



Elizabeth Unger
Purchasing Agent

City of Cambridge

PURCHASING DEPARTMENT

SHUO WANG
Assistant Purchasing Agent for
Goods & Services

NATALIE SULLIVAN
Assistant Purchasing Agent for
Design & Construction

TO: All Bidders

FROM: City of Cambridge

DATE: October 31, 2023

RE: File No. 11239 – Rindge Commons Pre-K Interior Fit-Out - Addendum No. 1

This addendum is comprised of the following:

1. New Bid Opening and Question Dates
2. Questions and Answers
3. Pre-bid sign in sheet (Attached)
4. Update to Drawings (Attached)

New Bid Opening Dates:

The new bid opening date for Filed sub bids is November 16, 2023 at 2:00pm. The new bid opening date for General bids is November 30, 2023 at 2:00pm.

The Last day for General contractor questions is November 20, 2023 at 12:00pm.

The following questions were asked and answered:

Question 1.: Room Finish Schedule on Drawing A8 has ACT material the ceiling finish in all rooms noted. Please confirm there is no painting required on any overhead ceiling surface per this finish schedule.

Answer: Gross Motor Room 121 has a painted GWB ceiling. Sheet A8.2 is updated as part of this Addendum.

Question 2.: If Overhead Ceiling Surfaces are to be painted, can you confirm if all overhead surfaces are to be same color/finish.

Answer: Gross Motor Room 121 has a painted GWB ceiling. Sheet A8.2 is updated as part of this Addendum.

Question 3.: Section 055000- Miscellaneous Metals is listed within in the table of contents however I don't see a specification section in the project manual. Is there a spec section 055000- Miscellaneous Metals?

Answer: This section was inadvertently omitted; please see attached

Continued on following page.



PROJECT MANUAL

PART B - SPECIFICATIONS

- ITEM 1.1 SECTION 055000: ADD section in its entirety.

DRAWINGS

ARCHITECTURAL (A-) DRAWINGS

- ITEM 1.2 Sheet G0.0 COVER: REPLACE sheet in its entirety.
- ITEM 1.3 Sheet A1.2 PARTITION TYPES: REPLACE sheet in its entirety.
- ITEM 1.4 Sheet A2.1 LEVEL 1 FLOOR PLANS: REPLACE sheet in its entirety.
- ITEM 1.5 Sheet A2.2 LEVEL 2 FLOOR PLANS: REPLACE sheet in its entirety.
- ITEM 1.6 Sheet A6.1 INTERIOR ELEVATIONS: REPLACE sheet in its entirety.
- ITEM 1.7 Sheet A8.2 ROOM FINISH SCHEDULE AND FLOOR PLANS: REPLACE sheet in its entirety.

DRAWINGS

FIRE PROTECTION (FP-) DRAWINGS

- ITEM 1.8 Sheet FP0.1 LEGENDS AND DETAILS – FIRE PROTECTION: REPLACE sheet in its entirety.
- ITEM 1.9 Sheet FP1.0 FIRE PROTECTION PLANS: REPLACE sheet in its entirety.

DRAWINGS

PLUMBING (P-) DRAWINGS

- ITEM 1.10 Sheet P0.1 LEGENDS, SCHEDULES AND DETAILS – PLUMBING: REPLACE sheet in its entirety.
- ITEM 1.11 Sheet P1.0 FIRST FLOOR PLUMBING PLANS: REPLACE sheet in its entirety.
- ITEM 1.12 Sheet P2.0 SECOND FLOOR PLUMBING PLAN: REPLACE sheet in its entirety.



DRAWINGS

MECHANICAL (M-) DRAWINGS

- **ITEM 1.13** Sheet M0.1 HVAC – SCHEDULE & LEGENDS: REPLACE sheet in its entirety.
- **ITEM 1.14** Sheet M0.2 HVAC – DETAILS I: REPLACE sheet in its entirety.
- **ITEM 1.15** Sheet M0.3 HVAC – DETAILS III: REPLACE sheet in its entirety.
- **ITEM 1.16** Sheet M1.1 HVAC – 1ST FLOOR DUCTWORK: REPLACE sheet in its entirety.
- **ITEM 1.17** Sheet M1.2 HVAC – 2ND FLOOR DUCTWORK: REPLACE sheet in its entirety.
- **ITEM 1.18** Sheet M2.1 HVAC – 1ST FLOOR PIPING: REPLACE sheet in its entirety.
- **ITEM 1.19** Sheet M2.2 HVAC – 2ND FLOOR PIPING: REPLACE sheet in its entirety.
- **ITEM 1.20** Sheet M3.2 HVAC – CONTROLS 1: REPLACE sheet in its entirety.
- **ITEM 1.21** Sheet VS1.1 HVAC – VIBRATION & SEISMIC DETAILS: REPLACE sheet in its entirety.

DRAWINGS

ELECTRICAL (E-) DRAWINGS

- **ITEM 1.22** Sheet E0.1 SYMBOL LIST/ FIXTURE SCHEDULE: REPLACE sheet in its entirety.
- **ITEM 1.23** Sheet E0.4 ONE LINE RISER: ADD sheet in its entirety.
- **ITEM 1.24** Sheet ED2.1 DEMO FLOOR PLAN: ADD sheet in its entirety.
- **ITEM 1.25** Sheet T1.2 SECURITY/ TECHNOLOGY DETAILS: REPLACE sheet in its entirety.

ATTACHMENTS

SECTION 055000

- Sheet G0.0 COVER
- Sheet A1.2 PARTITION TYPES
- Sheet A2.1 LEVEL 1 FLOOR PLANS
- Sheet A2.2 LEVEL 2 FLOOR PLANS
- Sheet A6.1 INTERIOR ELEVATIONS
- Sheet A8.2 ROOM FINISH SCHEDULE AND FLOOR PLANS
- Sheet FP0.1 LEGENDS AND DETAILS – FIRE PROTECTION: REPLACE sheet in its entirety.
- Sheet FP1.0 FIRE PROTECTION PLANS
- Sheet P0.1 LEGENDS, SCHEDULES AND DETAILS – PLUMBING: REPLACE sheet in its entirety.
- Sheet P1.0 FIRST FLOOR PLUMBING PLANS: REPLACE sheet in its entirety.
- Sheet P2.0 SECOND FLOOR PLUMBING PLAN



Sheet M0.1	HVAC – SCHEDULE & LEGENDS: REPLACE sheet in its entirety.
Sheet M0.2	HVAC – DETAILS I: REPLACE sheet in its entirety.
Sheet M0.3	HVAC – DETAILS III: REPLACE sheet in its entirety.
Sheet M1.1	HVAC – 1 ST FLOOR DUCTWORK: REPLACE sheet in its entirety.
Sheet M1.2	HVAC – 2 ND FLOOR DUCTWORK: REPLACE sheet in its entirety.
Sheet M2.1	HVAC – 1 ST FLOOR PIPING: REPLACE sheet in its entirety.
Sheet M2.2	HVAC – 2 ND FLOOR PIPING: REPLACE sheet in its entirety.
Sheet M3.2	HVAC – CONTROLS 1: REPLACE sheet in its entirety.
Sheet VS1.1	HVAC – VIBRATION & SEISMIC DETAILS
Sheet E0.1	SYMBOL LIST/ FIXTURE SCHEDULE: REPLACE sheet in its entirety.
Sheet E0.4	ONE LINE RISER: ADD sheet in its entirety.
Sheet ED2.1	DEMO FLOOR PLAN: ADD sheet in its entirety.
Sheet T1.2	SECURITY/ TECHNOLOGY DETAILS

End of Addendum No. 1

All other details remain the same.

Elizabeth Unger
Purchasing Agent

Addendum No. 1



SECTION 055000

MISCELLANEOUS METALS

PART 1 - GENERAL

1.01 RELATED DOCUMENTS

- A. Drawings and general provisions of the Contract, including General and Supplementary Conditions and Division 01 Specification Sections, apply to this Section.

1.02 SUMMARY

- A. Section Includes:
 - 1. Miscellaneous steel brackets and connectors for items of rough and finish carpentry, to the extent indicated, including clip angles and misc. supports.
 - 2. All other non-specified metal items, requiring specific fabrication, which are customarily provided by the miscellaneous and ornamental iron trade; and items on the Drawings noted under this SECTION.

1.03 COORDINATION

- A. Coordinate selection of shop primers with topcoats to be applied over them. Comply with paint and coating manufacturers' written recommendations to ensure that shop primers and topcoats are compatible with one another.
- B. Coordinate installation of metal fabrications that are anchored to or that receive other work. Furnish setting drawings, templates, and directions for installing anchorages, including sleeves, concrete inserts, anchor bolts, and items with integral anchors, that are to be embedded in concrete or masonry. Deliver such items to Project site in time for installation.

1.04 ACTION SUBMITTALS

- A. Product Data: For metal pan stairs and the following:
 - 1. Paint products.
- B. Shop Drawings: Include plans, elevations, sections, details, and attachments to other work.

1.05 INFORMATIONAL SUBMITTALS

- A. Welding certificates.

- B. Paint Compatibility Certificates: From manufacturers of topcoats applied over shop primers certifying that shop primers are compatible with topcoats.

1.06 QUALITY ASSURANCE

- A. Installer Qualifications: Fabricator of products.
- B. Welding Qualifications: Qualify procedures and personnel according to the following:
 - 1. AWS D1.1/D1.1M, "Structural Welding Code - Steel."
 - 2. AWS D1.3/D1.3M, "Structural Welding Code - Sheet Steel."

1.07 FIELD CONDITIONS

- A. Field Measurements: Verify actual locations of walls and other construction contiguous with metal fabrications by field measurements before fabrication.

PART 2 - PRODUCTS

2.01 METALS

- A. Metal Surfaces, General: Provide materials with smooth, flat surfaces unless otherwise indicated. For components exposed to view in the completed Work, provide materials without seam marks, roller marks, rolled trade names, or blemishes.
- B. Recycled Content of Steel Products: Postconsumer recycled content plus one-half of preconsumer recycled content not less than 25 percent.
- C. Steel Plates, Shapes, and Bars: ASTM A 36/A 36M.
- D. Steel Tubing: ASTM A 500 (cold formed) or ASTM A 513.
- E. Uncoated, Cold-Rolled Steel Sheet: ASTM A 1008/A 1008M, structural steel, Grade 25, unless another grade is required by design loads; exposed.
- F. General: Provide zinc-plated fasteners with coating complying with ASTM B 633 or ASTM F 1941, Class Fe/Zn 12 for exterior use, and Class Fe/Zn 5 where built into exterior walls. Select fasteners for type, grade, and class required.
- G. Bolts and Nuts: Regular hexagon-head bolts, ASTM A 307, Grade A; with hex nuts, ASTM A 563; and, where indicated, flat washers.
- H. Anchor Bolts: ASTM F 1554, Grade 36, of dimensions indicated; with nuts, ASTM A 563; and, where indicated, flat washers.

2.02 MISCELLANEOUS MATERIALS

- A. Low-Emitting Materials: Paints and coatings shall comply with the testing and product requirements of the California Department of Public Health's (formerly, the California Department of Health Services') "Standard Method for the Testing and Evaluation of Volatile Organic Chemical Emissions from Indoor Sources Using Environmental Chambers."
- B. Universal Shop Primer: Fast-curing, lead- and chromate-free, universal modified-alkyd primer complying with MPI#79 and compatible with topcoat.
 - 1. Use primer containing pigments that make it easily distinguishable from zinc-rich primer.

2.03 FABRICATION, GENERAL

- A. Cut, drill, and punch metals cleanly and accurately. Remove burrs and ease edges to a radius of approximately 1/32 inch unless otherwise indicated. Remove sharp or rough areas on exposed surfaces.
- B. Form bent-metal corners to smallest radius possible without causing grain separation or otherwise impairing work.
- C. Form exposed work with accurate angles and surfaces and straight edges.
- D. Weld connections to comply with the following:
 - 1. Use materials and methods that minimize distortion and develop strength and corrosion resistance of base metals.
 - 2. Obtain fusion without undercut or overlap.
 - 3. Remove welding flux immediately.
 - 4. Weld exposed corners and seams continuously unless otherwise indicated.
 - 5. At exposed connections, finish exposed welds to comply with NOMMA's "Voluntary Joint Finish Standards" for Type 3 welds: partially dressed weld with spatter removed.
- E. Form exposed connections with hairline joints, flush and smooth, using concealed fasteners where possible. Where exposed fasteners are required, use Phillips flat-head (countersunk) screws or bolts unless otherwise indicated. Locate joints where least conspicuous.

2.04 MISCELLANEOUS FRAMING AND SUPPORTS

- A. General: Provide steel framing and supports not specified in other Sections as needed to complete the Work.
- B. Fabricate units from steel shapes, plates, and bars of welded construction unless otherwise indicated. Fabricate to sizes, shapes, and profiles indicated and as necessary to receive adjacent construction.

2.05 STEEL WELD PLATES AND ANGLES

- A. Provide steel weld plates and angles not specified in other Sections, for items supported from concrete construction as needed to complete the Work. Provide each unit with no fewer than two integrally welded steel strap anchors for embedding in concrete.

2.06 FINISHES

- A. Preparation for Shop Priming: Prepare uncoated ferrous-metal surfaces to comply with SSPC-SP 3, "Power Tool Cleaning."
- B. Apply shop primer to uncoated surfaces of metal components. Comply with SSPC-PA 1, "Paint Application Specification No. 1: Shop, Field, and Maintenance Painting of Steel," for shop painting.

PART 3 - EXECUTION

3.01 INSTALLING MISCELLANEOUS FRAMING AND SUPPORTS

- A. General: Install framing and supports to comply with requirements of items being supported, including manufacturers' written instructions and requirements indicated on Shop Drawings.

3.02 ADJUSTING AND CLEANING

- A. Touchup Painting: Immediately after erection, clean field welds, bolted connections, and abraded areas of shop paint, and paint exposed areas with same material as used for shop painting to comply with SSPC-PA 1 for touching up shop-painted surfaces.
 - 1. Apply by brush or spray to provide a minimum 2.0-mil (0.05-mm) dry film thickness.

END OF SECTION 055000

Rindge Commons Pre-K

430 & 432 RINDGE AVE,
Cambridge, MA 02140

City of Cambridge
795 Massachusetts Avenue
Cambridge, MA 02139

t: 000.000.0000



**Johnson Roberts Associates Inc.
Architects**
24 Dane Street
Somerville, Massachusetts 02143

t: 617 666-8585
www.johnson-roberts.com

Mechanical, Plumbing, Fire Protection, Electrical & Technology

Garcia • Galuska • DeSousa
Faunce Corner Road, Suite D
Dartmouth, MA 02747

t: 508 998-5700

Cost Estimation

PM&C
Street and number
Town, MA ZIP

t: 000.000.0000

Code Consultant

Hastings Consulting Inc.
142 Hanlon Road
Holliston, MA 01746

t: 508 39708417

Commissioning Consultant

Hastings Consultants, Inc.
303 Wyman Street, Suite 300
Waltham, MA 02451

t: 877 5136249

Hardware Consultant

Robbie McCabe Consulting
27 Main Street, PO Box 530
Maynard, MA 01754

t: 978 2438261

LIST OF DRAWINGS

GENERAL

G0.0 COVER SHEET
G0.1 SYMBOLS & ABBREVIATIONS

ARCHITECTURAL

A1.1 CODE SHEET
A1.2 PARTITION TYPES
A2.1 LEVEL 1 FLOOR PLANS
A2.2 LEVEL 2 FLOOR PLANS
A4.1 SECTION & PLAN DETAILS
A4.2 MILLWORK DETAILS
A6.1 INTERIOR ELEVATIONS
A6.2 INTERIOR ELEVATIONS
A6.3 INTERIOR ELEVATIONS
A6.4 INTERIOR ELEVATIONS
A7.1 TOILET PLANS & ELEVATIONS
A8.1 DOOR SCHEDULE, LEGEND, & DETAILS
A8.2 FINISH SCHEDULE AND PLANS

FIRE PROTECTION

FP0.1 LEGEND AND DETAILS - FIRE PROTECTION
FP1.0 FIRE PROTECTION PLANS

PLUMBING

P0.1 LEGEND, SCHEDULES AND DETAILS - PLUMBING
P1.0 FIRST FLOOR PLUMBING PLANS
P2.0 SECOND FLOOR PLUMBING PLAN

HVAC

M0.1 HVAC - SCHEDULE & LEGENDS
M0.2 HVAC - DETAILS I
M0.3 HVAC - DETAILS III
M1.1 HVAC - 1ST FLOOR DUCTWORK
M1.2 HVAC - 2ND FLOOR DUCTWORK
M2.1 HVAC - 1ST FLOOR PIPING
M2.2 HVAC - 2ND FLOOR PIPING
M3.1 HVAC CONTROLS I
VS1.1 HVAC - VIBRATION & SEISMIC DETAILS.
(IN SPEC LIST)

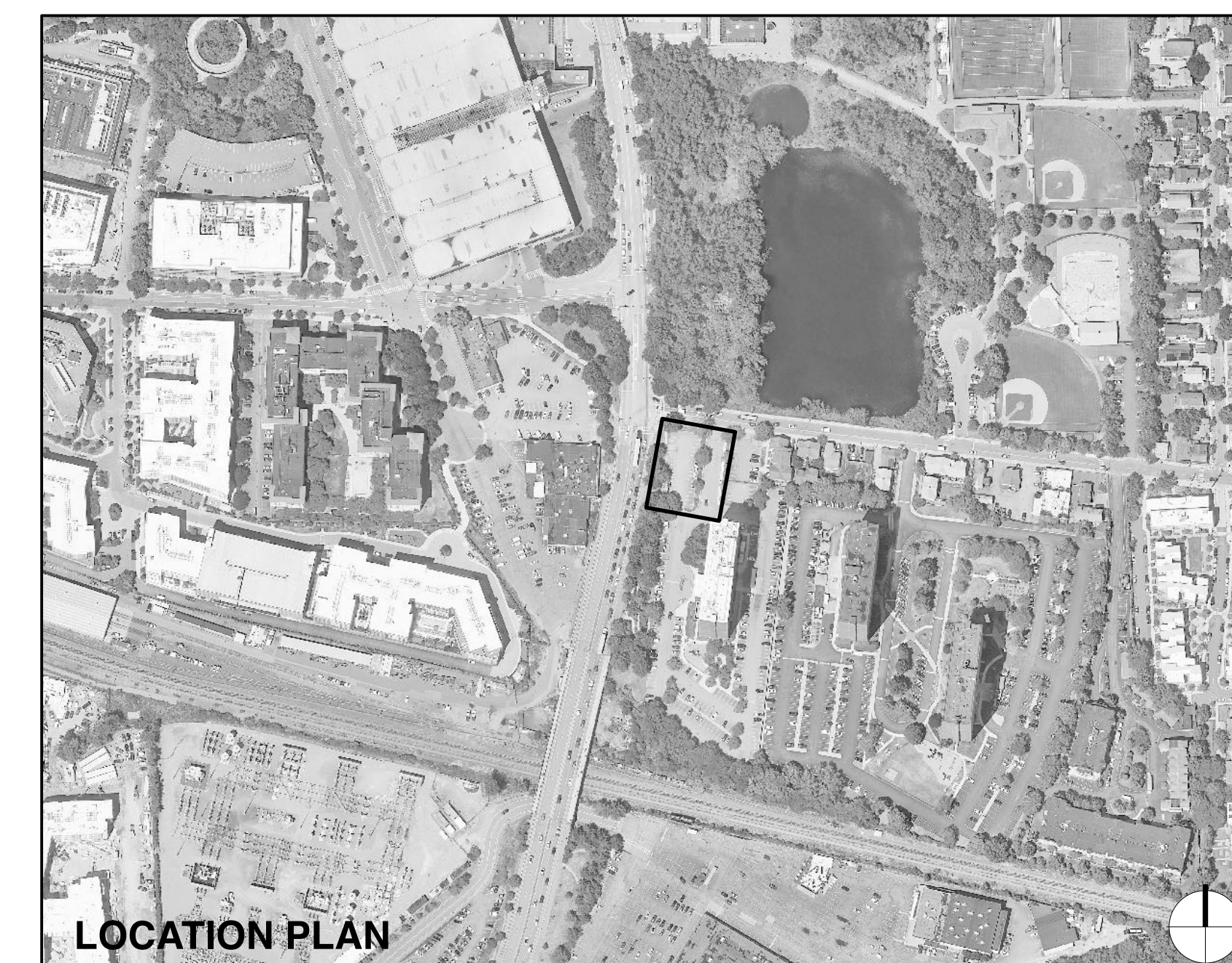
ELECTRICAL

E0.1 SYMBOL LIST / FIXTURE SCHEDULE
E0.2 MECHANICAL / PLUMBING SCHEDULES
E0.3 ONE LINE RISER
E0.4 ONE LINE RISER
E2.1 LEVEL 1 POWER / LIGHTING FLOOR PLANS
E2.2 LEVEL 2 POWER / LIGHTING FLOOR PLANS
E4.1 FIRE ALARM FLOOR PLANS
ED2.1 DEMO FLOOR PLAN

SECURITY

T1.1 SECURITY / TECHNOLOGY FLOOR PLANS
T1.2 SECURITY / TECHNOLOGY DETAILS

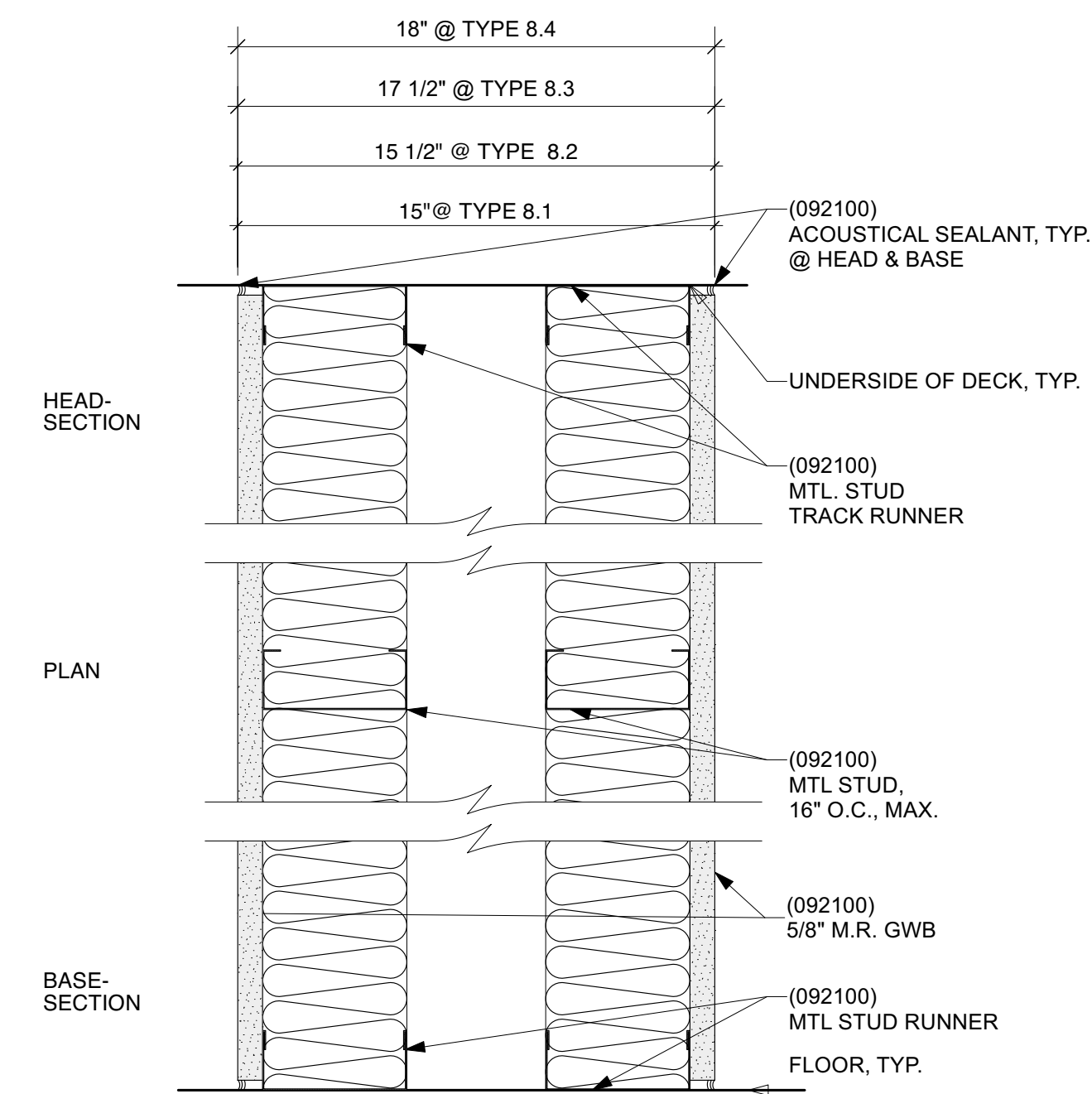
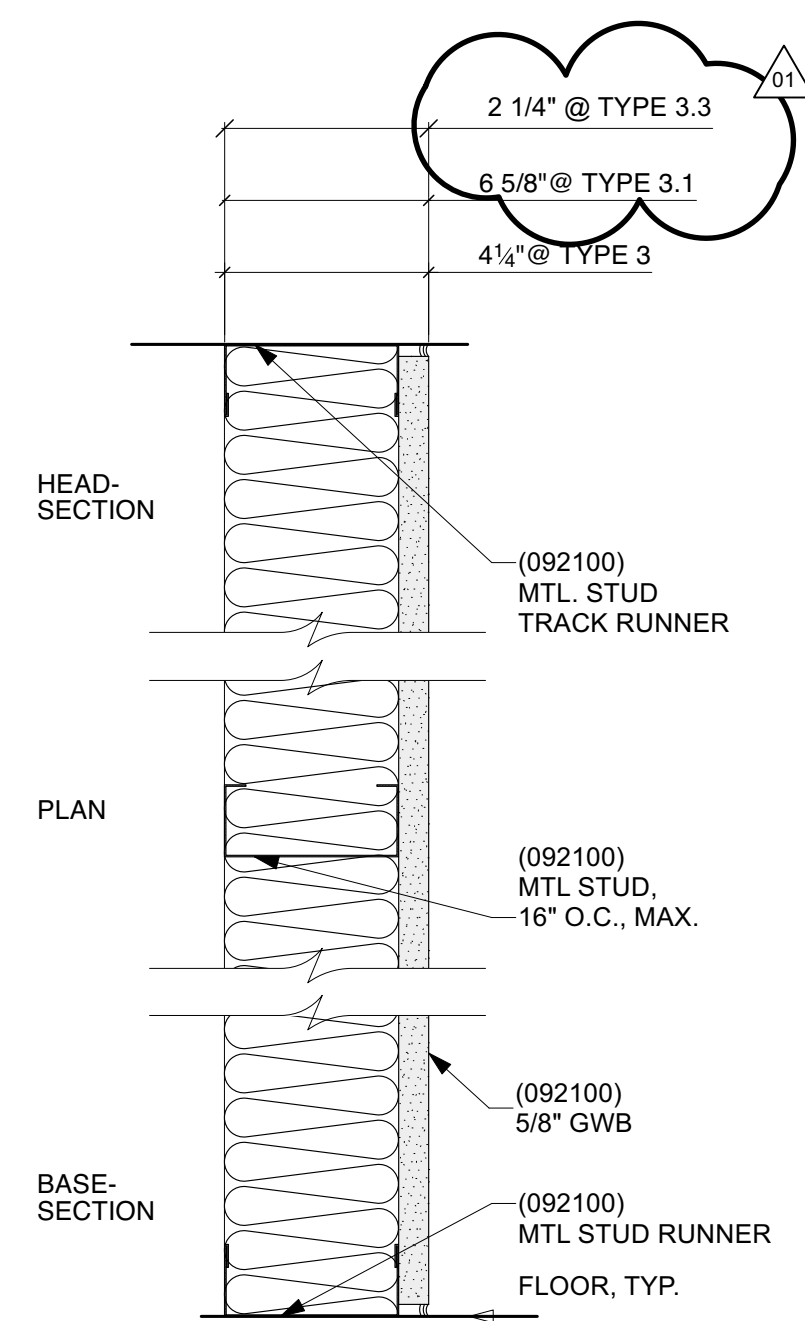
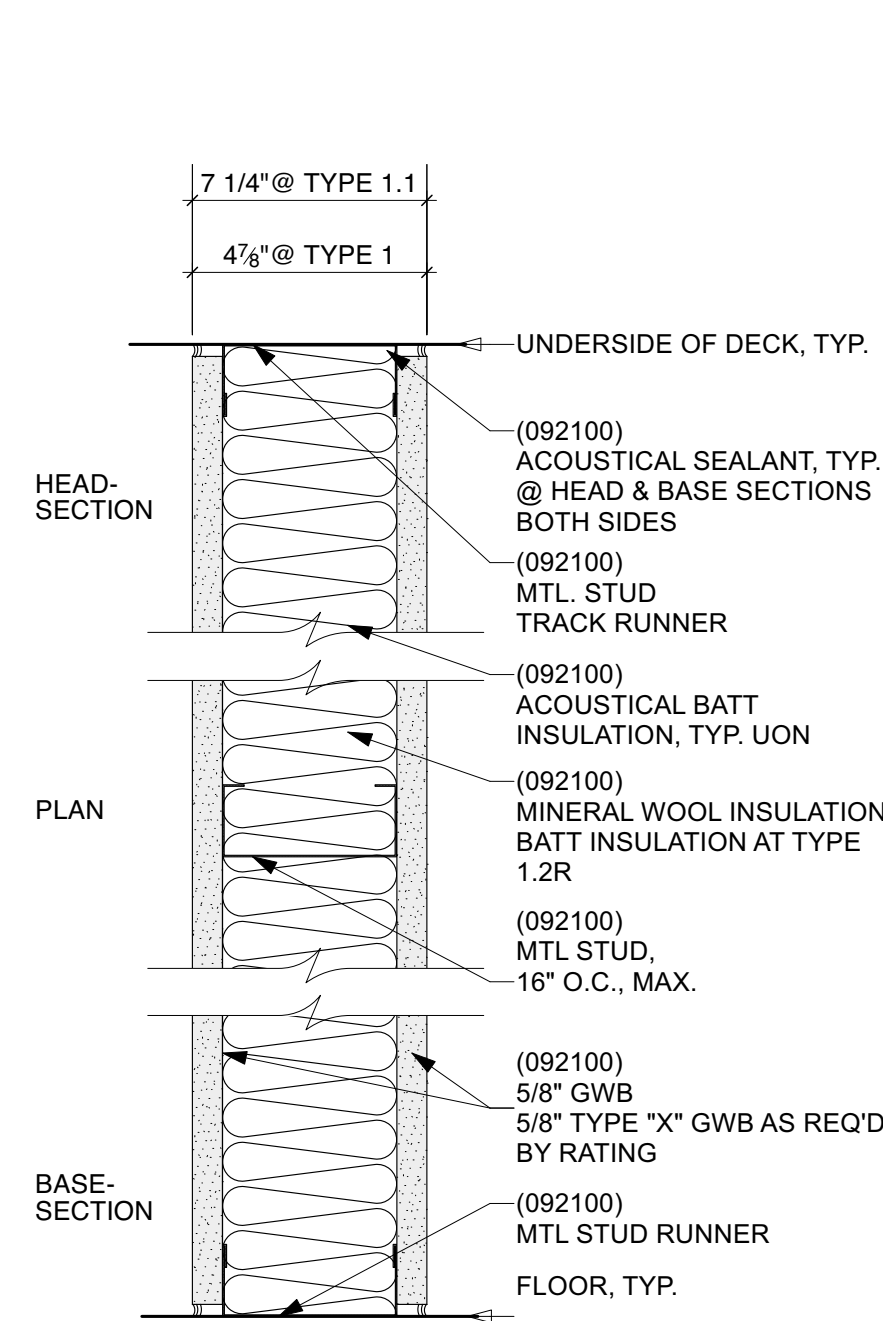
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BID DOCUMENTS

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10/12/2023



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- 3 3 5/8\"/>

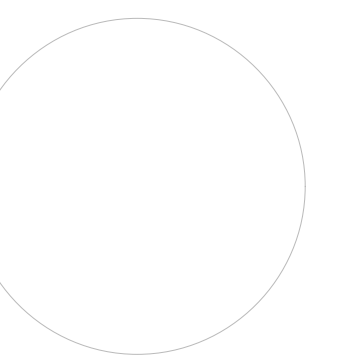
- 8.1 PLUMBING CHASE WALL 1'4 1/4\"/>

SEE FINISH SCHEDULE AND ELEVATIONS.

- USE MOISTURE RESISTANT GWB AT ALL WALLS W/ CERAMIC TILE FINISH
- USE IMPACT RESISTANT GWB AT ALL WALLS W/ P-LAM WAINSCOTING OR GYM PROTECTION MATS



24 DANE STREET
SOMERVILLE, MA
0 2 1 4 3 - 3 2 2 8



Architect

REV.	DATE	DESCRIPTION
01	30-Oct-2023	Add #1

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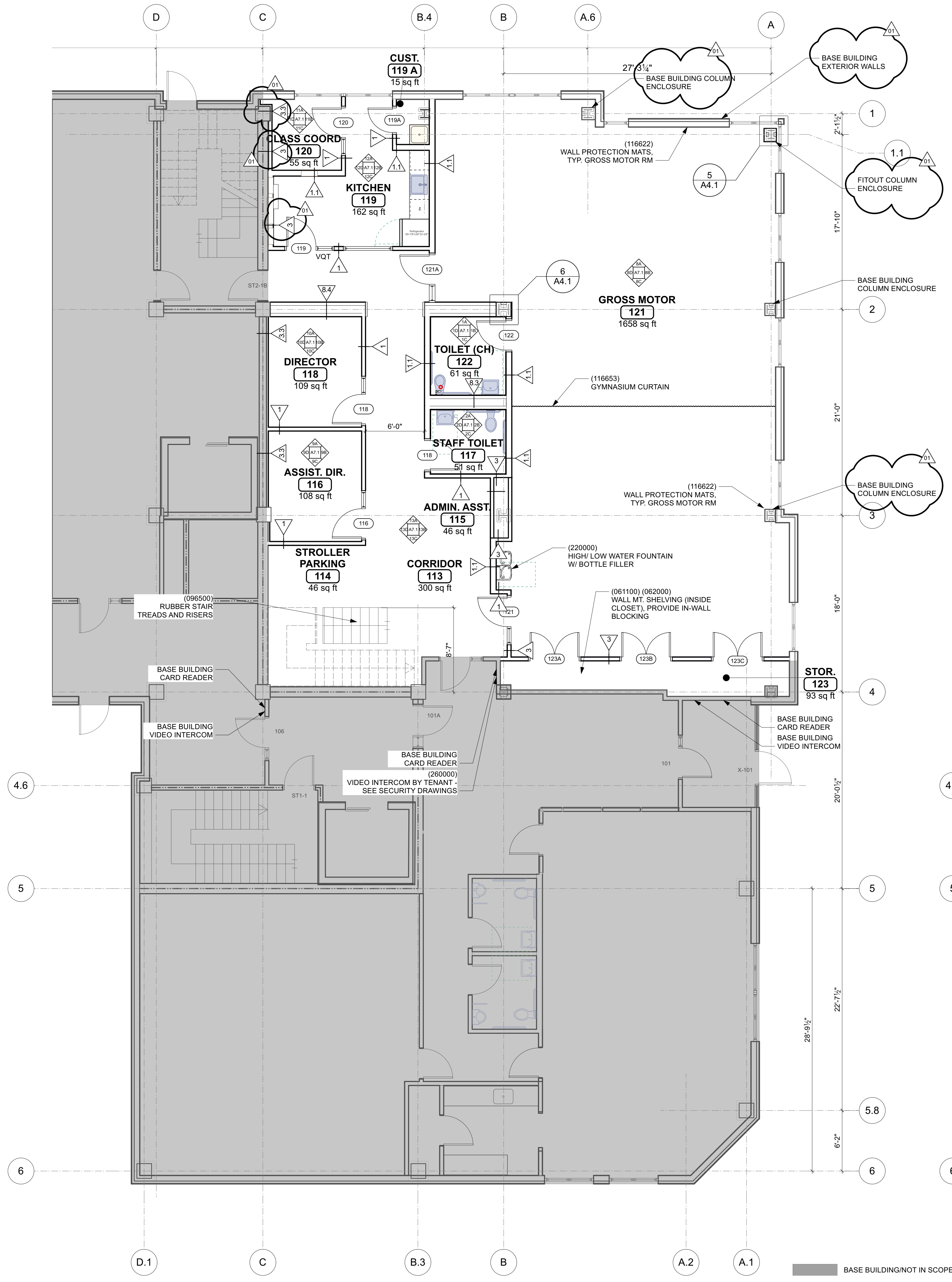
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Project No: 23006

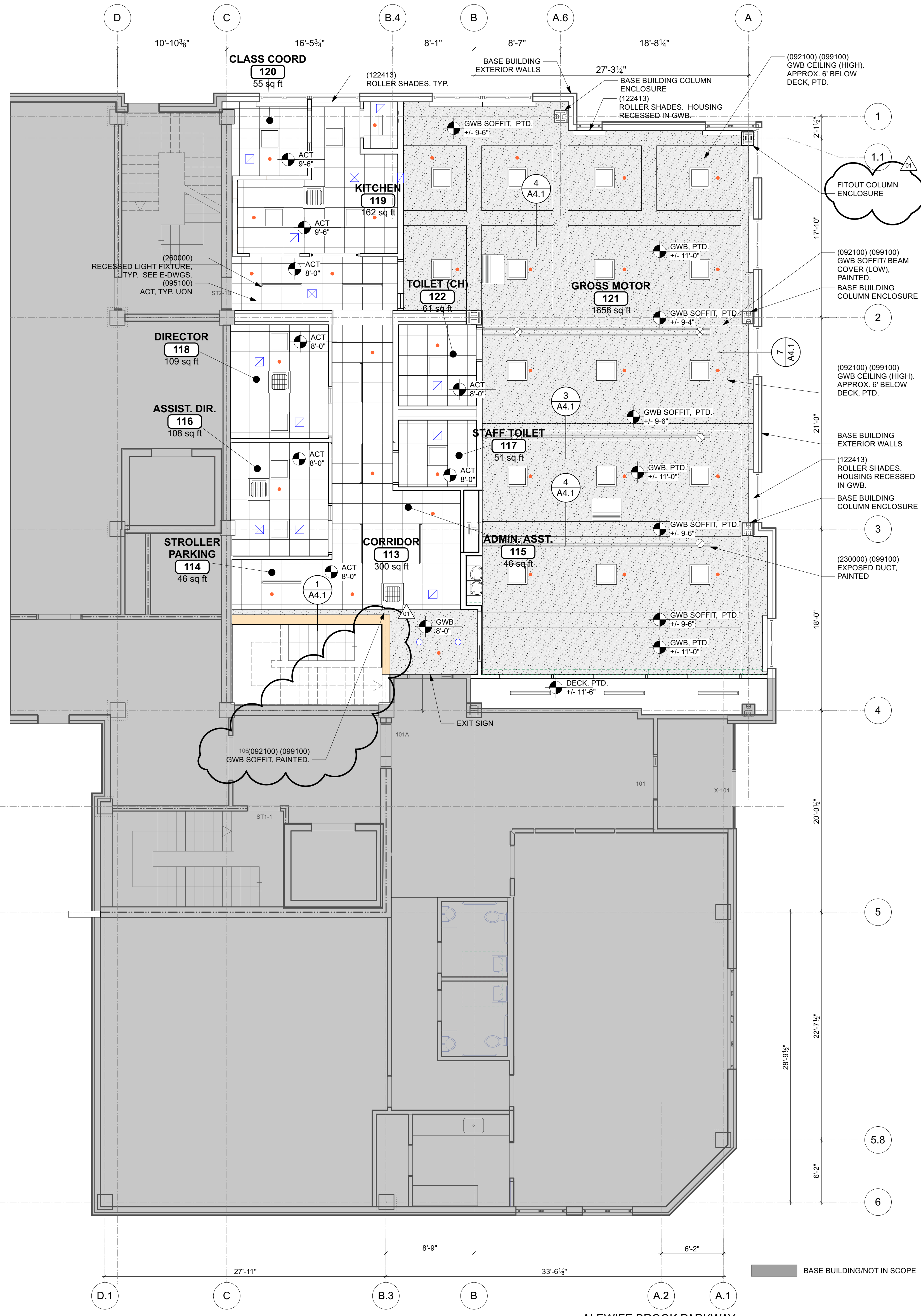
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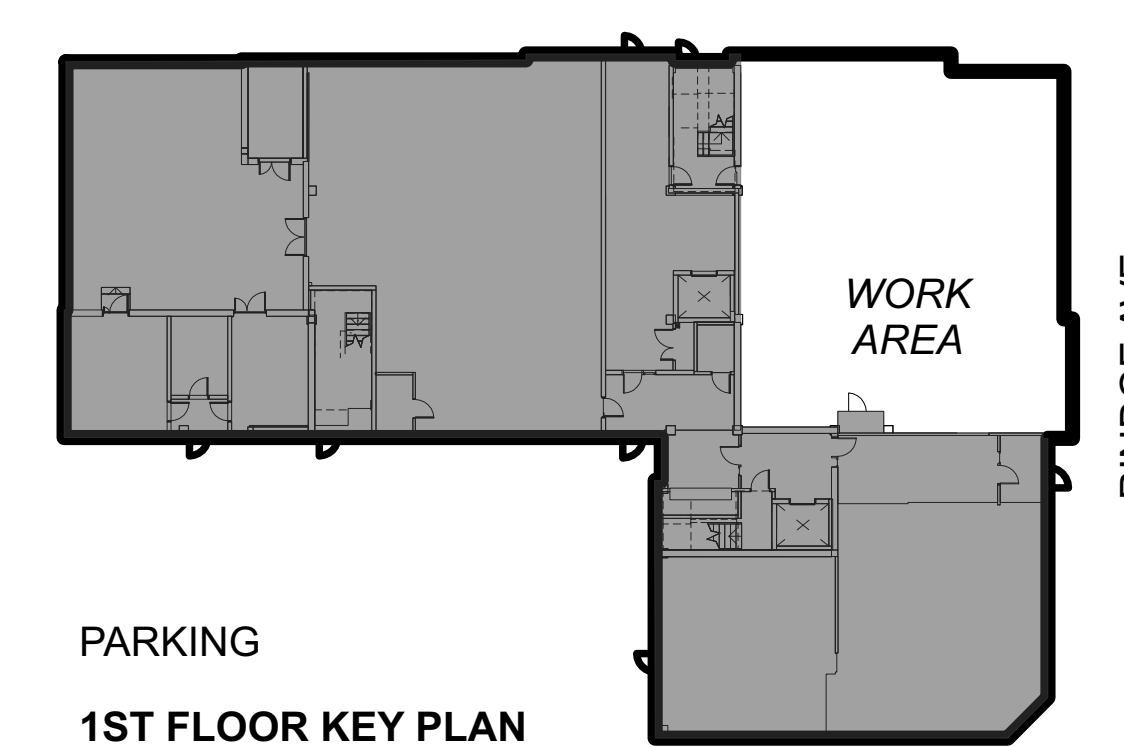
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1 LEVEL 1 FLOOR PLAN
Scale: 3/16" = 1'-0"



2 LEVEL 1 RCP
Scale: 3/16" = 1'-0"



PARKING
1ST FLOOR KEY PLAN

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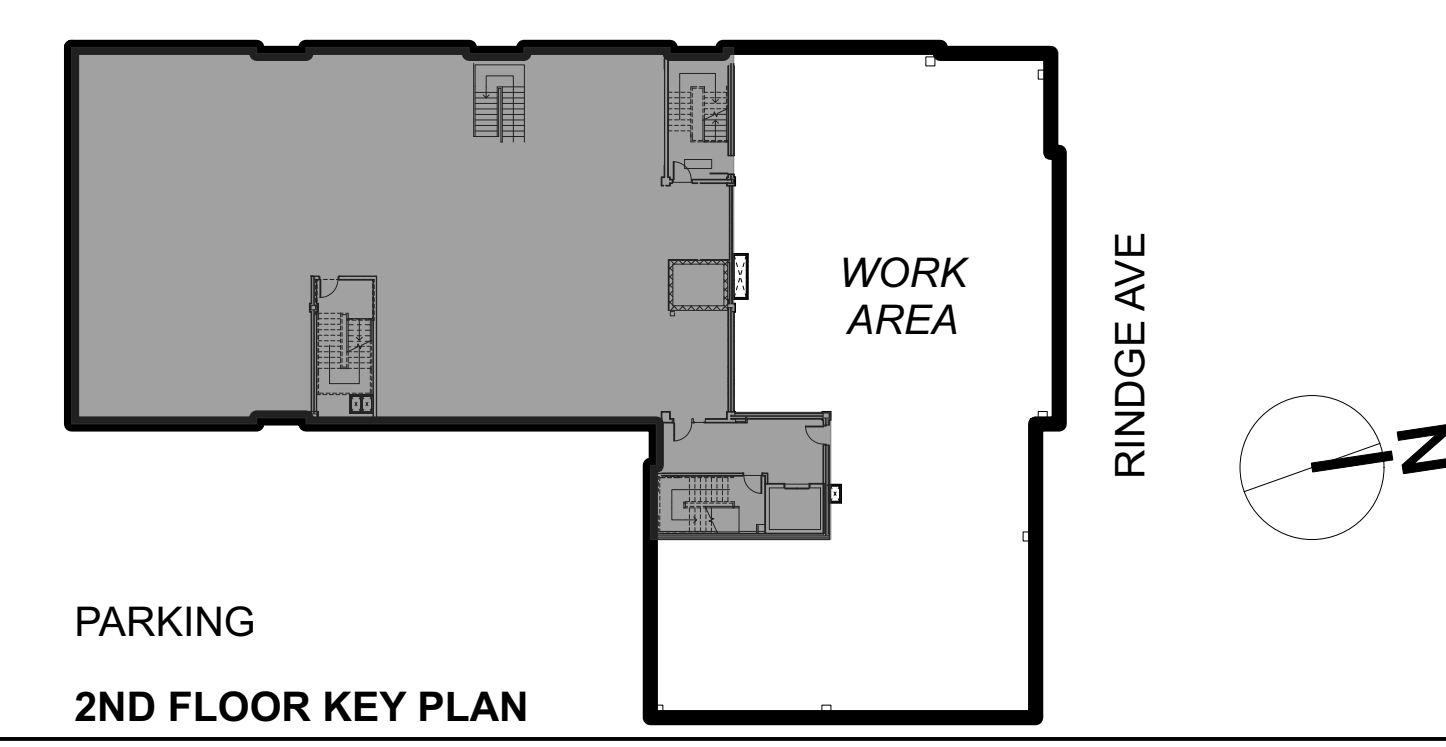
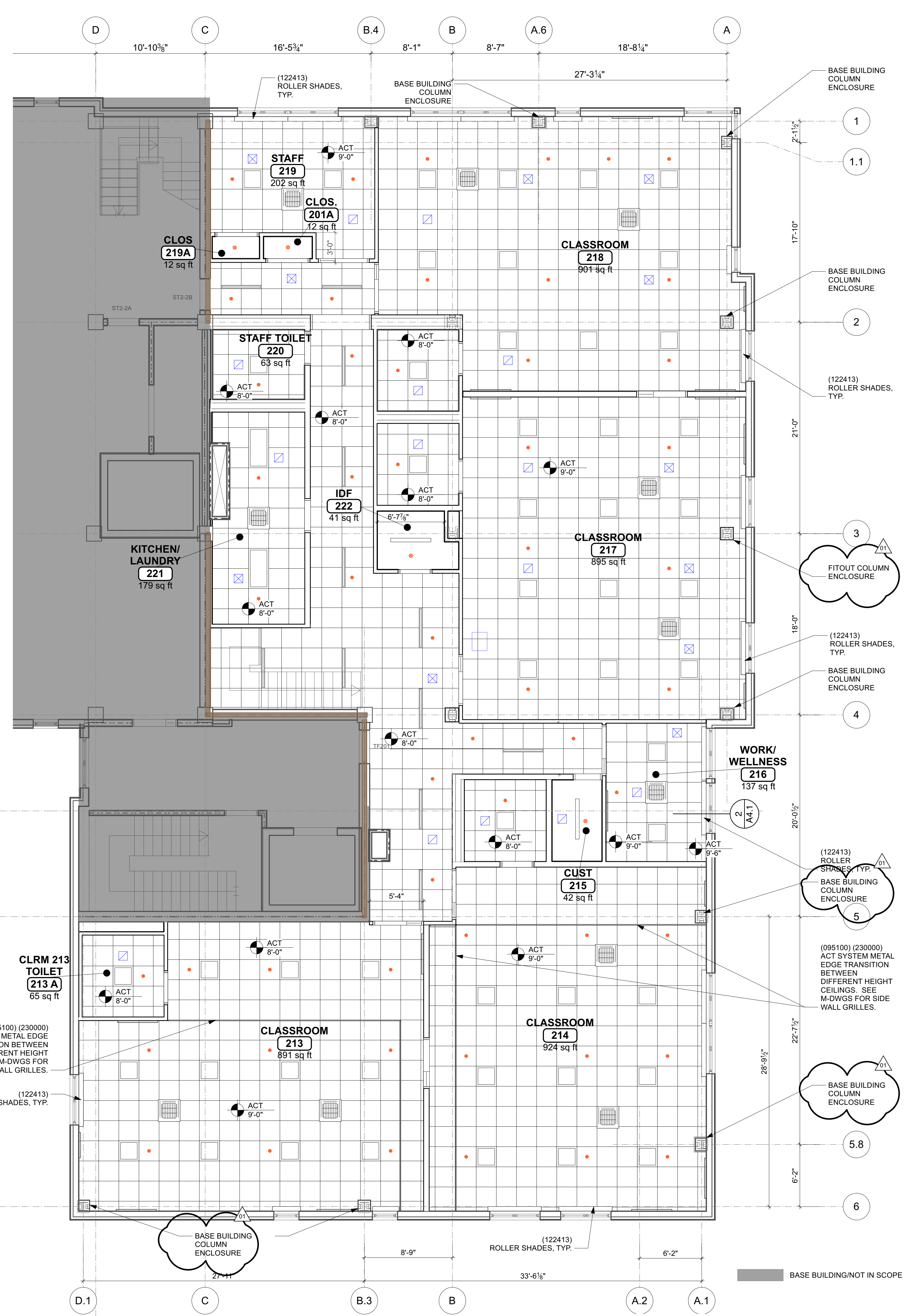
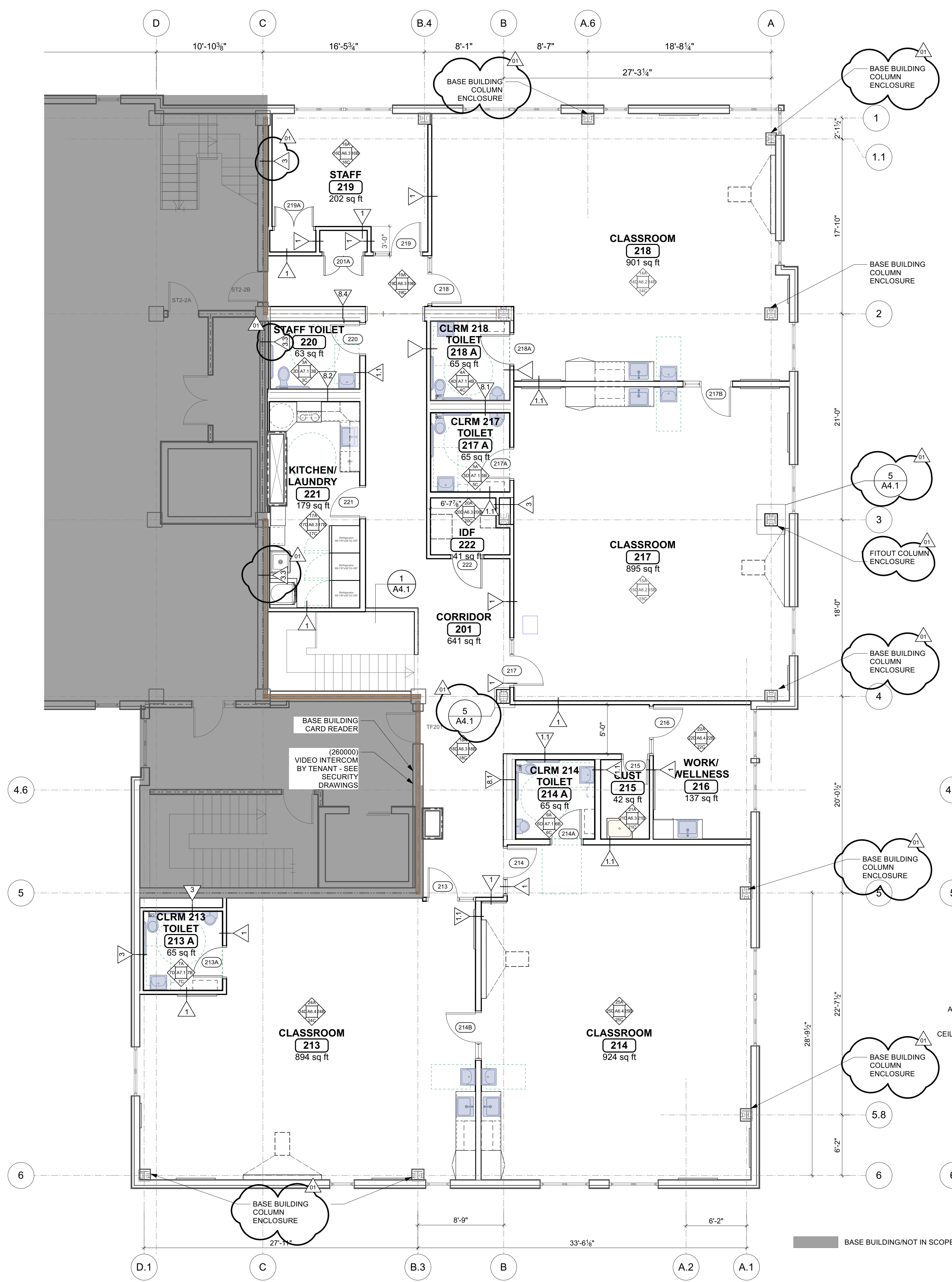
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Date: 10/12/2023 Drawn By: SH
Project No: 23006

Sheet No.

A2.1

BID DOCUMENTS



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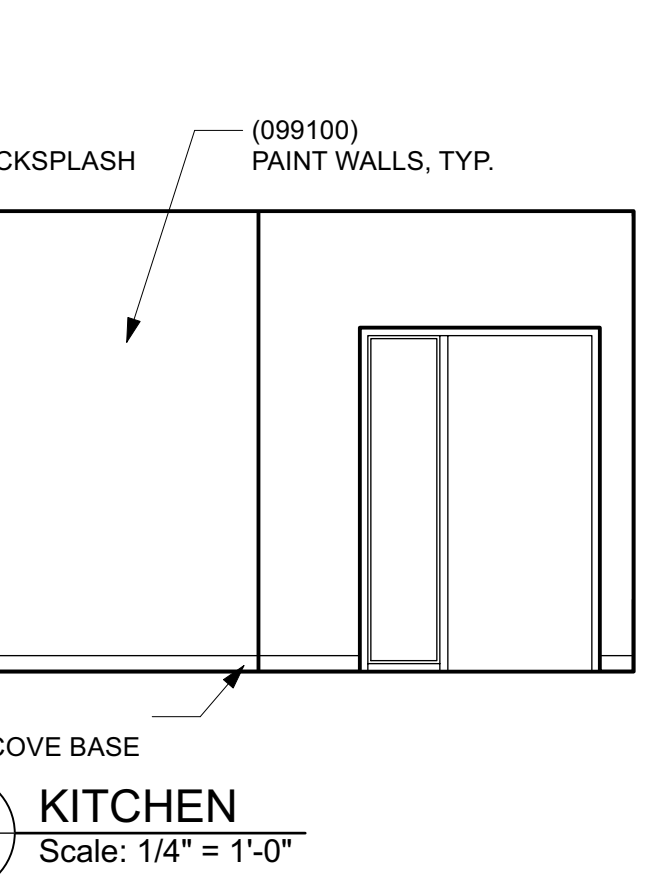
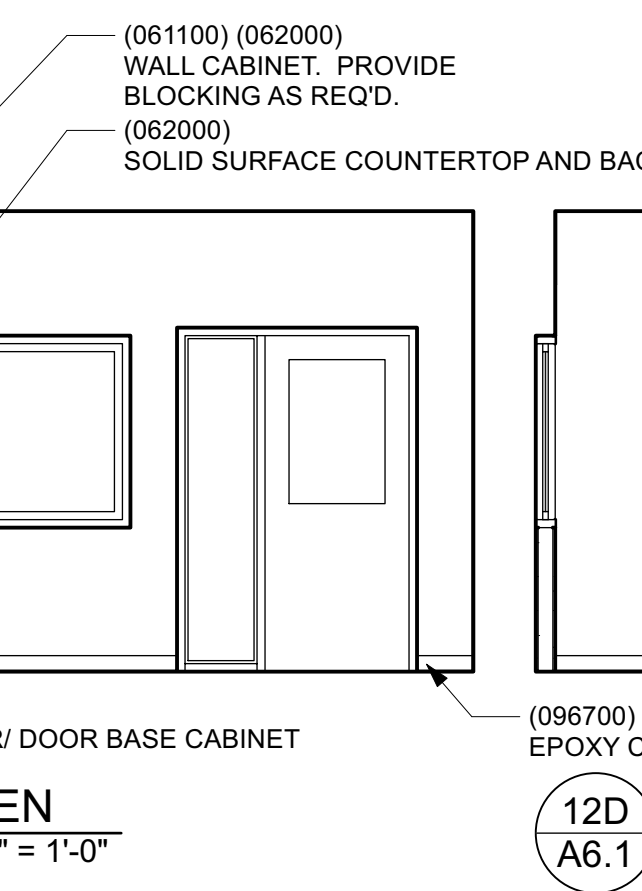
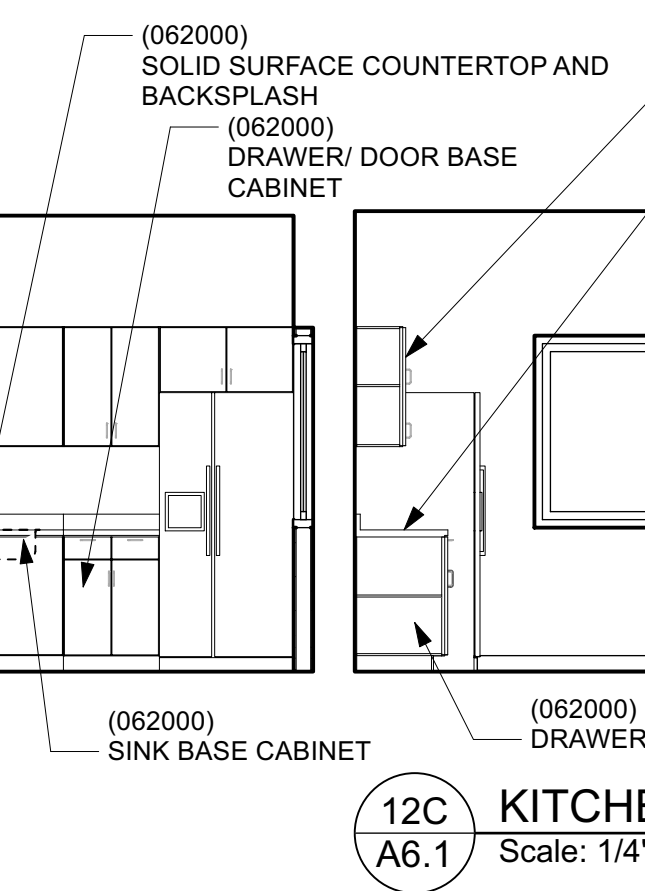
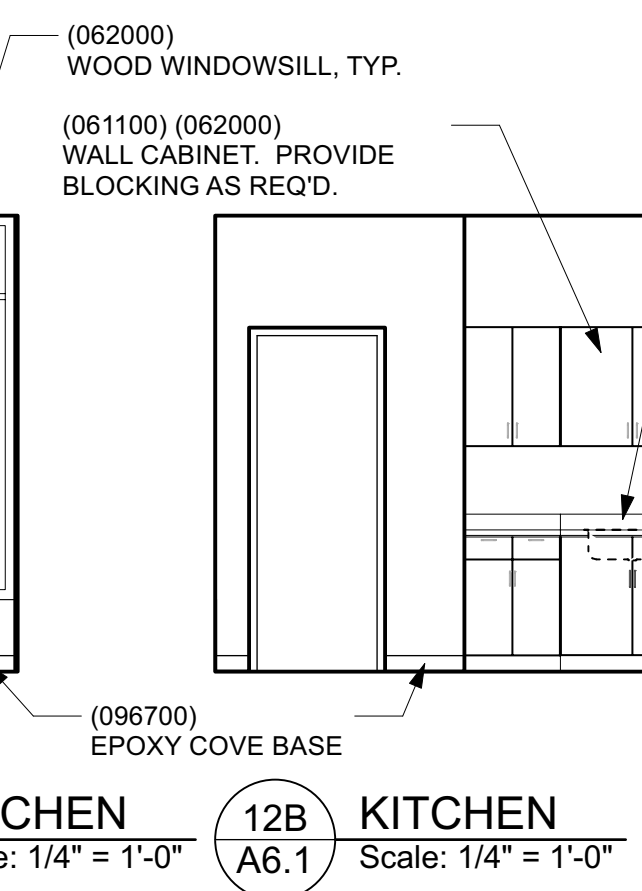
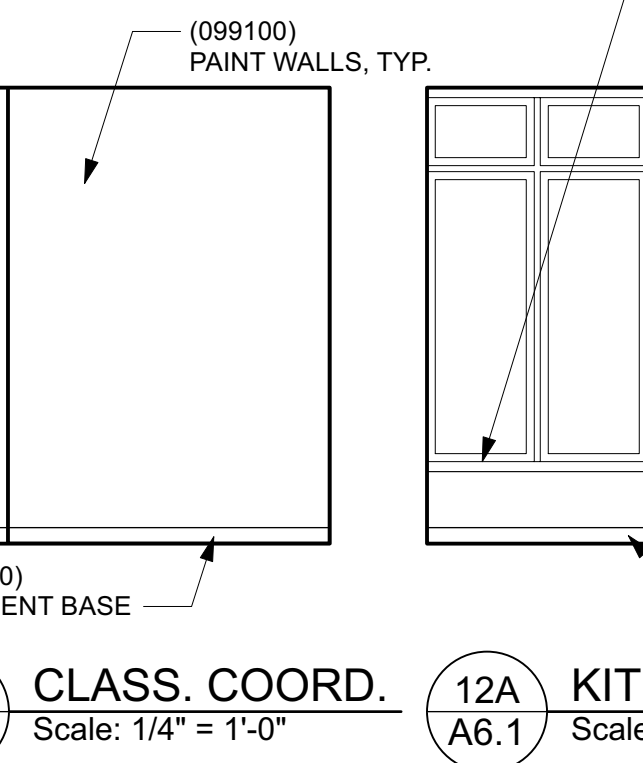
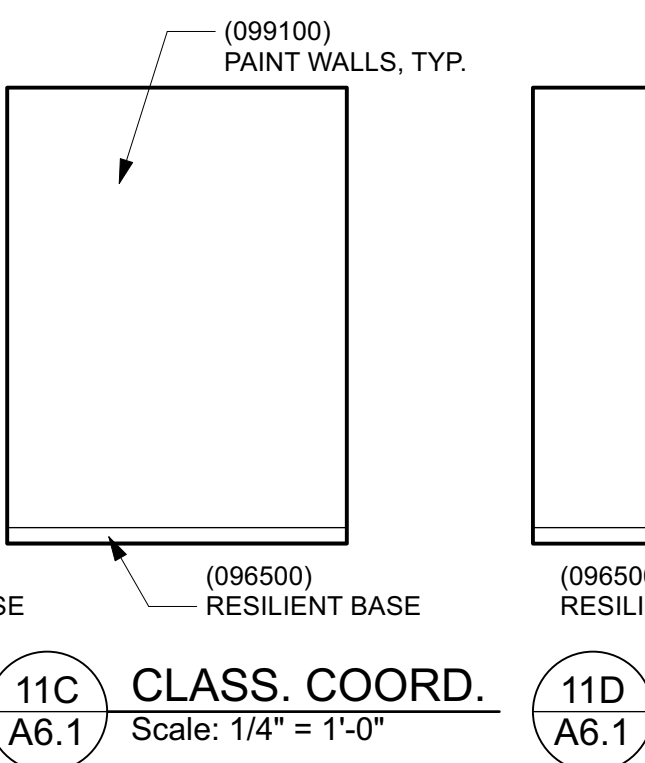
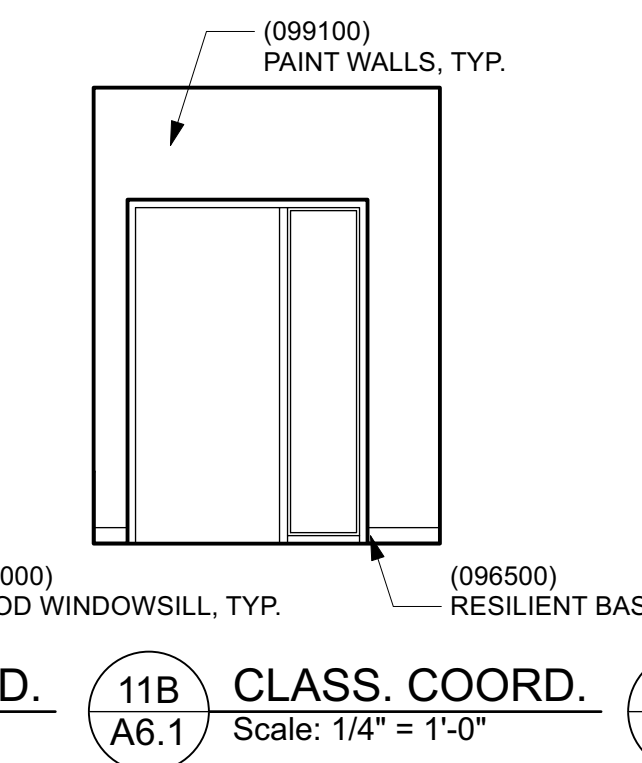
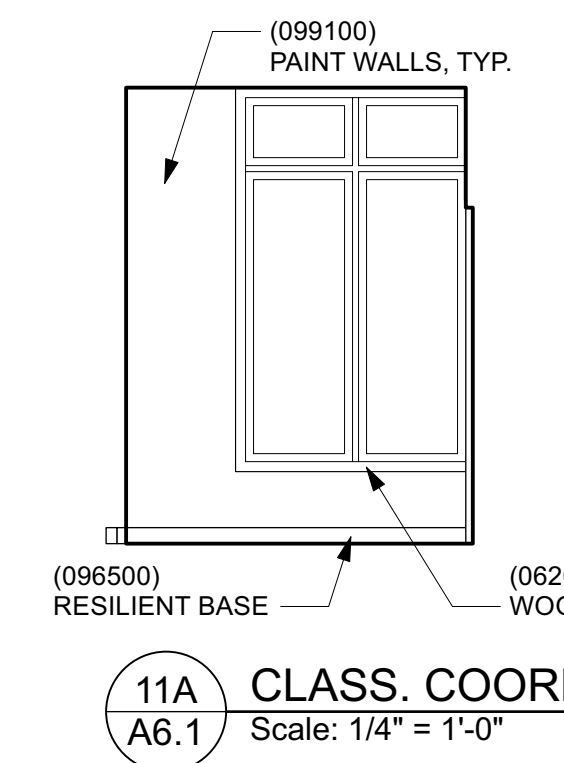
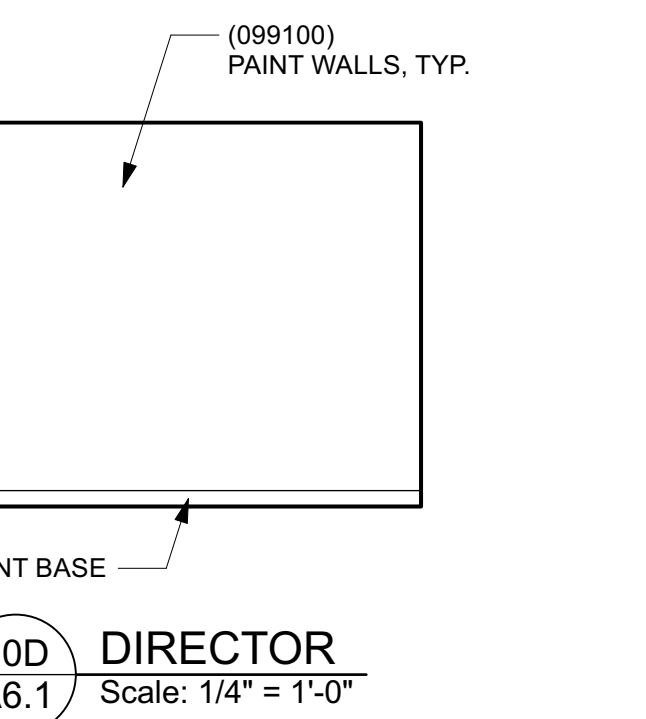
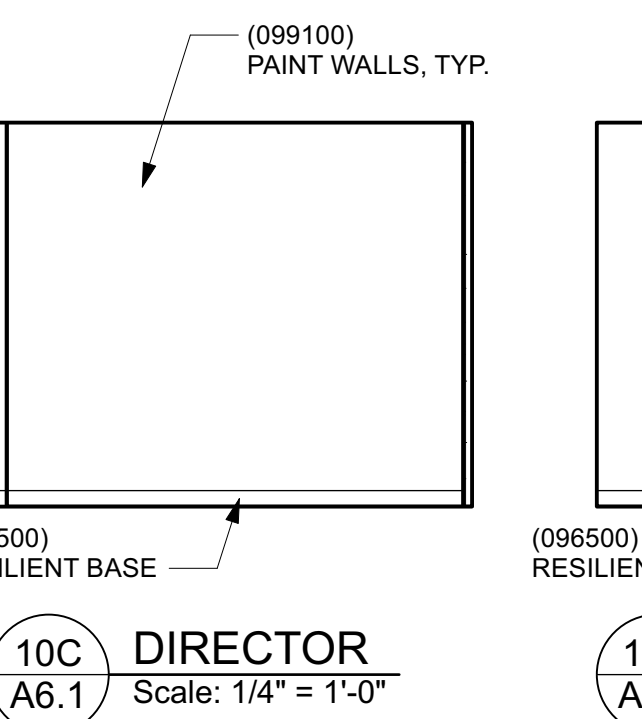
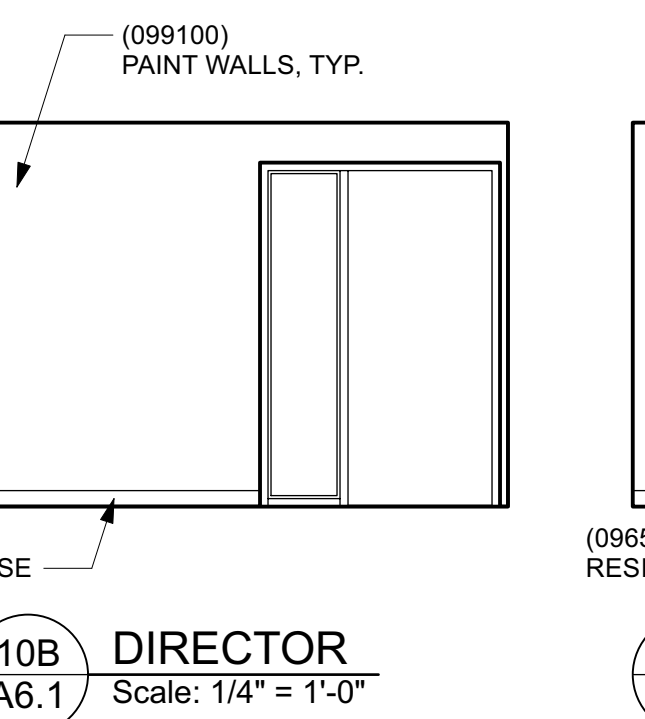
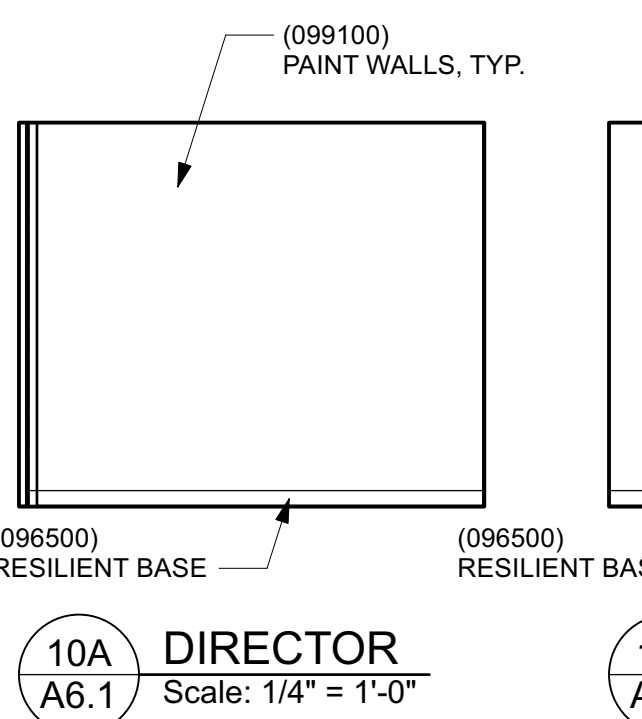
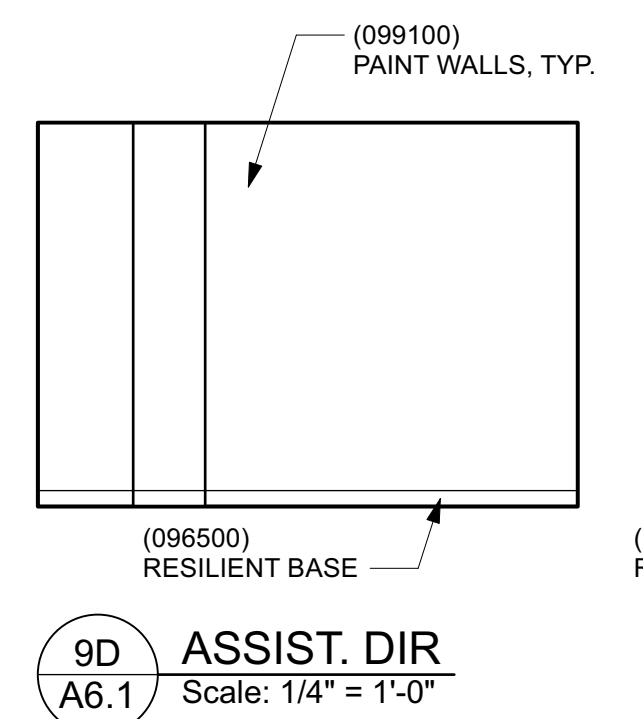
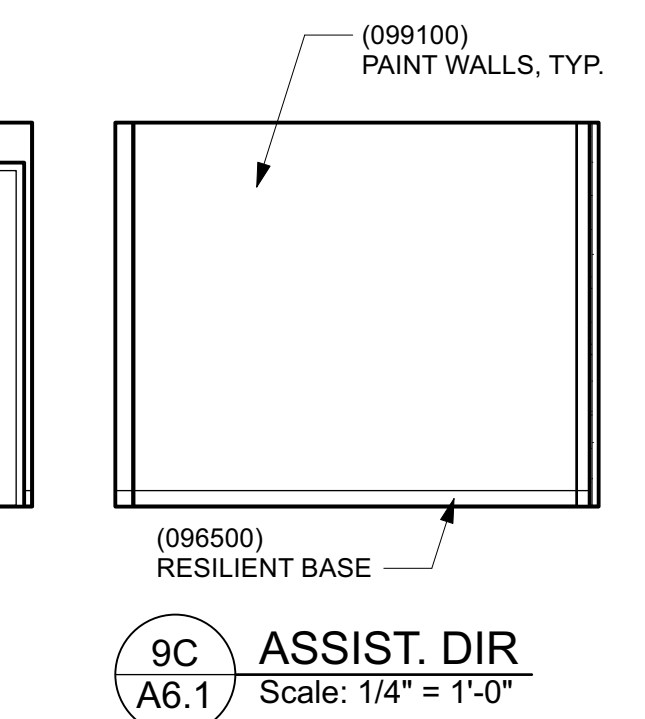
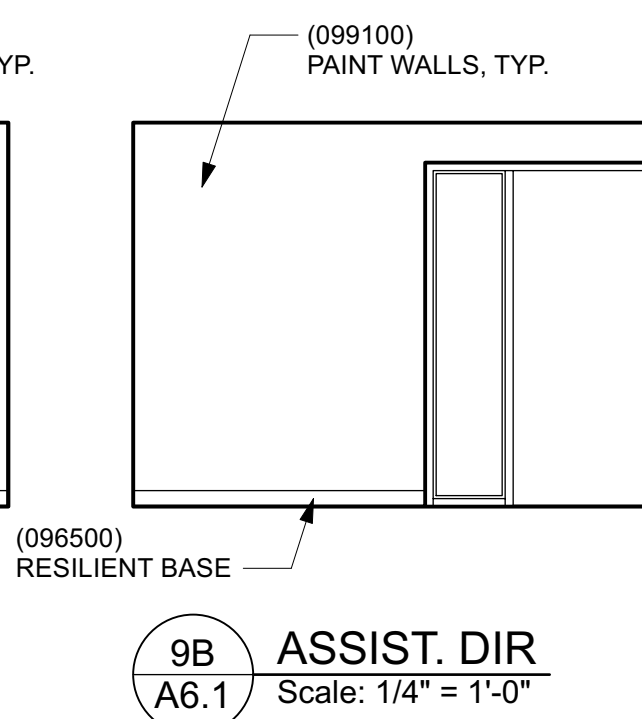
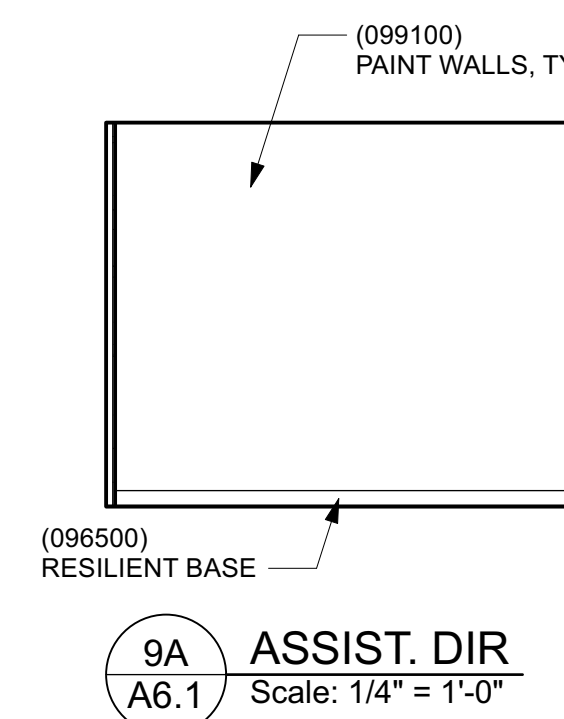
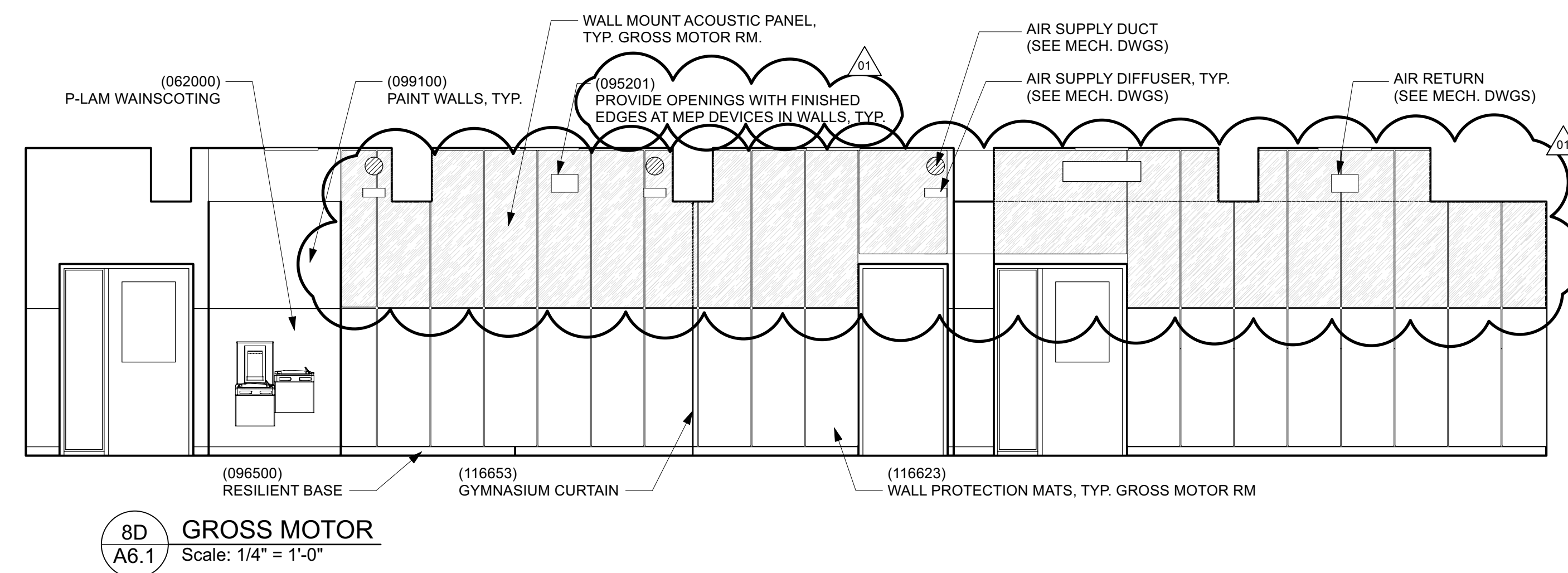
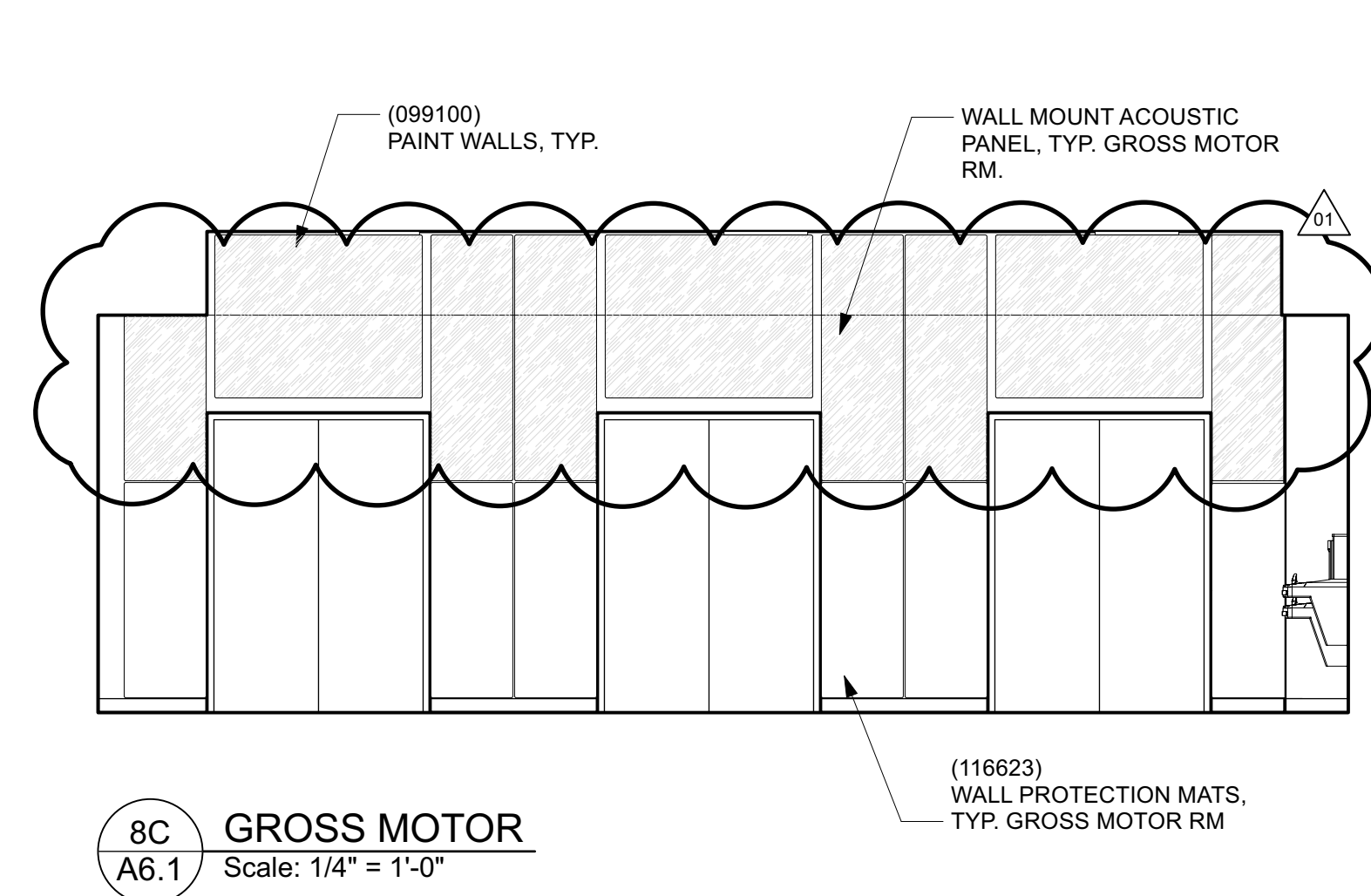
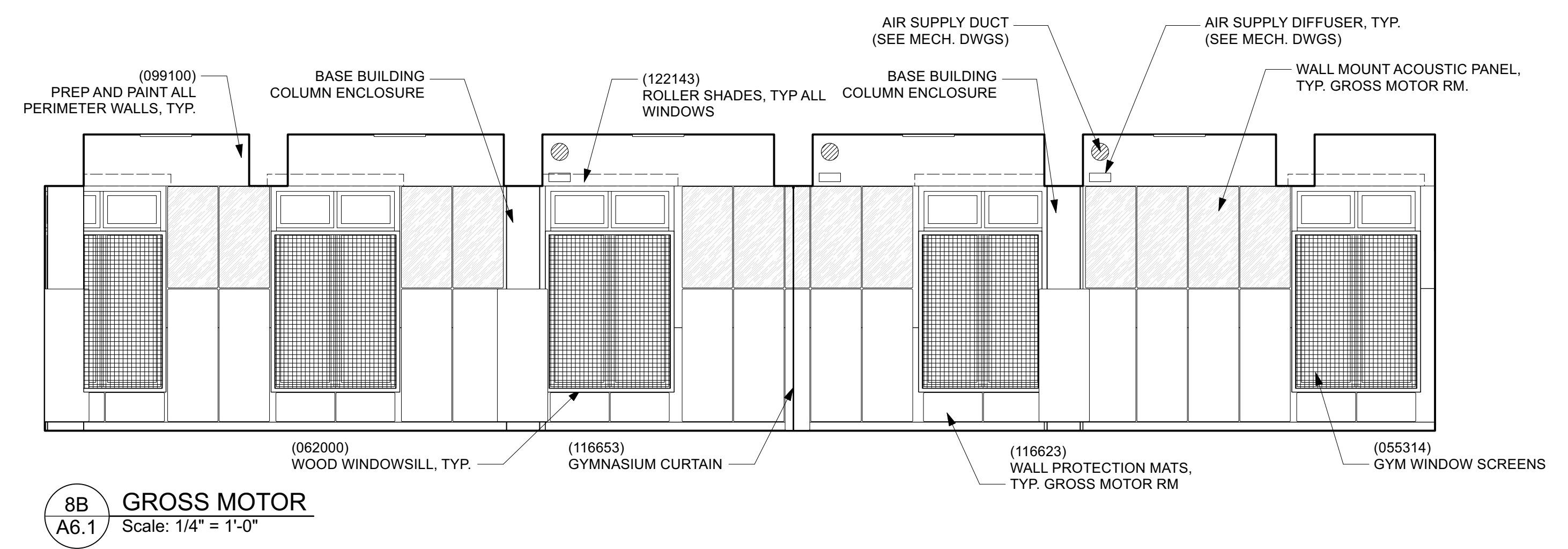
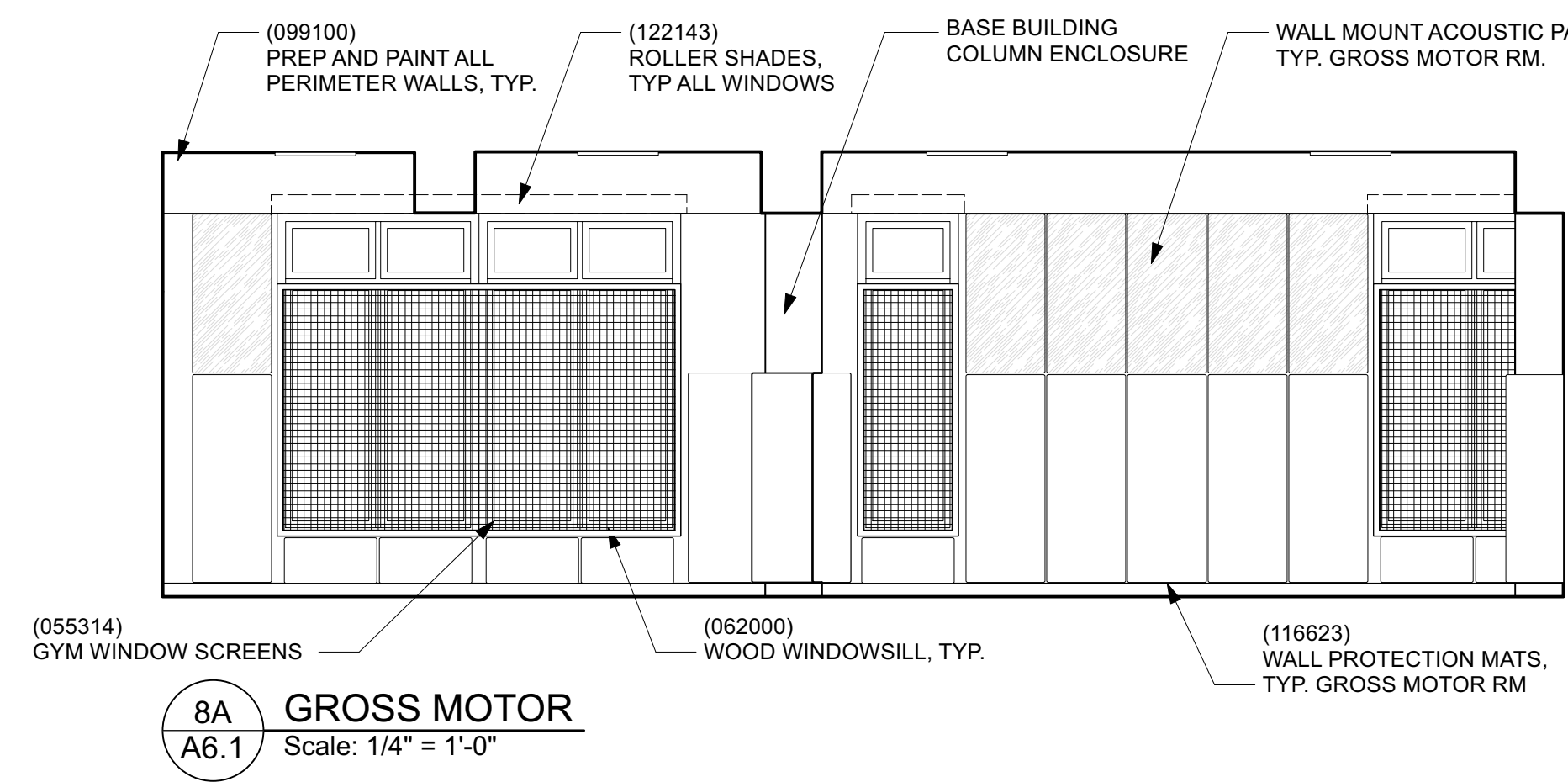
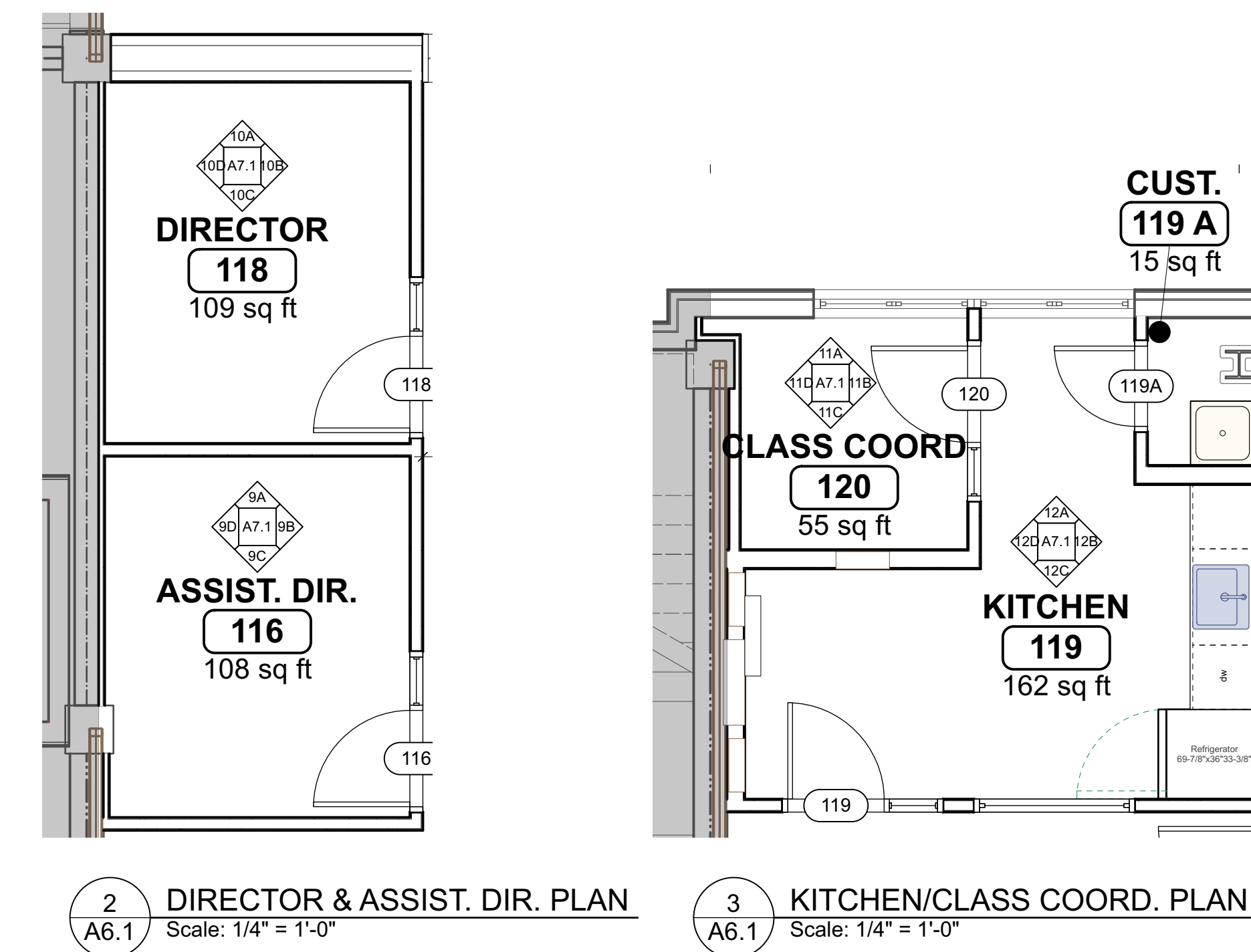
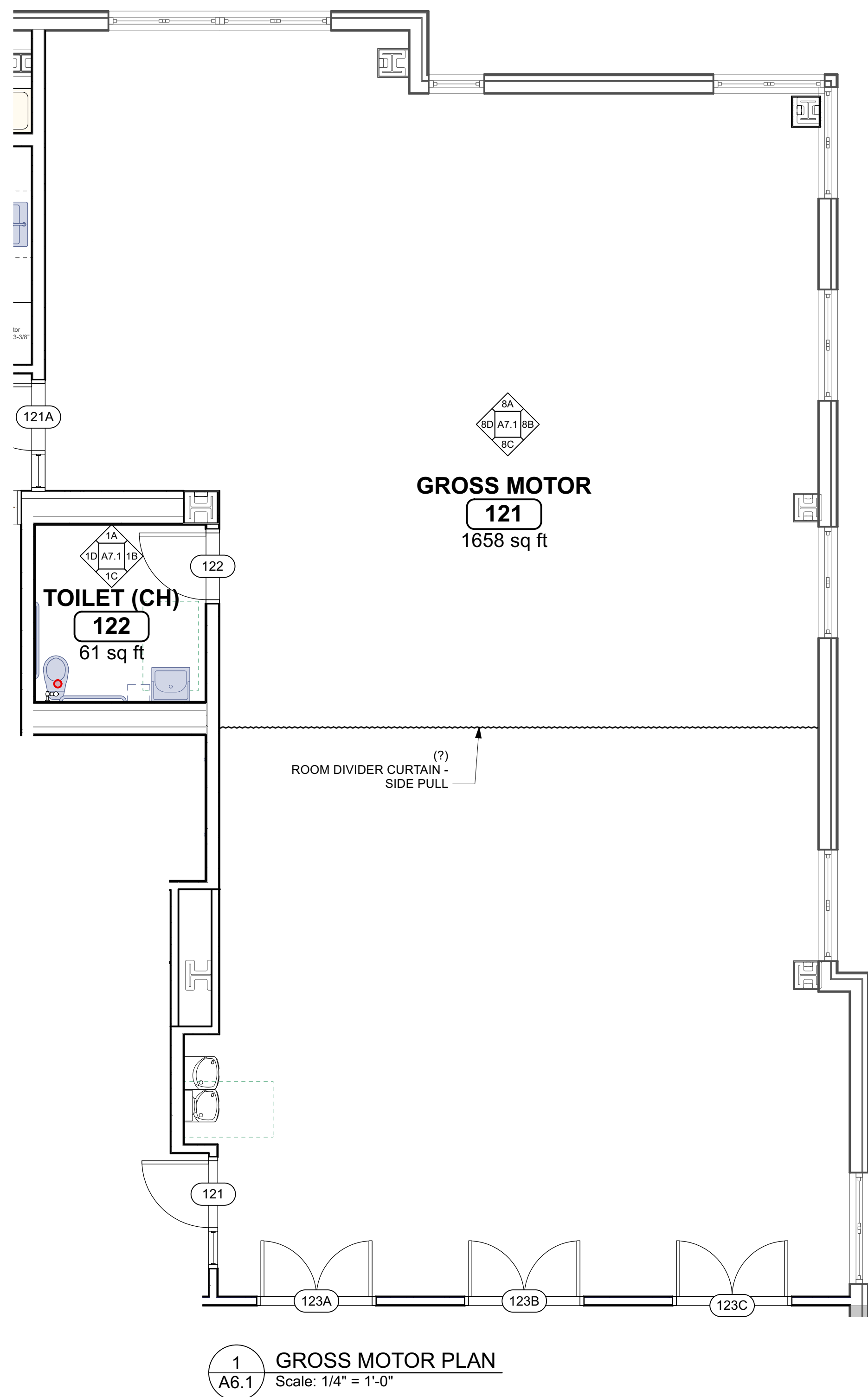
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**LEVEL 2 FLOOR
PLAN**

Date: 10/12/2023 Drawn By: SH
Project No: 23006

Sheet No.

A2.2

BID DOCUMENTS



**JOHNSON
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ASSOCIATES INC.**

ARCHITECTS

24 DANE STREET
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01	30-Oct-2023	Add #1

**Rindge
Commons
Pre-K**

430 & 432 RINDGE AVE,
Cambridge, MA 02140

Sheet Title
**INTERIOR
ELEVATIONS**

Date: 10/12/2023 Drawn By: SH
Project No: 23006

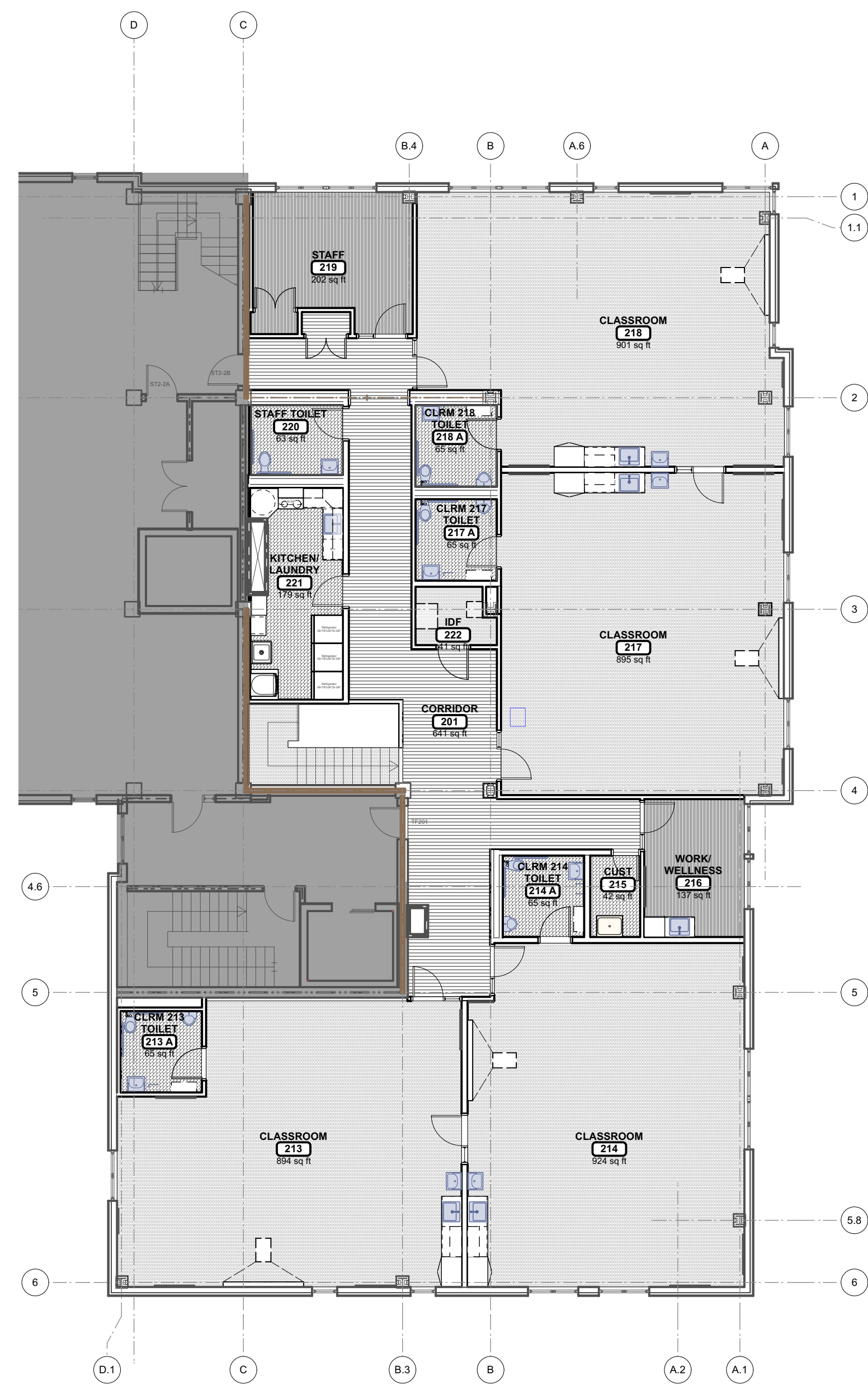
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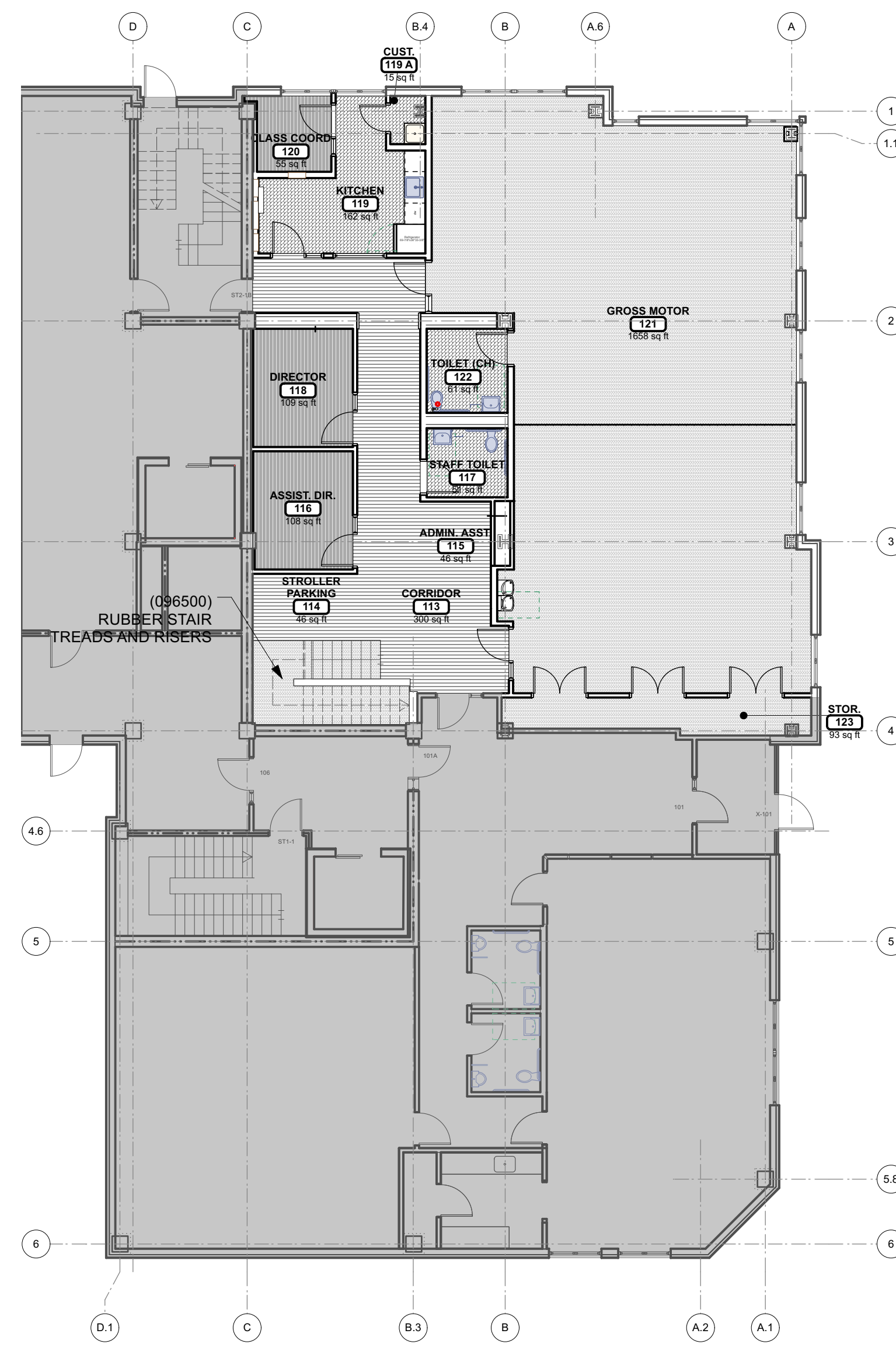
BID DOCUMENTS

ROOM FINISH SCHEDULE

Room No.	Room Name	Floor	Base	Walls				Ceiling				Notes		
		Mat'l	Mat'l	North		East		South		West			Mat'l	Fin.
				Mat'l	Fin.	Mat'l	Fin.	Mat'l	Fin.	Mat'l	Fin.			
113	CORRIDOR	VQT	RESIL	GWB	PAINT	GWB	PAINT	GWB	PAINT	GWB	PAINT	ACT/GWB	PAINT(GWB)	P-LAM WAINSCOTING 4' GWB CEILING AND SOFFIT IS PAINTED
114	STROLLER PARKING	VQT	RESIL	GWB	PAINT	GWB	PAINT	GWB	PAINT	GWB	PAINT	ACT	-	
115	ADMIN. ASST.	VQT	RESIL	GWB	PAINT	GWB	PAINT	GWB	PAINT	GWB	PAINT	ACT	-	
116	ASSIST. DIR.	CPT	RESIL	GWB	PAINT	GWB	PAINT	GWB	PAINT	GWB	PAINT	ACT	-	
117	STAFF TOILET	EPOXY	COVERED CT	CT	-	CT	-	CT	-	CT	-	ACT	-	
118	DIRECTOR	CPT	RESIL	GWB	PAINT	GWB	PAINT	GWB	PAINT	GWB	PAINT	ACT	-	
119	KITCHEN	EPOXY	COVERED EPOXY	PLAM	EPOXY PAINT	PLAM	EPOXY PAINT	PLAM	EPOXY PAINT	PLAM	EPOXY PAINT	ACT	-	
119 A	CUST.	EPOXY	COVERED EPOXY	PLAM	EPOXY PAINT	PLAM	EPOXY PAINT	PLAM	EPOXY PAINT	PLAM	EPOXY PAINT	ACT	-	
120	CLASS COORD	CPT	RESIL	GWB	PAINT	GWB	PAINT	GWB	PAINT	GWB	PAINT	ACT	-	
121	GROSS MOTOR	RUBBER	RESIL	GWB	PAINT	GWB	PAINT	GWB	PAINT	GWB	PAINT	GWB	PAINT	SOFT WALL PANELS/ ACOUSTIC WALL PANELS
122	TOILET (CH)	EPOXY	COVERED CT	CT	-	CT	-	CT	-	CT	-	ACT	-	
123	STOR.	RUBBER	RESIL	GWB	PAINT	GWB	PAINT	GWB	PAINT	GWB	PAINT	ACT	-	
201	CORRIDOR	VQT	RESIL	GWB	PAINT	GWB	PAINT	GWB	PAINT	GWB	PAINT	ACT	-	P-LAM WAINSCOTING 4'
201	CORRIDOR	-	RESIL	GWB	PAINT	GWB	PAINT	GWB	PAINT	GWB	PAINT	ACT	-	P-LAM WAINSCOTING 4'
201A	CLOS.	RUBBER	RESIL	GWB	PAINT	GWB	PAINT	GWB	PAINT	GWB	PAINT	ACT	-	
213	CLASSROOM	RUBBER	RESIL	GWB	PAINT	GWB	PAINT	GWB	PAINT	GWB	PAINT	ACT	-	P-LAM WAINSCOTING 4'
213	CLASSROOM													
213 A	CLRM 213 TOILET	EPOXY	COVERED CT	CT	-	CT	-	CT	-	CT	-	ACT	-	
214	CLASSROOM	RUBBER	RESIL	GWB	PAINT	GWB	PAINT	GWB	PAINT	GWB	PAINT	ACT	-	P-LAM WAINSCOTING 4'
214 A	CLRM 214 TOILET	EPOXY	COVERED CT	CT	-	CT	-	CT	-	CT	-	ACT	-	
215	CUST.	EPOXY	COVERED CT	CT	-	CT	-	CT	-	CT	-	ACT	-	
216	WORK/ WELLNESS	CPT	RESIL	GWB	PAINT	GWB	PAINT	GWB	PAINT	GWB	PAINT	ACT	-	
217	CLASSROOM	RUBBER	RESIL	GWB	PAINT	GWB	PAINT	GWB	PAINT	GWB	PAINT	ACT	-	P-LAM WAINSCOTING 4'
217 A	CLRM 217 TOILET	EPOXY	COVERED CT	CT	-	CT	-	CT	-	CT	-	ACT	-	
218	CLASSROOM	RUBBER	RESIL	GWB	PAINT	GWB	PAINT	GWB	PAINT	GWB	PAINT	ACT	-	P-LAM WAINSCOTING 4'
218 A	CLRM 218 TOILET	EPOXY	COVERED CT	CT	-	CT	-	CT	-	CT	-	ACT	-	
219	STAFF	CPT	RESIL	GWB	PAINT	GWB	PAINT	GWB	PAINT	GWB	PAINT	ACT	-	
219A	CLOS.	RUBBER	RESIL	GWB	PAINT	GWB	PAINT	GWB	PAINT	GWB	PAINT	ACT	-	
220	STAFF TOILET	EPOXY	COVERED CT	CT	-	CT	-	CT	-	CT	-	ACT	-	
221	KITCHEN/ LAUNDRY	EPOXY	COVERED EPOXY	PLAM	-	PLAM	-	PLAM	-	PLAM	-	ACT	-	
222	IDF	RUBBER	RESIL	GWB	PAINT	GWB	PAINT	GWB	PAINT	GWB	PAINT	ACT	-	



LEGEND:
 BASE BUILDING/NOT IN SCOPE
 CPT
 EPOXY
 RUBBER
 VQT



LEGEND:
 BASE BUILDING/NOT IN SCOPE
 CPT
 EPOXY
 RUBBER
 VQT

JOHNSON ROBERTS ASSOCIATES INC.
ARCHITECTS

24 DANE STREET
SOMERVILLE, MA
02143 - 3228

Architect

REV.	DATE	DESCRIPTION
01	23-Oct-2023	Add #1

Rindge Commons Pre-K
 430 & 432 RINDGE AVE,
 Cambridge, MA 02140

Sheet Title
ROOM FINISH SCHEDULE AND FLOOR PLANS

Date: 10/12/2023 Drawn By: SH
 Project No: 23006

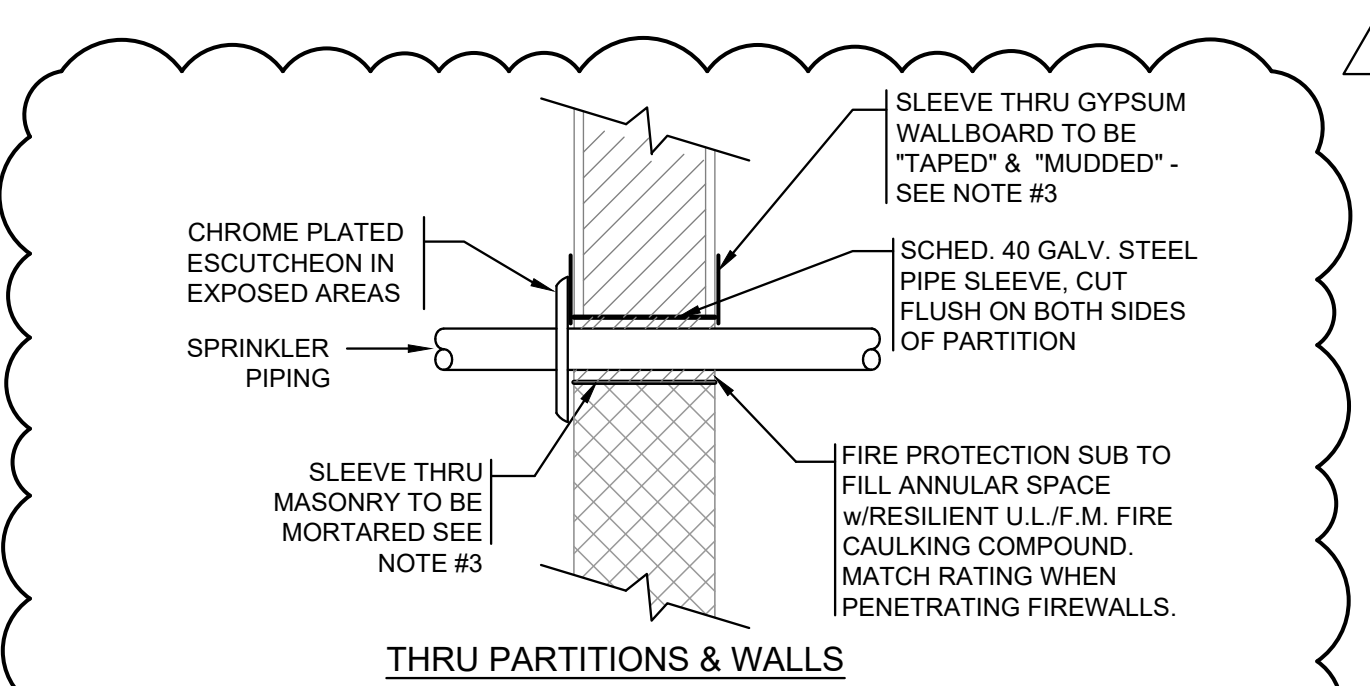
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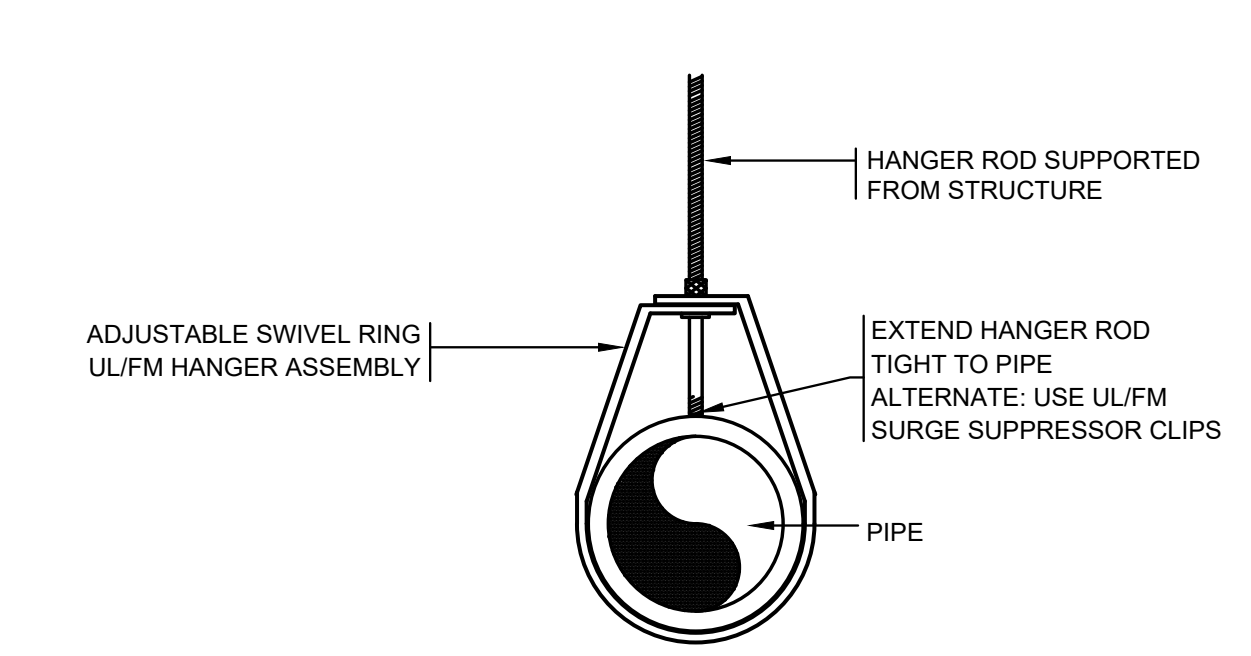
BID DOCUMENTS

LEGEND		
SYMBOL	ABBREV	DESCRIPTION
	FSP	STANDPIPE (WET)
	F	FIRE MAIN ABOVEGROUND
	SP	SPRINKLER LINE (WET)
		SIDEWALL SPRINKLER HEAD
		CONCEALED PENDANT SPRINKLER HEAD
		EXPOSED UPRIGHT SPRINKLER HEAD WITH GUARD
		SEMI RECESSED PENDANT SPRINKLER HEAD IN CEILING
	DP, DN	PIPE DROP OR DOWN
	UP	PIPE RISE OR UP
		TEE LOOKING DOWN
		CAP ON END OF PIPE
		STRAINER
	UN	UNION
	PG	PRESSURE GAGE
	CV	CHECK VALVE
	SCV	SUPERVISED CONTROL VALVE
	VV	VALVE ON VERTICAL
	FDC	FIRE DEPARTMENT CONNECTION (STORZ)
	FS	FLOW SWITCH
	PIV	POST INDICATOR VALVE
	ABD	AUTOMATIC BALL DRIP
		PRESSURE RELIEF VALVE
		SLOPED PIPE
	ITC	INSPECTORS TEST CONNECTION
	TYP	TYPICAL
	AC	CONCEALED ABOVE CEILING
	@C	EXPOSED AT CEILING
	AP	ACCESS PANEL
	AFF	ABOVE FINISHED FLOOR
	F&I	FURNISH AND INSTALL
	PC	PLUMBING CONTRACTOR
	PA	PRE-ACTION
	FPC	FIRE PROTECTION CONTRACTOR
	GC	GENERAL CONTRACTOR
	HVAC	HEAT, VENT & AIR CONDITIONER CONTRACTOR
	EC	ELECTRICAL CONTRACTOR
	DCVA	DOUBLE CHECK VALVE ASSEMBLY
	EXP	EXPOSED
	LPD	LOW POINT DRAIN
	GWB	GYPSUM WALL BOARD
	FDV	FIRE DEPARTMENT VALVE
	FDVC	FIRE DEPT. VALVE CABINET
	FHC	FIRE HOSE CABINET
	SCVA	SPRINKLER FLOOR CONTROL VALVE ASSEMBLY

NOTE: NOT ALL SYMBOLS LISTED ARE APPLICABLE TO THIS PROJECT.



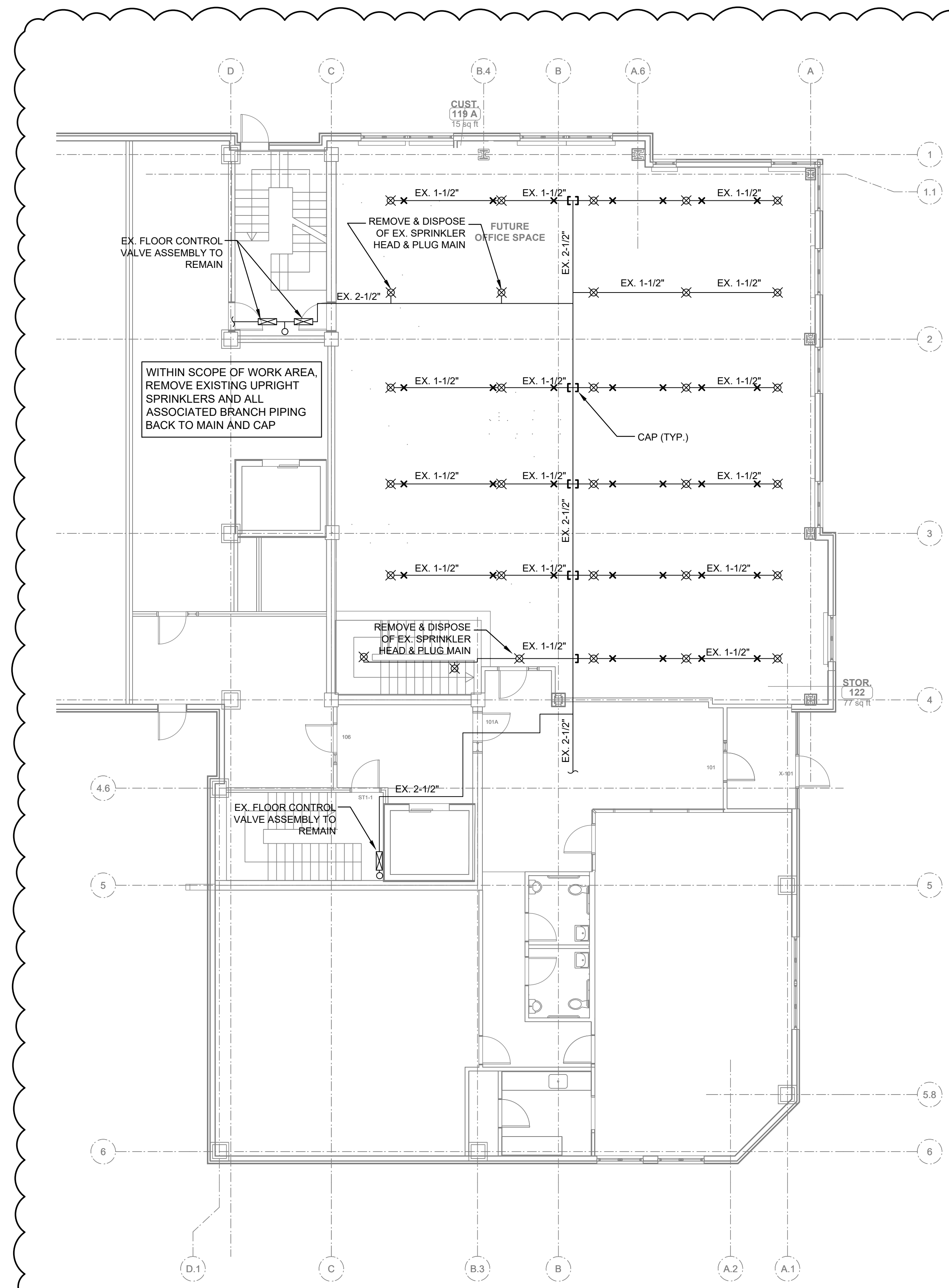
1 TYPICAL SLEEVE CONDITION DETAILS
 FP0.1 N.T.S.
 NOTE:
 1. ALL PIPING PENETRATING ALL PARTITIONS, WHETHER FIRE OR SMOKE RATED OR NOT, CONCEALED OR EXPOSED, SHALL BE SLEEVED AS DETAILED.
 2. WHERE CONCRETE WALLS, SLABS, ETC., ARE CORE DRILLED, INSTALL SLEEVE FLUSH WITH BOTH SIDES, CAULKED IN PLACE.
 3. REFER TO DIVISION 4 & 9 FOR PROCEDURES & METHODS OF PATCHING AROUND SLEEVES AT GYPSUM, PLASTER & MASONRY. REFER TO SPECS FOR DELINEATION OF RESPONSIBILITY.
 4. SLEEVE SHALL BE SIZED TO PROVIDE MIN. 1" CLEARANCE BETWEEN PIPE O.D. & SLEEVE I.D. FOR PIPING UP TO 3" IN SIZE. PROVIDE 2" CLEARANCE BETWEEN PIPE O.D. & SLEEVE I.D. FOR PIPING 4" IN SIZE AND GREATER.



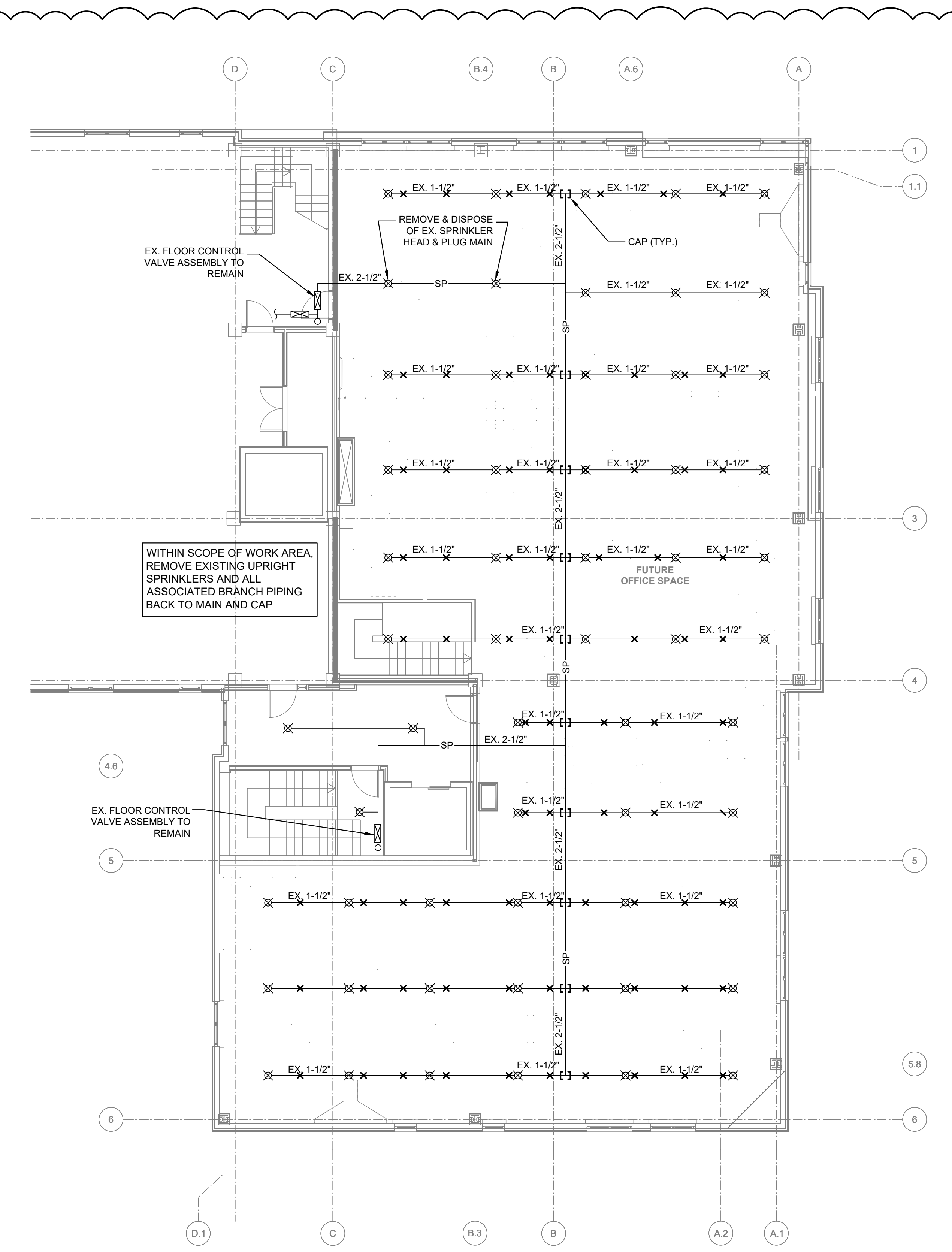
2 TYPICAL END-OF-LINE BRANCH PIPE HANGER DETAIL
 FP0.1 N.T.S.
 NOTE: TO BE USED AT ALL END-OF-LINE BRANCH HANGERS THROUGHOUT PROJECT

GENERAL NOTES

- THE WORK HEREIN REQUIRED INCLUDES A HYDRAULICALLY DESIGNED SPRINKLER SYSTEM AS SPECIFIED IN THE DOCUMENTS AND AS APPROVED BY THE ARCHITECT.
- THE FIRE PROTECTION DRAWINGS ARE DIAGRAMMATIC AND ARE TO BE USED FOR THE PURPOSE OF ESTABLISHING GENERAL LOCATIONS OF PIPING RUNS, SIZES OF PIPING, AND QUANTITIES OF FIXTURES AND EQUIPMENT TO BE FURNISHED HEREIN. REFER TO ARCHITECTURAL DRAWINGS FOR DIMENSIONS FOR EXACT LOCATIONS OF ALL SPRINKLER HEADS, AND EQUIPMENT, INCLUDING MOUNTING HEIGHTS. IN THE EVENT OF CONFLICT OR IF DIMENSIONS ARE NOT SHOWN, OBTAIN FIELD DIRECTIVE FROM THE ARCHITECT AS TO THE LOCATIONS OF ALL VISIBLE EQUIPMENT.
- ALL PIPING SHOWN ON THESE PLANS OR THOSE TO BE DESIGNED HEREIN SHALL BE RUN CONCEALED ABOVE SUSPENDED CEILINGS, IN CHASES, OR IN PARTITIONS UNLESS SPECIFICALLY NOTED OTHERWISE.
- ALL SPRINKLER HEADS IN CEILING TILES SHALL BE LOCATED IN THE EXACT CENTER OF TILE UNLESS SPECIFICALLY APPROVED OTHERWISE BY THE ARCHITECT.
- REFER TO ARCHITECTURAL REFLECTED CEILING PLANS FOR CEILING HEIGHTS AND CEILING MATERIALS AND LAYOUTS. REFER TO THE RESPECTIVE PLUMBING, HVAC AND ELECTRICAL DRAWINGS FOR LIGHTING, DIFFUSER AND REGISTER LAYOUTS IN CEILINGS AND FOR PIPING, DUCTWORK AND EQUIPMENT ABOVE CEILINGS FOR COORDINATION PURPOSES. IN THE EVENT OF CONFLICT OR IF DIMENSIONS ARE NOT SHOWN, OBTAIN FIELD DIRECTIVE FROM THE ARCHITECT AS TO THE LOCATIONS OF ALL VISIBLE EQUIPMENT.
- ATTENTION IS CALLED TO THE REQUIREMENT FOR THE PREPARATION OF COORDINATION DRAWINGS. IN ADDITION TO THE PREPARATION OF SHOP DRAWINGS ALSO PREPARE COORDINATION DRAWINGS AS OUTLINED IN THE SPECIFICATION. THE APPROVAL OF THE SHOP DRAWINGS INCLUDING DIMENSIONS SHOWN THEREIN DOES NOT RELIEVE THE CONTRACTOR.
- SPECIFIC ATTENTION IS DIRECTED TO THE REQUIREMENTS OF STATE BUILDING CODE AND NFPA 241-2022 REGARDING THE MAINTENANCE OF FIRE PROTECTION SYSTEMS INCLUDING STANDPIPES AND BULK FIRE MAINS BOTH DURING CONSTRUCTION. MAINTAIN THE SYSTEMS AS REQUIRED BY THESE STANDARDS AS A MINIMUM.
- REFER TO NFPA 13 TABLE 8.3.2.5(a) FOR TEMPERATURE RATINGS OF SPRINKLERS BASED ON DISTANCE FROM HEAT SOURCES SUCH AS HEATING DUCTS, DIFFUSERS AND UNIT HEATERS.
- WITHIN THE NEW SCOPE OF WORK AREA, REMOVE EXISTING TEMPORARY SPRINKLER HEADS AND ALL ASSOCIATED EXISTING SPRINKLER BRANCH PIPING BACK TO EXISTING SPRINKLER MAIN AND CAP.



1 FIRST FLOOR DEMO PLAN - FIRE PROTECTION
 FP1.0 SCALE: 1/8" = 1'-0"



2 SECOND FLOOR DEMO PLAN - FIRE PROTECTION
 FP1.0 SCALE: 1/8" = 1'-0"

GGD CONSULTING ENGINEERS, INC.
 375 Faunce Corner Road, Suite D, Dartmouth, MA 02747-1258
 P: 508-998-5700 • F: 508-998-0883 • E-MAIL: info@ggd.com

JOHNSON ROBERTS ASSOCIATES INC.
ARCHITECTS

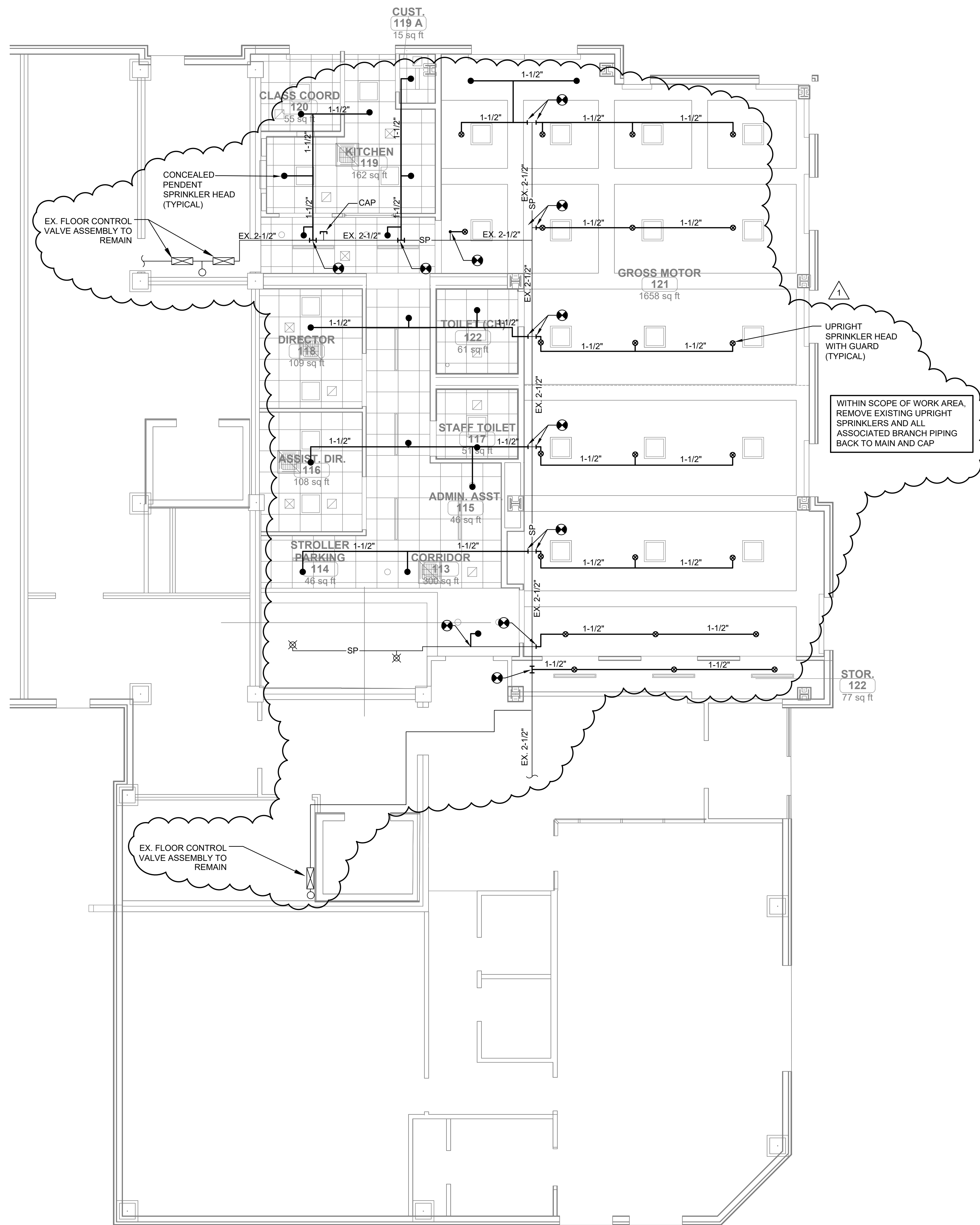
24 DANE STREET
 SOMERVILLE, MA
 02143 - 3228

REV.	DATE	DESCRIPTION
-	10-10-2023	BID DOCUMENTS
1	10-30-2023	ADDENDUM #1

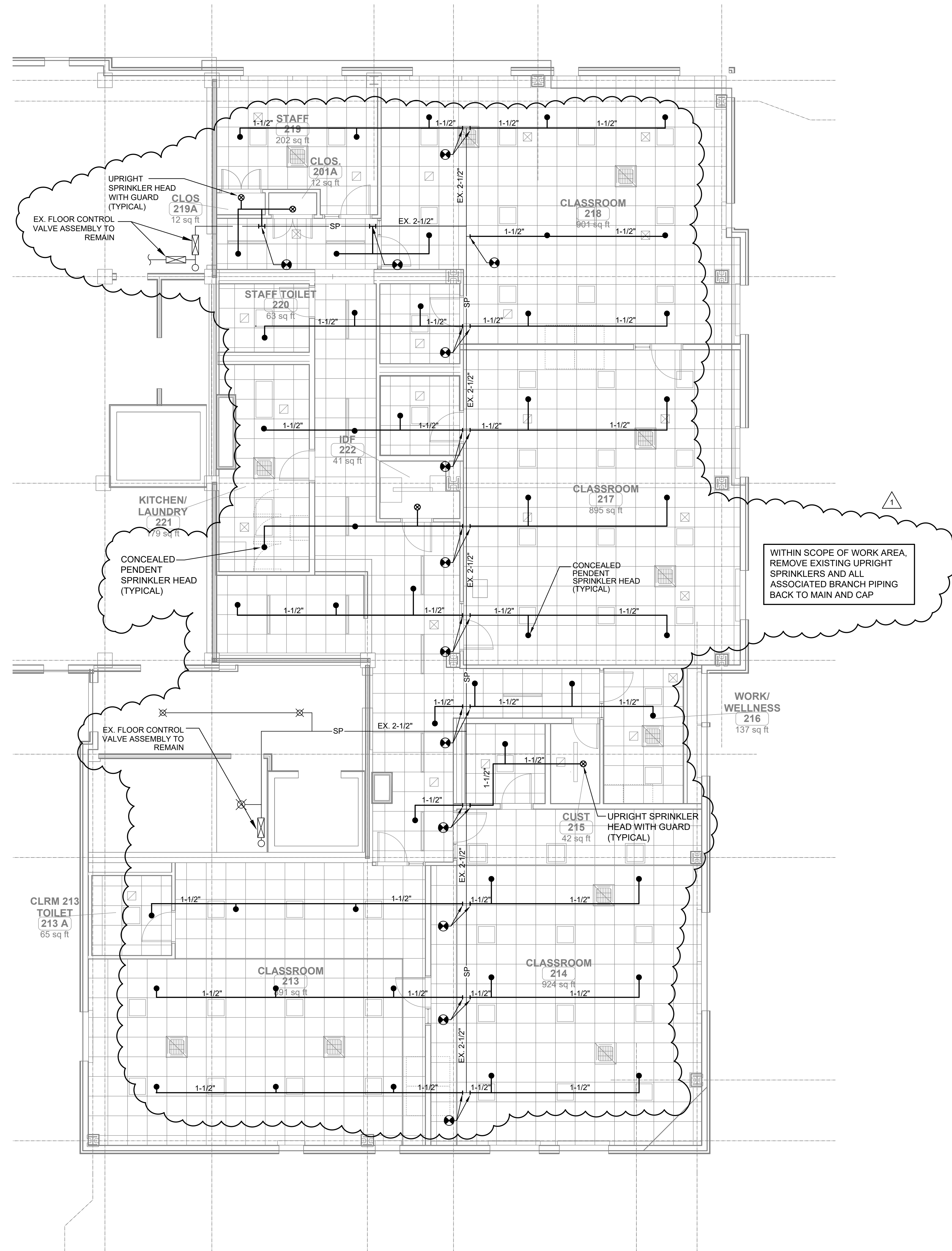
Rindge Commons Pre-K
 430 & 432 RINDGE AVE,
 Cambridge, MA 02140

Sheet Title
Legend, Details and Demo Plans - Fire Protection
 Date: 12-Oct-2023 Drawn By: RCD
 Project No: 23006 Scale: None

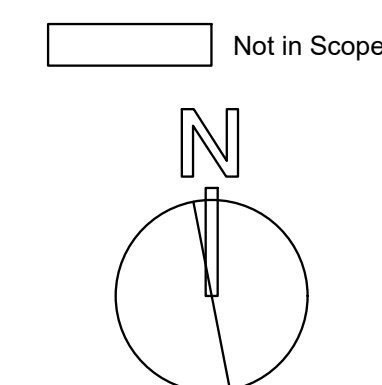
Sheet No.
FP0.1



1 **FIRST FLOOR PLAN - FIRE PROTECTION**
 FP1.0 SCALE: 3/16" = 1'-0"



2 **SECOND FLOOR PLAN - FIRE PROTECTION**
 FP1.0 SCALE: 3/16" = 1'-0"



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 P: 508-998-5700 • F: 508-998-0883 • E-MAIL: info@ggd.com

**JOHNSON
 ROBERTS
 ASSOCIATES INC.**
ARCHITECTS

24 DANE STREET
 SOMERVILLE, MA
 02143 - 3228

Architect

REV.	DATE	DESCRIPTION
-	10-10-2023	BID DOCUMENTS
1	10-30-2023	ADDENDUM #1

**Rindge
 Commons
 Pre-K**
 430 & 432 RINDGE AVE,
 Cambridge, MA 02140

Sheet Title
**Fire Protection
 Plans**

Date: 12-Oct-2023 Drawn By: RCD
 Project No: 23006 Scale: 3/16" = 1'-0"

Sheet No.
FP1.0

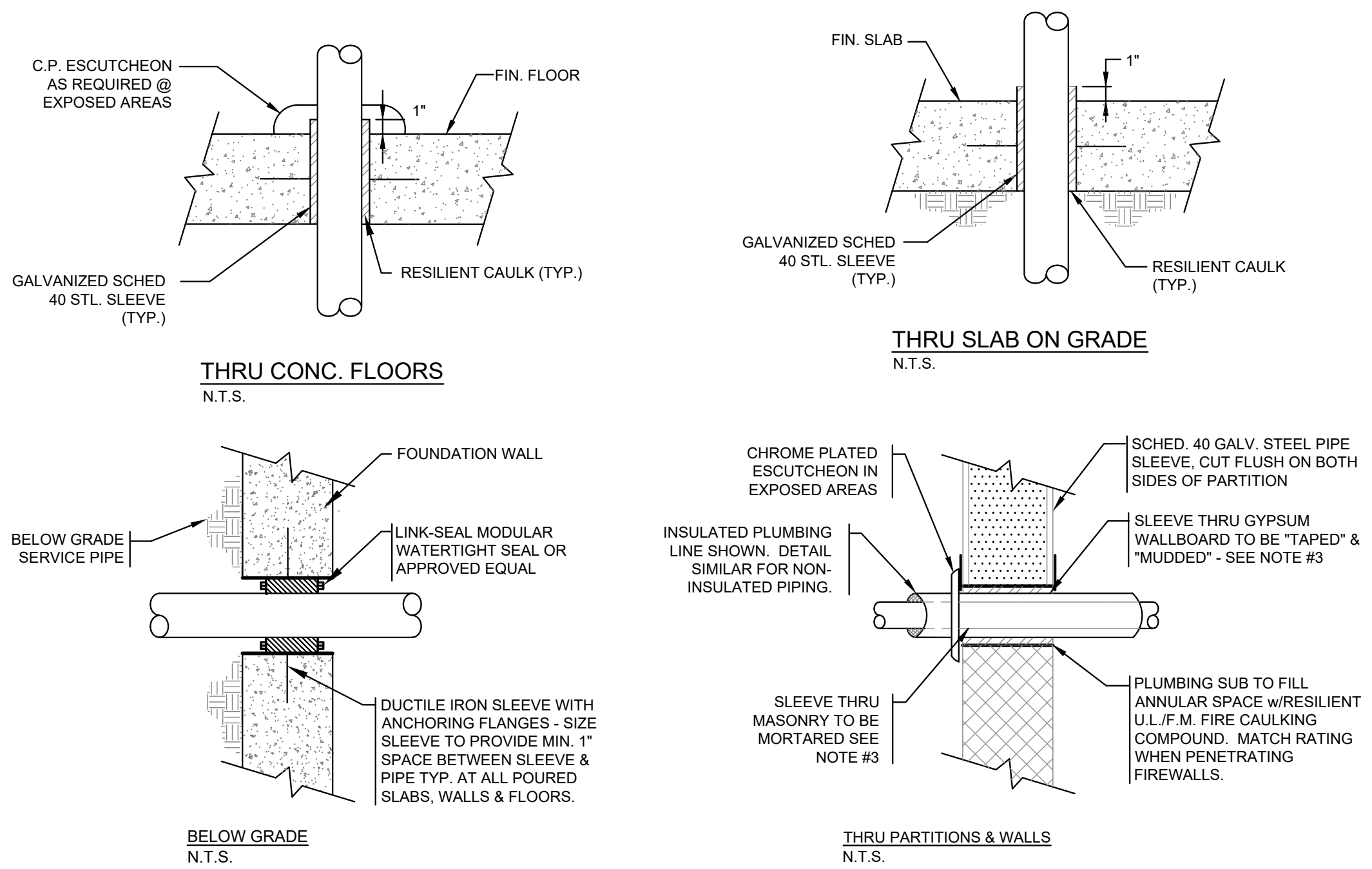
LEGEND

SYMBOL	ABBREV	DESCRIPTION
—	NEW	NEW WORK (DARK)
- - -	EX	EXISTING WORK (LIGHT)
SW	SW	SOILWASTE ABV. GRADE
SW	SW	SOILWASTE UNDERGROUND
V	V	VENT ABV. GRADE
V	V	VENT UNDERGROUND
HW	HW	INDIRECT WASTE
CW	CW	COLD WATER
HW	HW	HOT WATER
HWR	HWR	HOT WATER RETURN
HW 140°	HW 140°	HOT WATER 140°F
HWR 140°	HWR 140°	HOT WATER RETURN 140°F
DP DN	DP DN	PIPE DROP OR DOWN
UP	UP	PIPE RISE OR UP
		TEE LOOKING DOWN
		CAP ON END OF PIPE
		FLOOR DRAIN, ROOF DRAIN, AREA DRAIN
		STRAINER
		UNION
CO	CO	CLEANOUT
DCO	DCO	DANDY CLEANOUT
FCO	FCO	FLOOR CLEANOUT
PQ/TG	PQ/TG	PRESSURE GAGE/TEMPERATURE GAGE
SA	SA	SHOCK ABSORBER
BV	BV	BALANCING VALVE
BV	BV	BALL VALVE
CV	CV	CHECK VALVE
CV	CV	GAS COCK
CV	CV	GAS PRESSURE REGULATOR
SV	SV	SOLENOID VALVE
GV	GV	GATE VALVE
PRV	PRV	PRESSURE REDUCING VALVE
VOV	VOV	VALVE ON VERTICAL
PT	PT	P-TRAP
S&W	S&W	STOP & WASTE VALVE
EL	EL	EXPANSION LOOP
EL	EL	PIPE GUIDE
EL	EL	PIPE ANCHOR
EL	EL	FLOW IN DIRECTION OF ARROW
HBWH	HBWH	HOSE BIB/WALL HYDRANT
TP	TP	TRAP PRIMER
TW	TW	TEMPERED WATER
TYP.	TYP.	TYPICAL
FFE	FFE	FINISHED FLOOR ELEVATION
INV	INV	INVERT ELEVATION
VTR	VTR	VENT THRU ROOF
AP	AP	ACCESS PANEL
AFF	AFF	ABOVE FINISHED FLOOR
CI	CI	CAST IRON
CP	CP	CHROME PLATED
UC	UC	UNDER COUNTER
F&I	F&I	FURNISH AND INSTALL
PC	PC	PLUMBING CONTRACTOR
FPC	FPC	FIRE PROTECTION CONTRACTOR
GC	GC	GENERAL CONTRACTOR
HVAC	HVAC	HEAT, VENT & AIR COND. CONTRACTOR
DCVA	DCVA	DOUBLE CHECK VALVE ASSEMBLY
RFBP	RFBP	REDUCED PRESSURE BACKFLOW PREVENTOR
STK	STK	STACK
STP	STP	STANDPIPE
EXP	EXP	EXPOSED
FBO	FBO	FURNISHED BY OTHERS
ETBR	ETBR	EXISTING TO BE REMOVED
PD	PD	PUMP DISCHARGE

NOTE: NOT ALL SYMBOLS LISTED ARE APPLICABLE TO THIS PROJECT

GENERAL NOTES

1. THE PLUMBING DRAWINGS ARE DIAGRAMMATIC AND ARE TO BE USED FOR THE PURPOSE OF ESTABLISHING GENERAL LOCATIONS OF PIPING RUNS, SIZES OF PIPING, AND QUANTITIES OF FIXTURES AND EQUIPMENT TO BE FURNISHED HEREIN. REFER TO ARCHITECTURAL DRAWINGS FOR DIMENSIONS FOR EXACT LOCATIONS OF ALL PLUMBING FIXTURES, AND EQUIPMENT, INCLUDING FLOOR DRAINS, AND MOUNTING HEIGHTS. IN THE EVENT OF CONFLICT OR IF DIMENSIONS ARE NOT SHOWN, OBTAIN FIELD DIRECTIVE FROM THE ARCHITECT AS TO THE LOCATIONS OF ALL VISIBLE EQUIPMENT. PAY PARTICULAR CARE TO COORDINATE WITH THE ARCHITECT'S FIELD REPRESENTATIVE ALL FLOOR DRAIN AND FLOOR CLEANOUT LOCATIONS.
2. ALL PIPING SHOWN ON THIS PLAN SHALL BE RUN CONCEALED ABOVE SUSPENDED CEILING, IN CHASES, OR IN PARTITIONS UNLESS SPECIFICALLY NOTED OTHERWISE.
3. INSTALL ALL NEW VALVES SO AS TO BE EASILY ACCESSIBLE AND OPERABLE.
4. MAINTAIN PLUMBING SYSTEMS IN OTHER BUILDING AREAS AT ALL TIMES DURING THE CONSTRUCTION. REFER TO PHASING PLANS AND SPECIFICATIONS ON THE ARCHITECT'S DRAWINGS & SPECIFICATIONS.
5. THE PLUMBING DRAWINGS ARE INTENDED TO INDICATE THE SIZING AND DESIGN FOR THE MAIN SUPPLY AND WASTE PIPING AND FOCUSSES ON RUNS AND SIZES OF THE MAIN RISERS, STACKS AND VENT TERMINATION. IT IS NOT INTENDED TO INDICATE EVERY TRAP AND FIXTURE CONNECTION. CONTRACTOR IS REQUIRED TO PROVIDE ALL CONNECTIONS, TO MAKE ALL CONNECTIONS TO ALL DRAINS AND FIXTURES WHICH ARE SHOWN AND SCHEDULED ON THE PLUMBING DRAWINGS.



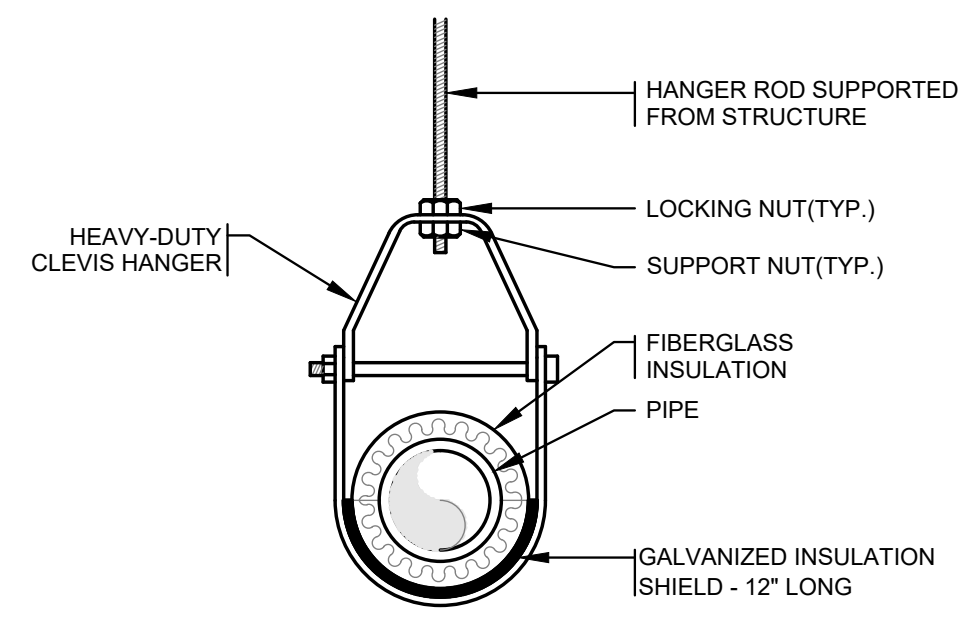
TYPICAL PLUMBING SLEEVE CONDITION DETAILS

- NOTE:
1. ALL PIPING PENETRATING ALL PARTITIONS, WHETHER FIRE OR SMOKE RATED OR NOT, CONCEALED OR EXPOSED, SHALL BE SLEEVED AS DETAILED.
 2. WHERE CONC. WALLS, SLABS, ETC., ARE CORE DRILLED, INSTALL SLEEVE FLUSH WITH BOTH SIDES, CAULKED & LEADED IN PLACE.
 3. REFER TO DIVISION 4 & 9 FOR PROCEDURES & METHODS OF PATCHING AROUND SLEEVES AT GYPSUM, PLASTER & MASONRY. REFER TO SPECS FOR DELINEATION OF RESPONSIBILITY.
 4. SLEEVES SHALL BE SIZED TO PROVIDE MIN. 1" CLEARANCE BETWEEN PIPE O.D. & SLEEVE I.D.

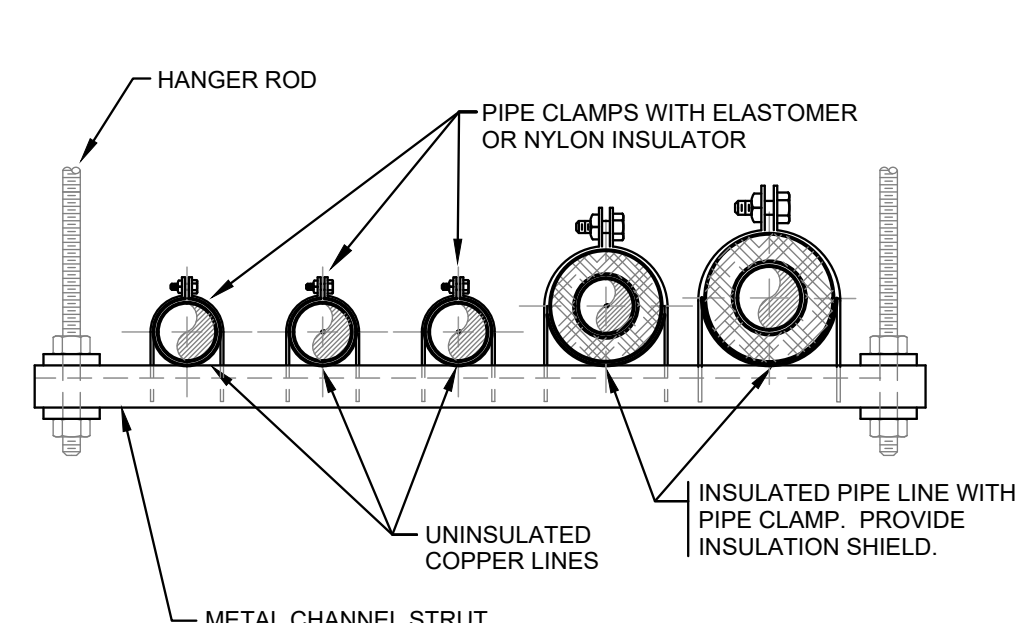
P. NO.	FIXTURE	S/W	VENT	CW	HW	REMARKS
P-1	WATER CLOSET- WALL MOUNT (ACCESSIBLE)	4"	2"	1-1/4"	-	SUPPLY RISER 1" STUBOUT TO FLUSH VALVE
P-1A	STAFF WATER CLOSET- WALL MOUNT (ACCESSIBLE)	4"	2"	1-1/4"	-	SUPPLY RISER 1" STUBOUT TO FLUSH VALVE
P-1K	WATER CLOSET- FLOOR MOUNT	4"	2"	1-1/4"	-	SUPPLY RISER 1" STUBOUT TO FLUSH VALVE
P-2	URINAL - WALL MOUNT (ACCESSIBLE)	2"	2"	1"	-	SUPPLY RISER 3/4" STUBOUT TO FLUSH VALVE
P-3	LAVATORY (ACCESSIBLE)	2"	2"	1/2"	1/2"	WALL MOUNTED
P-3A	STAFF LAVATORY (ACCESSIBLE)	2"	2"	1/2"	1/2"	WALL MOUNTED
P-4	MOP SINK BASIN	3"	2"	1/2"	1/2"	W/ RFBP
P-5	CLASSROOM SINK	2"	2"	1/2"	1/2"	COUNTERTOP
P-6	CLASSROOM SINK (ACCESSIBLE)	2"	2"	1/2"	1/2"	COUNTERTOP
P-7	KITCHEN SINK (ACCESSIBLE)	2"	2"	1/2"	1/2"	COUNTERTOP
P-8	ELECTRIC WATER COOLER	2"	2"	1/2"	-	W/ BOTTLE FILLER
P-9	CLOTHES WASHER SUPPLY BOX	2"	2"	1/2"	1/2"	W/ 2" STANDPIPE
P-10	LAUNDRY TUB	2"	2"	1/2"	1/2"	

UNIT NO.	UNIT FUNCTION	UNIT LOCATION	V	PH	KW	REMARKS
EWH-1	ELECT WTR. HEATER	CUST. 119A	208	1	4.5	AO SMITH DEL 30-4.5
EWH-2	ELECT WTR. HEATER	TOILET (CH) 122	208	1	8.3	EEMAX EEMAX LAVADVANTAGE SPEX8208T OR EQUAL
EWH-3	ELECT WTR. HEATER	STAFF TOILET 117	208	1	8.3	EEMAX EEMAX LAVADVANTAGE SPEX8208T OR EQUAL
EWH-4	ELECT WTR. HEATER	STAFF TOILET 220	208	1	8.3	EEMAX EEMAX LAVADVANTAGE SPEX8208T OR EQUAL
EWH-5	ELECT WTR. HEATER	LAUNDRY/KITCHEN 221	208	1	4.5	AO SMITH DEL 30-4.5
EWH-6	ELECT WTR. HEATER	CLASSROOM TOILET 218A	208	1	8.3	EEMAX EEMAX LAVADVANTAGE SPEX8208T OR EQUAL
EWH-7	ELECT WTR. HEATER	CLASSROOM TOILET 217A	208	1	8.3	EEMAX EEMAX LAVADVANTAGE SPEX8208T OR EQUAL
EWH-8	ELECT WTR. HEATER	CLASSROOM 218	208	1	8.3	EEMAX EEMAX LAVADVANTAGE SPEX8208T OR EQUAL
EWH-9	ELECT WTR. HEATER	CLASSROOM 218	208	1	8.3	EEMAX EEMAX LAVADVANTAGE SPEX8208T OR EQUAL
EWH-10	ELECT WTR. HEATER	CLASSROOM 217	208	1	8.3	EEMAX EEMAX LAVADVANTAGE SPEX8208T OR EQUAL
EWH-11	ELECT WTR. HEATER	CLASSROOM 217	208	1	8.3	EEMAX EEMAX LAVADVANTAGE SPEX8208T OR EQUAL
EWH-12	ELECT WTR. HEATER	CUST. 215	208	1	4.5	AO SMITH DEL 30-4.5
EWH-13	ELECT WTR. HEATER	CLASSROOM TOILET 213A	208	1	8.3	EEMAX EEMAX LAVADVANTAGE SPEX8208T OR EQUAL
EWH-14	ELECT WTR. HEATER	CLASSROOM 213	208	1	8.3	EEMAX EEMAX LAVADVANTAGE SPEX8208T OR EQUAL
EWH-15	ELECT WTR. HEATER	CLASSROOM 213	208	1	8.3	EEMAX EEMAX LAVADVANTAGE SPEX8208T OR EQUAL
EWH-16	ELECT WTR. HEATER	CLASSROOM 214	208	1	8.3	EEMAX EEMAX LAVADVANTAGE SPEX8208T OR EQUAL
EWH-17	ELECT WTR. HEATER	CLASSROOM 214	208	1	8.3	EEMAX EEMAX LAVADVANTAGE SPEX8208T OR EQUAL
P-8	ELECTRIC WATER COOLER	GROSS MOTOR 121	120	1	-	W/ BOTTLE FILLER

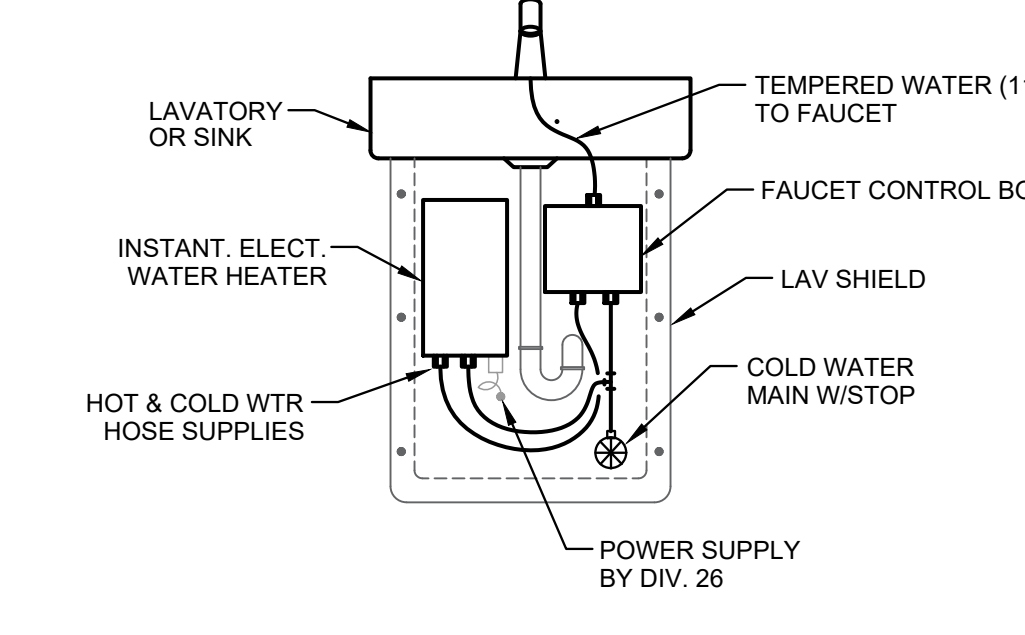
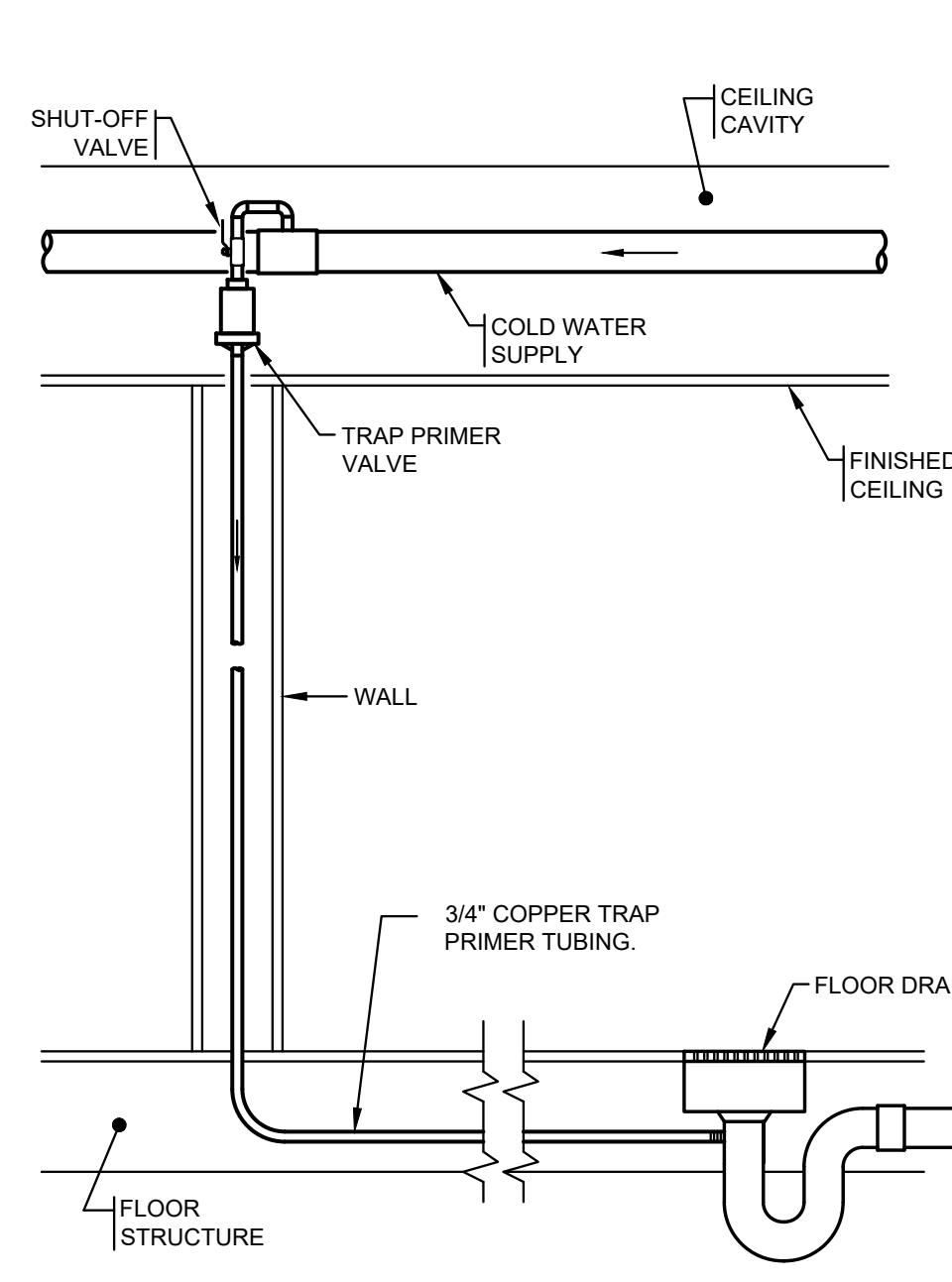
PDI SYMBOL	A	B	C	D	E	F
ZURN SERIES 1250-XL OR EQ.	A	B	C	D	E	F
FIXTURE UNITS	1-11	12-32	33-60	61-113	114-154	155-330



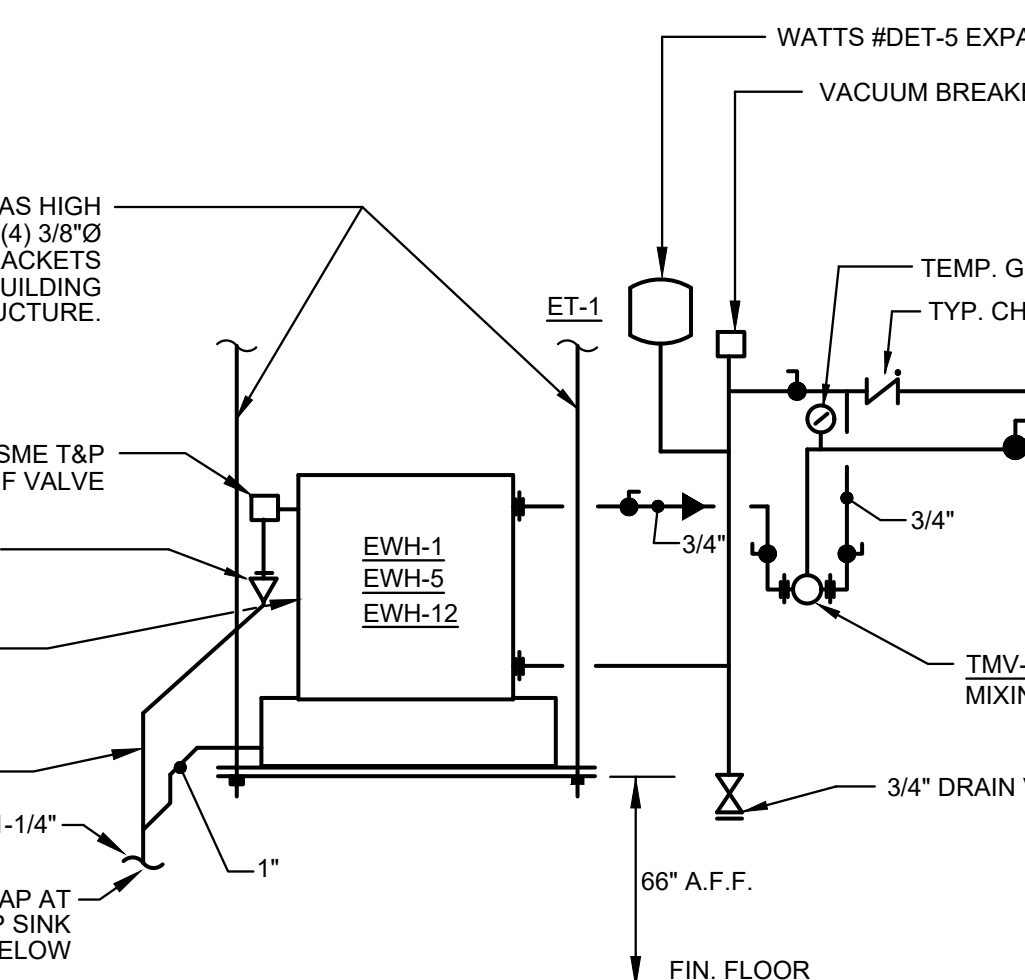
THIS DETAIL INDICATES HANGING OF INSULATED PIPING WHICH MAY BE EITHER WATER OR STORM DRAIN. CLEVIS HANGER DETAIL APPLIES TO ALL PLUMBING PIPING ON THIS PROJECT.



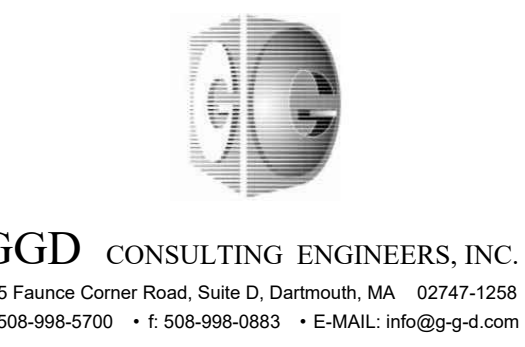
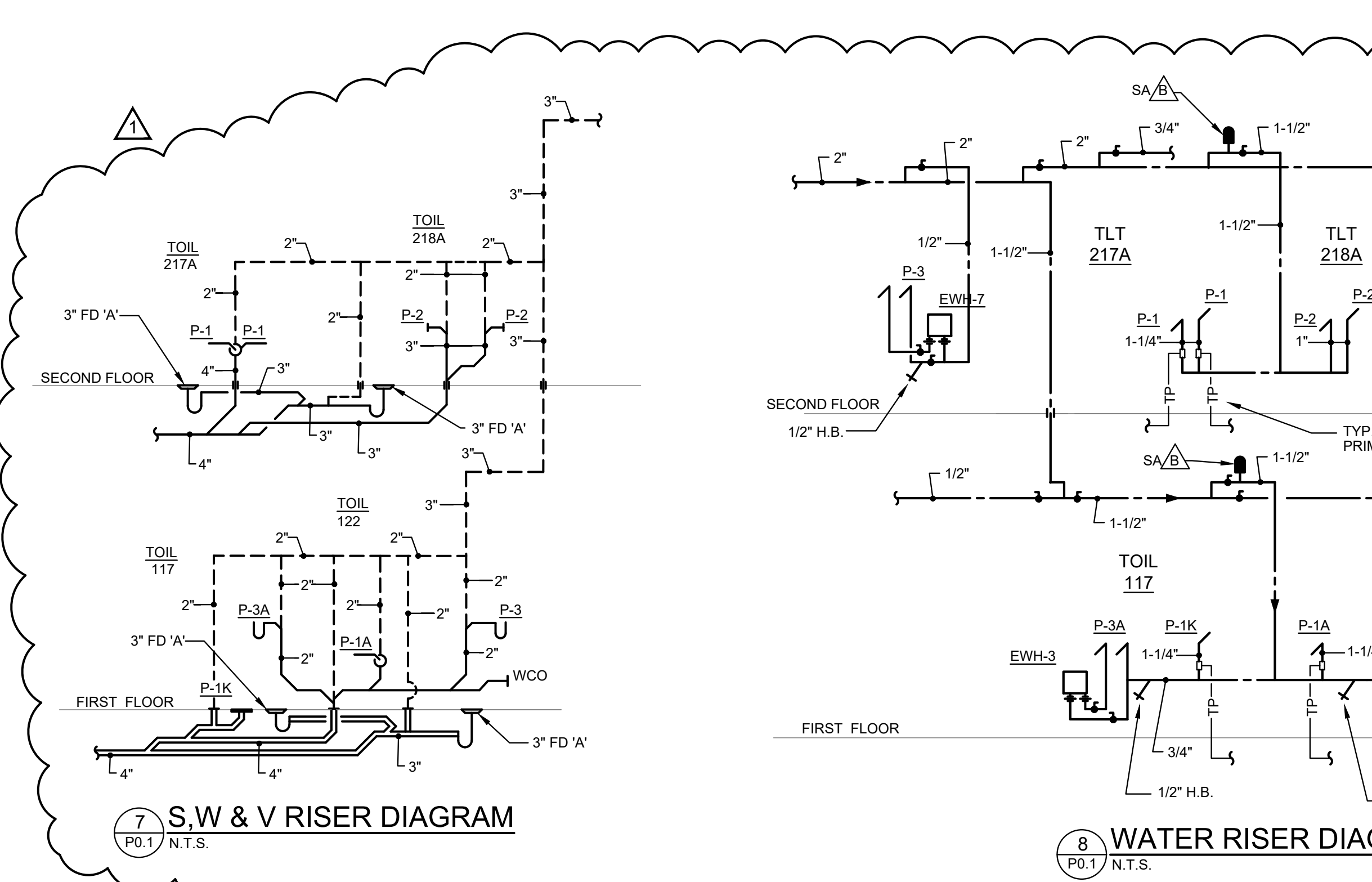
UNINSULATED COPPER LINES WITH PIPE CLAMP. PROVIDE INSULATION SHIELD.



TEMPERED WATER (110° F.) TO FAUCET



SUSP. HTR. AS HIGH AS POSSIBLE USING (4) 3/8" Ø STEEL RODS OR BRACKETS ATTACHED TO BUILDING STRUCTURE.



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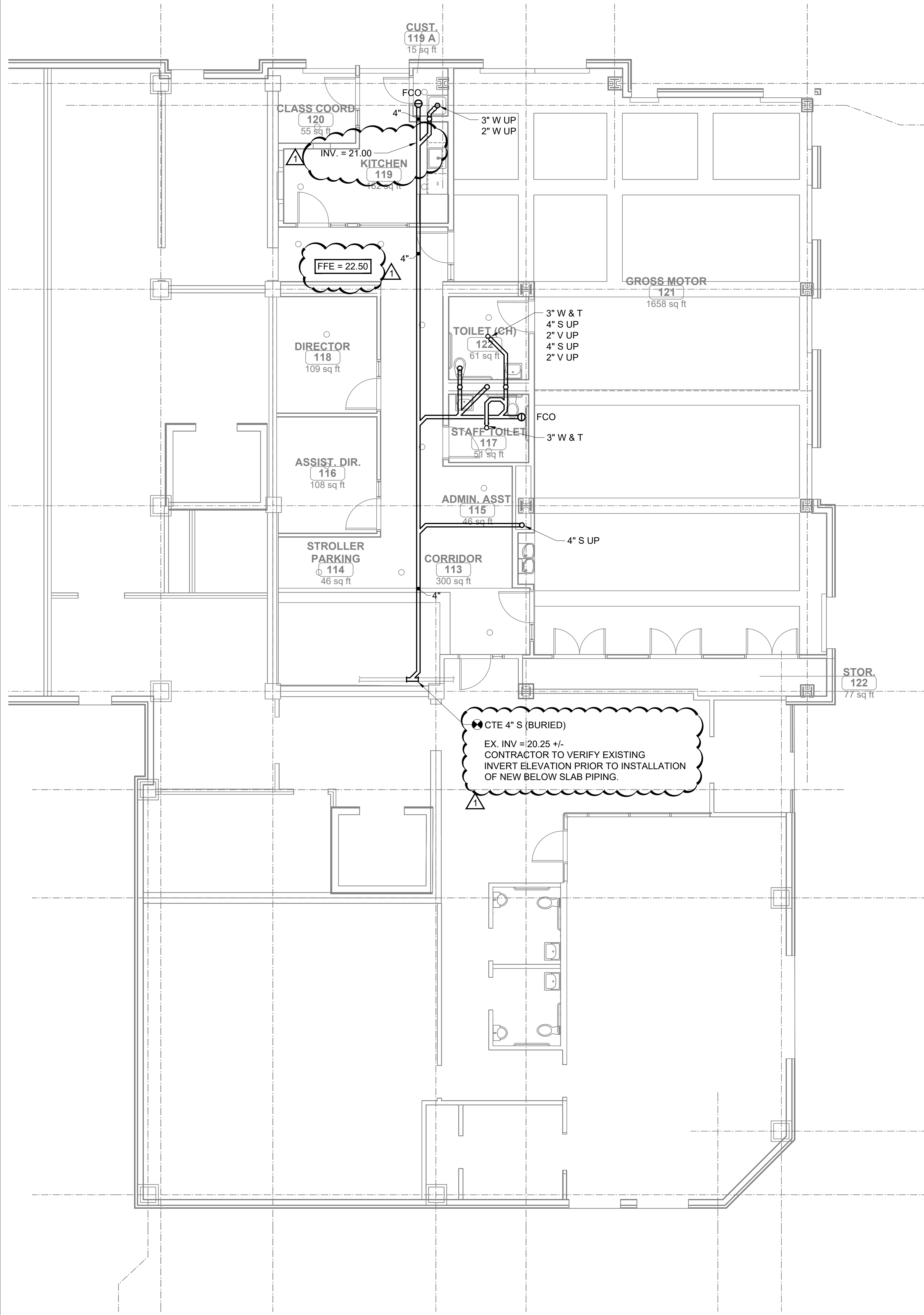
REV.	DATE	DESCRIPTION
-	10-10-2023	BID DOCUMENTS
1	10-30-2023	ADDENDUM #1

Rindge Commons Pre-K
430 & 432 RINDGE AVE,
Cambridge, MA 02140

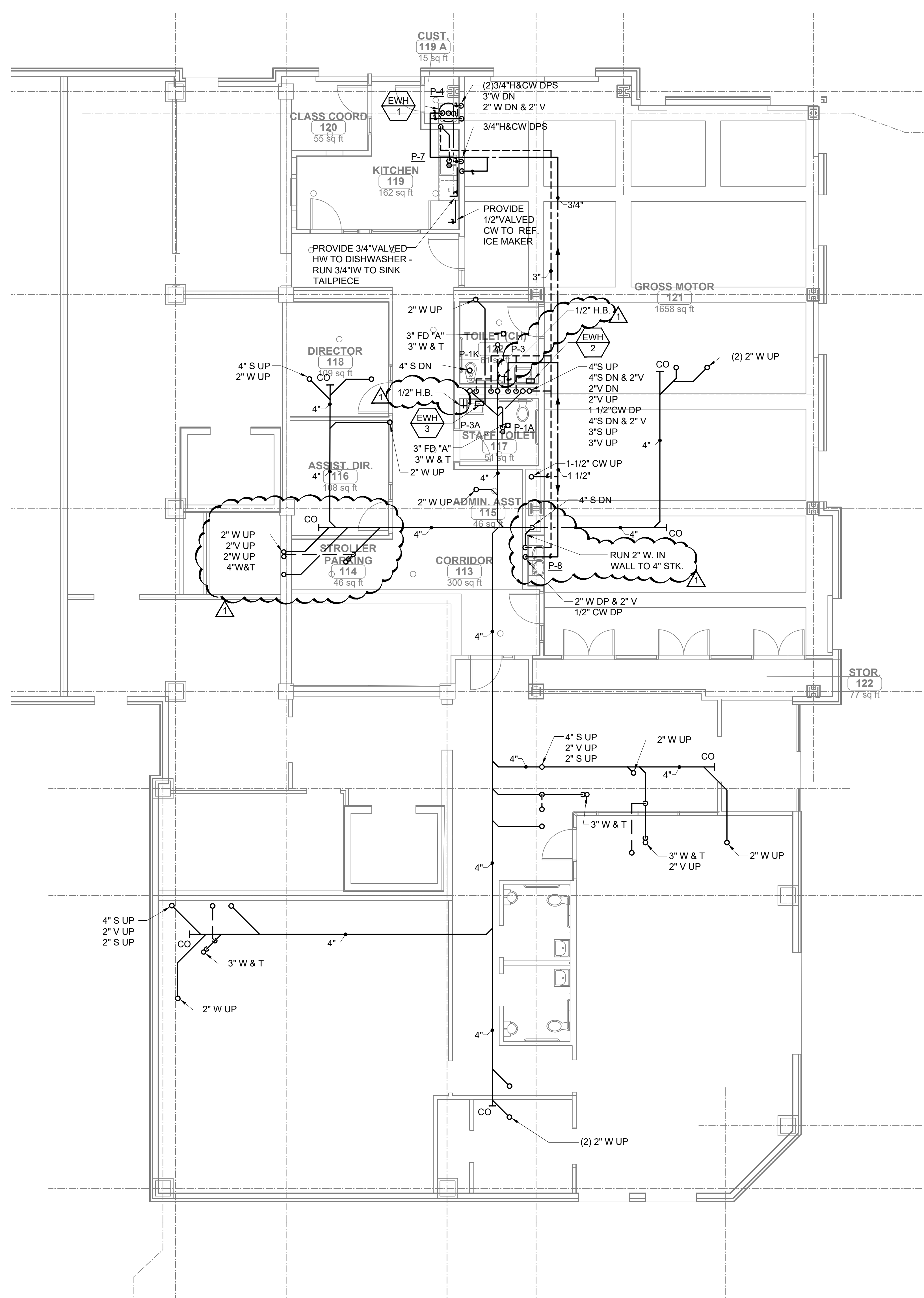
Legend, Schedules,
and Details -
Plumbing

Date: 12-Oct-2023 Drawn By: RCD
Project No: 23006 Scale: None

Sheet No.
P0.1

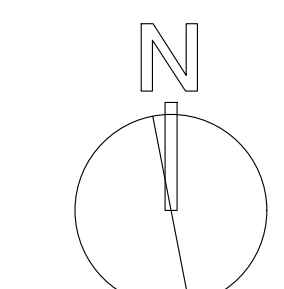


1 FIRST FLOOR BELOW SLAB PLAN - PLUMBING
P1.0 SCALE: 3/16" = 1'-0"



2 FIRST FLOOR PLAN - PLUMBING
P1.0 SCALE: 3/16" = 1'-0"

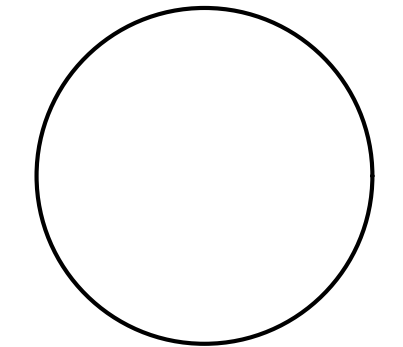
Not in Scope



GGD CONSULTING ENGINEERS, INC.
375 Franklin Corner Road, Suite D, Danvers, MA 01923
p. 508-998-5700 • f. 508-998-0883 • e-mail: info@ggd.com

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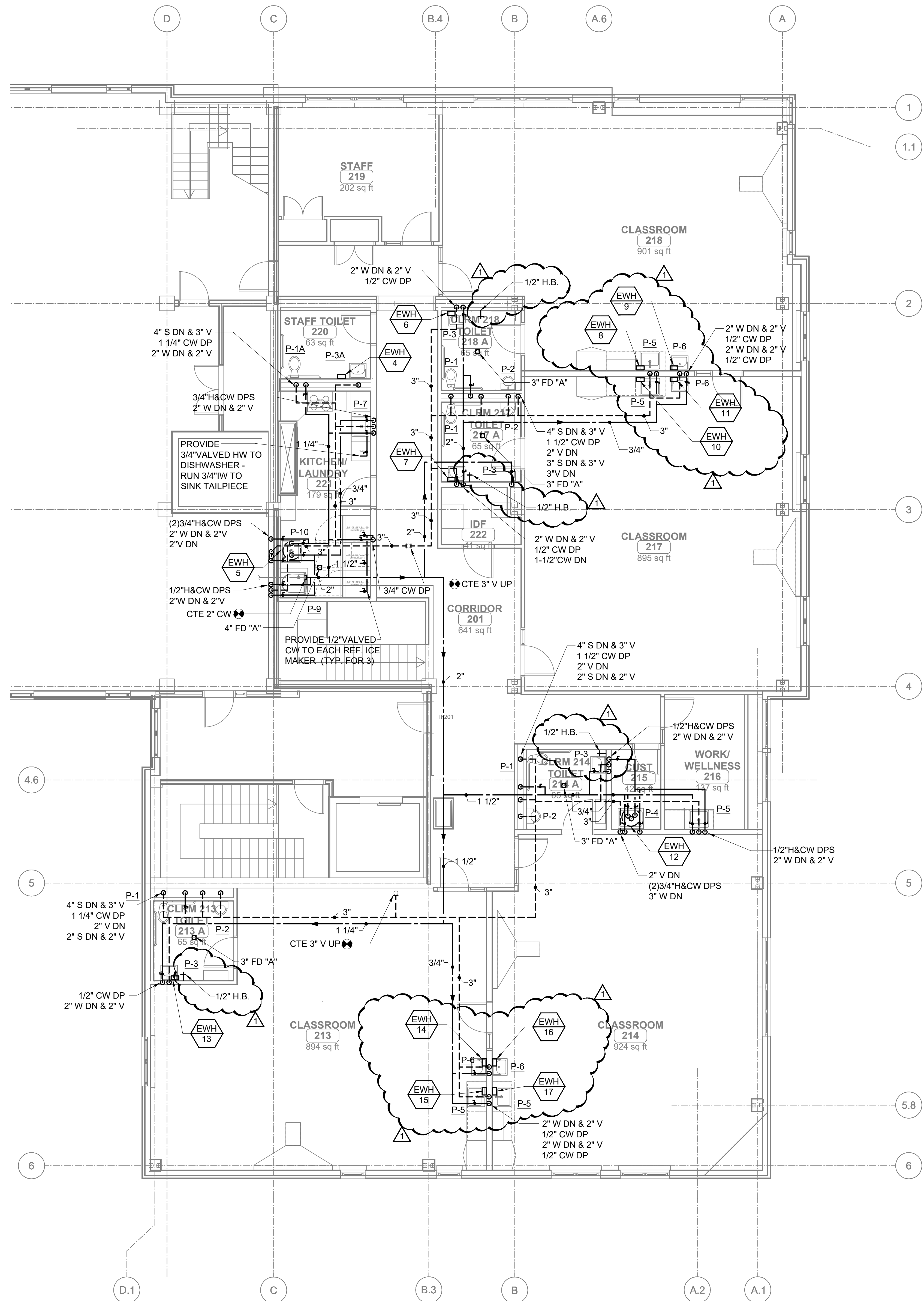
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1	10-26-2023	ADDENDUM #1

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Commons
Pre-K**
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Cambridge, MA 02140

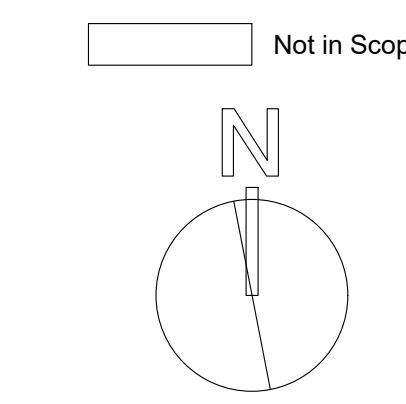
Sheet Title
**First Floor
Plumbing
Plans**

Date: 12-Oct-2023 Drawn By: RCD
Project No: 23006 Scale: 3/16" = 1'-0"

Sheet No.
P1.0



1 SECOND FLOOR PLAN - PLUMBING
 P2.0 SCALE: 3/16" = 1'-0"



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1	10-26-2023	ADDENDUM #1

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 Pre-K**
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 Cambridge, MA 02140

Sheet Title
**Second Floor
 Plumbing Plan**
 Date: 12-Oct-2023 Drawn By: RCD
 Project No: 23006 Scale: 3/16" = 1'-0"

Sheet No.
P2.0

VARIABLE REFRIGERANT FLOW UNITS (VRF)																				
UNIT NO.	MANUF. NO.	SPACE(S) SERVED	INDOOR UNITS						OUTDOOR UNITS											
			CFM	COOLING BTU	HEATING BTU	V	PH	MCA	MOCP	COND. PUMP	UNIT NO.	MODEL	CFM	COOLING BTU	HEATING BTU	V	PH	MOCP	MCA	EER/EER
HPUe-1	PLFY-P08NFMU-E	CLASS COORD	390	8,000	9,000	208	1.0	1	15	CP-1	VRFc-1	PURY-EP192TSNU-A	14,500	192,000	215,000	208	3	(2) 45	(2) 31	10.5/19.4
HPUe-2	PLFY-P12NFMU-E	KITCHEN	335	12,000	13,500	208	1.0	1	15	CP-1										
HPUe-3	PCFY-P24NKMU-ER1.TH	GROSS MOTOR	280	24,000	27,000	208	1.0	1	15	CP-1										
HPUe-4	PCFY-P24NKMU-ER1.TH	GROSS MOTOR	280	24,000	27,000	208	1.0	1	15	CP-1										
HPUe-5	PLFY-P08NFMU-E	ADMIN ASSIST	280	5,000	5,600	208	1.0	1	15	CP-1										
HPUe-6	PLFY-P08NFMU-E	ASSIST DIRECTOR	280	5,000	5,600	208	1.0	1	15	CP-1										
HPUe-7	PLFY-P08NFMU-E	DIRECTOR	280	5,000	5,600	208	1.0	1	15	CP-1										
HPUe-8	PLFY-P12NFMU-E	STAFF	335	12,000	13,500	208	1.0	1	15	CP-1										
HPUe-9	PLFY-P12NFMU-E	CLASS W/ TOILET	335	12,000	13,500	208	1.0	1	15	CP-1										
HPUe-10	PLFY-P12NFMU-E	CLASS W/ TOILET	335	12,000	13,500	208	1.0	1	15	CP-1										
HPUe-11	PLFY-P08NFMU-E	CLASS	390	8,000	9,000	208	1.0	1	15	CP-1										
HPUe-12	PLFY-P08NFMU-E	CLASS	390	8,000	9,000	208	1.0	1	15	CP-1										
HPUe-13	PLFY-P08NFMU-E	WORKWELLNESS	280	5,000	5,600	208	1.0	1	15	CP-1										
HPUe-14	PLFY-P12NFMU-E	CLASS	335	12,000	13,500	208	1.0	1	15	CP-1										
HPUe-15	PLFY-P12NFMU-E	CLASS	335	12,000	13,500	208	1.0	1	15	CP-1										
HPUe-16	PLFY-P08NFMU-E	CLASS	390	8,000	9,000	208	1.0	1	15	CP-1										
HPUe-17	PLFY-P08NFMU-E	CLASS	390	8,000	9,000	208	1.0	1	15	CP-1										
HPUe-18	PLFY-P12NFMU-E	KITCHEN/LAUNDRY	335	12,000	13,500	208	1.0	1	15	CP-1										

SELECTION BASED ON "MITSUBISHI". ALL REFRIGERANT TUBING SHALL BE SIZED BY UNIT MANUFACTURER. PROVIDE ALL NECESSARY JOINT KITS, FITTINGS AND ACCESSORIES FOR CONDENSATE DRAINING SYSTEM PER MANUFACTURER'S RECOMMENDATIONS. PROVIDE NECESSARY EQUIPMENT FOR GAS INTERFACE. CEILING MOUNTED EVAPORATORS SHALL HAVE INTERNAL CONDENSATE PUMPS. HPU CONTROLS SHALL BE BACNET. NOTE 1: PROVIDE 2-BRANCH JOINT PIPE KITS FOR HEAT-PUMPS LOCATED WITHIN THE SAME SPACE. REFER TO FLOOR PLANS FOR QUANTITIES.

BRANCH CONTROLLER FOR VRF									
UNIT NO.	MANUF. NO.	SERVICE	# OF BRANCHES	TOTAL CONNECTED CAPACITY (MBH)	ELEC DATA	REMARKS			
					VOLT PH AMPS				
BCC1	CMB-P1012NU-JA1	VRFc-1	12	64 INDOOR / 336 OUT	208 1 1.5				
BCC2	CMB-P108NU-KB1	VRFc-1	08	54 INDOOR / 126 OUT	208 1 1.5	NOTE 1			

SELECTION BASED ON "MITSUBISHI". REFER TO FLOOR PLANS FOR LOCATIONS. NOTE 1: SUB BOX FED FROM BC-1.

CONDENSATE PUMPS									
UNIT NO.	MANUF. NO.	SERVICE	G.P.H.	T.D.H. FT WATER	MOTOR	REMARKS			
					DRAW VOLT PH				
CP-1	8-10	HPUG	3	33	1/4 WATTS 12V	NOTE 1			

SELECTION BASED ON "SAUENMANN". PROVIDE OVERFLOW SAFETY SWITCH FOR EACH PUMP W/ ALARM. ALSO EACH PUMP SHALL BE FURNISHED WITH PROVISIONS FOR DIRECT CONNECTION (HARD WIRE) WITH PIGTAIL, READY FOR CONNECTION BY ELECTRICAL CONTRACTOR. NOTE 1: CONDENSATE PUMP TO BE PROVIDED FOR EACH HEAT PUMP & DCU INDOOR UNIT.

VRF MASTER CONTROLLER							
UNIT NO.	MANUF. NO.	CONTROLS	POWER CONNECTION	REMARKS			
			AMPS VOLT PH				
VC-1	AE-200A	VRF SYSTEM	0.3 120 1				

SELECTION BASED ON "MITSUBISHI". PROVIDE WITH BACNET INTERFACE FOR INTEGRATION WITH BMS SYSTEM.

AIR CONDITIONING DESIGN DATA						
DESIGN AREA	SUMMER				WINTER	
	OUT		IN		OUT	IN
	D.B.	W.B.	D.B.	W.B.	D.B.	D.B.
CAMBRIDGE, MA	90	74	75	68	7	70

DIFFUSER / REGISTER / GRILLE SCHEDULE			
SUPPLY DIFFUSERS / GRILLE			
SYMBOL	THROW/DEFLECTION	MODEL	MARK
	4-WAY 3-WAY 2-WAY 2-WAY CORNER 1-WAY	CEILING DIFFUSER PRICE - ANX (WITH INDUCTION VANES) ALUMINUM	S-1 S-1 S-1 S-4 S-1
	ROUND	CEILING CONE DIFFUSER PRICE - RCD WIRE GUARD	S-2
	SIDEWALL	LINEAR SLOT DIFFUSER PRICE - 610 - SUPPLY (HORIZONTAL DISCHARGE)	S-3
RETURN / EXHAUST GRILLES			
SYMBOL	THROW	MODEL	MARK
	N/A	CEILING GRILLE 45° DEFLECTION 1/2" BLADE SPACING HORIZONTAL BLADE, NO SCREW HOLES PRICE 635 - ALUMINUM	R/E-1
	N/A	SIDEWALL GRILLE 45° DEFLECTION, 3/8" BLADE SPACING HORIZONTAL BLADE PRICE 610 - ALUMINUM	R/E-2

NOTE:
1. PROVIDE ALL REQUIRED ACCESSORIES FOR APPLICABLE INSTALLATION METHOD (I.E., T-BAR PANEL, PLASTER FRAMES, & SQUARE-TO-ROUND TRANSITIONS.)
2. COLOR TO BE SELECTED BY ARCHITECT
3. REFER TO DRAWINGS FOR REQUIRED FLOW / DEFLECTIONS.

LEGEND		
SYMBOL	ABBREV	DESCRIPTION
	AFF	ABOVE FINISHED FLOOR
	AHJ	AUTHORITY HAVING JURISDICTION
	ATC	AUTOMATIC TEMP. CONTROL
	BMS	BUILDING MANAGEMENT SYSTEM
	CO	CONDENSATE CLEAN OUT
	CFM	CUBIC FEET PER MINUTE
	DDC	DIRECT DIGITAL CONTROL
	GC	GENERAL CONTRACTOR
	GPM	GALLONS PER MINUTE
	HP	HORSEPOWER
	HVAC	HEATING, VENTILATING AND AIR COND.
	IP	INCH PIPES
	MANUF	MANUFACTURER
	MAX	MAXIMUM
	MIN	MINIMUM
	NC	NORMALLY CLOSED
	NO	NORMALLY OPEN
	NTS	NOT TO SCALE
	OA	OUTSIDE AIR
	OD	OUTSIDE DIAMETER
	OED	OPEN END DRAIN
	PC	CONDENSATE PUMP
	PLB	PLUMBING CONTRACTOR
	PD	PRESSURE DROP
	PH	PHASE
	PSI	POUNDS PER SQUARE INCH
	TYP	TYPICAL
	V	VOLTS
	VEL	VELOCITY
	XX	EQUIPMENT TAG DESIGNATION
	DIA	DIAMETER
		GATE VALVE
		GLOBE VALVE
		CHECK VALVE
		BUTTERFLY VALVE
		BALL VALVE
		THREE-WAY CONTROL VALVE
		TWO-WAY CONTROL VALVE
		FLOW METERING ELEMENT
		CIRCUIT SETTER VALVE
		TRIPLE DUTY VALVE
		DRAIN VALVE
		PLUG VALVE
		SAFETY VALVE
		STRAINER
		UNION
		AUTOMATIC AIR VENT
		PIPE UP (ELBOW)
		PIPE DOWN (ELBOW)
		PRESSURE GAGE WITH GAGE COCK
		THERMOMETER
		BRANCH CONNECTION OUT OF TOP
		BRANCH CONNECTION OUT OF BOTTOM
		BRANCH CONNECTION OUT OF SIDE
		CAP ON END OF PIPE
		FLOW IN DIRECTION OF ARROW
		CONNECT NEW TO EXISTING
		DISCONNECT FROM EXISTING; LIMIT OF DEMOLITION
		SUPPLY AIR DUCT SECTION
		RETURN/EXHAUST AIR DUCT SECTION
		SUPPLY AIR
		RETURN/EXHAUST AIR
		LIMIT ALARM (HIGH OR LOW)
		SWITCH SERVING FAN
		THERMOSTAT
		DIFFUSER/REGISTER STYLE
		SIZE CFM

- GENERAL NOTES**
- ALL PIPING AND DUCTWORK UNLESS DIMENSIONED IS SHOWN DIAGRAMMATICALLY ONLY. EXACT LOCATION SHALL BE DETERMINED IN FIELD AFTER COORDINATING WITH OTHER WORK.
 - FOR TYPICAL PIPING DIAGRAMS AND CONNECTIONS AT EQUIPMENT, SEE DETAIL DRAWINGS.
 - FOR LOCATION OF OPENINGS IN ROOF AND FLOORS REFER TO STRUCTURAL AND ARCHITECTURAL DRAWINGS.
 - VENTS, VALVES, ETC. THAT MUST BE SERVICED SHALL BE LOCATED IN ACCESSIBLE POSITIONS.
 - THIS CONTRACTOR SHALL PROVIDE ACCESS DOORS AT LOCATIONS WHERE ACCESS TO VALVES, DAMPERS, FIRE DAMPERS, ETC. ARE REQUIRED.
 - ALL AIR VENTS & PRESSURE GAUGES SHALL BE INSTALLED WITH COCKS SUCH THAT THE DEVICE CAN BE REMOVED WITHOUT DRAINING PIPING SYSTEM.
 - HVAC CONTRACTOR SHALL COORDINATE ALL WORK WITH PLUMBING AND ELECTRICAL CONTRACTORS.
 - HVAC CONTRACTOR SHALL INFORM G.C. AS TO THE LOCATION AND SIZE OF ALL ACCESS PANELS.
 - ALL SUPPORT STEEL UNLESS SHOWN ON STRUCTURAL DRAWINGS SHALL BE PROVIDED BY HVAC CONTRACTOR.
 - DUCT SMOKE DETECTORS INDICATED ARE TO BE PROVIDED, WIRED, AND INSTALLED BY THIS CONTRACTOR FIRE ALARM INTERLOCK BY ELECTRICAL CONTRACTOR.
 - FOR ALL CONNECTIONS TO BUILDING STEEL REFER TO STRUCTURAL DRAWINGS.
 - THE MANUFACTURER LISTED IN THE SCHEDULES REFLECTS THE BASIS OF DESIGN AS INDICATED ON THE CONTRACT DRAWINGS AND IS NOT INTENDED TO SUGGEST THE REQUIRED PROVIDER. REFER TO THE SPECIFICATIONS FOR A COMPLETE DESCRIPTION OF EACH PRODUCT REQUIRED AND REFERENCE "OR EQUAL" REQUIREMENTS.
 - ALL SMOKE DAMPERS SHALL BE COMBINATION SMOKE/FIRE DAMPERS SHALL BE FURNISHED, INSTALLED AND POWER WIRED BY HVAC CONTRACTOR. DAMPERS SHALL BE MOTOR OPERATED WITH 24VOLT/120 VOLT ACTUATOR BY HVAC CONTRACTOR. FIRE ALARM INTERLOCK BY ELECTRICAL CONTRACTOR.
 - PROVIDE ISOLATION VALVES ON ALL BRANCH AND MAIN PIPING SUPPLY & RETURN LINES WHICH SERVE MORE THAN TWO PIECES OF TERMINAL HVAC EQUIPMENT.

GGD CONSULTING ENGINEERS, INC.
375 Falconer Corner Road, Suite D, Dartmouth, MA 02747-1258
P: 508-998-0700 F: 508-998-0853 E: EMAIL: info@ggd.com

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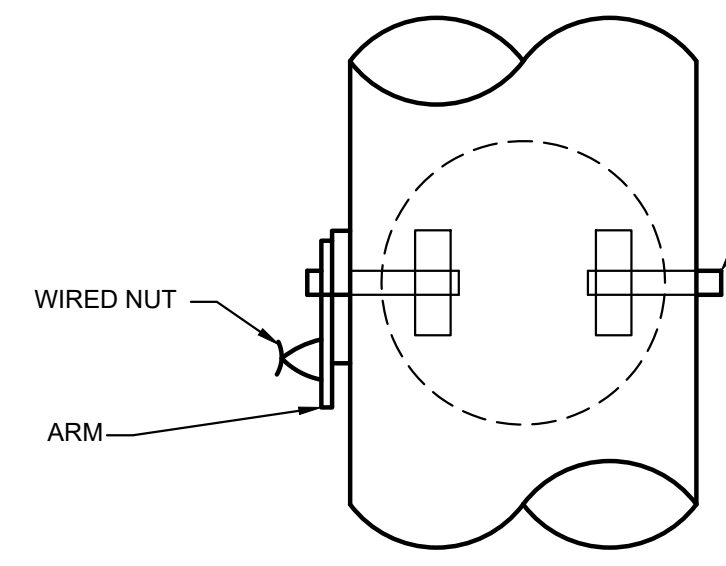
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Rindge Commons Pre-K
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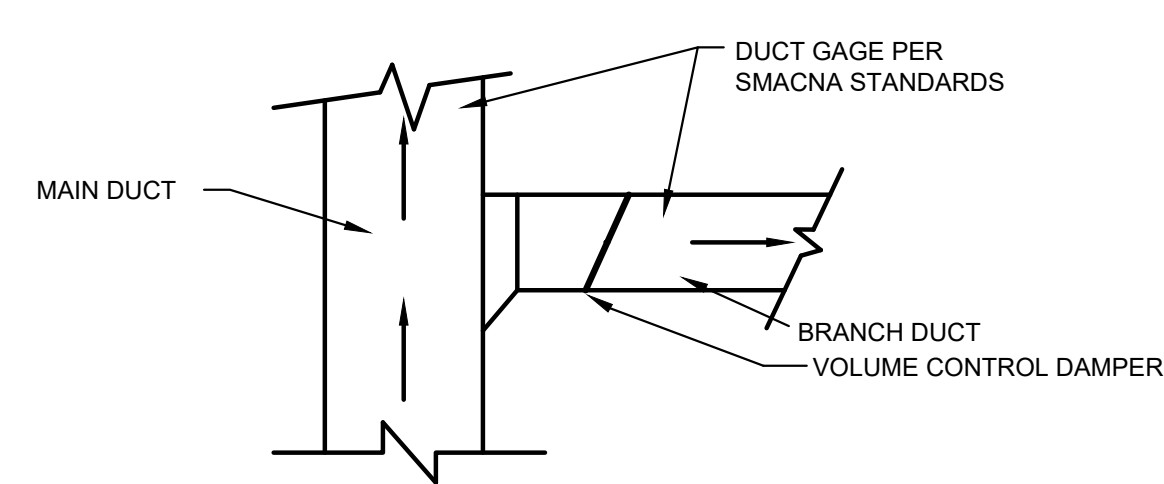
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HVAC - SCHEDULE & LEGENDS

Date: 12-Oct-2023 Drawn By: MJM
Project No: 23006 Scale: NTS

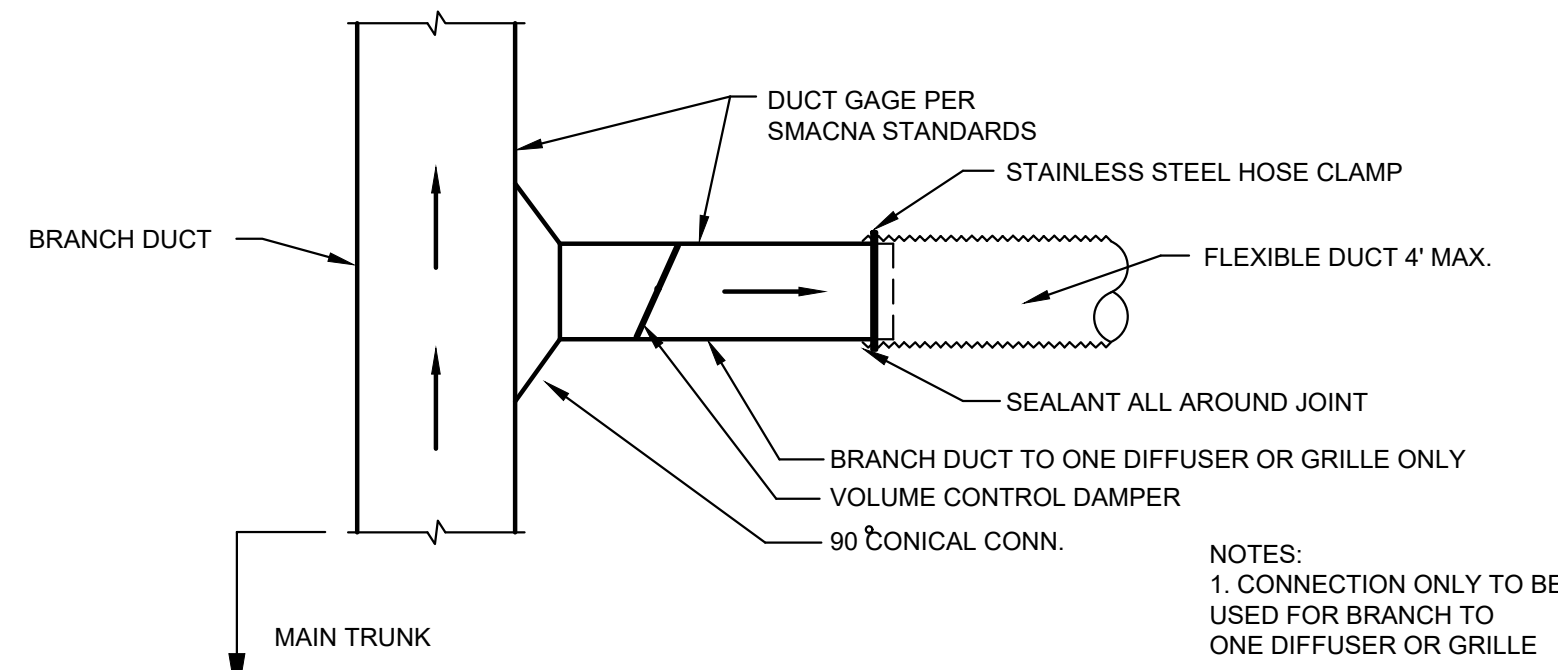
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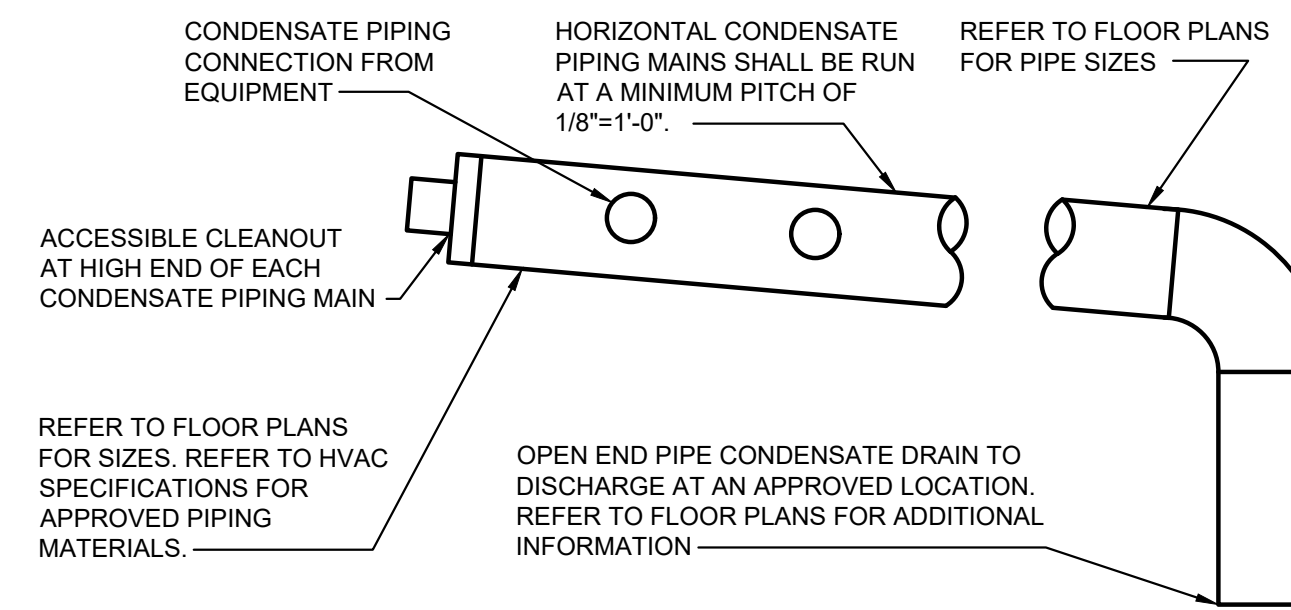
VOLUME DAMPER
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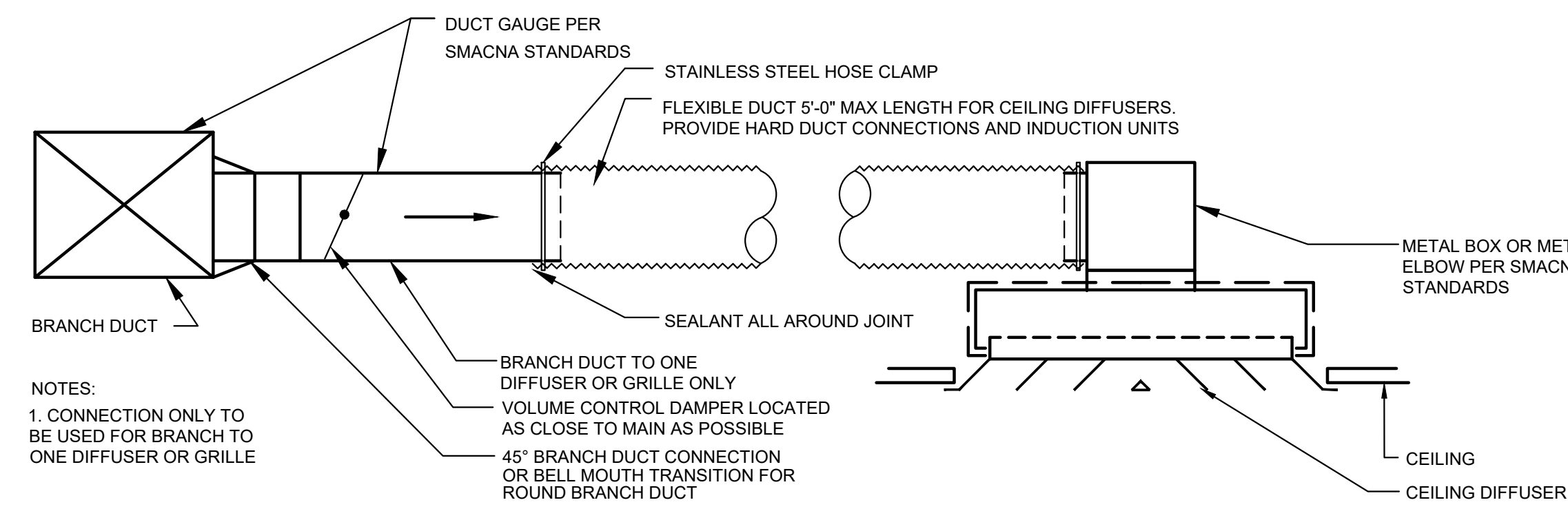
BRANCH DUCT CONNECTION TO MAIN
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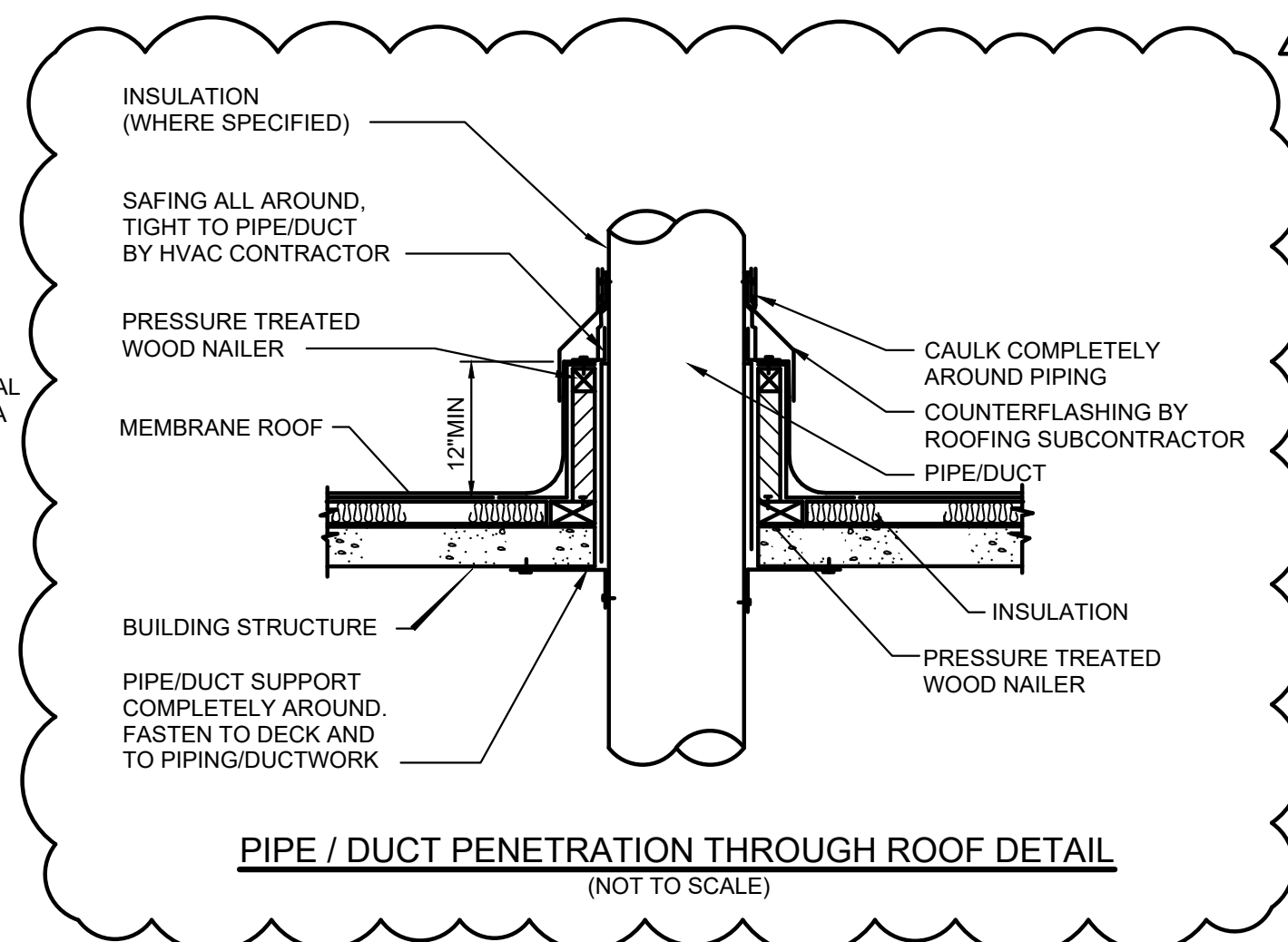
DIFFUSER/GRILLE CONNECTION TO BRANCH
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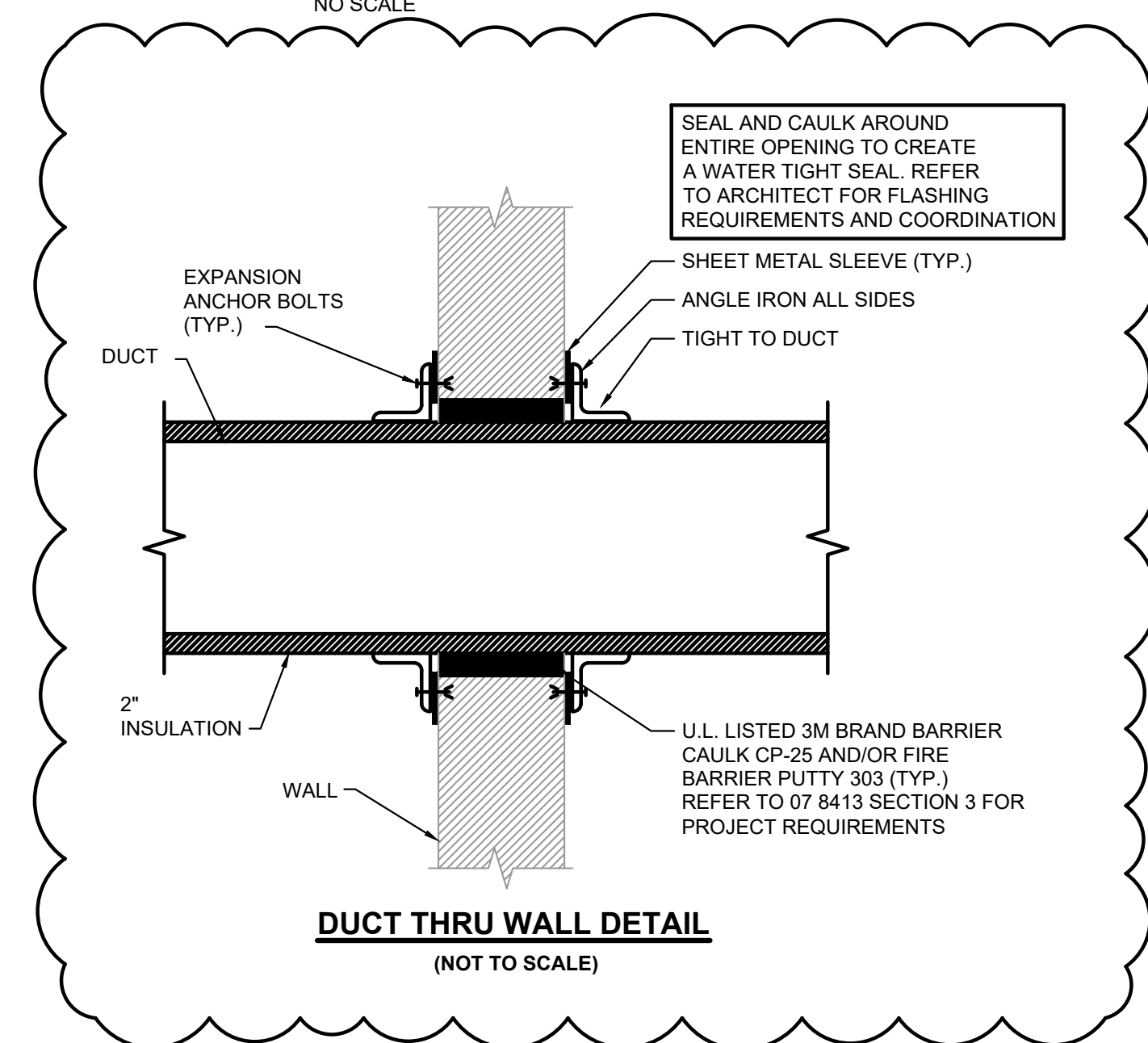
CONDENSATE PIPING DETAIL
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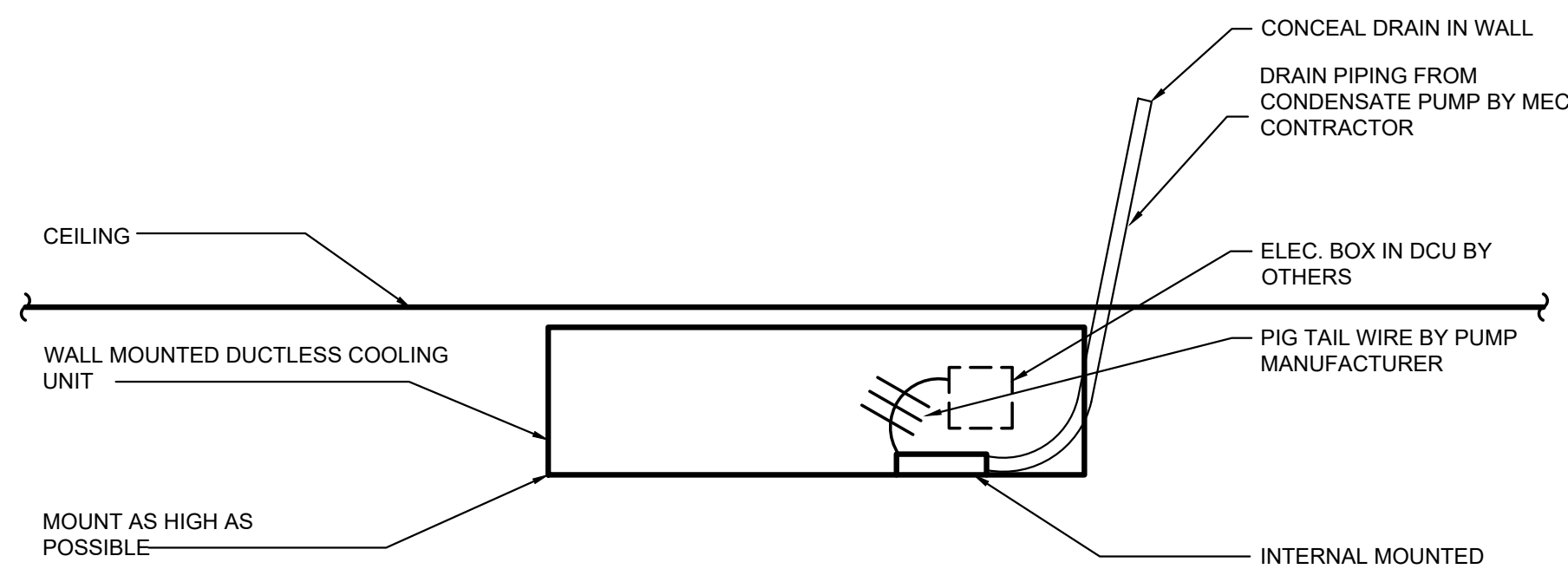
DIFFUSER/GRILLE CONNECTION TO BRANCH
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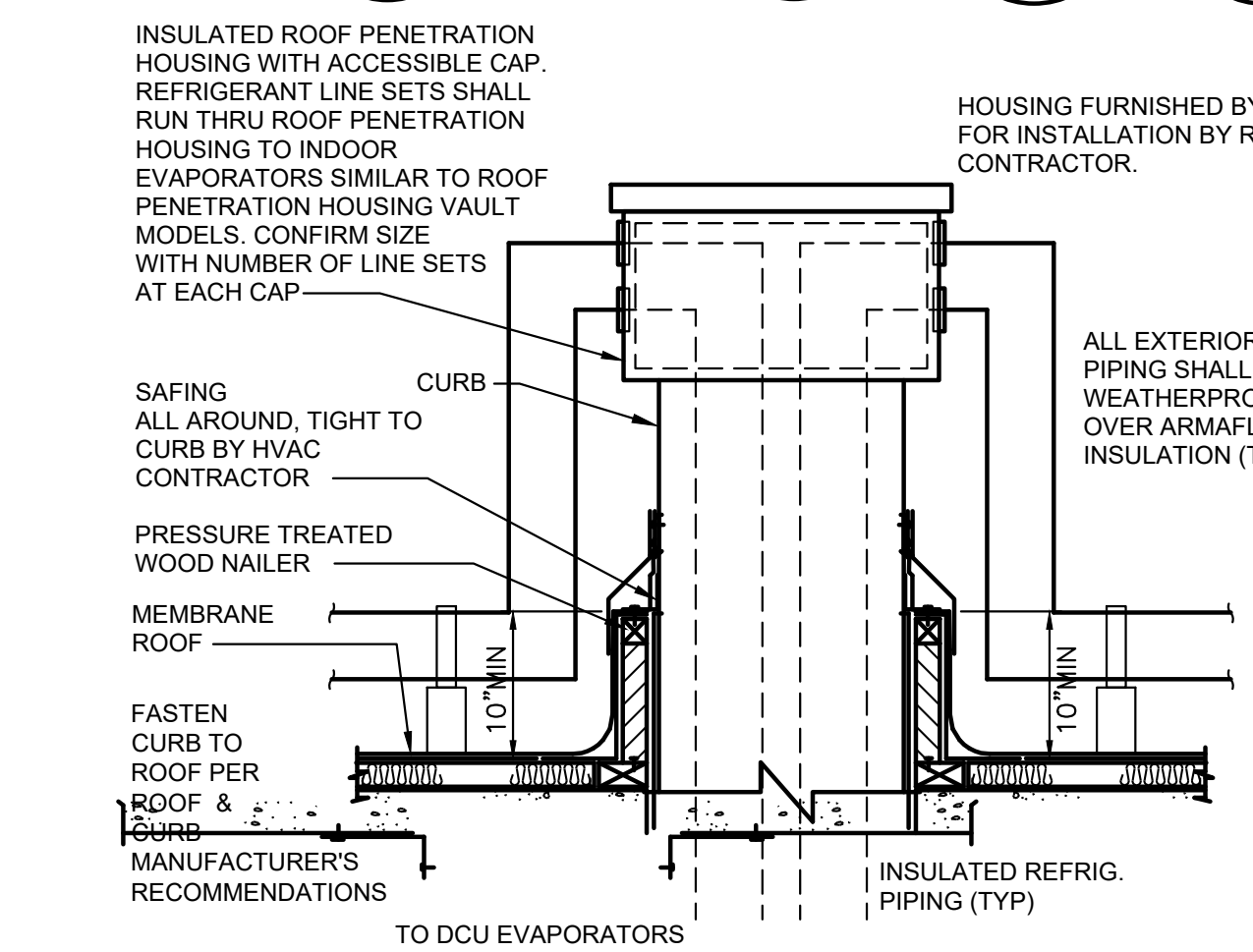
PIPE / DUCT PENETRATION THROUGH ROOF DETAIL
(NOT TO SCALE)



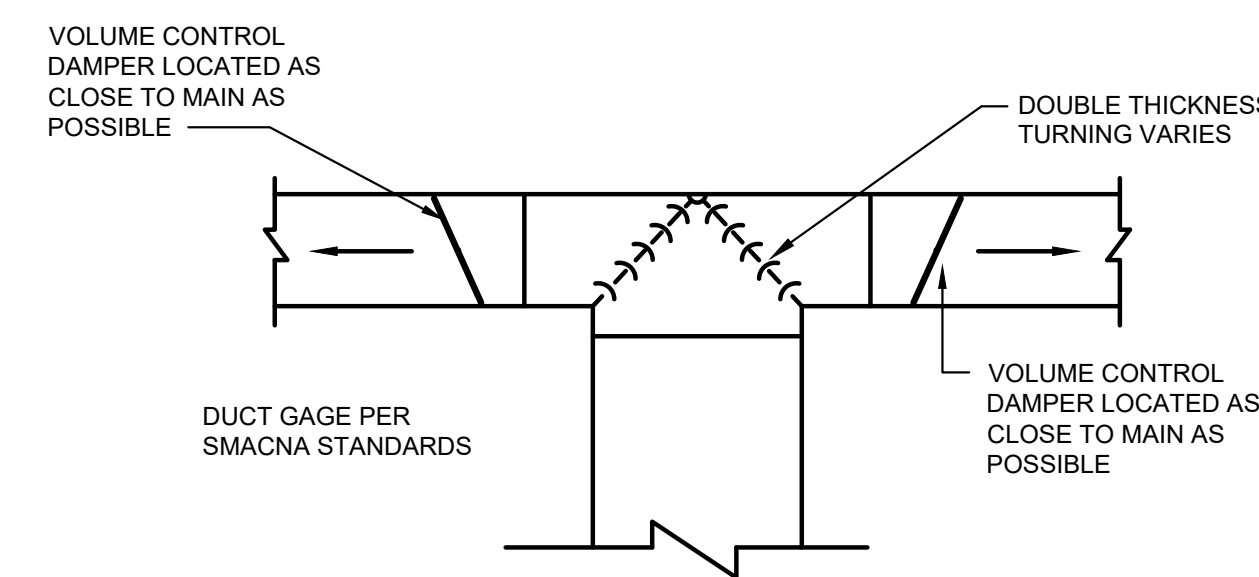
DUCT THRU WALL DETAIL
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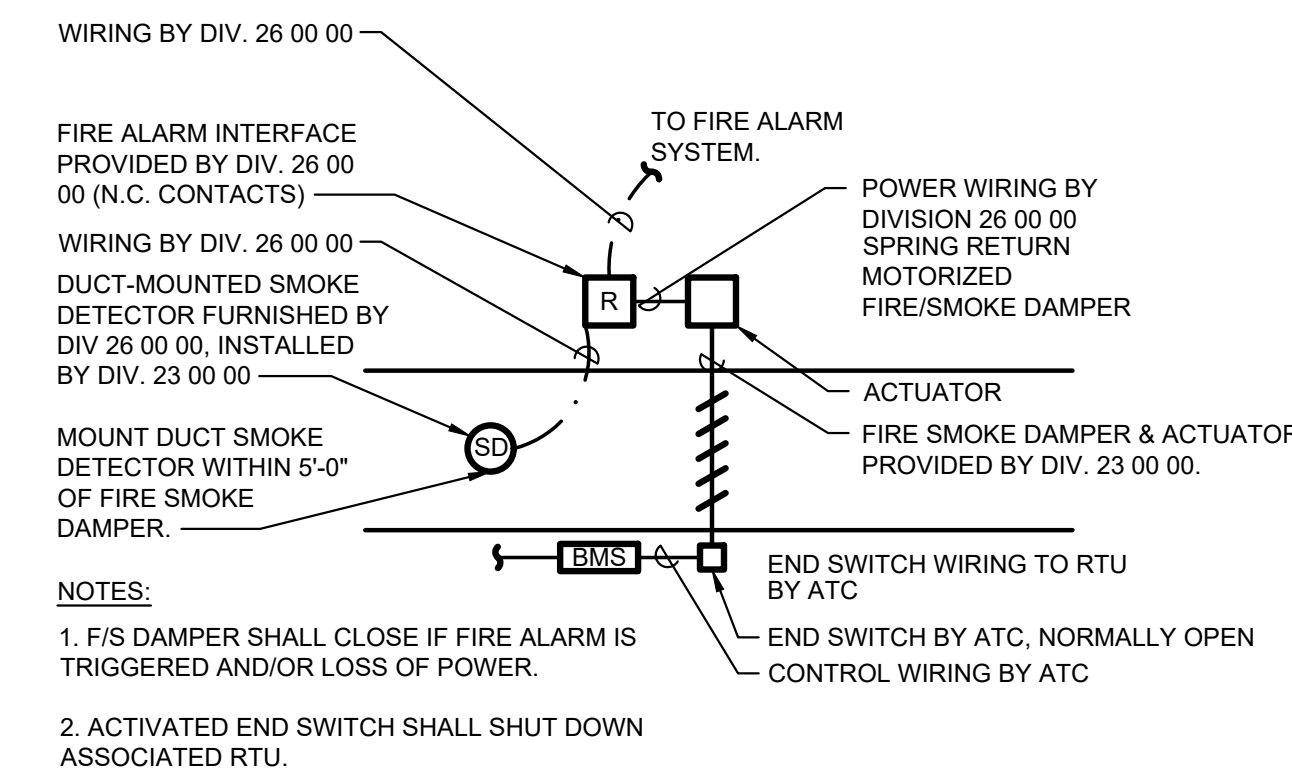
DUCTLESS COOLING UNIT DRAIN DETAIL (DCU)
(NOT TO SCALE)



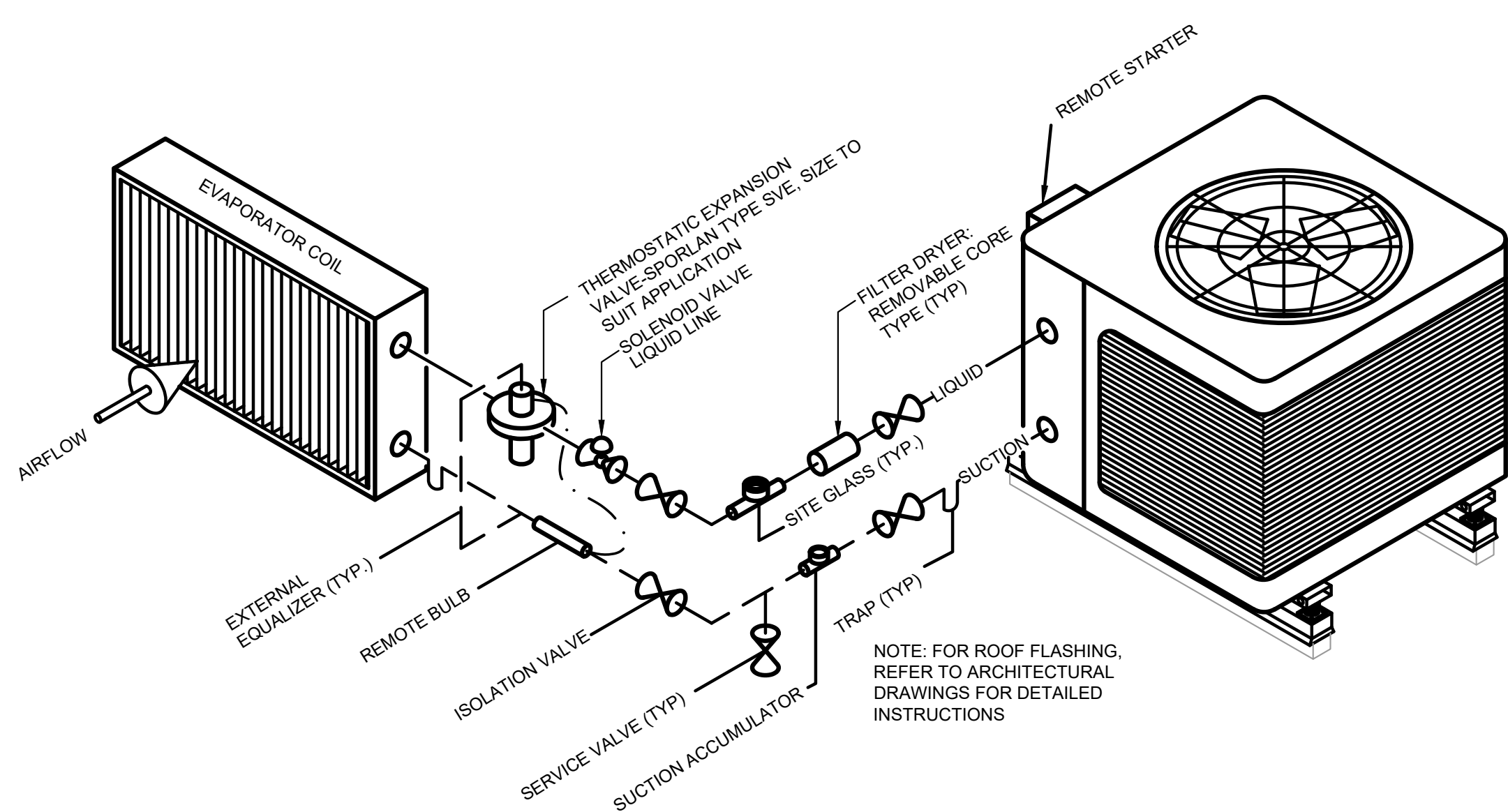
REFRIGERANT PIPE ROOF PENETRATION HOUSING
(NOT TO SCALE)



TYPICAL TEE DUCT CONNECTION
(NOT TO SCALE)



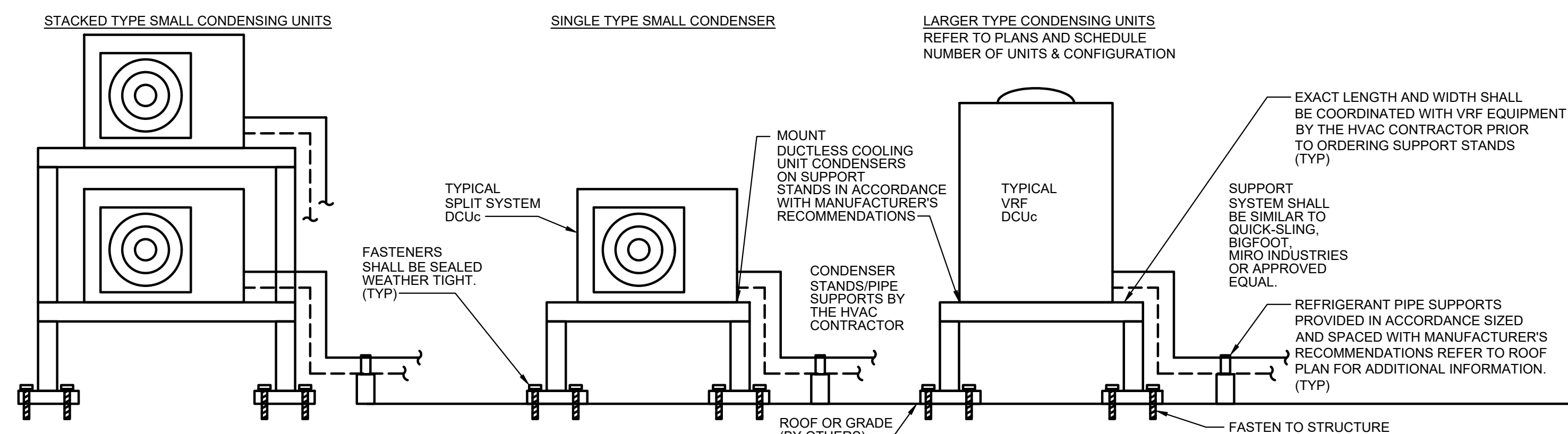
FIRE/SMOKE DAMPER DETAIL
(NOT TO SCALE)



REFRIGERANT PIPING DIAGRAM
(NOT TO SCALE)

REFRIGERANT PIPING: PROVIDE SUCTION LINES WITH ISOLATION VALVE, SUCTION ACCUMULATOR AND CHARGING CONNECTION. LIQUID LINE WITH SITE GLASS HAVING DOUBLE PORTS WITH GAPS, FILTER DRYER, ISOLATION VALVES AND CHARGING CONNECTION. INSULATE PER SPECIFICATIONS. SIZING PER MANUFACTURER. PROVIDE ALUMINUM JACKET ON EXTERIOR PIPING.

PIPING INDICATED IS FOR SINGLE CIRCUIT. CONTRACTOR SHALL PROVIDE ADDITIONAL PIPING, VALVES, INSULATION, ETC FOR ADDITIONAL CIRCUITS & HOT GAS BYPASS IN ACCORDANCE WITH MANUFACTURER'S RECOMMENDATIONS AND GUIDELINE REQUIREMENTS. CONFIRM, VERIFY & COORDINATE W/ UNIT MANUFACTURER FOR ALL PIPING & INSTALLATION REQUIREMENTS.



VRF OUTDOOR EQUIPMENT SUPPORT SYSTEM
(NOT TO SCALE)



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Sheet Title
HVAC - DETAILS I

Date: 12-Oct-2023 Drawn By: MJM
Project No: 23006 Scale: NTS

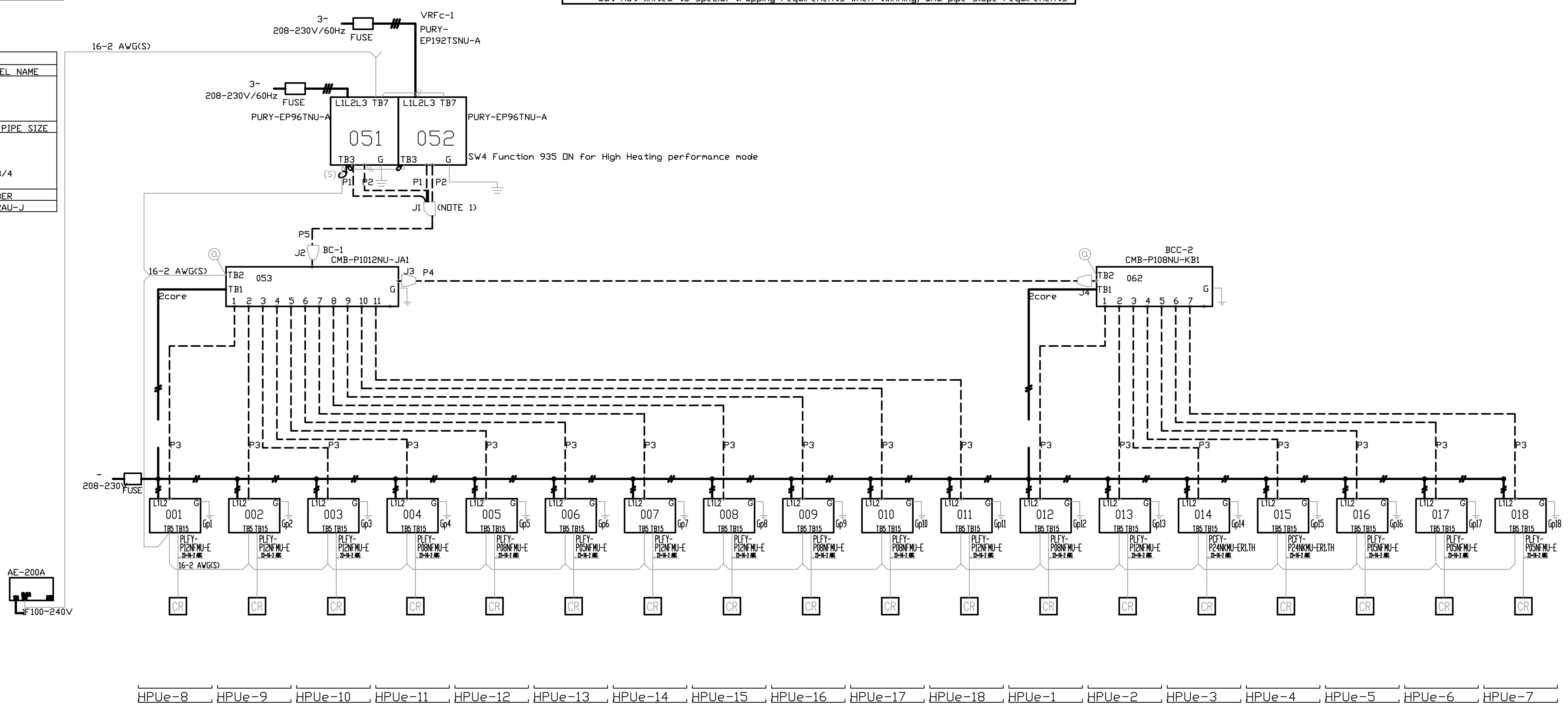
Sheet No.
M0.2

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DIAGRAM SYMBOL LEGEND	CONT. NO. PAGE
— POWER WIRE	
— CONTROL WIRE	
— REF. PIPE	

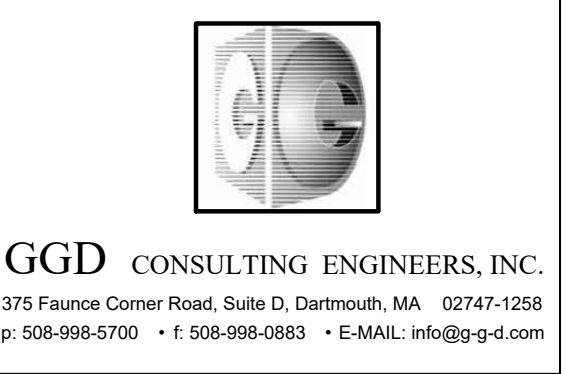
CITY MULTI
SYSTEM SCHEMATIC DWG.

This drawing is schematic in nature. Final routing of piping & wiring shall be determined by the installing contractor and/or designer of record. Additional refrigerant charge is needed depending on the size and length of extended piping. Please refer the amount of pre-charge and the formula of calculation which is mentioned on the data book.
 $1.25\text{mm}(16 \text{ AWG})$; $1.25\text{mm}(16 \text{ AWG})$ or more ; $0.75\text{mm}(20 \text{ AWG})$; between $0.5\text{mm}(24 \text{ AWG})$ and $0.75\text{mm}(20 \text{ AWG})$.
 Coded Notes:
 NDT1: Install twinning Y's within 15 degrees of level and with 20 inches of straight pipe on converging connection - reference installation manual for additional details including but not limited to special trapping requirements when twinning, and pipe slope requirements.

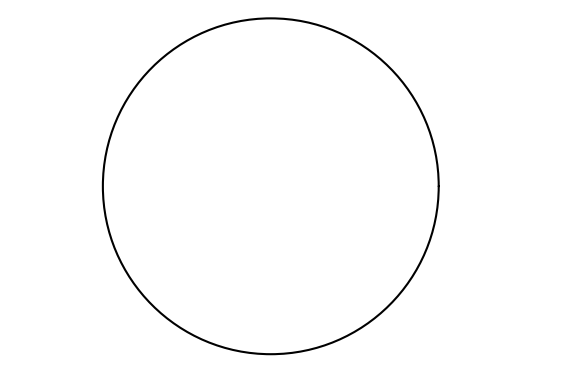
PIPING AND CONTROLS	
SYMBOL	BRANCH PIPE MODEL NAME
J1	CMY-R200NSBK
J2	CMY-R302S-G1
J3	CMY-R303S-G1
J4	CMY-R306S-G
SYMBOL LIQUID PIPE/GAS PIPE SIZE	
P1	3/4 /
P2	/ 7/8
P3	1/4 / 1/2
P4	3/8 / 5/8 / 3/4
P5	7/8 / 1-1/8
SYMBOL MODEL NUMBER	
CR	PAC-YT33CRAU-J



- HPUe-8
- HPUe-9
- HPUe-10
- HPUe-11
- HPUe-12
- HPUe-13
- HPUe-14
- HPUe-15
- HPUe-16
- HPUe-17
- HPUe-18
- HPUe-1
- HPUe-2
- HPUe-3
- HPUe-4
- HPUe-5
- HPUe-6
- HPUe-7



24 DANE STREET
 SOMERVILLE, MA
 02143 - 3228



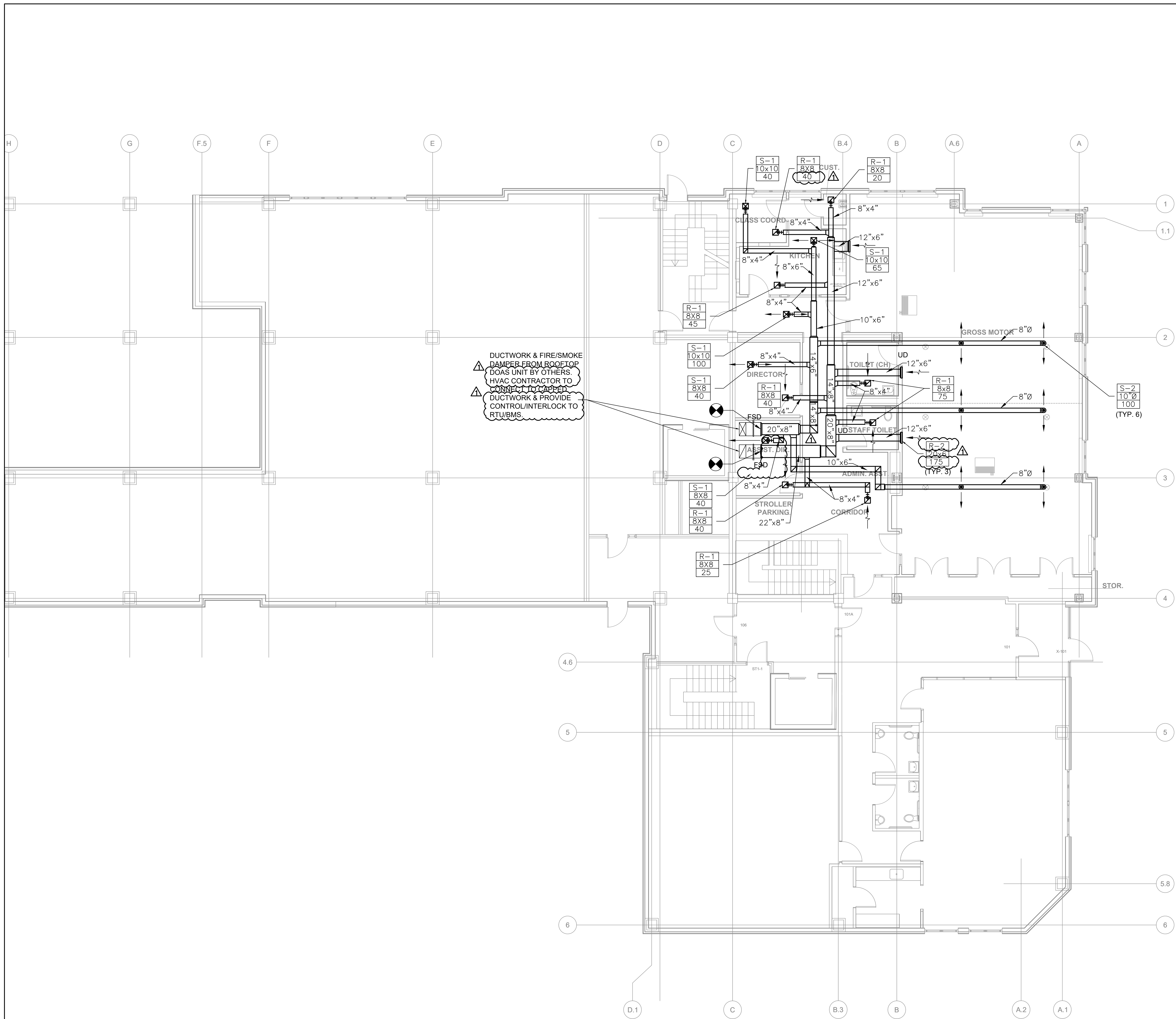
REV.	DATE	DESCRIPTION
-	10-10-2023	BID DOCUMENTS
1	10-30-2023	ADDENDUM #1

Rindge Commons Pre-K
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 Cambridge, MA 02140

Sheet Title
HVAC - DETAILS III

Date: 12-Oct-2023 Drawn By: MJM
 Project No: 23006 Scale: NTS

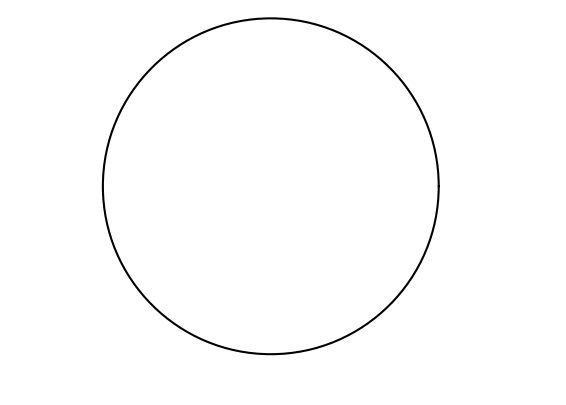
Sheet No.
M0.3



GGD CONSULTING ENGINEERS, INC.
 375 Falconer Corner Road, Suite D, Dartmouth, MA 02747-1258
 P: 508-998-0700 • F: 508-998-0883 • E: MAIL: info@ggd.com

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 ASSOCIATES INC.**
ARCHITECTS

24 DANE STREET
SOMERVILLE, MA
0 2 1 4 3 - 3 2 2 8



Architect

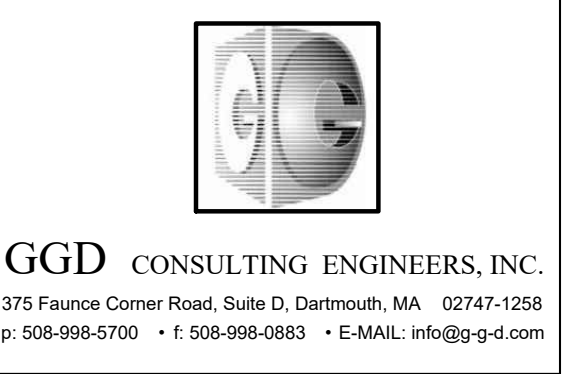
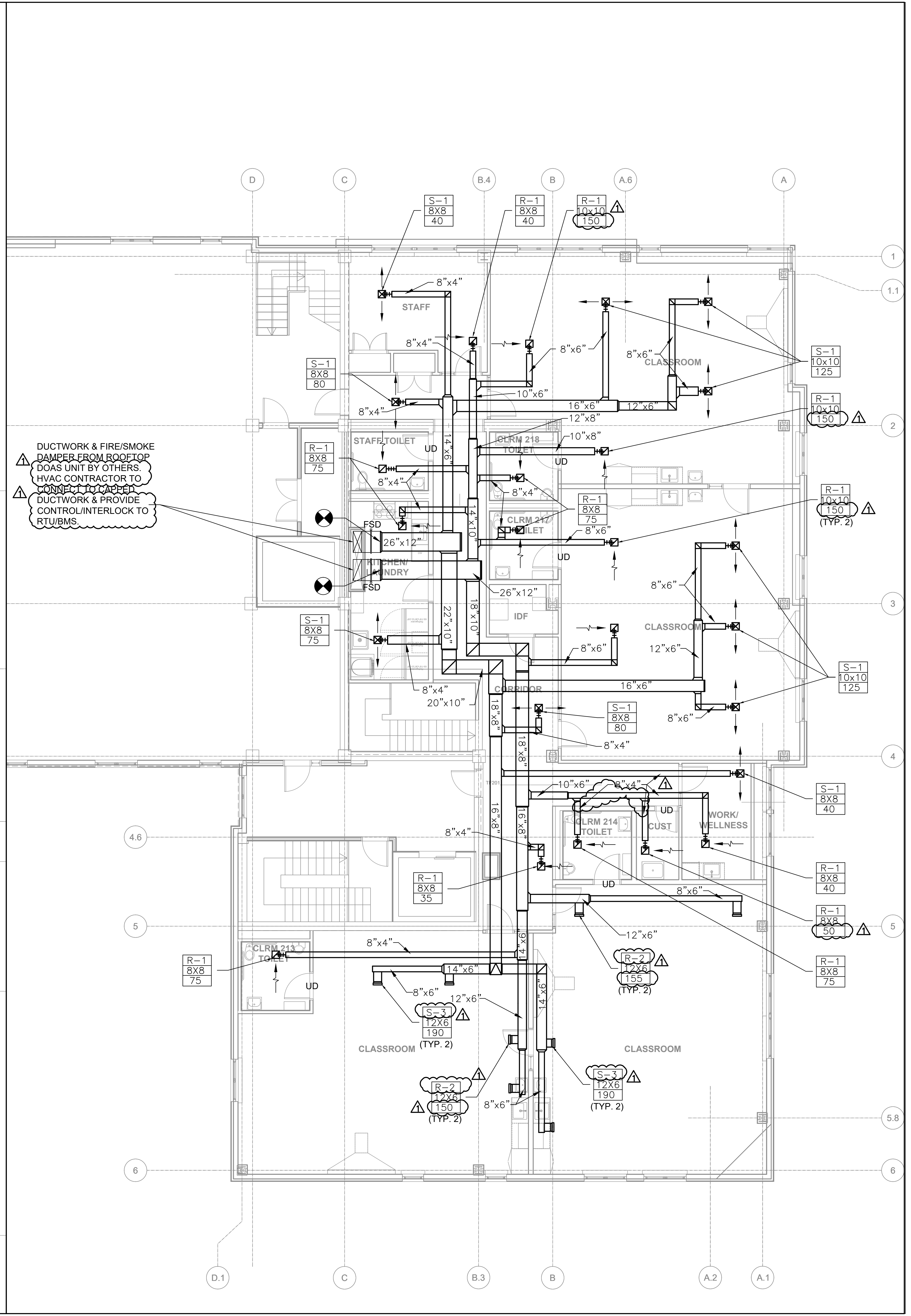
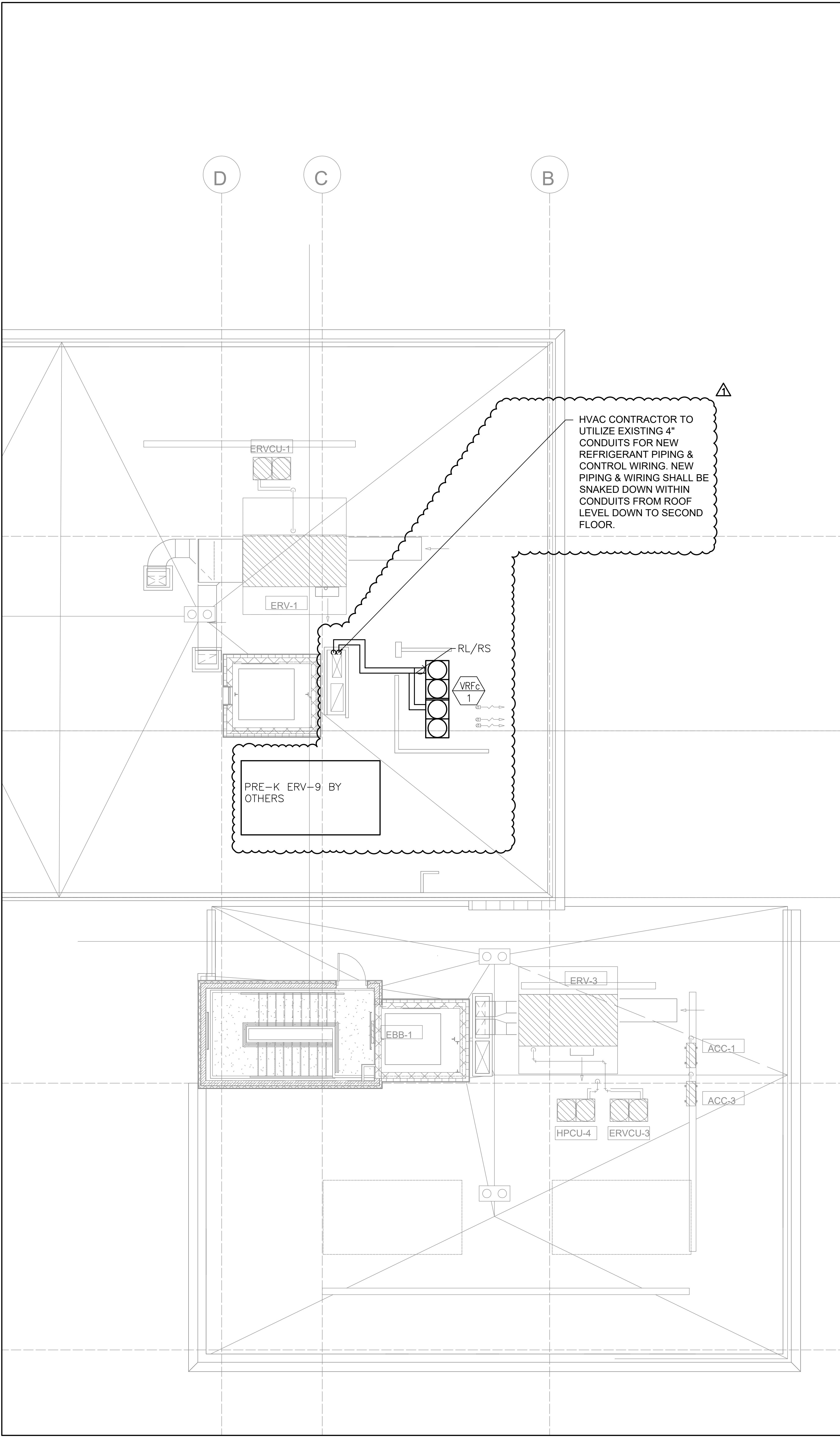
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1	10-30-2023	ADDENDUM #1

**Rindge
 Commons
 Pre-K**
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Sheet Title
**HVAC - 1ST
 FLOOR
 DUCTWORK**

Date: 12-Oct-2023 Drawn By: MJM
 Project No: 23006 Scale: 3/16" = 1' 0"

Sheet No.
M1.1



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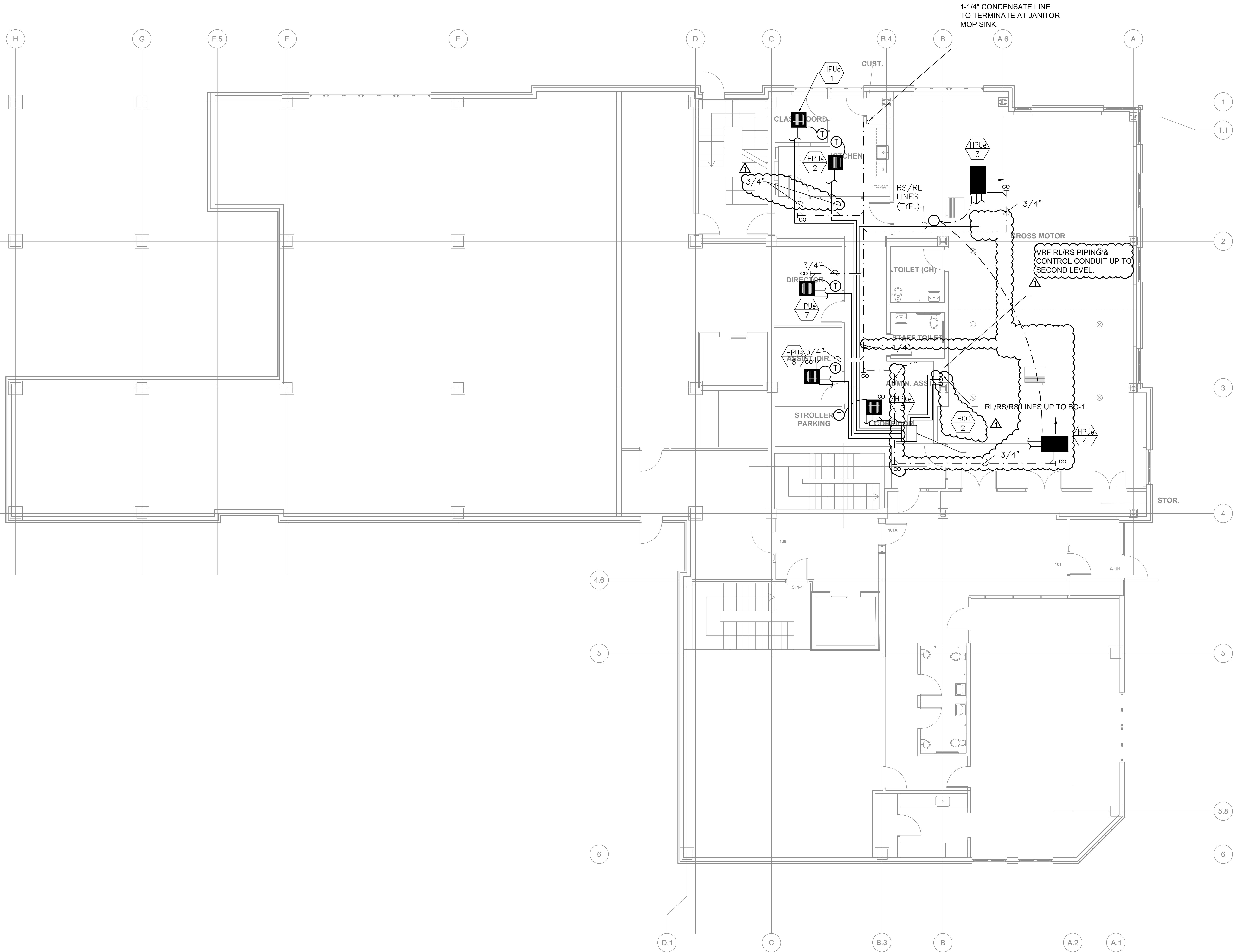
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1	10-30-2023	ADDENDUM #1

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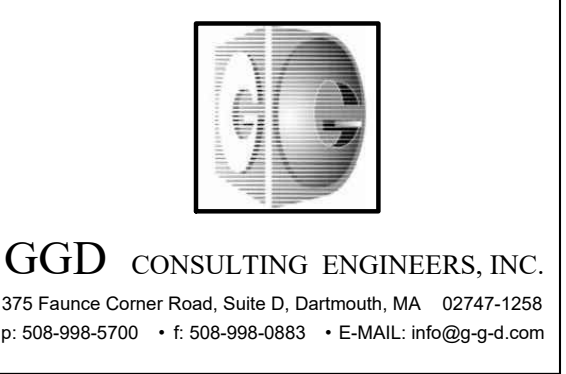
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HVAC - 2ND FLOOR DUCTWORK
 Date: 12-Oct-2023 Drawn By: MJM
 Project No: 23006 Scale: 3/16" = 1' 0"

Sheet No.
M1.2



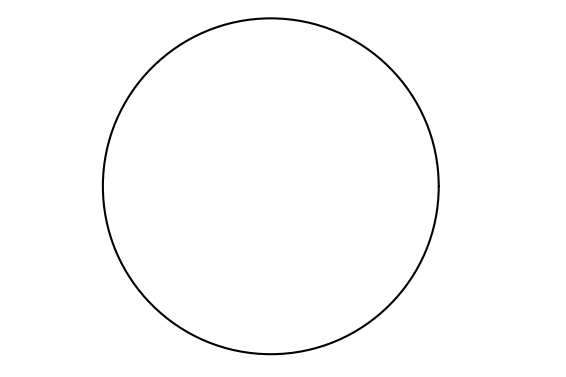
1-1/4" CONDENSATE LINE
TO TERMINATE AT JANITOR
MOP SINK.

VRF RL/RS PIPING &
CONTROL CONDUIT UP TO
SECOND LEVEL.



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24 DANE STREET
SOMERVILLE, MA
0 2 1 4 3 - 3 2 2 8



Architect

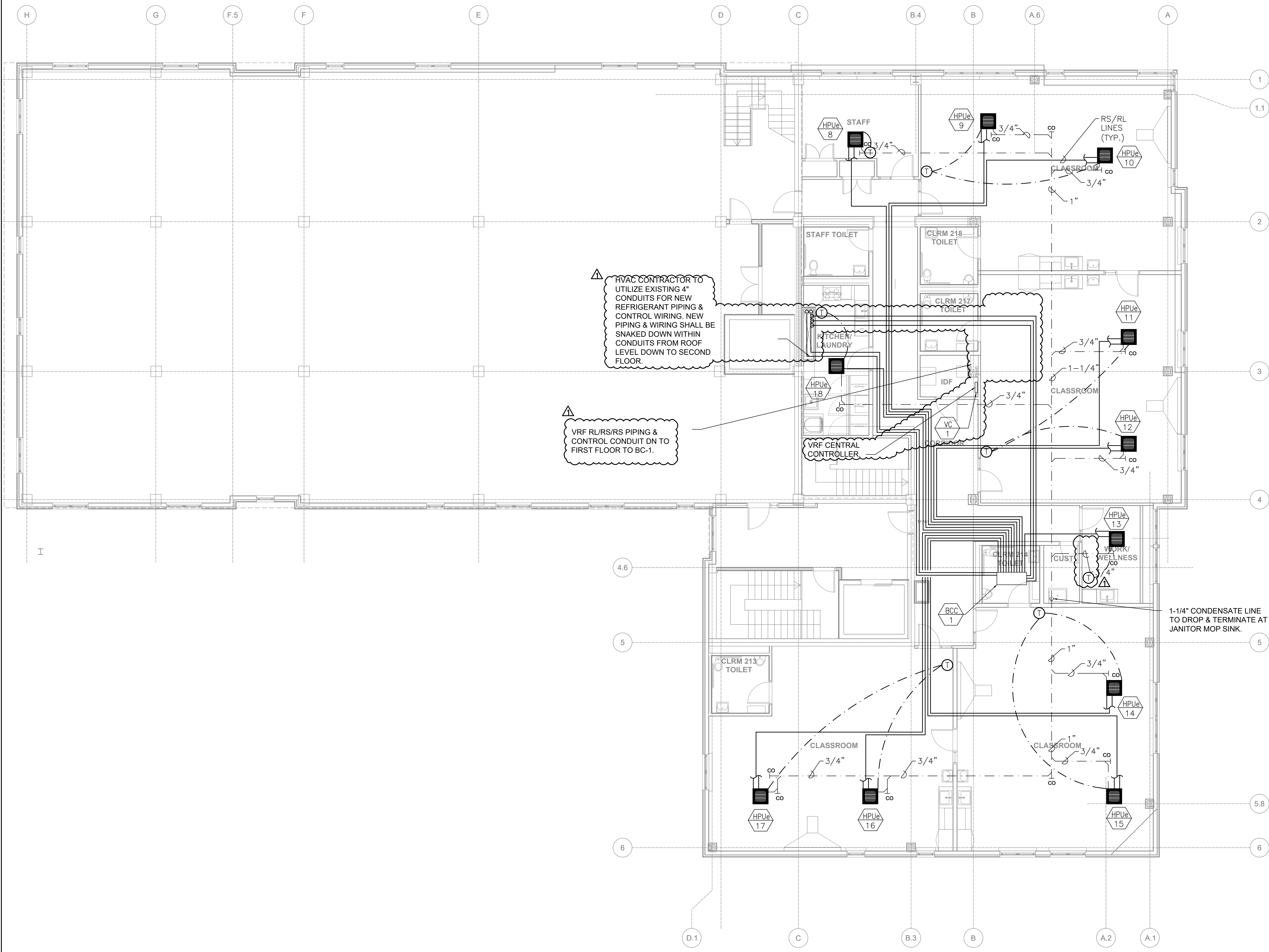
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1	10-30-2023	ADDENDUM #1

**Rindge
Commons
Pre-K**
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Sheet Title
**HVAC - 1ST
FLOOR PIPING**

Date: 12-Oct-2023 Drawn By: MJM
Project No: 23006 Scale: 3/16" = 1' 0"

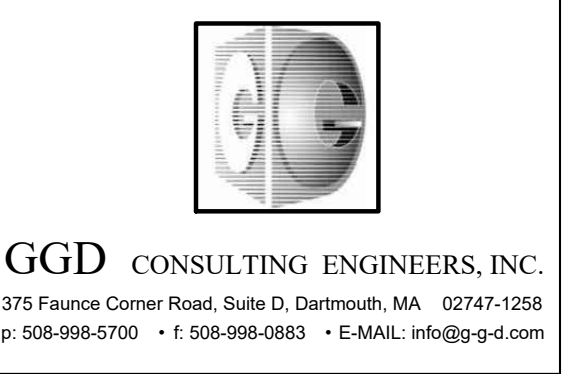
Sheet No.
M2.1



HVAC CONTRACTOR TO UTILIZE EXISTING 4" CONDUITS FOR NEW REFRIGERANT PIPING & CONTROL WIRING. NEW PIPING & WIRING SHALL BE SNAKED DOWN WITHIN CONDUITS FROM ROOF LEVEL DOWN TO SECOND FLOOR.

VRF RL/RS/RS PIPING & CONTROL CONDUIT DN TO FIRST FLOOR TO BC-1.

1-1/4" CONDENSATE LINE TO DROP & TERMINATE AT JANITOR MOP SINK.



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24 DANE STREET
SOMERVILLE, MA
0 2 1 4 3 - 3 2 2 8

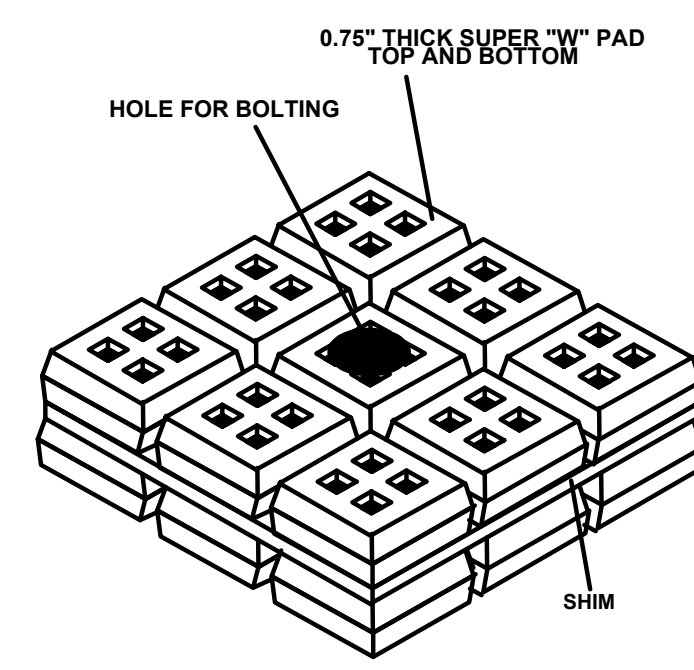
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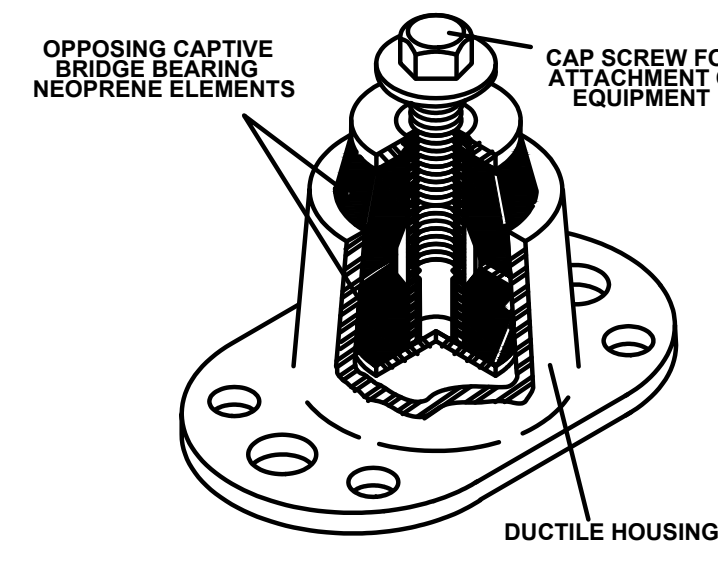
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**HVAC - 2ND
FLOOR PIPING**

Date: 12-Oct-2023 Drawn By: MJM
Project No: 23006 Scale: 3/16" = 1' 0"

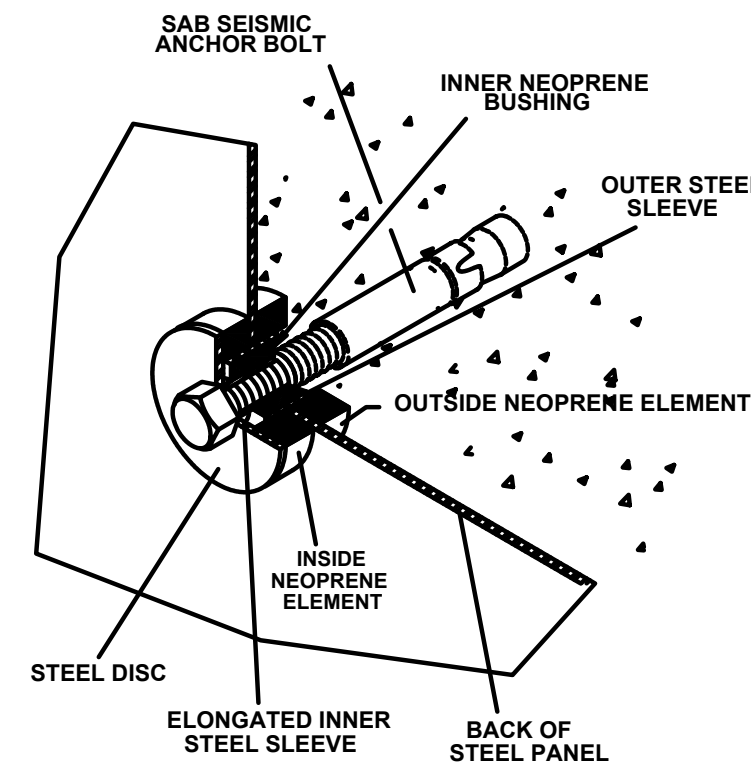
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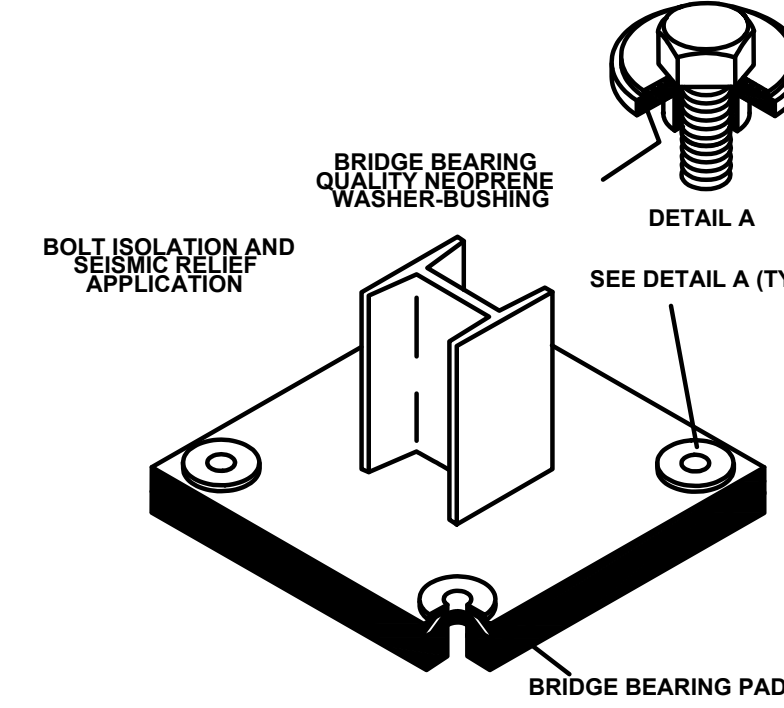
LAYERED SUPER "W" PADS WITH STEEL SHIM
SPECIFICATION 1



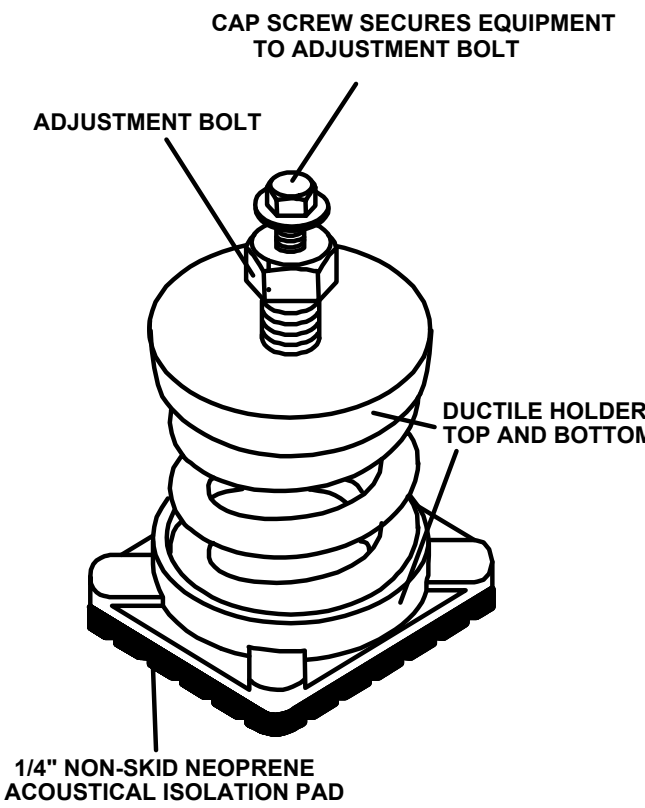
RESTRAINED BR MOUNT
SPECIFICATION 2



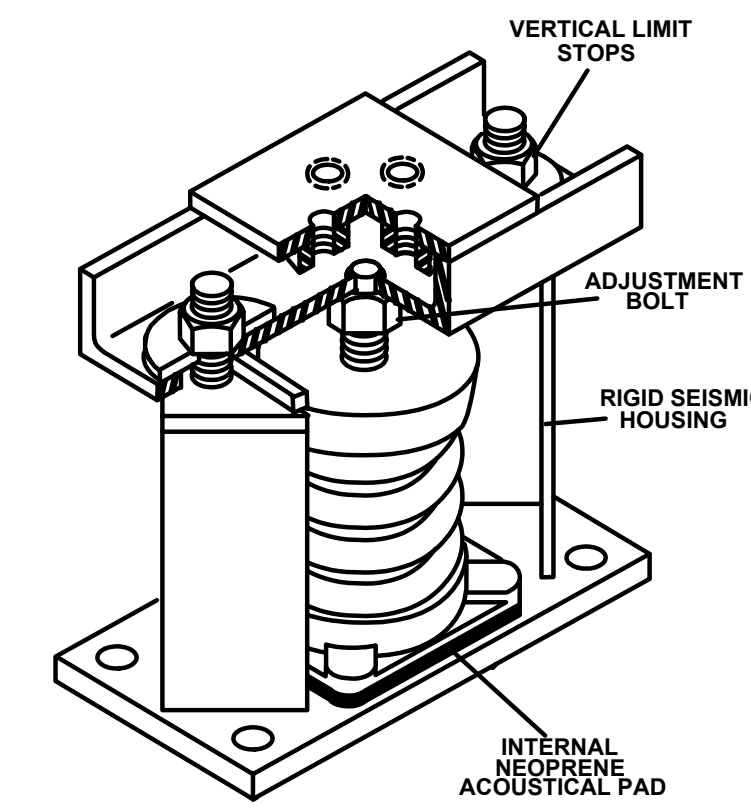
BR BUSHING
SPECIFICATION 3



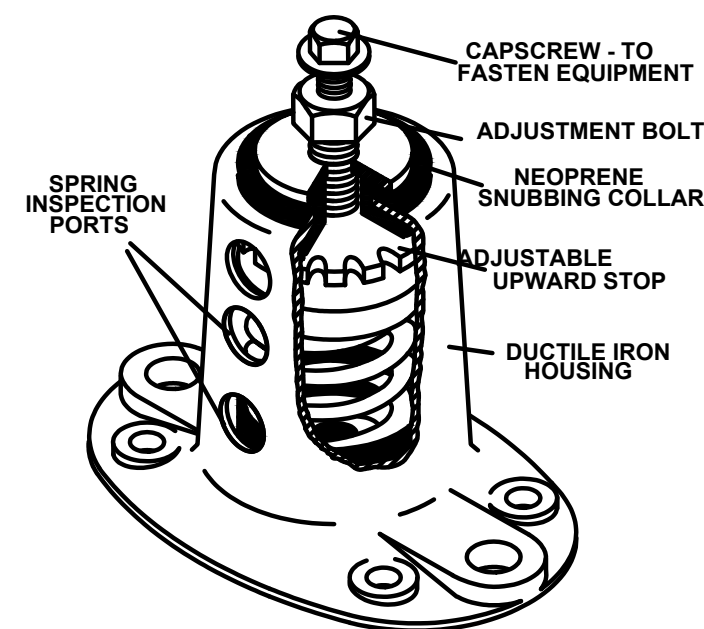
HG NEOPRENE BUSHING
SPECIFICATION 4



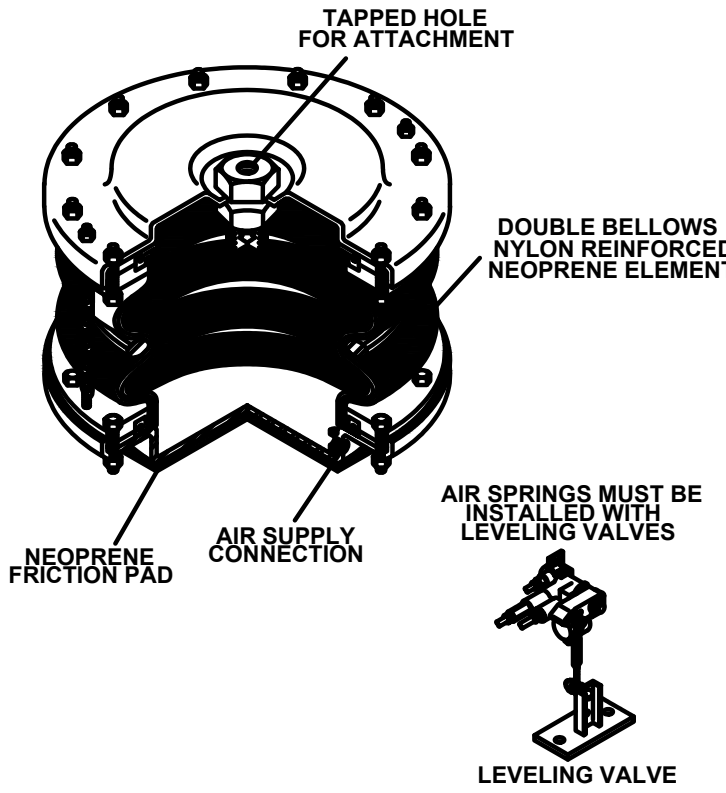
SLF SPRING MOUNT
SPECIFICATION 5



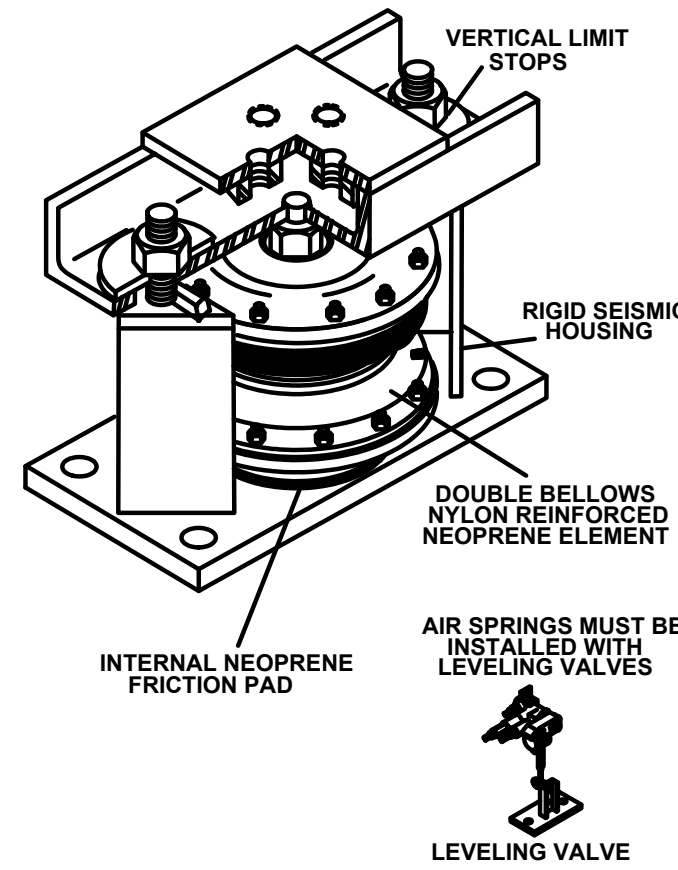
SLR SPRING MOUNT
SPECIFICATION 6



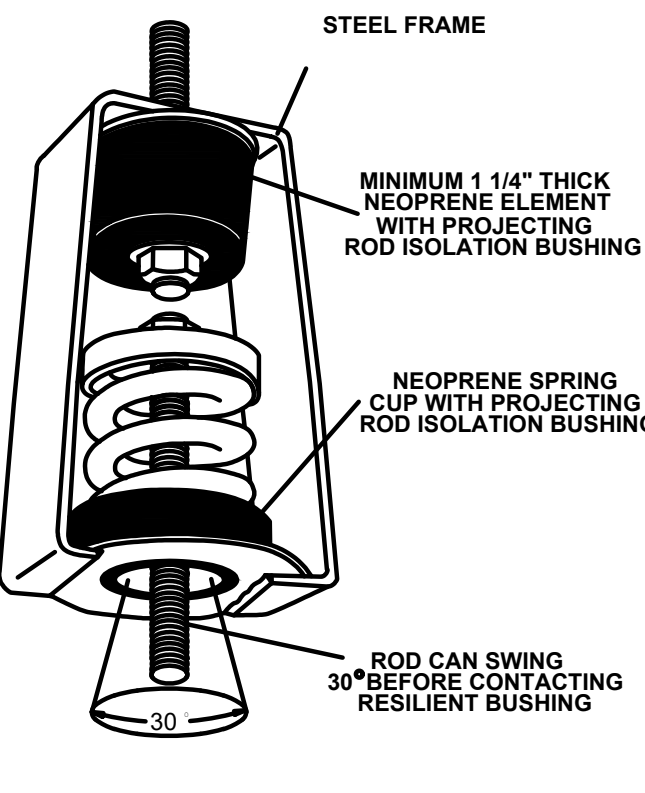
SSLFH HOUSED SPRING MOUNT
SPECIFICATION 7



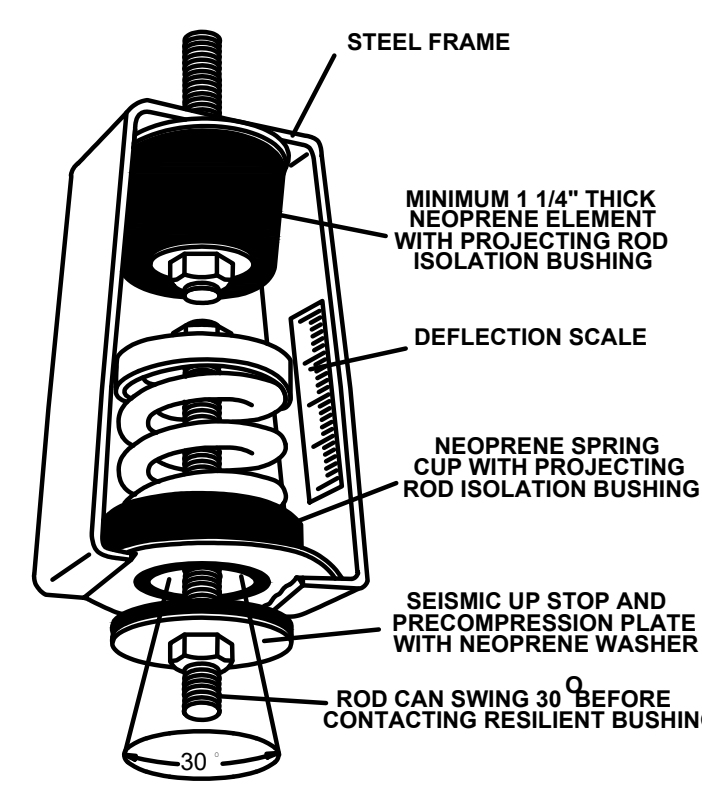
MT AIR SPRING MOUNT
SPECIFICATION 8



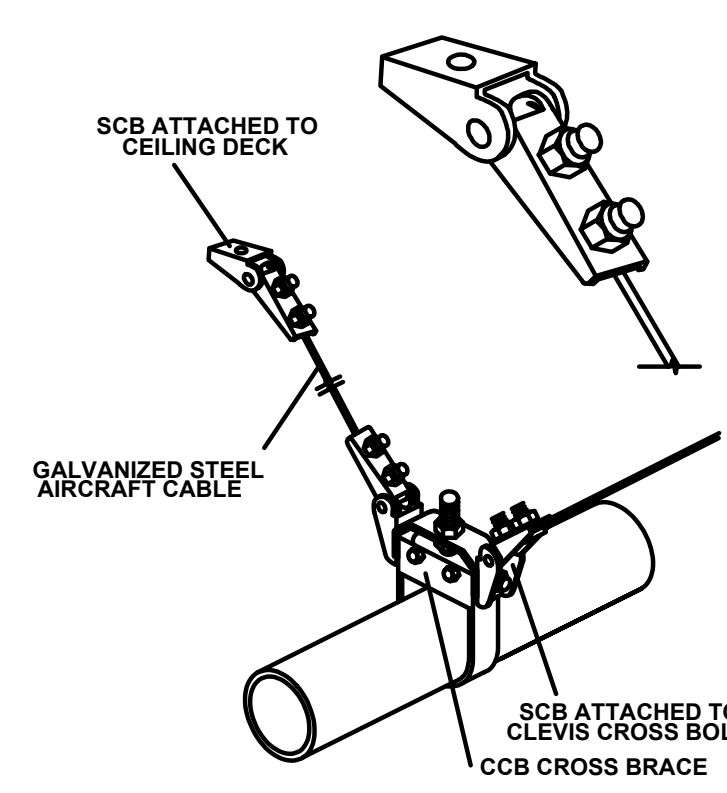
SLR AIR SPRING MOUNT
SPECIFICATION 9



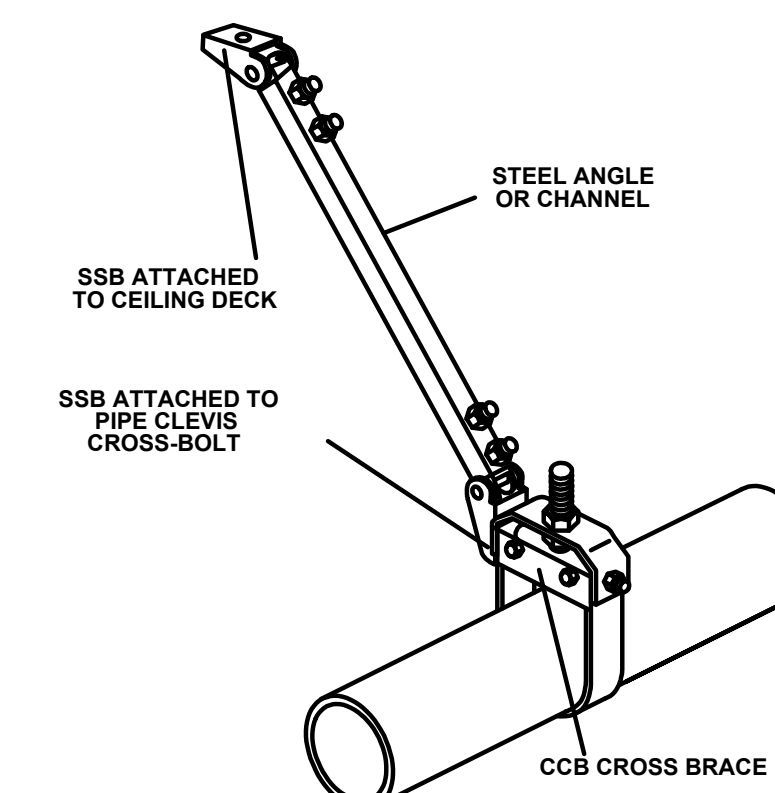
30N SPRING AND NEOPRENE HANGER
SPECIFICATION 10



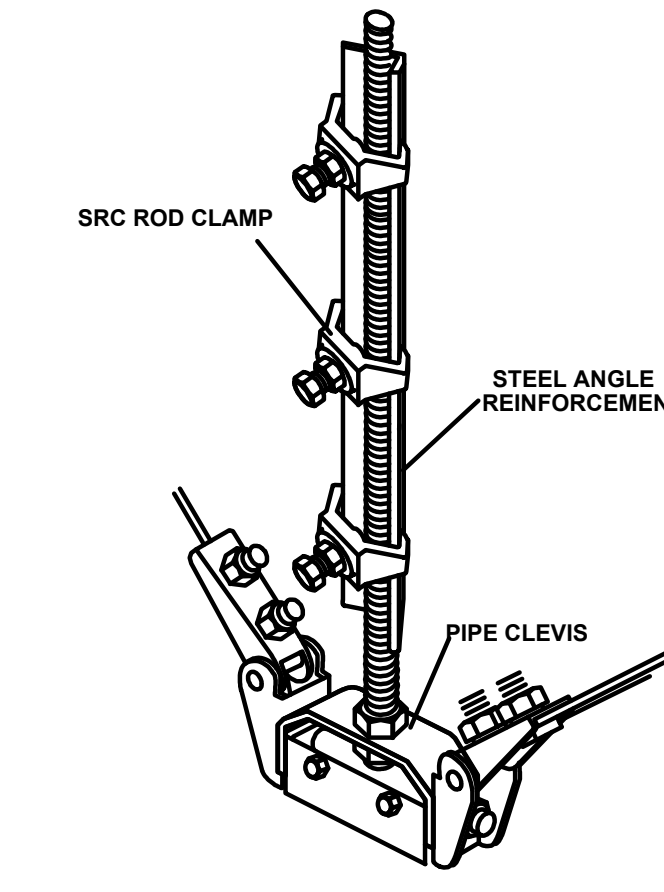
PC30N PRECOMPRESSED SPRING AND NEOPRENE HANGER
SPECIFICATION 11



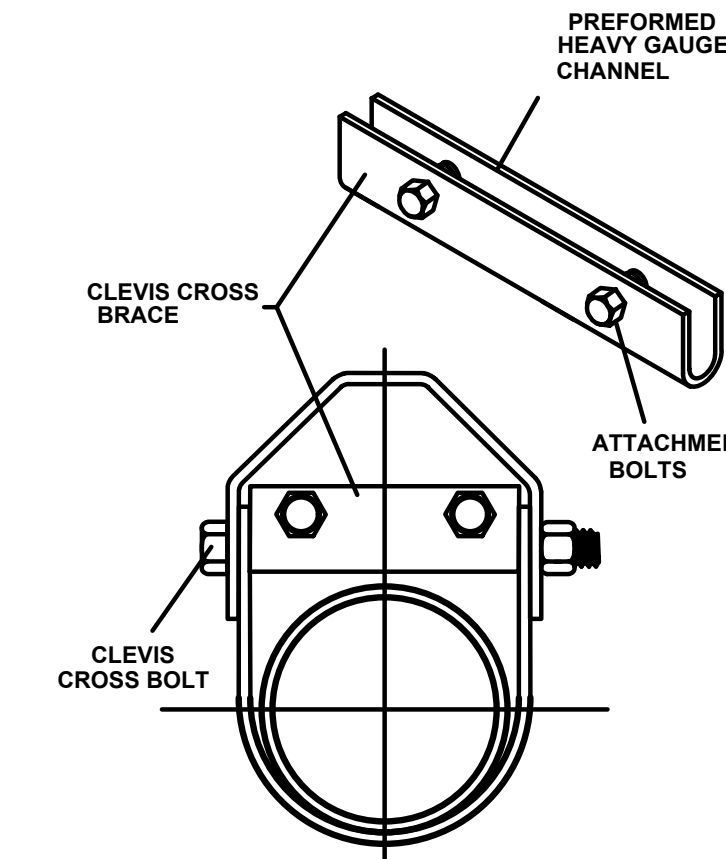
SCB, SCBH, AND SCBV CABLE RESTRAINTS
OSPD PRE-APPROVAL NO. 9202
SPECIFICATION 12



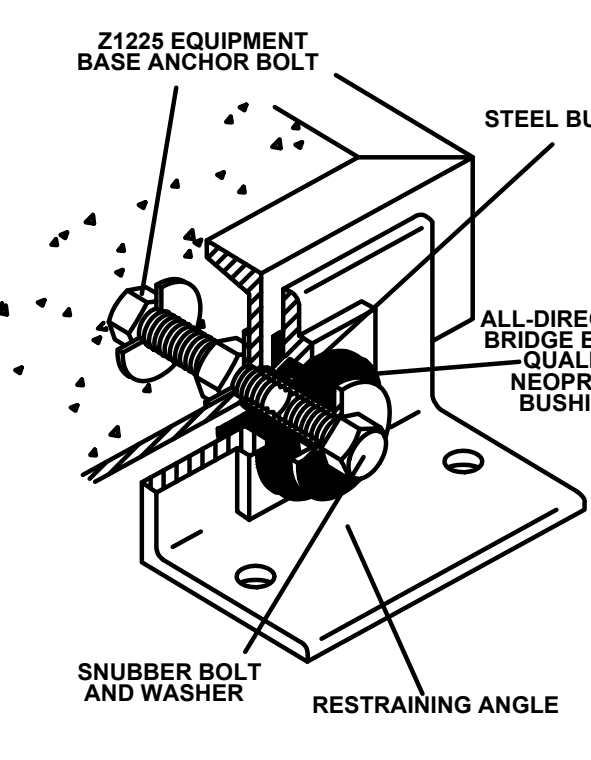
SEISMIC SOLID BRACE
SPECIFICATION 13



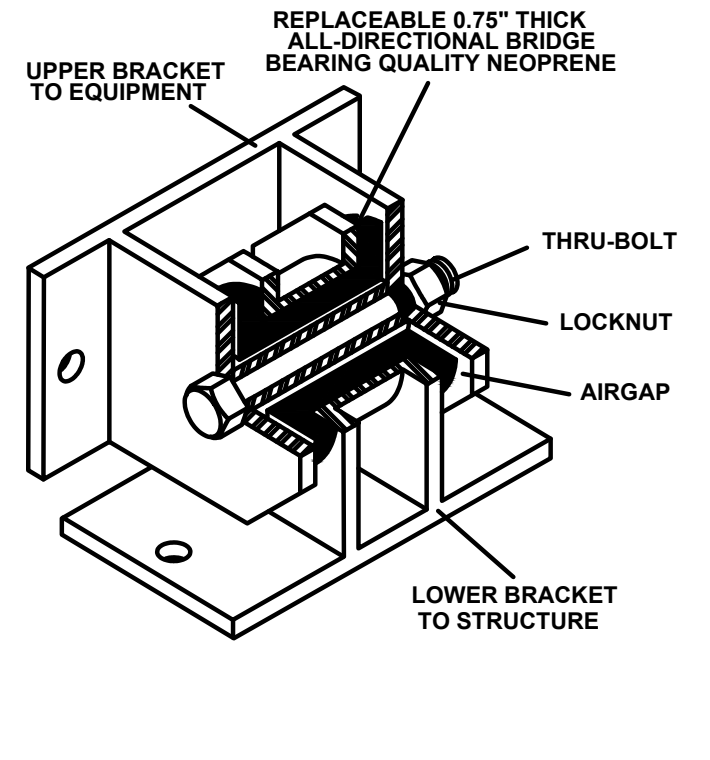
SRC SEISMIC ROD CLAMPS
SPECIFICATION 14



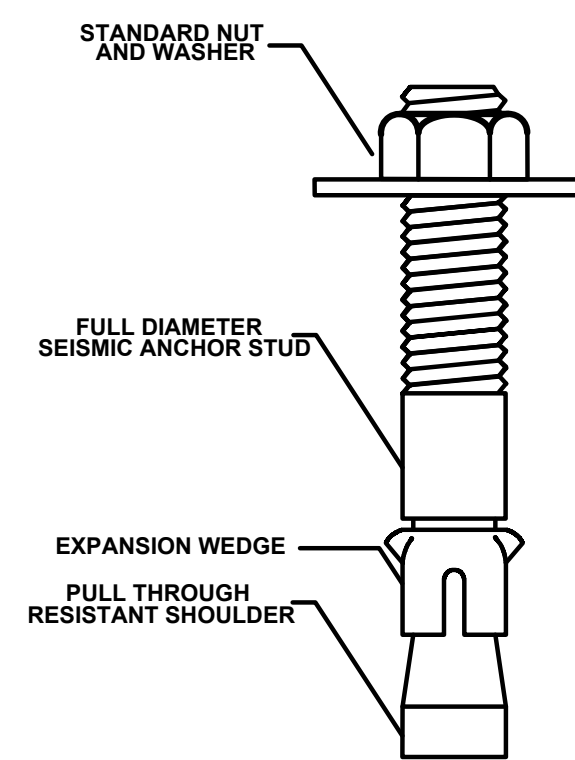
CCB CLEVIS CROSS BRACE
SPECIFICATION 15



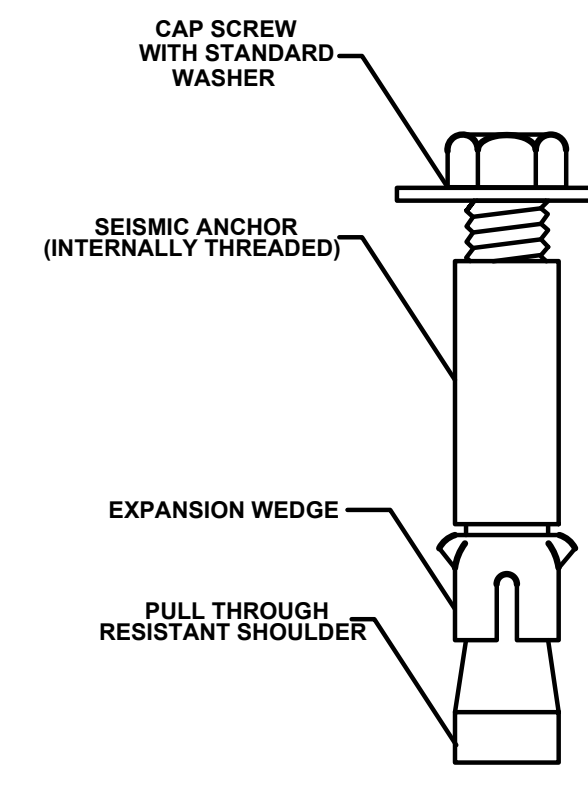
Z1225 ALL DIRECTIONAL SEISMIC SNUBBER
SPECIFICATION 16



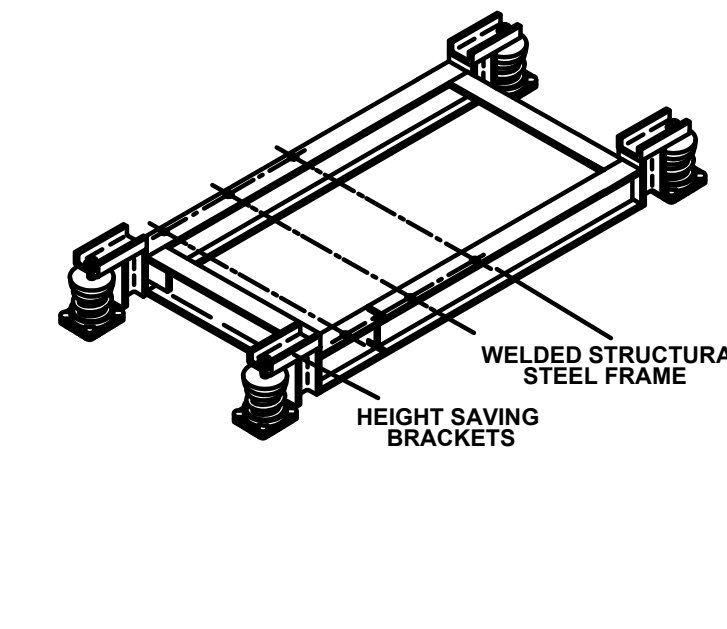
Z1011 ALL DIRECTIONAL SEISMIC SNUBBER
SPECIFICATION 17



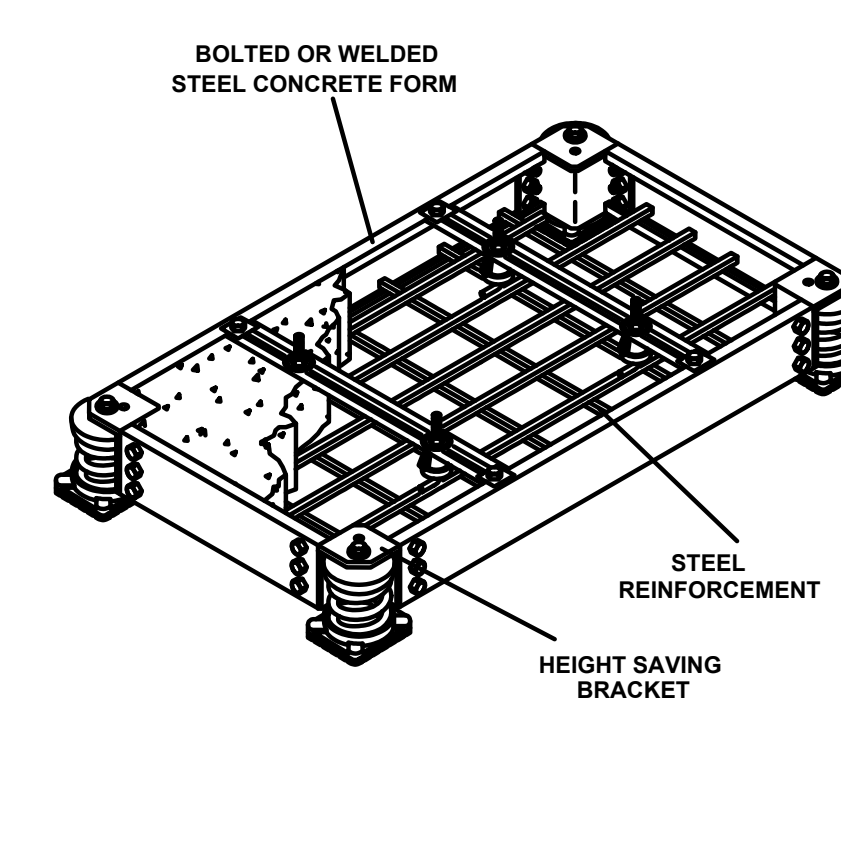
S&S SEISMIC ANCHOR STUD
SPECIFICATION 18



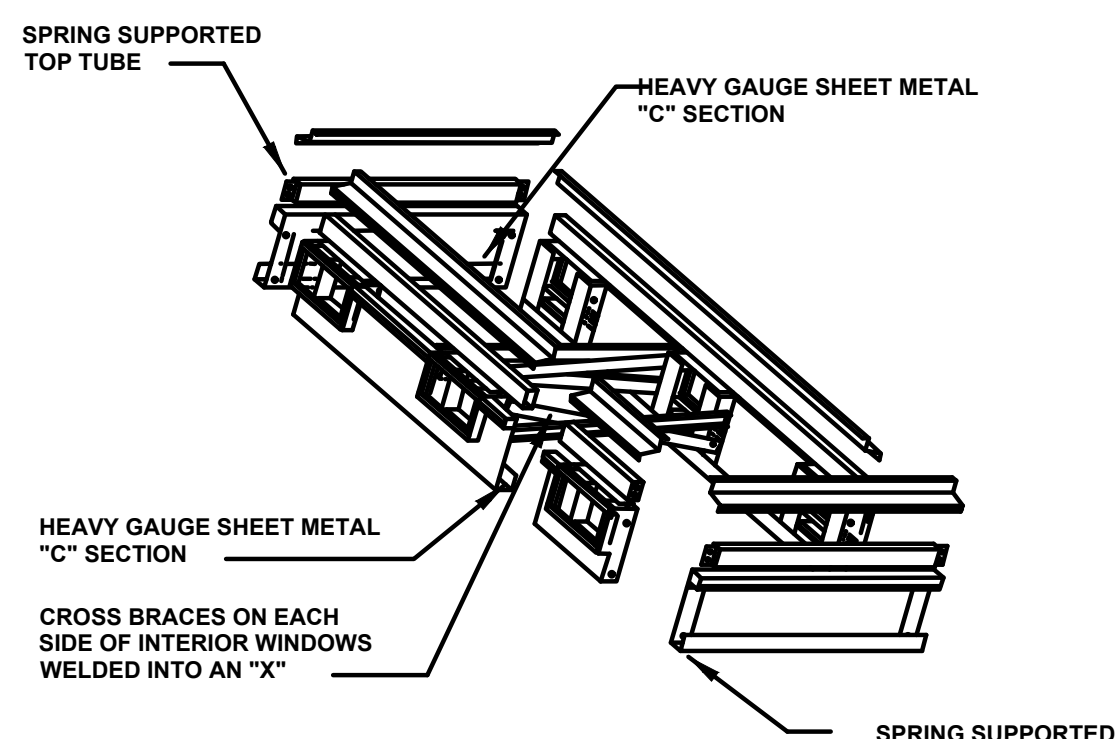
S&B SEISMIC ANCHOR BOLT
SPECIFICATION 19



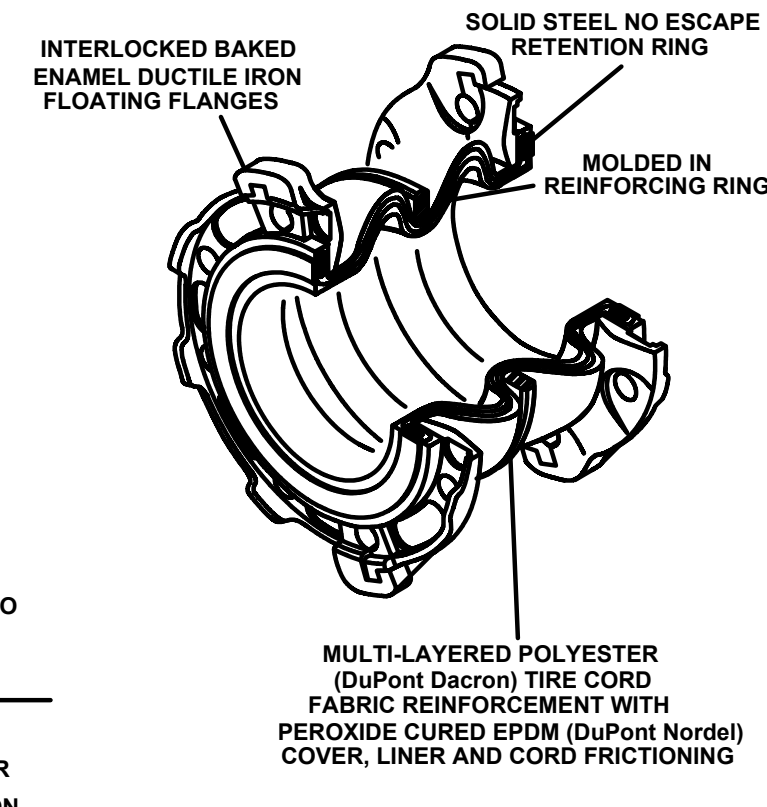
WF WIDE FLANGE STEEL BASE
SPECIFICATION 20



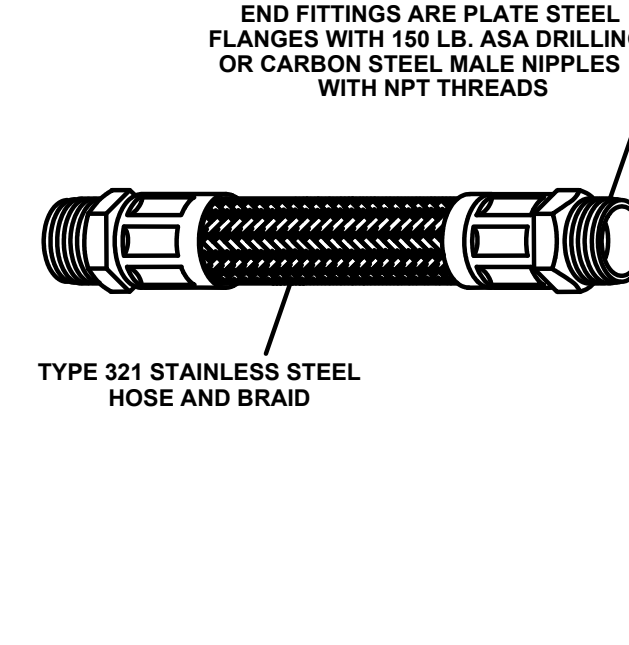
B&K CONCRETE FORM BASE
SPECIFICATION 21



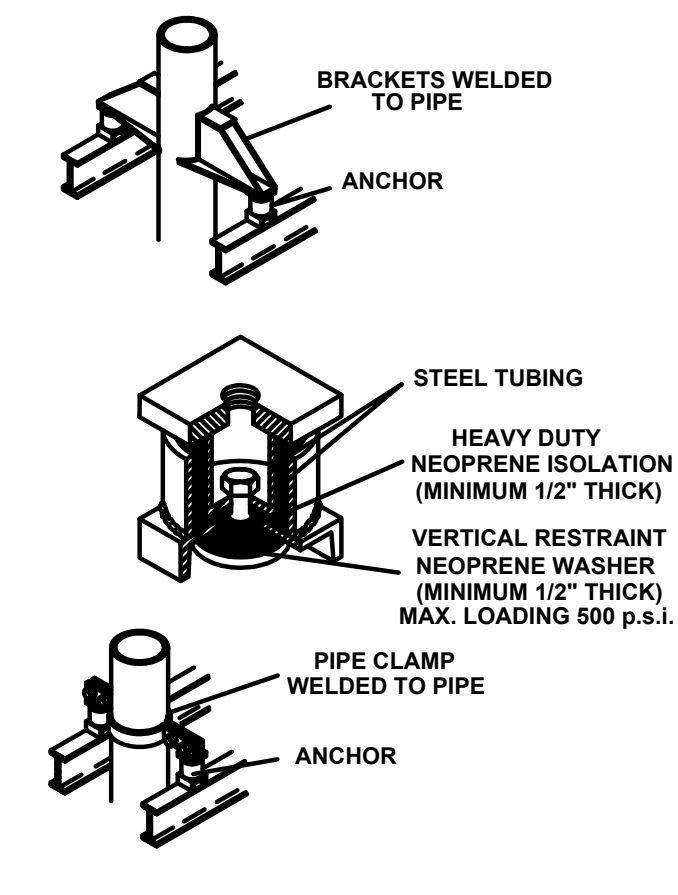
RCS SEISMIC ROOFTOP CURB
SPECIFICATION 22



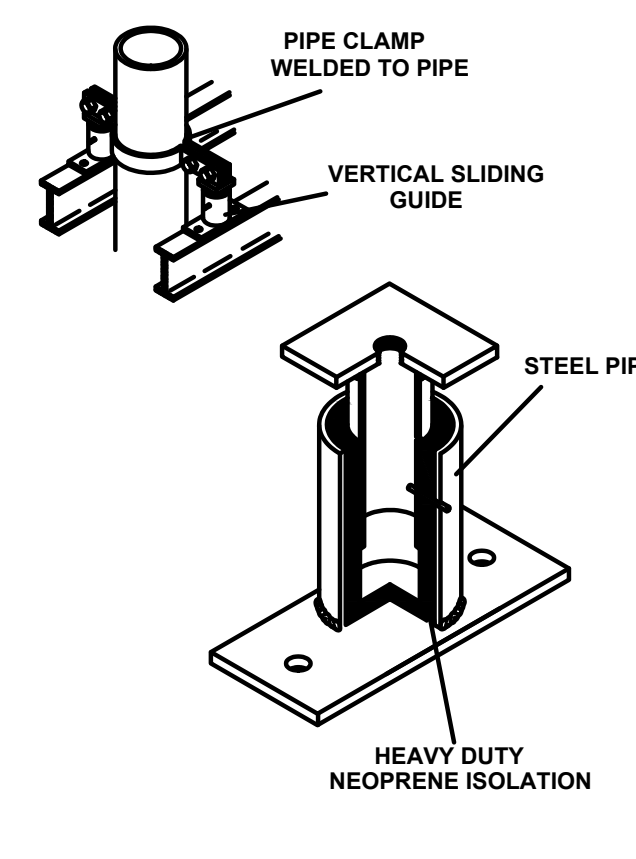
SFDEI MOLDED EXPANSION JOINT
SPECIFICATION 23



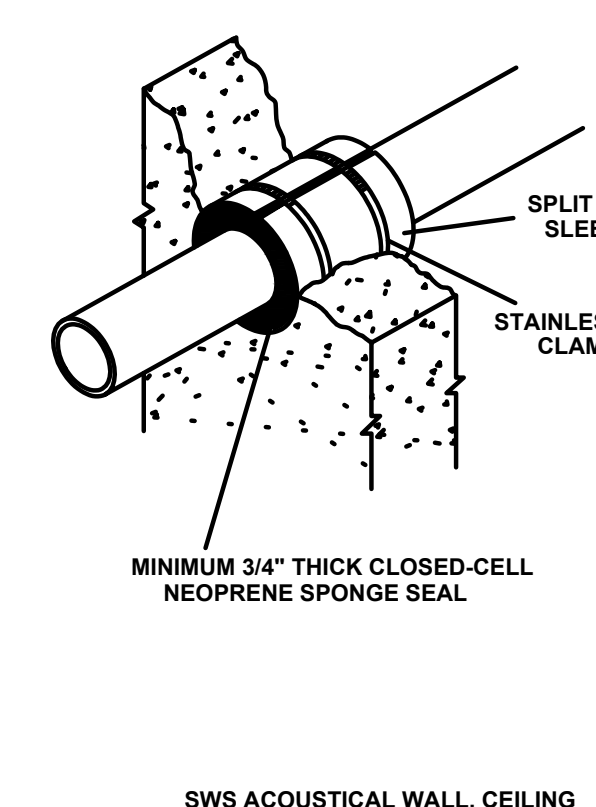
BSS STAINLESS STEEL HOSE
SPECIFICATION 24



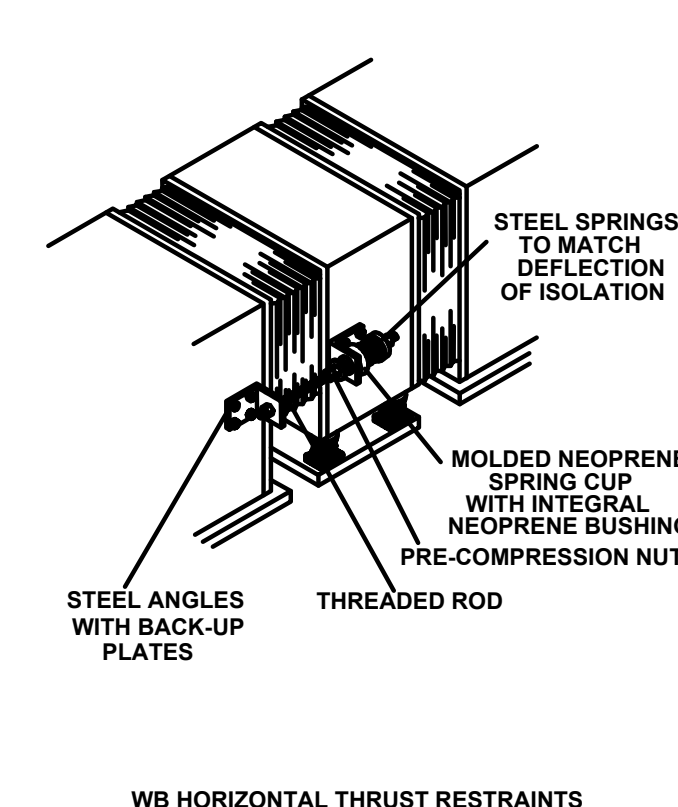
ADA ALL DIRECTIONAL ANCHOR
SPECIFICATION 25



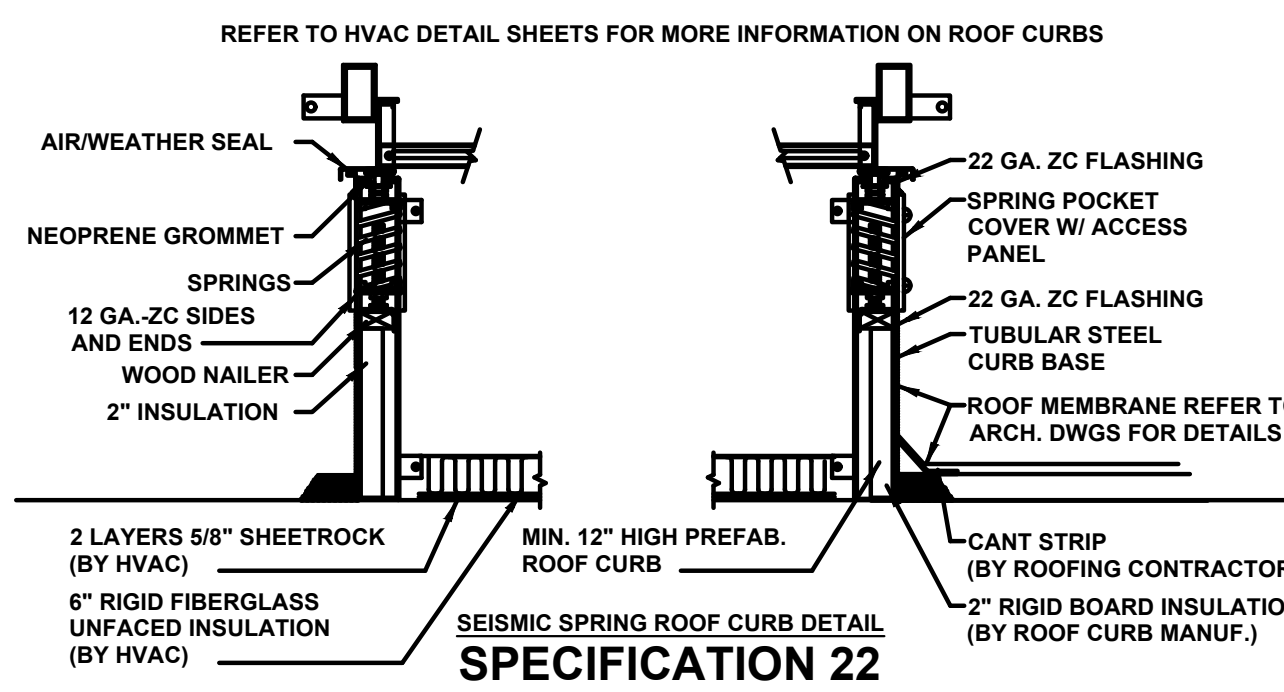
VSG VERTICAL SLIDING GUIDES
SPECIFICATION 26



SWS ACOUSTICAL WALL, CEILING OR FLOOR SEAL
SPECIFICATION 27



WB HORIZONTAL THRUST RESTRAINTS USED IN PAIRS
SPECIFICATION 28



SEISMIC SPRING ROOF CURB DETAIL
SPECIFICATION 22



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1	10-30-2023	ADDENDUM #1

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430 & 432 RINDGE AVE,
Cambridge, MA 02140

Sheet Title: **HVAC - VIBRATION & SEISMIC DETAILS**
Date: 12-Oct-2023 Drawn By: MJM
Project No: 23006 Scale: NTS

Sheet No.
VS1.1

SYMBOL LIST

LEGEND NOTES:

A. THIS SHEET IS A GENERAL LIST OF SYMBOLS AND ABBREVIATIONS AND SHALL BE USED AS A DICTIONARY TO DEFINE ITEMS INDICATED ON DRAWINGS. NOT ALL SYMBOLS OR ABBREVIATIONS ARE NECESSARILY USED ON THIS PROJECT. ALL EQUIPMENT IS TO BE PROVIDED UNDER THIS SECTION UNLESS SPECIFICALLY INDICATED OTHERWISE.

LIGHTING FIXTURES (see lighting fixture schedule)

LED LIGHT FIXTURE, CEILING MOUNTED SURFACE OR RECESSED.

EMERGENCY BATTERY UNIT WITH INTEGRAL HEADS.

SINGLE FACE INTERNALLY LIT EXIT SIGN, DIRECTIONAL INDICATORS OF THE 'CHEVRON' TYPE AS INDICATED ON DRAWINGS.

SWITCHES (typically mtd 48" AFF@u.n.o)

SINGLE POLE SWITCH-"a" DESIGNATES SWITCH CONTROL (LOWER CASE).

LIGHTING CONTROLS

- ALCS LOCAL SWITCHING / DIMMING STATION - REFER TO DETAIL SHEET E0.4.
- ALCS LOCAL ZONE SWITCHING / DIMMING STATION - REFER TO DETAIL SHEET E0.4.
- ALCS CEILING OCCUPANCY SENSOR - REFER TO DETAIL SHEET E0.4.
X = SPECIAL TYPE DESIGNATION E.G. ("WG" WIRE GUARD)
a = OCCUPANCY SENSOR ZONE CONTROL
- ALCS CEILING PHOTO SENSOR - REFER TO DETAIL SHEET E0.4.

WIRE AND RACEWAYS

WIRING AND RACEWAY - NO. OF DIAGONAL LINES INDICATES NO. #12 AWG CONDUCTORS. ABSENCE OF DIAGONAL LINES INDICATES 2 #12 AWG+#12AWG GROUND UNLESS NOTED OTHERWISE. GROUND WIRE IS NOT SHOWN IN COUNT BUT SHALL BE PROVIDED.

HOMERUN TO PANEL - NO. OF ARROWS INDICATES NO. OF 20 AMP/1 POLE CIRCUITS TO PANEL - UNLESS NOTED OTHERWISE.

FLEXIBLE CONNECTION TO EQUIPMENT

EXISTING EQUIPMENT

DOTTED DENOTES EXISTING EQUIPMENT.

X EXISTING EQUIPMENT & ASSOCIATED RACEWAY TO BE REMOVED AND CIRCUIT PULLED BACK TO NEXT ACTIVE OUTLET/BACK TO PANEL.

XM EXISTING EQUIPMENT TO REMAIN.

XR EXISTING EQUIPMENT TO BE REMOVED AND RELOCATED.

XL NEW LOCATION OF RELOCATED EXISTING EQUIPMENT.

XN EXISTING EQUIPMENT TO BE REMOVED AND NEW EQUIPMENT INSTALLED IN SAME LOCATION.

POWER

120/208 VOLT, 3 PHASE, 4 WIRE PANELBOARD.

JUNCTION BOX - SIZE AS REQUIRED.

EQUIPMENT CONTROL PANEL.

PULL BOX - SIZE AS REQUIRED.

JUNCTION BOX - SIZE AS REQUIRED.

FUSED DISCONNECT SWITCH HEAVY DUTY TYPE-"3R" INDICATES NEMA 3R

20—INDICATES TIME DELAY FUSE SIZE.
30—INDICATES SAFETY SWITCH SIZE

HORSEPOWER RATED THERMAL SWITCH WITH PILOT LIGHT

FS MOTORIZED FIRE/SMOKE DAMPER-F&I BY HVAC, WIRED BY E.C. TO POWER & FIRE ALARM SYSTEM.

SECURITY SYSTEM

DOME HIGH RESOLUTION IP CAMERA BY OWNERS SECURITY VENDOR. E.C. TO PROVIDE SINGLE GANG OPENING AND 4"SQ.X2 1/2"DP. J.B. & 3/4" CONDUIT WITH PULL STRING TO ACCESSIBLE ABOVE CEILING SPACE AT EACH LOCATION. WP=WEATHERPROOF

180= MULTI-HEAD CAMERA
M=MICROPHONE
C=CELL CORNER MOUNT CAMERA
LPR = LICENCE PLATE READER

IC EXTERIOR DOOR VIDEO INTERCOM STATION AND LICENSE BY EC, INTERFACE TO INTERCOM SYSTEM TO ALLOW FOR RECORDING, CAMERA CALL-UP IF EXTERIOR INTERCOM STATIONS ARE ACTIVATED. COORDINATE AS REQUIRED WITH SUPPLIER. DUAL GANG BOX, 3/4" CONDUIT & PULL STRING TO NEAREST ACCESSIBLE CEILING SPACE BY E.C.

IMS DOOR INTERCOM MASTER STATION AND LICENSE, PROVIDED BY EC. SINGLE GANG BOX, 3/4" CONDUIT & PULL STRING TO NEAREST ACCESSIBLE CEILING SPACE BY E.C.

FIRE ALARM SYSTEM

MANUAL PULL STATION - MTD 48" AFF TO CL.

VISUAL "ADA" COMPLIANT SIGNAL - MTD 80" AFF TO CL.

HORN/VISUAL "ADA" COMPLIANT SIGNAL - MTD 80" AFF TO CL.

ADDRESSABLE CEILING MOUNTED PHOTOELECTRIC SMOKE DETECTOR.

ADDRESSABLE CEILING MOUNTED PHOTOELECTRIC SMOKE DETECTOR ALSO USED FOR ELEVATOR RECALL.

FIRE ALARM CONTROL PANEL.

MONITOR MODULE

CONTROL MODULE

ISOLATION MODULE

RECEPTACLES

(typically mtd. at 18" a.f.f., uno)

TYPICAL OUTLET NOTATIONS

"a" = SWITCHED OUTLET, "a" - INDICATES SWITCH CONTROL.

"C" = MOUNTED 6" ABOVE COUNTER OR 42" AFF. COORDINATE EXACT MOUNTING HEIGHT WITH ARCHITECTURAL DRAWINGS.

"F" = FURNITURE MTD, COORDINATE EXACT LOCATION WITH FURNITURE PLANS.

"GFI" = GROUND FAULT INTERRUPTER TYPE.

"TL" = TWIST LOCK TYPE.
"WP" = WEATHERPROOF RECEPTACLE WITH "NRTL" LISTED COVERPLATE FOR WET LOCATION WITH GFI TYPE RECEPTACLE INSTALLED IN NEMA 4 ENCLOSURE W/KEY LOCK.

"P" = PEDESTAL MOUNTED ON CASEWORK WITH GFI RECEPTACLE. COORDINATE WITH EQUIPMENT DRAWINGS FOR EXACT LOCATION.

20 AMP, 120 VOLT DUPLEX RECEPTACLE; "2" INDICATES CIRCUIT NUMBER. TAMPER RESISTANT, CHILDPROOF

MISCELLANEOUS-DEVICES

1 E-3 DETAIL IDENTIFIER-INDICATES DETAIL #1 ON DWG. E-3.

GENERAL NOTES: (APPLIES TO ALL DRAWINGS)

- ELECTRICAL WORK SHALL BE IN ACCORDANCE WITH OSHA, NFPA STANDARDS, THE ELECTRICAL CODE AND THE LOCAL GOVERNING AUTHORITIES. THE DRAWINGS AND SPECIFICATIONS DO NOT ATTEMPT TO INDICATE ALL WORK REQUIRED BY CODES AND AUTHORITIES.
- TEST ALL EQUIPMENT AND SYSTEMS INSTALLED TO CERTIFY COMPLIANCE WITH DRAWINGS, SPECIFICATIONS, CODES, LOCAL AUTHORITIES AND REGULATIONS. INCLUDE LABOR AND COSTS FOR TESTING, REVIEWS, APPROVALS AND CERTIFICATIONS.
- DRAWINGS ARE DIAGRAMMATIC ONLY. EXACT LOCATION, MOUNTING HEIGHTS OF EQUIPMENT AND ROUTING OF RACEWAYS SHALL BE COORDINATED WITH THE EQUIPMENT REQUIREMENTS AND FIELD CONDITIONS.
- FURNISH AND INSTALL ALL INCIDENTAL ACCESSORIES NECESSARY TO MAKE THE ELECTRICAL WORK COMPLETE AND READY FOR OPERATION.
- SUPPORT ALL WORK FROM THE BUILDING STRUCTURE.
- ALL MOUNTING HEIGHTS ARE TO CENTERLINE UNLESS OTHERWISE INDICATED.
- IF EXACT MOUNTING OR RACEWAY ROUTINGS ARE NOT INDICATED (LOCATION OR HEIGHT) REQUEST CLARIFICATION PRIOR TO ROUGHING, OR INSTALLATION.
- DO NOT INSTALL OUTLETS BACK TO BACK. PROVIDE 24 INCH SPACING IN FIRE RATED WALLS.
- PROVIDE ELECTRICAL OUTLET PLATE GASKET SEALS AT RECEPTACLES, SWITCHES AND OTHER ELECTRICAL BOXES ON EXTERIOR WALLS AND INTERIOR WALLS BETWEEN CONDITIONED AND NON-CONDITIONED SPACES.
- INSTALL A GREEN GROUNDING CONDUCTOR WITHIN EACH RACEWAY SIZED IN ACCORDANCE WITH THE ELECTRIC CODE.
- PROVIDE WATERTIGHT AND GAS TIGHT SEALS INSIDE AND OUTSIDE OF CONDUITS THAT PENETRATE THE BUILDING BELOW GRADE, O.Z. GEDNEY OR APPROVED EQUAL. PROVIDE WEATHER TIGHT SEAL AT PENETRATIONS ABOVE GRADE.
- PROVIDE NRTL LISTED SMOKE AND FIRE SEALS AT ALL PENETRATIONS THROUGH FLOORS OR FULL HEIGHT (SLAB TO SLAB) WALLS.
- PROVIDE A PULL LINE IN EVERY EMPTY CONDUIT PROVIDED UNDER THIS SECTION.

ABBREVIATIONS

A	AMPERE
AF	AMP, FRAME
AFF	ABOVE FINISHED FLOOR
AFG	ABOVE FINISHED GRADE
AIC	INTERRUPTING CAPACITY
ARCH	ARCHITECT
AT	AMP TRIP
ATC	AUTO-TEMP CONTROL CONTRACTOR
ATS	AUTOMATIC TRANSFER SWITCH
AWG	AMERICAN WIRE GAUGE
C	CONDUIT (GENERIC TERM FOR RACEWAY. PROVIDE AS SPECIFIED)
CATV	CABLE TELEVISION
CB	CIRCUIT BREAKER
CKT	CIRCUIT
CLG	CEILING
CU	COPPER
CL	CENTERLINE
DP	DEEP
DWG	DRAWING
EC	ELECTRICAL CONTRACTOR
EMT	ELECTRIC METALLIC TUBING
FA	FIRE ALARM
F&I	FURNISHED AND INSTALLED
G,GND	GROUND
GC	GENERAL CONDITIONS
GFI	GROUND FAULT INTERRUPTER
HVAC	HEATING, VENTILATING, AND AIR CONDITIONING CONTRACTOR
HP	HORSEPOWER
IMC	INTERMEDIATE METALLIC CONDUIT
IT	INFORMATION TECHNOLOGY CONTRACTOR
JB	JUNCTION BOX
KCMIL	THOUSAND CIRCULAR MILS
KVA	KILO-VOLT AMPERE
KW	KILO-WATT
LTG	LIGHTING
MCB	MAIN CIRCUIT BREAKER
MCC	MOTOR CONTROL CENTER
MCM	THOUSAND CIRCULAR MILS
MDP	MAIN DISTRIBUTION PANEL
MH	MOUNTING HEIGHT
MLO	MAIN LUGS ONLY
MTD	MOUNTED
MTG	MOUNTING
NIC	NOT IN CONTRACT
NO.#	NUMBER
NTS	NOT TO SCALE
P	POLE(S)
PB	PULL BOX
PH,Ø	PHASE
PVC	POLY-VINYL CHLORIDE CONDUIT
PWR	POWER
RGS	RIGID GALVANIZED STEEL CONDUIT
SN	SOLID NEUTRAL
SWBD	SWITCHBOARD
T/D	TELEPHONE/DATA
TYP	TYPICAL
UNO	UNLESS NOTED OTHERWISE
WG	WIRE GUARD
WP	WEATHERPROOF
XFMR	TRANSFORMER
@72"	MOUNT 72 INCHES TO CENTERLINE ABOVE FINISHED FLOOR OR GRADE

LIGHTING FIXTURE SCHEDULE

ALL FIXTURES SHALL BE FURNISHED COMPLETE WITH ALL HARDWARE, LAMPS, HANGERS, FITTING, ETC., FOR A COMPLETE AND PROPER INSTALLATION.

TYPE	MANUFACTURER	CATALOG NO.	MTG.	VOLTAGE	LIGHT SOURCE			REMARKS
					LUMENS	WATTS	TYPE	
LR22	TCP	DTF2UZD2335K	S	UNIVERSAL	-	-	LED/3000K	2' X 2' RECESSED LED FIXTURE.
LS2	TCP	TCPGPS2UZDA835K	-	UNIVERSAL	-	-	LED/3500K	2' UTILITY FIXTURE WITH FROSTED ACRYLIC DIFFUSING LENS. PROVIDE CHAIN FOR PENDANT MOUNTING WHERE NECESSARY.
LS4	TCP	TCPGPS4UZDA835K	-	UNIVERSAL	-	-	LED/3500K	4' UTILITY FIXTURE WITH FROSTED ACRYLIC DIFFUSING LENS. PROVIDE CHAIN FOR PENDANT MOUNTING WHERE NECESSARY.
LS6	TCP	TCPGPS6UZDA835K	-	UNIVERSAL	-	-	LED/3500K	6' UTILITY FIXTURE WITH FROSTED ACRYLIC DIFFUSING LENS. PROVIDE CHAIN FOR PENDANT MOUNTING WHERE NECESSARY.
	EVENLITE LIGHTING	SOV-AC-G-1M-XX-XX-XX-FT-XX	U	UNIVERSAL	-	-	LED/3500K	SINGLE FACED LED EDGE LIT EXIT SIGN WITH GREEN LETTERING COORDINATE CHEVRONS WITH ARCHITECTURAL CODE PLAN.
	MULE LIGHTING	SQ-LED-W-SD	W	120	N/A	-	LED	EMERGENCY BATTERY UNIT

FIXTURE MANUFACTURER OPTIONS (OR EQUAL)

(A) WILLIAMS, PHILIPS, LITHONIA (B) KENALL, PINNACLE, BIRCHWOOD

NO.	OVER CURRENT DEVICES		CIRCUIT	FEEDER SIZE	COND. SIZE	REMARKS
	TRIP	FRAME				
1	100	100	PANEL LP1	4#1 & #6G	1 1/2"	-
2	200	225	PANEL MP1	4#3/0 & #4G	2"	-
3	200	225	PANEL RP1	4#3/0 & #4G	2"	-
4	50	60	VRF-1	4#6 & #10G	1"	-
5	100	100	ROOF VRF	SEE RISER	2"	-
6	100	100	ROOF VRF	SEE RISER	2"	-
7	100	100	SPARE	-	-	-

① SEE TRANSFORMER SCHEDULE FOR CONDUIT AND WIRE SIZE.

PANEL NO.	LOCATION	MTG	MAIN BUS AMPS	MAIN CB	BRANCH CKT BREAKER (AMPS)									TOTAL POLES	OTHERS	
					1 POLE			2 POLE			3 POLE					
					15	20	30	15	20	30	15	20	30			60
PP1	MAIN ELEC RM 139	S	225	200	-	35	-	-	-	-	-	-	-	1	42	-
MP1	MAIN ELEC RM 139	S	225	200	-	22	-	-	4	4	-	-	-	1	84	(14) 50/2
LP1	ELECTRIC ROOM 144	S	100	100	-	20	-	-	-	-	-	-	-	1	30	-

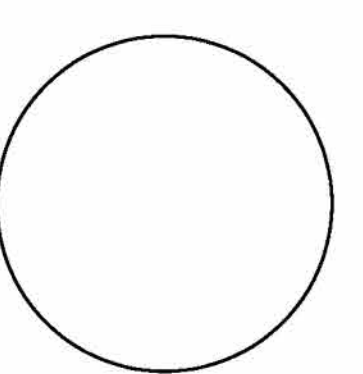
① SINGLE TUB DOUBLE HEIGHT PANEL



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315 Frances Corner Road, Suite 10, Danvers, MA 01923-1258
p: 958-998-0200 • f: 958-998-0553 • e: MAIL: info@ggd.com



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0 2 1 4 3 - 3 2 2 8



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1	10-30-2023	ADDENDUM #1

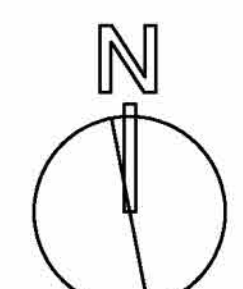
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SYMBOL LIST/ FIXTURE SCHEDULE

Date: 12-Oct-2023 Drawn By: TV
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LIGHTING GENERAL NOTES

1. MANUFACTURERS AND CATALOG NUMBERS IDENTIFIED IN THE "LIGHTING FIXTURE SCHEDULE" SHALL SERVE TO ESTABLISH THE BASIS OF DESIGN FOR EACH LIGHTING FIXTURE TYPE, PRODUCTS OF EQUAL APPEARANCE, CONSTRUCTION, PERFORMANCE, AND WARRANTY COVERAGE FROM MANUFACTURERS OTHER THAN THOSE IDENTIFIED MAY BE PROPOSED FOR USE ON THIS PROJECT, SUBJECT TO REVIEW AND APPROVAL BY THE ARCHITECT AND ENGINEER. THE "FIXTURE MANUFACTURER OPTIONS (OR EQUAL)" LISTING IS PROVIDED FOR GUIDANCE IN IDENTIFYING MANUFACTURERS CAPABLE OF PROVIDING EQUAL PRODUCTS, BUT IN NO WAY LIMITS MANUFACTURERS OR PRODUCTS THAT MAY BE PROPOSED AS EQUALS FOR THE PROJECT.
2. "LIGHTING FIXTURE SCHEDULE" REMARKS, "LIGHTING FIXTURE SCHEDULE NOTES", "LIGHTING GENERAL NOTES" AND NOTATIONS ELSEWHERE MAY INDICATE FEATURES AND ACCESSORIES THAT ARE NOT INDICATED IN THE CATALOG NUMBER BUT ARE REQUIRED FOR THE PROJECT. PRODUCTS OTHER THAN THOSE SPECIFIED SUBMITTED SHALL BE DOCUMENTED FOR CONFORMANCE IN PERFORMANCE, CONSTRUCTION, AND APPEARANCE WITH THE CRITERIA ESTABLISHED BY THE SPECIFIED PRODUCT.
3. FURNISH ALL LIGHTING FIXTURES COMPLETE WITH MOUNTING ACCESSORIES TO MEET THE JOB REQUIREMENTS. VERIFY ROOM SURFACE CONSTRUCTION AND FINISHES PRIOR TO ORDERING FIXTURES TO ENSURE PROPER MOUNTING PROVISIONS AND FIXTURE FITTINGS. REFER TO LATEST ARCHITECTURAL DRAWINGS.
4. VERIFY ALL FIXTURE MOUNTING HEIGHTS AND LOCATIONS WITH LATEST ARCHITECTURAL DRAWINGS. EXACT LOCATION OF FIXTURES SHALL BE CONFIRMED WITH THE ARCHITECT PRIOR TO START OF ROUGHING.
5. LED ARRAYS, MODULES, AND LIGHT ENGINES SHALL HAVE KELVIN COLOR TEMPERATURE AS SCHEDULED HAVING A MINIMUM COLOR RENDERING INDEX (CRI) OF 82 AND A MINIMUM L70 LIFETIME RATING OF 50,000 HOURS AT 25°C AMBIENT. LED DRIVERS SHALL HAVE 0-10V DIMMING CONTROL WITH FULLY ISOLATED CONTROL INPUTS AND MINIMUM POWER LEVEL OF 100%. LED FIXTURES WITH ARRAY / MODULE AND DRIVER PACKAGES OR LIGHT ENGINES SHALL HAVE PUBLISHED IESNA LM-79 AND LM-80 TESTING DATA AS A STANDARD MANUFACTURED OFFERING. INDIVIDUAL COMPONENT TESTING DATA WILL NOT BE ACCEPTED. ALL FIXTURES SHALL BE "DESIGN LIGHTS CONSORTIUM" (DLC) OR "ENERGYSTAR" LISTED, OR FURNISHED WITH DATA INDICATING CONFORMANCE WITH LATEST APPLICABLE LISTING CRITERIA.
6. FIXTURE LETTERS SHOWN ONCE ON A CONTINUOUS ROW OF FIXTURES SHALL BE TYPICAL FOR THAT ROW UNLESS OTHERWISE INDICATED. PROVIDE RUN LENGTH AS INDICATED (NUMERICALLY OR GRAPHICALLY) OR CONTINUOUS WHERE SHOWN BETWEEN TWO ARCHITECTURAL ELEMENTS (WALLS, SOFFITS, COLUMNS, ETC.).
7. LINEAR ROWS OF RECESSED, SURFACE, OR SUSPENDED FIXTURES SHALL BE INSTALLED TO PROVIDE CONTINUOUS RUN LENGTHS AS INDICATED ON THE DRAWINGS. PROVIDE ALL REQUIRED FITTINGS, CONNECTORS, SUPPORTS, TRIMS, ETC. SO THAT RUNS ARE A COMPLETE ASSEMBLY WITH THE APPEARANCE OF A SINGLE UNIT. ROWS SHALL BE CONFIGURED FOR MINIMUM NUMBER OF FEEDS, JOINTS, AND MOUNTINGS. PROVIDE ROW AND PATTERN CONFIGURATION DRAWINGS FOR REVIEW PRIOR AND APPROVAL PRIOR TO RELEASE OF MATERIAL ORDER.
8. PROVIDE FLAT ROUND CANOPIES FOR SUSPENDED FIXTURE LOCATIONS WHERE SUSPENSIONS MOUNTS TO UNFINISHED CEILING STRUCTURE (WHERE LOCATED IN FINISHED SPACES) AND WHERE PASSING THROUGH SUSPENDED CEILINGS (CONFIRM WHETHER IN TILE OR AT GRID). PROVIDE SWIVEL ALIGNERS FOR SUSPENSIONS WHERE REQUIRED FOR SLOPED CEILINGS. ENTIRE SUSPENSION ASSEMBLY SHALL BE SUPPLIED BY MANUFACTURER OF FIXTURES.
9. FIXTURES WITH LOUVERS SHALL BE PROVIDED WITH HIGH TRANSMISSION (95% OR BETTER) DIFFUSING LENSES OR FILMS TO OBSCURE DIRECT LAMP VIEWING.
10. FIXTURES SHALL BE SUPPORTED FROM THE BUILDING STRUCTURE, INDEPENDENT OF HUNG CEILINGS. DO NOT TAP METAL ROOF DECK FOR SUPPORT OF ANY ELECTRICAL EQUIPMENT. PROVIDE UNISTRUT AS REQUIRED FOR SUPPORT OF ALL ELECTRICAL EQUIPMENT.
11. REFER TO SPECIFICATIONS FOR SEISMIC SUPPORT, RESTRAINT, AND BRACING REQUIREMENTS OF THIS PROJECT.
12. PROVIDE TYPE AND QUANTITY OF DRIVERS AND TRANSFORMERS AS REQUIRED TO PROVIDE CONTROL METHOD INDICATIONS ON THE PLANS, INCLUDING BUT NOT LIMITED TO THE FOLLOWING: SWITCHING SUBSCRIPTS, NOTES, SCHEDULES, DESCRIPTIONS, AND DETAILS. QUANTITY OF DRIVERS AND TRANSFORMERS SHALL BE THE MINIMUM REQUIRED TO PROVIDE CONTROL. INDICATED TO MAINTAIN THE LOWEST CONNECTED LOAD OF LIGHTING SYSTEM POSSIBLE. TANDEM WIRING OF FIXTURES SHALL BE PROVIDED WHERE NECESSARY AND WITHIN THE WIRING DISTANCE RESTRICTIONS OF THE MANUFACTURER'S INSTALLATION REQUIREMENTS.
13. ALL LAMPS, LED SOURCES, DRIVERS, AND CONTROLS SHALL MEET THE LATEST UTILITY COMPANY INCENTIVE REQUIREMENTS. REFER TO THE LATEST PROGRAM REQUIREMENTS DOCUMENTATION AND COORDINATE WITH THE UTILITY COMPANY TO ENSURE COMPLIANCE.
14. ALL EXIT SIGN LIGHTING SHALL BE CIRCUITED AHEAD OF ANY SWITCH CONTROL FOR CONSTANT "ON" OPERATION. PROVIDE LOCKING DEVICE ON CIRCUIT BREAKER SERVING EXIT SIGNS.
15. EXIT SIGNS TO BE PROVIDED WITH ARROWS AS INDICATED ON DRAWINGS. TYPICALLY MOUNT ON CEILING WHERE VISIBLE OR ON WALL WHERE CEILING MOUNTING IS NOT PRACTICAL. EDGE-LIT SIGNS SHALL GENERALLY HAVE CLEAR PANELS EXCEPT FOR DOUBLE FACED UNITS AND SINGLE FACED UNITS ABLE TO BE VIEWED FROM BEHIND WHICH SHALL HAVE OPAQUE / MIRRORED PANELS. REFER TO ARCHITECTURAL DRAWINGS FOR INDICATION OF MOUNTING REQUIREMENTS.
16. EXIT SIGNS SHALL BE THE SELF-CONTAINED TYPE WITH INTEGRAL BATTERY BACK-UP AND SELF-DIAGNOSTICS WHERE NO LIFE SAFETY POWER SOURCE IS AVAILABLE, REGARDLESS OF MODEL / SERIES SPECIFIED.
17. EXIT SIGNS INSTALLED IN GYMNASIUMS, LOCKER ROOMS, AND ANY OTHER DESIGNATED AREAS SHALL BE PROVIDED WITH POLYCARBONATE FACE PLATE / SHIELD AS PART OF EXIT SIGN PACKAGE FROM SAME MANUFACTURER.
18. PROVIDE A SELF-CONTAINED EMERGENCY LIGHTING UNIT WITH TWIN ADJUSTABLE HEADS (TYPE "EB" WHERE SCHEDULED) AT EACH FIRE ALARM CONTROL PANEL, ELEVATOR MACHINE ROOM, REMOTE FIRE ALARM ANNUNCIATOR, @ THE LIFE SAFETY TRANSFER SWITCH AND IN THE GENERATOR ROOM. EXACT MOUNTING TO BE COORDINATED IN FIELD WITH ARCHITECT OR ENGINEER.
19. FIXTURES WITH MULTI WATTAGE BALLASTS OR DRIVERS SHALL BE LABELED FROM THE MANUFACTURER'S CATALOG OPTIONS. BLACK AND WHITE SHALL BE CONSIDERED A STANDARD FINISH OPTION FOR ALL PRODUCTS SPECIFIED REGARDLESS OF WHAT IS LISTED.
20. WHERE FIXTURES OTHER THAN THE SPECIFIED PRODUCTS ARE PROPOSED, THE CONTRACTOR SHALL PROVIDE LIGHT LEVEL CALCULATIONS IN ACCORDANCE WITH IESNA STANDARDS TO JUSTIFY THAT THE SUBSTITUTED FIXTURES ARE OF EQUAL PERFORMANCE (WITH EQUAL OR LOWER INPUT WATTAGE) TO THE SPECIFIED PRODUCTS (APPLIES TO ALL FIXTURES IN ALL SPACES).
22. EVERY SPACE ENCLOSED BY FLOOR TO CEILING WALLS SHALL BE PROVIDED WITH A MINIMUM OF ONE MANUAL LIGHTING SWITCH AND ONE CEILING MOUNTED OCCUPANCY SENSOR. ADDITIONAL CONTROLS SHALL BE AS INDICATED ON THE PLAN OR AS SPECIFIED ELSEWHERE.

LIGHTING CONTROL SYSTEM NOTES:

1. PROVIDE SWITCHING AND 0-10V DIMMING CONTROL FOR ALL LIGHTING (REFER TO PLANS) WITH PRESETS VIA N-LIGHT MODULES AND ACCESSORY POWER PACKS.
2. PROVIDE ALL SYSTEM COMPONENTS (AND WARRANTIES) FROM A SINGLE MANUFACTURER EXCEPT WHERE OTHERWISE SPECIFIED.
3. PROVIDE GANGED MASTER AND LOCAL SWITCHES AT LOCATION AS INDICATED FOR USER CONTROL OF LIGHTING (UNDER COMMON MULTI-GANG PLATE) ALL SWITCHES SHALL BE PROVIDED WITH ENGRAVED LABELS ON PLATES DESIGNATING THEIR FUNCTION. FILL FOR ENGRAVED LETTERING SHALL BE AS DIRECTED BY THE ARCHITECT.
4. THE BASIS-OF-DESIGN FOR THIS SYSTEM IS THE ACQUITY N-LIGHT SYSTEM.
5. LUTRON, CRESTRON, COOPER OR EQUAL ARE ACCEPTABLE MANUFACTURER OPTIONS.

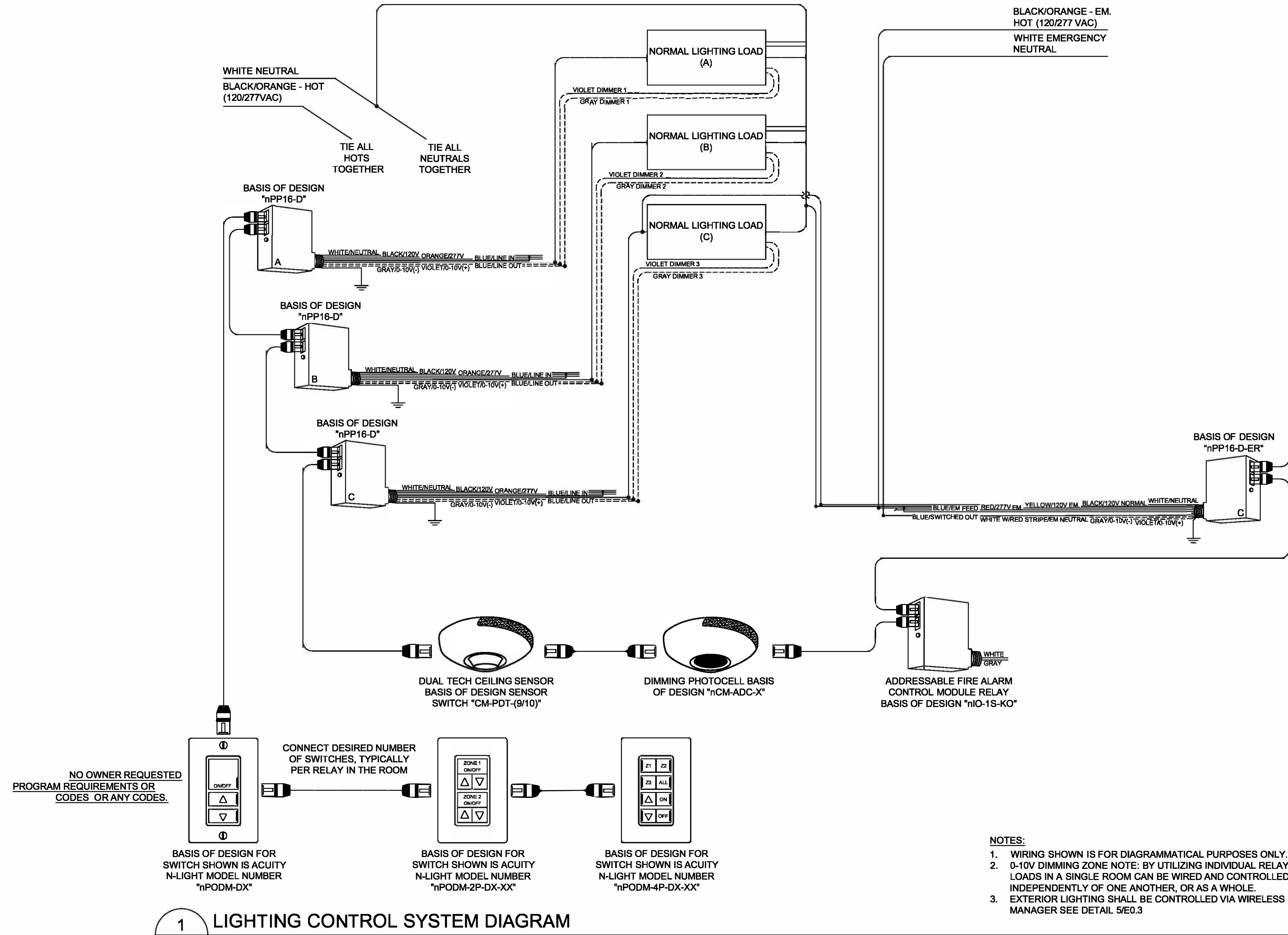
ALCS METHODS OF OPERATION NOTES

SENSOR OPERATIONS

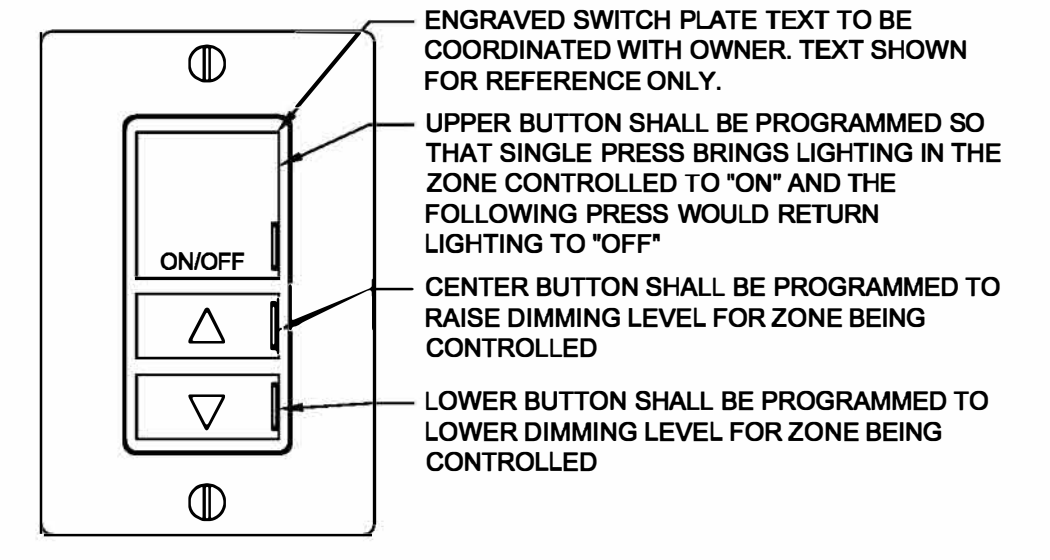
1. INTERIOR PHOTOSENSORS: EACH PHOTOSENSOR SHALL BE PROGRAMMED TO MAINTAIN FOOTCANDLE SETPOINTS ESTABLISHED FOR EACH SPACE DURING SYSTEM SETUP AND COMMISSIONING. DIMMING DEADBANDS AND FADERISE RATES SHALL BE ESTABLISHED TO PROVIDE SMOOTH, NON-INTRUSIVE, CHANGES IN SPACE LIGHT LEVELS IN RESPONSE TO CHANGING DAYLIGHT CONTRIBUTIONS AT ANY GIVEN TIME.
2. EXTERIOR PHOTOCCELL SENSOR SHALL BE SET TO TURN SITE LIGHTING "ON" AT DUSK.
3. OCCUPANCY SENSORS: EACH OCCUPANCY SENSOR SHALL BE SET TO MAINTAIN 100% DIMMING LEVEL FOR AS LONG AS MOTION IS DETECTED. ABSENCE OF MOTION DETECTION FOR 15 MINUTE PERIOD SHALL PROMPT THE SENSOR TO TIME OUT THE LIGHTING IN THE SPACE. MOTION DETECTED AT ANYTIME PRIOR TO THE FULL TIME-OUT SHALL RETURN THE LIGHTING TO THE NORMAL LEVEL WHERE OCCUPANCY SENSORS HAVE BEEN PROVIDED.
4. VACANCY SENSORS: EACH VACANCY SENSOR SHALL BE SET TO MAINTAIN 100% DIMMING LEVEL FOR AS LONG AS MOTION IS DETECTED. ABSENCE OF MOTION DETECTION FOR 15 MINUTE PERIOD SHALL PROMPT THE SENSOR TO TIME OUT THE LIGHTING IN THE SPACE. MOTION DETECTED AFTER TIME OUT SHALL REQUIRE MANUAL ON OPERATION IN ORDER TO RETURN THE LIGHTING TO THE NORMAL LEVEL.
5. SENSOR ADJUSTMENTS FOR ALL FUNCTIONS SHALL BE ADJUSTED DURING SYSTEM COMMISSIONING.

ZONING & PRESET LEVELS

1. INTERIOR SPACES SHALL BE ZONED AS INDICATED IN ON PLANS. LIGHTING LEVELS MAY BE ADJUSTED VIA THE LOCAL WALL STATION, HOWEVER, WHERE PHOTOSENSORS ARE PRESENT THE LIGHTING SHALL NOT BE ALLOWED EXCEED THE FOOTCANDLE LEVEL ESTABLISHED BY THE SPACE'S PHOTOSENSOR BASED ON AVAILABLE DAYLIGHT CONTRIBUTION AT ANY GIVEN TIME.
2. LIGHTING WITHIN THE DAYLIGHT ZONE ADJACENT TO OPENINGS TO THE EXTERIOR SUCH AS WINDOWS AND SKYLIGHTS (DEPTH OF EACH DAYLIGHT ZONE RELATIVE TO THE DAYLIGHT OPENING SHALL BE AS DEFINED BY UTILITY COMPANY ADVANCED BUILDING PROGRAM CORE REQUIREMENTS AND COMMONWEALTH OF MASSACHUSETTS ENERGY CODE) SHALL BE ZONED TO ALLOW FOR CONTROL SEPARATE FROM THE REMAINDER OF THE SPACE.
3. EXTERIOR LIGHTING SHALL BE ACTIVATED VIA PHOTOCCELL AND DEACTIVATED VIA TIMED SCHEDULES.
4. INTERIOR AND EXTERIOR PATHS OF EGRESS SHALL ACTIVATE AT 100% LEVELS UPON RECEIPT OF AN ALARM SIGNAL FROM THE LIFE SAFETY AUTOMATIC TRANSFER SWITCH & FIRE ALARM SYSTEM. LIGHTING LEVELS SHALL BE MAINTAINED AT 100% LEVELS REGARDLESS OF SUBSEQUENT INPUT REQUESTS UNTIL THE ORIGINATING ALARM SIGNAL IS RESTORED TO A NORMAL CONDITION. CONTACT CLOSURE OUTPUTS FROM EACH PIECE OF EQUIPMENT / SYSTEM SHALL BE PROVIDED BY THE RESPECTIVE VENDOR.
5. ALL ZONING SHALL BE CONFIRMED AND COMPLETED PRIOR TO COMMISSIONING. PROGRAMMING SHALL BE ALLOWED WHICH WILL VIOLATE THE LEED COMMONWEALTH OF MASSACHUSETTS BUILDING, ELECTRICAL, AND ENERGY REFERENCED THEREIN.



1 LIGHTING CONTROL SYSTEM DIAGRAM
SCALE: N.T.S.



2 STANDARD ZONE CONTROLLER
SCALE: N.T.S. SYMBOL REF: []

- NOTES:**
1. BASIS OF DESIGN FOR SWITCH SHOWN IS ACUITY N-LIGHT MODEL NUMBER "nPODM-DX"
 2. ALL ENGRAVED SWITCH PLATES SHALL BE COORDINATED WITH OWNER OR OWNERS PROJECT MANAGER PRIOR TO CONTROL STATION PROCUREMENT.
 3. SWITCH STATIONS BEING UTILIZED TO CONTROL FIXTURES WITHIN A DAY LIGHTING ZONE SHALL BE PROGRAMMED AS TO NOT ALLOW A MANUAL OVERRIDE OF THE DIMMING LEVELS SET BY THE PHOTO SENSOR IN THE SPACE.

- NOTES:**
1. WIRING SHOWN IS FOR DIAGRAMMATICAL PURPOSES ONLY.
 2. 0-10V DIMMING ZONE NOTE: BY UTILIZING INDIVIDUAL RELAYS, LOADS IN A SINGLE ROOM CAN BE WIRED AND CONTROLLED INDEPENDENTLY OF ONE ANOTHER, OR AS A WHOLE.
 3. EXTERIOR LIGHTING SHALL BE CONTROLLED VIA WIRELESS MANAGER SEE DETAIL 5E0.3

GGD CONSULTING ENGINEERS, INC.
315 Frances Corner Road, Suite D, Danvers, MA 01923-1726
p: 508-998-6700 • f: 508-998-0553 • e: MAIL: info@ggd.com

JOHNSON ROBERTS ASSOCIATES INC.
ARCHITECTS

24 DANE STREET
SOMERVILLE, MA
02143 - 3228

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-	10-10-2023	BID DOCUMENTS
1	10-30-2023	ADDENDUM #1

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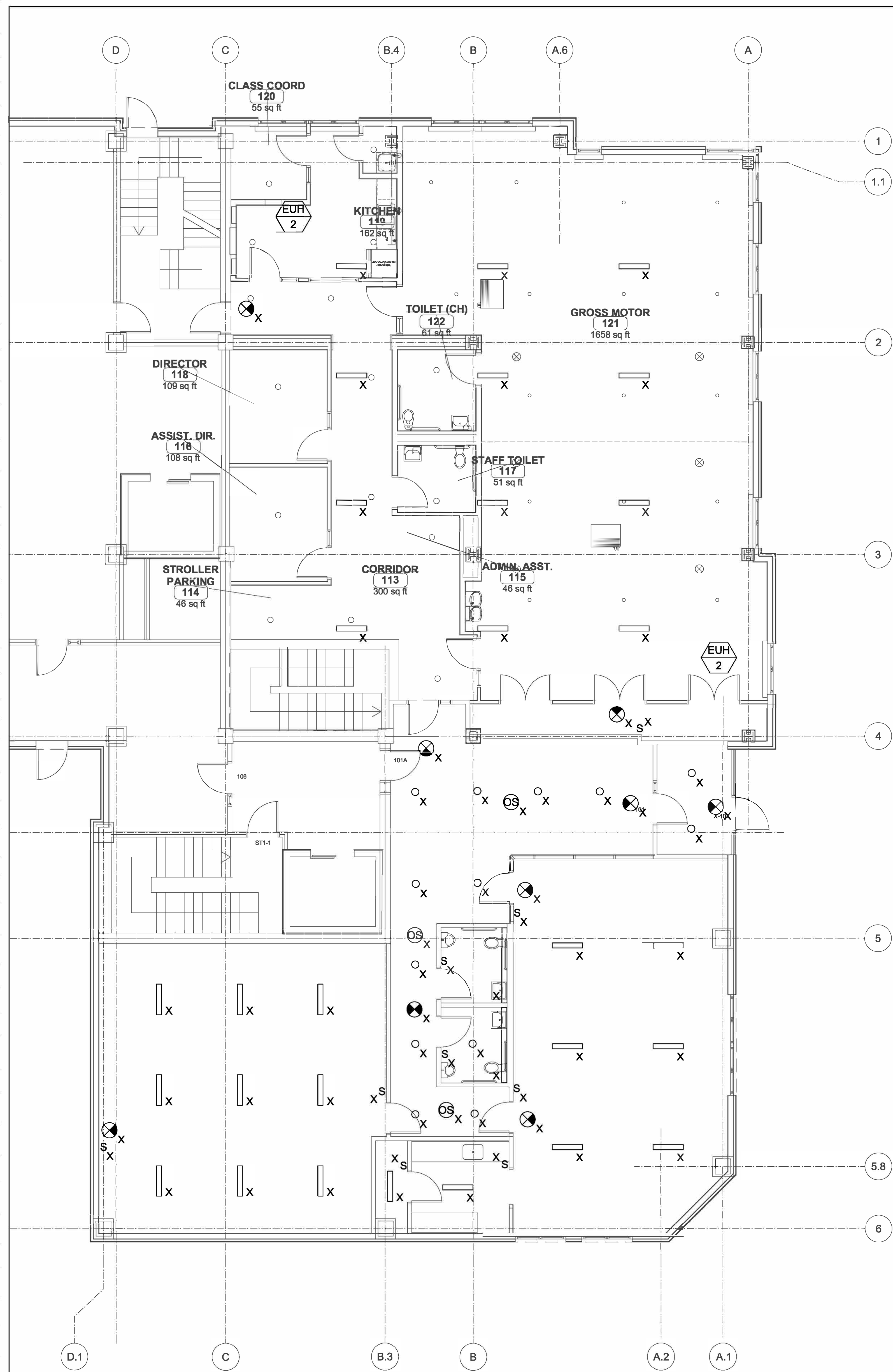
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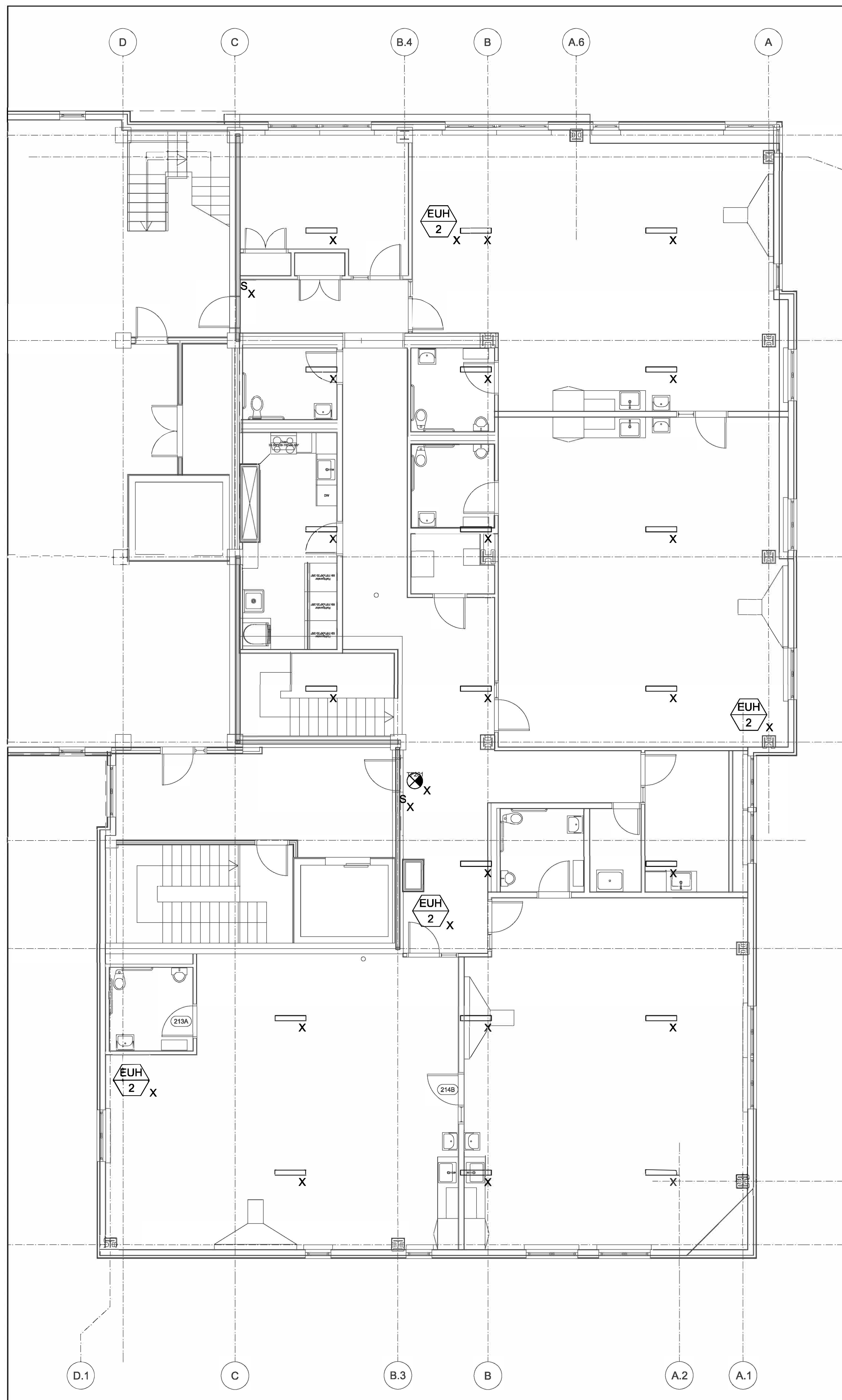
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GENERAL DEMOLITION NOTES:

1. REFER TO DEMOLITION SECTION OF SPECIFICATION FOR ADDITIONAL REQUIREMENTS.
2. WHERE DOWNSTREAM DEVICES ARE AFFECTED BY THE DEMOLITION WORK THIS CONTRACTOR SHALL PROVIDE NEW WIRING AS REQUIRED TO MAINTAIN ALL DOWNSTREAM DEVICES.
3. ALL DEVICES AND/OR EQUIPMENT REMOVED BY THIS CONTRACTOR SHALL BE INDICATED BY THE OWNER FOR DETERMINATION OF DISPOSAL OR STORAGE AS DIRECTED BY THE OWNER. FOR PURPOSES OF PRICING THIS CONTRACTOR SHALL ASSUME THAT NO DEVICE OR EQUIPMENT WILL BE RE-USED UNLESS SPECIFICALLY NOTED AS SUCH.
4. PARTICULAR CARE SHALL BE TAKEN TO AVOID CREATING HAZARDS ON THE PROJECT OR CAUSING DISRUPTION OF SERVICES REMAINING.
5. ALL EXISTING EQUIPMENT INDICATED TO BE REMOVED SHALL BE DONE IN A NEAT AND WORKMANLIKE MANNER. ALL EXISTING EQUIPMENT INDICATED TO BE TURNED OVER TO THE OWNER SHALL BE PRESENTED TO THE OWNER IN GOOD CONDITION AT A LOCATION DESIGNATED BY THE OWNER. ALL OTHER EQUIPMENT SHALL BE REMOVED FROM THE SITE.
6. REMOVE ALL ABANDONED CONDUCTORS AND EQUIPMENT NOT BUILT INTO THE BUILDING CONSTRUCTION. WHERE CEILING AND WALLS ARE REMOVED, ABANDONED WIRING SHALL BE REMOVED, AND ENDS OF LIVE SERVICES TO BE DISCONNECTED AND CUT-OFF.
7. ABANDONED ELEMENTS BUILT INTO WALLS SHALL BE MARKED "ABANDONED".



1 LEVEL 1 - DEMO
ED2.1 SCALE: 3/16"=1'-0"



2 LEVEL 2 - DEMO
ED2.1 SCALE: 3/16"=1'-0"



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375 Francis Corner Road, Suite D, Danvers, MA 01923
P: 908-998-6700 • F: 908-998-0583 • E-MAIL: info@ggd.com

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ARCHITECTS

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Sheet Title
**DEMO FLOOR
PLANS**

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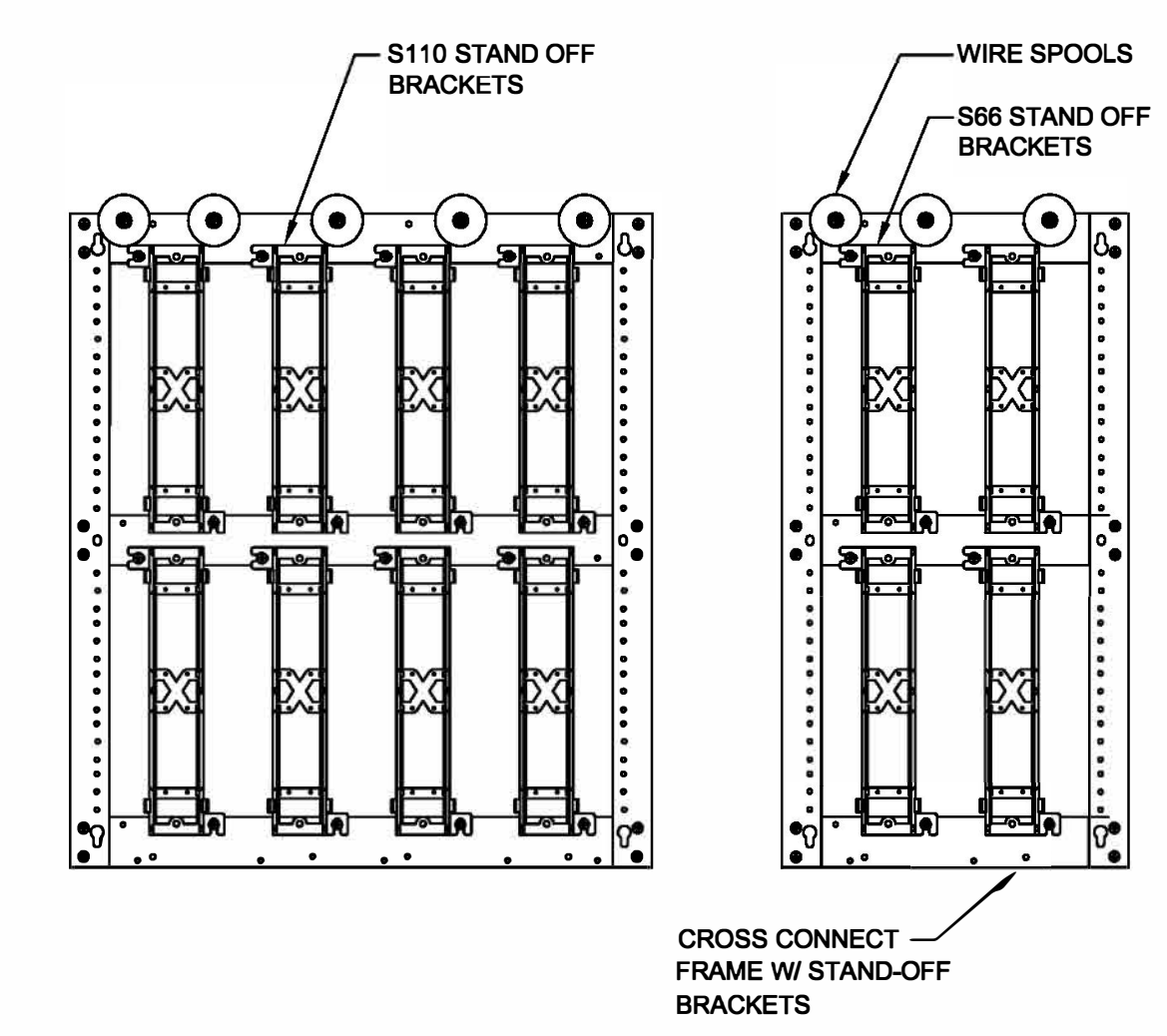
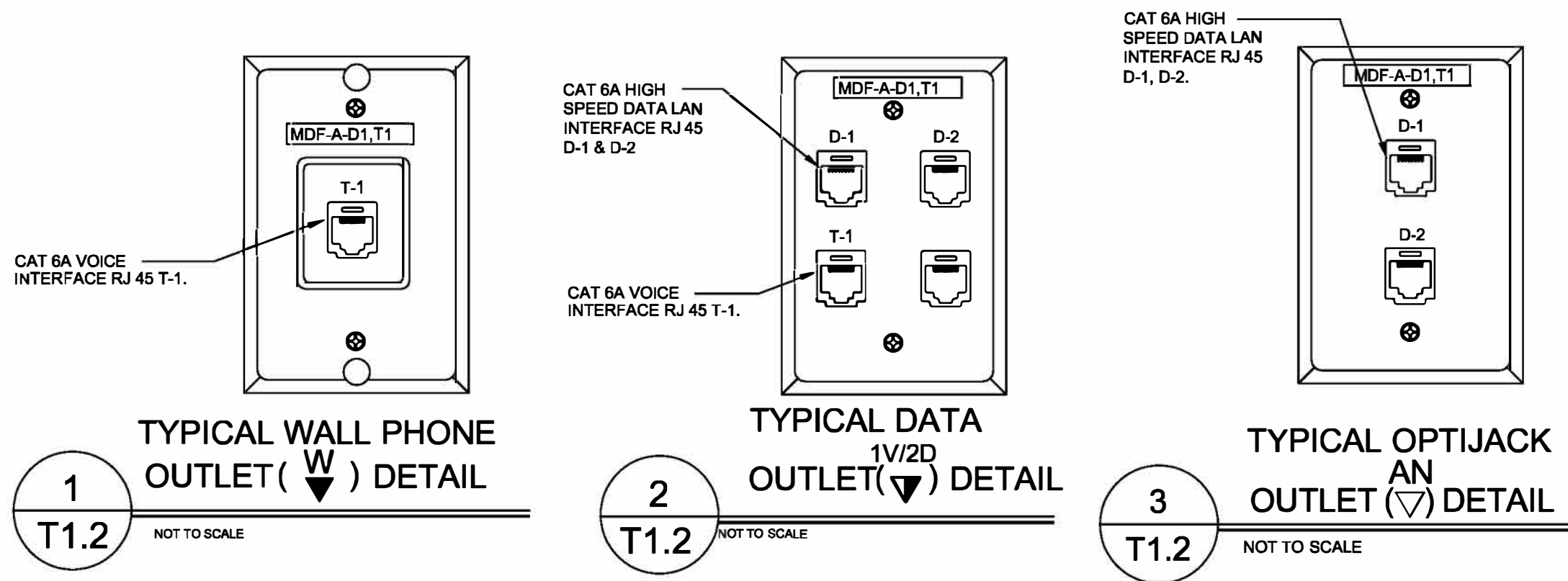
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SYMBOL LIST

TEL/DATA OUTLETS

- W** WALL MOUNTED TELEPHONE OUTLET @ 48" A.F.F. REFER TO TEL/DATA RISER FOR WIRING REQUIREMENTS. COVER PLATES SHALL BE STAINLESS STEEL.
- #** WALL MOUNTED DATA OUTLET @ 18" A.F.F. REFER TO TEL/DATA RISER FOR WIRING REQUIREMENTS. NUMERAL INDICATES NUMBER OF RJ45 JACKS ON SAME FACEPLATE. COVER PLATES SHALL BE STAINLESS STEEL.
- #/W/D** COMBINATION TEL/DATA OUTLET @ 18" A.F.F. #/W INDICATES NUMBER OF RJ45 VOICE JACKS, #/D INDICATES NUMBER OF RJ45 DATA JACKS ON SAME FACEPLATE. (1) VOICE & (1) DATA IF #/W/D IS NOT SHOWN (TYPICAL). REFER TO TEL/DATA RISER FOR WIRING REQUIREMENTS. COVER PLATES SHALL BE STAINLESS STEEL.
- AN** WIRELESS ACCESS NODE - DATA REFER TO TEL/DATA RISER FOR WIRING REQUIREMENTS. COVER PLATES SHALL BE STAINLESS STEEL. MOUNTED AT 92" A.F.F. U.N.O.
- TVC** CABLE/DATA OUTLET REFER TO TEL/DATA RISER FOR WIRING REQUIREMENTS REFER TO TEL/DATA RISER FOR WIRING REQUIREMENTS. COVER PLATES SHALL BE STAINLESS STEEL. COVER PLATES SHALL BE STAINLESS STEEL. MOUNTED @ 18" A.F.F. U.N.O. MOUNTED @ 18" A.F.F. U.N.O.
- TVE** VIDEO PROJECTOR OUTLET REFER TO TEL/DATA RISER FOR WIRING REQUIREMENTS. COVER PLATES SHALL BE STAINLESS STEEL. CEILING MOUNTED U.N.O.
- IDF** INTERMEDIATE DISTRIBUTION FRAME
- MDF** MAIN DISTRIBUTION FRAME
- Ⓢ** FLUSH MOUNTED CEILING SPEAKER - 70VOLT
- Ⓢ** SURFACE MOUNTED CEILING SPEAKER - 70VOLT
- Ⓢ** PENDANT LOUD SPEAKER - SOUNDSPHERE



GENERAL TECHNOLOGY NOTES:

1. COMMUNICATIONS OUTLETS ARE SHOWN FOR REFERENCE PURPOSES. EXACT LOCATIONS WILL BE AS SHOWN ON ELECTRICAL DRAWINGS. COORDINATE INSTALLATION OF ALL CABLING WITH ELECTRICAL SUBCONTRACTOR.
2. KEEP COMMUNICATIONS CABLING AT LEAST 12" AWAY FROM POWER WIRING.
3. ALL CONDUITS AND JUNCTION BOXES TO BE PROVIDED UNDER DIVISION 260000. CONDUITS SHOWN ARE FOR REFERENCE ONLY.

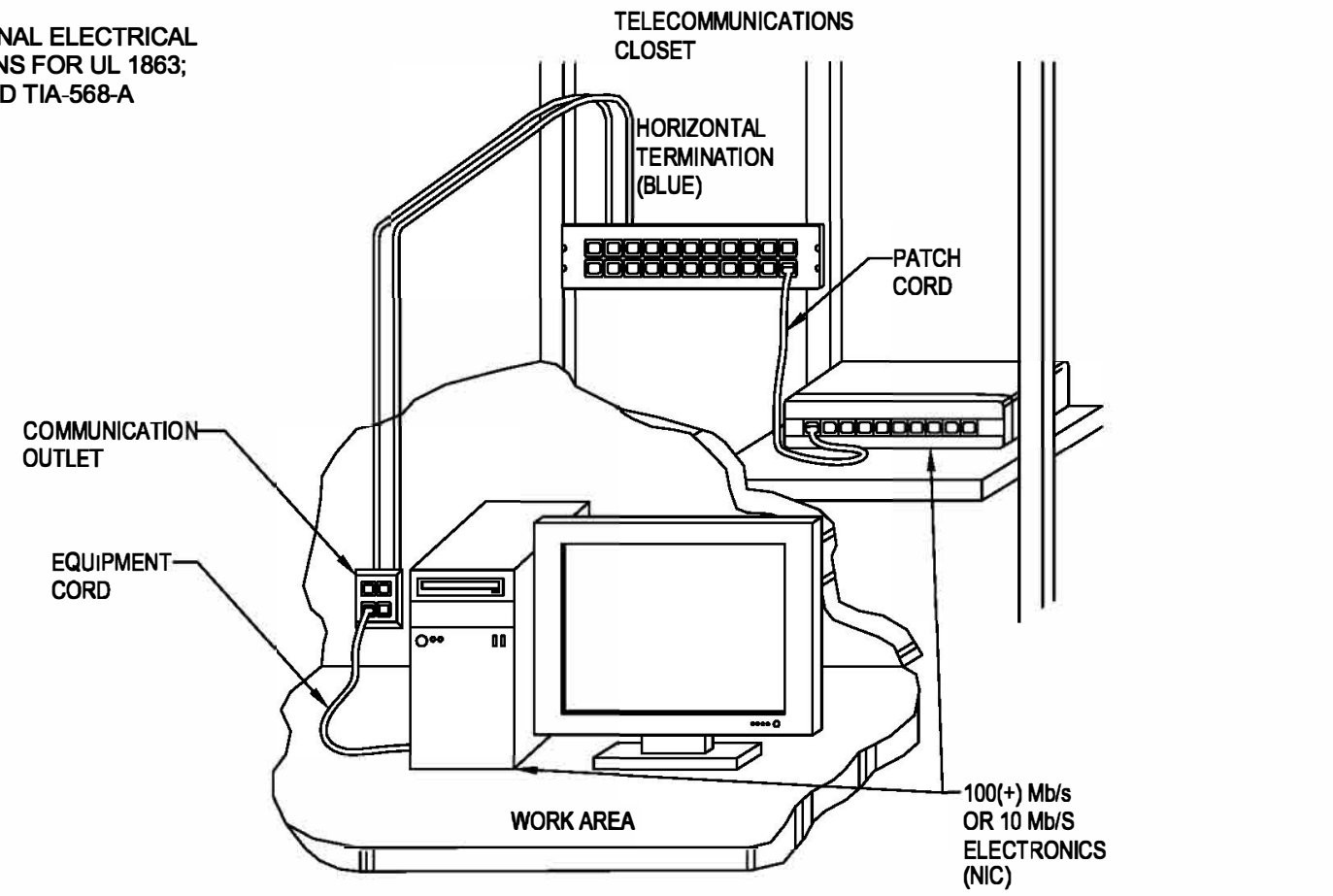
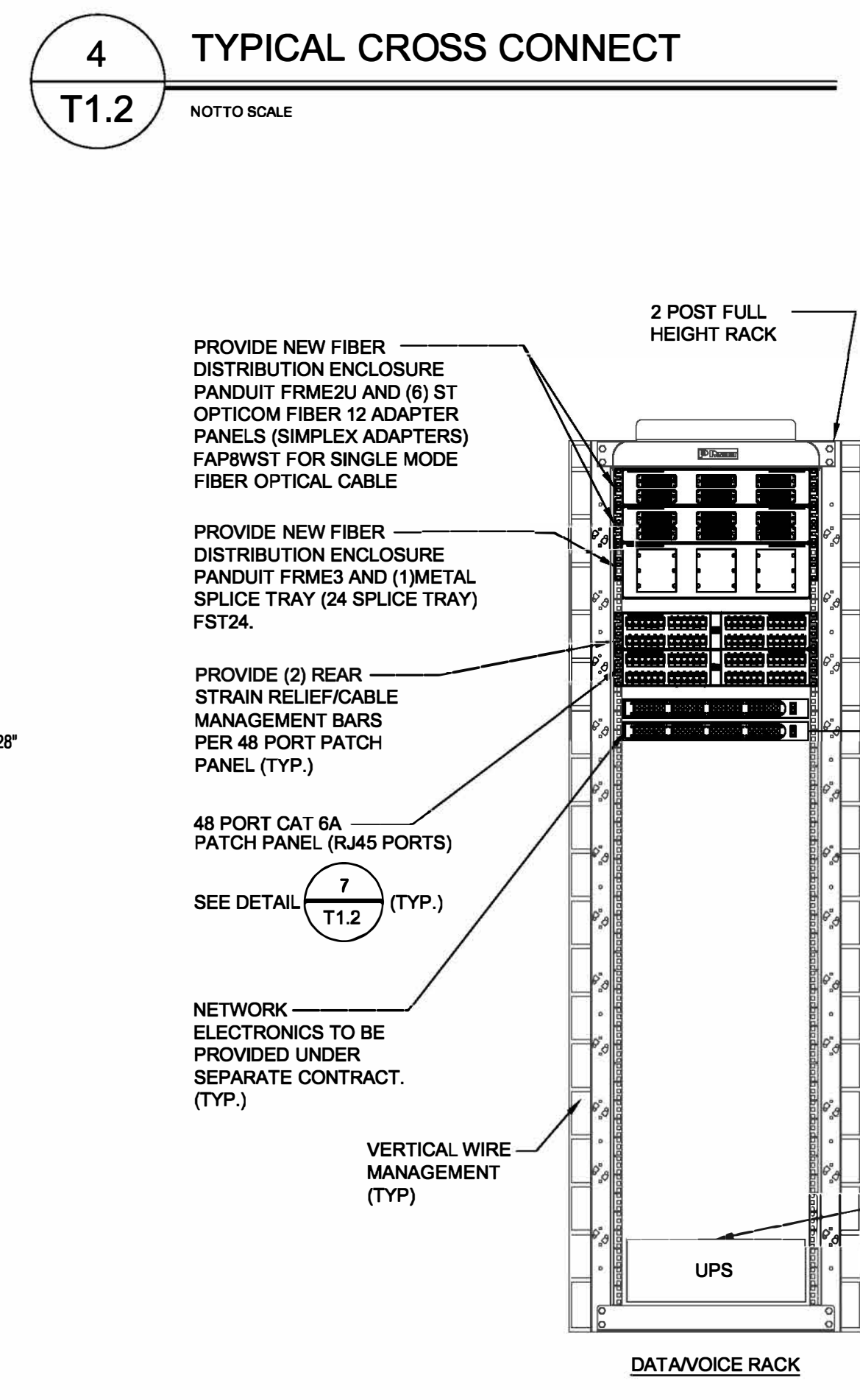
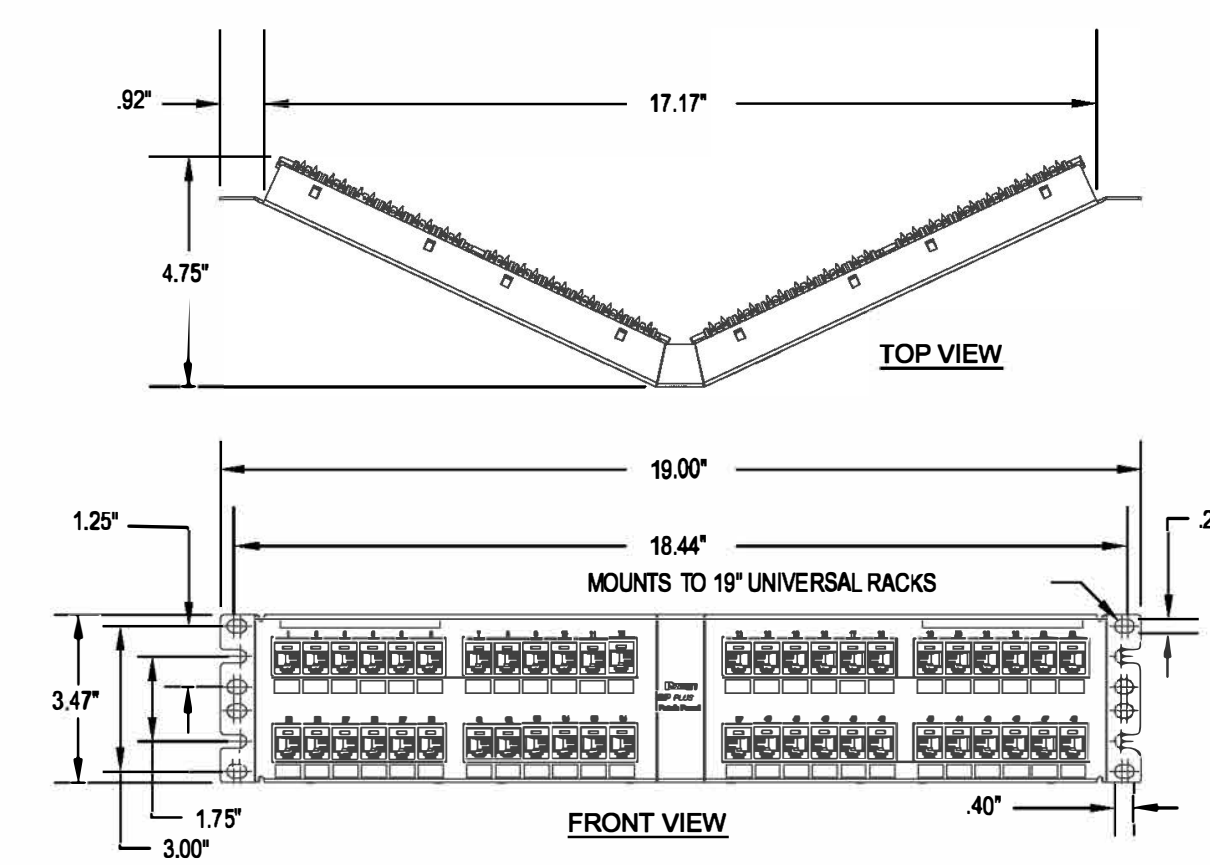
ABBREVIATIONS

- A.F.F. ABOVE FINISHED FLOOR
- A.F.G. ABOVE FINISHED GRADE
- ARCH. ARCHITECT
- A.T.C. AUTO-TEMP CONTROL CONTRACTOR
- Ⓢ CENTERLINE
- C.G. CEILING
- E.C. ELECTRICAL CONTRACTOR
- F&I FURNISHED AND INSTALLED
- F.P.C. FIRE PROTECTION CONTRACTOR
- G.C. GENERAL CONTRACTOR
- H.V.A.C. HEATING, VENTILATION, AND AIR CONDITIONING CONTRACTOR
- P.C. PLUMBING CONTRACTOR
- M.H. MOUNTING HEIGHT
- W.P. WEATHER PROOF
- U.N.O. UNLESS NOTED OTHERWISE
- WG WIRE GUARD
- CATV CABLE TELEVISION
- DH DOOR HOLDER
- F.A.C.P. FIRE ALARM CONTROL PANEL
- PAC PUBLIC ACCESS COMPUTER
- MAC MACINTOSH COMPUTER
- I.T. INFORMATION TECHNOLOGY
- IESS INTEGRATED ELECTRONIC SECURITY SYSTEM INTEGRATOR

QUANTITY OF DEVICES

IDF (IDF 222)

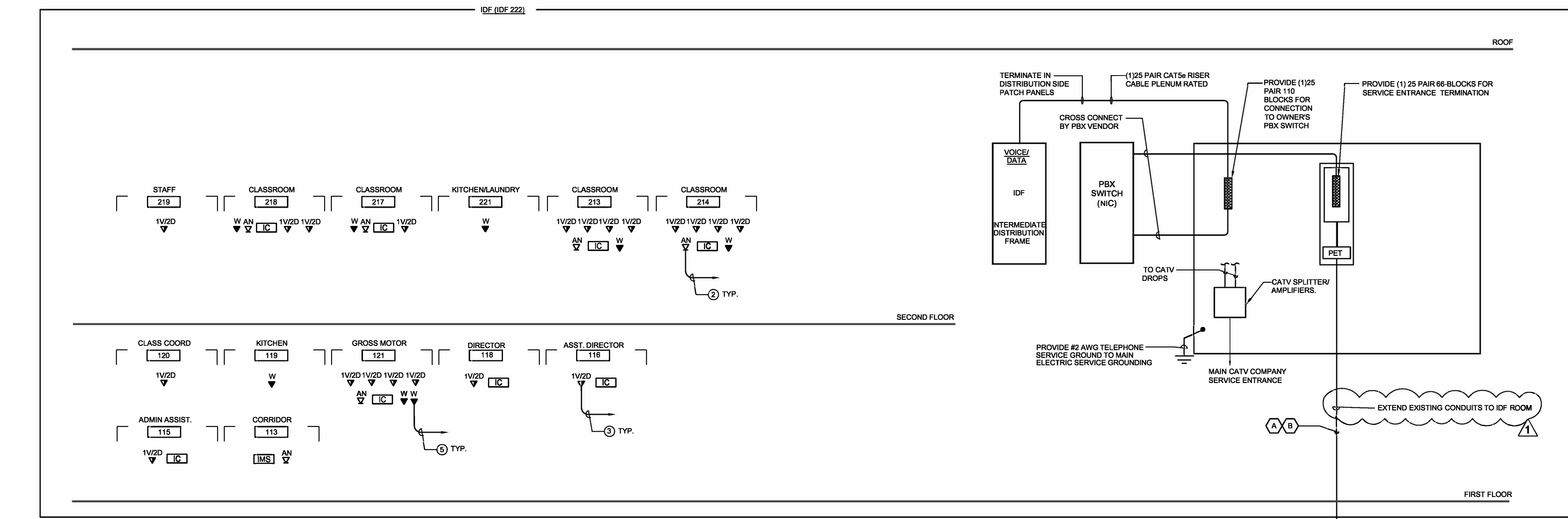
	DATA (CAT 6A)	VOICE (CAT 6A)	CATV
1/2D =	20	40	-
2 =	-	-	-
AN =	6	12	-
W =	8	-	-
TV =	-	-	-
TVC =	-	-	-
TOTAL	52	28	-



INTERMEDIATE DISTRIBUTION FRAME IDF

LOCATION: IDF (IDF 222)

CAT 6A (RJ45) VOICE PORT			CAT 6A (RJ45) DATA PORTS		
USED	SPARE	PATCH PANEL SIZE	USED	SPARE	PATCH PANEL SIZE
28	20	(1) 48 PORT	52	44	(2) 48 PORT



- NOTES:**
- ① - (1) CAT 6A UTP CABLES PLENUM RATED TO IDF/MDF DATA RACK IN BLOCKED AREA (TYPICAL)
 - ② - (2) CAT 6A UTP CABLES PLENUM RATED TO IDF/MDF DATA RACK IN BLOCKED AREA (TYPICAL)
 - ③ - (1) CAT 6A UTP CABLES PLENUM RATED TO IDF/MDF DATA RACK IN BLOCKED AREA (TYPICAL)
 - ④ - (2) CAT 6A UTP CABLES PLENUM RATED TO IDF/MDF DATA RACK IN BLOCKED AREA - (1) RG-6 QUAD SHIELD TO CATV SPLITTER IN MDF (TYPICAL)
 - ⑤ - (1) CAT 6A UTP CABLES PLENUM RATED TO IDF/MDF VOICE RACK IN BLOCKED AREA (TYPICAL)
 - ⑥ - (1) CAT 6A UTP CABLES PLENUM RATED TO IDF/MDF DATA RACK IN BLOCKED AREA - (1) CAT 6A UTP CABLE PLENUM RATED TO IDF/MDF VOICE RACK IN BLOCKED AREA (TYPICAL)
 - ⑦ - (1) CAT 6A UTP CABLES PLENUM RATED TO IDF/MDF DATA RACK IN BLOCKED AREA - (1) CAT 6A UTP CABLE PLENUM RATED TO IDF/MDF VOICE RACK IN BLOCKED AREA (TYPICAL)
- NOTE:**
1. THIS CONTRACTOR SHALL PROVIDE FOR A COMPLETE INSTALLATION. FURNISH ALL EQUIP., LABOR, WIRING AND OUTLETS REQUIRED FOR A COMPLETELY OPERATIONAL SYSTEM.
 2. ALL WIRING SHALL BE IN ACCORDANCE WITH EQUIPMENT SUPPLIER. COORDINATE ALL WIRING REQUIREMENTS PRIOR TO ROUGHING-IN.
 3. PROVIDE APPROPRIATE QUANTITIES OF DATA PATCH PANELS TO ACCOMMODATE ALL RESPECTIVE DATA CIRCUITS.
 4. PROVIDE CAT 6A PATCH CORDS TO MATCH TOTAL QUANTITY OF PATCH PANEL PORTS. AT BOTH MDF/IDF AND WORK STATION.
- A 12 STRAND MULTI-MODE FIBER CABLE TO IDF. INSTALL PLENUM RATED INNER-DUCT.
 - B 12 STRAND SINGLE MODE 8/8 MICRON FIBER CABLE TO MDF. INSTALL PLENUM RATED INNER-DUCT.



JOHNSON ROBERTS ASSOCIATES INC.
ARCHITECTS

24 DANE STREET
SOMERVILLE, MA
0 2 1 4 3 - 3 2 2 8

Architect

REV.	DATE	DESCRIPTION
-	10-10-2023	BID DOCUMENTS
1	10-30-2023	ADDENDUM #1

Rindge Commons Pre-K
430 & 432 RINDGE AVE,
Cambridge, MA 02140

Sheet Title
SECURITY/ TECHNOLOGY DETAILS

Date: 12-Oct-2023 Drawn By: TV
Project No: 23006 Scale:

Sheet No.

T1.2