

# NORTHERN HIGH SCHOOL - BID PACKAGE 2: DISTRICT WIDE ACCESS CONTROL

## PORTAGE PUBLIC SCHOOLS Portage, Michigan CONSTRUCTION DOCUMENTS

### DESIGN TEAM

#### ARCHITECT/ENGINEER

**TowerPinkster**  
Architecture · Engineering · Interiors

242 E. KALAMAZOO AVE, SUITE 100  
KALAMAZOO, MICHIGAN 49007  
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FAX: 269.343.6633

### REFERENCED CODES

BUILDING: 2015 MICHIGAN BUILDING CODE AND 2012 NFPA 101 LIFE SAFETY CODE  
ENERGY: 2015 MICHIGAN ENERGY CODE  
PLUMBING: 2018 MICHIGAN PLUMBING CODE  
MECHANICAL: 2015 MICHIGAN MECHANICAL CODE  
FUEL GAS: (IFGC) 2015 INTERNATIONAL FUEL GAS CODE  
ELECTRICAL: 2017 NATIONAL ELECTRICAL CODE WITH MICHIGAN AMENDMENTS  
BARRIER-FREE: 2015 MICHIGAN BUILDING CODE AND 2009 ICC & C A117.1  
USE GROUP: E  
CONSTRUCTION TYPE: II-B  
AUTOMATIC SPRINKLERS: YES

#### PROJECT AREA

TOTAL FINISHED PROJECT: 605 SQ. FT.

### ALTERNATES

ALTERNATE 1: SECURITY RESOURCE OFFICER OFFICE

### DRAWING INDEX

#### GENERAL

G 001 COVER SHEET

#### ARCHITECTURAL GENERAL

AG 001 GENERAL ARCHITECTURAL NOTES, INTERIOR PARTITION TYPES, DEVICE ALIGNMENT GUIDELINES, & ABBREVIATIONS

#### ARCHITECTURAL DEMOLITION

AD 101 LOWER LEVEL DEMOLITION PLAN & REFLECTED CEILING DEMOLITION PLAN

#### ARCHITECTURAL

A 101 LOWER LEVEL FLOOR PLAN & REFLECTED CEILING PLAN

#### INTERIORS GENERAL

IG 001 TYPICAL SYMBOLS & GENERAL NOTES

#### INTERIORS

I 101B LOWER LEVEL FINISH PLAN - UNIT B, MATERIAL SELECTION SCHEDULE, AND TYPICAL DETAILS

I 501 ENLARGED MILLWORK FINISH PLANS AND DETAILS

#### MECHANICAL & PLUMBING GENERAL

MG 001 MECHANICAL & PLUMBING GENERAL NOTES, ABBREVIATIONS, AND SYMBOLS

#### MECHANICAL DEMOLITION

MD 101 LOWER LEVEL MECHANICAL DEMOLITION PLAN

#### MECHANICAL

M 101 LOWER LEVEL MECHANICAL PLAN

#### ELECTRICAL - GENERAL

EG 001 ELECTRICAL SYMBOLS AND GENERAL NOTES

#### ELECTRICAL

E 101 LOWER LEVEL PLAN

### SITE ADDRESS

PORTAGE NORTHERN HIGH SCHOOL  
1000 IDAHO AVENUE  
PORTAGE, MI 49024

**TowerPinkster**  
Architecture · Engineering · Interiors

ISSUED FOR

DATE

PROJECT TITLE  
NORTHERN HIGH SCHOOL - BID PACKAGE  
2: DISTRICT WIDE ACCESS CONTROL

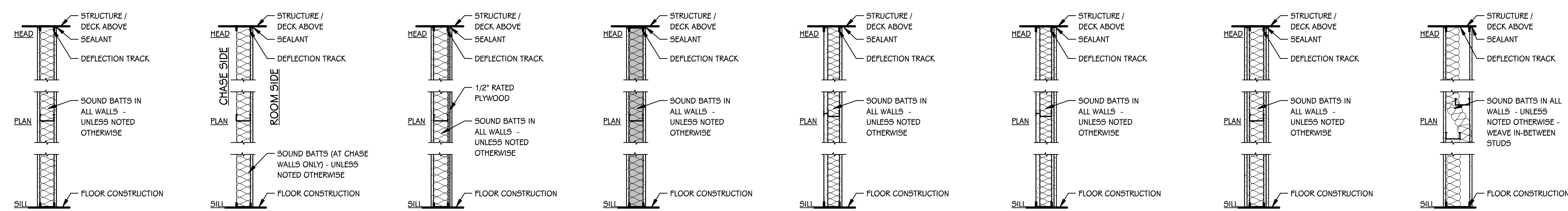
OWNER  
PORTAGE PUBLIC SCHOOLS

Portage, Michigan

DATE  
FEBRUARY 16, 2024

SHEET TITLE  
COVER SHEET

SHEET NUMBER  
G 001  
23-214.50



**11** METAL STUDS @ 16" O.C. WITH 5/8" GYPSUM BOARD BOTH SIDES. (1 HOUR FIRE) U.L. ASSEMBLY U465 WHERE NOTED ON PLANS  
**METAL STUD WALL**

**12** METAL STUDS @ 16" O.C. WITH 5/8" GYPSUM BOARD ON ROOM SIDE - BRACE WALL @ 4'-0" O.C. MAXIMUM.  
**METAL STUD CHASE WALL OR FURRING**

**13** METAL STUDS @ 16" O.C. WITH 1/2" RATED PLYWOOD ONE SIDE AND 5/8" GYPSUM BOARD ON BOTH SIDES.  
**METAL STUD WALL WITH PLYWOOD BACKING**

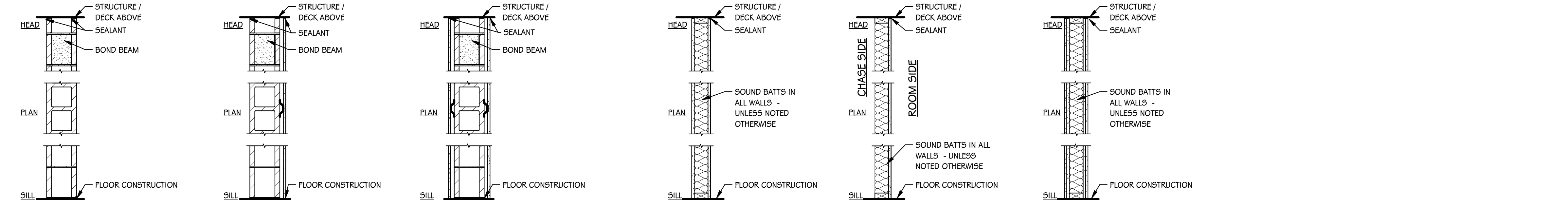
**14** METAL STUDS @ 16" O.C. WITH 5/8" TYPE "X" GYPSUM BOARD BOTH SIDES TO DECK.  
**STRUCTURAL METAL STUD WALL**

**15** METAL CH STUDS @ 16" O.C. WITH 5/8" TYPE "X" GYPSUM BOARD ON ROOM SIDE AND 1" TYPE "X" GYPSUM BOARD PANEL ON CHASE SIDE  
**METAL STUD CHASE WALL (1 HOUR FIRE) U.L. ASSEMBLY U415**

**16** METAL CH STUDS @ 16" O.C. WITH (2) LAYERS 5/8" TYPE "X" GYPSUM BOARD ON ROOM SIDE AND 1" TYPE "X" GYPSUM BOARD PANEL ON CHASE SIDE  
**METAL STUD CHASE WALL (2 HOUR FIRE) U.L. ASSEMBLY U438**

**17** METAL STUDS @ 16" O.C. WITH (2) LAYERS 5/8" TYPE "X" GYPSUM BOARD BOTH SIDES  
**METAL STUD WALL (2 HOUR FIRE) U.L. ASSEMBLY U425**

**18** 6" TOP AND BOTTOM TRACK WITH 3 5/8" METAL STUD FRAMING @ 16" O.C. (OFFSET) WITH 5/8" GYPSUM BOARD BOTH SIDES  
**METAL STUD SOUND WALL**



**19** 4" CONCRETE MASONRY UNITS  
**CMU WALL (1 AND 2 HOUR FIRE) U.L. ASSEMBLY - U905**

**20** 4" CONCRETE MASONRY UNITS WITH METAL FURRING AND 5/8" GYPSUM BOARD  
**CMU WALL WITH FURRING**

**21** 4" CONCRETE MASONRY UNITS WITH METAL FURRING AND 5/8" GYPSUM BOARD - BOTH SIDES  
**CMU WALL WITH FURRING BOTH SIDES**

**22** 6" CONCRETE MASONRY UNITS WITH METAL FURRING AND 5/8" GYPSUM BOARD - BOTH SIDES  
**WOOD STUD WALL**

**23** 6" CONCRETE MASONRY UNITS WITH METAL FURRING AND 5/8" GYPSUM BOARD - BOTH SIDES  
**WOOD STUD CHASE WALL**

**24** 8" CONCRETE MASONRY UNITS WITH METAL FURRING AND 5/8" GYPSUM BOARD - BOTH SIDES  
**WOOD STUD WALL (2 HOUR FIRE) U.L. ASSEMBLY U301**

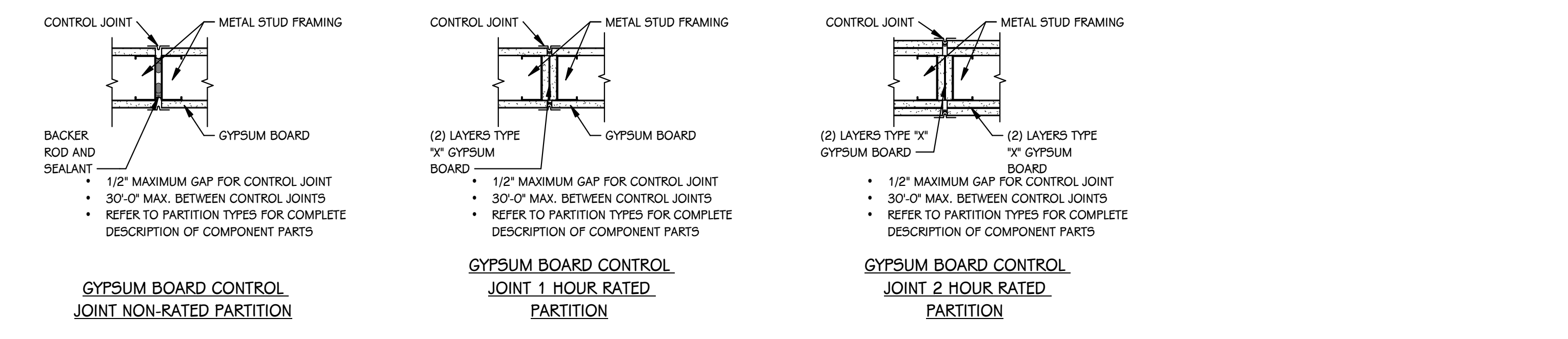
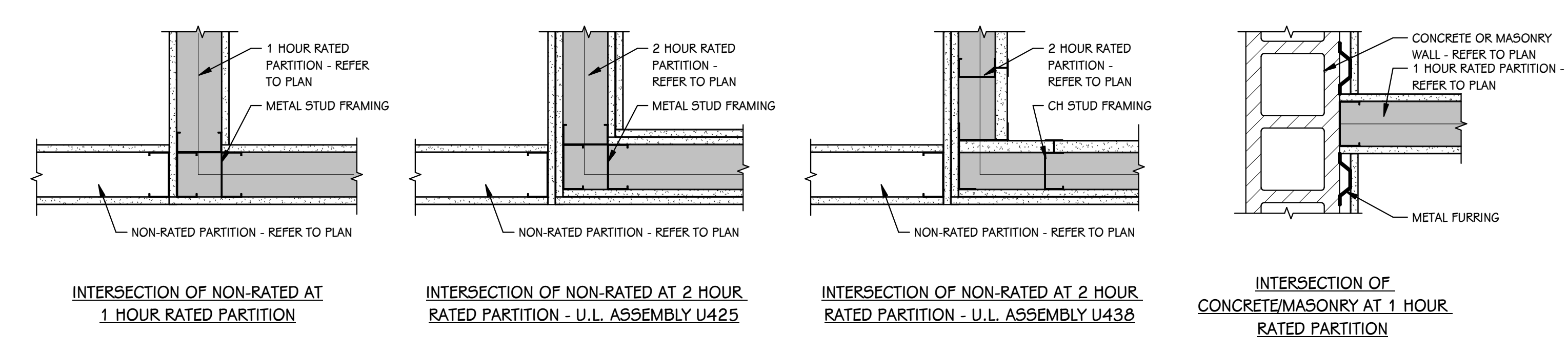
**25** 8" CONCRETE MASONRY UNITS WITH METAL FURRING AND 5/8" GYPSUM BOARD  
**WOOD STUD WALL (2 HOUR FIRE) U.L. ASSEMBLY U301**

**26** 10" CONCRETE MASONRY UNITS WITH METAL FURRING AND 5/8" GYPSUM BOARD  
**WOOD STUD WALL (2 HOUR FIRE) U.L. ASSEMBLY U301**

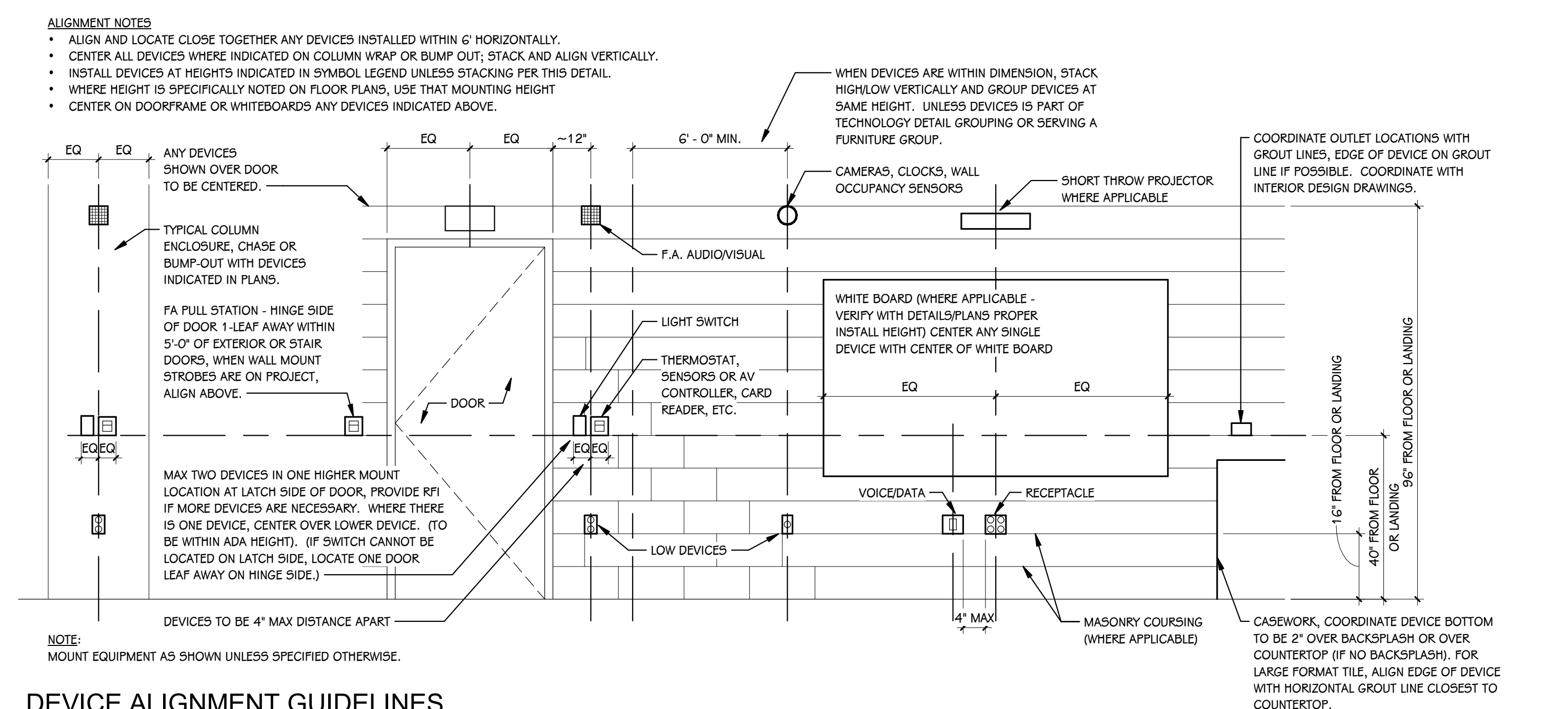
**27** 10" CONCRETE MASONRY UNITS WITH METAL FURRING AND 5/8" GYPSUM BOARD - BOTH SIDES  
**WOOD STUD WALL (2 HOUR FIRE) U.L. ASSEMBLY U301**

**28** 12" CONCRETE MASONRY UNITS WITH METAL FURRING AND 5/8" GYPSUM BOARD - BOTH SIDES  
**WOOD STUD WALL (2 HOUR FIRE) U.L. ASSEMBLY U301**

**INTERIOR PARTITION TYPES**  
3/4" = 1'-0"



**FIRE RATED WALL PLAN DETAILS**  
SCALE: NONE



**DEVICE ALIGNMENT GUIDELINES**  
1/2" = 1'-0"

**GENERAL NOTES - ARCHITECTURAL - PARTITIONS**

- NOT ALL WALL TYPES MAY BE USED ON PROJECT.
- REFER TO CODE COMPLIANCE PLANS FOR LOCATIONS OF SMOKE AND FIRE-RATED PARTITIONS.
- ALL PARTITIONS EXTEND TO BOTTOM OF STRUCTURE, UNLESS NOTED OTHERWISE.
- LINE OF STRUCTURE/DECK AS SHOWN AT THE HEAD CONDITION OF EACH PARTITION TYPE IS DIAGRAMMATIC ONLY AND DOES NOT INDICATE EXACT CONSTRUCTION CONDITIONS. TERMINATE PARTITIONS AT UNDERSIDE OF STRUCTURAL DECK TO MAINTAIN RATING. PROVIDE APPROPRIATE FRAMING AND GYPSUM BOARD TO OFFSET AROUND STRUCTURE OR OTHER OBSTRUCTIONS, SUCH AS PIPING OR DUCTWORK.
- PARTITIONS MAY TERMINATE AT STRUCTURAL MEMBERS WITH A RATING GREATER THAN OR EQUAL THE PARTITION, PROVIDED THAT RATING IS CONTINUOUS TO STRUCTURAL DECK ABOVE.
- NON-RATED PARTITIONS THAT EXTEND TO STRUCTURE SHALL TERMINATE AT UNDERSIDE OF STRUCTURAL DECK TO MAINTAIN A CONTINUOUS PLANE OF GYPSUM BOARD AS A NOISE, SMOKE OR OTHER TYPE OF BARRIER.
- ALL PARTITIONS EXTENDING TO STRUCTURE ABOVE SHALL TERMINATE WITH DEFLECTION TRACK - REFER TO INTERIOR PARTITION TYPE DETAIL ON THIS SHEET.
- ALL GYPSUM BOARD PARTITIONS NOT EXTENDING TO THE STRUCTURE MUST BE BRACED.
- UL DESIGN NUMBERS REFER TO THE FIRE RESISTANCE DIRECTORY; UNDERWRITERS LABORATORY, LATEST EDITION.
- MISCELLANEOUS NON-RATED CHASES TO BE 5/8" GYPSUM BOARD ON 3 5/8" METAL STUD FRAMING AT 16" O.C., UNLESS NOTED OTHERWISE.
- MISCELLANEOUS FURRING AROUND COLUMNS TO BE 5/8" GYPSUM BOARD ON 1 1/2" STUDS, UNLESS NOTED OTHERWISE.
- FIRE-RATED PARTITIONS TO HAVE FIRE-STOPPING SEALANTS AT HEAD, SILL, JUNCTURE WITH DISSIMILAR MATERIALS, ETC. AND AROUND ALL PENETRATIONS AND OPENINGS.
- CONSTRUCT ALL PARTITIONS WITH SOUND ATTENUATION BATTS WITH THE FOLLOWING SOUND BATT THICKNESS: 2 1/2" OR LESS METAL STUD - 1 1/2" THICKNESS, 3 5/8" OR LARGER METAL STUD - 3" THICKNESS. UNLESS NOTED OTHERWISE.

**GENERAL NOTES - ARCHITECTURAL - DEMOLITION**

- CONTRACTORS ARE REQUIRED TO INSPECT/REVIEW THE EXISTING BUILDING PRIOR TO RELATED DEMOLITION WORK. UNLESS NOTED OTHERWISE, REMOVAL OF ANY WALL, FLOOR OR CEILING INCLUDES ALL GENERAL MECHANICAL AND ELECTRICAL ITEMS WHICH ARE A PART OF, OR ATTACHED TO IT.
- CONTRACTOR SHALL VERIFY ALL EXISTING JOB SITE CONDITIONS AND DIMENSIONS AND BE RESPONSIBLE FOR THE SAME. ADVISE CONSTRUCTION MANAGER OF ANY AND ALL DISCREPANCIES.
- PATCH FLOORS, WALLS AND CEILINGS DAMAGED DURING CONSTRUCTION AND DEMOLITION AS REQUIRED. FINISH TO MATCH EXISTING.
- ACCOMMODATE NEW CONSTRUCTION IF NOT INDICATED.
- PROTECT ALL EXISTING FINISHES THROUGHOUT PROJECT.
- REFER TO DEMOLITION ELEVATIONS, SECTIONS AND DETAILS FOR ADDITIONAL INFORMATION.
- REFER TO STRUCTURAL, MECHANICAL, PLUMBING AND ELECTRICAL PLANS FOR ADDITIONAL DEMOLITION NOTES.
- SALVAGE ALL UNISTRUT AND PROTECT FOR RE-USE IN NEW CONSTRUCTION, IF REQUIRED.
- AT LOCATIONS OF REMOVED WALLS, ALL ASSOCIATED ITEMS ATTACHED TO THE WALL ARE TO BE REMOVED. SUCH AS: DOORS, WINDOWS, FRAMES, MARKERBOARDS, TACKBOARDS, TACK STRIPS, ETC.

**GENERAL NOTES - ARCHITECTURAL - NEW CONSTRUCTION**

- THE OWNER RESERVES THE RIGHT TO REMOVE ANY ITEM FROM THE PROJECT PRIOR TO COMMENCEMENT OF CONTRACTED DEMOLITION WORK.
- ALL EXISTING CONDITIONS SHOULD BE FIELD VERIFIED BEFORE WORK BEGINS.
- DIMENSIONS GIVEN ARE ACTUAL AND ARE TO THE FACE OF MASONRY UNITS OR TO THE FACE OF STUD FRAMING, UNLESS NOTED OTHERWISE.
- DETAILS SHOWN ILLUSTRATE DESIGN INTENT, NOT ALL POSSIBLE CONDITIONS. FOR CONDITIONS NOT SHOWN, USE DETAILS CLOSEST TO CONDITION IN QUESTION.
- EXTEND ALL INTERIOR WALL PARTITIONS FROM FLOOR TO STRUCTURE/DECK ABOVE UNLESS NOTED OR DETAILED OTHERWISE.
- WITHIN BUILDING INTERIOR PROVIDE BULLNOSE BLOCK IN CMU WALL ASSEMBLIES AT ALL EXPOSED OUTSIDE CORNERS, INCLUDING WINDOW AND DOOR JAMBS, UNLESS NOTES OR DETAILED OTHERWISE. PROVIDE SQUARE CORNERS AT ALL LOCATIONS FINISHED WITH WALL TILE. REFER TO FINISH PLANS (100 SHEETS) FOR LOCATIONS.
- TOOTH-IN MASONRY AT NEW OPENINGS IN EXISTING WALLS.
- TOOTH-IN NEW MASONRY INFILL INTO EXISTING OPENINGS AT ALL BULLNOSE BLOCK LOCATIONS.
- STUD WALLS SPANNING OVER 12'-0" IN HEIGHT SHALL BE A MINIMUM OF 20 GAUGE.
- STUD WALL SUPPORTING WALL CABINETS SHALL BE A MINIMUM OF 20 GAUGE.
- DOORS ARE TO BE 4" FROM CORNER OF ROOM, UNLESS NOTED OR DIMENSIONED OTHERWISE.
- FIRESTOP ALL INTERCONNECTIONS BETWEEN VERTICAL AND HORIZONTAL SPACES AND CONCEALED WALL SPACES AT CEILING, FLOOR AND ROOF LEVELS.
- FIRESEAL ALL PENETRATIONS, SUCH AS, PIPES, DUCTS, CONDUITS, ETC. THROUGH FIRE AND/OR SMOKE RATED ASSEMBLIES.
- FOR CONTROL JOINT (C.J.) LOCATIONS REFER TO EXTERIOR ELEVATIONS AND/OR FLOOR PLANS.
- PAINT ALL ELECTRICAL PANEL COVERS AND ACCESS PANELS TO MATCH ADJACENT FINISHES. USING OIL-BASED PAINT, NOT LATEX WALL PAINT.
- PROVIDE WOOD BLOCKING IN WALLS THAT REQUIRE WALL MOUNTED EQUIPMENT OR ACCESSORIES. COORDINATE WITH EQUIPMENT OR ACCESSORY MANUFACTURER.
- REMOVE ALL ASSOCIATED CURBS FOR ROOF TOP EQUIPMENT AND MECHANICAL ROOF TOP UNITS. LARGE VOIDS BELOW THE AIR HANDLING UNITS SHALL BE FILLED WITH INSULATION AS SPECIFIED FOR NOISE CONTROL.
- ALL EXISTING ROOF TOP PENETRATIONS BEING REMOVED REQUIRE ROOF PATCHING TO MATCH EXISTING ADJACENT.

**PARTITION STUD KEY - METAL, CH, AND WOOD**

DESIGNATION	SIZE
A	GYPSUM BOARD DIRECT APPLIED TO CMU
B	7/8"
C	1 1/2"
D	1 5/8"
E	2 1/2"
F	3 1/2"
G	3 5/8"
H	4"
J	5 1/2"
K	6"
L	8"
M	10"
N	12"
P	OPEN
Q	OPEN

DESIGNATION	SIZE
R	2 1/2"
S	4"
T	6"

DESIGNATION	SIZE
U	2"x4"
V	2"x6"
W	2"x8"

**PARTITION TYPE TAG (REFER TO FLOOR PLANS)**

PARTITION TYPE NUMBER      STUD SIZE DESIGNATION

FIRE RATING, IF REQUIRED

**LIST OF ABBREVIATIONS**

ACP	ACOUSTICAL PANEL CEILING
AFF	ABOVE FINISH FLOOR
ALUM	ALUMINUM
ANOD	ANODIZED
CMF	COLD FORMED METAL FRAMING
CMU	CONCRETE MASONRY UNIT
CONC	CONCRETE
DCMU	DECORATIVE CONCRETE MASONRY UNIT
EIPS	EXTERIOR INSULATION AND FINISH SYSTEM
FE	FIRE EXTINGUISHER
FEC	FIRE EXTINGUISHER CABINET
FRT	FIRE RESISTANT TREATED
FV	FIELD VERIFY
GYP BD	GYPSUM BOARD
HM	HOLLOW METAL
LVL	LAMINATED VENEER LUMBER
MCM	METAL COMPOSITE MATERIAL WALL PANEL
OC	ON CENTER
PT	PRESERVATIVE TREATED
PNT	PAINT
SS	STAINLESS STEEL
SSM	SOLID SURFACE MATERIAL
TYF	TYPICAL
VIF	VERIFY IN FIELD
WD	WOOD

ISSUED FOR      DATE

PROJECT TITLE  
NORTHERN HIGH SCHOOL - BID PACKAGE  
2: DISTRICT WIDE ACCESS CONTROL

OWNER  
PORTAGE PUBLIC SCHOOLS

Portage, Michigan

SHEET TITLE  
GENERAL ARCHITECTURAL NOTES,  
INTERIOR PARTITION TYPES, DEVICE  
ALIGNMENT GUIDELINES, &  
ABBREVIATIONS

SHEET NUMBER  
AG 001

DATE  
FEBRUARY 16, 2024

23-214-50



KEYED NOTES - ARCHITECTURAL - DEMOLITION	
1	REMOVE AND DISCARD ALUMINUM ENTRANCE SYSTEM AND HARDWARE, PATCH WALL AS REQUIRED.
2	REMOVE AND DISCARD FLOOR TILE, BASE AND ADHESIVE, PREPARE FLOOR FOR NEW FINISH, COORDINATE WITH NEW CONSTRUCTION AND PROTECT EXISTING TO REMAIN.
3	REMOVE AND DISCARD GYPSUM BOARD CEILING.

ISSUED FOR \_\_\_\_\_ DATE \_\_\_\_\_

PROJECT TITLE  
NORTHERN HIGH SCHOOL - BID PACKAGE  
2: DISTRICT WIDE ACCESS CONTROL

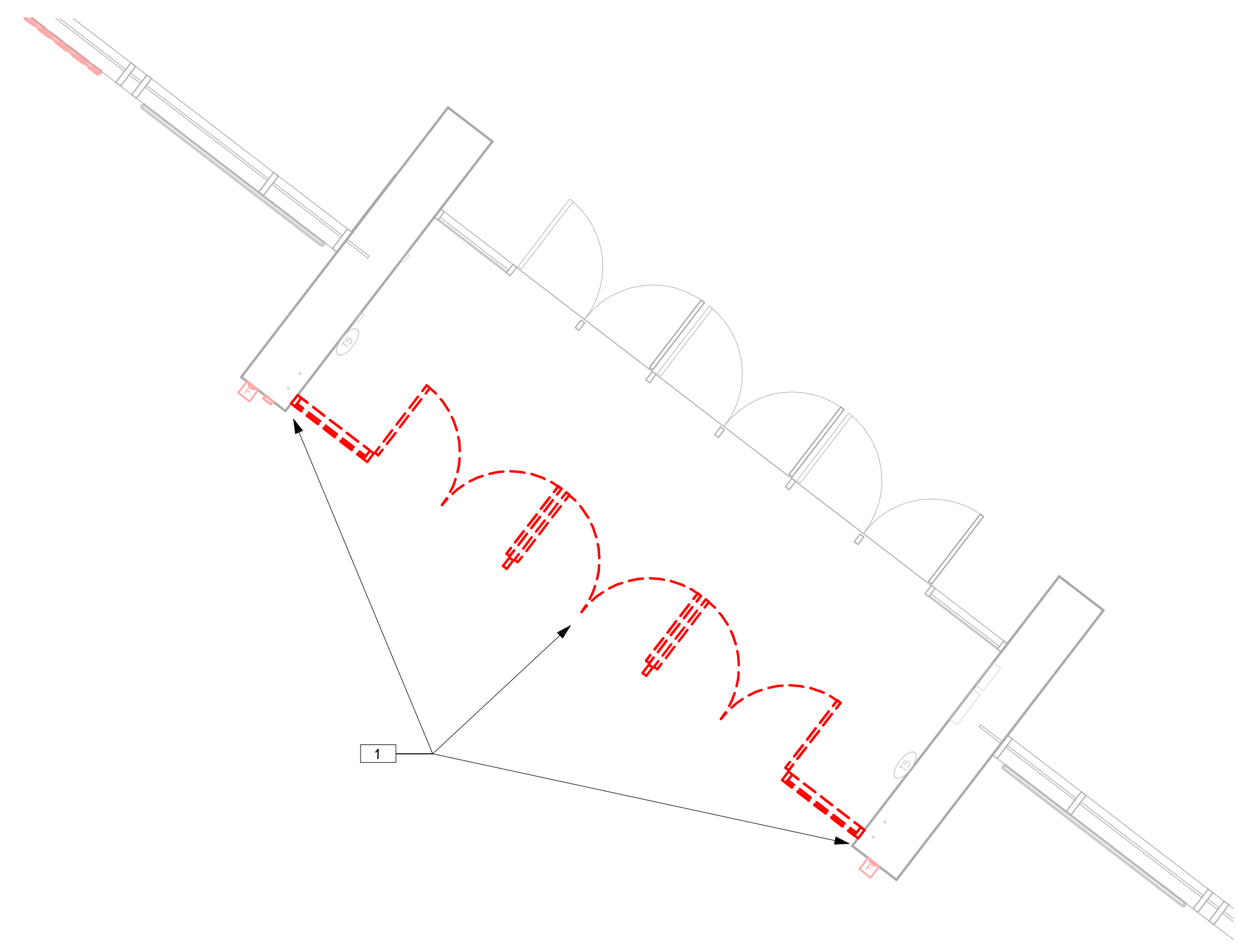
OWNER  
PORTAGE PUBLIC SCHOOLS

Portage, Michigan

SHEET TITLE  
LOWER LEVEL DEMOLITION PLAN &  
REFLECTED CEILING DEMOLITION PLAN

DATE  
FEBRUARY 16, 2024

SHEET NUMBER  
AD 101  
23-214.50



**LOWER LEVEL DEMOLITION PLAN - PARTIAL UNIT B**  
1/4" = 1'-0"



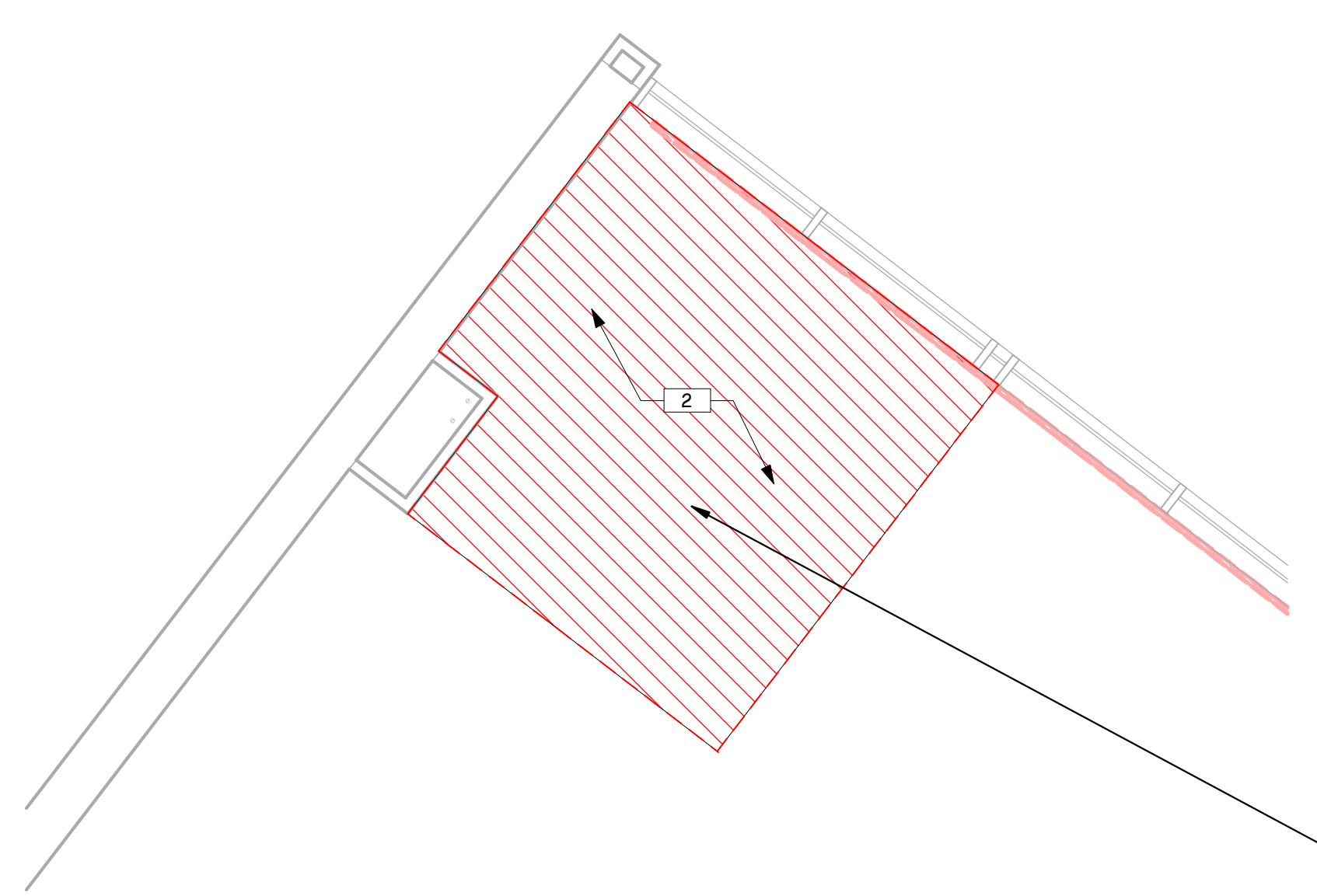
**LOWER LEVEL REFLECTED CEILING DEMOLITION PLAN - PARTIAL UNIT B**  
1/4" = 1'-0"



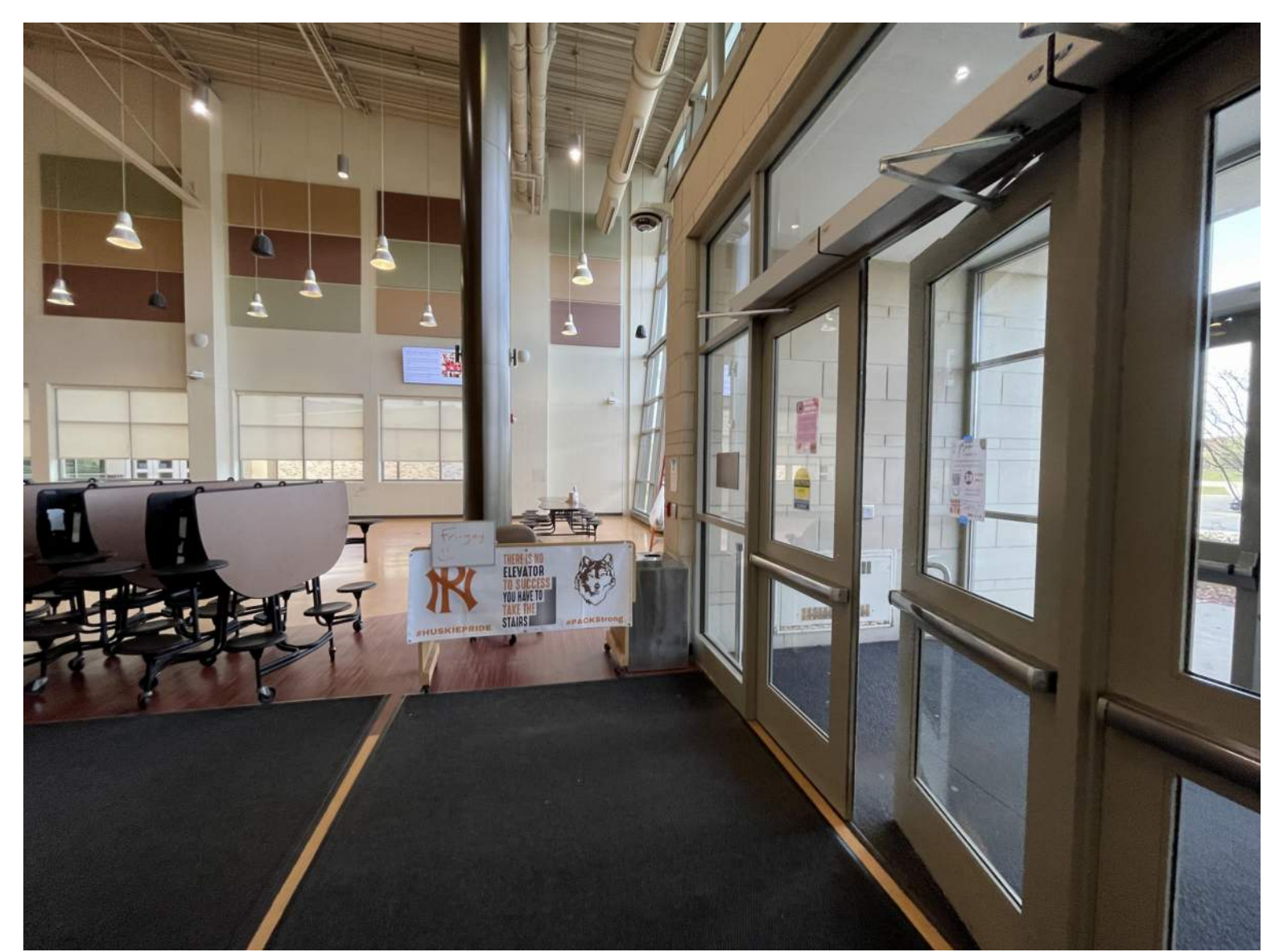
CAFETERIA - NORTH ENTRANCE



INTERIOR VESTIBULE - NORTH ENTRANCE



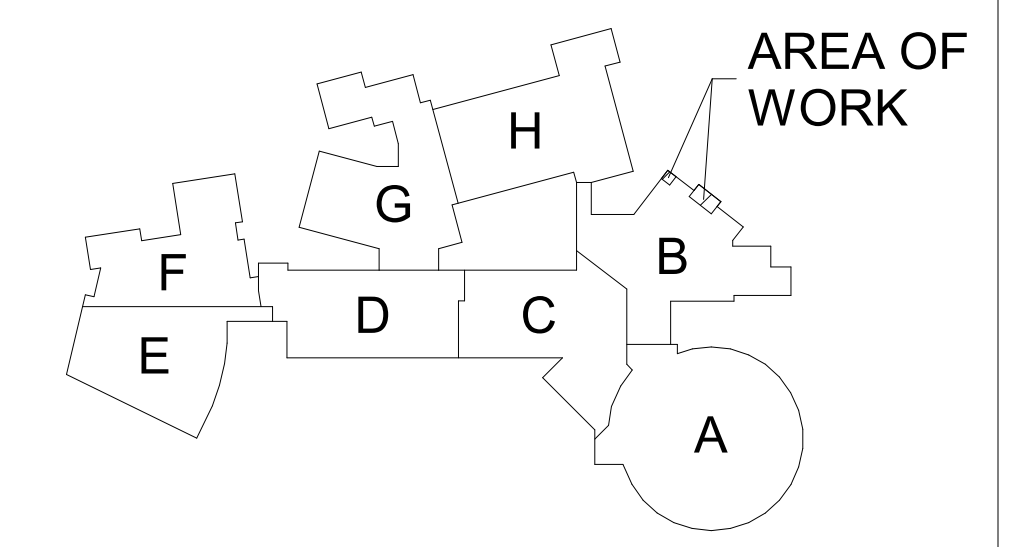
**LOWER LEVEL DEMOLITION PLAN - ALTERNATE 1 - PARTIAL UNIT B**  
1/4" = 1'-0"



CAFETERIA - NORTH ENTRANCE  
VIEW TOWARDS NORTHWEST CORNER - ALTERNATE 1

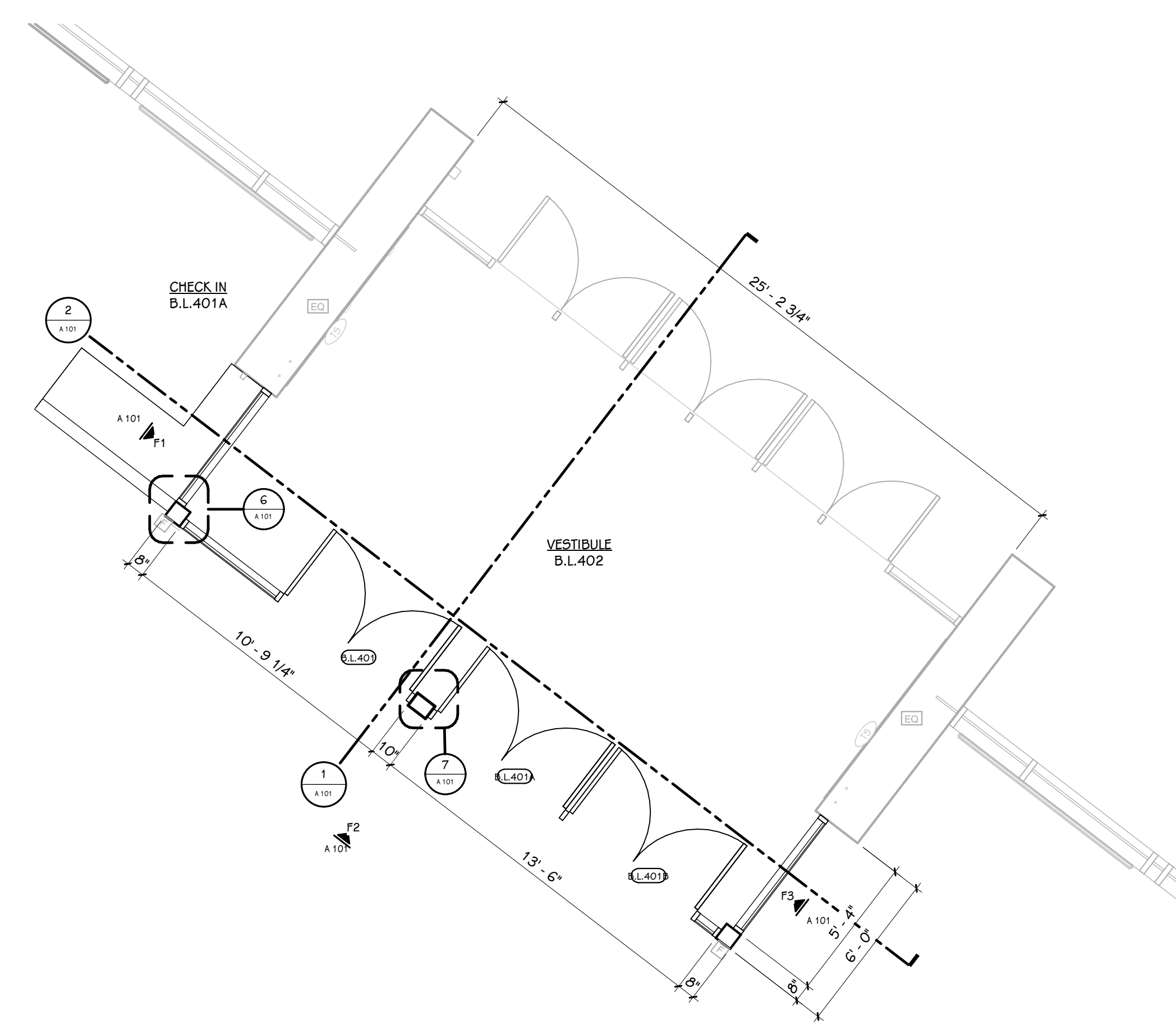
**THIS DRAWING SHEET IS INTENDED TO BE PLOTTED IN COLOR. IF THIS TEXT APPEARS IN BLACK AND WHITE, IT IS PLOTTED INCORRECTLY. DISCARD AND OBTAIN AN ACCURATE DRAWING**

PORTAGE NORTHERN HIGH SCHOOL

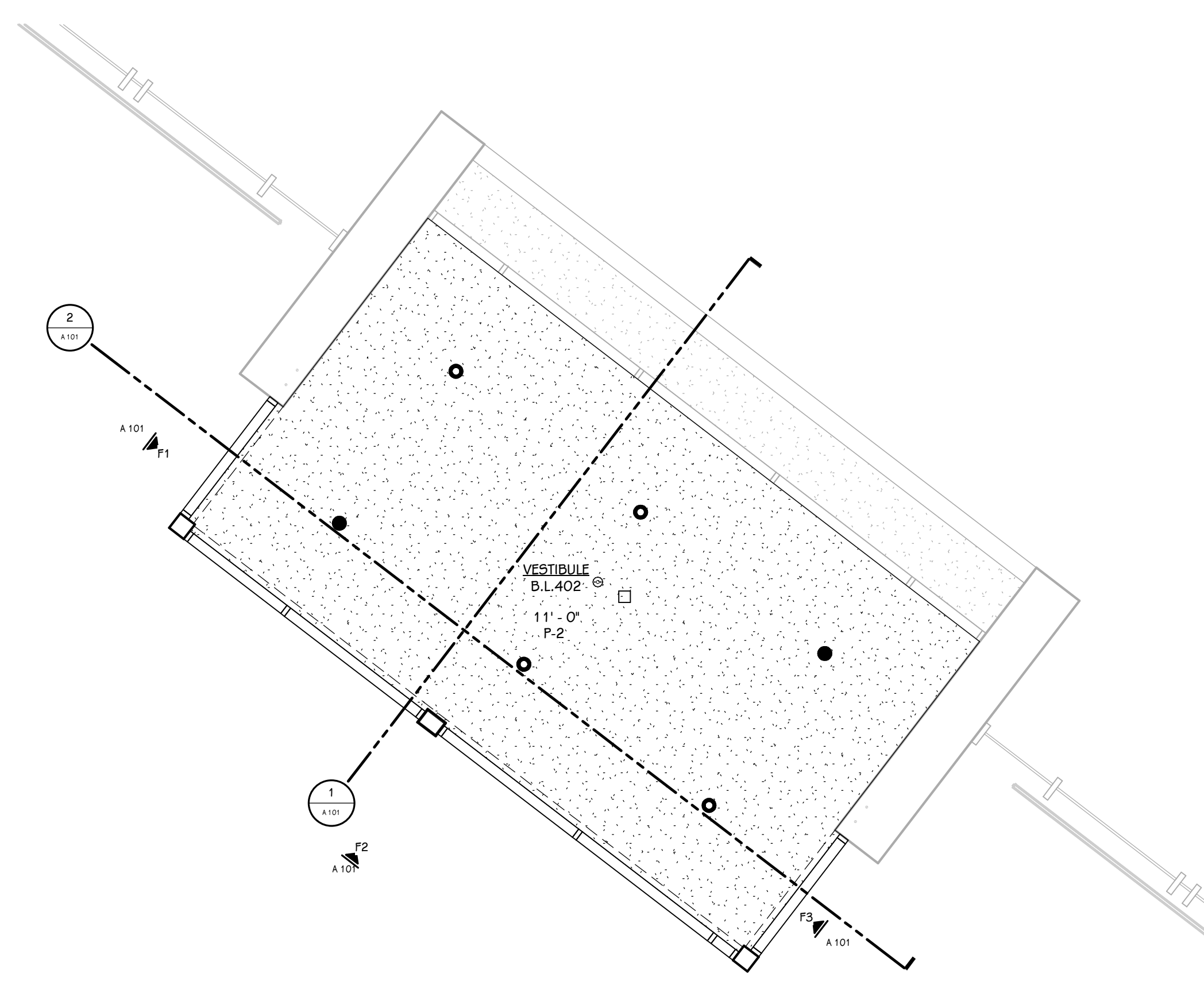


**KEY PLAN**  
SCALE: NO SCALE

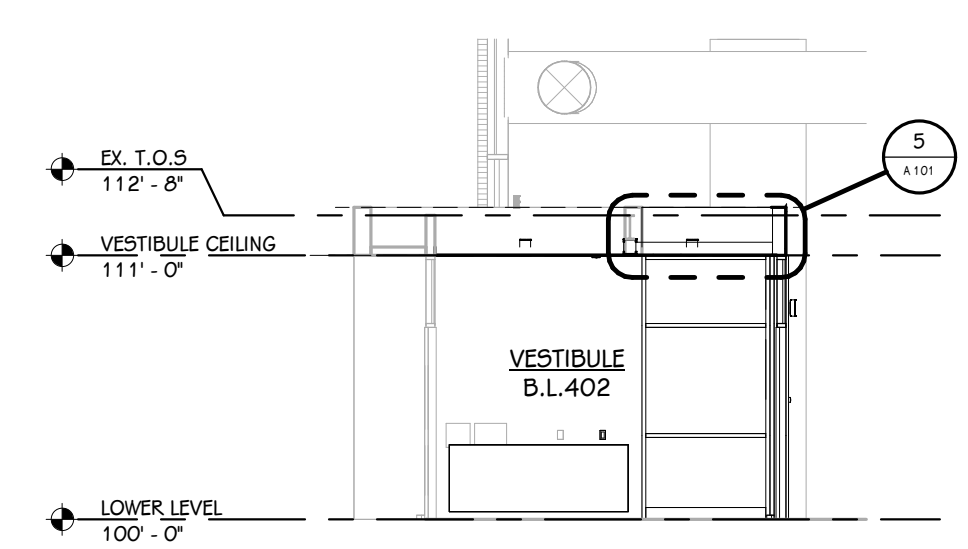




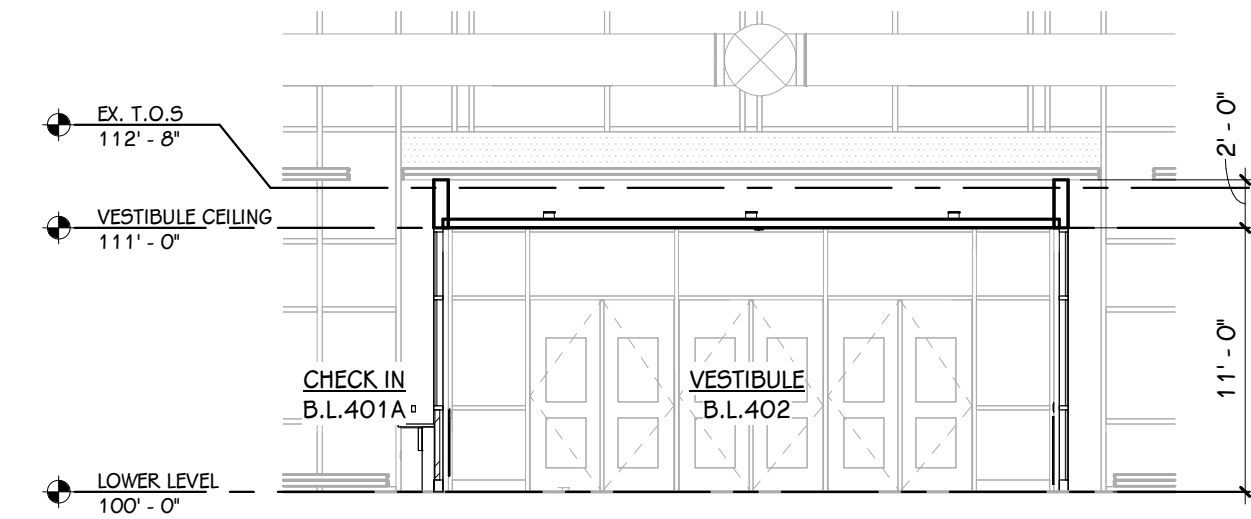
**LOWER LEVEL FLOOR PLAN - PARTIAL UNIT B**  
1/4" = 1'-0"



**LOWER LEVEL REFLECTED CEILING PLAN - PARTIAL UNIT B**  
1/4" = 1'-0"



**BUILDING SECTION 1**  
1/8" = 1'-0"



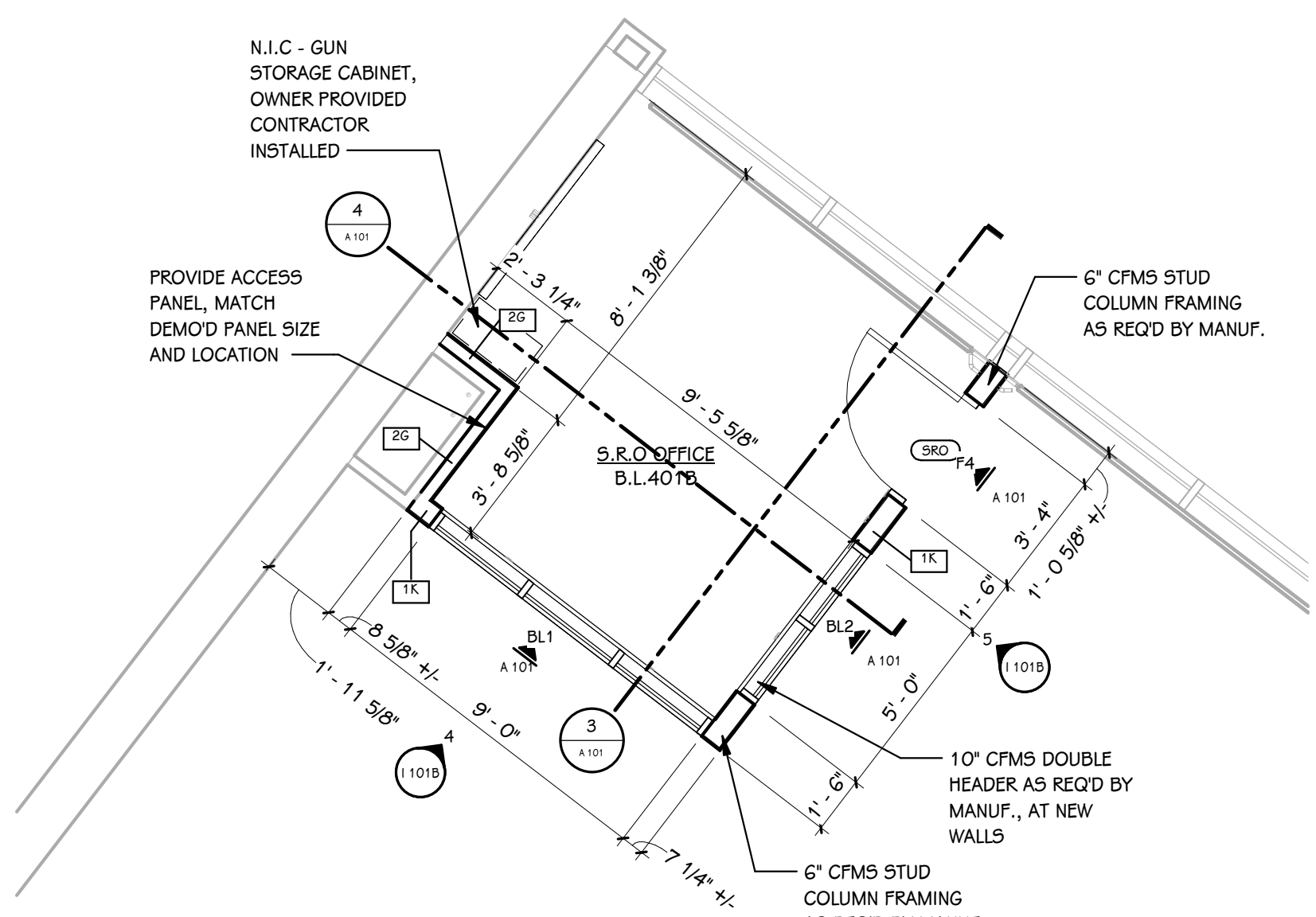
**BUILDING SECTION 2**  
1/8" = 1'-0"

**KEY - REFLECTED CEILING**

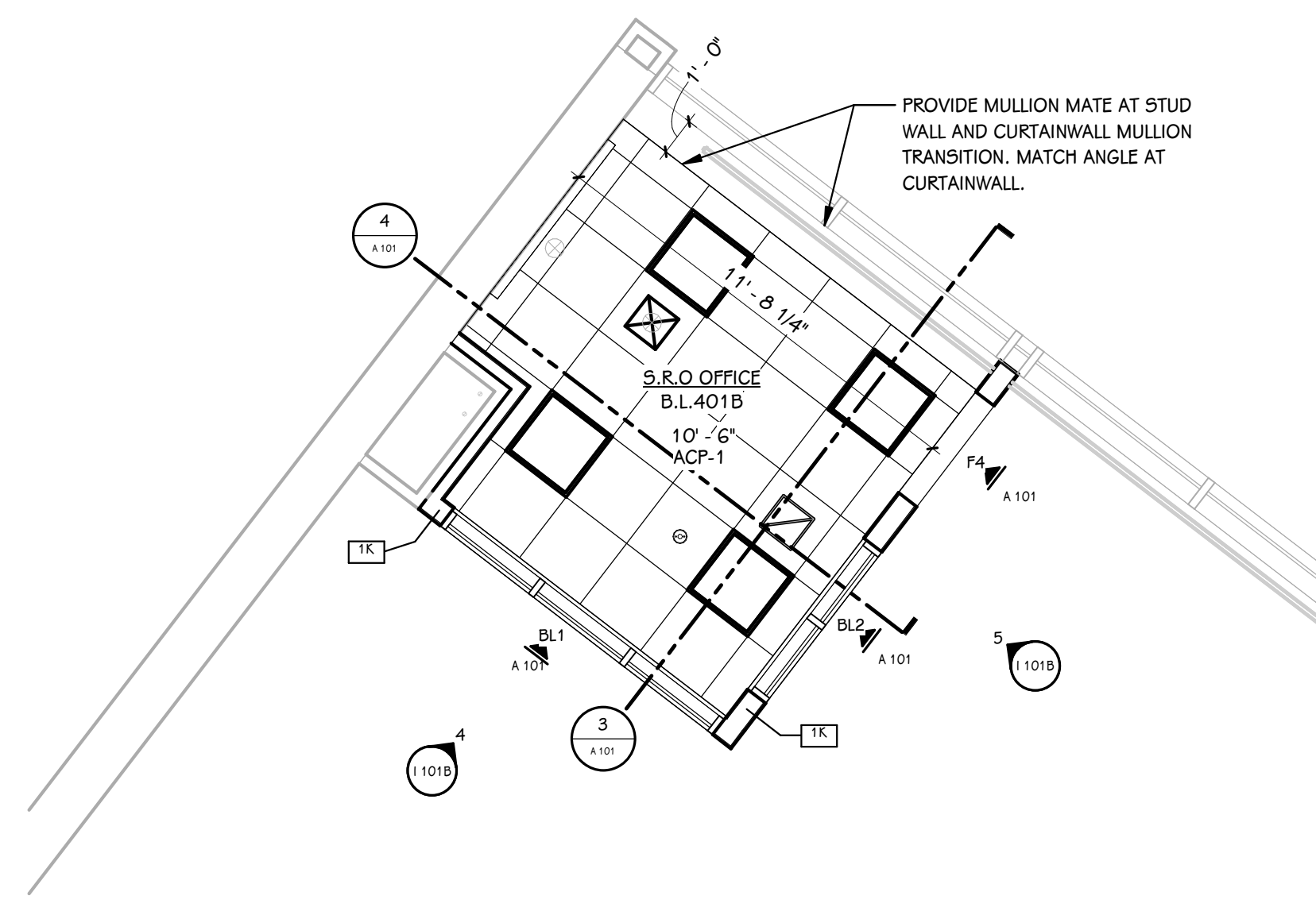
- Gypsum Board
- Lay-in Acoustical Tile Grid
- OR LIGHTING - REFER TO ELECTRICAL LIGHTING PLAN
- MECHANICAL - REFER TO MECHANICAL SHEET METAL PLAN

**GENERAL NOTES - REFLECTED CEILING**

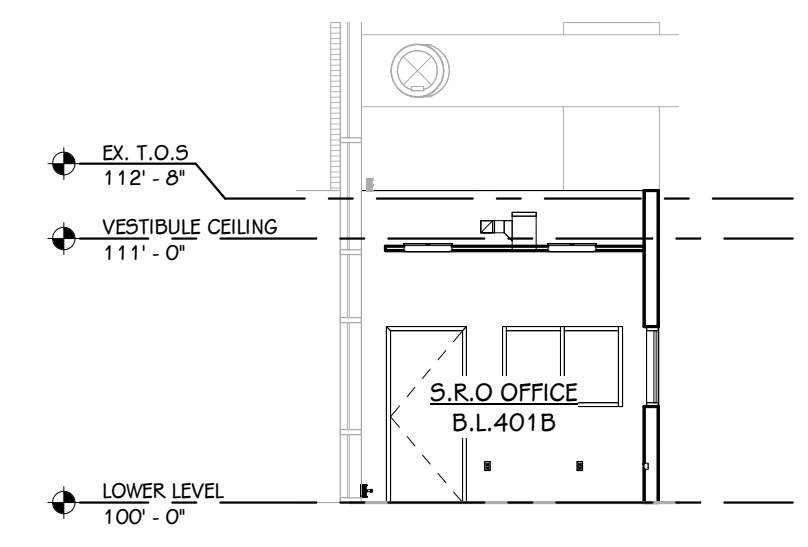
- WHERE CEILING TILE IS LESS THAN 3" AT PERIMETER OF ROOM PROVIDE A CUT 2x4 TILE IN LIEU OF FULL 2x2 TILE AND SMALL PIECE OF TILE OR DOUBLE GRID - MATCH 2x2 FOR STYLE AND COLOR.
- AT AREAS OF EXPOSED CEILING PAINT ALL STRUCTURE, DUCTWORK, PIPING, CONDUIT, RANGERS ETC., COORDINATE WITH MECHANICAL, ELECTRICAL AND PLUMBING SPECIFICATIONS. REFER TO THE REFLECTED CEILING PLANS FOR PAINT COLORS.



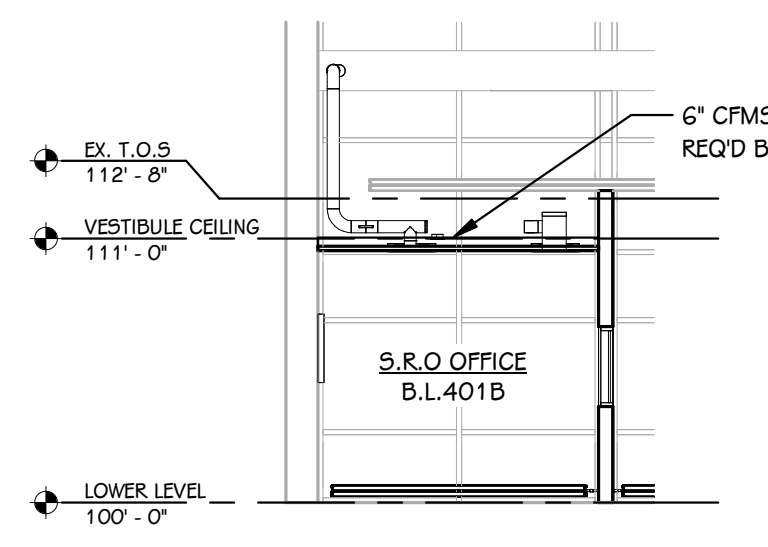
**LOWER LEVEL FLOOR PLAN - PARTIAL UNIT B - ALTERNATE 1**  
1/4" = 1'-0"



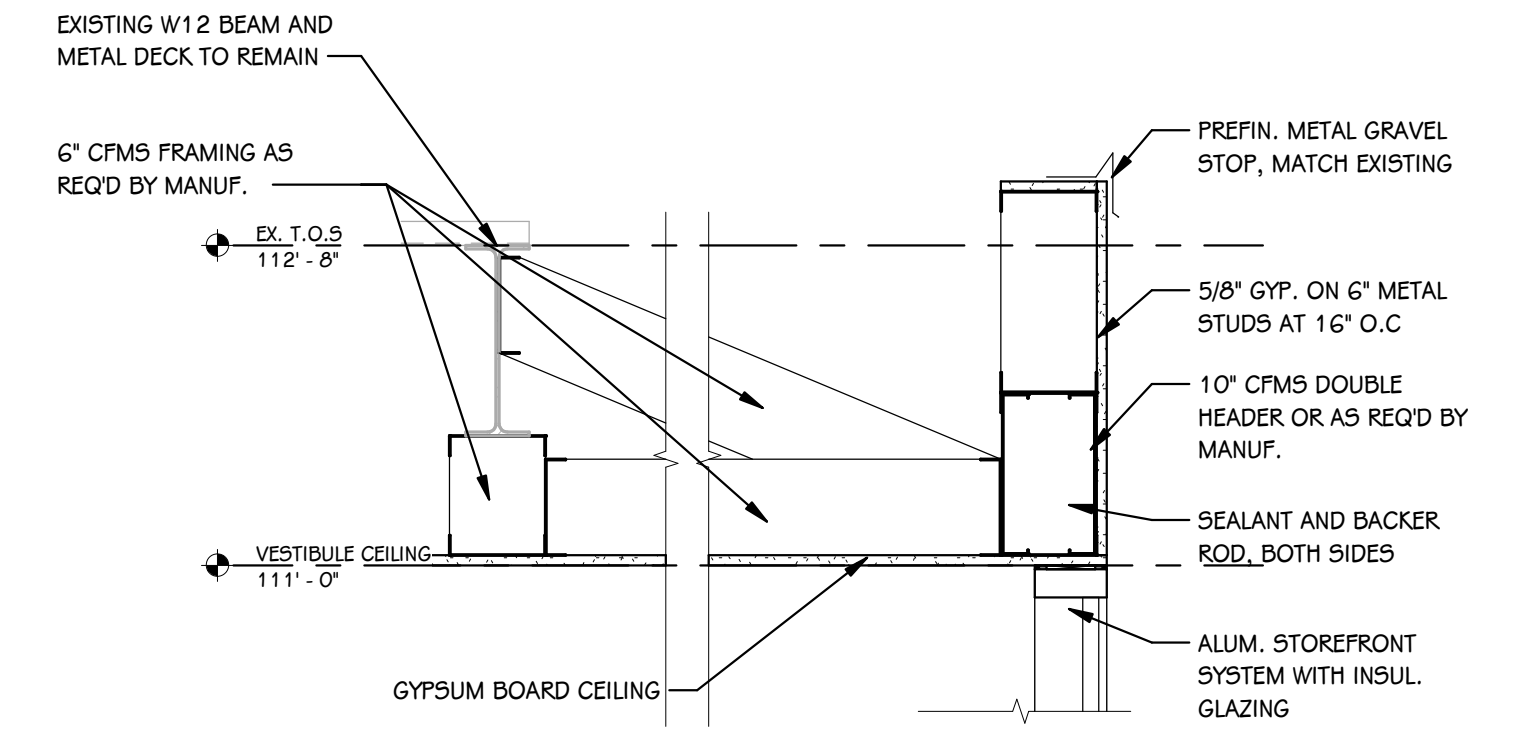
**LOWER LEVEL REFLECTED CEILING PLAN - PARTIAL UNIT B - ALTERNATE 1**  
1/4" = 1'-0"



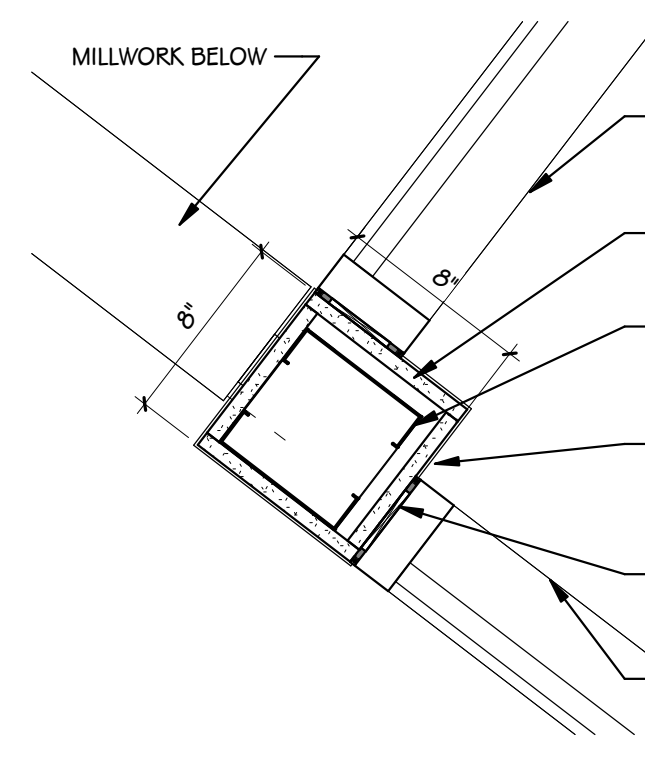
**BUILDING SECTION 3**  
1/8" = 1'-0"



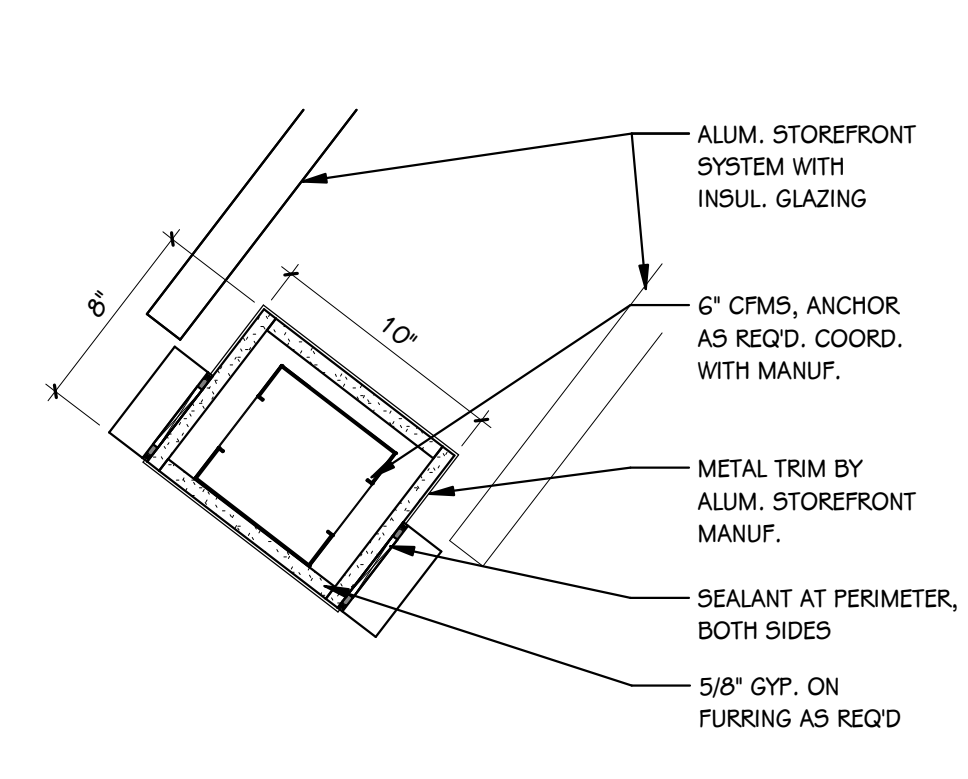
**BUILDING SECTION 4**  
1/8" = 1'-0"



**HEADER - DETAIL 5**  
1" = 1'-0"



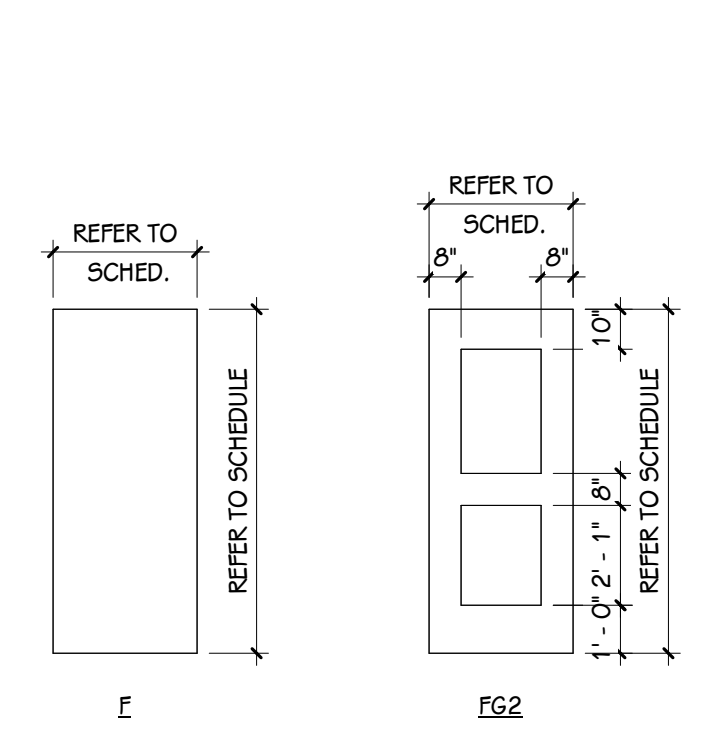
**FLOOR PLAN - DETAIL 6**  
1 1/2" = 1'-0"



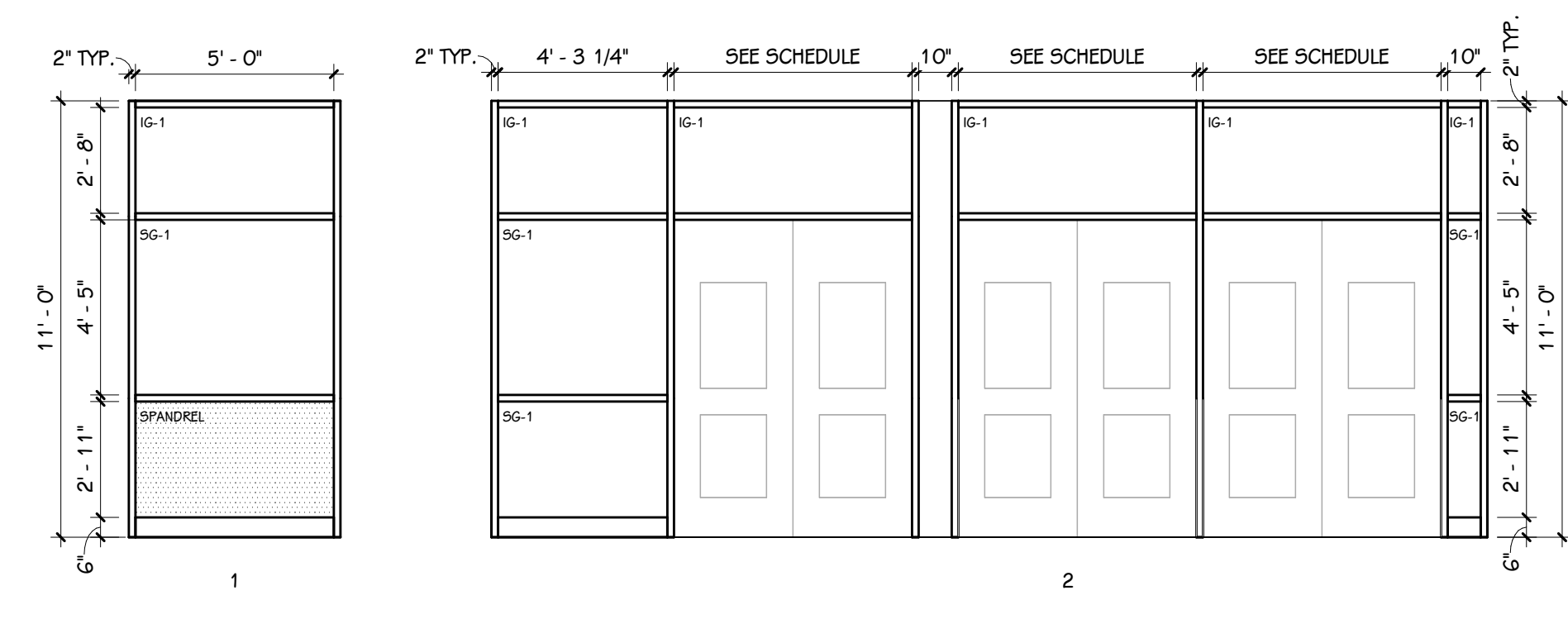
**FLOOR PLAN - DETAIL 7**  
1 1/2" = 1'-0"

**FIRST FLOOR DOOR SCHEDULE**

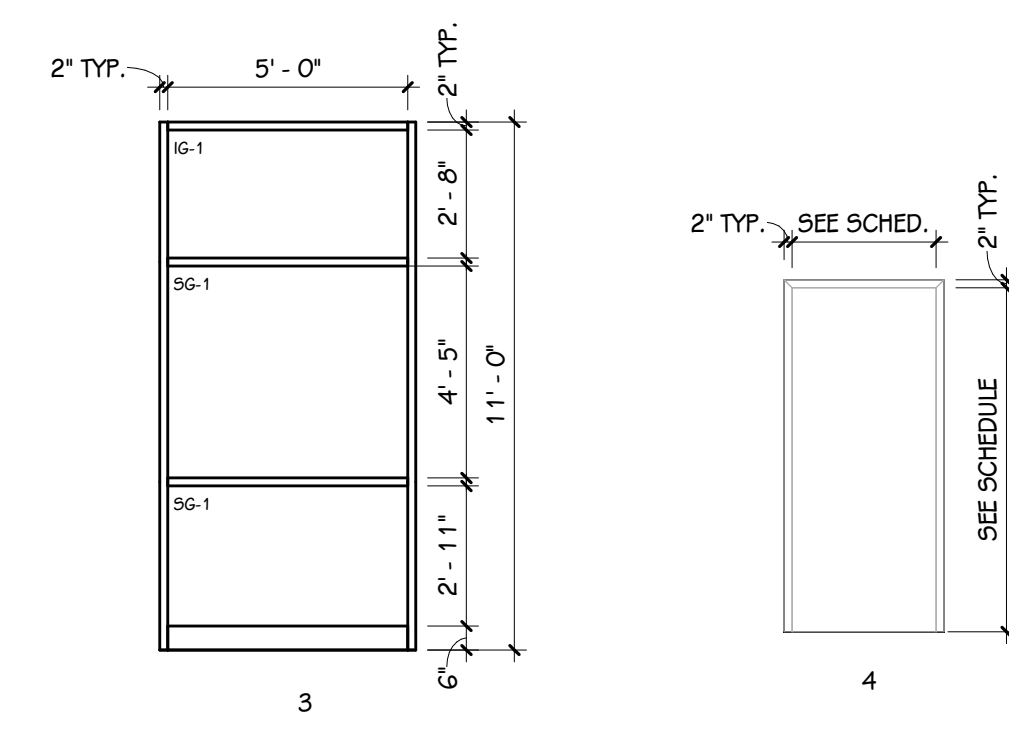
NUMBER	ROOM NAME	FIRE RATING	DOOR			SIZE			FRAME			DETAILS			GLASS	ACCESS CONTROLS					REMARKS	
			DOOR	FRAME	TYPE	MAT	FIN	WIDTH	HEIGHT	ELEV	MAT	FIN	HEAD	JAMB		SILL	A-PHONE	BARRIER-FREE	CARD READER	ELEC. LOCK HDWR.		MAG HOLD
S.R.O.	B.L.401B				P	WD	PREFIN	3'-0"	7'-2"	4	HM	P-3				No	No	No	No	No		ALTERNATE 1
B.L.401	B.L.402	VESTIBULE			FG2	AL	ANOD	6'-0"	8'-0"	2	AL	ANOD				No	Yes	No	Yes	No		
B.L.401A	B.L.402	VESTIBULE			FG2	AL	ANOD	6'-0"	8'-0"	2	AL	ANOD				No	No	No	Yes	No		
B.L.401B	B.L.402	VESTIBULE			FG2	AL	ANOD	6'-0"	8'-0"	2	AL	ANOD				No	No	No	Yes	No		



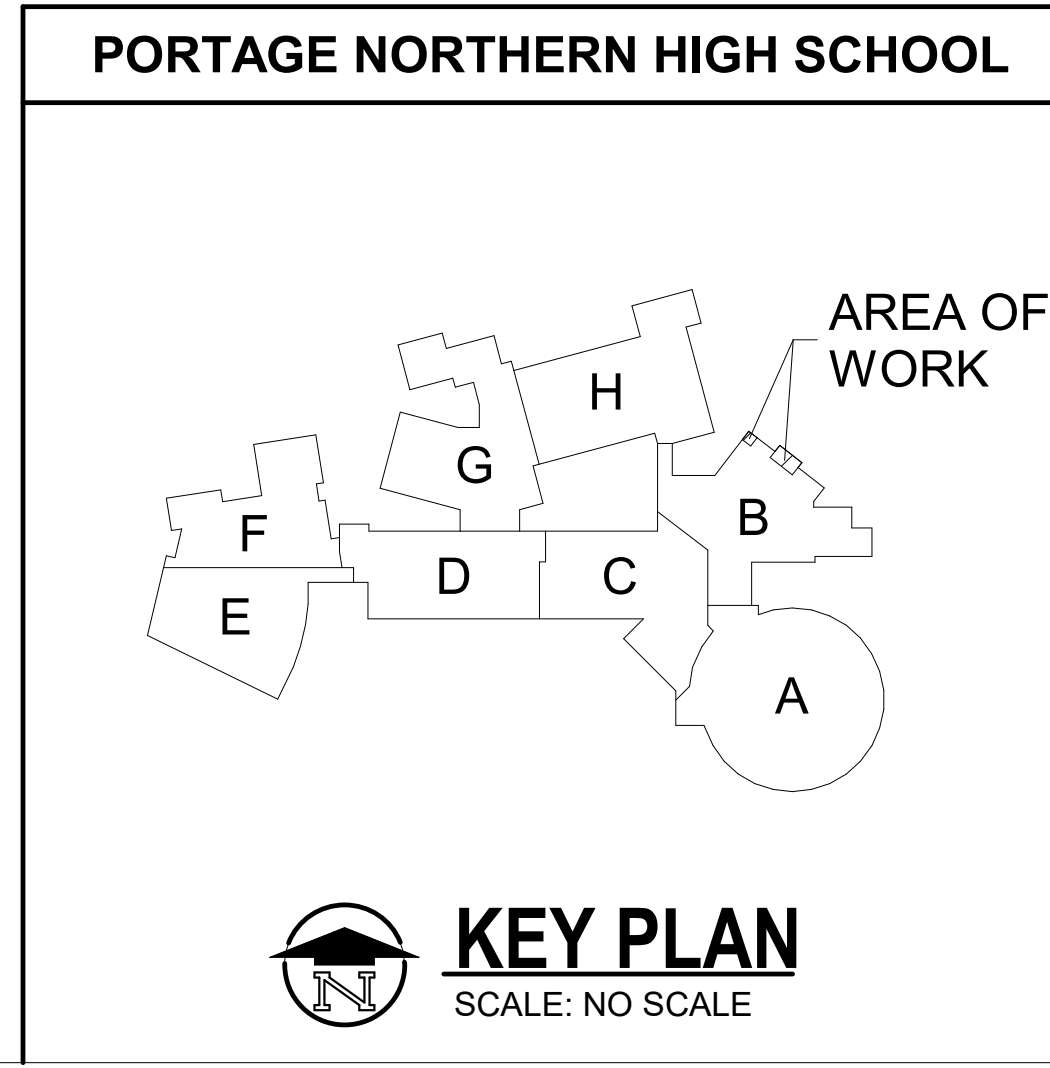
**DOOR PANEL ELEVATION**  
1/4" = 1'-0"



**FRAME ELEVATIONS**  
1/4" = 1'-0"



**BORROWED LITE ELEVATIONS - ALTERNATE 1**  
1/4" = 1'-0"



**KEY PLAN**  
SCALE: NO SCALE

ISSUED FOR DATE

PROJECT TITLE  
NORTHERN HIGH SCHOOL - BID PACKAGE  
2: DISTRICT WIDE ACCESS CONTROL

OWNER  
PORTAGE PUBLIC SCHOOLS

Portage, Michigan

SHEET TITLE  
LOWER LEVEL FLOOR PLAN &  
REFLECTED CEILING PLAN

DATE  
FEBRUARY 16, 2024

SHEET NUMBER  
A 101  
23-214-50

**INTERIOR - TYPICAL SYMBOLS AND REFERENCES**

	INDICATES MATERIAL TYPE
	INDICATES CORRESPONDING SELECTION IN MATERIAL SELECTION SCHEDULE
	INDICATES WALL FINISH
	INDICATES BASE FINISH
	INDICATES FLOOR FINISH
	INDICATES UPPER WALL FINISH
	INDICATES LOWER WALL FINISH
	INDICATES BASE FINISH
	INDICATES FLOOR FINISH
	INDICATES COUNTERTOP FINISH
	INDICATES CABINET FINISH (BASE AND UPPER)
	INDICATES EXTENT OF ATYPICAL FINISH (WALL, BASE, OR FLOOR)
	INDICATES DISSIMILAR FLOOR MATERIAL FINISHES, REFER TO TYPICAL FLOOR TRANSITION DETAILS
	INDICATES MULTIPLE MATERIALS, REFER TO ENLARGED PLANS OR ELEVATIONS
	INDICATES PATTERNED INSTALLATION OF A SINGLE MATERIAL TYPE, REFER TO DETAIL OR ELEVATION
	INDICATES PATTERN INTENT, REFER TO DETAIL OR ELEVATION
	INDICATES VISUAL DISPLAY BOARD, REFER TO VISUAL DISPLAY BOARD SCHEDULES
	INDICATES CORNER GUARD, REFER TO MATERIAL SELECTION SCHEDULE
	INDICATES WINDOW TREATMENT, REFER TO WINDOW TREATMENT SCHEDULE
	INDICATES INSTALLATION OF GRAIN

- NOTES - INTERIORS**
- REFER TO MATERIAL SELECTION SCHEDULE FOR FINISH INFORMATION.
  - REFER TO ARCHITECTURAL FLOOR PLANS AND SPECIFICATION FOR ADDITIONAL INFORMATION ON CONSTRUCTION MATERIALS.
  - REFER TO ARCHITECTURAL ENLARGED STAIR PLANS FOR RAILINGS, GUARD RAILS, FINISH COLORS OF ANY PAINTED METALS. COORDINATE STAIR DETAILS WITH FLOORING TYPES INDICATED ON FINISH PLANS.
  - REFER TO ARCHITECTURAL FLOOR PLANS FOR LOCKER LOCATIONS AND QUANTITIES.
  - REFER TO ARCHITECTURAL GENERAL SHEETS FOR BARRIER-FREE MOUNTING HEIGHT REQUIREMENTS AND CODE-REQUIRED SIGNAGE.
  - REFER TO ARCHITECTURAL ENLARGED TOILET ROOM PLANS FOR TOILET ACCESSORIES, PARTITIONS, ETC.
  - REFER TO REFLECTED CEILING PLANS FOR CEILING FINISH AND HEIGHTS.
  - WALL MOUNTED DIFFUSERS, GRILLES, ACCESS PANELS, ELECTRICAL PANELS, ETC. ARE TO BE PAINTED WITH AN OIL-BASED PAINT TO MATCH THE ADJACENT WALL FINISH.
  - AT AREAS OF EXPOSED CEILING WHERE DUCTWORK AND DIFFUSERS ARE TO BE PAINTED, COORDINATE WITH MECHANICAL SPECIFICATIONS AND REFER TO THE REFLECTED CEILING PLANS FOR PAINT COLORS.
  - CEILING ACCESS PANELS ARE TO BE PAINTED TO MATCH ADJACENT CEILING FINISH.
  - REFER TO DOOR SCHEDULE FOR FINISH ON DOORS AND FRAMES.
  - REFER TO FINISH PLANS FOR VISUAL DISPLAY BOARD LOCATIONS.
  - REFER TO INTERIOR ELEVATION SHEETS FOR REQUIREMENTS, GENERAL NOTES, ABBREVIATIONS, AND HARDWARE/ACCESSORY SELECTIONS FOR CASEWORK.
  - REFER TO INTERIORS TYPICAL DETAIL SHEETS FOR TILE TRIM DETAILS, FLOORING TRANSITIONS, WAINSCOT DETAILS, AND TYPICAL TILE PATTERN REQUIREMENTS.
  - ALL FLOOR SUPPORTED STORAGE RACKS, CABINETS, BOOKCASES, ETC. WHEN ADJACENT TO THE WALL SHALL BE FASTENED TO BOTH THE FLOOR AND WALL.
  - PROVIDE BLOCKING AS REQUIRED FOR ATTACHMENT OF CASEWORK, MILLWORK, SHELVING, EQUIPMENT, SPECIALTY FINISHES, ETC.
  - DETAILS SHOWN ILLUSTRATE DESIGN INTENT, NOT ALL POSSIBLE CONDITIONS. FOR CONDITIONS NOT SHOWN USE DETAILS CLOSEST TO CONDITION IN QUESTION.

**DEFINITIONS/ABBREVIATIONS - INTERIORS**

A.F.F.	ABOVE FINISHED FLOOR
BF	BARRIER FREE
CL	CENTER LINE
EX.	EXISTING
HOLD	HOLD DIMENSION
MIN.	MINIMUM CODE ALLOWABLE DIMENSION
OC	ON CENTER
OPP.	OPPOSITE
SIM	SIMILAR
TYP.	TYPICAL
V.I.F.	VERIFY IN FIELD

**THIS DRAWING SHEET IS INTENDED TO BE PLOTTED IN COLOR. IF THIS TEXT APPEARS IN BLACK AND WHITE, IT IS PLOTTED INCORRECTLY. DISCARD AND OBTAIN AN ACCURATE DRAWING**

ISSUED FOR DATE

PROJECT TITLE  
NORTHERN HIGH SCHOOL - BID PACKAGE  
2: DISTRICT WIDE ACCESS CONTROL

OWNER  
PORTAGE PUBLIC SCHOOLS

Portage, Michigan

SHEET TITLE  
TYPICAL SYMBOLS & GENERAL NOTES

DATE  
FEBRUARY 16, 2024

SHEET NUMBER  
IG 001  
23-214-50



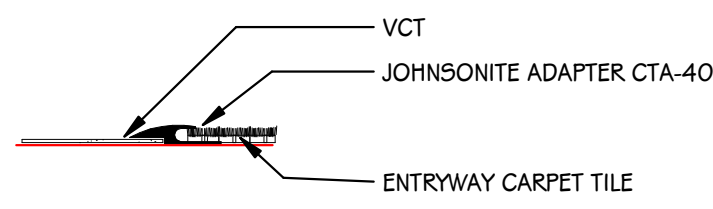
**MATERIAL SELECTION SCHEDULE**

ABBREV	ITEM	MANUFACTURER	PATTERN	COLOR	PRODUCT NO.	SIZE	SINGLE SOURCE	BASIS OF DESIGN	ADDITIONAL MANUFACTURERS	REMARKS
ACF-1	ACOUSTIC CEILING PANEL	USG	MARS	WHITE	86785	24" X 24"		X	ARMSTRONG CEILINGS	.70 NRC 35 CAC
ECPTL-1	ENTRYWAY CARPET TILE	MILLIKEN	ORSEK CUTWGRAIN	GREY	GR2335-27	25CM X 1M	X			ASHLAR INSTALLATION
IRWP-1	IMPACT RESISTANT WALL PROTECTION	INPRO	FALLADIUM RIGID SHEET	MONTEREY	O110	4' X 8' X .040 THICKNESS	X			MANUFACTURERS STANDARD TOP AND END CAPS TO MATCH WALL PROTECTION
IRWP-2	IMPACT RESISTANT WALL PROTECTION	INPRO	FALLADIUM RIGID SHEET	ANTIQUE WHITE	O104	4' X 8' X .040 THICKNESS				MANUFACTURERS STANDARD TOP AND END CAPS TO MATCH WALL PROTECTION
P-1	PAINT	SHERWIN WILLIAMS	--	WOOL SKEIN	5W6148	--	X			
P-2	PAINT	SHERWIN WILLIAMS	--	DOVER WHITE	5W6385	--	X			
P-3	PAINT	SHERWIN WILLIAMS	--	MATCH EXISTING DOOR FRAMES	--	--	X			DOOR FRAME COLOR FOR S.R.O OFFICE
PL-1	PLASTIC LAMINATE	WILSONART	--	CLASSIC LINEN	4943-38	--	X			
PL-2	PLASTIC LAMINATE	WILSONART	--	MONTECELLO MAPLE	7925-38	--	X			
RB-1	RUBBER BASE	JOHNSONITETARKETT	TRADITIONAL DURACOVE - WITH TOE	BROWN	47	4" HIGH BASE		X	ROPPEE, FLEXCO, MANNINGTON	
TCF-1	TEXTILE COMPOSITE FLOORING	J & J FLOORING	DOWNTOWN	BOURBON	1850-3156	24" X 24"	X			ASHLAR INSTALLATION

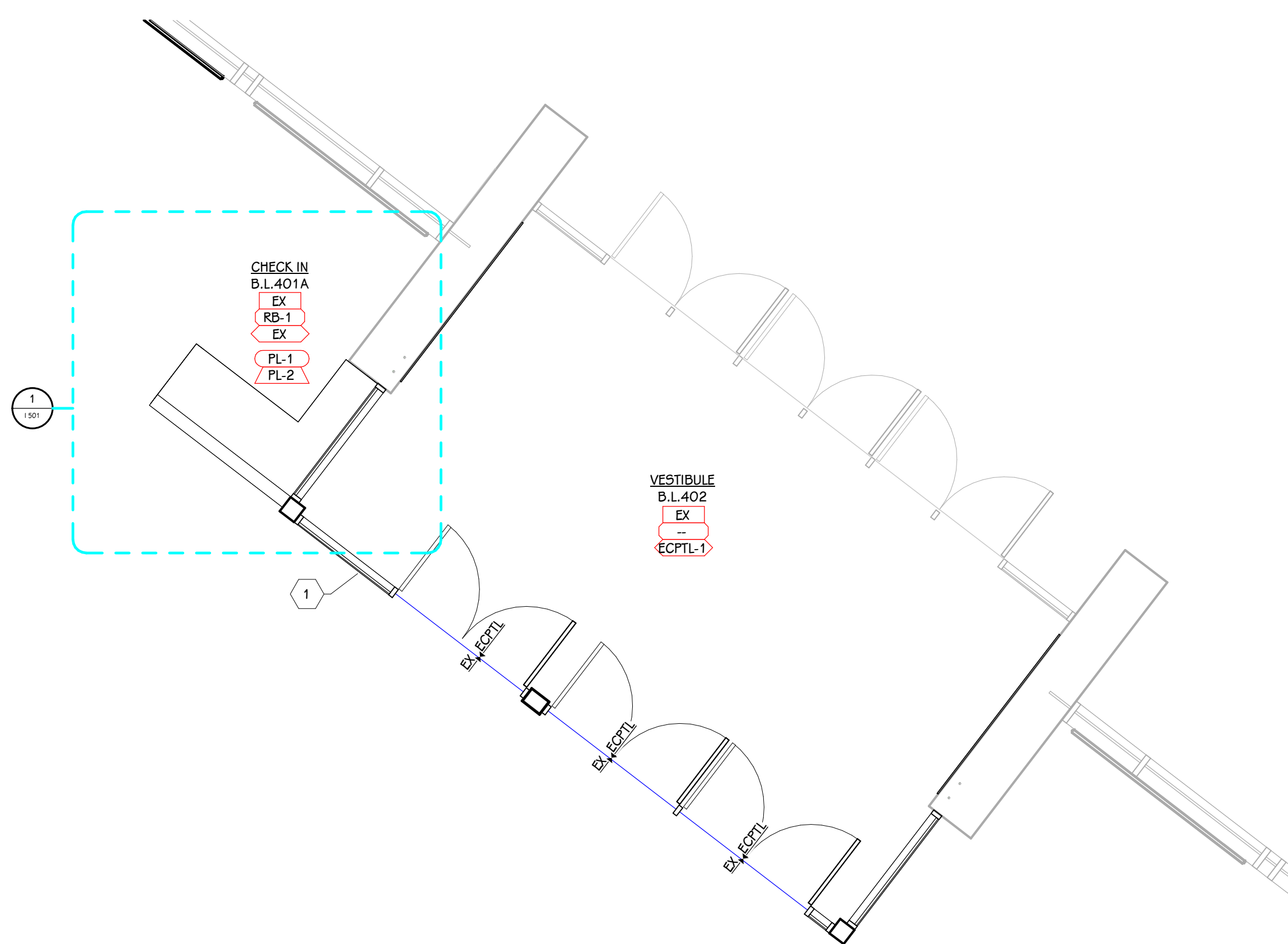
**GENERAL NOTES - MATERIAL SELECTION SCHEDULE**

- NO COMPARABLE PRODUCTS OR PRODUCT SUBSTITUTIONS WILL BE REVIEWED FOR PRODUCTS DESIGNATED AS SINGLE SOURCE.
- COMPARABLE PRODUCTS WILL BE REVIEWED FOR ITEMS LISTED AS BASIS OF DESIGN. COMPARABLE PRODUCTS ARE REQUIRED TO MEET ANY MINIMUM PERFORMANCE REQUIREMENTS LISTED IN REMARKS AND APPEARANCE OF SPECIFIED PRODUCT.
- REFER TO TYPICAL DETAILS AND PRODUCT SPECIFICATION FOR TRIMS AND ACCESSORIES ASSOCIATED WITH SPECIFIED PRODUCTS ABOVE.

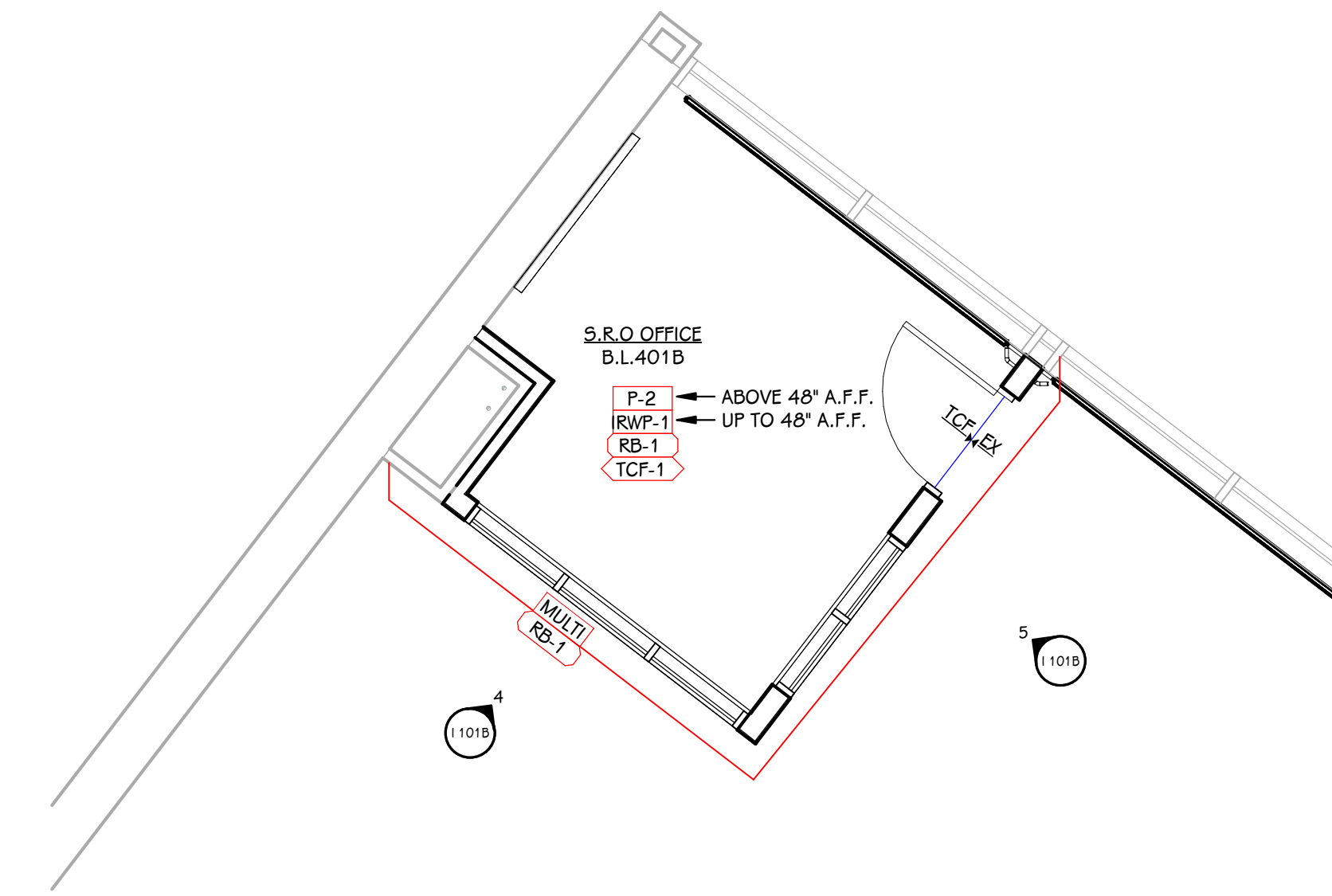
VCT TO CARPET TILE OR TEXTILE COMPOSITE FLOORING



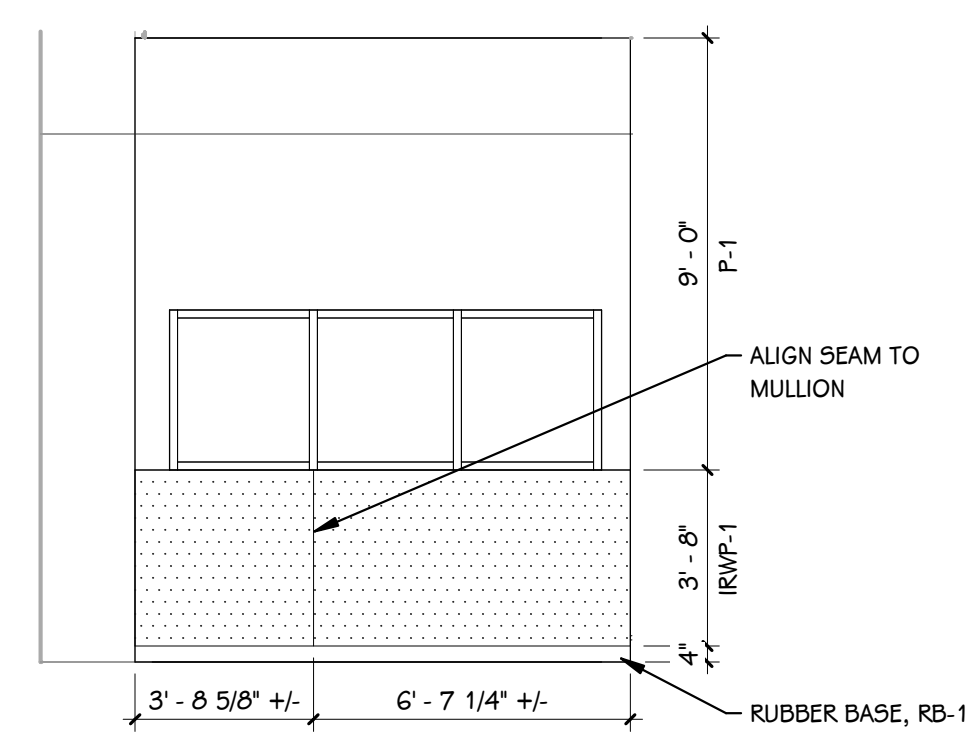
1 11018 3" = 1'-0"



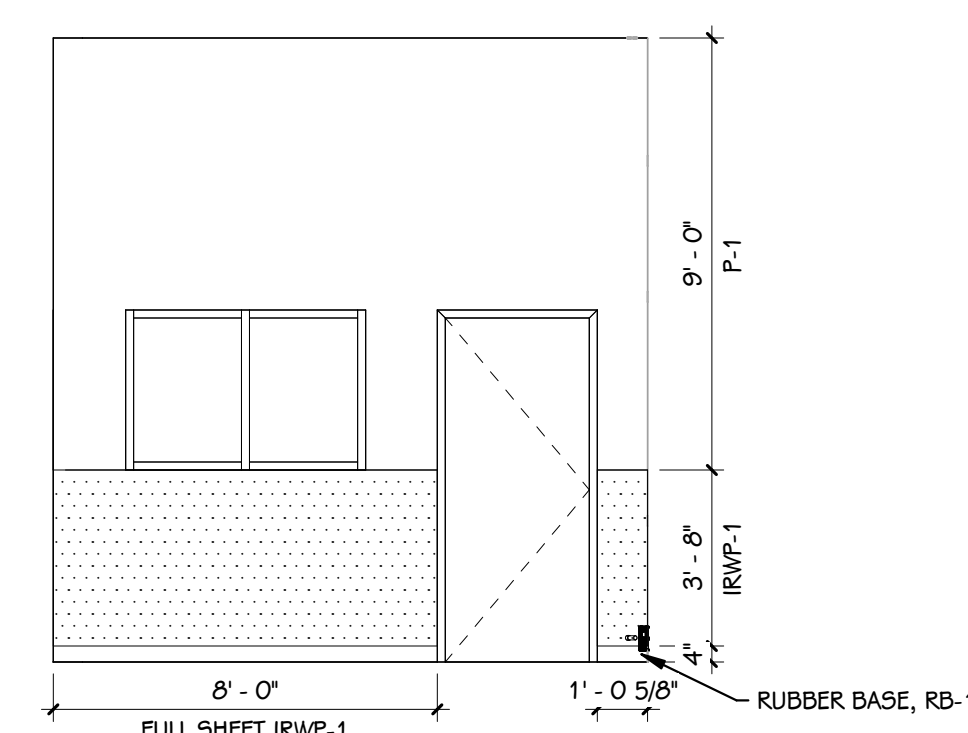
1 11018 1/4" = 1'-0"



2 11018 1/4" = 1'-0"



4 11018 1/4" = 1'-0"



5 11018 1/4" = 1'-0"

**NOTES - FINISH PLANS**

- FINISH TAGS APPLY TO LIKE MATERIALS IN ENTIRE ROOM. I.E. CASEWORK TAG MAY ONLY CALLOUT ONE RUN OF CASEWORK, BUT ALL CASEWORK IN ROOM RECEIVE THE SAME FINISHES, UNLESS TAGGED DIFFERENTLY.
- CASEWORK FINISH TAGS DO NOT APPLY TO CUSTOM MILLWORK PIECES. REFER TO ENLARGED MILLWORK DETAILS FOR FINISH MATERIALS.
- REFER TO ENLARGED FINISH PLANS AND PATTERN PLANS FOR ADDITIONAL FINISH DETAILS.
- DASHED LINE INDICATES LINE OF CEILING ABOVE, REFER TO REFLECTED CEILING PLANS.
- WHERE NO FINISH TAG IS SHOWN ALL EXISTING FINISHES ARE TO REMAIN, UNLESS OTHERWISE NOTED.

**KEYED NOTES - INTERIOR - FINISH PLAN**

- PAINT GYP ABOVE STORFRONT P-1, TYPICAL

ISSUED FOR DATE

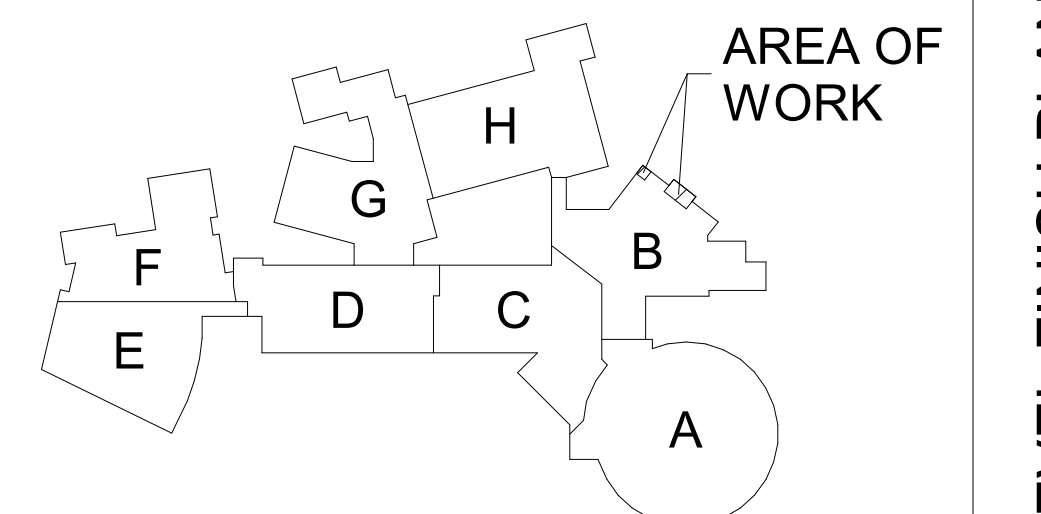
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**PORTAGE NORTHERN HIGH SCHOOL**

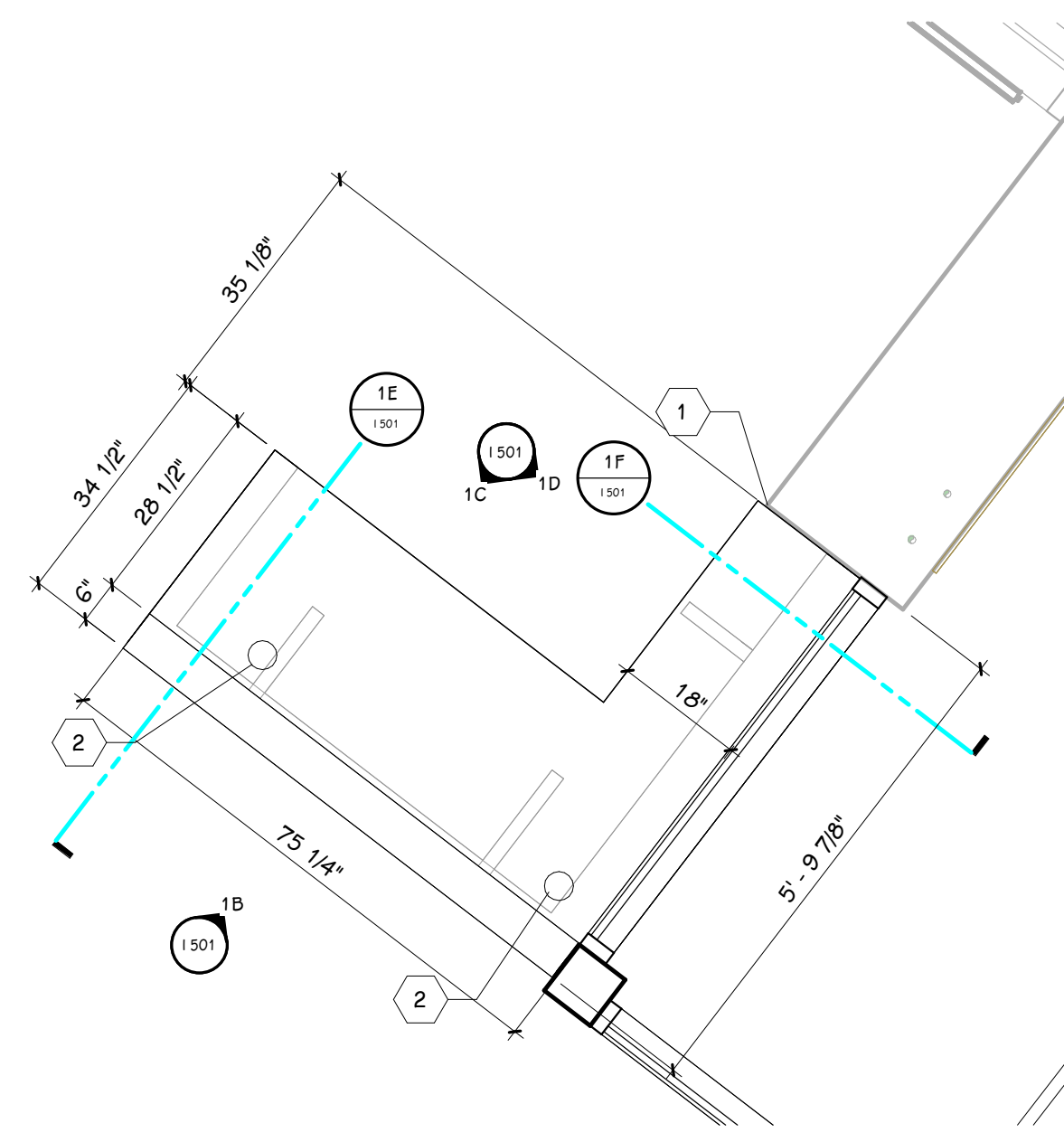


KEY PLAN  
SCALE: NO SCALE

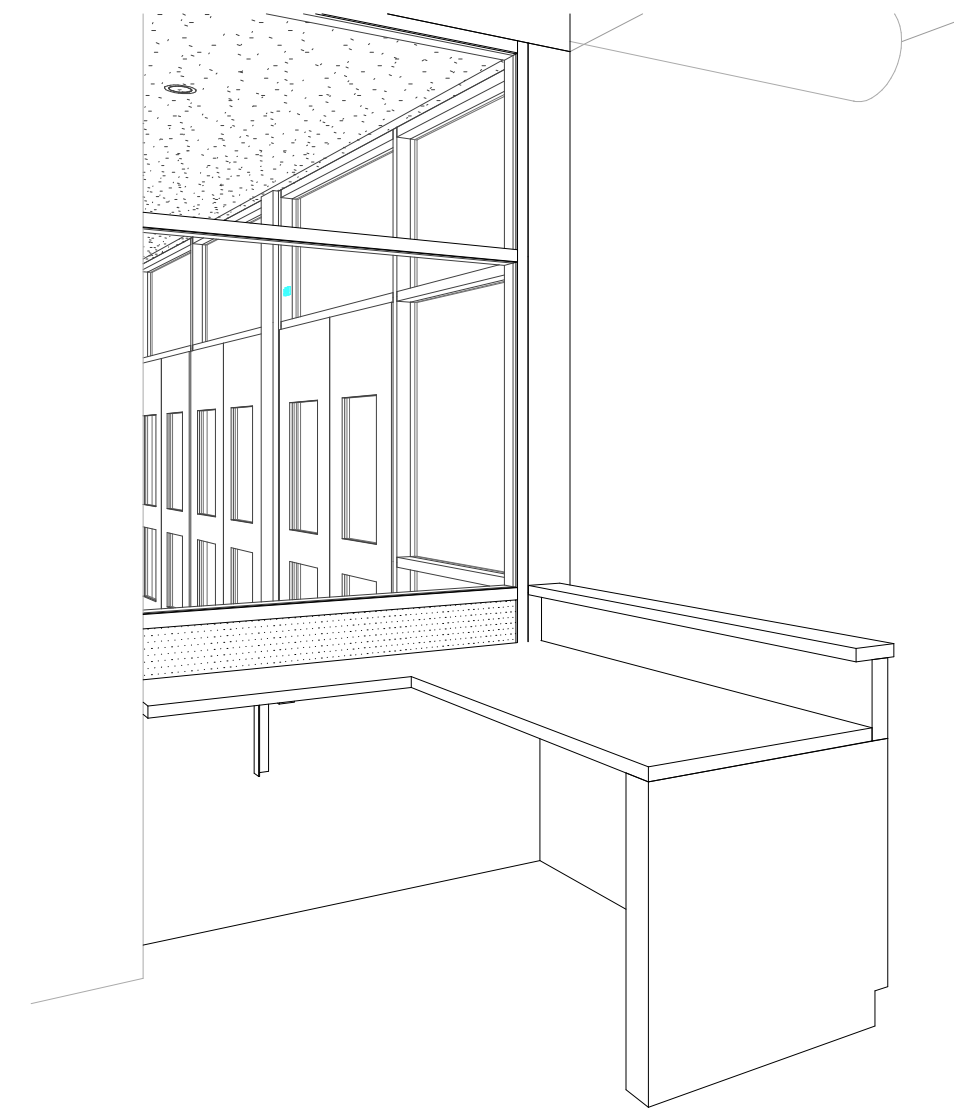
SHEET TITLE  
LOWER LEVEL FINISH PLAN - UNIT B,  
MATERIAL SELECTION SCHEDULE, AND  
TYPICAL DETAILS

DATE  
FEBRUARY 16, 2024  
SHEET NUMBER  
I 101B  
23-214-50

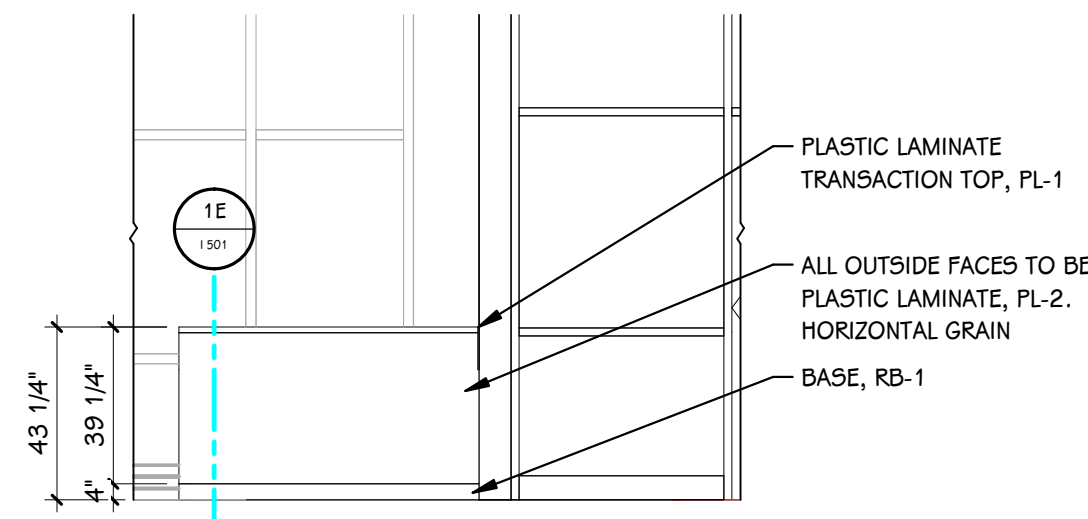




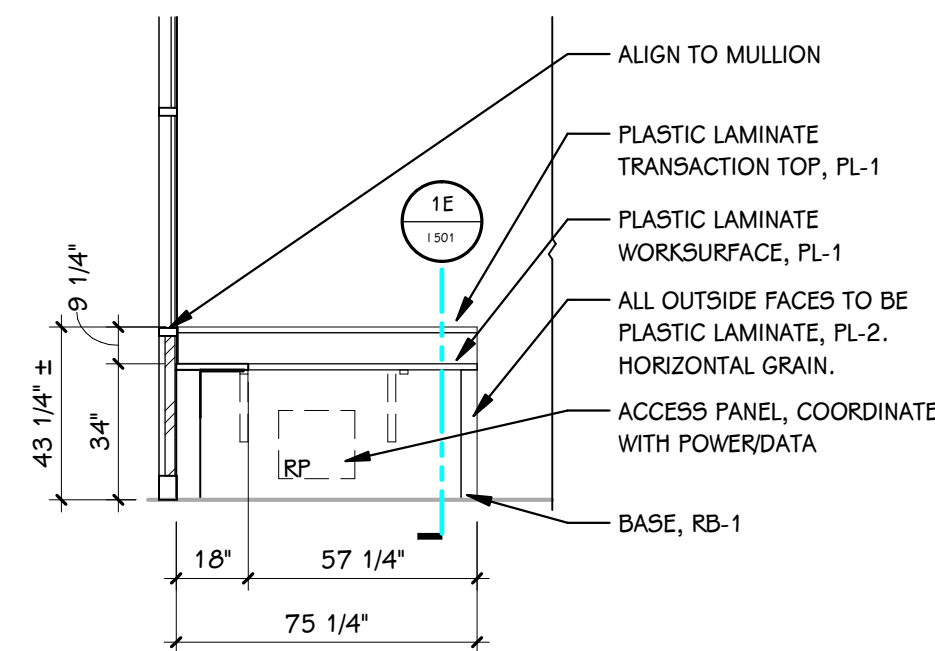
**1** ENLARGED MILLWORK PLAN - CHECK IN DESK  
1/2" = 1'-0"



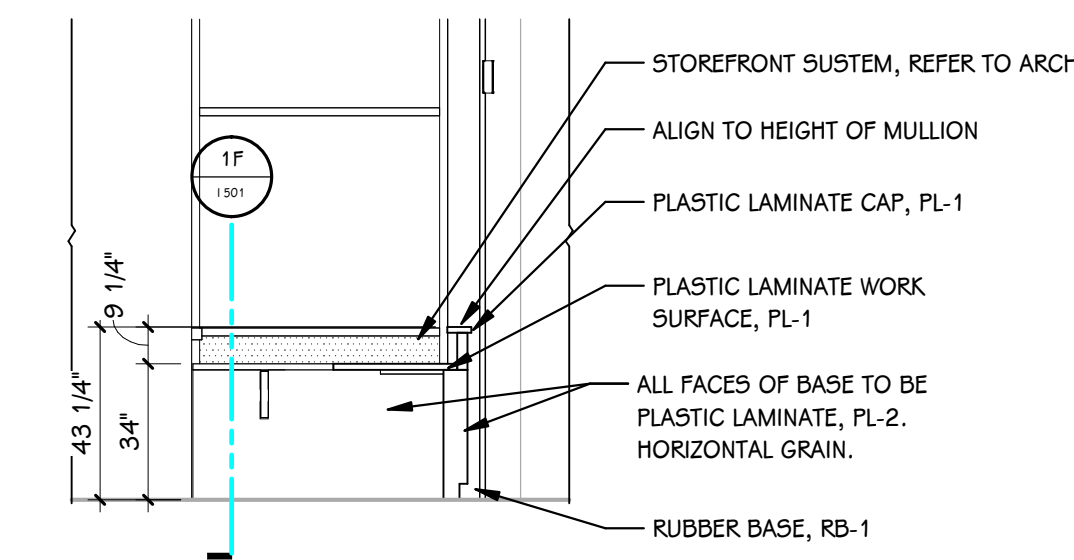
**1A** 3D - CHECK IN DESK  
1/80"



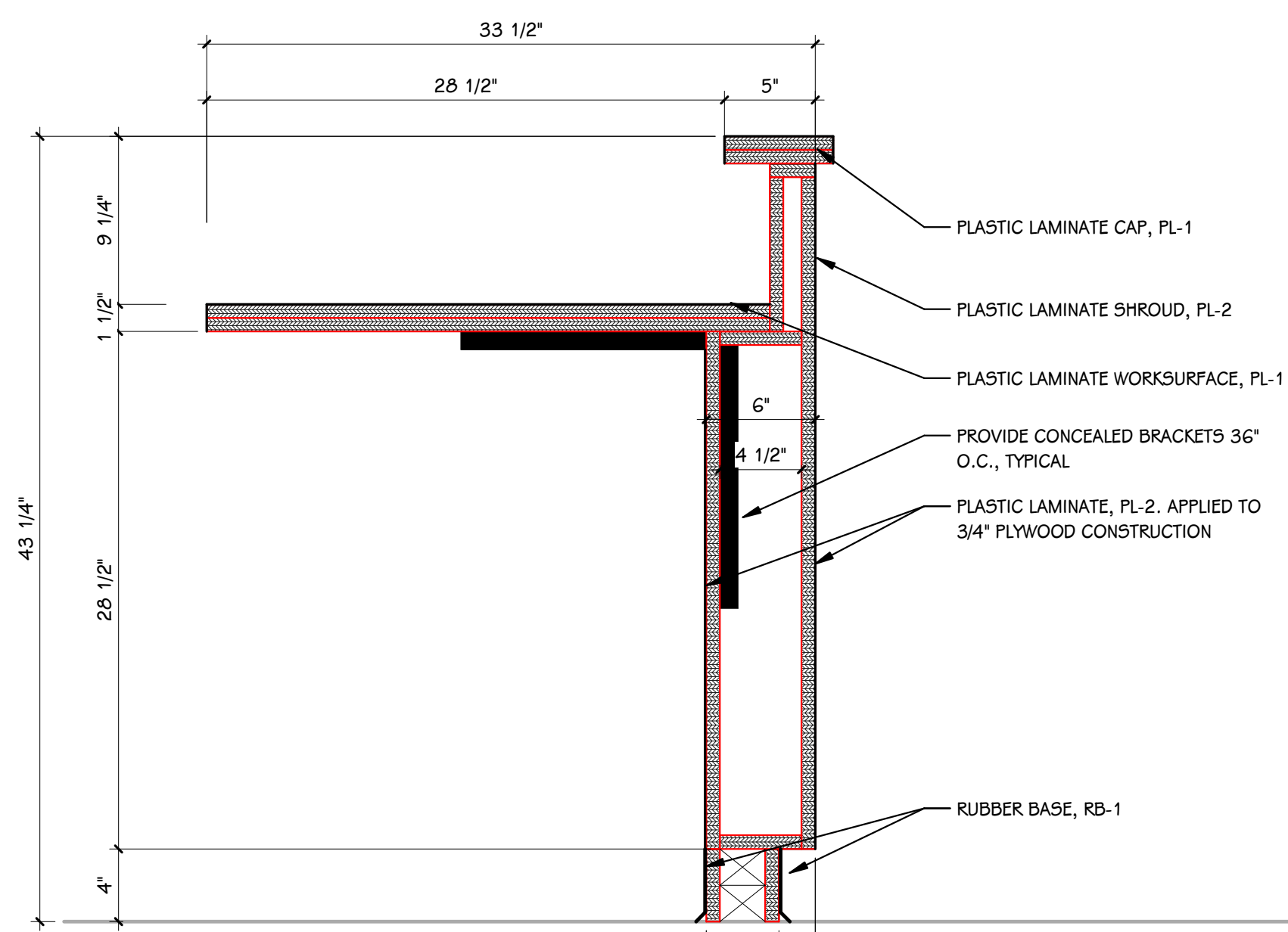
**1B** CHECK IN DESK - FRONT  
1/4" = 1'-0"



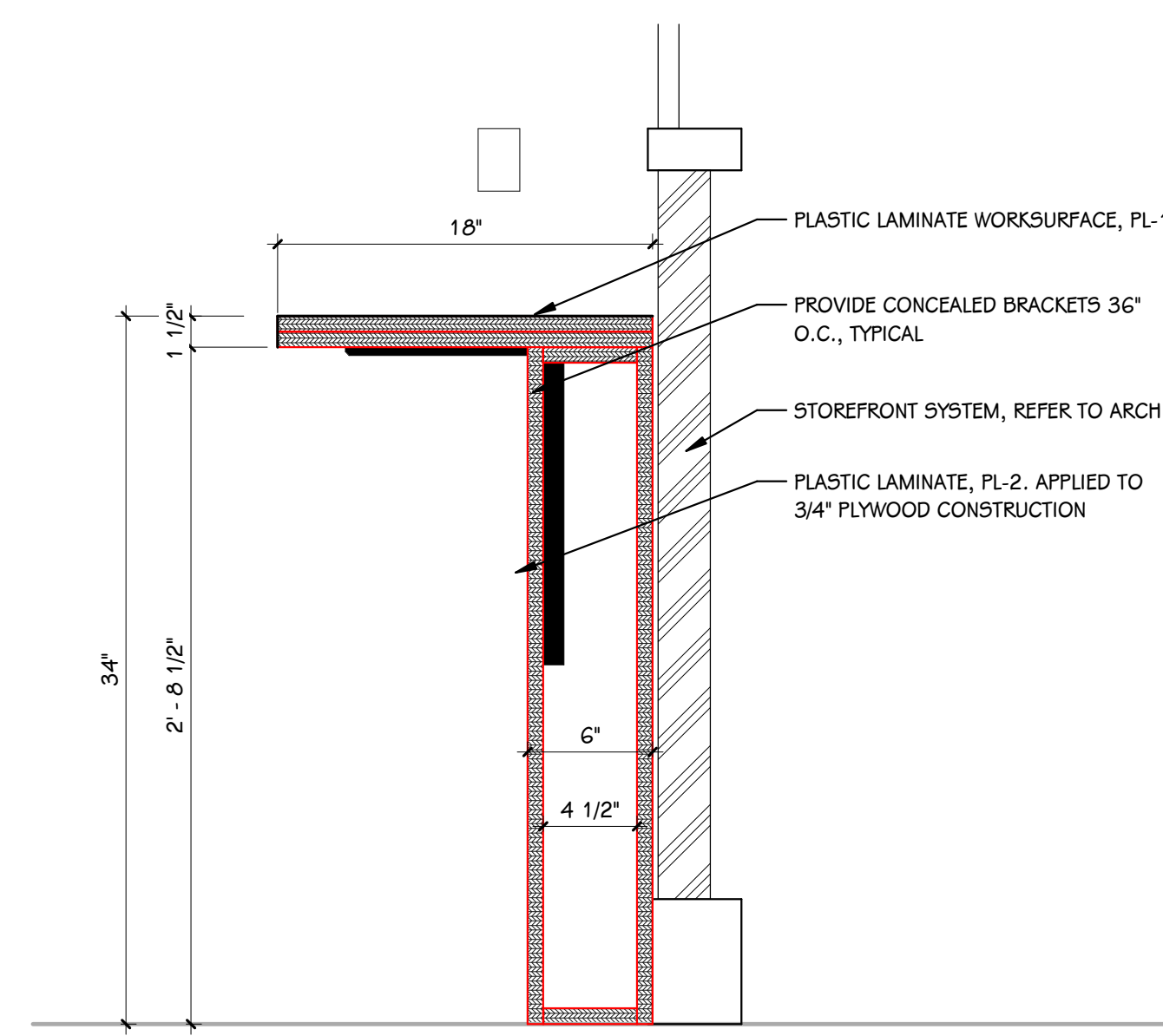
**1C** CHECK IN DESK - INTERIOR FRONT  
1/4" = 1'-0"



**1D** CHECK IN DESK - INTERIOR RETURN  
1/4" = 1'-0"



**1E** CHECK IN DESK - TRANSACTION  
1 1/2" = 1'-0"



**1F** CHECK IN DESK - WORK SURFACE  
1 1/2" = 1'-0"

**NOTES - MILLWORK**

- VERIFY ALL DIMENSIONS IN THE FIELD PRIOR TO FABRICATION.
- ALL DIMENSIONS ARE FROM FINISH FACE UNLESS NOTED OTHERWISE.
- CASEWORK FINISH TAGS DO NOT APPLY TO MILLWORK. REFER TO ELEVATIONS AND DETAILS FOR MILLWORK FINISHES.
- CABINETRY WITHIN MILLWORK SCOPE MUST BE FURNISHED FROM SAME VENDOR AND MANUFACTURER AS ADJACENT MILLWORK, DIE WALLS AND PANELS.
- WIREWAYS AND ACCESS PANELS FOR MILLWORK MOUNTED DEVICES AND TECHNOLOGY MUST BE COORDINATED WITH MECHANICAL, ELECTRICAL, TECHNOLOGY, AND SECURITY CONTRACTORS.
- FILLER PANELS SHALL BE NO LESS THAN 2" WIDE, UNLESS NOTED OTHERWISE.
- FINISH ANY EXPOSED END PANELS, UNDERSIDE OF CABINETS OR OPEN CABINETS, WITH MATERIAL SPECIFIED FOR FRONTS IN THAT ROOM.
- ALL VERTICAL AND HORIZONTAL EXPOSED AND SEMI-EXPOSED SURFACES TO BE FINISHED WITH BODY MATERIAL.
- SUPPORT BRACKETS ARE REQUIRED EVERY 36" O.C. AT AREAS WHERE COUNTERTOP IS OPEN UNDERNEATH. THE CONTRACTOR WILL BE RESPONSIBLE FOR PROVIDING BRACKETS APPROPRIATELY SIZED BASED ON DEPTH OF COUNTERTOP.
- PATTERN OR GRAIN DIRECTION TO BE VERTICAL ON DOORS AND HORIZONTAL ON DRAWERS - PER AWI STANDARDS, UNLESS NOTED OTHERWISE.
- LOCKS: ALL CABINETS KEYED ALIKE, PER ROOM. SEE ELEVATIONS FOR LOCK LOCATIONS.
- GROMMET LOCATIONS SHALL BE VERIFIED IN THE FIELD WITH THE OWNER PRIOR TO INSTALLATION - COORDINATE WITH POWER & DATA LOCATIONS FOR ANY ADDITIONAL WIRE MANAGEMENT REQUIREMENTS.
- SLABSMITHING WILL BE REQUIRED IN INSTANCES WHERE A PATTERNED QUARTZ, NATURAL STONE, OR SOLID SURFACE IS SPECIFIED.
- WHERE MILLWORK IS INDICATED TO RECEIVE RESIDENTIAL APPLIANCES, FURNITURE, OR OWNER-FURNISHED EQUIPMENT, COORDINATE WITH FINAL OWNER-PROVIDED SELECTIONS.

**KEYED NOTES - ENLARGED MILLWORK PLANS**

- CAULK JOINT BETWEEN EXISTING WALL AND MILLWORK.
- GROMMET LOCATIONS TO BE COORDINATED WITH ELECTRICAL.

**MILLWORK HARDWARE & ACCESSORY SELECTIONS**

- GROMMETS TYPE & FINISH: MCKET BRAVA @BRV1, SATIN CHROME FINISH.
- SUPPORT BRACKET TYPES & FINISH: A AND M HARDWARE HEAVY DUTY HYBRID BRACKETS. SIZED AS REQUIRED. FINISH TO BE BLACK POWDERCOAT UNLESS OTHERWISE NOTED.
- PVC EDGE BANDING TO BE SELECTED.

**STANDARD ABBREVIATIONS - CASEWORK**

ADJ	ADJUSTABLE	P/O	PULL-OUT DRAWER
FP	FILLER PANEL	BF	BARRIER FREE
RP	REMOVABLE PANEL	CLR	CLEAR OPENING

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OWNER  
PORTAGE PUBLIC SCHOOLS

SHEET NUMBER  
ENLARGED MILLWORK FINISH PLANS  
AND DETAILS  
1501

Portage, Michigan

DATE  
FEBRUARY 16, 2024

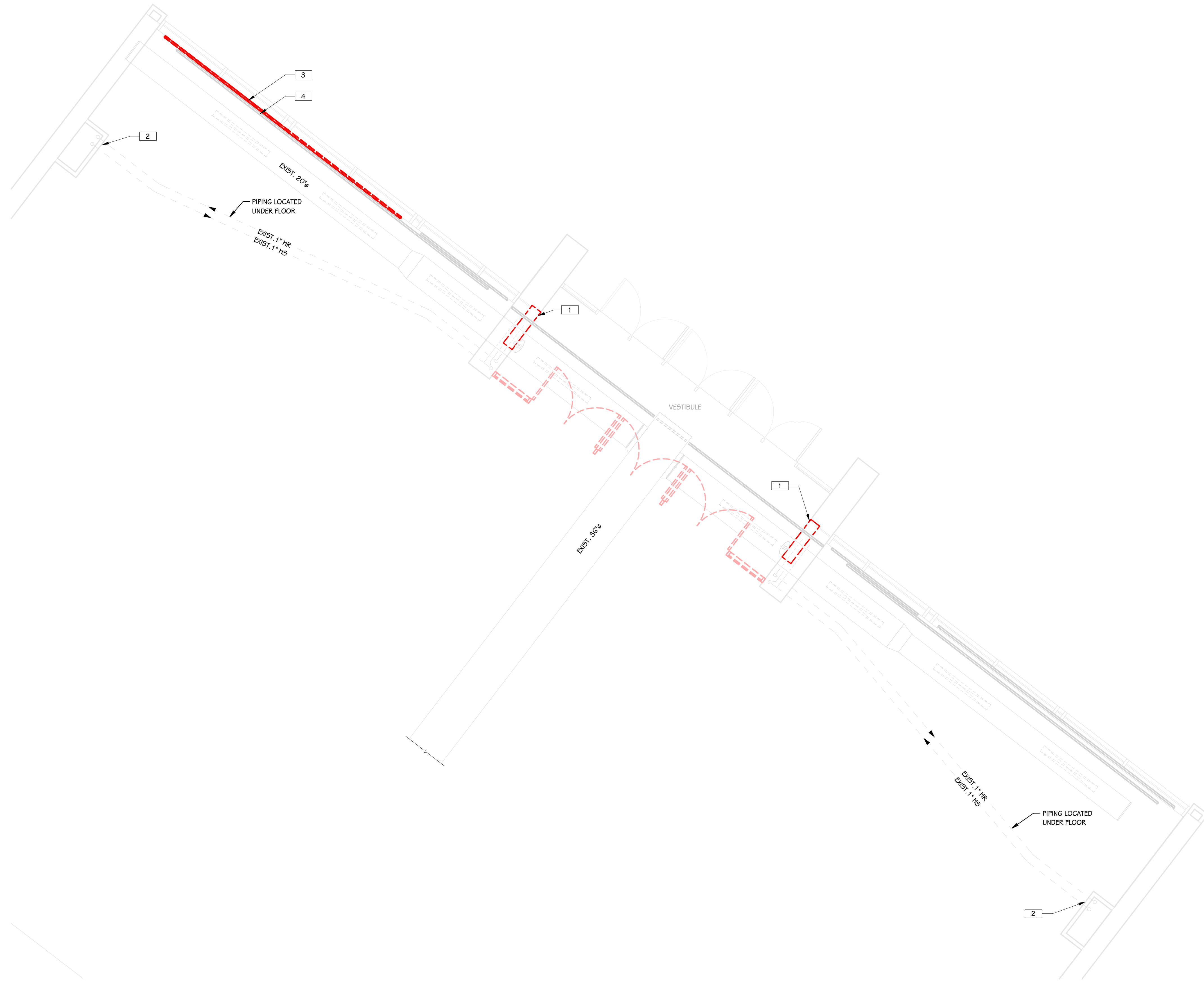
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ABBREVIATIONS	MECHANICAL SYMBOLS	GENERAL NOTES - MECHANICAL - NEW CONSTRUCTION
A.C.D. AUTOMATIC CONTROL DAMPER A.F.F. ABOVE FINISHED FLOOR A.G. ABOVE GRADE A.P.D. AIR PRESSURE DROP B.D. BALANCING DAMPER B.D.D. BACKDRAFT DAMPER B.F. BARRELS FREE BTUH BRITISH THERMAL UNIT PER HOUR B.V. BALANCING VALVE C.B. CATCH BASIN C.B.V. CALIBRATED BALANCING VALVE C.F.H. CUBIC FEET PER HOUR C.F.M. CUBIC FEET PER MINUTE C.H. CABINET HEATER C.I. CAST IRON C.M. CEILING MOUNTED C.O. CLEAN OUT C.V. CONTROL VALVE D.F. DRINKING FOUNTAIN DN. DOWN D.S. DOWN SHOUT E.A. EXHAUST AIR E.A.T. ENTERING AIR TEMPERATURE E.D.B. ENTERING DRY BULB E.F. EXHAUST FAN E.S.P. EXTERNAL STATIC PRESSURE E.W.B. ENTERING WET BULB E.W.C. ELECTRIC WATER COOLER E.W.T. ENTERING WATER TEMPERATURE EXIST. EXISTING E.I.R. EXISTING TO REMAIN F.C. FLEXIBLE CONNECTION F.D. FLOOR DRAIN (FD) FIRE DAMPER F.H.C. FIRE HOSE CABINET F.I. FIELD INSTALLED F.M. FLOOR MOUNTED F.P.M. FEET PER MINUTE F.R. FIN RADIATION G.P.M. GALLONS PER MINUTE H.B. HOSE BIBB HP HORSE POWER I.E. INVERT ELEVATION L.A.T. LEAVING AIR TEMPERATURE LAV. LAVATORY L.D.B. LEAVING DRY BULB LOUV. LOUVER L.W.B. LEAVING WET BULB L.W.T. LEAVING WATER TEMPERATURE M.A. MIXED AIR M.A.T. MIXED AIR TEMPERATURE MAX. MAXIMUM M.B. MOP BASIN MBH BRITISH THERMAL UNIT PER HOUR (THOUSANDS) MFR.(S) MANUFACTURER(S) M.H. MANGLE MIN. MINIMUM MTG. MOUNTING M.V. MANUAL AIR VENT N.C. NORMALLY CLOSED N.F.W.H. NON-FREEZE WALL HYDRANT N.I.C. NOT IN CONTRACT N.O. NORMALLY OPEN O.A. OUTSIDE AIR O.A.I. OUTSIDE AIR INTAKE OCT. OCTAVE P.A. PIPE ANCHOR P.D. PRESSURE DROP P.I.V. POST INDICATOR VALVE P.R.V. PRESSURE REDUCING VALVE P.T. PRESSURE TEMPERATURE TAPPING R.A. RETURN AIR R.D. ROOF DRAIN R.H. RELATIVE HUMIDITY R.I.O. ROUGH IN ONLY R.P.M. REVOLUTIONS PER MINUTE RPRP REDUCED PRESSURE PRINCIPAL BACKFLOW PREVENTER R.V. RELIEF VALVE S.A. SUPPLY AIR SENS. SENSIBLE SHR. SHOWER SK. SINK S.O.V. SHUT-OFF VALVE S.P. STATIC PRESSURE S.SK. SERVICE SINK TEMP. TEMPERATURE TOT. TOTAL T.R. TEMPERATURE RISE T.S. TIP SPEED T.S.P. TOTAL STATIC PRESSURE T.U. TERMINAL UNIT BOX T.W.C. TEPID WATER CONNECTION U.H. UNIT HEATER URN. URINAL V. VENT VEL. VELOCITY V.I. VIBRATION ISOLATORS V.I.F. VERIFY IN FIELD V.S. VENT STACK V.T.R. VENT THRU ROOF W. WASTE W.C. WATER CLOSET W.M. WALL MOUNTED W.P.D. WATER PRESSURE DROP W.SK. WASH SINK	—AW— ACID WASTE —AWV— ACID WASTE VENT —B— BALANCING VALVE —L— BUTTERFLY VALVE —B— CALIBRATED BALANCING VALVE —CAP— CAP —CO2— CARBON DIOXIDE —C— CHECK VALVE —CR— CHILLER RETURN —CS— CHILLER SUPPLY —CWR— CHILLED WATER RETURN —CWS— CHILLED WATER SUPPLY —CWD— COLD WATER (DOMESTIC) —A— COMPRESSED AIR —COND— CONDENSATE —CD— CONDENSATE DRAIN —CV— CONTROL VALVE —CTR— COOLING TOWER RETURN —CTS— COOLING TOWER SUPPLY —DI— DEIONIZED WATER —FD— FIRE DAMPER (HORIZONTAL) —FDV— FIRE DAMPER (VERTICAL) —FSD— FIRE/SMOKE DAMPER —FP— FIRE PROTECTION —FMT— FLOW METER (PROBE TYPE) —FMT— FLOW METER (WAFFER TYPE) —FS— FLOW SWITCH —FD— FOOTING DRAIN —FOR— FUEL OIL RETURN —FOS— FUEL OIL SUPPLY —G— GAS —GC— GAS COCK —GLR— GROUND LOOP WATER RETURN —GLS— GROUND LOOP WATER SUPPLY —HR— HEATING HOT WATER RETURN —HS— HEATING HOT WATER SUPPLY —HPR— HEAT PUMP RETURN —HPS— HEAT PUMP SUPPLY —HWR— HOT WATER RETURN (DOMESTIC) —HWS— HOT WATER SUPPLY (DOMESTIC) —H— HUMIDISTAT —MA— MEDICAL AIR —MVAC— MEDICAL VACUUM —N— NITROGEN —N2O— NITROUS OXIDE —OSV— OUTSIDE STEM AND YOKE VALVE —O2— OXYGEN —G— PRESSURE GAUGE —PRV— PRESSURE REDUCING VALVE —PRV— PRESSURE RELIEF VALVE —PT— PRESSURE TEMPERATURE TAPPING —PHR— PRIMARY HEATING HOT WATER RETURN —PHS— PRIMARY HEATING HOT WATER SUPPLY —PC— PUMPED CONDENSATE —R— REDUCED PRESSURE PRINCIPLE BACKFLOW PREVENTER —LIQ— LIQUID —SUCTION— REFRIGERANT LINE (SUCTION) —SAN— SANITARY SEWER (ABOVE FLOOR) —SAN— SANITARY SEWER (BELOW FLOOR) —S— SHUT-OFF VALVE —SD— SMOKE DAMPER —SCW— SOFT COLD WATER —SHW— SOFT HOT WATER —SHWR— SOFT HOT WATER RETURN —S— SPRING CHECK VALVE —STM (#)— STEAM —ST— STEAM TRAP —ST— STORM SEWER (ABOVE FLOOR) —ST (OP)— STORM SEWER (OVERFLOW SYSTEM) —ST— STORM (BELOW FLOOR) —S— STRAINER —SMR— SNOWMELT RETURN —SMS— SNOWMELT SUPPLY —TS— TEMPERATURE SENSOR —TW— TEPID WATER —TWR— TEPID WATER RETURN —T— THERMOMETER —T— THERMOSTAT —T— THREE-WAY CONTROL VALVE —T— THROTTLING VALVE —T— TRIPLE DUTY VALVE (ANGLE) —T— TRIPLE DUTY VALVE (STRAIGHT) —U— UNION —VAC— VACUUM —V— VACUUM BREAKER —V— VENT	1 DETAILS SHOWN ILLUSTRATE DESIGN INTENT, NOT ALL POSSIBLE CONDITIONS. DRAWINGS ARE NOT TO BE CONSIDERED FABRICATION DRAWINGS. 2 IF THE CONTRACTOR ELECTS TO PROVIDE EQUIPMENT OTHER THAN BASIS OF DESIGN, THE CONTRACTOR SHALL BE RESPONSIBLE TO COORDINATE THE LAYOUT AND CLEARANCE REQUIREMENTS IN ALL SPACES CONTAINING EQUIPMENT AND PROVIDE EQUIPMENT MEETING THE SPECIFICATIONS AND ACHIEVING CODE REQUIRED CLEARANCES WITHIN THE SPACE PROVIDED. CONTRACTOR IS REQUIRED TO COVER ALL ELECTRICAL COSTS FOR OTHER THAN BASIS OF DESIGN PRODUCTS SUCH AS DIFFERENT VOLTAGE OR DIFFERENT SIZE MOTOR. 3 COORDINATE ALL NEW CONSTRUCTION WORK OR ACTIVITY WITH THAT WHICH IS REQUIRED BY OTHER TRADES OR INSTALLERS IN ORDER TO PROVIDE A COMPLETE SYSTEM INCLUDING ALL NECESSARY COMPONENTS, FITTINGS, AND OFFSETS. 4 INSTALLER SHALL VERIFY ALL EXISTING JOBSITE CONDITIONS AND DIMENSIONS AND BE RESPONSIBLE FOR THE SAME. NOTIFY THE ENGINEER OF DISCREPANCIES PRIOR TO COMMENCING WORK. 5 FIRE SEAL ALL PENETRATIONS, SUCH AS PIPES, DUCTS, CONDUIT, ETC. THROUGH FIRE AND/OR SMOKE RATED ASSEMBLIES. 6 MECHANICAL INSTALLER IS RESPONSIBLE FOR PATCHING OF WALLS, CEILINGS, AND FLOORS WHERE FIXTURES, MECHANICAL EQUIPMENT, SHEET METAL, OR PIPING HAS BEEN REMOVED, RELOCATED, OR INSTALLED. 7 ALL PIPING AND DUCTWORK SHALL AVOID LOCATIONS DIRECTLY ABOVE ALL ELECTRICAL EQUIPMENT. COORDINATE WITH ELECTRICAL. 8 ALL LOW VOLTAGE CABLING SHALL BE RUN IN CONDUIT BETWEEN DEVICE AND CABLE TRAY OR TECHNOLOGY RACK. NO CABLING SHALL BE VISIBLE IN EXPOSED CEILING SPACES AND SHALL BE ROUTED IN CONDUIT THAT IS PAINTED TO MATCH SURFACE IT IS SUPPORTED FROM. CABLING THAT IS ROUTED ABOVE AN ACCESSIBLE CEILING SPACE CAN BE INDEPENDENTLY SUPPORTED WITH COMM HOOKS OR RINGS. 9 COORDINATE ALL TEMPERATURE SENSOR LOCATIONS WITH 'ELECTRICAL DEVICES ALIGNMENT GUIDELINES' DETAIL ON SHEET G 001. 10 WHERE SPACE PERMITS, ALL HYDRONIC BRANCH PIPING SHALL TAP OFF OF BOTTOM OR SIDE OF PIPING MAINS PER BRANCH PIPING TAKE-OFF PIPING DETAIL THIS SHEET. MANUAL AIR VENTS SHALL BE INSTALLED AT THE TOP OF ALL HYDRONIC SYSTEMS. 11 ALL EXISTING CLOSED SYSTEMS SHALL BE ISOLATED AND FLUSHED/CLEANED PRIOR TO CONNECTION TO NEW SYSTEMS. 12 ALL BRANCH PIPING SHALL BE FURNISHED WITH SHUT-OFF VALVES IN AN ACCESSIBLE LOCATION NEAR MAIN CONNECTION.
		<b>GENERAL NOTES - MECHANICAL - DEMOLITION</b> 1 ALL DUCTWORK, PIPING AND EQUIPMENT SHOWN DASHED SHALL BE REMOVED. PROTECT EXISTING WORK WHICH IS TO REMAIN IN PLACE FOR REUSE WITH TEMPORARY COVERS, SHORING, BRACING AND SUPPORTS. VERIFY LOCATIONS OF AND PROTECT EXISTING INTERIOR ELECTRICAL AND MECHANICAL UTILITIES AND SERVICES EXCEPT WHERE INDICATED OTHERWISE. ALL MATERIALS AND EQUIPMENT REMOVED AND NOT REUSED SHALL BECOME PROPERTY OF THE CONTRACTOR AND SHALL BE REMOVED FROM THE SITE. THE OWNER RESERVES THE RIGHT TO KEEP, OR TO SALVAGE PARTS FROM, ANY EQUIPMENT PRIOR TO BEING REMOVED FROM SITE. ALL MATERIALS AND EQUIPMENT REQUIRING REMOVAL AND RELOCATION FOR REUSE SHALL BE CAREFULLY REMOVED AND STORED TO PREVENT DAMAGE AND REINSTALLED AS THE WORK PROGRESSES. 2 CONTRACTOR SHALL PROTECT ALL WALLS, CEILINGS, FLOORS, LIGHTS AND OTHER FINISHED SURFACES NOT BEING DEMOED. IF DAMAGED, THE CONTRACTOR SHALL REPAIR TO MATCH EXISTING CONDITIONS. 3 MODIFICATIONS TO THE ROOFING SYSTEM FOR DEMOLITION, OR INSTALLATION OF NEW EQUIPMENT, SHALL BE DONE IN A MANNER TO MAINTAIN OWNERS ROOFING WARRANTY. 4 FOR ALL EXISTING ROOF CURBS WHICH ARE NOT BEING REUSED AND ARE RECEIVING NEW ROOF CAPS, IF THE MAXIMUM DIMENSIONS OF THE CURB EXCEED 30" IN EITHER DIRECTION THEN PROVIDE AND INSTALL 1.1/2" x 1.1/2" x 1/4" SUPPORT ANGLES TO SPAN ACROSS TOP OF ROOF CURB OPENING BELOW ROOF CAP. SPACING BETWEEN ANGLES SHALL NOT EXCEED 24" ON CENTER. 5 PERFORM PRE-DEMOLITION TESTS. MEASURE AND RECORD VALUES INDICATED, SUBMIT REPORT TO THE ENGINEER. ALL MEASUREMENTS SHALL BE TAKEN WITH THE EQUIPMENT OPERATING AT FULL DESIGN CAPACITY. MEASURE AND RECORD GRILLE, REGISTER, OR DIFFUSER AIRFLOW AND LEAK SIZE. MEASURE AND RECORD AIRFLOW, INLET STATIC PRESSURE, SUPPLY AIR TEMPERATURE, CFM, AND ENTHALPY OF ASSOCIATED TERMINAL UNIT. MEASURE AND RECORD OA AND SA CFM OF THE ASSOCIATED AIR HANDLING UNIT. MEASURE AND RECORD SPACE AND OUTDOOR TEMPERATURE AND HUMIDITY.
<b>CONTROL SYMBOLS</b>		
—CV— CONTROL VALVE —FMT— FLOW METER (PROBE TYPE) —T— THREE-WAY CONTROL VALVE —F— FREEZE STAT —M— MOTORIZED ACTUATOR —TS— HUMIDITY SENSOR —TS— TEMPERATURE SENSOR —CO2— CARBON DIOXIDE SENSOR —DP— DIFFERENTIAL PRESSURE SENSOR —AS— AIRFLOW SENSOR —MS— MOISTURE SENSOR —DS— DUCT SMOKE SENSOR		



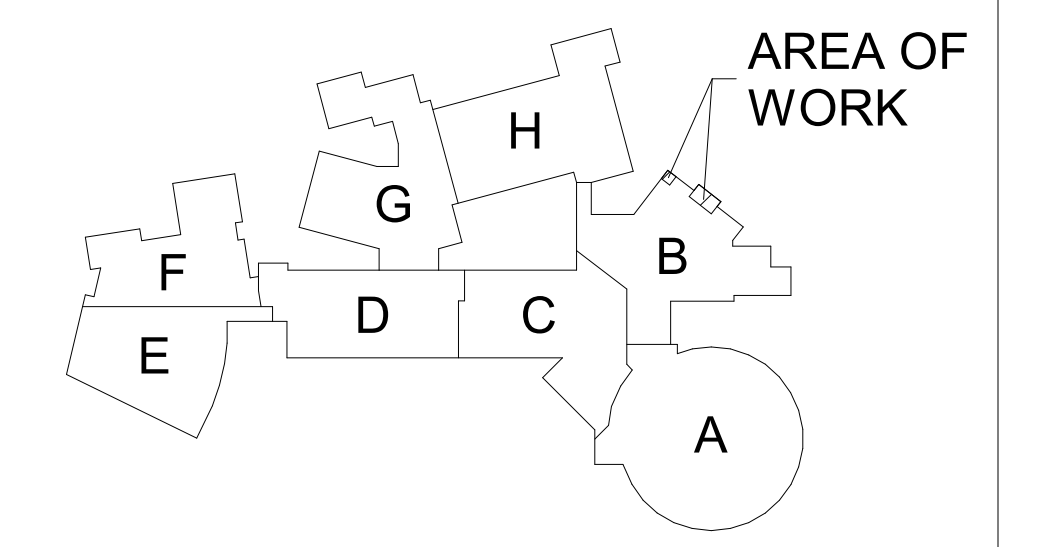


LOWER LEVEL MECHANICAL DEMOLITION PLAN  
 - PARTIAL UNIT B  
 1/4" = 1'-0"

KEYED NOTES - MECHANICAL - DEMOLITION

- 1 DEMO EXISTING CABINET HEATER. PREPARE WALL OPENING FOR INSTALLATION OF NEW UNIT. SALVAGE EXISTING RETURN AIR THERMOSTAT TO REUSE WITH NEW UNIT.
- 2 EXISTING HEATING WATER CONTROL VALVE SERVING CABINET HEATER LOCATED BEHIND ACCESS PANEL TO BE REUSED FOR NEW UNIT.
- 3 EXISTING PANEL RADIATION LOW ON WALL. DEMO ASSOCIATED SUPPORTS. EXISTING UNIT CONTROLS TO BE REUSED.
- 4 EXISTING PANEL RADIATION HIGH ON WALL TO REMAIN.

THIS DRAWING SHEET IS INTENDED TO BE PLOTTED IN COLOR. IF THIS TEXT APPEARS IN BLACK AND WHITE, IT IS PLOTTED INCORRECTLY. DISCARD AND OBTAIN AN ACCURATE DRAWING



KEY PLAN  
 SCALE: NO SCALE

SHEET TITLE  
 LOWER LEVEL MECHANICAL  
 DEMOLITION PLAN

OWNER  
 PORTAGE PUBLIC SCHOOLS

PROJECT TITLE  
 PPS ACCESS CONTROL - NORTHERN HIGH  
 SCHOOL - BID PACKAGE 2:  
 CONSTRUCTION

ISSUED FOR

SHEET NUMBER  
 MD 101  
 23-214.50

DATE  
 FEBRUARY 16, 2024

Portage, Michigan

DATE



ISSUED FOR \_\_\_\_\_ DATE \_\_\_\_\_

PROJECT TITLE  
PPS ACCESS CONTROL - NORTHERN HIGH SCHOOL - BID PACKAGE 2: CONSTRUCTION

OWNER  
PORTAGE PUBLIC SCHOOLS

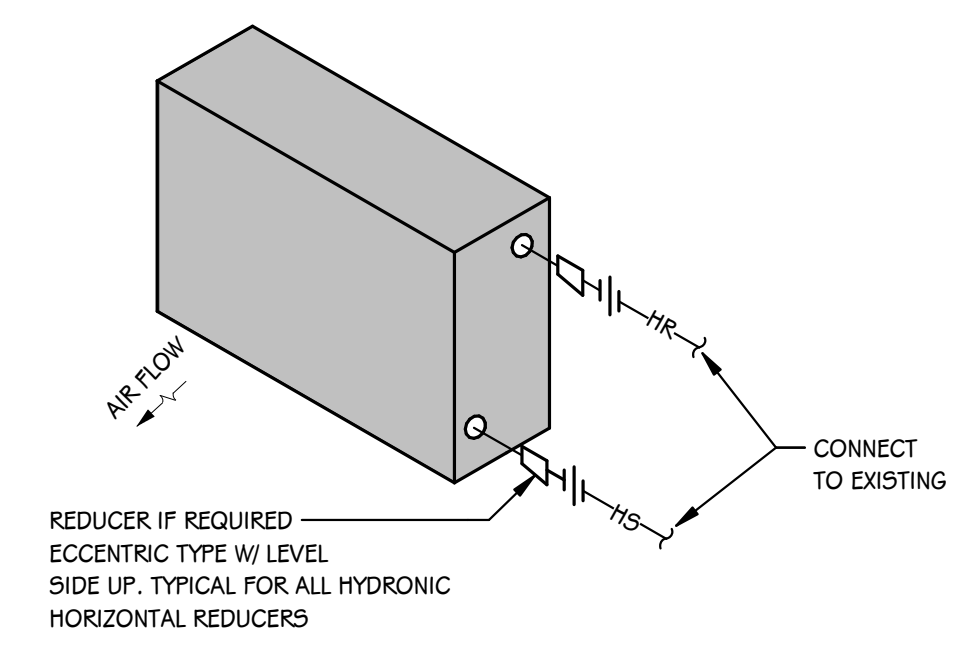
Portage, Michigan

DATE  
FEBRUARY 16, 2024

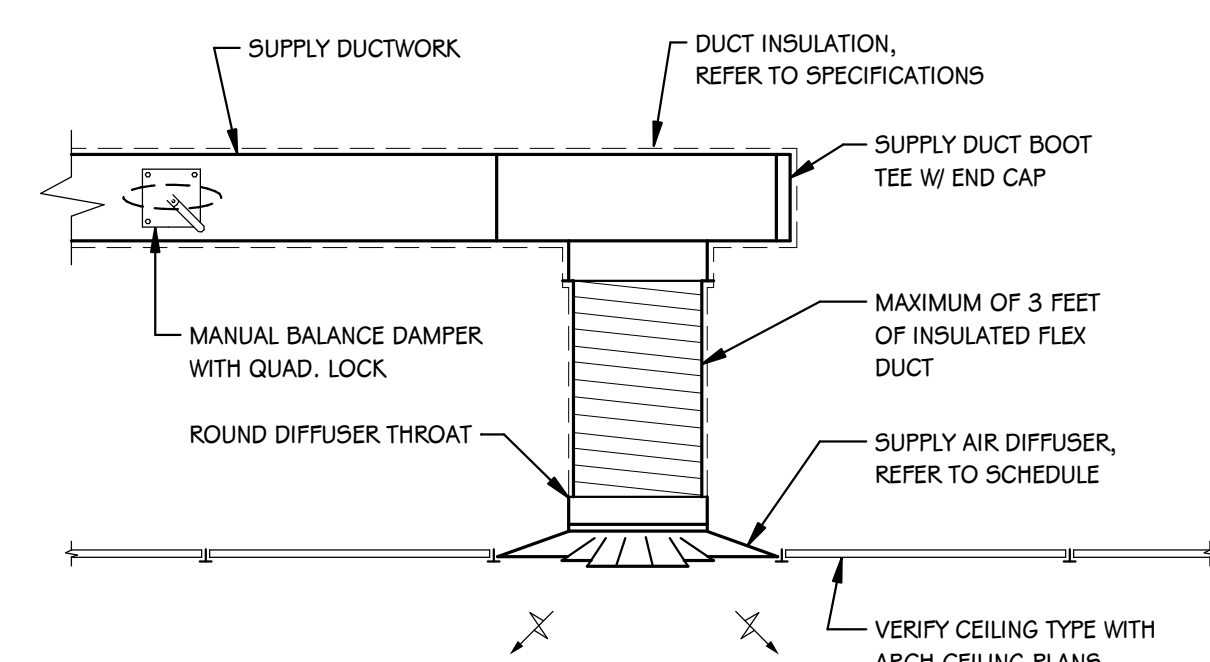
SHEET TITLE  
LOWER LEVEL MECHANICAL PLAN

SHEET NUMBER  
M 101  
23-214-50

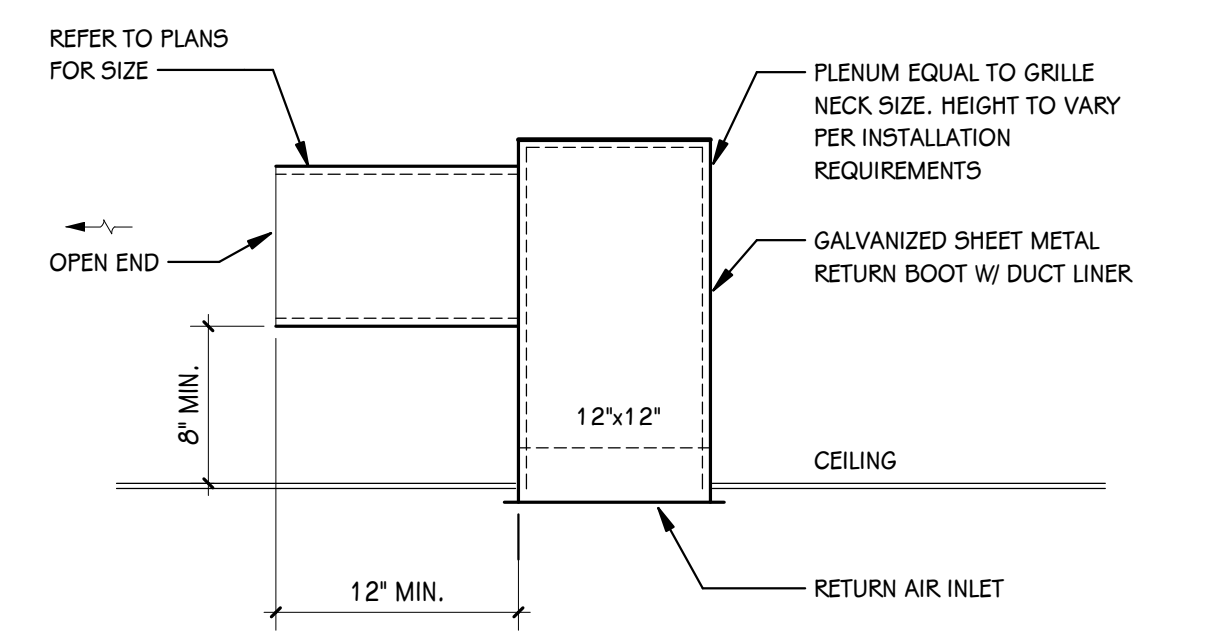
- KEYED NOTES - MECHANICAL - SHEET METAL**
- REFER TO RETURN AIR BOOT DETAIL.
  - RUN NEW DUCTWORK TIGHT TO WALL.
  - CONNECT NEW DUCTWORK TO EXISTING.
- KEYED NOTES - MECHANICAL - HVAC PIPING**
- INSTALL NEW CABINET HEATER IN EXISTING WALL OPENING. RECONNECT TO EXISTING PIPING BRANCH. REUSE EXISTING CONTROLS. REFER TO DETAIL.
  - CONNECT NEW PANEL RADIATION TO EXISTING PANELS IN SERIES. CONTRACTOR TO VERIFY LOCATION OF EXISTING CONTROLS AND REUSE FOR NEW PANELS.
  - INSTALL SALVAGED RETURN AIR THERMOSTAT IN RETURN AIR STREAM OF NEW CABINET HEATER.
  - EXISTING 3/4" HEATING WATER PIPING UP, 1" HEATING WATER PIPING DN IN WALL. CONTRACTOR TO VERIFY SIZE AND LOCATION.
  - EXISTING CONTROL VALVE SERVING CABINET HEATER LOCATED IN CHASE BEHIND ACCESS PANEL. REUSE VALVE FOR NEW CABINET HEATER. CONTRACTOR TO FIELD VERIFY LOCATION.
  - EXISTING 1" (P.V. SIZE) HEATING WATER SUPPLY AND RETURN PIPING LOCATED IN CHASE RUNNING UP/DN.



**CABINET HEATER PIPING DETAIL**  
SCALE: NONE

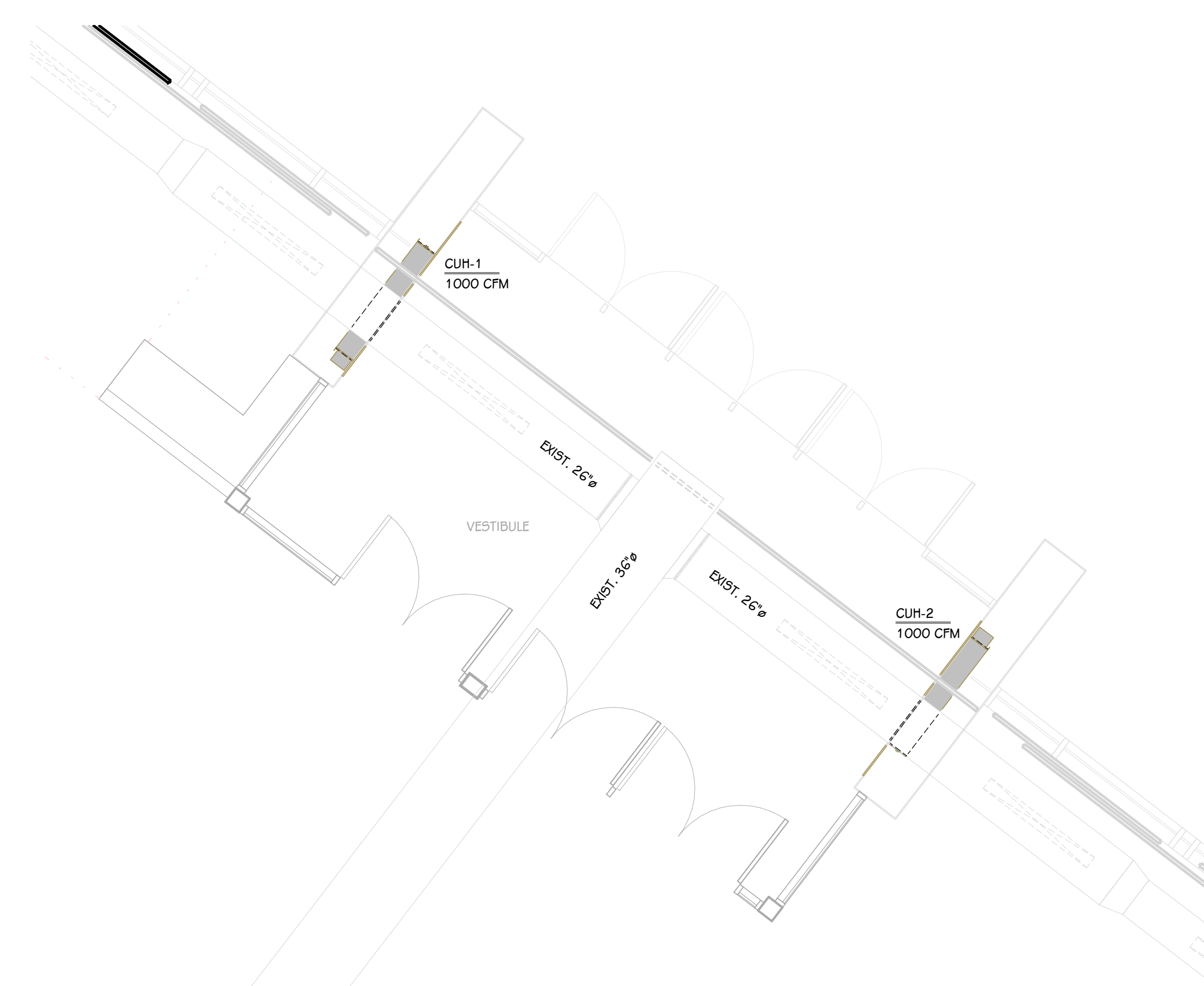
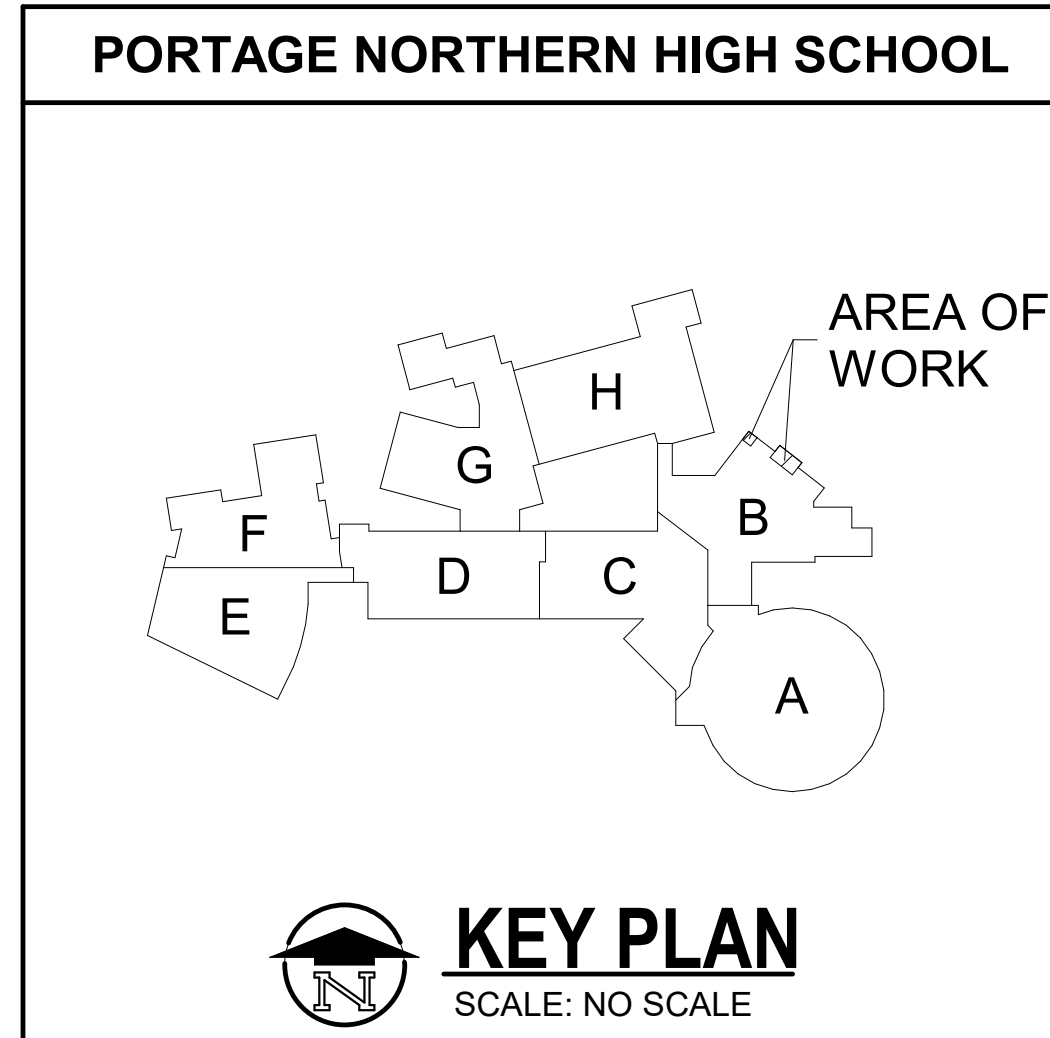


**CEILING MOUNTED SUPPLY DIFFUSER DETAIL**  
SCALE: NONE

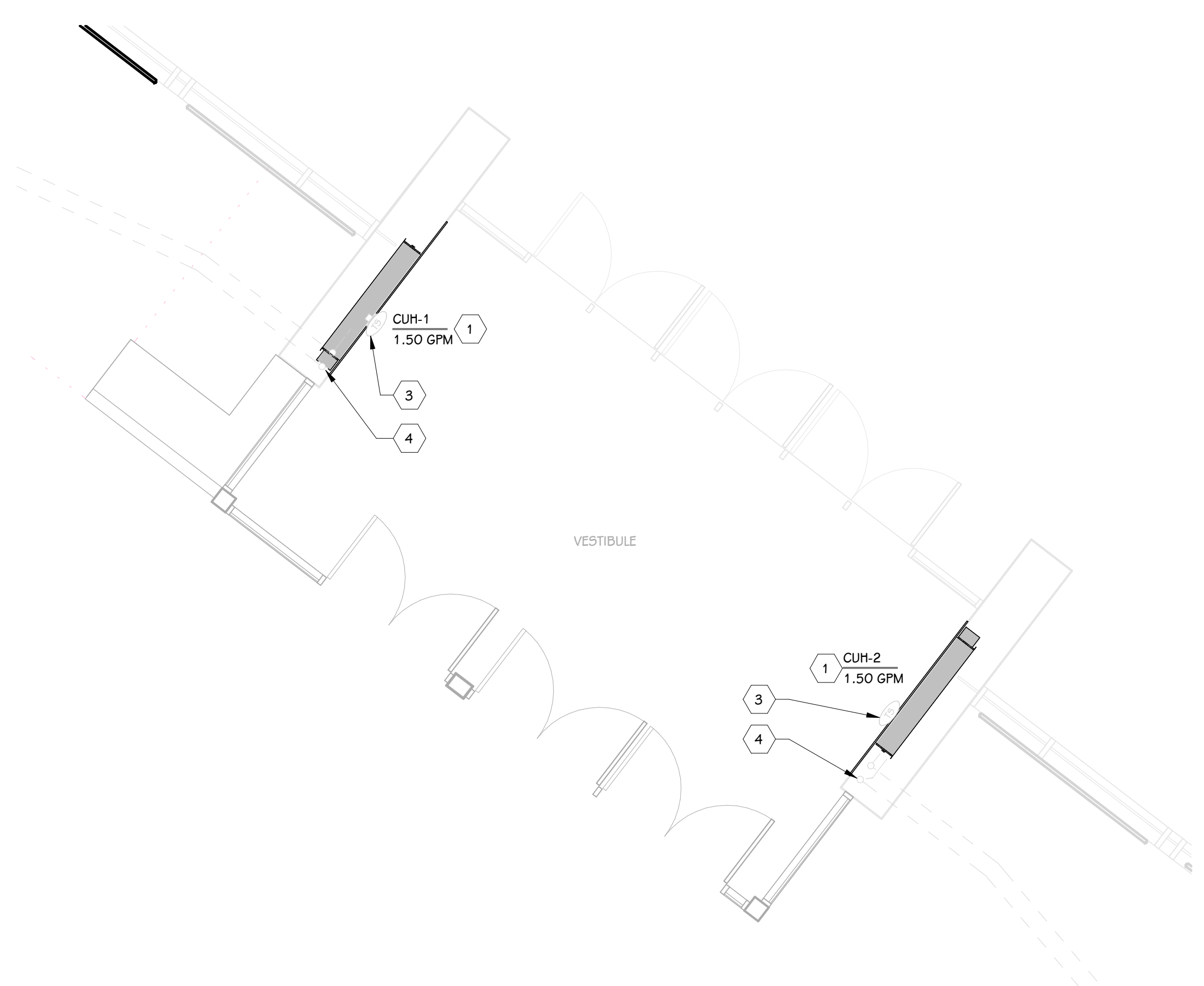


**RETURN AIR BOOT DETAIL**  
SCALE: NONE

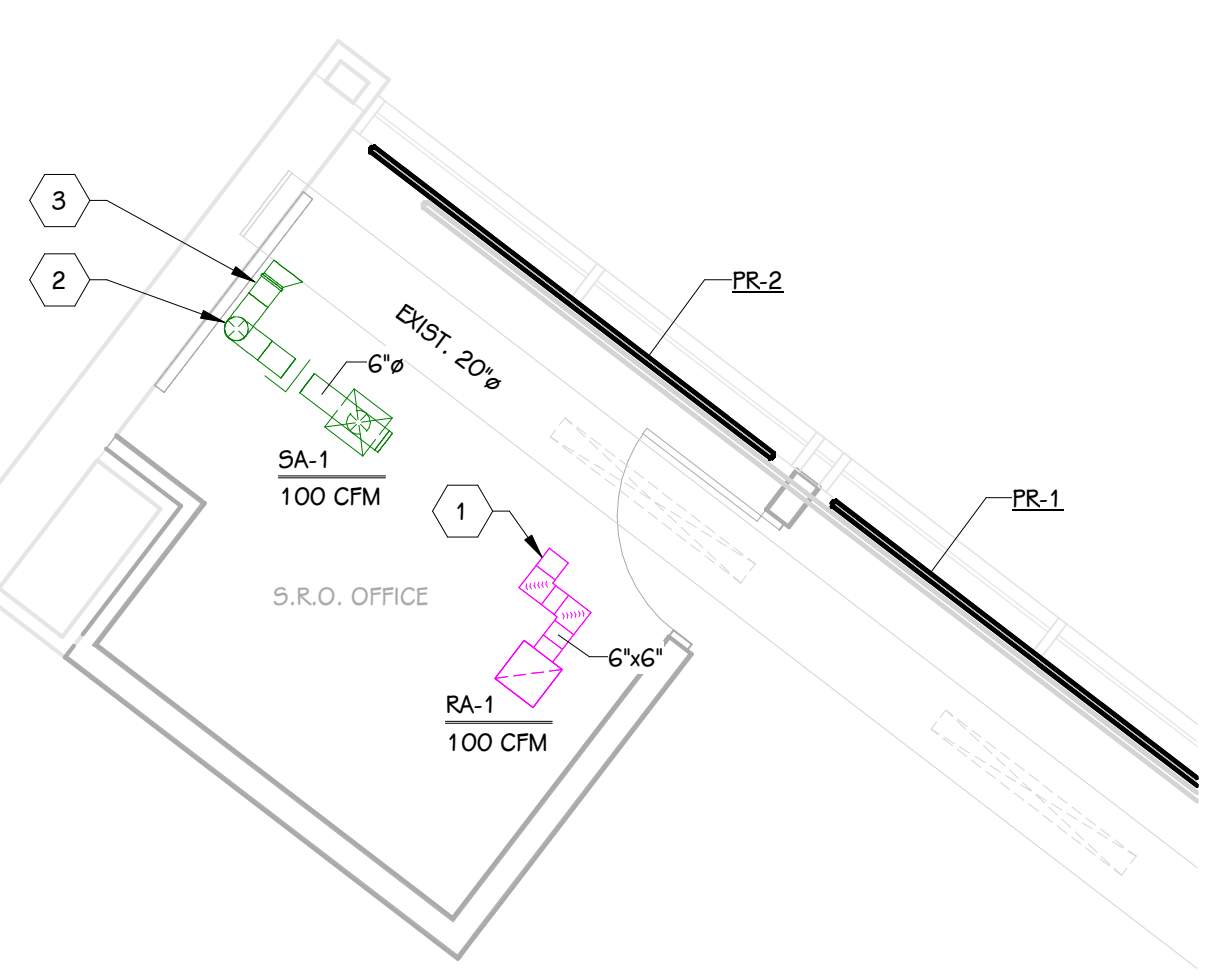
**THIS DRAWING SHEET IS INTENDED TO BE PLOTTED IN COLOR. IF THIS TEXT APPEARS IN BLACK AND WHITE, IT IS PLOTTED INCORRECTLY. DISCARD AND OBTAIN AN ACCURATE DRAWING**



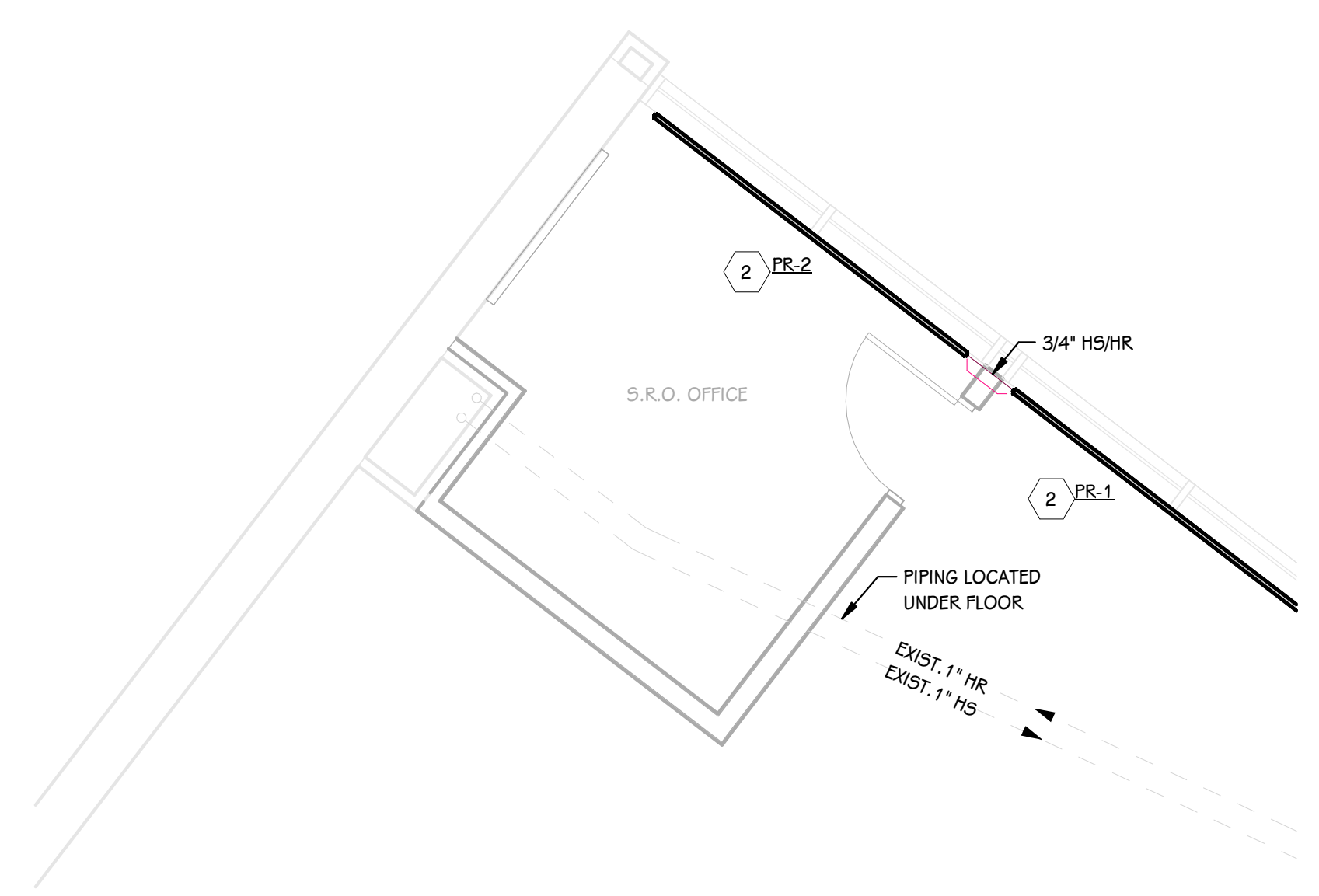
**LOWER LEVEL SHEET METAL PLAN - PARTIAL UNIT B**  
1/4" = 1'-0"



**LOWER LEVEL HVAC PIPING PLAN**  
1/4" = 1'-0"



**LOWER LEVEL SHEET METAL PLAN**  
1/4" = 1'-0"



**LOWER LEVEL HVAC PIPING PLAN - ALTERNATE 1**  
1/4" = 1'-0"

**GRILLES, REGISTERS, & DIFFUSERS** BASED ON PRICE

MARK	PANEL SIZE	FACE SIZE	NECK SIZE	MODEL	CFM RANGE	VCD	THROW	MATERIAL	FINISH	INSTALLATION	REMARKS
SA-1	24"x24"	12"x12"	6" Ø	A5CDA	75-125	NO	5-10-20	ALUMINUM	WHITE	LAY-IN	
RA-1	24"x24"	12"x12"	-	80	0 - 500	NO	-	ALUMINUM	WHITE	LAY-IN	

**CABINET HEATERS - WATER** BASED ON TRANE

MARK	MODEL	MOUNTING TYPE	AIRFLOW (CFM)	HEATING COIL				MOTOR DATA				REMARKS
				CAPACITY (MBH)	FLOW (GPM)	WPD (FT)	EWT (°F)	LWT (°F)	QUANTITY	HP	RPM	
CUH-1	FFHB100	WALL RECESSED	1000	60.0	1.5	0.83	180 °F	160 °F	0.1	1100	120/160	
CUH-2	FFHB100	WALL RECESSED	1000	60.0	1.5	0.83	180 °F	160 °F	0.1	1100	120/160	

NOTES:  
1. BASED ON 10°F EAT, 65°F LAT.

**PANEL RADIATION** BASED ON RUNTAL

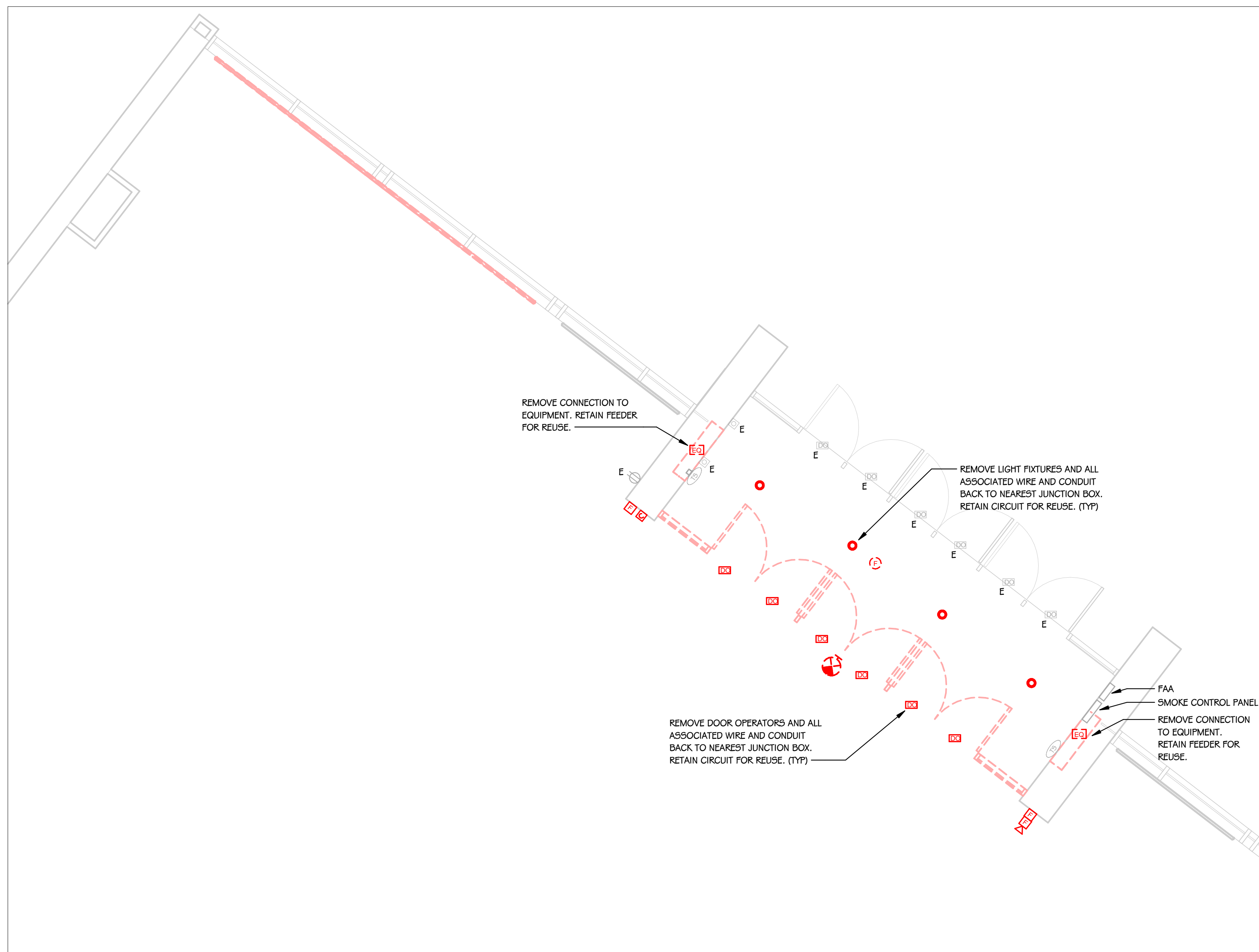
MARK	MODEL	ROWS	HEATING ELEMENT		MOUNTING		FINISH	REMARKS	
			LENGTH (FT-IN)	CAPACITY (BTUH/FT)	TYPE	HEIGHT			
PR-1	R2F-2	2	11' - 6"	827	0.50	FLOOR MOUNTED	(5)	(3)	(1), (2), (3), (4), (5), (6)
PR-2	R2F-2	2	11' - 6"	827	0.50	FLOOR MOUNTED	(5)	(3)	(1), (2), (3), (4), (5), (6)

- NOTES:
- BASED ON 160°F AWT AND 65° F EAT.
  - VERIFY ALL LENGTHS IN FIELD.
  - FINAL COLOR SELECTION BY ARCHITECT FROM MANUFACTURER'S FULL RANGE OF STANDARD COLORS.
  - PROVIDE WITH END CAP.
  - PROVIDE WITH HARDWARE FOR PEDESTAL MOUNTING TO FLOOR.
  - HEATING SYSTEM CONTAINS 30% PROPYLENE GLYCOL.

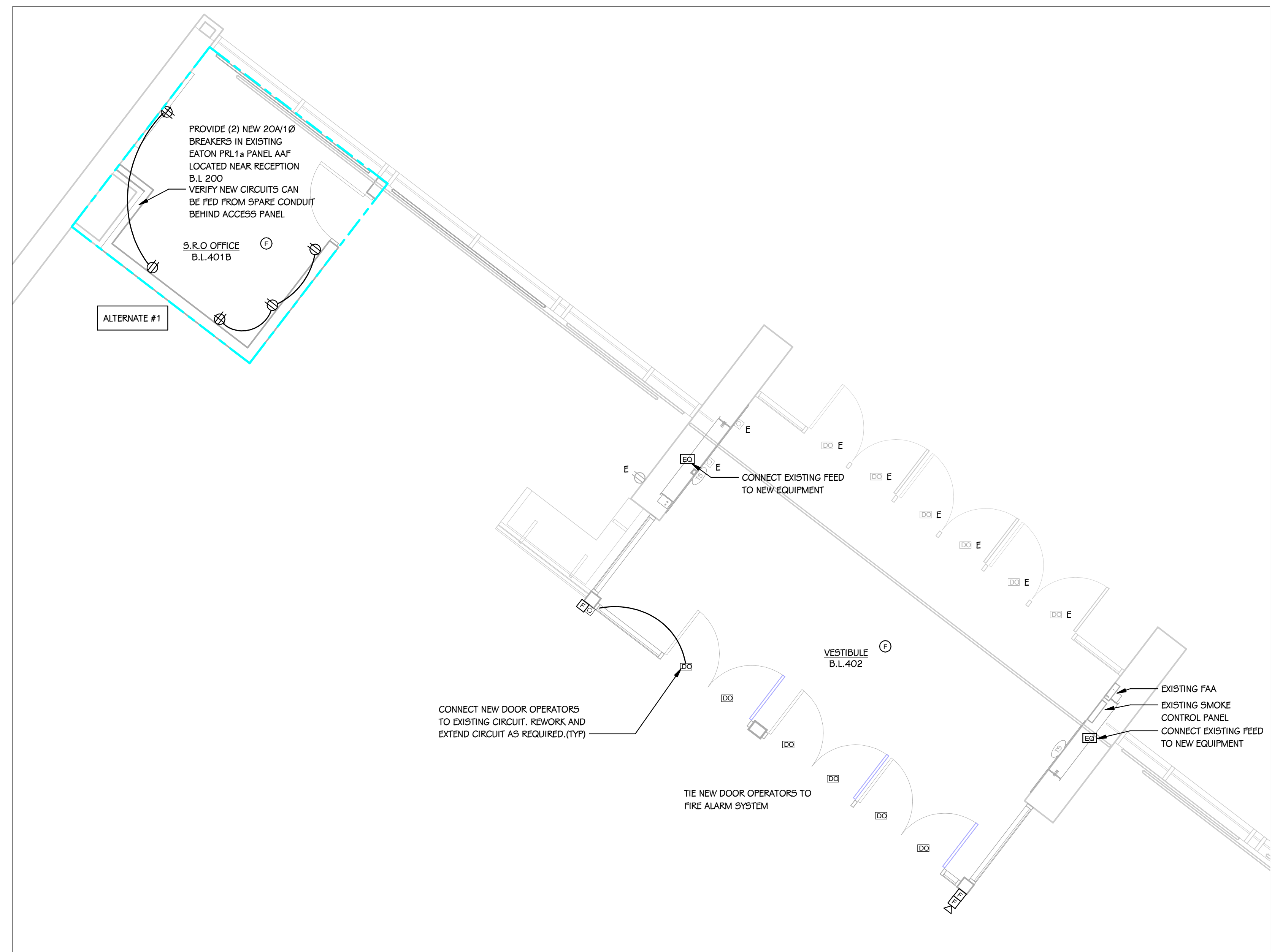




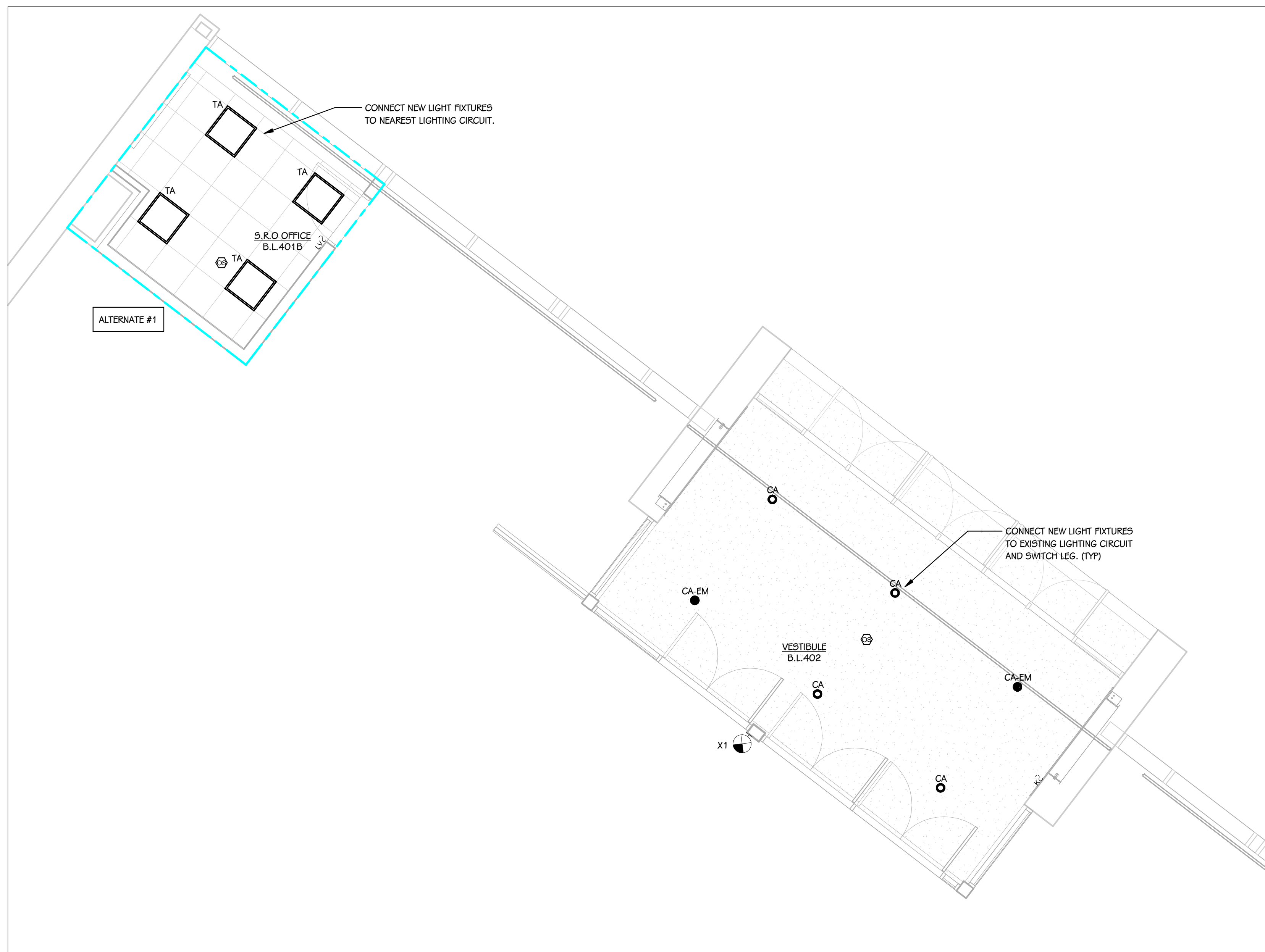




**FIRST FLOOR ELECTRICAL DEMOLITION PLAN**  
1/4" = 1'-0"



**FIRST FLOOR POWER PLAN**  
1/4" = 1'-0"



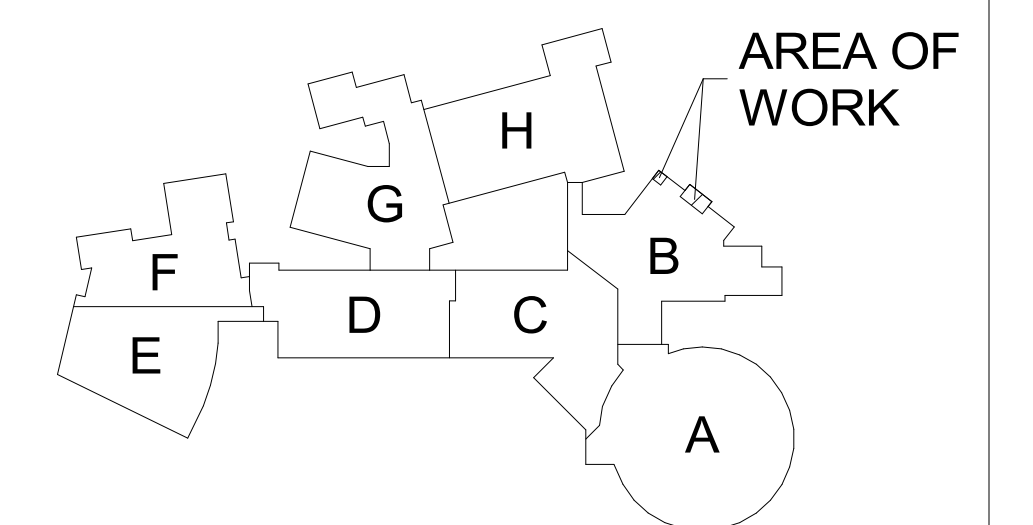
**FIRST FLOOR LIGHTING PLAN**  
1/4" = 1'-0"

**LIGHT FIXTURE SCHEDULE**

TYPE	SERIES	DESCRIPTION	MOUNTING	CEILING TYPE	DRIVER	WATTS	MANUFACTURER	NOTES
CA	CA	RECESSED DOWNLIGHT	RECESSED	GYP DRYWALL	0-10V	30 VA	GOTHAM #V06-40/30-AE-L99-MD-277-6210	
TA	TA	2x2 TROFFER, 2'-0" LONG	RECESSED	ACOUSTIC GRID	0-10V	37 VA	PINELITE #HFR-LED-P-2x2-DCC-B-540-277-9C	1, 2
X1	X1	EXIT SIGN - EDGE LT	SURFACE	N/A	N/A	5 VA	EVENLITE #50V-AC-R-FACESIM-CC-MOUNT-A-ARROW	1, 2

- 1 ALL LED FIXTURES TO HAVE WARRANTY TO MEET OR EXCEED WARRANTY INCLUDED IN BASIS OF DESIGN. FIXTURES LISTED AS EQUALS SHALL MEET DELIVERED LUMENS, CRI, EFFICACY AND OPTIONS OF THAT SPECIFIED. REFER TO SPECIFICATIONS 265100 AND 265600 FOR ADDITIONAL REQUIREMENTS.
- 2 THE MOUNTING DESCRIPTION IS GENERAL. REFER TO SHOP DRAWINGS AND MANUFACTURER'S INSTALLATION INSTRUCTIONS FOR SPECIFIC MOUNTING DETAILS.
- 3 FIXTURES WITH THE CENTER CIRCLE SHADED SHALL BE CONNECTED TO EMERGENCY POWER. FIXTURES WITH CENTER CIRCLE SHADED THAT ARE SWITCHED SHALL BE PROVIDED WITH UL924 ELD (EMERGENCY LIGHTING DEVICE). FOR INDIVIDUAL FIXTURES DEVICE SHALL BE MOUNTED INTERNAL TO THE FIXTURE. PROVIDE LABEL ON INSIDE OF FIXTURE INDICATING FED FROM MULTIPLE CIRCUITS. WHERE DEVICE CANNOT BE MOUNTED INSIDE OF FIXTURE, MOUNT ADJACENT TO FIXTURE IN ACCESSIBLE CEILING SPACE.

**PORTAGE NORTHERN HIGH SCHOOL**



**KEY PLAN**  
SCALE: NO SCALE

ISSUED FOR DATE

PROJECT TITLE  
NORTHERN HIGH SCHOOL - BID PACKAGE  
2: DISTRICT WIDE ACCESS CONTROL

OWNER  
PORTAGE PUBLIC SCHOOLS

Portage, Michigan

SHEET TITLE  
LOWER LEVEL PLAN

DATE  
FEBRUARY 16, 2024

SHEET NUMBER  
E 101  
23-214-50