

HUNTINGTON MIDDLE SCHOOL - MODERNIZATION AND ADDITION

500 REDPATH ST, KELSO, WA 98626

KELSO SCHOOL DISTRICT NO. 458



BID SET

INTEGRUS PROJECT NO. 21938.00



PROJECT TEAM

OWNER KELSO SCHOOL DISTRICT NO 453 601 CRAWFORD ST, KELSO, WA 98626 (360) 501-1900	MECHANICAL HULTZ - BHJ 1111 FAWCETT AVE SUITE 100 TACOMA, WA 98402 253.670.8213 NICK HULTZ
OWNERS REP CONSTRUCTION SERVICES GROUP ESD112 2500NE 65TH AVE VANCOUVER, WA 98661 360-952-3566 ANDREW TWYMAN	ELECTRICAL HULTZ - BHJ 1111 FAWCETT AVE SUITE 100 TACOMA, WA 98402 253.365.7221 SERU HAMM
ARCHITECTURAL INTEGRUS ARCHITECTURE 117 S MAIN STREET SUITE 100 SEATTLE, WA 98104 206.628.3137 SAM SCHAFER	FOOD SERVICE HALLIDAY ASSOCIATES 656 NW NORWOOD STREET CAMAS, WASHINGTON 98607 360.834.6657 LAURA BOURLAND
CIVIL PBS - VANCOUVER 415 W 6TH STREET, SUITE 601 VANCOUVER, WA 98660 360.587.2110 ELISSA PETERS	ACOUSTICAL LISTEN ACOUSTICS, INC 4949 S MACADAM AVE, SUITE 22 PORTLAND, OR 97204 503.241.5255 TOBIN COOLEY
STRUCTURAL INTEGRUS ARCHITECTURE 117 S MAIN STREET SUITE 100 SEATTLE, WA 98104 206.628.3137 THERESA DANIEL	HAZMAT NOW ENVIRONMENTAL SERVICES, INC 34004 9TH AVE S, STE 12 FEDERAL WAY, WA 98003 253.927.5233 DENNIS RAUSCHENBERG

ALTERNATES

	BASE BID DESCRIPTION	BID ALTERNATE DESCRIPTION
1. NEW EXTERIOR WINDOW OPENINGS	PROVIDE NEW EXTERIOR WINDOW OPENINGS AND ROLLER SHADES AT OFFICE 226, WORKROOM 230, SPEECH 215, OFFICE 127, TSEC 125, AND SPECIAL ED. 121A (6 TOTAL NEW WINDOW OPENINGS)	ADD: PROVIDE NEW EXTERIOR WINDOW OPENINGS AND ROLLERSHADES AT CLASSROOM, ART, SCIENCE, SPECIAL ED, AND FCS SPACES. (24 TOTAL NEW WINDOW OPENINGS)
2. BOILER ROOM CEILING	PROVIDE PAINT IN-LIEU OF CEILING TYPE GWB-2 AT BOILER ROOM 033	ADD: PROVIDE CEILING TYPE GWB-2 IN BOILER ROOM 033 PER DOCUMENTS
3. POWER AT CLASSROOM EXTERIOR WALLS	DO NOT PROVIDE POWER AT CLASSROOM EXTERIOR WALLS	ADD: PROVIDE POWER AT CLASSROOM EXTERIOR WALLS PER DOCUMENTS
4. EXISTING GYMNASIUM A/V SYSTEM	DO NOT PROVIDE A/V SYSTEM AT EXISTING GYMNASIUM	ADD: PROVIDE NEW A/V SYSTEM IN EXISTING GYMNASIUM (A/V RACK, PROJECTOR, PROJECTOR SCREEN, SCISSOR LIFT) PER DOCUMENTS
5. ELECT / LOW VOLTAGE WORK AT SHOP, FIELDHOUSE, PORTABLES	NO WORK AT BLDGS 2, 3 AND PORTABLE	ADD: PROVIDE WORK AT BLDGS 2, 3, AND PORTABLE PER SHEET E403
6. EXISTING GYM SCORE BOARD AND SHOT CLOCK	EXISTING SCOREBOARD AND SHOT CLOCK IN EXISTING GYM TO REMAIN.	ADD: NEW SCOREBOARD AND SHOT CLOCK IN THE CURRENT LOCATION OF THE EXISTING GYM.
7. EXTERIOR ELECTRONIC READER BOARD	DO NOT PROVIDE EXTERIOR READER BOARD ON WEST FAÇADE OF EXISTING BUILDING	ADD ELECTRONIC READER BOARD ON WEST WALL OF THE EXISTING CLASSROOM BUILDING NEAR GRIDLINE XC AND X1, AS SHOWN IN DOCUMENTS
8. THEATRICAL LIGHTING AT STAGE	DO NOT PROVIDE THEATRICAL LIGHTING AT STAGE	ADD: THEATRICAL LIGHTING ARRAY AT STAGE.
9. CYCLORAMA AND STAGE CURTAIN	DO NOT PROVIDE CYCLORAMA CURTAIN OR STAGE CURTAIN AT STAGE	ADD: CYCLORAMA CURTAIN AND STAGE CURTAIN AT STAGE
10. CEILING DIFFUSING PANELS AT MUSIC ROOM	PROVIDE ACT-7 MUSIC ROOM 148	ADD: PROVIDE CEILING DIFFUSING PANELS AT MUSIC ROOM PER DOCUMENTS
11. WALL ACOUSTIC PANELS AT CAFETERIA	PROVIDE PAINT IN-LIEU OF ACOUSTIC PANELS AT CAFETERIA ROOM 012	ADD: PROVIDE ACOUSTIC PANELS IN CAFETERIA ROOM 012 PER DOCUMENTS
12. VWC GRAPHICS	PROVIDE PAINT IN-LIEU OF VWC GRAPHICS IN HALLWAYS AT LIBRARY, ADMIN, CAFETERIA	ADD: PROVIDE VWC GRAPHICS IN HALLWAYS AT LIBRARY, ADMIN, CAFETERIA PER DOCUMENTS
13. DELETE AIR CONDITIONING	PROVIDE AIR CONDITIONING AND ASSOCIATED WORK AS SHOWN IN THE PROJECT DOCUMENTS.	<p>REMOVE: AIR CONDITIONING FROM ENTIRE PROJECT.</p> <p>DELETE: AIR CONDITIONING FROM ENTIRE PROJECT. INCLUDES REMOVAL OF CHILLER CH-1, CHILLED WATER PUMPS CP-4A AND CP-4B, CHILLED WATER PIPING, COOLING COILS FROM AIR HANDLING UNITS, AND ASSOCIATED VALVES AND ACCESSORIES.</p> <p>DELETE: EARTHWORK, CONCRETE, ASPHALT, PIPES, AND CURB SHOWN ON 'CHILLER PAD' DETAIL ON SHEET C404, EXCEPT ASPHALT ASSOCIATED WITH ELECTRICAL CONDUIT TRENCH RESTORATION.</p> <p>DELETE: SEED MIX AROUND CHILLER PAD SHOWN ON SHEET C301.</p> <p>DELETE: STRIPING BETWEEN EXISTING BUILDING 1 AND EXISTING BUILDINGS 2 AND 3 SHOWN ON SHEET C301.</p> <p>ADD: STRIPING ON NEW ASPHALT FOR TRENCH RESTORATION BETWEEN EXISTING BUILDING 1 AND EXISTING BUILDINGS 2 AND 3 TO MATCH EXISTING CONDITIONS.</p> <p>DELETE: FEEDERS AND CIRCUIT BREAKERS FOR CHILLER CH-1, HEAT TRACE, CHILLED WATER PUMPS CP-4A AND CP-4B.</p> <p>REVISE: PROVIDE 1600 AMP MAIN SWITCHBOARD M58 IN LIEU OF 2000 AMP.</p> <p>DELETE: DRAWING SHEET A114, OMIT IN ITS ENTIRETY.</p> <p>DELETE: DRAWING SHEET A621. OMIT ALL REFERENCES TO STC 36 REQUIREMENTS, OMIT IGU TYPE IG-3.</p> <p>REVISE: SPECIFICATION SECTION 085413. OMIT PARAGRAPHS 2.3F.1 AND 2.3F.2</p> <p>MODIFY: SHEET A100A - "LEVEL 0 BUILDING 1 AREA A - FOUNDATION/FIRST FLOOR PLAN"</p> <p>DELETE: CALLOUT "TOP OF CHILLER YARD NORTH WALL TO MATCH TOP OF ADJ (E) FTG. STEP FOOTING AS SHOWN IN WALL ELEVATION, GC COORD ELEVATION AND NUMBER OF FTG STEPS REQUIRED PER 28/S206"</p> <p>DELETE: CALLOUT "12" THICK CONCRETE RETAINING WALL AROUND CHILLER YARD. SEE DETAILS FOR TOF."</p> <p>DELETE: CALLOUT "PROVIDE MECH PAD FOR CHILLER PER 4/S202 SIZE PER MECH AND CHILLER MFR"</p> <p>DELETE: CALLOUT "PIPE PER MECH. SEE 13/S021"</p> <p>DELETE: CALLOUT "SEE 1/A114 FOR CHILLER YARD FENCE/GATE DETAILS"</p> <p>DELETE: CALLOUT "GATE POST. SEE ARCH. PROVIDE BASE PL PER 8/S206"</p> <p>DELETE: CALLOUT "5'-0" X 5'-0" X 18" FTG W/ (5) #6 REINF T&B EA WAY, TOP OF FTG TO MATCH TOP OF RETAINING WALL FTG. CONTINUE REINF THROUGH RETAINING WALL FTG, CTR FTG ON GATE POST"</p> <p>DELETE: DETAIL REFERENCE 27/S206 AT TWO (2) LOCATIONS</p> <p>DELETE: WALL ELEVATION REFERENCES 1/S206, 6/S206, 16/S206</p> <p>DELETE: SHEET S206</p>

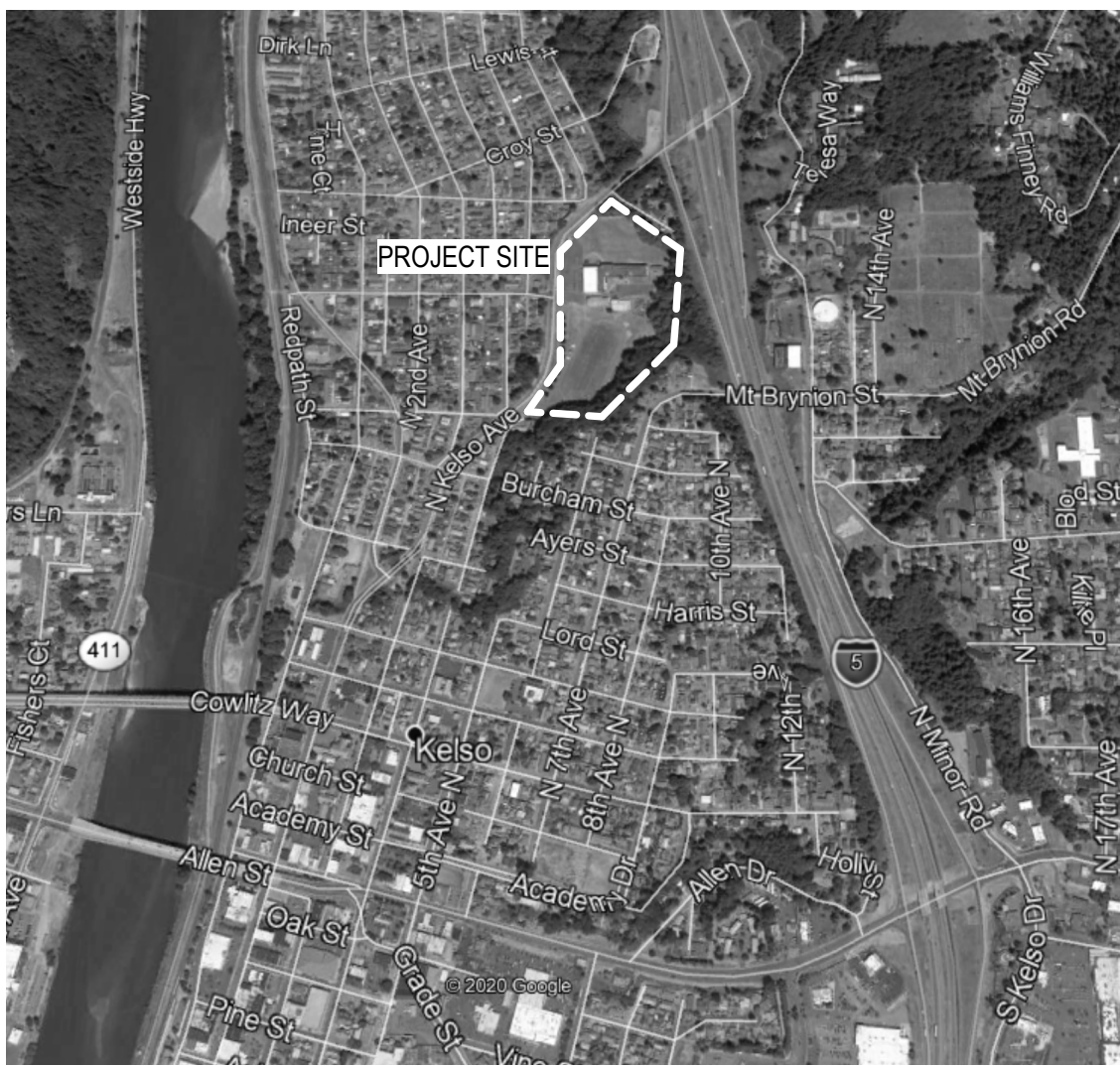
VOLUME 2 OF 2

FOOD SERVICE, MECHANICAL, ELECTRICAL

05/28/2021

SET NO. _____

VICINITY MAP



SHEET INDEX

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VOLUME 2

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M401B	LEVEL 1 BUILDING 1 AREA B - FLOOR PLAN - HVAC
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E201B	LEVEL 1 BLDG 1 AREA B - LIGHTING PLAN
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E202B	LEVEL 2 BLDG 1 AREA B - LIGHTING PLAN
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E300C	LEVEL 0 BLDG 1 AREA C - POWER & SYSTEMS PLAN
E301A	LEVEL 1 BLDG 1 AREA A - POWER & SYSTEMS PLAN
E301B	LEVEL 1 BLDG 1 AREA B - POWER & SYSTEMS PLAN
E302A	LEVEL 2 BLDG 1 AREA A - POWER & SYSTEMS PLAN
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E703	LOW VOLTAGE SYSTEMS MATRIX

KELSO SCHOOL DISTRICT NO. 458
HUNTINGTON MIDDLE SCHOOL -
MODERNIZATION AND ADDITION

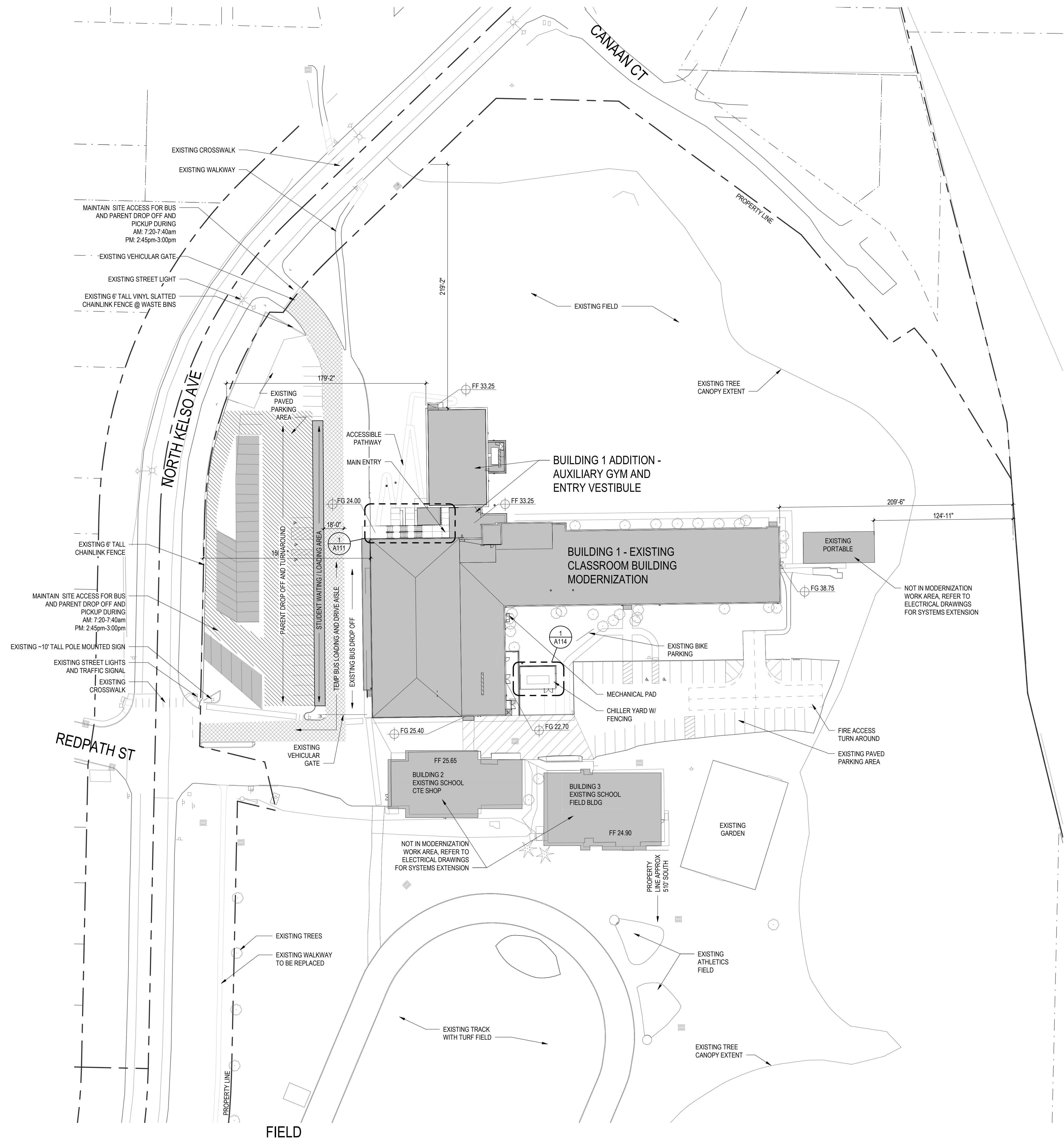
500 REDPATH ST, KELSO, WA 98626

Date:	05/28/2021
Job No.:	21938.00
Drawn By:	MT
Checked by:	MT

Revisions	
#	Description

INDEX, VICINITY
MAP

G001



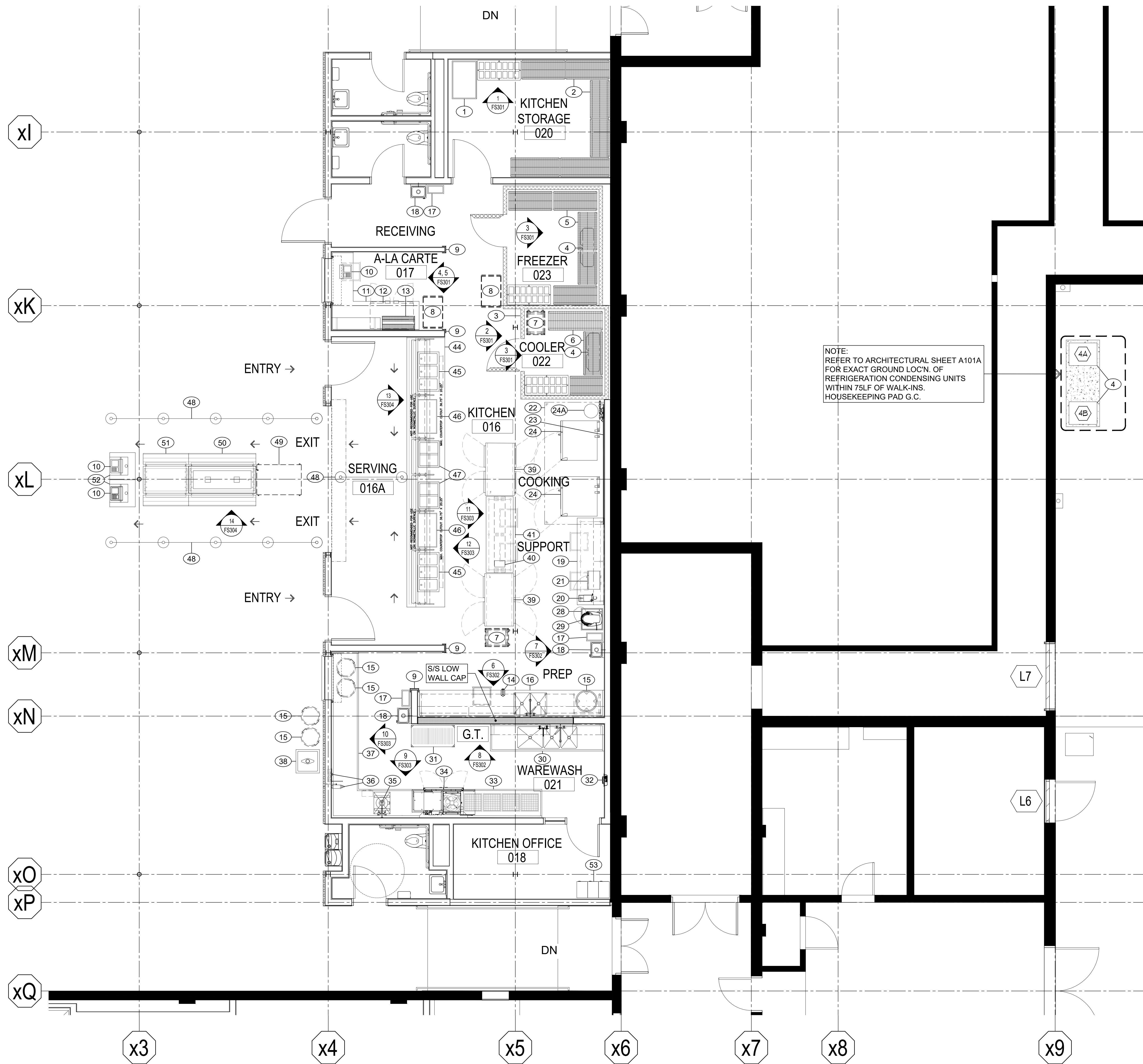
SITE PLAN
SCALE: 1" = 40'-0"

**KELSO SCHOOL DISTRICT NO. 458
HUNTINGTON MIDDLE SCHOOL -
MODERNIZATION AND ADDITION**
500 REDPATH ST, KELSO, WA 98626

Date:	05/28/2021
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Revisions	
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ARCHITECTURAL
SITE PLAN

G010



NOTE:
REFER TO ARCHITECTURAL SHEET A101A
FOR EXACT GROUND LOC.N. OF
REFRIGERATION CONDENSING UNITS
WITHIN 75LF OF WALK-INS.
HOUSEKEEPING PAD G.C.

EQUIPMENT SCHEDULE

ITEM	DESCRIPTION	QUAN.	REMARKS:
1	CAN RACK	1	---
2	DRY STORAGE SHELVING	LOT	---
3	WALK-IN COLD STORAGE ROOMS	2	---
4	REFRIGERATION SYSTEMS	2	REMOTE CONDENSING UNITS ON GRADE
5	WALK-IN FREEZER SHELVING	LOT	---
6	WALK-IN COOLER SHELVING	LOT	---
7	SPEED RACKS	2	EXISTING EQUIPMENT
8	UTILITY CARTS	2	EXISTING EQUIPMENT
9	CORNER/CHANNEL GUARDS & LOW WALL CAP	LOT	---
10	POINT OF SALE SYSTEM	LOT	BY OWNER
11	ALA CARTE SERVING COUNTER	1	---
12	UNDERCOUNTER REACH-IN REFRIGERATOR	1	---
13	WALL MOUNT MERCHANDISING DISPLAY GRID	1	---
14	MANUAL CAN OPENER	1	EXISTING EQUIPMENT
15	MOBILE WASTE RECEPTACLES	5	---
16	VEGETABLE PREP SINK TABLE	1	---
17	SLIM JIMS	3	---
18	HAND WASHING SINKS	3	---
19	PREP WORK TABLE	1	---
20	HOT WATER DISPENSER	1	---
21	MICROWAVE OVEN	1	---
22	CANOPY HOOD (TYPE II)	1	NO FIRE PROTECTION SYSTEM
23	STAINLESS STEEL WALL FLASHING	LOT	---
24	DOUBLE STACK COMBI-OVEN/STEAMERS	2	---
25	NOT USED	---	---
26	NOT USED	---	---
27	NOT USED	---	---
28	MOBILE MIXER CART	1	---
29	20-QUART MIXER	1	---
30	POT WASHING SINK TABLE	1	---
31	MOBILE POT AND PAN SHELVING	1	---
32	FOLD DOWN EYE WASH STATION	1	REQUIREMENTS BY PLUMBING DIVISION
33	CLEAN DISHTABLE	1	---
34	VENTLESS WAREWASHER WITH BOOSTER HEATER	1	---
35	DISPOSER	1	---
36	HOSE REEL WITH RECESSED CONTROL CABINET	1	---
37	SOILED DISHTABLE WITH TRAY RETURN PASS-THRU	1	---
38	MOBILE SOAK SINK	1	---
39	PASS-THRU HEATED/REFRIGERATED HOLDING CABINETS	2	---
40	ELECTRIC CAN OPENER	1	---
41	ISLAND WORK TABLE WITH OVERSHELF	1	---
42	NOT USED	---	---
43	NOT USED	---	---
44	SERVING COUNTER	1	---
45	DROP-IN HOT WELLS	2	---
46	DROP-IN HEATED HOT PLATES	2	---
47	DROP-IN REFRIGERATED COLD WELLS	2	---
48	PORTABLE TRAFFIC CONTROL RAILINGS	LOT	---
49	MOBILE DOUBLE-SIDED MILK COOLER	1	EXISTING EQUIPMENT
50	MOBILE DOUBLE-SIDED REFRIGERATED SALAD BAR	1	---
51	MOBILE DOUBLE-SIDED CONDIMENT BAR	1	---
52	MOBILE CASHIER COUNTERS	2	---
53	STACKING HALF SIZE STAFF LOCKERS	6	SPECIFIED BY ARCHITECTURAL DIVISION



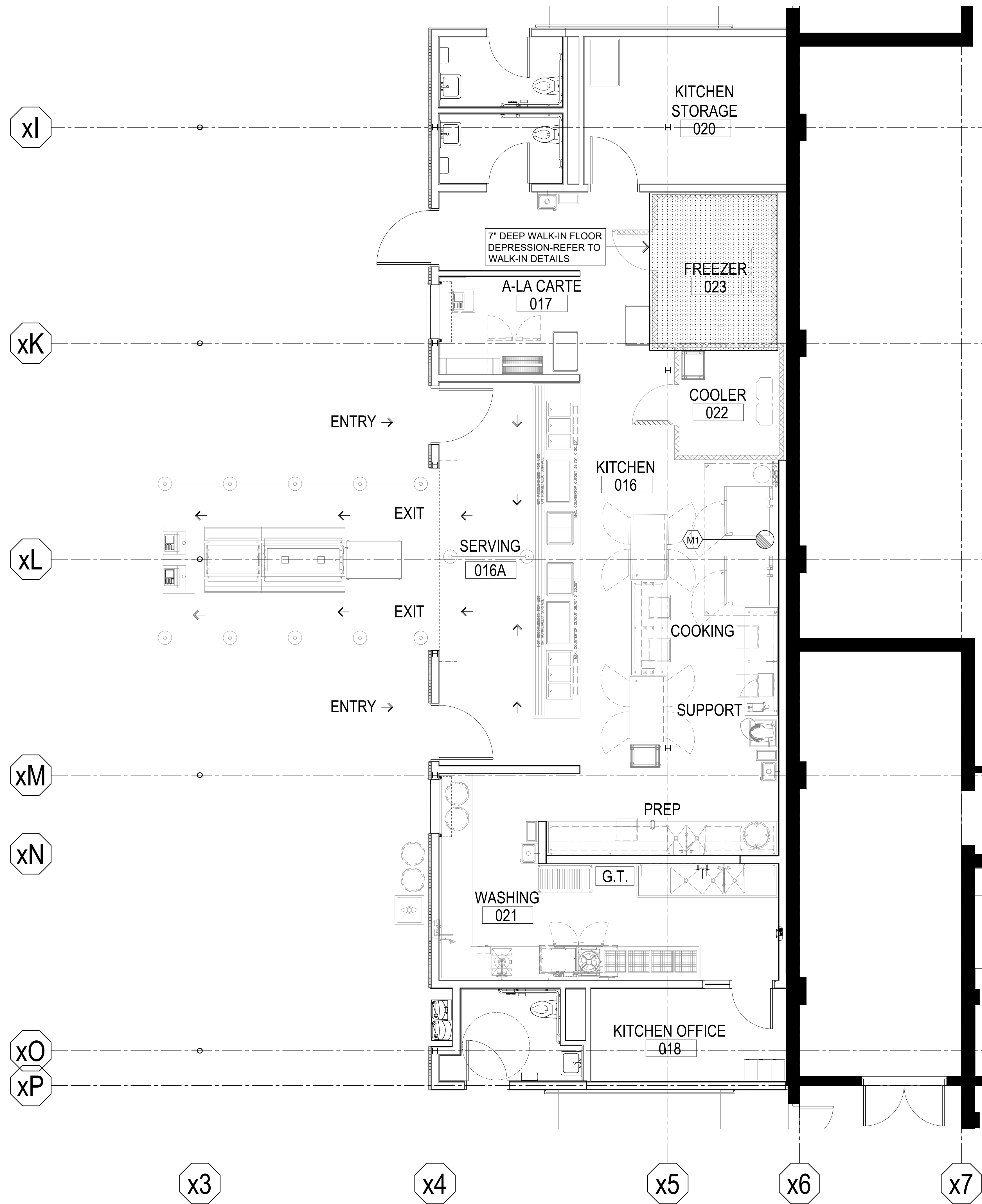
LEVEL 0 FOOD SERVICE EQUIPMENT PLAN

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



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

BID SET



MECHANICAL NOTES

M1. ONE (1) 16" DIAMETER TYPE II EXHAUST DUCT CONNECTION AT CANOPY HOOD. 1,688 CFM WITH -0.150" STATIC PRESSURE AT DUCT COLLAR.

DEPRESS./MECHANICAL SYMBOL LEGEND

EXHAUST DUCT

FLOOR DEPRESSION

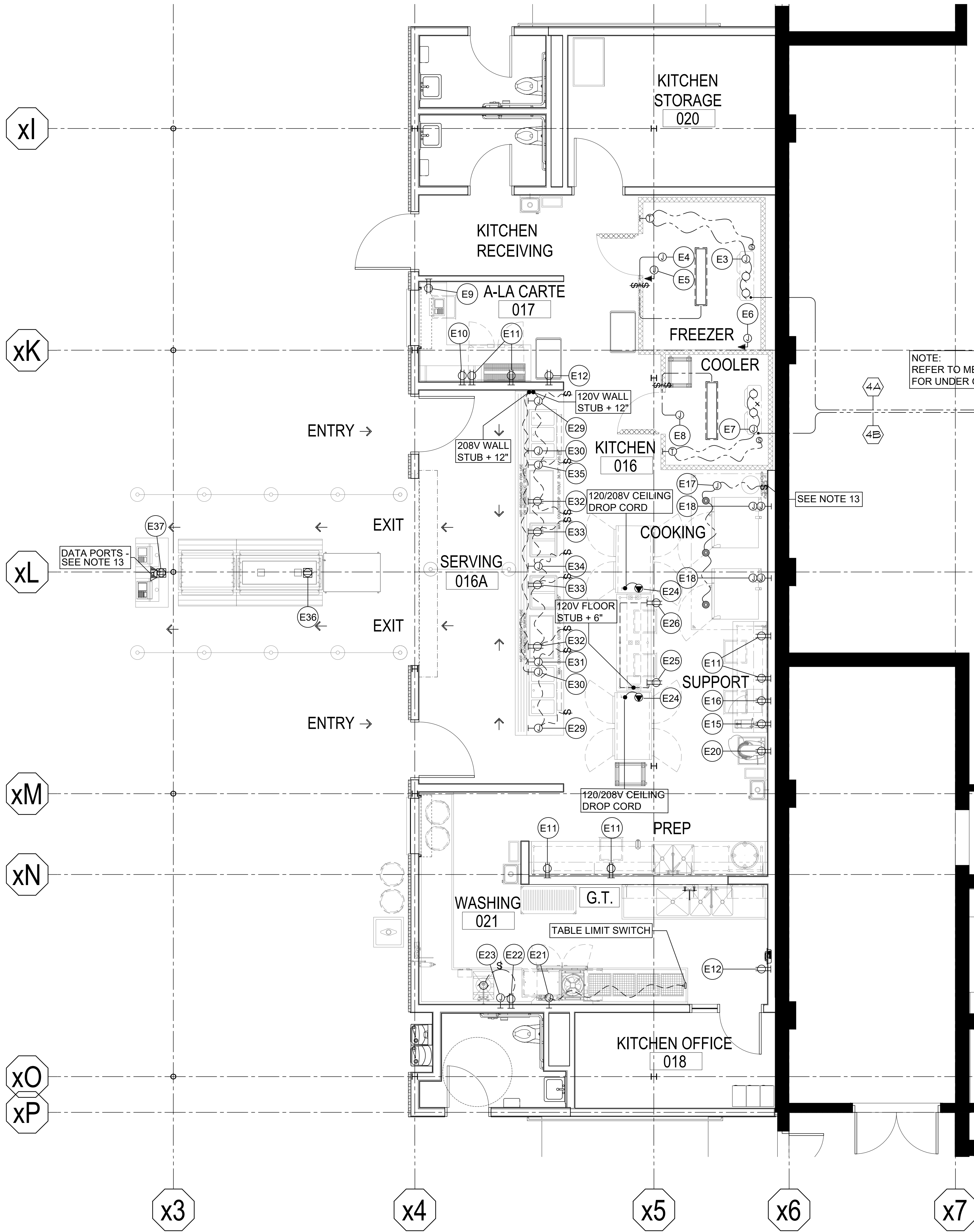
LEVEL 0 FOOD SERVICE MECHANICAL / FLOOR DEPRESSION PLAN
SCALE: 1/4" = 1'-0"

**KELSO SCHOOL DISTRICT NO. 458
HUNTINGTON MIDDLE SCHOOL -
MODERNIZATION AND ADDITION**
500 REDPATH ST, KELSO, WA 98626

Date:	05/28/2021
Job No.:	21938.00
Drawn By:	SRH/LB
Checked by:	LB
Revisions	
#	Date Description

LEVEL 0
FOOD SERVICE
MECHANICAL /
FLOOR DEPRESSION
PLAN

FS102



LEVEL 0 FOOD SERVICE ELECTRICAL / REFRIGERATION PLAN

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

NOTE:
REFER TO MECHANICAL SHEET M300A
FOR UNDER GROUND SLEEVING

NOTE:
REFER TO ARCHITECTURAL SHEET
A101A FOR EXACT GROUND LOC'N.
OF REFRIGERATION CONDENSING
UNITS WITHIN 75LF OF WALK-INS.
HOUSEKEEPING PAD G.C.

SEE NOTE 13

ELECTRICAL NOTES

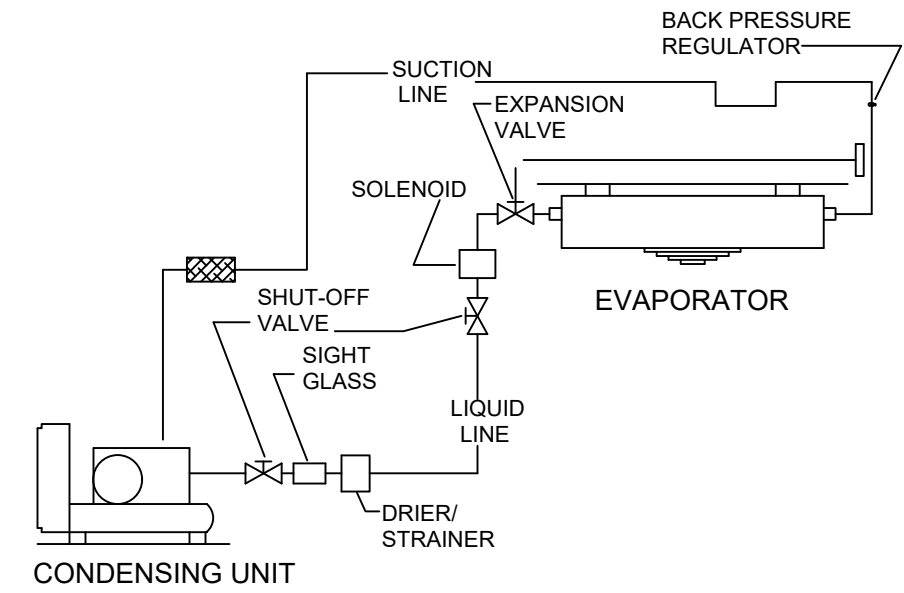
- THIS DRAWING IS NOT TO BE USED FOR ESTABLISHING ROUGH-IN LOCATIONS. REFER TO DIMENSIONED DRAWINGS PREPARED BY THE KITCHEN EQUIPMENT CONTRACTOR.
- UNDER ELECTRICAL WORK OF DIVISION 26, PROVIDE ALL ROUGH-INS AND FINAL CONNECTIONS IN CONFORMANCE WITH LOCAL CODES.
- HOOD LIGHTS ARE FURNISHED UNDER KITCHEN EQUIPMENT, DIVISION 11. UNDER ELECTRICAL WORK OF DIVISION 26, FURNISH AND INSTALL SWITCHES AND FURNISH AND INSTALL ALL INTERCONNECTING CONDUIT AND WIRING CONCEALED FROM SIGHT.
- WALK-IN COLD STORAGE ROOMS, LIGHTS, AND CEILING MOUNT EVAPORATORS ARE FURNISHED AND INSTALLED UNDER KITCHEN EQUIPMENT, DIVISION 11. UNDER ELECTRICAL WORK OF DIVISION 26, FURNISH AND INSTALL ALL INTERCONNECTING CONDUIT AND WIRING ABOVE CEILING CONCEALED FROM SIGHT.
- ALL ELECTRICAL RECEPTACLES SHALL BE MOUNTED HORIZONTALLY ON FIXTURES AND WALLS.
- ALL EVAPORATOR MOTOR CONNECTIONS SHALL BE MADE WITH CONDUIT TO A J-BOX. PLUG-IN TYPE CONNECTIONS WILL NOT BE ACCEPTED.
- COLD STORAGE ROOM EVAPORATOR DRAIN LINES (INCLUDING HEAT TAPE FOR FREEZER DRAIN) ARE FURNISHED AND INSTALLED UNDER KITCHEN EQUIPMENT, DIVISION 11. TRAP AT OUTLET END.
- REFRIGERATION LINES SHOWN ARE SCHEMATIC ONLY AND SHALL BE ADJUSTED TO FIT BUILDING CONDITIONS.
- UNDER ELECTRICAL WORK OF DIVISION 26, PROVIDE ALL DISCONNECTS, INTERLOCKS, AND CONTRACTORS REQUIRED BY LOCAL CODES.
- UNDER WORK OF KITCHEN EQUIPMENT, DIVISION 11, FURNISH AND INSTALL STAINLESS STEEL OR CHROME PLATED ESCUTCHEON PLATES FOR ALL ELECTRICAL CONNECTIONS PENETRATING COUNTER TOPS FOR BELOW COUNTER PLUG-INS.
- UNDER ELECTRICAL WORK OF DIVISION 26, FURNISH AND INSTALL ALL INTERCONNECTING WIRING BETWEEN WAREWASHER CONTROL PANEL AND EXHAUST FAN FOR AUTO FAN ON/OFF DURING EQUIPMENT OPERATION. SET FAN TO CONTINUE TO RUN AN EXTRA 20 MINUTES AFTER WAREWASHER IS TURNED-OFF.
- UNDER ELECTRICAL WORK OF DIVISION 26, PROVIDE POWER TO HOOD LIGHTS AND EXHAUST FAN ON ROOF-INTERLOCK WITH MAKE-UP AIR SUPPLY UNIT PER PER MECHANICAL ENG. PLANS. INTERCONNECT TO FAN/LIGHT/WALL SWITCH FURNISHED BY HOOD MANUFACTURER AND INSTALL @ 48" ABOVE FINISHED FLOOR.
- RUN 1" DIA. CONDUIT FOR ISOLATED & DEDICATED CASH SYSTEM COMMUNICATION LINES UNDER SLAB TO WALL. RUN UP WALL AND ACROSS CEILING. CONNECT TO MANAGERS STATION COMPUTER. VERIFY ALL SYSTEM REQUIREMENTS FOR OWNER SUPPLIED EQUIPMENT.
- UNDER ELECTRICAL WORK OF DIVISION 26 RUN ALL EXPOSED CONDUIT IN STAINLESS STEEL SLEEVES.

ELECTRICAL SCHEDULE

ITEM NO.	E.NO.	VOLTS	Ø	DESCRIPTION	LOC'N.	HEIGHT	SERVICE TO :	RATING	REMARKS
4	E1	208	3	J-BOX	PAD	VERIFY	WALK-IN FREEZER CONDENSING UNIT	11. 8 AMPS	SYSTEM A- SMART DEFROST SYSTEM
4	E2	208	3	J-BOX	PAD	VERIFY	WALK-IN COOLER CONDENSING UNIT	7. 6 AMPS	SYSTEM B- SMART DEFROST SYSTEM
4	E3	208	1	J-BOX	CEILING	---	WALK-IN FREEZER EVAPORATOR	10 A.MPS	SYSTEM A- SMART DEFROST SYSTEM
3	E4	120	1	J-BOX	CEILING	---	(1) WALK-IN LIGHT	80 W	80 W EACH
3	E5	120	1	J-BOX	CEILING	---	WALK-IN DOOR HEATER	500 W	---
3	E6	120	1	J-BOX	CEILING	---	WALK-IN DRAIN LINE HEATER	500 W	---
4	E7	120	1	J-BOX	CEILING	---	WALK-IN COOLER EVAPORATOR	2 AMPS	SYSTEM B- SMART DEFROST SYSTEM
3	E8	120	1	J-BOX	CEILING	---	(1) WALK-IN LIGHT	80 W	80 W EACH
10	E9	120	1	DCO	WALL	48"	POINT OF SALE	1 KW	ISOLATED & DEDICATED
12	E10	120	1	DCO	WALL	10"	UNDERCOUNTER REACH-IN REFRIGERATOR	7. 5 AMPS	FURNISHED WITH NEMA 5-15P
---	E11	120	1	DCO	WALL	48"	CONVENIENCE	1440 W	DEDICATED CIRCUIT
---	E12	120	1	DCO	WALL	18"	CONVENIENCE	1440 W	DEDICATED CIRCUIT
---	E13	---	---	NOT USED	---	---	---	---	---
---	E14	---	---	NOT USED	---	---	---	---	---
20	E15	120	1	DCO	WALL	48"	HOT WATER DISPENSER	1800 W	FURNISHED WITH NEMA 5-15P
21	E16	120	1	DCO	WALL	48"	MICROWAVE OVEN	13. 4 AMPS	FURNISHED WITH NEMA 5-15P
22	E17	120	1	J-BOX	CEILING	---	(3) CANOPY HOOD LIGHTS	450 W	---
24	E18	480	3	J-BOXES (STACKED)	WALL	12" 42"	DOUBLE STACK COMBI-OVEN STEAMERS	22 KW	EACH OVEN
---	E19	---	---	NOT USED	---	---	---	---	---
29	E20	120	1	DCO	WALL	18"	20-QUART MIXER	8 AMPS	FURNISHED WITH NEMA 5-15P
34	E21	480	3	J-BOX	WALL	68"	WAREWASHER WITH BOOSTER HEATER	63. 7 AMPS	SINGLE POINT CONN. (MOTORS/CONTROLS/BOOSTER). INTERCONNECT W/LIMIT SWITCH
34	E22	120	1	DCO	WALL	68"	WAREWASHER DETERGENT FEED	1440 W	DEDICATED CIRCUIT
35	E23	480	3	J-BOX	WALL	14"	DISPOSER	2 HP	CONNECTIONS TO DISPOSER, SOLENOID & SWITCH
39	E24	120/208	1	SCO (DROP CORD)	CEILING	---	PASS-THRU HEATED/REFRIG. HOLDING CABINET	13. 5 AMPS	FURNISHED WITH NEMA L14-20P
40	E25	120	1	DCO	FIXTURE	34"	ELECTRIC CAN OPENER	15 AMPS	FURNISHED WITH NEMA 5-15P. EXTEND FROM FLOOR STUB
---	E26	120	1	DCO	FIXTURE	34"	CONVENIENCE	1440 W	DEDICATED CIRCUIT. EXTEND FROM FLOOR STUB
---	E27	---	---	NOT USED	---	---	---	---	---
---	E28	---	---	NOT USED	---	---	---	---	---
44	E29	120	1	J-BOX	FIXTURE	54"	FOOD GUARD DISPLAY LIGHTS / HEAT LAMPS	10. 66 AMPS	WIRED TO SWITCH RUN THRU FOOD GUARD POST. EXTEND FROM WALL STUB
45	E30	208	3	J-BOX	FIXTURE	18"	DROP-IN HOT WELLS	3720 W	EXTEND FROM WALL STUB
44	E31	120	1	J-BOX	FIXTURE	54"	FOOD GUARD DISPLAY LIGHTS / HEAT LAMPS	6. 96 AMPS	WIRED TO SWITCH RUN THRU FOOD GUARD POST. EXTEND FROM WALL STUB
46	E32	120	1	DCO	FIXTURE	18"	DROP-IN HEATED HOT PLATE	6. 5 AMPS	FURNISHED WITH NEAM 5-15P. EXTEND FROM WALL STUB. CONN. TO REMOTE SWITCH
47	E33	120	1	DCO	FIXTURE	18"	DROP-IN REFRIGERATED WELLS	3. 9 AMPS	FURNISHED WITH NEAM 5-15P. EXTEND FROM WALL STUB. CONN. TO REMOTE SWITCH
44	E34	120	1	J-BOX	FIXTURE	54"	FOOD GUARD DISPLAY LIGHTS (2 LIGHTS TOTAL)	30 W TOTAL	WIRED TO ONE SWITCH. RUN THRU FOOD GUARD POST. EXTEND FROM WALL STUB
44	E35	120	1	J-BOX	FIXTURE	54"	FOOD GUARD DISPLAY LIGHTS / HEAT LAMPS	8. 16 AMPS	WIRED TO SWITCH RUN THRU FOOD GUARD POST. EXTEND FROM WALL STUB
49,50	E36	120	1	FLOOR BOX	FLOOR	0"	MILK COOLER & REFRIGERATED SALAD BAR	11. 4 AMPS	MILK COOLER = 2.7 A (NEMA 5-15P), SALAD BAR = 9 A (NEMA 5-15P)
10	E37	120	1	FLOOR BOX(4 -PLEX)	FLOOR	0"	(2) POINT OF SALE SYS. & DISPLAY LIGHTS	1440 W	ISOLATED & DEDICATED. NEMA 5-15P FOR CONDIMENT COUNTER

SYMBOLS

- 12" X 12" PULL BOX AT HEIGHT NOTED ON PLAN. MEASURED FROM FINISHED FLOOR NOT RAISED BASES. TO C OF PB AND FLUSH WITH FIN. WALL. USE 2" O CONDUIT. DOWN WITHIN WALL FROM ABOVE CEILING. ALL THE ABOVE FURNISHED AND INSTALLED BY ELECTRICAL CONTRACTOR.
- REFRIGERATION LINE CONNECTION AT EVAPORATOR BY KITCHEN EQUIPMENT CONTRACTOR.
- REFRIGERATION SYSTEM BY KITCHEN EQUIPMENT CONTRACTOR.
- INSULATED REFRIGERATION LINES. RUN FROM CONDENSING UNITS AND ABOVE FINISHED CEILING BY KITCHEN EQUIPMENT CONTRACTOR.
- CONDUIT UNDER FLOOR SIZE AS NOTED ON PLAN FROM PB IN WALL CONDUIT SHALL HAVE 24" MINIMUM RADIUS BENDS. FURNISHED AND INSTALLED BY ELECTRICAL CONTRACTOR.



REMOTE, NORMAL TEMP. REF'R. SCHEMATIC

NO SCALE
INCLUDE CRANKCASE HEATERS FOR ALL SYSTEMS EXPOSED TO FREEZING WEATHER
ADD OIL SEPARATORS TO LOW TEMPERATURE SYSTEMS
ALL SYSTEMS DESIGNED FOR +90 AMBIENT

ELECTRICAL SYMBOL LEGEND

- DCO (DUPLEX CONVENIENCE OUTLET)
- J-BOX (JUNCTION BOX)
- SCO
- THERMOSTAT
- SOLENOID
- MOTOR
- SWITCH(S)
- LIGHT
- FLOOR OR CEILING STUB (AS NOTED)

KELSO SCHOOL DISTRICT NO. 458
HUNTINGTON MIDDLE SCHOOL -
MODERNIZATION AND ADDITION
500 REDPATH ST, KELSO, WA 98626

Date: 05/28/2021
Job No.: 21938.00
Drawn By: SRH/LB
Checked by: LB
Revisions
Date Description

LEVEL 0
FOOD SERVICE
ELECTRICAL /
REFRIGERATION
PLAN

FS103

integrus
ARCHITECTURE
10 SOUTH CEDAR SPRING AVE. WA. 98204
TEL: 360.438.4661 FAX: 360.438.2194



HALLIDAY
ASSOCIATES
6550 N.W. NORWOOD
CLATSOP, WASH. 97106
503.325.8341 - 503.325.8342
FAX 503.325.8344 - 503.325.8345
FED. FACILITY CONSULTANTS
SPACE PLANNING & DESIGN

FOR QUESTIONS, CALL THE
Seattle Office
Jon Clarke
PHONE: (425) 212-5996
EMAIL: reg85@captiveaire.com

HOOD INFORMATION - JOB#4744110

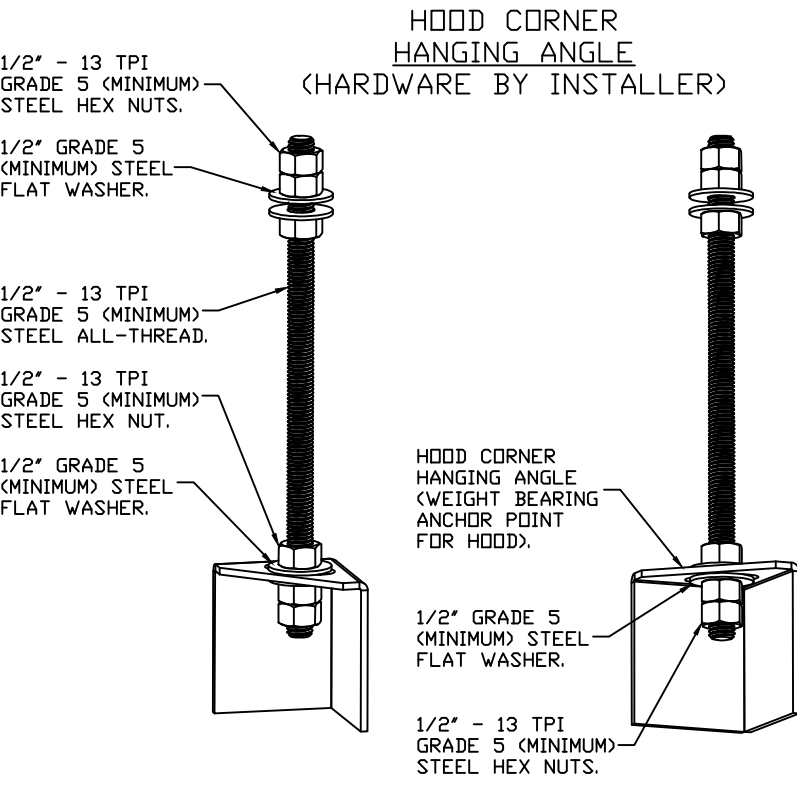
HOOD NO	TAG	MODEL	MANUFACTURER	LENGTH	MAX COOKING TEMP	TYPE	APPLIANCE DUTY	DESIGN CFM/FT	TOTAL EXH CFM	EXHAUST PLENUM RISER(S)						HOOD CONSTRUCTION	HOOD CONFIG		SWITCHES		
										WIDTH	LENG	HEIGHT	DIA	CFM	VEL		SP	END TO END	ROW	QUANTITY	LOCATION
1	ITEM 22	6618 VHB-G	CAPTIVEAIRE	11' 3'	700 DEG	II	N/A	150	1688			4'	16'	1688	1209	-0.150"	304 SS 100%	ALONE	ALONE	1 LIGHT	

HOOD INFORMATION

HOOD NO	TAG	FILTER(S)					LIGHT(S)			UTILITY CABINET(S)					FIRE SYSTEM PIPING	HOOD HANGING WEIGHT
		TYPE	QTY	HEIGHT	LENGTH	EFFICIENCY @ 7 MICRONS	QTY	TYPE	WIRE GUARD	LOCATION	SIZE	TYPE	SIZE	MODEL #	QUANTITY	
1	ITEM 22						3	RECESSED	NO							356 LBS

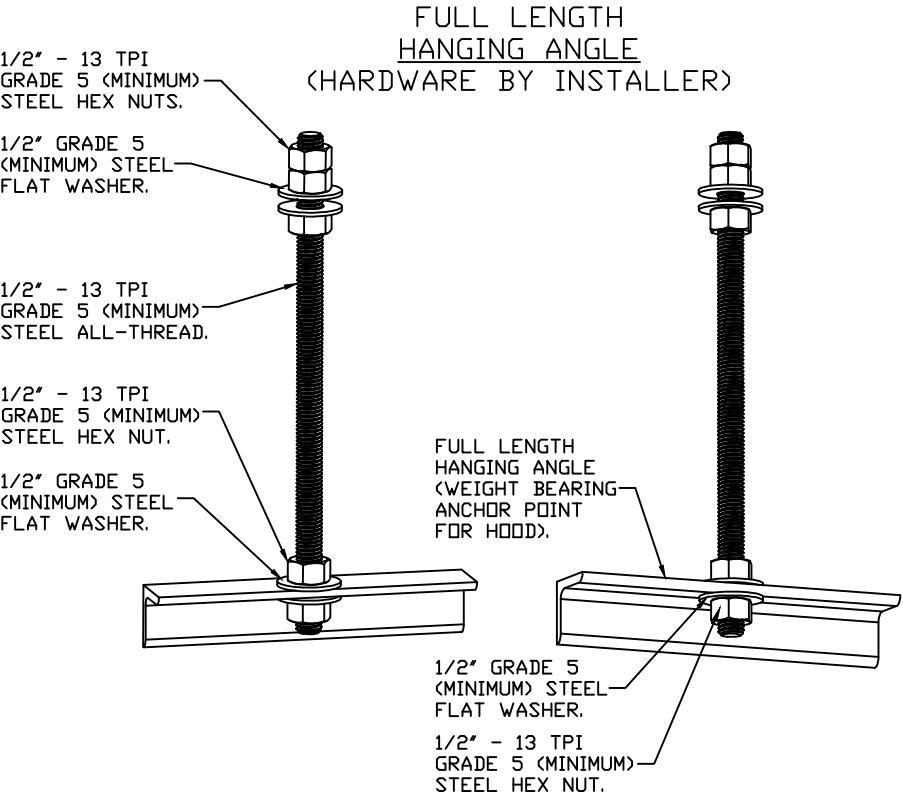
HOOD OPTIONS

HOOD NO	TAG	OPTION
1	ITEM 22	FIELD WRAPPER 18.00' HIGH FRONT, LEFT, RIGHT.



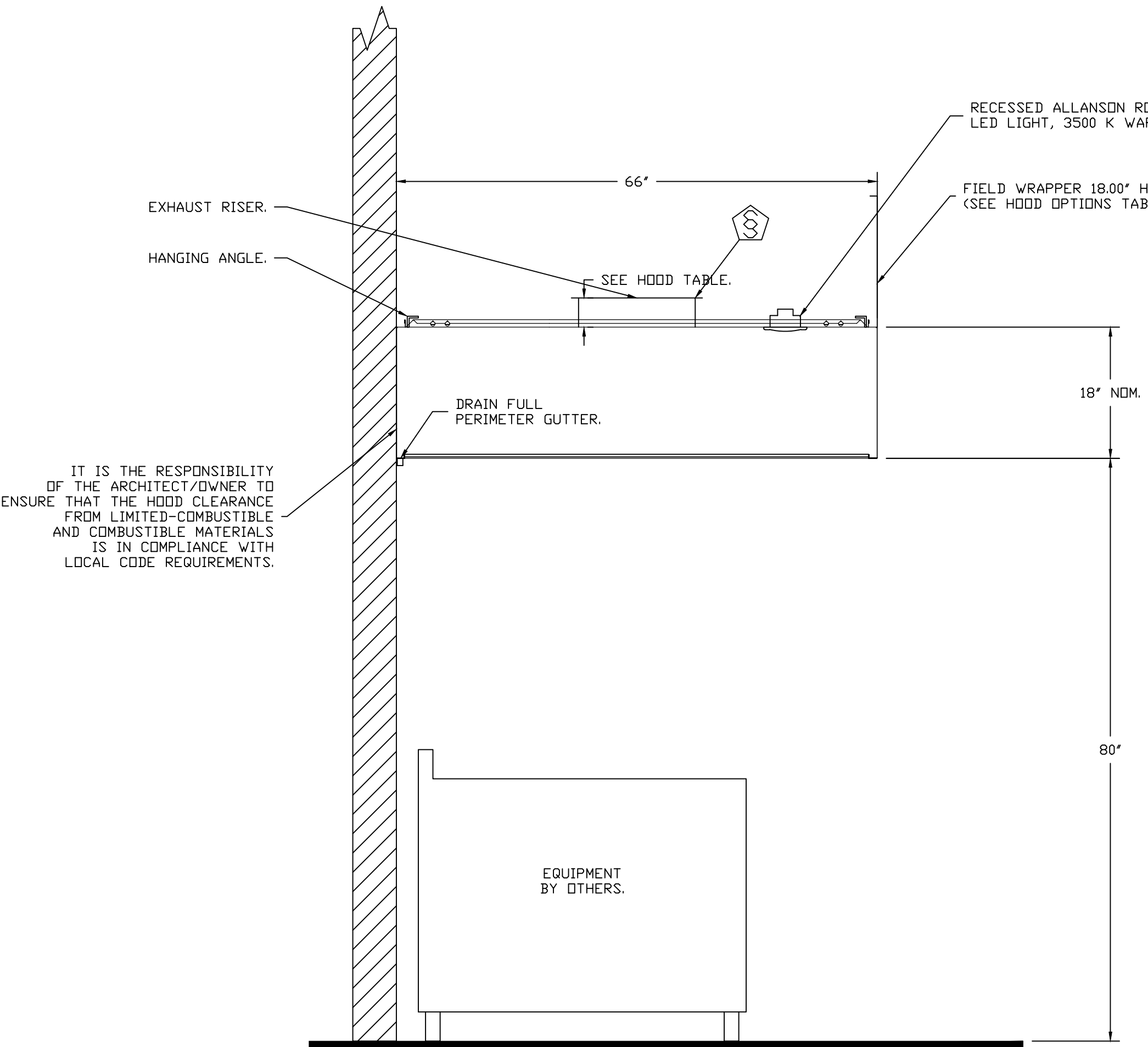
ASSEMBLY INSTRUCTIONS

HANGING ANGLE MUST BE SUPPORTED WITH 1/2" - 13 TPI GRADE 5 (MINIMUM) ALL-THREAD. SANDWICH HANGING ANGLES AND CEILING ANCHOR POINTS WITH 1/2" GRADE 5 (MINIMUM) STEEL FLAT WASHERS AND 1/2" - 13 TPI GRADE 5 (MINIMUM) HEX NUTS AS SHOWN. MUST USE DOUBLED HEX NUT CONFIGURATION BENEATH HOOD HANGING ANGLES AND ABOVE CEILING ANCHORS. MAINTAIN 1/4" OF EXPOSED THREADS BENEATH BOTTOM HEX NUT. TORQUE ALL HEX NUTS TO 57 FT-LBS.

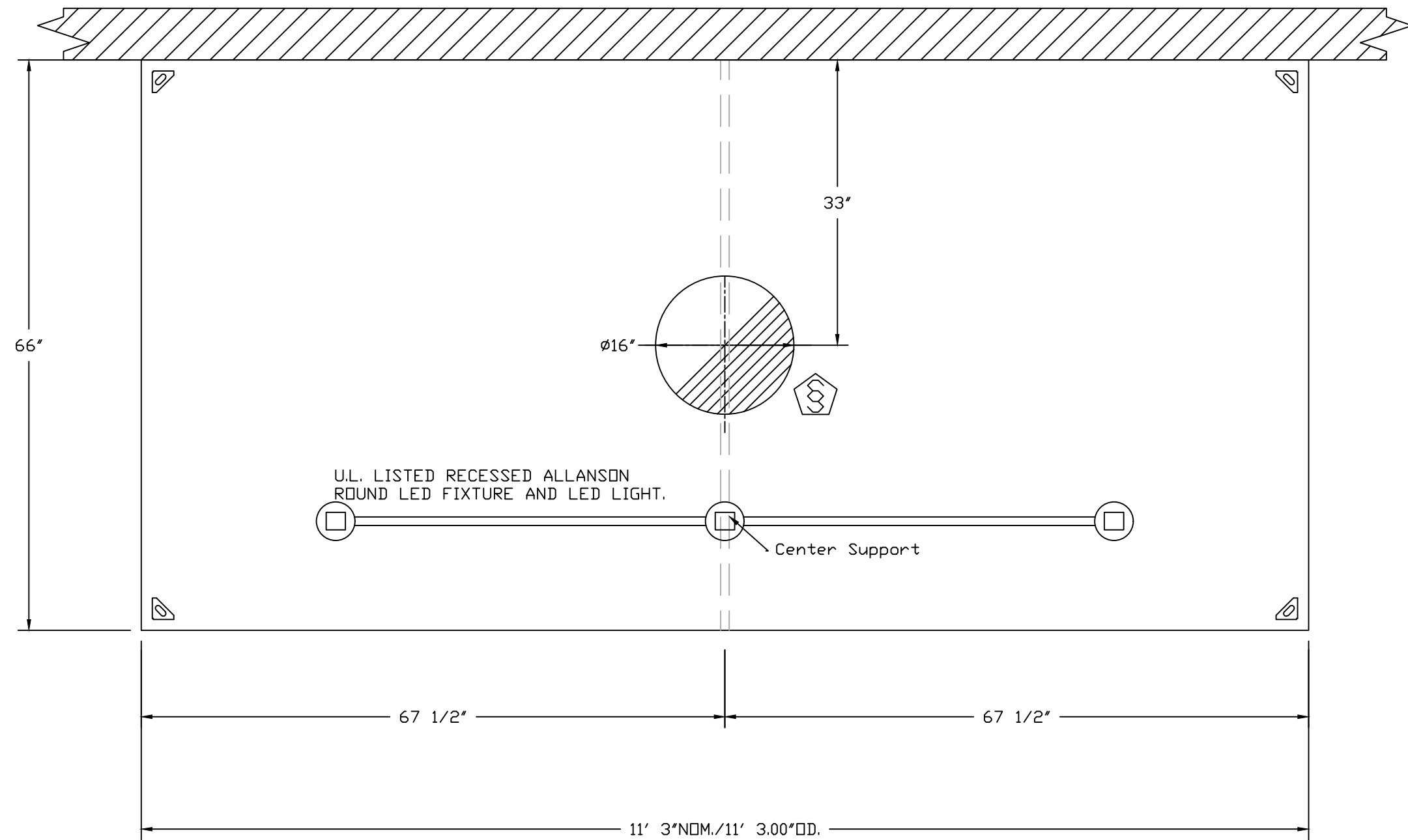


ASSEMBLY INSTRUCTIONS

HANGING ANGLE MUST BE SUPPORTED WITH 1/2" - 13 TPI GRADE 5 (MINIMUM) ALL-THREAD. SANDWICH HANGING ANGLES AND CEILING ANCHOR POINTS WITH 1/2" GRADE 5 (MINIMUM) STEEL FLAT WASHERS AND 1/2" - 13 TPI GRADE 5 (MINIMUM) HEX NUTS AS SHOWN. MUST USE DOUBLED HEX NUT CONFIGURATION ABOVE CEILING ANCHORS. SINGLE HEX NUT BENEATH HANGING ANGLE IS ACCEPTABLE FOR FULL LENGTH HANGING ANGLES. MAINTAIN 1/4" OF EXPOSED THREADS BENEATH BOTTOM HEX NUT. TORQUE ALL HEX NUTS TO 57 FT-LBS.



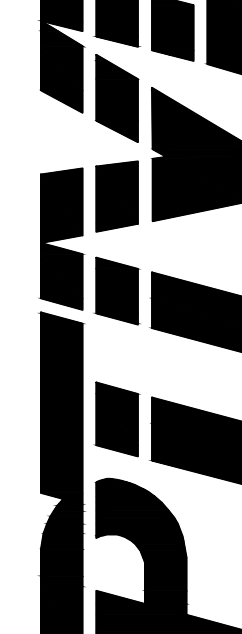

SECTION VIEW - MODEL 6618VHB-G
HOOD - #1 (ITEM 22)



PLAN VIEW - HOOD #1 (ITEM 22)
11' 3.00" LONG 6618VHB-G

REVISIONS

DESCRIPTION	DATE



www.captiveaire.com

1309 Pacific Ave. Everett, WA 98201 PHONE: (425) 212-5996 FAX: (425) 212-5998 EMAIL: reg85@captiveaire.com

Kelso SD - Huntington MS R1

500 Redpath St,

Kelso, WA, 98626

DATE: 2/16/2021

DWG.#: 4744110

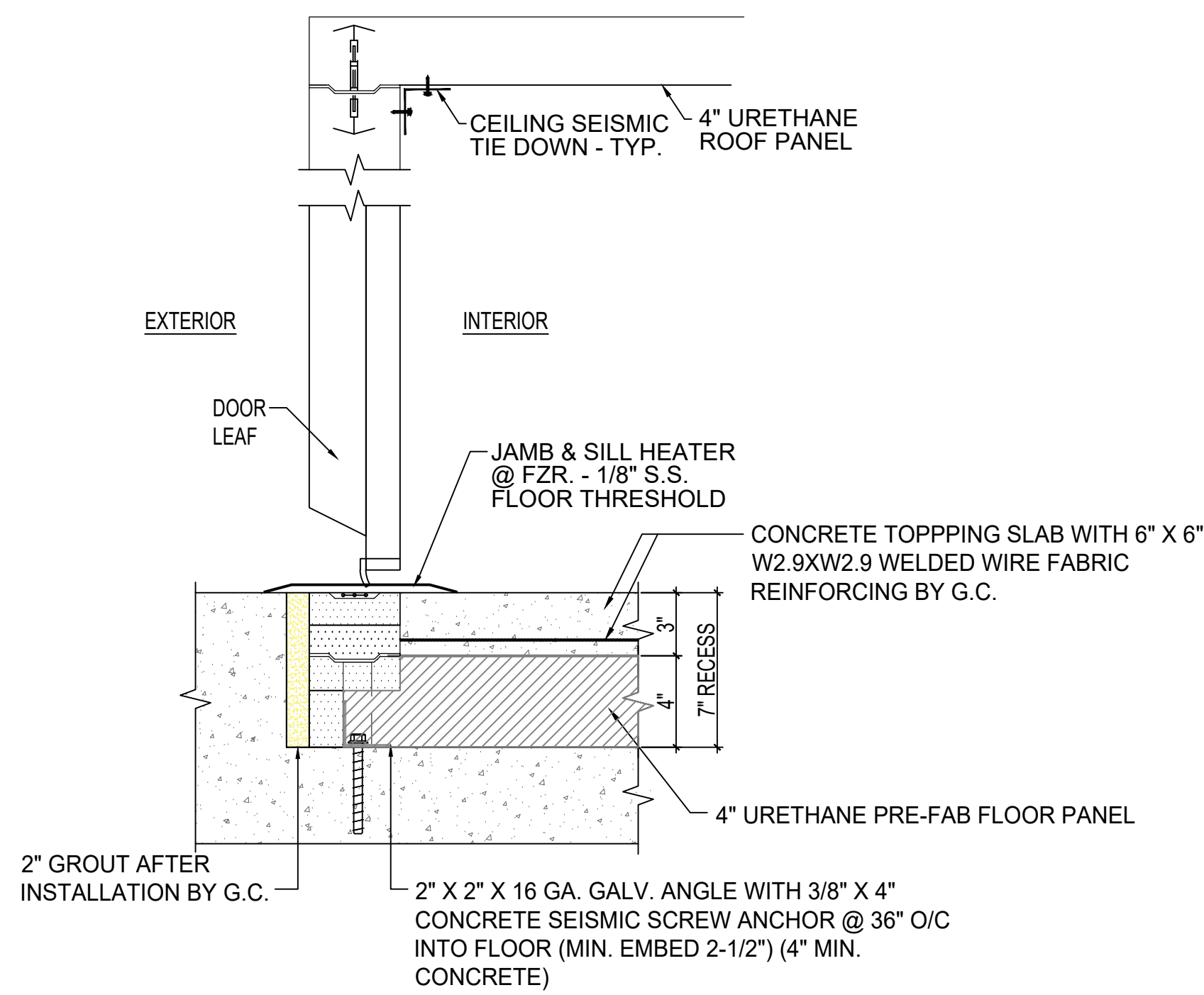
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SCALE: 3/4" = 1'-0"

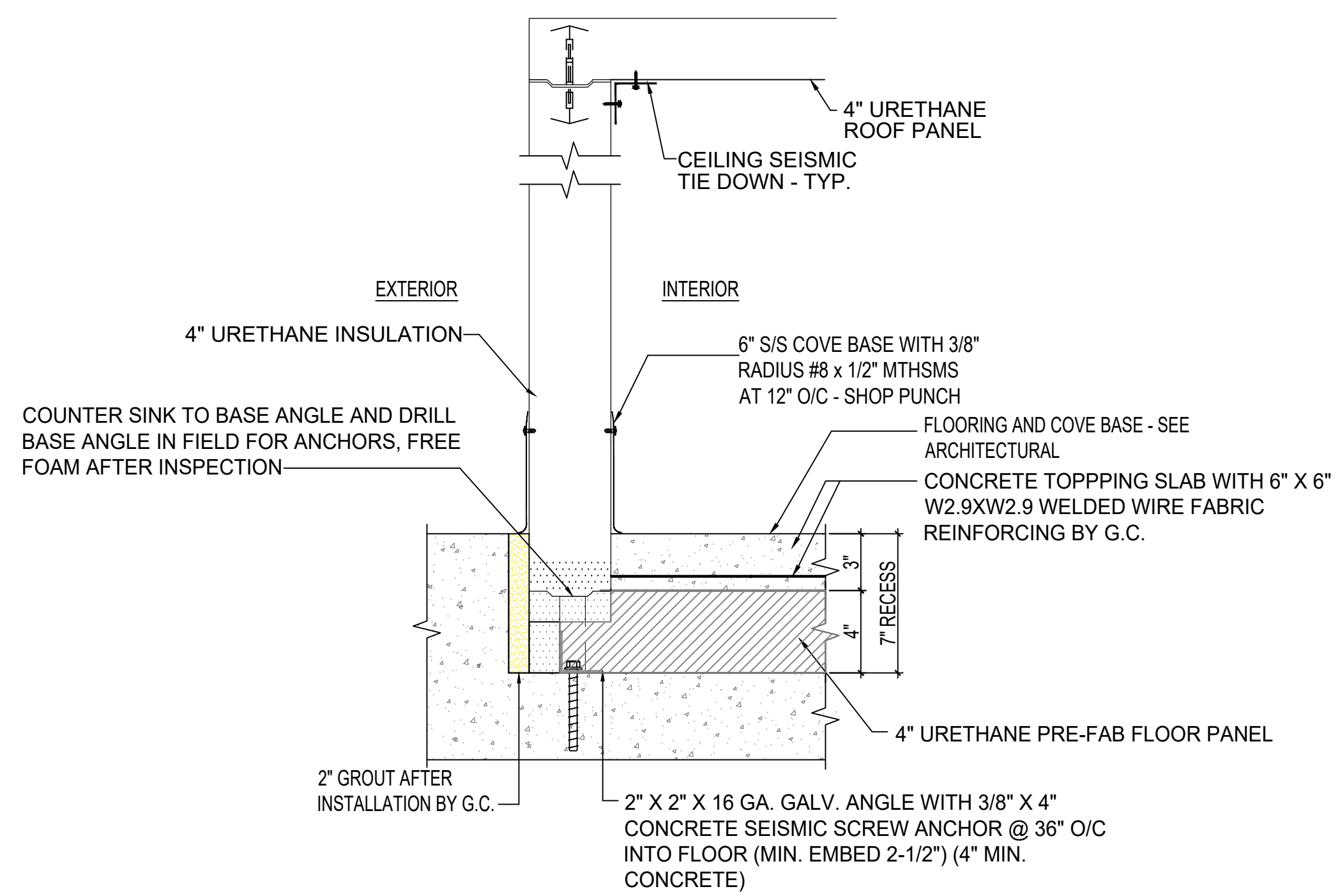
MASTER DRAWING

SHEET NO.

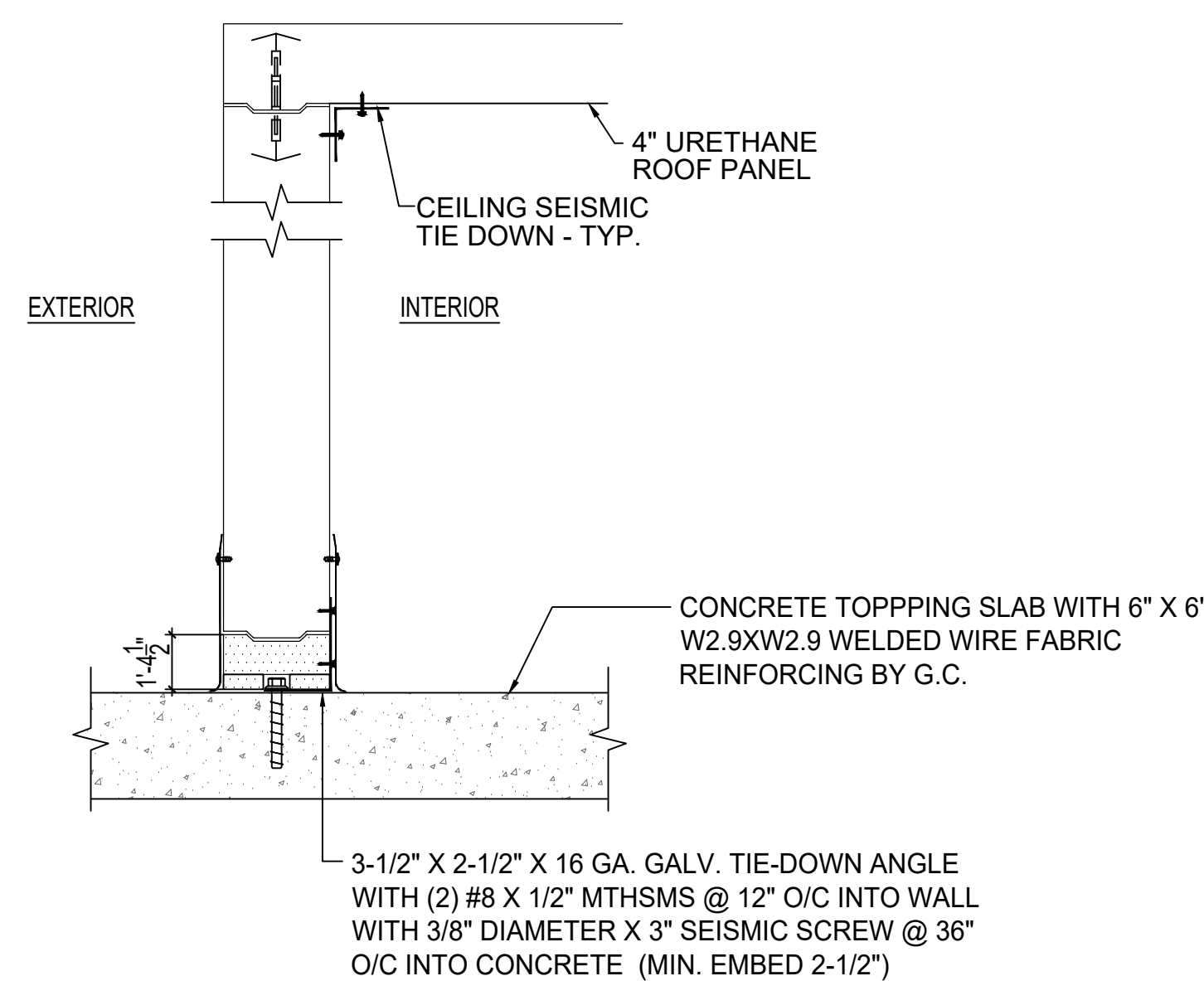
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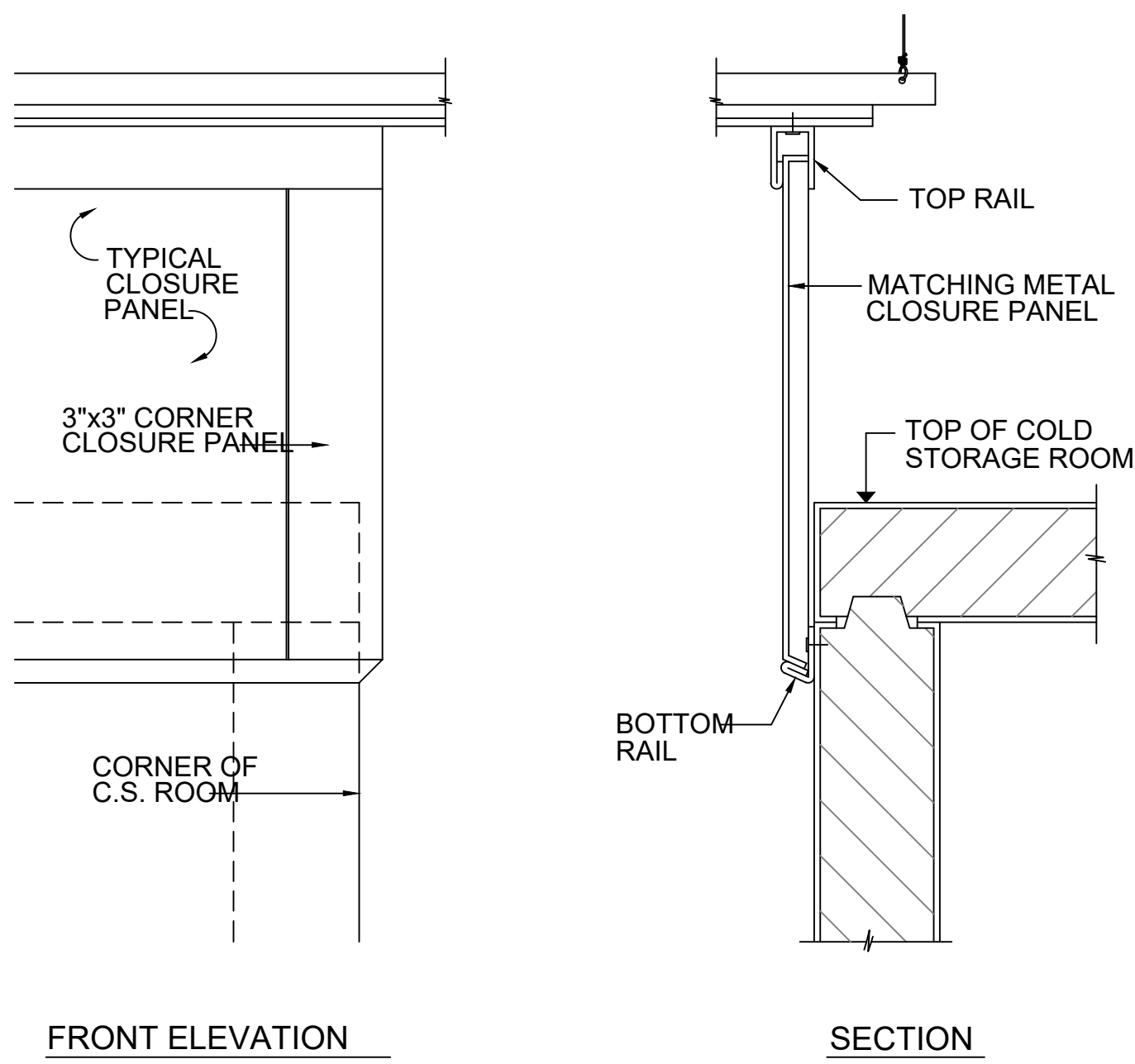
A DOOR/FLOOR SECTION - FREEZER
NO SCALE



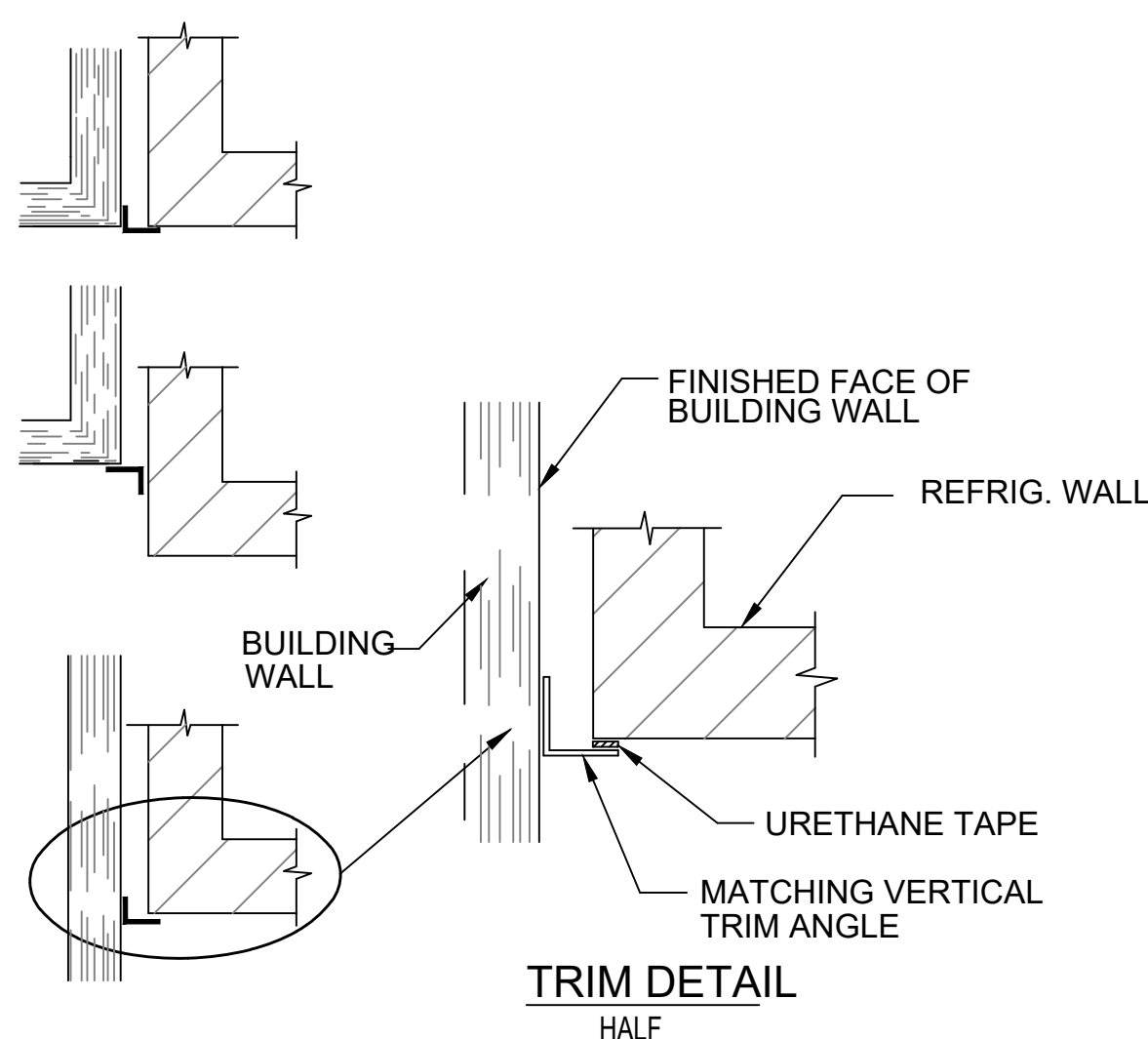
B WALL/FLOOR SECTION - FREEZER
NO SCALE



C WALL/FLOOR SECTION - COOLER
NO SCALE



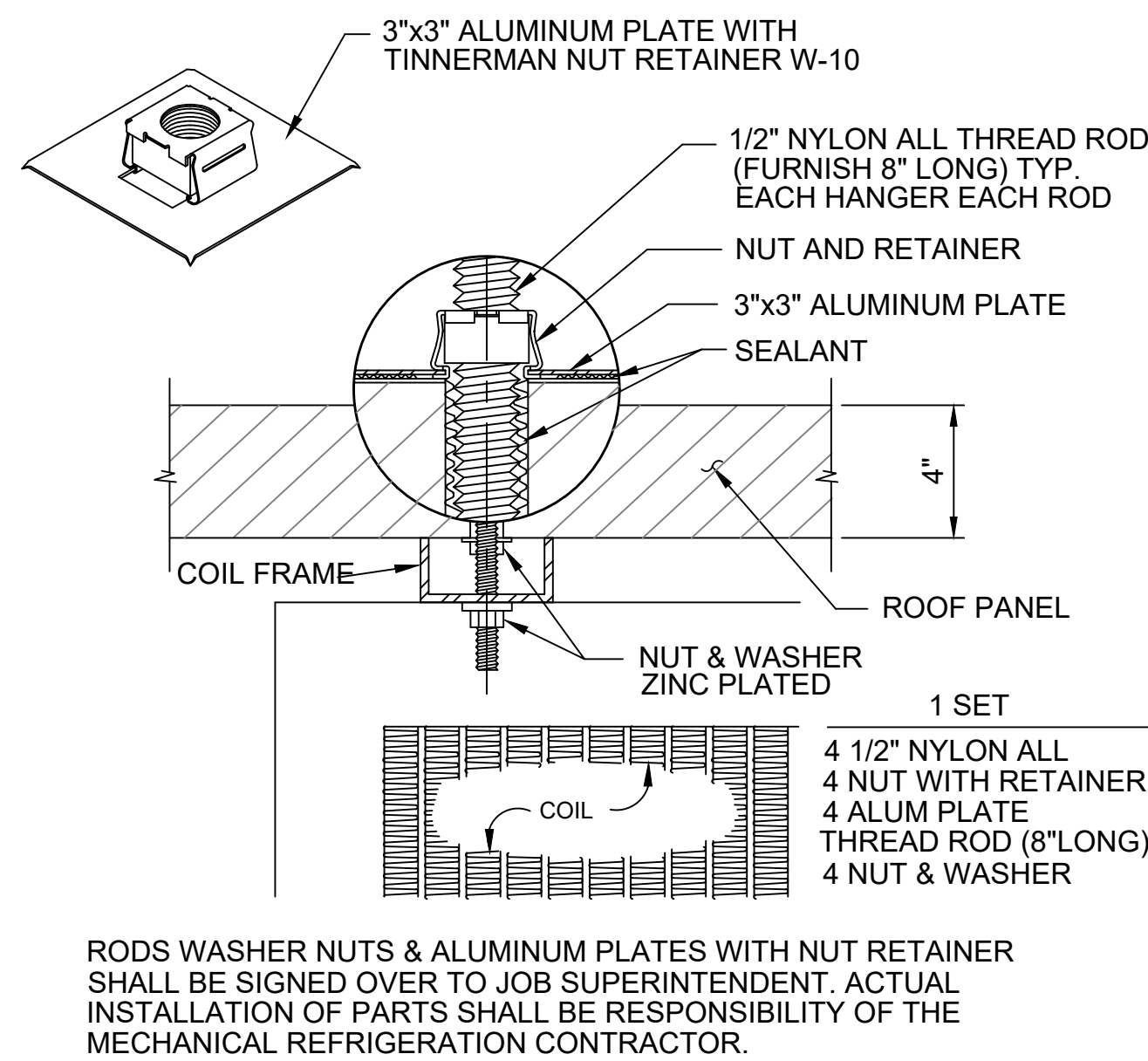
D CLOSURE PANEL DETAILS
NO SCALE



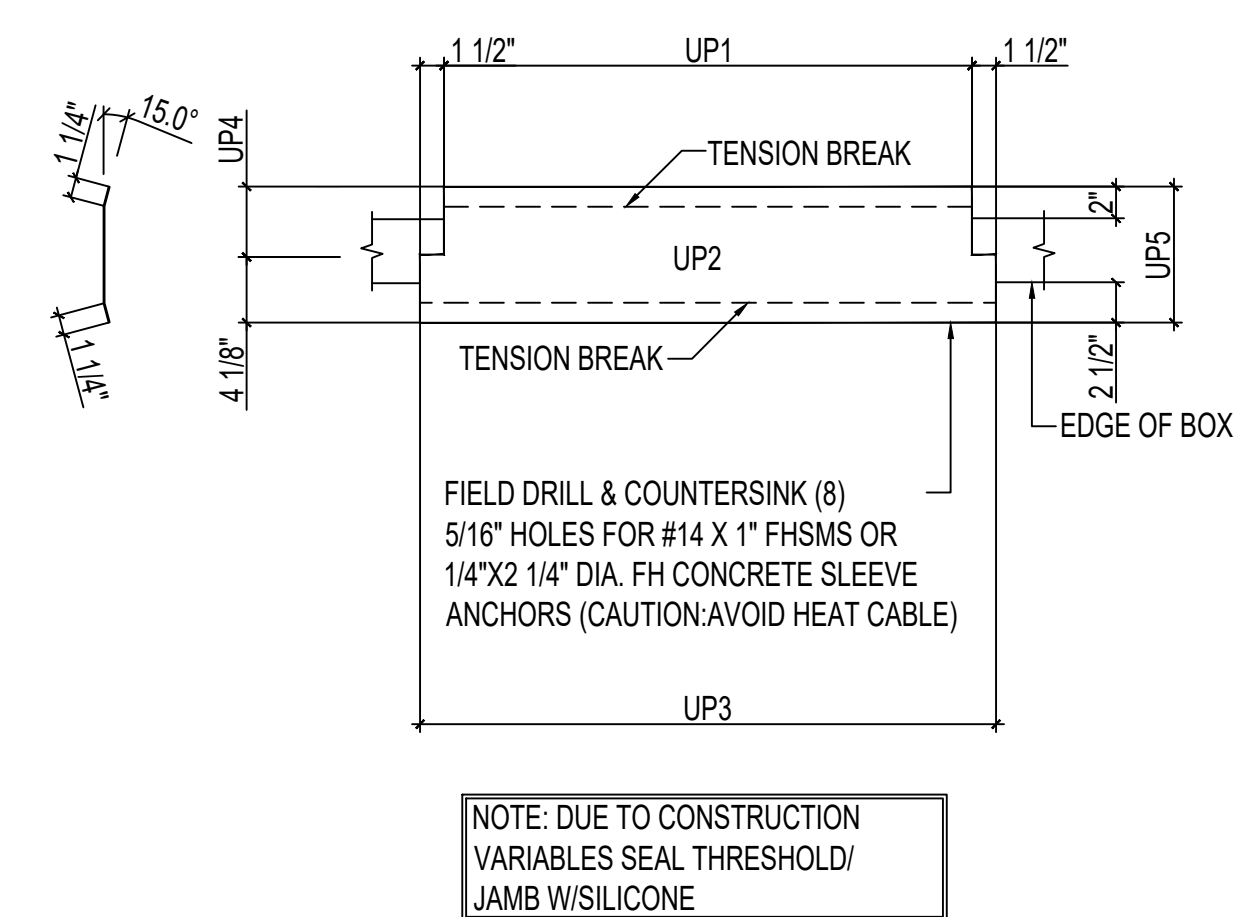
F VERITCAL TRIM MOULDING DETAIL
NO SCALE

WALK-IN NOTES

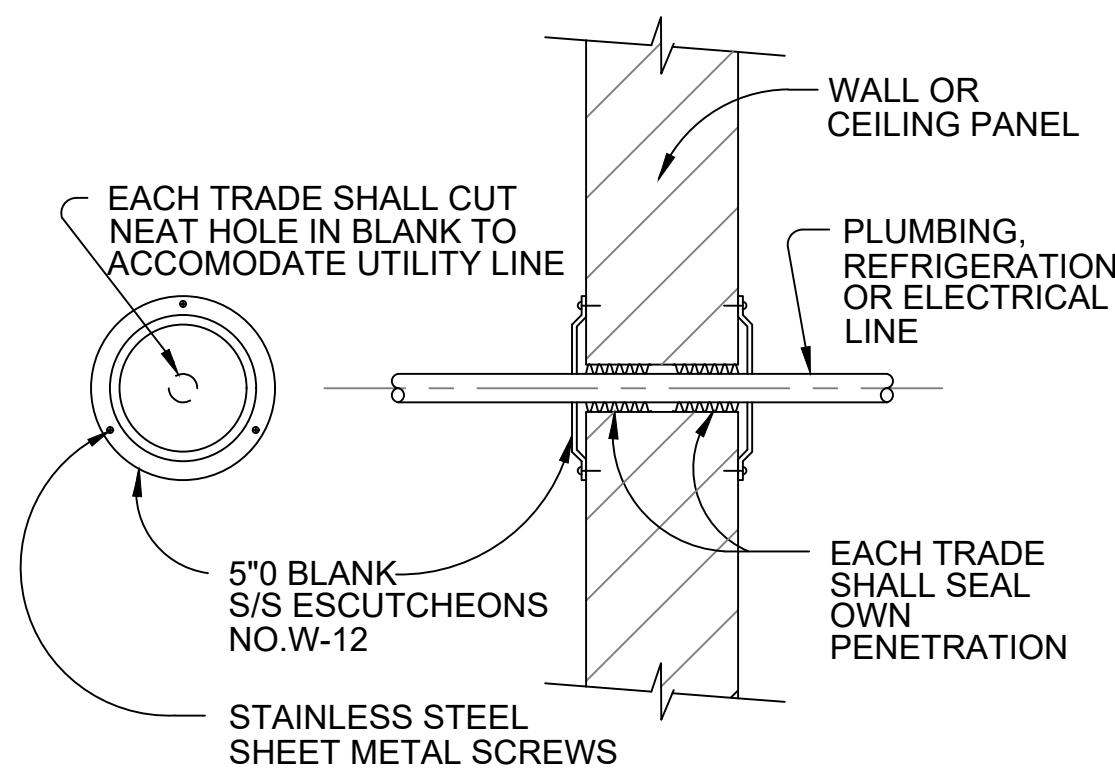
- REFER TO ARCHITECTURAL FINISH SCHEDULE FOR FINISHED FLOOR MATERIAL AT INTERIOR AND EXTERIOR OF WALK-IN COLD STORAGE ROOMS.
- WALL, CEILING, AND DOOR INSULATION SHALL BE AT LEAST R-25 FOR COOLERS AND R-32 FOR FREEZERS. FREEZER FLOOR INSULATION SHALL BE AT LEAST R-28. NOTE: SPECIFIED 4" INSULATED WALL PANELS ARE TO HAVE AN R-VALUE OF 8.06 PER INCH WITH A TOTAL MINIMUM 32.26 R VALUE.



G NYLON ROD COIL HANGER DETAIL
NO SCALE

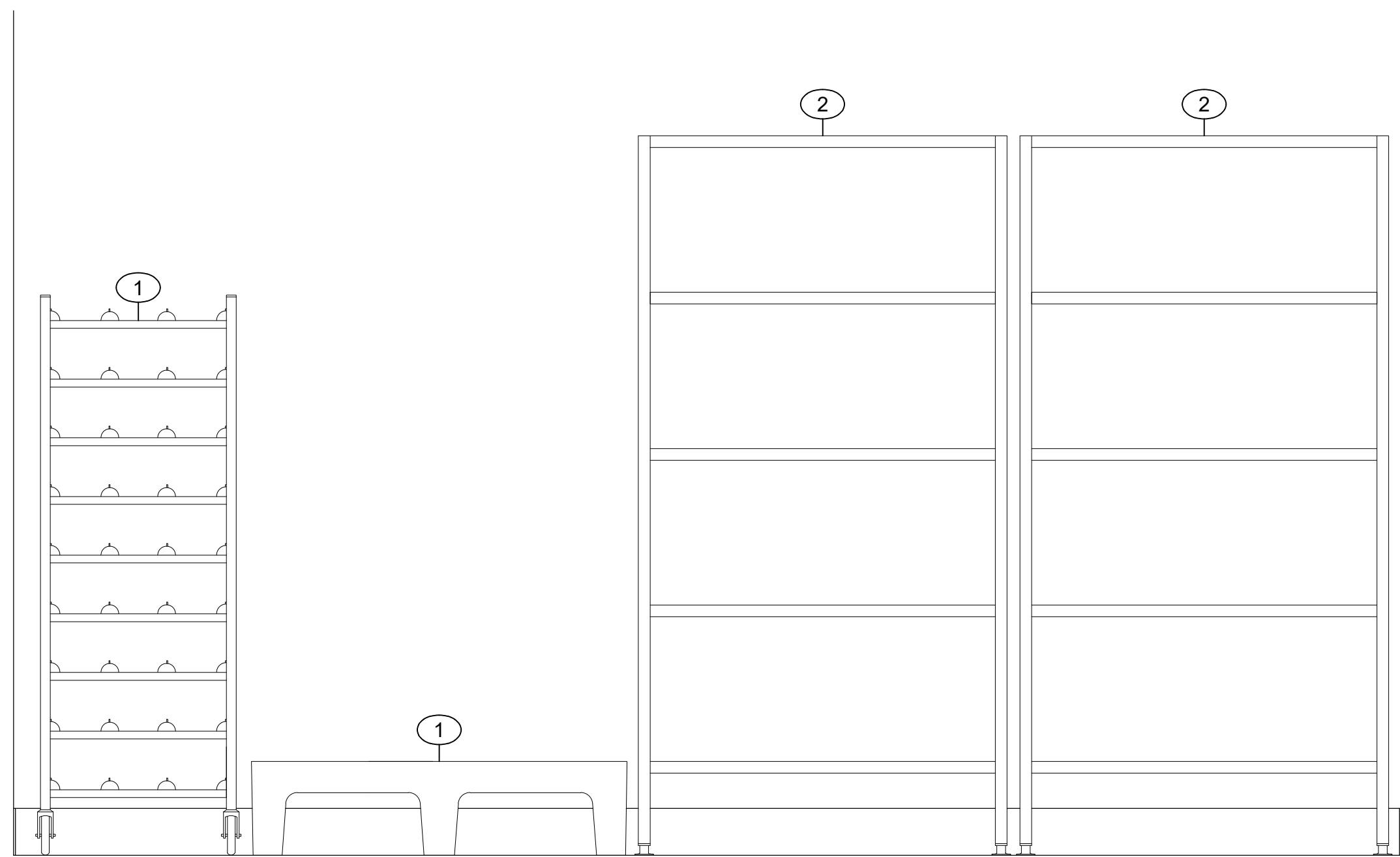


E THRESHOLD DETAILS
NO SCALE

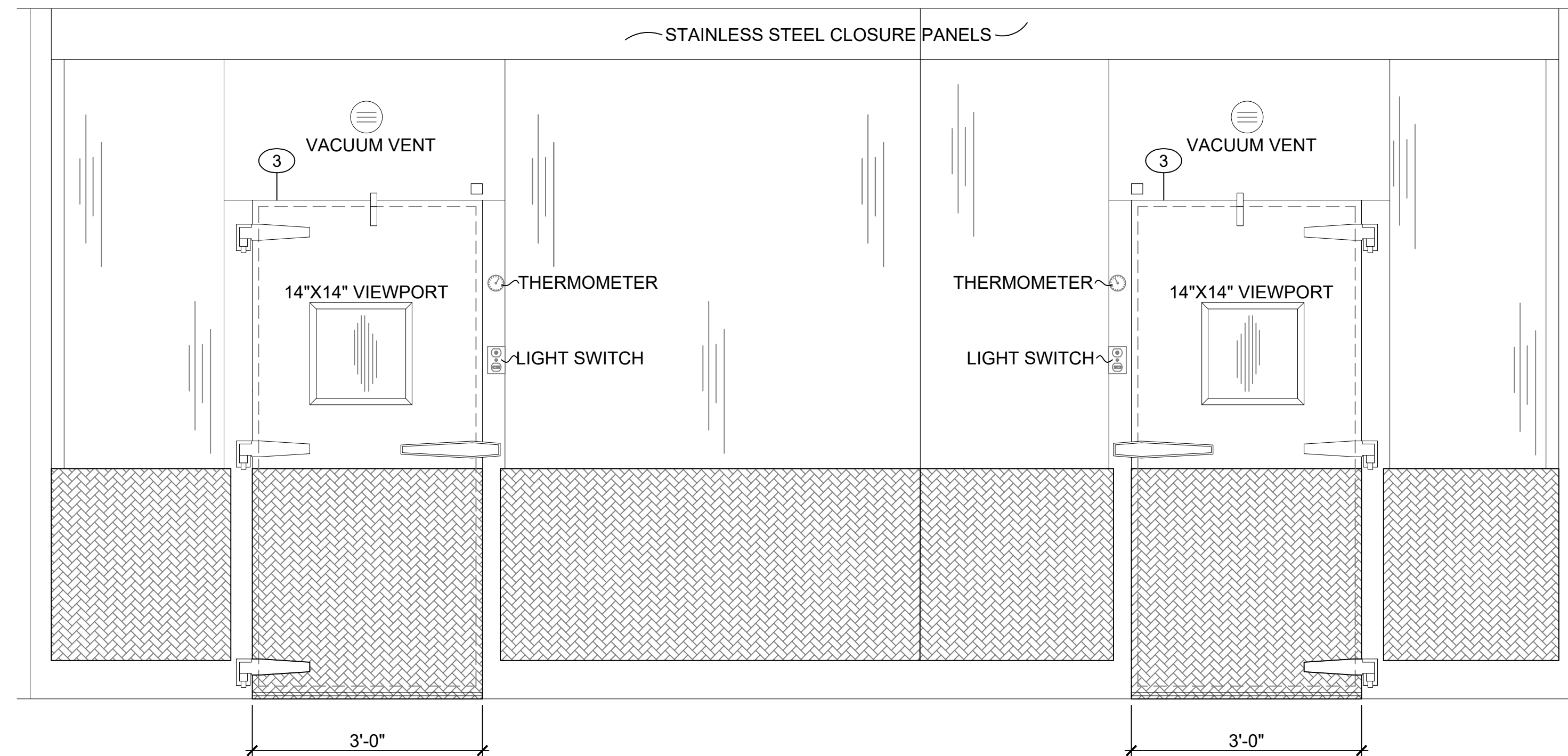


H TYPICAL ESCUTCHEON DETAIL
NO SCALE

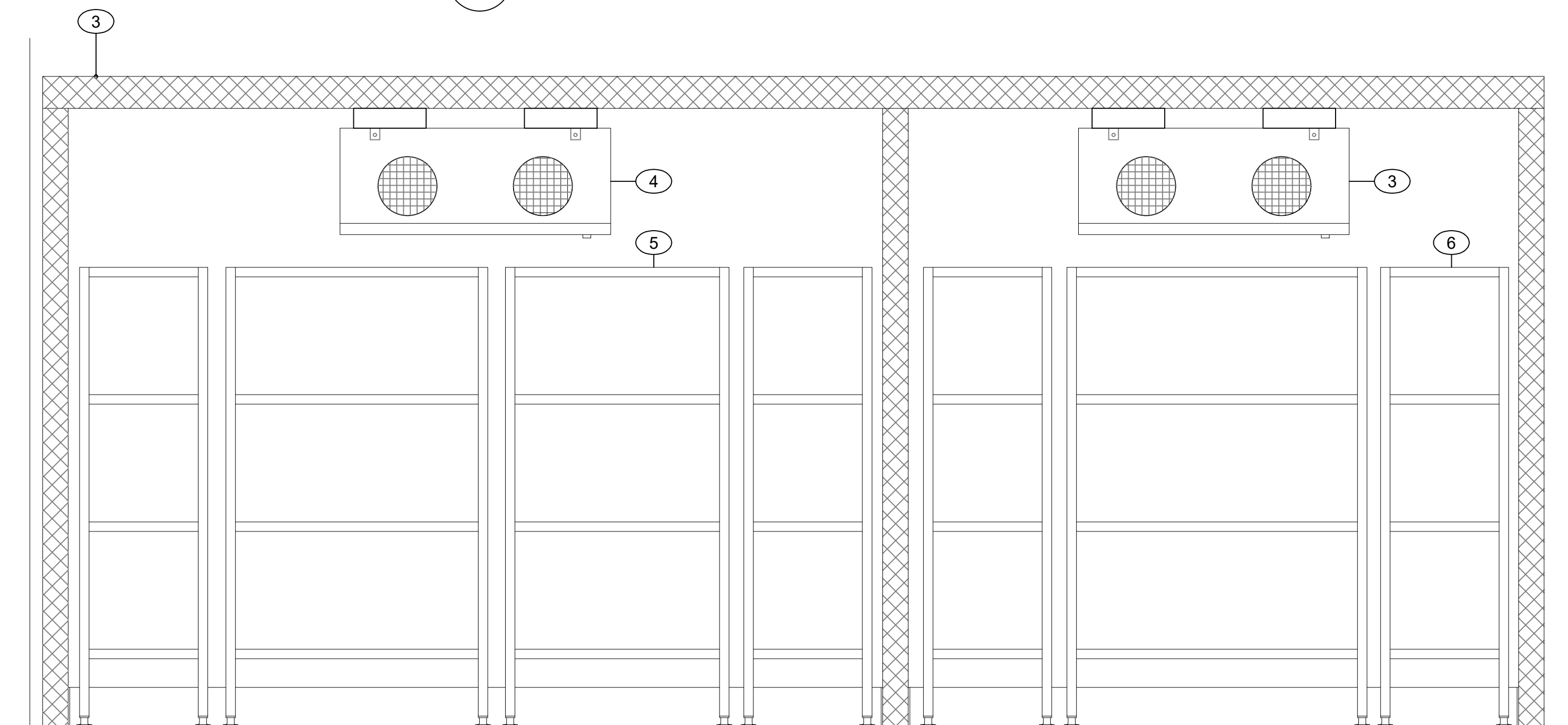
LEVEL 0 FOOD SERVICE WALK-IN DEPRESSION DETAILS
SCALE: NONE



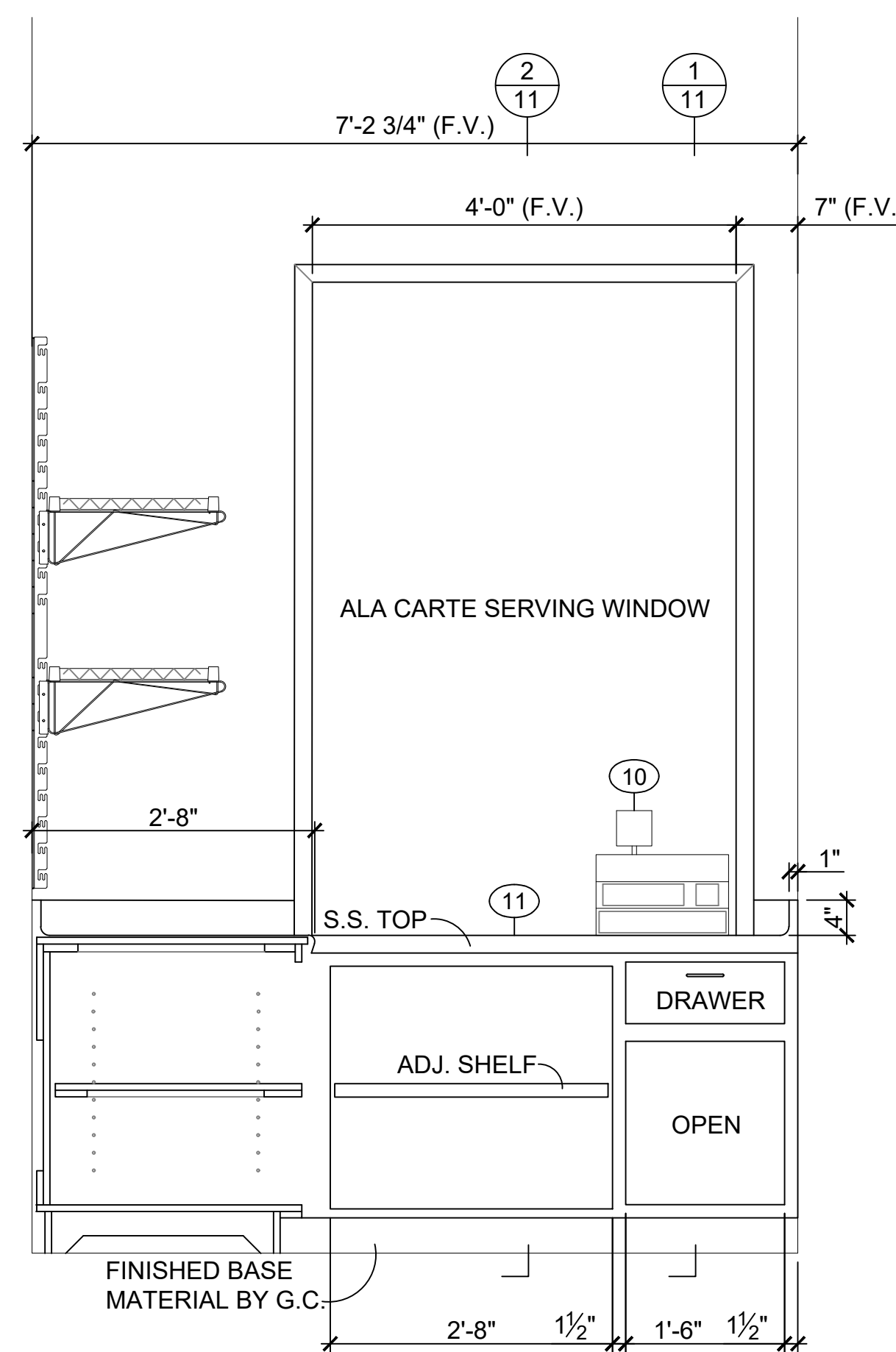
1 ELEVATION DRY STORAGE SHELVING
3/4"=1'-0"



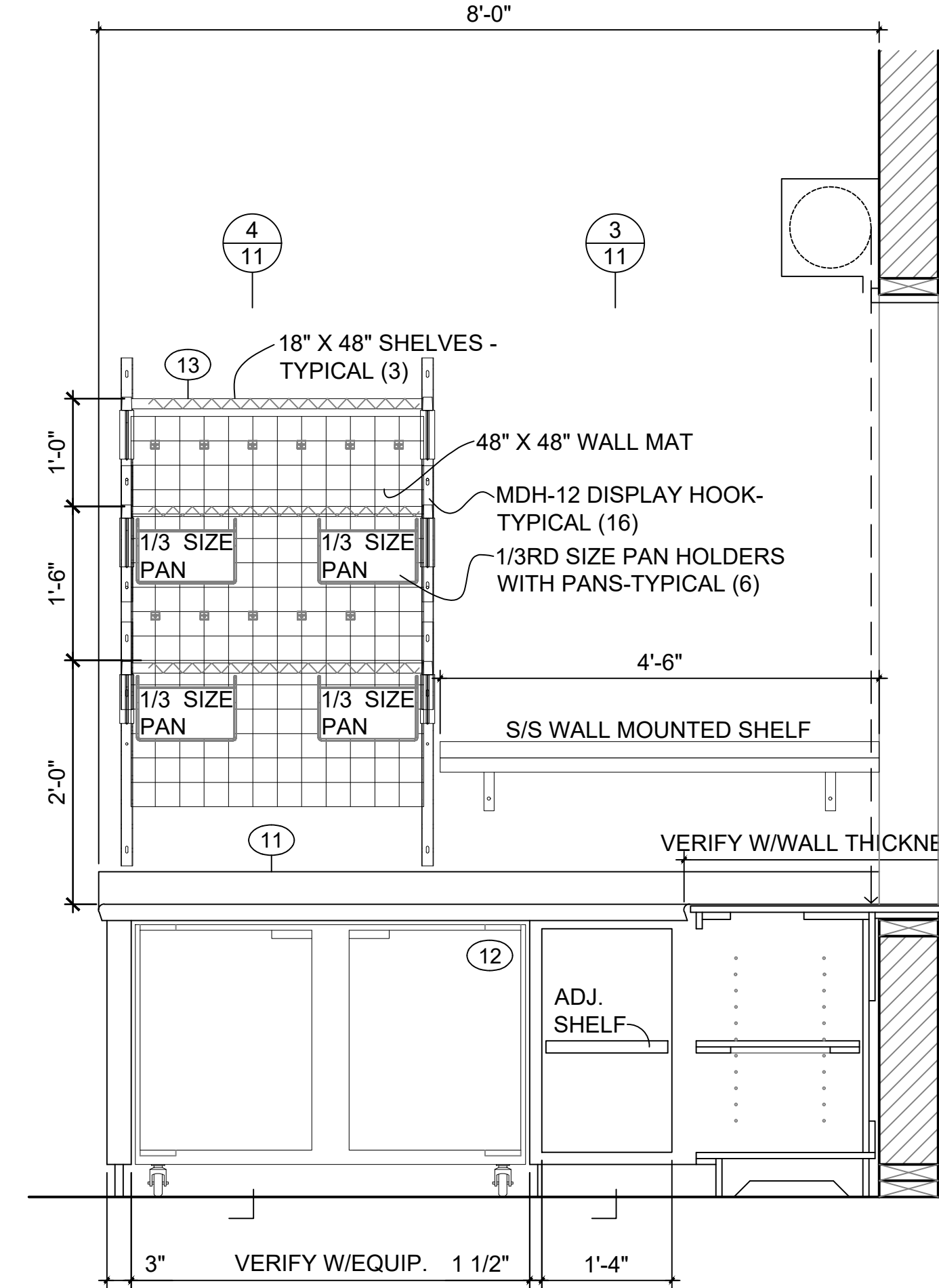
2 ELEVATION WALK-IN COOLER/FREEZER BANK - (EXTERIOR)
3/4"=1'-0"



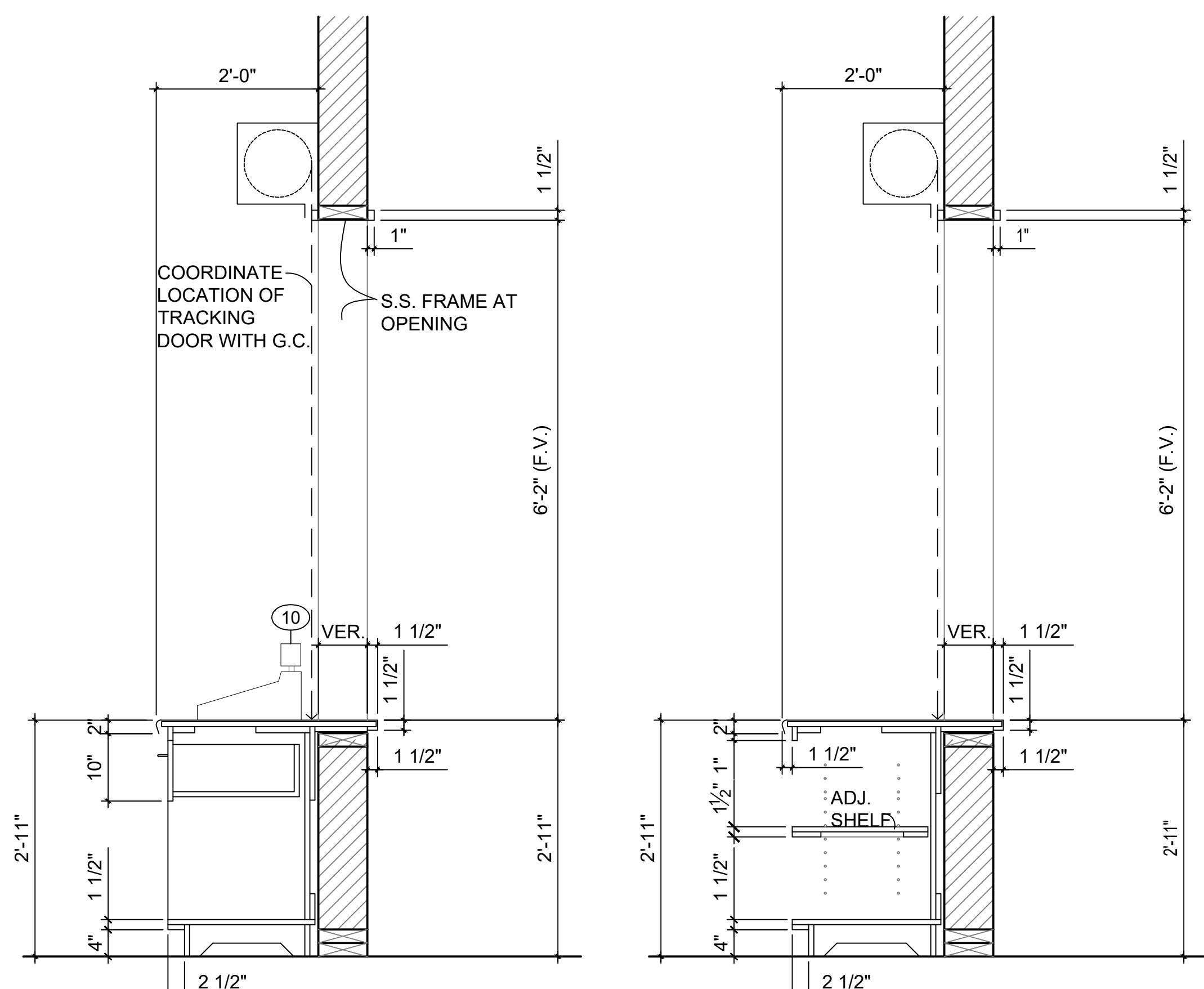
3 ELEVATION WALK-IN COOLER/FREEZER BANK - (INTERIOR)
3/4"=1'-0"



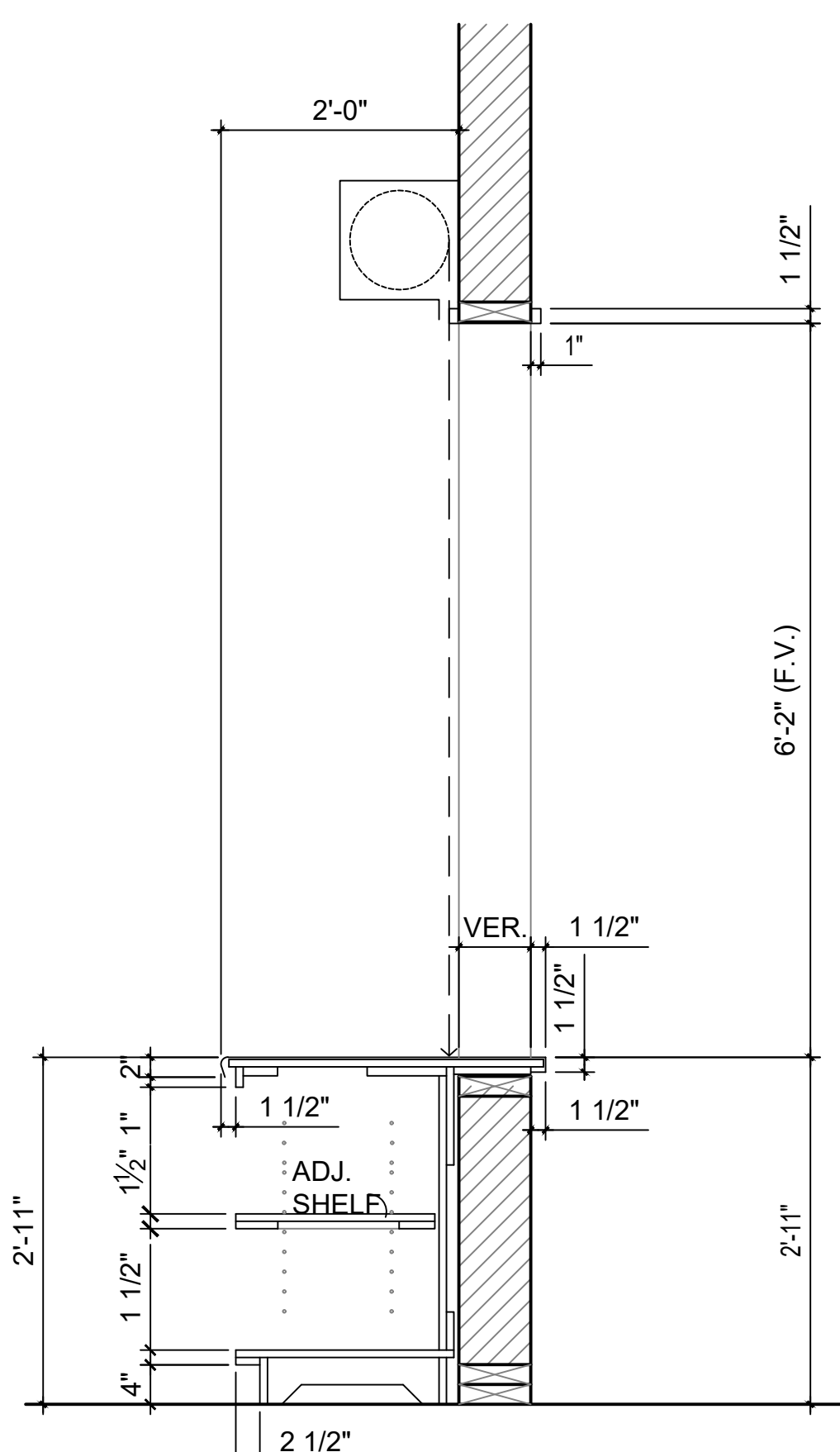
4 ELEVATION ALA CARTE SERVING COUNTER
3/4"=1'-0"



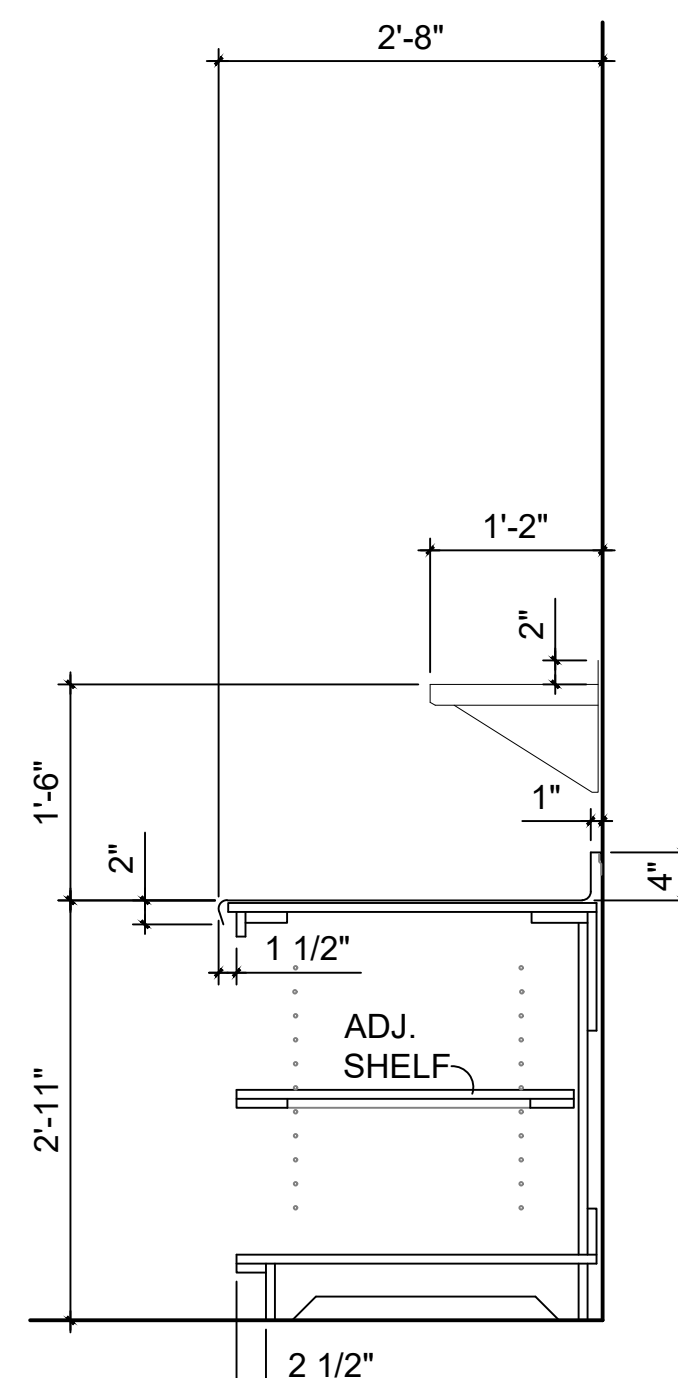
5 ELEVATION ALA CARTE SERVING COUNTER
3/4"=1'-0"



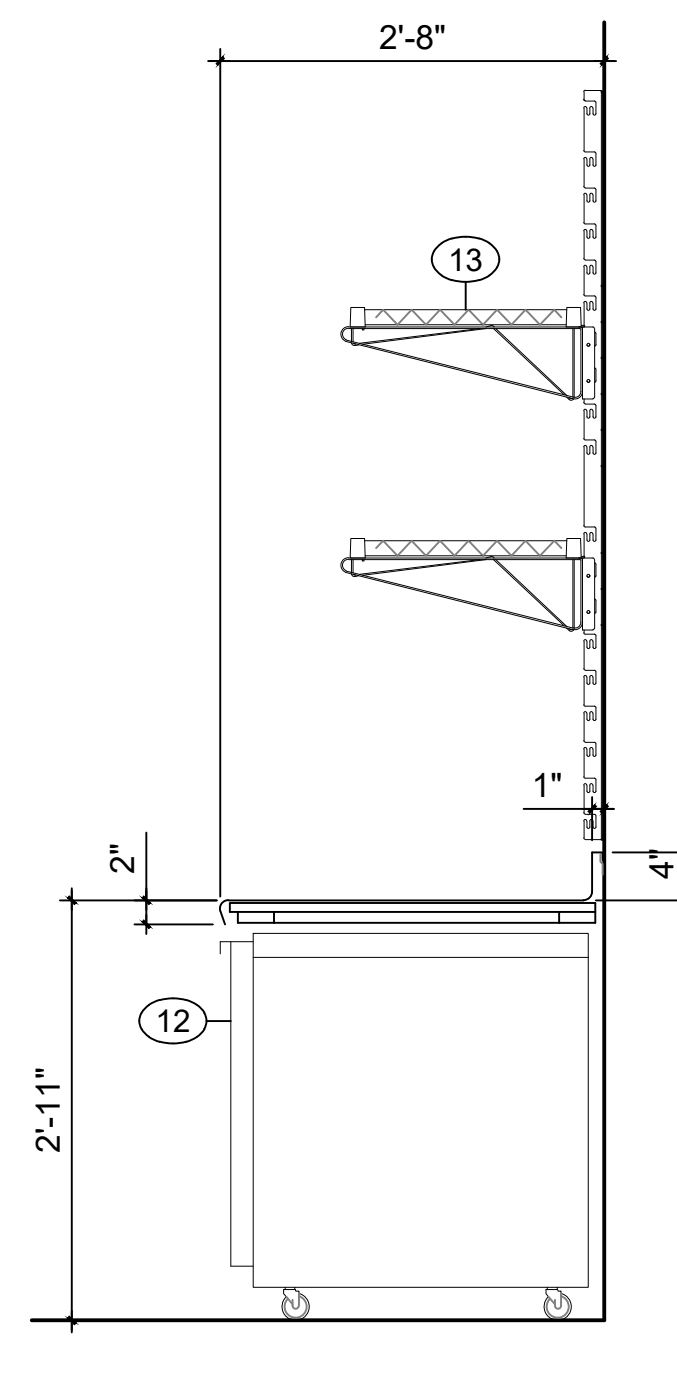
1 SECTION
3/4"=1'-0"



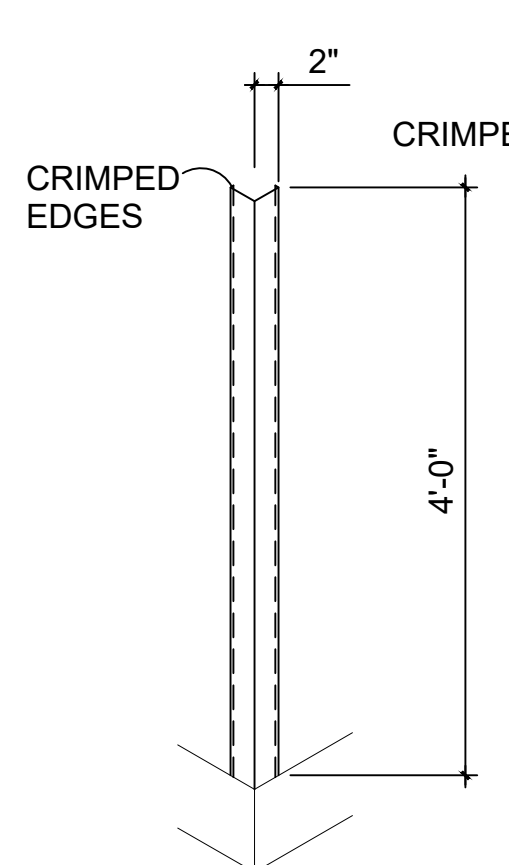
2 SECTION
3/4"=1'-0"



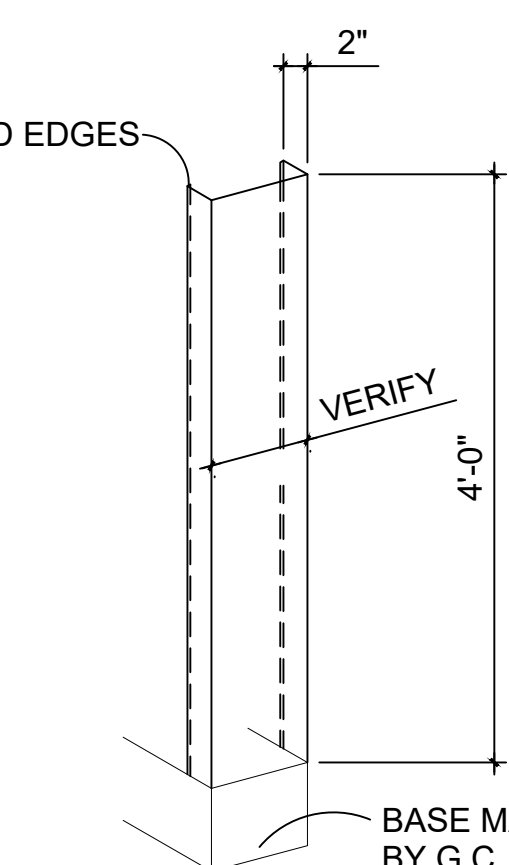
3 SECTION
3/4"=1'-0"



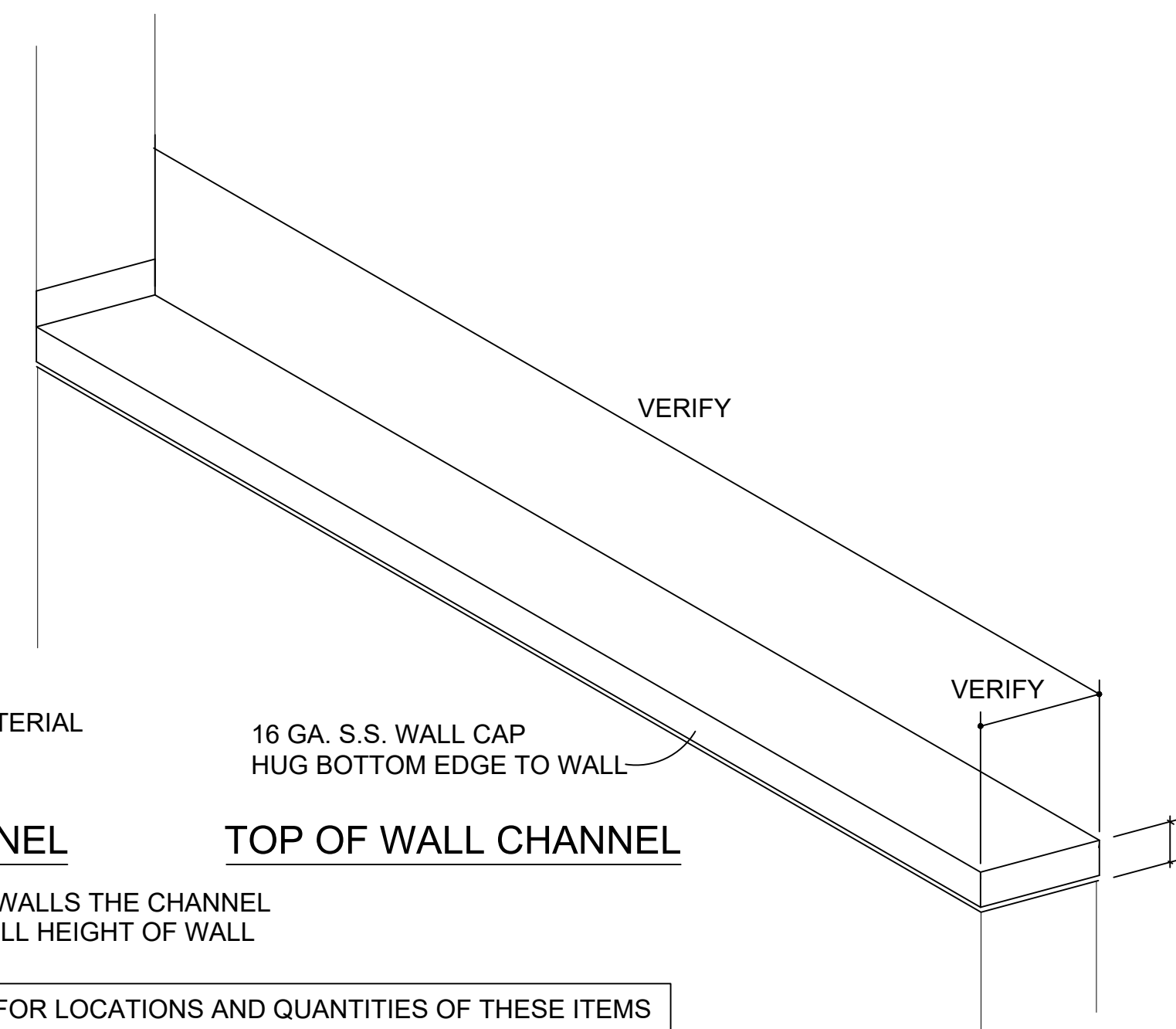
4 SECTION
3/4"=1'-0"



CORNER
90 DEGREES SHOWN.
135 DEGREES SIMILAR



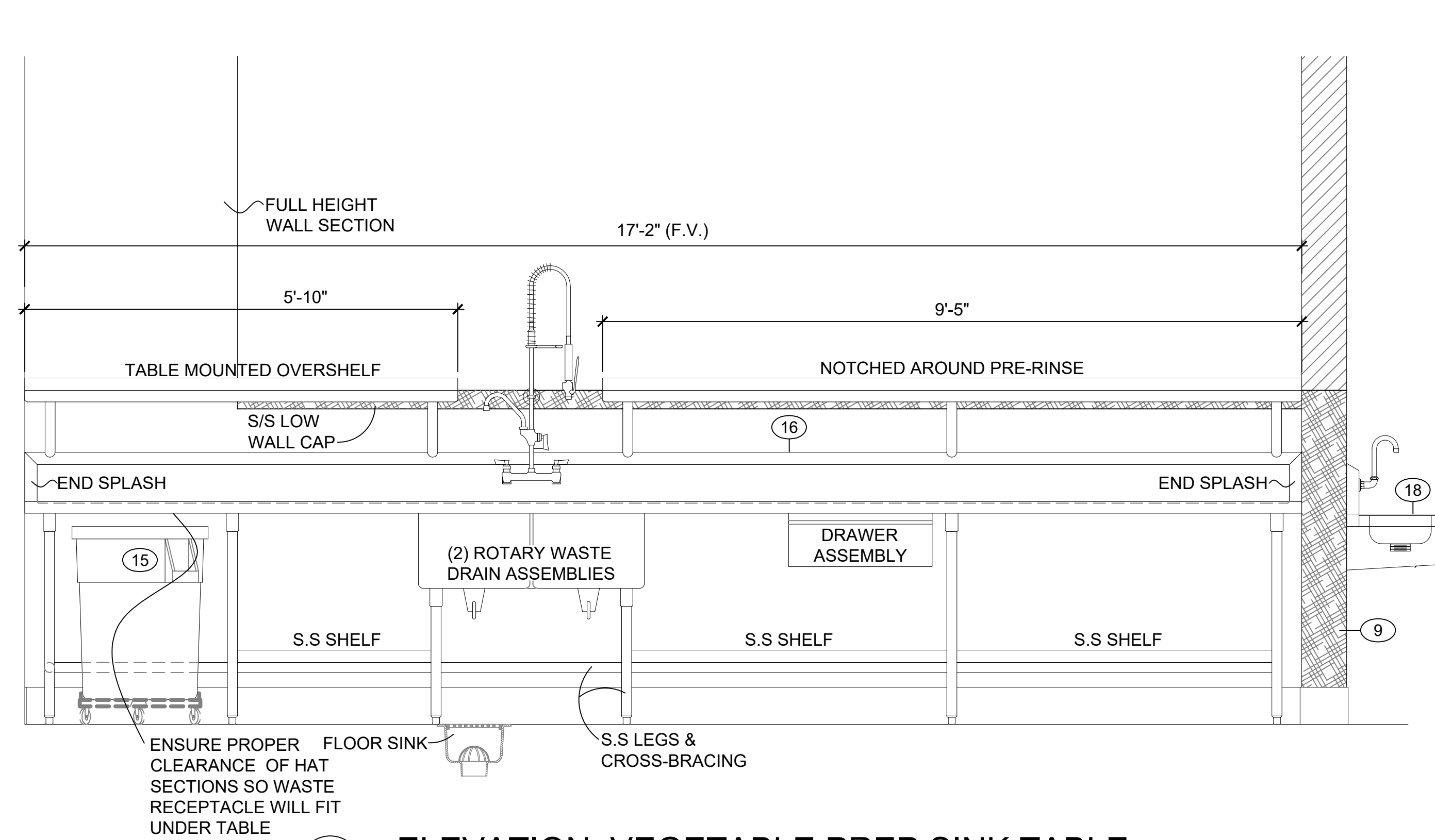
END OF WALL CHANNEL
NOTE: AT ISLAND COOKING WALLS THE CHANNEL
GUARD HEIGHT SHALL BE FULL HEIGHT OF WALL



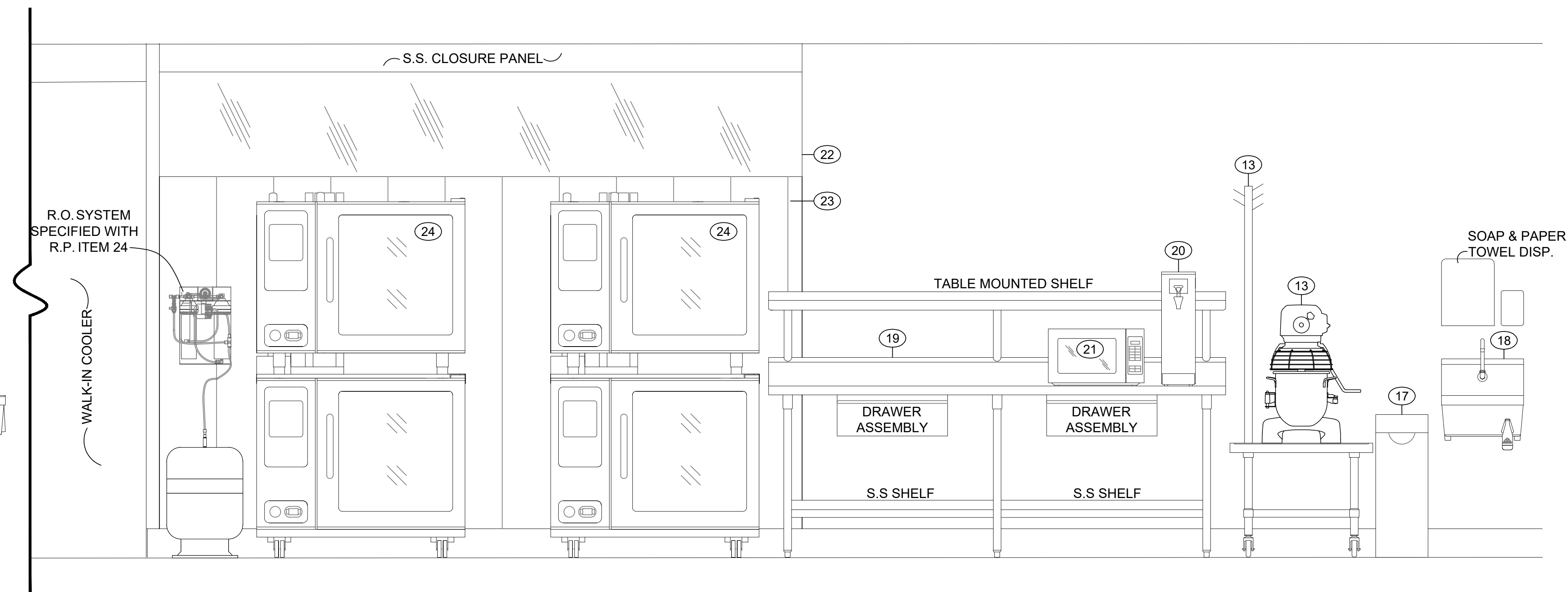
TOP OF WALL CHANNEL

A ISOMETRIC CHANNEL/WALL GUARDS & ISOMETRIC WALL CAP
3/4"=1'-0"

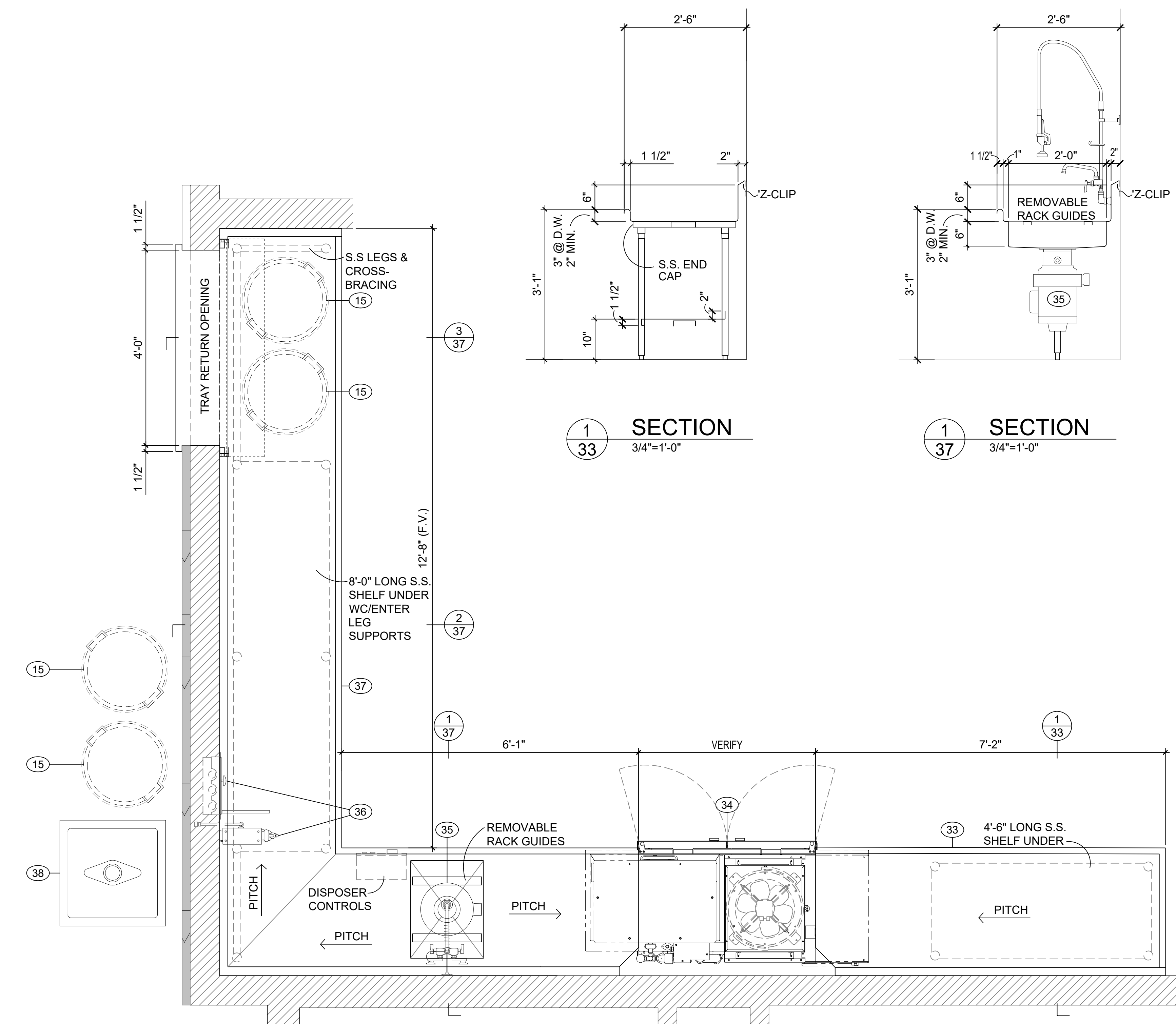
LEVEL 0 FOOD SERVICE ELEVATION AND FABRICATION DETAILS
SCALE: AS NOTED



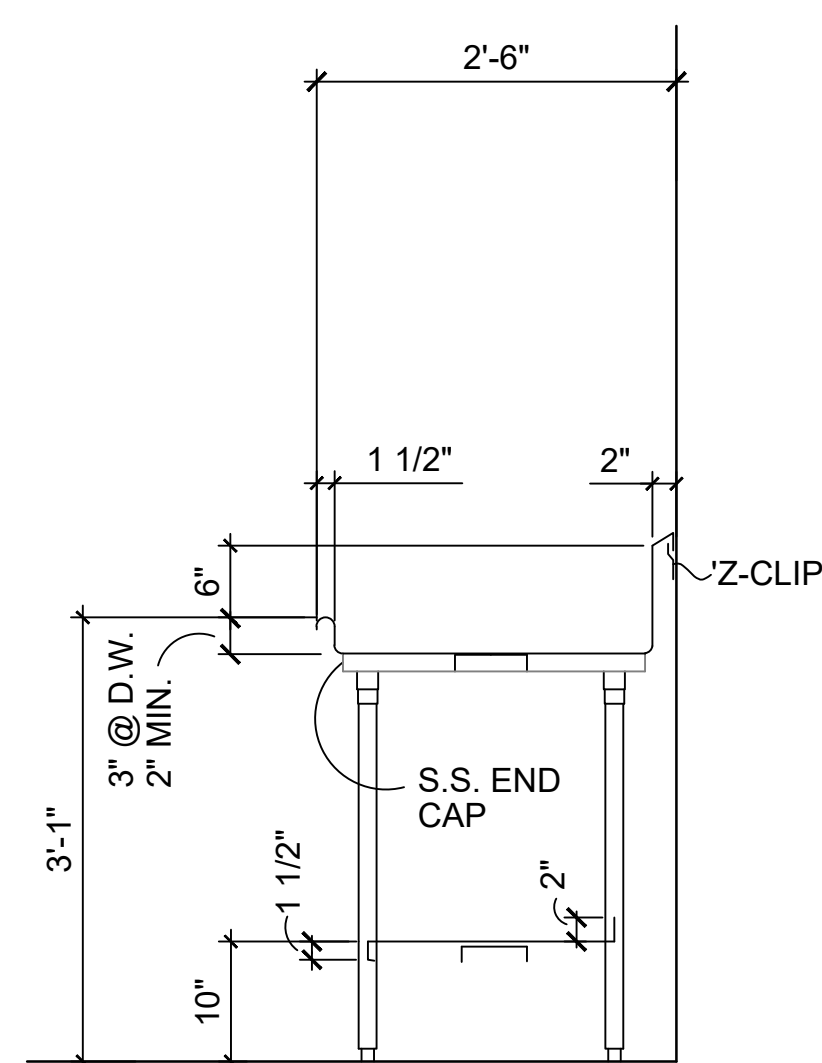
6 ELEVATION VEGETABLE PREP SINK TABLE
3/4"=1'-0"



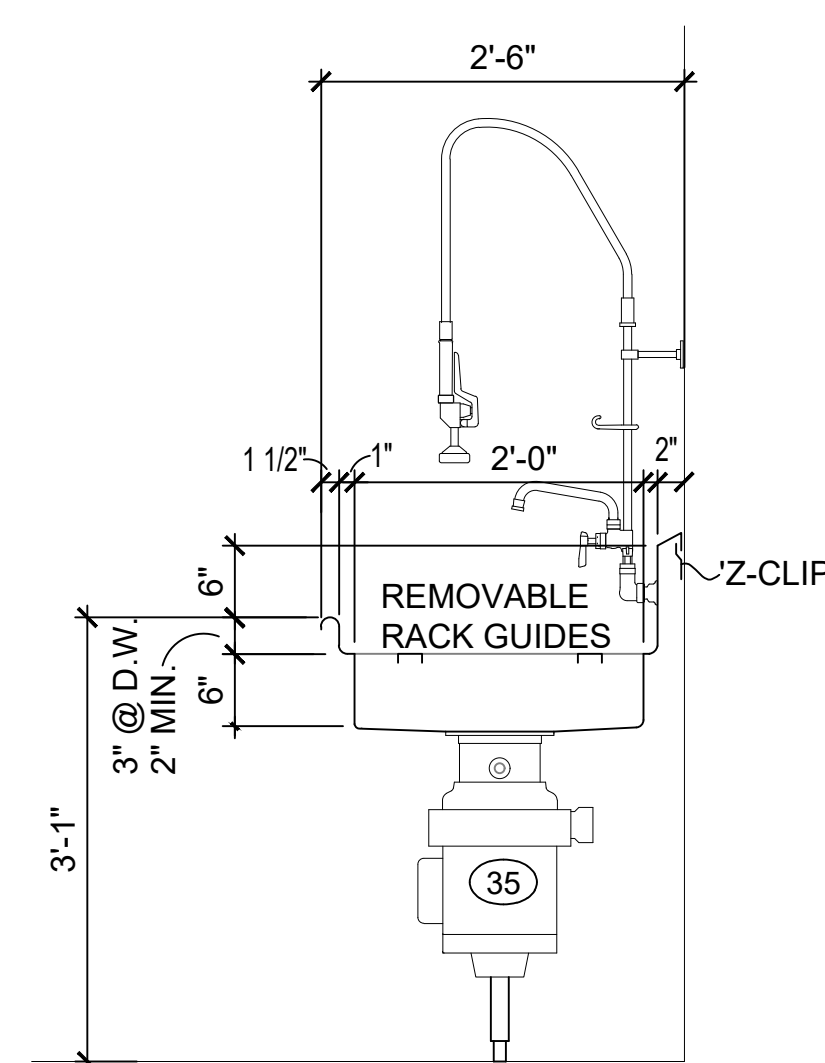
7 ELEVATION COOKING LINE
3/4"=1'-0"



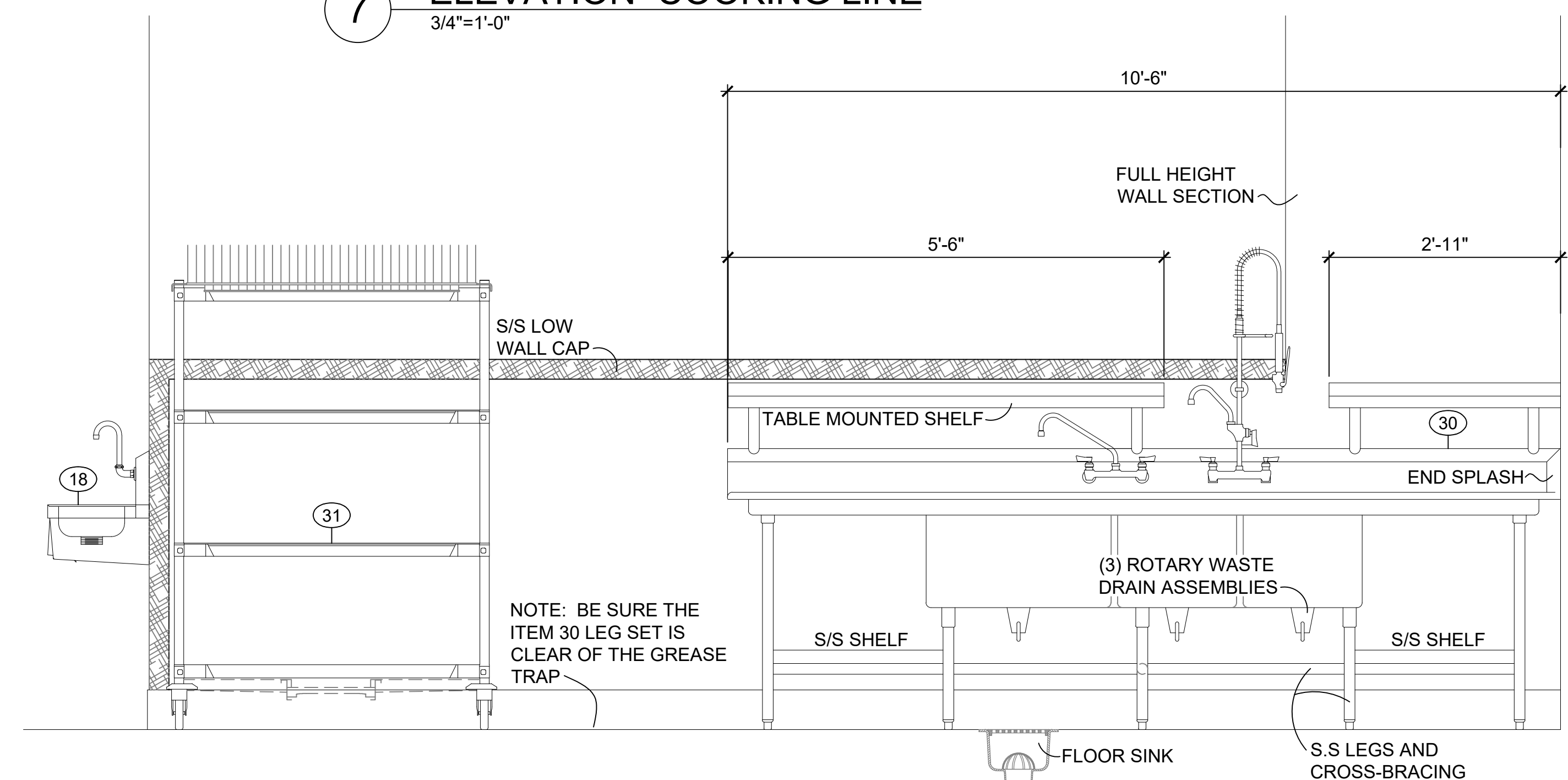
A PLAN VIEW WAREWASHING AREA
3/4"=1'-0"



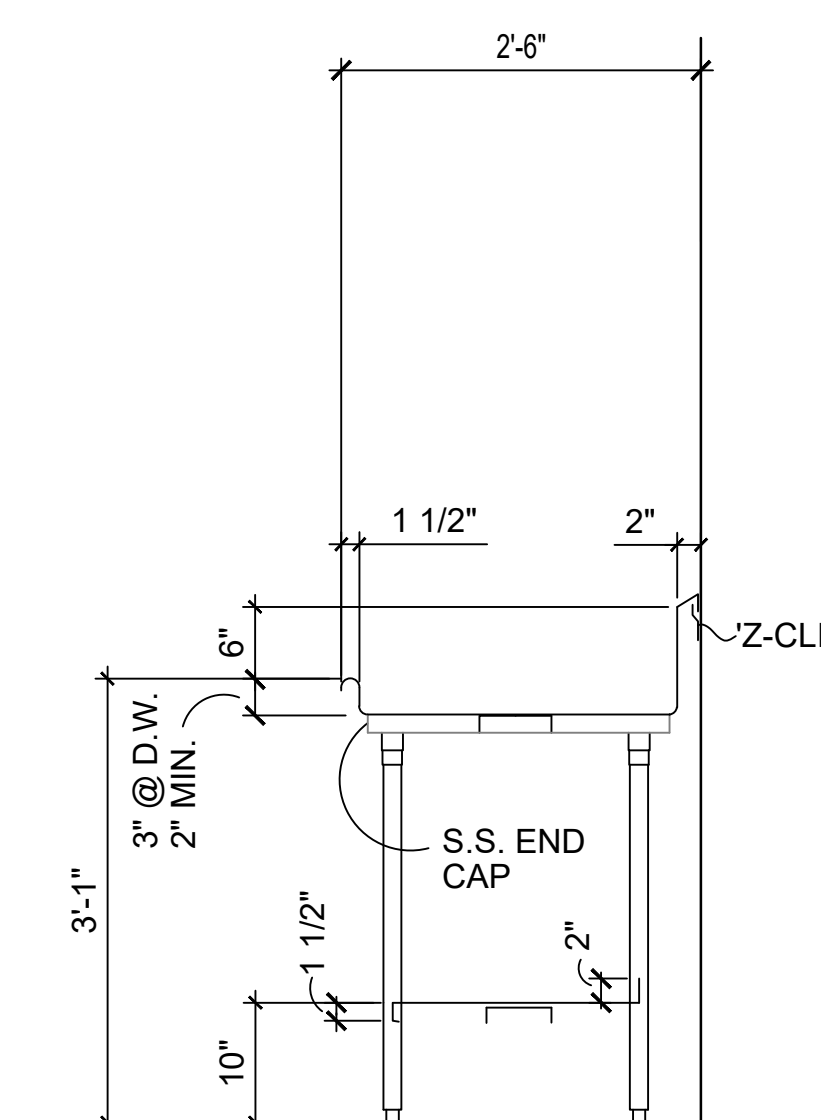
1 SECTION
3/4"=1'-0"



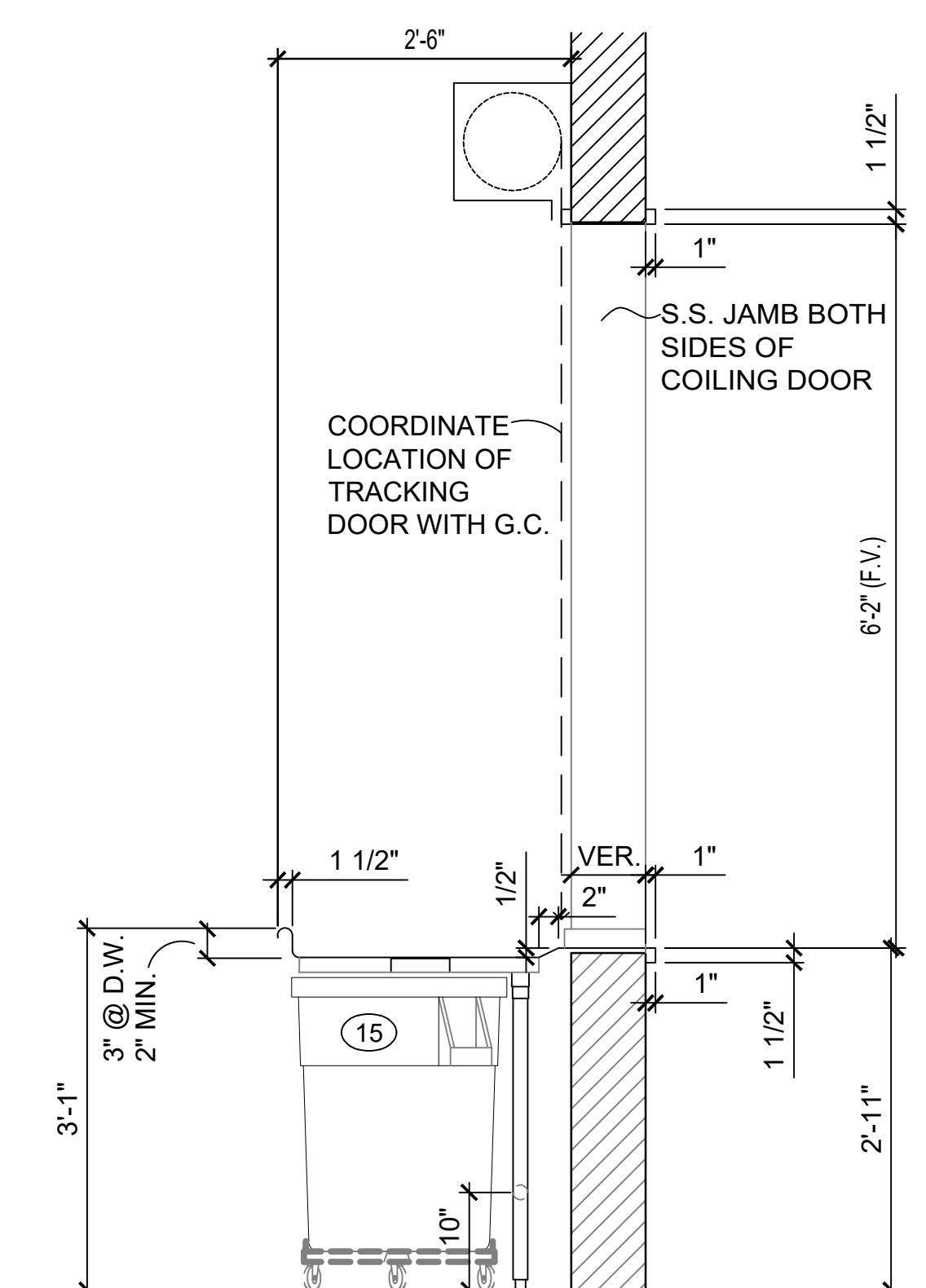
1 SECTION
3/4"=1'-0"



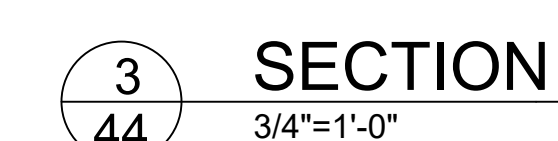
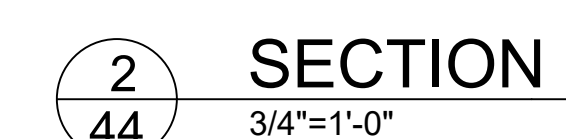
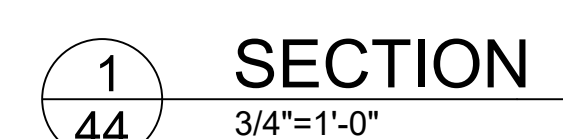
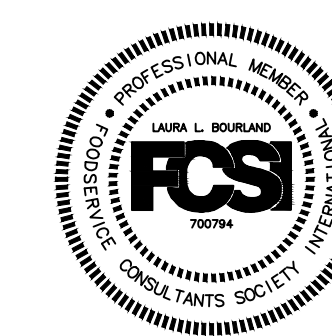
8 ELEVATION POT WASHING SINK TABLE
3/4"=1'-0"



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



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

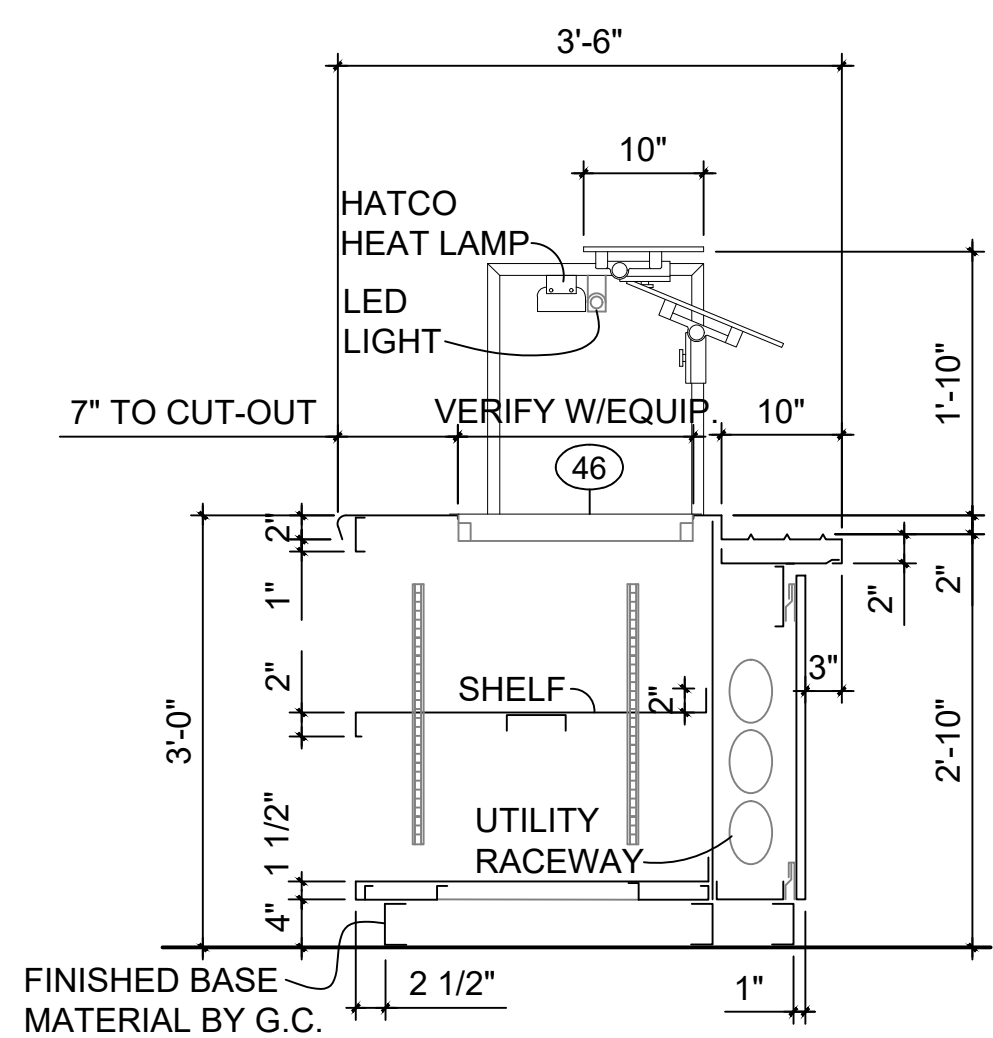
**BID SET**

**KELSO SCHOOL DISTRICT NO. 458
HUNTINGTON MIDDLE SCHOOL -
MODERNIZATION AND ADDITION**
500 REDPATH ST. KELSO, WA 98626

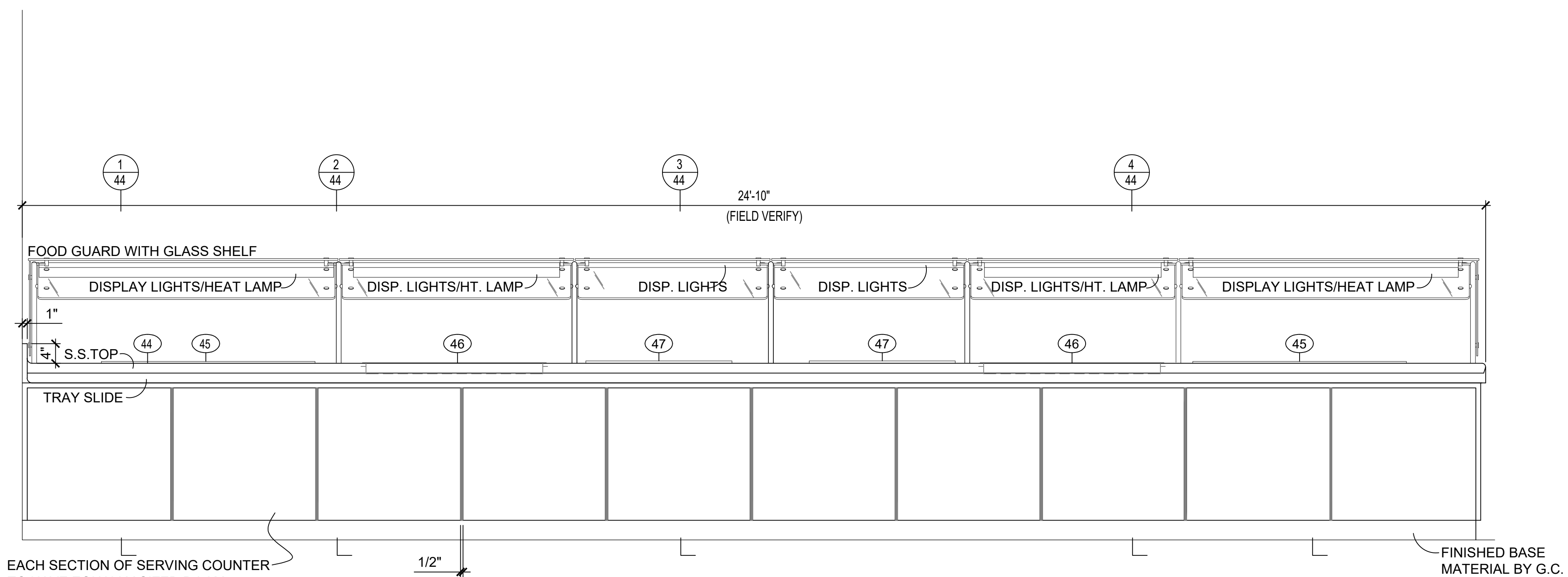
Date:	05/28/2021	
Job No.:	21938.00	
Drawn By:	SRH/LB	
Checked by:	LB	
Revisions		
#	Date	Description

LEVEL 0 FOOD SERVICE ELEVATION AND FABRICATION DETAILS

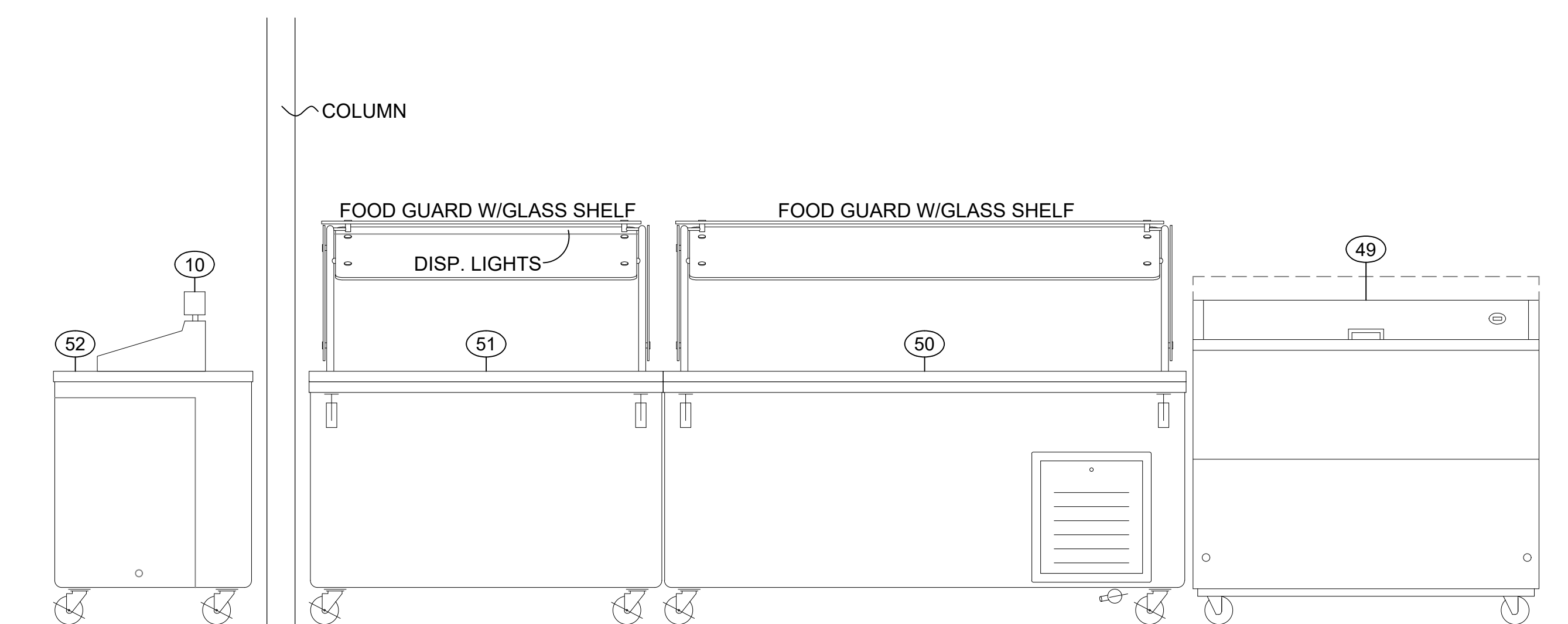
FS303



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

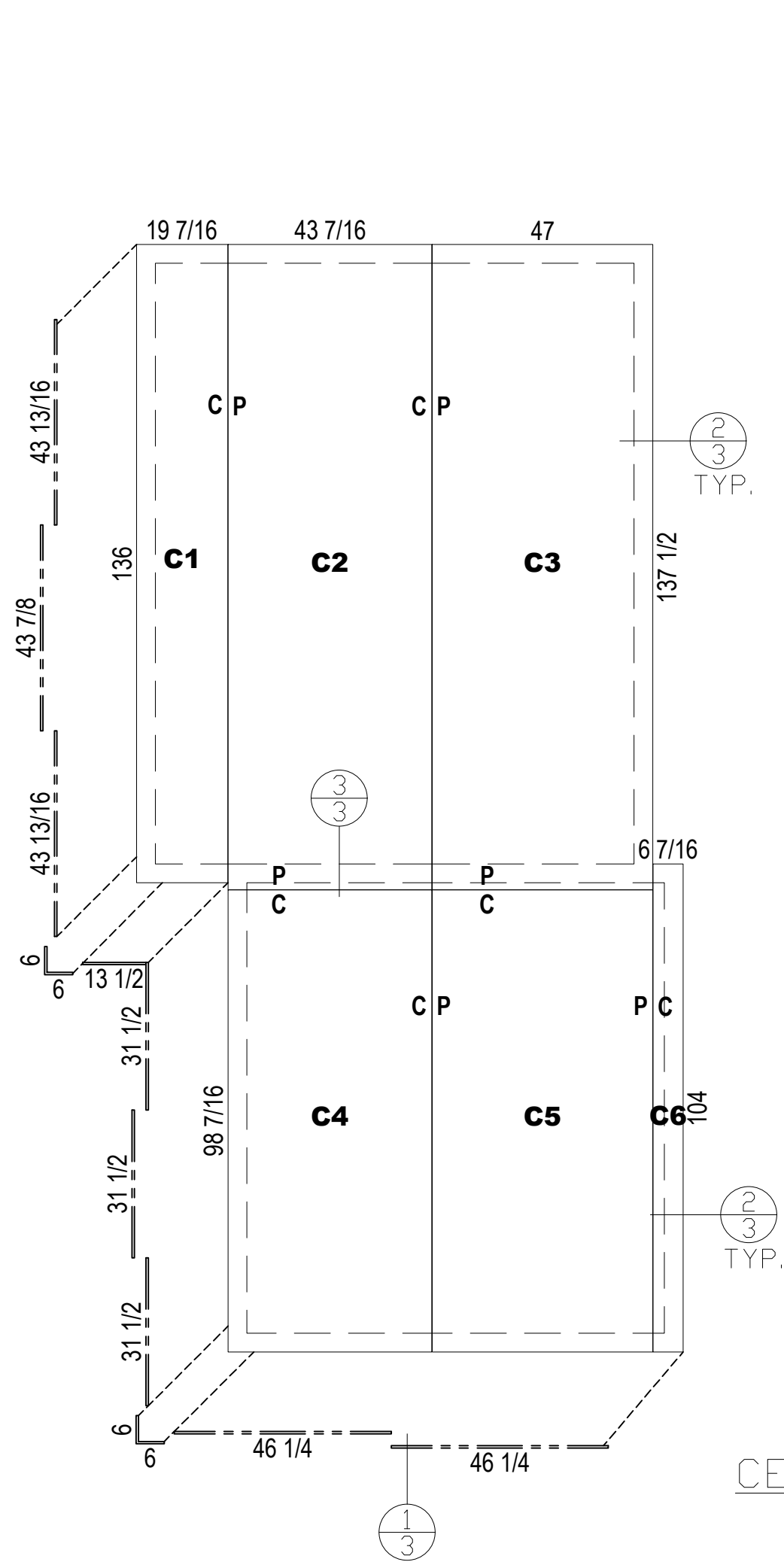


13 ELEVATION SERVING COUNTER (STUDENT SIDE)
3/4"=1'-0"

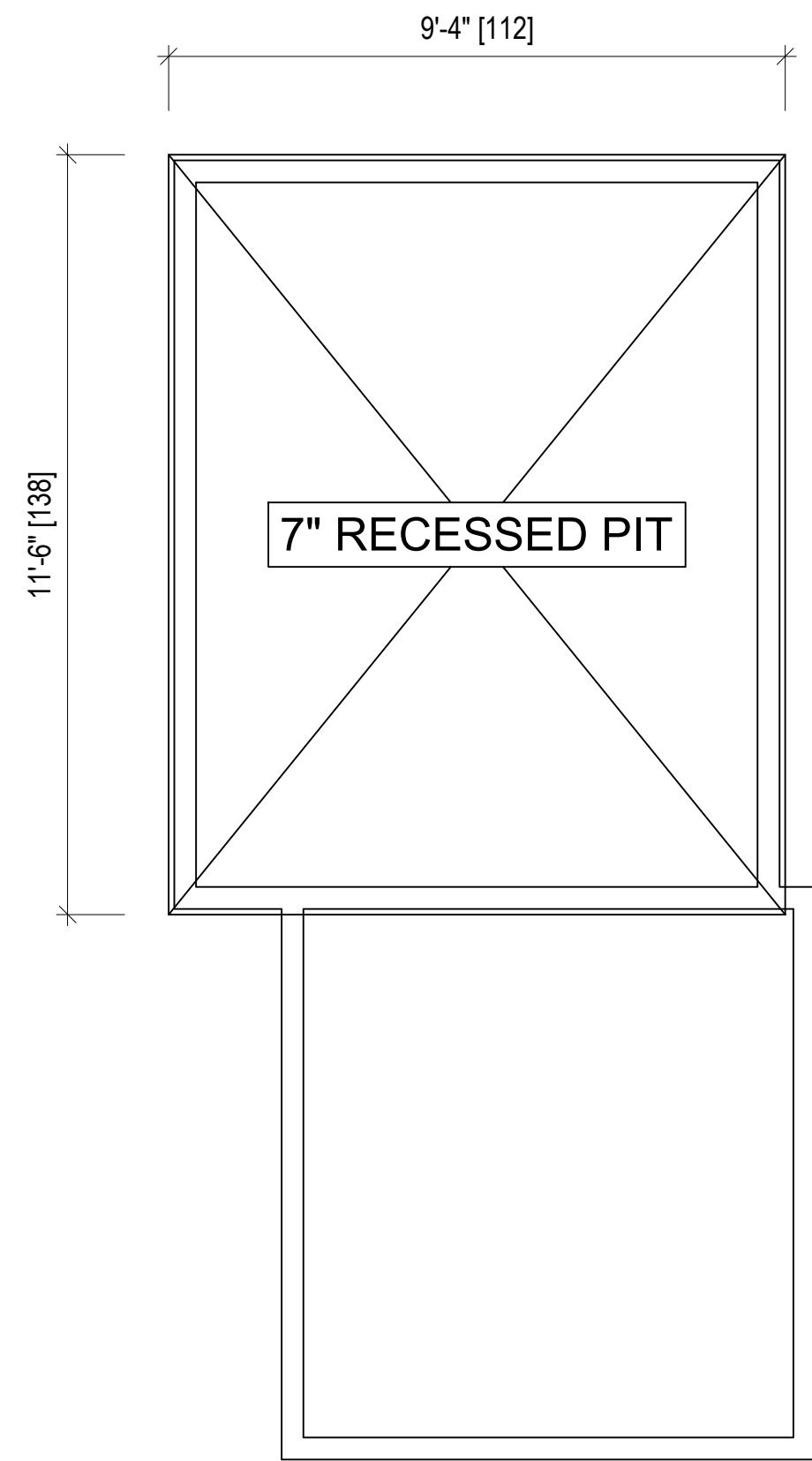


14 ELEVATION MILK, SALAD, CONDIMENTS, AND CASHIER STATION
3/4"=1'-0"

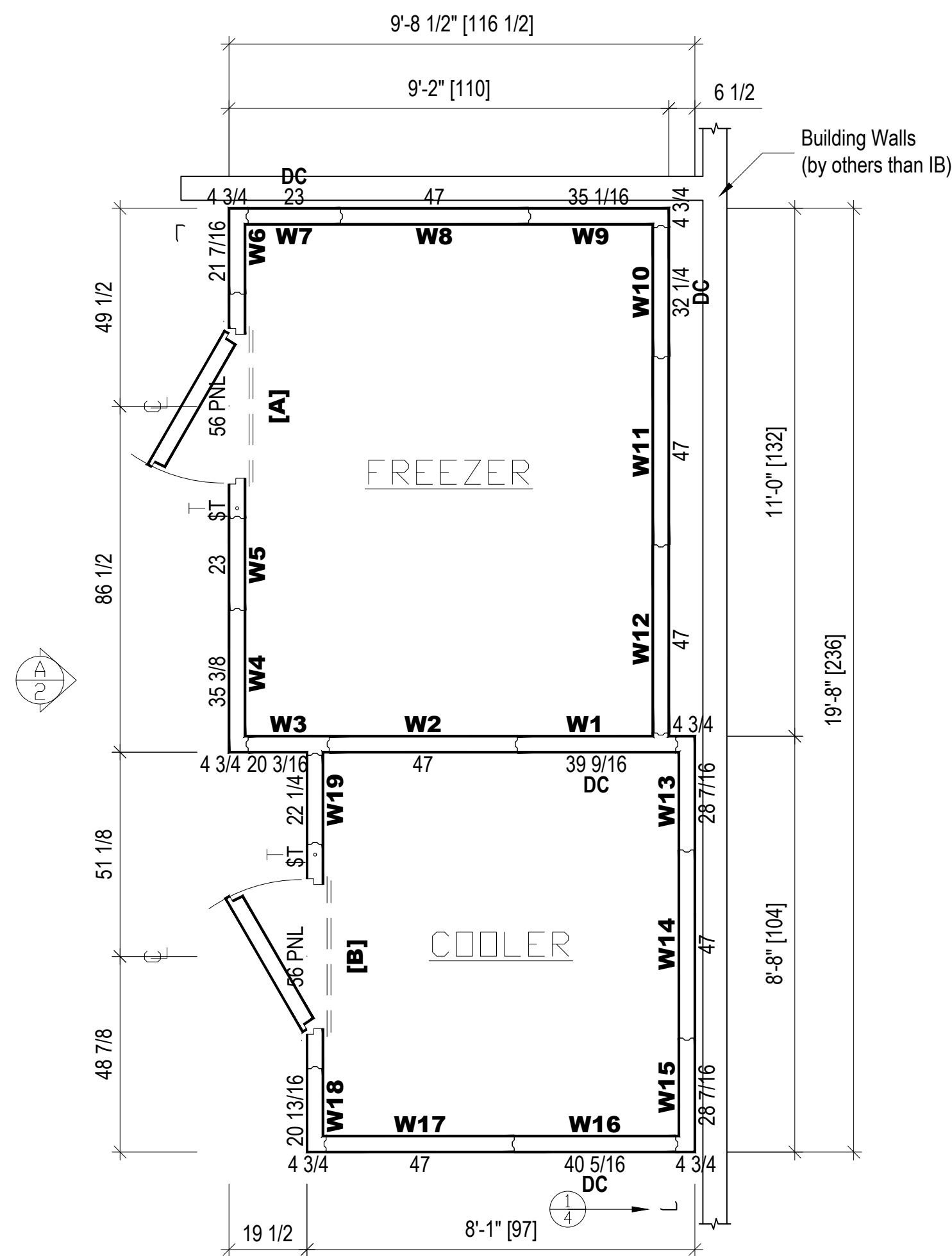
CONSTRUCTION LEGEND:
4" high density urethane



CEILING PANELS

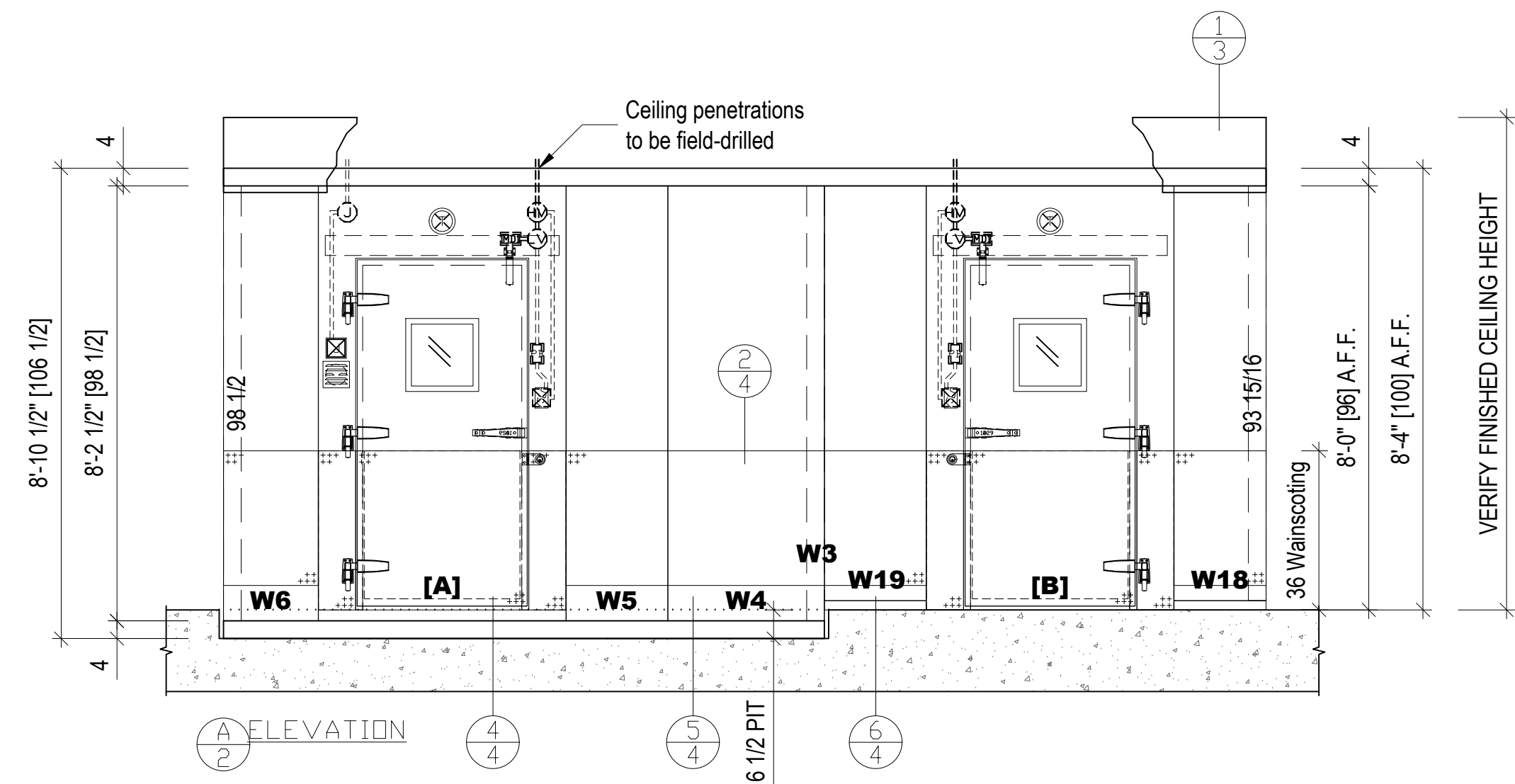


PIT PLAN

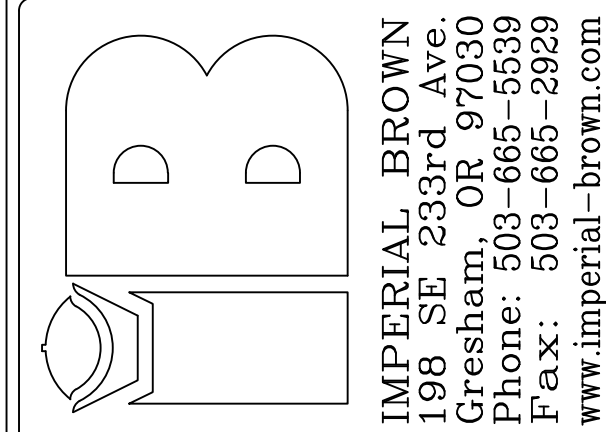


WALL PANELS

- .040 stucco aluminum
- 22 ga. stainless steel 304 #4
- Stucco galvalume



FLOOR PANELS
CAMLOCK SCREED



IMPERIAL BROWN
198 SE 233rd Ave.
Gresham, OR 97030
Phone: 503-665-5539
Fax: 503-665-2929
www.imperial-brown.com

DO NOT SCALE THIS DRAWING

SCALE: 3/16" = 1'-0"

DATE DRAWN: 5/18/2021

DATE PRINTED: 5/18/2021

BY: Kyle Lewis

CHK'D BY:

DRW#: 21-IB-59350-02

BOX: 2 OF 1

SHEET: 2 OF 4

21-IB-59350-02

21-IB-59350-00-02-01

NOT FOR CONSTRUCTION

PRELIMINARY

HALLIDAY ASSOCIATES, INC.

- CAMAS, WA

HUNTINGTON MIDDLE SCHOOL - KELSO SD

- KELSO, WA

NOTE: TO PREVENT CONDENSATION, ALLOW 2" MIN. CLEARANCE AROUND THE EXTERIOR OF INDOOR WALK-INS. MAINTAIN RELATIVE HUMIDITY BELOW 55% AND TEMPERATURE BELOW 75°F OR FORCED VENTILATION MAY BE REQUIRED IN ADDITION TO CLEARANCE.
NOTE: FLOORS OF INSTALLATION SITES SHALL BE TRUE AND LEVEL WITHIN 3/16" PER 10' OR ADDITIONAL COSTS MAY BE INCURRED.
NOTE: MANUFACTURER IS NOT RESPONSIBLE FOR ELECTRICAL, PLUMBING, PERMITS OR CONCRETE WORK UNLESS LISTED ON THE QUOTE.

KELSO SCHOOL DISTRICT NO. 458
HUNTINGTON MIDDLE SCHOOL -
MODERNIZATION AND ADDITION

500 REDPATH ST, KELSO, WA 98626

Date: 05/28/2021
Job No.: 21938.00
Drawn By: SRH/LB
Checked by: LB

Revisions		
#	Date	Description

LEVEL 0
FOOD SERVICE
WALK-IN DETAILS

FS306



integrus
ARCHITECTURE
10 SOUTH CEDAR, SPOKANE, WA 99204
TELEPHONE: (509) 332-5651 FAX: (509) 332-7154



HALLIDAY
ASSOCIATES, INC.
6555 NW
2501 42nd Ave.
Ft. Stevens, OR 97114
FOOD FACILITY CONSULTANTS
SPACE PLANNING • DESIGN



21-IB-59350-00-02-01

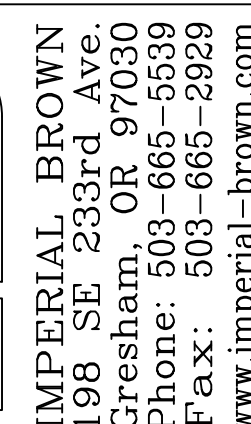
PRELIMINARY

- CAMAS, WA
HUNTINGTON MIDDLE SCHOOL - KELSO SD
- KELSO, WA

NOTE: TO PREVENT CONDENSATION, ALLOW 2" MIN. CLEARANCE AROUND THE EXTERIOR OF INDOOR WALK-INS. MAINTAIN RELATIVE HUMIDITY BELOW 55% AND TEMPERATURE BELOW 70°F. FORCED VENTILATION MAY BE REQUIRED IN ADDITION TO CLEARANCE.

NOTE: FLOORS OF INSTALLATION SITES SHALL BE TRUE AND LEVEL WITHIN 3/16" PER 10' OR ADDITIONAL COSTS MAY BE INCURRED.

NOTE: MANUFACTURER IS NOT RESPONSIBLE FOR ELECTRICAL, PLUMBING, PERMITS OR CONCRETE WORK UNLESS LISTED ON THE QUOTE.



DRW#: 21-IB-59350-02
BOX: 2 OF 1
SHEET: 4 OF 4



**KELSO SCHOOL DISTRICT NO. 458
HUNTINGTON MIDDLE SCHOOL -
MODERNIZATION AND ADDITION**
500 REDPATH ST, KELSO, WA 98626

#	Date	Description
---	------	-------------

FS308**BID SET**

MECHANICAL GENERAL NOTES

1. ALL WORK IS BASE BID UNLESS SPECIFICALLY NOTED AS ALTERNATE BID WORK.

2. MECHANICAL WORK IS NOT LIMITED TO MECHANICAL DRAWINGS AND DIVISION 20, 21, 22, 23, AND 25 SPECIFICATIONS. THERE IS ADDITIONAL MECHANICAL WORK TO BE INCLUDED IN THE BID INDICATED ON OTHER DRAWINGS AND IN OTHER SPECIFICATION DIVISIONS. CONTRACTOR SHALL REVIEW ALL DRAWINGS AND SPECIFICATIONS FOR ADDITIONAL MECHANICAL WORK.

3. ALL ITEMS ARE NEW UNLESS SPECIFICALLY NOTED AS EXISTING.

4. MECHANICAL EQUIPMENT 1/2 HP AND LESS SHALL HAVE ANY REQUIRED STARTER/STARTING RELAY PROVIDED BY DIVISION 25 (EXCEPT WHERE SPECIFICALLY SHOWN OR SPECIFIED OTHERWISE).

5. SEE ARCHITECTURAL AND STRUCTURAL DRAWINGS FOR BUILDING SEISMIC & EXPANSION JOINTS. PROVIDE FLEXIBLE CONNECTIONS IN ALL PIPING & DUCT SYSTEMS WHICH CROSS SUCH JOINTS. SIZED/CONFIGURED TO ACCOMMODATE SPECIFIED MOVEMENT (SEE SPECIFICATIONS) IN ANY DIRECTION W/O PERMANENT DAMAGE. SUBMIT DETAILS OF FLEXIBLE CONNECTIONS & LOCATIONS.

6. DRAWINGS SCALES APPLY TO FULL SIZE SHEET ONLY; FULL SIZE SHEETS ARE 42"x30". USE CAUTION IN OBTAINING DIMENSIONS AND QUANTITIES FROM DRAWINGS THAT ARE NOT THIS FULL SIZE; USE DIMENSIONS CALCULATED FROM DIMENSIONS ON THE ARCHITECTURAL AND STRUCTURAL DRAWINGS OVER OTHER METHODS OF OBTAINING DIMENSIONS.

7. SEISMICALLY ANCHOR ALL UNITS & EQUIPMENT TO BUILDING STRUCTURE. CONTRACTOR IS RESPONSIBLE TO SELECT AND PROVIDE ALL SEISMIC ANCHORING DEVICES FOR ALL MECHANICAL EQUIPMENT, ALL PIPING AND ALL DUCTWORK. CONTRACTOR SHALL SUBMIT DETAILS AND PLANS TO BUILDING INSPECTOR FOR REVIEW AND COMMENT PRIOR TO INSTALLATION.

8. FIXTURE LOCATIONS: VERIFY LOCATION OF PLUMBING FIXTURES WITH ARCHITECTURAL AND FOOD SERVICE DRAWINGS BEFORE BEGINNING WORK. ARCHITECTURAL DRAWINGS GOVERN. PLUMBING FIXTURE HEIGHTS SHALL BE AS SHOWN ON ARCHITECTURAL DRAWINGS.

9. TRAP PRIMERS: ALL FLOOR DRAINS, FUNNEL DRAINS, AND FLOOR RECEPTORS SHALL HAVE TRAP PRIMERS. SOME DRAINS HAVE THE TRAP PRIMER LINE AND ASSOCIATED TRAP PRIMER VALVE SHOWN ON THE PLANS SOME LOCATIONS DO NOT. LOCATIONS WHERE THIS TRAP PRIMER PIPING AND VALVE ARE NOT SHOWN STILL REQUIRE A TRAP PRIMER, BUT THE LOCATION MAY BE SELECTED BY THE CONTRACTOR. SEE DETAIL 4 SHEET M304.

10. CLEANOUTS: PROVIDE CLEANOUTS AS REQUIRED BY CODE; USE FLOOR CLEANOUTS WHERE POSSIBLE. SEE DETAILS ON SHEET M304.

11. PIPE ROUTING: ALL PIPING SHOWN IS SCHEMATIC, CONTRACTOR SHALL PROVIDE ALL OFFSETS/ELBOWS AS REQ'D TO ALLOW ROUTING AROUND STRUCTURE, ELECTRICAL, & OTHER INTERFERENCES. ALL PIPING SHALL BE RUN CONCEALED, UNO.

12. PIPE SIZES: UNSIZED PLUMBING PIPING SHALL MATCH THE SIZE OF THE LARGEST ADJACENT CONNECTING PIPE SIZE SHOWN, WHERE THE ADJACENT PIPE IS NOT SHOWN (OR NOT CLEAR), THE PIPE SIZE SHALL BE BASED ON THE GPM FLOWING IN THE PIPE (USE FIXTURE UNITS AND CORRESPONDING GPM PER THE UPC FOR DOMESTIC WATER SYSTEMS, USE WASTE FIXTURE UNITS & UPC TABLES FOR WASTE/VENT SYSTEM), AND A VELOCITY NO GREATER THAN 4 FEET PER SECOND. USE UPC CURVES FOR GPM/VELOCITY FOR APPROPRIATE PIPING MATERIAL INVOLVED.

13. ALL PLUMBING VENTS THRU ROOF SHALL BE MINIMUM 2' FROM ROOF CRICKET PEAK OR ROOF VALLEY. ADJUST PIPING AS NECESSARY.

14. CONDENSATE DRAINS: PROVIDE PRIMARY CONDENSATE DRAINS FOR UNITS GENERATING CONDENSATE IN ACCORDANCE WITH CODE REQUIREMENTS & AS SHOWN ON DRAWINGS. PROVIDE OVERFLOW DRAIN FROM AHU'S INTEGRAL OVERFLOW CONNECTION.

15. WHERE LOCATION IS NOT INDICATED FOR TRAP PRIMER VALVE CONTRACTOR SHALL SELECT LOCATION AND SUBMIT PROPOSED LOCATION. SERVE NO MORE THAN 4 DRAINS FROM ONE TRAP PRIMER VALVE. POWER TO ELECTRIC TRAP PRIMER VALVES IS BY DIVISION 25.
16. FOR TRANSFER DUCT DETAIL SEE DETAIL 4 SHEET M405. ALL TRANSFER DUCTS SHALL BE INTERNALLY LINED.

17. ALL DUCT PENETRATIONS CLASSROOM THRU WALLS AND FLOORS SHALL BE PROVIDED WITH CLOSURE COLLARS (BOTH SIDES OF PENETRATION) AND BE TIGHTLY SEALED TO PREVENT THE TRANSMISSION OF NOISE.

18. CONTRACTOR SHALL CAREFULLY COORDINATE WORK W/ ALL OTHER TRADES, ESPECIALLY IN CEILING SPACES WHERE SPACE IS TIGHT. SHEET METAL CONTRACTOR SHALL HAVE PRIORITY OVER OTHER MECHANICAL TRADES IN CEILING SPACE WHERE CONFLICTS OCCUR.

19. ALL DUCTWORK SHOWN IS SCHEMATIC, CONTRACTOR SHALL PROVIDE ALL OFFSETS/ELBOWS AS REQ'D TO ALLOW ROUTING AROUND STRUCTURE, ELECTRICAL, & OTHER INTERFERENCES.

20. FLEXIBLE DUCT LENGTH SHALL NOT EXCEED 8 FEET, AND MAY ONLY BE USED WHERE SPECIFICALLY SHOWN ON THE PLANS.

21. SUPPORT EXHAUST FANS FROM ROOF/CEILING VIA SPRING ISOLATORS. SEE DETAIL 18 SHEET M406.

22. PROVIDE MANUAL VOLUME DAMPERS IN ALL BRANCH DUCTS AND SPLITS IN MAIN DUCTS AND WHERE REQUIRED BY BALANCERS; ONLY SOME OF THE REQUIRED DAMPERS ARE SHOWN ON THE PLANS.

23. UNSIZED DUCTS SHALL MATCH THE SIZE OF THE LARGEST ADJACENT DUCT THAT IS SIZED. WHERE THE ADJACENT DUCT SIZE IS NOT SHOWN, PROVIDE THE FOLLOWING SIZED DUCTS (OR EQUIVALENT RECTANGULAR).
- | CFM | DUCTS TO AIR INLETS/OUTLETS | OTHER DUCT |
|-------------|-------------------------------|------------|
| 0 - 100 | 6" Ø | 6" Ø |
| 101 - 150 | 8" Ø | 8" Ø |
| 151 - 250 | 10" Ø | 8" Ø |
| 251 - 400 | 12" Ø | 10" Ø |
| 401 - 500 | 14" Ø | 12" Ø |
| 501 - 700 | 16" Ø | 12" Ø |
| 701 - 900 | 18" Ø | 14" Ø |
| 901 - 1200 | 20" Ø | 16" Ø |
| 1201 - 1500 | --- | 18" Ø |
| 1501 - 2000 | --- | 20" Ø |
| 2001 - 2400 | --- | 22" Ø |
| >2401 | SIZE BASED ON 0.08"/100' P.D. | |
24. VERIFY LOCATIONS OF ITEMS INSTALLED IN CEILINGS WITH ARCHITECTURAL REFLECTED CEILING PLANS PRIOR TO BEGINNING WORK. NOTIFY ARCHITECT/ENGINEER OF DISCREPANCIES.

25. IT SHALL BE THE CONTRACTOR'S RESPONSIBILITY TO COORDINATE & SELECT FINAL LOCATIONS OF ALL AIR INLETS/OUTLETS. SHIFT AIR INLETS/ OUTLETS FROM LOCATIONS SHOWN AS REQ'D TO AVOID CONFLICTS W/ STRUCTURE, LIGHTS, & OTHER ITEMS. SUCH SHIFTS SHALL MAINTAIN SYMMETRY OF AIR TERMINALS & SHALL HAVE PRIOR APPROVAL OF ARCHITECT/ENGINEER.

26. HEIGHTS GIVEN TO WALL INLETS & OUTLETS & WALL LOUVERS (& SIMILAR ITEMS) ARE TO BOTTOM OF OPENING. PRIOR TO ORDERING MATERIALS, CONTRACTOR SHALL VERIFY THE SUITABILITY OF ALL HEIGHTS BY PERFORMING FIELD REVIEWS.

27. LOCATE MOTORIZED DAMPERS TO BE ACCESSIBLE.

28. VERIFY ALL LOUVER LOCATIONS & SIZES WITH ARCHITECTURAL DRAWINGS. ARCHITECTURAL DRAWINGS GOVERN.

MECHANICAL GENERAL DEMOLITION NOTES

1. DEMOLITION DRAWINGS ARE INTENDED TO ONLY GIVE A GENERAL REPRESENTATION OF THE DEMOLITION INVOLVED, AND DO NOT CONSTITUTE A FULL LISTING OF ALL ITEMS REQUIRING REMOVAL. NOT ALL ITEMS TO BE DEMO'D ARE SHOWN. CONTRACTOR IS RESPONSIBLE TO REVIEW EXISTING CONDITIONS, EXISTING DRAWINGS, AND MECHANICAL GENERAL DEMOLITION NOTES.

2. A PRE-BID WALK-THRU IS A MANDATORY REQUIREMENT. IT IS THE CONTRACTOR'S RESPONSIBILITY TO REVIEW SITE CONDITIONS AND TO IDENTIFY ALL DEMOLITION WORK, AND INCLUDE IN HIS BID ALL COSTS FOR DEMOLITION & DISPOSAL. NOT ALL PLUMBING FIXTURES & HVAC ITEMS TO BE DEMO'D ARE SHOWN; SEE GENERAL NOTES FOR REQUIREMENTS.

3. EXIST. DUCTS, EQUIPMENT, PIPING, AIR INLETS/OUTLETS, PLUMBING FIXTURES SHOWN DASHED REPRESENT MAJOR MECHANICAL ITEMS TO BE REMOVED. SEE GENERAL NOTES, DRAWING NOTES & KEYED NOTES WHICH COVER ALL OTHER MISC. MECHANICAL ITEMS TO BE REMOVED.

4. ALL EXIST. ITEMS NOT BEING REUSED SHALL BE REMOVED. THIS INCLUDES SUCH ITEMS AS THERMOSTATS, CONTROL DEVICES, CONTROL WIRING, PNEUMATIC TUBING, DUCTS, FANS, PIPING, GRILLES, SUPPORTS, VALVES, CURBS, AND RELATED ACCESSORIES.

5. ABANDONED ITEMS, ANCHORS, INSERTS, PIPE STUBS, AND OTHER PROTECTIONS NOT BEING CONCEALED BY NEW CONSTRUCTION SHALL BE REMOVED TO 1" BELOW THE ADJACENT FINISHED SURFACE, AND THE DISTURBED AREA PATCHED.

6. PATCH ALL WALL/FLOOR/CEILING OPENINGS LEFT BY REMOVAL OF EXIST. ITEMS. PATCH SO AS TO MATCH FINISH OF ADJACENT UNDISTURBED AREA.

7. REFERENCE ARCHITECTURAL DRAWINGS FOR WHERE CEILING/WALL AND OTHER GENERAL DEMOLITION WORK IS BEING DONE.

8. WHERE EXIST. PLUMBING FIXTURES ARE REMOVED, CAP OFF CW, HW, VENT & WASTE PIPING AT A CONCEALED LOCATION (I.E. ABOVE CEILING OR INSIDE WALL).

9. WHEREVER FLOOR DRAINS ARE REMOVED, LOCATE AND REMOVE TRAP PRIMER THAT SERVED DRAIN(S) AND CAP OFF CW PIPING.

10. HOLD ALL REMOVED ITEMS FOR OWNERS REVIEW. ITEMS SELECTED BY OWNER FOR SALVAGE SHALL BE MOVED BY THE CONTRACTOR TO THE OWNERS STORAGE ROOM (VERIFY EXACT LOCATION WITH OWNER). ITEMS NOT SELECTED BY OWNER FOR SALVAGE SHALL BE DISPOSED OF OFF SITE BY CONTRACTOR.

11. ALL EXISTING ITEMS ASSOCIATED WITH DEMO'D ITEMS SHALL BE REMOVED. THIS INCLUDES SUCH ITEMS AS HANGERS, THERMOSTATS, DAMPERS, CURBS, SUPPORTS, CONTROL WIRING/CONDUIT, UNIONS, VALVES, PIPING, DUCTS, AND SIMILAR ACCESSORIES.

12. ROUTING SHOWN OF EXISTING ITEMS IS APPROXIMATE, CONTRACTOR SHALL FIELD VERIFY LOCATIONS, CONTENTS, AND FLOW DIRECTION OF ALL PIPING & DUCTS. LABELING SHOWN ON PLANS HAS NOT BEEN VERIFIED.

13. PROVIDE CAP-OFF OF ALL EXISTING UTILITIES THAT ARE CUT OR SERVED DEMO'D ITEMS. SYSTEMS TO BE CAPPED OFF INCLUDE HW, CW, WASTE, VENT, HWS, HWR, RL, HWC, SA DUCTS, RA DUCTS, AND EXHAUST DUCTS. ALL CAP-OFFS SHALL OCCUR IN A CONCEALED LOCATION.

14. SEE PLUMBING AND HVAC FLOOR PLANS FOR RECONNECTION OF NEW PIPING AND DUCTWORK.

MECHANICAL LEGEND

SYMBOL	DESCRIPTION	ABBREV.	DESCRIPTION
---	WASTE OR SOIL (W)	AFF	ABOVE FINISHED FLOOR
----	VENT (V)	AHU	AUTHORITY HAVING JURISDICTION
----	COLD WATER (CW)	APPROX	AIR HANDLING UNIT
----	HOT WATER (HW)	ARCH	APPROXIMATELY
----	HOT WATER CIRCULATING (HWC)	ASSY	ARCHITECTURAL
----	HEATING WATER SUPPLY (HWS)	BDD	ASSEMBLY
----	HEATING WATER RETURN (HWR)	BDD	AUTOMATIC AIR VENT
----	COOLING WATER SUPPLY (CHS)	B.O.D.	BACKDRAFT DAMPER
----	COOLING WATER RETURN (CHR)	BTU	BOTTOM OF DUCT
----	CONDENSATE (C)	BTUH	BRITISH THERMAL UNIT
----	FIRE (F)	BLDG	BRITISH THERMAL UNIT/HOUR
----	FIRE DEPARTMENT CONNECTION (FDC)	CAP	BUILDING
----	NATURAL GAS (G)	CLG	CAPACITY
----	MEDIUM PRESSURE NATURAL GAS (MPG)	CO	CEILING
----	RAIN LEADER (RL)	COP	CLEANOUT
----	REFRIGERANT LIQUID (RL), WHERE SHOWN ON HVAC PLANS	COMP	COEFFICIENT OF PERFORMANCE
----	REFRIGERANT GAS (RG), WHERE SHOWN ON HVAC PLANS	CONN	COMPRESSOR
----	FLOOR CLEANOUT (FCO)	CONT	CONNECTION
----	ISOLATION VALVE - SEE SPECIFICATIONS FOR TYPE	CFH	CONTINUE, CONTINUATION
----	BALANCING VALVE	CFM	CUBIC FEET PER HOUR
----	TWO-WAY CONTROL VALVE	CTG	CUBIC FEET PER MINUTE
----	THREE-WAY CONTROL VALVE	CW	CEILING TRANSFER GRILLE
----	CHECK VALVE	CWV	COLD WATER
----	DRAIN VALVE WITH HOSE CONNECTION	DEG F, °F	COMBINATION WASTE/VENT
----	PIPE UP	DIA, Ø	DEGREE FAHRENHEIT
----	PIPE DOWN	DN	DRAWING
----	PIPE TEE IN LINE, BRANCH PIPE DOWN	DWG	DRY BULB
----	UNION	DL	DOOR LOUVER
----	RELIEF VALVE OR SAFETY VALVE	EA	EACH
----	STRAINER WITH BLOW-OFF VALVE	ECM	ELECTRONIC COMMUTATED MOTOR
----	CONCENTRIC REDUCER	EF	EXHAUST FAN
----	HOSE BIBB	EFF	EFFICIENCY
----	AUTOMATIC AIR VENT	ELEC	ELECTRICAL, ELECTRIC
----	MANUAL AIR VENT	EMCS	ENERGY MANAGEMENT CONTROL SYSTEM
----	PRESSURE GAUGE	EER	ENERGY EFFICIENCY RATIO
----	PRESSURE REDUCING VALVE	EAT	ENTERING AIR TEMPERATURE
----	THERMOWELL	EWB	ENTERING WET BULB
----	THERMOMETER	EDB	ENTERING DRY BULB
----	METER	EOL	END OF LINING
20x12	DUCT (FIRST FIGURE, SIDE SHOWN)	EXH	EXHAUST
20x12Ø	FLAT OVAL DUCT (FIRST FIGURE, SIDE SHOWN)	EXIST, (E)	EXISTING
20x12L, 20x12L*	LINED DUCT (DIM. FOR NET FREE AREA) EOL* = END OF LINING * ~ 2" THICK LINING EOL* = END OF 2" THICK LINING	ESP	EXTERNAL STATIC PRESSURE
RI, Ø	RISE (R) OR DROP (D) ARROW IN DIRECTION OF FLOW	ETR	EXISTING TO REMAIN
Ø	DUCT SECTION (SUPPLY)	F	FIRE
Ø	DUCT SECTION (EXHAUST OR RETURN)	FL	FLOOR
Ø	ROUND DUCT OR FLAT OVAL	FCO	FLOOR CLEAN OUT
Ø	VOLUME DAMPER (MANUAL)	FDC	FIRE DEPARTMENT CONNECTION
Ø	MOTORIZED DAMPER	FLA	FULL LOAD AMPS
Ø	FLEXIBLE CONNECTION	FLEX	FLEXIBLE
Ø	FIRE DAMPER COMBINATION FIRE/SMOKE DAMPER	FPM	FEET PER MINUTE
Ø	FLEXIBLE DUCT	FV	FACE VELOCITY
Ø	ELBOW WITH TURNING VANES	GAL	GALLON
Ø	DUCT UP (RECTANGULAR)	G	GAS
Ø	DUCT UP (RECTANGULAR)	HB	HOSE BIBB
Ø	DUCT DOWN (RECTANGULAR)	HP	HORSE POWER
Ø	DUCT DOWN (RECTANGULAR)	HW	HOT WATER
Ø	DUCT UP (ROUND)	HWC	HOT WATER CIRCULATION
Ø	DUCT DOWN (ROUND)	INTEGR.	INTEGRAL
Ø	CEILING OUTLET	IN	INCH
Ø	CEILING INLET	I.E.	INVERT ELEVATION
Ø	WALL OUTLET (OR INLET)	KW	KILOWATT
Ø	LINEAR SLOT DIFFUSER, FIRST NO. IS SLOT WIDTH, SECOND NO. IS NO. OF SLOTS, THIRD NO. IS LENGTH	L	LEAVING AIR TEMPERATURE
Ø	THERMOSTAT G= WITH GUARD A= AVERAGED WITH OTHER	LAT	LEAVING AIR TEMPERATURE
Ø	CO2 SENSOR G= WITH GUARD	LDB	LEAVING DRY BULB
Ø	SWITCH	LWT	LEAVING WATER TEMPERATURE
Ø	INTERVAL TIMER	LWB	LEAVING WET BULB
Ø	DETAIL/SECTION IDENTIFICATION NUMBER SHEET ON WHICH DETAIL IS SHOWN	MAV	MANUAL AIR VENT
Ø		MAX	MAXIMUM
Ø		MANUF	MANUFACTURER
Ø		MBH	THOUSAND BTUH
Ø		MID	MIDDLE
Ø		MCA	MINIMUM CIRCUIT AMPACITY
Ø		MECH	MECHANICAL
Ø		MIN	MINIMUM
Ø		NO	NORMALLY OPEN
Ø		NC	NORMALLY CLOSED
Ø		NTS	NUMBER
Ø		OBD	NOT TO SCALE
Ø		OA	OPPOSED BLADE DAMPER
Ø		OAI	OUTSIDE AIR
Ø		P	OUTSIDE AIR INTAKE
Ø		P.D.I.	PHASE
Ø		PD	PLUMBING AND DRAINAGE INST.
Ø		R	PRESSURE DROP
Ø		RLA	RETURN
Ø		REF	RATED LOAD AMPS
Ø		RL	REFERENCE
Ø		RL	RAIN LEADER
Ø		RG	REFRIGERANT LIQUID
Ø		REQ'D	REFRIGERANT GAS
Ø		RA	REQUIRED
Ø		RPM	RETURN AIR
Ø		RM	REVOLUTIONS PER MINUTE
Ø		RVI	ROOM
Ø		RVR	ROOF VENT INTAKE
Ø		S	ROOF VENT RELIEF
Ø		SA	SUPPLY
Ø		SCO	SUPPLY AIR
Ø		S.O.	SURFACE CLEANOUT
Ø		SS	SCREENED OPENING
Ø		TEMP	STAINLESS STEEL
Ø		TD	TEMPERATURE
Ø		TG	TRANSFER DUCT
Ø		TYP	TRANSFER GRILLE
Ø		UNO	TYPICAL
Ø		VFD	UNLESS NOTED OTHERWISE
Ø		VTR	VARIABLE FREQUENCY DRIVE
Ø		V	VENT THROUGH ROOF
Ø		WC	VOLTS, VOLTAGE, VENT
Ø		WCO	WATER COLUMN
Ø		W	WALL CLEAN OUT
Ø		WB	WALL LOUVER
Ø		WTG	WATT
Ø		W	WET BULB
Ø		W	WALL TRANSFER GRILLE
Ø		W	WITH
NOTE: FOR DESCRIPTION OF OTHER ABBREVIATIONS SEE SYMBOL LISTING TO THE LEFT, EQUIPMENT/ITEMS SCHEDULES, AND ABBREVIATIONS LISTED IN SPECIFICATIONS			

KELSO SCHOOL DISTRICT NO. 458
HUNTINGTON MIDDLE SCHOOL -
MODERNIZATION AND ADDITION

Date:	05/28/2021
Job No.:	21938.00
Drawn By:	TP
Checked by:	NRH
Revisions	
#	Date Description


LEGEND AND
NOTES

M001


ENERGY CODE NOTES - 2018									
MECHANICAL CHECKLIST			EQUIPMENT SIZING, PERFORMANCE, AND TYPE		SUPPLY DUCTS WITHIN CONDITIONED SPACE WHERE SUPPLY AIR IS < 55 DEG F. OR > 105 DEG F.		R-3.3		
1. LOAD CALCULATIONS: LOAD CALCULATIONS HAVE BEEN PERFORMED IN ACCORDANCE WITH WSEC.			2. EQUIPMENT AND SYSTEM SIZING: OUTPUT CAPACITIES OF HEATING AND COOLING EQUIPMENT AND SYSTEMS ARE NO GREATER THAN THE SMALLEST AVAILABLE EQUIPMENT SIZE THAT EXCEEDS THE CALCULATED LOADS.		3. HVAC EQUIPMENT PERFORMANCE: EQUIPMENT SCHEDULES ARE INCLUDED WITH THESE PLANS.		4. HVAC TSPR COMPLIANCE: A. EXISTING BUILDING: EXCEPTION 4. HVAC SYSTEM WITH HEAT RECOVERY CHILLER. B. ADDITION: SINGLE ZONE VAV HEAT PUMP. SEE TSPR FORMS FOR COMPLIANCE.		
5. ELECTRIC MOTOR EFFICIENCY: ALL ELECTRIC MOTORS SHALL MEET THE MINIMUM EFFICIENCY OF MOTOR TABLES. FRACTION HP FAN MOTORS 1/12HP OR GREATER UP TO 1HP SHALL BE ECM TYPE OR SHALL HAVE A MINIMUM EFFICIENCY OF 70% OR GREATER.			6. FAN POWER LIMITATION: FOR ALL HVAC SYSTEMS WITH TOTAL FAN HP > 5HP, MOTOR HP OR BHP SHALL COMPLY WITH FAN POWER LIMITATIONS' EQUATIONS.		7. MOTOR NAMEPLATE HP: FOR EACH FAN, THE MOTOR SHALL BE NO LARGER THAN THE FIRST AVAILABLE MOTOR SIZE GREATER THAN THE BHP.		8. FAN EFFICIENCY: FANS AND FAN SYSTEMS GREATER THAN 5HP SHALL HAVE A FAN EFFICIENCY GRADE (FEG) OF 67 OR HIGHER PER AMCA 205.		
9. FAN VARIABLE FLOW CAPACITY: FOR FAN MOTORS 7.5 HP AND GREATER VARIABLE FLOWS SHALL BE PROVIDED WITH A VFD.			10. LARGE CAPACITY BOILER SYSTEMS: HYDRONIC SYSTEMS WITH A SINGLE BOILER OVER 500 MBH INPUT CAPACITY SHALL HAVE MULTIPLE STAGES OR MODULATION CAPACITY. BOILER SYSTEMS OVER 1,000 MBH SHALL HAVE THE FOLLOWING MINIMUM TURNDOWN RATIO:		BOILER SYSTEM INPUT (MBH)		MINIMUM TURNDOWN RATIO		
>=1,000 AND LESS THAN OR EQUAL TO 5,000			> 5,000 AND LESS THAN OR EQUAL TO 10,000		>10,000		3 TO 1 4 TO 1 5 TO 1		
11. PUMP VARIABLE FLOW CAPACITY, C403.2.13: FOR PUMP MOTORS 7.5 HP AND GREATER VARIABLE FLOWS SHALL BE PROVIDED WITH A VFD.			12. OUTDOOR AIR, EXHAUST & RELIEF DAMPERS: PROVIDE ALL OUTSIDE AIR, EXHAUST AIR, AND RELIEF AIR OPENINGS WITH CLASS 1 (MAX LEAKAGE OF 4 CFM/SF AT 1.0" W.C.) MOTORIZED DAMPERS.		13. RETURN AIR DAMPERS: PROVIDE RETURN AIR OPENINGS WITH CLASS 1 MOTORIZED DAMPER WHERE USED FOR AIRSIDE ECONOMIZER. WHERE INSTALLED IN UNITARY PACKAGED EQUIPMENT DAMPER, PROVIDE DAMPERS WITH LOWEST LEAKAGE RATE AVAILABLE FROM THE EQUIPMENT MANUFACTURER.		HVAC SYSTEM CONTROLS		
14. THERMOSTATIC CONTROLS: WHERE ADJACENT ZONES CONNECTED BY PERMANENT OPENINGS WITH AREA GREATER THAN 10% OF EITHER ZONE SF, PROVIDE CONTROL TO PREVENT ADJACENT ZONES FROM OPERATING IN CONFLICTING MODES. WHERE A NON-PERIMETER ZONE IS ADJACENT TO A PERIMETER ZONE, PROVIDE CONTROLS TO ONLY ALLOW COOLING IN THE NON-PERIMETER ZONE WHEN IT IS 5 DEGREES HIGHER THAN THE PERIMETER ZONE.			15. DEADBAND: THERMOSTATIC CONTROLS SHALL BE CONFIGURED WITH 5°F MINIMUM DEADBAND FOR SYSTEMS THAT CONTROL BOTH HEATING AND COOLING.		16. AUTOMATIC SETBACK AND SHUTDOWN: HVAC SYSTEMS SHALL BE EQUIPPED WITH AUTOMATIC CONTROLS CAPABLE OF STARTING AND STOPPING THE SYSTEM FOR SEVEN DIFFERENT DAILY SCHEDULES, AND SHALL HAVE MANUAL OVERRIDE CONFIGURED TO OPERATE THE SYSTEM FOR 2 HOURS.		17. AUTOMATIC START: AUTOMATIC START CONTROLS SHALL BE PROVIDED FOR EACH HVAC SYSTEM, AND BE CAPABLE OF AUTOMATICALLY ADJUSTING DAILY START TIME IN ORDER TO BRING EACH SPACE TO THE DESIRED OCCUPIED TEMPERATURE IMMEDIATELY PRIOR TO SCHEDULED OCCUPANCY.		
18. OUTDOOR AIR DAMPERS: OUTSIDE AIR INTAKE DAMPERS SHALL AUTOMATICALLY CLOSE WHEN SYSTEM OR SPACES SERVED ARE NOT IN USE OR DURING WARM-UP AND SET BACK.			19. VENTILATION: MECHANICAL VENTILATION AIR SYSTEMS SHALL BE CONFIGURED TO PROVIDE NOT MORE THAN 150%, BUT AT LEAST THE MINIMUM REQUIRED VOLUME OF OUTDOOR AIR TO EACH ZONE PER IMC. SEE MECHANICAL EQUIPMENT SCHEDULES FOR MINIMUM OUTSIDE AIR VALUES.		20. DEMAND CONTROLLED VENTILATION: FOR SPACES > 500 SF WITH AN OCCUPANT LOAD GREATER OF 25 PEOPLE PER 1000SF OR GREATER, PROVIDE OCCUPANCY-BASED OSA CONTROL TO REDUCE OUTSIDE AIR DAMPER WHEN SPACE IS UNOCCUPIED.		21. OCCUPANCY SENSORS: CLASSROOMS, GYMS, AUDITORIUMS, AND CONFERENCE ROOMS > 500 SF SHALL HAVE OCCUPANCY CONTROL TO CLOSE OUTSIDE AIR DAMPER OR TURN OFF EQUIPMENT WHEN SPACE IS UNOCCUPIED EXCEPT WHERE EQUIPPED WITH ANOTHER MEANS TO AUTOMATICALLY REDUCE OUTSIDE AIR INTAKE BELOW DESIGN RATES WHEN PARTIALLY OCCUPIED.		
22. FAN VARIABLE FLOW CAPACITY, C403.2.13: FOR FAN MOTORS 7.5 HP AND GREATER VARIABLE FLOWS SHALL BE PROVIDED WITH A VFD.			23. DDC SYSTEM CAPABILITY: DDC SYSTEMS SHALL BE CAPABLE OF CONTROLLING, MONITORING, TRENDING, AND GRAPHICALLY DISPLAYING PER WSEC.		DUCTING SYSTEMS		24. DUCT CONSTRUCTION: DUCTWORK SHALL BE CONSTRUCTED AND SEALED PER IMC.		
25. DUCT PRESSURE CLASS: ALL DUCTWORK SHOWN IS LOW PRESSURE DUCT, OPERATING AT STATIC PRESSURE LESS THAN OR EQUAL TO 3 INCHES WATER GAUGE (W.G.).			26. DUCT INSULATION: MINIMUM DUCT INSULATION PER WSEC IS AS FOLLOWS:		SERVICE INSULATION LEVEL		OUTSIDE AIR DUCTS AND PLENUMS		
OUTSIDE AIR DUCT SERVING INDIVIDUAL SUPPLY UNIT WITH LESS THAN 2,800 CFM OF SUPPLY AIR			SUPPLY & RETURN DUCTS IN UNCONDITIONED SPACES		R-7		R-6		
27. PIPING INSULATION, C403.2.9: MINIMUM PIPE INSULATION PER WSEC IS AS FOLLOWS:			FLUID OPERATING TEMPERATURE		INSULATION THICKNESS (NOMINAL PIPE SIZE)		NO INSULATION REQUIRED		
>350			251-350		201-250		141-200		
105-140			40-60		<40		PIPE INSULATION EXPOSED TO WEATHER, C403.2.9.1: PROVIDE METAL JACKETING ON ALL PIPE INSULATION EXPOSED TO WEATHER AND SEAL ALL SEAMS WATER TIGHT.		
28. PIPE INSULATION EXPOSED TO WEATHER, C403.2.9.1: PROVIDE METAL JACKETING ON ALL PIPE INSULATION EXPOSED TO WEATHER AND SEAL ALL SEAMS WATER TIGHT.			29. AIR ECONOMIZER REQUIRED: SEE EQUIPMENT SCHEDULES FOR EQUIPMENT PROVIDED WITH ECONOMIZER COOLING.		30. INTEGRATED ECONOMIZER OPERATION: ECONOMIZERS SHALL BE CONFIGURED FOR PARTIAL COOLING OPERATION EVEN WHERE ADDITIONAL MECHANICAL COOLING IS REQUIRED TO MEET THE LOAD.		31. ECONOMIZER HEATING IMPACT: ECONOMIZER CONTROLS SHALL BE SUCH THAT ECONOMIZER OPERATION DOES NOT INCREASE BUILDING HEATING ENERGY DURING NORMAL OPERATIONS.		
32. AIR ECONOMIZER CAPACITY: ECONOMIZER OUTSIDE AIR AND RETURN AIR DAMPERS SHALL MODULATE TO PROVIDE UP TO 100% OUTSIDE AIR FOR COOLING.			33. INTEGRATED AIR ECONOMIZER: MECHANICAL COOLING CONTROLS SHALL BE INTERLOCKED WITH AIR ECONOMIZER CONTROLS SO THE OUTSIDE AIR DAMPER REMAINS IN 100% OPEN POSITION WHEN MECHANICAL EQUIPMENT IS IN COOLING TO MEET THE COOLING LOAD, UNTIL THE LEAVING AIR TEMPERATURE IS < 45°F. FOR SYSTEMS WITH COOLING CAPACITY GREATER THAN 65 MBH, CONTROL OF ECONOMIZER DAMPERS SHALL NOT BE CONTROLLED BASED ONLY ON MIXED AIR TEMPERATURE.		34. ECONOMIZER HIGH LIMIT CONTROLS: PROVIDE HIGH-LIMIT ECONOMIZER SHUT-OFF CONTROL UTILIZING FIXED DRY BULB METHOD. ECONOMIZER SHALL BE OFF WHEN OUTDOOR AIR TEMPERATURE EXCEEDS 75°F.		HYDRONIC SYSTEM CONTROL		
35. VARIABLE FLOW CONTROL-HYDRONIC SYSTEM PUMPS: FAN AND PUMP MOTORS 7.5 HP AND GREATER SERVING VARIABLE FLOW SYSTEMS SHALL HAVE VARIABLE SPEED DRIVES OR OTHER CONTROL DEVICES THAT RESULT IN MOTOR DEMAND OF NO MORE THAN 30% DESIGN WATTAGE AT 50% OF DESIGN AIR VOLUME WHEN STATIC PRESSURE IS 1/3 OF THE DESIGN STATIC PRESSURE FOR FANS; AND 50% OF DESIGN WATER FLOW FOR PUMPS. PUMPS WITH VARIABLE SPEED CONTROLS SHALL BE CONTROLLED IN ONE OF THE FOLLOWING MANNERS: (1) FOR PUMPS 20 HP AND LESS BY REQUIRED DIFFERENTIAL PRESSURE, OR RESET BASED ON ZONE HYDRONIC DEMAND (OR OTHER ZONE LOAD INDICATORS), OR RESET DIRECTLY BASED ON PUMP POWER AND PUMP DIFFERENTIAL PRESSURE (2) PUMPS GREATER THAN 20 HP PUMP SPEED SHALL BE CONTROLLED BY STATIC PRESSURE SET POINT AS RESET BASED ON THE VALVE REQUIRING THE MOST PRESSURE OR DIRECTLY CONTROLLED BASED ON ZONE HYDRONIC DEMAND.			36. HYDRONIC SYSTEM SETBACK AND PART LOAD CONTROLS: BOILER SYSTEMS WITH DESIGN INPUT GREATER THAN 1,000,000 BTU/HR SHALL HAVE TURNDOWN AS LISTED BELOW. HYDRONIC SYSTEMS GREATER THAN OR EQUAL TO 300,000 BTU/HR IN DESIGN OUTPUT CAPACITY SUPPLYING HEATED OR COOLED CHILLED WATER TO COMFORT CONDITIONING SYSTEMS SHALL INCLUDE CONTROLS CONFIGURED TO: (1) AUTOMATICALLY RESET THE SUPPLY WATER TEMPERATURE IN RESPONSE TO BUILDING HEATING AND COOLING DEMAND USING COIL VALVE POSITION, ZONE RETURN WATER TEMPERATURE OR OUTDOOR AIR TEMPERATURE (2) AUTOMATICALLY VARY FLUID FLOW BY REDUCING THE SYSTEM DESIGN FLOW RATE BY NOT LESS THAN 50% (3) AUTOMATICALLY VARY PUMP FLOW ON CHILLED WATER SYSTEMS AND HEAT REJECTION LOOPS SERVING WATER COOLED UNITARY AIR CONDITIONERS BY REDUCING THE SYSTEM DESIGN FLOW RATE BY NOT LESS THAN 50%. PUMP FLOW SHALL BE CONTROLLED TO MAINTAIN ONE CONTROL VALVE NEARLY WIDE OPEN OR TO SATISFY THE MINIMUM DIFFERENTIAL PRESSURE.		BOILER TURNDOWN		BOILER DESIGN INPUT (BTU/HR)		
>=1,000,000 & <= 5,000,000			>5,000,000 & <= 10,000,000		>10,000,000		3 TO 1 4 TO 1 5 TO 1		
37. BOILER PLANT ISOLATION: BOILER SHALL BE CAPABLE OF AND CONFIGURED TO REDUCE FLOW AUTOMATICALLY THROUGH THE BOILER PLANT WHEN A BOILER IS SHUT DOWN.			DEDICATED OUTDOOR AIR SYSTEMS (DOAS)		38. DEDICATED OUTDOOR AIR SYSTEMS FOR EDUCATION BUILDINGS, OUTDOOR AIR SHALL BE PROVIDED TO EACH OCCUPIED SPACE BY A DEDICATED OUTDOOR AIR SYSTEM (DOAS).		39. ENERGY RECOVERY VENTILATION WITH DOAS, C403.6.1: ALL DOAS UNITS SHALL BE PROVIDED WITH EXHAUST HEAT RECOVERY WITH RATED EFFECTIVENESS TO INCREASE OSA ENTHALPY BY 50% OR MORE BASED ON THE DELTA BETWEEN THE RETURN AIR AND THE OUTSIDE AIR ENTHALPIES AT DESIGN CONDITIONS.		
40. HEATING/COOLING SYSTEM CONTROLS WITH DOAS, C403.6.2: EQUIPMENT THAT PROVIDES ZONE LEVEL HEATING AND COOLING SHALL BE CONFIGURED WITH FANS AND/OR PUMPS THAT CYCLE OFF AND PRIMARY COOLING AIR SHALL SHUT OFF WHEN THERE IS NO CALL FOR HEATING OR COOLING IN THE ZONES THEY SERVE.			MULTIPLE ZONE AIR SYSTEMS		41. AIR SYSTEMS SERVING MULTIPLE ZONES: SUPPLY AIR SYSTEMS SERVING MULTIPLE ZONES SHALL BE VAV SYSTEMS WHICH, DURING PERIODS OF REDUCED OCCUPANCY, ARE DESIGNED AND CONFIGURED TO REDUCE PRIMARY AIR SUPPLY TO EACH ZONE.		42. SINGLE DUCT VAV TERMINAL UNIT: SINGLE DUCT VAV TERMINAL UNITS ARE CONFIGURED TO REDUCE PRIMARY AIR FLOW RATE BEFORE REHEATING.		
43. VAV STATIC PRESSURE RESET: PROVIDE STATIC PRESSURE SETPOINT RESET BASED ON THE ZONE BASED ON THE ZONE WITH THE GREATEST NEED. THE SET POINT WILL BE LOWERED UNTIL ONE VAV BOX IS NEARLY WIDE OPEN.			44. VAV VENTILATION OPTIMIZATION CONTROLS: CONFIGURE CONTROLS TO AUTOMATICALLY REDUCE OUTSIDE AIR IN RESPONSE TO CO2 LEVELS AND SETPOINTS.		45. VAV SYSTEM SUPPLY AIR RESET: VAV HVAC SYSTEMS SHALL HAVE CONTROLS TO RESET THE SUPPLY AIR TEMPERATURE IN RESPONSE TO BUILDING LOAD OR OUTSIDE AIR TEMPERATURE. SETBACK RANGE SHALL BE NO LESS THEN 25% OF THE DIFFERENCE BETWEEN THE SUPPLY AIR TEMPERATURE AND THE SPACE TEMPERATURE.		46. AIR ECONOMIZER: SYSTEM IS CONFIGURED FOR 100% AIR ECONOMIZER AND ALL RELATED REQUIREMENTS PER C403.3.		
47. DIRECT DIGITAL CONTROLS (DDC): DDC CONTROL SYSTEM SHALL COMPLY WITH WSEC DIRECT DIGITAL CONTROL SYSTEMS REQUIREMENTS AND SHALL BE CAPABLE OF TRENDING AND GRAPHICALLY DISPLAYING INPUT AND OUTPUT POINTS.			48. MAX ALLOWABLE SYSTEM BRAKE HORSEPOWER: SYSTEM FAN MOTOR SHALL BE NO MORE THAN 90% OF THE BHP LIMIT PER TABLE.		49. FAULT DETECTION AND DIAGNOSTICS: DDC FAULT DETECTION AND DIAGNOSTICS SHALL INCLUDE THE FOLLOWING: 49.1. OUTSIDE AIR, RETURN AIR, AND SUPPLY AIR TEMPERATURE SENSORS. 49.2. TEMPERATURE SENSORS SHALL HAVE AN ACCURACY OF + OR - 2" F. 49.3. VAV AIR HANDLING UNIT CONTROLLER SHALL BE CONFIGURED TO INDICATE: ECONOMIZER COOLING AVAILABLE, ECONOMIZER ENABLED, COMPRESSOR ENABLED, HEATING ENABLED, MIXED AIR LOW LIMIT CYCLE ACTIVE, AND CURRENT VALUE OF ALL SENSORS.		COMMISSIONING		
50. SCOPE OF MECHANICAL SYSTEMS COMMISSIONING: ALL MECHANICAL SYSTEMS, EQUIPMENT AND CONTROLS ARE REQUIRED TO BE COMMISSIONED. FOR BUILDINGS WITH COOLING CAPACITY > 240 MBH OR HEATING OUTPUT > 300 MBH ALL SYSTEMS ARE TO BE COMMISSIONED REGARDLESS OF INDIVIDUAL CAPACITY.			51. COMMISSIONING REQUIREMENTS IN CONSTRUCTION DOCUMENTS: COMMISSIONING PLAN SHALL BE DEVELOPED BY A COMMISSIONING PROFESSIONAL AND CONSIST OF A NARRATIVE DESCRIPTION OF ACTIVITIES, ROLES & RESPONSIBILITIES OF THE COMMISSIONING TEAM, SCHEDULE OF ACTIVITIES INCLUDING TAB, FUNCTIONAL PERFORMANCE TESTING AND VERIFICATION OF PROJECT CLOSE OUT DOCUMENTATION, AND SUBMIT COMPLIANCE CHECKLIST TO THE BUILDING OFFICIAL UPON SUBSTANTIAL COMPLETION. A PRELIMINARY COMMISSIONING REPORT AND/OR COMMISSIONING COMPLIANCE CHECKLIST SHALL BE AVAILABLE FOR AHJ REVIEW PRIOR TO THE FINAL MECHANICAL INSPECTION.		52. AIR SYSTEM & HYDRONIC SYSTEM BALANCING: HVAC AIR AND WATER SYSTEMS SHALL BE BALANCED IN ACCORDANCE WITH THE SPECIFICATIONS AND THESE WSEC NOTES. SEE SPECIFICATIONS FOR FLOW RATE TOLERANCES.		53. AIR SYSTEM BALANCING DEVICES: PROVIDE ALL SUPPLY AIR OUTLETS AND TERMINAL DEVICES WITH MEANS OF BALANCING AIRFLOW. BALANCE TO FIRST MINIMIZE THROTTLING LOSSES, THEN ADJUST TO MEET DESIGN AIR FLOWS.		
54. HYDRONIC SYSTEM BALANCING DEVICES: PROVIDE ALL HYDRONIC COILS WITH MEANS OF BALANCING & MEASURING THE FLOW. SYSTEM SHALL BE PROPORTIONATELY BALANCED TO MINIMIZE THROTTLING LOSSES THEN THE PUMP SPEED SHALL BE ADJUSTED. THIS APPLIES TO ALL PUMPS GREATER THAN 5 HP.			55. FUNCTIONAL PERFORMANCE TESTING CRITERIA: FUNCTIONAL PERFORMANCE TESTING SHALL BE PERFORMED IN ACCORDANCE WITH WSEC.		PROJECT CLOSE OUT DOCUMENTATION		56. DOCUMENTATION SUBMITTAL REQUIREMENTS: SUBMIT ALL CLOSEOUT DOCUMENTATION INCLUDING AS-BUILTS AND O&M'S TO OWNER WITHIN 180 DAYS OF RECEIPT OF CERTIFICATE OF OCCUPANCY.		
57. THESE "ENERGY CODE NOTES" ARE LISTED TO SATISFY THE BUILDING DEPARTMENT'S REQUIREMENT THAT CERTAIN INFORMATION BE PLACED ON THE PLANS, BUT DO NOT DIMINISH THE FULL PROJECT REQUIREMENTS. PROVIDE ITEMS IN EXCESS OF CODE WHERE NOTED ON DRAWINGS AND IN SPECIFICATIONS. FOR OTHER ADDED REQUIREMENTS, SEE SPECIFICATIONS, INCLUDING BUT NOT LIMITED TO THE FOLLOWING:			ITEM		SECTION#		AS-BUILT DOCUMENTS		
O&M MANUALS			PIPING & DUCT INSULATION		DUCTWORK SEALING & TESTING		CONTROLS		
20 05 00			20 05 00		20 07 00		23 31 00		
DIVISION 25			COMMISSIONING		SCOPE OF SWH EQUIPMENT SYSTEMS COMMISSIONING: FOR BUILDINGS WHERE THE LARGEST SERVICE WATER HEATING SYSTEM CAPACITY IS 200 MBH OR GREATER, AND FOR ALL BUILDINGS WITH POOLS, ALL SWH EQUIPMENT AND CONTROLS ARE REQUIRED TO BE COMMISSIONED.		64. COMMISSIONING REQUIREMENTS IN CONSTRUCTION DOCUMENTS: COMMISSIONING PLAN SHALL BE DEVELOPED BY A COMMISSIONING PROFESSIONAL AND CONSIST OF A NARRATIVE DESCRIPTION OF ACTIVITIES, ROLES & RESPONSIBILITIES OF THE COMMISSIONING TEAM, SCHEDULE OF ACTIVITIES INCLUDING TAB, FUNCTIONAL PERFORMANCE TESTING AND VERIFICATION OF PROJECT CLOSE OUT DOCUMENTATION, AND SUBMIT COMPLIANCE CHECKLIST TO THE BUILDING OFFICIAL UPON SUBSTANTIAL COMPLETION. A PRELIMINARY COMMISSIONING REPORT AND/OR COMMISSIONING COMPLIANCE CHECKLIST SHALL BE AVAILABLE FOR AHJ REVIEW PRIOR TO THE FINAL MECHANICAL INSPECTION.		
65. FUNCTIONAL PERFORMANCE TESTING CRITERIA: FUNCTIONAL PERFORMANCE TESTING SHALL BE PERFORMED IN ACCORDANCE WITH WSEC.			66. DOCUMENTATION SUBMITTAL REQUIREMENTS: SUBMIT ALL CLOSEOUT DOCUMENTATION INCLUDING AS-BUILTS AND O&M'S TO OWNER PRIOR TO BUILDING.		67. THESE "ENERGY CODE NOTES" ARE LISTED TO SATISFY THE BUILDING DEPARTMENT'S REQUIREMENT THAT CERTAIN INFORMATION BE PLACED ON THE PLANS, BUT DO NOT DIMINISH THE FULL PROJECT REQUIREMENTS. PROVIDE ITEMS IN EXCESS OF CODE WHERE NOTED ON DRAWINGS AND IN SPECIFICATIONS. FOR OTHER ADDED REQUIREMENTS, SEE SPECIFICATIONS, INCLUDING BUT NOT LIMITED TO THE FOLLOWING:		68. HEATED WATER CIRCULATING SYSTEM: CIRCULATING HOT WATER PUMPS SHALL TURN OFF AUTOMATICALLY WHEN THERE IS NO DEMAND OR DESIRED WATER TEMPERATURE IN RETURN LOOP HAS BEEN MET. CIRCULATING HOT WATER PUMPS SHALL BE EQUIPPED WITH CONTROLS TO TURN OFF DURING PERIODS OF NON-USE.		
69. THESE "ENERGY CODE NOTES" ARE LISTED TO SATISFY THE BUILDING DEPARTMENT'S REQUIREMENT THAT CERTAIN INFORMATION BE PLACED ON THE PLANS, BUT DO NOT DIMINISH THE FULL PROJECT REQUIREMENTS. PROVIDE ITEMS IN EXCESS OF CODE WHERE NOTED ON DRAWINGS AND IN SPECIFICATIONS. FOR OTHER ADDED REQUIREMENTS, SEE SPECIFICATIONS, INCLUDING BUT NOT LIMITED TO THE FOLLOWING:			70. THESE "ENERGY CODE NOTES" ARE LISTED TO SATISFY THE BUILDING DEPARTMENT'S REQUIREMENT THAT CERTAIN INFORMATION BE PLACED ON THE PLANS, BUT DO NOT DIMINISH THE FULL PROJECT REQUIREMENTS. PROVIDE ITEMS IN EXCESS OF CODE WHERE NOTED ON DRAWINGS AND IN SPECIFICATIONS. FOR OTHER ADDED REQUIREMENTS, SEE SPECIFICATIONS, INCLUDING BUT NOT LIMITED TO THE FOLLOWING:		71. THESE "ENERGY CODE NOTES" ARE LISTED TO SATISFY THE BUILDING DEPARTMENT'S REQUIREMENT THAT CERTAIN INFORMATION BE PLACED ON THE PLANS, BUT DO NOT DIMINISH THE FULL PROJECT REQUIREMENTS. PROVIDE ITEMS IN EXCESS OF CODE WHERE NOTED ON DRAWINGS AND IN SPECIFICATIONS. FOR OTHER ADDED REQUIREMENTS, SEE SPECIFICATIONS, INCLUDING BUT NOT LIMITED TO THE FOLLOWING:		72. THESE "ENERGY CODE NOTES" ARE LISTED TO SATISFY THE BUILDING DEPARTMENT'S REQUIREMENT THAT CERTAIN INFORMATION BE PLACED ON THE PLANS, BUT DO NOT DIMINISH THE FULL PROJECT REQUIREMENTS. PROVIDE ITEMS IN EXCESS OF CODE WHERE NOTED ON DRAWINGS AND IN SPECIFICATIONS. FOR OTHER ADDED REQUIREMENTS, SEE SPECIFICATIONS, INCLUDING BUT NOT LIMITED TO THE FOLLOWING:		
73. THESE "ENERGY CODE NOTES" ARE LISTED TO SATISFY THE BUILDING DEPARTMENT'S REQUIREMENT THAT CERTAIN INFORMATION BE PLACED ON THE PLANS, BUT DO NOT DIMINISH THE FULL PROJECT REQUIREMENTS. PROVIDE ITEMS IN EXCESS OF CODE WHERE NOTED ON DRAWINGS AND IN SPECIFICATIONS. FOR OTHER ADDED REQUIREMENTS, SEE SPECIFICATIONS, INCLUDING BUT NOT LIMITED TO THE FOLLOWING:			74. THESE "ENERGY CODE NOTES" ARE LISTED TO SATISFY THE BUILDING DEPARTMENT'S REQUIREMENT THAT CERTAIN INFORMATION BE PLACED ON THE PLANS, BUT DO NOT DIMINISH THE FULL PROJECT REQUIREMENTS. PROVIDE ITEMS IN EXCESS OF CODE WHERE NOTED ON DRAWINGS AND IN SPECIFICATIONS. FOR OTHER ADDED REQUIREMENTS, SEE SPECIFICATIONS, INCLUDING BUT NOT LIMITED TO THE FOLLOWING:		75. THESE "ENERGY CODE NOTES" ARE LISTED TO SATISFY THE BUILDING DEPARTMENT'S REQUIREMENT THAT CERTAIN INFORMATION BE PLACED ON THE PLANS, BUT DO NOT DIMINISH THE FULL PROJECT REQUIREMENTS. PROVIDE ITEMS IN EXCESS OF CODE WHERE NOTED ON DRAWINGS AND IN SPECIFICATIONS. FOR OTHER ADDED REQUIREMENTS, SEE SPECIFICATIONS, INCLUDING BUT NOT LIMITED TO THE FOLLOWING:		76. THESE "ENERGY CODE NOTES" ARE LISTED TO SATISFY THE BUILDING DEPARTMENT'S REQUIREMENT THAT CERTAIN INFORMATION BE PLACED ON THE PLANS, BUT DO NOT DIMINISH THE FULL PROJECT REQUIREMENTS. PROVIDE ITEMS IN EXCESS OF CODE WHERE NOTED ON DRAWINGS AND IN SPECIFICATIONS. FOR OTHER ADDED REQUIREMENTS, SEE SPECIFICATIONS, INCLUDING BUT NOT LIMITED TO THE FOLLOWING:		
77. THESE "ENERGY CODE NOTES" ARE LISTED TO SATISFY THE BUILDING DEPARTMENT'S REQUIREMENT THAT CERTAIN INFORMATION BE PLACED ON THE PLANS, BUT DO NOT DIMINISH THE FULL PROJECT REQUIREMENTS. PROVIDE ITEMS IN EXCESS OF CODE WHERE NOTED ON DRAWINGS AND IN SPECIFICATIONS. FOR OTHER ADDED REQUIREMENTS, SEE SPECIFICATIONS, INCLUDING BUT NOT LIMITED TO THE FOLLOWING:			78. THESE "ENERGY CODE NOTES" ARE LISTED TO SATISFY THE BUILDING DEPARTMENT'S REQUIREMENT THAT CERTAIN INFORMATION BE PLACED ON THE PLANS, BUT DO NOT DIMINISH THE FULL PROJECT REQUIREMENTS. PROVIDE ITEMS IN EXCESS OF CODE WHERE NOTED ON DRAWINGS AND IN SPECIFICATIONS. FOR OTHER ADDED REQUIREMENTS, SEE SPECIFICATIONS, INCLUDING BUT NOT LIMITED TO THE FOLLOWING:		79. THESE "ENERGY CODE NOTES" ARE LISTED TO SATISFY THE BUILDING DEPARTMENT'S REQUIREMENT THAT CERTAIN INFORMATION BE PLACED ON THE PLANS, BUT DO NOT DIMINISH THE FULL PROJECT REQUIREMENTS. PROVIDE ITEMS IN EXCESS OF CODE WHERE NOTED ON DRAWINGS AND IN SPECIFICATIONS. FOR OTHER ADDED REQUIREMENTS, SEE SPECIFICATIONS, INCLUDING BUT NOT LIMITED TO THE FOLLOWING:		80. INSULATION OF PIPING: PROVIDE INSULATION FROM WATER HEATER TO FINAL FIXTURE, AND ON PIPING THAT IS HEAT TRACED. MINIMUM PIPE INSULATION PER WSEC IS AS FOLLOWS:		
81. INSULATION OF PIPING: PROVIDE INSULATION FROM WATER HEATER TO FINAL FIXTURE, AND ON PIPING THAT IS HEAT TRACED. MINIMUM PIPE INSULATION PER WSEC IS AS FOLLOWS:			FLUID OPERATING TEMPERATURE		INSULATION THICKNESS (NOMINAL PIPE SIZE)		141-200		
105-140			40-60		<40		54. EFFICIENT SWH SUPPLY PIPING: ALL PIPING CONNECTING TO SERVICE HOT WATER SOURCE, SHALL COMPLY WITH MAXIMUM ALLOWABLE PIPE LENGTH METHOD. MAXIMUM ALLOWABLE LENGTHS ARE AS FOLLOWS:		
NOMINAL PIPE SIZE (INCH)			AT PUBLIC LAVATORY		AT OTHER FIXTURES		1/2		
3/4			1		0.5		1-1/4		
1-1/2			2 OR LARGER		0.5		2 OR LARGER		
2			4		4		4		

KELSO SCHOOL DISTRICT NO. 458
HUNTINGTON MIDDLE SCHOOL -
MODERNIZATION AND ADDITION

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integrus
ARCHITECTURE



SIGNED
05/28/2021

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Date:	05/28/2021
Job No.:	21938.00
Drawn By:	TP
Checked by:	NRH
Revisions	
#	Date Description

NOTES

M002

AIR TERMINAL UNIT SCHEDULE										
SYMBOL	BASIS OF DESIGN MANUFACTURER AND SERIES NO.	AREA SERVED	PRIMARY AIR		INLET SIZE	P.D. @ MAX CFM	REHEAT COIL SIZE			REMARKS
			MAX. CFM	MIN. CFM			MBH	GPM	P.D. FT	
VAV-005	TITUS DESV	OFFICE 005, STAFF TLT 006	220	140	5"	0.3	4.5	0.5	2.00	W/ SOUND ATTENUATOR
VAV-007	TITUS DESV	BOYS LOCKER ROOM 007	1000	600	10"	0.3	19.4	2.0	2.00	W/ SOUND ATTENUATOR
VAV-041	TITUS DESV	OFFICE 041, STAFF TLT 041A	280	170	5"	0.3	5.5	1.0	2.00	W/ SOUND ATTENUATOR
VAV-043	TITUS DESV	GIRLS LOCKER ROOM 043	1000	600	10"	0.3	19.4	2.0	2.00	W/ SOUND ATTENUATOR
VAV-101	TITUS DESV	CLASSROOM 101, CORRIDOR 140	1500	900	12"	0.3	29.2	3.0	2.00	W/ SOUND ATTENUATOR
VAV-102	TITUS DESV	CLASSROOM 102	1300	780	12"	0.3	25.3	3.0	2.00	W/ SOUND ATTENUATOR
VAV-103	TITUS DESV	CLASSROOM 103	1300	780	12"	0.3	25.3	3.0	2.00	W/ SOUND ATTENUATOR
VAV-106	TITUS DESV	CUST 106	370	230	6"	0.3	7.5	1.0	2.00	W/ SOUND ATTENUATOR
VAV-107	TITUS DESV	SPECIAL ED 107	1300	780	12"	0.3	25.3	3.0	2.00	W/ SOUND ATTENUATOR
VAV-108	TITUS DESV	SPECIAL ED 108	1300	780	12"	0.3	25.3	3.0	2.00	W/ SOUND ATTENUATOR
VAV-109	TITUS DESV	CONFERENCE 109	875	530	10"	0.3	17.2	2.0	2.00	W/ SOUND ATTENUATOR
VAV-110	TITUS DESV	FACULTY ROOM 110	1020	620	10"	0.3	20.1	2.5	2.00	W/ SOUND ATTENUATOR
VAV-114	TITUS DESV	FCS 114, PANTRY 115, CORRIDOR 799	1800	1080	14"	0.3	35.0	3.5	2.00	W/ SOUND ATTENUATOR
VAV-116	TITUS DESV	SCIENCE 116	1370	830	12"	0.3	26.9	3.0	2.00	W/ SOUND ATTENUATOR
VAV-120	TITUS DESV	CLASSROOM 120	1200	720	12"	0.3	23.3	2.5	2.00	W/ SOUND ATTENUATOR
VAV-121	TITUS DESV	SPECIAL ED 121	550	330	7"	0.3	10.7	1.5	2.00	W/ SOUND ATTENUATOR
VAV-121A	TITUS DESV	SPECIAL ED 121A	450	270	7"	0.3	8.7	1.0	2.00	W/ SOUND ATTENUATOR
VAV-122	TITUS DESV	CLASSROOM 122	1200	720	12"	0.3	23.3	2.5	2.00	W/ SOUND ATTENUATOR
VAV-123	TITUS DESV	SPECIAL ED - LIFE SKILLS 123	1300	780	12"	0.3	25.3	3.0	2.00	W/ SOUND ATTENUATOR
VAV-124	TITUS DESV	COUNSELING - WAITING 124	265	160	6"	0.3	5.2	1.0	2.00	W/ SOUND ATTENUATOR
VAV-125	TITUS DESV	TSEC 125	190	120	5"	0.3	3.9	0.5	2.00	W/ SOUND ATTENUATOR
VAV-126	TITUS DESV	COUNSELOR - OFFICE 126	165	100	5"	0.3	3.2	0.5	2.00	W/ SOUND ATTENUATOR
VAV-127	TITUS DESV	COUNSELOR - OFFICE 127	110	70	4"	0.3	2.3	0.5	2.00	W/ SOUND ATTENUATOR
VAV-128	TITUS DESV	OFFICE ASSISTANT 128	145	90	5"	0.3	2.9	0.5	2.00	W/ SOUND ATTENUATOR
VAV-129	TITUS DESV	OFFICE / PSYCH 129	110	70	4"	0.3	2.3	0.5	2.00	W/ SOUND ATTENUATOR
VAV-130	TITUS DESV	VICE PRINCIPAL 130	130	80	4"	0.3	2.6	0.5	2.00	W/ SOUND ATTENUATOR
VAV-131	TITUS DESV	PRINCIPAL 131	130	80	4"	0.3	2.6	0.5	2.00	W/ SOUND ATTENUATOR
VAV-132	TITUS DESV	CONFERENCE 132	160	100	5"	0.3	3.2	0.5	2.00	W/ SOUND ATTENUATOR
VAV-135	TITUS DESV	HEALTH ROOM 135	95	60	4"	0.3	1.9	0.5	2.00	W/ SOUND ATTENUATOR
<div>NOTES</div> <div>1. SIZE REHEAT COIL WITH EWT=120°F, EAT = 55°F, MIN. 2 ROW COIL.</div> <div>2. MAX. NC=35 AT: 1.0" INLET STATIC PRESSURE, WITH 10' OF FLEX DUCT ATTENUATION, PLUS END REFLECTION DUE TO ENTERING A SLOT DIFFUSER, & 10 db ROOM EFFECT.</div>										

AIR TERMINAL UNIT SCHEDULE										
SYMBOL	BASIS OF DESIGN MANUFACTURER AND SERIES NO.	AREA SERVED	PRIMARY AIR		INLET SIZE	P.D. @ MAX CFM	REHEAT COIL SIZE			REMARKS
			MAX. CFM	MIN. CFM			MBH	GPM	P.D. FT	
VAV-136	TITUS DESV	FLEX ROOM 136	100	60	4"	0.3	1.9	0.5	2.00	W/ SOUND ATTENUATOR
VAV-137	TITUS DESV	FLEX ROOM 137	100	60	4"	0.3	1.9	0.5	2.00	W/ SOUND ATTENUATOR
VAV-138A	TITUS DESV	WAITING 138A, MAIN OFFICE 138	490	300	7"	0.3	13.0	1.5	2.00	W/ SOUND ATTENUATOR
VAV-143	TITUS DESV	STAGE 143	2000	1200	14"	0.5	38.9	4.0	2.50	W/ SOUND ATTENUATOR
VAV-143A	TITUS DESV	STORAGE	250	150	5"	0.3	4.8	0.5	2.00	W/ SOUND ATTENUATOR
VAV-146	TITUS DESV	INSTRUMENTS VESTIBULE 146, WORK ROOM 147	300	180	5"	0.3	5.8	1.0	2.00	W/ SOUND ATTENUATOR
VAV-148	TITUS DESV	MUSIC ROOM 148	2000	1200	14"	0.5	38.9	4.0	2.50	W/ SOUND ATTENUATOR
VAV-148A	TITUS DESV	PRACTICE 148A	100	60	4"	0.3	1.9	0.5	2.00	W/ SOUND ATTENUATOR
VAV-148B	TITUS DESV	PRACTICE 148B	560	340	7"	0.3	11.0	1.5	2.00	W/ SOUND ATTENUATOR
VAV-201	TITUS DESV	CLASSROOM 201, CORRIDOR 240	1500	900	12"	0.3	29.2	3.0	2.00	W/ SOUND ATTENUATOR
VAV-202	TITUS DESV	CLASSROOM 202	1300	780	12"	0.3	25.3	3.0	2.00	W/ SOUND ATTENUATOR
VAV-203	TITUS DESV	ART 203	1300	780	12"	0.3	25.3	3.0	2.00	W/ SOUND ATTENUATOR
VAV-207	TITUS DESV	CLASSROOM 207	1300	780	12"	0.3	25.3	3.0	2.00	W/ SOUND ATTENUATOR
VAV-208	TITUS DESV	CLASSROOM 208	1300	780	12"	0.3	25.3	3.0	2.00	W/ SOUND ATTENUATOR
VAV-209	TITUS DESV	SCIENCE 209, CORRIDOR 240	1500	900	12"	0.3	29.2	3.0	2.00	W/ SOUND ATTENUATOR
VAV-210	TITUS DESV	BOYS 211, GIRLS 212, STAFF TLT 213	155	100	5"	0.3	3.2	0.5	2.00	W/ SOUND ATTENUATOR
VAV-214	TITUS DESV	SCIENCE 214, SCIENCE PREP 210A	1375	780	12"	0.3	26.9	3.0	2.00	W/ SOUND ATTENUATOR
VAV-215	TITUS DESV	SPEECH 215	250	150	5"	0.3	4.9	0.5	2.00	W/ SOUND ATTENUATOR
VAV-216	TITUS DESV	SCIENCE 216	1300	780	12"	0.3	25.3	3.0	2.00	W/ SOUND ATTENUATOR
VAV-220	TITUS DESV	CLASSROOM 220	1200	720	12"	0.3	23.3	2.5	2.00	W/ SOUND ATTENUATOR
VAV-221	TITUS DESV	CLASSROOM 221	1200	720	12"	0.3	23.3	2.5	2.00	W/ SOUND ATTENUATOR
VAV-222	TITUS DESV	CLASSROOM 222	1200	720	12"	0.3	23.3	2.5	2.00	W/ SOUND ATTENUATOR
VAV-223	TITUS DESV	CLASSROOM 223	1300	780	12"	0.3	25.3	3.0	2.00	W/ SOUND ATTENUATOR
VAV-226	TITUS DESV	COACH 226	150	100	5"	0.3	3.2	0.5	2.00	W/ SOUND ATTENUATOR
VAV-227	TITUS DESV	ISS 227	350	210	6"	0.3	6.8	1.0	2.00	W/ SOUND ATTENUATOR
VAV-229A	TITUS DESV	LIBRARY 229, WORK ROOM 230	1320	800	12"	0.5	25.9	3.0	2.00	W/ SOUND ATTENUATOR
VAV-229B	TITUS DESV	LIBRARY 229	1200	720	12"	0.3	23.3	2.5	2.00	W/ SOUND ATTENUATOR
VAV-240C	TITUS DESV	CORRIDOR 240	300	180	6"	0.3	5.8	1.0	2.00	W/ SOUND ATTENUATOR
<div>NOTES</div> <div>1. SIZE REHEAT COIL WITH EWT=140°F, EAT = 55°F, MIN. 2 ROW COIL.</div> <div>2. MAX. NC=35 AT: 1.0" INLET STATIC PRESSURE, WITH 10' OF FLEX DUCT ATTENUATION, PLUS END REFLECTION DUE TO ENTERING A SLOT DIFFUSER, & 10 db ROOM EFFECT.</div>										

KELSO SCHOOL DISTRICT NO. 458
HUNTINGTON MIDDLE SCHOOL -
MODERNIZAION AND ADDITION

500 REDPATH ST, KELSO, WA 98626

Date:	05/28/2021
Job No.:	21938.00
Drawn By:	TP
Checked by:	NRH
Revisions	
#	Date Description

SCHEDULES

M003

AIR HANDLING UNIT SCHEDULE

SYMBOL	BASIS OF DESIGN MANUFACTURER AND SERIES NO.	AREA SERVED	UNIT CONFIGURATION	SUPPLY FAN						RETURN FAN						HEATING COIL										COOLING COIL														FILTERS		MAX. UNIT WEIGHT (LBS)	REMARKS																																																			
				TYPE	CFM	TSP	MAX RPM	MIN WHEEL DIA	ELECTRICAL HP VOLT/PH	TYPE	CFM	TSP	MAX RPM	MIN WHEEL DIA	ELECTRICAL HP VOLT/PH	CAP MBH	MIN ROWS FPI	MIN COIL SIZE (FH x FL)	AIR SIDE			WATER SIDE			TOTAL CAP MBH	SENSIBLE CAP MBH	MIN ROWS FPI	MIN COIL SIZE (FH x FL)	AIR SIDE					WATER SIDE				TYPE	MIN. SF	CODE OA																																																						
																			EDB	LDB	PD, IN	GPM	EWT	PD, FT					EDB	EWB	LDB	LWB	PD, IN	GPM	EWT	PD, FT																																																										
AHU-1	DAIKIN OAH038DCM	NORTH CLASSROOMS - LEVELS 1 & 2	OUTDOOR DRAW-THROUGH	PLENUM	15045	3.5"	3230	14"	(6) 2.5	480/3	PLENUM	15045	1.5"	3230	14"	(6) 1.13	480/3	406	2 8	30 x 82	40	65	0.25	41	140	5	502	406	6 10	30 x 85	80	67	55	54	0.95	100	45	5	PTA MERV 13	40	6350	8500	①																																																			
AHU-2	DAIKIN OAH035DCM	SOUTH CLASSROOMS - LEVELS 1 & 2	OUTDOOR DRAW-THROUGH	PLENUM	17165	3.5"	3230	14"	(6) 2.2	480/3	PLENUM	17165	1.5"	3230	14"	(6) 1.0	480/3	463	2 8	30 x 76	40	65	0.25	46	140	5	555	463	6 10	30 x 79	80	67	55	54	0.95	111	45	5	PTA MERV 13	37	6670	8000	①																																																			
AHU-3	DAIKIN OAH013DCM	SOUTHWEST CLASSROOMS - LEVELS 1 & 2	OUTDOOR DRAW-THROUGH	PLENUM	6295	3.5"	1950	14"	6.0	480/3	PLENUM	6295	1.5"	3230	14"	2.8	480/3	170	2 8	42 x 40	40	65	0.25	17	140	5	210	170	6 10	42 x 43	80	67	55	54	0.95	42	45	5	PTA MERV 13	14	3075	5000	①																																																			
AHU-12	DAIKIN CAH009DCM	CAFETERIA	INDOOR DRAW-THROUGH	PLENUM	6000	3.5"	2600	14"	6.7	480/3	PLENUM	6000	1.5"	3230	14"	7.0	480/3	270	2 8	42 x 38	40	85	0.25	27	140	5	208	162	8 10	30 x 39	80	67	55	54	0.95	42	45	5	PTA MERV 13	14	3500	3000	SINGLE ZONE VAV																																																			
AHU-16	DAIKIN BCAD0081	KITCHEN	INDOOR VERTICAL	PLENUM	650	2.5"	1800	14"	0.75	480/3	-	-	-	-	-	-	-	32	2 12		40	85	0.25	3	140	5	21	18	6 12		80	67	55	54	0.95	4	45	5	PTA MERV 13	3	250	500	SINGLE ZONE VAV																																																			
AHU-143	DAIKIN CAH008GDCM	BOYS LOCKER, STAGE	INDOOR DRAW-THROUGH	PLENUM	3370	3.5"	2600	14"	3.5	480/3	PLENUM	2000	1.5"	3230	14"	2.3	480/3	91	2 8	33 x 26	40	65	0.25	9	140	5	105	91	8 12	33 x 29	80	67	55	54	0.95	21	45	5	PTA MERV 13	7.5	1275	2500																																																				
AHU-145A	DAIKIN CAH009GDCM	GYM	INDOOR DRAW-THROUGH	PLENUM	4000	3.5"	2600	14"	6.3	480/3	PLENUM	4000	1.5"	3230	14"	3.3	480/3	150	2 8	30 x 36	40	85	0.25	15	140	7	130	108	8 10	30 x 39	80	67	55	54	0.95	26	45	7	PTA MERV 13	14	1700	3000	SINGLE ZONE VAV																																																			
AHU-145B	DAIKIN CAH009GDCM	GYM	INDOOR DRAW-THROUGH	PLENUM	4000	3.5"	2600	14"	6.3	480/3	PLENUM	4000	1.5"	3230	14"	3.3	480/3	150	2 8	30 x 36	40	85	0.25	15	140	7	130	108	8 10	30 x 39	80	67	55	54	0.95	26	45	7	PTA MERV 13	14	1700	3000	SINGLE ZONE VAV																																																			
AHU-148	DAIKIN CAH009GDCM	GIRLS LOCKER, MUSIC	INDOOR DRAW-THROUGH	PLENUM	4200	3.5"	2600	14"	6.3	480/3	PLENUM	2950	1.5"	3230	14"	3.3	480/3	112	2 8	30 x 36	40	65	0.25	11	140	5	125	112	8 10	30 x 39	80	67	55	54	0.95	25	45	5	PTA MERV 13	10	1250	2500																																																				
NOTES: 1. COIL PRESSURE DROPS NOTED ARE MAXIMUMS, AND SHALL NOT BE EXCEEDED. 2. SEE TYPICAL AHU CONFIGURATION & MAXIMUM UNIT DIMENSIONS ON SHEET M406 . 3. ALL UNITS SHALL HAVE 0-100% OA ECONOMIZER CAPACITY.																														4. ALL UNITS SHALL BE ECM OR DIRECT DRIVE W/ VFD'S. 5. MANUFACTURER TO SELECT COIL ROWS & FPI TO PROVIDE CAPACITY NOTED. ROWS / FPI INDICATED ARE MINIMUMS. 6. OTHER COIL SIZES MAY BE USED PROVIDED UNIT DIMENSIONS AND COIL MAX FPM AND PD'S ARE NOT EXCEEDED.																														7. PROVIDE ALL UNITS WITH CO2 CONTROL. LOCATE IN MAIN RETURN AIR DUCTS OR AS INDICATED ON FLOOR PLANS. SEE DRAWINGS AND SPECIFICATIONS FOR ADDED CO2 SENSORS AND CONTROL IN OTHER AREAS/ROOMS. 8. TSP IS BASED ON THE FOLLOWING: 0.15" OA LOUVER, 0.15" CONTROL DAMPER, 0.15" HEATING COIL, 0.5" COOLING COIL, 0.25" DIRTY FILTER, 0.10" CASING LOSS & REMAINDER SA DUCT SYSTEM. ADJUST TSP (& FAN RPM/HP) IF UNIT LOSSES ARE DIFFERENT (SUBJECT TO ENGINEER'S APPROVAL).																														① PROVIDE W/ ROOF CURB PER DETAIL 3 ON SHEET M405.				

CHILLER SCHEDULE

SYMBOL	SPECIFIED MANUFACTURER AND SERIES NUMBER	TYPE	COOLING PERFORMANCE							COMPRESSORS		FANS		ELECTRICAL			PHYSICAL SIZE ***	REMARKS
			CAP TONS	EFF. (MIN)	EWT	LWT	GPM	WATER PD, FT	OAT	QTY**	RLA EA.	QTY**	FLA EA.	MCA	MOP	VOLTS/PH		
CH-1	DAIKIN - HIGH EFFICIENCY AGZ150E	HEAT RECOVERY AIR COOLED SCROLL	152.5	11.2 EER	54	44	365	15	95	4	73	10	3.6	334 5"	400 15"	460/3 120/1"	238"L x 88"W x 99"H	W/ CIRCUIT BREAKER DISCONNECT & ACOUSTICAL ATTENUATION PACKAGE
* UNIT HEAT TAPE 500 WATTS. ** COMPRESSOR & FAN QTY SHOWN IS MINIMUM. *** UNIT SHALL NOT EXCEED THESE DIMENSIONS:																		

AIR CONDITIONING UNIT - SPLIT SYSTEM TYPE

SYMBOL	BASIS OF DESIGN MANUFACTURER AND SERIES NO.	AREA SERVED	COOLING CAP.		A - INDOOR - UNIT ***		B - OUTDOOR - UNIT ***				TOTAL ELECTRICAL**		MAX. OUTDOOR UNIT WEIGHT	MAX. INDOOR UNIT WEIGHT	REMARKS
			TOTAL MBH	EER	FAN		COMPRESSOR		FAN		MCA	VOLT/PH			
					CFM	FLA	QTY	RLA (EA)	QTY	FLA					
AC-035	mitsubishi PKA/PUY	MDF 035	12	15.2	320	0.33	1	12 (EA)	1	0.35	13	208/1	150	50	W/ CONDENSATE PUMP
* COOLING CAPACITY IS AHRI RATING: AT 80° F DB, 67° F WB INDOOR COIL EAT AND 95° F OUTDOOR COIL EAT. ** INDOOR UNIT IS POWERED OFF OUTDOOR UNIT DISCONNECT. *** ON PLANS "A" DESIGNATES INDOOR UNIT, "B" DESIGNATES OUTDOOR UNIT. (e.g. AC-1B IS AC-1 OUTDOOR UNIT)															

SINGLE ZONE VAV HEAT PUMP SCHEDULE

SYMBOL	BASIS OF DESIGN MANUFACTURER AND SERIES NO.	UNIT CONFIGURATION	AREA SERVED	COOLING CAP *				HEATING CAP *		INDOOR FAN			OUTDOOR FAN		COMPRESSOR		SUPPLEMENTARY HEATER	ELECTRICAL			FILTERS		MIN. OA CFM	MAX WEIGHT LBS	REMARKS	
				TOTAL MBH	SENS MBH	EFFICIENCY		MBH	EFFICIENCY	CFM	ESP	HP	QTY	HP (EA)	QTY	RLA (EA)		KW	MCA	MOP	VOLTS / PH	TYPE				MIN. SF
AHU-061	DAIKIN REBEL DPS020A	OUTDOOR PACKAGED SINGLE ZONE VAV	AUX GYM 061	253	188	10.6 EER	18.3 IEER	227	3.2 COP	7000	1.5"	7.5	2	4.0	1	30.1	45	129.4	150	480/3	PTA MERV 13	27	3150	4500	W/ SCR CONTROL, AND CO2 SENSOR	
<div>* COOLING CAPACITY IS AHRI RATING: AT 80°F DB; 67°F WB INDOOR COIL EAT AND 95°F OUTDOOR COIL EAT.</div> <div>NOTE: PROVIDE ALL UNITS WITH 0-100% OA ECONOMIZER</div> <div>** HEATING CAPACITY IS AHRI HI-TEMP RATING: AT 47°F; 43°F WB INDOOR COIL EAT AND 68°F OUTDOOR COIL EAT.</div>																										

AIR INLET & OUTLET SCHEDULE

SYMBOL	TYPE	BASIS OF DESIGN MANUFACTURER AND SERIES NO.	REMARKS
CD	CEILING DIFFUSER	TITUS MCD	MODULAR CORE DIFFUSER, ADJUSTABLE DISCHARGE, SQUARE NECK
CD-P	CEILING DIFFUSER - PERFORATED	TITUS PAR	SQUARE NECK, PERFORATED FACE
CRG	CEILING RETURN GRILLE	TITUS 50F	1/2"x1/2"x1/2" CUBE CORE
CEG	CEILING EXHAUST GRILLE	TITUS 50F	1/2"x1/2"x1/2" CUBE CORE
WSG-A	WALL SUPPLY GRILLE	KEES GHD0 SUPPLY	HORIZ. FACE BARS 1/2" O.C., 0" DEFLECTION
WRG-A	WALL RETURN GRILLE	KEES GHD40 RETURN	HORIZ. FACE BARS 1/2" O.C., 40" DEFLECTION
WSG	WALL SUPPLY GRILLE	TITUS 271 SERIES	SINGLE DEFLECTION, HORIZ. FACE BARS
WSR	WALL SUPPLY REGISTER	TITUS 271 SERIES	SINGLE DEFLECTION, HORIZ. FACE BARS, OPPOSED BLADE DAMPER
WRG	WALL RETURN GRILLE	TITUS 350 SERIES	HORIZ. FACE BARS 3/4" O.C., 35" DEFLECTION
WEG	WALL EXHAUST GRILLE	TITUS 350 SERIES	HORIZ. FACE BARS 3/4" O.C., 35" DEFLECTION
LSD	LINEAR SLOT DIFFUSER	TITUS FL	
TG	TRANSFER GRILLE	TITUS 50F	1/2"x1/2"x1/2" CUBE CORE
RCD	ROUND CEILING DIFFUSER	TITUS TMRA-AA	WITH WELDED CHAIN ATTACHMENT OF CORE & GRID TO BODY
RVR	ROOF VENT RELIEF	GREENHECK WRH	LOUVERED PENTHOUSE
RVI	ROOF VENT INTAKE	GREENHECK WIH	LOUVERED PENTHOUSE
NOTES: 1. CEILING DIFFUSERS (CD) SHALL HAVE NO. & DIRECTION OF THROWS AS INDICATED ON PLANS. (E.G. CD-3 = 3 WAY THROW) 2. ALL AIR TERMINALS SHALL HAVE FACTORY FINISH, COLOR AS SELECTED BY ARCHITECT. 3. SEE LEGEND FOR TERMINOLOGY USED IN AIR TERMINAL CALL-OUTS ON DRAWINGS. 4. SEE ARCH. FINISH SCHEDULE FOR CEILING TYPES, PROVIDE AIR TERMINALS TO MATCH CEILING CONSTRUCTION INSTALLED IN.			

FAN SCHEDULE

SYMBOL	BASIS OF DESIGN MANUFACTURER AND SERIES NO.	TYPE	AREA SERVED	CFM	ESP	MAX RPM	ELECTRICAL		DRIVE	CONTROL	MAX WEIGHT (LBS)	REMARKS
							HP	VOLTS / PH				
EF-2	GREENHECK G-123-VG	ROOFTOP	BOYS /GIRLS RESTROOMS, SCIENCE PREP 210A	1575	0.375	1550	1/2	115/1	DIRECT	TIME SCHEDULE	100	W/ EC MOTOR, CURB
EF-010	GREENHECK SQ-140	INLINE	BOYS LOCKER	1790	0.375	1550	3/4	115/1	DIRECT	TIME SCHEDULE	150	W/ EC MOTOR
EF-16A	GREENHECK SQ-90	INLINE	KITCHEN 016 GENERAL EXHAUST	550	0.375	1550	1/4	115/1	DIRECT	TIME SCHEDULE	75	W/ EC MOTOR ①
EF-16B	GREENHECK SQ-140	INLINE	KITCHEN 016 TYPE II HOOD	1688	1.5	1550	3/4	460/3	DIRECT	HOOD SWITCH	150	W/ EC MOTOR
EF-033	GREENHECK SQ-140	INLINE	BOILER 033	1050	0.375	1140	3/4	115/1	DIRECT	Ⓣ	150	W/ EC MOTOR
EF-047	GREENHECK SQ-140	INLINE	GIRLS LOCKER	1895	0.375	1550	3/4	115/1	DIRECT	TIME SCHEDULE	150	W/ EC MOTOR
EF-062	GREENHECK SQ-90	INLINE	AUX GYM RESTROOMS	395	0.375	1550	1/4	115/1	DIRECT	TIME SCHEDULE	75	W/ EC MOTOR, CURB
EF-114A	GREENHECK CUE-140	ROOFTOP UPBLAST	FCS 114 - TYPE II HOODS	2100	0.375	1550	3/4	115/1	DIRECT	SWITCH	150	W/ EC MOTOR, CURB
EF-114B	GREENHECK CUE-80	ROOFTOP UPBLAST	FCS 114 - TYPE II HOOD	300	0.375	1550	1/4	115/1	DIRECT	SWITCH	75	W/ EC MOTOR, CURB
EF-133	GREENHECK G-80	INLINE	STAFF TLT 133/134, TLT 135A	240	0.375	1550	1/4	115/1	DIRECT	TIME SCHEDULE	75	W/ EC MOTOR, CURB
EF-145	GREENHECK G-80	ROOFTOP	GYM STORAGE 145 STORAGE 243	260	0.375	1550	1/4	115/1	DIRECT	TIME SCHEDULE	75	W/ EC MOTOR, CURB
EF-203B	GREENHECK G-90	ROOFTOP	KILN 203B	400	0.375	1550	1/4	115/1	DIRECT	Ⓣ	50	W/ EC MOTOR, CURB
EF-204	GREENHECK G-133	ROOFTOP	RESTROOMS, CUST., STORAGE	1530	0.375	1550	3/4	115/1	DIRECT	TIME SCHEDULE	100	W/ EC MOTOR, CURB
EF-228	GREENHECK G-80	ROOFTOP	CUST. 228, IDF 225	210	0.375	1550	1/4	115/1	DIRECT	TIME SCHEDULE	75	W/ EC MOTOR, CURB
NOTES: 1. PROVIDE ALL FANS CONFIGURED TO MEET ENERGY CODE, I.E. PROVIDE WITH PROPER MOTOR EFFICIENCY OR PROVIDE WITH EC MOTOR. MOTOR HP SIZE SCHEDULED IS PRELIMINARY; FINAL EQUIPMENT AND MOTOR SIZE SHALL VARY TO MEET ENERGY CODE REQUIREMENTS.												
2. PROVIDE ALL FANS WITH UNIT MOUNTED DISCONNECT.												
											① INTERLOCK W/ EF-16B, TO BE OFF WHEN EF-16B IS ON.	

WATER HEATER SCHEDULE											
SYMBOL	BASIS OF DESIGN MANUFACTURER AND SERIES NO.	TYPE	AREA SERVED	HEATING CAPACITY INPUT	STORAGE (GAL)	DOMESTIC HW			ELECTRICAL		REMARKS
						GPH	EWT	LWT	POWER	VOLTS/PH	
WH-1	BRADFORD WHITE EF SERIES	TANK TYPE, GAS FIRED	KITCHEN	150 MBH	100	167	40	140	15 FLA	115/1	ASME RATED
WH-2	BRADFORD WHITE EF SERIES	TANK TYPE, GAS FIRED	LOCKER ROOMS	300 MBH	100	418	40	120	15 FLA	115/1	ASME RATED
WH-3	BRADFORD WHITE EF SERIES	TANK TYPE, GAS FIRED	MAIN BUILDING	150 MBH	100	209	40	120	15 FLA	115/1	ASME RATED
WH-4	BRADFORD WHITE CEA20	TANK TYPE, ELECTRIC	AUX GYM	3 KW	19	16	40	120	14 FLA	208/3	ASME RATED

BOILER SCHEDULE									
SYMBOL	BASIS OF DESIGN MANUFACTURER AND SERIES NO.	TYPE	INPUT RATING MBH	OUTPUT CAPACITY MBH	MINIMUM PRESSURE RATING	* EFFICIENCY	ELECTRICAL		REMARKS
							FLA	VOLTS/PH	
B-1	ADVANCED THERMAL HYDRONICS KN PLUS SERIES	GAS FIRED	2600	2498	100 PSI	96.1%	11.3	208/3	FULLY MODULATING, 5:1 TURN DOWN
B-2	ADVANCED THERMAL HYDRONICS KN PLUS SERIES	GAS FIRED	2600	2498	100 PSI	96.1%	11.3	208/3	FULLY MODULATING, 5:1 TURN DOWN
* RATED AT 80°F EWT, 100% FIRING, SEA LEVEL, PER AHRI STANDARDS.									

PUMP SCHEDULE								
SYMBOL	BASIS OF DESIGN MANUFACTURER AND SERIES NO.	TYPE	SERVICE	GPM	HEAD FT. H2O	ELECTRICAL		REMARKS
						HP	VOLTS/PH	
CP-1	BELL & GOSSETT SERIES e-80	INLINE	B-1	260	40	5	460/3	BRONZE FITTED
CP-2	BELL & GOSSETT SERIES e-80	INLINE	B-2	260	40	5	460/3	BRONZE FITTED
CP-3A	BELL & GOSSETT SERIES e-1510	END SUCTION	HEATING WATER	289	120	15	460/3	BRONZE FITTED, W/ VFD (VFD BY DIV. 25)
CP-3B	BELL & GOSSETT SERIES e-1510	END SUCTION	HEATING WATER	289	120	15	460/3	BRONZE FITTED, W/ VFD (VFD BY DIV. 25)
CP-4A	BELL & GOSSETT SERIES e-1510	END SUCTION	CHILLER PRIMARY	365	40	7.5	460/3	BRONZE FITTED, W/ VFD (VFD BY DIV. 25)
CP-4B	BELL & GOSSETT SERIES e-1510	END SUCTION	CHILLER SECONDARY	397	90	15	460/3	BRONZE FITTED, W/ VFD (VFD BY DIV. 25)
CP-5	BELL & GOSSETT NBF	DOMESTIC CIRCULATOR	DOMESTIC HWC	6	10	1/4	115/1	LEAD FREE
CP-6A	BELL & GOSSETT NBF	DOMESTIC CIRCULATOR	BOYS LOCKER ROOMS HWC	1.5	5	1/4	115/1	LEAD FREE
CP-6B	BELL & GOSSETT NBF	DOMESTIC CIRCULATOR	GIRLS LOCKER ROOMS HWC	3	8	1/4	115/1	LEAD FREE
CP-7	BELL & GOSSETT NBF	DOMESTIC CIRCULATOR	KITCHEN HWC	2.5	5	1/4	115/1	LEAD FREE
CP-8	BELL & GOSSETT NBF	DOMESTIC CIRCULATOR	WH-4	0.5	5	1/4	115/1	LEAD FREE

MISCELLANEOUS EQUIPMENT SCHEDULE							
SYMBOL	ITEM DESCRIPTION	SPECIFIED MANUFACTURER AND SERIES NUMBER	AREA SERVED	EQUIPMENT CAPACITY	ELECTRICAL		REMARKS
					POWER	VOLTS / PH	
HT-1	HEAT TRACE	RAYCHEM XL	CHILLER	500 WATTS 5W/LF	500 WATTS	115/1	W/ THERMOSTAT & POWER CONN KIT
HET-1	HEATING EXPANSION TANK	AMTROL	HEATING SYSTEM	211 GALLONS	-	-	VERTICAL TANK, ASME, MAX 150 PSIG
CET-1	COOLING EXPANSION TANK	AMTROL	CHILLER SYSTEM	106 GALLONS	-	-	VERTICAL TANK, ASME, MAX 150 PSIG
UH-1	UNIT HEATER	STERLING HS-48	BOILER ROOM	34,800 BTUH, 140" EWT, 60" EAT, 3.5 GPM	1/20 HP	115/1	
AS-1	AIR & DIRT SEPARATOR	SPIROTERM "SPIROVENT DIRT"	HYDRONIC HEATING SYSTEM	-	-	-	VDN-600 W/ DRAIN
AS-2	AIR & DIRT SEPARATOR	SPIROTERM "SPIROVENT DIRT"	HYDRONIC COOLING SYSTEM	-	-	-	VDN-600 W/ DRAIN
GT-1	GREASE INTERCEPTOR	GREASE GUARDIAN GGX25	KITCHEN 3-COMP SINK	25 GALLONS	1025 WATTS	230/1	
KV-1	KILN VENT	SKUTT "ENVIROVENT 2"	KILN 203B	140 CFM	1.4 AMPS	115/1	DOWN DRAFT KILN VENT, W/ ENVIROLINK CONTROLLER

PLUMBING FIXTURE SCHEDULE						
SYMBOL	DESCRIPTION	W	V	CW	HW	REMARKS
P-1A	WATER CLOSET	4"	2"	1"	-	WALL MOUNT ADA ACCESSIBLE
P-1B	WATER CLOSET	4"	2"	1"	-	WALL MOUNT
P-2A	URINAL	2"	1-1/2"	3/4"	-	WALL MOUNT ADA ACCESSIBLE
P-3A	LAVATORY - STAFF	2"	1-1/2"	1/2"	1/2"	WALL MOUNT, ADA ACCESSIBLE
P-4A	MULTI LAV	2"	1-1/2"	3/4"	3/4"	2 USER, ADA OR JUNIOR HEIGHT
P-5A	SINK	2"	2"	1/2"	1/2"	SS SINGLE COMPARTMENT
P-5B	SINK	2"	2"	1/2"	1/2"	SS DOUBLE COMPARTMENT
P-5C	SINK - ART	2"	2"	1/2"	1/2"	SS SINGLE COMPARTMENT, W/ PLASTER TRAP
P-6A	SERVICE SINK	3"	2"	1/2"	1/2"	FLOOR MOUNT
P-7A	REFRIGERATOR BOX	-	-	1/2"	-	
P-8A	DRINKING FOUNTAIN	2"	1-1/2"	1/2"	-	DUAL UNIT W/ BOTTLE FILLER, 115V/1PH, ADA ACCESSIBLE
P-10A	WALL HYDRANT	-	-	3/4"	-	FREEZE PROOF
P-11A	FLOOR DRAIN	SIZES AS NOTED ON PLANS **				W/ TRAP PRIMER
P-11B	FUNNEL FLOOR DRAIN	SIZES AS NOTED ON PLANS **				W/ TRAP PRIMER
P-11C	FLOOR RECEPTOR	SIZES AS NOTED ON PLANS **				W/ TRAP PRIMER
P-12A	WASHER FITTING	2"	1-1/2"	3/4"	3/4"	
P-13A	EMERGENCY EYEWASH	2"	1-1/2"	3/4"	3/4"	WALL MOUNT, ADA ACCESSIBLE
** PROVIDE W/ 4" W & 2" V UNO.						

integrus

ARCHITECTURE

SEAL OF THE CITY OF KENNESAW
WASHINGTON
PROFESSIONAL ENGINEER
SIGNED
05/28/2021

HULTZ & BHU

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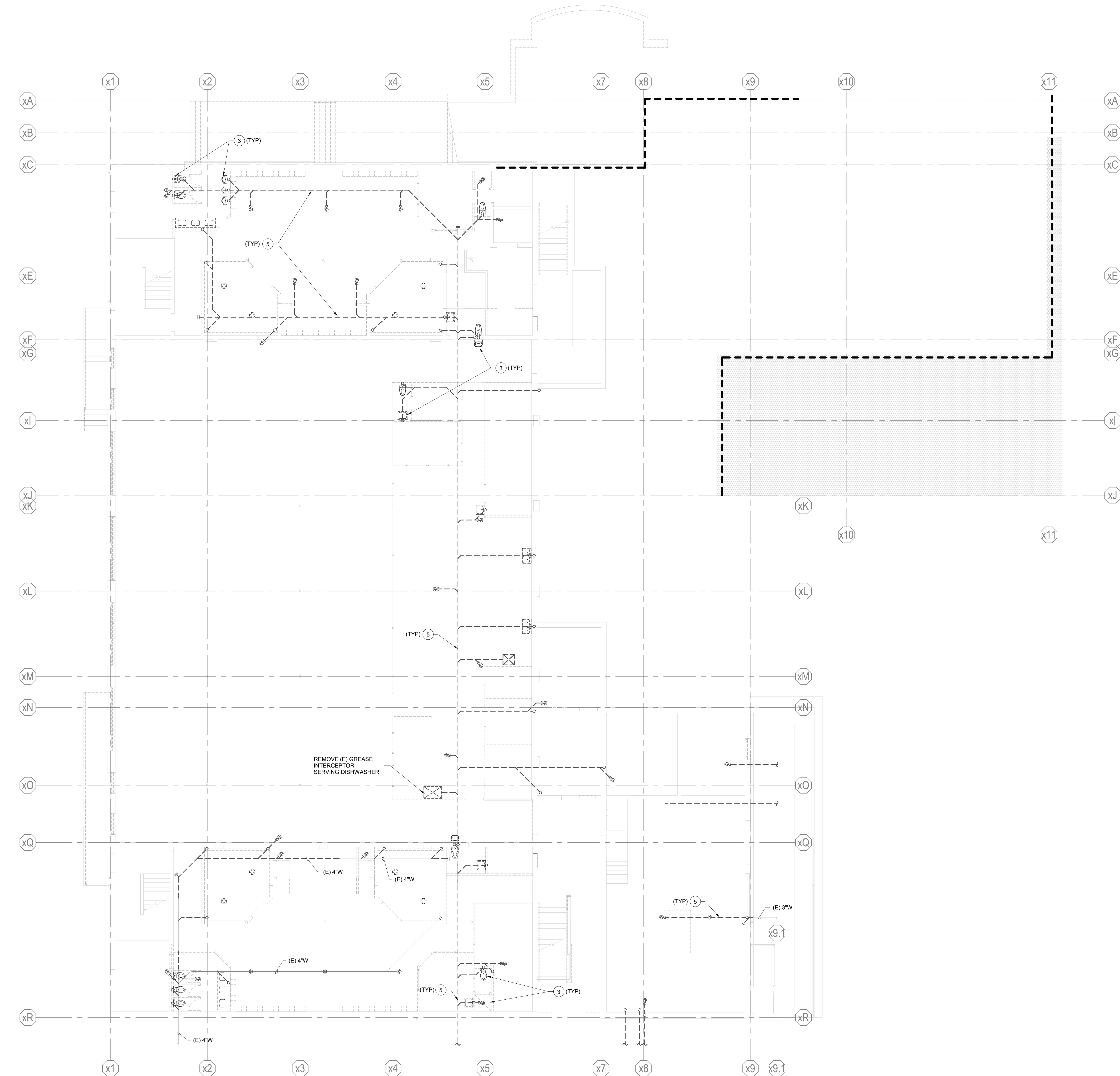
KELSO SCHOOL DISTRICT NO. 458
HUNTINGTON MIDDLE SCHOOL -
MODERNIZATION AND ADDITION
500 REDPATH ST, KELSO, WA 98626

Date:	05/28/2021
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SCHEDULES

M005

BID SET



GENERAL NOTES:

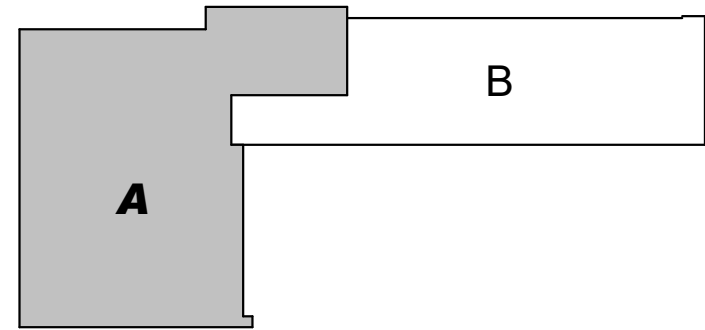
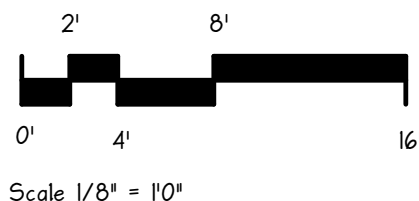
1. FOR ADDITIONAL DEMOLITION NOTES, SEE SHEET M0.01.
2. ALL HW/CW PIPING SHALL BE REMOVED COMPLETE INCLUDING VALVES, FITTINGS, SUPPORTS, AND ACCESSORIES.
3. REMOVE ALL CONTROLS COMPLETE INCLUDING THERMOSTATS, CONTROLLERS, WIRING, TUBING, FITTINGS, CABINETS, COMPRESSOR, & ACCESSORIES.
4. REMOVE HW/CW/W PIPING & SUPPLY, RETURN, EXHAUST DUCTWORK COMPLETE FROM KITCHEN. REMOVE ALL FLOOR DRAINS, RECEPTORS, & TRENCH DRAINS. CAP ALL UNDERGROUND PIPING CONCEALED BELOW FLOOR. CUT & PATCH FLOOR AS NECESSARY TO REMOVE DRAINS & TO CONCEAL PIPING.
5. NOT ALL KEYED NOTES MAY BE USED ON ALL SHEETS.

KEYED NOTES:

- 1 REMOVE EXISTING VAV BOX COMPLETE INCLUDING DUCTWORK, CONTROLS, SUPPORTS, POWER, GRILLES, DIFFUSERS, & ACCESSORIES.
- 2 REMOVE EXISTING GRILLE, DIFFUSER & ASSOCIATED DUCTWORK, SUPPORTS & ACCESSORIES.
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- 9 REMOVE EXISTING HOOD COMPLETE INCLUDING SUPPORTS, DUCTWORK, CONTROLS, FANS, POWER, & ACCESSORIES.
- 10 REMOVE EXISTING DOMESTIC CW RISER COMPLETE INCLUDING PIPING, FITTINGS, VALVES, GAUGES, SUPPORTS, & ACCESSORIES. REMOVE BELOW GRADE PIPING. SAWCUT & PATCH FLOOR AS NECESSARY TO REMOVE PIPING.
- 11 REMOVE EXISTING BOILERS COMPLETE INCLUDING BREECHING, PIPING, SUPPORTS, FITTINGS, VALVES, & ACCESSORIES.
- 12 REMOVE EXISTING STEAM CONVECTOR COMPLETE INCLUDING SUPPORTS, PIPING, VALVES, CONTROLS, POWER & ACCESSORIES.
- 13 CAP EXISTING ROOF CURB WITH SHEETMETAL CAP.
- 14 REMOVE EXISTING ROOF CURB. EXISTING ROOF OPENING TO BE RE-USED.
- 15 EXISTING ROOF CURB TO REMAIN AND BE RE-USED.



BUILDING 1 AREA A FOUNDATION PLAN - PLUMBING DEMO
SCALE: 1/8" = 1'-0"



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HUNTINGTON MIDDLE SCHOOL -
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BLDG 1 AREA A
FOUNDATION
PLAN -
PLUMBING
DEMO

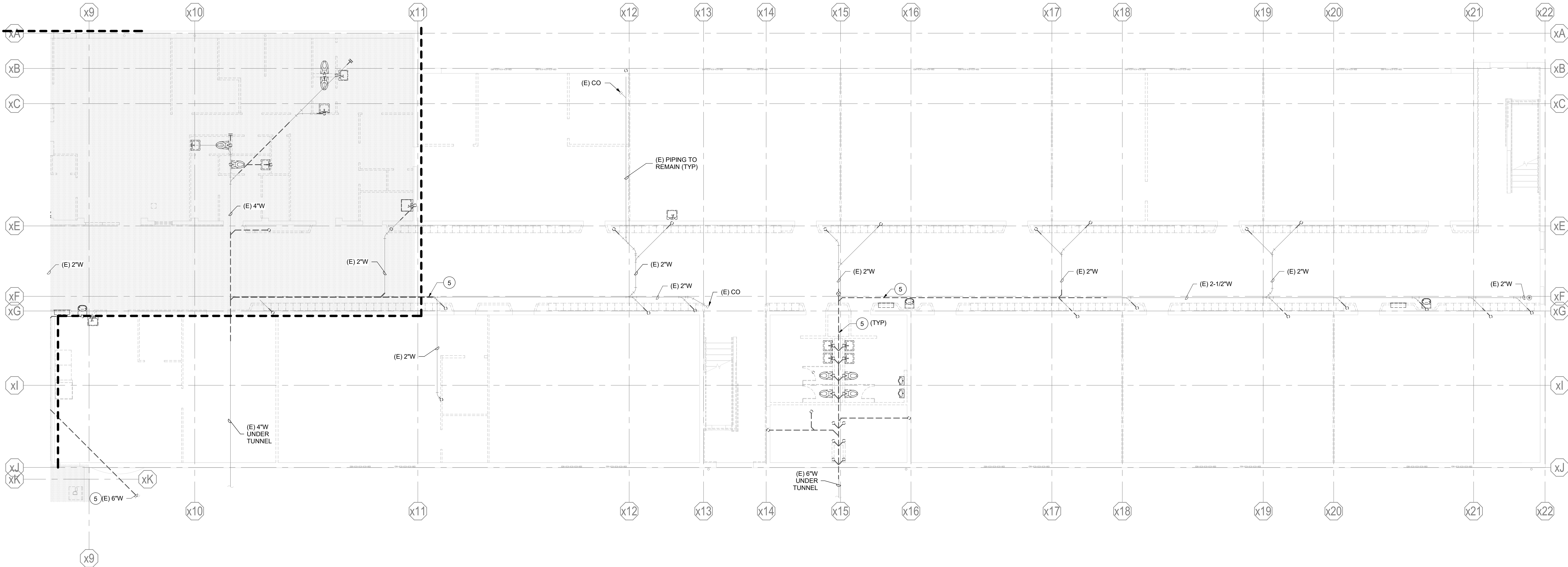
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GENERAL NOTES:

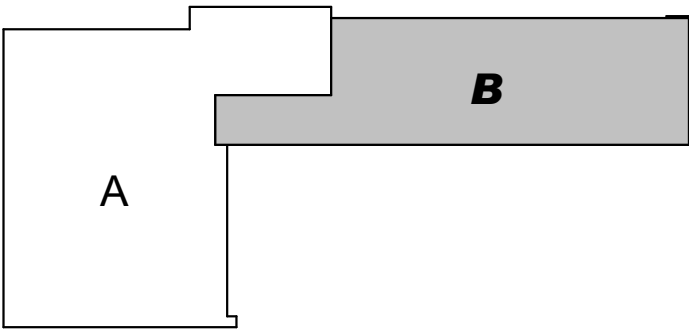
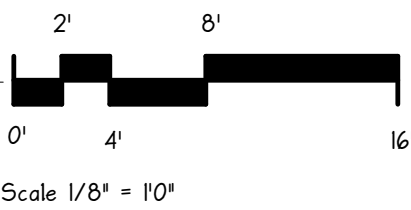
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BUILDING 1 AREA B FOUNDATION PLAN - PLUMBING DEMO
SCALE: 1/8" = 1'-0"



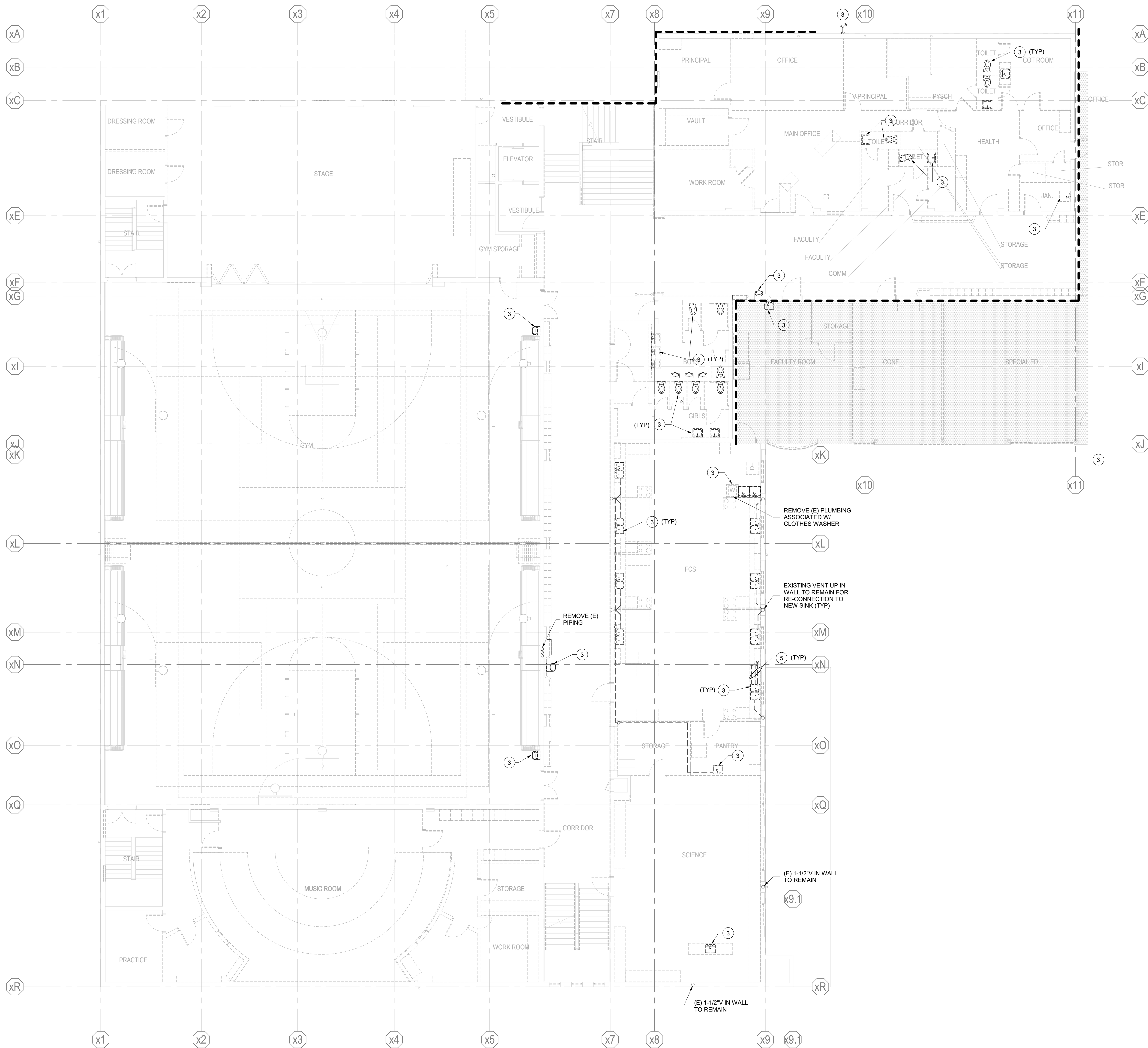
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HUNTINGTON MIDDLE SCHOOL -
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BLDG 1 AREA B
FOUNDATION
PLAN -
PLUMBING
DEMO

MD200B





GENERAL NOTES:

- 1. FOR ADDITIONAL DEMOLITION NOTES, SEE SHEET M0.01.
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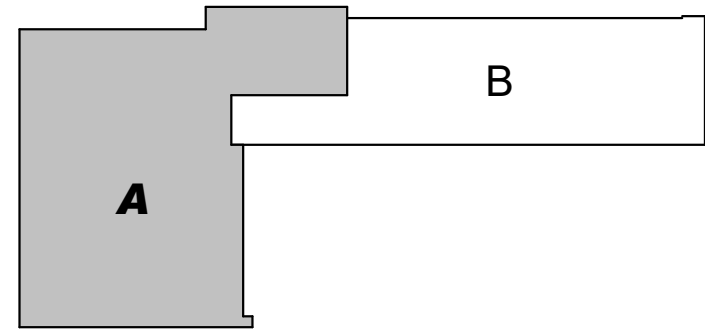
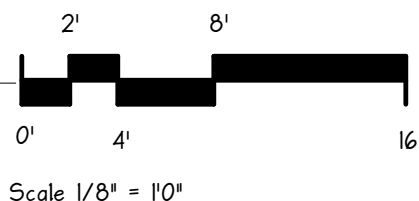
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- 14 REMOVE EXISTING ROOF CURB. EXISTING ROOF OPENING TO BE RE-USED.
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LEVEL 1 BUILDING 1 AREA A - PLUMBING DEMO

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



KELSO SCHOOL DISTRICT NO. 458
HUNTINGTON MIDDLE SCHOOL -
MODERNIZATION AND ADDITION

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LEVEL 1 BLDG 1
AREA A FLOOR
PLAN -
PLUMBING
DEMO

MD301A

integrus

ARCHITECTURE

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TELEPHONE (509) 333-8881 FAX (509) 333-2294

SEAL

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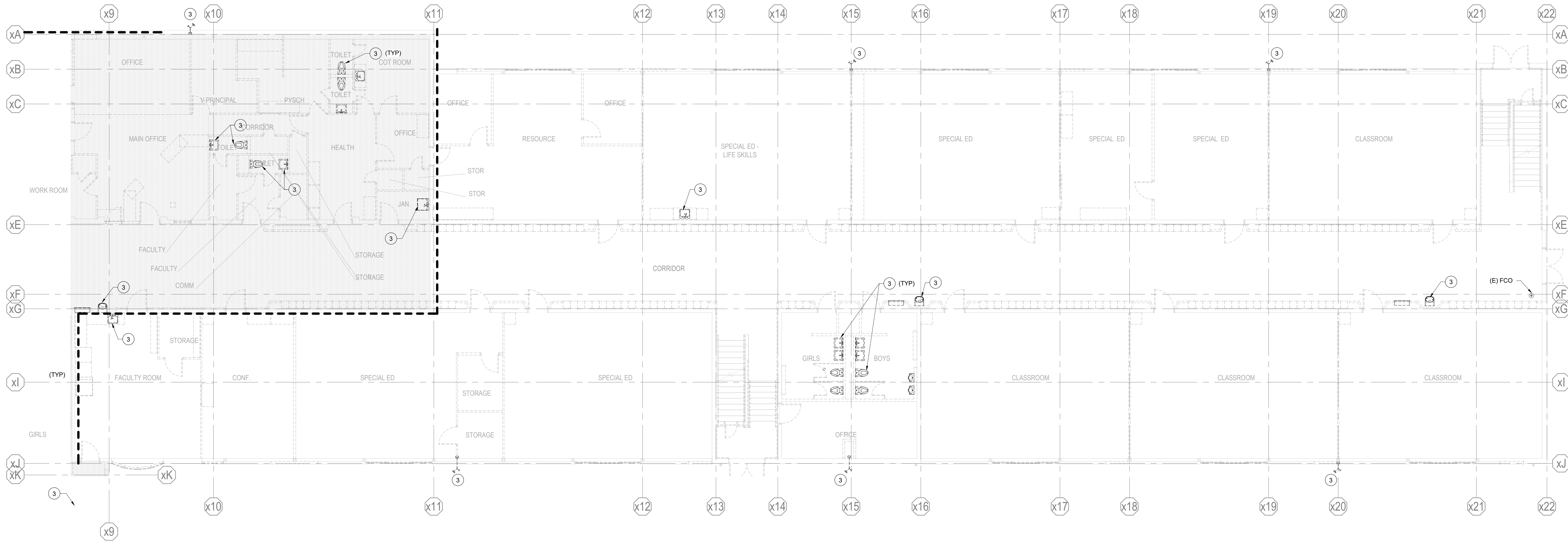
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05/28/2021

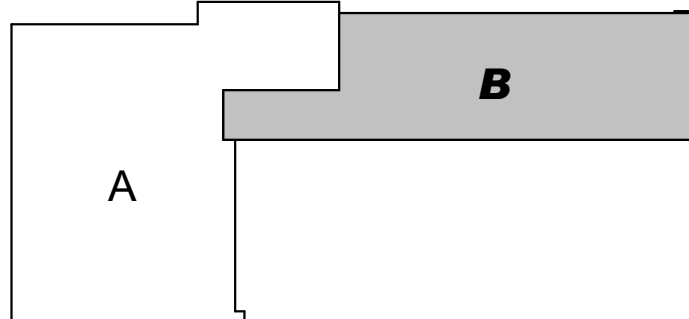
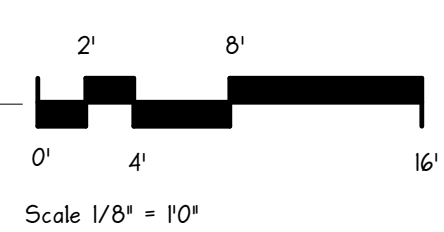
HULTZ & BHU

engineers inc

1111 Everett Ave Suite 100 Tacoma, WA 98402
Phone: (253) 383-3257 Fax: (253) 383-3253
general@hultzbhu.com Job Number: 20-038



 **LEVEL 1 BUILDING 1 AREA B - PLUMBING DEMO**
SCALE: 1/8" = 1'-0"



GENERAL NOTES:

1. FOR ADDITIONAL DEMOLITION NOTES, SEE SHEET M0.01.
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MODERNIZATION AND ADDITION**
500 REDPATH ST, KELSO, WA 98626

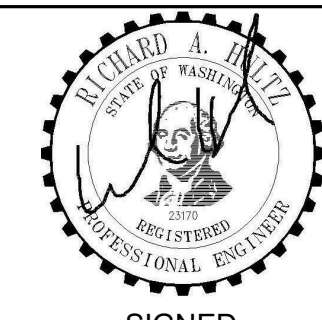
Date:	05/28/2021
Job No.:	21938.00
Drawn By:	TP
Checked by:	NRH
Revisions	
#	Date Description

LEVEL 1 BLDG 1
AREA B FLOOR
PLAN -
PLUMBING
DEMO

MD301B

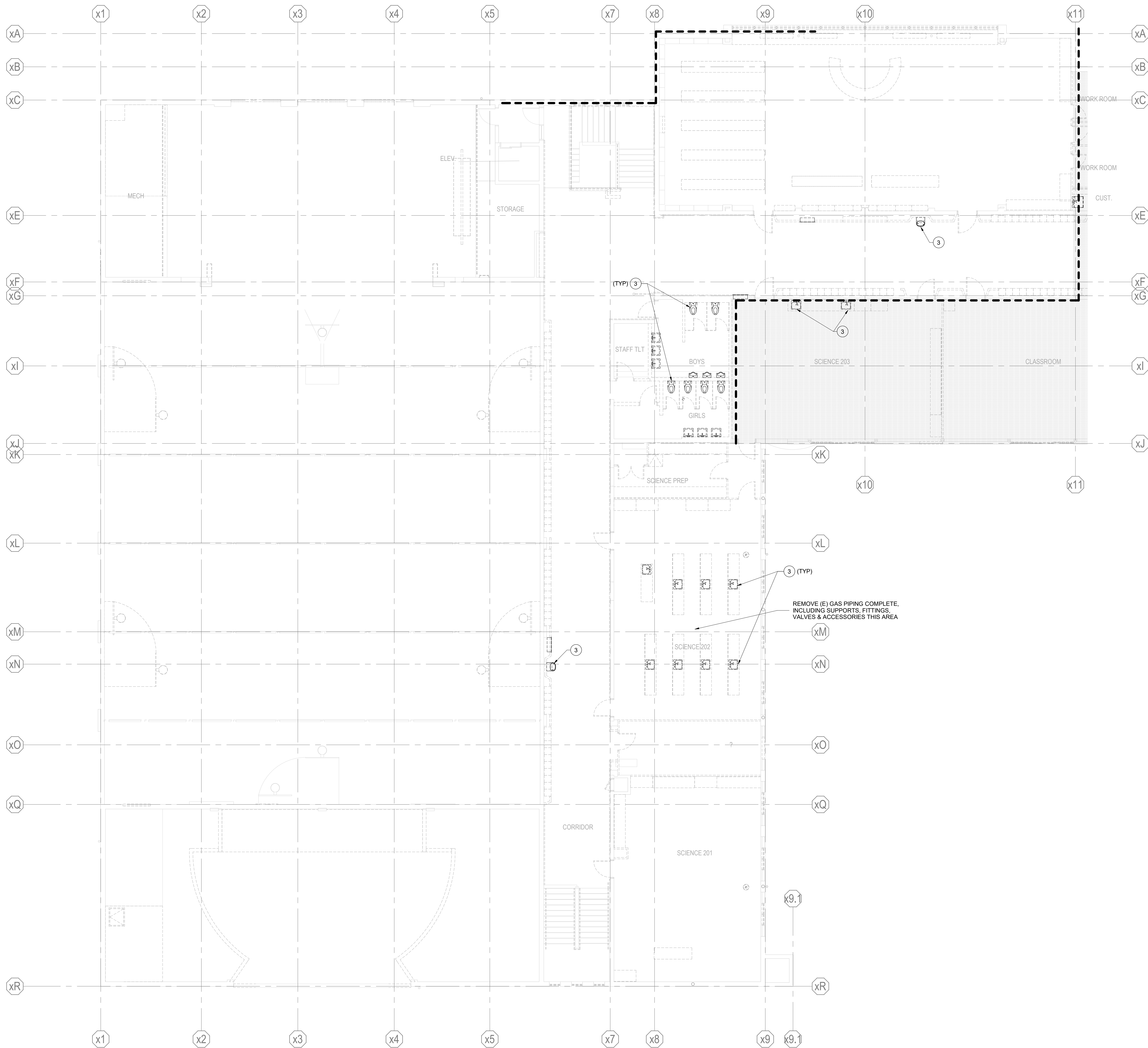


10 SOUTH CEDAR, BUNKAN, WA 98024
TELEPHONE: (360) 333-8881 FAX: (360) 333-2194

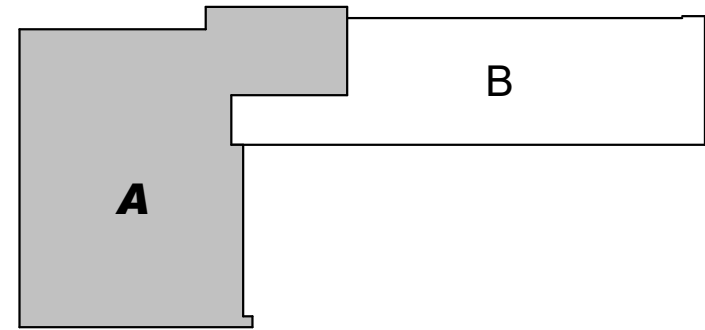
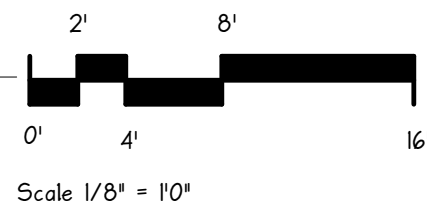


SIGNED
09/28/2021

HULTZ, BHU
engineers inc
Tacoma, WA 98402
1111 Everett Ave Suite 100
Phone: (253) 383-3257 Fax: (253) 383-3253
general@hultzbhu.com Job Number: 20-038



LEVEL 2 BUILDING 1 AREA A- PLUMBING DEMO
SCALE: 1/8" = 1'-0"



GENERAL NOTES:

1. FOR ADDITIONAL DEMOLITION NOTES, SEE SHEET M0.01.
2. ALL HW/CW PIPING SHALL BE REMOVED COMPLETE INCLUDING VALVES, FITTINGS, SUPPORTS, AND ACCESSORIES.
3. REMOVE ALL CONTROLS COMPLETE INCLUDING THERMOSTATS, CONTROLLERS, WIRING, TUBING, FITTINGS, CABINETS, COMPRESSOR, & ACCESSORIES.
4. REMOVE HW/CW/W PIPING & SUPPLY, RETURN, EXHAUST DUCTWORK COMPLETE FROM KITCHEN. REMOVE ALL FLOOR DRAINS, RECEPTORS, & TRENCH DRAINS. CAP ALL UNDERGROUND PIPING CONCEALED BELOW FLOOR. CUT & PATCH FLOOR AS NECESSARY TO REMOVE DRAINS & TO CONCEAL PIPING.
5. NOT ALL KEYED NOTES MAY BE USED ON ALL SHEETS.

KEYED NOTES:

- 1 REMOVE EXISTING VAV BOX COMPLETE INCLUDING DUCTWORK, CONTROLS, SUPPORTS, POWER, GRILLES, DIFFUSERS, & ACCESSORIES.
- 2 REMOVE EXISTING GRILLE, DIFFUSER & ASSOCIATED DUCTWORK, SUPPORTS & ACCESSORIES.
- 3 REMOVE EXISTING PLUMBING FIXTURE COMPLETE INCLUDING HW/CW/W PIPING, SUPPORTS & ACCESSORIES.
- 4 REMOVE EXISTING THERMOSTAT COMPLETE INCLUDING WIRING, CONTROLLER, & ACCESSORIES.
- 5 REMOVE EXISTING PIPING COMPLETE INCLUDING SUPPORTS, FITTINGS, VALVES & ACCESSORIES.
- 6 REMOVE EXISTING EXHAUST FAN COMPLETE INCLUDING SUPPORTS, DUCTWORK, GRILLES, CONTROLS, POWER, & ACCESSORIES.
- 7 REMOVE EXISTING WATER HEATER COMPLETE INCLUDING PIPING, VALVES, FITTINGS, SUPPORTS CONTROLS, POWER, & ACCESSORIES.
- 8 REMOVE EXISTING DUCTWORK COMPLETE INCLUDING GRILLES, SUPPORTS, FITTINGS, & ACCESSORIES.
- 9 REMOVE EXISTING HOOD COMPLETE INCLUDING SUPPORTS, DUCTWORK, CONTROLS, FANS, POWER, & ACCESSORIES.
- 10 REMOVE EXISTING DOMESTIC CW RISER COMPLETE INCLUDING PIPING, FITTINGS, VALVES, GAUGES, SUPPORTS, & ACCESSORIES. REMOVE BELOW GRADE PIPING. SAWCUT & PATCH FLOOR AS NECESSARY TO REMOVE PIPING.
- 11 REMOVE EXISTING BOILERS COMPLETE INCLUDING BREECHING, PIPING, SUPPORTS, FITTINGS, VALVES, & ACCESSORIES.
- 12 REMOVE EXISTING STEAM CONVECTOR COMPLETE INCLUDING SUPPORTS, PIPING, VALVES, CONTROLS, POWER & ACCESSORIES.
- 13 CAP EXISTING ROOF CURB WITH SHEETMETAL CAP.
- 14 REMOVE EXISTING ROOF CURB. EXISTING ROOF OPENING TO BE RE-USED.
- 15 EXISTING ROOF CURB TO REMAIN AND BE RE-USED.

KELSO SCHOOL DISTRICT NO. 458 HUNTINGTON MIDDLE SCHOOL - MODERNIZATION AND ADDITION

500 REDPATH ST, KELSO, WA 98626

Date:	05/28/2021
Job No.:	21938.00
Drawn By:	TP
Checked by:	NRH
Revisions	
#	Date Description

LEVEL 2 BLDG 1
AREA A FLOOR
PLAN -
PLUMBING
DEMO

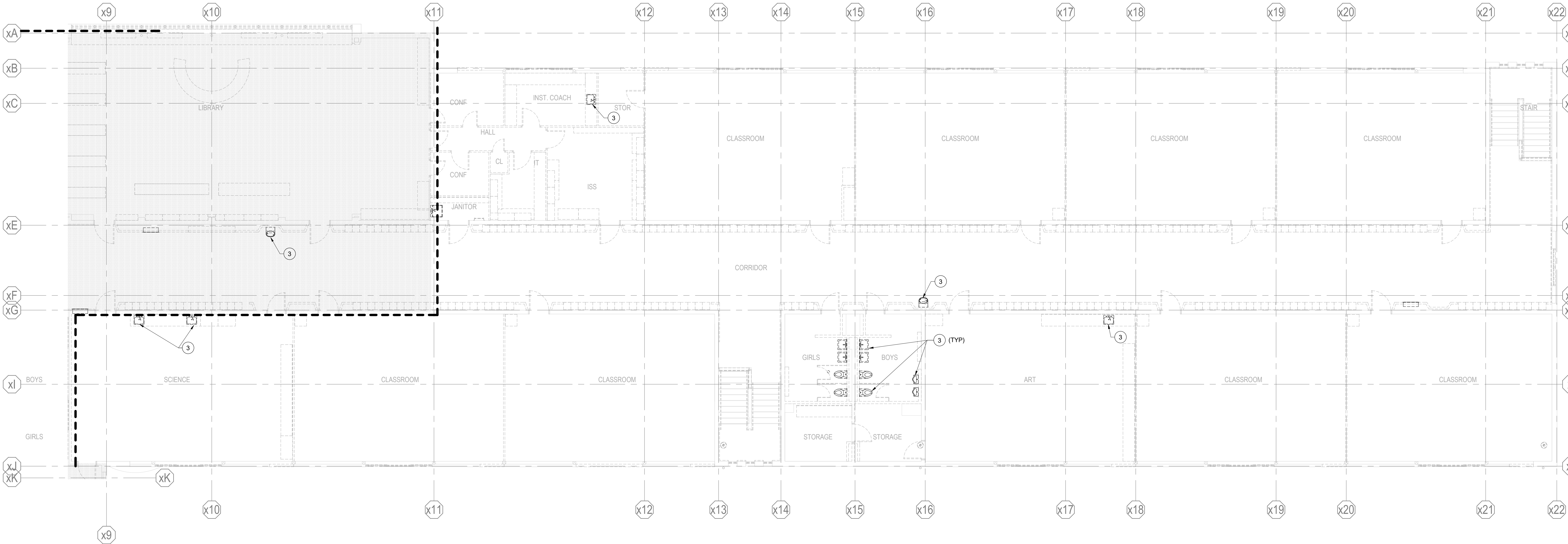
MD302A

GENERAL NOTES:

1. FOR ADDITIONAL DEMOLITION NOTES, SEE SHEET M0.01.
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3. REMOVE ALL CONTROLS COMPLETE INCLUDING THERMOSTATS, CONTROLLERS, WIRING, TUBING, FITTINGS, CABINETS, COMPRESSOR, & ACCESSORIES.
4. REMOVE HW/CW/W PIPING & SUPPLY, RETURN, EXHAUST DUCTWORK COMPLETE FROM KITCHEN. REMOVE ALL FLOOR DRAINS, RECEPTORS, & TRENCH DRAINS. CAP ALL UNDERGROUND PIPING CONCEALED BELOW FLOOR. CUT & PATCH FLOOR AS NECESSARY TO REMOVE DRAINS & TO CONCEAL PIPING.
5. NOT ALL KEYED NOTES MAY BE USED ON ALL SHEETS.

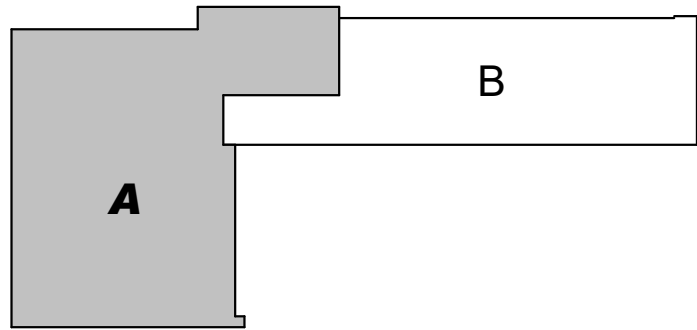
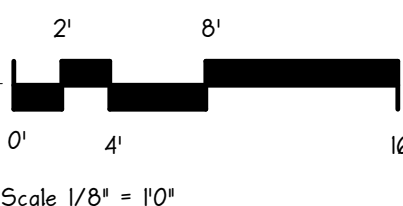
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- 2 REMOVE EXISTING GRILLE, DIFFUSER & ASSOCIATED DUCTWORK, HW/CW/W PIPING, SUPPORTS & ACCESSORIES.
- 3 REMOVE EXISTING PLUMBING FIXTURE COMPLETE INCLUDING SUPPORTS, DUCTWORK, GRILLES, CONTROLS, POWER, & ACCESSORIES.
- 4 REMOVE EXISTING THERMOSTAT COMPLETE INCLUDING WIRING, CONTROLLER, & ACCESSORIES.
- 5 REMOVE EXISTING PIPING COMPLETE INCLUDING SUPPORTS, FITTINGS, VALVES & ACCESSORIES.
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- 7 REMOVE EXISTING WATER HEATER COMPLETE INCLUDING PIPING, VALVES, FITTINGS, SUPPORTS, CONTROLS, POWER, & ACCESSORIES.
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- 9 REMOVE EXISTING HOOD COMPLETE INCLUDING SUPPORTS, DUCTWORK, CONTROLS, FANS, POWER, & ACCESSORIES.
- 10 REMOVE EXISTING DOMESTIC CW RISER COMPLETE INCLUDING PIPING, FITTINGS, VALVES, GAUGES, SUPPORTS, & ACCESSORIES. REMOVE BELOW GRADE PIPING. SAWCUT & PATCH FLOOR AS NECESSARY TO REMOVE PIPING.
- 11 REMOVE EXISTING BOILERS COMPLETE INCLUDING BREECHING, PIPING, SUPPORTS, FITTINGS, VALVES, & ACCESSORIES.
- 12 REMOVE EXISTING STEAM CONVECTOR COMPLETE INCLUDING SUPPORTS, PIPING, VALVES, CONTROLS, POWER & ACCESSORIES.
- 13 CAP EXISTING ROOF CURB WITH SHEETMETAL CAP.
- 14 REMOVE EXISTING ROOF CURB. EXISTING ROOF OPENING TO BE RE-USED.
- 15 EXISTING ROOF CURB TO REMAIN AND BE RE-USED.



LEVEL 2 BUILDING 1 AREA B- PLUMBING DEMO

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



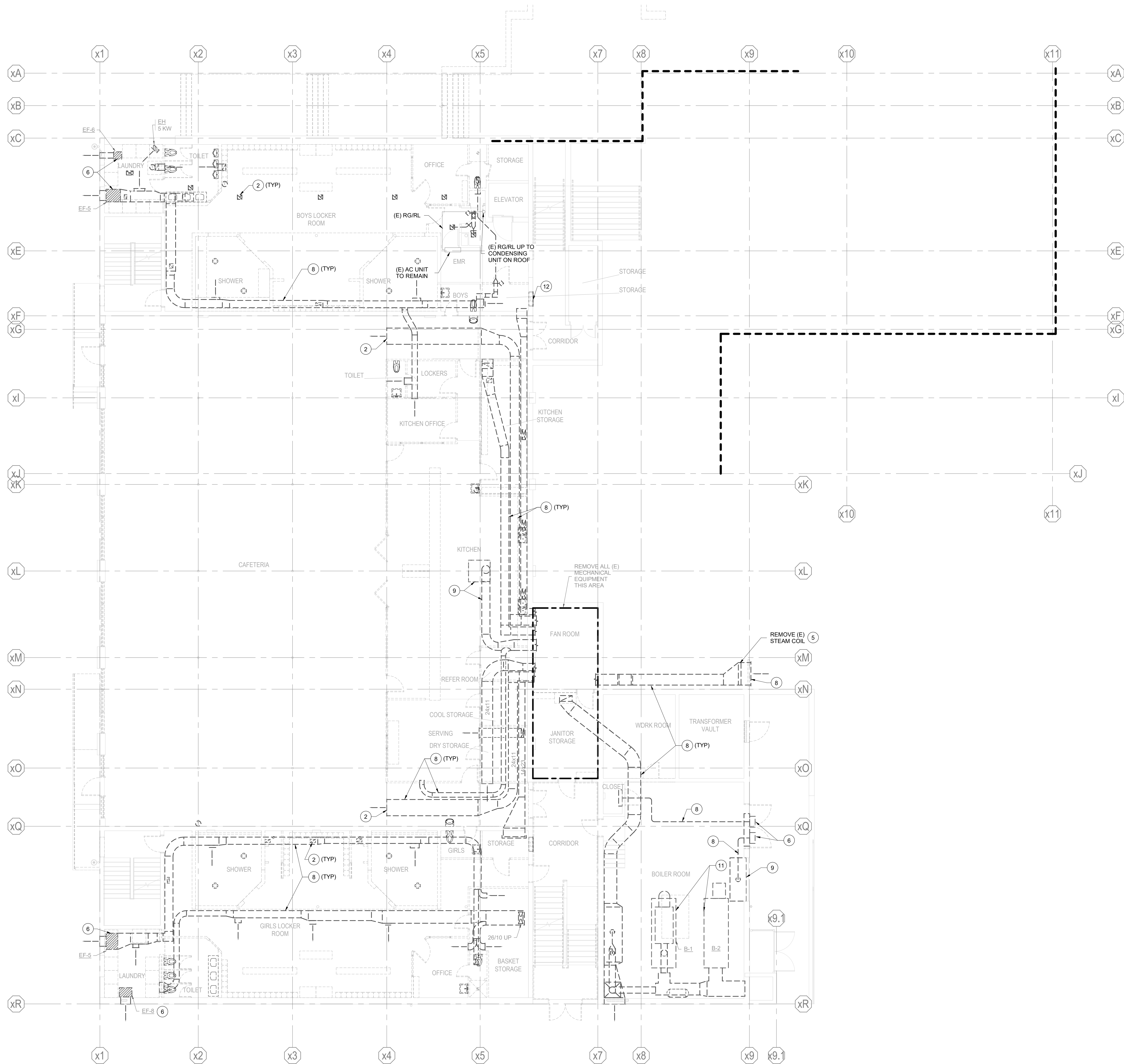
KELSO SCHOOL DISTRICT NO. 458
HUNTINGTON MIDDLE SCHOOL -
MODERNIZATION AND ADDITION

500 REDPATH ST, KELSO, WA 98626

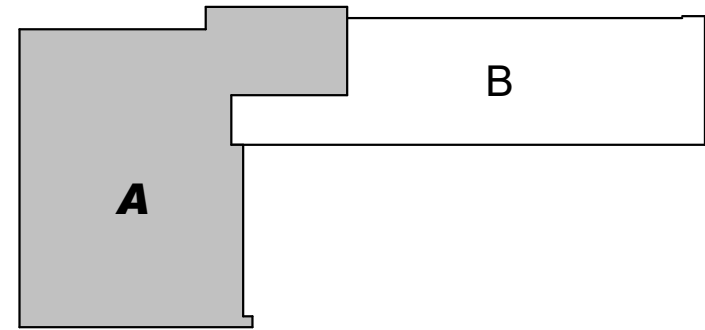
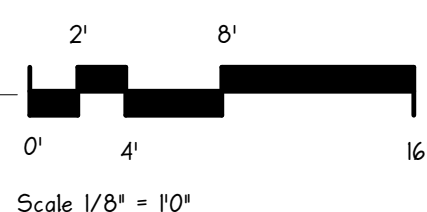
Date:	05/28/2021
Job No.:	21938.00
Drawn By:	TP
Checked by:	NRH
Revisions	
#	Date Description

LEVEL 2 BLDG 1
AREA B FLOOR
PLAN -
PLUMBING
DEMO

MD302B



LEVEL 0 BUILDING 1 FLOOR PLAN - HVAC DEMO
SCALE: 1/8" = 1'-0"



GENERAL NOTES:

1. FOR ADDITIONAL DEMOLITION NOTES, SEE SHEET M0.01.
2. ALL HW/CW PIPING SHALL BE REMOVED COMPLETE INCLUDING VALVES, FITTINGS, SUPPORTS, AND ACCESSORIES.
3. REMOVE ALL CONTROLS COMPLETE INCLUDING THERMOSTATS, CONTROLLERS, WIRING, TUBING, FITTINGS, CABINETS, COMPRESSOR, & ACCESSORIES.
4. REMOVE HW/CW/W PIPING & SUPPLY, RETURN, EXHAUST DUCTWORK COMPLETE FROM KITCHEN. REMOVE ALL FLOOR DRAINS, RECEPTORS, & TRENCH DRAINS. CAP ALL UNDERGROUND PIPING CONCEALED BELOW FLOOR. CUT & PATCH FLOOR AS NECESSARY TO REMOVE DRAINS & TO CONCEAL PIPING.
5. NOT ALL KEYED NOTES MAY BE USED ON ALL SHEETS.

KEYED NOTES:

1. REMOVE EXISTING VAV BOX COMPLETE INCLUDING DUCTWORK, CONTROLS, SUPPORTS, POWER, GRILLES, DIFFUSERS, & ACCESSORIES.
2. REMOVE EXISTING GRILLE, DIFFUSER & ASSOCIATED DUCTWORK, SUPPORTS & ACCESSORIES.
3. REMOVE EXISTING PLUMBING FIXTURE COMPLETE INCLUDING HW/CW/W PIPING, SUPPORTS & ACCESSORIES.
4. REMOVE EXISTING THERMOSTAT COMPLETE INCLUDING WIRING, CONTROLLER, & ACCESSORIES.
5. REMOVE EXISTING PIPING COMPLETE INCLUDING SUPPORTS, FITTINGS, VALVES & ACCESSORIES.
6. REMOVE EXISTING EXHAUST FAN COMPLETE INCLUDING SUPPORTS, DUCTWORK, GRILLES, CONTROLS, POWER, & ACCESSORIES.
7. REMOVE EXISTING WATER HEATER COMPLETE INCLUDING PIPING, VALVES, FITTINGS, SUPPORTS, CONTROLS, POWER, & ACCESSORIES.
8. REMOVE EXISTING DUCTWORK COMPLETE INCLUDING GRILLES, SUPPORTS, FITTINGS, & ACCESSORIES.
9. REMOVE EXISTING HOOD COMPLETE INCLUDING SUPPORTS, DUCTWORK, CONTROLS, FANS, POWER, & ACCESSORIES.
10. REMOVE EXISTING DOMESTIC CW RISER COMPLETE INCLUDING PIPING, FITTINGS, VALVES, GAUGES, SUPPORTS, & ACCESSORIES. REMOVE BELOW GRADE PIPING. SAWCUT & PATCH FLOOR AS NECESSARY TO REMOVE PIPING.
11. REMOVE EXISTING BOILERS COMPLETE INCLUDING BREECHING, PIPING, SUPPORTS, FITTINGS, VALVES, & ACCESSORIES.
12. REMOVE EXISTING STEAM CONVECTOR COMPLETE INCLUDING SUPPORTS, PIPING, VALVES, CONTROLS, POWER & ACCESSORIES.
13. CAP EXISTING ROOF CURB WITH SHEETMETAL CAP.
14. REMOVE EXISTING ROOF CURB. EXISTING ROOF OPENING TO BE RE-USED.
15. EXISTING ROOF CURB TO REMAIN AND BE RE-USED.

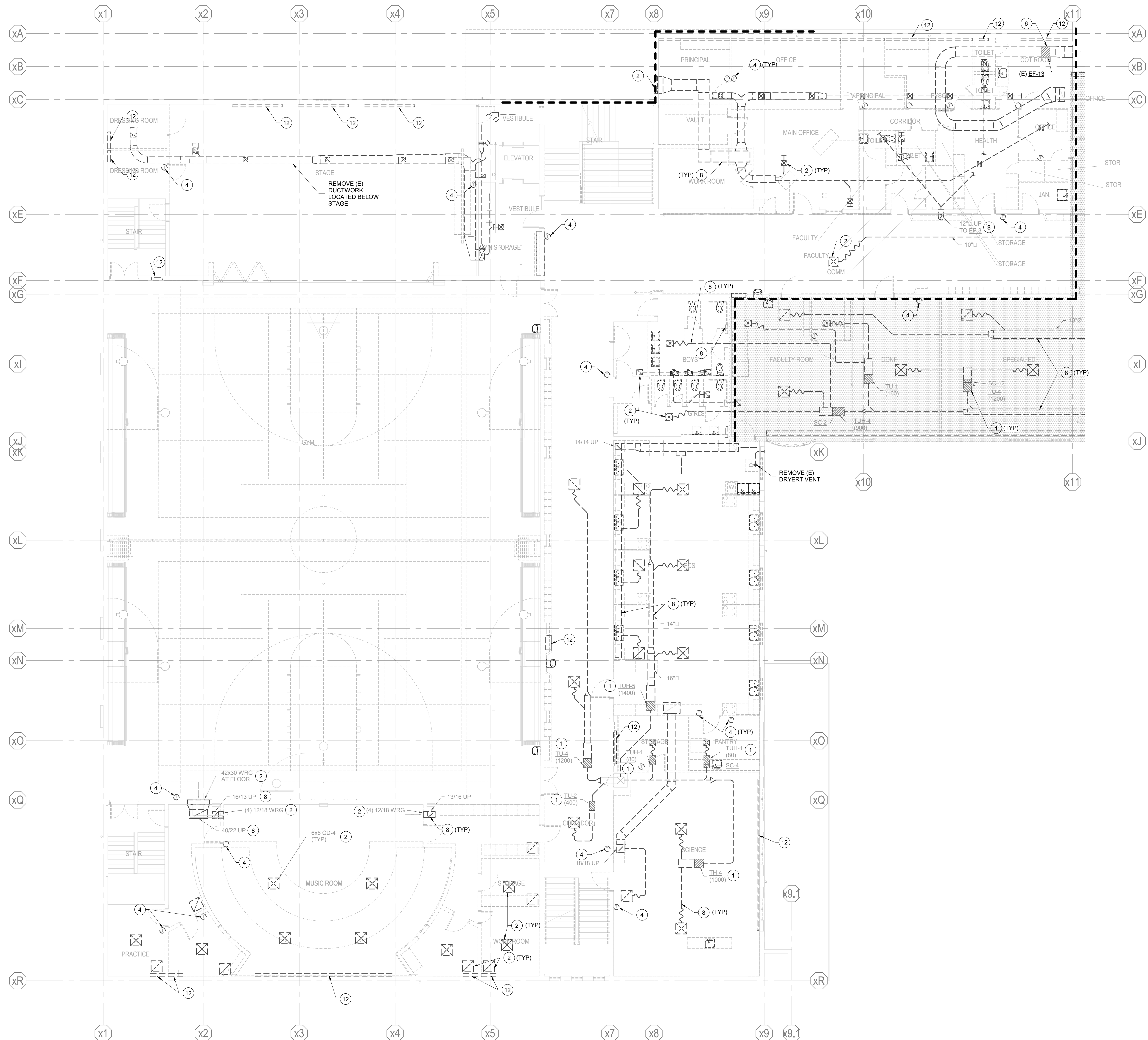
KELSO SCHOOL DISTRICT NO. 458 HUNTINGTON MIDDLE SCHOOL - MODERNIZATION AND ADDITION

500 REDPATH ST, KELSO, WA 98626

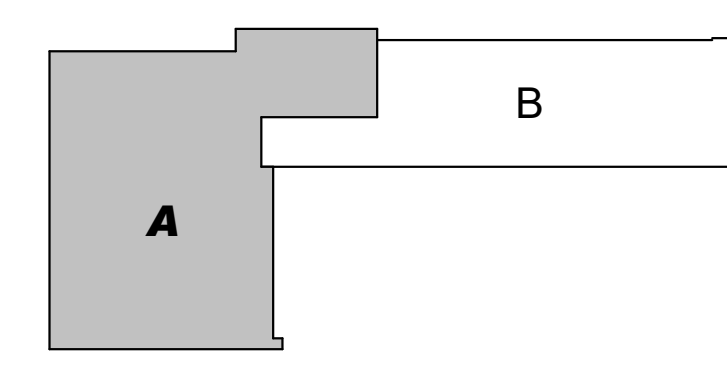
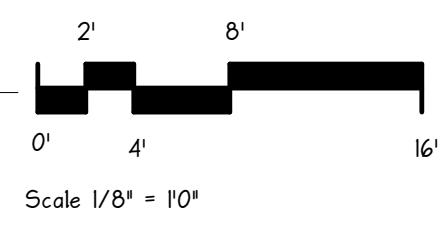
Date:	05/28/2021
Job No.:	21938.00
Drawn By:	TP
Checked by:	NRH
Revisions	
#	Date Description

LEVEL 0
BUILDING 1
FLOOR PLAN -
HVAC DEMO

MD400A



LEVEL 1 BUILDING 1 AREA A - HVAC DEMO
SCALE: 1/8" = 1'-0"



GENERAL NOTES:

1. FOR ADDITIONAL DEMOLITION NOTES, SEE SHEET M0.01.
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- 4 REMOVE EXISTING THERMOSTAT COMPLETE INCLUDING WIRING, CONTROLLER, & ACCESSORIES.
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- 7 REMOVE EXISTING WATER HEATER COMPLETE INCLUDING PIPING, VALVES, FITTINGS, SUPPORTS, CONTROLS, POWER, & ACCESSORIES.
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- 9 REMOVE EXISTING HOOD COMPLETE INCLUDING SUPPORTS, DUCTWORK, CONTROLS, FANS, POWER, & ACCESSORIES.
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KELSO SCHOOL DISTRICT NO. 458
HUNTINGTON MIDDLE SCHOOL -
MODERNIZATION AND ADDITION
500 REDPATH ST, KELSO, WA 98626

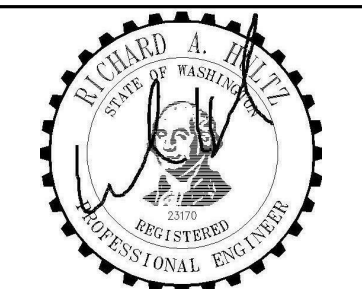
Date:	05/28/2021
Job No.:	21938.00
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Checked by:	NRH
Revisions	
#	Date Description

LEVEL 1
BUILDING 1
AREA A FLOOR
PLAN - HVAC
DEMO

MD401A

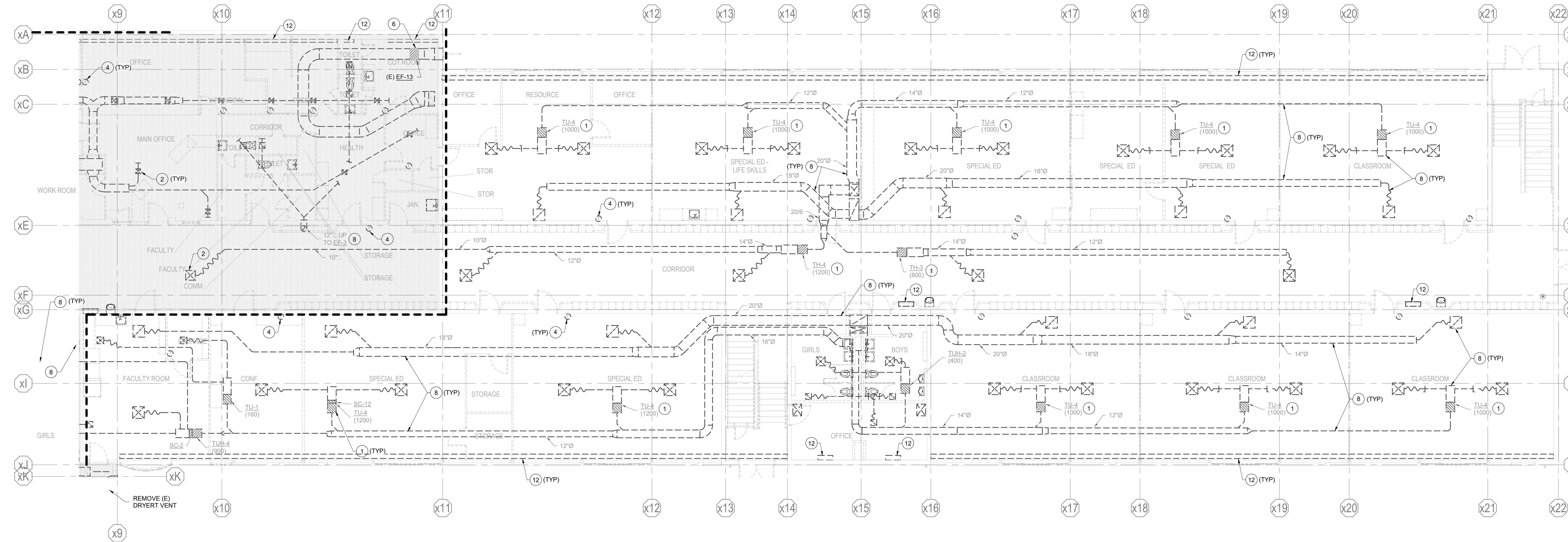


10 SOUTH CEDAR, BOKANE, WA 99264
TELEPHONE: (509) 335-8881 FAX: (509) 335-2194



SIGNED
05/28/2021

HULTZ & BHU
engineers inc
1111 Everett Ave Suite 100 Tacoma, WA 98402
Phone: (253) 383-3253 Fax: (253) 383-3253
general@hultzbhu.com Job Number: 20-038



LEVEL 1 BUILDING 1 AREA B - HVAC DEMO
SCALE: 1/8" = 1'-0"

GENERAL NOTES:

1. FOR ADDITIONAL DEMOLITION NOTES, SEE SHEET M0.01.
2. ALL HW/CW PIPING SHALL BE REMOVED COMPLETE INCLUDING VALVES, FITTINGS, SUPPORTS, AND ACCESSORIES.
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KEYED NOTES:

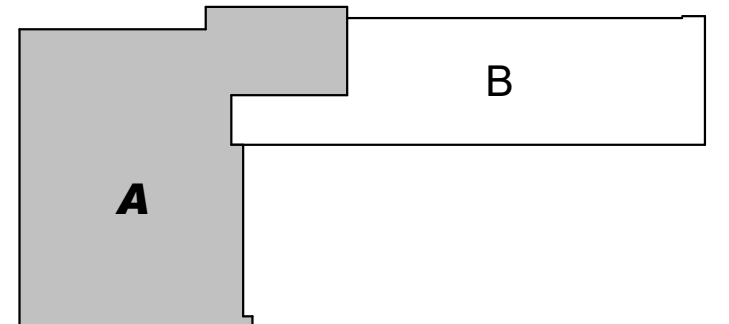
- 1 REMOVE EXISTING VAV BOX COMPLETE INCLUDING DUCTWORK, CONTROLS, SUPPORTS, POWER, GRILLES, DIFFUSERS, & ACCESSORIES.
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**KELSO SCHOOL DISTRICT NO. 458
HUNTINGTON MIDDLE SCHOOL -
MODERNIZATION AND ADDITION**
500 REDPATH ST, KELSO, WA 98626

Date:	05/28/2021
Job No.:	21938.00
Drawn By:	TP
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Revisions	
#	Date Description

LEVEL 1
BUILDING 1
AREA B FLOOR
PLAN - HVAC
DEMO

MD401B

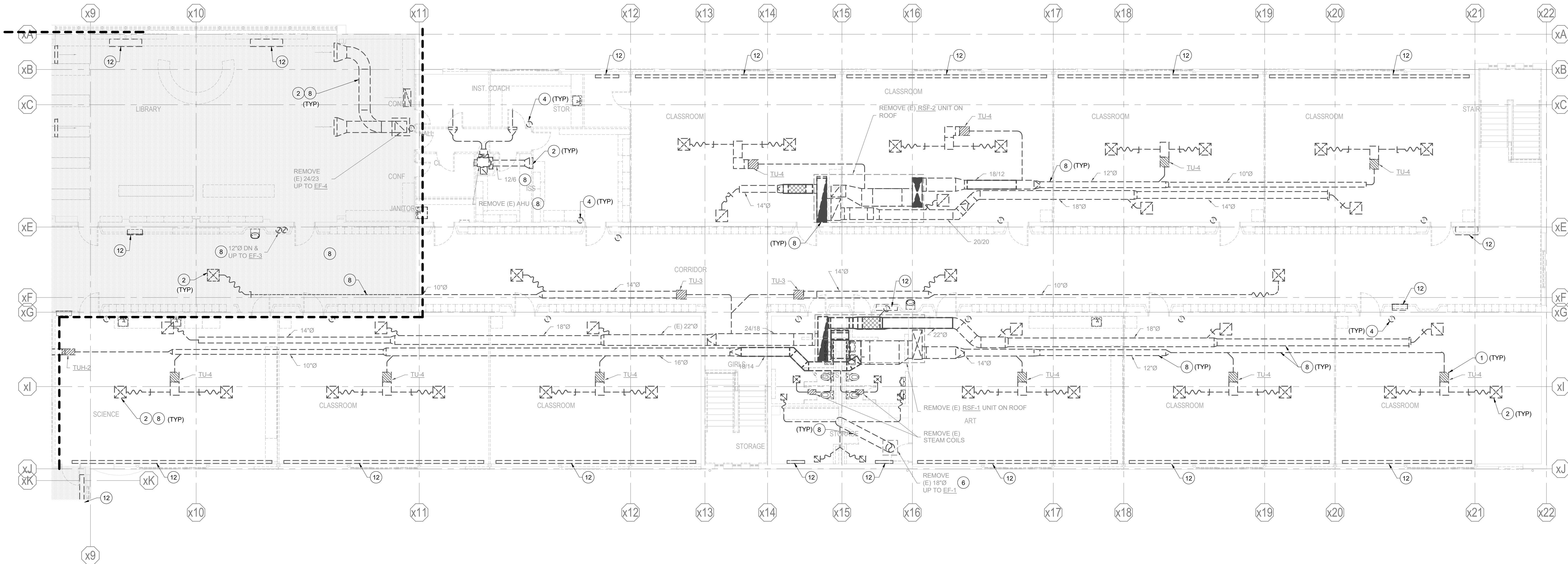


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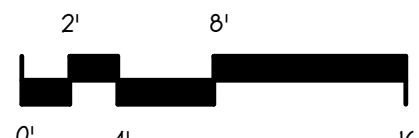
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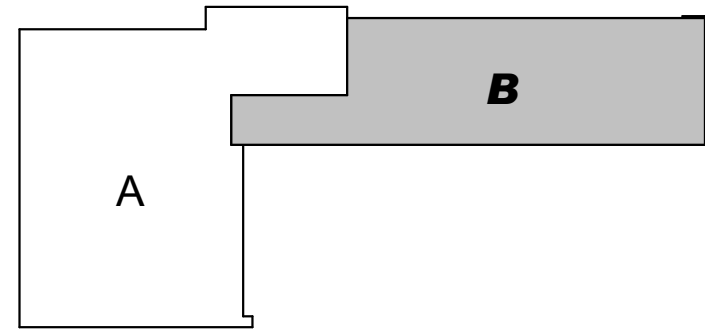


LEVEL 2 BUILDING 1 AREA B - HVAC DEMO

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



Scale 1/8" = 10'



KELSO SCHOOL DISTRICT NO. 458
HUNTINGTON MIDDLE SCHOOL -
MODERNIZATION AND ADDITION

500 REDPATH ST, KELSO, WA 98626

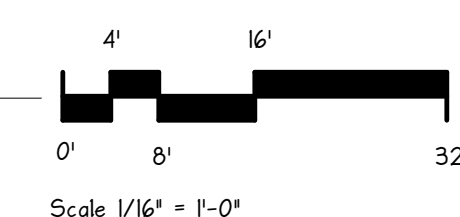
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Revisions	
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LEVEL 2
BUILDING 1
AREA B FLOOR
PLAN - HVAC
DEMO

MD402B

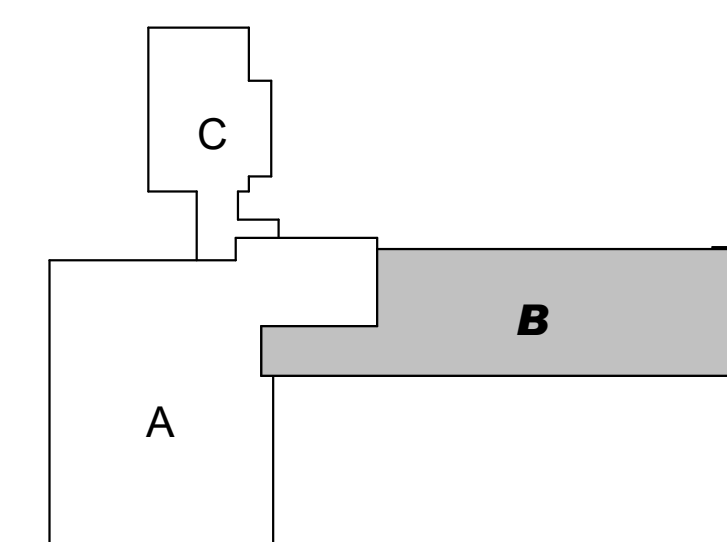
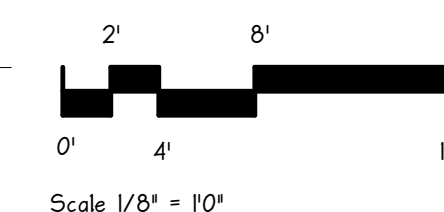
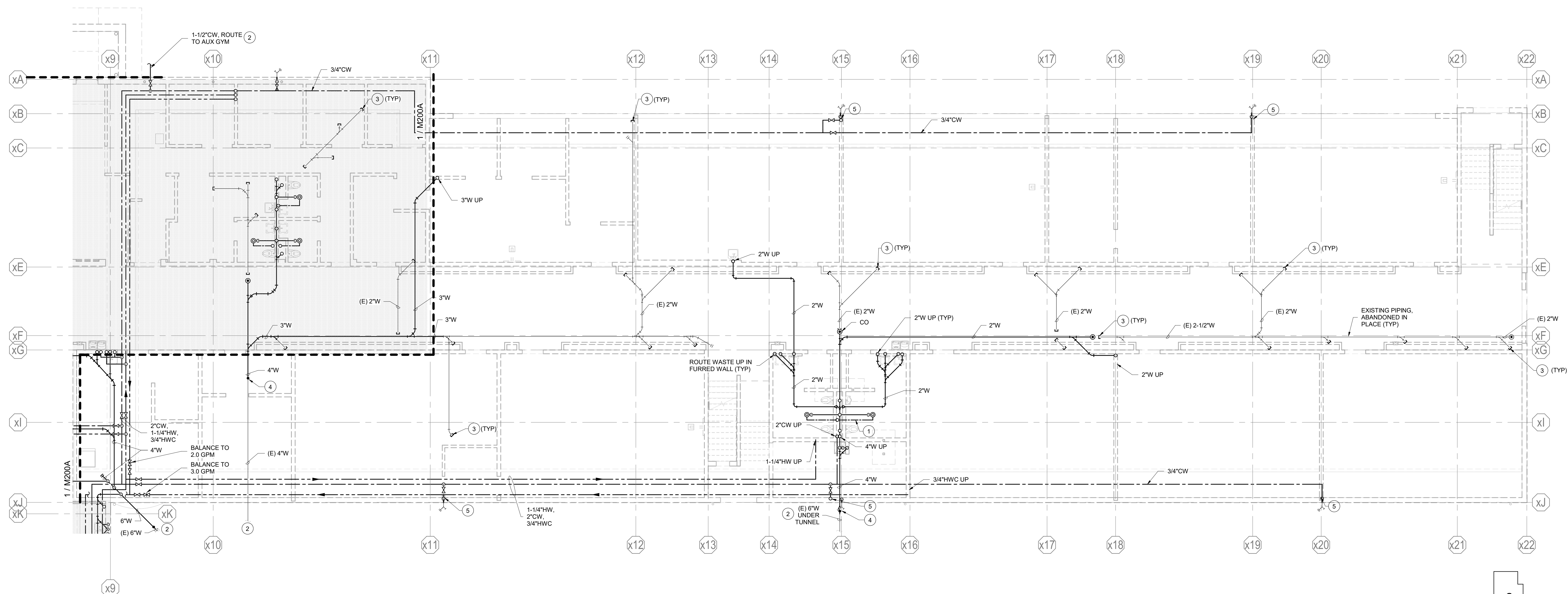


SIGNED
09/28/2021
HULTZ, BHU
engineers inc
Tacoma, WA 98402
1111 Everett Ave Suite 100
Phone: (253) 383-3257 Fax: (253) 383-3253
general@hultzbhu.com Job Number: 20-038



1. SEE STRUCTURAL DWGS FOR LOCATIONS OF FOUNDATION COMPONENTS. ITEMS SHOWN ON THIS SHEET ARE APPROXIMATE ONLY. OFFSET ITEMS AS NEEDED TO CLEAR FOOTINGS & OTHER UG ITEMS.
2. INVERT ELEVATIONS ARE BASED ON DEPTH BELOW FINISHED FLOOR ELEVATION AT POINT WASTE PIPING EXITS BLDG. BLDG FINISHED FLOOR ELEVATION VARIES THRU BLDGS. AS DO EXTERIOR GRADES AROUND THE BUILDING. SEE ARCH & CIVIL PLANS FOR RELATED INFORMATION TO DETERMINE RELATIVE PIPING DEPTH.
3. PROVIDE WASTE PIPE SLOPES TO MAINTAIN POSITIVE SLOPE CONTRACTOR PRIOR TO BEGINNING WORK.
4. PRIOR TO BEGINNING ANY WORK CONTRACTOR SHALL VERIFY DEPTH OF SITE SEWER AND CONFIRM PIPING SLOPES IN ORDER TO PROVIDE PROPER WORKING SEWER SYSTEM.
5. FIXTURES SHOWN DASHED REPRESENT FIXTURES ON FLOOR ABOVE. SEE PLUMBING FLOOR PLAN FOR EXACT TYPE AND LOCATION.
6. REVIEW ALL DRAWINGS & SUBMITTALS AND VERIFY FIXTURE LOCATIONS PRIOR TO BEGINNING WORK.
7. FOR PIPE SIZES TO INDIVIDUAL PLUMBING FIXTURES SEE "PLUMBING FIXTURE SCHEDULE", SMTX 0003
8. REVIEW ALL DRAWINGS & SUBMITTALS & VERIFY LOCATION OF ALL FLOOR DRAINS AND FIXTURES PRIOR TO BEGINNING WORK. VERIFY EQUIPMENT LOCATIONS, DRAIN POINTS, AND RELATED DETAILS TO ENSURE THAT DRAINS ARE PROPERLY SIZED. VERIFY ITEMS IN RED W/NO ABOVE FLOOR DRAIN PIPING ROUTED TO THROUGH WALKWAY OR ACCESS PATHS.
9. AT MAIN RESTROOMS CONTRACTOR MAY USE HORIZONTAL DISCHARGE WASTE LINE CARRIERS AND ABOVE FLOOR WASTE PIPING IN PLUMBING CHASES IF SET BY THE DESIGN SHOWN. PROVIDE END OF LINE CLEANOUTS EQUAL TO DESIGN.
10. PROVIDE WALL CLEANOUTS BELOW ALL SINKS AND AS REQUIRED BY CODE.
11. NOT ALL KEYED NOTES MAY BE USED ON ALL SHEETS.

- 1 1/2" CW TRAP PRIMER LINE TO FLOOR DRAIN/FLOOR RECEPTOR.
- 2 CONNECT TO SITE PIPING. VERIFY LOCATIONS AND COORDINATE WITH SITE CONTRACTOR.
- 3 CAP (E) PIPING WHERE ABANDONED IN PLACE.
- 4 CONNECT TO EXISTING PIPING.
- 5 3/4" CW UP TO P-10A.



TRUE NORTH

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

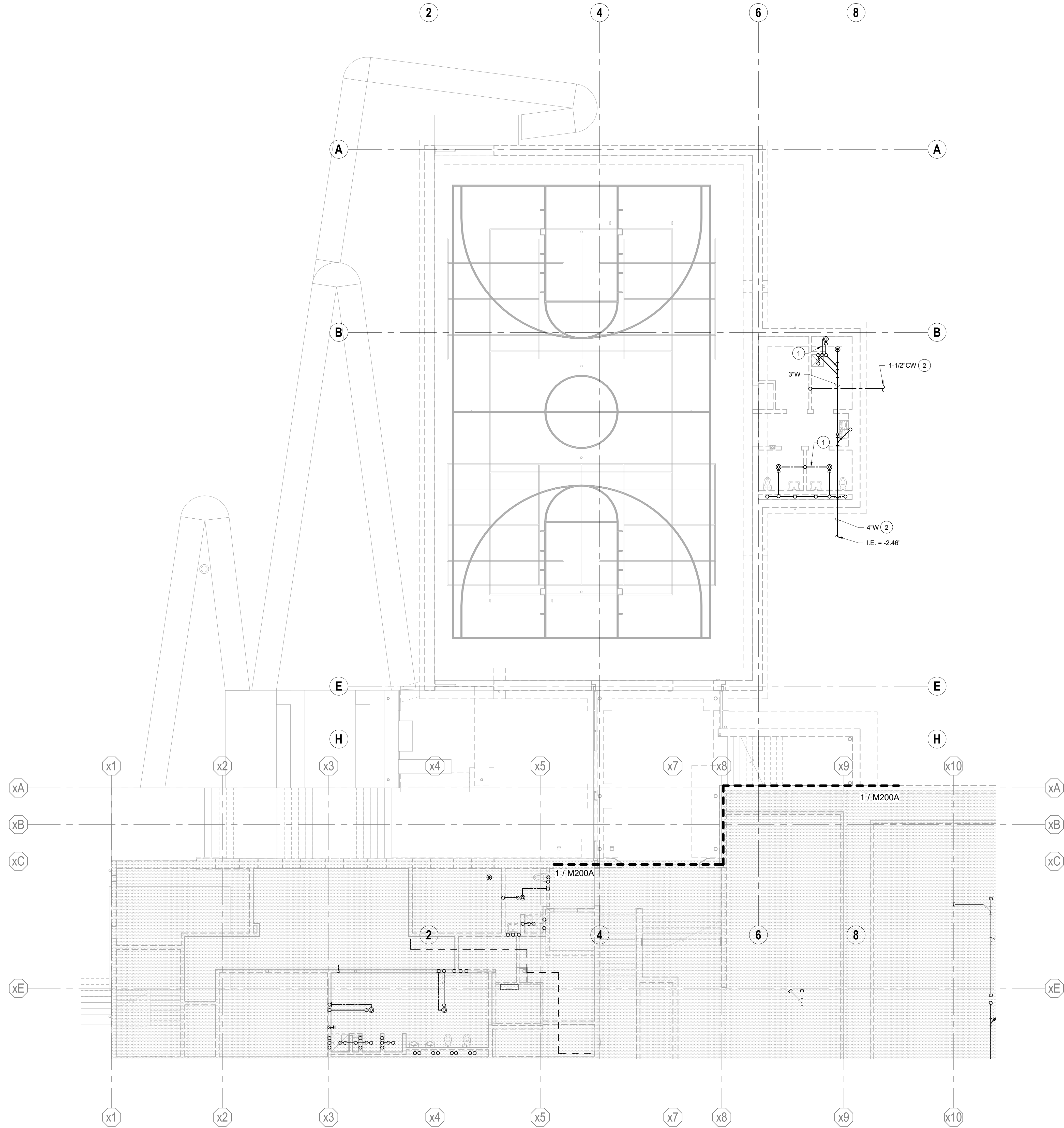
**KELSO SCHOOL DISTRICT NO. 458
HUNTINGTON MIDDLE SCHOOL -
MODERNIZATION AND ADDITION**
500 REDPATH ST., KELSO, WA 98626

Date:	05/28/2021	
Job No.:	21938.00	
Drawn By:	TP	
Checked by:	NRH	
Revisions		
#	Date	Description

BUILDING 1
AREA B
FOUNDATION
PLAN -
PLUMBING

M200B

BID SET



GENERAL NOTES:

1. SEE STRUCTURAL DWGS FOR LOCATIONS OF FOUNDATION COMPONENTS. ITEMS SHOWN ON THIS DRAWING ARE APPROXIMATE ONLY. OFFSET ITEMS AS NEEDED TO CLEAR FOOTINGS & OTHER UG ITEMS.
2. INVERT ELEVATIONS ARE BASED ON DEPTH BELOW FINISHED FLOOR ELEVATION AT POINT WASTE PIPING EXITS BLDG. BLDG FINISHED FLOOR ELEVATION VARIES THROUGH BLDG. AS DO EXTERIOR GRADES AROUND THE BUILDING. SEE ARCH & CIVIL PLANS FOR RELATED INFORMATION TO DETERMINE RELATIVE PIPING DEPTH. COORDINATE PIPE INVERT ELEVATIONS WITH SITE CONTRACTOR PRIOR TO BEGINNING WORK.
3. PRIOR TO BEGINNING ANY WORK CONTRACTOR SHALL VERIFY DEPTH OF SITE SEWER AND CONFIRM PIPING SLOPES IN ORDER TO PROVIDE PROPER WORKING SEWER SYSTEM.
4. FIXTURES SHOWN DASHED REPRESENT FIXTURES ON FLOOR ABOVE. SEE PLUMBING FLOOR PLAN FOR EXACT TYPE AND LOCATION.
5. REVIEW ALL DRAWINGS & SUBMITTALS AND VERIFY FIXTURE LOCATIONS PRIOR TO BEGINNING WORK.
6. FOR PIPE SIZES TO INDIVIDUAL PLUMBING FIXTURES SEE "PLUMBING FIXTURE SCHEDULE", SHEET M003.
7. REVIEW ALL DRAWINGS & SUBMITTALS & VERIFY LOCATION OF ALL FLOOR DRAINS AND FIXTURES PRIOR TO BEGINNING WORK. VERIFY EQUIPMENT LOCATIONS, DRAIN POINTS, AND RELATED DETAILS TO ENSURE THAT DRAINS CAN PROPERLY SERVE ITEMS INTENDED W/O ABOVE FLOOR DRAIN PIPING ROUTED THROUGH WALKWAY OR ACCESS PATHS.
8. AT MAIN RESTROOMS CONTRACTOR MAY USE HORIZONTAL DISCHARGE WASTE CARRIERS AND ABOVE FLOOR WASTE PIPING IN PLUMBING CHASE IN LIEU OF THE DESIGN SHOWN. PROVIDE END OF LINE CLEANOUTS EQUAL TO DESIGN.
9. PROVIDE WALL CLEANOUTS BELOW ALL SINKS AND AS REQUIRED BY CODE.
10. NOT ALL KEYED NOTES MAY BE USED ON ALL SHEETS.

KEYED NOTES:

- 1 1/2" CW TRAP PRIMER LINE TO FLOOR DRAIN/FLOOR RECEPTOR.
- 2 CONNECT TO SITE PIPING. VERIFY LOCATIONS AND COORDINATE WITH SITE CONTRACTOR.
- 3 CAP (E) PIPING WHERE ABANDONED IN PLACE.
- 4 CONNECT TO EXISTING PIPING.
- 5 3/4" CW UP TO P-10A.

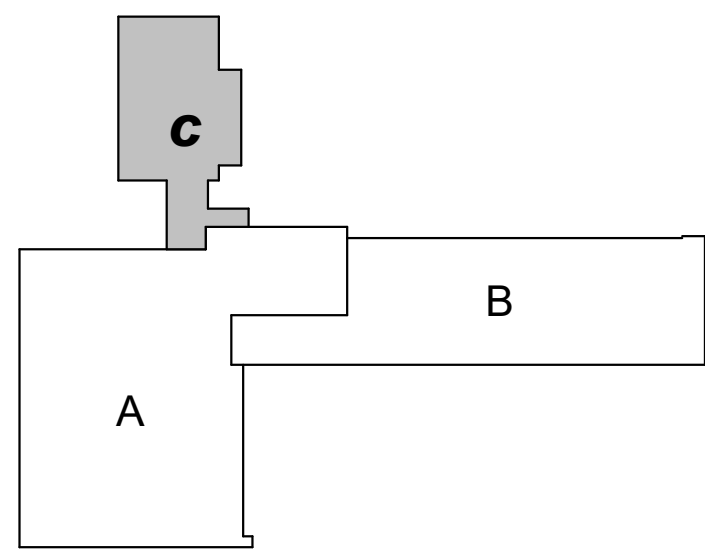


BUILDING 1 AREA C AUXILIARY GYM FOUNDATION PLAN - PLUMBING

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



Scale 1/8" = 10'



**KELSO SCHOOL DISTRICT NO. 458
HUNTINGTON MIDDLE SCHOOL -
MODERNIZATION AND ADDITION**

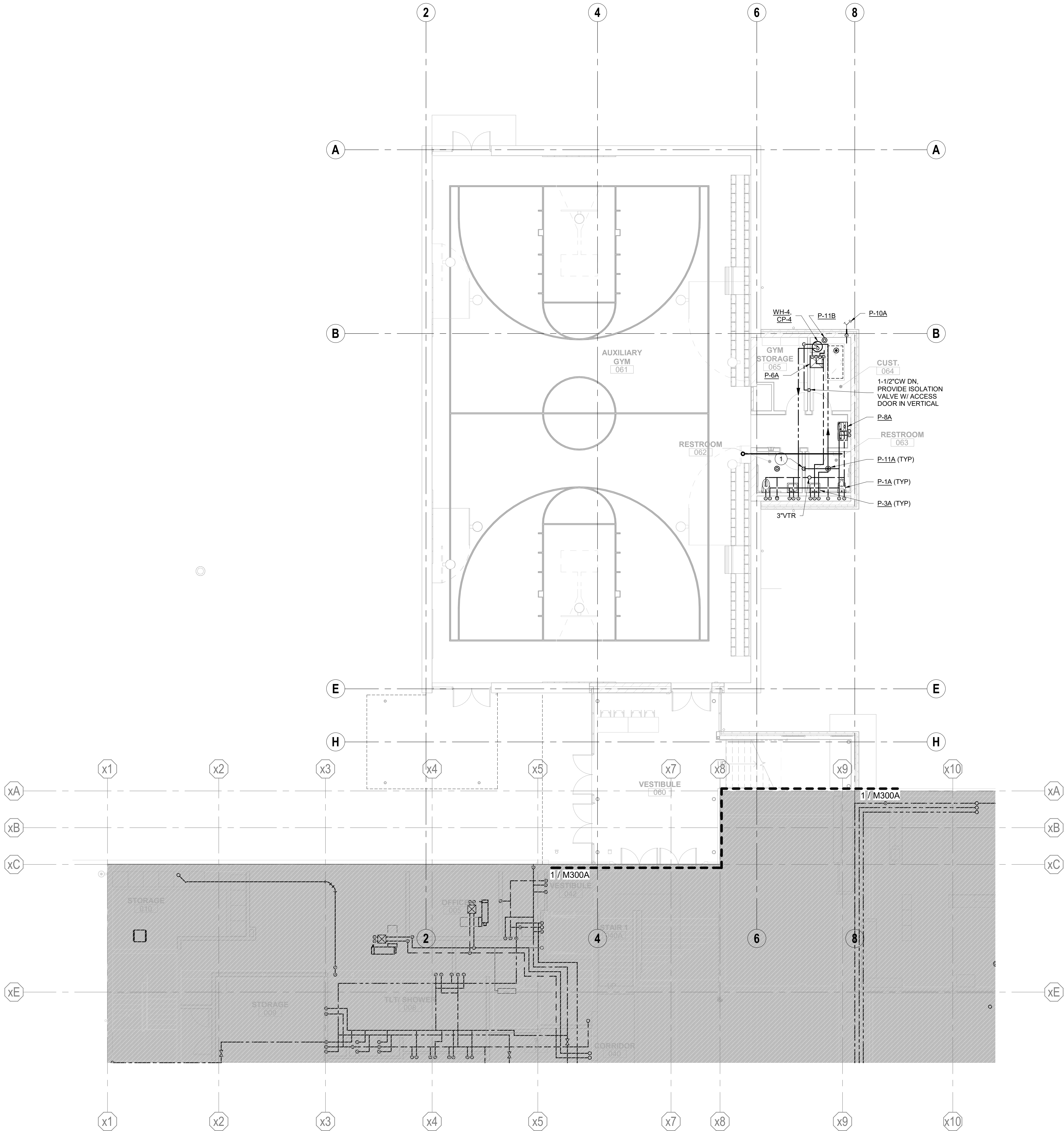
500 REDPATH ST, KELSO, WA 98626

Date: 05/28/2021
Job No.: 21938.00
Drawn By: TP
Checked by: NRH

Revisions		
#	Date	Description

**BUILDING 1
AREA C
AUXILIARY GYM
FOUNDATION
PLAN - PLBG**

M200C



GENERAL NOTES:

- FOR PIPING SIZES TO INDIVIDUAL PLUMBING FIXTURES SEE "PLUMBING FIXTURE SCHEDULE", SHEET M003 AND FOOD SERVICE DRAWINGS.
- PROVIDE WALL CLEANOUT BENEATH FIXTURES FOR ALL SINKS AND LAVATORIES.
- ALL ISOLATION VALVES SHALL BE ACCESSIBLE. PLUMBING CONTRACTOR SHALL COORDINATE WITH OTHER TRADES TO INSURE VALVES ARE ACCESSIBLE.
- OFFSET VTRS AND PIPING AS REQUIRED TO AVOID DUCTWORK AND OTHER OBSTRUCTIONS. VTRS SHALL BE A MINIMUM OF 10 FEET FROM ANY OUTSIDE AIR OPENING.
- AT RESTROOMS WITH PLUMBING CHASES, THE CONTRACTOR MAY USE HORIZONTAL DISCHARGE WASTE CARRIERS AND ABOVE FLOOR WASTE PIPING IN LIEU OF THE DESIGN SHOWN. PROVIDE END OF LINE CLEANOUT ACCESS EQUAL TO DESIGN.
- AT RESTROOMS PROVIDE COLD WATER HEADER FULL LENGTH OF PLUMBING CHASE SAME SIZE AS BRANCH COLD WATER LINE SHOWN SERVING RESTROOMS (UNO).
- PROVIDE WATER HAMMER ARRESTORS ON ALL COLD WATER LINES SERVING FIXTURES WITH FLUSH VALVES. LOCATE UPSTREAM OF LAST FIXTURE ON LINE. AT EACH FIXTURE GROUP, PROVIDE SHUT-OFF VALVE AND ACCESS DOOR. PDI SIZE SHALL BE AS FOLLOWS:

NO. OF FIXTURES W/ FLUSH VALVES	PDI SIZE
1-2	A
3-5	B
6 & MORE	C
- ROUTE PIPING SO AS NOT TO OBSTRUCT EQUIPMENT ACCESS.
- PROVIDE AAV'S WITH ISOLATION VALVES AT PIPING HIGH POINTS (LOCATIONS MAY VARY DEPENDING ON ACTUAL CONTRACTOR PIPE ROUTING AND PIPE SLOPE).
- LOCATE ALL VAV UNIT COIL PIPING TO BE ACCESSIBLE THOUGH CEILING. LOCATE COMPONENTS BETWEEN 8" AND 24" ABOVE CEILING.
- FOR ALL FIXTURES & PIPING LOCATED AT WALLS ON GRID LINES, STRUCTURAL MEMBERS LIE DIRECTLY ON WALL AND PIPING BETWEEN FLOORS SHALL OFFSET AROUND STRUCTURAL MEMBERS. PIPING ON LOWER LEVEL SHALL OFFSET ABOVE CEILING OUT FROM WALL TO AVOID STRUCTURAL. ONCE ABOVE FLOOR, PIPING SHALL OFFSET WITHIN TOESPACE OF CASEWORK & THEN OFFSET BACK INTO WALL, OR OFFSET WIN WALL SPACE.
- SEE DETAILS 1 & 2 ON SHEET M305 FOR HYDRONIC COIL CONNECTIONS. CONTROL VALVES ARE 2-WAY TYPE UNO.
- SEE STRUCTURAL PLANS FOR EXACT LOCATION OF OPENINGS IN CONCRETE FLOORS, WALLS, AND ROOF.
- NOT ALL KEYED NOTES ARE USED ON ALL SHEETS.

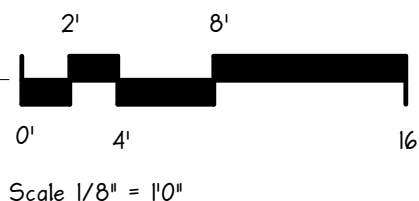
KEYED NOTES:

- TRAP PRIMER VALVE W/ ACCESS DOOR AND 1/2" CW CONNECTION, SEE DETAIL 1 SHEET M304.
- PROVIDE DISHWASHER WITH AIR GAP FITTING. INSTALL IN COUNTERTIP TIGHT TO WALL.
- 3/4" END OF LINE VALVES, FOR FLUSHING/DRAINING.
- PROVIDE W/ 3-WAY CONTROL VALVE.
- 1/2" CW TRAP PRIMER LINE TO FLOOR DRAIN/FLOOR RECEPTOR.
- CONNECT TO SITE PIPING. VERIFY LOCATIONS AND COORDINATE WITH SITE CONTRACTOR.
- CAP (E) PIPING WHERE ABANDONED IN PLACE.
- CONNECT TO EXISTING PIPING.
- FIXTURE HW/CW SERVED FROM BELOW.
- HW/CWM SERVING FIXTURE ABOVE.
- GAS PRESSURE REGULATOR, 2 PSI INLET, 7" W.C. OUTLET PRESSURE. CAPACITY SHALL MATCH EQUIPMENT BEING SERVED. VENT REGULATOR FULL SIZE UP THRU ROOF.
- PROVIDE 3/4" HW/SHWR PIPING FROM NEARBY MAINS. PROVIDE W/ 2-WAY VALVE PER DETAIL 1/M305.
- ABOVEGROUND GREASE TRAP SERVES ADJACENT 3-COMPARTMENT SINK.
- INSTALL WALL HYDRANT AT SAME LOCATION AS PREVIOUSLY DEMO'D HYDRANT. RE-USE (E) COLD WATER PIPING WHERE NOT ACCESSIBLE TO REPLACE.
- ROUTE 3/4" HW/CW UP & DN IN FURRED WALL TO SERVE STACKED LAVATORIES.
- CONNECT TO (E) VENT PIPING WHICH SERVED PREVIOUSLY DEMO'D FIXTURE. EXACT ROUTING OF VENT PIPING IS UNKNOWN, CONTRACTOR SHALL FIELD VERIFY PRIOR TO BEGINNING WORK.
- PROVIDE WITH AN ISLAND VENT PER DETAIL 9, SHEET M305.
- PROVIDE 8" UNDERGROUND SLEEVE FOR RG/RL SERVING FREEZER & COOLER. SEE DETAIL 8, SHEET M305.
- ROUTE VENT IN CASEWORK, CONNECT TO (E) VENT UP IN CONCRETE WALL.
- ROUTE PIPING UP TO FIXTURE ABOVE THROUGH CASEWORK.
- 3-WAY CONTROL VALVE.
- ROUTE 3/4" CONDENSATE DRAIN FROM AHU TO NEAREST FLOOR DRAIN.

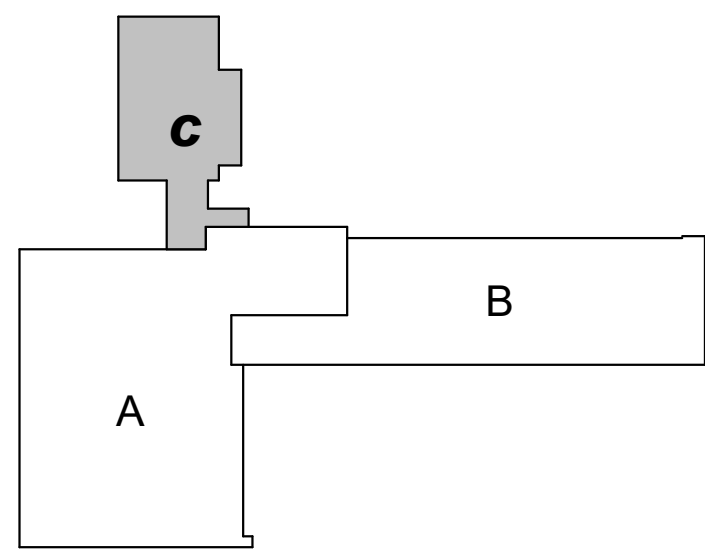


LEVEL 0 BUILDING 1 AREA C AUXILIARY GYM FLOOR PLAN - PLUMBING

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



Scale 1/8" = 10'



KELSO SCHOOL DISTRICT NO. 458
HUNTINGTON MIDDLE SCHOOL -
MODERNIZATION AND ADDITION

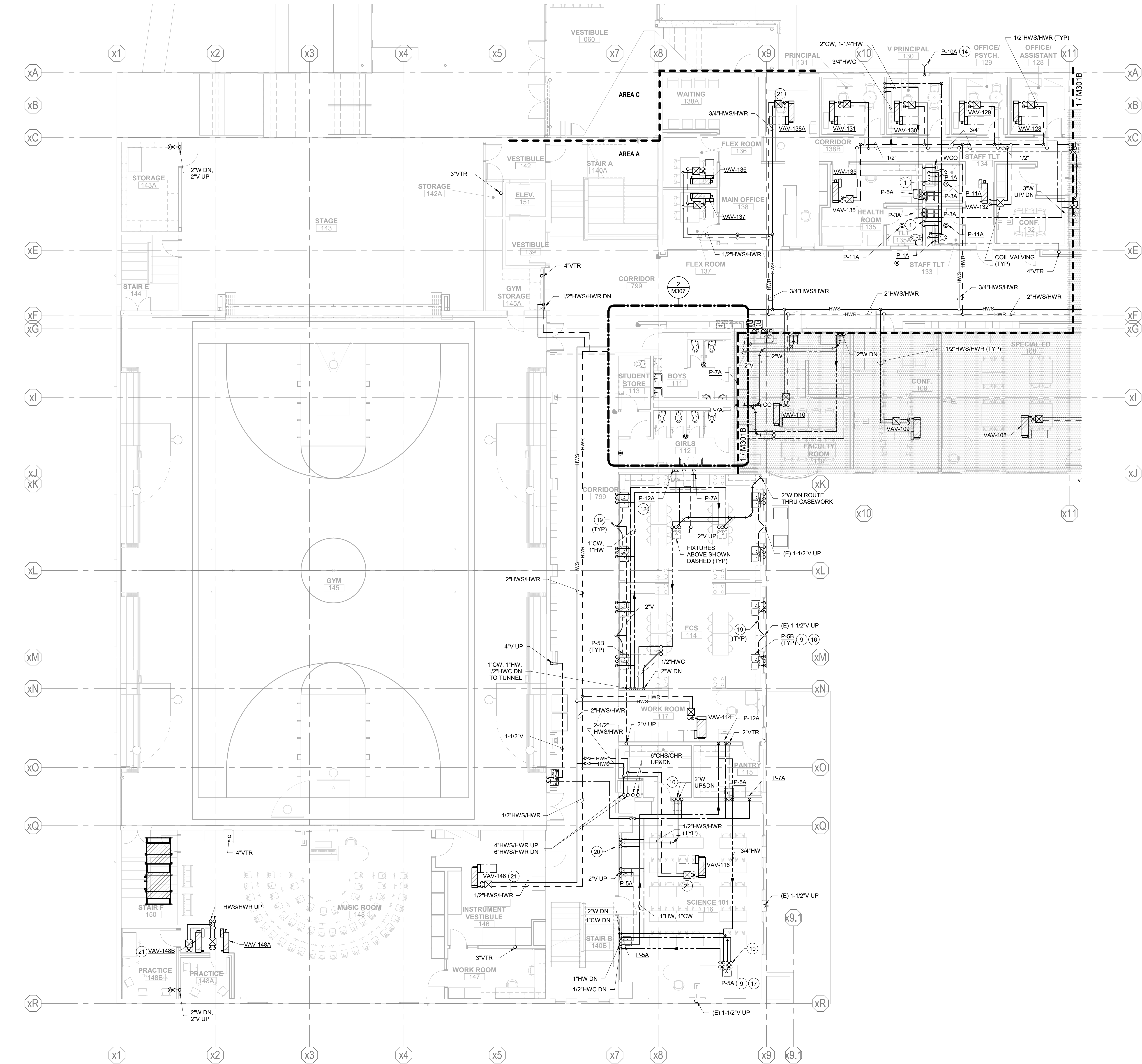
500 REDPATH ST, KELSO, WA 98626

Date: 05/28/2021
Job No.: 21938.00
Drawn By: TP
Checked by: NRH

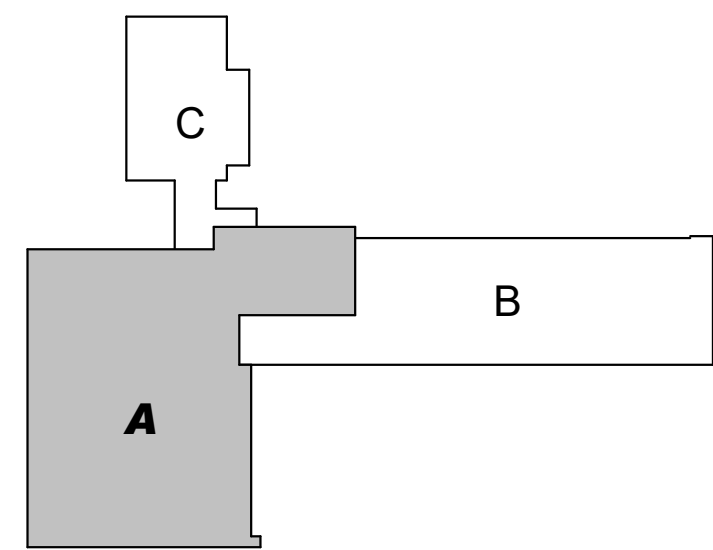
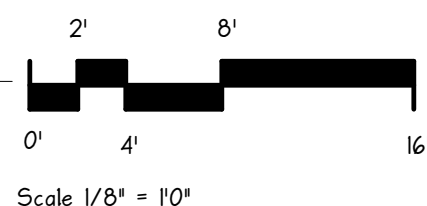
Revisions		
#	Date	Description

LEVEL 0
BUILDING 1
AREA C
AUXILIARY GYM
- PLUMBING

M300C



LEVEL 1 BUILDING 1 AREA A FLOOR PLAN - PLUMBING
SCALE: 1/8" = 1'-0"



GENERAL NOTES:

- FOR PIPING SIZES TO INDIVIDUAL PLUMBING FIXTURES SEE "PLUMBING FIXTURE SCHEDULE", SHEET M003 AND FOOD SERVICE DRAWINGS.
- PROVIDE WALL CLEANOUT BENEATH FIXTURES FOR ALL SINKS AND LAVATORIES.
- ALL ISOLATION VALVES SHALL BE ACCESSIBLE. PLUMBING CONTRACTOR SHALL COORDINATE WITH OTHER TRADES TO INSURE VALVES ARE ACCESSIBLE.
- OFFSET VTR'S AND PIPING AS REQUIRED TO AVOID DUCTWORK AND OTHER OBSTRUCTIONS. VTR'S SHALL BE A MINIMUM OF 10 FEET FROM ANY OUTSIDE AIR OPENING.
- AT RESTROOMS WITH PLUMBING CHASES, THE CONTRACTOR MAY USE HORIZONTAL DISCHARGE WASTE CARRIERS AND ABOVE FLOOR WASTE PIPING IN LIEU OF THE DESIGN SHOWN. PROVIDE END OF LINE CLEANOUT ACCESS EQUAL TO DESIGN.
- AT RESTROOMS PROVIDE COLD WATER HEADER FULL LENGTH OF PLUMBING CHASE SAME SIZE AS BRANCH COLD WATER LINE SHOWN SERVING RESTROOMS (UNO).
- PROVIDE WATER HAMMER ARRESTORS ON ALL COLD WATER LINES SERVING FIXTURES WITH FLUSH VALVES. LOCATE UPSTREAM OF LAST FIXTURE ON LINE. AT EACH FIXTURE GROUP, PROVIDE SHUT-OFF VALVE AND ACCESS DOOR. PDI SIZE SHALL BE AS FOLLOWS:

NO. OF FIXTURES	PDI SIZE
1-2	A
3-4	B
5 & MORE	C
- ROUTE PIPING SO AS NOT TO OBSTRUCT EQUIPMENT ACCESS.
- PROVIDE AAV'S WITH ISOLATION VALVES AT PIPING HIGH POINTS (LOCATIONS MAY VARY DEPENDING ON ACTUAL CONTRACTOR PIPE ROUTING AND PIPE SLOPE).
- LOCATE ALL VAV UNIT COIL PIPING TO BE ACCESSIBLE THOUGH CEILING. LOCATE COMPONENTS BETWEEN 8" AND 24" ABOVE CEILING.
- FOR ALL FIXTURES & PIPING LOCATED AT WALLS ON GRID LINES, STRUCTURAL MEMBERS LIE DIRECTLY ON WALL, AND PIPING BETWEEN FLOORS SHALL OFFSET AROUND STRUCTURAL MEMBERS. PIPING ON LOWER LEVEL SHALL OFFSET ABOVE CEILING OUT FROM WALL TO AVOID STRUCTURAL. ONCE ABOVE FLOOR, PIPING SHALL OFFSET WITHIN TOESPACE OF CASEWORK & THEN OFFSET BACK INTO WALL, OR OFFSET WIN WALL SPACE.
- SEE DETAILS 1 & 2 ON SHEET M305 FOR HYDRONIC COIL CONNECTIONS. CONTROL VALVES ARE 2-WAY TYPE UNO.
- SEE STRUCTURAL PLANS FOR EXACT LOCATION OF OPENINGS IN CONCRETE FLOORS, WALLS, AND ROOF.
- NOT ALL KEYED NOTES ARE USED ON ALL SHEETS.

KEYED NOTES:

- TRAP PRIMER VALVE W/ ACCESS DOOR AND 1/2"CW CONNECTION, SEE DETAIL 1 SHEET M304.
- PROVIDE DISHWASHER WITH AIR GAP FITTING, INSTALL IN COUNTERTOP TIGHT TO WALL.
- 3/4" END OF LINE VALVES, FOR FLUSHING/DRAINING.
- PROVIDE W/ 3-WAY CONTROL VALVE.
- 1/2" CW TRAP PRIMER LINE TO FLOOR DRAIN/FLOOR RECEPTOR.
- CONNECT TO SITE PIPING. VERIFY LOCATIONS AND COORDINATE WITH SITE CONTRACTOR.
- CAP (E) PIPING WHERE ABANDONED IN PLACE.
- CONNECT TO EXISTING PIPING.
- FIXTURE HW/CW SERVED FROM BELOW.
- HW/CWM SERVING FIXTURE ABOVE.
- GAS PRESSURE REGULATOR, 2 PSI INLET, 7" W.C. OUTLET PRESSURE. CAPACITY SHALL MATCH EQUIPMENT BEING SERVED. VENT REGULATOR FULL SIZE UP THRU ROOF.
- PROVIDE 3/4" HW/SHWR PIPING FROM NEARBY MAINS. PROVIDE W/ 2-WAY VALVE PER DETAIL 1/M305.
- ABOVEGROUND GREASE TRAP SERVES ADJACENT 3-COMPARTMENT SINK.
- INSTALL WALL HYDRANT AT SAME LOCATION AS PREVIOUSLY DEMO'D HYDRANT. RE-USE (E) COLD WATER PIPING WHERE NOT ACCESSIBLE TO REPLACE.
- ROUTE 3/4" HW/CW UP & DN IN FURRED WALL TO SERVE STACKED LAVATORIES.
- CONNECT TO (E) VENT PIPING WHICH SERVED PREVIOUSLY DEMO'D FIXTURE. EXACT ROUTING OF VENT PIPING IS UNKNOWN, CONTRACTOR SHALL FIELD VERIFY PRIOR TO BEGINNING WORK.
- PROVIDE WITH AN ISLAND VENT PER DETAIL 9, SHEET M305.
- PROVIDE 8" UNDERGROUND SLEEVE FOR RGRL SERVING FREEZER & COOLER. SEE DETAIL 8, SHEET M305.
- ROUTE VENT IN CASEWORK, CONNECT TO (E) VENT UP IN CONCRETE WALL.
- ROUTE PIPING UP TO FIXTURE ABOVE THROUGH CASEWORK.
- 3-WAY CONTROL VALVE.
- ROUTE 3/4" CONDENSATE DRAIN FROM AHU TO NEAREST FLOOR DRAIN.

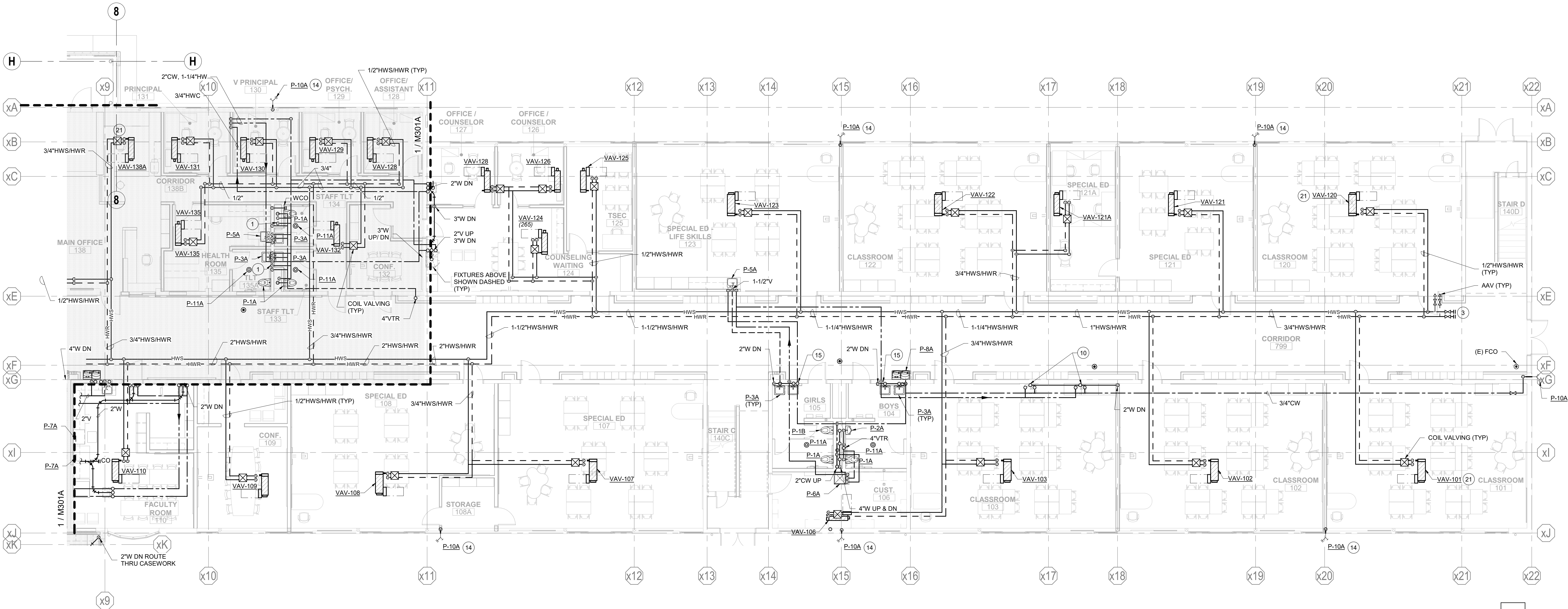
KELSO SCHOOL DISTRICT NO. 458 HUNTINGTON MIDDLE SCHOOL - MODERNIZATION AND ADDITION

500 REDPATH ST, KELSO, WA 98626

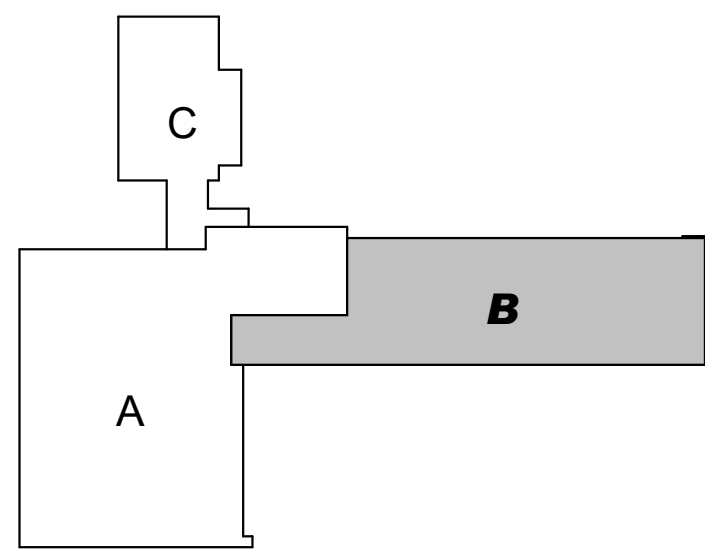
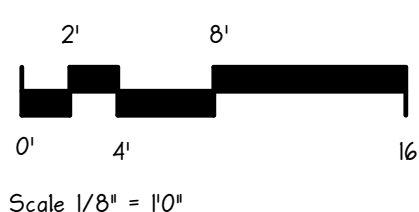
Date:	05/28/2021	
Job No.:	21938.00	
Drawn By:	TP	
Checked by:	NRH	
Revisions		
#	Date	Description

LEVEL 1
BUILDING 1
AREA A FLOOR
PLAN -
PLUMBING

M301A



 **LEVEL 1 BUILDING 1 AREA B FLOOR PLAN - PLUMBING**
SCALE: 1/8" = 1'-0"



KEYED NOTES:

- TRAP PRIMER VALVE W/ ACCESS DOOR AND 1/2" CW CONNECTION, SEE DETAIL 1 SHEET M304.
- PROVIDE DISHWASHER WITH AIR GAP FITTING, INSTALL IN COUNTERTOP TIGHT TO WALL.
- 3/4" END OF LINE VALVES, FOR FLUSHING/DRAINING.
- PROVIDE W/ 3-WAY CONTROL VALVE.
- 1/2" CW TRAP PRIMER LINE TO FLOOR DRAIN/FLOOR RECEPTOR.
- CONNECT TO SITE PIPING. VERIFY LOCATIONS AND COORDINATE WITH SITE CONTRACTOR.
- CAP (E) PIPING WHERE ABANDONED IN PLACE.
- CONNECT TO EXISTING PIPING.
- FIXTURE HW/CW SERVED FROM BELOW.
- HW/CWW SERVING FIXTURE ABOVE.
- GAS PRESSURE REGULATOR, 2 PSI INLET, 7" W.C. OUTLET PRESSURE. CAPACITY SHALL MATCH EQUIPMENT BEING SERVED. VENT REGULATOR FULL SIZE UP THRU ROOF.
- PROVIDE 3/4" HWS/HWR PIPING FROM NEARBY MAINS. PROVIDE W/ 2-WAY VALVE PER DETAIL 1M305.
- ABOVEGROUND GREASE TRAP SERVES ADJACENT 3-COMPARTMENT SINK.
- INSTALL WALL HYDRANT AT SAME LOCATION AS PREVIOUSLY DEMOD HYDRANT. RE-USE (E) COLD WATER PIPING WHERE NOT ACCESSIBLE TO REPLACE.
- ROUTE 3/4" HW/CW UP & DN IN FURRED WALL TO SERVE STACKED LAVATORIES.
- CONNECT TO (E) VENT PIPING WHICH SERVED PREVIOUSLY DEMOD FIXTURE. EXACT ROUTING OF VENT PIPING IS UNKNOWN. CONTRACTOR SHALL FIELD VERIFY PRIOR TO BEGINNING WORK.
- PROVIDE WITH AN ISLAND VENT PER DETAIL 9, SHEET M305.
- PROVIDE 6" UNDERGROUND SLEEVE FOR RGRL SERVING FREEZER & COOLER. SEE DETAIL 8, SHEET M305.
- ROUTE VENT IN CASEWORK. CONNECT TO (E) VENT UP IN CONCRETE WALL.
- ROUTE PIPING UP TO FIXTURE ABOVE THROUGH CASEWORK.
- 3-WAY CONTROL VALVE.
- ROUTE 3/4" CONDENSATE DRAIN FROM AHU TO NEAREST FLOOR DRAIN.

GENERAL NOTES:

- FOR PIPING SIZES TO INDIVIDUAL PLUMBING FIXTURES SEE "PLUMBING FIXTURE SCHEDULE", SHEET M003 AND FOOD SERVICE DRAWINGS.
- PROVIDE WALL CLEANOUT BENEATH FIXTURES FOR ALL SINKS AND LAVATORIES.
- ALL ISOLATION VALVES SHALL BE ACCESSIBLE. PLUMBING CONTRACTOR SHALL COORDINATE WITH OTHER TRADES TO INSURE VALVES ARE ACCESSIBLE.
- OFFSET VTRS AND PIPING AS REQUIRED TO AVOID DUCTWORK AND OTHER OBSTRUCTIONS. VTRS SHALL BE A MINIMUM OF 10 FEET FROM ANY OUTSIDE AIR OPENING.
- AT RESTROOMS WITH PLUMBING CHASES, THE CONTRACTOR MAY USE HORIZONTAL DISCHARGE WASTE CARRIERS AND ABOVE FLOOR WASTE PIPING IN LIEU OF THE DESIGN SHOWN. PROVIDE END OF LINE CLEANOUT ACCESS EQUAL TO DESIGN.
- AT RESTROOMS PROVIDE COLD WATER HEADER FULL LENGTH OF PLUMBING CHASE SAME SIZE AS BRANCH COLD WATER LINE SHOWN SERVING RESTROOMS (UNO).
- PROVIDE WATER HAMMER ARRESTORS ON ALL COLD WATER LINES SERVING FIXTURES WITH FLUSH VALVES. LOCATE UPSTREAM OF LAST FIXTURE ON LINE, AT EACH FIXTURE GROUP. PROVIDE SHUT-OFF VALVE AND ACCESS DOOR. PDI SIZE SHALL BE AS FOLLOWS:

NO. OF FIXTURES	PDI SIZE
1-2	A
3-5	B
6 & MORE	C
- ROUTE PIPING SO AS NOT TO OBSTRUCT EQUIPMENT ACCESS.
- PROVIDE AAV'S WITH ISOLATION VALVES AT PIPING HIGH POINTS (LOCATIONS MAY VARY DEPENDING ON ACTUAL CONTRACTOR PIPE ROUTING AND PIPE SLOPE).
- LOCATE ALL VAV UNIT COIL PIPING TO BE ACCESSIBLE THOUGH CEILING. LOCATE COMPONENTS BETWEEN 8" AND 24" ABOVE CEILING.
- FOR ALL FIXTURES & PIPING LOCATED AT WALLS ON GRID LINES. STRUCTURAL MEMBERS LIE DIRECTLY ON WALL AND PIPING BETWEEN FLOORS SHALL OFFSET AROUND STRUCTURAL MEMBERS. PIPING ON LOWER LEVEL SHALL OFFSET ABOVE CEILING OUT FROM WALL TO AVOID STRUCTURAL. ONCE ABOVE FLOOR, PIPING SHALL OFFSET WITHIN TOESPACE OF CASEWORK & THEN OFFSET BACK INTO WALL, OR OFFSET WIN WALL SPACE.
- SEE DETAILS 1 & 2 ON SHEET M305 FOR HYDRONIC COIL CONNECTIONS. CONTROL VALVES ARE 2-WAY TYPE UNO.
- SEE STRUCTURAL PLANS FOR EXACT LOCATION OF OPENINGS IN CONCRETE FLOORS, WALLS, AND ROOF.
- NOT ALL KEYED NOTES ARE USED ON ALL SHEETS.

KELSO SCHOOL DISTRICT NO. 458
HUNTINGTON MIDDLE SCHOOL -
MODERNIZATION AND ADDITION
500 REDPATH ST, KELSO, WA 98626


Date:	05/28/2021
Job No.:	21938.00
Drawn By:	TP
Checked by:	NRH
Revisions	
#	Date Description

LEVEL 1
BUILDING 1
AREA B FLOOR
PLAN -
PLUMBING

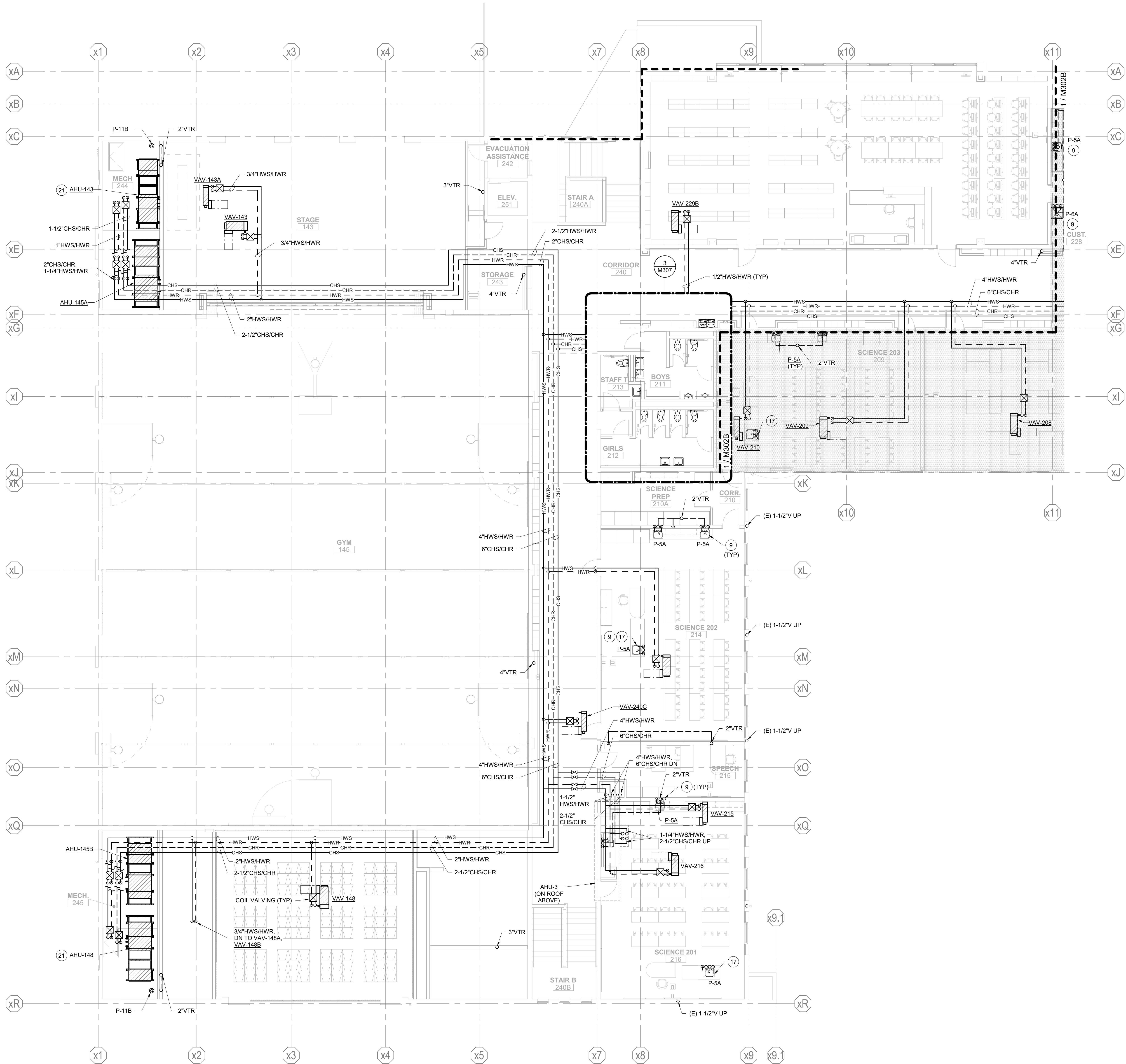
M301B



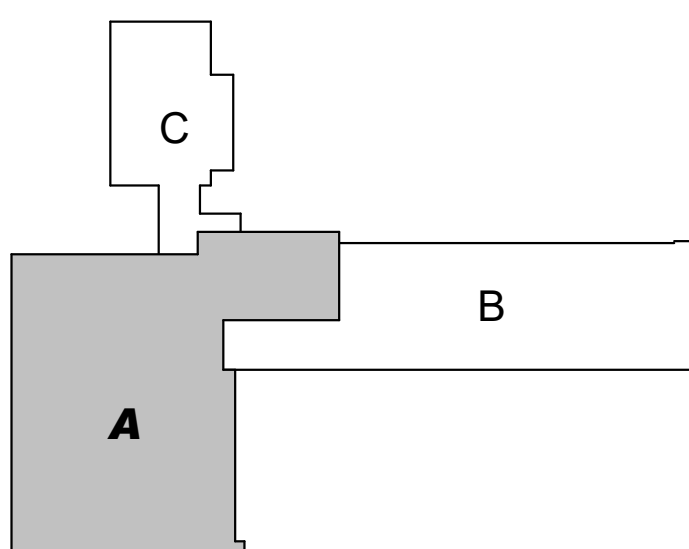
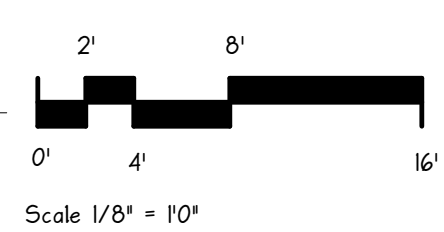
SIGNED
05/28/2021



HULTZ & BHU
engineers inc
Tacoma, WA 98402
1111 Everett Ave Suite 100
Phone: (253) 383-3257 Fax: (253) 383-3253
general@hultzbhu.com Job Number: 20-038



TRUE NORTH
LEVEL 2 BUILDING 1 AREA A FLOOR PLAN - PLUMBING
SCALE: 1/8" = 1'-0"



GENERAL NOTES:

- FOR PIPING SIZES TO INDIVIDUAL PLUMBING FIXTURES SEE "PLUMBING FIXTURE SCHEDULE", SHEET M003 AND FOOD SERVICE DRAWINGS.
- PROVIDE WALL CLEANOUT BENEATH FIXTURES FOR ALL SINKS AND LAVATORIES.
- ALL ISOLATION VALVES SHALL BE ACCESSIBLE. PLUMBING CONTRACTOR SHALL COORDINATE WITH OTHER TRADES TO INSURE VALVES ARE ACCESSIBLE.
- OFFSET VTR'S AND PIPING AS REQUIRED TO AVOID DUCTWORK AND OTHER OBSTRUCTIONS. VTR'S SHALL BE A MINIMUM OF 10 FEET FROM ANY OUTSIDE AIR OPENING.
- AT RESTROOMS WITH PLUMBING CHASES, THE CONTRACTOR MAY USE HORIZONTAL DISCHARGE WASTE CARRIERS AND ABOVE FLOOR WASTE PIPING IN LIEU OF THE DESIGN SHOWN. PROVIDE END OF LINE CLEANOUT ACCESS EQUAL TO DESIGN.
- AT RESTROOMS PROVIDE COLD WATER HEADER FULL LENGTH OF PLUMBING CHASE SAME SIZE AS BRANCH COLD WATER LINE SHOWN SERVING RESTROOMS (UNO).
- PROVIDE WATER HAMMER ARRESTORS ON ALL COLD WATER LINES SERVING FIXTURES WITH FLUSH VALVES. LOCATE UPSTREAM OF LAST FIXTURE ON LINE. AT EACH FIXTURE GROUP, PROVIDE SHUT-OFF VALVE AND ACCESS DOOR. PDI SIZE SHALL BE AS FOLLOWS:

NO. OF FIXTURES	PDI SIZE
1-2	A
3-4	B
5 & MORE	C
- ROUTE PIPING SO AS NOT TO OBSTRUCT EQUIPMENT ACCESS.
- PROVIDE AAV'S WITH ISOLATION VALVES AT PIPING HIGH POINTS (LOCATIONS MAY VARY DEPENDING ON ACTUAL CONTRACTOR PIPE ROUTING AND PIPE SLOPE).
- LOCATE ALL VAV UNIT COIL PIPING TO BE ACCESSIBLE THOUGH CEILING. LOCATE COMPONENTS BETWEEN 8" AND 24" ABOVE CEILING.
- FOR ALL FIXTURES & PIPING LOCATED AT WALLS ON GRID LINES, STRUCTURAL MEMBERS LIE DIRECTLY ON WALL, AND PIPING BETWEEN FLOORS SHALL OFFSET AROUND STRUCTURAL MEMBERS. PIPING ON LOWER LEVEL SHALL OFFSET ABOVE CEILING OUT FROM WALL TO AVOID STRUCTURAL. ONCE ABOVE FLOOR, PIPING SHALL OFFSET WITHIN TOESPACE OF CASEWORK & THEN OFFSET BACK INTO WALL, OR OFFSET W/IN WALL SPACE.
- SEE DETAILS 1 & 2 ON SHEET M305 FOR HYDRONIC COIL CONNECTIONS. CONTROL VALVES ARE 2-WAY TYPE UNO.
- SEE STRUCTURAL PLANS FOR EXACT LOCATION OF OPENINGS IN CONCRETE FLOORS, WALLS, AND ROOF.
- NOT ALL KEYED NOTES ARE USED ON ALL SHEETS.

KEYED NOTES:

- TRAP PRIMER VALVE W/ ACCESS DOOR AND 1/2" CW CONNECTION, SEE DETAIL 1 SHEET M304.
- PROVIDE DISHWASHER WITH AIR GAP FITTING. INSTALL IN COUNTERTOP TIGHT TO WALL.
- 3/4" END OF LINE VALVES, FOR FLUSHING/DRAINING.
- PROVIDE W/ 3-WAY CONTROL VALVE.
- 1/2" CW TRAP PRIMER LINE TO FLOOR DRAIN/FLOOR RECEPTOR.
- CONNECT TO SITE PIPING. VERIFY LOCATIONS AND COORDINATE WITH SITE CONTRACTOR.
- CAP (E) PIPING WHERE ABANDONED IN PLACE.
- CONNECT TO EXISTING PIPING.
- FIXTURE HW/CW SERVED FROM BELOW.
- HW/CW/W SERVING FIXTURE ABOVE.
- GAS PRESSURE REGULATOR, 2 PSI INLET, 7" W.C. OUTLET PRESSURE. CAPACITY SHALL MATCH EQUIPMENT BEING SERVED. VENT REGULATOR FULL SIZE UP THRU ROOF.
- PROVIDE 3/4" HWS/HWR PIPING FROM NEARBY MAINS. PROVIDE W/ 2-WAY VALVE PER DETAIL 1/M305.
- ABOVEGROUND GREASE TRAP SERVES ADJACENT 3-COMPARTMENT SINK.
- INSTALL WALL HYDRANT AT SAME LOCATION AS PREVIOUSLY DEMO'D HYDRANT. RE-USE (E) COLD WATER PIPING WHERE NOT ACCESSIBLE TO REPLACE.
- ROUTE 3/4" HW/CW UP & DN IN FURRED WALL TO SERVE STACKED LAVATORIES.
- CONNECT TO (E) VENT PIPING WHICH SERVED PREVIOUSLY DEMO'D FIXTURE. EXACT ROUTING OF VENT PIPING IS UNKNOWN, CONTRACTOR SHALL FIELD VERIFY PRIOR TO BEGINNING WORK.
- PROVIDE WITH AN ISLAND VENT PER DETAIL 9, SHEET M305.
- PROVIDE 8" UNDERGROUND SLEEVE FOR RGRL SERVING FREEZER & COOLER. SEE DETAIL 8, SHEET M305.
- ROUTE VENT IN CASEWORK, CONNECT TO (E) VENT UP IN CONCRETE WALL.
- ROUTE PIPING UP TO FIXTURE ABOVE THROUGH CASEWORK.
- 3-WAY CONTROL VALVE.
- ROUTE 3/4" CONDENSATE DRAIN FROM AHU TO NEAREST FLOOR DRAIN.

**KELSO SCHOOL DISTRICT NO. 458
HUNTINGTON MIDDLE SCHOOL -
MODERNIZATION AND ADDITION**

500 REDPATH ST, KELSO, WA 98626

Date:	05/28/2021
Job No.:	21938.00
Drawn By:	TP
Checked by:	NRH
Revisions	
#	Date Description

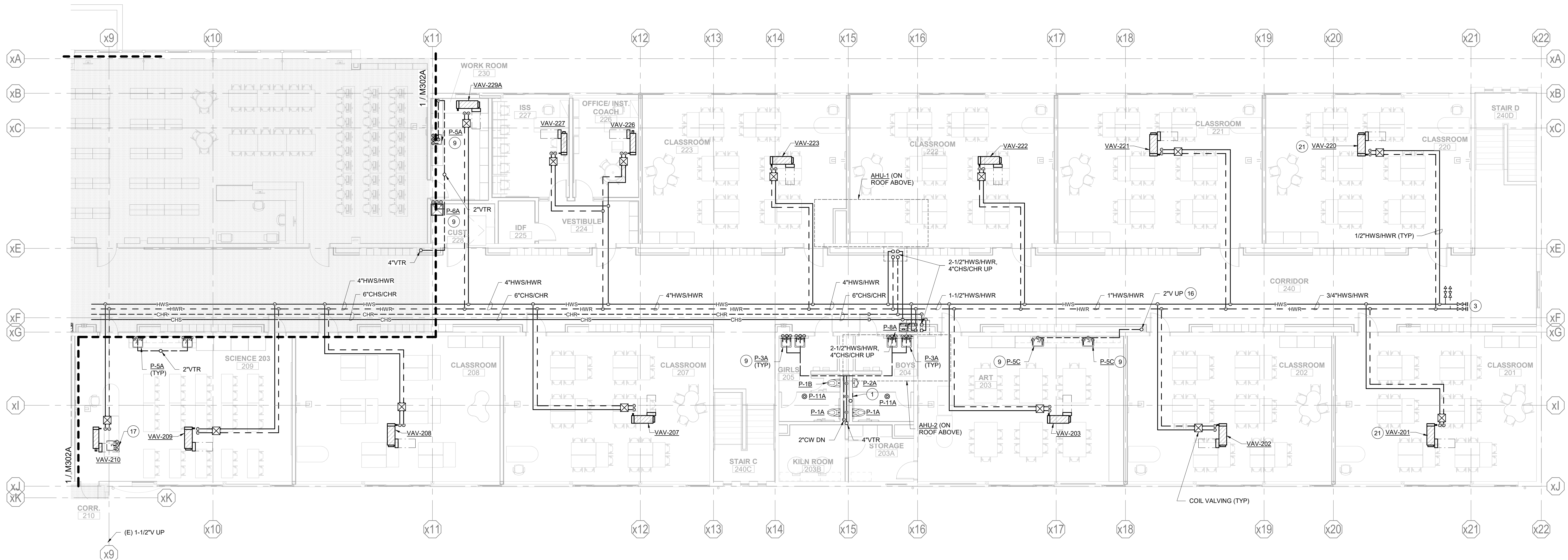
LEVEL 2
BUILDING 1
AREA A - FLOOR
PLAN -
PLUMBING

M302A

integrus
ARCHITECTURE

SIGNED
05/28/2021

HULTZ & BHU
engineers inc
Tacoma, WA 98402
1111 Everett Ave Suite 100
Phone: (253) 383-3257 Fax: (253) 383-3283
general@hultzbhu.com
Job Number: 20-038



LEVEL 2 BUILDING 1 AREA B FLOOR PLAN - PLUMBING
SCALE: 1/8" = 1'-0"

KEYED NOTES:

- TRAP PRIMER VALVE W/ ACCESS DOOR AND 1/2" CW CONNECTION, SEE DETAIL 1 SHEET M304.
- PROVIDE DISHWASHER WITH AIR GAP FITTING, INSTALL IN COUNTERTOP TIGHT TO WALL.
- 3/4" END OF LINE VALVES, FOR FLUSHING/DRAINING.
- PROVIDE W/ 3-WAY CONTROL VALVE.
- 1/2" CW TRAP PRIMER LINE TO FLOOR DRAIN/FLOOR RECEPTOR.
- CONNECT TO SITE PIPING. VERIFY LOCATIONS AND COORDINATE WITH SITE CONTRACTOR.
- CAP (E) PIPING WHERE ABANDONED IN PLACE.
- CONNECT TO EXISTING PIPING.
- FIXTURE HW/CW SERVED FROM BELOW.
- HW/CWW SERVING FIXTURE ABOVE.
- GAS PRESSURE REGULATOR, 2 PSI INLET, 7" W.C. OUTLET PRESSURE. CAPACITY SHALL MATCH EQUIPMENT BEING SERVED. VENT REGULATOR FULL SIZE UP THRU ROOF.
- PROVIDE 3/4" HWS/HWR PIPING FROM NEARBY MAINS. PROVIDE W/ 2-WAY VALVE PER DETAIL 1M305.
- ABOVEGROUND GREASE TRAP SERVES ADJACENT 3-COMPARTMENT SINK.
- INSTALL WALL HYDRANT AT SAME LOCATION AS PREVIOUSLY DEMOD HYDRANT. RE-USE (E) COLD WATER PIPING WHERE NOT ACCESSIBLE TO REPLACE.
- ROUTE 3/4" HW/CW UP & DN IN FURRED WALL TO SERVE STACKED LAVATORIES.
- CONNECT TO (E) VENT PIPING WHICH SERVED PREVIOUSLY DEMOD FIXTURE. EXACT ROUTING OF VENT PIPING IS UNKNOWN, CONTRACTOR SHALL FIELD VERIFY PRIOR TO BEGINNING WORK.
- PROVIDE WITH AN ISLAND VENT PER DETAIL 9, SHEET M305.
- PROVIDE 6" UNDERGROUND SLEEVE FOR RGRL SERVING FREEZER & COOLER. SEE DETAIL 8, SHEET M305.
- ROUTE VENT IN CASEWORK, CONNECT TO (E) VENT UP IN CONCRETE WALL.
- ROUTE PIPING UP TO FIXTURE ABOVE THROUGH CASEWORK.
- 3-WAY CONTROL VALVE.
- ROUTE 3/4" CONDENSATE DRAIN FROM AHU TO NEAREST FLOOR DRAIN.

GENERAL NOTES:

- FOR PIPING SIZES TO INDIVIDUAL PLUMBING FIXTURES SEE "PLUMBING FIXTURE SCHEDULE", SHEET M003 AND FOOD SERVICE DRAWINGS.
- PROVIDE WALL CLEANOUT BENEATH FIXTURES FOR ALL SINKS AND LAVATORIES.
- ALL ISOLATION VALVES SHALL BE ACCESSIBLE. PLUMBING CONTRACTOR SHALL COORDINATE WITH OTHER TRADES TO INSURE VALVES ARE ACCESSIBLE.
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- AT RESTROOMS PROVIDE COLD WATER HEADER FULL LENGTH OF PLUMBING CHASE SAME SIZE AS BRANCH COLD WATER LINE SHOWN SERVING RESTROOMS (UNO).
- PROVIDE WATER HAMMER ARRESTORS ON ALL COLD WATER LINES SERVING FIXTURES WITH FLUSH VALVES. LOCATE UPSTREAM OF LAST FIXTURE ON LINE, AT EACH FIXTURE GROUP. PROVIDE SHUT-OFF VALVE AND ACCESS DOOR. PDI SIZE SHALL BE AS FOLLOWS:

NO. OF FIXTURES	PDI SIZE
1-2	A
3-5	B
6 & MORE	C
- ROUTE PIPING SO AS NOT TO OBSTRUCT EQUIPMENT ACCESS.
- PROVIDE AAV'S WITH ISOLATION VALVES AT PIPING HIGH POINTS (LOCATIONS MAY VARY DEPENDING ON ACTUAL CONTRACTOR PIPE ROUTING AND PIPE SLOPE).
- LOCATE ALL VAV UNIT COIL PIPING TO BE ACCESSIBLE THOUGH CEILING. LOCATE COMPONENTS BETWEEN 8" AND 24" ABOVE CEILING.
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- SEE DETAILS 1 & 2 ON SHEET M305 FOR HYDRONIC COIL CONNECTIONS. CONTROL VALVES ARE 2-WAY TYPE UNO.
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- NOT ALL KEYED NOTES ARE USED ON ALL SHEETS.

KELSO SCHOOL DISTRICT NO. 458
HUNTINGTON MIDDLE SCHOOL -
MODERNIZATION AND ADDITION

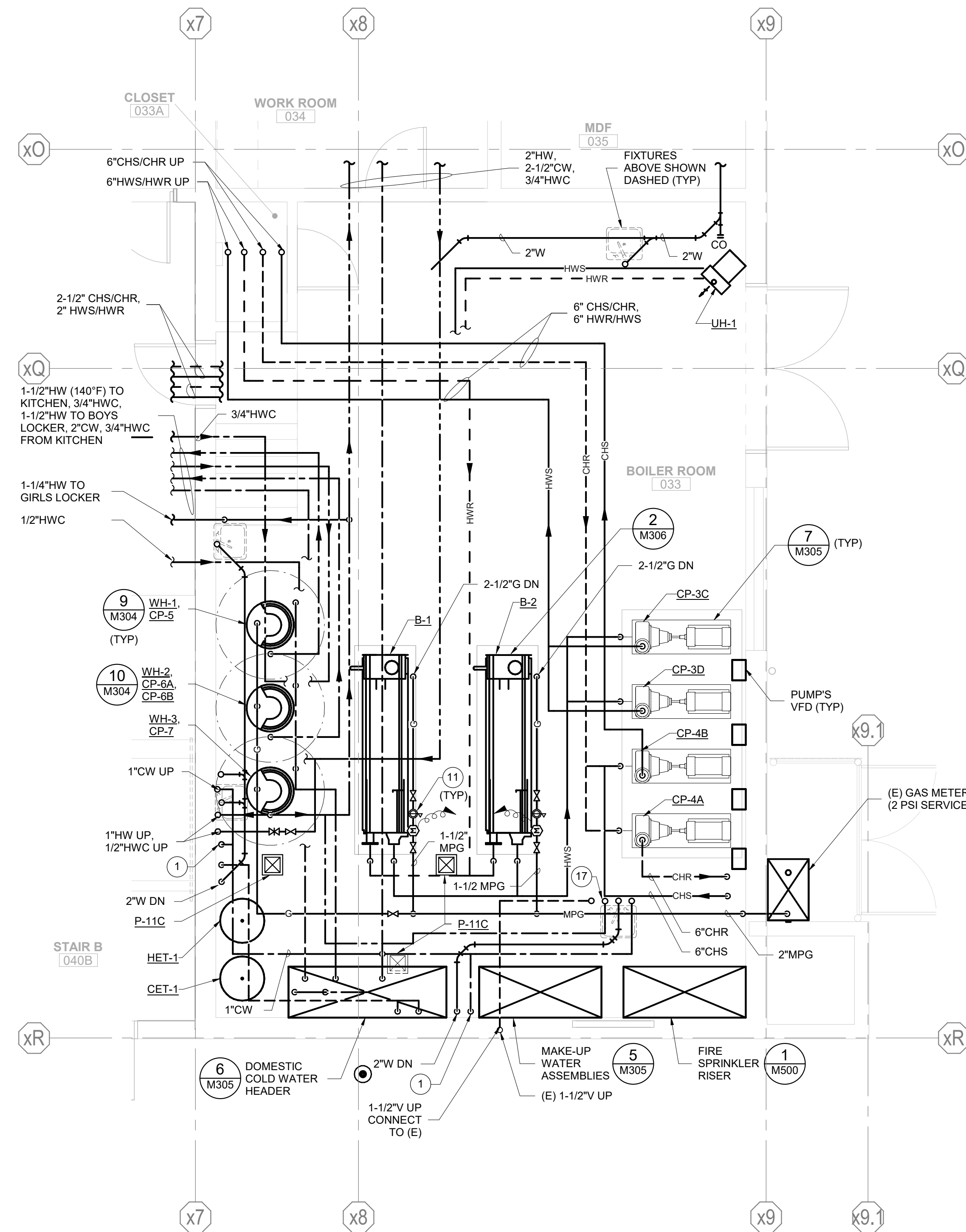
500 REDPATH ST, KELSO, WA 98626

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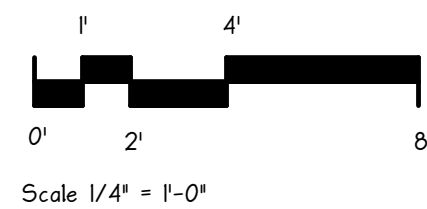
LEVEL 2
BUILDING 1
AREA B - FLOOR
PLAN -
PLUMBING

M302B

BID SET



1 ENLARGED BOILER ROOM PLAN - PLUMBING
SCALE: 1/4" = 1'-0"



GENERAL NOTES:

- FOR PIPING SIZES TO INDIVIDUAL PLUMBING FIXTURES SEE "PLUMBING FIXTURE SCHEDULE", SHEET M003 AND FOOD SERVICE DRAWINGS.
- PROVIDE WALL CLEANOUT BENEATH FIXTURES FOR ALL SINKS AND LAVATORIES.
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- AT RESTROOMS PROVIDE COLD WATER HEADER FULL LENGTH OF PLUMBING CHASE SAME SIZE AS BRANCH COLD WATER LINE SHOWN SERVING RESTROOMS (UNO).
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NO. OF FIXTURES W/ FLUSH VALVES	PDI SIZE
1-2	A
3-4	B
5 & MORE	C
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- PROVIDE AAV'S WITH ISOLATION VALVES AT PIPING HIGH POINTS (LOCATIONS MAY VARY DEPENDING ON ACTUAL CONTRACTOR PIPE ROUTING AND PIPE SLOPE).
- LOCATE ALL VAV UNIT COIL PIPING TO BE ACCESSIBLE THOUGH CEILING. LOCATE COMPONENTS BETWEEN 8" AND 24" ABOVE CEILING.
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- NOT ALL KEYED NOTES ARE USED ON ALL SHEETS.

KEYED NOTES:

- TRAP PRIMER VALVE W/ ACCESS DOOR AND 1/2" CW CONNECTION, SEE DETAIL 1 SHEET M304.
- PROVIDE DISHWASHER WITH AIR GAP FITTING, INSTALL IN COUNTERTIP TIGHT TO WALL.
- 3/4" END OF LINE VALVES, FOR FLUSHING/DRAINING.
- PROVIDE W/ 3-WAY CONTROL VALVE.
- 1/2" CW TRAP PRIMER LINE TO FLOOR DRAIN/FLOOR RECEPTOR.
- CONNECT TO SITE PIPING. VERIFY LOCATIONS AND COORDINATE WITH SITE CONTRACTOR.
- CAP (E) PIPING WHERE ABANDONED IN PLACE.
- CONNECT TO EXISTING PIPING.
- FIXTURE HW/CW SERVED FROM BELOW.
- HW/CWW SERVING FIXTURE ABOVE.
- GAS PRESSURE REGULATOR, 2 PSI INLET, 7" W.C. OUTLET PRESSURE. CAPACITY SHALL MATCH EQUIPMENT BEING SERVED. VENT REGULATOR FULL SIZE UP THRU ROOF.
- PROVIDE 3/4" HWS/HWR PIPING FROM NEARBY MAINS. PROVIDE W/ 2-WAY VALVE PER DETAIL 1/M305.
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- ROUTE 3/4" HW/CW UP & DN IN FURRED WALL TO SERVE STACKED LAVATORIES.
- CONNECT TO (E) VENT PIPING WHICH SERVED PREVIOUSLY DEMO'D FIXTURE. EXACT ROUTING OF VENT PIPING IS UNKNOWN, CONTRACTOR SHALL FIELD VERIFY PRIOR TO BEGINNING WORK.
- PROVIDE WITH AN ISLAND VENT PER DETAIL 9, SHEET M305.
- PROVIDE 8" UNDERGROUND SLEEVE FOR RGRL SERVING FREEZER & COOLER. SEE DETAIL 8, SHEET M305.
- ROUTE VENT IN CASEWORK, CONNECT TO (E) VENT UP IN CONCRETE WALL.
- ROUTE PIPING UP TO FIXTURE ABOVE THROUGH CASEWORK.
- 3-WAY CONTROL VALVE.
- ROUTE 3/4" CONDENSATE DRAIN FROM AHU TO NEAREST FLOOR DRAIN.

BOILER ROOM NOTES:

- SEE PIPING SCHEMATICS SHEET M306 AND EQUIPMENT DETAILS FOR COMPLETE PIPING CONNECTIONS; NOT ALL ITEMS/CONNECTIONS SHOWN IN PLAN.
- ROUTE PIPING HIGH (MIN 8'-0" AFF) TO ALLOW ACCESS TO ALL EQUIPMENT.
- SEE WATER HEATER DETAIL 8 & 9 ON SHEET M304 FOR PIPING CONNECTIONS.
- SEE SHEET M400A FOR BOILER FLUE ROUTING.

SIGNED
09/28/2021

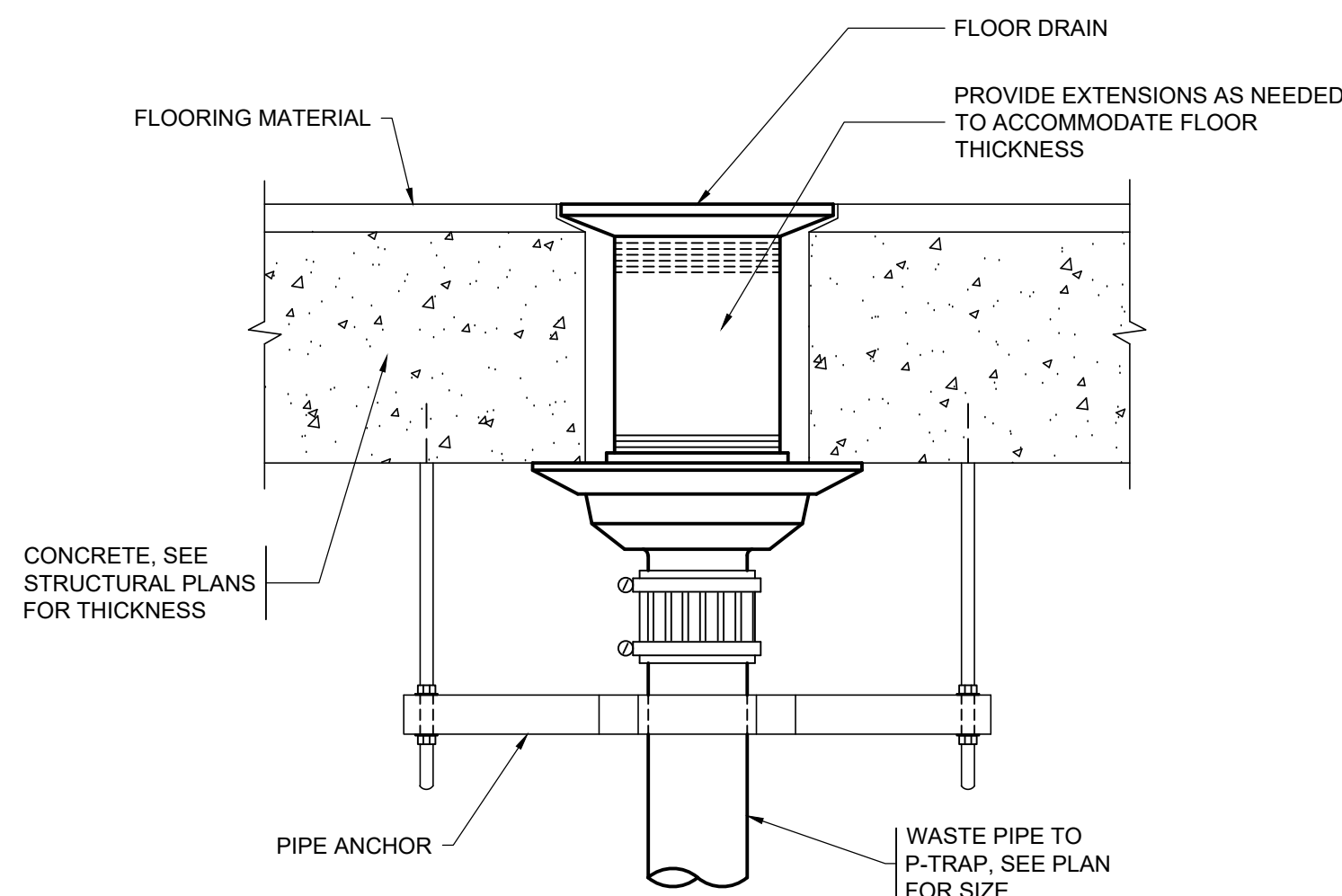
HULTZ & BHU
engineers inc
Tacoma, WA 98402
1111 Everett Ave Suite 100
Phone: (253) 383-3257 Fax: (253) 383-3283
general@hultzbhu.com Job Number: 20-038

**KELSO SCHOOL DISTRICT NO. 458
HUNTINGTON MIDDLE SCHOOL -
MODERNIZATION AND ADDITION**
500 REDPATH ST, KELSO, WA 98626

Date:	05/28/2021
Job No.:	21938.00
Drawn By:	TP
Checked by:	NRH
Revisions	
#	Date Description

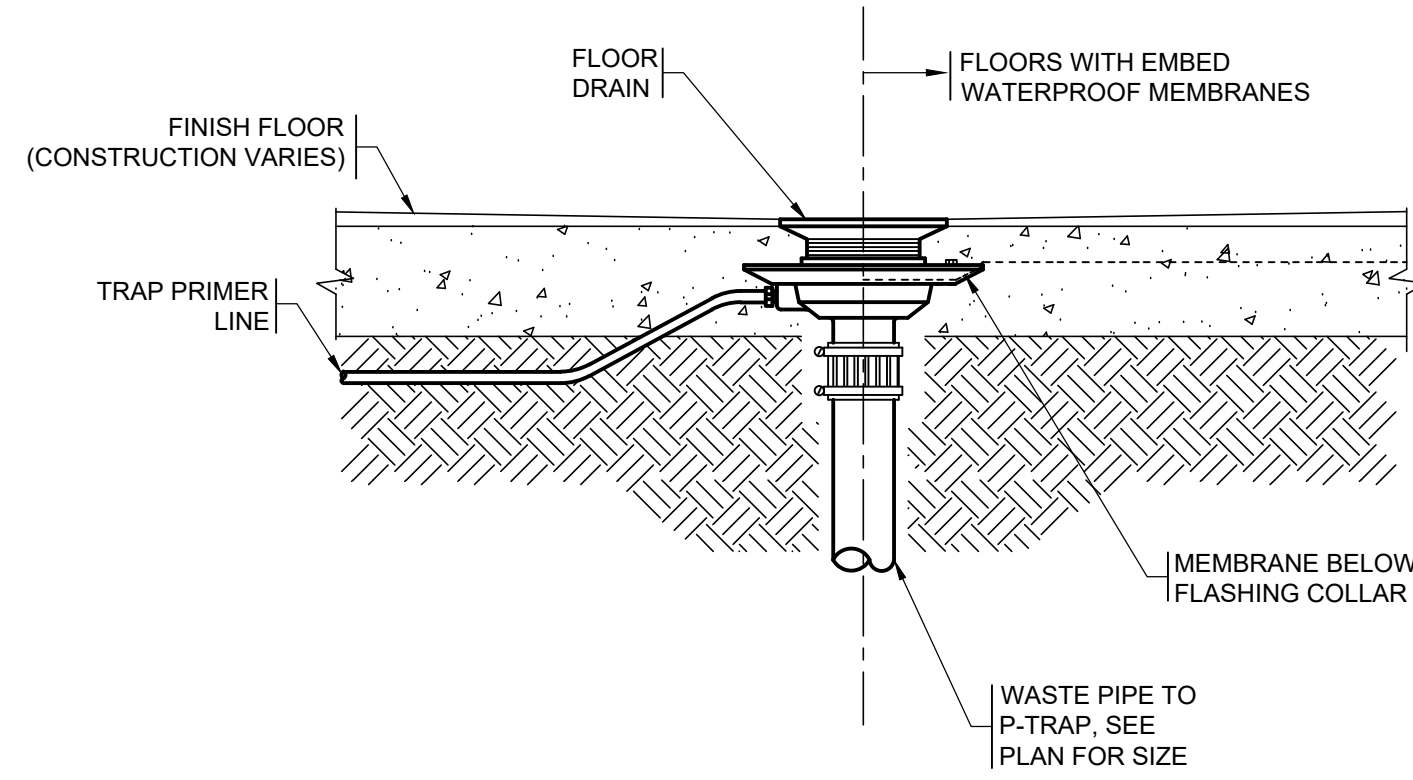
ENLARGED
PLUMBING
PLANS

M303



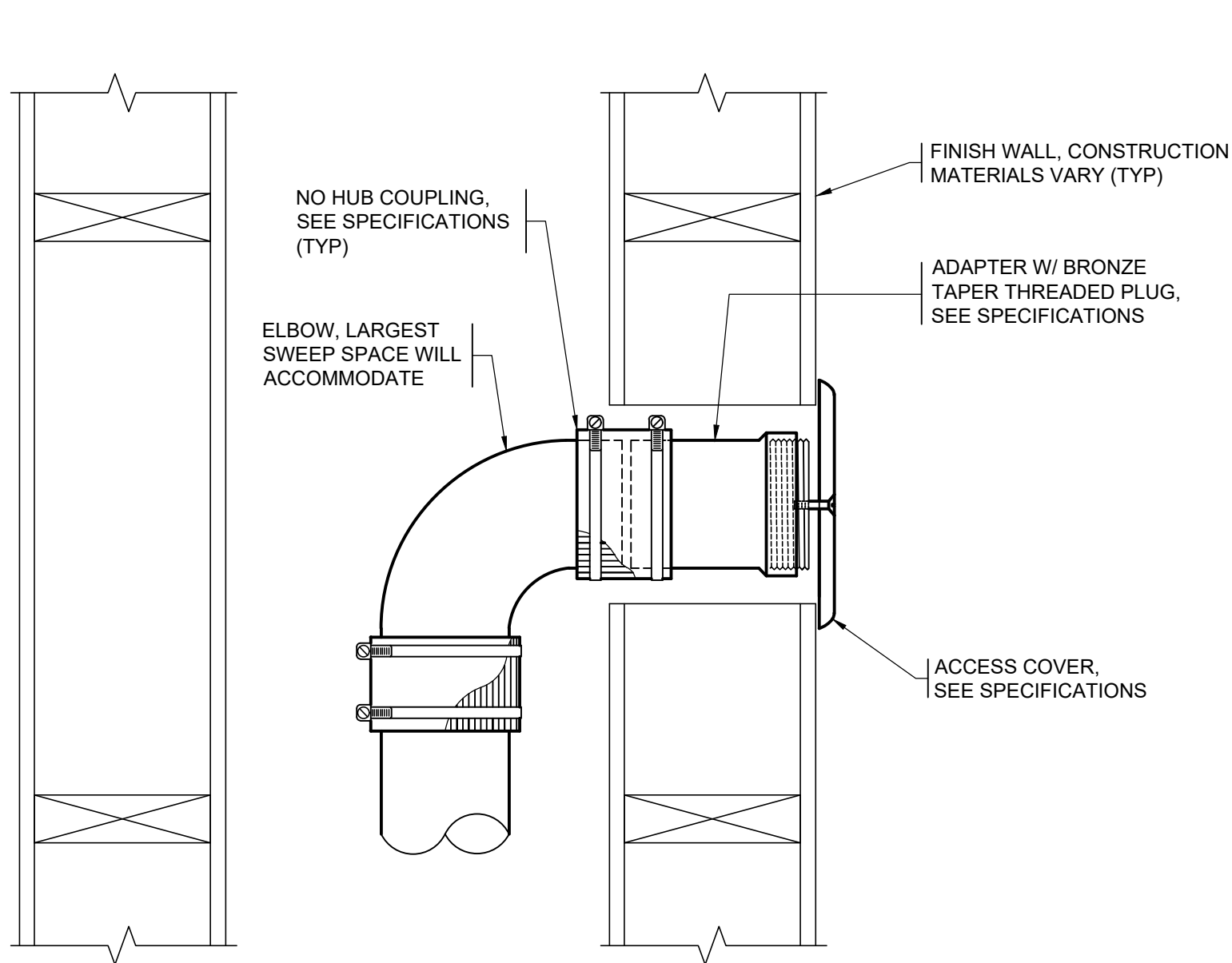
- NOTES:
1. SEE SPECIFICATIONS FOR ADDITIONAL FLOOR DRAIN REQUIREMENTS. PROVIDE W/ TRAP PRIMER.
 2. COORDINATE LOCATION TO AVOID OTHER BUILDING SYSTEMS.
 3. LOCATE TO AVOID CUTTING REBAR. COORDINATE FINAL LOCATIONS WITH STRUCTURAL PRIOR TO BEGINNING WORK.

FLOOR DRAIN DETAIL 1
NTS

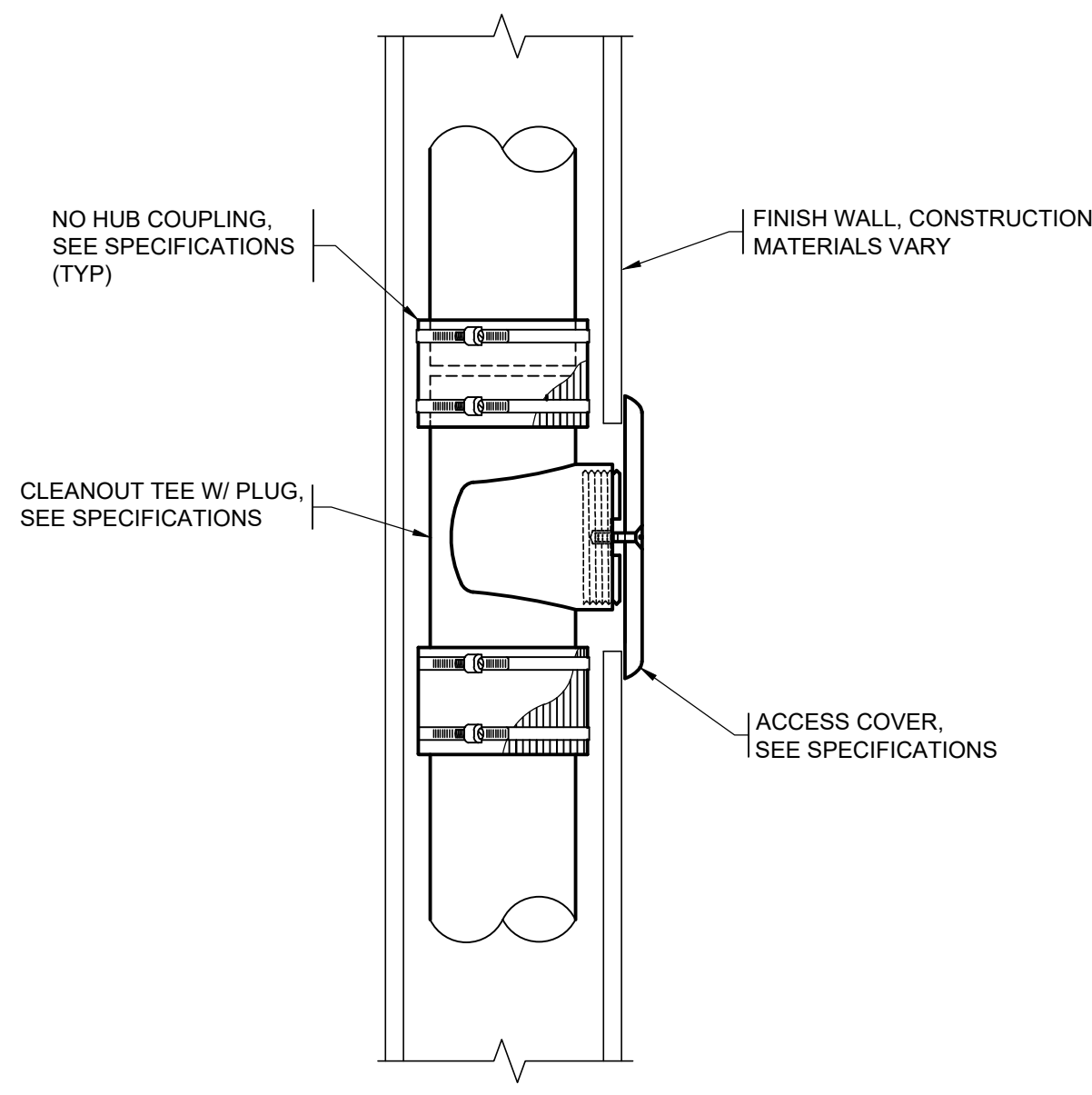


NOTE: SEE SPECIFICATIONS FOR ADDITIONAL FLOOR DRAIN REQUIREMENTS.

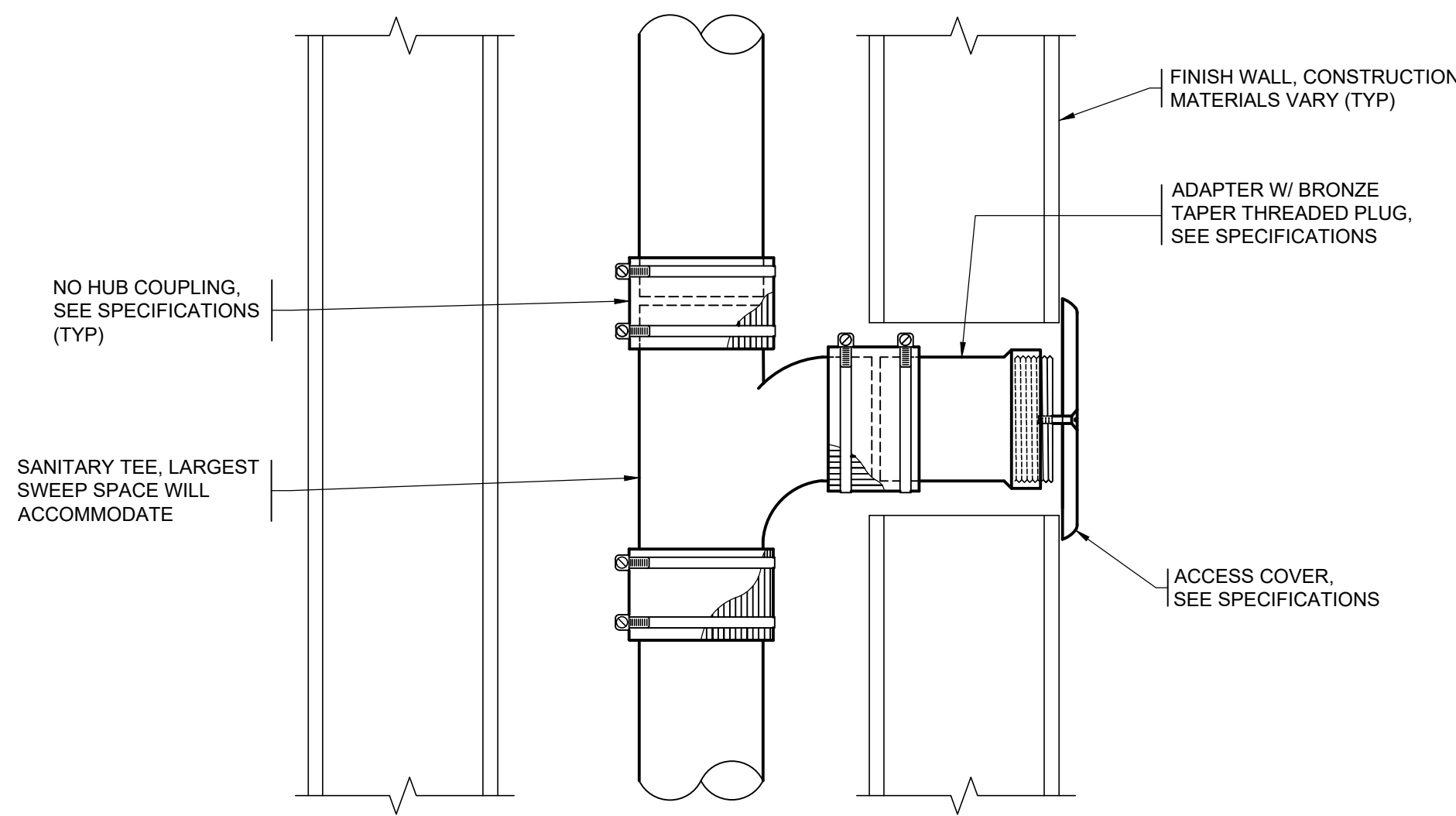
FLOOR DRAIN DETAIL 2
NTS



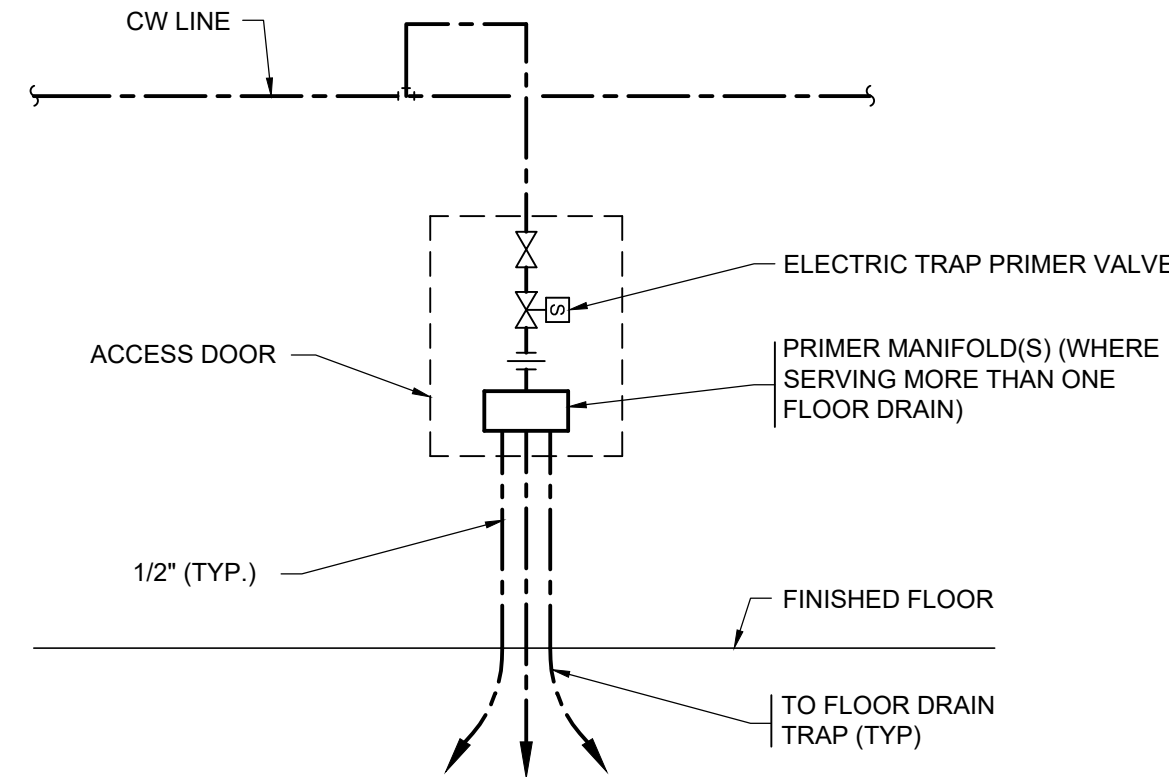
WALL CLEANOUT-W/ ELBOW
NTS



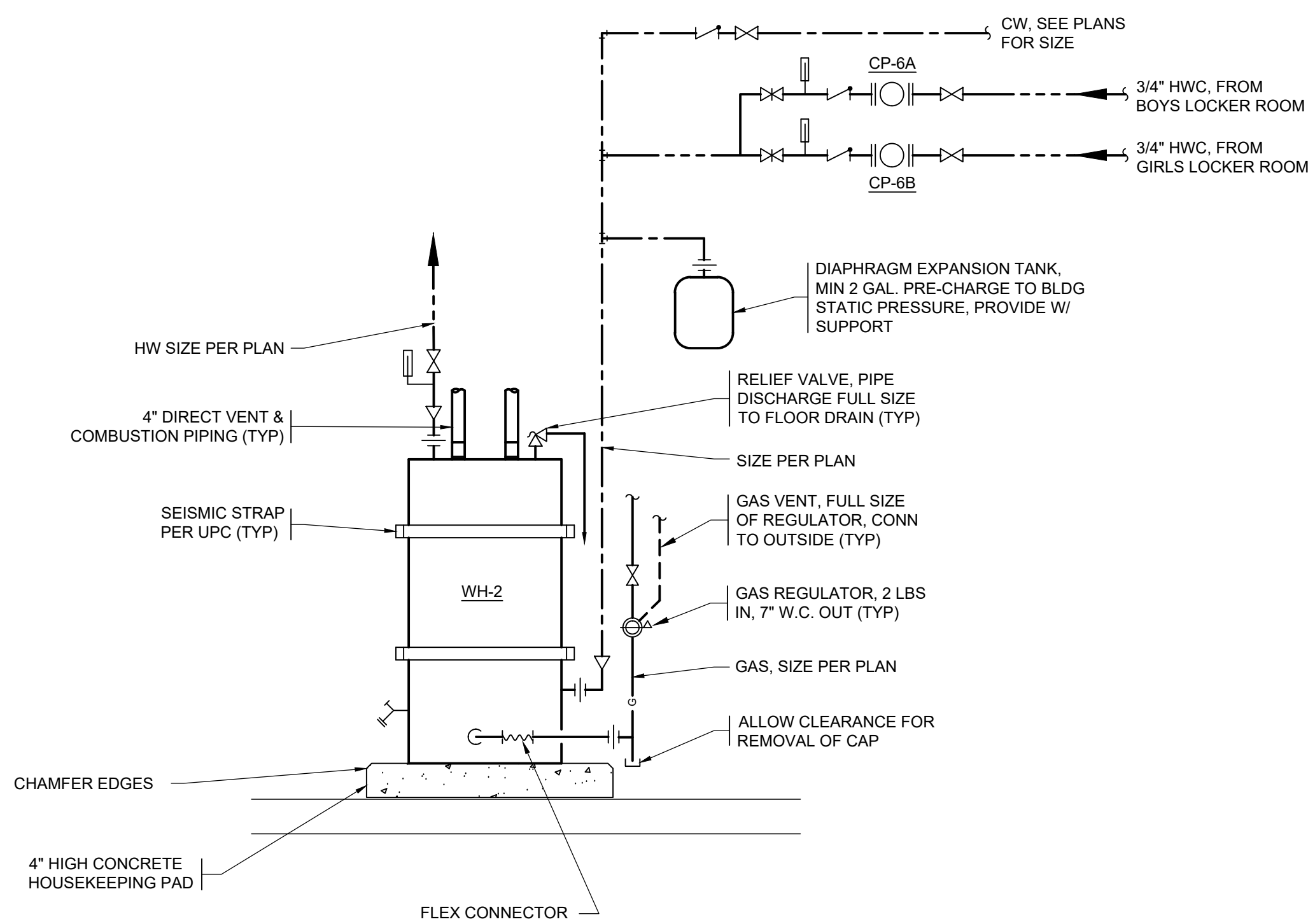
WALL CLEANOUT-IN WALL
NTS



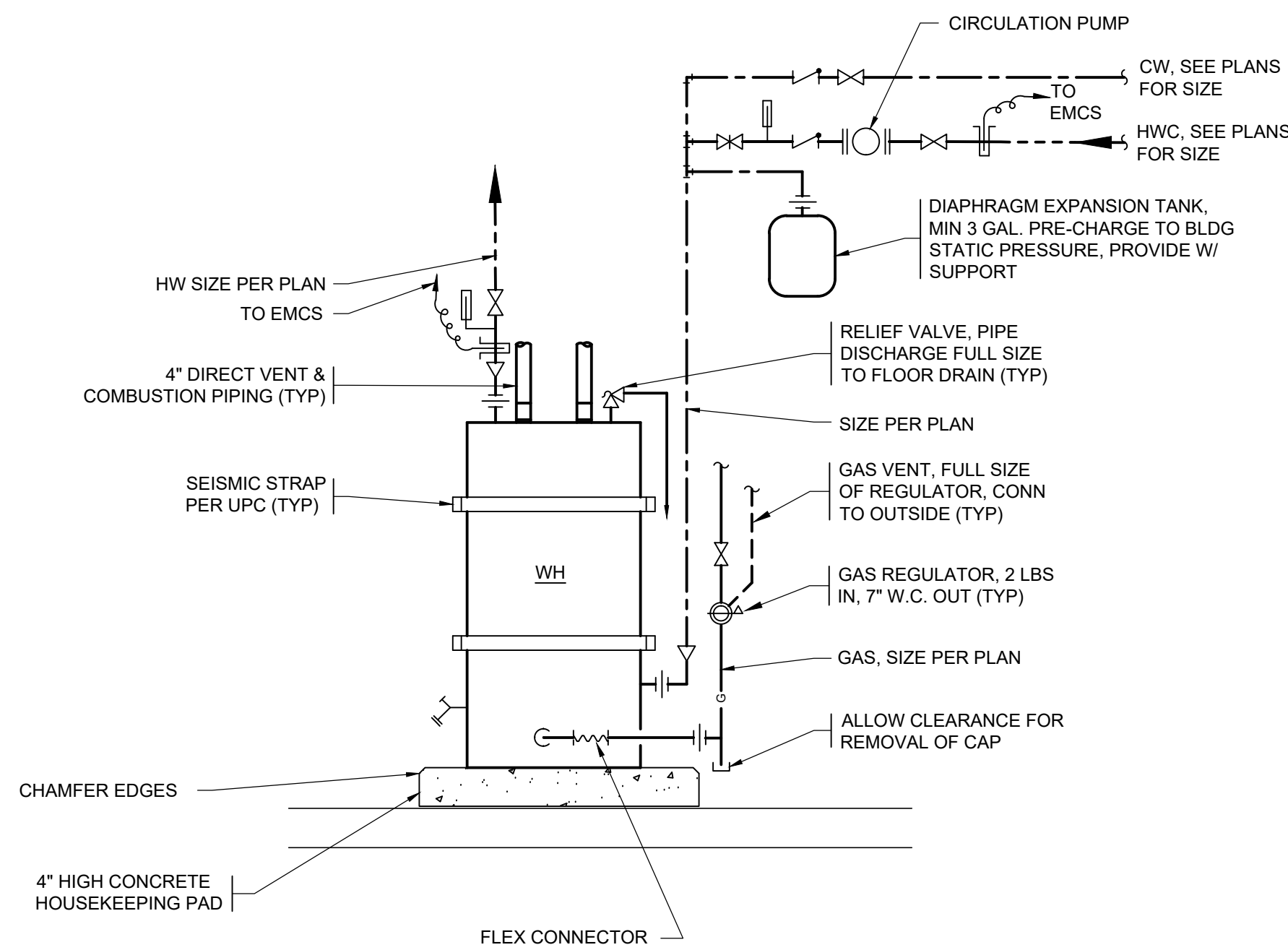
WALL CLEANOUT-W/ TEE IN CHASE
NTS



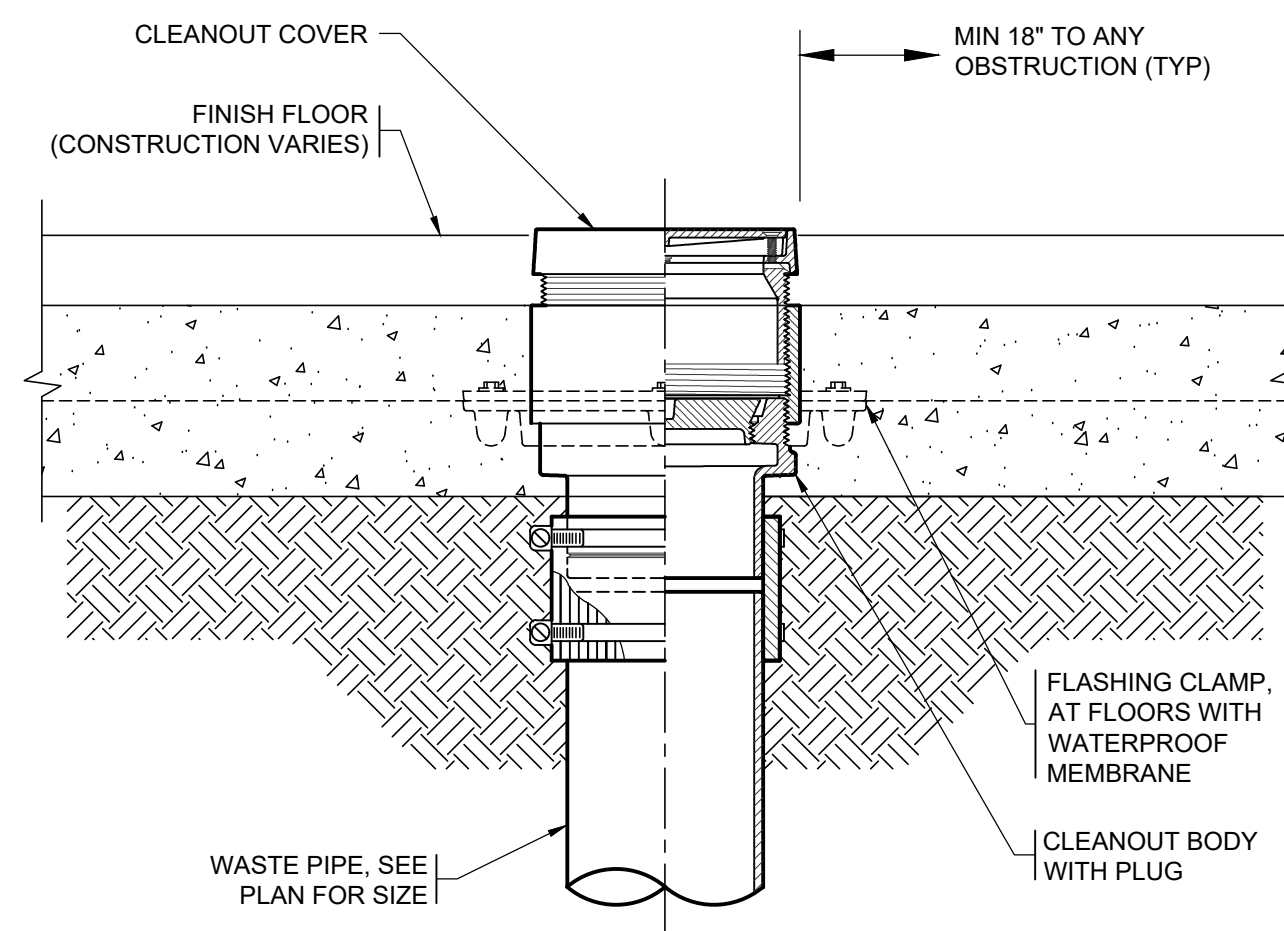
TRAP PRIMER DETAIL
NTS



GAS WATER HEATER DETAIL 10
NTS



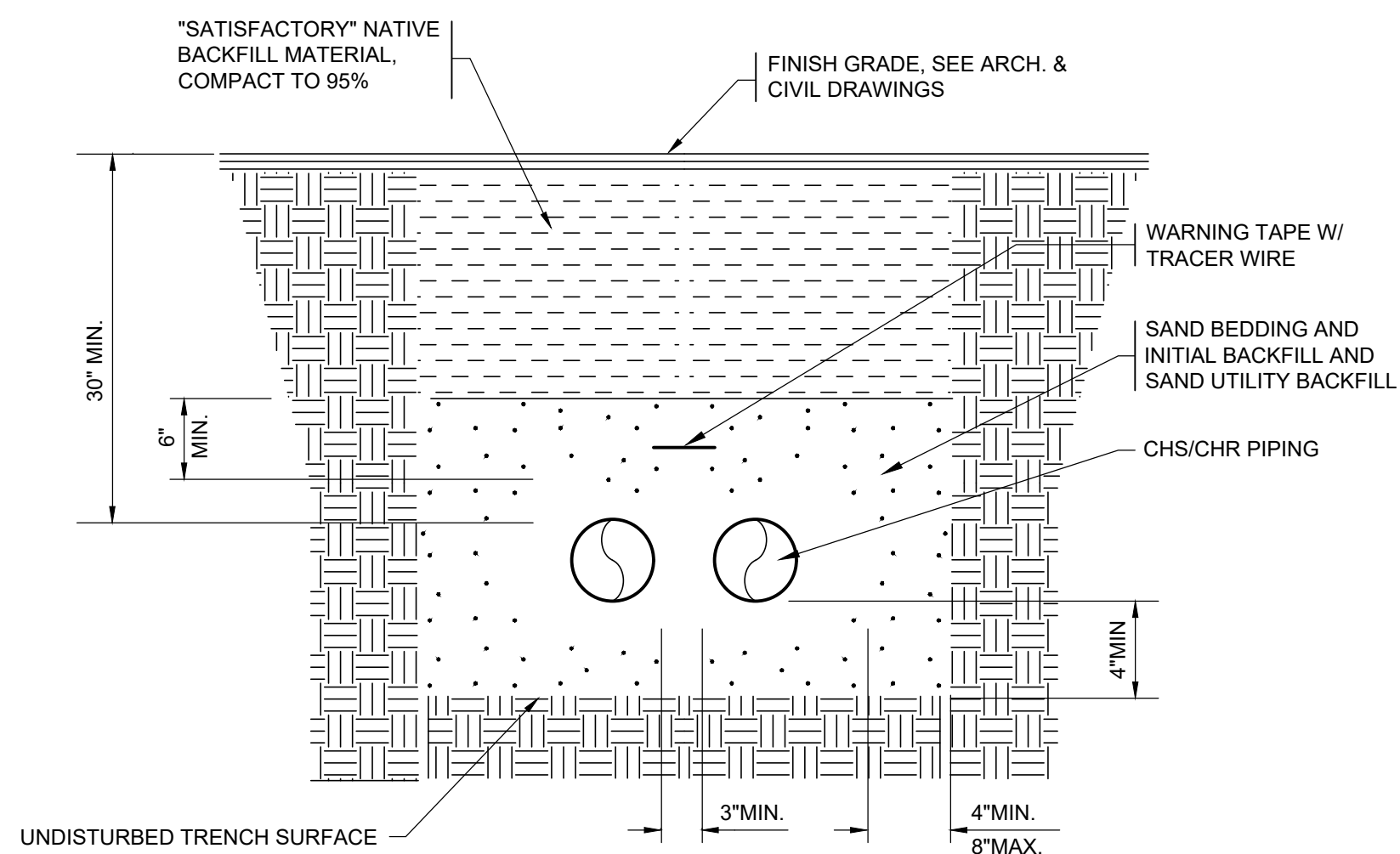
GAS WATER HEATER DETAIL 9
NTS



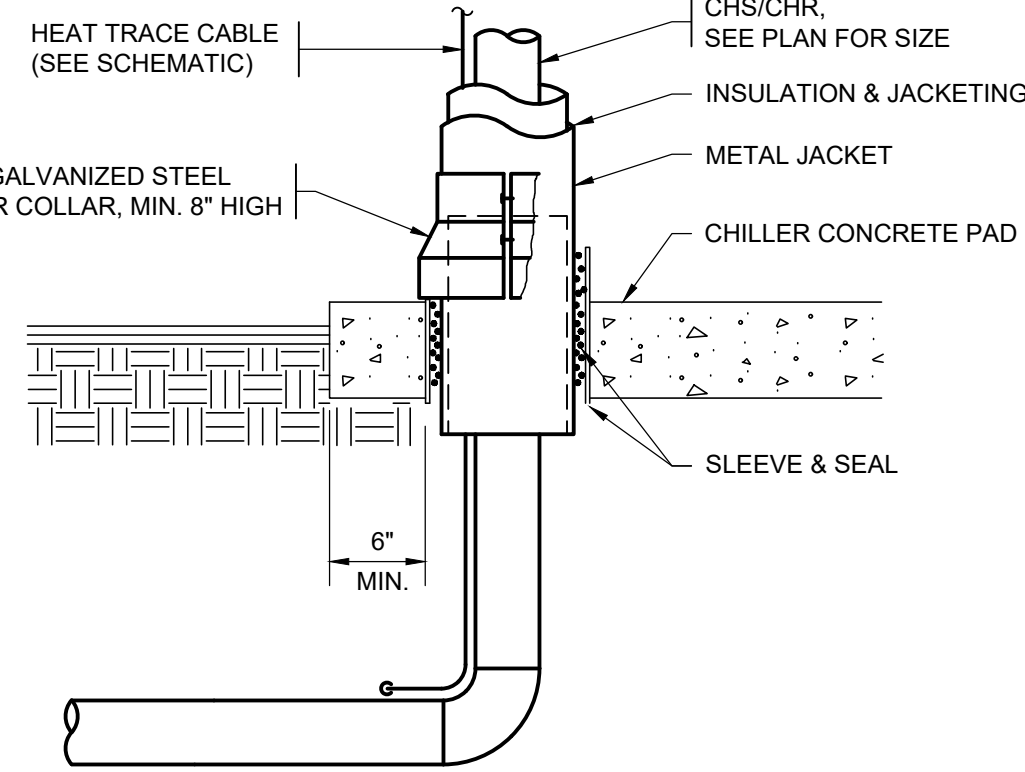
NOTE: SEE SPECIFICATIONS FOR ADDITIONAL FLOOR DRAIN REQUIREMENTS.

FLOOR CLEANOUT DETAIL 8
NTS

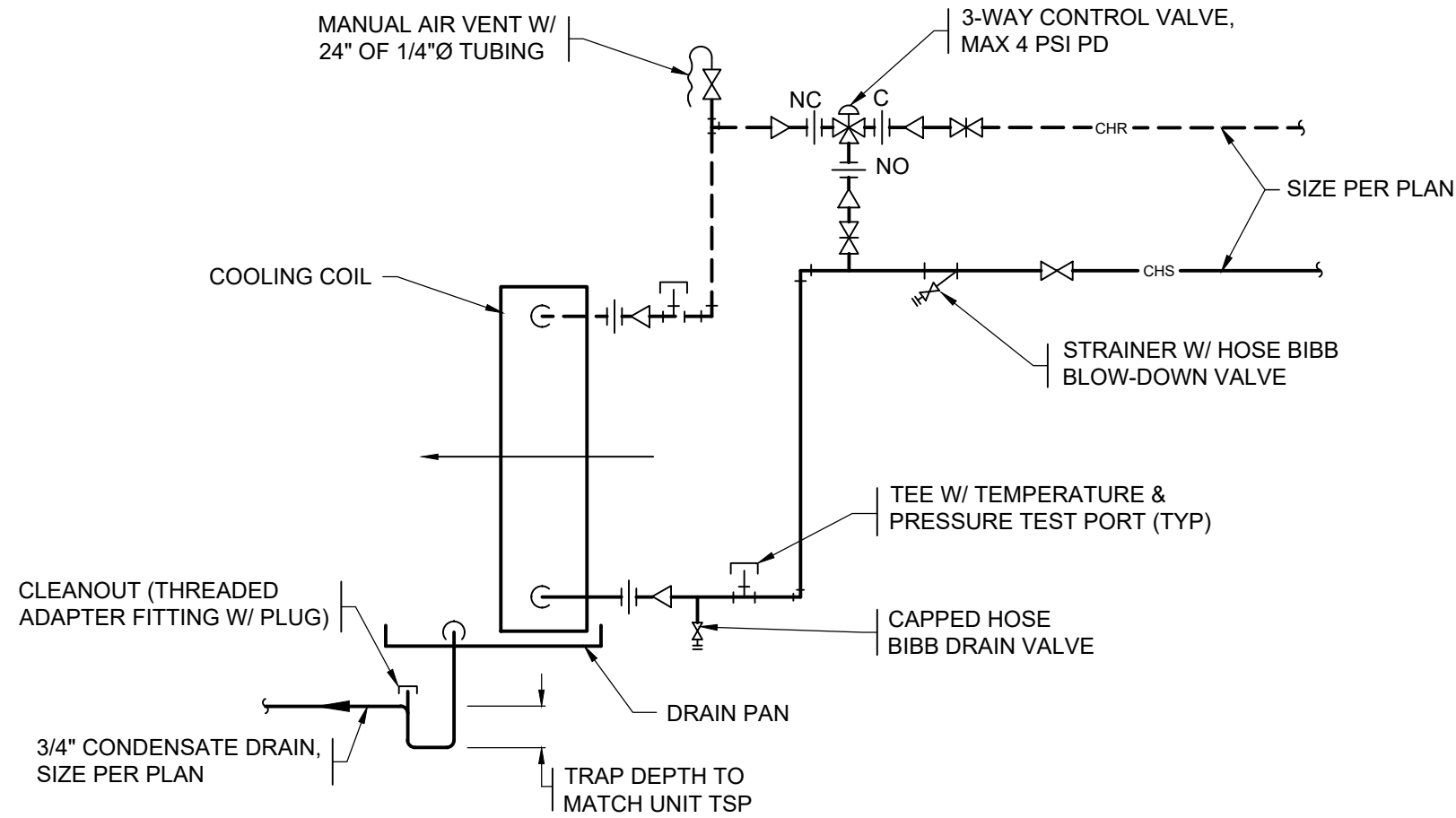
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#	Date Description



CHS/CHR TRENCH DETAIL 4
NTS M305

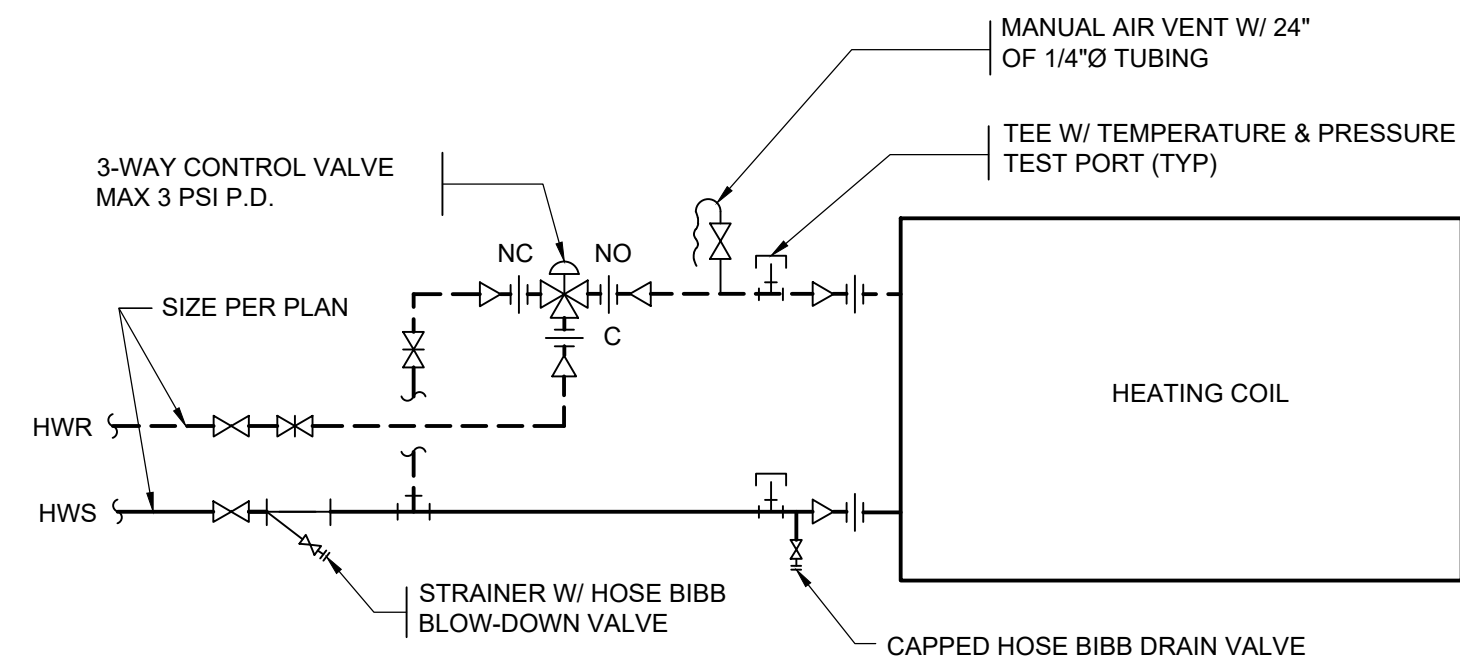


CHILLER PIPING 3
NTS M305

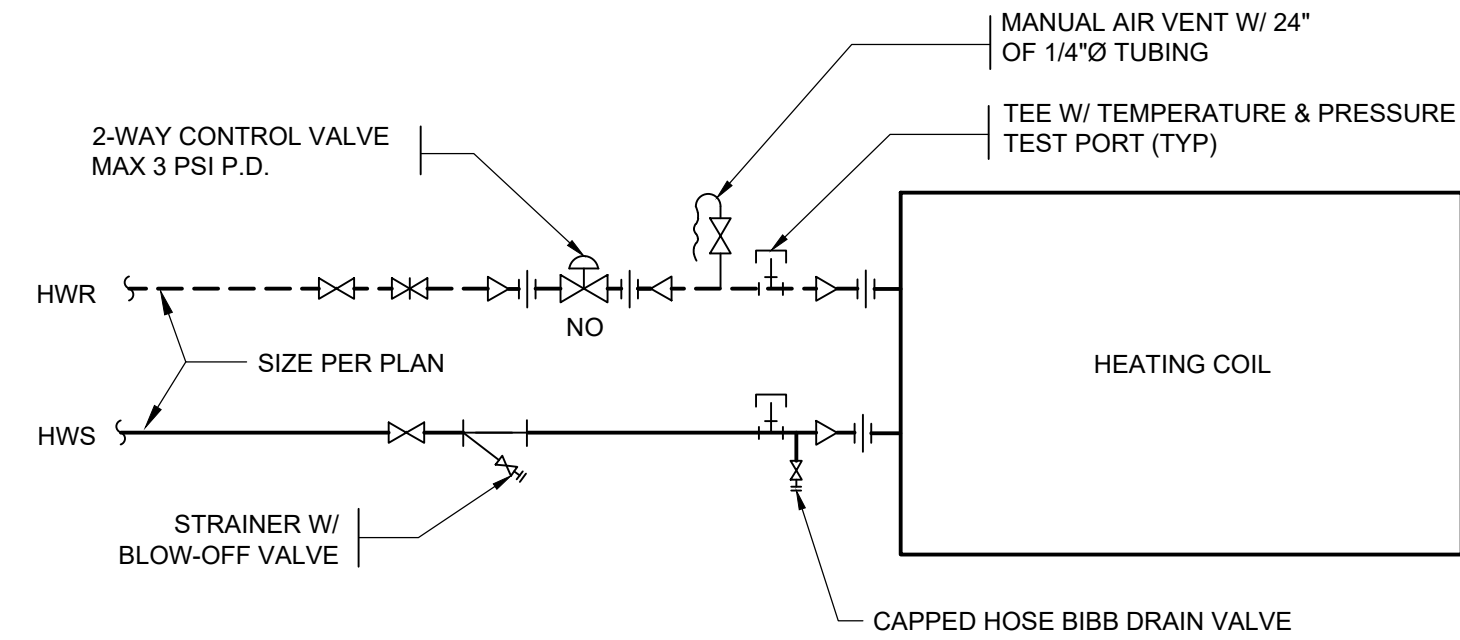


- NOTES:
1. LOCATE COIL VALVING/PIPING SO AS NOT TO OBSTRUCT UNIT ACCESS.
 2. CONDENSATE TRAP MAY BE LOCATED AWAY FROM UNIT SO AS NOT TO OBSTRUCT UNIT ACCESS.
 3. 2-WAY CONTROL VALVE PIPING IS THE SAME BUT WITHOUT "NO" CONNECTION TO 3-WAY VALVE.

COOLING COIL PIPING DETAIL 2
NTS M305



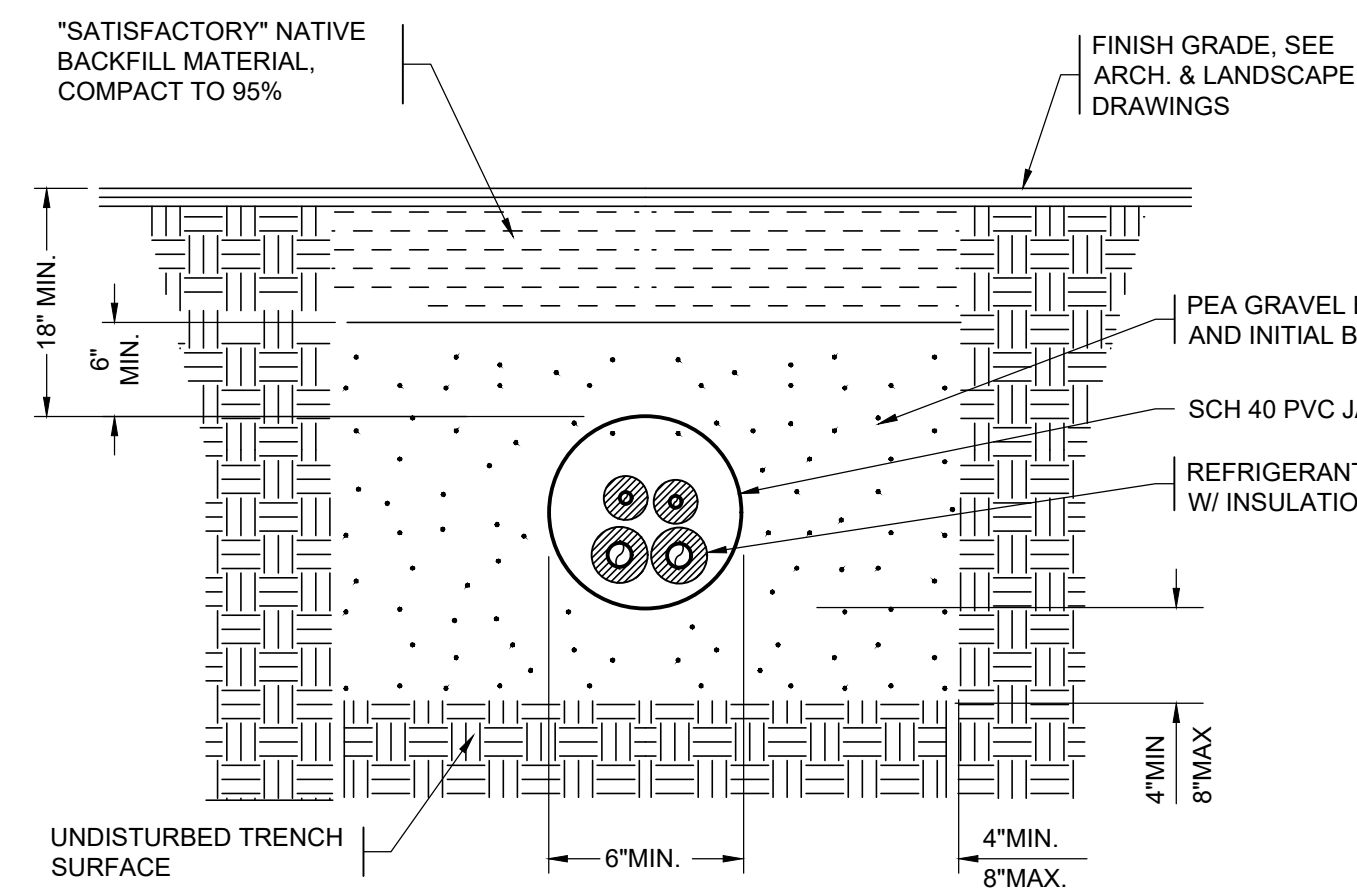
3-WAY CONTROL VALVE



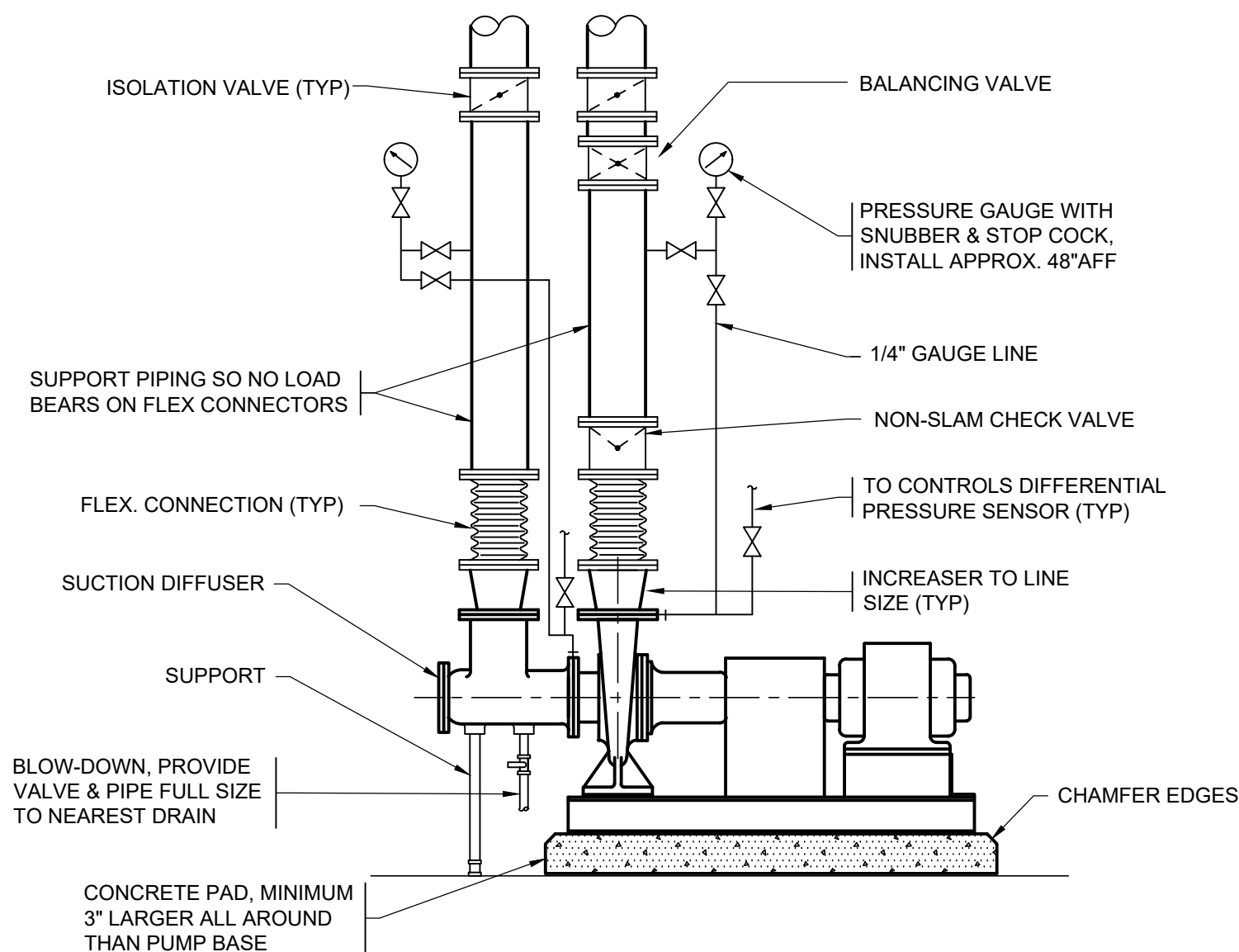
2-WAY CONTROL VALVE

- NOTES:
1. LOCATE COIL VALVING PIPING SO AS NOT TO OBSTRUCT UNIT ACCESS.
 2. LOCATE DRAIN AT LOW POINT TO ALLOW COMPLETE COIL DRAINING.

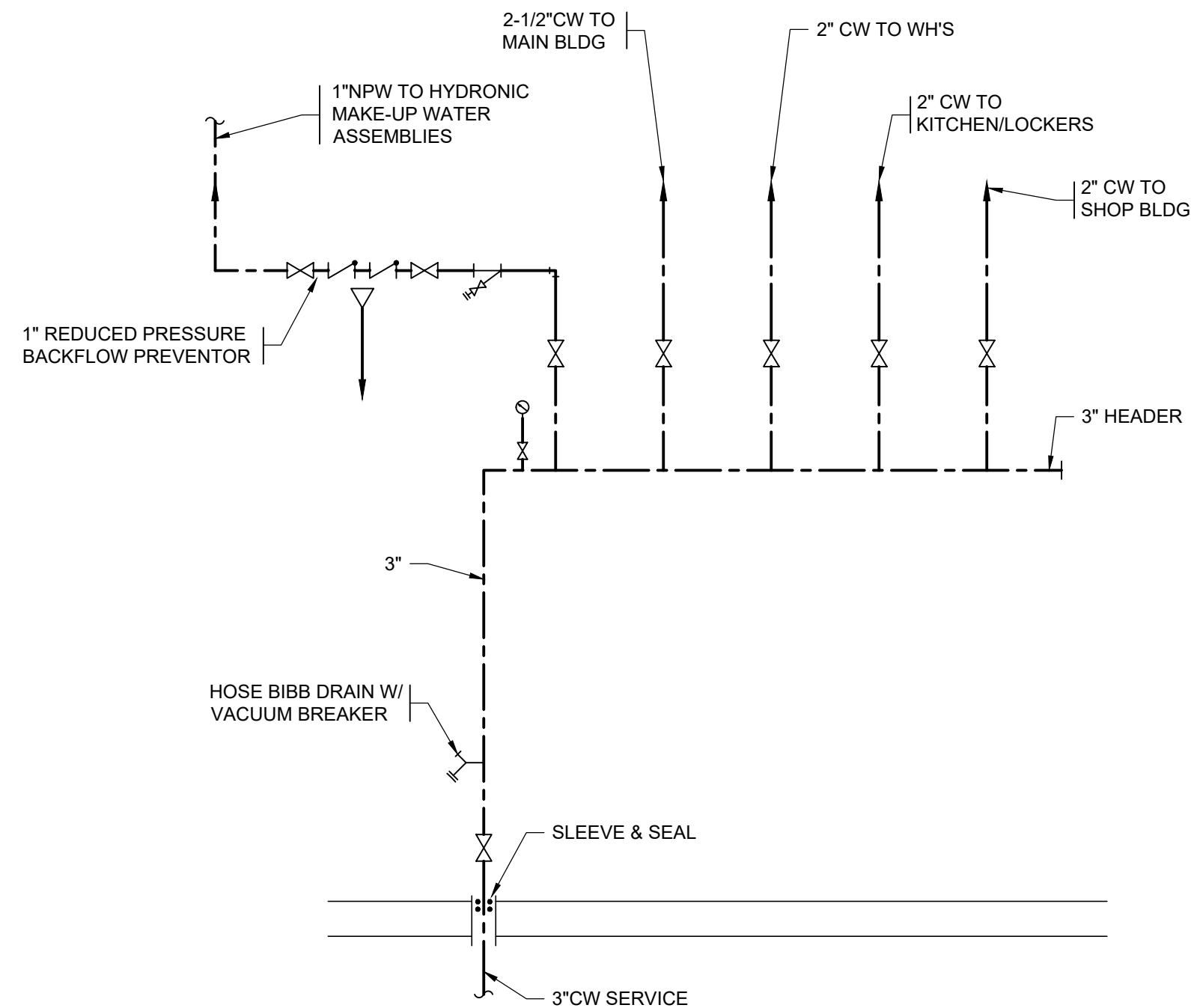
HEATING COIL PIPING DETAIL 1
NTS M305



RG/RL TRENCH SECTION 8
NTS M305

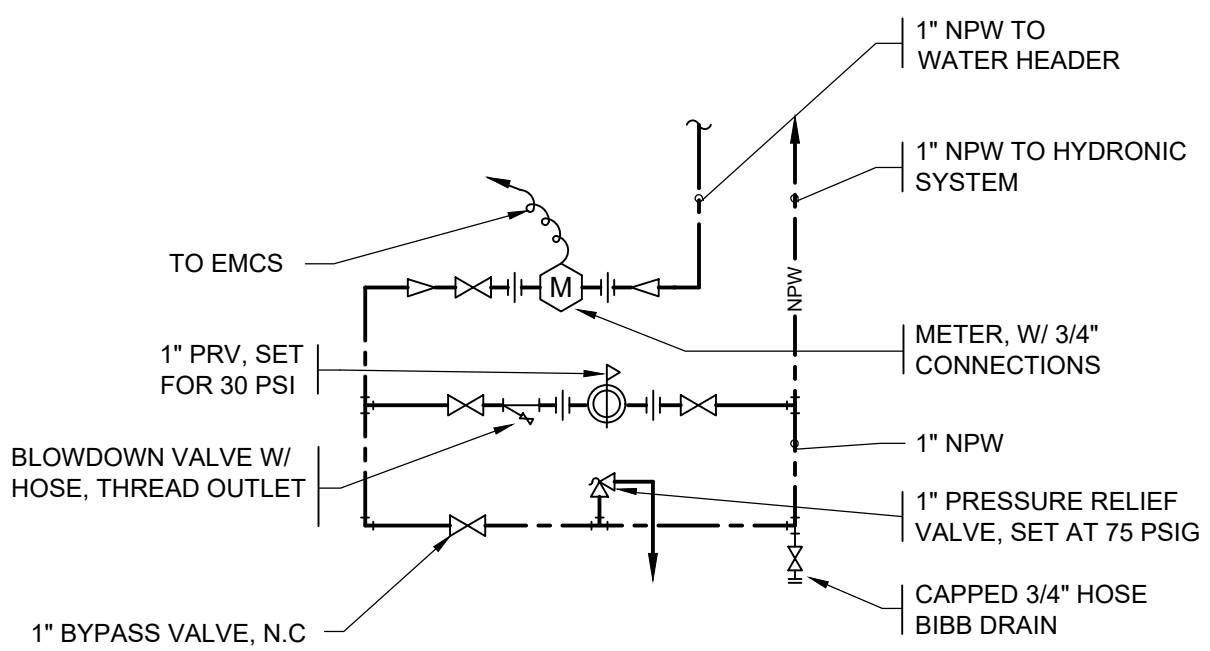


BASE MOUNTED PUMP DETAIL 7
NTS M305



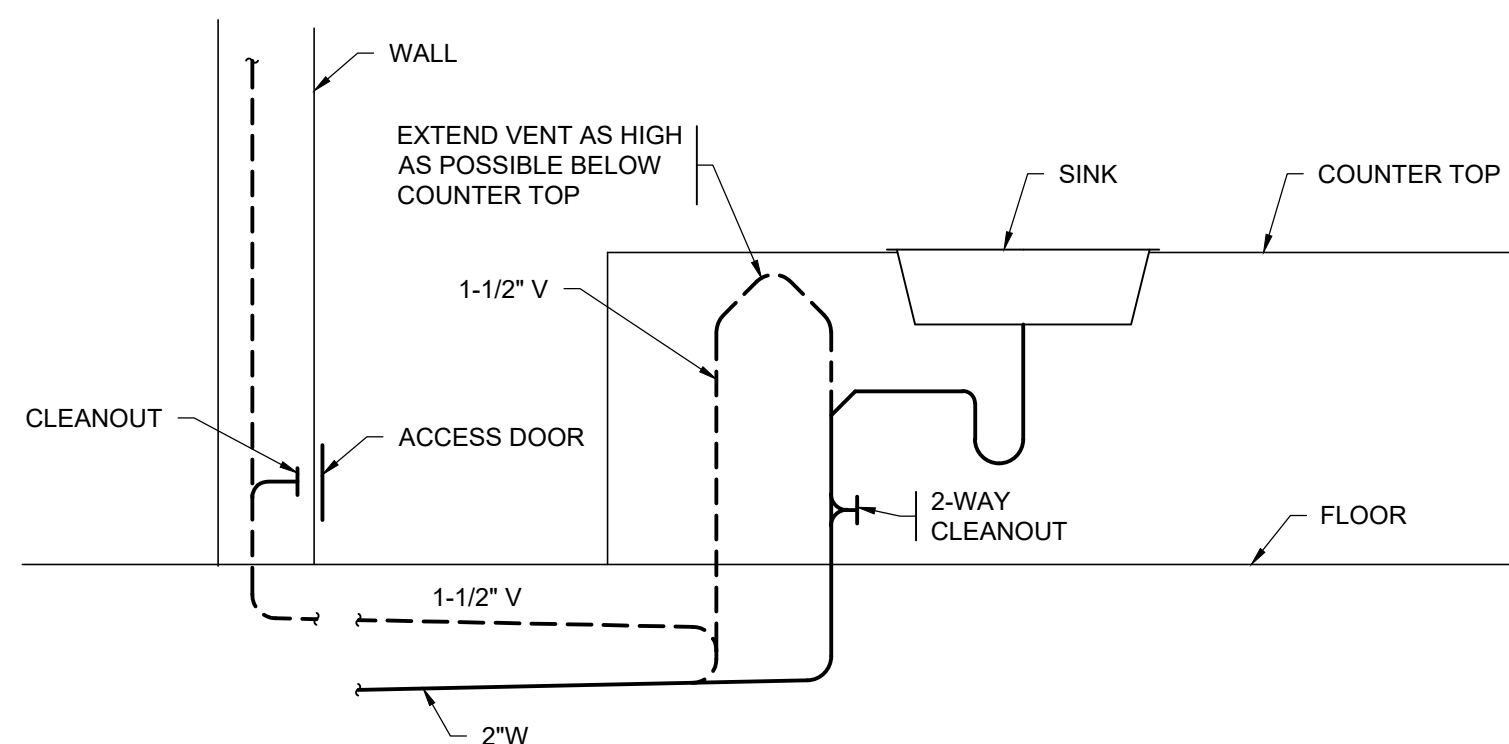
- NOTE:
1. LOCATE BACKFLOWS TO MEET CODE REQUIREMENTS FOR ACCESS.

WATER HEADER 6
NTS M305

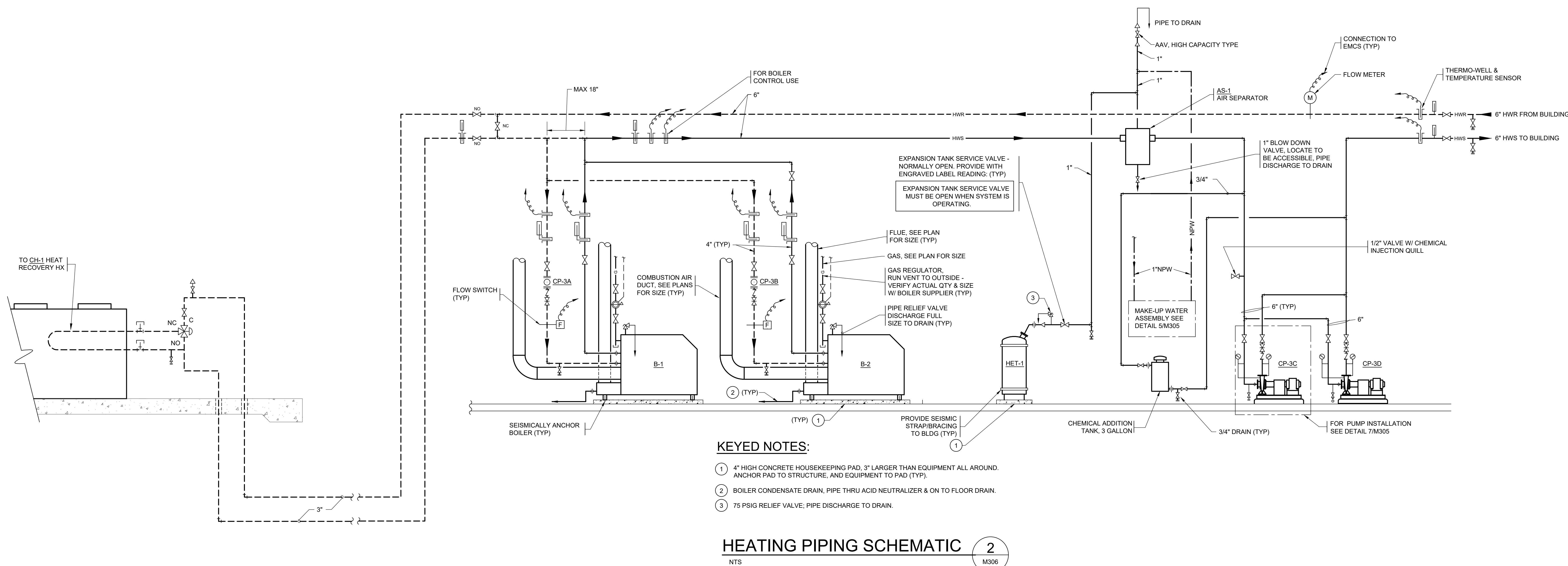
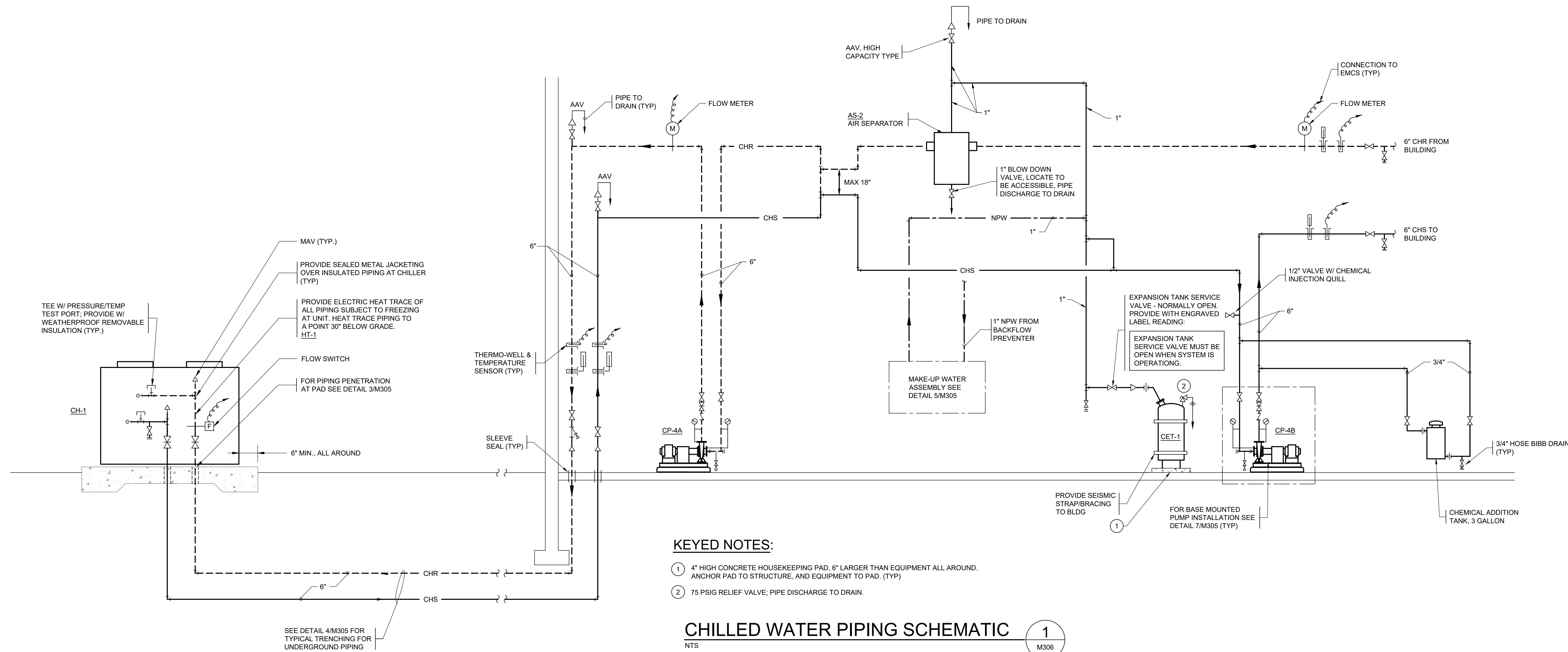


- NOTE:
1. PROVIDE 2 ASSEMBLIES. ONE TO SERVE HEATING HOT WATER SYSTEM & ONE TO SERVE CHILLED WATER SYSTEM.

MAKE-UP WATER ASSEMBLY 5
NTS M305



ISLAND VENT DETAIL 9
NTS M305

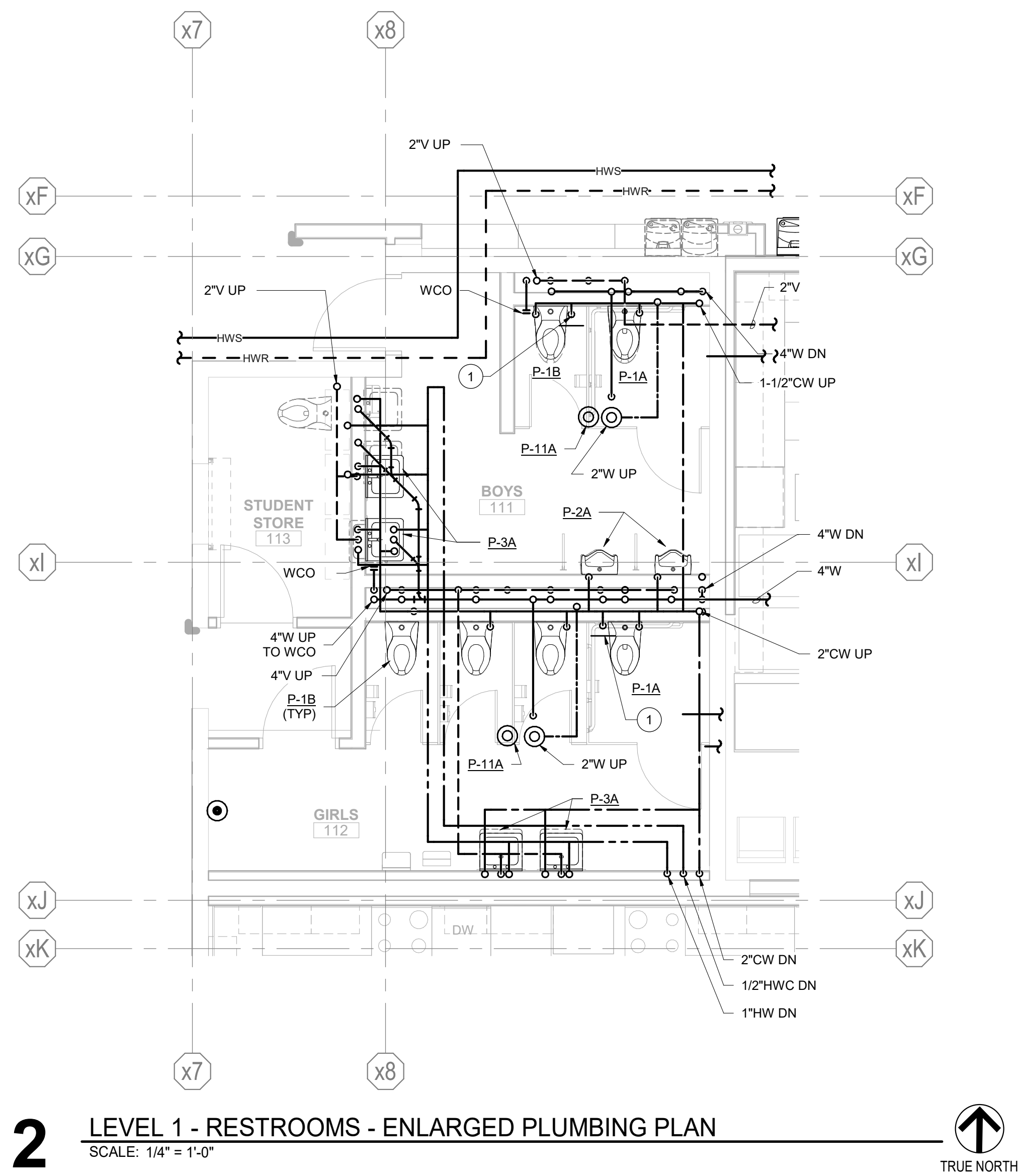


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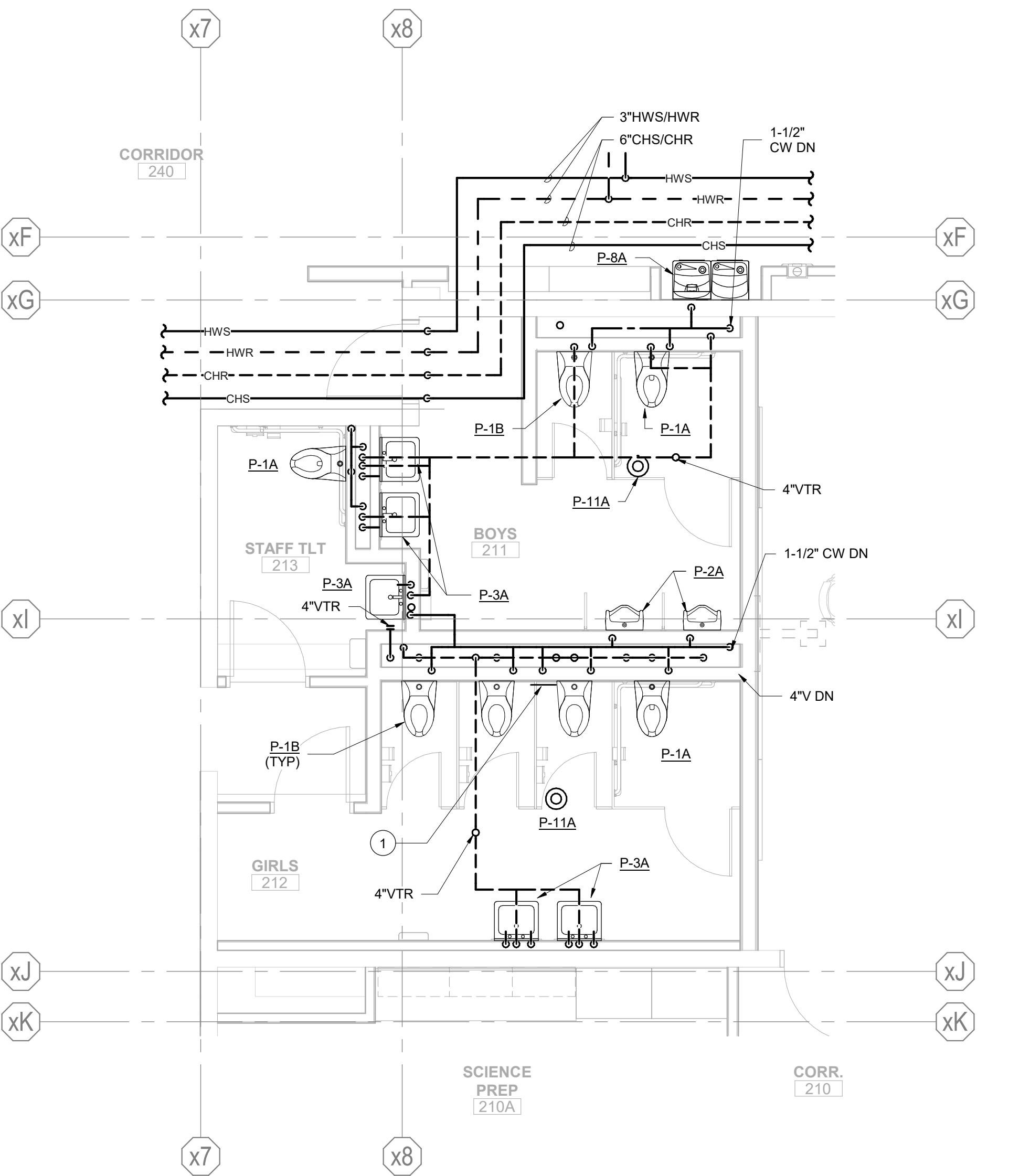
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DETAILS

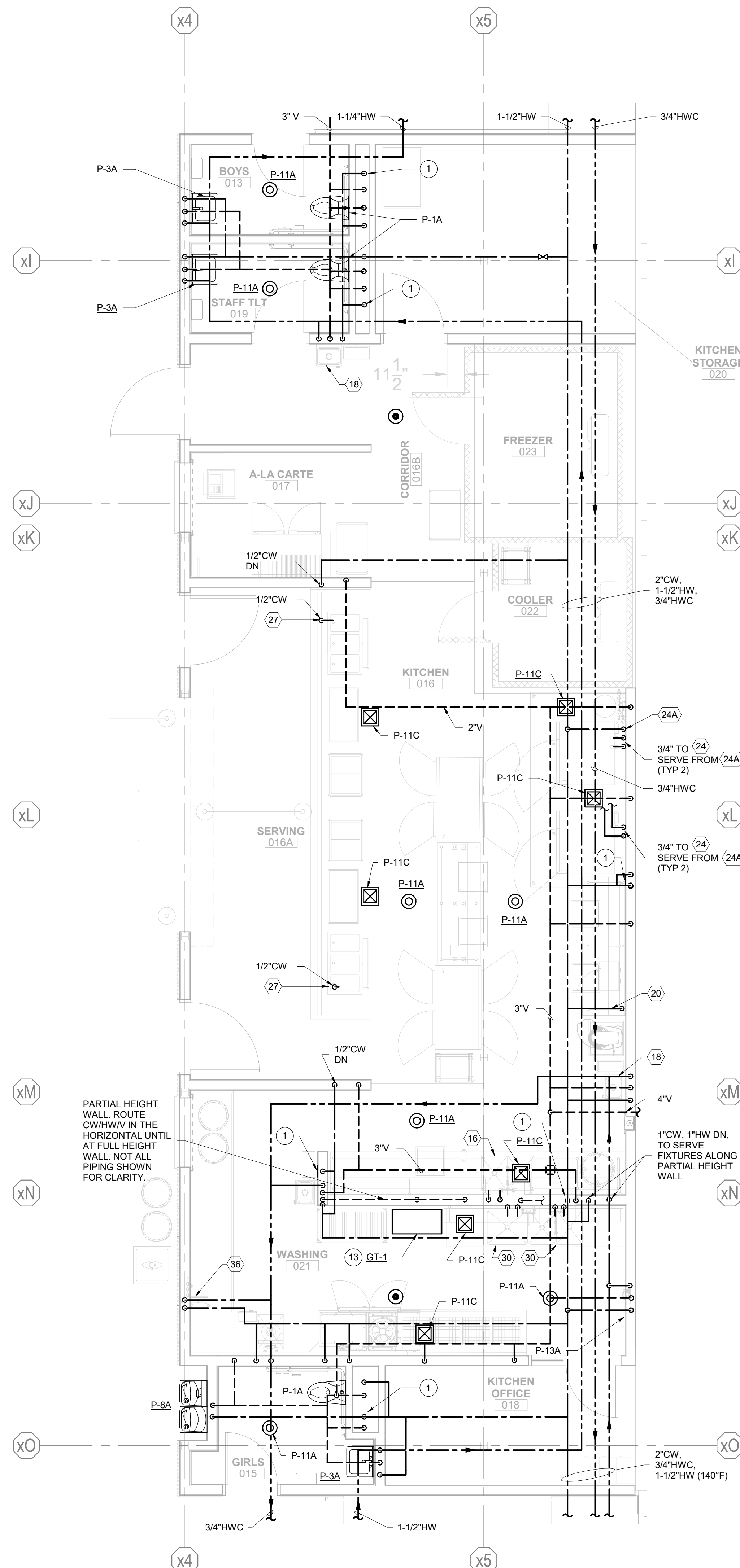
M306



2 LEVEL 1 - RESTROOMS - ENLARGED PLUMBING PLAN
SCALE: 1/4" = 1'-0"



3 LEVEL 2 - RESTROOMS - ENLARGED PLUMBING PLAN
SCALE: 1/4" = 1'-0"



1 LEVEL 0 - KITCHEN - ENLARGED PLUMBING PLAN
SCALE: 1/4" = 1'-0"

GENERAL NOTES:

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- PROVIDE WALL CLEANOUT BENEATH FIXTURES FOR ALL SINKS AND LAVATORIES.
- ALL ISOLATION VALVES SHALL BE ACCESSIBLE. PLUMBING CONTRACTOR SHALL COORDINATE WITH OTHER TRADES TO INSURE VALVES ARE ACCESSIBLE.
- OFFSET VTR'S AND PIPING AS REQUIRED TO AVOID DUCTWORK AND OTHER OBSTRUCTIONS. VTR'S SHALL BE A MINIMUM OF 10 FEET FROM ANY OUTSIDE AIR OPENING.
- AT RESTROOMS WITH PLUMBING CHASES, THE CONTRACTOR MAY USE HORIZONTAL DISCHARGE WASTE CARRIERS AND ABOVE FLOOR WASTE PIPING IN LIEU OF THE DESIGN SHOWN. PROVIDE END OF LINE CLEANOUT ACCESS EQUAL TO DESIGN.
- AT RESTROOMS PROVIDE COLD WATER HEADER FULL LENGTH OF PLUMBING CHASE SAME SIZE AS BRANCH COLD WATER LINE SHOWN SERVING RESTROOMS (UNO).
- PROVIDE WATER HAMMER ARRESTORS ON ALL COLD WATER LINES SERVING FIXTURES WITH FLUSH VALVES. LOCATE UPSTREAM OF LAST FIXTURE ON LINE, AT EACH FIXTURE GROUP. PROVIDE SHUT-OFF VALVE AND ACCESS DOOR. PDI SIZE SHALL BE AS FOLLOWS:

NO. OF FIXTURES W/ FLUSH VALVES	PDI SIZE
1-2	A
3-4	B
5 & MORE	C
- ROUTE PIPING SO AS NOT TO OBSTRUCT EQUIPMENT ACCESS.
- PROVIDE AAV'S WITH ISOLATION VALVES AT PIPING HIGH POINTS (LOCATIONS MAY VARY DEPENDING ON ACTUAL CONTRACTOR PIPE ROUTING AND PIPE SLOPE).
- LOCATE ALL VAV UNIT COIL PIPING TO BE ACCESSIBLE THOUGH CEILING. LOCATE COMPONENTS BETWEEN 8" AND 24" ABOVE CEILING.
- FOR ALL FIXTURES & PIPING LOCATED AT WALLS ON GRID LINES, STRUCTURAL MEMBERS LIE DIRECTLY ON WALL AND PIPING BETWEEN FLOORS SHALL OFFSET AROUND STRUCTURAL MEMBERS. PIPING ON LOWER LEVEL SHALL OFFSET ABOVE CEILING OUT FROM WALL TO AVOID STRUCTURAL. ONCE ABOVE FLOOR, PIPING SHALL OFFSET WITHIN TOESPACE OF CASEWORK & THEN OFFSET BACK INTO WALL, OR OFFSET WIN WALL SPACE.
- SEE DETAILS 1 & 2 ON SHEET M305 FOR HYDRONIC COIL CONNECTIONS. CONTROL VALVES ARE 2-WAY TYPE UNO.
- SEE STRUCTURAL PLANS FOR EXACT LOCATION OF OPENINGS IN CONCRETE FLOORS, WALLS, AND ROOF.
- NOT ALL KEYED NOTES ARE USED ON ALL SHEETS.

KEYED NOTES:

- TRAP PRIMER VALVE W/ ACCESS DOOR AND 1/2" CW CONNECTION, SEE DETAIL 1 SHEET M304.
- PROVIDE DISHWASHER WITH AIR GAP FITTING, INSTALL IN COUNTERTOP TIGHT TO WALL.
- 3/4" END OF LINE VALVES, FOR FLUSHING/DRAINING.
- PROVIDE W/ 3-WAY CONTROL VALVE.
- 1/2" CW TRAP PRIMER LINE TO FLOOR DRAIN/FLOOR RECEPTOR.
- CONNECT TO SITE PIPING. VERIFY LOCATIONS AND COORDINATE WITH SITE CONTRACTOR.
- CAP (E) PIPING WHERE ABANDONED IN PLACE.
- CONNECT TO EXISTING PIPING.
- FIXTURE HW/CW SERVED FROM BELOW.
- HW/CWW SERVING FIXTURE ABOVE.
- GAS PRESSURE REGULATOR, 2 PSI INLET, 7" W.C. OUTLET PRESSURE. CAPACITY SHALL MATCH EQUIPMENT BEING SERVED. VENT REGULATOR FULL SIZE UP THRU ROOF.
- PROVIDE 3/4" HW/SHWR PIPING FROM NEARBY MAINS. PROVIDE W/ 2-WAY VALVE PER DETAIL 1M305.
- ABOVEGROUND GREASE TRAP SERVES ADJACENT 3-COMPARTMENT SINK.
- INSTALL WALL HYDRANT AT SAME LOCATION AS PREVIOUSLY DEMO'D HYDRANT. RE-USE (E) COLD WATER PIPING WHERE NOT ACCESSIBLE TO REPLACE.
- ROUTE 3/4" HW/CW UP & DN IN FURRED WALL TO SERVE STACKED LAVATORIES.
- CONNECT TO (E) VENT PIPING WHICH SERVED PREVIOUSLY DEMO'D FIXTURE. EXACT ROUTING OF VENT PIPING IS UNKNOWN, CONTRACTOR SHALL FIELD VERIFY PRIOR TO BEGINNING WORK.
- PROVIDE WITH AN ISLAND VENT PER DETAIL 9, SHEET M305.
- PROVIDE 8" UNDERGROUND SLEEVE FOR RGRL SERVING FREEZER & COOLER. SEE DETAIL 8, SHEET M305.
- ROUTE VENT IN CASEWORK, CONNECT TO (E) VENT UP IN CONCRETE WALL.
- ROUTE PIPING UP TO FIXTURE ABOVE THROUGH CASEWORK.
- 3-WAY CONTROL VALVE.
- ROUTE 3/4" CONDENSATE DRAIN FROM AHU TO NEAREST FLOOR DRAIN.

KITCHEN PLUMBING NOTES:

- SEE FOOD SERVICE (FS) PLANS & SPECIFICATIONS FOR ADDITIONAL MECHANICAL WORK. ALL ITEMS REQUIRING PLUMBING CONNECTIONS SHALL BE COMPLETELY CONNECTED BY THE DIVISION 22 CONTRACTOR.
- PROVIDE INDIRECT DRAINS FOR ITEMS AS NOTED ON FOOD SERVICE PLANS.
- ROUTE CIRCULATED HW PIPING AS CLOSE TO DROP TO HAND WASH SINKS AS POSSIBLE (TO MEET CODE REQ'D TIMING FOR HW TO FIXTURE).
- SEE FOOD SERVICE (SFS) PLANS FOR EXACT LOCATIONS OF FLOOR RECEPTORS SERVING KITCHEN EQUIPMENT. LOCATIONS SHOWN ARE APPROXIMATE.

KITCHEN PLAN KEYED NOTES:

- # INDICATES KITCHEN EQUIPMENT, SEE FOOD SERVICE (FS) PLANS.

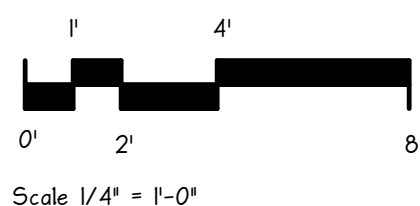
KELSO SCHOOL DISTRICT NO. 458 HUNTINGTON MIDDLE SCHOOL - MODERNIZATION AND ADDITION

500 REDPATH ST, KELSO, WA 98626

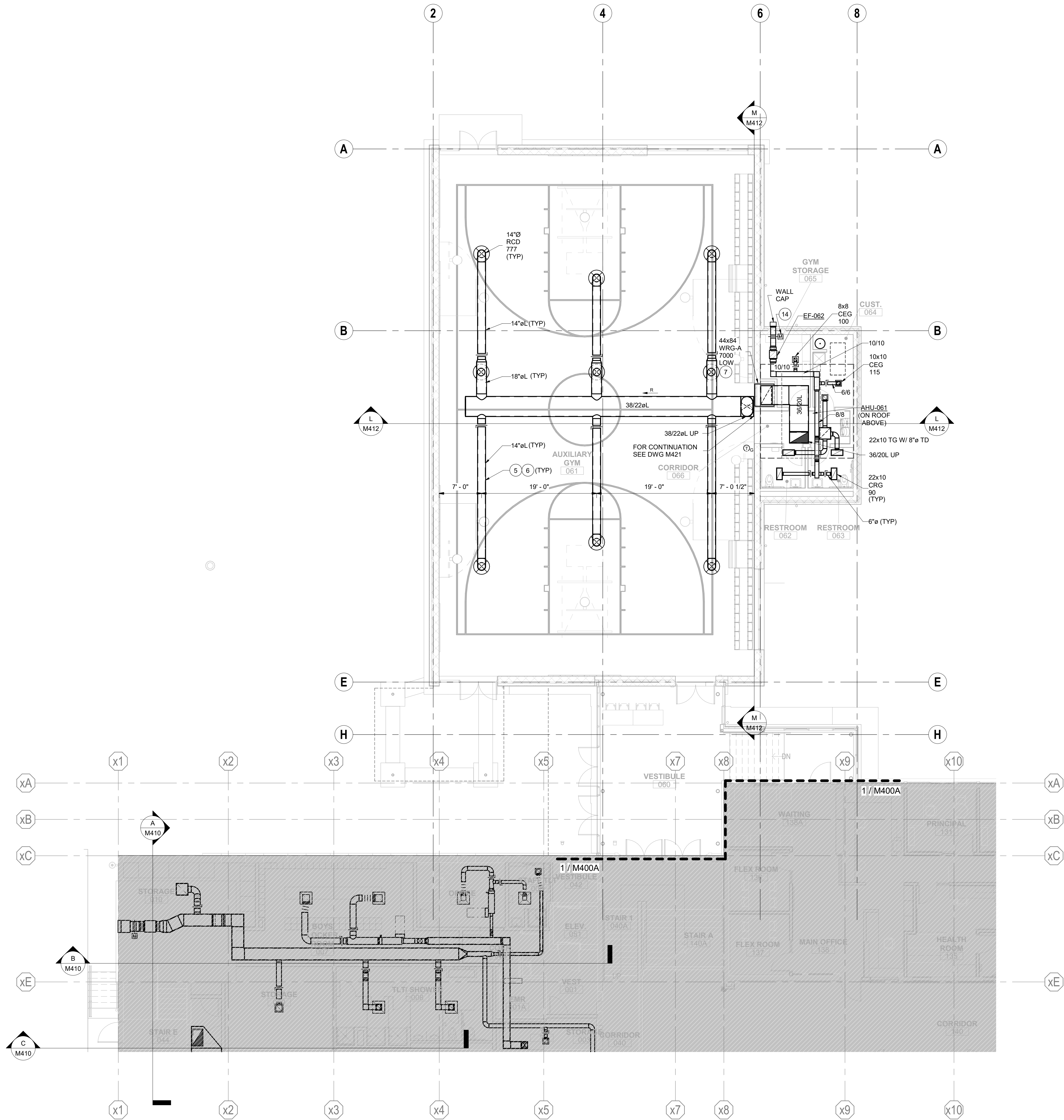
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ENLARGED
PLUMBING
PLANS

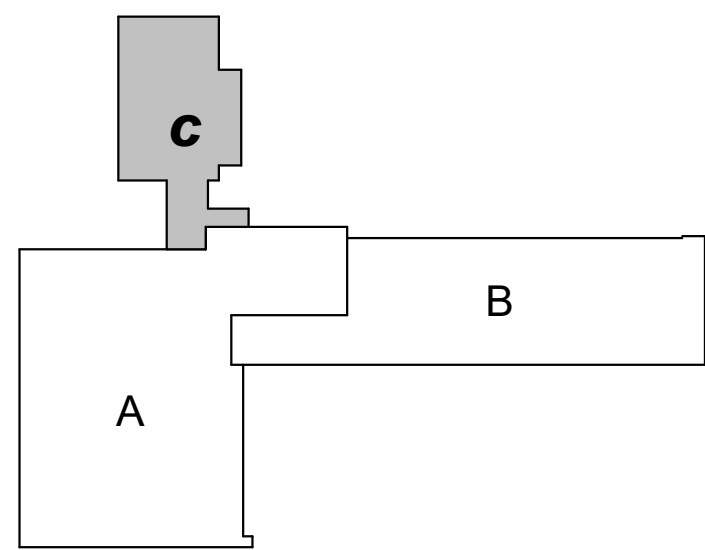
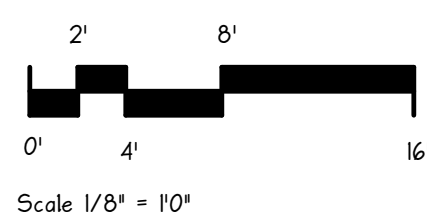
M307



BID SET



LEVEL 0 BUILDING 1 AREA C AUXILIARY GYM FLOOR PLAN - HVAC
SCALE: 1/8" = 1'-0"



KELSO SCHOOL DISTRICT NO. 458
HUNTINGTON MIDDLE SCHOOL -
MODERNIZATION AND ADDITION

500 REDPATH ST, KELSO, WA 98626

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Revisions		
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LEVEL 0
BUILDING 1
AREA C
AUXILIARY GYM
- HVAC

M400C

GENERAL NOTES:

- SEE MECHANICAL NOTES, SHEET M001 & M002.
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- LOCATE MOTORIZED DAMPERS, ACTUATORS, & BDD'S TO BE ACCESSIBLE. PROVIDE DUCT ACCESS DOORS AT MOTORIZED DAMPERS, & BDD'S TO ALLOW ACCESS TO DAMPERS.
- BDD & DUCT CONN'S AT LOUVERS SHALL MATCH FULL LOUVER SIZE (UNLESS NOTED OTHERWISE).
- CFM'S SHOWN REPRESENT SYSTEM IN "OCCUPIED" MODE, HOOD FANS OFF, ZONE DAMPERS AT 100%, AND VAV BOXES IN COOLING MODE.
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- SEE ARCH FOR WALL LOUVER (WL) DIMENTIONS (TYP).
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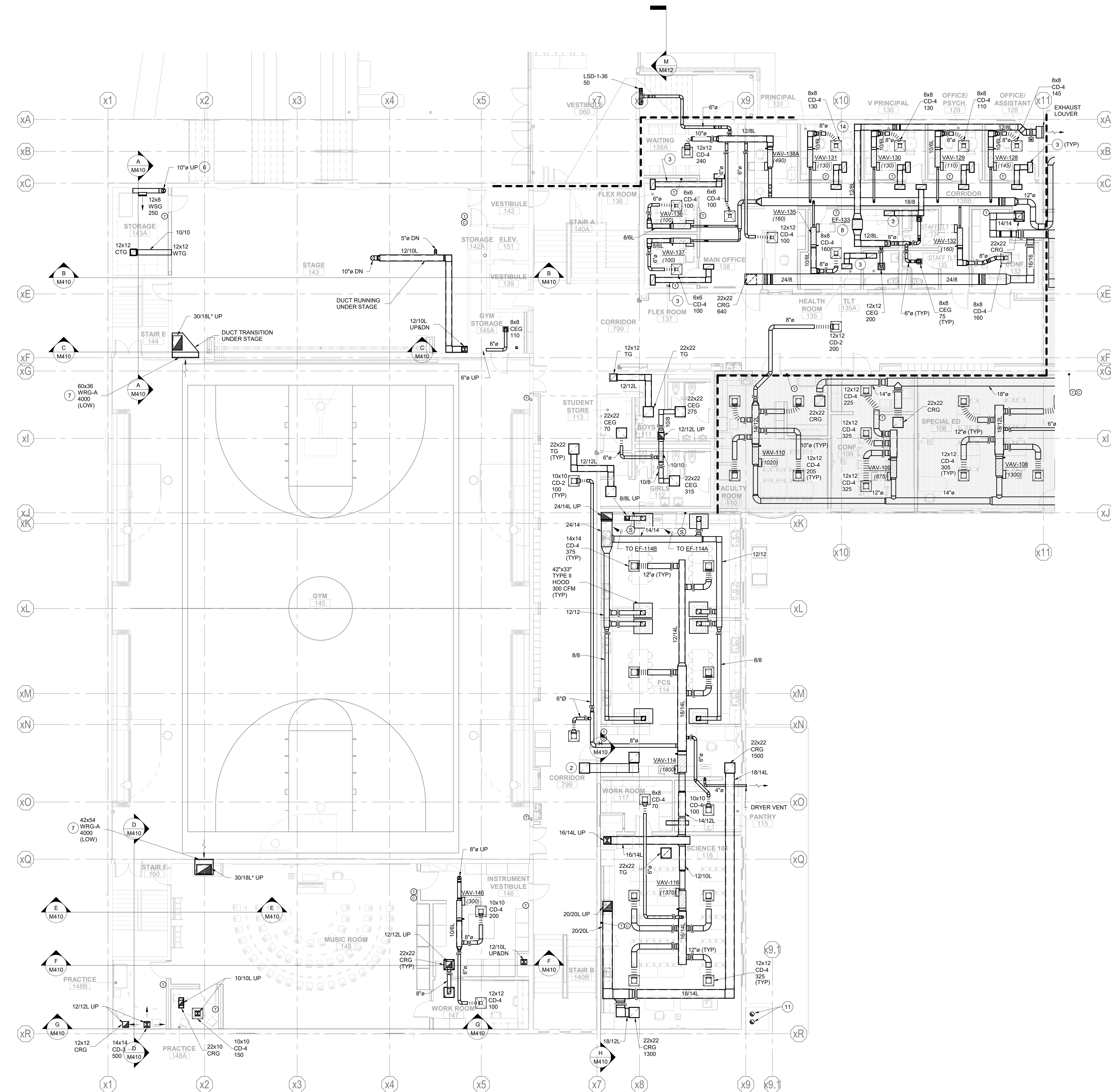
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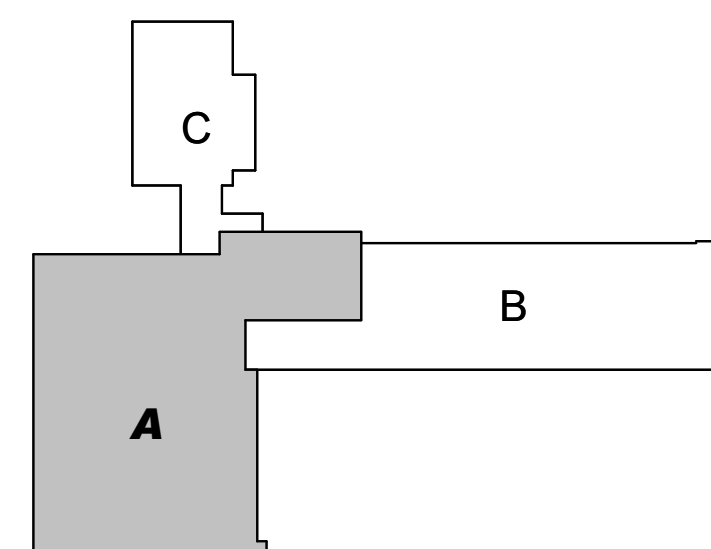
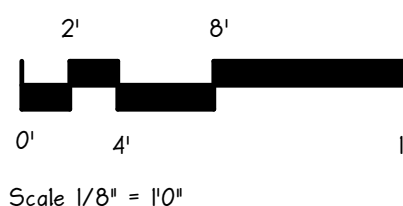
integrus
ARCHITECTURE

SIGNED
05/28/2021

HULTZ, BHU
engineers inc
1111 Everett Ave Suite 100 Tacoma, WA 98402
Phone: (253) 383-3257 Fax: (253) 383-3283
general@hultzbhu.com Job Number: 20-038



LEVEL 1 BUILDING 1 AREA A FLOOR PLAN - HVAC
SCALE: 1/8" = 1'-0"



GENERAL NOTES:

- SEE MECHANICAL NOTES, SHEET M001 & M002.
- SEE PLUMBING DRAWINGS FOR HYDRONIC PIPING.
- SEE ARCHITECTURAL DRAWINGS TO VERIFY LOUVERS SIZES AND LOCATIONS. SF INDICATED IS FOR GENERAL REFERENCE.
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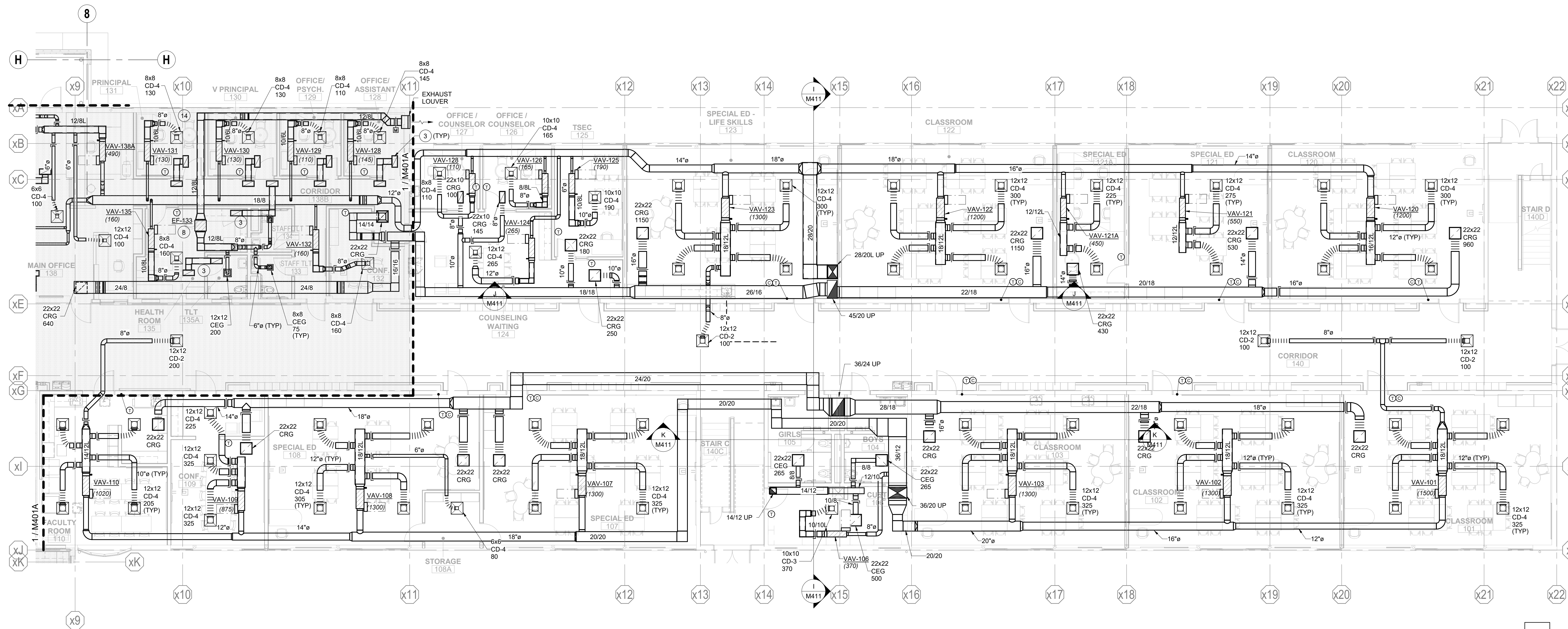
KELSO SCHOOL DISTRICT NO. 458
HUNTINGTON MIDDLE SCHOOL -
MODERNIZATION AND ADDITION

500 REDPATH ST, KELSO, WA 98626

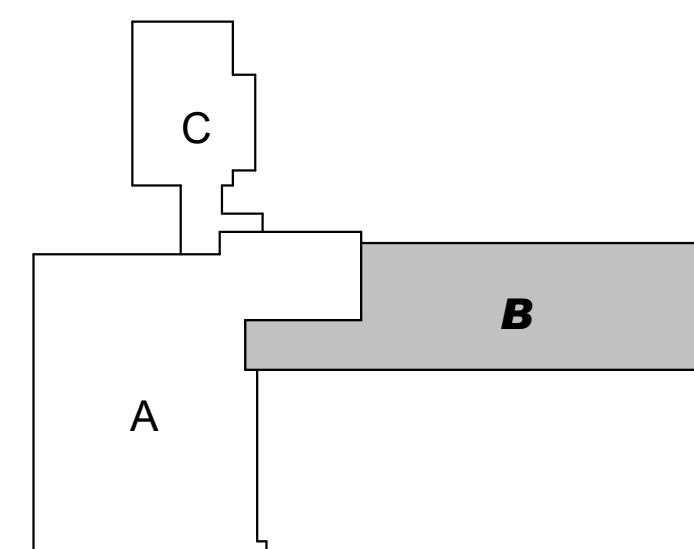
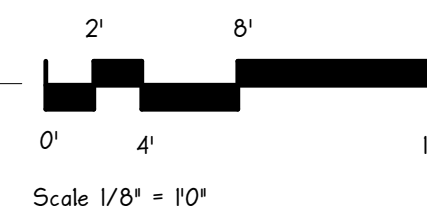
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Job No.:	21938.00	
Drawn By:	TP	
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Revisions		
#	Date	Description

LEVEL 1
BUILDING 1
AREA A - FLOOR
PLAN - HVAC

M401A



LEVEL 1 BUILDING 1 AREA B FLOOR PLAN - HVAC
SCALE: 1/8" = 1'-0"



KEYED NOTES:

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KELSO SCHOOL DISTRICT NO. 458 HUNTINGTON MIDDLE SCHOOL - MODERNIZATION AND ADDITION

500 REDPATH ST, KELSO, WA 98626

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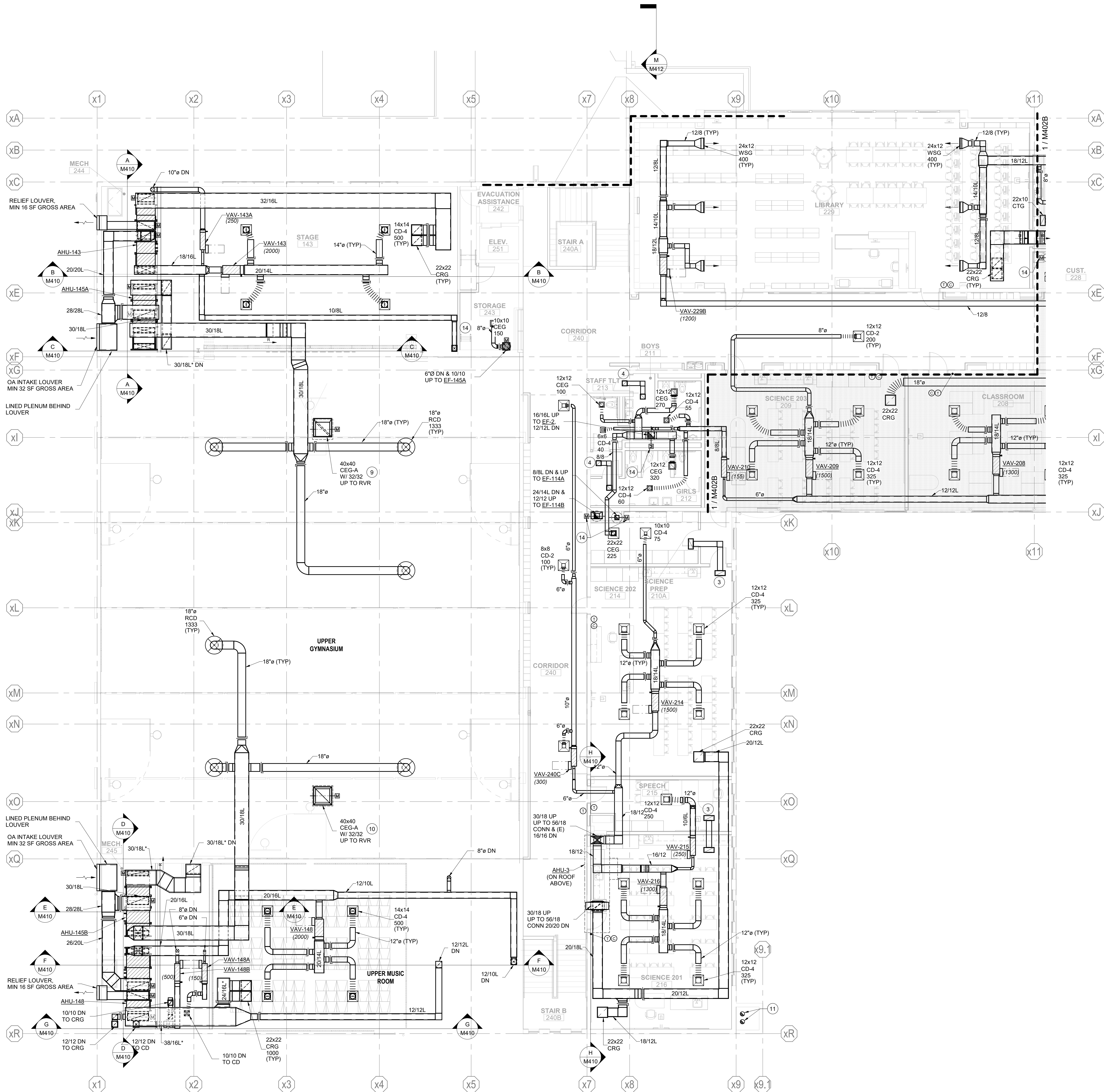
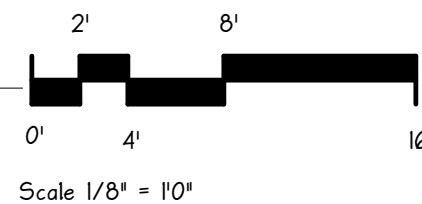
LEVEL 1
BUILDING 1
AREA B - FLOOR
PLAN - HVAC

M401B



LEVEL 2 BUILDING 1 AREA A FLOOR PLAN - HVAC

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



GENERAL NOTES:

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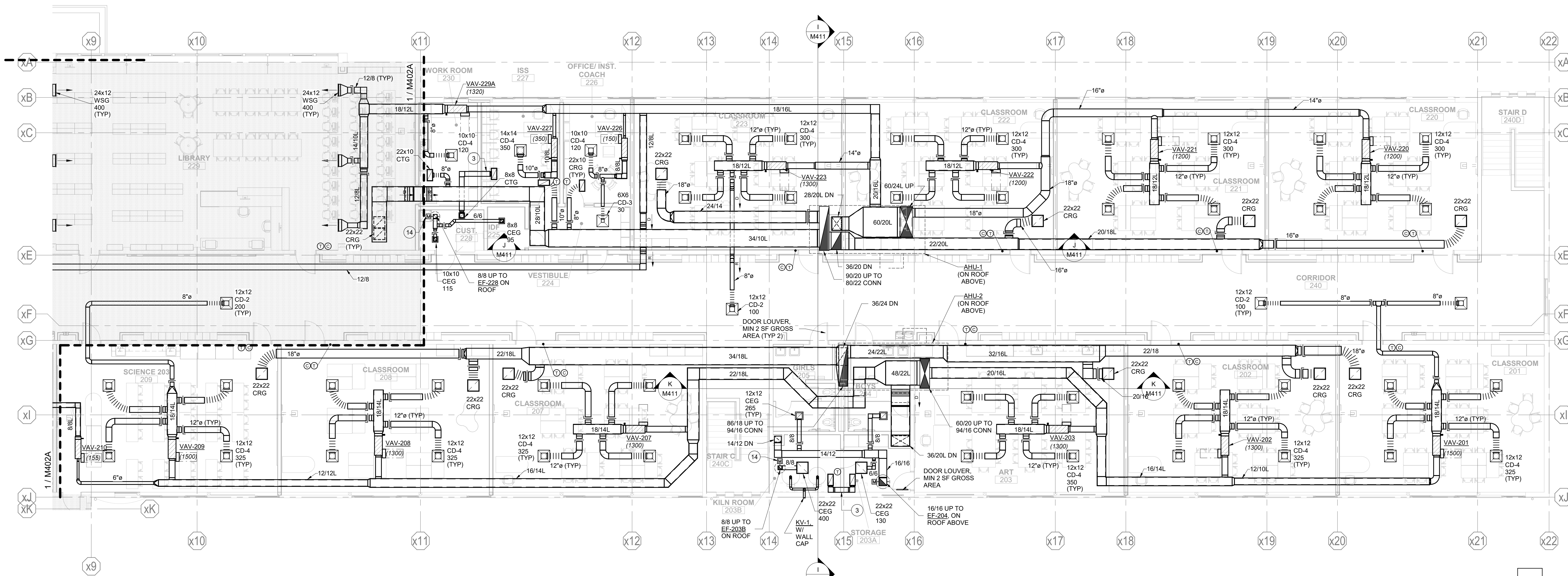
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Drawn By: TP
Checked by: NRH

Revisions
Date Description

LEVEL 2
BUILDING 1
AREA A FLOOR
PLAN - HVAC

M402A

BID SET

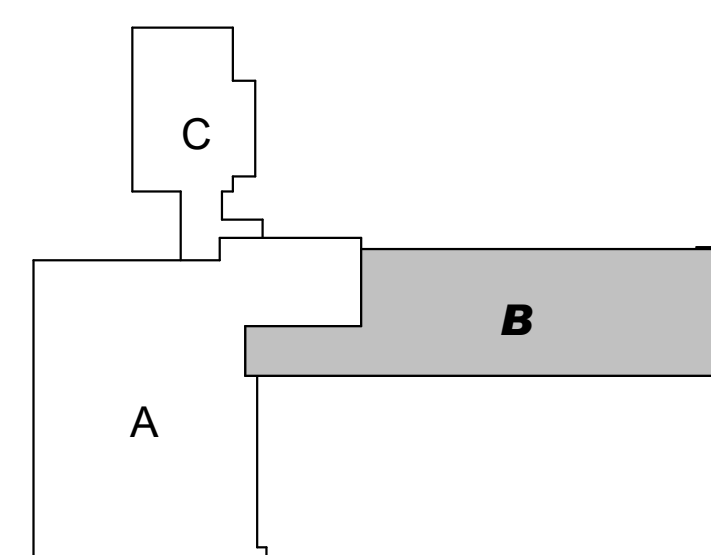


LEVEL 2 BUILDING 1 AREA B FLOOR PLAN - HVAC

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



Scale 1/8" = 1'-0"



KEYED NOTES:

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- 10"Ø BOILER FLUE, ROUTE UP THROUGH EXISTING CHIMNEY. MINIMUM 24" ABOVE HIGHEST POINT WITHIN 10'-0".
- INTERLOCK MOTORIZED DAMPER WITH AHU-12, TO BE OPEN WHEN AHU IS ON IN THE OCCUPIED MODE.
- RE-USE EXISTING ROOF OPENING. PROVIDE W/ NEW CURB. CONTRACTOR TO FIELD VERIFY EXACT LOCATION PRIOR TO BEGINNING WORK.
- INTERLOCK MOTORIZED DAMPER WITH FAN, TO BE OPEN WHEN FAN IS ON.
- PROVIDE SHEETMETAL CAP OVER EXISTING ABANDONED ROOF CURB. CONTRACTOR TO FIELD VERIFY DIMENSIONS OF CURB PRIOR TO BEGINNING WORK.

GENERAL NOTES:

- SEE MECHANICAL NOTES, SHEET M001 & M002.
- SEE PLUMBING DRAWINGS FOR HYDRONIC PIPING.
- SEE ARCHITECTURAL DRAWINGS TO VERIFY LOUVERS SIZES AND LOCATIONS. SF INDICATED IS FOR GENERAL REFERENCE.
- LOCATE MOTORIZED DAMPERS, ACTUATORS, & BDD'S TO BE ACCESSIBLE. PROVIDE DUCT ACCESS DOORS AT MOTORIZED DAMPERS, & BDD'S TO ALLOW ACCESS TO DAMPERS.
- BDD & DUCT CONN'S AT LOUVERS SHALL MATCH FULL LOUVER SIZE (UNLESS NOTED OTHERWISE).
- CFM'S SHOWN REPRESENT SYSTEM IN "OCCUPIED" MODE, HOOD FANS OFF, ZONE DAMPERS AT 100%, AND VAV BOXES IN COOLING MODE.
- VERIFY HEIGHTS OF ALL WALL OUTLETS/INLETS WITH ARCHITECT PRIOR TO CONSTRUCTION. CONTRACTOR SHALL PROVIDE AS A SUBMITTAL PROPOSED HEIGHT THAT SUITS CONSTRUCTION AND PROVIDES PROPER LOCATION OF INLET/OUTLETS FOR AIR DISTRIBUTION.
- VERIFY MOUNTING HEIGHTS OF ALL EXPOSED DUCTWORK WITH ARCHITECT PRIOR TO CONSTRUCTION. CONTRACTOR SHALL PROVIDE AS A SUBMITTAL PROPOSED HEIGHT THAT SUITS CONSTRUCTION AND PROVIDES PROPER AIR DISTRIBUTION.
- PROVIDE TRANSITIONS AT DUCT CONNECTIONS TO EQUIPMENT AND AIR TERMINALS TO MATCH UNIT CONNECTION SIZES. TRANSITIONS SHALL BE LINES WHERE CONNECTING DUCTS ARE LINED.
- RESTROOM EXHAUST & TRANSFER GRILLES SHALL BE INSTALLED TO BE IN LINE W/ EACH OTHER.
- ALL SUPPLY & RETURN AIR DUCTWORK SHALL BE SOUND LINED WITHIN 15' MINIMUM OF THE AIR HANDLER OR AS INDICATED ON PLANS - WHICHEVER IS MORE.
- SEE ARCH FOR WALL LOUVER (WL) DIMENSIONS (TYP).
- NOT ALL KEYED NOTES MAY BE USED ON ALL SHEETS.

KELSO SCHOOL DISTRICT NO. 458 HUNTINGTON MIDDLE SCHOOL - MODERNIZATION AND ADDITION

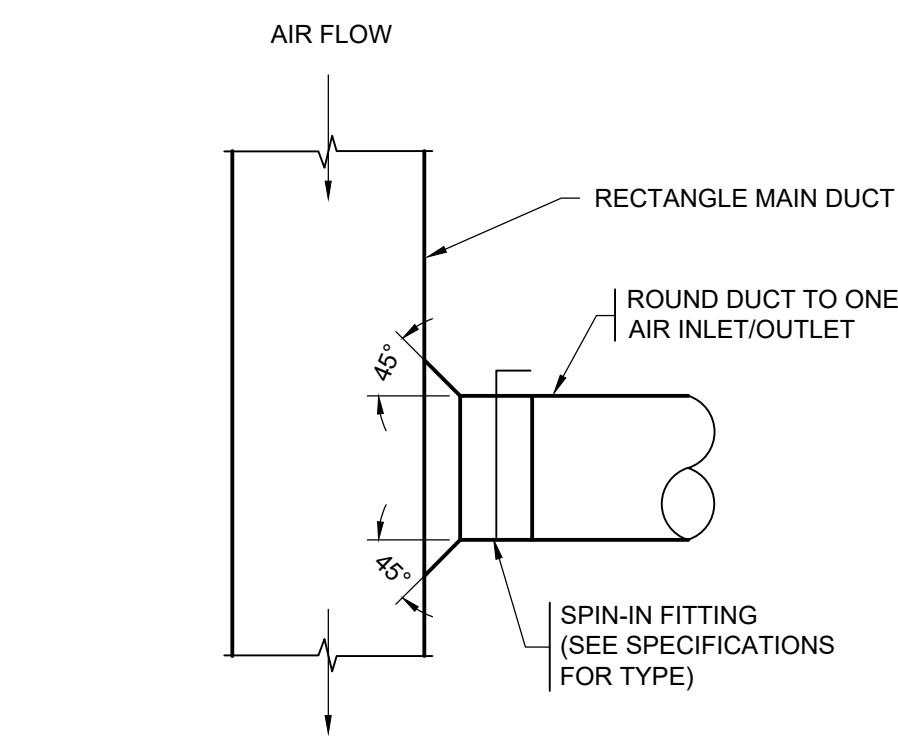
500 REDPATH ST, KELSO, WA 98626

Date:	05/28/2021	
Job No.:	21938.00	
Drawn By:	TP	
Checked by:	NRH	
Revisions		
#	Date	Description

LEVEL 2
BUILDING 1
AREA B FLOOR
PLAN - HVAC

M402B

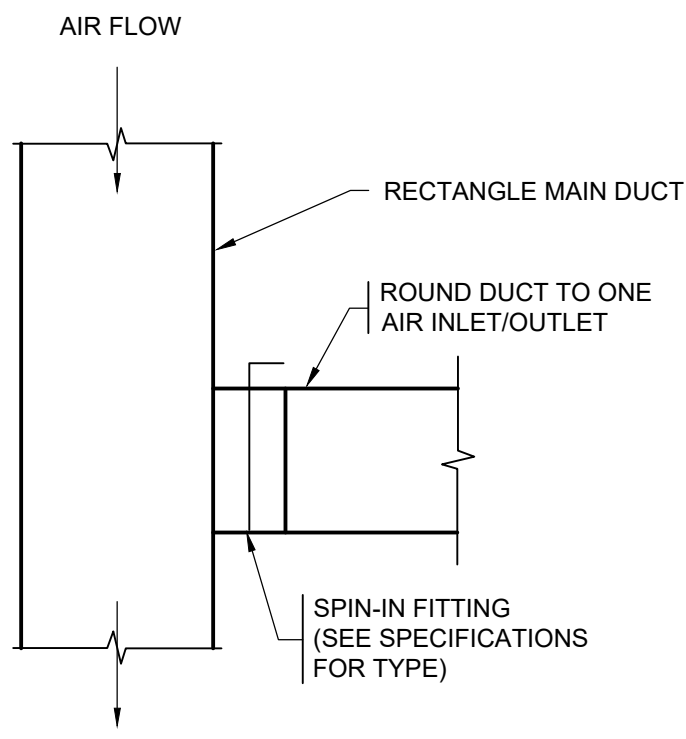
BID SET



BRANCH SERVING MULTIPLE AIR INLETS/OUTLETS

NOTE:

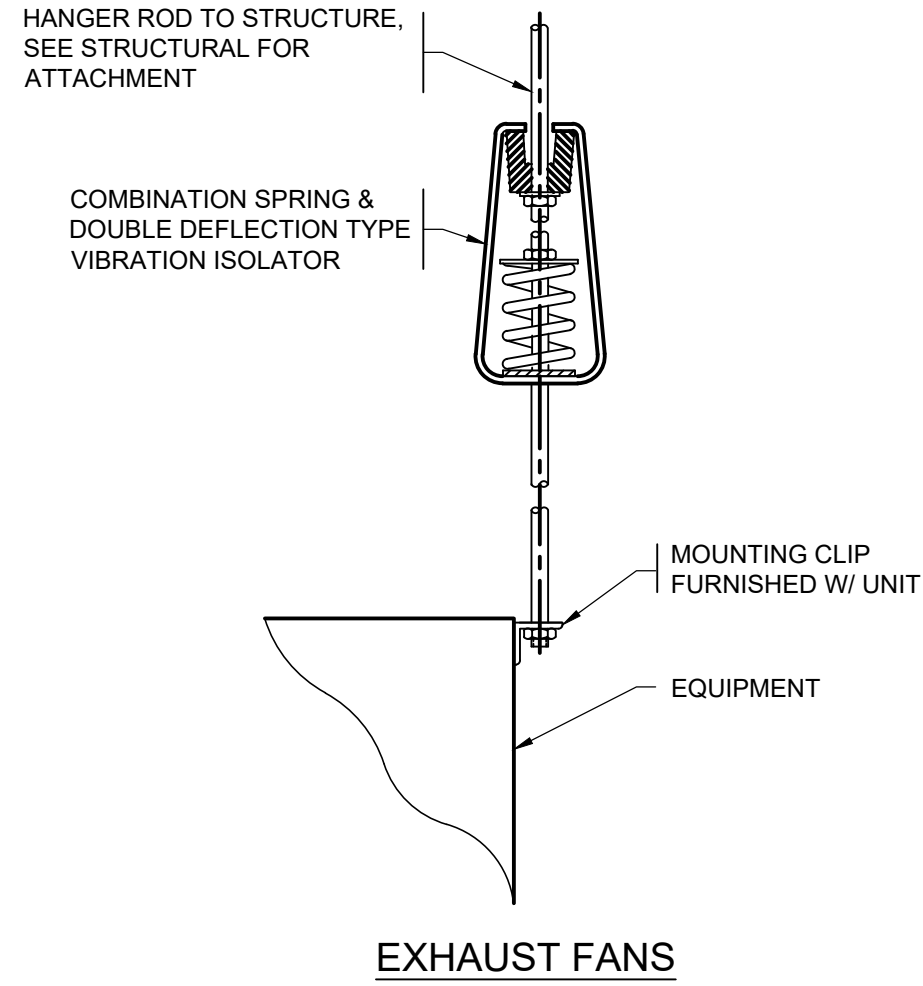
WHERE MAIN DUCT DOES NOT HAVE ADEQUATE HEIGHT TO ACCEPT ROUND DUCT, PROVIDE RECTANGULAR CONNECTION, WITH SAME FREE AREA AS ROUND DUCT, AND TRANSITION TO ROUND



SERVING ONE INLET/OUTLET

NOTE:

WHERE MAIN DUCT DOES NOT HAVE ADEQUATE HEIGHT TO ACCEPT ROUND DUCT, PROVIDE RECTANGULAR CONNECTION, WITH SAME FREE AREA AS ROUND DUCT, AND TRANSITION TO ROUND

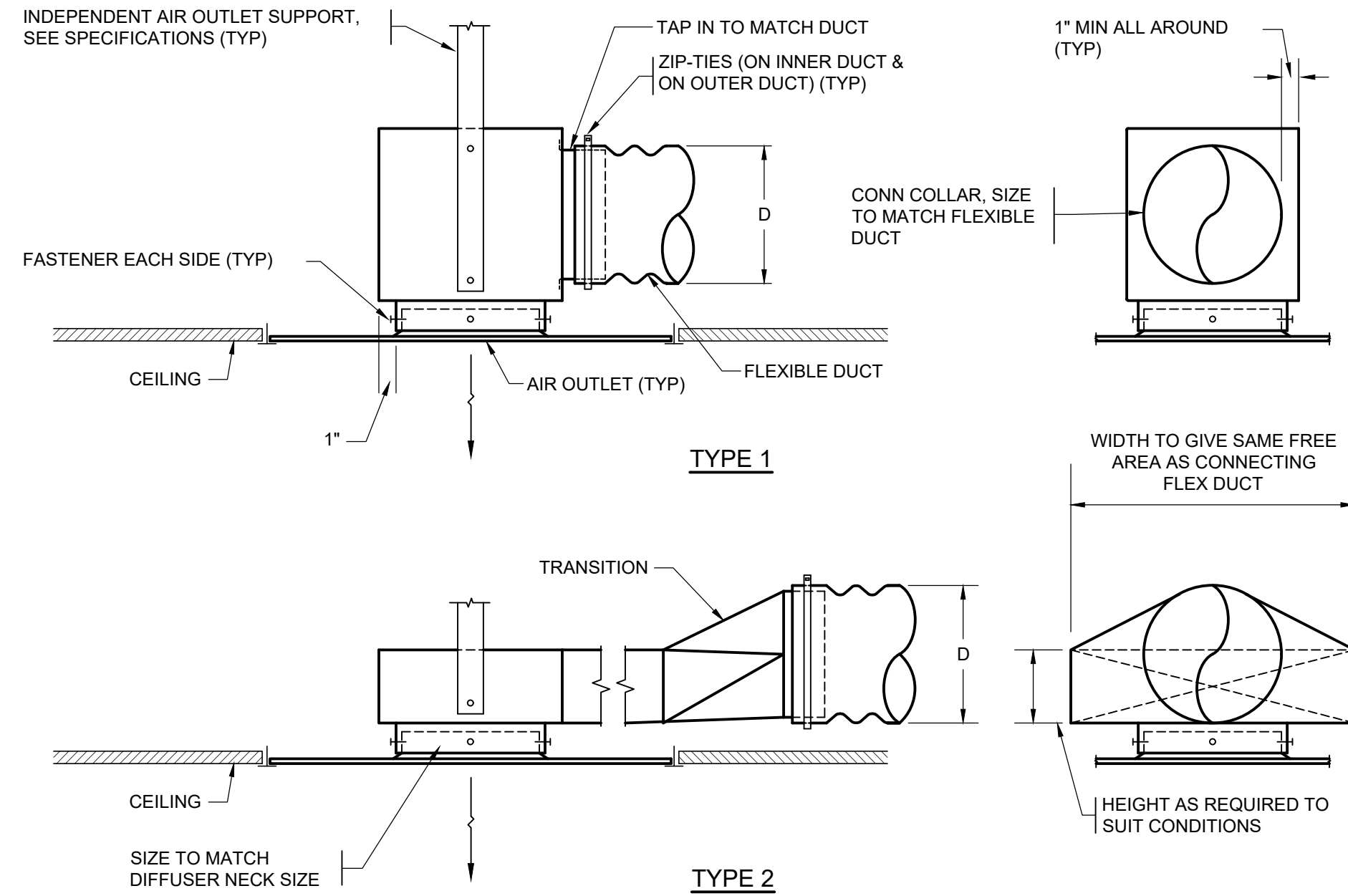


NOTES:

1. ALL SUSPENDED HVAC EQUIPMENT W/ ROTATING COMPONENTS SHALL HAVE VIBRATION ISOLATORS AS SHOWN.
2. VIBRATION ISOLATORS SHALL BE SELECTED FOR 1" DEFLECTION (UNO).
3. SEE STRUCTURAL FOR ATTACHMENT TO STRUCTURE & OTHER ANCHORING REQUIREMENTS. WHERE NOT SHOWN (OR UNCLEAR) SUBMIT SHOP DRAWINGS OF PROPOSED METHODS.
4. PROVIDE SEISMIC RESTRAINTS PER SPECIFICATIONS & PER CODE.

HVAC EQUIPMENT SUPPORT

NTS

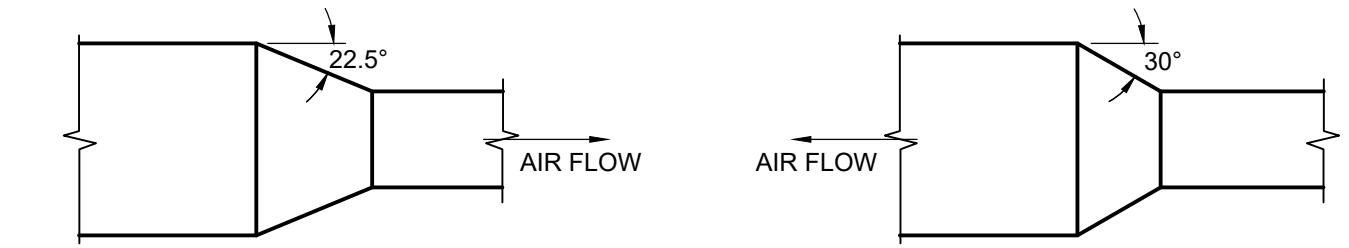


NOTES:

1. PROVIDE TYPE 1 UNLESS BUILDING CONDITIONS REQUIRE LOWER PROFILE - THEN USE TYPE 2.
2. CONSTRUCT PLENUM BOXES OF MIN. 26 GA. GALV. STEEL.
3. NOT ALLOWED AT TRANSFER DUCTS.
4. LINE PLENUM & DUCT TO AIR OUTLET WHERE SO NOTED ON PLANS OR IN SPECIFICATIONS.
5. CEILING TYPE & AIR OUTLET FRAME STYLE MAY VARY FROM THAT DEPICTED.
6. NOT ALL SUPPORTS ARE SHOWN FOR CLARITY.
7. SEE SPECIFICATIONS FOR ADDITIONAL REQUIREMENTS.

TIGHT CONDITION - FLEX DUCT AIR OUTLET CONNECTION

NTS



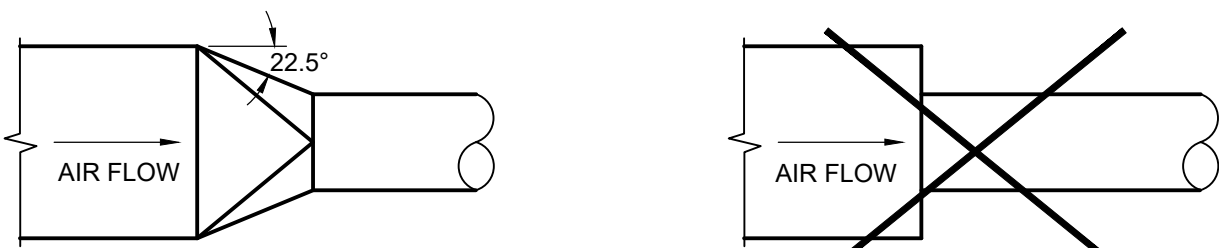
CONCENTRIC TRANSITION (DIVERGING)

CONCENTRIC TRANSITION (CONVERGING)

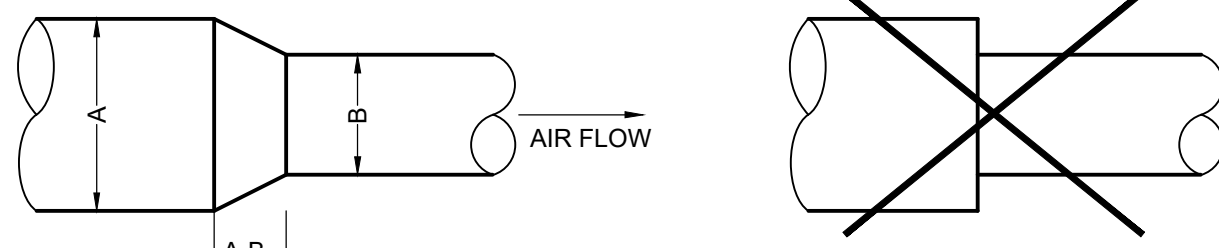


ECCENTRIC TRANSITION

STRAIGHT TAP NOT ALLOWED



RECT - TO ROUND



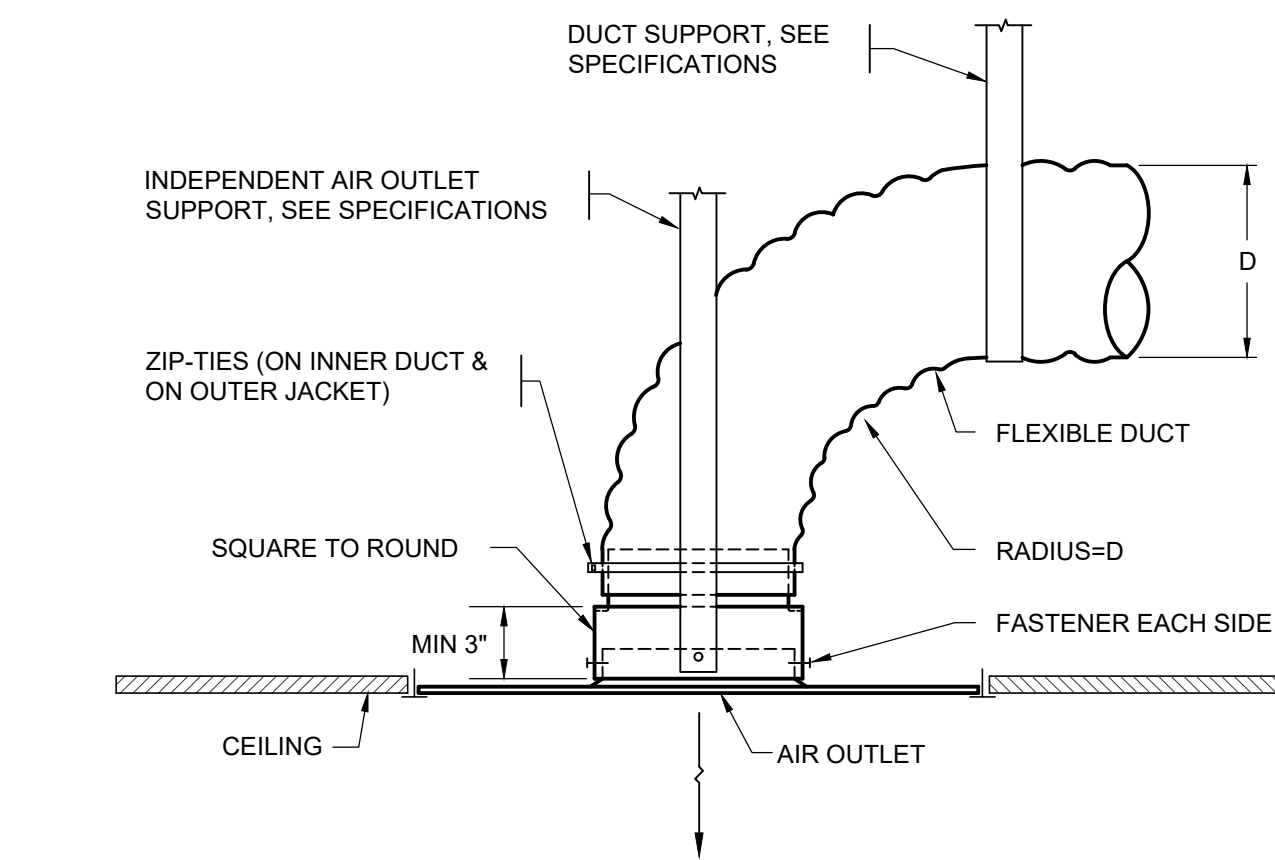
ROUND - TO ROUND

ROUND TRANSITIONS

NTS

RECT-TO-RECT TRANSITIONS

NTS

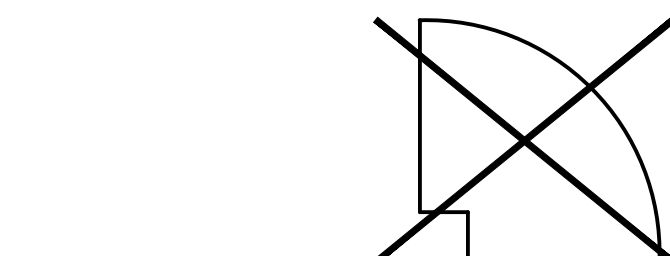


NOTES:

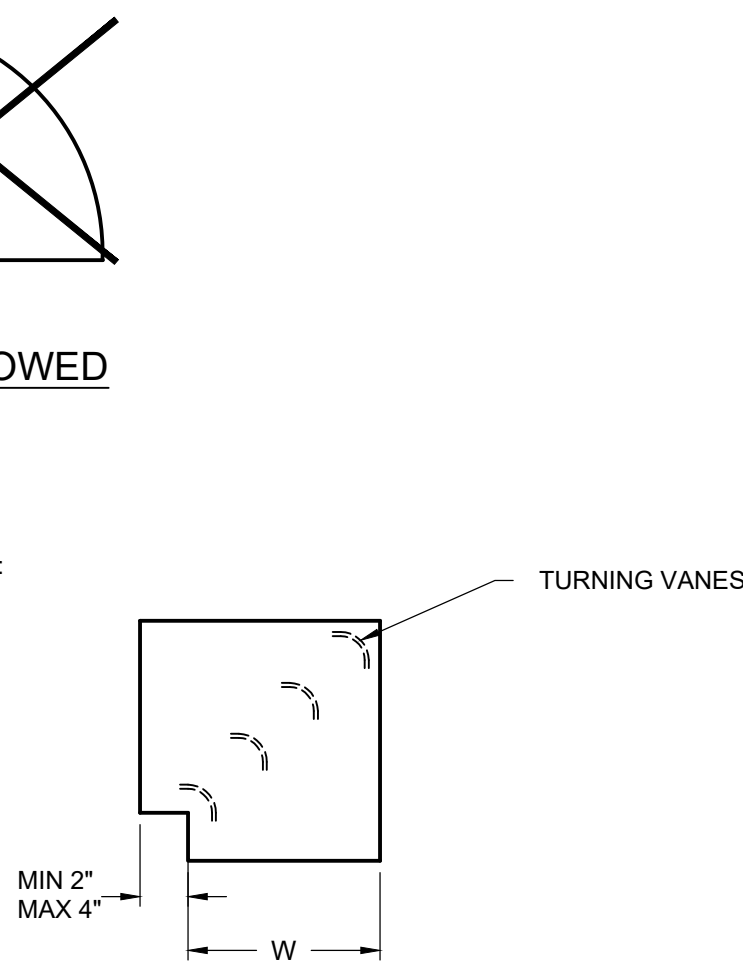
1. USE WHERE ADEQUATE SPACE IS AVAILABLE FOR FLEX DUCT RADIUS, AND WHERE FLEX DUCT IS SHOWN ON PLANS TO AIR OUTLET.
2. NOT ALLOWED AT TRANSFER DUCTS.
3. WHEN THERE IS INSUFFICIENT ROOM TO MAINTAIN FLEX DUCT RADIUS, SEE DETAIL TITLED "TIGHT CONDITION - FLEX DUCT AIR OUTLET CONNECTION."
4. NOT ALLOWED WHERE LINED "CANS" (OR LINED DUCTS) SHOWN (OR REQ'D) AT AIR OUTLETS.
5. CEILING TYPE & AIR OUTLET FRAME STYLE MAY VARY FROM THAT DEPICTED.
6. NOT ALL SUPPORTS SHOWN FOR CLARITY.

FLEX DUCT AIR OUTLET CONNECTION

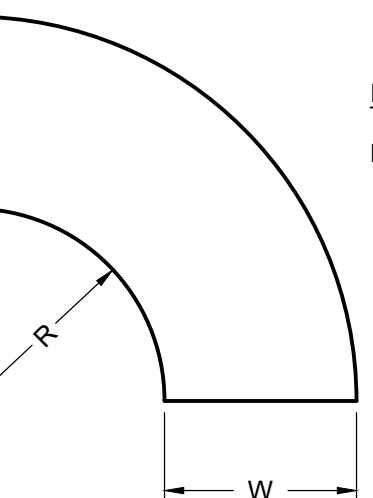
NTS



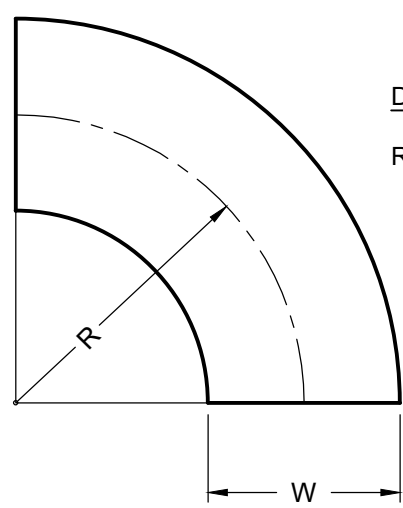
RADIUS ELBOW



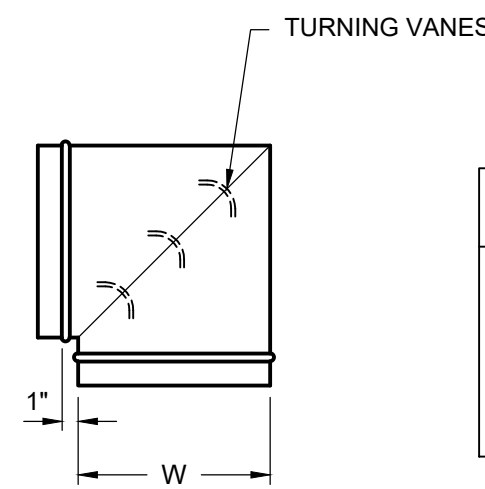
MITERED ELBOW



DIE-STAMPED ELBOW



FABRICATED ELBOW



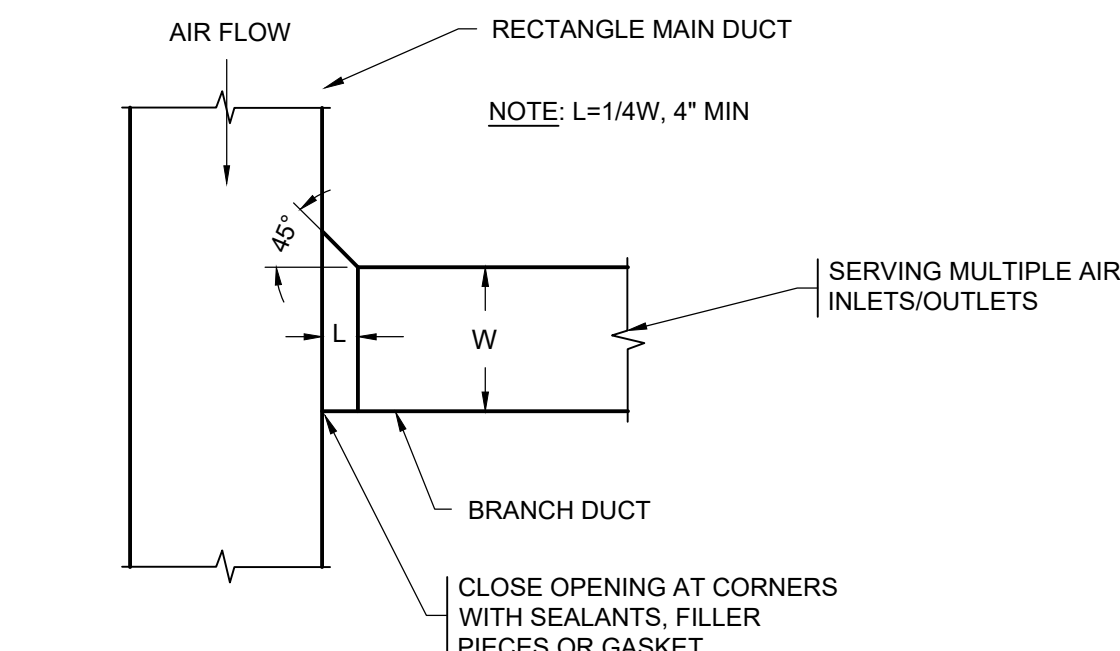
MITERED 90° ELBOW

DIMENSION	
DIAMETER (INCH)	NUMBER OF VANES
3-9	2
10-14	3
15-19	4
20-60	5
OVER 60	12" MAX. SPACING

DIMENSION:

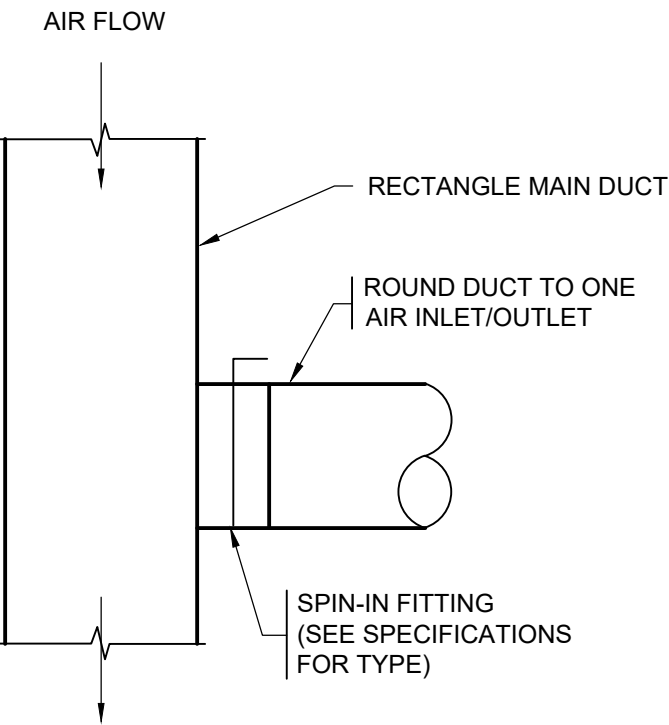
ANGLE	NUMBER OF GORES
0-35°	2
36-71°	3
72-90°	5

R=1.5W



RECT-TO-RECT BRANCH DUCT CONNECTION

NTS



SERVING ONE INLET/OUTLET

NOTE:

WHERE MAIN DUCT DOES NOT HAVE ADEQUATE HEIGHT TO ACCEPT ROUND DUCT, PROVIDE RECTANGULAR CONNECTION, WITH SAME FREE AREA AS ROUND DUCT, AND TRANSITION TO ROUND

RECT-TO-ROUND BRANCH DUCT CONNECTION

NTS

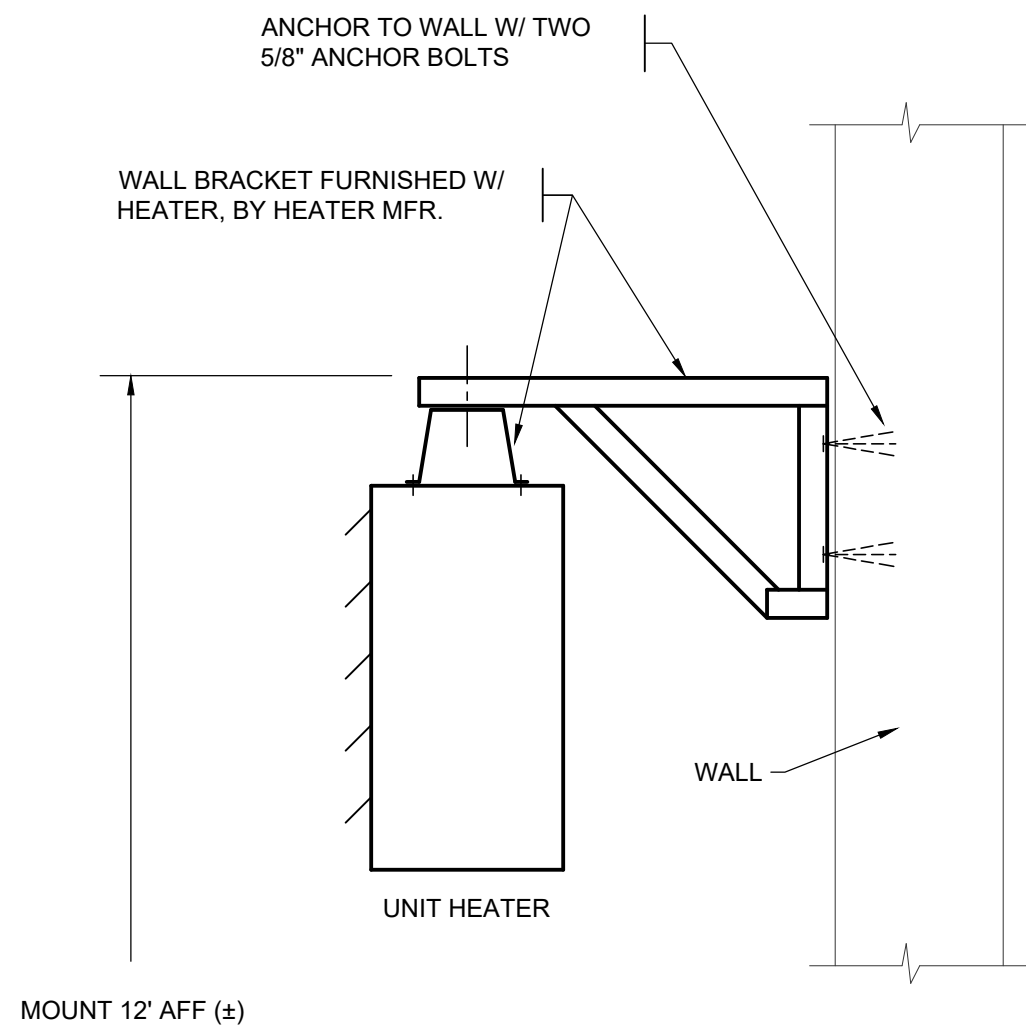
ELBOWS - RECTANGULAR

NTS

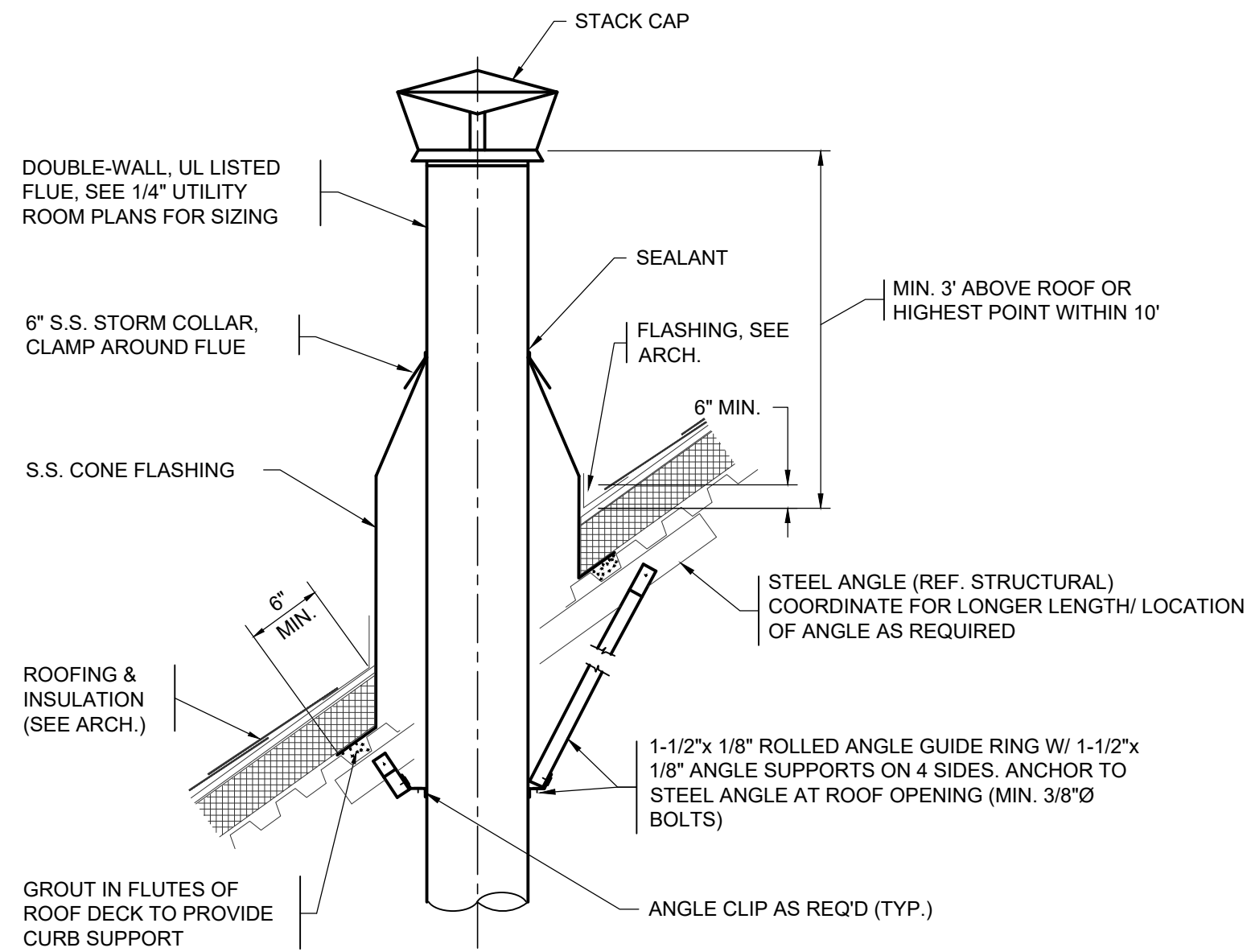
ELBOWS - ROUND

NTS



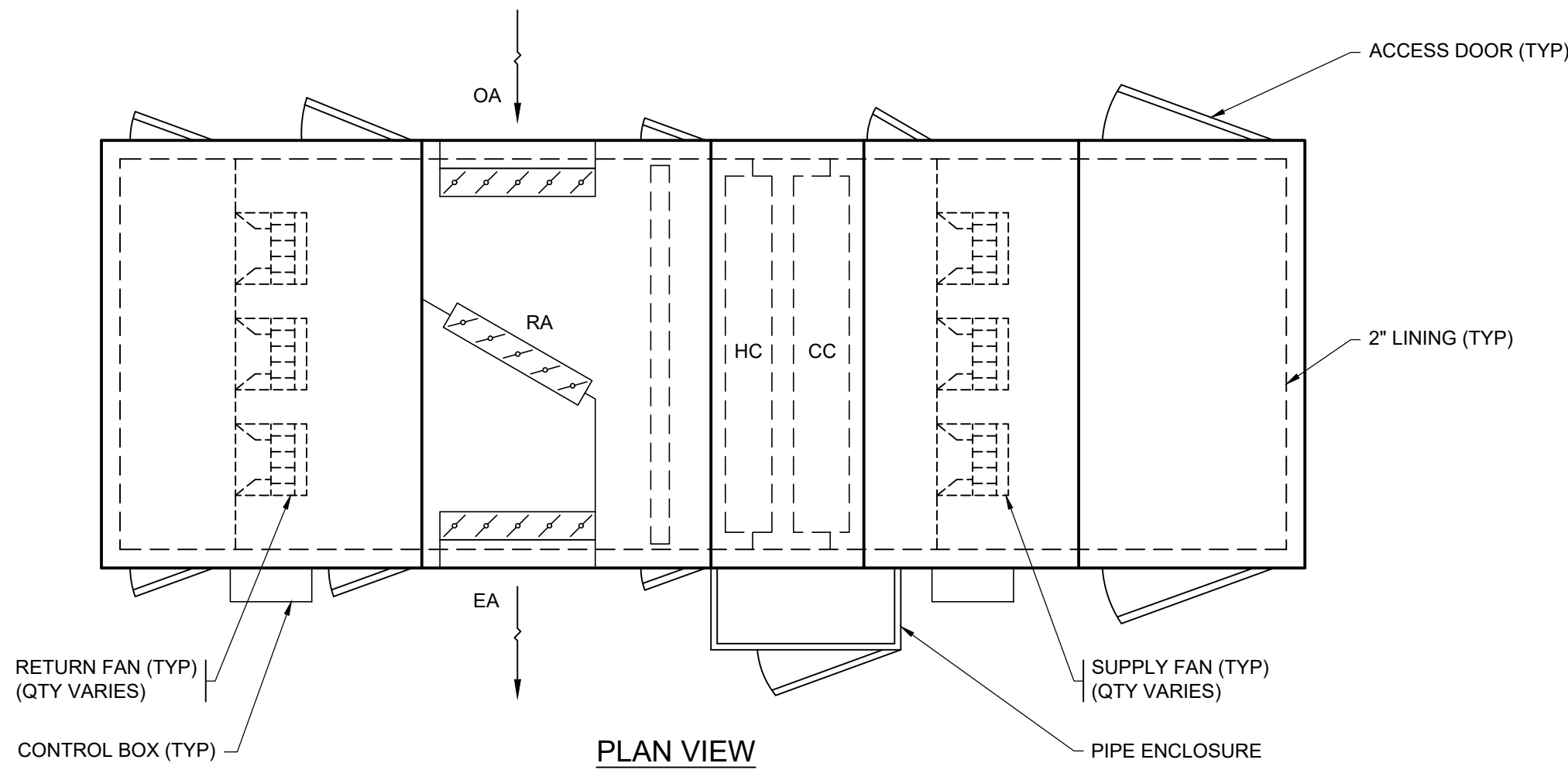


UNIT HEATER
NTS

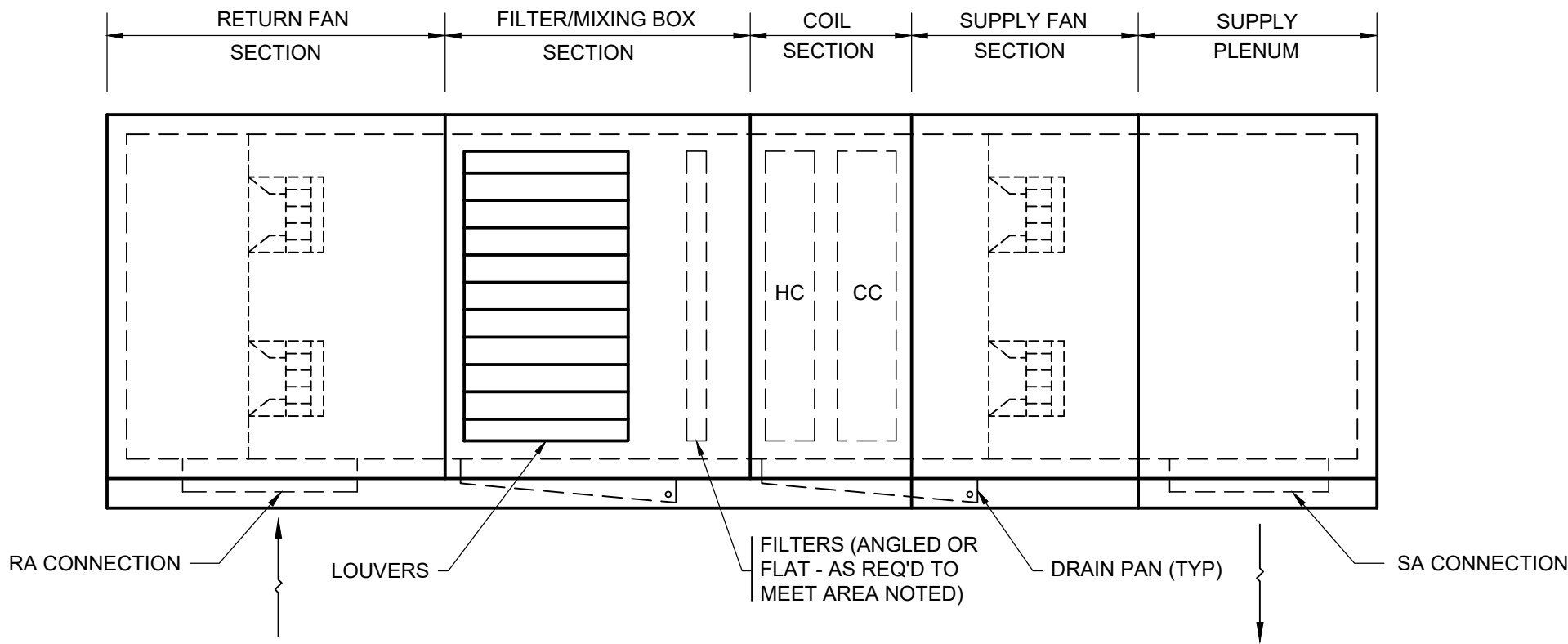


- NOTES:**
- FLUE IS INTENDED TO SUPPORT OFF BOILER.
 - FOR WATER HEATERS PROVIDE FLUE MFRS STANDARD SUPPORT RING TO SUPPORT AT BASE NEAR WATER HEATER.
 - FLUE IS TO BE ALLOWED TO EXPAND UPWARD.
 - PROVIDE SUITABLE GUIDES/EXPANSION FITTINGS/GUYING/FLASHINGS AS REQ'D FOR PROPER INSTALLATION IN ACCORDANCE W/ MRG. STANDARDS.
 - SUBMIT SHOP DRAWINGS OF FLUE DESIGN & COMPONENTS.
 - WATER HEATER FLUE MAY BE TYPE B GALV. STEEL AT A POINT 1' BELOW ROOF & TO WATER HEATER.
 - PROVIDE OFFSETS IN FLUE AND/OR REVISIONS IN EQUIPMENT LOCATIONS TO ALLOW FLUE ROUTING TO CLEAR ROOF STRUCTURE & VALLEYS.

FLUE DETAIL
NTS



PLAN VIEW



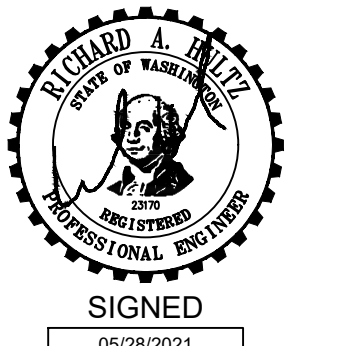
SIDE VIEW

- NOTES:**
- SEE SPECIFICATIONS FOR COMPLETE UNIT REQUIREMENTS.
 - SEE PLANS FOR UNIT LENGTH, DUCT CONNECTION LOCATIONS, PROPER ACCESS SIDES, ETC.
 - SEE SCHEDULE FOR UNIT CAPACITIES.
 - ALL ACCESS DOORS SHOWN SHALL BE PROVIDED ON BOTH SIDES OF UNIT.
 - UNIT DIMENSIONS SHALL NOT EXCEED THOSE SHOWN.
 - ROOF CURB SHALL MATCH PIPE ENCLOSURE, SO THAT ALL PIPING IS PROTECTED FROM OUTDOORS.
 - ROOFTOP AHU-1, AHU-2, & AHU-3: UNIT SA/RA CONNECTIONS SHALL ACCOMMODATE USE OF EXISTING ROOF OPENINGS. DUCTWORK MAY BE OFFSET WITHIN ROOF CURB AS NECESSARY TO MAKE UNIT CONNECTIONS. SEE MECHANICAL, ARCHITECTURAL, & STRUCTURAL DRAWINGS FOR LOCATIONS & SIZES OF EXISTING ROOF OPENINGS.
 - PIPING ENCLOSURE SHALL BE SIZED TO ACCOMMODATE HEATING/ COOLING HYDRONIC PIPING, VALVES & ACCESSORIES AS SHOWN IN COIL CONNECTION DETAILS ON SHEET M305.
 - INDOOR UNITS: PROVIDE UNIT IN MULTIPLE SECTIONS AS NEEDED FOR INSTALLATION.

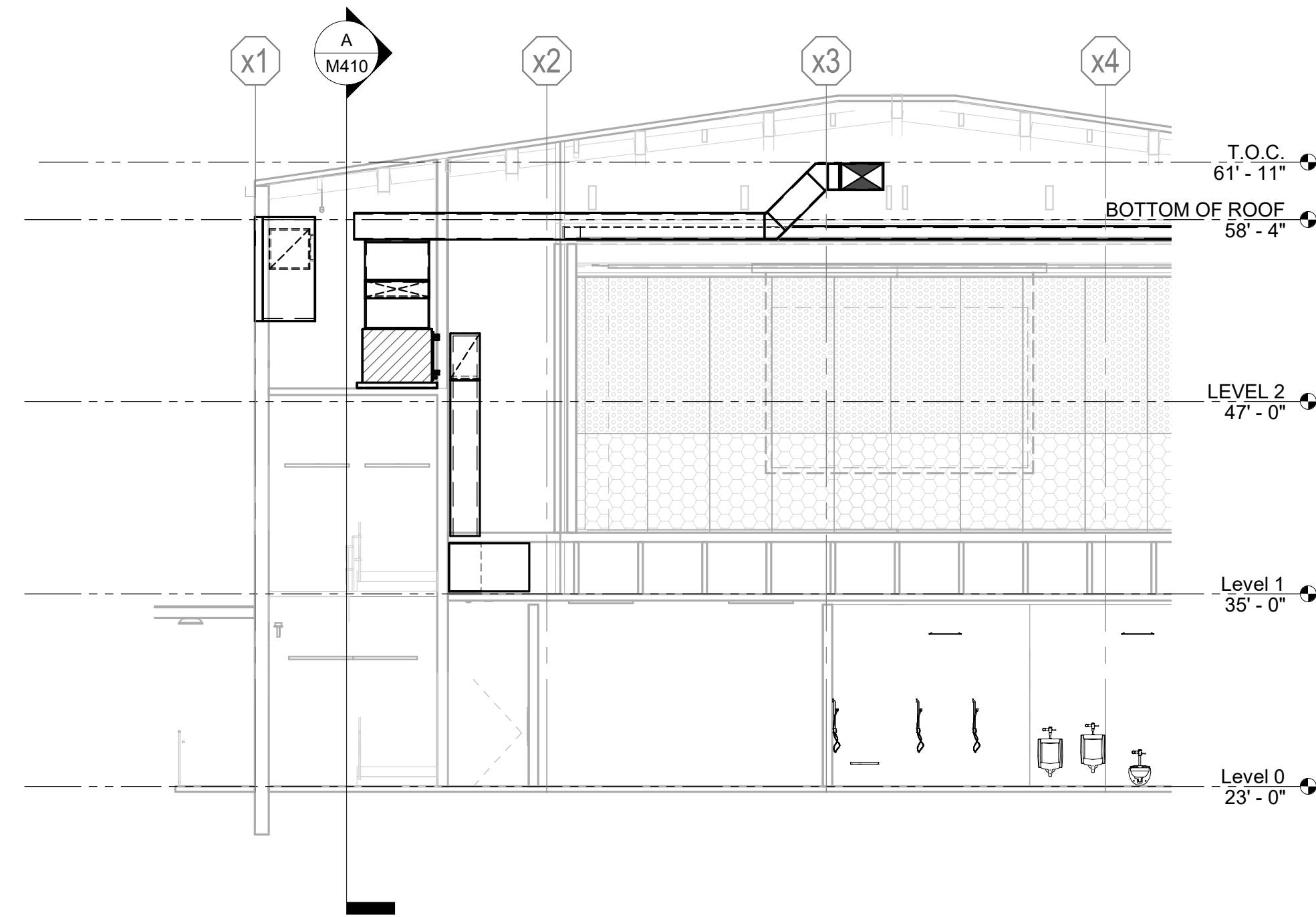
UNIT	MAX W *	MAX H	MAX L
AHU-1	96"	78"	220"
AHU-2	96"	78"	224"
AHU-3	60"	60"	220"
AHU-12	62"	56"	164"
AHU-143	50"	48"	158"
AHU-145A/B	60"	48"	150"
AHU-148	60"	48"	142"

* WIDTH DOES NOT INCLUDE PIPE ENCLOSURE

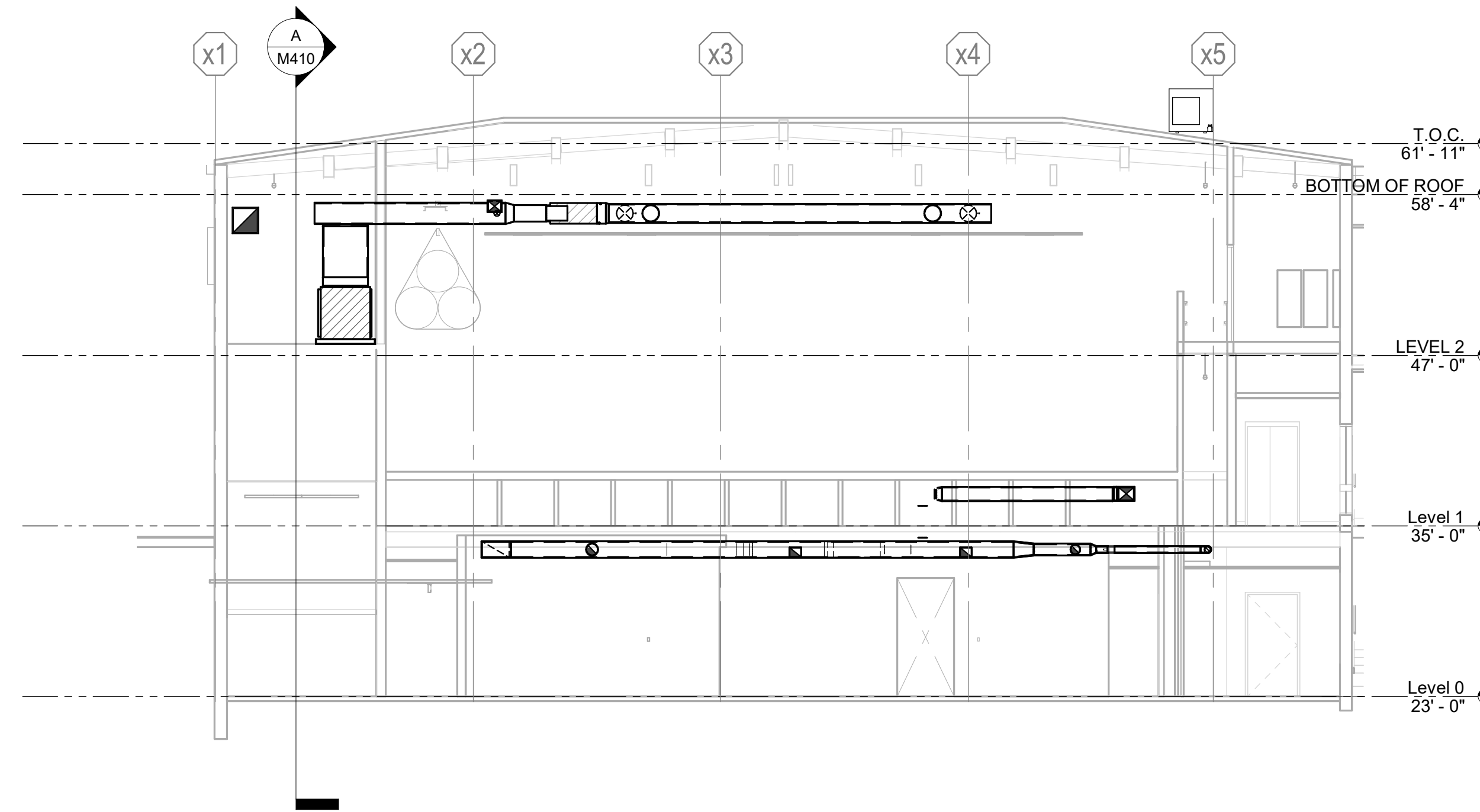
AHU DETAIL
NTS



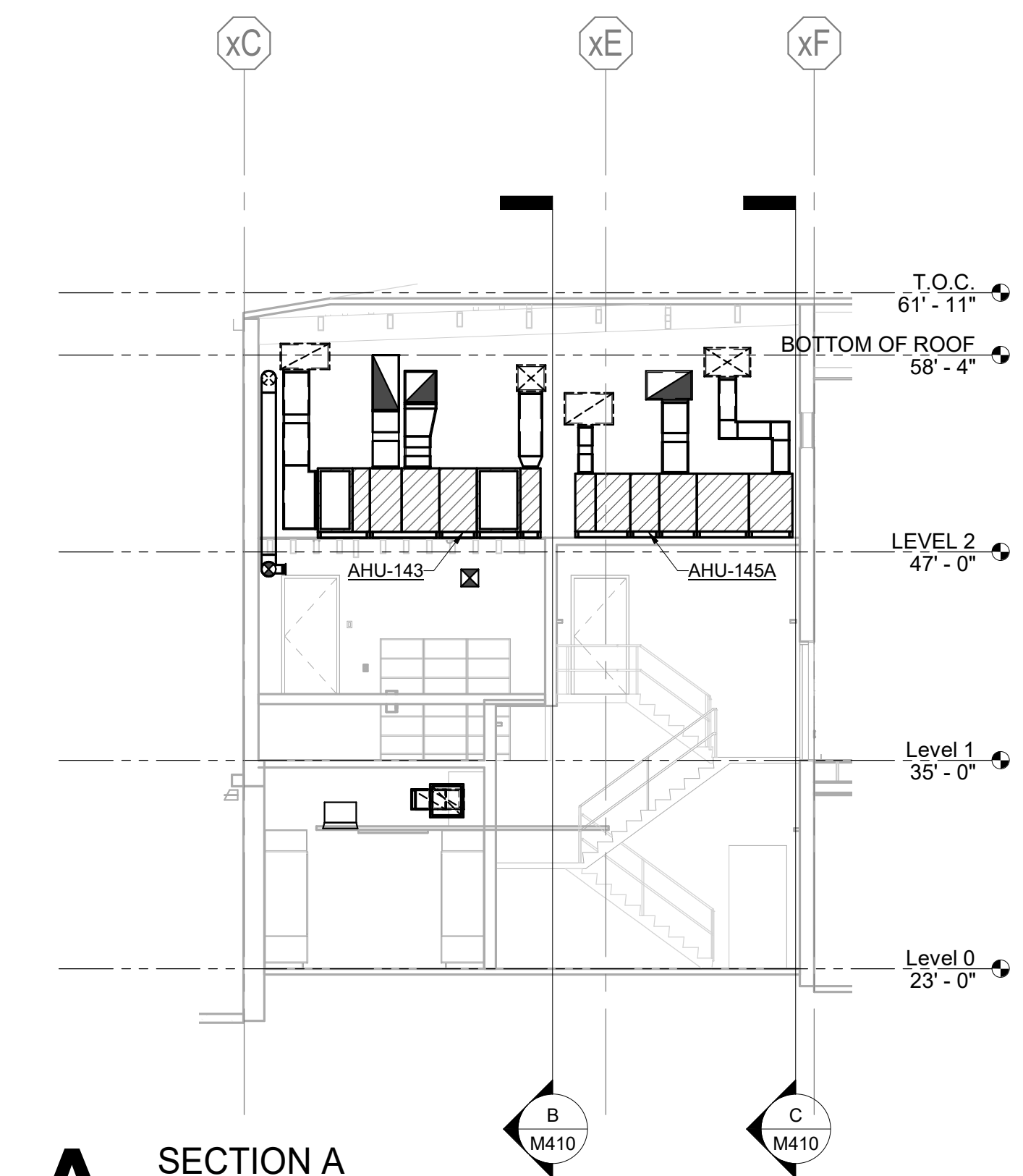
Date:	05/28/2021
Job No.:	21938.00
Drawn By:	TP
Checked by:	NRH
Revisions	
#	Date Description



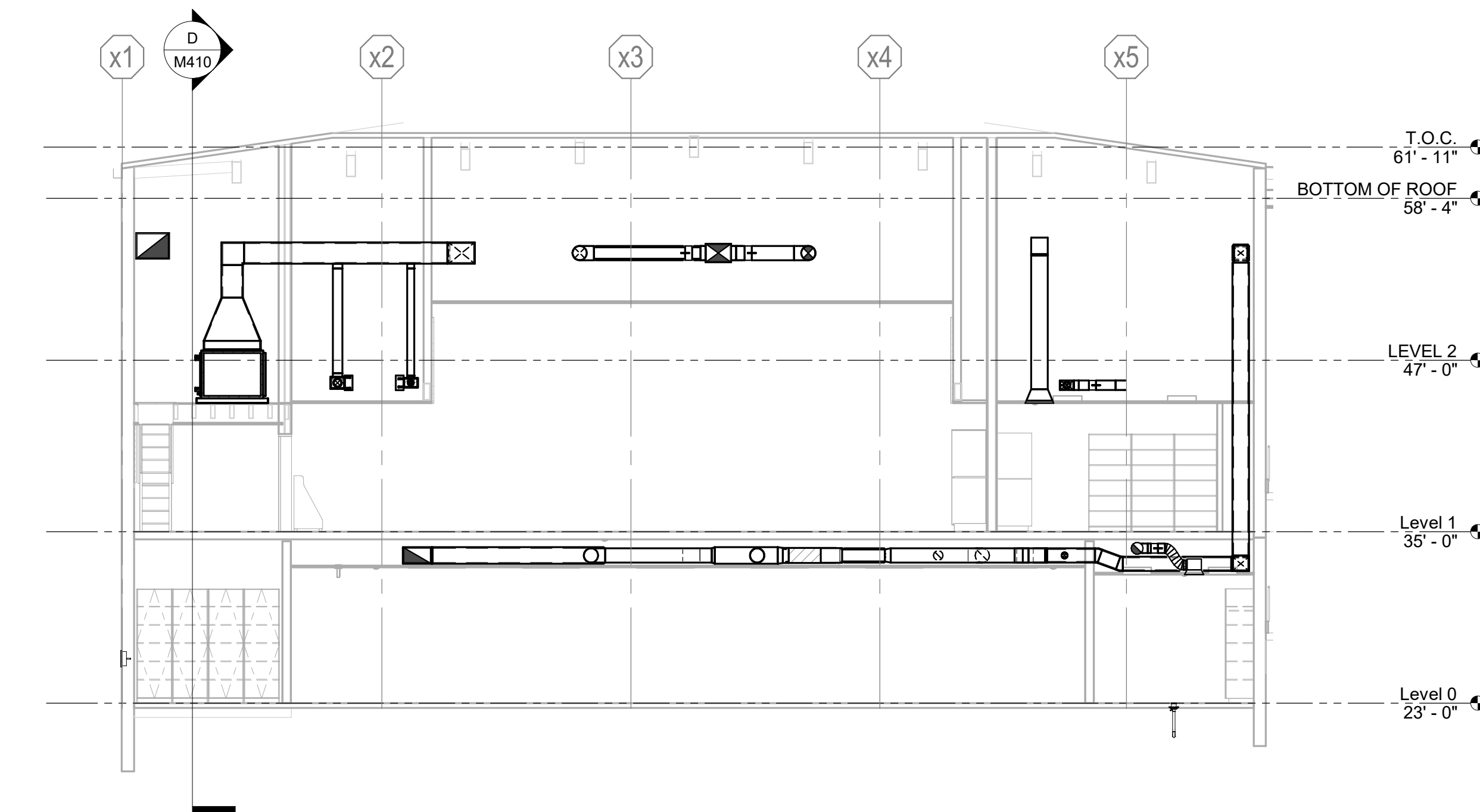
C SECTION C
SCALE: 1/8" = 1'-0"



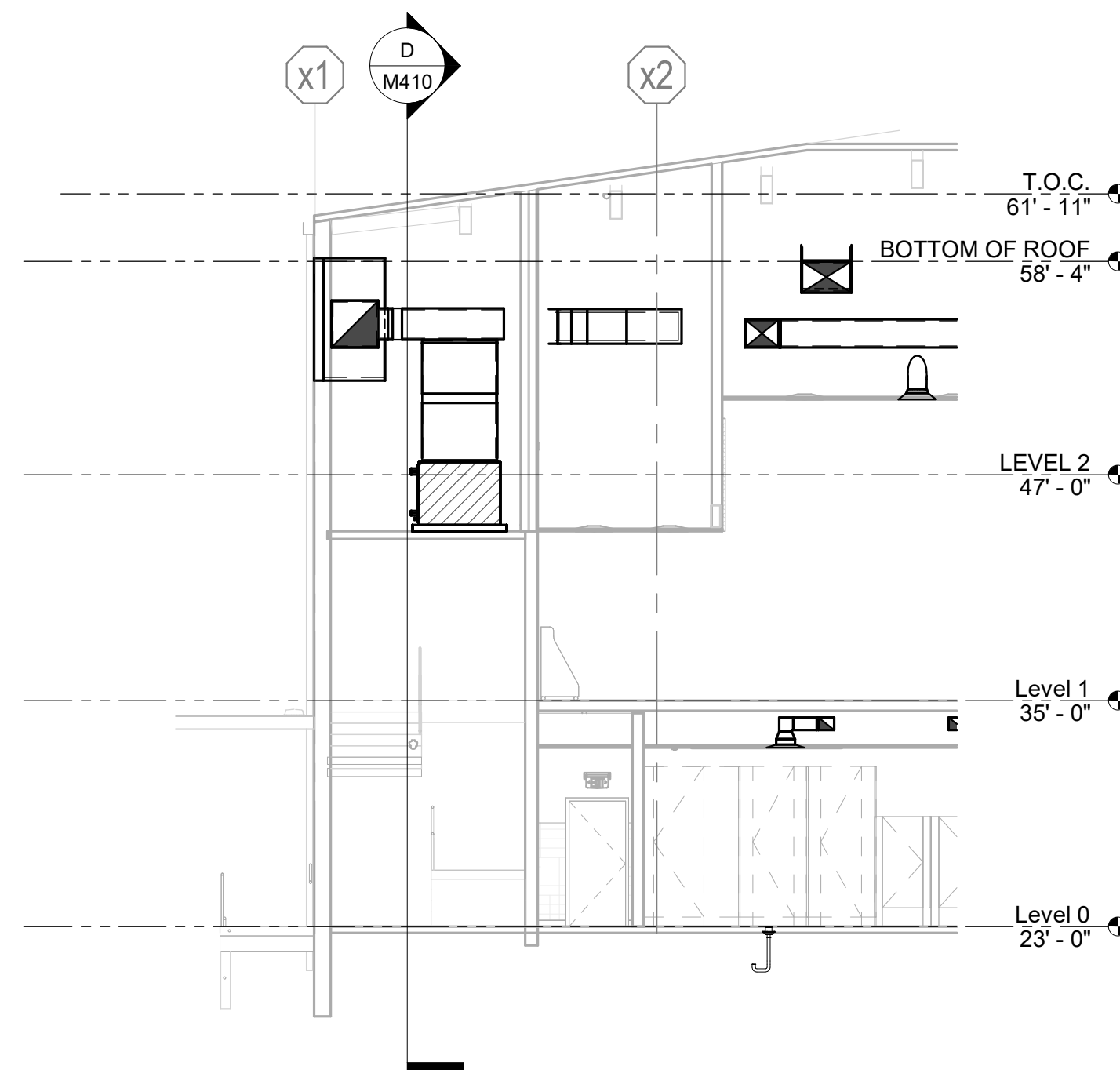
B SECTION B
SCALE: 1/8" = 1'-0"



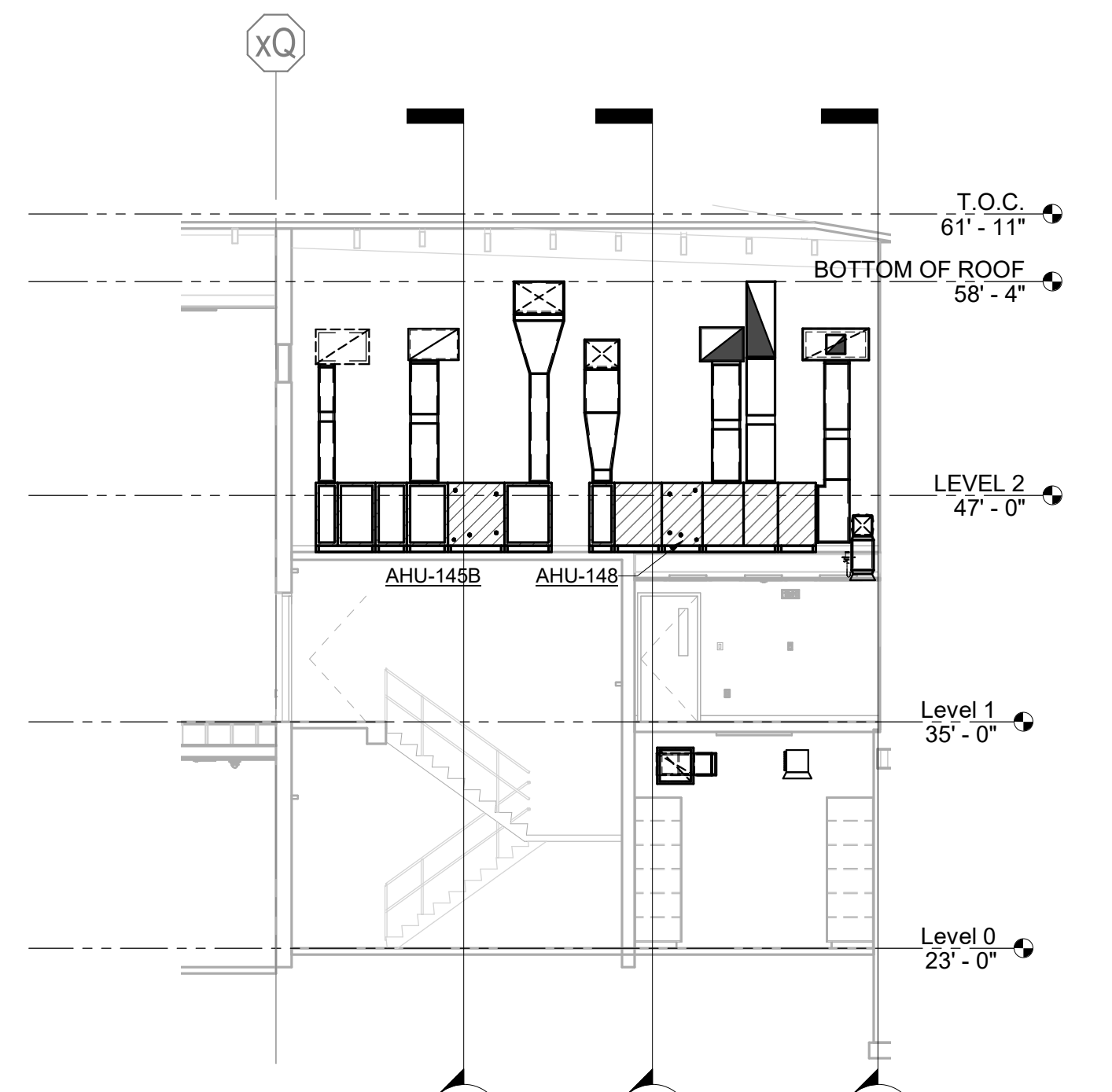
A SECTION A
SCALE: 1/8" = 1'-0"



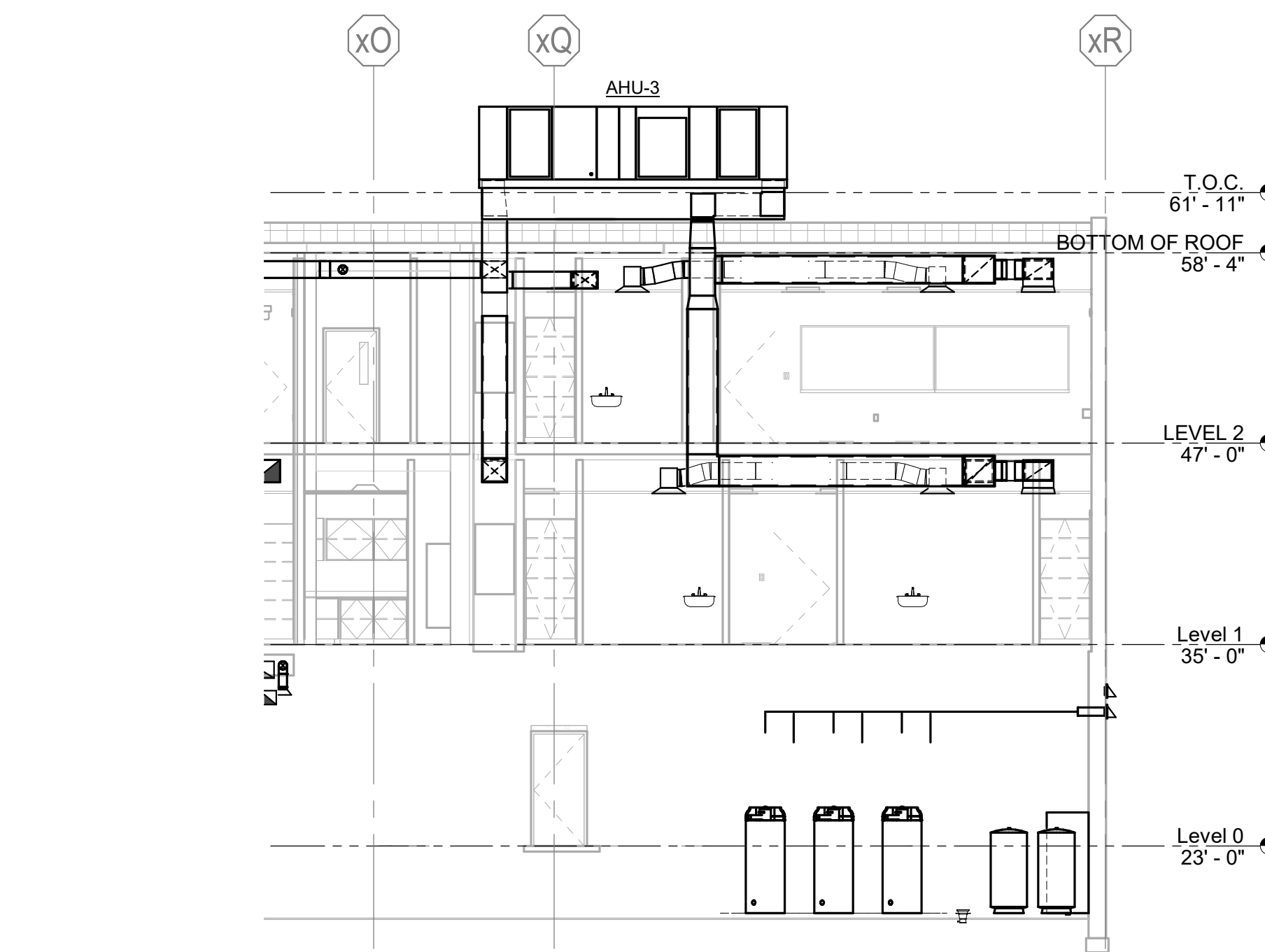
F SECTION F
SCALE: 1/8" = 1'-0"



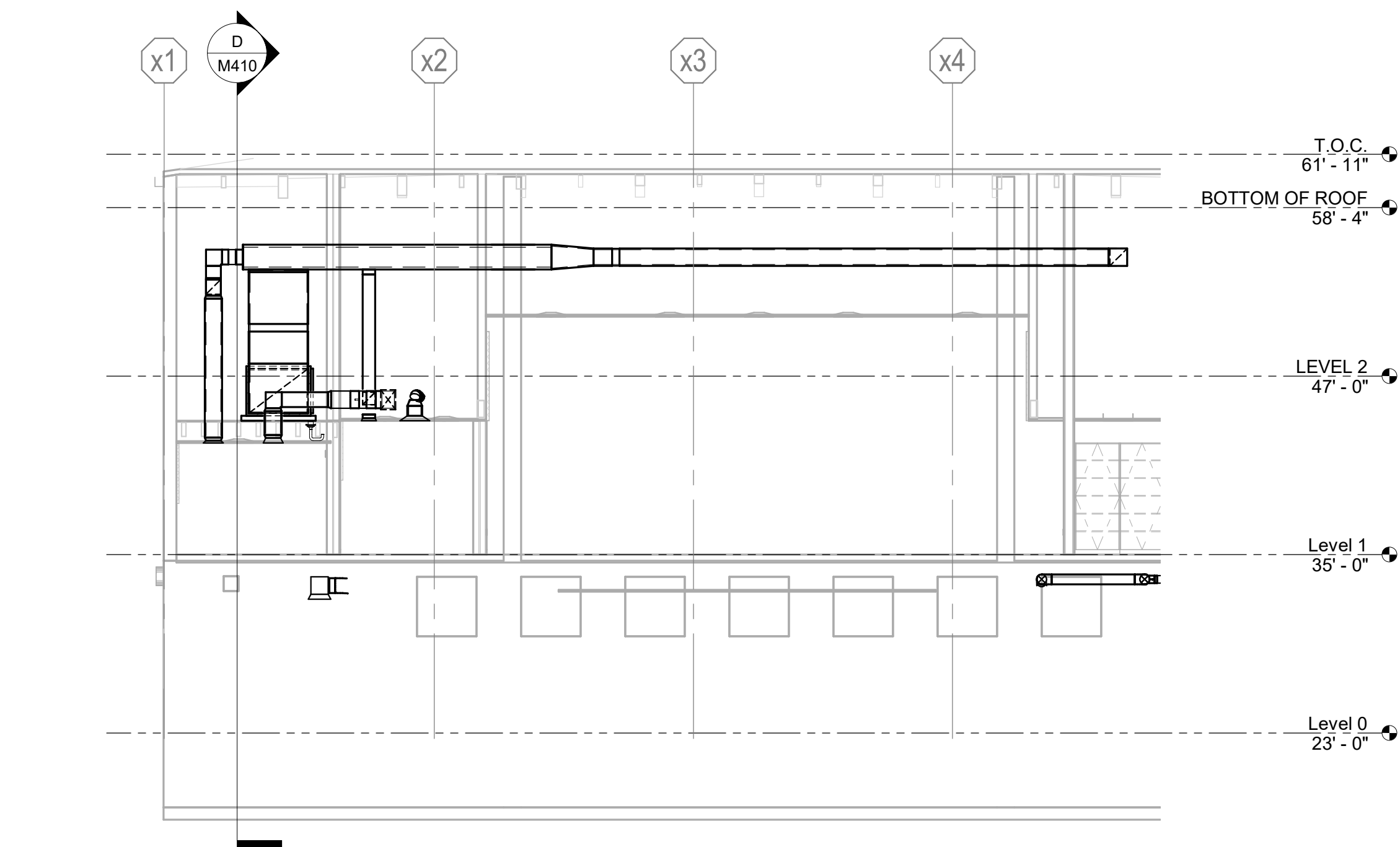
E SECTION E
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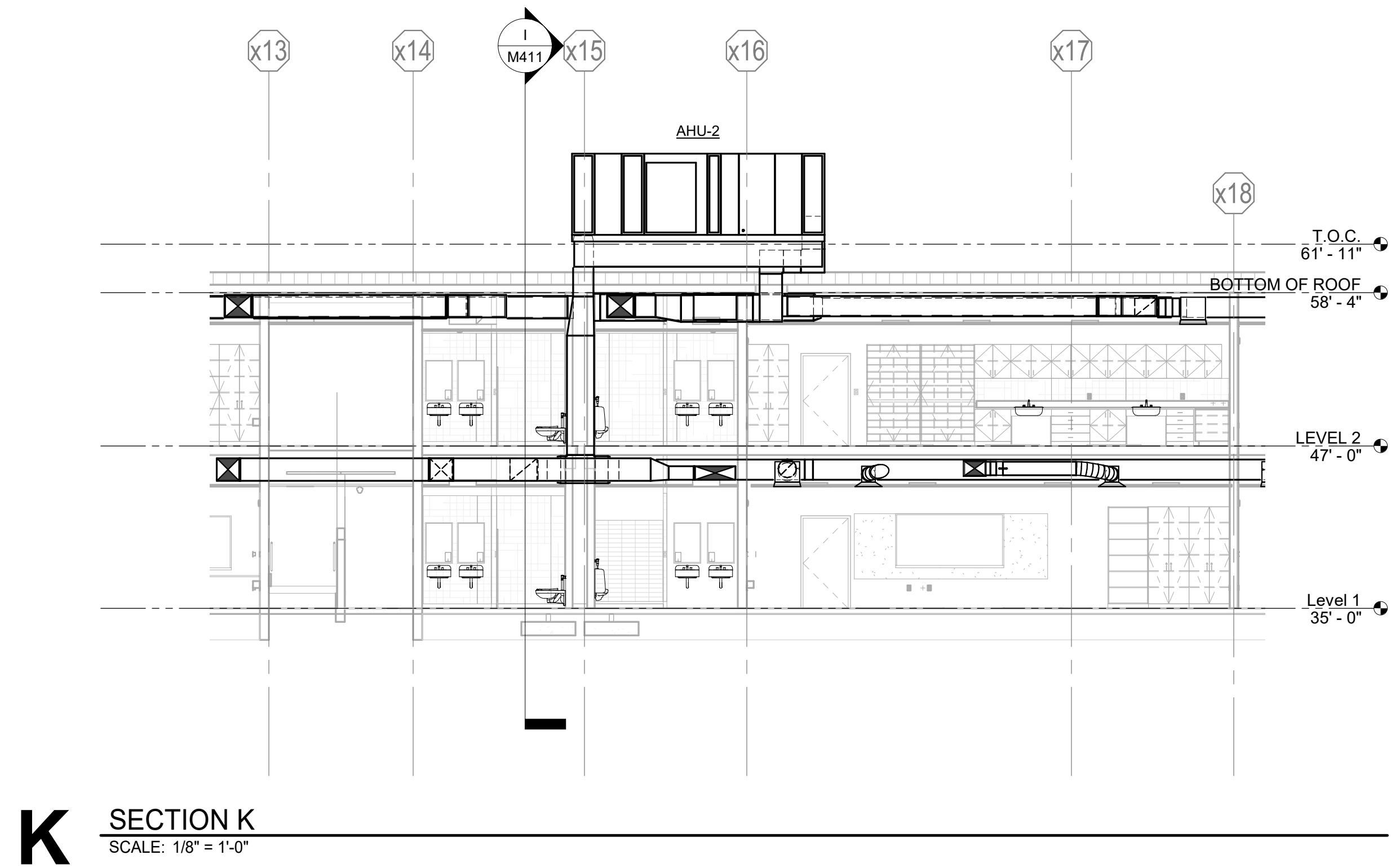
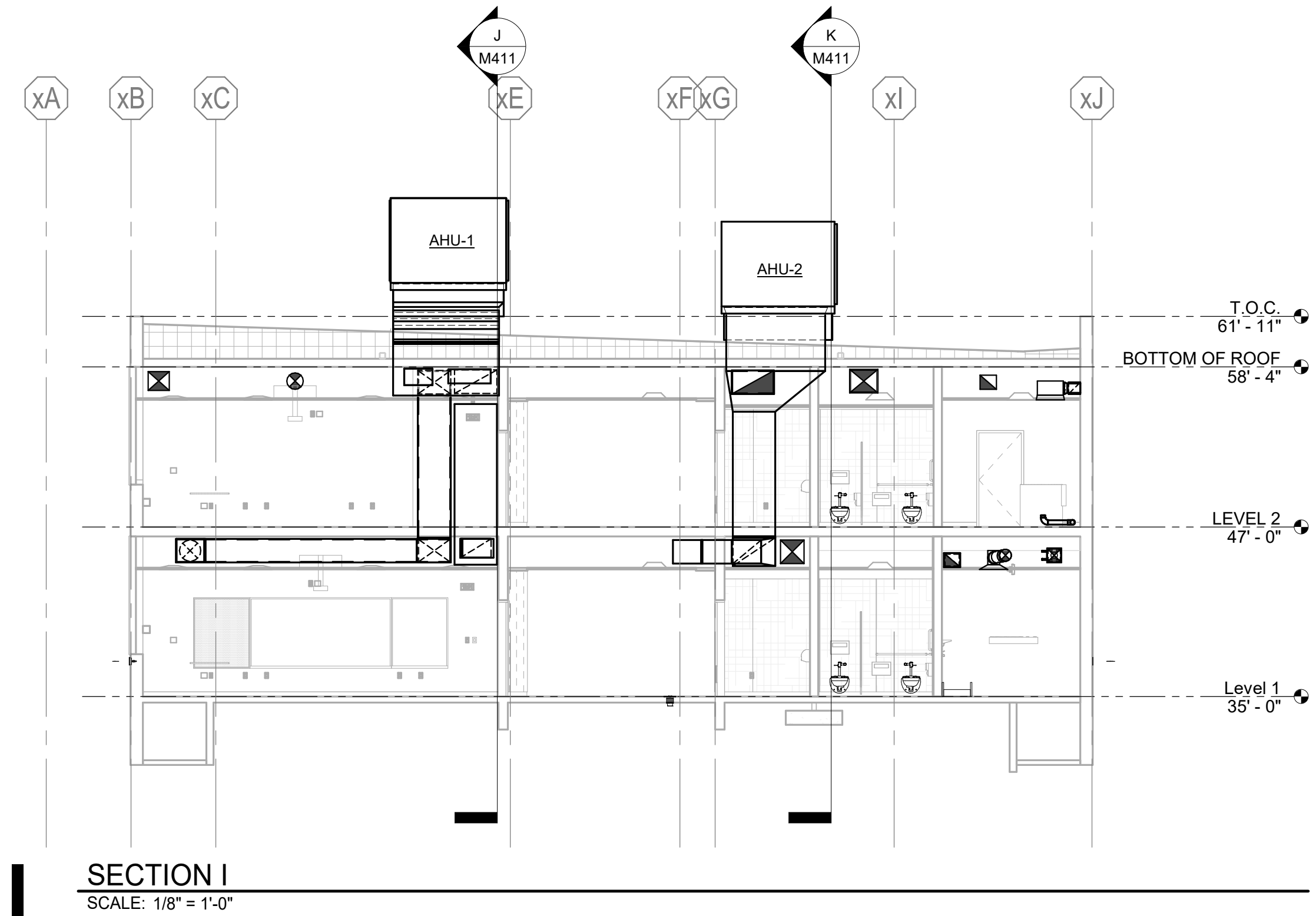
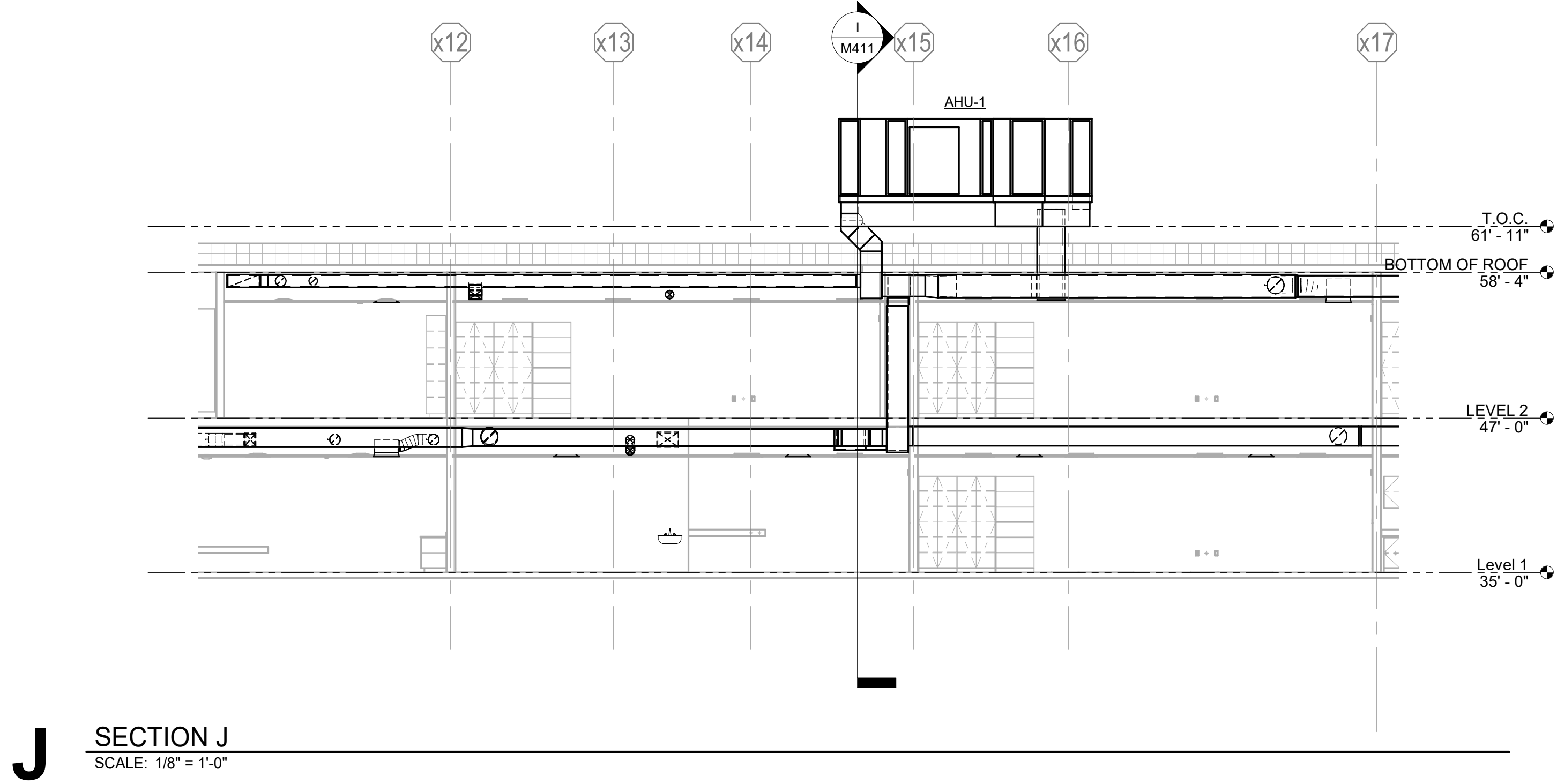
D SECTION D
SCALE: 1/8" = 1'-0"

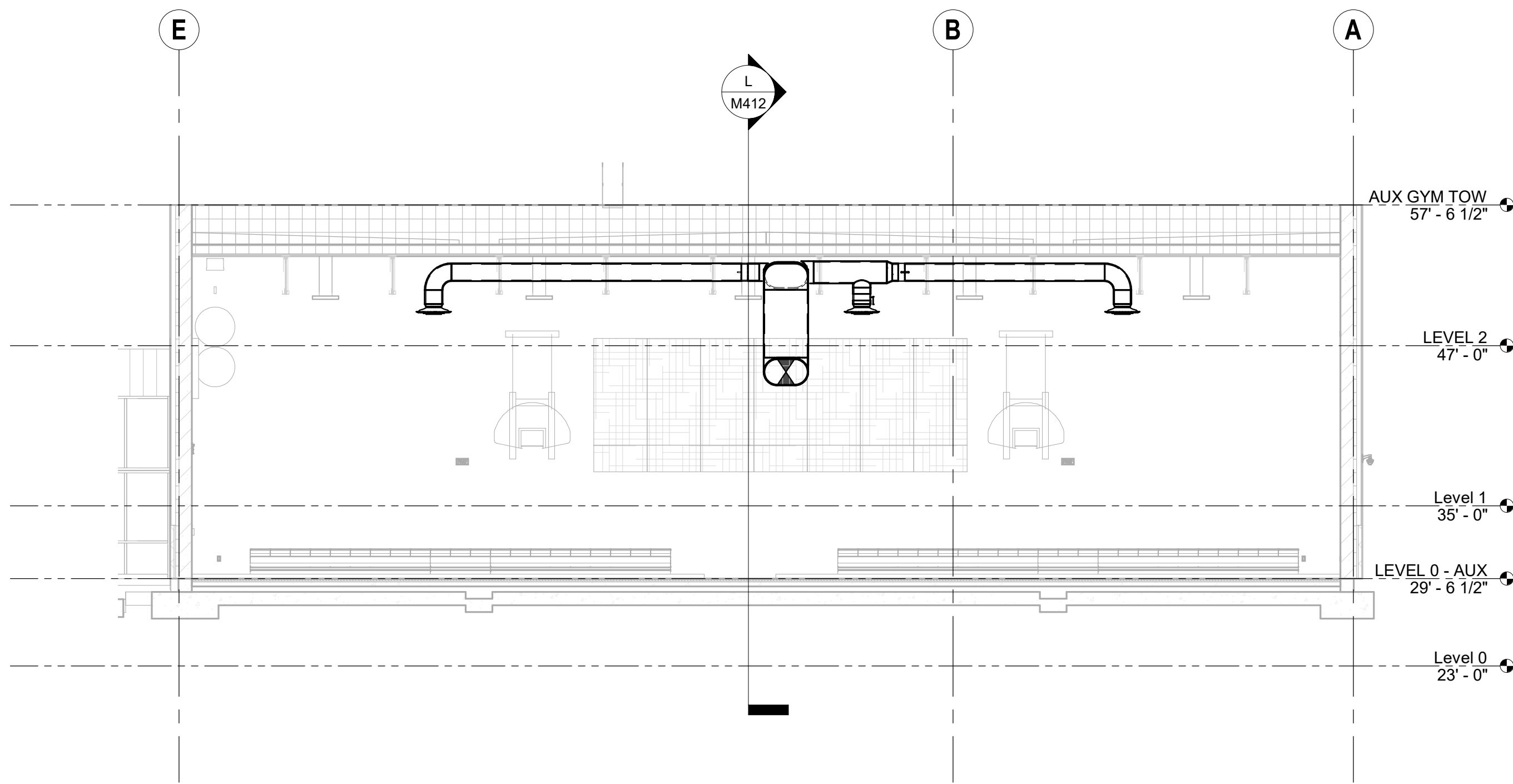


H SECTION H
SCALE: 1/8" = 1'-0"

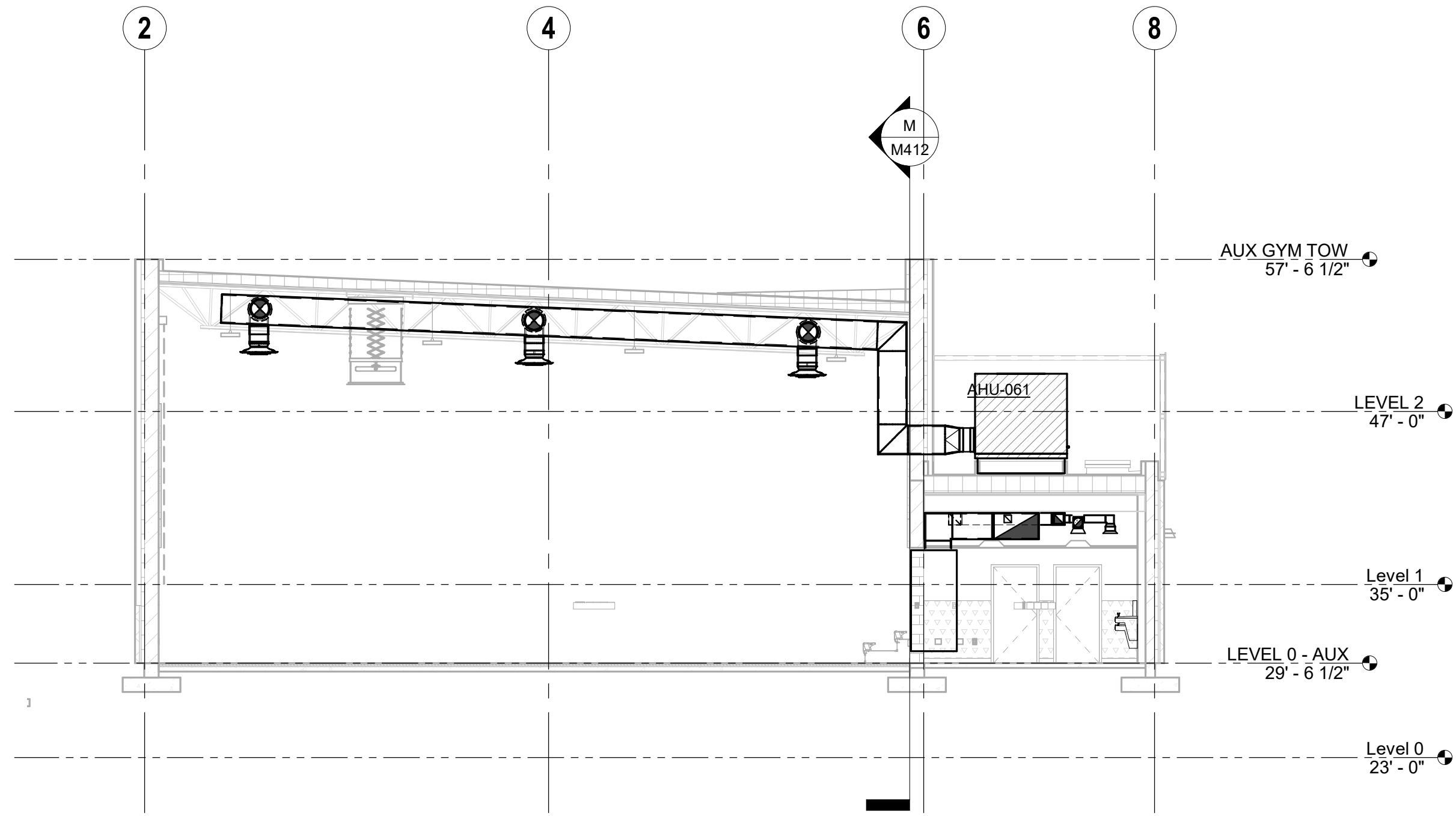


G SECTION G
SCALE: 1/8" = 1'-0"





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



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

**KELSO SCHOOL DISTRICT NO. 458
HUNTINGTON MIDDLE SCHOOL -
MODERNIZATION AND ADDITION**
500 REDPATH ST, KELSO, WA 98626

Date: 05/28/2021
Job No.: 21938.00
Drawn By: TP
Checked by: NRH

Revisions		
#	Date	Description

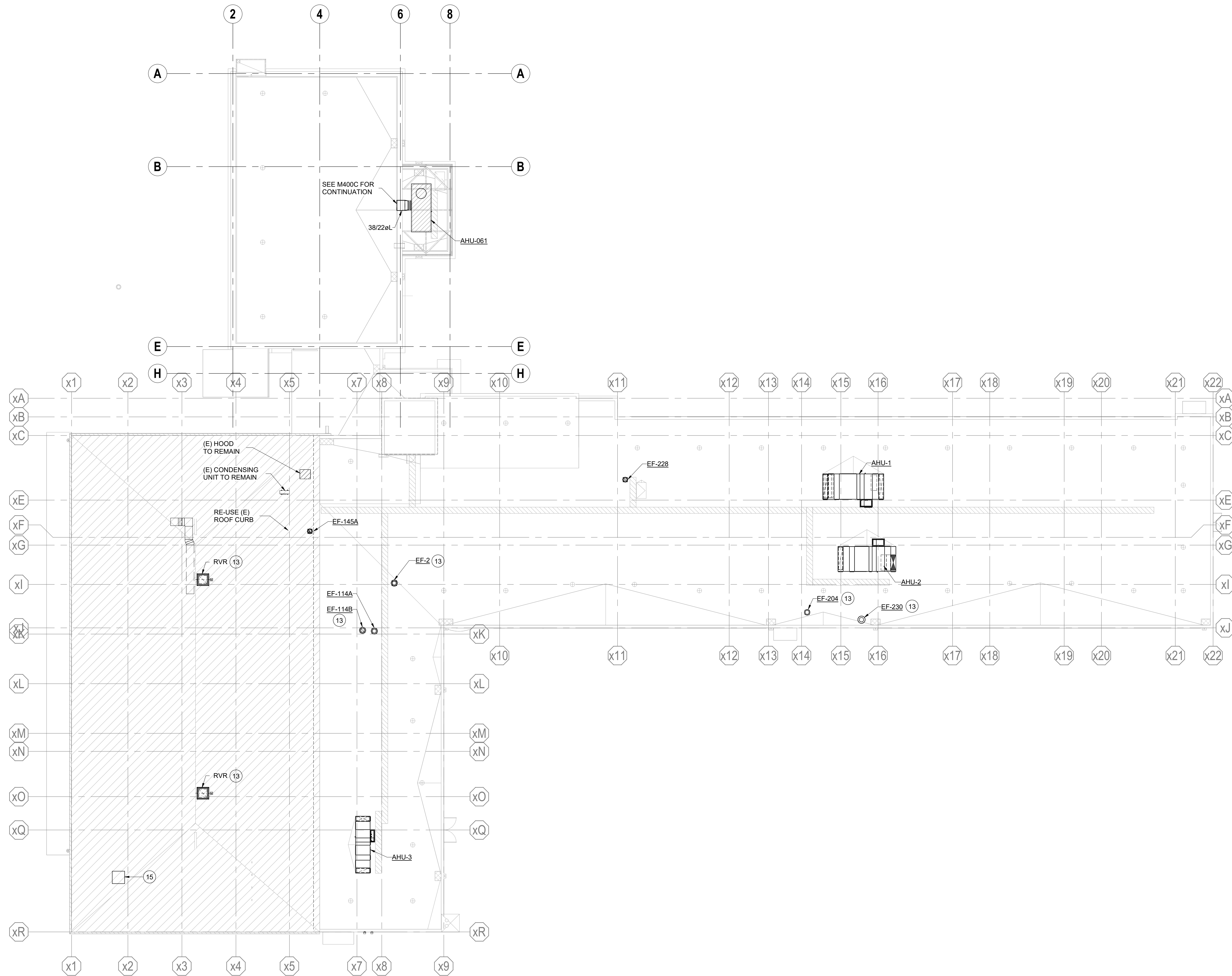
SECTIONS

M412

HULTZ & BHU
engineers inc
1111 Everett Ave Suite 100 Tacoma, WA 98402
Phone: (253) 383-3257 Fax: (253) 383-3283
general@hultzbhu.com Job Number: 20-038

integrus ARCHITECTURE
10 SOUTH CEDAR, BPOKANE, WA 99264
TELEPHONE: (509) 333-8881 FAX: (509) 333-2194

SIGNED
05/28/2021

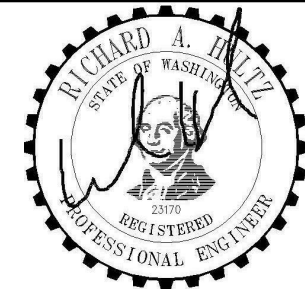


GENERAL NOTES:

1. SEE MECHANICAL NOTES, SHEET M001 & M002.
2. SEE PLUMBING DRAWINGS FOR HYDRONIC PIPING.
3. SEE ARCHITECTURAL DRAWINGS TO VERIFY LOUVERS SIZES AND LOCATIONS. SF INDICATED IS FOR GENERAL REFERENCE.
4. LOCATE MOTORIZED DAMPERS, ACTUATORS, & BDD'S TO BE ACCESSIBLE. PROVIDE DUCT ACCESS DOORS AT MOTORIZED DAMPERS, & BDD'S TO ALLOW ACCESS TO DAMPERS.
5. BDD & DUCT CONN'S AT LOUVERS SHALL MATCH FULL LOUVER SIZE (UNLESS NOTED OTHERWISE).
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7. VERIFY HEIGHTS OF ALL WALL OUTLETS/INLETS WITH ARCHITECT PRIOR TO CONSTRUCTION. CONTRACTOR SHALL PROVIDE AS A SUBMITTAL PROPOSED HEIGHT THAT SUITS CONSTRUCTION AND PROVIDES PROPER LOCATION OF INLETS/OUTLETS FOR AIR DISTRIBUTION.
8. VERIFY MOUNTING HEIGHTS OF ALL EXPOSED DUCTWORK WITH ARCHITECT PRIOR TO CONSTRUCTION. CONTRACTOR SHALL PROVIDE AS A SUBMITTAL PROPOSED HEIGHT THAT SUITS CONSTRUCTION AND PROVIDES PROPER AIR DISTRIBUTION.
9. PROVIDE TRANSITIONS AT DUCT CONNECTIONS TO EQUIPMENT AND AIR TERMINALS TO MATCH UNIT CONNECTION SIZES. TRANSITIONS SHALL BE LINES WHERE CONNECTING DUCTS ARE LINED.
10. RESTROOM EXHAUST & TRANSFER GRILLES SHALL BE INSTALLED TO BE IN LINE W/ EACH OTHER.
11. ALL SUPPLY & RETURN AIR DUCTWORK SHALL BE SOUND LINED WITHIN 15' MINIMUM OF THE AIR HANDLER OR AS INDICATED ON PLANS - WHICHEVER IS MORE.
12. SEE ARCH FOR WALL LOUVER (WL) DIMENTIONS (TYP).
13. NOT ALL KEYED NOTES MAY BE USED ON ALL SHEETS.

KEYED NOTES:

- 1 (2) 22x22 CRG'S W/ 22/22L UP TO LINED PLENUM.
- 2 22x22 CTG'S WITH 12/12L TD (UNO).
- 3 22x10 CTG'S WITH 10/8L TD (UNO).
- 4 12x12 CTG'S WITH 10/8L TD (UNO).
- 5 RUN DUCT BETWEEN/THRU JOISTS (REF STRUCTURAL DWGS).
- 6 DUCTWORK RUNS EXPOSED IN THIS ROOM. CAREFULLY FABRICATE & ASSEMBLE DUCTWORK TO PROVIDE BEST FINISHED APPEARANCE.
- 7 PROVIDE SPACE THERMOSTAT BEHIND GRILLE IN DUCT.
- 8 WRAP FAN, FLEX & DUCT (2' PAST FAN EACH DIRECTION) WITH SOUND ATTENUATION WRAP. PROVIDE WRAP IN MULTIPLE PIECES AT FAN TO ALLOW REMOVAL OF SMALL SECTION FOR FAN DRIVE ACCESS.
- 9 INTERLOCK MOTORIZED DAMPER WITH AHU-145A, TO BE OPEN WHEN AHU IS ON IN THE OCCUPIED MODE.
- 10 INTERLOCK MOTORIZED DAMPER WITH AHU-145B, TO BE OPEN WHEN AHU IS ON IN THE OCCUPIED MODE.
- 11 10"Ø BOILER FLUE, ROUTE UP THROUGH EXISTING CHIMNEY, MINIMUM 24" ABOVE HIGHEST POINT WITHIN 10'-0".
- 12 INTERLOCK MOTORIZED DAMPER WITH AHU-12, TO BE OPEN WHEN AHU IS ON IN THE OCCUPIED MODE.
- 13 RE-USE EXISTING ROOF OPENING. PROVIDE W/ NEW CURB. CONTRACTOR TO FIELD VERIFY EXACT LOCATION PRIOR TO BEGINNING WORK.
- 14 INTERLOCK MOTORIZED DAMPER WITH FAN, TO BE OPEN WHEN FAN IS ON.
- 15 PROVIDE SHEETMETAL CAP OVER EXISTING ABANDONED ROOF CURB. CONTRACTOR TO FIELD VERIFY DIMENSIONS OF CURB PRIOR TO BEGINNING WORK.



SIGNED

05/28/2021

**KELSO SCHOOL DISTRICT NO. 458
HUNTINGTON MIDDLE SCHOOL -
MODERNIZATION AND ADDITION**
500 REDPATH ST, KELSO, WA 98626

Date:	05/28/2021
Job No.:	21938.00
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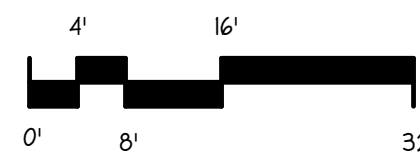
OVERALL ROOF
PLANS - HVAC

M421



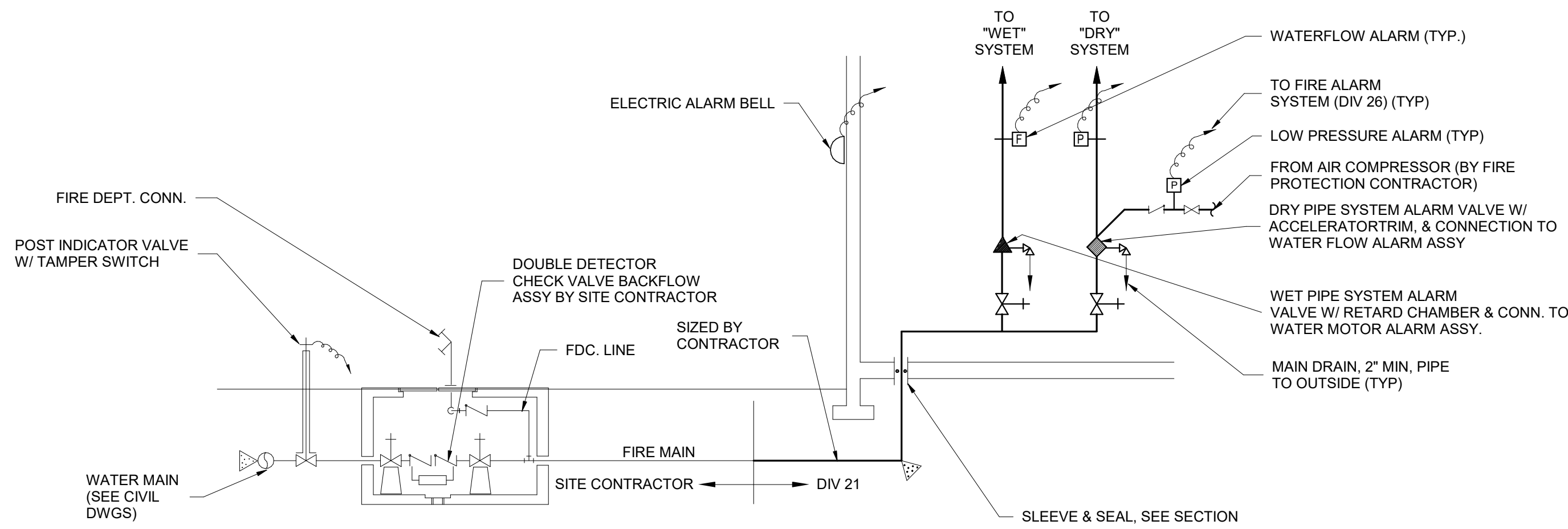
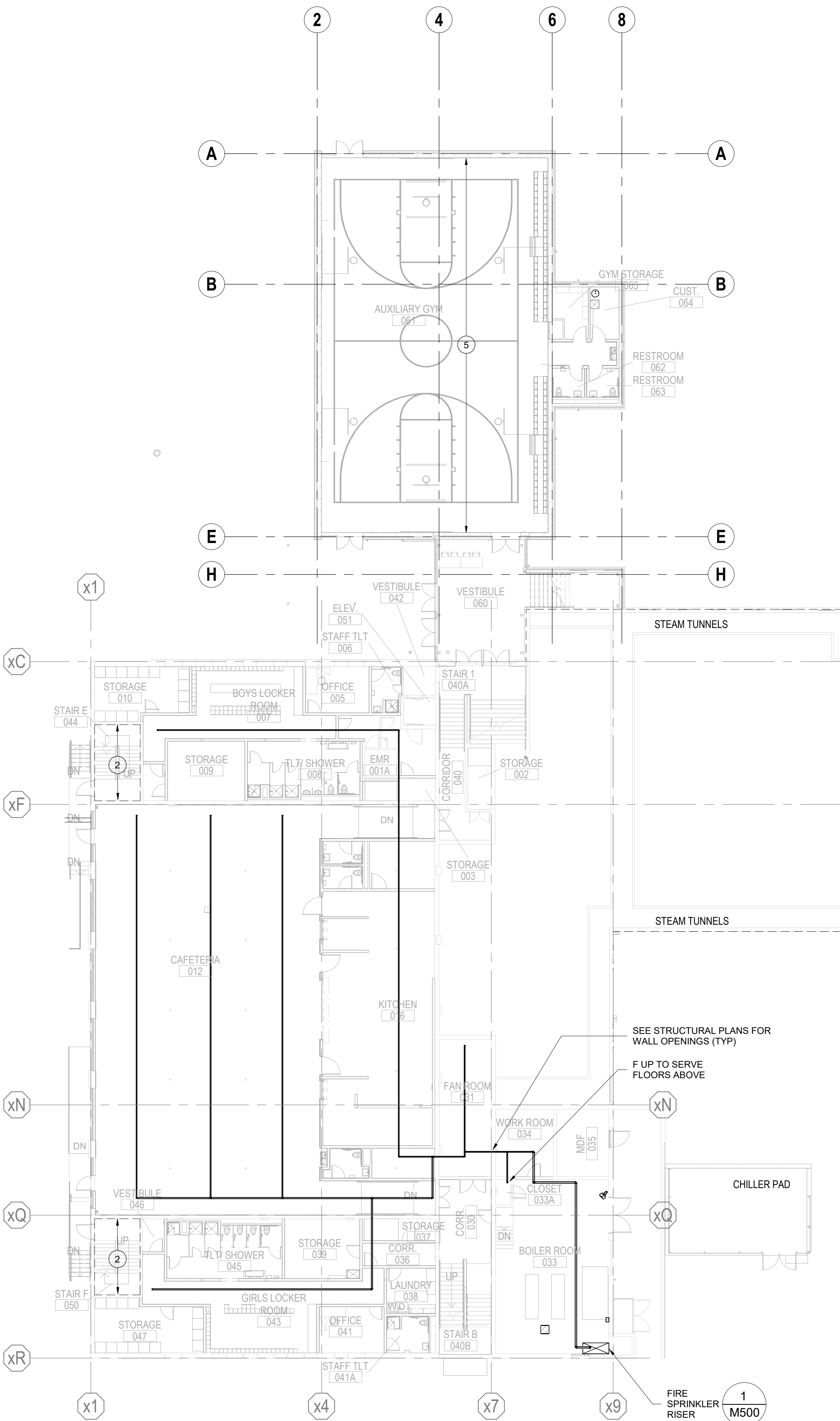
OVERALL ROOF PLANS - HVAC

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



Scale 1/16" = 1'-0"

BID SET



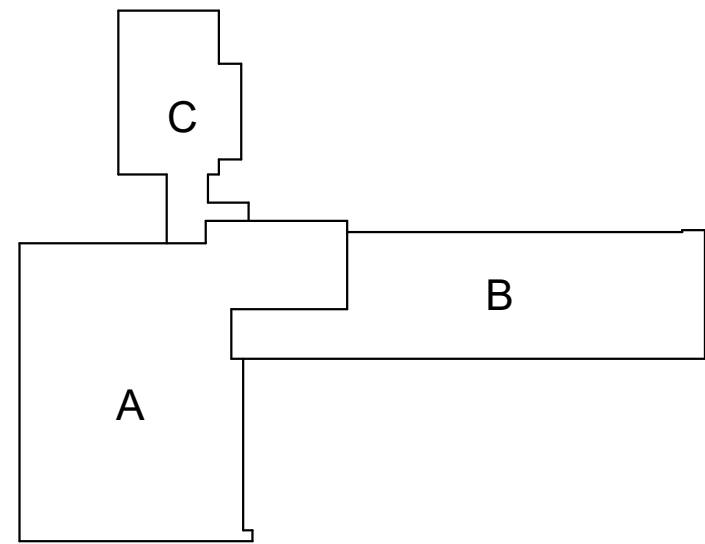
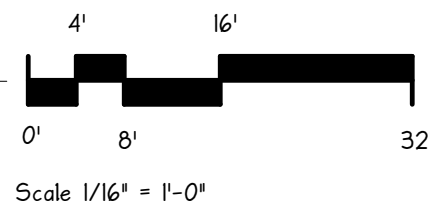
- NOTES:**
- PIPE SIZING IS BY CONTRACTOR (UNO).
 - CONNECTION OF ALL TAMPER SWITCHES & WATERFLOW ALARMS TO BUILDING FIRE ALARM SYSTEM IS BY DIVISION 26.
 - ALL BENDS/JOINTS SHALL BE RESTRAINED AGAINST MOVEMENT USING MECHANICAL JOINTS W/ SET SCREW RETAINER GLANDS OR OTHER APPROVED METHODS.
 - PROVIDE THRUST BLOCKS AT ALL CHANGES IN DIRECTION OF PIPING PER NFPA 24, & AHJ REQUIREMENTS.
 - CONTRACTOR SHALL PROVIDE A DRY PIPE TYPE SYSTEM (INCLUDING AIR COMPRESSOR) AS REQUIRED TO SERVE AREAS SUBJECT TO FREEZING. LOCATE COMPRESSOR AT THE FIRE RISER.

FIRE SPRINKLER SCHEMATIC 1 M500

- GENERAL NOTES:**
- COMPLETE BUILDING SHALL BE FIRE SPRINKLERED PER NFPA 13, PER THE LOCAL AUTHORITY HAVING JURISDICTION, AND IN EXCESS OF THESE REQUIREMENTS AS INDICATED.
 - PROVIDE WET PIPE TYPE SYSTEM SERVING ALL AREAS NOT SUBJECT TO FREEZING, AND DRY PIPE SYSTEM SERVING OTHER AREAS. DRY TYPE HEADS MAY BE USED OFF WET SYSTEM FOR LIMITED COVERAGE AREAS AND WHERE FREEZING OF WET PIPE IS NOT POSSIBLE.
 - REVIEW ARCHITECTURAL, STRUCTURAL, AND ALL OTHER DRAWINGS FOR BUILDING DETAILS AND LAYOUT.
 - COORDINATE WITH ALL TRADES IN ROUTING OF SPRINKLER PIPING TO AVOID CONFLICTS. FIRE PROTECTION SYSTEM HAS THE LOWEST PRIORITY OF ITEMS RAN IN THE CEILING. PROVIDE OFFSETS AS REQUIRED.
 - SPRINKLER HEADS SHALL BE CENTERED IN CEILING TILE.
 - SEE CIVIL DWGS FOR LOCATION OF CONNECTION TO PRIMARY WATER SUPPLY, & LOCATION OF FVA & FDC.
 - NOTIFY STRUCTURAL ENGINEER OF ALL INTENDED DRILLING/CUTTING OF STRUCTURE. OBTAIN ENGINEER'S APPROVAL PRIOR TO DRILLING OR CUTTING.
 - SEE DIVISION 21 FOR FIRE SPRINKLER SYSTEM SPECIFICATIONS.
 - HAZARD CLASS SHALL BE AS DETERMINED BY AUTHORITY HAVING JURISDICTION.
 - SEE ELECTRICAL PLAN & SPECIFICATIONS FOR FIRE ALARM SYSTEM.
 - CONTRACTOR'S PLANS SHALL BE STAMPED BY A WASHINGTON STATE LICENSED FIRE PROTECTION DESIGNER (AS REQ'D BY AUTHORITY HAVING JURISDICTION).
 - ALL FIRE SPRINKLER HEADS SERVING OCCUPIED AREAS OF THE BLDG SHALL BE QUICK RESPONSE TYPE.
 - ALL EXPOSED PIPING SHALL BE CAREFULLY FABRICATED & INSTALLED FOR BEST APPEARANCE. PIPING SHALL BE CLEANED AND PREPARED FOR PAINTING. PIPING MAY ONLY BE RAN EXPOSED WHERE NOTED AND WHERE APPROVED BY ARCHITECT. WHERE EXPOSED ALL PIPE LABELS, MARKS, LETTERING, ETC. SHALL BE REMOVED.
 - EXPOSED PIPING SHALL BE ARRANGED TO BE SYMMETRIC AND COMPATIBLE WITH THE DIRECTION AND SPACING OF ADJACENT STRUCTURE MEMBERS AND ARCHITECTURAL FEATURES.
 - ALL FIRE SPRINKLER HEADS SHALL BE LOCATED TO BE SYMMETRIC WITHIN SPACES SERVED AND BUILDING ARCHITECTURAL FEATURES.
 - BUILDING PLAN ON THESE SHEETS IS APPROXIMATE AND IS SCHEMATIC. USE ARCHITECTURAL PLANS FOR ACTUAL BUILDING LAYOUT. SEE ARCHITECTURAL PLANS FOR CEILINGS. ARCHITECTURAL PLANS GOVERN.
 - NOT ALL OVERHANGS OR AREAS REQUIRING SPRINKLER COVERAGE ARE SHOWN ON THIS SHEET. SEE SPECIFICATIONS, CODE REQUIREMENTS, AND ALL DRAWINGS FOR COMPLETE REQUIREMENTS.
 - SERVE BELOW STAIRS AND SIMILAR ITEMS WITH SIDEWALL HEADS AND WITH PIPING ROUTED CONCEALED IN WALLS.
 - PIPE ROUTING ON THESE PLANS DO NOT CONSTITUTE A "DESIGN". ALL SYSTEM DESIGN IS BY THE CONTRACTOR. THE PIPING LOCATIONS ARE MEANT TO CONVEY A CONCEPTUAL INTENT TO THE CONTRACTOR OF PREFERRED PIPING PATHS. SINCE THE SYSTEM IS NOT "DESIGNED", NO ROUTING PATHS SHOWN HAVE BEEN CONFIRMED FOR ADEQUATE SPACE, CODE COMPLIANCE, OR COMPLETE FEASIBILITY.
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 - SEE STRUCTURAL PLANS FOR WALL OPENINGS.
 - COORDINATE ALL WALL PENETRATIONS WITH STRUCTURAL.

- KEYED NOTES:**
- PROVIDE COVERAGE WITH DRY PIPE SYSTEM.
 - PROVIDE COVERAGE WITH DRY PIPE SYSTEM OR DRY TYPE HEADS OFF WET SYSTEM.
 - LOCATION VALVE/TEST/ALARM FOR SPRINKLER SYSTEM SERVING WINGS.
 - LIMIT PIPING THROUGH HIGH CEILING AREA TO ONE PIPE SERVING THIS AREA.
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 - PIPE CROSSING GRIDLINE "E" IS TO BE TREATED AS A PENETRATION THROUGH A SEISMIC JOINT. PROVIDE SLEEVING & FLEX CONNECTIONS AS NEEDED TO ALLOW MOVEMENT OF 2 INCHES IN ANY DIRECTION.
 - NO PENETRATIONS SHALL BE MADE THROUGH THIS EXISTING CONCRETE WALL.

LEVEL 0 - OVERALL FLOOR PLAN - FIRE PROTECTION
SCALE: 1/16" = 1'-0"



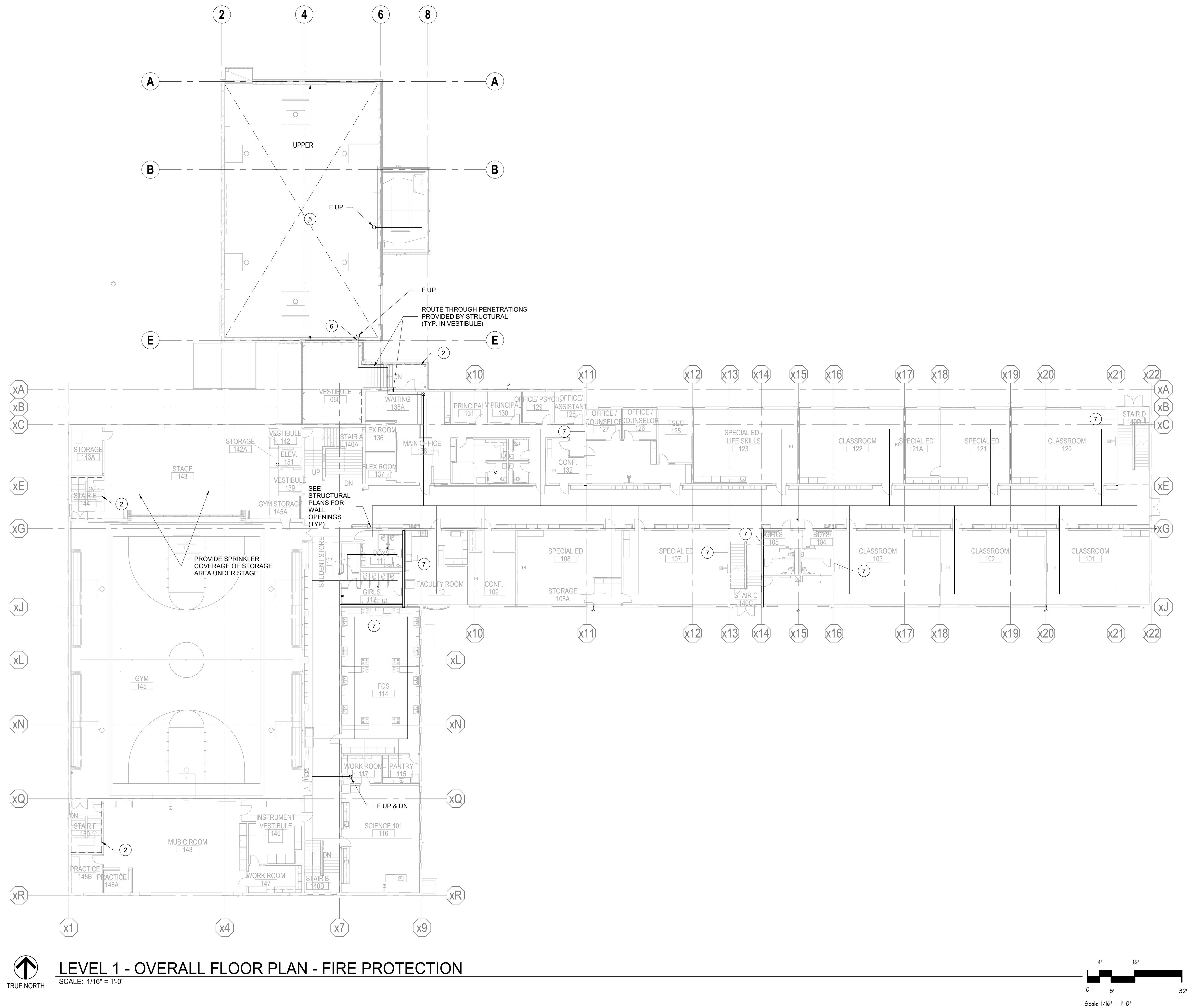
**KELSO SCHOOL DISTRICT NO. 458
HUNTINGTON MIDDLE SCHOOL -
MODERNIZATION AND ADDITION**

500 REDPATH ST, KELSO, WA 98626

Date:	05/28/2021
Job No.:	21938.00
Drawn By:	TP
Checked by:	NRH
Revisions	
#	Date Description

LEVEL 0
OVERALL
FLOOR PLAN -
FIRE
PROTECTION

M500



LEVEL 1 - OVERALL FLOOR PLAN - FIRE PROTECTION

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

GENERAL NOTES:

- COMPLETE BUILDING SHALL BE FIRE SPRINKLERED PER NFPA 13 PER THE LOCAL AUTHORITY HAVING JURISDICTION, AND IN EXCESS OF THESE REQUIREMENTS AS INDICATED.
- PROVIDE WET PIPE TYPE SYSTEM SERVING ALL AREAS NOT SUBJECT TO FREEZING, AND DRY PIPE SYSTEM SERVING OTHER AREAS. DRY TYPE HEADS MAY BE USED OFF WET SYSTEM FOR LIMITED COVERAGE AREAS AND WHERE FREEZING OF WET PIPE IS NOT POSSIBLE.
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KEYED NOTES:

- PROVIDE COVERAGE WITH DRY PIPE SYSTEM.
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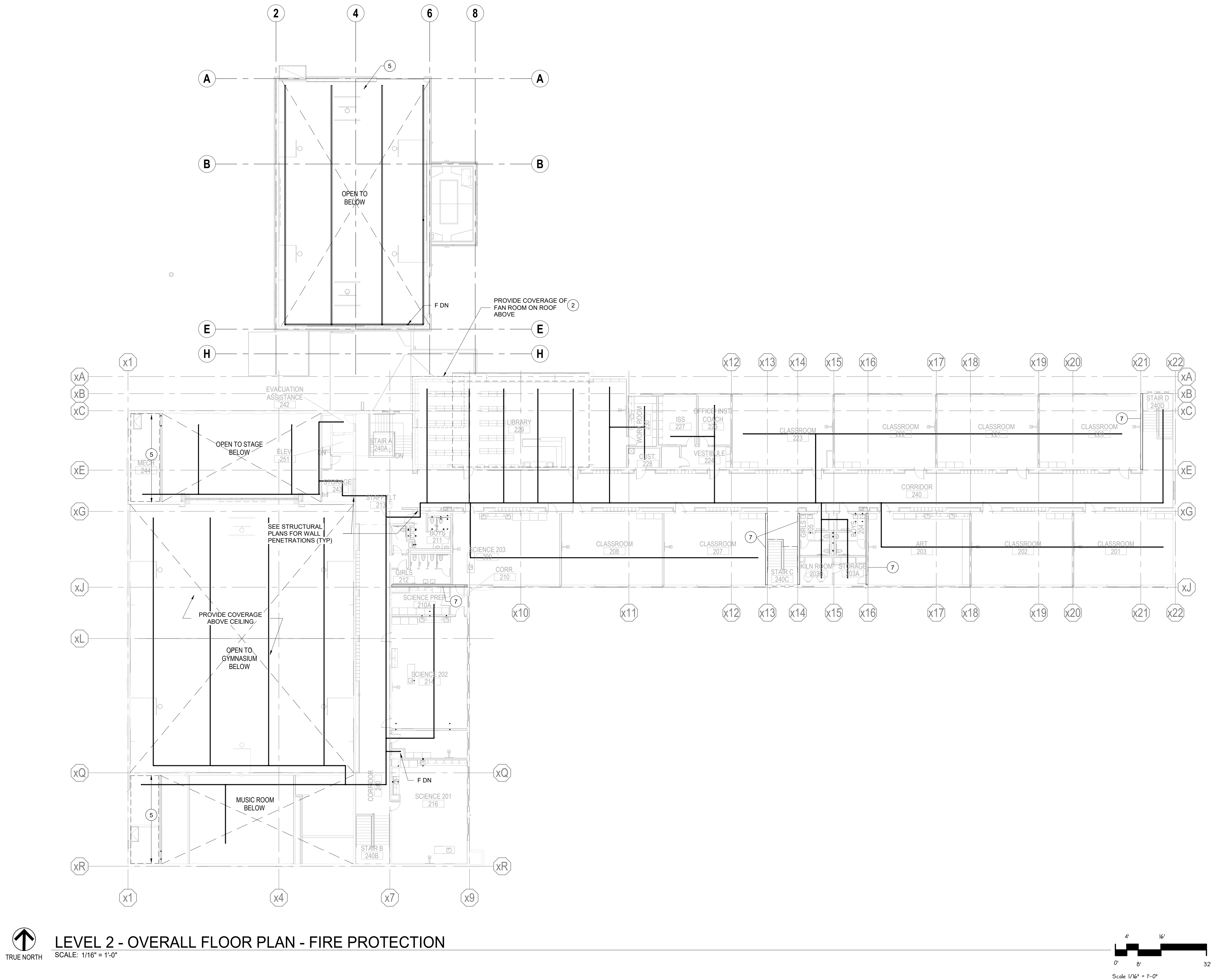
KELSO SCHOOL DISTRICT NO. 458
HUNTINGTON MIDDLE SCHOOL -
MODERNIZATION AND ADDITION

500 REDPATH ST, KELSO, WA 98626

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LEVEL 1
OVERALL
FLOOR PLAN -
FIRE
PROTECTION

M501



GENERAL NOTES:

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KELSO SCHOOL DISTRICT NO. 458
HUNTINGTON MIDDLE SCHOOL -
MODERNIZATION AND ADDITION

500 REDPATH ST, KELSO, WA 98626


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Checked by: NRH

Revisions	
#	Description

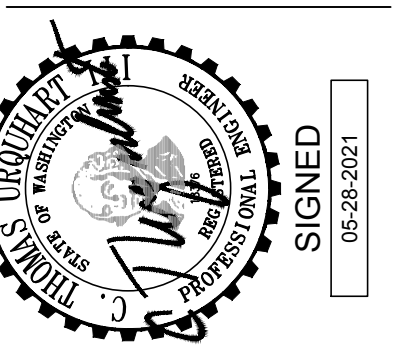
LEVEL 2
OVERALL
FLOOR PLAN -
FIRE
PROTECTION

M502

ABBREVIATIONS (SOME ABBREVIATIONS MAY NOT BE USED ON DRAWINGS)				ELECTRICAL SYMBOL LEGEND (SOME SYMBOLS MAY NOT BE USED ON DRAWINGS)				GENERAL ELECTRICAL NOTES:	
ABBREV	DESCRIPTION	ABBREV	DESCRIPTION	SYMBOL	DESCRIPTION	SYMBOL	DESCRIPTION	SYMBOL	DESCRIPTION
A or AMP	AMPERES	MH	MANHOLE		GENERAL BUBBLE NOTE TAG SYMBOL: # - IDENTIFYING NUMBER SCHEDULED EQUIPMENT CONNECTION (INCLUDE ALL WIRING, DISCONNECTING MEANS, CONTROL AND OTHER REQUIREMENTS SCHEDULED) DETAIL SYMBOL: # - IDENTIFYING NUMBER B - SHEET WHERE DETAIL TAKEN C - SHEET WHERE DETAIL SHOWN	 SUBSCRIPT: WH WATER HEATER HD HAND DRYER WC WATER COOLER	AUDIO VISUAL AV SYSTEM ENCLOSURE AV SYSTEM INPUT STATION PROJECTOR AV PLATE AV SYSTEM SELECTOR STATION AV FLOOR BOX FIRE RATED SIGNAL FLUSH SERVICE POKE THRU SYSTEM FLOOR BOX, AV PUBLIC ADDRESS SYSTEM SPEAKER	 AV 	
AC	ALTERNATING CURRENT	MIN	MINIMUM		REVISION CALLOUT		PANELBOARD - NEW PANELBOARD - EXISTING		 INTERCOM / CLOCK COMBINATION DIGITAL CLOCK & SPEAKER INTERCOM SPEAKER INTERCOM CALL SWITCH VOLUME CONTROL
A/C	AIR CONDITIONING	MLO	MAIN LUGS ONLY		FLAG NOTE		SWITCHBOARD OR MCC (DRAWN TO SCALE) MAGNETIC MOTOR STARTER OR OTHER MOTOR CONTROL DEVICE AS SCHEDULED COMBINATION STARTER AND FUSED DISCONNECT FUSED DISCONNECT DRY TYPE TRANSFORMER		
AIC	AMPERE INTERRUPTING CAPACITY	MOP, MOCP	MAXIMUM OVERCURRENT PROTECTION		SCHEDULED CONDUIT CALLOUT		INGROUND HANDHOLE OR VAULT: P - POWER, S - SIGNAL, TYPE 1, 2, 3 ... PER DETAIL		
AL	ALUMINUM	MTD	MOUNTED	 	LIGHTING LIGHTING OUTLET - CEILING LUMINAIRE (LENGTH TO SCALE ON DRAWINGS) LUMINAIRE (TO SCALE ON DRAWINGS) SURFACE FIXTURE - ROUND SURFACE FIXTURE - WALL RECESSED FIXTURE - ROUND EXIT FIXTURE - CEILING EXIT FIXTURE - WALL EXIT FIXTURE WITH DIRECTION ARROWS EMERGENCY FIXTURE - TWIN HEAD COMBINATION EXIT SIGN AND TWIN HEAD EMERGENCY LIGHTING UNIT LIGHT FIXTURE ON EMERGENCY LIGHTING CIRCUIT (INVERTER)	 			



117 SOUTH MAIN STREET, SUITE 100, SEATTLE, WA 98104
TELEPHONE (206) 462-3157 FAX (206) 462-3158



SIGNED 02/26/2021

HULTZ BHU
engineers inc

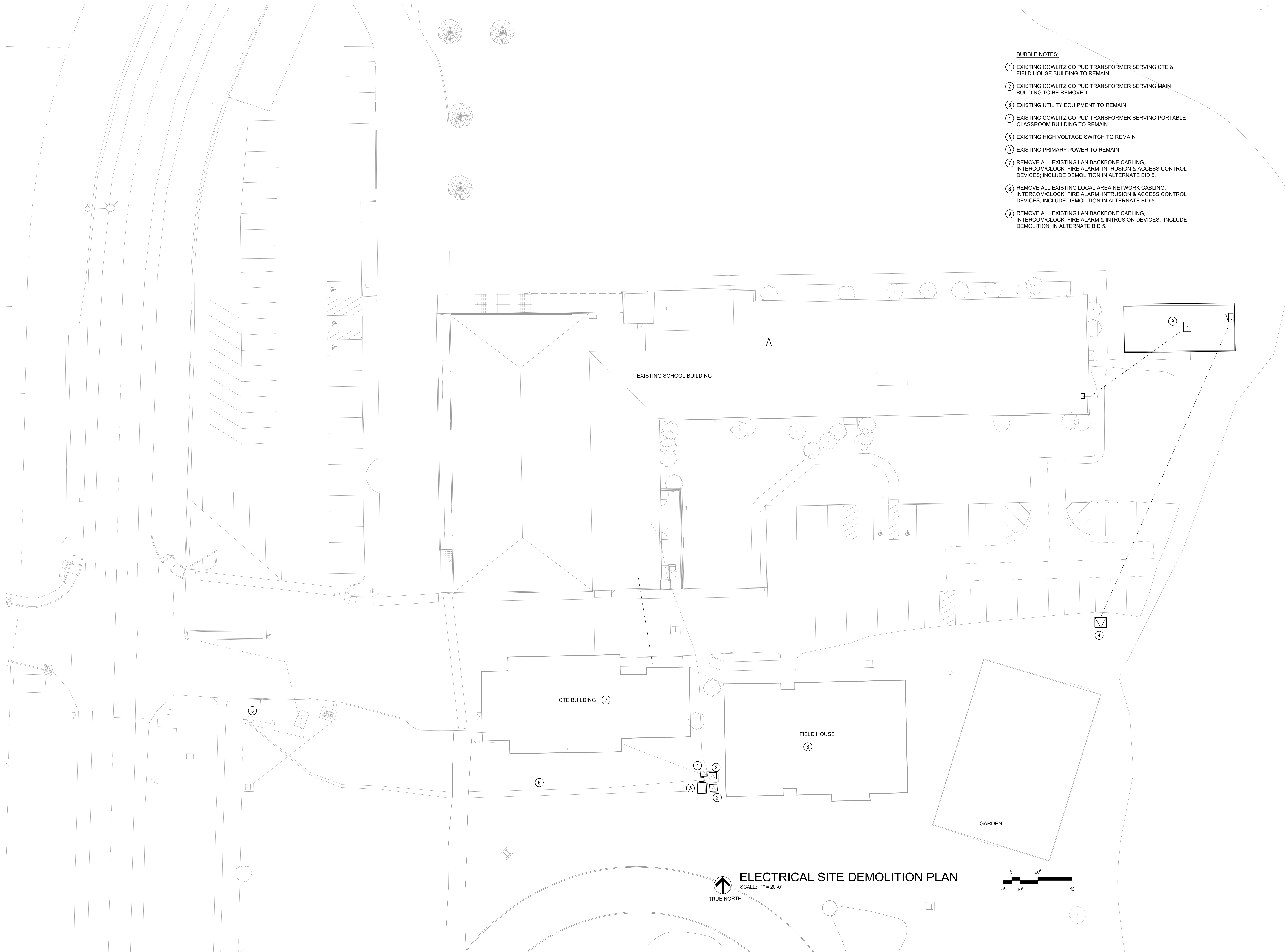
1111 Fremont Ave Suite 100
Tacoma, WA 98402
Phone: (253) 383-3257 Fax: (253) 383-3257
general@hultzbhu.com

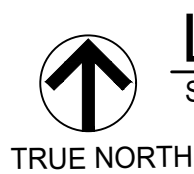
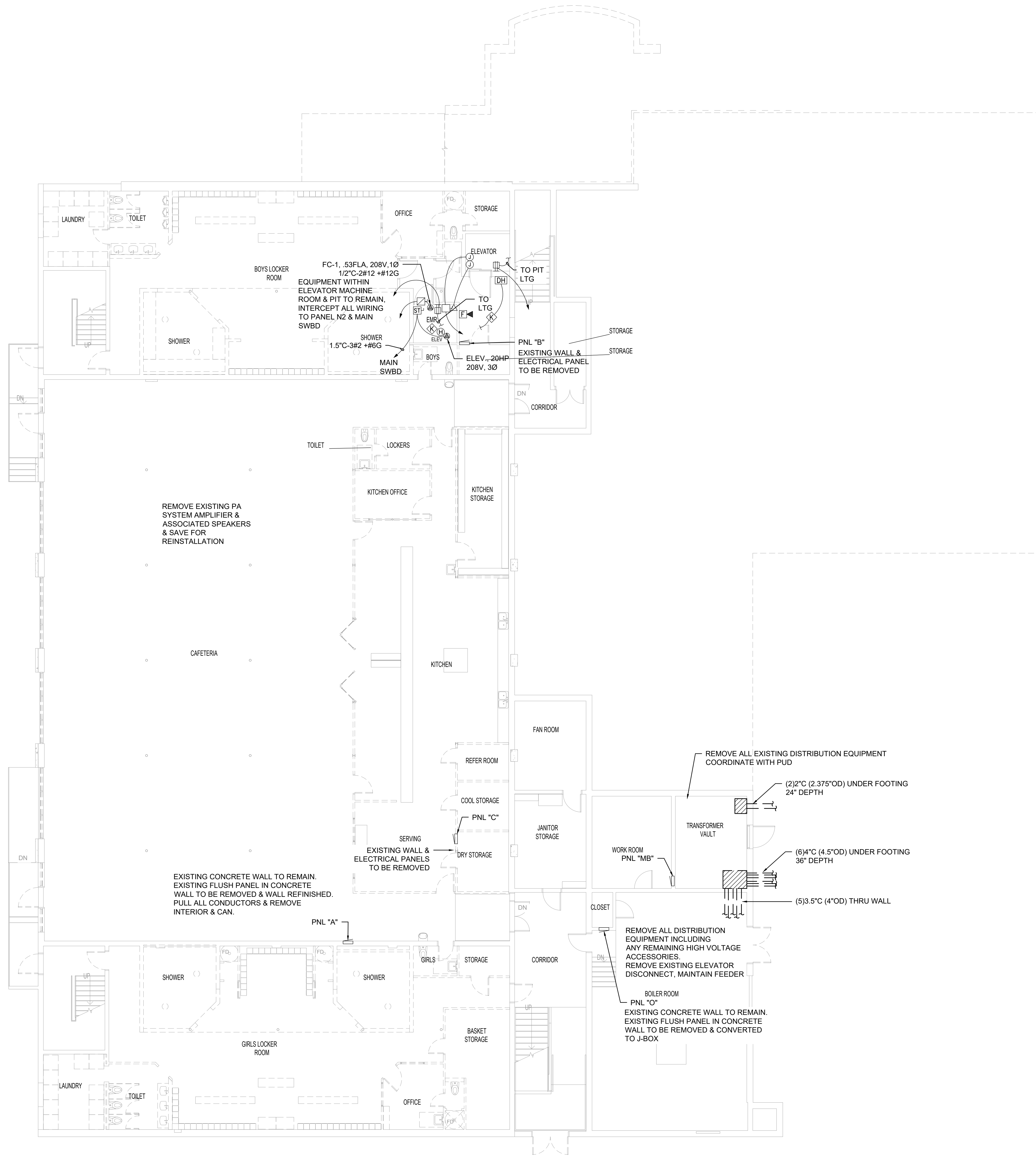
KELSO SCHOOL DISTRICT NO. 458
HUNTINGTON MIDDLE SCHOOL -
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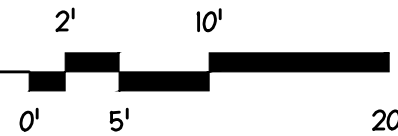
ELECTRICAL
ABBREVIATIONS,
LEGEND & NOTES





LEVEL 0 - AREA A - DEMOLITION PLAN

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



ELECTRICAL DEMOLITION NOTES:

REMOVE ALL EXISTING ELECTRICAL DISTRIBUTION EQUIPMENT WITHIN MAIN BUILDING EXCEPT EQUIPMENT SERVING THE ELEVATOR MACHINE & ELEVATOR MACHINE ROOM.

REMOVE ALL LIGHT FIXTURES, WIRING DEVICES & LOW VOLTAGE SYSTEMS WITHIN MAIN BUILDING.

WITHIN CTE, FIELD HOUSE & DOUBLE CLASSROOM PORTABLE, REMOVE FIRE ALARM, INTERCOM/CLOCK, ACCESS CONTROL & INTRUSION ALARM DEVICES.

PULL SIGNAL BACKBONE CABLING SERVING CTE, FIELD HOUSE & DOUBLE CLASSROOM PORTABLE.

MAINTAIN CONDUITS TO CTE, FIELD HOUSE, FIELD & DOUBLE CLASSROOM PORTABLE.

COORDINATE WITH UTILITIES TO PROTECT & MODIFY EXISTING DISTRICT-WIDE FIBER SERVICE, TELEPHONE SERVICE & POWER SERVICE.

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LEVEL 0 -
ELECTRICAL
DEMOLITION
PLANS

ED100

117 SOUTH MAIN STREET, SUITE 100, SEATTLE, WA 98104
TELEPHONE: (206) 462-7157 FAX: (206) 462-7158

SIGNED
05/28/2021

HULTZ & BHU
engineers inc
1111 Everett Ave Suite 100 Tacoma, WA 98402
Phone: (253) 383-3257 Fax: (253) 383-3283
general@hultzbhu.com Job Number: 20-038

ELECTRICAL DEMOLITION NOTES:

REMOVE ALL EXISTING ELECTRICAL DISTRIBUTION EQUIPMENT WITHIN MAIN BUILDING EXCEPT EQUIPMENT SERVING THE ELEVATOR MACHINE & ELEVATOR MACHINE ROOM.

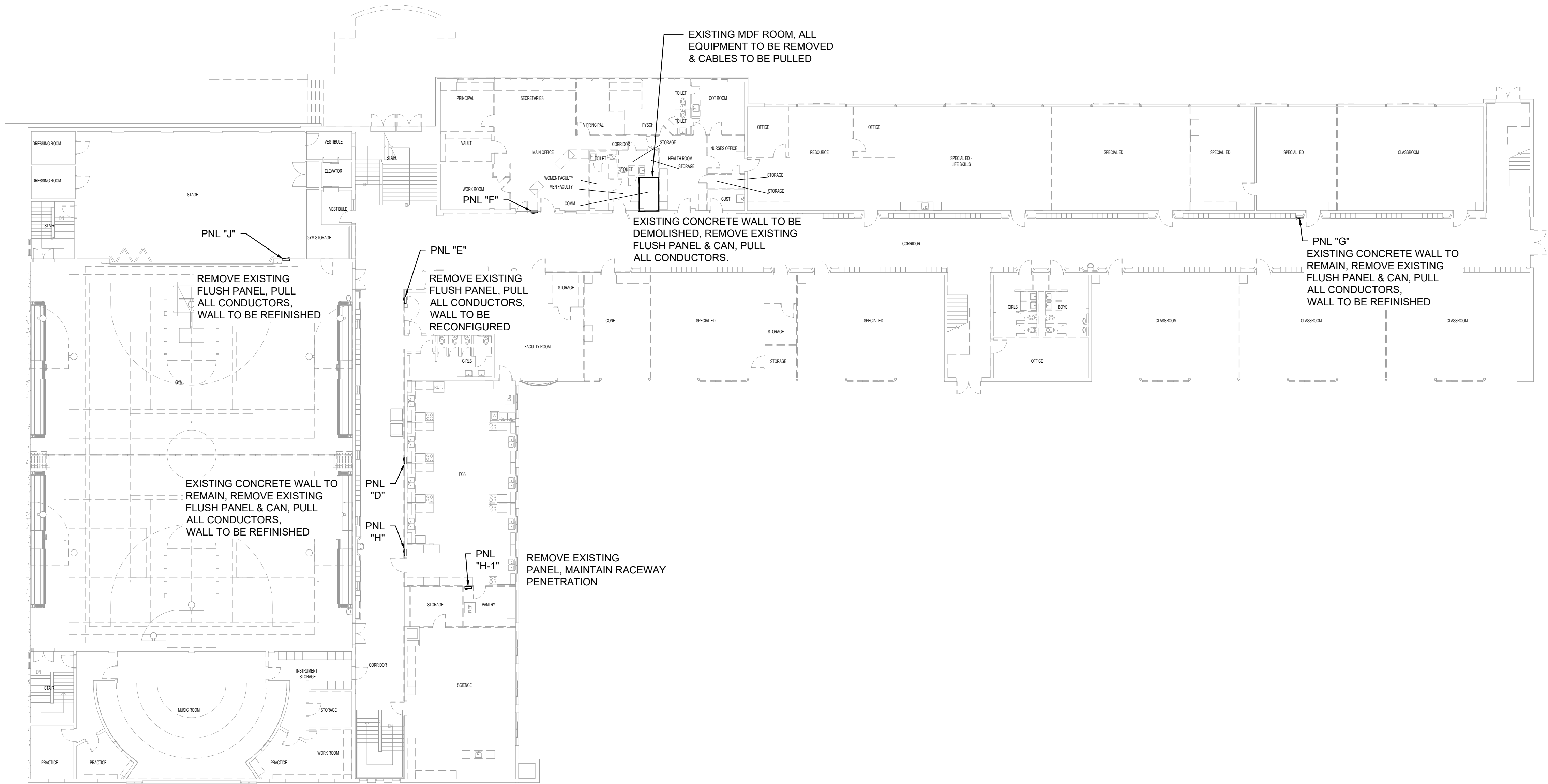
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LEVEL 1 - ELECTRICAL DEMOLITION PLAN
SCALE: 1/16" = 1'-0"
TRUE NORTH

integrus
ARCHITECTURE

HULTIZ BHU
engineers inc
1111 Fremont Ave Suite 100 Tacoma, WA 98402
Phone: (253) 383-3257 Fax: (253) 383-3253
general@hultzbhu.com Job Number: 20-038

SIGNED
05/28/2021

KELSO SCHOOL DISTRICT NO. 458
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MODERNIZATION AND ADDITION
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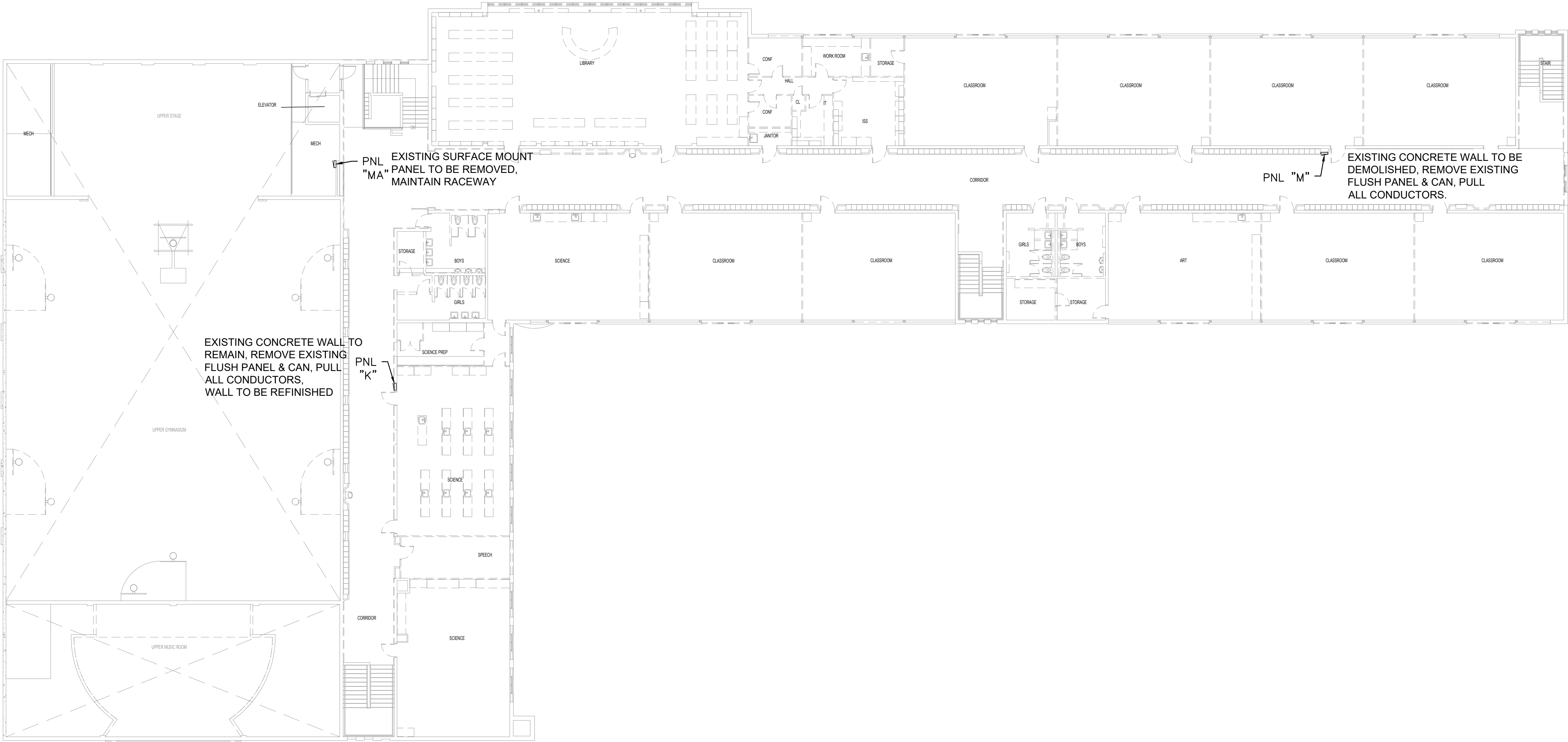
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#	Date Description

LEVEL 1 -
ELECTRICAL
DEMOLITION
PLAN

ED101

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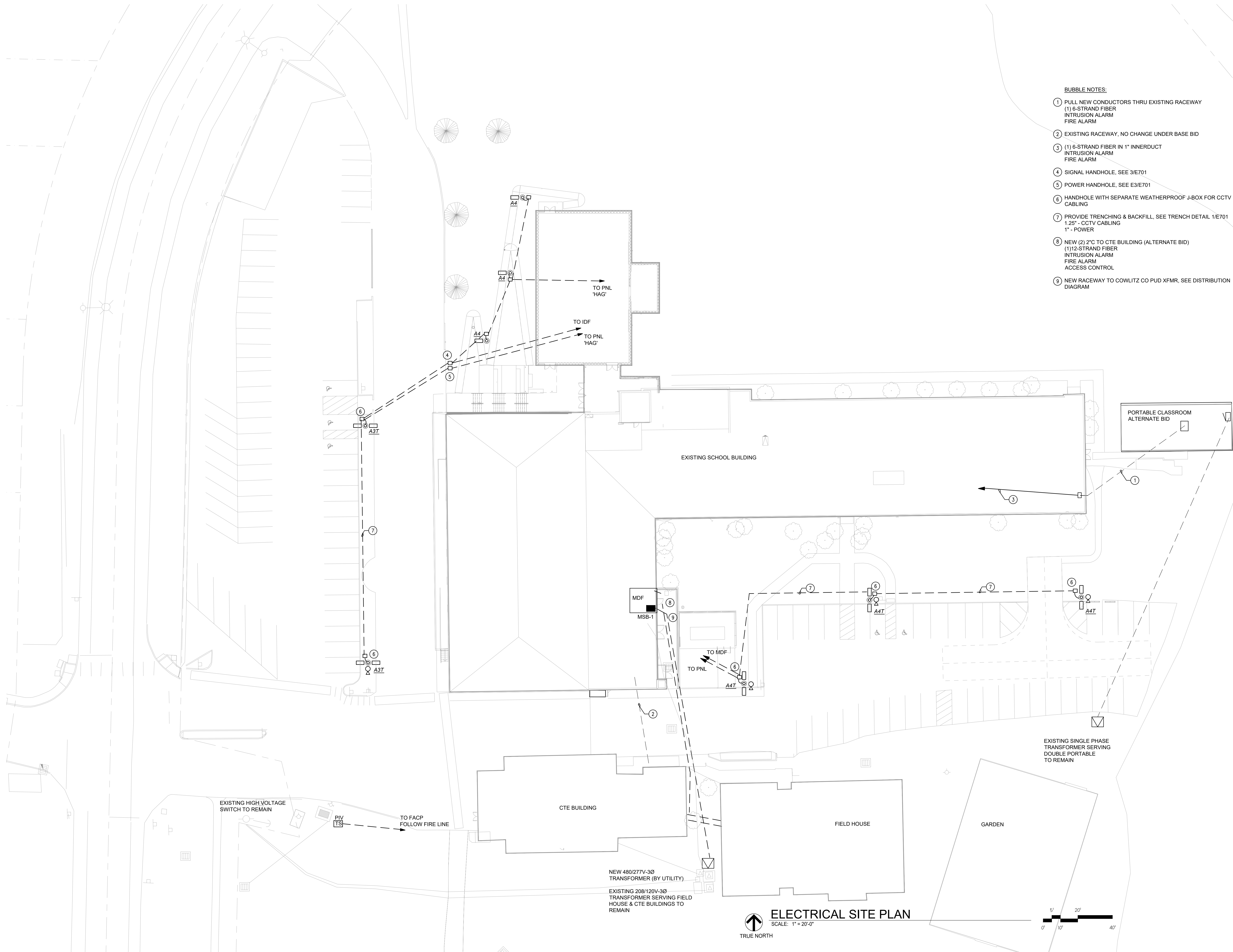
 **LEVEL 2 - ELECTRICAL DEMOLITION PLAN**
SCALE: 1/16" = 1'-0"
0' 4' 8' 16' 32'

**KELSO SCHOOL DISTRICT NO. 458
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LEVEL 2 -
ELECTRICAL
DEMOLITION
PLAN

ED102




- BUBBLE NOTES:**
- 1 PULL NEW CONDUCTORS THRU EXISTING RACEWAY
(1) 6-STRAND FIBER
INTRUSION ALARM
FIRE ALARM
 - 2 EXISTING RACEWAY, NO CHANGE UNDER BASE BID
 - 3 (1) 6-STRAND FIBER IN 1" INNERDUCT
INTRUSION ALARM
FIRE ALARM
 - 4 SIGNAL HANDHOLE, SEE 3/E701
 - 5 POWER HANDHOLE, SEE E3/E701
 - 6 HANDHOLE WITH SEPARATE WEATHERPROOF J-BOX FOR CCTV
CABLING
 - 7 PROVIDE TRENCHING & BACKFILL, SEE TRENCH DETAIL 1/E701
1.25" - CCTV CABLING
1" - POWER
 - 8 NEW (2) 2" C TO CTE BUILDING (ALTERNATE BID)
(1) 12-STRAND FIBER
INTRUSION ALARM
FIRE ALARM
ACCESS CONTROL
 - 9 NEW RACEWAY TO COWLITZ CO PUD XFMR, SEE DISTRIBUTION
DIAGRAM

**KELSO SCHOOL DISTRICT NO. 458
HUNTINGTON MIDDLE SCHOOL -
MODERNIZATION AND ADDITION**
500 REDPATH ST, KELSO, WA 98626


Date:	05.28.2021
Job No.:	21938.00
Drawn By:	BN
Checked by:	SH
Revisions	
#	Date Description

ELECTRICAL SITE
PLAN

E100

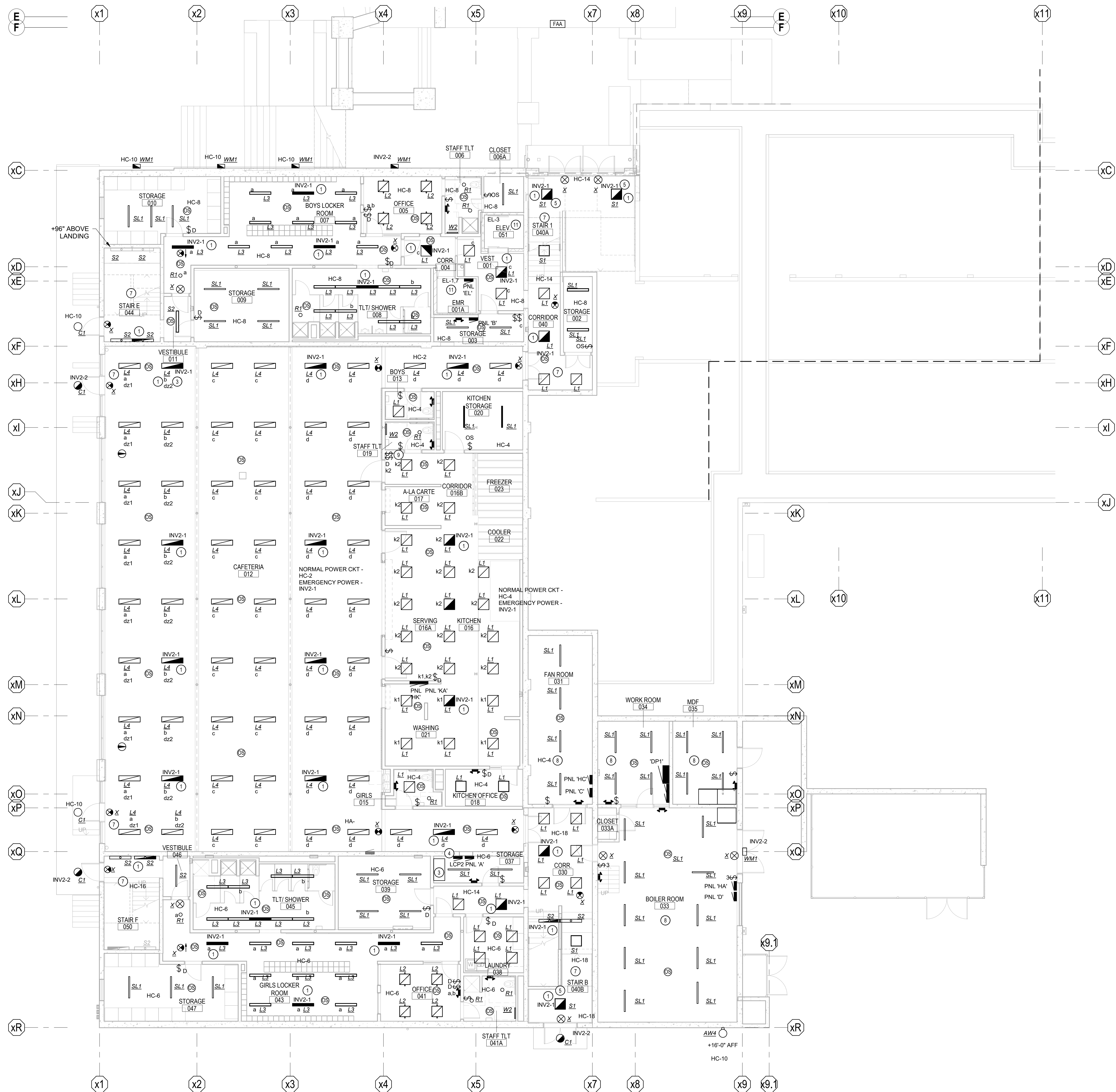


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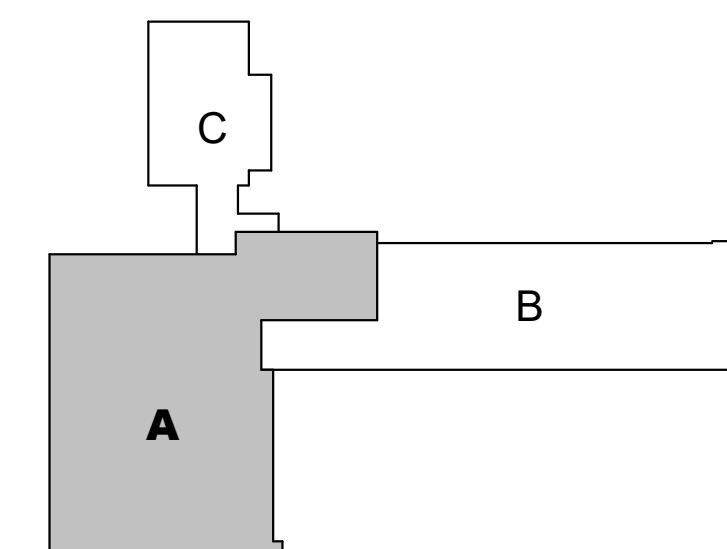
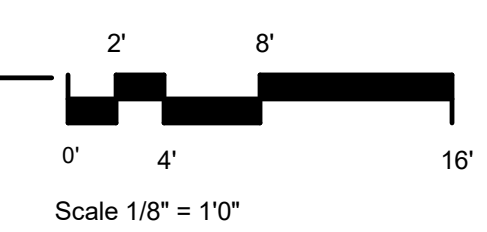
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05/28/2021



- BUBBLE NOTES**
- 1 PROVIDE EMERGENCY TRANSFER DEVICE FOR CONTROLLED FIXTURE SERVED BY INVERTER CIRCUIT (1) DEVICE PER CONTROL ZONE, SEE WIRING DIAGRAM 3/E601
 - 2 LIGHTING CONTROL STATION MOUNTED IN SMR BOX WITH WIREMOLD TO ACCESSIBLE CEILING
 - 3 LIGHTING INVERTER INV2, 277V, 8 KW, CIRCUIT HC-36, 3/4" - 2#8-#10G, WITH (5) OUTPUT CIRCUIT BREAKERS, MAXIMUM FOOTPRINT = 48"W X 25"D
 - 4 LIGHTING CONTROL PANEL
 - 5 CONCRETE CEILING, INSTALL NEW SURFACE MOUNT FIXTURE OVER EXISTING CAST HOUSING
 - 6 INTERCEPT EXISTING RACEWAY & PROVIDE NEW HOMERUN
 - 7 CONCRETE CONSTRUCTION, UTILIZE SMR FOR NEW WIRING
 - 8 UTILIZE EMT FOR NEW WIRING
 - 9 CAFETERIA LIGHTING CONTROL STATION
 - 10 CORRIDOR LIGHTING CONTROL STATION
 - 11 INTERCEPT EXISTING ELEVATOR CAB, ELEVATOR PIT & ELEVATOR MACHINE ROOM LIGHTING CIRCUITS & EXTEND TO NEW PNL 'EL'



LEVEL 0 BUILDING 1 - AREA A - LIGHTING
SCALE: 1/8" = 1'-0"



**KELSO SCHOOL DISTRICT NO. 458
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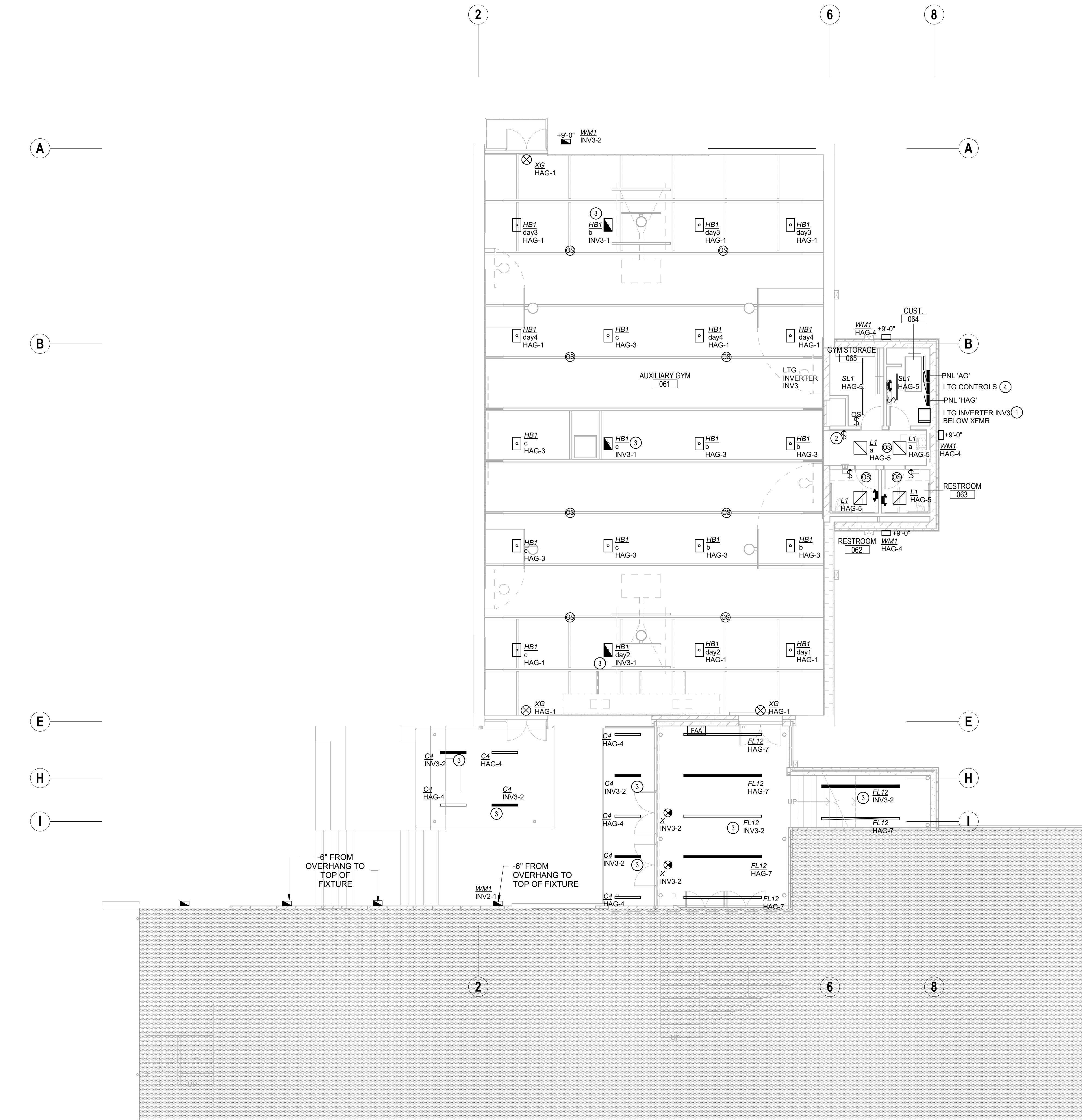
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#	Date Description

LEVEL 0
BUILDING 1 -
AREA A -
LIGHTING PLAN

E200A

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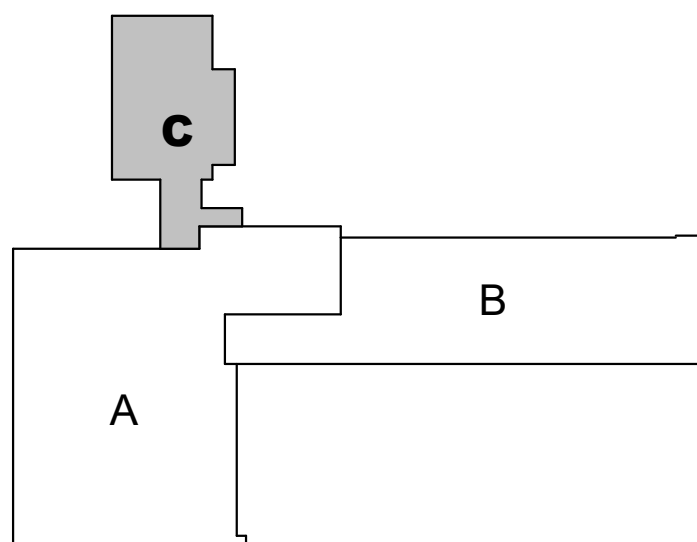
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LEVEL 0 BUILDING 1 - AREA C - LIGHTING
SCALE: 1/8" = 1'-0"

- BUBBLE NOTES**
- 1 LIGHTING INVERTER INV3 - 1.5KW, 277V VOLT, (3) OUTPUT CIRCUIT BREAKERS, CKT HAG-24, MAXIMUM FOOTPRINT = 25"W X 13"D
 - 2 GYM LIGHTING CONTROL STATION WITH MANUAL ON/OFF/RAISE/LOWER CONTROLS FOR ZONES
day1 - PRIMARY DAYLIGHT ZONE - EAST WINDOW
day2 - SECONDARY DAYLIGHT ZONE - EAST WINDOW
day3 - PRIMARY DAYLIGHT ZONE - NORTH WINDOWS
day4 - SECONDARY DAYLIGHT ZONE - NORTH WINDOWS
a - HALL
 - 3 PROVIDE EMERGENCY TRANSFER DEVICE FOR CONTROLLED FIXTURE SERVED BY INVERTER CIRCUIT [(1) DEVICE PER CONTROL ZONE]. SEE WIRING DIAGRAM 3/E601
 - 4 LIGHTING CONTROL PANEL - RELAYS FOR CONTROL OF EXTERIOR LIGHTS WITH INTEGRAL ASTRONOMIC TIMECLOCK

0' 4' 8' 16'
Scale 1/8" = 1'-0"



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Drawn By:	SJH/BN
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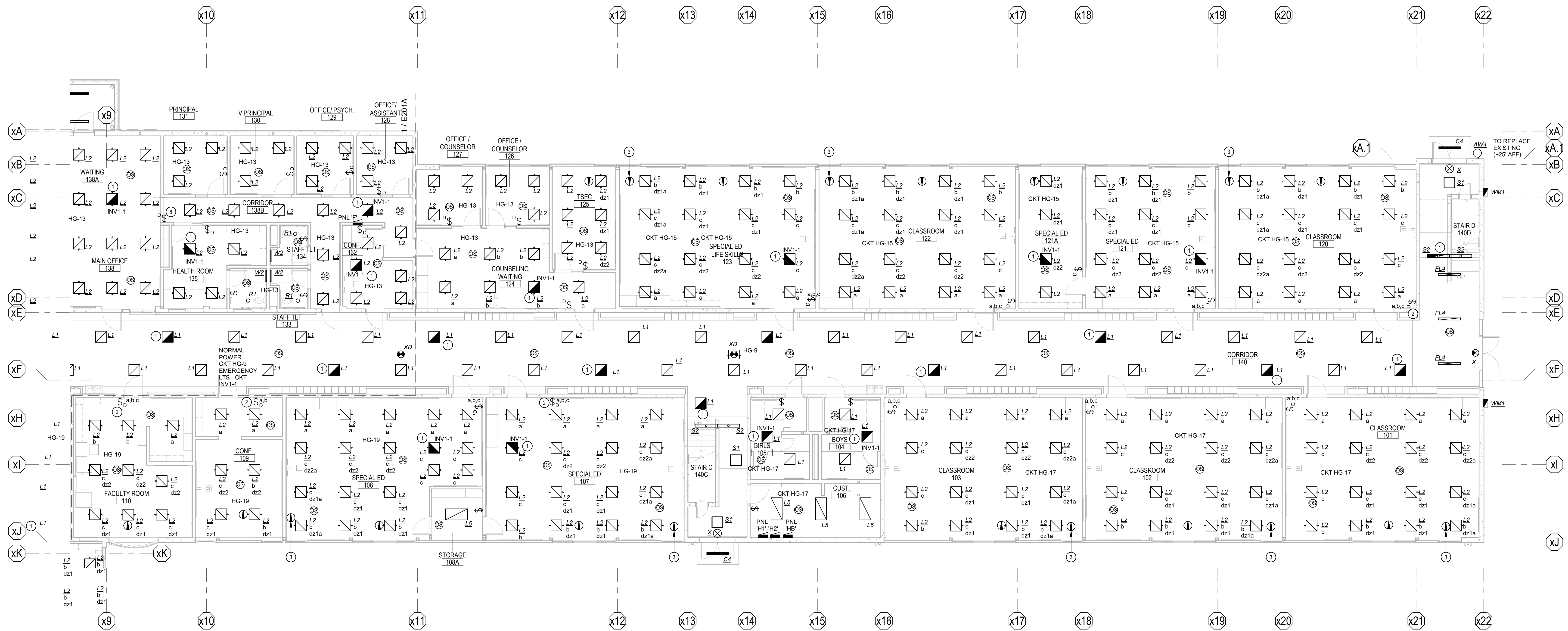
LEVEL 0
BUILDING 1 -
AREA C -
LIGHTING

E200C

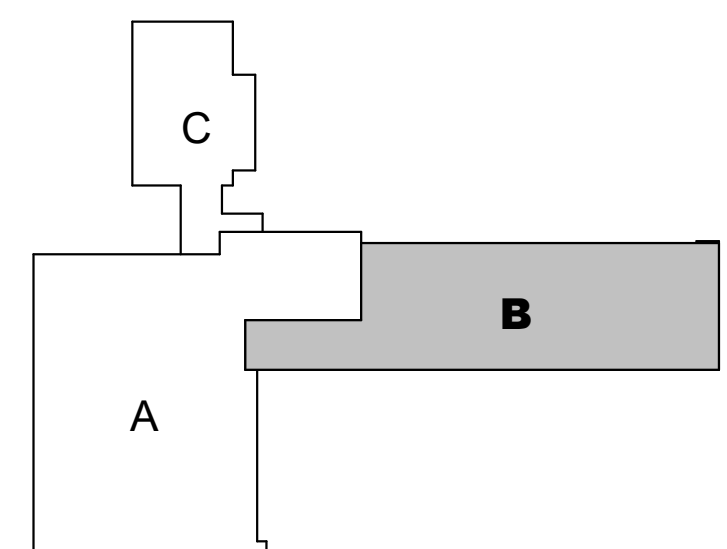
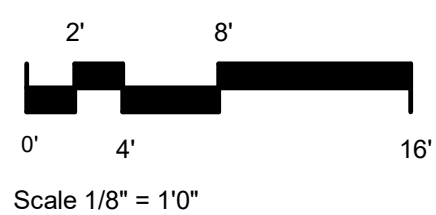
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LEVEL 1 BUILDING 1 - AREA B - LIGHTING
SCALE: 1/8" = 1'-0"



BUBBLE NOTES

- 1 PROVIDE EMERGENCY TRANSFER DEVICE FOR CONTROLLED FIXTURE SERVED BY INVERTER CIRCUIT (1) DEVICE PER CONTROL ZONE. SEE WIRING DIAGRAM 3/E601
- 2 CONTROL STATION MOUNTED IN SMR BOX WITH WIREMOLD TO ACCESSIBLE CEILING
- 3 PROVIDE ADDITIONAL PHOTOSENSOR & AUTOMATIC DIMMING CONTROL FOR PRIMARY & SECONDARY DAYLIGHT ZONES CREATED BY ALTERNATE BID 1 EXTERIOR WINDOW (dz1a & dz2a)

KELSO SCHOOL DISTRICT NO. 458 HUNTINGTON MIDDLE SCHOOL - MODERNIZATION AND ADDITION

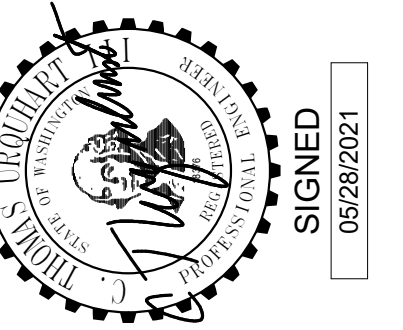
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LEVEL 1
BUILDING 1 -
AREA B -
LIGHTING

E201B

- ① PROVIDE EMERGENCY TRANSFER DEVICE FOR CONTROLLED FIXTURE SERVED BY INVERTER CIRCUIT [(1) DEVICE PER CONTROL ZONE]. SEE WIRING DIAGRAM 3/E01
- ② CONTROL STATION MOUNTED IN SMR BOX WITH WIREMOLD TO ACCESSIBLE CEILING
- ③ PROVIDE ADDITIONAL PHOTOSENSOR & AUTOMATIC DIMMING CONTROL FOR PRIMARY & SECONDARY DAYLIGHT ZONES CREATED BY ALTERNATE BID 1 EXTERIOR WINDOW (d21a & d22a)
- ④ KILN IN USE LIGHT. INTERTIE TO KILN CONTACTORS.



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**KELSO SCHOOL DISTRICT NO. 458
HUNTINGTON MIDDLE SCHOOL -
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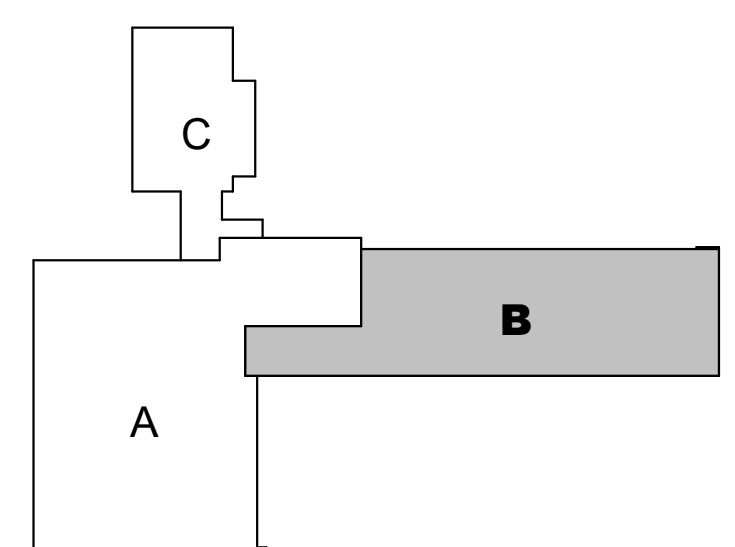
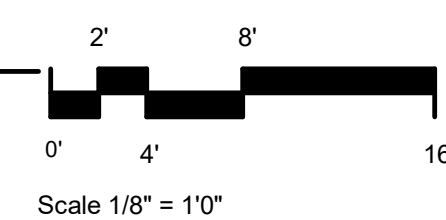
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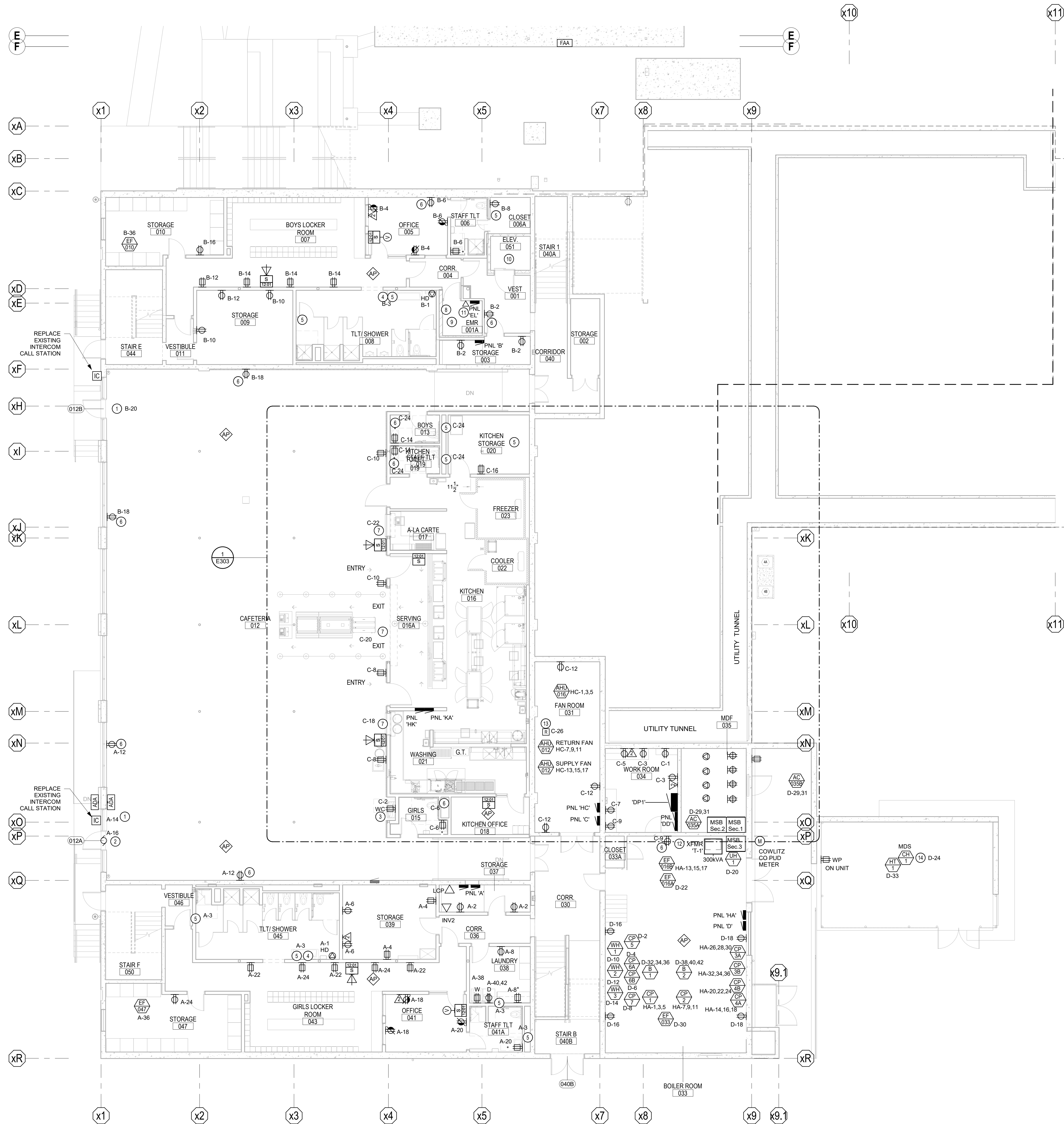
LEVEL 2
BUILDING 1 -
AREA B -
LIGHTING

E202B



LEVEL 2 BUILDING 1 - AREA B - LIGHTING
SCALE: 1/8" = 1'-0"





GENERAL NOTES

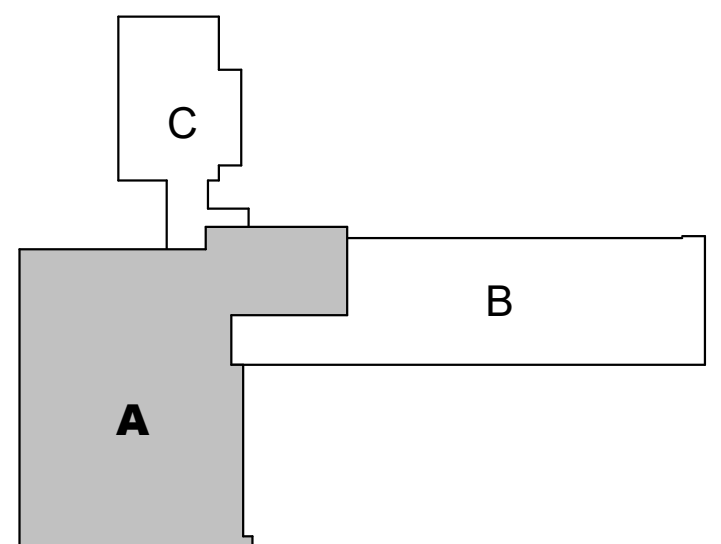
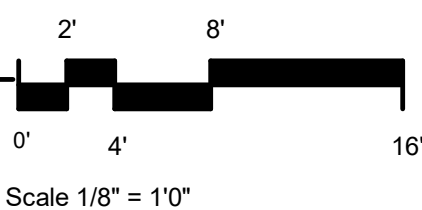
1. SEE SHEETS E100, E400, E401, E402 & E403 FOR CCTV CAMERA LOCATIONS. PROVIDE CAT 6 CABLE FOR EACH LOCATION. PROVIDE EXTENDERS WHERE CABLE DISTANCE EXCEEDS 90M.

BUBBLE NOTES

- 1 ACCESS CONTROL POWER SUPPLY
- 2 ADA OPERATOR, PROVIDE POWER & CONTROL WIRING PER SHOP DRAWINGS.
- 3 WATER COOLER RECEPTACLE WITH GFCI CIRCUIT BREAKER, VERIFY LOCATION.
- 4 PLUMBING SENSOR 120V POWER, VERIFY TRANSFORMER LOCATION.
- 5 TRAP PRIMER 120V POWER, VERIFY LOCATION.
- 6 EXISTING RECEPTACLE LOCATION IN CONCRETE WALL, PROVIDE NEW SURFACE BOX & HOMERUN.
- 7 MOTORIZED SHUTTER CONNECTION, PROVIDE POWER & CONTROL WIRING TO OPERATOR LOCATION(S) PER MANUFACTURER'S SHOP DRAWING.
- 8 EXISTING ELEVATOR SHUNT TRIP TO REMAIN
- 9 INTERCEPT EXISTING ELEVATOR MACHINE ROOM CIRCUITS & EXTEND TO NEW PANEL 'EL', SEE PANEL SCHEDULE.
- 10 INTERCEPT EXISTING ELEVATOR PIT CIRCUITS & EXTEND TO NEW PANEL 'EL', SEE PANEL SCHEDULE.
- 11 NEW ANALOG TELEPHONE CONNECTION, PROVIDE CAT 5 TO TERMINAL BOARD IN MDF ROOM.
- 12 INTERCEPT EXISTING ELEVATOR FEEDER, REMOVE FUSED DISCONNECT & EXTEND TO NEW DISTRIBUTION PANEL 'DP1'
- 13 FAN SHUT DOWN RELAY
- 14 PROVIDE 120V CIRCUIT FOR CHILLER 'CH-1' SOUND PACKAGE.



LEVEL 0 - AREA A BUILDING 1 - POWER & SYSTEMS
SCALE: 1/8" = 1'-0"

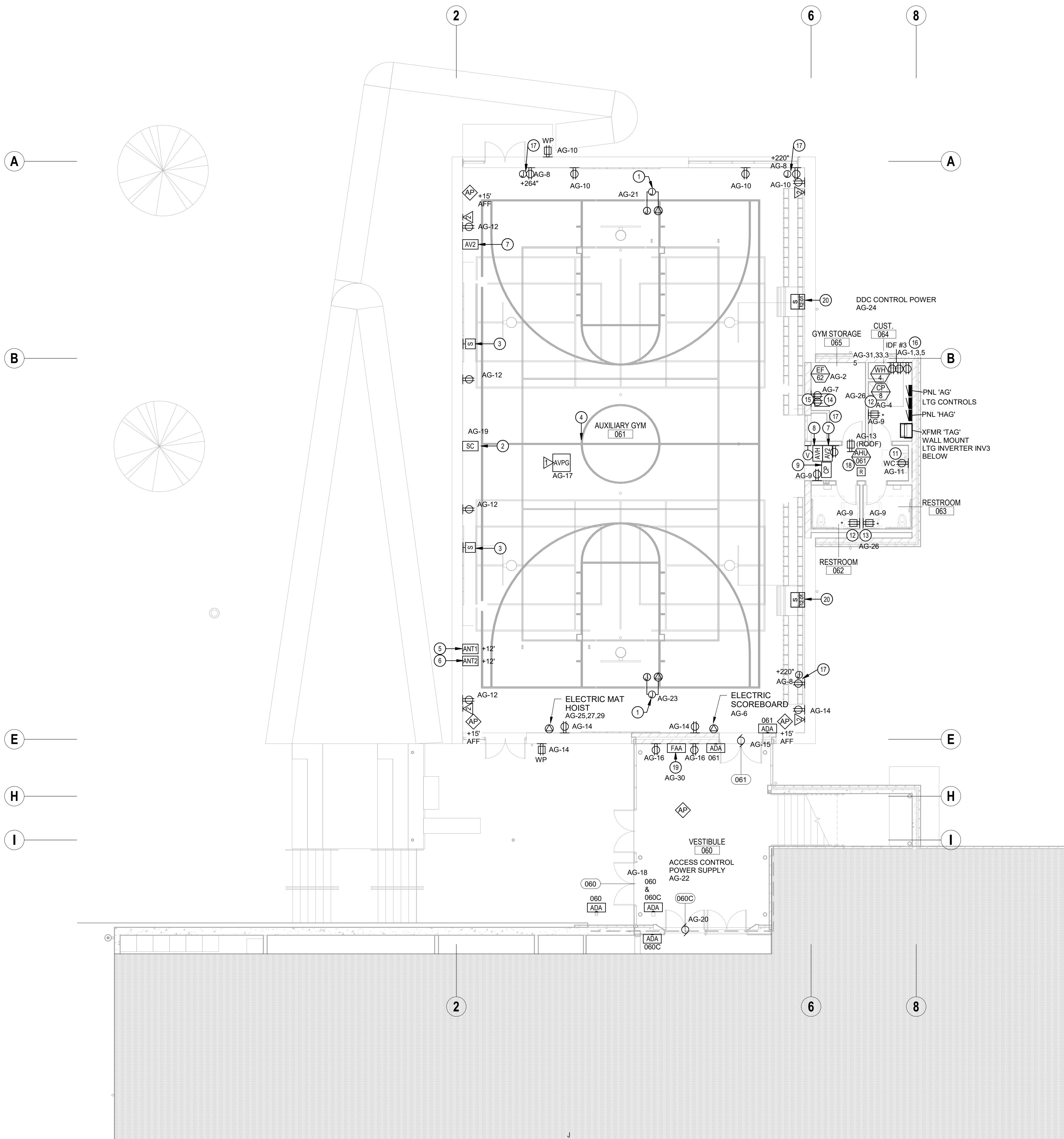


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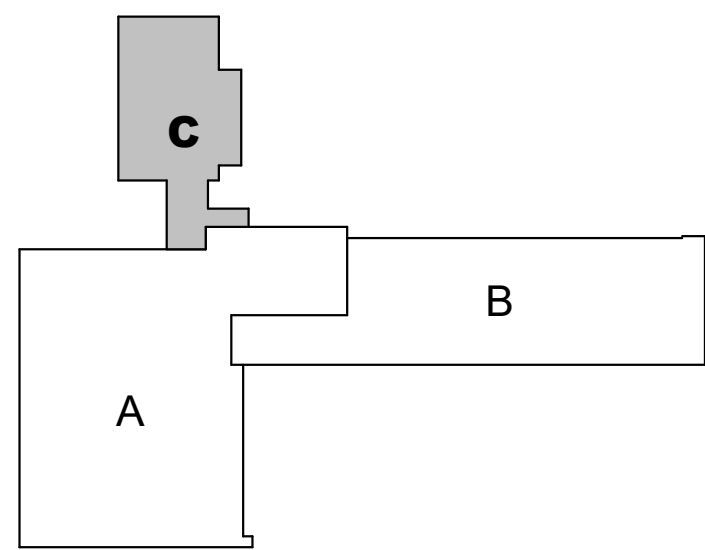
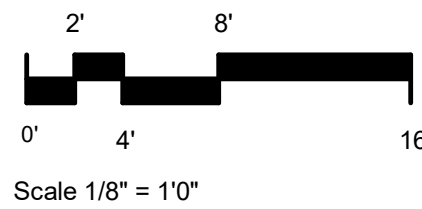
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LEVEL 0
BUILDING 1 -
AREA A -
POWER &
SYSTEMS

E300A



LEVEL 0 BUILDING 1 - AREA C - POWER & SYSTEMS
SCALE: 1/8" = 1'-0"



GENERAL NOTES

1. SEE SHEETS E100, E400, E401, E402 & E403 FOR CCTV CAMERA LOCATIONS. PROVIDE CAT 6 CABLE FOR EACH LOCATION. PROVIDE EXTENDERS WHERE CABLE DISTANCE EXCEEDS 90M.

BUBBLE NOTES:


1. PROVIDE TWO (2) 120V, 20A CIRCUITS TO EACH CONTROL PANEL. LOCATE CONTROL PANEL ACCORDING TO MANUFACTURERS INSTRUCTIONS. REFER TO MANUFACTURERS INSTALLATION DOCUMENTS FOR ADDITIONAL REQUIREMENTS.
2. MOTORIZED PROJECTION SCREEN CONTROLLER. PROVIDE (1) 3/4" WITH (1) CAT6A CABLE TO AV RACK LOCATED WITHIN GYM STORAGE 065.
3. SPEAKER PLATE. PROVIDE (2) 12/2 SPEAKER CABLE TO AV RACK LOCATED WITHIN SOTRAGE 065. VERIFY MOUNTING HEIGHT OF SPEAKERS WITH ARCHITECT/OWNER.
4. PROJECTOR AND LIFT: CEILING MOUNT PROJECTOR WITH SCISSOR LIFT MOUNT. PROVIDE (1) 1" C AND (1) CAT6A CABLE TO AV RACK IN STORAGE 065.
5. ANT1: WIRELESS MICROPHONE ANTENNA. PROVIDE (2) RG58 FOR MIC. MOUNT AT +12'-0" AFF.
6. ANT2: ASSISTED LISTENING SYSTEM ANTENNA. PROVIDE PROTECTIVE CAGE FOR TRANSMITTER. PROVIDE (1) RG58.
7. AV2: COMBINATION HDMI INPUT PLATE. PROVIDE (1) 1" C WITH (2) 22/2 MIC AND AUXILIARY TO AV RACK IN ROOM 065.
8. AVH: HDMI INPUT PLATE. PROVIDE (1) 1" C WITH (1) SHIELDED CAT6A CABLE TO AV RACK IN ROOM 065.
9. CP: SOUND SYSTEM CONTROL PANEL. PROVIDE (1) 1" C WITH (1) CAT6A TO AV RACK IN ROOM 065.
10. ACCESS CONTROL POWER SUPPLY. VERIFY LOCATION
11. WATER COOLER/BOTTLE FILLER OUTLET. VERIFY LOCATION
12. TRAP PRIMER POWER. VERIFY LOCATION
13. PLUMBING SENSOR 120V POWER CONNECTION. VERIFY LOCATION
14. AV EQUIPMENT RACK ON CASTERS, 24U WITH FULL VENT LOCKABLE DOOR. WITH MULTI-FORMAT PRESENTATION SYSTEM (SWITCHER, SCALER, MIC PREAMP, AUDIO DSP & CONTROLS), PROJECTOR RECEIVER & ROOM CONTROLLER WITH SCALER, AMPLIFIER, SIGNAL PROCESSOR, 27"D X 23"W, WITH 19" RACK RAILS & DRAWER FOR MICROPHONES. WITH SHELF ABOVE FOR ASSISTED LISTENING SYSTEM TRANSMITTER.
15. POWER, CONTROL & AV CABLEING & RACEWAY FOR AV COMPONENTS (PROJECTOR/LIFT, SCREEN, MICROPHONES, ALS & SPEAKERS) TO ROUTE TIGHT TO STRUCTURE & DOWN IN CMU WALL TO CEILING OF GYM STORAGE 065. PROVIDE (5) 1.5" C FOR LOW VOLTAGE CABLEING + POWER
16. IDF #3 - WALL MOUNT ENCLOSED CABINET. WITH FIBER PATCH PANEL, (1) 24-PORT CAT 6A PATCH PANEL (STATIONS & WAP - TERMINATE CAT 6 & CAT 6A ON 6A PATCH PANEL); (1) 24-PORT CAT 6 PATCH PANEL (CCTV), 12-PORT CCTV SWITCH, LIGHTNING PROTECTORS & UPS. PROVIDE POE INJECTORS FOR CCTV CABLEING TO SITE. SEE E100, E400 & E700
17. MOTORIZED SHADES - LOCATE CONTROL STATION IN HALL NEAR GYM STORAGE. PROVIDE 120V POWER FOR EACH MOTOR. PROVIDE CAT 5E CABLEING BETWEEN EACH MOTOR. WALL CONTROL STATION & CONTROLLER HEAD END PER MANUFACTURER'S SHOP DRAWING. LOCATE CONTROLLER HEAD END IN STORAGE 065.
18. POWER FROM SUB-FEED CIRCUIT BREAKER IN PNL 'HAG'. PROVIDE 120V POWER FOR FAN SHUT DOWN RELAY, CKT AG-28
19. FIRE ALARM REMOTE ANNUNCIATOR WITH FIRE FIGHTER HANDSET
20. PROVIDE SURFACE MOUNT HOUSING FOR INTERCOM/CLOCK. MOUNT CALL SWITCH IN SMR BOX WITH SINGLE PIECE WIREMOLD BETWEEN SPEAKER & CALL SWITCH.

KELSO SCHOOL DISTRICT NO. 458
HUNTINGTON MIDDLE SCHOOL -
MODERNIZATION AND ADDITION
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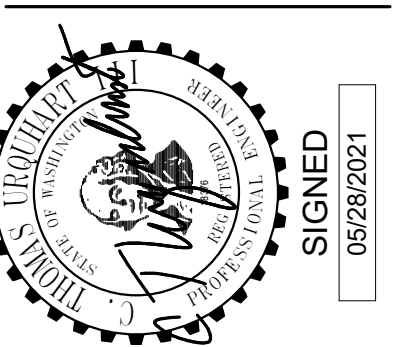
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LEVEL 0
BUILDING 1 -
AREA C -
POWER &
SYSTEMS

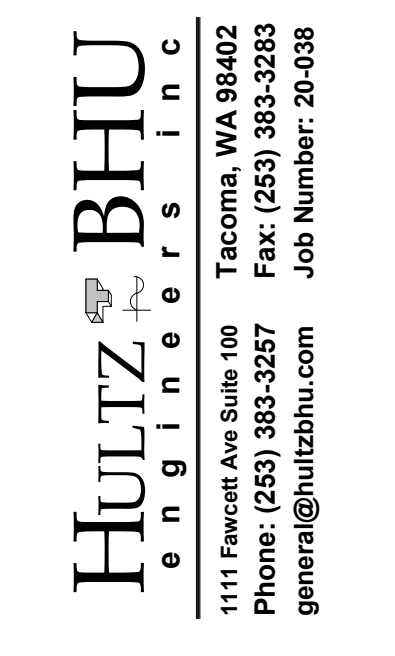
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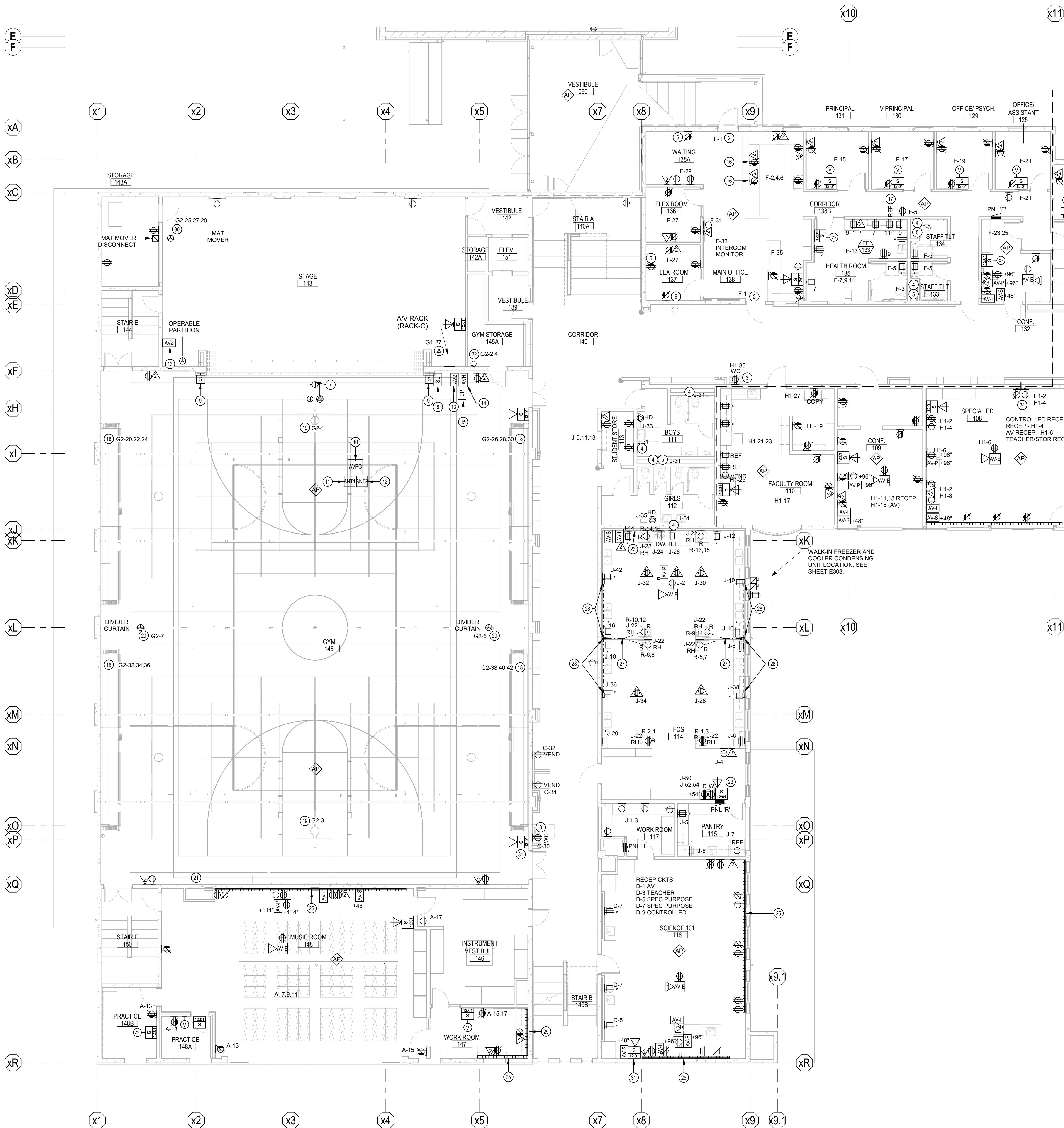
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GENERAL NOTES

- SEE SHEETS E100, E400, E401, E402 & E403 FOR CCTV CAMERA LOCATIONS. PROVIDE CAT 6 CABLE FOR EACH LOCATION. PROVIDE EXTENDERS WHERE CABLE DISTANCE EXCEEDS 90M.

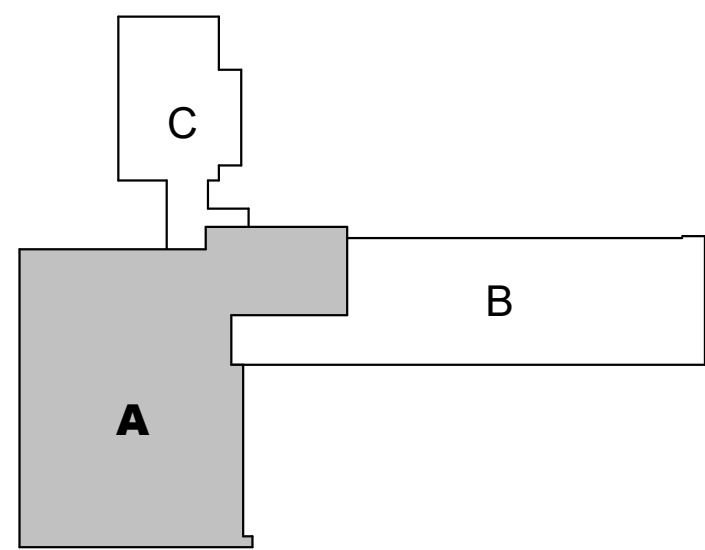
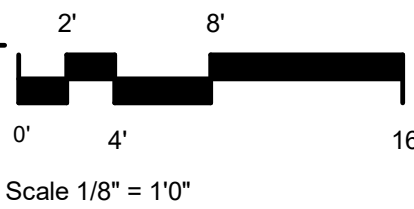
BUBBLE NOTES:

- PROVIDE 2-PIECE WIREMOLD 4000 UNDER ADDITIVE ALTERNATE. 25FT SECTION UNLESS NOTED OTHERWISE.
- ACCESS CONTROL POWER SUPPLY
- WATER COOLER RECEPTACLE WITH GFCI CIRCUIT BREAKER. VERIFY LOCATION.
- PLUMBING SENSOR 120V POWER. VERIFY TRANSFORMER LOCATION.
- TRAP PRIMER 120V POWER. VERIFY LOCATION.
- EXISTING RECEPTACLE LOCATION IN CONCRETE WALL, PROVIDE NEW SURFACE BOX & HOMERUN.
- PROVIDE TWO (2) 120V, 20A CIRCUITS TO EACH CONTROL PANEL. LOCATE CONTROL PANEL ACCORDING TO MANUFACTURERS INSTRUCTIONS. REFER TO MANUFACTURERS INSTALLATION DOCUMENTS FOR ADDITIONAL REQUIREMENTS.
- MOTORIZED PROJECTION SCREEN CONTROLLER. PROVIDE (1) 3/4" C WITH (1) CAT6A CABLE TO AV RACK LOCATED ON STAGE (ALT BID 4).
- SPEAKER PLATE: PROVIDE (2) 1/2" SPEAKER CABLE TO AV RACK LOCATED ON STAGE. VERIFY MOUNTING HEIGHT OF SPEAKERS WITH ARCHITECT/OWNER. (ALT BID 4)
- CEILING MOUNT PROJECTOR. PROVIDE (1) 1" C AND (1) CAT6A CABLE TO AV RACK ON STAGE (ALT BID 4).
- ANT1: WIRELESS MICROPHONE ANTENNA. PROVIDE (2) RG58 FOR MIC. MOUNT AT +12'-0" AFF (ALT BID 4).
- ANT2: ASSISTED LISTENING SYSTEM ANTENNA. PROVIDE PROTECTIVE CAGE FOR TRANSMITTER. PROVIDE (1) RG58 (ALT BID 4).
- AV2: COMBINATION HDMI INPUT PLATE. PROVIDE (1) 3/4" C WITH (2) 22/2 MIC AND AUXILIARY TO AV RACK ON STAGE (ALT BID 4).
- AVH: HDMI INPUT PLATE. PROVIDE (1) 3/4" C WITH (1) SHIELDED CAT6A CABLE TO AV RACK ON STAGE (ALT BID 4).
- CP: SOUND SYSTEM CONTROL PANEL. PROVIDE (1) 3/4" C WITH (1) CAT6A TO AV RACK ON STAGE (ALT BID 4).
- ROUTE POWER AND DATA THRU CASEWORK. COORDINATE WITH CASEWORK CONTRACTOR.
- LOCATE REMOTE RESET FOR UNDERCOUNTER GFI REFRIGERATOR RECEPTACLE IN ACCESSIBLE LOCATION ABOVE COUNTER.
- EXISTING MOTORIZED BLEACHER, INTERCEPT EXISTING FEEDER AND PROVIDE NEW HOMERUN.
- MOTORIZED BASKETBALL BACKSTOP. PROVIDE CONTROL WIRING TO GYM CONTROL PANEL.
- MOTORIZED DIVIDER CURTAIN. PROVIDE CONTROL WIRING TO GYM CONTROL PANEL.
- GYM SCOREBOARD
- GYM EQUIPMENT RELAY PANEL
- RANGE POWER KILL SWITCH, RED MUSHROOM HEAD WITH KEY RESET
- CONCRETE WALL, PROVIDE DEVICES IN WIREMOLD SMR BOX. COREDRILL & ROUTE RACEWAY INTO CHASE & UP TO ACCESSIBLE CEILING SPACE
- CONCRETE WALL, PROVIDE DEVICES IN WIREMOLD 4000, SEE DETAIL 2/E701.
- ROUTE RACEWAY DOWN TO CEILING SPACE BELOW & OVER TO TEACHER ISLAND, SEE DETAIL 3/E701.
- ROUTE DOWN IN SIDE WALL TO +18" AFF & OVER THRU PARTIAL HEIGHT WALL TO RANGE. 3/4" C, 3#8+10G.
- ROUTE RACEWAY DOWN IN SIDE WALL & THRU FURRED WALL UNDER COUNTER TO RECEPTACLE LOCATION. PROVIDE JUNCTION BOX AS REQUIRED TO TURN UP. MOUNT DEVICE ABOVE BACKSPLASH.
- GYM AV CABINET ON CASTERS (PROVIDE UNDER ALT BID 4)
- MOTORIZED MAT HOIST, PROVIDE FUSED DISCONNECT. PROVIDE CONTROL WIRING TO GYM CONTROL PANEL.
- PROVIDE SURFACE MOUNT HOUSING FOR INTERCOM/CLOCK. MOUNT CALL SWITCH IN SMR BOX WITH SINGLE PIECE WIREMOLD BETWEEN SPEAKER & CALL SWITCH.



LEVEL 1 BUILDING 1 - AREA A - POWER & SYSTEMS

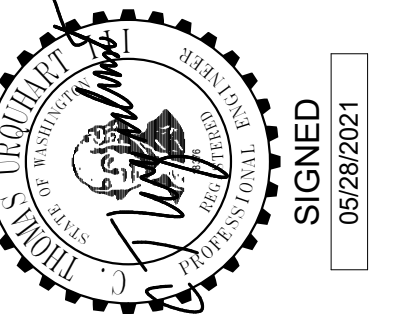
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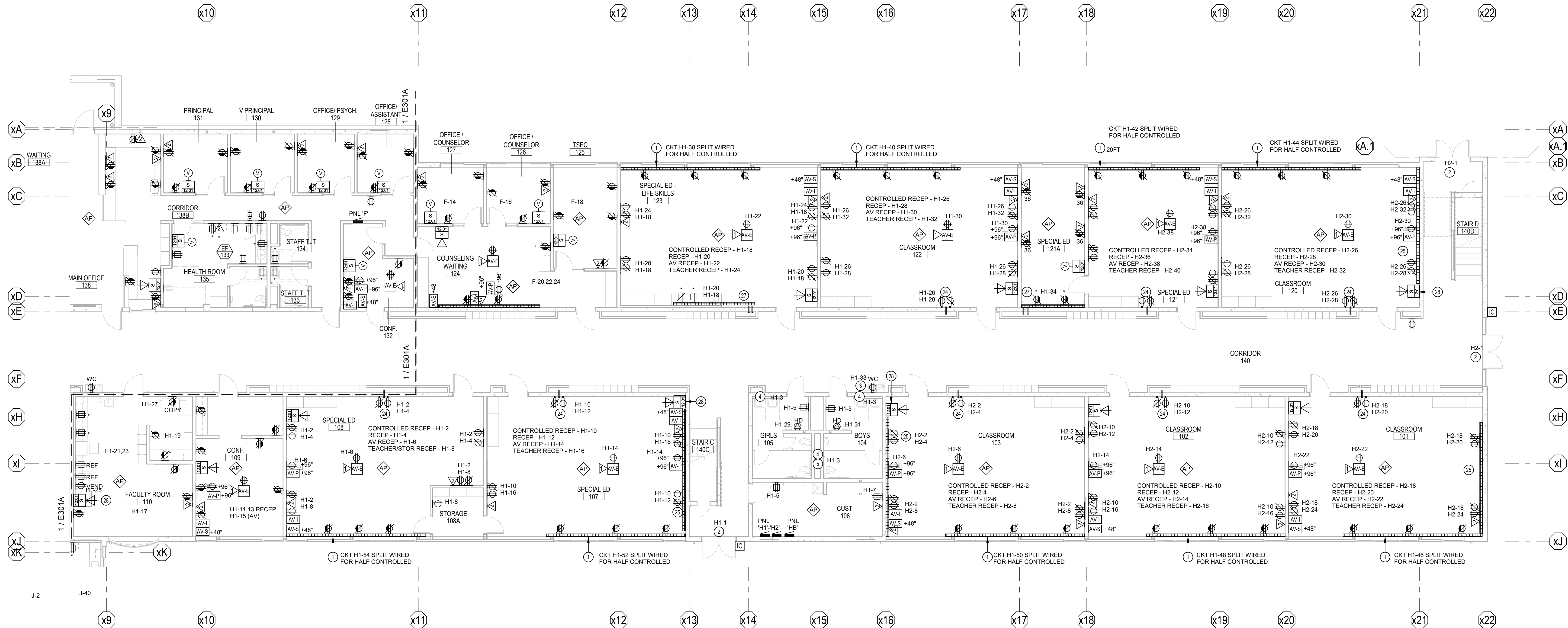
LEVEL 1
BUILDING 1 -
AREA A -
POWER &
SYSTEMS

E301A

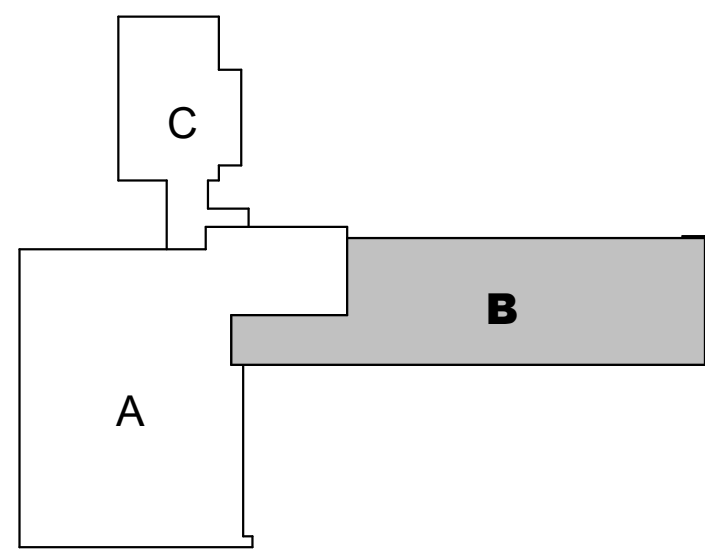
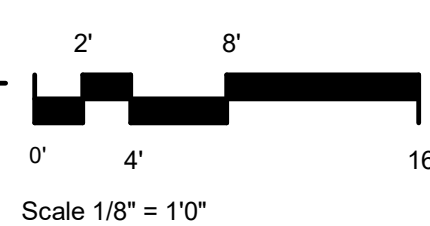


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LEVEL 1 BUILDING 1 - AREA B - POWER & SYSTEMS
SCALE: 1/8" = 1'-0"



GENERAL NOTES

- SEE SHEETS E100, E400, E401, E402 & E403 FOR CCTV CAMERA LOCATIONS. PROVIDE CAT 6 CABLEING FOR EACH LOCATION. PROVIDE EXTENDERS WHERE CABLE DISTANCE EXCEEDS 90M.

BUBBLE NOTES

- PROVIDE 2-PIECE WIREMOLD 4000 UNDER ADDITIVE ALTERNATE. 25FT SECTION UNLESS NOTED OTHERWISE. PROVIDE DIVIDED ENTRANCE END FITTING WITH 3/4" C - POWER + 1" C - FUTURE SIGNAL WITH PULL STRING INTO ADJACENT FRAMED WALL & UP TO ACCESSIBLE SPACE
- ACCESS CONTROL POWER SUPPLY
- WATER COOLER RECEPTACLE WITH GFCI CIRCUIT BREAKER, VERIFY LOCATION.
- PLUMBING SENSOR 120V POWER, VERIFY TRANSFORMER LOCATION.
- TRAP PRIMER 120V POWER, VERIFY LOCATION.
- EXISTING RECEPTACLE LOCATION IN CONCRETE WALL, PROVIDE NEW SURFACE BOX & HOMERUN.
- CONCRETE WALL, PROVIDE DEVICES IN WIREMOLD SMR BOX, COREDRILL & ROUTE RACEWAY INTO CHASE & UP TO ACCESSIBLE CEILING SPACE
- CONCRETE WALL, PROVIDE DEVICES IN WIREMOLD 4000, SEE DETAIL 2/E701.
- ROUTE RACEWAY DOWN TO CEILING SPACE BELOW & OVER TO TEACHER ISLAND, SEE DETAIL 3/E701.
- CONCRETE WALL, PROVIDE DEVICES IN WIREMOLD 4000, COREDRILL & ROUTE RACEWAY INTO CHASE & UP TO ACCESSIBLE CEILING SPACE IN CORRIDOR. PROVIDE DIVIDED ENTRANCE END FITTING WITH 3/4" C - POWER + 1" C - FUTURE SIGNAL WITH PULL STRING
- PROVIDE SURFACE MOUNT HOUSING FOR INTERCOM/CLOCK. MOUNT CALL SWITCH IN SMR BOX WITH SINGLE PIECE WIREMOLD BETWEEN SPEAKER & CALL SWITCH.

KELSO SCHOOL DISTRICT NO. 458
HUNTINGTON MIDDLE SCHOOL -
MODERNIZATION AND ADDITION
500 REDPATH ST, KELSO, WA 98626

Date:	05.28.2021
Job No.:	21938.00
Drawn By:	BN
Checked by:	SH
Revisions	
#	Date Description

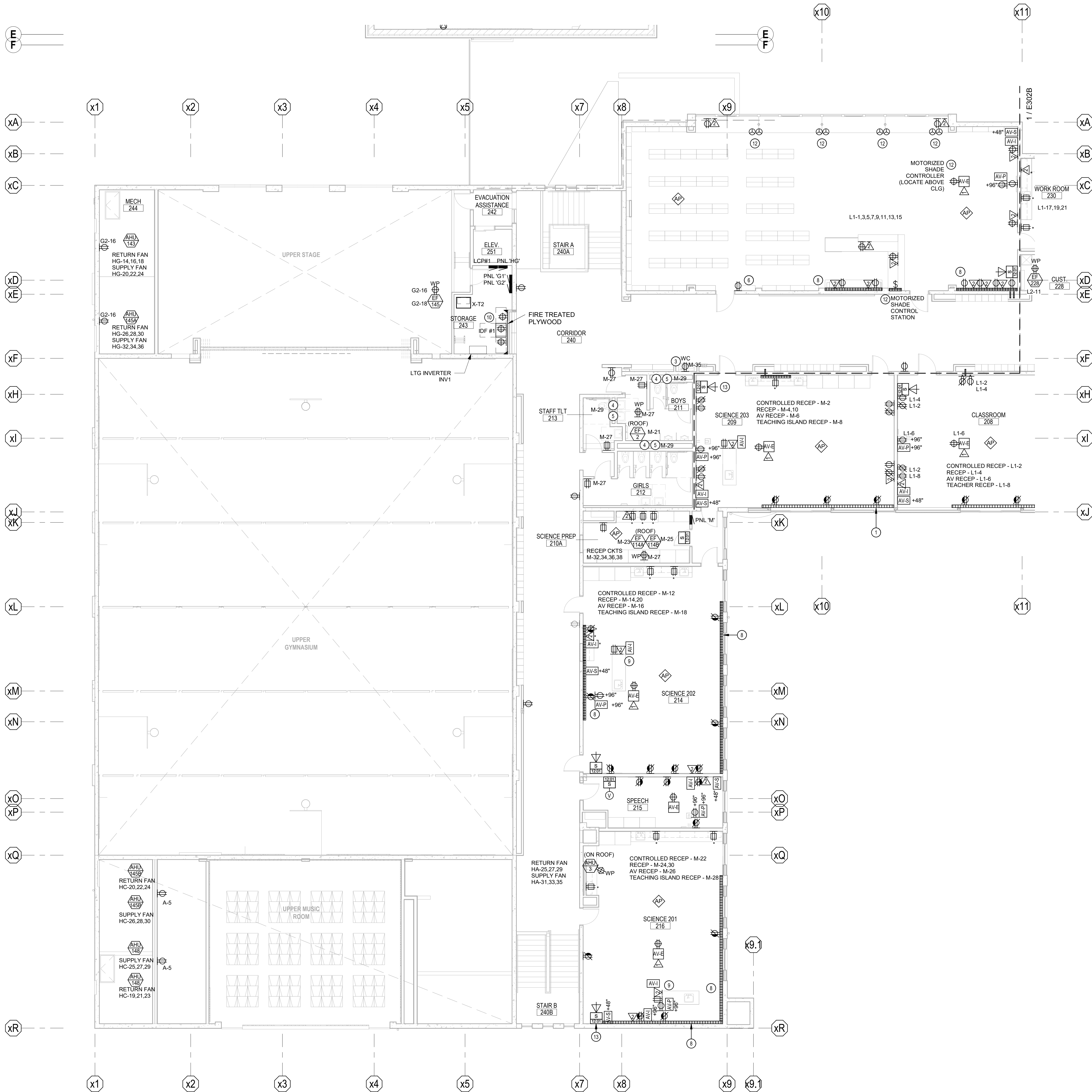
LEVEL 1
BUILDING 1 -
AREA B -
POWER &
SYSTEMS

E301B

10 SOUTH CEDAR, BPOKANE, WA 99264
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general@hultzbhu.com Job Number: 20-038

SIGNED
05/28/2021



GENERAL NOTES

- SEE SHEETS E100, E400, E401, E402 & E403 FOR CCTV CAMERA LOCATIONS. PROVIDE CAT 6 CABLING FOR EACH LOCATION. PROVIDE EXTENDERS WHERE CABLE DISTANCE EXCEEDS 90M.

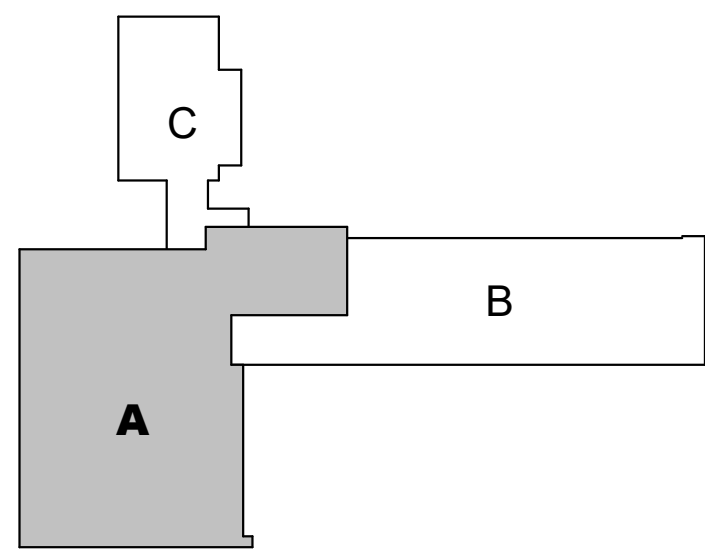
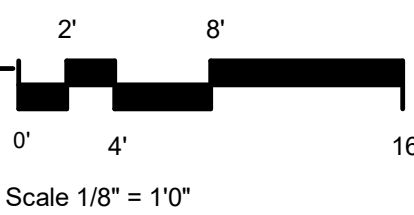
BUBBLE NOTES

- PROVIDE 2-PIECE WIREMOLD 4000 UNDER ADDITIVE ALTERNATE. 25FT SECTION UNLESS NOTED OTHERWISE.
- ACCESS CONTROL POWER SUPPLY
- WATER COOLER RECEPTACLE WITH GFCI CIRCUIT BREAKER, VERIFY LOCATION.
- PLUMBING SENSOR 120V POWER, VERIFY TRANSFORMER LOCATION.
- TRAP PRIMER 120V POWER, VERIFY LOCATION.
- EXISTING RECEPTACLE LOCATION IN CONCRETE WALL, PROVIDE NEW SURFACE BOX & HOMERUN.
- CONCRETE WALL, PROVIDE DEVICES IN WIREMOLD SMR BOX, COREDRILL & ROUTE RACEWAY INTO CHASE & UP TO ACCESSIBLE CEILING SPACE
- CONCRETE WALL, PROVIDE DEVICES IN WIREMOLD 4000, SEE DETAIL 2/E701.
- ROUTE RACEWAY DOWN TO CEILING SPACE BELOW & OVER TO TEACHER ISLAND, SEE DETAIL 3/E701.
- IDF #1 - ENCLOSED CABINET
- IDF #2 - OPEN FRAME RACK
- MOTORIZED SHADE CONNECTION, PROVIDE 120V POWER & ETHERNET CONNECTION BETWEEN SHADES, SHADE CONTROLLER & SHADE CONTROL STATION.
- PROVIDE SURFACE MOUNT HOUSING FOR INTERCOM/CLOCK. MOUNT CALL SWITCH IN SMR BOX WITH SINGLE PIECE WIREMOLD BETWEEN SPEAKER & CALL SWITCH.



LEVEL 2 BUILDING 1 - AREA A - POWER & SYSTEMS

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



KELSO SCHOOL DISTRICT NO. 458
HUNTINGTON MIDDLE SCHOOL -
MODERNIZATION AND ADDITION

500 REDPATH ST, KELSO, WA 98626

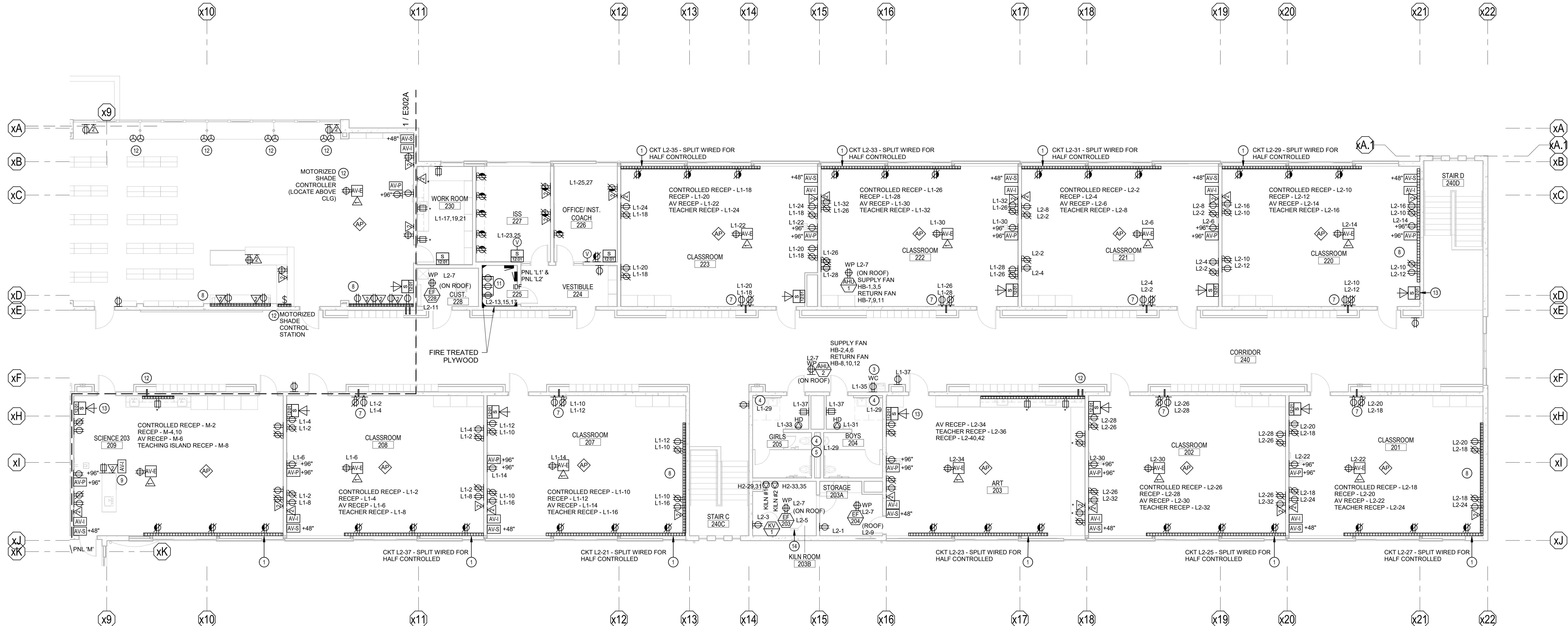
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Revisions	
#	Date Description

LEVEL 2
BUILDING 1 -
AREA A -
POWER &
SYSTEMS

E302A

1. SEE SHEETS E100, E400, E401, E402 & E403 FOR CCTV CAMERA LOCATIONS. PROVIDE CAT 6 CABLING FOR EACH LOCATION. PROVIDE EXTENDERS WHERE CABLE DISTANCE EXCEEDS 90M.

- ## BUBBLE NOTES
- ① PROVIDE 2-PIECE WIREMOLD 4000 UNDER ADDITIVE ALTERNATE. 25ST SECTION UNLESS NOTED OTHERWISE.
 - ② ACCESS CONTROL POWER SUPPLY
 - ③ WATER COOLER RECEPTACLE WITH GFCI CIRCUIT BREAKER, VERIFY LOCATION.
 - ④ PLUMBING SENSOR 120V POWER, VERIFY TRANSFORMER LOCATION.
 - ⑤ TRAP PRIMER 120V POWER, VERIFY LOCATION.
 - ⑥ EXISTING RECEPTACLE LOCATION IN CONCRETE WALL, PROVIDE NEW SURFACE BOX & HOMERUN.
 - ⑦ CONCRETE WALL, PROVIDE DEVICES IN WIREMOLD SMR BOX, COREDRILL & ROUTE RACEWAY INTO CHASE & UP TO ACCESSIBLE CEILING SPACE
 - ⑧ CONCRETE WALL, PROVIDE DEVICES IN WIREMOLD 4000, SEE DETAIL 2/E701.
 - ⑨ ROUTE RACEWAY DOWN TO CEILING SPACE BELOW & OVER TO TEACHER ISLAND, SEE DETAIL 3/E701.
 - ⑩ IDF #1 - ENCLOSED CABINET
 - ⑪ IDF #2 - OPEN FRAME RACK
 - ⑫ CONCRETE WALL, PROVIDE DEVICES IN WIREMOLD 4000, COREDRILL & ROUTE RACEWAY INTO CHASE & UP TO ACCESSIBLE CEILING SPACE IN CORRIDOR, PROVIDE DIVIDED ENTRANCE END FITTING WITH 3/4" C. POWER + 1" C. FUTURE SIGNAL WITH PULL STRING
 - ⑬ PROVIDE SURFACE MOUNT HOUSING FOR INTERCOM/CLOCK. MOUNT CALL SWITCH IN SMR BOX WITH SINGLE PIECE WIREMOLD BETWEEN SPEAKER & CALL SWITCH.
 - ⑭ SEE KILN CONTROL DETAIL, SHEET E701/DETAIL 4.



LEVEL 2 BUILDING 1 - AREA B - POWER & SYSTEMS
SCALE: 1/8" = 1'-0"



TRUE NORTH

2' 4' 8'

0' 4' 16'

Scale 1/8" = 1'0"

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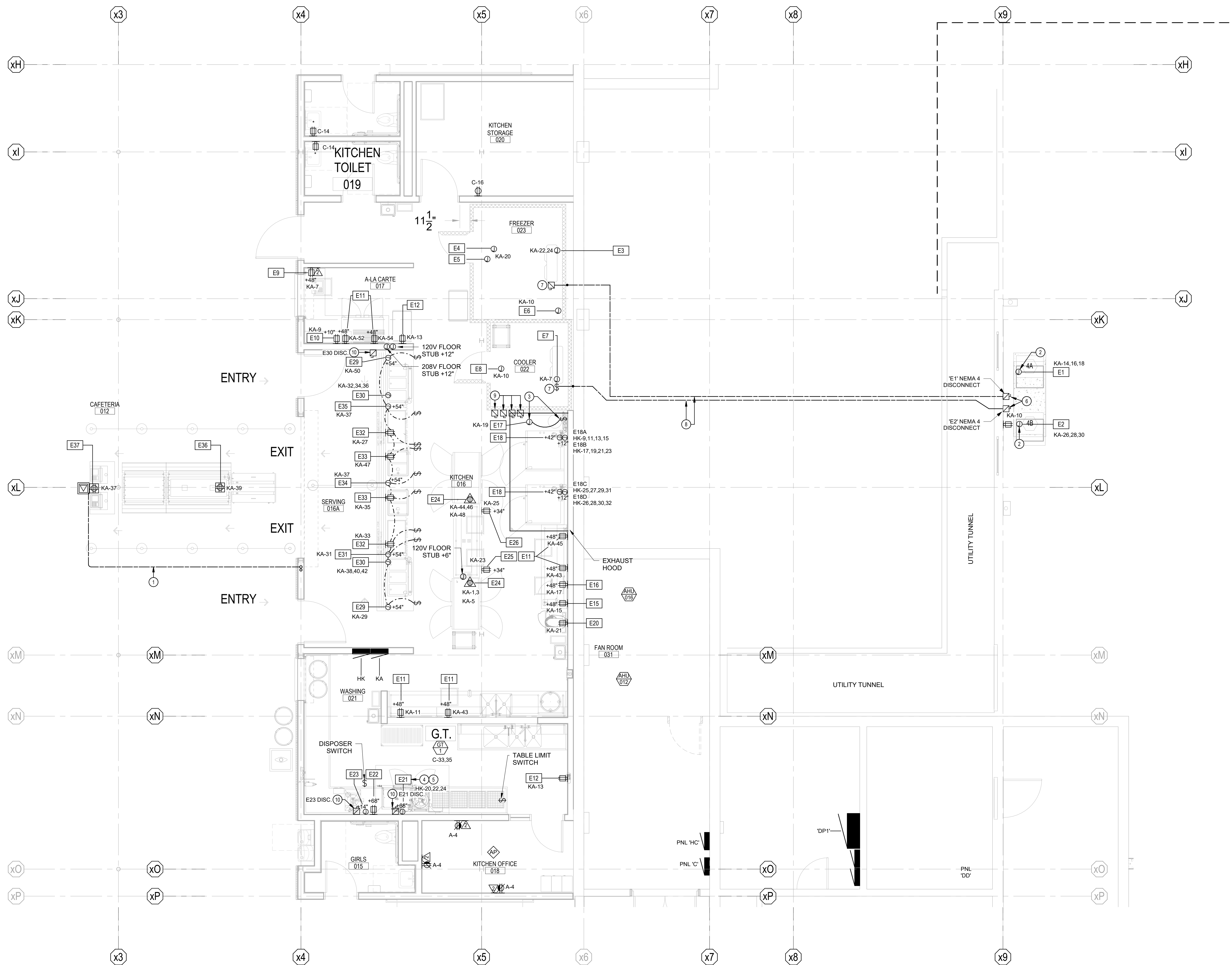
LEVEL 2
BUILDING 1 -
AREA B -
POWER &
SYSTEMS PLAN

E302B

BID SET

1. REFER TO FOOD SERVICES PLANS FOR ADDITIONAL INFORMATION.
2. REFER TO SHEET E505, KITCHEN EQUIPMENT CONNECTION SCHEDULES
3. HOOD LIGHTS ARE FURNISHED BY OTHERS. DIVISION 26 TO SUPPLY AND INSTALL LIGHT SWITCHES AND INTERCONNECTING CONDUIT AND WIRING CONCEALED FROM SIGHT.
4. WALK-IN COLD STORAGE ROOMS: LIGHTS AND CEILING MOUNT EXHAUSTORATORS ARE FURNISHED AND INSTALLED BY OTHERS. DIVISION 26 TO SUPPLY AND INSTALL ALL INTERCONNECTING CONDUIT AND WIRING ABOVE CEILING CONCEALED FROM SIGHT.
5. ALL ELECTRICAL RECEPTACLES SHALL BE MOUNTED HORIZONTALLY ON FIXTURES AND WALLS.
6. WAREWASHER: DIVISION 26 TO PROVIDE AND INSTALL ALL INTERCONNECTING WIRING BETWEEN WAREWASHER CONTROL PANEL AND EXHAUST FAN FOR AUTO ON/OFF DURING EQUIPMENT OPERATION. SET FAN TO CONTINUE TO RUN FOR AN EXTRA 20 MINUTES AFTER WAREWASHER IS TURNED OFF.
7. KITCHEN HOOD: DIVISION 26 TO PROVIDE POWER TO HOOD LIGHTS AND EXHAUST FAN ON ROOF. INTERLOCK WITH MAKE UP AIR SUPPLY (AHU-16; SEE E505.) INTERCONNECT TO FANLIGHT WALL SWITCH PROVIDED BY HOOD MANUFACTURER AND INSTALL .48" ABOVE FINISHED FLOOR.
8. RUN #1 CONDUIT FOR ISOLATED AND DEDICATED CASH SYSTEM COMMUNICATION LINES UNDER SLAB TO WALL. RUN UP WALL AND ACROSS CEILING. CONNECT TO MANAGERS STATION COMPUTER.
9. ALL EXPOSED CONDUIT TO BE RAN IN STAINLESS STEEL SLEEVES.

- 1 PROVIDE 1" C- POWER - 110° (1") CAT6 TO MDF FOR POINT OF SALE SYSTEM. RUN UNDERGROUND TO NEAREST WALL AND UP TO ACCESSIBLE CEILING.
- 2 REFER TO ARCHITECTURAL PLANS FOR EXACT LOCATION OF CONDENSING UNITS.
- 3 PROVIDE POWER TO HOOD LIGHTS AND EXHAUST FAN ON ROOF. INTERCONNECT TO MECHANICAL UNIT, FAN, LIGHT & WALL SWITCH.
- 4 CONNECT TO TABLE LIMIT SWITCH.
- 5 FURNISH AND INSTALL ALL INTERCONNECTING WIRING BETWEEN WAREWASHER CONTROL PANEL AND EXHAUST FAN FOR AUTO FAN ON/OFF DURING EQUIPMENT OPERATION FAN TO RUN ADDITIONAL TWENTY MINUTES AFTER WAREWASHER IS TURNED OFF.
- 6 NEMA 4 FUSED DISCONNECT MOUNTED ON WALL. PROVIDE UNISTRUT SUPPORTS AS REQUIRED AND WEATHERPROOF RECEPTACLE MOUNTED TO UNISTRUT.
- 7 DISCONNECT ATTACHED TO UNIT.
- 8 GUNDERGROUND CONDUITS. PENETRATE EXISTING UTILITY TUNNEL WALL FOR ROUTING OF UNDERGROUND CONDUITS FROM DISCONNECT TO UNIT. PATCH AND SEAL ALL PENETRATIONS AS REQUIRED. REFER TO KITCHEN CONNECTION SCHEDULE ON SHEET E505 FOR WIRE AND CONDUIT SIZE. COORDINATE WITH MECHANICAL TRENCHING TO SAME LOCATION.
- 9 FUSED DISCONNECT FOR DOUBLE STACK OVENS, EQUIPMENT TAG E18A, E18B, E18C & E18D. COORDINATE WITH ARCHITECT PRIOR TO ROUGH-IN FOR FINAL LOCATION.
- 10 NEMA 4 FUSED DISCONNECT FOR SCHEDULED KITCHEN EQUIPMENT, SEE SHEET E505. COORDINATE WITH ARCHITECT PRIOR TO ROUGH-IN FOR FINAL LOCATION.



1' 4'

0' 2'

Scale 1/4" = 1'-0"

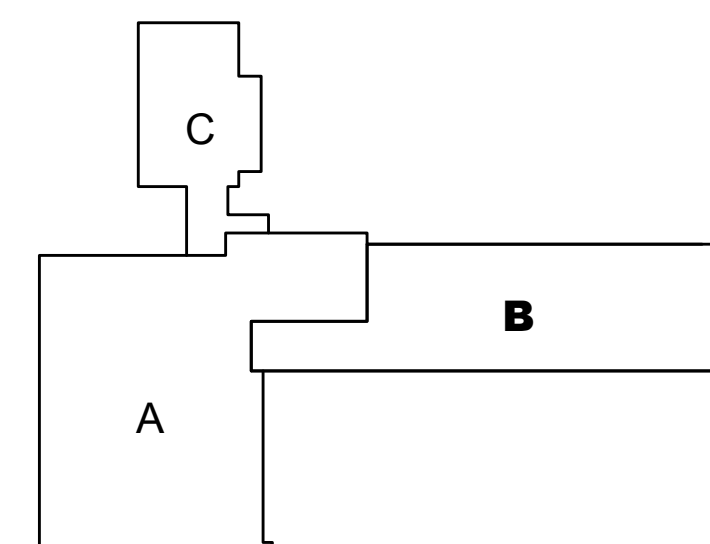
**KELSO SCHOOL DISTRICT NO. 458
HUNTINGTON MIDDLE SCHOOL -
MODERNIZATION AND ADDITION**
500 REDPATH ST, KELSO, WA 98626

ENLARGED
KITCHEN
ELECTRICAL
PLAN

E303

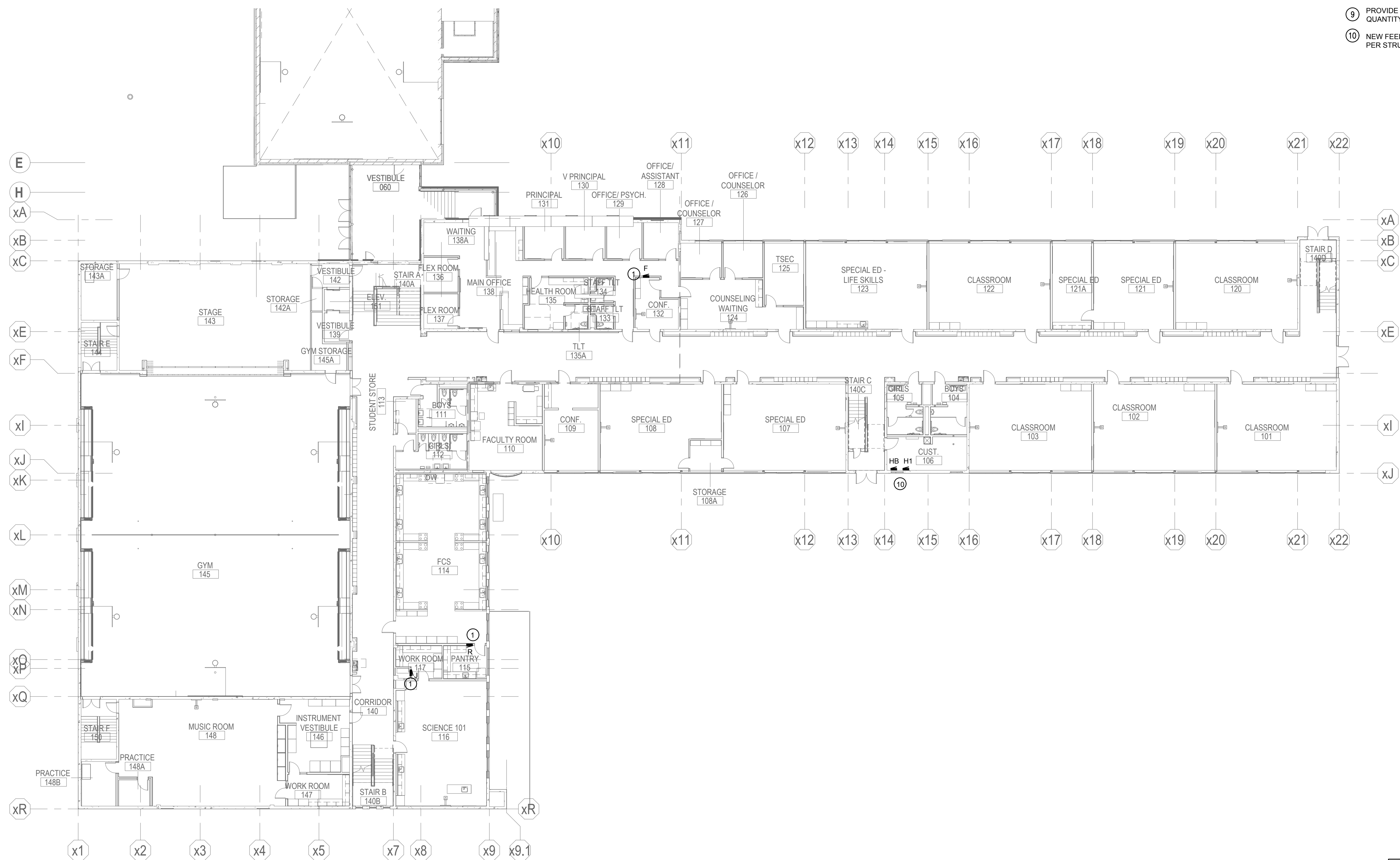
1. FEEDER ROUTING SHOWN IS APPROXIMATE. CONTRACTOR IS RESPONSIBLE FOR VERIFY ROUTING & PROVIDE PULL BOXES & ELBOWS AS REQUIRED TO MEET NEC REQUIREMENTS.
2. SEE STRUCTURAL DRAWINGS FOR REQUIREMENTS FOR PENETRATIONS THRU EXISTING CONCRETE WALLS & FLOORS. X-RAY AS REQUIRED TO AVOID DAMAGE TO EXISTING REBAR
3. SEE ARCHITECTURAL & STRUCTURAL DRAWINGS FOR LOCATION OF CONCRETE WALLS
4. INTENT OF DRAWING IS FOR COORDINATION WITH CONCRETE STRUCTURE. NOT ALL RACEWAYS ARE SHOWN. CONTRACTOR IS RESPONSIBLE TO PROVIDE ALL RACEWAY & BUILDING PENETRATIONS AS REQUIRED FOR COMPLETE OPERATIONAL SYSTEMS.

- ① NEW FEEDER UTILIZING EXISTING PENETRATIONS THRU CONCRETE WALL
- ② NEW CONDUITS UNDER EXISTING FOOTING. REMOVE CONCRETE SLAB & ASPHALT AS REQUIRED, COMPLY WITH REQUIREMENTS OF PUD & STRUCTURAL DETAILS.
- ③ NEW RACEWAY PENETRATION THRU EXISTING CONCRETE WALL
- ④ NEW FEEDER WITH NEW PENETRATION THRU CONCRETE STRUCTURE LESS THAN 2.5" PENETRATION
- ⑤ NEW FEEDER EXPOSED IN SPACE
- ⑥ NEW FEEDER TO AUX GYM ADDITION, ROUTE FROM BOILER ROOM, THRU MDF ROOM & UTILITY TUNNEL, FROM UTILITY TUNNEL, ROUTE BELOW GRADE TO NEW ADDITION, STUB UP IN FOOTING, CONNECT WITH STRUCTURAL. PROVIDE PULL-BOXES IN TUNNEL AS REQUIRED. PROVIDE TRENCHING & BACKFILL FOR NEW RACEWAY FROM TUNNEL TO ADDITION, EXISTING GRADE SLOPES, SEE CIVIL FOR ELEVATIONS.
- ⑦ PROVIDE PULL-BOXES IN TUNNEL AS REQUIRED TO MAINTAIN MINIMUM NUMBER OF BENDS
- ⑧ ROUTE RACEWAY THRU TUNNEL, PROVIDE UNISTRUT SUPPORT TO SECURE TO WALL OR CEILING
- ⑨ PROVIDE NEW LIGHTS IN TUNNEL AT EXISTING LOCATION, ASSUME QUANTITY OF 12, HOMERUN TO PNL H1
- ⑩ COREDRILL TO ROUTE UP TO PANELS IN CUSTODIAN ROOM ABOVE
- ⑪ NEW LOW VOLTAGE SYSTEM RACEWAY ROUTED THRU TUNNEL, SEE TELECOMMUNICATIONS RISER DIAGRAM, SHEET E70
- ⑫ CHILLER FEEDER - ROUTE UNDERGROUND WITH CHILLED WATER LINES, ROUTE UP INSIDE BUILDING TO NEAREST WALL & EXPOSED WITHIN BOILER ROOM TO MBSB OR PNL D AS REQUIRED

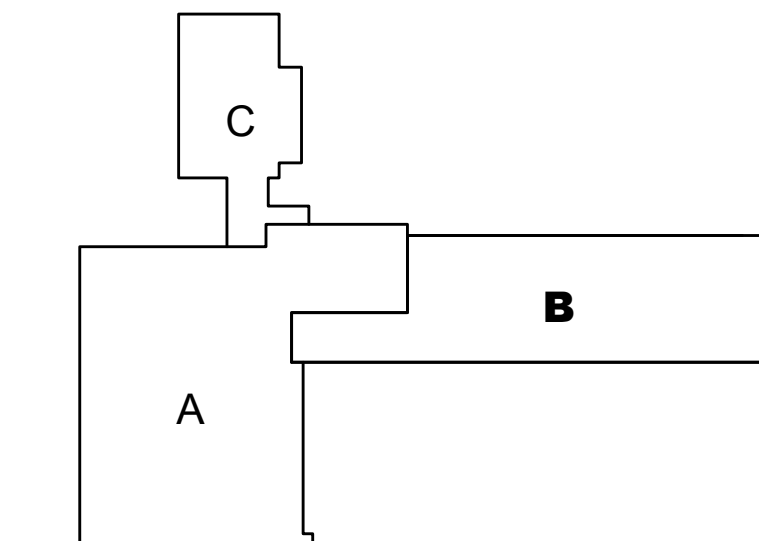


Date:	05.28.2021	
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Drawn By:	BN	
Checked by:	SH	
Revisions		
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E304



LEVEL 1 FEEDER ELECTRICAL PLAN
 SCALE: 1/16" = 1'-0"
 TRUE NORTH



**LEVEL 1 -
 FEEDER
 ELECTRICAL
 PLAN**

E305

GENERAL NOTES:

1. FEEDER ROUTING SHOWN IS APPROXIMATE. CONTRACTOR IS RESPONSIBLE FOR VERIFY ROUTING & PROVIDE PULL BOXES & ELBOWS AS REQUIRED TO MEET NEC REQUIREMENTS.
2. SEE STRUCTURAL DRAWINGS FOR REQUIREMENTS FOR PENETRATIONS THRU EXISTING CONCRETE WALLS & FLOORS. X-RAY AS REQUIRED TO AVOID DAMAGE TO EXISTING REBAR
3. SEE ARCHITECTURAL & STRUCTURAL DRAWINGS FOR LOCATION OF CONCRETE WALLS
4. INTENT OF DRAWING IS FOR COORDINATION WITH CONCRETE STRUCTURE. NOT ALL RACEWAYS ARE SHOWN. CONTRACTOR IS RESPONSIBLE TO PROVIDE ALL RACEWAY & BUILDING PENETRATIONS AS REQUIRED FOR COMPLETE OPERATIONAL SYSTEMS.

BUBBLE NOTES:

- 1 NEW FEEDER UTILIZING EXISTING PENETRATIONS THRU CONCRETE WALLS
- 2 NEW CONDUITS UNDER EXISTING FOOTING. REMOVE CONCRETE SLAB & ASPHALT AS REQUIRED. COMPLY WITH REQUIREMENTS OF PUD & STRUCTURAL DETAILS.
- 3 NEW RACEWAY PENETRATION THRU EXISTING CONCRETE WALL
- 4 NEW FEEDER WITH NEW PENETRATION THRU CONCRETE STRUCTURE LESS THAN 2.5" PENETRATION
- 5 NEW FEEDER EXPOSED IN SPACE
- 6 NEW FEEDER TO AUX GYM ADDITION. ROUTE FROM BOILER ROOM, THRU MDF ROOM & INTO UTILITY TUNNEL. FROM UTILITY TUNNEL, ROUTE BELOW GRADE TO NEW ADDITION. STUB UP IN FOOTING. COORDINATE WITH STRUCTURAL. PROVIDE PULL-BOXES IN TUNNEL AS REQUIRED. PROVIDE TRENCHING & BACKFILL FOR NEW RACEWAY FROM TUNNEL TO ADDITION. EXISTING GRADE SLOPES, SEE CIVIL FOR ELEVATIONS.
- 7 PROVIDE PULL-BOXES IN TUNNEL AS REQUIRED TO MAINTAIN MINIMUM NUMBER OF BENDS
- 8 ROUTE RACEWAY THRU TUNNEL, PROVIDE UNISTRUT SUPPORT TO SECURE TO WALL OR CEILING
- 9 PROVIDE NEW LIGHTS IN TUNNEL AT EXISTING LOCATION. ASSUME QUANTITY OF (12). HOMERUN TO PNL H1
- 10 NEW FEEDER FROM TUNNEL BELOW. COREDRILL CONCRETE FLOOR PER STRUCTURAL REQUIREMENTS

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**KELSO SCHOOL DISTRICT NO. 458
 HUNTINGTON MIDDLE SCHOOL -
 MODERNIZATION AND ADDITION
 500 REDPATH ST, KELSO, WA 98626**

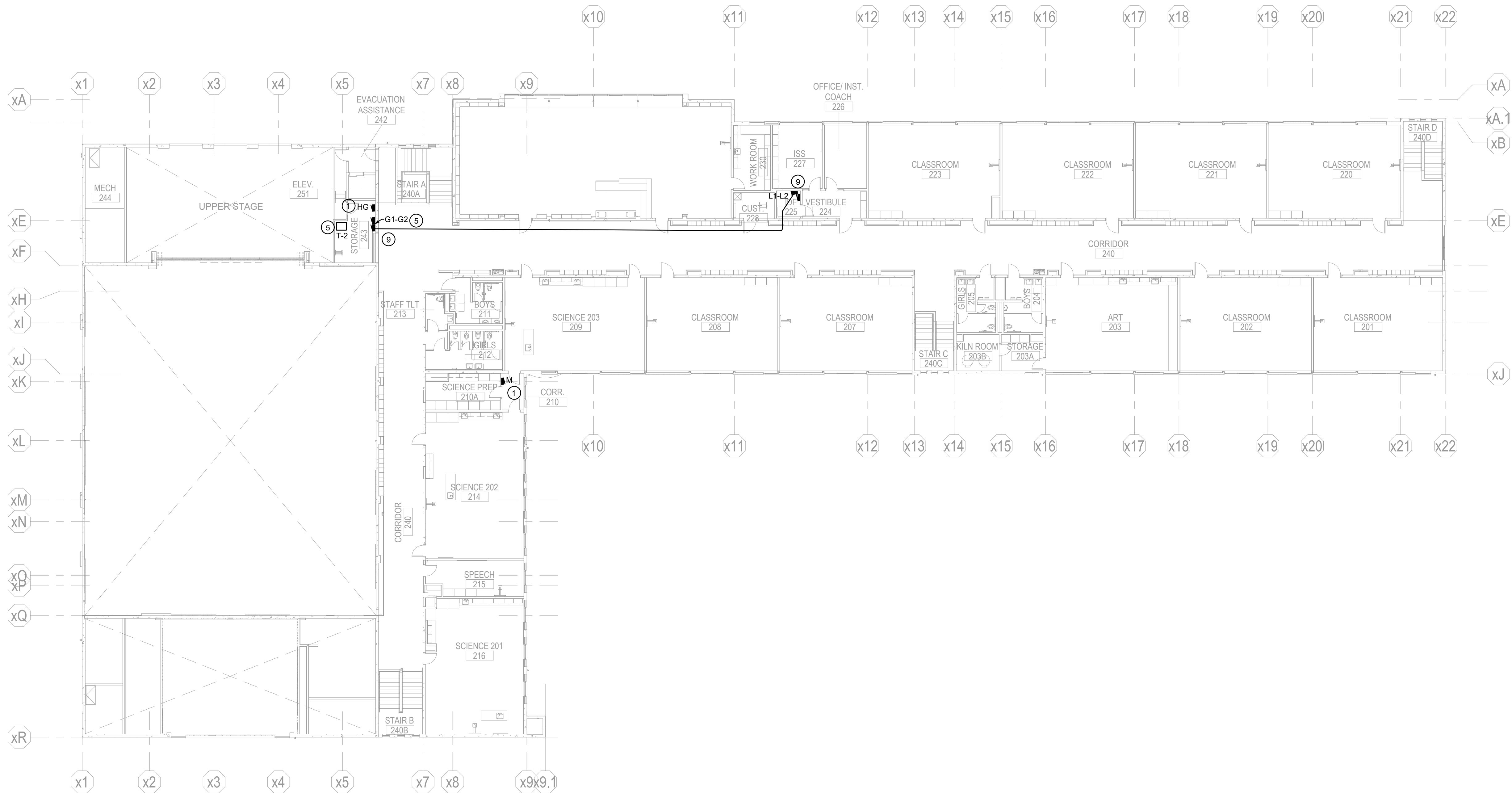
Date:	05.28.2021
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Checked by:	SH
Revisions	
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GENERAL NOTES:

1. FEEDER ROUTING SHOWN IS APPROXIMATE. CONTRACTOR IS RESPONSIBLE FOR VERIFY ROUTING & PROVIDE PULL BOXES & ELBOWS AS REQUIRED TO MEET NEC REQUIREMENTS.
2. SEE STRUCTURAL DRAWINGS FOR REQUIREMENTS FOR PENETRATIONS THRU EXISTING CONCRETE WALLS & FLOORS. X-RAY AS REQUIRED TO AVOID DAMAGE TO EXISTING REBAR
3. SEE ARCHITECTURAL & STRUCTURAL DRAWINGS FOR LOCATION OF CONCRETE WALLS
4. INTENT OF DRAWING IS FOR COORDINATION WITH CONCRETE STRUCTURE. NOT ALL RACEWAYS ARE SHOWN, CONTRACTOR IS RESPONSIBLE TO PROVIDE ALL RACEWAY & BUILDING PENETRATIONS AS REQUIRED FOR COMPLETE OPERATIONAL SYSTEMS.

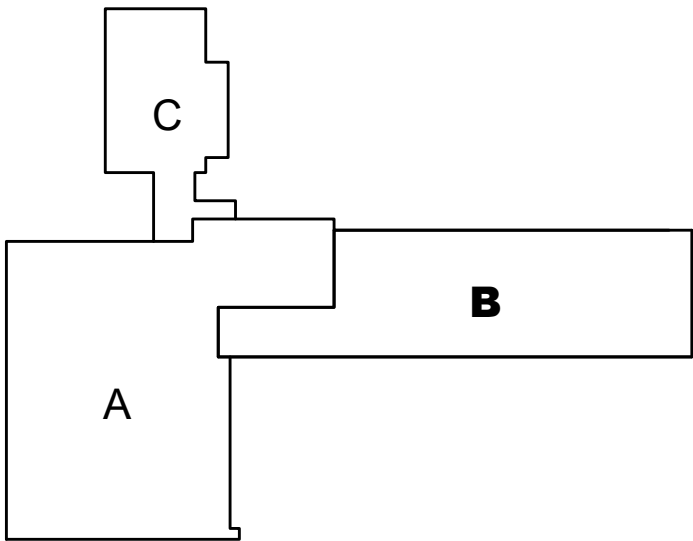
BUBBLE NOTES:

- 1 NEW FEEDER UTILIZING EXISTING PENETRATIONS THRU CONCRETE WALLS
- 2 NEW CONDUITS UNDER EXISTING FOOTING, REMOVE CONCRETE SLAB & ASPHALT AS REQUIRED, COMPLY WITH REQUIREMENTS OF PUD & STRUCTURAL DETAILS.
- 3 NEW RACEWAY PENETRATION THRU EXISTING CONCRETE WALL
- 4 NEW FEEDER WITH NEW PENETRATION THRU CONCRETE STRUCTURE LESS THAN 2.5" PENETRATION
- 5 NEW FEEDER EXPOSED IN SPACE
- 6 NEW FEEDER TO AUX GYM ADDITION, ROUTE FROM BOILER ROOM, THRU MDF ROOM & INTO UTILITY TUNNEL, FROM UTILITY TUNNEL, ROUTE BELOW GRADE TO NEW ADDITION, STUB UP IN FOOTING, COORDINATE WITH STRUCTURAL. PROVIDE PULL-BOXES IN TUNNEL AS REQUIRED. PROVIDE TRENCHING & BACKFILL FOR NEW RACEWAY FROM TUNNEL TO ADDITION. EXISTING GRADE SLOPES, SEE CIVIL FOR ELEVATIONS.
- 7 PROVIDE PULL-BOXES IN TUNNEL AS REQUIRED TO MAINTAIN MINIMUM NUMBER OF BENDS
- 8 ROUTE RACEWAY THRU TUNNEL, PROVIDE UNISTRUT SUPPORT TO SECURE TO WALL OR CEILING
- 9 NEW FEEDER OVERHEAD ON LEVEL 2, PROVIDE NEW PENETRATION (2)2"C THRU EXISTING CONCRETE WALL AT GRIDLINE X8 & XF
- 10 NEW FEEDER FROM TUNNEL BELOW, COREDRILL CONCRETE FLOOR PER STRUCTURAL REQUIREMENTS



 **LEVEL 2 FEEDER ELECTRICAL PLAN**
SCALE: 1/16" = 1'-0"
TRUE NORTH

2' 8' 16'
0' 4' 32'




KELSO SCHOOL DISTRICT NO. 458
HUNTINGTON MIDDLE SCHOOL -
MODERNIZATION AND ADDITION
500 REDPATH ST, KELSO, WA 98626

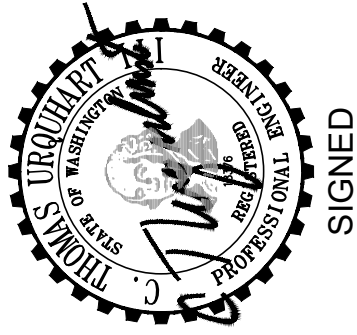
Date:	05.28.2021
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LEVEL 2 -
FEEDER
ELECTRICAL
PLAN

E306

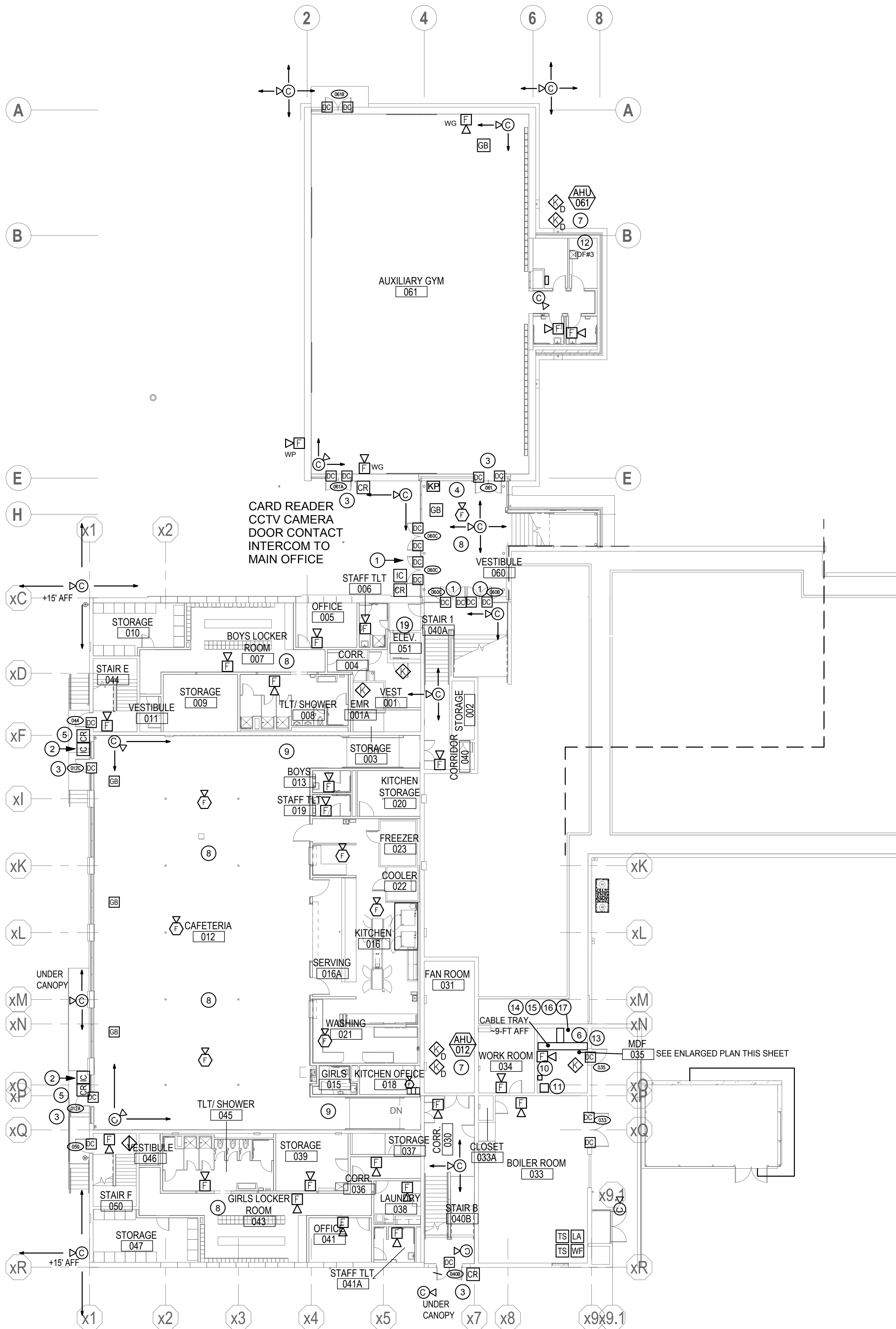


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SIGNED
05/28/2021

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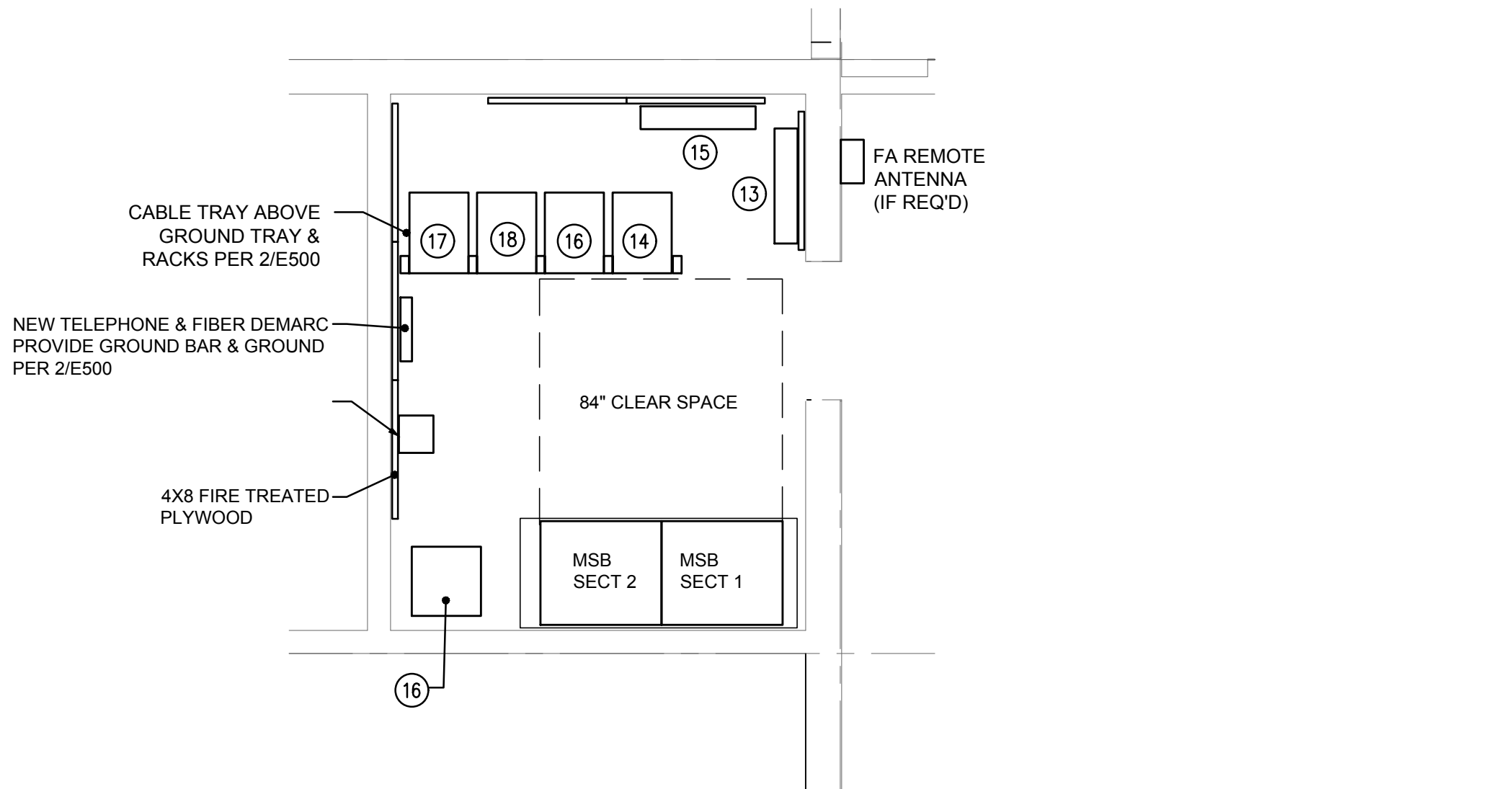
LEVEL 0 - OVERALL - SECURITY & FIRE ALARM
SCALE: 1/16" = 1'-0"

GENERAL NOTES:

1. PROVIDE DOOR CONTACTS EACH EXTERIOR DOOR
2. DEVICE LOCATIONS ARE APPROXIMATE, VERIFY EXACT PLACEMENT WITH APPROVED SYSTEM SHOP DRAWINGS
3. EMERGENCY RADIO AMPLIFICATION SYSTEM COMPONENTS SHOWN FOR BIDDING PURPOSES, PROVIDE SYSTEM PER APPROVED SHOP DRAWINGS TO BE PREPARED AFTER INITIAL BUILDING TESTING PER IFC 510.
4. CCTV STATION CABLING & PATCH PANELS TO BE PROVIDED BY SECTION 271001 AS PART OF COMPLETE CAMPUS LAN. POE SWITCHES, CAMERAS, MOUNTS & OTHER ASSOCIATED EQUIPMENT TO BE INSTALLED BY SECTION 282300.

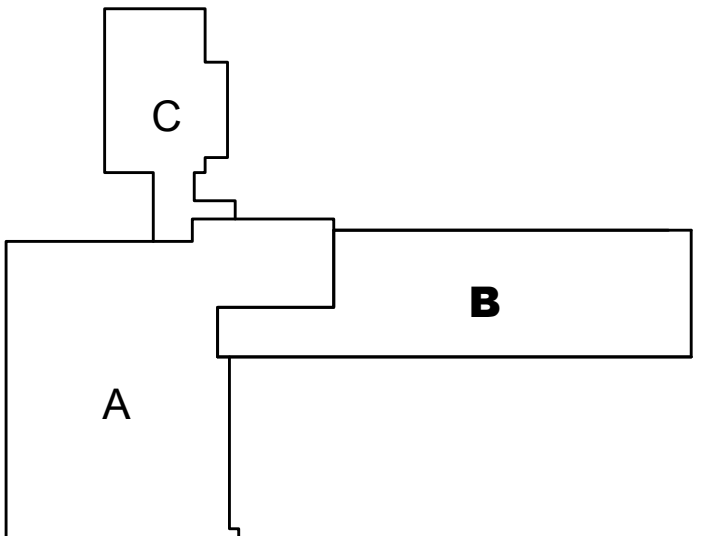
BUBBLE NOTES:

1. CONTROLLED DOOR ON TIME SCHEDULE & CARD READER, NORMALLY LOCKED WITH THE ABILITY TO UNLOCK FROM MAIN OFFICE WITH LED ABOVE TO INDICATE LOCKED OR UNLOCKED. UTILIZING PHYSICAL PUSH BUTTON & SOFTWARE.
2. REPLACE EXISTING INTERCOM CALL STATION
3. DOOR CONTROLLED ON SCHEDULE, BY CARD READER OR THRU REMOTE RELEASE (VIRTUALLY THRU SOFTWARE)
4. FIRE FIGHTER REMOTE HANDSET & REMOTE ANNUNCIATOR STATION
5. CARD READER CONTROLS BOTH DOORS (012C & 044 / 012A & 050), DOOR ALSO CONTROLLED ON TIME SCHEDULE OR REMOTE FROM MAIN OFFICE
6. NEW SYSTEMS CABLING THROUGH NEW RACEWAY TO SHOP BUILDING (PROVIDE UNDER ALT BID 5)
7. DUCT MOUNTED SMOKE DETECTOR IN SUPPLY IN RETURN, PROVIDE FIRE ALARM RELAY FOR FAN SHUT DOWN
8. EMERGENCY RADIO AMPLIFICATION SYSTEM INDOOR ANTENNA
9. EMERGENCY RADIO AMPLIFICATION SYSTEM SPLITTER
10. EMERGENCY RADIO AMPLIFICATION SYSTEM BI-DIRECTIONAL AMPLIFIER
11. EMERGENCY RADIO AMPLIFICATION SYSTEM POWER SUPPLY
12. CCTV SYSTEM PATCH PANEL & SWITCH WITH POE EXTENDERS FOR SITE CAMERAS
13. FIRE ALARM CONTROL PANEL, BATTERY CABINET & COMMUNICATOR - SEE RISER DIAGRAM, 4/E702
14. CCTV SYSTEM HEAD END SWITCH & PATCH PANELS
15. ACCESS CONTROL & INTRUSION ALARM SYSTEM HEAD END EQUIPMENT
16. INTERCOM / CLOCK SYSTEM HEAD END SWITCH & PATCH PANELS
17. FIBER SWITCH, FIBER PATCH PANEL, TELEPHONE EQUIPMENT, SERVER & UPS
18. STATION PATCH PANELS, WAP PATCH PANELS & SWITCHES
19. PROVIDE NEW FIRE ALARM CONNECTIONS FOR EXISTING ELEVATOR EQUIPMENT, SEE 3/E702



ENLARGED MDF ROOM 035 PLAN
SCALE: 1/4" = 1'-0"

TRUE NORTH
EXACT ROOM LAYOUT TO BE CONFIRMED AFTER APPROVAL OF MSB SECTION 1 & MSB SECTION 2 TO ENSURE 84" OF REQUIRED CLEAR SPACE IS MAINTAINED IN FRONT OF EQUIPMENT



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#	Date	Description
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LEVEL 0
BUILDING 1 - FIRE
ALARM &
SECURITY PLAN

E400

integrus
ARCHITECTURE

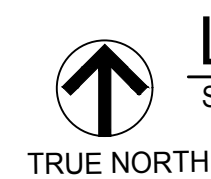
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GENERAL@HULTZBHU.COM

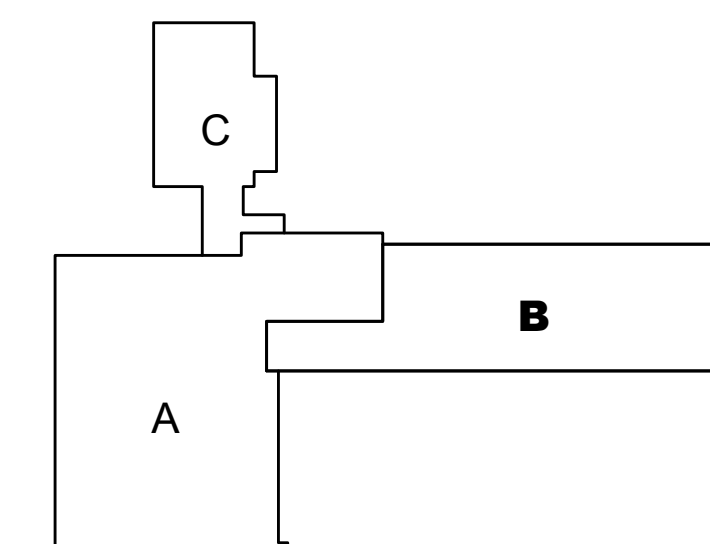
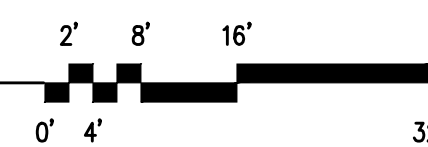
SIGNED
05/28/2021

1. PROVIDE DOOR CONTACTS EACH EXTERIOR DOOR
2. DEVICE LOCATIONS ARE APPROXIMATE, VERIFY EXACT PLACEMENT WITH PROVIDED SYSTEM SHOP DRAWINGS
3. EMERGENCY RADIO AMPLIFICATION SYSTEM COMPONENTS SHOWN FOR BIDDING PURPOSES, PROVIDE SYSTEM PER APPROVED SHOP DRAWINGS TO BE PREPARED AFTER INITIAL BUILDING TESTING PER IFC §10.
- 4.

- ① CONTROLLED DOOR ON TIME SCHEDULE & CARD READER, NORMALLY LOCKED WITH THE ABILITY TO UNLOCK FROM MAIN OFFICE WITH LED ABOVE TO INDICATE LOCKED OR UNLOCKED. UTILIZING PHYSICAL PUSH BUTTON & SOFTWARE.
- ② REPLACE EXISTING INTERCOM CALL STATION
- ③ DOOR CONTROLLED ON SCHEDULE, BY CARD READER OR THRU REMOTE RELEASE (VIRTUALLY THRU SOFTWARE)
- ④ CONTROLLED DOOR ON TIME SCHEDULE, NORMALLY UNLOCKED WITH THE ABILITY TO LOCK FROM MAIN OFFICE WITH LED ABOVE TO INDICATE LOCKED OR UNLOCKED. UTILIZING PHYSICAL PUSH BUTTON & SOFTWARE.
- ⑤ EMERGENCY RADIO AMPLIFICATION SYSTEM INDOOR ANTENNA
- ⑥ EMERGENCY RADIO AMPLIFICATION SYSTEM SPLITTER



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



500 REDPATH ST, KELSO, WA 98626

Revisions		
#	Date	Description

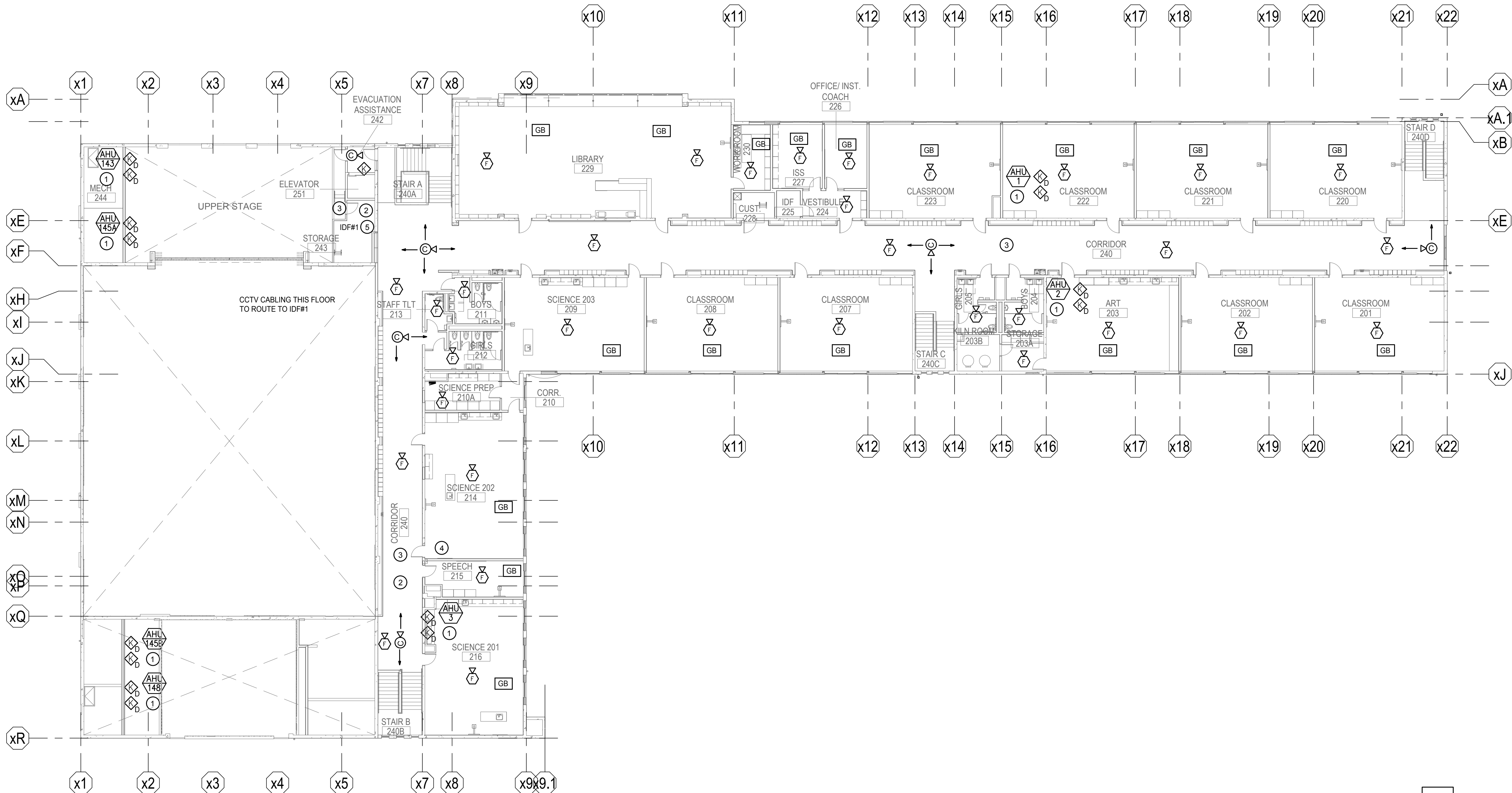
E401

GENERAL NOTES:

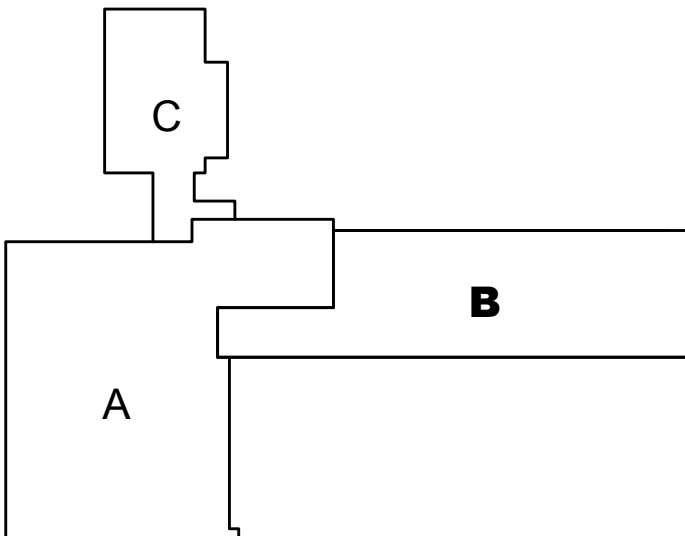
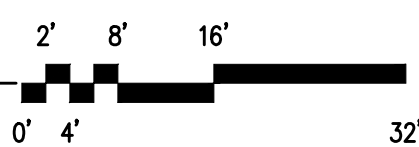
1. PROVIDE DOOR CONTACTS EACH EXTERIOR DOOR
2. DEVICE LOCATIONS ARE APPROXIMATE. VERIFY EXACT PLACEMENT WITH APPROVED SYSTEM SHOP DRAWINGS
3. EMERGENCY RADIO AMPLIFICATION SYSTEM COMPONENTS SHOWN FOR BIDDING PURPOSES. PROVIDE SYSTEM PER APPROVED SHOP DRAWINGS TO BE PREPARED AFTER INITIAL BUILDING TESTING PER IFC 910.
4. CCTV STATION CABLING & PATCH PANELS TO BE PROVIDED BY SECTION 271001 AS PART OF COMPLETE CAMPUS LAN. POE SWITCHES, CAMERAS, MOUNTS & OTHER ASSOCIATED EQUIPMENT TO BE INSTALLED BY SECTION 282300.

BUBBLE NOTES:

- ① DUCT MOUNTED SMOKE DETECTOR IN SUPPLY IN RETURN. PROVIDE FIRE ALARM RELAY FOR FAN SHUT DOWN
- ② EMERGENCY RADIO AMPLIFICATION SYSTEM INDOOR ANTENNA
- ③ EMERGENCY RADIO AMPLIFICATION SYSTEM SPLITTER
- ④ EMERGENCY RADIO AMPLIFICATION SYSTEM DONOR ANTENNA ON ROOF. PROVIDE 2" DOWN TO BDA IN MDF ROOM
- ⑤ CCTV SYSTEM PATCH PANEL & POE SWITCH



LEVEL 2 - BUILDING 1 - FIRE ALARM & SECURITY PLAN
SCALE: 1/16" = 1'-0"
TRUE NORTH

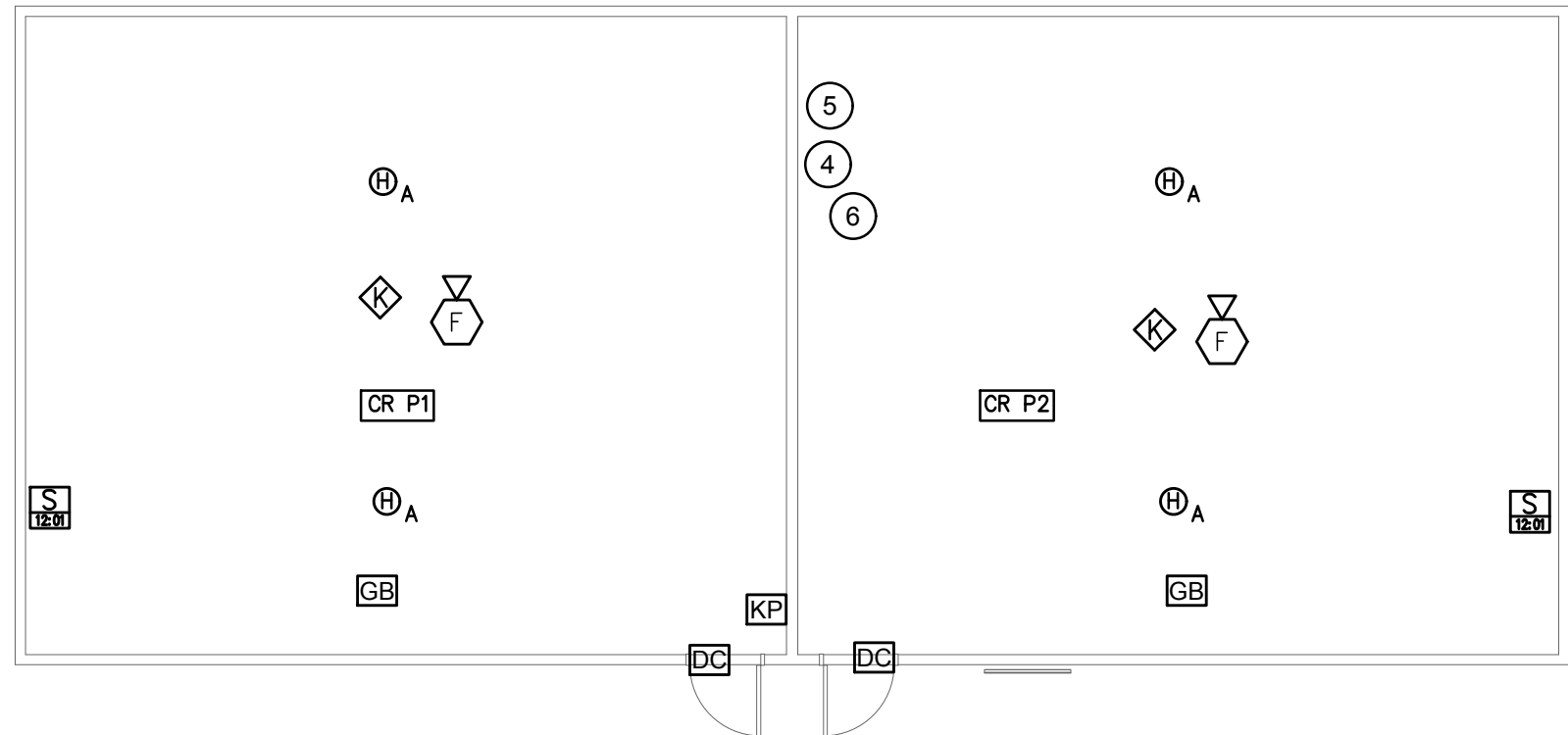


KELSO SCHOOL DISTRICT NO. 458
HUNTINGTON MIDDLE SCHOOL -
MODERNIZATION AND ADDITION
500 REDPATH ST, KELSO, WA 98626

Date:	05.28.2021
Job No.:	21938.00
Drawn By:	BN
Checked by:	SH
Revisions	
#	Date Description

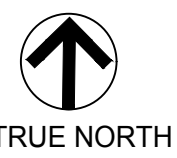
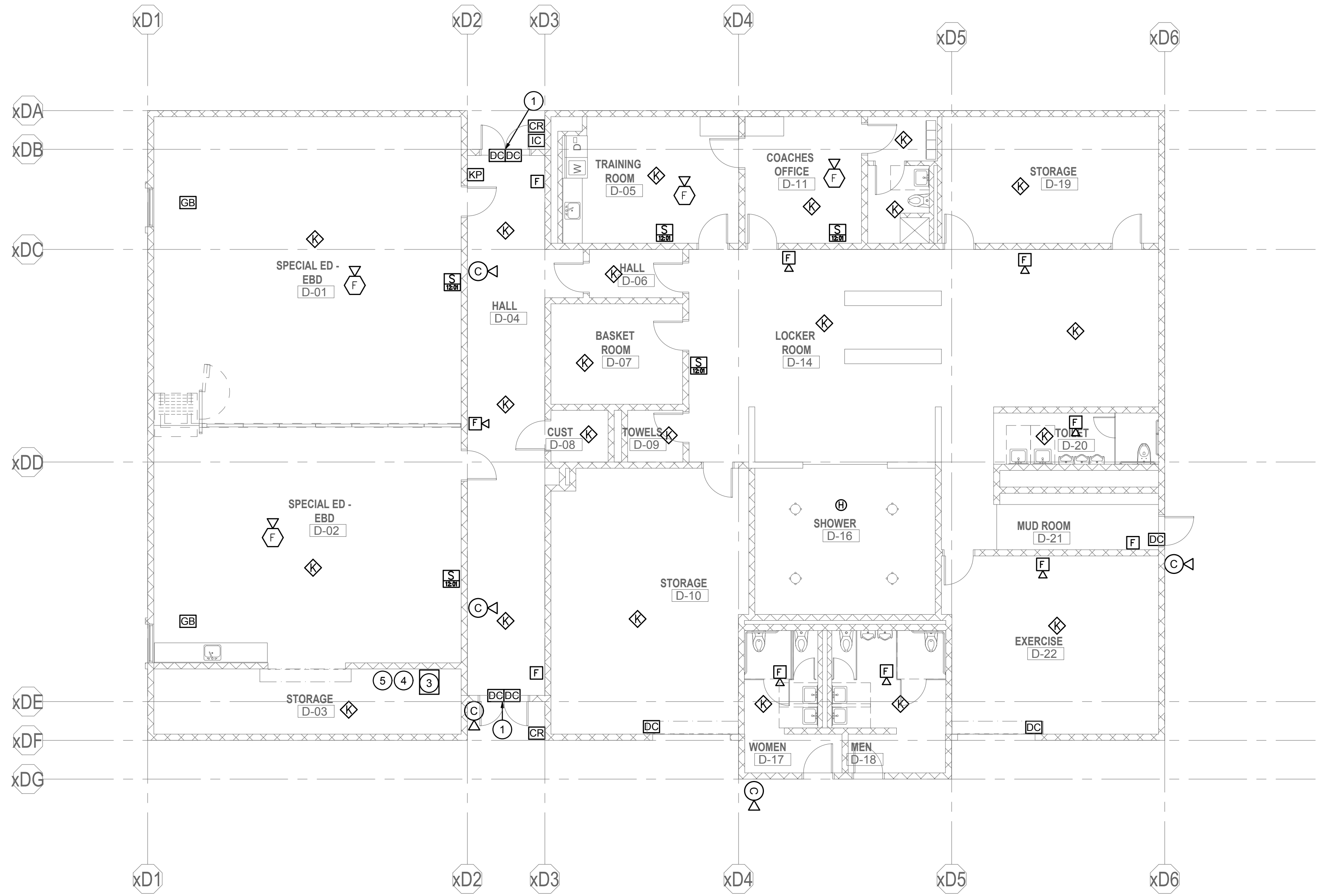
LEVEL 2
BUILDING 1 - FIRE
ALARM &
SECURITY PLAN

E402



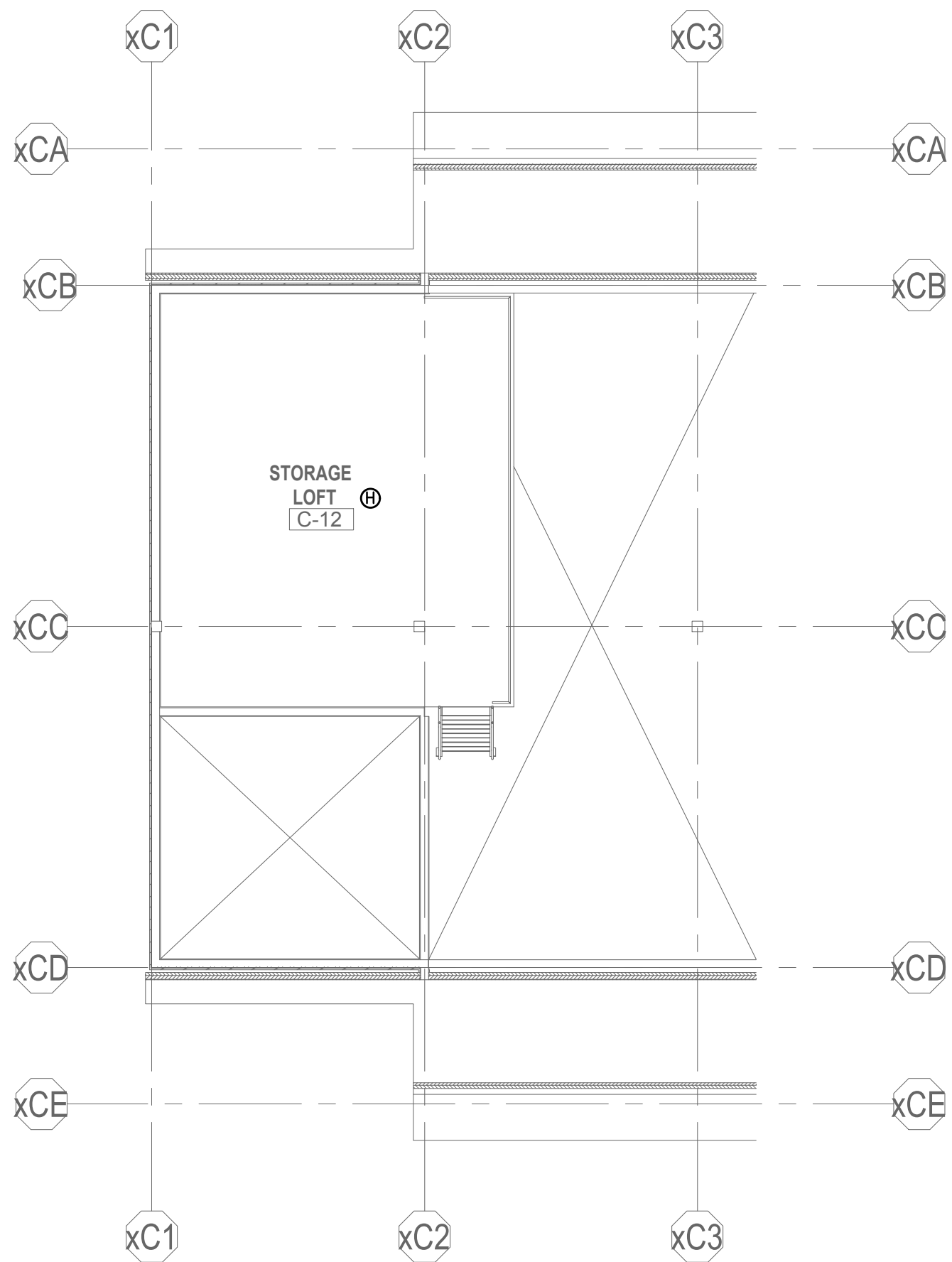
PORTABLE - FIRE ALARM & SYSTEMS PLAN

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



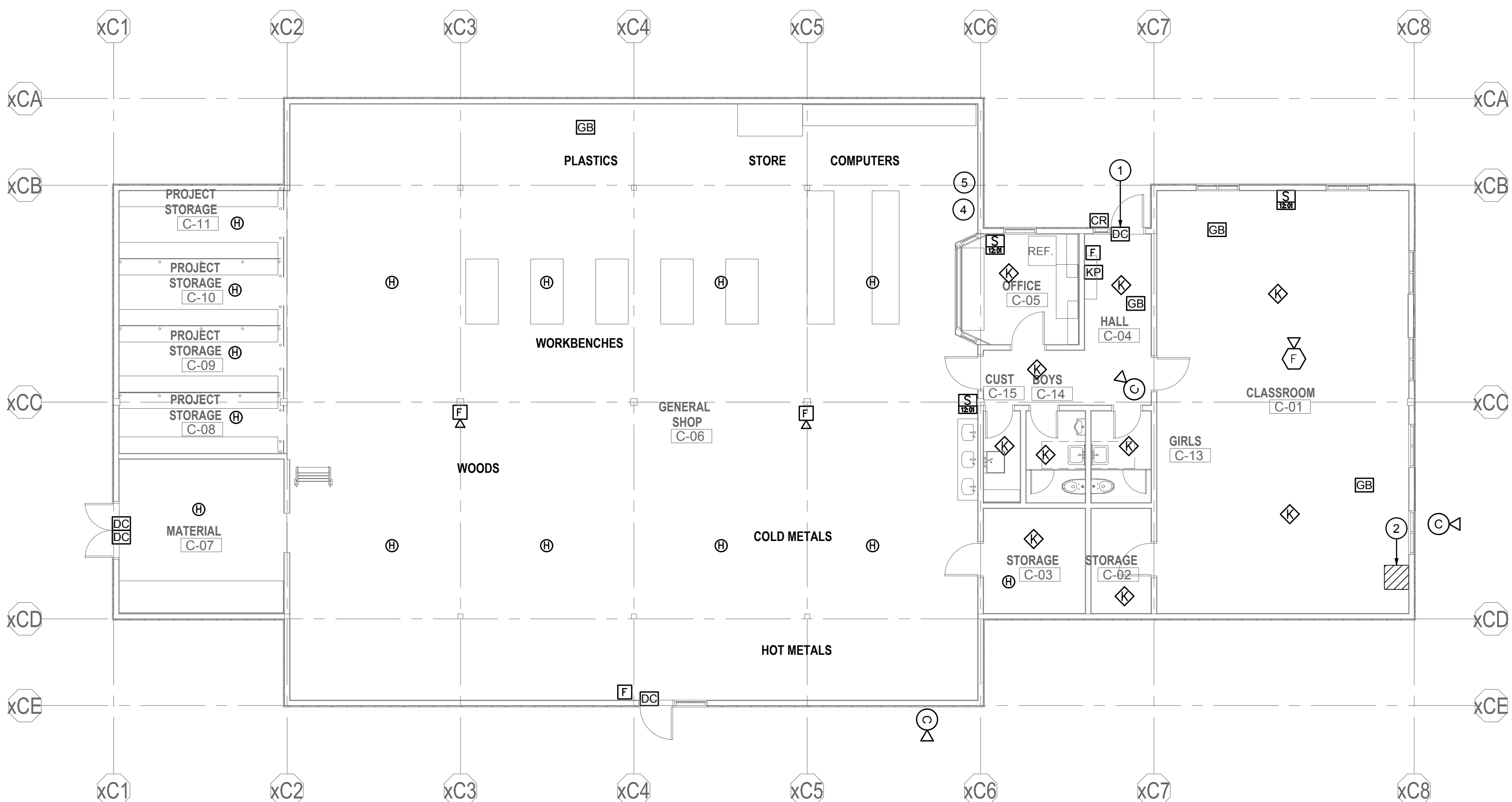
BLDG 3 - FIRE ALARM, SECURITY & SYSTEMS PLAN

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



BLDG 2- LOFT - FIRE ALARM PLAN

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



BLDG 2 - FIRE ALARM, SECURITY & SYSTEMS PLAN

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

GENERAL NOTES:

1. WORK ON THIS SHEET TO BE PERFORMED UNDER ALTERNATE BID 5

BUBBLE NOTES:

1. DOOR TO BE UNLOCKED ON SCHEDULE.
2. EXISTING DATA RACK - PROVIDE NEW INTERCOM PATCH PANEL. TERMINATE NEW FIBER CABLING ON EXISTING PATCH PANEL, PROVIDE NEW CONNECTORS
3. NEW BLDG 3 IDF - WALL MOUNT
4. FIRE ALARM J-BOX
5. FIRE ALARM LIGHTNING PROTECTION
6. EXISTING PORTABLE IDF - FREE-STANDING CABINET
7. KEYPAD DISARMS BOTH CLASSROOMS

integrus
ARCHITECTURE

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engineers inc
1111 Everett Ave Suite 100 Tacoma, WA 98402
Phone: (253) 383-3257 Fax: (253) 383-3253
general@hultzbhu.com Job Number: 20-038

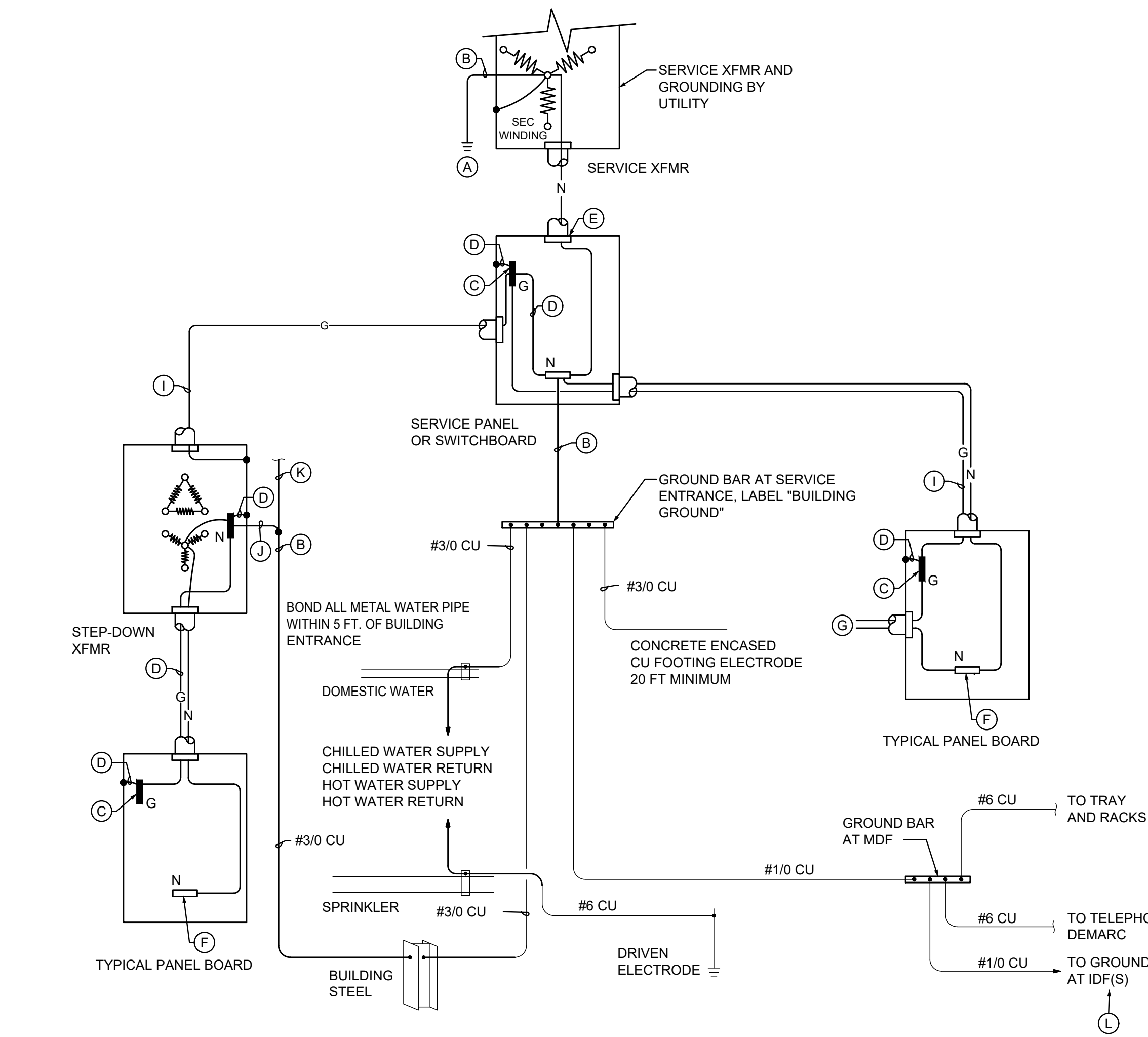
SIGNED
05/28/2021

KELSO SCHOOL DISTRICT NO. 458
HUNTINGTON MIDDLE SCHOOL -
MODERNIZATION AND ADDITION
500 REDPATH ST, KELSO, WA 98626

Date:	05/28/2021
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BLDGs 2, 3 &
PORTABLE - FIRE
ALARM,
SECURITY &
SYSTEMS PLANS

E403

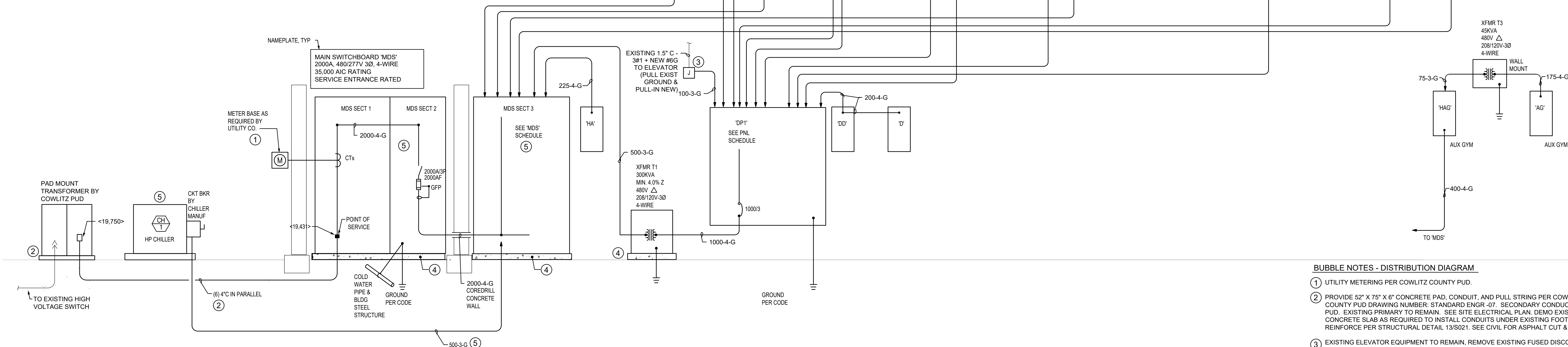


FEEDER SCHEDULE		
CALLOUT X-Y-Z	Y = CONFIGURATION CODE	Z = INDICATES IF GROUND CONDUCTOR(S) ARE INCLUDED
X = NOMINAL CIRCUIT AMPACITY	1N = 1W + NEUT	G = EQUIPMENT GROUND
EG 225 = 225 AMPERES	1 = 1PH 2W	IG = ISOLATED GROUND
	2 = 1PH 3W	
	3 = 3PH 3W	
	4 = 3PH 4W	
CALLOUT	DESCRIPTION	REMARKS
60-3-G	1" C-3R6 + #10 GND	
60-4-G	1 1/2" C-4R6 + #10 GND	
100-3-G	1 1/4" C-3R2 + #8 GND	
100-4-G	1 1/2" C-4R2 + #8 GND	
110-4-G	1 1/2" C-4R1 + #8 GND	
125-3-G	1 1/2" C-3R1 + #8 GND	
125-4-G	1 1/2" C-4R1 + #8 GND	
150-3-G	2" C-3R1/0 + #6 GND	
150-4-G	2" C-4R1/0 + #6 GND	
175-3-G	2" C-3R2/0 + #6 GND	
175-4-G	2" C-4R2/0 + #6 GND	
200-3-G	2" C-3R3/0 + #6 GND	
200-4-G	2" C-4R3/0 + #6 GND	
225-3-G	2" C-3R4/0 + #4 GND	
225-4-G	2 1/2" C-4R4/0 + #4 GND	
250-3-G	2 1/2" C-3R250 KCM + #4 GND	
250-4-G	2 1/2" C-4R250 KCM + #4 GND	
275-4-G	3" C - 4R300KCM + #2G	
300-4-G	3" C - 4R350KCM + #2G	
350-3-G	3" C - 3R500KCM + #2G	
400-4-G	(2) 2" C-4R3/0 + #3 GND IN PARALLEL	
500-3-G	(2) 2 1/2" C-3R250KCM + #2 GND IN PARALLEL	
600-4-G	(3) 2" C-4R350 KCM + #1 GND IN PARALLEL	
700-3-G	(3) 2 1/2" C-3R250 KCM + #1/0 GND IN PARALLEL	
700-4-G	(3) 2 1/2" C-4R250 KCM + #2/0 GND IN PARALLEL	
1000-4-G	(3) 3" C - 4R400 KCM + #3/0 GND IN PARALLEL	
2000-4-G	(5) 3.5" C - 4R600 KCM + #2/0 GND IN PARALLEL	

GROUNDING DIAGRAM

BUBBLE NOTES - GROUNDING DIAGRAM

- (A) DRIVEN ELECTRODE SYSTEM
- (B) GROUNDING ELECTRODE CONDUCTOR
- (C) EQUIPMENT GROUNDING BUS
- (D) BONDING JUMPER, SIZE PER NEC TABLE 250.102 (C) (1)
- (E) GROUNDING LOCKNUT
- (F) INSULATED NEUTRAL BUS
- (G) LIGHTING, RECEPTACLE, MOTOR, & EQUIPMENT CIRCUITS (INCLUDE EQUIPMENT GROUND CONDUCTOR)
- (H) NOT USED
- (I) EQUIPMENT GROUND CONDUCTOR
- (J) GROUNDING ELECTRODE CONDUCTOR FOR SEPARATELY DERIVED SYSTEMS MAY BE INSTALLED AT FIRST DISCONNECTING MEANS (PANELBOARD, SWITCH, ENCLOSED CIRCUIT BREAKER) SUBJECT TO COMPLIANCE WITH ALL NEC 250.30 REQUIREMENTS.
- (K) COMMON GROUNDING ELECTRODE CONDUCTOR FOR SEPARATELY DERIVED SYSTEMS
- (L) BOND TRAY AND RACKS TO GROUND BAR WITH #6 CU.



BUBBLE NOTES - DISTRIBUTION DIAGRAM

- (1) UTILITY METERING PER COWLITZ COUNTY PUD.
- (2) PROVIDE 52" X 75" X 6" CONCRETE PAD, CONDUIT, AND PULL STRING PER COWLITZ COUNTY PUD DRAWING NUMBER: STANDARD ENGR -07. SECONDARY CONDUCTORS BY PUD. EXISTING PRIMARY TO REMAIN. SEE SITE ELECTRICAL PLAN. DEMO EXISTING CONCRETE SLAB AS REQUIRED TO INSTALL CONDUITS UNDER EXISTING FOOTING, REINFORCE PER STRUCTURAL DETAIL 13/9021. SEE CIVIL FOR ASPHALT CUT & PATCH.
- (3) EXISTING ELEVATOR EQUIPMENT TO REMAIN, REMOVE EXISTING FUSED DISCONNECT IN BOILER ROOM, INTERCEPT FEEDER AT CEILING, PROVIDE PULL BOX & EXTEND FEEDER TO NEW PANEL 'DP1'
- (4) PROVIDE REINFORCED CONCRETE HOUSEKEEPING PAD, PROVIDE VIBRATION ISOLATION AT TRANSFORMER
- (5) UNDER DEDUCTIVE ALT BID NO 13 - NO AIR CONDITIONING SYSTEM - PROVIDE 1600A FUSES, DELETE CIRCUIT BREAKER & FEEDER FOR CHILLER
- (6) BOLT TRANSFORMER TO WOOD FLOOR WITH VIBRATION ISOLATORS AT EACH CORNER EDWARDS MFR# A24801441 OR EQUAL

DISTRIBUTION DIAGRAM

KELSO SCHOOL DISTRICT NO. 458 HUNTINGTON MIDDLE SCHOOL - MODERNIZATION AND ADDITION

500 REDPATH ST., KELSO, WA 98626

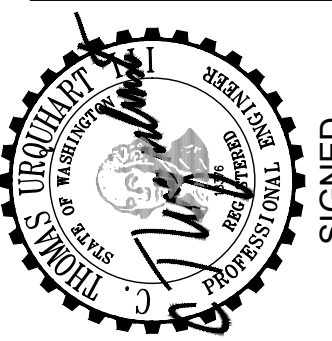
Date:	05.28.2021
Job No.:	21938.00
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Revisions	
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ELECTRICAL DISTRIBUTION

E500

BID SET

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ARCHITECTURE



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Phone: (253) 383-3257 Fax: (253) 383-3283
general@hultzbhu.com Job Number: 20-038

SIGNED
05-26-2021

THREE PHASE PANEL SCHEDULE																							
HK GRID SECTION 1 OF1 LOCATION: KITCHEN				VOLTAGE: 480/277 4W ENCLOSURE X FLUSH SURFACE X NEMA TYPE 1 NEMA TYPE 3R NEMA TYPE 12				RATING: 225 A ACCESSORIES ISOLATED GROUND X SPD 200% NEUTRAL FEED THRU LUGS DOUBLE LUGS				MAIN: LUGS A/C ASSEMBLY SERVICE RATED SERIES RATED X 14K 35K 65K											
CODE	DESCRIPTION	R	VA	BKR *	CKT	A	B	C	CKT	BKR *	VA	DESCRIPTION	R	CODE									
K	DISPOSER (E23)	900	203/G	1	1913				2	15/3	1013	MAKE-UP AIR UNIT	M	M									
K	2HP	900		3			1913		4		1013		M	M									
K		900		5				1913	6		1013		M	M									
K	SHUNT TRIP			7	2027				8	15/3	2027	AHU-8	LM	LM									
K	COMBI-OVEN STEAMER (E18A)	7334	30/3GS	9		9361			10		2027		LM	LM									
K		7333		11				9360	12		2027		LM	LM									
K		7333		13	7333				14	30/3 G		SPARE											
K	SHUNT TRIP			15		0			16														
K	COMBI-OVEN STEAMER (E18B)	7334	30/3GS	17				7334	18														
K		7333		19	24978				20	80/3G	17645	WARE WASHER & BOOSTER HEATER											
K		7333		21		24978			22		17645	(E21)											
K	SHUNT TRIP			23				17645	24		17645												
K	COMBI-OVEN STEAMER (E18C)	7334	30/3GS	25	14668				26	30/3G	7334	COMBI-OVEN STEAMER (E18D)	k	k									
K		7333		27		14667			28		7334	-	k	k									
K		7333		29				14667	30		7334	-	k	k									
K	SHUNT TRIP			31	0				32			SHUNT TRIP											
K	SPARE	20/1		33		0			34	20/1		SPARE											
K	SPARE	20/1		35				0	36	20/1		SPARE											
K	SPD	20/3		37	0				38	20/1		SPARE											
				39		0			40	20/1		SPARE											
				41				0	42	20/1		SPARE											
* BREAKER FEATURES: A=AFCL, G=GFCL, N=SWITCHED NEUTRAL, S=SHUNT TRIP R = RED WITH PADLOCK ATTACHMENT										50919	50919	50919	VA	HK									
										50919	50919	50919	VA SUB-TOTAL										
KVA										KVA					TOTAL LOAD								
L	LIGHTING		X	125%						CONNECTED					KVA					AMPS			
R	RECEPTACLES		X	100%						CALCULATED					152.8					183.7			
R	RECEPTACLES OVER 10K		X	50%											122.5					147.4			
M	MOTORS	3.0	X	100%	3.0						REMARKS												
LM	LARGEST MOTOR	6.1	X	125%	7.6																		
K	KITCHEN	90.7	X	65%	59.0																		
	REMAINDER	52.9	X	100%	52.9																		

THREE PHASE PANEL SCHEDULE																								
HB SECTION 1 OF 1 LOCATION: CUST 106				VOLTAGE: 480/277 ENCLOSURE FLUSH X SURFACE X NEMA TYPE 1 NEMA TYPE 3R NEMA TYPE 12				4W RATING: 225 A ACCESSORIES ISOLATED GROUND X SPD 200% NEUTRAL FEED THRU LUGS DOUBLE LUGS				MAIN: LUGS A/C ASSEMBLY SERVICE RATED SERIES RATED X 14K 35K 65K												
CODE	DESCRIPTION	R	VA	BKR *	CKT	A	B	C	CKT	BKR *	VA	DESCRIPTION	R	CODE										
M	AHU-1 SUPPLY FAN		6800	30/3	1	13600			2	30/3	6800	AHU-2 SUPPLY FAN	LM	LM										
M			6800		3		13600		4		6800		M	LM										
M			6800		5			13600	6		6800		M	LM										
M	AHU-1 RETURN FAN		6800	30/3	7	13600			8	30/3	6800	AHU-2 RETURN FAN	M	M										
M			6800		9		13600		10		6800		M	M										
M			6800		11			13600	12		6800		M	M										
	SPACE			13	0				14			SPACE	M	M										
	SPACE			15			0		16			SPACE	M	M										
	SPACE			17				0	18			SPACE	M	M										
	SPACE			19	0			0	20			SPACE	M	M										
	SPACE			21		0			22			SPACE	M	M										
	SPACE			23			0	0	24			SPACE	M	M										
	SPD	20/3		25			0		26			SPACE	M	M										
				27			0		28			SPACE	M	M										
								0	30			SPACE	M	M										
* BREAKER FEATURES: A=AFCL, G=GFCL, N=SWITCHED NEUTRAL, S=SHUNT TRIP R = RED WITH PADLOCK ATTACHMENT						27200	27200	27200	VA	HB														
						27200	27200	27200	VA SUB-TOTAL															
KVA						KVA	TOTAL LOAD				KVA	AMPS												
L	LIGHTING		X	125%					CONNECTED	81.6	98.2													
R	RECEPTACLES		X	100%					CALCULATED	86.7	104.3													
R	RECEPTACLES OVER 10K		X	50%					REMARKS															
M	MOTORS	61.2	X	100%	61.2																			
LM	LARGEST MOTOR	20.4	X	125%	25.5																			
K	KITCHEN		X	100%																				
	REMAINDER		X	100%																				

THREE PHASE PANEL SCHEDULE																
MDS GRID LOCATION: MAIN ELECTRICAL ROOM			VOLTAGE: 480/277			4W		RATING: 2000 A			MAIN:		2000A FUSED SWITCH, 2000AF WITH GFP			
			ENCLOSURE			ACCESSORIES			A/C ASSEMBLY							
			FLUSH			ISOLATED GROUND			X SERVICE RATED							
			X SURFACE SWITCHBOARD			X SPD						SERIES RATED				
			X NEMA TYPE 1			200% NEUTRAL						14K				
			NEMA TYPE 3R			FEED THRU LUGS						X 35K				
						DOUBLE LUGS						65K				
CODE	DESCRIPTION	R	VA	BKR*	CKT	A	B	C	CKT	BKR*	VA	DESCRIPTION	R	CODE		
OP2	PANEL HK		50919	225/3	1	139623			2	400/3	88704	CHILLER CH-1		OP2		
OP2	-		50919		3		139623		4		88704	PROVIDE PROVISIONS ONLY		OP2		
OP2	-		50919		5			139623	6		88704	UNDER ALT BID 13		OP2		
OP2	PANEL HA		19434	225/3	7	57129			8	400/3	37695	PNL HAG		OP2		
OP2	-		18934		9		55907		10		36973			OP2		
OP2	-		20334		11				12		37757			OP2		
OP2	PNL HG		54090	400/3	13	81290			14	225/3	27200	PNL HB		OP2		
OP2	-		53225		15		80425		16		27200	-		OP2		
OP2	-		53655		17			80855	18		27200	-		OP2		
OP2	XFMR T1 (PANEL DP1)		114067	500/3	21	134041			20	250/3	19974	PNL HC		OP2		
OP2	300KVA		111595		23		130548		22		18953	-		OP2		
OP2	-		123753		25			148466	24		24713	-		OP2		
	PROVISIONS		125/3		25	0			26	225/3		SPARE				
	-				27		0		28			-				
	-				29			0	30			-				
	PROVISIONS		200/3		31		0		32	400/3		PROVISIONS				
	-				33			0	34			-				
	-				35			0	36			-				
	PROVISIONS		500/3		37	0			38	30/3		SPD				
	-				39		0		40			-				
	-				41			0	42			-				
* BREAKER FEATURES:						412083	406503	427035	VA MDS							
A=AFCI, G=GFCI, N=SWITCHED NEUTRAL, S=SHUNT TRIP																
L = WITH PADLOCK ATTACHMENT						412083	406503	427035	VA SUB-TOTAL							
L	LIGHTING		KVA			KVA	TOTAL LOAD		KVA	AMPS						
R	RECEPTACLES	67.0	X	125%		83.8	CONNECTED		1245.6	1498.3						
R	RECEPTACLES OVER 10K	98.2	X	50%		49.1	CALCULATED		1189.2	1430.4						
M	MOTORS	381.3	X	100%		381.3	REMARKS									
L	LARGEST MOTOR	266.1	X	125%		332.6										
K	KITCHEN	142.0	X	65%		92.3										
A	REMAINDER	217.0	X	100%		217.0	PROVIDE 2000A SWITCH WITH 1600 AMP FUSES UNDER ALTERNATE BID 13									
A	RANGES PER 220.55	64.0	X	36%		23.0										
OP2	BRANCH CKT LOADS															

THREE PHASE PANEL SCHEDULE																																	
C		VOLTAGE: 208/120 4W										RATING: 125 A				MAIN: LUG				ENCLOSURE ACCESSORIES A/C ASSEMBLY													
		FLUSH										ISOLATED GROUND				SERVICE RATED				SERIES RATED													
		X SURFACE										X SPD				200% NEUTRAL				X 10K													
		NEMA TYPE 1										FEED THRU LUGS				25K				42K													
		NEMA TYPE 3R										DOUBLE LUGS																					
CODE	DESCRIPTION	R	VA	BKR *	CKT	A	B	C	CKT	BKR *	VA	DESCRIPTION	R	CODE	DESCRIPTION	R	VA	BKR *	CKT	A	B	C	CKT	BKR *	VA	DESCRIPTION	R	CODE					
R	RECEP - WK RM 034		180	20/1	1	1307			2	20/1 G	1127	H20 COOLER/BF - CAFETERIA		M	RECEP - OFFICE 018, GIRLS 015		360	20/1	3										R				
R	RECEP - WK RM 034		360	20/1	3		900		4	20/1 G	540	RECEP - GIRLS 015, PLBG SENSOR		R	RECEP - CAFETERIA		180	20/1	6	540									R				
R	RECEP - WK RM 034		180	20/1	6			540	8	20/1	360	RECEP - CAFETERIA		R	RECEP - CAFETERIA		360	20/1	10										R				
R	RECEP - WK RM 034, MECH RM		360	20/1	9		720		10	20/1	360	RECEP - FAN RM 031		R	RECEP - BOYS & STAFF		360	20/1	14										R				
	SPARE			20/1	11			540	12	20/1	540	RECEP - KITCHEN STOR 20		R	MOTORIZED SHUTTER - WASHING		670	20/1	18										R				
	SPARE			20/1	13	360			14	20/1	360	MOTORIZED SHUTTER - SERVING		LM	MOTORIZED SHUTTER - SERVING		1127	20/1	20										LM				
	SPARE			20/1	17			670	18	20/1	670	MOTORIZED SHUTTER - ALA CARTE		M	MOTORIZED SHUTTER - ALA CARTE		1127	20/1	22										M				
	SPARE			20/1	21		670		22	20/1	670	PLBG SENSORS & TRAP PRIMER			PLBG SENSORS & TRAP PRIMER		100	20/1	24														
	SPARE			20/1	25	100			26	20/1	100	FAN SHUT DOWN RELAY			FAN SHUT DOWN RELAY		200	20/1	26														
	SPARE			20/1	27		0		28	20/1		SPARE			SPARE			20/1	28														
	SPARE			20/1	29			1127	30	20/1 G	1127	H20 COOLER/BF - LVL 1		M	H20 COOLER/BF - LVL 1		1127	20/1 G	30										M				
	GREASE INTERCEPTOR GT-1		515	20/2	33	1500		2015	34	20/1 G	1500	VENDING MACHINE - LVL 1			VENDING MACHINE - LVL 1		1500	20/1 G	34														
			515						35			SPACE			SPACE																		
	SPD			30/3	37	0			38			SPACE			SPACE																		
					41		0		42			SPACE			SPACE																		
* BREAKER FEATURES:		A=AFCI, G=GFCCI, N=SWITCHED NEUTRAL, S=SHUNT TRIP																															
		R = RED WITH PADLOCK ATTACHMENT																															
		KVA										KVA										TOTAL LOAD				KVA				AMPS			
		4.0										4.0										12.9				36.8				CALCULATED			
		3.6										3.6										12.9				36.8							
		1.1										1.1										12.9				36.8							
		4.2										4.2										12.9				36.8							
		4.2										4.2										12.9				36.8							
		4.2										4.2										12.9				36.8							
		4.2										4.2										12.9				36.8							
		4.2										4.2										12.9				36.8							
		4.2										4.2										12.9				36.8							
		4.2										4.2										12.9				36.8							
		4.2										4.2										12.9				36.8							
		4.2										4.2										12.9				36.8							
		4.2										4.2										12.9				36.8							
		4.2										4.2										12.9				36.8							
		4.2										4.2										12.9				36.8							
		4.2										4.2										12.9				36.8							
		4.2										4.2										12.9				36.8							
		4.2										4.2										12.9				36.8							
		4.2										4.2										12.9				36.8							
		4.2										4.2										12.9				36.8							
		4.2										4.2										12.9				36.8							
		4.2										4.2										12.9				36.8							
		4.2										4.2										12.9				36.8							
		4.2										4.2										12.9				36.8							
		4.2										4.2										12.9				36.8							
		4.2										4.2										12.9				36.8							
		4.2										4.2										12.9				36.8							
		4.2										4.2										12.9				36.8							
		4.2										4.2										12.9				36.8							
		4.2										4.2										12.9				36.8							
		4.2										4.2										12.9				36.8							
		4.2										4.2										12.9				36.8							
		4.2										4.2										12.9				36.8							
		4.2										4.2										12.9				36.8							
		4.2										4.2										12.9				36.8							
		4.2										4.2										12.9				36.8							
		4.2										4.2										12.9				36.8							
		4.2										4.2										12.9				36.8							
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		4.2										4.2										12.9				36.8							
		4.2										4.2										12.9				36.8							
		4.2										4.2										12.9				36.8							
		4.2										4.2										12.9				36.8							
		4.2										4.2										12.9				36.8							
		4.2										4.2										12.9				36.8							

THREE PHASE PANEL SCHEDULE																			
G2		VOLTAGE: 208/120 4W				RATING: 400 A				MAIN: LUGS									
SECTION 2 OF 4		ENCLOSURE				ACCESSORIES				A/C ASSEMBLY									
LOCATION: STORAGE 243		FLUSH				ISOLATED GROUND				SERVICE RATED									
		X SURFACE				X SPD				X 10K									
		X NEMA TYPE 1				200% NEUTRAL				X FEED THRU LUGS									
		NEMA TYPE 3R				25K				X 10K									
		NEMA TYPE 12				DOUBLE LUGS				42K									
CODE	DESCRIPTION	R	VA	BKR *	CKT	A	B	C	CKT	BKR *	VA	DESCRIPTION	R	CODE					
M	MOTORIZED BACKBOARD NORTH	1127	20/1	1	2327			2	20/1	1200	GYM CONTROL PANEL								
M	MOTORIZED BACKBOARD SOUTH	1127	20/1	3		2327		4	20/1	1200	GYM CONTROL PANEL								
M	DIVIDER CURTAIN	1127	20/1	5				6	20/1	1200	SCOREBOARD								
M	DIVIDER CURTAIN	1127	20/1	7	2327			8	20/1	1200	SCOREBOARD								
	SPARE		20/2	9		0		10	20/1		SPARE								
	SPARE		20/2	11		0		12	20/1		SPARE								
	SPARE		13		0			14	20/1		SPARE								
	SPARE		15			540		16	20/1	540	RECEP - ROOF, MECH 244								
	SPARE		30/2	17		670		18	20/1	670	EF-145 (1/4 HP)								
	SPARE		19		900			20	20/3	900	BLEACHER								
	SPARE		30/2	21		900		22		900									
LM	MAT HOIST (2 HP)	900	20/3	25	1800			26	20/3	900	BLEACHER								
LM		900		27		1800		28		900									
LM		900		29		1800		30		900									
	SPARE		20/3	31		900		32	20/3	900	BLEACHER								
			33			900				900									
			35			900				900									
	SPARE		30/3	37	900			38	20/3	900	BLEACHER								
			39			900		40		900									
			41			900		42		900									
* BREAKER FEATURES:						9154	7367	7497	VA G2										
A=AFCL, G=GFCI, N=SWITCHED NEUTRAL, S=SHUNT TRIP						19640	17992	17580	VA L1										
R = RED WITH PADLOCK ATTACHMENT						28794	25359	25077	VA SUB-TOTAL										
		KVA				TOTAL LOAD				KVA				AMPS					
		X 125%				CONNECTED				79.2				219.9					
		X 100%				CALCULATED				67.6				187.5					
L	LIGHTING		10.0	X	100%	10.0													
R	RECEPTACLES		24.7	X	50%	12.4													
M	MOTORS		18.9	X	100%	18.9													
LM	LARGEST MOTOR		2.7	X	125%	3.4													
K	KITCHEN		22.9	X	100%	22.9													
	REMAINDER																		

THREE PHASE PANEL SCHEDULE																			
H1		VOLTAGE: 208/120 4W				RATING: 225 A				MAIN: LUG									
		ENCLOSURE				ACCESSORIES				A/C ASSEMBLY									
		FLUSH				ISOLATED GROUND				SERVICE RATED									
		X SURFACE				X SPD				X 10K									
		X NEMA TYPE 1				200% NEUTRAL				X FEED THRU LUGS									
		NEMA TYPE 3R				25K				X 10K									
		NEMA TYPE 12				DOUBLE LUGS				42K									
CODE	DESCRIPTION	R	VA	BKR *	CKT	A	B	C	CKT	BKR *	VA	DESCRIPTION	R	CODE					
	DOOR HARDWARE POWER	500	20/1	1	1580			2	20/1	1080	RECEP - SPEC ED 108 (CONTROLLED)								
	PLUG SENSORS & TRAP PRIMER	200	20/1	3		920		4	20/1	720	RECEP - SPEC ED 108								
R	RECEP - RESTROOMS, CUST 106	540	20/1	5		1540		6	20/1	1000	AV RECEP - SPEC ED 108								
	RECEP - CUST 106	180	20/1	7	720			8	20/1	540	RECEP - SPEC ED 108								
	SPARE		20/1	9		1080		10	20/1	1080	RECEP - SPEC ED 107 (CONTROLLED)								
R	RECEP - CONF 109	360	20/1	11		1080		12	20/1	720	RECEP - SPEC ED 107								
R	RECEP - CONF 109	900	20/1	13	1900			14	20/1	1000	AV RECEP - SPEC ED 107								
	AV RECEP - CONF 109	1000	20/1	15	1360			16	20/1	360	RECEP - SPEC ED 107								
R	RECEP - FACULTY RM 110	360	20/1	17		1440		18	20/1	1080	RECEP - CR 123 (CONTROLLED)								
R	RECEP - FACULTY RM 110	540	20/1	19	1260			20	20/1	720	RECEP - CR 123								
	COPIER RECEP - FACULTY RM 110	1200	20/1	21		2200		22	20/1	1000	AV RECEP - CR 123								
	SM APPLIANCE - FACULTY RM	1500	20/1	23		1860		24	20/1	360	RECEP - CR 123								
	RECEP - FACULTY RM	360	20/1	25	1440			26	20/1	1080	RECEP - CR 122 (CONTROLLED)								
	VENDING MACH - FACULTY RM	1500	20/1 G	27		2220		28	20/1	720	RECEP - CR 122								
	HAND DRYER - GIRLS 105	1800	20/1 L	29		2800		30	20/1	1000	AV RECEP - CR 122								
	HAND DRYER - BOYS 104	1800	20/1 L	31	2160			32	20/1	360	RECEP - CR 122								
M	WATER COOLER/BOTTLE FILLER	1127	20/1 G	33		1667		34	20/1	540	RECEP - SPEC ED 121A								
M	WATER COOLER/BOTTLE FILLER	1127	20/1 G	35		1487		36	20/1	360	RECEP - SPEC ED 121A								
	SPACE		37		540			38	20/1	540	RECEP - 123 - ALT BID *								
	SPACE		39		540			40	20/1	540	RECEP - 122 - ALT BID *								
	SPACE		41		540			42	20/1	540	RECEP - 121 - ALT BID *								
	SPACE		20/1	43	540			44	20/1	540	RECEP - 120 - ALT BID *								
	SPACE		20/1	45	540			46	20/1	540	RECEP - 101 - ALT BID *								
	SPACE		20/1	47	540			48	20/1	540	RECEP - 102 - ALT BID *								
	SPD		30/3	49	540			50	20/1	540	RECEP - 103 - ALT BID *								
				51	540			52	20/1	540	RECEP - 107 - ALT BID *								
				53	540			54	20/1	540	RECEP - 108 - ALT BID *								
* BREAKER FEATURES:						10680	11067	11827	VA H1										
A=AFCL, G=GFCI, N=SWITCHED NEUTRAL, S=SHUNT TRIP						11272	10132	14864	VA H2										
L = WITH PADLOCK ATTACHMENT						21952	21199	26691	VA SUB-TOTAL										
		KVA				TOTAL LOAD				KVA				AMPS					
L	LIGHTING		X	125%							CONNECTED	69.8	193.9						
R	RECEPTACLES	10.0	X	100%	10.0						CALCULATED	60.8	168.8						
R	RECEPTACLES OVER 10K	18.1	X	50%	9.0														
M	MOTORS	2.3	X	100%	2.3						REMARKS								
LM	LARGEST MOTOR		X	125%															
K	KITCHEN		X	100%							* PROVIDE SPARE CKT BKR UNDER BASE BID								
	REMAINDER	39.5	X	100%	39.5														

THREE PHASE PANEL SCHEDULE															
L2		VOLTAGE: 208/120		4W		RATING: 400 A		MAIN: LUG							
		ENCLOSURE		ACCESSORIES		ISOLATED GROUND		A/C ASSEMBLY							
		FLUSH		SERIES RATED		X SPD		X 10K							
		X SURFACE		200% NEUTRAL		X FEED THRU LUGS		NEMA TYPE 12							
		X NEMA TYPE 1		NEMA TYPE 3R		DOUBLE LUGS		42K							
CODE	DESCRIPTION	R	VA	BKR *	CKT	A	B	C	CKT	BKR *	VA	DESCRIPTION	R	CODE	
R	RECEP - STORAGE 203A		500	20/1	1	1580			2	20/1	1080	RECEP - CR 221 (CONTROLLED)	R		
M	KILN VENT KV-1		165	20/1	3		885		4	20/1	720	RECEP - CR 221	R		
M	EF-203B (1/4 HP)		867	20/1	5			1667	6	20/1	1000	AV RECEP - CR 221			
R	RECEP - ROOF		900	20/1	7	1440			8	20/1	540	RECEP - CR 221			
LM	EF-204B (3/4 HP)		1587	20/1	9		2667		10	20/1	1080	RECEP - CR 220 (CONTROLLED)	R		
M	EF-228 (1/6 HP)		506	20/1	11			1226	12	20/1	720	RECEP - CR 220	R		
	IDF		1000	20/1	13	2000			14	20/1	1000	AV RECEP - CR 220			
	IDF		1000	20/1	15		1360		16	20/1	360	RECEP - CR 220	R		
	IDF		1000	20/1	17			2080	18	20/1	1080	RECEP - CR 201 (CONTROLLED)	R		
R	RECEP - 206 - ALT BID *		540	20/1	19	1260			20	20/1	720	RECEP - CR 201	R		
R	RECEP - 207 - ALT BID *		540	20/1	21		1540		22	20/1	1000	AV RECEP - CR 201			
R	RECEP - 203 - ALT BID *		540	20/1	23			1440	24	20/1	900	RECEP - CR 201	R		
R	RECEP - 202 - ALT BID *		540	20/1	25	1620			26	20/1	1080	RECEP - CR 202 (CONTROLLED)	R		
R	RECEP - 201 - ALT BID *		540	20/1	27		1260		28	20/1	720	RECEP - CR 202	R		
R	RECEP - 220 - ALT BID *		540	20/1	29			1540	30	20/1	1000	AV RECEP - CR 202			
R	RECEP - 221 - ALT BID *		540	20/1	31	900			32	20/1	360	RECEP - CR 202	R		
R	RECEP - 222 - ALT BID *		540	20/1	33		1540		34	20/1	1000	AV RECEP - ART 203			
R	RECEP - 223 - ALT BID *		540	20/1	35			1260	36	20/1	720	RECEP - ART 203	R		
R	RECEP - 208 - ALT BID *		540	20/1	37	1260			38	20/1	720	RECEP - ART 203	R		
	SPARE		20/1	39			720		40	20/1	720	RECEP - ART 203	R		
	SPARE		20/1	41				720	42	20/1	720	RECEP - ART 203	R		
	SPARE		20/1	43	0				44	20/1		SPARE			
	SPARE		20/1	45	0		0		46	20/1		SPARE			
	SPARE		20/1	47	0			0	48	20/1		SPARE			
	SPARE		20/1	49	0				50	20/1		SPARE			
	SPARE		20/1	51	0		0		52	20/1		SPARE			
	SPARE		20/1	53	0				54	20/1		SPARE			
* BREAKER FEATURES:															
A=AFCL, G=GFCI, N=SWITCHED NEUTRAL, S=SHUNT TRIP															
L = WITH PADLOCK ATTACHMENT															

KITCHEN EQUIPMENT CONNECTION SCHEDULE												
NAME	DESCRIPTION	MAXIMUM RATINGS						FEEDER		DISCONNECT	REMARKS	
		HP	KVA	FLA	MCA	MOCP	VOLT/PH	#12 EACH PHASE, NEUTRAL, PLUS GROUND	BY	DESCRIPTION		
E1	WALK-IN FREEZER CONDENSING UNIT		4.25	11.80	14.75	20	208	3		• NEMA 4 FUSED DISC.	ISOLATED & DEDICATED CIRCUIT FURNISHED WITH NEMA 5-15P DEDICATED CIRCUIT FURNISHED WITH NEMA 5-15P FURNISHED WITH NEMA 5-15P SHUNT-TRIP BREAKER (FOUR LOCATIONS) FURNISHED WITH NEMA 5-15P SINGLE POINT CONNECTION, INTERCONNECT W/ILMIT SWITCH DEDICATED CIRCUIT CONNECTIONS TO DISPOSER, SOLENOID & SWITCH FURNISHED WITH L14-20P. SCO CORD DROP FURNISHED WITH L14-20P. SCO CORD DROP EXTEND FROM FLOOR STUB FOR CONNECTION. FURNISHED WITH NAME 5-15P DEDICATED CIRCUIT. EXTEND FROM FLOOR STUB WIRED TO SWITCH RUN THRU FOOD GUARD POST. EXTEND FROM WALL STUB WIRED TO SWITCH RUN THRU FOOD GUARD POST. EXTEND FROM WALL STUB FURNISHED WITH NEMA 5-15P. EXTEND FROM WALL STUB. CONNECT TO REMOTE SWITCH FURNISHED WITH NEMA 5-15P. EXTEND FROM WALL STUB. CONNECT TO REMOTE SWITCH WIRED TO ONE SWITCH, RUN THRU FOOD GUARD POST. EXTEND FROM WALL STUB WIRED TO SWITCH RUN THRU FOOD GUARD POST. EXTEND FROM WALL STUB MILK COOLER = 2.7A (NEMA 5-15P) SALAD BAR = 9A (NEMA 5-15P) ISOLATED & DEDICATED. NEMA 5-15P FOR CONDIMENT COUNTER.	
E2	WALK-IN COOLER CONDENSING UNIT		2.74	7.60	9.50	20	208	3		• NEMA 4 FUSED DISC.		
E3	WALK-IN FREEZER EVAP		2.08	10.00	12.50	20	208	1		• FUSED DISC.		
E4	(1) WALK-IN LIGHT		0.08	0.67	0.84	20	120	1		• TOGGLE		
E5	WALK-IN DOOR HEATER		0.50	4.16	5.20	20	120	1		• TOGGLE		
E6	WALK-IN DRAIN LINE HTR		0.50	4.16	5.20	20	120	1		• TOGGLE		
E7	WALK-IN EVAPORATOR		0.24	2.00	2.50	20	120	1		• TOGGLE		
E8	(1) WALK-IN LIGHT		0.08	0.67	0.84	20	120	1		• TOGGLE		
E9	POINT OF SALE		1.00	8.33	10.41	20	120	1		• NEMA 5-15R		
E10	REACH-IN U.C. REFER		0.90	7.50	9.38	20	120	1		• NEMA 5-15R		
E11	CONVENIENCE		1.44	12.00	15.00	20	120	1		• NEMA 5-15R		
E12	CONVENIENCE		1.44	12.00	15.00	20	120	1		• NEMA 5-15R		
E15	HOT WATER DISPENSER		1.80	15.00	18.75	20	120	1		• NEMA 5-15R		
E16	MICROWAVE OVEN		1.61	13.40	16.75	20	120	1		• NEMA 5-15R		
E17	(3) CANOPY HOOD LIGHTS		0.45	3.75	4.69	20	120	1		• TOGGLE		
E18	DOUBLE STACK COMBI-OVEN STEAMERS		22.01	26.47	33.09	35	480	3	1/2"C, (3)#10, (1)#10 GND	• FUSED DISC.		
E20	20-QUART MIXER		0.96	8.00	10.00	20	120	1		• NEMA 5-15R		
E21	WAREWASHER WITH BOOSTER HEATER		52.96	63.70	79.63	80	480	3	1-1/4"C, (4)#4, (1)#8 GND	• NEMA 4 FUSED DISC.		
E22	WAREWASHER DETERGENT FEED		1.44	12.00	15.00	20	120	1		• TOGGLE		
E23	DISPOSER	2 HP	2.83	3.40	4.25	20	480	3		• NEMA 4 FUSED DISC.		
E24	PASS-THRU HEAT/REFER CAB		1.62	13.50	16.88	20	120	1		• CORD AND PLUG		
E24	PASS-THRU HEAT/REFER CAB		2.81	13.50	16.88	20	208	1		• CORD AND PLUG		
E25	ELECTRIC CAN OPENER		1.80	15.00	18.75	20	120	1		• NEMA 5-15R		
E26	CONVENIENCE OUTLET		1.44	12.00	15.00	20	120	1		• CIRCUIT BKR		
E29	FOOD GUARD LTG/HEAT LAMP		1.28	10.66	13.33	20	120	1		• TOGGLE		
E30	DROP IN HOT WELLS		3.72	10.33	12.91	20	208	3		• FUSED DISC.		
E31	FOOD GUARD LTG/HEAT LAMP		0.84	6.96	8.70	20	120	1		• TOGGLE		
E32	DROP IN HEATED HOT PLATE		0.78	6.50	8.13	20	120	1		• NEMA 5-15R		
E33	DROP IN REFRIGERATED WELLS		0.47	3.90	4.88	20	120	1		• NEMA 5-15R		
E34	FOOD GUARD LTG (2 TOTAL)		0.03	0.25	0.31	20	120	1		• NEMA 5-15R		
E35	FOOD GUARD LTG/HEAT LAMP		0.98	8.16	10.20	20	120	1		• NEMA 5-15R		
E36	MILK/SALAD COOLER		1.37	11.40	14.25	20	120	1		• FLOORBOX		
E37	P.O.SALE SYSTEM (2 TOTAL)		1.44	12.00	15.00	20	120	1		• FLOORBOX		

SCHEDULE LEGEND:

114.08

● = FURNISH AND INSTALL NEW UNDER DIVISION 26
○ = INSTALL UNDER DIVISION 26; FURNISHED WITH EQUIPMENT OR BY OTHERS.
X = FURNISH AND INSTALL BY OTHERS (NOT DIVISION 26)
* = EXISTING, RELOCATED EQUIPMENT

EQUIPMENT CONNECTION SCHEDULE NOTES:

1. VERIFY VOLTAGE, PHASE, FLA/MCA OF EACH CONNECTION WITH EQUIPMENT SUPPLIER PRIOR TO ROUGH-IN. NOTIFY ARCHITECT/ENGINEER WHEN SCHEDULED SUPPLY WILL NOT MEET NEC REQUIREMENTS.

2. OUTLETS, DISCONNECTS, CONTROLLERS, AND EQUIPMENT CONNECTIONS FOR ROOF TOP AND OTHER OUTDOOR EQUIPMENT SHALL BE WEATHER PROOF.

3. LOCATION OF OUTLETS, DISCONNECTS, CONTROL DEVICES, AND EQUIPMENT CONNECTIONS ARE DIAGRAMMATIC AND TO BE LOCATED IN FIELD BY THE CONTRACTOR AS APPROVED BY THE ENGINEER. UNLESS OTHERWISE INDICATED ON PLANS, INSTALL CONTROL DEVICES IN SIGHT OF EQUIPMENT. ARRANGE WIRING AND EQUIPMENT TO AVOID INTERFERENCE WITH OTHER WORK AND TO MAXIMIZE ACCESSIBILITY FOR MAINTENANCE AND REPAIRS.

4. COORDINATE WITH THE OTHER INSTALLING CONTRACTORS TO ENSURE NEC REQUIRED ACCESS TO DISCONNECTS IS PROVIDED FOR EACH PIECE OF EQUIPMENT.

5. PROVIDE SMOKE DUCT DETECTORS IN HEATING AND COOLING SYSTEMS PER INTERNATIONAL MECHANICAL CODE. SEE DIVISION 25 EQUIPMENT SCHEDULES FOR ADDITIONAL UNITS RATED OVER 2000 CFM AND PROVIDE DUCT DETECTOR AS REQUIRED.

6. WIRING BETWEEN EQUIPMENT DISCONNECT AND POINT OF CONNECTION SHALL COMPLY WITH NEC BASED ON EQUIPMENT NAMEPLATE RATING EXCEPT MINIMUM BRANCH CIRCUIT RATING SHALL BE 20 AMPERES.

7. SIZE OF DISCONNECT SWITCH AND MOTOR STARTER SHALL BE SIZED TO COMPLY WITH NEC REQUIREMENTS. WHERE INDICATED MOTOR CONTROL IS NOT LOCATED IN SIGHT OF MOTOR AS DEFINED BY NEC, PROVIDE ADDITIONAL DISCONNECTING MEANS TO

8. WIRING SIZES ARE BASED ON 90 DEGREE C. FOR AMPACITIES 100 AMPERES AND LESS. FOR FEEDERS LESS THAN 100 FEET IN LENGTH, CONDUCTOR SIZES MAY BE SELECTED BASED ON 75 DEGREE C. WHERE EQUIPMENT INSTALLED IS LABELED FOR 75 DEGREE

9. SCHEDULE LEGEND: ● = FURNISH AND INSTALL NEW UNDER DIVISION 26
○ = INSTALL UNDER DIVISION 26; FURNISHED WITH EQUIPMENT OR BY OTHERS.
X = FURNISH AND INSTALL BY OTHERS (NOT DIVISION 26)
* = EXISTING, RELOCATED EQUIPMENT

MECHANICAL EQUIPMENT CONNECTION SCHEDULE - MISCELLANEOUS													
NAME	DESCRIPTION	LOCATION	MAXIMUM RATINGS					(CU) FEEDER		DISCONNECT		REMARKS	
			HP	KVA	FLA	MCA	MOCP	VOLT/PH	#12 EACH PHASE, NEUTRAL, PLUS GROUND	BY	DESCRIPTION		
HT-1	CHILLER HEAT TRACE	BOILER RM - CHILLER		0.50	4.2	5.2	20	120	1	● ● ● ● ●	TOGGLE	5W PER LINEAR FOOT	
UH-1	UNIT HEATER	BOILER ROOM	1/20	0.17	1.4	1.8	20	120	1		TOGGLE		
KV-1	KILN VENT			0.17	1.4	1.8	20	120	1		TOGGLE		
AR-1	AIR COMPRESSOR	FS RISER	1	1.14	9.5	11.9	20	120	1		3/4"C, 2#10, 1#10G		RECEPTACLE
GT-1	GREASE INTERCEPTOR	KITCHEN		1.02	4.9	6.2	20	208	1		TOGGLE		

MECHANICAL EQUIPMENT CONNECTION SCHEDULE - WATER HEATERS & BOILERS													
NAME	DESCRIPTION	LOCATION	MAXIMUM RATINGS						(CU) FEEDER		DISCONNECT		REMARKS
			HP	KVA	FLA	MCA	MOCP	VOLT/PH	#12 EACH PHASE, NEUTRAL, PLUS GROUND	BY	DESCRIPTION		
WH-1	TANK TYPE GAS	BOILER ROOM		1.80	15.0	18.8	20	120	1		●	TOGGLE	
WH-2	TANK TYPE GAS	BOILER ROOM		1.80	15.0	18.8	20	120	1		●	TOGGLE	
WH-3	TANK TYPE GAS	BOILER ROOM		1.80	15.0	18.8	20	120	1		●	TOGGLE	
WH-4	TANK TYPE ELECTRIC	AUX GYM CUST		3.00	14.0	17.5	20	208	3		●	30AS/20AF	
B-1	GAS FIRED	BOILER ROOM		4.07	11.3	14.1	20	208	3		●	30AS/20AF	
B-2	GAS FIRED	BOILER ROOM		4.07	11.3	14.1	20	208	3		●	30AS/20AF	

MECHANICAL EQUIPMENT CONNECTION SCHEDULE - CHILLER													
NAME	DESCRIPTION	LOCATION	MAXIMUM RATINGS						(CU) FEEDER		DISCONNECT		REMARKS
			HP	KVA	FLA	MCA	MOCP	VOLT/PH	#12 EACH PHASE, NEUTRAL, PLUS GROUND	BY	DESCRIPTION		
CH-1	CHILLER	EXTERIOR		222.15	267.2	334.0	400	480	3	(2)2-1/2"C, (3)#250kcm, (1)#2G	●	WP 400AS/400AF	WITH HEAT TAPE (HT-1) AND MANUFACTURER PROVIDED UNIT MOUNTED CIRCUIT BREAKER. PROVIDE 120V CIRCUIT FOR SOUND PACKAGE

MECHANICAL EQUIPMENT CONNECTION SCHEDULE - HEAT PUMPS														
NAME	DESCRIPTION	CFM	LOCATION	MAXIMUM RATINGS						(CU) FEEDER		DISCONNECT		REMARKS
				HP	KVA	FLA	MCA	MOCP	VOLT/PH	#12 EACH PHASE, NEUTRAL, PLUS GROUND	BY	DESCRIPTION		
AHU-061	VAV HEAT PUMP	7000	AUX GYM ROOF		86.06	103.5	129.4	150	480	3	2"C, 4#1/0, 1#6G	●	200AS/150AF	PROVIDE DUCT SMOKE DETECTOR WITH 120V FAN SHUT DOWN RELAY. POWERED VIA OUTDOOR HEAT PUMP
AC-035A	SPLIT SYSTEM HP - INDOOR		MDF ROOM		0.00		0.0		208	1		●	TOGGLE	
AC-035B	SPLIT SYSTEM HP - OUTDOOR		EXT MDF ROOM		2.16	10.4	13.0		208	1		●	WP 30AS/20AF	

MECHANICAL EQUIPMENT CONNECTION SCHEDULE - AIR HANDLING UNITS														
NAME	DESCRIPTION	CFM	LOCATION	MAXIMUM RATINGS						(CU) FEEDER		DISCONNECT		REMARKS
				HP	KVA	FLA	MCA	MOCP	VOLT/PH	#12 EACH PHASE, NEUTRAL, PLUS GROUND	BY	DESCRIPTION		
AHU-1	N CR - SUPPLY FAN	15045	ROOF	(6) 2.5	17.03	20.5	25.6	30	480	3	3/4"C, 3#10, 1#10G	•		PROVIDE DUCT SMOKE DETECTOR WITH 120V FAN SHUT DOWN RELAY.
AHU-1	N CR - RETURN FAN	15045	ROOF	(6) 1.3	17.03	20.5	25.6	30	480	3	3/4"C, 3#10, 1#10G	•		
AHU-2	S CR - SUPPLY FAN	17165	ROOF	(6) 2.2	17.03	20.5	25.6	30	480	3	3/4"C, 3#10, 1#10G	•		
AHU-2	S CR - RETURN FAN	17165	ROOF	(6) 1	17.03	20.5	25.6	30	480	3	3/4"C, 3#10, 1#10G	•		PROVIDE DUCT SMOKE DETECTOR WITH 120V FAN SHUT DOWN RELAY.
AHU-3	SW CR - SUPPLY FAN	6295	ROOF	6	6.52	7.8	9.8	15	480	3		•		PROVIDE DUCT SMOKE DETECTOR WITH 120V FAN SHUT DOWN RELAY.
AHU-3	SW CR - RETURN FAN	6295	ROOF	2.8	6.65	8.0	10.0	15	480	3		•		
AHU-12	CAFETERIA - SUPPLY FAN	6000	FAN RM	6.7	6.52	7.8	9.8	15	480	3		•		
AHU-12	CAFETERIA - RETURN FAN	6000	FAN RM	7	6.65	8.0	10.0	15	480	3		•		PROVIDE DUCT SMOKE DETECTOR WITH 120V FAN SHUT DOWN RELAY.
AHU-16	KITCHEN - SUPPLY FAN	650	FAN RM		4.32	5.2	6.5	15	480	3		•		PROVIDE DUCT SMOKE DETECTOR WITH 120V FAN SHUT DOWN RELAY.
AHU-16	KITCHEN - RETURN FAN	650	FAN RM		4.32	5.2	6.5	15	480	3		•		
AHU-143	BOYS LOCKER - SUPPLY FAN	3370	GYM	3.5	3.72	4.5	5.6	15	480	3		•		
AHU-143	BOYS LOCKER - RETURN FAN	2000	GYM	2.3	6.65	8.0	10.0	15	480	3		•		
AHU-145A	GYM - SUPPLY FAN	4000	GYM	6.3	11.57	13.9	17.4	20	480	3		•		
AHU-145A	GYM - RETURN FAN	4000	GYM	3.3	8.51	10.2	12.8	15	480	3		•		
AHU-145B	GYM - SUPPLY FAN	4000	GYM	6.3	11.56	13.9	17.4	20	480	3		•		PROVIDE DUCT SMOKE DETECTOR WITH 120V FAN SHUT DOWN RELAY.
AHU-145B	GYM - RETURN FAN	4000	GYM	3.3	8.73	10.5	13.1	15	480	3		•		
AHU-148	GIRLS LOCKER - SUPPLY FAN	4200	GYM	6.3	6.65	8.0	10.0	15	480	3		•		
AHU-148	GIRLS LOCKER - RETURN FAN	2950	GYM	3.3	2.26	2.7	3.4	15	480	3		•		PROVIDE DUCT SMOKE DETECTOR WITH 120V FAN SHUT DOWN RELAY.

MECHANICAL EQUIPMENT CONNECTION SCHEDULE - PUMPS																
NAME	DESCRIPTION	LOCATION	MAXIMUM RATINGS					(CU) FEEDER		DISCONNECT		CONTROLS			REMARKS	
			HP	KVA	FLA	MCA	MOCP	VOLT/PH	#12 EACH PHASE, NEUTRAL, PLUS GROUND	BY	DESCRIPTION	STARTER	ATC			
											BY DESCRIPTION					
CP-1	INLINE BOILER PUMP	BOILER ROOM	5	6.32	7.6	9.5	20	480	3	●	30AS/20AF	●	NEMA 1	X		
CP-2	INLINE BOILER PUMP	BOILER ROOM	5	6.32	7.6	9.5	20	480	3	●	30AS/20AF	●	NEMA 1	X		
CP-3A	SUCTION HEATING WATER	BOILER ROOM	15	17.46	21.0	26.3	30	480	3	●	30AS/30AF	X	VFD	X		
CP-3B	SUCTION HEATING WATER	BOILER ROOM	15	17.46	21.0	26.3	30	480	3	●	30AS/30AF	X	VFD	X		
CP-4A	SUCTION HEATING WATER	BOILER ROOM	7.5	9.15	11.0	13.8	20	480	3	●	30AS/20AF	X	VFD	X		
CP-4B	SUCTION HEATING WATER	BOILER ROOM	15	17.46	21.0	26.3	30	480	3	●	30AS/30AF	X	VFD	X		
CP-5	CIRC PUMP	BOILER ROOM	1/4	0.70	5.8	7.3	20	120	1	●	TOGGLE	X	RELAY	X		
CP-6A	CIRC PUMP	BOILER ROOM	1/4	0.70	5.8	7.3	20	120	1	●	TOGGLE	X	RELAY	X		
CP-6B	CIRC PUMP	BOILER ROOM	1/4	0.70	5.8	7.3	20	120	1	●	TOGGLE	X	RELAY	X		
CP-7	CIRC PUMP	BOILER ROOM	1/4	0.70	5.8	7.3	20	120	1	●	TOGGLE	X	RELAY	X		
CP-8	CIRC PUMP	CUST 064	1/4	0.70	5.8	7.3	20	120	1	●	TOGGLE	X	RELAY	X		

LIGHT FIXTURE SCHEDULE													
TYPE	DESCRIPTION	MANUFACTURER	LAMP	VA/W	VOLTAGE	REMARKS	TYPE	DESCRIPTION	MANUFACTURER	LAMP	VA/W	VOLTAGE	REMARKS
A4	FULL CUT OFF LED LUMINAIRE, WITH MOTION SENSOR FOR BI-LEVEL OPERATION LIGHT LEVELS, INTEGRAL SURGE SUPPRESSION, TYPE 4 DISTRIBUTION, ROUND 20-FT POLE ROUND BASE COVER 11,905 LUMENS	McGRAW EDISON VENTUS LIGHT PACKAGE E04	3000K LED	100 VA / 97 W	277V	SEE POLE BASE DETAIL	HB1	PENDANT MOUNT LED HIGH BAY, WIDE DISTRIBUTION, CHAIN MOUNT, 0-10V DIMMING DRIVER 18,000 LUMENS	METALUX OHB HE HIGH EFFICIENCY PKG	LED 3500K	110 W	277V	
A4T	TANDEM FULL CUT OFF LED LUMINAIRES AT 180 DEGREE, WITH MOTION SENSOR FOR BI-LEVEL OPERATION INTEGRAL SURGE SUPPRESSION, TYPE 4 DISTRIBUTION, ROUND 20-FT POLE ROUND BASE COVER 14,882 LUMENS PER LUMINAIRE	McGRAW EDISON VENTUS LIGHT PACKAGE E05	3000K LED	140 VA / 127 W PER HEAD 280 VA / 254 W PER POLE	277V	SEE POLE BASE DETAIL	HB2	PENDANT MOUNT LED HIGH BAY, WIDE DISTRIBUTION, CHAIN MOUNT 0-10V DIMMING DRIVER 24,000 LUMENS	METALUX OHB HE HIGH EFFICIENCY PKG	LED 3500K	132 W	277V	
A3T	TANDEM FULL CUT OFF LED LUMINAIRES AT 180 DEGREE, WITH MOTION SENSOR FOR BI-LEVEL OPERATION INTEGRAL SURGE SUPPRESSION, TYPE 3 DISTRIBUTION, ROUND 20-FT POLE ROUND BASE COVER 15,292 LUMENS PER LUMINAIRE	McGRAW EDISON VENTUS LIGHT PACKAGE E05	3000K LED	140 VA / 127 W PER HEAD 280 VA / 254 W PER POLE	277V	SEE POLE BASE DETAIL	L1	2X2 LAY-IN LED FLAT PANEL 0-10V DIMMING DRIVER 4850 LUMENS	LITELINE FORUM	LED 3500K	31 VA / 30 W	277V	
AW4	WALL MOUNT FULL CUT OFF LUMINAIRE WITH MOTION SENSOR FOR BI-LEVEL OPERATION INTEGRAL SURGE SUPPRESSION, TYPE 4 DISTRIBUTION 14,882 LUMENS	McGRAW EDISON VENTUS LIGHT PACKAGE E05	3000K LED	140 VA / 127 W	277V		L2	2X2 LAY-IN LED LUMINAIRE, DIFFUSE OPAL CENTER DIFFUSER, 0-10V DIMMING DRIVER 4478 LUMENS	METALUX ENCOUNTER	LED 3500K	39 VA / 38 W	277V	
C1	LED CANOPY MOUNT FIXTURE SUITABLE FOR INSTALLATION OVER EXISTING J-BOX MIN 3500 LUMENS	MIRUS LIGHTING L1515	3000K LED	36 VA / 34 W	277V		L3	6" X 4' LAY-IN FLAT PANEL 0-10V DIMMING DRIVER 3600 LUMENS	LITELINE FORUM	LED 3500K	31 VA / 30 W	277V	
C4	LED LINEAR FIXTURE 4"WIDE X 48" LONG UL LISTED WET LOCATION WITH DIFFUSE LENS AND WIDE DISTRIBUTION 1000 LUMENS / FOOT	LUMENWERX WET	LED 3000K	60 VA / 48 W	277V		L4	1X4 LAY-IN FLAT PANEL 0-10V DIMMING DRIVER 4660 LUMENS	LITELINE FORUM	LED 3500K	41 VA / 40 W	277V	
WM1	LED WALL PACK WITH TYPE 3 DISTRIBUTION FULL CUT-OFF OPTIC, INTEGRAL SURGE SUPPRESSION 700 mA DRIVER, BRONZE FINISH LUMENS: 8331 / 99 LPW	McGRAW EDISON IMPACT	3000K LED	70 VA / 66 W	UNV		L5	2X4 LAY-IN FLAT PANEL 0-10V DIMMING DRIVER 5240 LUMENS	LITELINE FORUM	LED 3500K	41 VA / 40 W	277V	
EP	SURFACE MOUNT 48" LONG LED, UL LISTED WET LOCATION WHEN WALL MOUNTED, POLYCARBONATE DIFFUSER, INTEGRAL DRIVER LUMENS: 8610	BEGHELLI BS100LED	LED 4000K	71 VA / 70 W	120-277V	ELEVATOR PIT ONLY	L6	RECESSED T-BAR LINEAR LED, SYMMETRIC DISTR, 0-10V DIMMING DRIVER, LENGTH AS SHOWN 1000 LUMENS / FT	ARON EDGET1	LED 3500K	8 W / FT	277V	
MR	48"L SURFACE OR CHAIN MOUNT LED STRIPLIGHT WITH SYMMETRIC REFLECTOR, INTEGRAL DRIVER 5000 LUMENS	LITHONIA ZL1N	LED 4000K	35 VA / 34 W	120V	ELEVATOR MACHINE ROOM	LP8	DIRECT/INDIRECT PENDANT, 4"W X 96"L, ALUMINUM EXTRUSION, SATIN DIFFUSE LENS 0-10V DIMMING DRIVER 1195 LUMENS PER FOOT	LUMENWERX VIA 4 NEORAY	LED 3500K	90 VA / 85 W	277V	
X	LED EXIT SIGN, GREEN LETTERS, WHITE STEEL HOUSING, UNIVERSAL MOUNTING, WITH INTEGRAL BATTERY, TEST SWITCH & SELF DIAGNOSTICS	ISOLITE LP SERIES	LED	4VA / 4W	UNV		R1	SURFACE MOUNT, LENSED LED DISK DOWNLIGHT UL LISTED FOR WET LOCATION, 0-10V DIMMING DRIVER 750 LUMENS	DMF DRD5S	LED 3500K	9 VA / 9 W	277V	
XD	DOUBLE SIDED LED EXIT SIGN, GREEN LETTERS, WHITE STEEL HOUSING, UNIVERSAL MOUNTING WITH DIRECTIONAL ARROWS. WITH INTEGRAL BATTERY, TEST SWITCH & SELF DIAGNOSTICS	ISOLITE LP SERIES	LED	4VA / 4W	UNV		RL12	SIMILAR TO FL8 EXCEPT 12 FEET IN LENGTH. SUITABLE FOR ACP CEILING 0-10V DIMMING DRIVER 1195 LUMENS PER FOOT	NEORAY LUMENWERX	LED	135VA / 127 W	277V	
XG	LED EXIT SIGN, GREEN LETTERS, WHITE STEEL HOUSING, WALL MOUNT WITH WIRE GUARD WITH INTEGRAL BATTERY, TEST SWITCH & SELF DIAGNOSTICS	ISOLITE LP SERIES	LED	4VA / 4W	UNV		SL1	LENSED LED STRIPLIGHT, NARROW CHANNEL FROSTED LENS, SURFACE OR CHAIN HUNG 0-10V DIMMING DRIVER 2680 LUMENS	METALUX SNLED COLUMBIA LCL	LED 3500K	22 VA / 22 W		
K	KILN IN USE LIGHT RED LETTERS, WHITE STEEL HOUSING		LED	4VA / 4W	UNV	SEE KILN WIRING DIAGRAM	S1	SIMILAR TO TYPE L1 EXCEPT WITH SURFACE MOUNT FRAME KIT, 0-10V DIMMING DRIVER 4850 LUMENS	LITELINE FORUM	LED 3500K	41 VA / 40 W	277V	
LF	LINEAR RECESSED DOWNLIGHT WIDE OPTIC, BLACK FINISH	LUMINII STENOS	LED 3500K		120V		S2	48" LONG SURFACE MOUNT LED WITH OPAL ACRYLIC LENS AND JOINER BAND WHERE SHOWN AS LONGER THAN 4-FT UNIT, DUAL CIRCUIT WHERE REQUIRED FOR EMERGENCY LIGHTING 4144 LUMENS	LUMINAIRE VISION V VP4	3500K LED	42 VA / 40 W PER 4-FT	277V	
FL4	RECESSED LINEAR LED. 4"W X 48"L, FLUSH SATIN DIFFUSE LENS, ALUMINUM EXTRUSION 0-10V DIMMING DRIVER 575 LUMENS PER FOOT	NEORAY LUMENWERX	LED	20 VA / 20 W	277V		W2	DIRECT/INDIRECT WALL MOUNT, 4"W X 24"L 0-10V DIMMING DRIVER DIRECT = 644 LUMENS/FT INDIRECT = 488 LUMENS/FT	NEORAY LUMENWERX	LED 3500K	20 VA / 20 W	277V	
FL8	RECESSED LINEAR LED. 4"W X 96"L, FLUSH SATIN DIFFUSE LENS, ALUMINUM EXTRUSION 0-10V DIMMING DRIVER 1195 LUMENS PER FOOT	NEORAY LUMENWERX	LED	90 VA / 85 W	277V		W4	SAME AS TYPE W2 EXCEPT 4"W X 48" L 0-10V DIMMING DRIVER	NEORAY LUMENWERX	LED 3500K	40 VA / 40 W	277V	
FL12	RECESSED LINEAR LED. 4"W X 144"L, FLUSH SATIN DIFFUSE LENS, ALUMINUM EXTRUSION 0-10V DIMMING DRIVER 1195 LUMENS PER FOOT	NEORAY LUMENWERX	LED	135 VA / 127 W	277V		⬇	TWIN HEAD EMERGENCY LIGHT WITH INTEGRAL BATTERY, TEST SWITCH & SELF DIAGNOSTICS WHITE HOUSING, WHITE HOUSING	ISOLITE RL2LED	2W LED		UNV	


KELSO SCHOOL DISTRICT NO. 458
HUNTINGTON MIDDLE SCHOOL -
MODERNIZAITON AND ADDITION

500 REDPATH ST, KELSO, WA 98626

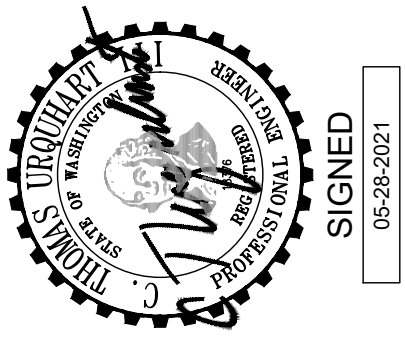
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Revisions		
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LIGHT FIXTURE
SCHEDULE

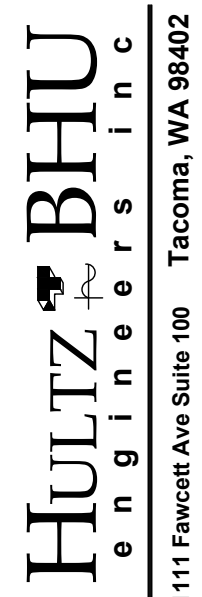
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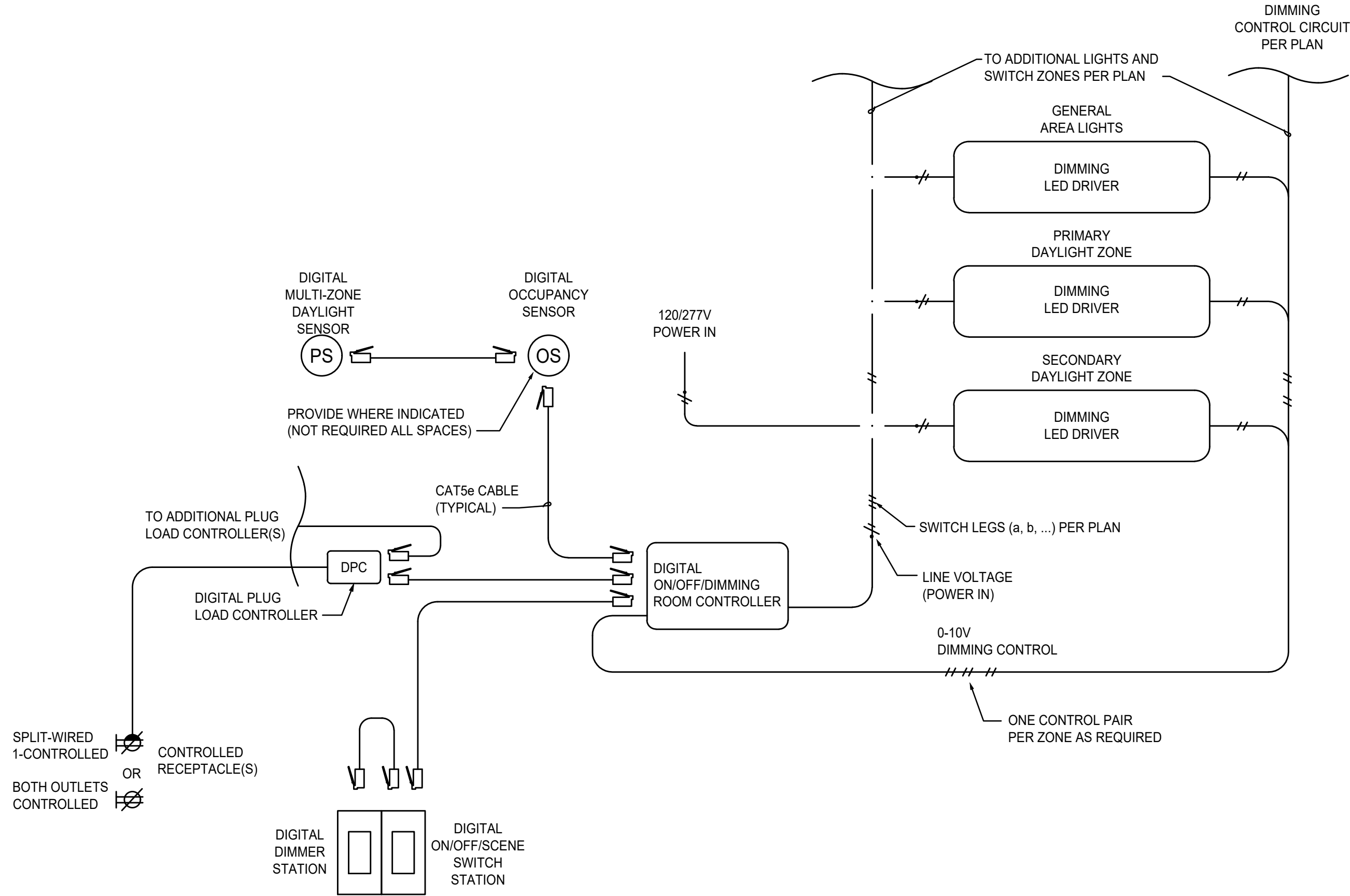
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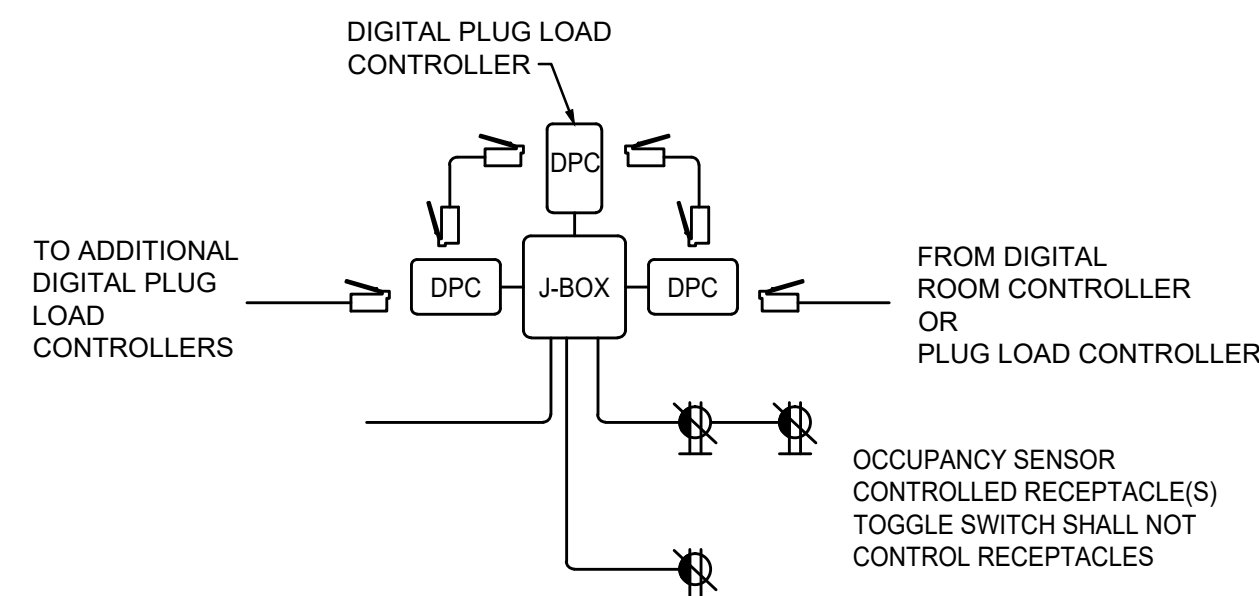
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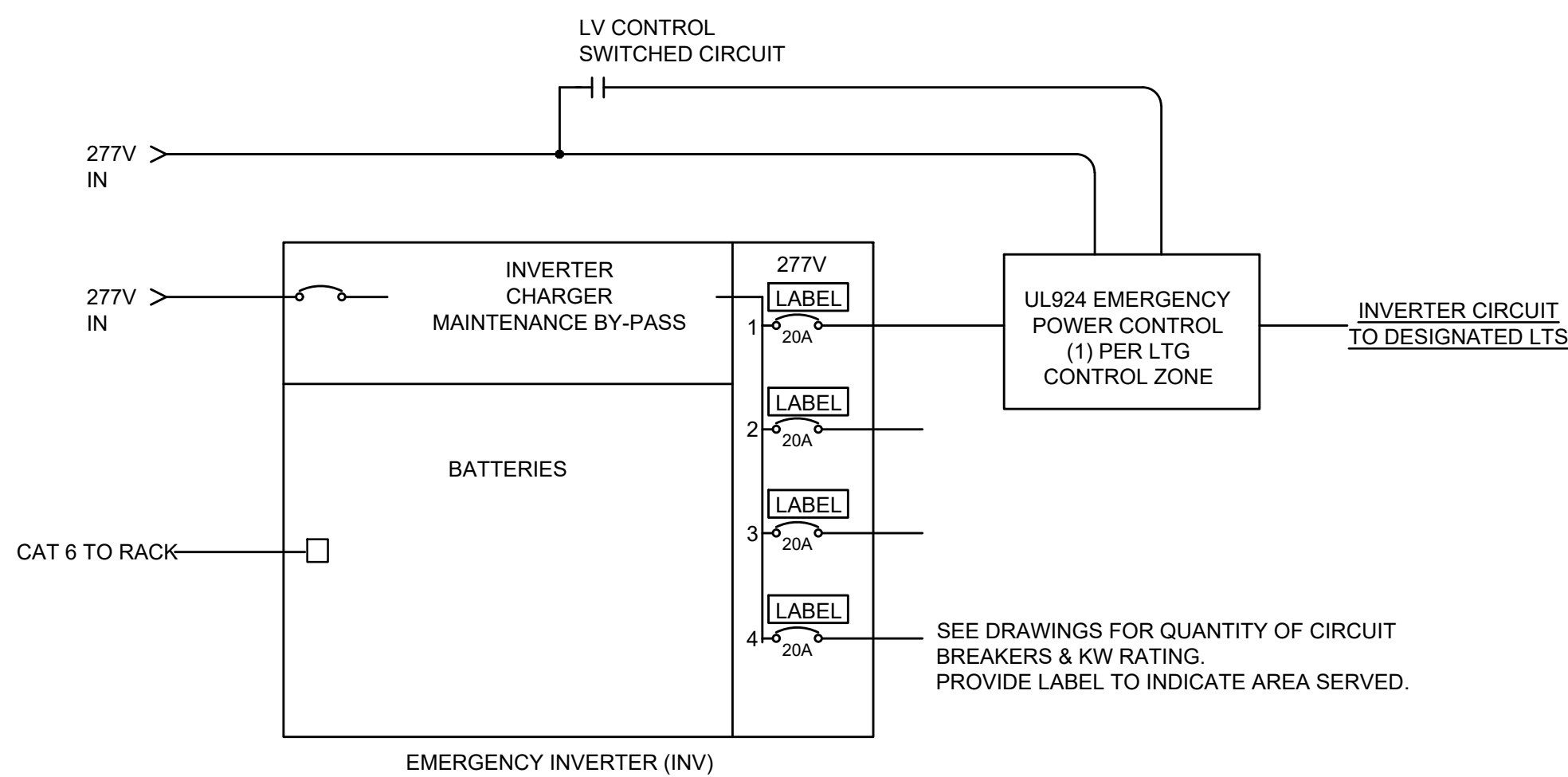
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DIGITAL LIGHTING CONTROL DIAGRAM - DAYLIGHT ZONES/OCCUPANCY SENSOR



DIGITAL PLUG LOAD CONTROL



LIFE SAFETY INVERTER ONE-LINE DIAGRAM

LIGHTING CONTROL NOTES

1. PROVIDE QUANTITY OF RELAY POWER PACKS, ROOM CONTROLLERS, AUTOMATIC SENSORS, AND INTERFACE ACCESSORIES REQUIRED FOR COMPLETE LIGHTING CONTROL SYSTEM BASED ON GENERAL AREA LIGHTING, DAYLIGHT ZONES, AND MANUAL SWITCH CONTROL INDICATED ON PLANS. ROOMS AND BUILDING SPACES WHERE OCCUPANCY SENSORS ARE NOT INDICATED SHALL BE CONNECTED FOR AUTOMATIC TIME SWITCH CONTROL AS SCHEDULED.
2. WHERE OCCUPANCY SENSORS ARE INDICATED, PROVIDE ONE OR MORE SENSORS AS REQUIRED FOR FULL AREA COVERAGE. LOCATE OCCUPANCY SENSORS IN ROOM TO MINIMIZE FALSE ACTIVATION THROUGH OPEN DOORS.
3. INSTALL ROOM CONTROLLERS IN ACCESSIBLE CEILING OR ATTIC SPACES AND WITHIN 6 FEET OF FIRST LIGHTING OUTLET SERVING LIGHTS TO BE CONTROLLED UNLESS OTHERWISE INDICATED.
4. INSTALL RELAY POWER PACK ON BOX OF FIRST LIGHTING OUTLET ABOVE ACCESSIBLE CEILINGS. FOR INACCESSIBLE CEILING SPACES, INSTALL RELAY POWER PACK IN COMMON OUTLET BOX WITH CEILING SENSOR. PROVIDE EXTENDED BOX DEPTH WITH SUITABLE TRIM AND INSTALLATION TO COMPLY WITH NEC 725.136 REQUIREMENTS FOR LINE VOLTAGE/CLASS 2 CIRCUIT SEPARATION USING DIVIDER AND/OR MINIMUM CONDUCTOR SPACE SEPARATION.
5. LOCATE AND AIM DAYLIGHT SENSORS PER SYSTEM MANUFACTURER RECOMMENDATIONS.
6. PROGRAM ROOM CONTROLLERS FOR SEPARATE ON/OFF MANUAL CONTROL OF ROOM LIGHTS PER PLAN (a, b, ...) AND MASTER DIMM CONTROL UNLESS OTHERWISE DIRECTED BY OWNER.
7. PROGRAM ROOM CONTROLLERS FOR AUTOMATIC CONTROL OF ROOM LIGHTS AS FOLLOWS: OCCUPANCY SENSOR(S) AUTOMATIC OFF UNLESS OTHERWISE SCHEDULED. DAYLIGHT SENSOR(S) SEPARATE AUTOMATIC DIM OF PRIMARY AND SECONDARY DAYLIGHT ZONES. DAYLIGHT RESPONSIVE CONTROLS SHALL BE CONFIGURED TO COMPLETELY SHUT OFF ALL CONTROLLED LIGHTS IN THAT ZONE.
8. PROGRAM DIGITAL RECEPTACLE PLUG CONTROLLER(S) FOR OCCUPANCY SENSOR AUTOMATIC OFF UNLESS OTHERWISE INDICATED.
9. PROVIDE DIGITAL WALL SWITCH STATIONS WITH A PUSHBUTTON FOR EACH CONTROL CIRCUIT INDICATED (a, b, c ...) PLUS A LABELED "ALL OFF" PUSHBUTTON AND LABELED DIMMING CONTROL SWITCH, UNLESS OTHERWISE INDICATED.
10. LOW VOLTAGE WIRING SHALL BE INSTALLED IN 3/4" DIAMETER CONDUIT EXCEPT OPEN CABLEING MAY BE INSTALLED ABOVE ACCESSIBLE CEILINGS AND IN ATTIC SPACES UNLESS OTHERWISE INDICATED ON PLANS.
11. WHEN A NETWORKED BUILDING LIGHTING CONTROL SYSTEM IS PROVIDED, INTERFACE MODULE(S) MAY BE PROVIDED IN LIEU OF ROOM CONTROLLERS.

LIGHTING AND RECEPTACLE CONTROL SCHEDULE

ROOM NAME	MANUAL CONTROL				AUTOMATIC CONTROL							UL924 EMERGENCY POWER CONTROL	REMARKS
	LINE VOLTAGE SW	LOW VOLTAGE SW	RAISE / LOWER	SCENE SW	MANUAL ON	AUTO ON	COMBINATION WALL SWITCH/OCC SENSOR	CEILING OCC SENSOR	RELAY CONTROLLED BY TIMECLOCK	DAYLIGHT SENSOR FOR AUTOMATIC DIMMING	50% RECPT LOAD CNTRL - TIMECLOCK		
TYPICAL CLASSROOM		X	X	X	X			X		X		X	TYP CLASSROOM TO HAVE 3 MANUAL CONTROLS ZONES, a = FRONT OF ROOM, b = CENTER OF ROOM, c = BACK OF ROOM WITH ABILITY TO RAISE/LOWER LIGHT LEVEL IN EACH ZONE OR TURN LIGHTS OFF. CLASSROOM TO HAVE 2 AUTOMATIC CONTROL ZONES FOR PRIMARY & SECONDARY DAYLIGHT ZONES THAT ARE TYPICALLY PERPENDICULAR TO THE MANUAL CONTROL ZONES. ONE CONTROLLED RECEPTACLE CIRCUIT PER ROOM. CONTROL MAY BE COMBINED WITH OCCUPANCY SENSOR FOR LIGHTING OR SEPARATE SENSORS.
SPECIAL EDUCATION, SCIENCE, FACS & ART CLASSROOMS		X	X	X	X			X		X	X	X	TYP CLASSROOM TO HAVE 3 MANUAL CONTROLS ZONES, a = FRONT OF ROOM, b = CENTER OF ROOM, c = BACK OF ROOM WITH ABILITY TO RAISE/LOWER LIGHT LEVEL IN EACH ZONE OR TURN LIGHTS OFF. CLASSROOM TO HAVE 2 AUTOMATIC CONTROL ZONES FOR PRIMARY & SECONDARY DAYLIGHT ZONES THAT ARE TYPICALLY PERPENDICULAR TO THE MANUAL CONTROL ZONES. ONE CONTROLLED RECEPTACLE CIRCUIT PER ROOM.
LIBRARY		X	X	X	X			X		X		X	3 MANUAL CONTROLS ZONES, a = WEST SIDE - STACKS, b = CIRCULATION - CENTER PENDANTS, c = EAST SIDE - COMPUTER LAB. WITH ABILITY TO RAISE/LOWER LIGHT LEVEL IN EACH ZONE OR TURN LIGHTS OFF. WITH AUTOMATIC CONTROL ZONES FOR PRIMARY & SECONDARY DAYLIGHT ZONES.
TYPICAL OFFICE		X	X		X			X				X	TYP OFFICE TO HAVE MANUAL ON/OFF/RAISE/LOWER SWITCH STATION WITH CEILING MOUNTED OCCUPANCY SENSOR AND OCCUPANCY SENSOR CONTROL OF INDICATED RECEPTACLES.
BREAK ROOM & WORK ROOM		X	X		X			X			X	X	MANUAL ON/OFF/RAISE/LOWER SWITCH STATION WITH CEILING MOUNTED OCCUPANCY SENSOR AND TIME CLOCK CONTROL OF INDICATED RECEPTACLES.
TYPICAL CONFERENCE ROOM		X	X		X			X				X	MANUAL ON/OFF/RAISE/LOWER SWITCH STATION WITH CEILING MOUNTED OCCUPANCY SENSOR AND OCCUPANCY SENSOR CONTROL OF INDICATED RECEPTACLES.
CORRIDOR		X				X		X	X			X	CORRIDOR TO HAVE COMBINATION OF OCCUPANCY SENSORS AND TIME CLOCK WITHIN LOW VOLTAGE LIGHTING CONTROL PANEL WITH MANUAL OVERRIDE SWITCH IN CENTRAL LOCATION.
MULTI-OCCUPANT TOILETS		X				X		X	X			X	COMBINATION OF OCCUPANCY SENSORS AND TIME CLOCK WITHIN LOW VOLTAGE LIGHTING CONTROL PANEL WITH MANUAL OVERRIDE SWITCH IN CENTRAL LOCATION.
LOCKER ROOMS		X				X		X	X			X	COMBINATION OF OCCUPANCY SENSORS AND TIME CLOCK WITHIN LOW VOLTAGE LIGHTING CONTROL PANEL WITH MANUAL OVERRIDE SWITCH IN CENTRAL LOCATION.
SINGLE OCCUPANT TOILETS		X				X		X				X	
CAFETERIA		X	X	X		X		X	X	X		X	SIMILAR TO CORRIDOR WITH TIMECLOCK FOR AUTOMATIC CONTROL DURING NORMALLY OCCUPIED HOURS AND MANUAL SWITCHES FOR ON/OFF/RAISE/LOWER CONTROL OF EACH ZONE TO BE LOCATED IN KITCHEN WITH OCCUPANCY SENSORS FOR AUTOMATIC CONTROL OUTSIDE OF NORMALLY OCCUPIED HOURS
GYM		X	X	X		X		X	X	X		X	SIMILAR TO COMMONS WITH TIMECLOCK FOR AUTOMATIC CONTROL AND MANUAL SWITCHES FOR ON/OFF/RAISE/LOWER CONTROL OF EACH ZONE TO BE LOCATED ON NORTH & SOUTH SIDES OF DIVIDER CURTAIN.
AUX GYM		X	X	X		X		X	X	X		X	SIMILAR TO COMMONS WITH TIMECLOCK FOR AUTOMATIC CONTROL AND MANUAL SWITCHES FOR ON/OFF/RAISE/LOWER CONTROL OF EACH ZONE
KITCHEN		X	X			X		X				X	
STAGE		X	X	X	X				X			X	DMX CONTROL STATION FOR PERFORMANCE LIGHTS
STORAGE		X			X								
EQUIPMENT ROOMS	X												NO AUTOMATIC CONTROLS FOR SAFETY PURPOSES
EXTERIOR - BUILDING MOUNT													PHOTOCELL ON & OFF AT REQUIRED EXITS
EXTERIOR - BUILDING MOUNT									X				PHOTOCELL ON & TIMECLOCK OFF WHERE NOT REQUIRED BY
EXTERIOR - POLE MOUNT									X				ASTRONOMIC TC ON & OFF WITH MOTION SENSOR DIMMING

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SIGNED
05/26/2021

KELSO SCHOOL DISTRICT NO. 458
HUNTINGTON MIDDLE SCHOOL -
MODERNIZATION AND ADDITION
500 REDPATH ST, KELSO, WA 98626

Date:	05.28.2021
Job No.:	21938.00
Drawn By:	BN
Checked by:	SH
Revisions	
#	Date Description

LIGHTING
CONTROL

COMMUNICATIONS BACKBONE CONDUIT SCHEDULE					
ID	(QTY) SIZE	CONDUCTORS	FROM	TO	PURPOSE
C1 C2 C3	EXISTING EXISTING NEW	25 PAIR TRUNK	UTILITY CONNECTION UTILITY CONNECTION BOILER RM	MDF ROOM BOILER RM MDF RM	WIDE AREA NETWORK FIBER ANALOG TELEPHONE EXTEND FROM TELEPHONE DEMARC TO NEW MDF
C4	(1) 3 INCH (1) 2 INCH (1) 1.25 INCH (1) 2 INCH (1) 1.25 INCH (2) 2 INCH (1) 2 INCH	12--STRAND SINGLE--MODE FO W/ INNER DUCT 25 PAIR TRUNK SLC LOOP (2) CAT 6 COAX (PROVISION)	MDF	IDF #1 LVL 2 AREA A	LAN ANALOG TELEPHONE FIRE ALARM SECURITY NEWTWORK ELECTRONICS MANAGEMENT SPARE EMERGENCY RESPONDER RADIO PROVISION
C5	(1) 3 INCH (1) 2 INCH (1) 1.25 INCH (1) 2 INCH (1) 1.25 INCH (2) 2 INCH	12--STRAND SINGLE--MODE FO W/ INNER DUCT 25 PAIR TRUNK SLC LOOP (2) CAT 6	MDF	IDF #2 LVL 2 AREA B	LAN ANALOG TELEPHONE FIRE ALARM SECURITY NEWTWORK ELECTRONICS MANAGEMENT SPARE
C6	(1) 2 INCH	COAX (PROVISION)	IDF #1	IDF #2	EMERGENCY RESPONDER RADIO PROVISION
C7	(1) 3 INCH (1) 2 INCH (1) 1.25 INCH (1) 2 INCH (2) 2 INCH	12--STRAND SINGLE--MODE FO W/ INNER DUCT 25 PAIR TRUNK SLC LOOP	MDF	IDF #3 AUX GYM	LAN ANALOG TELEPHONE FIRE ALARM SECURITY SPARE
C8	(2) 2 INCH	12--STRAND SINGLE--MODE FO W/ INNER DUCT 25 PAIR TRUNK SLC LOOP	MDF	IDF #4 CTE BLDG	LAN ANALOG TELEPHONE FIRE ALARM SECURITY
C9	(1) 2 INCH (1) 1 INCH	6 OR 12 STRAND FO W (2) CAT 5 I/O SLC LOOP	IDF #4 CTE BLDG	IDF #5 FIELD HOUSE BLDG	LAN ANALOG TELEPHONE FIRE ALARM SECURITY
C10	EXISTING -- --	6--STRAND SINGLE--MODE FO W/ INNER DUCT 25 PAIR TRUNK SLC LOOP	IDF #2	IDF #6 PORTABLE	LAN ANALOG TELEPHONE FIRE ALARM
C11	(1) 2 INCH	COAX	MDF	ROOF	EMERGENCY RESPONDER RADIO SYSTEM

BUBBLE NOTES:

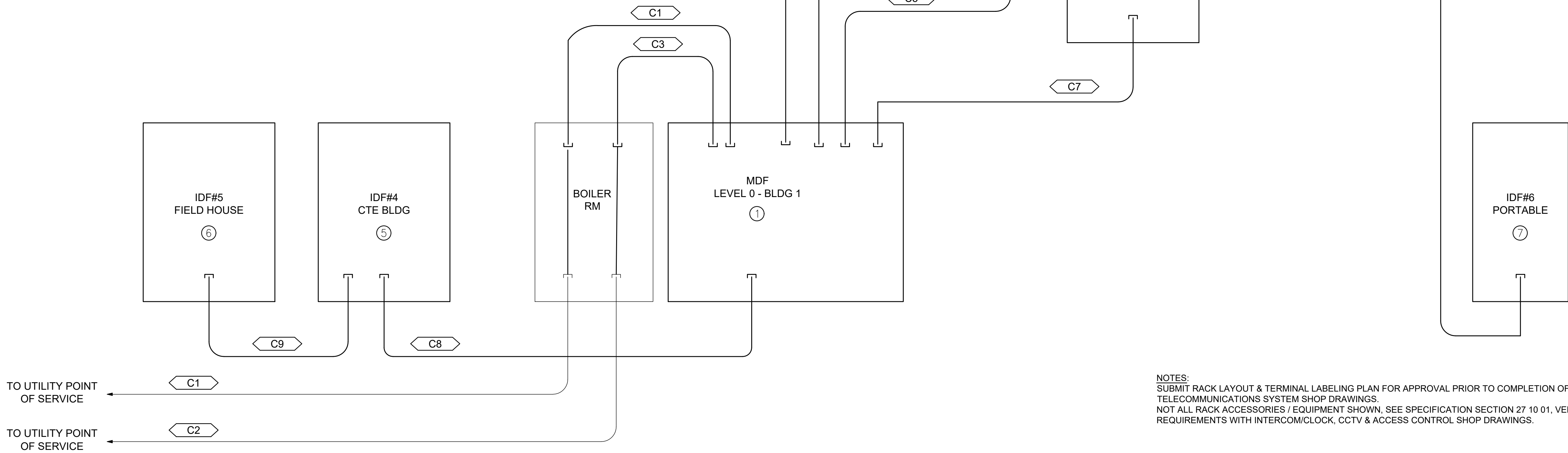
- ① MDF
(4) 7-FT HIGH 4-POST RACKS, PROPOSED RACK ARRANGEMENT (TO BE VERIFIED)
RACK #1
FIBER PATCH PANEL
FIBER SWITCH
FIBER SHELF
24-PORT CAT 5E ANALOG PATCH PANEL
SPACE FOR VOIP SWITCH (SWITCH BY OWNER)
SPACE FOR OWNER'S SERVER
UPS
2 RMU HORIZONTAL WIRE MANAGEMENT BETWEEN EACH PATCH PANEL
- RACKS #2
(4) 48-PORT CAT 6 STATION PATCH PANELS
(7) 48-PORT CAT 6A WAP PATCH PANEL
(1) 24-PORT ANALOG PATCH PANEL
(8) 2 RMU HORIZONTAL WIRE MANAGEMENT PANELS
(1) SHELF
(1) POWER STRIPS
- RACK #3
INTERCOM CLOCK EQUIPMENT
SHELF
(2) 48-PORT INTERCOM/CLOCK PATCH PANEL
UPS
- RACK #4
(2) 48-PORT CAT 6 CCTV PATCH PANEL
CCTV POE SWITCHES
(1) ACCESS CONTROL PATCH PANEL
MEDIA CONVERTERS FOR FIBER TO ETHERNET FOR CCTV CAMERAS
(1) POWER STRIP
UPS

BUBBLE NOTES:

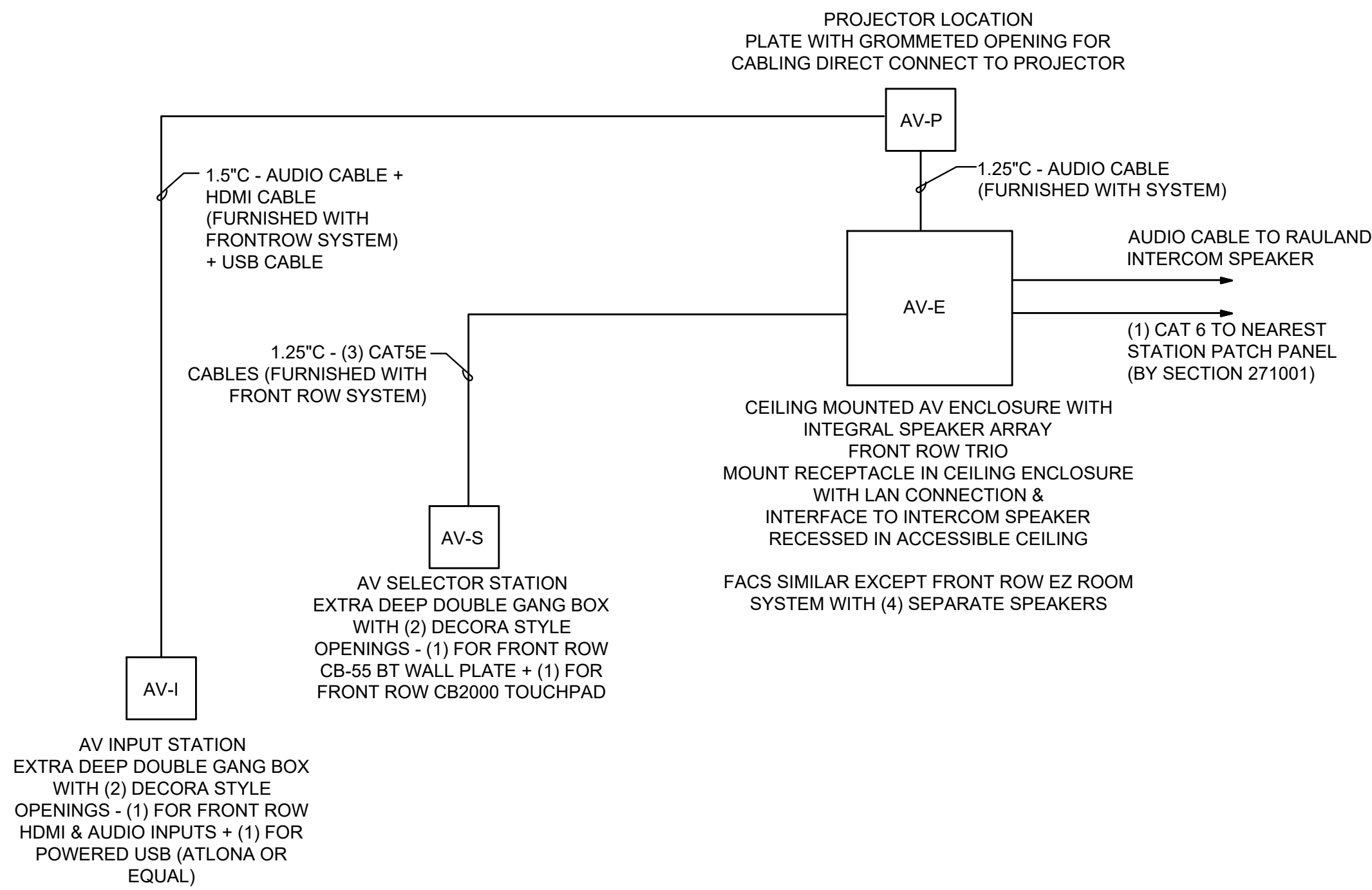
- ② IDF #1
(1) ENCLOSED CABINET
FIBER PATCH PANEL
2 RMU HORIZONTAL WIRE MANAGEMENT BETWEEN EACH 48 PORT PATCH PANEL
1 RMU HORIZONTAL WIRE MANAGEMENT BETWEEN EACH 24 PORT PATCH PANEL
(4) 48-PORT STATION CAT 6 PATCH PANELS
(2) 48-PORT WAP CAT 6A PATCH PANEL
(1) 48-PORT CCTV CAT 6 PATCH PANEL
(1) 24-PORT ANALOG PATCH PANEL
UPS
(ALL IC/CLOCK TO IDF#2 OR MDF)
- ③ IDF #2
(2) 4-POST OPEN RACKS
FIBER PATCH PANEL
2 RMU HORIZONTAL WIRE MANAGEMENT BETWEEN EACH PATCH PANEL
(4) 48-PORT STATION CAT 6 PATCH PANELS
(2) 48-PORT WAP CAT 6A PATCH PANEL
(2) 48-PORT INTERCOM/CLOCK PATCH PANEL
(1) 24-PORT ANALOG PATCH PANEL
(1) ACCESS CONTROL PATCH PANEL
UPS
(ALL CCTV TO IDF#1, IDF#3 OR MDF)
- ④ IDF #3
5RMU WALL MOUNT CABINET
FIBER PATCH PANEL
CAT 6A PATCH PANEL - STATIONS & WAPS
CAT 6 CCTV PATCH PANEL
UPS
(IC/CLOCK THIS AREA TO IDF#2)
SEE E300C

BUBBLE NOTES:

- ⑤ IDF #4
EXISTING WALL MOUNT RACK
FIBER PATCH PANEL
2 RMU HORIZONTAL WIRE MANAGEMENT BETWEEN EACH 48 PORT PATCH PANEL
1 RMU HORIZONTAL WIRE MANAGEMENT BETWEEN EACH 24 PORT PATCH PANEL
(1) 48-PORT STATION PATCH PANELS
(1) 24-PORT WAP PATCH PANEL
(1) 12-PORT ANALOG PATCH PANEL
(1) INTERCOM/CLOCK PATCH PANEL
UPS
- ⑥ IDF #5
WALL MOUNT RACK
FIBER PATCH PANEL
1 RMU HORIZONTAL WIRE MANAGEMENT BETWEEN EACH PATCH PANEL
2 RMU HORIZONTAL WIRE MANAGEMENT BETWEEN EACH 24 PORT PATCH PANEL
(1) 48-PORT STATION PATCH PANELS
(1) 24-PORT WAP PATCH PANEL
(1) 12-PORT ANALOG PATCH PANEL
(1) INTERCOM/CLOCK PATCH PANEL
UPS
- ⑦ IDF #6
EXISTING ENCLOSED CABINET
EXISTING FIBER PATCH PANEL - PROVIDE NEW INSERTS
TERMINATE FIBER & COPPER ON EXISTING TERMINALS
EXCEPT NEW FOR INTERCOM/CLOCK



TELECOMMUNICATIONS SYSTEM RISER DIAGRAM



CLASSROOM & CONFERENCE RM AV SYSTEM RISER

NOTES:

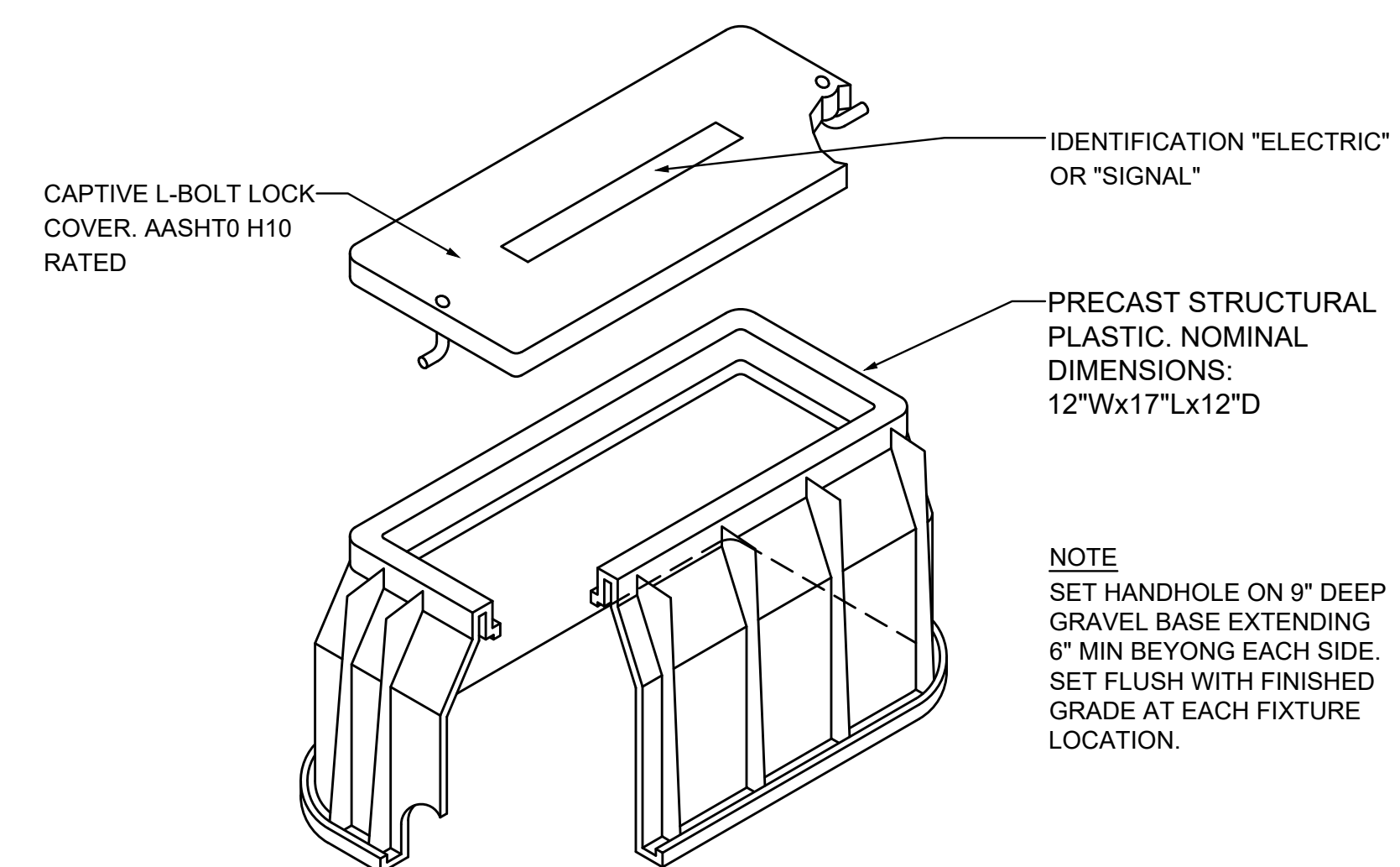
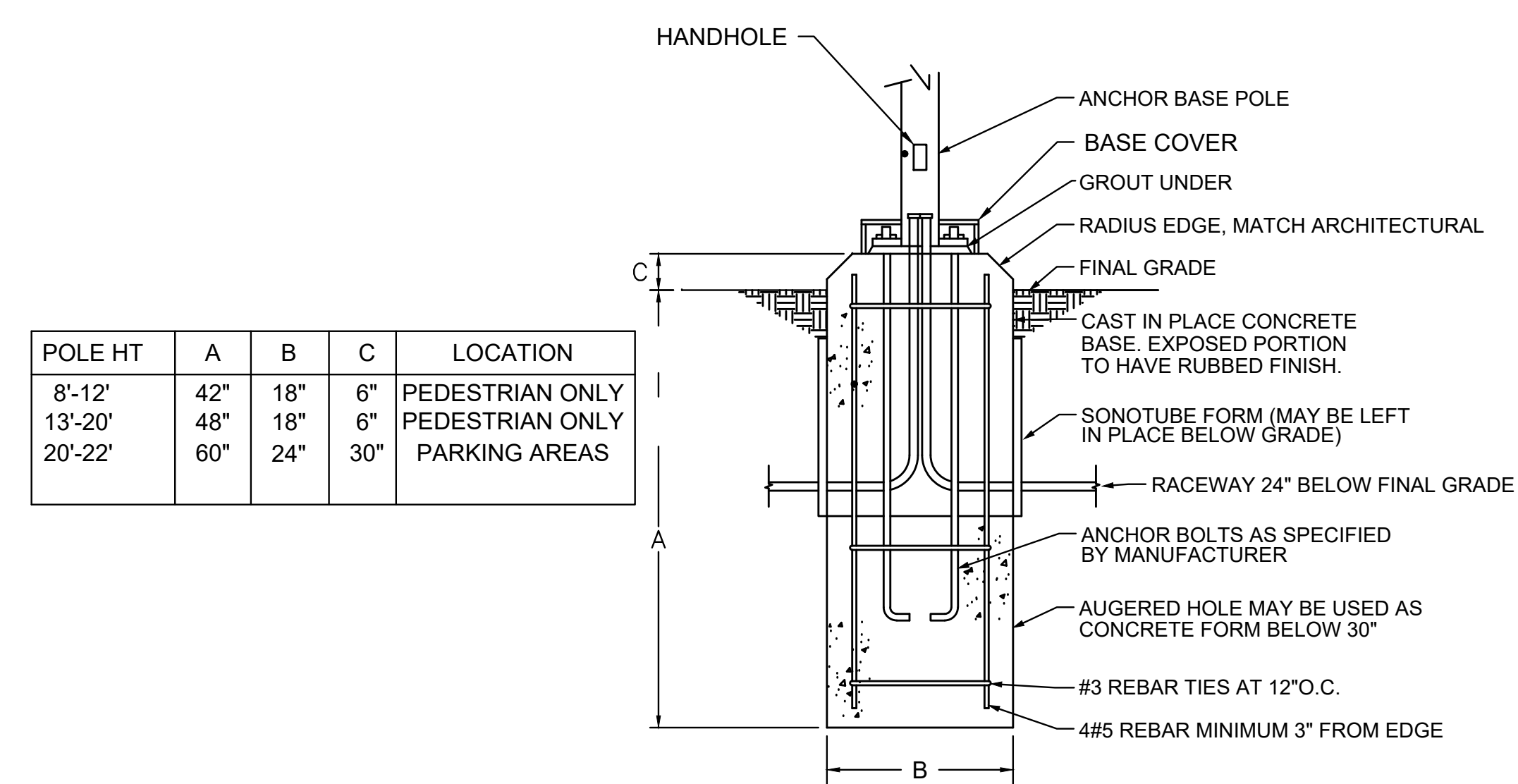
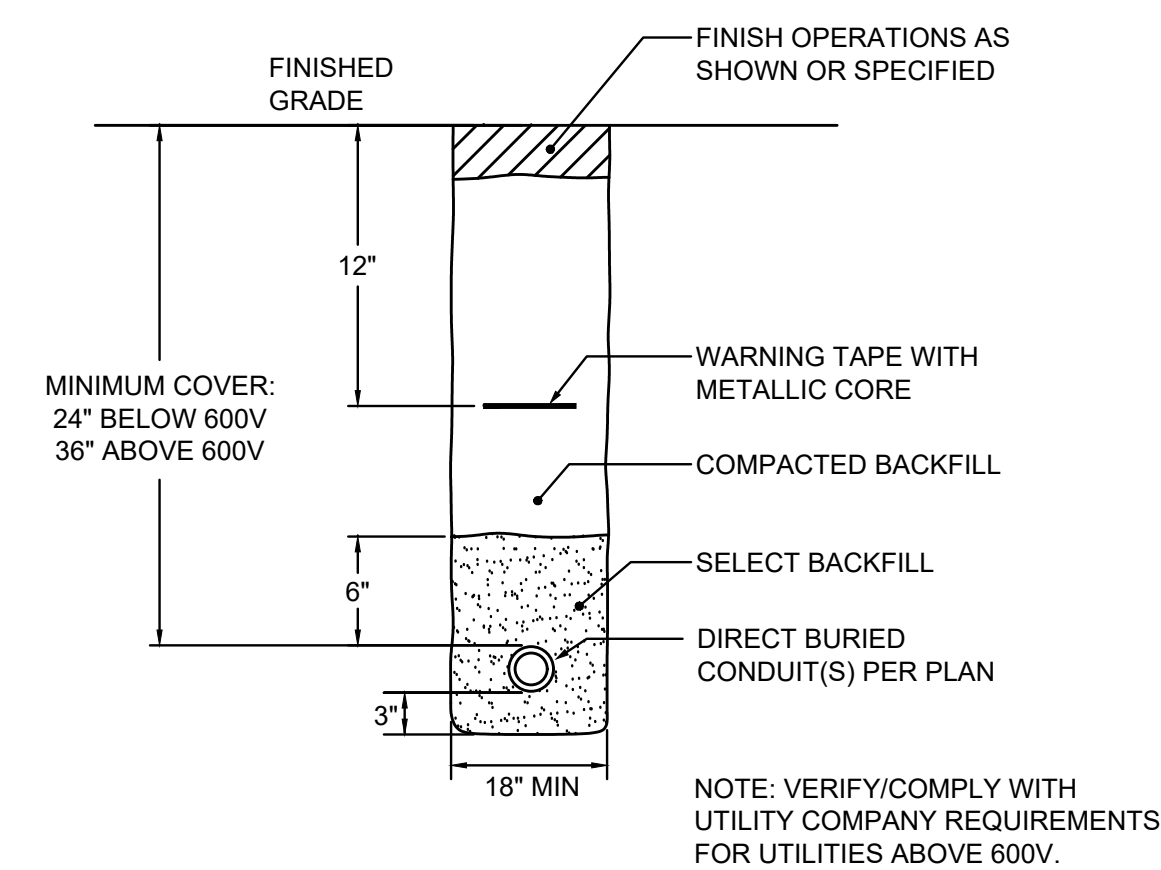
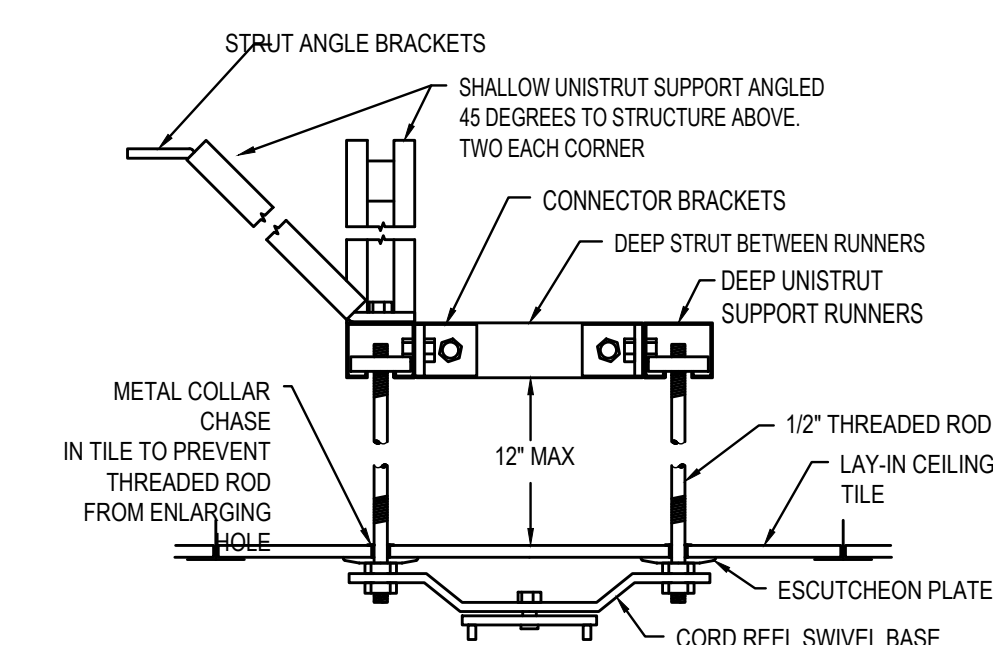
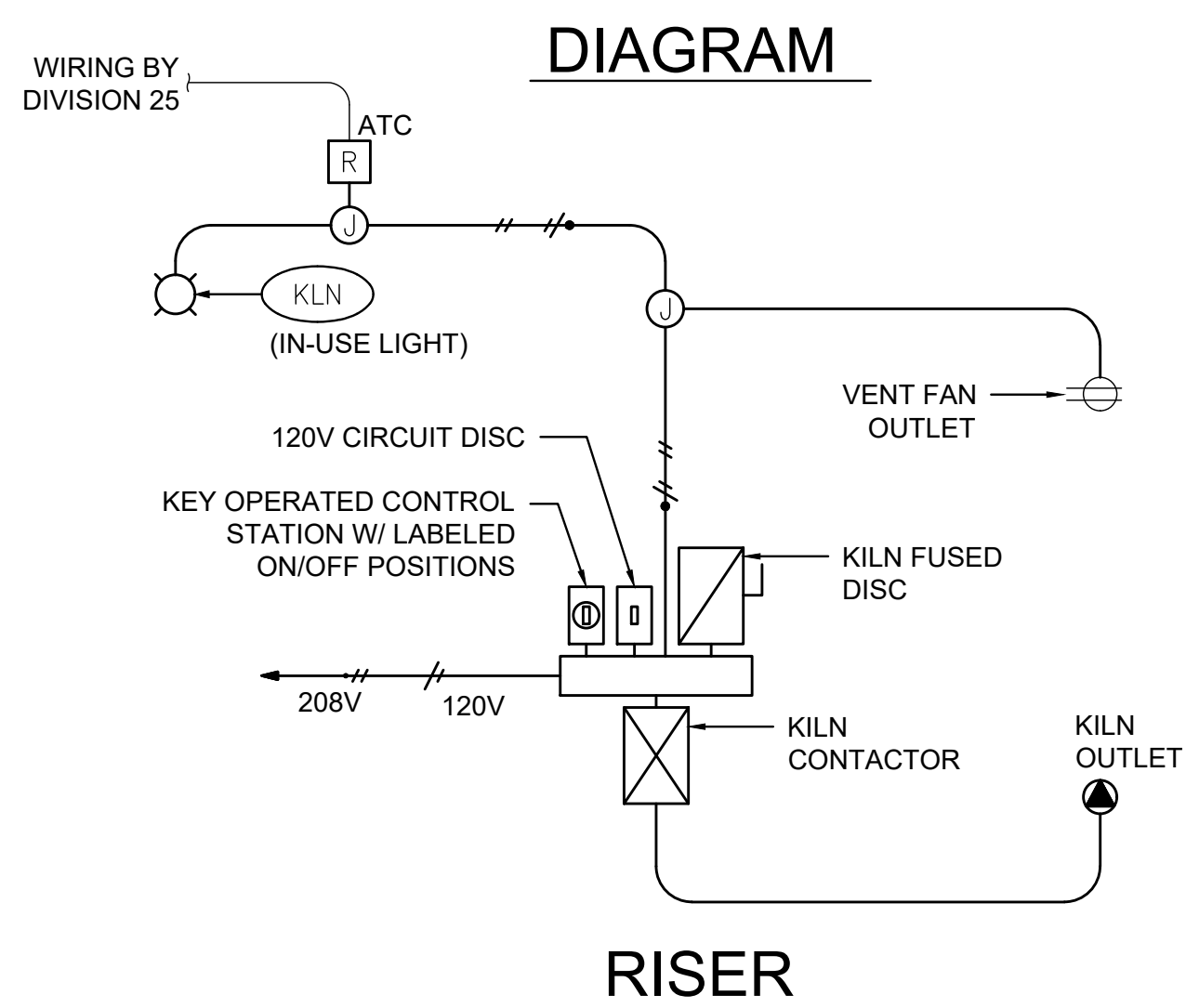
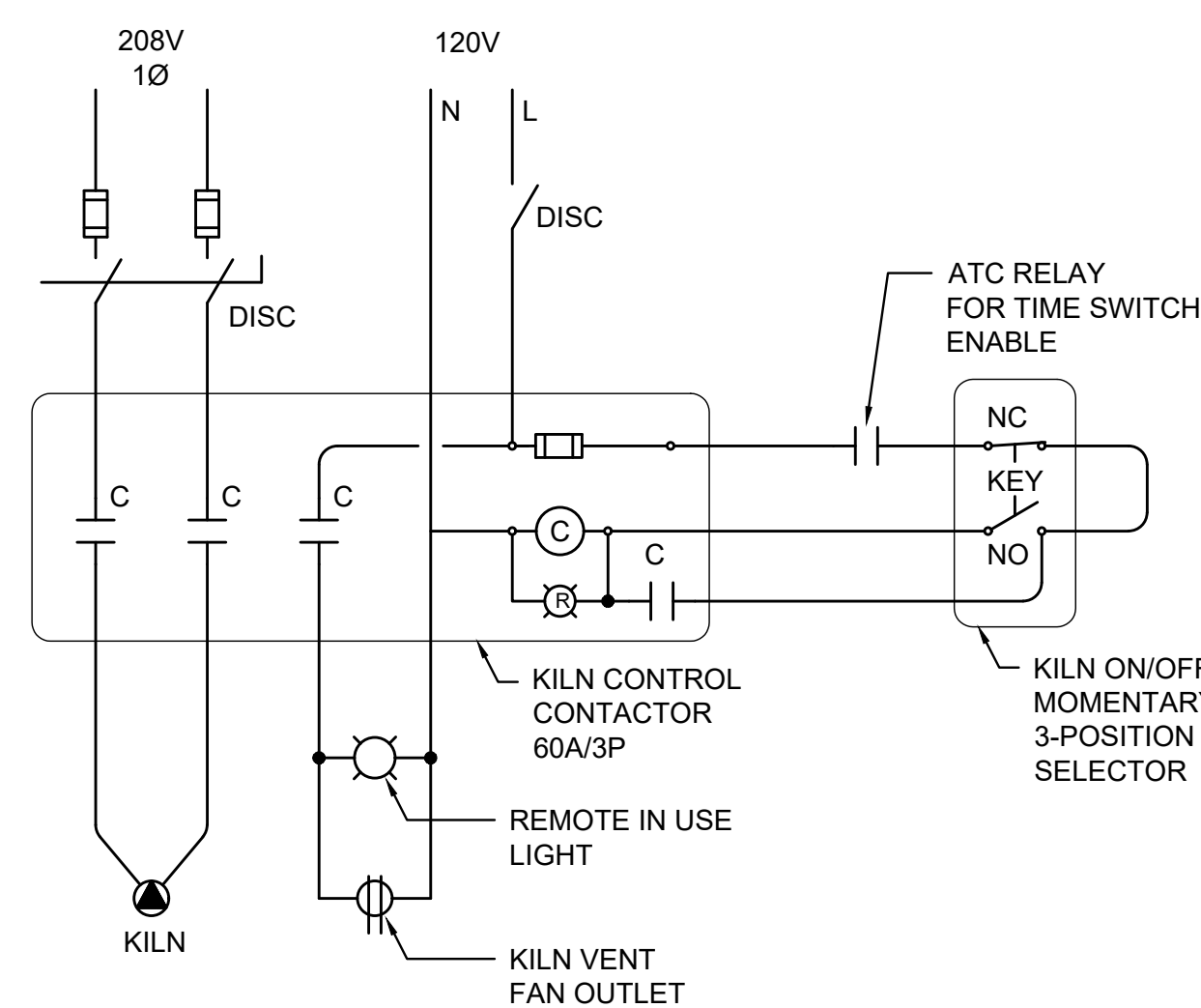
SUBMIT RACK LAYOUT & TERMINAL LABELING PLAN FOR APPROVAL PRIOR TO COMPLETION OF TELECOMMUNICATIONS SYSTEM SHOP DRAWINGS.
NOT ALL RACK ACCESSORIES / EQUIPMENT SHOWN, SEE SPECIFICATION SECTION 27 10 01, VERIFY REQUIREMENTS WITH INTERCOM/CLOCK, CCTV & ACCESS CONTROL SHOP DRAWINGS.

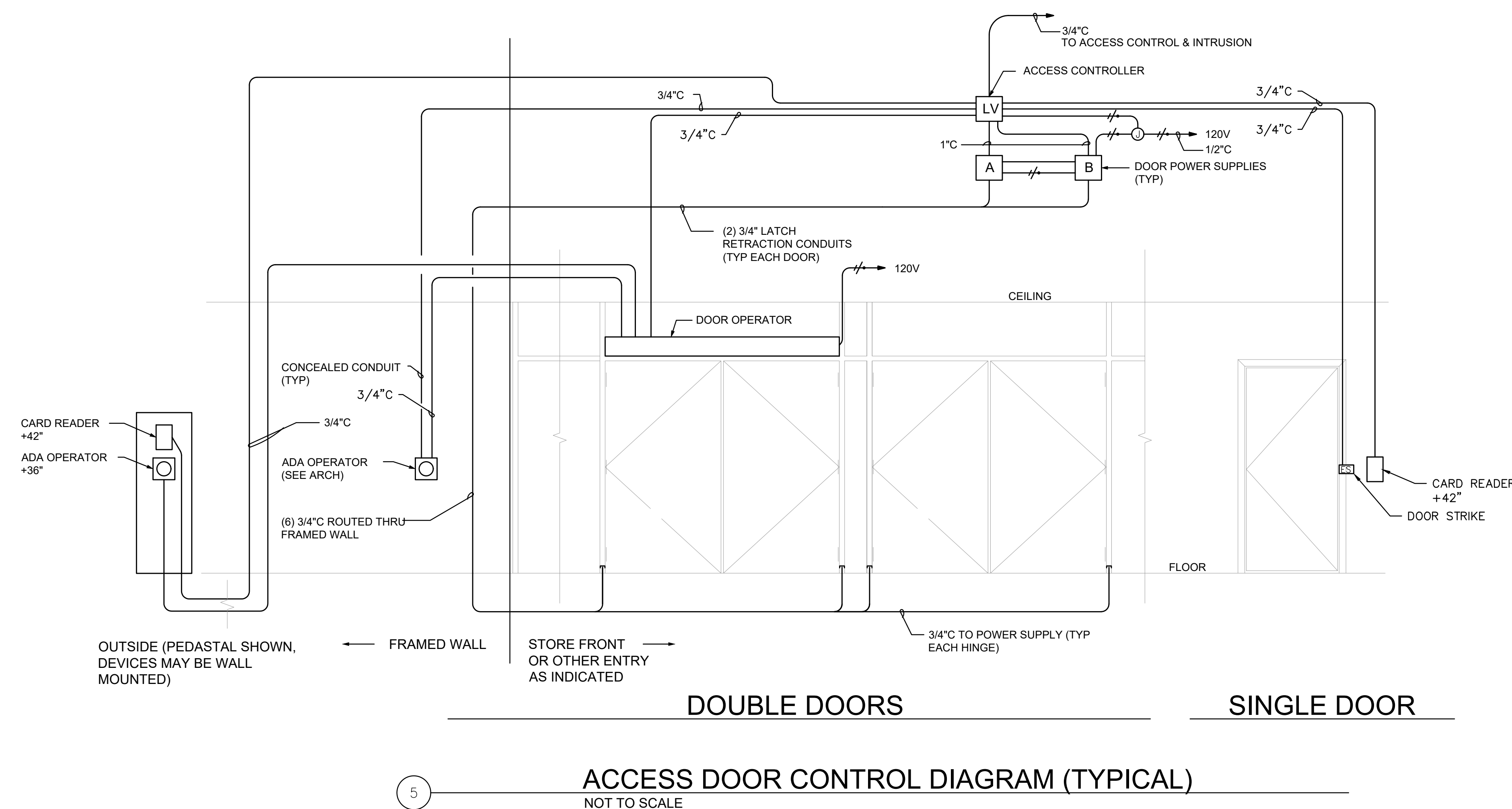
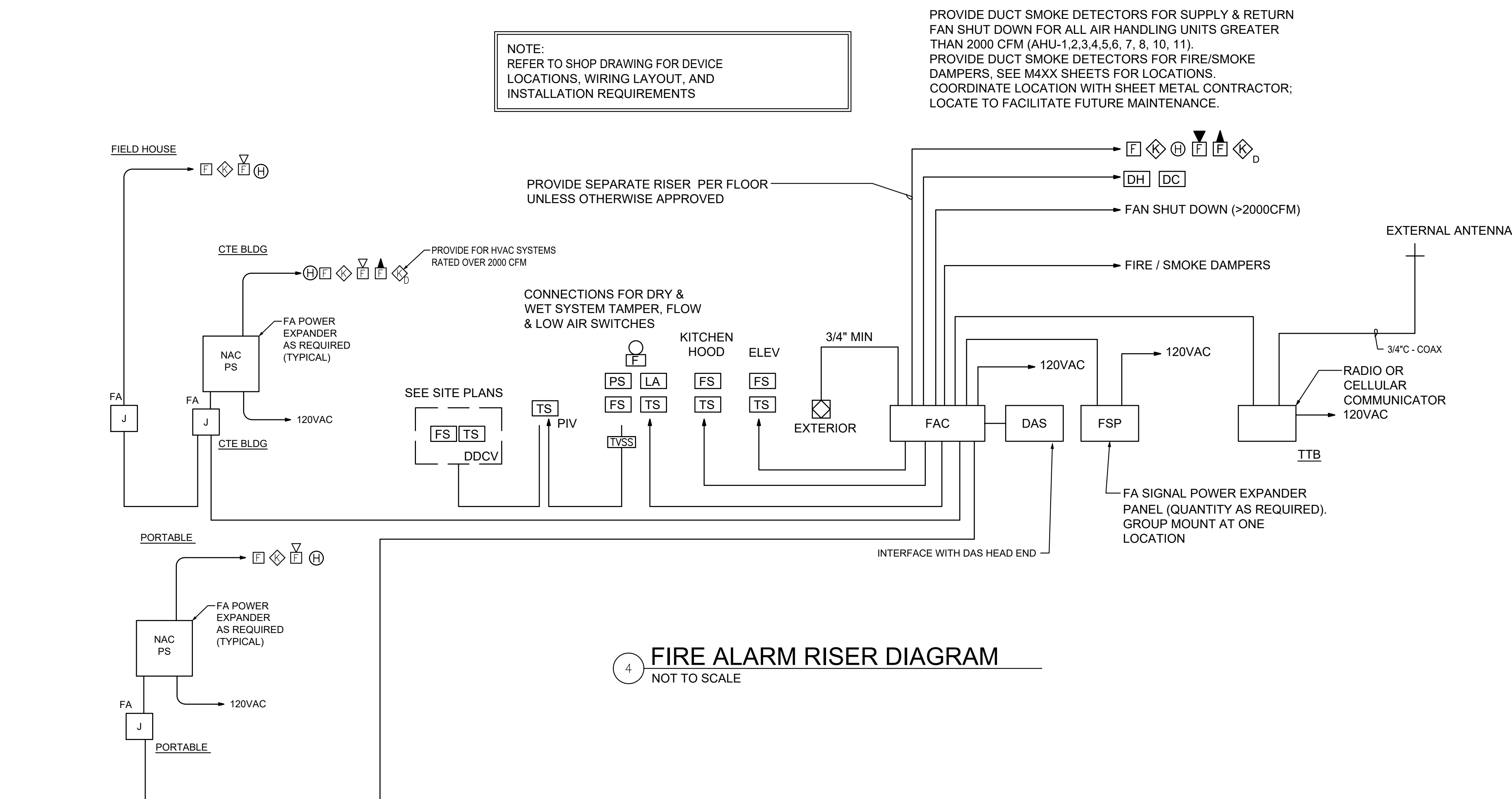
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SYSTEMS RISER
DIAGRAMS

E700

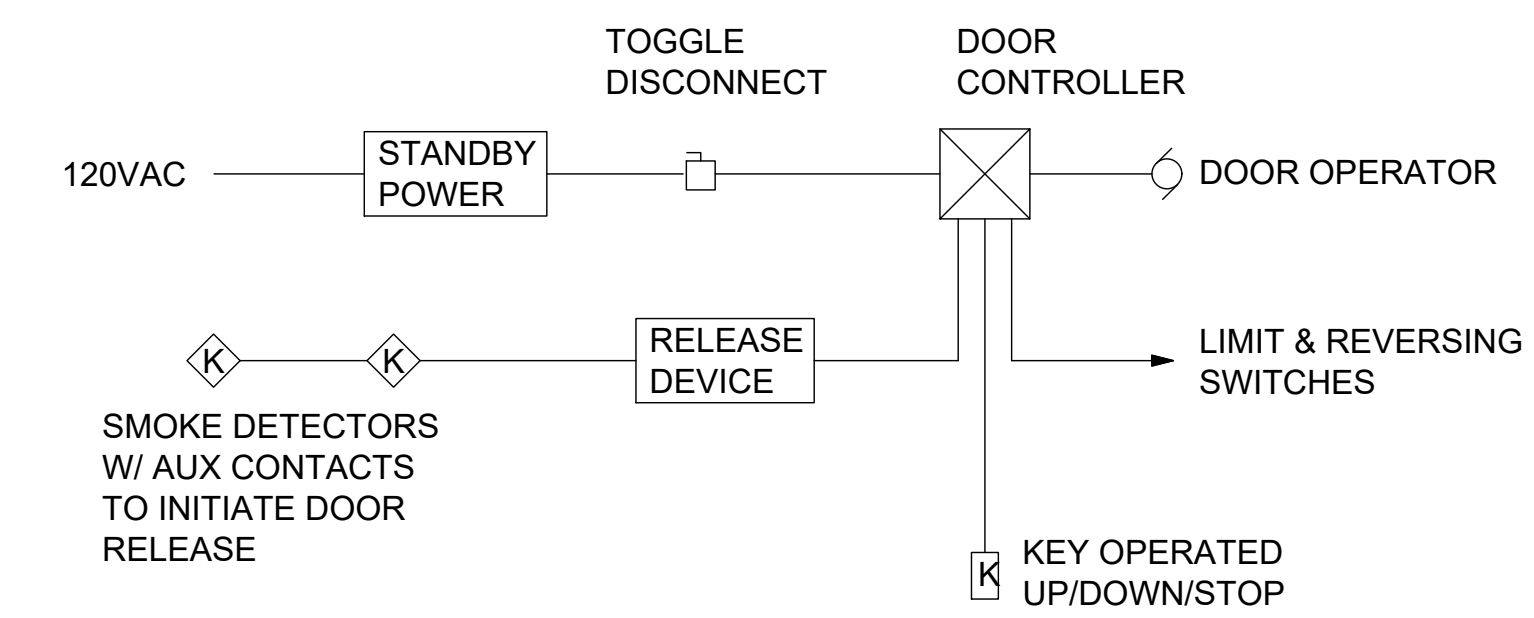




ACCESS DOOR CONTROL NOTES

1. VERIFY EXACT REQUIREMENTS WITH MANUFACTURER'S WIRING DIAGRAMS

PROVIDE DUCT SMOKE DETECTORS FOR SUPPLY & RETURN
FAN SHUT DOWN FOR ALL AIR HANDLING UNITS GREATER
THAN 2000 CFM (AHU-1,2,3,4,5,6, 7, 8, 10, 11).
PROVIDE DUCT SMOKE DETECTORS FOR FIRE/SMOKE
DAMPERS, SEE M4XX SHEETS FOR LOCATIONS.
COORDINATE LOCATION WITH SHEET METAL CONTRACTOR;
LOCATE TO FACILITATE FUTURE MAINTENANCE.



- CONSTRUCTION NOTES:

1. PROVIDE POWER DISCONNECT, SMOKE DETECTORS, CONDUITS, WIRE, BOX ROUGH-IN, AND EQUIPMENT CONNECTIONS AS REQUIRED.
2. COMPLY WITH REQUIREMENTS OF SHOP DRAWINGS FURNISHED UNDER DIVISION 08.
3. VERIFY EXACT LOCATION OF SYSTEM COMPONENTS WITH ARCHITECT/ENGINEER PRIOR TO ROUGH-IN.

