

## CONTRACT ADDENDUM 04

<b>date:</b>	5.28.24
<b>project:</b>	Nibley Middle School
<b>by:</b>	Michael Rigby
<b>subject:</b>	Addendum 05

The Work shall be carried out in accordance with the following supplemental instructions issued in accordance with the Contract Documents. Prior to proceeding in accordance with these instructions, indicate your acceptance of these instructions for minor change to the work as consistent with the Contract Documents and return a copy to the Architect.

**NOTICE:** The last day to submit questions will be Thursday, May 23<sup>rd</sup> end of day. The last day for addendum release will be Tuesday, May 28<sup>th</sup>.

### QUESTIONS:

#### DWA QUESTION - MAY 23, 2024

- 01 DWA Question 01:** *The fire hydrants don't show any concrete pads or bollards around them. Will either be necessary?*

**ANSWER:** See Civil items

- 02 DWA Question 02:** *On sheet A411 in restrooms F125 and F127 there aren't any soap dispensers called out for any of the sinks. Should they be called out?*

**ANSWER:** Soap dispensers added and tagged on sheet.

- 03 DWA Question 03:** *Are the digital displays called out owner provided?*

**ANSWER:** Yes, all digital displays will be owner provided, contractor installed

- 04 DWA Question 04:** *The enlarged plan for Choir D111 shows goggle cleaning cabinets where the elevation shows felt tack boards. Where should the goggle cleaning cabinets be?*

**ANSWER:** Tags for the tack boards, and digital display have been corrected.

- 05 DWA Question 05:** *On sheet A-418 the enlarged plans show felt tack boards, but the elevations show digital displays. Please clarify.*

**ANSWER:** Keynotes have been corrected on sheet

- 06 DWA Question 06:** *The specifications do not call out the level of drywall finish, such as level 4 or 5, smooth or textured. Please Advise.*

**ANSWER:** See updated Specification section 09 2116 – Gypsum board Assemblies

- 07 DWA Question 07:** *On sheet E-242 it is calling for (2) 24strand fiber line to each I.T closet. Do they want a total of 48 strands per closet or do they want (2) 12strand fiber lines ran for a total of 24 strands?*
- ANSWER:** (1) 24-strand to each IDF, or (2) 12-strand would be acceptable. We do not need 48 fibers.
- 08 DWA Question 08:** *On sheet A-114.3 in the kitchen, it looks as though there are corner guards shown in a lot of places, but not labeled. Please clarify corner guards in the kitchen.*
- ANSWER:** Corner guards in kitchen area are per Kitchen K-101.
- 09 DWA Question 09:** *On sheet A-114.4 in rooms D111 and D108, the legend does not reflect the materials shown in the classroom and it's not listed on the finish schedule pages. Please provide the ceiling material callout for these 2 rooms.*
- ANSWER:** See legend in RCP A-114.4 and Sec 09 5100 Acoustical Ceilings, 2.02 Acoustical Ceilings, D FRP Lay-in Ceiling Panels.
- 10 DWA Question 10:** *The base bid roofing specs ask for a vapor barrier of 6 mil polyethylene, is that correct? Or do they want an actual roof vapor barrier installed? If so, what product/spec?*
- ANSWER:** See updated specification section 07 5400.
- 11 DWA Question 11:** *Is EPS-tapered insulation acceptable for the sloped insulation at roof crickets?*
- ANSWER:** This is acceptable, minimum 1.5 lb. EPS weight. See updated Roofing Specifications.
- 12 DWA Question 12:** *ALT 2 calls for a wind speed warranty of up to 90 mph. Is this the intended wind speed for the Base Bid also?*
- ANSWER:** Wind uplift needs to be designed to forces calculated with ASCE 7. See both base bid and alternate bid roofing specification sections.
- 13 DWA Question 13:** *It looks like the roofing material thickness for the roofing alternate was revised from 45 mil to 60 mil in addendum 3, but the base bid roofing material is still shown as 45 mil. Please advise if the base bid will be changed as well.*
- ANSWER:** No Base bid mill is per Specification.
- 14 DWA Question 14:** *There are a couple of sections on these parapet walls that are very wide on top, too wide for our 4'x10' sheets of metal to make a proper cap, which is what it calls for. On these areas that are too large for our metal, could we install a membrane coated metal drip edge at the face of the parapet that we can weld our membrane too to make it water tight and then, using that membrane coated metal drip edge as a hold-down clip, snap a piece of metal over that to give it the finish look they're looking for?*
- ANSWER:** This is acceptable
- 15 DWA Question 15:** *Spec section 21 1000, 3.4G, states that 2" pipe and larger shall be threaded. Would it be possible to use grooved pipe for 2" and smaller?*
- ANSWER:** Yes. This is noted in this addendum.

- 16 DWA Question 16:** *Storefront Spec in the basis of design of swinging doors section B it has Thermally Broken doors for E104A and E104B. There are no doors on the door schedule with those door numbers.*

**ANSWER:** See updated Spec Section

- 17 DWA Question 17:** *On Level 1 Area E it has a window type X called out but there is no window type X on the window schedule.*

**ANSWER:** That should be frame type W, see updated sheet A-115.2

- 18 DWA Question 18:** *In the glazing spec basis of design it has grey tinted glass called out. But is also mentions Clear. Please clarify.*

**ANSWER:** See updated Specification section 08 8000

- 19 DWA Question 19:** *The drawings indicate there is power and lighting in Sections 1B & 2B that is supplied from the panels in sections 1A & 2A, If the alternate 1 is chosen, what is the plan to supply these items.*

**ANSWER:** All power and lighting in areas 1A, 1B, 2A and 2B are power from the panels in Electrical A120. Whether the alternate is selected or not, should not affect these panels or the power to the other areas.

- 20 DWA Question 20:** *The drawings indicate that the street lighting is supplied by the city and installed by RMP. RMP indicates that they only run power to the light poles. Who is responsible to install the pole base's and install the light poles?*

**ANSWER:** Jennifer with Rocky Mountain Power informed us that they have an agreement with the city that RMP will install the light poles. If that is not the case, please plan on the city installing the light poles. We should only be required to install the conduit.

**ITEMS:**

- |       |  |
|-------|--|
| 05.01 | See attached Civil Items   |
| 05.02 | See attached Structural Items  |
| 05.03 | See attached Mechanical Items  |
| 05.04 | See attached Electrical Items  |
| 05.05 | 07 5400 – Thermoplastic (KEE) Membrane Roofing <ul style="list-style-type: none"><li>• Formerly 2.03 A - Removed vapor barrier from spec</li><li>• 2.03 D,1 - Added EPS foam crickets as acceptable alternate to poly-iso.</li></ul>                                     |
| 05.06 | 07 5419 – Single-ply PVC Thermoplastic Roofing <ul style="list-style-type: none"><li>• 2.05 B – Added EPS foam crickets as acceptable alternate to poly-iso</li><li>• 2.05 - Added Quality Assurance paragraph to match section requirements found in 07 5400.</li></ul> |
| 05.07 | 08 4313 – Aluminum-framed Storefronts <ul style="list-style-type: none"><li>• Removed doors E104A &amp; E104B from thermal doors.</li></ul>  |

- 05.08      08 8000 – Glazing
- 2.04-2.06 - Changed callouts from grey tint to clear glazing
- 05.09      09 2119 – Gypsum Board Assemblies
- 3.03 Finish and Texture paragraph now added and clarifies design intent.
- 05.10      A-114.4 – AREA D – REFLECTED CEILING PLAN
- Removed finish tag P1 in D108
- 05.11      A-115.2 – PLAN – LEVEL 01 AREA E - ANNOTATION
- Frame Type X removed and corrected to Frame Type W
- 05.12      A-411 – ENLARGED VIEWS
- D4 Soap Dispensers added and tagged.
  - Accessories legend updated on item “E” to “wall mounted soap dispenser...”
- 05.13      A-416 – ENLARGED VIEWS
- A3 – Enlarged Plan keynotes for the tack boards and digital display have been corrected.
- 05.14      A-418 – ENLARGED VIEWS
- A1 – Enlarged Plan keynotes corrected.
  - A4 – Enlarged plan keynotes corrected.
  - Keynotes and Accessories legend corrected.

**Sheets:**

A-114.4 – AREA D – REFLECTED CEILING PLAN  
A-115.2 – PLAN – LEVEL 01 AREA E - ANNOTATION  
A-411 – ENLARGED VIEWS  
A-416 – ENLARGED VIEWS  
A-418 – ENLARGED VIEWS

Michael Rigby      5.28.24

ISSUED BY      Date  
Architect

ACCEPTED BY      Date  
Contractor



CACHE • LANDMARK  
ENGINEERS • SURVEYORS • PLANNERS

## NMS ADDENDUM #5

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**DATE:** May 28, 2024

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**TO:** **Michael Rigby**  
Design West Architects  
255 South 300 West  
Logan UT, 84321

435.754.9366 C  
435.752.7031 T

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**FROM:** **Jeremy Jensen**  
Cache-Landmark Engineering  
95 Golf Course Rd, Suite 101  
Logan, UT 84321

435.770.3441 C  
435.713.0099 T  
jjensen@cachelandmark.com

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**PROJECT:** Nibley Middle School

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**SUBJECT:** Addendum #5 – Bid Package #2

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The following additions are provided for Bid Package #2 based on questions provided to the Owner/Architect/Engineers:

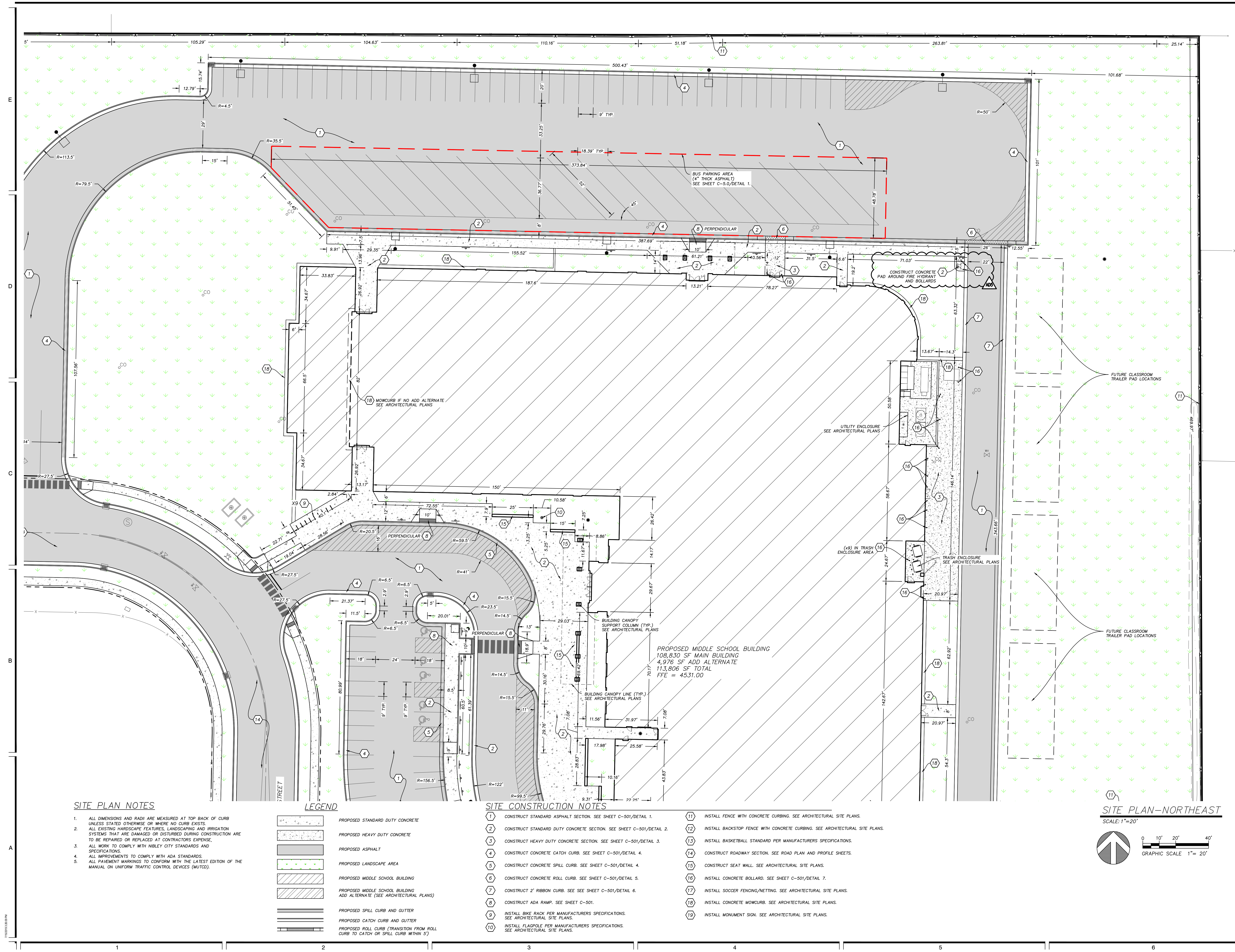
1. Civil - Site Plan – Northwest, Sheet C-203.
  - a. **ADDED** – Bollards and concrete pad for proposed fire hydrant as shown on plan.
2. Civil – Site Plan – Northeast, Sheet C-204.
  - a. **ADDED** – Bollards and concrete pad for proposed fire hydrant as shown on plan

Addendum #5 is hereby issued on May 28, 2024  
Cache-Landmark Engineering

Jeremy Jensen E.I.T.  
Project Manager

Attachment – Civil Sheets C-202 and C-204

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### SITE PLAN NOTES

1. ALL DIMENSIONS AND RADII ARE MEASURED AT TOP BACK OF CURB UNLESS STATED OTHERWISE OR WHERE NO CURB EXISTS.
2. ALL EXISTING HARDSCAPE FEATURES, LANDSCAPING AND IRRIGATION SYSTEMS THAT ARE DAMAGED OR DISTURBED DURING CONSTRUCTION ARE TO BE REPAIRED OR REPLACED AT CONTRACTORS EXPENSE.
3. ALL WORK TO COMPLY WITH NIBLEY CITY STANDARDS AND SPECIFICATIONS.
4. ALL IMPROVEMENTS TO COMPLY WITH ADA STANDARDS.
5. ALL PAYMENT MARKINGS TO CONFORM WITH THE LATEST EDITION OF THE MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES (MUTCD).

### LEGEND

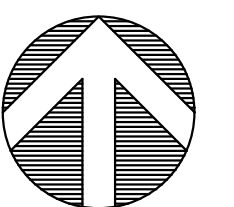
- PROPOSED STANDARD DUTY CONCRETE
- PROPOSED HEAVY DUTY CONCRETE
- PROPOSED ASPHALT
- PROPOSED LANDSCAPE AREA
- PROPOSED MIDDLE SCHOOL BUILDING
- PROPOSED MIDDLE SCHOOL BUILDING ADD ALTERNATE (SEE ARCHITECTURAL PLANS)
- PROPOSED SPILL CURB AND GUTTER
- PROPOSED CATCH CURB AND GUTTER
- PROPOSED ROLL CURB (TRANSITION FROM ROLL CURB TO CATCH OR SPILL CURB WITHIN 5')

### SITE CONSTRUCTION NOTES

1. CONSTRUCT STANDARD ASPHALT SECTION. SEE SHEET C-501/DETAIL 1.
2. CONSTRUCT STANDARD DUTY CONCRETE SECTION. SEE SHEET C-501/DETAIL 2.
3. CONSTRUCT HEAVY DUTY CONCRETE SECTION. SEE SHEET C-501/DETAIL 3.
4. CONSTRUCT CONCRETE CATCH CURB. SEE SHEET C-501/DETAIL 4.
5. CONSTRUCT CONCRETE SPILL CURB. SEE SHEET C-501/DETAIL 4.
6. CONSTRUCT CONCRETE ROLL CURB. SEE SHEET C-501/DETAIL 5.
7. CONSTRUCT 2' RIBBON CURB. SEE SHEET C-501/DETAIL 6.
8. CONSTRUCT ADA RAMP. SEE SHEET C-501.
9. INSTALL BIKE RACK PER MANUFACTURERS SPECIFICATIONS. SEE ARCHITECTURAL SITE PLANS.
10. INSTALL FLAGPOLE PER MANUFACTURERS SPECIFICATIONS. SEE ARCHITECTURAL SITE PLANS.
11. INSTALL FENCE WITH CONCRETE CURBING. SEE ARCHITECTURAL SITE PLANS.
12. INSTALL BACKSTOP FENCE WITH CONCRETE CURBING. SEE ARCHITECTURAL SITE PLANS.
13. INSTALL BASKETBALL STANDARD PER MANUFACTURERS SPECIFICATIONS.
14. CONSTRUCT ROADWAY SECTION. SEE ROAD PLAN AND PROFILE SHEETS.
15. CONSTRUCT SEAT WALL. SEE ARCHITECTURAL SITE PLANS.
16. INSTALL CONCRETE BOLLARD. SEE SHEET C-501/DETAIL 7.
17. INSTALL SOCCER FENCING/NETTING. SEE ARCHITECTURAL SITE PLANS.
18. INSTALL CONCRETE MONOCURB. SEE ARCHITECTURAL SITE PLANS.
19. INSTALL MONUMENT SIGN. SEE ARCHITECTURAL SITE PLANS.

### SITE PLAN-NORTHEAST

SCALE: 1"=20'



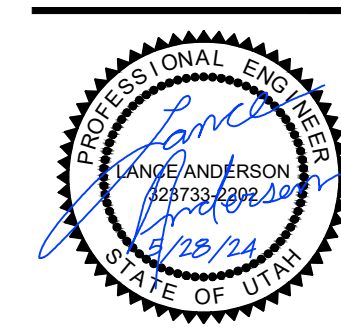
CONSTRUCTION DOCUMENTS

### NIBLEY MIDDLE SCHOOL

3050 SOUTH 920 WEST NIBLEY, UT  
CACHE COUNTY SCHOOL DISTRICT

MARK	DATE	DESCRIPTION
A002	5/9/2024	BID PACKAGE # ADJUDICUM #2
A005	5/9/2024	BID PACKAGE # ADJUDICUM #5

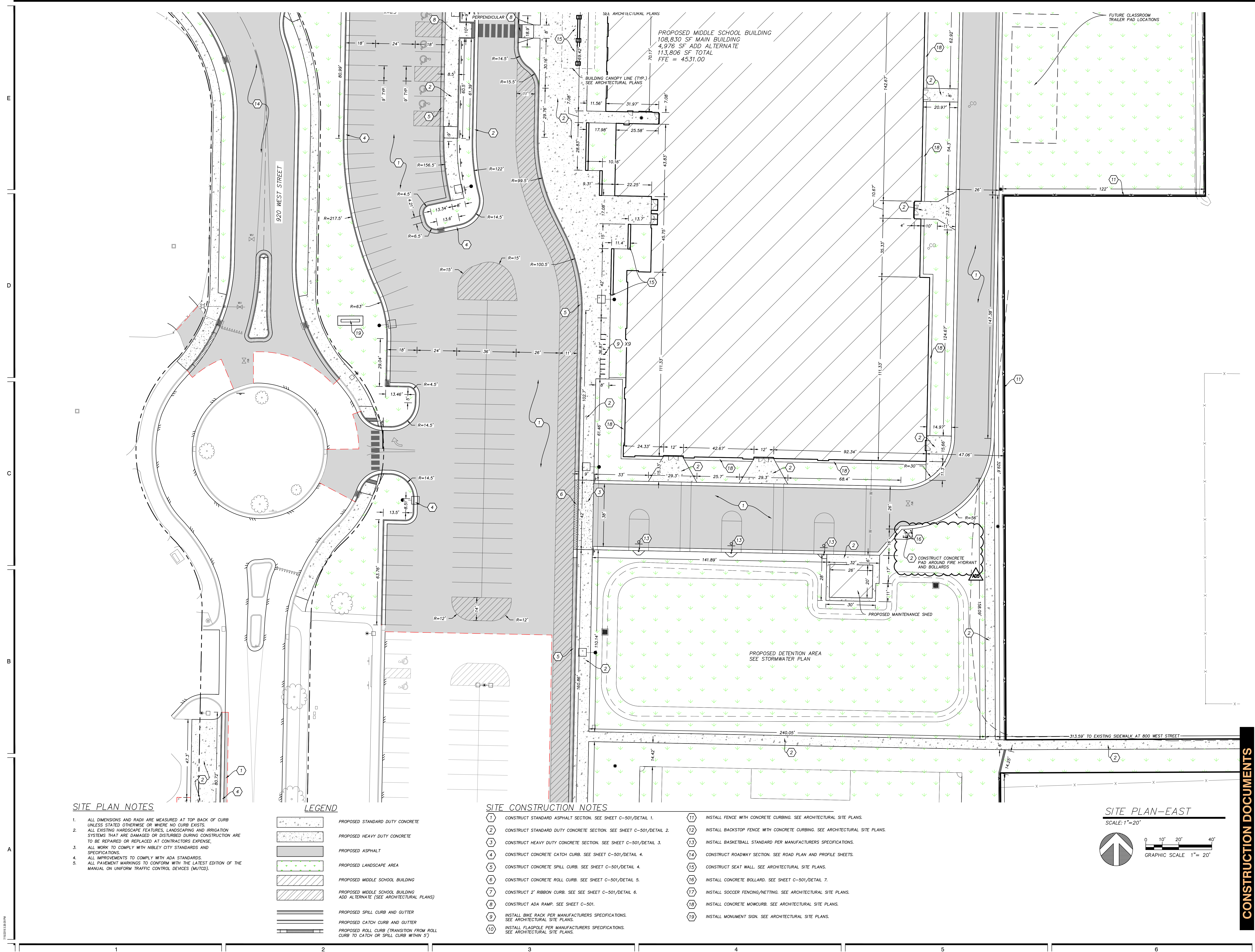
PROJECT #: 123005  
DRAWN BY: J. JENSEN  
CHECKED BY: L. ANDERSON  
ISSUED: 05.28.2024



CIVIL - SITE PLAN  
NORTHEAST

C-203

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SITE PLAN NOTES

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LEGEND

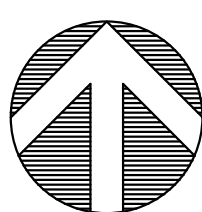
- PROPOSED STANDARD DUTY CONCRETE
- PROPOSED HEAVY DUTY CONCRETE
- PROPOSED ASPHALT
- PROPOSED LANDSCAPE AREA
- PROPOSED MIDDLE SCHOOL BUILDING
- PROPOSED MIDDLE SCHOOL BUILDING ADD ALTERNATE (SEE ARCHITECTURAL PLANS)
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SITE CONSTRUCTION NOTES

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2. CONSTRUCT STANDARD DUTY CONCRETE SECTION. SEE SHEET C-501/DETAIL 2.
3. CONSTRUCT HEAVY DUTY CONCRETE SECTION. SEE SHEET C-501/DETAIL 3.
4. CONSTRUCT CONCRETE CATCH CURB. SEE SHEET C-501/DETAIL 4.
5. CONSTRUCT CONCRETE SPILL CURB. SEE SHEET C-501/DETAIL 4.
6. CONSTRUCT CONCRETE ROLL CURB. SEE SHEET C-501/DETAIL 5.
7. CONSTRUCT 2' RIBBON CURB. SEE SHEET C-501/DETAIL 6.
8. CONSTRUCT ADA RAMP. SEE SHEET C-501.
9. INSTALL BIKE RACK PER MANUFACTURERS SPECIFICATIONS. SEE ARCHITECTURAL SITE PLANS.
10. INSTALL FLAGPOLE PER MANUFACTURERS SPECIFICATIONS. SEE ARCHITECTURAL SITE PLANS.
11. INSTALL FENCE WITH CONCRETE CURBING. SEE ARCHITECTURAL SITE PLANS.
12. INSTALL BACKSTOP FENCE WITH CONCRETE CURBING. SEE ARCHITECTURAL SITE PLANS.
13. INSTALL BASKETBALL STANDARD PER MANUFACTURERS SPECIFICATIONS.
14. CONSTRUCT ROADWAY SECTION. SEE ROAD PLAN AND PROFILE SHEETS.
15. CONSTRUCT SEAT WALL. SEE ARCHITECTURAL SITE PLANS.
16. INSTALL CONCRETE BOLLARD. SEE SHEET C-501/DETAIL 7.
17. INSTALL SOCCER FENCING/NETTING. SEE ARCHITECTURAL SITE PLANS.
18. INSTALL CONCRETE MOWCURB. SEE ARCHITECTURAL SITE PLANS.
19. INSTALL MONUMENT SIGN. SEE ARCHITECTURAL SITE PLANS.

SITE PLAN-EAST

SCALE: 1"=20'



0 10' 20' 40'  
GRAPHIC SCALE 1"= 20'

CONSTRUCTION DOCUMENTS

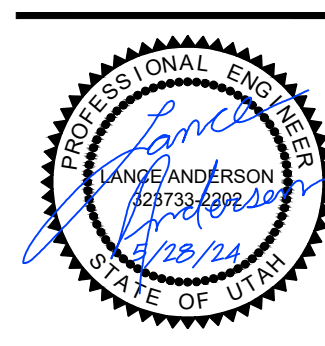
NIBLEY MIDDLE SCHOOL

3050 SOUTH 920 WEST NIBLEY, UT

CACHE COUNTY SCHOOL DISTRICT

DATE:	DESCRIPTION:
5/9/2024	BID PACKAGE # ADDENDUM #2
5/9/2024	BID PACKAGE # ADDENDUM #5
5/9/2024	BID PACKAGE # ADDENDUM #5

PROJECT #: 123005  
DRAWN BY: J. JENSEN  
CHECKED BY: L. ANDERSON  
ISSUED: 05.28.2024



CIVIL - SITE PLAN  
EAST

C-204



## MEMORANDUM

Project: CCSD Middle Schools

Project No: 23914

Location: Cache County, UT

Date: 5/28/2024

☐ Telephone

☐ Conference

☐ Field

☒ Memo

Memo by: Josh Blazzard, SE

RE: Addendum 5

Comments/Items Discussed:

Below is a description of items contained in Addendum #5:

**Sheet S-011:**

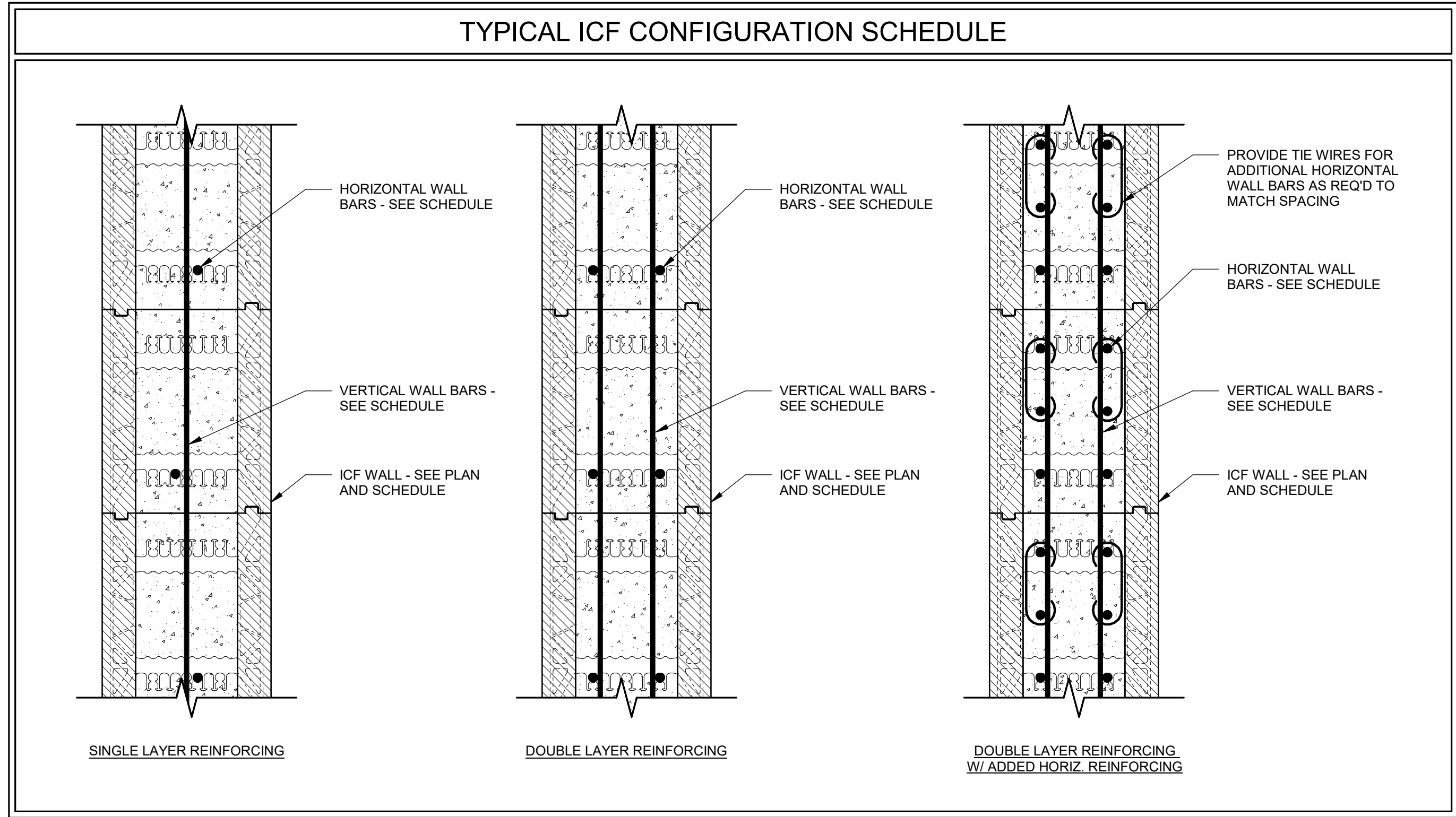
- 1) The concrete wall schedule has been updated to include an option for 18" horizontal wall spacing.

Copy to: Design West Architects

Filing: ☒ Project File ☐ Other

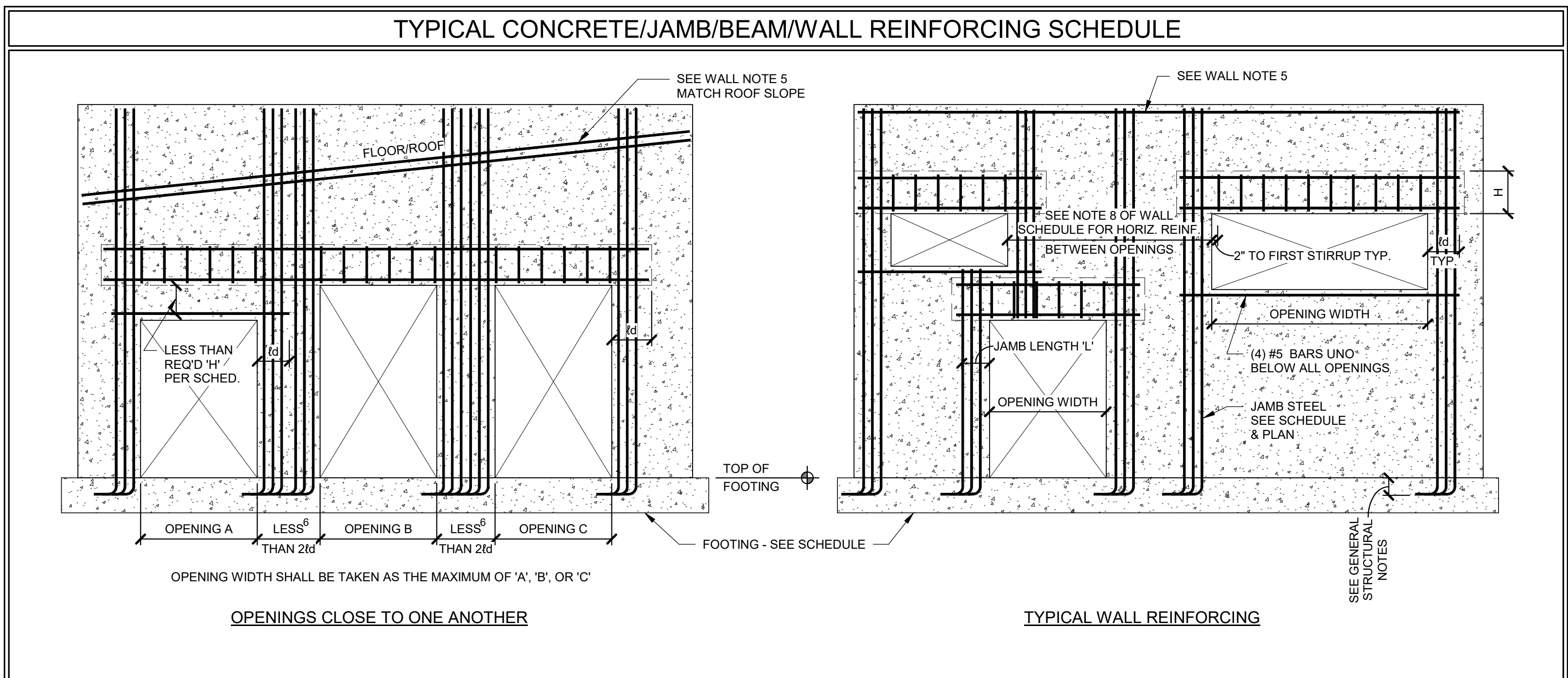
23914\_Addendum 5 Narrative\_20240528.doc

STANDARD HOOK & BEND SCHEDULE						
TYPE OF STANDARD HOOK	BAR SIZE	MIN. INSIDE BEND DIA. FOR STIRRUPS, TIES, AND HOOPS, in	STRAIGHT EXTENSION $l_{dev}$ FOR STIRRUPS, TIES, AND HOOPS in	MIN. INSIDE BEND DIA. FOR OTHER BARS, in	STRAIGHT EXTENSION $l_{dev}$ FOR OTHER BARS in	TYPE OF STANDARD HOOK
90° HOOK	#3 - #5	4d <sub>s</sub>	GREATER OF 6d <sub>s</sub> AND 3"	6d <sub>s</sub>	12d <sub>s</sub>	
	#6 - #8	6d <sub>s</sub>	12d <sub>s</sub>			
	#9 - #11	N/A	N/A			
	#14 - #18	N/A	N/A			
135° HOOK	#3 - #5	4d <sub>s</sub>	GREATER OF 6d <sub>s</sub> AND 3"	N/A	N/A	
	#6 - #8	6d <sub>s</sub>	GREATER OF 6d <sub>s</sub> AND 3"	N/A	N/A	
	#9 - #11	N/A	N/A	N/A	N/A	
	#14 - #18	N/A	N/A	N/A	N/A	
180° HOOK	#3 - #5	4d <sub>s</sub>	GREATER OF 4d <sub>s</sub> AND 2.5"	6d <sub>s</sub>	GREATER OF 4d <sub>s</sub> AND 2.5"	
	#6 - #8	6d <sub>s</sub>	GREATER OF 4d <sub>s</sub> AND 2.5"			
	#9 - #11	N/A	N/A			
	#14 - #18	N/A	N/A			



2021 IBC CONCRETE REBAR LAP SPICE SCHEDULE (60KSI REBAR)																																	
FOR CONCRETE APPLICATIONS (ACI 318 - 19)																																	
<div><div><div><div><div></div><div>FACE OF JOINT OR CRITICAL SECTION</div></div><div><div></div><div>DEVELOPMENT LENGTH</div><div><math>l_d</math></div></div></div><div><div><div></div><div>FACE OF JOINT OR CRITICAL SECTION</div></div><div><div></div><div>LAP SPICE LENGTH</div><div><math>l_s</math></div></div></div><div><div><div></div><div>FACE OF JOINT OR CRITICAL SECTION</div></div><div><div></div><div>HOOK DEVELOPMENT LENGTH</div><div><math>l_{dh}</math></div></div></div><div><div><div></div><div>COUPLER OR WELDED SPICE</div></div><div><div></div><div>CLEAR</div><div>2'-0"</div></div></div></div></div>																																	
BAR LOCATION	CONCRETE REINFORCING & SPICE LENGTHS (IN)																																
	CONCRETE			BAR SIZE																													
	TYPE	STRENGTH	#3			#4			#5			#6			#7			#8			#9			#10			#11			COMMENTS			
		$l_d$	$l_s$	$l_{dh}$	$l_d$	$l_s$	$l_{dh}$	$l_d$	$l_s$	$l_{dh}$	$l_d$	$l_s$	$l_{dh}$	$l_d$	$l_s$	$l_{dh}$	$l_d$	$l_s$	$l_{dh}$	$l_d$	$l_s$	$l_{dh}$	$l_d$	$l_s$	$l_{dh}$	$l_d$	$l_s$	$l_{dh}$					
VERT. WALL BARS, FILL ON METAL DECK	NWC	3000 PSI	17	22	6	22	29	6	28	36	8	33	43	11	48	62	14	55	72	16	62	81	20	70	91	23	78	101	27				
HORIZ. WALL BARS, FOOTING TOP BARS	NWC	3000 PSI	22	29	6	29	38	6	36	47	8	43	56	11	63	82	14	72	94	16	81	105	20	91	118	23	101	131	27				
BEAM BOTTOM BARS, COLUMN BARS	NWC	3000 PSI	17	22	6	22	29	10	28	36	13	33	43	17	48	62	21	55	72	26	62	81	31	70	91	37	78	101	43				
FOOTING BOTTOM BARS, SLAB ON GRADE	NWC	3000 PSI	12	16	6	14	18	6	17	22	8	20	26	11	29	38	14	33	43	16	38	49	20	42	55	23	46	61	27				
SLAB TOP BARS <sup>1</sup> , BEAM TOP BARS	NWC	3000 PSI	22	29	6	29	38	10	36	47	13	43	56	17	63	82	21	72	94	26	81	105	31	91	118	37	101	131	43				
BAR LOCATION	CONCRETE REINFORCING & SPICE LENGTHS (IN)																																
	CONCRETE		BAR SIZE																														
	TYPE	STRENGTH	#3			#4			#5			#6			#7			#8			#9			#10			#11			COMMENTS			
		$l_d$	$l_s$	$l_{dh}$	$l_d$	$l_s$	$l_{dh}$	$l_d$	$l_s$	$l_{dh}$	$l_d$	$l_s$	$l_{dh}$	$l_d$	$l_s$	$l_{dh}$	$l_d$	$l_s$	$l_{dh}$	$l_d$	$l_s$	$l_{dh}$	$l_d$	$l_s$	$l_{dh}$	$l_d$	$l_s$	$l_{dh}$					
VERT. WALL BARS, FILL ON METAL DECK	NWC	4500 PSI	14	18	6	18	23	6	23	30	8	27	35	10	40	52	12	45	59	15	51	66	18	57	74	21	64	83	25				
HORIZ. WALL BARS, FOOTING TOP BARS	NWC	4500 PSI	18	23	6	24	31	6	30	39	8	35	46	10	51	66	12	59	77	15	66	86	18	74	96	21	82	107	25				
BEAM BOTTOM BARS, COLUMN BARS	NWC	4500 PSI	14	18	6	18	23	9	23	30	12	27	35	16	40	52	20	45	59	24	51	66	29	57	74	34	64	83	40				
FOOTING BOTTOM BARS, SLAB ON GRADE	NWC	4500 PSI	12	16	6	12	16	6	13	17	8	16	21	10	23	30	12	26	34	15	29	38	18	33	43	21	36	47	25				
SLAB TOP BARS <sup>1</sup> , BEAM TOP BARS	NWC	4500 PSI	18	23	6	24	31	9	30	39	12	35	46	16	51	66	20	59	77	24	66	86	29	74	96	34	82	107	40				
NOTES:																																	
1. MECHANICAL COUPLERS MAY BE USED IN LIEU OF LAP SPICES SHOWN. SEE STRUCTURAL NOTES FOR MINIMUM COUPLER CAPACITY. WHERE MECHANICAL COUPLERS ARE USED, STAGGER ADJACENT SPICES A MINIMUM OF 24" AS INDICATED ABOVE.																																	
2. LENGTHS INDICATED IN THIS SCHEDULE SHALL BE INCREASED BY 50% FOR STRAIGHT BAR DEVELOPMENT AND 20% FOR HOOKED BARS WHERE EPOXY COATING IS USED.																																	
3. WHEN SPlicing BARS OF DIFFERENT SIZES, USE LAP SPICE LENGTH OF LARGER BARS UNO.																																	
4. SPICE BARS LARGER THAN #11 USING MECHANICAL COUPLERS.																																	
5. SLAB TOP BARS ONLY FOR SLABS 12" OR GREATER IN THICKNESS.																																	

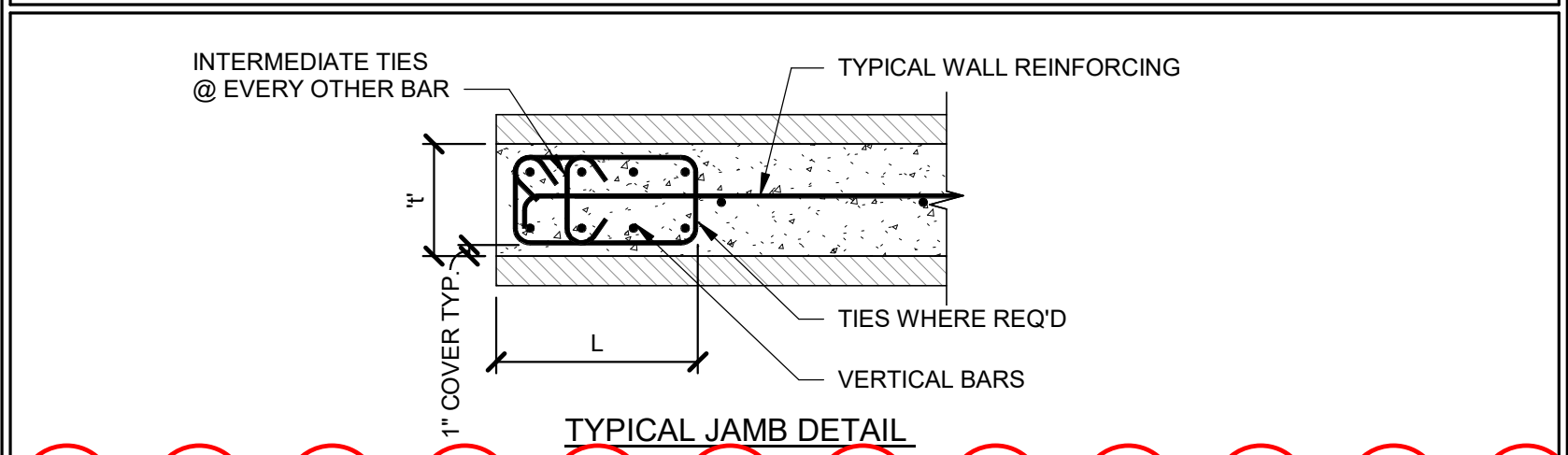
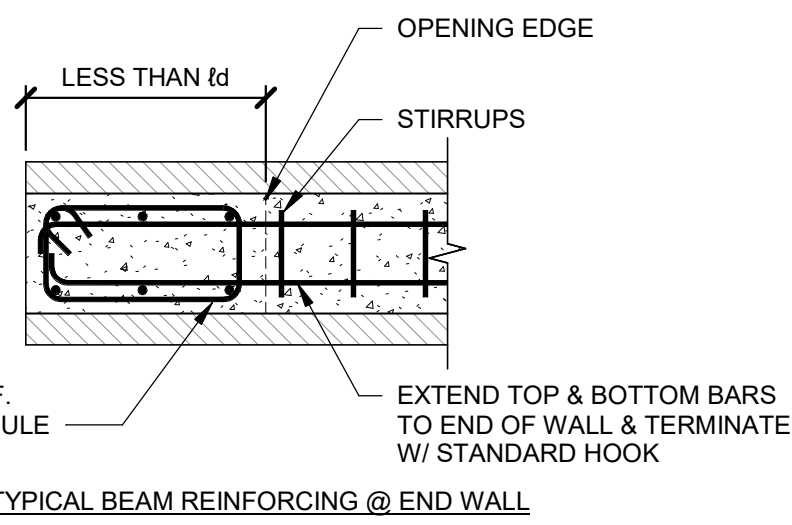
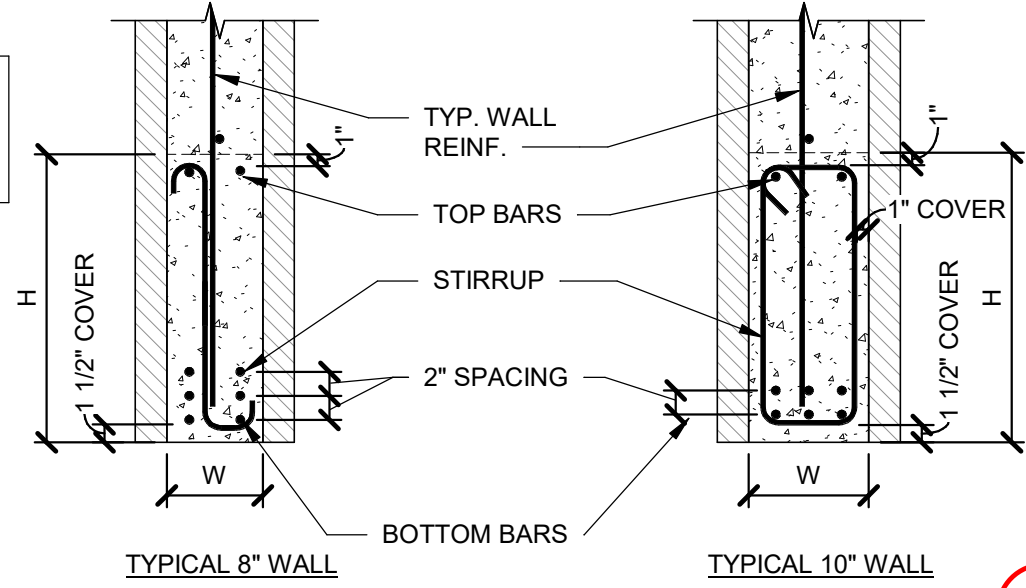
- NOTES:
- MECHANICAL COUPLERS MAY BE USED IN LIEU OF LAP SPICES SHOWN. SEE STRUCTURAL NOTES FOR MINIMUM COUPLER CAPACITY. WHERE MECHANICAL COUPLERS ARE USED, STAGGER ADJACENT SPICES A MINIMUM OF 24" AS INDICATED ABOVE.
  - LENGTHS INDICATED IN THIS SCHEDULE SHALL BE INCREASED BY 50% FOR STRAIGHT BAR DEVELOPMENT AND 20% FOR HOOKED BARS WHERE EPOXY COATING IS USED.
  - WHEN SPICING BARS OF DIFFERENT SIZES, USE LAP SPICE LENGTH OF LARGER BARS UNO.
  - SPICE BARS LARGER THAN #11 USING MECHANICAL COUPLERS.
  - SLAB TOP BARS ONLY FOR SLABS 12" OR GREATER IN THICKNESS.



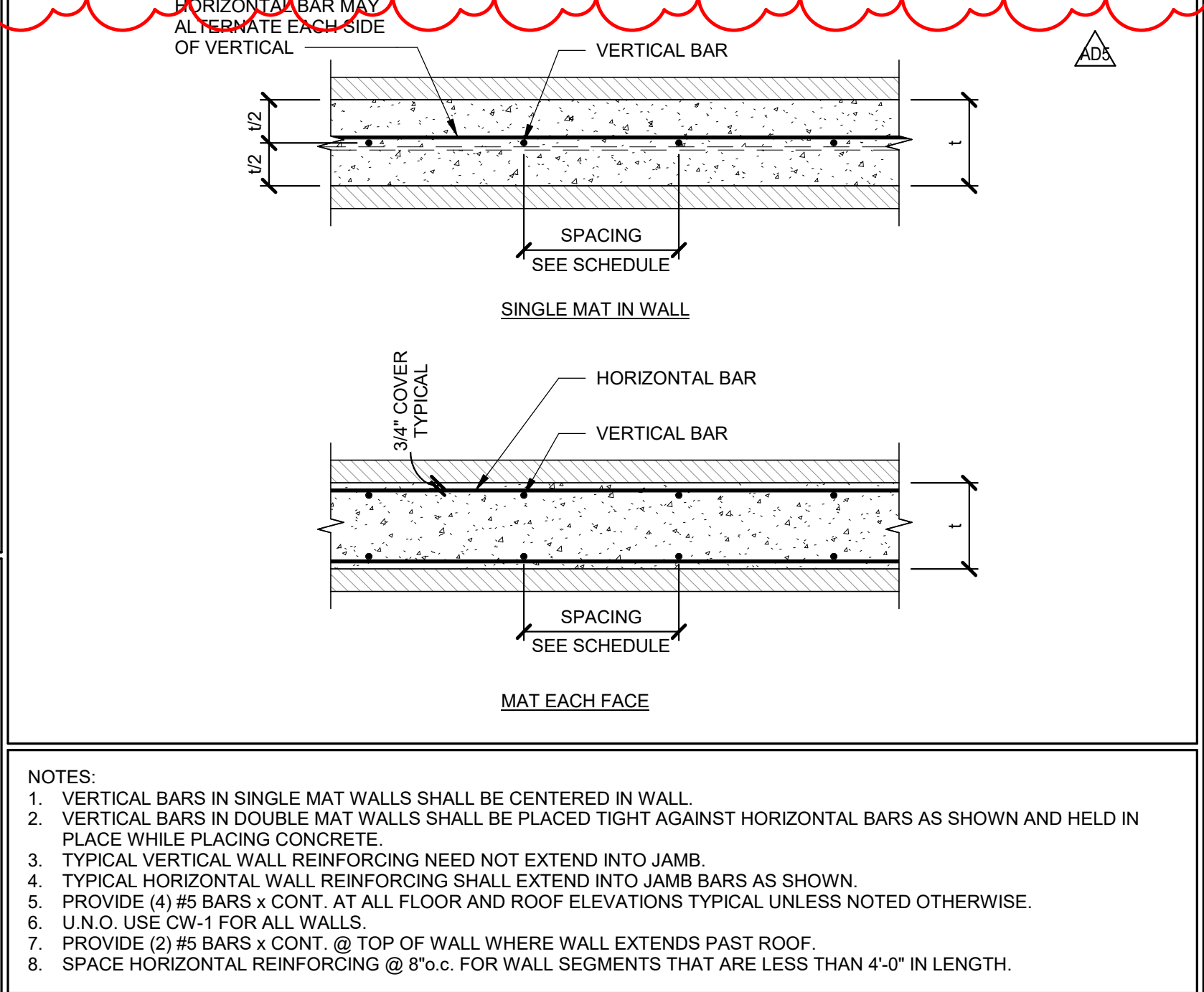
CONCRETE WALL HEADER SCHEDULE								CONCRETE JAMB SCHEDULE							
MARK	H	W	BOTTOM BARS	TOP BARS	TRANSVERSE BAR SPACING	MAX. OPENING WIDTH	COMMENTS	MARK	WALL 't'	LENGTH	VERTICAL BARS	TIES?	MAX. OPENING SIZE	COMMENTS	
CB-1	16"	8"	(2) #5	(2) #5	#4 @ 6"o.c.	5'-0"		CJ-1	8"	16"	(6) #6	--	5'-0"		
CB-2	16"	8"	(4) #5	(2) #5	#4 @ 6"o.c.	7'-0"	(2) LAYERS BOTTOM BARS	CJ-2	8"	16"	(6) #6	#3 @ 12"o.c.	7'-0"		
CB-3	24"	8"	(4) #6	(2) #5	#4 @ 8"o.c.	10'-0"	(2) LAYERS BOTTOM BARS	CJ-3	8"	20"	(8) #6	#3 @ 12"o.c.	12'-0"		
CB-4	24"	8"	(6) #6	(2) #5	#5 @ 8"o.c.	14'-0"	(3) LAYERS BOTTOM BARS	CJ-4	8"	24"	(10) #6	#3 @ 12"o.c.	16'-0"		
CB-5	32"	8"	(6) #6	(2) #6	#5 @ 8"o.c.	16'-0"	(3) LAYERS BOTTOM BARS	CJ-5	8"	36"	(12) #6	#3 @ 12"o.c.	--		
CB-6	48"	8"	(6) #6	(2) #6	#5 @ 12"o.c.	SEE PLAN	(3) LAYERS BOTTOM BARS	CJ-6	8" OR 10"	16"	(6) #6	#3 @ 5"o.c.	SEE PLAN		
CB-7	16"	10"	(3) #6	(2) #5	#3 @ 6"o.c.	7'-0"		CJ-7	10"	12"	(4) #6	--	5'-0"		
CB-8	24"	10"	(6) #6	(2) #5	#3 @ 6"o.c.	12'-0"	(2) LAYERS BOTTOM BARS	CJ-8	10"	16"	(6) #6	#3 @ 12"o.c.	7'-0"		
CB-9	32"	10"	(6) #6	(2) #5	#3 @ 6"o.c.	16'-0"	(3) LAYERS BOTTOM BARS	CJ-9	10"	30"	(14) #6	--	12'-0"		
								CJ-10	10"	48"	(24) #6	--	16'-0"		
								CJ-11	8"	30"	(12) #6	#3 @ 12"o.c.	SEE PLAN		
NOTES: 1. TOP AND BOTTOM BARS SHALL BE CONTINUOUS THROUGHOUT THE HEADER WITHOUT SPLICING IF POSSIBLE. 2. IF SPLICES ARE REQUIRED THEY SHALL NOT OCCUR IN THE MIDDLE HALF SPAN OF THE HEADER. 3. TYPICAL HORIZONTAL WALL REINFORCING NEED NOT OCCUR IN DEPTH OF HEADER. 4. TOP AND BOTTOM BARS SHALL EXTEND PAST THE EDGE OF AN OPENING A MINIMUM DISTANCE OF THE DEVELOPMENT LENGTH 'L' SEE REBAR LAP/SPLICE SCHEDULE. 5. NO CONSTRUCTION/EXPANSION JOINTS SHALL OCCUR THROUGH BEAM LENGTH.								NOTES: 1. JAMBS PER OPENING SIZE SHALL BE USED U.N.O. ON PLANS. 2. THE SPACING IS A MAXIMUM. 3. NO VERTICAL CONSTRUCTION/EXPANSION JOINTS SHALL OCCUR IN JAMB LENGTH 'L'. 4. LAP SPLICES SHALL BE PER REBAR LAP SCHEDULE. 5. JAMB REINFORCING SHALL BE TIED TO FOOTING DOWELS. 6. JAMBS SHALL BE AT EACH SIDE OF OPENING. WHERE OPENINGS ARE CLOSE TOGETHER AND NOT SPECIFICALLY CALLED OUT ON PLANS CONTACT ENGINEER.							

- NOTES:
- TOP AND BOTTOM BARS SHALL BE CONTINUOUS THROUGHOUT THE HEADER WITHOUT SPICING IF POSSIBLE.
  - IF SPICES ARE REQUIRED THEY SHALL NOT OCCUR IN THE MIDDLE HALF SPAN OF THE HEADER.
  - TYPICAL HORIZONTAL WALL REINFORCING NEED NOT OCCUR IN DEPTH OF HEADER.
  - TOP AND BOTTOM BARS SHALL EXTEND PAST THE EDGE OF AN OPENING A MINIMUM DISTANCE OF THE DEVELOPMENT LENGTH  $l_d$ ; SEE REBAR LAP/SPICE SCHEDULE.
  - NO CONSTRUCTION/EXPANSION JOINTS SHALL OCCUR THROUGH BEAM LENGTH.

NOTE: SINGLE STIRRUP LEG SHALL BE USED @ 8" WALLS UNO. SINGLE STIRRUP HOOP SHALL BE USED @ 10" WALL UNO.



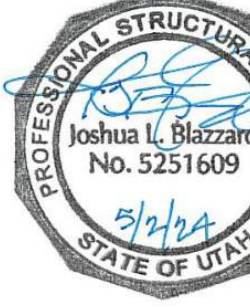
CONCRETE WALL SCHEDULE						
MARK	t	VERTICAL REINFORCING SIZE	VERTICAL REINFORCING SPACING	HORIZONTAL REINFORCING SIZE	HORIZONTAL REINFORCING SPACING	COMMENTS
CW-1	8"	#6	16"o.c.	#5	16" OR 18"o.c.	TYPICAL WALL UNLESS NOTED OTHERWISE
CW-2	8"	#6	12"o.c.	#5	16" OR 18"o.c.	MAT EACH FACE
CW-3	10"	#6	8"o.c.	#6 @ 16"o.c. OR (2) #5 @ 18"o.c.		
CW-4	10"	#6	12"o.c.	#6 @ 16"o.c. OR (2) #5 @ 18"o.c.		
CW-5	8"	#6	16"o.c.	#6	16" OR 18"o.c.	
CW-6	8"	#6	16"o.c.	#6	16" OR 18"o.c.	HOOK BARS AROUND VERTICAL REINF. AT END OF WALLS



- NOTES:
- VERTICAL BARS IN SINGLE MAT WALLS SHALL BE CENTERED IN WALL.
  - VERTICAL BARS IN DOUBLE MAT WALLS SHALL BE PLACED TIGHT AGAINST HORIZONTAL BARS AS SHOWN AND HELD IN PLACE WHILE PLACING CONCRETE.
  - TYPICAL HORIZONTAL WALL REINFORCING NEED NOT EXTEND INTO JAMB.
  - TYPICAL HORIZONTAL WALL REINFORCING SHALL EXTEND INTO JAMB BARS AS SHOWN.
  - PROVIDE (4) #5 BARS x CONT. AT ALL FLOOR AND ROOF ELEVATIONS TYPICAL UNLESS NOTED OTHERWISE.
  - U.N.O. USE CW-1 FOR ALL WALLS.
  - PROVIDE (2) #5 BARS x CONT. @ TOP OF WALL WHERE WALL EXTENDS PAST ROOF.
  - SPACE HORIZONTAL REINFORCING @ 8"o.c. FOR WALL SEGMENTS THAT ARE LESS THAN 4'-0" IN LENGTH.

MARK	DATE	DESCRIPTION
	05.28.24	ADD

PROJECT #: 123006  
DRAWN BY: BLP  
CHECKED BY: J. Blazard  
ISSUED: 05.02.2024





## **ADDENDUM 5**

**DATE:** May 28, 2024

**PROJECT NO:** 23717

**PROJECT:** Hyde Park and Nibley Middle Schools

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The following revision, additions, deletions, and/or items of clarification shall hereby be included as an integral part of the Contract Documents for the above-listed project and shall be fully binding. All other requirements of the original plans and specification shall remain in effect in their respective order.

### **DIVISION – 21, 22 & 23**

#### **QUESTIONS**

Can we get pipe sizing on the MP pages that are not indicated please?

A. Additional pipe sizes have been added. See attached.

Can we get the piping in a bolder print, so it is more legible please?

A. The drawings are meant to be printed in color. Please print drawings in color.

Spec section 21 1000,3.4G, states that 2" pipe and larger shall be threaded. Would it be possible to use grooved pipe for 2" and smaller?

A. Yes. This is noted in this addendum.

-Spec section 233113-15 3.12 B states that duct in areas with no ceilings needs to be double wall. Our experience with VBFA is that it is typically noted on the drawings where double wall K-27 duct is required. There are currently several places on the drawings where double wall duct is called out.

Is it the intent for all exposed duct to be double wall (even where not noted)? This would apply to places like the gym, cafeteria, CCA shop, etc.

A. No. The exposed medium pressure ductwork shall be double wall from the air handler to 20 feet down stream of the air handler. All other exposed ductwork shall be lined as specified.

#### **DRAWINGS**

##### **SHEET - M601**

1. Add note 2 to Air Handler Schedule as follows: 2. UNIT COMPLETE WITH 20" SEISMIC CURB AND EBTRON AIR FLOW MEASURING STATION ON THE OUTSIDE AIR INLET.
2. Add curb height of 18" to note 2 on Make-Up Air Handler Unit Schedule. See attached.
3. Add DL-1 to the Grilles, Registers and Diffusers schedule as shown. See attached.

##### **SHEET - MP111.A**

1. Modify piping as shown. See attached.

##### **SHEET - MP111.B**

1. Modify piping as shown. See attached.

##### **SHEET - MP111.C**

1. Add pipe size tag. See attached.
2. Modify piping as shown. See attached.

**SHEET - MP111.D**

1. Add pipe size tag. See attached.
2. Modify piping as shown. See attached.

**SHEET - MP111.E**

1. Add pipe size tag. See attached.
2. Move pipe size tag for clarity. See attached.
3. Modify piping as shown. See attached.

**SHEET - MP111.F**

1. Modify piping as shown. See attached.
2. Add pipe size tag. See attached.

**SHEET - MP112.A**

1. Modify piping as shown. See attached.

**SHEET - MP112.B**

1. Modify piping as shown. See attached.

**SHEET - MP112.C**

1. Modify piping as shown. See attached.

**SPECIFICATIONS**

**SECTION – 211000**

2. Paragraph 3.4.G.1 changed from “2 and Smaller” to “1-1/4 and Smaller”

**PRIOR APPROVALS**

The following manufacturers, trade names and products are allowed to bid on a name brand only basis with the provision that they completely satisfy all and every requirement of the drawings, specifications and all addenda shall conform to the design, quality and standards specified, established, and required for the complete and satisfactory installation and performance of the building and all its respective parts.

<u>Item</u>	<u>Manufacturer</u>	<u>Comments</u>
Water Cooler	Oasis	Not Approved
Bottle Filler	Oasis	Not Approved
Emergency Shower	Chicago	Approved
Water Heater	PVI	Not Approved
Water Treatment	Clear Water	Not Approved
Cabinet Unit Heaters	Sterling Commercial Hydronics	Approved
Boilers	Lochinvar	Not Approved
Unit Heaters	Sterling Commercial Hydronics	Approved
Water Heaters	Lochinvar	Not Approved
VFD	Eaton	Not Approved
VFD	Danfoss	Approved
Storage Tanks	Lochinvar	Approved
Piping	Niron	Not Approved
Service Sink	Fiat	Approved
Grease Interceptor	Schier	Not Approved
Water Closets	Sloan Valve Co.	Not Approved
Urinals	Sloan Valve Co.	Approved
Lavatories	Sloan Valve Co.	Not Approved
Sensor Faucet	Sloan Valve Co.	Approved
Grease Interceptor	Schier	Not Approved
HVAC Power Ventilators	S&P	Not Approved
Fixed Extruded Aluminum Louvers	United Enertech	Approved
Custom AHU	Scott Springfield	Not Approved

Packaged indirect fired Outdoor MAU	Thermo Tek	Not Approved
Ductless Fan Coil Units	Mitsubishi	Approved
Electric Unit Heaters	Berko	Approved
Thermometers	Winters	Approved
Hydronic Piping Specialties	IFC	Approved
Expansion Tanks, Air Separators	Grundfos	Approved
Hydronic Heat Exchangers	Alfa Laval	Approved

WATER-COOLED CHILLER SCHEDULE																		
ID	MANUFACTURER AND MODEL NUMBER	LOCATION	TYPE	REFRIG.	LOAD (TONS)	FLUID				ELECTRICAL				CHILLER AND CONTROL CIRCUIT	PHYSICAL LENGTH/ WIDTH/ HEIGHT	NOTES		
						DESCRIPTION	FLOW	ENTERING/ LEAVING	WORKING	HEAD	MAX	TOTAL	EFFECTENCY				MAXIMUM UNIT	EFFICIENCY
							RATE (GPM)	TEMP. (°F)										
CH-1	CARRIER 19MW-21L2K259E35	CHILLER RM	MAG BEARING	RS13A	270	EVAPORATOR CONDENSER	686.9 749	5444 6090	30% P GLY WATER	18.2 14.6	150 252	450	0.542	0.5330 (NPLV)	460/3/60 - 120/1/60 158/52/100	1-7		

1. WITH FACTORY SOUND ATTENUATION, STARTER AND DISCONNECT

2. UNIT WITH MODULATION CAPACITY DOWN TO 15% OF MAXIMUM LOAD AND RUN AT 55 CHWS AND 59 CHWR

3. UNIT WITH FACTORY VSD/DISCONNECT, FILTER, BACNET NETWORK INTERFACE CARD

4. MINIMUM EVAPORATOR FLOW = 350 GPM, CONDENSER = 375.4 GPM.

5. UNIT COMPLETE WITH ECONOMIZER.


6. UNIT WITH INLET GUIDE VANES, VFD AND MAGNETIC BEARING COMPRESSORS

7. PROVIDE WITH MARINE BOX ON CONDENSER WATER INLET.

CHEMICAL FEED SYSTEM SCHEDULE															
ID	MANUFACTURER AND MODEL NUMBER	LOCATION	TYPE	FLUID	WORKING FLUID (GAL)	TOTAL VOLUME (GAL)	STATIC FILL PRESSURE (PSIG)	PRESSURE RATING (PSIG)	ELECTRICAL VOLT/PH/Hz	ALARM PANEL	PHYSICAL				NOTES
											(IN)	(IN)	NPT	TANK HEIGHT (GAL)	
CWT-01	WEST CONDENSER WATER TREATMENT	CHILLER ROOM C112	CHEMICAL FEEDER	WATER	1686.4	4	0	120/1/60	---	198/3/66	1	50	1-3		

1. PROVIDE THREE DOUBLE WALL CONTAINMENT POLY TANKS: (1) SCALE INHIBITOR, (2) BIOCIDES, ONE INJECTION PUMP PER TANK MOUNTED ON SS SHELF ABOVE TANKS  
2. WALL MOUNTED CONTROLLER. SOLIDS SEPARATOR BLOW DOWN SHALL BE CONTROLLED BY TOWER TREATMENT CONTROLLER  
3. ESTIMATED WEIGHT: 50 LBS.

HYDRONIC BOILER SCHEDULE																		
ID	MANUFACTURER AND MODEL NUMBER	LOCATION	TYPE	FUEL TYPE	MINIMUM INPUT FLOW (BTU/H)	MINIMUM INPUT FLOW (CFH)	OUTPUT FLOW (BTU/H)	FLUID			ELECTRICAL				PHYSICAL		NOTES	
								FLOW RATE	ENTERING/ LEAVING TEMP. (°F)	WORKING FLUID	HEAD LOSS (FT)	MOTOR QUAN	MOTOR SIZE (HP)	MOTOR VOLT/PH/Hz	CONTROL CIRCUIT	STACK DIAMETER (IN)		HEIGHT (IN)
B-1	CLEAVER-BROOKS CFC-E 5000	BOILER ROOM D135	COND. FORCED, DUAL RET	NAT GAS	5000000	5000	4400000	282.4	126.7/160	30% P GLY	5	1	10.73	460/3/60	120/1/60	1@14	80.6/58.7/93.6	1
B-2	CLEAVER-BROOKS CFC-E 5000	BOILER ROOM D135	COND. FORCED, DUAL RET	NAT GAS	5000000	5000	4400000	282.4	126.7/160	30% P GLY	5	1	10.73	460/3/60	120/1/60	1@14	80.6/58.7/93.6	1
1. ASME CERTIFIED																		

- (1) ALL CAPACITIES BASED ON 400 FEET ELEVATION. 
- (2) UNIT COMPLETE WITH 18" SPRING VIBRATION ISOLATED ROOF CURB. MATCH ROOF CURB TO SUPPORT UNIT.
- (3) SUPPLIED WITH VSD/CAV AND COMBUSTION AIR OPENING.
- (4) INTERLOCK UNIT WITH KITCHEN HOOD CONTROL PANEL, DIV. 26.
- (5) EQUIPPED WITH FACTORY MOUNTED STARTER & DISCONNECT.
- (6) TYPE UNIT: 100% OUTSIDE AIR ROOFTOP MAKE-UP AIR HANDLING UNIT, COMPLETE WITH THE FOLLOWING OPTIONS:  
A) DOWN DISCHARGE PLENUM.  
B) STAINLESS STEEL HEAT EXCHANGER.  
C) MODULATING GAS VALVE DOWN TO 30% AND DUCT TEMPERATURE SENSOR. SET TEMPERATURE SENSOR AT 65 DEG-F LEAVING AIR TEMPERATURE.  
D) EVAPORATIVE COOLER TO BLOWER FAN TRANSITION.  
E) FACTORY MOUNTED DISCONNECT.

MAKE-UP AIR HANDLER UNIT SCHEDULE															
ID	MANUFACTURER	MODEL NO	LOCATION	OUTSIDE AIR FLOW RATE (CFM)	EXTERNAL STATIC PRESSURE DROP (IN H2O)	HEATING ENTER/ LEAVING AIR TEMP. (DEG. F)	INPUT HEATING LOAD (MBH)	OUTPUT HEATING LOAD (MBH)	FUEL TYPE	MAX DIMENSIONS L x W x H (IN)	MAX OPERATING WEIGHT (LBS)	EVAP HP	MOTOR VOLT/PH/Hz		NOTES
MAU-1	GREENHECK	IGX-P116-H22-MF	KITCHEN	2681	0.75	-20	287.7	233.1	NAT GAS	133 X 44 X 45	1700	YES	1.5	460/3/60	(1) 2/3 (3) 4 (5) 6
MAU-2	GREENHECK	IGX-P116-H22-MF	KITCHEN	2681	0.75	-20	287.7	233.1	NAT GAS	133 X 44 X 45	1700	YES	1.5	460/3/60	(1) 2/3 (3) 4 (5) 6

1. UNIT COMPLETE WITH 1" FILTERS. 
2. UNIT COMPLETE WITH 20" SEISMIC CURB AND EBTIRON AIR FLOW MEASURING STATION ON THE OUTSIDE AIR INLET. 

AIR HANDLER SCHEDULE											
ID	MANUFACTURER AND MODEL NUMBER	LOCATION	AIR	COMPONENTS			ELECTRICAL	PHYSICAL			
			SUPPLY AIRFLOW	FANS	COILS	LIGHTING AND OUTLET	WIDTH/HEIGHT	CABINET LENGTH	WEIGHT		
ID	MODEL NUMBER	LOCATION	(CFM)	FANS	COILS	VOLT/PH/Hz	(IN)	(IN)	(LB)	NOTES	
RTU-1	DAIKIN QAH071GBCM	AREA A,B	32403	SF-RTU-1, RF-RTU-1	CC-RTU-1, HC-RTU-1	120/1/60	420/136/100	168.7	1.2		
RTU-2	DAIKIN QAH082GBCM	AREA A,B	37205	SF-RTU-1, RF-RTU-2	CC-RTU-2, HC-RTU-2	120/1/60	426/136/112	181.6	1.2		
RTU-3	DAIKIN QAH082GBCM	AREA C	34705	SF-RTU-1, RF-RTU-3	CC-RTU-3, HC-RTU-3	120/1/60	424/136/112	181.6	1.2		
RTU-4	DAIKIN QAH045GBCM	AREA D	21240	SF-RTU-1, RF-RTU-4	CC-RTU-4, HC-RTU-4	120/1/60	398/106/84	115.9	1.2		
RTU-5	DAIKIN QAH008GBCM	AREA D	3290	SF-RTU-1, RF-RTU-5	CC-RTU-5, HC-RTU-5	120/1/60	326/58/40	41.4	1.2		
RTU-6	DAIKIN QAH021GBCM	AREA D	8856	SF-RTU-1, RF-RTU-6	CC-RTU-6, HC-RTU-6	120/1/60	356/58/58	68.1	1.2		
RTU-7	DAIKIN QAH025GBCM	AREA E	10555	SF-RTU-1, RF-RTU-7	CC-RTU-7, HC-RTU-7	120/1/60	354/76/72	70.9	1.2		
RTU-8	DAIKIN QAH019GBCM	AREA F	8425	SF-RTU-1, RF-RTU-8	CC-RTU-8, HC-RTU-8	120/1/60	364/80/52	67.1	1.2		
RTU-9	DAIKIN QAH017GBCM	AREA F	30000	SF-RTU-1, RF-RTU-9	CC-RTU-9, HC-RTU-9	120/1/60	418/136/100	172.3	1.2		
RTU-10	DAIKIN QAH020GBCM	AREA F	8695	SF-RTU-1, RF-RTU-10	CC-RTU-10, HC-RTU-10	120/1/60	348/76/60	65.6	1.2		

AIR SEPARATOR SCHEDULE											
ID	MANUFACTURER AND MODEL NUMBER	LOCATION	TYPE	FLUID				PHYSICAL		NOTES	
				FLOW (GPM)	WORKING FLUID	HEAD LOSS (FT)	SYSTEM PRESSURE (PSIG)	DIA/ HEIGHT (IN)			
AS-QHW-01	TACO AC08F-125	CHILLER ROOM C112	TANK, IN-LINE, STRAINER	1037.8	30% P GLY	3	60	2045.5	1		
ASHW-1	TACO 4988AD-125	BOILER ROOM D135	TANK, HIGH EFF. AIR/DIRT	662.9	30% P GLY	3	60	1841.5	1		
1. ASME CERTIFIED											

AIR HANDLER HYDRONIC COIL SCHEDULE															
ID	MANUFACTURER AND MODEL NUMBER	LOCATION	USAGE	AIR						HYDRONIC				PHYSICAL	
				RATE (CFM)	LOAD (BTU/H)	SENSIBLE (BTU/H)	ENTERING TEMP. (°F)	LEAVING TEMP. (°F)	STATIC PRESSURE (IN. H2O)	FLOW (GPM)	ENTERING/ LEAVING TEMP. (°F)	WORKING FLUID	HEAD LOSS (FT)	NO. COILS	MINIMUM FACE AREA (FT²)
CC-RTU-1	DAIKIN	RTU-1	COOLING	32403	962870	886633	81.862.2	51.850.6	0.57	170.7	4254.1	30% P GLY	16.3	2	66.62
CC-RTU-2	DAIKIN	RTU-2	COOLING	37205	1131106	1005771	81.462.2	51.850.7	0.56	194.1	4254.2	30% P GLY	15.8	2	76.88
CC-RTU-3	DAIKIN	RTU-3	COOLING	34705	1063615	965902	82.582.2	52.150.6	0.47	187.6	4253.8	30% P GLY	14.9	2	76.88
CC-RTU-4	DAIKIN	RTU-4	COOLING	21240	720509	620259	83.883.7	51.951.2	0.67	127.5	4253.8	30% P GLY	10.2	2	42.62
CC-RTU-5	DAIKIN	RTU-5	COOLING	3290	93487	81263	79.61.8	52.01.1	0.46	15.9	4254.2	30% P GLY	12.5	1	7.5
CC-RTU-6	DAIKIN	RTU-6	COOLING	8856	278770	246816	82.382.6	51.950.8	0.46	47.5	4254.2	30% P GLY	14.6	1	20.12
CC-RTU-7	DAIKIN	RTU-7	COOLING	10555	262590	240695	76.660	51.750.3	0.46	46.8	4253.7	30% P GLY	9.7	2	23.62
CC-RTU-8	DAIKIN	RTU-8	COOLING	8425	257842	235773	82.462	51.850.4	0.62	44.8	4254	30% P GLY	12.3	1	16.75
CC-RTU-9	DAIKIN	RTU-9	COOLING	30000	933290	830187	82.462.5	52.290.8	0.46	165.3	4253.8	30% P GLY	15.3	2	66.62
CC-RTU-10	DAIKIN	RTU-10	COOLING	8695	245623	229421	80.661	51.850.1	0.5	43.8	4253.7	30% P GLY	14	1	18.38
HC-RTU-1	DAIKIN	RTU-1	HEATING	32885	451084	451084	39.5	60.1	0.09	23.6	160/119.8	30% P GLY	3.3	2	65
HC-RTU-2	DAIKIN	RTU-2	HEATING	32960	691642	691642	37.4	60.3	0.12	35.9	160/119.4	30% P GLY	6.3	2	70
HC-RTU-3	DAIKIN	RTU-3	HEATING	27108	703424	703424	31.5	59.8	0.19	37.2	160/120.2	30% P GLY	4.5	2	70
HC-RTU-4	DAIKIN	RTU-4	HEATING	21240	578538	578538	30.6	60.3	0.14	30.1	160/119.5	30% P GLY	1.5	2	41.25
HC-RTU-5	DAIKIN	RTU-5	HEATING	3290	28421	28421	50.6	60	0.14	2	160/129.9	30% P GLY	0.2	1	4.38
HC-RTU-6	DAIKIN	RTU-6	HEATING	8230	190387	190387	34.6	59.9	0.07	10	160/119.9	30% P GLY	3.6	1	19.25
HC-RTU-7	DAIKIN	RTU-7	HEATING	6850	76391	76391	50	62	0.11	4.3	160/122.5	30% P GLY	0.3	1	16.25
HC-RTU-8	DAIKIN	RTU-8	HEATING	4645	144102	144102	26.7	60.6	0.13	7.1	160/117.4	30% P GLY	2.7	1	16
HC-RTU-9	DAIKIN	RTU-9	HEATING	30000	1450254	1450254	36.8	89.6	0.15	78.8	160/120.3	30% P GLY	3	2	65
HC-RTU-10	DAIKIN	RTU-10	HEATING	8640	353636	353636	44.5	89.7	0.17	19.3	160/121.5	30% P GLY	3.3	1	17.5

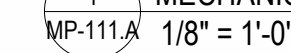
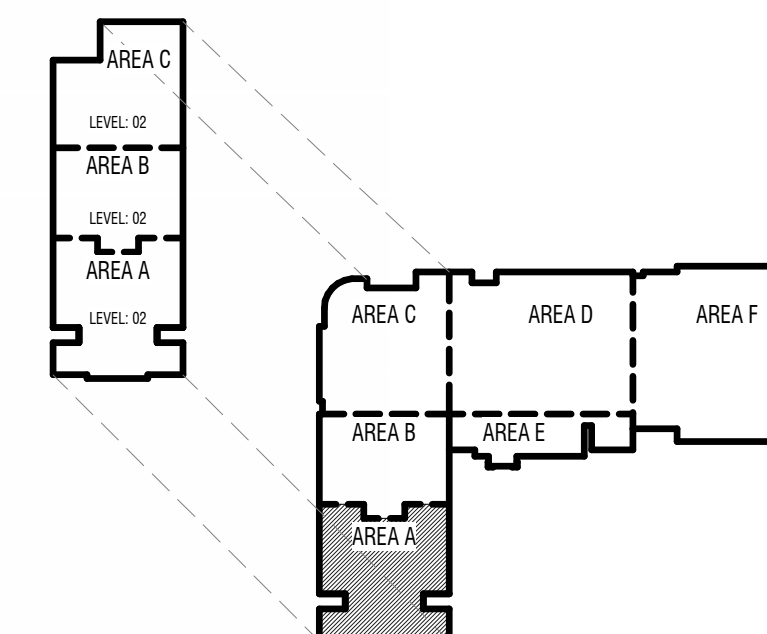
CONDENSATE NEUTRALIZER SCHEDULE													
ID	MANUFACTURER AND MODEL NUMBER	LOCATION	QTY	TYPE	CONDENSATE DEVICE		PHYSICAL			NOTES			
					INPUT LOAD (BTU/H)	EFFICIENCY (%)	LENGTH/ WIDTH/ HEIGHT (IN)	NPT FITTING (IN)					
CN-1	AXIOM NT25	BOILER ROOM D135	1	STANDARD	5000000	96	17.5/13.5/6	1					
CN-2	AXIOM NT25	BOILER ROOM D135	1	STANDARD	5000000	96	17.5/13.5/6	1					

COOLING TOWER SCHEDULE																
ID	MANUFACTURER AND MODEL NUMBER	LOCATION	TYPE	FAN AIRFLOW (CFM)	AMBIENT TEMP. (°F)	FLOW RATE (GPM)	ENTERING/ LEAVING TEMP. (°F)	WORKING FLUID	INLET/ OUTLET HEAD LOSS (FT)	ELECTRICAL FAN				PHYSICAL		NOTES
										QUAN.	SIZE (HP)	MOTOR SPEED (RPM)	TOWER CONTROL CIRCUIT VOLT/PHHZ	OPERATING WEIGHT (LB)	LENGTH/ WIDTH/ HEIGHT (IN)	
CT-01 CELL A	EVAPCO AT 19-239	MECH. YARD	OPEN. COUNTERFLOW, AXIAL	50900	9596	810	10080	WATER	5	1	15	1750	460/360 - 120/180	7090	107.5/101.5/140.4	1-7
1. UNIT PROVIDED WITH LOW SOUND FAN.																
2. BASIN SHALL BE ALL 304 STAINLESS STEEL CONSTRUCTION.																
3. PROVIDE BASIN PLATFORM, LADDERS, LADDER EXTENSIONS AS REQUIRED.																
4. PROVIDE WITH VIBRATION SWITCHES.																
5. UNIT COME/PETE WITH A 10 KW, 480V/3PH SUMP HEATER. PROVIDE TRANSFORMER FOR A CONTROL CIRCUIT AT 120V/1PH.																
6. TOWER SITS ON SUPPORT. SEE STRUCTURAL DRAWINGS.																
7. UNIT COMPLETE WITH SUMP SWEEPER PIPING, MINIMUM SWEEPER FLOW RATE 80 GPM AT 20 PSI.																

PROJECT #: 23717  
DRAWN BY: Author  
CHECKED BY: LW  
ISSUED: 05/02/2024

MECHANICAL PIPING  
PLAN - LEVEL 01 -  
AREA A

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E

D

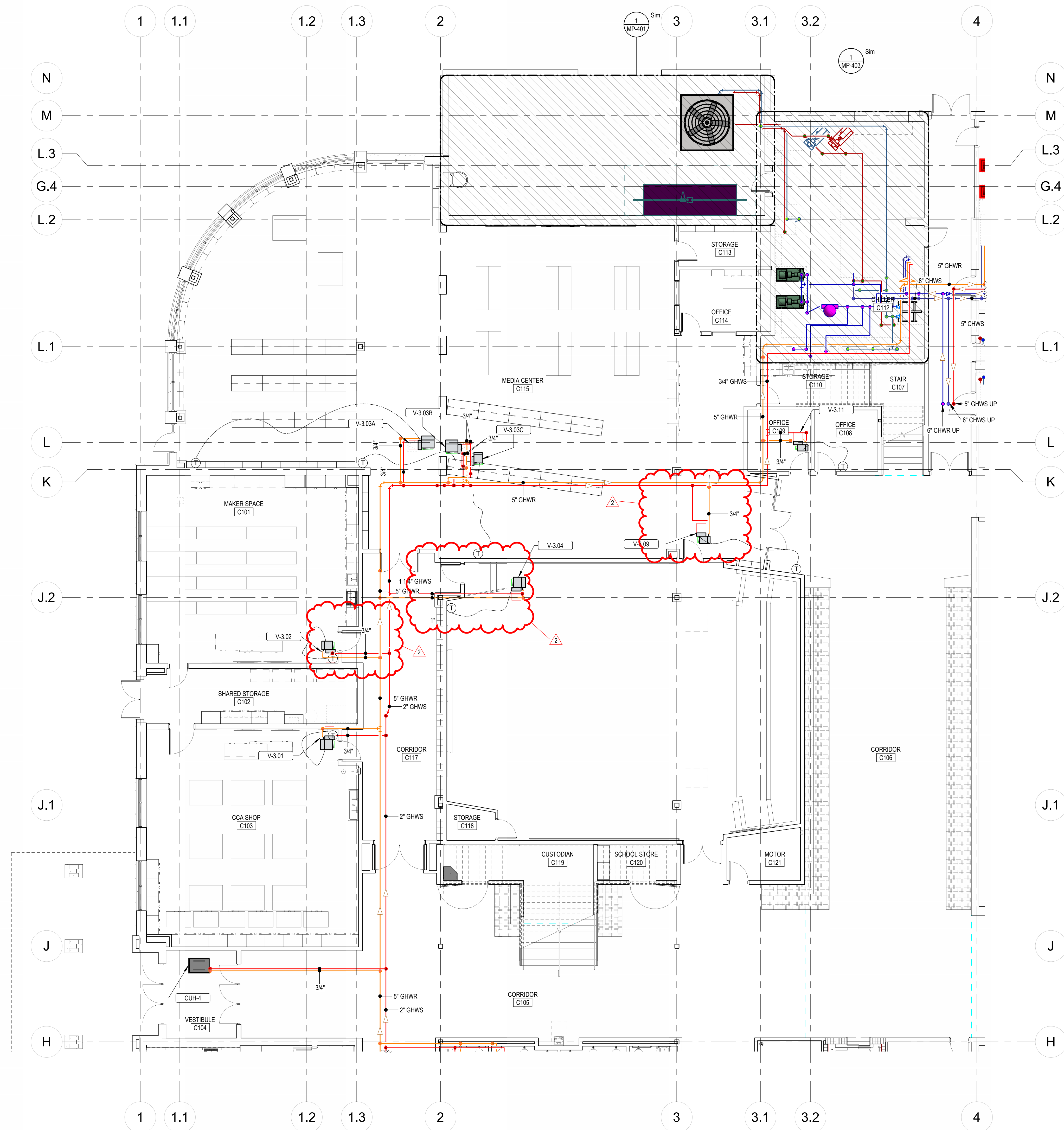
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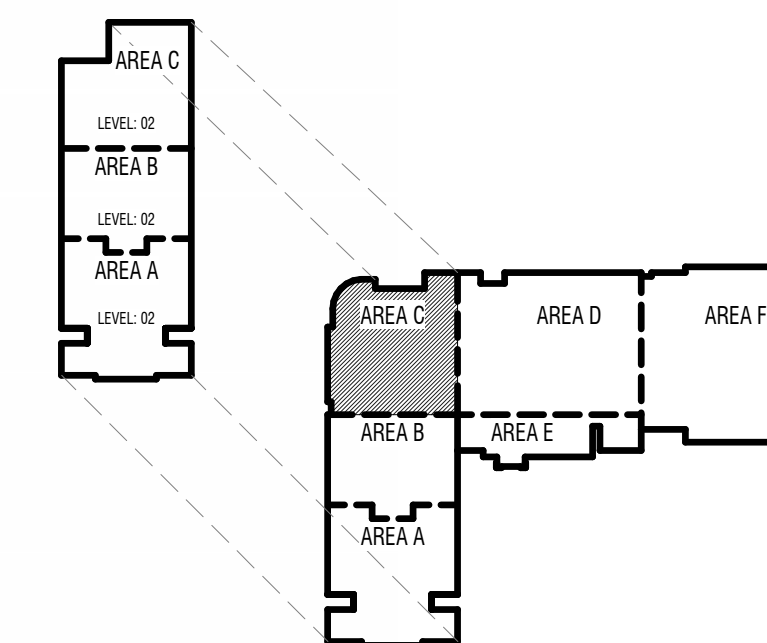
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1 MECHANICAL PIPING PLAN - LEVEL 01 - AREA C  
MP-111.C 1/8" = 1'-0"



KEYNOTES

## KEY PLAN



TO BE DETERMINED

CONSTRUCTION DOCUMENTS

design west architects  
255 SOUTH 400 WEST  
LOGAN UT 84321  
795 NORTH 400 WEST  
SALT LAKE CITY UT 84103

40 W. Cache Valley Blvd.  
Building 1, Suite B  
Logan, UT  
O: (435) 752-5081  
www.vbfa.com  
VBFA Project #: 23717

NIBLEY MIDDLE SCHOOL

3050 S 920 W NIBLEY, UTAH

CACHE COUNTY SCHOOL DISTRICT

DATE	DESCRIPTION
5-15-2024	Adopted
5-29-2024	Adopted

PROJECT #: 23717  
DRAWN BY: Author  
CHECKED BY: LW  
ISSUED: 05/02/2024

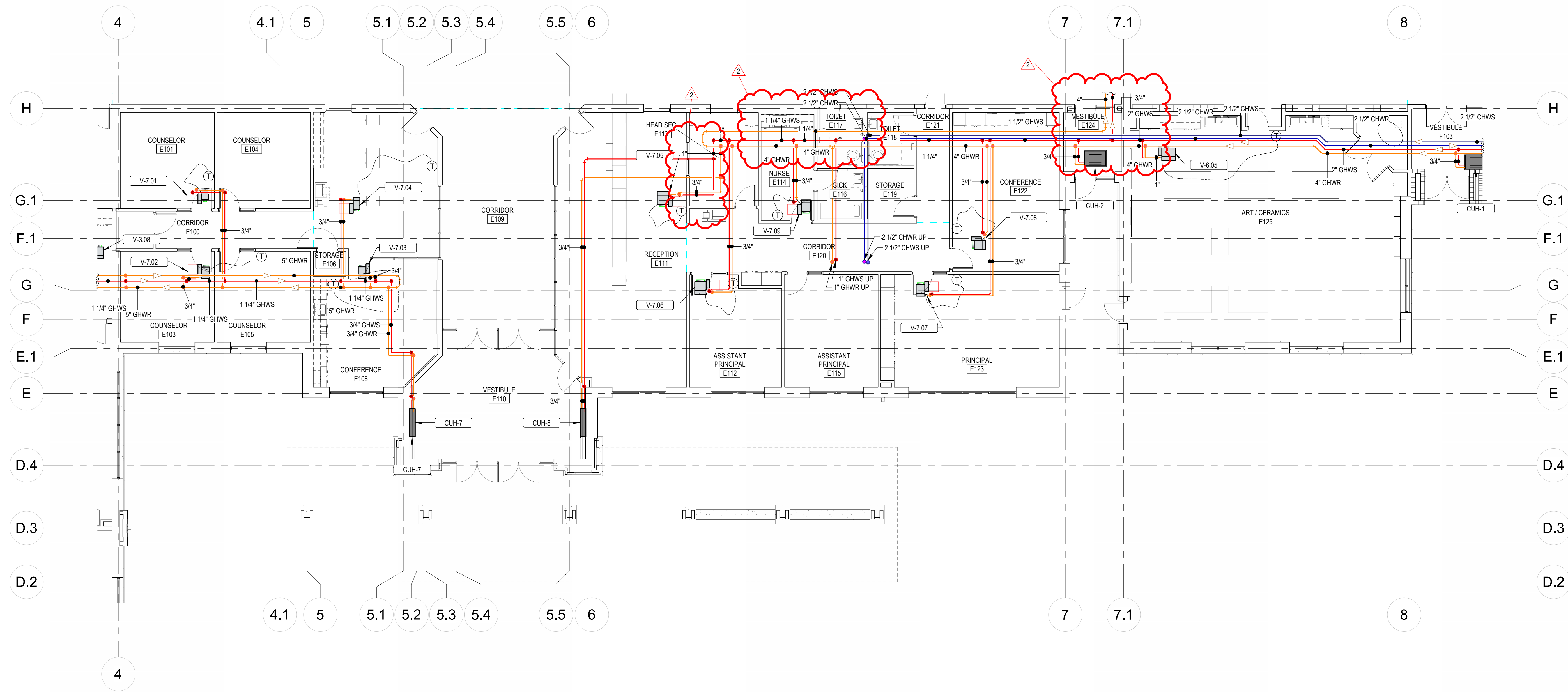
STATE OF UTAH  
PROFESSIONAL ENGINEER  
No. 8380445-2302  
BRENDAN L. JENNINGS

MECHANICAL PIPING  
PLAN - LEVEL 01 -  
AREA C

MP-111.C

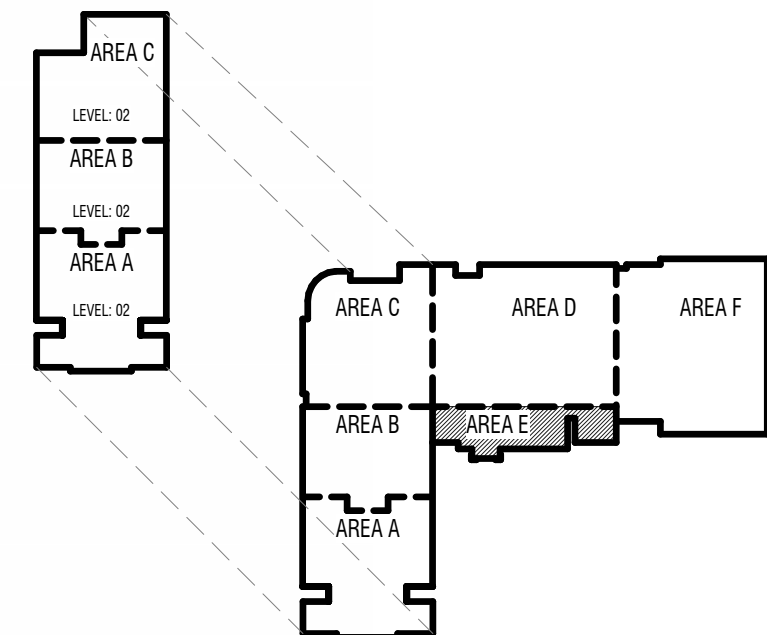


E  
D  
C  
B  
A



1 MECHANICAL PIPING PLAN - LEVEL 01 - AREA E  
MP-111.E 1/8\"/>

KEY PLAN



KEYNOTES

CONSTRUCTION DOCUMENTS

design west architects

255 SOUTH 400 WEST  
LOGAN UT 84321  
795 NORTH 400 WEST  
SALT LAKE CITY UT 84103

40 W. Cache Valley Blvd.  
Building 1, Suite B  
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O: (435) 752-5081  
www.vbfa.com  
VBFA Project #: 23717

VBFA

VBFA Project #: 23717

NIBLEY MIDDLE SCHOOL

3050 S 920 W NIBLEY, UTAH

CACHE COUNTY SCHOOL DISTRICT

DATE	DESCRIPTION
5-29-2024	Autumn 5
2	

PROJECT #:

23717

DRAWN BY:

Author

CHECKED BY:

LW

ISSUED:

05/02/2024

STATE OF UTAH

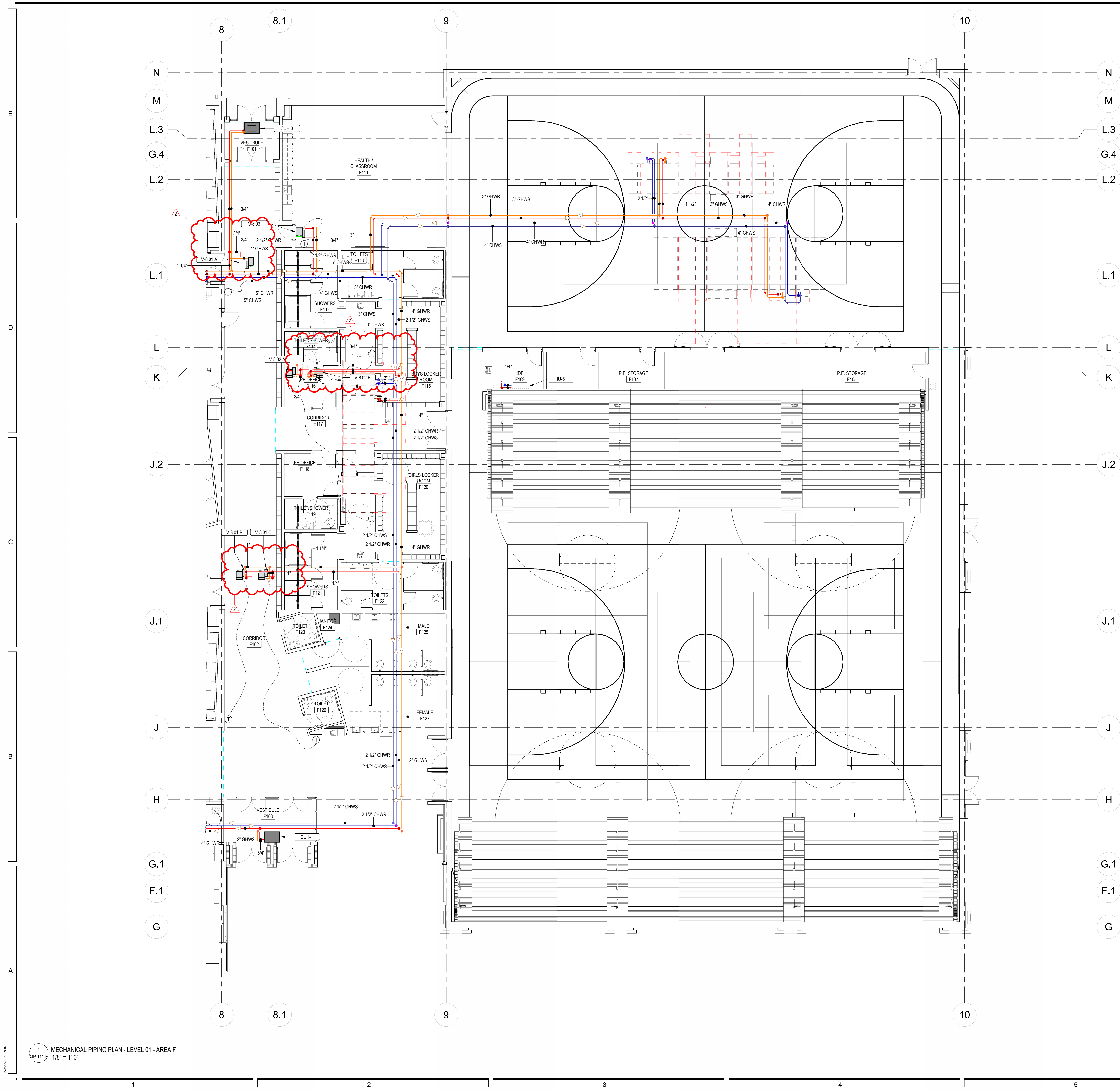
PROFESSIONAL ENGINEER

8380445-2302

CECILIAN L. JENNINGS

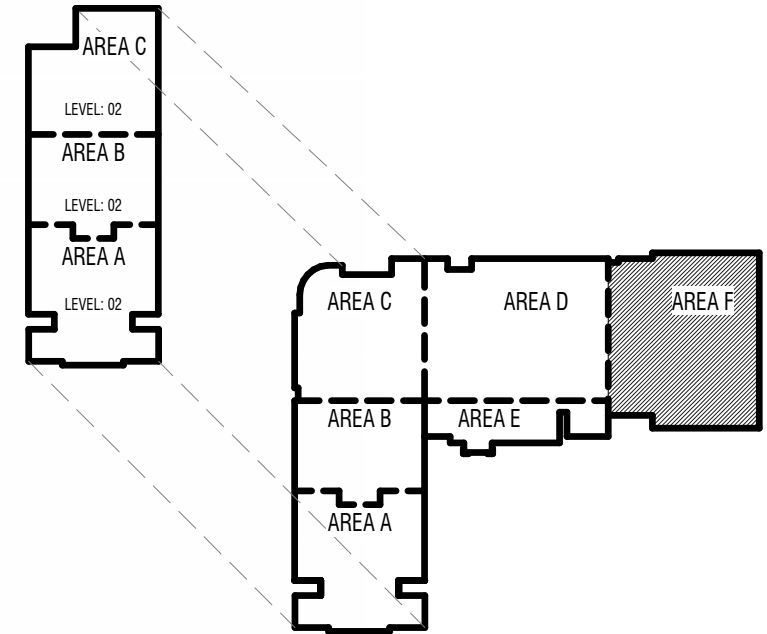
MECHANICAL PIPING PLAN - LEVEL 01 - AREA E

MP-111.E



KEYNOTES

KEY PLAN



TO BE DETERMINED

1 MECHANICAL PIPING PLAN - LEVEL 01 - AREA F  
MP-111.F 1/8" = 1'-0"

DATE	DESCRIPTION
5-29-2024	Adopted
2	

PROJECT #:	23717
DRAWN BY:	Author
CHECKED BY:	LW
ISSUED:	05/02/2024

STATE OF UTAH  
PROFESSIONAL ENGINEER  
No. 838045-2302  
BRENDAN L. JENNINGS

MECHANICAL PIPING  
PLAN - LEVEL 01 -  
AREA F

MP-111.F

CONSTRUCTION DOCUMENTS



E

D

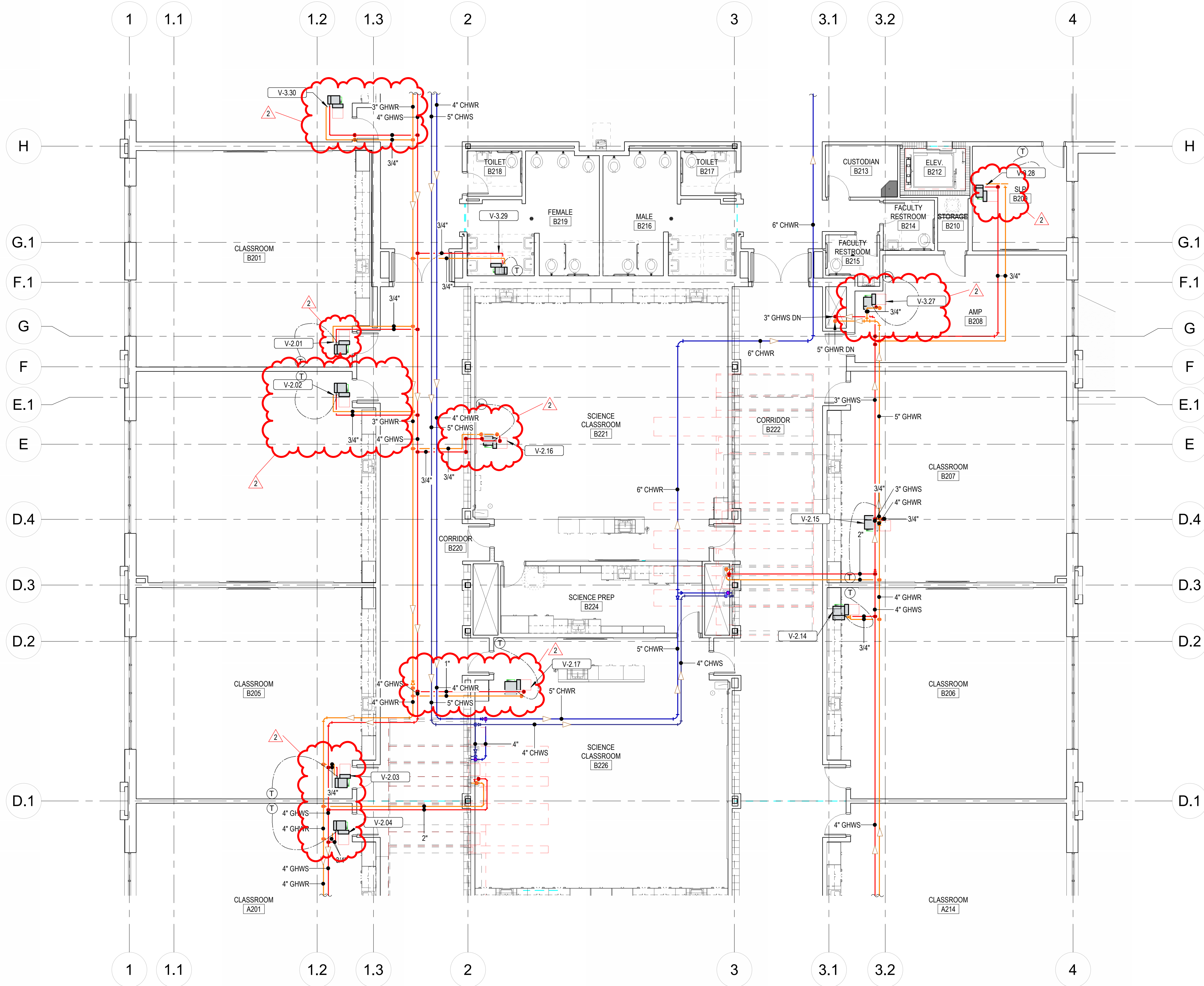
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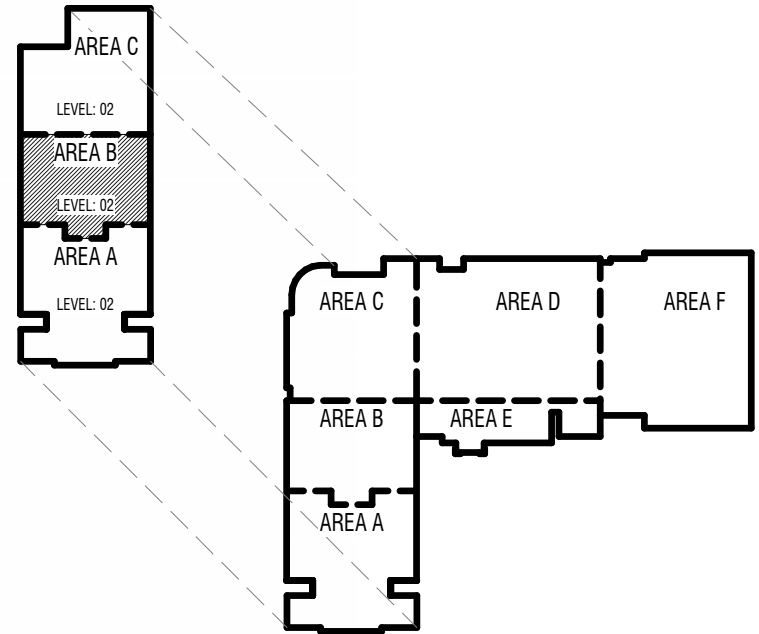
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1 MECHANICAL PIPING PLAN - LEVEL 02 - AREA B  
MP-112.B 1/8" = 1'-0"



KEYNOTES

KEY PLAN



TO BE DETERMINED

CONSTRUCTION DOCUMENTS

**design west** architects  
255 SOUTH 400 WEST  
795 NORTH 400 WEST  
LOGAN, UT 84321  
SALT LAKE CITY, UT 84103

**VBFA** 40 W. Cache Valley Blvd.  
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Logan, UT  
O: (435) 752-5081  
www.vbfa.com  
VBFA Project #: 23717

NIBLEY MIDDLE SCHOOL

3050 S 920 W NIBLEY, UTAH

CACHE COUNTY SCHOOL DISTRICT

DATE	DESCRIPTION
5-20-2024	Autumn 5
2	

PROJECT #: 23717  
DRAWN BY: Author  
CHECKED BY: LW  
ISSUED: 05/02/2024

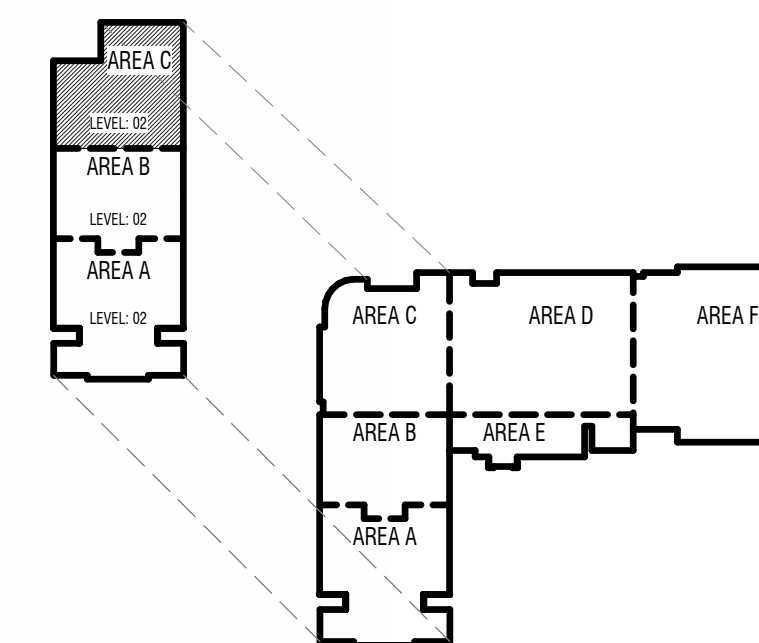
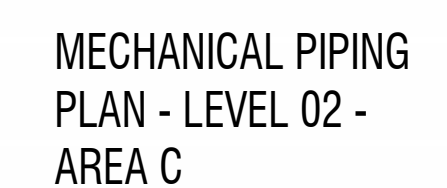
STATE OF UTAH  
PROFESSIONAL ENGINEER  
No. 8380445-2302  
BRENDAN L. JENNINGS

MECHANICAL PIPING  
PLAN - LEVEL 02 -  
AREA B

MP-112.B

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PROJECT #: 2371  
DRAWN BY: Author  
CHECKED BY: LW  
ISSUED: 05/02/202



TO BE DETERMINED

MECHANICAL PIPING PLAN - LEVEL 02 - AREA C



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## ADDENDUM #05

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<b>To:</b>	Stephen Williams, AIA, NCARB	<b>From:</b>	Philip Borup
<b>Company:</b>	Design West Architects	<b>Phone:</b>	801-534-1130
<b>Date:</b>	05/28/2024		
<b>Project</b>	Nibley Middle School	<b>Project #:</b>	2023-268

---

### **Specifications:**

**26 0110 Conduit Raceways:** Section 2.4 has been added as follows:

#### **2.4 COLORS:**

- A. Provide colored conduit for each system as follows:
1. 120/208V Power – Yellow
  2. 277/480V Power – Orange
  3. Data – Blue
  4. CCTV – Blue
  5. Intercom – Blue
  6. Wireless Access Points – Blue
  7. Fire Alarm – Red
- B. Standard silver conduits can be used in open ceilings where they will be painted to match the color of the ceiling.

#### **27 1500 Communications Horizontal Cabling**

1. Leviton has been added as an approved manufacturer for UTP cabling.
2. Tyco has been removed from the UTP cable hardware. Leviton is the only approved manufacturer for UTP cable hardware.

### **Approved Bidders:**

1. Approved lighting controls have changed back to how they were in the bid set. Lutron is the only approved manufacturer. Wattstopper and others will be allowed to bid as an unapproved system. Those manufacturers will be reviewed by the district at bid time. The cost for each lighting control manufacturer is to be broken out separately on the bid form.

### **Drawings:**

#### **E-101 – Site Plan – Electrical:**

1. AF2 fixtures at monument sign have been deleted. An additional pull box was added at the monument sign with conduit back to the electrical room for future power.

#### **E-111 – Level 1 – Area A – Lighting:**

1. Exterior wall packs have been adjusted. See plans for more information.

#### **E-112 – Level 1 – Area B – Lighting:**

1. Exterior wall packs have been adjusted. See plans for more information.

#### **E-113 – Level 1 – Area C – Lighting:**

1. Exterior wall packs have been adjusted. See plans for more information.



**E-115 – Level 1 – Area E – Lighting:**

1. Exterior wall packs have been adjusted. See plans for more information.

**E-121 – Level 2 – Area A – Lighting:**

1. Circuit and relay added to flag flood light.

**E-132 – Cafetorium Theatrical Lighting Plan:**

1. Changed two switch stations to touchscreens and added switch stations next to each of the four (4) entrances into the Cafetorium.

**E-141 – Theatrical Lighting Riser:**

1. Riser and schedules have been updated.

**E-161 – Light Fixture Schedule:**

1. LS5 and AF2 have been removed from the schedule, LP3 and LR2 have been updated and WP3 has been added.
2. Relay schedules have been updated.

**E-211 – Level 1 – Area A - Power**

1. Power to EF-14 has been added.

**E-212 – Level 1 – Area B - Power**

1. Power to split system has been removed from Elevator Equipment Room

**E-213 – Level 1 – Area C - Power**

1. Special outlet for AC-1 has been changed to a fused disconnect.

**E-214 – Level 1 – Area D - Power**

1. Power added for VAV box transformer in Storage D112.

**E-215 – Level 1 – Area E - Power**

1. Power to exhaust fan has added in Kiln room.

**E-221 – Level 2 – Area A - Power**

1. Power added for VAV box transformer in Classroom A206.

**E-222 – Level 2 – Area B - Power**

1. Power added for VAV box transformer in Corridor.

**E-223 – Level 2 – Area C - Power**

1. Power added for split system in AV Booth C209.

**E-224 – Roof Plan – Overall - Power**

1. Conduit through the roof added for emergency radio antenna.

**E-231 – Enlarged Power Plans**

1. Power added to a few pieces of Mechanical Equipment.

**E-232 – Enlarged Kitchen Plan**

1. Power added to electric unit heater in kitchen restroom.



**E-242 – Data Risers**

1. Half rack in Storage E119 has been changed to a full floor mounted rack.
2. Equipment was removed from the 3<sup>rd</sup> rack in the MDF to make space for intercom equipment.
3. Drawings were changed to show only (1) 24-strand fiber is needed to each IDF.

**E-314 – Level 1 – Area D – Fire Alarm**

1. Wires for SLC circuiting have been shown.
2. See drawings for additional changes.

**E-315 – Level 1 – Area E – Fire Alarm**

1. Wires for SLC circuiting have been shown.
2. See drawings for additional changes.

**E-316 – Level 1 – Area F – Fire Alarm**

1. Wires for SLC circuiting have been shown.
2. See drawings for additional changes.

**E-321 – Level 2 – Area A – Fire Alarm**

1. Wires for SLC circuiting have been shown.
2. See drawings for additional changes.

**E-322 – Level 2 – Area B – Fire Alarm**

1. Wires for SLC circuiting have been shown.
2. See drawings for additional changes.

**E-323 – Level 2 – Area C – Fire Alarm**

1. Wires for SLC circuiting have been shown.
2. See drawings for additional changes.

**E-332 – Fire Alarm Symbols and Notes**

1. Fire Alarm Matrix has been updated.

**E-411 – Level 1 – Area A – Systems:**

1. Keyed notes have been added to cameras.

**E-412 – Level 1 – Area B – Systems:**

1. Keyed notes have been added to cameras.

**E-413 – Level 1 – Area C – Systems:**

1. Keyed notes have been added to cameras.

**E-414 – Level 1 – Area D – Systems:**

1. Keyed notes have been added to cameras.
2. Additional information has been provided for kitchen doorbell.

**E-415 – Level 1 – Area E – Systems:**

1. Keyed notes have been added to cameras.

**E-421 – Level 2 – Area A – Systems:**

1. Keyed notes have been added to cameras.

**E-422 – Level 2 – Area B – Systems:**

1. Keyed notes have been added to cameras.

**ADDRESS**

240 E. Morris Ave. #200  
Salt Lake City, UT 84115

**OFFICE**

(801) 534-1130  
(801) 534-1080

**FAX**

**WEB**

[www.envisioneng.com](http://www.envisioneng.com)  
[info@envisioneng.com](mailto:info@envisioneng.com)

**EMAIL**



**E-423 – Level 2 – Area C – Systems:**

1. Keyed notes have been added to cameras.

**E-442 – Security Detail & Risers**

1. Details and CCTV scope have been updated.

**E-531 – Audio Visual Sections & Elevations**

1. Classroom connection plate elevations have been updated.

**E-532 – AV Music Rooms - Sections & Elevations**

1. Classroom connection plate elevations have been updated.

**E-541 – Audio Visual Enlarged Plans – Typical Classrooms**

1. Classroom connection plate elevations have been updated.

**E-571 – AV Riser & Equipment List**

1. Lightspeed DRQ has been added to list of approved classroom ceiling speakers.

**E-573 – AV Riser & Equipment List**

1. Audio system – Cafetorium – equipment list has been updated.

**E-575 – AV Riser & Equipment List**

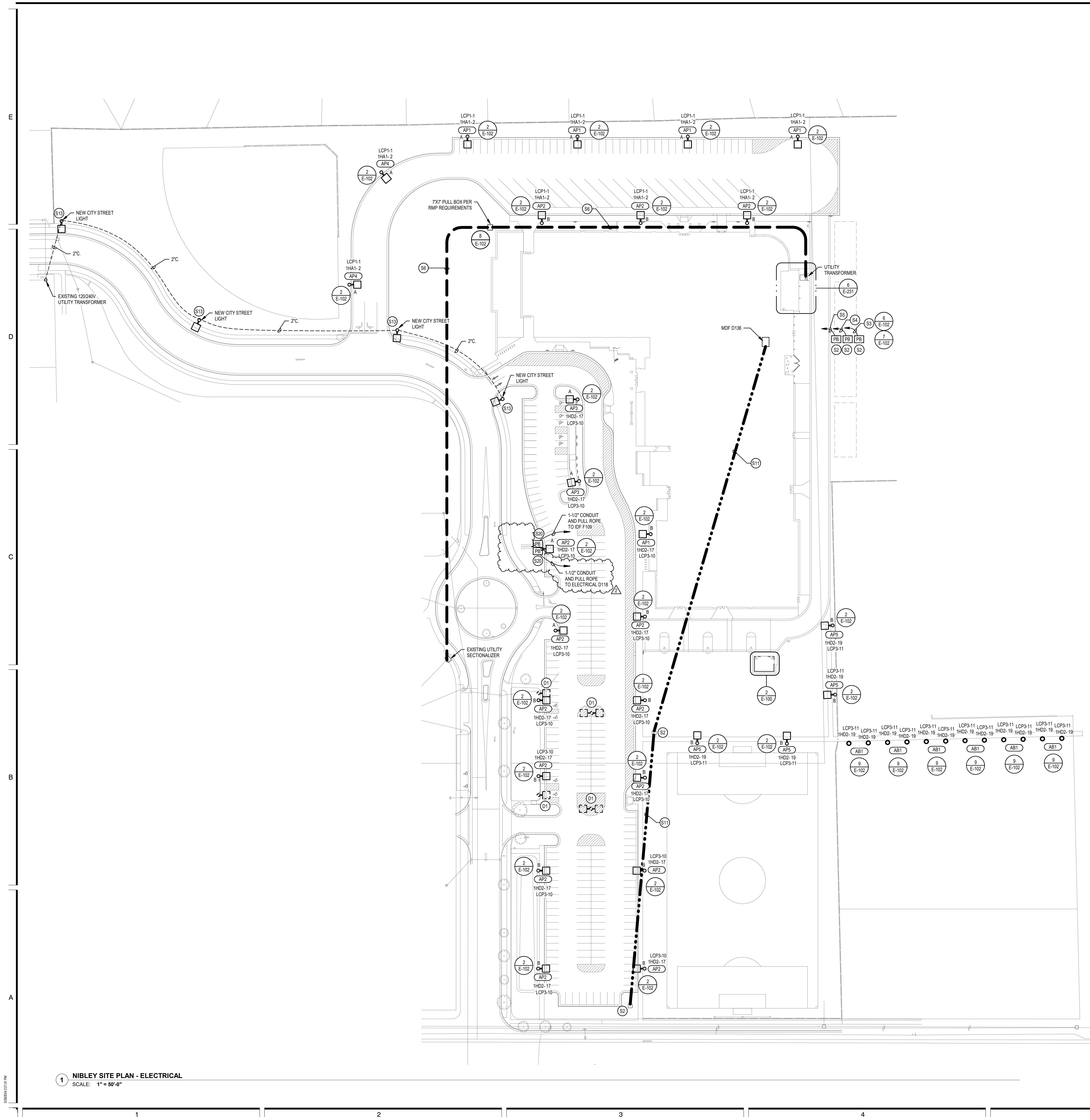
1. Audio system – Cafetorium – equipment list has been updated.

**E-615 – Level 1 – Area E - Intercom**

1. New symbols have been added to the reception area..

**E-671 – Intercom Riser & Equip List**

1. Intercom system – school – equipment list has been updated.



1 NIBLEY SITE PLAN - ELECTRICAL  
SCALE: 1" = 50'-0"

SITE GENERAL NOTES:

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

UTILITY COORDINATION REQUIREMENTS:

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

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

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

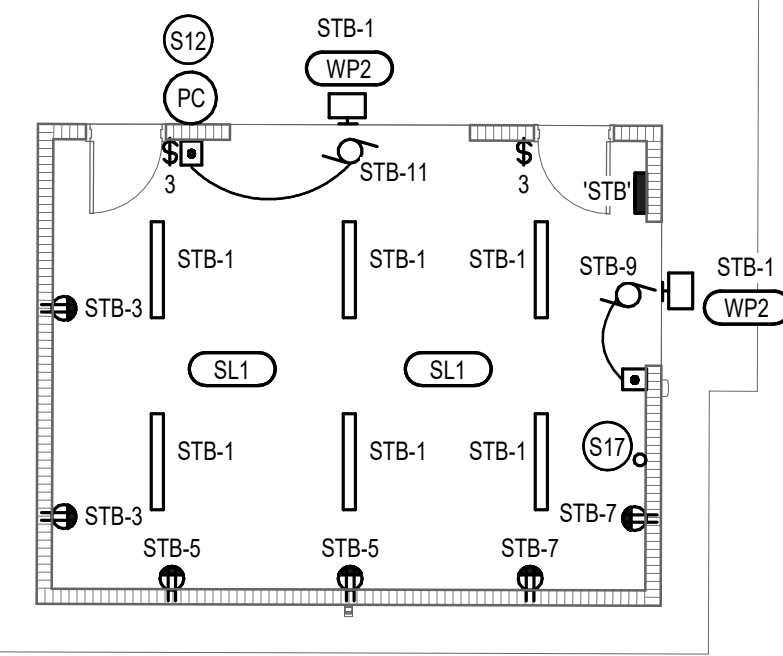
THE CONTRACTOR SHALL NOT ROUGH-IN ANY CONDUITS, EQUIPMENT PADS, OR SIMILAR ITEMS UNTIL THE UTILITY COORDINATION IS COMPLETE AND ALL THE LOCATIONS ARE KNOWN. THE CONTRACTOR SHALL PROVIDE THE ARCHITECT AND ENGINEER A WRITTEN, SIGNED STATEMENT, INCLUDING A SKETCH OF EQUIPMENT AND CONDUIT LOCATIONS, FROM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

UTILITY REQUIREMENTS:

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

KEYED NOTES

- D1 DEMOLITION NOTE TEXT GOES HERE.
- S2 PROVIDE HUBBELL QUAZITE 24" X 36" PG STYLE IN-GRADE JUNCTION BOX WITH HEAVY DUTY COVER. CONFIRM PLACEMENT WITH OWNER PRIOR TO ROUGH-IN. REFER TO THE SITE DETAILS FOR MORE INFORMATION.
- S3 RUN (4) 3" CONDUITS TO SWITCHBOARD 'DPLD' FOR POWER TO FUTURE PORTABLES. PROVIDE PULL ROPE AND LABEL BOTH ENDS OF CONDUIT.
- S4 RUN (3) 2" CONDUITS TO IDF F109 FOR DATA, INTERCOM, AND FIRE ALARM TO FUTURE PORTABLES. PROVIDE PULL ROPE AND LABEL BOTH ENDS OF CONDUIT.
- S5 RUN (2) 2" CONDUITS TO MDF D136 FOR FIRE ALARM TO FUTURE PORTABLES. PROVIDE PULL ROPE AND LABEL BOTH ENDS OF CONDUIT.
- S6 SEE ONE LINE DIAGRAM FOR MORE INFORMATION.
- S11 SEE TELECOM RISER DIAGRAM FOR MORE INFORMATION.
- S12 LINE VOLTAGE PHOTOCELL TO CONTROL EXTERIOR WP2 LIGHT FIXTURES.
- S13 CITY STREET LIGHT WILL BE FURNISHED BY THE CITY AND INSTALLED BY ROCKY MOUNTAIN POWER. ELECTRICAL CONTRACTOR IS TO RUN 2" CONDUIT BETWEEN THE STREET LIGHTS AS SHOWN. INSERT PULL STRING AND LABEL. COORDINATE EXACT LOCATIONS WITH NIBLEY CITY.
- S17 RUN A 1-1/2" CONDUIT FROM IDF F109 FOR FUTURE DATA. PROVIDE PULL ROPE AND LABEL BOTH ENDS OF CONDUIT.
- S20 PROVIDE HUBBELL QUAZITE 18" X 18" PG STYLE IN-GRADE JUNCTION BOX WITH HEAVY DUTY COVER. CONFIRM PLACEMENT WITH OWNER PRIOR TO ROUGH-IN. REFER TO THE SITE DETAILS FOR MORE INFORMATION.



2 ENLARGED STORAGE BUILDING - NIBLEY  
SCALE: 1/8" = 1'-0"

UTILITY PROVIDER:

JENNIFER PETERSEN  
Tele: (C) 801-391-7084  
Email: JENNIFER.PETERSEN@PACIFICORP.COM  
WOF 7194949

CONSTRUCTION DOCUMENTS

MARK	DATE	DESCRIPTION
ADDITION 3	05/15/24	
ADDITION 5	05/22/24	

PROJECT #: 123006  
DRAWN BY: Author  
CHECKED BY: Checker  
ISSUED: 04.26.2024



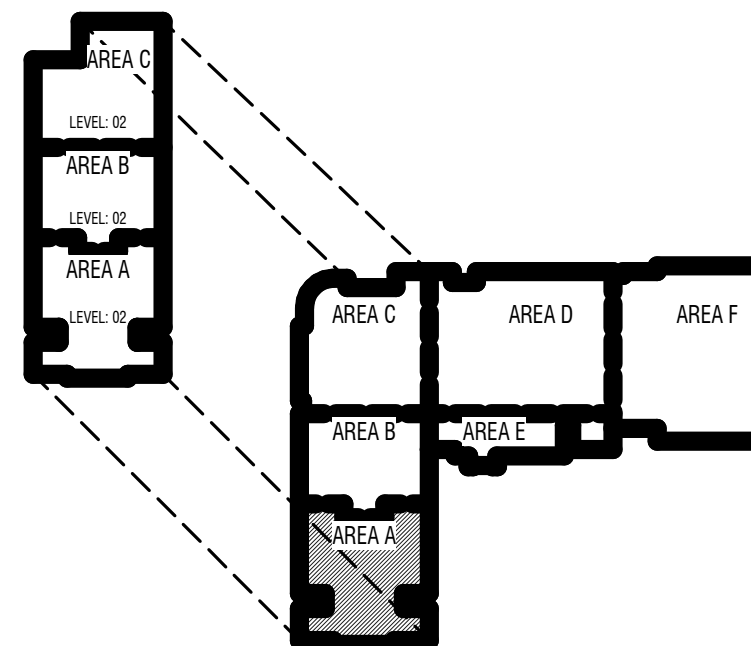
LIGHTING GENERAL NOTES:

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

**KEYED NOTES** 

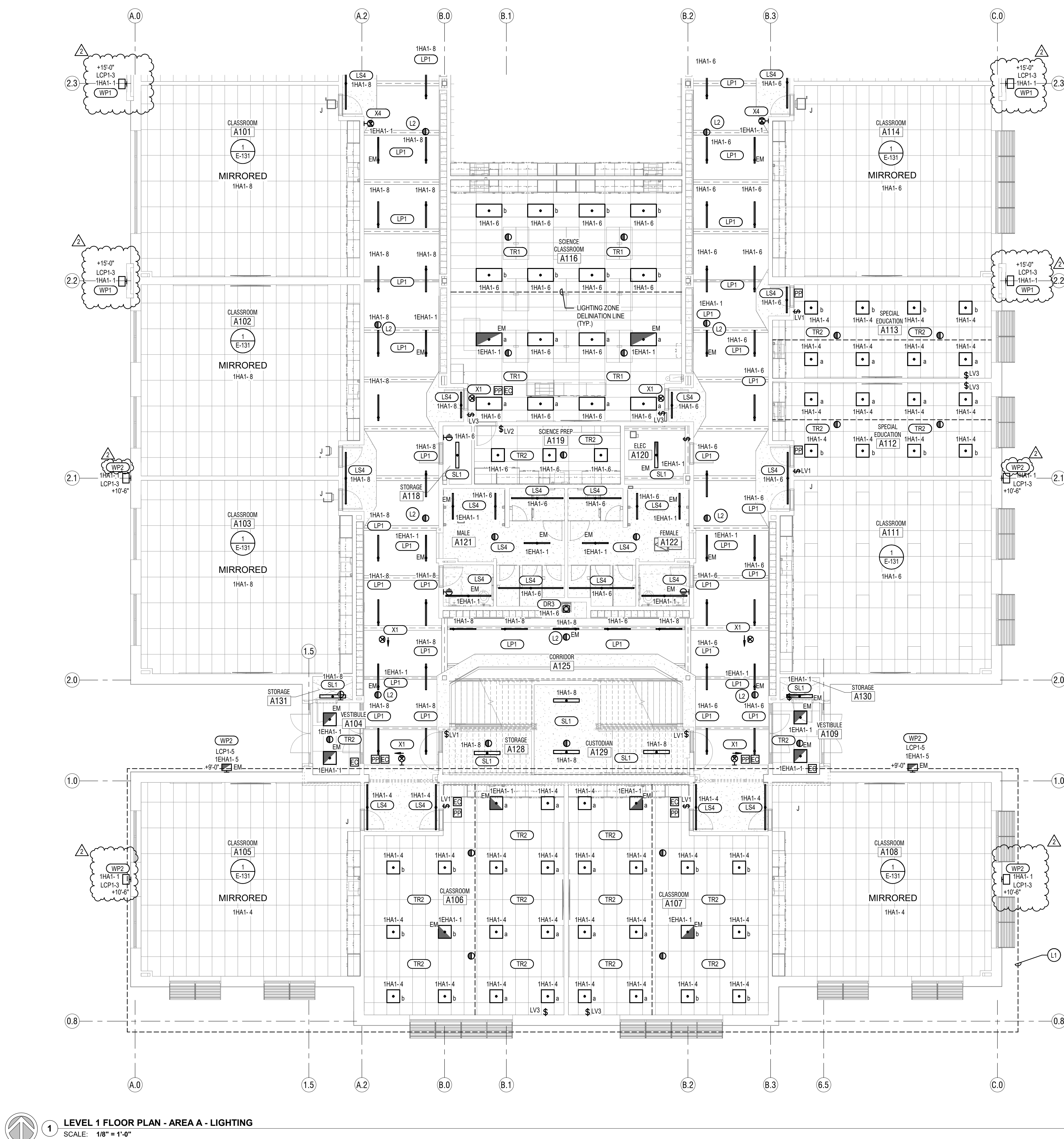
- |    |  |
|----|--|
| L1 | UNDER THE BASE BID, INCLUDE ALL WORK IN THIS AREA AS SHOWN ON THE PLANS. UNDER ALTERNATE #1, THIS AREA WILL BE REMOVED FROM THE PROJECT. PROVIDE A SEPARATE COST TO BE ISSUED AS A CREDIT FOR ALL WORK IN THIS AREA AS SHOWN ON THE PLANS. |
| L2 | PENDANT MOUNT MOTION SENSOR ON THREADED ROD AT THE SAME HEIGHT AS LIGHT FIXTURES.  |

## KEY PLAN



TO BE DETERMINED

# CONSTRUCTION DOCUMENTS

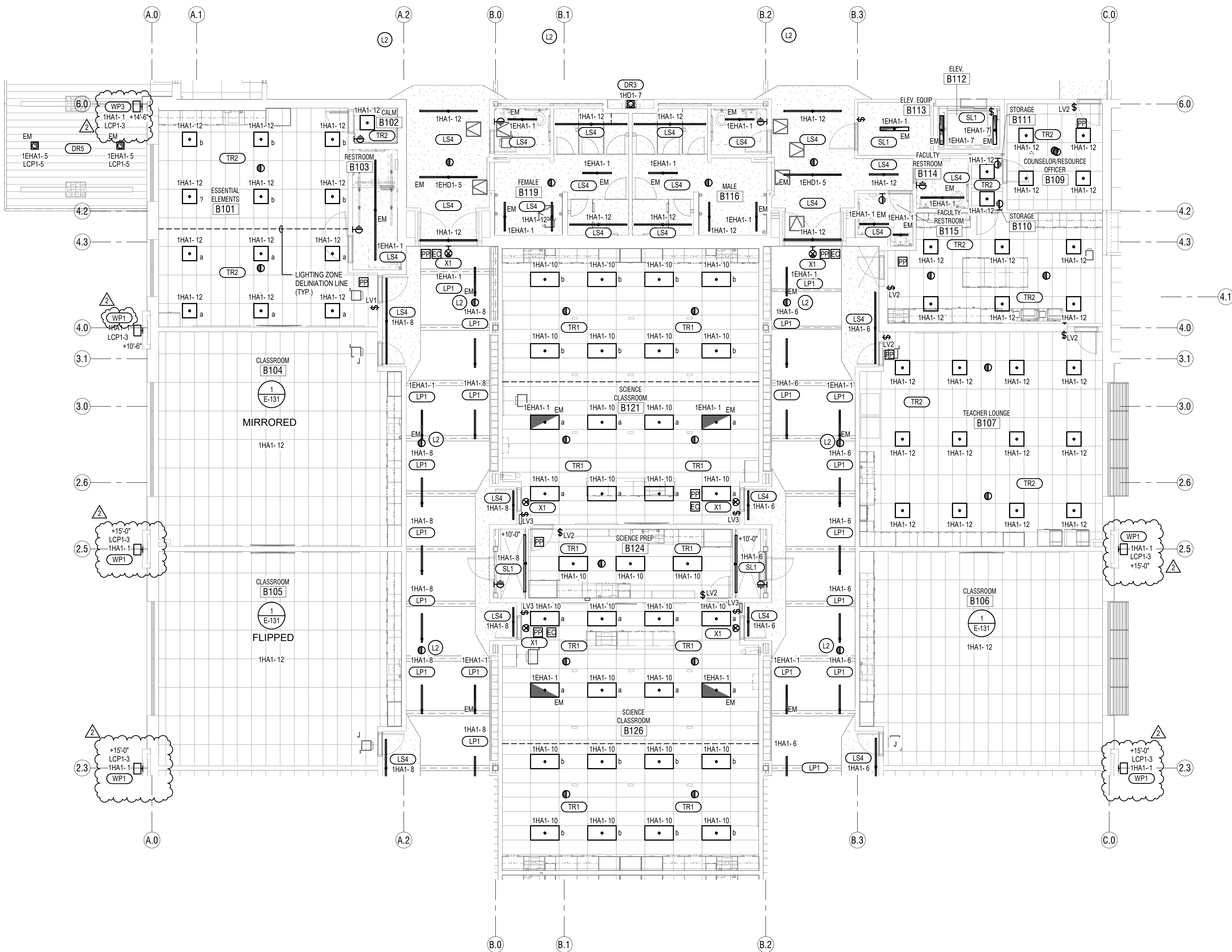


LIGHTING GENERAL NOTES:

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

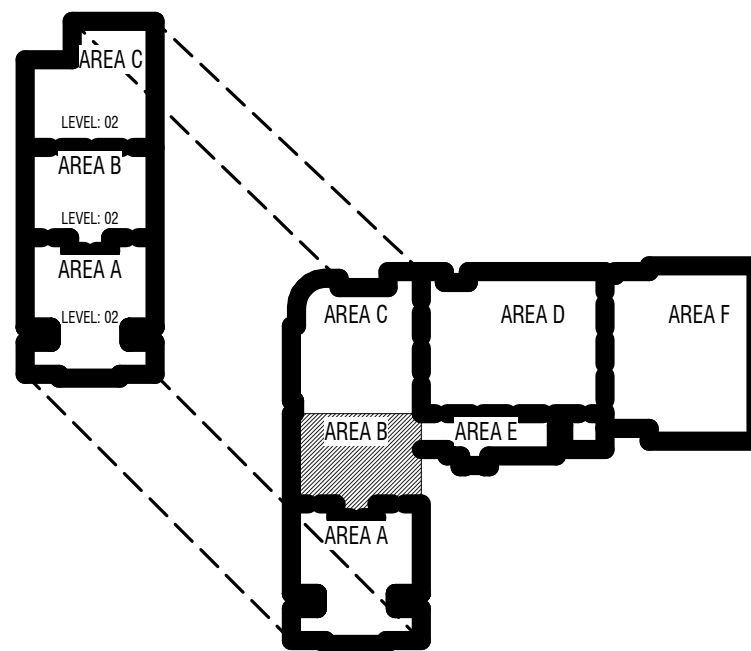
## KEYED NOTES (H)

- L2 PENDANT MOUNT MOTION SENSOR ON THREADED ROD AT THE SAME HEIGHT AS LIGHT FIXTURES.



**LEVEL 1 FLOOR PLAN - AREA B -  
LIGHTING**

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



TO BE DETERMINED

# CONSTRUCTION DOCUMENTS



L3	DMX CONTROLLER TO CONTROL RGB LIGHTS IN BOTH STAIRS AND RGB LIGHTS IN CORRIDOR C106.
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TO BE DETERMINED

E

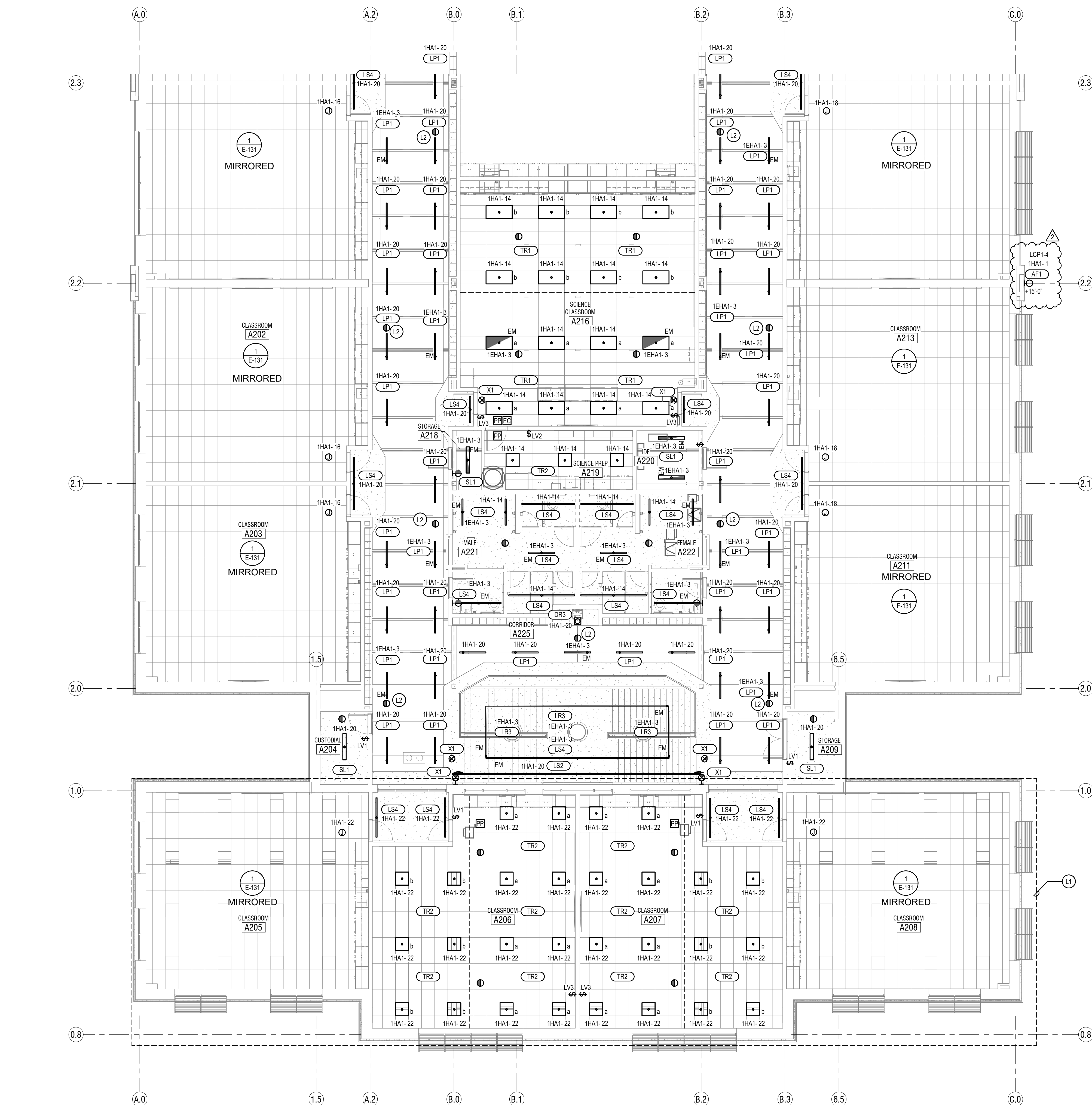
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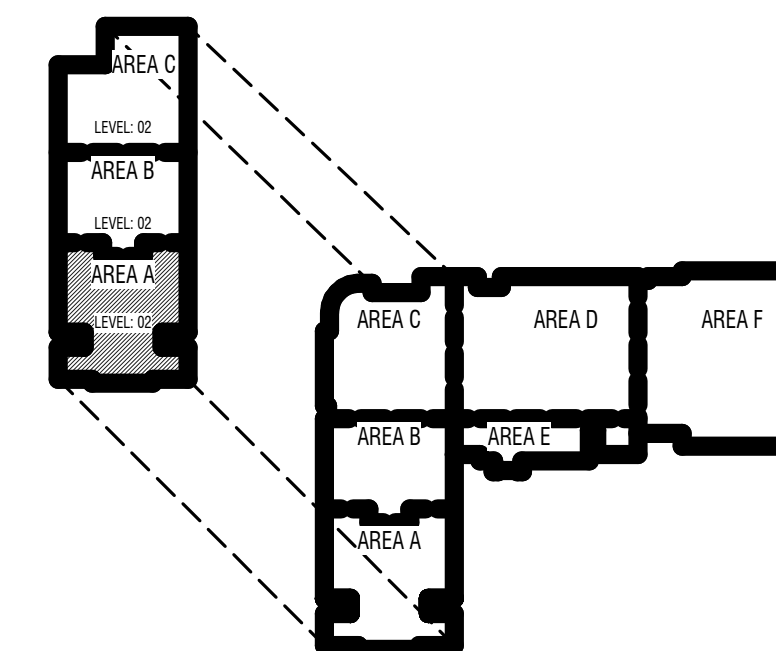
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1 LEVEL 2 FLOOR PLAN - AREA A - LIGHTING  
SCALE: 1/8" = 1'-0"

- LIGHTING GENERAL NOTES:**
- REFER TO LIGHTING DETAILS SHEETS FOR TYPICAL CONTROL WIRING DIAGRAMS. PROVIDE COMPLETE SYSTEM WITH ALL REQUIRED CONDUIT, WIRING, SWITCHES, SENSORS, POWER PACK, ETC.
  - LOCATE POWER PACKS AND ROOM CONTROLLERS ABOVE ACCESSIBLE CEILING NEAR ROOM ENTRANCES.
  - CONFIRM ALL LOCATIONS OF LIGHT FIXTURES WITH ARCHITECT PRIOR TO INSTALLATION.
  - PROVIDE UNSWITCHED HOT FOR ALL EMERGENCY LIGHTS AND BATTERY PACKS.
  - REFER TO ARCHITECTURAL CEILING PLANS FOR EXACT LOCATIONS OF ALL LIGHT FIXTURES. PROVIDE AN RFI FOR ANY CONFLICTS BETWEEN LIGHTING PLANS AND ARCHITECTURAL REFLECTED CEILING PLANS PRIOR TO ORDERING LIGHT FIXTURES.
- KEYED NOTES**
- L1 UNDER THE BASE BID, INCLUDE ALL WORK IN THIS AREA AS SHOWN ON THE PLANS. UNDER ALTERNATE #1, THIS AREA WILL BE REMOVED FROM THE PROJECT. PROVIDE A SEPARATE COST TO BE ISSUED AS A CREDIT FOR ALL WORK IN THIS AREA AS SHOWN ON THE PLANS.
- L2 PENDANT MOUNT MOTION SENSOR ON THREADED ROD AT THE SAME HEIGHT AS LIGHT FIXTURES.

KEY PLAN



CONSTRUCTION DOCUMENTS

MARK	DATE	DESCRIPTION
1	05/22/24	ADDENDUM 5

PROJECT #:	123006
DRAWN BY:	Author
CHECKED BY:	Checker
ISSUED:	04/26/2024





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THEATRICAL LIGHT FIXTURE SCHEDULE				
DESCRIPTION	TYPE	MFG	PART NUMBER	NOTES
LED WASH FIXTURE	W	STRAND		NOTE 1
LED PROFILE FIXTURE WITH 15-30 DEGREE ZOOM LENS	P1	STRAND		NOTE 2
LED PROFILE FIXTURE WITH 25-50 DEGREE ZOOM LENS	P2	STRAND		NOTE 3
LED CYC FIXTURE	CYC	STRAND		NOTE 4

## NOTES:

- LED WASH FIXTURE INCLUDES POWER CABLE, DMX CABLE, RGB CONNECTOR, C-CLAMP, SAFETY CABLE. CONTRACTOR TO VERIFY LENGTH OF POWER CABLE AND DMX CABLE PRIOR TO ORDERING. COORDINATE EXACT FIXTURE LOCATIONS WITH THE SCHOOL'S THEATER TEACHER.
- LED PROFILE FIXTURES INCLUDES POWER CABLE, DMX CABLE, RGB CONNECTOR, C-CLAMP, SAFETY CABLE, SIZE A PATTERN HOLDER, AND 15-30 DEGREE ZOOM LENS. CONTRACTOR TO VERIFY LENGTH OF POWER CABLE AND DMX CABLE PRIOR TO ORDERING. COORDINATE EXACT LOCATIONS WITH THE SCHOOL'S THEATER TEACHER.
- LED PROFILE FIXTURES INCLUDES POWER CABLE, DMX CABLE, RGB CONNECTOR, C-CLAMP, SAFETY CABLE, AND 25-50 DEGREE ZOOM LENS. CONTRACTOR TO VERIFY LENGTH OF POWER CABLE AND DMX CABLE PRIOR TO ORDERING. COORDINATE EXACT LOCATIONS WITH THE SCHOOL'S THEATER TEACHER.
- LED CYC FIXTURE INCLUDES POWER CABLE, DMX CABLE, RGB CONNECTOR, C-CLAMP, SAFETY CABLE. CONTRACTOR TO VERIFY LENGTH OF POWER CABLE AND DMX CABLE PRIOR TO ORDERING. COORDINATE EXACT FIXTURE LOCATIONS WITH THE SCHOOL'S THEATER TEACHER.

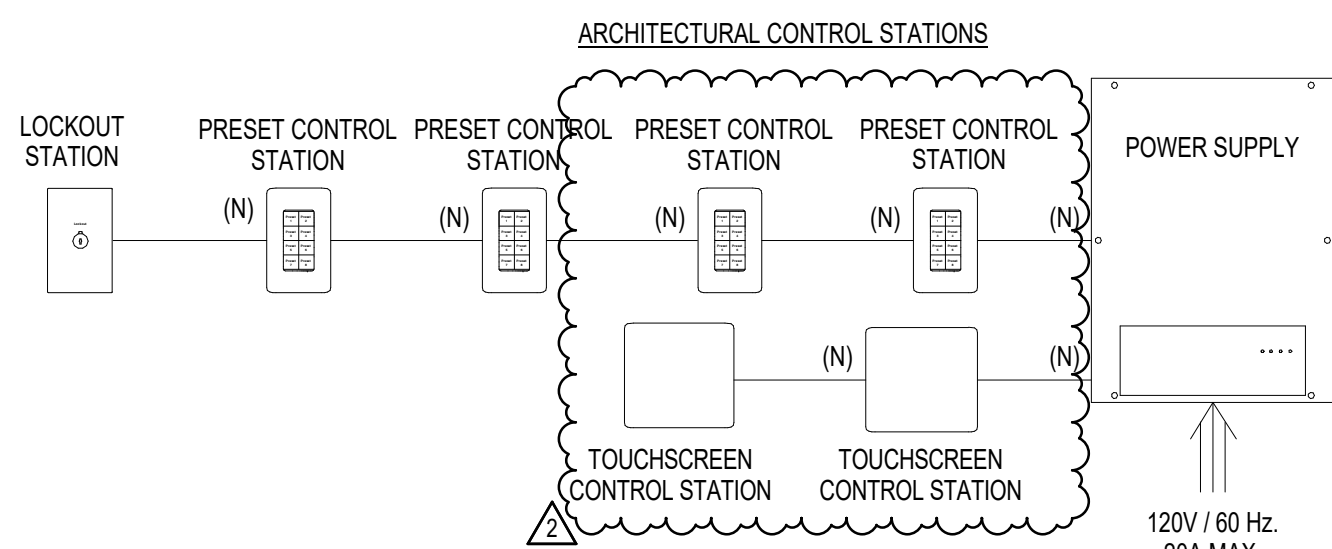
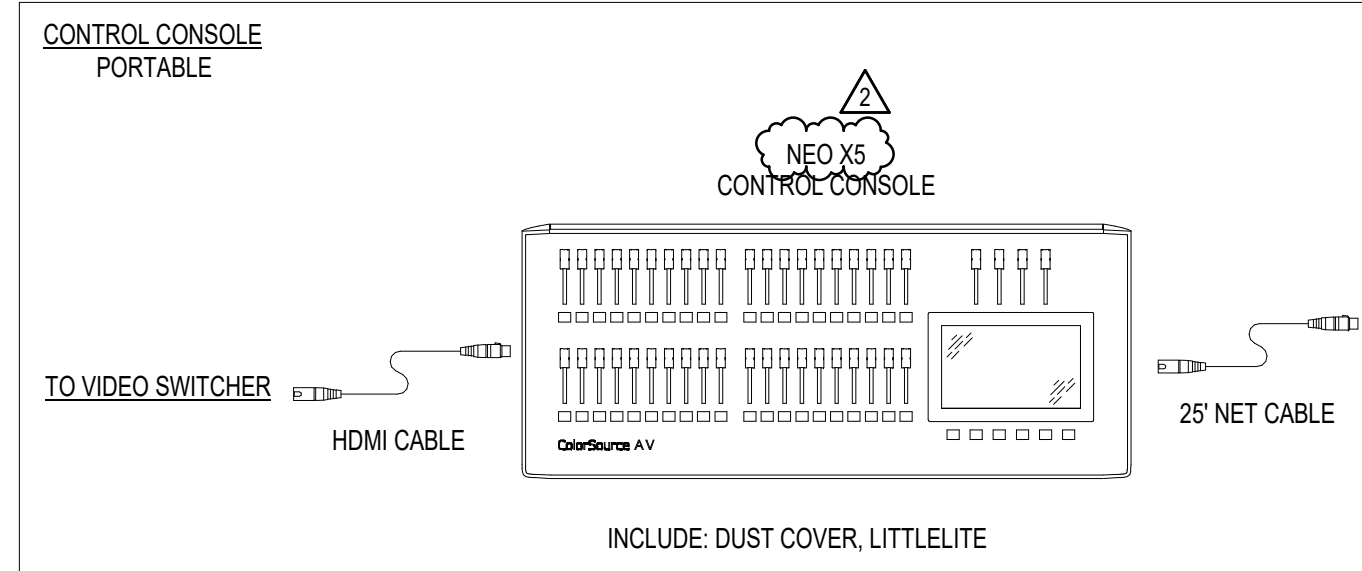
THEATRICAL CONTROLS	
TYPE	DESCRIPTION
C-CS-1, 2, 3	CONNECTOR STRIP: (1) 5' CONNECTOR STRIP, (24) RGB OUTLETS, SURFACE MOUNTED TO STRUCTURE, HANGING BRACKETS, (4) SWITCHED CIRCUITS, (1) DMX OUTPUT GATEWAY
C-CS-4, 5	CONNECTOR STRIP: (1) 16' CONNECTOR STRIP, (6) RGB OUTLETS, MOUNTED TO ETC MOTORIZED HOIST, HANGING BRACKETS, (2) SWITCHED CIRCUITS, (1) DMX OUTPUT GATEWAY

RELAY PANEL: E-RP			
OUT	CONTROL ZONE	LOAD TYPE	CONTROL METHOD
1	STAGE LIGHTS	LED	DMX
2	CAFETERIUM LRS	LED	DMX
3	CAFETERIUM LRS	LED	DMX
4	CAFETERIUM LRS	LED	DMX
5	STAGE RAMP LIGHTS	LED	DMX
6	CAFETERIUM DM7	LED	DMX
7	SPARE	LED	DMX
8	SPARE	LED	DMX

RELAY PANEL: A-RP			
OUT	CONTROL ZONE	LOAD TYPE	CONTROL METHOD
1	PROSCENIUM DM4	LED	DMX
2	CAFETERIUM LRT	LED	DMX
3	CAFETERIUM LRT	LED	DMX
4	C-CS-1	LED	DMX
5	C-CS-1	LED	DMX
6	C-CS-1	LED	DMX
7	C-CS-1	LED	DMX
8	C-CS-2	LED	DMX
9	C-CS-2	LED	DMX
10	C-CS-2	LED	DMX
11	C-CS-2	LED	DMX
12	C-CS-3	LED	DMX
13	C-CS-3	LED	DMX
14	C-CS-3	LED	DMX
15	C-CS-3	LED	DMX
16	C-CS-4	LED	DMX
17	C-CS-4	LED	DMX
18	C-CS-5	LED	DMX
19	C-CS-5	LED	DMX
20	SPARE	LED	DMX
21	SPARE	LED	DMX
22	SPARE	LED	DMX
23	SPARE	LED	DMX
24	SPARE	LED	DMX

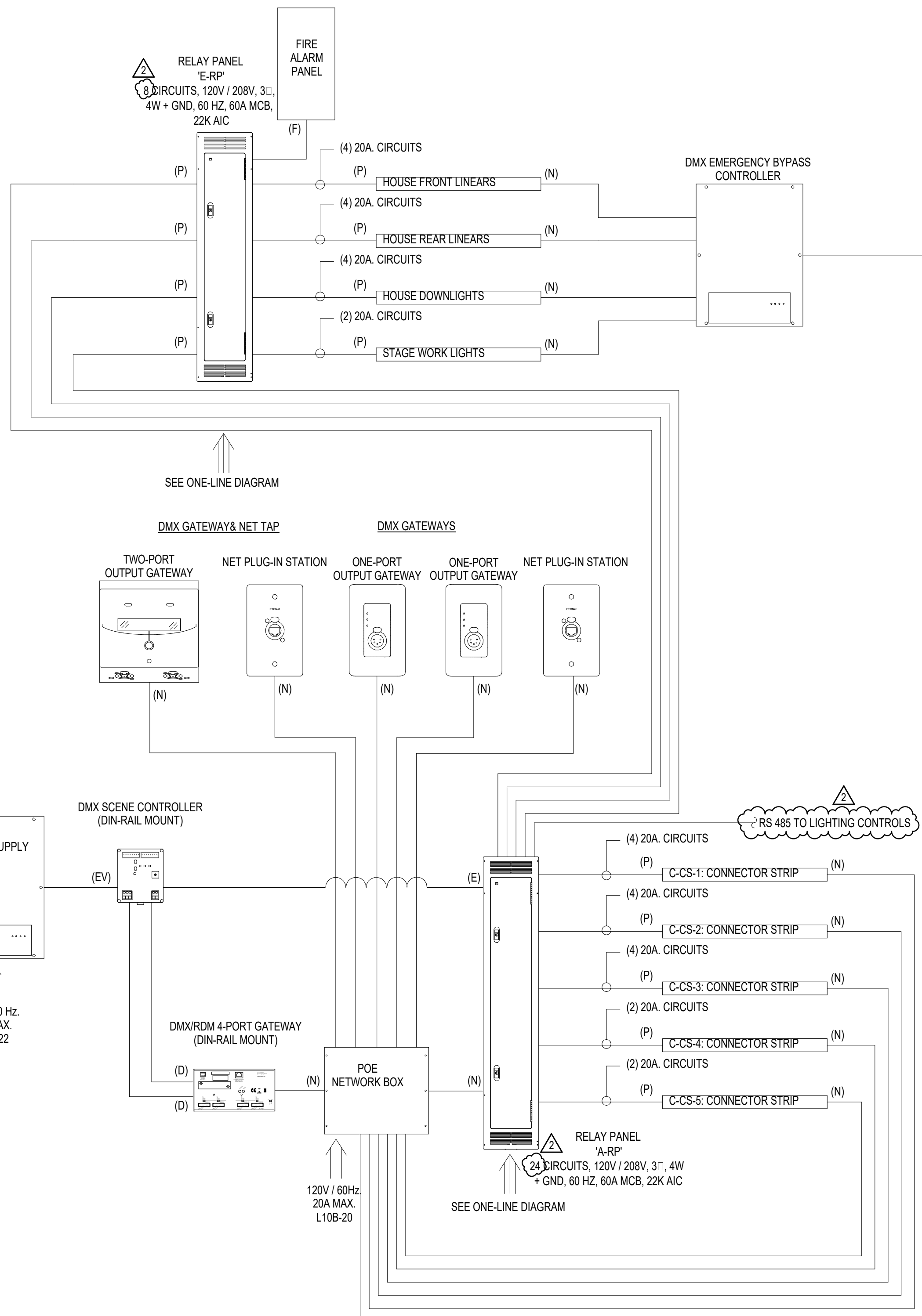
## WIRING LEGEND

SYMBOL	WIRE TYPE	SIGNAL
(D)	(1) BELDEN 9729	DMX
(N)	(1) BELDEN 1833A	NETWORK
(E)	(1) BELDEN 8471 (1) #14 AWG, STRANDED	
(P)	2#12 AWG 1#12 AWG GND (UPSIZE FOR VOLTAGE DROP)	120V POWER
(EV)	(1) BELDEN 8471 (1) #14 AWG, STRANDED (2) #16 AWG, STRANDED	



## NOTES:

- ALL CIRCUITS MUST BE 2-WIRE + GROUND. NO COMMON NEUTRALS ALLOWED.
- ALL CONTROL WIRING IS PROVIDED BY CONTRACTOR UNLESS OTHERWISE NOTED.
- TOTAL COMBINED LENGTH OF ECHO WIRING RUNS SHALL NOT EXCEED 1940 FEET (590 METERS).
- ALL NETWORK WIRING RUNS SHALL BE CONTINUOUS, UNSPliced AND SHALL NOT EXCEED 300 FEET (90 METERS). ALL NETWORK CONNECTIONS TO BE IEEE 1598B.



## 2 COMMONS THEATRICAL LIGHTING RISER DIAGRAM

SCALE: NTS

MARK	DATE	DESCRIPTION
ADDITIONAL 3	05/15/24	
ADDITIONAL 5	05/22/24	
PROJECT #:	123006	
DRAWN BY:	SB	
CHECKED BY:	AH	
ISSUED:	04/26/2024	



LIGHT FIXTURE SCHEDULE					
TYPE	DESCRIPTION	SOURCE	LOAD	APPROVED MANUFACTURERS	CATALOG NUMBER / SERIES
AB1	42" LED EXTERIOR BOLLARD WITH 180-DEGREE DISTRIBUTION. IK10 RATING.	LED 3000 LM 0-10 V DIMMING 4000 K	277 V 30 W	MCGRAW-EDISON SELUX RAGNI LIGHTING	BRT6 IBL 3.5 4QD 40 SCBA UNV DM CIK-16-C-42-35-50-TX-1-S-STANDARD FINISH
AF1	WALL MOUNTED EXTERIOR LED FLOOD LIGHT FIXTURE WITH 15 X 60 BEAM ANGLE AND FULL SNOOT. MOUNTED ON	LED 1200 LM 0-10 V DIMMING 4000 K	277 V 13 W	ECOSENSE LUMASCAPE	F170-15-LO-40-E1-X-F-C LS330 - 150 840 WH S 13 P 016
AF2	NOT USED				
AP1	LED POLE MOUNTED LIGHT FIXTURE WITH TYPE 4 DISTRIBUTION. HOUSE SIDE SHIELD AND 20', NON-TAPERED STEEL POLE.	LED 20,000 LM 0-10 V DIMMING 4000 K	277 V 185 W	MCGRAW-EDISON GARCO LITHONIA BEACON PRODUCTS, INC.	GLAN-SA2C-740-U-T4-SCBA-SPB2-SSP20 (MCR, KW)HSS OPF-M-A14-740-T4M-AR1-UNV-STANDARD FINISH-HSS RSX2 LED P3 40K R4 MVOLT SPA HS NLTAR2 PIRHN DOBXD / SSS 20 4C DM19AS DOBXD VP-2-320L-210-4K7-4-UNV-ASQU-SCBA SHD 2-HSS-XXX-SCBA SSS820-40A-1-B3-SCB
AP2	LED POLE MOUNTED LIGHT FIXTURE WITH TYPE 4 DISTRIBUTION AND 20', NON-TAPERED STEEL POLE.	LED 20,000 LM 0-10 V DIMMING 4000 K	277 V 185 W	MCGRAW-EDISON GARCO LITHONIA BEACON PRODUCTS, INC.	GLAN-SA2C-740-U-T4-SCBA-SPB2-SSP20 (MCR, KW)HSS OPF-M-A14-740-T4M-AR1-UNV-STANDARD FINISH RSX2 LED P3 40K R4 MVOLT SPA NLTAR2 PIRHN DOBXD / SSS 20 4C DM19AS DOBXD VP-2-320L-210-4K7-4-UNV-ASQU-SCBA SSS820-40A-1-B3-SCB
AP3	LED POLE MOUNTED LIGHT FIXTURE WITH TYPE 5 DISTRIBUTION AND 20', NON-TAPERED STEEL POLE.	LED 20,000 LM 0-10 V DIMMING 4000 K	277 V 185 W	MCGRAW-EDISON GARCO LITHONIA BEACON PRODUCTS, INC.	GLAN-SA2C-740-U-T5-SCBA-SPB2-SSP20 (MCR, KW)HSS OPF-M-A14-740-T5M-AR1-UNV-STANDARD FINISH-HSS RSX2 LED P3 40K R4 MVOLT SPA HS NLTAR2 PIRHN DOBXD / SSS 20 4C DM19AS DOBXD VP-2-320L-210-4K7-50M-UNV-ASQU SCBA SSS820 40A-1-B3-SCBA
AP4	LED POLE MOUNTED LIGHT FIXTURE WITH TYPE 2 DISTRIBUTION. HOUSE SIDE SHIELD AND 20', NON-TAPERED STEEL POLE.	LED 20,000 LM 0-10 V DIMMING 4000 K	277 V 185 W	MCGRAW-EDISON GARCO LITHONIA BEACON PRODUCTS, INC.	GLAN-SA2C-740-U-T2-SCBA-SPB2-SSP20 (MCR, KW)HSS OPF-M-A14-740-T2M-AR1-UNV-STANDARD FINISH-HSS RSX2 LED P3 40K R4 MVOLT SPA HS NLTAR2 PIRHN DOBXD / SSS 20 4C DM19AS DOBXD VP-2-320L-210-4K7-2-UNV-ASQU-SCBA SHD 2-HSS-XXX-SCBA SSS820-40A-1-B3-SCB
AP5	LED POLE MOUNTED LIGHT FIXTURE WITH TYPE 2 DISTRIBUTION. HOUSE SIDE SHIELD AND 12', NON-TAPERED STEEL POLE.	LED 10,000 LM 0-10 V DIMMING 4000 K	277 V 90 W	MCGRAW-EDISON GARCO LITHONIA BEACON PRODUCTS, INC.	GLAN-SA2C-740-U-T2-SCBA-SPB2-SSP12 (MCR, KW)HSS OPF-M-A14-740-T2M-AR1-UNV-STANDARD FINISH-HSS RSX2 LED P3 40K R4 MVOLT SPA HS NLTAR2 PIRHN DOBXD / SSS 12 4C DM19AS DOBXD VP-2-320L-210-4K7-2-UNV-ASQU-SCBA SHD 2-HSS-XXX-SCBA SSS820-40A-1-B3-SCB
DR1	4" ROUND DOWNLIGHT FIXTURE WITH 60-DEGREE BEAM, WHITE TRIM AND REFLECTOR.	LED 1500 LM 0-10 V DIMMING 4000 K	277 V 15 W	HALO COMM GOTHAM LIGHTOLIER PRESCOLITE	HC4 LDN4 40'15 LOAAR LSS MVOLT G210 TRW 4RN ZAROL1594WCCDZ10U LFR-4RD-4M-15L40K6-MD-DM1/LFR-4RD-T-SSW7/ LFR-4RD-H
DR2	4" ROUND DOWNLIGHT FIXTURE, WITH WHITE DEADFRONT LENS FOR SHOWER.	LED 1500 LM 0-10V-DIMMING 4000 K	277 V 15 W	HALO COMM GOTHAM LIGHTOLIER PRESCOLITE	HC4 EVQ4SH 40'15 DFR SOL MVOLT E21 4RN PARSL1594WCCDZ10U LFR-4RD-4M-15L40K6-MD-DM1/LFR-4RD-T-SH-WT/CULFR-4RD-H
DR3	2" ROUND DOWNLIGHT FIXTURE, WITH 40-DEGREE BEAM, WHITE TRIM AND REFLECTOR.	LED 700 LM 0-10V-DIMMING 4000 K	277 V 8 W	ALPHABET LITHONIA LIGHTOLIER CREATIVE SYSTEMS	NU3 LDN3 40'10 LOAAR LSS MVOLT UG210 TRW 3RN P3RDL07940CDZ10U 4NC-R-ST-10-5-SHB-A30-90-R-ST-WT-ST-SANL-80
DR4	4" SQUARE LED WALL WASH DOWNLIGHT FIXTURE, WITH WHITE TRIM AND REFLECTOR.	LED 2000 LM 0-10V-DIMMING 4000 K	277 V 20 W	ALPHABET LITHONIA LIGHTOLIER PRESCOLITE	NU4-QW-SW-25LM-40K-90-WW-WH-WH-NC-UNV-DM10 LDN4 40'15 LOAAR LSS MVOLT G210 TRW 4SN P4SLW20294WCCDZ10U
DR5	4" ROUND EXTERIOR RATED LED DOWNLIGHT FIXTURE WITH 60-DEGREE BEAM, SEMI-SPECULAR REFLECTOR AND CUSTOM COLOR TRIM TO MATCH EXTERIOR SOFFIT.	LED 1500 LM NON-DIMMING 4000 K	277 V 15 W	ALPHABET GOTHAM LIGHTOLIER PRESCOLITE	NU4 LDN4 40'15 LOAAR LSS MVOLT G210 TRW 4RN ZAROL1594WCCDZ10U LFR-4RD-4M-15L40K6-MD-DM1/LFR-4RD-T-SSW7/ LFR-4RD-H
DR6	4" ROUND RGBW LED DOWNLIGHT FIXTURE WITH 20-DEGREE BEAM, WHITE TRIM AND REFLECTOR.	LED 200 LM OF WHITE DMX RGBW	277 V 20 W	ALPHABET GOTHAM LIGHTOLIER PRESCOLITE	NU4-R-RGBW-10LM-35K-90-25D-CL-WH-WH-NC-UNV-DMX-RJ45
DR7	4" ROUND DOWNLIGHT FIXTURE WITH 80-DEGREE BEAM, WHITE TRIM AND REFLECTOR.	LED 1500 LM DMX 4000 K	277 V 15 W	ALPHABET GOTHAM LIGHTOLIER PRESCOLITE	NU4 LDN4 40'15 LOAAR LSS MVOLT G210 TRW 4RN ZAROL1594WCCDZ10U LFR-4RD-4M-15L40K6-MD-DM1/LFR-4RD-T-SSW7/ LFR-4RD-H
HB1	17X4 LED PENDANT HIGH BAY FIXTURE WITH WHITE LENS AND IK10 RATING.	LED 30,000 LM NON-DIMMING 4000 K	277 V 285 W	METALUX LITHONIA HE WILLIAMS COLUMBIA	OHB-30SE-MFL-UNV-L840-CD-U CPH6 48000LM SEF GCL WID MVOLT G210 40K 80CRI DWH GH4-L300840-F4-DIM-UNV PELA-840-L30-B-ED-U-M
LP1	PENDANT MOUNTED LED LINEAR LIGHT FIXTURE, WITH 2'X2" PROFILE. LENGTH AS SHOWN ON DRAWINGS.	LED 1000 LM / FT 0-10V DIMMING 4000 K	277 V 10 W / FT	CORELITE AXIS LIGHTING LUMENWERX	S122DP HP X P D " S T L 840 F 277 DC FC-1% FA50 " FE SCBA TBZDLED-1000-80-40-SO-XX-STANDARD FINISH-UNV-DP-1-CAB36 FORAP2-22-HLO-LED-80-1000-40-UNV-D1-1-SSWAC3-W
LP2	PENDANT MOUNTED LED LINEAR LIGHT FIXTURE WITH 3.5'X3.5" PROFILE AND 2.5" W X 2.5" H REGRESSED NOTCH. LENGTH AS SHOWN ON DRAWINGS.	LED 500 LM / FT 0-10V DIMMING 4000 K	277 V 7 W / FT	FLUXWERX Pinnacle	PF1-B-8-A-40-SCBA-X-S-F2-M-06 S9602-D-P-40K-070-XX-SCBA-UNV-OE CDH-N40-X-AC-ST-2-EL1-1-SCBA-FE

LP3	DECORATIVE PENDANT MOUNTED LED LINEAR LIGHT FIXTURE WITH DIRECT / INDIRECT DISTRIBUTION. DIRECT AND INDIRECT LIGHTING ARE TO BE ON SEPARATE SWITCHES. LENGTH AS SHOWN ON DRAWINGS.	LED 1200 LM / FT DN 400 LM / FT UP 0-10V DIMMING 4000 K	277 V 20 W / FT	ECOSENSE AYO	RP24-B-80ND30LP-U40-UNV-D-2C-FRF-SCAB-XX-48-XX GAZ-CS-B-44-APSB-4-X-940-L-L-VL-SB-1D-8-MF-SC-MN
LP4	PENDANT MOUNTED LED LINEAR LIGHT FIXTURE WITH 2'X2" PROFILE. LENGTH AS SHOWN ON DRAWINGS.	LED 1000 LM / FT 0-10V DIMMING 4000 K	10 W / FT	CORELITE FINELITE EXTANT ARCH. LIGHTING LUMENWERX QTRAN OMNI LIGHT KELVIX XICO FLUXWERX PMIC LIGHTING PINNACLE NULITE AXIS LIGHTING INC. MARK LIGHTING LUMENWERX	S122DP HP X P ID " S T L 840 F 277 DC FC-1% FA50 " FE SCBA HTG-I-P-T-DT-XX-SLO-1250-840-MEODF-VU-D- STANDARD FINISH-AC-XX VIAQ2-P-HLO-FHNA-SW-85-1250-NA-40 " UNV-D1-1C HUE-RGB412-H02-XX OCH4-688R-XX-OM APO-XX-E-24 HUE-DMX-CONTROLLER-STANDARD FINISH HUE-DMX-DECODER NT14-02-B-A-40-F2-M-X S9602-D-FUTRM-40K-070-XX-SCBA-UNV-OE CRD-840-X-F-2-EL1-1-SCBA RM2-8-135-UNV-D-1C-FRF-WH-XX B2SORLED-750-80-35-SO-X-W-UNV-DP-1-DF SL2L LOP " FT FLP GB 80CRI 35K 800LM MN1 27 2T VIAQ2-P-HLO-FH-SW-80CRI-750LMF 35K-FT-UNV- D1-1CDM-W BPR02-REC-FL-SH-CHR-H0-XX-SCBA-WWF-LP-SC- UNV-XX-EDMX
LR1	1" WIDE LINEAR RECESSED LED RGBW LIGHT FIXTURE WITH WHITE LENS AND MID-IR TRAIL LENGTH AS SHOWN ON DRAWINGS.	LED 400 LM / FT OF WHITE DMX RGBW	277 V 12 W	QTRAN OMNI LIGHT KELVIX XICO FLUXWERX PMIC LIGHTING PINNACLE NULITE AXIS LIGHTING INC. MARK LIGHTING LUMENWERX	HUE-RGB412-H02-XX OCH4-688R-XX-OM APO-XX-E-24 HUE-DMX-CONTROLLER-STANDARD FINISH HUE-DMX-DECODER NT14-02-B-A-40-F2-M-X S9602-D-FUTRM-40K-070-XX-SCBA-UNV-OE CRD-840-X-F-2-EL1-1-SCBA RM2-8-135-UNV-D-1C-FRF-WH-XX B2SORLED-750-80-35-SO-X-W-UNV-DP-1-DF SL2L LOP " FT FLP GB 80CRI 35K 800LM MN1 27 2T VIAQ2-P-HLO-FH-SW-80CRI-750LMF 35K-FT-UNV- D1-1CDM-W BPR02-REC-FL-SH-CHR-H0-XX-SCBA-WWF-LP-SC- UNV-XX-EDMX
LR2	LINEAR RECESSED LED LIGHT FIXTURE WITH 2.5" W x 2.5" H REGRESSED NOTCH. LENGTH AS SHOWN ON DRAWINGS. OUTSIDE 90-DEGREE MITERED CORNER. UP WALL AS SHOWN ON PLANS.	LED 500 LM / FT 0-10V DIMMING 4000 K	277 V 5 W / FT	FLUXWERX PMIC LIGHTING PINNACLE NULITE AXIS LIGHTING INC. MARK LIGHTING LUMENWERX	NT14-02-B-A-40-F2-M-X S9602-D-FUTRM-40K-070-XX-SCBA-UNV-OE CRD-840-X-F-2-EL1-1-SCBA RM2-8-135-UNV-D-1C-FRF-WH-XX B2SORLED-750-80-35-SO-X-W-UNV-DP-1-DF SL2L LOP " FT FLP GB 80CRI 35K 800LM MN1 27 2T VIAQ2-P-HLO-FH-SW-80CRI-750LMF 35K-FT-UNV- D1-1CDM-W BPR02-REC-FL-SH-CHR-H0-XX-SCBA-WWF-LP-SC- UNV-XX-EDMX
LR3	2" WIDE MID-IN RECESSED LED LINEAR LIGHT FIXTURE. LENGTH AS SHOWN ON DRAWINGS. FACTORY MITERED CORNERS.	LED 800 LM / FT 0-10V DIMMING 4000 K	277 V 8 W / FT	PRUDENTIAL AXIS LIGHTING INC. MARK LIGHTING DAY-Q-LITE PRUDENTIAL AXIS LIGHTING INC. MARK LIGHTING DAY-Q-LITE QTRAN OMNI LIGHT KELVIX XICO CHAC2-F-WHRS-30-SWS250-5-0-35- 1-F1-FT 0-10V DIMMING	PRFL-34-D-FL-RGBW-L0-X-TRL-W-DM10 BPR02-REC-FL-SH-LED4-SO-XX-SCBA-WWF-LP-SC- UNV-XX-DMX PRFL-34-D-FL-40-HO-X-TRL-W-DM10 ARKA-L11SW-5-0-35-DRY-STD-DF-15-BW-CLS-WH-CL2- SST-ST-XX DRIVER GEN2-35-HO-XX OCH-006-XX-OM-APO-XX-E-24 061 " 1" DK 35K WHR CP 5V ULV CHAC2-F-WHRS-30-SWS250-5-0-35- 1-F1-FT 0-10V DIMMING
LR4	2" WIDE MID-IN RECESSED RGBW LED LINEAR LIGHT FIXTURE WITH ASYMMETRIC OPTIC. LENGTH AS SHOWN ON DRAWINGS. TIE TO DMX CONTROLLER IN RECEPTION E111.	LED 400 LM / FT OF WHITE DMX RGBW	277 V 12 W / FT	PRUDENTIAL AXIS LIGHTING INC. MARK LIGHTING DAY-Q-LITE QTRAN OMNI LIGHT KELVIX XICO CHAC2-F-WHRS-30-SWS250-5-0-35- 1-F1-FT 0-10V DIMMING	PRFL-34-D-FL-RGBW-L0-X-TRL-W-DM10 BPR02-REC-FL-SH-LED4-SO-XX-SCBA-WWF-LP-SC- UNV-XX-DMX PRFL-34-D-FL-40-HO-X-TRL-W-DM10 ARKA-L11SW-5-0-35-DRY-STD-DF-15-BW-CLS-WH-CL2- SST-ST-XX DRIVER GEN2-35-HO-XX OCH-006-XX-OM-APO-XX-E-24 061 " 1" DK 35K WHR CP 5V ULV CHAC2-F-WHRS-30-SWS250-5-0-35- 1-F1-FT 0-10V DIMMING
LR5	2" WIDE MID-IN RECESSED LED LINEAR LIGHT FIXTURE. LENGTH AS SHOWN ON DRAWINGS. FACTORY MITERED CORNERS.	LED 800 LM / FT DMX 4000 K	277 V 8 W / FT	PRUDENTIAL AXIS LIGHTING INC. MARK LIGHTING DAY-Q-LITE QTRAN OMNI LIGHT KELVIX XICO CHAC2-F-WHRS-30-SWS250-5-0-35- 1-F1-FT 0-10V DIMMING	PRFL-34-D-FL-RGBW-L0-X-TRL-W-DM10 BPR02-REC-FL-SH-LED4-SO-XX-SCBA-WWF-LP-SC- UNV-XX-DMX PRFL-34-D-FL-40-HO-X-TRL-W-DM10 ARKA-L11SW-5-0-35-DRY-STD-DF-15-BW-CLS-WH-CL2- SST-ST-XX DRIVER GEN2-35-HO-XX OCH-006-XX-OM-APO-XX-E-24 061 " 1" DK 35K WHR CP 5V ULV CHAC2-F-WHRS-30-SWS250-5-0-35- 1-F1-FT 0-10V DIMMING
LS1	1" WIDE SURFACE MOUNTED LED LINEAR LIGHT FIXTURE WITH WRAP AROUND LENS.	LED 500 LM / FT 0-10V DIMMING 4000 K	277 V 5 W	QTRAN OMNI LIGHT KELVIX XICO CHAC2-F-WHRS-30-SWS250-5-0-35- 1-F1-FT 0-10V DIMMING	ARKA-L11SW-5-0-35-DRY-STD-DF-15-BW-CLS-WH-CL2- SST-ST-XX DRIVER GEN2-35-HO-XX OCH-006-XX-OM-APO-XX-E-24 061 " 1" DK 35K WHR CP 5V ULV CHAC2-F-WHRS-30-SWS250-5-0-35- 1-F1-FT 0-10V DIMMING
LS2	5' W x 4' L SURFACE MOUNTED LED LINEAR LIGHT FIXTURE WITH WRAP AROUND LENS.	LED 400 LM / FT 0-10V DIMMING 4000 K	277 V 40 W	KENALL LUMINAIRE HE WILLIAMS BEGHELLI	MJHAS VPF4L LSL " FT MSL4 100 50W 4K MVOLT OP WH AVX-4-L62-840-CPC-L50-DMX-UNV BS100LED-4HT-VL0-WT40-120-277V
LS3	1" WIDE CORNER MOUNTED EXTERIOR LED LINEAR LIGHT FIXTURE WITH WHITE LENS.	LED 400 LM / FT 0-10V DIMMING 4000 K	277 V 4 W	Q-TRAN OMNI LIGHT ACOLYTE LED	SW243-0-VET-40-BW-CLS-WH-CL2-XX ARKA-SCBA-SST-DF-NX-XX GENZML-1-SO-7-0CH-005-7-FR-AL-APO-7-E-24 CHAC2-W-SCBA-RB-0-SWS265-3-0-40 DRIVER
LS4	1" WIDE LED LINEAR SURFACE MOUNTED LIGHT FIXTURE WITH WHITE LENS. LENGTH AS SHOWN ON THE DRAWINGS.	LED 750 LM / FT 0-10V DIMMING 4000 K	277 V 6 W / FT	QTRAN OMNI LIGHT SCOUT XICO NSQ05-S-FT-MWH-E1-CFL-S80-35-DLM-F5-UNV F001-NR-LD8-NB-NC-1 FACTORY MITERED CORNER	SW-HW-246-D-DRY-40-BW-6W-WH-BL2-XX WIDE-ST-SST-DF-NX-XX QZ DRIVER GEN2-35-HO-XX OCH-SCS-XX-OM-AL-APO-XX-E-24 SS-SLR S0M M35 W " 1 E N 48 " " NSQ05-S-FT-MWH-E1-CFL-S80-35-DLM-F5-UNV F001-NR-LD8-NB-NC-1 FACTORY MITERED CORNER
LS5	NOT USED				
LW1	WALL MOUNTED LED LINEAR LIGHT FIXTURE WITH 2'X2" PROFILE & WHITE LENS. DIRECT DISTRIBUTION ONLY.	LED 1250 LM / FT NON-DIMMING 4000 K	13 W / FT	NULITE BARTCO AXIS LIGHTING STARTEK	RW24-D-STF-12-L40-UNV-D-1-SCBA-XX BSS214 " 40 D H WD SN SCBA B2SORLED-1000-80-40-SO-4-STANDARD FINISH-UNV-DP-1 SLIMD-4-1000-SD-40K-60-PW-AWM-U-1C
P1	DECORATIVE LED PENDANT MOUNTED LIGHT FIXTURE. 3" W x 12" H	LED 1500 LM NON-DIMMING 4000 K	277 V 15 W	OXYGEN EUREKA LINDSLEY CONTECH	3-653-XXX-4000K 4233-XB LED 40 277V DV 3 C 36 RC SCBA SCBA WH LRD PN 08 40 10 XX H12 XX XX 0-10V OFG101
P2	VERTICALLY MOUNTED 4" LONG PENDANT MOUNTED LIGHT FIXTURE WITH 3 LIGHT BARS AND WHITE LENSES.	LED 400 LM / FT 0-10V DIMMING 4000 K	277 V 8 W / FT	ECOSENSE AYO LIGHTING	Y3-CYS-4 40K-VL0-UNV-10D-SCBA-MF-44-PSB-8 OPT-CS-3-44-B-PS-X-PL4-840-VL-VL-10-STANDARD FINISH-W
SC1	LED RGBW WALL MOUNTED CYLINDER WITH 20-DEGREE BEAM. DIRECT DISTRIBUTION ONLY.	LED 200 LM OF WHITE DMX RGBW	277 V 20 W	ALPHABET	BETA-4R-RGBW-10LM-43K-90-25D-SCBA-SCBA-W
SC3	4" HIGH BY 4" WIDE BACKLIT LED EXTERIOR WALL SCORCE.	LED 1000 LM NON-DIMMING 4000 K	277 V 8 W	DALS	SWS48-CC
SL1	LED STRIP LIGHT FIXTURE WITH WHITE LENS. LENGTH AS SHOWN ON THE DRAWINGS.	LED 1250 LM / FT NON-DIMMING 4000 K	277 V 12 W / FT	METALUX LITHONIA HE WILLIAMS COLUMBIA	48NX48SL-U-UNV-L840-CD-UJ AYC-CHAINSET-UJ CLX L48 4000LM SEF RDL MVOLT G210 40K 80CRI WH 60R-TL-420840-STANDARD FINISH-DMX-UNV-DMX-CS-DM24-S2458W CSL4-LSCS
TR1	2'X4' DECORATIVE LED TROFFER, 1" WIDE LENS AROUND THE PERIMETER OF THE GRID TILE.	LED 4800 LM 0-10V DIMMING 4000 K	277V 48 W	LUXRITE LOUVERS LED LITHONIA GREEN IMAGE	LR24187-4000K LI-GRD-24-CCT LFRM 2X4 AL08 SSW7 MVOLT M6 GN-SFL-24-45-A-35
TR2	2'X2' DECORATIVE LED TROFFER, 1" WIDE LENS AROUND THE PERIMETER OF THE GRID TILE.	LED 3300 LM 0-10V DIMMING 4000 K	277V 33 W	LUXRITE LOUVERS LED LITHONIA GREEN IMAGE	LR22187-4000K LI-GRD-22-CCT LFRM 2X2 AL08 SSW7 MVOLT M6 GN-SFL-22-45-A-35
TR3	2'X2' LED FLAT PANEL WITH SMOOTH WHITE LENS.	LED 3300 LM 0-10V DIMMING 4000 K	277V 33 W	METALUX DAYBRITE LITHONIA COLUMBIA	22CCTGX-35-L840 2P233835-4-OS-UNV-DM CPX 243 3300LM 80CRI 35K SWL MN1 21 MVOLT 16 CBT22-A-LSCS-EDD-2PK
WP1	EXTERIOR WALL MOUNTED LED ROUND CYLINDER. 13-DEGREE BEAM UP, 80-DEGREE BEAM DOWN.	LED 1000 LM UP 4000 LM DN 0-10V DIMMING 4000 K	277 V 50 W	PORTFOLIO KIRLIN	(1) LERUDC400010 (2) EC6C40809040 (1) 6LBNKH (1) 6LBMXH (1) LNEGRUD LWC-06RD-3500L-1000U-WFL-SPU-50K-UNV

WP2	18" x 18" x 4"D EXTERIOR LED WALL PACK WITH TYPE 4 DISTRIBUTION. CUSTOM COLOR TO MATCH BUILDING FINISHES.	LED 9,000 LM 0-10V DIMMING 4000 K	277V 56 W	PERFORMANCE IN LTG GARCO LITHONIA SOLERA	M50M-S3-T3-CCBA-40K-UNV-0-10V GBM12-840-74M-UNV-CC H003 LED P3 40K 7000M IN MVOLT 55M CCBA ACER-G-1657H-LED-UNV-4000K-DM-D-WM- TYPE IV-COLOR MINITEX BLK
WP3	EXTERIOR WALL MOUNTED LED ROUND CYLINDER. 13-DEGREE BEAM UP, INDIRECT DISTRIBUTION ONLY.	LED 1000 LM UP 0-10V DIMMING 4000 K	277 V 15 W	PORTFOLIO KIRLIN	LERUDC400010 LWC
X1	SINGLE SIDED LED CAST EXIT SIGN WITH GREEN LETTERS. AC ONLY.	LED	277 V 5W	ABS INSTALLATION PRODUCTS ISOLITE MULE COMPASS	EDC AC G U SCBA SCBA MTEBP MD-A1-G-BA CCESG
X2	LED DIE CAST DOUBLE SIDED EXIT SIGN. WHITE WITH GREEN LETTERS. AC ONLY.	LED	277 V 5W	EVENLITE LITHONIA MULE	CCDS-AC-G-2-SCBA-XX LQOWGS MDA-U-G-WW
X3	LED DIE CAST EXIT SIGN WITH WIRE GUARD. WHITE WITH GREEN LETTERS. AC ONLY.	LED	277 V 5W	EVENLITE LITHONIA MULE	CCDS-AC-G-1-SCBA-XX-M990010 LOC W 1 G / ELAWGL MDA-U-G-WW WS1
X4	LED DIE CAST DOUBLE SIDED EXIT SIGN WITH GREEN LETTERS. DMX MOUNTED. AC ONLY.	LED	277 V 5W	EVENLITE LITHONIA MULE	SOV-AC-G-2M-SCBA-UJC EDG 2 GMR MDA-U-G-WW

LIGHT FIXTURE GENERAL NOTES

1. REFER TO THE ARCHITECTURAL REFLECTED CEILING PLANS FOR LOCATIONS OF LIGHT FIXTURES. BRING ALL DISCREPANCIES OF LOCATIONS AND QUANTITIES TO THE ATTENTION OF THE ARCHITECT PRIOR TO BIDDING.  
2. CONFIRM MOUNTING HEIGHTS AND LOCATIONS OF ALL LIGHT FIXTURES WITH ARCHITECTURAL ELEVATIONS AND / OR ARCHITECT.  
3. REFER TO THE SPECIFICATIONS FOR OTHER LIGHT FIXTURE REQUIREMENTS.  
4. CONFIRM AVAILABLE MOUNTING DEPTHS OF ALL LIGHT FIXTURES AND COMPARE WITH DEPTHS SHOWN ON SHOP DRAWINGS. BRING ALL POTENTIAL CONFLICT AREAS TO THE ATTENTION OF THE ARCHITECT AND ELECTRICAL ENGINEER PRIOR TO RELEASE.  
5. ALL INTERIOR LIGHT FIXTURES ARE TO BE 3000 K AND ALL EXTERIOR LIGHT FIXTURES ARE TO BE 4000 K, UNLESS OTHERWISE NOTED IN THE FIXTURE DESCRIPTION.  
6. ALL LIGHT SOURCES ARE TO BE A MINIMUM OF 80 CRI UNLESS OTHERWISE NOTED IN THE FIXTURE DESCRIPTION.  
7. ALL LED SOURCES MUST MEET L80 AT 50,000 HRS MINIMUM UNLESS OTHERWISE NOTED.  
8. CONFIRM ALL MOUNTING REQUIREMENTS WITH ARCHITECT PRIOR TO RELEASE.  
9. ALL LIGHT FIXTURES ARE TO HAVE AN EFFICACY OF 80 LUMENS PER WATT MINIMUM.

LIGHT FIXTURE PRIOR APPROVAL REQUIREMENTS

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

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1. REFER TO THE ARCHITECTURAL REFLECTED CEILING PLANS FOR LOCATIONS OF LIGHT FIXTURES. BRING ALL DISCREPANCIES OF LOCATIONS AND QUANTITIES TO THE ATTENTION OF THE ARCHITECT PRIOR TO BIDDING.  
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4. WHEN A CONTRADICTION EXISTS BETWEEN A SPECIFIC MODEL NUMBER AND THE DESCRIPTION, THE DESCRIPTION SHALL GOVERN.

## LIGHTING CONTROL PANEL SCHEDULE

PANEL NAME: LCP1

LOCATION: ELEC A10

TRANSFORMER VOLTAGE: 277

MOUNTING: SURFACE

NEMA TYPE: NEMA 1

RELAY NO.	CIRCUIT BREAKER	LOAD CONTROLLED	POLES	METHOD OF CONTROL	PROGRAMMING REQUIREMENTS
1	THA1-2	SITE POLE LIGHTING	1	SWITCHED	
2	THA1-2	VESTIBULE COLUMN LIGHT	1	SWITCHED	
3	THA1-1	FLAG POLE LIGHT	1	SWITCHED	
4	THA1-2	EM LG BUILDING EXTERIOR	1	SWITCHED	
5	THA1-2	EM LG BUILDING EXTERIOR	1	SWITCHED	
6		SPARE	1	SWITCHED	
7		SPARE	1	SWITCHED	
8		SPARE	1	SWITCHED	

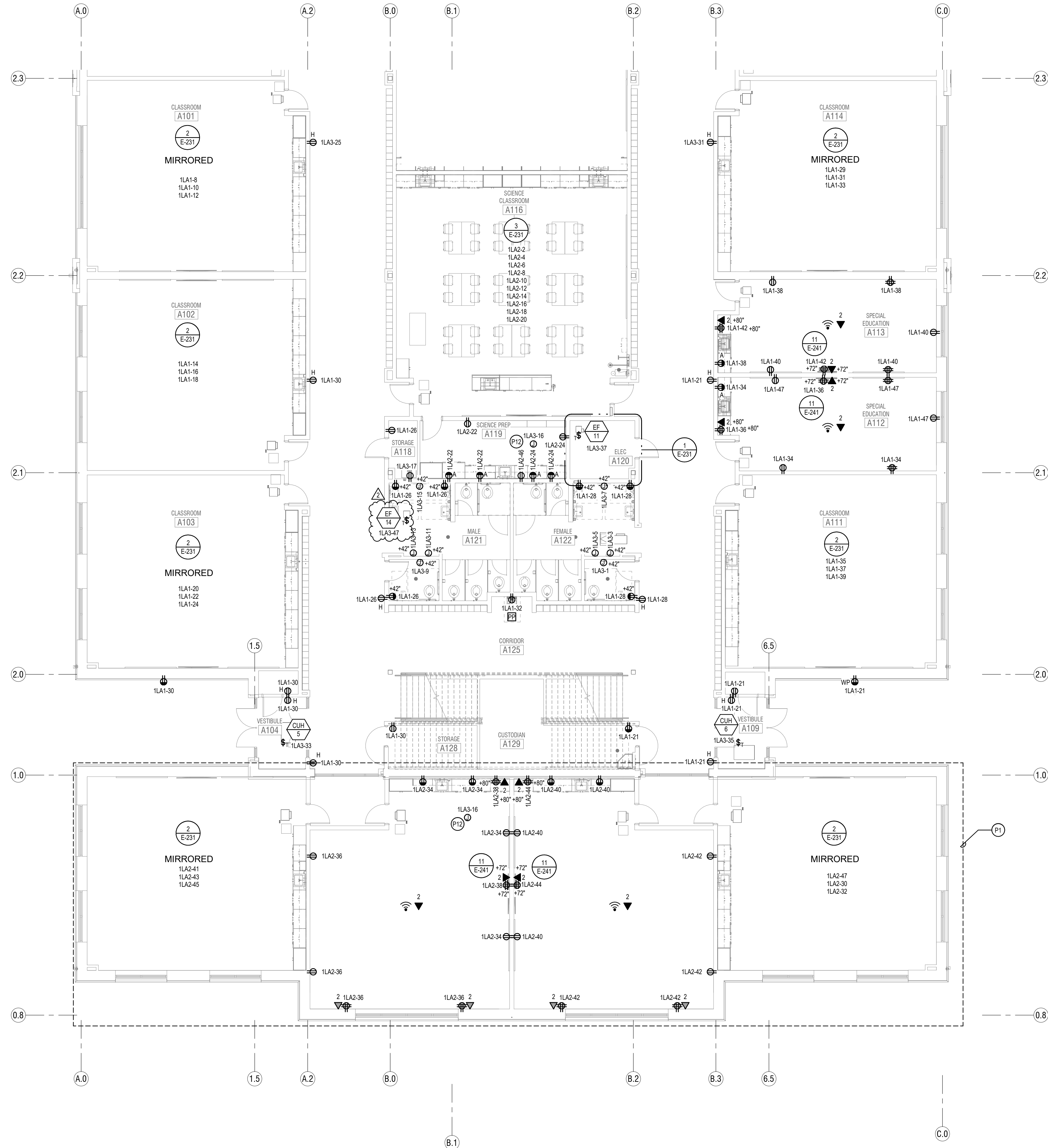
### PROGRAMMING REQUIREMENTS

A	TIME ON (6:00 AM) - TIME OFF (7:00 PM) 2 HOUR OVERRIDE AT LOW VOLTAGE SWITCH
B	TIME ON (6:00 AM) - TIME OFF (10:00 PM)
C	MANUAL ON - TIME OFF (5:30 PM)
D	MANUAL ON - MANUAL OFF - SWEEP OFF AT END OF DAY (5:30 PM)
E	TIME ON (7:30 AM) - MANUAL OFF - SWEEP OFF AT END OF DAY (5:30 PM)
F	PHOTO CELL ON - PHOTO CELL OFF
G	PHOTO CELL ON - TIME OFF (6:00 PM) 2 HOUR OVERRIDE AT LOW VOLTAGE SWITCH

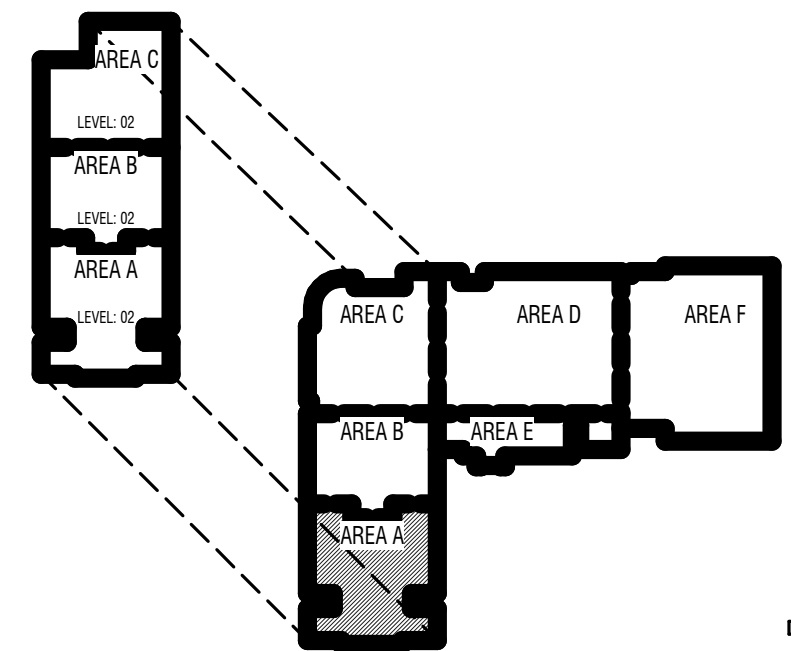
NOTES: COORDINATE WITH THE ARCHITECT/TOWNER FOR THE EXACT START AND END TIMES PRIOR TO THE FINAL PROGRAMMING OF THE LIGHTING CONTROL SYSTEM.



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



### KEY PLAN



POWER GENERAL NOTES:	
1.	ALL 120V, 20AMP OUTLETS THAT ARE WITHIN 6' OF ANY SINK SHALL BE GFCI.
2.	THE DIVISION 26 CONTRACTOR SHALL DETERMINE THE EXACT ROUTING OF ALL CONDUITS IN THE FIELD. THIS PLAN REPRESENTS A SCHEMATIC REPRESENTATION OF DEVICE LOCATIONS AND CONDUIT RUNS.
KEYED NOTES	
P1	UNDER THE BASE BID, INCLUDE ALL WORK IN THIS AREA AS SHOWN ON THE PLANS. UNDER ALTERNATE #1, THIS AREA WILL BE REMOVED FROM THE PROJECT. PROVIDE A SEPARATE COST TO BE ISSUED AS A CREDIT FOR ALL WORK IN THIS AREA AS SHOWN ON THE PLANS.
P12	POWER FOR VAV BOX TRANSFORMER. COORDINATE EXACT LOCATION WITH MECHANICAL CONTRACTOR.

### CONSTRUCTION DOCUMENTS

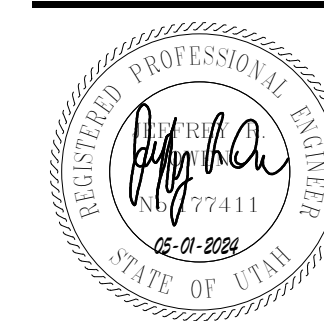
MARK:	DATE:	DESCRIPTION:
	05/22/24	ADDENDUM 5

PROJECT #:	123006
DRAWN BY:	Author
CHECKED BY:	Checker
ISSUED:	04/26/2024



[illegible]

PROJECT #: 12300  
DRAWN BY: Author  
CHECKED BY: Checker  
ISSUED: 04.26.202

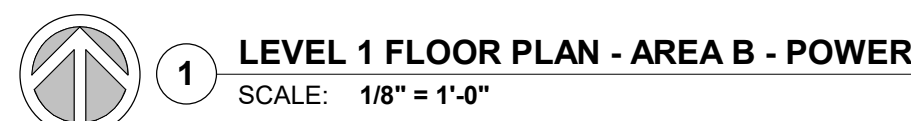


LEVEL 1 - AREA B -  
POWER

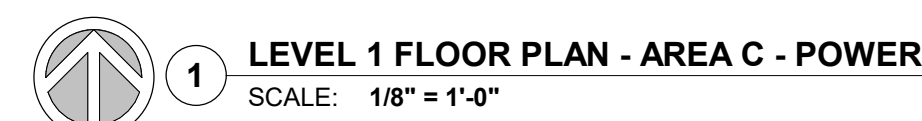
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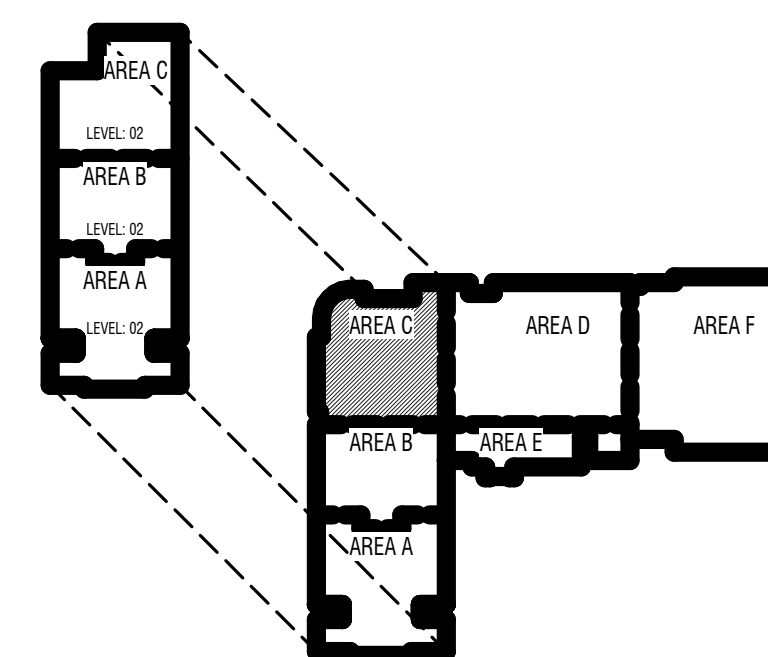
TO BE DETERMINED



P12	POWER FOR VAV BOX TRANSFORMER. COORDINATE EXACT LOCATION WITH MECHANICAL CONTRACTOR.
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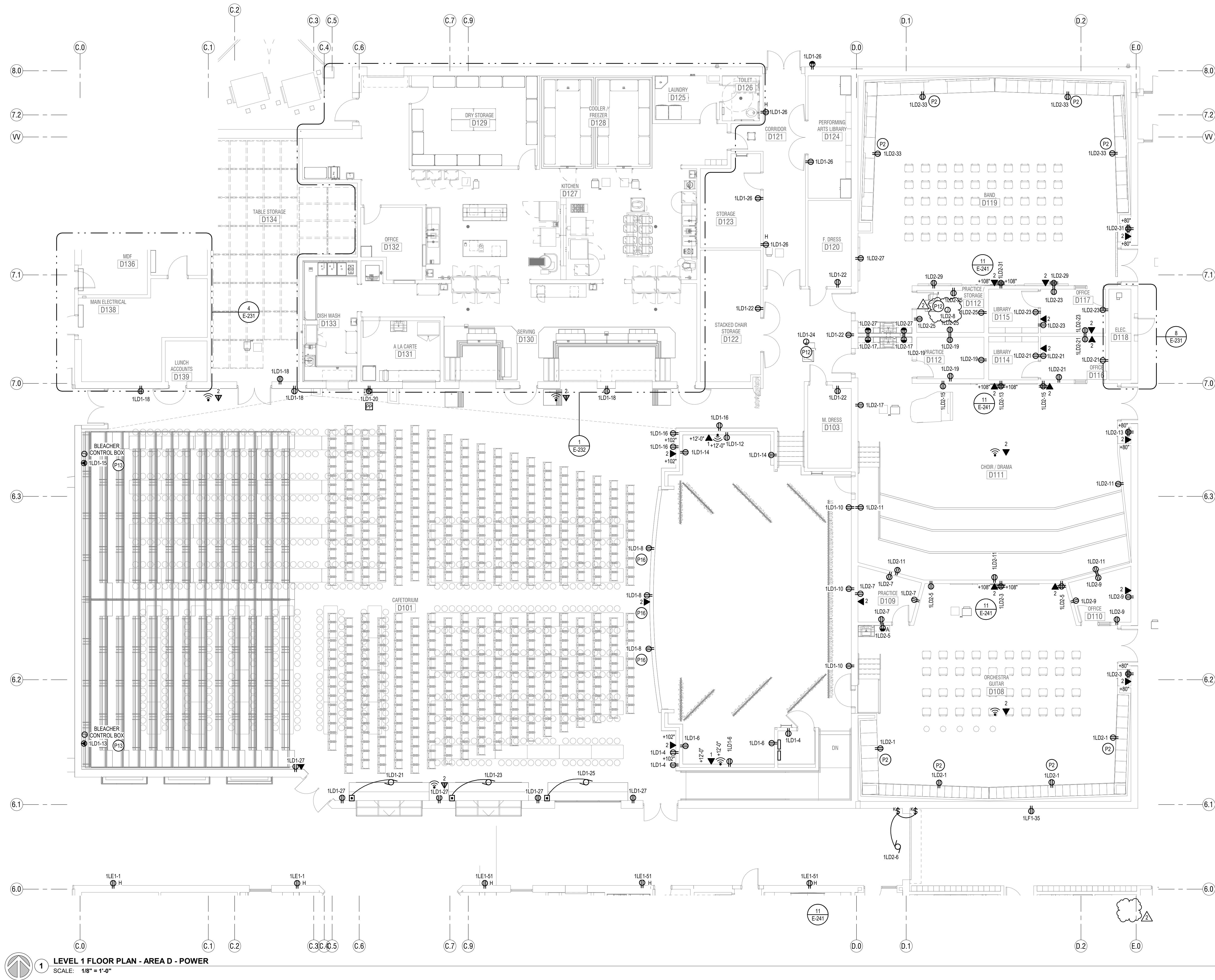
P12	POWER FOR VAY BOX TRANSFORMER. COORDINATE EXACT LOCATION WITH MECHANICAL CONTRACTOR.
P14	WIREFOLD.
P15	2-CHANNEL WIREFOLD WITH DATA.
P16	TIE THE SHADE MOTOR TO THE CIRCUIT INDICATED THROUGH THE SHADE MOTOR SWITCH IN THE MAIN OFFICE AREA. REFER TO THE MANUFACTURER'S WIRING DIAGRAMS FOR ADDITIONAL INFORMATION. VERIFY THE LOCATION AND NUMBER OF CONTROLLERS AND SHADE MOTORS WITH THE SUPPLIER.
P21	MUSHROOM TYPE EMERGENCY SHUT OFF BUTTON WITH CLEAR PROTECTIVE COVER AND NORMALLY OPEN CONTACT. TIE TO SHUNT TRIP MAIN BREAKER IN PANEL 11C1.
P24	PROVIDE A 25 KW INVERTER WITH 480V, 3Ø INPUT AND 480V, 3Ø OUTPUT TO POWER EMERGENCY LIGHTING PANELS.



TO BE DETERMINED

E  
D  
C  
B  
A

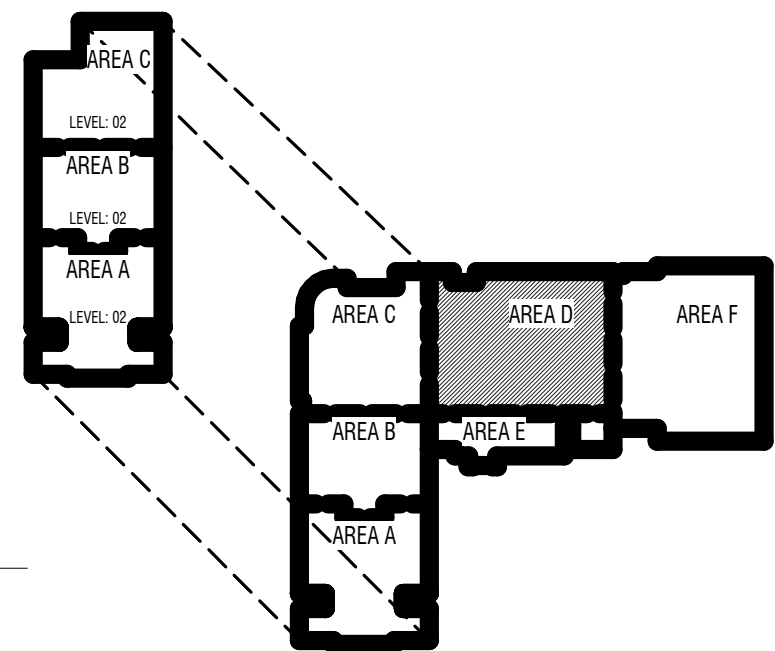
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1 LEVEL 1 FLOOR PLAN - AREA D - POWER  
SCALE: 1/8" = 1'-0"

- POWER GENERAL NOTES:**
- ALL 120V, 20AMP OUTLETS THAT ARE WITHIN 6' OF ANY SINK SHALL BE GFCI.
  - THE DIVISION 26 CONTRACTOR SHALL DETERMINE THE EXACT ROUTING OF ALL CONDUITS IN THE FIELD. THIS PLAN REPRESENTS A SCHEMATIC REPRESENTATION OF DEVICE LOCATIONS AND CONDUIT RUNS.
- KEYED NOTES**
- P2 RECEPTACLE TO BE MOUNTED HORIZONTALLY IN KICK PLATE UNDER MILLWORK.
- P12 POWER FOR VAV BOX TRANSFORMER. COORDINATE EXACT LOCATION WITH MECHANICAL CONTRACTOR.
- P13 BLEACHER CONTROL BOX.
- P16 MOUNT DEVICE IN FACE OF STEP.

KEY PLAN



CONSTRUCTION DOCUMENTS

**design west architects**

255 SOUTH 400 WEST  
735 NORTH 400 WEST  
SALT LAKE CITY, UT 84103

**ENVISION**

ENGINEERS  
240 E. MORRIS AVE. SUITE 200  
SALT LAKE CITY, UT 84115  
P: 801.534.1130  
www.envisioneng.com

**NIBLEY MIDDLE SCHOOL**

3050 S 920 W NIBLEY, UTAH  
CACHE COUNTY SCHOOL DISTRICT

MARK	DATE	DESCRIPTION
	05/22/24	ADDENDUM 5

PROJECT #: 123006

DRAWN BY: Author

CHECKED BY: Checker

ISSUED: 04/26/2024

REGISTERED PROFESSIONAL ENGINEER  
STATE OF UTAH  
77411

LEVEL 1 - AREA D - POWER

**E-214**

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E

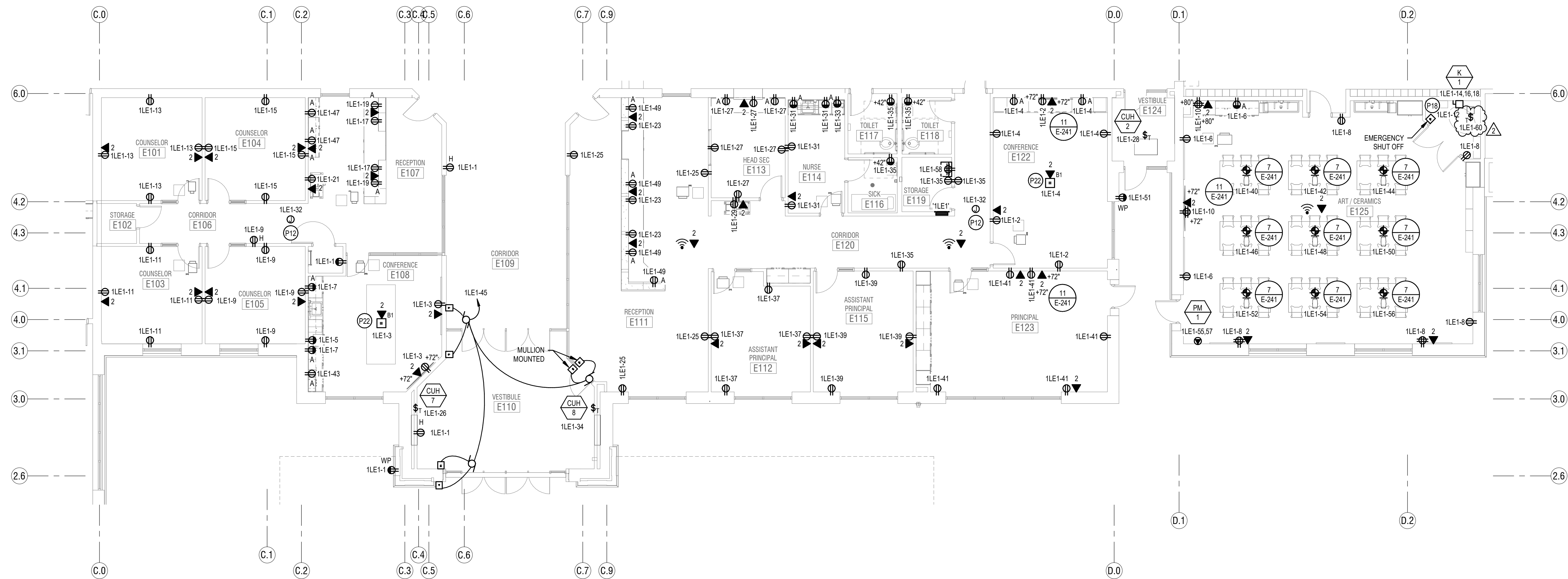
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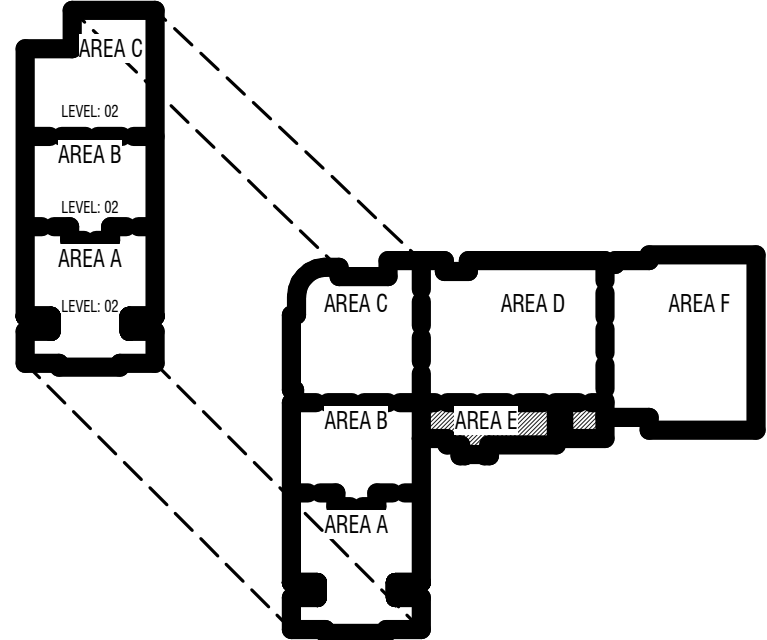
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1 LEVEL 1 FLOOR PLAN - AREA E - POWER  
SCALE: 1/8" = 1'-0"

POWER GENERAL NOTES:	
1.	ALL 120V, 20AMP OUTLETS THAT ARE WITHIN 6' OF ANY SINK SHALL BE GFCI.
2.	THE DIVISION 26 CONTRACTOR SHALL DETERMINE THE EXACT ROUTING OF ALL CONDUITS IN THE FIELD. THIS PLAN REPRESENTS A SCHEMATIC REPRESENTATION OF DEVICE LOCATIONS AND CONDUIT RUNS.
KEYED NOTES	
P12	POWER FOR VAV BOX TRANSFORMER. COORDINATE EXACT LOCATION WITH MECHANICAL CONTRACTOR.
P18	MUSHROOM TYPE EMERGENCY SHUT OFF BUTTON WITH CLEAR PROTECTIVE COVER AND NORMALLY OPEN CONTACT. TIE TO KILN SHUNT TRIP BREAKER.
P22	4 GANG CONCRETE FLOOR BOX. PROVIDE WITH A 4-PLEX OUTLET, 2 DATA PORTS AND A BLANK SPACE FOR AN "HUBBELL CAT. #24GTGVR111" CFBMG211" OR APPROVED EQUAL. RUN 1-1/2" CONDUIT FROM BLANK SPACE UP NEAREST WALL AND INTO ACCESSIBLE CEILING SPACE.

## KEY PLAN



## CONSTRUCTION DOCUMENTS

MARK	DATE	DESCRIPTION
PROJECT #:	123006	
DRAWN BY:	Author	
CHECKED BY:	Checker	
ISSUED:	04/26/2024	

PROJECT #:	123006
DRAWN BY:	Author
CHECKED BY:	Checker
ISSUED:	04/26/2024



LEVEL 1 - AREA E - POWER

E-215

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NIBLEY MIDDLE SCHOOL

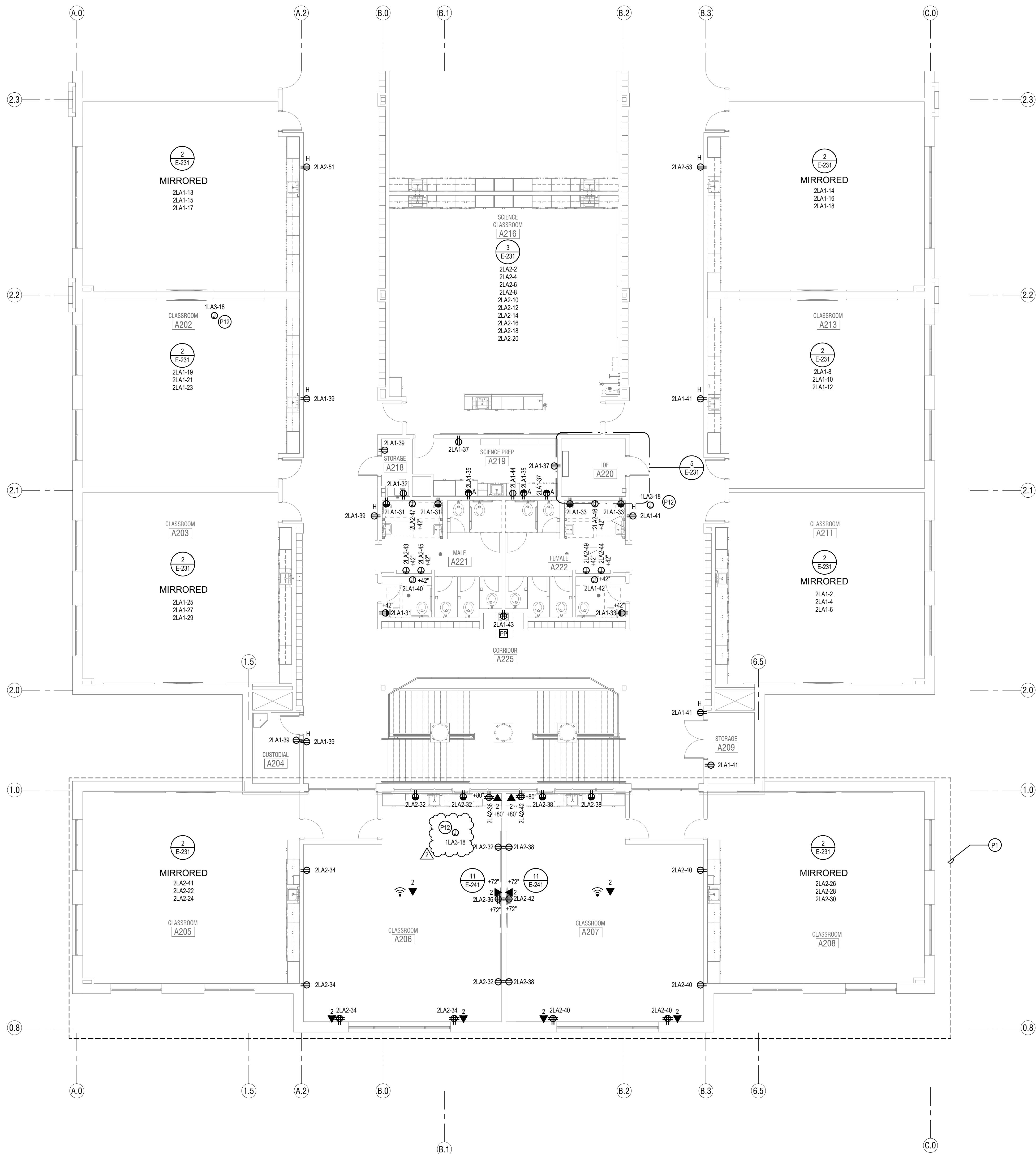
3050 S 920 W NIBLEY, UTAH

CACHE COUNTY SCHOOL DISTRICT

design west architects  
LOGAN UT 84321  
SALT LAKE CITY UT 84103

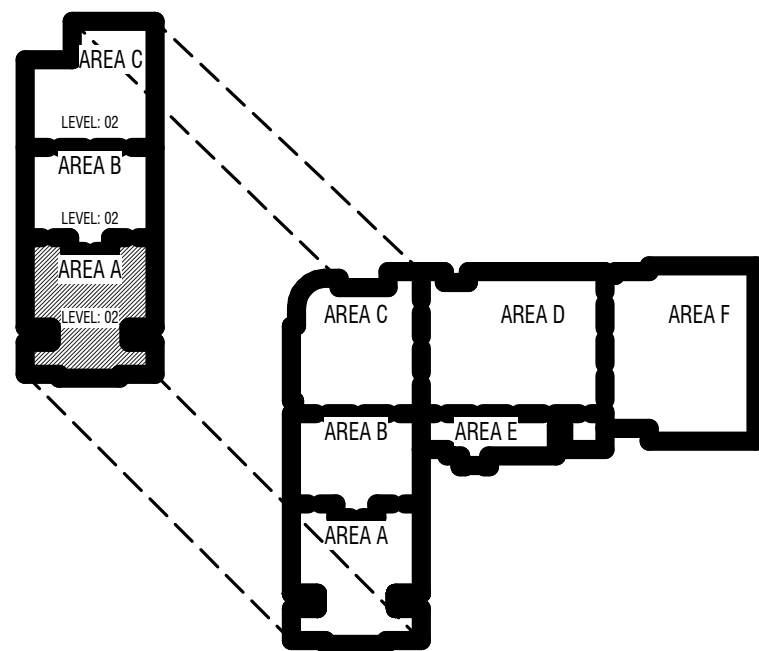
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1 LEVEL 2 FLOOR PLAN - AREA A - POWER  
SCALE: 1/8" = 1'-0"



- POWER GENERAL NOTES:**
- ALL 120V, 20AMP OUTLETS THAT ARE WITHIN 6' OF ANY SINK SHALL BE GFCI.
  - THE DIVISION 26 CONTRACTOR SHALL DETERMINE THE EXACT ROUTING OF ALL CONDUITS IN THE FIELD. THIS PLAN REPRESENTS A SCHEMATIC REPRESENTATION OF DEVICE LOCATIONS AND CONDUIT RUNS.
- KEYED NOTES**
- P1 UNDER THE BASE BID, INCLUDE ALL WORK IN THIS AREA AS SHOWN ON THE PLANS. UNDER ALTERNATE #1, THIS AREA WILL BE REMOVED FROM THE PROJECT. PROVIDE A SEPARATE COST TO BE ISSUED AS A CREDIT FOR ALL WORK IN THIS AREA AS SHOWN ON THE PLANS.
- P12 POWER FOR VAV BOX TRANSFORMER. COORDINATE EXACT LOCATION WITH MECHANICAL CONTRACTOR.

KEY PLAN



CONSTRUCTION DOCUMENTS

**design west architects**  
LOGAN UT 84321  
SALT LAKE CITY UT 84103

**ENVISION**  
ENGINEERS  
240 E. MORRIS AVE. SUITE 200  
SALT LAKE CITY, UT 84115  
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www.envisioneng.com

**NIBLEY MIDDLE SCHOOL**  
3050 S 920 W NIBLEY, UTAH  
CACHE COUNTY SCHOOL DISTRICT

MARK	DATE	DESCRIPTION
05/22/24	ADDITION 5	

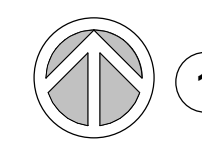
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ISSUED: 04/26/2024



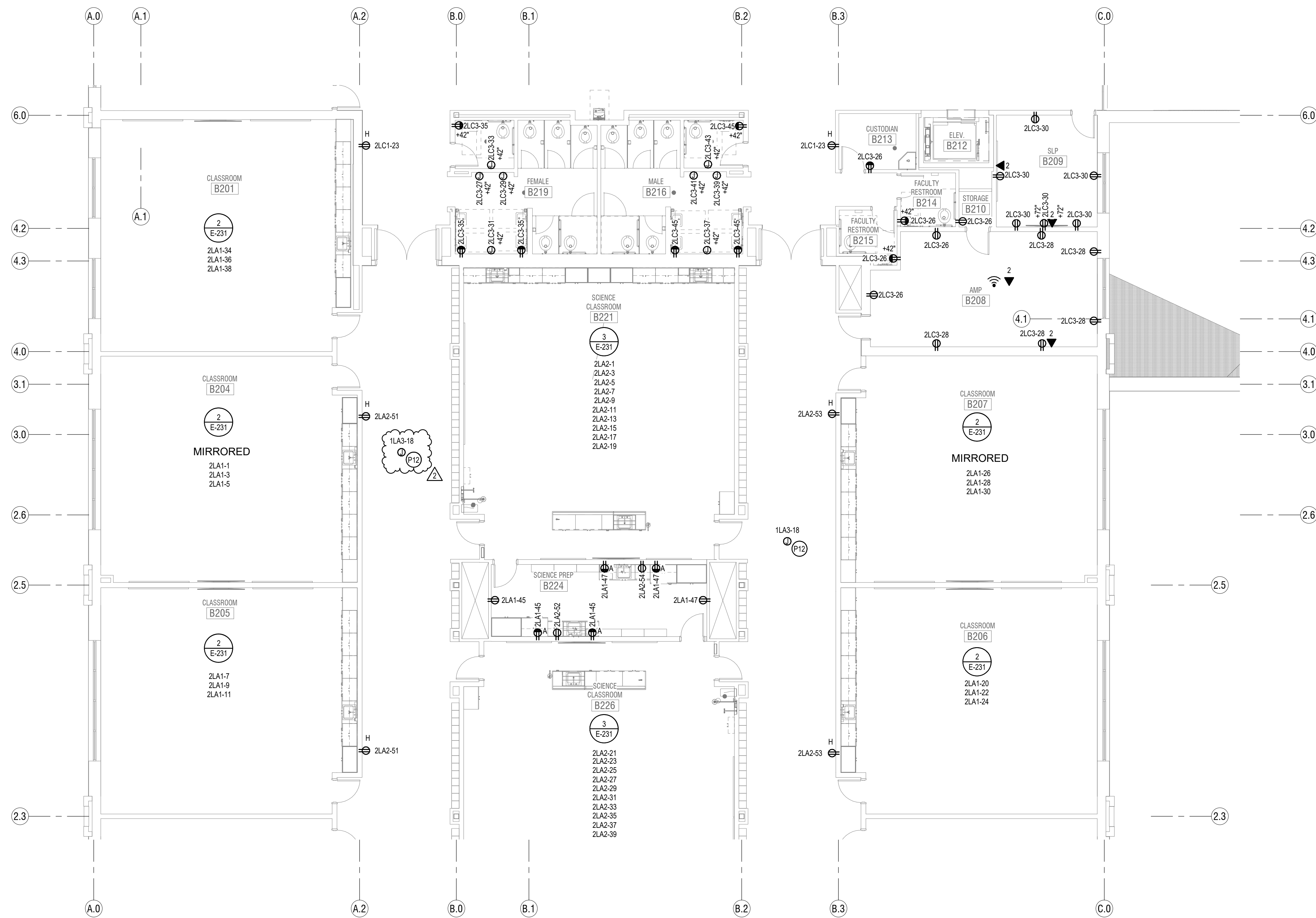
LEVEL 2 - AREA A - POWER

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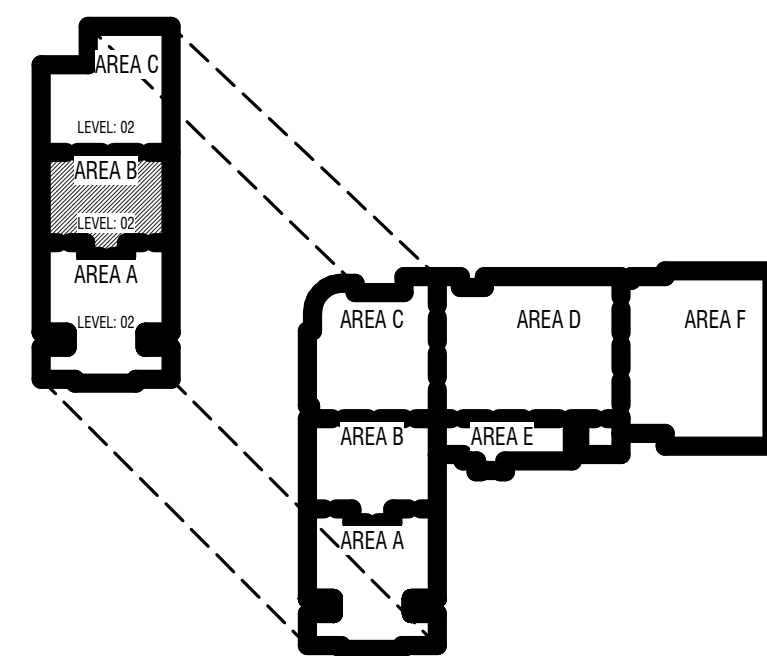


1 LEVEL 2 FLOOR PLAN - AREA B - POWER  
SCALE: 1/8" = 1'-0"



POWER GENERAL NOTES:	
1.	ALL 120V, 20AMP OUTLETS THAT ARE WITHIN 6' OF ANY SINK SHALL BE GFCI.
2.	THE DIVISION 26 CONTRACTOR SHALL DETERMINE THE EXACT ROUTING OF ALL CONDUITS IN THE FIELD. THIS PLAN REPRESENTS A SCHEMATIC REPRESENTATION OF DEVICE LOCATIONS AND CONDUIT RUNS.
KEYED NOTES	
P12	POWER FOR VAV BOX TRANSFORMER. COORDINATE EXACT LOCATION WITH MECHANICAL CONTRACTOR.

KEY PLAN



TO BE DETERMINED

CONSTRUCTION DOCUMENTS

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PROJECT #:	123006	
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CHECKED BY:	Checker	
ISSUED:	04.26.2024	



LEVEL 2 - AREA B - POWER

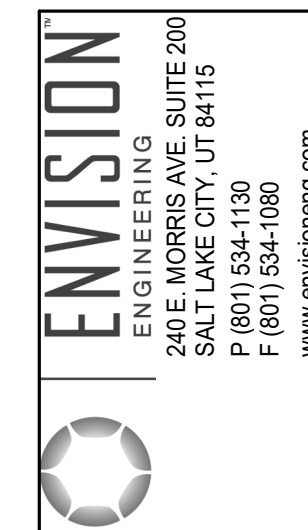
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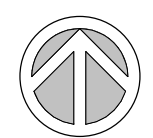
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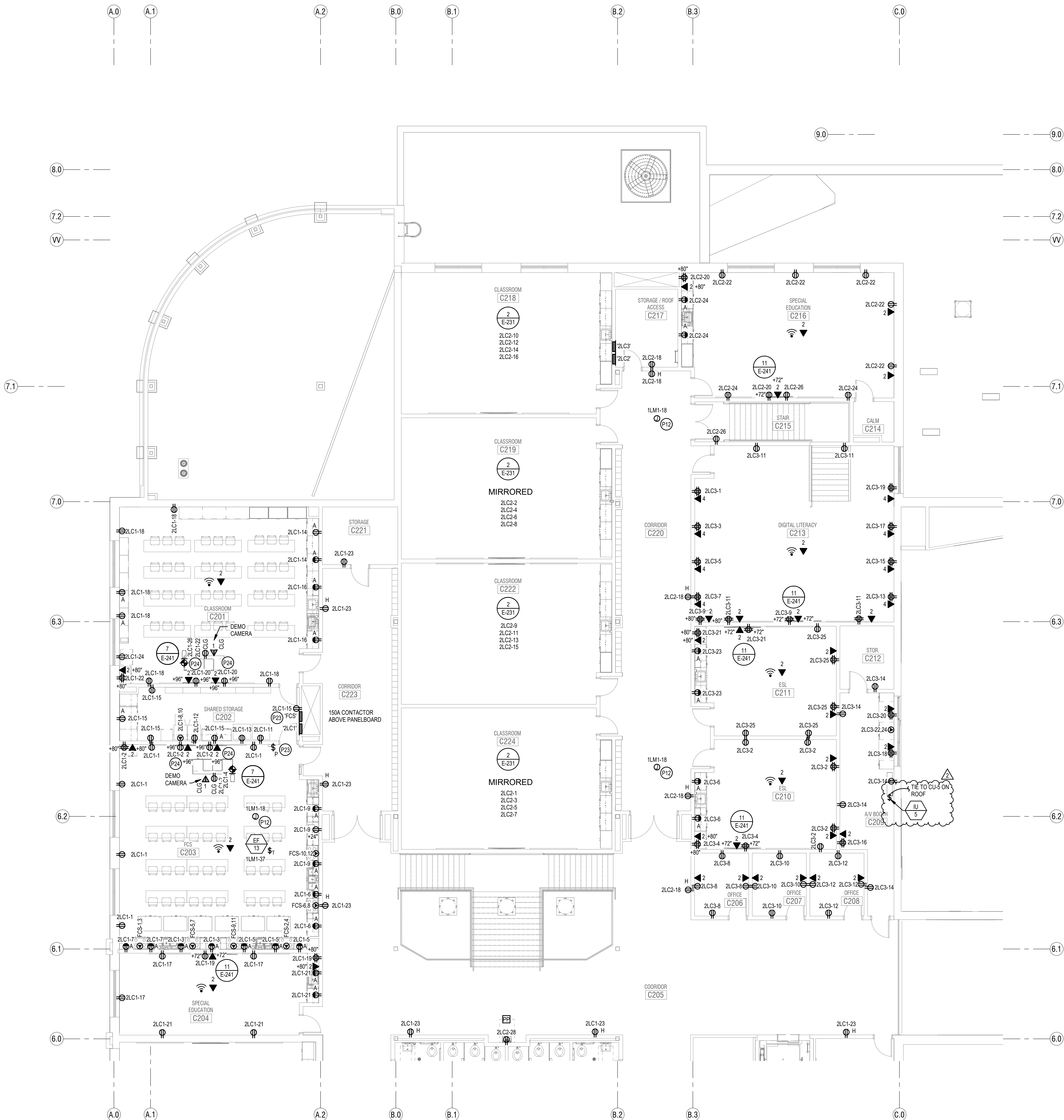
CACHE COUNTY SCHOOL DISTRICT



design west architects  
255 SOUTH 300 WEST  
795 NORTH 400 WEST  
LOGAN UT 84321  
SALT LAKE CITY UT 84103



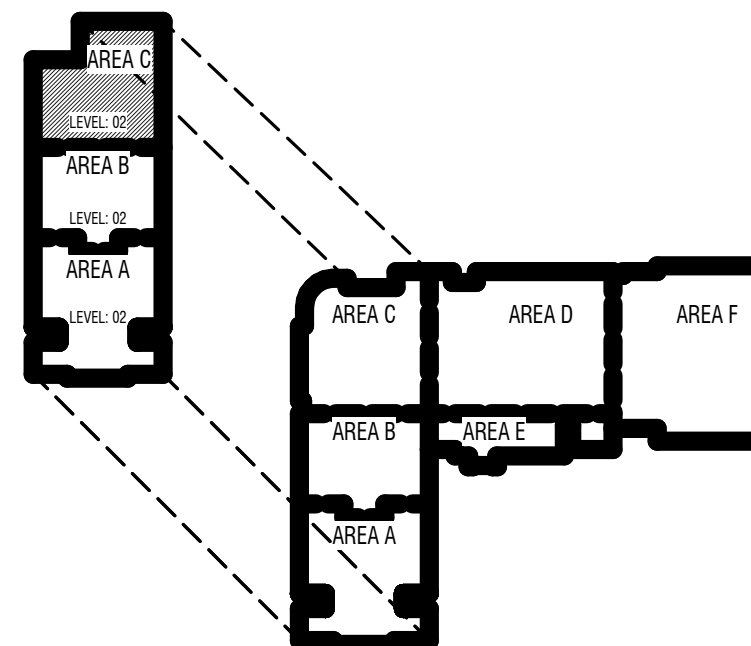
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SCALE: 1/8" = 1'-0"

**POWER GENERAL NOTES:**

- ALL 120V, 20AMP OUTLETS THAT ARE WITHIN 6' OF ANY SINK SHALL BE GFCI.
- THE DIVISION 26 CONTRACTOR SHALL DETERMINE THE EXACT ROUTING OF ALL CONDUITS IN THE FIELD. THIS PLAN REPRESENTS A SCHEMATIC REPRESENTATION OF DEVICE LOCATIONS AND CONDUIT RUNS.

**KEYED NOTES**

- P12 POWER FOR VAV BOX TRANSFORMER. COORDINATE EXACT LOCATION WITH MECHANICAL CONTRACTOR.
- P23 RUN A 2" RGS CONDUIT THROUGH THE ROOF TO THE IDF/MDF BELOW IN THE APPROXIMATE LOCATION SHOWN FOR FUTURE WIRELESS ANTENNA LOCATION. CONDUIT IS TO EXTEND 5' ABOVE THE ROOF. PROVIDE A WEATHERHEAD ON THE END OF THE CONDUIT.
- P24 PROVIDE A 25 KW INVERTER WITH 480V, 3Ø INPUT AND 480V, 3Ø OUTPUT TO POWER EMERGENCY LIGHTING PANELS.

**KEY PLAN**

TO BE DETERMINED

**CONSTRUCTION DOCUMENTS**

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DATE:

PROJECT #:

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AUTHOR:

CHECKER:

DATE:

04.26.2024



LEVEL 2 - AREA C - POWER

**E-223**

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**NIBLEY MIDDLE SCHOOL**

3050 S 920 W WIMLEY, UTAH

CACHE COUNTY SCHOOL DISTRICT

**design west architects**  
255 SOUTH 300 WEST  
SALT LAKE CITY, UT 84103

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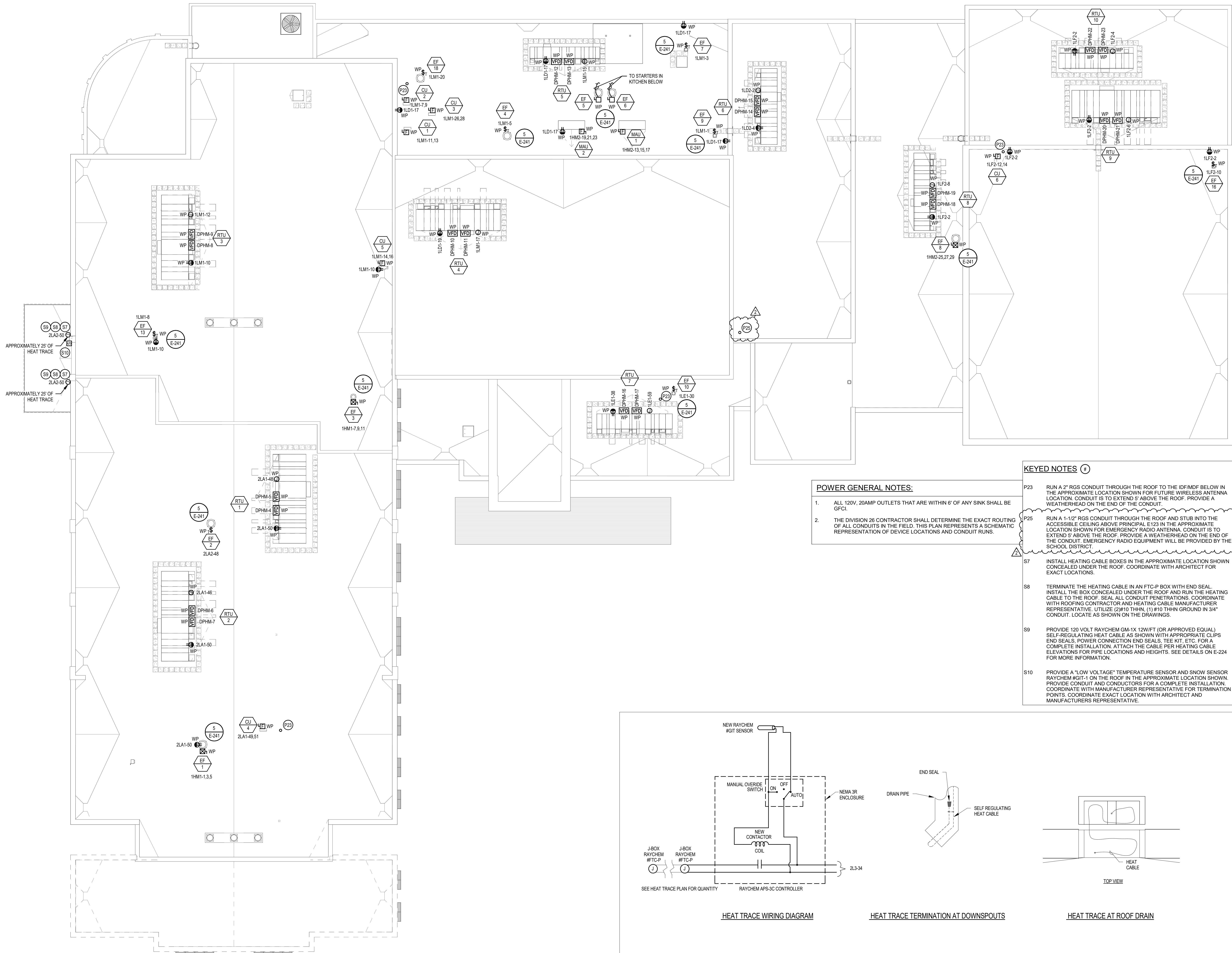
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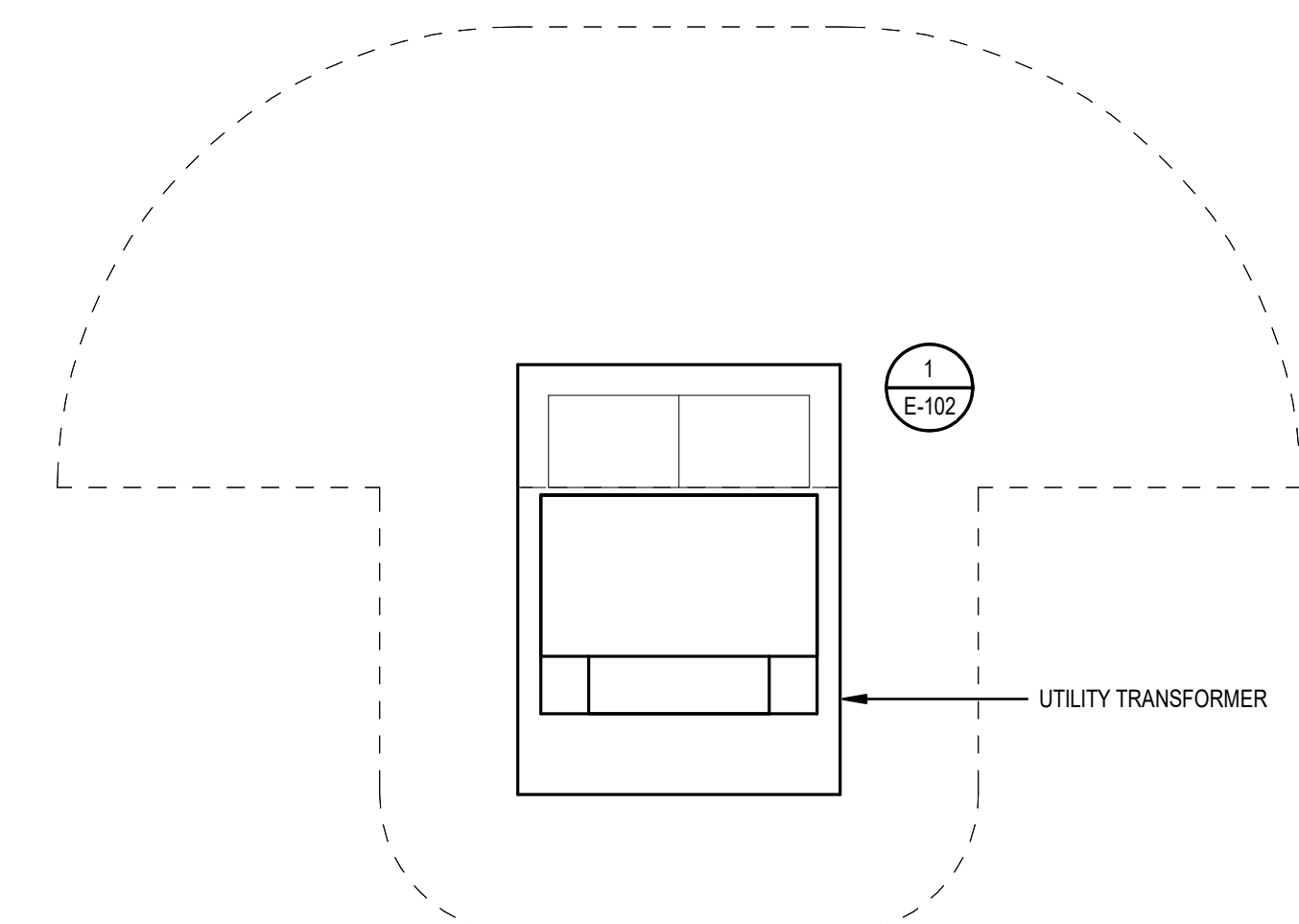
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	05/22/24	ADDENDUM 5

PROJECT #:	123006
DRAWN BY:	Author
CHECKED BY:	Checker
ISSUED:	04/26/2024

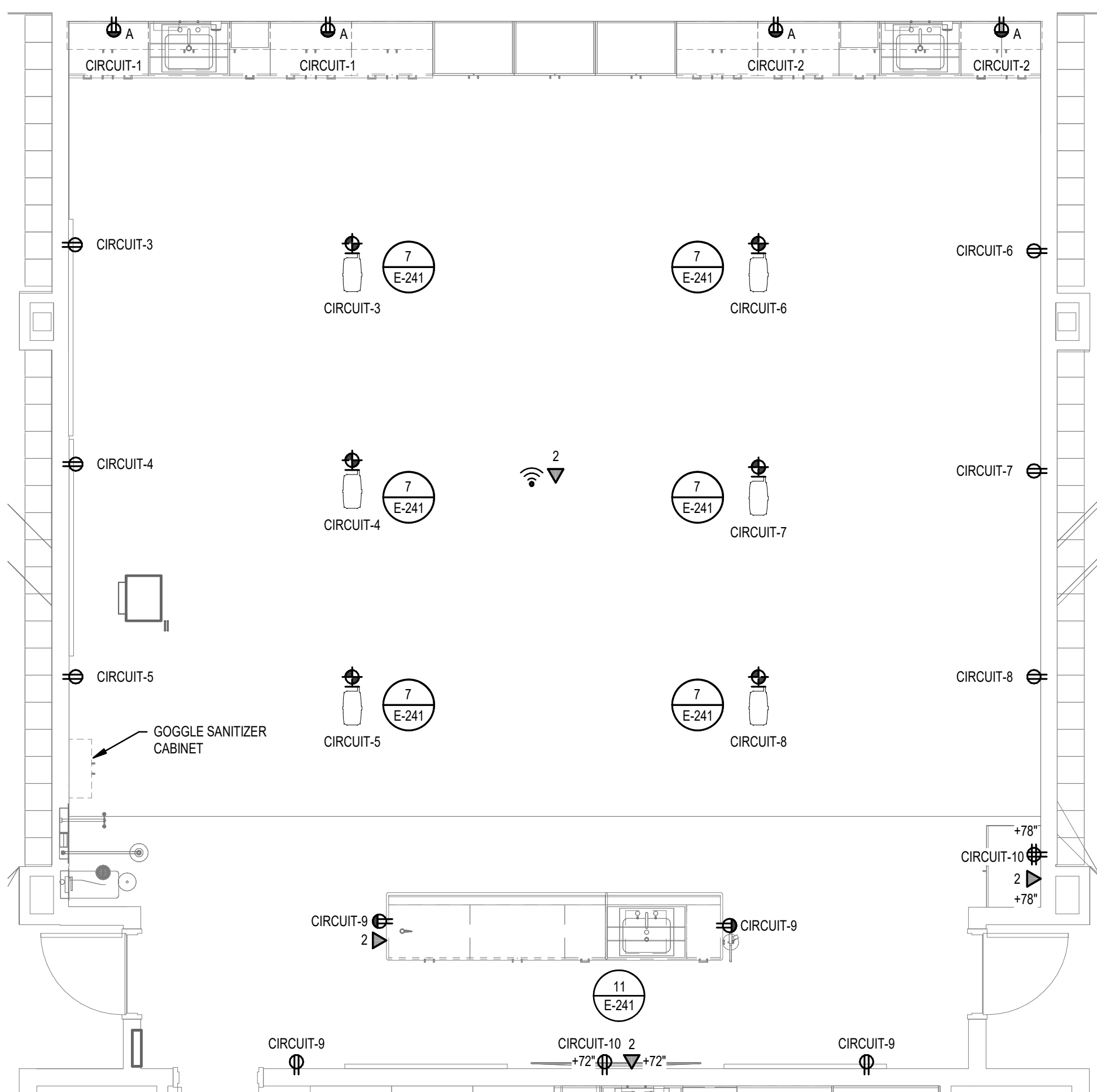


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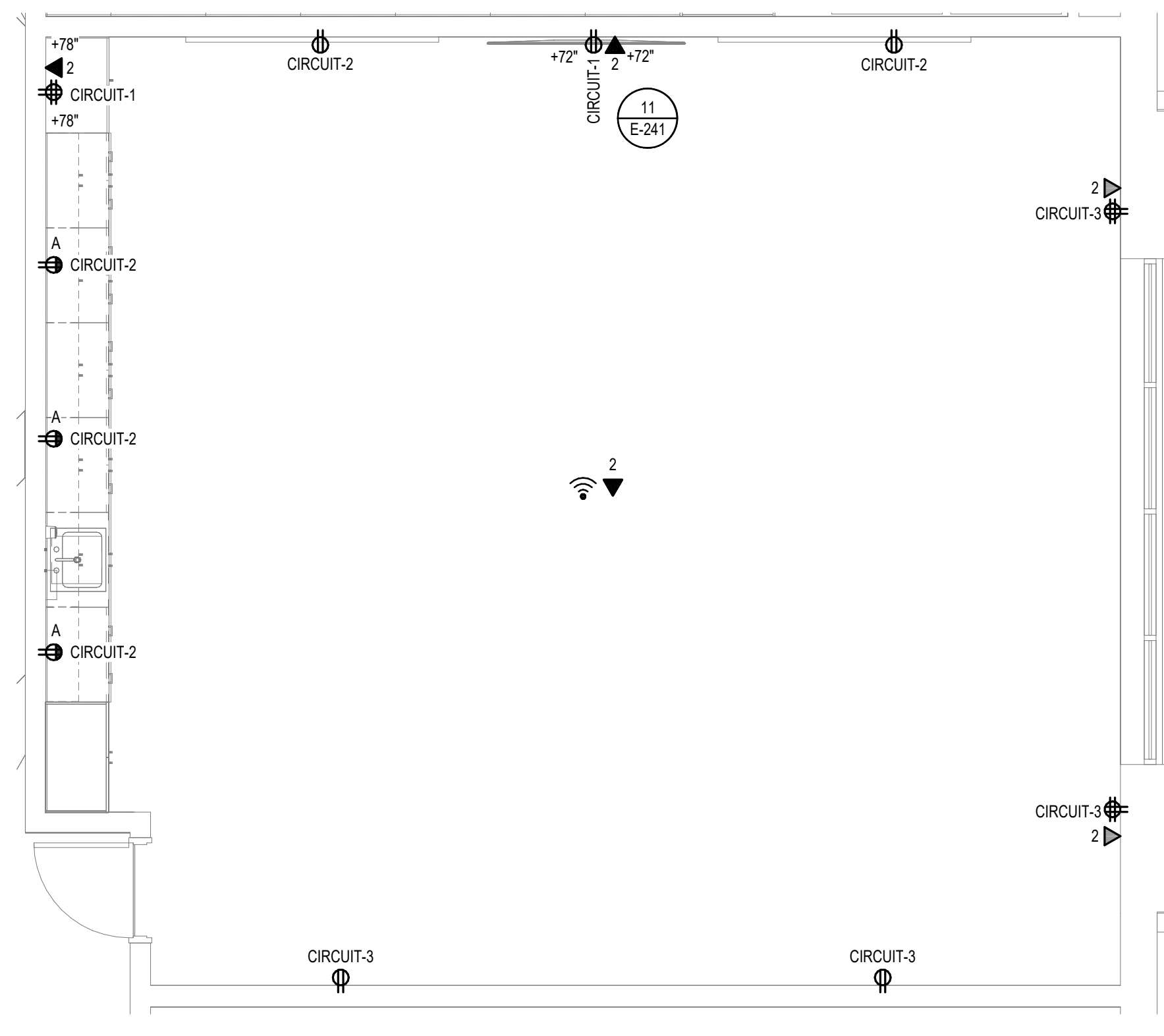
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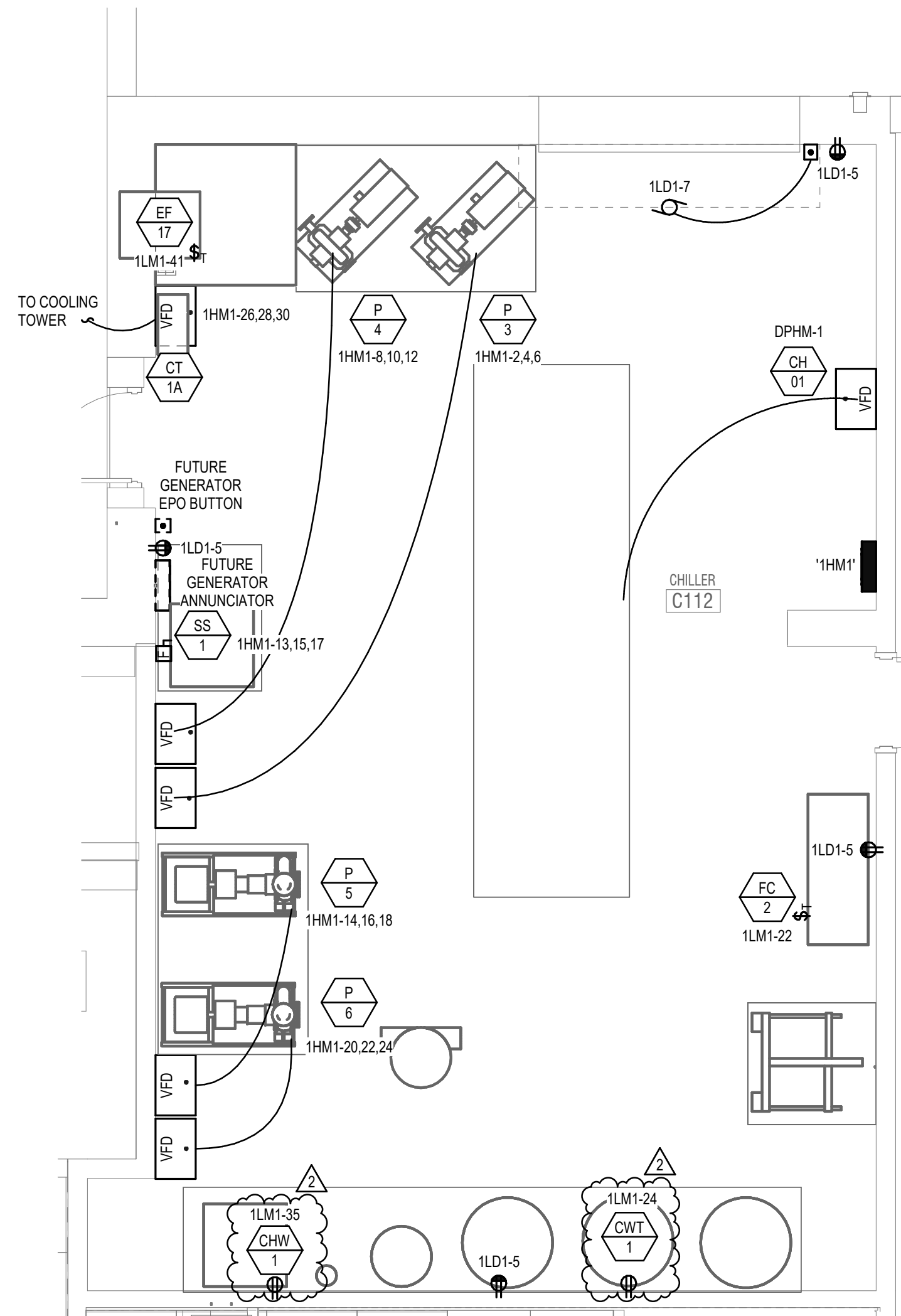
6 ENLARGED MECHANICAL YARD  
SCALE: 1/4" = 1'-0"



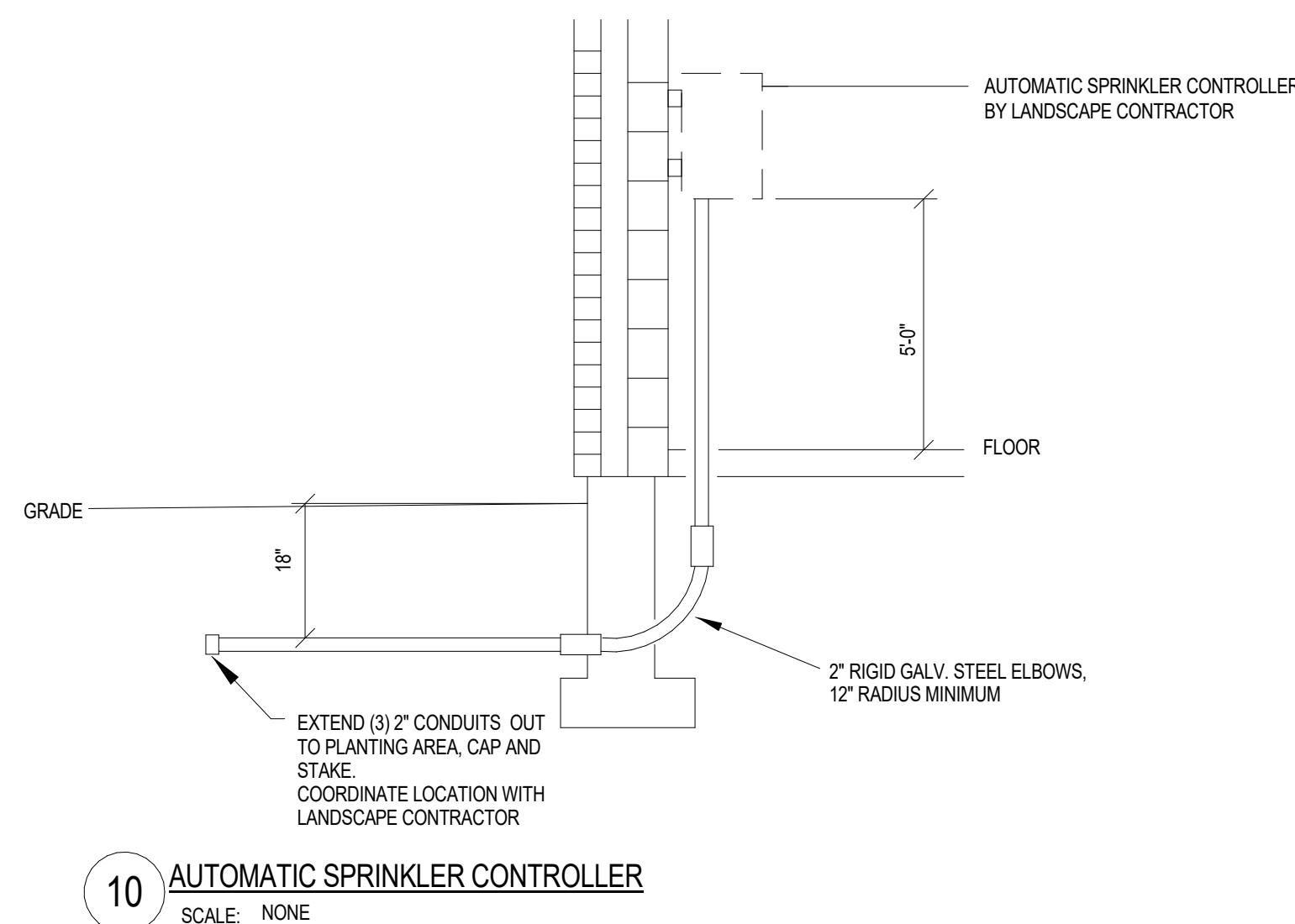
3 TYPICAL SCIENCE CLASSROOM  
SCALE: 1/4" = 1'-0"



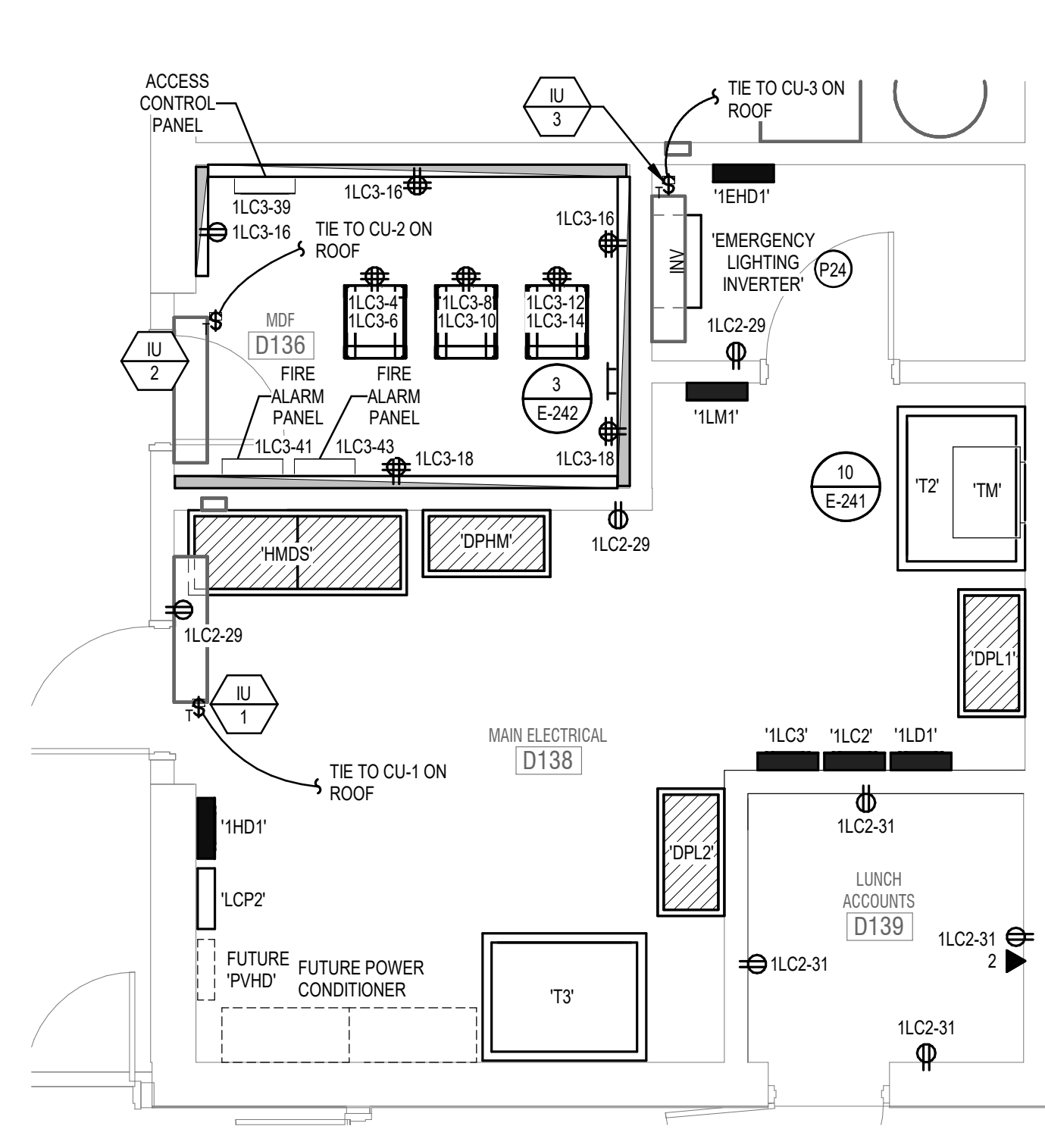
2 TYPICAL CLASSROOM  
SCALE: 1/4" = 1'-0"



9 ENLARGED CHILLER AND BOILER ROOMS  
SCALE: 1/4" = 1'-0"



10 AUTOMATIC SPRINKLER CONTROLLER  
SCALE: NONE

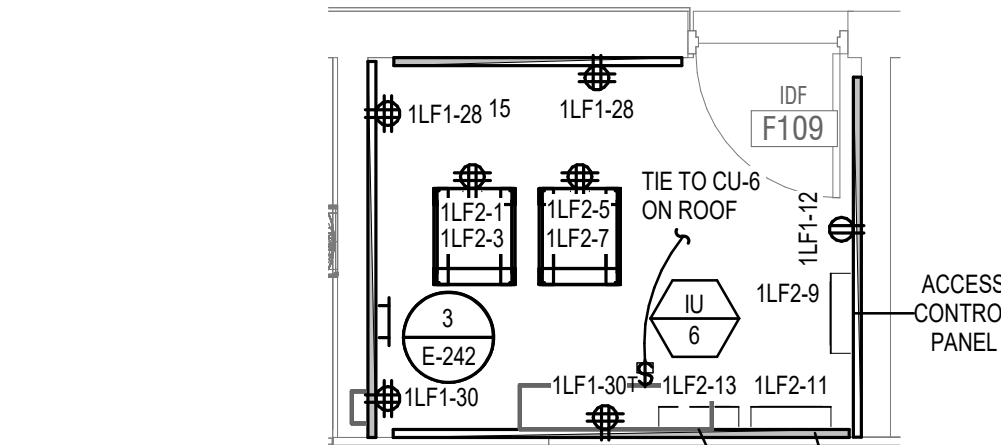


4 ENLARGED MAIN/EMERGENCY ELECTRICAL ROOMS  
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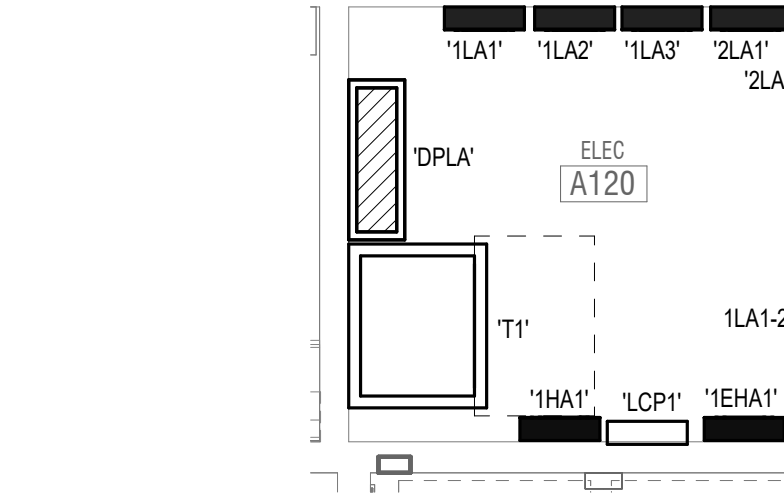
- POWER GENERAL NOTES:**
- ALL 120V, 20AMP OUTLETS THAT ARE WITHIN 6" OF ANY SINK SHALL BE GFCI.
  - THE DIVISION 26 CONTRACTOR SHALL DETERMINE THE EXACT ROUTING OF ALL CONDUITS IN THE FIELD. THIS PLAN REPRESENTS A SCHEMATIC REPRESENTATION OF DEVICE LOCATIONS AND CONDUIT RUNS.
- KEYED NOTES:**
- P3 PROVIDE HUBBELL QUAZITE 24" X 36" PG STYLE IN-GRADE JUNCTION BOX WITH HEAVY DUTY COVER. CONFIRM PLACEMENT WITH OWNER PRIOR TO ROUGH-IN. REFER TOT HE SITE DETAILS FOR MORE INFORMATION.
- P4 1" CONDUIT TO MDF FOR DATA TO FUTURE GENERATOR. INSERT PULL STRING & LABEL.
- P5 3/4" CONDUIT TO CHILLER ROOM FOR FUTURE GENERATOR ANNUNCIATOR & EPO BUTON. INSERT PULL STRING & LABEL.
- P6 3/4" CONDUIT TO BUILDING AUTOMATION SYSTEM. INSERT PULL STRING & LABEL.
- P7 3/4" CONDUIT TO FUTURE TRANSFER SWITCH LOCATION IN EMERGENCY ELECTRICAL ROOM D137.
- P8 2" CONDUIT FOR POWER TO FUTURE GENERATOR DOCKING STATION LOCATION.
- P9 1" CONDUIT FOR FUTURE GENERATOR CONTROLS TO FUTURE GENERATOR DOCKING STATION LOCATION.
- P24 PROVIDE A 25 KW INVERTER WITH 480V, 3Ø INPUT AND 480V, 3Ø OUTPUT TO POWER EMERGENCY LIGHTING PANELS.

8 ENLARGED ELEC. D118  
SCALE: 1/4" = 1'-0"

5 ENLARGED IDF A220  
SCALE: 1/4" = 1'-0"



7 ENLARGED IDF F109  
SCALE: 1/4" = 1'-0"



1 ENLARGED ELEC A120  
SCALE: 1/4" = 1'-0"

CONSTRUCTION DOCUMENTS

MARK	DATE	DESCRIPTION
ADDENDUM 5	05/22/24	

PROJECT #: 123006  
DRAWN BY: Author  
CHECKED BY: Checker  
ISSUED: 04.26.2024



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## KITCHEN EQUIPMENT SCHEDULE

UNIT NAME		ELECTRICAL INPUT						FEEDER				DISCONNECT / CONNECTION AT UNIT			REMARKS	
TYPE	No.	DESCRIPTION	LOAD	TYPE	VOLTS	PHASE	AMPS	QTY	CONDUIT SIZE	WIRE SIZE	EQPT GND	NOTE	CONNECTION TYPE	HEIGHT		
K	5	PROOFER CABINET	16.7	FLA	120 V	1	17 A	1	3/4"	2	10	14A	NEMA 5-30R	CORD DROP	IN UTILITY DISTRIBUTION SYSTEM CORD DROP WITH GFCI RECEPTACLE	
K	7	20 QT MIXER	8	FLA	120 V	1	8 A	1	3/4"	2	12	12	18A			NEMA 5-20R
K	10	CONVECTION OVEN	15.4	FLA	120 V	1	15 A	1	3/4"	2	12	12	13A	NEMA 5-20R	CORD DROP	IN UTILITY DISTRIBUTION SYSTEM CORD DROP WITH GFCI RECEPTACLE. SHARES CORD DROP WITH EQUIPMENT K-17
K	14	CAN OPENER	10	FLA	120 V	1	10 A	1	3/4"	2	12	12	18A	NEMA 5-20R		
K	15	KETTLE	5	FLA	120 V	1	5 A	1	3/4"	2	12	12	13A	NEMA 5-20R	CORD DROP	IN UTILITY DISTRIBUTION SYSTEM CORD DROP WITH GFCI RECEPTACLE. SHARES CORD DROP WITH EQUIPMENT K-14
K	17	FOOD PROCESSOR	3.5	FLA	120 V	1	4 A	1	3/4"	2	12	12	18A	NEMA 5-20R		
K	18	COMBINATION OVEN	4.3	FLA	208 V	1	4 A	1	3/4"	2	12	12	14A	NEMA 6-20R	+18"	IN UTILITY DISTRIBUTION SYSTEM
K	21	PLANETARY MIXER	9.5	FLA	120 V	1	10 A	1	3/4"	2	12	12	13A	NEMA 5-20R		
K	24	PASS-THRU REFRIGERATOR	5.9	FLA	120 V	1	6 A	1	3/4"	2	12	12	13A	NEMA 5-20R	+60"	
K	25	PASS-THRU HEATED CABINET	3	KVA	208 V	1	14 A	1	3/4"	2	12	12	14A	NEMA 6-20R		
K	26	ICE CUBER	11.9	FLA	120 V	1	12 A	1	3/4"	2	12	12	13A	NEMA 5-20R	+48"	PROVIDE HANDLE CLAMP ON CIRCUIT BREAKER
K	30	HOT FOOD WELL	15.8	FLA	208 V	3	16 A	1	3/4"	3	10	10	12A	DIRECT		
K	32	MILK COOLER	2.7	FLA	120 V	1	3 A	1	3/4"	2	12	12	13A	NEMA 5-20R	STUB UP	200A NEMA 4K NON-FUSED DISCONNECT, INTERCONNECT TABLE LIMIT SWITCH TO DISHWASHER 30A NEMA 4K NON-FUSED DISCONNECT
K	34	WAREWASHER	138.9	FLA	208 V	3	139 A	1	2"	3	20	6	9A	DISCONNECT		
K	36	SCRAP COLLECTOR	5.5	FLA	208 V	1	6 A	1	3/4"	2	12	12	9A	DISCONNECT	DROP FROM ABOVE	
K	40	WALK-IN COOLER LIGHTS AND HEAT TAPE	0.35	KVA	120 V	1	3 A	1	3/4"	2	12	12	12A	DIRECT		
K	40.1	WALK-IN COOLER EVAPORATOR	1.1	FLA	120 V	1	1 A	1	3/4"	2	12	12	1A	THERM. SW.	DROP FROM ABOVE	
K	40.2	WALK-IN COOLER CONDENSOR	5	FLA	208 V	3	5 A	1	3/4"	3	12	12	10A	DISCONNECT		
K	41	WALK-IN FREEZER LIGHTS AND HEAT TAPE	0.35	KVA	120 V	1	3 A	1	3/4"	2	12	12	12A	DIRECT	DROP FROM ABOVE	30A NEMA 3R FUSED DISCONNECT WITH 10A FUSES
K	41.1	WALK-IN FREEZER EVAPORATOR	9.8	FLA	208 V	1	10 A	1	3/4"	2	12	12	10A	DISCONNECT		
K	41.2	WALK-IN FREEZER CONDENSOR	16.4	FLA	208 V	3	16 A	1	3/4"	2	10	10	10A	DISCONNECT	ROOF	30A NEMA 3R FUSED DISCONNECT WITH 20A FUSES
K	42	FRENCH FRY WARMER	4.2	FLA	120 V	1	4 A	1	3/4"	2	12	12	13A	NEMA 5-20R		
K	44	CASHER COUNTER	10	FLA	120 V	1	10 A	1	3/4"	2	12	12	13A	NEMA 5-20R	STUB UP	100A LOAD CENTER. PROVIDE SHUNT TRIP BREAKER. INTERLOCK WITH HOODS.
K	47	UTILITY DISTRIBUTION SYSTEM	40	FLA	208 V	3	40 A	1	1 1/2"	4	2	8	12A	DIRECT		
K	48	MICROWAVE	14.4	FLA	208 V	1	14 A	1	3/4"	2	12	12	14A	NEMA 6-20R	+60"	
K	52	WARMING CABINET	12	FLA	120 V	1	12 A	1	3/4"	2	12	12	13A	NEMA 5-20R		
K	53	DISPLAY CASE REFRIGERATED	4.2	FLA	120 V	1	4 A	1	3/4"	2	12	12	13A	NEMA 5-20R	+48"	

### STARTER/DISCONNECT/CONNECTION AT UNIT NOTES:

- MANUAL STARTER WITH THERMAL OVERLOAD.
- MANUAL STARTER WITH THERMAL OVERLOAD PROTECTION & LOW VOLTAGE RELAY / CONTACTOR FOR ATC CONTROL.
- COMBINATION MAGNETIC STARTER / FUSED DISCONNECT.
- COMBINATION MAGNETIC STARTER / MOTOR CIRCUIT PROTECTOR (MCP).
- COMBINATION VARIABLE FREQUENCY DRIVE / MOTOR CIRCUIT PROTECTOR (MCP).
- REDUCED VOLTAGE STARTER.
- COMBINATION TWO-SPEED STARTER / FUSED DISCONNECT.
- COMBINATION TWO-SPEED STARTER / MOTOR CIRCUIT PROTECTOR (MCP).
- NON-FUSED DISCONNECT SWITCH.
- FUSED DISCONNECT SWITCH.
- BREAKER AND ENCLOSURE.
- DIRECT CONNECTION.
- DUPLEX RECEPTACLE OUTLET.
- SPECIAL PURPOSE OUTLET.
- SHUNT-TRIP DISCONNECT.
- TOGGLE SWITCH.
- MAGNETIC STARTER.
- DROP CORD OUTLET.

### GENERAL NOTES:

- VERIFY THE REQUIREMENTS OF THE POS SYSTEM WITH THE SUPPLIER INCLUDING ELECTRICAL REQUIREMENTS AND THE INTERCONNECTION REQUIREMENTS.
- PROVIDE DATA CONDUIT AS REQUIRED BY POS SUPPLIER. VERIFY INTERCONNECTION REQUIREMENTS BETWEEN COMPONENTS.
- CONNECT FLEX TO JUNCTION BOX MOUNTED IN BASE OF COUNTER. INTERCONNECT CONTROLS.
- CONNECT FLEX TO JUNCTION BOX MOUNTED IN BASE OF COUNTER. INTERCONNECT SWITCH. RUN POWER TO LIGHTS AT SNEEZE GUARD, THROUGH SNEEZE GUARD SUPPORT LEGS.
- CONNECT FLEX TO OUTLET MOUNTED IN BASE OF COUNTER. INTERCONNECT SWITCH WITH OUTLET.
- SIZE ALL FUSES IN ACCORDANCE WITH MANUFACTURER'S RECOMMENDATIONS.
- FURNISHED, INSTALLED & CONNECTED UNDER DIVISION 26.
- FURNISHED & INSTALLED UNDER ANOTHER DIVISION REQUIRING CONNECTIONS UNDER DIVISION 26.
- FURNISHED UNDER ANOTHER DIVISION BUT INSTALLED AND CONNECTED UNDER DIVISION 26.
- FURNISHED, INSTALLED & CONNECTED UNDER ANOTHER DIVISION.
- FURNISHED BY OWNER, INSTALLED & CONNECTED BY DIVISION 26.

### KEYED NOTES

- INTERCONNECT TO EXHAUST SYSTEM. COORDINATE ALL WORK WITH THE KITCHEN EQUIPMENT INSTALLER AND MECHANICAL CONTRACTOR PRIOR TO ANY ROUGH-IN.
- PROVIDE ALL REQUIRED CONNECTIONS TO HOOD LIGHTS. COORDINATE ALL WORK WITH THE KITCHEN EQUIPMENT INSTALLER AND HOOD INSTALLER PRIOR TO ANY ROUGH-IN.
- UTILITY DISTRIBUTION SYSTEM IS PROVIDED BY THE KITCHEN EQUIPMENT SUPPLIER/INSTALLER. ELECTRICAL CONTRACTOR TO PROVIDE FEEDER AND FEEDER CONNECTIONS. ALL ASSOCIATED OUTLETS ARE PROVIDED AND INSTALLED BY THE KITCHEN EQUIPMENT SUPPLIER/INSTALLER. COORDINATE ALL WORK PRIOR TO ANY ROUGH-IN.
- TO LIGHTS BY KITCHEN EQUIPMENT SUPPLIER. COORDINATE ALL WORK AND CONNECTIONS WITH THE KITCHEN EQUIPMENT INSTALLER.
- TO HEATER BY KITCHEN EQUIPMENT SUPPLIER. COORDINATE ALL WORK AND CONNECTIONS WITH THE KITCHEN EQUIPMENT INSTALLER.

### KITCHEN ELECTRICAL NOTES:

- COORDINATE EXACT LOCATION, TERMINATIONS, AND MOUNTING HEIGHTS WITH EQUIPMENT MANUFACTURER DRAWINGS AND OWNER IN FIELD PRIOR TO ANY INSTALLATION. REFER TO THE EQUIPMENT INSTALLATION DRAWINGS FOR ADDITIONAL INFORMATION.
- VERIFY ALL MOUNTING HEIGHTS PRIOR TO INSTALLATION WITH THE EQUIPMENT INSTALLER/SUPPLIER.
- CONTRACTOR SHALL COORDINATE EXACT ELECTRICAL REQUIREMENTS WITH EQUIPMENT MANUFACTURER FOR EACH SPECIFIC MODEL AND PIECE OF EQUIPMENT. PROVIDE ELECTRICAL SERVICE AS REQUIRED.
- ALL COVER PLATES IN THE KITCHEN SHALL BE STAINLESS STEEL.
- THE CONTRACTOR SHALL PROVIDE ALL DISCONNECT SWITCHES, STARTERS, ETC. AS REQUIRED BY NEC. VERIFY ALL ELECTRICAL REQUIREMENTS WITH THE EQUIPMENT INSTALLER/SUPPLIER PRIOR TO ROUGH-IN.
- THE ELECTRICAL CONTRACTOR TO PROVIDE ALL HARDWIRED CONNECTIONS TO EQUIPMENT.
- PROVIDE WATERTIGHT FITTINGS, BOXES, COUPLINGS, ETC. IN ALL PREP AREAS THAT ARE EXPOSED TO SPRAY DOWN.
- ANY CONNECTION TO EQUIPMENT SHALL BE MADE USING SEALTIGHT CONDUIT AND WATERTIGHT FITTINGS.
- ALL DISCONNECT SWITCHES LOCATED IN THE KITCHEN AREAS SHALL BE RATED FOR SPRAY DOWN, NEMA 4X STAINLESS STEEL.
- ALL EQUIPMENT ROUGH-IN REQUIREMENTS SHALL BE COORDINATED WITH THE EQUIPMENT SUPPLIER PRIOR TO ANY ROUGH-IN. CONTRACTOR TO OBTAIN CUT SHEETS FOR EACH PIECE OF EQUIPMENT FROM THE EQUIPMENT SUPPLIER AND VERIFY EXACT ROUGH-IN LOCATIONS. IF THE CONTRACTOR DALS TO COORDINATE THE LOCATIONS WITH THE SUPPLIER, THE CONTRACTOR FIX THE ROUGH-IN AT NO ADDITIONAL COST TO THE OWNER.

### ELECTRICAL NOTES

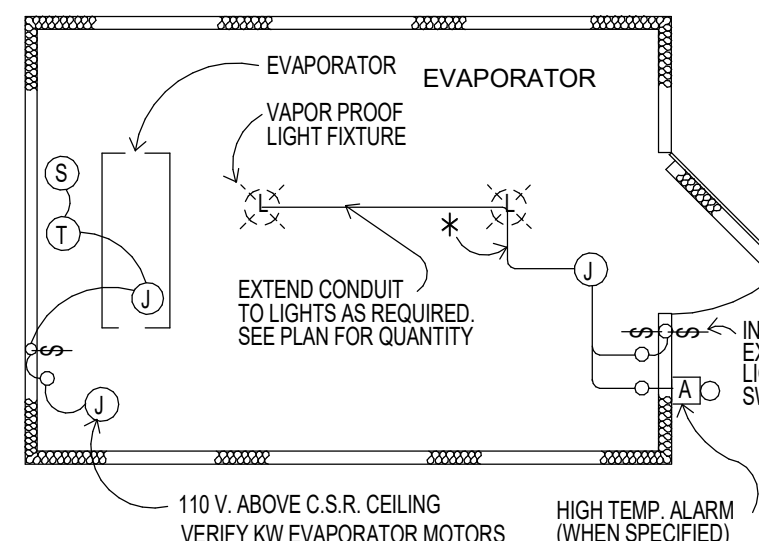
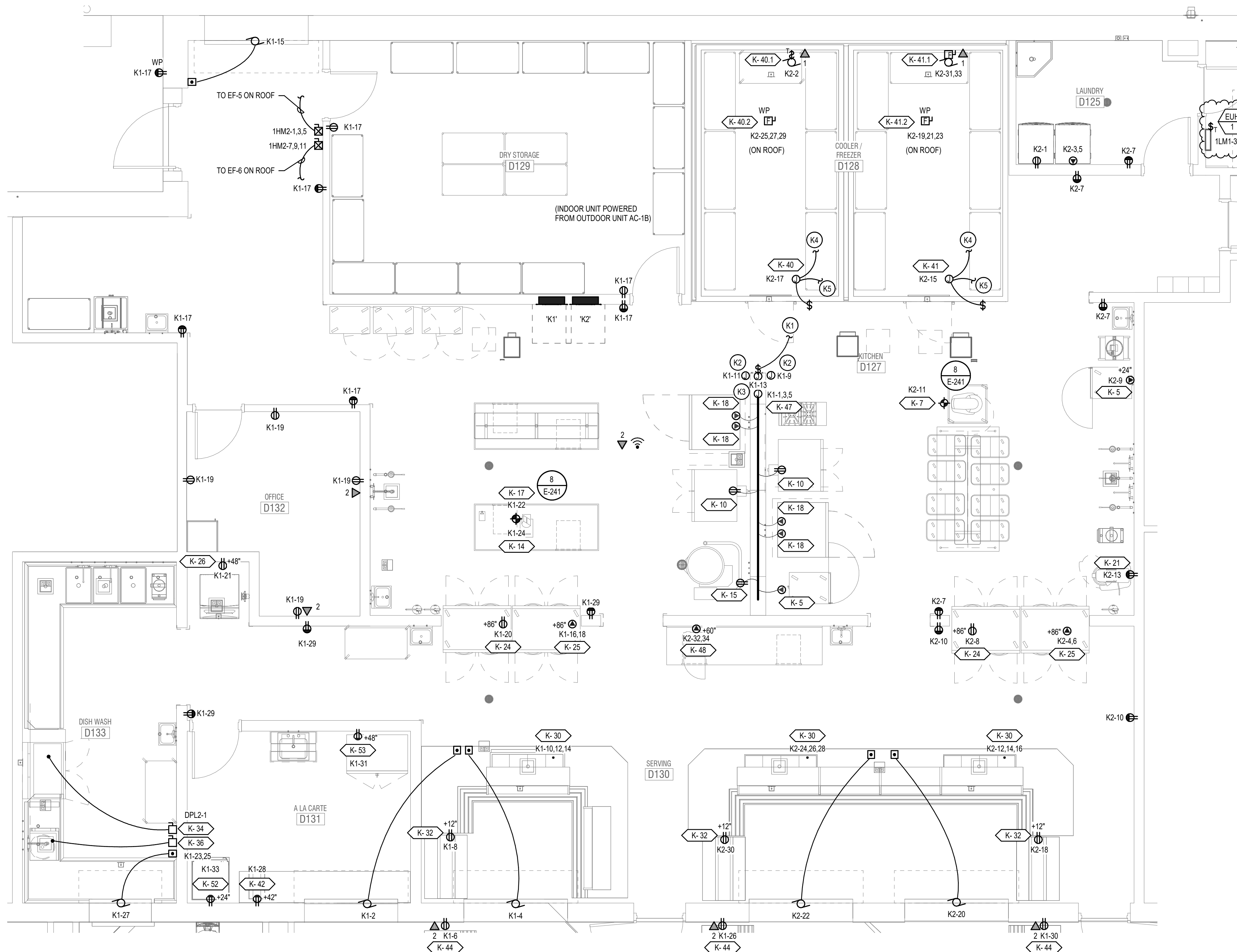
- ELECTRICAL PLAN SHOWS ROUGH-IN POINTS AND SCHEDULED CONNECTIONS. KITCHEN EQUIPMENT CONTRACTOR WILL PROVIDE DIMENSIONED ROUGH-IN DRAWINGS FOR CONSTRUCTION.
- ELECTRICAL SYSTEM IS DESIGNED FOR 120/208 VOLTS, 3 PHASE, 60 HERTZ, 4 WIRE SYSTEM.
- ELECTRICAL DIVISION SHALL FURNISH AND INSTALL ALL JUNCTION BOXES, RECEPTACLES, COVER PLATES, PULL BOXES, CONDUIT AND WIRING EXCEPT WHERE NOTED. RECEPTACLES AND COVER PLATES SHALL BE BRUSHED STAINLESS STEEL FURNISHED BY ELECTRICAL DIVISION.
- ALL CONDUIT RUNS INDICATED FOR REFRIGERATION LINES SHALL BE FURNISHED AND INSTALLED BY THE ELECTRICAL DIVISION. CONDUIT SHALL HAVE 12" (600MM) MINIMUM RADIUS BENDS.
- KITCHEN EQUIPMENT CONTRACTOR SHALL FURNISH AND INSTALL VAPOR PROOF VENTILATOR LIGHTS COMPLETE WITH LAMPS. INTERCONNECTING CONDUIT, WIRING WITH WALL SWITCH FURNISHED AND INSTALLED BY THE ELECTRICAL DIVISION.
- ADDITIONAL CONVENIENCE RECEPTACLES, TELEPHONE AND INTERCOM JACKS AND TEMPERATURE MONITORING SYSTEM ETC. SHALL BE LOCATED BY THE ELECTRICAL ENGINEER/ ARCHITECT AND AS REQUIRED BY CODE.
- PRE-FABRICATED COLD STORAGE ROOMS ARE FURNISHED BY THE KITCHEN EQUIPMENT CONTRACTOR COMPLETE WITH SPICE BOXES, LIGHT FIXTURES, LAMPS, LIGHT SWITCHES AND DOOR HEATERS. ELECTRICAL DIVISION TO INSTALL SAME AND SHALL FURNISH AND INSTALL INTERCONNECTING CONDUIT, WIRING SEAL OFFS, SEALANT AND MAKE FINAL CONNECTIONS.

### NOTE: ELECTRICAL MOUNTING

ALL WALL MOUNT ELECTRICAL RECEPTACLE AND J-BOXES ARE TO BE FLUSH MOUNTED IN WALLS WITH NO EXPOSED CONDUIT SHOWING ON SURFACE OF WALLS. ARCHITECT TO PROVIDE MINIMUM WALL FURRING IF REQUIRED.

### NOTE: WALK-IN ELECTRICAL

ALL CONDUIT SHALL BE RUN ON THE EXTERIOR CEILING OF ALL COLD STORAGE ROOMS AND SHALL PENETRATE THE CEILING AT A POINT WHERE THE CONDUIT CAN DROP DIRECTLY TO THE POINT OF CONNECTION. UNDER NO CIRCUMSTANCES, WILL ELECTRICAL CONDUIT BE PERMITTED ON THE INTERIOR.



### REFRIGERATOR

- JUNCTION BOX
- THERMOSTAT
- LIQUID LINE SOLENOID
- EYES & NIPPLE FOR CEILING PENETRATION TO SPICE BOX
- HEATED VACUUM VENT
- C.S.R. - COLD STORAGE ROOM
- EMT RIGID CONDUIT RUN ABOVE C.S.R. CEILING BY ELEC. DIVISION (TYP)
- 110 V. ABOVE COLD STORAGE ROOM CEILING
- KW LIGHTS (EACH)
- KW VIEWPORT & DOOR HEATER (FREEZER)
- KW HIGH TEMP. ALARM (WHEN SPECIFIED)

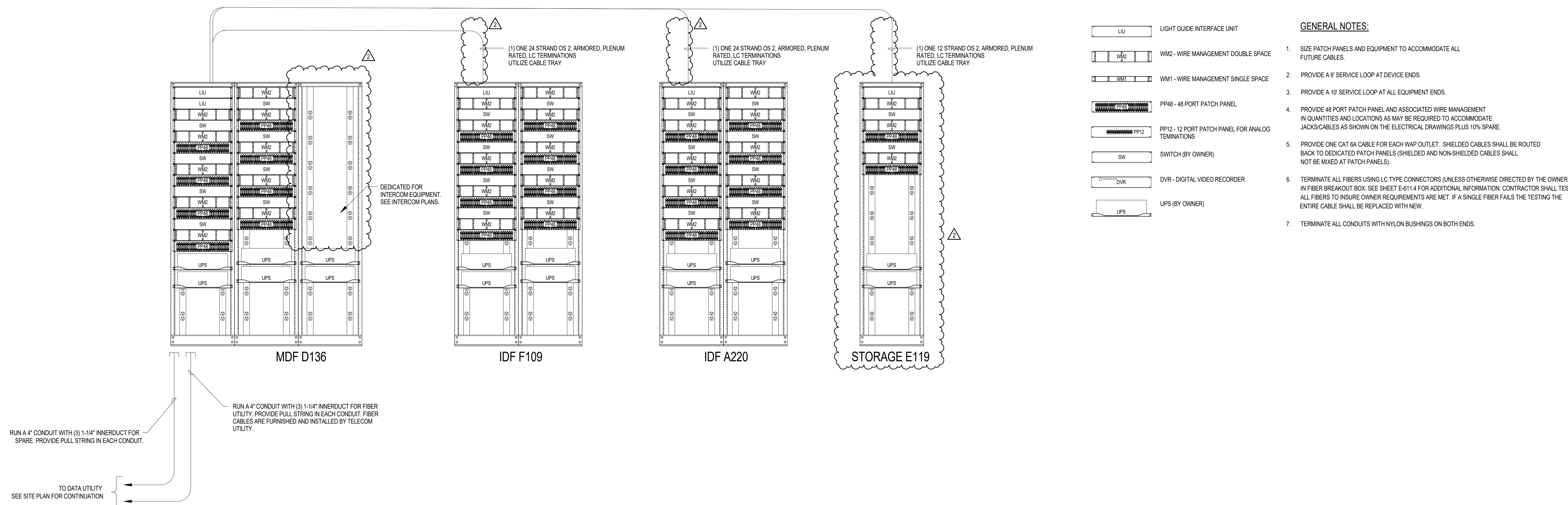
### FREEZER

### NOTES:

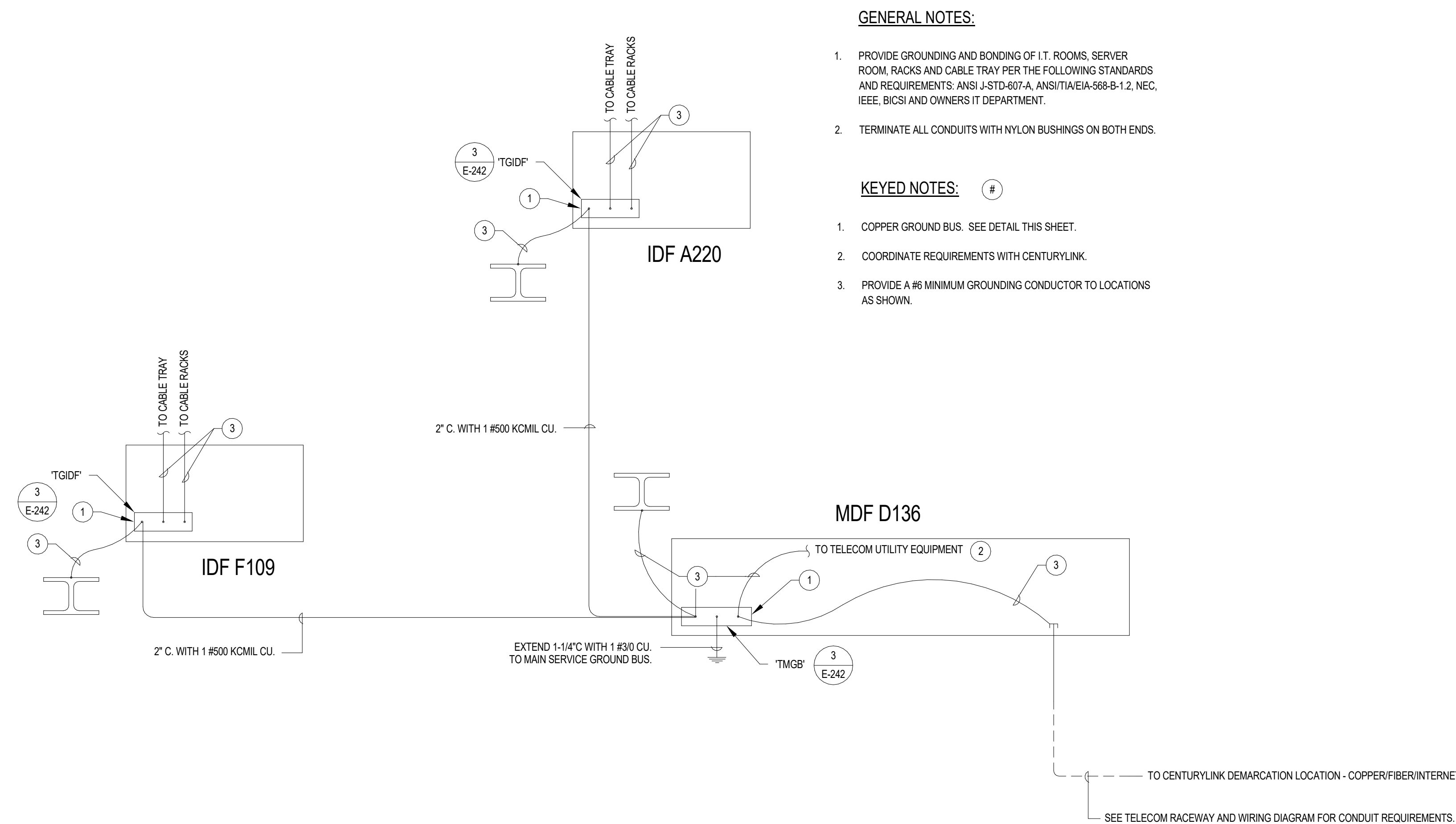
- LIGHT FIXTURES, SWITCH BOXES, SWITCHES, & SPICE BOXES ARE FURNISHED LOOSE WITH COLD STORAGE ROOMS. ELECTRICAL DIVISION TO INSTALL, WIRE & SEAL BY ACCEPTED INDUSTRY PRACTICE.
- EVAPORATORS FOR COLD STORAGE ROOM ARE FURNISHED & INSTALLED COMPLETE WITH ROOM THERMOSTAT, LIQUID LINE SOLENOID & DISCONNECT SWITCH. ELECTRICAL DIVISION TO PROVIDE INTERCONNECTING CONDUIT & WIRING FROM BUILDING SERVICE TO ALL COMPONENTS.
- ELECTRICAL DIVISION TO PROVIDE ALL BUILDING SERVICES INCLUDING J-BOXES, INTERCONNECTING CONDUIT & WIRING FROM BUILDING SERVICE TO COMPONENTS.
- EYES FITTING FURNISHED WITH COLD STORAGE ROOMS. ELECTRICAL DIVISION TO INSTALL, WIRE & SEAL BY ACCEPTED INDUSTRY PRACTICE.
- STAINLESS STEEL ESCUTCHEON PLATES & HOLES THROUGH INSULATED PANELS ARE FURNISHED WITH COLD STORAGE ROOM. ELECTRICAL DIVISION TO SEAL ALL PENETRATIONS WITH CAULKING ON THE C.S.R. INTERIOR & EXTERIOR AND INSTALL INTERIOR & EXTERIOR ESCUTCHEON PLATES.
- EVAPORATOR FAN MOTORS FOR REFRIGERATORS RUN CONTINUOUSLY. DO NOT WIRE INTERNALLY WITH THERMOSTAT. EVAPORATOR FAN MOTORS FOR FREEZERS CYCLE WITH FREEZER DEFROST.

### TYPICAL COOLER/FREEZER ELECTRICAL DIAGRAM

## CONSTRUCTION DOCUMENTS



1 TELECOM RACEWAY AND WIRING DIAGRAM  
SCALE: NONE



2 GROUNDING RISER DIAGRAM  
SCALE: NONE

GENERAL NOTES:

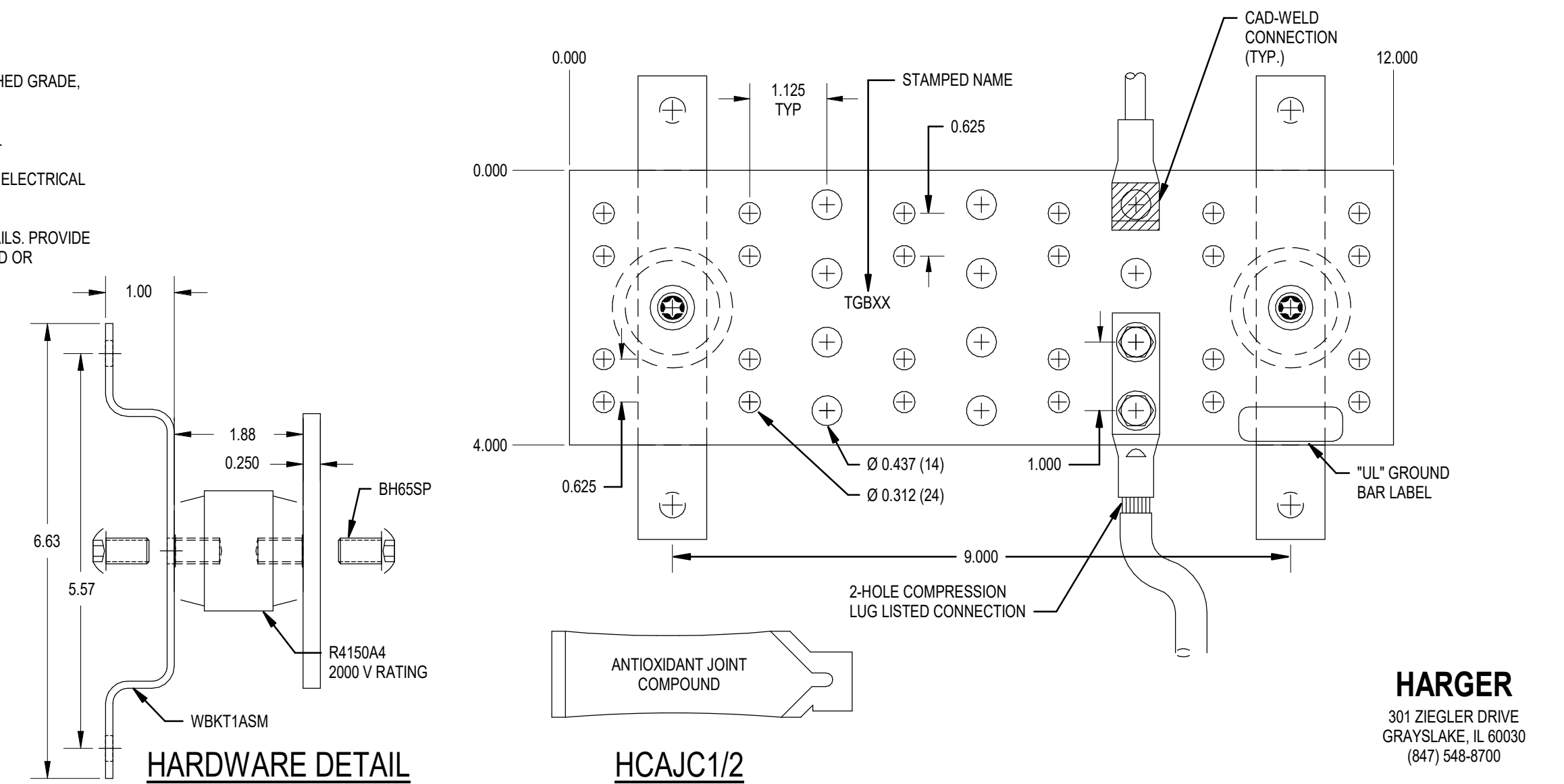
1. PROVIDE GROUNDING AND BONDING OF I.T. ROOMS, SERVER ROOM, RACKS AND CABLE TRAY PER THE FOLLOWING STANDARDS AND REQUIREMENTS: ANSI J-STD-607-A, ANSI/TIA/EIA-568-B-1.2, NEC, IEEE, BICSI AND OWNERS IT DEPARTMENT.
2. TERMINATE ALL CONDUITS WITH NYLON BUSHINGS ON BOTH ENDS

KEYED NOTES:

1. COPPER GROUND BUS. SEE DETAIL THIS SHEET.
2. COORDINATE REQUIREMENTS WITH CENTURYLINK.
3. PROVIDE A #6 MINIMUM GROUNDING CONDUCTOR TO LOCATIONS AS SHOWN.

NOTES:

1. SUPPORT FROM WALL 12 INCHES ABOVE FINISHED GRADE, UNLESS NOTED OTHERWISE.
2. PROVIDE IN MAIN TELECOMMUNICATION ROOM.
3. EXTEND BONDING CONDUCTOR BACK TO MAIN ELECTRICAL SERVICE SERVICE BONDING BAR.
4. SEE SPECIFICATION SECTION 260452 FOR DETAILS. PROVIDE MANUFACTURER AND PART NUMBER INDICATED OR APPROVED EQUIVALENT.



**3 TELECOMMUNICATIONS GROUNDING BUS BAR - TMGB**  
SCALE: NTS

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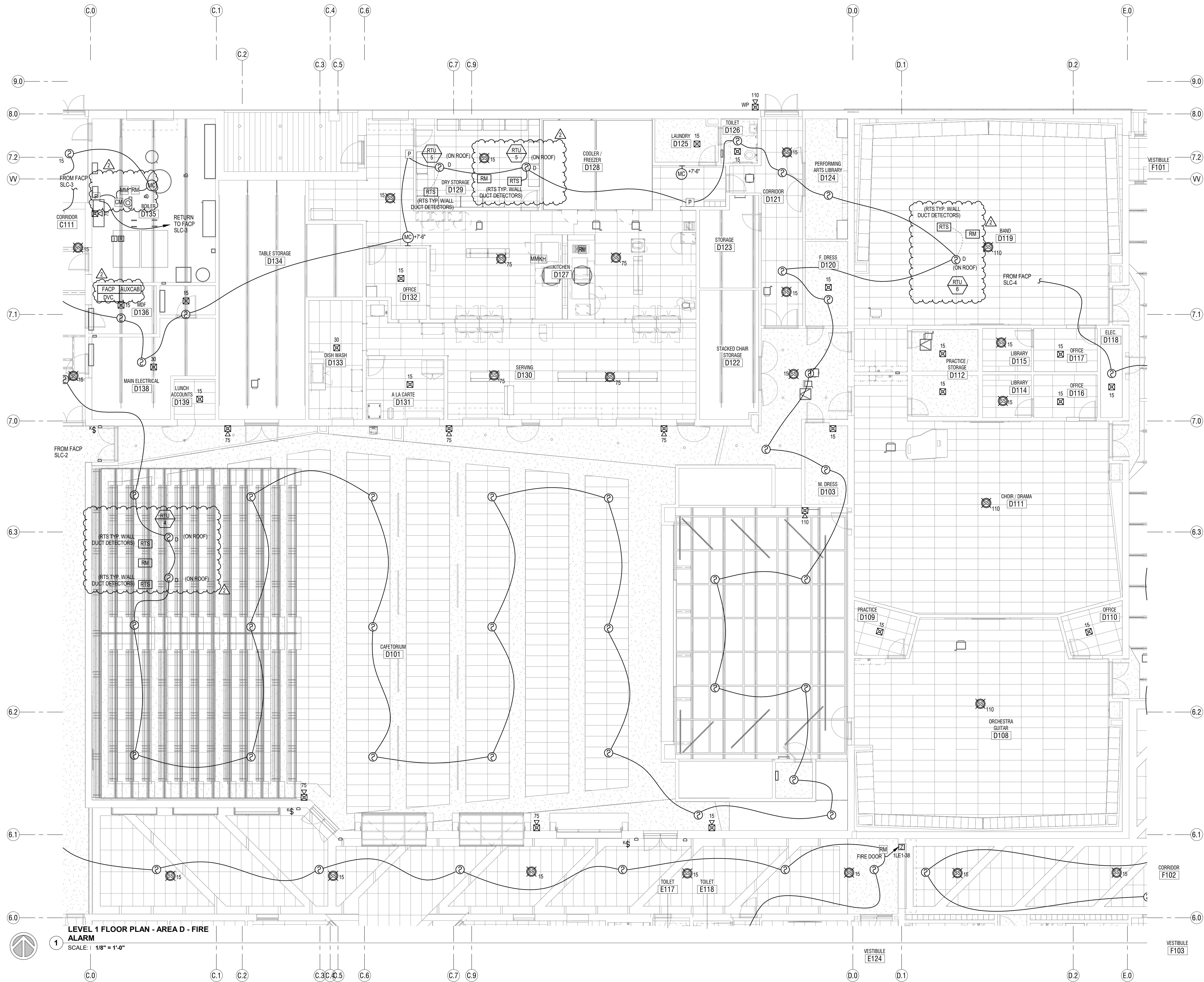
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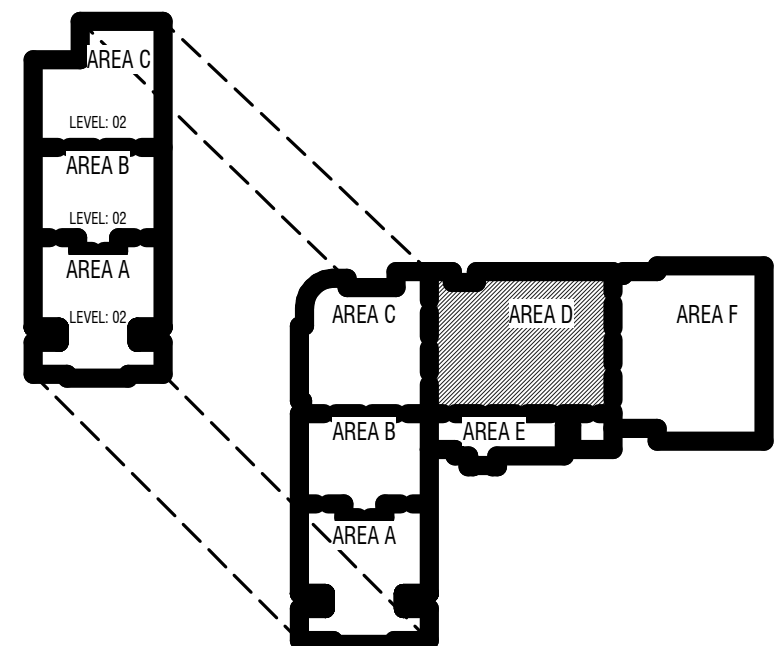


SYSTEMS GENERAL NOTES:

- COORDINATE ALL WALL MOUNTED LOCATIONS WITH THE ARCHITECT.
- THE DIVISION 28 CONTRACTOR SHALL DETERMINE THE EXACT ROUTING OF ALL CONDUITS IN THE FIELD. THIS PLAN REPRESENTS A SCHEMATIC REPRESENTATION OF DEVICE LOCATIONS, AND CONDUIT RUNS.
- ALL CONDUITS THAT TERMINATE ABOVE THE CEILING SHALL TERMINATE WITH NYLON BUSHING.
- CONTRACTOR SHALL COORDINATE ALL CEILING MOUNTED DEVICES WITH THE LIGHTING PLANS. RELOCATE DEVICES AS NECESSARY. RELOCATED DEVICES SHALL COMPLY WITH ALL NFPA SPACING REQUIREMENTS.

KEYED NOTES ①

KEY PLAN



CONSTRUCTION DOCUMENTS

MARK	DATE	DESCRIPTION
PROJECT #:	05/22/24	ADDENDUM 5
DRAWN BY:		Author
CHECKED BY:		Checker
ISSUED:		04/26/2024

PROJECT #:



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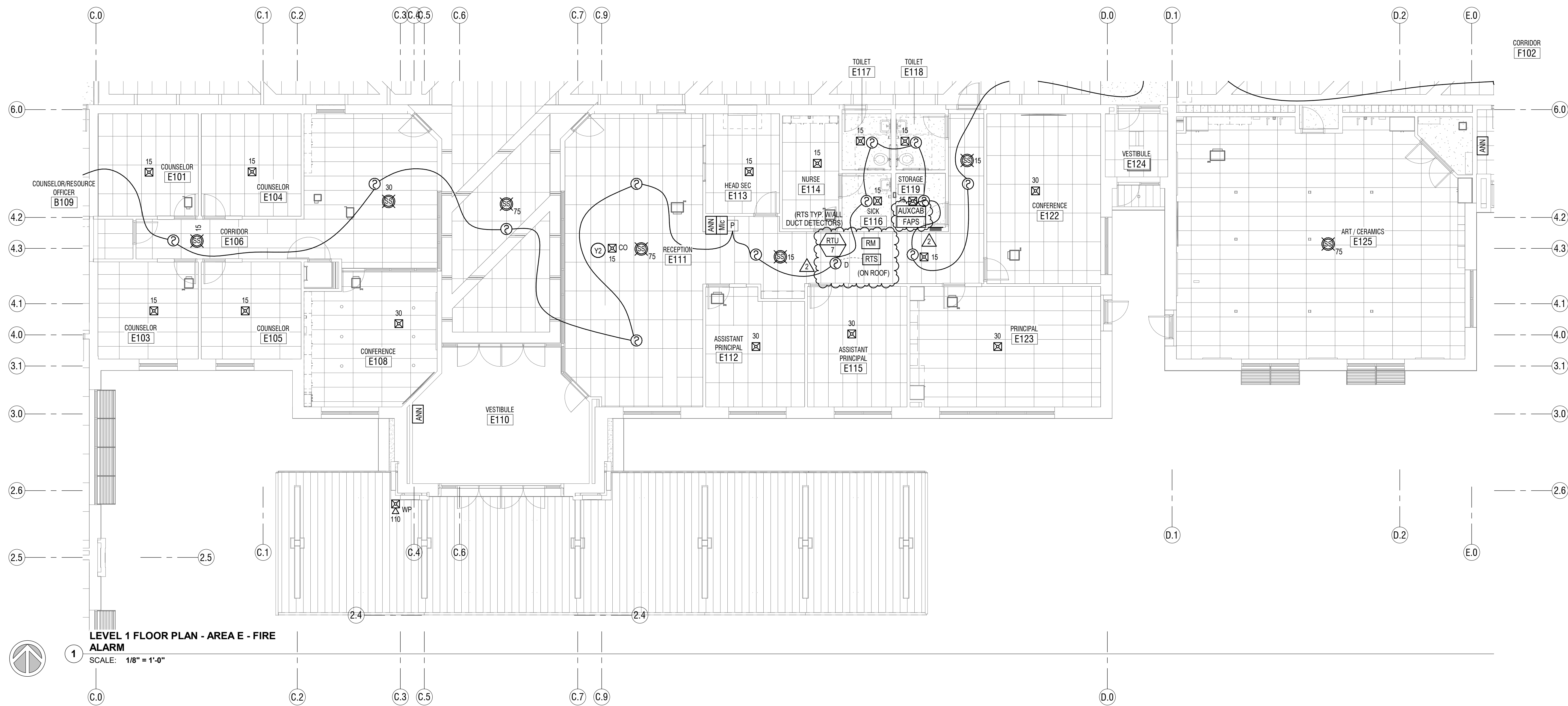
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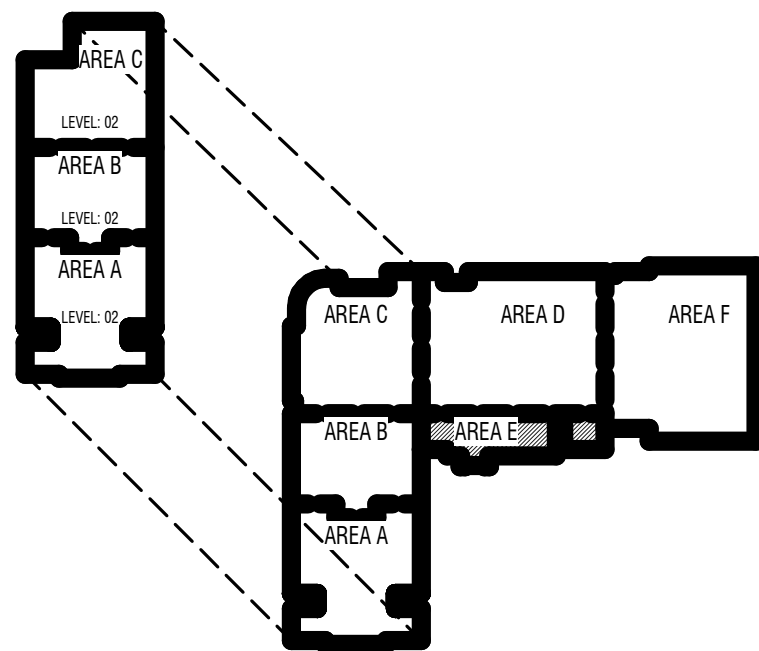


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KEYED NOTES ①

KEY PLAN



CONSTRUCTION DOCUMENTS

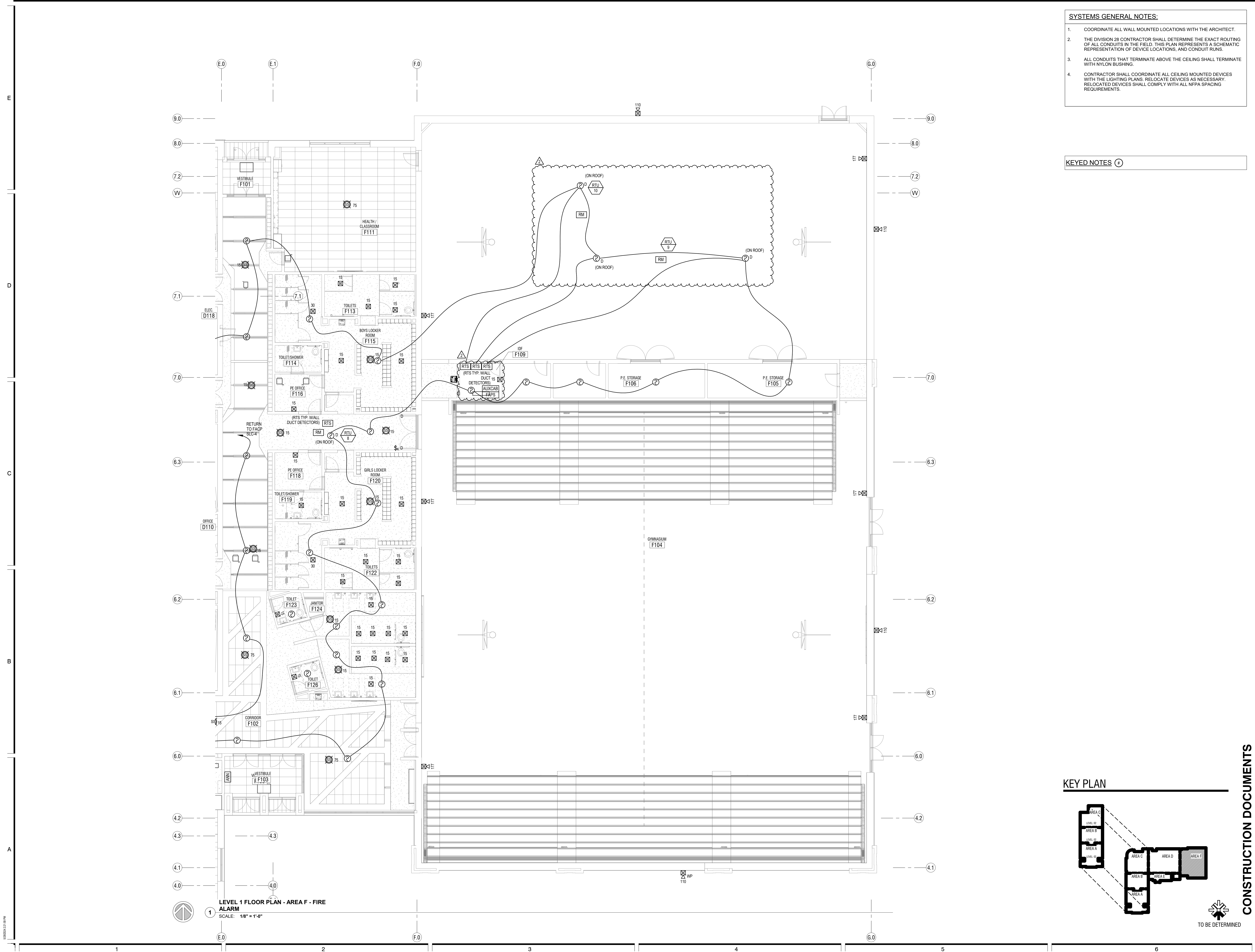
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PROJECT #: 123006  
DRAWN BY: Author  
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ISSUED: 04/26/2024



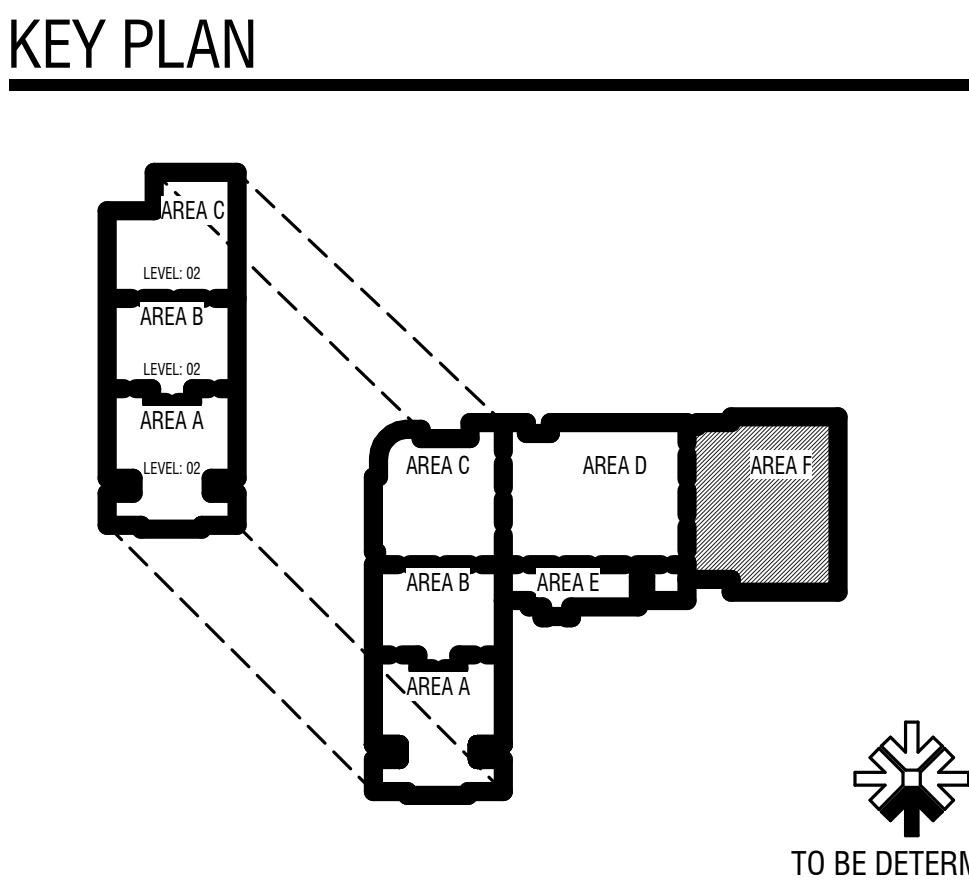
LEVEL 1 - AREA E -  
FIRE ALARM

E-315  
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**KEYED NOTES** ①



**CONSTRUCTION DOCUMENTS**

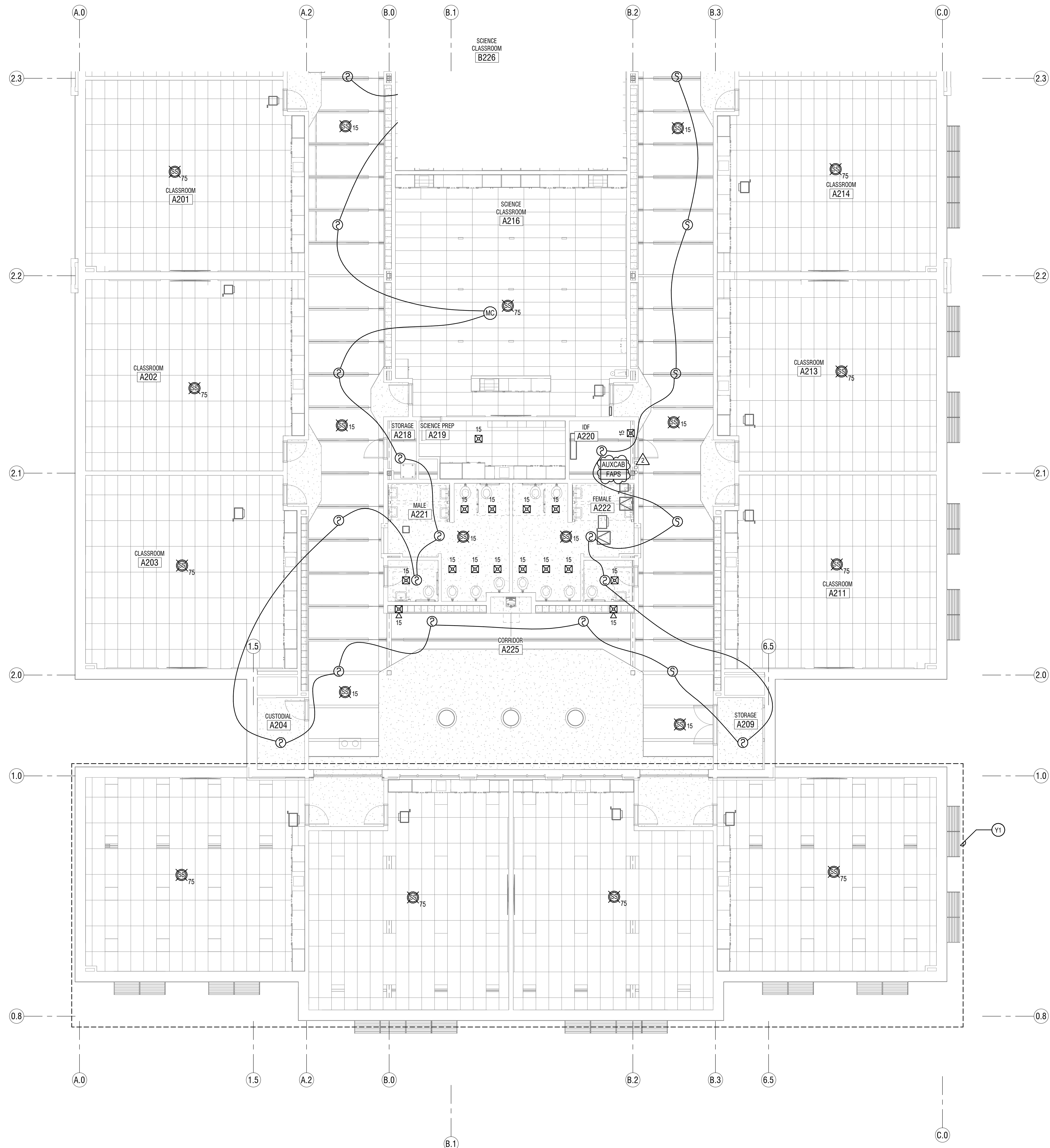
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DRAWN BY:	Author	
CHECKED BY:	Checker	
ISSUED:	04.26.2024	

SYSTEMS GENERAL NOTES:

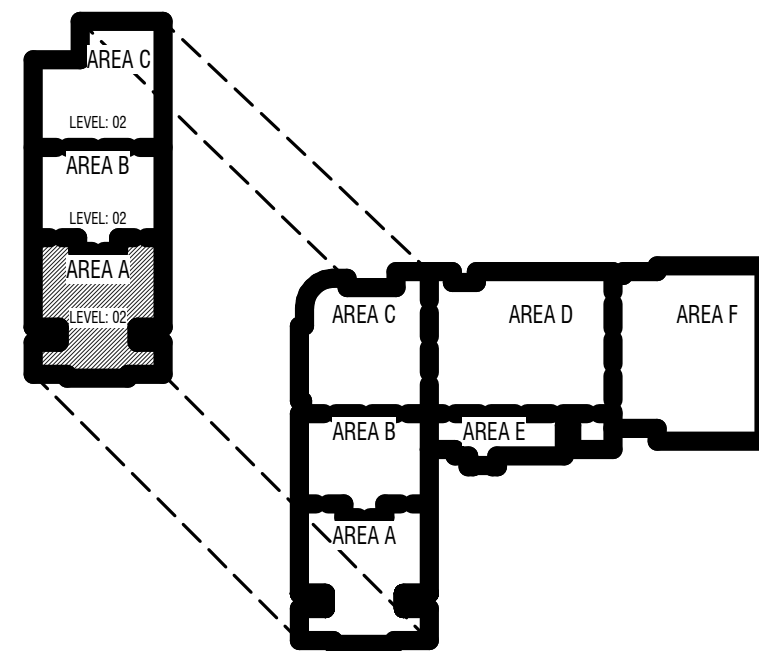
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**KEYED NOTES** 

- |    |  |
|----|--|
| Y1 | UNDER THE BASE BID, INCLUDE ALL WORK IN THIS AREA AS SHOWN ON THE PLANS. UNDER ALTERNATE #1, THIS AREA WILL BE REMOVED FROM THE PROJECT. PROVIDE A SEPARATE COST TO BE ISSUED AS A CREDIT FOR ALL WORK IN THIS AREA AS SHOWN ON THE PLANS. |
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## KEY PLAN



TO BE DETERMINED

## CONSTRUCTION DOCUMENTS

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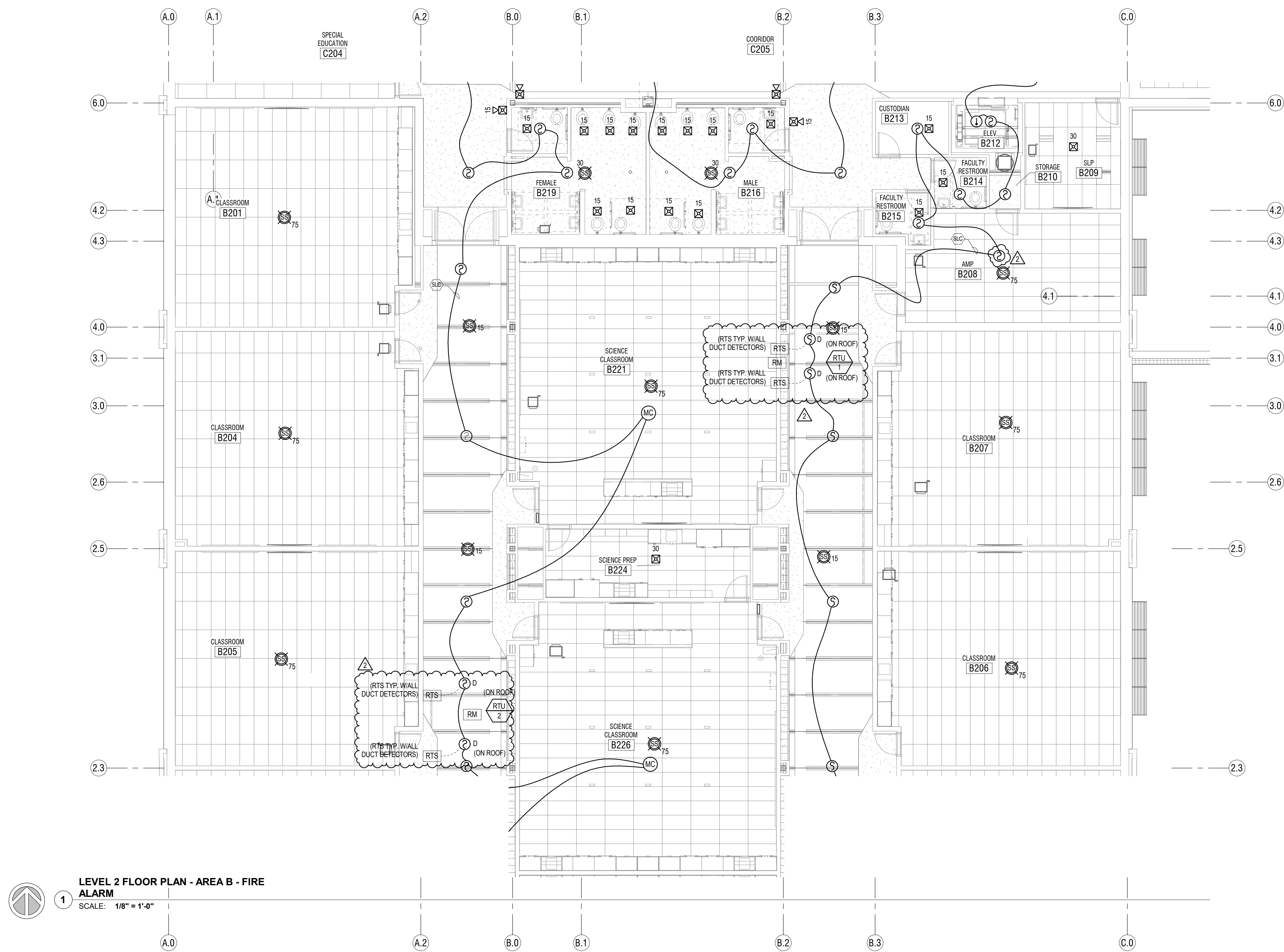
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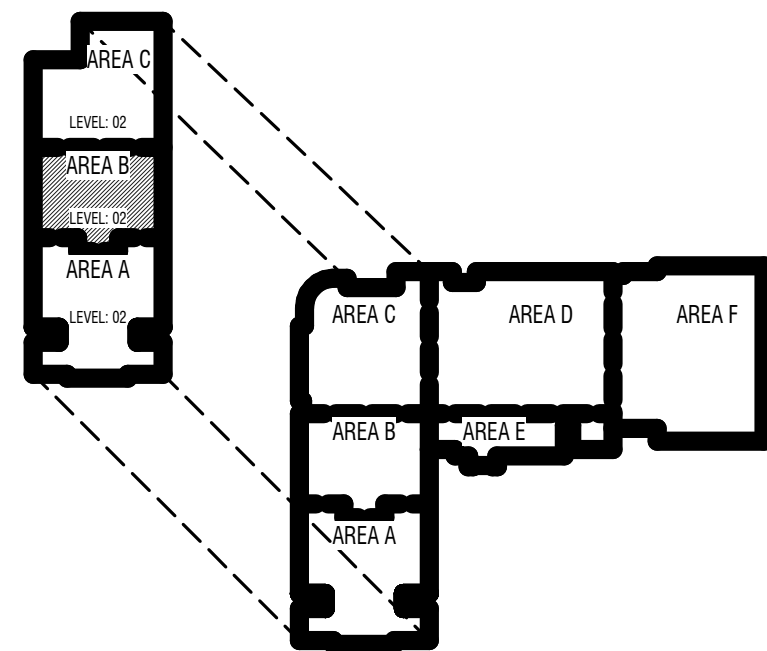


1  
LEVEL 2 FLOOR PLAN - AREA B - FIRE ALARM  
SCALE: 1/8" = 1'-0"

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**KEYED NOTES** ①

**KEY PLAN**



**CONSTRUCTION DOCUMENTS**

MARK	DATE	DESCRIPTION
PROJECT #:	123006	
DRAWN BY:	Author	
CHECKED BY:	Checker	
ISSUED:	04.26.2024	

PROJECT #:

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Author

CHECKED BY:

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ISSUED:

04.26.2024



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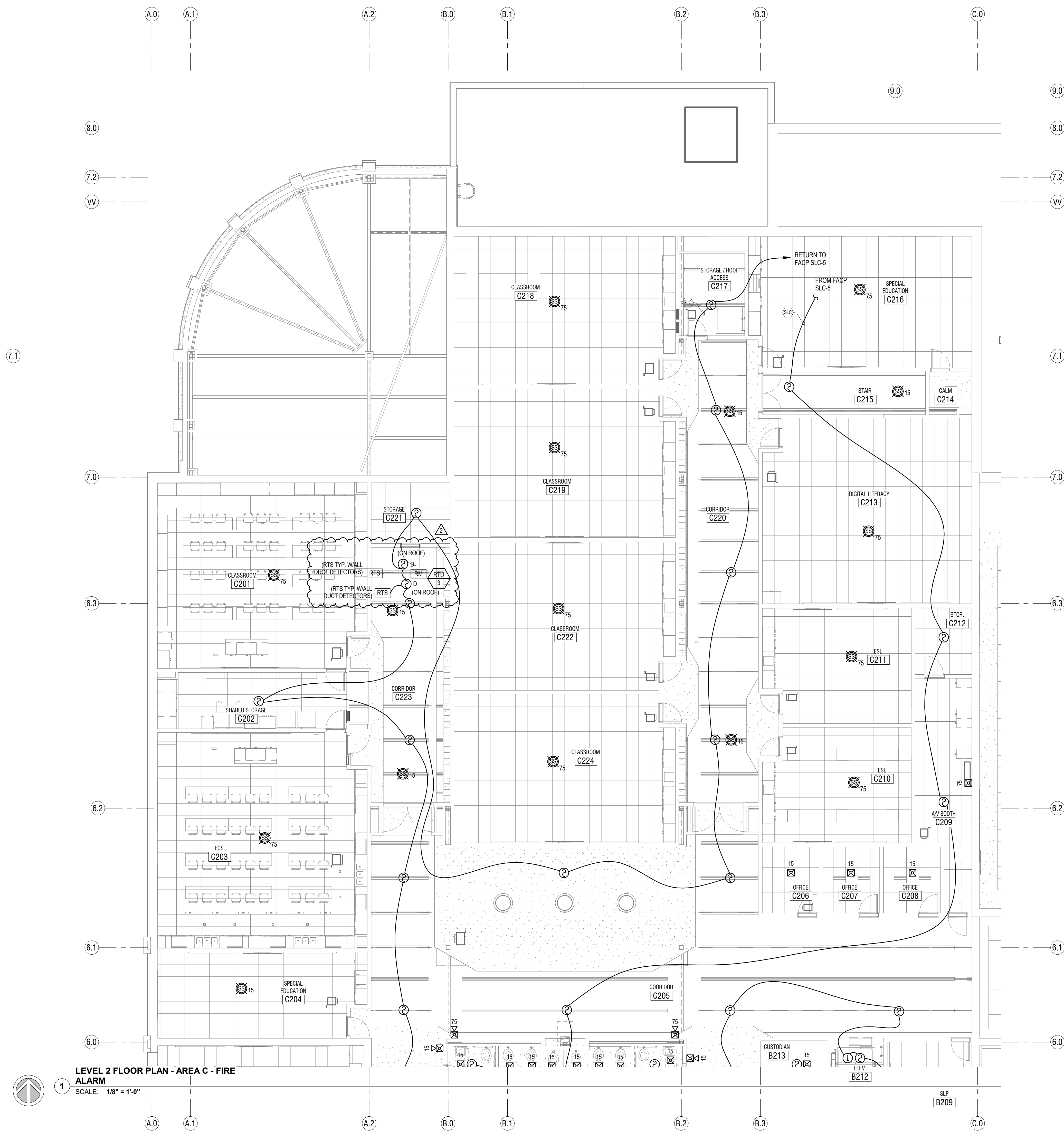
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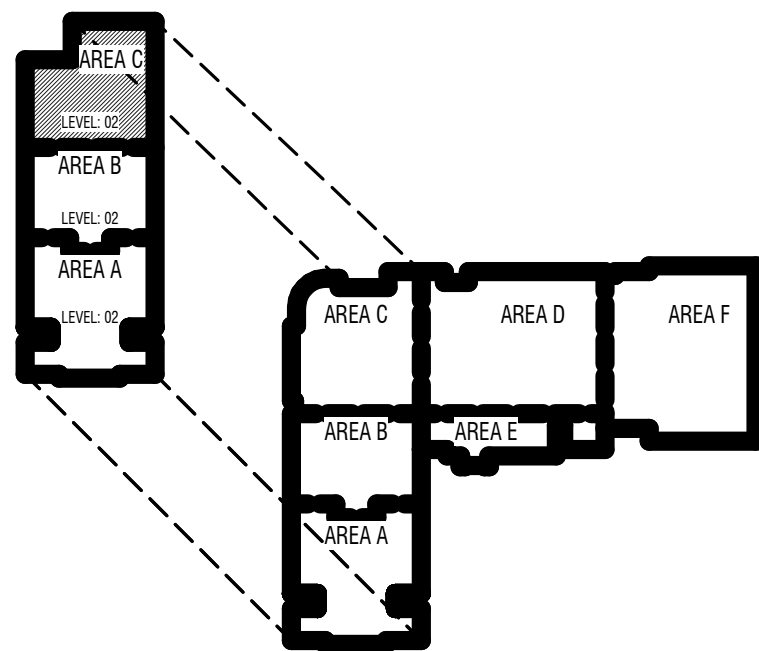
LEVEL 2 FLOOR PLAN - AREA C - FIRE ALARM  
SCALE: 1/8" = 1'-0"

SYSTEMS GENERAL NOTES:

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KEYED NOTES ①

KEY PLAN



CONSTRUCTION DOCUMENTS

MARK	DATE	DESCRIPTION
PROJECT #:	123006	
DRAWN BY:	Author	
CHECKED BY:	Checker	
ISSUED:	04.26.2024	

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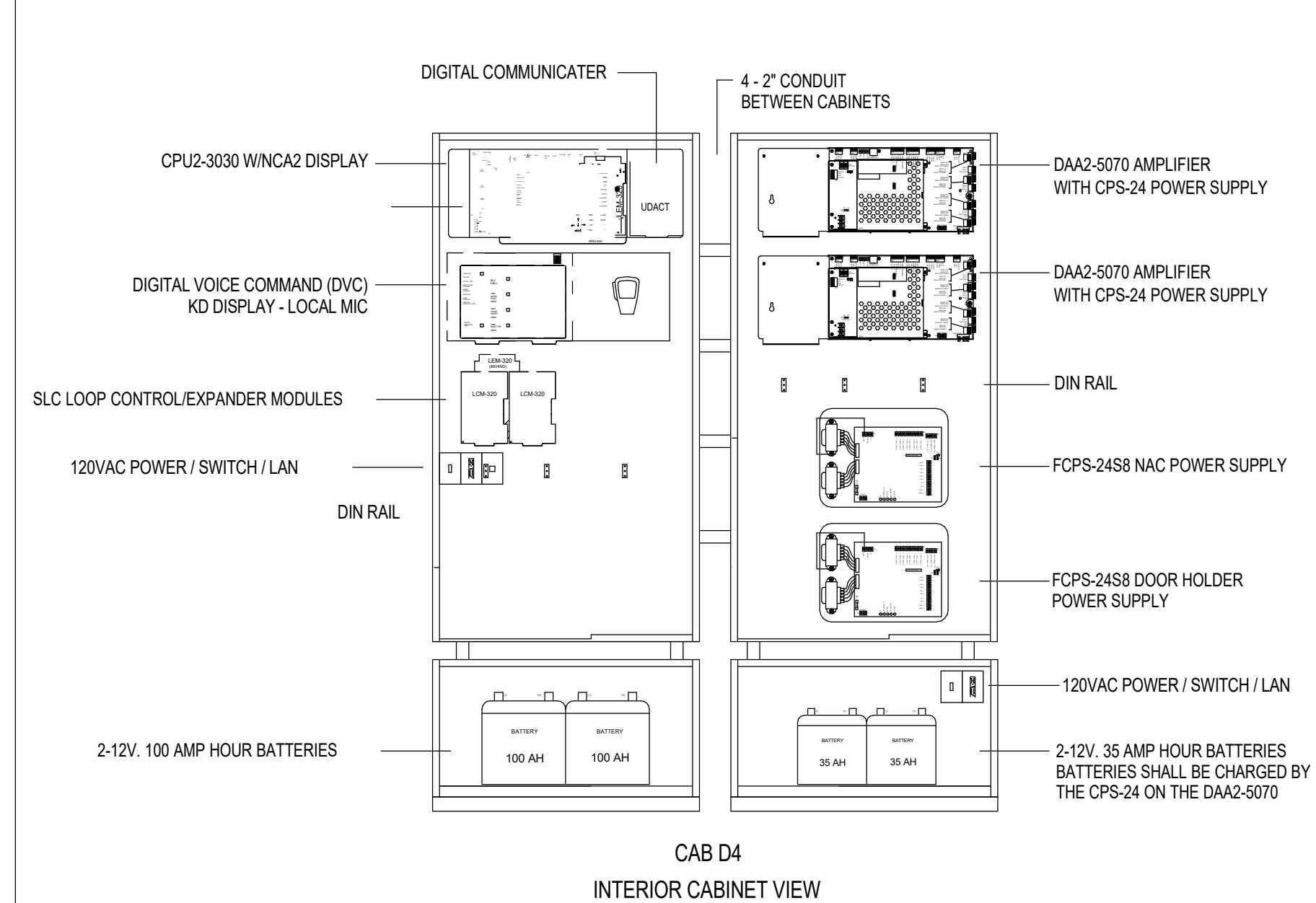
INCORRECT

WHEN INSTALLING DEVICES, CONDUCTORS SHALL NOT BE SPICED. SPICES OR CONNECTIONS SHALL OCCUR ONLY AT DEVICES OR APPLIANCES.

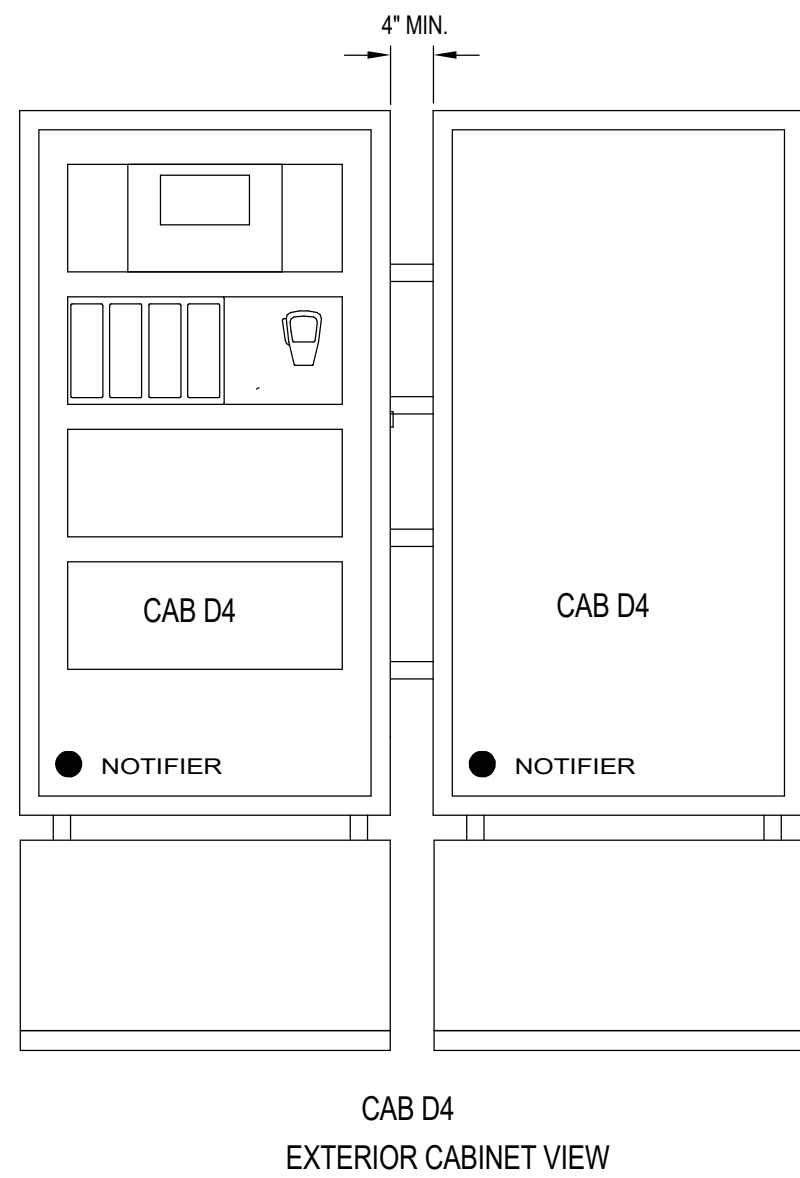
WIRING METHODS  
SCHEMATIC: NO SCALE

THIS IS AN ADDRESSABLE FIRE ALARM SYSTEM. COORDINATE DEVICE ADDRESSES AND MAPPING WITH DAVE FULLMER - CCSD (435) 994-0350.

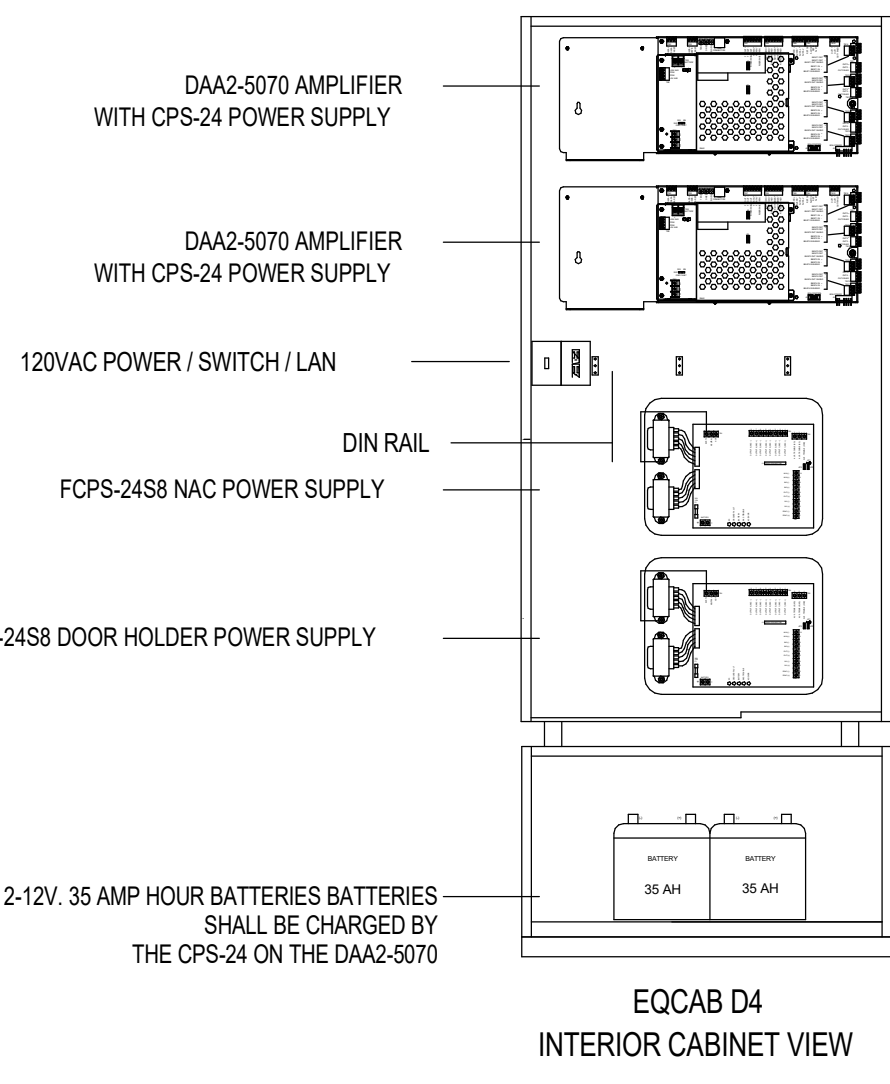
## FACP ROOM



FACP ROOM CABINET DETAIL  
SCALE: NTS



## FAPS-1, FAPS-2, FAPS-3 &amp; FAPS-4 LOCATIONS



FIRE ALARM POWER SUPPLY CABINET DETAIL  
SCALE: NTS

FIRE ALARM SYMBOL LEGEND				
NOTE: ALL SYMBOLS MAY NOT BE USED ON THIS PROJECT				
SYMBOL	DESCRIPTION	MANUF. & PART #	MOUNTING	MOUNT IN
FACP	FIRE ALARM CONTROL PANEL	NOTIFIER - ONYX SERIES NFS2-3030	CABINET TOP @ 6'-2"	NOTIFIER - CAB D4
DVC	DIGITAL VOICE CONTROL PANEL	NOTIFIER - DVC	IN FACP CABINET	IN FACP CABINET
FAPS	FIRE ALARM POWER SUPPLY CABINET	NOTIFIER - Fcps-2458 & DAA2-5070	CABINET TOP @ 6'-2"	NOTIFIER - CAB EQ D4 (NAC POWER SUPPLY & AMPLIFIER)
FAUX	FIRE ALARM DOOR HOLDER POWER	NOTIFIER - Fcps-2458	IN FAPS CABINET	IN FAPS CABINET WHERE REQUIRED
ANN	FIRE ALARM REMOTE ANNUNCIATOR	NOTIFIER - FDU-80	FIELD VERIFY	3 GANG DEEP - MOUNTED FLUSH, 48" TO TOP
MIC	REMOTE MICROPHONE	NOTIFIER - RM-1	FIELD VERIFY	IN REMOTE ANNUNCIATOR CABINET
-S-	SMOKE DETECTOR	NOTIFIER - FSP-851	CEILING	4 SQ. DEEP W/ MUD RING - MOUNTED FLUSH
DD	DUCT SMOKE DETECTOR	NOTIFIER - FSP-851R / DNR	INDICATED DUCT	DNR HOUSING
P	PULL STATION	NOTIFIER - NBG-12LX	WALL @ 48" TO CENTER OF BOX	4 SQ. DEEP W/ SINGLE GANG MUD RING - MOUNTED FLUSH
+	HEAT DETECTOR	NOTIFIER - FSH-851	CEILING	4 SQ. DEEP W/ MUD RING - MOUNTED FLUSH
TXRX	BEAM SMOKE DETECTOR-TX/RX	NOTIFIER - BEAM200S	FIELD VERIFY	VERIFY
R	BEAM SMOKE DETECTOR-REFLECTOR	NOTIFIER - BEAM200S	FIELD VERIFY	VERIFY
RTS	REMOTE TEST SWITCH	NOTIFIER - RTS-151KEY	CEILING MOUNTED NEAR UNIT	SINGLE GANG 2-1/2" DEEP OR MOUNT DIRECTLY TO CEILING
MG	*MULTI CRITERIA DETECTOR W/CO DET.	NOTIFIER - FCO-851	CEILING	4 SQ. DEEP W/ MUD RING - MOUNTED FLUSH
MM	MONITOR MODULE	NOTIFIER - FMM-1		4 SQ. DEEP - MOUNTED FLUSH
CM	CONTROL MODULE	NOTIFIER - FCM-1		4 SQ. DEEP - MOUNTED FLUSH
RM	RELAY MODULE	NOTIFIER - FRM-1		4 SQ. DEEP - MOUNTED FLUSH
SP	**SPEAKER / STROBE - CEILING	NOTIFIER - SPSCR	CEILING	4 SQ. DEEP W/ DOUBLE GANG MUD RING - MOUNTED FLUSH
SP	**SPEAKER / STROBE	NOTIFIER - SPRV	WALL @ 84" TO CENTER OF BOX	4 SQ. DEEP W/ DOUBLE GANG MUD RING - MOUNTED FLUSH
SP	**SPEAKER / STROBE (WEATHERPROOF)	NOTIFIER - SPRSK	WALL @ 10' TO CENTER OF BOX	4 SQ. DEEP W/ DOUBLE GANG MUD RING - MOUNTED FLUSH
SP	**STROBE - CEILING MOUNT	NOTIFIER - SCR	CEILING	4 SQ. DEEP W/ SINGLE GANG MUD RING - MOUNTED FLUSH
SP	**STROBE	NOTIFIER - SR	WALL @ 84" TO CENTER OF BOX	4 SQ. DEEP W/ SINGLE GANG MUD RING - MOUNTED FLUSH
SP	**SPEAKER	NOTIFIER - SPRV		4 SQ. DEEP W/ DOUBLE GANG MUD RING - MOUNTED FLUSH
DH	24VDC MAGNETIC DOOR HOLDERS	ABH - 2500	FIELD VERIFY	WALL MOUNT - DOUBLE GANG NEW FLUSH - EXIST + SURFACE
FSD	FIRE/SMOKE DAMPER	BY OTHERS	BY OTHERS	BY OTHERS
MSL	KITCHEN HOOD SYSTEM	BY OTHERS	VERIFY	VERIFY
ZM	RELAY MODULE	NOTIFIER - FZM-1	IN FACP CABINET	4 SQ. DEEP - MOUNTED FLUSH
ABBREVIATION	DESCRIPTION	ABBREVIATION	DESCRIPTION	
E	EXISTING	AWG	AMERICAN WIRE GAUGE	
G	WITH GUARD / PROTECTIVE COVER	TWP	TWISTED PAIR	
P	PENDENT MOUNT	TWSP	TWISTED SHIELDED PAIR	
R	RESIDENTIAL (110V)	FPLP	FIRE POWER LIMITED PLENUM	
S	SLANDER BASE	FPLR	FIRE POWER LIMITED RISER	
WP	WEATHERPROOF			
EOL	END OF LINE RESISTOR			
EOLR	END OF LINE RELAY			
* FCO-851 INTELLIQUAD DETECTOR-FOUR SENSING ELEMENTS: CARBON MONOXIDE DETECTOR - FLAME DETECTOR SMOKE DETECTOR - THERMAL DETECTOR				
** NEW FIRE ALARM SYSTEM INSTALLATION IN EXISTING AREAS OF THE BUILDING: ALL SURFACE MOUNT CABLE RUNS SHALL BE IN LEGRAND WIREMOLD PN05 OR PN10 LOW-VOLTAGE LATCHING RACEWAY. SURFACE MOUNTED DEVICES, SPEAKERS, AND SPEAKER-STROBES SHALL BE IN MATCHING WIREMOLD 2300 SERIES TWO-GANG EXTRA DEEP DEVICE BOXES. INSTALLING CONTRACTOR SHALL COORDINATE WITH THE SCHOOL DISTRICT THE RACEWAY FINISHES AND ROUTING PRIOR TO INSTALLATION.				
				-S- DEVICE ADDRESS    P L10100 OR L1M100 (L DENOTES LOOP) (D or M - DENOTES DETECTOR OR MODULE #)  1-#14(2 TWP) WIRE TYPE ABBREVIATED CONDUCTOR COUNT WIRE SIZE IF CABLES (IF OMITTED ONLY 1 CABLE NEEDED)

## GENERAL NOTES:

- POWER-LIMITED AND NONPOWER-LIMITED CIRCUIT WIRING MUST REMAIN SEPARATED IN CABINET. ALL POWER-LIMITED CIRCUIT WIRING MUST REMAIN AT LEAST 0.25" AWAY FROM ANY NONPOWER-LIMITED CIRCUIT WIRING. FURTHERMORE, ALL POWER-LIMITED AND NONPOWER-LIMITED CIRCUIT WIRING MUST ENTER AND EXIT THE CABINET THROUGH DIFFERENT KNOCKOUTS AND/OR CONDUITS.
- T-TAPPING SHALL NOT BE PERMITTED.
- POWER FOR ALL FIRE ALARM PANELS AND FIRE ALARM POWER SUPPLIES MUST BE PROVIDED BY A DEDICATED CIRCUIT.
- SMOKE DETECTORS SHALL NOT BE INSTALLED UNTIL AFTER CONSTRUCTION CLEAN-UP IS COMPLETE AND FINAL.
- INSTALLATION SHALL COMPLY WITH NEC, NFPA 72 AND ALL OTHER APPLICABLE CODES AS REQUIRED BY THE LOCAL AUTHORITY HAVING JURISDICTION.
- DO NOT INSTALL ANY SMOKE OR HEAT DETECTOR WITHIN 3 FEET OF ANY AIR DIFFUSER.
- CONDUCTORS SHALL NOT BE SPICED. SPICES OR CONNECTIONS SHALL OCCUR ONLY AT DEVICES OR APPLIANCES.
- APPROVED STAMPED DRAWINGS SHALL BE PROVIDED BY THE SCHOOL DISTRICT. HOWEVER, UPON COMPLETION, THE INSTALLING CONTRACTOR SHALL PROVIDE AS BUILT DRAWINGS TO CCSD - DAVE FULLMER (435) 994-0350 IN ELECTRONIC FORM AND HARD COPIES PRINTED TO SCALE ON MYLAR.
- THE SIGNALING LINE CIRCUITS (SLC) AND NOTIFICATION APPLIANCE CIRCUITS (NAC'S) SHALL BE WIRED AS SHOWN ON THE DRAWINGS IN SEPARATE CONDUITS UNLESS OTHERWISE APPROVED BY THE SCHOOL DISTRICT AND THE LOCAL AUTHORITY HAVING JURISDICTION. (NO CHANGES WITHOUT WRITTEN APPROVAL FROM DAVE FULLMER (435) 994-0350).
- WIRE (THIN) COLOR SHALL BE ORANGE/BLUE FOR SIGNALING CIRCUITS, PINK/PURPLE FOR FAPS (SYNC & TROUBLE), YELLOW JACKET FOR PHONE CONNECTIONS.
- THE MAIN FIRE ALARM CABINET SHALL BE "D" SIZE WITH A GLASS DOOR.
- UPON COMPLETION, THE INSTALLING CONTRACTOR SHALL PERFORM FINAL TESTING OF THE ENTIRE SYSTEM, AND SHALL COORDINATE AND PERFORM A FINAL FIRE ALARM SYSTEM INSPECTION WITH THE LAHJ.
- ALL RACEWAY SHALL BE 3/4" EMT UNLESS NOTED OTHERWISE.
- ALL WIRE CONNECTIONS IN MAIN FACP SHALL BE ON DIN RAIL FIRST THEN TO MAIN BOARD WITH SAME COLOR OF WIRE. PROVIDE LABEL FOR EACH.
- FIELD SELECTABLE AUDIBILITY SETTINGS OF NOTIFICATION APPLIANCES SHALL BE SET TO: WATTAGE TAP SETTINGS ON ALL VOICE EVACUATION SPEAKERS SHALL BE SET TO 1/2 WATT UNLESS OTHERWISE NOTED ON THE DRAWINGS.
- ALL FIRE ALARM SYSTEM "J" BOX COVERS AND CONDUIT MUST BE
- DUCT SMOKE DETECTOR LOCATIONS MUST BE APPROVED BY CCSD DAVE FULLMER (435) 994-0350 PRIOR TO INSTALLATION.
- ALL SPEAKERS, STROBES AND SPEAKER STROBES SHALL BE IN COLOR.
- 

## CONSTRUCTION DOCUMENTS

DESCRIPTION:

DATE:

05/28/24

MARK:

ADDENDUM 5

PROJECT #:

123006

DRAWN BY:

SB

CHECKED BY:

AH

ISSUED:

04/26/2024



FIRE ALARM  
SYMBOLS AND  
NOTES

E-332

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design west architects  
LOGAN UT 84321  
SALT LAKE CITY UT 84103  
255 SOUTH 300 WEST  
735 NORTH 400 WEST

NIBLEY MIDDLE SCHOOL

3050 S 920 W NIBLEY, UTAH

CACHE COUNTY SCHOOL DISTRICT

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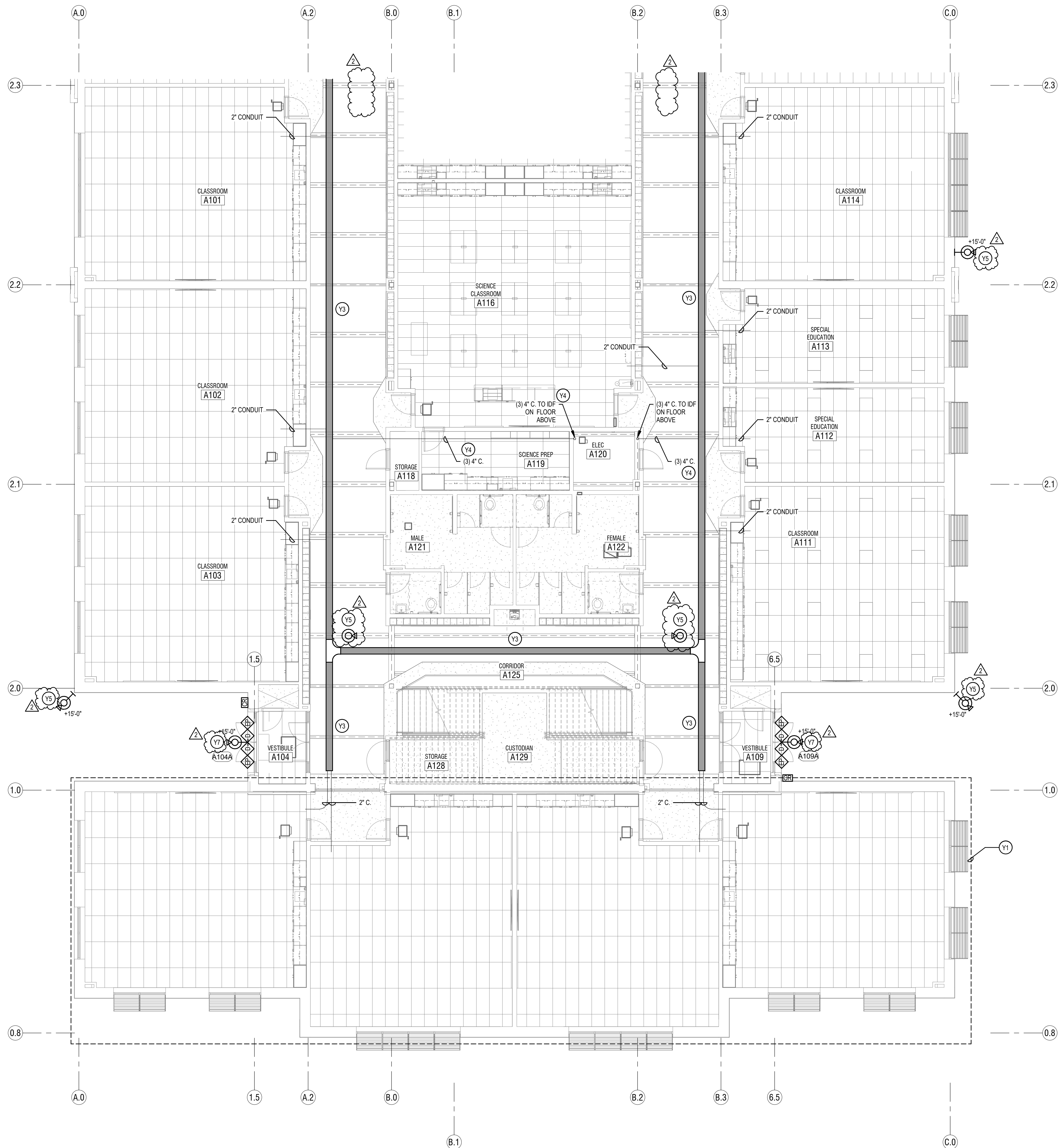
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1 LEVEL 1 FLOOR PLAN - AREA A - SYSTEMS  
SCALE: 1/8" = 1'-0"



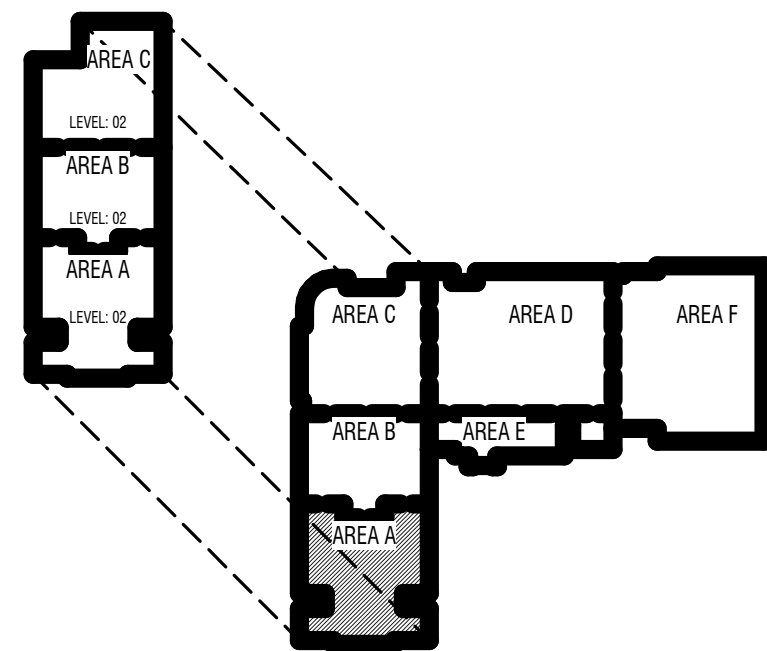
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#### KEYED NOTES

- Y1 UNDER THE BASE BID, INCLUDE ALL WORK IN THIS AREA AS SHOWN ON THE PLANS. UNDER ALTERNATE #1, THIS AREA WILL BE REMOVED FROM THE PROJECT. PROVIDE A SEPARATE COST TO BE ISSUED AS A CREDIT FOR ALL WORK IN THIS AREA AS SHOWN ON THE PLANS.
- Y3 PROVIDE 12" WIDE BY 4" HIGH BASKET TYPE CABLE TRAY AS SHOWN. PROVIDE SOLID BOTTOM AND SOLID TOP COVER IN CABLE TRAYS IN ALL AREAS THAT ARE OPEN TO STRUCTURE. SEE DETAILS AND SPECIFICATIONS FOR MORE INFORMATION. MOUNT CABLE TRAY 4" ABOVE ACCESSIBLE CEILINGS. IN OPEN CEILINGS, MOUNT CABLE TRAY AT 10'-0" TO BOTTOM OF TRAY. IN LOCATIONS WHERE DUCTWORK IS IN THE WAY, LOWER CABLE TRAY SO THERE IS 4" OF CLEAR SPACE BETWEEN THE TOP OF THE CABLE TRAY AND THE DUCTWORK.
- Y4 KEEP ONE CONDUIT EMPTY FOR FUTURE USE. PROVIDE PULL STRING AND LABEL.
- Y5 PROVIDE AXIS P3738-PLC CAMERA AND CAMERA MOUNT.
- Y7 PROVIDE AXIS P3268-LVE CAMERA AND CAMERA MOUNT.

#### KEY PLAN



#### CONSTRUCTION DOCUMENTS

MARK	DATE	DESCRIPTION
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DRAWN BY:	Author	
CHECKED BY:	Checker	
ISSUED:	04.26.2024	

PROJECT #:



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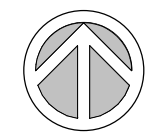
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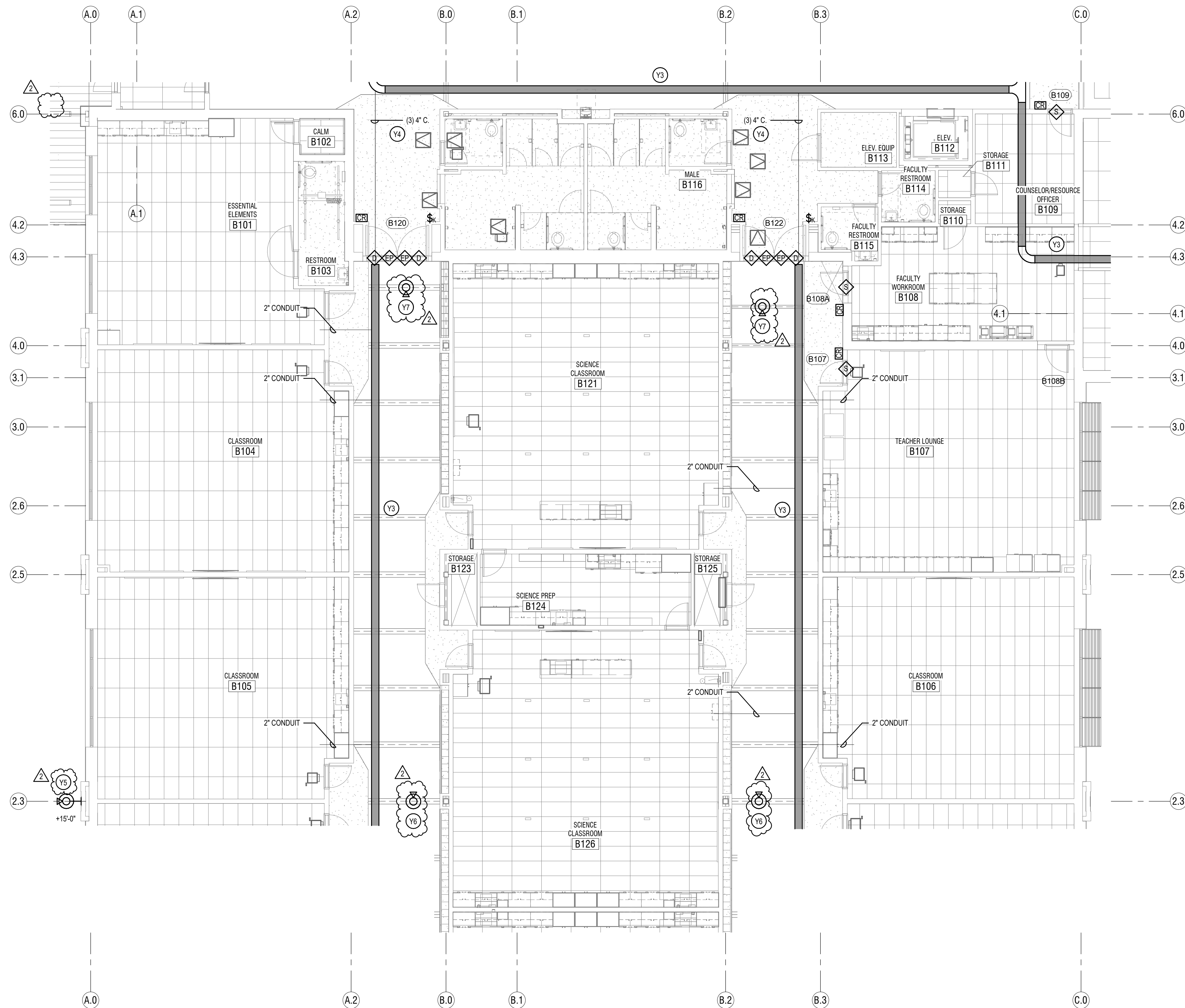
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1 LEVEL 1 FLOOR PLAN - AREA B - SYSTEMS  
SCALE: 1/8" = 1'-0"



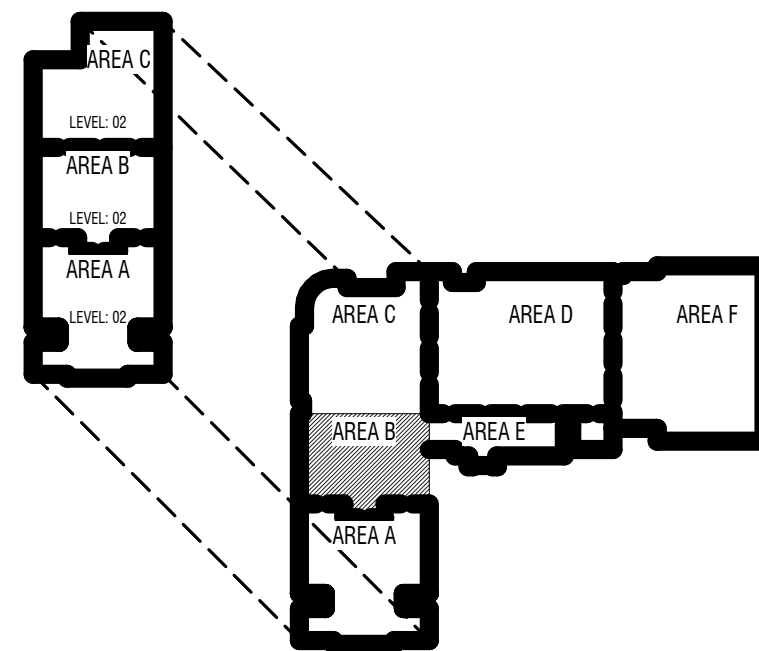
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#### KEYED NOTES ①

- Y3 PROVIDE 12" WIDE BY 4" HIGH BASKET TYPE CABLE TRAY AS SHOWN. PROVIDE SOLID BOTTOM AND SOLID TOP COVER IN CABLE TRAYS IN ALL AREAS THAT ARE OPEN TO STRUCTURE. SEE DETAILS AND SPECIFICATIONS FOR MORE INFORMATION. MOUNT CABLE TRAY 4" ABOVE ACCESSIBLE CEILINGS. IN OPEN CEILINGS, MOUNT CABLE TRAY AT 10'-0" TO BOTTOM OF TRAY. IN LOCATIONS WHERE DUCTWORK IS IN THE WAY, LOWER CABLE TRAY SO THERE IS 4" OF CLEAR SPACE BETWEEN THE TOP OF THE CABLE TRAY AND THE DUCTWORK.
- Y4 KEEP ONE CONDUIT EMPTY FOR FUTURE USE. PROVIDE PULL STRING AND LABEL.
- Y5 PROVIDE AXIS P3738-PLC CAMERA AND CAMERA MOUNT.
- Y6 PROVIDE AXIS P4707-PLC CAMERA AND CAMERA MOUNT.
- Y7 PROVIDE AXIS P3268-LVE CAMERA AND CAMERA MOUNT.

#### KEY PLAN



TO BE DETERMINED

#### CONSTRUCTION DOCUMENTS

MARK: DESCRIPTION:

PROJECT #: 123006  
DRAWN BY: Author  
CHECKED BY: Checker  
ISSUED: 04.26.2024

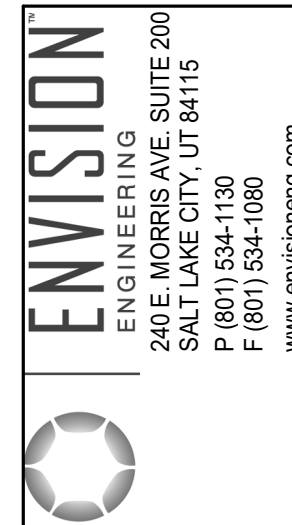


LEVEL 1 - AREA B - SYSTEMS

E-412

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design west architects  
255 SOUTH 400 WEST  
795 NORTH 400 WEST  
LOGAN UT 84321  
SALT LAKE CITY UT 84103



NIBLEY MIDDLE SCHOOL

3050 S 920 W NIBLEY, UTAH

CACHE COUNTY SCHOOL DISTRICT

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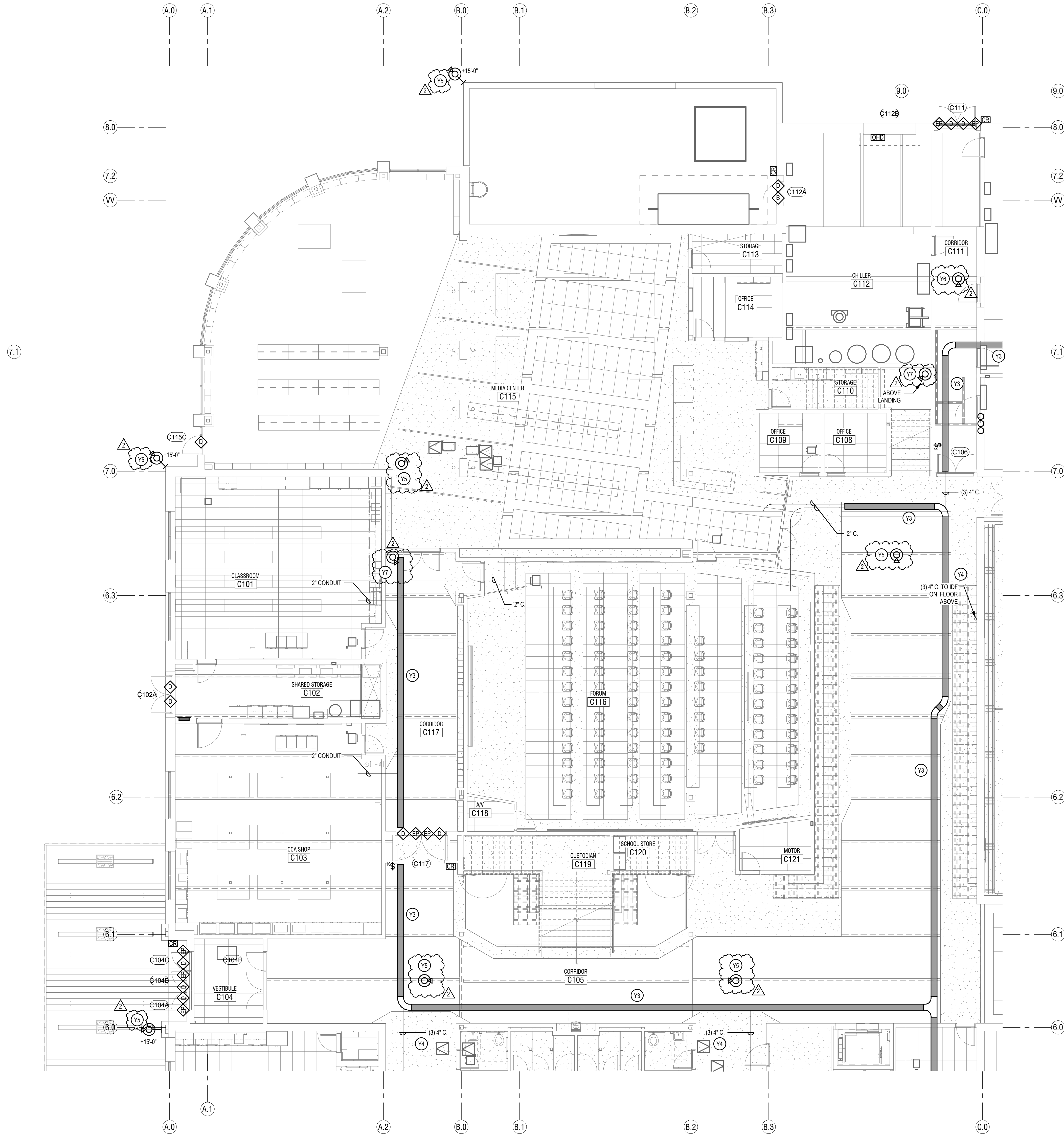
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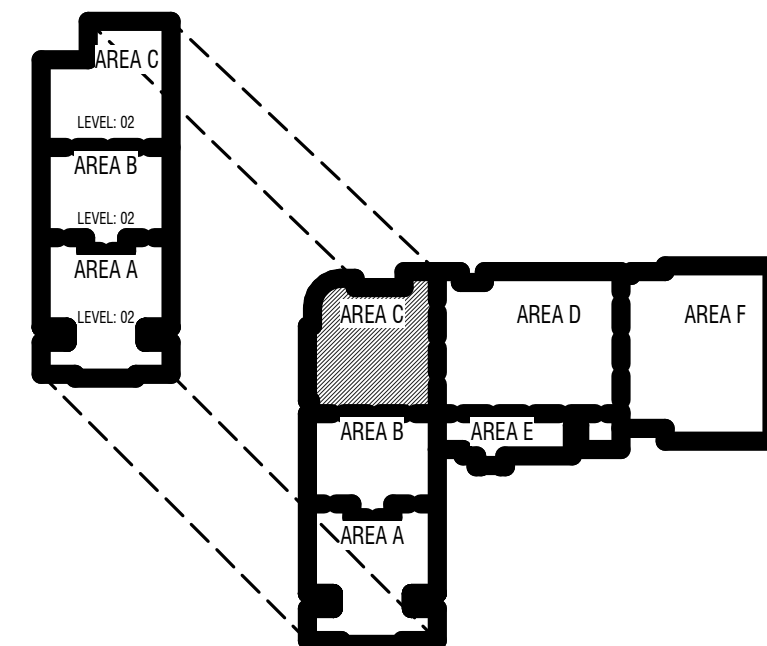
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E

1 LEVEL 1 FLOOR PLAN - AREA C - SYSTEMS  
SCALE: 1/8" = 1'-0"



KEY PLAN



SYSTEMS GENERAL NOTES:

- COORDINATE ALL WALL MOUNTED LOCATIONS WITH THE ARCHITECT.
- THE DIVISION 28 CONTRACTOR SHALL DETERMINE THE EXACT ROUTING OF ALL CONDUITS IN THE FIELD. THIS PLAN REPRESENTS A SCHEMATIC REPRESENTATION OF DEVICE LOCATIONS, AND CONDUIT RUNS.
- ALL CONDUITS THAT TERMINATE ABOVE THE CEILING SHALL TERMINATE WITH NYLON BUSHING.
- CONTRACTOR SHALL COORDINATE ALL CEILING MOUNTED DEVICES WITH THE LIGHTING PLANS. RELOCATE DEVICES AS NECESSARY. RELOCATED DEVICES SHALL COMPLY WITH ALL NFPA SPACING REQUIREMENTS.

KEYED NOTES ①

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- Y4 KEEP ONE CONDUIT EMPTY FOR FUTURE USE. PROVIDE PULL STRING AND LABEL.
- Y5 PROVIDE AXIS P3738-PLC CAMERA AND CAMERA MOUNT.
- Y6 PROVIDE AXIS P4707-PLC CAMERA AND CAMERA MOUNT.
- Y7 PROVIDE AXIS P3268-LVE CAMERA AND CAMERA MOUNT.

CONSTRUCTION DOCUMENTS

PROJECT #: 123006  
DRAWN BY: Author  
CHECKED BY: Checker  
ISSUED: 04.26.2024



LEVEL 1 - AREA C - SYSTEMS

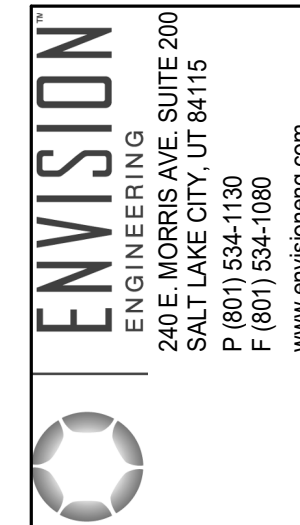
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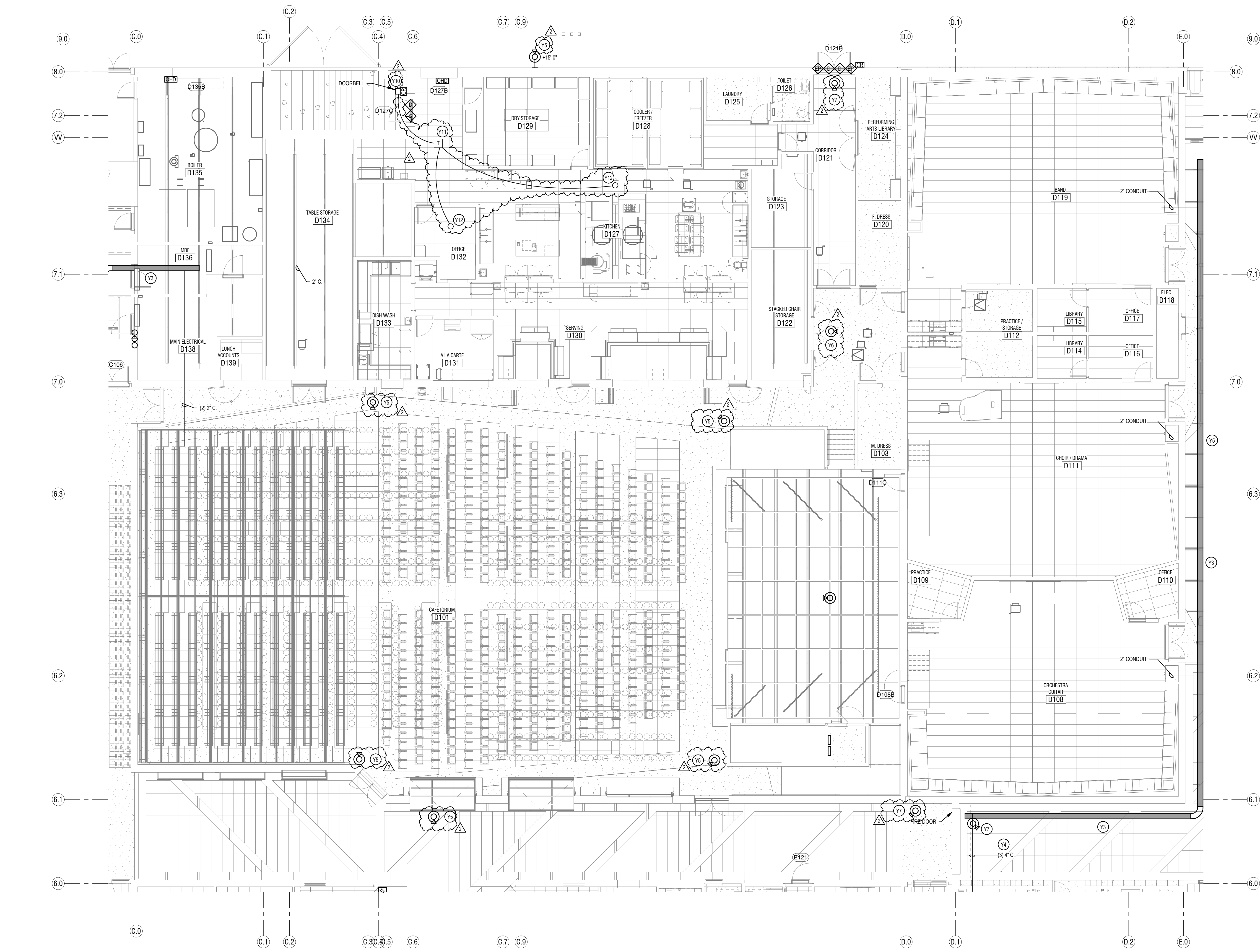
NIBLEY MIDDLE SCHOOL

3050 S 920 W NIBLEY, UTAH

CACHE COUNTY SCHOOL DISTRICT



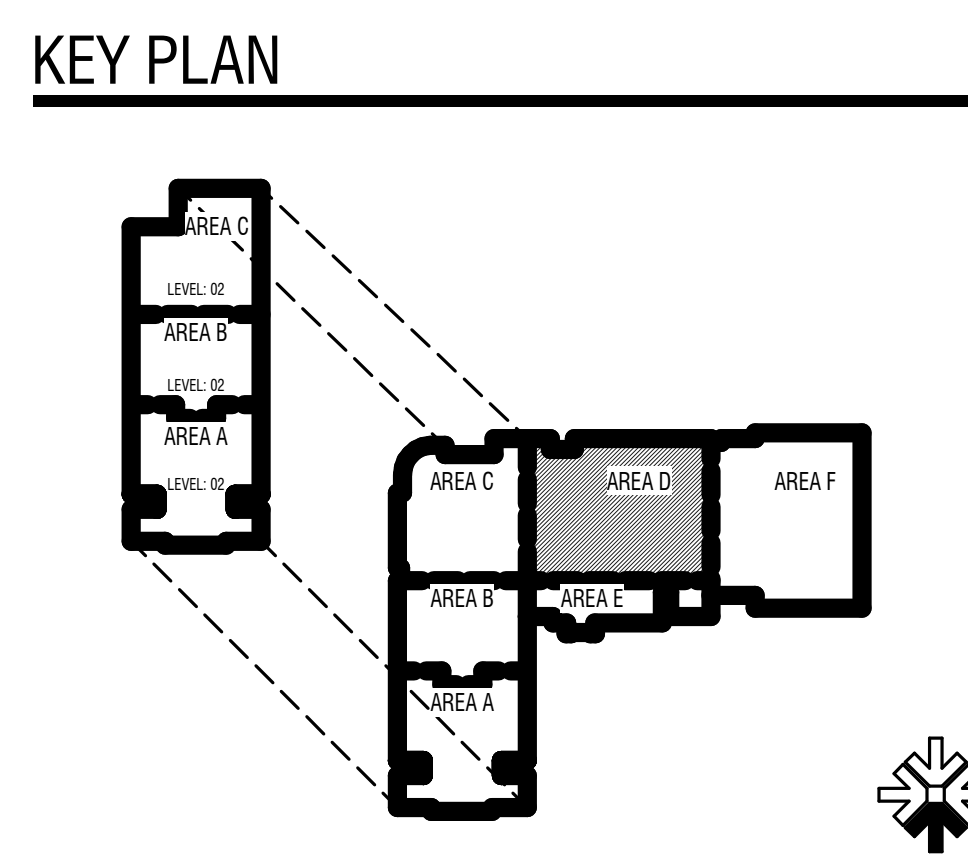
design west architects  
255 SOUTH 400 WEST  
LOGAN UT 84321  
735 NORTH 400 WEST  
SALT LAKE CITY UT 84103



1 LEVEL 1 FLOOR PLAN - AREA D - SYSTEMS  
SCALE: 1/8" = 1'-0"

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  - THE DIVISION 28 CONTRACTOR SHALL DETERMINE THE EXACT ROUTING OF ALL CONDUITS IN THE FIELD. THIS PLAN REPRESENTS A SCHEMATIC REPRESENTATION OF DEVICE LOCATIONS, AND CONDUIT RUNS.
  - ALL CONDUITS THAT TERMINATE ABOVE THE CEILING SHALL TERMINATE WITH NYLON BUSHING.
  - CONTRACTOR SHALL COORDINATE ALL CEILING MOUNTED DEVICES WITH THE LIGHTING PLANS. RELOCATE DEVICES AS NECESSARY. RELOCATED DEVICES SHALL COMPLY WITH ALL NFPA SPACING REQUIREMENTS.

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- Y4 KEEP ONE CONDUIT EMPTY FOR FUTURE USE. PROVIDE PULL STRING AND LABEL.
- Y5 PROVIDE AXIS P3738-PLE CAMERA AND CAMERA MOUNT.
- Y6 PROVIDE AXIS P4707-PLE CAMERA AND CAMERA MOUNT.
- Y7 PROVIDE AXIS P3268-LVE CAMERA AND CAMERA MOUNT.
- Y10 PROVIDE EDWARDS SIGNALING #1768C-B (OR APPROVED EQUIVALENT) 24V LOW VOLTAGE WEATHERPROOF BUTTON FOR DOORBELL.
- Y11 PROVIDE EDWARDS SIGNALING #559 (OR APPROVED EQUIVALENT) 40VA, 120V PRIMARY, 24V SECONDARY, CLASS 2 LOW VOLTAGE ENCLOSURE. MOUNT ABOVE THE ACCESSIBLE CEILING.
- Y12 PROVIDE EDWARDS SIGNALING #339GI (OR APPROVED EQUIVALENT) 24V CHIME. CONFIRM MOUNTING LOCATIONS WITH THE OWNER.



MARK	DATE	DESCRIPTION
PROJECT #:	123006	
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ISSUED:	04.26.2024	

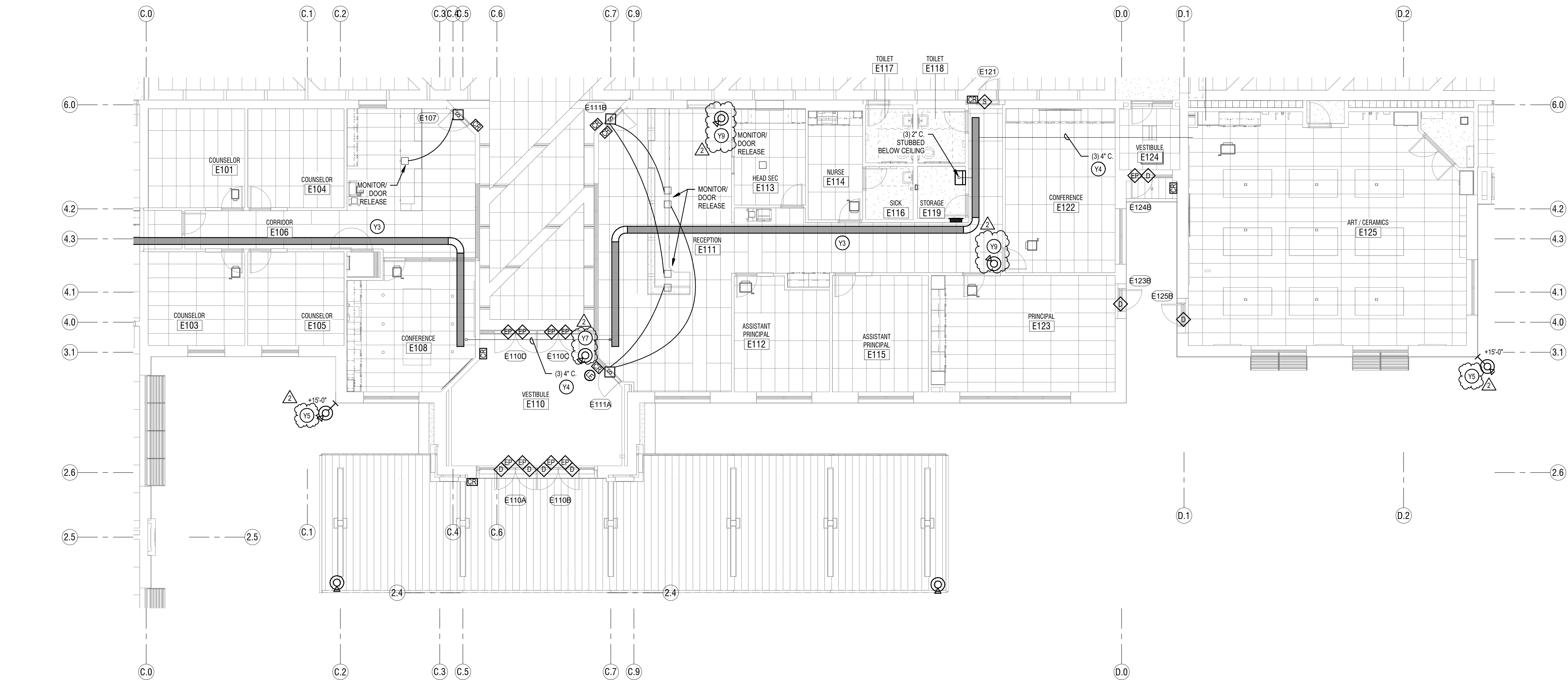
CONSTRUCTION DOCUMENTS



TO BE DETERMINED

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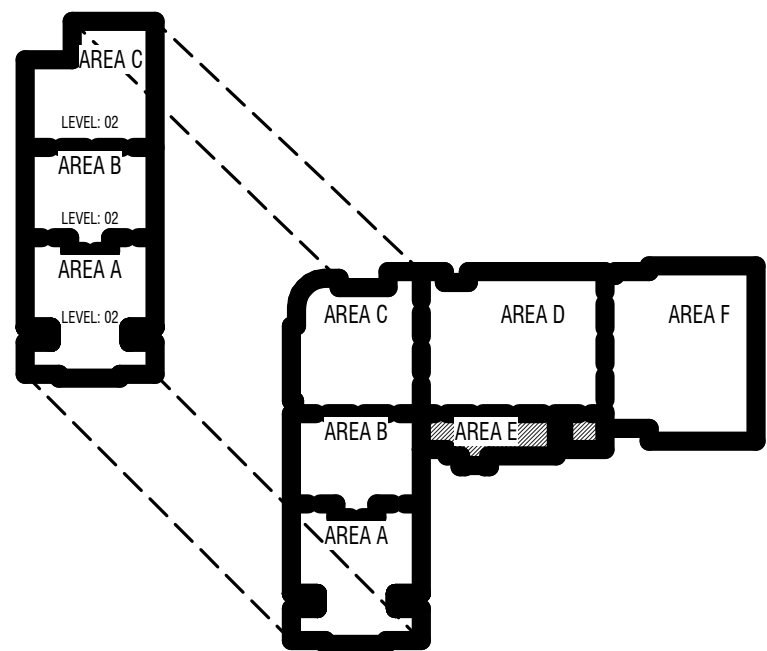


1 LEVEL 1 FLOOR PLAN - AREA E - SYSTEMS  
SCALE: 1/8" = 1'-0"

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- Y4 KEEP ONE CONDUIT EMPTY FOR FUTURE USE. PROVIDE PULL STRING AND LABEL.
- Y5 PROVIDE AXIS P3738-PLC CAMERA AND CAMERA MOUNT.
- Y7 PROVIDE AXIS P3268-LVE CAMERA AND CAMERA MOUNT.
- Y9 THIS CAMERA IS ROUGH-IN ONLY. COIL 20' OF CABLE ABOVE CEILING AT THE CAMERA LOCATION SHOWN. TERMINATE CABLE AND TEST. DO NOT PROVIDE A CAMERA OR MOUNT AT THIS LOCATION.

**KEY PLAN**



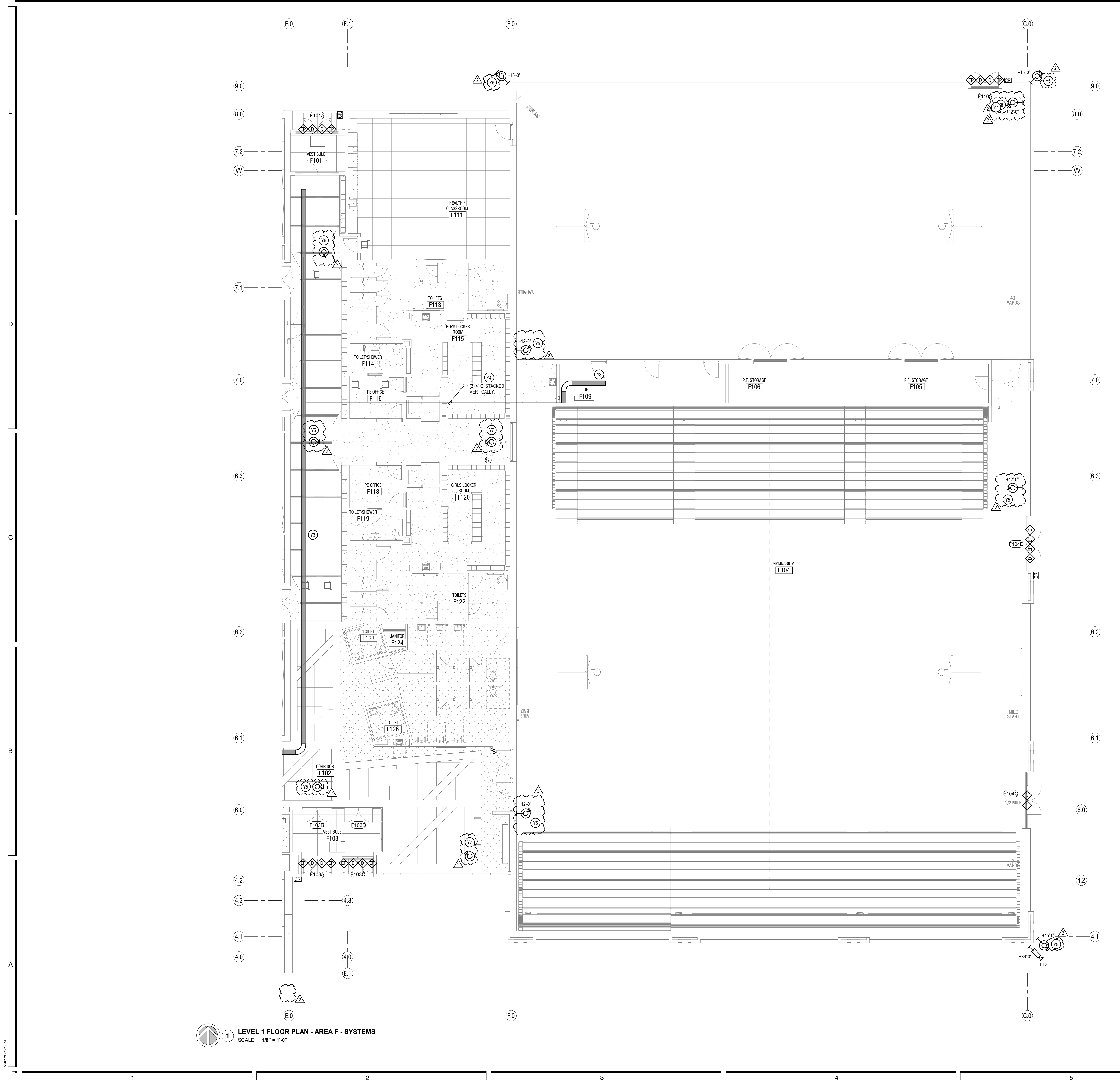
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**CONSTRUCTION DOCUMENTS**

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ADDENDUM 5	05/22/24	

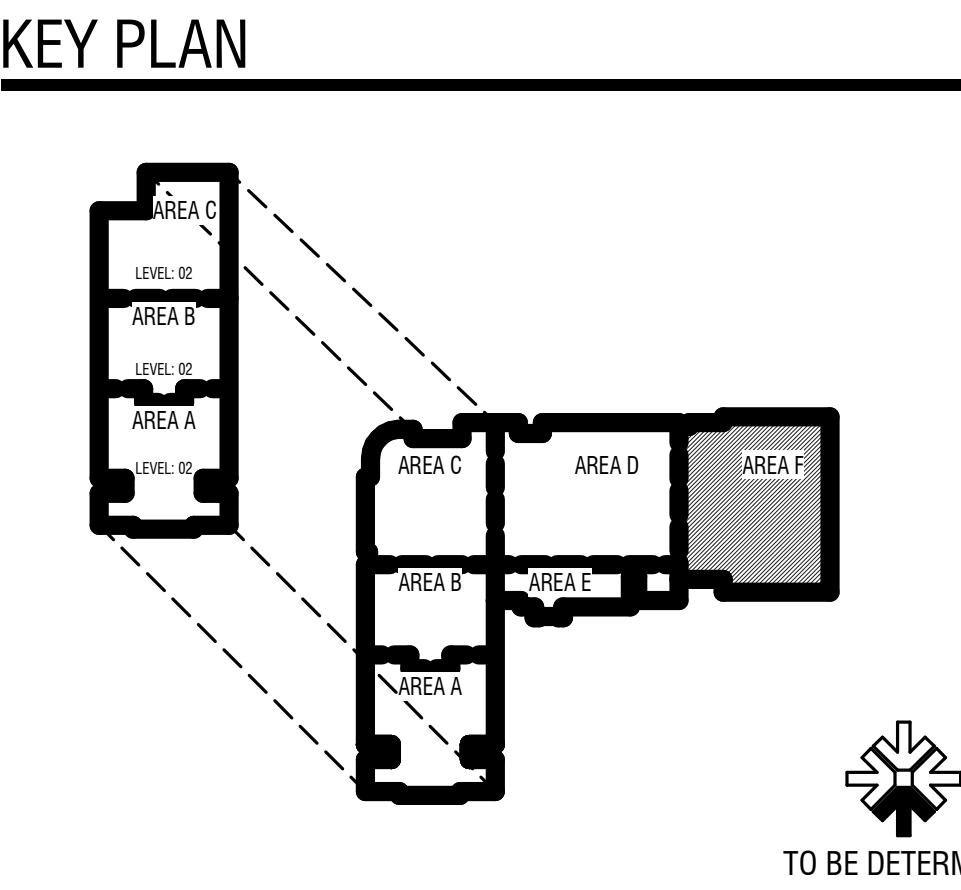
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DRAWN BY:	Author
CHECKED BY:	Checker
ISSUED:	04.26.2024





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- Y6 PROVIDE AXIS P4707-PLC CAMERA AND CAMERA MOUNT.
- Y7 PROVIDE AXIS P3268-LVE CAMERA AND CAMERA MOUNT.
- Y8 PROVIDE AXIS Q6135-LE CAMERA AND CAMERA MOUNT.



**CONSTRUCTION DOCUMENTS**

**design west architects**

255 SOUTH 400 WEST  
735 NORTH 400 WEST  
SALT LAKE CITY UT 84103

**ENVISION**

ENGINEERS  
240 E. MORRIS AVE. SUITE 200  
SALT LAKE CITY, UT 84115  
P: 801.534.1130  
www.envisioneng.com

**NIBLEY MIDDLE SCHOOL**

3050 S 920 W NIBLEY, UTAH  
CACHE COUNTY SCHOOL DISTRICT

**PROJECT #:** 123006

**DRAWN BY:** Author

**CHECKED BY:** Checker

**ISSUED:** 04.26.2024

**LEVEL 1 - AREA F - SYSTEMS**

**E-416**

**DATE:** 05/22/24

**DESCRIPTION:**

MARK	DATE	DESCRIPTION
1	05/22/24	ADDITIONAL S

**PROFESSIONAL ENGINEER**

STATE OF UTAH

77411

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E

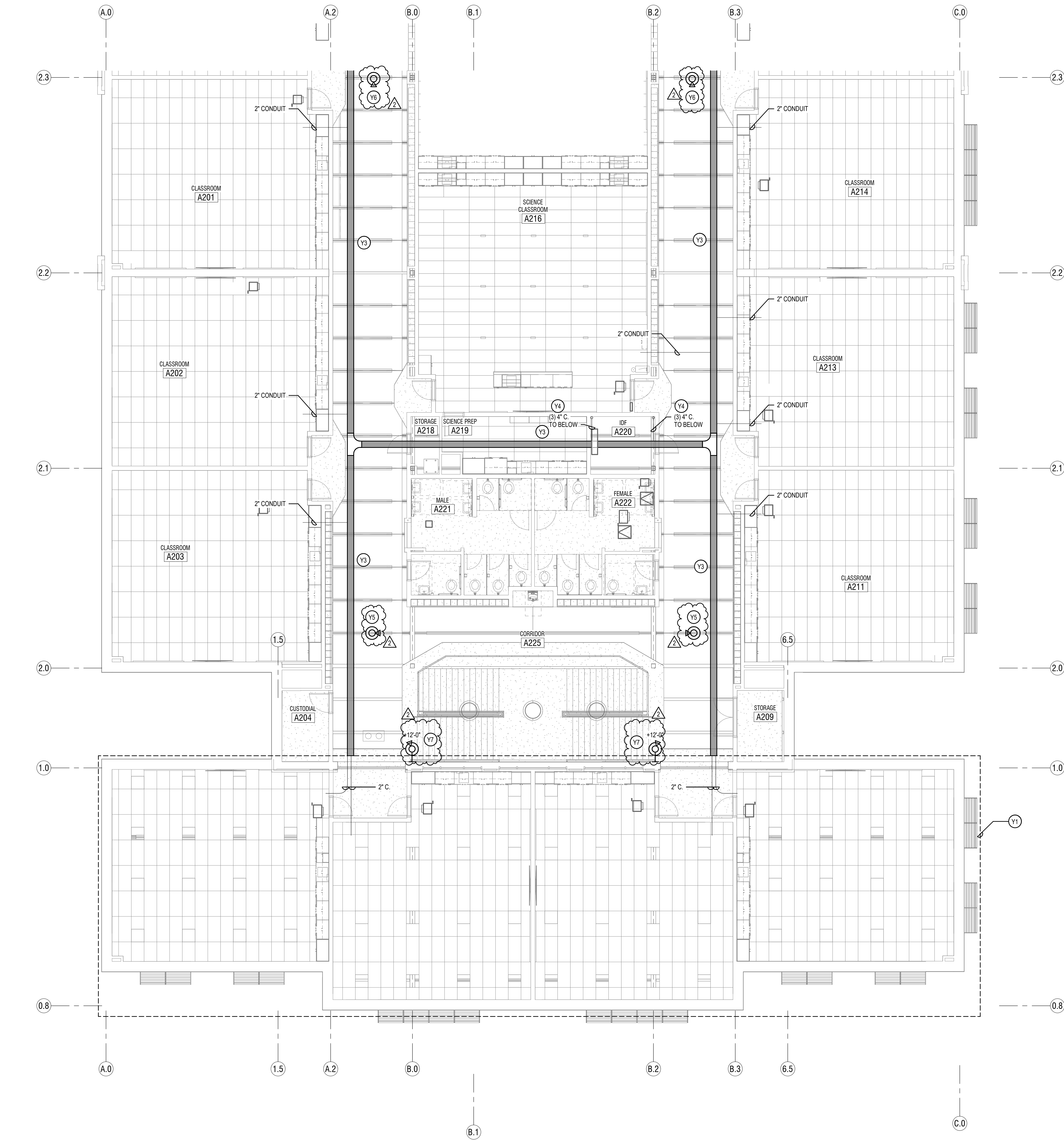
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1 LEVEL 2 FLOOR PLAN - AREA A - SYSTEMS  
SCALE: 1/8\" = 1'-0"

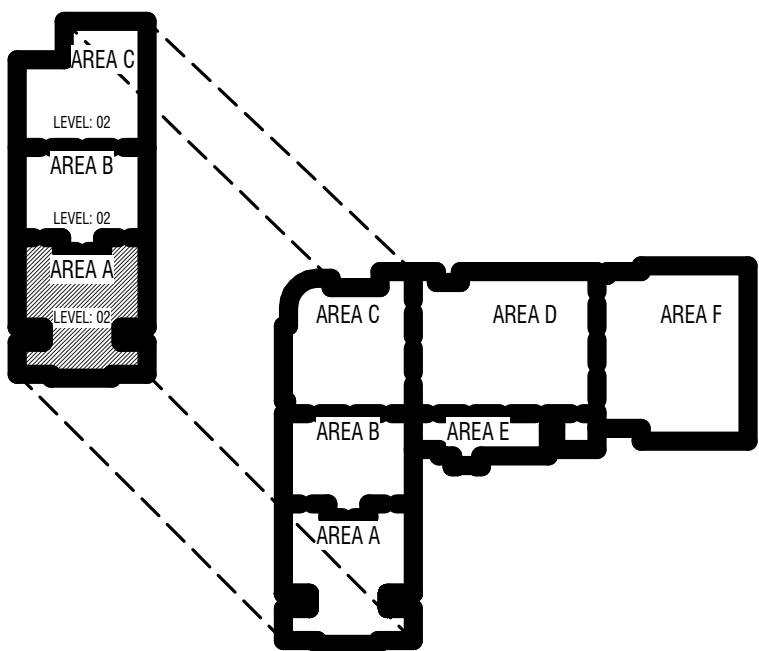
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KEYED NOTES ①

- Y1 UNDER THE BASE BID, INCLUDE ALL WORK IN THIS AREA AS SHOWN ON THE PLANS. UNDER ALTERNATE #1, THIS AREA WILL BE REMOVED FROM THE PROJECT. PROVIDE A SEPARATE COST TO BE ISSUED AS A CREDIT FOR ALL WORK IN THIS AREA AS SHOWN ON THE PLANS.
- Y3 PROVIDE 12\" WIDE BY 4\" HIGH BASKET TYPE CABLE TRAY AS SHOWN. PROVIDE SOLID BOTTOM AND SOLID TOP COVER IN CABLE TRAYS IN ALL AREAS THAT ARE OPEN TO STRUCTURE. SEE DETAILS AND SPECIFICATIONS FOR MORE INFORMATION. MOUNT CABLE TRAY 4\" ABOVE ACCESSIBLE CEILINGS. IN OPEN CEILINGS, MOUNT CABLE TRAY AT 10'-0\" TO BOTTOM OF TRAY. IN LOCATIONS WHERE DUCTWORK IS IN THE WAY, LOWER CABLE TRAY SO THERE IS 4\" OF CLEAR SPACE BETWEEN THE TOP OF THE CABLE TRAY AND THE DUCTWORK.
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KEY PLAN



CONSTRUCTION DOCUMENTS

MARK	DATE	DESCRIPTION
PROJECT #:	123006	
DRAWN BY:	Author	
CHECKED BY:	Checker	
ISSUED:	04.26.2024	

PROJECT #:



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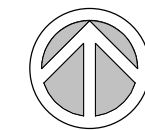
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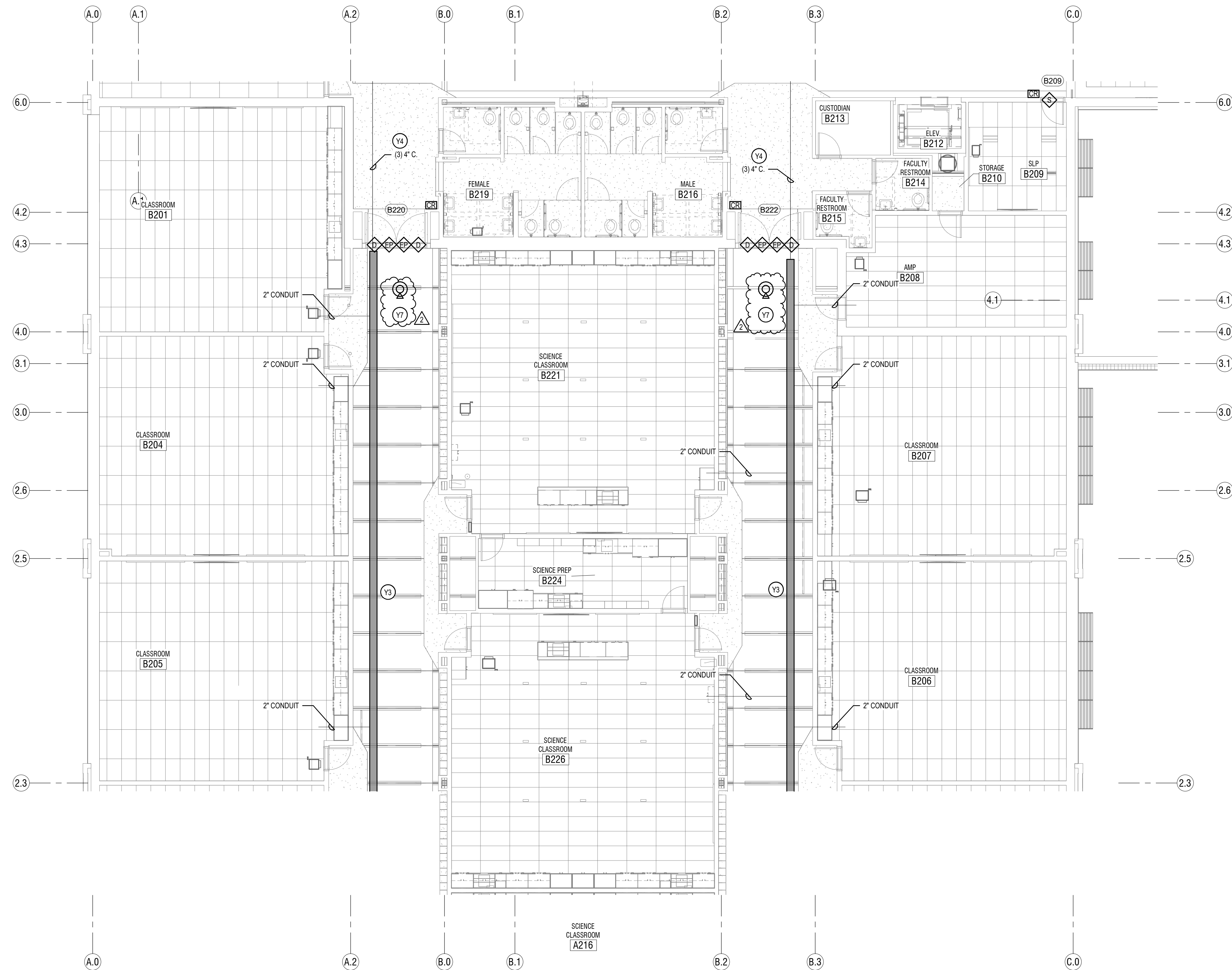
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1 LEVEL 2 FLOOR PLAN - AREA B - SYSTEMS  
SCALE: 1/8" = 1'-0"



#### SYSTEMS GENERAL NOTES:

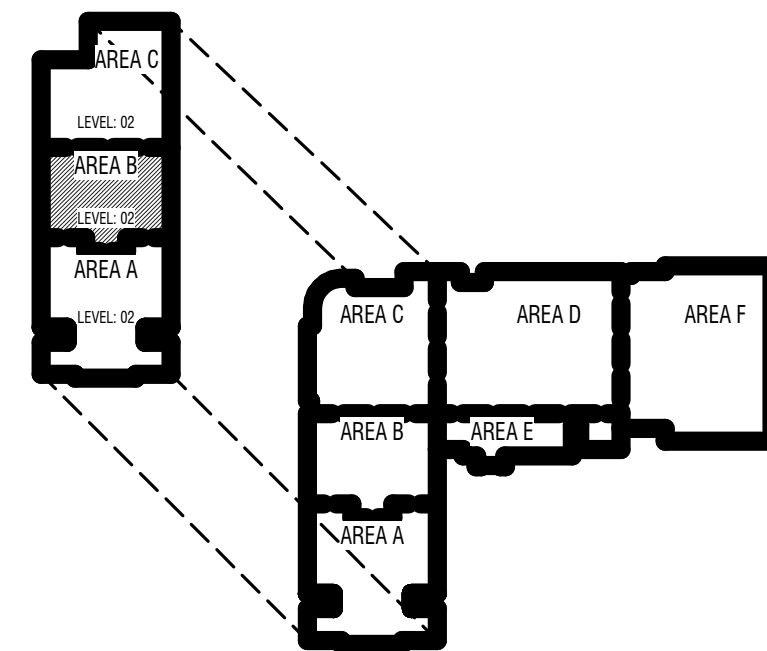
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#### KEYED NOTES ①

- Y3 PROVIDE 12\"/>



#### KEY PLAN



#### CONSTRUCTION DOCUMENTS

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PROJECT #:	123006	
DRAWN BY:	Author	
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ISSUED:	04.26.2024	

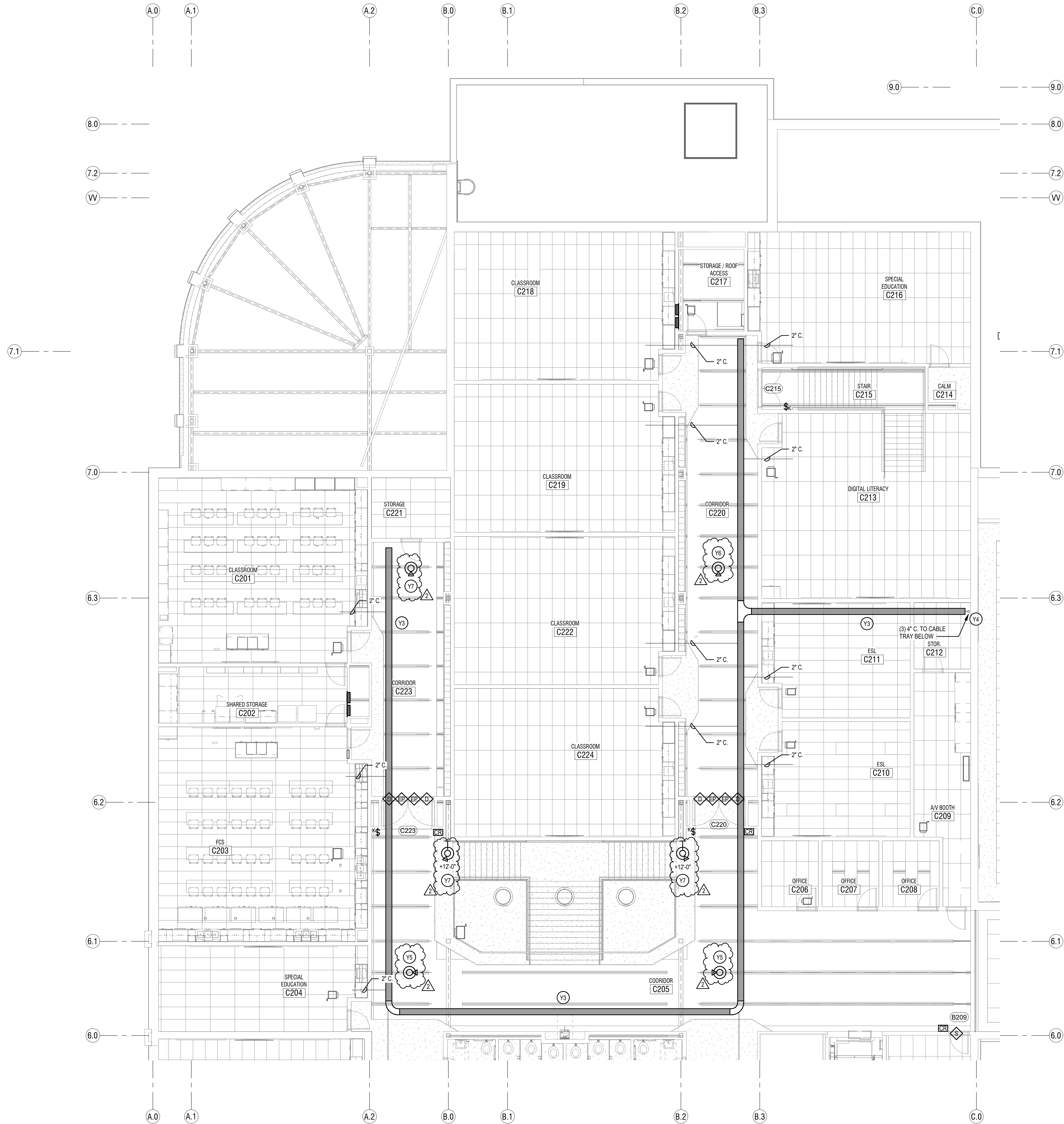
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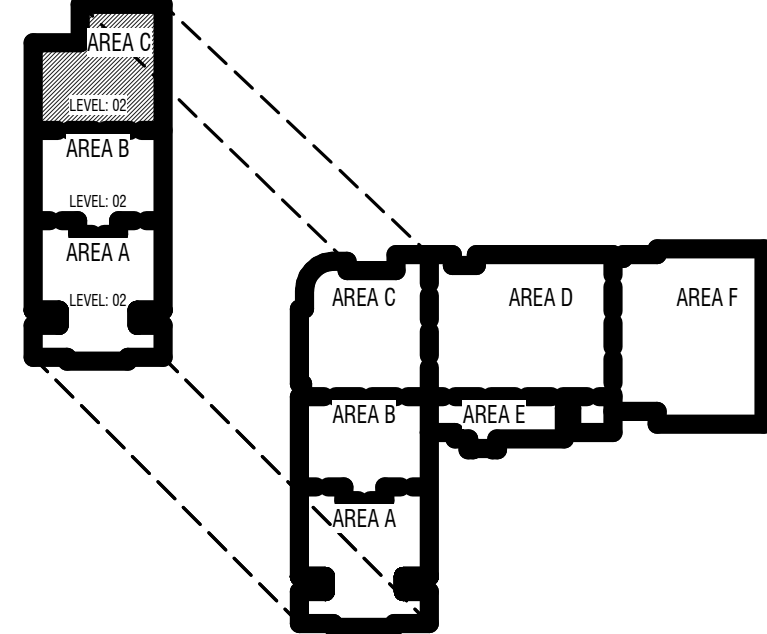
**1 LEVEL 2 FLOOR PLAN - AREA C - SYSTEMS**  
SCALE: 1/8" = 1'-0"



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**KEY PLAN**



**CONSTRUCTION DOCUMENTS**

MARK	DATE	DESCRIPTION
PROJECT #:	123006	
DRAWN BY:	Author	
CHECKED BY:	Checker	
ISSUED:	04.26.2024	

PROJECT #:

123006

DRAWN BY:

Author

CHECKED BY:

Checker

ISSUED:

04.26.2024



**DOORS HELD OPEN BY ELECTRONIC DOOR HOLDERS.**

DOORS THAT ARE HELD OPEN BY ELECTRONIC DOOR HOLDER SHALL FUNCTION AS FOLLOWS:

FIRE ALARM  
UPON ACTIVATION OF THE FIRE ALARM SYSTEM THE DOORS BEING HELD OPEN WITH ELECTRONIC DOOR HOLDERS SHALL RELEASE AND CLOSE.

THE FIRE ALARM SYSTEM SHALL NOTIFY THE ACCESS CONTROL SYSTEM THAT THE FIRE ALARM HAS ACTIVATED AND UNLOCK ALL DOORS THAT ARE CONTROLLED THROUGH THE ACCESS CONTROL SYSTEM.

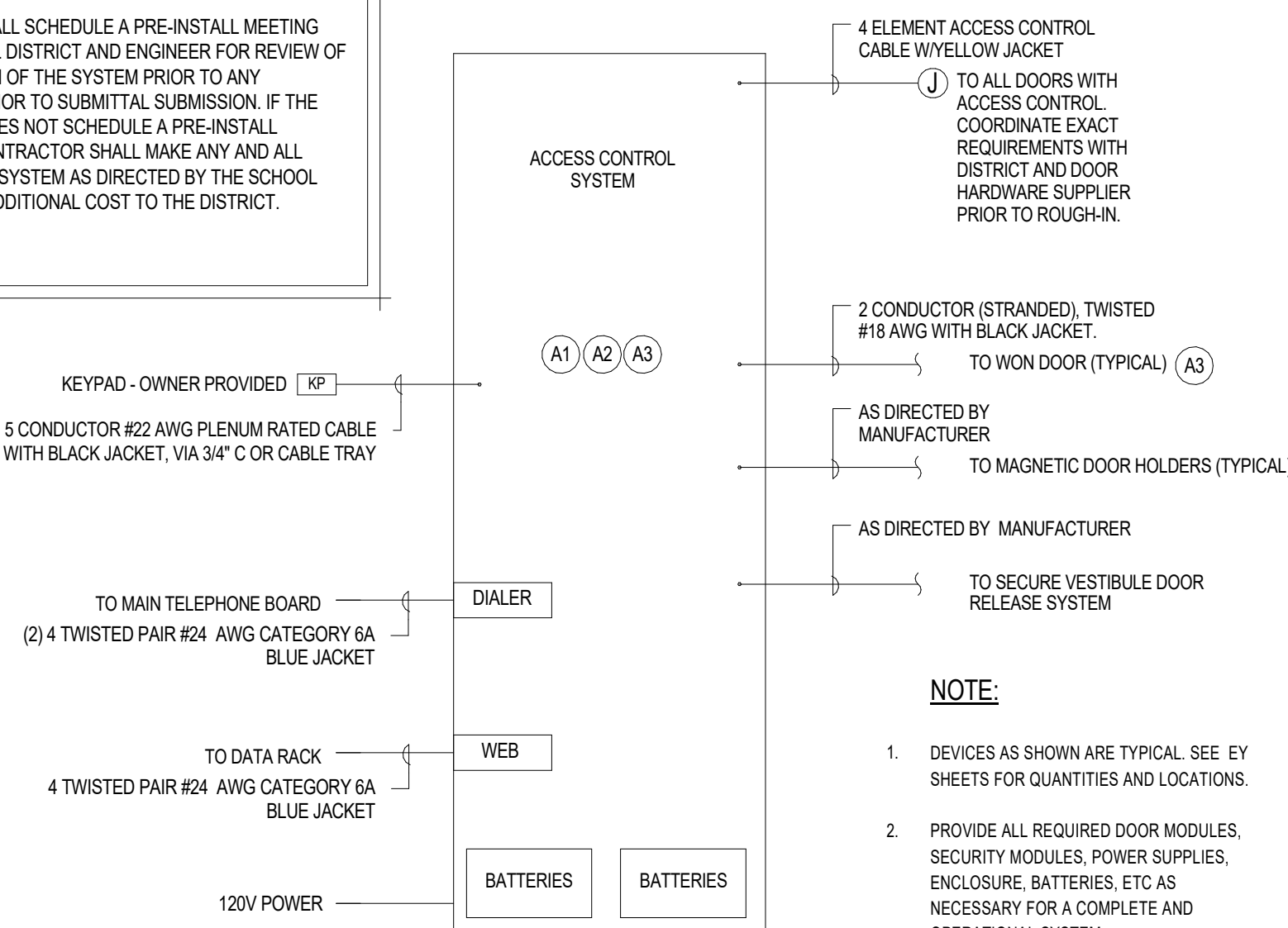
LOCK DOWN  
UPON ACTIVATION OF A LOCK DOWN THE ACCESS CONTROL PANEL SHALL LOCK ALL DOORS CONTROLLED BY THE ACCESS CONTROL SYSTEM.

THE ACCESS CONTROL SYSTEM SHALL NOTIFY THE FIRE ALARM SYSTEM THAT A LOCK DOWN HAS BEEN INITIATED AND RELEASE ALL DOOR HELD OPEN WITH ELECTRONIC DOOR HOLDERS.

THE FIRE ALARM SYSTEM AND ACCESS CONTROL SYSTEM INTEGRATORS SHALL WORK CLOSELY TOGETHER AND WITH THE DISTRICT TO PROVIDE THE REQUIRED PROGRAMMING AND INPUTS SO DOORS FUNCTION AS STATED ABOVE.

**NOTE:**

CONTRACTOR SHALL SCHEDULE A PRE-INSTALL MEETING WITH THE SCHOOL DISTRICT AND ENGINEER FOR REVIEW OF THE INSTALLATION OF THE SYSTEM PRIOR TO ANY ROUGH-IN AND PRIOR TO SUBMITTAL SUBMISSION. IF THE CONTRACTOR DOES NOT SCHEDULE A PRE-INSTALL MEETING, THE CONTRACTOR SHALL MAKE ANY AND ALL CHANGES TO THE SYSTEM AS DIRECTED BY THE SCHOOL DISTRICT AT NO ADDITIONAL COST TO THE DISTRICT.

**NOTE:**

- DEVICES AS SHOWN ARE TYPICAL. SEE EY SHEETS FOR QUANTITIES AND LOCATIONS.
- PROVIDE ALL REQUIRED DOOR MODULES, SECURITY MODULES, POWER SUPPLIES, ENCLOSURE, BATTERIES, ETC AS NECESSARY FOR A COMPLETE AND OPERATIONAL SYSTEM.

**SECURITY / ACCESS CONTROL SYSTEM GENERAL NOTES:**

- ALLOW SUFFICIENT LENGTH OF CABLE FOR TERMINATION AT EACH END.
- PLENUM RATED CABLE.
- LABEL ALL CABLES AT BOTH ENDS WITH ROOM NUMBER.
- COORDINATE ALL REQUIREMENTS WITH WEBER SCHOOL DISTRICT PRIOR TO ROUGH-IN.

**ACCESS CONTROL KEYED NOTES: (A1)**

- ACCESS CONTROL SYSTEM TO POWER ALL ELECTRIFIED DOOR HARDWARE THROUGH THE ACCESS CONTROL SYSTEM. CONFIRM ALL REQUIREMENTS WITH THE DOOR HARDWARE SUPPLIER. PROVIDE ALL REQUIRED POWER SUPPLIES AS NECESSARY FOR A COMPLETE AND OPERATIONAL SYSTEM.
- FIRE ALARM SYSTEM TO POWER ALL MAGNETIC DOOR HOLDERS, WHERE CALLED OUT THROUGH FIRE ALARM SYSTEM. CONFIRM ALL REQUIREMENTS WITH THE DOOR HARDWARE SUPPLIER. PROVIDE ALL REQUIRED POWER SUPPLIES AS NECESSARY FOR A COMPLETE AND OPERATIONAL SYSTEM.
- ACCESS CONTROL SYSTEM TO CONTROL ALL WON DOORS AS CALLED OUT. CONFIRM ALL REQUIREMENTS WITH THE DOOR SUPPLIER. PROVIDE ALL REQUIRED DOOR CONTROLLERS AS NECESSARY FOR A COMPLETE AND OPERATIONAL SYSTEM.
- REMOTE LINE INTERFACE (RLI) THE MODULE SHALL BE CAPABLE OF HAVING REMOTE INPUTS FOR LOCK/UNLOCK, PATRON DEVICES (PAT) AND RESET AND SHALL BE WITHIN 5,000 FEET OF THE LOK. THE LINES BETWEEN THE LOK MODULE AND THE RLI SHALL BE FULLY SUPERVISED FOR LINE SHORTS, OPEN LINES, AND LINES SHORTED TO GROUND. THE LOCK/UNLOCK AND PAT INPUTS SHALL BEHAVE THE SAME AS THE LOCAL INPUTS OF THE SAME NAME WITH THE EXCEPTION THAT THE RLI PAT INPUT IS NOT IGNORED WHEN THE PANIC INPUT HAS BEEN ASSERTED. THE RESET INPUT SHALL BE CAPABLE OF RESTORING THE DOOR TO NORMAL OPERATION FROM THE PANIC AND FIRE MODES PROVIDED THE CAUSE FOR THE PANIC AND/OR FIRE CONDITION HAS BEEN RESTORED TO THE RLI INPUTS CAN ACTIVATE WITH DRY CONTACTS OR THEY CAN BE DRIVEN BY VOLTAGES BETWEEN 12-24 DC VOLTS. EACH CIRCUIT HAS A SEPARATE SELECTOR SWITCH FOR THE DRY CONTACT VS VOLTAGE STYLE INPUTS. LOK MODULE IS FURNISHED WITH THE WON DOOR. REFER TO SPECIFICATION 065513 FOR ADDITIONAL INFORMATION.

7

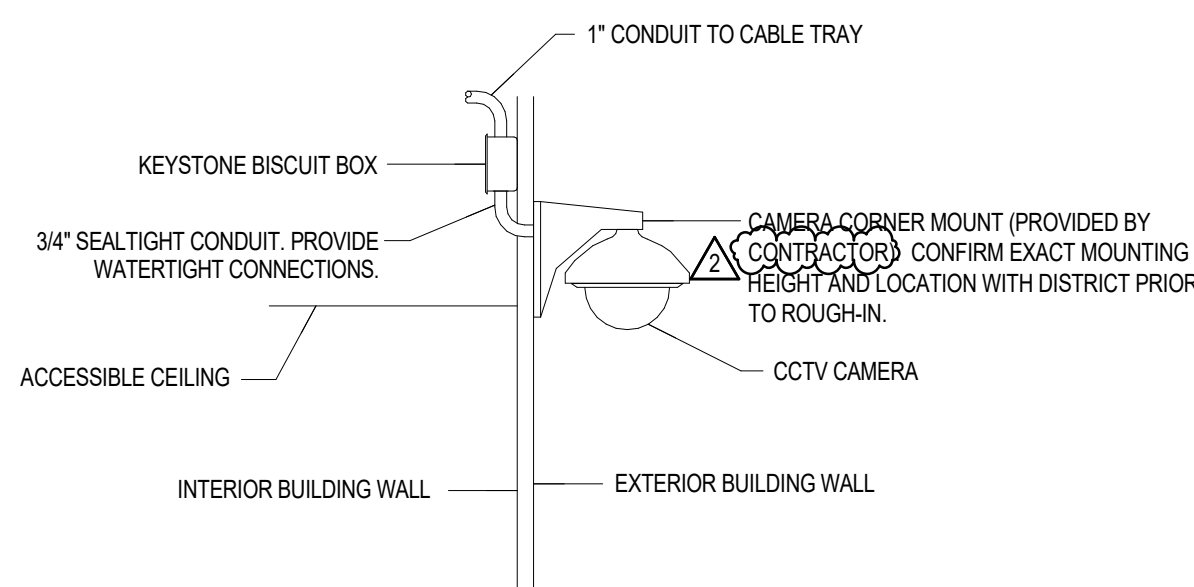
**SECURITY SYSTEM / ACCESS CONTROL SYSTEM RISER DIAGRAM**

SCALE: NONE

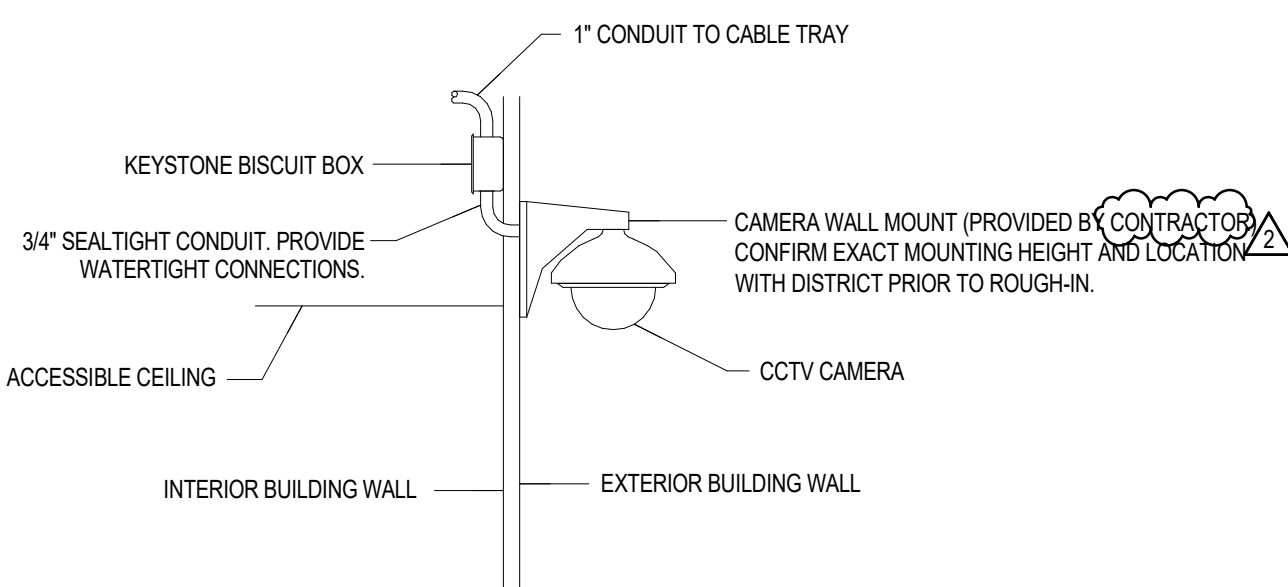
ITEM	FURNISHED AND TESTED BY		INSTALLED BY	
	CCSD	CONTRACTOR	CCSD	CONTRACTOR
FACP, FATP AND MAC PANELS		X		X
DEVICES (SMOKE DETECTORS, HORN/STROBES, CARBON MONOXIDE DETECTORS, MONITOR MODULES, CONTROL MODULES, BASE CONNECTIONS, ETC.)		X		X
FIRE ALARM TWISTED PAIR CABLE		X		X
RACEWAY - CONDUIT, BACKBOXES, ETC.		X		X
PRINTED LABELING OF ALL PATCH PANELS, DEVICE FACEPLATES, WRAPS, ETC.		X		X
ALL CONSUMABLES (TAPE, STRING, TIE-WRAPS, VELCRO, ANCHORS, BOLTS, NUTS, SCREWS, WRAP LABELS, PRINTED LABELS, ETC.)		X		X

ITEM	FURNISHED BY		INSTALLED AND TESTED BY	
	CCSD	CONTRACTOR	CCSD	CONTRACTOR
SWITCHES		X		X
PANELS		X		X
CARD READER AND HARDWARE CABLING (4 ELEMENT ACCESS CONTROL CABLE, YELLOW JACKET)		X		X
RACEWAY - CONDUIT, CABLE TRAY, BACKBOXES, ETC.		X		X
PRINTED LABELING OF ALL PATCH PANELS, DEVICE FACEPLATES, WRAPS, ETC.		X		X
ALL CONSUMABLES (TAPE, STRING, TIE-WRAPS, VELCRO, ANCHORS, BOLTS, NUTS, SCREWS, WRAP LABELS, PRINTED LABELS, ETC.)		X		X

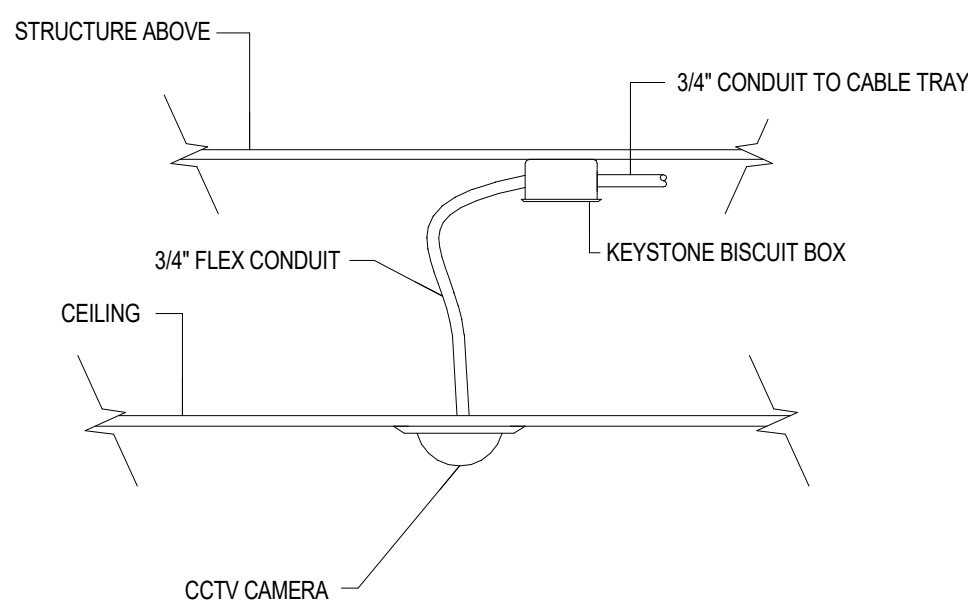
ITEM	FURNISHED BY		INSTALLED AND TESTED BY	
	CCSD	CONTRACTOR	CCSD	CONTRACTOR
SWITCHES		X		X
NVR NETWORK VIDEO RECORDING SERVER, MONITORS, ETC.		X		X
SECURITY CAMERAS AND MOUNTS		X		X
ALL 6/4 INCH HORIZONTAL CABLING - ORANGE (CAT 6A CABLES)		X		X
RACEWAY - CONDUIT, CABLE TRAY, BACKBOXES, ETC.		X		X
PRINTED LABELING OF ALL PATCH PANELS, DEVICE FACEPLATES, WRAPS, ETC.		X		X
ALL CONSUMABLES (TAPE, STRING, TIE-WRAPS, VELCRO, ANCHORS, BOLTS, NUTS, SCREWS, WRAP LABELS, PRINTED LABELS, ETC.)		X		X

**2 EXTERIOR CORNER MOUNTED CAMERA DETAIL**

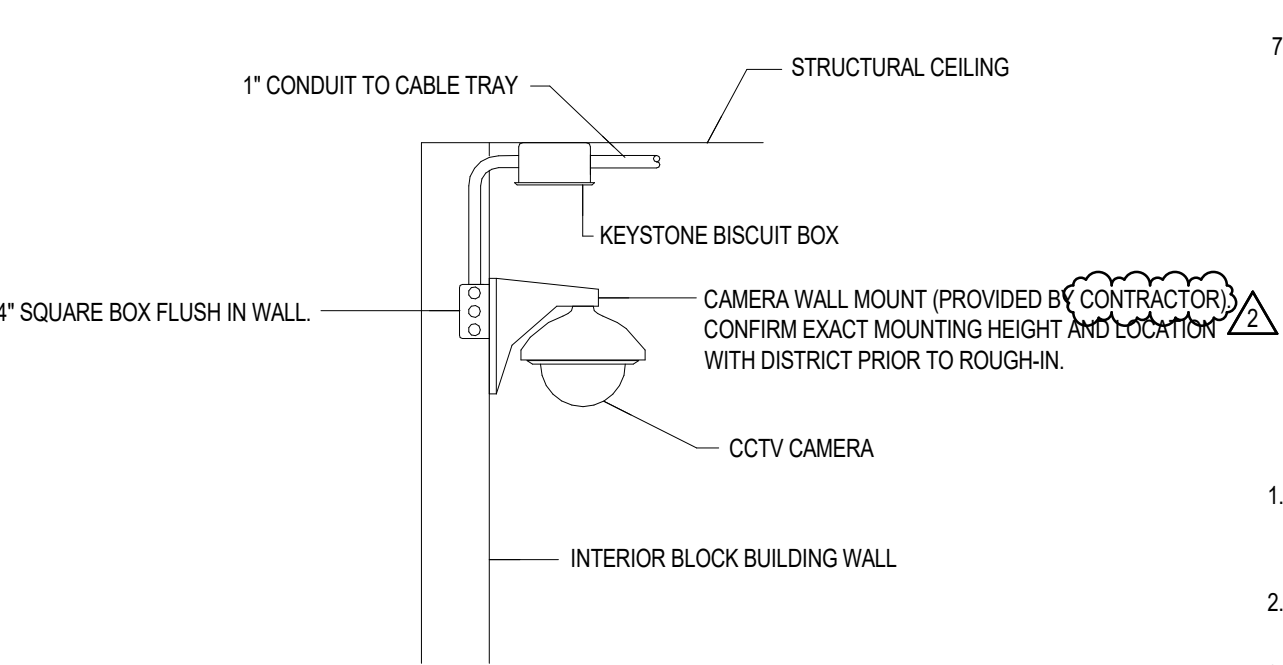
SCALE: NONE

**1 EXTERIOR WALL MOUNTED CAMERA DETAIL**

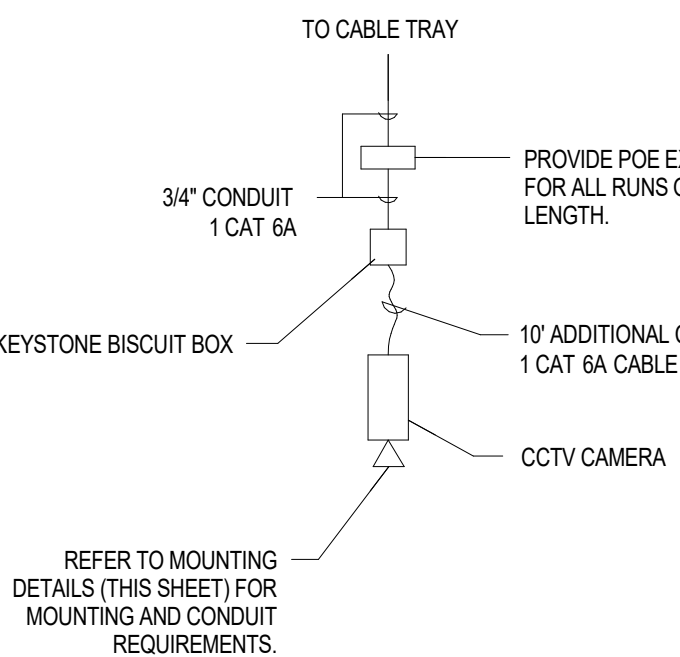
SCALE: NONE

**4 INTERIOR CEILING MOUNTED CAMERA DETAIL**

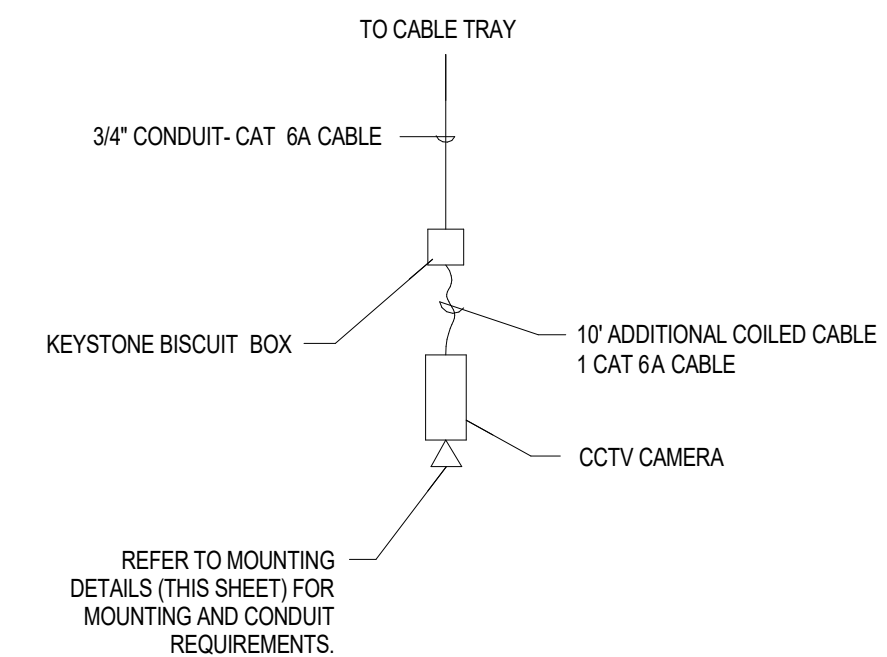
SCALE: NONE

**3 INTERIOR WALL MOUNTED CAMERA DETAIL**

SCALE: NONE

**5 CCTV CAMERA WIRING DETAIL**

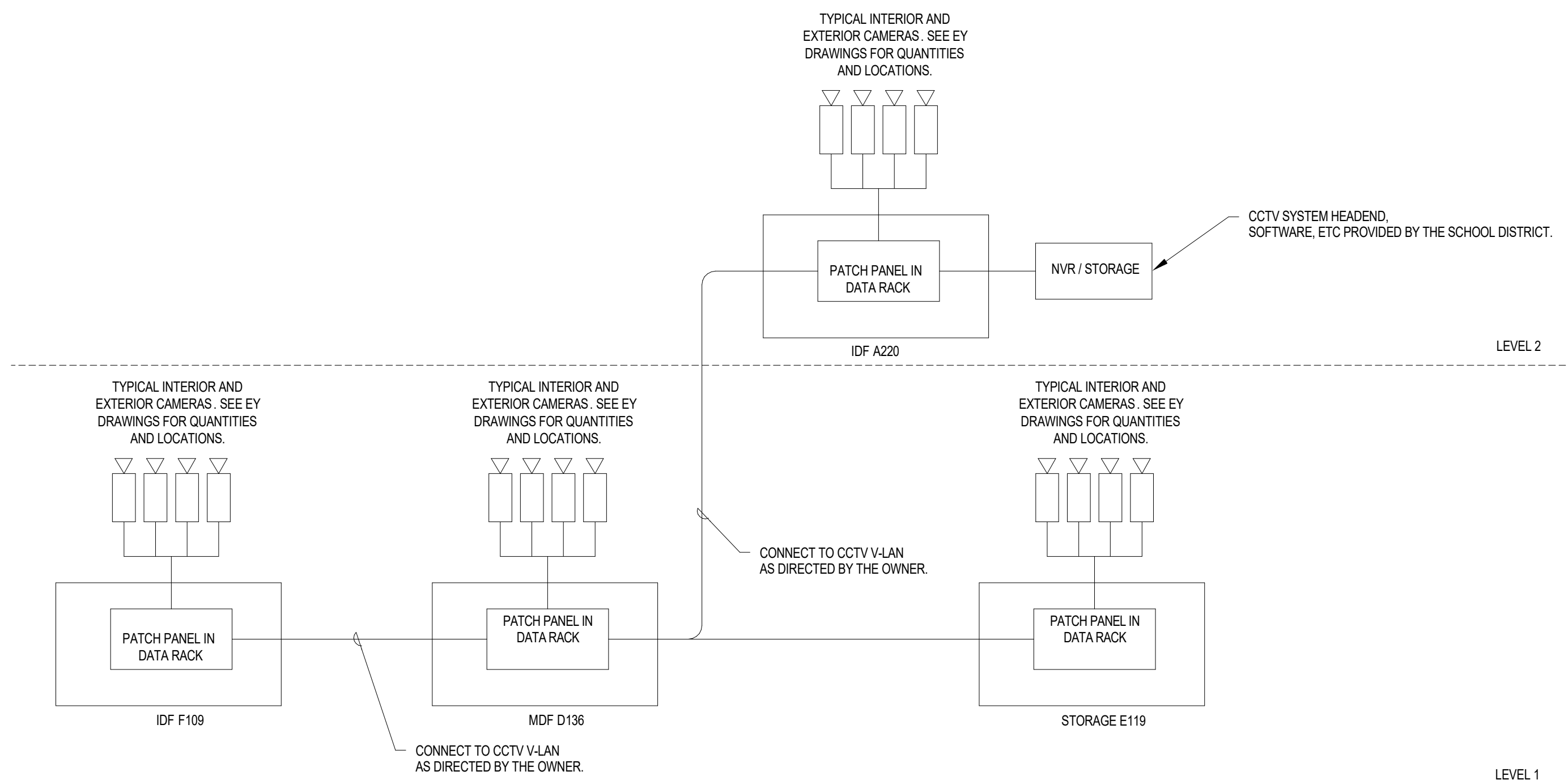
SCALE: NONE



CCTV MOUNTING DIAGRAMS AS SHOWN ARE FOR BASIC CONCEPT AND LAYOUT. CONTRACTOR SHALL COORDINATE ALL ROUGH-IN REQUIREMENTS WITH THE OWNER PRIOR TO ANY ROUGH-IN.

**NOTE:**

CONTRACTOR SHALL SCHEDULE A PRE-INSTALL MEETING WITH THE SCHOOL DISTRICT AND ENGINEER FOR REVIEW OF THE INSTALLATION OF THE SYSTEM PRIOR TO ANY ROUGH-IN AND PRIOR TO SUBMITTAL SUBMISSION. IF THE CONTRACTOR DOES NOT SCHEDULE A PRE-INSTALL MEETING, THE CONTRACTOR SHALL MAKE ANY AND ALL CHANGES TO THE SYSTEM AS DIRECTED BY THE SCHOOL DISTRICT AT NO ADDITIONAL COST TO THE DISTRICT.



6

**CCTV SYSTEM RISER DIAGRAM**

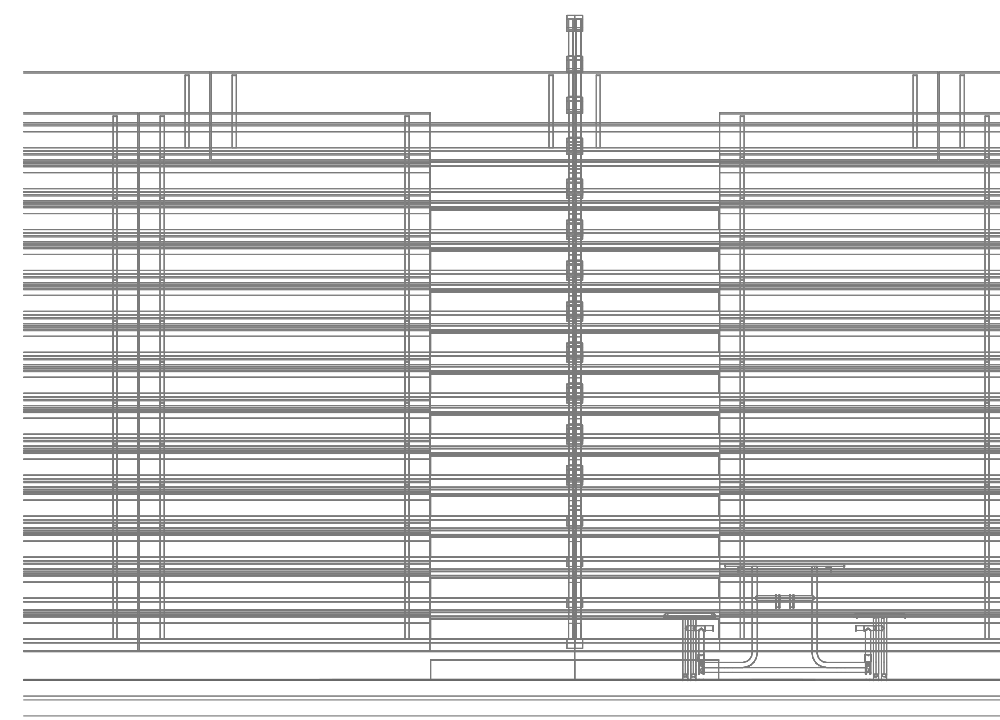
SCALE: NONE

**CCTV GENERAL NOTES:**

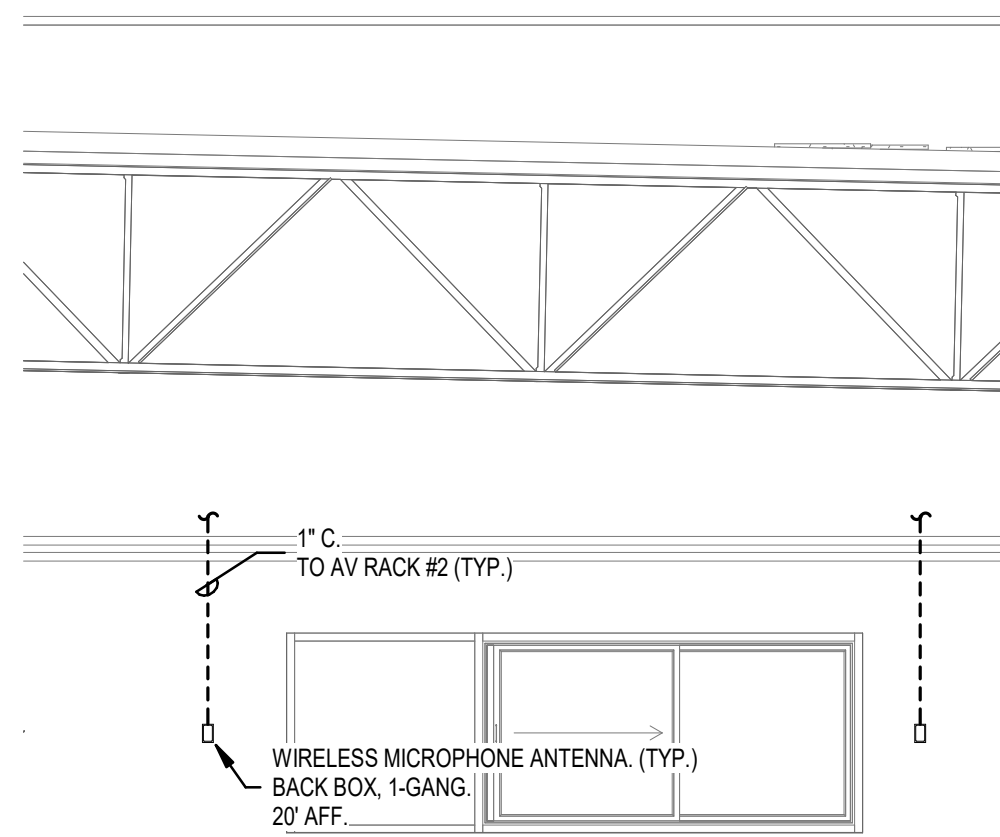
- COORDINATE ALL CAMERA LOCATIONS, WIRING AND ROUGH-IN REQUIREMENTS WITH OWNER AND SUPPLIER PRIOR TO ROUGH-IN.
- INSTALL CABLES IN RACEWAYS AND CABLE TRAYS EXCEPT ABOVE LAY-IN TILE ACCESSIBLE CEILINGS. INSTALL CABLES IN RACEWAY WHERE ROUTED IN CONSOLES, CABINETS, DESKS, AND COUNTERS. INSTALL CABLING WITH HORIZONTAL AND VERTICAL CABLE GUIDES IN TELECOMMUNICATIONS SPACES WITH TERMINATING HARDWARE AND INTERCONNECTION EQUIPMENT. WHERE CABLES ARE ROUTED ABOVE ACCESSIBLE LAY-IN TILE SUSPENDED CEILINGS, SECURE AND SUPPORT CABLES WITH J-HOOKS A MINIMUM OF 8 INCHES (203 MM) ABOVE CEILINGS AND NOT MORE THAN 60 INCHES (1524 MM) APART. CABLE SHALL NOT BE RUN THROUGH STRUCTURAL MEMBERS OR IN CONTACT WITH PIPES, DUCTS, OR OTHER POTENTIALLY DAMAGING ITEMS. INSTALL CABLES IN OPEN CEILINGS (FINISHED AND UNFINISHED) IN RACEWAYS, WHERE RACEWAYS ARE INSTALLED IN FINISHED CEILINGS, PAINT RACEWAYS TO MATCH THE COLOR OF THE SURROUNDING SURFACE.
- ALL CABLING NOT SPECIFICALLY IDENTIFIED IN THE RISER DIAGRAM SHALL BE MANUFACTURER RECOMMENDED CABLING.
- FOR WALL MOUNT CAMERAS, PROVIDE JUNCTION BOX AT 12" UNLESS NOTED OTHERWISE. COORDINATE EXACT MOUNTING HEIGHT WITH DISTRICT PRIOR TO ROUGH-IN.
- EACH CAMERA TO HAVE A DEDICATED CABLE DROP BACK TO DATA ROOM.
- ALL CABLING SHALL BE PLENUM RATED.
- CONTRACTOR TO TERMINATE AND TEST ALL CABLING (INCLUDING ALL CAMERA CABLING AND ANY FIBER OPTIC CABLES) AT CAMERA AND DATA RACK AS DIRECTED BY THE OWNER. CONFIRM ALL TERMINATION TYPES WITH THE OWNER PRIOR TO ANY TERMINATIONS AND TESTING. CONFIRM ALL TERMINATION LOCATIONS WITH THE OWNER PRIOR TO TERMINATING ANY CABLING.

**CCTV EQUIPMENT GENERAL NOTES:**

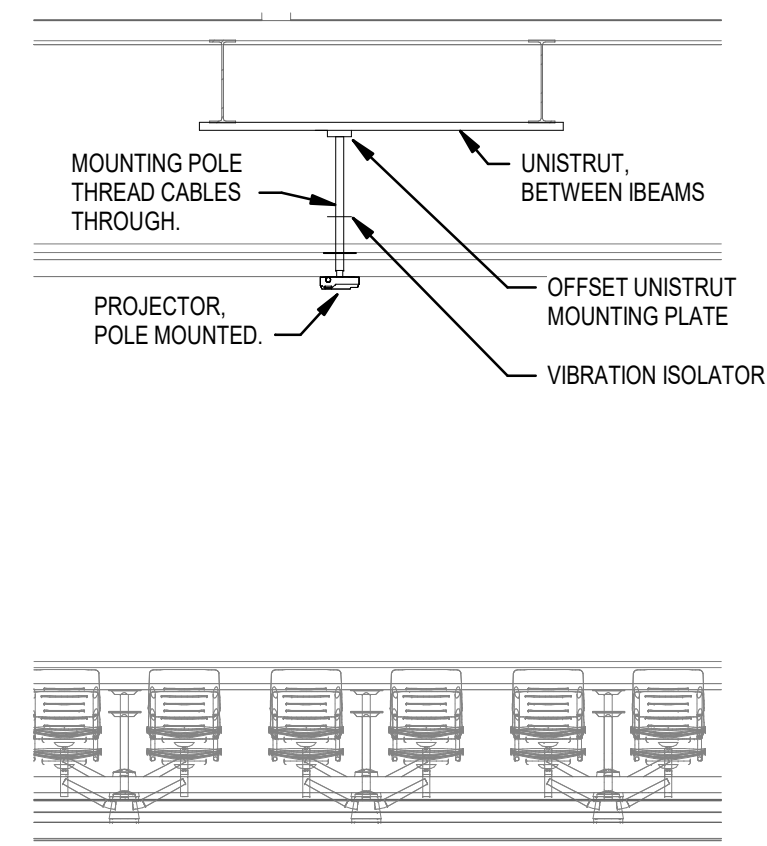
- CONFIRM ALL MOUNTING LOCATIONS AND HEIGHTS WITH THE OWNER AND ARCHITECT PRIOR TO ANY ROUGH-IN.
- CONTRACTOR TO INSTALL ALL CABLING AS CALLED OUT.
- ALL CABLING SHALL BE CAT 6A, PLENUM, ORANGE JACKET UNLESS NOTED OTHERWISE.
- CONTRACTOR TO INSTALL OWNER FURNISHED EQUIPMENT.
- SEE POWER AND SYSTEMS PLANS FOR ADDITIONAL REQUIREMENTS.



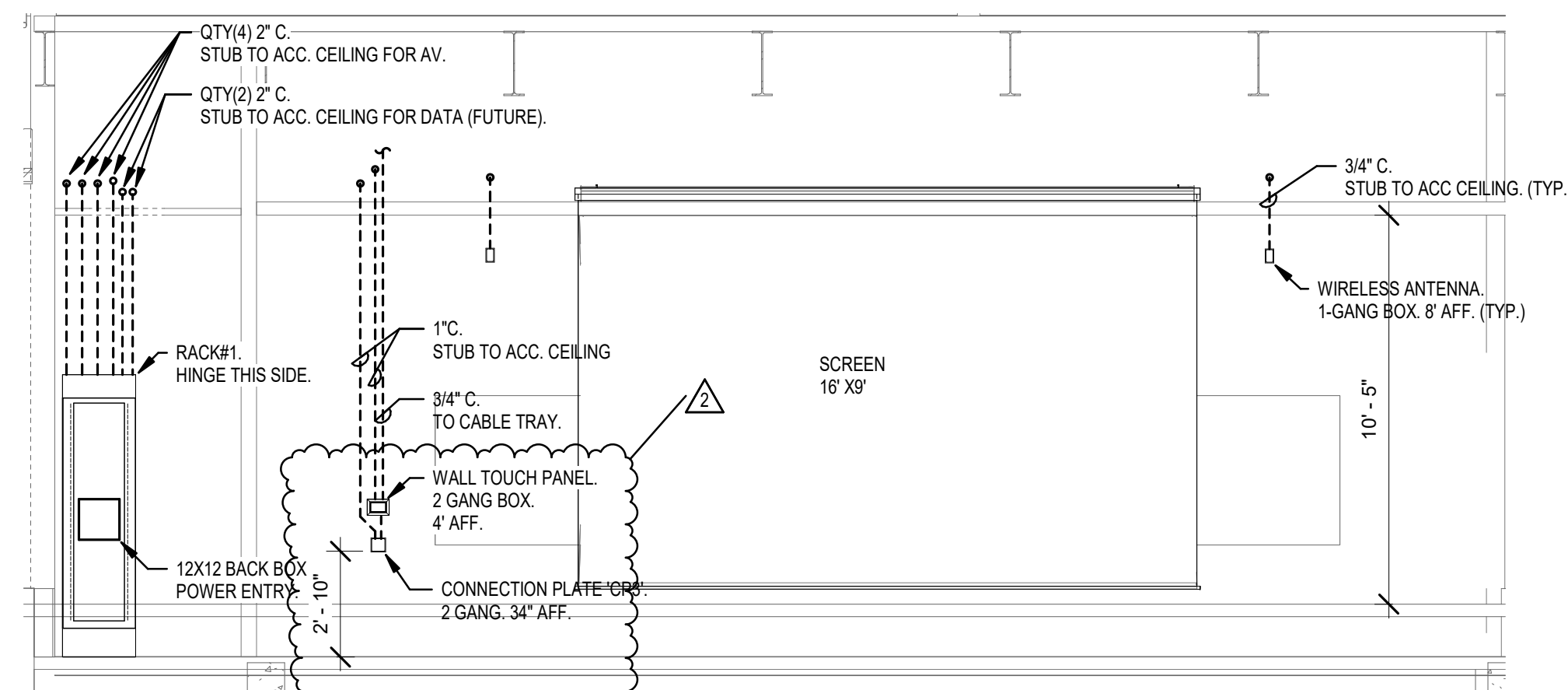
7 CAFETORIUM AV WIRELESS MIC ANTENNA ELEVATION  
SCALE: 1/4" = 1'-0"



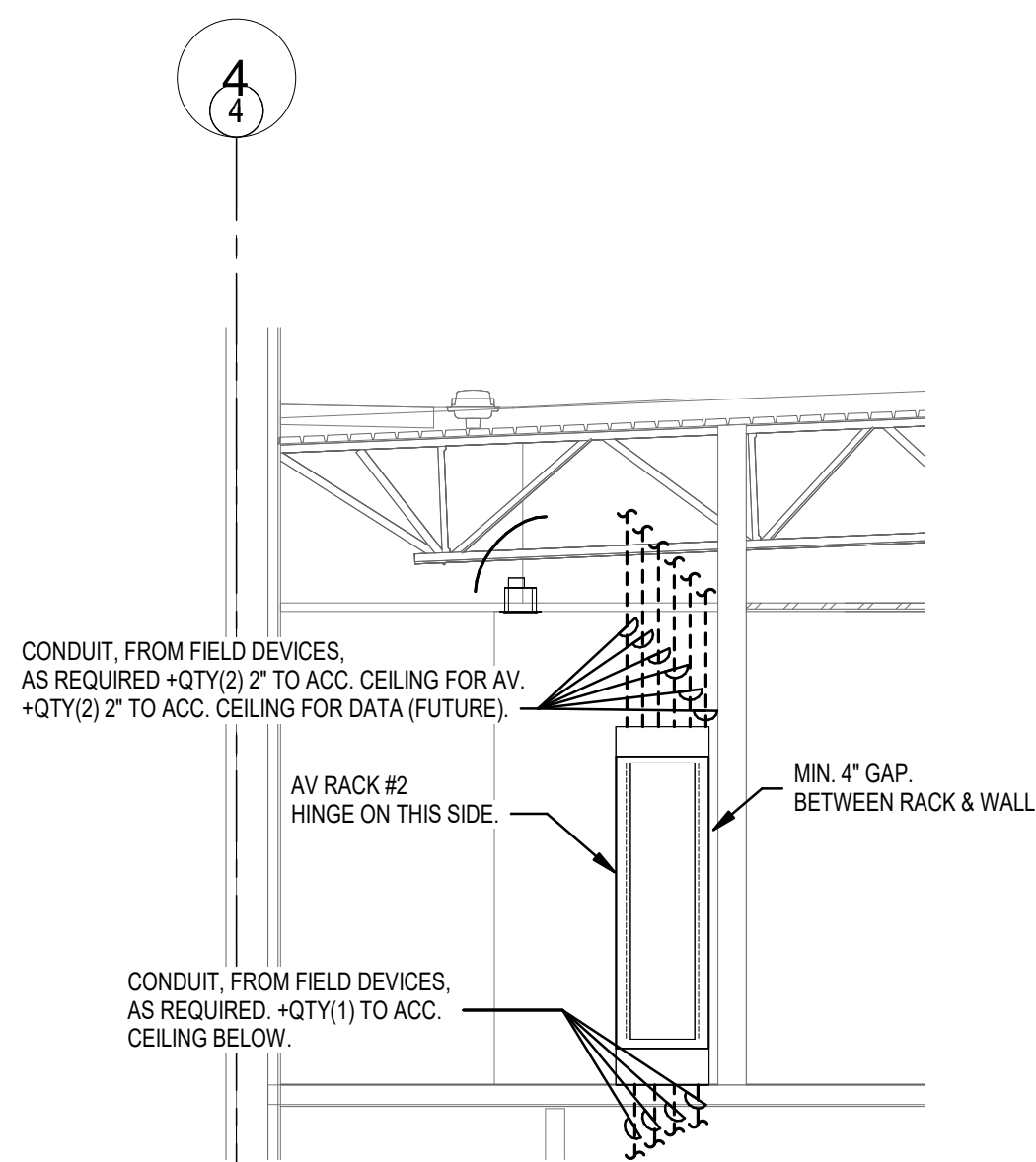
6 ENLARGED CAFETORIUM 348 SECTION 2  
SCALE: 1/8" = 1'-0"



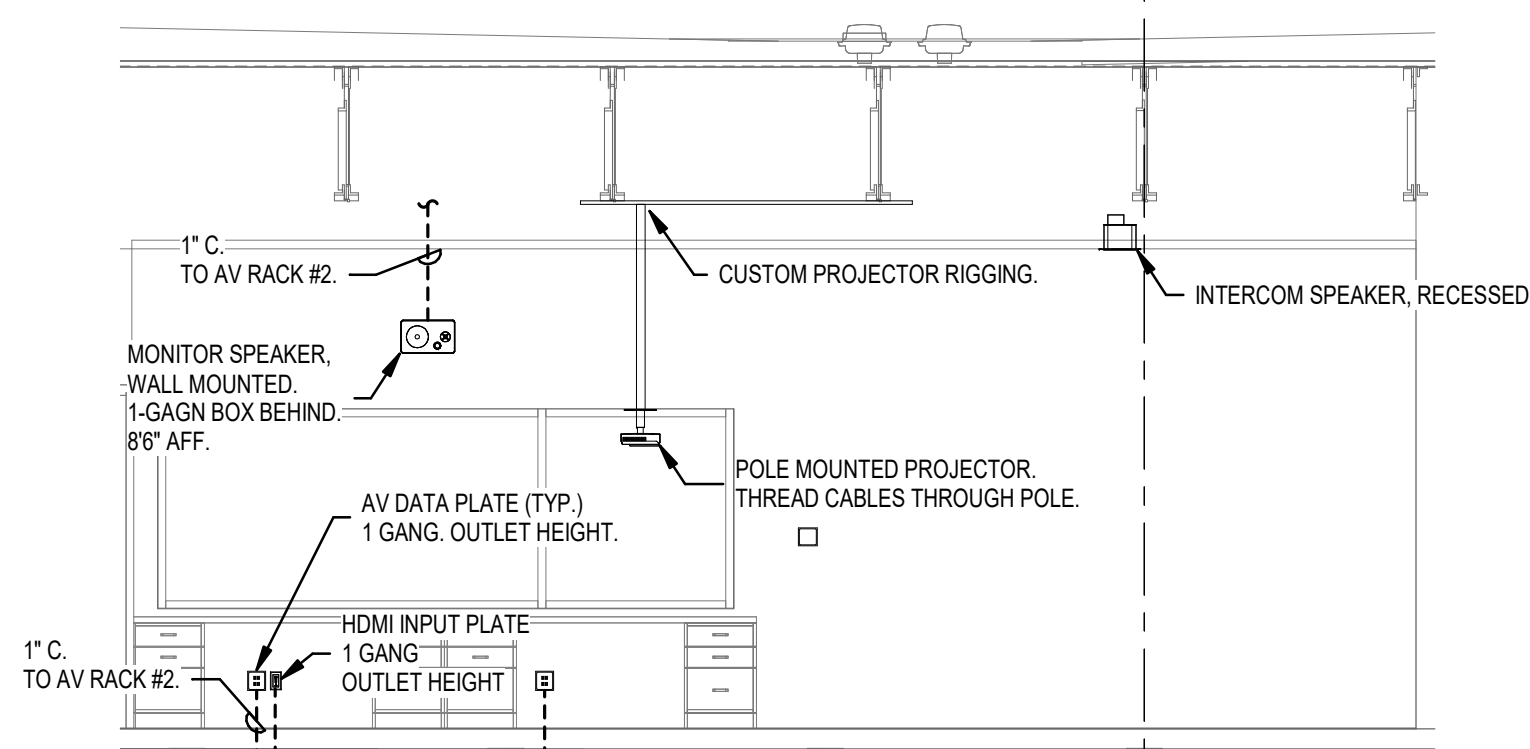
4 FORUM PROJECTOR MOUNTING ELEVATION  
SCALE: 1/4" = 1'-0"



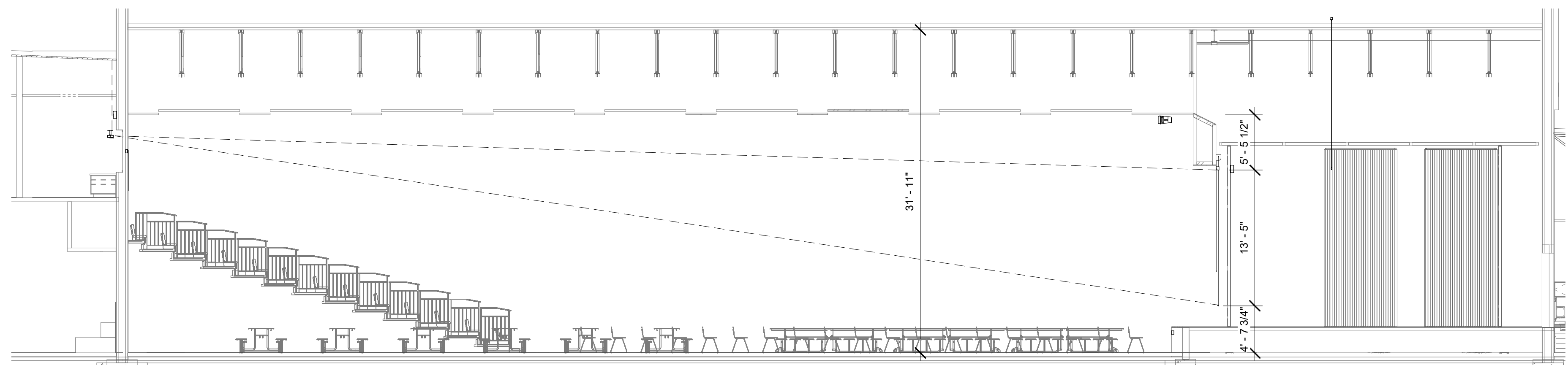
2 FORUM AV ELEVATION FRONT  
SCALE: 1/4" = 1'-0"



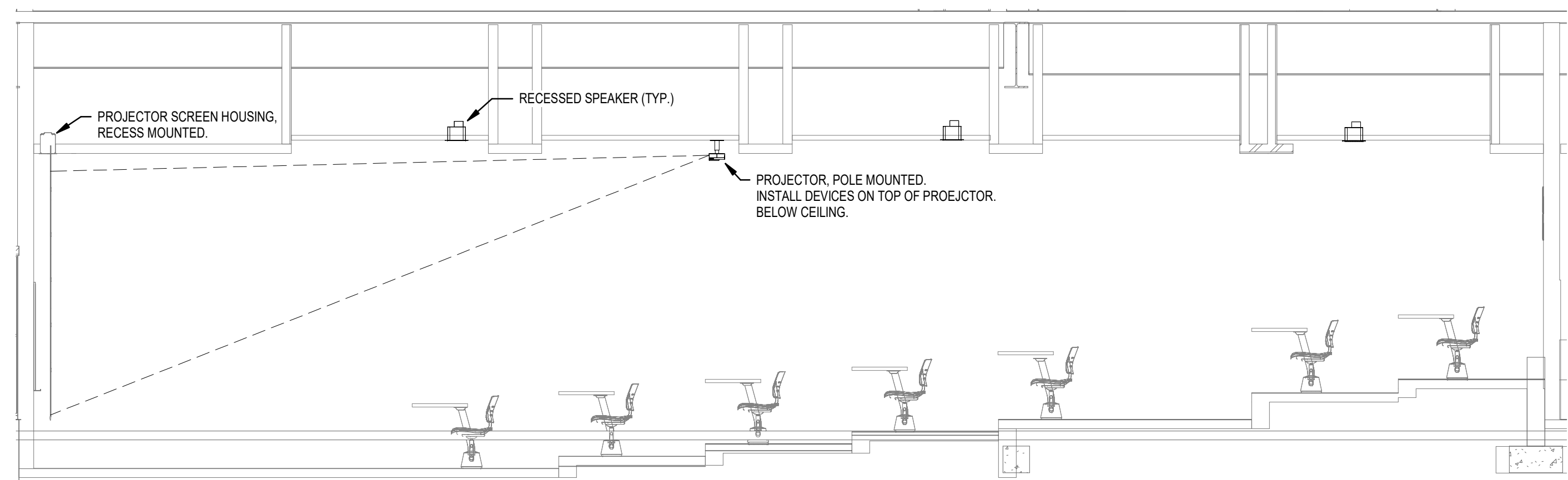
8 ENLARGED AV RACK#2 (CAFETORIUM) ELEVATION  
SCALE: 1/4" = 1'-0"



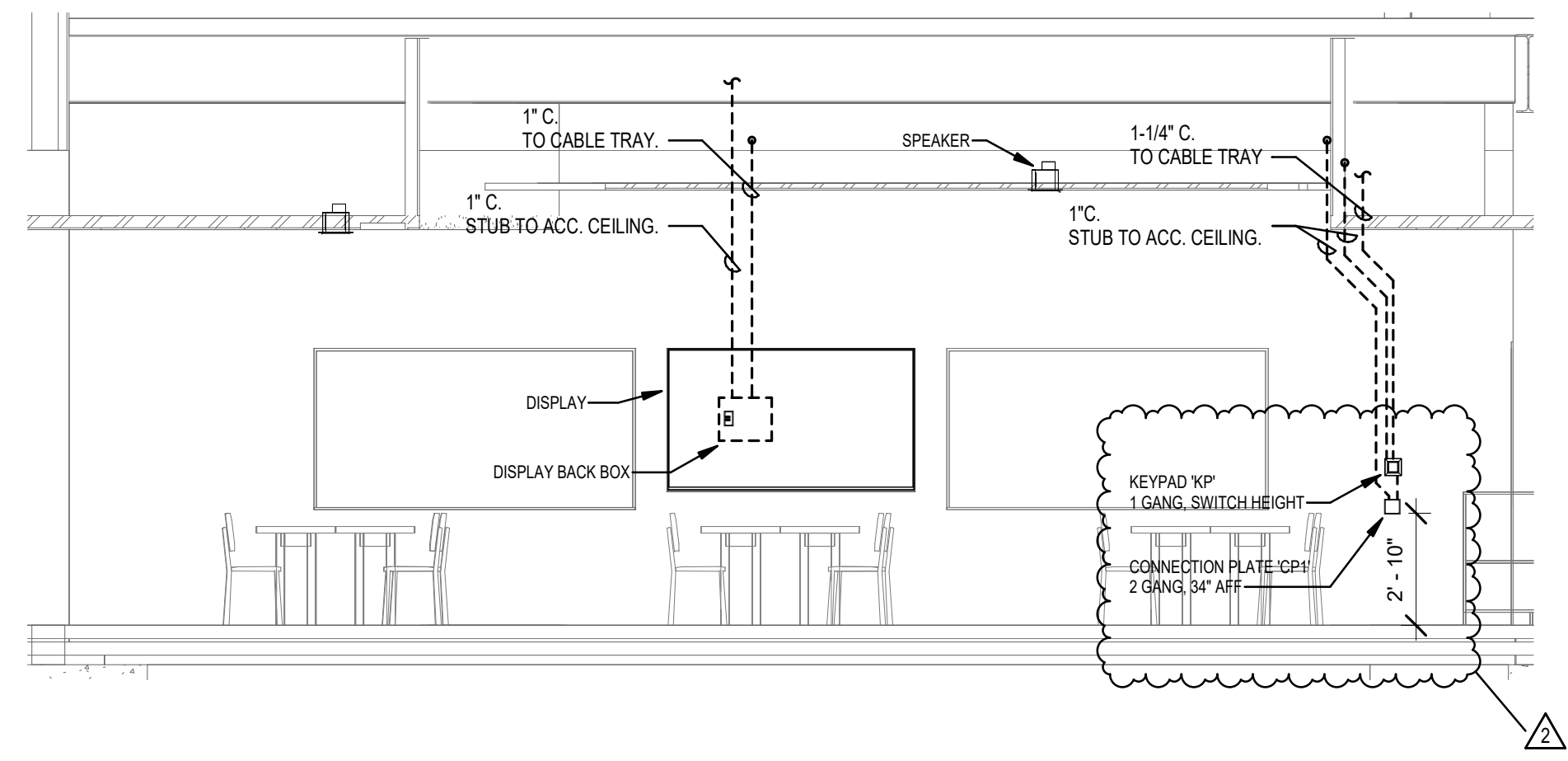
9 ENLARGED AV ROOM DESK ELEVATION  
SCALE: 1/4" = 1'-0"



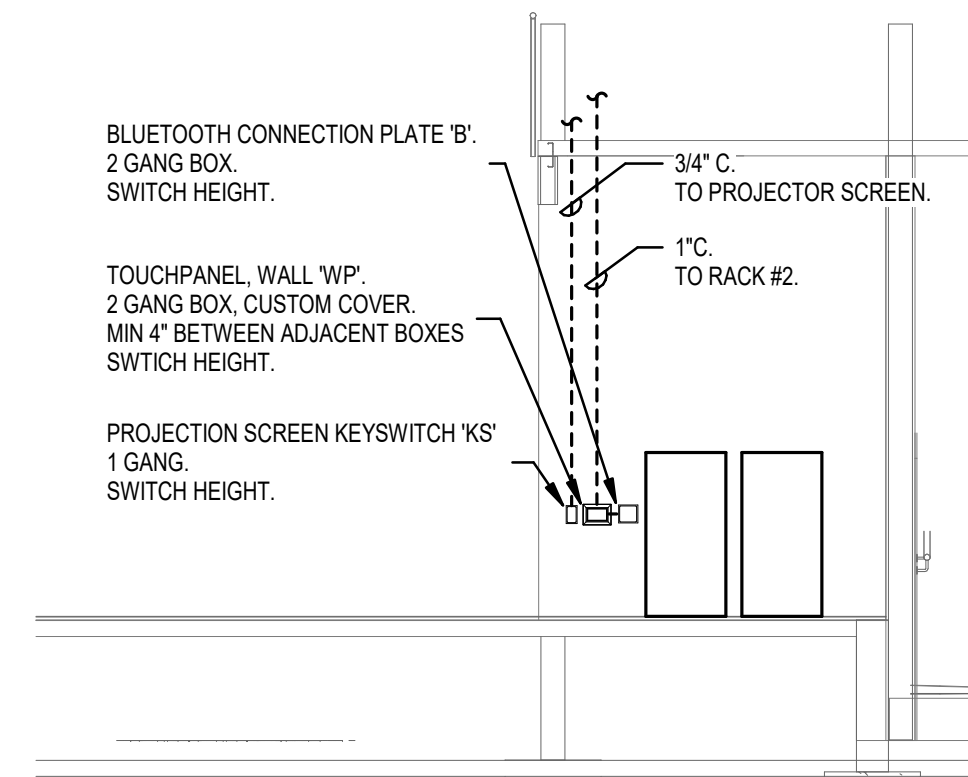
5 ENLARGED CAFETORIUM 348 SECTION 1  
SCALE: 1/8" = 1'-0"



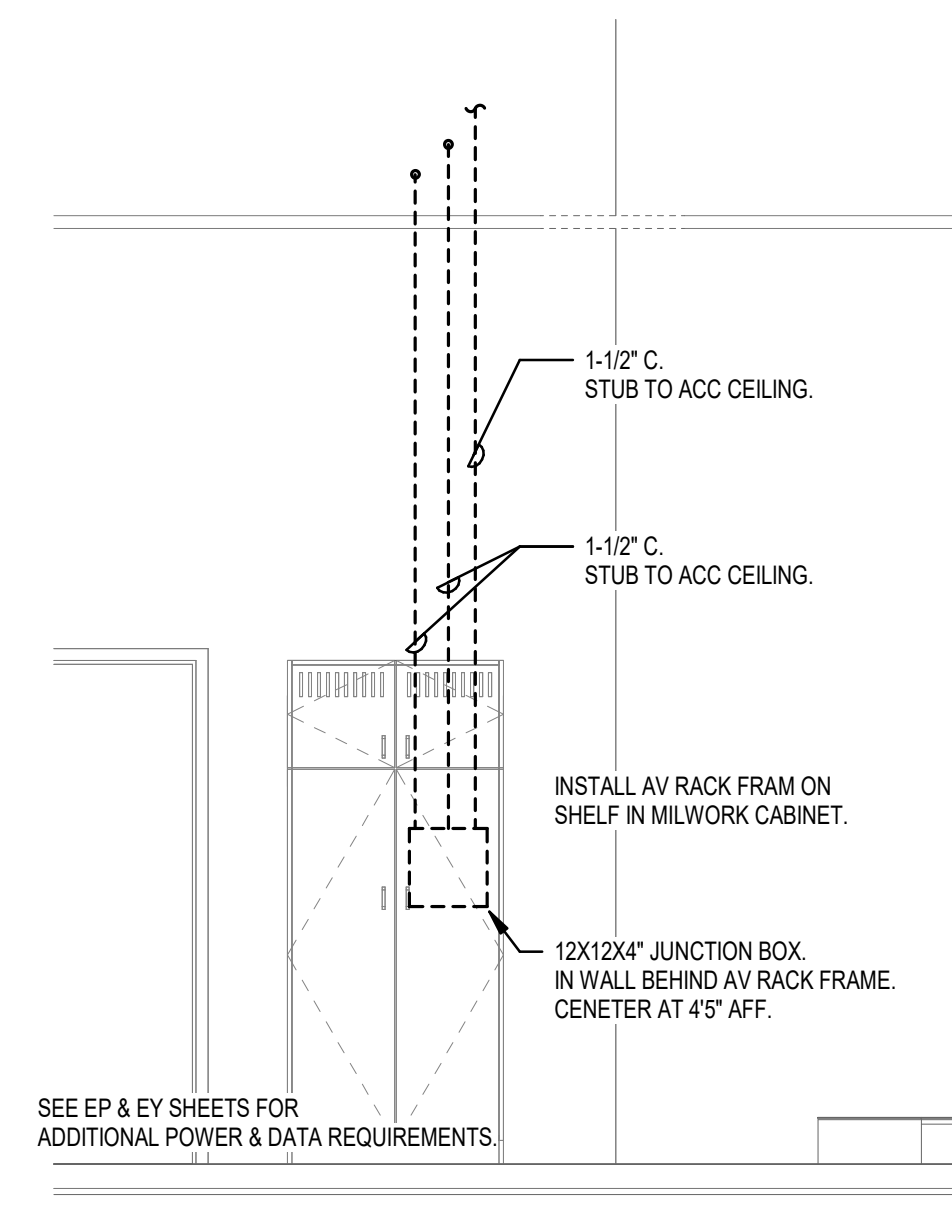
3 ENLARGED FORUM 701 SECTION 1  
SCALE: 1/4" = 1'-0"



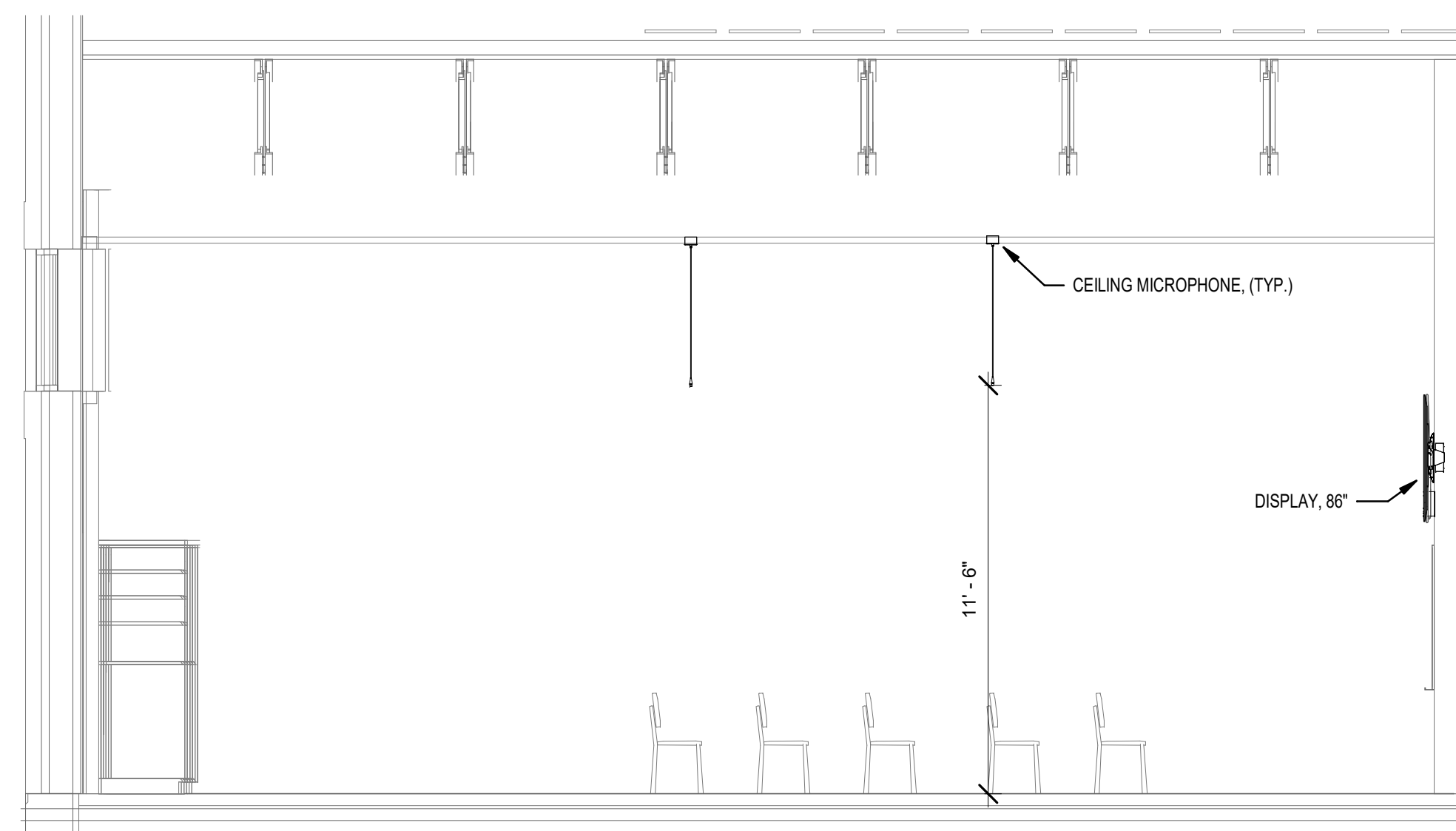
1 ENLARGED MEDIA CENTER 178 SECTION 1  
SCALE: 1/4" = 1'-0"



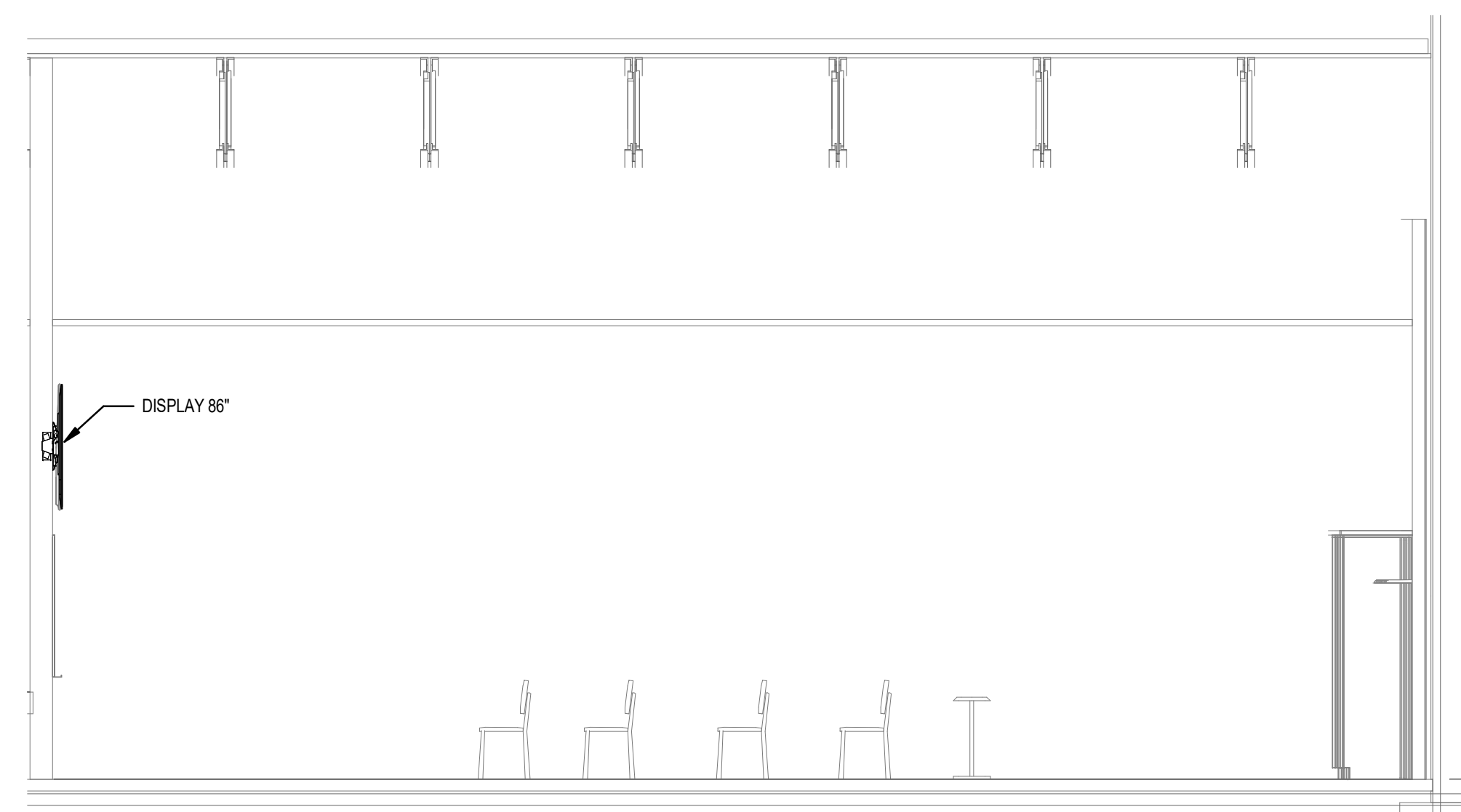
10 CAFETORIUM AV CONTROLS ELEVATION  
SCALE: 1/4" = 1'-0"



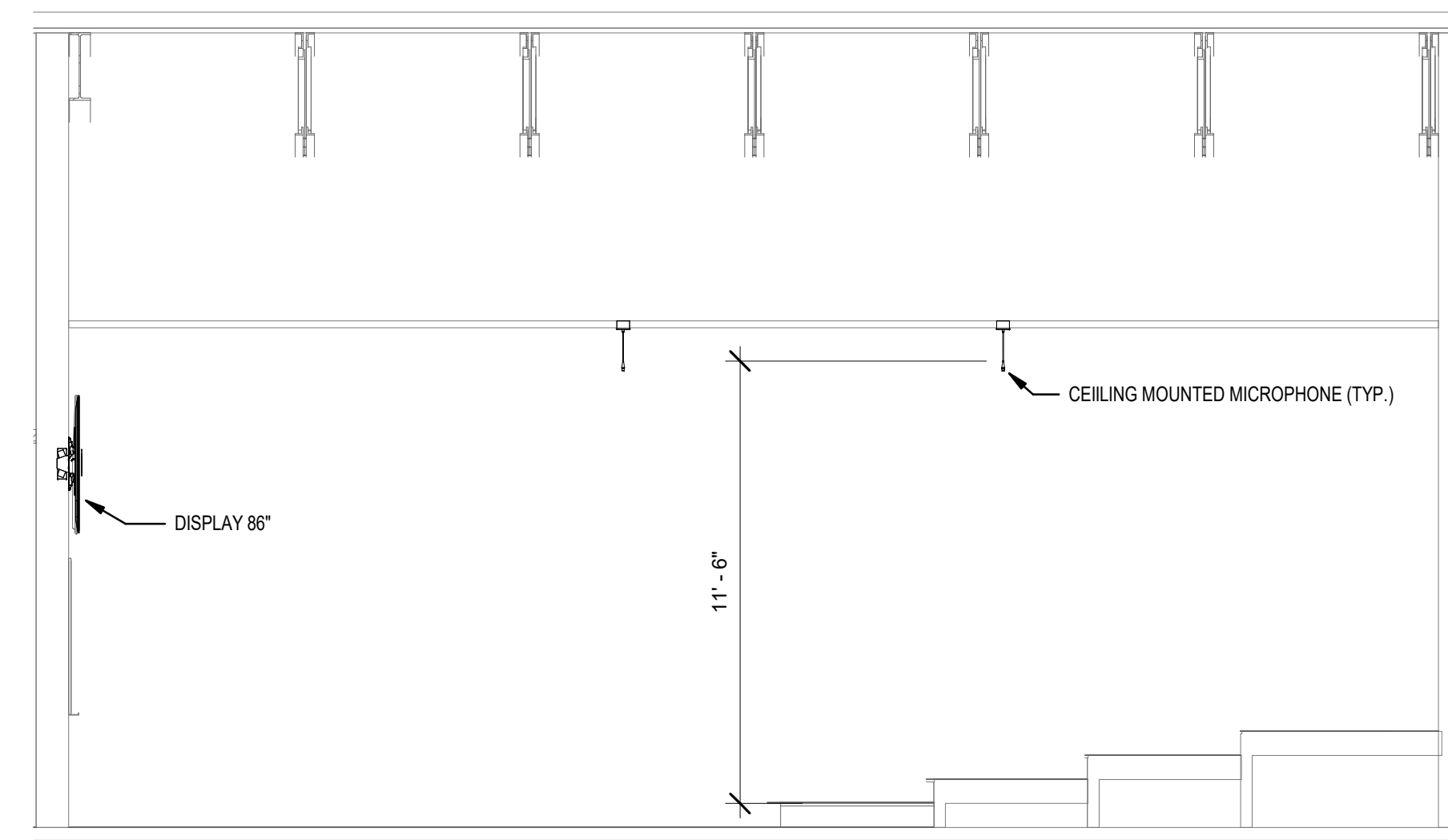
**7** ENLARGED BAND, CHOIR & ORCHESTRA  
MILLWORK AV RACK ELEVATION (TYP.)  
SCALE: 3/8" = 1'-0"



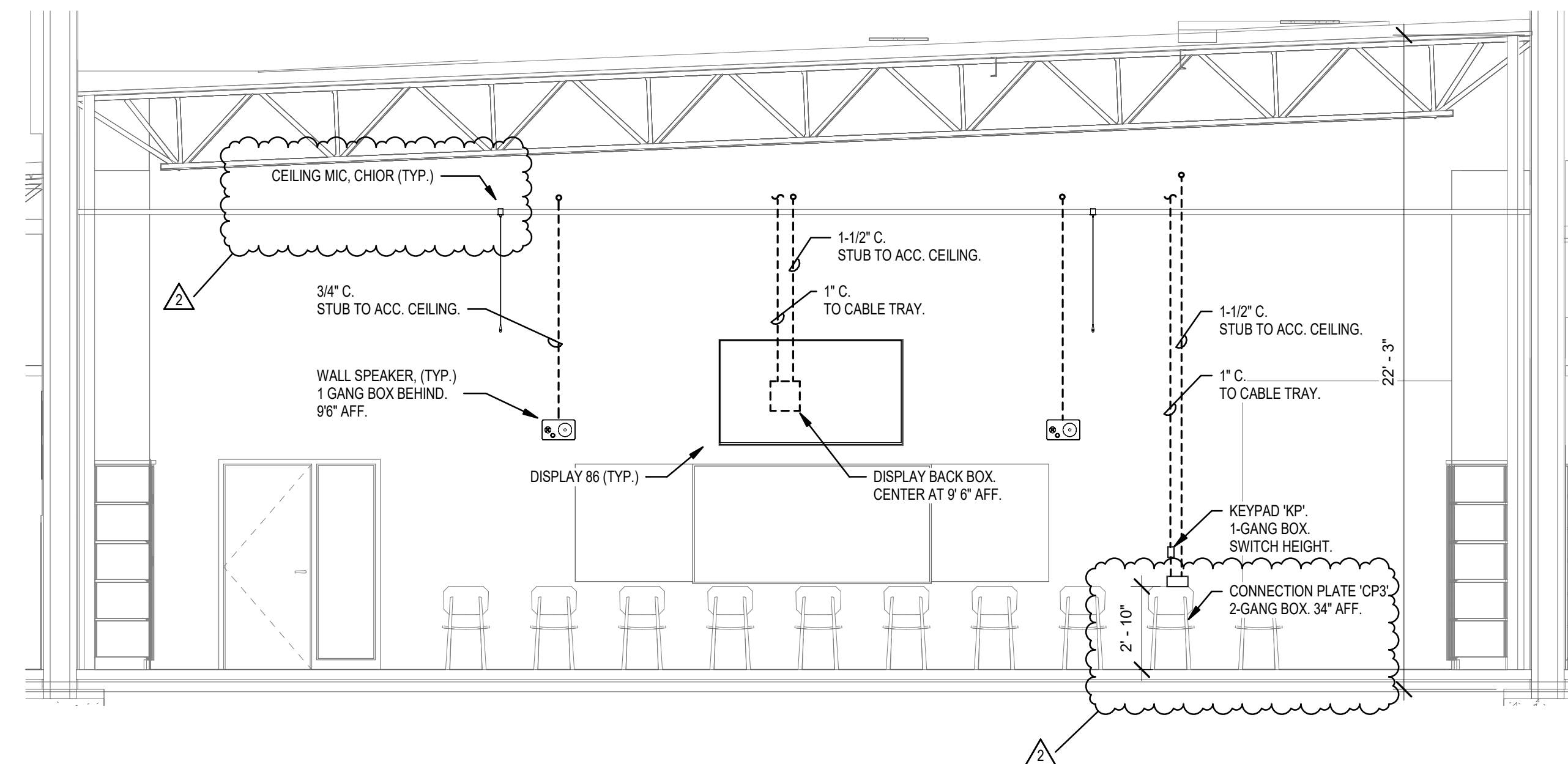
**3 ENLARGED BAND SECTION 2**  
SCALE: 1/4" = 1'-0"



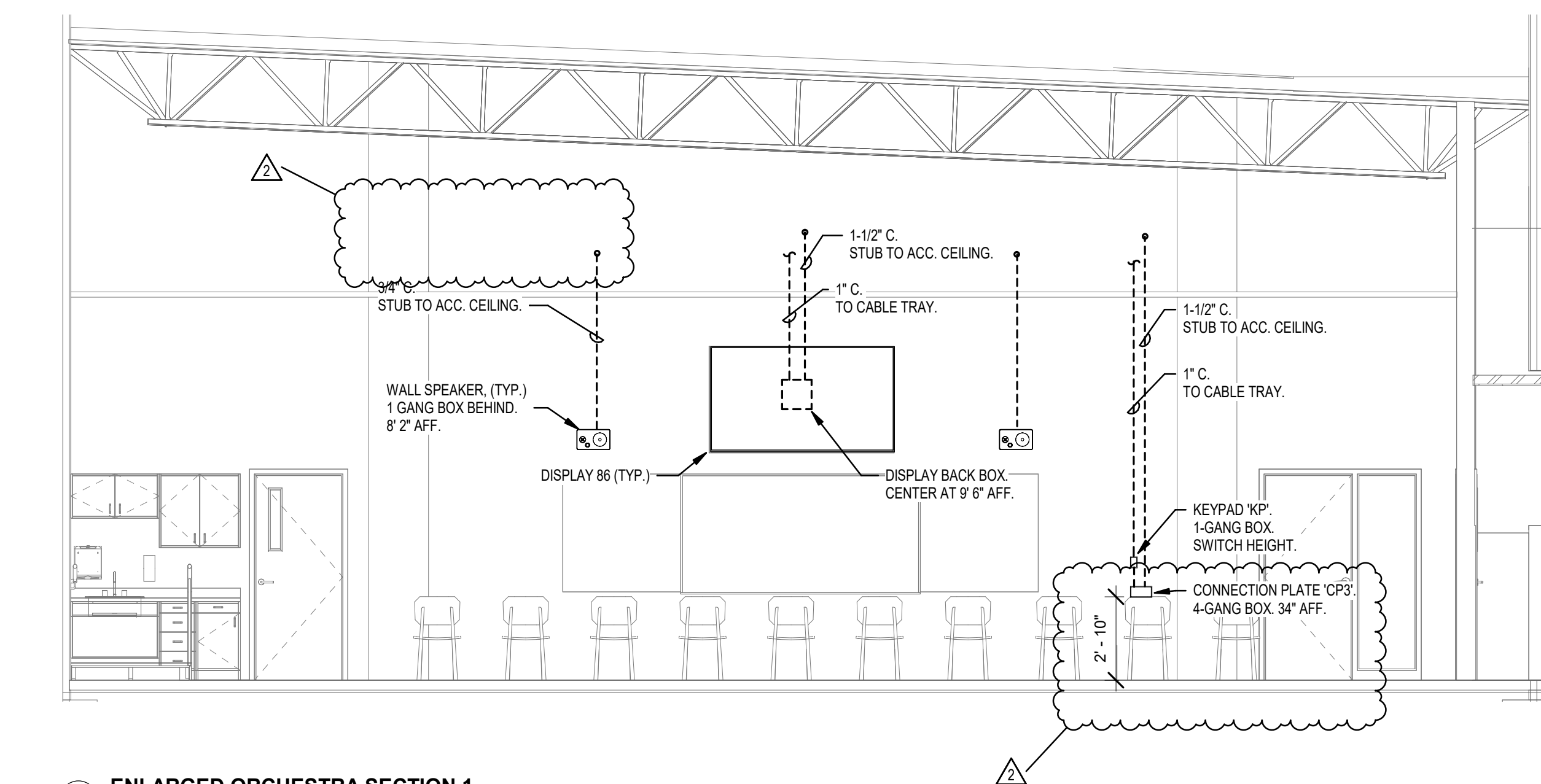
**4 ENLARGED ORCHESTRA SECTION 2**  
SCALE: 1/4" = 1'-0"



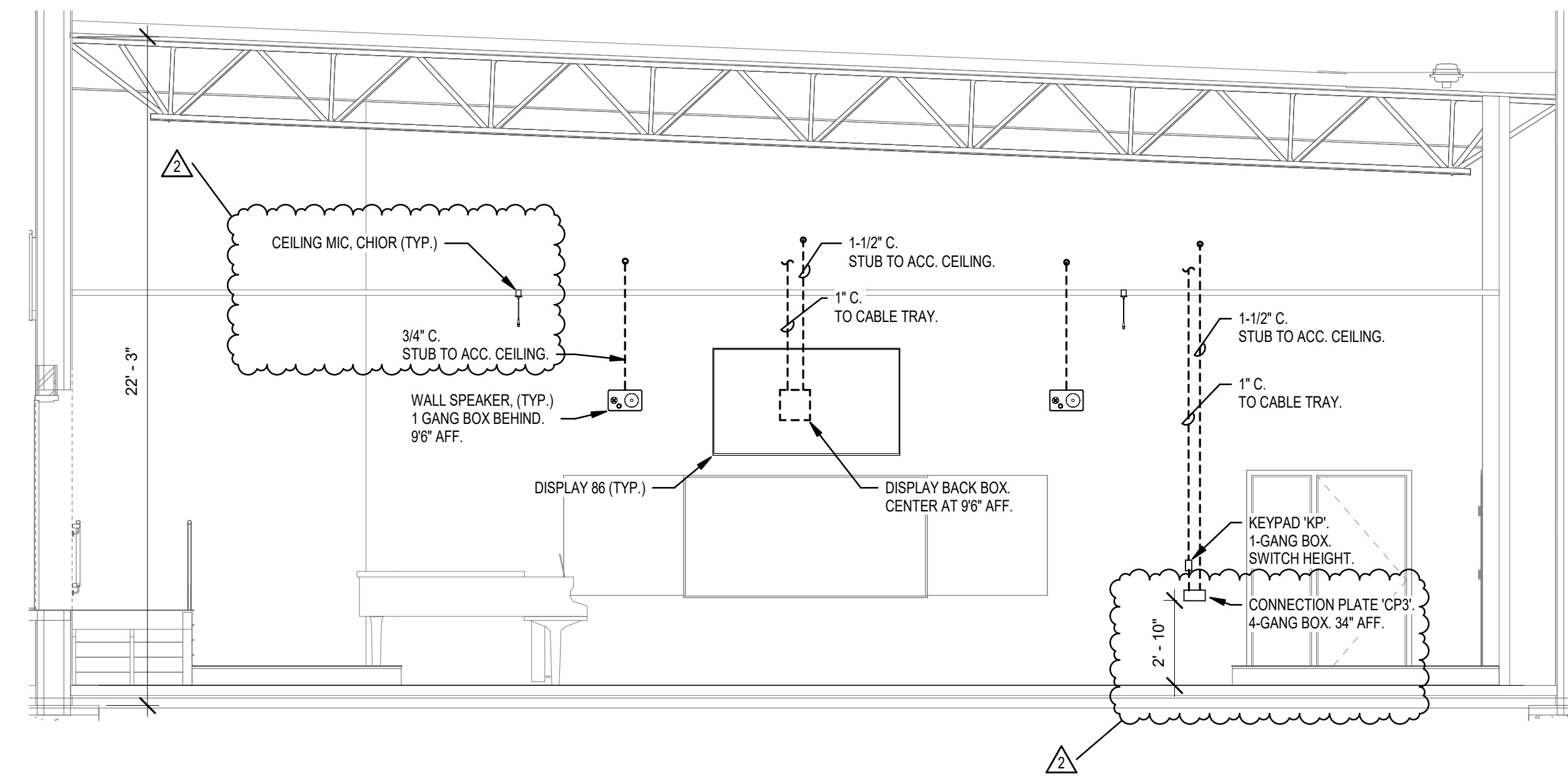
2 ENLARGED CHOIR/DRAMA SECTION 2  
SCALE: 1/4" = 1'-0"



**5 ENLARGED BAND SECTION 1**  
SCALE: 1/4" = 1'-0"



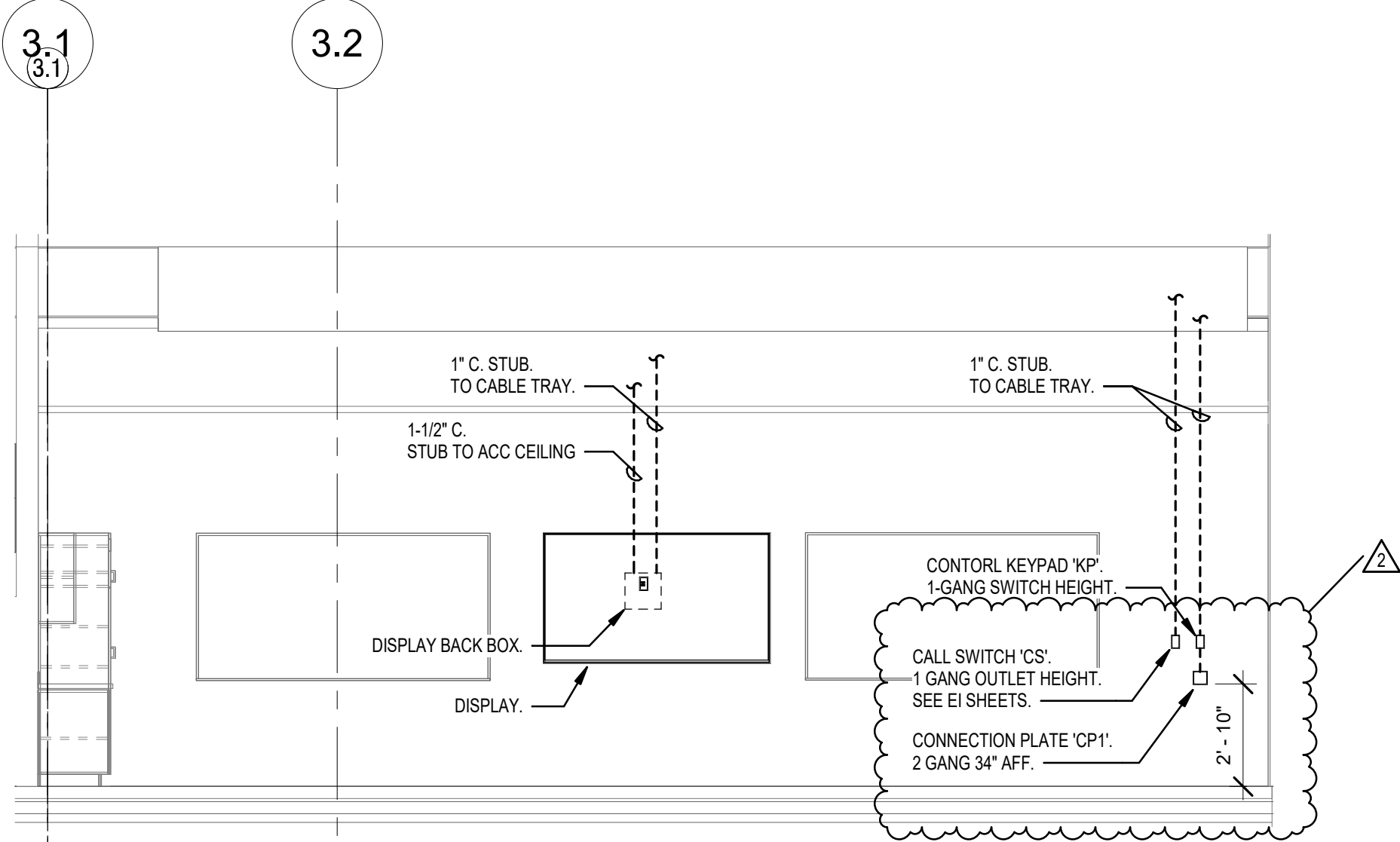
**6 ENLARGED ORCHESTRA SECTION 1**  
SCALE: 1/4" = 1'-0"



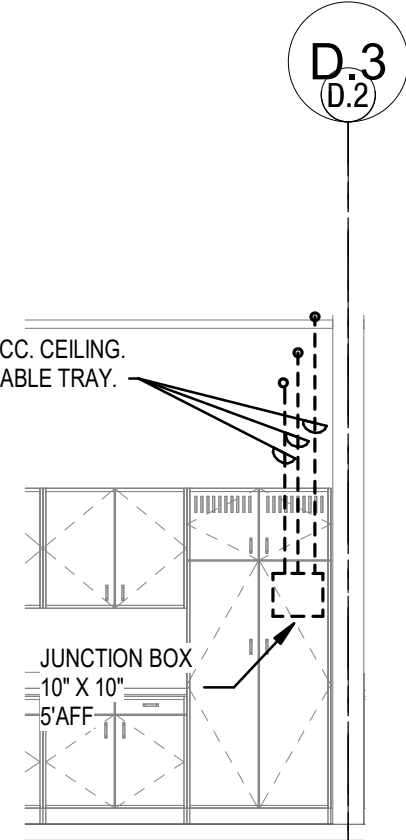
**1 ENLARGED CHOIR/DRAMA SECTION 1**  
SCALE: 1/4" = 1'-0"

E  
D  
C  
B  
A

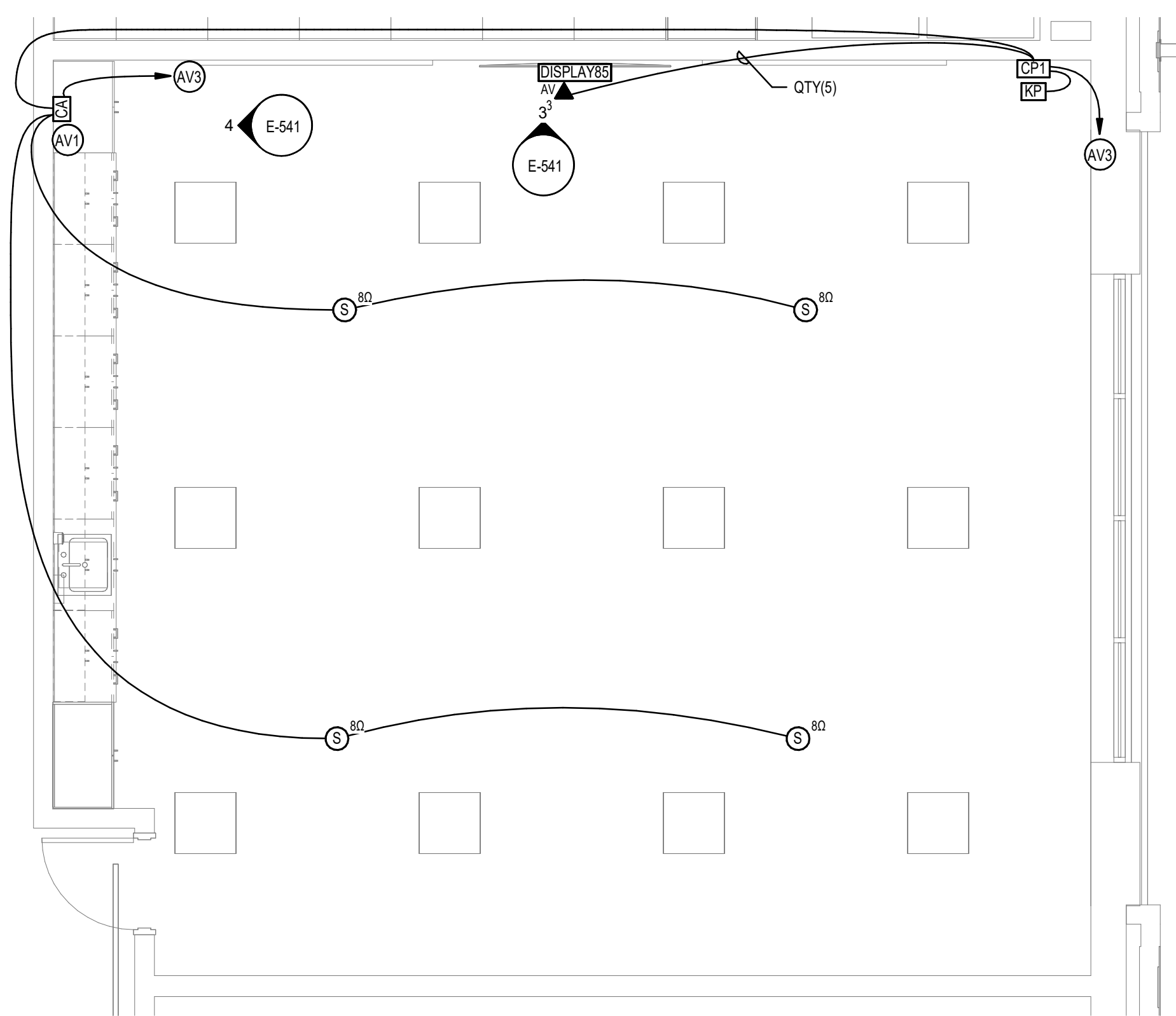
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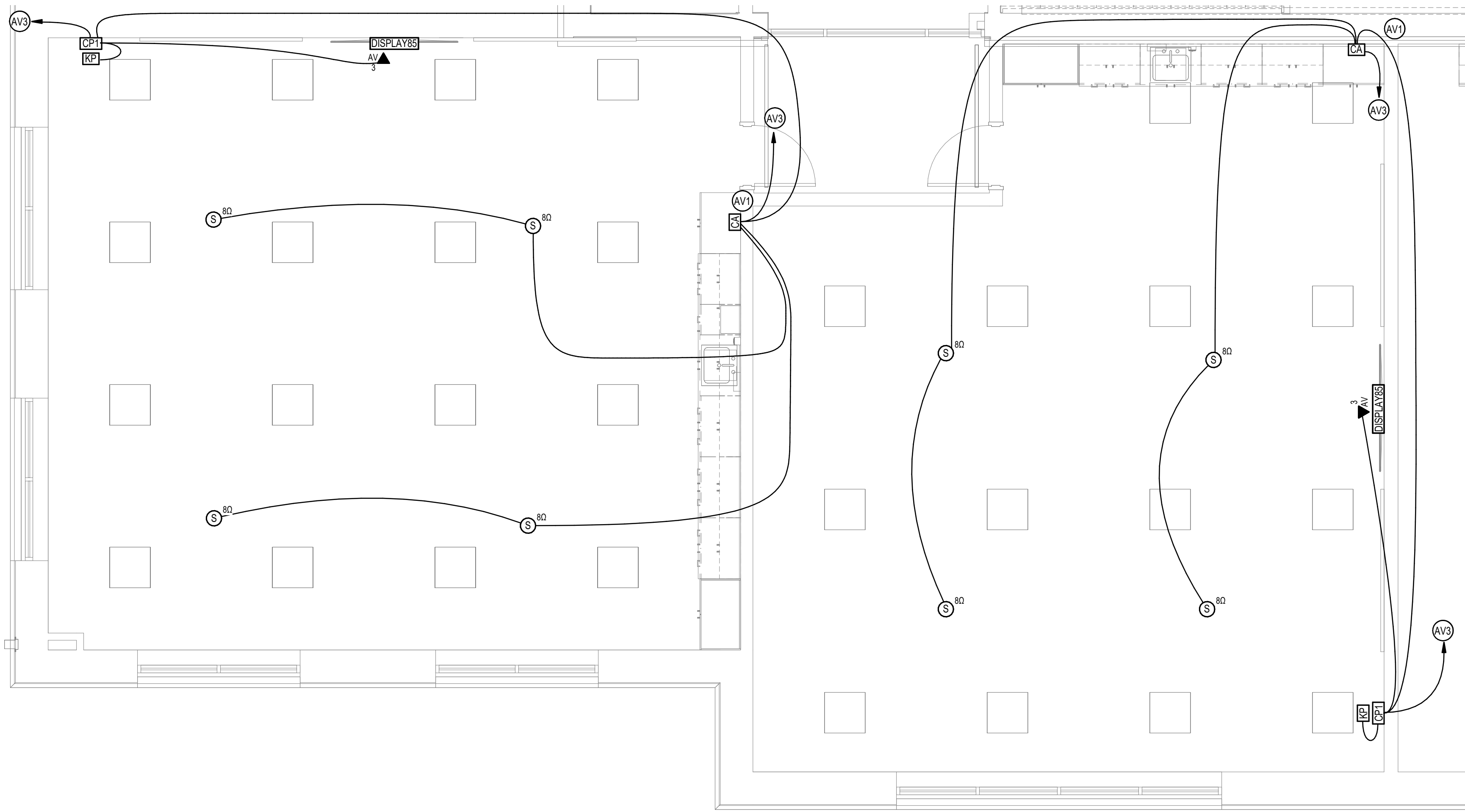
3 CLASSROOM DISPLAY ELEVATION, TYP.  
SCALE: 1/4" = 1'-0"



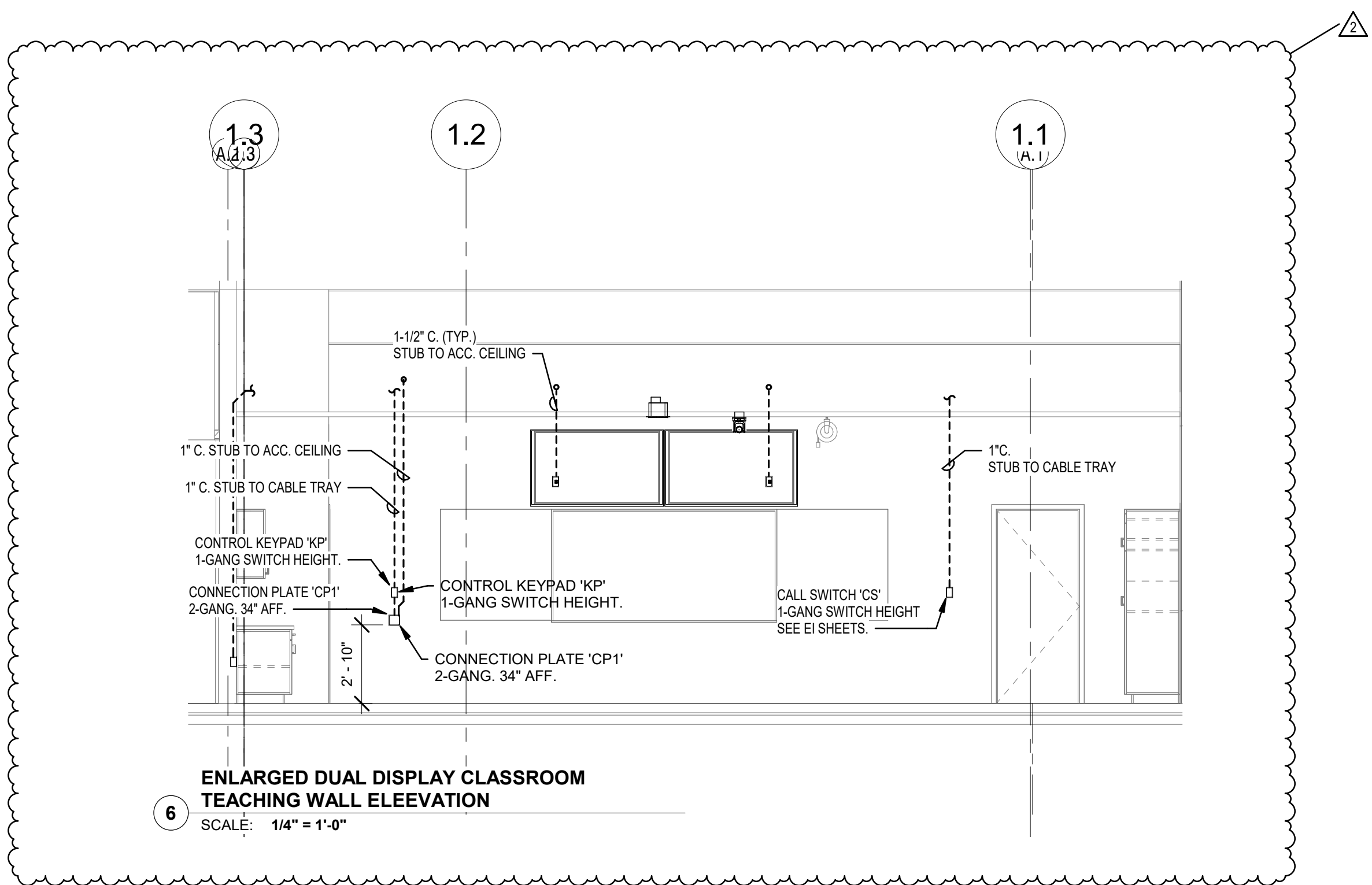
4 CLASSROOM JUNCTION BOX ELEVATION  
SCALE: 1/4" = 1'-0"



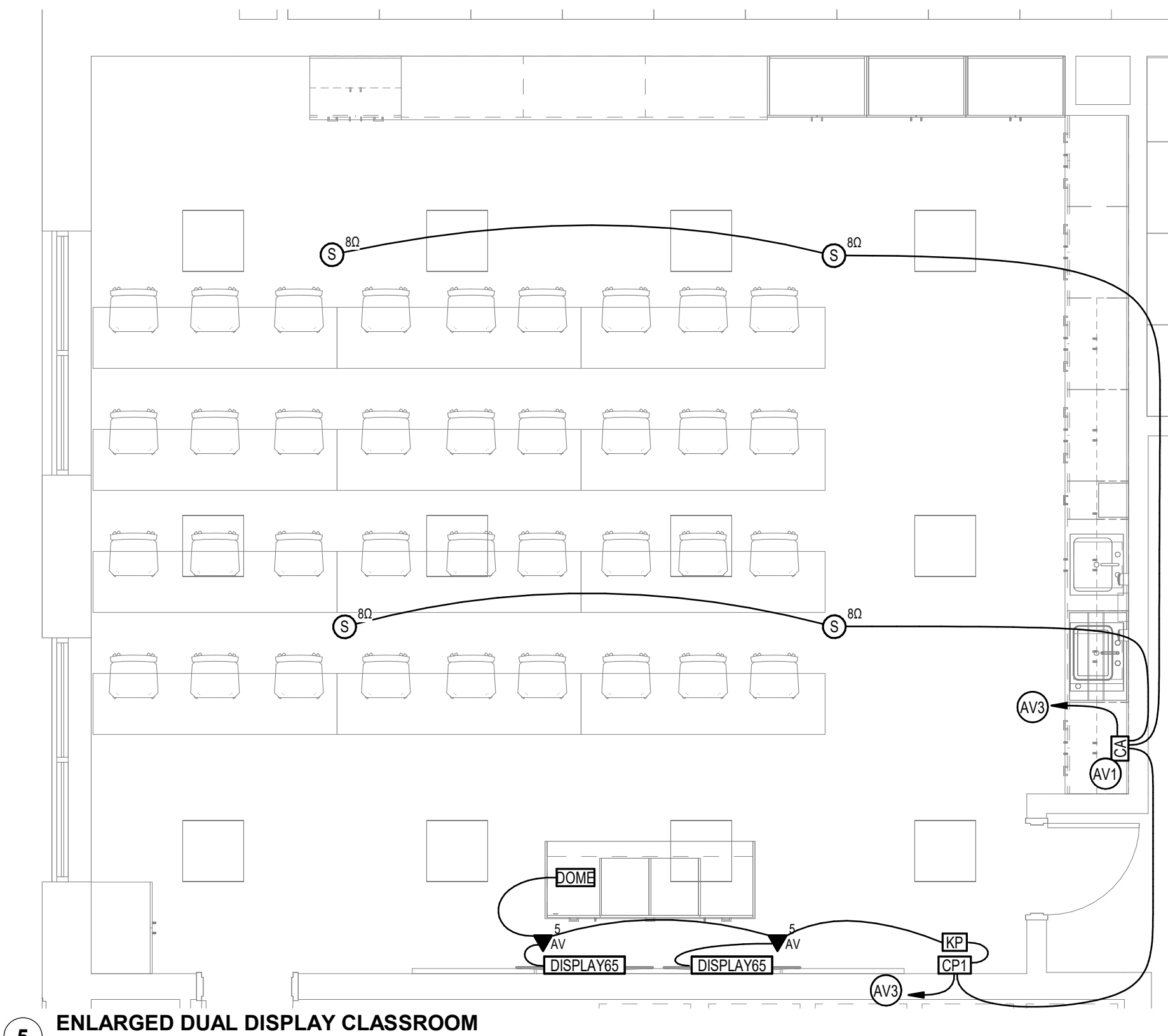
1 ENLARGED CLASSROOM A/V - PLANS  
SCALE: 1/4" = 1'-0"



2 ENLARGED ALTERNATE CLASSROOM  
SCALE: 1/4" = 1'-0"



6 ENLARGED DUAL DISPLAY CLASSROOM  
TEACHING WALL ELEVATION  
SCALE: 1/4" = 1'-0"



5 ENLARGED DUAL DISPLAY CLASSROOM  
SCALE: 1/4" = 1'-0"

AUDIO VISUAL GENERAL NOTES:

- NO CHANGES SHALL BE MADE WITHOUT THE AV CONSULTANT'S WRITTEN CONSENT.
- TO MINIMIZE SIGNAL CROSS TALK, GROUP CABLES ACCORDING TO SIGNALS BEING CARRIED. MAINTAIN SEPARATION BETWEEN POWER AND ALL OTHER CABLE GROUPS OF AT LEAST 24" AND 6" BETWEEN ALL OTHER CABLE GROUPS WHEN RUN IN PARALLEL. GROUPS SHALL BE:
  - POWER.
  - CONTROL.
  - VIDEO.
  - MIC LEVEL AUDIO CABLES (LESS THAN -20dBm).
  - LINE LEVEL AUDIO CABLES (-20dBm TO +20dBm).
  - SPEAKER LEVEL CABLES (+20dBm OR GREATER).
  - DATA CABLES.
- PROVIDE #6 AWG THHN WIRE W/ GREEN INSULATION FROM EACH AV EQUIPMENT CABINET TO THE NEAREST MAIN BUILDING GROUND. CONNECT GROUNDING WIRE TO BARE METAL ON EQUIPMENT CABINET.
- COLORS OF ALL SOUND DEVICES THAT ARE EXPOSED, INCLUDING INPUT AND OUTPUT PLATES, VOLUME CONTROLS, SWITCHES, SPEAKERS, SPEAKER ENCLOSURES, SPEAKER MOUNTING HARDWARE, ETC. SHALL BE REVIEWED AND APPROVED BY OWNER PRIOR TO ORDERING.
- CABLE ROUTES SHOWN ON DRAWINGS DO NOT ACTUALLY REFLECT THE RACEWAYS. THE RACEWAYS SHALL BE DETERMINED IN THE FIELD.
- LABEL ALL THE WIRELESS HANDHELD MICROPHONES AND BELT PACKS WITH NAMES OR NUMBERS FOR EASY IDENTIFICATION.
- REFER TO RISER DIAGRAMS AND EQUIPMENT LISTS FOR THE TYPES AND NUMBERS OF WIRES REQUIRED FOR EACH AV DEVICE.
- SETUP COMPRESSORS AND LIMITERS IN ALL OF THE DSPS TO PROTECT THE AMPLIFIERS AND SPEAKERS. ALSO, SETUP A PASSWORD ON THE DSPS, TO CONTROL THE ACCESS TO THEM. COORDINATE W. OWNER TO DETERMINE APPROPRIATE PASSWORDS.
- MOCKUP A TYPICAL CLASSROOM AV SYSTEM FIRST, TEST AND TRY OUT ALL THE FUNCTIONS OF THE SYSTEM AND PERFORMANCE OF EACH AV COMPONENT BEFORE PURCHASING EVERYTHING FOR ALL THE CLASSROOMS.
- AUDIO INPUT AND OUTPUT LEVELS SHALL BE BALANCED. EQUALIZERS SHALL BE SET TO THE FOLLOWING PARAMETERS AS MEASURED IN 1/3 OCTAVE BANDS FROM 10HZ TO 2 KHZ.
  - FLAT WITHIN PLUS OR MINUS 2 DBA, FROM 71HZ TO 17KHZ.
  - SLOPE DOWN ALONG AN APPROXIMATED 3 DBA PER OCTAVE SLOPE FROM 0 TO 71HZ AND 17KHZ AND UP.
- USE SEPARATE CHANNEL FOR EACH ASSISTIVE LISTENING SYSTEM 'ALS' IN THE FACILITY. PROGRAM ALL RECEIVERS, REGARDLESS OF WHICH 'ALS' THEY ARE ASSOCIATED WITH SO THAT USERS MAY SELECT ANY OF THE AVAILABLE CHANNELS.
- ALL CABLES IN PLENUM SPACES SHALL BE PLENUM RATED. WHEN NON- PLENUM CABLE IS SPECIFIED, IN PLENUM SPACES, INTEGRATOR SHALL SUBSTITUTE PLENUM CABLE.

KEYED NOTES

- AV1 INSTALL JUNCTION BOX, 10" X 10" IN WALL BEHIND CABINET, AT 18" AFF. UNLESS OTHERWISE NOTED, PROVIDE QTY. (3) 1" C. TO ACC. CEILING.
- AV3 TO DATA RACK IN NEAREST MDF/IDF CLOSET.

CONSTRUCTION DOCUMENTS

MARK	DATE	DESCRIPTION
PROJECT #:	123006	
DRAWN BY:	SB	
CHECKED BY:	AH	
ISSUED:	04.26.2024	

PROJECT #:

DRAWN BY:

CHECKED BY:

ISSUED:



AUDIO VISUAL  
ENLARGED PLANS -  
TYPICAL  
CLASSROOMS

E-541

AV SYSTEM - TYPE 2 CLASSROOM - EQUIPMENT LIST						
SYMBOL	DESCRIPTION	QTY/ROOM	SUPPLIER	MODEL	ROUGH-IN	CABLE
CA	CLASSROOM AMP	OFI		CASCADIA		WEST PENN 454
	PAGE SENSE CABLE			PAGE SENSE CABLE		WEST PENN 254346 - YELLOW
	JUNCTION BOX	1	NR	10"X10"X4"	SEE ELEVATION DETAIL	
S <sub>80</sub>	AMPLIFIER LOCATION	OFFP	ATLASIED	SD72W-KIT		WEST PENN 25225B
	RECESSED SPEAKER, DROP TILE KIT W/ TILE BRIDGE			81-8R CS95-8 82-8 SD72		
	BACK CAN					
	BAFFLE					
	SPEAKER, BYPASS TRANSFORMER					
	ALTERNATE DROP TILE SPEAKER ASSEMBLY, BRIDGE, CAN & BAFFLE INCLUDED.					
	DISPLAY	OFCI		COORDINATE W/ OWNER	BACK BOX	
	DISPLAY WALL MOUNT	OFCI		COORDINATE W/ OWNER	REFER TO EP SHEETS FOR DETAILS	
	JUNCTION BOX	1		BY DIV 26 SEE SCHEDULE		
CP1	TEACHER STATION CONNECTION PLATE 'CP1'	OFFP	CUSTOM	SEE DETAIL	2 GANG BOX	WEST PENN 254346
AV	TV CONNECTION PLATE 'AV3'	OFFP	CUSTOM	SEE DETAIL	SEE ELEVATION DETAIL	WEST PENN 445
HU TX	HDMI & USB TRANSMITTER	2	EXTRON	DTP HDMI 4K 230	INSTALL IN DISPLAY BACK BOX	WEST PENN 254346
HU RX	HDMI & USB RECEIVER	2	EXTRON	DTP HDMI 4K 230 RX		WEST PENN 254346
XP	KEYPAD & CONTROLLER	1	EXTRON	M/C PLUS 50	1-GANG BOX	
	CABLES, PATCH & CONNECTION, PER ROOM	2	BELDEN		1" C. TO ACCESSIBLE CEILING SPACE	
	GIGABIT PATCH CABLE, POE RATED, 6'	1	BELDEN			
	GIGABIT PATCH CABLE, POE RATED, 10'	1	KRAMER			
	HDMI PATCH CABLE, 6'	1	KRAMER			
	HDMI PATCH CABLE, 10'	2	CUSTOM	VERIFY REQ W/ OWNER		
	USB PATCH CABLE	1	EXTRON			
	3.5 MM TRS STEREO TO 3.5MM TRS, 10'	1	EXTRON			

AR = AS REQUIRED; NIC= NOT IN CONTRACT; NR = NO REQUIREMENT; OFCI = OWNER FURNISHED CONTRACTOR INSTALLED; OFFP = OBTAIN FROM PLANS; OFCI =OWNER FURNISHED & INSTALLED

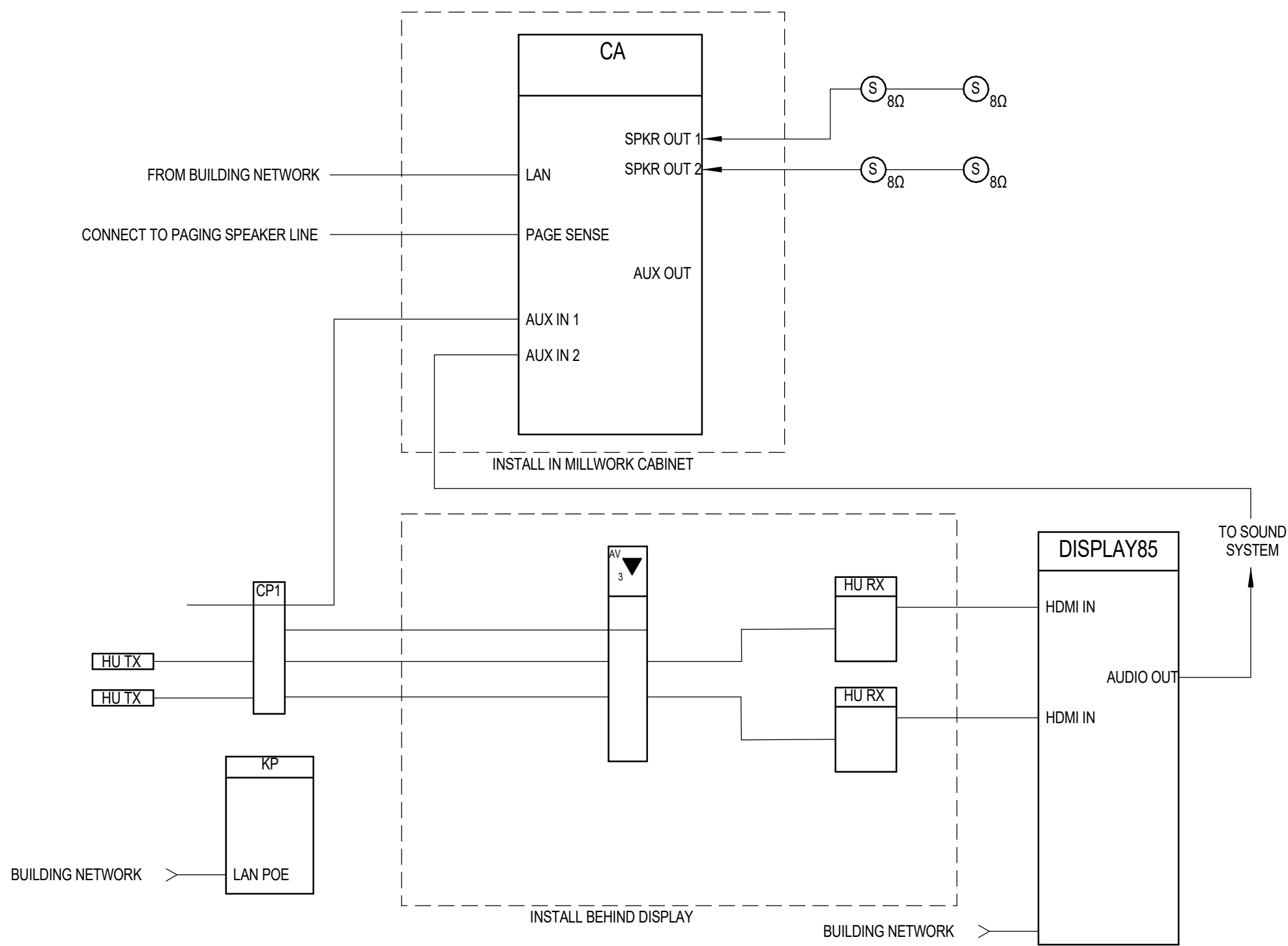
SIGNAGE SYSTEM EQUIPMENT LIST						
SYMBOL	DESCRIPTION	QTY/ROOM	SUPPLIER	MODEL	ROUGH-IN	CABLE
SIGNAGE80	DISPLAY, 80", 4K, HDMI INPUTS	OFCI		COORDINATE W/ OWNER		EXTRON HDMI PRO SERIES
	DISPLAY MOUNT, WALL TILT	OFCI		COORDINATE W/ OWNER	SEE EP SHEETS	
PLAYER	SIGNAGE PLAYER	OFCI		COORDINATE W/ OWNER		EXTRON HDMI PRO SERIES

AR = AS REQUIRED; NIC= NOT IN CONTRACT; NR = NO REQUIREMENT; OFCI = OWNER FURNISHED CONTRACTOR INSTALLED; OFFP = OBTAIN FROM PLANS; OFCI =OWNER FURNISHED & INSTALLED

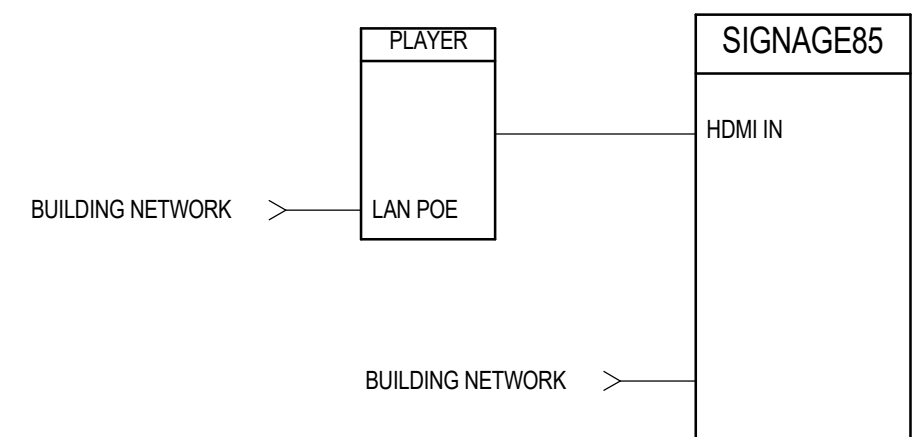
GENERAL SYSTEM NOTES:

1. CLASSROOMS HAVE 8 OHM SPEAKERS.
2. COORDINATE WITH OWNER TO DETERMINE WHICH HOBASET DATA DROP TO CONNECT HU TX & HU RX TO. RUN CABLES FOR ALL CONNECTIONS.
3. PROVIDE ETHERNET CONTROL OF DISPLAY TO PROVIDE ON/OFF, AND SOURCE SELECTION.
- 4.

1. THIS RISER & EQUIPMENT LIST APPLY TO:
  - 1.1. TYPICAL CLASSROOMS
  - 1.2. SPECIAL EDUCATION CLASSROOMS



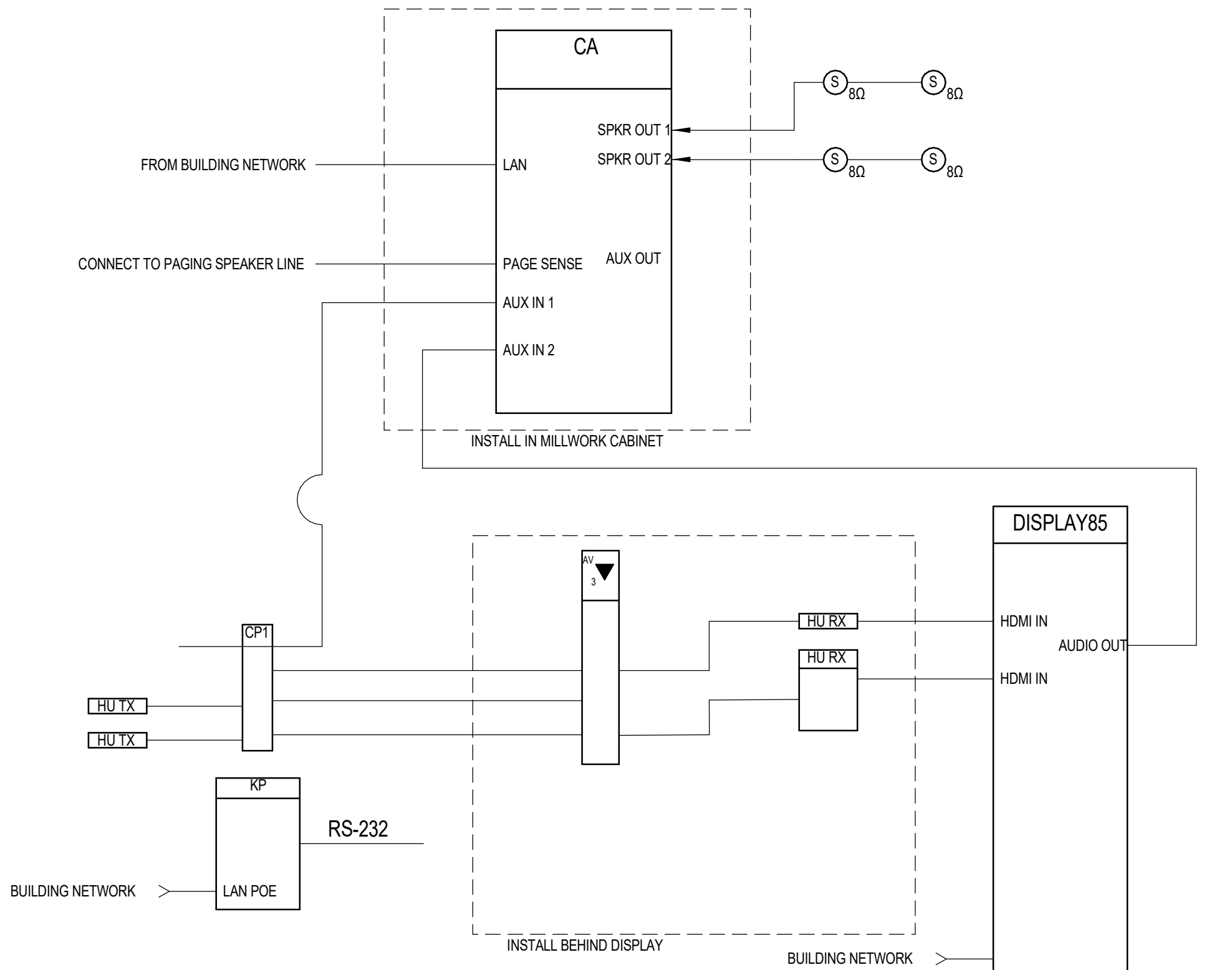
1 AV SYSTEM RISER - TYPICAL CLASSROOMS - RISER  
SCALE: NONE








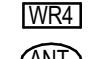
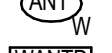
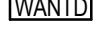


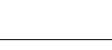


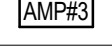














3 AV SYSTEM - SIGNAGE - RISER  
SCALE: NONE

GENERAL SYSTEM NOTES:

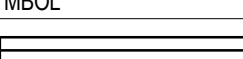


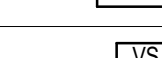

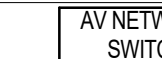
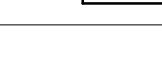

1. CLASSROOMS HAVE 8 OHM SPEAKERS.
2. COORDINATE WITH OWNER TO DETERMINE WHICH HOBASET DATA DROP TO CONNECT HU TX & HU RX TO. RUN CABLES FOR ALL CONNECTIONS.
3. PROVIDE RS-232 CONTROL OF CEILING MOUNTED DOCUMENT CAMERA & ETHERNET CONTROL OF DISPLAY TO PROVIDE ON/OFF, AND SOURCE SELECTION.



4 VIDEO SYSTEM RISER LIBRARY  
SCALE: NONE

AUDIO SYSTEM - CAFETERIUM - EQUIPMENT LIST							
SYMBOL	DESCRIPTION	QTY	ROOM	SUPPLIER	MODEL	ROUGH-IN	CABLE
	EQUIPMENT RACK, 48RU, 20" D, X 23.5" W,	1		MIDDLE ATLANTIC	SR-46-28	12X12X6" BACK BOX IN WALL	
	FRONT DOOR	1			PDF-46		
	VERTICAL POWER STRIP	1			PD-2420SC-NS	SEE DETAIL	
	RACK MOUNT DRAWER	1			UD3		
	VERTICAL CABLE LACING STRIP	4			LACE-44-OWP		
	HORIZONTAL LACING BAR	4			LRP-2A		
	POWER CONDITIONER	1	AIR	FURMAN	CN-2400S	INSTALL IN RACK	
	MICROPHONE INPUT CABLE	1	AIR	PRO-CON	BR0131	1-GANG 3/4" DEEP 3/4" C. THROUGHOUT	WEST PENN 454
	BLUETOOTH RECEIVER	1	OFF	RDL	DD-BTM44	SEE ELEVATION	SEE DETAILS
	CD RECORDER	1		TASCAM	SS-CDR-200		SEE DETAILS
  	WIRELESS MICROPHONE SYSTEM					QTY(2) 1-GANG BOX FOR ANTENNA W/ 3/4" C. TO RACK.	GIGABIT PATCH CABLE - CONNECT TO AV NETWORK
	RECEIVER, 4CH	3		SHURE	ULXD4QGV5-G50	1-GANG 3" DEEP	WEST PENN 454
	12 WAVE ANTENNA	2		SHURE	UA844+ SWB	1-GANG 3" DEEP	WEST PENN 810
	REMOTE ANTENNA MOUNTING KIT	2		SHURE	UA844+ SWB	1-GANG 3" DEEP	WEST PENN 810
	POWERED ANTENNA DISTRIBUTOR	1		SHURE	ULXD2/SM58	1-GANG 3" DEEP	WEST PENN 810
	HANDHELD MIC	2		SHURE	ULXD2/SM58	1-GANG 3" DEEP	WEST PENN 810
	BODY PACK TRANSMITTER & MIC	10		SHURE	ULXD2/SM58	1-GANG 3" DEEP	WEST PENN 810
	TABLE TOP MICROPHONE CHARGER	6		SHURE	SBG220	1-GANG 3" DEEP	WEST PENN 810
	TABLE TOP BATTERY CHARGER	1		SHURE	SBG220	1-GANG 3" DEEP	WEST PENN 810
	SPARE BATTERIES	8		SHURE	SBG009	1-GANG 3" DEEP	WEST PENN 810
	REMOTE ANTENNA MOUNTING KIT	2		SHURE	UA505	1-GANG 3" DEEP	WEST PENN 810
	DSP, AUDIO W/ REQUIRED UCI, SCRIPTING, AND DANTE LICENSES	1	AIR	Q-SYS	CORE 110F V2		WEST PENN 254246
	AV NETWORK SWITCH	1		NETGEAR	AV LINE		WEST PENN 254246
	ASSISTIVE LISTENING SYSTEM, 2 CH, DANTE ENABLED	1		LISTEN	GSM4230P		GIGABIT PATCH CABLES
	SERVER RECEIVERS	4					
		1					
		4					
		1					
	MIXING CONSOLE, 32CH DANTE CARD	1		SOUND CRAFT	SI PERFORMER 3		GIGABIT PATCH CABLES
	DANTE CARD	1			DANTE CARD D		
	AMP #1, 8 CH, 8K W	2		Q-SYS	CK-Q BK8		WEST PENN 227
	AMP #2	1		CROWN	DCI 2000		WEST PENN 227
	AMP #3	1		CROWN	DCI 2000		WEST PENN 227
	FOLD BACK SPEAKER	2		COMMUNITY	Q2-WA	1-GANG 3" DEEP BOX	WEST PENN 227
	SPEAKER FLYING HARDWARE	A/R		CUSTOM		3/4" C. THROUGHOUT	WEST PENN 227
	MONITOR SPEAKER CONNECTION PLATE	1		CUSTOM		SEE DETAIL	WEST PENN 227
	PANEL MOUNT 4 POLE SPEAKON	1		NEUTRIK	ML4	1-GANG 3" DEEP BOX	WEST PENN 227
	MONITOR SPEAKER	1		EV	SL100-WNE	1" C. THROUGHOUT	
	MOUNTING HARDWARE	A/R		CUSTOM			
	STEREO TO MON	A/R		EDCOR	S2M		
	NETWORK JACK	2		CUSTOM			
	CEILING MICROPHONE	1		AUDIO TECHNICA	UB85AW	1-GANG 3" DEEP BOX 3/4" C. THROUGHOUT	WEST PENN 252918
	AUX INPUT	1		RDL		DEEP 3" 1-GANG BACK BOX 3/4" C. THROUGHOUT	WEST PENN 252918
	LINE ARRAY SPEAKER	5		Q-SYS	WL30R2	1-GANG 3" DEEP BOX 3/4" C. THROUGHOUT	WEST PENN 252918
	CABLE CONNECTOR	A/R		NEUTRIK	NL8FC	DEEP 1-GANG BOX	WEST PENN 25210
	ARRAY FRAME	1		Q-SYS	AF30R2-S		
	PULL BACK BAR	1		Q-SYS	RE30R2-S		
	CLASSROOM AMPLIFIER	1	OFF	LIGHTSPEED	CASCADIA	INSTALL IN RACK	WEST PENN 454
							WEST PENN 254346 - YELLOW

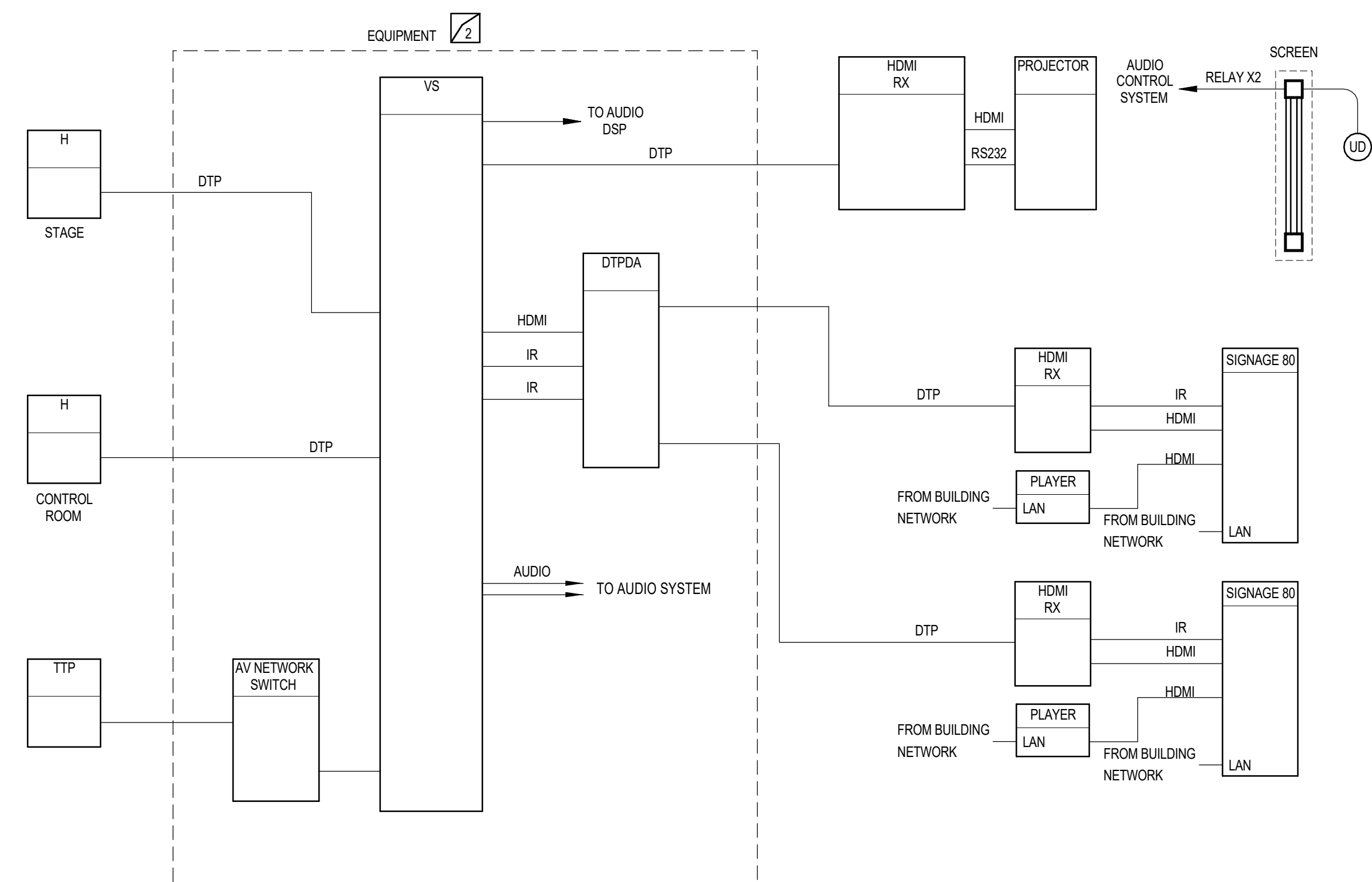
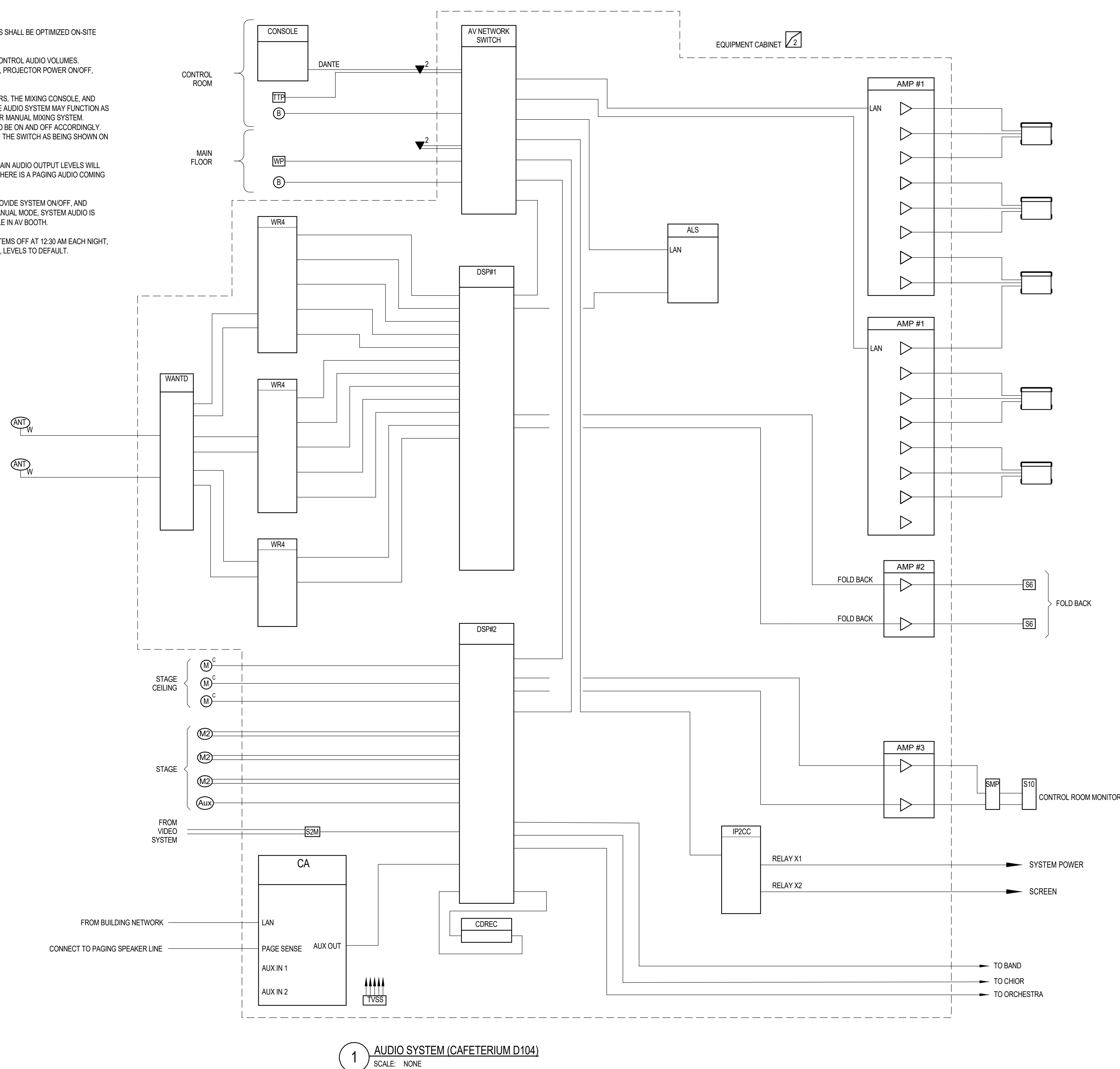
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










VIDEO SYSTEM - CAFETERIUM - EQUIPMENT LIST						
SYMBOL	DESCRIPTION	QTY	SUPPLIER	MODEL	ROUGH-IN	CABLE
	SURFACE MOUNTED SCREEN 160"X96" 12" BLACK DROP 16:9 PROFESSIONAL ELECTROL MATT WHITE BLACK SCREEN CASE. PROJECTOR SCREEN SURFACE FACING AUDIENCE	1	DA-LITE	CUSTOM 38701		
	THREE POSITION CONTROL SWITCH	1	DA-LITE	AS RECOMMENDED BY DA-LITE	1-GANG 3" DEEP 3/4" CONDUIT THROUGHOUT SWITCH HEIGHT	AS RECOMMENDED BY MANUFACTURER
	LOW VOLTAGE CONTROLLER	1	DA-LITE	LVC-IV		
	HDMI INPUT, WALL	A/R	EXTRON	DTP T HWP 4K 331 D	1-GANG 3" DEEP (2) 3/4" C. TO EQUIPMENT CABINET #2	WEST PENN 254246F
	HDMI RECEIVER, BEHIND DISPLAYS	A/R	EXTRON	DTP R HWP 4K 331 D	1-GANG 3" DEEP 3/4" C. TO EQUIPMENT CABINET #2	WEST PENN 254246F WEST PENN 25591
	HDMI SWITCHER & CONTROL PROCESSOR	A/R	EXTRON	DTP CROSS POINT 82 4K PCP MA10		EXTRON HDMI PRO
	DTP DA, 4 PORTS	1	EXTRON	DTP HD DA4 4K 230		
	TOUCH PANEL 9", TABLE TOP	1	EXTRON	TLP PRO 525T		EXTRON HDMI PRO EXTRON XTP OPT 24P WEST PENN 254246F
	AV NETWORK SWITCH	1	NETGEAR	AV LINE GSM4212PX		WEST PENN 254246
	SHARED WITH SIGNAGE SYSTEM	2				
	PROJECTOR, 16.9, 16K LUMENS WILENS	1	PANASONIC	PT-RQ18K		EXTRON HDMI PRO
	LENS	1	PANASONIC	ET-D3LE130		
	PROJECTOR MOUNT, MICRO ADJUSTABLE	1	CHIEF	YCTU		
	INTERFACE PLATE	1	CHIEF	HCUW (INCLUDED)		
	CEILING MOUNTING	1	CUSTOM	CUSTOM		
	POLE	A/R	CUSTOM	CUSTOM		
RODING		A/R	CUSTOM	CUSTOM		
	VIBRATION ISOLATOR	A/R	MIDDLE ATLANTIC	CMA347		

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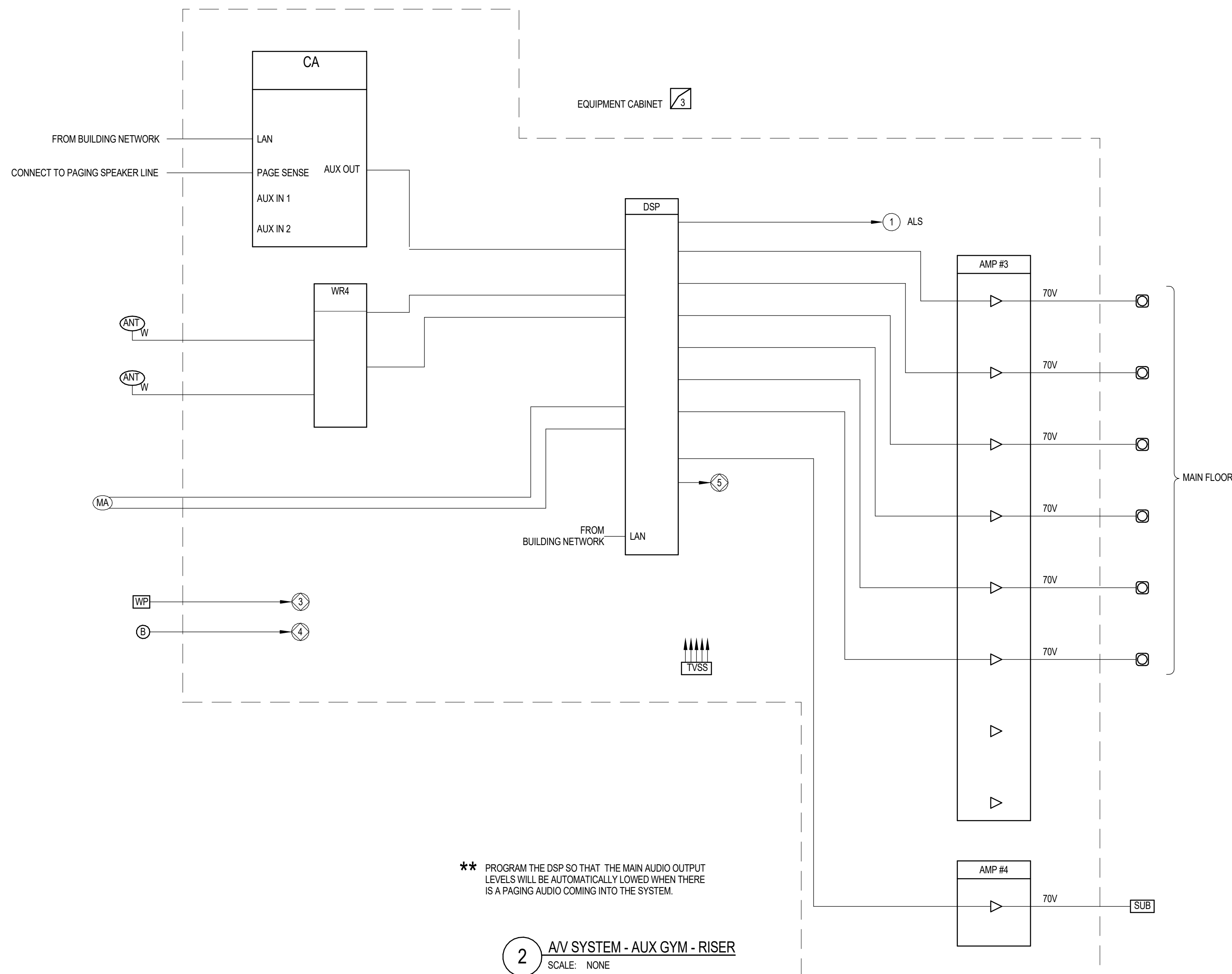
## NOTES:

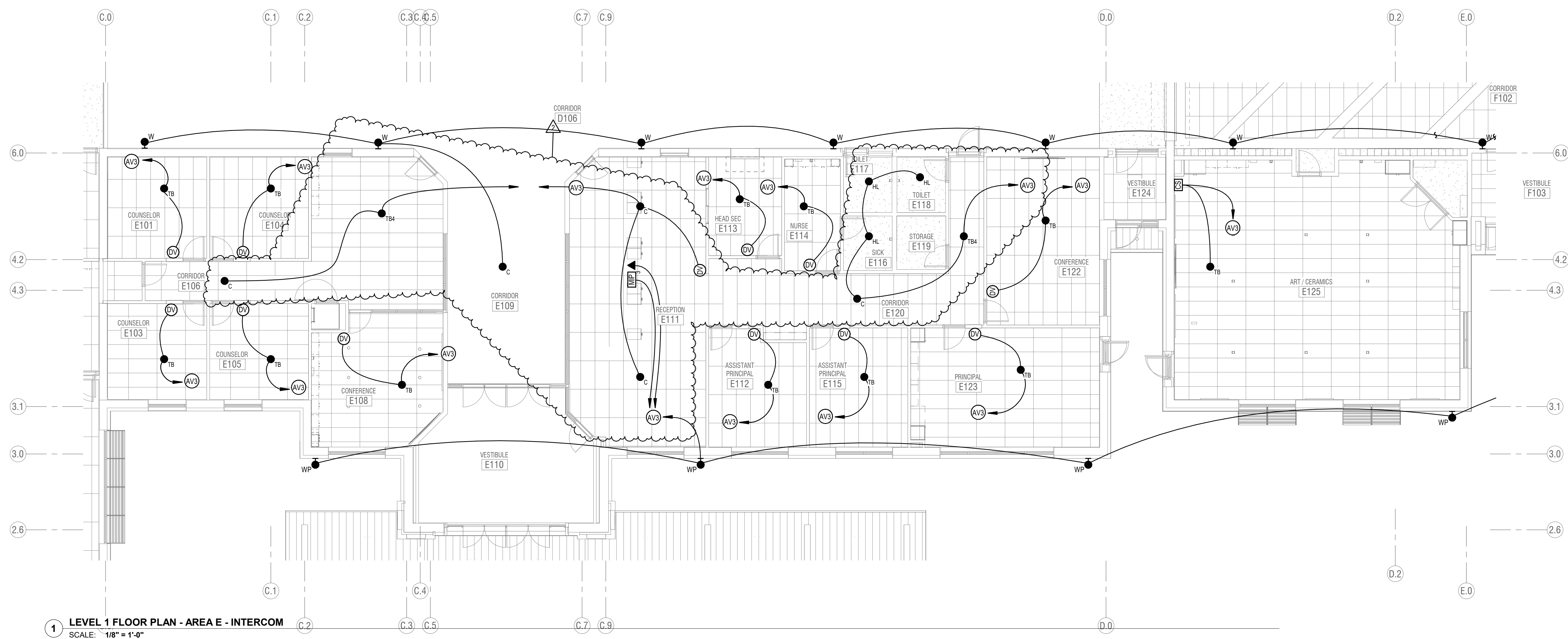
- THE SPEAKER COVERAGE SETTINGS SHALL BE OPTIMIZED ON-SITE DURING THE INSTALLATION.
- PROGRAM THE TOUCH PANEL, TO CONTROL AUDIO VOLUMES, AUDIO/VIDEO SOURCE SELECTIONS, PROJECTOR POWER ON/OFF, PROJECTION SCREEN UP/DOWN.
- PROGRAM THE DIGITAL PROCESSORS, THE MIXING CONSOLE, AND AUTOMANUAL SWITCH SO THAT THE AUDIO SYSTEM MAY FUNCTION AS EITHER AN AUTO MIXING SYSTEM OR MANUAL MIXING SYSTEM. PROGRAM LED'S ON THE SWITCH TO BE ON AND OFF ACCORDINGLY. ALSO PROVIDE CUSTOM LABELS ON THE SWITCH AS BEING SHOWN ON THE SWITCH DETAIL.
- PROGRAM THE DSP SO THAT THE MAIN AUDIO OUTPUT LEVELS WILL BE AUTOMATICALLY LOWED THEN THERE IS A PAGING AUDIO COMING INTO THE SYSTEM.
- CONFIGURE PLATFORM 'WP' TO PROVIDE SYSTEM ON/OFF, AND AUTOMANUAL MODES. WHEN IN MANUAL MODE, SYSTEM AUDIO IS ROUTED THROUGH MIXING CONSOLE IN AV BOOTH.
- CONFIGURE SYSTEM TO TURN SYSTEMS OFF AT 12:30 AM EACH NIGHT, AND RESET ALL SYSTEM ROUTINGS, LEVELS TO DEFAULT.



AV SYSTEM - AUX GYM - EQUIPMENT LIST						
SYMBOL	DESCRIPTION	QTY	SUPPLIER	MODEL	ROUGH-IN	CABLE
	EQUIPMENT RACK, 48RU, 28" D, X 23.5" W			SPECIFIED AS PART OF GYM SYSTEM		
	WIRELESS MICROPHONE SYSTEM RECEIVER, 401 1/2 WAVE ANTENNA HANDHELD MIC BODY PACK TRANSMITTER BATTERY CHARGING STATION SPARE BATTERIES SHELF FOR CHARGING STATION, (SRU) REMOTE ANTENNA MOUNTING KIT	1 1 1 1 1 2 2 2	SHURE INCLUDED SHURE SHURE SHURE SHURE NR SHURE	ULXD4QGV-G50 ULXD2/SM58 ULXD1/MX153 SBC200 SBW00 NR UA505	QTY(2) 1-GANG BOX FOR ANTENNA W/ 3/4" C. TO RACK INSTALL TRANSMITTER IN RACK. STORE EQUIPMENT IN RACK.	GIGABIT PATCH CABLE - CONNECT TO AV NETWORK WEST PENN 225 INSTALLED MIC CABLE, W NEUTRIK NCMMX-8
	18" THICK PLEXI GLASS ANTENNA CONVERTER	2	AMERICAN TIME OR EQUAL	CUSTOM - HTTPS://WWW.AMERICAN-TIME.COM/GET-QUOTE-GUARD-BULDER/		
	DIGITAL SIGNAL PROCESSOR, W/ UCI, SCRIPTING AND DANTE LICENSES AUDIO IO EXPANSION GPIO EXPANSION RELAY CONTROL MODULE	1 A/R A/R A/R A/R	Q-SYS Q-SYS QIO-GP8X3 GLOBAL CACHE	CORE 110F V2 QIO-ML4I, QIO-L04, QIO-ML2X2 QIO-GP8X8 ITACH-P2CC		
	POWER CONDITIONER & SEQUENCER	1	FURMAN	CN-1800S	INSTALL IN RACK	
	AMPLIFIER, 70V 8 CHANNEL	1	CROWN	DCI2400	INSTALL IN RACK	
	PORTABLE EQUIPMENT MIC STAND MIC STAND BOOM HANDHELD MIC, WIRED MICROPHONE CORD, 25' MIC CORD 50'	2 2 2 2 2	ATLAS IED ATLAS IED SHURE AUDIO TECHNICA AUDIO TECHNICA	MS-20 PB21WEB BETA 58A AT83A-25 AT83A-50	PROVIDE TO OWNER AND STORE IN RACK	
	WALL PLATE, TOUCH SCREEN CONTROLLER WALL PLATE BACK BOX AND COVER	1 1 1	Q-SYS FSR	TSC-T0-G3 WB-PS7SC-T0-G3	SEE DETAIL	WEST PENN 4246AF
	BLUETOOTH CONNECTION PLATE BLUETOOTH, FRMT A FRMT A RECEIVER, IN RACK	1 1	RDL RDL	D-BT1A TX-TPR2A	SEE DETAIL	WEST PENN 4246AF
	1-GANG WIRE COVER SPEAKER, 16A/FLOOR SURFACED, WHITE, 200W EACH	1 OFF OFF	NR COMMUNITY CUSTOM	NR R-55C2AX FLYING HARDWARE		
	SPEAKER, SUB SURFACED, WHITE, 200W EACH	1 OFF	COMMUNITY COMMUNITY	ISB-115W		1-GANG BOX 3/4" C. THROUGHOUT WEST PENN 2325SB
	AMPLIFIER, 70V, FOR SUB	1	BIAMP	ALC-404D	INSTALL IN RACK	
	ASISTIVE LISTNING SYSTEM, 2 CH RECEIVERS			SPECIFIED AS PART OF GYM SYSTEM		
	STEREO TO MONO		A/R	EDCOR	SMZ	
	AV SWITCH, 30 PORT, POE+, 300w			SPECIFIED AS PART OF GYM SYSTEM		
	ZONE MODULE		OFEO	LIGHTSPEED	CASCADIA	

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1 LEVEL 1 FLOOR PLAN - AREA E - INTERCOM  
SCALE: 1/8" = 1'-0"

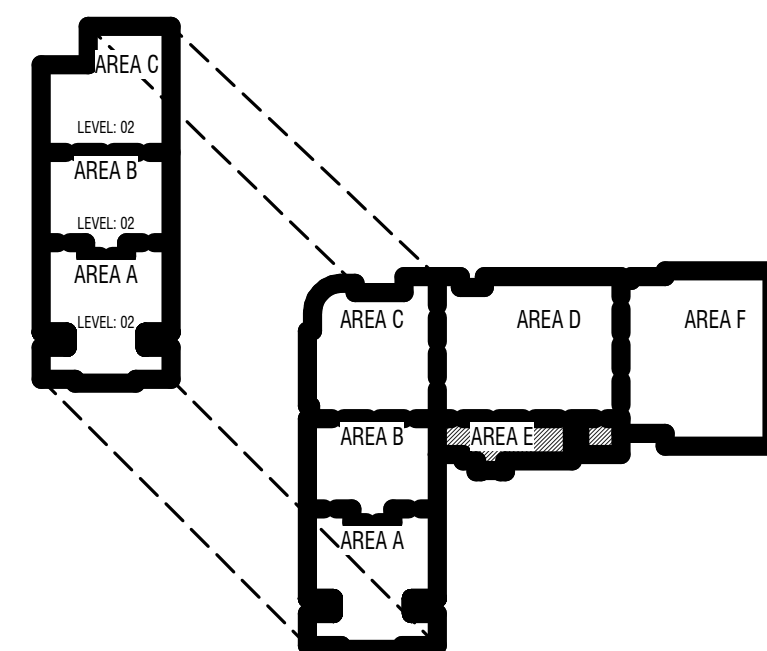
#### INTERCOM GENERAL NOTES:

1. RUN 1 CAT5 CABLE WITH CONDUIT FROM THE INTERCOM MAIN CONTROLLER TO THE DIGITAL TELEPHONE HEADEND EQUIPMENT. PROGRAM THE OWNER SUPPLIED TELEPHONE SYSTEM SO THAT A DIGITAL TELEPHONE CAN PERFORM THE CALL CLASSROOM INTERCOM SYSTEM & PAGING FUNCTIONS OF AN INTERCOM CONSOLE.
2. WIRE ALL VOLUME CONTROLS SO THEY CONTROL ONLY SINGLE SPEAKER.
3. INTERCOM SYSTEM RISER DIAGRAMS, LAYOUTS, AND EQUIPMENT LISTS ARE BASED ON SIGNAL FLOWS OF AUDIO ENHANCEMENT EQUIPMENT. IF APPROVED ALTERNATE EQUIPMENT IS CHOSEN, LAYOUTS AND DIAGRAMS MAY BE DIFFERENT THAN THOSE SHOWN ON DRAWINGS. ADDITIONAL BOXES, PLATES, CABLES, RACK SPACES, AND POWER OUTLETS MAY BE REQUIRED AS DETERMINED BY THE INTEGRATOR WHO CHOOSES THE ALTERNATE EQUIPMENT. ALTERNATE EQUIPMENT INTEGRATOR SHALL BE RESPONSIBLE TO COORDINATE ALL CHANGES REQUIRED BY ALTERNATE EQUIPMENT TO ENSURE TURN-KEY SYSTEM WITH SIMILAR FUNCTIONALITY TO THAT SPECIFIED.
4. PROGRAM AND INSTALL REQUIRED RELAY CABLES AND CONDUITS BETWEEN THE ACCESS CONTROL SYSTEM AND THE INTERCOM SYSTEM AS DESIRED BY OWNER. PROGRAM THE INTERCOM SYSTEM SO THAT THE SYSTEM MAY TRIGGER ACCESS CONTROL SYSTEM WHEN RELAYS ARE ENERGIZED OR DE-ENERGIZED.
5. AV SYSTEMS INTEGRATORS WHO WISH TO BID ON THIS PROJECT MUST BE TRAINED AND CERTIFIED BY CLASSROOM VOICE LIFT SYSTEM MANUFACTURER SPECIFIED FOR THIS PROJECT.
6. PROVIDE #6 AWG THHN WIRE W/ GREEN INSULATION FROM EACH AV EQUIPMENT CABINET TO THE NEAREST MAIN BUILDING GROUND. CONNECT GROUNDING WIRE TO BARE METAL ON EQUIPMENT CABINET.
7. COLORS OF ALL EXPOSED INTERCOM DEVICES INCLUDING INPUT & OUTPUT PLATES, VOLUME CONTROLS, SWITCHES, SPEAKERS, AND SPEAKER ENCLOSURES SHALL BE REVIEWED BY OWNER PRIOR TO ORDERING.
8. CLASSROOM AMPLIFIERS MAY BE LOCATED ON WALL, CEILINGS, OR IN MILLWORK CABINETS. REFER TO PLANS FOR SPECIFIC DEVICE LOCATIONS.
9. INSTALL CLOCKS CENTERED, 6" ABOVE TOP OF DOOR FRAME.
10. CONFIGURE INTERCOM AND CSAS SYSTEMS TO PROVIDE EMERGENCY SIGNALING FROM CSAS TO INTERCOM.

#### KEYED NOTES

AV3 TO DATA RACK IN NEAREST MDF/IDF CLOSET.

#### KEY PLAN



#### CONSTRUCTION DOCUMENTS

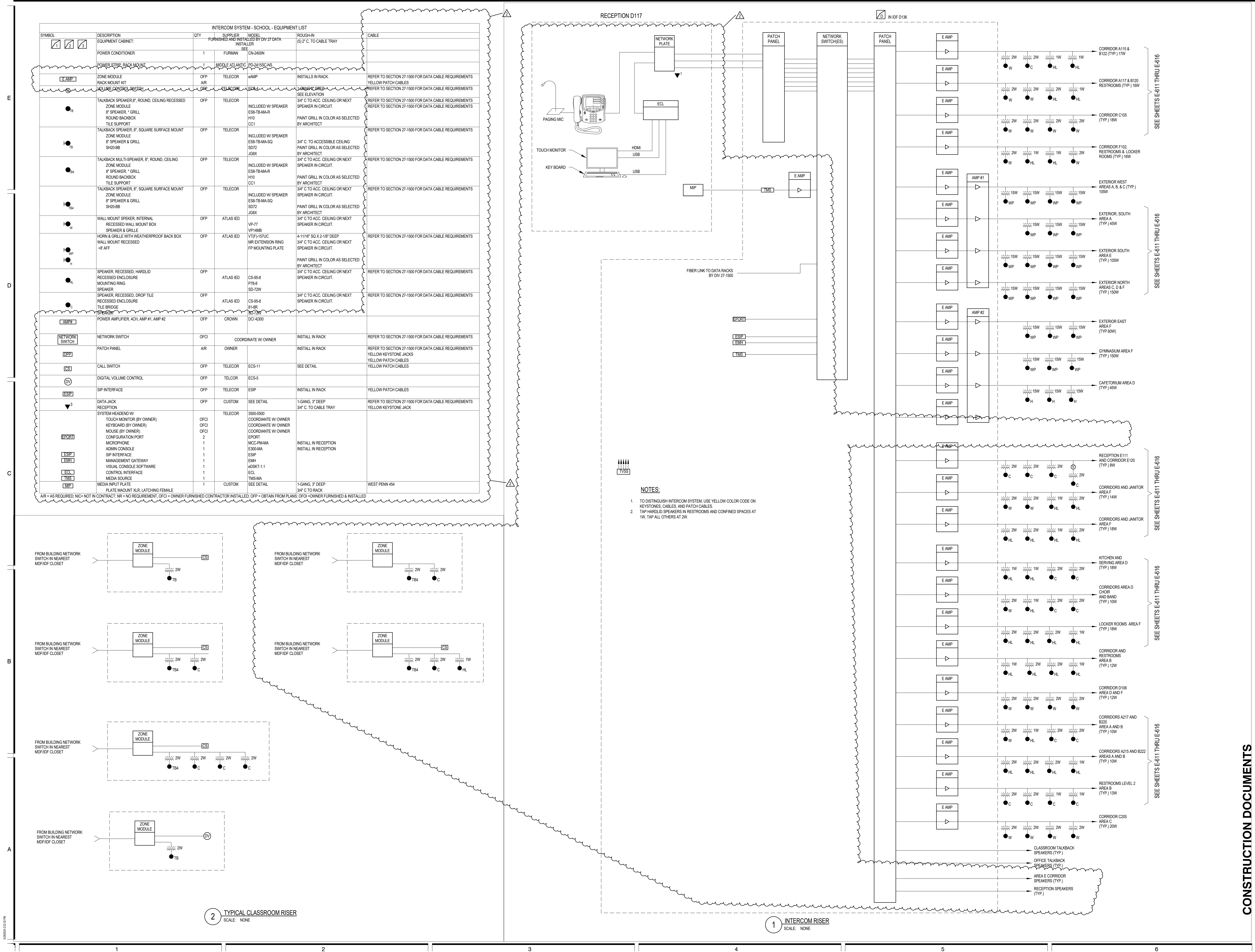
MARK	DATE	DESCRIPTION
ADDITION 3	05/15/24	
ADDITION 5	05/22/24	

PROJECT #: 123006  
DRAWN BY: Author  
CHECKED BY: Checker  
ISSUED: 04/26/2024



LEVEL 1 - AREA E - INTERCOM

E-615



**SECTION 07 5400  
THERMOPLASTIC (KEE) MEMBRANE ROOFING - BASE BID**

**PART 1 – GENERAL**

**1.01 SUMMARY**

- A. Section Includes:
  - 1. Mechanically Fastened Membrane Roofing System.
  - 2. Roof Insulation.
  - 3. Vapor Retarder.
  - 4. FiberClad Coated Metal
  - 5. Tapered Roof Insulation
  - 6. Coverboard
  - 7. Walkways
- B. Related Sections:
  - 1. Division 01 – General Conditions.
  - 2. Division 06 – Wood, Plastics, and Composites.
  - 3. Division 07 – Thermal and Moisture Protection.
  - 4. Division 22 – Plumbing.
  - 5. Division 23 – HVAC.

**1.02 REFERENCES**

- A. Comply with all References in effect, most active, or latest version as of the date of the Contract Documents.
- B. American Society of Civil Engineers (ASCE) ([www.asce.org](http://www.asce.org)) 7 - Minimum Design Loads for Buildings and Other Structures.
- C. ASTM International (ASTM) ([www.astm.org](http://www.astm.org)):
  - 1. C578 - Standard Specification for Preformed Cellular Polystyrene Thermal Insulation.
  - 2. C1177 - Standard Specification for Glass Mat Gypsum Substrate for Use as Sheathing.
  - 3. C1278 - Standard Specification for Fiber-Reinforced Gypsum Panel.
  - 4. C1289 - Standard Specification for Faced Rigid Cellular Polyisocyanurate Thermal Insulation Board.
  - 5. C1549 - Standard Test Method for Determination of Solar Reflectance near Ambient Temperature Using a Portable Solar Reflectometer.
  - 6. D751 - Standard Test Methods for Coated Fabrics
  - 7. D882 - Standard Test Method for Tensile Properties of Thin Plastic Sheeting
  - 8. D1149 - Standard Test Methods for Rubber Deterioration - Cracking in an Ozone Controlled Environment.
  - 9. D1204 - Standard Test Method for Linear Dimensional Changes for Nonrigid Thermoplastic Sheeting or Film at Elevated Temperature.
  - 10. D2136 - Standard Test Method for Coated Fabrics - Low-Temperature Bend Test.
  - 11. D4397 - Standard specification for Polyethylene sheeting for construction, industrial and agricultural applications.
  - 12. D4434 - Standard Specification for Poly (Vinyl Chloride) Sheet Roofing.
  - 13. D5635 - Standard Test Method for Dynamic Puncture Resistance of Roofing Membrane Specimens.
  - 14. D6754 - Standard Specification for Ketone Ethylene Ester Based Sheet Roofing.
  - 15. E108 - Standard Test Methods for Fire Tests of Roof Coverings.
  - 16. E1980 - Standard Practice for Calculating Solar Reflectance Index of Horizontal and Low-Sloped Opaque Surfaces.
- D. Energy Star ([www.energystar.gov](http://www.energystar.gov)) - Qualified Products.
- E. Factory Mutual Insurance Co. (FM) ([www.fmglobal.com](http://www.fmglobal.com)):
  - 1. 4470 - Approval Standard for Single-Ply, Polymer-Modified Bitumen Sheet, Built-Up Roof (BUR) and Liquid Applied Roof Assemblies for Use in Class 1 and Noncombustible Roof

Deck Construction.

2. Property Loss Prevention Data Sheet 1-28 - Design Wind Loads.
3. Property Loss Prevention Data Sheet 1-49 - Perimeter Flashing.
- F. National Roofing Contractors Association (NRCA) - Roofing and Waterproofing Manual.
- G. NSF/ANSI 347 – Sustainability Assessment for Single Ply Membranes.
- H. 2010 Americans with Disabilities Act. (ADAAG) ([www.ada.gov](http://www.ada.gov)).
- I. 2015 International Building Code. (2015 IBC).

### **1.03 PERFORMANCE REQUIREMENTS**

- A. General: Provide installed roofing membrane and base flashings that remain watertight; do not permit the passage of water; and resist specified uplift pressures, thermally induced movement, and exposure to weather without failure.
- B. Material Compatibility: Provide roofing materials that are compatible with one another under conditions of service and application required, as demonstrated by roofing membrane manufacturer based on testing and field experience.
- C. FMG Listing: Provide roofing membrane, base flashings, and component materials that comply with requirements in FMG 4450 and FMG 4470 as part of a membrane roofing system and that are listed in FMG's "Approval Guide" for Class 1 or noncombustible construction, as applicable. Identify materials with FMG markings.
  1. Fire/Windstorm Classification: Class 1A-90.
  2. Hail Resistance: MH.
- D. Roofing System Design: Provide a membrane roofing system that is identical to systems that have been successfully tested by a qualified testing and inspecting agency to resist the factored design uplift pressures calculated according to SPRI's "Wind Load Design Guide for Fully Adhered and Mechanically Fastened Roofing Systems."

### **1.04 SUBMITTALS**

- A. Under provisions of Division 01.
- B. Product Data: For each type of product indicated.
- C. Shop Drawings: For roofing system. Include plans, elevations, sections, details, and attachments to other Work.
  1. Base flashings and membrane terminations.
  2. Tapered insulation, including slopes.
  3. Insulation fastening patterns.
- D. Samples for Verification: For the following products:
  1. 12 by 12 inch square of sheet roofing, of color specified, including T-shaped side and end lap seam.
  2. 12 by 12-inch square of roof insulation.
  3. 12 by 12-inch (300-by-300-mm) square of walkway pads or rolls.
  4. 12 inch (300-mm) length of metal termination bars.
  5. Six (6) fasteners of each type.
- E. Installer Certificates: Signed by roofing system Manufacturer certifying that Installer is approved, authorized, or licensed by manufacturer to install roofing system.
- F. Manufacturer Certificates: Signed by roofing manufacturer certifying that roofing system complies with requirements specified in "Performance Requirements" Article.
  1. Submit evidence of meeting performance requirements.
- G. Qualification Data: For Installer and manufacturer.
- H. Product Test Reports: Based on evaluation of comprehensive tests performed by manufacturer and witnessed by a qualified testing agency, for components of roofing system.
- I. Maintenance Data: For roofing system to include in maintenance manuals.
- J. Warranties: Special warranties specified in this Section.

- K. Inspection Report: Copy of roofing system Manufacturer's inspection report of completed roofing installation.

#### **1.05 QUALITY ASSURANCE**

- A. Installer Qualifications: A qualified firm that is approved, authorized, or licensed by roofing system Manufacturer to install Manufacturer's product and that is eligible to receive Manufacturer's warranty.
- B. Manufacturer Qualifications: A qualified manufacturer with 20 Years experience manufacturing the same membrane without formulation changes. The roofing membrane formulation and system shall be identical to that used for this Project, per applicable change, by law. The membrane and accessories must be produced by the warranted manufacturer. No Private Label Products will be accepted.
- C. Source Limitations: Obtain components for membrane roofing system approved by roofing membrane manufacturer.
- D. Fire-Test-Response Characteristics: Provide membrane roofing materials with the fire-test-response characteristics indicated as determined by testing identical products per test method below by UL, FMG, or another testing and inspecting agency acceptable to authorities having jurisdiction. Materials shall be identified with appropriate markings of applicable testing and inspecting agency.
  - 1. Exterior Fire-Test Exposure: Class A; ASTM E108, for application and roof slopes indicated.
- E. Pre-installation Conference: Conduct conference at Project site. Comply with requirements in Division 1 Section "Project Management and Coordination." Review methods and procedures related to roofing system including, but not limited to, the following:
  - 1. Meet with Owner, Architect, Owner's insurer if applicable, testing and inspecting agency representative, roofing Installer, roofing system manufacturer's representative, deck Installer, and installers whose work interfaces with or affects roofing including installers of roof accessories and roof-mounted equipment.
  - 2. Review methods and procedures related to roofing installation, including manufacturer's written instructions. Note: Contractor shall have written manufacturer specifications, roof drawings, roof drawing notes and scope of work of work on site during the construction period.
  - 3. Review and finalize a construction schedule and verification of material availability.
  - 4. Review structural loading limitations, prior to loading.
  - 5. Review all details, including base flashings, special details, roof drainage, roof penetration schedule, equipment curb and any conditions that will affect the roofs construction or integrity.
  - 6. Review Contractors Risk Management Plan and OSHA approved Safety Program
  - 7. Review roof observation and repair procedures during and after roof installation.

#### **1.06 DELIVERY, STORAGE, AND HANDLING**

- A. Deliver roofing materials to Project site in original containers with seals unbroken and labeled with manufacturer's name, product brand name and type, date of manufacture, and directions for storing and mixing with other components.
- B. Store liquid materials in their original undamaged containers in a clean, dry, protected location and within the temperature range required by roofing system manufacturer. Protect stored liquid material from direct sunlight.
  - 1. Discard and legally dispose of liquid material that cannot be applied within its stated shelf life.
- C. Protect roof insulation materials from physical damage and from deterioration by sunlight, moisture, soiling, and other sources. Store in a dry location. Comply with insulation manufacturer's written instructions for handling, storing, and protecting during installation.
- D. Handle and store roofing materials and place equipment in a manner to avoid permanent deflection of deck.

## 1.07 PROJECT CONDITIONS

- A. Weather Limitations: Proceed with installation only when existing and forecasted weather conditions permit roofing system to be installed according to manufacturer's written instructions and warranty requirements.

## 1.08 WARRANTY

- A. Special Warranty: Manufacturer's standard form, without monetary limitation, in which manufacturer agrees to repair or replace components of membrane roofing system that fail in materials or workmanship within specified warranty period. Failure includes roof leaks.
  - 1. Special warranty includes roofing membrane, base flashings, roofing membrane accessories, roof insulation, fasteners, walkway products and other components of membrane roofing system.
  - 2. Warranty Period: Twenty (20) Year NDL, Non-Prorated, from date of Substantial Completion.
  - 3. Warranty shall include a 1inch Hail Warranty and shall have no exclusions for ponding conditions.
- B. Special Project Warranty: Submit roofing Installer's warranty, on warranty form at end of this Section, signed by Installer, covering Work of this Section, including all components of membrane roofing system such as roofing membrane, base flashing, roof insulation, fasteners, cover boards, substrate boards, vapor retarders, roof pavers, and walkway products, for the following warranty period:
  - 1. Warranty Period: Two (2) years from date of Substantial Completion.

## PART 2 – PRODUCTS

### 2.01 MANUFACTURERS

- A. Design Basis: Contract Documents and are based on products by:
  - 1. Seaman Corporation - Fibertite. ([www.fibertite.com](http://www.fibertite.com)).
    - a. ASTM D6754, Ketone Ethylene Ester (KEE) Sheet Roofing, FiberTite-SM Membrane.
- B. Substitutions: Under provisions of Division 01:
  - 1. Approved Equal: Submitting Manufacturers will be subject to compliance with stated requirements. Substitution request must be submitted 10 days prior to bid date. Provide products, by the manufacturer, that meet or exceed the stated manufacturers qualifications, performance requirements, fire test requirements, physical properties and warranty requirements.
    - a. Thickness: 45 mils (1.1 mm), nominal.
    - b. Color: Off White/ Thermal Tan.
    - c. Inter-ply Reinforcement to be 18 x 19 / 840 X 1,000 denier with reinforced polyester knit fabric that includes an adhesive coating that promotes a molecular bond between the base fabric and the top and bottom membrane facer films.
    - d. Maximum sheet width 6 feet (or up to 74 inches).
  - 2. Substitution request must comply with the following minimum physical properties, Substitutes will only be considered if properties are provided in the same format, as below, for comparison purposes.
    - a. Test Method Result
      - Thickness (nominal)      ASTM D751      0.045 (1.14mm)
      - Breaking Strength      ASTM D751 Grab      375 x 350 lbs
      - Tensile Strength      ASTM D882      8500 psi (598 kgf/cm2)
      - Tear Strength      ASTM D751      100 lbs (445 N)
      - Dynamic Puncture      ASTM D5635      25 joules
      - Low Temperature Flex      ASTM D2136      -40 degrees F
      - Dimensional Stability      ASTM D1204      <1.0%
      - Seam Strength      ASTM D751      100% of fabric strength
      - Coating Adhesion      ASTM D751      Cannot initiate coating peel

Hydrostatic Resistance	ASTM D751	750 psi (46 kgf/cm <sup>2</sup> )
Oil Resistance	MIL-C-20696C	No swelling, cracking, or leaking
Ozone Resistance	ASTM D1149	No effect
Solar Reflectance Index (SRI)	ASTM E1980	98.54

3. All Manufacturers submitting for an approved substitution must produce a membrane which contains the solid state polymer "KEE" or Elvaloy component.

## 2.02 AUXILIARY MATERIALS

- A. General: Auxiliary materials recommended by roofing system manufacturer for intended use and compatible with membrane roofing.
  1. Liquid-type auxiliary materials shall meet VOC limits of authorities having jurisdiction.
- B. Manufacturer's standard sheet flashing of same material, type, reinforcement, thickness, and color as KEE sheet membrane.
- C. Bonding Adhesive: Manufacturers standard solvent based bonding adhesive, for membrane and for base flashing applications.
- D. Insulation Adhesive: Manufacturers approved low rise or Two-Part Polyurethane Insulation Adhesive.
- E. Manufacturer's standard predrilled stainless-steel or aluminum bars, approximately 1 by 1/8 inch (25 by 3 mm) thick; with anchors.
- F. Fasteners: Factory-coated steel fasteners and metal plates meeting corrosion-resistance provisions in FMG 4470, designed for fastening membrane to substrate, and acceptable to membrane roofing system manufacturer.
- G. Miscellaneous Accessories: Provide pourable sealers, preformed cone and vent sheet flashings, preformed inside and outside corner sheet flashings, T-joint covers, termination reglets, cover strips, and other accessories, as required and approved by the manufacturer.
- H. FiberClad coated, heat weldable sheet metal capable of being formed into a variety of shapes and profiles. 24 gauge. G90 galvanized metal sheet with a 20 mil (0.5 mm) coating. 4 ft by 8 ft (1.2 m x 1.2 m) or 4 ft by 10 ft (1.2 m x 3.0 m).
  1. m) or 4 ft by 10 ft (1.2 m x 3.0 m).
- I. Wall Vents: 24 gauge galvanized or PVC clad steel. Net free area of 39.6 sq.in. each. Shall be shaped to keep out rain water. Shall have 1/8 inch or finer bug screen.
- J. Sump Pans: Install a prefabricated insulation sumped drain, 36 by 36 inch min. at each roof drain, overflow drain, and reinforce, per Manufacturers approved detail requirement.

## 2.03 ROOF INSULATION

- A. General: Provide preformed roof insulation boards that comply with requirements and referenced standards, selected from manufacturer's standard sizes and of thicknesses indicated.
- B. Polyisocyanurate Board Insulation: ASTM C1289, Type II, 20 psi, felt or glass-fiber mat facer on both major surfaces.
- C. Equivalent products by following Manufacturers are acceptable:
  1. Atlas Roofing Corp. ([www.atlasroofing.com](http://www.atlasroofing.com)).
  2. Hunter Panels. ([www.hpanels.com](http://www.hpanels.com)).
  3. Substitutions: As approved by the Membrane Manufacturer and under provisions of Division 01.
- D. Provide preformed saddles, crickets, tapered edge strips, and other insulation shapes where indicated for sloping to drain. Fabricate to slopes indicated utilizing Polyisocyanurate Insulation.

## **2.04 INSULATION ACCESSORIES**

- A. General: Roof insulation accessories recommended by insulation manufacturer for intended use and compatible with membrane roofing.
- B. Fasteners: Factory-coated steel fasteners and metal or plates meeting corrosion-resistance provisions in FMG 4470, designed for fastening roof insulation to substrate, and acceptable to roofing system manufacturer.
- C. Sump Pans: Install a prefabricated insulation sumped drain, 36 by 36 inch min. at each roof drain, overflow drain, and reinforce, per Manufacturers approved detail requirement.

## **2.05 COVER BOARDS**

- A. Cover Board: Glass mat faced gypsum panels, ASTM C1177/C1177M, fire resistant type, 5/8 inch thick.
  - 1. See Section 09 2116 - Gypsum Board Assemblies
    - a. Location: See parapet walls and cap details in drawings.

## **2.06 WALKWAYS**

- A. Flexible Walkways: Install contrasting color flexible walkways, fully adhered and acceptable to the membrane roofing system manufacturer, warranted for the duration-equal to the specified system warranty.

# **PART 3 – EXECUTION**

## **3.01 EXAMINATION**

- A. Examine substrates, areas, and conditions, with Installer present, for compliance with the following requirements and other conditions affecting performance of roofing system:
  - 1. Verify that roof openings and penetrations are in place and set and braced and that roof drains are securely clamped in place.
  - 2. Verify that wood blocking, curbs, and nailers are securely anchored to roof deck at penetrations, terminations and that nailers match thicknesses of insulation.
  - 3. Verify that surface plane flatness and fastening of steel roof deck comply with requirements in Division 5 Section "Steel Decking."

## **3.02 PREPARATION**

- A. Clean substrate of dust, debris, moisture, and other substances detrimental to roofing installation according to roofing system manufacturer's written instructions. Remove sharp projections.
- B. Prevent materials from entering and clogging roof drains and conductors and from spilling or migrating onto surfaces of other construction. Remove roof-drain plugs when no work is taking place or when rain is forecast.
- C. Complete terminations and base flashings and provide temporary seals to prevent water from entering completed sections of roofing system at the end of the workday or when rain is forecast. Remove and discard temporary seals before beginning work on adjoining roofing.

## **3.03 INSULATION INSTALLATION**

- A. Coordinate installing membrane roofing system components so insulation is not exposed to precipitation or left exposed at the end of the workday.
- B. Comply with membrane roofing system manufacturer's written instructions for installing roof insulation.
- C. Install tapered insulation under area of roofing to conform to slopes indicated.
- D. Install insulation under area of roofing to achieve required LTTR R Value of 34.0 Min. Install two equal layers of insulation, with joints of each succeeding layer staggered from joints of previous layer, half lapped in each direction.
- E. Trim surface of insulation where necessary at roof drains so completed surface is flush and does not restrict flow of water.

- F. Install insulation with long joints of insulation in a continuous straight line with end joints staggered between rows, abutting edges and ends between boards. Fill gaps exceeding 1/4 inch with insulation.
  - 1. Cut and fit insulation within 1/4 inch of nailers, projections, and penetrations.
  - 2. Fasten insulation according to requirements in FMG's "Approval Guide" for specified Windstorm Resistance Classification.
  - 3. Fasten insulation to resist uplift pressure at corners, perimeter, and field of roof.
- G. Sump Pans: Install a prefabricated insulation sumped drain, 36 by 36 inch min. at each roof drain, overflow drain, and reinforce, per Manufacturers approved detail requirement.

### **3.04 MECHANICALLY FASTENED ROOFING MEMBRANE INSTALLATION**

- A. Install roofing membrane over area to receive roofing according to roofing system manufacturer's written instructions. Unroll roofing membrane and allow relaxing before installing.
- B. Start installation of roofing membrane in presence of roofing system manufacturer's technical personnel.
- C. Accurately align roofing membranes and maintain uniform side and end laps of minimum dimensions required by manufacturer. Stagger end laps.
- D. Mechanically fasten roofing membrane securely at terminations, penetrations, and perimeter of roofing.
- E. Apply roofing membrane with side laps shingled with slope of roof deck where possible.
- F. Seams: Clean seam areas, overlap roofing membrane, and hot-air weld side and end laps of roofing membrane according to manufacturer's written instructions to ensure a watertight seam installation.
  - 1. Test lap edges with probe to verify seam weld continuity. Apply lap sealant to seal cut edges of roofing membrane.
  - 2. Verify field strength of seams a minimum of twice daily, repair seam sample areas, label with date / location and retain for manufacturers technical manager's review.
  - 3. Repair tears, voids, and lapped seams in roofing membrane that does not meet requirements.
- G. Spread sealant or mastic bed over deck drain flange at deck drains and securely seal roofing membrane in place with clamping ring.
- H. In-Splice Attachment: Secure one edge of roofing membrane using fastening plates or metal battens centered within membrane splice and mechanically fasten roofing membrane to roof deck. Field-splice seam.

### **3.05 BASE FLASHING INSTALLATION**

- A. Install sheet flashings and preformed flashing accessories and adhere to substrates according to membrane roofing system manufacturer's written instructions.
- B. Apply solvent-based bonding adhesive to substrate and underside of sheet flashing at required rate and allow to partially dry. Do not apply bonding adhesive to seam area of flashing.
- C. Flash penetrations and field-formed inside and outside corners with sheet flashing.
- D. Clean seam areas and overlap and firmly roll sheet flashings into the adhesive. Weld side and end laps to ensure a watertight seam installation.
- E. Terminate and seal top of sheet flashings and mechanically anchor to substrate through termination bars.

### **3.06 WALKWAY INSTALLATION**

- A. Flexible Walkways: Install walkway products in locations indicated. Heat weld to substrate or adhere walkway products to substrate with compatible adhesive according to roofing system manufacturer's written instructions.

### **3.07 FIELD QUALITY CONTROL**

- A. Final Roof Inspection: Arrange for roofing system manufacturer's technical personnel to inspect roofing installation on completion and submit report to Architect.
  - 1. Notify Architect or Owner 72 hours in advance of date and time of inspection.
- B. Repair or remove and replace components of membrane roofing system where test results or inspections indicate that they do not comply with specified requirements.
- C. Additional testing and inspecting, at Contractor's expense, will be performed to determine compliance of replaced or additional work with specified requirements.

### **3.08 PROTECTING AND CLEANING**

- A. Protect membrane roofing system from damage and wear during remainder of construction period. When remaining construction will not affect or endanger roofing, inspect roofing for deterioration and damage, describing its nature and extent in a written report, with copies to Architect and Owner.
- B. Correct deficiencies in or remove membrane roofing system that does not comply with requirements, repair substrates, and repair or reinstall membrane roofing system to a condition free of damage and deterioration at time of Substantial Completion and according to warranty requirements.
- C. Clean overspray and spillage from adjacent construction using cleaning agents and procedures recommended by manufacturer of affected construction.

### **3.09 ROOFING INSTALLER'S WARRANTY**

- A. WHEREAS of, herein called the "Roofing Installer," has performed roofing and associated work ("work") on the following project:
  - 1. Owner:
  - 2. Address:
  - 3. Building Name/Type:
  - 4. Address:
  - 5. Area of Work:
  - 6. Acceptance Date:
  - 7. Warranty Period:
  - 8. Expiration Date:
- B. AND WHEREAS Roofing Installer has contracted (either directly with Owner or indirectly as a subcontractor) to warrant said work against leaks and faulty or defective materials and workmanship for designated Warranty Period,
- C. NOW THEREFORE Roofing Installer hereby warrants, subject to terms and conditions herein set forth, that during Warranty Period he will, at his own cost and expense, make or cause to be made such repairs to or replacements of said work as are necessary to correct faulty and defective work and as are necessary to maintain said work in a watertight condition.
- D. This Warranty is made subject to the following terms and conditions:
  - 1. Specifically excluded from this Warranty are damages to work and other parts of the building, and to building contents, caused by:
    - a. lightning;
    - b. peak gust wind speed exceeding 70 mph (m/sec);
    - c. fire;
    - d. failure of roofing system substrate, including cracking, settlement, excessive deflection, deterioration, and decomposition;
    - e. faulty construction of parapet walls, copings, chimneys, skylights, vents, equipment supports, and other edge conditions and penetrations of the work;
    - f. vapor condensation on bottom of roofing; and

- g. Activity on roofing by others, including construction contractors, maintenance personnel, other persons, and animals, whether authorized or unauthorized by Owner.
  2. When work has been damaged by any of foregoing causes, Warranty shall be null and void until such damage has been repaired by Roofing Installer and until cost and expense thereof have been paid by Owner or by another responsible party so designated.
  3. Roofing Installer is responsible for damage to work covered by this Warranty but is not liable for consequential damages to building or building contents resulting from leaks or faults or defects of work.
  4. During Warranty Period, if Owner allows alteration of work by anyone other than Roofing Installer, including cutting, patching, and maintenance in connection with penetrations, attachment of other work, and positioning of anything on roof, this Warranty shall become null and void on date of said alterations, but only to the extent said alterations affect work covered by this Warranty. If Owner engages Roofing Installer to perform said alterations, Warranty shall not become null and void unless Roofing Installer, before starting said work, shall have notified Owner in writing, showing reasonable cause for claim, that said alterations would likely damage or deteriorate work, thereby reasonably justifying a limitation or termination of this Warranty.
  5. During Warranty Period, if original use of roof is changed and it becomes used for, but was not originally specified for, a promenade, work deck, spray-cooled surface, flooded basin, or other use or service more severe than originally specified, this Warranty shall become null and void on date of said change, but only to the extent said change affects work covered by this Warranty.
  6. Owner shall promptly notify Roofing Installer of observed, known, or suspected leaks, defects, or deterioration and shall afford reasonable opportunity for Roofing Installer to inspect work and to examine evidence of such leaks, defects, or deterioration.
  7. This Warranty is recognized to be the only warranty of Roofing Installer on said work and shall not operate to restrict or cut off Owner from other remedies and resources lawfully available to Owner in cases of roofing failure. Specifically, this Warranty shall not operate to relieve Roofing Installer of responsibility for performance of original work according to requirements of the Contract Documents, regardless of whether Contract was a contract directly with Owner or a subcontract with Owner's General Contractor.
- E. IN WITNESS THEREOF, this instrument has been duly executed this day of , .
1. Authorized Signature:
  2. Name:
  3. Title:

**END OF SECTION 07 5400**

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**SECTION 07 5419  
SINGLE-PLY PVC THERMOPLASTIC ROOFING - BID ALTERNATE #2**

**PART 1 GENERAL**

**1.01 SECTION INCLUDES**

- A. Mechanically attached PVC thermoplastic roofing membrane.
- B. Insulation, flat and tapered.
- C. Vapor retarder.
- D. Deck sheathing.
- E. Roofing cant strips, stack boots, roofing expansion joints, and walkway pads.

**1.02 RELATED REQUIREMENTS**

- A. Section 07 6200 - Sheet Metal Flashing and Trim: Counterflashings, reglets and \_\_\_\_\_.

**1.03 REFERENCE STANDARDS**

- A. ASCE 7 - Minimum Design Loads and Associated Criteria for Buildings and Other Structures; Most Recent Edition Cited by Referring Code or Reference Standard.
- B. ASTM C578 - Standard Specification for Rigid, Cellular Polystyrene Thermal Insulation; 2023.
- C. ASTM C1177/C1177M - Standard Specification for Glass Mat Gypsum Substrate for Use as Sheathing; 2017.
- D. ASTM C1289 - Standard Specification for Faced Rigid Cellular Polyisocyanurate Thermal Insulation Board; 2023a.
- E. ASTM D4434/D4434M - Standard Specification for Poly(Vinyl Chloride) Sheet Roofing; 2021.
- F. FM DS 1-28 - Wind Design; 2015, with Editorial Revision (2024).
- G. FM DS 1-29 - Roof Deck Securement and Above-Deck Roof Components; 2016, with Editorial Revision (2022).
- H. NRCA (RM) - The NRCA Roofing Manual; 2024.

**1.04 SUBMITTALS**

- A. See Section 01 3000 - Administrative Requirements for submittal procedures.
- B. Product Data: Provide manufacturer's written information listed below.
  - 1. Product data indicating membrane materials, flashing materials, insulation, vapor retarder, surfacing, and fasteners.
- C. Shop Drawings: Indicate joint or termination detail conditions, conditions of interface with other materials, and paver layout.
- D. Manufacturer's Certificate: Certify that products meet or exceed specified requirements.
- E. Warranty:
  - 1. Submit manufacturer warranty and ensure that forms have been completed in Owner's name and registered with manufacturer.
  - 2. Submit installer's certification that installation complies with all warranty conditions for the waterproof membrane.
- F. Installer's qualification statement.

**1.05 QUALITY ASSURANCE**

- A. Installer Qualifications: A qualified firm that is approved, authorized, or licensed by roofing system Manufacturer to install Manufacturer's product and that is eligible to receive Manufacturer's warranty.
- B. Manufacturer Qualifications: A qualified manufacturer with 20 Years experience manufacturing the same membrane without formulation changes. The roofing membrane formulation and system shall be identical to that used for this Project, per applicable change, by law. The membrane and accessories must be produced by the warranted manufacturer. No Private

Label Products will be accepted.

- C. Source Limitations: Obtain components for membrane roofing system approved by roofing membrane manufacturer.
- D. Fire-Test-Response Characteristics: Provide membrane roofing materials with the fire-test-response characteristics indicated as determined by testing identical products per test method below by UL, FMG, or another testing and inspecting agency acceptable to authorities having jurisdiction. Materials shall be identified with appropriate markings of applicable testing and inspecting agency.
  - 1. Exterior Fire-Test Exposure: Class A; ASTM E108, for application and roof slopes indicated.
- E. Pre-installation Conference: Conduct conference at Project site. Comply with requirements in Division 1 Section "Project Management and Coordination." Review methods and procedures related to roofing system including, but not limited to, the following:
  - 1. Meet with Owner, Architect, Owner's insurer if applicable, testing and inspecting agency representative, roofing Installer, roofing system manufacturer's representative, deck Installer, and installers whose work interfaces with or affects roofing including installers of roof accessories and roof-mounted equipment.
  - 2. Review methods and procedures related to roofing installation, including manufacturer's written instructions. Note: Contractor shall have written manufacturer specifications, roof drawings, roof drawing notes and scope of work of work on site during the construction period.
  - 3. Review and finalize a construction schedule and verification of material availability.
  - 4. Review structural loading limitations, prior to loading.
  - 5. Review all details, including base flashings, special details, roof drainage, roof penetration schedule, equipment curb and any conditions that will affect the roofs construction or integrity.
  - 6. Review Contractors Risk Management Plan and OSHA approved Safety Program.
  - 7. Review roof observation and repair procedures during and after roof installation.

#### **1.06 DELIVERY, STORAGE, AND HANDLING**

- A. Deliver products in manufacturer's original containers, dry, undamaged, with seals and labels intact.
- B. Protect products in weather protected environment, clear of ground and moisture.
- C. Protect foam insulation from direct exposure to sunlight.

#### **1.07 FIELD CONDITIONS**

- A. Do not apply roofing membrane during unsuitable weather.
- B. Do not apply roofing membrane when ambient temperature is below 40 degrees F or above \_\_\_\_ degrees F.
- C. Do not apply roofing membrane to damp or frozen deck surface or when precipitation is expected or occurring.
- D. Do not expose materials vulnerable to water or sun damage in quantities greater than can be weatherproofed the same day.

#### **1.08 WARRANTY**

- A. See Section 01 7800 - Closeout Submittals for additional warranty requirements.
- B. System Warranty: Provide manufacturer's system warranty agreeing to repair or replace roofing that leaks or is damaged due to wind or other natural causes.
  - 1. Warranty Term: 20 years.
  - 2. For repair and replacement include costs of both material and labor in warranty.
  - 3. Exceptions NOT Permitted:
    - a. Damage due to wind of speed greater than 56 mph but less than 90 mph.

## **PART 2 PRODUCTS**

### **2.01 MANUFACTURERS**

- A. Basis of Design: Carlisle SynTec: [www.carlisle-syntec.com/#sle](http://www.carlisle-syntec.com/#sle).
- B. Substitutions: See Section 01 6000 - Product Requirements.

### **2.02 ROOFING APPLICATIONS**

- A. PVC Membrane Roofing: One ply membrane, mechanically fastened, over insulation.
- B. Roofing Assembly Performance Requirements and Design Criteria:
  - 1. Wind Uplift:
    - a. Designed to withstand wind uplift forces calculated with ASCE 7.
    - b. Design Wind Speed: In accordance with local building code and authorities having jurisdiction (AHJ).

### **2.03 ROOFING MEMBRANE AND ASSOCIATED MATERIALS**

- A. Membrane:
  - 1. Material: Polyvinyl chloride (PVC) complying with ASTM D4434/D4434M.
  - 2. Reinforcing: Internal fabric.
  - 3. Thickness: 60 mils (0.060 inch), minimum.
  - 4. Sheet Width: Factory fabricated into largest sheets possible.
  - 5. Color: White.
  - 6. Products:
    - a. Carlisle SynTec Systems; SureFlex PVC.
- B. Seaming Materials: As recommended by membrane manufacturer.
- C. Membrane Fasteners: As recommended and approved by membrane manufacturer.
  - 1. Carlisle SynTec Systems; HP-X Fastener: #15 threaded fastener with #3 Phillips drive. Use with Carlisle SynTec Systems Piranha Fastening Plate for mechanically fastened membrane systems on steel or plywood decks.
- D. Vapor Retarder: Material approved by roof manufacturer complying with requirements of fire rating classification; compatible with roofing and insulation materials.
  - 1. Fire-retardant adhesive.
- E. Flexible Flashing Material: Same material as membrane.

### **2.04 COVER BOARDS**

- A. Cover Board: Glass mat faced gypsum panels, ASTM C1177/C1177M, fire resistant type, 5/8 inch thick.
  - 1. Product: See Section 09 2116 Gypsum Board Assemblies
    - a. Location: See parapet walls and cap details in drawings.

### **2.05 INSULATION**

- A. Polyisocyanurate (ISO) Board Insulation: Complies with ASTM C1289, Type II, Class 2
  - 1. Grade and Compressive Strength: Grade 2, 20 psi, minimum.
- B. Expanded Polystyrene (EPS) Board Insulation: Complies with ASTM C578, Type II, is an acceptable alternate for tapered insulation at cricket conditions only.
  - 1. Location: Crickets only
  - 2. Density: 1.5 pcf minimum

### **2.06 ACCESSORIES**

- A. Prefabricated Flashing Accessories:
  - 1. Corners and Seams: Same material as membrane, in manufacturer's standard thicknesses.
  - 2. Penetrations: Same material as membrane, with manufacturer's standard cut-outs, rigid inserts, clamping rings, and flanges.

3. Walkway Rolls: Sure-Flex Heat Weldable Walkway Rolls; 80 mils (0.080 inch) thick; gray membrane.
  4. Contour Rib Profile: Manufacturer's standard extruded PVC; 1-1/4 inch tall, 2-1/8 inch wide, 3/8 inch profile.
  5. Miscellaneous Flashing: Non-reinforced PVC membrane; 80 mils (0.080 inch) thick, in manufacturer's standard lengths and widths.
- B. Insulation Fasteners: Appropriate for purpose intended and approved by roofing manufacturer.
- C. Membrane Adhesive: As recommended by membrane manufacturer.
1. Products:
- D. Surface Conditioner for Adhesives: Compatible with membrane and adhesives.
- E. Sealants: As recommended by membrane manufacturer.
1. Products:
- F. Cleaner: Manufacturer's standard, clear, solvent-based cleaner.
- G. Edgings and Terminations: Manufacturer's standard edge and termination accessories.
1. Snap-On Edge System:
  2. Anchor Bar Fascia System:
  3. Drip Edge:
  4. Coping:
  5. PVC Coated Sheet Metal.
  6. Termination Bar.

## **PART 3 EXECUTION**

### **3.01 EXAMINATION**

- A. Verify that surfaces and site conditions are ready to receive work.
- B. Verify deck is supported and secure.
- C. Verify deck is clean and smooth, flat, free of depressions, waves, or projections, properly sloped and suitable for installation of roof system.
- D. Verify deck surfaces are dry and free of snow or ice.
- E. Verify that roof openings, curbs, and penetrations through roof are solidly set, and cant strips are in place.

### **3.02 INSTALLATION - GENERAL**

- A. Perform work in accordance with manufacturer's instructions and NRCA (RM) applicable requirements.
- B. Do not apply roofing membrane during unsuitable weather.
- C. Do not apply roofing membrane when ambient temperature is outside the temperature range recommended by manufacturer.
- D. Do not apply roofing membrane to damp or frozen deck surface or when precipitation is expected or occurring.
- E. Do not expose materials vulnerable to water or sun damage in quantities greater than can be weatherproofed the same day.

### **3.03 INSTALLATION - GENERAL**

- A. Perform work in accordance with manufacturer's instructions.
- B. Do not apply roofing membrane during unsuitable weather.
- C. Do not apply roofing membrane when ambient temperature is outside the temperature range recommended by manufacturer.
- D. Do not apply roofing membrane to damp or frozen deck surface or when precipitation is expected or occurring.

- E. Do not expose materials vulnerable to water or sun damage in quantities greater than can be weatherproofed the same day.

### **3.04 INSULATION INSTALLATION**

- A. Attachment of Insulation:
  - 1. Mechanically fasten insulation to deck in accordance with roofing manufacturer's instructions and Factory Mutual requirements.
- B. Lay subsequent layers of insulation with joints staggered minimum 6 inches from joints of preceding layer.
- C. Lay boards with edges in moderate contact without forcing, and gap between boards no greater than 1/4 inch. Cut insulation to fit neatly to perimeter blocking and around penetrations through roof.
- D. Do not apply more insulation than can be completely waterproofed in the same day.

### **3.05 MEMBRANE APPLICATION**

- A. Roll out membrane, free from wrinkles or tears. Place sheet into place without stretching.
- B. Shingle joints on sloped substrate in direction of drainage.
- C. Seam Welding:
  - 1. Seam Welding: Overlap edges and ends and seal seams by heat welding, minimum 2 inches.
  - 2. Cover all seams with manufacturer's recommended joint covers.
  - 3. Probe all seams once welds have thoroughly cooled. (Approximately 30 minutes.)
  - 4. Repair all deficient seams within the same day.
  - 5. Seal cut edges of reinforced membrane after seam probe is complete.
- D. Mechanical Attachment:
  - 1. Apply membrane and mechanical attachment devices in accordance with manufacturer's instructions.
- E. At intersections with vertical surfaces:
  - 1. Extend membrane over cant strips and up a minimum of 4 inches onto vertical surfaces.
  - 2. Fully adhere flexible flashing over membrane and up to nailing strips.
- F. Coordinate installation of roof drains and sumps and related flashings.
- G. Daily Seal: Install daily seal per manufacturers instructions at the end of each work day. Prevent infiltration of water at incomplete flashings, terminations, and at unfinished membrane edges.

### **3.06 FIELD QUALITY CONTROL**

- A. See Section 01 4000 - Quality Requirements for general requirements for field quality control and inspection.
- B. Require site attendance of roofing and insulation material manufacturers daily during installation of the Work.

### **3.07 CLEANING**

- A. See Section 01 7000 - Execution and Closeout Requirements for additional requirements.
- B. Remove bituminous markings from finished surfaces.
- C. In areas where finished surfaces are soiled by work of this section, consult manufacturer of surfaces for cleaning advice and conform to their documented instructions.
- D. Repair or replace defaced or damaged finishes caused by work of this section.

### **3.08 PROTECTION**

- A. Protect installed roofing and flashings from construction operations.

- B. Where traffic must continue over finished roof membrane, protect surfaces using durable materials.

**END OF SECTION 07 5419**

**SECTION 08 4313  
ALUMINUM-FRAMED STOREFRONTS**

**PART 1 GENERAL**

**1.01 SECTION INCLUDES**

- A. Aluminum-framed storefront, with vision glass.
- B. Aluminum doors and frames.
  - 1. **NOTE:** On doors receiving exit devices no universal preps are allowed and the doors shall be prepared specifically for the exit device functions as scheduled.
- C. Weatherstripping.

**1.02 RELATED REQUIREMENTS**

- A. Section 08 4229 - Automatic Entrances.
- B. Section 08 7100 - Door Hardware: Hardware items other than specified in this section.
- C. Section 08 8000 - Glazing: Glass and glazing accessories.

**1.03 REFERENCE STANDARDS**

- A. AAMA CW-10 - Care and Handling of Architectural Aluminum from Shop to Site; 2015.
- B. AAMA 611 - Voluntary Specification for Anodized Architectural Aluminum; 2020.
- C. ASTM B221 - Standard Specification for Aluminum and Aluminum-Alloy Extruded Bars, Rods, Wire, Profiles, and Tubes; 2021.
- D. ASTM B221M - Standard Specification for Aluminum and Aluminum-Alloy Extruded Bars, Rods, Wire, Profiles, and Tubes (Metric); 2021.
- E. ASTM E283/E283M - Standard Test Method for Determining Rate of Air Leakage Through Exterior Windows, Skylights, Curtain Walls, and Doors Under Specified Pressure Differences Across the Specimen; 2019.
- F. ASTM E330/E330M - Standard Test Method for Structural Performance of Exterior Windows, Doors, Skylights and Curtain Walls by Uniform Static Air Pressure Difference; 2014 (Reapproved 2021).

**1.04 ADMINISTRATIVE REQUIREMENTS**

- A. Coordinate with installation of other components that comprise the exterior enclosure.
- B. Preinstallation Meeting: Conduct a preinstallation meeting one week before starting work of this section; require attendance by all affected installers.

**1.05 SUBMITTALS**

- A. See Section 01 3000 - Administrative Requirements for submittal procedures.
- B. Product Data: Provide component dimensions, describe components within assembly, anchorage and fasteners, glass and infill, door hardware, and internal drainage details.
- C. Shop Drawings: Indicate system dimensions, framed opening requirements and tolerances, affected related work, expansion and contraction joint location and details, and field welding required.
  - 1. **NOTE:** On doors receiving exit devices no universal preps are allowed and the doors shall be prepared specifically for the exit device functions as scheduled.
- D. Samples: Submit two samples 2 by 4 inches in size illustrating finished aluminum surface, glass, glazing materials.
- E. Manufacturer's Certificate: Certify that the products supplied meet or exceed the specified requirements.

**1.06 QUALITY ASSURANCE**

- A. Manufacturer Qualifications: Company specializing in performing work of type specified and with at least three years of documented experience.

- B. Installer Qualifications: Company specializing in performing work of type specified and with at least three years of documented experience.
- C. Prior to ordering aluminum doors, frames and hardware, provide a mock-up of a pair of entrance doors with the scheduled hardware found in the Project Manual. Upon written approval of the mock-up by the Owner, Architect and their Consultants and after submittal review and acceptance and after the pre-installation meeting as required by this Section, aluminum doors and frames may be fabricated and hardware may be ordered.

#### **1.07 DELIVERY, STORAGE, AND HANDLING**

- A. Handle products of this section in accordance with AAMA CW-10.
- B. Protect finished aluminum surfaces with wrapping. Do not use adhesive papers or sprayed coatings that bond to aluminum when exposed to sunlight or weather.

#### **1.08 FIELD CONDITIONS**

- A. Do not install sealants when ambient temperature is less than 40 degrees F. Maintain this minimum temperature during and 48 hours after installation.

#### **1.09 WARRANTY**

- A. See Section 01 7800 - Closeout Submittals for additional warranty requirements.
- B. Correct defective Work within a five year period after Date of Substantial Completion.
- C. Provide five year manufacturer warranty against excessive degradation of exterior finish. Include provision for replacement of units with excessive fading, chalking, or flaking.

### **PART 2 PRODUCTS**

#### **2.01 BASIS OF DESIGN -- FRAMING FOR INSULATING GLAZING**

- A. Center-Set Style, Thermally-Broken:
  - 1. Basis of Design: Kawneer: Trifab VersaGlaze 451T Framing System at exterior openings; [www.kawneer.com](http://www.kawneer.com).
  - 2. Vertical Mullion Dimensions: 2 inches wide by 4-1/2 inches deep.
- B. Center-Set Style, Not Thermally-Broken:
  - 1. Basis of Design: Kawneer: Trifab VersaGlaze 451 Framing System at interior openings and interior vestibule doors; [www.kawneer.com](http://www.kawneer.com).
  - 2. Vertical Mullion Dimensions: 2 inches wide by 4-1/2 inches deep.
- C. Substitutions: See Section 01 6000 - Product Requirements.

#### **2.02 BASIS OF DESIGN -- SWINGING DOORS**

- A. Wide Stile, Single Glazing:
  - 1. Basis of Design: Kawneer: 500 Standard Entrance System at interior openings including interior vestibule doors; [www.kawneer.com](http://www.kawneer.com).
  - 2. Thickness: 1-3/4 inches.
- B. Wide Stile, Insulating Glazing, Not Thermally-Broken
  - 1. Basis of Design: Kawneer: 500 Standard Entrance System at exterior openings for Not Thermally-Broken; Kawneer 500T Insulpour for Thermally-Broken; [www.kawneer.com](http://www.kawneer.com).
  - 2. Thickness: 1-3/4 (at Not Thermal-Broken) and 2-1/4" (at Thermal-Broken) inches.
- C. Substitutions: See Section 01 6000 - Product Requirements.
  - 1. For any product not identified as "Basis of Design", submit information as specified for substitutions.

#### **2.03 MANUFACTURERS**

- A. Aluminum-Framed Storefront and Doors:
  - 1. EFCO Corporation; \_\_\_\_\_: [www.efcocorp.com/#sle](http://www.efcocorp.com/#sle).
  - 2. Kawneer North America; \_\_\_\_\_: [www.kawneer.com/#sle](http://www.kawneer.com/#sle).
  - 3. Manko Window Systems, Inc; \_\_\_\_\_: [www.mankowindows.com/#sle](http://www.mankowindows.com/#sle).
  - 4. Oldcastle BuildingEnvelope; \_\_\_\_\_: [www.oldcastlebe.com/#sle](http://www.oldcastlebe.com/#sle).

5. Tubelite, Inc; \_\_\_\_\_: [www.tubeliteinc.com/#sle](http://www.tubeliteinc.com/#sle).
6. YKK AP America Inc; \_\_\_\_\_: [www.ykkap.com/#sle](http://www.ykkap.com/#sle).
7. Substitutions: See Section 01 6000 - Product Requirements.

#### **2.04 ALUMINUM-FRAMED STOREFRONT**

- A. Aluminum-Framed Storefront: Factory fabricated, factory finished aluminum framing members with infill, and related flashings, anchorage and attachment devices.
  1. Finish Color: As select by architect from manufactures full range of colors.
  2. Fabrication: Joints and corners flush, hairline, and weatherproof, accurately fitted and secured; prepared to receive anchors and hardware; fasteners and attachments concealed from view; reinforced as required for imposed loads.
  3. Construction: Eliminate noises caused by wind and thermal movement, prevent vibration harmonics, and prevent "stack effect" in internal spaces.
  4. System Internal Drainage: Drain to the exterior by means of a weep drainage network any water entering joints, condensation occurring in glazing channel, and migrating moisture occurring within system.
  5. Expansion/Contraction: Provide for expansion and contraction within system components caused by cycling temperature range of 170 degrees F over a 12 hour period without causing detrimental effect to system components, anchorages, and other building elements.
  6. Movement: Allow for movement between storefront and adjacent construction, without damage to components or deterioration of seals.
  7. Perimeter Clearance: Minimize space between framing members and adjacent construction while allowing expected movement.
  8. Maintain continuous air barrier and/or vapor retarder seal throughout assembly, primarily in line with inside pane of glazing and inner sheet of infill panel, and heel bead of glazing compound.
- B. Performance Requirements
  1. Wind Loads: Design and size components to withstand the specified load requirements without damage or permanent set, when tested in accordance with ASTM E330/E330M, using loads 1.5 times the design wind loads and 10 second duration of maximum load.
    - a. Member Deflection: Limit member deflection to flexure limit of glass in any direction, with full recovery of glazing materials.
  2. Air Leakage: 0.06 cfm/sq ft maximum leakage of storefront wall area when tested in accordance with ASTM E283/E283M at 1.57 psf pressure difference.

#### **2.05 COMPONENTS**

- A. Aluminum Framing Members: Tubular aluminum sections, thermally broken with interior section insulated from exterior, drainage holes and internal weep drainage system.
  1. Framing members for interior applications need not be thermally broken.
  2. Glazing Stops: Flush.
- B. Glazing: See Section 08 8000.
- C. Swing Doors: Glazed aluminum.
  1. Thickness: 1-3/4 and 2-1/4 inches inches.
  2. Top Rail: 5 inches wide.
  3. Vertical Stiles: 5 inches wide.
  4. Bottom Rail: 10 inches wide.
  5. Glazing Stops: Square.
  6. Finish: Same as storefront.

#### **2.06 MATERIALS**

- A. Extruded Aluminum: ASTM B221 (ASTM B221M).
- B. Fasteners: Stainless steel.
- C. Glazing Gaskets: Type to suit application to achieve weather, moisture, and air infiltration requirements.

## **2.07 FINISHES**

- A. Class I Color Anodized Finish: AAMA 611 AA-M12C22A42 Integrally colored anodic coating not less than 0.7 mils thick.
- B. Color: As selected by Architect from manufacturer's full range.
- C. Touch-Up Materials: As recommended by coating manufacturer for field application.

## **2.08 HARDWARE**

- A. Other Door Hardware: See Section 08 7100.
- B. Weatherstripping: Wool pile, continuous and replaceable; provide on all doors.
- C. Sill Sweep Strips: Resilient seal type, retracting, of neoprene; provide on all doors.
- D. Automatic Door Operators and Actuators: See Section 08 4229.

## **PART 3 EXECUTION**

### **3.01 EXAMINATION**

- A. Verify dimensions, tolerances, and method of attachment with other work.
- B. Verify that storefront wall openings and adjoining water-resistive and/or air barrier seal materials are ready to receive work of this section.

### **3.02 INSTALLATION**

- A. Install wall system in accordance with manufacturer's instructions.
- B. Attach to structure to permit sufficient adjustment to accommodate construction tolerances and other irregularities.
- C. Provide alignment attachments and shims to permanently fasten system to building structure.
- D. Align assembly plumb and level, free of warp or twist. Maintain assembly dimensional tolerances, aligning with adjacent work.
- E. Provide thermal isolation where components penetrate or disrupt building insulation.
- F. Install sill flashings. Turn up ends and edges; seal to adjacent work to form water tight dam.
- G. Where fasteners penetrate sill flashings, make watertight by seating and sealing fastener heads to sill flashing.
- H. Pack fibrous insulation in shim spaces at perimeter of assembly to maintain continuity of thermal barrier.
- I. Touch-up minor damage to factory applied finish; replace components that cannot be satisfactorily repaired.

### **3.03 TOLERANCES**

- A. Maximum Variation from Plumb: 0.06 inch per 3 feet non-cumulative or 0.06 inch per 10 feet, whichever is less.
- B. Maximum Misalignment of Two Adjoining Members Abutting in Plane: 1/32 inch.

### **3.04 ADJUSTING**

- A. Adjust operating hardware and sash for smooth operation.

### **3.05 CLEANING**

- A. Remove protective material from pre-finished aluminum surfaces.
- B. Wash down surfaces with a solution of mild detergent in warm water, applied with soft, clean wiping cloths, and take care to remove dirt from corners and to wipe surfaces clean.

### **3.06 PROTECTION**

- A. Protect installed products from damage until Date of Substantial Completion.

**END OF SECTION 08 4313**

**SECTION 08 8000  
GLAZING**

**PART 1 GENERAL**

**1.01 SECTION INCLUDES**

- A. Insulating glass units.
- B. Glazing units.
- C. Glazing compounds.

**1.02 RELATED REQUIREMENTS**

- A. Section 07 2500 - Weather Barriers.
- B. Section 07 9200 - Joint Sealants: Sealants for other than glazing purposes.
- C. Section 08 1113 - Hollow Metal Doors and Frames: Glazed lites in doors and borrowed lites.
- D. Section 08 1416 - Flush Wood Doors: Glazed lites in doors.
- E. Section 08 3200 - Sliding Glass Doors: Glazing provided by door manufacturer.
- F. Section 08 4229 - Automatic Entrances: Glazing provided as part of door assembly.
- G. Section 08 4313 - Aluminum-Framed Storefronts: Glazing provided as part of storefront assembly.
- H. Section 10 2800 - Toilet, Bath, and Laundry Accessories: Mirrors.

**1.03 REFERENCE STANDARDS**

- A. 16 CFR 1201 - Safety Standard for Architectural Glazing Materials; Current Edition.
- B. ANSI Z97.1 - American National Standard for Safety Glazing Materials Used in Buildings - Safety Performance Specifications and Methods of Test; 2015 (Reaffirmed 2020).
- C. ASCE 7 - Minimum Design Loads and Associated Criteria for Buildings and Other Structures; Most Recent Edition Cited by Referring Code or Reference Standard.
- D. ASTM C864 - Standard Specification for Dense Elastomeric Compression Seal Gaskets, Setting Blocks, and Spacers; 2005 (Reapproved 2019).
- E. ASTM C920 - Standard Specification for Elastomeric Joint Sealants; 2018.
- F. ASTM C1036 - Standard Specification for Flat Glass; 2021.
- G. ASTM C1048 - Standard Specification for Heat-Strengthened and Fully Tempered Flat Glass; 2018.
- H. ASTM C1193 - Standard Guide for Use of Joint Sealants; 2016 (Reapproved 2023).
- I. ASTM C1376 - Standard Specification for Pyrolytic and Vacuum Deposition Coatings on Flat Glass; 2021a.
- J. ASTM E84 - Standard Test Method for Surface Burning Characteristics of Building Materials; 2023d.
- K. ASTM E1300 - Standard Practice for Determining Load Resistance of Glass in Buildings; 2016.
- L. ASTM E2190 - Standard Specification for Insulating Glass Unit Performance and Evaluation; 2019.
- M. GANA (SM) - GANA Sealant Manual; 2008.
- N. ITS (DIR) - Directory of Listed Products; Current Edition.
- O. NFRC 100 - Procedure for Determining Fenestration Product U-factors; 2023.
- P. NFRC 200 - Procedure for Determining Fenestration Product Solar Heat Gain Coefficient and Visible Transmittance at Normal Incidence; 2023.
- Q. NFRC 300 - Test Method for Determining the Solar Optical Properties of Glazing Materials and Systems; 2023.

- R. UL (DIR) - Online Certifications Directory; Current Edition.

#### **1.04 ADMINISTRATIVE REQUIREMENTS**

- A. Preinstallation Meeting: Convene a preinstallation meeting one week before starting work of this section; require attendance by each of the affected installers.

#### **1.05 SUBMITTALS**

- A. See Section 01 3000 - Administrative Requirements for submittal procedures.
- B. Product Data on Insulating Glass Unit, Glazing Unit, and Plastic Film Glazing Types: Provide structural, physical and environmental characteristics, size limitations, special handling and installation requirements.
- C. Product Data on Glazing Compounds and Accessories: Provide chemical, functional, and environmental characteristics, limitations, special application requirements, and identify available colors.
- D. Samples: Submit one samples 12 by 12 inch in size of glass units, showing coloration.
- E. Samples: Submit 2 inch long bead of glazing sealant, color as selected.
- F. Certificate: Certify that products of this section meet or exceed specified requirements.
- G. Warranty Documentation: Submit manufacturer warranty and ensure that forms have been completed in Owner's name and registered with manufacturer.

#### **1.06 QUALITY ASSURANCE**

- A. Manufacturer Qualifications: Company specializing in manufacturing the products specified in this section with minimum three years of documented experience.
- B. Installer Qualifications: Company specializing in performing work of the type specified and with at least three years documented experience.

#### **1.07 FIELD CONDITIONS**

- A. Do not install glazing when ambient temperature is less than 40 degrees F.
- B. Maintain minimum ambient temperature before, during and 24 hours after installation of glazing compounds.

#### **1.08 WARRANTY**

- A. See Section 01 7800 - Closeout Submittals for additional warranty requirements.
- B. Insulating Glass Units: Provide a five (5) year manufacturer warranty to include coverage for seal failure, interpane dusting or misting, including providing products to replace failed units.

### **PART 2 PRODUCTS**

#### **2.01 MANUFACTURERS**

- A. Float Glass Manufacturers:
  - 1. Guardian Glass, LLC; \_\_\_\_\_: [www.guardianglass.com/#sle](http://www.guardianglass.com/#sle).
  - 2. Pilkington North America Inc; \_\_\_\_\_: [www.pilkington.com/na/#sle](http://www.pilkington.com/na/#sle).
  - 3. Vitro Architectural Glass (formerly PPG Glass): [www.vitroglazings.com/#sle](http://www.vitroglazings.com/#sle).
- B. Mirrored Glass Manufacturers:
  - 1. Pilkington North America Inc; Pilkington Mirropane Transparent Mirror: [www.pilkington.com/na/#sle](http://www.pilkington.com/na/#sle).
  - 2. Substitutions: See Section 01 6000 - Product Requirements.

#### **2.02 PERFORMANCE REQUIREMENTS - EXTERIOR GLAZING ASSEMBLIES**

- A. Provide type and thickness of exterior glazing assemblies to support assembly dead loads, and to withstand live loads caused by positive and negative wind pressure acting normal to plane of glass.
  - 1. Design Pressure: Calculated in accordance with ASCE 7.
  - 2. Comply with ASTM E1300 for design load resistance of glass type, thickness, dimensions, and maximum lateral deflection of supported glass.

3. Seismic Loads: Design and size glazing components to withstand seismic loads and sway displacement in accordance with the requirements of ASCE 7
  4. Provide glass edge support system sufficiently stiff to limit the lateral deflection of supported glass edges to less than 1/175 of their lengths under specified design load.
  5. Glass thicknesses listed are minimum.
- B. Weather-Resistive Barrier Seals: Provide completed assemblies that maintain continuity of building enclosure water-resistive barrier, vapor retarder, and/or air barrier.
1. In conjunction with weather barrier related materials described in other sections, as follows:
    - a. Water-Resistive Barriers: See Section 07 2500.
  2. To maintain a continuous vapor retarder and/or air barrier throughout glazed assembly from glass pane to heel bead of glazing sealant.
- C. Thermal and Optical Performance: Provide exterior glazing products with performance properties as indicated. Performance properties are in accordance with manufacturer's published data as determined with the following procedures and/or test methods:
1. Center of Glass U-Value: Comply with NFRC 100 using Lawrence Berkeley National Laboratory (LBNL) WINDOW 6.3 computer program.
  2. Center of Glass Solar Heat Gain Coefficient (SHGC): Comply with NFRC 200 using Lawrence Berkeley National Laboratory (LBNL) WINDOW 6.3 computer program.
  3. Solar Optical Properties: Comply with NFRC 300 test method.

## **2.03 GLASS MATERIALS**

- A. Float Glass: Provide float glass based glazing unless otherwise indicated.
1. Annealed Type: ASTM C1036, Type I - Transparent Flat, Class 1 - Clear, Quality - Q3.
  2. Kind HS - Heat-Strengthened Type: Complies with ASTM C1048.
  3. Kind FT - Fully Tempered Type: Complies with ASTM C1048.
  4. Fully Tempered Safety Glass: Complies with ANSI Z97.1 or 16 CFR 1201 criteria for safety glazing used in hazardous locations.
  5. Thicknesses: As indicated; provide greater thickness as required for exterior glazing wind load design.

## **2.04 INSULATING GLASS UNITS**

- A. Manufacturers:
1. Glass: Any of the manufacturers specified for float glass.
- B. Insulating Glass Units: Types as indicated.
1. Durability: Certified by an independent testing agency to comply with ASTM E2190.
  2. Coated Glass: Comply with requirements of ASTM C1376 for pyrolytic (hard-coat) or magnetic sputter vapor deposition (soft-coat) type coatings on flat glass; coated vision glass, Kind CV; coated overhead glass, Kind CO; or coated spandrel glass, Kind CS.
  3. Metal-Edge Spacers: Aluminum, bent and soldered corners.
  4. Spacer Color: Bronze.
  5. Edge Seal:
    - a. Dual-Sealed System: Provide polyisobutylene sealant as primary seal applied between spacer and glass panes, and silicone, polysulfide, or polyurethane sealant as secondary seal applied around perimeter.
  6. Color: Black.
  7. Purge interpane space with dry air, hermetically sealed.
  8. Capillary Tubes: Provide tubes from air space for insulating glass units without inert type gas that have a change of altitude greater than 2500 feet between point of fabrication and point of installation to permit pressure equalization of air space.
    - a. Breather Tubes: Seal or crimp breather tubes upon installation in accordance with insulating glass fabricator's requirements.
    - b. Inert gas may be installed in the field into air space in accordance with insulating glass fabricator's and installer's requirements.
- C. Type IG-1 - Insulating Glass Units: Vision glass, double glazed.

1. Applications: Exterior glazing unless otherwise indicated.
  2. Space between lites filled with air.
  3. Outboard Lite: Annealed float glass, 1/4 inch thick, minimum.
    - a. Tint: Clear.
    - b. Coating: Self-cleaning type, on #1 surface.
    - c. Coating: Low-E (passive type), on #2 surface.
  4. Inboard Lite: Annealed float glass, 1/4 inch thick, minimum.
    - a. Tint: Clear.
  5. Total Thickness: 1 inch.
  6. Thermal Transmittance (U-Value), Summer - Center of Glass: 26, nominal.
  7. Visible Light Transmittance (VLT): 32% to 64% percent, nominal.
  8. Solar Heat Gain Coefficient (SHGC): 0.19 to 0.27, nominal.
- D. Type IG-3 - Insulating Glass Units: Spandrel glazing.
1. Applications: Exterior spandrel glazing unless otherwise indicated.
  2. Space between lites filled with air.
  3. Outboard Lite: Annealed float glass, 1/4 inch thick, minimum.
    - a. Tint: Clear.
    - b. Coating: Same as on vision units, on #2 surface.
  4. Inboard Lite: Heat-strengthened float glass, 1/4 inch thick.
    - a. Tint: Clear.
  5. Total Thickness: 1 inch.
  6. Thermal Transmittance (U-Value), Summer - Center of Glass: \_\_\_\_\_, nominal.
- E. Type IG-5 - Insulating Glass Units: Safety glazing.
1. Applications:
    - a. Glazed lites in exterior doors.
    - b. Glazed sidelights and panels next to doors.
    - c. Other locations required by applicable federal, state, and local codes and regulations.
    - d. Other locations indicated on drawings.
  2. Space between lites filled with air.
  3. Glass Type: Same as Type IG-1 except use fully tempered float glass for both outboard and inboard lites.
  4. Tint: Clear.
  5. Total Thickness: 1 inch.
  6. Thermal Transmittance (U-Value), Summer - Center of Glass: 26, nominal.
  7. Visible Light Transmittance (VLT): 32% to 64% percent, nominal.
  8. Solar Heat Gain Coefficient (SHGC): 0.19 to 0.27, nominal.
  9. Visible Light Reflectance, Outside: 64 percent, nominal.
- F. Type IG-6 - Insulating Glass Units: Obscured glass and Vision glass, double glazed.
1. Applications: Exterior glazing unless otherwise indicated. To be installed at exterior windows of toilet rooms and locker rooms.
  2. Space between lites filled with air.
  3. Outboard Lite: Annealed float glass, 1/4 inch thick, minimum.
    - a. Tint: Clear.
    - b. Coating: Self-cleaning type, on #1 surface.
    - c. Coating: Low-E (passive type), on #2 surface.
  4. Inboard Lite: Obscured float glass, 1/4 inch thick, minimum.
    - a. Tint: Clear.
  5. Total Thickness: 1 inch.
  6. Thermal Transmittance (U-Value), Summer - Center of Glass: 26, nominal.
  7. Visible Light Transmittance (VLT): 32% to 64% percent, nominal.
  8. Solar Heat Gain Coefficient (SHGC): 0.19 to 0.27, nominal.

## **2.05 BASIS OF DESIGN - INSULATING GLASS UNITS**

- A. Basis of Design - Insulating Glass Units: Vision glazing, with low-e coating.

1. Applications: Exterior insulating glass glazing unless otherwise indicated.
2. Space between lites filled with air.
3. Total Thickness: 1 inch.
4. Visible Light Transmittance (VLT): 32% to 64% percent, nominal.
5. Solar Heat Gain Coefficient (SHGC): 0.19 to 0.27, nominal.
6. Visible Light Reflectance, Outside: 64 percent, nominal.
7. Glazing Method: Dry glazing method, gasket glazing.
8. Coated Glass: Comply with requirements of ASTM C1376 for pyrolytic (hard-coat) or magnetic sputter vapor deposition (soft-coat) type coatings on flat glass; coated vision glass, Kind CV; coated overhead glass, Kind CO; or coated spandrel glass, Kind CS.
9. Spacer Color: Black.
10. Edge Seal:
11. Color: Black.
12. Purge interpane space with dry air, hermetically sealed.
13. Basis of Design - Vitro Architectural Glass (formerly PPG Glass):  
[www.vitroglazings.com/#sle](http://www.vitroglazings.com/#sle).
14. Outboard Lite: Annealed float glass, 1/4 inch thick, minimum.
  - a. Low-E Coating: Vitro Architectural Glass (formerly PPG Glass) Solarban 70 glass on #2 surface.
  - b. Glass: Clear.
15. Inboard Lite: Heat-strengthened float glass, 1/4 inch thick.
16. Other Manufacturers: Provide either the product identified as "Basis of Design" or an equivalent product of another acceptable manufacturer.
17. Substitution Procedures: See Section 01 6000 - Product Requirements.

## 2.06 GLAZING UNITS

- A. Type G-2 - Monolithic Interior Vision Glazing:
  1. Applications: Interior glazing unless otherwise indicated.
  2. Glass Type: Annealed float glass.
  3. Tint: Clear.
  4. Thickness: 1/4 inch, nominal.
- B. Type G-3 - Monolithic Safety Glazing: Non-fire-rated.
  1. Applications:
    - a. Glazed lites in doors, except fire doors.
    - b. Glazed sidelights to doors, except in fire-rated walls and partitions.
    - c. Other locations required by applicable federal, state, and local codes and regulations.
    - d. Other locations indicated on drawings.
  2. Glass Type: Fully tempered safety glass as specified.
  3. Tint: Clear.
  4. Thickness: 1/4 inch, nominal.
  5. Manufacturers:
    - a. Capital Glass; [www.capitolglassco.com](http://www.capitolglassco.com).
    - b. Substitutions: See Section 01 6000 - Product Requirements.
- C. Type M-1 - Transparent One-Way Mirror: Mirror quality float glass with pyrolytic (hard coat) type coating located on high light level surface of glass; ASTM C1376.
  1. Applications: Locations as indicated on drawings.
  2. Thickness: 1/4 inch.
  3. Glass Tint: Clear .
  4. Glass Type: Fully tempered.
  5. Manufacturers:
    - a. Pilkington North America Inc; Pilkington Mirropane Transparent Mirror:  
[www.pilkington.com/na/#sle](http://www.pilkington.com/na/#sle).
    - b. Substitutions: See Section 01 6000 - Product Requirements.

## **2.07 GLAZING COMPOUNDS**

- A. Type GC-2 - Butyl Sealant: Single component; ASTM C920 Grade NS, Class 12-1/2, Uses M and A, Shore A hardness of 10 to 20; black color.
- B. Type GC-5 - Silicone Sealant: Single component; neutral curing; capable of water immersion without loss of properties; nonbleeding, nonstaining; ASTM C920 Type S, Grade NS, Class 25, Uses M, A, and G; with cured Shore A hardness range of 15 to 25; \_\_\_\_\_ color.
- C. Manufacturers:
  - 1. Dow Corning Corporation: [www.dowcorning.com/construction/#sle](http://www.dowcorning.com/construction/#sle). Dow Corning Corporation: [www.dowcorning.com/construction/#sle](http://www.dowcorning.com/construction/#sle).
  - 2. Tremco Commercial Sealants & Waterproofing; Proglaze: [www.tremcosealants.com/#sle](http://www.tremcosealants.com/#sle).
  - 3. Substitutions: See Section 01 6000 - Product Requirements.

## **2.08 ACCESSORIES**

- A. Setting Blocks: Silicone, with 80 to 90 Shore A durometer hardness; ASTM C864 Option II. Length of 0.1 inch for each square foot of glazing or minimum 4 inch by width of glazing rabbet space minus 1/16 inch by height to suit glazing method and pane weight and area.
- B. Spacer Shims: Neoprene, 50 to 60 Shore A durometer hardness; ASTM C864 Option II. Continuous by one half the height of the glazing stop by thickness to suit application, self adhesive on one face.
- C. Glazing Tape, Back Bedding Mastic Type: Preformed, butyl-based, 100 percent solids compound with integral resilient spacer rod applicable to application indicated; 5 to 30 cured Shore A durometer hardness; coiled on release paper; black color.
  - 1. Width: As required for application.
  - 2. Thickness: As required for application.
  - 3. Spacer Rod Diameter: As required for application.
- D. Glazing Splines: Resilient silicone extruded shape to suit glazing channel retaining slot; ASTM C864 Option II; color black.
- E. Glazing Clips: Manufacturer's standard type.

## **PART 3 EXECUTION**

### **3.01 VERIFICATION OF CONDITIONS**

- A. Verify that openings for glazing are correctly sized and within tolerances, including those for size, squareness, and offsets at corners.
- B. Verify that surfaces of glazing channels or recesses are clean, free of obstructions that may impede moisture movement, weeps are clear, and support framing is ready to receive glazing system.
- C. Verify that sealing between joints of glass framing members has been completed effectively.

### **3.02 PREPARATION**

- A. Clean contact surfaces with appropriate solvent and wipe dry within maximum of 24 hours before glazing. Remove coatings that are not tightly bonded to substrates.
- B. Seal porous glazing channels or recesses with substrate compatible primer or sealer.
- C. Prime surfaces scheduled to receive sealant where required for proper sealant adhesion.

### **3.03 INSTALLATION, GENERAL**

- A. Install glazing in compliance with written instructions of glass, gaskets, and other glazing material manufacturers, unless more stringent requirements are indicated, including those in glazing referenced standards.
- B. Install glazing sealants in accordance with ASTM C1193, GANA (SM), and manufacturer's instructions.
- C. Set glass lites in proper orientation so that coatings face exterior or interior as indicated.

- D. Prevent glass from contact with any contaminating substances that may be the result of construction operations such as, and not limited to the following; weld splatter, fire-safing, plastering, mortar droppings, and paint.

### **3.04 INSTALLATION - DRY GLAZING METHOD (GASKET GLAZING)**

- A. Application - Exterior and/or Interior Glazed: Set glazing infills from either the exterior or the interior of the building.
- B. Place setting blocks at 1/4 points with edge block no more than 6 inch from corners.
- C. Rest glazing on setting blocks and push against fixed stop with sufficient pressure on gasket to attain full contact.
- D. Install removable stops without displacing glazing gasket; exert pressure for full continuous contact.

### **3.05 INSTALLATION - WET/DRY GLAZING METHOD (PREFORMED TAPE AND SEALANT)**

- A. Application - Exterior Glazed: Set glazing infills from the exterior of the building.
- B. Cut glazing tape to length and set against permanent stops, 3/16 inch below sight line. Seal corners by butting tape and dabbing with butyl sealant.
- C. Apply heel bead of butyl sealant along intersection of permanent stop with frame ensuring full perimeter seal between glass and frame to complete the continuity of the air and vapor seal.
- D. Place setting blocks at 1/4 points with edge block no more than 6 inch from corners.
- E. Rest glazing on setting blocks and push against tape and heel bead of sealant with sufficient pressure to attain full contact at perimeter of pane or glass unit.
- F. Install removable stops, with spacer strips inserted between glazing and applied stops 1/4 inch below sight lines.
  - 1. Place glazing tape on glazing pane of unit with tape flush with sight line.
- G. Fill gap between glazing and stop with \_\_\_\_\_ type sealant to depth equal to bite of frame on glazing, but not more than 3/8 inch below sight line.
- H. Apply cap bead of \_\_\_\_\_ type sealant along void between the stop and the glazing, to uniform line, flush with sight line. Tool or wipe sealant surface smooth.

### **3.06 INSTALLATION - WET/DRY GLAZING METHOD (TAPE AND SEALANT)**

- A. Application - Interior Glazed: Set glazing infills from the interior of the building.
- B. Cut glazing tape to length and install against permanent stops, projecting 1/16 inch above sight line.
- C. Place setting blocks at 1/4 points with edge block no more than 6 inch from corners.
- D. Rest glazing on setting blocks and push against tape to ensure full contact at perimeter of pane or unit.
- E. Install removable stops, spacer shims inserted between glazing and applied stops at 24 inch intervals, 1/4 inch below sight line.
- F. Fill gaps between pane and applied stop with \_\_\_\_\_ type sealant to depth equal to bite on glazing, to uniform and level line.
- G. Carefully trim protruding tape with knife.

### **3.07 CLEANING**

- A. Remove excess glazing materials from finish surfaces immediately after application using solvents or cleaners recommended by manufacturers.
- B. Remove nonpermanent labels immediately after glazing installation is complete.
- C. Clean glass and adjacent surfaces after sealants are fully cured.
- D. Clean glass on both exposed surfaces not more than 4 days prior to Date of Substantial Completion in accordance with glass manufacturer's written recommendations.

**3.08 PROTECTION**

- A. Remove and replace glass that is damaged during construction period prior to Date of Substantial Completion.

**END OF SECTION 08 8000**

**SECTION 09 2116  
GYPSUM BOARD ASSEMBLIES**

**PART 1 GENERAL**

**1.01 SECTION INCLUDES**

- A. Acoustic sound putty packs
- B. Gypsum sheathing.
- C. Gypsum wallboard.

**1.02 RELATED REQUIREMENTS**

- A. Section 01 6116 - Volatile Organic Compound (VOC) Content Restrictions.
- B. Section 06 1000 - Rough Carpentry: Wood blocking product and execution requirements.
- C. Section 07 2100 - Thermal Insulation: Acoustic insulation.
- D. Section 07 2500 - Weather Barriers: Water-resistive barrier over sheathing.
- E. Section 07 8400 - Firestopping: Top-of-wall assemblies at fire-resistance-rated walls.
- F. Section 07 9200 - Joint Sealants: Sealing acoustical gaps in construction other than gypsum board or plaster work.

**1.03 REFERENCE STANDARDS**

- A. AISI S100 - North American Specification for the Design of Cold-Formed Steel Structural Members; 2016, with Supplement (2020).
- B. AISI S220 - North American Standard for Cold-Formed Steel Nonstructural Framing; 2020.
- C. AISI S240 - North American Standard for Cold-Formed Steel Structural Framing; 2015, with Errata (2020).
- D. ASTM A653/A653M - Standard Specification for Steel Sheet, Zinc-Coated (Galvanized) or Zinc-Iron Alloy-Coated (Galvannealed) by the Hot-Dip Process; 2023.
- E. ASTM A1003/A1003M - Standard Specification for Steel Sheet, Carbon, Metallic- and Nonmetallic-Coated for Cold-Formed Framing Members; 2015.
- F. ASTM C840 - Standard Specification for Application and Finishing of Gypsum Board; 2023.
- G. ASTM C1177/C1177M - Standard Specification for Glass Mat Gypsum Substrate for Use as Sheathing; 2017.
- H. ASTM C1280 - Standard Specification for Application of Exterior Gypsum Panel Products for Use as Sheathing; 2018 (Reapproved 2023).
- I. ASTM C1396/C1396M - Standard Specification for Gypsum Board; 2017.
- J. ASTM C1629/C1629M - Standard Classification for Abuse-Resistant Nondecorated Interior Gypsum Panel Products and Fiber-Reinforced Cement Panels; 2023.
- K. ASTM D3273 - Standard Test Method for Resistance to Growth of Mold on the Surface of Interior Coatings in an Environmental Chamber; 2021.
- L. GA-216 - Application and Finishing of Gypsum Panel Products; 2021.
- M. GA-600 - Fire Resistance and Sound Control Design Manual; 2021.

**1.04 SUBMITTALS**

- A. See Section 01 3000 - Administrative Requirements for submittal procedures.
- B. Product Data:
  - 1. Provide manufacturer's data on partition head to structure connectors, showing compliance with requirements.

**1.05 QUALITY ASSURANCE**

- A. Installer Qualifications: Company specializing in performing gypsum board installation and finishing, with minimum five years of experience.

## **PART 2 PRODUCTS**

### **2.01 METAL FRAMING MATERIALS**

- A. Steel Sheet: ASTM A1003/A1003M, subject to the ductility limitations indicated in AISI S220 or equivalent.
- B. Manufacturers - Metal Framing, Connectors, and Accessories:
  - 1. Clarkwestern Dietrich Building Systems LLC; None - N/A: [www.clarkdietrich.com/#sle](http://www.clarkdietrich.com/#sle).
  - 2. Jaimes Industries; None - N/A: [www.jaimesind.com/#sle](http://www.jaimesind.com/#sle).
  - 3. Marino; None - N/A: [www.marinoware.com/#sle](http://www.marinoware.com/#sle).
  - 4. Phillips Manufacturing Co; None - N/A: [www.phillipsmfg.com/#sle](http://www.phillipsmfg.com/#sle).
  - 5. SCAFCO Corporation; None - N/A: [www.scafco.com/#sle](http://www.scafco.com/#sle).
  - 6. Steel Construction Systems; None - N/A: [www.steelconsystems.com/#sle](http://www.steelconsystems.com/#sle).
  - 7. Substitutions: See Section 01 6000 - Product Requirements.
- C. Partition Head to Structure Connections: Provide mechanical anchorage devices that accommodate deflection and prevent rotation of studs while maintaining structural performance of partition.
  - 1. Structural Performance: Maintain lateral load resistance and vertical movement capacity required by applicable code, when evaluated in accordance with AISI S100.
  - 2. Material: ASTM A653/A653M steel sheet, SS Grade 50/340, with G60/Z180 hot-dipped galvanized coating.
  - 3. Provide components as listed in ICC Evaluation Service for use in ESR-1042 fire-rated and sound rated at head of partition joint systems indicated on drawings.
  - 4. Deflection, Sound, and Firestop Track:
    - a. Provide mechanical anchorage devices as described above that accommodate deflection while maintaining the fire-rating of the wall assembly.

### **2.02 BOARD MATERIALS**

- A. Manufacturers - Gypsum-Based Board:
  - 1. American Gypsum Company; None - N/A: [www.americangypsum.com/#sle](http://www.americangypsum.com/#sle).
  - 2. CertainTeed Corporation; None - N/A: [www.certainteed.com/#sle](http://www.certainteed.com/#sle).
  - 3. Continental Building Products; None - N/A: [www.continental-bp.com/#sle](http://www.continental-bp.com/#sle).
  - 4. Georgia-Pacific Gypsum; None - N/A: [www.gpgypsum.com/#sle](http://www.gpgypsum.com/#sle).
  - 5. National Gypsum Company; None - N/A: [www.nationalgypsum.com/#sle](http://www.nationalgypsum.com/#sle).
  - 6. PABCO Gypsum; None - N/A: [www.pabco gypsum.com/#sle](http://www.pabco gypsum.com/#sle).
  - 7. USG Corporation; None - N/A: [www.usg.com/#sle](http://www.usg.com/#sle).
  - 8. Substitutions: See Section 01 6000 - Product Requirements.
- B. Impact Resistant Wallboard:
  - 1. Application: Install at wood and metal shops, drama, and weight room.
  - 2. Surface Abrasion: Level 3, minimum, when tested in accordance with ASTM C1629/C1629M.
  - 3. Indentation: Level 1, minimum, when tested in accordance with ASTM C1629/C1629M.
  - 4. Soft Body Impact: Level 3, minimum, when tested in accordance with ASTM C1629/C1629M.
  - 5. Hard Body Impact: Level 2, minimum, when tested in accordance with ASTM C1629/C1629M.
  - 6. Mold Resistance: Score of 10, when tested in accordance with ASTM D3273.
  - 7. Type: Fire-resistance-rated Type X, UL or WH listed.
  - 8. Thickness: 5/8 inch.
  - 9. Edges: Tapered.
- C. Backing Board For Non-Wet Areas: Water-resistant gypsum backing board as defined in ASTM C1396/C1396M; sizes to minimum joints in place; ends square cut.
  - 1. Application: at all window jambs and sills, restrooms, and within 2 feet of all plumbing fixtures including drinking fountains or electric water coolers.
  - 2. Mold Resistance: Score of 10, when tested in accordance with ASTM D3273.

3. At Assemblies Indicated with Fire-Resistance Rating: Use type required by indicated tested assembly; if no tested assembly is indicated, use Type X board, UL or WH listed.
4. Type X Thickness: 5/8 inch.
5. Edges: Tapered.
6. Products:
  - a. Gold Bond Building Products, LLC provided by National Gypsum Company; Gold Bond XP Fire-Shield Gypsum Board: [www.goldbondbuilding.com/#sle](http://www.goldbondbuilding.com/#sle).
  - b. Substitutions: See Section 01 6000 - Product Requirements.
- D. Ceiling Board: Special sag resistant gypsum ceiling board as defined in ASTM C1396/C1396M; sizes to minimize joints in place; ends square cut.
  1. Application: ceilings in wet areas, unless otherwise indicated.
  2. Thickness: 5/8 inch.
  3. Edges: Tapered.
- E. Exterior Sheathing Board: Sizes to minimize joints in place; ends square cut.
  1. Application: Exterior sheathing, unless otherwise indicated.
  2. Glass Mat Faced Sheathing: Glass mat faced gypsum substrate as defined in ASTM C1177/C1177M.
  3. Core Type: Regular.
  4. Regular Board Thickness: 1/2 inch.
  5. Edges: Square.
- F. Exterior Soffit Board: Exterior gypsum soffit board as defined in ASTM C1396/C1396M; sizes to minimize joints in place; ends square cut.
  1. Application: Ceilings and soffits in protected exterior areas, unless otherwise indicated.
  2. Types: Regular, in locations indicated.
  3. Regular Type Thickness: 5/8 inch.
  4. Edges: Tapered.
- G. Roof Cover Board
  1. Application: Parapets, unless otherwise indicated.
  2. Type Thickness: 5/8 inch
  3. Products:
    - a. Georgia-Pacific Gypsum; Densdeck Prime, [www.gpgypsum.com/#sle](http://www.gpgypsum.com/#sle).
    - b. Substitutions: See Section 01 6000 - Product Requirements
  4. Fasteners: Factory-coated steel fasteners and metal or plastic plates complying with corrosion- resistance provisions in FM Global 4470, designed for fastening substrate board to roof deck.

## **2.03 GYPSUM BOARD ACCESSORIES**

- A. Acoustic Insulation: ASTM C665; preformed glass fiber, friction fit type, unfaced. Thickness: 3-1/2" inch.
- B. Acoustic Putty Packs installed at back boxes in sound rated walls and at interior of exterior fired walls. Products by 3M, Hilti, or equivalent.
- C. Water-Resistive Barrier: See Section 07 2500.
- D. Beads, Joint Accessories, and Other Trim: ASTM C1047, galvanized steel or rolled zinc, unless noted otherwise.
  1. Corner Beads: Low profile, for 90 degree outside corners.
  2. Expansion Joints:
    - a. Type: V-shaped metal with factory-installed protective tape.

## **PART 3 EXECUTION**

### **3.01 EXAMINATION**

- A. Verify that project conditions are appropriate for work of this section to commence.

### **3.02 BOARD INSTALLATION**

- A. Comply with ASTM C840, GA-216, and manufacturer's instructions. Install to minimize butt end joints, especially in highly visible locations.
- B. Single-Layer Nonrated: Install gypsum board in most economical direction, with ends and edges occurring over firm bearing.
- C. Double-Layer Non-Rated: Use gypsum board for first layer, placed parallel to framing or furring members, with ends and edges occurring over firm bearing. Place second layer perpendicular to framing or furring members. Offset joints of second layer from joints of first layer.
- D. Exposed Gypsum Board in Interior Wet Areas: Seal joints, cut edges, and holes with water-resistant sealant.
- E. Exterior Sheathing: Comply with ASTM C1280. Install sheathing vertically, with edges butted tight and ends occurring over firm bearing.
  - 1. Paper-Faced Sheathing: Immediately after installation, protect from weather by application of water-resistive barrier.
- F. Exterior Soffits: Install exterior soffit board perpendicular to framing, with staggered end joints over framing members or other solid backing.

### **3.03 FINISH AND TEXTURE**

- A. Finish Level: Level 4
- B. Texture: None

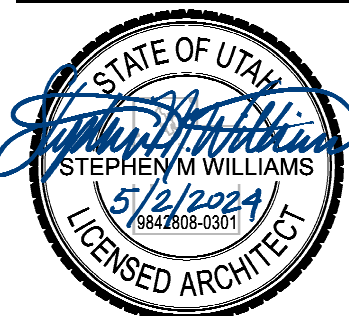
### **3.04 INSTALLATION OF TRIM AND ACCESSORIES**

- A. Control Joints: Place control joints consistent with lines of building spaces and as indicated.
  - 1. Not more than 30 feet apart on walls and ceilings over 50 feet long.
  - 2. At exterior soffits, not more than 30 feet apart in both directions.
- B. Corner Beads: Install at external corners, using longest practical lengths.
- C. Edge Trim: Install at locations where gypsum board abuts dissimilar materials.

**END OF SECTION 09 2116**

DATE	DESCRIPTION
APRIL 03	APPROVAL
MAY 2024	ADDITIONAL
AUG 2024	ADDITIONAL

PROJECT #:	123006
DRAWN BY:	FRANKS
CHECKED BY:	RIGBY
ISSUED:	05.02.2024



## GENERAL NOTES

- KEYNOTES: THE FIRST TWO NUMBERS REPRESENT THE RELATED CSI MASTER FORMAT DIVISION. THE SECOND SET OF NUMBERS REPRESENTS AN IDENTIFYING MARK VALUE. NOT ALL VALUES MAY BE USED OR OCCUR IN THE DOCUMENT SET.
- ADDITIONALLY, KEYNOTES RETAIN THEIR ASSIGNED VALUE UNIVERSALLY THROUGHOUT THE SET. THE KEYNOTES LISTED BELOW, REPRESENT THE KEYNOTES FOUND AND UTILIZED ON THIS SHEET AND EACH LIST WILL DIFFER RESPECTIVE TO ITS SHEET. THEREFORE, BASED ON ACTUAL KEYNOTES UTILIZED ON A GIVEN SHEET OF DRAWINGS, GAPS IN THE SEQUENCING WILL OCCUR.
- CONTRACTOR SHALL COORDINATE LAY-OUT OF STRUCTURAL, MECHANICAL, SPRINKLER AND ELECTRICAL. NOTIFY ARCHITECT OF ANY CONFLICTS.
- ALL INTERIOR DIMENSIONS ARE TO/FROM FACE OF STUD / MASONRY. ALL EXTERIOR DIMENSIONS ARE TO/FROM FACE OF GRID FOUNDATION. DIMENSIONS MARKED CLEAR OR CLR ARE FROM FACE OF FINISH TO FACE OF FINISH AND SHALL BE MAINTAINED AND CANNOT BE FIELD ADJUSTED WITHOUT PRIOR APPROVAL OF THE ARCHITECT.
- SEE A-891 LEGEND FOR FINISH LEGEND
- CEILING HEIGHT IS 8.0. FINISHED CEILING HEIGHT ABOVE FINISHED FLOOR
- MEASUREMENTS SPECIFYING "EO" = EQUAL LENGTH OR WIDTH TO FILL REMAINDER OF LENGTH REQUIRED
- CEILING WITH NO DIRECT MEASUREMENTS, ASSUME CEILING TO BE EQUALLY DISTANCED ON ALL SIDES OF ROOM
- FIXTURES IN OPEN TO STRUCTURE AREAS ARE DIMENSIONED FROM WALL OR CENTERLINE OF ROOM
- LIGHT FIXTURES WITH NO DIMENSIONS ARE TO BE CENTERED ON ROOM UNLESS OTHERWISE NOTED
- FIXTURES WITHIN A.C.T. TO BE CENTERED IN GRID UNLESS OTHERWISE NOTED
- FIXTURES ON GRID SHALL BE IN LINE WITH GRID CENTER ON CENTER UNLESS OTHERWISE NOTED
- ROLLER SHADES PER FINISH PLANS, COORDINATE MANUAL AND POWER LOCATIONS WITH THE ELECTRICAL AND FINISH PLANS.
- FIRE SPRINKLER HEADS, MOTION DETECTORS, LIGHT SENSORS, ETC. ARE TO BE CENTERED IN THE PANEL.
- BID ALTERNATE 1 SHEETS SERIES A-800 INDICATED WITH [Symbol]
- OPEN TO STRUCTURE CEILING TO HAVE GYPSUM AT WALLS EXTEND UP INTO FLUTES OF DECK, ANY MECHANICAL, PLUMBING OR STRUCTURAL PENETRATIONS THROUGH WALLS SHALL BE ENCLOSED, PROVIDED A CLEAN FINISH TIGHT AROUND FIXTURES, BEAMS, PIPES, DUCTS, ETC.

## KEYNOTES

MARK	DESCRIPTION
11.12	WALL MOUNTED MOTORIZED PROJECTION SCREEN

## LEGEND

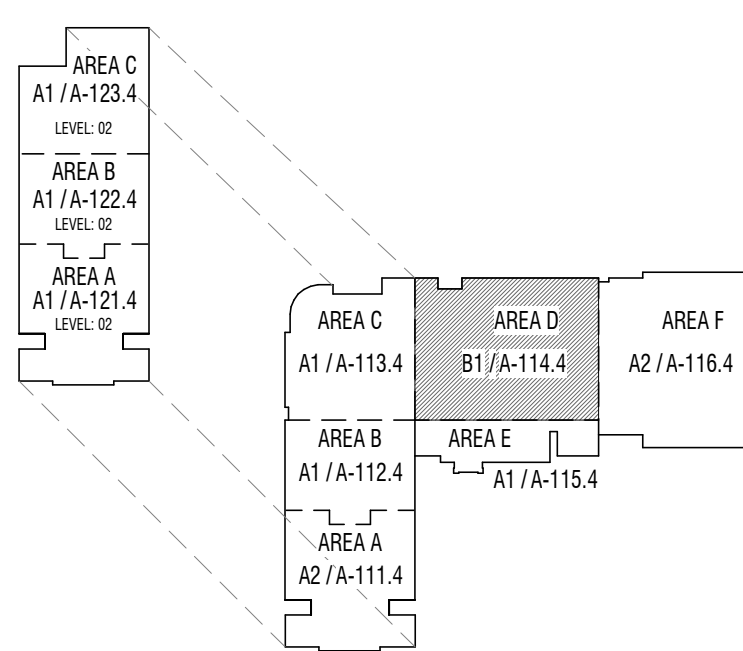
### MATERIALS

[Symbol]	4'-0" x 4'-0" SUSPENDED ACOUSTICAL LAY-IN CEILING SYSTEM	[Symbol]	METAL DECK - O.T.S.
[Symbol]	PAINTED GYPSUM BOARD CEILING TYPICAL, U.N.O.		
[Symbol]	EXPOSED STRUCTURE TO RECEIVE 1-HR CEMENTITIOUS SPRAY		
[Symbol]	8'-0" x 4'-0" PAINTED TO MATCH DECK ACOUSTIC TECTUM PANEL ATTACHED TO DECK (NO EXPOSED FASTENERS)		
[Symbol]	PREFINISHED METAL SOFFIT		

### SYMBOLS

[Symbol]	2'x2' / 2'x4' TROFFERS
[Symbol]	RECESSED FIXTURE
[Symbol]	SUSPENDED HIGH-BAY FIXTURE
[Symbol]	SUSPENDED LINEAR FIXTURES
[Symbol]	SURFACE MOUNTED LINEAR FIXTURES
[Symbol]	RECESSED LINEAR FIXTURES
[Symbol]	8" LINEAR WALL SCONCE
[Symbol]	SQUARE LED LIGHTS
[Symbol]	2'x4' CEILING SOUND DIFFUSER PANEL
[Symbol]	ADJUSTABLE TRACK LIGHTING / DECORATIVE PENDANT LIGHTS
[Symbol]	MOUNTED LAY IN LIGHT FIXTURE
[Symbol]	AIR GRILLES/ACCESS PANELS:
[Symbol]	EXHAUST
[Symbol]	SUPPLY / FRESH
[Symbol]	RETURN / RELIEF
[Symbol]	ACCESS PANEL
[Symbol]	DENOTES CENTER OF ACT TILE AND DIRECTION FOR LAYOUT

## KEY PLAN

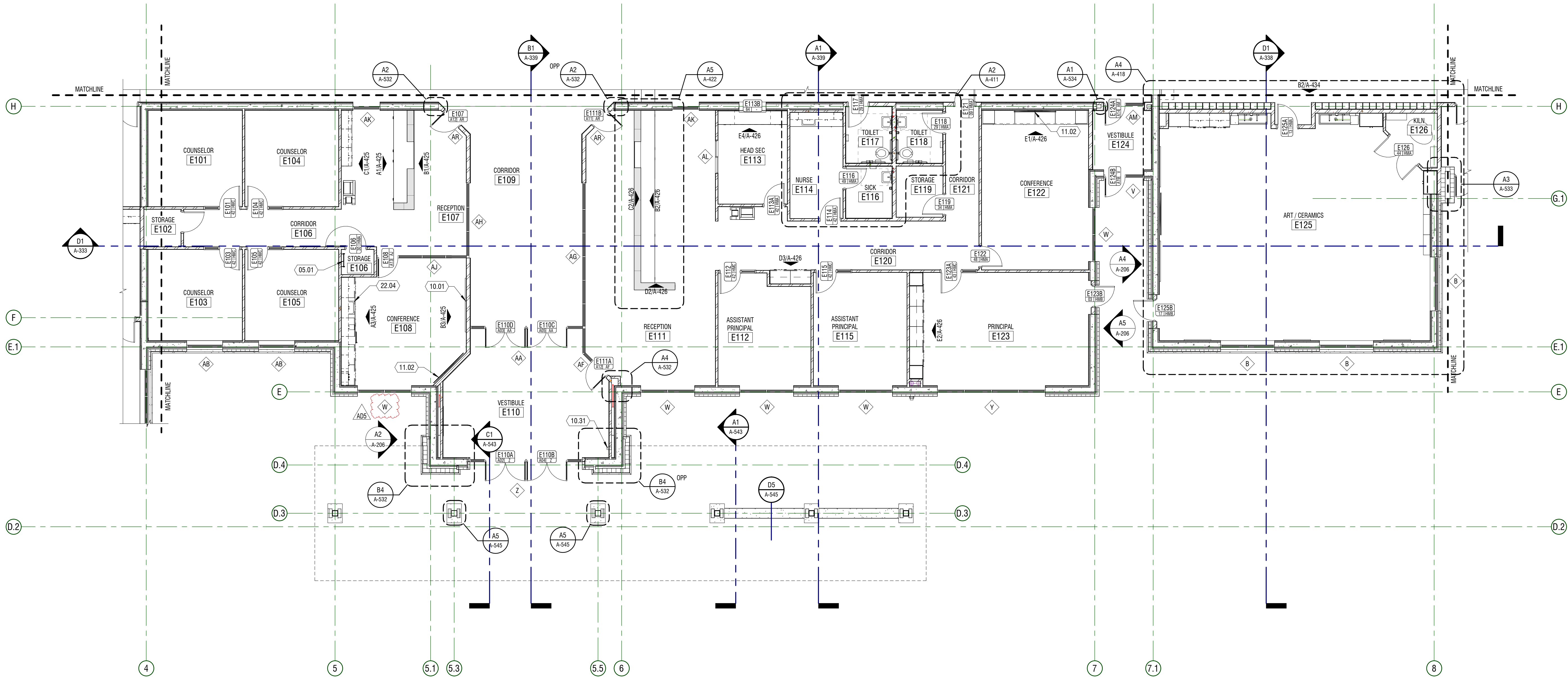


## B1 PLAN - REFLECTED CEILING

1/8" = 1'-0" AREA D - LEVEL 01

E  
D  
C  
B  
A

5/13/2024 1:27:18 PM



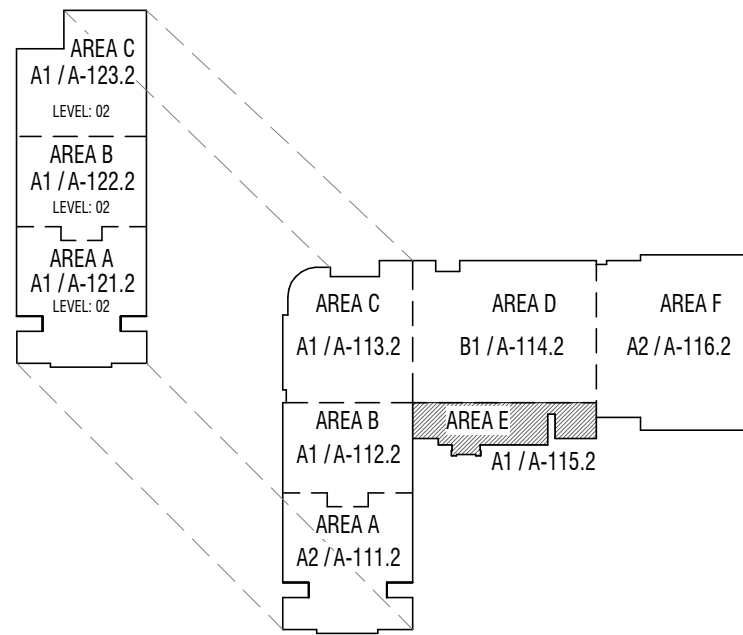
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- HOLLOW METAL FRAME AND ALUMINUM WINDOW TYPES (H) ARE SHOWN ON SHEET SERIES A-570. DIMENSIONS TO FRAMES WILL BE TO OUTSIDE EDGE OF FRAME. SEE BOTH THE FLOOR PLAN AND EXTERIOR ELEVATIONS FOR ALL WINDOW TYPE REFERENCES.
- SEE FINISH PLANS FOR SIGNAGE LOCATION, SIGNAGE SYMBOL.
- SEE SHEET SERIES G-004 & A-512 FOR ALL FIRE WALLS, SMOKE WALLS, WALLS TO CEILING LEVEL, SOUND WALLS.
- FEC = FIRE EXTINGUISHER IN SEMI-RECESSED CABINET.
- A1/A-101 INDICATES INTERIOR ROOM ELEVATIONS ON SHEET REFERENCED.
- SEE SITE PLANS FOR EXTERIOR STAIRS, RAILING AND RAMP DETAILS.
- ROLLER SHADES PER FINISH PLANS.
- BID ALTERNATE 1 SHEETS SERIES A-800 INDICATED WITH [ ]

## KEYNOTES

#	DESCRIPTION
05.01	WALL MOUNTED LADDER WITH LOCKED ACCESS GATE
10.01	WHITEBOARD 8'-0" X 4'-0" HIDDEN TACKLESS PAPER HOLDER ON TOP AND MARKER TRAY ON BOTTOM
10.31	KNOX BOX
11.02	WALL MOUNTED DIGITAL DISPLAY - SEE DETAIL E1/A-591 FOR MOUNTING, OWNER PROVIDED, CONTRACTOR INSTALLED
22.04	SVK

## KEY PLAN

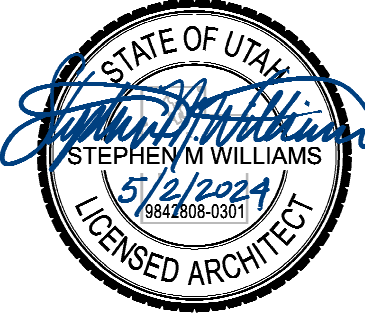


**A1** PLAN - ANNOTATION  
1/8" = 1'-0" AREA E - LEVEL 01

CONSTRUCTION DOCUMENTS

MARK	DATE	DESCRIPTION
A05	MAY 2024	ADDITIONAL DS

PROJECT #:	123006
DRAWN BY:	NELSON
CHECKED BY:	RGBY
ISSUED:	05.02.2024



E

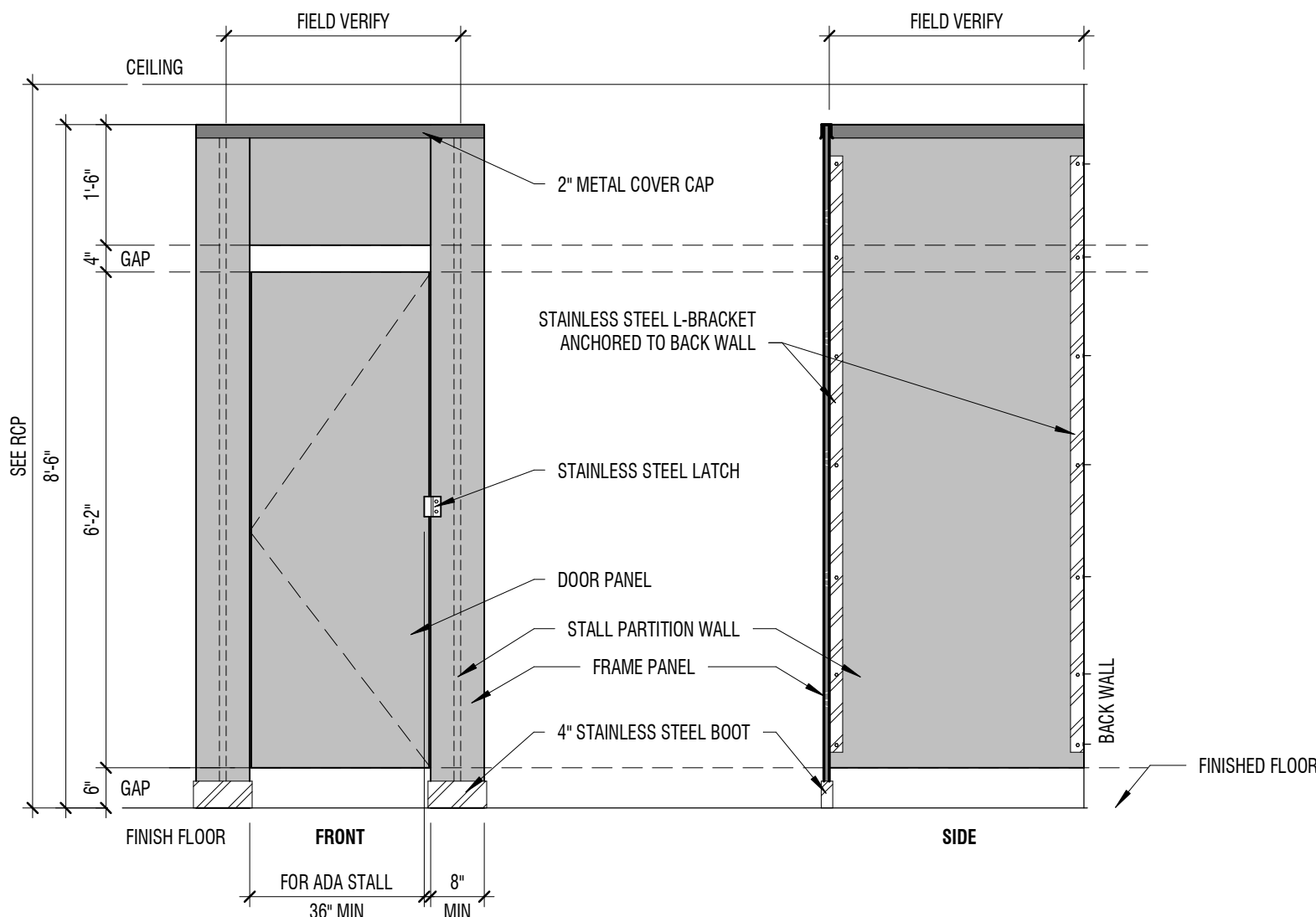
D

C

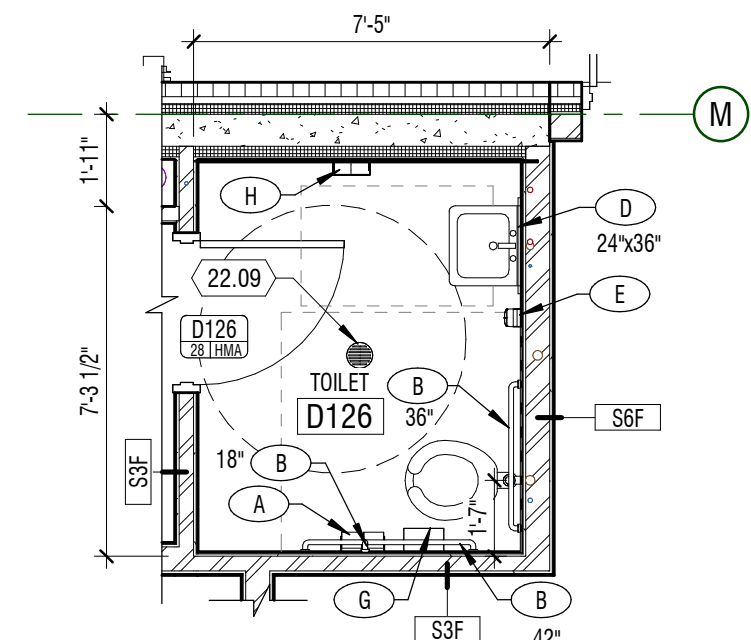
B

A

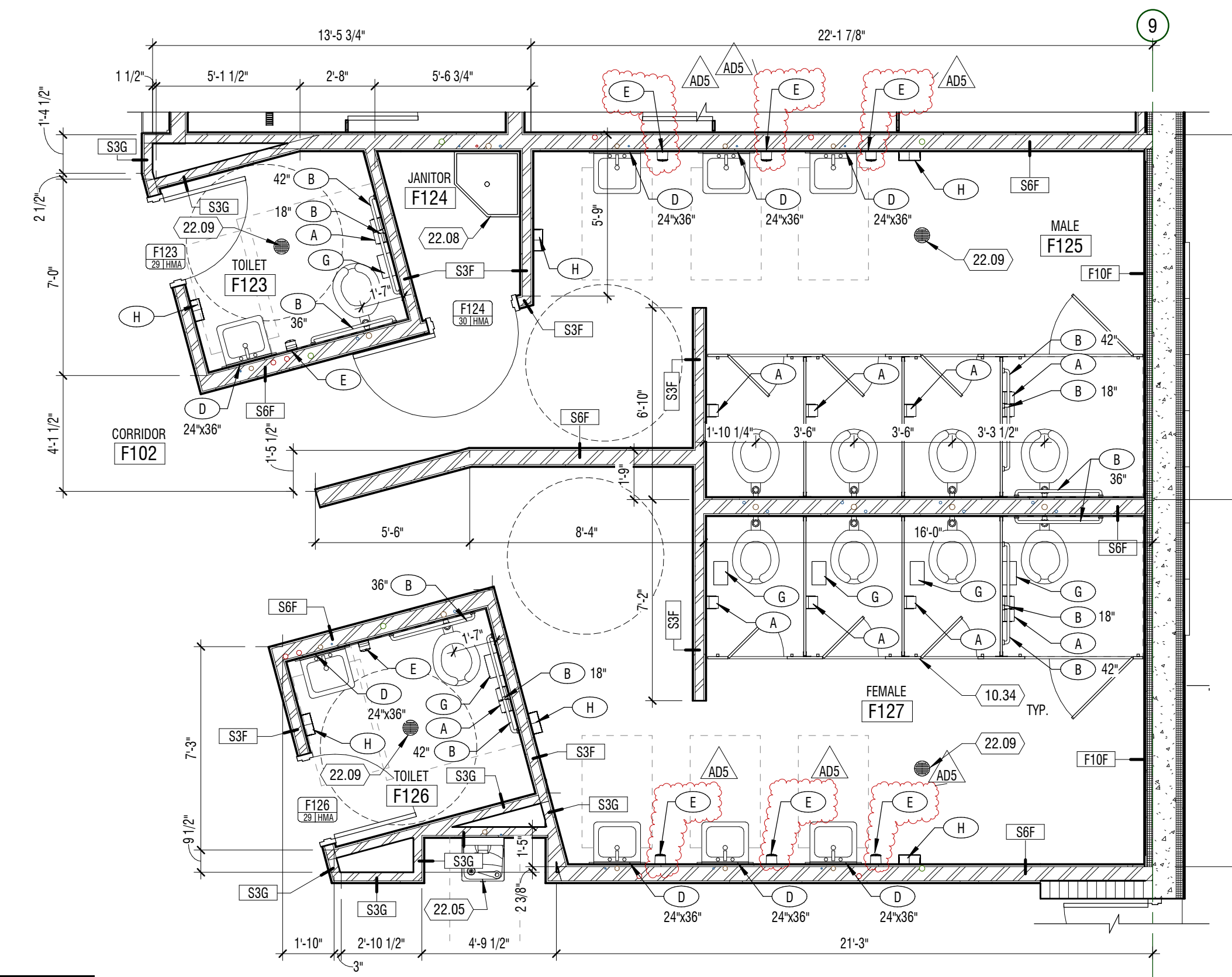
5/13/2024 10:27:35 PM

**D1 BATHROOM PARTITIONS**

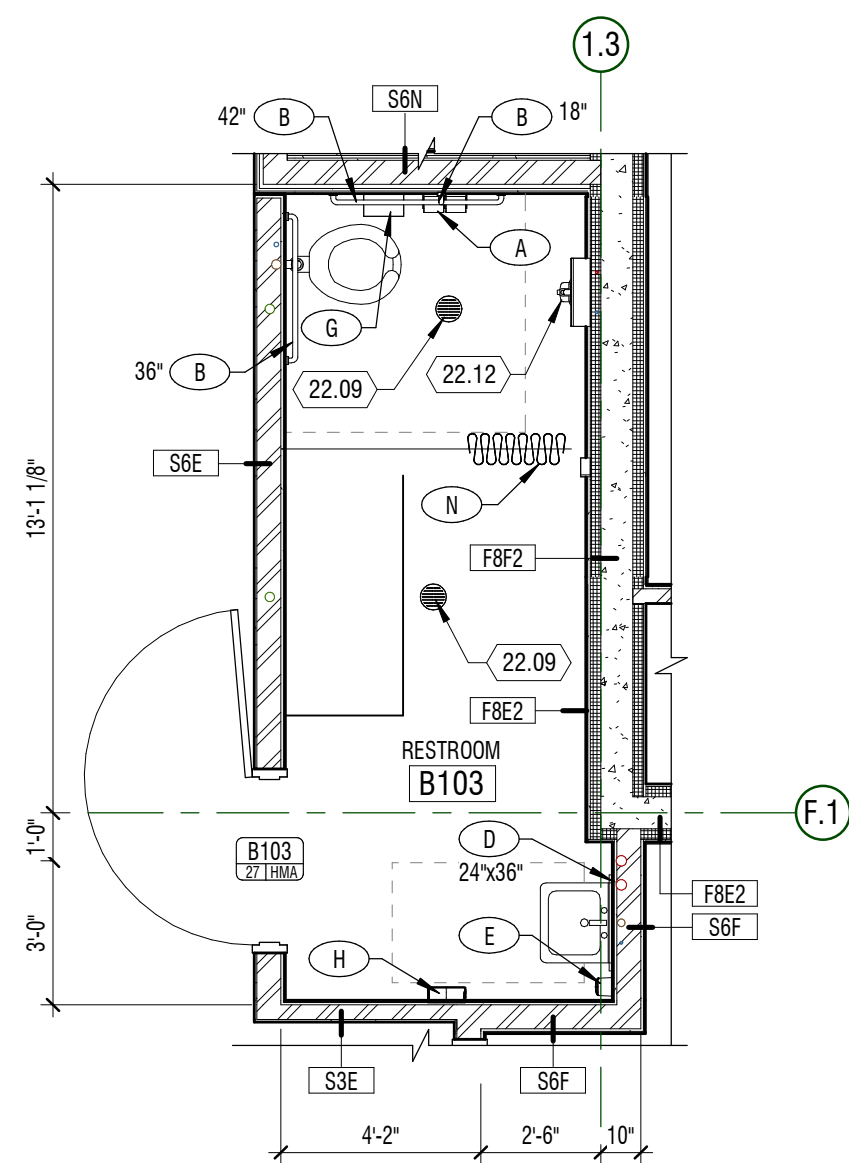
1/2" = 1'-0"

**D2 ENLARGED PLAN**

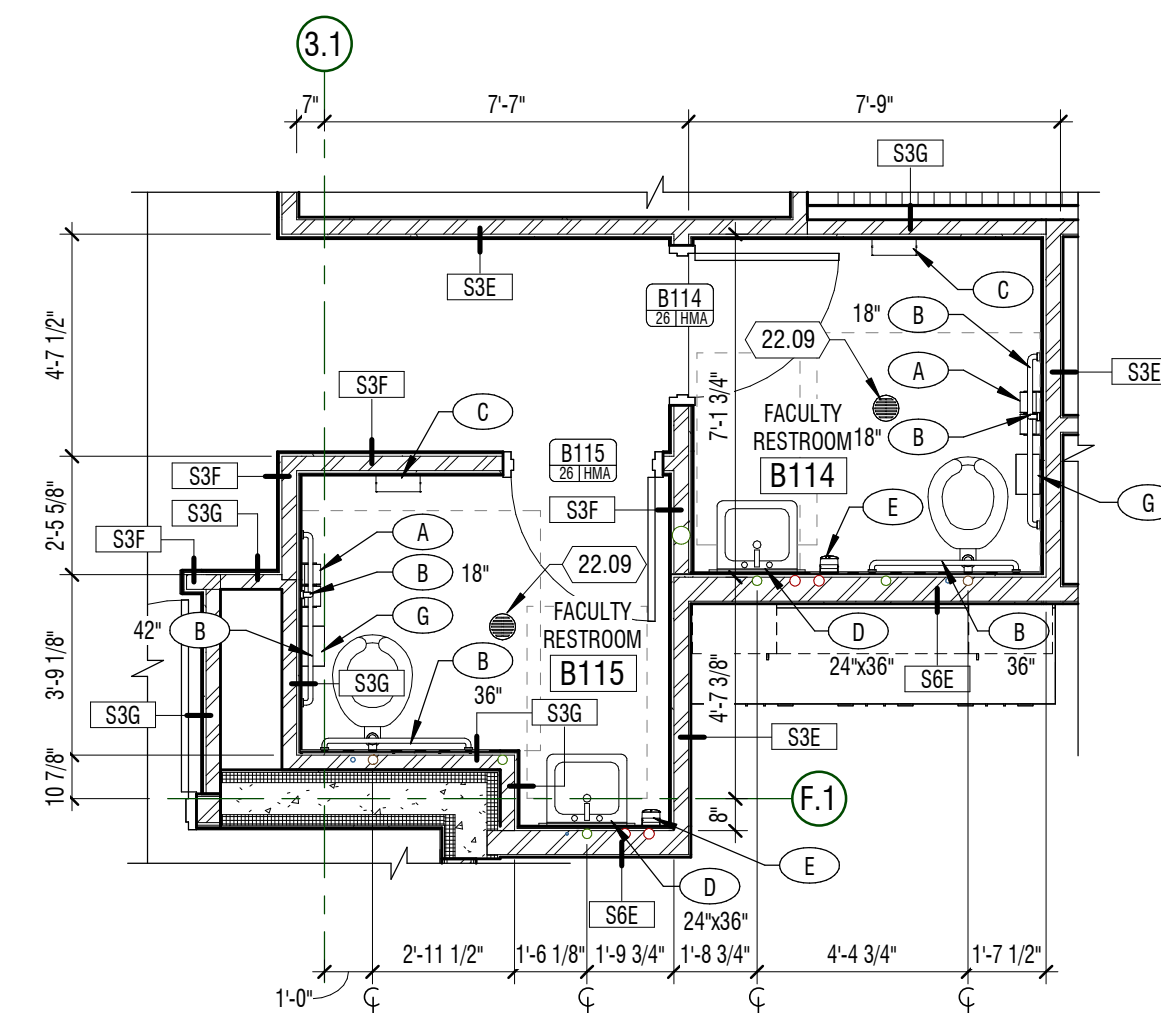
1/4" = 1'-0" TOILET D126

**D4 ENLARGED PLAN**

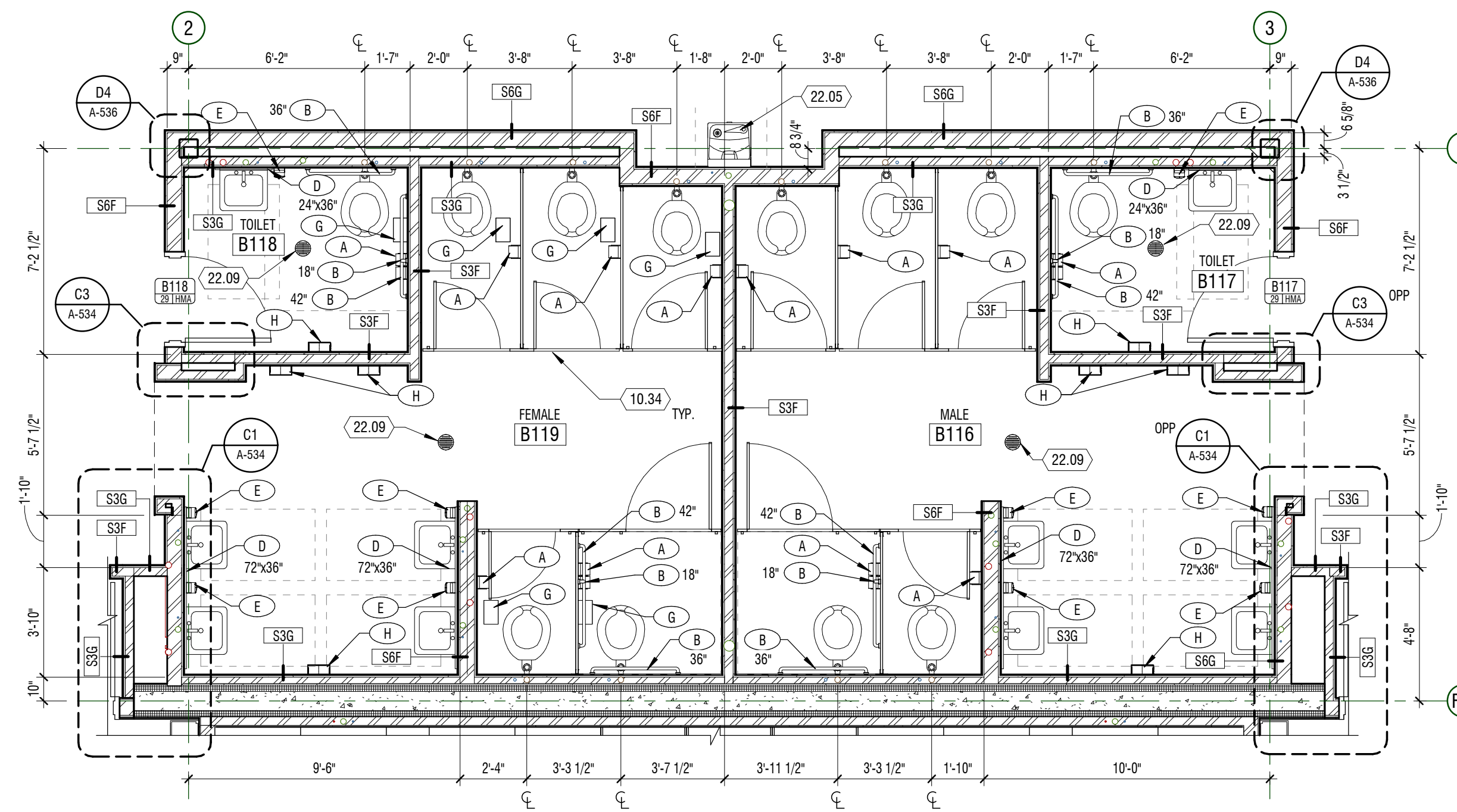
1/4" = 1'-0" MALE F125 - FEMALE F127

**B1 ENLARGED PLAN**

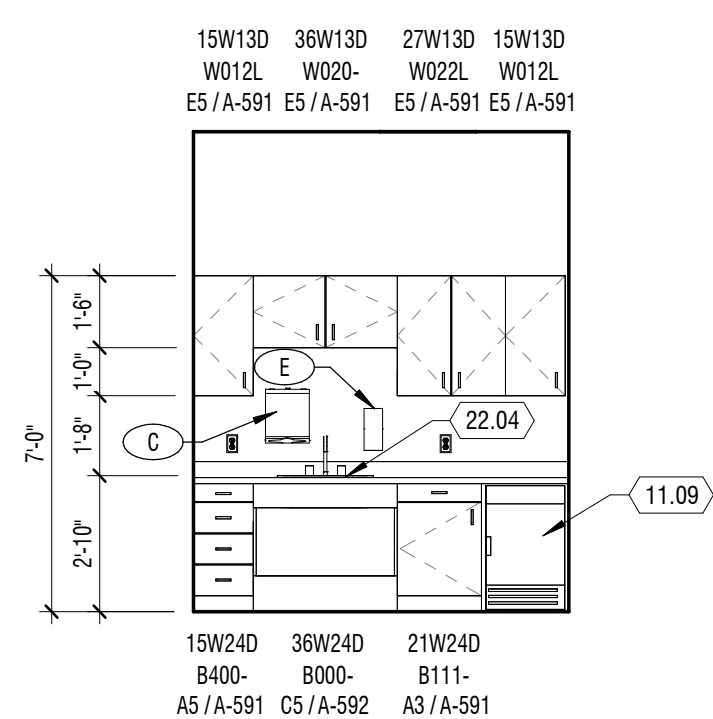
1/4" = 1'-0" RESTROOM B103

**B2 ENLARGED PLAN**

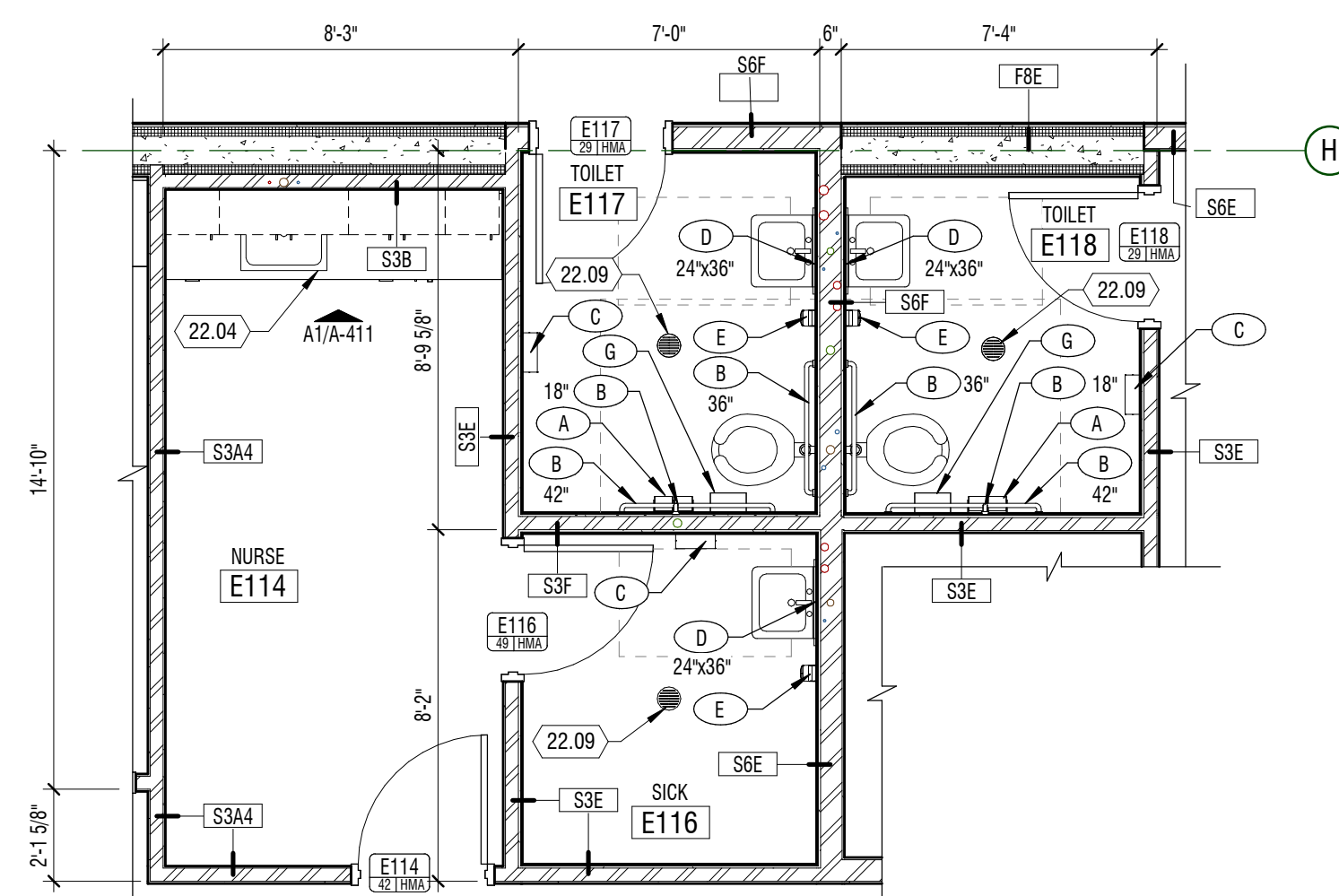
1/4" = 1'-0" FACULTY RESTROOM B114/B214 - B115/B215

**B4 ENLARGED PLAN**

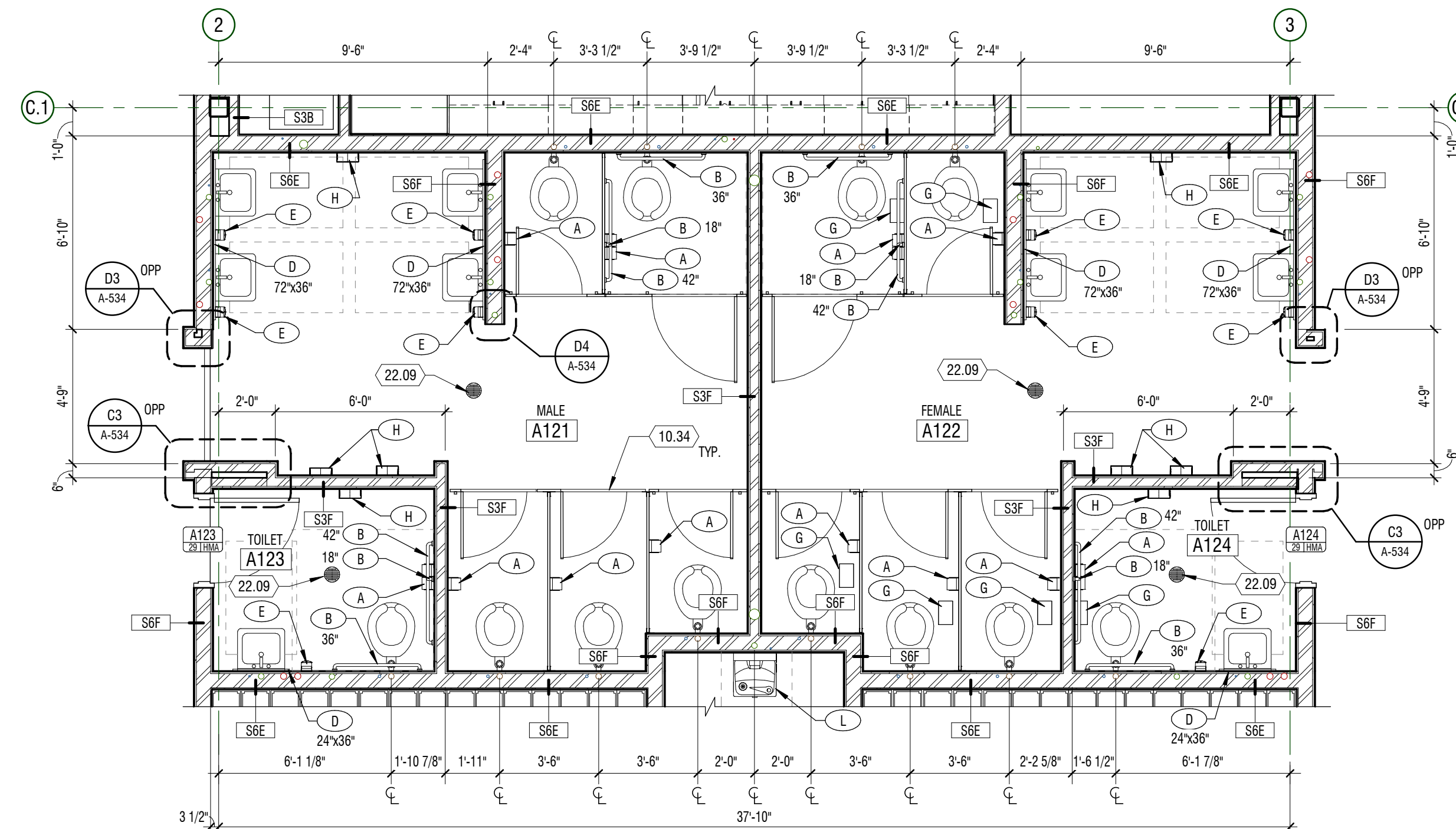
1/4" = 1'-0" MALE B116/B216 - FEMALE B119/B219

**A1 INTERIOR ELEVATION**

1/4" = 1'-0" NURSE E114

**A2 ENLARGED PLAN**

1/4" = 1'-0" NURSE E114 - SICK E116 - TOILET E117/E118

**A4 ENLARGED PLAN**

1/4" = 1'-0" MALE A121/A221 - FEMALE A122/A222

**ACCESSORIES**

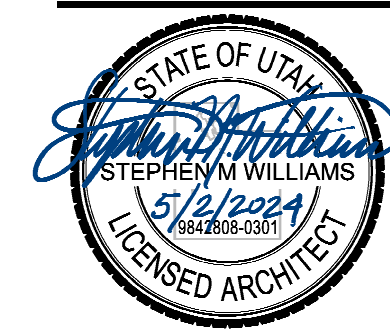
- A TOILET TISSUE DISPENSER  
OWNER FURNISHED, CONTRACTOR INSTALLED
- B GRAB BAR  
LENGTH INDICATED ON PLAN
- C PAPER TOWEL DISPENSER  
OWNER FURNISHED, CONTRACTOR INSTALLED
- D MIRROR  
SIZE INDICATED ON PLAN
- E WALL MOUNTED SOAP DISPENSER  
OWNER FURNISHED, CONTRACTOR INSTALLED
- F FEMININE NAPKIN VENDOR
- G FEMININE NAPKIN DISPOSAL
- H ELECTRIC HAND DRYER
- J DIAPER CHANGING STATION
- K DRAIN PIPE PROTECTION
- L NOT USED
- M NOT USED
- N SHOWER CURTAIN
- P SHOWER SEAT

**KEYNOTES**

MARK	DESCRIPTION
10.34	PARTITIONS - SEE DETAIL D1/A-411
11.09	DISHWASHER - OWNER PROVIDED, CONTRACTOR INSTALLED
22.04	SINK
22.05	DRINKING FOUNTAIN
22.08	MOP SINK
22.09	FLOOR DRAIN - SLOPE FLOOR TO DRAIN
22.12	SHOWER HEAD

MARK	DATE	DESCRIPTION
AUS	MAY 2024	ADDITIONAL DS

PROJECT #:	123006
DRAWN BY:	NELSON
CHECKED BY:	RIGBY
ISSUED:	05.02.2024



## KEYNOTES

- ## CASEWORK KEY

- CABINET TYPE**  
(DRAWER(S))  
DOOR(S)  
ADJUSTABLE SHELVES  
ACCESSORY  
W # # # X

**CABINET TYPE**  
(DRAWER(S))  
DOOR(S)  
ADJUSTABLE SHELVES  
ACCESSORY (IF NOTED)  
W # # # X

**CABINET TYPE**  
(DRAWER(S))  
DOOR(S)  
ADJUSTABLE SHELVES  
ACCESSORY (IF NOTED)  
T # # # X

**NOTES:**  
**CABINET TYPE**  
B BASE CABINET  
M MOVABLE CART  
T TALL CABINET  
W WALL CABINET

**DRAWER**  
# DENOTES NUMBER OF TOTAL DRAWERS

**DOOR**  
# DENOTES NUMBER OF TOTAL DOORS

**ADJUSTABLE SHELVES**  
# DENOTES NUMBER OF TOTAL SHELVES

**ACCESSORY**  
# DENOTES NO ACCESSORY  
D VERTICAL DIVIDER  
F FILE DRAWER  
L LOCKS (AT DOOR(S)) (DRAWER(S))  
R HANGER ROD  
V VENTED DOOR

**CASEWORK TAG**

18W240  
R111  
A1A-500

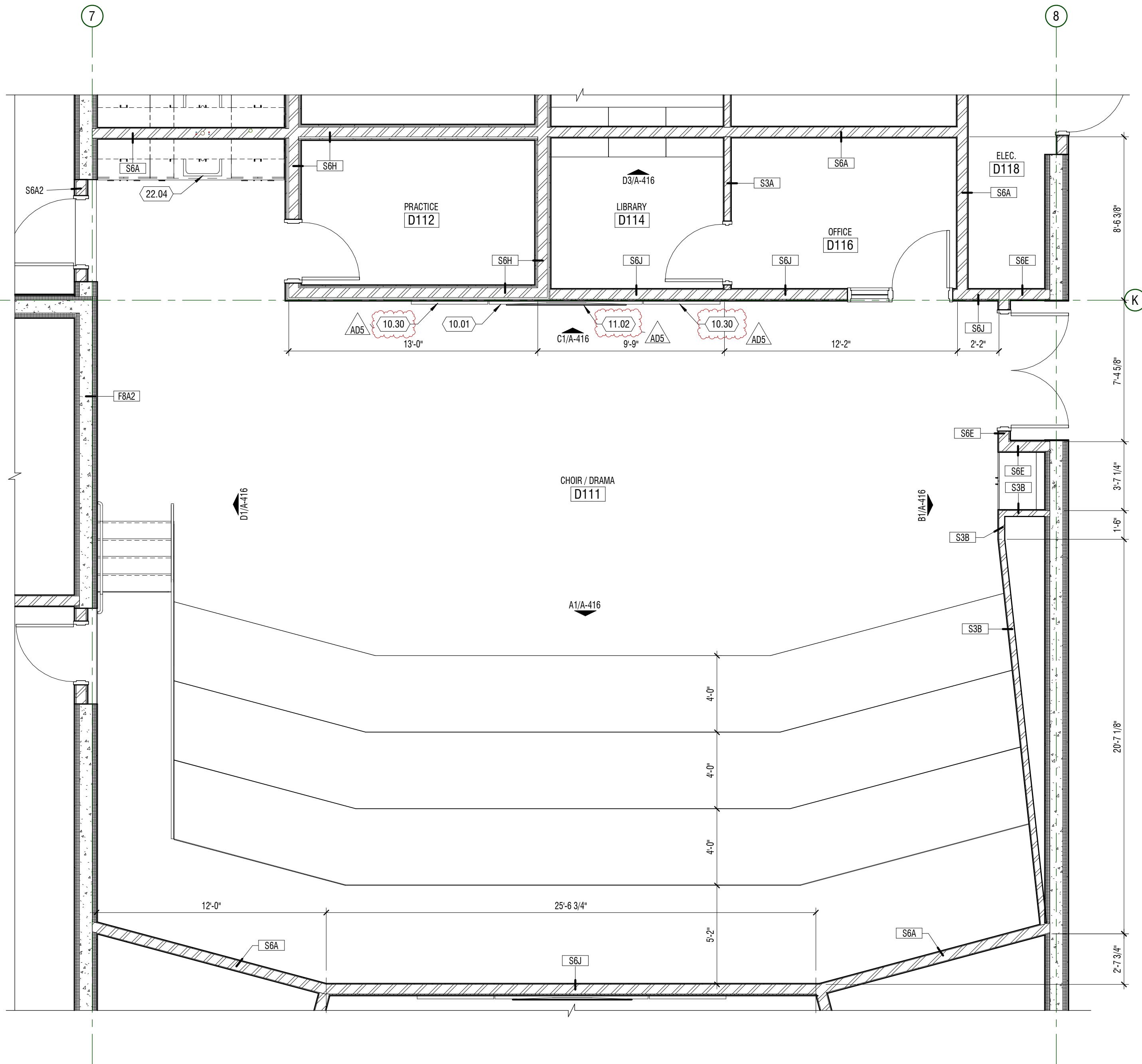
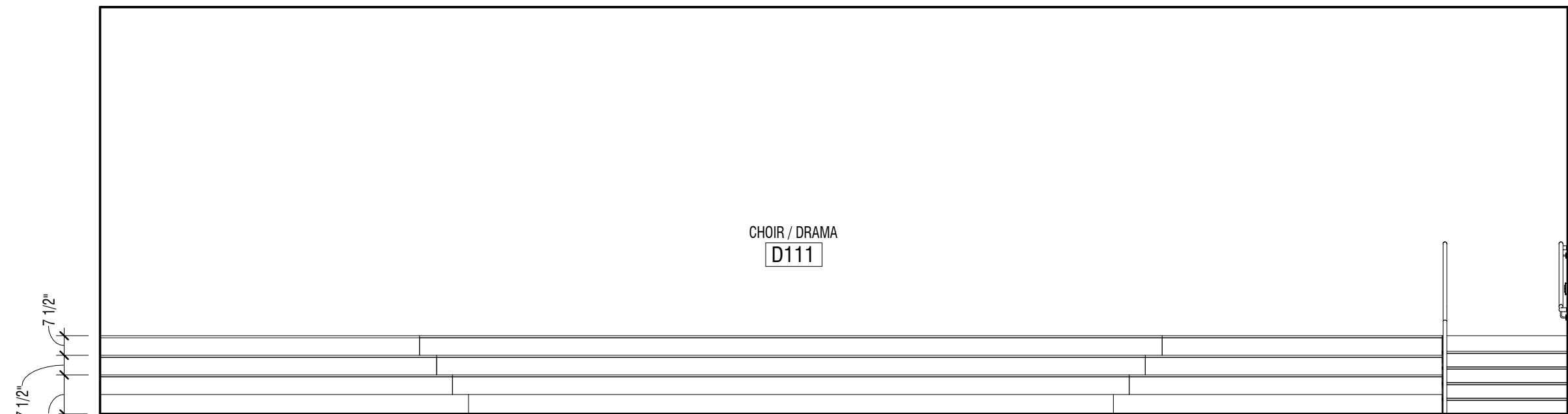
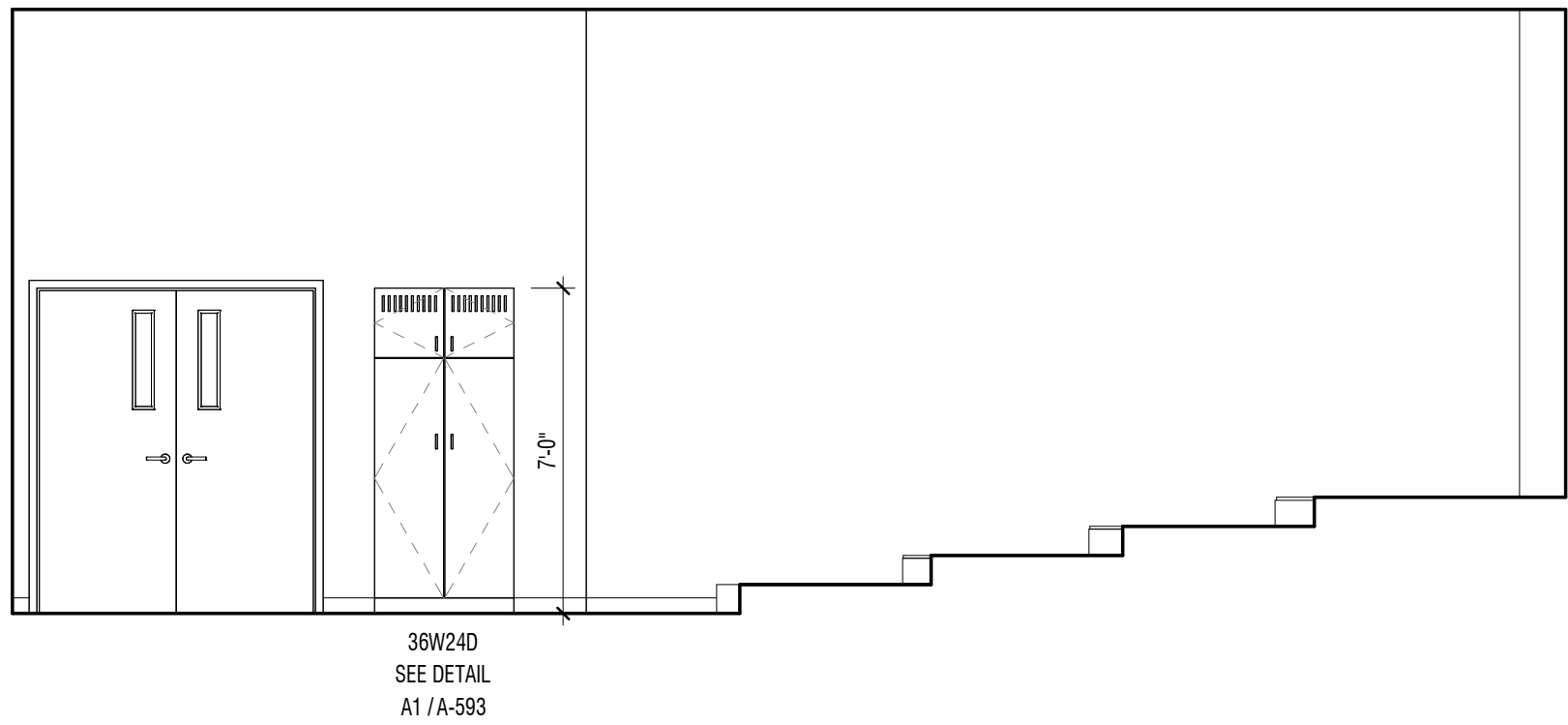
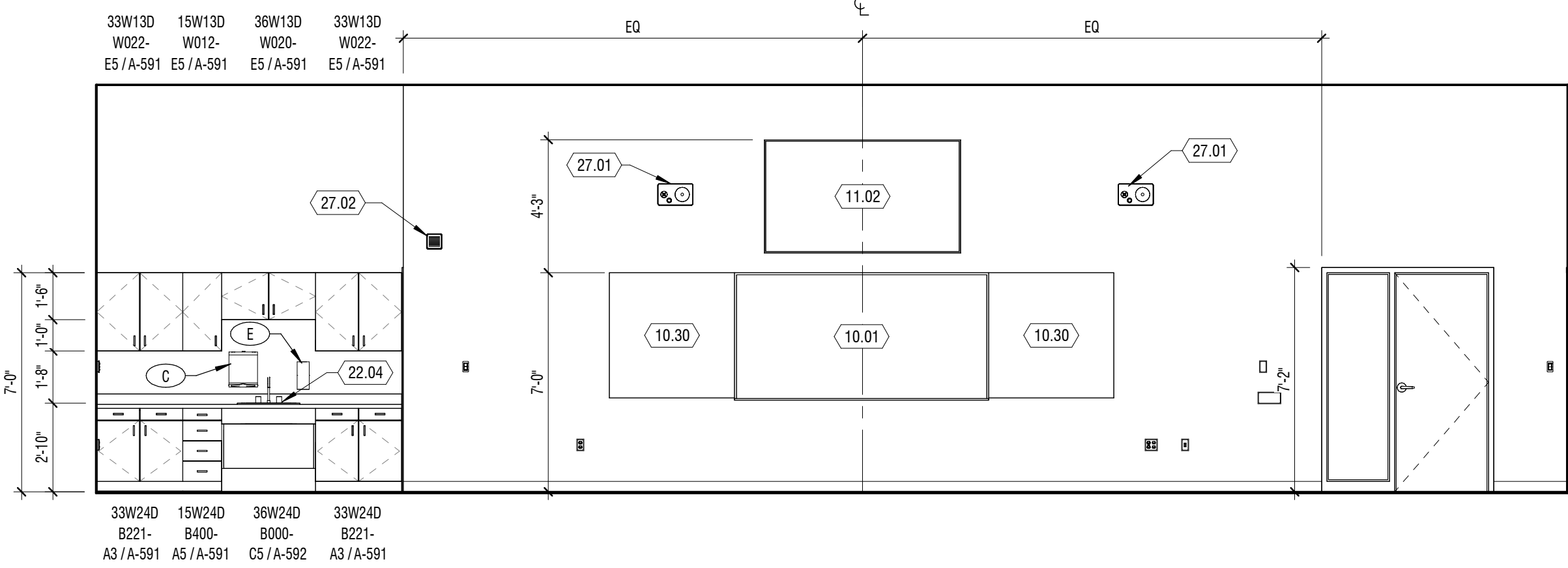
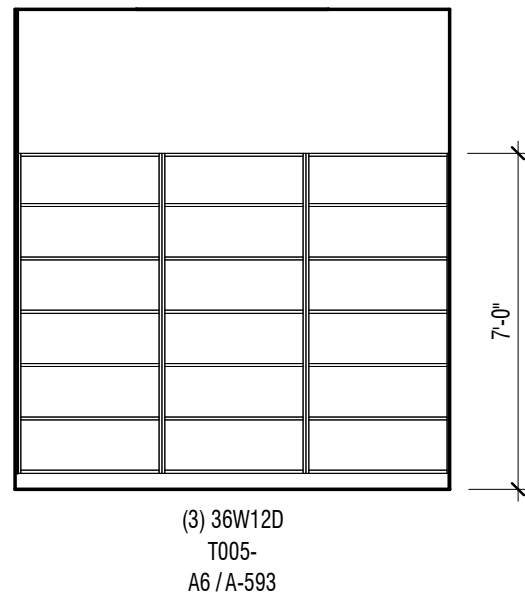
— SIZE  
— IDENTIFIER  
— DETAIL REFERENCE

## C1 INTERIOR ELEVATION

## B1 INTERIOR ELEVATION

## A1 INTERIOR ELEVATION

## A3 ENLARGED PLAN



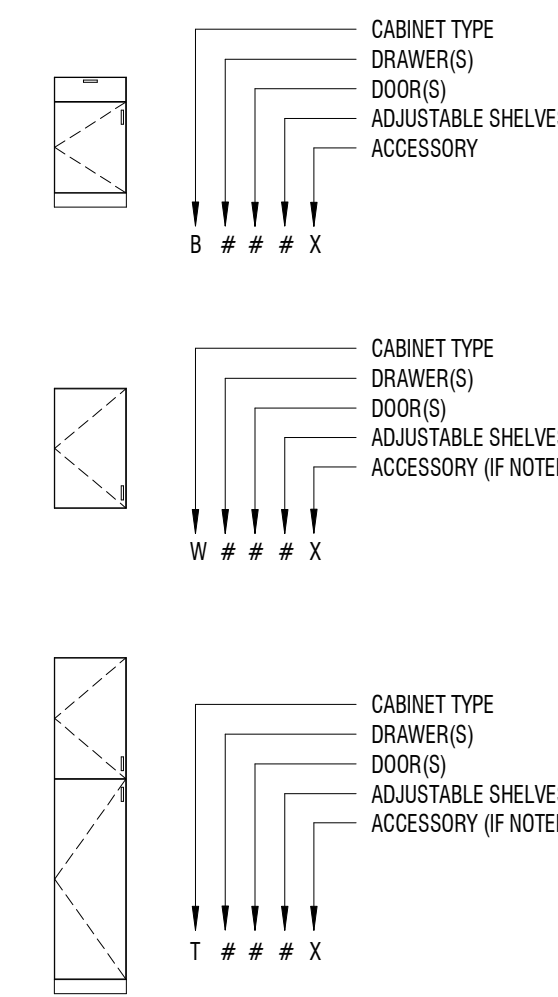
## ACCESSORIES

- |            |  |
|------------|--|
| <b>(A)</b> | TILET TISSUE DISPENSER<br>OWNER FURNISHED, CONTRACTOR INSTALLED      |
| <b>(B)</b> | GRAB BAR<br>LENGTH INDICATED ON PLAN                                 |
| <b>(C)</b> | PAPER TOWEL DISPENSER<br>OWNER FURNISHED, CONTRACTOR INSTALLED       |
| <b>(D)</b> | MIRROR<br>SIZE INDICATED ON PLAN                                     |
| <b>(E)</b> | WALL MOUNTED SOAP DISPENSER<br>OWNER FURNISHED, CONTRACTOR INSTALLED |
| <b>(F)</b> | FEMININE NAPKIN VENDOR   |
| <b>(G)</b> | FEMININE NAPKIN DISPOSAL   |
| <b>(H)</b> | ELECTRIC HAND DRYER  |
| <b>(J)</b> | DIAPER CHANGING STATION  |
| <b>(K)</b> | DRAIN PIPE PROTECTION  |
| <b>(L)</b> | NOT USED   |
| <b>(M)</b> | NOT USED   |
| <b>(N)</b> | SHOWER CURTAIN   |
| <b>(P)</b> | SHOWER SEAT  |

## KEYNOTES

#	MARK	DESCRIPTION
10.01		WHITEBOARD 8'-0" X 4'-0". HIDDEN TACKLESS PAPER HOLDER ON TOP AND MARKER TRAY ON BOTTOM
10.30		4'-0" X 4'-0" ACOUSTIC FELT TACK BOARD (FRAMELESS)
10.32		WHITEBOARD 8'-0" X 4'-0". HIDDEN TACKLESS PAPER HOLDER ON TOP AND MARKER TRAY ON BOTTOM
11.02	ADS	WALL MOUNTED DIGITAL DISPLAY - SEE DETAIL E11-591 FOR MOUNTING. OWNER PROVIDED. CONTRACTOR INSTALLED
22.07		TROUGH W/SHINK
22.14		SINK W/SHUBBLER
26.01		CEILING MOUNTED POWER CORD DROP - SEE ELECTRICAL

## CASEWORK KEY



**NOTES:**  
**CABINET TYPE**  
 B BASE CABINET  
 M MOVABLE CART  
 T TALL CABINET  
 W WALL CABINET

**DRAWER**  
 # DENOTES NUMBER OF TOTAL DRAWER

**DOOR**  
 # DENOTES NUMBER OF TOTAL DOORS

**ADJUSTABLE SHELVES**  
 # DENOTES NUMBER OF TOTAL SHELVES

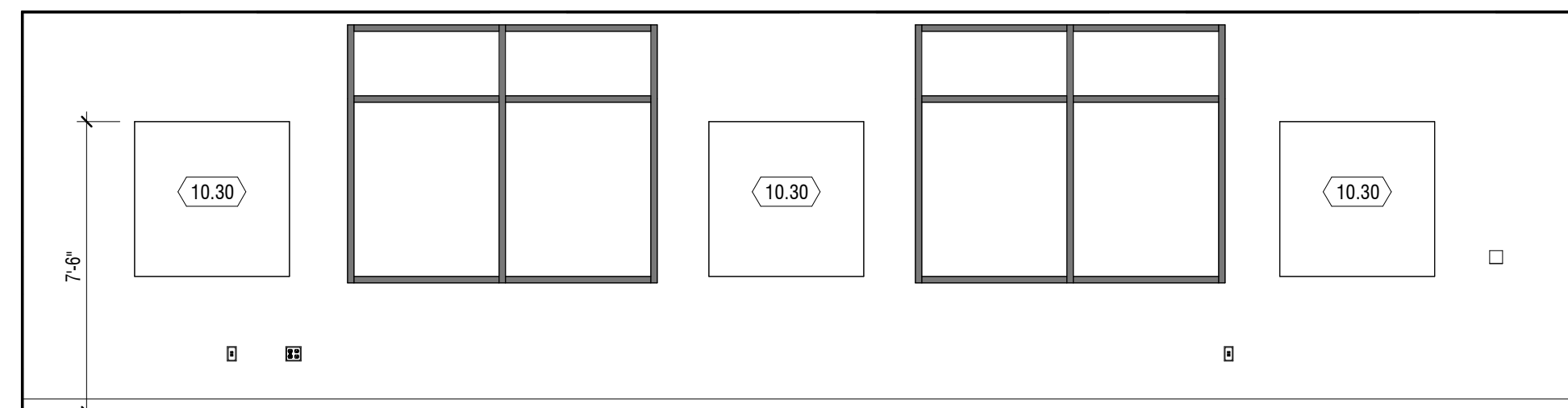
**ACCESSORY**  
 # DENOTES NO ACCESSORY  
 D CERTICAL DRAWER  
 F FILE DRAWER(S)  
 L LOCKS AT DOOR(S) DRAWER(S)  
 R HANGER ROD  
 V VENTED DOOR

**CASEWORK TAG**

18W24D → SIZE  
 8111- → IDENTIFIER  
 A1A500 → DETAIL REFERENCE

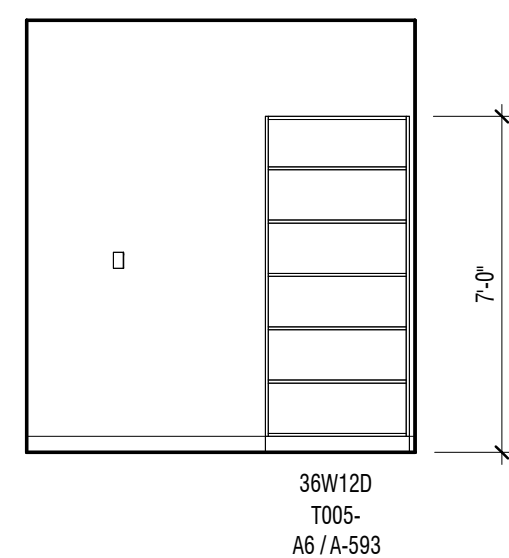
## E1 INTERIOR ELEVATION

ART / CERAMICS E125



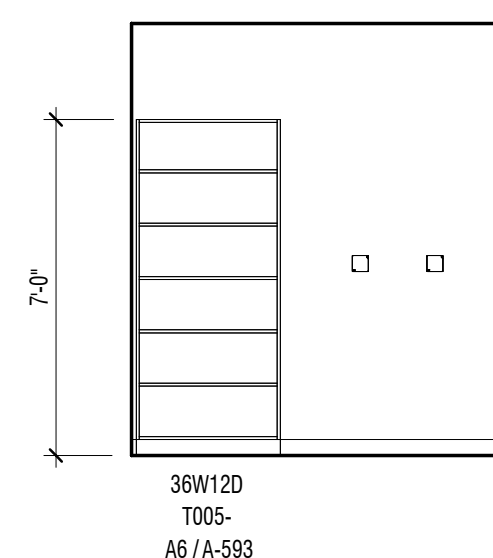
## D1 INTERIOR ELEVATION

1/4" = 1'-0" KILN E126



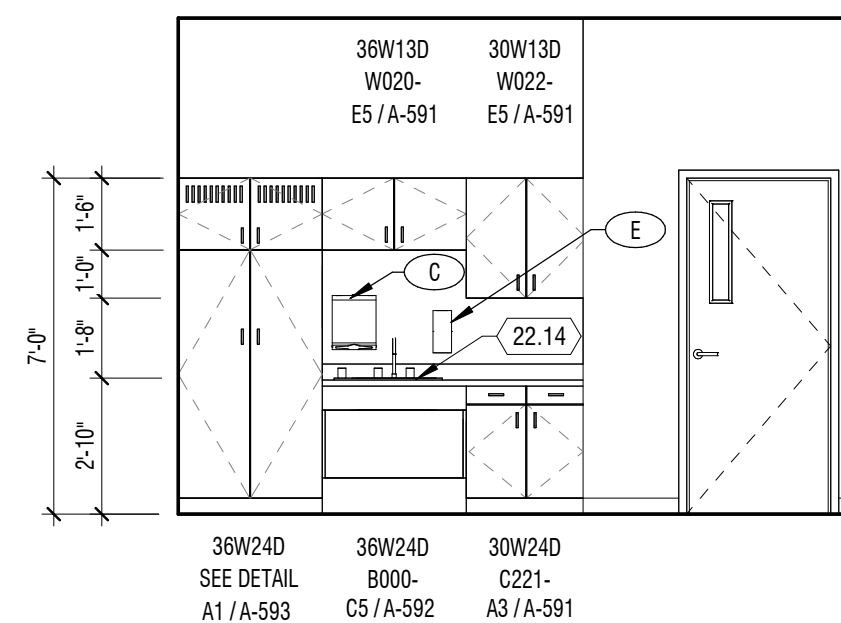
## D2 INTERIOR ELEVATION

1/4" = 1'-0" KILN E126



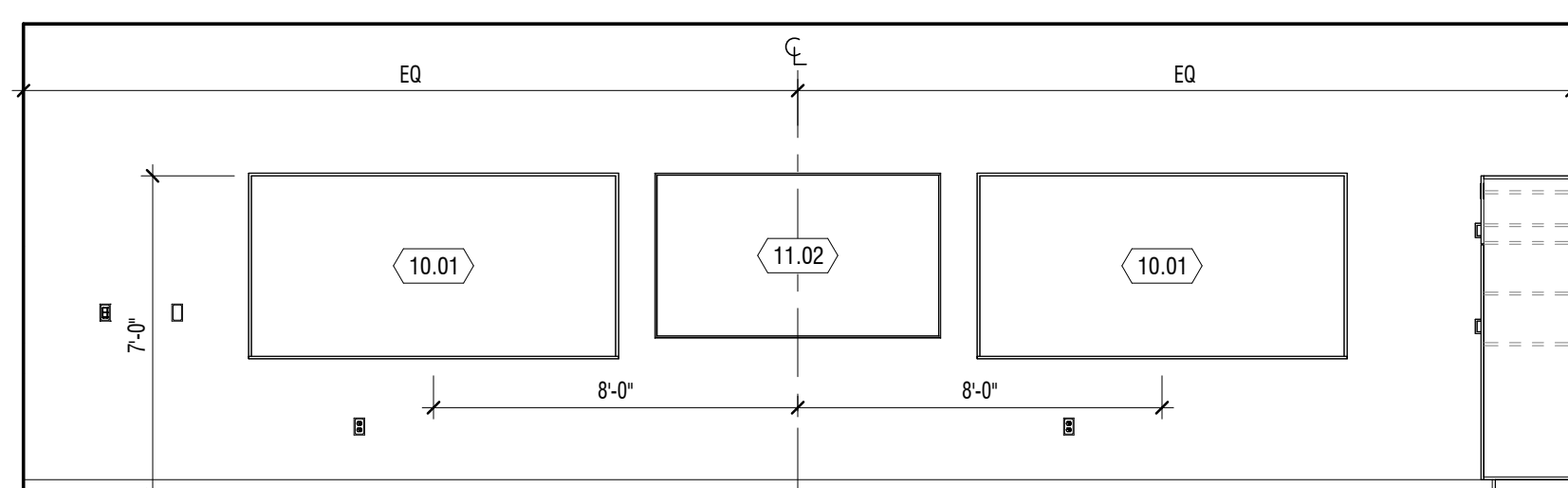
## C1 INTERIOR ELEVATION

1/4" = 1'-0" SPECIAL EDUCATION C204



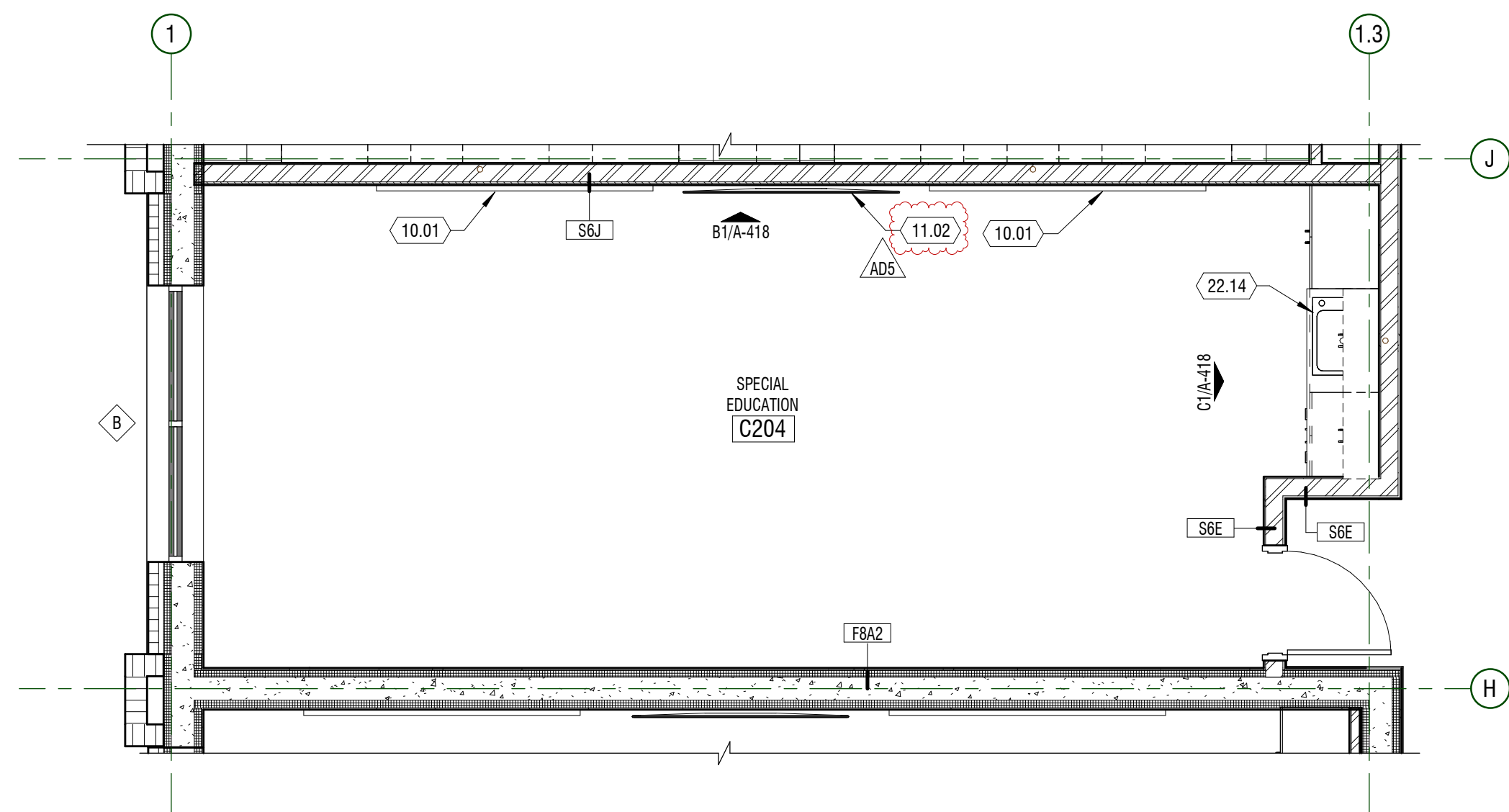
## B1 INTERIOR ELEVATION

1/4" = 1'-0" SPECIAL EDUCATION C204



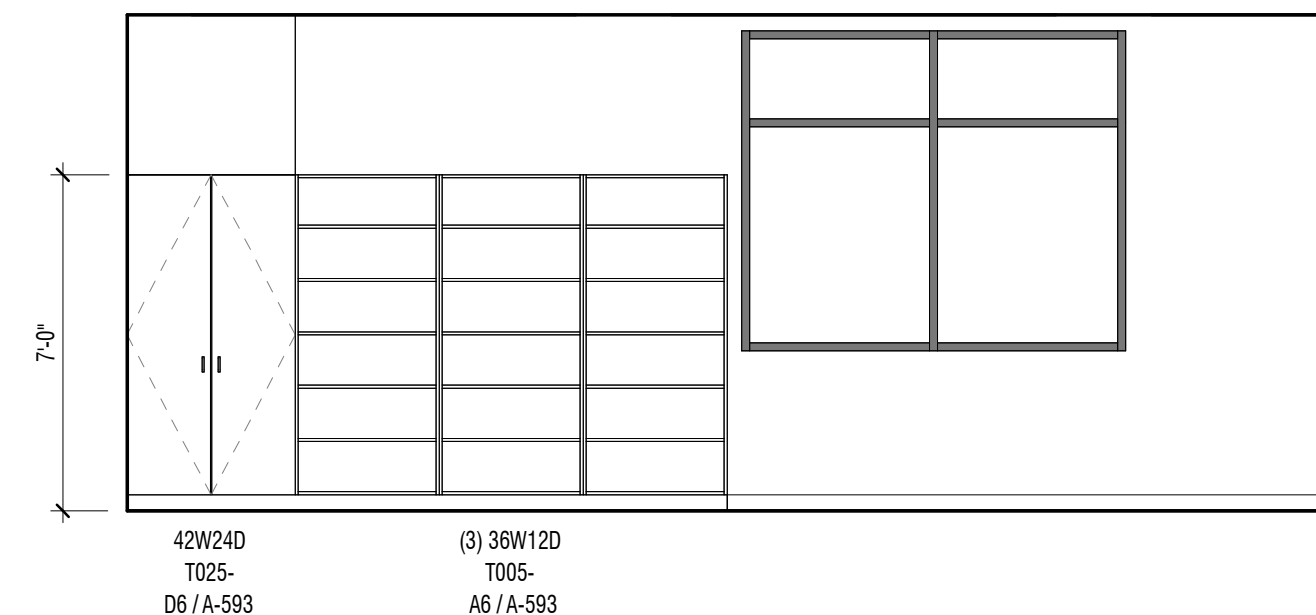
## A1 ENLARGED PLAN

1/4" = 1'-0" SPECIAL EDUCATION C204



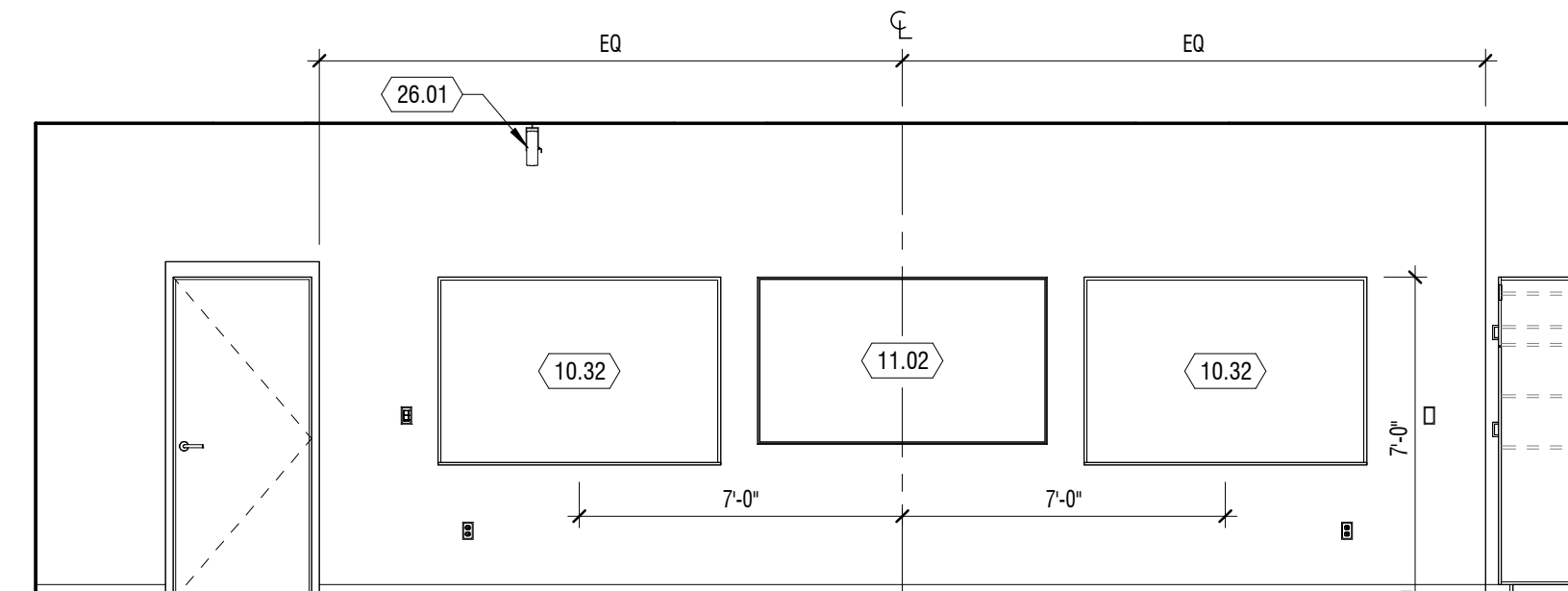
## E4 INTERIOR ELEVATION

ART / CERAMICS E125



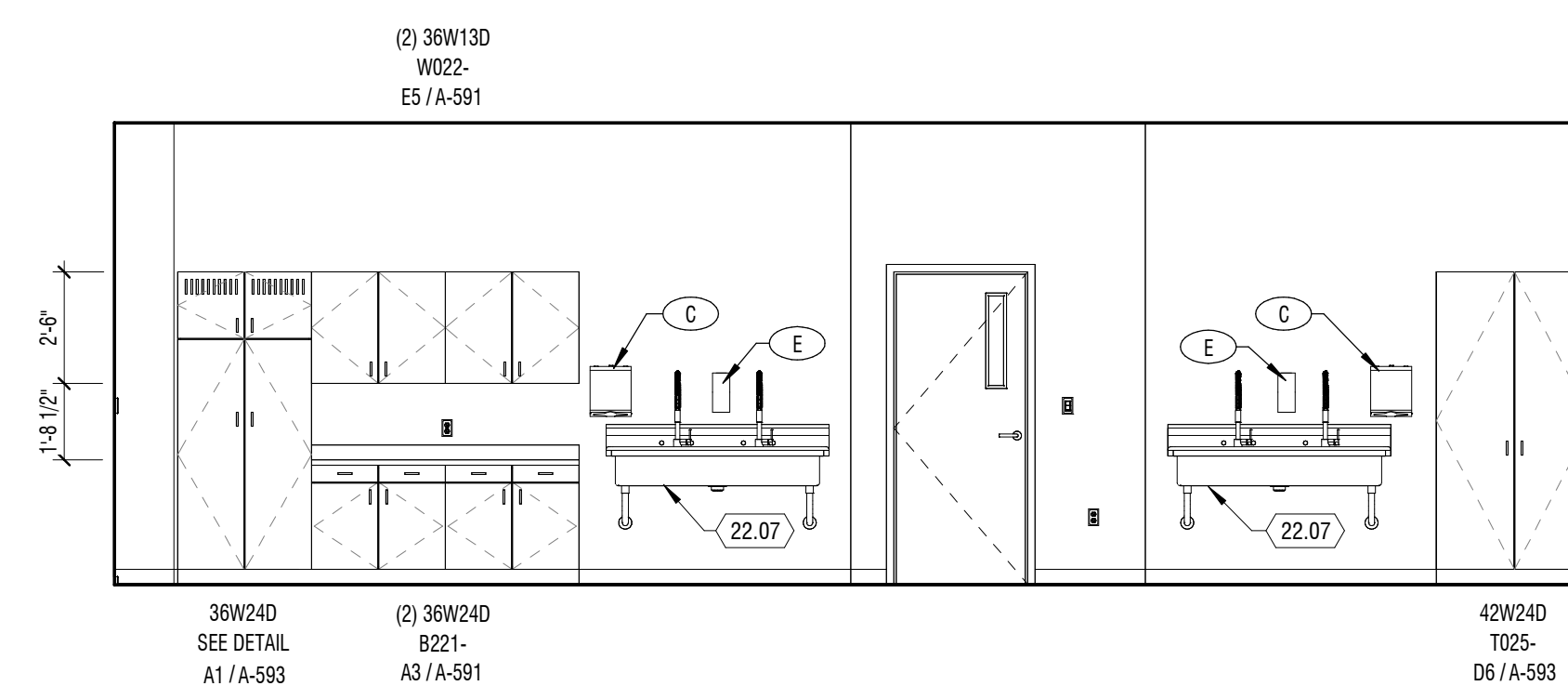
## D4 INTERIOR ELEVATION

1/4" = 1'-0" ART / CERAMICS E125



## C4 INTERIOR ELEVATION

1/4" = 1'-0" ART / CERAMICS E125



## A4 ENLARGED PLAN

1/4" = 1'-0" ART / CERAMIS E124

