

DUCT LEGEND		
SINGLE LINE SYMBOL	DOUBLE LINE SYMBOL	DESCRIPTION
		RECTANGULAR DUCT - WIDTH x DEPTH (PLAN VIEW) DEPTH x WIDTH (SECTION VIEW)
		1" ACOUSTICALLY LINED RECTANGULAR DUCT-DIMENSIONS ARE OUTSIDE
		2" ACOUSTICALLY LINED RECTANGULAR DUCT-DIMENSIONS ARE OUTSIDE
		MANUAL AIR DAMPER
		RISE OR DROP DUCT IN DIRECTION OF AIR FLOW
		RECTANGULAR TO RECTANGULAR TRANSITION , MAX. SLOPE OF 1:3
		RECTANGULAR TO ROUND TRANSITION , MAX. SLOPE OF 1:3
		ELBOW, RECTANGULAR, SMOOTH RADIUS, WITHOUT TURNING VANES
		SQUARE/RECTANGULAR DUCT ELBOW WITH TURNING VANES
		CONVERGING OR DIVERGING TEE, 45° ENTRY, RECTANGULAR MAIN AND BRANCH. WHEN REDUCING MAIN, SIDE OF TAKE OFF OR ENTRY BRANCH TO BE FLAT, OTHER SIDES MAX. SLOPE OF 1:3
		CONICAL DUCT TAKE OFF FROM RECTANGULAR VIA SPIN-IN W/DAMPER AND SCOOP
		ROUND DUCT TAKE OFF FROM RECTANGULAR VIA SMOOTH CONVERGING BELL MOUTH
		RECTANGULAR DUCT TEE. MAD'S ON THE 2 BRANCHES, THROAT SIZED FOR EQUAL PRESSURE DROP
		RECTANGULAR DUCT SPLIT MAD'S, THROAT SIZED FOR EQUAL PRESSURE DROP
		3-WAY RECTANGULAR SPLIT WITH TWO TRANSITIONAL ELBOWS AND TRANSITIONING MAIN. DOWNSTREAM MAD'S ON THE TREE BRANCHES. THROATS SIZED FOR EQUAL PRESSURE DROP.
		FOR CONCEALED DUCT: DROP TO DIFFUSER SHALL BE FULL SIZE OF DIFFUSER NECK. FOR EXPOSED DUCT: DROP SHALL BE FULL SIZE OF OD DIFFUSER FRAME, FLANGE FOR MOUNTING DIFFUSER TURNED IN. AIR EXTRACTOR AND EQUALIZER GRID AT CONNECTION TO MAIN.
		SUPPLY AIR, SUPPLY AIR DUCT IN SECTION, SUPPLY DROP
		RETURN AIR, RETURN AND OUTSIDE AIR DUCT IN SECTION, RETURN AIR DROP
		EXHAUST AIR, EXHAUST AIR DUCT IN SECTION, EXHAUST AIR DROP
		FLEXIBLE DUCT (ROUND)
		45° REDUCING LATERAL FITTING
		90° REDUCING TEE FITTING

MECHANICAL GENERAL NOTES	
1.	ALL WORK SHALL COMPLY WITH ALL APPLICABLE CODES, SPECIFICATIONS, LOCAL ORDINANCES AND INDUSTRY STANDARDS.
2.	VERIFY EXACT LOCATION OF ALL (E) EQUIPMENT, DUCTWORK, DIFFUSERS, REGISTERS AND GRILLES. NOTIFY ARCHITECT IMMEDIATELY OF ANY DISCREPANCIES BETWEEN (E) SYSTEMS AND DRAWINGS.
3.	COORDINATE EXACT LOCATION OF EQUIPMENT AND ALL PENETRATIONS THROUGH ROOF, FLOORS AND WALLS WITH ARCHITECTURAL STRUCTURAL SYSTEMS PRIOR TO COMMENCING WORK.
4.	COORDINATE EXACT SIZE AND ROUTING OF DUCTWORK WITH ARCHITECTURAL PLANS, STRUCTURE AND EQUIPMENT PRIOR TO COMMENCING WORK.
5.	SEE ARCHITECTURAL REFLECTED CEILING PLAN FOR EXACT LOCATION OF ALL CEILING DIFFUSERS, REGISTERS AND GRILLES.
6.	FURNISH AND INSTALL MANUAL AIR DAMPERS AT ALL DUCT BRANCH TAKEOFFS TO A SINGLE SUPPLY DIFFUSER.
7.	FLEXIBLE DUCTWORK CONNECTIONS TO CEILING DIFFUSERS ARE LIMITED TO 5' MAXIMUM LENGTH.
8.	ALL DUCTWORK, CEILING DIFFUSERS/REGISTERS/GRILLES, EQUIPMENT, PIPING ETC., ARE NEW U.O.N. (SHOWN HEAVY). (E) DUCTWORK, PIPING ETC. IS SHOWN LIGHT. SEE LEGEND.
9.	(E) DUCTWORK AND ITEMS TO BE REMOVED ARE SHOWN CROSSED ("X") OUT. SEE LEGEND, COORDINATE CLOSELY WITH (N) DUCTWORK AND P.O.C.'S SHOWN. ALL OTHER (E) DUCTWORK, ETC. TO REMAIN.
10.	WHERE INLET DUCT DIAMETER AND DIFFUSER NECK SIZE ARE THE SAME (I.E. 9" DIA. & 9x9) CONTRACTOR SHALL OVERSIZE THE SHEET METAL PLENUM TO ACCOMMODATE THE ROUND DUCT CONNECTION.
11.	THERMOSTAT TO BE INSTALLED AT 46" ABOVE FINISHED FLOOR (TOP OF THERMOSTAT), DO NOT INSTALL THERMOSTAT OVER CASEWORK OR SHELVING OVER 24" IN DEPTH & 34" IN HEIGHT. REFER TO CBC SECTION 11B-308 FOR ADDITIONAL REQUIREMENTS.

MECHANICAL LEGEND		
SYMBOL	ABBREVIATION	DESCRIPTION
	ABV	ABOVE
	ABC	ABOVE CEILING
	AF	ABOVE FLOOR
	AFF	ABOVE FINISHED FLOOR
	AFG	ABOVE FINISHED GRADE
	AD, AP	ACCESS DOOR, ACCESS PANEL
	AC	AIR CONDITIONING
	APD	AIR PRESSURE DROP, INCHES WATER COLUMN
	AB	ANCHOR BOLT
	BDD	BACK DRAFT DAMPER
	BF	BELOW FLOOR
	BHP	BRAKE HORSE POWER
	BTU(H)	BRITISH THERMAL UNITS (PER HOUR)
	BPT	BYPASS TIMER
	CC	CENTER TO CENTER
	CLG	CEILING
	CEF	CEILING EXHAUST FAN
	CLR	CLEAR
	CONC	CONCRETE
	CD	CONCENTRIC REDUCER
	COND	CONDENSATE DRAIN
	CONN	CONDENSER
	CONT	CONNECT OR CONNECTION
	CONTR	CONTINUATION
	CFM	CONTRACTOR
	CDR	CUBIC FEET OF AIR FLOW PER MINUTE
	DIA	DAMPER
	DL	DEGREES FAHRENHEIT
	DN	DIAMETER, PHASE
	DR	DOOR LOUVER
	DB	DOWN
	DS	DRAIN
	EP	DRY BULB (DEGREES FAHRENHEIT)
	EL	DYNAMIC SENSOR
	ENT	ECCENTRIC REDUCER
	EDB	ELECTRICAL PANEL
	EW	ENTERING
	EWT	ENTERING DRY BULB
	EWB	ENTERING WATER
	EVAP	ENTERING WATER TEMPERATURE
	EC	ENTERING WET BULB
	EA	EVAPORATOR
	EAD	EVAPORATIVE COOLER
	EF	EXHAUST AIR
	(E), EXIST	EXHAUST AIR DAMPER
	(E)	EXHAUST FAN
	(E)	EXISTING
	(E)	EXISTING TO BE REMOVED
	(E)	EXISTING TO BE ABANDONED
	ESP	EXISTING TO BE CAPPED
	FPM	EXTERNAL STATIC PRESSURE
	FIN	FEET PER MINUTE
	FD	FINISH
	FS	FIRE DAMPER
	FC	FIRE/SMOKE DAMPER
	FLR	FLEXIBLE CONNECTION
	FLV	FLOOR
	FA	FLOW IN DIRECTION OF ARROW
	FB	FLOW LIMITING VALVE
	FLA	FROM ABOVE
	GALV	FROM BELOW
	GI	FULL LOAD AMPS
	GA	GALVANIZED
		GALVANIZED IRON
		GAUGE

PIPING, DUCTWORK & ELECTRICAL DISTRIBUTION SYSTEM BRACING NOTE	
PIPING, DUCTWORK, AND ELECTRICAL DISTRIBUTION SYSTEMS SHALL BE BRACED TO COMPLY WITH THE FORCES AND DISPLACEMENTS PRESCRIBED IN ASCE 7-16 SECTION 13.3 AS DEFINED IN ASCE 7-16 SECTION 13.6.5, 13.6.6, 13.6.7, 13.6.8, AND 2019 CBC, SECTIONS 1617A.1.24, 1617A.1.25, AND 1617A.1.26.	
THE METHOD OF SHOWING BRACING AND ATTACHMENTS TO THE STRUCTURE FOR THE IDENTIFIED DISTRIBUTION SYSTEM ARE AS NOTED BELOW. WHEN BRACING AND ATTACHMENTS ARE BASED ON PREAPPROVED INSTALLATION GUIDE (E.G., 3M/ACNA OR OSHPD OPM FOR 2013 CBC OR LATER), COPIES OF THE BRACING SYSTEM INSTALLATION GUIDE OR MANUAL SHALL BE AVAILABLE ON THE JOBSITE PRIOR TO THE START OF AND DURING THE HANGING AND BRACING OF THE DISTRIBUTION SYSTEMS. THE STRUCTURAL ENGINEER OF RECORD SHALL VERIFY THE ADEQUACY OF THE STRUCTURE TO SUPPORT THE HANGER AND BRACE LOADS.	
MECHANICAL PIPING (MP), MECHANICAL DUCTS (MD), PLUMBING PIPING (PP), ELECTRICAL DISTRIBUTION SYSTEMS (E):	
MP <input type="checkbox"/> MD <input type="checkbox"/> PP <input type="checkbox"/> E <input type="checkbox"/>	OPTION 1: DETAILED ON THE APPROVED DRAWINGS WITH PROJECT SPECIFIC NOTES AND DETAILS
MP <input checked="" type="checkbox"/> MD <input checked="" type="checkbox"/> PP <input type="checkbox"/> E <input type="checkbox"/>	OPTION 2: SHALL COMPLY WITH THE APPLICABLE OSHPD PRE-APPROVED (OPM #) #0043-13.

MECHANICAL LEGEND cont'd		
SYMBOL	ABBREVIATION	DESCRIPTION
	HTG	HEATING
	H	HUMIDISTAT, "X" INDICATES DEVICE CONTROLLED
	IE	INVERT ELEVATION
	KW	KILOWATTS
	KWH	KILOWATT HOUR
	LDB	LEAVING DRY BULB IN DEGREES FAHRENHEIT
	LWB	LEAVING WET BULB IN DEGREES FAHRENHEIT
	LRA	LOCKED ROTOR AMPERES
	MAD, MD	LOUVER
	MFR	MANUAL AIR DAMPER
	MAX	MANUFACTURER
	MIN	MAXIMUM
	MCC	MINIMUM
	(N)	MOTOR CONTROL CENTER
	OC	NEW
	OA	ON CENTER
	OAD	OUTSIDE AIR
	OD	OUTSIDE AIR DAMPER
	OV	OUTSIDE DIAMETER
	OH	OUTLET VELOCITY
		OVERHEAD
		PIPE DROP
		PIPE RISE
		PITCH DOWN IN DIRECTION OF FLOW
	POC	POINT OF CONNECTION
	LBS	POUNDS
	PSI (G) (A)	POUNDS PER SQUARE INCH (GAUGE) (ABSOLUTE)
	PD	PRESSURE DROP
	PRV	PRESSURE REDUCING VALVE
	RG	REFRIGERANT GAS PIPING
	RS	REFRIGERANT SUCTION PIPING
	RL	REFRIGERANT LIQUID PIPING
	RA	RETURN AIR
	RAD	RETURN AIR DAMPER
	RPM	REVOLUTIONS PER MINUTE
	RLA	RUNNING LOAD AMPERES
	SB	SECURITY BARS
	SM	SHEET METAL
	SD	SMOKE DAMPER
	SKD	SMOKE DETECTOR
	SD	SPLITTER DAMPER
	SOFT, FT2	SQUARE FEET
	SQIN, IN2	SQUARE INCHES
	SP	STATIC PRESSURE
	SPD	STATIC PRESSURE DROP
	SA	SUPPLY AIR
	SF	SUPPLY FAN
	TCP	TEMPERATURE CONTROL PANEL
	TCV	TEMPERATURE CONTROL VALVE
	(TS) X	TEMPERATURE SENSOR, "X" INDICATES DEVICE CONTROLLED
	(T) X	THERMOSTAT, "X" INDICATES DEVICE CONTROLLED
	MBH	THOUSAND BRITISH THERMAL UNITS PER HOUR
	TA	TO ABOVE
	TB	TO BELOW
	TP	TOTAL PRESSURE
	TSP	TOTAL STATIC PRESSURE
	TYP	TYPICAL
	UG	UNDERGROUND
	UCD	UNDER CUT DOOR
	UCN	UNLESS OTHERWISE NOTED
	WPD	WATER PRESSURE DROP
	W	WATTS
	WT	WEIGHT
	WB	WET BULB
	WMS	WIRE MESH SCREEN
MEP COMPONENT ANCHORAGE NOTE		
ALL MECHANICAL, PLUMBING, AND ELECTRICAL COMPONENTS SHALL BE ANCHORED AND INSTALLED PER THE DETAILS ON THE DSA APPROVED CONSTRUCTION DOCUMENTS. THE FOLLOWING COMPONENTS SHALL BE ANCHORED OR BRACED TO MEET THE FORCE AND DISPLACEMENT REQUIREMENTS PRESCRIBED IN THE 2019 CBC, SECTIONS 1617A.1.18 THROUGH 1617A.1.26 AND ASCE 7-16 CHAPTER 13, 26 AND 30.		
1. ALL PERMANENT EQUIPMENT AND COMPONENTS.		
2. TEMPORARY, MOVABLE OR MOBILE EQUIPMENT THAT IS PERMANENTLY ATTACHED (E.G. HARD WIRED) TO THE BUILDING UTILITY SERVICES SUCH AS ELECTRICITY, GAS OR WATER.		
"PERMANENTLY ATTACHED" SHALL INCLUDE ALL ELECTRICAL CONNECTIONS EXCEPT PLUGS FOR 110/220 VOLT RECEPTACLES HAVING FLEXIBLE CABLE.		
3. TEMPORARY, MOVABLE OR MOBILE EQUIPMENT WHICH IS HEAVIER THAN 400 POUNDS OR HAS A CENTER OF MASS LOCATED 4 FEET OR MORE ABOVE THE ADJACENT FLOOR OR ROOF LEVEL THAT DIRECTLY SUPPORT THE COMPONENT ARE REQUIRED TO BE RESTRAINED IN A MANNER APPROVED BY DSA.		
THE FOLLOWING MECHANICAL AND ELECTRICAL COMPONENTS SHALL BE POSITIVELY ATTACHED TO THE STRUCTURE, BUT NEED NOT DEMONSTRATE DESIGN COMPLIANCE WITH THE REFERENCES NOTED ABOVE. THESE COMPONENTS SHALL HAVE FLEXIBLE CONNECTIONS PROVIDED BETWEEN THE COMPONENT AND ASSOCIATED DUCTWORK, PIPING, AND CONDUIT. FLEXIBLE CONNECTIONS MUST ALLOW MOVEMENT IN BOTH TRANSVERSE AND LONGITUDINAL DIRECTIONS.		
A. COMPONENTS WEIGHING LESS THAN 400 POUNDS AND HAVE A CENTER OF MASS LOCATED 4 FEET OR LESS ABOVE THE ADJACENT FLOOR OR ROOF LEVEL THAT DIRECTLY SUPPORT THE COMPONENT.		
B. COMPONENTS WEIGHING LESS THAN 20 POUNDS, OR IN THE CASE OF DISTRIBUTION SYSTEMS, LESS THAN 5 POUNDS PER FOOT, WHICH ARE SUSPENDED FROM A ROOF OR FLOOR OR HUNG FROM A WALL.		
THE ANCHORAGE OF ALL MECHANICAL, ELECTRICAL AND PLUMBING COMPONENTS SHALL BE SUBJECT TO THE APPROVAL OF THE DESIGN PROFESSIONAL IN GENERAL RESPONSIBLE CHARGE OR STRUCTURAL ENGINEER DELEGATED RESPONSIBILITY AND ACCEPTANCE BY DSA. THE PROJECT INSPECTOR WILL VERIFY THAT ALL COMPONENTS AND EQUIPMENT HAVE BEEN ANCHORED IN ACCORDANCE WITH THE ABOVE REQUIREMENTS.		

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IF THIS SHEET IS NOT 30"x42", IT IS
A REDUCED PRINT SCALE ACCORDINGLY

CONDENSING UNIT SCHEDULE

UNIT	SERVES	"CARRIER" MODEL NO.	EVAP CFM	SENSIBLE COOLING CAP. (MBH)	TOTAL COOLING CAP. (MBH)	REFRIG. PIPE		VOLT/PH	ELECTRICAL DATA				SEER (EER)	OPER. WT. (LBS.)	MOUNTING DETAIL	CONTROL DIAGRAM	NOTES
						RS (DIA.)	RL (DIA.)		COND. FAN FLA	COMPRESSOR RLA	MCA	MOCP					
CU 101	CR 101	24ACB748	1600	36.3	46.2	1-1/8	3/8	208/1	1.3	21.2	104.0	27.8	40	16.0 (13.0)	280	2 M5.1B 3 M6.1B	1 2 3 4
CU 102	CR 102	24ACB748	1600	36.3	46.2	1-1/8	3/8	208/1	1.3	21.2	104.0	27.8	40	16.0 (13.0)	280	2 M5.1B 3 M6.1B	1 2 3 4
CU 103	CR 103	24ACB748	1600	36.3	46.2	1-1/8	3/8	208/1	1.3	21.2	104.0	27.8	40	16.0 (13.0)	280	2 M5.1B 3 M6.1B	1 2 3 4
CU 104	CR 104	24ACB748	1600	36.3	46.2	1-1/8	3/8	208/1	1.3	21.2	104.0	27.8	40	16.0 (13.0)	280	2 M5.1B 3 M6.1B	1 2 3 4
CU 106	CR 106	24ACB748	1600	36.3	46.2	1-1/8	3/8	208/1	1.3	21.2	104.0	27.8	40	16.0 (13.0)	280	2 M5.1B 3 M6.1B	1 2 3 4
CU 107	CR 107	24ACB748	1600	36.3	46.2	1-1/8	3/8	208/1	1.3	21.2	104.0	27.8	40	16.0 (13.0)	280	2 M5.1B 3 M6.1B	1 2 3 4
CU 108	CR 108	24ACB748	1600	36.3	46.2	1-1/8	3/8	208/1	1.3	21.2	104.0	27.8	40	16.0 (13.0)	280	2 M5.1B 3 M6.1B	1 2 3 4
CU 150	SDC 150	24ACB748	1600	36.3	46.2	1-1/8	3/8	208/1	1.3	21.2	104.0	27.8	40	16.0 (13.0)	280	2 M5.1B 3 M6.1B	1 2 3 4
CU 151	SDC 151	24ACB748	1600	36.3	46.2	1-1/8	3/8	208/1	1.3	21.2	104.0	27.8	40	16.0 (13.0)	280	2 M5.1B 3 M6.1B	1 2 3 4
CU 201	CR 201	24ACB748	1600	36.3	46.2	1-1/8	3/8	208/1	1.3	21.2	104.0	27.8	40	16.0 (13.0)	280	2 M5.1B 3 M6.1B	1 2 3 4
CU 202	CR 202	24ACB748	1600	36.3	46.2	1-1/8	3/8	208/1	1.3	21.2	104.0	27.8	40	16.0 (13.0)	280	2 M5.1B 3 M6.1B	1 2 3 4
CU 204	CR 204	24ACB748	1600	36.3	46.2	1-1/8	3/8	208/1	1.3	21.2	104.0	27.8	40	16.0 (13.0)	280	2 M5.1B 3 M6.1B	1 2 3 4
CU 205	RESOURCE 205	24ACB748	800	18.0	23.2	3/4	3/8	208/1	0.6	11.1	58.3	14.5	20	15.0 (12.5)	185	2 M5.1B 4 M6.1B	1 2 3 4
CU 206	RESOURCE 206A&B, OT/FLEX 206C	24ACB748	1600	36.3	46.2	1-1/8	3/8	208/1	1.3	21.2	104.0	27.8	40	16.0 (13.0)	280	2 M5.1B 4 M6.1B	1 2 3 4
CU 207	CR 207	24ACB748	1600	36.3	46.2	1-1/8	3/8	208/1	1.3	21.2	104.0	27.8	40	16.0 (13.0)	280	2 M5.1B 3 M6.1B	1 2 3 4
CU 208	CR 208	24ACB748	1600	36.3	46.2	1-1/8	3/8	208/1	1.3	21.2	104.0	27.8	40	16.0 (13.0)	280	2 M5.1B 3 M6.1B	1 2 3 4
CU 209	CR 209	24ACB748	1600	36.3	46.2	1-1/8	3/8	208/1	1.3	21.2	104.0	27.8	40	16.0 (13.0)	280	2 M5.1B 3 M6.1B	1 2 3 4
CU 210	SCIENCE 210	24ACB760	1950	43.2	53.8	1-1/8	3/8	208/1	1.3	28.8	152.9	37.3	60	15.5 (12.0)	285	2 M5.1B 3 M6.1B	1 2 3 4
CU 212	SCIENCE 212	24ACB760	1950	43.2	53.8	1-1/8	3/8	208/1	1.3	28.8	152.9	37.3	60	15.5 (12.0)	285	2 M5.1B 3 M6.1B	1 2 3 4

- NOTES:
- 1 SENSIBLE AND TOTAL COOLING CAPACITY ARE AT 94 DEG. F AMBIENT OUTDOOR CONDITIONS.
 - 2 PROVIDE ALL REFRIGERANT PIPING AND ALL ACCESSORIES BETWEEN CONDENSING UNIT & FURNACES. SEE PLANS FOR EXTENT OF PIPING.
 - 3 PROVIDE WITH EXPANDED METAL CONDENSER COIL GUARDS.
 - 4 CONTRACTOR SHALL REVIEW REFRIGERANT LINE SIZES WITH MANUFACTURER OF THE SUBMITTED FURNACE/CONDENSING UNITS AND MAKE ANY ADJUSTMENTS IN SIZE NECESSARY TO COMPLY WITH MANUFACTURER'S REQUIREMENTS FOR THE LENGTH OF THE RUNS SHOWN ON DRAWINGS. ADDITIONALLY, REVIEW SUCTION RISERS WITH THE MANUFACTURER AND PROVIDE DOUBLE SUCTION RISERS IF RECOMMENDED FOR PROPER OIL RETURN. CONTRACTOR SHALL PROVIDE SEPARATE SUBMITTAL FOR ENGINEER'S REVIEW OF CONFORMANCE WITH THESE REQUIREMENTS.



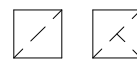




FURNACE SCHEDULE (WITH DX COOLING COIL)

UNIT	SERVES	"CARRIER" MODEL NO. U.N.O.	CFM	MIN OSA (CFM)	ESP (IN. WG.)	DX COOLING COIL			GAS HEATING			ELECTRICAL DATA				AFUE (%)	OPER WT. (LBS.)	MOUNTING DETAIL	CONTROL DIAGRAM	NOTES		
						"CARRIER" MODEL NO.	EDB (°F)	EWB (°F)	INPUT (MBH)	OUTPUT (MBH)	EDB (°F)	VOLT/PH	HP	SUPPLY FAN RPM	FLA						MCA	MOCP
F 101	CR 101	59TP6A080-20	1600	UPPER 450 LOWER 130	0.6	CNPVP48	80.3	63.8	80.0	78.0	58.5	120/1	1.0	1200 MAX.	12.3	13.0	20	97	230	1 M5.1B	3 M6.1B	1 2 3 4 5 6 7 8
F 102	CR 102	59TP6A080-20	1600	UPPER 450 LOWER 130	0.6	CNPVP48	80.3	63.8	80.0	78.0	58.5	120/1	1.0	1200 MAX.	12.3	13.0	20	97	230	1 M5.1B	3 M6.1B	1 2 3 4 5 6 7 8
F 103	CR 103	59TP6A080-20	1600	UPPER 450 LOWER 130	0.6	CNPVP48	80.3	63.8	80.0	78.0	58.5	120/1	1.0	1200 MAX.	12.3	13.0	20	97	230	1 M5.1B	3 M6.1B	1 2 3 4 5 6 7 8
F 104	CR 104	59TP6A080-20	1600	UPPER 450 LOWER 130	0.6	CNPVP48	80.3	63.8	80.0	78.0	58.5	120/1	1.0	1200 MAX.	12.3	13.0	20	97	230	1 M5.1B	3 M6.1B	1 2 3 4 5 6 7 8
F 106	CR 106	59TP6A080-20	1600	UPPER 450 LOWER 130	0.6	CNPVP48	80.3	63.8	80.0	78.0	58.5	120/1	1.0	1200 MAX.	12.3	13.0	20	97	230	1 M5.1B	3 M6.1B	1 2 3 4 5 6 7 8
F 107	CR 107	59TP6A080-20	1600	UPPER 450 LOWER 130	0.6	CNPVP48	80.3	63.8	80.0	78.0	58.5	120/1	1.0	1200 MAX.	12.3	13.0	20	97	230	1 M5.1B	3 M6.1B	1 2 3 4 5 6 7 8
F 108	CR 108	59TP6A080-20	1600	UPPER 450 LOWER 130	0.6	CNPVP48	80.3	63.8	80.0	78.0	58.5	120/1	1.0	1200 MAX.	12.3	13.0	20	97	230	1 M5.1B	3 M6.1B	1 2 3 4 5 6 7 8
F 150	SDC 150	59TP6A080-20	1600	UPPER 450 LOWER 130	0.6	CNPVP48	80.3	63.8	80.0	78.0	58.5	120/1	1.0	1200 MAX.	12.3	13.0	20	97	230	1 M5.1B	3 M6.1B	1 2 3 4 5 6 7 8
F 151	SDC 151	59TP6A080-20	1600	UPPER 450 LOWER 130	0.6	CNPVP48	80.3	63.8	80.0	78.0	58.5	120/1	1.0	1200 MAX.	12.3	13.0	20	97	230	1 M5.1B	3 M6.1B	1 2 3 4 5 6 7 8
F 201	CR 201	59TP6A080-20	1600	UPPER 450 LOWER 130	0.6	CNPVP48	80.3	63.8	80.0	78.0	58.5	120/1	1.0	1200 MAX.	12.3	13.0	20	97	230	1 M5.1B	3 M6.1B	1 2 3 4 5 6 7 8
F 202	CR 202	59TP6A080-20	1600	UPPER 450 LOWER 130	0.6	CNPVP48	80.3	63.8	80.0	78.0	58.5	120/1	1.0	1200 MAX.	12.3	13.0	20	97	230	1 M5.1B	3 M6.1B	1 2 3 4 5 6 7 8
F 204	CR 204	59TP6A080-20	1600	UPPER 450 LOWER 130	0.6	CNPVP48	80.3	63.8	80.0	78.0	58.5	120/1	1.0	1200 MAX.	12.3	13.0	20	97	230	1 M5.1B	3 M6.1B	1 2 3 4 5 6 7 8
F 205	RESOURCE 205	59TP6A040-12	800	180	0.5	CNPVP24	79.3	63.6	40.0	39.0	60.8	120/1	0.5	1200 MAX.	6.8	7.4	15	97	180	1 M5.1B	4 M6.1B	1 2 3 4 5 6 7 9
F 206	RESOURCE 206A&B, OT/FLEX 206C	59TP6A080-20	1600	420	0.6	CNPVP48	80.0	63.7	80.0	78.0	59.2	120/1	1.0	1200 MAX.	12.3	13.0	20	97	230	1 M5.1B	4 M6.1B	1 2 3 4 5 6 7 9
F 207	CR 207	59TP6A080-20	1600	UPPER 450 LOWER 130	0.6	CNPVP48	80.3	63.8	80.0	78.0	58.5	120/1	1.0	1200 MAX.	12.3	13.0	20	97	230	1 M5.1B	3 M6.1B	1 2 3 4 5 6 7 8
F 208	CR 208	59TP6A080-20	1600	UPPER 450 LOWER 130	0.6	CNPVP48	80.3	63.8	80.0	78.0	58.5	120/1	1.0	1200 MAX.	12.3	13.0	20	97	230	1 M5.1B	3 M6.1B	1 2 3 4 5 6 7 8
F 209	CR 209	59TP6A080-20	1600	UPPER 450 LOWER 130	0.6	CNPVP48	80.3	63.8	80.0	78.0	58.5	120/1	1.0	1200 MAX.	12.3	13.0	20	97	230	1 M5.1B	3 M6.1B	1 2 3 4 5 6 7 8
F 210	SCIENCE 210	59TP6A120-22	1950	UPPER 495 LOWER 200	0.6	CNPVP60	79.8	63.8	100.0	97.0	59.6	120/1	1.0	1200 MAX.	11.1	11.9	20	97	275	1 M5.1B	3 M6.1B	1 2 3 4 5 6 7 8
F 212	SCIENCE 212	59TP6A120-22	1950	UPPER 495 LOWER 200	0.6	CNPVP60	79.8	63.8	100.0	97.0	59.6	120/1	1.0	1200 MAX.	11.1	11.9	20	97	275	1 M5.1B	3 M6.1B	1 2 3 4 5 6 7 8

- NOTES:
- 1 UNIT SELECTED AT 94 DEG. F DB / 67 DEG. F WB SUMMER AMBIENT, AND 29 DEG. F DB WINTER AMBIENT AIR TEMPERATURES.
 - 2 ESP SCHEDULED DOES NOT INCLUDE DX COIL APD.
 - 3 SEE CONDENSING UNIT SCHEDULE FOR COOLING CAPACITIES.
 - 4 OPERATING WEIGHT INCLUDES DX COIL.
 - 5 PROVIDE WITH MANUFACTURER'S CONCENTRIC COMBUSTION AIRVENT KIT. SEE DETAIL 3/M5.1B.
 - 6 PROVIDE WITH 1" MERV 13 DISPOSABLE PLEATED MEDIA FILTERS.
 - 7 PROVIDE WITH MANUFACTURER'S CONDENSATE NEUTRALIZATION KIT.
 - 8 LOWER OUTSIDE AIR POSITION INDICATED IS BASED ON 0.15 CFM/SQ.FT. ALLOWABLE FOR CO2 DEMAND CONTROLLED SYSTEMS AT MINIMUM OCCUPANCY. UPPER OUTSIDE AIR POSITION INDICATED IS BASED ON 15 CFM/OCCUPANT WHEN SPACE IS AT MAXIMUM OCCUPANCY. UNLESS SYSTEM IS IN ECONOMIZER MODE. SEE CONTROLS FOR SEQUENCE OF OPERATION.
 - 9 PROVIDE "LITTLE GIANT" MODEL VDMA-20ULS CONDENSATE PUMP, 208V/180, 1/30 HP, 0.6 AMPS, 1/2 GAL. TANK. DISCHARGE CHECK VALVE WITH OPTIONAL SAFETY SWITCH. INSTALL ON WALL BRACKET WITHIN FURNACE ENCLOSURE. INTERLOCK SAFETY SWITCH WITH FURNACE INTERLOCK SAFETY SWITCH WITH FAN COIL UNIT TO SHUT-DOWN FURNACE UPON CONDENSATE PUMP FAILURE.

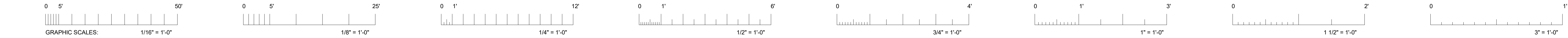
DIFFUSER, REGISTER & GRILLE SCHEDULE

DIFFUSER, REGISTER & GRILLE SCHEDULE

SYMBOL	DESCRIPTION	KRUEGER	METALAIRE	NAILOR	TITUS	TUTTLE & BAILEY
	MODULAR CORE SURFACE MOUNT CEILING DIFFUSER BEVEL FRAME 3/4" DROP	1240 FRAME 21 - 1-1/4"	9000-2	7500-S	MCD BORDER TYPE 6	SQD-SB
	MODULAR CORE LAY-IN CEILING DIFFUSER FOR T-BAR CEILING 24x24 PANEL	1240 FRAME 23	9000-6P	7500-L	MCD BORDER TYPE 3	SQD-LT
	CEILING RETURN OR EXHAUST WITH 1/2" EGG CRATE CORE FOR SURFACE MOUNT	EGC-5	CC5D	61 EC-S	MODEL 50 F BORDER TYPE 1	CRE500-SF
	CEILING RETURN, RELIEF OR EXHAUST WITH 1/2" EGG CRATE CORE IN 24x24 PANEL FOR T-BAR CEILING	EGC-5TB	CC5D-TBD	61 EC-L	MODEL 50 F BORDER TYPE 3	CRE500-LT
	DOUBLE DEFLECTION SUPPLY GRILLE WITH VERTICAL FRONT BARS, 3/4" SPACING	880 V	V 4004 S	61 DV	300 RS	T54
	RETURN OR EXHAUST GRILLE WITH 3/5" OR 45" HORIZONTAL BARS.	S 80 H	SRH	7145 H	350 RL	T70D
	DOUBLE DEFLECTION SPIRAL DUCT MOUNTED SUPPLY GRILLE WITH CURVED FRAME, AIR SCOOP EXTRACTOR, VERTICAL FRONT BLADES, 2" SPACING.	EQUAL	EQUAL	EQUAL	S300FS	EQUAL
NOTES:						
1. ALL SYMBOLS NOTED MAY NOT BE USED. REFER TO PLANS FOR SIZE AND QUANTITY.		4. COORDINATE DIFFUSER TYPE WITH REFLECTED CEILING PLAN.				
2. ALL SUPPLY AIR DIFFUSERS ARE 4 WAY BLOW UNLESS SHOWN OTHERWISE.		5. OPPOSED BLADE DAMPERS ARE NOT REQUIRED AT DIFFUSERS, REGISTERS OR GRILLES.				
3. FURNISH ALL PRODUCTS OF A SINGLE MANUFACTURER.		6. PROVIDE MANUAL AIR DAMPERS AT EACH BRANCH DUCT TO A SINGLE DIFFUSER, REGISTER OR GRILLE.				
* ALUMINUM REGISTERS FOR SHOWERS AND DAMP AREAS						

DUCTLESS SPLIT SYSTEM AIR CONDITIONING (COOLING ONLY) UNIT SCHEDULE

UNIT	SERVES	"DAIKIN" MODEL NO. (INDOOR UNIT)	CFM	ELECTRICAL DATA		OPER. WT. (LBS.)	MOUNTING DETAIL	UNIT	"DAIKIN" MODEL NO. (OUTDOOR UNIT)	TOTAL COOLING CAPACITY (MBH)	REFRIG. PIPE		ELECTRICAL DATA				SEER	OPER. WT. (LBS.)	MOUNTING DETAIL	CONTROL DIAGRAM	NOTES	
				VOLT/PH	FAN FLA						RS (DIA.)	RL (DIA.)	VOLT/PH	FAN FLA	COMPRESSOR RLA	MCA						MOCP
SAC A114	ELEC DATA A114	FTKB18AXVJU	430	208/1	0.24	35	9 M5.1B	SCU A114	RKB18AXVJU	18.0	1/2	1/4	208/1	0.5	13	13.2	20	17	85	10 M5.1B	5 M6.1B	1 2 3 4 5 6 7
SAC 208D	ELEC DATA 208D	FTKB12AXVJU	360	208/1	.20	25	9 M5.1B	SCU 208D	RKB12AXVJU	12.0	3/8	1/4	208/1	0.19	7.5	7.7	15	17	60	10 M5.1B	5 M6.1B	1 2 3 4 5 6 7



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RELIEF/EXHAUST VENTILATOR SCHEDULE

UNIT	LOCATION SERVED	"GREENHECK" MODEL NO.	TYPE	TOTAL THROAT SIZE	CFM	S.P. (IN. W.G.)	OPER. WT. (LBS.)	MOUNTING DETAIL
RV A1	ERV A1	FGR	RELIEF	12x12	390	0.03	40	10 M5.1B
RV A2	ERV A2	FGR	RELIEF	16x16	600	0.03	55	10 M5.1B
RV 101	CR 101	FGR	RELIEF	18x18	1600	0.07	55	10 M5.1B
RV 102	CR 102	FGR	RELIEF	18x18	1600	0.07	55	10 M5.1B
RV 103	CR 103	FGR	RELIEF	18x18	1600	0.07	55	10 M5.1B
RV 104	CR 104	FGR	RELIEF	18x18	1600	0.07	55	10 M5.1B
RV 106	CR 106	FGR	RELIEF	18x18	1600	0.07	55	10 M5.1B
RV 107	CR 107	FGR	RELIEF	18x18	1600	0.07	55	10 M5.1B
RV 108	CR 108	FGR	RELIEF	18x18	1600	0.07	55	10 M5.1B
RV 150	SDC 150	FGR	RELIEF	18x18	1600	0.07	55	10 M5.1B
RV 151	SDC 151	FGR	RELIEF	18x18	1600	0.07	55	10 M5.1B
RV 201	CR 201	FGR	RELIEF	18x18	1600	0.07	55	10 M5.1B
RV 202	CR 202	FGR	RELIEF	18x18	1600	0.07	55	10 M5.1B
RV 204	CR 204	FGR	RELIEF	16x16	800	0.03	55	10 M5.1B
RV 205	RESOURCE 205	FGR	RELIEF	18x18	1600	0.07	55	10 M5.1B
RV 206	RESOURCE 206A&B, OT/FLEX 206C	FGR	RELIEF	18x18	1600	0.07	55	10 M5.1B
RV 207	CR 207	FGR	RELIEF	18x18	1600	0.07	55	10 M5.1B
RV 208	CR 208	FGR	RELIEF	18x18	1600	0.07	55	10 M5.1B
RV 209	CR 209	FGR	RELIEF	18x18	1600	0.07	55	10 M5.1B
RV 210	SCIENCE 210	FGR	RELIEF	24x24	2000	0.04	85	10 M5.1B
RV 212	SCIENCE 212	FGR	RELIEF	24x24	2000	0.04	85	10 M5.1B

NOTES:
1. PROVIDE WITH MANUFACTURER'S ROOF CURB, BIRDSCREEN & MOTORIZED DAMPER W/ NEMA 3R ACTUATOR (SEE CONTROL DIAGRAMS).

INTAKE HOOD SCHEDULE

UNIT	"GREENHECK" MODEL NO.	TYPE	TOTAL THROAT SIZE	CFM	S.P. (IN. W.G.)	OPER. WT. (LBS.)	MOUNTING DETAIL	NOTES
IH A1	FGI	INTAKE	12x12	390	0.03	40	10 M5.1B	1
IH A2	FGI	INTAKE	16x16	600	0.03	55	10 M5.1B	1
IH 153	FGI	INTAKE	12x12	45	0.03	40	10 M5.1B	1
IH 154	FGI	INTAKE	12x12	45	0.03	40	10 M5.1B	1

NOTES:
1 PROVIDE WITH MANUFACTURER'S ROOF CURB & BIRDSCREEN.

EXHAUST FAN SCHEDULE

UNIT	SERVES	"GREENHECK" MODEL NO. U.N.O.	CFM	SP (IN. W.G.)	DUTY	STYLE	RPM	HP (WATTS)	VOLT/PH	OPER. WT. (LBS.)	INTERLOCK TO RUN WITH	MOUNTING DETAIL	CONTROL DIAGRAM	NOTES
CEF A103A	ALL GENDER A103A	SP-A200	125	0.375	E	CE	760	(30)	120/1	25	OCC SENSOR	4 M5.1B	6 M6.1B	1 2 3
CEF A115	STAFF A115	SP-A200	125	0.375	E	CE	760	(30)	120/1	25	OCC SENSOR	4 M5.1B	6 M6.1B	1 2 3
CEF A116	STAFF A116	SP-A200	125	0.375	E	CE	760	(30)	120/1	25	OCC SENSOR	4 M5.1B	6 M6.1B	1 2 3
CEF 152	SPED 152	SPA510	300	0.375	E	CE	950	(224)	120/1	35	OCC SENSOR	4 M5.1B	6 M6.1B	1 2 3

DUTY: E- EXHAUST
STYLE: CE- CEILING, RED- ROOF EXHAUST DOWNBLAST
NOTES: 1 PROVIDE WITH THERMAL OVERLOAD PROTECTED MOTOR.
2 PROVIDE WITH FACTORY BACKDRAFT DAMPER & SPEED CONTROLLER.
3 INTERLOCK FAN TO OCCUPANCY SENSOR, BY DIV. 26.

VRF FAN COIL UNIT SCHEDULE

UNIT	LOCATION	"DAIKIN" MODEL NO.	CFM	MIN. O.A. (CFM)	COOLING CAPACITY (MBH)	HEATING CAPACITY (MBH)	REFRIG. PIPE RL (DIA.)	RS (DIA.)	ELECTRICAL DATA			OPER. WT. (LBS.)	MOUNTING DETAIL	CONTROL DIAGRAM	NOTES
									VOLT/PH	MCA	MOCP				
FC A100	LOBBY A100 & RECEPTION A101	FXZQ18TAVJU	510	200	18.0	20.0	1/4	1/2	208/1	0.6	15	45	6 M5.1B	7 M6.1B 1 M6.2B	1 2 3 4 5
FC A102	OFFICE A102	FXZQ07TAVJU	310	30	7.5	8.5	1/4	1/2	208/1	0.3	15	35	6 M5.1B	7 M6.1B 1 M6.2B	1 2 3 4 5
FC A103	NURSE A103	FXZQ07TAVJU	310	45	7.5	8.5	1/4	1/2	208/1	0.3	15	35	6 M5.1B	7 M6.1B 1 M6.2B	1 2 3 4 5
FC A104	PRINCIPAL A104	FXZQ07TAVJU	310	45	7.5	8.5	1/4	1/2	208/1	0.3	15	35	6 M5.1B	7 M6.1B 1 M6.2B	1 2 3 4 5
FC A105	VP A105	FXZQ07TAVJU	310	30	7.5	8.5	1/4	1/2	208/1	0.3	15	35	6 M5.1B	7 M6.1B 1 M6.2B	1 2 3 4 5
FC A106	VP A106	FXZQ07TAVJU	310	30	7.5	8.5	1/4	1/2	208/1	0.3	15	35	6 M5.1B	7 M6.1B 1 M6.2B	1 2 3 4 5
FC A107	ACADEMIC COUNSEL A107	FXZQ07TAVJU	310	30	7.5	8.5	1/4	1/2	208/1	0.3	15	35	6 M5.1B	7 M6.1B 1 M6.2B	1 2 3 4 5
FC A108	ACADEMIC COUNSEL A108	FXZQ07TAVJU	310	30	7.5	8.5	1/4	1/2	208/1	0.3	15	35	6 M5.1B	7 M6.1B 1 M6.2B	1 2 3 4 5
FC A109	BREAKWORKROOM A109	FXZQ15TAVJU	405	100	15.0	17.0	1/4	1/2	208/1	0.4	15	40	6 M5.1B	7 M6.1B 1 M6.2B	1 2 3 4 5
FC A111	CONFERENCE A111	FXZQ15TAVJU	405	120	15.0	17.0	1/4	1/2	208/1	0.4	15	40	6 M5.1B	7 M6.1B 1 M6.2B	1 2 3 4 5
FC A117	WAITING A117	FXZQ18TAVJU	510	225	18.0	20.0	1/4	1/2	208/1	0.6	15	45	6 M5.1B	7 M6.1B 1 M6.2B	1 2 3 4 6
FC A119	PYSCH A119	FXZQ07TAVJU	310	45	7.5	8.5	1/4	1/2	208/1	0.3	15	35	6 M5.1B	7 M6.1B 1 M6.2B	1 2 3 4 5
FC A120	COUNSEL A120	FXZQ07TAVJU	310	30	7.5	8.5	1/4	1/2	208/1	0.3	15	35	6 M5.1B	7 M6.1B 1 M6.2B	1 2 3 4 5
FC A121	COUNSEL A121	FXZQ07TAVJU	310	30	7.5	8.5	1/4	1/2	208/1	0.3	15	35	6 M5.1B	7 M6.1B 1 M6.2B	1 2 3 4 5

NOTES:
1 PROVIDE WITH MANUFACTURER'S HARD WIRED WALL MOUNTED PROGRAMMABLE THERMOSTAT.
2 PROVIDE WITH MULTI-FUNCTION CASEMENT AND FILTERS.
3 PROVIDE WITH MANUFACTURER'S INTEGRAL CONDENSATE PUMP ACCESSORY. NO SEPARATE POWER SUPPLY REQUIRED.
4 REFER TO 1/M6.2B FOR REFRIGERANT PIPING SIZES.
5 OUTSIDE AIR CONNECTED INTO UNITS 4" DIA. INLET, REFER TO 1/M2.1.
6 OUTSIDE AIR SUPPLIED TO THE SPACE BY CEILING DIFFUSER, REFER TO 1/M2.1.

ENERGY RECOVERY VENTILATOR SCHEDULE

UNIT	LOCATION	"LOSSNAY" MODEL NO.	CFM	ESP (IN. W.G.)	MCA	MOCP	VOLT/PH	SOUND PRESSURE (dBA)	OPER. WT. (LBS.)	MOUNTING DETAIL	CONTROL DIAGRAM	NOTES
ERV A1	WAITING A117	VAM470GVJU	390	0.73	3.9	15	208/1	35	125	7 M5.1B	1 M6.2B	1
ERV A2	CORRIDOR A112	VAM600GVJU	600	0.76	4.2	15	208/1	36	150	7 M5.1B	1 M6.2B	1

NOTES:
1 ERV SHALL BE INTERLOCKED W/ VRF SYSTEM, REFER TO 1/M6.2B.

BRANCH SELECTOR SCHEDULE

UNIT	LOCATION	"DAIKIN" MODEL NO. (INDOOR UNIT)	ELECTRICAL DATA			OPER. WT. (LBS.)	MOUNTING DETAIL	CONTROL DIAGRAM	NOTES
			VOLT/PH	MCA	MOP				
BS A1	WAITING A117	BS8Q64TVJ	208/1	0.8	15.0	75	7 M5.1B	1 M6.2B	1
BS A2	CORRIDOR A112	BS8Q64TVJ	208/1	0.6	15.0	70	7 M5.1B	1 M6.2B	1

NOTES:
1 REFER TO 1/M6.2B FOR REFRIGERANT PIPING SIZES.

VRF HEAT RECOVERY UNIT SCHEDULE

UNIT	LOCATION	"DAIKIN" MODEL NO.	NOMINAL SIZE (TONS)	COOL CAP. (MBH)	HEAT CAP. (MBH)	ELECTRICAL DATA			EER (IEER)	COP	GAS PIPE (INCH.)	LIQUID PIPE (INCH.)	HI/LW PRESS. PIPE (INCH.)	OPER. WT. (LBS.)	MOUNTING DETAIL	CONTROL DIAGRAM	NOTES
						VOLT/PH	MCA	MOCP									
HRU A1	GRADE	REYQ168XAYDU	14	149.7	143.6	460/3	31.1	40	10.7 (22.3)	3.5	1-1/8	5/8	7/8	795	5 M5.1B	1 M6.2B	1 2 3

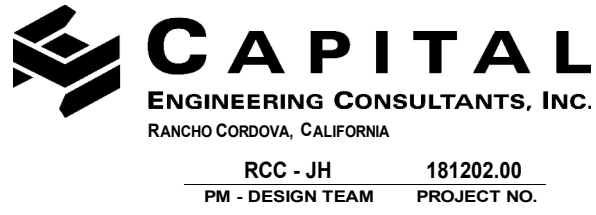
NOTES:
1 UNITS SELECTED AT 94 DEG. F DB SUMMER, 29 DEG. F DB WINTER AMBIENT TEMPERATURES.
2 SYSTEM CAPABLE OF SIMULTANEOUS HEATING AND COOLING OPERATION, R-410A REFRIGERANT.
3 REFER TO 1/M6.2B FOR REFRIGERANT PIPING SIZES.



Revisions	Delta	Date	Revisions	By
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PROGRESS DRAWINGS
INCREMENT II

ISSUE DATE: 11/3/20 BY: MH



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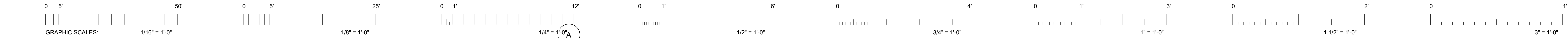
Project
MODERNIZATION AND RECONFIGURATION PROJECT
INCREMENT II

Sheet Title
HVAC SCHEDULES

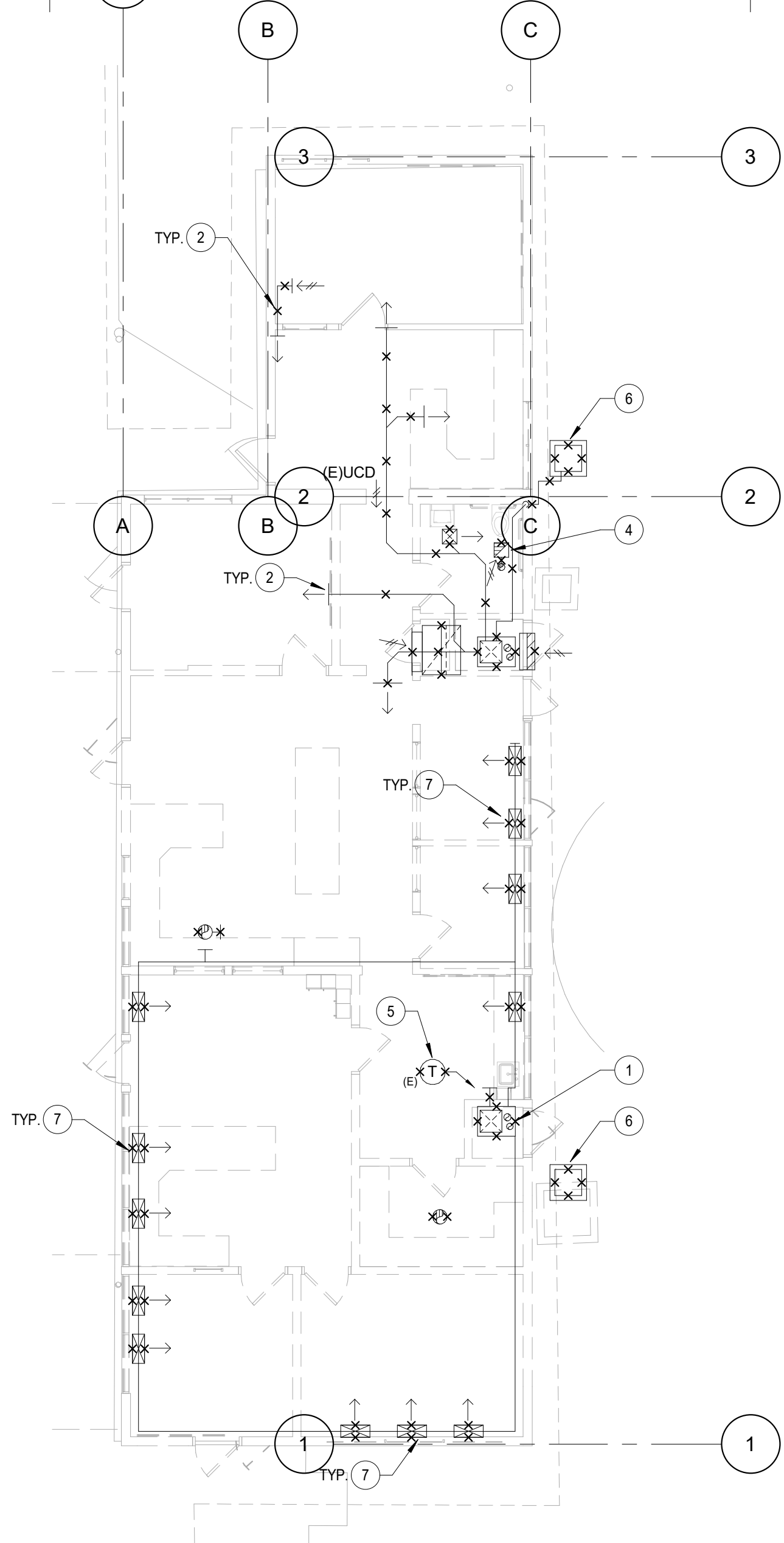
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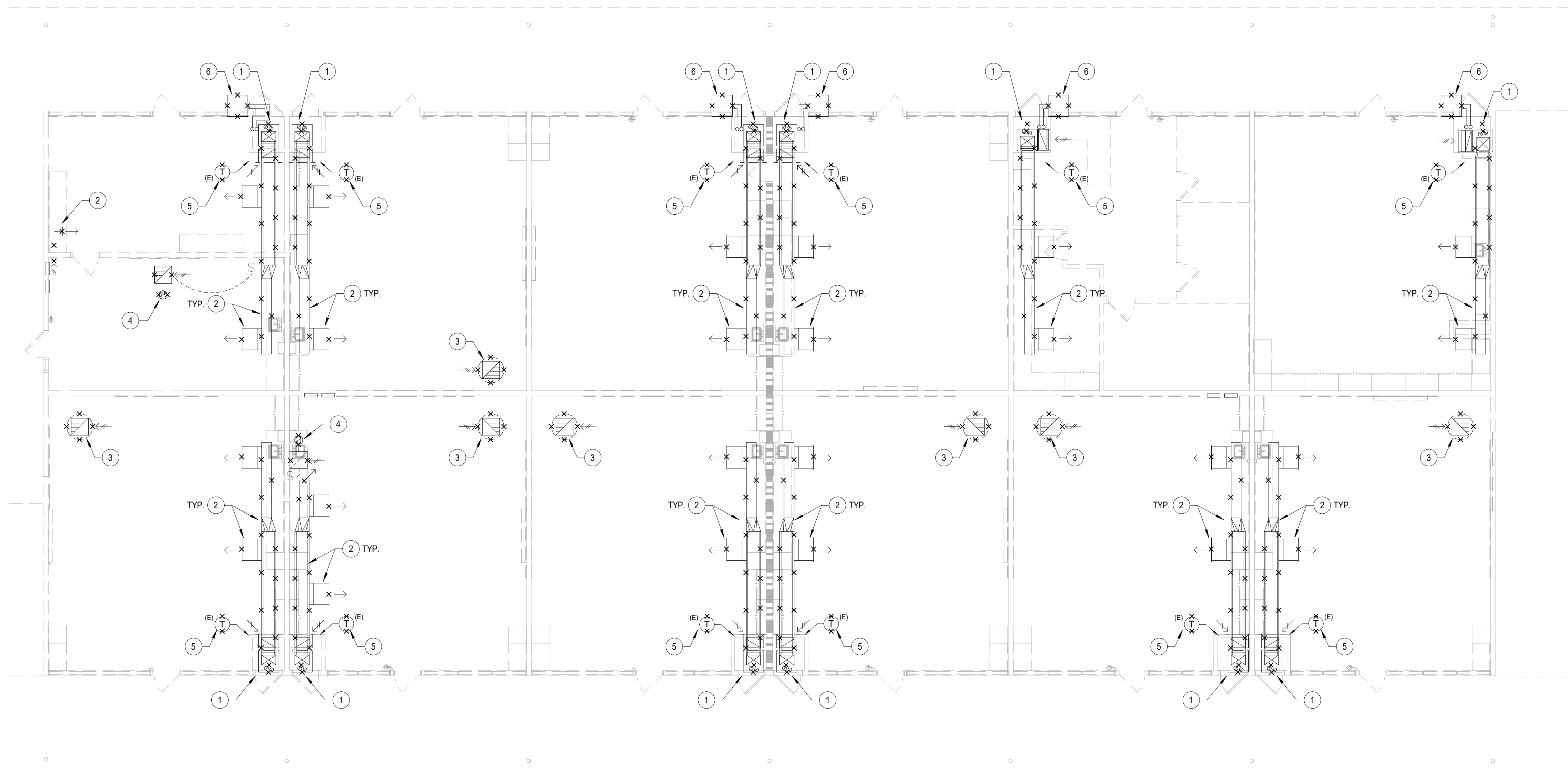
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2 BUILDING 150 - HVAC DEMOLITION PLAN
M1.1 SCALE: 1/8" = 1'-0"



1 BUILDING 100 - HVAC DEMOLITION PLAN
M1.1 SCALE: 1/8" = 1'-0"

DEMOLITION SHEET NOTES:

1. THE HVAC DESIGN HAS BEEN BASED ON RECORD DRAWINGS AND SITE OBSERVATIONS. CONTRACTOR SHALL PERFORM INVESTIGATION OF THE EXISTING CONDITIONS PRIOR TO INSTALLATION OF NEW WORK. CONTRACTOR SHALL NOTIFY THE ARCHITECT IMMEDIATELY OF EXISTING CONDITIONS THAT MAY NOT ALLOW INSTALLATION OF NEW WORK AS SHOWN.
2. EXISTING EQUIPMENT, PIPING, COMPONENTS, ETC. ARE SHOWN DIAGRAMMATICALLY AND ARE NOT EXACTLY AS SHOWN ON PLANS. CONTRACTOR SHALL FIELD VERIFY ALL EXISTING CONDITIONS PRIOR TO START OF WORK. RECORD THE EXISTING CONDITIONS IN "COORDINATED LAYOUTS" REQUIRED BY SPECIFICATION SECTION 235000, AND MAKE ANY ADJUSTMENTS NECESSARY TO COMPLETE THE DESCRIBED SCOPE OF WORK. CONTRACTOR SHALL MAKE ALLOWANCE IN BID FOR THIS REQUIREMENT.
3. WHERE INSTALLED AT EXISTING CLASSROOMS, REMOVE WIRELESS HVAC DOOR CONTACT AT EXTERIOR DOORS.

DEMOLITION KEYNOTES:

- 1 REMOVE EXISTING FURNACE, RETURN AIR PLENUM, CONTROLS AND SUPPORTS.
- 2 REMOVE EXISTING DUCTWORK AND DIFFUSERS/GRILLES.
- 3 REMOVE EXISTING RELIEF VENT, DUCTWORK AND GRILLE.
- 4 REMOVE EXISTING EXHAUST FAN, CONTROLS AND SUPPORTS.
- 5 REMOVE EXISTING THERMOSTAT AND CONTROL WIRING.
- 6 REMOVE EXISTING CONDENSING UNIT, PIPING, CONTROLS AND SUPPORTS.
- 7 REMOVE EXISTING GRILLES AND PATCH FLOOR. CAP AND ABANDON DUCTWORK BELOW FLOOR.

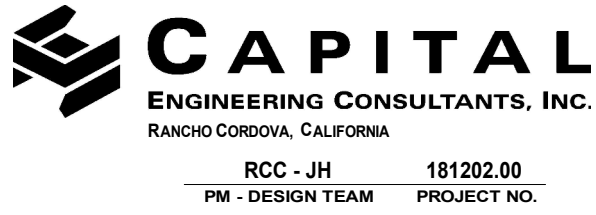


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HY Architects Project number: 5241

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Project
MODERNIZATION AND RECONFIGURATION PROJECT
INCREMENT II

Sheet Title
BUILDING 100 & 150 - HVAC
DEMOLITION PLANS

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M1.1
Sheet 70 of 128



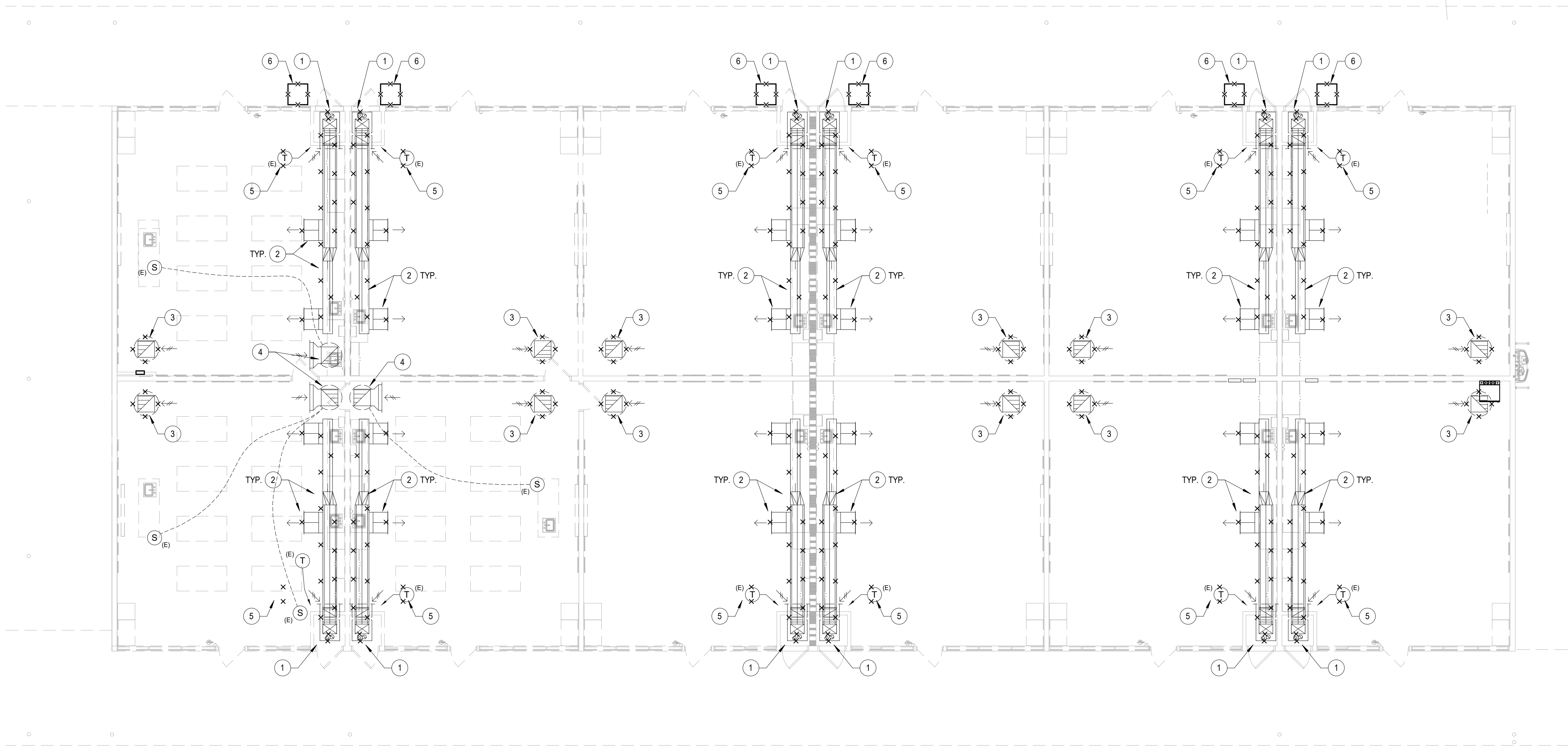
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3. WHERE INSTALLED AT EXISTING CLASSROOMS, REMOVE WIRELESS HVAC DOOR CONTACT AT EXTERIOR DOORS.

DEMOLITION KEYNOTES:

- 1 REMOVE EXISTING FURNACE, RETURN AIR PLENUM, CONTROLS AND SUPPORTS.
- 2 REMOVE EXISTING DUCTWORK AND DIFFUSERS/GRILLES.
- 3 REMOVE EXISTING RELIEF VENT, DUCTWORK AND GRILLE.
- 4 REMOVE EXISTING EXHAUST FAN, CONTROLS AND SUPPORTS.
- 5 REMOVE EXISTING THERMOSTAT AND CONTROL WIRING.
- 6 REMOVE EXISTING GRADE-MOUNTED CONDENSING UNIT, PIPING, CONTROLS AND SUPPORTS.



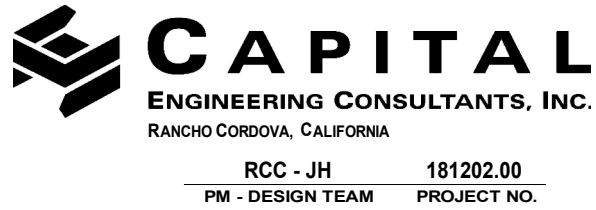
1 BUILDING 200 - HVAC DEMOLITION PLAN
M1.2 SCALE: 1/8" = 1'-0"



Revisions	Delta	Date	Revisions	By

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PROGRESS DRAWINGS
INCREMENT II

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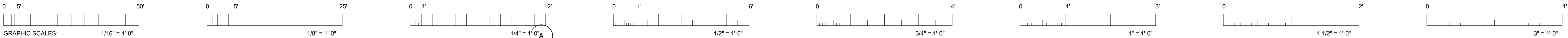
HY Architects Project number: 5241

Facility
WALNUT CREEK SCHOOL DISTRICT
2425 WALNUT BOULEVARD, WALNUT CREEK, CA 94597

Project
MODERNIZATION AND RECONFIGURATION PROJECT
INCREMENT II

Sheet Title
BUILDING 200 - HVAC
DEMOLITION PLANS

Client Project Number:	Client Proj. #
Scale: 1/8" = 1'-0"	Sheet
Drawn By: Author	M1.2
Checked By: Checker	
Issue Date: 11/3/20	
Revit Version: 2019	Sheet 71 of 128



IF THIS SHEET IS NOT 30"x42", IT IS
A REDUCED PRINT SCALE ACCORDINGLY

SHEET NOTES:

- REFER TO ARCHITECTURAL REFLECTED CEILING PLANS FOR EXACT LOCATION OF CEILING DIFFUSERS/GRILLES/FANS/ACCESS PANELS, TYP.
- WHERE NOTED ON MECHANICAL FLOOR PLAN WITH "UCD", PROVIDE 3/4" DOOR UNDERCUT FOR TRANSFER/MAKE-UP AIR. REFER TO ARCHITECTURAL DOOR SCHEDULE FOR DETAILS.
- FOR TYPICAL LAY-IN DIFFUSER/GRILLE MOUNTING, REFER TO DETAIL 3/M5.28.
- FOR TYPICAL CONCEALED DUCT SUPPORT, REFER TO DETAIL 5/M5.28.

KEYNOTES:

- PROVIDE DUCT TRANSITION FROM RETURN GRILLE TO THROAT SIZE OF RELIEF VENTILATOR. PROVIDE DUCT RISER UP THRU ROOF TO RELIEF VENTILATOR W/ 24V MOTORIZED DAMPER, REFER TO DETAIL 1/M5.18, TYP.
- 3" COMBUSTION AIR AND 3" FLUE VENT UP TO CONCENTRIC VENT KIT THRU ROOF. REFER TO DETAIL 3/M5.18, TYP.
- LINED DUCT MOUNTED HIGH ON WALL, FOR MOUNTING REFER TO DETAIL 1/M5.28, TYP.
- RADIUSSED FACE DIFFUSER, REFER TO DETAIL 2/M5.28, TYP.
- 30x18 RETURN GRILLE, W/ 30x8 RETURN DUCT DOWN TO MIXED AIR PLENUM, TYP.
- RURS PIPING UP THRU ROOF, REFER TO DETAIL 4/M5.28, TYP.
- VRF REFRIGERANT PIPING. FOR CLARITY, EACH LINE SHOWN REPRESENTS ONE "LINESET". REFER TO 1/M6.26 FOR QUANTITY AND SIZES, TYP.
- REFRIGERANT PIPING MOUNTED ON UNDERSIDE OF EXTERIOR CANOPY, REFER TO DETAIL 8/M5.28, TYP.
- REFRIGERANT PIPING THRU WALL, REFER TO DETAIL 11/M5.18, TYP.
- EMS CONTROL PANEL, REFER TO 1/M6.18. COORDINATE EXACT LOCATION WITH DIV. 26.
- "DAIKIN" VRV I-TOUCH MANAGER CONTROL PANEL. REFER TO 1/M6.28. COORDINATE EXACT LOCATION WITH DIV. 26.
- PROVIDE 12" DIA. LINED DUCT CONNECTIONS TO ERV-A1. ROUTE 12" DIA. LINED OUTSIDE AIR & RELIEF DUCTS UP THRU ROOF TO HA1 & RV-A1, RESPECTIVELY.
- PROVIDE 14" DIA. LINED DUCT CONNECTIONS TO ERV-A2. ROUTE 14" DIA. LINED OUTSIDE AIR & RELIEF DUCTS UP THRU ROOF TO HA2 & RV-A2, RESPECTIVELY.
- 9x6 EA DUCT UP THRU ROOF TO MANUFACTURER'S ROOF JACK.
- 4" DIA. DOMESTIC CLOTHES DRYER EXHAUST DUCT UP THRU ROOF.
- 6" DIA. OUTSIDE AIR DUCT UP THRU ROOF TO INTAKE HOOD, REFER TO DETAIL 10/M5.18.
- 4" DIA. FLEXIBLE DUCT CONNECTION TO FAN COIL UNIT'S OUTSIDE AIR INTAKE.



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Facility
WALNUT CREEK SCHOOL DISTRICT
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Project
MODERNIZATION AND RECONFIGURATION PROJECT
INCREMENT II

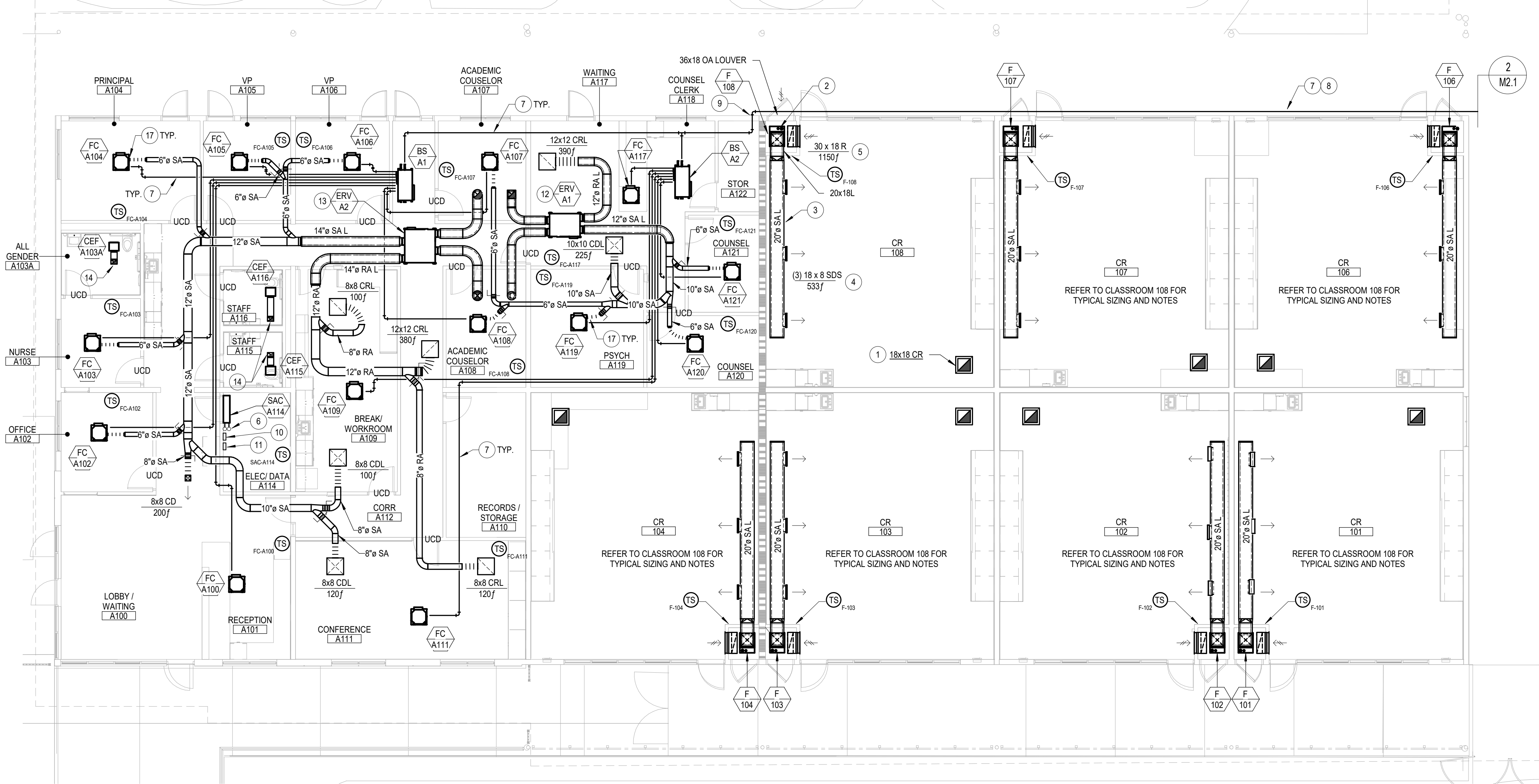
Sheet Title
BUILDING 100 & 150 - HVAC FLOOR PLANS

Client Project Number: Client Proj. #

Scale: 1/8" = 1'-0"
Drawn By: Author
Checked By: Checker
Issue Date: 11/3/20
Revit Version: 2019

Sheet
M2.1
Sheet 72 of 128

2 BUILDING 150 - HVAC FLOOR PLAN
M2.1 SCALE: 1/8" = 1'-0"



1 BUILDING 100 - HVAC FLOOR PLAN
M2.1 SCALE: 1/8" = 1'-0"



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- WHERE NOTED ON MECHANICAL FLOOR PLAN WITH "UCD", PROVIDE 3/4" DOOR UNDERCUT FOR TRANSFER/MAKE-UP AIR. REFER TO ARCHITECTURAL DOOR SCHEDULE FOR DETAILS.
- FOR TYPICAL LAY-IN DIFFUSER/GRILLE MOUNTING, REFER TO DETAIL 3/M5.28.
- FOR TYPICAL CONCEALED DUCT SUPPORT, REFER TO DETAIL 5/M5.28.

KEYNOTES:

- PROVIDE DUCT TRANSITION FROM RETURN GRILLE TO THROAT SIZE OF RELIEF VENTILATOR. PROVIDE DUCT RISER UP THRU ROOF TO RELIEF VENTILATOR W/ 24V MOTORIZED DAMPER, REFER TO DETAIL 1/M5.18, TYP.
- 3" COMBUSTION AIR AND 3" FLUE VENT UP TO CONCENTRIC VENT KIT THRU ROOF, REFER TO DETAIL 3/M5.18, TYP.
- LINED DUCT MOUNTED HIGH ON WALL, FOR MOUNTING REFER TO DETAIL 1/M5.28, TYP.
- RADIUSSED FACE DIFFUSER, REFER TO DETAIL 2/M5.28, TYP.
- 30x18 RETURN GRILLE, W/ 30x8 RETURN DUCT DOWN TO MIXED AIR PLENUM, TYP.
- 36x18 RETURN GRILLE, W/ 36x8 RETURN DUCT DOWN TO MIXED AIR PLENUM, TYP.
- RLRS PIPING UP THRU ROOF, REFER TO DETAIL 4/M5.28, TYP.

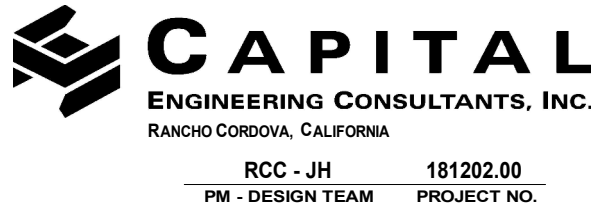


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ISSUE DATE: 11/3/20 BY: MH



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HY Architects Project number: 5241

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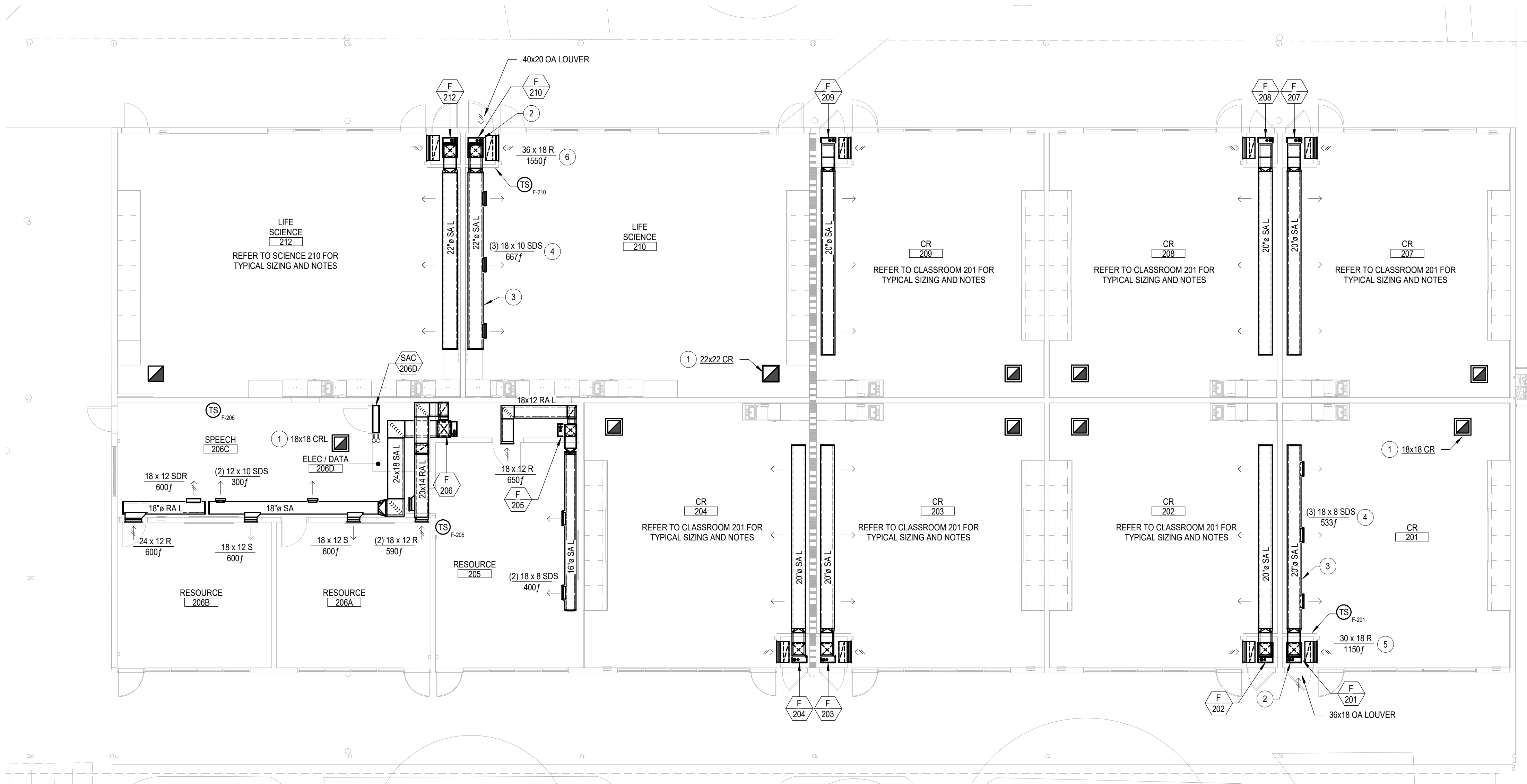
Project
MODERNIZATION AND RECONFIGURATION PROJECT
INCREMENT II

Sheet Title
BUILDING 200 - HVAC FLOOR PLAN

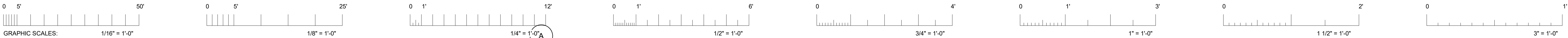
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Scale: 1/8" = 1'-0"
Drawn By: Author
Checked By: Checker
Issue Date: 11/3/20
Revit Version: 2019

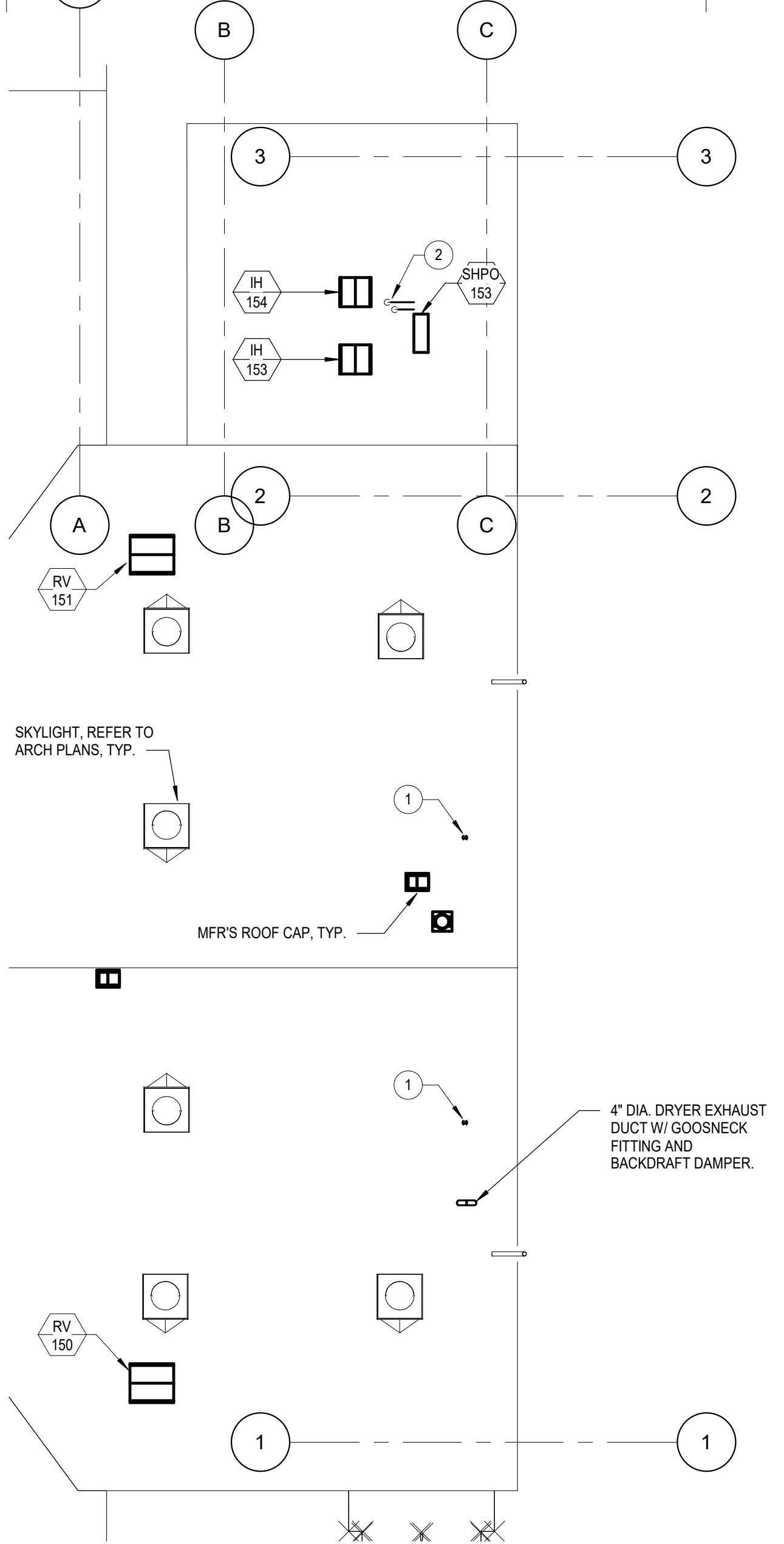
Sheet
M2.2
Sheet 73 of 128



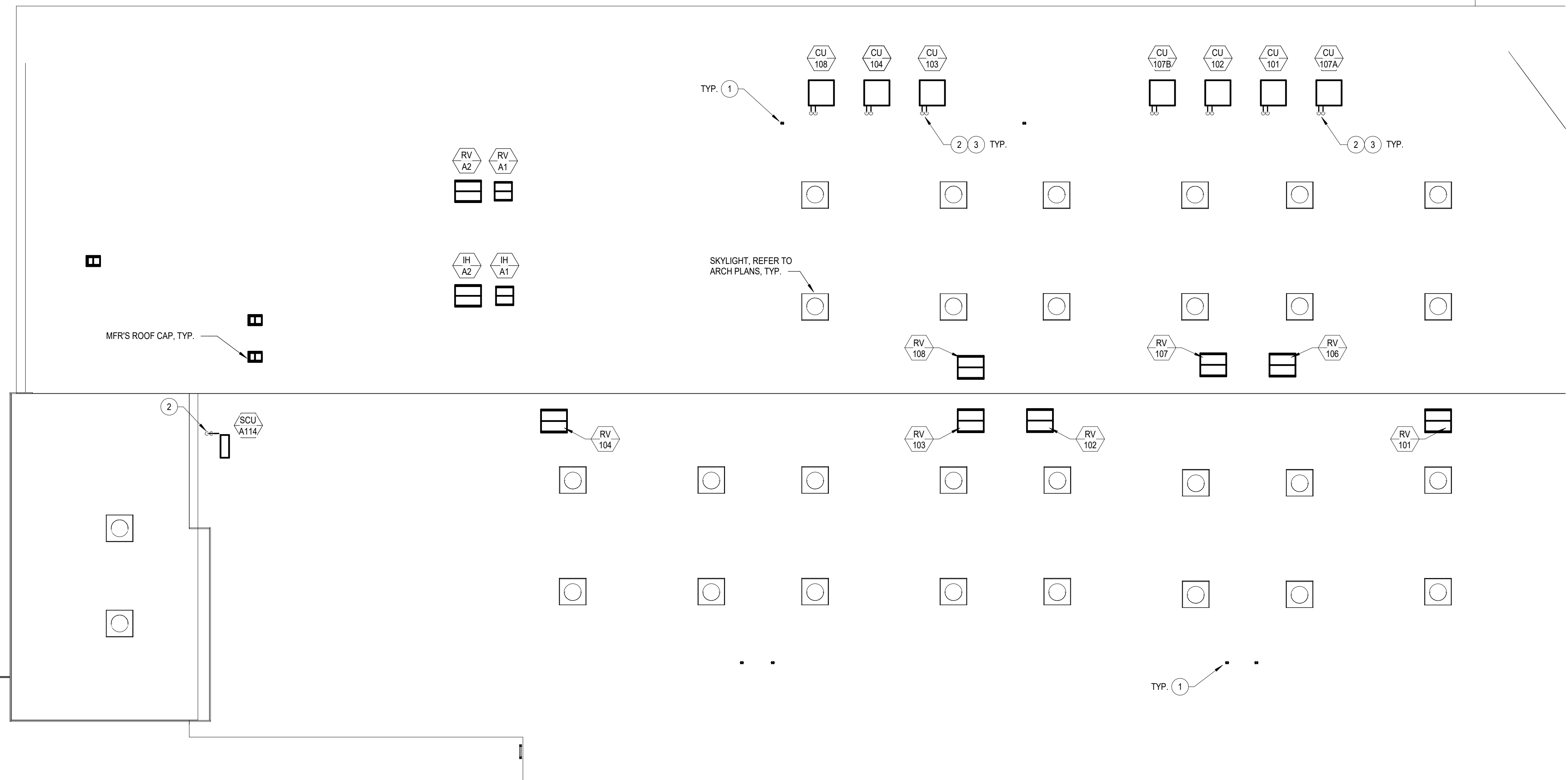
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2 BUILDING 150 - HVAC ROOF PLAN
M3.1 SCALE: 1/8" = 1'-0"



1 BUILDING 100 - HVAC ROOF PLAN
M3.1 SCALE: 1/8" = 1'-0"

SHEET NOTES:

- COORDINATE OUTSIDE AIR INTAKE LOCATIONS W/ PLUMBING VENT(S) THRU ROOF. EXHAUST AIR DISCHARGE(S), FLUE VENT(S), ETC. TO MAINTAIN A MINIMUM WORKING CLEARANCE OF 10'-0", TYP.

KEYNOTES:

- CONCENTRIC VENT KIT THRU ROOF, REFER TO DETAIL 4M5.1B, TYP.
- REFRIGERANT PIPING DOWN THRU ROOF, REFER TO DETAIL 5M5.2B, TYP.
- ROUTE REFRIGERANT PIPING ABOVE CEILING TO ASSOCIATED FURNACE DX COL, TYP.

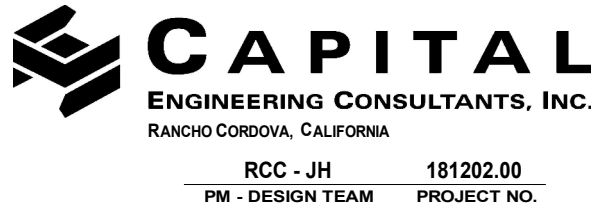


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WALNUT CREEK SCHOOL DISTRICT
2425 WALNUT BOULEVARD, WALNUT
CREEK, CA 94597

Project
**MODERNIZATION AND
RECONFIGURATION PROJECT
INCREMENT II**

Sheet Title
**BUILDING 100 & 150 HVAC
ROOF PLAN**

Client Project Number: Client Proj. #

Scale: 1/8" = 1'-0"
Drawn By: Author
Checked By: Checker
Issue Date: 11/3/20
Revit Version: 2019

Sheet
M3.1
Sheet 74 of 128

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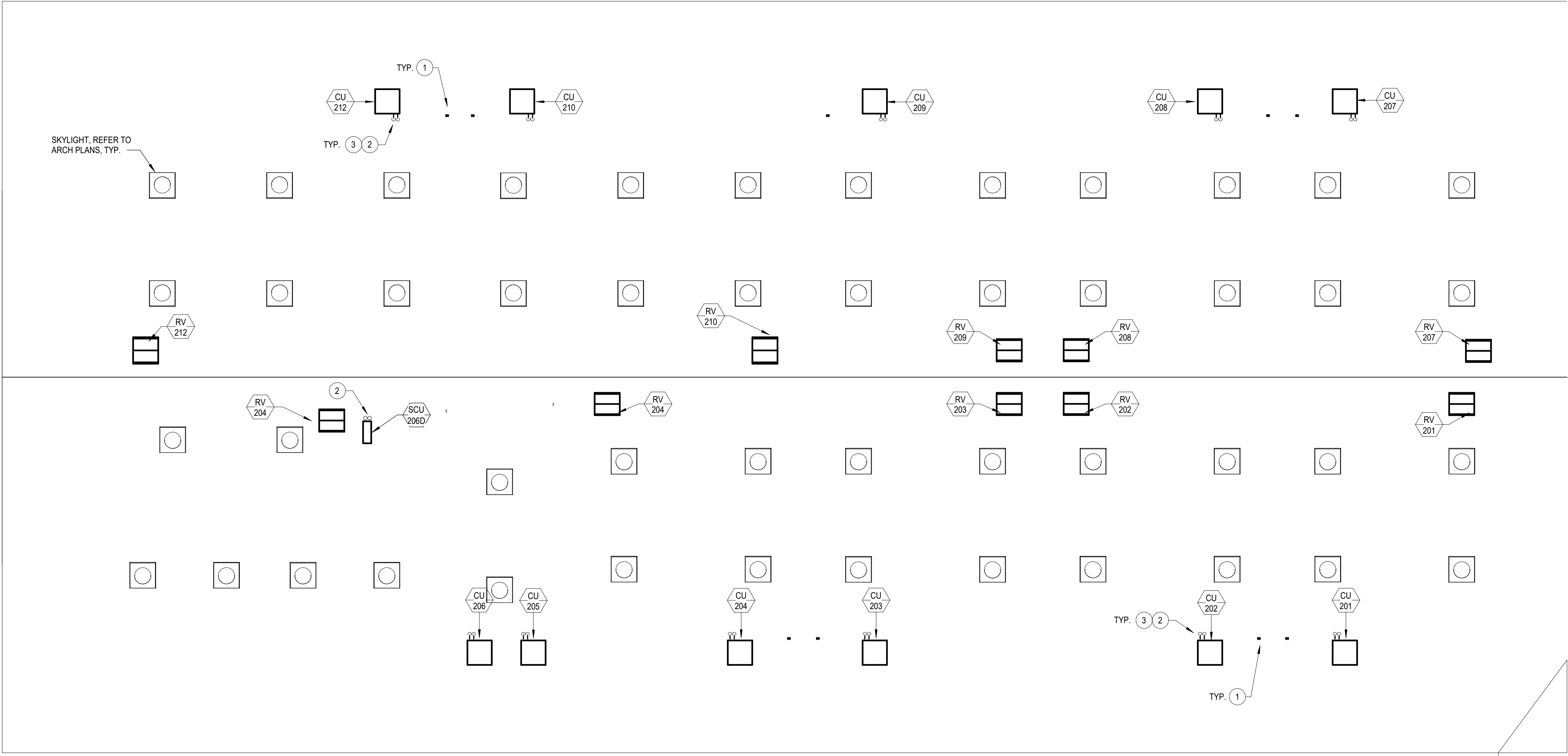
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SHEET NOTES:

- COORDINATE OUTSIDE AIR INTAKE LOCATIONS W/ PLUMBING VENT(S) THRU ROOF. EXHAUST AIR DISCHARGE(S), FLUE VENT(S), ETC. TO MAINTAIN A MINIMUM WORKING CLEARANCE OF 10'-0", TYP.

KEYNOTES:

- CONCENTRIC VENT KIT THRU ROOF, REFER TO DETAIL 4M5.1B, TYP.
- REFRIGERANT PIPING DOWN THRU ROOF, REFER TO DETAIL 5M5.2B, TYP.
- ROUTE REFRIGERANT PIPING ABOVE CEILING TO ASSOCIATED FURNACE DX COIL, TYP.



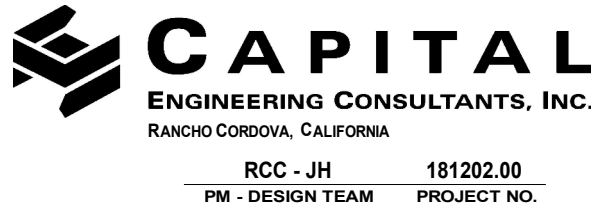
1 BUILDING 200 - HVAC ROOF PLAN
M3.2 SCALE: 1/8" = 1'-0"



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Delta	Date	Revisions	By

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HY Architects Project number: 5241

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WALNUT CREEK SCHOOL DISTRICT
2425 WALNUT BOULEVARD, WALNUT CREEK, CA 94597

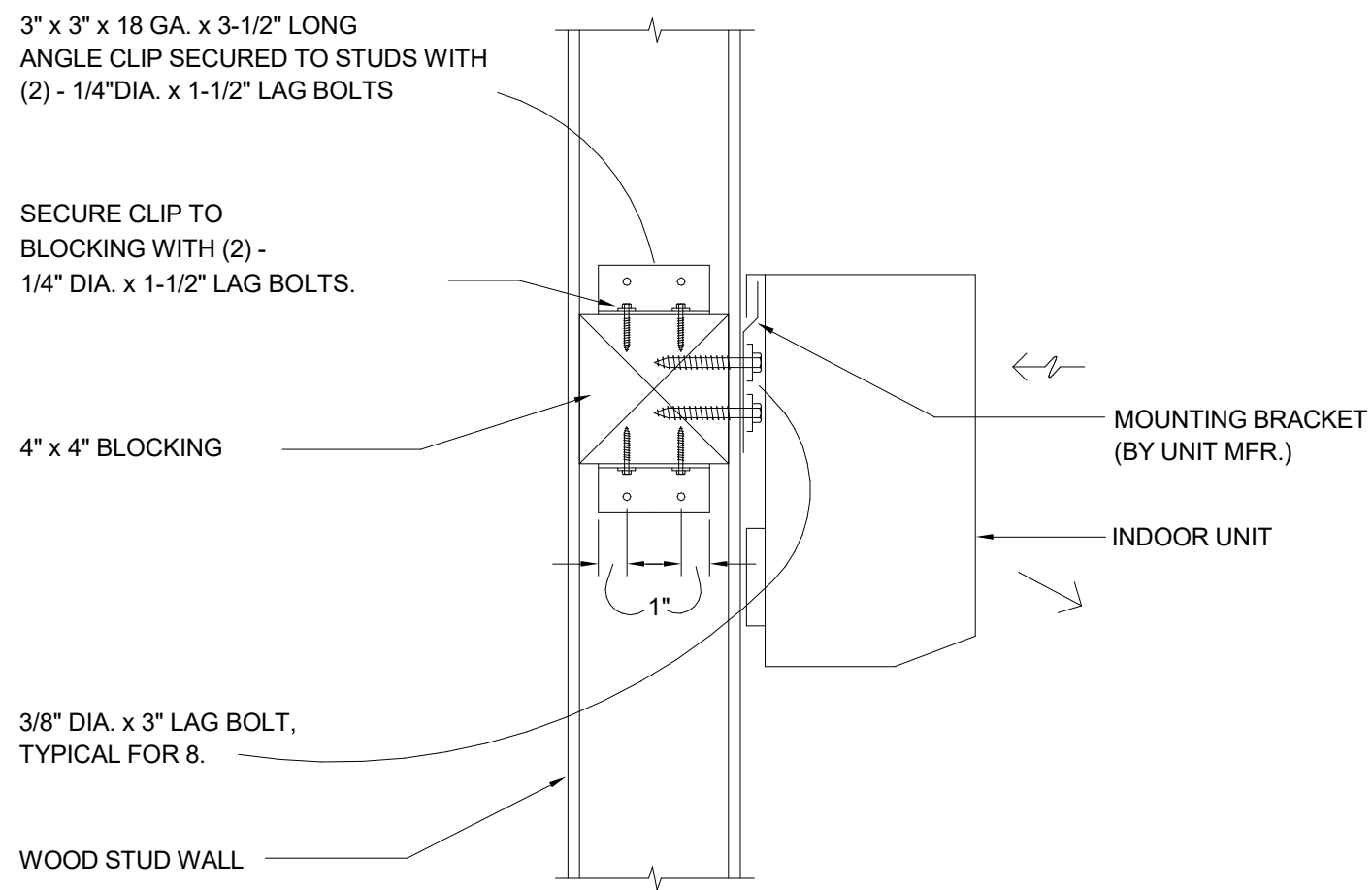
Project
MODERNIZATION AND RECONFIGURATION PROJECT
INCREMENT II

Sheet Title
BUILDING 200 HVAC ROOF PLAN

Client Project Number:		Client Proj. #	
Scale:	1/8" = 1'-0"	Sheet	
Drawn By:	Author	M3.2	
Checked By:	Checker		
Issue Date:	11/3/20		
Revit Version:	2019	Sheet	75 of 128



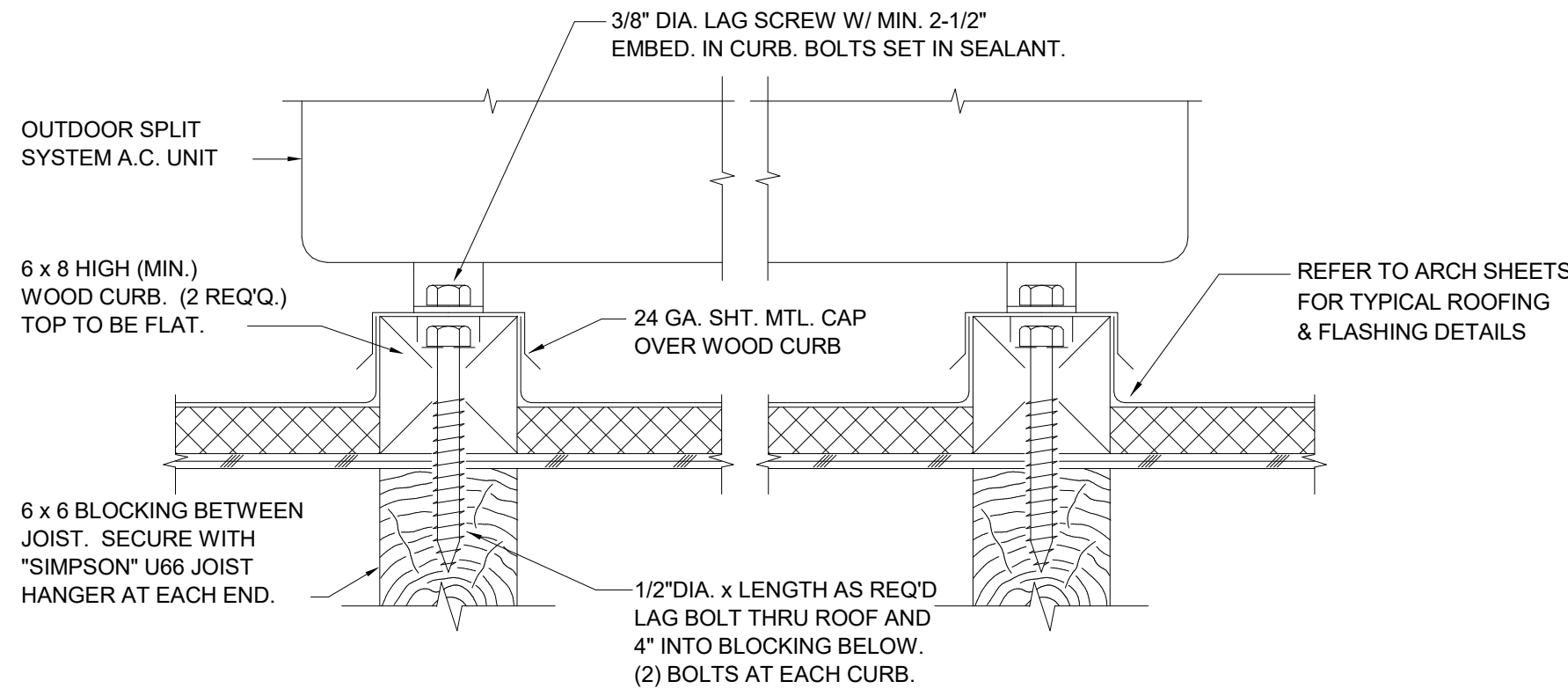
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INDOOR SPLIT SYSTEM MOUNTING

SCALE : NONE

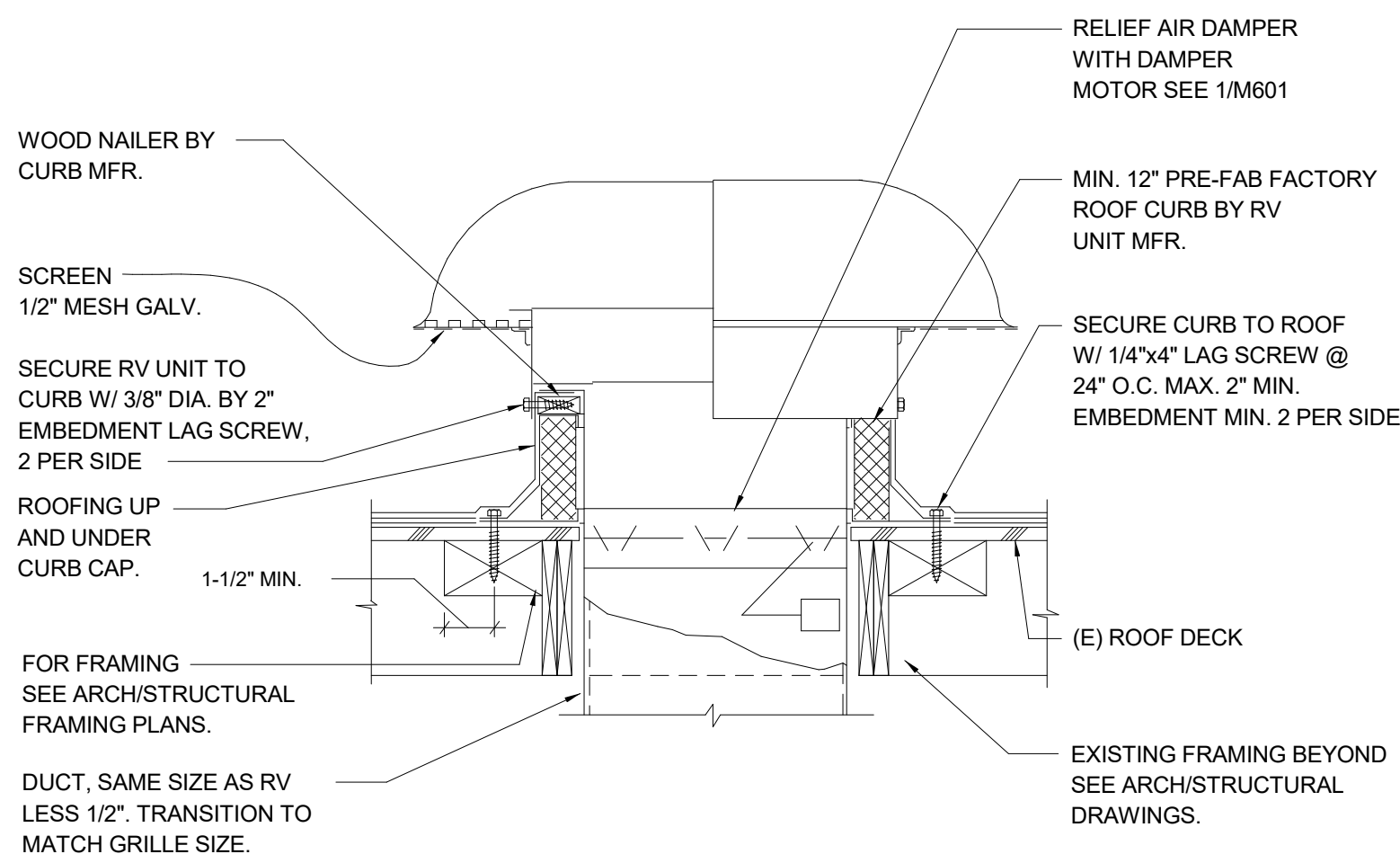
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M5.1B



SCU / SHPO MOUNTING DETAIL

SCALE : NONE

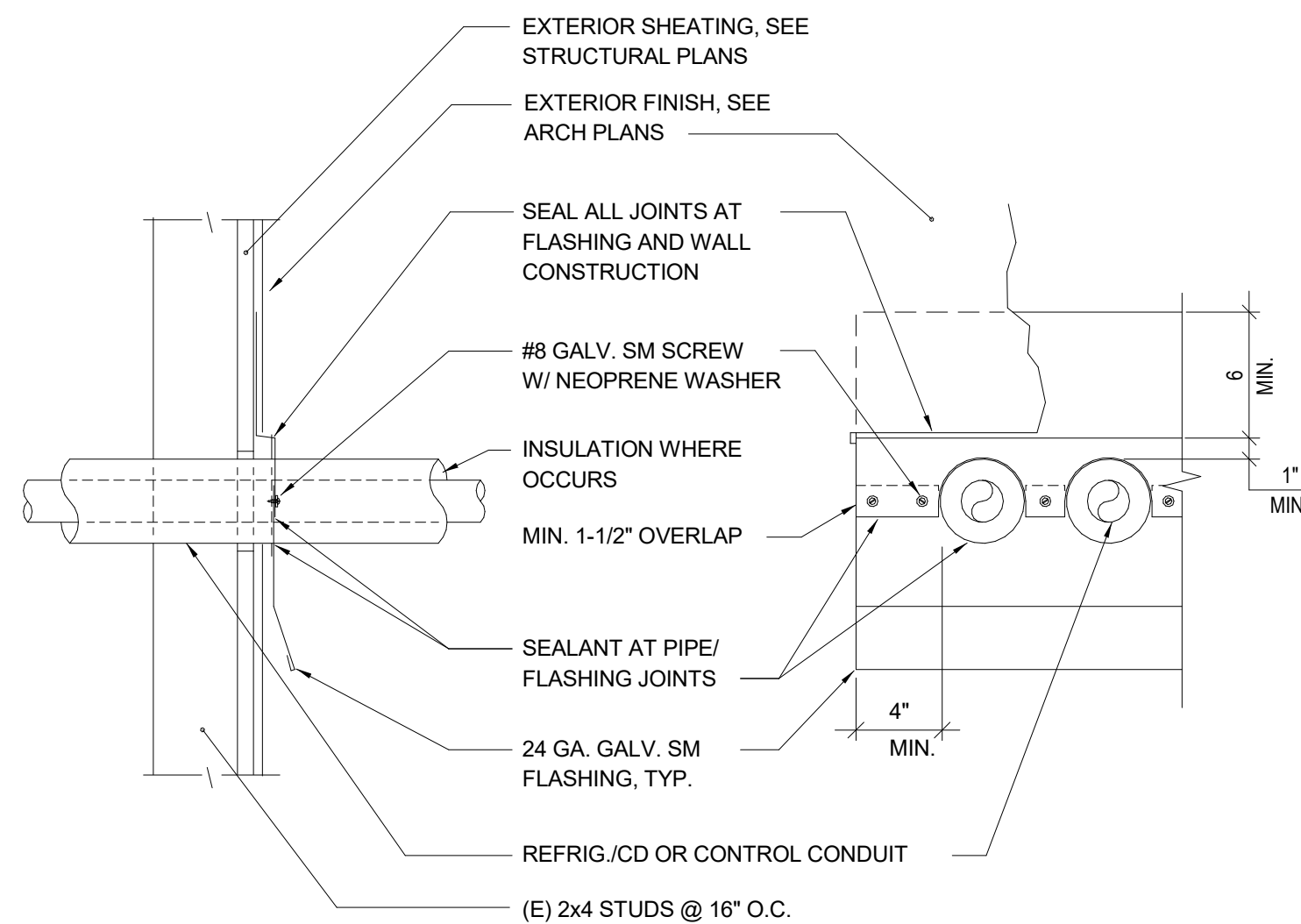
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M5.1B



RELIEF VENT/OA INTAKE HOOD DETAIL

SCALE : NONE

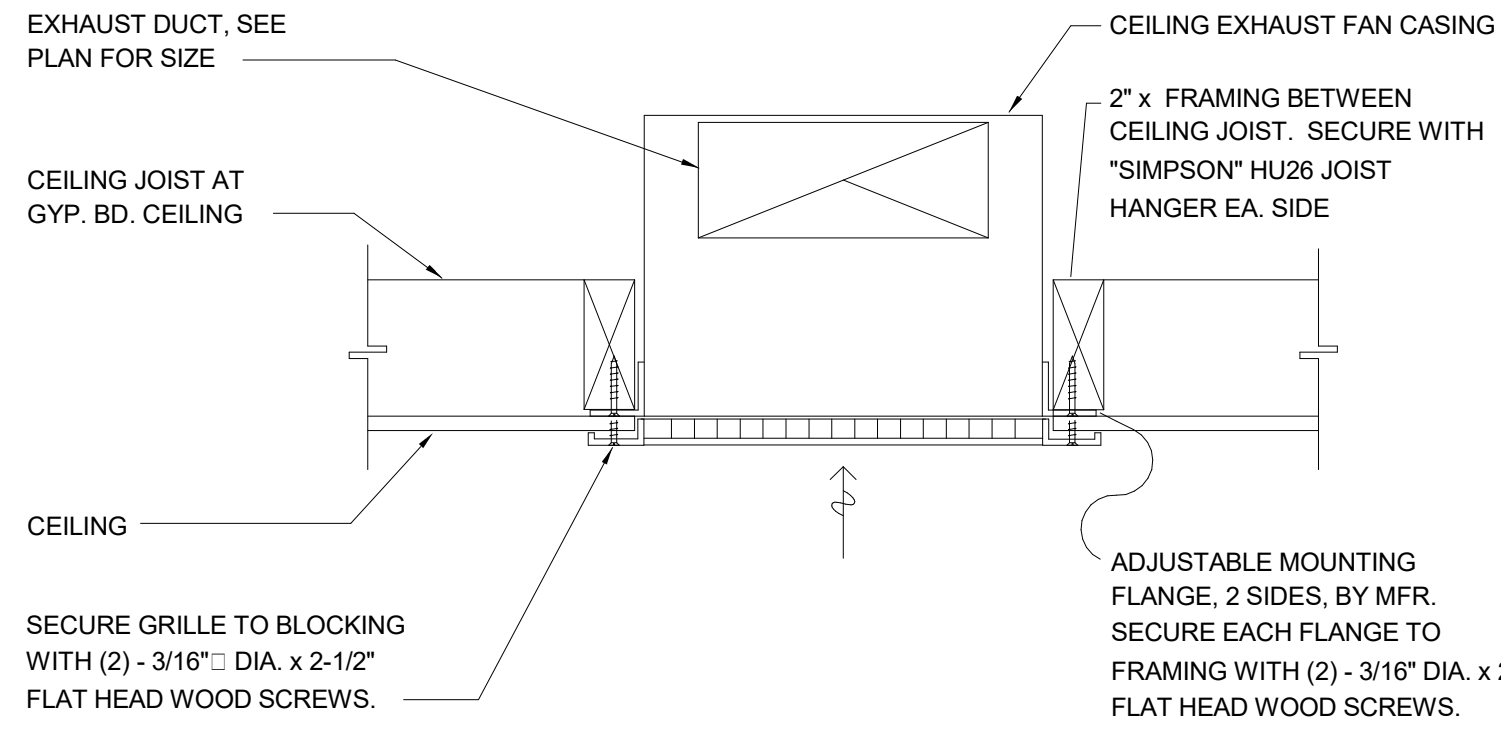
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M5.1B



PIPE THRU WALL DETAIL

SCALE : NONE

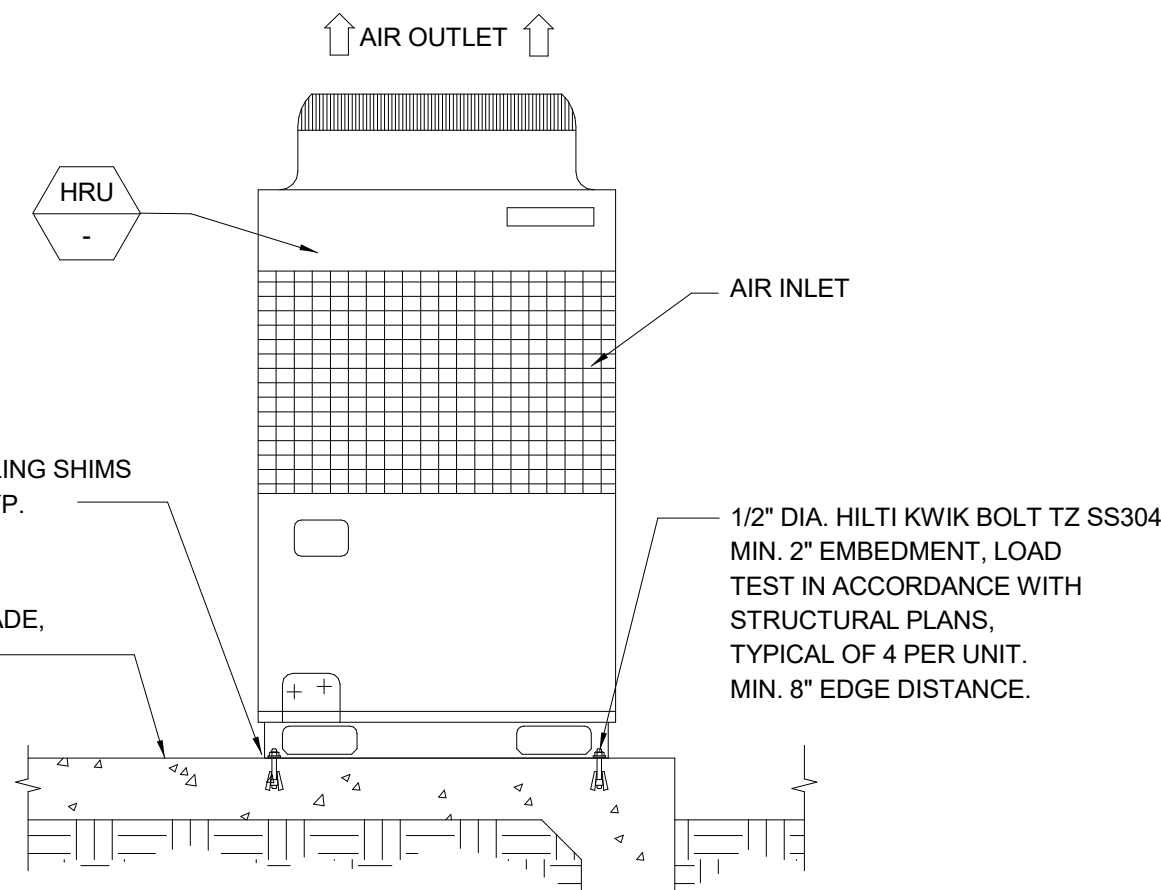
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M5.1B



CEILING EXHAUST FAN MOUNTING

SCALE : NONE

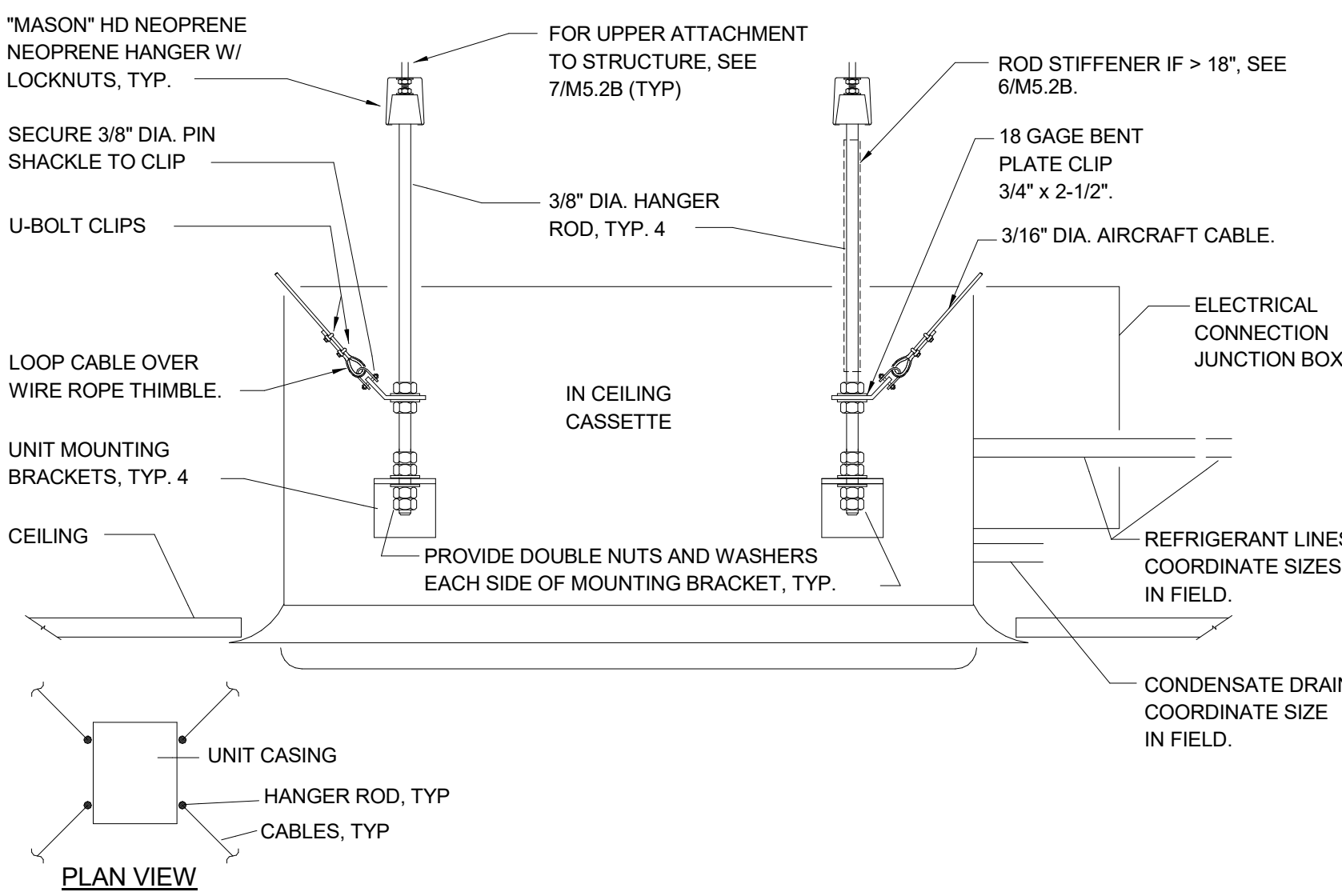
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M5.1B



HEAT RECOVERY UNIT MOUNTING

SCALE : NONE

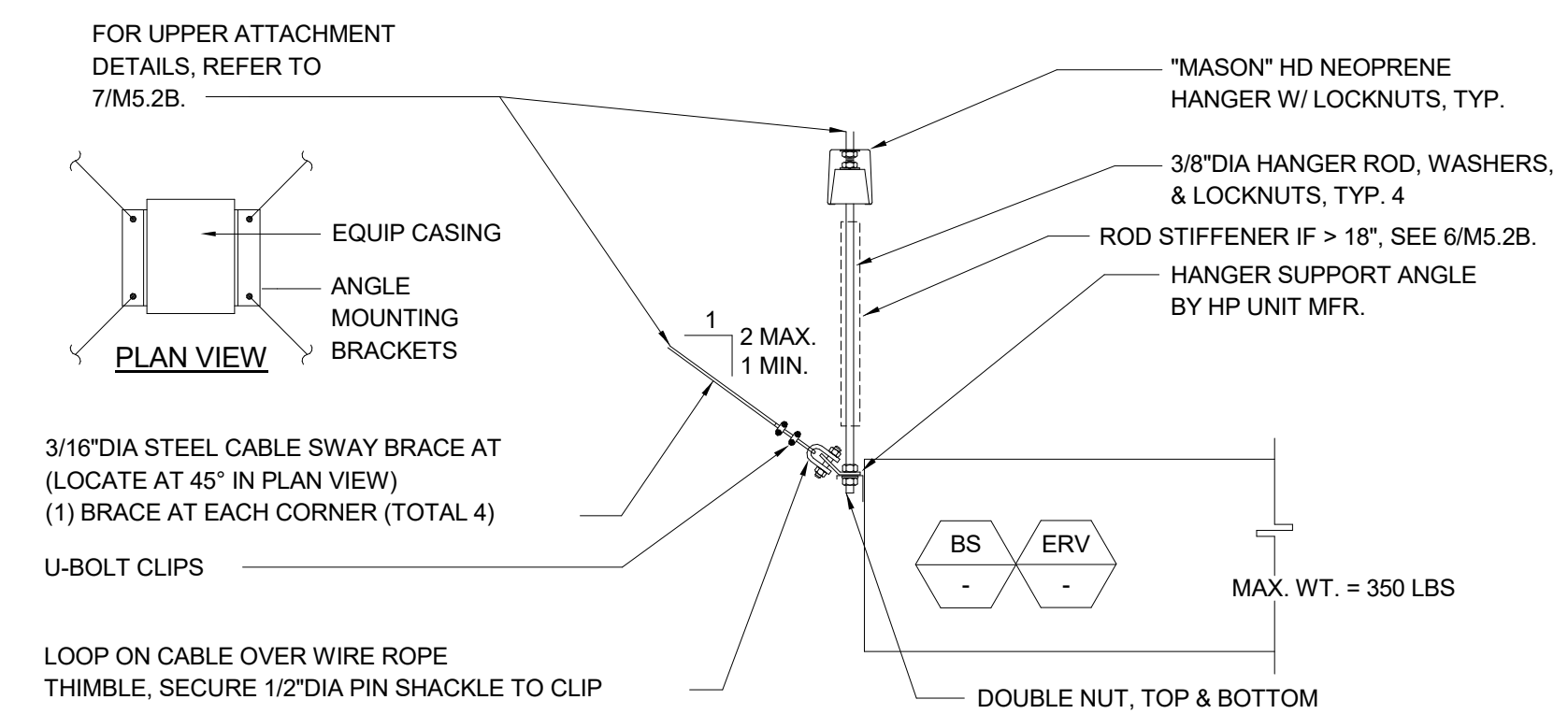
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M5.1B



CLG. MTD. FC / SHPI MOUNTING

SCALE : NONE

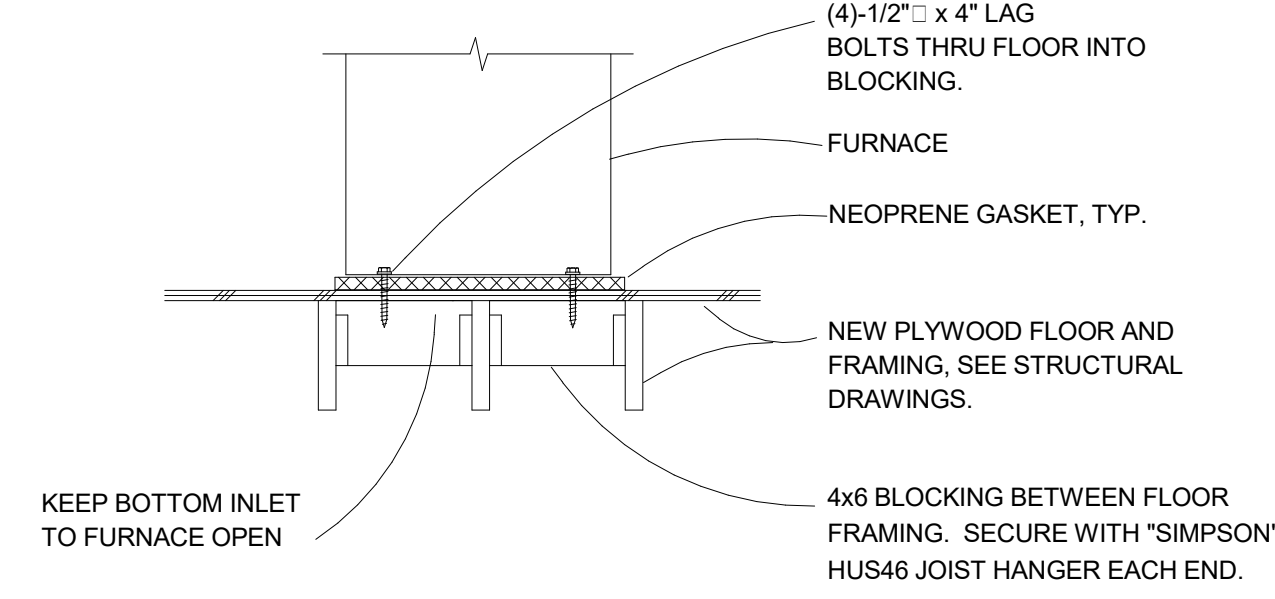
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M5.1B



BRANCH SELECTOR & ERV MOUNTING

SCALE : NONE

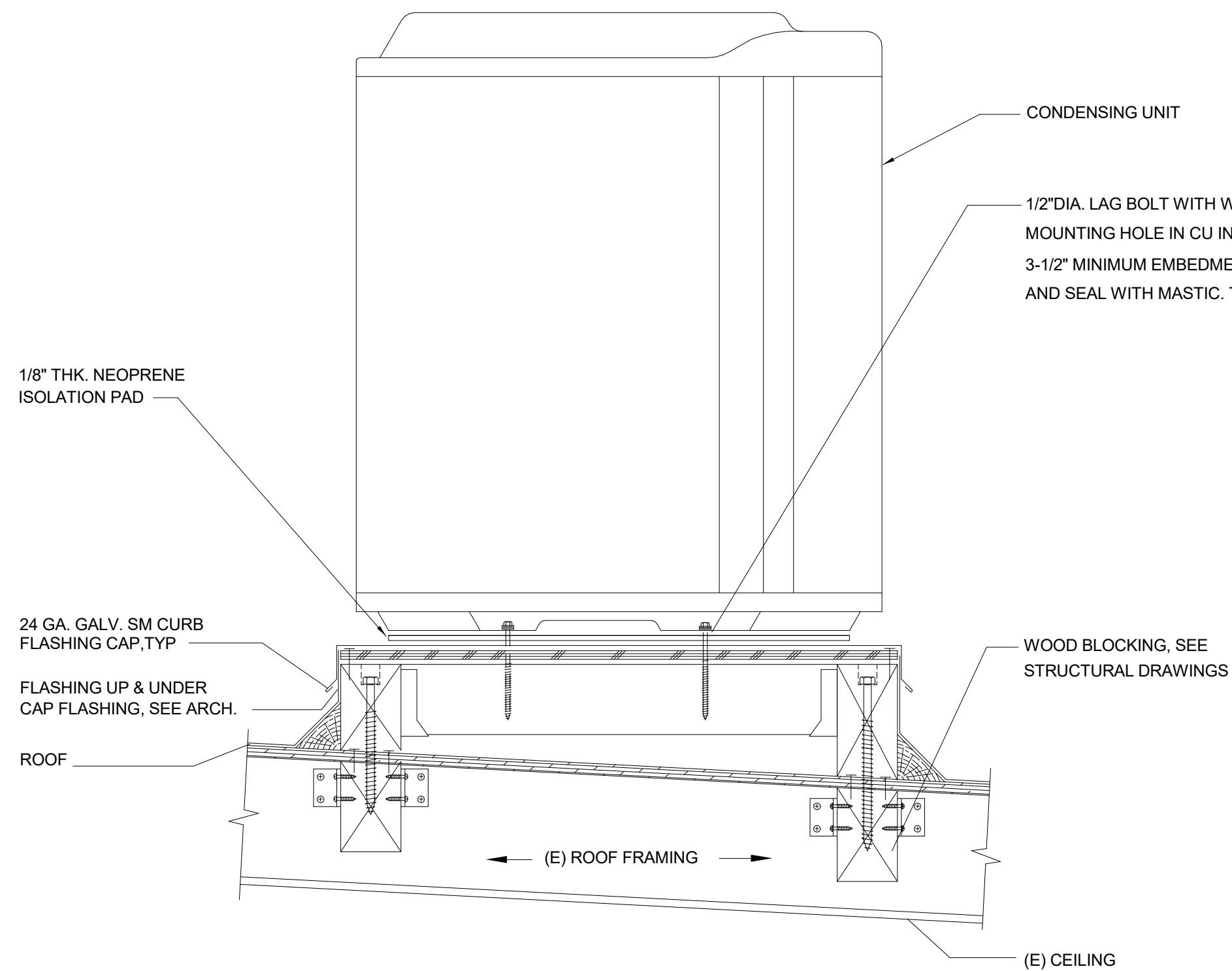
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M5.1B



TYP. VERTICAL FURNACE MOUNTING

SCALE : NONE

1
M5.1B

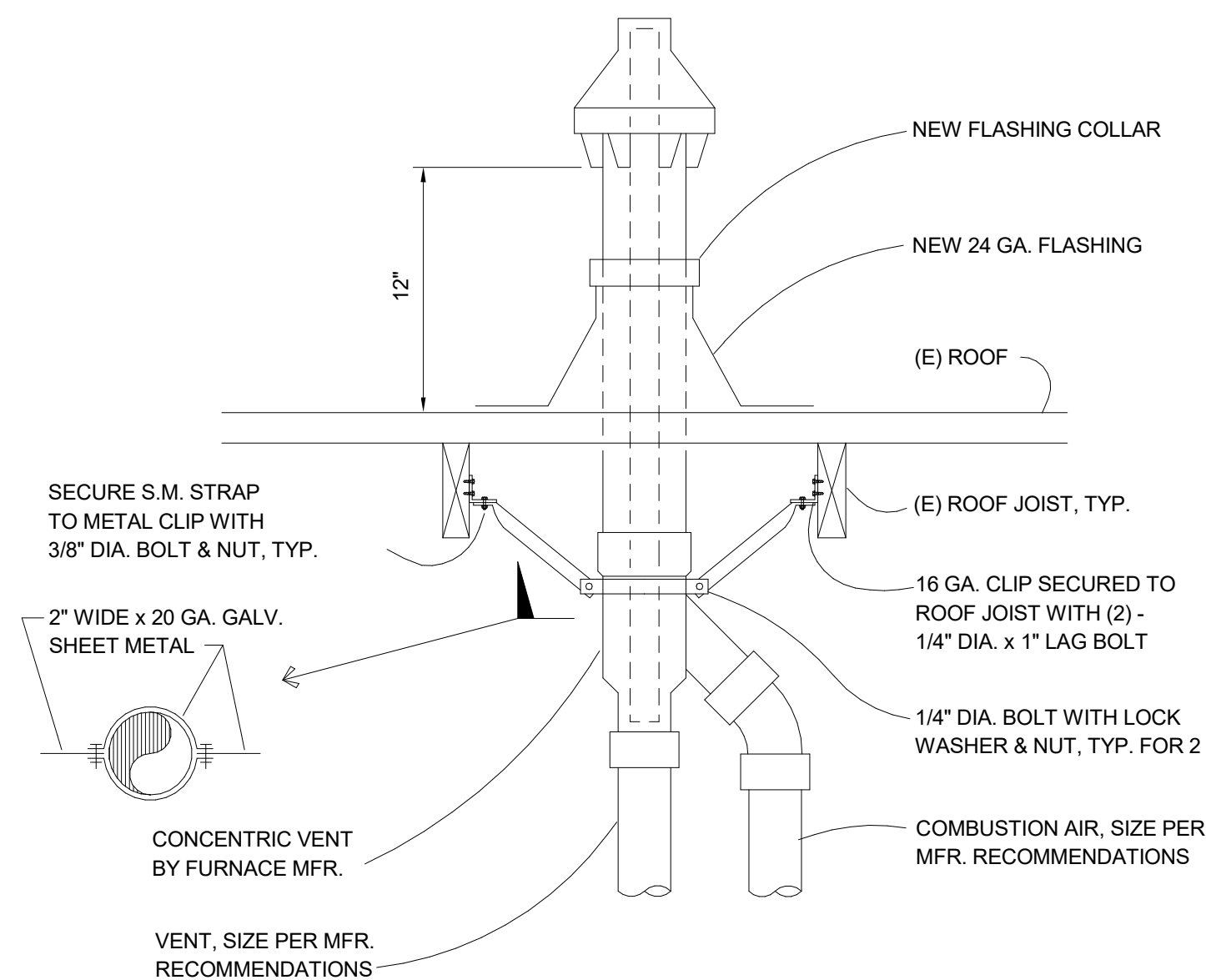


NOTE:
SECURE EACH INSIDE CORNER OF CURB WITH 'SIMPSON' L30.

COND. UNIT MOUNTING AT ROOF

SCALE : NONE

2
M5.1B



VENT & COMBUSTION AIR PIPING

SCALE : NONE

3
M5.1B



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CAPITAL
ENGINEERING CONSULTANTS, INC.
RANCHO CERRITOS, CALIFORNIA
RCC - JH 181202.00
PM - DESIGN TEAM PROJECT NO.

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HY HIBSER YAMAUCHI
Architects, Inc.
300 - 27th Street
Oakland, CA 94612
510.446.2222 tel | 510.446.2211 fax

HY Architects Project number: 5241

Facility
WALNUT CREEK SCHOOL DISTRICT
2425 WALNUT BOULEVARD, WALNUT CREEK, CA 94597

Project
MODERNIZATION AND RECONFIGURATION PROJECT INCREMENT II

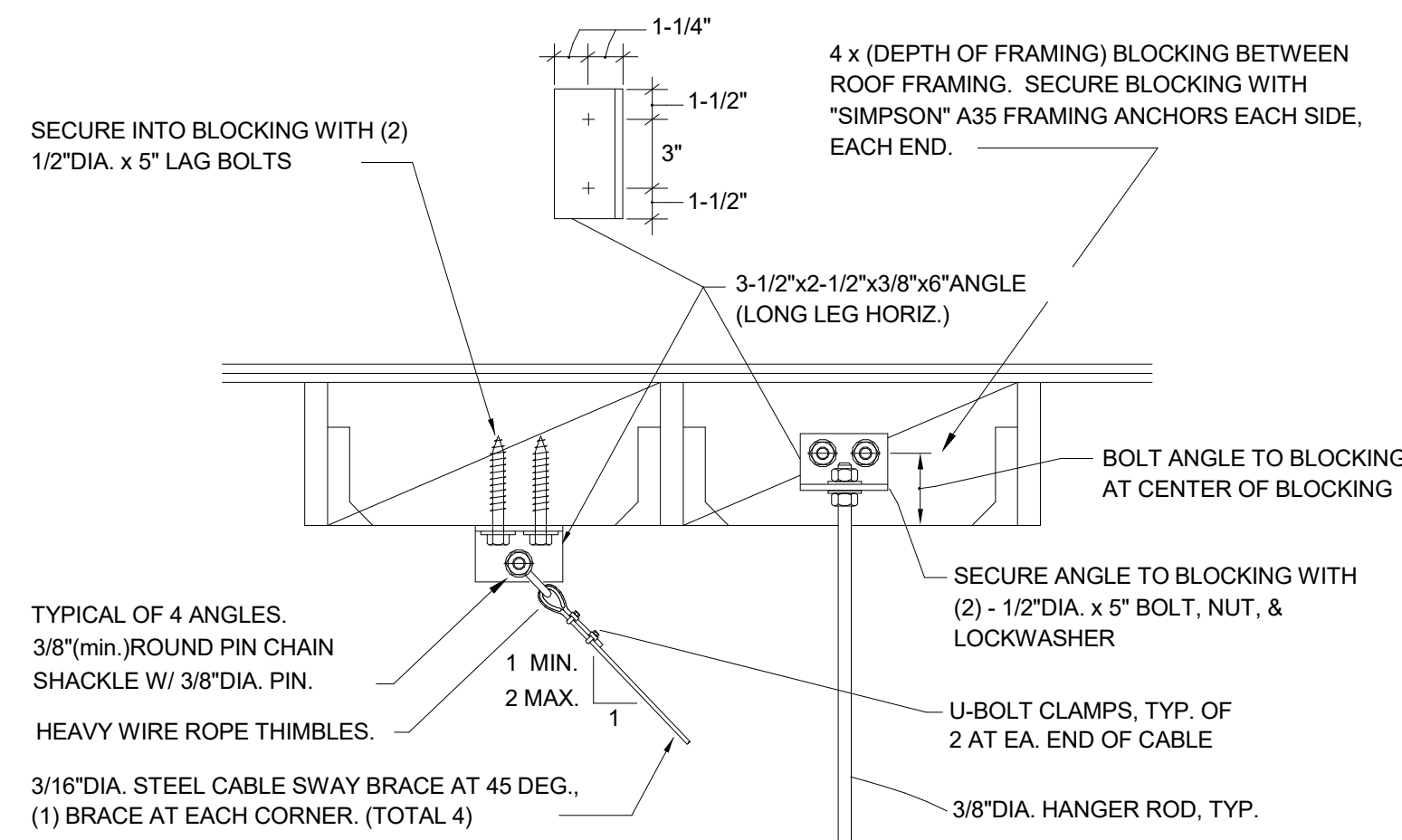
Sheet Title
HVAC DETAILS

Client Project Number: Client Proj. #

Scale: 12" = 1'-0"
Drawn By: Author
Checked By: Checker
Issue Date: 11/3/20
Revit Version: 2019
Sheet 76 of 128
M5.1B



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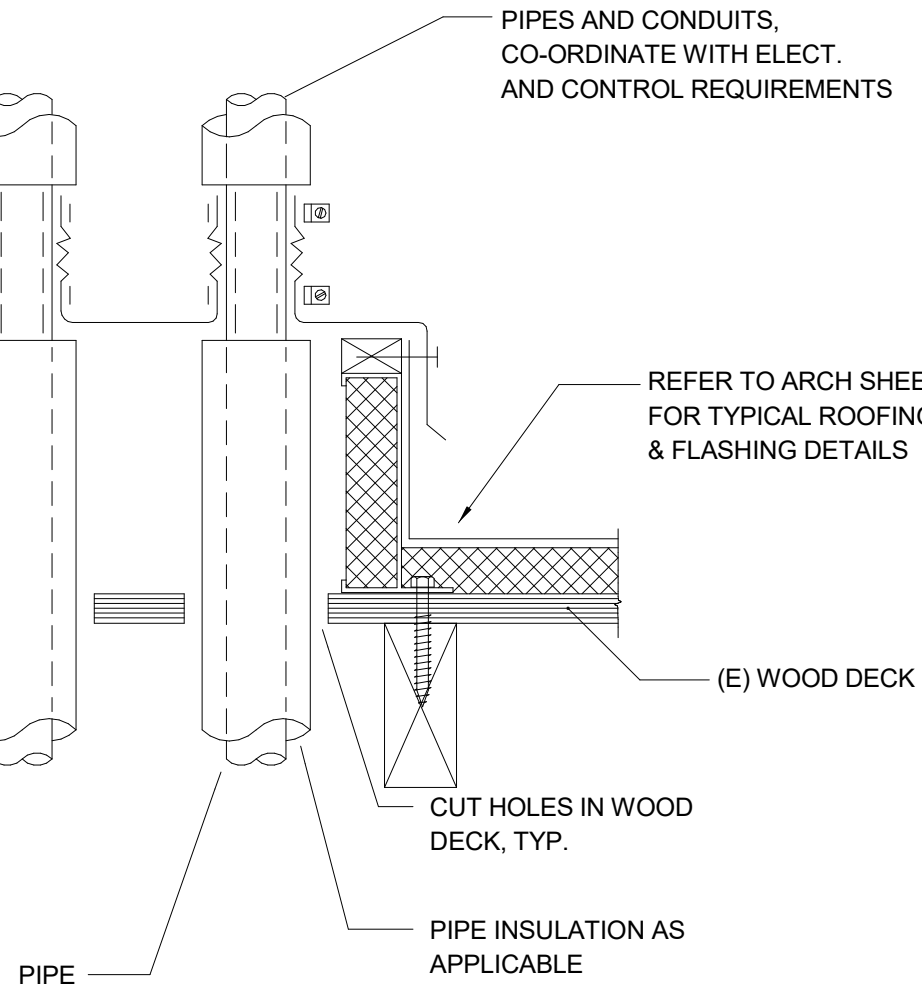


NOTE:
PROVIDE SHAPED 2x UNDER
CURB TO MAINTAIN TOP OF
CURB LEVEL

*PATE PIPE CURB MODEL
PCA-1 COMPLETE WITH
COVER, GRADUATED STEP
BOOTS, AND STAINLESS
STEEL CLAMPS

SECURE COVER TO NAILER
WITH 3/8\"/>

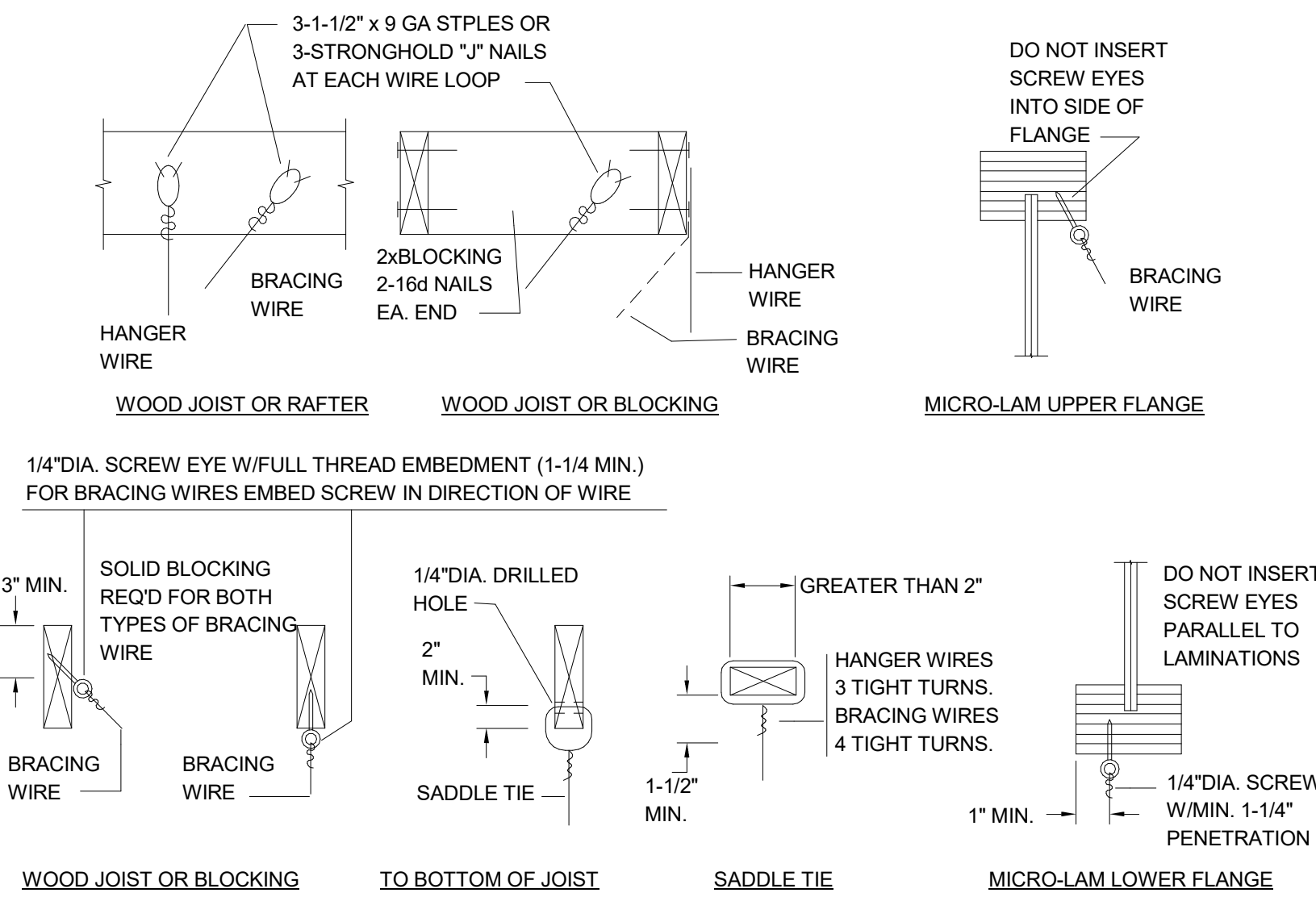
SECURE CURB TO
2x4 BLOCKING BETWEEN
(E) ROOF JOISTS WITH
2-3/8\"/>



PIPE THROUGH ROOF

SCALE : NONE

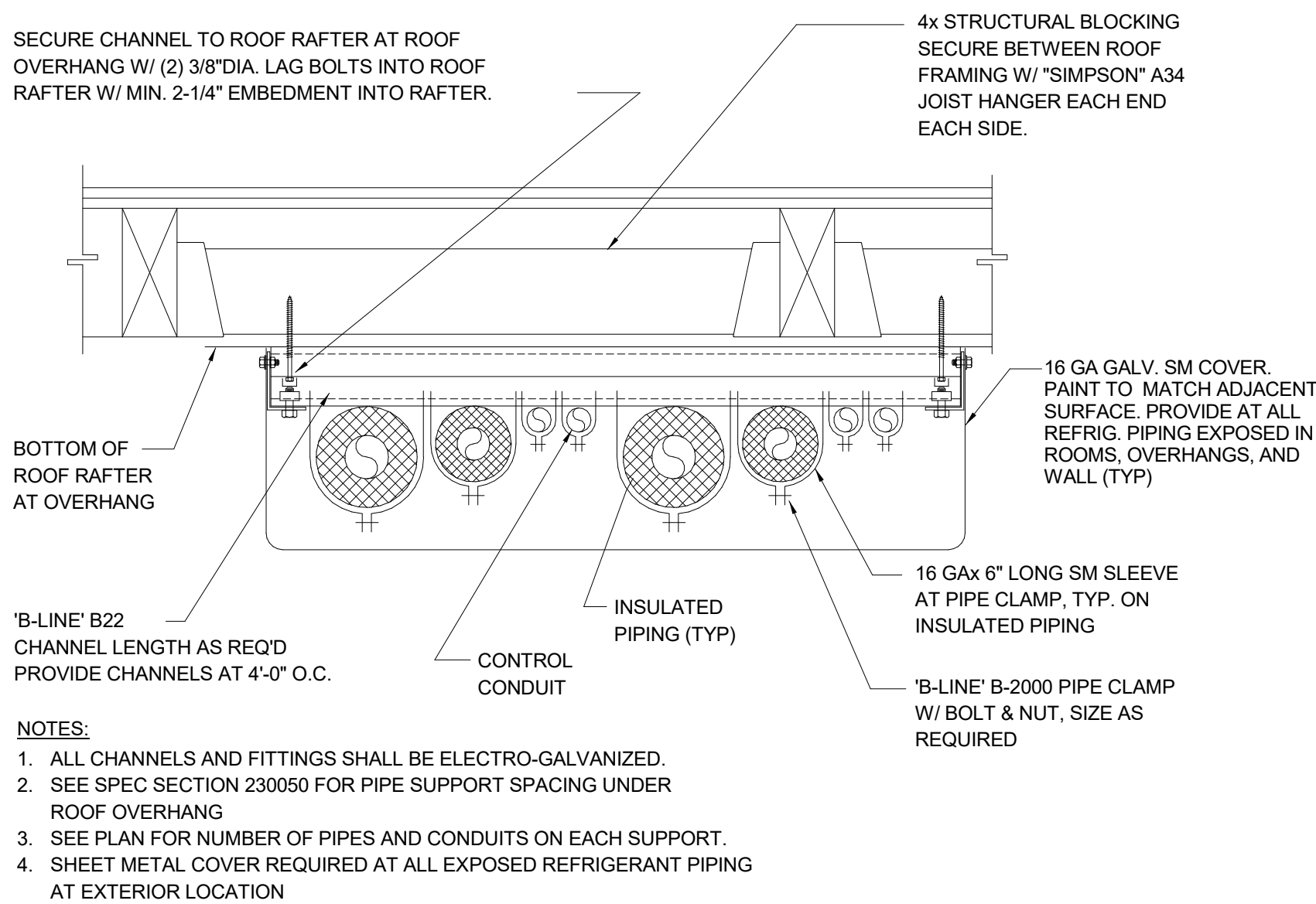
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M5.2B



UPPER ATTACHMENT MOUNTING

SCALE : NONE

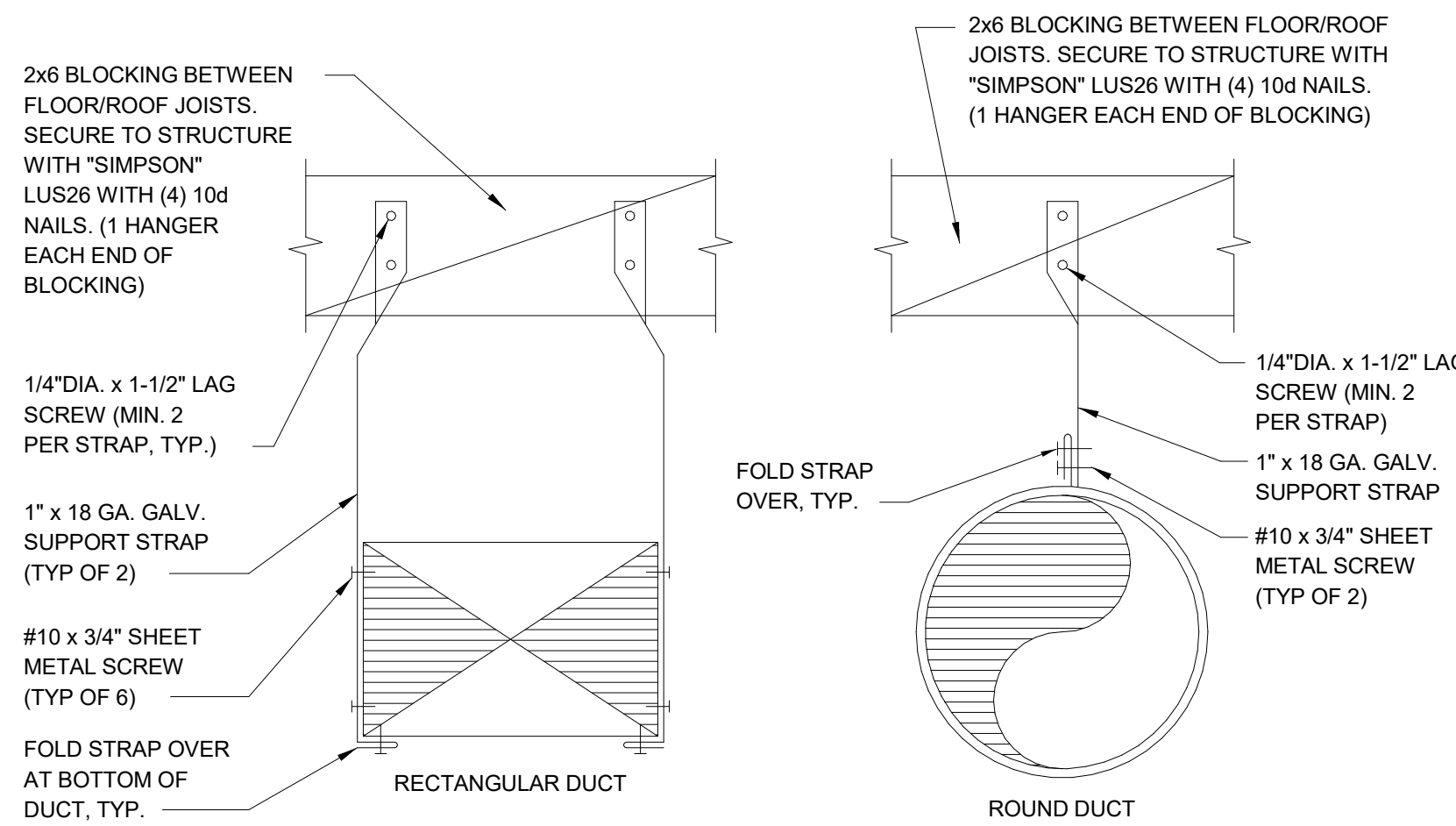
7
M5.2B



PIPE AT ROOF OVERHANG/WALL/CLG.

SCALE : NONE

8
M5.2B



NOTES:

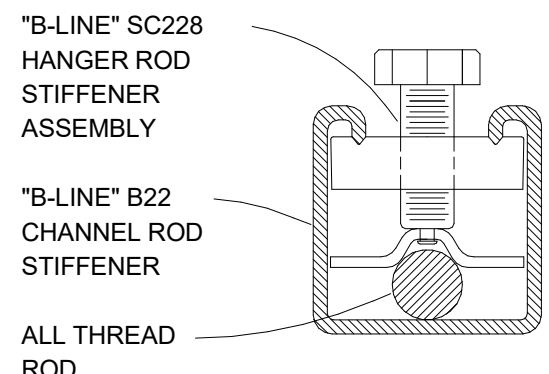
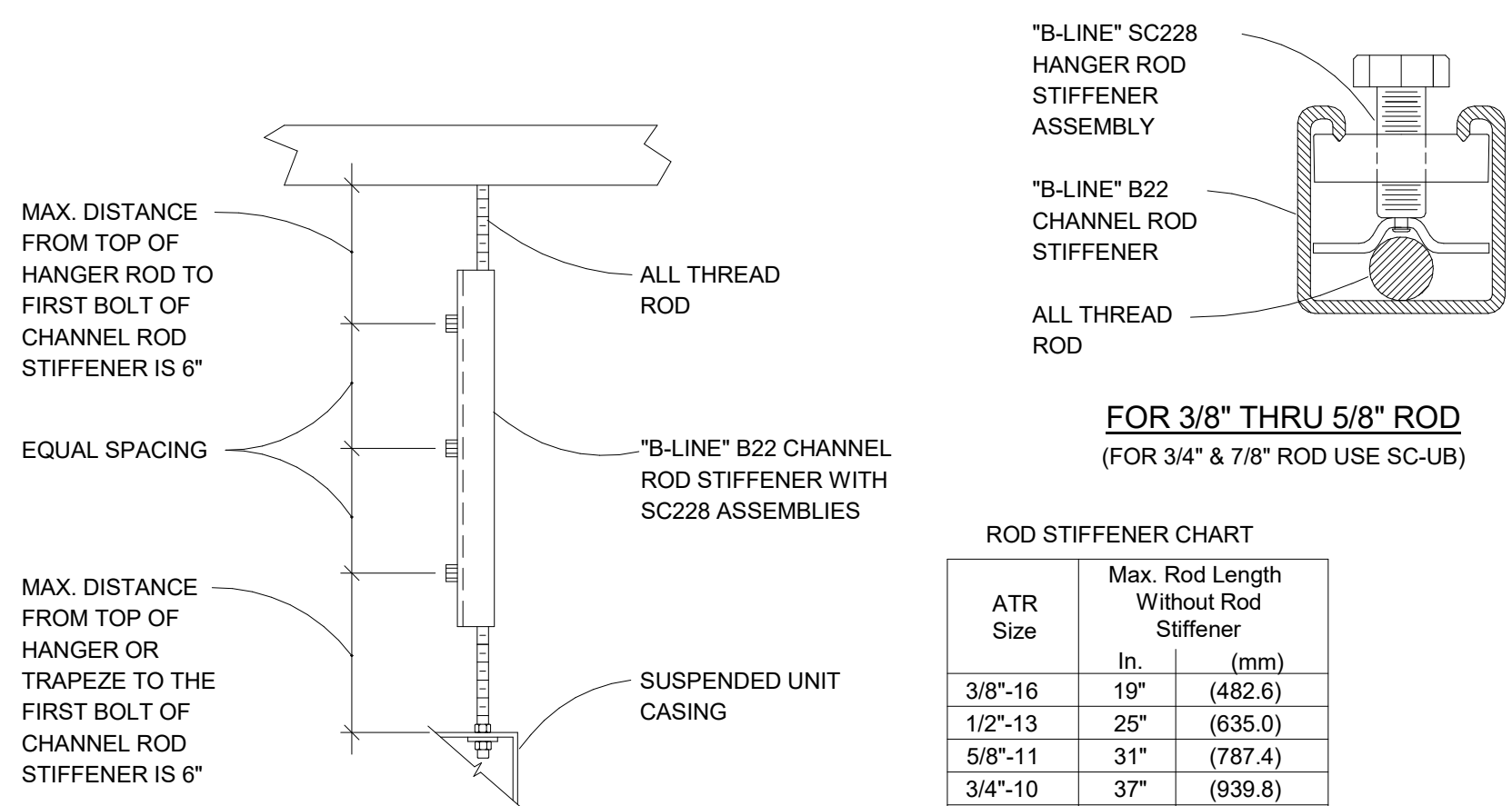
1) SUPPORT STRAP SPACING SHALL BE MAX. 8'-0\"/>

2) PROVIDE HANGERS/SUPPORTS IN COMPLIANCE WITH SMACNA "HVAC DUCT CONSTRUCTION
STANDARDS", REFER TO SPEC SECTION 238000 FOR ADDITIONAL REQUIREMENTS.

TYPICAL DUCT SUPPORT

SCALE : NONE

5
M5.2B



FOR 3/8\"/>

ROD STIFFENER CHART		
ATR Size	Max. Rod Length Without Rod Stiffener	
	In.	(mm)
3/8\"-16	19"	(482.6)
1/2\"-13	25"	(635.0)
5/8\"-11	31"	(787.4)
3/4\"-10	37"	(939.8)
7/8\"-9	43"	(1092.2)

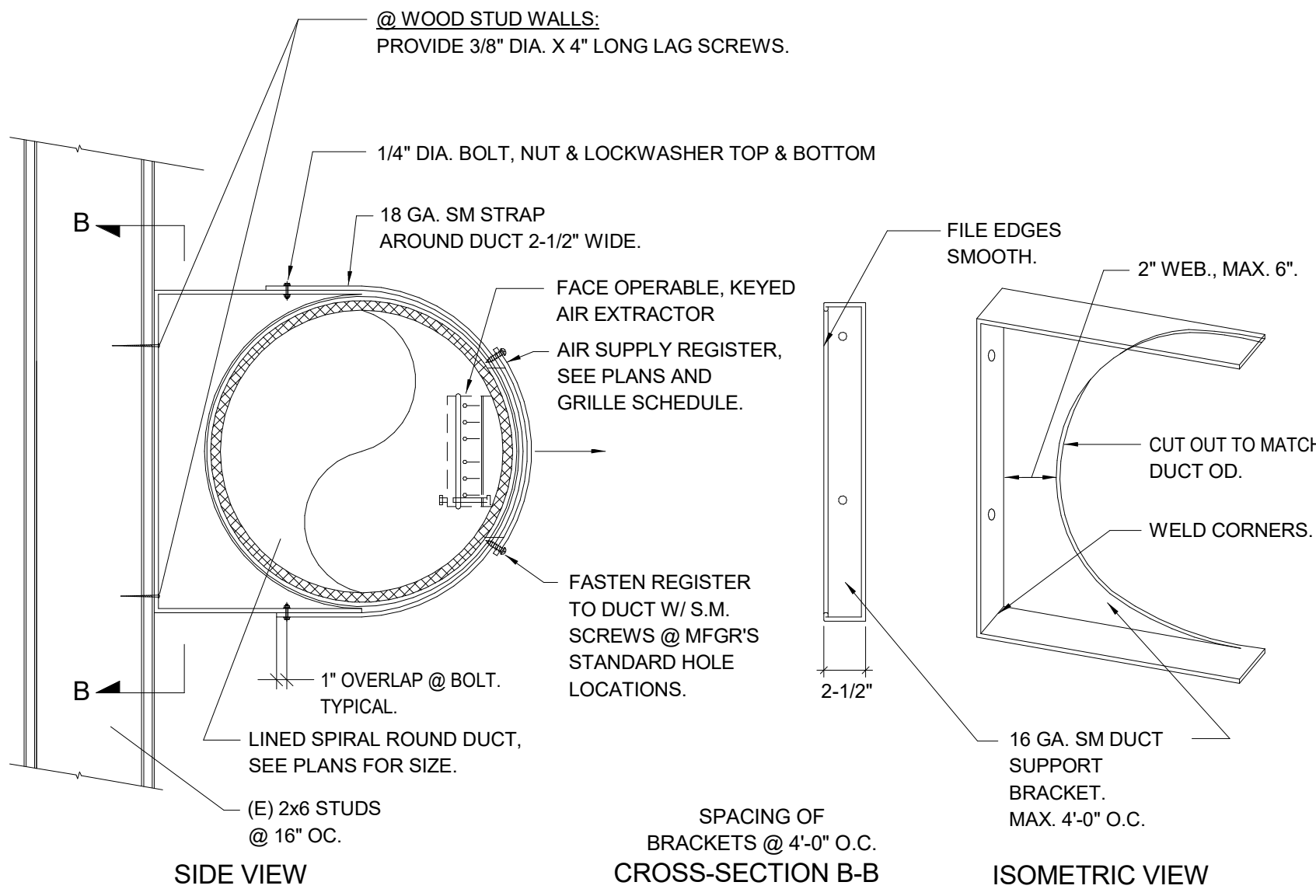
Note: Minimum of (2)-SC228 or
SC-UB are required per rod.

DETAIL FROM "B-LINE" SEISMIC
RESTRAINTS SYSTEM, OSHPD
PRE-APPROVAL No. OPA-300.

ROD STIFFENER

SCALE : NONE

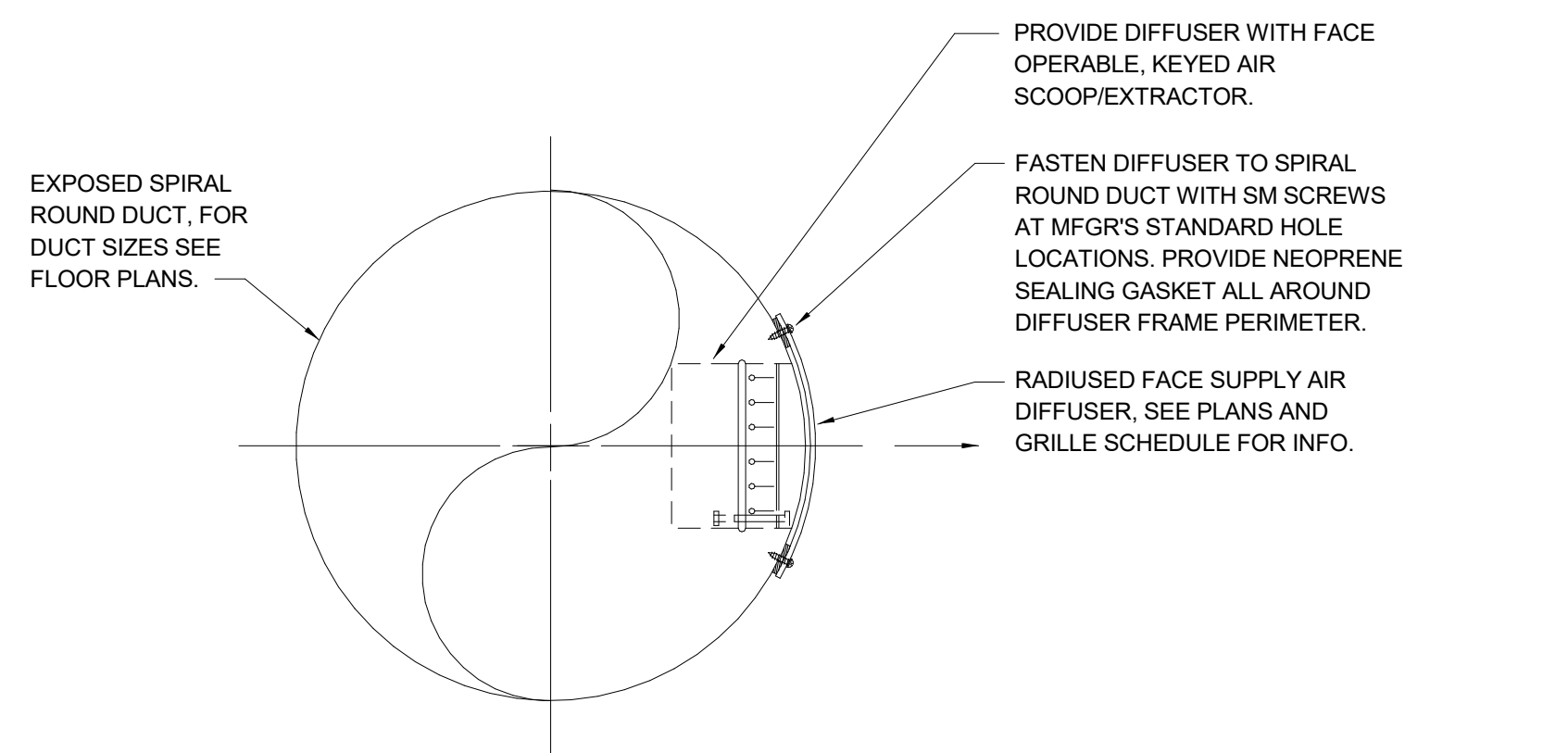
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M5.2B



DUCT SUPPORT AT WALL DETAIL

SCALE : NONE

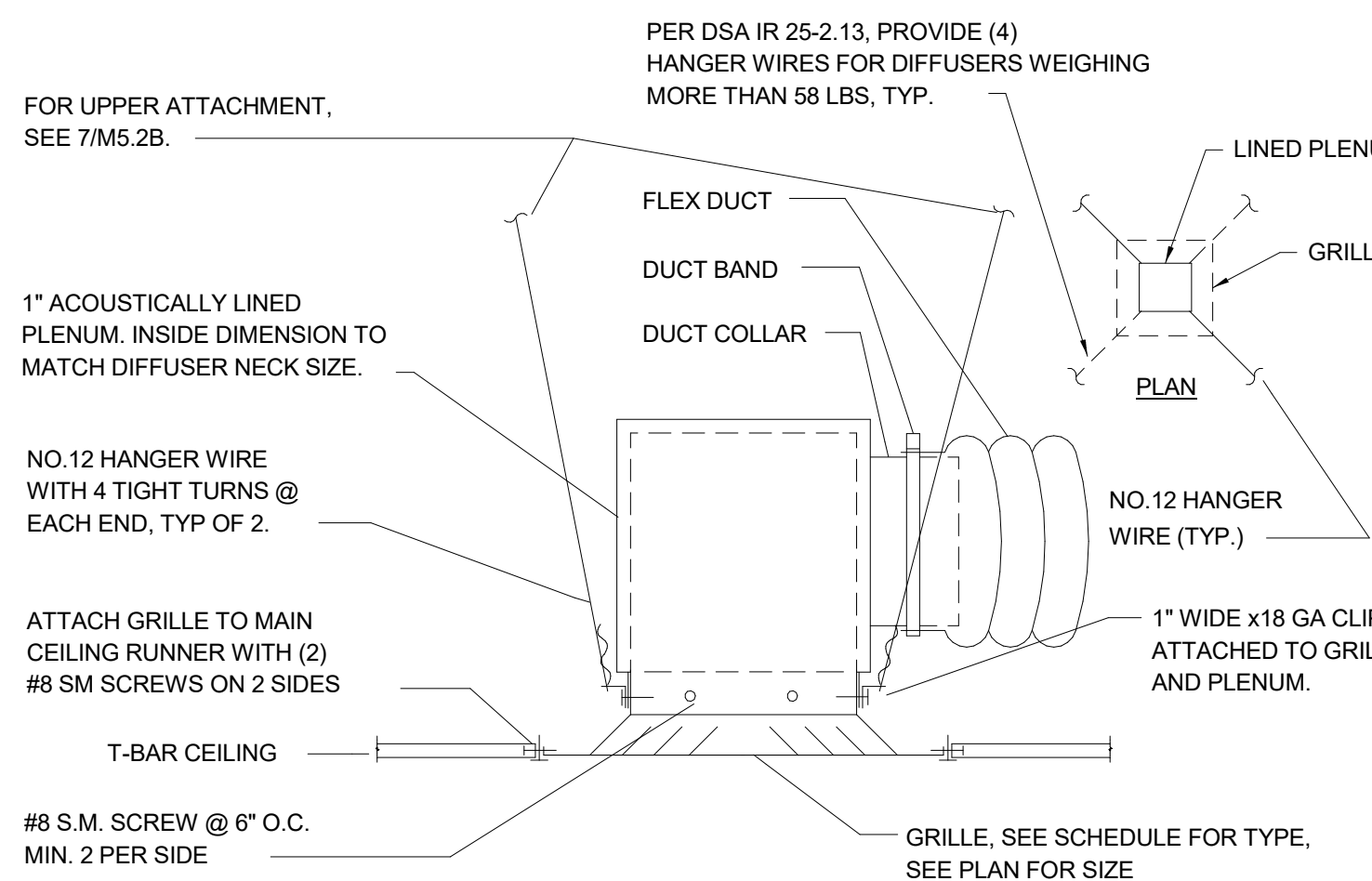
1
M5.2B



RADIUSED FACE DIFFUSER MOUNTING

SCALE : NONE

2
M5.2B



TYP. LAY-IN DIFFUSER/GRILLE MOUNTING

SCALE : NONE

3
M5.2B

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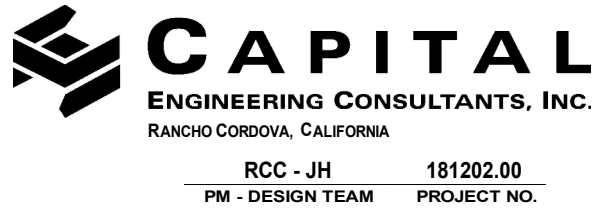


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Facility
WALNUT CREEK SCHOOL DISTRICT
2425 WALNUT BOULEVARD, WALNUT
CREEK, CA 94597

Project
MODERNIZATION AND
RECONFIGURATION PROJECT
INCREMENT II

Sheet Title
HVAC DETAILS

Client Project Number: Client Proj. #

Scale: 12" = 1'-0"

Drawn By: Author

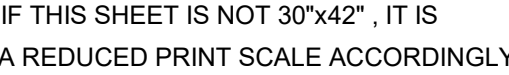
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Issue Date: 11/3/20

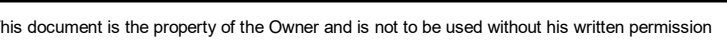
Revit Version: 2019

M5.2B

Sheet 77 of 128



ISSUE DATE: 11/3/20 BY: MH



Facility	WALNUT CREEK SCHOOL DISTRICT 2425 WALNUT BOULEVARD, WALNUT CREEK, CA 94597
----------	--

Sheet Title
HVAC CONTROL DIAGRAMS

Scale: 12" = 1'-0"

Drawn By: Author

Checked By: Checker

Issue Date: 11/3/20

Revit Version: 2019

Sheet 79 of 128

M6.2B

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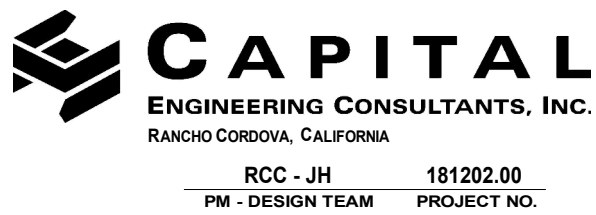


Revisions	Delta	Date	Revisions	By

NOT FOR CONSTRUCTION

PROGRESS DRAWINGS INCREMENT II

ISSUE DATE: 11/3/20 BY: MH



RCC - JH 181022-00
PM - DESIGN TEAM PROJECT NO.

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Architect/Engineer Of Record:



HY HIBSER YAMAUCHI
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300 - 27th Street
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HY Architects Project number: 5241

Facility

WALNUT CREEK SCHOOL DISTRICT
2425 WALNUT BOULEVARD, WALNUT
CREEK, CA 94597

Project

MODERNIZATION AND RECONFIGURATION PROJECT INCREMENT II

Sheet Title

HVAC TITLE 24 DOCUMENTATION

Client Project Number: Client Proj. #

Scale:

Drawn By: Author

Checked By: Checker

Issue Date: 11/3/20

Revit Version: 2019

M7.1B

Sheet 80 of 128

STATE OF CALIFORNIA
MECHANICAL SYSTEMS
NRCC-MCH-E CALIFORNIA ENERGY COMMISSION

CERTIFICATE OF COMPLIANCE NRCC-MCH-E
This document is used to demonstrate compliance for mechanical systems that are within the scope of the permit application and are demonstrating compliance using the prescriptive path outlined in §140.5, or §141.0(b)(2) for alterations.
Project Name: Walnut Creek Intermediate School Building 100 Report Page: (Page 1 of 14)
Project Address: 2425 Walnut Blvd Date Prepared: 7/30/2020

A. GENERAL INFORMATION			
01 Project Location (City)	Walnut Creek	04 Total Conditioned Floor Area	6048
02 Climate Zone	12	05 Total Unconditioned Floor Area	0
03 Occupancy Types Within Project:			
06 # of Stories (Habitable Above Grade)		1	
<input type="checkbox"/> Office (R)	<input type="checkbox"/> Retail (M)	<input type="checkbox"/> Non-refrigerated Warehouse (S)	
<input type="checkbox"/> Hotel/ Motel Guest Rooms (R-1)	<input type="checkbox"/> School (E)	<input type="checkbox"/> Healthcare Facility (H)	
<input type="checkbox"/> High-Rise Residential (R-2/R-3)	<input type="checkbox"/> Relocatable Class Bldg (E)	<input checked="" type="checkbox"/> Other (write in)	See Table J

B. PROJECT SCOPE		
This table includes mechanical systems or components that are within the scope of the permit application and are demonstrating compliance using the prescriptive path outlined in §140.5, or §141.0(b)(2) for alterations.		
01	02	03
Air System(s)	Wet System Components	Dry System Components
<input checked="" type="checkbox"/> Heating Air System	<input type="checkbox"/> Water Economizer	<input type="checkbox"/> Air Economizer
<input checked="" type="checkbox"/> Cooling Air System	<input type="checkbox"/> Pumps	<input type="checkbox"/> Electric Resistance Heat
Mechanical Controls	Hydronic System Piping	Fan Systems
<input checked="" type="checkbox"/> Mechanical Controls	<input type="checkbox"/> Cooling Towers	<input type="checkbox"/> Ductwork
<input type="checkbox"/> Chillers	<input type="checkbox"/> Ventilation	<input checked="" type="checkbox"/> Ventilation
<input type="checkbox"/> Boilers	<input type="checkbox"/> Zonal Systems/ Terminal Boxes	

Registration Number: Registration Date/Time: Registration Provider: EnergySoft
CA Building Energy Efficiency Standards - 2019 Nonresidential Compliance Report Version: 2019.0.001 Schema Version: rev 20190401 Report Generated: 2020-07-30 10:29:29

STATE OF CALIFORNIA
MECHANICAL SYSTEMS
NRCC-MCH-E CALIFORNIA ENERGY COMMISSION

CERTIFICATE OF COMPLIANCE NRCC-MCH-E
This document is used to demonstrate compliance for mechanical systems that are within the scope of the permit application and are demonstrating compliance using the prescriptive path outlined in §140.5, or §141.0(b)(2) for alterations.
Project Name: Walnut Creek Intermediate School Building 100 Report Page: (Page 4 of 14)
Project Address: 2425 Walnut Blvd Date Prepared: 7/30/2020

G. PUMPS							
This section does not apply to this project.							
H. FAN SYSTEMS & AIR ECONOMIZERS							
This table is used to demonstrate compliance with prescriptive requirements found in §140.4(c), §140.4(e) and §140.4(m) for fan systems. Fan systems serving healthcare facilities, or those serving only process loads, are exempt from these requirements and do not need to be included in Table H.							
System Name:	F-101	Economizer: ¹	NA: 54 kBTU/h cooling	Economizer Controls:	Designed per and (m)	System Fan Type:	Fixed Flow
01	02	03	04	05	06	07	08
Fan Name or Item Tag	Fan Function	Qty	Maximum Design Supply Airflow (CFM)	HP Unit ²	Design HP	Device	Design Airflow through Device (CFM)
SF	Supply	1	1600	BHP	1		
Total System Design Supply Airflow (CFM):			1600	Total System Design (BHP):		1	Maximum System Fan Power (BHP): 1.5
System Name:	F-102	Economizer: ¹	NA: 54 kBTU/h cooling	Economizer Controls:	Designed per and (m)	System Fan Type:	Fixed Flow
01	02	03	04	05	06	07	08
Fan Name or Item Tag	Fan Function	Qty	Maximum Design Supply Airflow (CFM)	HP Unit ²	Design HP	Device	Design Airflow through Device (CFM)
SF	Supply	1	1600	BHP	1		
Total System Design Supply Airflow (CFM):			1600	Total System Design (BHP):		1	Maximum System Fan Power (BHP): 1.5

Registration Number: Registration Date/Time: Registration Provider: EnergySoft
CA Building Energy Efficiency Standards - 2019 Nonresidential Compliance Report Version: 2019.0.001 Schema Version: rev 20190401 Report Generated: 2020-07-30 10:29:29

STATE OF CALIFORNIA
MECHANICAL SYSTEMS
NRCC-MCH-E CALIFORNIA ENERGY COMMISSION

CERTIFICATE OF COMPLIANCE NRCC-MCH-E
This document is used to demonstrate compliance for mechanical systems that are within the scope of the permit application and are demonstrating compliance using the prescriptive path outlined in §140.5, or §141.0(b)(2) for alterations.
Project Name: Walnut Creek Intermediate School Building 100 Report Page: (Page 8 of 14)
Project Address: 2425 Walnut Blvd Date Prepared: 7/30/2020

I. SYSTEM CONTROLS								
This table is used to demonstrate compliance with mandatory controls in §110.4 and §120.2, and prescriptive controls in §140.4(f) and (n) or requirements in §141.0(b)(2) for altered space conditioning systems.								
01	02	03	04	05	06	07	08	09
System Name	System Zoning	Conditioned Floor Area Being Served (ft ²)	Thermostats §110.2(b) & (c) ¹ , §120.2(a)(i) or §141.0(b)(2)	Shut-Off Controls §120.2(a)	Isolation Zone Controls §120.2(a)	Demand Response §120.2(b)	Supply Air Temp. Reset §140.4(f)	Window Interlocks per §140.4(i)
F-101	Single zone	25,000 ft ²	Energy Management System (EMS)	NA: 7 day per	4 Hour Timer	EMCS	NA: Alteration	NA: Alteration Project
F-102	Single zone	25,000 ft ²	Energy Management System (EMS)	NA: 7 day per	4 Hour Timer	EMCS	NA: Alteration	NA: Alteration Project
F-103	Single zone	25,000 ft ²	Energy Management System (EMS)	NA: 7 day per	4 Hour Timer	EMCS	NA: Alteration	NA: Alteration Project
F-104	Single zone	25,000 ft ²	Energy Management System (EMS)	NA: 7 day per	4 Hour Timer	EMCS	NA: Alteration	NA: Alteration Project
F-106	Single zone	25,000 ft ²	Energy Management System (EMS)	NA: 7 day per	4 Hour Timer	EMCS	NA: Alteration	NA: Alteration Project
F-107	Single zone	25,000 ft ²	Energy Management System (EMS)	NA: 7 day per	4 Hour Timer	EMCS	NA: Alteration	NA: Alteration Project
F-108	Single zone	25,000 ft ²	Energy Management System (EMS)	NA: 7 day per	4 Hour Timer	EMCS	NA: Alteration	NA: Alteration Project

¹FOOTNOTES: Gravity gas wall heaters, gravity floor heaters, gravity room heaters, non-central electric heaters, fireplaces or decorative gas appliances, wood stoves are not required to have setback thermostats.
*Notes: Controls with a * require a note in the space below explaining how compliance is achieved. EX: system 1: SA Temp Reset: Exempt because zones compliant with §140.4(d); EXCEPTION 1 to §140.4(f)

Registration Number: Registration Date/Time: Registration Provider: EnergySoft
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STATE OF CALIFORNIA
MECHANICAL SYSTEMS
NRCC-MCH-E CALIFORNIA ENERGY COMMISSION

CERTIFICATE OF COMPLIANCE NRCC-MCH-E
This document is used to demonstrate compliance for mechanical systems that are within the scope of the permit application and are demonstrating compliance using the prescriptive path outlined in §140.5, or §141.0(b)(2) for alterations.
Project Name: Walnut Creek Intermediate School Building 100 Report Page: (Page 2 of 14)
Project Address: 2425 Walnut Blvd Date Prepared: 7/30/2020

C. COMPLIANCE RESULTS																							
Table C will indicate if the project data input into the compliance document is compliant with mechanical requirements. This table is not editable by the user. If this table says "DOES NOT COMPLY" or "COMPLIES with Exceptional Conditions" refer to Table D., or the table indicated as not compliant for guidance.																							
01		02		03		04		05		06		07		08		09							
System Summary §110.2, §110.2, §140.4		AND	Pumps §140.4(i)		AND	Fans/ Economizers §140.4(c), §140.4(e)		AND	System Controls §110.2, §120.2, §140.4(f)		AND	Ventilation §120.1		AND	Terminal Box Controls §140.4(d)		AND	Distribution §120.3, §140.4(i)		AND	Cooling Towers §110.2(e)(2)		Compliance Results
(See Table F)			(See Table G)			(See Table H)			(See Table I)			(See Table J)			(See Table K)			(See Table L)			(See Table M)		
Yes		AND			AND	Yes		AND	Yes		AND			AND	Yes		AND			AND	COMPLIES		COMPLIES
Mandatory Measures Compliance (See Table Q for Details)																COMPLIES							

D. EXCEPTIONAL CONDITIONS
This table is auto-filled with uneditable comments because of selections made or data entered in tables throughout the form.

E. ADDITIONAL REMARKS
This table includes remarks made by the permit applicant to the Authority Having Jurisdiction.

F. HVAC SYSTEM SUMMARY (DRY & WET SYSTEMS)											
This table is used to demonstrate compliance for mechanical equipment with mandatory requirements found in §110.1 and §110.2(a) and prescriptive requirements found in §140.4(a), §140.4(b) and §140.4(i) or §141.0(b)(2) for alterations.											
Dry System Equipment Sizing (includes air conditioners, condensers, heat pumps, VRF, furnaces and unit heaters)											
01	02	03	04	05	06	07	08	09	10	11	
Name or Item Tag	Equipment Category per Tables 110.2	Equipment Type per Tables 110.2 & Table 29	Smallest Size Available ¹ §140.4(a)	Equipment Sizing per Mechanical Schedule (Btu/h) §140.4 (a&b)							
				Heating Output ^{2,3}		Cooling Output ^{2,3}					
				Per Design (kBtu/h)	Rated (kBtu/h)	Supp. Heating Output (kBtu/h)	Sensible Per Design (kBtu/h)	Rated (kBtu/h)	Total Heating Load	Total Sensible Cooling Load	

Registration Number: Registration Date/Time: Registration Provider: EnergySoft
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STATE OF CALIFORNIA
MECHANICAL SYSTEMS
NRCC-MCH-E CALIFORNIA ENERGY COMMISSION

CERTIFICATE OF COMPLIANCE NRCC-MCH-E
This document is used to demonstrate compliance for mechanical systems that are within the scope of the permit application and are demonstrating compliance using the prescriptive path outlined in §140.5, or §141.0(b)(2) for alterations.
Project Name: Walnut Creek Intermediate School Building 100 Report Page: (Page 5 of 14)
Project Address: 2425 Walnut Blvd Date Prepared: 7/30/2020

H. FAN SYSTEMS & AIR ECONOMIZERS							
System Name:	F-103	Economizer: ¹	NA: 54 kBTU/h cooling	Economizer Controls:	Designed per and (m)	System Fan Type:	Fixed Flow
01	02	03	04	05	06	07	08
Fan Name or Item Tag	Fan Function	Qty	Maximum Design Supply Airflow (CFM)	HP Unit ²	Design HP	Device	Design Airflow through Device (CFM)
SF	Supply	1	1600	BHP	1		
Total System Design Supply Airflow (CFM):			1600	Total System Design (BHP):		1	Maximum System Fan Power (BHP): 1.5
System Name:	F-104	Economizer: ¹	NA: 54 kBTU/h cooling	Economizer Controls:	Designed per and (m)	System Fan Type:	Fixed Flow
01	02	03	04	05	06	07	08
Fan Name or Item Tag	Fan Function	Qty	Maximum Design Supply Airflow (CFM)	HP Unit ²	Design HP	Device	Design Airflow through Device (CFM)
SF	Supply	1	1600	BHP	1		
Total System Design Supply Airflow (CFM):			1600	Total System Design (BHP):		1	Maximum System Fan Power (BHP): 1.5
System Name:	F-106	Economizer: ¹	NA: 54 kBTU/h cooling	Economizer Controls:	Designed per and (m)	System Fan Type:	Fixed Flow
01	02	03	04	05	06	07	08
Fan Name or Item Tag	Fan Function	Qty	Maximum Design Supply Airflow (CFM)	HP Unit ²	Design HP	Device	Design Airflow through Device (CFM)
SF	Supply	1	1600	BHP	1		
Total System Design Supply Airflow (CFM):			1600	Total System Design (BHP):		1	Maximum System Fan Power (BHP): 1.5

Registration Number: Registration Date/Time: Registration Provider: EnergySoft
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STATE OF CALIFORNIA
MECHANICAL SYSTEMS
NRCC-MCH-E CALIFORNIA ENERGY COMMISSION

CERTIFICATE OF COMPLIANCE NRCC-MCH-E
This document is used to demonstrate compliance for mechanical systems that are within the scope of the permit application and are demonstrating compliance using the prescriptive path outlined in §140.5, or §141.0(b)(2) for alterations.
Project Name: Walnut Creek Intermediate School Building 100 Report Page: (Page 9 of 14)
Project Address: 2425 Walnut Blvd Date Prepared: 7/30/2020

J. VENTILATION AND INDOOR AIR QUALITY											
This table is used to demonstrate compliance with mandatory ventilation requirements in §120.1 and §141.0(b)(2) for all nonresidential, high-rise residential and hotel/motel occupancies. For alterations, only ventilation systems being altered within the scope of the permit application need to be documented in this table. In lieu of this table, the required outdoor ventilation rates and airflow may be shown on the plans or the calculations can be presented in a spreadsheet.											
01	<input type="checkbox"/>	Check the box if the project included new or altered high-rise residential dwelling units.									
02	<input type="checkbox"/>	Check the box if the project is showing ventilation calculations on the plans, or attaching the calculations instead of completing this table.									
03	<input type="checkbox"/>	Check the box if the project is using natural ventilation in any nonresidential or hotel/motel spaces to meet required ventilation rates per §120.1(c)(2).									
Nonresidential and Hotel/ Motel Ventilation Systems											
04		05			06			07			
System Name	F-101	System Design OA CFM Airflow ¹		450	System Design Transfer Air CFM		0	Air Filtration per §120.1(c) and §141.0(b)(2) ²			
08	09	10	11	12	13	14	15	Provided per §120.1(c) (NR and Hotel/Motel)			
Mechanical Ventilation Required per §120.1(c)(3) ³					Exh. Vent per §120.1(c)(4)						
Space Name or Item Tag	Occupancy Type ⁴	Conditioned Floor Area (ft ²)	# of Shower heads/ toilets	# of people ⁵	Required Min OA CFM	Required Min CFM	Provided per Design CFM	DCV or Sensor Controls per §120.1(d)(3), §120.1(d)(5), and §120.1(e)(3) ⁶			
F-101	All others	864		30	328.32	0	0	DCV		Provided per §120.1(d)(4)	
								Occ Sensor			
04		05			06			07			
System Name	F-102	System Design OA CFM Airflow ¹		450	System Design Transfer Air CFM		0	Air Filtration per §120.1(c) and §141.0(b)(2) ²			
08	09	10	11	12	13	14	15	Provided per §120.1(c) (NR and Hotel/Motel)			
Mechanical Ventilation Required per §120.1(c)(3) ³					Exh. Vent per §120.1(c)(4)						
Space Name or Item Tag	Occupancy Type ⁴	Conditioned Floor Area (ft ²)	# of Shower heads/ toilets	# of people ⁵	Required Min OA CFM	Required Min CFM	Provided per Design CFM	DCV or Sensor Controls per §120.1(d)(3), §120.1(d)(5), and §120.1(e)(3) ⁶			
F-104	All others	864		30	328.32	0	0	DCV		Provided per §120.1(d)(4)	
								Occ Sensor			

Registration Number: Registration Date/Time: Registration Provider: EnergySoft
CA Building Energy Efficiency Standards - 2019 Nonresidential Compliance Report Version: 2019.0.001 Schema Version: rev 20190401 Report Generated: 2020-07-30 10:29:29

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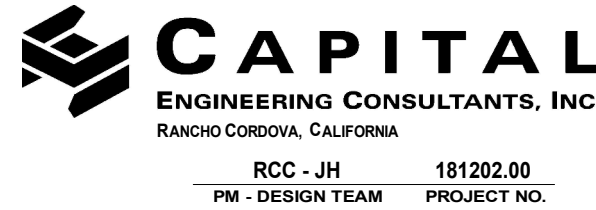
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Revisions	Delta	Date	Revisions	By

NOT FOR CONSTRUCTION
PROGRESS DRAWINGS
INCREMENT II

ISSUE DATE: 11/3/20 BY: MH



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Architect/Engineer Of Record:



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300 - 27th Street
Oakland, CA 94612
510.446.2222 x1510.446.2211 fax

HY Architects Project number: 5241

Facility
WALNUT CREEK SCHOOL DISTRICT
2425 WALNUT BOULEVARD, WALNUT
CREEK, CA 94597

Project

**MODERNIZATION AND
RECONFIGURATION PROJECT
INCREMENT II**

Sheet Title

**HVAC TITLE 24
DOCUMENTATION**

Client Project Number: Client Proj. #

Scale: Sheet
Drawn By: Author
Checked By: Checker
Issue Date: 11/3/20
Revit Version: 2019
M7.2B
Sheet 81 of 128

STATE OF CALIFORNIA
Mechanical Systems
NRCC-MCH-E CALIFORNIA ENERGY COMMISSION

CERTIFICATE OF COMPLIANCE		NRCC-MCH-E	
Project Name:	Walnut Creek Intermediate School Building 100	Report Page:	(Page 10 of 14)
Project Address:	2425 Walnut Blvd	Date Prepared:	7/30/2020

J. VENTILATION AND INDOOR AIR QUALITY			
04		05	06
System Name	F-106	System Design OA CFM Airflow ¹	450
08	09	10	11
12	13	14	15
Space Name of Item Tag	Occupancy Type ⁴	Conditioned Floor Area (ft ²)	# of Shower heads/ toilets
F-106	All others	864	30
04	05	06	07
System Name	F-107	System Design OA CFM Airflow ¹	450
08	09	10	11
12	13	14	15
Space Name of Item Tag	Occupancy Type ⁴	Conditioned Floor Area (ft ²)	# of Shower heads/ toilets
F-107	All others	864	30
04	05	06	07
System Name	F-108	System Design OA CFM Airflow ¹	450
08	09	10	11
12	13	14	15

Registration Number: Registration Date/Time: Registration Provider: EnergySoft
CA Building Energy Efficiency Standards - 2019 Nonresidential Compliance Report Version: 2019.0.001
Schema Version: rev 20190401 Report Generated: 2020-07-30 10:29:29

STATE OF CALIFORNIA
Mechanical Systems
NRCC-MCH-E CALIFORNIA ENERGY COMMISSION

CERTIFICATE OF COMPLIANCE		NRCC-MCH-E	
Project Name:	Walnut Creek Intermediate School Building 100	Report Page:	(Page 13 of 14)
Project Address:	2425 Walnut Blvd	Date Prepared:	7/30/2020

O. DECLARATION OF REQUIRED CERTIFICATES OF ACCEPTANCE			
Yes	No	Form/Title	Field Inspector
<input type="radio"/>	<input checked="" type="radio"/>	NRCA-MCH-14-A Distributed Energy Storage (DES) Systems Acceptance NOTE: This form does not automatically move to "Yes". If Distributed Energy System (DES) AC Systems are included in the scope permit applicant should move this form to "Yes".	<input type="checkbox"/>
<input type="radio"/>	<input checked="" type="radio"/>	NRCA-MCH-15-A Thermal Energy Storage (TES) System Acceptance NOTE: This form does not automatically move to "Yes". If Chilled water Storage, Ice-on-Coil Internal Melt, Ice Harvester, Brine, Ice-Slurry, Eutectic Salt, Clathrate Hydrate Slurry (CHS), Cryogenic or Encapsulated (Ice Ball) Systems are included in the scope, permit applicant should move this form to "Yes".	<input type="checkbox"/>
<input type="radio"/>	<input checked="" type="radio"/>	NRCA-MCH-16-A Supply Air Temperature Reset Controls	<input type="checkbox"/>
<input type="radio"/>	<input checked="" type="radio"/>	NRCA-MCH-17-A Condenser Water Temperature Reset Controls	<input type="checkbox"/>
<input type="radio"/>	<input checked="" type="radio"/>	NRCA-MCH-18-A Energy Management Control Systems	<input type="checkbox"/>
<input type="radio"/>	<input checked="" type="radio"/>	NRCA-MCH-19-A Occupancy Sensor Controls	<input type="checkbox"/>
<input type="radio"/>	<input checked="" type="radio"/>	NRCA-MCH-20 Multi-Family Ventilation	<input type="checkbox"/>
<input type="radio"/>	<input checked="" type="radio"/>	NRCA-MCH-21 Multi-Family Envelope Leakage	<input type="checkbox"/>

P. DECLARATION OF REQUIRED CERTIFICATES OF VERIFICATION			
Yes	No	Form/Title	Field Inspector
<input type="radio"/>	<input checked="" type="radio"/>	NRVC-MCH-04-H Duct Leakage Test NOTE: Must be completed by a HERS Rater	<input type="checkbox"/>
<input type="radio"/>	<input checked="" type="radio"/>	NRVC-MCH-24 Enclosure Air Leakage Worksheet NOTE: Must be completed by a HERS Rater	<input type="checkbox"/>
<input type="radio"/>	<input checked="" type="radio"/>	NRVC-MCH-27 High-rise Residential NOTE: Must be completed by a HERS Rater	<input type="checkbox"/>
<input type="radio"/>	<input checked="" type="radio"/>	NRVC-MCH-32 Local Mechanical Exhaust NOTE: Must be completed by a HERS Rater	<input type="checkbox"/>

Q. MANDATORY MEASURES DOCUMENTATION LOCATION			
This table is used to indicate where mandatory measures are documented in the plan set or construction documentation.			
01		02	
Compliance with Mandatory Measures documented through MCH		Plan sheet or construction document location	
Mandatory Measures Note Block ¹		M-Sheets	

Registration Number: Registration Date/Time: Registration Provider: EnergySoft
CA Building Energy Efficiency Standards - 2019 Nonresidential Compliance Report Version: 2019.0.001
Schema Version: rev 20190401 Report Generated: 2020-07-30 10:29:29

STATE OF CALIFORNIA
Mechanical Systems
NRCC-MCH-E CALIFORNIA ENERGY COMMISSION

CERTIFICATE OF COMPLIANCE		NRCC-MCH-E	
Project Name:	Walnut Creek Intermediate School Building 150	Report Page:	(Page 2 of 10)
Project Address:	2425 Walnut Blvd	Date Prepared:	7/30/2020

C. COMPLIANCE RESULTS																
Table C will indicate if the project data input into the compliance document is compliant with mechanical requirements. This table is not editable by the user. If this table says "DUE" NOT COMPLY" or "COMPLIES with Exceptional Conditions" refer to Table D., or the table indicates as not compliant for guidance.																
01		02		03		04		05		06		07		08		09
System Summary	AND	Pumps	AND	Fans/Economizers	AND	System Controls	AND	Ventilation	AND	Terminal Box Controls	AND	Distribution	AND	Cooling Towers		Compliance Results
§110.1, §110.2, §140.4		§140.4(a)		§140.4(c), §140.4(d)		§110.2, §120.2, §140.4(f)		§120.1		§140.4(i)		§120.3, §140.4(i)		§110.7(a)		
(See Table F)		(See Table G)		(See Table H)		(See Table I)		(See Table J)		(See Table K)		(See Table L)		(See Table M)		
Yes	AND		AND	Yes	AND	Yes	AND	Yes	AND		AND		AND		COMPLIES	
Mandatory Measures Compliance (See Table Q for Details)												COMPLIES				

D. EXCEPTIONAL CONDITIONS											
This table is auto-filled with unevaluated comments because of selections made or data entered in tables throughout the form.											

E. ADDITIONAL REMARKS											
This table includes remarks made by the permit applicant to the Authority Having Jurisdiction.											

F. HVAC SYSTEM SUMMARY (DRY & WET SYSTEMS)											
This table is used to demonstrate compliance for mechanical equipment with mandatory requirements found in 110.1 and 110.2(a), and prescriptive requirements found in 140.4(a), 140.4(b), and 140.4(c), or 141.0(b) for alterations.											
Dry System Equipment Sizing (includes air conditioners, condensers, heat pumps, VRF, furnaces and unit heaters)											
01	02	03	04	05	06	07	08	09	10	11	
Name or Item Tag	Equipment Category per Tables 110.2	Equipment Type per Tables 110.2 & Title 20	Smallest Size Available ¹ 140.4(a)	Heating Output ^{1,3}		Supp. Heating Output (kBtu/h)	Sensible Per Design (kBtu/h)	Total Heating Load	Cooling Output ^{1,3}		Total Sensible Cooling Load
				Per Design (kBtu/h)	Rated (kBtu/h)				Per Design (kBtu/h)	Rated (kBtu/h)	

Registration Number: Registration Date/Time: Registration Provider: EnergySoft
CA Building Energy Efficiency Standards - 2019 Nonresidential Compliance Report Version: 2019.0.001
Schema Version: rev 20190401 Report Generated: 2020-07-30 10:38:59

STATE OF CALIFORNIA
Mechanical Systems
NRCC-MCH-E CALIFORNIA ENERGY COMMISSION

CERTIFICATE OF COMPLIANCE		NRCC-MCH-E	
Project Name:	Walnut Creek Intermediate School Building 100	Report Page:	(Page 11 of 14)
Project Address:	2425 Walnut Blvd	Date Prepared:	7/30/2020

J. VENTILATION AND INDOOR AIR QUALITY							
Mechanical Ventilation Required per 120.1(c) 3							
Space Name or Item Tag	Occupancy Type ⁴	Conditioned Floor Area (ft ²)	# of Shower heads/ toilets	# of people ¹	Required Min OA CFM	Required Min CFM	Provided per Design CFM
F-108	All others	864		30	328.32	0	0
DCV or Sensor Controls per 120.1(d)3, 120.1(d)5, and 120.1(e)3 4							
						DCV	Provided per 120.1(d)4
						Occ Sensor	

¹ FOOTNOTES: System CFM should include both mechanical and natural ventilation for the zone/system
² Air filtration requirements apply to the following three system types per 120.1(c)1A : space conditioning systems utilizing ducts to supply air to occupiable space; supply-only ventilation systems providing outside air to occupiable space; supply side of balanced ventilation systems including heat recovery and energy recovery ventilation systems providing outside air to occupiable space.
³ Uniform Mechanical Code may have more stringent ventilation requirements; the most stringent code requirement takes precedence.
⁴ See Standards Tables 120.1.4 and 120.1.8
⁵ For lecture halls with fixed seating, the expected number of occupants shall be determined in accordance with the California Building Code.
⁶ 120.2(b)3 requires systems serving rooms that are required by 120.1(c)1A to have lighting occupancy sensing controls to also have occupancy sensing zone controls for ventilation. Examples of spaces which require lighting occupancy sensors include offices 250ft² or smaller, multipurpose rooms less than 1,000 ft², classrooms, conference rooms, restrooms, aisles and open areas in warehouses, library book stack aisles, corridors, stairwells, parking garages, and loading and unloading zones, unless excepted by 120.1(c).

K. TERMINAL BOX CONTROLS	
This section does not apply to this project.	

L. DISTRIBUTION (DUCTWORK AND PIPING)	
This section does not apply to this project.	

M. COOLING TOWERS	
This section does not apply to this project.	

Registration Number: Registration Date/Time: Registration Provider: EnergySoft
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STATE OF CALIFORNIA
Mechanical Systems
NRCC-MCH-E CALIFORNIA ENERGY COMMISSION

CERTIFICATE OF COMPLIANCE		NRCC-MCH-E	
Project Name:	Walnut Creek Intermediate School Building 100	Report Page:	(Page 14 of 14)
Project Address:	2425 Walnut Blvd	Date Prepared:	7/30/2020

DOCUMENTATION AUTHOR'S DECLARATION STATEMENT	
Documentation Author Name: Aaron Wintersmith	Documentation Author Signature:
Company: Capital Engineering Consultants Inc.	Signature Date: 2020-07-30
Address: 11020 Sun Center DR #100	CEA/HERS Certification Identification (if applicable):
City/State/Zip: Rancho Cordova CA 95670	Phone: 916-851-3500
RESPONSIBLE PERSON'S DECLARATION STATEMENT	
I certify the following under penalty of perjury under the laws of the State of California: 1. The information provided on this Certificate of Compliance is true and correct. 2. I am eligible under Division 3 of the Business and Professions Code to accept responsibility for the building design or system design identified on this Certificate of Compliance (responsible designer). 3. The energy features and performance specifications, materials, components, and manufactured devices for the building design or system design identified on this Certificate of Compliance conform to the requirements of Title 24, Part 1 and Part 6 of the California Code of Regulations. 4. The building design features or system design features identified on this Certificate of Compliance are consistent with the information provided on other applicable compliance documents, worksheets, calculations, plans and specifications submitted to the enforcement agency for approval with this building permit application. 5. I will ensure that a completed signed copy of this Certificate of Compliance shall be made available with the building permit(s) issued for the building, and made available to the enforcement agency for all applicable inspections. I understand that a completed signed copy of this Certificate of Compliance is required to be included with the documentation the builder provides to the building owner at occupancy.	
Responsible Designer Name: Thomas A Duval	Responsible Designer Signature:
Company: Capital Engineering	Date Signed: 2020-07-30
Address: 11020 Sun Center DR #100	License: 22836
City/State/Zip: Rancho Cordova CA 94597	Phone: 916-851-3500

Registration Number: Registration Date/Time: Registration Provider: EnergySoft
CA Building Energy Efficiency Standards - 2019 Nonresidential Compliance Report Version: 2019.0.001
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STATE OF CALIFORNIA
Mechanical Systems
NRCC-MCH-E CALIFORNIA ENERGY COMMISSION

CERTIFICATE OF COMPLIANCE		NRCC-MCH-E	
Project Name:	Walnut Creek Intermediate School Building 150	Report Page:	(Page 3 of 10)
Project Address:	2425 Walnut Blvd	Date Prepared:	7/30/2020

F. HVAC SYSTEM SUMMARY (DRY & WET SYSTEMS)											
F-150	Unitary AC/ Condensers	AC, air cooled, split (1 phase)	Yes	78000	78000	0	43024	36000	37962	81348	
F-151	Unitary AC/ Condensers	AC, air cooled, split (1 phase)	Yes	78000	78000	0	43024	36000	37969	81378	

¹ FOOTNOTES: Equipment shall be the smallest size, within the available options of the desired equipment line, necessary to meet the design heating and cooling loads of the building per 140.4(d). Healthcare facilities are excepted.
² It is common practice to show rated output capacity on the equipment schedule. Sensible cooling output comes from specification sheet tables.
³ If equipment is heating only, leave cooling output and load blank. If equipment is cooling only, leave heating output and load blank.
⁴ Authority Having Jurisdiction may ask for load calculations used for compliance per 140.4(b).

Dry System Equipment Efficiency (other than Package Terminal Air Conditioners (PTAC) and Package Terminal Heat Pumps (PTHP))											
01	02	03	04	05	06	07	08	09			
Name or Item Tag	Size Category (Btu/h)	Rating Condition (°F)	Efficiency Unit	Minimum Efficiency Required per Tables 110.2 / Title 20	Design Efficiency	Efficiency Unit	Minimum Efficiency Required per Tables 110.2 / Title 20	Design Efficiency			
F-150	65,000		AFUE	0.81	0.94	SEER	13.0	16			
F-151	65,000		AFUE	0.81	0.94	SEER	13.0	16			

G. PUMPS	
This section does not apply to this project.	

Registration Number: Registration Date/Time: Registration Provider: EnergySoft
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STATE OF CALIFORNIA
Mechanical Systems
NRCC-MCH-E CALIFORNIA ENERGY COMMISSION

CERTIFICATE OF COMPLIANCE		NRCC-MCH-E	
Project Name:	Walnut Creek Intermediate School Building 100	Report Page:	(Page 12 of 14)
Project Address:	2425 Walnut Blvd	Date Prepared:	7/30/2020

N. DECLARATION OF REQUIRED CERTIFICATES OF INSTALLATION			
Selections have been made based on information provided in previous tables of this document. If any selection needs to be changed, please explain why in Table E Additional Remarks. These documents must be provided to the building inspector during construction and can be found online at https://www.energy.ca.gov/title24/2019standards/2019_compliance_documents/Nonresidential_Documents/NRCA/			
Yes	No	Form/Title	Field Inspector
<input checked="" type="radio"/>	<input type="radio"/>	NRCA-MCH-01-E - Must be submitted for all buildings	<input type="checkbox"/>

O. DECLARATION OF REQUIRED CERTIFICATES OF ACCEPTANCE			
Selections have been made based on information provided in previous tables of this document. If any selection needs to be changed, please explain why in Table E Additional Remarks. These documents must be provided to the building inspector during construction and can be found online at https://www.energy.ca.gov/title24/2019standards/2019_compliance_documents/Nonresidential_Documents/NRCA/			
Yes	No	Form/Title	Field Inspector
<input checked="" type="radio"/>	<input type="radio"/>	NRCA-MCH-02-A - Outdoor Air must be submitted for all newly installed HVAC units. Note: MCH-02-A can be performed in conjunction with MCH-07-A Supply Fan VFD Acceptance (if applicable) since testing activities overlap.	<input type="checkbox"/>
<input checked="" type="radio"/>	<input type="radio"/>	NRCA-MCH-03-A - Constant Volume Single Zone HVAC NOTE: This form does not automatically move to "Yes". If constant Volume Single Zone HVAC Systems are included in the scope, permit applicant should move this form to "Yes".	<input type="checkbox"/>
<input type="radio"/>	<input checked="" type="radio"/>	NRCA-MCH-04-A - Air Distribution Duct Leakage	<input type="checkbox"/>
<input checked="" type="radio"/>	<input type="radio"/>	NRCA-MCH-05-A - Air Economizer Controls	<input type="checkbox"/>
<input checked="" type="radio"/>	<input type="radio"/>	NRCA-MCH-06-A Demand Control Ventilation Systems must be submitted for all systems required to employ demand controlled ventilation (refer to 120.1(c)3) can vary outside ventilation flow rates based on maintaining interior carbon dioxide (CO2) concentration setpoints.	<input type="checkbox"/>
<input type="radio"/>	<input checked="" type="radio"/>	NRCA-MCH-07-A Supply Fan Variable Flow Controls	<input type="checkbox"/>
<input type="radio"/>	<input checked="" type="radio"/>	NRCA-MCH-08-A Valve Leakage Test	<input type="checkbox"/>
<input type="radio"/>	<input checked="" type="radio"/>	NRCA-MCH-09-A Supply Water Temperature Reset Controls	<input type="checkbox"/>
<input type="radio"/>	<input checked="" type="radio"/>	NRCA-MCH-10-A Hydronic System Variable Flow Controls	<input type="checkbox"/>
<input type="radio"/>	<input checked="" type="radio"/>	NRCA-MCH-11-A Automatic Demand Shed Controls	<input type="checkbox"/>
<input type="radio"/>	<input checked="" type="radio"/>	NRCA-MCH-12-A FDD for Packaged Direct Expansion Units	<input type="checkbox"/>
<input type="radio"/>	<input checked="" type="radio"/>	NRCA-MCH-13-A Automatic FDD for Air Handling Units and Zone Terminal Units Acceptance	<input type="checkbox"/>

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STATE OF CALIFORNIA
Mechanical Systems
NRCC-MCH-E CALIFORNIA ENERGY COMMISSION

CERTIFICATE OF COMPLIANCE		NRCC-MCH-E	
Project Name:	Walnut Creek Intermediate School Building 150	Report Page:	(Page 1 of 10)
Project Address:	2425 Walnut Blvd	Date Prepared:	7/30/2020

A.

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IF THIS SHEET IS NOT 30"x42", IT IS
A REDUCED PRINT SCALE ACCORDINGLY

STATE OF CALIFORNIA

Mechanical Systems

NRCC-MCH-E

CALIFORNIA ENERGY COMMISSION

CERTIFICATE OF COMPLIANCE		NRCC-MCH-E	
Project Name:	Walnut Creek Intermediate School Building 150	Report Page:	(Page 5 of 10)
Project Address:	2425 Walnut Blvd	Date Prepared:	7/30/2020

I. SYSTEM CONTROLS

This table is used to demonstrate compliance with mandatory controls in §110.2 and §120.2 and prescriptive controls in §140.4(f) and (n) or requirements in §141.0(b)(2) for altered space conditioning systems.

01	02	03	04	05	06	07	08	09
System Name	System Zoning	Conditioned Floor Area Being Served (ft²)	Thermostats §110.2(b) & (c)¹, §120.2(b)(1) & §141.0(b)(2)	Shut-Off Controls §120.2(b)	Isolation Zone Controls §120.2(d)	Demand Response §120.2(b)	Supply Air Temp. Reset §140.4(f)	Window Interlocks per §140.4(n)
F-150	Single zone	25,000 ft²	Energy Management System (EMS)	NA: 7 day per	4 Hour Timer	EMCS	NA: Alteration	NA: Alteration Project
F-151	Single zone	25,000 ft²	Energy Management System (EMS)	NA: 7 day per	4 Hour Timer	EMCS	NA: Alteration	NA: Alteration Project

¹ FOOTNOTES: Gravity gas wall heaters, gravity floor heaters, gravity room heaters, non-central electric heaters, fireplaces or decorative gas appliances, wood stoves are not required to have setback thermostats.

*Notes: Controls with a * require a note in the space below explaining how compliance is achieved. EX: system 1: SA Temp Reset: Exempt because zones compliant with §140.4(d); EXCEPTION 1 to §140.4(f)

J. VENTILATION AND INDOOR AIR QUALITY

This table is used to demonstrate compliance with mandatory ventilation requirements in §120.1 and §120.2(c)(3) for all nonresidential, high-rise residential and hotel/motel occupancies. For alterations, only ventilation systems being altered within the scope of the permit application need to be documented in this table. In lieu of this table, the required outdoor ventilation rates and airflow may be shown on the plans or the calculations can be presented in a spreadsheet.

01	<input type="checkbox"/>	Check the box if the project is showing ventilation calculations on the plans, or attaching the calculations instead of completing this table.
02	<input type="checkbox"/>	Check this box if the project included new or altered high-rise residential dwelling units.
03	<input type="checkbox"/>	Check the box if the project is using natural ventilation in any nonresidential or hotel/motel spaces to meet required ventilation rates per §120.1(c)(2).

Nonresidential and Hotel/ Motel Ventilation Systems

04	05	06	07
System Name	F-150	System Design OA CFM Airflow¹	450
08	09	10	11
12	13	14	15
16			

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STATE OF CALIFORNIA

Mechanical Systems

NRCC-MCH-E

CALIFORNIA ENERGY COMMISSION

CERTIFICATE OF COMPLIANCE		NRCC-MCH-E	
Project Name:	Walnut Creek Intermediate School Building 150	Report Page:	(Page 8 of 10)
Project Address:	2425 Walnut Blvd	Date Prepared:	7/30/2020

O. DECLARATION OF REQUIRED CERTIFICATES OF ACCEPTANCE

Selections have been made based on information provided in previous tables of this document. If any selection needs to be changed, please explain why in Table E Additional Remarks. These documents must be provided to the building inspector during construction and can be found online at https://www.energy.ca.gov/title24/2019standards/2019_compliance_documents/Nonresidential_Documents/NRCA/

Yes	No	Form/Title	Field Inspector	
			Pass	Fail
<input checked="" type="radio"/>	<input type="radio"/>	NRCA-MCH-02-A - Outdoor Air must be submitted for all newly installed HVAC units. Note: MCH-02-A can be performed in conjunction with MCH-07-A Supply Fan VFD Acceptance (if applicable) since testing activities overlap.	<input type="checkbox"/>	<input type="checkbox"/>
<input checked="" type="radio"/>	<input type="radio"/>	NRCA-MCH-03-A - Constant Volume Single Zone HVAC NOTE: This form does not automatically move to "Yes". If Constant Volume Single Zone HVAC Systems are included in the scope, permit applicant should move this form to "Yes".	<input type="checkbox"/>	<input type="checkbox"/>
<input type="radio"/>	<input checked="" type="radio"/>	NRCA-MCH-04-A - Air Distribution Duct Leakage	<input type="checkbox"/>	<input type="checkbox"/>
<input checked="" type="radio"/>	<input type="radio"/>	NRCA-MCH-05-A - Air Economizer Controls	<input type="checkbox"/>	<input type="checkbox"/>
<input checked="" type="radio"/>	<input type="radio"/>	NRCA-MCH-06-A Demand Control Ventilation Systems must be submitted for all systems required to employ demand controlled ventilation (refer to §120.1(c)(3)) can vary outside ventilation flow rates based on maintaining interior carbon dioxide (CO₂) concentration setpoints.	<input type="checkbox"/>	<input type="checkbox"/>
<input type="radio"/>	<input checked="" type="radio"/>	NRCA-MCH-07-A Supply Fan Variable Flow Controls	<input type="checkbox"/>	<input type="checkbox"/>
<input type="radio"/>	<input checked="" type="radio"/>	NRCA-MCH-08-A Valve Leakage Test	<input type="checkbox"/>	<input type="checkbox"/>
<input type="radio"/>	<input checked="" type="radio"/>	NRCA-MCH-09-A Supply Water Temperature Reset Controls	<input type="checkbox"/>	<input type="checkbox"/>
<input type="radio"/>	<input checked="" type="radio"/>	NRCA-MCH-10-A Hydronic System Variable Flow Controls	<input type="checkbox"/>	<input type="checkbox"/>
<input type="radio"/>	<input checked="" type="radio"/>	NRCA-MCH-11-A Automatic Demand Shed Controls	<input type="checkbox"/>	<input type="checkbox"/>
<input type="radio"/>	<input checked="" type="radio"/>	NRCA-MCH-12-A FDD for Packaged Direct Expansion Units	<input type="checkbox"/>	<input type="checkbox"/>
<input type="radio"/>	<input checked="" type="radio"/>	NRCA-MCH-13-A Automatic FDD for Air Handling Units and Zone Terminal Units Acceptance	<input type="checkbox"/>	<input type="checkbox"/>
<input type="radio"/>	<input checked="" type="radio"/>	NRCA-MCH-14-A Distributed Energy Storage DX AC Systems Acceptance NOTE: This form does not automatically move to "Yes". If Distributed Energy System DX AC Systems are included in teh scope permit applicant should move this form to "Yes".	<input type="checkbox"/>	<input type="checkbox"/>
<input type="radio"/>	<input checked="" type="radio"/>	NRCA-MCH-15-A Thermal Energy Storage (TES) System Acceptance NOTE: This form does not automatically move to "Yes". If Chilled Water Storage, Ice-on-Coil Internal Melt, Ice-on-Coil External melt, Ice Harvester, Brine, Ice Slurry, Eutectic Salt, Clathrate Hydrate Slurry (CHS), Cryogenic or Encapsulated (Ice Ball) Systems are included in the scope, permit applicant should move this form to "Yes".	<input type="checkbox"/>	<input type="checkbox"/>
<input type="radio"/>	<input checked="" type="radio"/>	NRCA-MCH-16-A Supply Air Temperature Reset Controls	<input type="checkbox"/>	<input type="checkbox"/>
<input type="radio"/>	<input checked="" type="radio"/>	NRCA-MCH-17-A Condenser Water Temperature Reset Controls	<input type="checkbox"/>	<input type="checkbox"/>
<input type="radio"/>	<input checked="" type="radio"/>	NRCA-MCH-18-A Energy Management Control Systems	<input type="checkbox"/>	<input type="checkbox"/>

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STATE OF CALIFORNIA

Domestic Water Heating System

NRCCPLBE

CALIFORNIA ENERGY COMMISSION

CERTIFICATE OF COMPLIANCE		NRCCPLBE	
This document is used to demonstrate compliance for nonresidential occupancies with requirements in §110.1, §110.3, §120.3, and §140.5, and with requirements in §141.0 for additions and alterations, for domestic water heating spaces using the prescriptive path. For high-rise residential and hotel/motel occupancies compliance is demonstrated with requirements in §110.1, §110.3, §120.3, §150.0 and §150.1(c)(8), and with requirements §150.2 for additions.			
Project Name:	Walnut Creek Intermediate School Building 150	Report Page:	(Page 1 of 8)
Project Address:	2425 Walnut Blvd	Date Prepared:	7/30/2020

A. GENERAL INFORMATION

01 Project Location (city)	Walnut Creek	02 Climate Zone	12
03 Occupancy Types Within Project (select all that apply):			
<input checked="" type="checkbox"/> Nonresidential	<input type="checkbox"/> High-Rise Residential	<input type="checkbox"/> Hotel/Motel	
<input type="checkbox"/> State Building	<input type="checkbox"/> Healthcare Facility	<input type="checkbox"/> Other (Write In)	

B. PROJECT SCOPE

This table includes domestic water heating systems that are within the scope of the permit application and are demonstrating compliance using the prescriptive paths outlined in §140.5, §150.1(c)(8), and §141.0(a), or §141.0(b)(2)(iv) for additions or alterations. Solar water heating systems are documented on the NRCC-SRA compliance document. Combined hydronic water heating systems are documented on the NRCC-MCH compliance document.

01	02	03
My project consists of (check all that apply):	System Type¹,²	System Components
<input checked="" type="checkbox"/> New system (DHW system being installed for the first time in newly constructed building)	Individual System (serving nonresidential spaces)	<input checked="" type="checkbox"/> Equipment <input checked="" type="checkbox"/> Distribution <input checked="" type="checkbox"/> Controls
<input type="checkbox"/> System Alteration (equipment, distribution or controls)		<input type="checkbox"/> Equipment <input type="checkbox"/> Distribution <input type="checkbox"/> Controls

¹ FOOTNOTES: Point of use water heaters, or other non-central systems used to serve nonresidential spaces, are considered individual systems.

² Dwelling units refers to hotel/motel guest rooms and units in a high-rise residential occupancy.

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STATE OF CALIFORNIA

Mechanical Systems

NRCC-MCH-E

CALIFORNIA ENERGY COMMISSION

CERTIFICATE OF COMPLIANCE		NRCC-MCH-E	
Project Name:	Walnut Creek Intermediate School Building 150	Report Page:	(Page 6 of 10)
Project Address:	2425 Walnut Blvd	Date Prepared:	7/30/2020

J. VENTILATION AND INDOOR AIR QUALITY

Space Name or Item Tag	Mechanical Ventilation Required per §120.1(c)3 ³					Exh. Vent per §120.1(c)4		DCV or Sensor Controls per §120.1(d)3, §120.1(d)5, and §120.1(e)3 ⁴
	Occupancy Type⁴	Conditioned Floor Area (ft²)	# of Shower heads/ toilets	# of people⁵	Required Min OA CFM	Required Min CFM	Provided per Design CFM	
F-150	All others	748		30	284.24	0	0	DCV Provided per §120.1(d)4
04		05			06		07	
System Name	F-151	System Design OA CFM Airflow¹		450	System Design Transfer Air CFM		0	Air Filtration per §120.1(c)² and §141.0(b)2 ²
08	09	10	11	12	13	14	15	Provided per §120.1(c) (NR and Hotel/Motel)
16								
Space Name or Item Tag	Mechanical Ventilation Required per §120.1(c)3 ³					Exh. Vent per §120.1(c)4		DCV or Sensor Controls per §120.1(d)3, §120.1(d)5, and §120.1(e)3 ⁴
	Occupancy Type⁴	Conditioned Floor Area (ft²)	# of Shower heads/ toilets	# of people⁵	Required Min OA CFM	Required Min CFM	Provided per Design CFM	
F-151	All others	751		30	285.38	0	0	DCV Provided per §120.1(d)4
Occ Sensor								

¹ FOOTNOTES: System CFM should include both mechanical and natural ventilation for the zone/system.

² Air filtration requirements apply to the following three system types per §120.1(c)(1A): space conditioning systems utilizing ducts to supply air to occupiable space; supply-only ventilation systems providing outside air to occupiable space; supply side of balanced ventilation systems including heat recovery and energy recovery ventilation systems providing outside air to occupiable space.

³ Uniform Mechanical Code may have more stringent ventilation requirements; the most stringent code requirement takes precedence.

⁴ See Standards Tables L20.1-A and L20.1-B.

⁵ For lecture halls with fixed seating, the expected number of occupants shall be determined in accordance with the California Building Code.

⁶ §120.1(e)(3) requires systems serving rooms that are required by §130.1(d) to have lighting occupancy sensing controls to also have occupancy sensing zone controls for ventilation. Examples of spaces which require lighting occupancy sensors include offices 250ft² or smaller, multipurpose rooms less than 1,000 ft², classrooms, conference rooms, restrooms, aisles and open areas in warehouses, library book stack aisles, corridors, stairwells, parking garages, and loading and unloading zones, unless excepted by §130.1(c).

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STATE OF CALIFORNIA

Mechanical Systems

NRCC-MCH-E

CALIFORNIA ENERGY COMMISSION

CERTIFICATE OF COMPLIANCE		NRCC-MCH-E	
Project Name:	Walnut Creek Intermediate School Building 150	Report Page:	(Page 9 of 10)
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O. DECLARATION OF REQUIRED CERTIFICATES OF ACCEPTANCE

<input type="radio"/>	<input checked="" type="radio"/>	NRCA-MCH-19-A Occupancy Sensor Controls	<input type="checkbox"/>	<input type="checkbox"/>
<input type="radio"/>	<input checked="" type="radio"/>	NRCA-MCH-20 Multi-Family Ventilation	<input type="checkbox"/>	<input type="checkbox"/>
<input type="radio"/>	<input checked="" type="radio"/>	NRCA-MCH-21 Multi-Family Envelope Leakage	<input type="checkbox"/>	<input type="checkbox"/>

P. DECLARATION OF REQUIRED CERTIFICATES OF VERIFICATION

Selections have been made based on information provided in previous tables of this document. If any selection needs to be changed, please explain why in Table E Additional Remarks. These documents must be completed by a HERS Rater and provided to the building inspector during construction. The first documents must be created by a HERS Provides registry, but drafts can be found online at https://www.energy.ca.gov/title24/2019standards/2019_compliance_documents/Nonresidential_Documents/NRCV/

Yes	No	Form/Title	Field Inspector	
			Pass	Fail
<input type="radio"/>	<input checked="" type="radio"/>	NRCV-MCH-04-H Duct Leakage Test NOTE: Must be completed by a HERS Rater	<input type="checkbox"/>	<input type="checkbox"/>
<input type="radio"/>	<input checked="" type="radio"/>	NRCV-MCH-24 Enclosure Air Leakage Worksheet NOTE: Must be completed by a HERS Rater	<input type="checkbox"/>	<input type="checkbox"/>
<input type="radio"/>	<input checked="" type="radio"/>	NRCV-MCH-27 High-rise Residential NOTE: Must be completed by a HERS Rater	<input type="checkbox"/>	<input type="checkbox"/>
<input type="radio"/>	<input checked="" type="radio"/>	NRCV-MCH-32 Local Mechanical Exhaust NOTE: Must be completed by a HERS Rater	<input type="checkbox"/>	<input type="checkbox"/>

Q. MANDATORY MEASURES DOCUMENTATION LOCATION

This table is used to indicate where mandatory measures are documented in the plan set or construction documentation.

01	02
Compliance with Mandatory Measures documented through MCH	Plan sheet or construction document location
Yes	M-Sheets
Mandatory Measures Note block¹	

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STATE OF CALIFORNIA

Domestic Water Heating System

NRCCPLBE

CALIFORNIA ENERGY COMMISSION

CERTIFICATE OF COMPLIANCE		NRCCPLBE	
Project Name:	Walnut Creek Intermediate School Building 150	Report Page:	(Page 2 of 8)
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C. COMPLIANCE RESULTS

Table C will indicate if the project data input into the compliance document is compliant with water heating requirements. If this table says "DOES NOT COMPLY" or "COMPLIES with Exceptional Conditions" refer to Table D, or the table indicated as not compliant for guidance.

01	02	03	04
Domestic Hot Water Equipment	Distribution Systems	Controls	
Table F	Table G	Table H	Compliance Results
Yes			DOES NOT COMPLY

D. EXCEPTIONAL CONDITIONS

This table is auto-filled with uneditable comments because of selections made or data entered in tables throughout the form.

E. ADDITIONAL REMARKS

This table includes remarks made by the permit applicant to the Authority Having Jurisdiction.

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STATE OF CALIFORNIA

Mechanical Systems

NRCC-MCH-E

CALIFORNIA ENERGY COMMISSION

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K. TERMINAL BOX CONTROLS

This section does not apply to this project.

L. DISTRIBUTION (DUCTWORK AND PIPING)

This section does not apply to this project.

M. COOLING TOWERS

This section does not apply to this project.

N. DECLARATION OF REQUIRED CERTIFICATES OF INSTALLATION

Selections have been made based on information provided in previous tables of this document. If any selection needs to be changed, please explain why in Table E Additional Remarks. These documents must be provided to the building inspector during construction and can be found online at https://www.energy.ca.gov/title24/2019standards/2019_compliance_documents/Nonresidential_Documents/NRCI/

Yes	No	Form/Title	Field Inspector	
			Pass	Fail
<input checked="" type="radio"/>	<input type="radio"/>	NRCI-MCH-01-E - Must be submitted for all buildings	<input type="checkbox"/>	<input type="checkbox"/>

Registration Number:	Registration Date/Time:	Registration Provider: EnergySoft
CA Building Energy Efficiency Standards - 2019 Nonresidential Compliance	Report Version: 2019.0.001 Schema Version: rev 20190401	Report Generated: 2020-07-30 10:38:59

STATE OF CALIFORNIA

Mechanical Systems

NRCC-MCH-E

CALIFORNIA ENERGY COMMISSION

CERTIFICATE OF COMPLIANCE		NRCC-MCH-E	
Project Name:	Walnut Creek Intermediate School Building 150	Report Page:	(Page 10 of 10)
Project Address:	2425 Walnut Blvd	Date Prepared:	7/30/2020

DOCUMENTATION AUTHOR'S DECLARATION STATEMENT

Documentation Author Name: Aaron Wintersmith	Documentation Author Signature:
Company: Capital Engineering Consultants Inc.	Signature Date: 2020-07-30
Address: 11020 Sun Center DR #100 Rancho Cordova CA 95670	CEA/HERS Certification Identification (if applicable): Phone: 916-851-3500

RESPONSIBLE PERSON'S DECLARATION STATEMENT

I certify the following under penalty of perjury, under the laws of the State of California:

- The information provided on this Certificate of Compliance is true and correct.
- I am eligible under Division 1 of the Business and Professions Code to accept responsibility for the building design or system design identified on this Certificate of Compliance (responsible designer).
- The energy features and performance specifications, materials, components, and manufactured devices for the building design or system design identified on this Certificate of Compliance conform to the requirements of Title 24, Part 1 and Part 6 of the California Code of Regulations.
- The building design features or system design features identified on this Certificate of Compliance are consistent with the information provided on other applicable compliance documents, worksheets, calculations, plans and specifications submitted to the enforcement agency for approval with this building permit application.
- I will ensure that a completed signed copy of this Certificate of Compliance shall be made available with the building permit(s) issued for the building, and made available to the enforcement agency for all applicable inspections. I understand that a completed signed copy of this Certificate of Compliance is required to be included with the documentation the builder provides to the building owner at occupancy.

Responsible Designer Name: Thomas A Duval	Responsible Designer Signature:
Company: Capital Engineering	Date Signed: 2020-07-30
Address: 11020 Sun Center DR #100 Rancho Cordova CA 94597	License: 22836 Phone: 916-851-3500

Registration Number:	Registration Date/Time:	Registration Provider: EnergySoft
CA Building Energy Efficiency Standards - 2019 Nonresidential Compliance	Report Version: 2019.0.001 Schema Version: rev 20190401	Report Generated: 2020-07-30 10:38:59

STATE OF CALIFORNIA

Domestic Water Heating System

NRCCPLBE

CALIFORNIA ENERGY COMMISSION

CERTIFICATE OF COMPLIANCE		NRCCPLBE	
Project Name:	Walnut Creek Intermediate School Building 150	Report Page:	(Page 3 of 8)
Project Address:	2425 Walnut Blvd	Date Prepared:	7/30/2020

11/3/2020 10:13:21 L:\Revit Local Files\181022_00_Walnut Creek IS_MPH10_2022_00_Walnut Creek IS_MPH10_2022_00



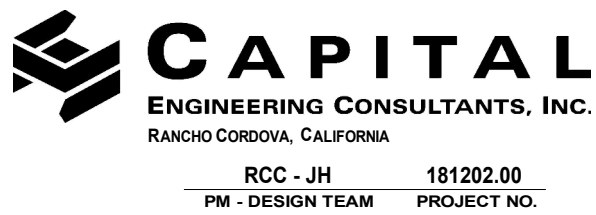
IF THIS SHEET IS NOT 30"x42", IT IS
A REDUCED PRINT SCALE ACCORDINGLY



Revisions	Delta	Date	Revisions	By

NOT FOR CONSTRUCTION
PROGRESS DRAWINGS
INCREMENT II

ISSUE DATE: 11/3/20 BY: MH



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Architect/Engineer Of Record:



HIBSER YAMAUCHI
Architects, Inc.

300 - 27th Street
Oakland, CA 94612
510.446.2222 tel / 510.446.2211 fax

HY Architects Project number: 5241

Facility
WALNUT CREEK SCHOOL DISTRICT
2425 WALNUT BOULEVARD, WALNUT
CREEK, CA 94597

Project

**MODERNIZATION AND
RECONFIGURATION PROJECT
INCREMENT II**

Sheet Title
**HVAC TITLE 24
DOCUMENTATION**

Client Project Number: Client Proj. #

Scale:
Drawn By: Author
Checked By: Checker
Issue Date: 11/3/20
Revit Version: 2019
Sheet 83 of 128
M7.4B

STATE OF CALIFORNIA
Domestic Water Heating System
NRCCLBE CALIFORNIA ENERGY COMMISSION
CERTIFICATE OF COMPLIANCE
Project Name: Walnut Creek Intermediate School Building 150 Report Page: (Page 4 of 8)
Project Address: 2425 Walnut Blvd Date Prepared: 7/30/2020

G. DOMESTIC HOT WATER DISTRIBUTION SYSTEM									
This table is used to demonstrate compliance for nonresidential occupancies with distribution requirements in §120.3 and §140.3. For high-rise residential and hotel/motel occupancies, compliance is demonstrated with requirements §110.3(c), §120.3, §150.0, §150.1									
Recirculation Loops in Central Systems Serving Dwelling Units or Nonresidential Spaces									
	Yes	No	Not Applicable	Requirement					
01									
02									
03									
04									
05									
06									
07									
	Yes	No	Not Applicable	Requirement					
08				Compact hot water distribution system field verified by a HERS Rater per Reference Appendix RA4.4.16					
				A drain water heat recovery system that is field verified by a HERS rater per Reference Appendix RA3.6.9					
09				Compact hot water distribution system field verified by a HERS rater per Reference Appendix RA4.4.6 and a drain water heat recovery system that is field verified by a HERS rater per Reference Appendix RA3.6.9					
				A photovoltaic system capacity of 0.3kWdc (for climate zones 2-15) or 1.1kWdc (for climate zones 1 & 16) larger than the requirement specified in §150.1(c)14.					
10				Compact hot water distribution system per Reference Appendix RA4.4.6 for projects in climate zones 1 and 16.					
				A photovoltaic system capacity of 0.3kWdc (form climate zones 1 and 16) larger than the requirement specified in §150.1(c)14.					

Registration Number: Registration Date/Time: Registration Provider: EnergySoft
CA Building Energy Efficiency Standards - 2019 Nonresidential Compliance Report Version: 2019.0.001 Schema Version: rev 20190401 Report Generated: 2020-07-30 10:38:59

STATE OF CALIFORNIA
Domestic Water Heating System
NRCCLBE CALIFORNIA ENERGY COMMISSION
CERTIFICATE OF COMPLIANCE
Project Name: Walnut Creek Intermediate School Building 150 Report Page: (Page 7 of 8)
Project Address: 2425 Walnut Blvd Date Prepared: 7/30/2020

J. DECLARATION OF REQUIRED CERTIFICATES OF ACCEPTANCE
There are no Certificates of Acceptance applicable to service water heating requirements.

K. DECLARATION OF REQUIRED CERTIFICATES OF VERIFICATION									
Selections have been made based on information provided in this document. If any selection have been changed by permit applicant, an explanation should be included in Table E. Additional Remarks. These documents must be completed by a HERS Rater and provided to the building inspector during construction. The final documents must be created by a HERS Providers registry, but drafts can be found online at https://www.energy.ca.gov/title24/2019standards/2019_compliance_documents/Nonresidential_Documents/NRCV/									
Yes	No	Form/Title						Field Inspector	
								Pass	Fail
		NRCV-PLB-21-H High-rise Residential Central Hot Water Distribution HERS Verification							
		NRCV-PLB-22-H High-rise Residential Individual Dwelling Unit Hot Water Distribution HERS Verification							

Registration Number: Registration Date/Time: Registration Provider: EnergySoft
CA Building Energy Efficiency Standards - 2019 Nonresidential Compliance Report Version: 2019.0.001 Schema Version: rev 20190401 Report Generated: 2020-07-30 10:38:59

STATE OF CALIFORNIA
Mechanical Systems
NRCC-MCH-E CALIFORNIA ENERGY COMMISSION
CERTIFICATE OF COMPLIANCE
Project Name: Walnut Creek Intermediate School Building 200 Report Page: (Page 3 of 17)
Project Address: 2425 Walnut Blvd Date Prepared: 7/30/2020

C. COMPLIANCE RESULTS									
Table C will indicate if the project data input into the compliance document is compliant with mechanical requirements. This table is not editable by the user. If this table says "DOES NOT COMPLY" or "COMPLIES with Exceptional Conditions" refer to Table D, or the table indicated as not compliant for guidance.									
01	02	03	04	05	06	07	08	09	
System Summary §110.3, §110.2, §140.4	Pumps §140.4(c)	Fans/Economizers §140.4(c), §140.4(e)	System Controls §110.2, §120.2, §140.4(f)	Ventilation §120.1	Terminal Box Controls §140.4(d)	Distribution §120.3, §140.4(i)	Cooling Towers §110.2(c)2	Compliance Results	
(See Table F)	(See Table G)	(See Table H)	(See Table I)	(See Table J)	(See Table K)	(See Table L)	(See Table M)		
Yes	AND	AND	Yes	AND	Yes	AND	AND	COMPLIES	
Mandatory Measures Compliance (See Table Q for Details)									

D. EXCEPTIONAL CONDITIONS
This table is auto-filled with uneditable comments because of selections made or data entered in tables throughout the form.

E. ADDITIONAL REMARKS
This table includes remarks made by the permit applicant to the Authority Having Jurisdiction.

F. HVAC SYSTEM SUMMARY (DRY & WET SYSTEMS)									
This table is used to demonstrate compliance for mechanical equipment with mandatory requirements found in §110.1, and §110.2(a), and prescriptive requirements found in §140.4(a), §140.4(b), and §140.4(i), or §141.0(b)2 for alterations.									
Dry System Equipment Sizing (includes air conditioners, condensers, heat pumps, VRF, furnaces and unit heaters)									
01	02	03	04	05	06	07	08	09	10
Name or Item Tag	Equipment Category per Tables 110.2	Equipment Type per Tables 110.2 & Title 20	Smallest Size Available ¹ §140.4(a)	Equipment Sizing per Mechanical Schedule (Btu/h) §140.4(a&b)	Heating Output ^{2,3}	Cooling Output ^{2,3}	Per Design (kBtu/h)	Rated (kBtu/h)	Total Sensible Cooling Load

Registration Number: Registration Date/Time: Registration Provider: EnergySoft
CA Building Energy Efficiency Standards - 2019 Nonresidential Compliance Report Version: 2019.0.001 Schema Version: rev 20190401 Report Generated: 2020-07-30 10:43:07

STATE OF CALIFORNIA
Domestic Water Heating System
NRCCLBE CALIFORNIA ENERGY COMMISSION
CERTIFICATE OF COMPLIANCE
Project Name: Walnut Creek Intermediate School Building 150 Report Page: (Page 5 of 8)
Project Address: 2425 Walnut Blvd Date Prepared: 7/30/2020

G. DOMESTIC HOT WATER DISTRIBUTION SYSTEM									
Mandatory Pipe Insulation All Occupancies									
11		For systems serving dwelling units, pipe insulation for the following applications is specified to have a minimum wall thickness of 1 in or a minimum R-value of 7.7 per §150.0(c)12A: • The first 5 ft of cold water pipes form storage tank • All hot water piping with nominal diameter < 3/4 in associated with DHW recirculation systems • Piping with nominal diameter < 3/4 from heating source to storage tank or between tanks • All hot water pipes with nominal diameter < 3/4 from heating source to kitchen fixtures							
12		For systems serving nonresidential spaces, pipe insulation for the following applications is specified to comply with Table 120.3-A (see below) per §120.3: • Recirculating system piping, including supply and return piping of the water heater • The first 8 ft of hot and cold outlet piping, including between storage tank and heat trap, for a nonrecirculating storage system • Pipes that are externally heated							
13		Insulation shall be protected from damage, including that due to sunlight, moisture, equipment maintenance, and wind. Insulation exposed to weather shall be installed with a cover suitable for outdoor service per §120.3(b) and §150.0(c)13							

Registration Number: Registration Date/Time: Registration Provider: EnergySoft
CA Building Energy Efficiency Standards - 2019 Nonresidential Compliance Report Version: 2019.0.001 Schema Version: rev 20190401 Report Generated: 2020-07-30 10:38:59

STATE OF CALIFORNIA
Domestic Water Heating System
NRCCLBE CALIFORNIA ENERGY COMMISSION
CERTIFICATE OF COMPLIANCE
Project Name: Walnut Creek Intermediate School Building 150 Report Page: (Page 8 of 8)
Project Address: 2425 Walnut Blvd Date Prepared: 7/30/2020

DOCUMENTATION AUTHOR'S DECLARATION STATEMENT	
Documentation Author Name: Aaron Wintersmith	Documentation Author Signature:
Company: Capital Engineering Consultants Inc.	Signature Date:
Address: 11020 Sun Center DR #100	CEA/HERS Certification Identification (if applicable):
City/State/Zip: Rancho Cordova CA 95670	Phone: 916-851-3500
RESPONSIBLE PERSON'S DECLARATION STATEMENT	
I certify the following under penalty of perjury, under the laws of the State of California: 1. The information provided on this Certificate of Compliance is true and correct. 2. I am eligible under Division 3 of the Business and Professions Code to accept responsibility for the building design or system design identified on this Certificate of Compliance (responsible designer). 3. The energy features and performance specifications, materials, components, and manufactured devices for the building design or system design identified on this Certificate of Compliance conform to the requirements of Title 24, Part 1 and Part 6 of the California Code of Regulations. 4. The building design features or system design features identified on this Certificate of Compliance are consistent with the information provided on other applicable compliance documents, worksheets, calculations, plans and specifications submitted to the enforcement agency for approval with this building permit application. 5. I will ensure that a completed signed copy of this Certificate of Compliance shall be made available with the building permit(s) issued for the building, and made available to the enforcement agency for all applicable inspections. I understand that a completed signed copy of this Certificate of Compliance is required to be included with the documentation the builder provides to the building owner at occupancy.	
Responsible Designer Name: Thomas A Duval	Responsible Designer Signature:
Company: Capital Engineering	Date Signed: 2020-07-30
Address: 11020 Sun Center DR #100	License: 22836
City/State/Zip: Rancho Cordova CA 94597	Phone: 916-851-3500

Registration Number: Registration Date/Time: Registration Provider: EnergySoft
CA Building Energy Efficiency Standards - 2019 Nonresidential Compliance Report Version: 2019.0.001 Schema Version: rev 20190401 Report Generated: 2020-07-30 10:43:07

STATE OF CALIFORNIA
Mechanical Systems
NRCC-MCH-E CALIFORNIA ENERGY COMMISSION
CERTIFICATE OF COMPLIANCE
Project Name: Walnut Creek Intermediate School Building 200 Report Page: (Page 4 of 17)
Project Address: 2425 Walnut Blvd Date Prepared: 7/30/2020

F. HVAC SYSTEM SUMMARY (DRY & WET SYSTEMS)									
F-201	Unitary AC/ Condensers	AC, air cooled, split (1 phase)	Yes	78000	78000	0	43024	36000	38212 82536
F-202	Unitary AC/ Condensers	AC, air cooled, split (1 phase)	Yes	78000	78000	0	43024	36000	38212 82536
F-204	Unitary AC/ Condensers	AC, air cooled, split (1 phase)	Yes	78000	78000	0	43024	36000	38212 82536
F-205	Unitary AC/ Condensers	AC, air cooled, split (1 phase)	Yes	39000	39000	0	21284	18000	23296 60801
F-206	Unitary AC/ Condensers	AC, air cooled, split (1 phase)	Yes	78000	78000	0	42875	36000	64314 170524
F-207	Unitary AC/ Condensers	AC, air cooled, split (1 phase)	Yes	78000	78000	0	43024	36000	38212 82536
F-208	Unitary AC/ Condensers	AC, air cooled, split (1 phase)	Yes	78000	78000	0	43024	36000	38212 82536
F-209	Unitary AC/ Condensers	AC, air cooled, split (1 phase)	Yes	78000	78000	0	43024	36000	38212 82536
F-210	Unitary AC/ Condensers	AC, air cooled, split (1 phase)	Yes	97000	97000	0	53507	48000	41876 89752
F-212	Unitary AC/ Condensers	AC, air cooled, split (1 phase)	Yes	97000	97000	0	50383	48000	14856 63163
¹ FOOTNOTES: Equipment shall be the smallest size, within the available options of the desired equipment line, necessary to meet the design heating and cooling loads of the building per §140.4(a). Healthcare facilities are excepted. ² It is common practice to show rated output capacity on the equipment schedule. Sensible cooling output comes from specification sheet tables. ³ If equipment is heating only, leave cooling output blank and load blank. If equipment is cooling only, leave heating output and load blank. ⁴ Authority having jurisdiction may ask for load calculations used for compliance per §140.4(b).									
Dry System Equipment Efficiency (other than Package Terminal Air Conditioners (PTAC) and Package Terminal Heat Pumps (PTHP))									
01	02	03	04	05	06	07	08	09	
Name or Item Tag	Size Category (Btu/h)	Rating Condition (°F)	Efficiency Unit	Minimum Efficiency Required per Tables 110.2 / Title 20	Design Efficiency	Efficiency Unit	Minimum Efficiency Required per Tables 110.2 / Title 20	Design Efficiency	
F-201	65,000		AFUE	0.81	0.94	SEER	13.0	16	
F-202	65,000		AFUE	0.81	0.94	SEER	13.0	16	
F-204	65,000		AFUE	0.81	0.94	SEER	13.0	16	
F-205	65,000		AFUE	0.81	0.94	SEER	13.0	15	
F-206	65,000		AFUE	0.81	0.94	SEER	13.0	16	
F-207	65,000		AFUE	0.81	0.94	SEER	13.0	16	

Registration Number: Registration Date/Time: Registration Provider: EnergySoft
CA Building Energy Efficiency Standards - 2019 Nonresidential Compliance Report Version: 2019.0.001 Schema Version: rev 20190401 Report Generated: 2020-07-30 10:43:07

STATE OF CALIFORNIA
Domestic Water Heating System
NRCC-PLB CALIFORNIA ENERGY COMMISSION
CERTIFICATE OF COMPLIANCE
Project Name: Walnut Creek Intermediate School Building 150 Report Page: (Page 6 of 8)
Project Address: 2425 Walnut Blvd Date Prepared: 7/30/2020

H. DOMESTIC HOT WATER CONTROLS									
This table is used to demonstrate compliance with control requirements in §110.3 for all occupancies. For high-rise residential and hotel/motel occupancies, compliance is also demonstrated with requirements in §150.1(c)8.									
	Yes	No	Not Applicable	Requirement					
01				Construction documents require manufacturer certification that service water-heating systems are equipped with automatic temperature controls capable of adjusting temperature settings per §110.3(a).					
02				Systems with capacity > 167,000 BTUH equipped with outlet temperature controls per §110.3(c)1, unless covered by California Plumbing Code 613.0.					
03				Controls for circulating pumps or electrical heat trace systems are capable of automatically turning off the system per §110.3(c)2, unless systems serves healthcare facility.					
04				For recirculation systems serving multiple dwelling units, design includes automatic pump controls per §150.1(c)8B, or §150.2 for additions or alterations.					
05				For recirculation systems serving individual dwelling units, design includes manual on/off controls as specified in Reference Appendix RA4.4.9 per §150.1(c)8.					
06				For replacement single heat pump water heaters serving individual dwelling units in climate zone 1-15, design includes communication interface that meets demand responsive control requirements of §110.12(a) per §150.2(b)3H(i).					

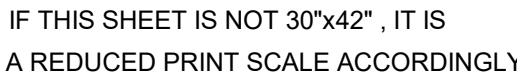
I. DECLARATION OF REQUIRED CERTIFICATES OF INSTALLATION
Selections have been made based on information provided in this document. If any selection have been changed by permit applicant, an explanation should be included in Table E. Additional Remarks. These documents must be provided to the building inspector during construction and can be found online at https://www.energy.ca.gov/title24/2019standards/2019_compliance_documents/Nonresidential_Documents/NRCV/

Yes	No	Form/Title	Field Inspector	
			Pass	Fail
		NRCL-PLB-01-E - Must be submitted for all buildings		
		NRCL-PLB-02-E - Must be submitted for high-rise residential and hotel/motel central hot water distribution systems to be recognized for compliance.		
		NRCL-PLB-03-E - Must be submitted for high-rise residential and hotel/motel single dwelling unit hot water distribution systems to be recognized for compliance.		


Registration Number: Registration Date/Time: Registration Provider: EnergySoft
CA Building Energy Efficiency Standards - 2019 Nonresidential Compliance Report Version: 2019.0.001 Schema Version: rev 20190401 Report Generated: 2020-07-30 10:38:59

STATE OF CALIFORNIA
Mechanical Systems
NRCC-MCH-E CALIFORNIA ENERGY COMMISSION
CERTIFICATE OF COMPLIANCE
Project Name: Walnut Creek Intermediate School Building 200 Report Page: (Page 1 of 17)
Project Address: 2425 Walnut Blvd Date Prepared: 7/30/2020

A. GENERAL INFORMATION			
01 Project Location (city)	Walnut Creek	04 Total Conditioned Floor Area	9394
02 Climate Zone	12	05 Total Unconditioned Floor Area	0
03 Occupancy Types Within Project:		06 # of Stories (Habitable Above Grade)	1
<input type="checkbox"/> Office (R)	<input type="checkbox"/> Retail (M)	<input type="checkbox"/> Non-refrigerated Warehouse (S)	
<input type="checkbox"/> Hotel/ Motel Guest Rooms (R-1)	<input type="checkbox"/> School (E)	<input type="checkbox"/> Healthcare Facility (H)	
<input type="checkbox"/> High-Rise Residential (R-2/R-3)	<input type="checkbox"/> Relocatable Class Bldg (E)	<input checked="" type="checkbox"/> Other (write in)	See Table J



Revisions			
Delta	Date	Revisions	By



CAPITAL
ENGINEERING CONSULTANTS, INC.
RANCHO CORDOVA, CALIFORNIA

RCC - JH 181202.00
PM - DESIGN TEAM PROJECT NO.

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LV HIBSER YAMAUCHI
Architects, Inc.

300 - 27th Street
Oakland, CA 94612
510.446.2222 tel | 510.446.2211 fax

HY Architects Project number:	5241
-------------------------------	------

WALNUT CREEK SCHOOL DISTRICT
2425 WALNUT BOULEVARD, WALNUT
CREEK, CA 94597

Project

MODERNIZATION AND
RECONFIGURATION PROJECT
INCREMENT II

Sheet Title

HVAC TITLE 24
DOCUMENTATION

Client Project Number:	Client Proj. #
------------------------	----------------

Scale:

Drawn By: Author

Checked By: Checker

Issue Date: 11/3/20

Revit Version: 2019

M7.5B

Sheet 84 of 128

STATE OF CALIFORNIA		CALIFORNIA ENERGY COMMISSION	
Mechanical Systems			
NRCC-MCH-E			
CERTIFICATE OF COMPLIANCE		NRCC-MCH-E	
Project Name:	Walnut Creek Intermediate School Building 200	Report Page:	(Page 7 of 17)
Project Address:	2425 Walnut Blvd	Date Prepared:	7/30/2020

H. FAN SYSTEMS & AIR ECONOMIZERS											
System Name:		F-209	Economizer: ¹	NA: 54 kbtu/h cooling		Economizer Controls:		Designed per and (m)		System Fan Type:	Fixed Flow
O1	O2	O3	O4	O5	O6	O7	O8				
Fan Name or Item Tag	Fan Function	Qty	Maximum Design Supply Airflow (CFM)		HP Unit ²	Design HP	Fan Power Pressure Drop Adjustment - Table 140.4-B		Device	Design Airflow through Device (CFM)	
SF	Supply	1	1600		BHP	1					
Total System Design Supply Airflow (CFM):				1600	Total System Design (BHP):		1	Maximum System Fan Power (BHP):		1.5	
System Name:		F-210	Economizer: ¹	Fixed Temperature		Economizer Controls:		Designed per and (m)		System Fan Type:	Fixed Flow
O1	O2	O3	O4	O5	O6	O7	O8				
Fan Name or Item Tag	Fan Function	Qty	Maximum Design Supply Airflow (CFM)		HP Unit ²	Design HP	Fan Power Pressure Drop Adjustment - Table 140.4-B		Device	Design Airflow through Device (CFM)	
SF	Supply	1	1950		BHP	1					
Total System Design Supply Airflow (CFM):				1950	Total System Design (BHP):		1	Maximum System Fan Power (BHP):		1.83	
System Name:		F-212	Economizer: ¹	Fixed Temperature		Economizer Controls:		Designed per and (m)		System Fan Type:	Fixed Flow
O1	O2	O3	O4	O5	O6	O7	O8				
Fan Name or Item Tag	Fan Function	Qty	Maximum Design Supply Airflow (CFM)		HP Unit ²	Design HP	Fan Power Pressure Drop Adjustment - Table 140.4-B		Device	Design Airflow through Device (CFM)	
SF	Supply	1	1950		BHP	1					
Total System Design Supply Airflow (CFM):				1950	Total System Design (BHP):		1	Maximum System Fan Power (BHP):		1.83	

Registration Number:	Registration Date/Time:	Registration Provider: EnergySoft
CA Building Energy Efficiency Standards - 2019 Nonresidential Compliance	Report Version: 2019.0.001 Schema Version: rev 20190401	Report Generated: 2020-07-30 10:43:07

STATE OF CALIFORNIA		CALIFORNIA ENERGY COMMISSION	
Mechanical Systems			
NRCC-MCH-E			
CERTIFICATE OF COMPLIANCE		NRCC-MCH-E	
Project Name:	Walnut Creek Intermediate School Building 200	Report Page:	(Page 10 of 17)
Project Address:	2425 Walnut Blvd	Date Prepared:	7/30/2020

4. VENTILATION AND INDOOR AIR QUALITY										
F-202	All others	865		30	328.7	0	0		DCV	Provided per §120.1(d)(4)
04		05		06		07				
								Occ Sensor		
System Name	F-204	System Design OA CFM Airflow ³		450	System Design Transfer Air CFM		0	Air Filtration per §120.1(c) and §141.0(b)(2) ² Provided per §120.1(c) (NR and Hotel/Motel)		
08	09	10	11	12	13	14	15	16		
Mechanical Ventilation Required per §120.1(c)(3) ³					Exh. Vent per §120.1(c)(4)					
Space Name of Item Tag	Occupancy Type ⁴	Conditioned Floor Area (ft ²)	# of Shower heads/ toilets	# of people ⁵	Required Min OA CFM	Required Min CFM	Provided per Design CFM	DCV or Sensor Controls per §120.1(d)(3), §120.1(d)(5), and §120.1(e)(3) ⁶		
F-204	All others	865		30	328.7	0	0	DCV	Provided per §120.1(d)(4)	
04		05		06		07				
								Occ Sensor		
System Name	F-205	System Design OA CFM Airflow ³		180	System Design Transfer Air CFM		0	Air Filtration per §120.1(c) and §141.0(b)(2) ² Provided per §120.1(c) (NR and Hotel/Motel)		
08	09	10	11	12	13	14	15	16		
Mechanical Ventilation Required per §120.1(c)(3) ³					Exh. Vent per §120.1(c)(4)					
Space Name of Item Tag	Occupancy Type ⁴	Conditioned Floor Area (ft ²)	# of Shower heads/ toilets	# of people ⁵	Required Min OA CFM	Required Min CFM	Provided per Design CFM	DCV or Sensor Controls per §120.1(d)(3), §120.1(d)(5), and §120.1(e)(3) ⁶		
F-205	All others	468		12	177.84	0	0	DCV	Provided per §120.1(d)(4)	
04		05		06		07				
								Occ Sensor		

Registration Number:	Registration Date/Time:	Registration Provider: EnergySoft
CA Building Energy Efficiency Standards - 2019 Nonresidential Compliance	Report Version: 2019.0.001 Schema Version: rev 20190401	Report Generated: 2020-07-30 10:43:07

STATE OF CALIFORNIA		CALIFORNIA ENERGY COMMISSION	
Mechanical Systems			
NRCC-MCH-E			
CERTIFICATE OF COMPLIANCE		NRCC-MCH-E	
Project Name:	Walnut Creek Intermediate School Building	Report Page:	(Page 13 of 17)
Project Address:	2425 Walnut Blvd	Date Prepared:	7/30/2020

J. VENTILATION AND INDOOR AIR QUALITY										
F-212	All others	1315	33	499.7	0	0		DCV	Provided per §120.1(d)(4)	
04		05		06			07			
							Occ Sensor			
System Name	F-212	System Design OA CFM Airflow ³		495.52	System Design Transfer Air CFM		0	Air Filtration per §120.1(c) and §141.0(b)(2) ⁴		
08	09	10	11	12	13	14	15	Provided per §120.1(c) (NR and Hotel/Motel)		
		Mechanical Ventilation Required per §120.1(c)(3) ³				Exh. Vent per §120.1(c)(4)				
Space Name of item Tag	Occupancy Type ⁴	Conditioned Floor Area (ft ²)	# of Shower heads/ toilets	# of people ⁵	Required Min OA CFM	Required Min CFM	Provided per Design CFM	DCV or Sensor Controls per §120.1(d)(3), §120.1(d)(5), and §120.1(e)(3) ⁶		
F-212	All others	1304		3	495.52	0	0	DCV	Provided per §120.1(d)(4)	
							Occ Sensor			

Registration Number:	Registration Date/Time:	Registration Provider: EnergySoft
CA Building Energy Efficiency Standards - 2019 Nonresidential Compliance	Report Version: 2019.0.001 Schema Version: rev 20190401	Report Generated: 2020-07-30 10:43:07

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IF THIS SHEET IS NOT 30"x42", IT IS
A REDUCED PRINT SCALE ACCORDINGLY

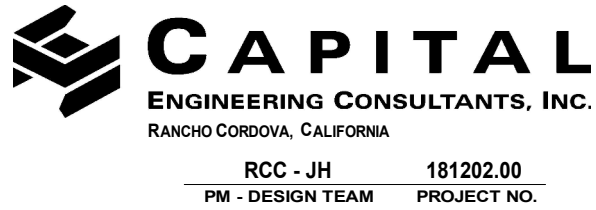


Revisions			
Delta	Date	Revisions	By

NOT FOR CONSTRUCTION

PROGRESS DRAWINGS INCREMENT II

ISSUE DATE: 11/3/20 BY: MH



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Architect/Engineer Of Record:



HY Architects Project number: 5241

Facility
WALNUT CREEK SCHOOL DISTRICT
2425 WALNUT BOULEVARD, WALNUT
CREEK, CA 94597

Project MODERNIZATION AND RECONFIGURATION PROJECT INCREMENT II

Sheet Title
HVAC TITLE 24
DOCUMENTATION

Client Project Number: Client Proj. #

Scale:
Drawn By: Author
Checked By: Checker
Issue Date: 11/3/20
Revit Version: 2019

Sheet
M7.6B
Sheet 85 of 128

STATE OF CALIFORNIA
Mechanical Systems
NRCC-MCH-E CALIFORNIA ENERGY COMMISSION
CERTIFICATE OF COMPLIANCE NRCC-MCH-E
Project Name: Walnut Creek Intermediate School Building 200 Report Page: (Page 14 of 17)
Project Address: 2425 Walnut Blvd Date Prepared: 7/30/2020

L. DISTRIBUTION (DUCTWORK AND PIPING)
This section does not apply to this project.

M. COOLING TOWERS
This section does not apply to this project.

N. DECLARATION OF REQUIRED CERTIFICATES OF INSTALLATION
Selections have been made based on information provided in previous tables of this document. If any selection needs to be changed, please explain why in Table E Additional Remarks.
These documents must be provided to the building inspector during construction and can be found online at
https://www.energy.ca.gov/title24/2019standards/2019_compliance_documents/Nonresidential_Documents/NRCC/

Yes	No	Form/Title	Field Inspector
			Pass Fail
<input checked="" type="radio"/>	<input type="radio"/>	NRCC-MCH-01-E - Must be submitted for all buildings	<input type="checkbox"/> <input type="checkbox"/>

Registration Number: Registration Date/Time: Registration Provider: EnergySoft
CA Building Energy Efficiency Standards - 2019 Nonresidential Compliance Report Version: 2019.0.001 Report Generated: 2020-07-30 10:43:07
Schema Version: rev 20190401

STATE OF CALIFORNIA
Mechanical Systems
NRCC-MCH-E CALIFORNIA ENERGY COMMISSION
CERTIFICATE OF COMPLIANCE NRCC-MCH-E
Project Name: Walnut Creek Intermediate School Building 200 Report Page: (Page 17 of 17)
Project Address: 2425 Walnut Blvd Date Prepared: 7/30/2020

DOCUMENTATION AUTHOR'S DECLARATION STATEMENT
Documentation Author Name: Aaron Wintersmith
Company: Capital Engineering Consultants Inc.
Address: 11020 Sun Center DR #100
City/State/Zip: Rancho Cordova CA 95670
Phone: 916-851-3500

RESPONSIBLE PERSON'S DECLARATION STATEMENT
I certify the following under penalty of perjury under the laws of the State of California:
1. The information provided on this Certificate of Compliance is true and correct.
2. I am eligible under Division 3 of the Business and Professions Code to accept responsibility for the building design or system design identified on this Certificate of Compliance (responsible designer).
3. The energy features and performance specifications, materials, components, and manufactured devices for the building design or system design identified on this Certificate of Compliance conform to the requirements of Title 24, Part 1 and Part 6 of the California Code of Regulations.
4. The building design features or system design features identified on this Certificate of Compliance are consistent with the information provided on other applicable compliance documents, worksheets, calculations, plans and specifications submitted to the enforcement agency for approval with this building permit application.
5. I will ensure that a completed signed copy of this Certificate of Compliance shall be made available with the building permit(s) issued for the building, and made available to the enforcement agency for all applicable inspections. I understand that a completed signed copy of this Certificate of Compliance is required to be included with the documentation the builder provides to the building owner at occupancy.

Responsible Designer Name: Thomas A Duval
Company: Capital Engineering
Address: 11020 Sun Center DR #100
City/State/Zip: Rancho Cordova CA 94597
Date Signed: 2020-07-30
License: 22836
Phone: 916-851-3500

Registration Number: Registration Date/Time: Registration Provider: EnergySoft
CA Building Energy Efficiency Standards - 2019 Nonresidential Compliance Report Version: 2019.0.001 Report Generated: 2020-07-30 10:43:07
Schema Version: rev 20190401

STATE OF CALIFORNIA
Mechanical Systems
NRCC-MCH-E CALIFORNIA ENERGY COMMISSION
CERTIFICATE OF COMPLIANCE NRCC-MCH-E
Project Name: Walnut Creek Intermediate School Building 200 Report Page: (Page 15 of 17)
Project Address: 2425 Walnut Blvd Date Prepared: 7/30/2020

O. DECLARATION OF REQUIRED CERTIFICATES OF ACCEPTANCE
Selections have been made based on information provided in previous tables of this document. If any selection needs to be changed, please explain why in Table E Additional Remarks.
These documents must be provided to the building inspector during construction and can be found online at
https://www.energy.ca.gov/title24/2019standards/2019_compliance_documents/Nonresidential_Documents/NRCA/

Yes	No	Form/Title	Field Inspector
			Pass Fail
<input checked="" type="radio"/>	<input type="radio"/>	NRCA-MCH-02-A - Outdoor Air must be submitted for all newly installed HVAC units. Note: MCH-02-A can be performed in conjunction with MCH-07-A Supply Fan VFD Acceptance (if applicable) since testing activities overlap.	<input type="checkbox"/> <input type="checkbox"/>
<input checked="" type="radio"/>	<input type="radio"/>	NRCA-MCH-03-A - Constant Volume Single Zone HVAC NOTE: This form does not automatically move to "Yes". If Constant Volume Single Zone HVAC Systems are included in the scope, permit applicant should move this form to "Yes".	<input type="checkbox"/> <input type="checkbox"/>
<input type="radio"/>	<input checked="" type="radio"/>	NRCA-MCH-04-A - Air Distribution Duct Leakage	<input type="checkbox"/> <input type="checkbox"/>
<input checked="" type="radio"/>	<input type="radio"/>	NRCA-MCH-05-A - Air Economizer Controls	<input type="checkbox"/> <input type="checkbox"/>
<input checked="" type="radio"/>	<input type="radio"/>	NRCA-MCH-06-A Demand Control Ventilation Systems must be submitted for all systems required to employ demand controlled ventilation (refer to §120.11(13)) can vary outside ventilation flow rates based on maintaining interior carbon dioxide (CO2) concentration setpoints.	<input type="checkbox"/> <input type="checkbox"/>
<input type="radio"/>	<input checked="" type="radio"/>	NRCA-MCH-07-A Supply Fan Variable Flow Controls	<input type="checkbox"/> <input type="checkbox"/>
<input type="radio"/>	<input checked="" type="radio"/>	NRCA-MCH-08-A Valve Leakage Test	<input type="checkbox"/> <input type="checkbox"/>
<input type="radio"/>	<input checked="" type="radio"/>	NRCA-MCH-09-A Supply Water Temperature Reset Controls	<input type="checkbox"/> <input type="checkbox"/>
<input type="radio"/>	<input checked="" type="radio"/>	NRCA-MCH-10-A Hydronic System Variable Flow Controls	<input type="checkbox"/> <input type="checkbox"/>
<input type="radio"/>	<input checked="" type="radio"/>	NRCA-MCH-11-A Automatic Demand Shed Controls	<input type="checkbox"/> <input type="checkbox"/>
<input type="radio"/>	<input checked="" type="radio"/>	NRCA-MCH-12-A FDD for Packaged Direct Expansion Units	<input type="checkbox"/> <input type="checkbox"/>
<input type="radio"/>	<input checked="" type="radio"/>	NRCA-MCH-13-A Automatic FDD for Air Handling Units and Zone Terminal Units Acceptance	<input type="checkbox"/> <input type="checkbox"/>
<input type="radio"/>	<input checked="" type="radio"/>	NRCA-MCH-14-A Distributed Energy Storage DX AC Systems Acceptance NOTE: This form does not automatically move to "Yes". If Distributed Energy System DX AC Systems are included in the scope permit applicant should move this form to "Yes".	<input type="checkbox"/> <input type="checkbox"/>
<input type="radio"/>	<input checked="" type="radio"/>	NRCA-MCH-15-A Thermal Energy Storage (TES) System Acceptance NOTE: This form does not automatically move to "Yes". If Chilled Water Storage, Ice-on-Coil Internal Melt, Ice-on-Coil External melt, Ice Harvester, Brine, Ice-Slurry, Eutectic Salt, Clathrate Hydrate Slurry (CHS), Cryogenic or Encapsulated (Ice Ball) Systems are included in the scope, permit applicant should move this form to "Yes".	<input type="checkbox"/> <input type="checkbox"/>
<input type="radio"/>	<input checked="" type="radio"/>	NRCA-MCH-16-A Supply Air Temperature Reset Controls	<input type="checkbox"/> <input type="checkbox"/>
<input type="radio"/>	<input checked="" type="radio"/>	NRCA-MCH-17-A Condenser Water Temperature Reset Controls	<input type="checkbox"/> <input type="checkbox"/>
<input type="radio"/>	<input checked="" type="radio"/>	NRCA-MCH-18-A Energy Management Control Systems	<input type="checkbox"/> <input type="checkbox"/>

Registration Number: Registration Date/Time: Registration Provider: EnergySoft
CA Building Energy Efficiency Standards - 2019 Nonresidential Compliance Report Version: 2019.0.001 Report Generated: 2020-07-30 10:43:07
Schema Version: rev 20190401

STATE OF CALIFORNIA
Mechanical Systems
NRCC-MCH-E CALIFORNIA ENERGY COMMISSION
CERTIFICATE OF COMPLIANCE NRCC-MCH-E
Project Name: Walnut Creek Intermediate School Building 200 Report Page: (Page 16 of 17)
Project Address: 2425 Walnut Blvd Date Prepared: 7/30/2020

O. DECLARATION OF REQUIRED CERTIFICATES OF ACCEPTANCE

<input type="radio"/>	<input checked="" type="radio"/>	NRCA-MCH-19-A Occupancy Sensor Controls	<input type="checkbox"/> <input type="checkbox"/>
<input type="radio"/>	<input checked="" type="radio"/>	NRCA-MCH-20 Multi-Family Ventilation	<input type="checkbox"/> <input type="checkbox"/>
<input type="radio"/>	<input checked="" type="radio"/>	NRCA-MCH-21 Multi-Family Envelope Leakage	<input type="checkbox"/> <input type="checkbox"/>

P. DECLARATION OF REQUIRED CERTIFICATES OF VERIFICATION
Selections have been made based on information provided in previous tables of this document. If any selection needs to be changed, please explain why in Table E Additional Remarks.
These documents must be completed by a HERS Rater and provided to the building inspector during construction. The final documents must be created by a HERS Provides registry, but drafts can be found online at https://www.energy.ca.gov/title24/2019standards/2019_compliance_documents/Nonresidential_Documents/NRCV/

Yes	No	Form/Title	Field Inspector
			Pass Fail
<input type="radio"/>	<input checked="" type="radio"/>	NRCV-MCH-04-H Duct Leakage Test NOTE: Must be completed by a HERS Rater	<input type="checkbox"/> <input type="checkbox"/>
<input type="radio"/>	<input checked="" type="radio"/>	NRCV-MCH-24 Enclosure Air Leakage Worksheet NOTE: Must be completed by a HERS Rater	<input type="checkbox"/> <input type="checkbox"/>
<input type="radio"/>	<input checked="" type="radio"/>	NRCV-MCH-27 High-rise Residential NOTE: Must be completed by a HERS Rater	<input type="checkbox"/> <input type="checkbox"/>
<input type="radio"/>	<input checked="" type="radio"/>	NRCV-MCH-32 Local Mechanical Exhaust NOTE: Must be completed by a HERS Rater	<input type="checkbox"/> <input type="checkbox"/>

Q. MANDATORY MEASURES DOCUMENTATION LOCATION
This table is used to indicate where mandatory measures are documented in the plan set or construction documentation.

01	02
Compliance with Mandatory Measures documented through MCH	Plan sheet or construction document location
Mandatory Measures Note Block ¹	M-Sheets

Registration Number: Registration Date/Time: Registration Provider: EnergySoft
CA Building Energy Efficiency Standards - 2019 Nonresidential Compliance Report Version: 2019.0.001 Report Generated: 2020-07-30 10:43:07
Schema Version: rev 20190401

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IF THIS SHEET IS NOT 30"x42", IT IS
A REDUCED PRINT SCALE ACCORDINGLY

PLUMBING FIXTURE SPECIFICATION & CONNECTION SCHEDULE													
ADA	SYMBOL	FIXTURE	FIXTURE MANUFACTURER AND MODEL No.	FAUCET OR VALVE MANUFACTURER AND MODEL No.	TRIM MANUFACTURER AND MODEL No.	REMARKS	VENT	WASTE		COLD WATER		HOT WATER	
								BRANCH	OUTLET	BRANCH	OUTLET	BRANCH	OUTLET
	WC-1	WATER CLOSET WALL MOUNTED FLUSH VALVE STD/ACCESSIBLE	*"AMERICAN STANDARD" AFWALL NO. 3351.101, 1.28 GPF WALL HUNG, VITREOUS CHINA, ELONGATED, SIPHON JET ACTION, 1-1/2" TOP SPUD.	*"SLOAN" ROYAL 111 HET 1.28, ADA COMPLIANT, 1.28 GPF (MANUAL)	SEAT: "CHURCH" MODEL 295SSCT OR "BEMIS" MODEL 1955SSCT. PROVIDE WITH SELF- SUSTAINING CONCEALED CHECK HINGES, ONE PIECE STAINLESS STEEL POST HINGES, WHITE COLOR, CARRIER: "J.R. SMITH" 100 OR 200 SERIES OR "ZURN" Z1203 AND Z1204 SERIES PROVIDE REAR SUPPORT LUG AND ANCHOR FOOT ASSEMBLY.	MOUNT AT HEIGHT INDICATED ON ARCHITECTURAL DRAWINGS. WHERE USED FOR CBC ACCESSIBLE WATER CLOSETS, THE FLUSH VALVE HANDLE SHALL BE MOUNTED ON THE WIDE SIDE OF THE WATER CLOSET ENCLOSURE.	2"	4"	4"	1-1/4"	1"	--	--
	L-1	LAVATORY WALL MOUNTED HOT AND COLD WATER STD/ACCESSIBLE	*"AMERICAN STANDARD" LUCERNE NO. 0355.012, WALL HUNG, VITREOUS CHINA WITH CONTOURED BACK AND SIDE SPLASH SHIELDS, FRONT OVERFLOW, CONCEALED ARM RECESS, 4" CENTERS, 20" x 18" D SHAPED BOWL.	*"CHICAGO" 3600-E2805AB FAUCET, PUSH LEVER WITH AERATOR WITH 0.5 GPM FLOW RATE, WITH VANDAL RESISTANT ECONO-FLO SPRAY OUTLET, WITH IPS CONNECTIONS, ADA COMPLIANT, SET MAXIMUM WATER TEMPERATURE STOP TO RESTRICT WATER TEMPERATURE TO 110° F.	ADA COMPLIANT. LAVATORY GRID DRAIN WITH 1-1/4" OFFSET TAILPIECE, INTEGRAL PERFORATED GRID NO. 7723.018, CHROME FINISH. MOUNT P-TRAP FLUSH TO WALL. CARRIER: "J R SMITH" 0700 OR ZURN Z1231	MOUNT AT HEIGHT INDICATED ON ARCHITECTURAL DRAWINGS. PROVIDE CONCEALED ARMS AND FLOOR SUPPORT, WITH FEET OF SUPPORT SECURELY ANCHORED TO FLOOR. IN ADDITION ANCHOR TOP OF SUPPORT TO WALL CONSTRUCTION.	1-1/2"	2"	1-1/2"	3/4"	1/2"	3/4"	1/2"
	S-1	SINK COUNTER MOUNTED COLD WATER ONLY W/BUBBLER	*"JUST" CRAF-ADA-1931-16-GR-VRL STAINLESS STEEL, 19" FRONT TO BACK, 31" WIDE x 6-1/2" DEPTH OVERALL, 18 GAUGE STAINLESS STEEL, SIDE LEDGES WITH SELF- RIM. PROVIDE REAR DRAIN LOCATION, VANDAL RESISTANT BACKING PLATE AT BUBBLER AND FAUCET FOR VANDAL RESISTANT PINS. BACKING PLATE SHALL BE 14 GAUGE SS FORMED AS A CHANNEL.	*"CHICAGO" ECAST MODEL 350-E35ABCP(V/VAVVP) GOOSENECK FAUCET, "HAW'S" 5054LF BUBBLER, VANDAL RESISTANT. PROVIDE VANDAL PROOF PIN (VPP) IN BUBBLER AND FAUCET, ARRANGE TO MATE WITH SLOTS IN SINK. PROVIDE 1.5 GPM VANDAL RESISTANT LAMINAR FLOW AERATOR.	*"JUST" J-ADA-35-SSF-VR DRAIN SYSTEM. INSTALL P-TRAP FLUSH TO WALL. *JUST" JTS-150 P-TRAP, SWIVEL STYLE WITH CLEAN OUT	ARRANGE FINAL INSTALLATION OF SINK SUCH THAT THE BUBBLER WILL BE WITHIN 5" OF THE EDGE OF THE COUNTERTOP. INSTALL FAUCET IN CENTER OF SIDE SPLASH. PROVIDE SLOT FOR BUBBLER AT 15° ANGLE FROM FRONT OF THE SINK, AND INSTALL THE BUBBLER AT 15° ANGLE	1-1/2"	2"	1-1/2"	3/4"	1/2"	-	-
	S-2	SINK COUNTER MOUNTED HOT AND COLD WATER ADMIN/CONF./NURSE	*"JUST" SL-ADA-1921-A-GR 19" FRONT TO BACK, 21" WIDE x 6-1/2" DEPTH OVERALL, 18 GAUGE STAINLESS STEEL, LEDGE BACK WITH SELF- RIM. PROVIDE SINGLE FAUCET HOLE. PROVIDE REAR DRAIN LOCATION. PROVIDE FACTORY ADHERED VANDAL RESISTANT BACKING PLATE AT FAUCET, AND SLOT AT FAUCET FOR VANDAL RESISTANT BACKING PLATE SHALL BE 14 GAUGE SS FORMED AS CHANNEL.	*"CHICAGO" ECAST MODEL 50-E35ABCP(V/VAVVP) GOOSENECK FAUCET, 1.5 GPM VANDAL RESISTANT LAMINAR FLOW AERATOR AND RIGID/SWING FAUCET, PROVIDE VANDAL RESISTANT PIN IN FAUCET, ARRANGED TO MATE WITH SLOT IN SINK.	*"JUST" J-ADA-35-SSF-VR DRAIN SYSTEM. INSTALL P-TRAP FLUSH TO WALL. *JUST" JTS-150 P-TRAP, SWIVEL STYLE WITH CLEAN OUT		1-1/2"	2"	1-1/2"	3/4"	1/2"	3/4"	1/2"
	DF-1	DRINKING FOUNTAIN WALL MOUNTED STD/ACCESSIBLE DUAL HEIGHT W/BOTTLE FILLER	*"HAW'S" 1117L, STAINLESS STEEL DUAL HEIGHT, WALL MOUNTED STAINLESS STEEL BACK PANEL MODEL 6700R, WITH MODEL 1920 BOTTLE FILLER	INTEGRAL	WITH P-TRAP	SURPORT SYSTEM: MODEL 6717 MOUNTING PLATE AND 6800 SUPPORT CARRIER. PROVIDE MANUFACTURER'S INTERNAL SUPPORT SYSTEM. WHERE INSTALLED ON CONCRETE OR CMU WALL, PROVIDE TWO MODEL 6700 MOUNTING PLATES AND INSTALL WITH ONE PLATE ON EACH SIDE OF WALL. SET AT HEIGHT INDICATED ON ARCH DRAWINGS.	1-1/2"	2"	1-1/2"	3/4"	1/2"	-	-
	RIM	REFRIGERATOR ICE MAKER	*"GUY GRAY" MODEL SSIB2AB LEAD FREE ICE MAKER HOOK-UP, WITH %143" FIP INLET AND %147" COMPRESSION OUTLET	INTEGRAL	INTEGRAL	PROVIDE STAINLESS STEEL BOX AND STAINLESS STEEL FACE PLATE.	-	-	-	1/2"	1/4"	-	-
	WM	WASHMACHINE WASHER BOX	*"ACORN" MODEL 8186 WASH MACHINE BOX.	INTEGRAL	INTEGRAL	WITH HOT AND COLD WATER HOSE BIBBS AND DRAIN CONNECTION	1-1/2"	2"	2"	3/4"	1/2"	3/4"	1/2"
	TP	TRAP PRIMER	MIFAB "M-500" SERIES, PRECISION PLUMBING PRODUCTS				-	-	-	1/2"	1/2"	-	-
	FD	FLOOR DRAIN	*"ZURN" FD-2321 NO HUB, FOOT TRAFFIC AND LIGHT CART APPLICATION, CAST IRON BODY WITH FLASHING COLLAR, ADJUSTABLE HEAD AND 7" DIAMETER NICKLE BRONZE TOP W/ 1/2" TRAP PRIMER OCNNECTION, TYPE "B" STRAINER				2"	2"	2"	-	-	-	-
GENERAL NOTES:													
1. WATER SUPPLIES AND STOPS													
A. PROVIDE 85 PERCENT IPS RED BRASS PIPE, SECURELY ANCHORED TO BUILDING CONSTRUCTION, FOR EACH CONNECTION TO FAUCETS, STOPS, HOSE BIBBS, ETC. EACH FIXTURE, EXCEPT HOSE BIBBS, SHALL HAVE A STOP VALVE INSTALLED ON WATER SUPPLY LINES TO PERMIT REPAIRS WITHOUT SHUTTING OFF WATER MAINS.													
B. PROVIDE ALL WATER SUPPLIES TO FIXTURES WITH COMPRESSION SHUT-OFF STOPS WITH IPS INLETS WITH THREADED BRASS NIPPLES AT PIPE CONNECTION AND LOCK SHIELD LOOSE KEY. PROVIDE COMBINATION FIXTURES WITH COMPRESSION STOP AND IPS INLET ON EACH WATER SUPPLY FITTING. PROVIDE LOOSE KEY HANDLE FOR EACH STOP.													
C. PROVIDE 1/2 INCH RISER TUBES WITH REDUCING COUPLING FOR ALL FIXTURES, UNLESS OTHERWISE NOTED. REFER TO SPECIFICATION SECTION, 15440 OR 22 40 00.													
2. PIPE, PLUMBING FITTINGS, FIXTURES, SOLDER AND FLUX SHALL COMPLY WITH LEAD FREE REQUIREMENTS OF THE CALIFORNIA HEALTH AND SAFETY CODE SECTION 116875. PROVIDE PRODUCTS LISTED AND LABELED AS COMPLYING WITH NSF 61, ANNEX G, OR PROVIDE OTHER EVIDENCE OF COMPLIANCE WITH THE CALIFORNIA HEALTH AND SAFETY CODE SECTION 116875. PROVIDE PRODUCT SUBMITTAL INFORMATION PROVING COMPLIANCE WITH LEAD FREE REQUIREMENTS.													

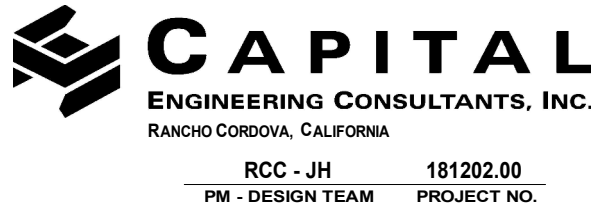


Revisions			
Delta	Date	Revisions	By

NOT FOR CONSTRUCTION

PROGRESS DRAWINGS
INCREMENT II

ISSUE DATE: 11/3/20 BY: MH



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Architect/Engineer Of Record:



HY Architects Project number: 5241

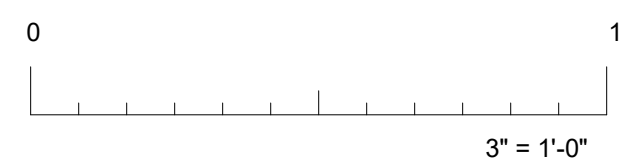
Facility
WALNUT CREEK SCHOOL DISTRICT
2425 WALNUT BOULEVARD, WALNUT
CREEK, CA 94597

Project
MODERNIZATION AND
RECONFIGURATION PROJECT
INCREMENT II

Sheet Title
PLUMBING FIXTURE
SPECIFICATION AND
CONNECTION SCHEDULE

Client Project Number: Client Proj. #

Scale: 12" = 1'-0"	Sheet
Drawn By: RC/JH	P0.2B
Checked By: TD	
Issue Date: 11/3/20	
Revit Version: 2019	Sheet 87 of 128



PROGRESS DRAWINGS INCREMENT II

BY: MF: 

300 - 27th Street
Oakland, CA 94612
510.446.2222 tel | 510.446.2211 fax

5241

HY Architects Project number: 5241

Facility

WALNUT CREEK SCHOOL DISTRICT
2425 WALNUT BOULEVARD, WALNUT
CREEK, CA 94597

Project

MODERNIZATION AND RECONFIGURATION PROJECT INCREMENT II

Sheet Title

BUILDING 100 & 150 - PLUMBING DEMOLITION PLANS

Client Project Number:

Client Proj. #

Scale: $1/8" = 1'-0"$

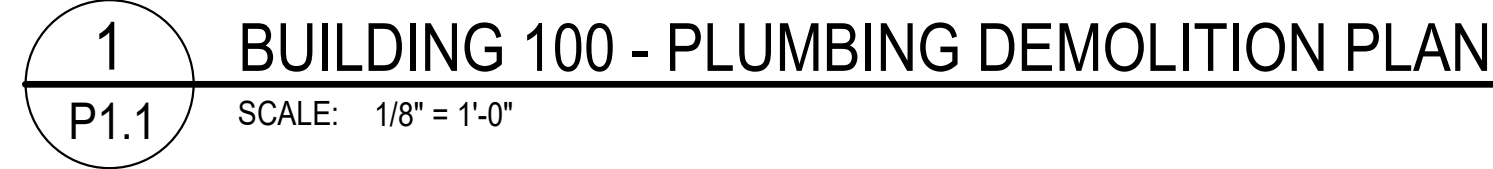
Drawn By: RC

Checked By: TD

Issue Date: 11/02/2011

P1.1

Sheet 88 of 128

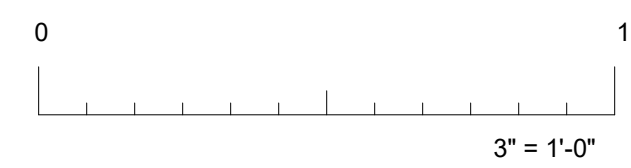
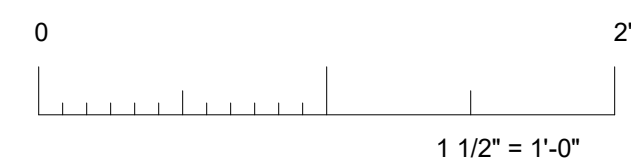
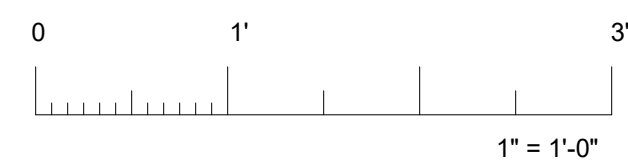
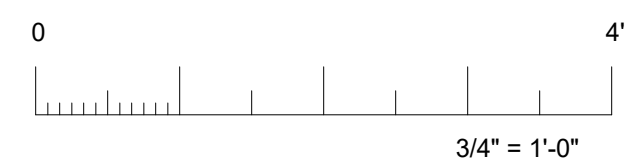
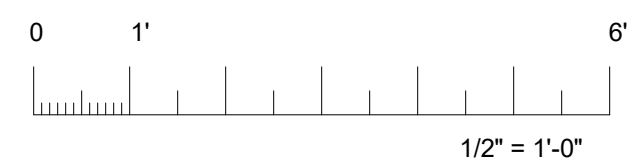
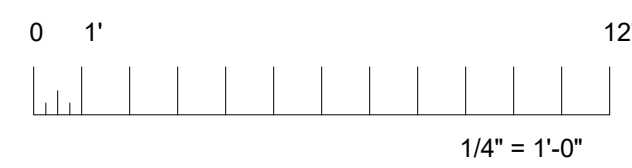
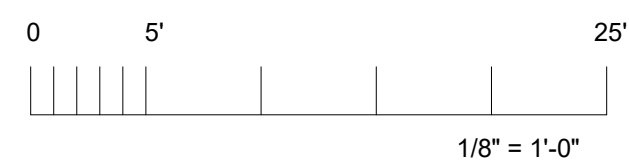
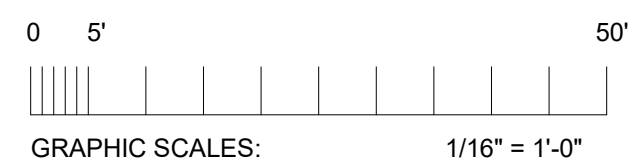


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P1.1

BUILDING 100 - PLUMBING DEMOLITION PLAN

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

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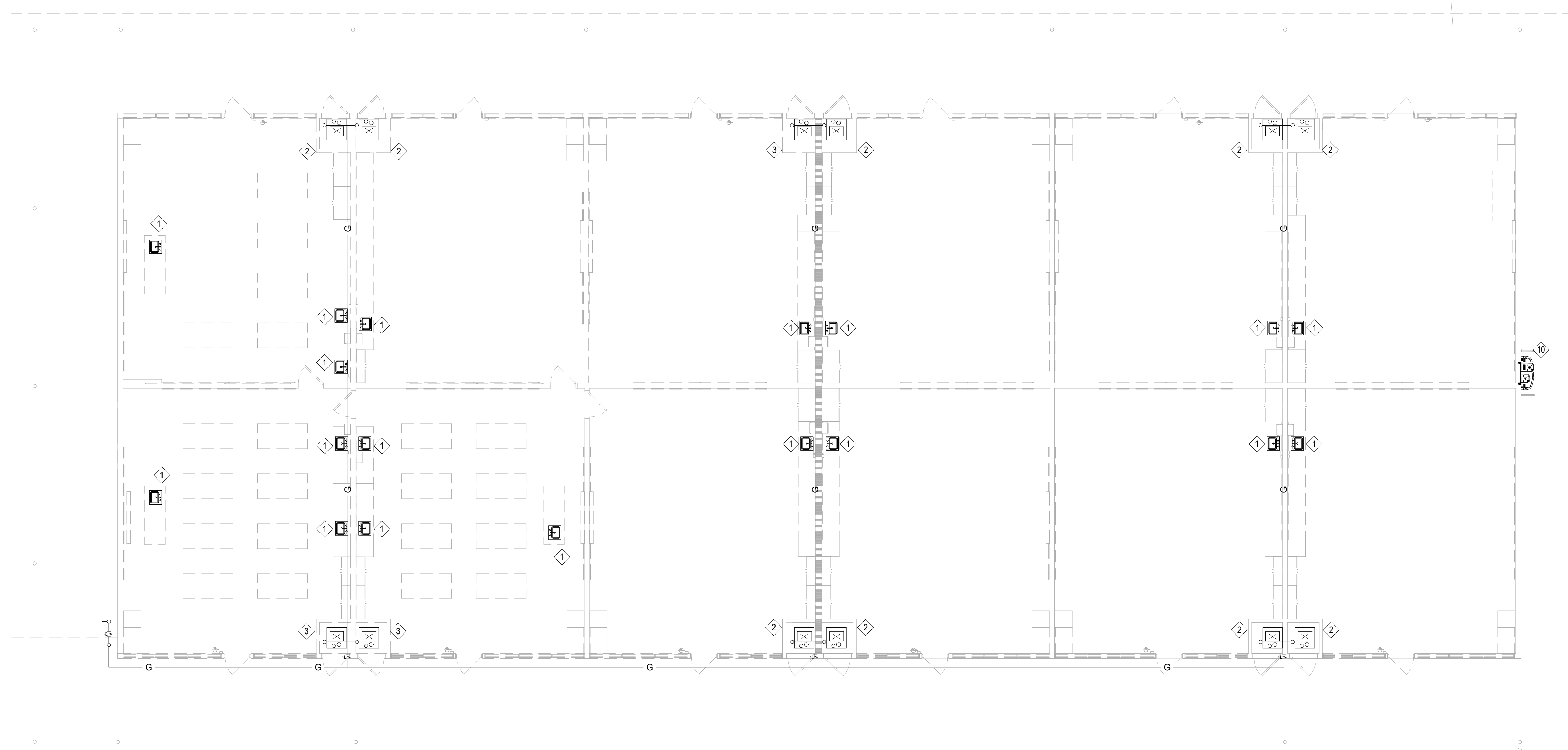
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SHEET NOTES:

1. CONTRACTOR TO FIELD VERIFY EXACT LOCATIONS, SIZES, ROUTING, AND INVERTS OF ALL PIPING PRIOR TO CONSTRUCTION.
2. ALL PIPING SHALL BE INSTALLED BEHIND FINISHED SURFACES EXCEPT AS NOTED OTHERWISE. SAW CUT AND REMOVE PORTIONS OF ARCHITECTURAL FINISHES AS REQUIRED TO RUN NEW PIPING OR CAP EXISTING PIPING BEHIND ARCHITECTURAL FINISHES. PATCH FINISHES TO MATCH EXISTING ADJACENT SURFACES.
3. SEE SHEET P0.1B FOR ADDITIONAL NOTES.

KEYNOTES:

- 1 EXISTING SINK TO BE REMOVED AND REPLACED WITH NEW. ADJUST EXISTING PIPING TO ACCOMMODATE FOR NEW ROUGH-IN REQUIREMENTS OF REPLACEMENT.
- 2 EXISTING FURNACE TO BE REMOVED AND REPLACED WITH NEW. REMOVE EXISTING CONDENSATE LINES. PREPARE EXISTING DRY WELL FOR CONNECTION OF NEW CONDENSATE LINE. REMOVE EXISTING GAS BACK TO SHUTOFF VALVE. PREPARE FOR CONNECTION OF NEW GAS LINE TO NEW FURNACE.
- 3 EXISTING FURNACE TO BE REMOVED. CAP GAS AND CONDENSATE LINES.
- 4 EXISTING DRINKING FOUNTAIN TO BE REMOVED AND REPLACED WITH NEW.



1 BUILDING 200 - PLUMBING DEMOLITION PLAN

P1.2 SCALE: 1/8" = 1'-0"

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PROGRESS DRAWINGS
INCREMENT II

ISSUE DATE: 11/3/20 BY: MH



RCC - JH	181202.00
PM - DESIGN TEAM	PROJECT NO

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Architect/Engineer Of Record:



HY Architects Project number:	5241
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Facility	
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WALNUT CREEK SCHOOL DISTRICT
2425 WALNUT BOULEVARD, WALNUT
CREEK, CA 94597

Project

MODERNIZATION AND
RECONFIGURATION PROJECT
INCREMENT II

Sheet Title

**BUILDING 200 - PLUMBING
DEMOLITION PLAN**

Client Project Number:	Client Proj. #
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Scale: $1/8" = 1'-0"$

Scale: 10 = 100%

Drawn By: Author

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Checked By: Checker

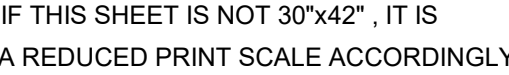
Checked By: Checker
Issue Date: 11/03/2020

Issue Date: 11/3/2019
Revit Version: 2019

Sheet

P1.2

Sheet 89 of 128



1. CONTRACTOR TO FIELD VERIFY EXACT LOCATIONS, SIZES, ROUTING, AND INVERTS OF ALL PIPING PRIOR TO CONSTRUCTION.
2. ALL PIPING SHALL BE INSTALLED BEHIND FINISHED SURFACES EXCEPT AS NOTED OTHERWISE. CUTTING AND REMOVAL OF PORTIONS OF ARCHITECTURAL FINISHES AS REQUIRED TO RUN NEW PIPING OR CAP EXISTING PIPING BEHIND ARCHITECTURAL FINISHES. PATCH FINISHES TO MATCH EXISTING ADJACENT SURFACES.
3. SEE SHEET P0.1B FOR ADDITIONAL NOTES.



- 1 NEW SINK TO BE CONNECTED TO EXISTING DOMESTIC COLD WATER, WASTE, AND VENT SYSTEMS. EXTEND EXISTING PLUMBING SERVICES AS REQUIRED TO MAKE NEW CONNECTIONS. ALL PLUMBING SHALL BE BEHIND FINISHED SURFACES.
- 2 3/4" CONDENSATE DRAIN LINE FROM FAN COIL, ROUTE TO AND DROP IN WALL, TERMINATE AT FULL PITCH OF SINK WITH AN APPROVED FITTING.
- 3 NEW FURNACE, CONNECT TO EXISTING GAS AND CONDENSATE. REFER TO DETAIL 8P5-1B
- 4 CONDENSATE DRAIN PIPE, ROUTE ON WALL AND PAINT TO MATCH ARCHITECTURAL FINISHES. ROUTE BELOW GRADE TO DRY WELL. REFER TO DETAIL 6P5-1B.
- 5 HOT WATER RETURN, REFER TO DETAIL 7P5-1B.
- 6 TRAP PRIMER WITH ACCESS DOOR, REFER TO DETAIL 9P5-1B
- 7 WATER HAMMER ARRESTOR (WHA)

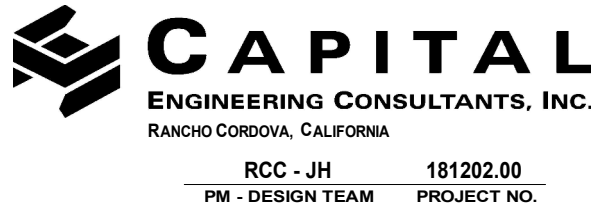


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CREEK, CA 94597

Project

MODERNIZATION AND
RECONFIGURATION PROJECT
INCREMENT II

Sheet Title

**BUILDING 100 & 150 -
PLUMBING FLOOR PLANS**

Client Project Number: _____ Client Proj. # _____

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

Drawn By: Author

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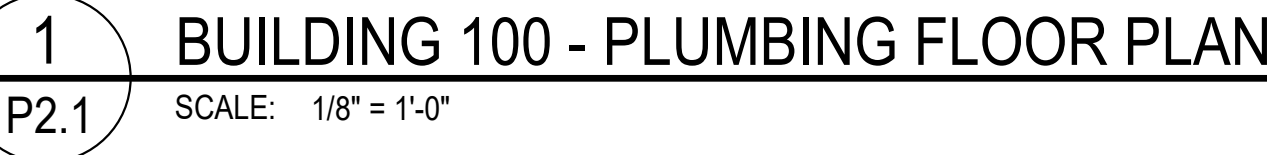
Issue Date: 11/3/20

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Sheet

P2.1

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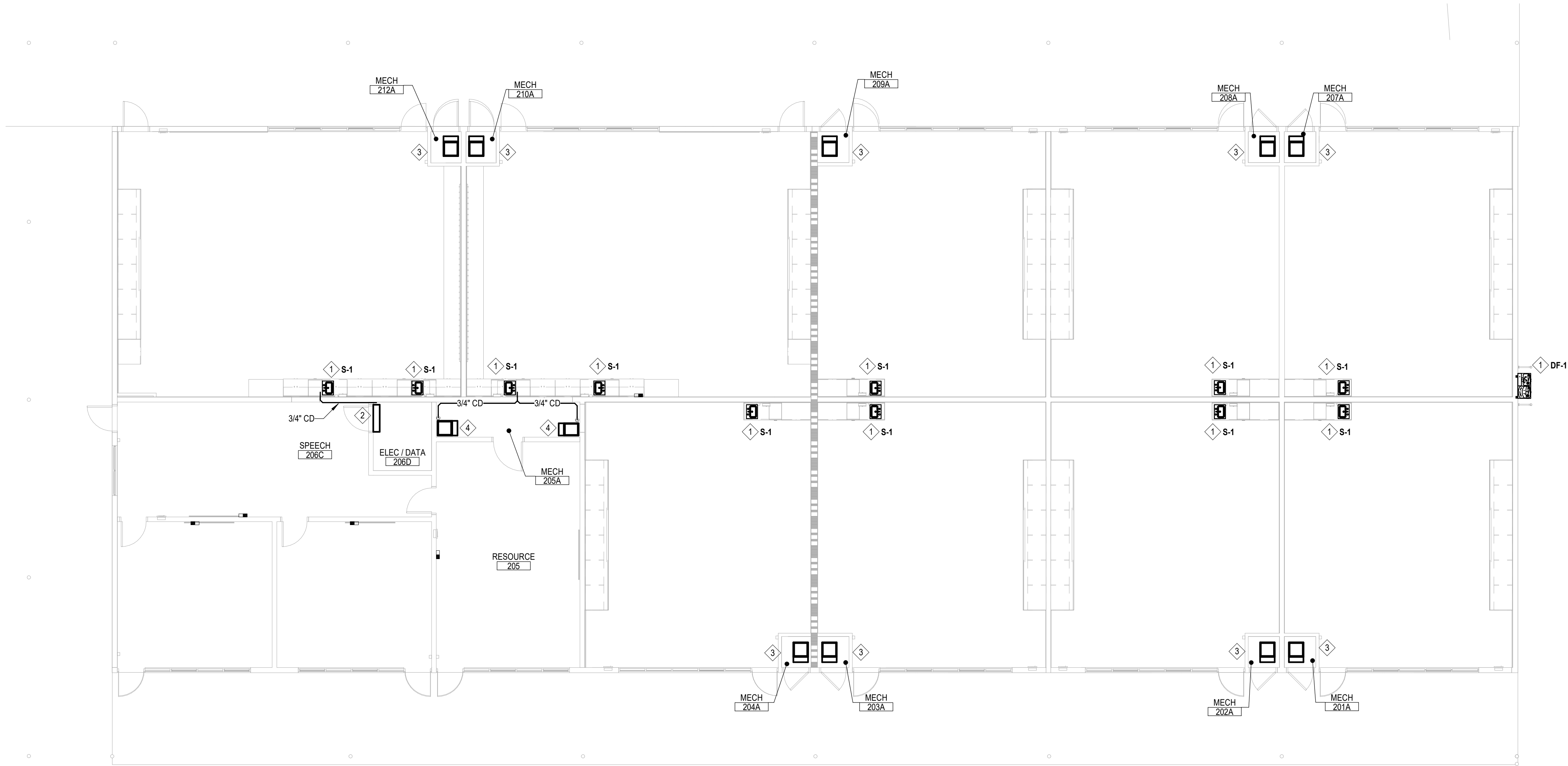
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SHEET NOTES:

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3. SEE SHEET P0.1 FOR ADDITIONAL NOTES.

KEYNOTES:

- 1 NEW SINK TO BE CONNECTED TO EXISTING DOMESTIC COLD WATER, WASTE, AND VENT SYSTEMS. EXTEND EXISTING PLUMBING SERVICES AS REQUIRED TO MAKE NEW CONNECTIONS. ALL PIPING SHALL BE BEHIND FINISHED SERVICES.
- 2 3/4" CONDENSATE DRAIN LINE FROM FAN COIL, ROUTE TO AND DROP IN WALL, TERMINATE AT TAILPIECE OF SINK WITH AN APPROVED FITTING.
- 3 NEW FURNACE, CONNECT TO EXISTING GAS AND CONDENSATE
- 4 NEW FURNACE, EXTEND GAS TO PROVIDE SERVICE, ROUTE CONDENSATE IN WALL AND TERMINATE AT TAILPIECE OF SINK WITH AN APPROVED FITTING.



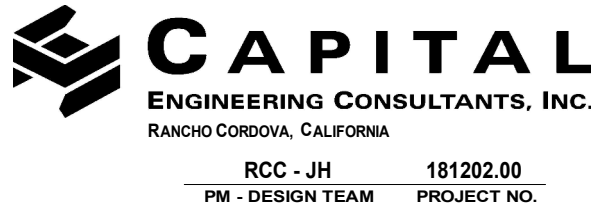
1 BUILDING 200 - PLUMBING FLOOR PLAN
P2.2 SCALE: 1/8" = 1'-0"



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HY Architects Project number: 5241

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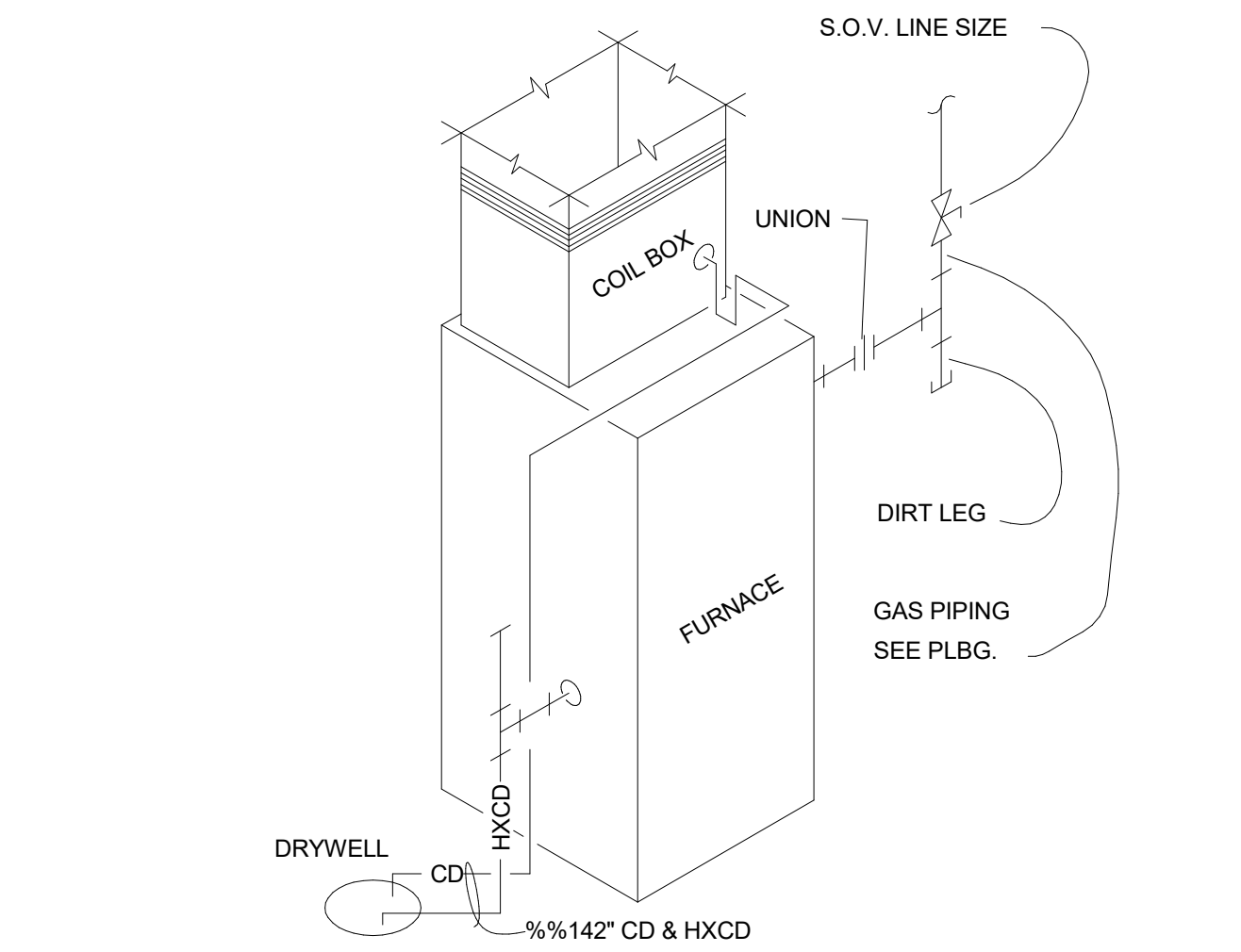
Project
MODERNIZATION AND RECONFIGURATION PROJECT
INCREMENT II

Sheet Title
BUILDING 200 - PLUMBING FLOOR PLAN

Client Project Number:	Client Proj. #
Scale: 1/8" = 1'-0"	Sheet
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Issue Date: 11/3/20	
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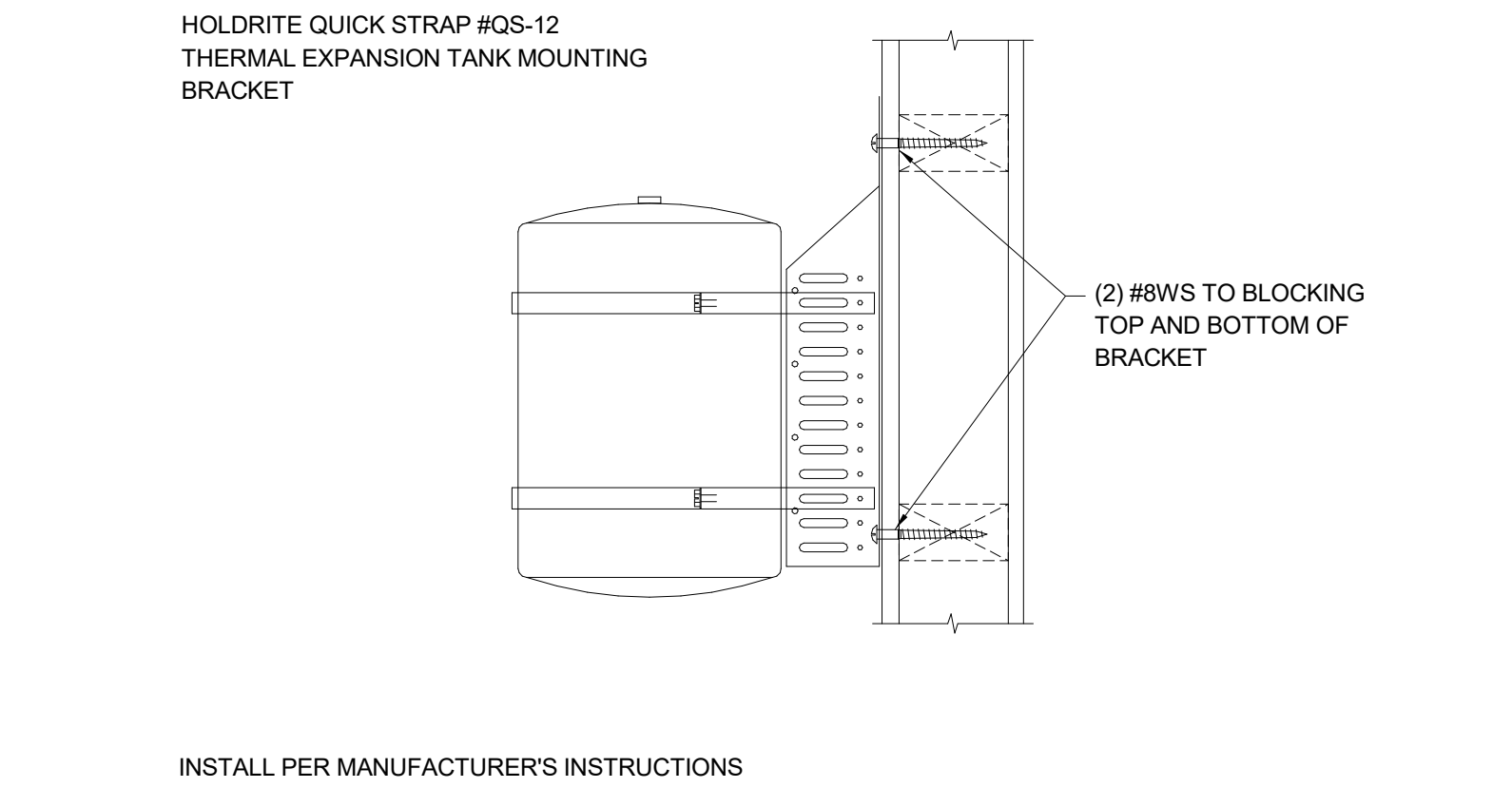
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FURNACE PIPING

SCALE : NONE

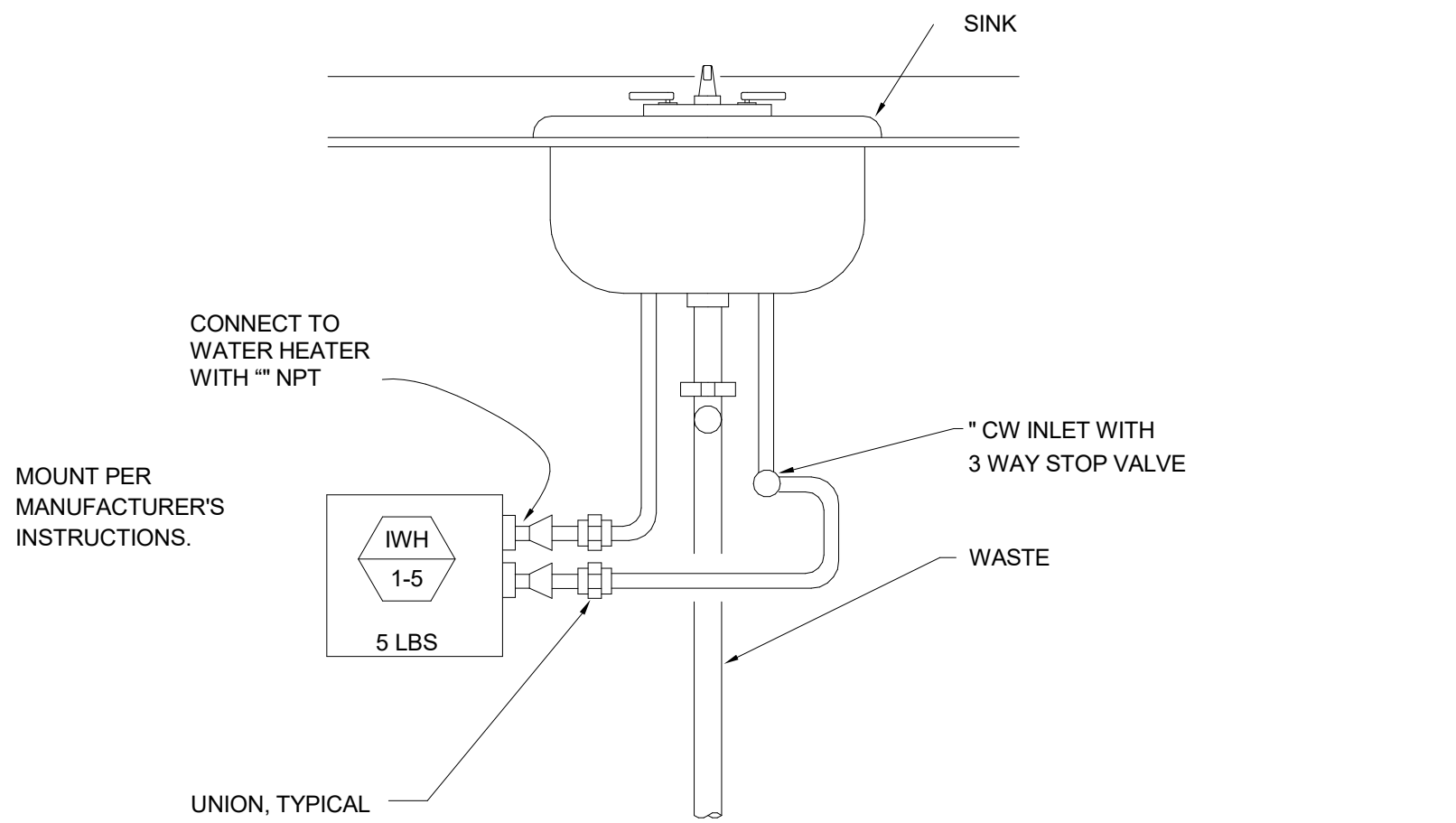
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P5.1B



EXPANSION TANK MOUNTING

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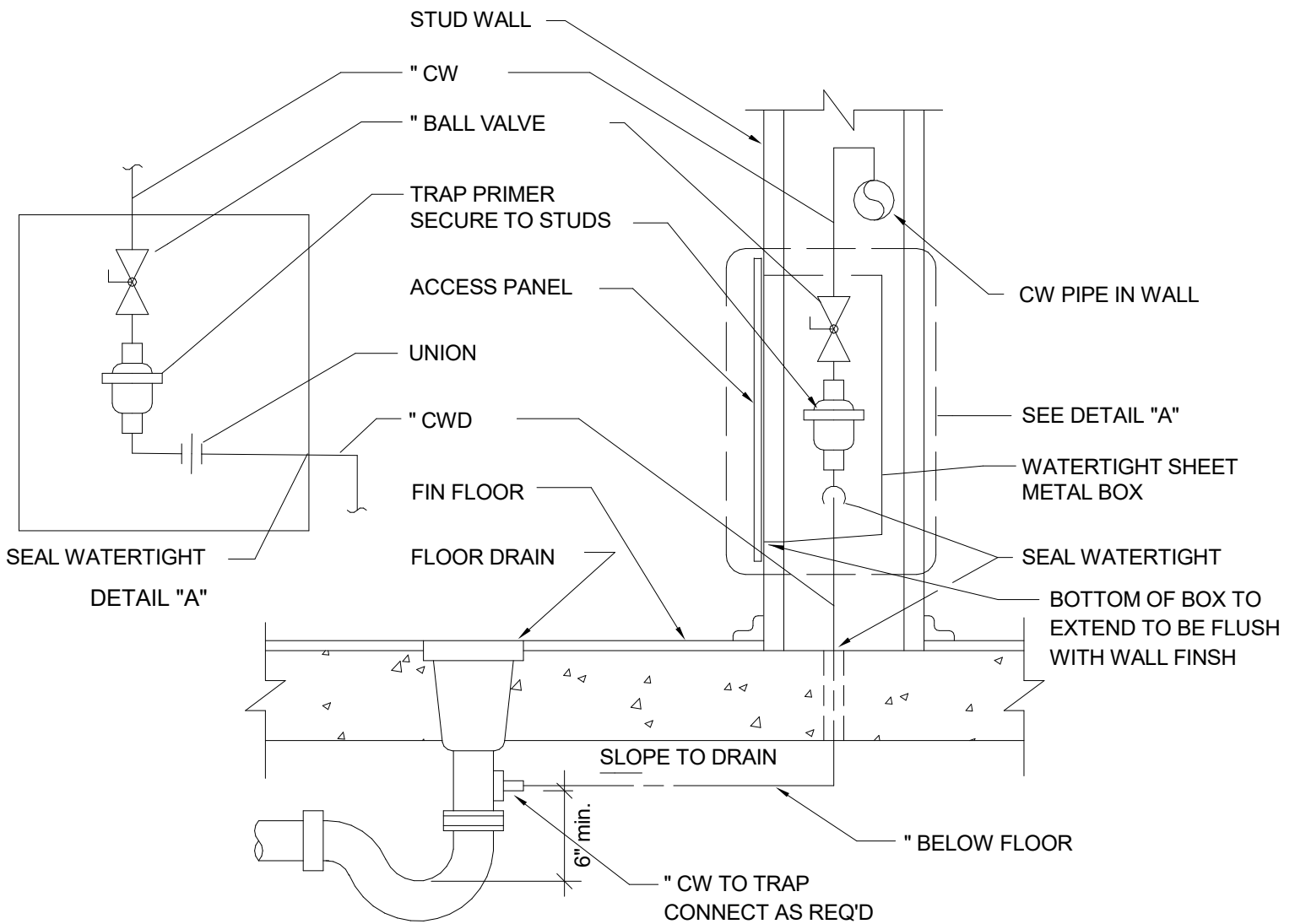
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P5.1B



INSTANTANEOUS WATER HEATER

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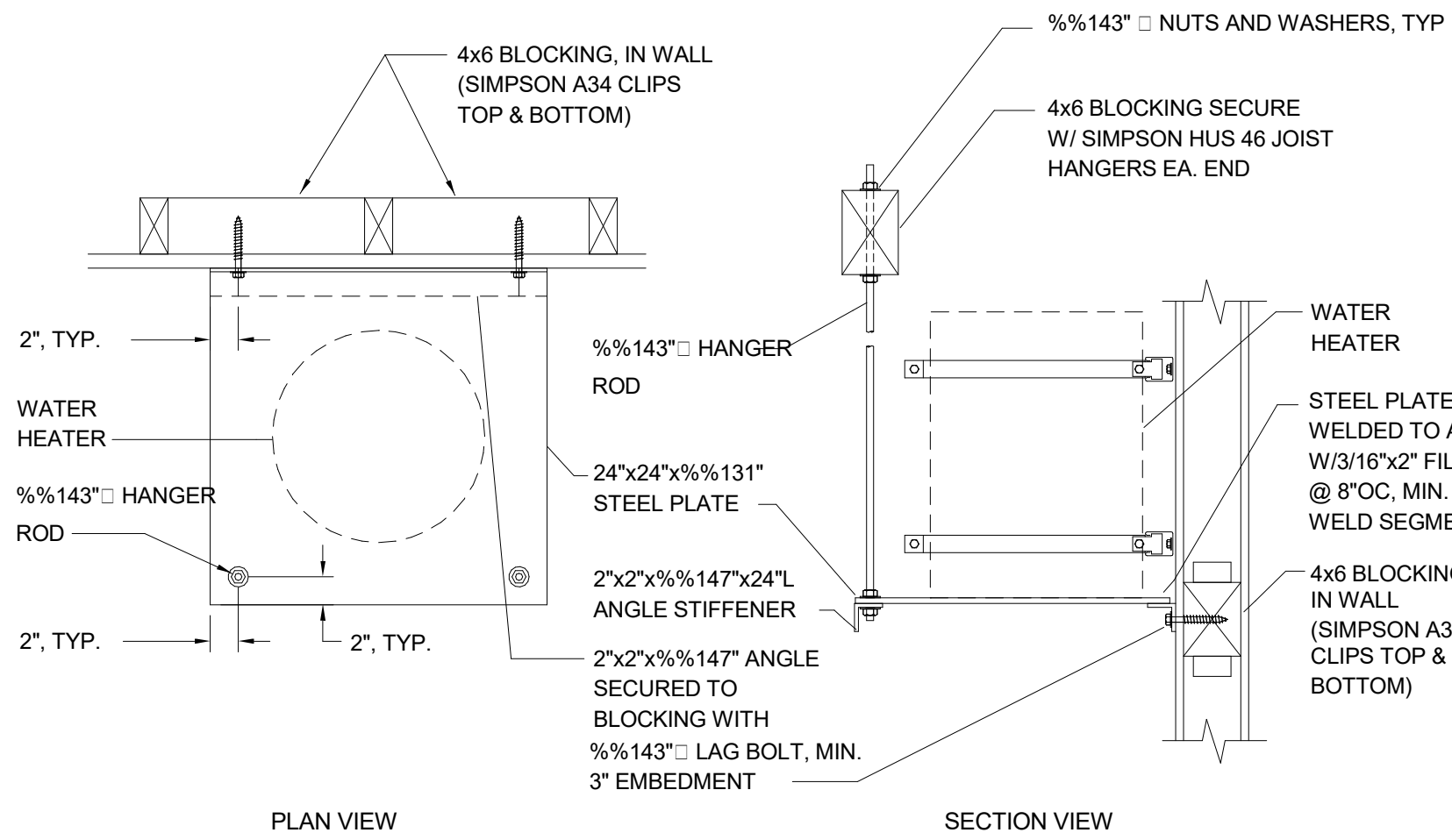
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P5.1B



TRAP PRIMER TO FLOOR DRAIN

SCALE : NONE

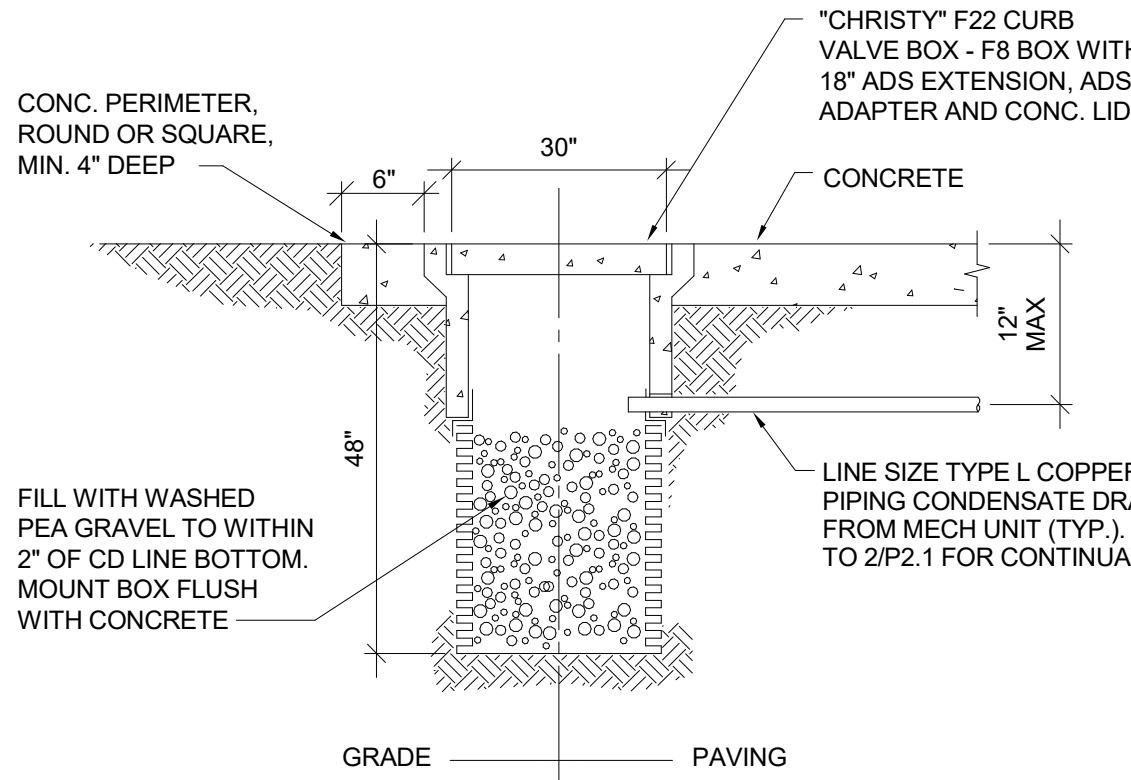
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P5.1B



WATER HEATER SHELF DETAIL

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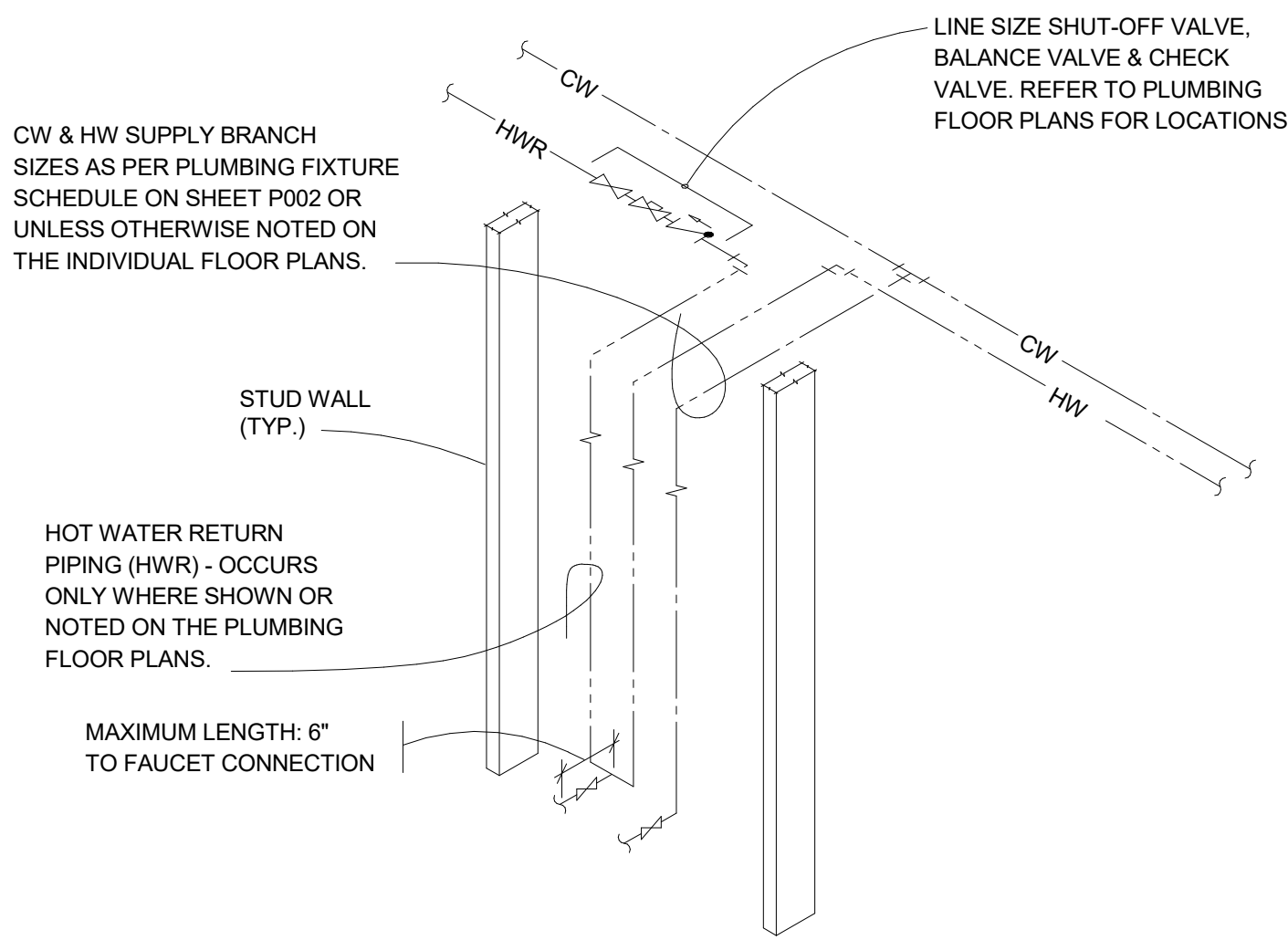
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P5.1B



DRY WELL DETAIL

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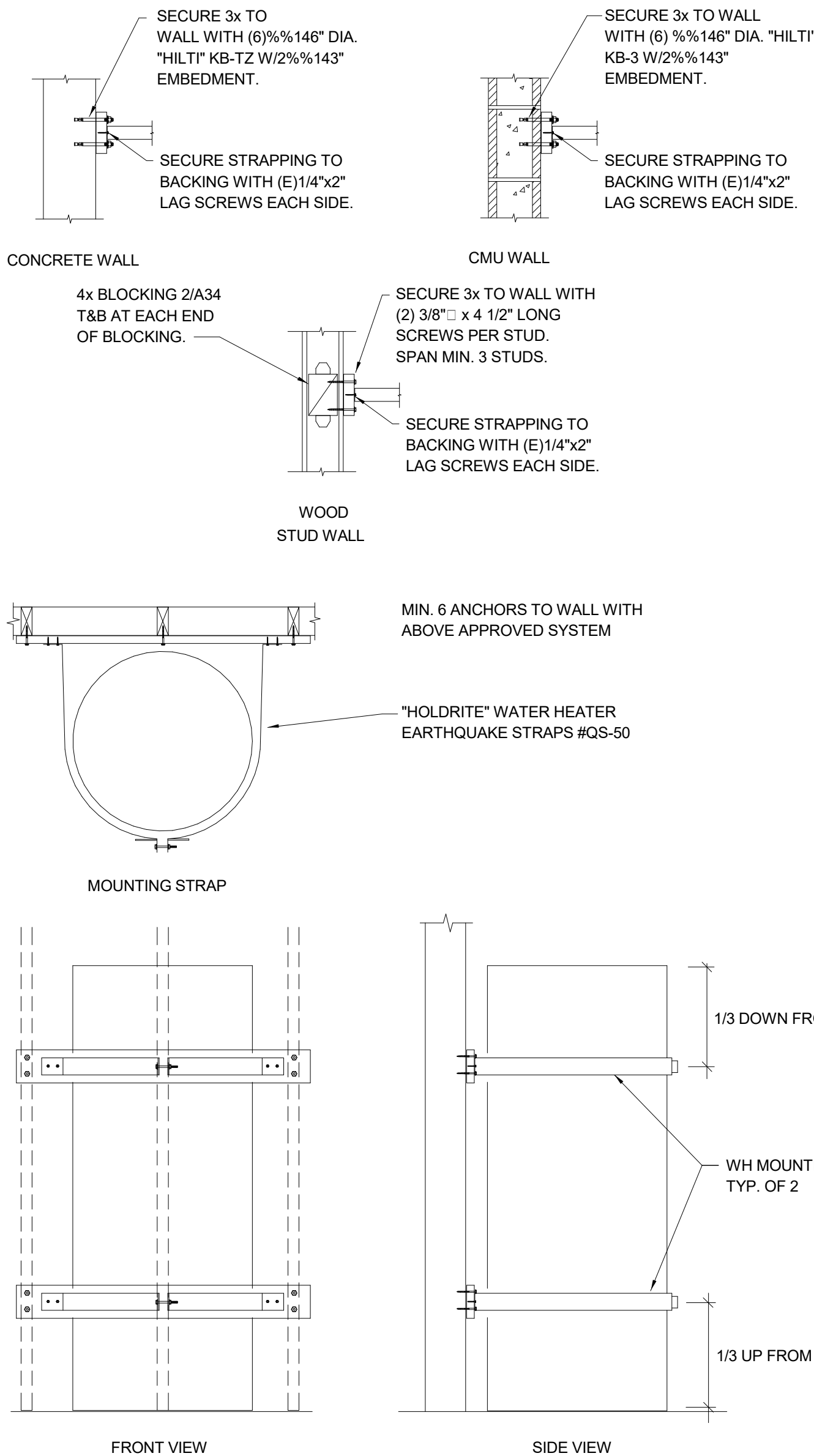
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P5.1B



HOT WATER RETURN PIPE DETAIL

SCALE : NONE

7
P5.1B



WATER HEATER SUPPORT

SCALE : NONE

3
P5.1B



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Project
MODERNIZATION AND
RECONFIGURATION PROJECT
INCREMENT II

Sheet Title
PLUMBING DETAILS

Client Project Number: Client Proj. #

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Sheet
P5.1B
Sheet 92 of 128



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GENERAL ELECTRICAL NOTES

1. ELECTRICAL CONTRACTOR IS TO PROVIDE LABOR, MATERIALS, TRANSPORTATION, EQUIPMENT, RELATED HAND TOOLS, SPECIAL AND OCCASIONAL SERVICES TO CONSTRUCT AND INSTALL THE COMPLETE ELECTRICAL SYSTEM AS SPECIFIED AND SHOWN ON THE PLANS.
2. MOUNTING HEIGHTS SHALL BE A MAXIMUM +48" TO TOP OF BOX OR MINIMUM 15" TO BOTTOM OF BOX PER CBC 1142A. ALL MOUNTING HEIGHTS SHALL BE AS SHOWN ON SYMBOL LIST UNLESS OTHERWISE NOTED ON DRAWINGS.
3. BONDING JUMPERS SHALL BE INSTALLED TO INSURE CONTINUITY WHERE CONDUIT CONNECTIONS AT CONCENTRIC KNOCKOUTS ARE TO SERVE AS A GROUND.
4. PROVIDE GREEN THWN COPPER GROUND WIRE FROM PANELBOARD GROUND BUS TO ALL BRANCH CIRCUITS.
5. THE ELECTRICIAN SHALL CHECK THE TIGHTNESS OF ALL PANELBOARD BUSES AND CIRCUIT BREAKER LUGS. COMPLETELY VACUUM AND CLEAN INTERIOR OF EQUIPMENT PRIOR TO TURN OVER TO THE OWNER.
6. ALL NEW AND EXISTING PANELBOARDS AND SWITCHBOARDS SHALL BE PROVIDED WITH NEW TYPEWRITTEN DIRECTORIES TO IDENTIFY THE LOCATION OF EACH LOAD SERVED.
7. ALL EQUIPMENT SHALL BE U.L. LISTED AND INSTALLED AS PER LISTING OR LABELING (I.E. MAX. FUSE SIZES MEAN FUSE PROTECTION REQUIRED).
8. REFER TO ARCHITECTURAL DRAWINGS FOR ACTUAL LAYOUTS OF ALL LIGHTING FIXTURES AND EQUIPMENT.
9. CONTRACTOR TO COORDINATE ALL NEW WORK WITH ALL OTHER TRADES FOR A SMOOTH FLOW OF INSTALLATION WORK.
10. ELECTRICAL CONTRACTOR SHALL BE RESPONSIBLE FOR DAMAGES TO ALL WALLS, FLOORS AND CEILINGS INCURRED DURING ELECTRICAL CONSTRUCTION. IF DAMAGE OCCURS DURING ELECTRICAL CONSTRUCTION, THE ELECTRICAL CONTRACTOR SHALL COORDINATE WITH GENERAL CONTRACTOR TO PATCH, PAINT AND REPAIR TO MATCH EXISTING CONDITIONS.
11. COORDINATE EQUIPMENT LOCATIONS AND ELECTRICAL REQUIREMENTS OF ALL EQUIPMENT REQUIRING ELECTRICAL HOOK-UP WITH CONTRACTOR RESPONSIBLE FOR PROVIDING EQUIPMENT AND EQUIPMENT MANUFACTURER DATA SHEETS.
12. COORDINATE ELECTRICAL OUTLET LOCATIONS WITH ARCHITECTURAL ELEVATIONS (I.E. CABINETS). AVOID ALL COUNTER SUPPORTS, AND LOCATIONS BEHIND INACCESSIBLE FIXED CABINETS.
13. UPON COMPLETION OF THE INSTALLATION OF THE FIRE PROTECTIVE SIGNALING EQUIPMENT, A SATISFACTORY TEST OF THE ENTIRE SYSTEM SHALL BE MADE IN THE PRESENCE OF THE ENFORCING FIRE AGENCY.
14. ALL CORRIDOR AND EXTERIOR WALL PENETRATIONS FOR PIPES, CONDUITS, ETC., IN WALLS REQUIRING PROTECTED OPENINGS SHALL BE FIRE STOPPED. FIRE STOP MATERIAL SHALL BE A TESTED ASSEMBLY APPROVED BY THE CALIFORNIA STATE FIRE MARSHAL.
15. ELECTRICAL CONTRACTOR SHALL REVIEW MECHANICAL AND PLUMBING CONTRACT DRAWINGS AND VERIFY ALL MECHANICAL EQUIPMENT LOCATIONS, MOTOR SIZES AND CONTROL WIRING REQUIREMENTS WITH MECHANICAL CONTRACTOR AND MECHANICAL EQUIPMENT SUPPLIERS AND MANUFACTURERS PRIOR TO INSTALLATION OF ELECTRICAL CONNECTIONS.
16. RECEPTACLES SHALL NOT BE INSTALLED BACK TO BACK AND SHALL BE SPACED 24" APART. WHERE RECEPTACLES CANNOT BE SPACED 24" APART, PROVIDE 3M FIRE RATED PUTTY PADS TO MATCH WALL FIRE RATING.
17. PROVIDE AN ISOLATED GROUND WIRE IN ADDITION TO NORMAL EQUIPMENT GROUND IN ALL COMPUTER DEDICATED CIRCUITS.
18. ALL CONTROL DEVICES TO BE USED BY THE OCCUPANT OF THE ROOM OR AREA SHALL BE INSTALLED AT A MINIMUM OF 36" C/L, TO A MAXIMUM OF 48" TO TOP OF BOX FROM THE FINISHED FLOOR.
19. ELECTRICAL DRAWINGS ARE DIAGRAMMATIC AND ALTHOUGH THE SIZE AND LOCATIONS OF EQUIPMENT IS SHOWN TO SCALE WHEREVER POSSIBLE, CONTRACTOR SHALL MAKE USE OF MANUFACTURER'S OR OWNER'S DATA AVAILABLE AND/OR VERIFY DATA IN THE FIELD FOR PROVIDING AND INSTALLING CORRECT CABLE LENGTHS.
20. ALL EQUIPMENT MUST BE LISTED, LABELED, OR CERTIFIED BY A NATIONAL RECOGNIZED TESTING LABORATORY (NRTL).
21. ELECTRICAL CONTRACTOR SHALL COORDINATE WITH ALL TRADES TO KEEP ELECTRICAL ROOMS EXCLUSIVELY DEDICATED TO PANELBOARDS, SIGNAL AND OTHER ELECTRICAL EQUIPMENT. NO PLUMBING, PIPING OR MECHANICAL DUCTS SHALL RUN OVER ELECTRICAL PANEL OR OTHER ELECTRICAL EQUIPMENT PER C.E.C. 110-26(f).
22. ALL SWITCHES AND RECEPTACLES SHALL BE PROVIDED WITH 'BROTHER' LABELING SYSTEM TO IDENTIFY THE PANEL AND CIRCUIT NUMBER OF EACH OUTLET. COLOR TO BE 3/8" HIGH BLACK ON TRANSPARENT TAPE.
23. ALL CABINETS, DISCONNECT SWITCHES, PULLBOXES, AND TERMINAL BOXES SHALL BE PROVIDED WITH LABELING SYSTEM TO IDENTIFY THE PANEL AND ITS USE. SEE SPECIFICATIONS FOR REQUIREMENTS.
24. MAINTAIN "AS-BUILT" RECORDS AT ALL TIMES, SHOWING EXACT LOCATION OF ALL UNDERGROUND AND/OR CONCEALED CONDUITS AND SERVICES INSTALLED UNDER THIS CONTRACT, INCLUDING CIRCUIT IDENTIFICATION WHERE APPLICABLE. PROVIDE OWNER WITH "AS-BUILT" DOCUMENTS AS INDICATED IN THE PROJECT MANUAL.
25. DRAWINGS INDICATE THE LOCATION OF DEVICES, FIXTURES AND EQUIPMENT AND THE CIRCUIT NUMBER AND PANEL DESIGNATION WHICH SUPPLIES THEM. THE CONTRACTOR SHALL VERIFY WITH ARCHITECT/VENDORS AND COORDINATE ALL LOCATIONS PRIOR TO INSTALLATION. CONTRACTOR SHALL BE RESPONSIBLE FOR COMPLETELY CONNECTING ALL ELECTRICAL DEVICES TO CIRCUITS INDICATED ON THE DRAWINGS.
26. ALL EQUIPMENT GROUNDING SHALL CONFORM TO ARTICLE 250 OF THE NATIONAL ELECTRIC CODE, LATEST EDITION.
27. ALL EXTERIOR CONDUIT ABOVE GRADE INCLUDING ALL ROOF MOUNTED CONDUIT, SHALL BE RIGID GALVANIZED STEEL, U.O.N. COAT ALL EXPOSED THREADS WITH GALVANIZING PAINT.
28. ALL CONDUIT SHALL BE CONCEALED, UNLESS OTHERWISE NOTED.
29. ALL UNDERGROUND CONDUIT RUNS SHALL BE SEALED TO PREVENT GAS/MOISTURE ENTERING THE PIPE PER ARTICLE 230-8, 300.5 AND 300.50E.
30. PROVIDE EXPANSION FITTINGS AND/OR CONDUIT FLEX TO CONDUITS PASSING THROUGH STRUCTURAL EXPANSION JOINT SYSTEM. VERIFY/COORDINATE WITH ARCHITECT FOR LOCATION.
31. ALL SIGNAL WIRING/CABLING (TELEPHONE/INTERCOM/DATA/FIRE ALARM/CATV/INTRUSION ALARM SYSTEMS) SHALL BE NEATLY TERMINATED WITH TERMINAL BLOCKS AND LABELED WITH WIRE MARKERS AT ITS CABINETS/PANELS.
32. ALL RACEWAY PASSING THROUGH EXPANSION JOINT AREA SHALL BE PROVIDED WITH EXPANSION JOINT FITTINGS AND/OR FLEX CONDUIT AS REQUIRED.
33. ALL FIXTURES WITH EMERGENCY BATTERY PACK SHALL BE PROVIDED WITH UNSWITCHED HOT.
34. ALL EXTERIOR MOUNTED GFI RECEPTACLE OUTLETS TO BE PROVIDED WITH LOCKABLE COVERS, TAYMAC MX3200.
35. FOR POWER AND LIGHTING CIRCUITS, CONTRACTOR SHALL PROVIDE SEPARATE NEUTRAL FOR EACH CIRCUIT IN THE RACEWAY OR PROVIDE BREAKER TIES TO MEET NEC CODE 210.4.
36. ALL EQUIPMENT/COMPONENTS/DEVICES INSTALLED OUTDOOR SHALL BE U.L. LISTED FOR WET LOCATION.
37. THE CONTRACTOR SHALL PAY FOR ALL REQUIRED PERMITS AND INSPECTION FEES.
38. THE CONTRACTOR SHALL VERIFY WITH THE ARCHITECTURAL DRAWINGS ALL LOCATIONS AND DIMENSIONS OF DEVICES/EQUIPMENT PRIOR TO ROUGH-IN.
39. ALL EXIT SIGNS SHALL COMPLY WITH SECTIONS 1019 OF THE C.B.C.
40. ALL DIVISION 15 EQUIPMENT LOW VOLTAGE CONTROL WIRING SHALL BE PROVIDED AND INSTALLED BY DIVISION 15 U.O.N. PROVIDE CONDUIT WHERE REQUIRED BY DIV 25.
41. COORDINATE INSTALLATION OF ALL RECESSED LIGHT FIXTURES WITH DIVISION 15 PRIOR TO INSTALLATION OF HVAC DUCTS AND SPRINKLER HEADS. ENSURE AFTER INSTALLATION OF FIXTURES THAT THERE IS NO CONTACT BETWEEN DUCTS AND FIXTURES TO AVOID VIBRATION IN FIXTURES.
42. ALL CONDUIT STUB OUTS AND CONDUITS TERMINATING TO A J-BOX, CABINET, AND THE LIKE SHALL BE PROVIDED WITH INSULATED THROAT. BOX OR CABINET COVER SHALL BE LABELED AS TO USE.
43. MEP COMPONENT ANCHORAGE NOTES:

ALL MECHANICAL, PLUMBING, AND ELECTRICAL COMPONENTS SHALL BE ANCHORED AND INSTALLED PER THE DETAILS ON THE DSA APPROVED CONSTRUCTION DOCUMENTS. WHERE NO DETAIL IS INDICATED, THE FOLLOWING COMPONENTS SHALL BE ANCHORED OR BRACED TO MEET THE FORCE AND DISPLACEMENT REQUIREMENTS PRESCRIBED IN THE 2019 CBC, SECTIONS 1616A.1.23 THROUGH 1616A.1.26 AND ASCE 7-10 CHAPTER 13, 26 AND 30.

1. ALL PERMANENT EQUIPMENT AND COMPONENTS.
2. TEMPORARY OR MOVABLE EQUIPMENT THAT IS PERMANENTLY ATTACHED (E.G. HARD WIRED) TO THE BUILDING UTILITY SERVICES SUCH AS ELECTRICITY, GAS OR WATER.
3. MOVABLE EQUIPMENT WHICH IS STATIONED IN ONE PIECE FOR MORE THAN 8 HOURS AND HEAVIER THAN 400 POUNDS ARE REQUIRED TO BE ANCHORED WITH TEMPORARY ATTACHMENTS.

THE FOLLOWING MECHANICAL AND ELECTRICAL COMPONENTS SHALL BE POSITIVELY ATTACHED TO THE STRUCTURE, BUT THE ATTACHMENT NEED NOT BE DETAILED ON THE PLANS. THESE COMPONENTS SHALL HAVE FLEXIBLE CONNECTIONS PROVIDED BETWEEN THE COMPONENT AND ASSOCIATED DUCTWORK, PIPING AND CONDUIT.

- A. COMPONENTS WEIGHING LESS THAN 400 POUNDS AND HAVE A CENTER OF MASS LOCATED 4 FEET OR LESS ABOVE THE ADJACENT FLOOR OR ROOF LEVEL THAT DIRECTLY SUPPORT THE COMPONENT
- B. COMPONENTS WEIGHING LESS THAN 20 POUNDS OR IN THE CASE OF DISTRIBUTED SYSTEMS, LESS THAN 5 POUNDS PER FOOT, WHICH ARE SUSPENDED FROM A ROOF OR FLOOR OR HUNG FROM A WALL

FOR THOSE ELEMENTS THAT DO NOT REQUIRE DETAILS ON THE APPROVED DRAWINGS, THE INSTALLATION SHALL BE SUBJECT TO THE APPROVAL OF THE DESIGN PROFESSIONAL IN GENERAL RESPONSIBLE CHARGE OR STRUCTURAL ENGINEER DELEGATED RESPONSIBILITY AND THE DSA DISTRICT STRUCTURAL ENGINEER. THE PROJECT INSPECTOR WILL VERIFY THAT ALL COMPONENTS AND EQUIPMENT HAVE BEEN ANCHORED IN ACCORDANCE WITH ABOVE REQUIREMENTS.

PIPING, DUCTWORK, AND ELECTRICAL DISTRIBUTION SYSTEM BRACING NOTE

PIPING, DUCTWORK AND ELECTRICAL DISTRIBUTION SYSTEMS SHALL BE BRACED TO COMPLY WITH THE FORCES AND DISPLACEMENTS PRESCRIBED IN ASCE 7-10 SECTION 13.3 AS DEFINED IN ASCE 7-10 SECTION 13.6.5.6, 13.6.7, 13.6.8 AND 2019 CBC, SECTIONS 1616A.1.23, 1616A.1.24, 1616A.1.25 AND 1616A.1.26.

THE METHOD OF SHOWING BRACING AND ATTACHMENTS TO THE STRUCTURE FOR THE IDENTIFIED DISTRIBUTION SYSTEM ARE AS NOTED BELOW. WHEN BRACING AND ATTACHMENTS ARE BASED ON A PREAPPROVED INSTALLATION GUIDE (E.G. SMACNA OR OSHD OPM), COPIES OF THE BRACING SYSTEM INSTALLATION GUIDE OR MANUAL SHALL BE AVAILABLE ON THE JOBSITE PRIOR TO THE START OF AND DURING THE HANGING AND BRACING OF THE DISTRIBUTION SYSTEMS. THE STRUCTURAL ENGINEER OF RECORD SHALL VERIFY THE ADEQUACY OF THE STRUCTURE TO SUPPORT THE HANGER AND BRACE LOADS.

MECHANICAL PIPING (MP), MECHANICAL DUCTS (MD), PLUMBING PIPING (PP), ELECTRICAL DISTRIBUTION SYSTEMS (E):

MP □ MD □ PP □ E □ - OPTION 1: DETAILED ON THE APPROVED DRAWINGS WITH PROJECT SPECIFIC NOTES AND DETAILS.

MP □ MD □ PP □ E □ - OPTION 2: SHALL COMPLY WITH THE APPLICABLE OSHD PRE-APPROVAL (OPM #) #0043-13, 0052-13, 0063-13.

ELECTRICAL SYMBOL LIST

NOTE: DASHED SYMBOLS ON PLANS DENOTE EXISTING DEVICES

	LIGHT FIXTURE - SEE FIXTURE SCHEDULE	(E)	EXISTING
	EMERGENCY LIGHT FIXTURE WITH BATTERY BACK - SEE FIXTURE SCHEDULE	(N)	NEW
	WALL MOUNTED LIGHT FIXTURE - SEE FIXTURE SCHEDULE	AL	ALUMINUM
	EXIT SIGN - WALL OR CEILING MOUNT WITH DIRECTIONAL ARROWS WHERE INDICATED SEE FIXTURE SCHEDULE	ANN	ANNUNCIATOR
	EMERGENCY LIGHT FIXTURE - SEE FIXTURE SCHEDULE	CL	CENTERLINE
	1ST LIGHT SWITCH +48" U.O.N.	CR	CLASSROOM
	3-WAY LIGHT SWITCH, +48" TO TOP OF BOX U.O.N.	CU	COPPER
	4-WAY LIGHT SWITCH, +48" TO TOP OF BOX U.O.N.	FACP	FIRE ALARM CONTROL PANEL
	KEYED LIGHT SWITCH +48" TO TOP OF BOX U.O.N.	FATC	FIRE ALARM TERMINAL CABINET
	1PST LIGHT SWITCH WITH PILOT LIGHT, +48" TO TOP OF BOX U.O.N.	GFI	GROUND FAULT INTERRUPTER
	CEILING MOUNT DUAL TECHNOLOGY OCCUPANCY SENSOR, WATTSTOPPER LMDC-100	GFP	GROUND FAULT PROTECTION
	CEILING MOUNT PHOTO SENSOR, WATTSTOPPER LMLS-400	IDF	INTERMEDIATE DISTRIBUTION FRAME
	LIGHTING CONTROLLER WITH DAYLIGHTING, SEE LIGHTING DETAILS	IG	ISOLATED GROUND
	LIGHTING CONTROLLER WITHOUT DAYLIGHTING, SEE SEE LIGHTING DETAILS	IGB	ISOLATED GROUND BUS
	DIMMING SWITCH, WATTSTOPPER #LMSW-SERIES, +48" TO TOP OF BOX	MDF	MAIN DISTRIBUTION FRAME
	MULTI-SCENE DIMMING SWITCH, WATTSTOPPER	MT	EMPTY CONDUIT WITH PULL CORD
	WALL MOUNT OCCUPANCY SENSOR, +48" TO TOP OF BOX	PB	PULL BOX
	DIMMING SWITCH WITH OCC SENSOR, LUTRON MS-Z101-XX	RPS	REMOTE POWER SUPPLY
	20A, 125V, 3W GROUNDING TYPE DUPLEX RECEPTACLE, +18" U.O.N.	SAD	SEE ARCHITECTURAL DRAWINGS
	20A, 125V, 4W DUPLEX RECEPTACLE, CEILING MOUNTED	STC	SIGNAL TERMINAL CABINET
	20A, 125V, 3W GROUNDING TYPE, FOURPLEX RECEPTACLE, +18" U.O.N.	TMGB	TELECOMMUNICATIONS MAIN GROUNDING BUS BAR
	20A, 125V, 3W GROUNDING TYPE DUPLEX RECEPTACLE, MOUNTED HORIZONTALLY	TTB	TELEPHONE TERMINAL BOARD
	20A, 125V DUPLEX GFI RECEPTACLE, +18" U.O.N.	WP	WEATHERPROOF
	20A, 125V DUPLEX GFI RECEPTACLE WITH ONE SWITCHED PLUG	UG	UNDERGROUND
	SPECIAL RECEPTACLE AS REQUIRED BY EQUIPMENT SPECIFIED	U.O.N.	UNLESS OTHERWISE NOTED
	JUNCTION BOX, CEILING OR WALL MOUNTED - SIZED PER CODE	VIF	VERIFY IN FIELD
	DATA DROP AND CAT 6A CABLE FOR SECURITY CAMERA. WP INDICATES WEATHERPROOF	XFMR	TRANSFORMER
	DUPLEX DATA OUTLET +18" U.O.N.		FIXTURE TAG - LETTER DENOTES TYPE, NUMBERS INDICATE LAMP QUANTITY AND WATTAGE
	FOURPLEX OUTLET +18" U.O.N.		NUMBERED ELECTRICAL NOTE
	TELEPHONE OUTLET +48" TO TOP OF BOX		MECHANICAL TAG - LETTER DENOTES TYPE, NUMBER DENOTES EQUIPMENT NUMBER
	WIRELESS ACCESS POINT		
	INTRUSION ALARM KEYPAD BACKBOX WITH 3/4" CONDUIT AND CABLE TO IACP LOCATION		
	INTRUSION ALARM MOTION SENSOR BACKBOX WITH 3/4" CONDUIT AND CABLE TO IACP LOCATION		
	INTRUSION ALARM DOOR CONTRACT WITH 3/4" CONDUIT AND CABLE TO IACP LOCATION		
	INTERCOM SYSTEM CLOCK/SPEAKER UNIT		
	PAGING SPEAKER - CEILING OR WALL MOUNTED		
	FIRE ALARM CONTROL PANEL (FACP)		
	FIRE ALARM REMOTE POWER SUPPLY		
	FIRE ALARM MANUAL PULL STATION, +48" TO TOP OF BOX, U.O.N.		
	FIRE ALARM SMOKE DETECTOR		
	200° FIXED HEAT DETECTOR		
	135° FIXED HEAT DETECTOR		
	DUCT SMOKE DETECTOR		
	CARBON MONOXIDE DETECTOR		
	FLOW SWITCH		
	TAMPER SWITCH		
	FIRE ALARM SPEAKER/STROBE, CANDELA AS NOTED		
	FIRE ALARM SPEAKER WITH WEATHER PROOF BACK BOX		
	FIRE ALARM STROBE, CANDELA AS NOTED		
	ADDRESSABLE MONITOR MODULE		
	ADDRESSABLE CONTROL RELAY		
	END OF LINE RESISTOR		
	ISOLATED GROUND BUS		
	DISCONNECT SWITCH - FUSED AS REQUIRED, WEATHERPROOF FOR OUTDOORS, SIZED PER MANUFACTURER'S REQUIREMENTS		
	MOTOR CONNECTION		
	THERMAL OVERLOAD SWITCH		
	MANUAL MOTOR STARTING SWITCH, HORSE POWER RATED WITH OVERLOADS		
	EXISTING CONDUIT		
	BRANCH CIRCUIT CONDUIT CONCEALED IN WALL OR CEILING		
	BRANCH CIRCUIT CONDUIT CONCEALED UNDER FLOOR OR UNDERGROUND		
	HOMERUN TO PANELBOARD OR OTHER TERMINATION POINT		
	STUB CONDUIT TO ACCESSIBLE SPACE		
	CONDUIT UP		
	CONDUIT DOWN		
	ANY BRANCH CIRCUIT CONDUIT SHALL BE MINIMUM 3/4" C - 2#12, 1#12 GREEN GROUND UNLESS OTHERWISE NOTED. FOR A GREATER NUMBER OF #12 WIRES: (— 1#4" C - 3#12, 1#12G) ETC. FOR WIRE SIZES OTHER THAN #12: (— 1#4" C - 1#12G), (GROUND SIZED PER CEC, IN CODE SIZE CONDUIT) ETC.		



No.	Revisions	By	Date	Appr.
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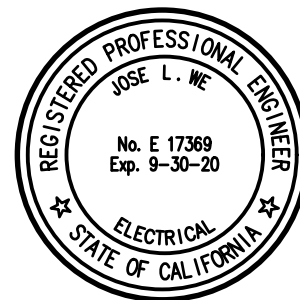
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2425 WALNUT BOULEVARD, WALNUT
CREEK, CA 94597

Project

MODERNIZATION AND
RECONFIGURATION PROJECT
INCREMENT II

Sheet Title

ELECTRICAL SYMBOLS, NOTES AND
SCHEDULES

Client Project Number: Client Proj. #

Scale: AS NOTED

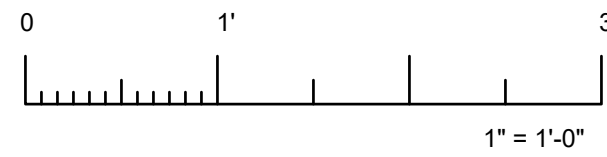
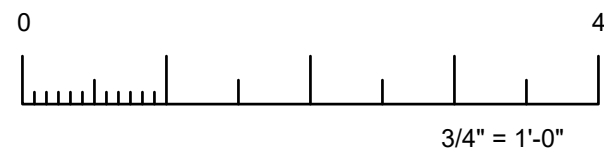
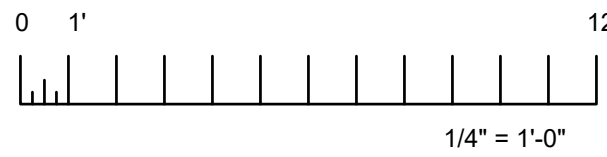
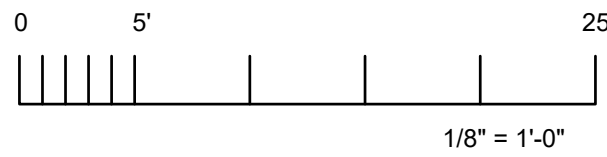
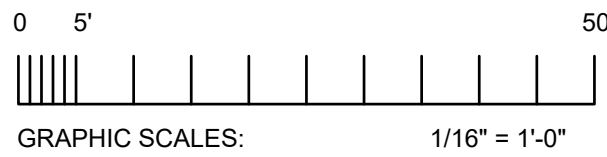
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Sheet 93 of 128



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NEW PANEL 2A												BLDG 100		
DESCRIPTION	LOAD (KVA)				CB	CKT	SN	CKT	CB	LOAD (KVA)				DESCRIPTION
	LTG.	REC.	RES.	MOT.						LTG.	REC.	RES.	MOT.	
RECEPTS - CR 101		0.72			201	1	*	2	201		0.72			RECEPTS - CR 106
RECEPTS - CR 101		0.72			201	3	*	4	201		0.72			RECEPTS - CR 106
RECEPTS - CR 101		0.72			201	5	*	6	201		0.72			RECEPTS - CR 106
RECEPTS - CR 101		0.72			201	7	*	8	201		0.72			RECEPTS - CR 106
RECEPTS - CR 102		0.72			201	9	*	10	201		0.72			RECEPTS - CR 107
RECEPTS - CR 102		0.72			201	11	*	12	201		0.72			RECEPTS - CR 107
RECEPTS - CR 102		0.72			201	13	*	14	201		0.72			RECEPTS - CR 107
RECEPTS - CR 102		0.72			201	15	*	16	201		0.72			RECEPTS - CR 107
RECEPTS - CR 103		0.72			201	17	*	18	201		0.72			RECEPTS - CR 108
RECEPTS - CR 103		0.72			201	19	*	20	201		0.72			RECEPTS - CR 108
RECEPTS - CR 103		0.72			201	21	*	22	201		0.72			RECEPTS - CR 108
RECEPTS - CR 103		0.72			201	23	*	24	201		0.72			RECEPTS - CR 108
RECEPTS - CR 104		0.72			201	25	*	26	201		0.72			RECEPTS - AI21
RECEPTS - CR 104		0.72			201	27	*	28	201		0.72			RECEPTS - AI20
RECEPTS - CR 104		0.72			201	29	*	30	201		0.72			RECEPTS - AI19
RECEPTS - CR 104		0.72			201	31	*	32	201		0.72			RECEPTS - AI08
RECEPTS - RECORDS CORRIDOR		0.54			201	33	*	34	201		0.72			RECEPTS - AI18 122
RECEPTS - CONF A111		0.72			201	35	*	36	201		0.72			RECEPTS - AI07
RECEPTS - RECEPTION A101		0.54			201	37	*	38	201		0.72			RECEPTS - AI06
RECEPTS - LOBBY		0.54			201	39	*	40	201		0.72			RECEPTS - AI05
RECEPTS - AI02		0.54			201	41	*	42	201		0.72			RECEPTS - AI04
RECEPTS - NURSE		0.54			201	43	*	44	201					SPARE
RECEPTS - COPIER		1.20			201	45	*	46	201					SPARE
RECEPTS - COPIER		1.20			201	47	*	48	201					SPARE
RECEPTS - COPIER		1.20			201	49	*	50	201					SPARE
RECEPTS - WORKROOM		0.36			201	51	*	52	201					SPARE
SPARE					201	53	*	54	201					SPARE
SPARE					201	55	*	56	201					SPARE
SPARE					201	57	*	58	201					SPARE
SPARE					201	59	*	60	201					SPARE
SPARE					201	61	*	62	201					SPARE
SPARE					201	63	*	64	201					SPARE
SPARE					201	65	*	66	201					SPARE
SPARE					201	67	*	68	201					SPARE
SPARE					201	69	*	70	201					SPARE
SPARE					201	71	*	72	201					SPARE
LTG - CR 107	0.60				201	73	*	74	201	0.60				LTG - CR 104
LTG - CR 108	0.60				201	75	*	76	201	0.60				LTG - CR 103
LTG - CR 102	0.60				201	77	*	78	201	0.60				LTG - CR 108
LTG - CR 101	0.60				201	79	*	80	201	0.60				LTG - COUNSEL OFFICES
LTG - EXTERIOR					201	81	*	82	201	0.90				LTG - AI02-AI04 CORRIDOR
LTG - EXTERIOR					201	83	*	84	201	0.90				LTG - LOBBY, TOILETS, BREAK, CONF
TOTAL		2.40	18.90							4.50	15.12			
VOLTS:	120/208V, 3ø, 4W													
BUS:	150 AMP													CONNECTED KVA: 40.92
MAIN:	150 AMP													CONNECTED AMPS: 113.67

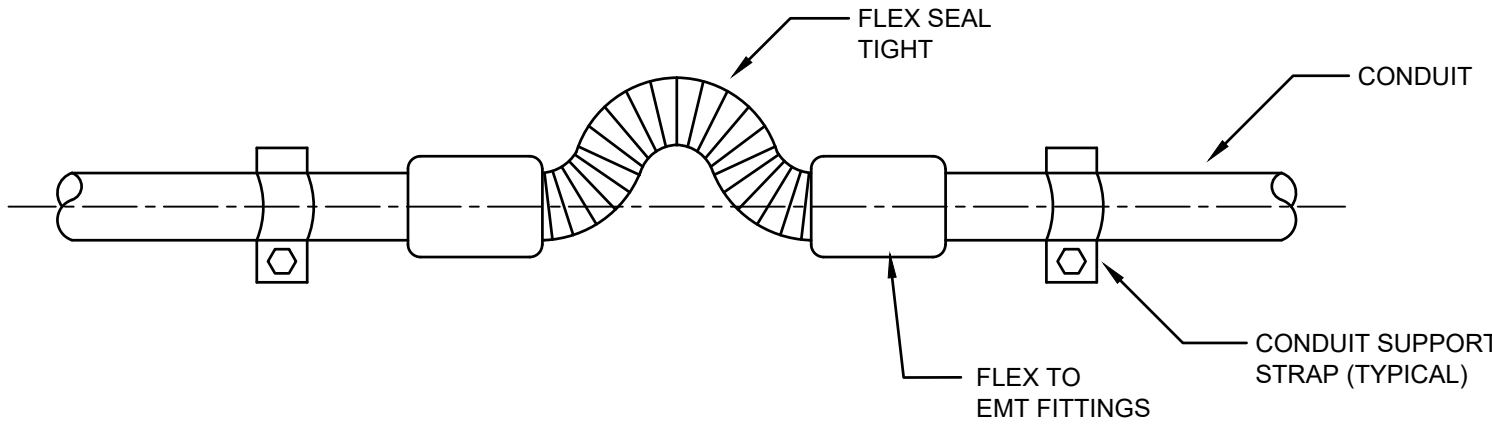
NEW PANEL 2B														BLDG 100	
DESCRIPTION	LOAD (KVA)								LOAD (KVA)				DESCRIPTION		
	LTG.	REC.	RES.	MOT.	CB	CKT	SN	CKT	LTG.	REC.	RES.	MOT.			
SPARE					201	1	*	2	201					F-108	
SPARE					201	3	*	4	201					F-107B	
SPARE					201	5	*	6	201					F-107A	
SPARE					201	7	*	8	201					F-104	
SPARE					201	9	*	10	201					F-103	
SPARE					201	11	*	12	201					F-102	
SPARE					201	13	*	14	201					F-101	
SPARE					201	15	*	16	201					SPARE	
SPARE					201	17	*	18	201					SPARE	
SPARE					201	19	*	20	201					SPARE	
SPARE					201	21	*	22	201					SPARE	
SPARE					201	23	*	24	402						
SPARE					201	25	*	26					4.68	CU-107A	
CU-108				4.68	402	28	*	30	402					4.68	CU-101
CU-104				4.68	402	31	*	32	402					4.68	CU-102
CU-103				4.68	402	33	*	34							SPACE
								35	36						
								37	38						
CU-107B				4.68	402	39	*	40	1003			30.00			PANEL 2B1
								41	42						
TOTAL								18.72				40.36	14.04		
VOLTS: 120/208V, 3ø, 4W		MTG: SURFACE													
BUS: 250		TYPE: _____													
MAIN: 250 AMP MB		KAIC: _____													
										CONNECTED KVA: 73.12					
										CONNECTED AMPS: 203.11					

NEW PANEL 2B1														BLDG 100	
DESCRIPTION	LOAD (KVA)								LOAD (KVA)						DESCRIPTION
	LTG.	REC.	RES.	MOT.	CB	CKT	SN	CKT	LTG.	REC.	RES.	MOT.			
SPARE					201	1	*	2	201					SPARE	
SPARE					201	3	*	4	201					SPARE	
SPARE					201	5	*	6	201					SPARE	
SPARE					201	7	*	8	201					SPARE	
SPARE					201	9	*	10	201					SPARE	
SPARE					201	11	*	12	201					SPARE	
SPARE					201	13	*	14	201					SPARE	
SPARE					201	15	*	16	201					SPARE	
SPARE					201	17	*	18	201					SPARE	
SPARE					201	19	*	20	201					SPARE	
SPARE					201	21	*	22	201					SPARE	
SPARE					201	23	*	24	201					SPARE	
SPARE					201	25	*	26	201					SPARE	
SPARE					201	27	*	28	201					SPARE	
SPARE					201	29	*	30	201					SPARE	
IWH-1				4.60	302	31	*	32			4.60			IWH-4	
						33	*	34							
IWH-2			4.60		302	35	*	36			4.60			IWH-5	
						37	*	38							
IWH-3			4.60		302	39	*	40	302		4.60			IWH-6	
						41	*	42							
TOTAL				13.80							13.80				
VOLTAGE: 120/208V, 3ø, 4W MTG: SURFACE															
BUS: TYPE:															
MAIN: KAC:															
CONNECTED KVA: 27.60										CONNECTED AMPS: 76.67					

NEW PANEL 1A														BLDG 200		
DESCRIPTION	LOAD (KVA)						CB	CKT	SN	CKT	CB	LOAD (KVA)				DESCRIPTION
	LTG.	REC.	RES.	MOT.								LTG.	REC.	RES.	MOT.	
RECEPTS - CR 204		0.72					201	1	*	2	201				0.72	RECEPTS - CR 207
RECEPTS - CR 204		0.72					201	3	*	4	201				0.72	RECEPTS - CR 207
RECEPTS - CR 204		0.72					201	5	*	6	201				0.72	RECEPTS - CR 207
RECEPTS - CR 204		0.72					201	7	*	8	201				0.72	RECEPTS - CR 207
RECEPTS - CR 210		0.72					201	9	*	10	201				0.72	RECEPTS - CR 208
RECEPTS - CR 210		0.72					201	11	*	12	201				0.72	RECEPTS - CR 208
RECEPTS - CR 210		0.72					201	13	*	14	201				0.72	RECEPTS - CR 208
RECEPTS - CR 210		0.72					201	15	*	16	201				0.72	RECEPTS - CR 208
RECEPTS - CR 210		0.72					201	17	*	18	201				0.72	RECEPTS - CR 209
RECEPTS - CR 210		0.72					201	19	*	20	201				0.72	RECEPTS - CR 209
RECEPTS - CR 210		0.72					201	21	*	22	201				0.72	RECEPTS - CR 209
RECEPTS - CR 210		0.72					201	23	*	24	201				0.72	RECEPTS - CR 209
RECEPTS - CR 210		0.72					201	25	*	26	201				0.72	RECEPTS - CR 201
RECEPTS - CR 212		0.72					201	27	*	28	201				0.72	RECEPTS - CR 201
RECEPTS - CR 212		0.72					201	29	*	30	201				0.72	RECEPTS - CR 201
RECEPTS - CR 212		0.72					201	31	*	32	201				0.72	RECEPTS - CR 201
RECEPTS - CR 212		0.72					201	33	*	34	201				0.72	RECEPTS - CR 202
RECEPTS - CR 212		0.72					201	35	*	36	201				0.72	RECEPTS - CR 202
RECEPTS - CR 212		0.72					201	37	*	38	201				0.72	RECEPTS - CR 202
RECEPTS - CR 212		0.72					201	39	*	40	201				0.72	RECEPTS - CR 202
RECEPTS - CR 212		0.72					201	41	*	42	201				0.72	RECEPTS - CR 203
RECEPTS - CR 212		0.72					201	43	*	44	201				0.72	RECEPTS - CR 203
RECEPTS - RESOURCE 200A		0.72					201	45	*	46	201				0.72	RECEPTS - CR 203
RECEPTS - RESOURCE 200B		0.72					201	47	*	48	201				0.72	RECEPTS - CR 203
RECEPTS - RESOURCE 205		0.36					201	49	*	50	201					SPARE
RECEPTS - RESOURCE 205		0.36					201	51	*	52	201					SPARE
RECEPTS - SPEECH		0.36					201	53	*	54	201					SPARE
SPARE							201	55	*	56	201					SPARE
SPARE							201	57	*	58	201					SPARE
SPARE							201	59	*	60	201					SPARE
SPARE							201	61	*	62	201					SPARE
SPARE							201	63	*	64	201					SPARE
SPARE							201	65	*	66	201					SPARE
SPARE							201	67	*	68	201					SPARE
SPARE							201	69	*	70	201					SPARE
SPARE							201	71	*	72	201					SPARE
LTG - CR 202	0.60						201	73	*	74	201	0.60				LTG - CR 204
LTG - CR 201	0.60						201	75	*	76	201	0.60				LTG - CR 203
LTG - CR 207	0.60						201	77	*	78	201	0.60				LTG - CR 209
LTG - CR 208	0.60						201	79	*	80	201	0.60				LTG - CR 210
LTG - EXTENSION	0.60						201	81	*	82	201	0.60				LTG - CR 212
LTG - EXTENSION	0.60						201	83	*	84	201	0.60				LTG - RESOURCE
TOTAL							3.60				18.36				4.50	17.28
VOLTS: 120/208V 3-W	MTG:						CONNECTED KVA: 43.74									
BUS: 150 AMP	TYPE:						CONNECTED AMPS: 121.50									
MAN: 150 AMP	KAIC:															

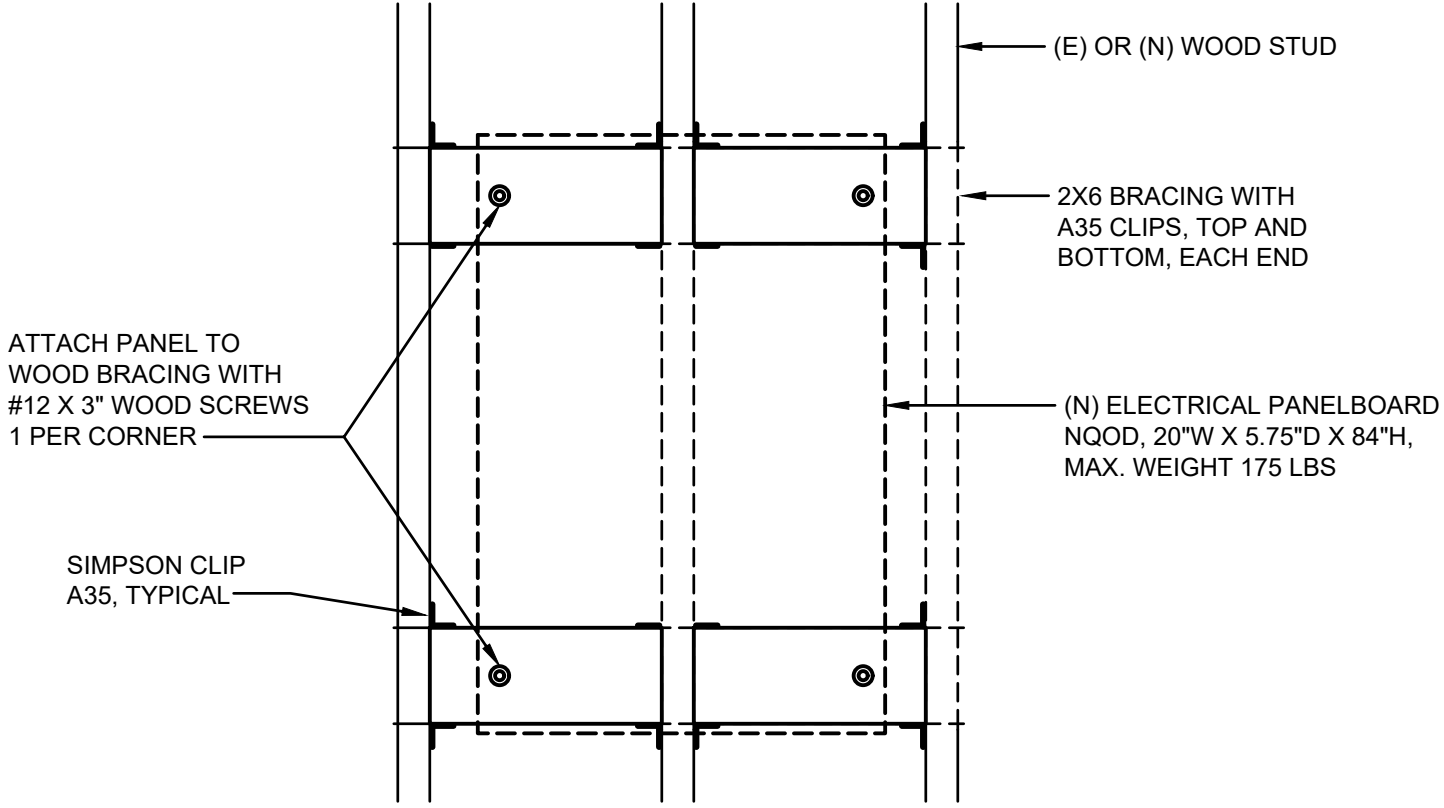


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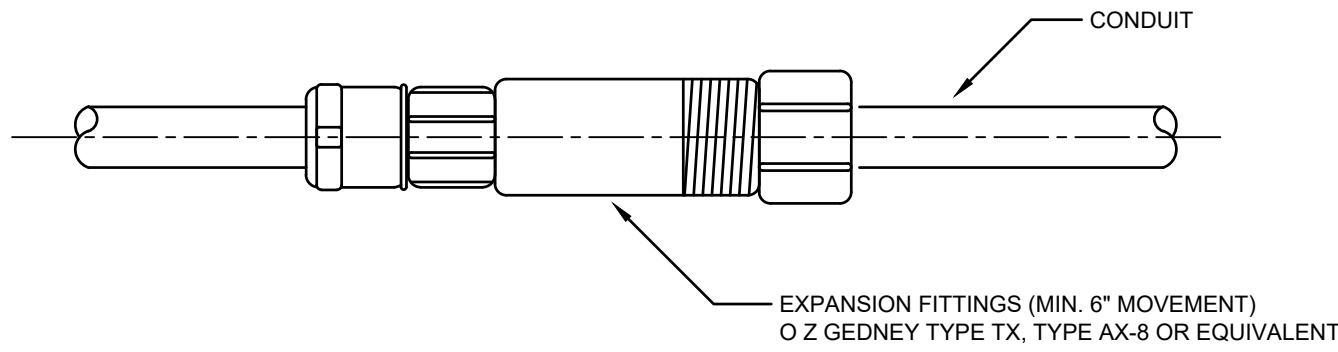
EXPOSED CONDUIT EXPANSION FITTING DETAIL - FLEX JOINT

NTS 8



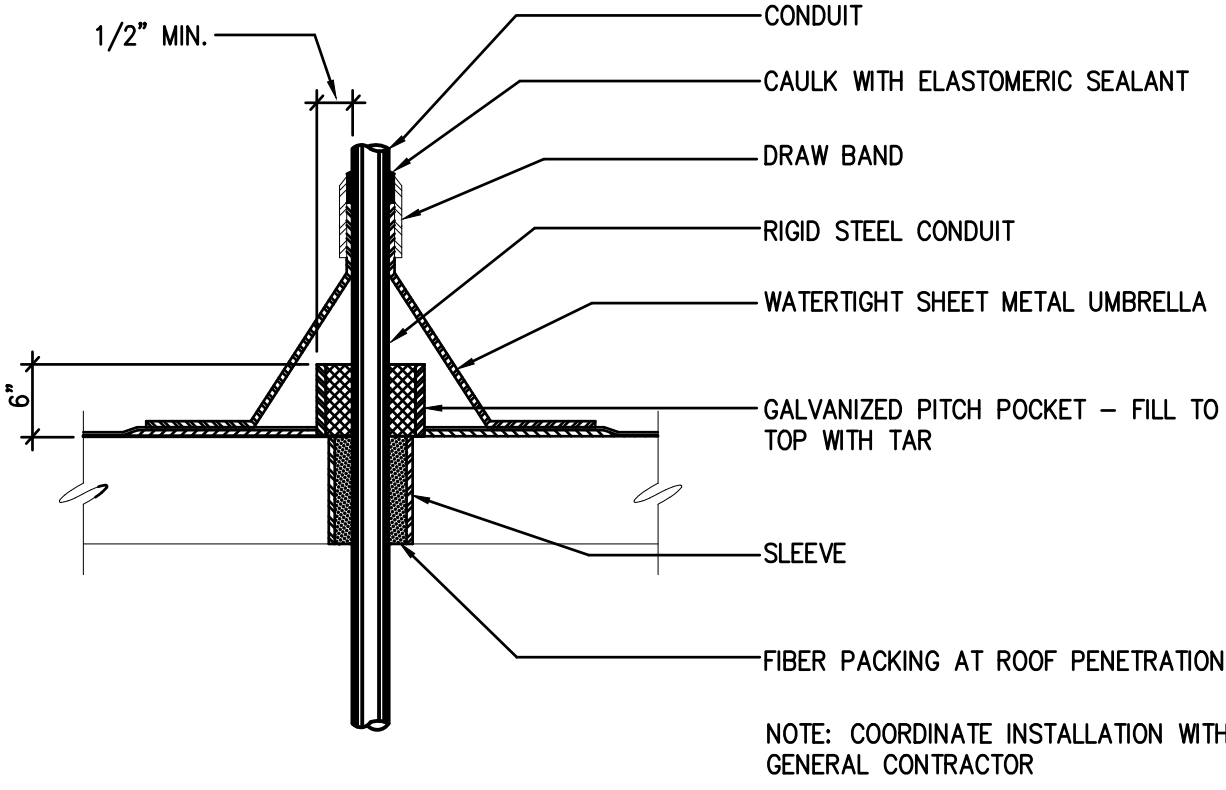
SURFACE PANELBOARD MOUNTING DETAIL - WOOD

NTS 4



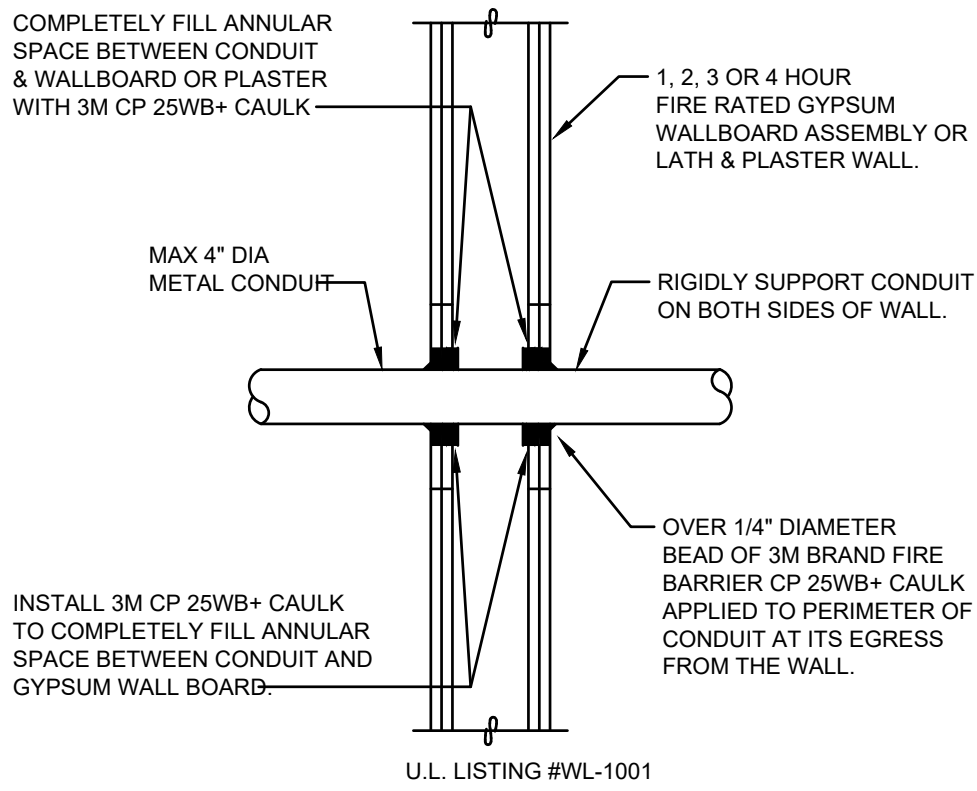
EXPOSED CONDUIT EXPANSION FITTING DETAIL - WALL

NTS 9



CONDUIT ROOF PENETRATION DETAIL

NTS 6



CONDUIT PENETRATION DETAIL - FIRE RATED WALL

NTS 7

NOT USED

NTS 1

NOT USED

NTS 5

NOT USED

NTS 10

NOT USED

NTS 2



Revisions				
No.	Revisions	By	Date	Appr.

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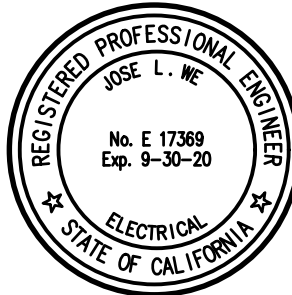
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HY ARCHITECTS JOB NUMBER 5241

Facility

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2425 WALNUT BOULEVARD, WALNUT
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Project

**MODERNIZATION AND
RECONFIGURATION PROJECT
INCREMENT II**

Sheet Title

ELECTRICAL DETAILS

Client Project Number: Client Proj. #

Scale: AS NOTED

Drawn By: DAM

Checked By: TLK

Issue Date: 7/22/20

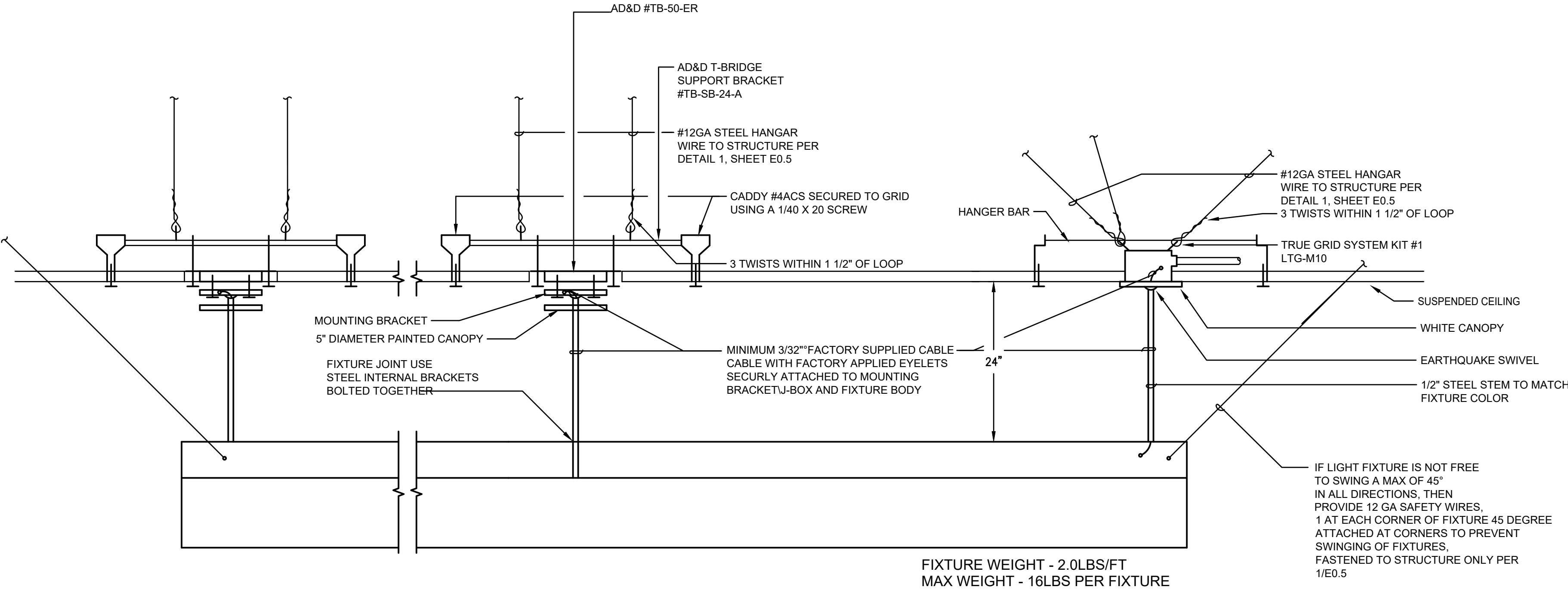
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SUSPENDED FIXTURE MOUNTING DETAIL - T-BAR

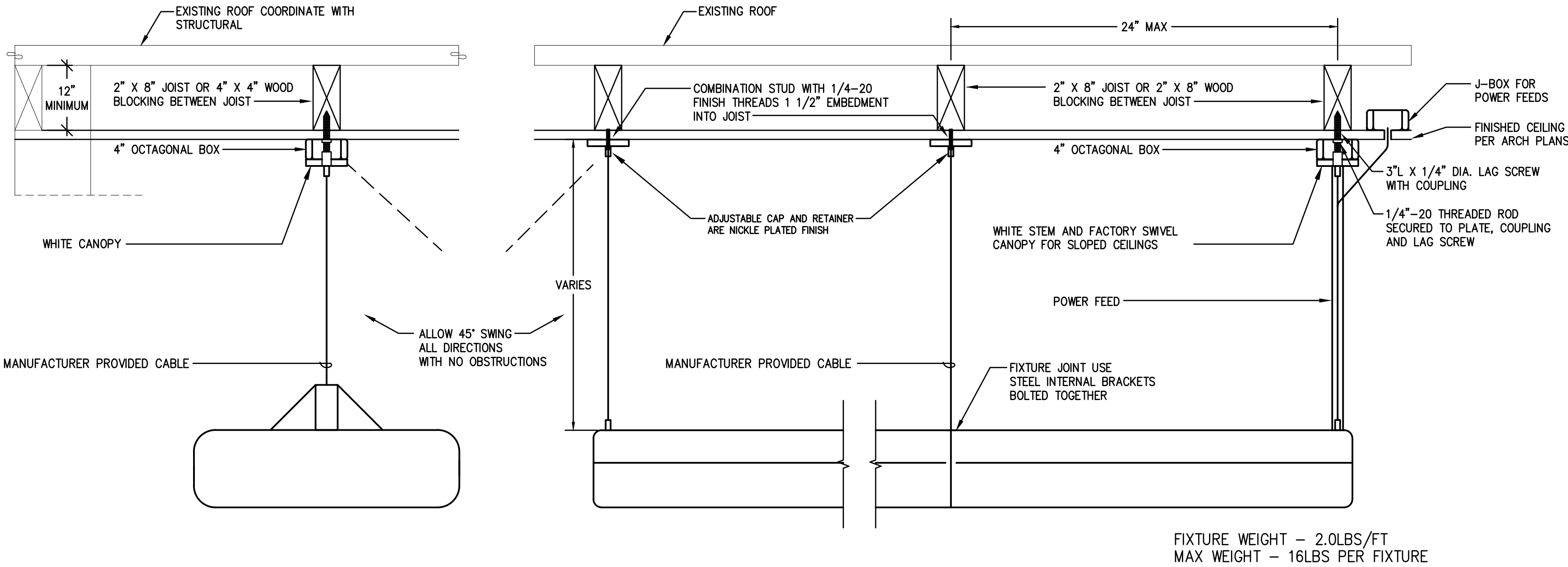
NTS

3

NOT USED

NTS

1



SUSPENDED FIXTURE MOUNTING DETAIL - GYP BD CEILING

NTS

2



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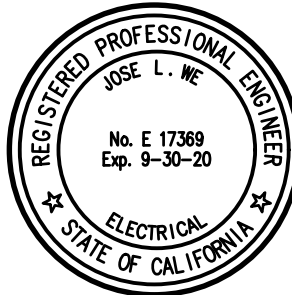
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Client Project Number: Client Proj. #

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Checked By: TLK

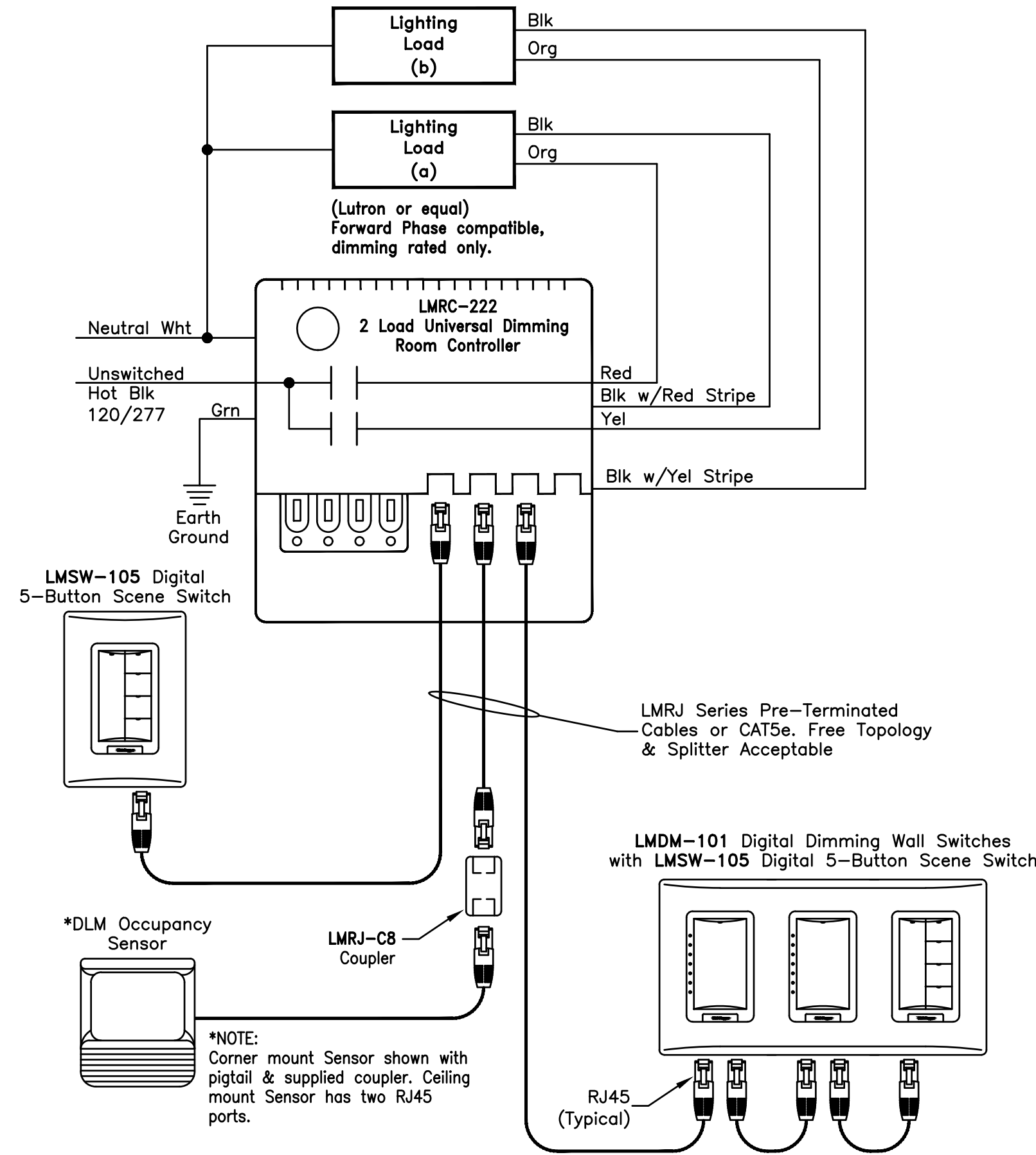
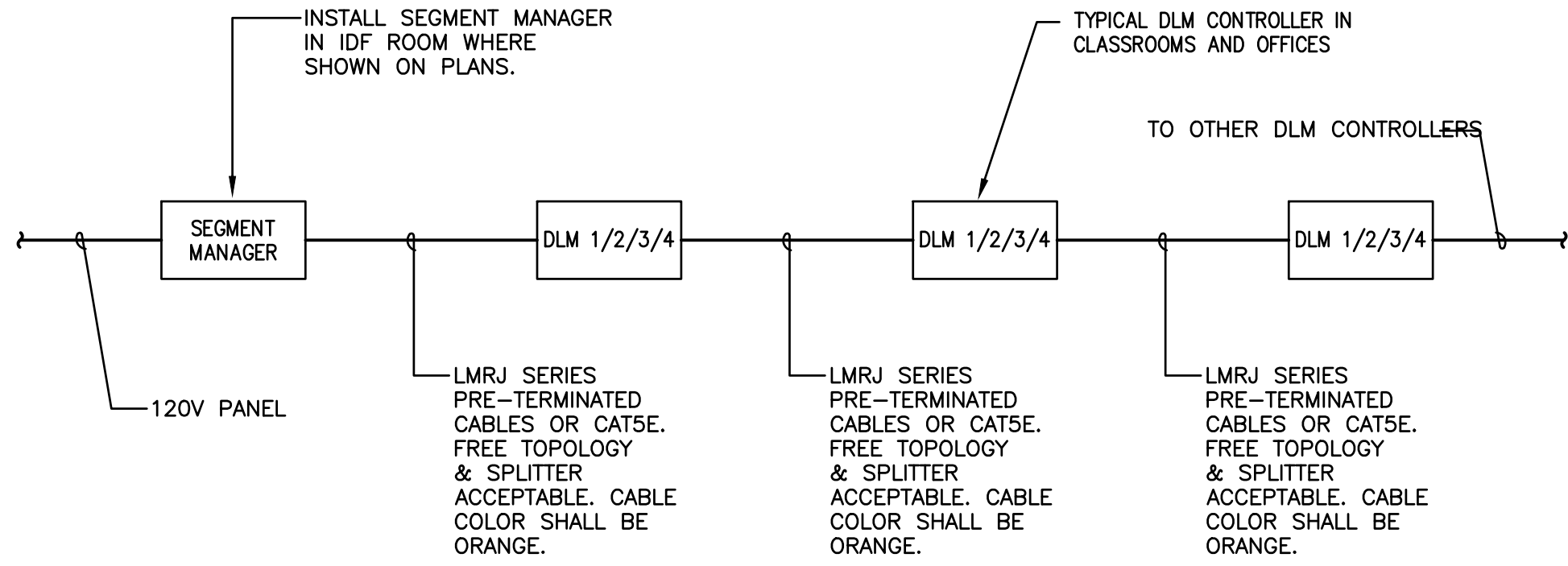
Issue Date: 7/22/20

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Sheet 98 of 128



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DEVICES ARE PRESET FOR PLUG n' GO™ OPERATION.
ADJUSTMENT IS OPTIONAL. Sequence of Operation: In this configuration the LMRC-222 defaults to multi-level automatic-on/automatic-off operation. Load (a) on the LMRC-222 turns on automatically, while Load (b) defaults to manual-on control; all relays turn off automatically. Enhanced room controllers support up to 64 loads and 48 devices per DLM local network. At system startup, default dimming parameters are established including: levels for presets 1-4; fade times; and fade and ramp rates. Dimming and system parameters may be customized. For full operational details, adjustments and more features of the product, see the DLM System Installation Guide at www.wattstopper.com

LMRC-222 Two Load Universal
Dimming Room Controller (3 Wire)

DLM3

OVERALL LOW VOLTAGE WIRING DIAGRAM

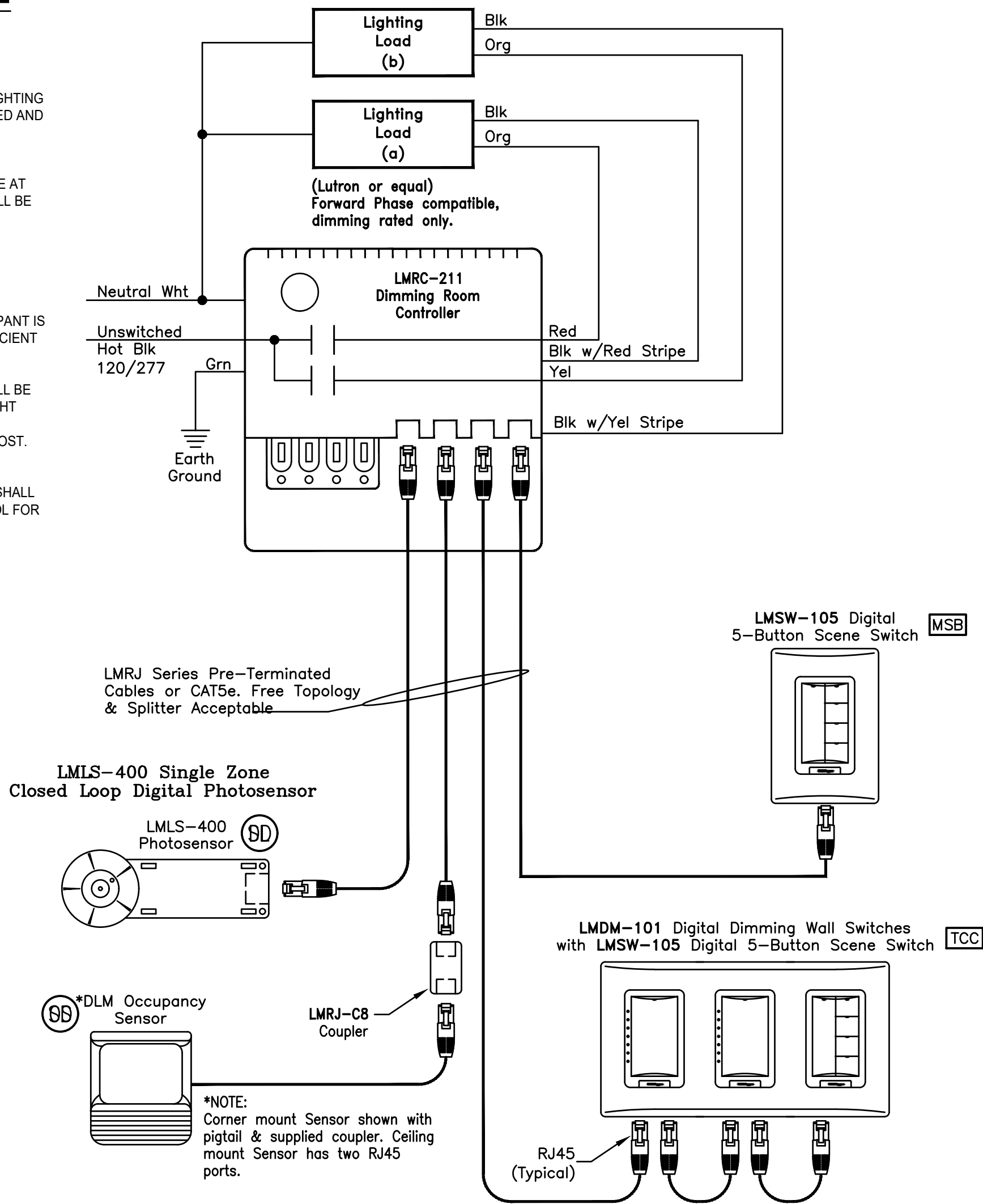
NTS 3

LIGHTING CONTROL WIRING DIAGRAM - NO DAYLIGHTING

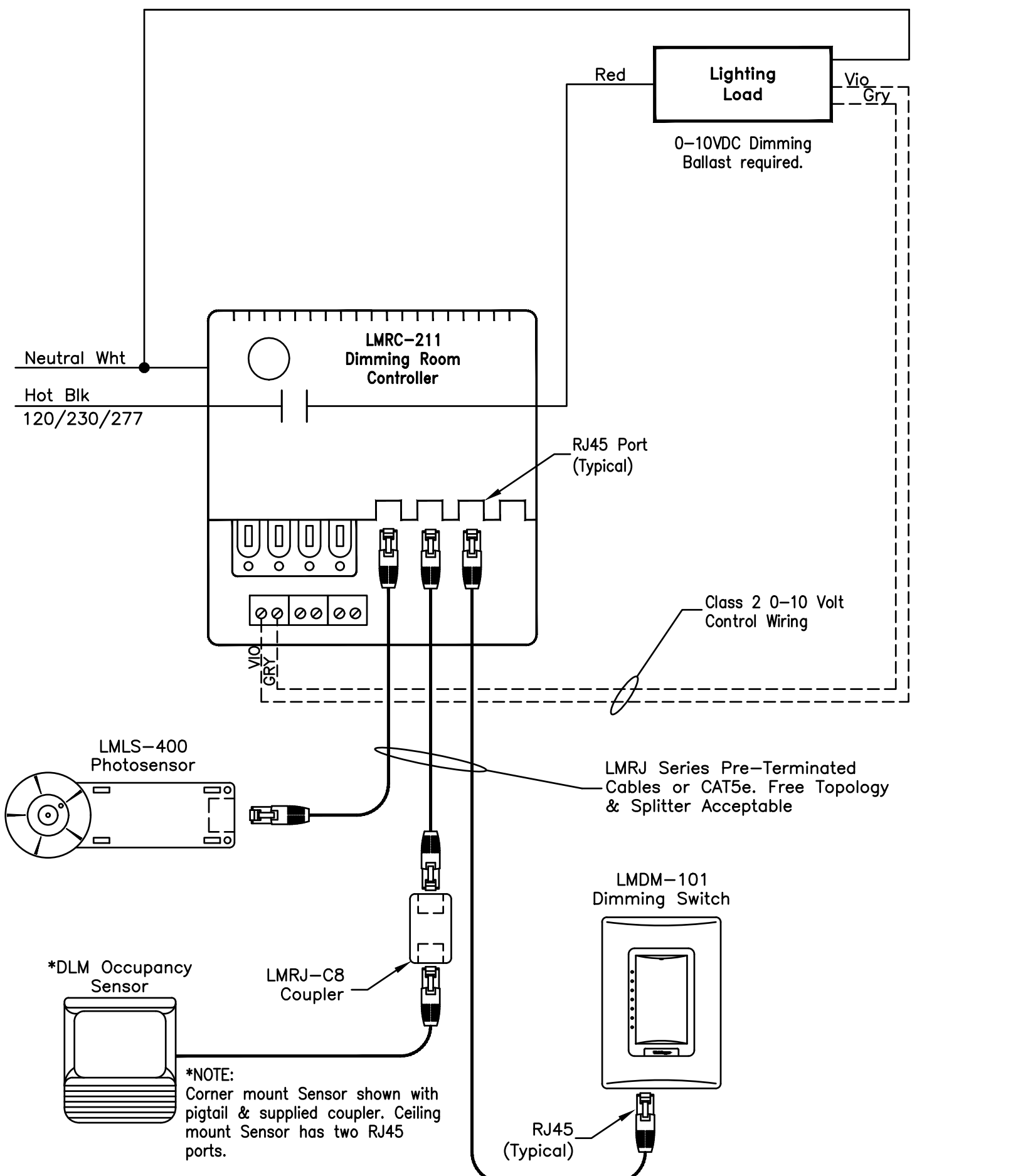
NTS 1

TYPICAL CLASSROOM LIGHTING CONTROL

1. EACH CLASSROOM IS TO BE PROVIDED WITH (2) OR (3) ROWS OF DIMMABLE LUMINAIRES AND WHITEBOARD LUMINAIRES.
2. FIXTURES UTILIZE LED DIMMING FOR GENERAL LIGHTING AND FOR 'AV' MODE OPERATION. THE AUTOMATIC LIGHTING CONTROLS INCLUDE INTEGRAL OCCUPANCY SENSORS THAT TURN ON AND OFF WHEN OCCUPANT IS DETECTED AND INTEGRAL CONTINUOUS DAYLIGHTING CONTROLS THAT AUTOMATICALLY DIM THE LIGHTS WHEN SUFFICIENT NATURAL DAYLIGHT IS MORE THAN THE FOOTCANDLE SET POINT.
3. FIXTURES CAN BE MANUALLY CONTROLLED WHEN ROOM IS OCCUPIED FOR GENERAL LIGHTING AND 'AV' MODE AT THE MAIN SWITCH BANK(MSB) AT THE MAIN ENTRANCE AND AT THE TEACHER CONTROL CENTER(TCC). IT SHALL BE CAPABLE OF MANUALLY DIMMING THE FIXTURES AT ANYTIME.
4. GENERAL LIGHTING SHALL UTILIZE UP AND DOWN LIGHTING IN FIXTURES FOR MAXIMUM OUTPUT.
5. WHITEBOARD LUMINAIRES SHALL BE CONTROLLED BY THE 'TCC' AT THE FRONT OF THE CLASSROOM.
6. THE AUTOMATIC LIGHTING CONTROLS INCLUDE OCCUPANCY SENSORS THAT TURN ON AND OFF WHEN OCCUPANT IS DETECTED AND CONTINUOUS DAYLIGHTING CONTROLS THAT AUTOMATICALLY DIMM THE LIGHTS WHEN SUFFICIENT NATURAL DAYLIGHT IS MORE THAN THE FOOTCANDLE SET POINT.
7. FOOTCANDLE LEVEL SHALL BE SET BETWEEN 35-50 FC PER THE DISTRICT REQUIREMENTS. CALIBRATION SHALL BE ACCOMPLISHED WITHOUT A LADDER AND WITHOUT ANY SPECIAL EQUIPMENT OTHER THAN AN ACCURATE LIGHT METER. NIGHTTIME LEVELS SHALL CLOSELY MATCH THE DAYTIME SETPOINTS. FINAL CALIBRATION SHALL BE PROVIDED BY AN AUTHORIZED REPRESENTATIVE OF FINELITE INC AND SHALL BE INCLUDED IN THE SYSTEM COST. CLOSED-LOOP CONTINUOUS DIMMING FOR DAYLIGHTING AND AV CONTROL.
8. THE CONTINUOUS DAYLIGHT DIMMING(CDD) SHALL MEASURE LIGHT AT WORKPLANE WITHIN A 60° CONE AND SHALL MAINTAIN A CONSTANT LIGHT LEVEL. A MINUTE TIME CONSTANT SHALL PROVIDE JUMP-FREE LEVEL CONTROL FOR ENERGY USE REDUCTION WHENEVER DAYLIGHT IS PRESENT IN THE AREA LIGHTED BY EACH FIXTURE ROW.



DEVICES ARE PRESET FOR PLUG n' GO™ OPERATION.
ADJUSTMENT IS OPTIONAL.
Sequence of Operation: The LMLS-400 monitors the ambient light in the controlled space and works with the room controller(s) to maintain the design light level. WattStopper's exclusive control algorithm uses on/off or dimming setpoints and other control parameters to establish the correct light levels throughout the day regardless of changing daylight contribution.
For full operational details, adjustments and more features of the product, see the DLM System Installation Guide at www.wattstopper.com



DEVICES ARE PRESET FOR PLUG n' GO™ OPERATION.
ADJUSTMENT IS OPTIONAL. Sequence of Operation: The LMLS-400 monitors the ambient light in the controlled space and works with the room controller(s) to maintain the design light level. WattStopper's exclusive control algorithm uses on/off or dimming setpoints and other control parameters to establish the correct light levels throughout the day regardless of changing daylight contribution.
For full operational details, adjustments and more features of the product, see the DLM System Installation Guide at www.wattstopper.com

LMLS-400 Single Zone
Closed Loop Digital Photosensor

DLM1

CLASSROOM LIGHTING CONTROL WIRING DIAGRAM

NTS 4

LIGHTING CONTROL WIRING DIAGRAM - WITH DAYLIGHTING

NTS 2



Revisions				
No.	Revisions	By	Date	Appr.

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3397 Mt. Diablo Blvd., Suite C
Lafayette, CA 94549
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19-002 INC 2

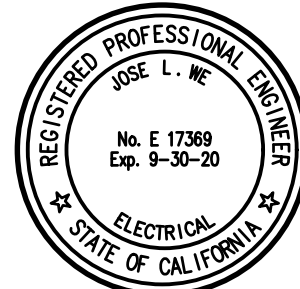
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ISSUE DATE: 7/22/20 BY: MH

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Architect/Engineer Of Record:



HIBSER YAMAUCHI
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HY ARCHITECTS JOB NUMBER 5241

Facility
WALNUT CREEK SCHOOL DISTRICT
2425 WALNUT BOULEVARD, WALNUT
CREEK, CA 94597

Project

MODERNIZATION AND RECONFIGURATION PROJECT INCREMENT II

Sheet Title

ELECTRICAL DETAILS

Client Project Number: Client Proj. #

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Drawn By: DAM

Checked By: TLK

Issue Date: 7/22/20

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Sheet 98 of 128



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REGISTERED PROFESSIONAL ENGINEER
JOSE L. NE
No. E 17369
Exp. 9-30-20
ELECTRICAL
STATE OF CALIFORNIA

Architect/Engineer Of Record



REGISTERED PROFESSIONAL ENGINEER
JOSE L. NE
No. E 17369
Exp. 9-30-20
ELECTRICAL
STATE OF CALIFORNIA



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Facility

WALNUT CREEK SCHOOL DISTRICT
2425 WALNUT BOULEVARD, WALNUT
CREEK, CA 94597

Project

MODERNIZATION AND RECONFIGURATION PROJECT INCREMENT II

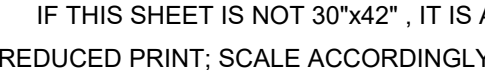
Sheet Title
ELECTRICAL TITLE 24
POWER

Client Project Number:	Client Proj.
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 Drawn By: DAM
 Checked By: TLK
 Issue Date: 7/22/20

E0.08b

Sheet 99 of 128


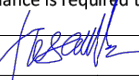


STATE OF CALIFORNIA OUTDOOR LIGHTING CERES-81A TO E-6 (Updated 3/8/15) CERTIFICATE OF COMPLIANCE		CALIFORNIA ENERGY COMMISSION NRC-1 TO D-6 Page 4 of 6	
Outdoor Lighting		Date Received: 02-31-20	
Project Name: WALNUT CREEK INTERMEDIATE SCHOOL, INC.2			
DOCUMENTATION AUTHORITY'S DECLARATION STATEMENT			
1. I certify that this Certificate of Compliance documentation is accurate and complete.			
Documentation Author Name: JOSE L WE		Documentation Designer Signature:	
Company: WMM Electrical Consultants Inc.		Signature Date: 02-31-20	
Address: 3397 Mt. Diablo Blvd., Suite C		CA Declaration Identification # if available:	
City/State/Zip: Lafayette, CA 94549		Phone: 925-385-0649	
RESPONSIBLE PERSON'S DECLARATION STATEMENT			
I certify the following under penalty of perjury, under the laws of the State of California: 1. The information provided on this Certificate of Compliance is true and correct. 2. I am eligible under Division 3 of the Business and Professions Code to accept responsibility for the building design or system design identified on this Certificate of Compliance (irrespective of design). 3. The energy features and performance specifications, materials, components, and manufactured devices for the building design or system design identified on this Certificate of Compliance conform to the requirements of Title 24, Part 1 and Part 6 of the California Code of Regulations. 4. The building design features or system design feature(s) identified on the Certificate of Compliance are consistent with the information provided on other applicable compliance documents, worksheets, calculations, plans, and specifications submitted to the enforcement agency for approval with this building permit application. 5. I will ensure that a completed signed copy of this Certificate of Compliance shall be made available with the building permit(s) issued for the building, and made available to the enforcement agency of all applicable jurisdictions. I understand that a completed signed copy of this Certificate of Compliance is required to be included with the documentation the builder provides to the building owner at occupancy.			
Responsible Designer Name: JOSE L WE		Responsible Designer Signature:	
Company: WMM Electrical Consultants Inc.		Date Signed: 02-31-20	
Address: 3397 Mt. Diablo Blvd., Suite C		License: E17369	
City/State/Zip: Lafayette, CA 94549		Phone: 925-385-0649	

CA Building Energy Efficiency Standards - 2016 Nonresidential Compliance

April 2016

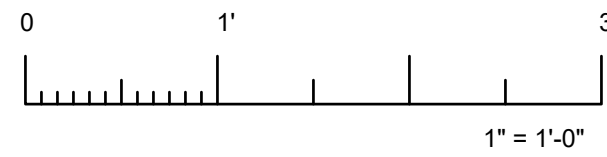
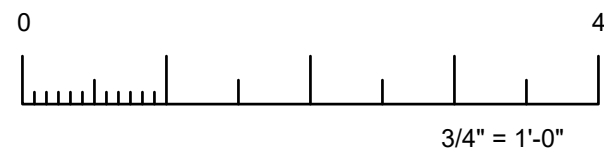
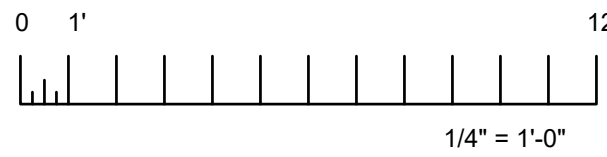
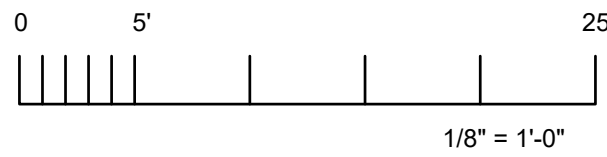
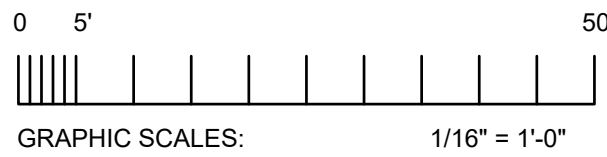
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OFFICE OF CALIFORNIA OUTDOOR LIGHTING POWER ALLOWANCES GE-085C24-10-015 (Revised 5/1/16) CERTIFICATE OF COMPLIANCE Outdoor Lighting Power Allowances		CALIFORNIA ENERGY CODE NRC-10-10-03-01 (Page 4 of 4)	
Project Name: WALNUT CREEK INTERMEDIATE SCHOOL, INC 2		Date Presented: 01-31-20	
DOCUMENTATION AUTHORITY'S DECLARATION STATEMENT I, _____ (certify that this Certificate of Compliance documentation is accurate and complete. Documentation Author Name: JOSE L. WE Company: WEM Electrical Consultants Inc. Address: 3937 M.M. Diablo Blvd., Suite C City/State/Zip: Lafayette, CA 94549			
RESPONSIBLE DESIGNER'S DECLARATION STATEMENT I certify the following under penalty of perjury, under the laws of the State of California: 1. The information provided on this Certificate of Compliance is true and correct. 2. I am eligible under Division 3 of the Business and Professions Code to accept responsibility for the building design or system design identified on this Certificate of Compliance (responsible designer). 3. The energy features and performance specifications, materials, components, and manufactured devices for the building design or system design identified on this Certificate of Compliance conform to the requirements of Title 24, Part 1 and Part 6 of the California Code of Regulations. 4. The building design features or system design features identified on this Certificate of Compliance are consistent with the information provided on other applicable compliance documents, worksheets, calculations, plans and specifications submitted to the enforcement agency for approval with this building permit application. 5. I ensure that a completed signed copy of this Certificate of Compliance will be made available with the building permit(s) issued for the building, and made available to the enforcement agency for all applicable inspection. I understand that a completed signed copy of this Certificate of Compliance is required to be included with the documentation the builder provides to the building owner at occupancy.		Documentation Author Signature:  Signature Date: 01-31-20 CA Certificate Identification # (if applicable) Phone: 925-385-0649	
Responsible Designer Name: JOSE L. WE Company: WEM Electrical Consultants Inc. Address: 3937 M.M. Diablo Blvd., Suite C City/State/Zip: Lafayette, CA 94549		Responsible Designer Signature:  Date Signed: 01-31-20 License: C 17369 Phone: 925-385-0649	



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Sheet 101 of 128



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GENERAL NOTES

1.

SHEET NOTES

- EXISTING PANEL TO BE DISCONNECTED AND REMOVED.
- INTERCEPT EXISTING FEEDER AND EXTEND TO NEW PANEL. SEE NEW SITE PLAN AND ONE-LINE DIAGRAM.



Revisions				
No.	Revisions	By	Date	Appr.

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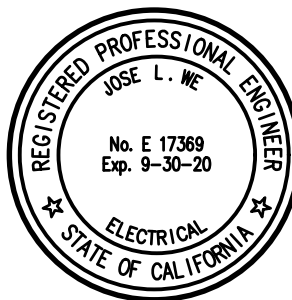
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HY ARCHITECTS JOB NUMBER 5241

Facility

WALNUT CREEK SCHOOL DISTRICT
2425 WALNUT BOULEVARD, WALNUT
CREEK, CA 94597

Project

MODERNIZATION AND
RECONFIGURATION PROJECT
INCREMENT II

Sheet Title

ELECTRICAL EXISTING SITE POWER
PLAN

Client Project Number:

Client Proj. #

Scale: AS NOTED

Sheet

Drawn By: DAM

Checked By: TLK

Issue Date: 7/22/20

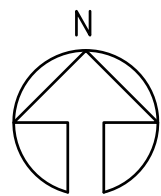
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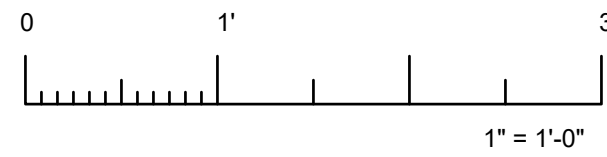
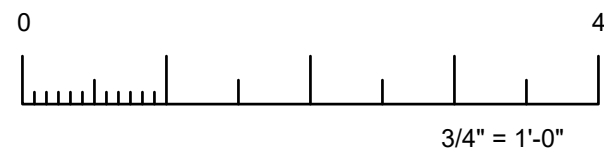
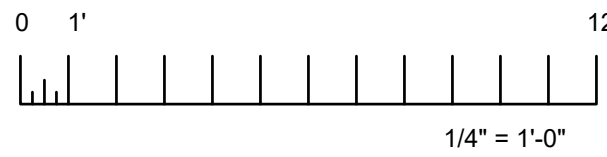
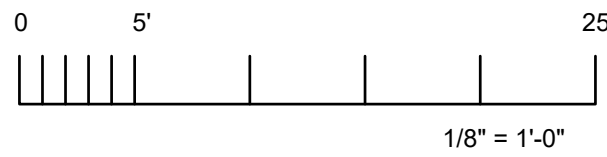
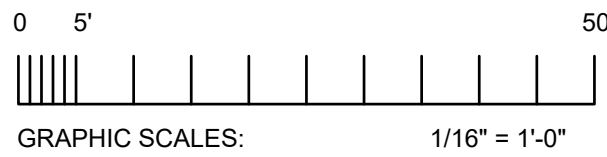
Sheet 103 of 128

ELECTRICAL EXISTING SITE POWER PLAN

1" = 40'-0"

1





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GENERAL NOTES

1.

SHEET NOTES

- EXTEND EXISTING FEEDER TO NEW PANEL LOCATION. SEE ONE-LINE DIAGRAM.
- NEW PULLCAN ON ROOF FOR POWER CONNECTIONS.



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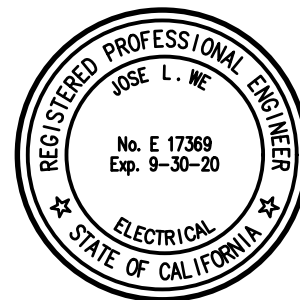
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2425 WALNUT BOULEVARD, WALNUT
CREEK, CA 94597

Project
**MODERNIZATION AND
RECONFIGURATION PROJECT
INCREMENT II**

Sheet Title
**ELECTRICAL REVISED SITE POWER
PLAN**

Client Project Number: Client Proj. #

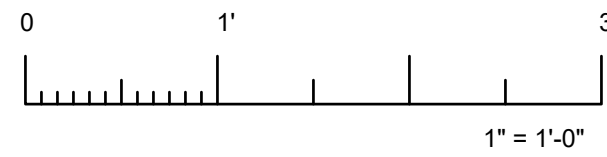
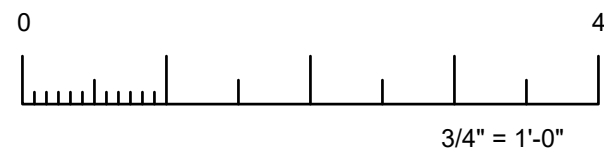
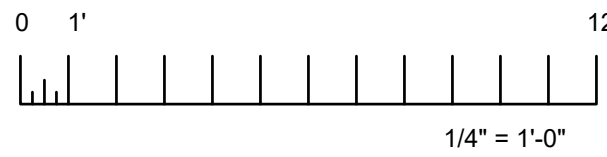
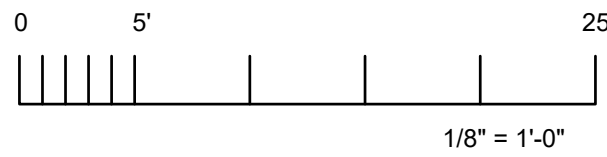
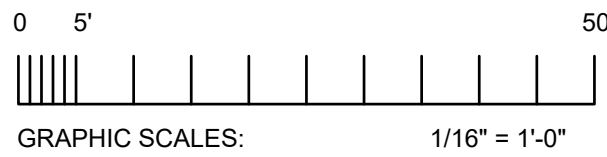
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Sheet 104 of 128

ELECTRICAL REVISED SITE POWER PLAN

1" = 40'-0"

1



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GENERAL NOTES

1.

SHEET NOTES

EXISTING IDF, FATC AND STC TO BE DISCONNECTED AND REMOVED.



Revisions				
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3397 Mt. Diablo Blvd., Suite C
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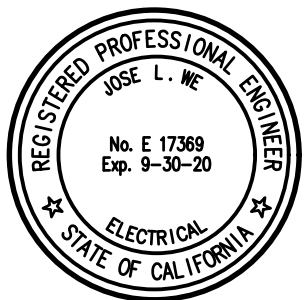
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HY ARCHITECTS JOB NUMBER 5241

Facility
WALNUT CREEK SCHOOL DISTRICT
2425 WALNUT BOULEVARD, WALNUT
CREEK, CA 94597

Project
MODERNIZATION AND
RECONFIGURATION PROJECT
INCREMENT II

Sheet Title
ELECTRICAL EXISTING SITE
SIGNAL PLAN

Client Project Number: Client Proj. #

Scale: AS NOTED
Drawn By: DAM
Checked By: TLK
Issue Date: 7/22/20

Sheet

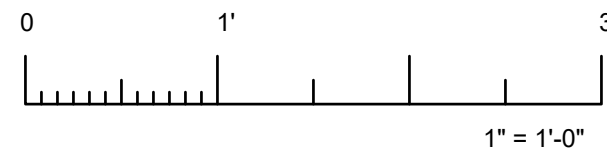
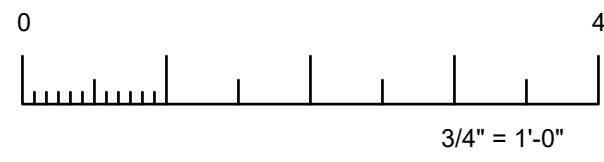
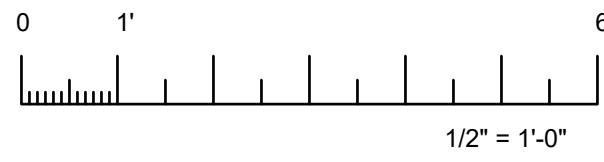
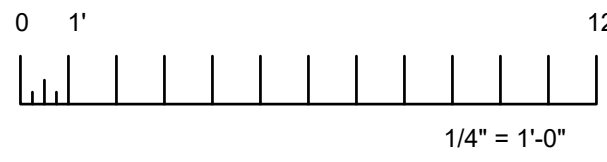
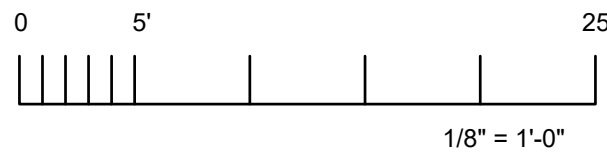
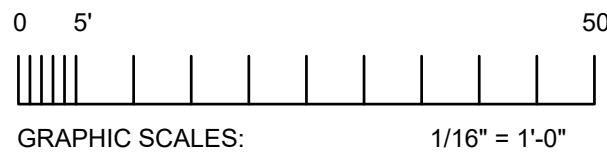
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Sheet 105 of 128

ELECTRICAL EXISTING SITE SIGNAL PLAN

1" = 40'-0"

1



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GENERAL NOTES

1.

SHEET NOTES

- EXTEND EXISTING LOW VOLTAGE CONDUITS TO NEW IDF ROOM.
- NEW PULL CAN ON ROOF FOR LOW VOLTAGE SYSTEMS RECONNECTIONS.
- PULL NEW LOW VOLTAGE CABLES IN EXISTING CONDUITS PER RISER DIAGRAMS.



Revisions				
No.	Revisions	By	Date	Appr.

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Tel: 925.385.0649
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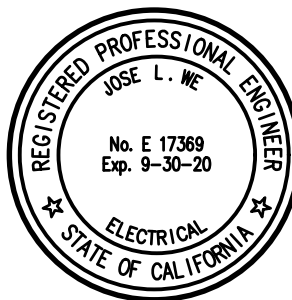
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510.446.2222 tel; 510.446.2211 fax
HY ARCHITECTS JOB NUMBER 5241

Facility
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2425 WALNUT BOULEVARD, WALNUT
CREEK, CA 94597

Project
**MODERNIZATION AND
RECONFIGURATION PROJECT
INCREMENT II**

Sheet Title
**ELECTRICAL REVISED SITE
SIGNAL PLAN**

Client Project Number: Client Proj. #

Scale: AS NOTED
Drawn By: DAM
Checked By: TLK
Issue Date: 7/22/20

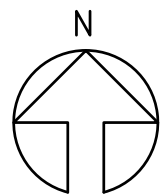
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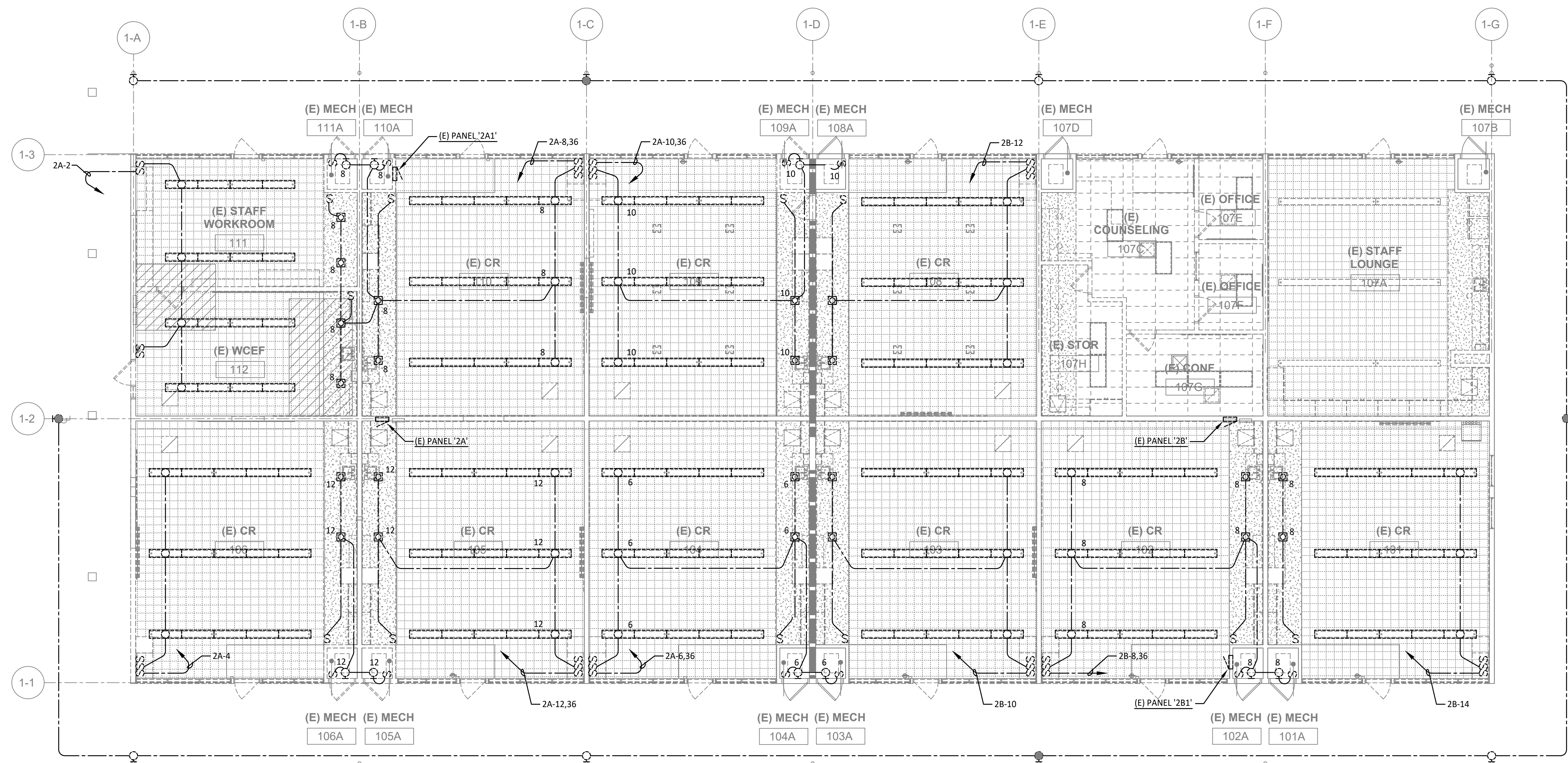
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ELECTRICAL REVISED SITE SIGNAL PLAN

1" = 40'-0"

1





GENERAL NOTES

1. ALL LIGHT FIXTURES, SWITCHES AND CONTROLS ARE NEW.
2. ALL NEW CONDUITS AT EXISTING WALLS TO REMAIN SHALL BE RUN VERTICALLY INSIDE WALL THEN CONTINUED IN ACCESSIBLE CEILING SPACE TO MINIMIZE CUTTING AND PATCHING AND HORIZONTAL BORING THROUGH EXISTING STUDS.
3. ALL EXTERIOR WALLPACKS ARE TO BE REPLACED WITH NEW. PULL NEW 3#10 WIRING IN EXISTING CONDUITS FOR HOT LEG EMERGENCY PUMP CONNECTION.

SHEET NOTES

1 CONNECT NEW WALLPACK WITH NEW CONDUIT AND 3#10



Revisions				
No.	Revisions	By	Date	Appr.

WKM

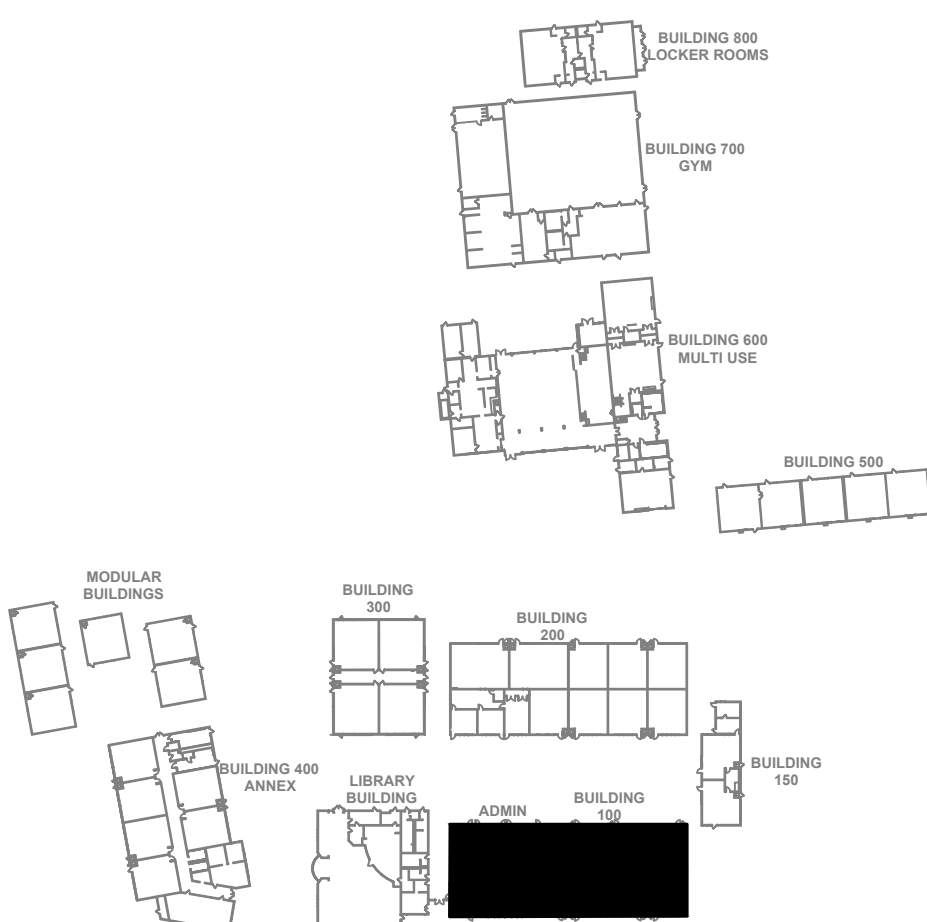
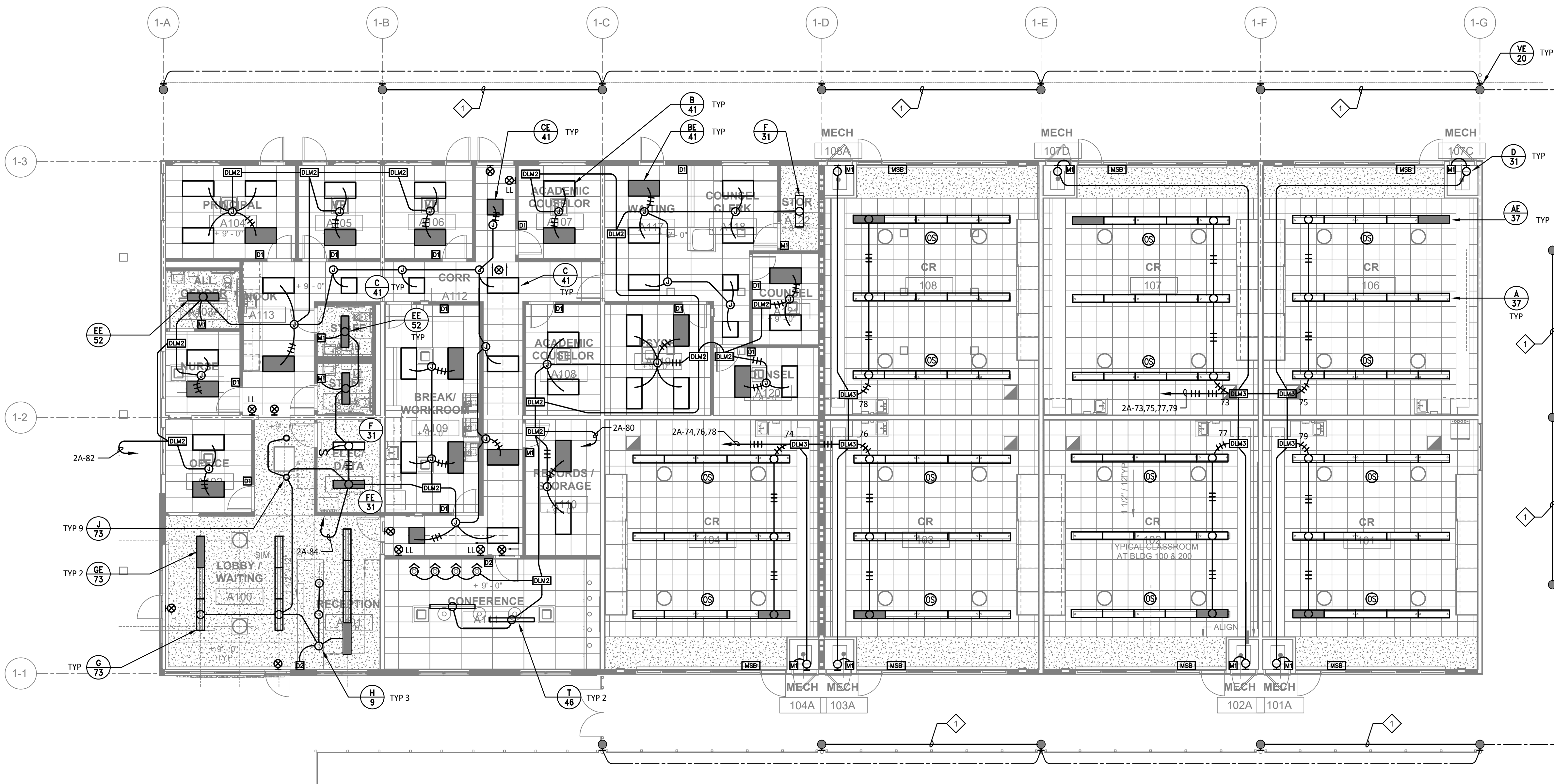
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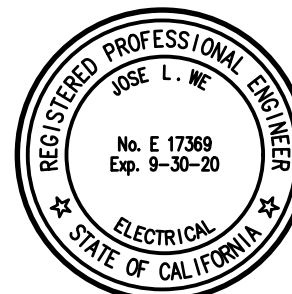
ISSUE DATE: 7/22/20 BY: MH

ELECTRICAL DEMOLITION LIGHTING PLAN - BUILDING 100	1/8" = 1'-0"	1
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Architect/Engineer Of Record



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Facility

WALNUT CREEK SCHOOL DISTRICT
2425 WALNUT BOULEVARD, WALNUT
CREEK, CA 94597

Project MODERNIZATION AND RECONFIGURATION PROJECT INCREMENT II

Sheet Title
ELECTRICAL LIGHTING PLANS
BUILDING 100

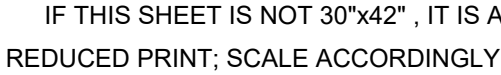
Client Project Number:	Client Proj
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Scale:	AS NOTED	Sheet
Design:	RAM	

Checked By: TLK

Sheet 107 of 128

ELECTRICAL REVISED LIGHTING PLAN - BUILDING 100	1/8" = 1'-0"	1
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1. ALL LIGHT FIXTURES, SWITCHES AND CONTROLS ARE NEW.
2. ALL NEW CONDUITS AT EXISTING WALLS TO REMAIN SHALL BE RUN VERTICALLY INSIDE WALL THEN CONTINUED IN ACCESSIBLE CEILING SPACE TO MINIMIZE CUTTING AND PATCHING AND HORIZONTAL BORING THROUGH EXISTING STUDS
3. ALL EXTERIOR WALLPACKS ARE TO BE REPLACED WITH NEW. PULL NEW 3#10 WIRING IN EXISTING CONDUITS FOR HOT LEG EMERGENCY PACK CONNECTION.

SHEET NOTES

- 1 CONNECT NEW WALLPACK WITH NEW CONDUIT AND 3#10.



Revisions				
No.	Revisions	By	Date	Appr.

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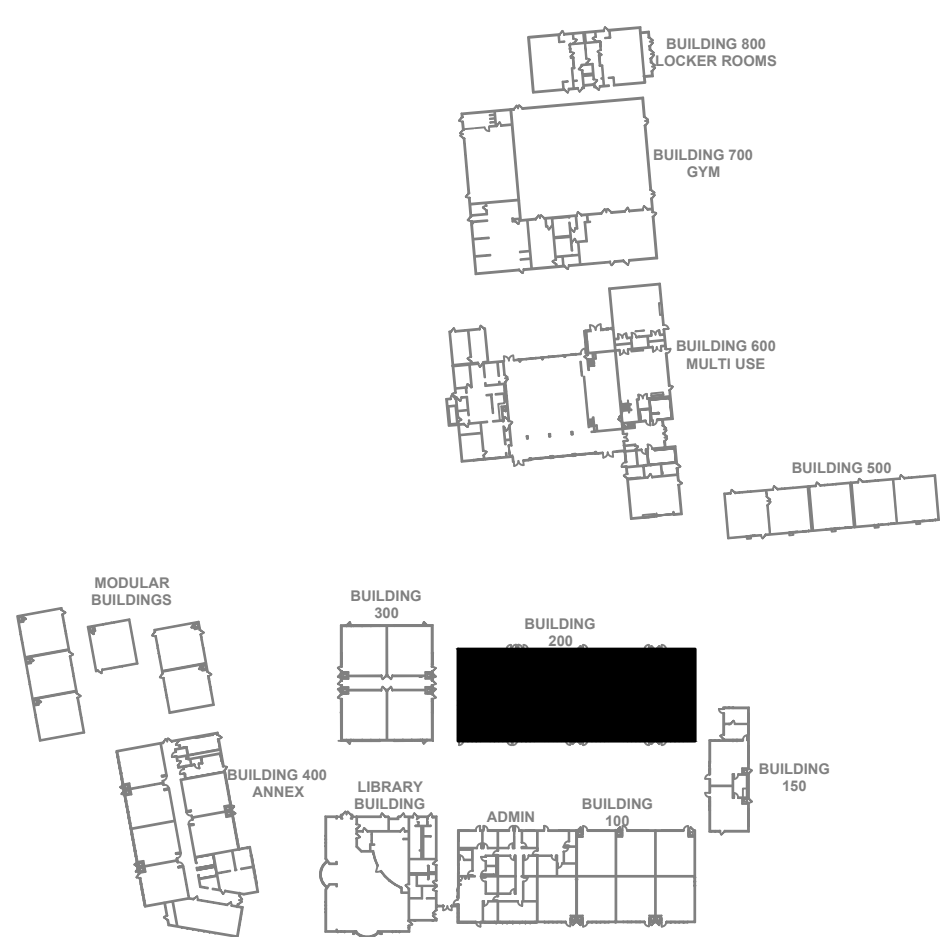
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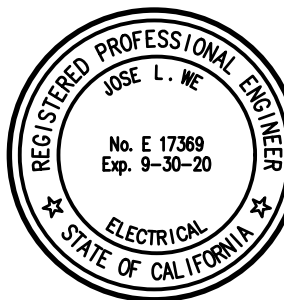
ISSUE DATE: 7/22/20 BY: MH

ELECTRICAL DEMOLITION LIGHTING PLAN - BUILDING 200	1/8" = 1'-0"	1
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Facility

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Project

MODERNIZATION AND RECONFIGURATION PROJECT INCREMENT II

Sheet Title

ELECTRICAL LIGHTING PLANS
BUILDING 200

Client Project Number:

Client Proj. #

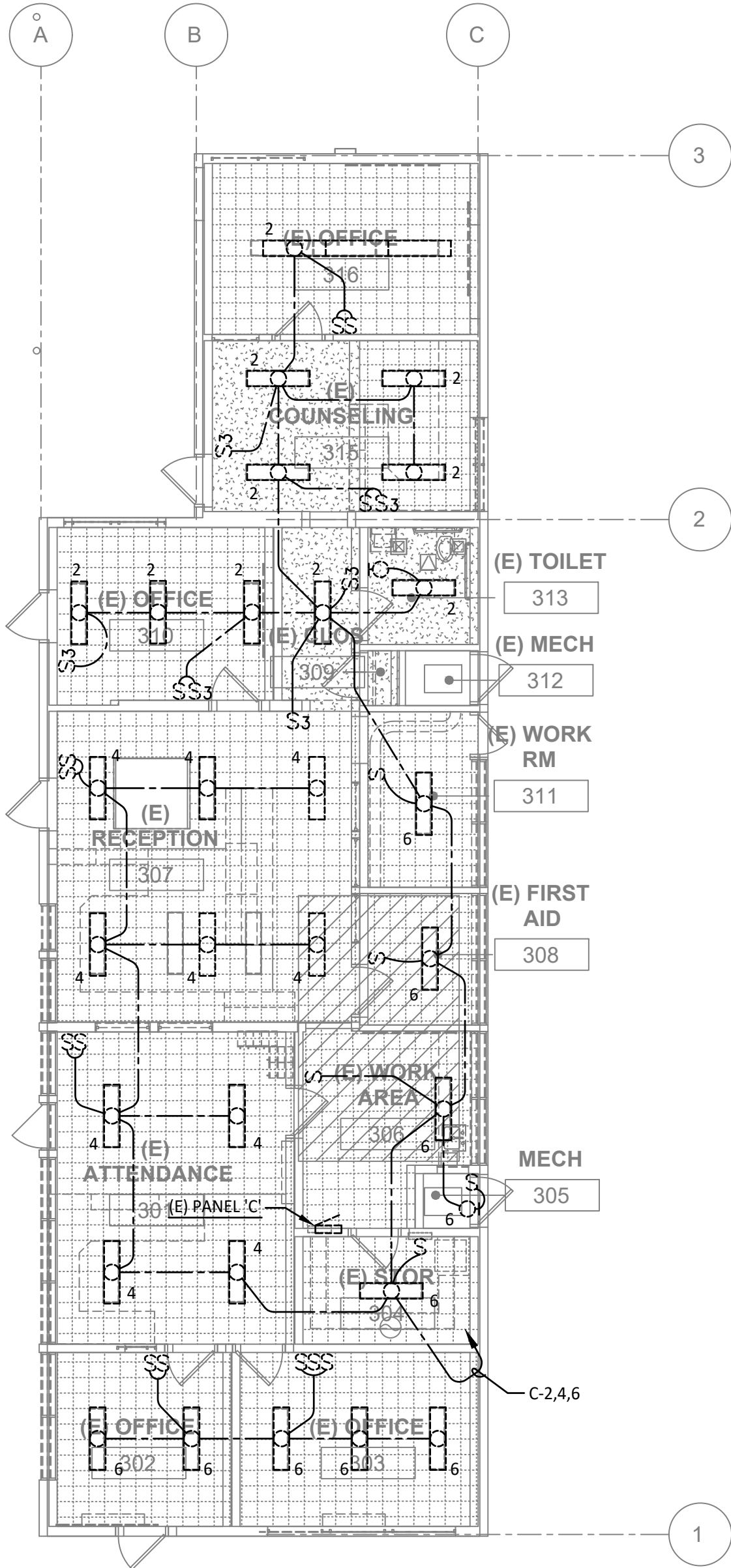
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E2.02

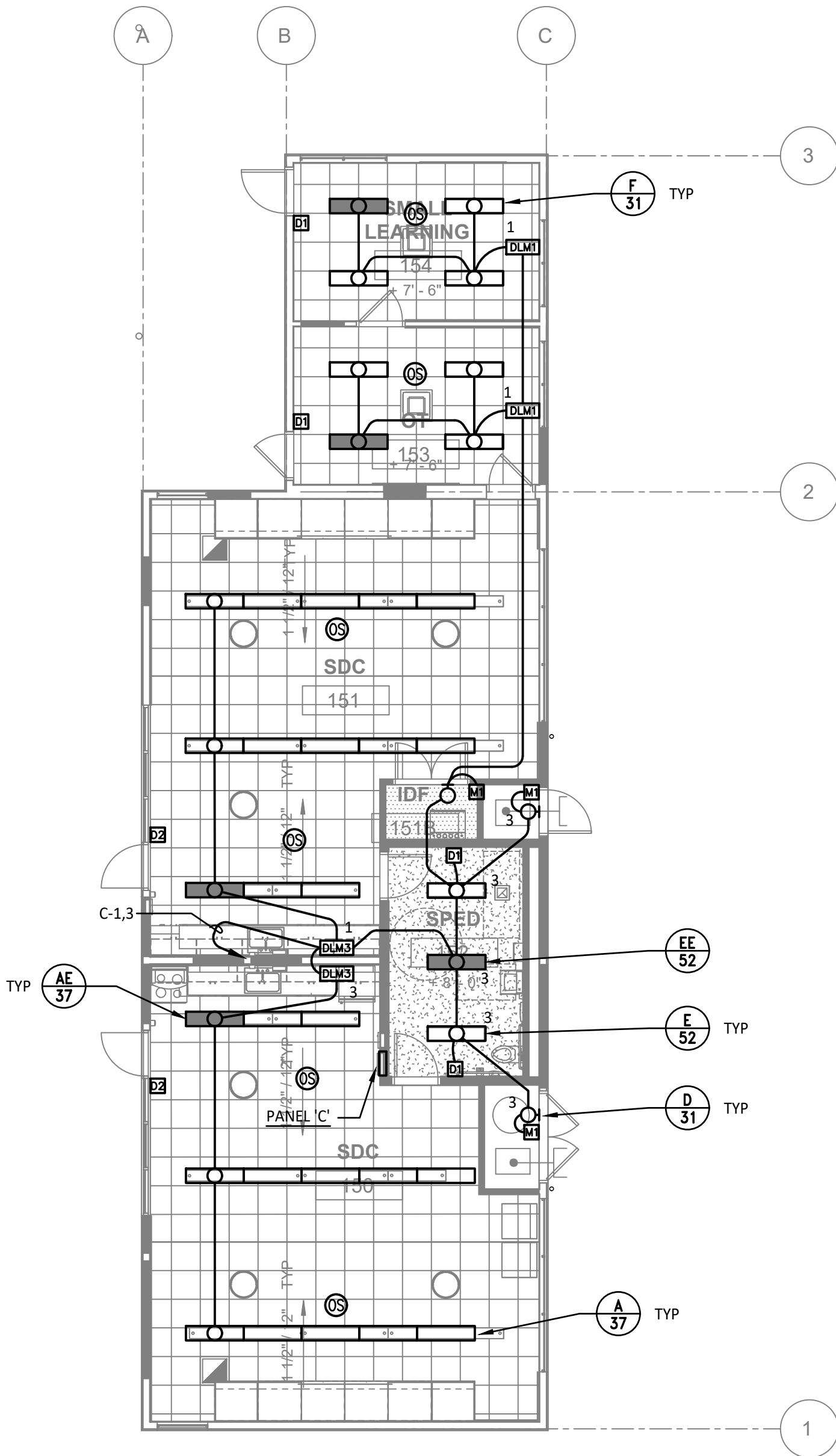
Sheet 108 of 128



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ELECTRICAL DEMOLITION LIGHTING PLAN - BUILDING 150 1/8" = 1'-0" 1



ELECTRICAL REVISED LIGHTING PLAN - BUILDING 150 1/8" = 1'-0" 2

GENERAL NOTES

- ALL LIGHT FIXTURES, SWITCHES AND CONTROLS ARE NEW.
- ALL NEW CONDUITS AT EXISTING WALLS TO REMAIN SHALL BE RUN VERTICALLY INSIDE WALL THEN CONTINUED IN ACCESSIBLE CEILING SPACE TO MINIMIZE CUTTING AND PATCHING AND HORIZONTAL BORING THROUGH EXISTING STUDS.

SHEET NOTES



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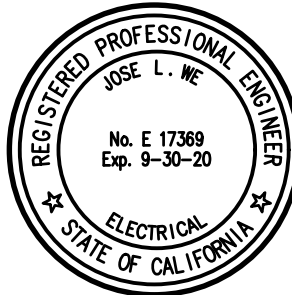
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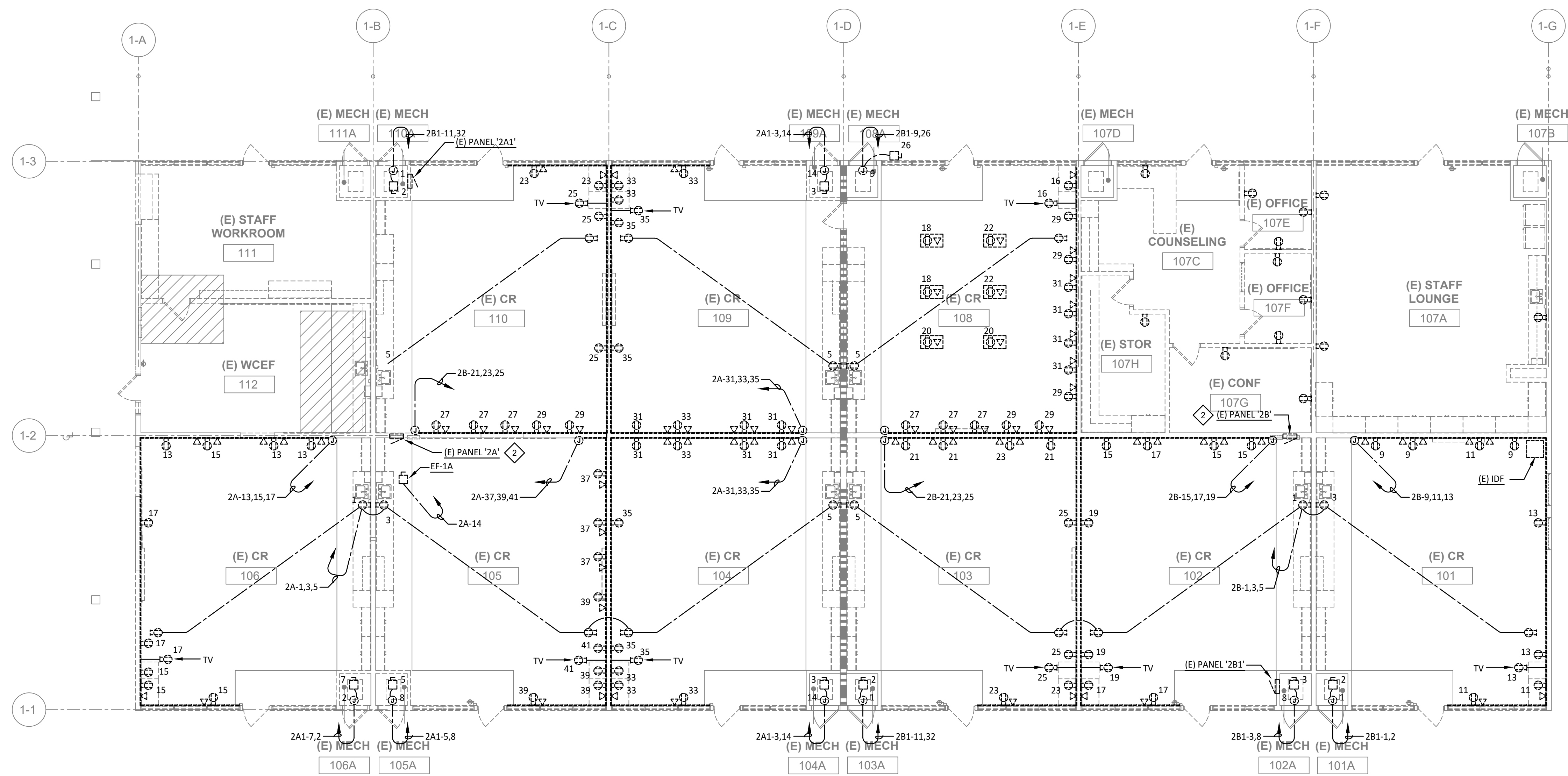
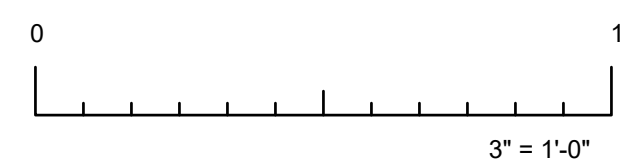
Project
MODERNIZATION AND
RECONFIGURATION PROJECT
INCREMENT II

Sheet Title
ELECTRICAL LIGHTING PLANS
BUILDINGS 150

Client Project Number: Client Proj. #

Scale: AS NOTED
Drawn By: DAM
Checked By: TLK
Issue Date: 7/22/20

Sheet
E2.03
Sheet 109 of 128



GENERAL NOTES

1. ALL POWER AND DATA IN THIS BUILDING TO BE REPLACED WITH NEW.
2. SEE E3.03 FOR HVAC SYSTEMS POWER.
3. ALL NEW CONDUITS AT EXISTING WALLS TO REMAIN SHALL BE RUN VERTICALLY INSIDE WALL THEN CONTINUED IN ACCESSIBLE CEILING SPACE TO MINIMIZE CUTTING AND PATCHING AND HORIZONTAL BORING THROUGH EXISTING STUDS.

SHEET NOTES

3. PROVIDE POWER FOR TV AT +5'-0" AFF.
4. EXISTING PANEL TO BE DISCONNECTED AND REMOVED.
5. (2) 20' CAT 6 COILS FOR FUTURE.
6. PROVIDE POWER FOR MECHOSHADES.
7. PROVIDE POWER FOR CHARGING CARTS.
8. PROVIDE POWER AND DATA FOR PRINTER IN CABINET.
9. PROVIDE POWER AND DATA FOR COPIER.
10. PROVIDE LOW VOLTAGE CONNECTION FROM WINDOW ACTUATOR CONTROLLER IN IDF ROOM FOR MOTORIZED WINDOW. COORDINATE EXACT LOCATION IN FIELD.
11. PROVIDE CONDUIT AND JUNCTION BOX FOR WINDOW ACTUATOR CONTROLLER. COORDINATE EXACT LOCATION IN FIELD.
12. PROVIDE 120V POWER FOR WINDOW ACTUATOR CONTROLLER.



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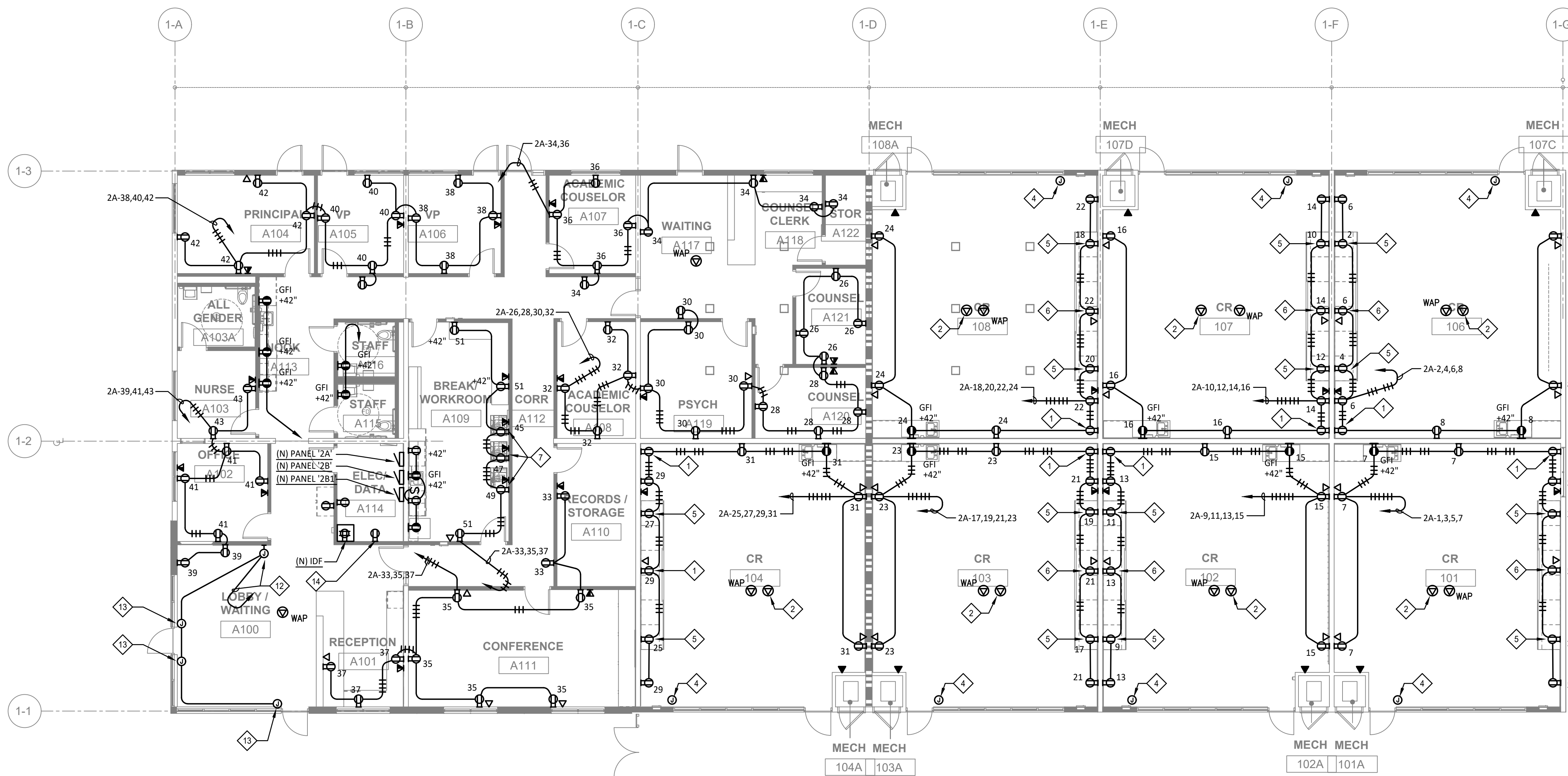
ISSUE DATE: 7/22/20

BY: MH

ELECTRICAL DEMOLITION POWER AND DATA PLAN - BUILDING 100

$$1/8'' = 1'-0''$$

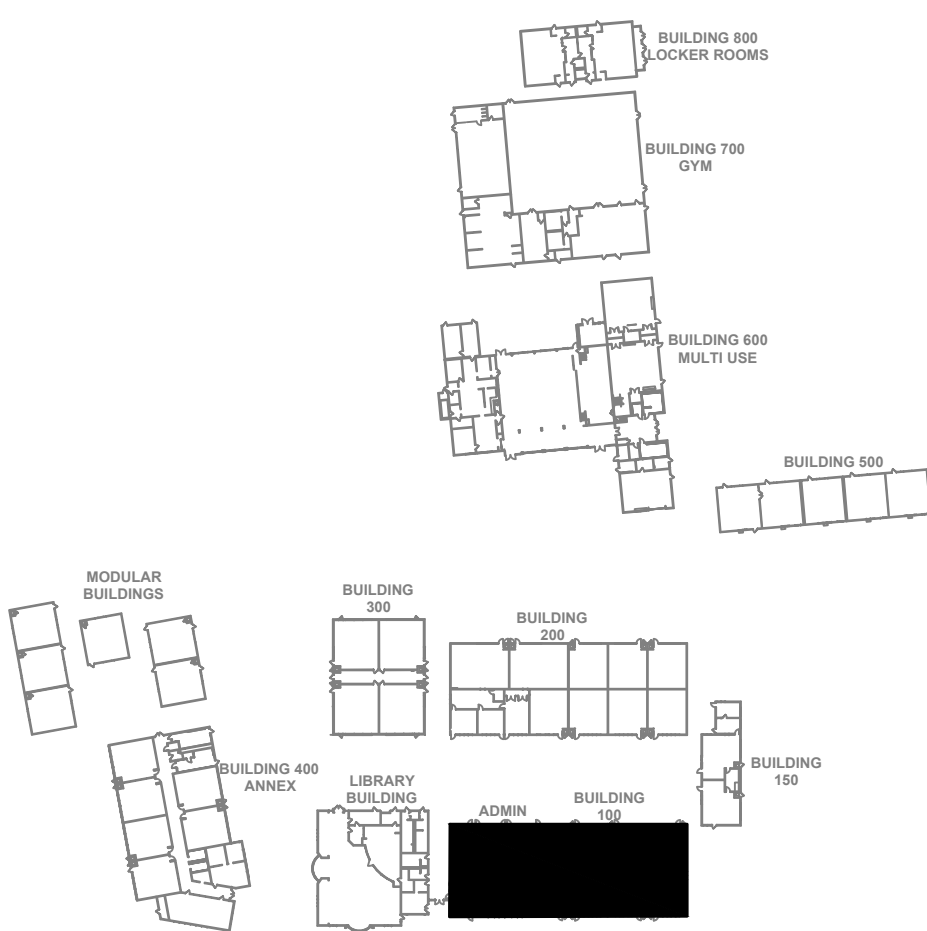
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ELECTRICAL REVISED POWER AND DATA PLAN - BUILDING 100

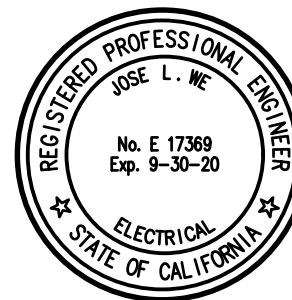
$$1/8'' = 1'-0''$$

2



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Project
MODERNIZATION AND
RECONFIGURATION PROJECT
INCREMENT II

Sheet Title
ELECTRICAL POWER AND DATA
PLANS
BUILDING 100

Client Project Number:	Client Proj
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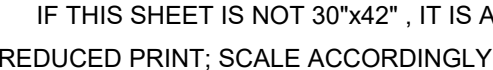
Scale: AS NOTED

Drawn By: DAM

Checked By: TLK

E3.01

Sheet 110 of 128



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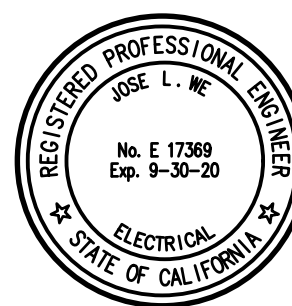
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BY: MF

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2425 WALNUT BOULEVARD, WALNUT
CREEK, CA 94597

Project

MODERNIZATION AND
RECONFIGURATION PROJECT
INCREMENT II

Sheet Title
ELECTRICAL POWER AND DATA
PLANS
BUILDING 200

Client Project Number:	Client Proj
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Scale: AS NOTED

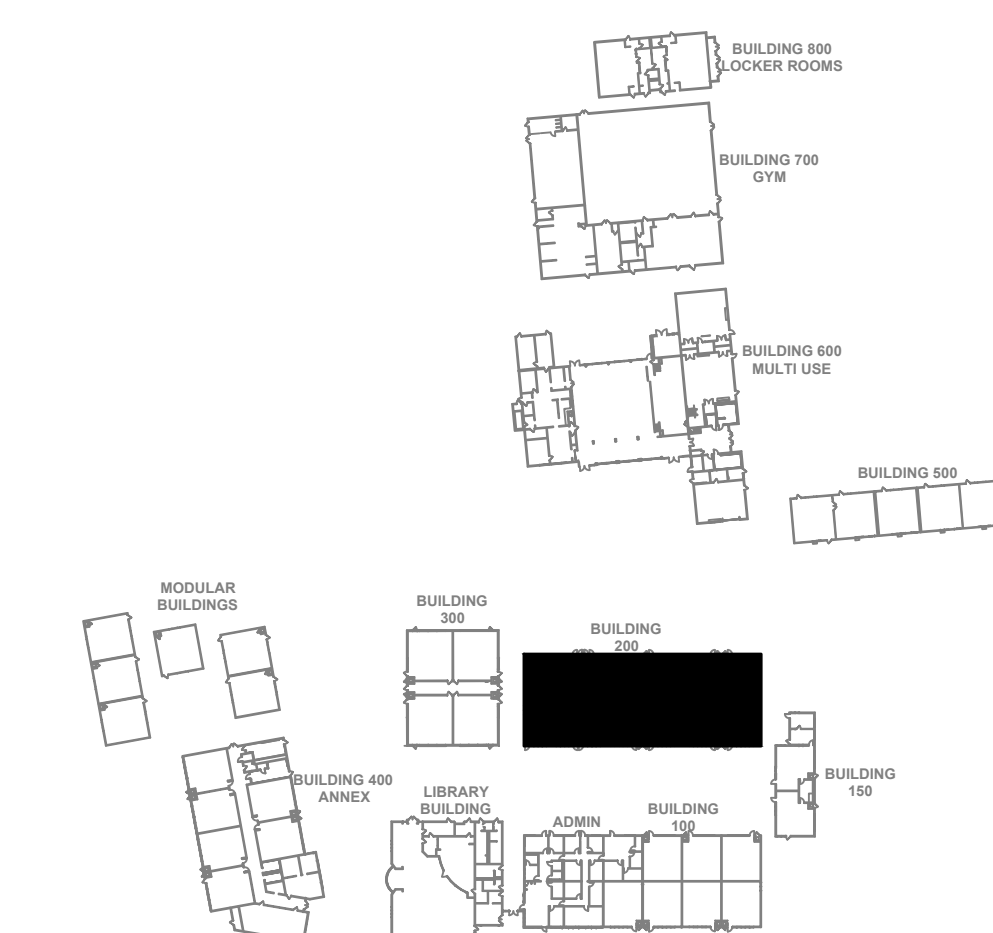
Obat: AS 100

Drawn By: DAM

Checked By: TLK

E3.02

Sheet 111 of 128



GENERAL NOTES

1. ALL POWER AND DATA IN THIS BUILDING TO BE REPLACED WITH NEW.
2. SEE E3.03 FOR HVAC SYSTEMS POWER.
3. ALL NEW CONDUITS AT EXISTING WALLS TO REMAIN SHALL BE RUN VERTICALLY INSIDE WALL THEN CONTINUED IN ACCESSIBLE CEILING SPACE TO MINIMIZE CUTTING AND PATCHING AND HORIZONTAL BORING THROUGH EXISTING STUDS

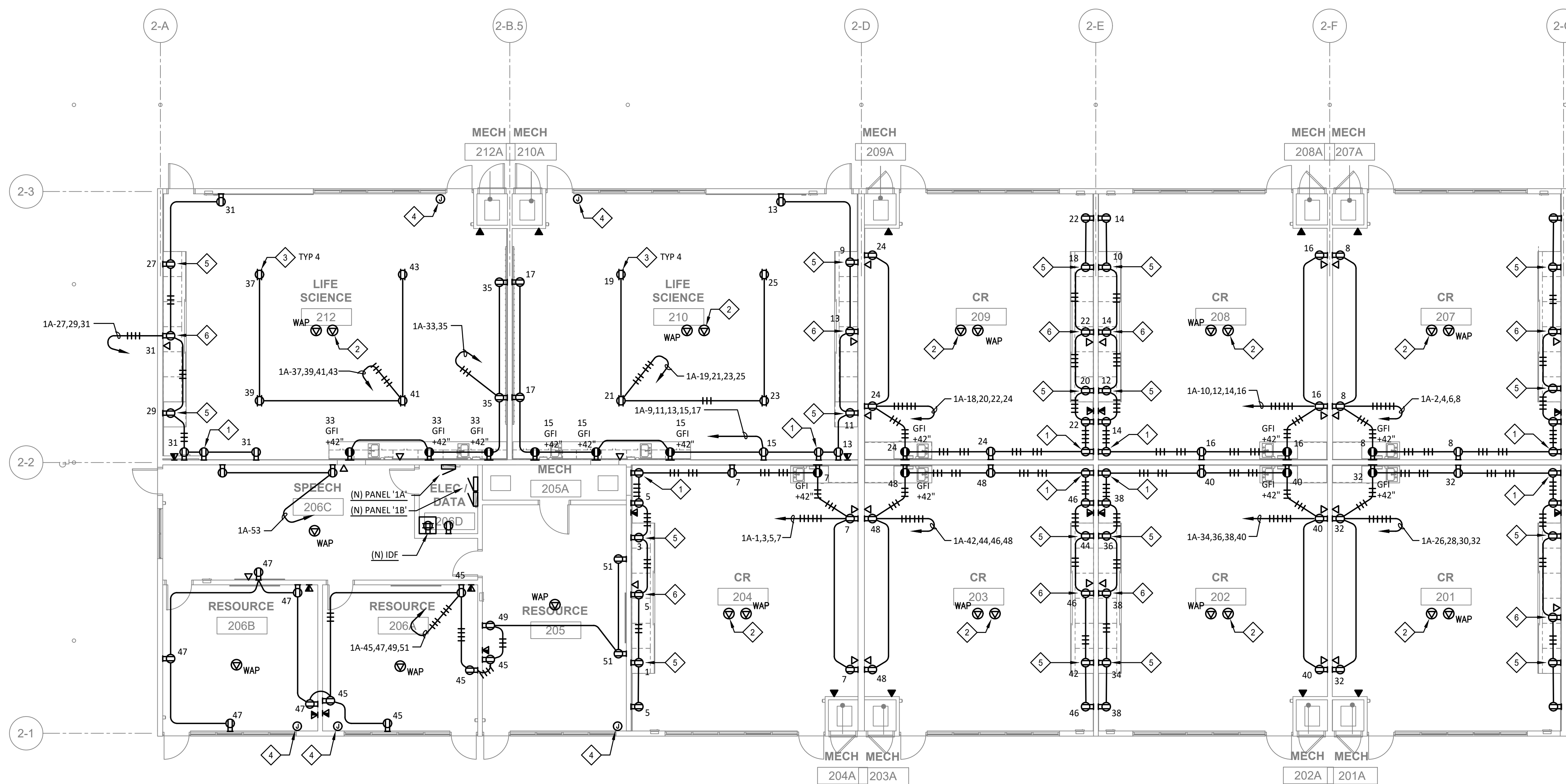
SHEET NOTES

- 1 PROVIDE POWER FOR TV AT +5/-0" AFF.
 - 2 (2) 20' CAT 6 COILS FOR FUTURE.
 - 3 CEILING MOUNT CORD REEL.
 - 4 PROVIDE POWER FOR MECHOSHADOWS.
 - 5 PROVIDE POWER FOR CHARGING CARTS.
 - 6 PROVIDE POWER AND DATA FOR PRINTER IN CABINET.
- PROVIDE LOW VOLTAGE CONNECTION FROM WINDOW ACTUATOR CONTROLLER IN IDF ROOM FOR MOTORIZED WINDOW. COORDINATE EXACT LOCATION IN FIELD.
- PROVIDE CONDUIT AND JUNCTION BOX FOR WINDOW CONTROLLER. COORDINATE EXACT LOCATION IN FIELD.
- PROVIDE 120V POWER FOR WINDOW ACTUATOR CONTROLLER.

ELECTRICAL DEMOLITION POWER AND DATA PLAN - BUILDING 200

$$1/8'' = 1'-0''$$

1



ELECTRICAL REVISED POWER AND DATA PLAN - BUILDING 200

$$1/8'' = 1'-0''$$

2



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GENERAL NOTES

- ALL NEW CONDUITS AT EXISTING WALLS TO REMAIN SHALL BE RUN VERTICALLY INSIDE WALL THEN CONTINUED IN ACCESSIBLE CEILING SPACE TO MINIMIZE CUTTING AND PATCHING AND HORIZONTAL BORING THROUGH EXISTING STUDS.

SHEET NOTES



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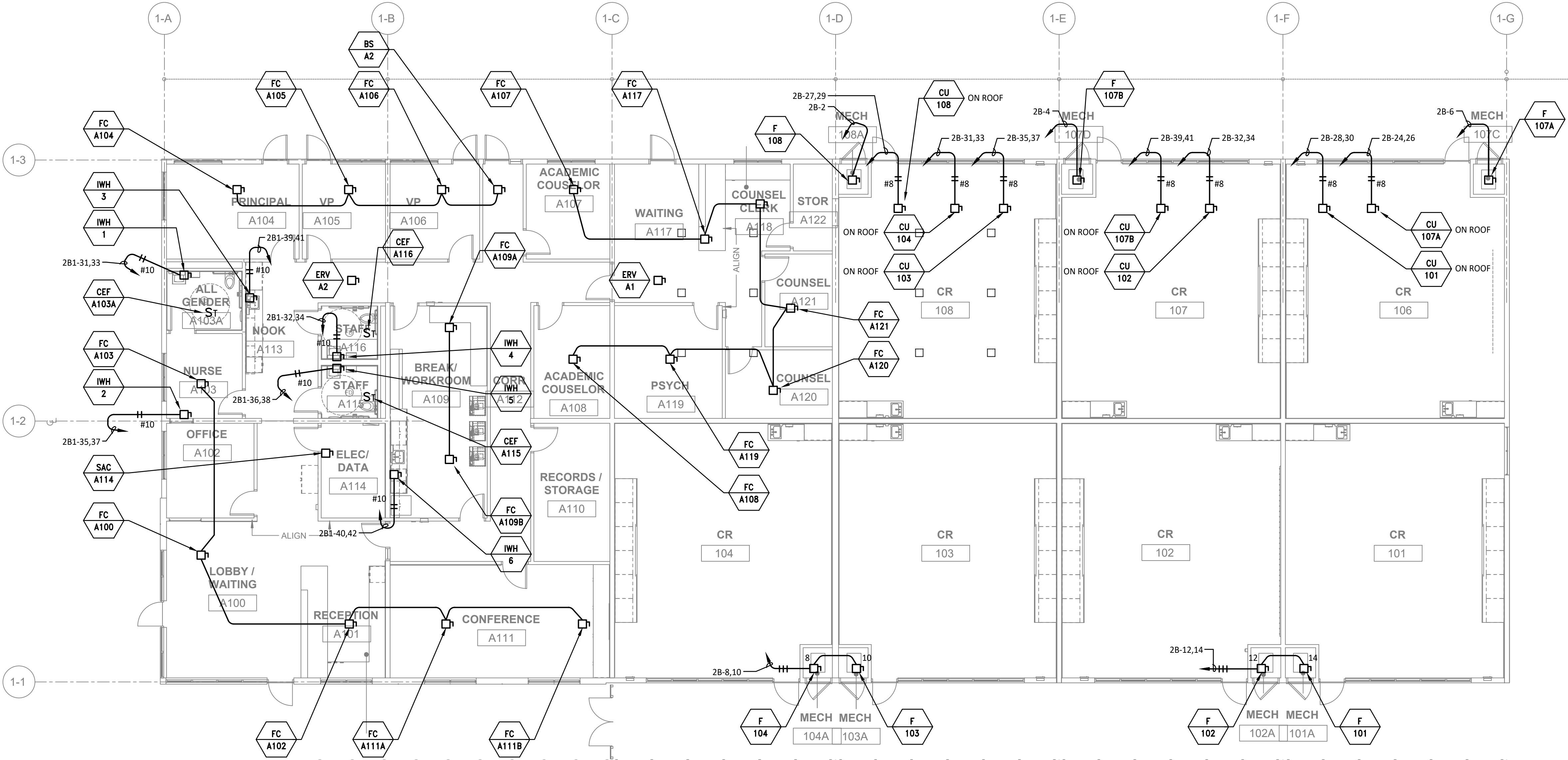
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ISSUE DATE: 7/22/20 BY: MH

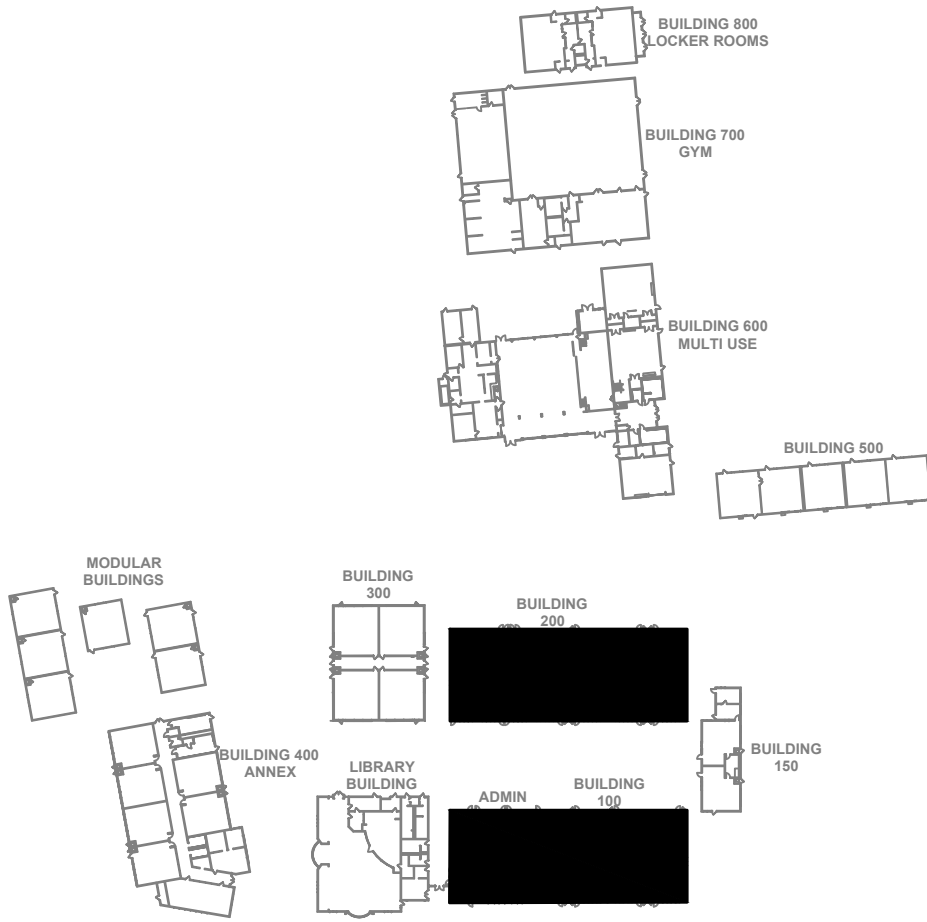
ELECTRICAL REVISED MECHANICAL POWER PLAN - BUILDING 200

1/8" = 1'-0" 2



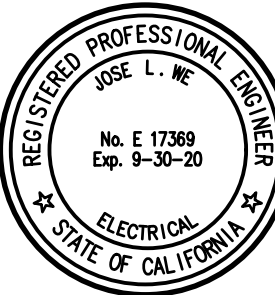
ELECTRICAL REVISED MECHANICAL POWER PLAN - BUILDING 100

1/8" = 1'-0" 1



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Facility
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2425 WALNUT BOULEVARD, WALNUT
CREEK, CA 94597

Project
**MODERNIZATION AND
RECONFIGURATION PROJECT
INCREMENT II**

Sheet Title
**ELECTRICAL ROOF POWER PLANS
BUILDINGS 100 AND 200**

Client Project Number: Client Proj. #

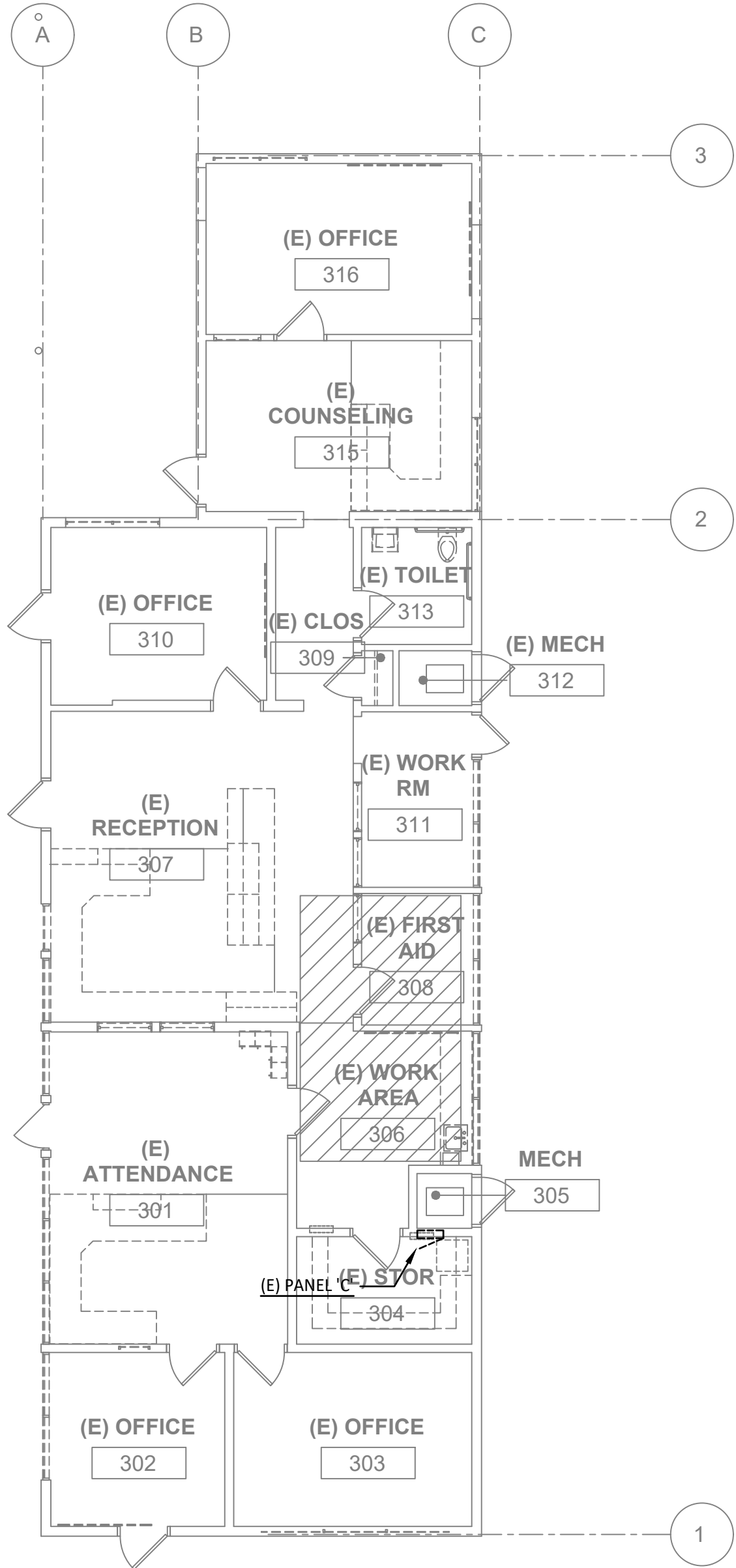
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Drawn By: DAM
Checked By: TLK
Issue Date: 7/22/20

E3.03

Sheet 112 of 128



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GENERAL NOTES

- ALL POWER AND DATA IN THESE BUILDINGS TO BE REMOVED UNLESS OTHERWISE NOTED.
- ALL NEW CONDUITS AT EXISTING WALLS TO REMAIN SHALL BE RUN VERTICALLY INSIDE WALL THEN CONTINUED IN ACCESSIBLE CEILING SPACE TO MINIMIZE CUTTING AND PATCHING AND HORIZONTAL BORING THROUGH EXISTING STUDS.

SHEET NOTES

- PROVIDE POWER FOR TV AT +5'-0" AFF.
- (2) 20' CAT 6 COILS FOR FUTURE.
- PROVIDE 1" CONDUIT TO OUTDOOR UNIT FOR POWER CONNECTION.
- PROVIDE POWER AND DATA IN CABINET FOR PRINTER.



Revisions				
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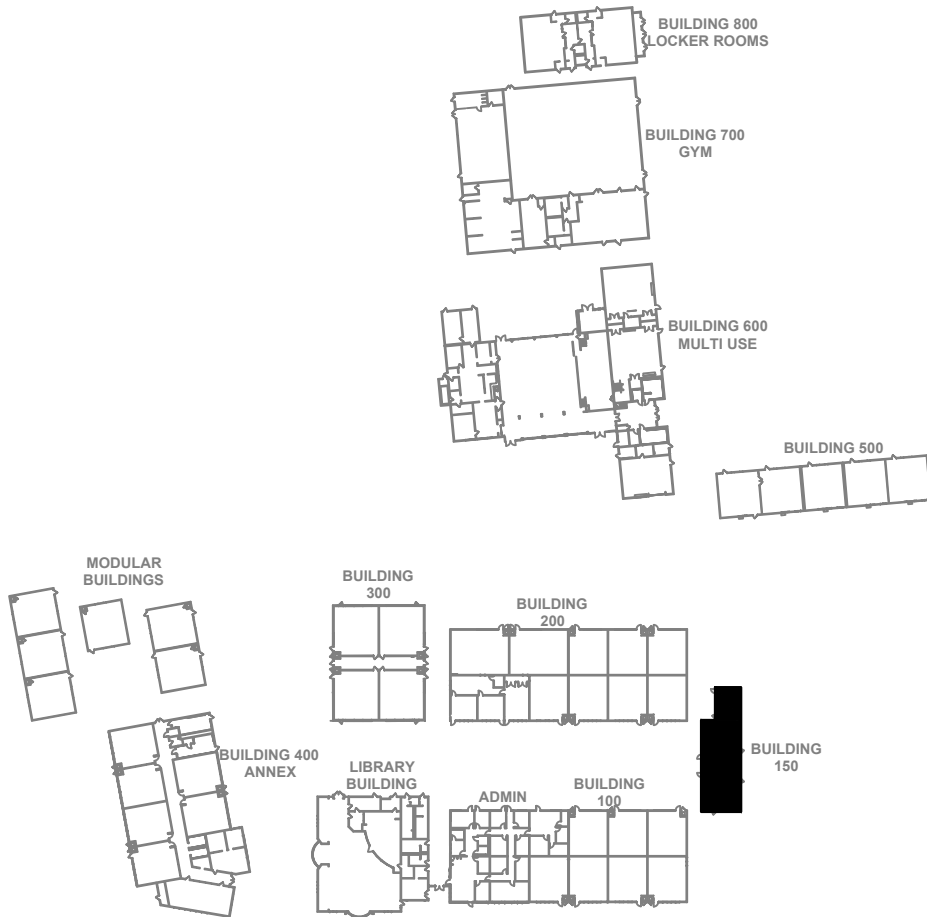
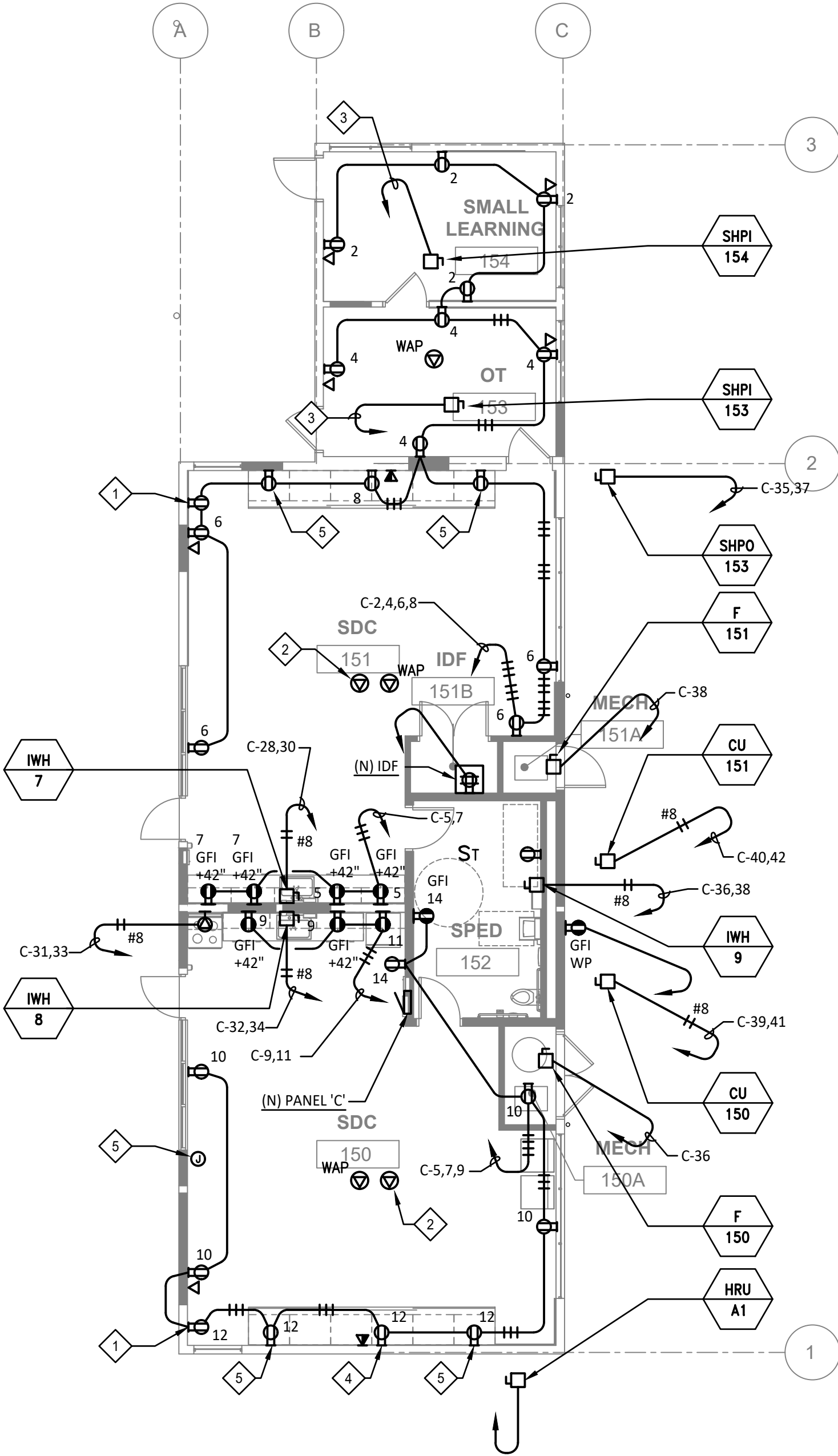
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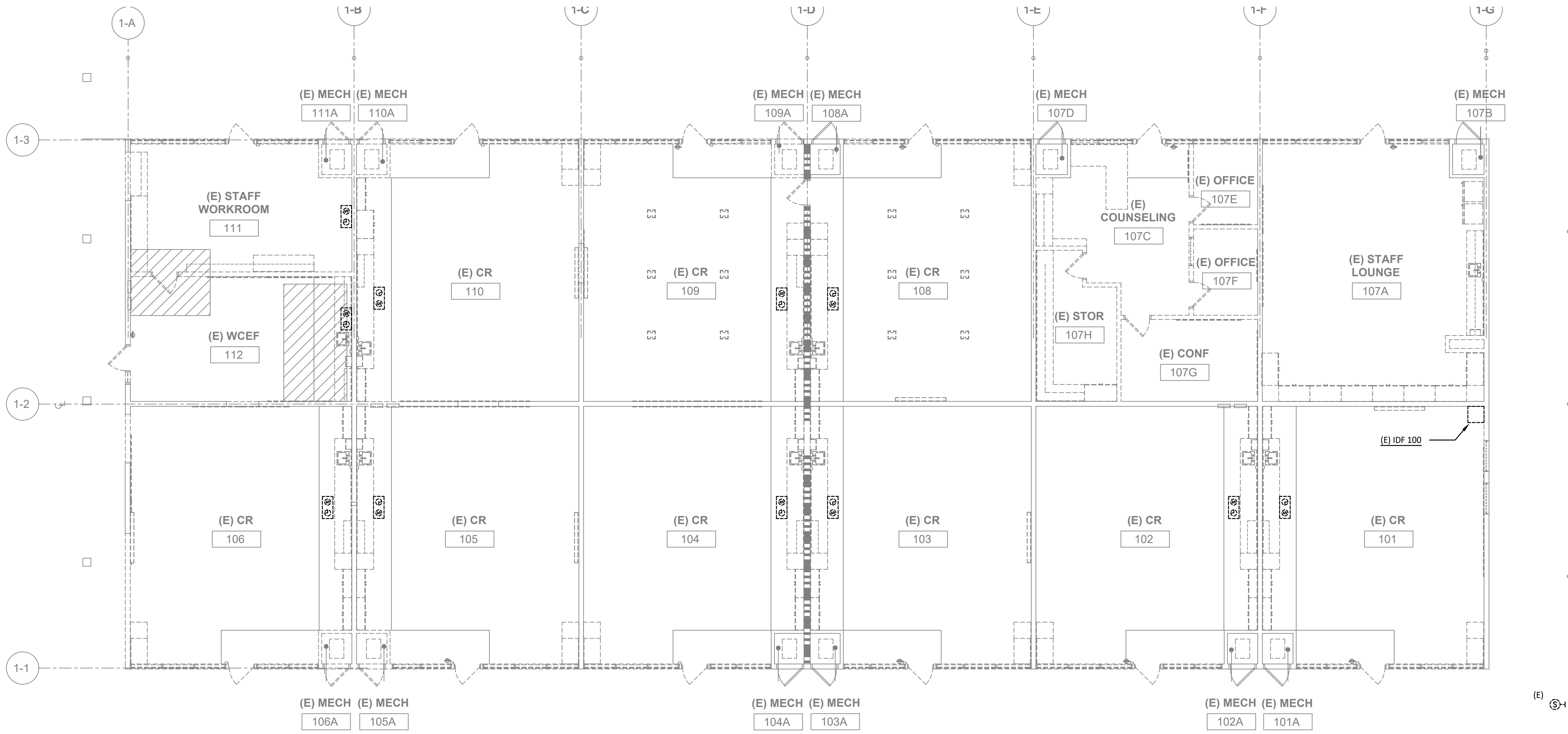
ELECTRICAL DEMOLITION POWER AND DATA PLAN - BUILDING 150 1/8" = 1'-0" 1



ELECTRICAL REVISED POWER AND DATA PLAN - BUILDING 150 1/8" = 1'-0" 2



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GENERAL NOTES

- ALL CLOCK/SPEAKER UNITS, INTRUSION ALARM DEVICES AND WIRING ARE TO BE REPLACED WITH NEW.
- SEE WIRING DIAGRAMS FOR CABLING REQUIREMENTS.
- ALL NEW CONDUITS AT EXISTING WALLS TO REMAIN SHALL BE RUN VERTICALLY INSIDE WALL THEN CONTINUED IN ACCESSIBLE CEILING SPACE TO MINIMIZE CUTTING AND PATCHING AND HORIZONTAL BORING THROUGH EXISTING STUDS.

SHEET NOTES

- ◇ PROVIDE DATA DROP FOR NEW CEILING MOUNTED CAMERA. COORDINATE EXACT LOCATION WITH DISTRICT AND ARCHITECT PRIOR TO ROUGH-IN.



Revisions				
No.	Revisions	By	Date	Appr.

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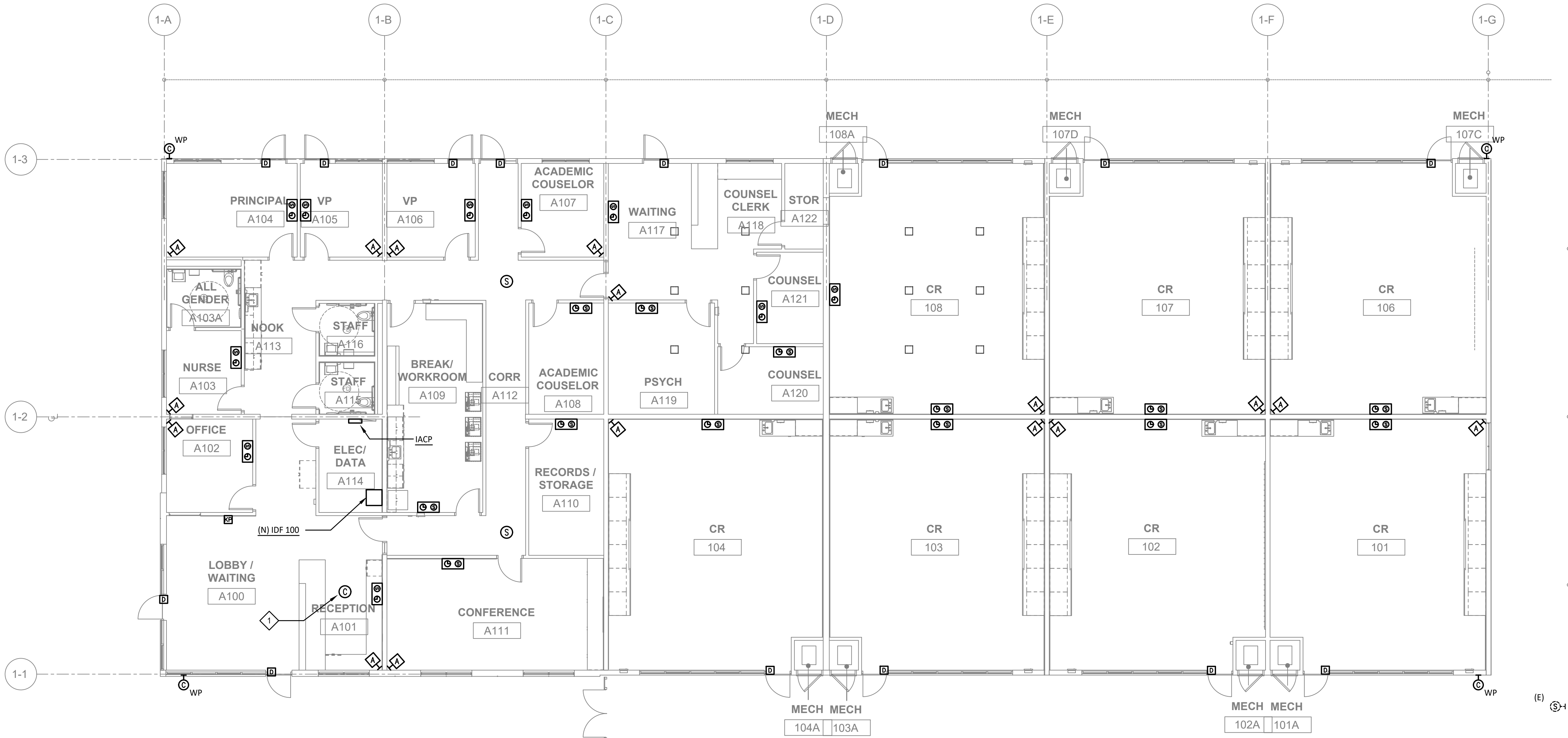
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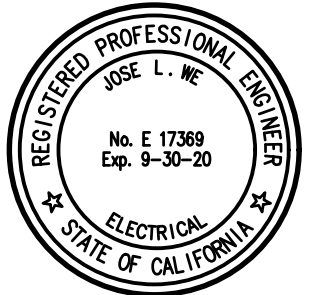
ELECTRICAL DEMOLITION SIGNAL PLAN - BUILDING 100 1/8" = 1'-0" 1



ELECTRICAL REVISED SIGNAL PLAN - BUILDING 100 1/8" = 1'-0" 2

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CREEK, CA 94597

Project
**MODERNIZATION AND
RECONFIGURATION PROJECT
INCREMENT II**

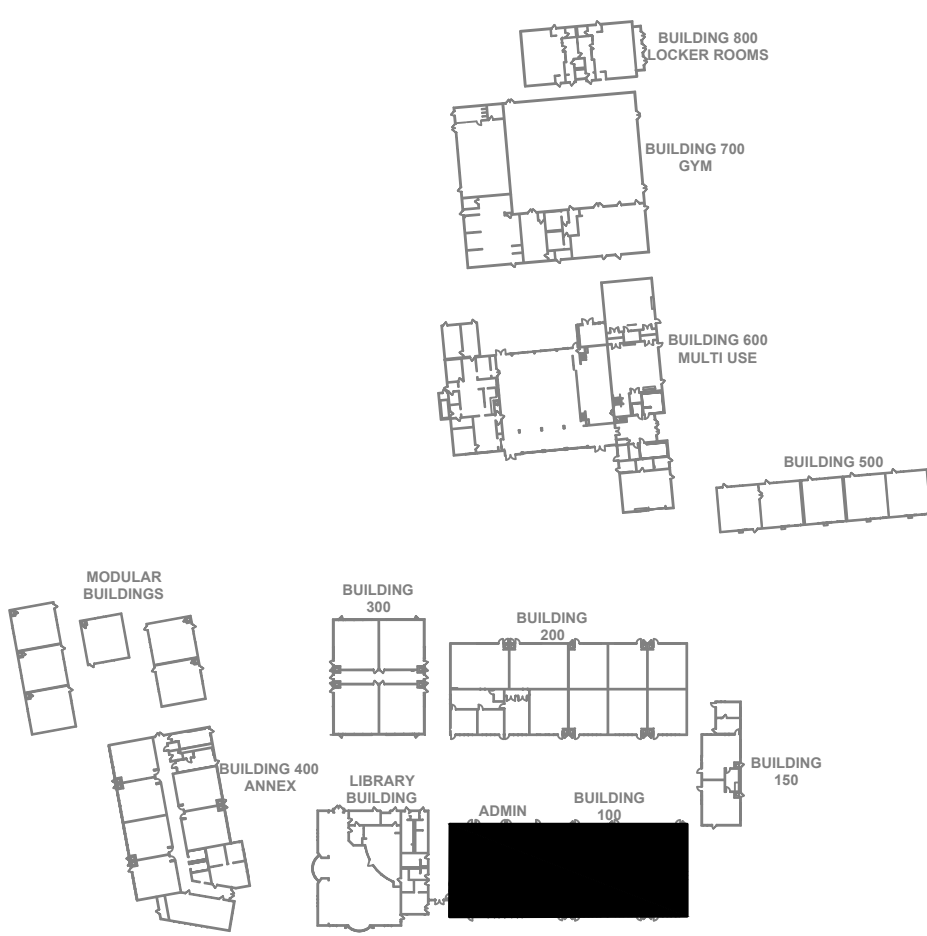
Sheet Title
**ELECTRICAL SIGNAL PLANS
BUILDING 100**

Client Project Number: Client Proj. #

Scale: AS NOTED
Drawn By: DAM
Checked By: TLK
Issue Date: 7/22/20

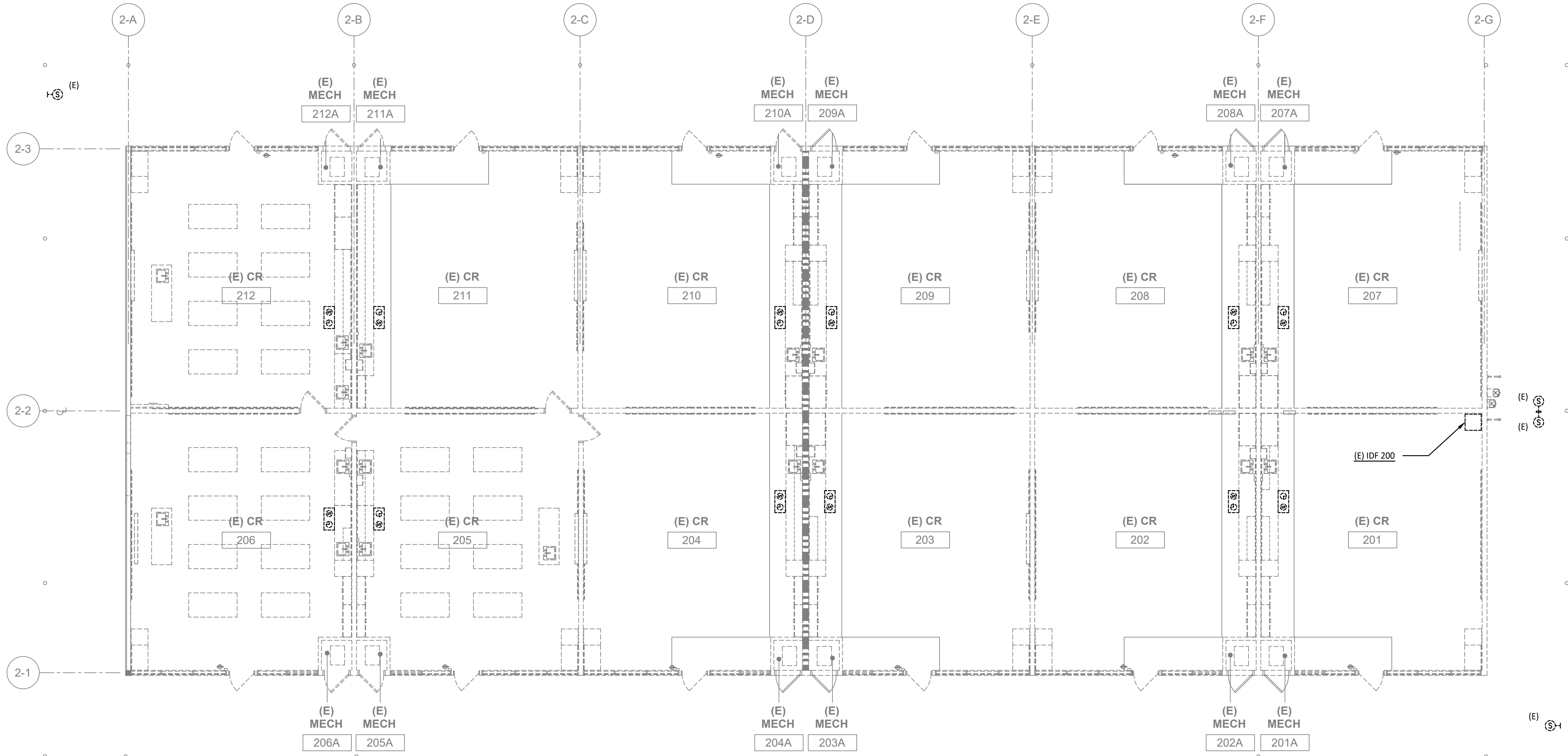
E4.01

Sheet 114 of 128





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GENERAL NOTES

1. ALL CLOCK/SPEAKER UNITS, INTRUSION ALARM DEVICES AND WIRING ARE TO BE REPLACED WITH NEW.
2. SEE WIRING DIAGRAMS FOR CABLING REQUIREMENTS.
3. ALL NEW CONDUITS AT EXISTING WALLS TO REMAIN SHALL BE RUN VERTICALLY INSIDE WALL THEN CONTINUED IN ACCESSIBLE CEILING SPACE TO MINIMIZE CUTTING AND PATCHING AND HORIZONTAL BORING THROUGH EXISTING STUDS.

SHEET NOTES



Revisions				
No.	Revisions	By	Date	Appr.

WCKM

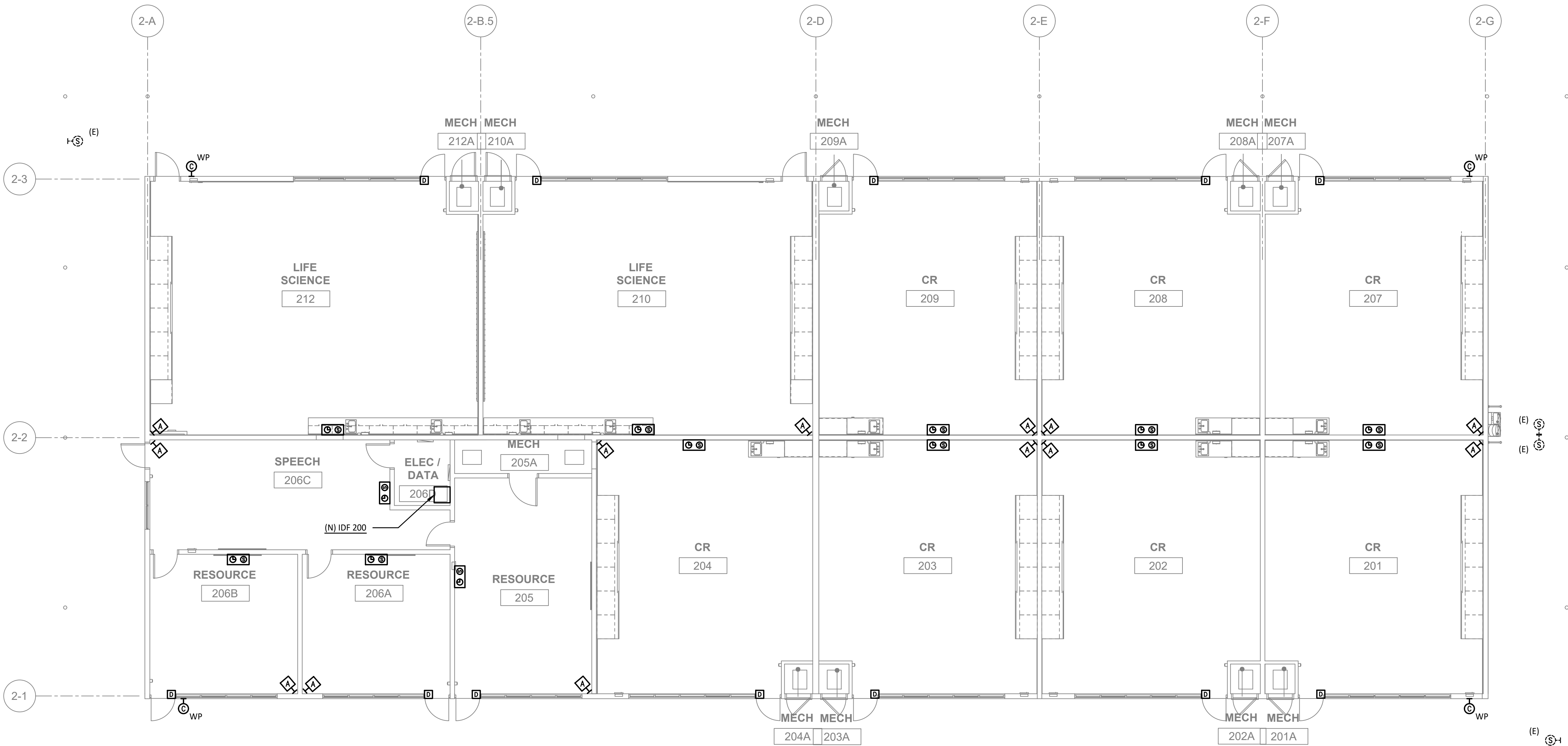
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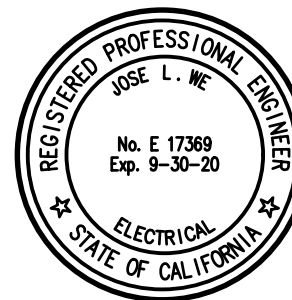
ELECTRICAL DEMOLITION SIGNAL PLAN - BUILDING 200 1/8" = 1'-0" 1



ELECTRICAL REVISED SIGNAL PLAN - BUILDING 200 1/8" = 1'-0" 2

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HY ARCHITECTS JOB NUMBER 5241

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2425 WALNUT BOULEVARD, WALNUT
CREEK, CA 94597

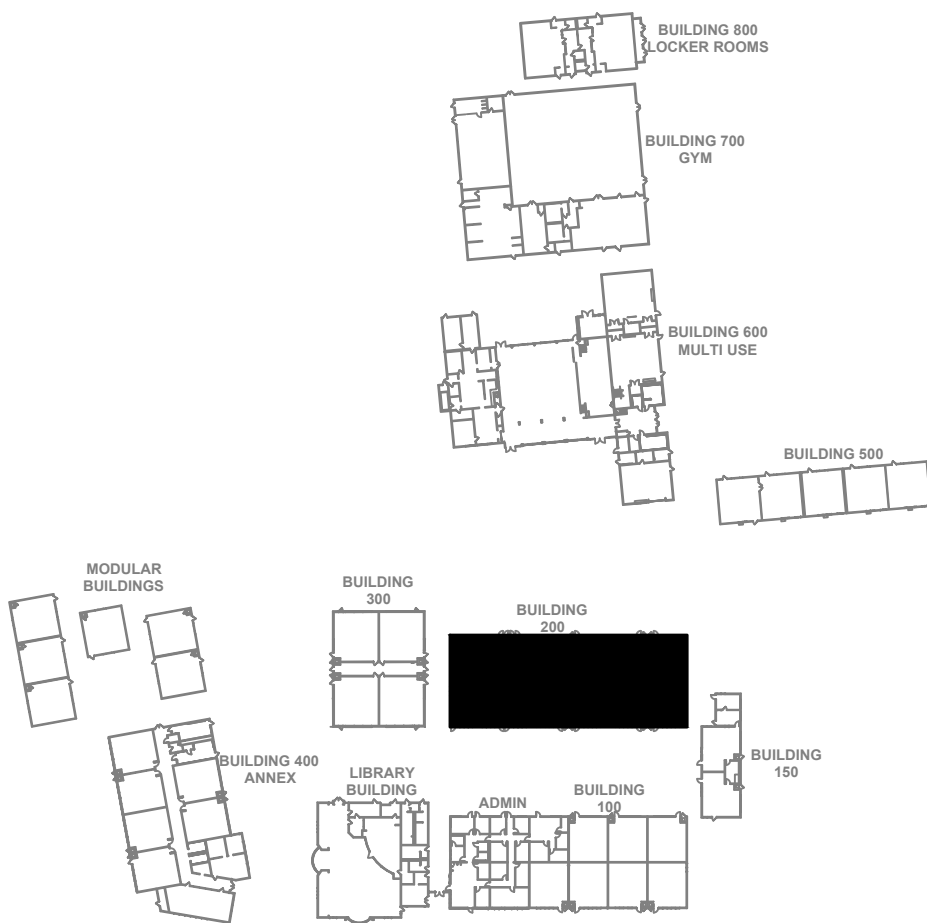
Project
**MODERNIZATION AND
RECONFIGURATION PROJECT
INCREMENT II**

Sheet Title
**ELECTRICAL SIGNAL PLANS
BUILDING 200**

Client Project Number: Client Proj. #

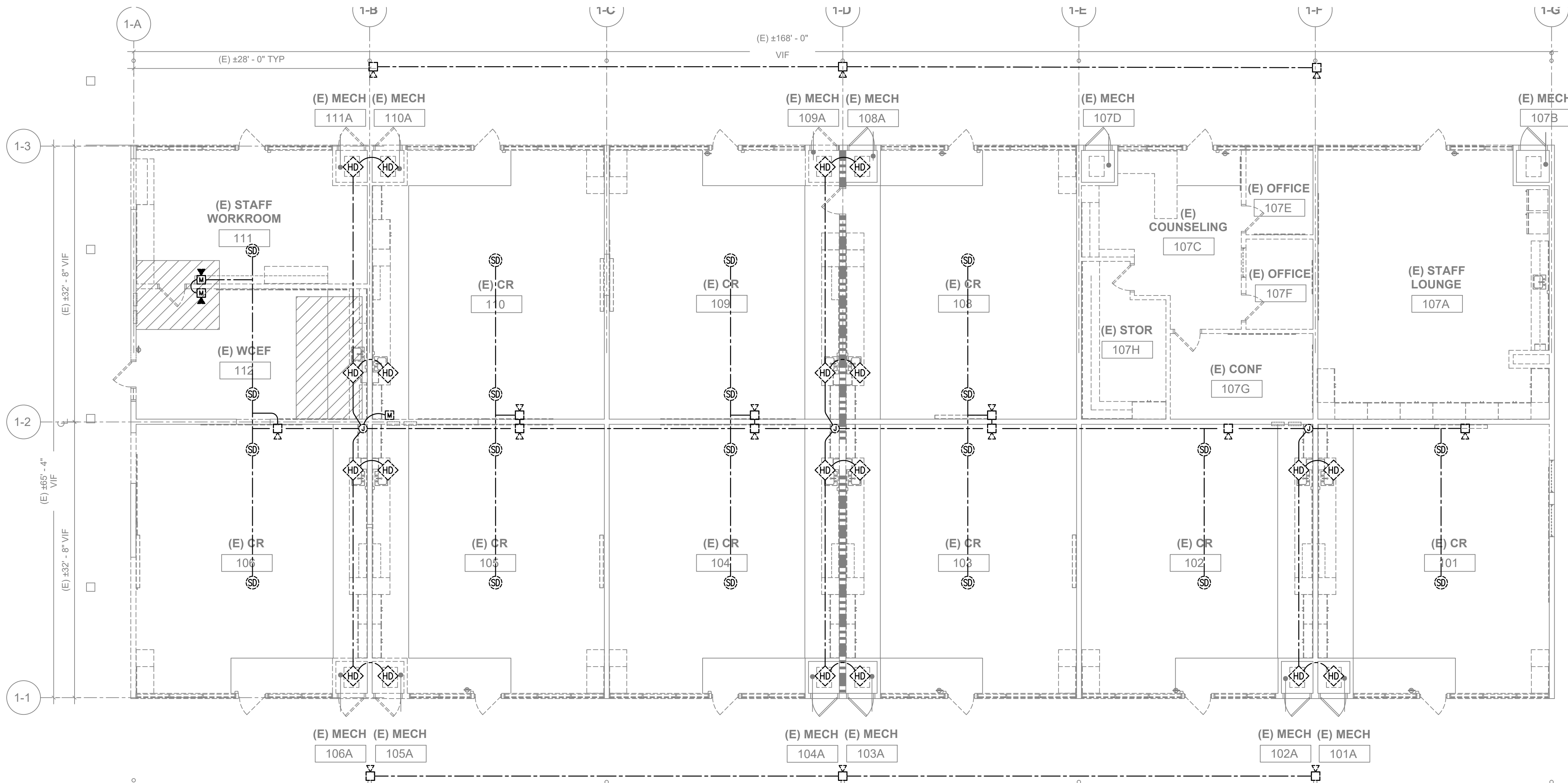
Scale: AS NOTED
Drawn By: DAM
Checked By: TLK
Issue Date: 7/22/20

Sheet
E4.02
Sheet 115 of 128





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GENERAL NOTES

- ALL FIRE ALARM DEVICES, SURFACE RACEWAY AND WIRING TO BE REMOVED.
- ALL NEW CONDUITS AT EXISTING WALLS TO REMAIN SHALL BE RUN VERTICALLY INSIDE WALL THEN CONTINUED IN ACCESSIBLE CEILING SPACE TO MINIMIZE CUTTING AND PATCHING AND HORIZONTAL BORING THROUGH EXISTING STUDS.

SHEET NOTES

- ◇ MOUNT DEVICE WITHIN 3' HORIZONTALLY OF PEAK OF CEILING.



Revisions				
No.	Revisions	By	Date	Appr.

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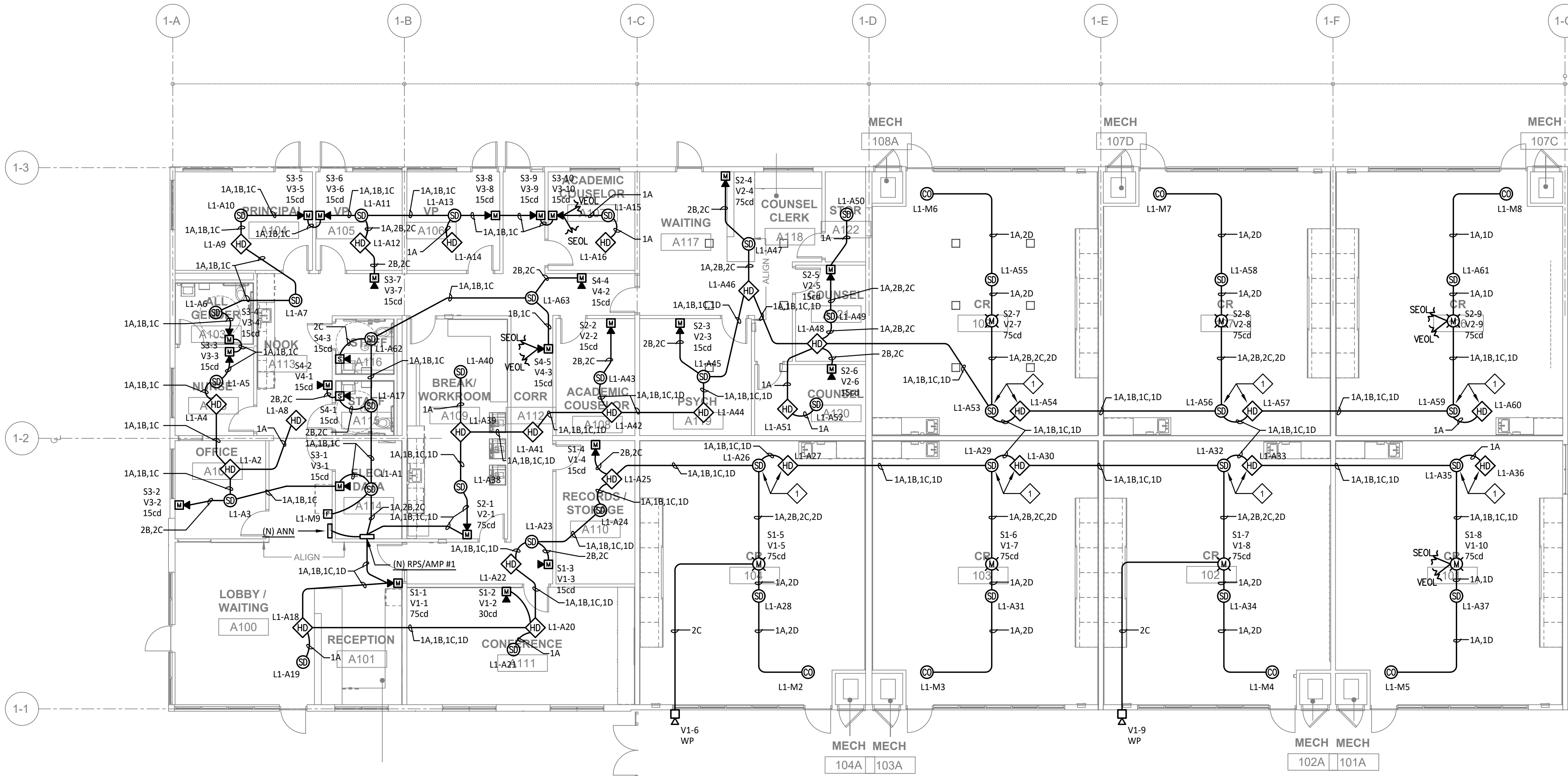
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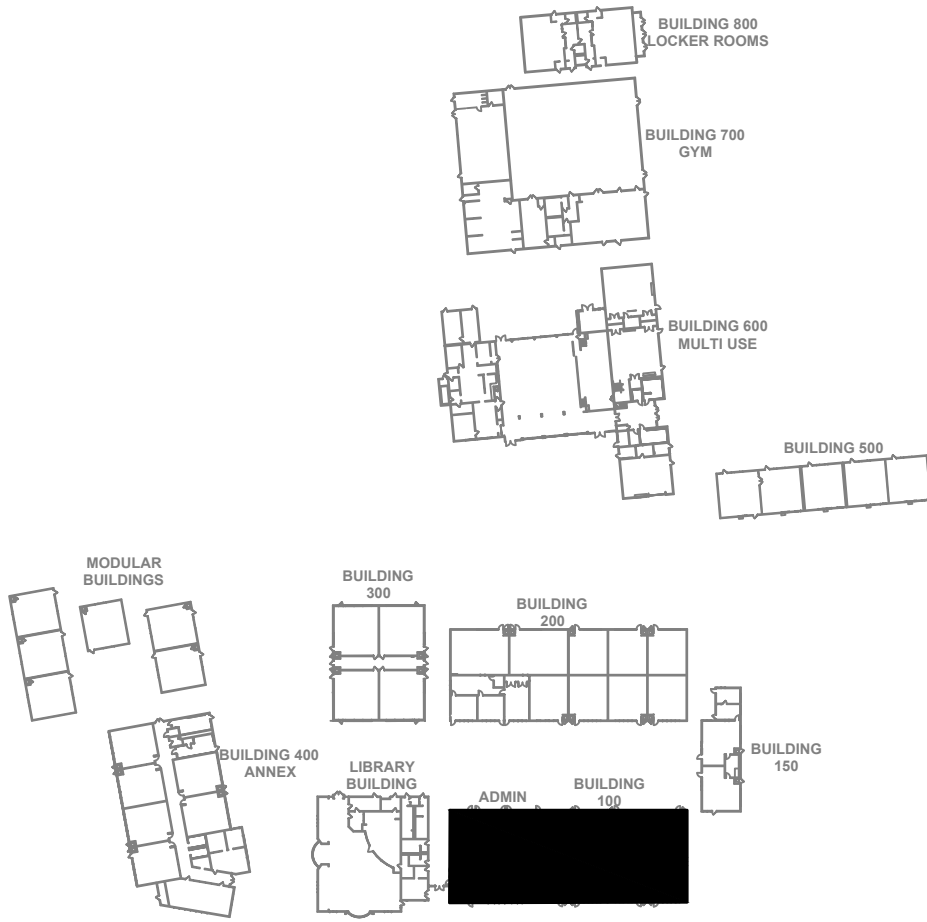
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ISSUE DATE: 7/22/20 BY: MH

ELECTRICAL DEMOLITION FIRE ALARM PLAN - BUILDING 100 1/8" = 1'-0" 1

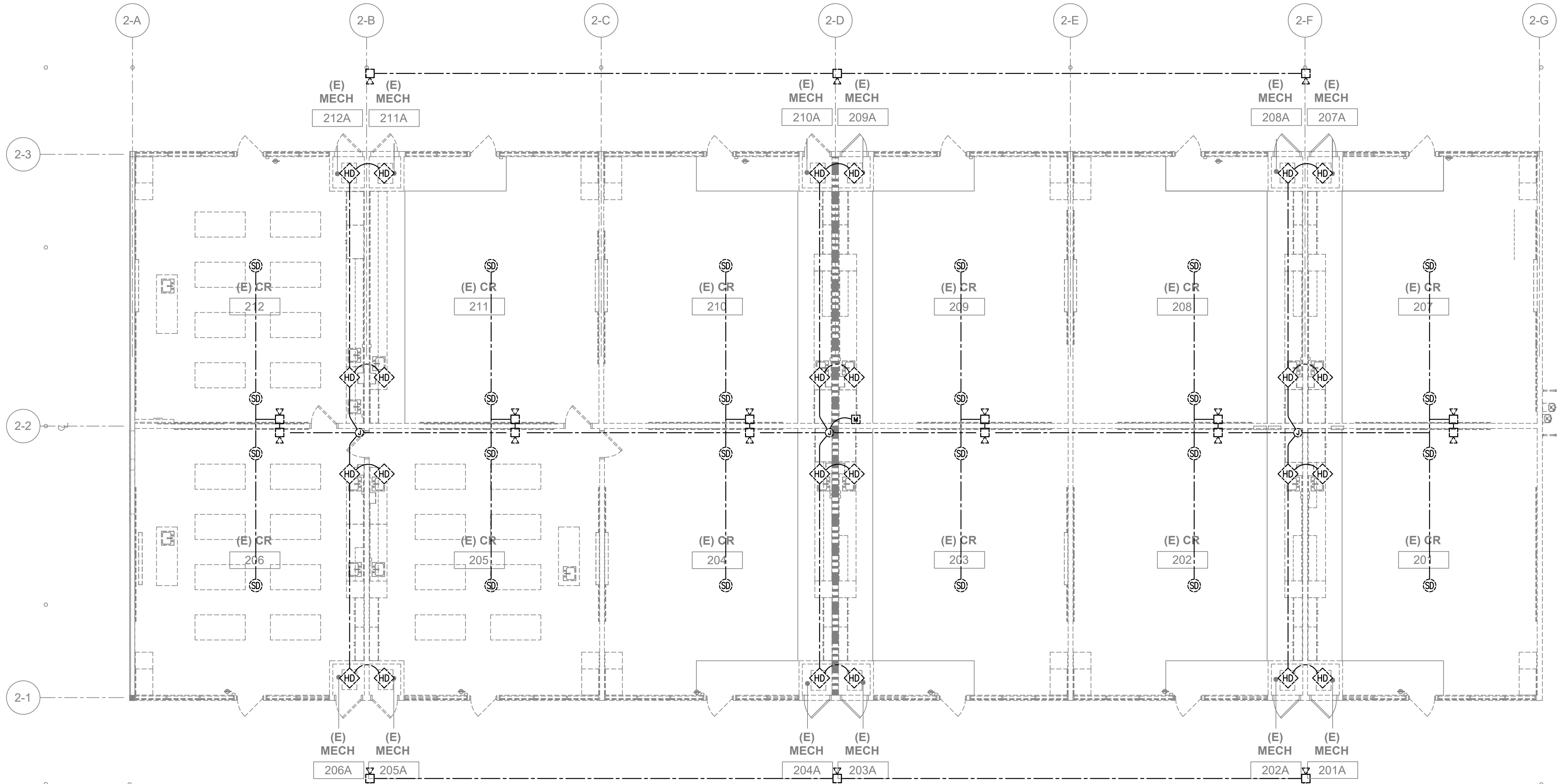


ELECTRICAL REVISED FIRE ALARM PLAN - BUILDING 100 1/8" = 1'-0" 2





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GENERAL NOTES

- ALL FIRE ALARM DEVICES, SURFACE RACEWAY AND WIRING TO BE REMOVED.
- ALL NEW CONDUITS AT EXISTING WALLS TO REMAIN SHALL BE RUN VERTICALLY INSIDE WALL THEN CONTINUED IN ACCESSIBLE CEILING SPACE TO MINIMIZE CUTTING AND PATCHING AND HORIZONTAL BORING THROUGH EXISTING STUDS.

SHEET NOTES

- ◇ MOUNT DEVICE WITHIN 3' HORIZONTALLY OF PEAK OF CEILING.



Revisions				
No.	Revisions	By	Date	Appr.

WCKM

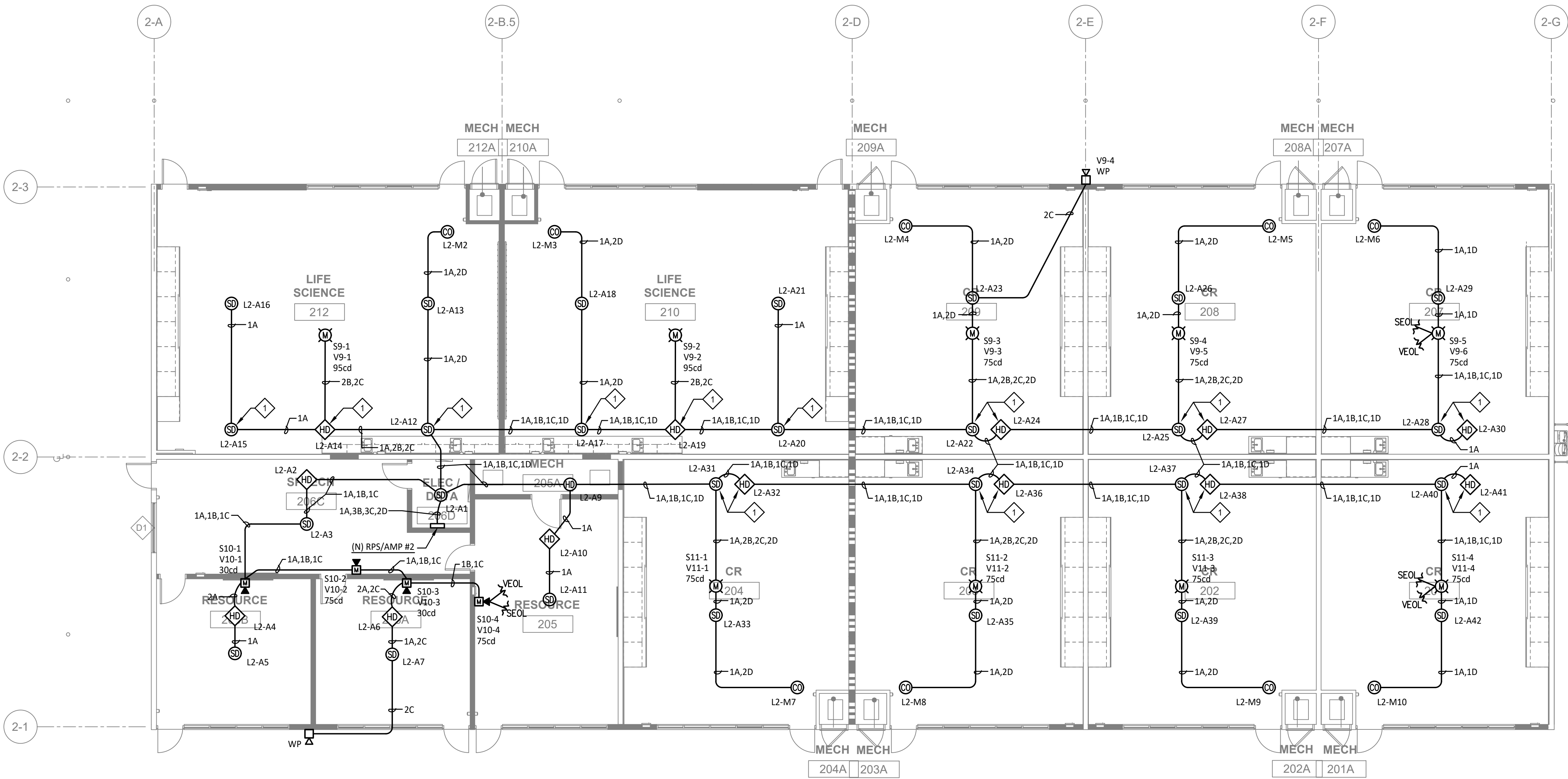
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3397 Mt. Diablo Blvd., Suite C
Lafayette, CA 94549
Tel: 925.385.0649
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ISSUE DATE: 7/22/20 BY: MH

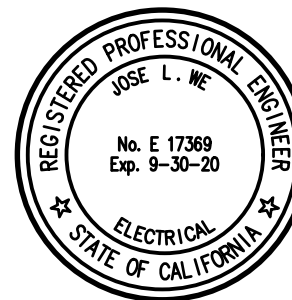
ELECTRICAL DEMOLITION FIRE ALARM PLAN - BUILDING 200 1/8" = 1'-0" 1



ELECTRICAL REVISED FIRE ALARM PLAN - BUILDING 200 1/8" = 1'-0" 2

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Facility
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2425 WALNUT BOULEVARD, WALNUT
CREEK, CA 94597

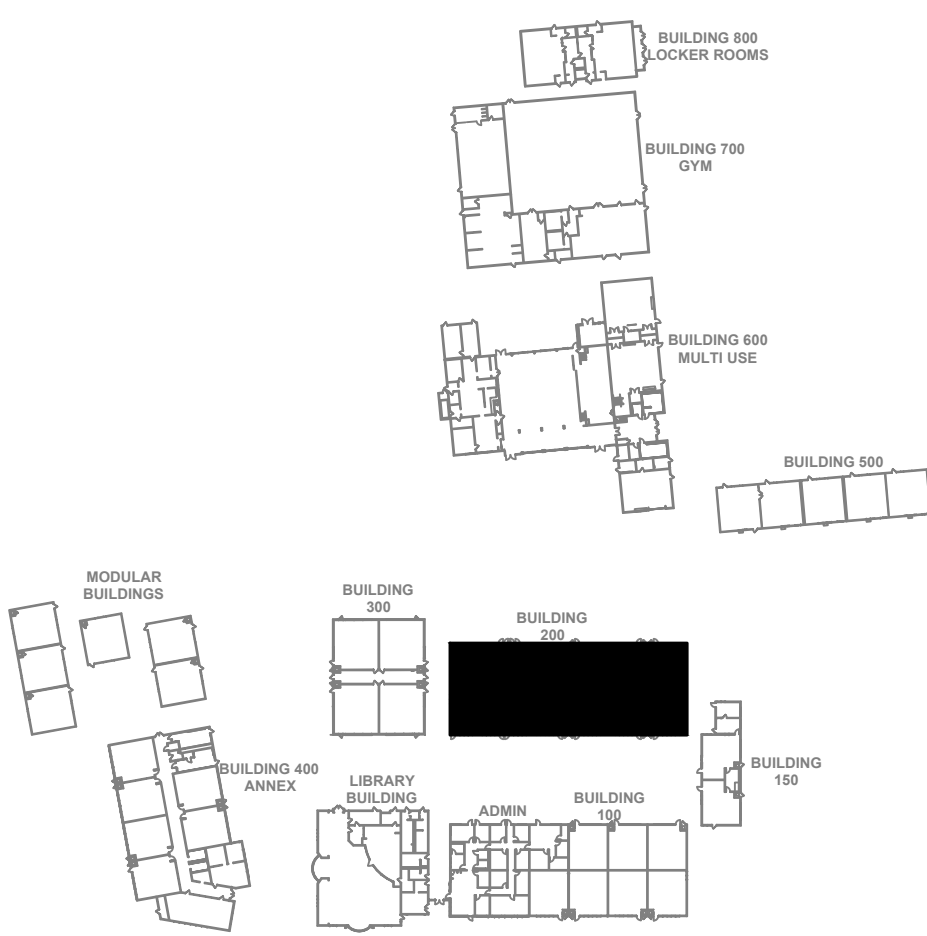
Project
**MODERNIZATION AND
RECONFIGURATION PROJECT
INCREMENT II**

Sheet Title
**ELECTRICAL FIRE ALARM PLANS
BUILDING 200**

Client Project Number: Client Proj. #

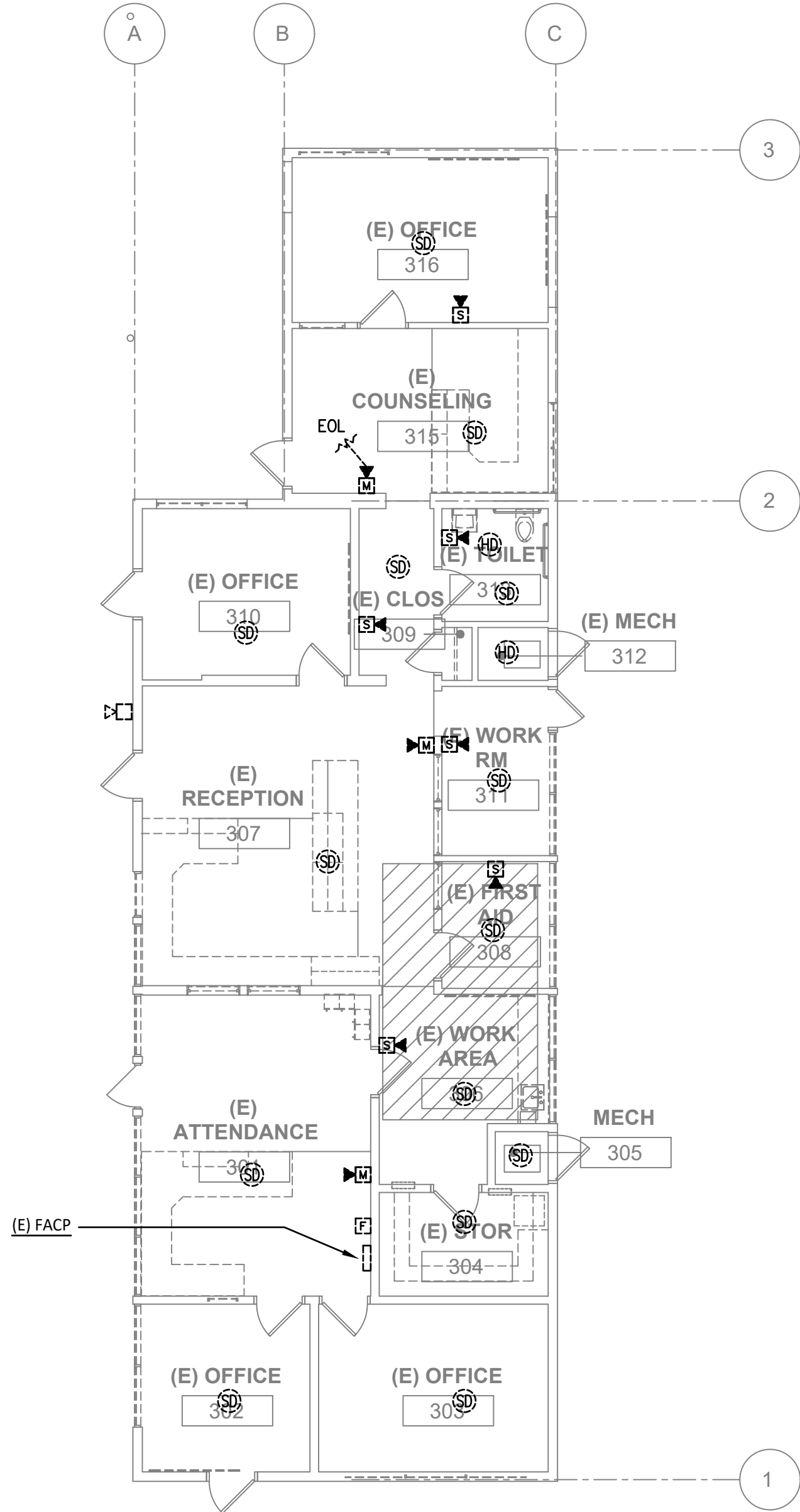
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Issue Date: 7/22/20

Sheet
E5.02
Sheet 118 of 128





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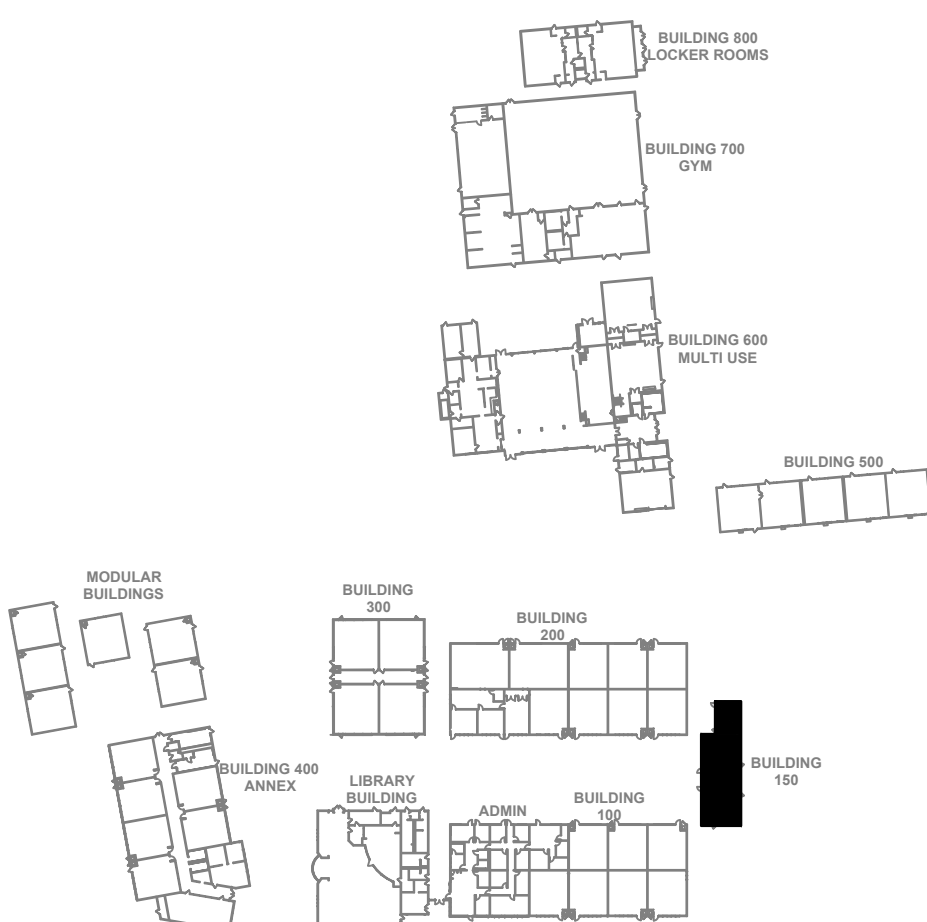
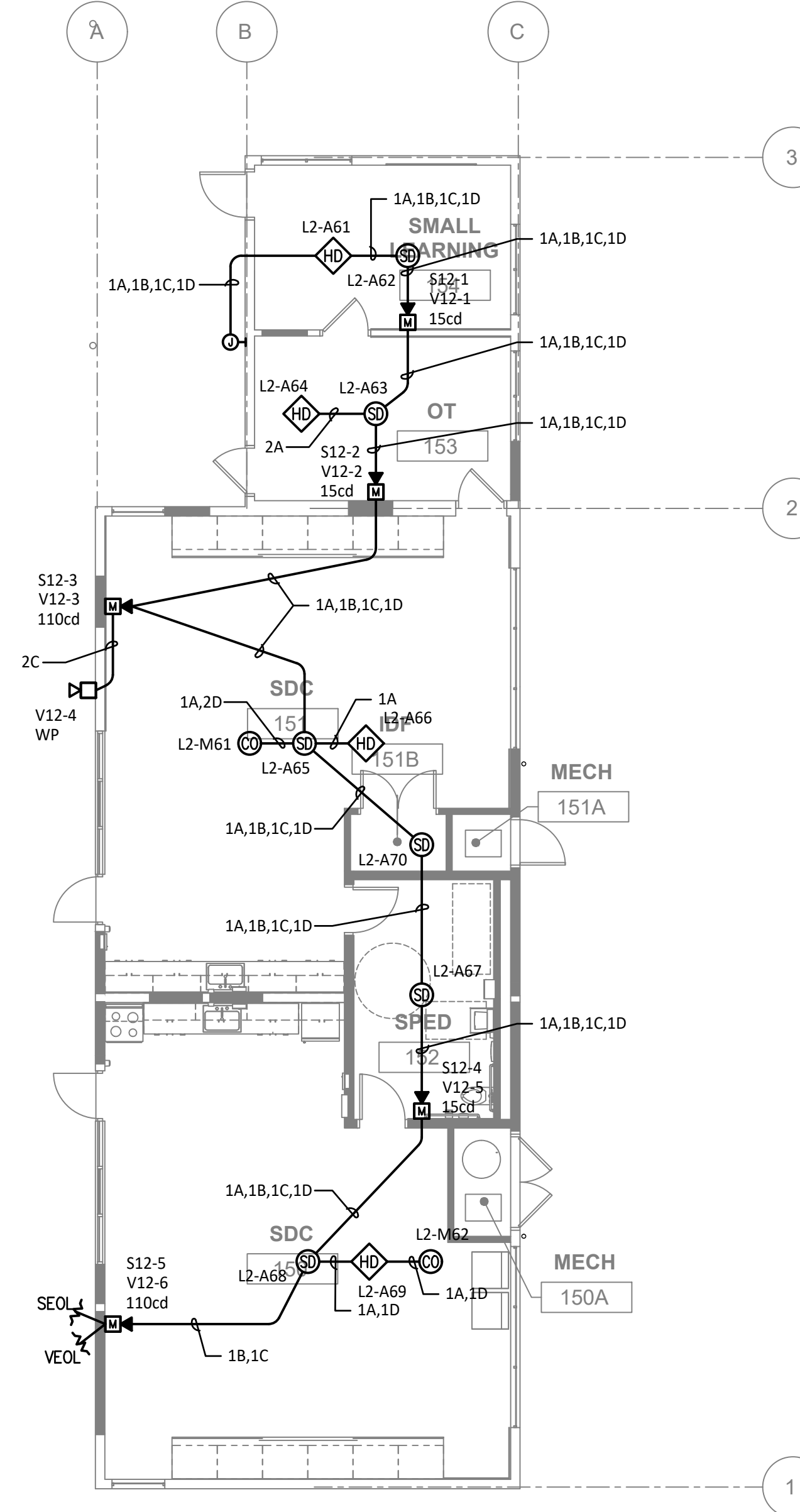
GENERAL NOTES

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- ALL NEW CONDUITS AT EXISTING WALLS TO REMAIN SHALL BE RUN VERTICALLY INSIDE WALL THEN CONTINUED IN ACCESSIBLE CEILING SPACE TO MINIMIZE CUTTING AND PATCHING AND HORIZONTAL BORING THROUGH EXISTING STUDS.

SHEET NOTES

- ◇ MOUNT DEVICE WITHIN 3' HORIZONTALLY OF PEAK OF CEILING.

ELECTRICAL DEMOLITION FIRE ALARM PLAN - BUILDING 150 1/8" = 1'-0" 1



ELECTRICAL REVISED FIRE ALARM PLAN - BUILDING 150 1/8" = 1'-0" 3



Revisions				
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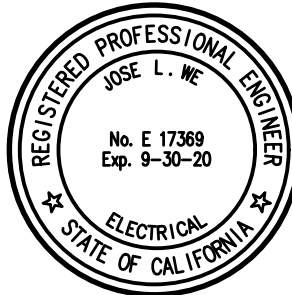
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Project

**MODERNIZATION AND
RECONFIGURATION PROJECT
INCREMENT II**

Sheet Title

**ELECTRICAL FIRE ALARM PLANS
BUILDINGS 150**

Client Project Number: Client Proj. #

Scale: AS NOTED

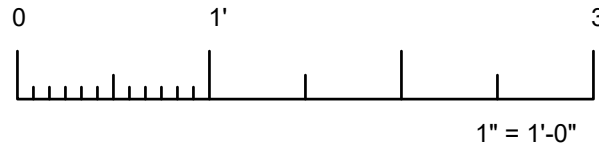
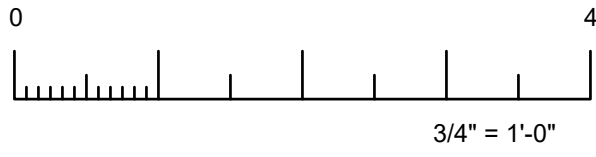
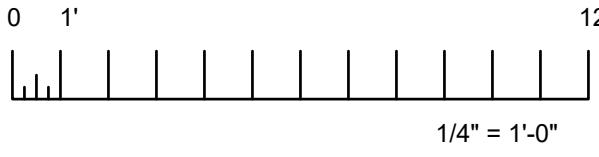
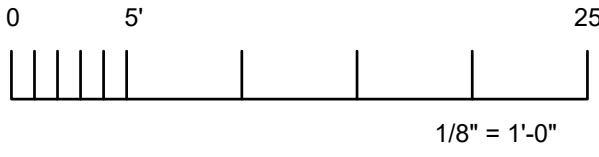
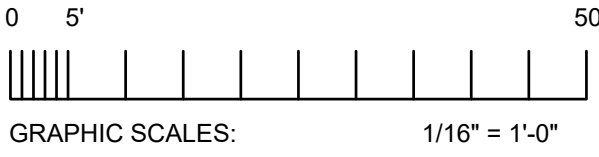
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Issue Date: 7/22/20

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BILL OF MATERIALS				
QTY.	DESCRIPTION	MODEL #	MANUFACTURER	CSFM LISTING #
1	(E) FIRE ALARM VOICE EVAC CONTROL PANEL WITH INTEGRAL DACT	NFS2-3030	NOTIFIER	7165-0028.0224
18	CARBON MONOXIDE DETECTOR	C0T224TR	SYSTEM SENSOR	5278-1653.0219
71	ADDRESSABLE SMOKE DETECTOR	FSP-851	NOTIFIER	7272-0028.0206
1	ADDRESSABLE 135 DEGREE HEAT DETECTOR	FST-851	NOTIFIER	7270-0028.0196
42	ADDRESSABLE 200 DEGREE HEAT DETECTOR	FST451H	NOTIFIER	7300-0028.0219
19	ADDRESSABLE MONITOR MODULE	FCM-1	NOTIFIER	7300-0028.0219
2	ADDRESSABLE CONTROL MODULE	FCM-1	NOTIFIER	7300-0028.0219
2	REMOTE POWER SUPPLY	PS-8	COOPER WHEELLOCK	7315-0785.0167
1	EXTERIOR WEATHERPROOF SPEAKER	ET70-24MCW-FR	COOPER WHEELLOCK	7320-0785.0105
32	INTERIOR WALL MT.SPEAKER/STROBE ADJUSTABLE CANDELA	ET90-24MCW-FR	COOPER WHEELLOCK	7125-0785.0152
16	INTERIOR CEILING MT.SPEAKER/STROBE ADJUSTABLE CANDELA	ET90-24MCW-FR	COOPER WHEELLOCK	7125-0785.0152
1	INTERIOR WALL MT.STROBE ADJUSTABLE CANDELA	ST	COOPER WHEELLOCK	7125-0785.0168

FIRE ALARM OPERATION MATRIX											
	OUTPUT	ANNUNCIATE ALARM CONDITION AT P.A.C.P.	ANNUNCIATE TROUBLE CONDITION AT P.A.C.P.	ANNUNCIATE ALARM CONDITION AT ANNUNCIATOR	ANNUNCIATE TROUBLE CONDITION AT ANNUNCIATOR	ACTIVATE SPEAKER/STROBE AND THROUGHOUT CAMPUS	ACTIVATE SPRINKLER RISER BELL	SHUTDOWN ASSOCIATED AHU AND FIRE SMOKE DAMPERS	SHUTDOWN CEILING FANS	ACTIVATE ALARM SIGNAL FOR CENTRAL STATION (SIGNAL VIA DRY CONTACTS)	ACTIVATE TROUBLE SIGNAL FOR CENTRAL STATION (SIGNAL VIA DRY CONTACTS)
MANUAL STATION	X	X				X				X	
HEAT/SMOKE DETECTORS	X		X	X		X		X	X	X	
DUCT DETECTORS		X	X		X			X	X	X	
WATER FLOW	X		X	X		X		X	X	X	
TAMPER / PIV SYSTEM TROUBLE		X		X		X					X
KITCHEN HOOD SUPPRESSION SYSTEM	X		X		X						X
CARBON MONOXIDE DETECTOR											X

FIRE ALARM CONTROL PANEL BATTERY CALCULATIONS

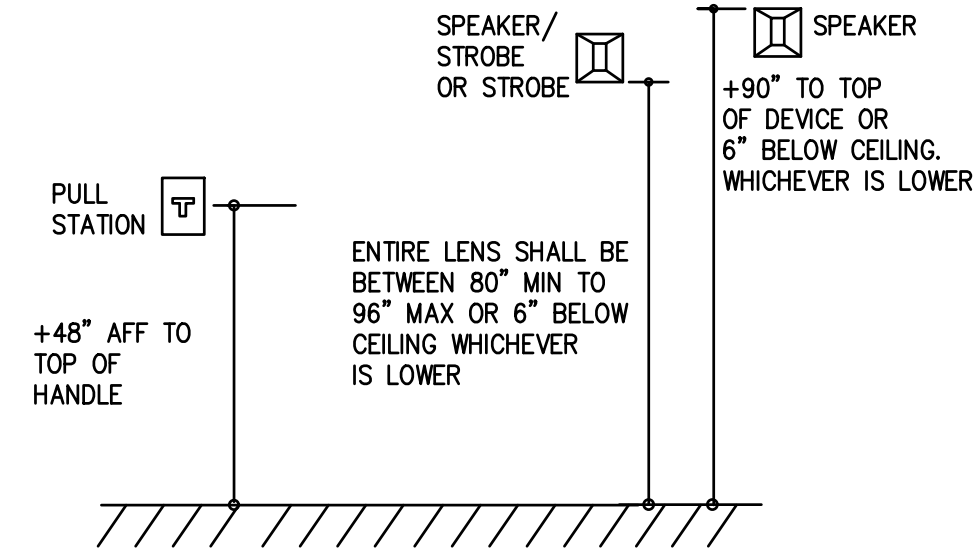
PANEL MODULES		STANDBY		ALARM	
QTY (N)	DESCRIPTION	EACH	TOTAL	EACH	TOTAL
1	NFS2-3030 CPU WITH KEYBOARD/DISPLAY	0.3800	0.3800	0.4150	0.4150
1	LOOP CONTROL MODULE	0.1300	0.1300	0.1300	0.1300
1	LOOP EXPANDER MODULE	0.1000	0.1000	0.1000	0.1000
1	POWER SUPPLY WITH CHARGER 24V	0.0520	0.0520	0.0520	0.0520
1	NETWORK CONTROL	0.1100	0.1100	0.1100	0.1100
1	ANNUNCIATOR, LCD-160	0.3000	0.3000	0.3250	0.3250
1	DIGITAL VOICE COMMAND - DVC-EM	1.0000	1.0000	1.0000	1.0000
1	DAA-2	0.5000	0.5000	4.6900	4.6900
PANEL STANDBY CURRENT			2.5720		
PANEL ALARM CURRENT					6.8220

FIELD DEVICES		STANDBY		ALARM	
QTY (N)	DESCRIPTION	EACH	TOTAL	EACH	TOTAL
1	ANNUNCIATOR	0.2000	0.2000	0.2000	0.2000
1	MANUAL PULL STATION	0.0030	0.0030	0.0030	0.0030
71	125 ADDRESSABLE SMOKE DETECTOR	0.00036	0.0709	0.00650	1.2740
1	3 ADDRESSABLE 135 DEGREE HEAT DETECTOR	0.00030	0.0012	0.00650	0.0260
42	64 ADDRESSABLE 200 DEGREE HEAT DETECTOR	0.00030	0.0318	0.00650	0.6890
	BEAM DETECTOR	0.00038	0.0000	0.00060	0.0000
2	DUCT DETECTOR	0.00030	0.0006	0.00650	0.0130
19	10 MONITOR MODULE	0.00038	0.0109	0.00060	0.0174
2	9 CONTROL MODULE	0.00038	0.0041	0.00650	0.0715
8	10 ISOLATOR MODULE	0.00045	0.0081	0.00500	0.0900
DEVICE STANDBY CURRENT			0.3276		
DEVICE ALARM CURRENT					2.3839

TOTAL SYSTEM CURRENT

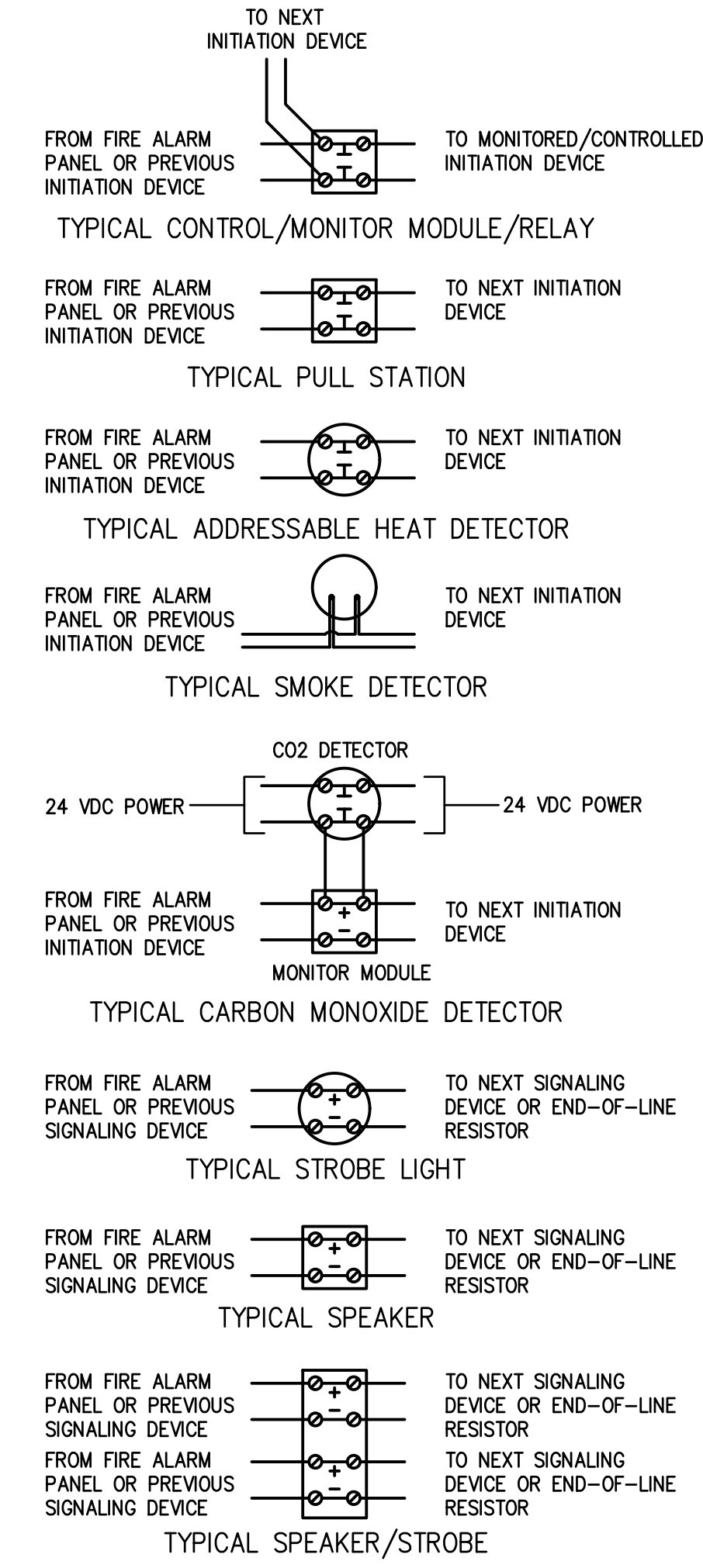
DESCRIPTION	STANDBY	ALARM
CONTROL PANEL	2.5720	6.8220
FIELD DEVICES	0.3276	2.3839
TOTAL STANDBY CURRENT	2.8996	
X 24 HOUR STANDBY	69.5894	
TOTAL ALARM CURRENT		9.2059
15 MINUTES OF ALARM (X 25)		2.3015
TOTAL BATTERY REQUIREMENT		71.8909
TOTAL BAT. WITH 20% SAFETY MARGIN		86.2691
BATTERY SUPPLIED		(2)110 AH1

* REQUIRES EXTERNAL BATTERY CABINET



TYPICAL ELEVATIONS PULLS/SPEAKER/STROBE

NO SCALE



TYPICAL FIRE ALARM DETAILS

NOT TO SCALE

SCOPE OF WORK

PROVIDE AND INSTALL NEW NOTIFIER VOICE EVACUATION FIRE ALARM SYSTEM DEVICES AS SHOWN ON PLANS.

TYPE OF SYSTEM

- THIS IS A NEW AUTOMATIC ADDRESSABLE VOICE EVACUATION SYSTEM.
- CLASS 'B' DETECTION.
- CLASS 'B' INITIATION.
- SYSTEM IS A PROTECTED PREMISES AND REQUIRES 24 HOUR STANDBY. - THE SUPERVISING STATION SHALL BE LISTED AS EITHER UJFX OR INITIATING DEVICES FOR AREA OF WORK SHALL BE AUTOMATIC TYPE AS REQUIRED BY FIRE PROTECTION ACT (38575) GREEN OAKS FAMILY ACADEMY MIDDLE SCHOOL.
- BUILDINGS ARE TYPE 'E' OCCUPANCY.
- SYSTEM DESIGNER: TIFFANY L. KANE, WKM ELECTRICAL CONSULTANTS INCORPORATED

APPLICABLE CODES

PARTIAL LIST OF APPLICABLE CODES AS OF JANUARY 1, 2020:
2019 CALIFORNIA ADMINISTRATIVE CODE (CAC), PART 1, TITLE 24 CCR
2019 CALIFORNIA BUILDING CODE (CBC), PART 2, TITLE 24 CCR (2018 INTERNATIONAL BUILDING CODE, VOL. 1 & 2, AND 2016 CALIFORNIA AMENDMENTS)
2019 CALIFORNIA ELECTRICAL CODE (CEC), PART 3, TITLE 24 CCR (2017 NATIONAL ELECTRICAL CODE AND 2019 CALIFORNIA AMENDMENTS)
2019 CALIFORNIA MECHANICAL CODE (CMC), PART 4, TITLE 24 CCR (2018 IAPMO UNIFORM MECHANICAL CODE AND 2019 CALIFORNIA AMENDMENTS)
2019 CALIFORNIA PLUMBING CODE (CPC), PART 5, TITLE 24 CCR (2018 IAPMO UNIFORM PLUMBING CODE AND 2019 CALIFORNIA AMENDMENTS)
2019 CALIFORNIA ENERGY CODE (CEC), PART 6, TITLE 24 CCR
2019 CALIFORNIA FIRE CODE (CFC), PART 8, TITLE 24 CCR (2018 INTERNATIONAL FIRE CODE AND 2019 CALIFORNIA AMENDMENTS)
2019 CALIFORNIA EXISTING BUILDING CODE (CEBC), PART 10, TITLE 24 CCR (2018 INTERNATIONAL EXISTING BUILDING CODE AND 2019 CALIFORNIA AMENDMENTS)
2019 CALIFORNIA GREEN BUILDING STANDARDS CODE (CALGREEN), PART 11, TITLE 24 CCR
2019 CALIFORNIA REFERENCED STANDARDS CODE, PART 12, TITLE 24 CCR
TITLE 19 CCR, PUBLIC SAFETY, STATE FIRE MARSHAL REGULATIONS
2016 ASME A17.1/CSA 344-13 SAFETY CODE FOR ELEVATORS AND ESCALATORS (PER 2019 CBC PART 2 CH 35) NOTE: CAL/OSHA ELEVATOR UNIT ENFORCES CCR TITLE 8 AND USES THE 2004 ASME A17.1 BY ADOPTION

PARTIAL LIST OF APPLICABLE STANDARDS:
NFPA 13 - STANDARD FOR THE INSTALLATION OF SPRINKLER SYSTEMS (CA AMENDED) - 2016 EDITION
NFPA 14 - STANDARD FOR THE INSTALLATION OF STANDPIPE AND HOSE SYSTEMS (CA AMENDED) - 2013 EDITION NFPA 17
STANDARD FOR DRY CHEMICAL EXTINGUISHING SYSTEMS - 2016 EDITION NFPA 17A - STANDARD FOR WET CHEMICAL EXTINGUISHING SYSTEMS - 2017 EDITION
NFPA 20 - STANDARD FOR THE INSTALLATION OF STATIONARY PUMPS FOR FIRE PROTECTION - 2017 EDITION
NFPA 22 - STANDARD FOR WATER TANKS FOR PRIVATE FIRE PROTECTION - 2013 EDITION
NFPA 24 - STANDARD FOR THE INSTALLATION OF PRIVATE FIRE SERVICE MAINS AND THEIR APPURTENANCES (CA AMENDED) - 2016 EDITION
NFPA 72 - NATIONAL FIRE ALARM AND SIGNALING CODE (CA AMENDED) - 2016 EDITION
NFPA 80 - STANDARD FOR FIRE DOORS AND OTHER OPENING PROTECTIVES - 2016 EDITION
NFPA 2001 - STANDARD ON CLEAN AGENT FIRE EXTINGUISHING SYSTEMS (CA AMENDED) - 2015 EDITION
UL 300 - STANDARD FOR FIRE TESTING OF FIRE EXTINGUISHING SYSTEMS FOR PROTECTION OF COMMERCIAL COOKING EQUIPMENT - 2005 (R2010)
UL 464 - AUDIBLE SIGNALING DEVICES FOR FIRE ALARM AND SIGNALING SYSTEMS, INCLUDING ACCESSORIES - 2003 EDITION
UL 521 - STANDARD FOR HEAT DETECTORS FOR FIRE PROTECTIVE SIGNALING SYSTEMS - 1999 EDITION
UL 1971 - STANDARD FOR SIGNALING DEVICES FOR THE HEARING IMPAIRED - 2002 (R2010)
ICC 300 - STANDARD FOR BLEACHERS, FOLDING AND TELESCOPIC SEATING, AND GRANDSTANDS - 2017 EDITION

FOR A COMPLETE LIST OF APPLICABLE NFPA STANDARDS REFER TO 2016 CBC (SFM) CHAPTER 35 AND CALIFORNIA FIRE CODE CHAPTER 80.

SEE CALIFORNIA BUILDING CODE CHAPTER 35 FOR STATE OF CALIFORNIA AMENDMENTS TO THE NFPA STANDARDS AND AN OVERALL LISTING OF REFERENCED STANDARDS.

FIRE ALARM SYSTEM NOTES

1. FINAL FIRE ALARM TEST SHALL BE MADE WITH THE DSA PROJECT INSPECTOR (PI). LOCAL FIRE AUTHORITY SHALL BE NOTIFIED OF DATE AND TIME OF FINAL FIRE ALARM TESTING AND SHALL ASSIST/ WITNESS SUCH TESTING WHEN ABLE.
2. UNDERGROUND AND EXTERIOR CONDUITS WILL HAVE WATER-TIGHT FITTINGS. (CEC 110-11 and 300-6)
3. FIRE ALARM DEVICE MOUNTING HEIGHTS:
 - PULL STATION: 48" TO TOP OF HANDLE ABOVE FINISHED FLOOR. (CEC 380-8c)
 - HORN/INTERIOR: MINIMUM 90" TO TOP OF DEVICE ABOVE FINISHED FLOOR, NOT LESS THAN 6" FROM CEILING. (2016 NFPA72-18.4.8.1)
 - WALL MOUNTED STROBE OR HORN/STROBE: MINIMUM 90" TO BOTTOM OF STROBE LENS AND NOT GREATER THAN 10" TO TOP OF STROBE LENS, ABOVE FINISHED FLOOR, NOT LESS THAN 6" FROM CEILING. (2016 NFPA72-18.5.4.1)
4. TO ENSURE THAT AUDIBLE PUBLIC MODE SIGNALS ARE CLEARLY HEARD, UNLESS OTHERWISE PERMITTED BY 2016 NFPA72-18.4.3.2 THROUGH 18.4.3.5, THEY SHALL HAVE A SOUND LEVEL AT LEAST 15db ABOVE THE AVERAGE AMBIENT SOUND LEVEL OR 5db ABOVE THE MAXIMUM SOUND LEVEL HAVING A DURATION OF AT LEAST 60 SECONDS, WHICHEVER IS GREATER, MEASURED 5 ft (1.5 m) ABOVE THE FLOOR IN THE AREA REQUIRED TO BE SERVED BY THE SYSTEM USING THE A-WEIGHTED SCALE (dBA). (2016 NFPA72-18.4.3.1)
5. AUDIBLE DEVICES SHALL SOUND THE CALIFORNIA UNIFORM FIRE ALARM SIGNAL IN TEMPORAL MODE.
6. VISUAL DEVICES SHALL NOT EXCEED 2 FLASHES PER SECOND AND SHALL NOT BE SLOWER THAN 1 FLASH EVERY SECOND. (2016 NFPA72-18.5.2.1)
7. FIRE ALARM CONTRACTOR SHALL PROVIDE A "RECORD OF COMPLETION" TO THE PROJECT INSPECTOR (PI) / DSA AFTER COMPLETION OF OPERATIONAL ACCEPTANCE TESTS. (2016 NFPA 72-14.6.2.4 AND FIGURE 14.6.2.4)
8. ALL CIRCUITS SHALL BE SUPERVISED AGAINST OPENS, SHORTS AND GROUNDS.
9. INSTALLATION OF DEVICES SHALL BE IN ACCORDANCE WITH MANUFACTURER'S INSTRUCTIONS.
10. MARK ALL WIRES IN ACCORDANCE WITH 760-10.
11. ALL OUTSIDE FIRE ALARM DEVICES SHALL BE CSFM LISTED AS WEATHERPROOF TYPE.
12. EXISTING CAMPUS FIRE ALARM SYSTEM SHALL NOT BE DISCONNECTED OR TAKEN OUT OF SERVICE WITHOUT WRITTEN PERMISSION FROM SCHOOL DISTRICT. 48 HOUR NOTICE SHALL PROVIDED TO LOCAL FIRE AUTHORITY PRIOR TO FIRE ALARM SYSTEM SHUTDOWN.
13. ALL FIRE ALARM WIRING SHALL BE CONTINUOUS WITHOUT SPLICES AND TERMINATED IN TERMINAL BLOCKS OF THE DEVICE OR FIRE ALARM APPROVED TERMINAL BLOCKS IN TERMINAL CABINETS OR JUNCTION BOXES.
14. ALL FIRE ALARM WIRING INSTALLED IN UNDERGROUND CONDUIT OR OTHER WET LOCATIONS SHALL BE UL LISTED FOR WET LOCATIONS.
15. ALL WIRING TO BE RUN IN FIRE ALARM DEDICATED CONDUIT. ALL NEW FA WIRING SHALL BE INSTALLED IN CONDUIT MINIMUM SIZE 3/4" U.O.N. USE EXISTING FIRE ALARM CONDUITS WHERE PRACTICAL TO INSTALL A NEW FA WIRING. FIELD VERIFY EXACT EXISTING CONDUIT ROUTING.
16. ALL SHIELDS TO BE CONTINUOUS, DRY AND FREE FROM ALL GROUNDS AND SHORTS.
17. ELECTRICAL/FIRE ALARM CONTRACTOR SHALL VERIFY EXISTING AVAILABLE ADDRESSES ON EXISTING SYSTEM AND CORRECT ON AS-BUILT DRAWINGS FOR SUBMITTAL TO SCHOOL DISTRICT AT END OF PROJECT.
18. THIS CAMPUS HAS AN EXISTING UL LISTED CENTRAL MONITORING STATION. SUPERVISING STATION: AUTOMATIC FIRE ALARM SYSTEMS SHALL TRANSMIT THE ALARM, SUPERVISORY AND TROUBLE SIGNALS TO AN APPROVED SUPERVISING STATION AS REQUIRED BY NFPA 72, AS AMENDED BY CFC CHAPTER 80. THE SUPERVISION STATION SHALL BE LISTED AS EITHER UJFX OR UJUS BY UNDERWRITERS LABORATORY OR SHALL MEET THE REQUIREMENTS OF FACTORY MUTUAL RESEARCH APPROVAL STANDARD 3011.
19. THE DOCUMENTATION CABINET SHALL BE PROMINENTLY LABELED SYSTEM RECORD DOCUMENTS PER NFPA 72, 7.7.2.4.
20. AFTER APPROVAL, SUBSTITUTIONS OF FIRE ALARM MANUFACTURERS SHALL REQUIRE A CHANGE ORDER WITH MANUFACTURER CUT SHEETS AND APPLICABLE CSFM LISTINGS.



Revisions				
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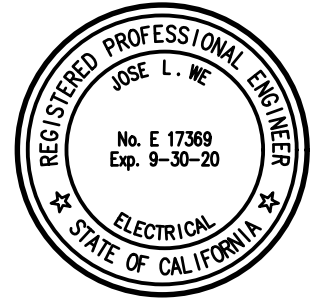
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2425 WALNUT BOULEVARD, WALNUT CREEK, CA 94597

Project

MODERNIZATION AND RECONFIGURATION PROJECT INCREMENT II

Sheet Title

ELECTRICAL FIRE ALARM NOTES

Client Project Number: Client Proj. #

Scale: AS NOTED

Drawn By: DAM

Checked By: TLK

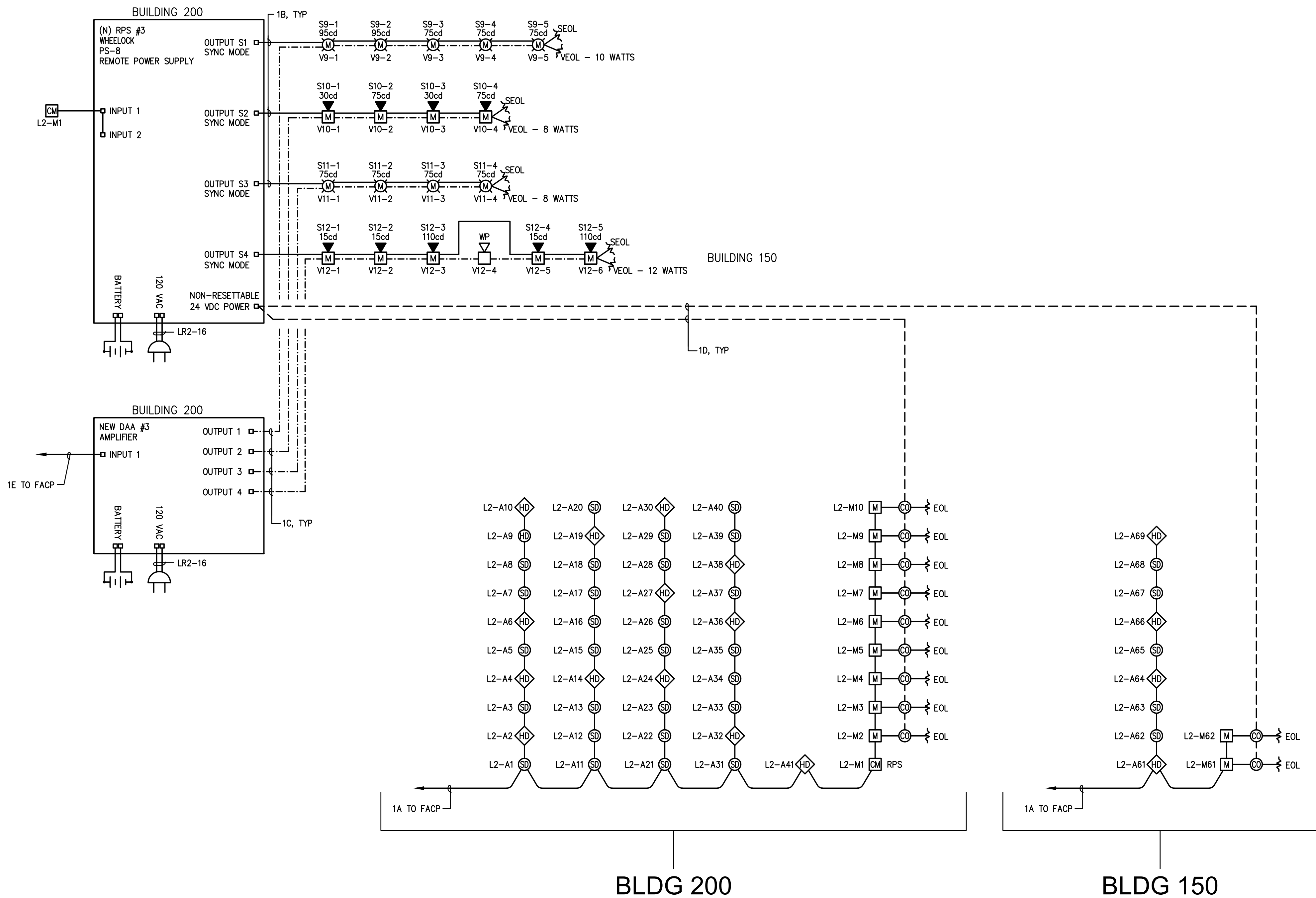
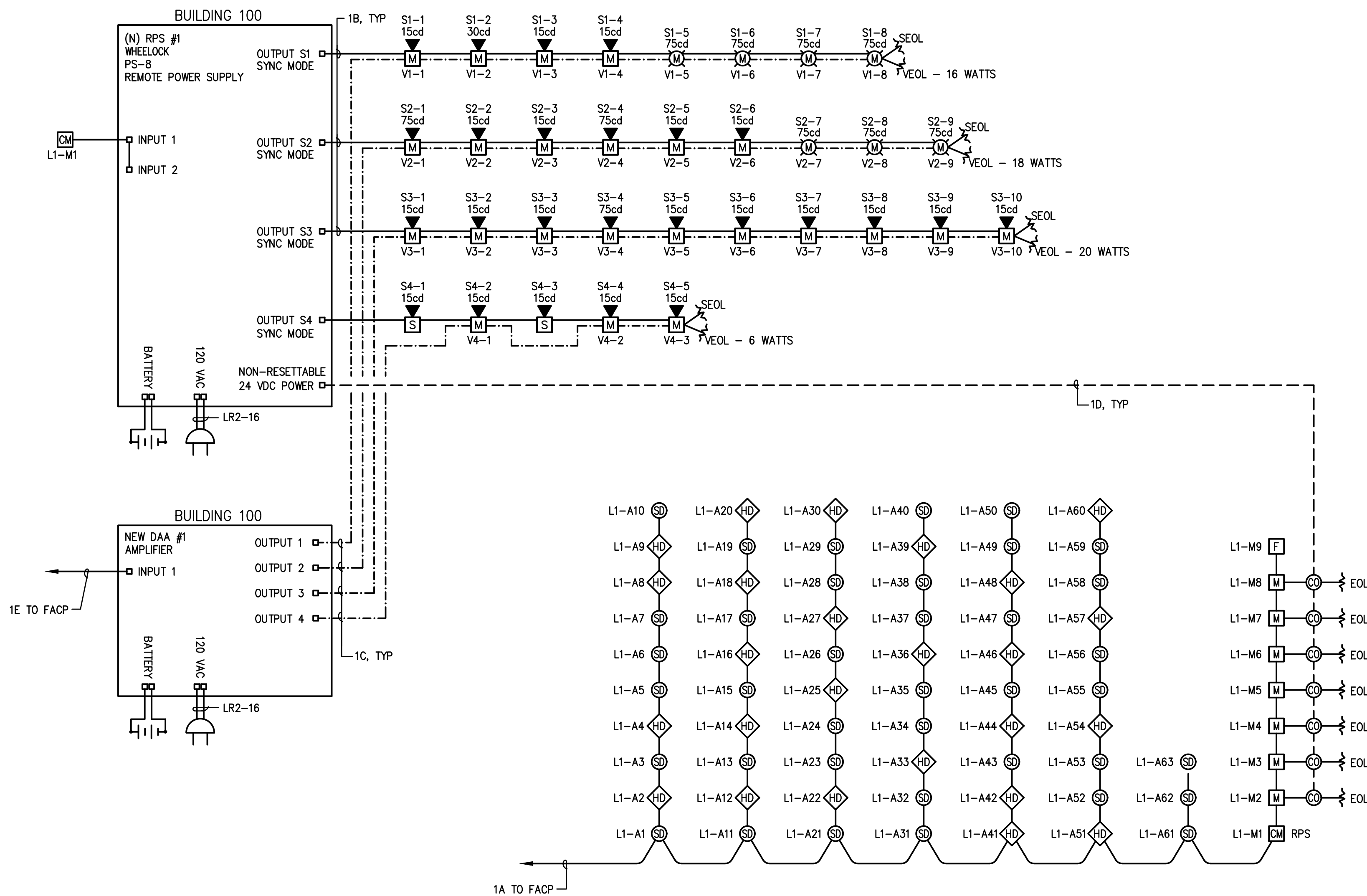
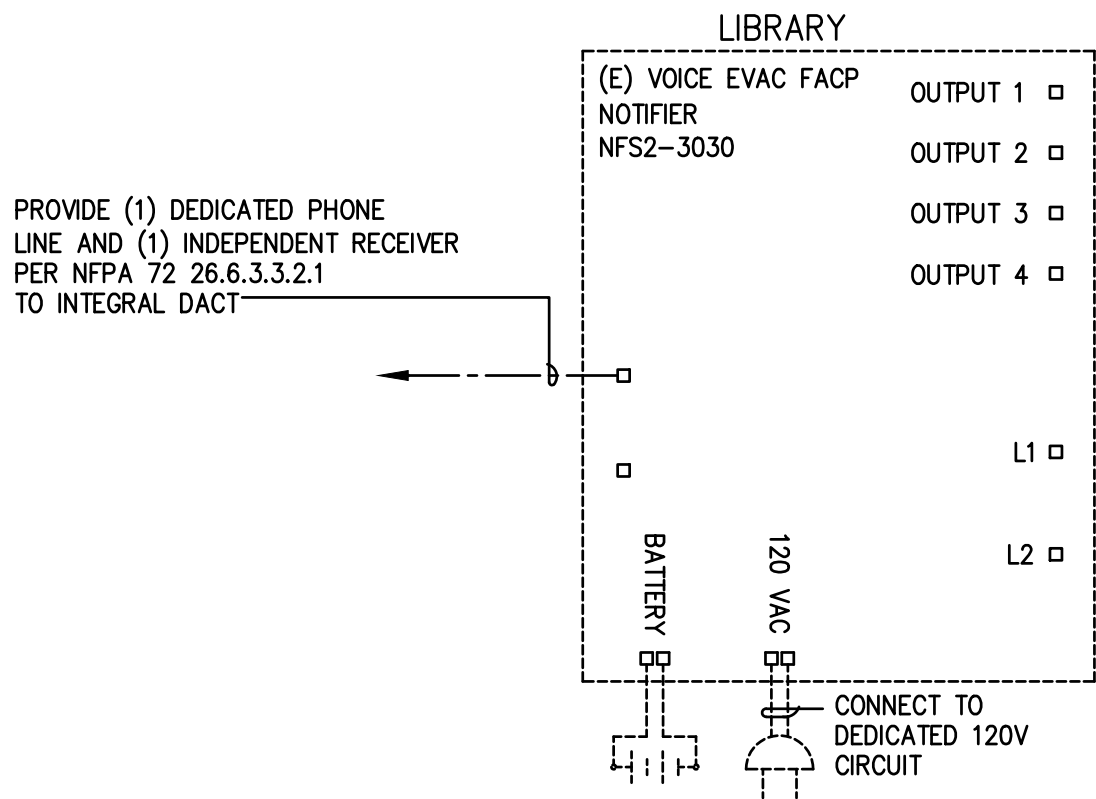
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Sheet 120 of 128



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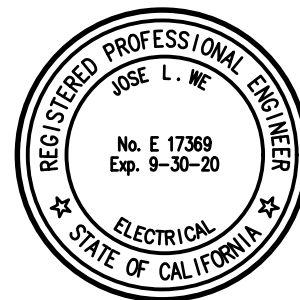
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Project
**MODERNIZATION AND
RECONFIGURATION PROJECT
INCREMENT II**

Sheet Title
ELECTRICAL FIRE ALARM RISER

Client Project Number: Client Proj. #

Scale: AS NOTED

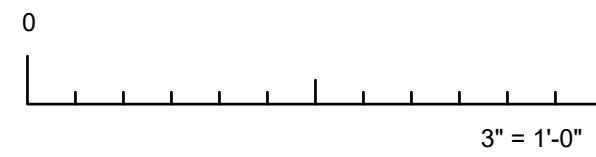
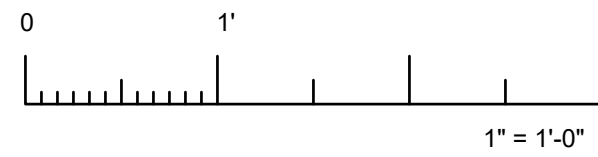
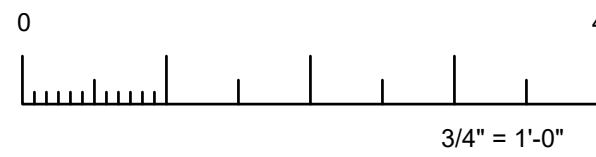
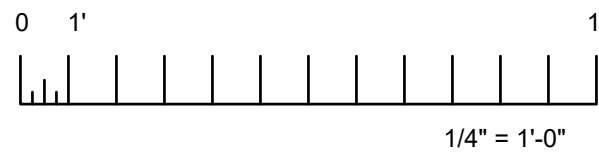
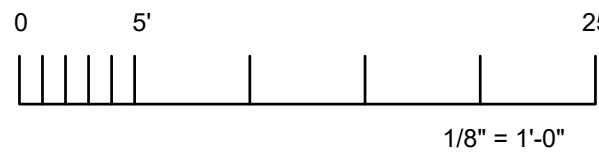
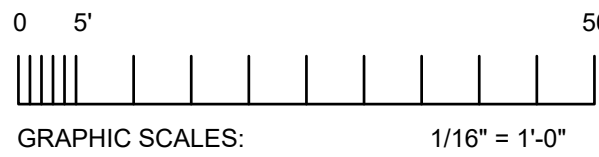
Drawn By: DAM

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Issue Date: 7/22/20

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Sheet 121 of 128



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VOLTAGE DROP (VD) CALCULATION

PROJECT NAME: WALNUT CREEK INTERMEDIATE
SIGNAL CIRCUIT #: S1

DEVICE #	1st	2nd	3rd	4th	5th	6th	7th	8th	9th	10th
GAUGE WIRE	12	12	12	12	12	12	12	12	12	12
DISTANCE (FT)	10	25	10	20	30	40	40	40		
AMPS OF DEVICE	0.249	0.249	0.249	0.249	0.249	0.249	0.249	0.249	0.249	
TOTAL AMPS@DEV.	1.992	1.743	1.494	1.245	0.996	0.747	0.498	0.249	0	0
VOLT. DROP @ DEV.	0.065892	0.144138	0.049419	0.082364	0.098837	0.098837	0.065892	0.032946	0	0

DEVICE #	11th	12th	13th	14th	15th	16th	17th	18th	19th	20th
GAUGE WIRE	12	12	12	12	12	12	12	12	12	12
DISTANCE (FT)										
AMPS OF DEVICE										
TOTAL AMPS@DEV.	0	0	0	0	0	0	0	0	0	0
VOLT. DROP @ DEV.	0	0	0	0	0	0	0	0	0	0

TOTAL CKT. AMPS	1.992 AMPS	WIRE SIZE	RESIS. /M.F.T.	CIRC. MILS.	
		10	1.24	10380	
TOTAL CKT V DROP =	0.6383 VDC	12	1.59	6530	** FORMULA **
		14	2.52	4110	
CKT VOLTAGE =	20.4	16	4.02	2580	I* FEET * 21.6
		18	6.39	1620	
% VOLTAGE DROP=	3.1%	20	10.1	1020	C.M.

VOLTAGE DROP (VD) CALCULATION

PROJECT NAME: WALNUT CREEK INTERMEDIATE
SIGNAL CIRCUIT #: S2

DEVICE #	1st	2nd	3rd	4th	5th	6th	7th	8th	9th	10th
GAUGE WIRE	12	12	12	12	12	12	12	12	12	12
DISTANCE (FT)	10	45	15	25	25	40	40	40		
AMPS OF DEVICE	0.249	0.249	0.249	0.249	0.249	0.249	0.249	0.249	0.249	
TOTAL AMPS@DEV.	2.241	1.992	1.743	1.494	1.245	0.996	0.747	0.498	0.249	0
VOLT. DROP @ DEV.	0.074128	0.296512	0.086483	0.123547	0.102956	0.082364	0.098837	0.065892	0.032946	0

DEVICE #	11th	12th	13th	14th	15th	16th	17th	18th	19th	20th
GAUGE WIRE	12	12	12	12	12	12	12	12	12	12
DISTANCE (FT)										
AMPS OF DEVICE										
TOTAL AMPS@DEV.	0	0	0	0	0	0	0	0	0	0
VOLT. DROP @ DEV.	0	0	0	0	0	0	0	0	0	0

TOTAL CKT. AMPS	2.241 AMPS	WIRE SIZE	RESIS. /M.F.T.	CIRC. MILS.	
		10	1.24	10380	
TOTAL CKT V DROP =	0.9637 VDC	12	1.59	6530	** FORMULA **
		14	2.52	4110	
CKT VOLTAGE =	20.4	16	4.02	2580	I* FEET * 21.6
		18	6.39	1620	
% VOLTAGE DROP=	4.7%	20	10.1	1020	C.M.

VOLTAGE DROP (VD) CALCULATION

PROJECT NAME: WALNUT CREEK INTERMEDIATE
SIGNAL CIRCUIT #: S3

DEVICE #	1st	2nd	3rd	4th	5th	6th	7th	8th	9th	10th
GAUGE WIRE	12	12	12	12	12	12	12	12	12	12
DISTANCE (FT)	15	25	40	5	30	5	20	30	10	5
AMPS OF DEVICE	0.249	0.249	0.249	0.249	0.249	0.249	0.249	0.249	0.249	0.249
TOTAL AMPS@DEV.	2.49	2.241	1.992	1.743	1.494	1.245	0.996	0.747	0.498	0.249
VOLT. DROP @ DEV.	0.123547	0.18532	0.263566	0.028828	0.148256	0.020591	0.065892	0.074128	0.016473	0.004118

DEVICE #	11th	12th	13th	14th	15th	16th	17th	18th	19th	20th
GAUGE WIRE	12	12	12	12	12	12	12	12	12	12
DISTANCE (FT)										
AMPS OF DEVICE										
TOTAL AMPS@DEV.	0	0	0	0	0	0	0	0	0	0
VOLT. DROP @ DEV.	0	0	0	0	0	0	0	0	0	0

TOTAL CKT. AMPS	2.49 AMPS	WIRE SIZE	RESIS. /M.F.T.	CIRC. MILS.	
		10	1.24	10380	
TOTAL CKT V DROP =	0.9307 VDC	12	1.59	6530	** FORMULA **
		14	2.52	4110	
CKT VOLTAGE =	20.4	16	4.02	2580	I* FEET * 21.6
		18	6.39	1620	
% VOLTAGE DROP=	4.6%	20	10.1	1020	C.M.

VOLTAGE DROP (VD) CALCULATION

PROJECT NAME: WALNUT CREEK INTERMEDIATE
SIGNAL CIRCUIT #: S4

DEVICE #	1st	2nd	3rd	4th	5th	6th	7th	8th	9th	10th
GAUGE WIRE	12	12	12	12	12	12	12	12	12	12
DISTANCE (FT)	25	5	10	30	20					
AMPS OF DEVICE	0.249	0.249	0.249	0.249	0.249					
TOTAL AMPS@DEV.	1.245	0.996	0.747	0.498	0.249	0	0	0	0	0
VOLT. DROP @ DEV.	0.102956	0.016473	0.024709	0.049419	0.016473	0	0	0	0	0

DEVICE #	11th	12th	13th	14th	15th	16th	17th	18th	19th	20th
GAUGE WIRE	12	12	12	12	12	12	12	12	12	12
DISTANCE (FT)										
AMPS OF DEVICE										
TOTAL AMPS@DEV.	0	0	0	0	0	0	0	0	0	0
VOLT. DROP @ DEV.	0	0	0	0	0	0	0	0	0	0

TOTAL CKT. AMPS	1.245 AMPS	WIRE SIZE	RESIS. /M.F.T.	CIRC. MILS.	
		10	1.24	10380	
TOTAL CKT V DROP =	0.21 VDC	12	1.59	6530	** FORMULA **
		14	2.52	4110	
CKT VOLTAGE =	20.4	16	4.02	2580	I* FEET * 21.6
		18	6.39	1620	
% VOLTAGE DROP=	1.0%	20	10.1	1020	C.M.

VOLTAGE DROP (VD) CALCULATION

PROJECT NAME: WALNUT CREEK INTERMEDIATE
SIGNAL CIRCUIT #: S9

DEVICE #	1st	2nd	3rd	4th	5th	6th	7th	8th	9th	10th
GAUGE WIRE	12	12	12	12	12	12	12	12	12	12
DISTANCE (FT)	35	45	45	40	40					
AMPS OF DEVICE	0.249	0.249	0.249	0.249	0.249					
TOTAL AMPS@DEV.	1.245	0.996	0.747	0.498	0.249	0	0	0	0	0
VOLT. DROP @ DEV.	0.144138	0.148256	0.111192	0.065892	0.032946	0	0	0	0	0

DEVICE #	11th	12th	13th	14th	15th	16th	17th	18th	19th	20th
GAUGE WIRE	12	12	12	12	12	12	12	12	12	12
DISTANCE (FT)										
AMPS OF DEVICE										
TOTAL AMPS@DEV.	0	0	0	0	0	0	0	0	0	0
VOLT. DROP @ DEV.	0	0	0	0	0	0	0	0	0	0

TOTAL CKT. AMPS	1.245 AMPS	WIRE SIZE	RESIS. /M.F.T.	CIRC. MILS.	
		10	1.24	10380	
TOTAL CKT V DROP =	0.5024 VDC	12	1.59	6530	** FORMULA **
		14	2.52	4110	
CKT VOLTAGE =	20.4	16	4.02	2580	I* FEET * 21.6
		18	6.39	1620	
% VOLTAGE DROP=	2.5%	20	10.1	1020	C.M.

VOLTAGE DROP (VD) CALCULATION

PROJECT NAME: WALNUT CREEK INTERMEDIATE
SIGNAL CIRCUIT #: S10

DEVICE #	1st	2nd	3rd	4th	5th	6th	7th	8th	9th	10th
GAUGE WIRE	12	12	12	12	12	12	12	12	12	12
DISTANCE (FT)	35	45	45	40						
AMPS OF DEVICE	0.249	0.249	0.249	0.249						
TOTAL AMPS@DEV.	0.996	0.747	0.498	0.249	0	0	0	0	0	0
VOLT. DROP @ DEV.	0.11531	0.111192	0.074128	0.032946	0	0	0	0	0	0

DEVICE #	11th	12th	13th	14th	15th	16th	17th	18th	19th	20th
GAUGE WIRE	12	12	12	12	12	12	12	12	12	12
DISTANCE (FT)										
AMPS OF DEVICE										
TOTAL AMPS@DEV.	0	0	0	0	0	0	0	0	0	0
VOLT. DROP @ DEV.	0	0	0	0	0	0	0	0	0	0

TOTAL CKT. AMPS	0.996 AMPS	WIRE SIZE	RESIS. /M.F.T.	CIRC. MILS.	
		10	1.24	10380	
TOTAL CKT V DROP =	0.3336 VDC	12	1.59	6530	** FORMULA **
		14	2.52	4110	
CKT VOLTAGE =	20.4	16	4.02	2580	I* FEET * 21.6
		18	6.39	1620	
% VOLTAGE DROP=	1.6%	20	10.1	1020	C.M.

VOLTAGE DROP (VD) CALCULATION

PROJECT NAME: WALNUT CREEK INTERMEDIATE
SIGNAL CIRCUIT #: S11

DEVICE #	1st	2nd	3rd	4th	5th	6th	7th	8th	9th	10th
GAUGE WIRE	12	12	12	12	12	12	12	12	12	12
DISTANCE (FT)	65	45	45	40						
AMPS OF DEVICE	0.249	0.249	0.249	0.249						
TOTAL AMPS@DEV.	0.996	0.747	0.498	0.249	0	0	0	0	0	0
VOLT. DROP @ DEV.	0.214148	0.111192	0.074128	0.032946	0	0	0	0	0	0

DEVICE #	11th	12th	13th	14th	15th	16th	17th	18th	19th	20th
GAUGE WIRE	12	12	12	12	12	12	12	12	12	12
DISTANCE (FT)										
AMPS OF DEVICE										
TOTAL AMPS@DEV.	0	0	0	0	0	0	0	0	0	0
VOLT. DROP @ DEV.	0	0	0	0	0	0	0	0	0	0

TOTAL CKT. AMPS	0.996 AMPS	WIRE SIZE	RESIS. /M.F.T.	CIRC. MILS.	
		10	1.24	10380	
TOTAL CKT V DROP =	0.4324 VDC	12	1.59	6530	** FORMULA **
		14	2.52	4110	
CKT VOLTAGE =	20.4	16	4.02	2580	I* FEET * 21.6
		18	6.39	1620	
% VOLTAGE DROP=	2.1%	20	10.1	1020	C.M.

VOLTAGE DROP (VD) CALCULATION

PROJECT NAME: WALNUT CREEK INTERMEDIATE
SIGNAL CIRCUIT #: S12

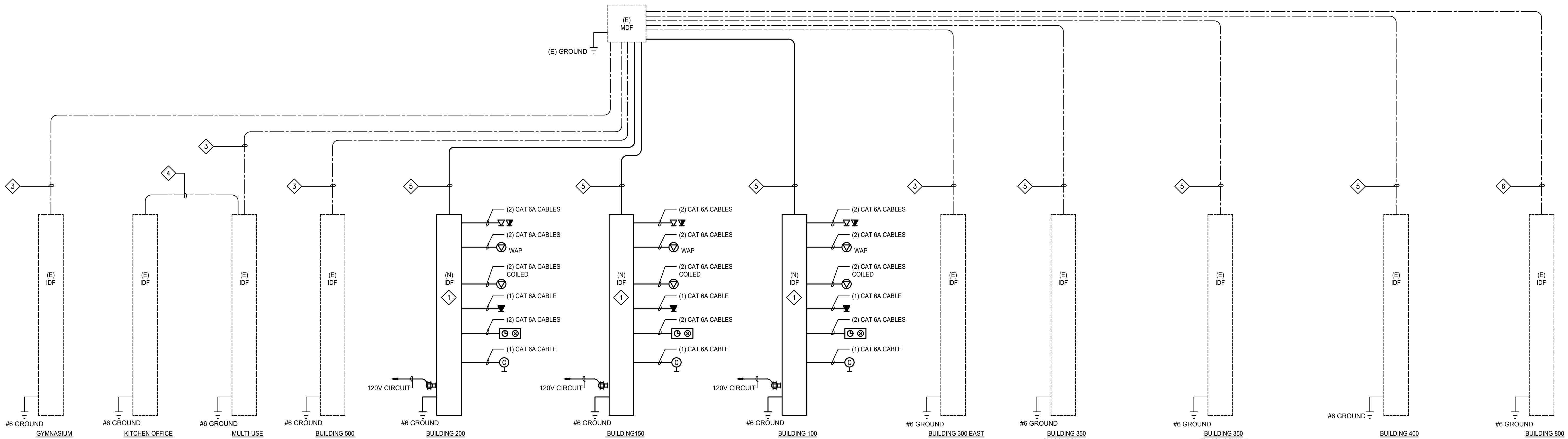
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GAUGE WIRE	12	12	12	12	12	12	12	12	12	12
DISTANCE (FT)	300	20	35	50	45					
AMPS OF DEVICE	0.249	0.249	0.249	0.249	0.249					
TOTAL AMPS@DEV.	1.245	0.996	0.747	0.498	0.249	0	0	0	0	0
VOLT. DROP @ DEV.	1.235467	0.065892	0.086483	0.082364	0.037064	0	0	0	0	0

DEVICE #	11th	12th	13th	14th	15th	16th	17th	18th	19th	20th
GAUGE WIRE	12	12	12	12	12	12	12	12	12	12
DISTANCE (FT)										
AMPS OF DEVICE										
TOTAL AMPS@DEV.	0	0	0	0	0	0	0	0	0	0
VOLT. DROP @ DEV.	0	0	0	0	0	0	0	0	0	0

TOTAL CKT. AMPS	1.245 AMPS	WIRE SIZE	RESIS. /M.F.T.	CIRC. MILS.	
		10	1.24	10380	
TOTAL CKT V DROP =	1.5073 VDC	12	1.59	6530	** FORMULA **
		14	2.52	4110	
CKT VOLTAGE =	20.4	16	4.02	2580	1" FEET * 21.6
		18	6.39	1620	-----
% VOLTAGE DROP=	7.4%	20	10.1	1020	C.M.



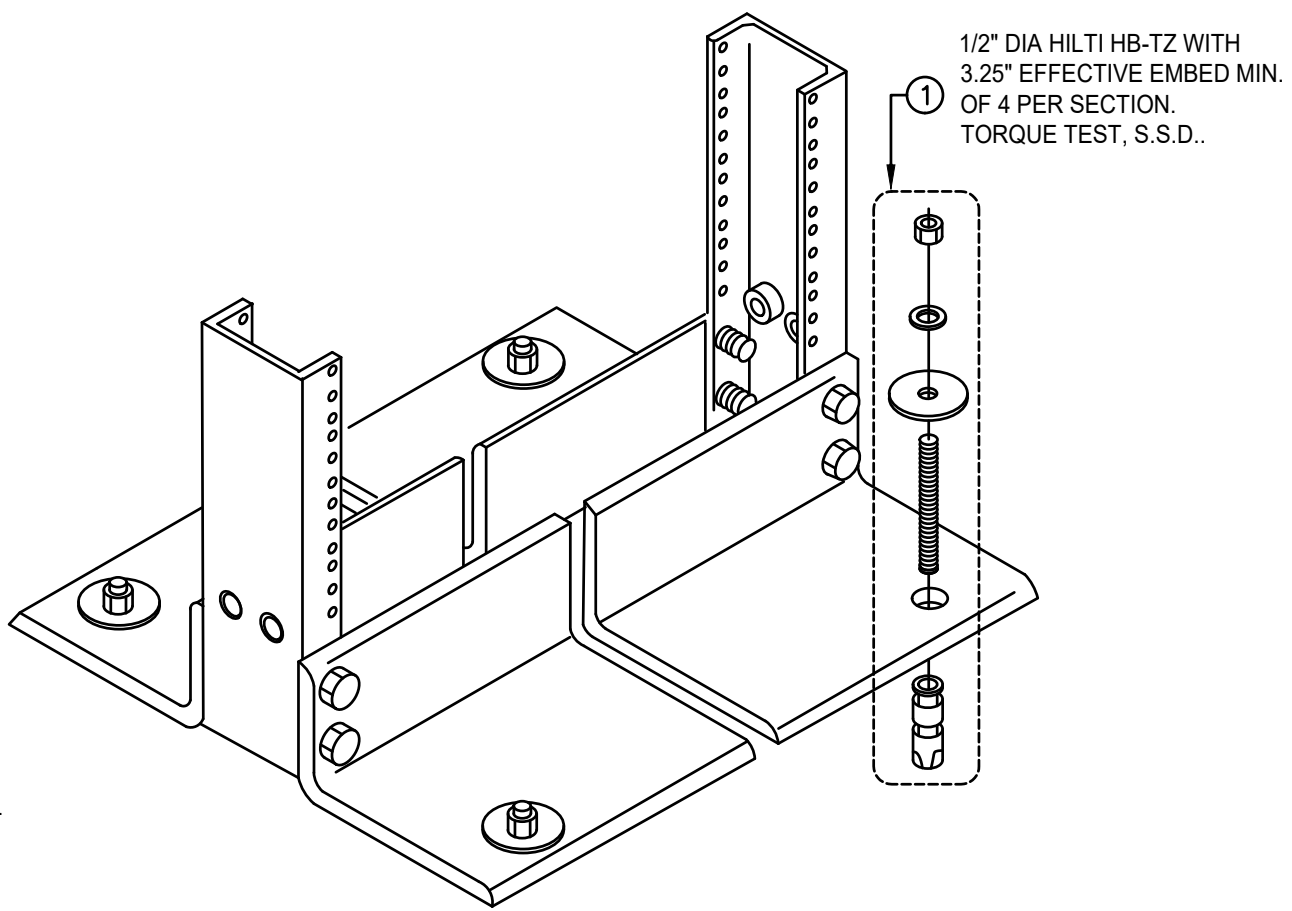
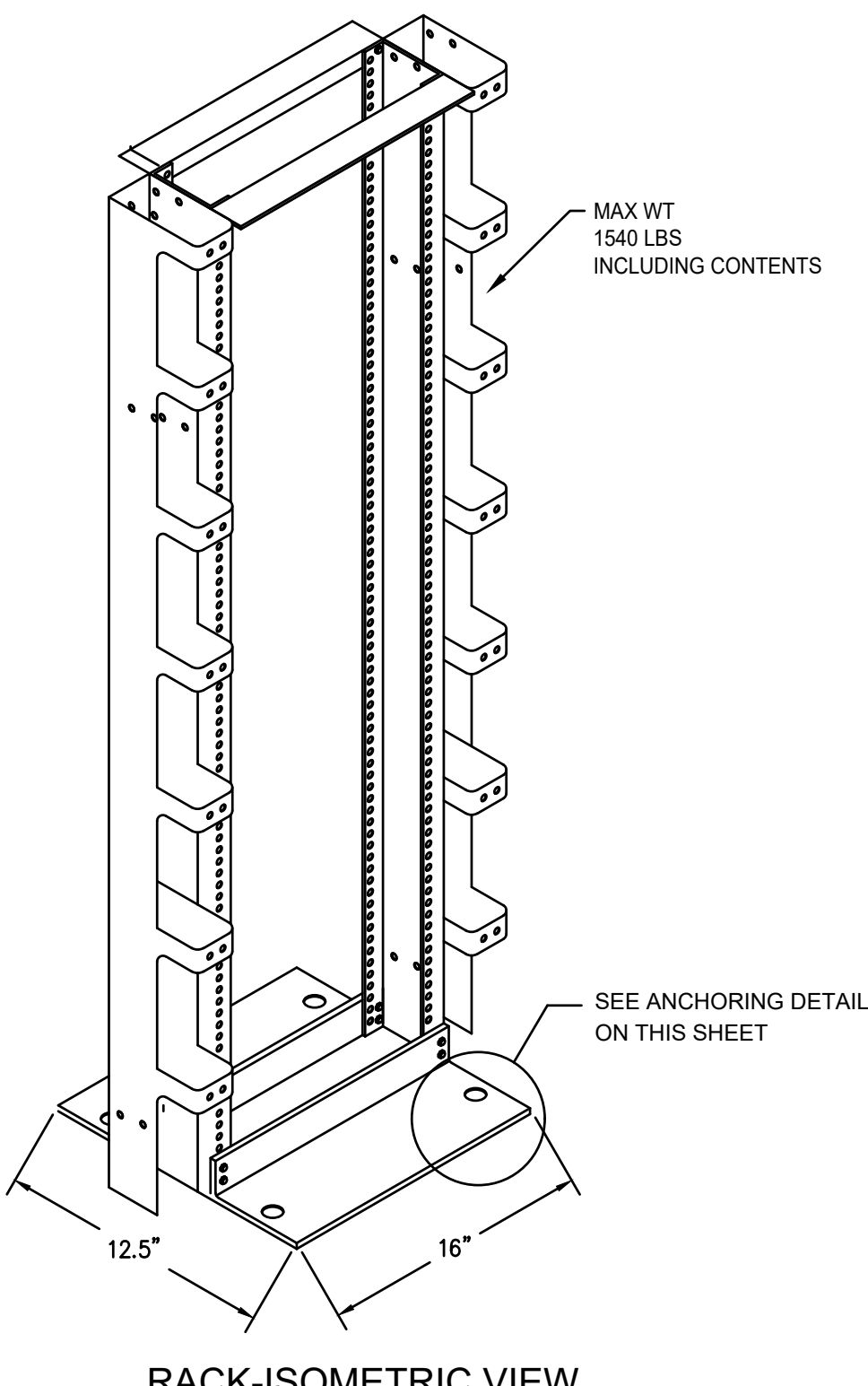
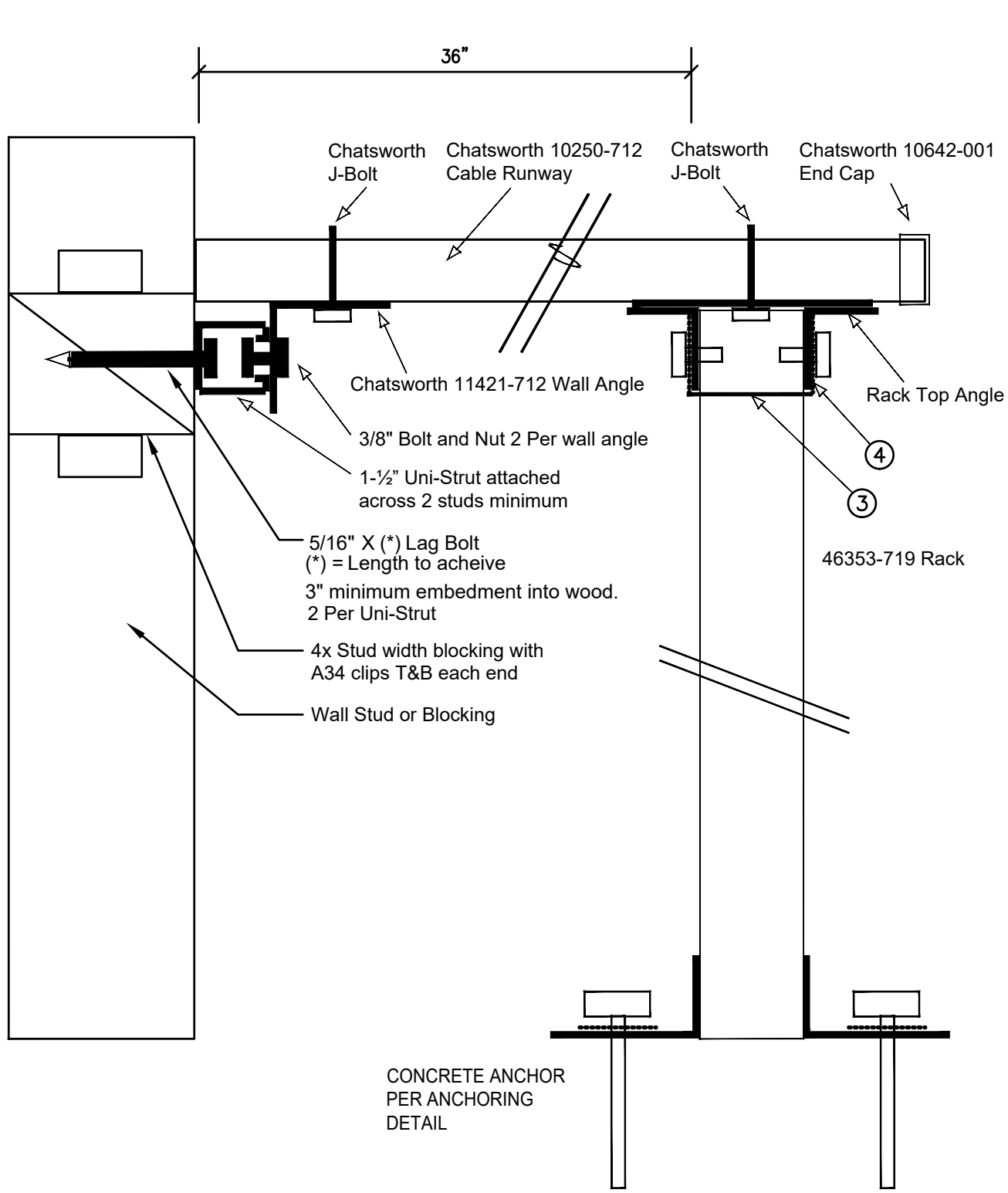
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DETAIL NOTES:

- 1 REPLACE EXISTING IDF WITH NEW.
- 2 PROVIDE NEW IDF.
- 3 EXISTING FIBER OPTIC CABLE.
- 4 EXISTING ETHERNET CONNECTION.
- 5 REPLACE EXISTING FIBER OPTIC CABLE WITH NEW.
- 6 NEW FIBER OPTIC CABLE TO NEW IDF.

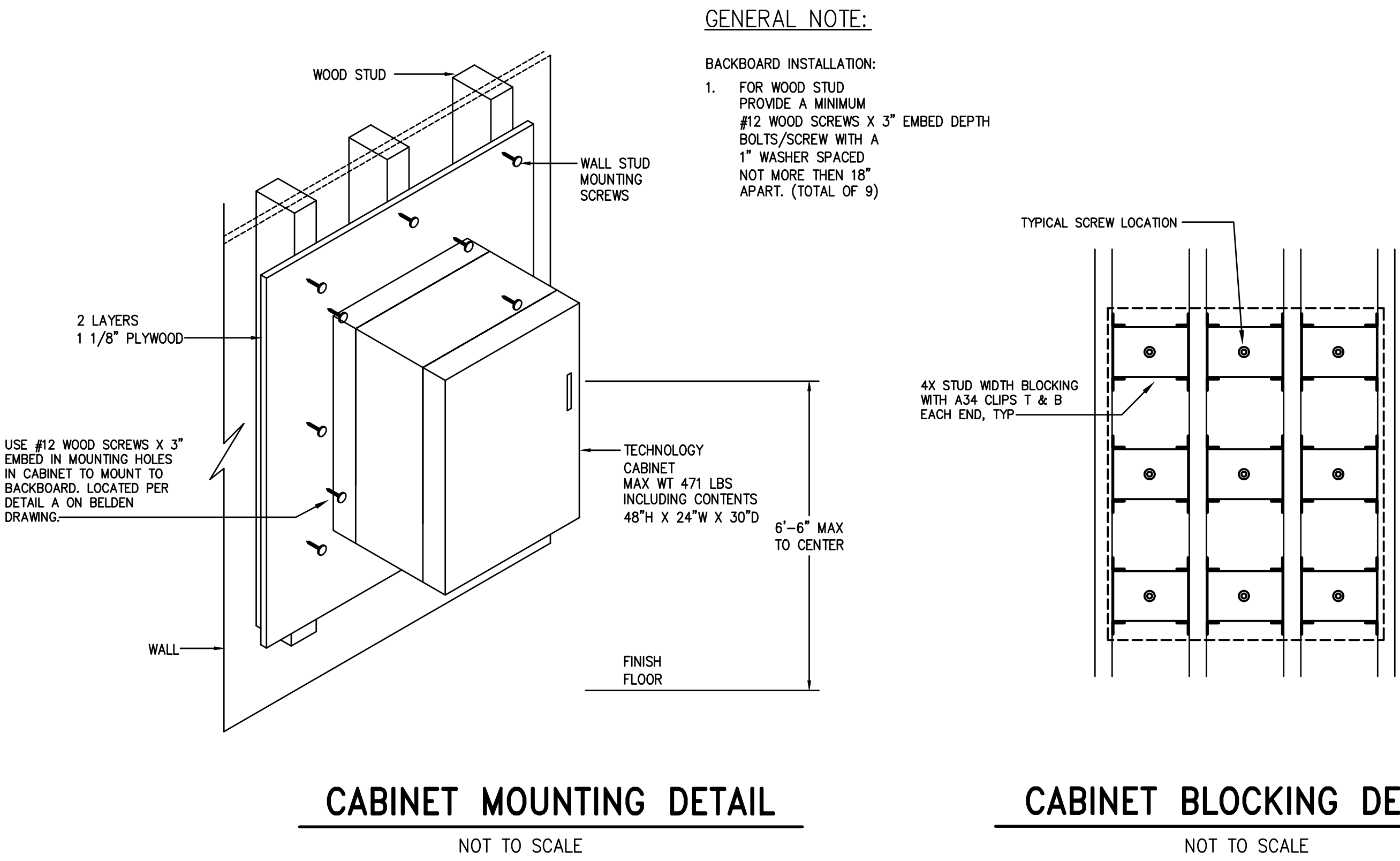
DATA/TELEPHONE DISTRIBUTION RISER DIAGRAM NTS 1



DETAIL NOTES:

- 1 CONCRETE FLOOR ANCHORING
- 2 NOT USED.
- 3 USE CHATSWORTH 12730-712 RACK-TO-RUNWAY MOUNTING PLATE TO ALLOW USE TO TOP RACK RU MOUNTING SPACE
- 4 PANDUIT RGW-31-1 PAINT PIERCING WASHER. USE AT ALL RACK ASSEMBLY BOLTS

CABLE RUNWAY/DATA RACK ANCHORING DETAILS NTS 3



CABINET MOUNTING DETAIL

CABINET BLOCKING DETAIL

NOT TO SCALE

NOT TO SCALE

CABINET MOUNTING DETAIL NTS 2



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3397 Mt. Diablo Blvd., Suite C
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Tel: 925.385.0649
19-002 INC 2

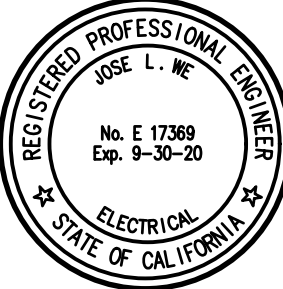
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ISSUE DATE: 7/22/20 BY: MH

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HY ARCHITECTS JOB NUMBER 5241

Facility
WALNUT CREEK SCHOOL DISTRICT
2425 WALNUT BOULEVARD, WALNUT
CREEK, CA 94597

Project
MODERNIZATION AND
RECONFIGURATION PROJECT
INCREMENT II

Sheet Title
ELECTRICAL DATA DETAILS

Client Project Number: Client Proj. #

Scale: AS NOTED

Drawn By: DAM

Checked By: TLK

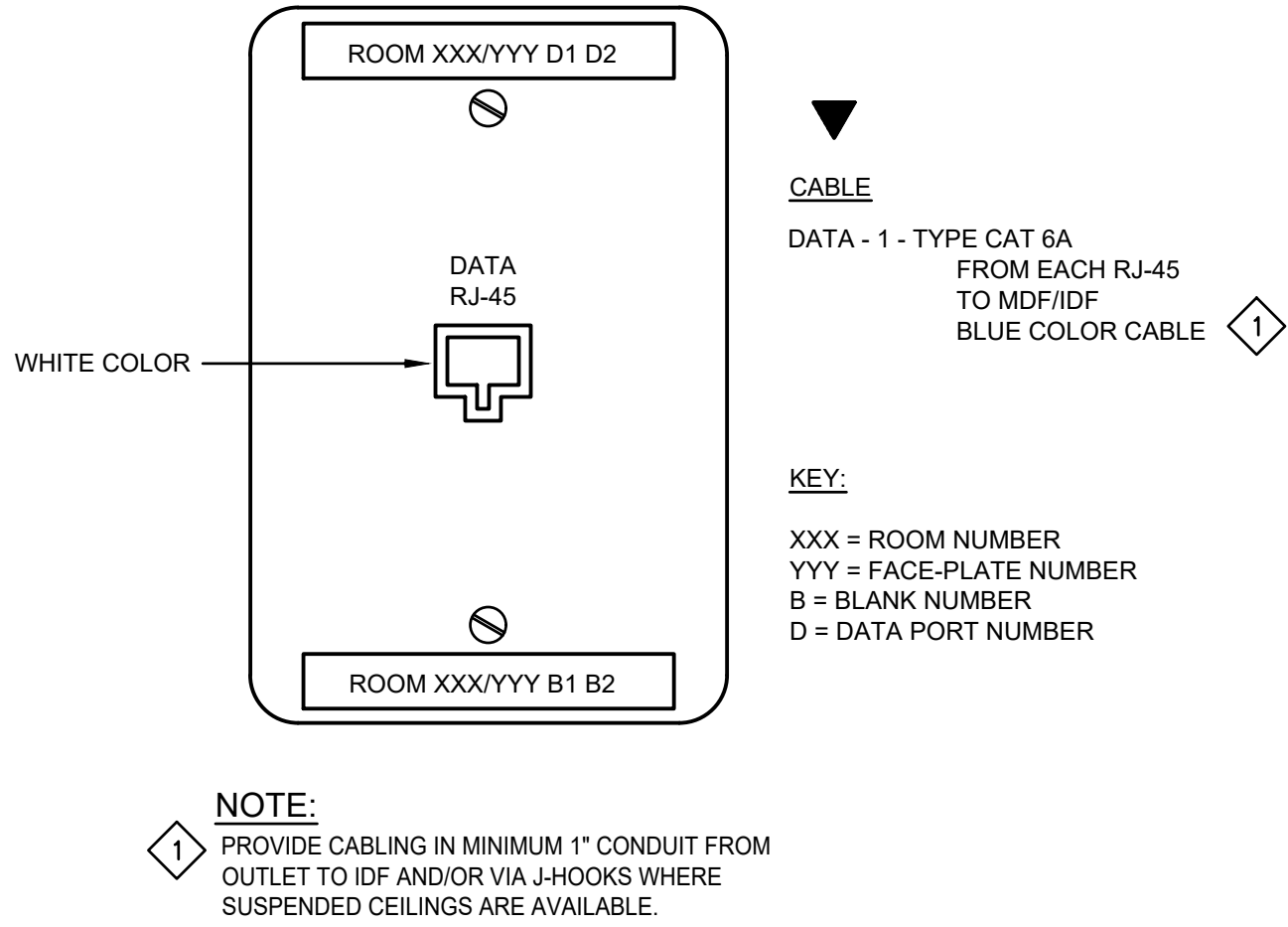
Issue Date: 7/22/20

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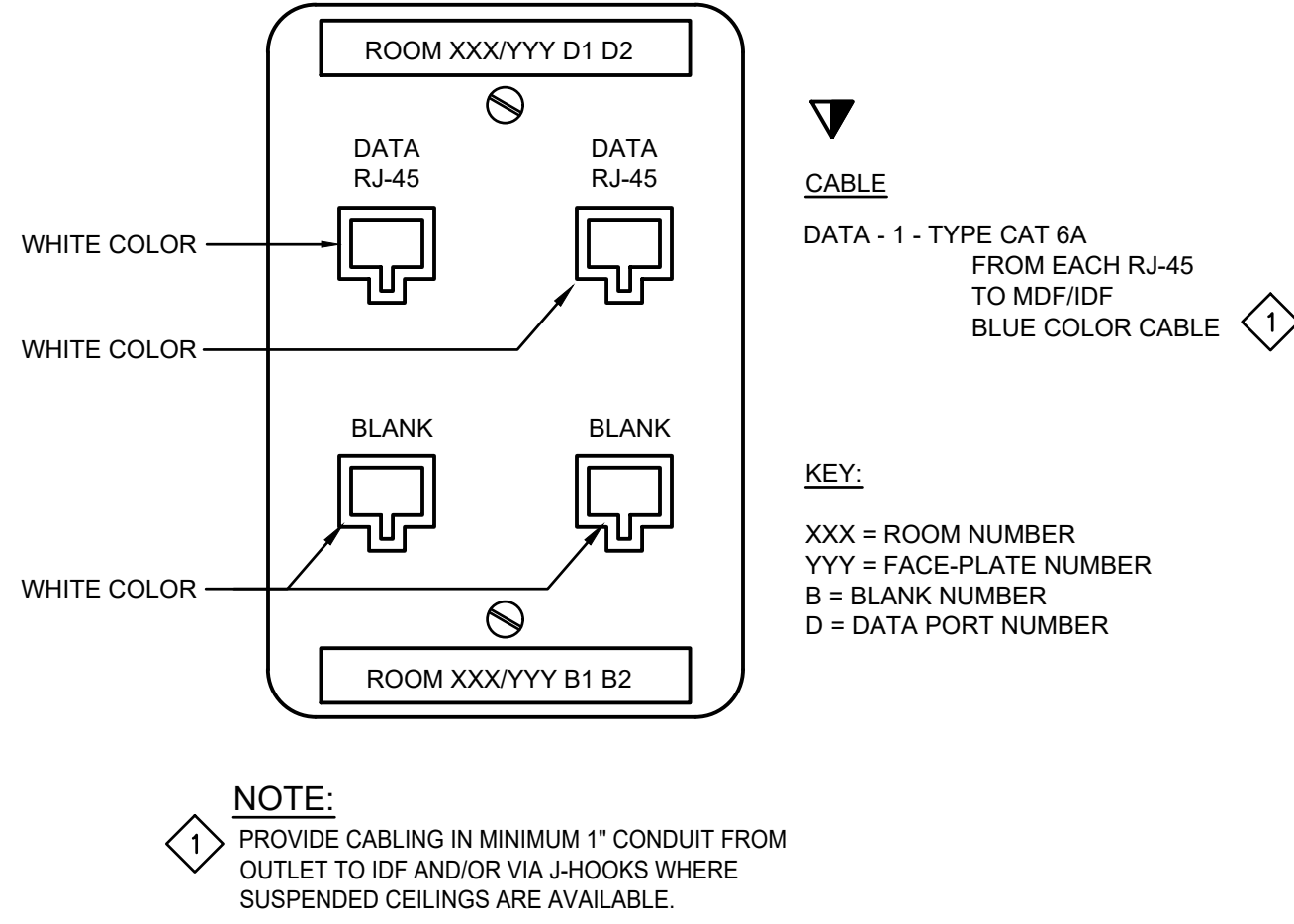
Sheet 103 of 128



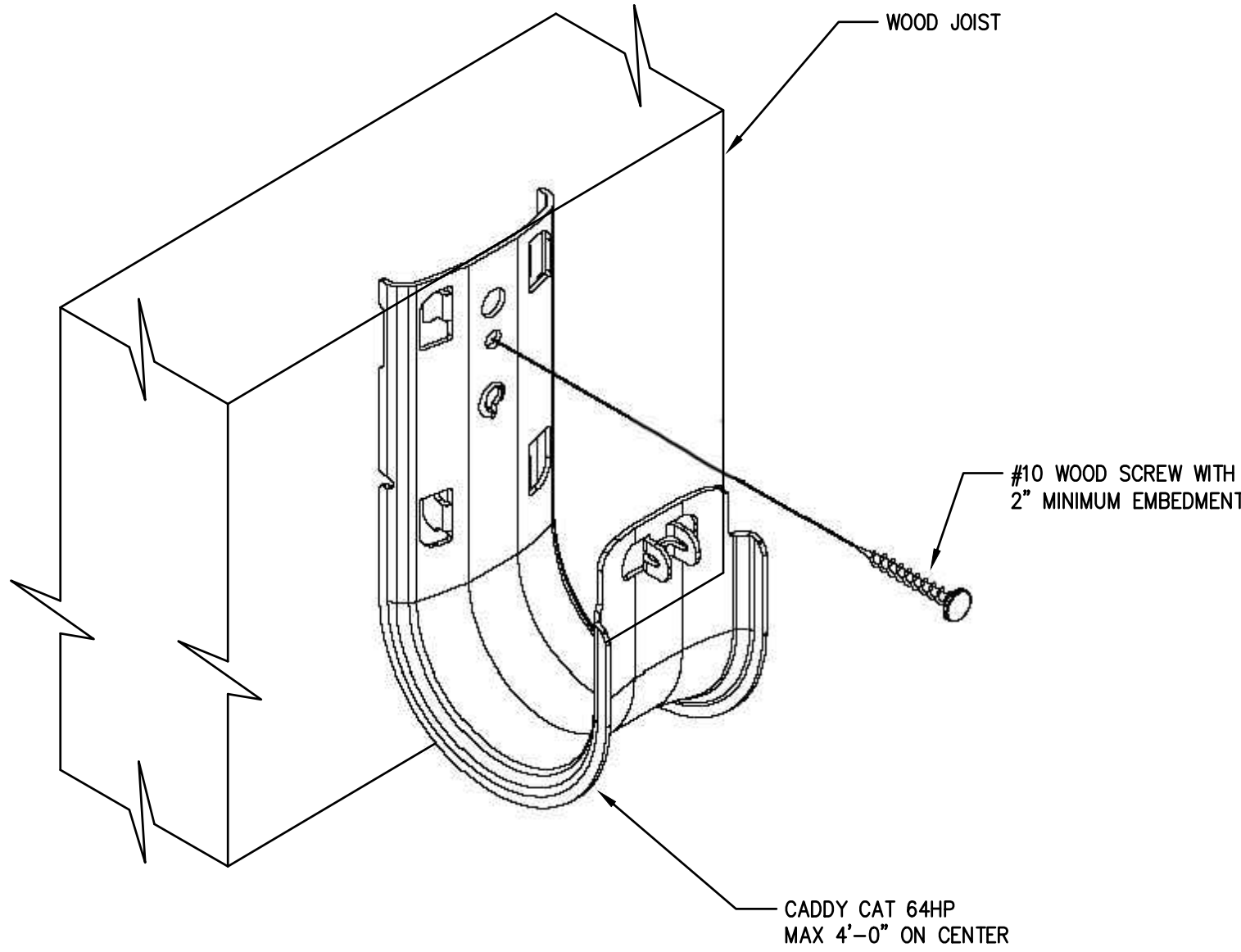
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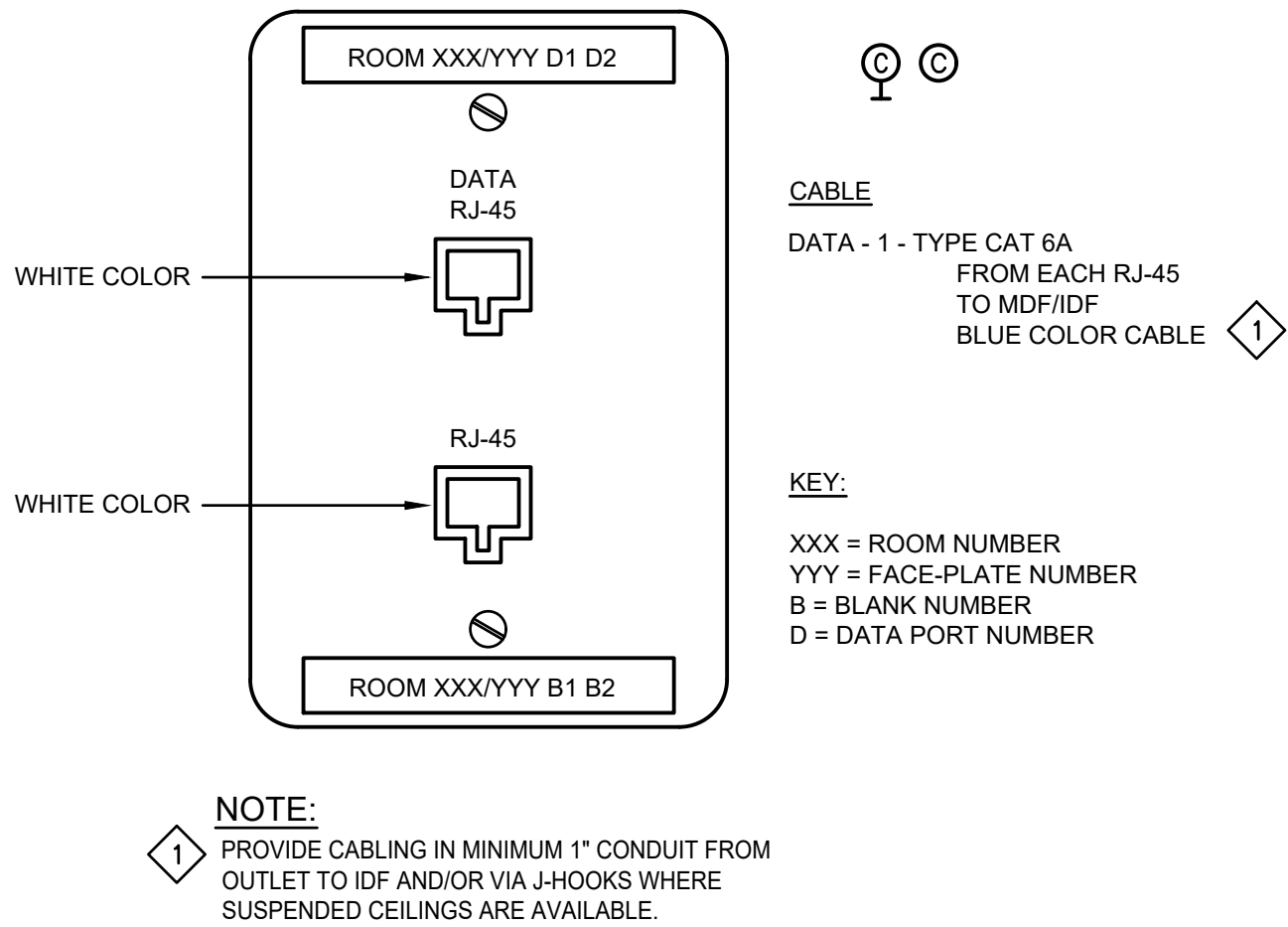
TYPICAL WALL PHONE OUTLET NTS 7



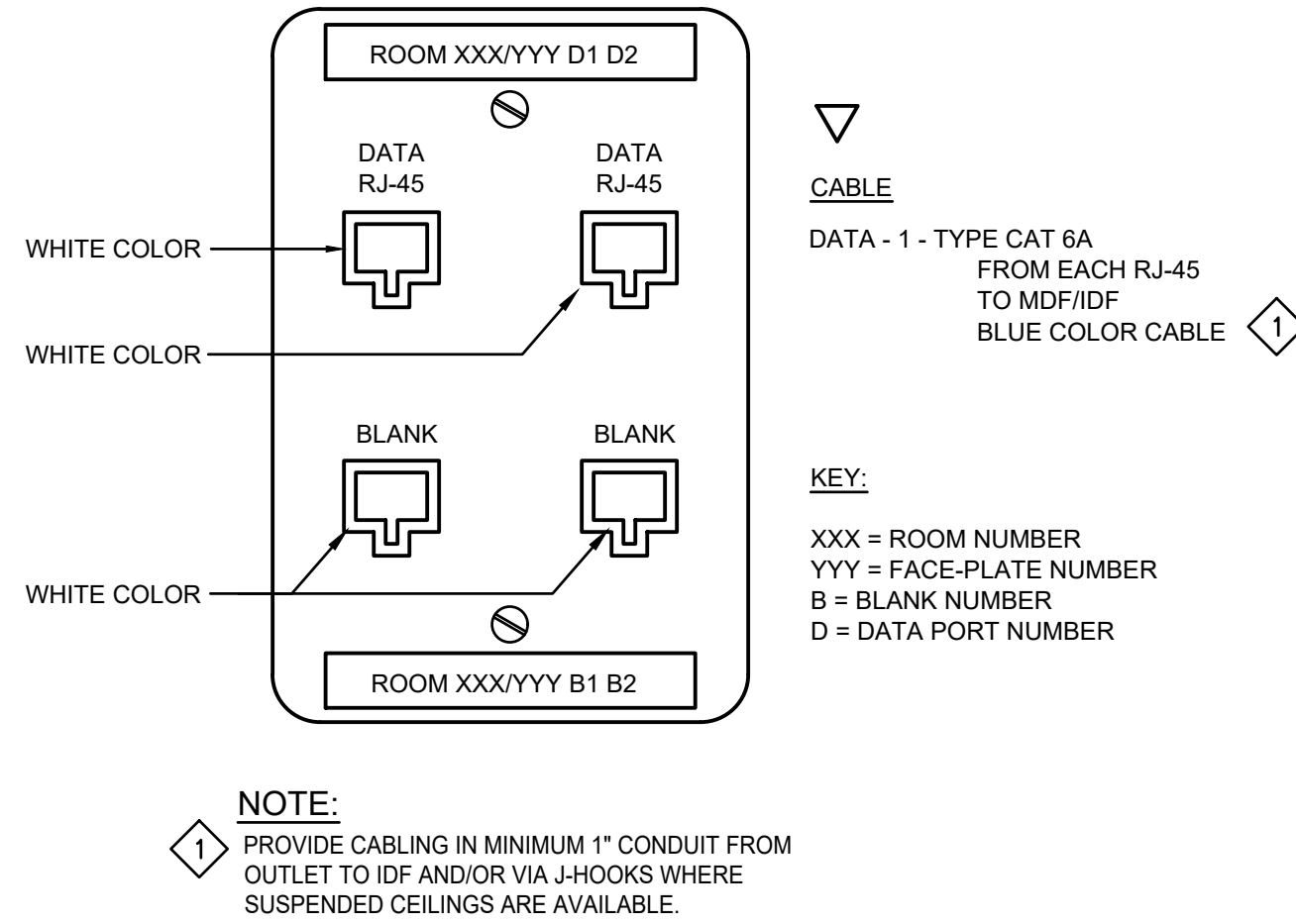
TYPICAL ADMIN/TEACHER'S VOICE/DATA OUTLET NTS 4



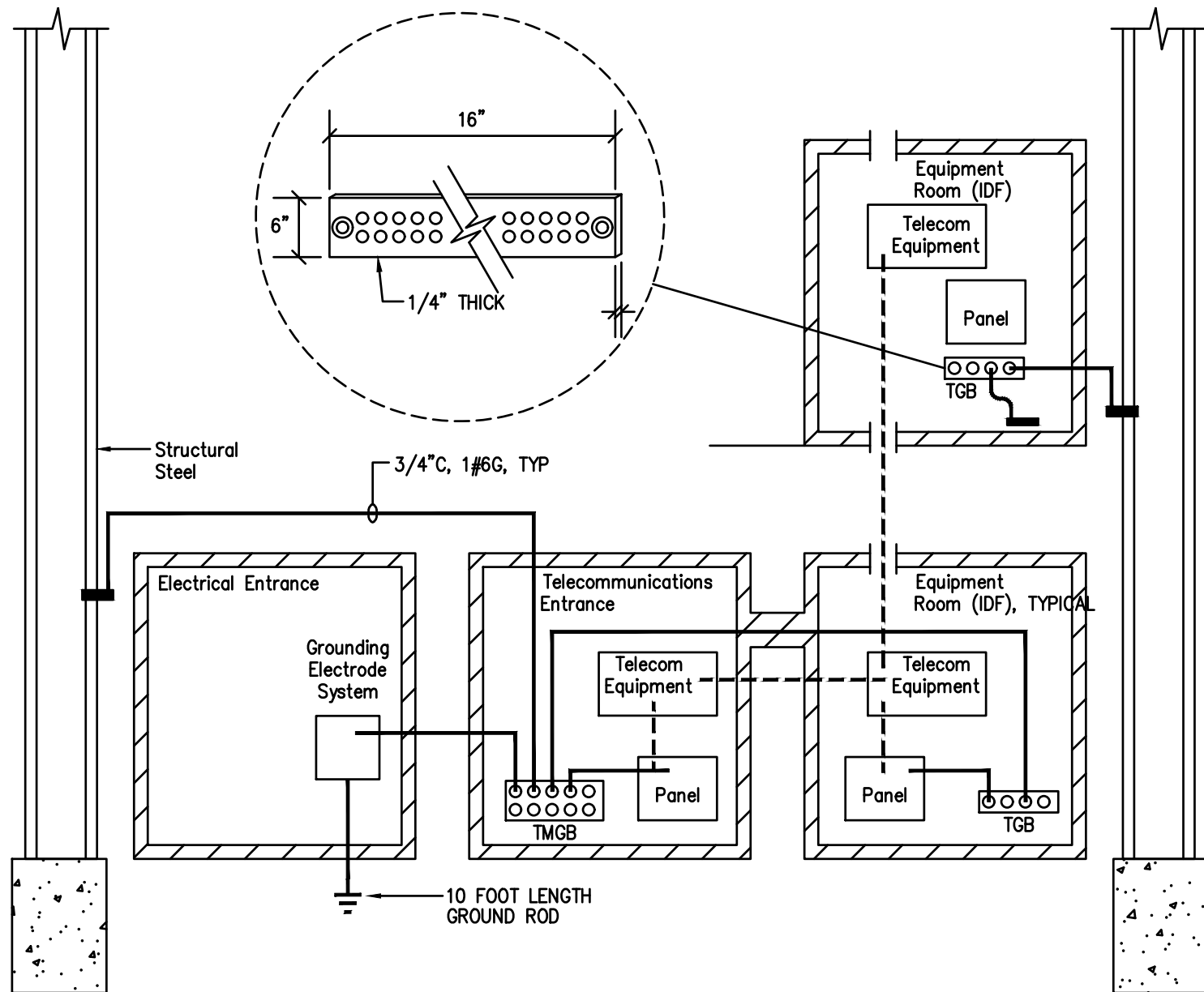
CABLE PATHWAYS DETAIL NTS 1



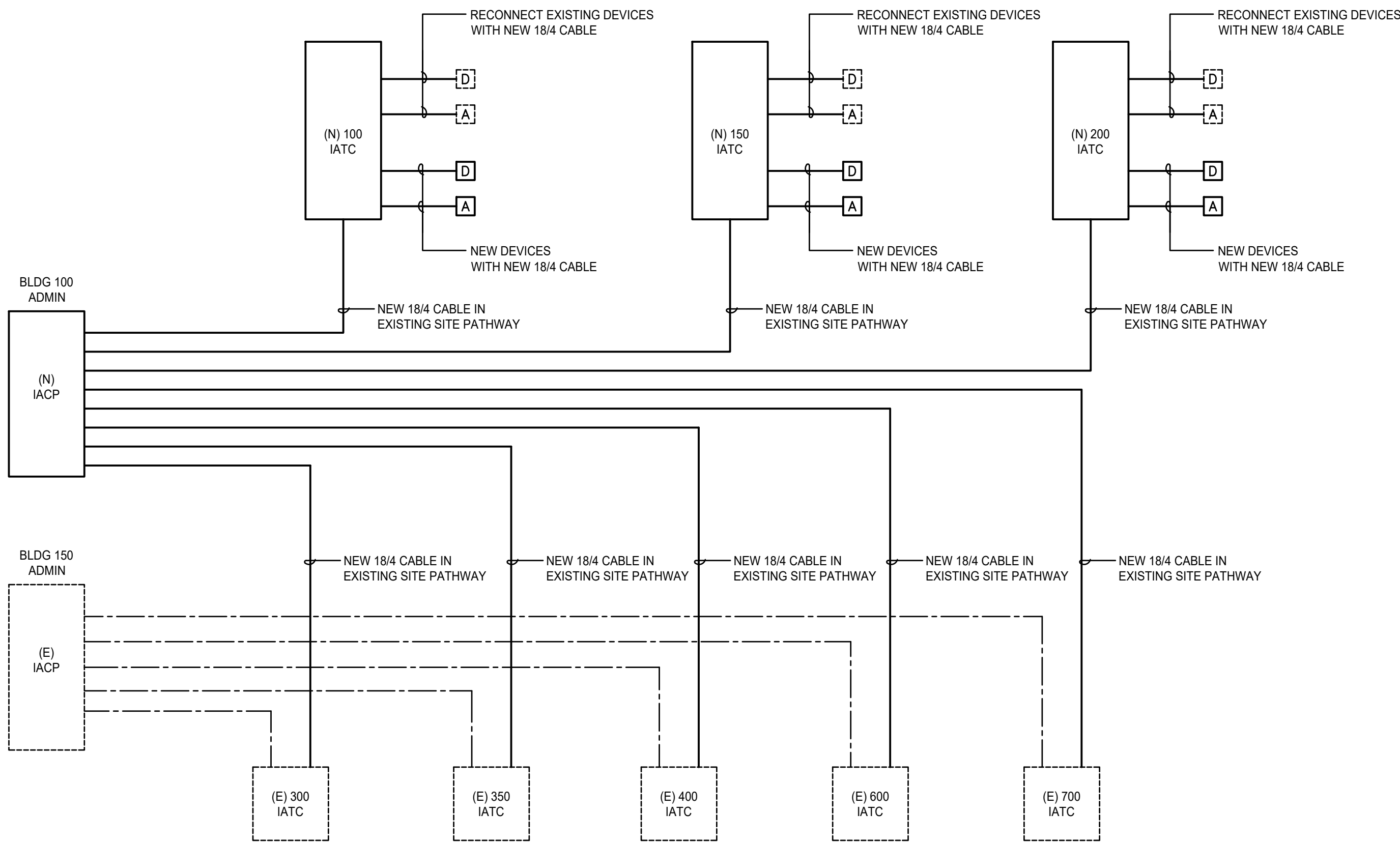
TYPICAL CAMERA OUTLET NTS 8



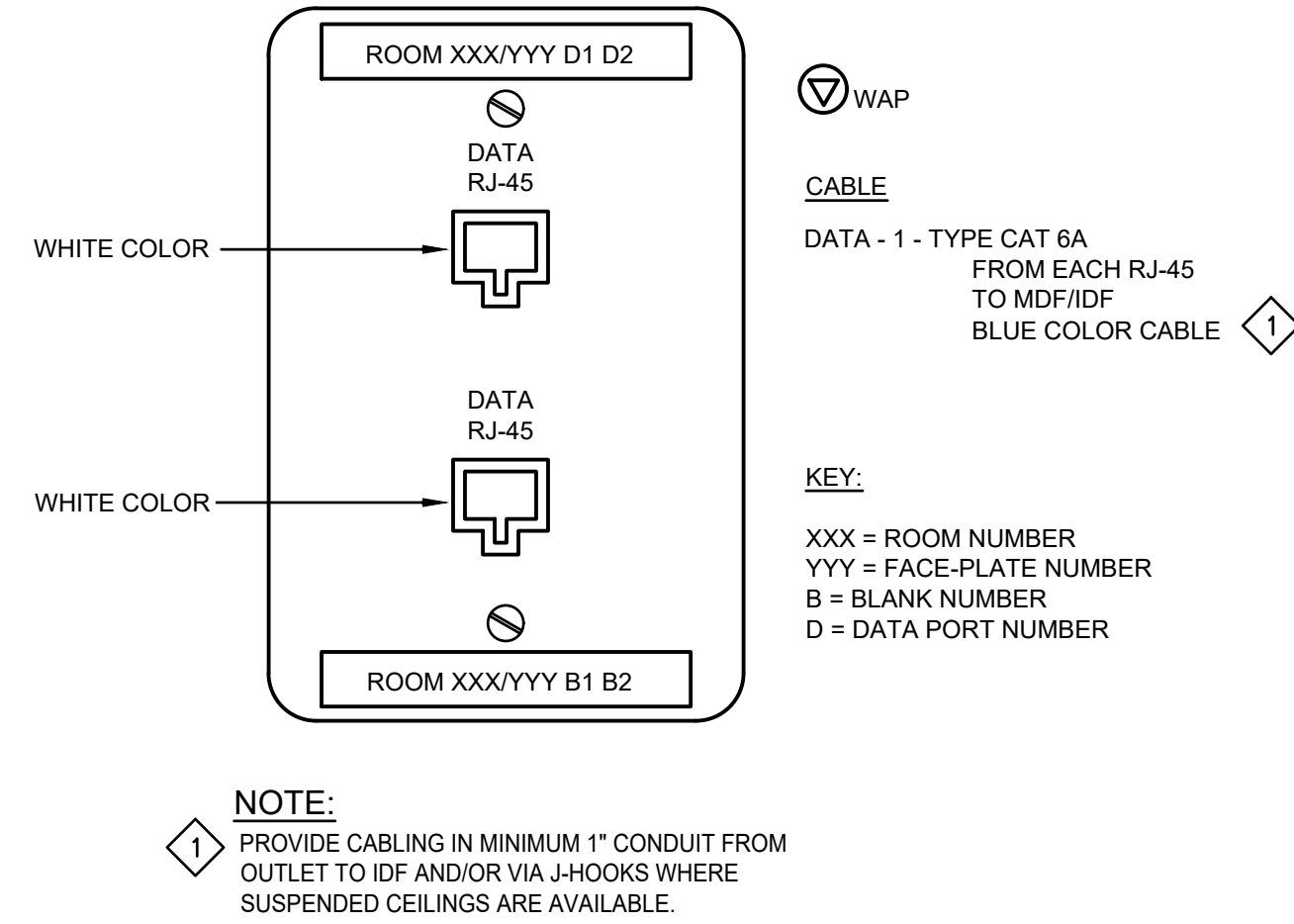
TYPICAL STUDENT DATA OUTLET NTS 5



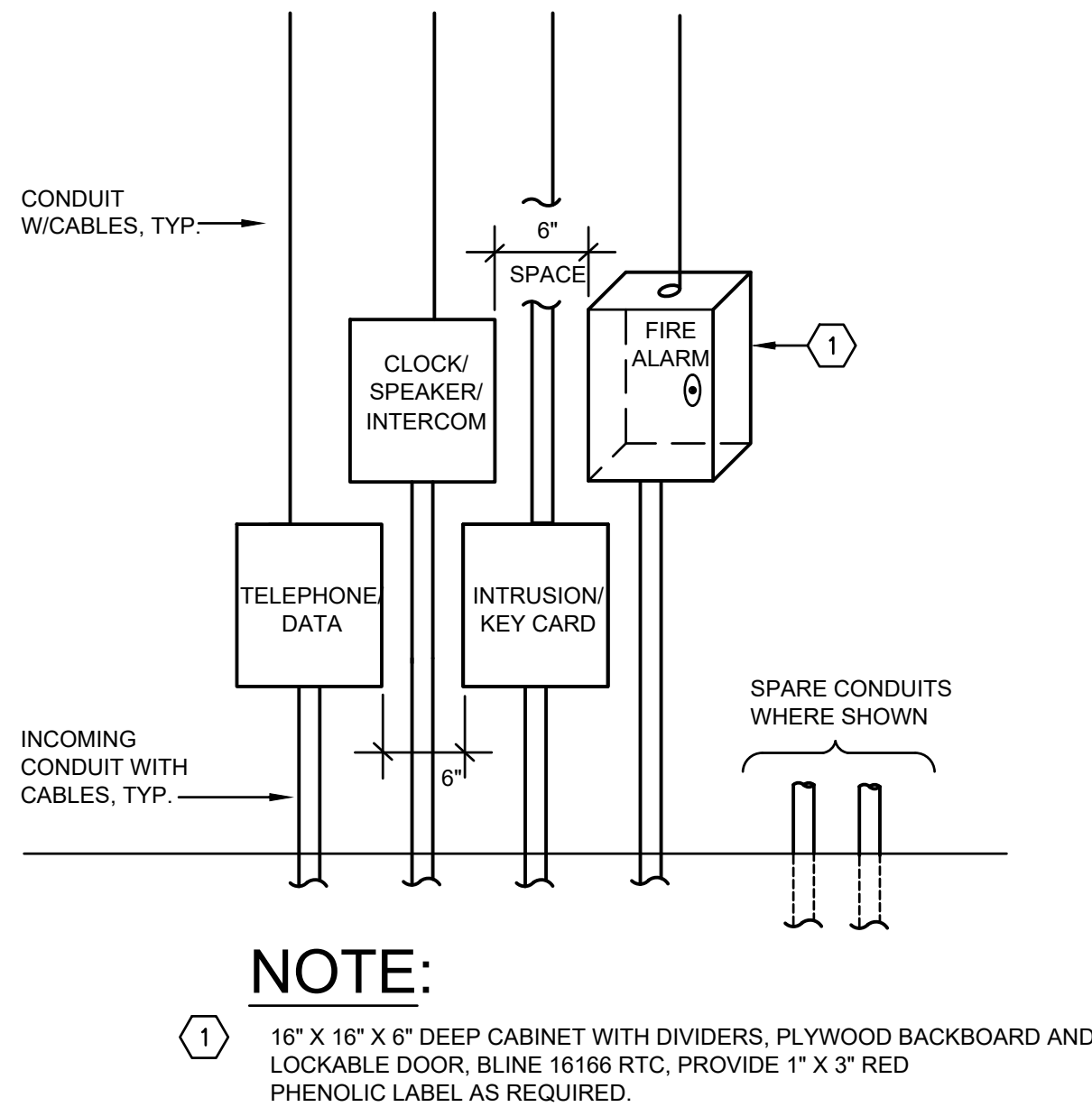
BUILDING GROUND DETAIL NTS 2



INTRUSION ALARM WIRING DIAGRAM NTS 9



TYPICAL WIRELESS DATA OUTLET NTS 6



TYPICAL STC LAYOUT NTS 3



Revisions				
No.	Revisions	By	Date	Appr.

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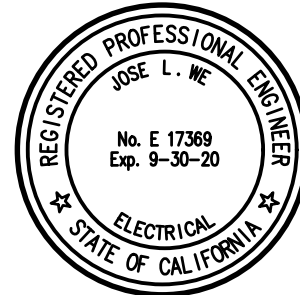
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ISSUE DATE: 7/22/20 BY: MH

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Facility
WALNUT CREEK SCHOOL DISTRICT
2425 WALNUT BOULEVARD, WALNUT
CREEK, CA 94597

Project
**MODERNIZATION AND
RECONFIGURATION PROJECT
INCREMENT II**

Sheet Title
ELECTRICAL DATA DETAILS

Client Project Number: Client Proj. #

Scale: AS NOTED Sheet

Drawn By: DAM

Checked By: TLK

Issue Date: 7/22/20

E7.02b

Sheet 124 of 128