NOT EXCEEDING 60 INCHES. INSTALL EXPOSED CABLES PARALLEL AND PERPENDICULAR TO SURFACES OR EXPOSED STRUCTURAL MEMBERS, AND FOLLOW SURFACE CONTOURS. USE UL-LISTED PLENUM CABLE THROUGHOUT THE ENTIRE SYSTEM.
11. ALL CABLES SHALL BE PLENUM RATED.
12. ALL PATCH PANELS SHALL BE FULLY POPULATED, EMPTY SPACES IN PATCH PANELS WILL NOT BE ACCEPTED.

NOTE:

1. CONTRACTOR SHALL SCHEDULE A PRE-INSTALL MEETING WITH THE SCHOOL DISTRICT AND ENGINEER FOR REVIEW OF THE INSTALLATION OF THE SYSTEM PRIOR TO ANY ROUGH-IN AND PRIOR TO SUBMITTAL SUBMISSION. IF THE CONTRACTOR DOES NOT SCHEDULE A PRE-INSTALL MEETING, THE CONTRACTOR SHALL MAKE ANY AND ALL CHANGES TO THE SYSTEM AS DIRECTED BY THE SCHOOL DISTRICT AT NO ADDITIONAL COST TO THE DISTRICT.
2. RACK LAYOUT ARE FOR BASIC CONCEPT AND LAYOUT. DATA SYSTEM INSTALLER SHALL PROVIDE ALL EQUIPMENT AS NECESSARY FOR A COMPLETE AND OPERATIONAL SYSTEM TO COMPLY WITH THE SPECIFICATIONS AND OWNER REQUIREMENTS.
3. DATA CONTRACTOR SHALL LAYOUT RACKS AS DIRECTED BY THE OWNER. PROVIDE SPACE FOR OWNER PROVIDED ACTIVE EQUIPMENT.
4. DATA CONTRACTOR SHALL PROVIDE ALL REQUIRED PATCH PANELS AND WIRE MANAGEMENT FOR AV SYSTEM. COORDINATE ALL WORK AND REQUIREMENTS WITH THE AV INSTALLER.

CABLE / JACK COLORS:

WIRELESS ACCESS POINT - BLUE
LIGHTING CONTROLS - WHITE
CCTV - YELLOW
DATA - BLUE

WIRELESS ACCESS POINT - BLUE
CCTV - YELLOW
DATA - BLUE

JACK COLORS APPLY TO PATCH PANEL AND FIELD JACKS

ALL JACK COLORS SHALL BE APPROVED BY THE OWNER PRIOR TO ORDERING. SEE SPECIFICATION FOR SAMPLE REQUIREMENTS.

PATCH CABLE COLORS:

WIRELESS ACCESS POINT - BLUE
ENERGY - PURPLE
CCTV - YELLOW
DATA - BLUE
SEE SPECIFICATIONS FOR ADDITIONAL REQUIREMENTS.
CONFIRM ALL LENGTHS WITH THE DISTRICT PRIOR ORDERING.

KEYED NOTES: (#)

1. FIBER OPTIC LIU FOR FUTURE USE. COORDINATE SIZE AND ALL REQUIREMENTS WITH TOOELE SCHOOL DISTRICT.
2. 48 PORT CAT. 6A PATCH PANEL FOR DATA. CONTRACTOR TO VERIFY AND PROVIDE EXACT QUANTITY OF PATCH PANELS REQUIRED FOR A COMPLETE INSTALLATION. FULLY POPULATE PATCH PANEL.
3. 24 PORT CAT. 6A PATCH PANEL FOR WIFI. CONTRACTOR TO VERIFY AND PROVIDE EXACT QUANTITY OF PATCH PANELS REQUIRED FOR A COMPLETE INSTALLATION. FULLY POPULATE PATCH PANEL.
4. 24 PORT CAT. 6A PATCH PANEL FOR CCTV. CONTRACTOR TO VERIFY AND PROVIDE EXACT QUANTITY OF PATCH PANELS REQUIRED FOR A COMPLETE INSTALLATION. FULLY POPULATE PATCH PANEL.
5. EXACQ VISION NVR #IPO4-20T-R4A(RAID), 4U RACKMOUNT IP CAMERA SERVER (A-SERIES), EXACQVISION SOFTWARE (PROFESSIONALL) WINDOWS 7 OS, PRE-INSTALL ONE FOR EACH CAMERA + TWO EXTRA PRE-INSTALL IP CAMERA LICENSES), 1 TO 64 IP CAMERA INPUTS, INCLUDE GIGABIT NIC, SERVER-CLASS HARD DRIVES, UNIVERSAL POWER SUPPLY, 16 GB RAM, 3 YEAR WARRANTY AND SOFTWARE SUBSCRIPTION. CCTV SYSTEM SUPPLIER TO SUBMIT SERVER CALCULATIONS OF ACTUAL SERVER SIZE REQUIRED TO HANDLE CAMERAS SHOWN WITH BACK UP TIME AS REQUIRED BY THE OWNER. SERVER SIZE SHALL BE ADJUSTED BASED ON THE SERVER CALCULATION.
6. 1 GIG SWITCH. SIZE TO ACCOMMODATE ALL CAMERAS.
8. VERTICAL WIRE MANAGER. PROVIDE MIDDLE ATLANTIC #VCD SERIES SINGLE DUCT WIRE MANAGEMENT (OR PRIOR APPROVED EQUIVALENT)
9. OWNER PROVIDED ACTIVE EQUIPMENT.
10. MECHANICALLY FASTEN RACK TO FLOOR A MINIMUM FOUR (4) PLACES.
11. COPPER GROUND BUS. SEE DETAIL THIS SHEET.
12. COORDINATE REQUIREMENTS WITH LOCAL COMMUNICATIONS PROVIDER AND OWNERS IT DEPARTMENT.
13. PROVIDE A #6 MINIMUM GROUNDING CONDUCTOR TO LOCATIONS AS SHOWN.
14. SPACE RESERVED FOR OWNER EQUIPMENT.

VCBO ARCHITECTURE
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REGISTERED PROFESSIONAL ENGINEER
JEFFREY R. OWEN
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STATE OF UTAH
08/16/21

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REV	DATE	DESCRIPTION

VCBO NUMBER: 21515
CLIENT NUMBER: 20385
DATE: 2021-08-16

TCSD WAREHOUSE REMODEL - BLDGS 649

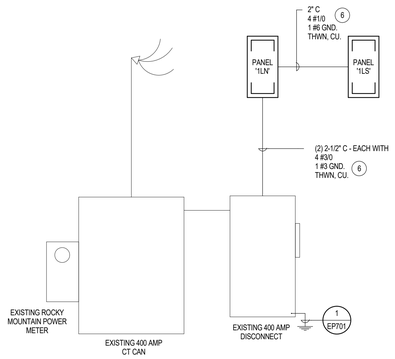
TOOELE COUNTY SCHOOL DISTRICT
PROJECT ADDRESS: 180 GARNET ST. TOOELE, UTAH 84074

BID SET

DATA DETAILS

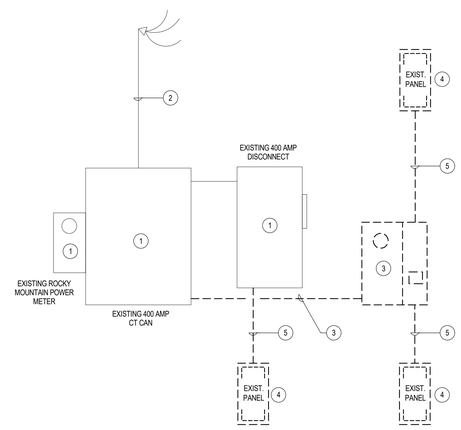
EP601

B:\2021\21515.rvt



ONE-LINE DIAGRAM

SCALE: NONE



DEMOLITION ONE-LINE DIAGRAM

SCALE: NONE

KEYED NOTES: (#)

1. EXISTING 400 AMP, 208V, 3 PHASE CT CABINET. DISCONNECT AND METER BASE TO REMAIN IN PLACE. COORDINATE MODIFICATIONS WITH ROCKY MOUNTAIN POWER PRIOR TO ANY WORK BEING DONE. PLUG ALL OPEN HOLES IN THE CT CABINET.
2. EXISTING ROCKY MOUNTAIN POWER OVERHEAD FEED TO REMAIN IN PLACE. PROTECT FROM DAMAGE DURING ALL PHASES OF THE CONSTRUCTION.
3. DISCONNECT, REMOVE AND DISPOSE OF EXISTING 200 AMP, 208V, 3 PHASE METER / MAIN DISCONNECT. REMOVE ALL CONDUIT AND CONDUCTORS COMPLETELY. METER TO BE REMOVED BY ROCKY MOUNTAIN POWER. COORDINATE ALL WORK AND REQUIREMENTS WITH ROCKY MOUNTAIN POWER PRIOR TO ANY WORK BEING DONE.
4. DISCONNECT, REMOVE AND DISPOSE OF EXISTING ELECTRICAL PANEL. REMOVE ALL CONDUITS AND CONDUCTORS ASSOCIATED WITH THE PANEL COMPLETELY. SEE DEMOLITION ONE-LINE DIAGRAM.
5. DISCONNECT, REMOVE AND DISPOSE OF EXISTING FEEDER COMPLETELY.
6. CONTRACTOR SHALL UPSIZE FEEDER FOR VOLTAGE DROP, SHOWN OR NOT. BASED ON THE ACTUAL ROUTING OF THE FEEDER.

GENERAL NOTES:

1. THE ELECTRICAL CONTRACTOR SHALL VERIFY THE AVAILABLE FAULT CURRENT WITH THE ROCKY MOUNTAIN POWER PRIOR TO BIDDING AND PROVIDE EQUIPMENT RATED ACCORDINGLY. SUBMIT FAULT CURRENT CALCULATIONS WITH SHOP DRAWINGS SUBMITTAL.
2. PROVIDE FULL LENGTH VERTICAL BUSSING IN ALL SWITCHBOARDS, DISTRIBUTION PANELBOARDS AND PANELBOARDS.
3. COORDINATE SPACE WITH ALL OTHER TRADES TO MAINTAIN ALL CODE-REQUIRED CLEARANCES.
4. ADJUST THE VERTICAL ALIGNMENT (UP TO 5' DOWNWARD) AND HORIZONTAL ALIGNMENT (UP TO 10' IN EITHER DIRECTION) ALONG NEW DUCTBANK ROUTES TO AVOID EXISTING UTILITIES AT NO ADDITIONAL COST TO THE OWNER.
5. CONTRACTOR SHALL UPSIZE ALL FEEDER FOR VOLTAGE DROP PER NEC REQUIREMENTS WETHER SHOWN OR NOT.

GENERAL NOTES:

6. ALL OVERCURRENT PROTECTIVE DEVICES SHALL BE THE SAME FAULT CURRENT RATING AS THE RATING OF THE PANEL OR SWITCHBOARD THEY ARE LOCATED IN.
7. THE ELECTRICAL CONTRACTOR SHALL PROVIDE A LABEL ON ALL PANELBOARDS, DISTRIBUTION PANELS, SWITCHBOARDS AND TRANSFORMERS INDICATING THE ARC-FLASH HAZARD. LABEL SHALL MEET THE REQUIREMENTS OF NEC 110.16. LABELS ARE PROVIDED BY THE GEAR MANUFACTURE AND ARE BASED ON THE OVERCURRENT PROTECTIVE DEVICE COORDINATION STUDY. LABELS ARE INSTALLED IN THE FIELD BY THE CONTRACTOR.
8. THE ELECTRICAL CONTRACTOR SHALL PROVIDE A LAMINATE LABEL ON PANEL CTM INDICATING THE MAXIMUM AVAILABLE FAULT CURRENT AT THE PANEL. THE ELECTRICAL CONTRACTOR SHALL PROVIDE ALL REQUIRED CALCULATIONS BASED ON THE EXACT UTILITY TRANSFORMER USED ON THE PROJECT. THE LABEL SHALL INCLUDE THE DATE THE CALCULATIONS WHERE COMPLETED , THE MAXIMUM AVAILABLE FAULT CURRENT AND OTHER INFORMATION AS REQUIRED BY NEC 110.24. THE CALCULATION SHALL BE DOCUMENTED AND MADE AVAILABLE TO THOSE AUTHORIZED TO DESIGN, INSTALL, INSPECT, MAINTAIN OR OPERATE THE SYSTEM.

GENERAL NOTES:

9. CONTRACTOR SHALL TEST THE GROUND FAULT FUNCTION OF THE MAIN BUILDING DISCONNECT AND SET TO CORRECT SETTING. ALL TEST RESULTS SHALL BE SUBMITTED TO THE AHJ AND OWNER PRIOR TO POWER TO PANEL INSPECTION AND OR METER RELEASE.
10. ALL SYSTEM BONDING JUMPER CONDUCTORS SHOWN ARE TO BE RUN IN EACH PARALLEL FEEDER SET.
11. CONTRACTOR SHALL REVIEW ONE-LINE DIAGRAM AND CONFIRM FEEDER WIRE SIZES. ANY DISCREPANCIES SHALL BE REPORTED TO THE ENGINEER PRIOR TO BID. IF DISCREPANCIES EXIST, CONTRACTOR SHALL PROVIDE CORRECT WIRE SIZE BASED ON ACTUAL BREAKER SIZE AND ANY VOLTAGE DROP ADJUSTMENTS. SEE NEC 210.19, 215.2, 250.112, AND 310,15.
12. ALL GROUNDING WIRES SHOWN IN FEEDER SCHEDULE ARE COPPER WIRES.

VOLTAGE DROP UPSIZING CHART FOR 20 AMP, SINGLE PHASE BRANCH CIRCUITS

120 VOLTS		
LENGTH (FT)	CONDUCTOR SIZE	CONDUIT SIZE
0-80	(3) #12	3/4"
81-125	(3) #10	3/4"
126-200	(3) #8	3/4"
201-320	(3) #6	1"
>320	(3) #4	1-1/2"

277 VOLTS		
LENGTH (FT)	CONDUCTOR SIZE	CONDUIT SIZE
0-130	(3) #12	3/4"
131-215	(3) #10	3/4"
216-330	(3) #8	3/4"
331-530	(3) #6	1"
>530	(3) #4	1-1/2"

PROVIDE BRANCH CIRCUIT CONDUCTORS IN SIZES SUCH THAT VOLTAGE DROP FOR BRANCH CIRCUITS DO NOT EXCEED 3 PERCENT AT THE FARTHEST OUTLET. INCREASE CONDUCTOR SIZES (AND CONDUITS WHERE TO COMPLY WITH NEC CONDUIT FILL REQUIREMENTS) AS NECESSARY TO ACCOMMODATE THIS REQUIREMENT. CALCULATIONS SHALL BE BASED ON THE FOLLOWING:

1. LIGHTING BRANCH CIRCUITS: CONNECTED LOAD PLUS 25% SPARE
2. APPLIANCE AND EQUIPMENT BRANCH CIRCUITS: NAMEPLATE OR NEC REQUIRED LOAD.
3. 120V CONVENIENCE OUTLET BRANCH CIRCUITS - AS PER TABLE ABOVE.
3. 277V LIGHTING BRANCH CIRCUITS - AS PER TABLE ABOVE.
4. USE THE NEC METHOD TO CALCULATE VOLTAGE DROP.

PANELBOARD SCHEDULE

PANEL NAME: 1LN
MOUNTING: SURFACE
ENCLOSURE: NEMA 1
DOOR STYLE: DOOR-IN-DOOR

VOLTAGE: 208Y/120
PHASE: 3
WIRE: 4
MIN. A.I.C. RATING: 42KA

MAINS TYPE: MCB
BUS MATERIAL: ALUMINUM
BUS RATING: 400 AMPS
MCB RATING: 400 AMPS

SPD: CATEGORY "A"
NEUTRAL: 100% RATED
BRANCH OCP TYPE: BOLT-ON CBs
ISOLATED GROUND: NO

NOTE	CIRCUIT DESCRIPTION	BREAKER AMPS	BREAKER POLE	LOAD TYPE	CKT #	CONNECTED LOAD/PHASE (VA) A	B	C	CKT #	LOAD TYPE	BREAKER AMPS	BREAKER POLE	CIRCUIT DESCRIPTION	NOTE
	NORTH EXTERIOR / FIRE RISER LTS	20	1	L	1	344 1,320			2	M	20	1	NORTH WEST UNIT HEATER UH-1	
	GENERAL AREA LIGHTING	20	1	L	3		1,740 1,320		4	M	20	1	NORTH EAST UNIT HEATER UH-1	
	GENERAL AREA LIGHTING	20	1	L	5			1,740 1,320	6	M	20	1	SOUTH WEST UNIT HEATER UH-1	
	OFFICE LIGHTS	20	1	L	7	400 1,320			8	M	20	1	SOUTH EAST UNIT HEATER UH-1	
	IT STROAGE LIGHTS	20	1	L	9		1,740 1,920		10	M	30	1	WEST OVERHEAD DOOR	
	SECURE STORAGE LIGHTS	20	1	L	11			1,740 1,920	12	M	30	1	NORTH OVERHEAD DOOR	
	RACK LIGHTS	20	1	L	13	1,160 1,000			14	E	20	3	NORTH RISER ROOM HEAT	
	RACK LIGHTS	20	1	L	15		1,160 1,000		16	E	-	-	-	
	RACK LIGHTS	20	1	L	17			1,160 1,000	18	E	-	-	-	
	RACK LIGHTS	20	1	L	19	1,160 1,352			20	M	25	2	HEAT PUMP CU-1/HP-1	
	RACK LIGHTS	20	1	L	21		1,160 1,352		22	M	-	-	-	
	RACK LIGHTS	20	1	L	23			1,160 480	24	E	20	1	ELECTRIC HEAT PANEL ERP-1	
	RACK LIGHTS	20	1	L	25	1,160 900			26	E	20	1	WATER HEATER/PUMP WH-1/CP-1	
	RACK LIGHTS	20	1	L	27		1,160 1,200		28	E	20	1	WASHER	
	RACK LIGHTS	20	1	L	29			1,160 2,496	30	E	30	2	DRYER	
	LIGHTING CONTROL PANEL LCPN	20	1	E	31	960 2,496			32	E	-	-	-	
	FIRE ALARM PANEL	20	1	E	33		960 900		34	R	20	1	UTILITY / RESTROOM C.O.	
	SECURITY PANEL	20	1	E	35			960 540	36	R	20	1	OFFICE C.O.	
	WEST DOCK LEVELER	30	1	M	37	1,920 720			38	R	20	1	OFFICE C.O.	
	EAST DOCK LEVELER	30	1	M	39		1,920 720		40	R	20	1	OFFICE C.O.	
	FORK LIFT CHARGER	30	3	E	41			2,880 1,200	42	R	20	1	PRINTER	
	-	-	-	E	43	2,880 1,080			44	R	20	1	NORTH WEST C.O.	
	-	-	-	E	45		2,880 720		46	R	20	1	NORTH C.O.	
	FORK LIFT CHARGER	30	3	E	47			2,880 720	48	R	20	1	NORTH EAST C.O.	
	-	-	-	E	49	2,880 720			50	R	20	1	SOUTH C.O.	
	-	-	-	E	51		2,880 720		52	R	20	1	SOUTH WEST C.O.	
	FORK LIFT CHARGER	30	3	E	53			2,880 900	54	R	20	1	IT OFFICE C.O.	
	-	-	-	E	55	2,880 720			56	R	20	1	COMPUTER STATION	
	-	-	-	E	57		2,880 360		58	R	20	1	COMPUTER STATION	
	PALLET JACK CHARGER	20	1	E	59			1,200 960	60	E	20	1	DATA RACK	
	PALLET JACK CHARGER	20	1	E	61	1,200 960			62	E	20	1	DATA RACK	
	PALLET JACK CHARGER	20	1	E	63		1,200 900		64	E	20	1	CHEMICAL MIX STATION	
3	HEAT CABLE	30	2	E	65			2,496 1,352	66	M	25	2	HEAT PUMP CU-2/HP-2	
-	-	-	-	E	67	2,496 1,352			68	M	-	-	-	
3	HEAT CABLE	30	2	E	69		2,496 600		70	M	20	1	SPARE	
-	-	-	-	E	71			2,496	72		20	1	SPARE	
3	HEAT CABLE CONTROLS	20	1	E	73	600			74		20	1	SPARE	
	SPARE	20	1		75				76		20	1	SPARE	
	SPARE	20	1		77				78		20	1	SPARE	
	SPARE	20	1		79	9,795			80	P	150	3	PANEL 1LS	
	SPARE	20	1		81		10,369		82	P	-	-	-	
	SPARE	20	1		83			7,750	84	P	-	-	-	
	TOTAL CONNECTED LOAD PER PHASE (VA):					43,775	44,248	43,390						
	TOTAL ESTIMATED DEMAND LOAD PER PHASE (VA):					45,486	47,057	45,319						
	TOTAL ESTIMATED DEMAND LOAD PER PHASE (AMPS):					379	392	378						

TYPE	LOAD CLASSIFICATION	CONNECTED LOAD	DEMAND FACTOR	ESTIMATED DEMAND	PANEL TOTALS
P	SUB-PANEL	SUB-PANEL LOADS BROKEN OUT BY LOAD CLASIFICATION BELOW			
R	RECEPTACLES	13,620 VA	87%	11,810 VA	TOTAL CONNECTED LOAD: 131,413 VA
L	LIGHTING	30,329 VA	125%	37,911 VA	25% OF LARGEST MOTOR: 676 VA
C	CONTINUOUS	-	-	-	TOTAL ESTIMATED DEMAND LOAD: 137,861 VA
E	EQUIPMENT	61,296 VA	100%	61,296 VA	TOTAL ESTIMATED DEMAND BALANCED CURRENT: 383 AMPS
M	MOTOR	26,168 VA	100%	26,168 VA	MAXIMUM ESTIMATED DEMAND PHASE CURRENT: 392 AMPS
K	KITCHEN	-	-	-	
	OTHER	-	-	-	

PANELBOARD SCHEDULE

PANEL NAME: 1LS
MOUNTING: SURFACE
ENCLOSURE: NEMA 1
DOOR STYLE: DOOR-IN-DOOR

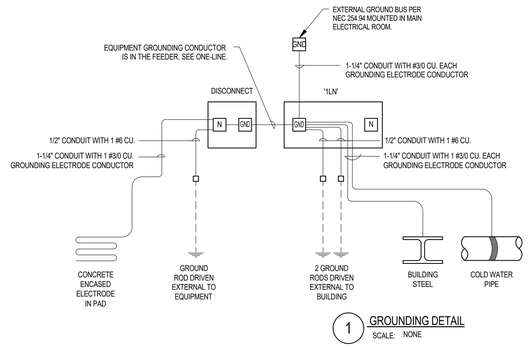
VOLTAGE: 208Y/120
PHASE: 3
WIRE: 4
MIN. A.I.C. RATING: 42KA

MAINS TYPE: MLO
BUS MATERIAL: ALUMINUM
BUS RATING: 225 AMPS
MCB RATING: NONE

SPD: NONE
NEUTRAL: 100% RATED
BRANCH OCP TYPE: BOLT-ON CBs
ISOLATED GROUND: NO

NOTE	CIRCUIT DESCRIPTION	BREAKER AMPS	BREAKER POLE	LOAD TYPE	CKT #	CONNECTED LOAD/PHASE (VA) A	B	C	CKT #	LOAD TYPE	BREAKER AMPS	BREAKER POLE	CIRCUIT DESCRIPTION	NOTE
	SOUTH EXTERIOR / FIRE RISER LTS	20	1	L	1	275 1,320			2	M	20	1	NORTH WEST UNIT HEATER UH-1	
	WAREHOUSE LIGHTS	20	1	L	3		1,740 1,320		4	M	20	1	NORTH EAST UNIT HEATER UH-1	
	WAREHOUSE LIGHTS	20	1	L	5			1,740 1,320	6	M	20	1	SOUTH WEST UNIT HEATER UH-1	
	WAREHOUSE LIGHTS	20	1	L	7	1,740 1,320			8	M	20	1	SOUTH EAST UNIT HEATER UH-1	
	WAREHOUSE LIGHTS	20	1	L	9		1,740 1,920		10	M	30	1	SOUTH OVERHEAD DOOR	
	WAREHOUSE LIGHTS	20	1	L	11			1,470 1,000	12	E	20	3	SOUTH RISER ROOM HEAT	
	WAREHOUSE LIGHTS	20	1	L	13	1,740 1,000			14	E	-	-	-	
	WAREHOUSE LIGHTS	20	1	L	15		1,740 1,000		16	E	-	-	-	
	LIGHTING CONTROL PANEL LCPS	20	1	E	17			960 720	18	R	20	1	NORTH C.O.	
	FIRE ALARM NAC PANEL	20	1	E	19	960 720			20	R	20	1	EAST C.O.	
	SPARE	20	1		21		900		22	R	20	1	SOUTH C.O.	
	SPARE	20	1		23			540	24	R	20	1	SOUTH WEST C.O.	
	SPARE	20	1		25	720			26	R	20	1	NORTH WEST C.O.	
	SPARE	20	1		27				28		20	1	SPARE	
	SPARE	20	1		29				30		20	1	SPARE	
	SPACE				31				32		20	1	SPARE	
	SPACE				33				34		20	1	SPARE	
	SPACE				35				36		20	1	SPARE	
	SPACE				37				38		20	1	SPARE	
	SPACE				39				40		20	1	SPARE	
	SPACE				41				42		20	1	SPARE	
	TOTAL CONNECTED LOAD PER PHASE (VA):					9,795	10,360	7,750						
	TOTAL ESTIMATED DEMAND LOAD PER PHASE (VA):					10,734	12,145	8,553						
	TOTAL ESTIMATED DEMAND LOAD PER PHASE (AMPS):					89	101	71						

TYPE	LOAD CLASSIFICATION	CONNECTED LOAD	DEMAND FACTOR	ESTIMATED DEMAND	PANEL TOTALS
P	SUB-PANEL	SUB-PANEL LOADS BROKEN OUT BY LOAD CLASIFICATION BELOW			
R	RECEPTACLES	3,600 VA	100%	3,600 VA	TOTAL CONNECTED LOAD: 27,905 VA
L	LIGHTING	12,185 VA	125%	15,231 VA	25% OF LARGEST MOTOR: 480 VA
C	CONTINUOUS	-	-	-	TOTAL ESTIMATED DEMAND LOAD: 31,431 VA
E	EQUIPMENT	4,920 VA	100%	4,920 VA	TOTAL ESTIMATED DEMAND BALANCED CURRENT: 87 AMPS
M	MOTOR	7,200 VA	100%	7,200 VA	MAXIMUM ESTIMATED DEMAND PHASE CURRENT: 101 AMPS
K	KITCHEN	-	-	-	
	OTHER	-	-	-	



1 GROUNDING DETAIL

SCALE: NONE

EQUIPMENT SCHEDULE

UNIT NAME	DESCRIPTION	LOAD	TYPE	VOLTAGE	PHASE	AMPERAGE	CONDUIT SIZE	WIRES AT UNIT NO.	WIRES AT UNIT SIZE	STARTER / DISCONNECT/ CONNECTION AT UNIT NOTE	STARTER SIZE	OCP SIZE	DISCONNECT POLES	DISCONNECT SIZE	DISCONNECT POLES	REMARKS
CU-1	CONDENSING UNIT - OUTDOOR UNIT	13	MCA	208	1	13	3/4"	2	10	10A	-	25	2	30	2	NEMA 3R DISCONNECT
CU-2	CONDENSING UNIT - OUTDOOR UNIT	13	MCA	208	1	13	3/4"	2	10	10A	-	25	2	30	2	NEMA 3R DISCONNECT
CP-1	RECIRCULATION PUMP	55	WATTS	120	1	0.48	3/4"	2	12	1A	-	-	-	1 HP	1	
CP-2	RECIRCULATION PUMP	1.5	AMPS	120	1	1.5	3/4"	2	12	1A	-	-	-	-	-	
EF-1	EXHAUST FAN	129	WATTS	120	1	1	3/4"	2	12	1A	-	-	-	1 HP	1	
EH-1	ELECTRIC UNIT HEATER	3	KW	208	3	8	3/4"	3	12	10A	-	20	3	30	3	
ERP-1	ELECTRIC HEATING PANEL	4	AMPS	120	1	4	3/4"	2	12	16A	-	-	-	-	-	
HP-1	HEAT PUMP - INDOOR UNIT	1	FLA	208	1	1	3/4"	2	12	1A	-	-	-	1 HP	2	
HP-2	HEAT PUMP - INDOOR UNIT	1	FLA	208	1	1	3/4"	2	12	1A	-	-	-	1 HP	2	
UH-1	GAS UNIT HEATER	1/2	HP	120	1	11	3/4"	2	12	1A	-	-	-	1 HP	1	
WH-1	GAS WATER HEATER	5	AMPS	120	1	5	3/4"	2	12	16A	-	-	-	-	-	CONTROL VOLTAGE

SIZE ALL FUSES IN ACCORDANCE WITH MANUFACTURER'S RECOMMENDATIONS.

STARTER / DISCONNECT NOTES:

1. MANUAL STARTER WITH THERMAL OVERLOAD
2. MANUAL STARTER WITH THERMAL OVERLOAD PROTECTION & LOW VOLTAGE RELAY / CONTACTOR FOR ATC CONTROL.
3. COMBINATION MAGNETIC STARTER / FUSED DISCONNECT
4. COMBINATION MAGNETIC STARTER / MOTOR CIRCUIT PROTECTOR (MCP)
5. COMBINATION VARIABLE FREQUENCY DRIVE / MOTOR CIRCUIT PROTECTOR (MCP)
6. REDUCED VOLTAGE STARTER
7. COMBINATION TWO-SPEED STARTER / FUSED DISCONNECT
8. COMBINATION TWO-SPEED STARTER / MOTOR CIRCUIT PROTECTOR (MCP)
9. NON-FUSED DISCONNECT SWITCH
10. FUSED DISCONNECT SWITCH
11. BREAKER AND ENCLOSURE
12. DIRECT CONNECTION
13. DUPLEX RECEPTACLE OUTLET
14. SPECIAL PURPOSE OUTLET
15. SHUNT-TRIP BREAKER AND ENCLOSURE
16. TOGGLE SWITCH
17. MAGNETIC STARTER

INSTALLATION NOTES:

A. FURNISHED, INSTALLED, & CONNECTED UNDER DIVISION 16.
B. FURNISHED & INSTALLED UNDER ANOTHER DIVISION REQUIRING CONNECTIONS UNDER DIVISION 16.
C. FURNISHED UNDER ANOTHER DIVISION BUT INSTALLED AND CONNECTED UNDER DIVISION 16.
D. FURNISHED, INSTALLED, & CONNECTED UNDER ANOTHER DIVISION
E. FURNISHED BY OWNER, INSTALLED & CONNECTED BY DIVISION 16

PANELBOARD SCHEDULE NOTES:

1. CONTRACTOR SHALL USE THE ROOM NAMES LISTED ON THE ARCHITECTURAL SIGNAGE PLAN FOR ALL ROOM NAMES ON THE FINAL PANEL SCHEDULE CIRCUIT DESCRIPTIONS. IF IT IS FOUND THAT THE ARCHITECTURAL FLOOR PLAN ROOM NAMES HAVE BEEN USED THE SCHEDULES WILL BE UPDATED TO FOR THE CORRECT ROOM NAMES AT NO ADDITIONAL COST TO THE OWNER.

PANELBOARD SCHEDULE GENERAL NOTES:

1. PROVIDE DEDICATED NEUTRALS FOR ALL BRANCH CIRCUIT PER NEC AND THE SPECIFICATIONS.
2. CONTRACTOR SHALL UPSIZE ALL BRANCH CIRCUITS AS NECESSARY FOR VOLTAGE DROP WHETHER SHOWN OR NOT.

PANELBOARD SCHEDULE KEYED NOTES:
1. PROVIDE CLASS A GROUND FAULT INTERRUPTER TYPE CIRCUIT BREAKER.
2. PROVIDE ARC FAULT CIRCUIT INTERRUPTER TYPE CIRCUIT BREAKER.
3. PROVIDE 30 MILLIAMPERE EQUIPMENT GROUND FAULT PROTECTOR TYPE CIRCUIT BREAKER.
4. PROVIDE SHUNT-TRIP TYPE CIRCUIT BREAKER WITH 120V COIL.
5. PROVIDE HACR RATED CIRCUIT BREAKER.
6. PROVIDE HANDLE CLAMP FOR HOLDING CIRCUIT BREAKER IN THE "ON" OR "OFF" POSITION.
7. PROVIDE SWITCHING RATED CIRCUIT BREAKER.
8. PROVIDE NEW CIRCUIT BREAKER IN EXISTING PANELBOARD (WHERE PANEL IS INDICATED AS EXISTING) OF SAME MANUFACTURER AND A.I.C. RATING AS EXISTING.
9. EXISTING LOAD.
10. PROVIDE WITH PADLOCK HASP.

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REV	DATE	DESCRIPTION

VCBO NUMBER: 21515
CLIENT NUMBER: 20385
DATE: 2021-08-16

TCSD WAREHOUSE REMODEL - BLDGS 649

TOOELE COUNTY SCHOOL DISTRICT
PROJECT ADDRESS: 180 GARNET ST. TOOELE, UTAH 84074

BID SET

ONE-LINE DIAGRAM AND SCHEDULES

EP701

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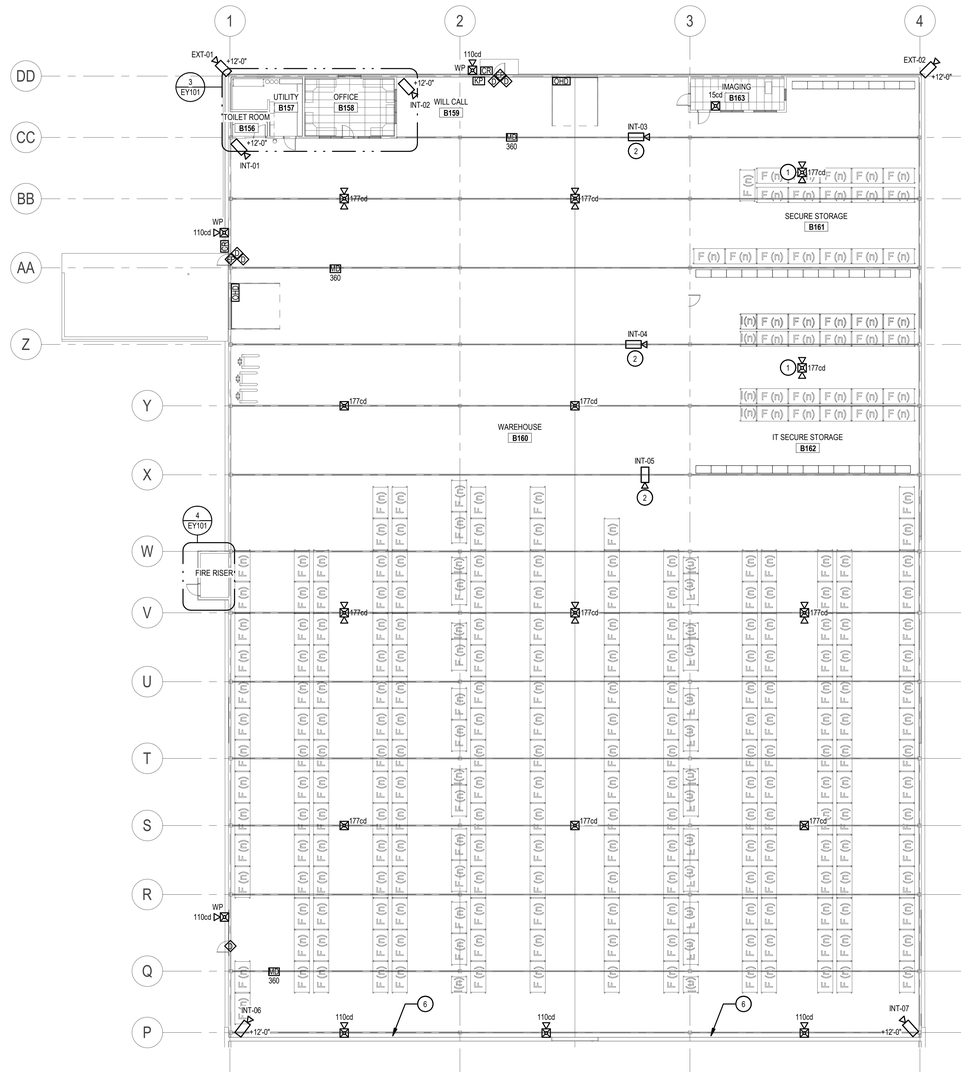
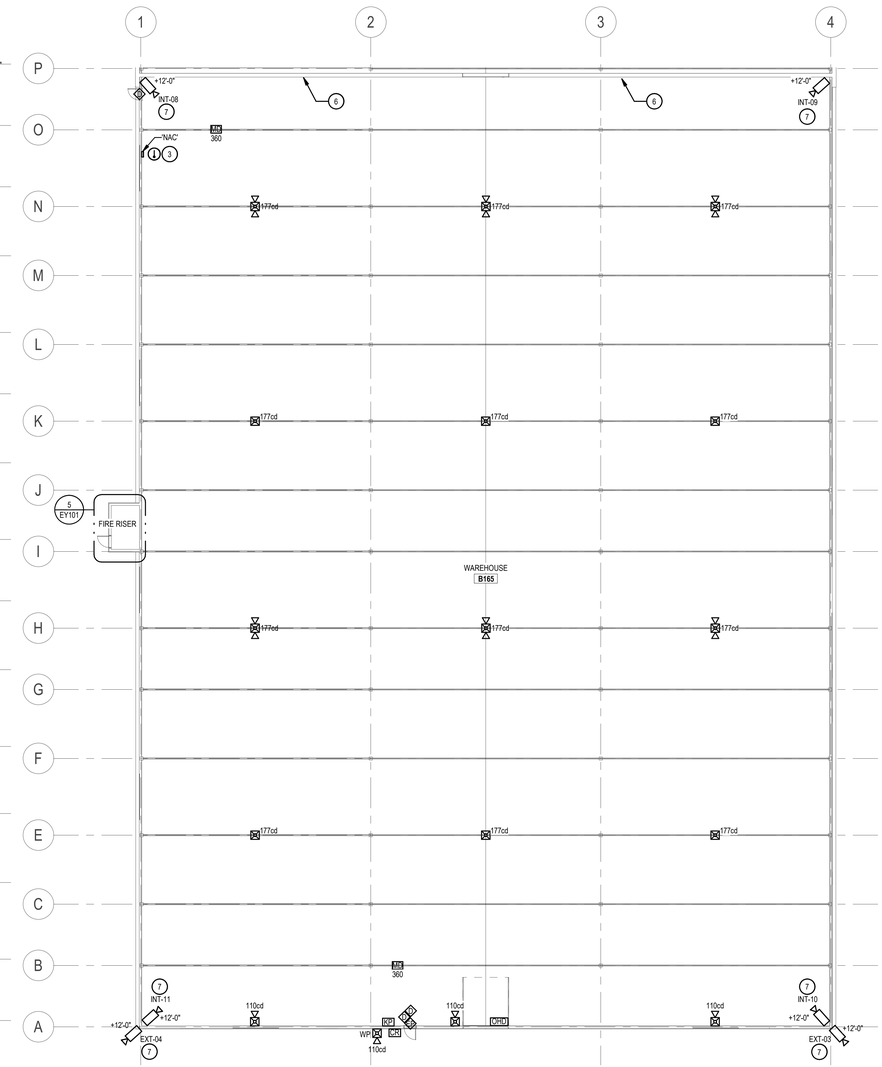


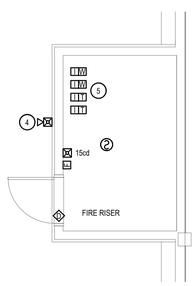
1 SYSTEMS PLAN - 649A

SCALE: 1/16" = 1'-0"



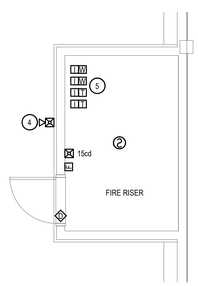
2 SYSTEMS PLAN - 649B

SCALE: 1/16" = 1'-0"



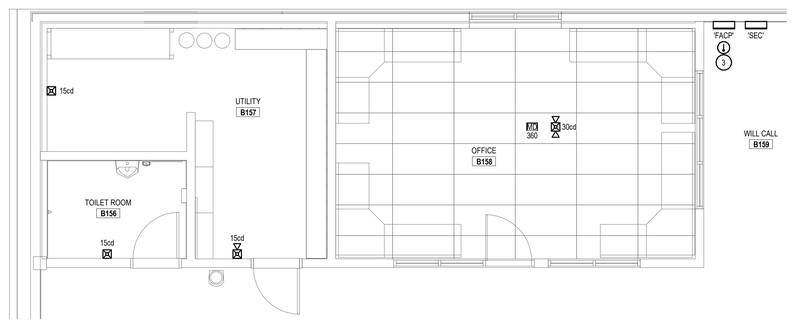
5 SOUTH FIRE RISER ROOM SYSTEMS PLAN

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



4 NORTH FIRE RISER ROOM SYSTEMS PLAN

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



3 OFFICE SYSTEMS PLAN

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

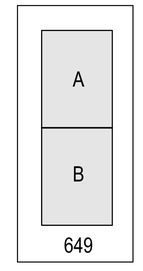
SYSTEMS GENERAL NOTES:

1. ALL FIRE ALARM CABLING SHALL BE RAN IN RED CONDUIT. REFER TO SHEET EY701 FOR ADDITIONAL INFORMATION.
2. REFER TO SHEET EY702 FOR ADDITIONAL REQUIREMENTS FOR ACCESS CONTROL, SECURITY, AND CCTV SYSTEMS.
3. ALL CABLING THAT IS NOT IN CONDUIT OR CABLE TRAY SHALL BE A MINIMUM OF 5' FROM ANY LIGHT FIXTURE.
4. SECURE AND SUPPORT CABLES WITH J-HOOKS AT INTERVALS NOT EXCEEDING 60 INCHES. INSTALL EXPOSED CABLES PARALLEL AND PERPENDICULAR TO SURFACES OR EXPOSED STRUCTURAL MEMBERS, AND FOLLOW SURFACE CONTOURS.
5. DO NOT LOCATE ANY FIRE ALARM DEVICES BEHIND DOORS OR SHELVING. REFER TO THE ARCHITECTURAL DRAWINGS FOR SHELVING LOCATIONS.
6. THE DIVISION 28 CONTRACTOR SHALL DETERMINE THE EXACT ROUTING OF ALL CONDUITS IN THE FIELD.
7. ALL CONDUITS THAT TERMINATE ABOVE THE CEILING SHALL TERMINATE WITH NYLON BUSHING.
8. CONTRACTOR SHALL COORDINATE ALL CEILING MOUNTED DEVICES WITH THE LIGHTING PLANS. RELOCATED DEVICES AS NECESSARY. RELOCATED DEVICES SHALL COMPLY WITH ALL NFPA SPACING REQUIREMENTS.
9. ALL FIRE ALARM DEVICE LOCATIONS, EQUIPMENT LOCATIONS, RISER DIAGRAM, ETC ARE SCHEMATIC IN NATURE AND ARE SHOWN TO PROVIDE INTENT OF THE FIRE ALARM SYSTEM TO BE PROVIDED. FIRE ALARM SYSTEM SUPPLIER SHALL PROVIDE BID AND SHOP DRAWINGS THAT INCLUDE A FULL CODE COMPLIANT DESIGN INCLUDING ALL NOTIFICATION AND INITIATION DEVICES REQUIRED PER THE LATEST ADOPTED EDITION OF ALL APPLICABLE CODES (IFC,IBC,IMC,NEC) IN EFFECT FOR THE CODE ENFORCEMENT DEPARTMENT HAVING JURISDICTION WHETHER SHOWN OR NOT. THE FIRE ALARM SYSTEM SHALL MEET ALL OWNER AND ENGINEERS REQUIREMENTS THAT MAY REQUIRE A SYSTEM THAT EXCEEDS MINIMUM CODE REQUIREMENTS. ANY AND ALL DEVICES THAT ARE ADDED DUE TO CODE REVIEW AND AHJ INSPECTION WILL BE ADDED AT NO ADDITIONAL COST TO THE OWNER.
10. CONTRACTOR SHALL COORDINATE ALL WALL MOUNTED DEVICE, FIXTURE AND EQUIPMENT HEIGHTS AND LOCATIONS WITH THE ARCHITECT PRIOR TO ANY ROUGH-IN.

KEYED NOTES (#)

1. PENDANT MOUNT HORN/STROBE AT 15'-0" AFF TO MATCH HEIGHT OF ALL OTHER HORN/STROBES IN THE SPACE.
2. MOUNT CCTV CAMERA TO THE BOTTOM OF THE TRUSS SO THE CAMERA HAS A CLEAR VIEW OF THE SPACE. CONFIRM LOCATION AND REQUIREMENTS WITH THE SUPPLIER AND OWNER PRIOR TO ANY ROUGH-IN.
3. WALL MOUNT DETECTOR ABOVE PANEL. COORDINATE INSTALLATION AND REQUIREMENTS WITH THE FIRE ALARM SYSTEM SUPPLIER PRIOR TO ANY ROUGH-IN.
4. 120V WATERFLOW HORN/STROBE IS FURNISHED BY THE SPRINKLER SYSTEM SUPPLIER AND INSTALLED AND CONNECTED BY THE CONTRACTOR. CONNECT TO LOCAL 120V CIRCUIT. ROUTE BRANCH CIRCUIT THROUGH TO NORMALLY OPEN CONTACT ON THE WATERFLOW SWITCH.
5. CONFIRM EXACT LOCATION AND QUANTITY OF WATERFLOW AND TAMPER SWITCHES WITH THE SPRINKLER SYSTEM INSTALLER PRIOR TO ROUGH-IN.
6. ANY AND ALL PENETRATIONS THROUGH THIS WALL SHALL BE FIRE CALKED AND SEALED PER ALL REQUIREMENTS AND STANDARDS FOR RATING OF WALL. SEE ARCHITECTURAL DRAWINGS FOR WALL RATING REQUIREMENTS.
7. PROVIDE POE EXTENDER AND MIDSPAN (IF REQUIRED) FOR THIS CAMERA. SEE 4/EY701 AND CONFIRM ALL REQUIREMENTS WITH THE CCTV SYSTEM SUPPLIER / INSTALLER PRIOR TO ANY ROUGH-IN.

KEY PLAN



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REV	DATE	DESCRIPTION

VCBO NUMBER: 21515
CLIENT NUMBER: 20385
DATE: 2021-08-16

TCSD WAREHOUSE REMODEL - BLDGS 649

TOOELE COUNTY SCHOOL DISTRICT
PROJECT ADDRESS: 180 GARNET ST. TOOELE, UTAH 84074

BID SET

SYSTEMS PLAN

EY101

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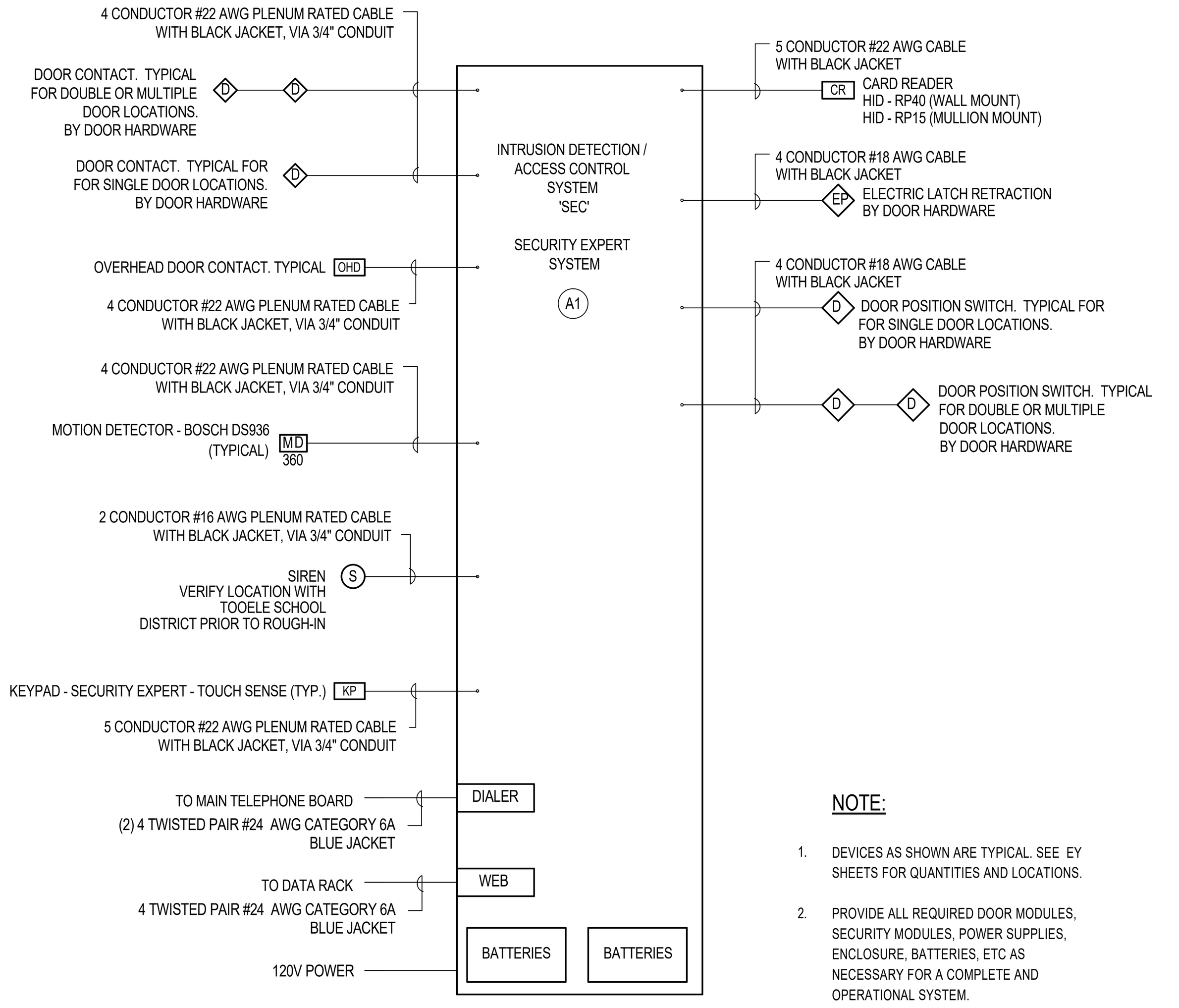


NOTE:

1. DEVICES AS SHOWN ARE TYPICAL. SEE EY SHEETS FOR QUANTITIES AND LOCATIONS.
2. PROVIDE ALL REQUIRED DOOR MODULES, SECURITY MODULES, POWER SUPPLIES, ENCLOSURE, BATTERIES, ETC AS NECESSARY FOR A COMPLETE AND OPERATIONAL SYSTEM.

NOTE:

CONTRACTOR SHALL SCHEDULE A PRE-INSTALL MEETING WITH THE SCHOOL DISTRICT AND ENGINEER FOR REVIEW OF THE INSTALLATION OF THE SYSTEM PRIOR TO ANY ROUGH-IN AND PRIOR TO SUBMITTAL SUBMISSION. IF THE CONTRACTOR DOES NOT SCHEDULE A PRE-INSTALL MEETING, THE CONTRACTOR SHALL MAKE ANY AND ALL CHANGES TO THE SYSTEM AS DIRECTED BY THE SCHOOL DISTRICT AT NO ADDITIONAL COST TO THE DISTRICT.

ACCESS CONTROL KEYED NOTES: (A#)

1. ACCESS CONTROL SYSTEM TO POWER ALL ELECTRIFIED DOOR HARDWARE THROUGH THE ACCESS CONTROL SYSTEM. CONFIRM ALL REQUIREMENTS WITH THE DOOR HARDWARE SUPPLIER. PROVIDE ALL REQUIRED POWER SUPPLIES AS NECESSARY FOR A COMPLETE AN OPERATIONAL SYSTEM.

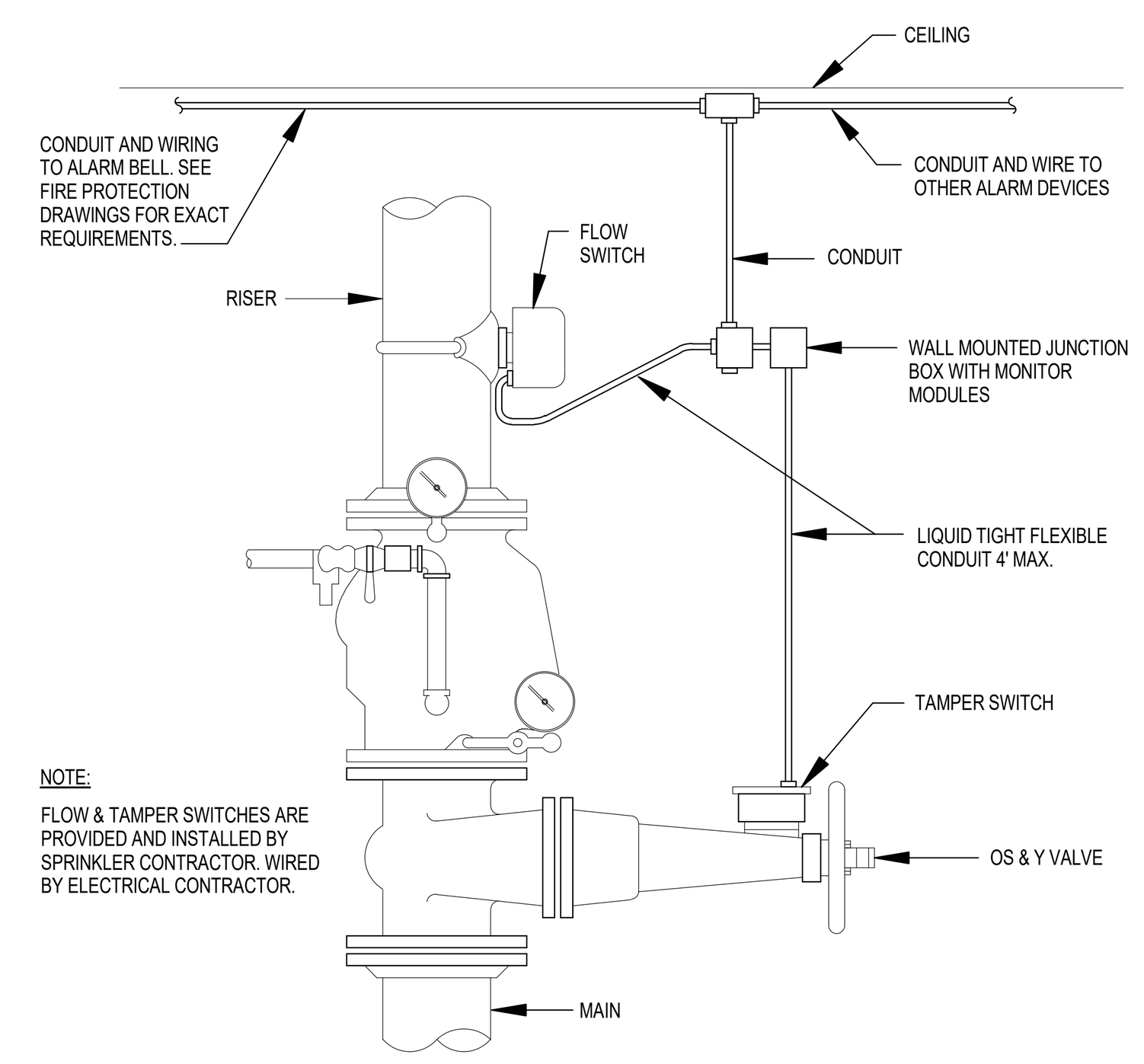
SECURITY / ACCESS CONTROL SYSTEM GENERAL NOTES:

1. ALLOW SUFFICIENT LENGTH OF CABLE FOR TERMINATION AT EACH END.
2. PLENUM RATED CABLE.
3. LABEL ALL CABLES AT BOTH ENDS AS DIRECTED BY THE OWNER.
4. COORDINATE ALL REQUIREMENTS WITH TOOELE SCHOOL DISTRICT PRIOR TO ROUGH-IN.
5. THE SECURITY SYSTEM SUPPLIER SHALL PROVIDE COMPUTER DRAFTED SHOP DRAWINGS OF THE ENTIRE SECURITY SYSTEM USING FLOOR PLANS PROVIDED BY THE ENGINEER. SHOP DRAWINGS TO INCLUDE PLANS, SECTIONS, ELEVATIONS, FINAL DEVICE LOCATIONS, CONDUIT SIZE AND ROUTING AND ALL CONDUCTOR SIZES. TYPICAL RISERS WILL NOT BE ACCEPTED.
6. APPROVED MANUFACTURE FOR THE INTRUSION DETECTION / ACCESS CONTROL SYSTEM IS SECURITY EXPERT NO OTHERS APPROVED.
7. PROVIDE A DEDICATED ZONE FOR EACH INTRUSION DETECTION SYSTEM DEVICE WITH THE EXCEPTION OF THE DOUBLE DOOR IN WHICH CASE ONE ZONE IS SUFFICIENT.

3 SECURITY SYSTEM / ACCESS CONTROLSYSTEM RISER DIAGRAM
SCALE: NONE

DOOR ROUGH-IN GENERAL NOTES:

1. CONTRACTOR SHALL WORK CLOSELY WITH THE DOOR HARDWARE SUPPLIER AND ACCESS CONTROL SYSTEM SUPPLIER FOR DOOR REQUIREMENTS, ROUGH-IN AND WIRING.
2. CONTRACTOR SHALL COORDINATE ALL JUNCTION BOX ROUGH-IN LOCATIONS WITH THE OWNER AND ACCESS SYSTEM CONTROL SYSTEM SUPPLIER PRIOR TO ANY ROUGH-IN.
3. ALL CABLING TO DEVICES THAT ARE INSTALLED WITHIN DOOR OR ON MULLIONS SHALL BE ROUTED THROUGH THE MULLIONS. COORDINATE INSTALLATION WITH THE WINDOW SYSTEM INSTALLER PRIOR TO ANY ROUGH-IN.



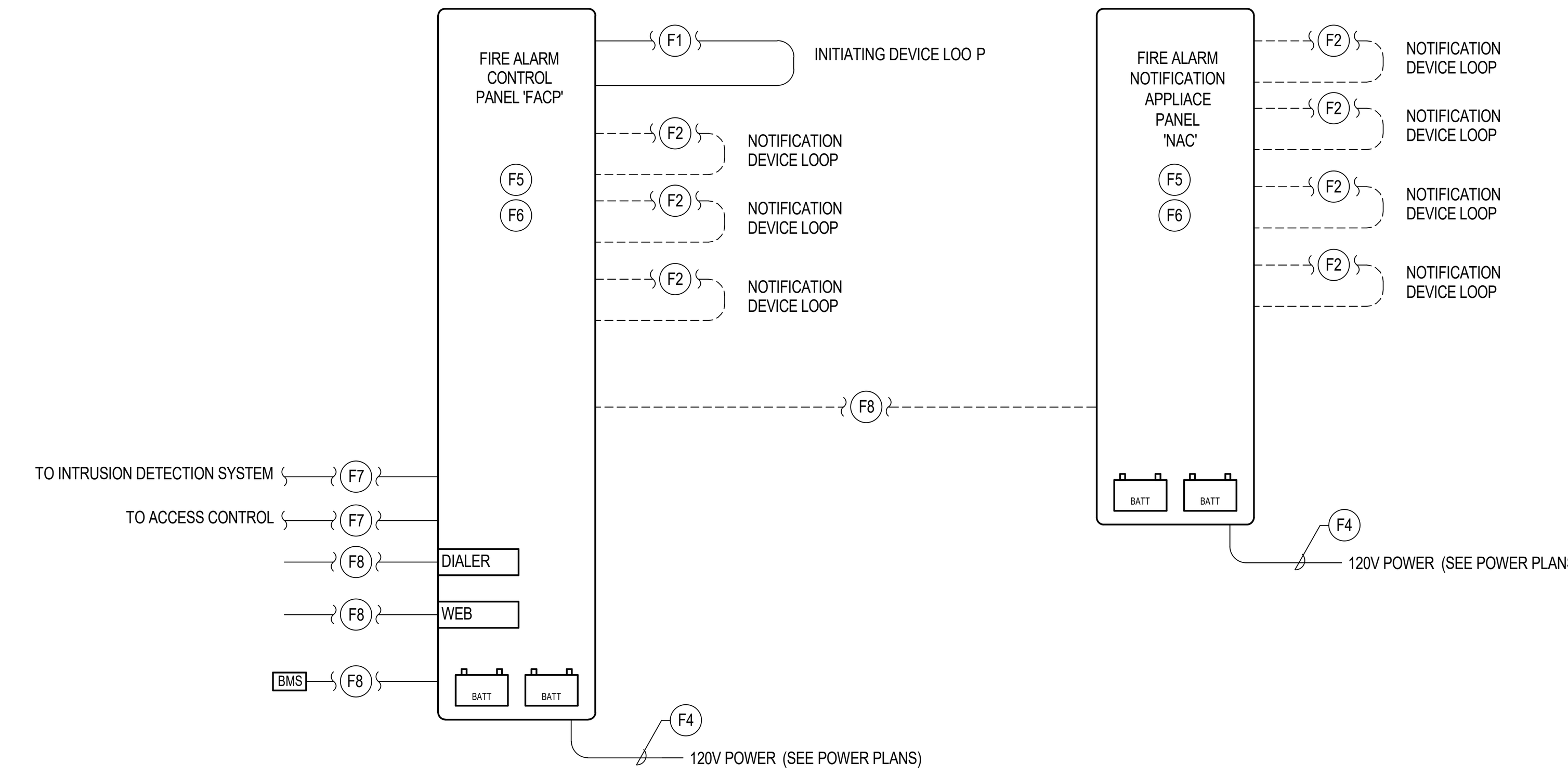
2 FIRE SPRINKLER RISER CONNECTIONS
SCALE: NONE

NOTE:

CONTRACTOR SHALL SCHEDULE A PRE-INSTALL MEETING WITH THE SCHOOL DISTRICT AND ENGINEER FOR REVIEW OF THE INSTALLATION OF THE SYSTEM PRIOR TO ANY ROUGH-IN AND PRIOR TO SUBMITTAL SUBMISSION. IF THE CONTRACTOR DOES NOT SCHEDULE A PRE-INSTALL MEETING, THE CONTRACTOR SHALL MAKE ANY AND ALL CHANGES TO THE SYSTEM AS DIRECTED BY THE SCHOOL DISTRICT AT NO ADDITIONAL COST TO THE DISTRICT.

NOTE:

ALL FIRE ALARM DEVICE LOCATIONS , EQUIPMENT LOCATIONS, RISER DIAGRAM, ETC ARE SCHEMATIC IN NATURE AND ARE SHOWN TO PROVIDE INTENT OF THE FIRE ALARM SYSTEM TO BE PROVIDED. FIRE ALARM SYSTEM SUPPLIER SHALL PROVIDE BID AND SHOP DRAWINGS THAT INCLUDE A FULL CODE COMPLIANT DESIGN INCLUDING ALL NOTIFICATION AND INITIATION DEVICES REQUIRED PER THE LATEST ADOPTED EDITION OF ALL APPLICABLE CODES (IFC,IBC,IMC,NEC) IN EFFECT FOR THE CODE ENFORCEMENT DEPARTMENT HAVING JURISDICTION WHETHER SHOWN OR NOT. THE FIRE ALARM SYSTEM SHALL MEET ALL OWNER AND ENGINEERS REQUIREMENTS THAT MAY REQUIRE A SYSTEM THAT EXCEEDS MINIMUM CODE REQUIREMENTS. ANY AND ALL DEVICES THAT ARE ADDED DUE TO CODE REVIEW AND AHJ INSPECTION WILL BE ADDED AT NO ADDITIONAL COST TO THE OWNER.



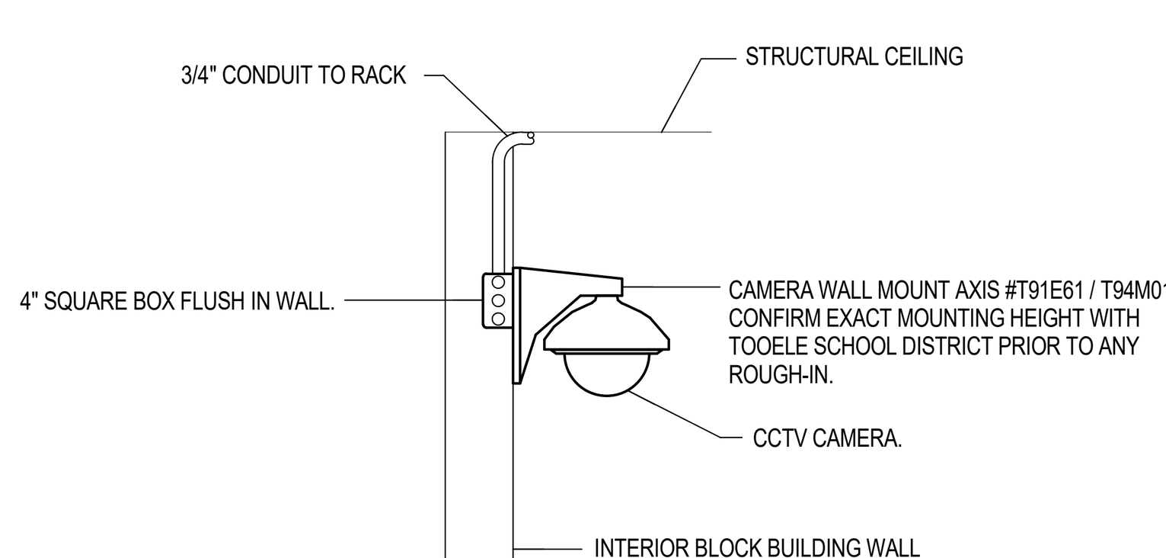
1 FIRE ALARM SYSTEM RISER DIAGRAM
SCALE: NONE

KEYED NOTES: (F#)

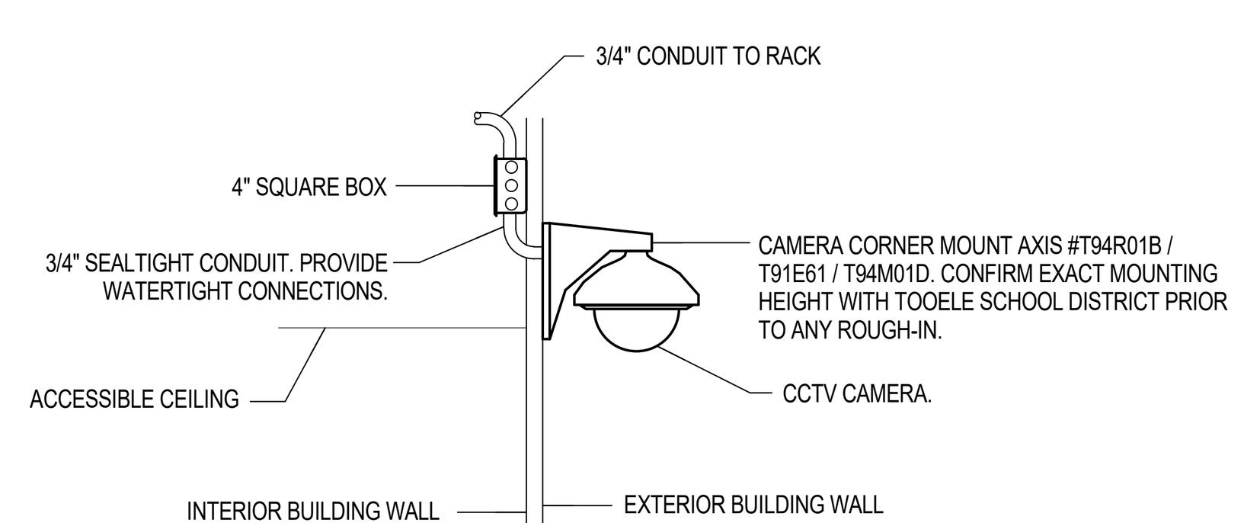
1. TYPICAL CLASS-A SIGNALING LINE CIRCUIT - RED 3/4" CONDUIT WITH 4 #14 SOLID THHN CU. TWISTED PAIRS (SHIELDED AS MAY BE RECOMMENDED BY THE MANUFACTURER). MAXIMUM OF 110 ADDRESSABLE DEVICES PER CIRCUIT. MAKE CONNECTIONS AS FOLLOWS: RED DEVICE POSITIVE, BLACK DEVICE NEGATIVE, WHITE AUXILIARY POWER POSITIVE, AND BLUE AUXILIARY POWER NEGATIVE. AUXILIARY POWER IS FOR DOOR HOLDERS (WHERE REQUIRED) OR OTHER ANCILLARY FUNCTIONS. AUXILIARY POWER IS NOT CLASS-A. BREAK LOOP NEAR CENTER OF SIGNALING LINE CIRCUIT AND CAP; FEED BOTH SIDES WITH SEPARATE DOOR HOLDER POWER CIRCUITS AT PANEL.
2. TYPICAL CLASS-A NOTIFICATION APPLIANCE CIRCUIT - RED 3/4" CONDUIT WITH 2 #14 SOLID THHN CU. TWISTED PAIR, RED POSITIVE, BLACK NEGATIVE. MAXIMUM CIRCUIT LOAD IS 1.75 AMPS. MAXIMUM VOLTAGE DROP IS 7%.
3. TYPICAL CLASS-A COMMUNICATIONS LOOP - RED 3/4" CONDUIT WITH 4 #14 SOLID THHN CU. TWISTED PAIRS (SHIELDED AS MAY BE RECOMMENDED BY THE MANUFACTURER). MAXIMUM DISTANCE IS 6,000 FEET.
4. EXTEND A 3/4" CONDUIT WITH 2 #12 AND 1 #12 GND. TO CIRCUIT AS CALLED OUT. SEE POWER PLANS.
5. PROVIDE PLASTIC LAMINATE LABEL WITH NAME AS CALLED OUT ON THE DRAWINGS. LABEL TO BE RED WITH 1/4" HIGH WHITE LETTERS.
6. PROVIDE LAMINATE LABEL IN FACP AND NAC PANELS WITH PANELBOARD / BRANCH CIRCUIT NUMBER AND PANELBOARD ROOM NUMBER.
7. EXTEND A RED 1" CONDUIT WITH MANUFACTURES RECOMMENDED CABLING. PROVIDE NECESSARY SIGNALS TO THE INTRUSION DETECTION PANEL AND ACCESS CONTROL PANEL FOR LOCK DOWN.
8. EXTEND A RED 1" CONDUIT WITH MANUFACTURES RECOMMENDED CABLING.

FIRE ALARM SYSTEM GENERAL NOTES:

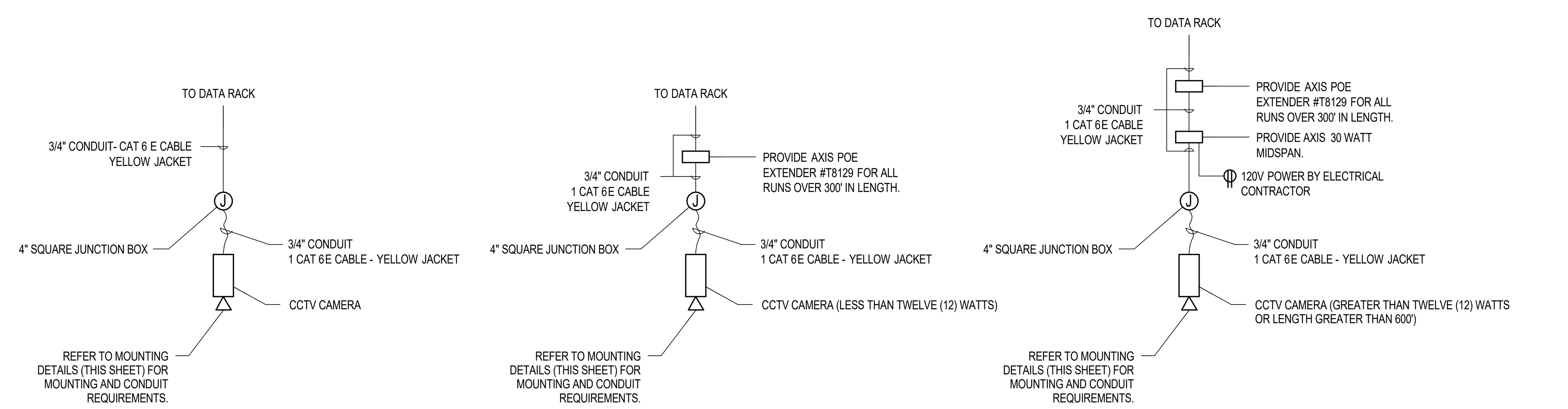
1. PROVIDE ADDRESSABLE FIRE ALARM SYSTEM . REFER TO THE SPECIFICATIONS FOR ADDITIONAL INFORMATION.
2. THE SYSTEM SHALL BE PROGRAMMED SO THAT IF ANY INITIATION DEVICE IS ACTUATED, AN ALARM SIGNAL WHICH IS AUDIBLE THROUGHOUT THE BUILDING WILL BE ACTIVATED.
3. WIRING SHALL BE CONTINUOUS FROM ONE DEVICE TO ANOTHER. NO SPLICING IS ALLOWED.
4. PROVIDE FIRE ALARM MAP OF THE BUILDING SHOWING ALL FIRE ALARM SYSTEM DEVICES. MAP TO INCLUDE BUT NOT LIMITED TO THE FOLLOWING :
   A. EXACT LOCATIONS OF ALL DEVICES, FIRE ALARM CONTROL PANEL AND NAC PANELS.
   B. EXACT LOCATIONS OF ALL MONITOR AND CONTROL MODULES. WHERE MODULES ARE LOCATED ABOVE THE CEILING, PROVIDE CLEAR DESIGNATION OR NOTE.
   C. ROOM NAMES.
   D. ALL DEVICE ADDRESS SHALL BE INDICATED ON THE DRAWINGS.
   E. ALL MAPS SHALL BE 11"X17" . PROVIDE ONE SET IN A SLEEVED 3 RING BINDER AND ONE SET LAMINATED AND MOUNTED NEXT TO FACP. DELIVER 3 RING BINDER WITH MAPS TO THE ELECTRICAL ENGINEER FOR REVIEW AND APPROVAL AS PART OF THE CLOSE OUT DOCUMENTS. REFER TO THE SPECIFICATIONS FOR ADDITIONAL INFORMATION. MOUNT LAMENTED MAPS AT THE FACP IN LOCATION AS DIRECTED BY THE OWNER.
5. THE FIRE ALARM SYSTEM SUPPLIER SHALL PROVIDE COMPUTER DRAFTED SHOP DRAWINGS OF THE ENTIRE FIRE ALARM SYSTEM USING FLOOR PLANS PROVIDED BY THE ENGINEER. SHOP DRAWINGS TO INCLUDE BATTERY CALCULATIONS, VOLTAGE DROP CALCULATIONS, PLANS, SECTIONS, ELEVATIONS, FINAL DEVICE LOCATIONS AND ADDRESS, CONDUIT SIZE AND ROUTING AND ALL CONDUCTOR SIZES. TYPICAL RISERS AND CALCULATIONS WILL NOT BE ACCEPTED. ALL SHOP DRAWINGS SHALL BE PREPARED AND APPROVED BY A NICET CERTIFIED FIRE ALARM TECHNICIAN, LEVEL III OR GREATER.
6. ALL NOTIFICATION DEVICE CIRCUIT VOLTAGE DROP CALCULATIONS SHALL BE DONE IN COMPLIANCE WITH NFPA 72. THE FIRE ALARM SYSTEM SUPPLIER TO DETERMINE THE AMOUNT NOTIFICATION DEVICE CIRCUITS THAT ARE REQUIRED BASED ON THE NUMBER OF NOTIFICATION DEVICES SHOWN ON THE DRAWINGS. THE FIRE ALARM SUPPLIER SHALL DETERMINE THE AMOUNT OF 'NAC' PANELS THAT WILL BE REQUIRED BASES ON THE QUANTITY OF NOTIFICATION DEVICE CIRCUITS.
7. AUDIBLE ANNUNCIATION DEVICES SHALL BE SILENCED VIA THE FACP FRONT PANEL OR REMOTE ANNUNCIATOR WHILE ALLOWING VISUAL ANNUNCIATION DEVICES TO REMAIN IN ALARM.
8. THE FIRE ALARM SYSTEM SUPPLIER SHALL SUBMIT THE FIRE ALARM SHOP DRAWINGS AND MANUFACTURERS CUTSHEETS TO THE LOCAL AUTHORITY HAVING JURISDICTION (AHJ) FOR REVIEW AND APPROVAL PRIOR TO THE ROUGH-IN OF THE SYSTEM. PROVIDE A MINIMUM OF TWO (2) SETS OF DRAWINGS, CUTSHEETS, AND CALCULATIONS TO AHJ.
9. VERIFY AND COMPLY WITH ALL CURRENT STATE, LOCAL AND NATIONAL CODES. COMPLY WITH ALL CURRENT NEC, NFPA, FIRE MARSHAL AND OWNERS STANDARDS AND REQUIREMENTS.
10. UPON CLOSE OUT OF THE PROJECT THE FIRE ALARM SYSTEM SUPPLIER TO PROVIDE A CD(S) WITH CAD AND PDF DRAWINGS OF THE BUILDING FIRE ALARM MAP, CAD AND PDF AS-BUILT DRAWINGS, GENERAL PROGRAMMING, SITE SPECIFIC PROGRAMMING, PDF O&M MANUALS AND APPROVED SHOP DRAWINGS . REFER TO THE SPECIFICATIONS FOR ADDITIONAL INFORMATION.
11. LABEL ALL DETECTOR BASES, MANUAL STATIONS AND MODULE COVERS WITH 1/2" LETTERS WITH DEVICE ADDRESS NUMBER. HANDWRITTEN LABELS WILL NOT BE ACCEPTED.
12. FOR ALL DEVICES LOCATED ABOVE A LAY-IN TILE CEILING PROVIDE LABEL WITH 1/2" LETTERS WITH DEVICE ADDRESS NUMBER ON THE CEILING GRID BELOW THE DEVICE. HANDWRITTEN LABELS WILL NOT BE ACCEPTED.
13. ALL FIRE ALARM CABLING SHALL BE RAN IN CONDUIT ONLY. MINIMUM RED CONDUIT SIZE SHALL BE 3/4". CONTRACTOR SHALL SPRAY PAINT ALL JUNCTION BOXES AND FITTINGS ASSOCIATED WITH THE FIRE ALARM SYSTEM RED.



6 INTERIOR WALL MOUNTED CAMERA DETAIL
SCALE: NONE



5 EXTERIOR CORNER MOUNTED CAMERA DETAIL
SCALE: NONE

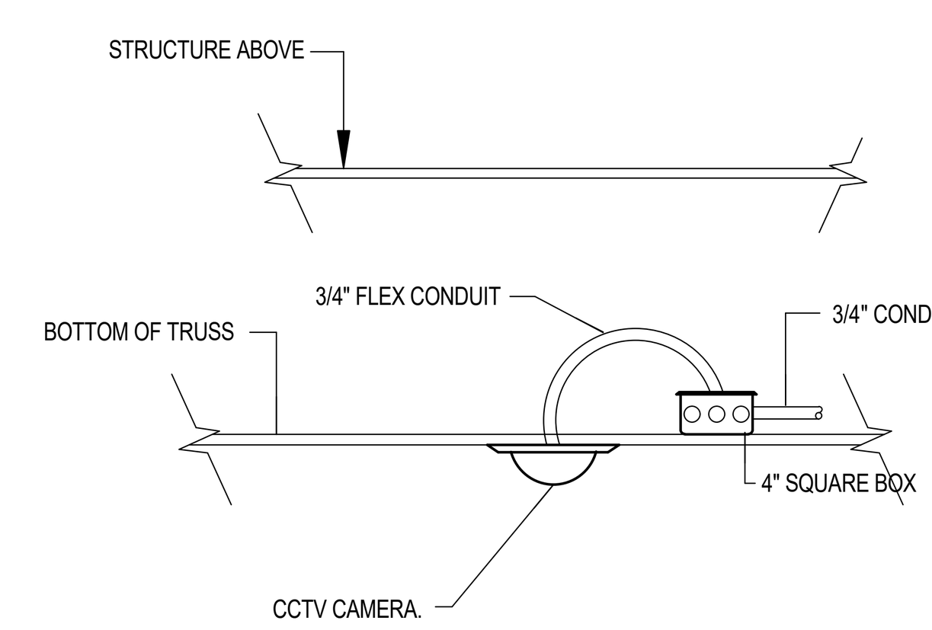


4 CCTV CAMERA WIRING DETAIL
SCALE: NONE

CCTV MOUNTING DIAGRAMS AS SHOWN ARE FOR BASIC CONCEPT AND LAYOUT. CONTRACTOR SHALL COORDINATE ALL ROUGH-IN REQUIREMENTS WITH THE OWNER PRIOR TO ANY ROUGH-IN.

NOTE:

CONTRACTOR SHALL SCHEDULE A PRE-INSTALL MEETING WITH THE SCHOOL DISTRICT AND ENGINEER FOR REVIEW OF THE INSTALLATION OF THE SYSTEM PRIOR TO ANY ROUGH-IN AND PRIOR TO SUBMITTAL SUBMISSION. IF THE CONTRACTOR DOES NOT SCHEDULE A PRE-INSTALL MEETING, THE CONTRACTOR SHALL MAKE ANY AND ALL CHANGES TO THE SYSTEM AS DIRECTED BY THE SCHOOL DISTRICT AT NO ADDITIONAL COST TO THE DISTRICT.



7 INTERIOR SURFACE MOUNTED CAMERA DETAIL
SCALE: NONE

CCTV EQUIPMENT GENERAL NOTES:

1. CONFIRM ALL MOUNTING LOCATIONS AND HEIGHTS WITH THE OWNER PRIOR TO ANY ROUGH-IN.
2. CONTRACTOR TO INSTALL ALL CABLING AS CALLED OUT.
3. ALL CABLING SHALL BE CAT 6A, PLENUM, YELLOW JACKET UNLESS NOTED OTHERWISE.
4. CONTRACTOR TO INSTALL OWNER FURNISHED EQUIPMENT.
5. SEE POWER AND SYSTEMS PLANS FOR ADDITIONAL REQUIREMENTS.
6. CONTRACTOR SHALL INSTALL CCTV NVR AND SOFTWARE AND PROGRAM PER THE OWNERS DIRECTION.

CCTV GENERAL NOTES:

1. CCTV CAMERAS, MOUNTS, ETC ARE PROVIDED, INSTALLED AND CONNECTED BY THE ELECTRICAL CONTRACTOR. PROVIDE A 25' COIL OF CABLE AT EACH CAMERA LOCATION.
2. COORDINATE ALL CAMERA LOCATIONS, WIRING AND ROUGH-IN REQUIREMENTS WITH OWNER AND SUPPLIER PRIOR TO ROUGH-IN.
4. ALL CABLING NOT SPECIFICALLY IDENTIFIED IN THE RISER DIAGRAM SHALL BE MANUFACTURER RECOMMENDED CABLING.
5. REFER TO SYSTEMS PLANS FOR CAMERA LOCATIONS.
6. EACH CAMERA TO HAVE A DEDICATED CABLE DROP BACK TO DATA RACK.
7. ALL CABLING SHALL BE PLENUM RATED.
8. CONTRACTOR TO TERMINATE AND TEST ALL CABLING (INCLUDING ALL CAMERA CABLING AND ANY FIBER OPTIC CABLES) AT CANERA AND DATA RACK AS DIRECTED BY THE OWNER. CONFIRM ALL TERMINATION TYPES WITH THE OWNER PRIOR TO ANY TERMINATIONS AND TESTING. CONFIRM ALL TERMINATION LOCATIONS WITH THE OWNER PRIOR TO TERMINATING ANY CABLING.

CCTV CAMERA/EQUIPMENT SCHEDULE

		VOLTAGE			ENCLOSURE				CAMERA TYPE				MOUNT TYPE						
CAMERA ID#	MOUNTING LOCATION	120 VAC	24VDC	PoE	EXTERIOR	VANDAL RESIST.	EXTERIOR DOME	INTERIOR DOME	4 MP COLOR	1080P COLOR	1080P BLACK AND WHITE	5 MP COLOR	CORNER	WALL	SURFACE	CEILING	COVERT	PENDANT	AXIS CAMERA PART NUMBER
EXT -01	EXTERIOR - NORTH WEST			X	X	X						X	X						M3037-PVE
EXT -02	EXTERIOR - NORTH EAST			X	X	X						X	X						M3037-PVE
EXT -03	EXTERIOR - SOUTH EAST			X	X	X						X	X						M3037-PVE
EXT -04	EXTERIOR - SOUTH WEST			X	X	X						X	X						M3037-PVE
INT-01	NORTH WARE HOUSE - WEST			X		X			X					X					M3066-V
INT-02	NORTH WAREHOUSE - NORTH			X		X			X					X					M3066-V
INT-03	NORTH WAREHOUSE - IT STORAGE			X		X			X						X				M3066-V
INT-04	NORTH WAREHOUSE - SEC STORAGE			X		X			X						X				M3066-V
INT-05	NORTH WAREHOUSE - NORTH RACK			X		X			X						X				M3066-V
INT-06	NORTH WAREHOUSE - SOUTH WEST			X		X			X					X					M3066-V
INT-07	NORTH WAREHOUSE - SOUTH EAST			X		X			X					X					M3066-V
INT-08	SOUTH WAREHOUSE - NORTH WEST			X		X			X					X					M3066-V
INT-09	SOUTH WAREHOUSE - NORTH EAST			X		X			X					X					M3066-V
INT-10	SOUTH WAREHOUSE - SOUTH EAST			X		X			X					X					M3066-V
INT-11	SOUTH WAREHOUSE - SOUTH WEST			X		X			X					X					M3066-V

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REGISTERED PROFESSIONAL ENGINEER
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No.177461
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08/16/21

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P (801) 534-1130
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REV | DATE | DESCRIPTION

VCBO NUMBER: 21515
CLIENT NUMBER: 20385
DATE: 2021-08-16

TCSD WAREHOUSE REMODEL - BLDGS 649

TOOELE COUNTY SCHOOL DISTRICT
PROJECT ADDRESS: 180 GARNET ST. TOOELE, UTAH 84074
BID SET

SYSTEMS RISER DIAGRAMS AND DETAILS

EY701

ACCESS CONTROL COORDINATION REQUIREMENTS:

CODE REFERENCES AND REQUIREMENTS:
2016 NFPA 101 - LIFE SAFETY CODE
- 7.2.1.5.6(5) REQUIRES THAT LOSS OF POWER WILL UNLOCK THE ELECTRICALLY CONTROLLED DOOR HARDWARE.

7.2.1.6.2.(4) REQUIRES THAT ACTIVATION OF THE BUILDING FIRE ALARM SYSTEM UNLOCK ALL DOORS LOCATED IN THE PATH OF EGRESS. 2016 NFPA 80 - FIRE DOORS AND OTHER OPENING PROTECTIVES

2016 NFPA 80 - FIRE DOORS AND OTHER OPENING PROTECTIVES
- 6.1.3.4 REQUIRES THAT POWER OPERATED FIRE DOORS HAVE A RELEASING DEVICE TO AUTOMATICALLY RELEASE POWER UPON FIRE ALARM.
- 6.4.4.3.3 REQUIRES THAT FIRE RATED DOORS BE POSITIVELY LATCHED TO MAINTAIN THE FIRE RATING, ALL ELECTRIC STRIKES USED IN FIRE RATED DOORS MUST BE FAIL SECURE.

2012 IBC - INTERNATIONAL BUILDING CODE
- 1010.1.9.8 REQUIRES ELECTROMAGNETICALLY LOCKED DOORS HAVE A SENSOR RELEASE SWITCH EITHER AUTOMATIC OR BY A READILY ACCESSIBLE WALL MOUNTED PUSHBUTTON TO RELEASE THE LOCK WITHIN 5' OF THE DOOR.

INTEGRATION WITH FIRE ALARM
ALL MAGNETIC LOCKS SHALL BE UNLOCKED DURING A GENERAL FIRE ALARM. THIS ACTION IS NOT REQUIRED IF SYSTEM IS IN ALARM BY MEANS OF A MANUAL PULL STATION. AUTOMATIC DETECTION DEVICES SUCH AS SMOKE DETECTORS OR SPRINKLER FLOW REQUIRE UNLOCKING AND THE DOOR MUST REMAIN UNLOCKED UNTIL FIRE ALARM SYSTEM RESET. CONTRACTOR SHALL INCLUDE ALL FIRE ALARM INTERFACE EQUIPMENT SUCH AS ADDRESSABLE CONTROL MODULES OR BY CONTACT CLOSURE SIGNALING TO THE ACCESS CONTROL PANELS AS NECESSARY TO MEET THE CODE REQUIREMENTS. ALL DOORS IN STAIRWELLS MUST ALLOW FOR RE-ENTRY.

TO ENSURE A COMPLETE AND OPERATING ACCESS CONTROL SYSTEM AND TO ELIMINATE DELAYS, INSUFFICIENT OR UNNECESSARY WORK BY ALL OF THE ENTITIES INVOLVED, THE FOLLOWING STEPS SHALL BE COMPLETED. THE FAILURE TO DO SO RESULTING IN ADDED COSTS AND LOST TIME WILL BE BORN SOLELY BY THE CONTRACTOR. NO ADDITIONAL PAYMENTS WILL BE MADE BY THE OWNER TO COVER WORK DESCRIBED BELOW.

DURING THE BIDDING PROCESS:
1. THE ELECTRICAL CONTRACTOR SHALL REVIEW THE FLOORPLAN DRAWINGS AND DETAILS ON THIS SHEET. THE FLOORPLANS WILL INDICATE WHICH DOORS HAVE ACCESS CONTROL EQUIPMENT REQUIRING ROUGH-IN. DEVICE LOCATIONS REQUIRING JUNCTION BOXES WILL BE SHOWN ON THE FLOORPLANS, BUT ALL CONDUIT AND HARDWARE REQUIREMENTS CAN ONLY BE DETERMINED BY REFERRING TO THE SPECIFIC DOOR ROUGH-IN DETAILS AND THE ARCHITECTURAL DOOR HARDWARE SPECIFICATION. ANY DISCREPANCIES SHALL BE BROUGHT TO THE ATTENTION OF THE ENGINEER FOR CLARIFICATION.
2. THE ELECTRICAL CONTRACTOR SHALL REVIEW THE ARCHITECTURAL DOOR HARDWARE SCHEDULE, DOOR HARDWARE SPECIFICATIONS, AND DEFINED EGRESS PATHS. IDENTIFY ACCESS CONTROLLED DOORS LOCATED IN FIRE RATED WALLS AND IN PATHS OF EGRESS REQUIRING ADDITIONAL CONTROL DEVICES.
3. THE ELECTRICAL CONTRACTOR SHALL VERIFY WHICH DOORS USING AN ELECTRIFIED EXIT DEVICE WILL REQUIRE 120V AT THE DOOR. THIS IS MANUFACTURER SPECIFIC AND MUST BE CONFIRMED WITH THE GENERAL CONTRACTOR ACCORDING TO WHICH HARDWARE SUPPLIER BEING USED.

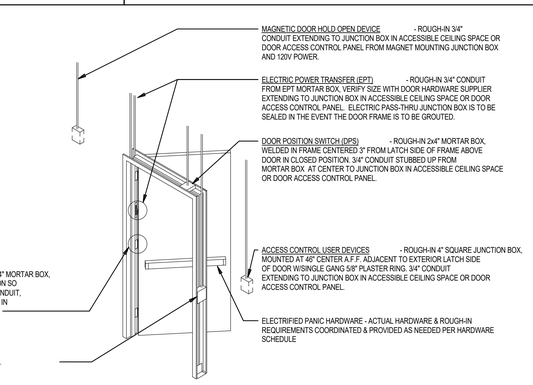
POST-BID, DURING THE SUBMITTAL PROCESS:
4. DURING THE SUBMITTAL PROCESS, THE ELECTRICAL CONTRACTOR SHALL REVIEW THE APPROVED DOOR HARDWARE SUBMITTAL TO CONFIRM THE FINAL HARDWARE SETS PRIOR TO ANY ROUGH-IN. ANY QUESTIONS SHALL BE ISSUED BY FORMAL RFI.
5. MEET WITH THE ACCESS CONTROL VENDOR TO REVIEW ALL FINAL INTEGRATION AND ROUGH-IN REQUIREMENTS. ONLY AFTER CONFIRMING THE FINAL DOOR HARDWARE AND ACCESS CONTROL SYSTEM REQUIREMENTS SHALL ANY ROUGH-IN WORK BEGIN.

ABBREVIATIONS:

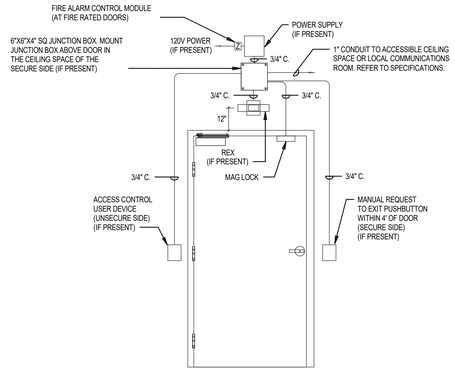
ADO - AUTOMATIC DOOR OPERATOR
AFF - ABOVE FINISHED FLOOR
AP - ACCESS CONTROL PANEL
CR - CARD READER
DHS - DOOR HARDWARE SUPPLIER
DPS - DOOR POSITION SWITCH
EPT - ELECTRIC POWER TRANSFER
ES - ELECTRIC STRIKE
MAG LOCK - MAGNETIC LOCK
RX - EXIT DEVICE
PB - DOOR RELEASE PUSH BUTTON (MANUAL REX).
REX - REQUEST TO EXIT
RFI - REQUEST FOR INFORMATION

GENERAL NOTES:

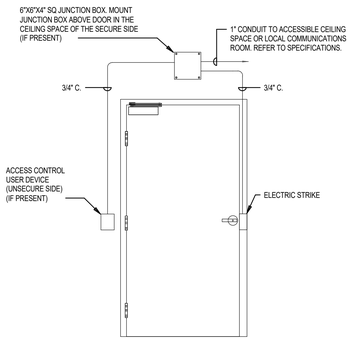
1. IF DOOR IS TO BE GROUTED MAKE SURE EPT MORTAR BOX IS IN PLACE AND CONDUIT CONNECTED AND SEALED.
2. IF DOOR IS TO BE EQUIPPED WITH AUTOMATIC DOOR OPERATOR, THOSE ROUGH-IN PROVISIONS SHALL BE IN ADDITION TO THESE REQUIREMENTS. AUTOMATIC DOOR OPERATORS SHALL HAVE COMPLETE RUN FROM ITS CONTROL PANEL TO THE DOOR ACCESS CONTROL PANEL AND INCLUDE 120V POWER.
3. IF NO ACCESSIBLE CEILING SPACE IS NEAR THE CONTROLLED DOOR, ALL CONDUITS ARE TO BE RUN CONTINUOUS TO THE DOOR ACCESS CONTROL PANEL OR A LOCATION APPROVED BY THE OWNER.
4. FOR DOUBLE DOORS, DUPLICATE THE ROUGH-IN.
5. DOOR HARDWARE SCHEDULE DETERMINES ACTUAL ROUGH-IN REQUIREMENTS.



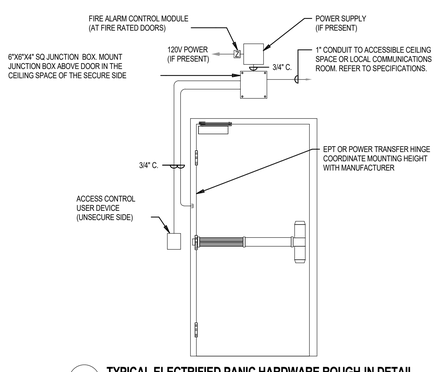
1 TYPICAL BOX AND CONDUIT REQUIREMENTS ROUGH-IN DETAIL
SCALE: NTS



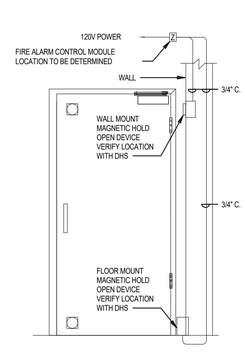
2 TYPICAL ELECTRO-MAGNETIC LOCK ROUGH-IN DETAIL
SCALE: NTS



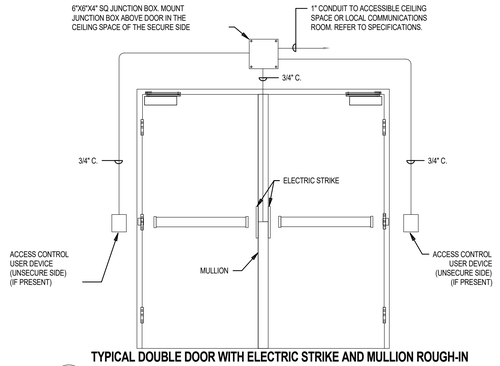
3 TYPICAL ELECTRIC STRIKE ROUGH-IN DETAIL
SCALE: NTS



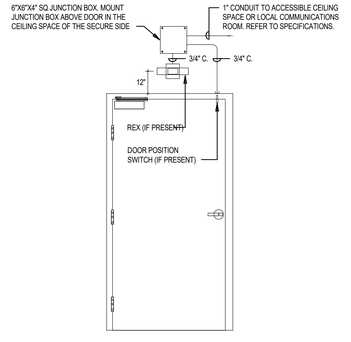
4 TYPICAL ELECTRIFIED PANIC HARDWARE ROUGH-IN DETAIL
SCALE: NTS



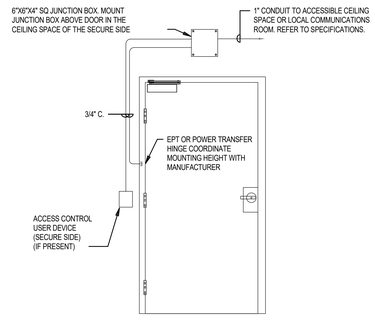
5 TYPICAL MAGNETIC DOOR HOLD OPEN DEVICE ROUGH-IN DETAIL
SCALE: NTS



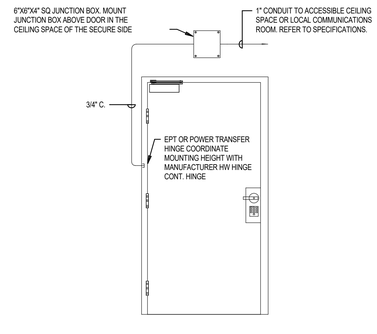
6 TYPICAL DOUBLE DOOR WITH ELECTRIC STRIKE AND MULLION ROUGH-IN DETAIL
SCALE: NTS



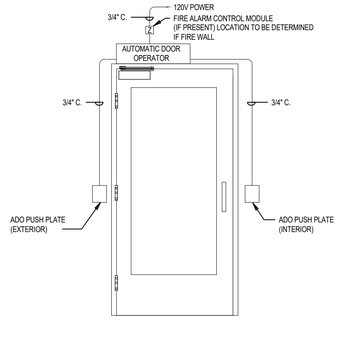
7 TYPICAL DOOR POSITION SWITCH ROUGH-IN DETAIL
SCALE: NTS



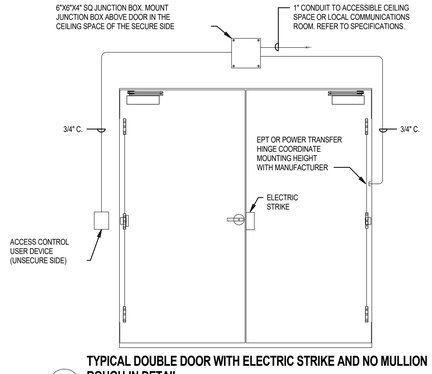
8 TYPICAL ELECTRIFIED LEVEL ROUGH-IN DETAIL
SCALE: NTS



9 TYPICAL INTEGRATED LOCKSET DOOR ROUGH-IN DETAIL
SCALE: NTS



10 TYPICAL AUTOMATIC DOOR OPERATOR ROUGH-IN DETAIL
SCALE: NTS



11 TYPICAL DOUBLE DOOR WITH ELECTRIC STRIKE AND NO MULLION ROUGH-IN DETAIL
SCALE: NTS

GENERAL NOTES:

1. THE DOOR DETAILS SHOWN BELOW ARE GENERAL ROUGH-IN DETAILS AND NOT ALL DEVICES SHOWN MAY BE PRESENT FOR EACH DOOR. CONTRACTOR SHALL REFER TO THE DOOR HARDWARE SCHEDULE IN THE ARCHITECTS DRAWINGS AND SPECS TO DETERMINE WHAT DEVICES ARE PRESENT FOR EACH DOOR REQUIRING CARD ACCESS DOOR EQUIPMENT.
2. NOT ALL DOOR STYLE DETAILS SHOWN BELOW MAY BE INCLUDED IN THE PROJECT.
3. ALL CONDUIT SHALL BE CONCEALED UNLESS SPECIFICALLY NOTED OTHERWISE ON THE DRAWINGS.
4. THE DOOR ROUGH-IN INFORMATION SHOWN ON THESE DRAWINGS ARE SCHEMATIC IN NATURE AND CANNOT ACCOUNT FOR. ALL SPECIFIC VENDOR REQUIREMENTS, OR ACTUAL DOOR HARDWARE PROVIDED. COORDINATE SPECIFIC LOCATIONS WITH SECURITY CONTRACTOR AND APPROVED DOOR HARDWARE SCHEDULES PRIOR TO ROUGH-IN. CONTRACTOR IS RESPONSIBLE FOR A COMPLETE CONDUIT RACEWAY SYSTEM AT THE DOOR AND BACK TO LOCAL ELECTRICAL ROOM.
5. IF REX IS NOT INCLUDED IN DOOR HANDLE OR EXIT DEVICE, PROVIDE BOX FOR WALL MOUNTED REX DEVICE. VERIFY WITH DOOR HARDWARE PRIOR TO ROUGH-IN.
6. PROVIDE CONDUIT AND DEVICE BACK BOX ROUGH-IN AT ALL CARD READER DOOR LOCATIONS. CONDUIT SHALL BE 3/4" UNLESS OTHERWISE NOTED AND ALL BOXES SHALL BE 4 SQUARE WITH A SINGLE GANG MUD RING FOR DEVICES OR JUST A SINGLE GANG BOX IF INSTALLED AT THE DOOR FRAME.
7. A SINGLE FIRE ALARM CONTROL MODULE MAY BE USED TO CONTROL THE POWER TO MULTIPLE DOORS IF COORDINATED WITH THE ACCESS CONTROL SYSTEM VENDOR TO WIRE DOORS SEPARATE FROM OTHER DOORS TOGETHER ON THE SAME POWER SUPPLY LOOP.
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REV	DATE	DESCRIPTION

VCBO NUMBER:	21515
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TCSD WAREHOUSE REMODEL - BLDGS 649

TOOELE COUNTY SCHOOL DISTRICT
PROJECT ADDRESS: 180 GARNET ST. TOOELE, UTAH 84074

BID SET

DOOR DETAILS

8/3/2021 2:26:05 PM

EY702

ACCESS CONTROL COORDINATION REQUIREMENTS:

CODE REFERENCES AND REQUIREMENTS:
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ABBREVIATIONS:

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AFF - ABOVE FINISHED FLOOR
AP - ACCESS CONTROL PANEL
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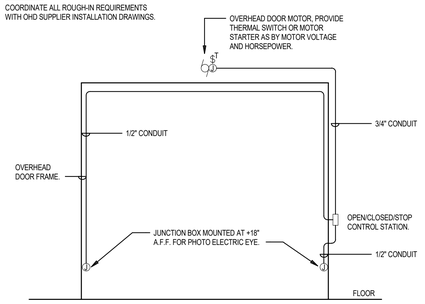
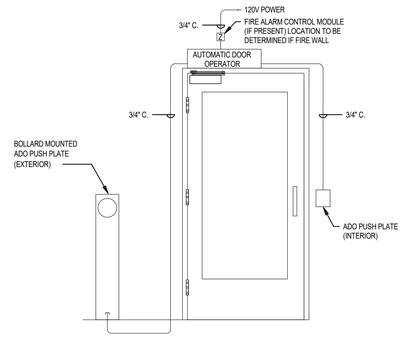
DPS - DOOR POSITION SWITCH
EPT - ELECTRIC POWER TRANSFER
ES - ELECTRIC STRIKE
MAG LOCK - MAGNETIC LOCK
RX - EXIT DEVICE
PB - DOOR RELEASE PUSH BUTTON (MANUAL REX)
REX - REQUEST TO EXIT
RFI - REQUEST FOR INFORMATION

NOTE:

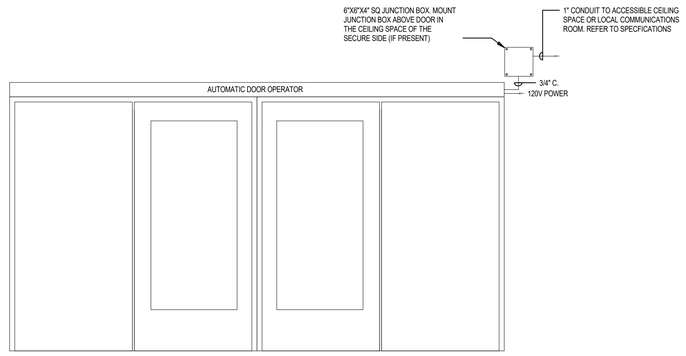
COORDINATE ALL ROUGH-IN REQUIREMENTS WITH OHD SUPPLIER INSTALLATION DRAWINGS.



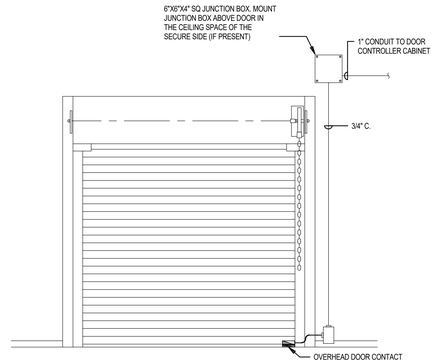
5 TYPICAL OVERHEAD DOOR ROUGH-IN DETAIL
SCALE: NTS



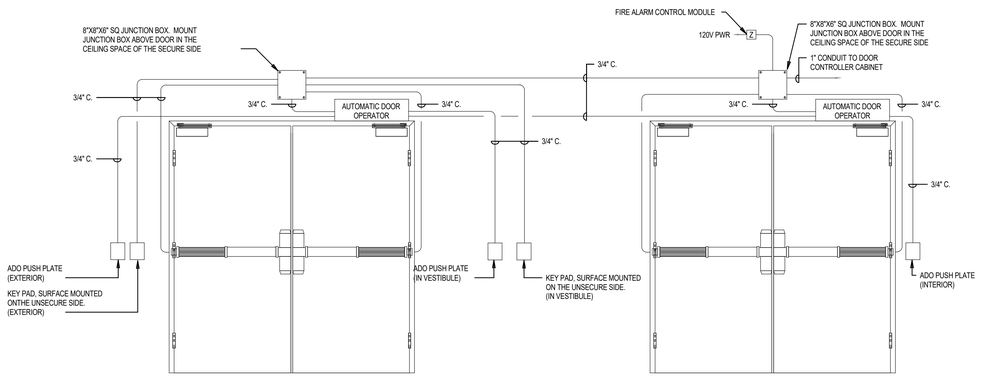
1 TYPICAL AUTOMATIC DOOR OPERATOR WITH BOLLARD MOUNTED PUSH PLATE ROUGH-IN DETAIL
SCALE: NTS



2 TYPICAL AUTOMATIC SLIDING DOOR ROUGH-IN DETAIL
SCALE: NTS



3 TYPICAL MONITORED OVERHEAD ROLL-UP DOOR ROUGH-IN DETAIL
SCALE: NTS



4 TYPICAL MULTIPLE AUTOMATIC DOOR OPERATOR ROUGH-IN DETAIL
SCALE: NTS

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REV	DATE	DESCRIPTION

VCBO NUMBER:	21515
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TCSD WAREHOUSE REMODEL - BLDGS 649

TOOELE COUNTY SCHOOL DISTRICT
PROJECT ADDRESS: 180 GARNET ST. TOOELE, UTAH 84074

BID SET

DOOR DETAILS

EY703

8/16/2021 2:30:08 PM

COMcheck Software Version 4.1.5.2
Interior Lighting Compliance Certificate

Project Information

Energy Code: 2018 IECC
Project Title: Warehouse Building 649
Project Type: New Construction

Construction Site:
180 Garnet Street
Tooele, UT

Owner/Agent:

Designer/Contractor:

REGISTERED PROFESSIONAL ENGINEER
JEFFREY R. OWEN
No.177411
STATE OF UTAH
08/16/21

Additional Efficiency Package(s)

Credits: 1.0 Required 1.0 Proposed
Reduced Lighting Power, 1.0 credit

Allowed Interior Lighting Power

A Area Category	B Floor Area (ft2)	C Allowed Watts / ft2	D Allowed Watts (B X C)
1-Warehouse	90000	0.43	38880
		Total Allowed Watts =	38880

Proposed Interior Lighting Power

A Fixture ID : Description / Lamp / Wattage Per Lamp / Ballast	B Lamps/ Fixture	C # of Fixtures	D Fixture Watt.	E (C X D)
1-Warehouse				
LED 1: GID1: 2x4 Indirect Lay-in: LED Other Fixture Unit 28W:	1	7	35	245
LED 2: HB1: High Bay: LED Other Fixture Unit 125W:	1	102	290	29580
LED 3: SW1: Surface Wrap: LED Other Fixture Unit 40W:	1	1	45	45
LED 4: SW2: Surface Wrap: LED Other Fixture Unit 50W:	1	4	53	212
		Total Proposed Watts =		30082

Interior Lighting PASSES: Design 23% better than code

Interior Lighting Compliance Statement

Compliance Statement: The proposed interior lighting design represented in this document is consistent with the building plans, specifications, and other calculations submitted with this permit application. The proposed interior lighting systems have been designed to meet the 2018 IECC requirements in *COMcheck* Version 4.1.5.2 and to comply with any applicable mandatory requirements listed in the Inspection Checklist.

Scott Kingery - Project Manager — Name - Title
Signature
Aug. 16, 2021 — Date

COMcheck Software Version 4.1.5.2
Inspection Checklist

Energy Code: 2018 IECC

Requirements: 0.0% were addressed directly in the COMcheck software

Text in the "Comments/Assumptions" column is provided by the user in the COMcheck Requirements screen. For each requirement, the user certifies that a code requirement will be met and how that is documented, or that an exception is being claimed. Where compliance is itemized in a separate table, a reference to that table is provided.

Section # & Req.ID	Plan Review	Complies?	Comments/Assumptions
C103.2 [PR4][1]	Plans, specifications, and/or calculations provide all information with which compliance can be determined for the interior lighting and electrical systems and equipment and document where exceptions to the standard are claimed. Information provided should include interior lighting power calculations, wattage of bulbs and ballasts, transformers and control devices.	☐Complies ☐Does Not ☐Not Observable ☐Not Applicable	
C406 [PR9][1]	Plans, specifications, and/or calculations provide all information with which compliance can be determined for the additional energy efficiency package options.	☐Complies ☐Does Not ☐Not Observable ☐Not Applicable	

Additional Comments/Assumptions:

1 High Impact (Tier 1) 2 Medium Impact (Tier 2) 3 Low Impact (Tier 3)

Section # & Req.ID	Rough-In Electrical Inspection	Complies?	Comments/Assumptions
C405.2.2.2 [EL22][1]	Spaces required to have light-reduction controls have a manual control that allows the occupant to reduce the connected lighting load in a reasonably uniform illumination pattern >= 50 percent.	☐Complies ☐Does Not ☐Not Observable ☐Not Applicable	
C405.2.1.1 C405.2.1.1 [EL18][1]	Occupancy sensors installed in classrooms/lecture/training rooms, conference/meeting/multipurpose rooms, copy/print rooms, lounges/breakrooms, enclosed offices, open plan office areas, restrooms, storage rooms, locker rooms, warehouse storage areas, and other spaces <= 300 sqft that are enclosed by floor-to-ceiling height partitions. Reference section language C405.2.1.2 for control function in warehouses and section C405.2.1.3 for open plan office spaces.	☐Complies ☐Does Not ☐Not Observable ☐Not Applicable	
C405.2.1.2 [EL19][1]	Occupancy sensors control function in warehouses: In warehouses, the lighting in aisleways and open areas is controlled with occupant sensors that automatically reduce lighting power by 50% or more when the areas are unoccupied. The occupant sensors control lighting in each aisleway independently and do not control lighting beyond the aisleway being controlled by the sensor.	☐Complies ☐Does Not ☐Not Observable ☐Not Applicable	
C405.2.1.3 [EL20][1]	Occupant sensor control function in open plan office areas: Occupant sensor controls in open office spaces >= 300 sq.ft. have controls 1) configured so that general lighting can be controlled separately in control zones with floor areas <= 600 sq.ft. within the space, 2) automatically turn off general lighting in all control zones within 20 minutes after all occupants have left the space, 3) are configured so that general lighting power in each control zone is reduced by >= 80% of the full zone general lighting power within 20 minutes of all occupants leaving that control zone, and 4) are configured such that any daylight responsive control will activate space general lighting or control zone general lighting only when occupancy for the same area is detected.	☐Complies ☐Does Not ☐Not Observable ☐Not Applicable	
C405.2.2.1 C405.2.2.1 C405.2.2.2 [EL21][1]	Each area not served by occupancy sensors (per C405.2.1) have time-switch controls and functions detailed in sections C405.2.2.1 and C405.2.2.2.	☐Complies ☐Does Not ☐Not Observable ☐Not Applicable	

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Section # & Req.ID	Rough-In Electrical Inspection	Complies?	Comments/Assumptions
C405.2.3.1 C405.2.3.2 C405.2.3.2 [EL23][1]	Daylight zones provided with individual controls that control the lights independent of general area lighting. See code section C405.2.3 Daylight-responsive controls for applicable spaces, C405.2.3.1 Daylight responsive control function and section C405.2.3.2 Sidelit zone.	☐Complies ☐Does Not ☐Not Observable ☐Not Applicable	
C405.2.4 [EL26][1]	Separate lighting control devices for specific uses installed per approved lighting plans.	☐Complies ☐Does Not ☐Not Observable ☐Not Applicable	
C405.2.4 [EL27][1]	Additional interior lighting power allowed for special functions per the approved lighting plans and is automatically controlled and separated from general lighting.	☐Complies ☐Does Not ☐Not Observable ☐Not Applicable	
C405.3 [EL6][1]	Exit signs do not exceed 5 watts per face.	☐Complies ☐Does Not ☐Not Observable ☐Not Applicable	
C405.6 [EL26][1]	Low-voltage dry-type distribution electric transformers meet the minimum efficiency requirements of Table C405.6.	☐Complies ☐Does Not ☐Not Observable ☐Not Applicable	
C405.7 [EL27][1]	Electric motors meet the minimum efficiency requirements of Tables C405.7(1) through C405.7(4). Efficiency verified through certification under an approved certification program or the equipment efficiency ratings shall be provided by motor manufacturer (where certification programs do not exist).	☐Complies ☐Does Not ☐Not Observable ☐Not Applicable	
C405.8.2.1 C405.8.2.1 [EL28][1]	Escalators and moving walks comply with ASME A17.1/CSA B44 and have automatic controls configured to reduce speed to the minimum permitted speed in accordance with ASME A17.1/CSA B44 or applicable local code when not conveying passengers.	☐Complies ☐Does Not ☐Not Observable ☐Not Applicable	
C405.9 [EL29][1]	Total voltage drop across the combination of feeders and branch circuits <= 5%.	☐Complies ☐Does Not ☐Not Observable ☐Not Applicable	

Additional Comments/Assumptions:

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Section # & Req.ID	Final Inspection	Complies?	Comments/Assumptions
C303.3, C408.2.5.2 [FI17][1]	Furnished O&M instructions for systems and equipment to the building owner or designated representative.	☐Complies ☐Does Not ☐Not Observable ☐Not Applicable	
C405.4.1 [FI18][1]	Interior installed lamp and fixture lighting power is consistent with what is shown on the approved lighting plans, demonstrating proposed watts are less than or equal to allowed watts.	☐Complies ☐Does Not ☐Not Observable ☐Not Applicable	*See the Interior Lighting fixture schedule for values.*
C408.1.1 [FI57][1]	Building operations and maintenance documents will be provided to the owner. Documents will cover manufacturers' information, specifications, programming procedures and means of illustrating to owner how building, equipment and systems are intended to be installed, maintained, and operated.	☐Complies ☐Does Not ☐Not Observable ☐Not Applicable	
C408.2.5.1 [FI16][1]	Furnished as-built drawings for electric power systems within 90 days of system acceptance.	☐Complies ☐Does Not ☐Not Observable ☐Not Applicable	
C408.3 [FI33][1]	Lighting systems have been tested to ensure proper calibration, adjustment, programming, and operation.	☐Complies ☐Does Not ☐Not Observable ☐Not Applicable	

Additional Comments/Assumptions:

1 High Impact (Tier 1) 2 Medium Impact (Tier 2) 3 Low Impact (Tier 3)

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REV DATE DESCRIPTION

VCBO NUMBER: 20385
CLIENT NUMBER: -
DATE: 2021-08-18

TCSD WAREHOUSE 649 REMODEL

TOOELE COUNTY SCHOOL DISTRICT
PROJECT ADDRESS: 180 GARNET ST. TOOELE, UTAH 84074

CONSTRUCTION DOCUMENT

LIGHTING CERTIFICATE

LC