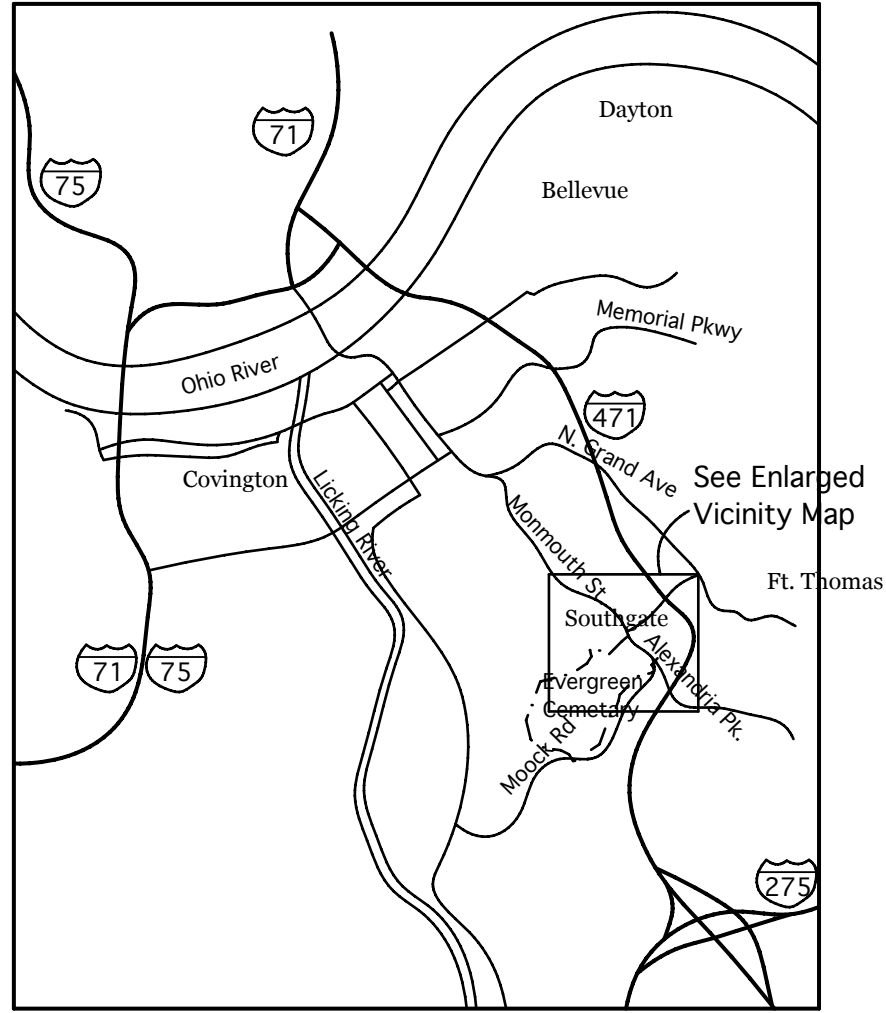
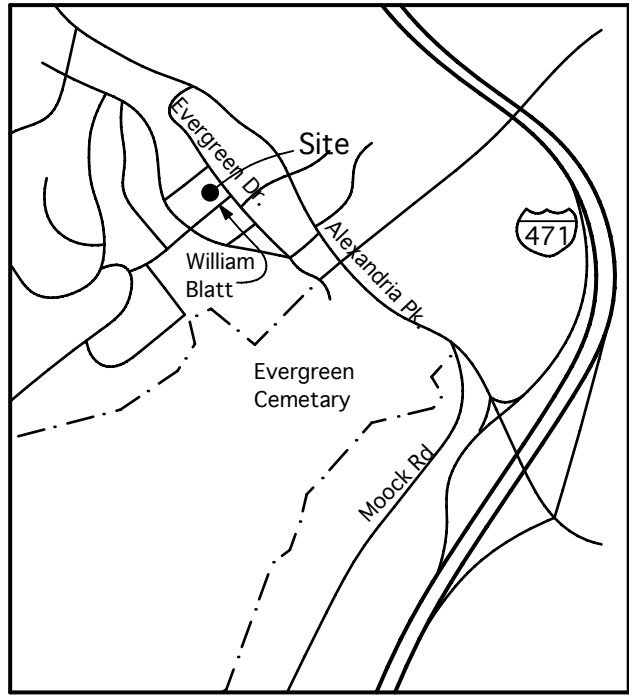




Vicinity Map



Enlarged Vicinity Map

ARCHITECTURAL

- 1 Vicinity Plan; Lower Level Plan; Reflected Ceiling Plan
- 2 Main Level Plan; Reflected Ceiling Plan; Schedules

PLUMBING

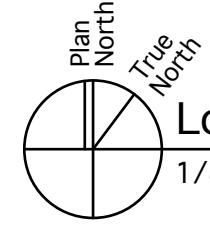
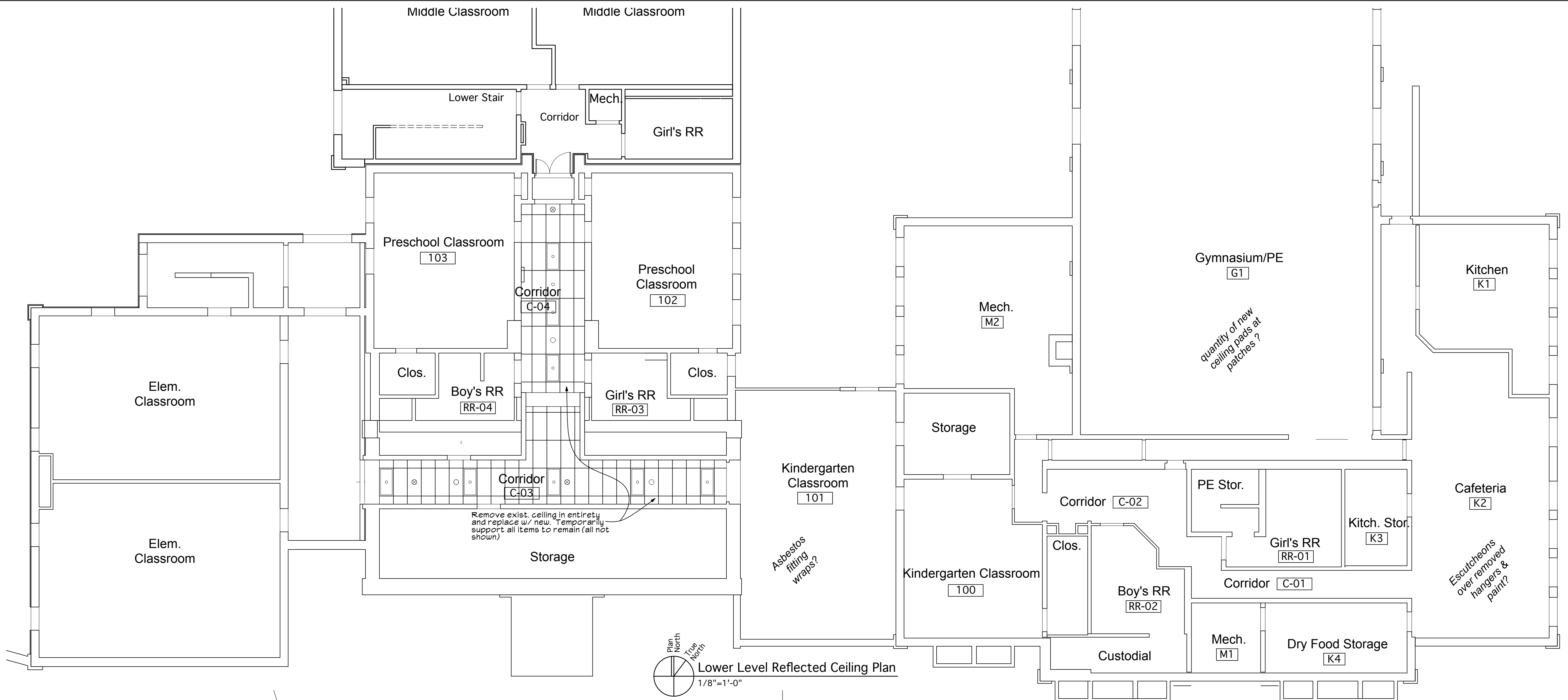
- PD100 Plumbing Above Ground Demolition Plan- Level 1
- PD101 Plumbing Above Ground Demolition Plan- Level 2
- PD401 Plumbing Above Ground Demolition Plan - Enlarged Plans
- P-100 Plumbing Above Ground - Level 1
- P-101 Plumbing Above Ground - Level 2
- P-401 Plumbing - Enlarged Plans; Gas Isometric

MECHANICAL

- M-001 Mechanical Ductwork - Legend & Abbreviations
- MD100 Mechanical Demolition - Level 1
- MD101 Mechanical Demolition - Level 2
- MD102 Mechanical Demolition - Roof
- M-100 Mechanical Ductwork - Level 1
- M-101 Mechanical Ductwork - Level 2
- M-102 Mechanical Ductwork - Roof
- M-501 Mechanical Details
- M-502 Mechanical Piping Diagrams
- M-601 Mechanical Schedules
- MP100 Mechanical Piping - Level 1
- MP101 Mechanical Piping - Level 2
- MP102 Mechanical Piping - Roof

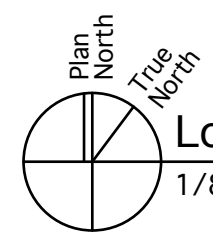
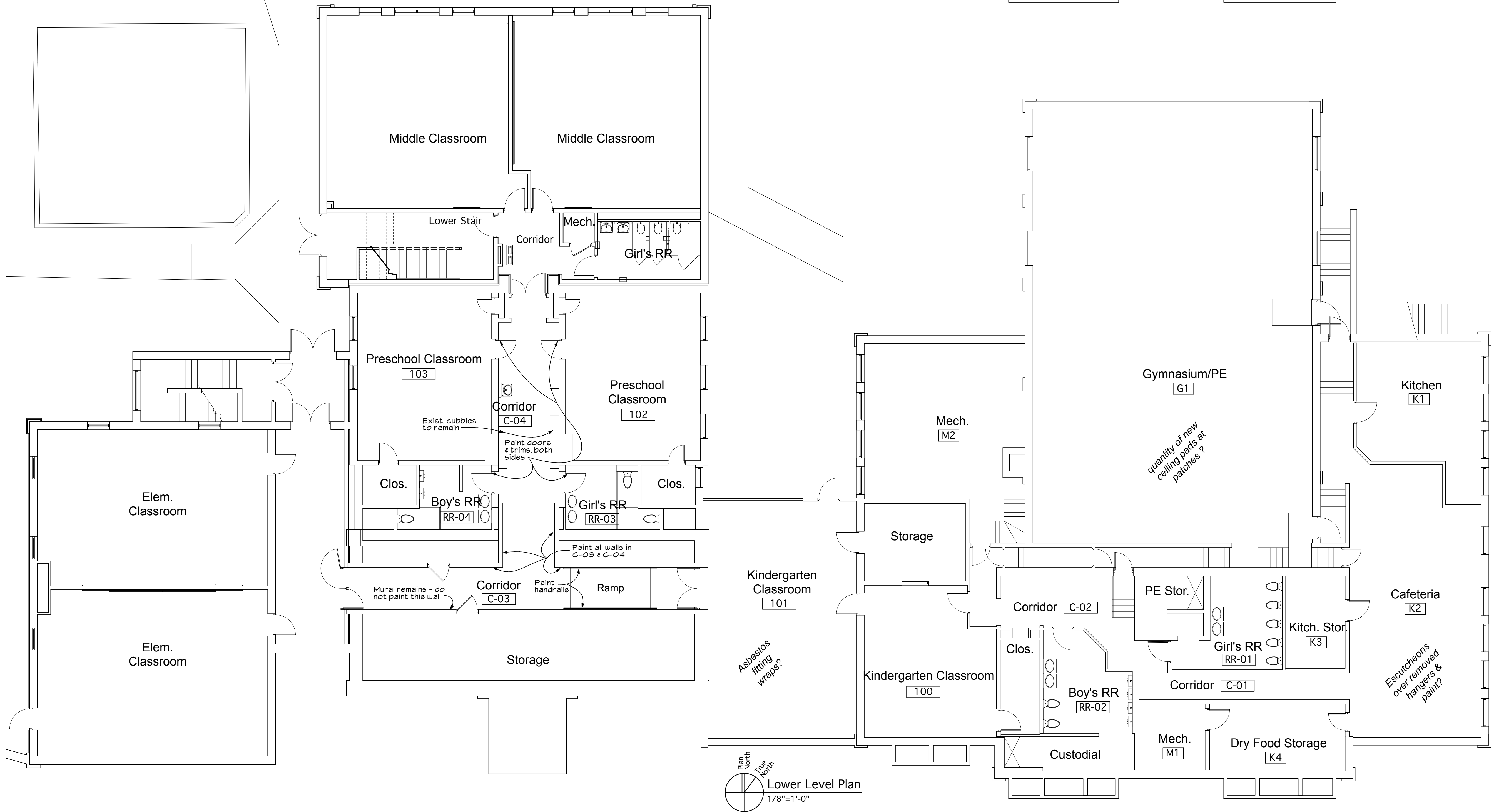
ELECTRICAL

- ED100 Electrical Demolition Plan - Level 1
- ED101 Electrical Demolition Plan - Level 2
- ED102 Electrical Demolition Plan - Roof
- EL100 Electrical Lighting - Level 1
- EL101 Electrical Lighting - Level 2
- EL601 Electrical Lighting Compliance; Schedules
- EP100 Electrical Power Plan - Level 1
- EP101 Electrical Power Plan - Level 2
- EP102 Electrical Power Plan - Roof
- EP601 Electrical Legend; Abbreviations; Single Lines; Panels
- EP602 Electrical Panel Schedules
- EP603 Electrical Schedules



Lower Level Reflected Ceiling Plan

1/8"=1'-0"



Lower Level Plan

1/8"=1'-0"

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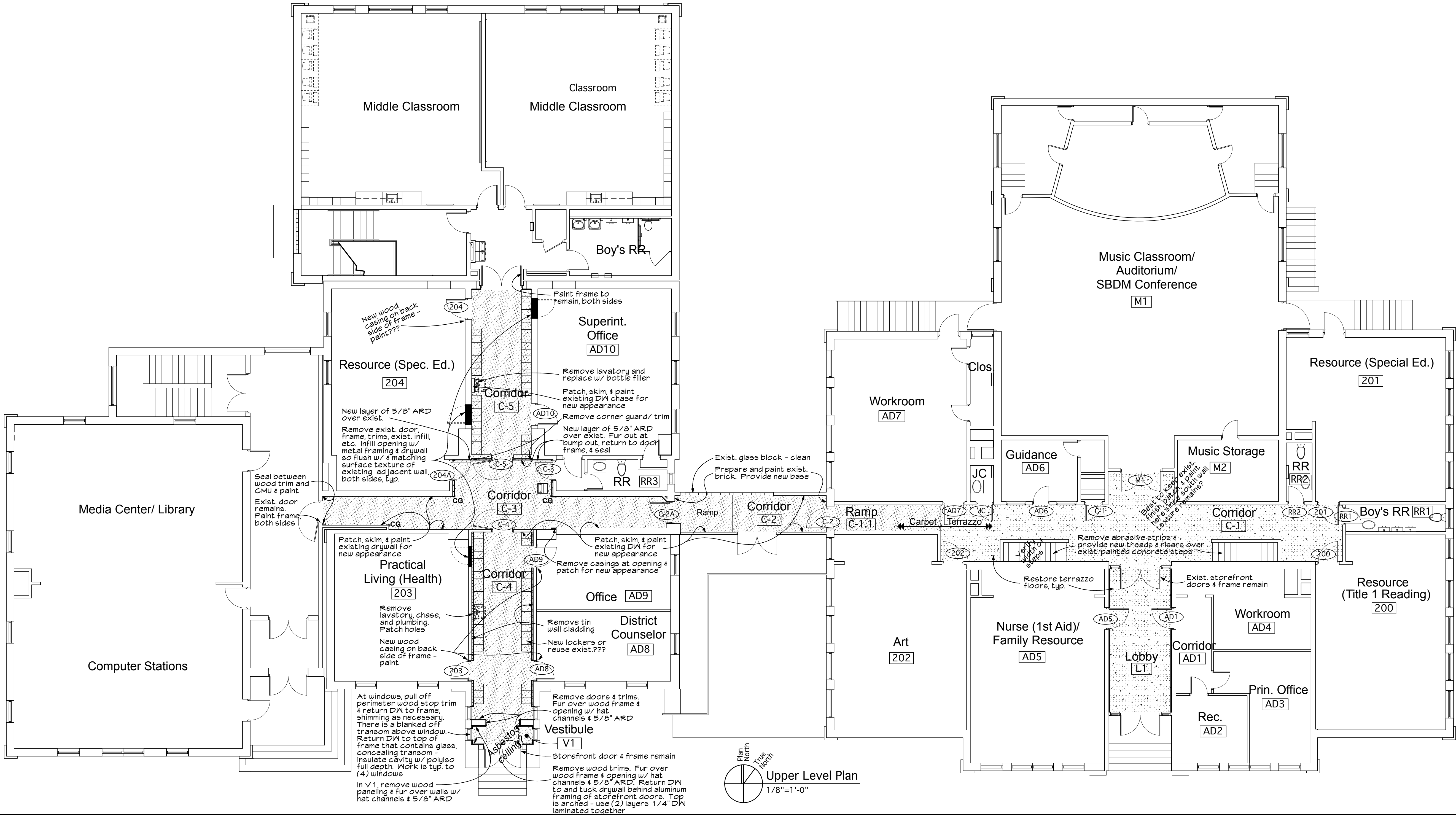
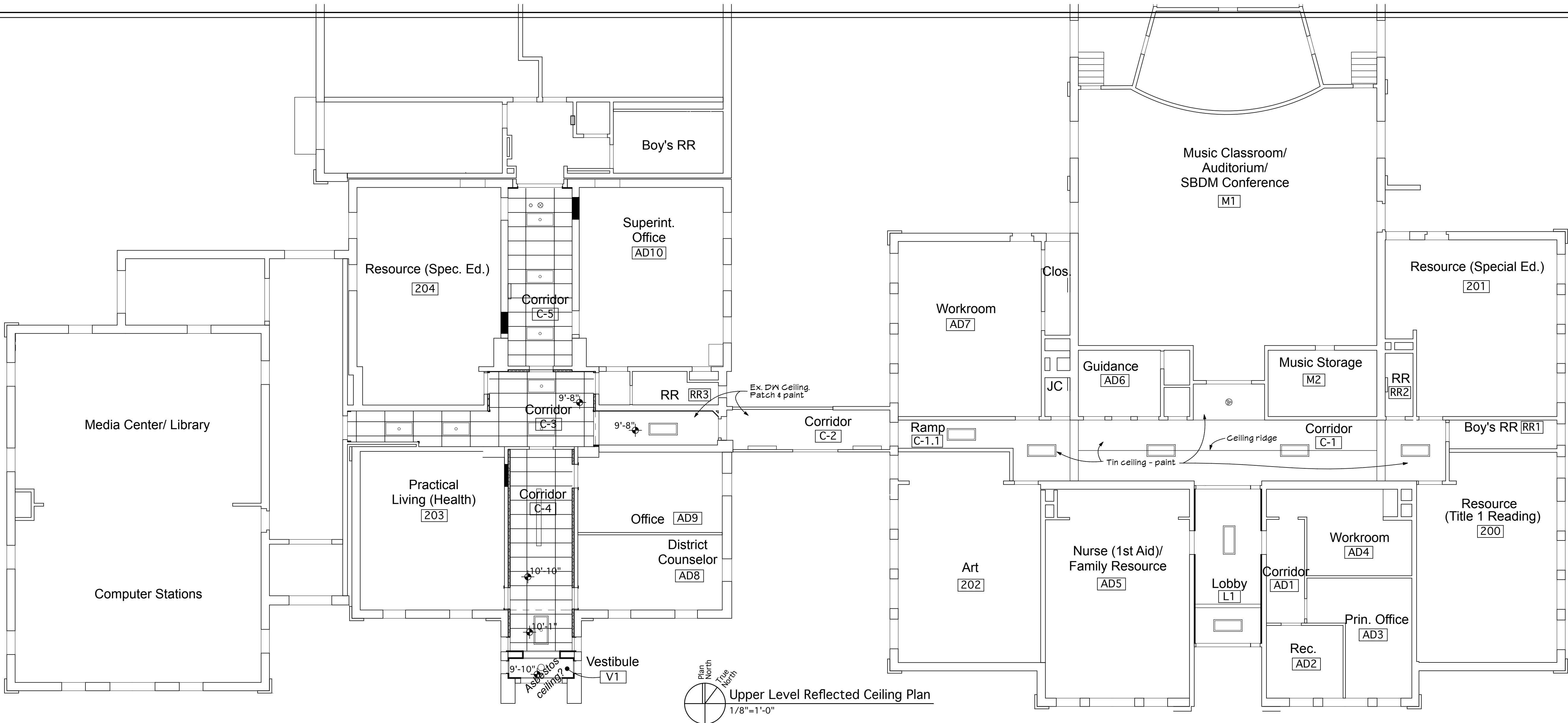
DOOR SCHEDULE													
DOOR #	DOOR		MAT.	TYPE	FRAME		DETAILS			LABEL	HRDW	See notes at Frame Types also REMARKS	
	SIZE				MAT.	TYPE	HEAD	JAMB	SILL				
AD1	3'-1" x 7'-0" x 1 3/4"		WD	HG	HM	1	P7/2 Sim.	P7/2	—	20	01		
AD5	3'-1" x 7'-0" x 1 3/4"		WD	HG	HM	1				20			
AD6	2'-8" x 7'-0" x 1 3/4"		WD	VL	HM	1				20			
AD7	3'-2" x 7'-0" x 1 3/4"		WD	VL	HM	1				20			
AD8	2'-11" x 7'-0" x 1 3/4"		WD	VL	HM	1				20			
AD9	3'-0" x 7'-0" x 1 3/4"		WD	VL	HM	1				20			
AD10	3'-0" x 7'-0" x 1 3/4"		WD	VL	HM	1				20			
200	3'-2" x 7'-0" x 1 3/4"		WD	VL	HM	1				20			
201	3'-2" x 7'-0" x 1 3/4"		WD	VL	HM	1				20			
202	3'-2" x 7'-0" x 1 3/4"		WD	VL	HM	1				20			
203	3'-0" x 7'-0" x 1 3/4"		WD	VL	HM	1				20			
204	2'-10" x 7'-0" x 1 3/4"		WD	VL	HM	1				20			
204A	3'-0" x 7'-0" x 1 3/4"		WD	VL	HM	1				20			
M1	(2) 3'-0" x 7'-0" x 1 3/4"		WD	VL	Ex	---				20		+ sound seals & new glass	
C-1	3'-0" x 7'-0" x 1 3/4"		WD	VL	HM	1				60			
C-2	3'-0" x 7'-0" x 1 3/4"		WD	F	Ex	---				60			
C-2A	2'-8" x 7'-0" x 1 3/4"		WD	F	Ex	---				60			
C-3	3'-6" x 7'-0" x 1 3/4"		WD	F	HM	1				20			
C-4	3'-0" x 7'-0" x 1 3/4"		WD	VL	Ex	---				20			
C-5	3'-0" x 7'-0" x 1 3/4"		WD	VL	Ex	---				20			
V1	(1) 3'-0" x 7'-0" x 1 3/4" + (1) 2'-0" x 7'-0" x 1 3/4"		WD	VL	HM	1				20			
RR1	2'-6" x 7'-0" x 1 3/4"		WD	F	HM	1				20			
RR2	2'-6" x 7'-0" x 1 3/4"		WD	F	HM	1				20			
JC	2'-8" x 7'-0" x 1 3/4"		WD	F	HM	1				20			

DOOR SCHEDULE ABBREVIATIONS AND NOTES:			
AL: Aluminum	EX Existing	HM Hollow metal	W: Wood
1. All hollow metal frames shall be mitered, fully welded and ground smooth, ready for finish painting			
2. All hollow metal frames to be grouted solid in masonry and spot grouted at anchors in framing			
3. Apply sealant @ perimeter of frames, each side			
4. Egress doors shall be readily operable from the egress side without the use of a key or special knowledge or effort.			
5. Coordinate door undercuts w/ thresholds & floor finish thicknesses prior to ordering doors so that they are correct height to properly contact threshold & to clear floor finish.			
6. See Floor Plans for door swings. Several will be changed and will not match existing.			
7. Field verify all rough openings prior to ordering doors and frames. Include any adjustments on shop drawings.			

ROOM FINISH SCHEDULE										
ROOM #	ROOM TITLE	FLOOR	BASE	N. WALL	E. WALL	S. WALL	W. WALL	FINISH	CEILING	CLG HGT
C-03	Corridor	VCT?								
C-04	Corridor	VCT?								
L1	Lobby	ET	?	CMU	DW	DW	DW	P	AC1	8'-10"±
C-1	Corridor	ET								
C-1.1	Ramp	CS	R							
C-1	Corridor	CS	R							
C-2	Corridor	CS	R							
C-3	Corridor	CS	R							
C-4	Corridor	CS	R							
C-5	Corridor	CS	R							
V1	Corridor	CS	R							

FINISH SCHEDULE ABBREVIATIONS:				Note: See specifications for additional information	
AC1	2" X 4" High NRC lay-in ceiling panel	P	Paint, see specs		
AC2	2" X 4" Lay-in ceiling panel	PL	Plaster - Existing (See Gen. Note #6 on Title Sheet)		
Conc.	Concrete-exposed where floor; paint where wall				
CP	Carpet Squares	R	Resilient Base		
CMU	Concrete Masonry Units				
DW	Drywall - 5/8" Abuse Resistant (ARD) all walls; 1/2" Type X all soffits, bulkheads, & as noted. See drawings for Moisture Resistant (MRD) locations	RTR	Resilient Treads & Risers (2 piece)		
Ex.	Existing to remain	VCT	Vinyl Composition Tile		

GENERAL NOTES:	
1. Paint all plaster ceilings not just those indicated on plans.	
2. Intent is to match existing ceiling heights. If scheduled heights conflict w/ existing, notify architect for clarification	
3. Most rooms on the Floor Plans are not indicated on the above schedule but have room #'s assigned to them. See MEP drawings for work.	
4. Remove all flooring & base in all areas of new flooring & as indicated. In areas of wood trim & where necessary for new appearance at resilient base, patch walls to appear new.	
3. See Floor Plans for additional finishes in Non-Sceduled spaces	



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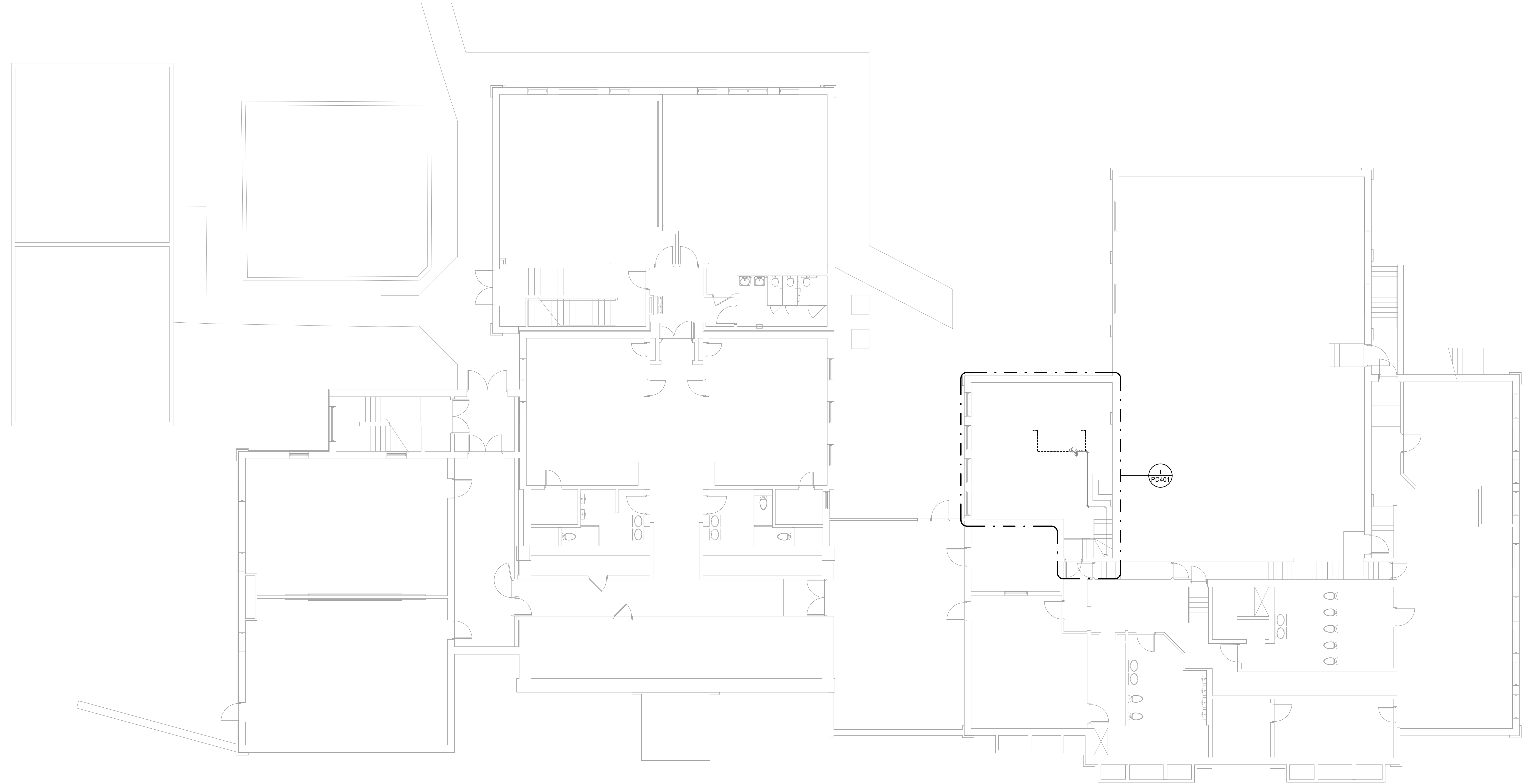
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1 PLUMBING - LEVEL 1 - ABOVE GROUND DEMOLITION PLAN
1/8" = 1'-0"

2" REFERENCE LINE

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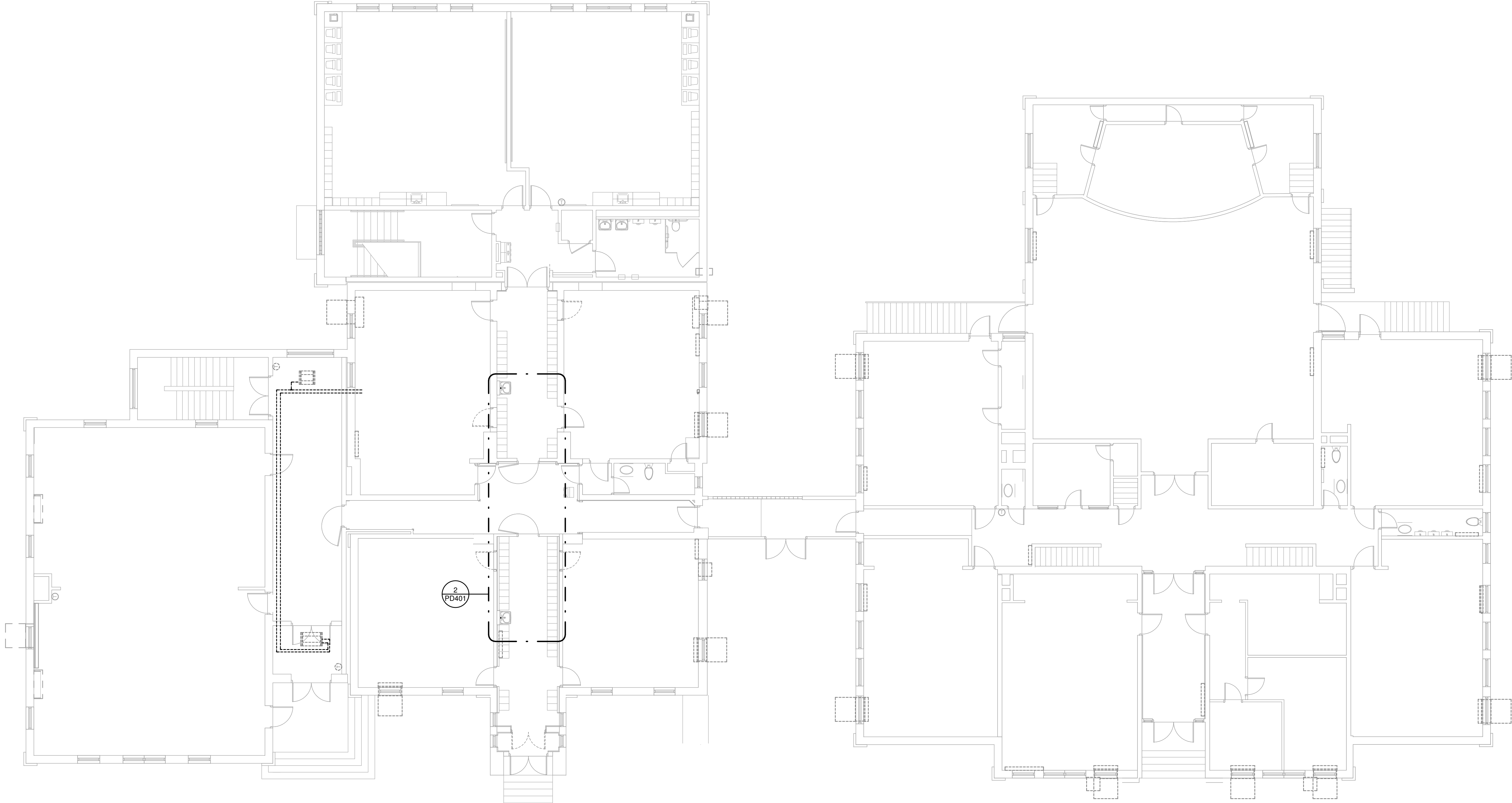
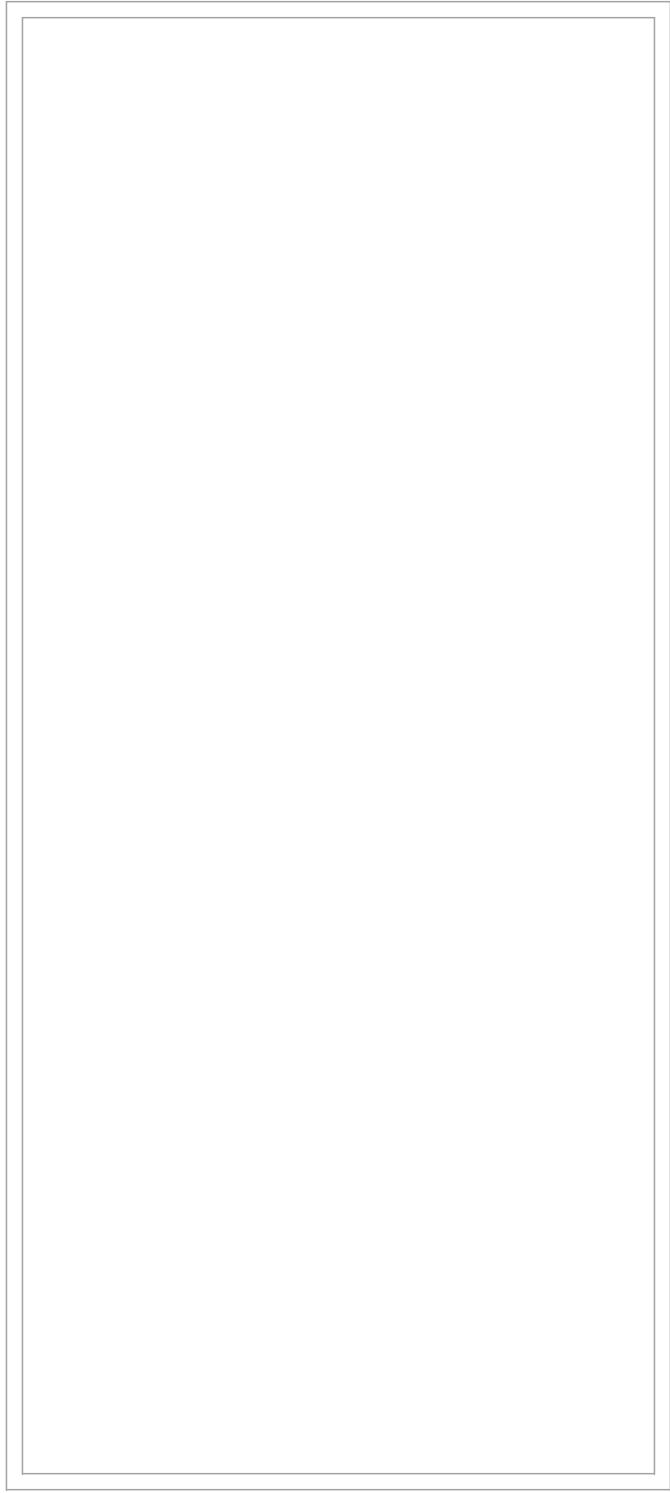
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1/8" = 1'-0"



2" REFERENCE LINE

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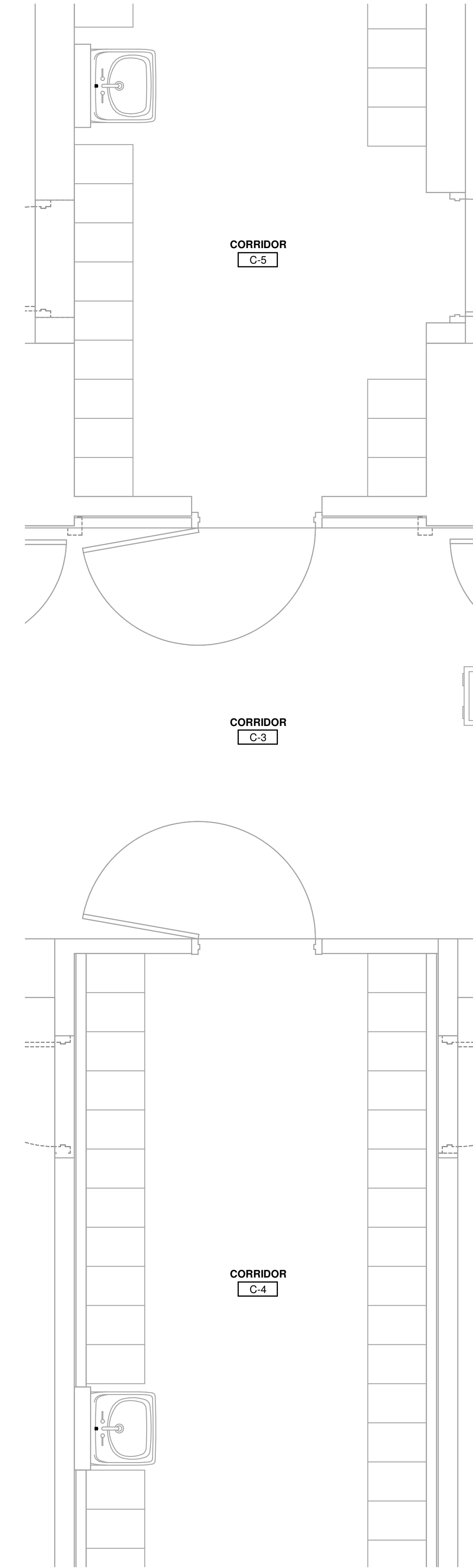
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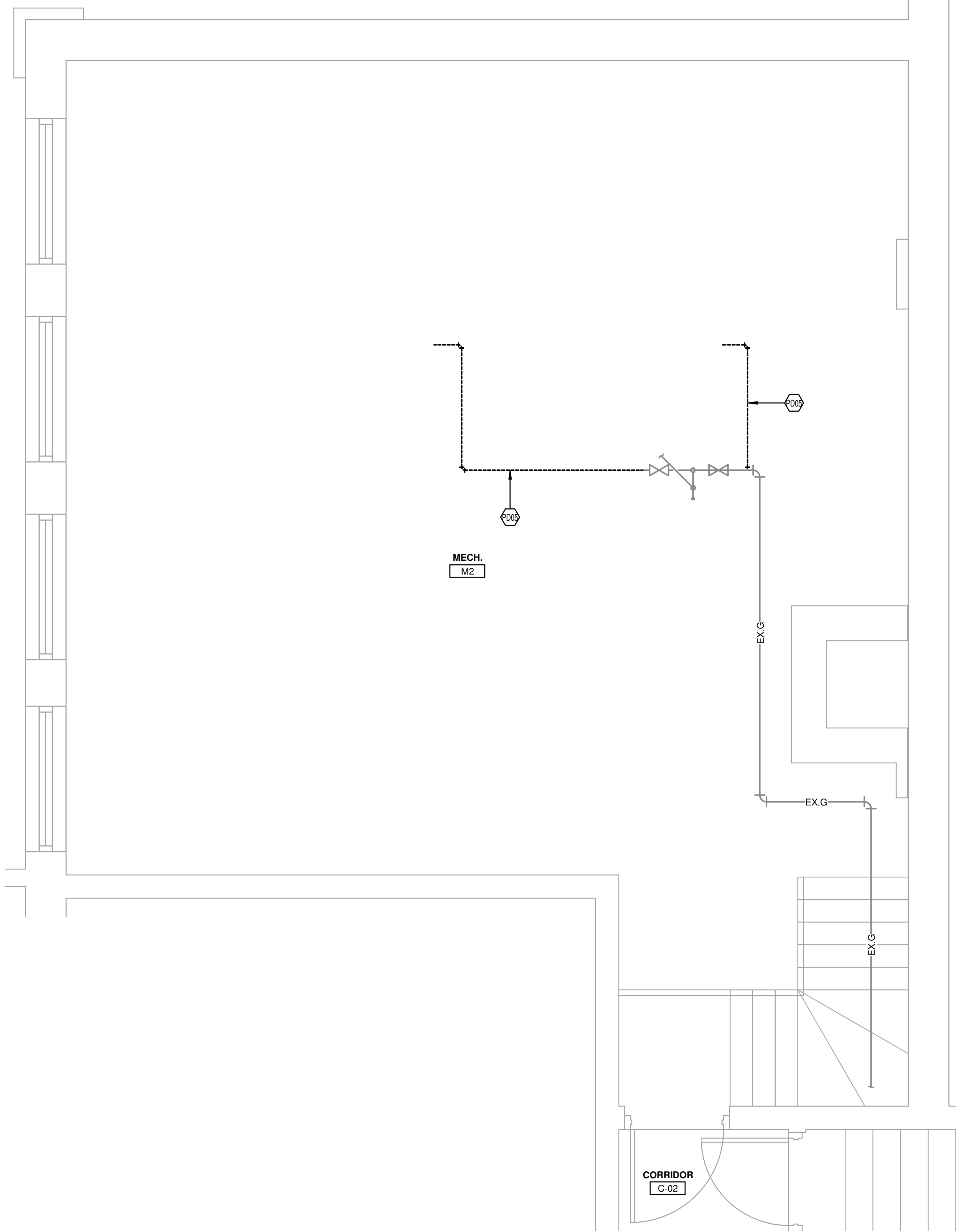
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② PLUMBING - LEVEL 2 - ENLARGED ABOVE GROUND DEMOLITION PLAN
1/2" = 1'-0"



① PLUMBING - LEVEL 1 - ENLARGED ABOVE GROUND DEMOLITION PLAN
1/2" = 1'-0"

2" REFERENCE LINE

KEYED NOTES
PD05 DEMOLISH EXISTING GAS PIPING FROM DEMOLISHED BOILER BACK TO EXISTING GAS RISER.

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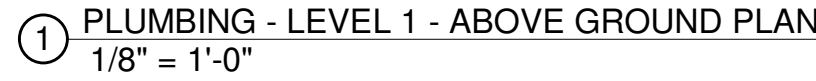
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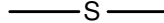
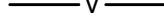
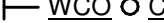
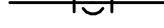
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ENLARGED
DEMOLITION
PLANS

PD401

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PLUMBING LEGEND	
SYMBOL	DESCRIPTION
PLAN-VIEW LINE TYPES	
	WORK SHOWN FADED INDICATES EXISTING WORK TO REMAIN OR NEW WORK BY OTHERS AS APPLICABLE
	WORK SHOWN BOLD-DASHED INDICATES SELECTIVE DEMOLITION WORK
	WORK SHOWN BOLD-CONTINUOUS INDICATES NEW WORK
PIPING LINE TYPES	
	SANITARY WASTE PIPING
	SANITARY VENT PIPING
	DOMESTIC COLD WATER PIPING
	DOMESTIC HOT WATER PIPING (120°F)
	NATURAL GAS PIPING
PLUMBING ACCESSORIES	
	UNION
	PIPE CAP
	FCO - FLOOR CLEANOUT, WCO - WALL CLEANOUT
PIPE VALVES	
	CONTROL VALVE, SHUT-OFF VALVE
	CHECK VALVE
PLUMBING SYMBOLS	
	PIPE UP
	PIPE DOWN
	PIPE TEE DOWN
	PIPE TEE UP
	PIPE CONTINUATION

STANDARD PLUMBING ABBREVIATIONS			
ACCESS	ACCESSORIES	CW	COLD WATER
AFF	ABOVE FINISHED FLOOR	EX	EXISTING
ANSI	AMERICAN NATIONAL STANDARDS INSTITUTE	NAT GAS	NATURAL GAS
ASPE	AMERICAN SOCIETY OF PLUMBING ENGINEERS	PVC	POLYVINYL CHLORIDE
BTUH	BRITISH THERMAL UNIT PER HOUR	SK	SINK
CO	CLEAN OUT	V	VENT

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PLUMBING -
LEVEL 1

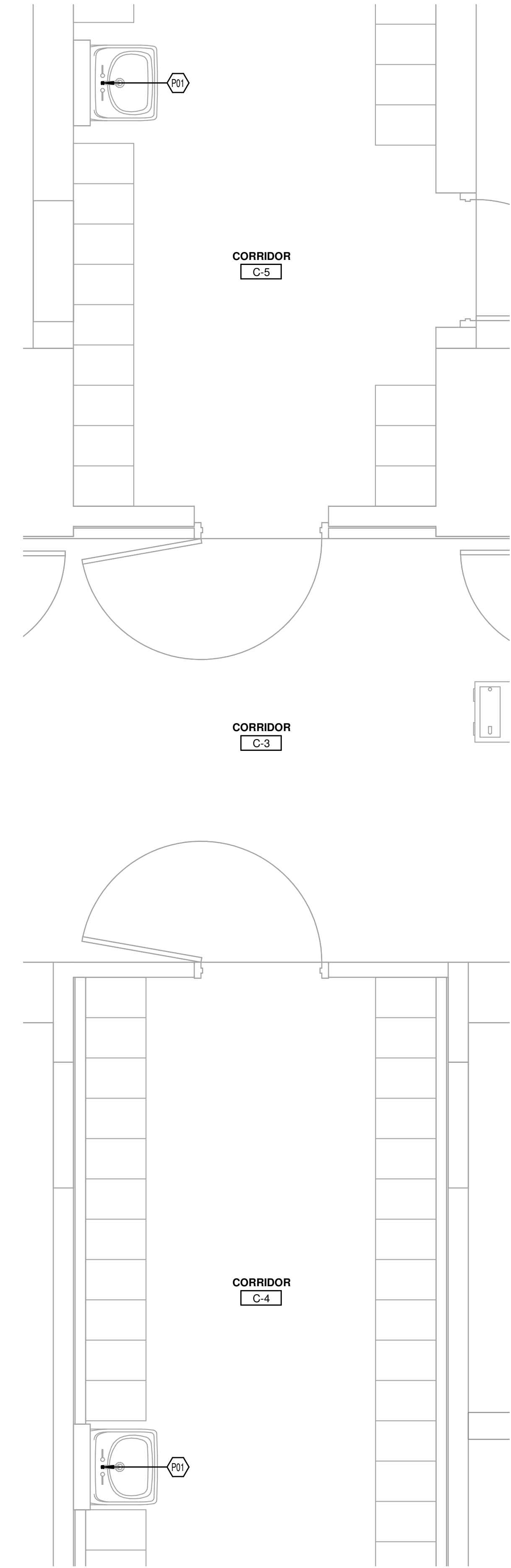
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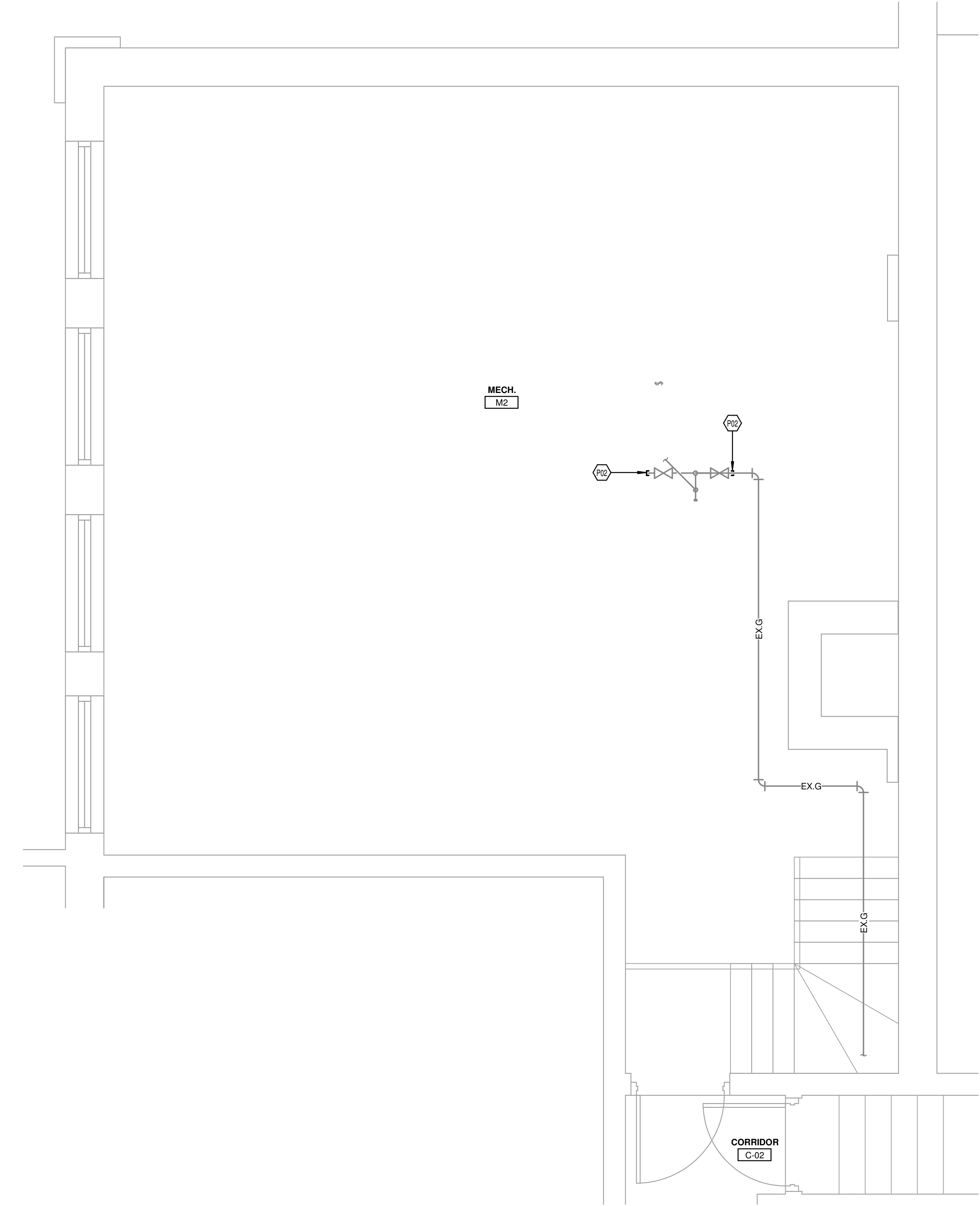


1 PLUMBING - LEVEL 2 - ABOVE GROUND PLAN
1/8" = 1'-0"

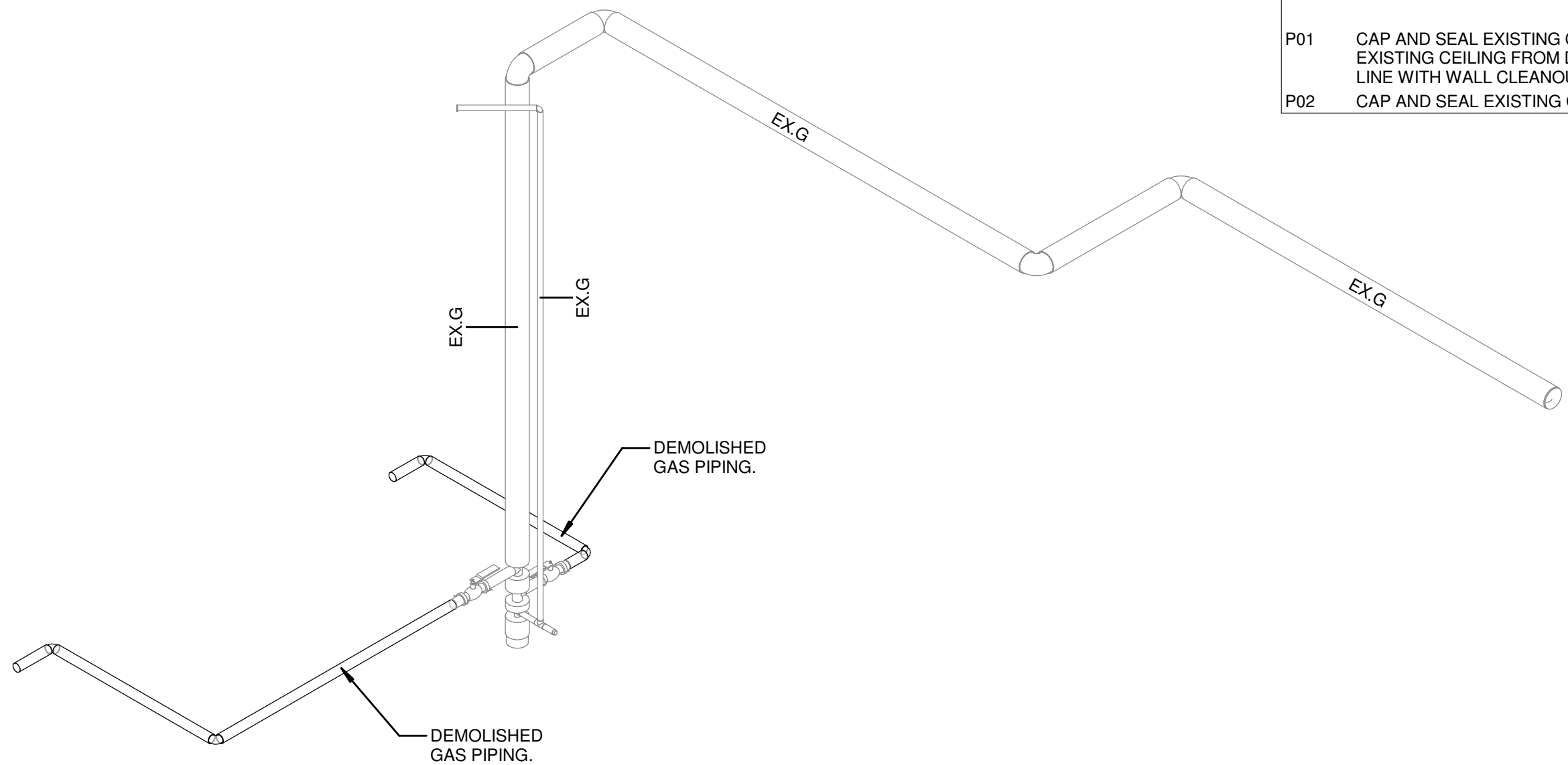
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③ PLUMBING - LEVEL 2 - ENLARGED ABOVE GROUND PLAN
1/2" = 1'-0"



① PLUMBING - LEVEL 1 - ENLARGED ABOVE GROUND PLAN
1/2" = 1'-0"



② PLUMBING - GAS GAS ISOMETRIC

KEYED NOTES

P01 CAP AND SEAL EXISTING CW AND HW CONNECTIONS BACK TO ABOVE EXISTING CEILING FROM DEMOLISHED SINK. CAP EXISTING SANITARY LINE WITH WALL CLEANOUT BACK BEHIND NEW WALL.

P02 CAP AND SEAL EXISTING GAS PIPE BACK TO EXISTING SHUTOFF VALVE.

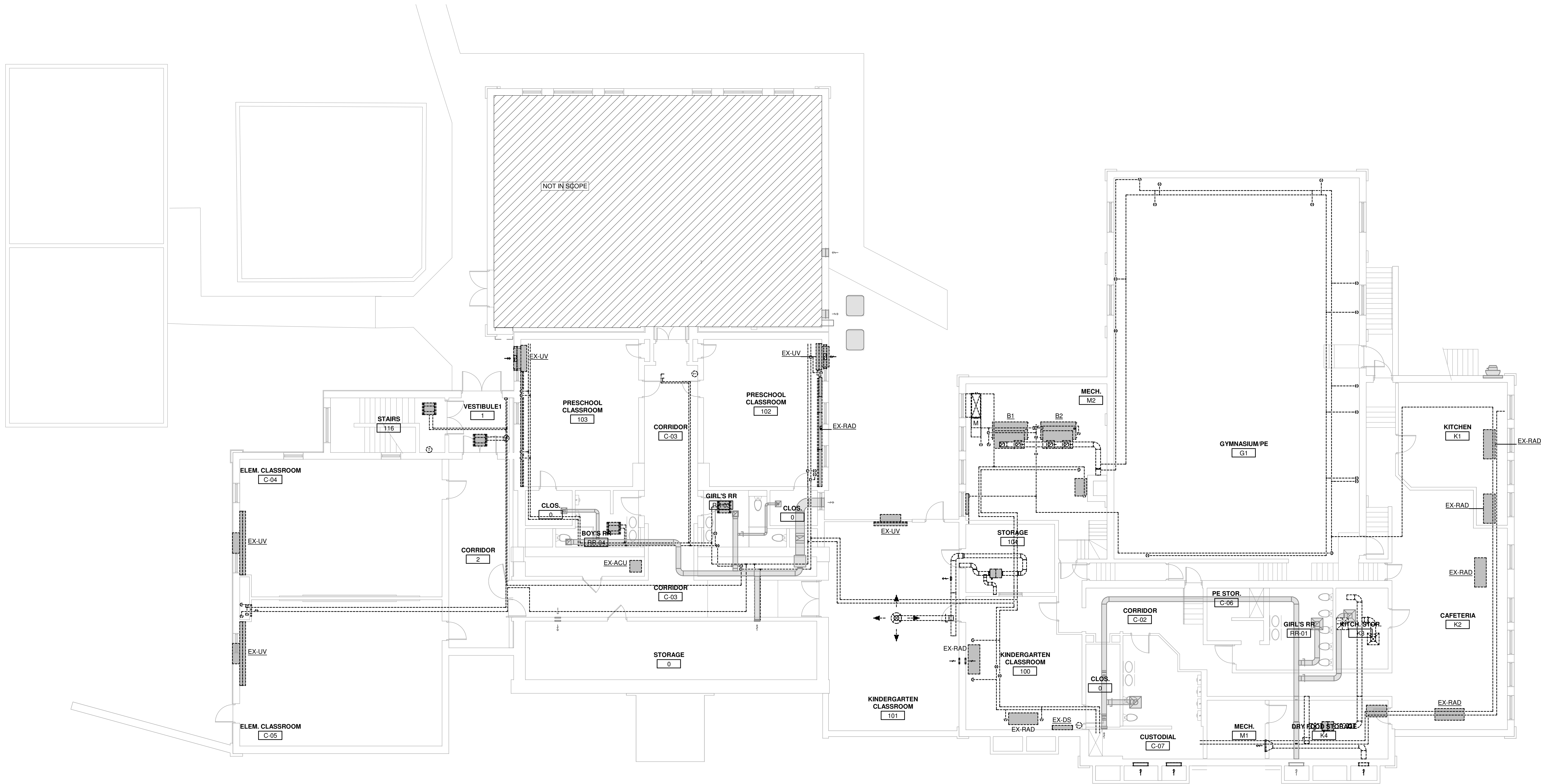
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MECHANICAL - LEVEL 1
1/8" = 1'-0"



2" REFERENCE LINE

DEMOLITION GENERAL NOTES

- A. REMOVE EXISTING DUCTWORK, CONTROLS, AND MISCELLANEOUS HVAC EQUIPMENT NOT INTENDED FOR REUSE. FIELD VERIFY THE EXACT SCOPE PRIOR TO BID. COORDINATE ALL DEMOLITION WORK WITH THE LANDLORD AND GENERAL CONTRACTOR.

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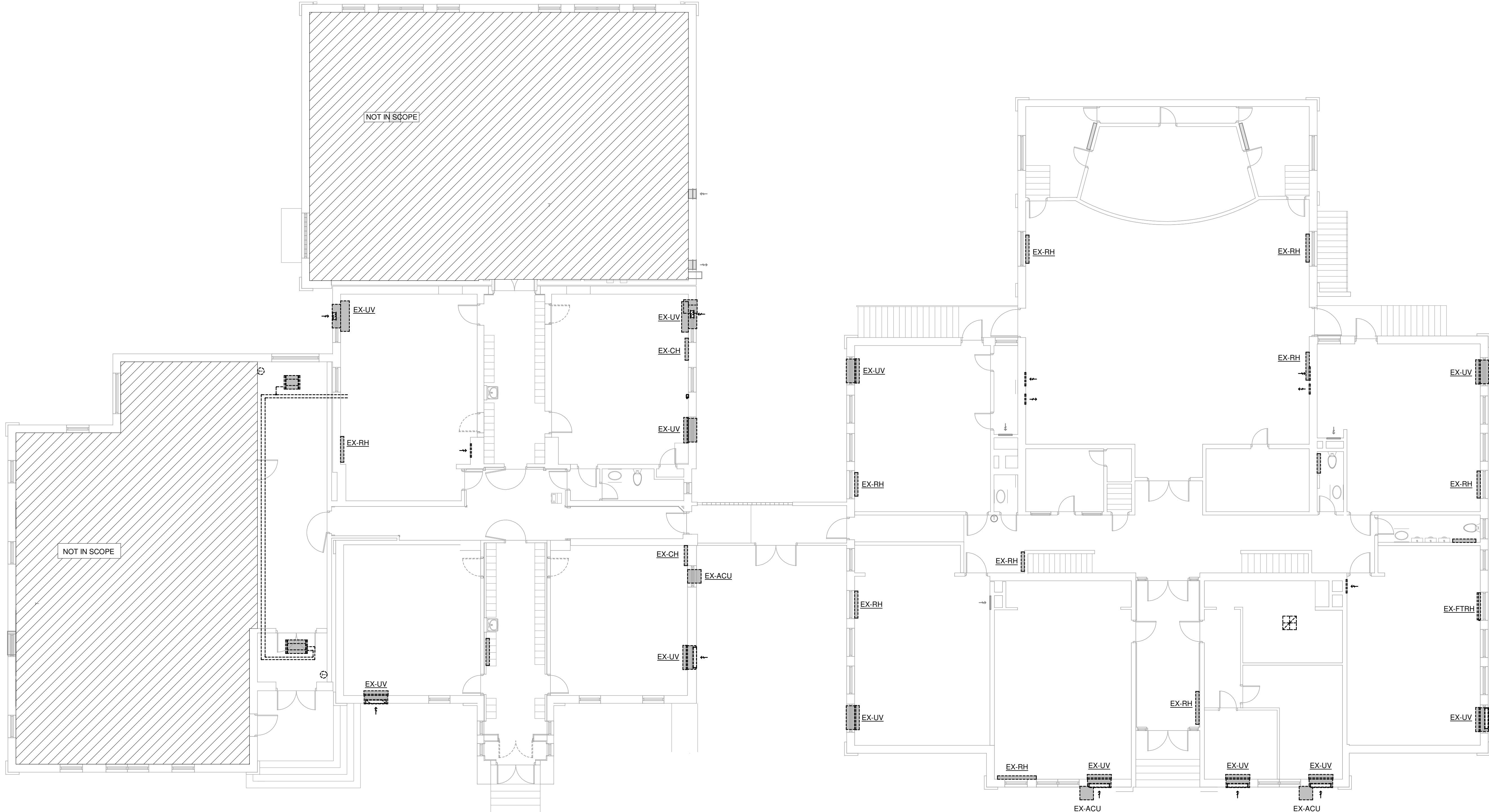
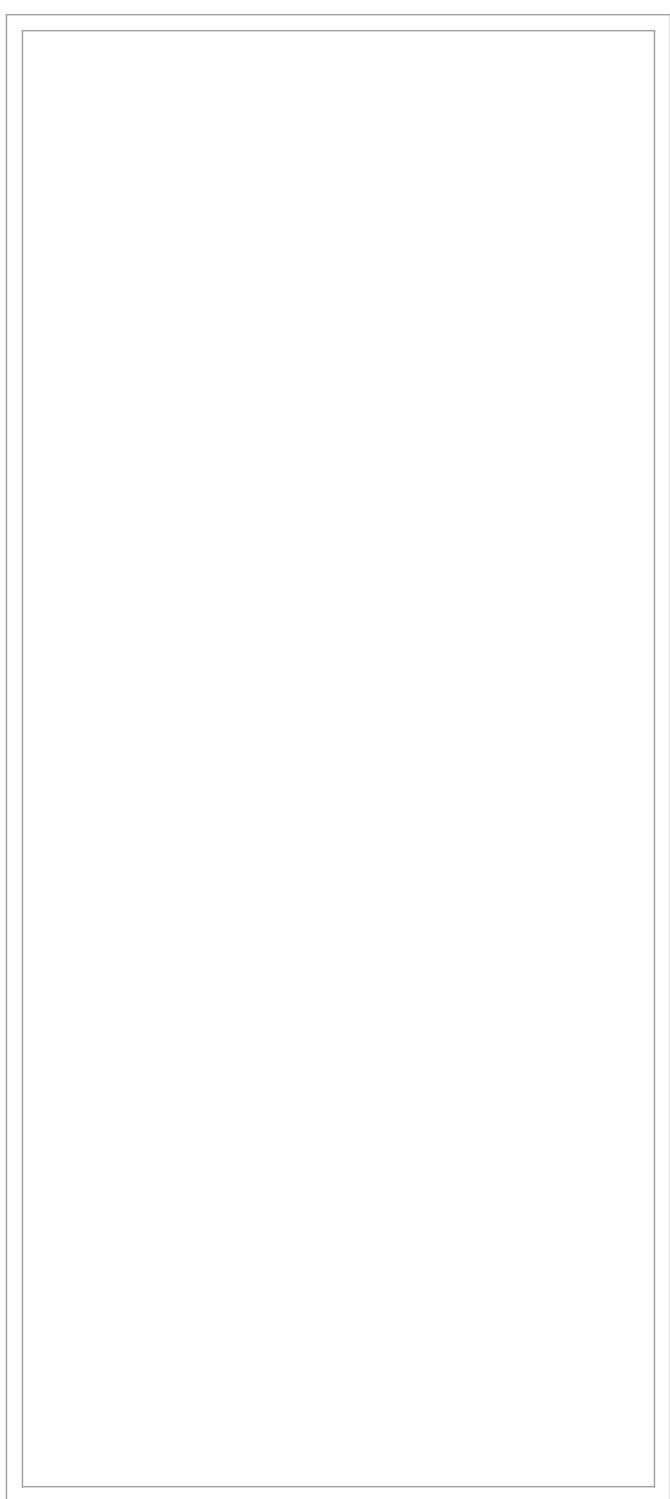
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MECHANICAL - LEVEL 2
1/8" = 1'-0"



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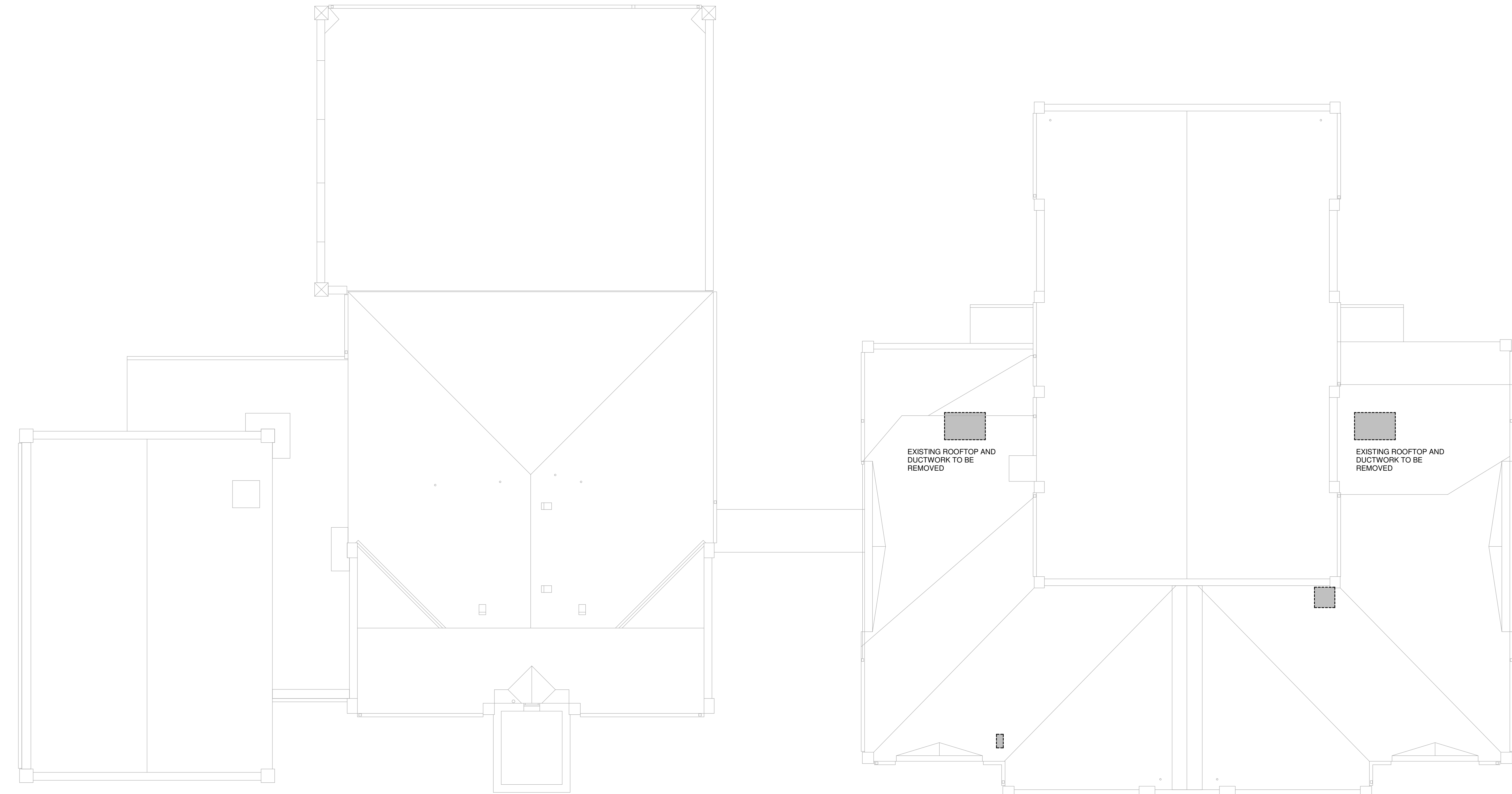
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MECHANICAL -
LEVEL 2

MD101



1 MECHANICAL - ROOF
1/8" = 1'-0"

2" REFERENCE LINE

DEMOLITION GENERAL NOTES

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08/31/18	SCHEMATIC DESIGN
10/04/18	DESIGN DEVELOPMENT

DWN: CJS CHK: KTW

PROJ. DATE 10/04/18

SHEET DATE 10/04/18

JOB NO.

MECHANICAL -
ROOF

MD102

KEYED NOTES

NEW WORK GENERAL NOTES

- A. PROVIDE ALL LABOR, MATERIAL, AND EQUIPMENT NECESSARY TO COMPLETELY FINISH, INSTALL, AND PLACE INTO OPERATION TO THE ENTIRE SATISFACTION OF THE ARCHITECT-ENGINEER IN THE SPECIFICATIONS IN ACCORDANCE WITH ALL STATE AND LOCAL CODES AND ORDINANCES. REPORT ANY KNOWN DISCREPANCIES TO THE ARCHITECT-ENGINEER PRIOR TO INSTALLATION.
- B. REFER TO ARCHITECTURAL REFLECTED CEILING PLANS FOR EXHAUST LOCATIONS OF CEILING DIFFUSERS, REGISTERS AND GRILLES.
- C. DO NOT SCALE DRAWINGS; REFER TO ARCHITECTURAL REFLECTED CEILING PLANS FOR DIMENSIONS OF WALLS, DOORS, WINDOWS, AND CABINETS.
- D. COORDINATE WORK AND SPACE REQUIREMENTS IN CEILING SPACES WITH OTHER TRADES AND MECHANICAL EQUIPMENT.
- E. EQUIPMENT LOCATION AND ORIENTATION OF ROOF MOUNTED EQUIPMENT TO ARCHITECTURAL AND STRUCTURAL DRAWINGS.
- F. COORDINATE WALL DOVERS WITH ARCHITECTURAL ELEVATIONS AND FINISHES.
- G. PROVIDE VOLUME DAMPERS AT ALL SUPPLY, RETURN, AND EXHAUST DUCT BRANCH TAKE-OFFS.
- H. PROVIDE TURNING VANES AT 90 DEGREE RETURN ELBOWS. OMIT TURNING VANES IN ACOUSTIC LINEN RETURN DUCT ELBOWS.
- I. PROVIDE FLEXIBLE DUCT ON INLET TO EACH CEILING DIFFUSER. CUT FLEXIBLE DUCT TO LENGTH NEEDED AND INSTALL WITHOUT KNOTS OR SHARP BENDS (BENDS WITH CENTERLINE RADIUS LESS THAN 10 TIMES DUCT DIAMETER). SECURE FLEXIBLE DUCT WITH MINIMUM 1/2" WIDE METAL STRAPS OR SADDLES.
- J. SIZES OF ACOUSTIC LINEN DUCTS ARE NET INSIDE DIMENSION (NID). NET METAL DUCTS ARE NID PLUS 1/2".
- K. RUNOUTS TO CEILING DIFFUSERS ARE THE SAME SIZE AS THE DIFFUSER NECK UNLESS NOTED OTHERWISE.
- L. ALL EQUIPMENT SHALL BE INSTALLED IN ACCORDANCE WITH MANUFACTURER RECOMMENDED MINIMUM CLEARANCES FOR SERVICE, ACCESS, AND FIRE PROTECTION.
- M. PROVIDE A MINIMUM 18" CLEARANCE TO ALL OUTSIDE AIR INTAKES AND ALL EXHAUST, VENT, AND FLUE OUTLETS.
- N. ALL MATERIALS EXPOSED WITHIN PLenums SHALL BE NON-FLAMMABLE OR SHOWN TO BE NON-FLAMMABLE BY TEST OF NOT MORE THAN 25 AND A SMOKE-DEVELOPED INDEX OF NOT MORE THAN 45 WHEN TESTED IN ACCORDANCE WITH ASTM E 84.
- O. CONTRAST THE FINISH OF THE CEILING, COORDINATED WITH THE CONCRETE RISERS IN THE FLOOR STRUCTURE.

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Southgate, KY
Mr. Greg Duty, Superintendent

Renovations For:
Southgate Elementary School

Renovations For:

PRELIMINARY
-
NOT FOR
CONSTRUCTION

REVISIONS

08/31/18 SCHEMATIC DESIGN
10/04/18 DESIGN DEVELOPMENT

DWIN: 010 CLK: KTM

PROJ DATE 10/04/18

SHEET DATE 10/04/18

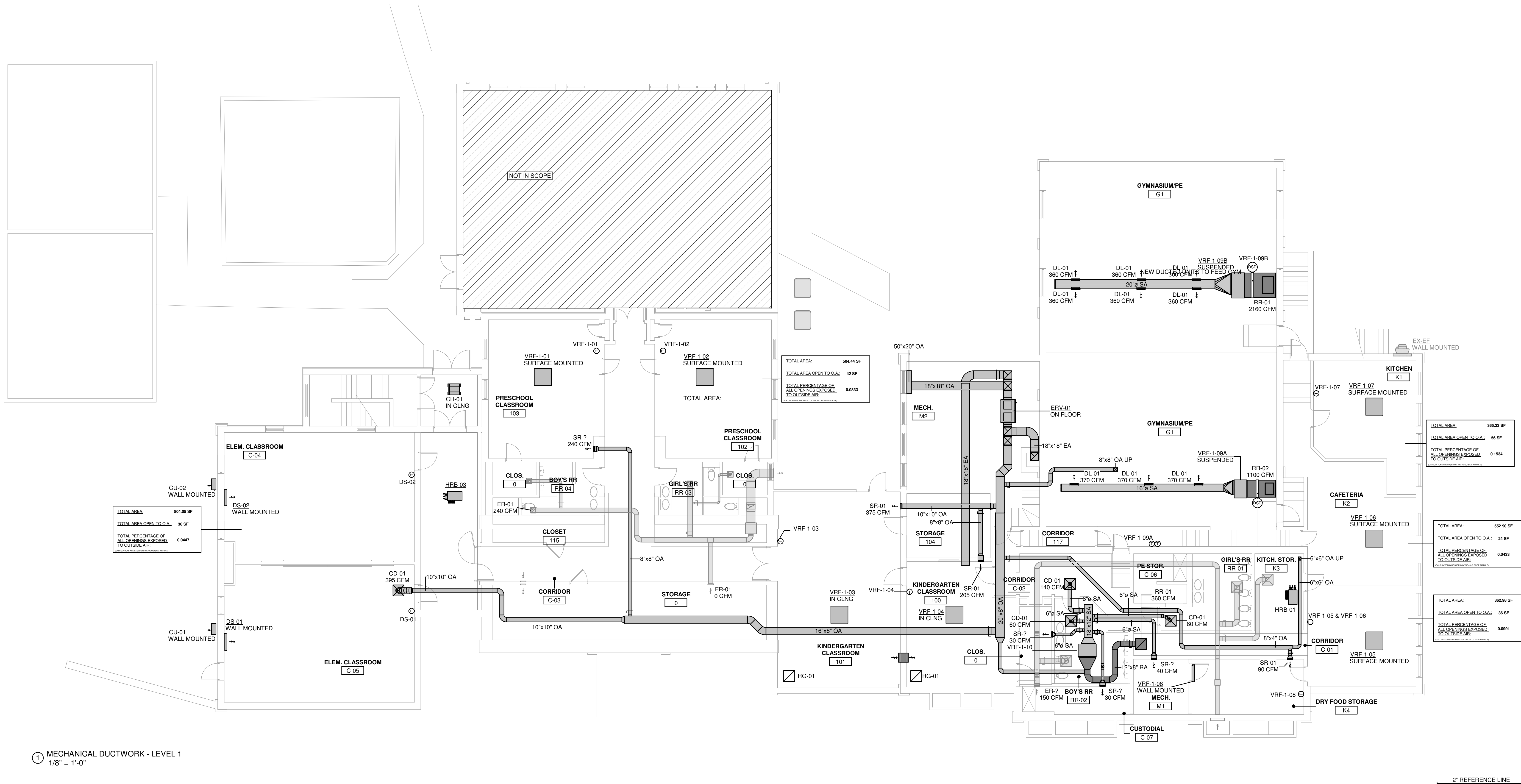
JOB NO.

MECHANICAL

DUCTWORK -
LEVEL 1

M-100

KI H.JOB 20692 00



2" REFERENCE LINE

NEW WORK GENERAL NOTES

- A. PROVIDE ALL FURN, MATERIAL, AND EQUIPMENT NECESSARY TO COMPLETELY FURNISH, INSTALL, AND PLACE INTO OPERATION TO THE PROJECT. SHOWING SHALL BE SUBMITTED TO THE CITY ENGINEER IN THE SPECIFICATIONS IN ACCORDANCE WITH ALL STATE AND LOCAL CODES AND ORDINANCES. REPORT ANY KNOWN DISCREPANCIES TO THE ARCHITECT/ENGINEER PRIOR TO INSTALLATION.
- B. REFER TO ARCHITECTURAL REFLECTED CEILING PLANS FOR EXISTING LOCATIONS OF CEILING DIFFUSERS, REGISTERS AND GRILLES.
- C. DO NOT SCALE DRAWINGS; REFER TO ARCHITECTURAL DRAWINGS FOR DIMENSIONED LOCATIONS OF WALLS, DOORS, WINDOWS, AND CABINETS.
- D. COORDINATE WORK AND SPACE REQUIREMENTS IN CEILING SPACES WITH OTHER TRADES PRIOR TO INSTALLATION.
- E. LOCATE ALL EXHAUST FANS, EXHAUST FANS, AND MOUNTED EQUIPMENT WITH ARCHITECTURAL AND STRUCTURAL DRAWINGS.
- F. COORDINATE WALL LOUVERS WITH ARCHITECTURAL ELEVATIONS AND FINISHES.
- G. PROVIDE VOLUME DAMPERS AT ALL SUPPLY, RETURN, AND EXHAUST DUCT BRANCH TAKE-OFFS.
- H. PROVIDE 90 DEGREE ELBOWS AND 90 DEGREE MITERED ELBOWS. MUST TURNING VANS IN ACOUSTIC LINEN RETURN DUCT ELBOWS.
- I. PROVIDE FLEXIBLE DUCT ON INLET TO EACH CEILING DIFFUSER. CUT FLEXIBLE DUCT TO LENGTH NEEDING AND INSTALL WITHOUT KNOTS OR SHARP BENDS (BENDS WITH CENTERLINE RADIUS LESS THAN 10 TIMES THE DUCT SIZE). PROVIDE FLEXIBLE DUCT WITH MINIMUM 1/2" WIDE METAL STRAPS OR SADDLES.
- J. SIZES OF ACOUSTIC LINEN DUCTS ARE NET INSIDE DIMENSION (LENGTH). MEASURE LENGTH OF EACH DUCT FROM HANGING RUNOUTS TO CEILING DIFFUSERS ARE THE SAME SIZE AS THE DIFFUSER NECK UNLESS NOTED OTHERWISE.
- K. PROVIDE ALL EQUIPMENT, MATERIALS, AND SUPPLIES AND MANUFACTURER RECOMMENDED MINIMUM CLEARANCES FOR SERVICE, ACCESS, AND FIRE PROTECTION.
- L. PROVIDE MINIMUM 18" CLEARANCE FROM ALL OUTSIDE AIR INTAKES AND ALL EXHAUST, VENT, AND FLUE OUTLETS. ALL MATERIALS EXPOSED WITH PLENUMS SHALL BE NON COMBUSTIBLE OR SHALL BE PROTECTED WITH A MINIMUM OF NOT MORE THAN 2" AND A SMOKE-DEVELOPED INDEX OF NOT MORE THAN 50 WHEN TESTED IN ACCORDANCE WITH ASTM E 84.
- M. PROVIDE ELECTRICAL AND MECHANICAL COORDINATED WITH THE CONCRETE RIGID IN THE FLOOR STRUCTURE.

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10/04/18 DESIGN DEVELOPMENT

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JOB NO.

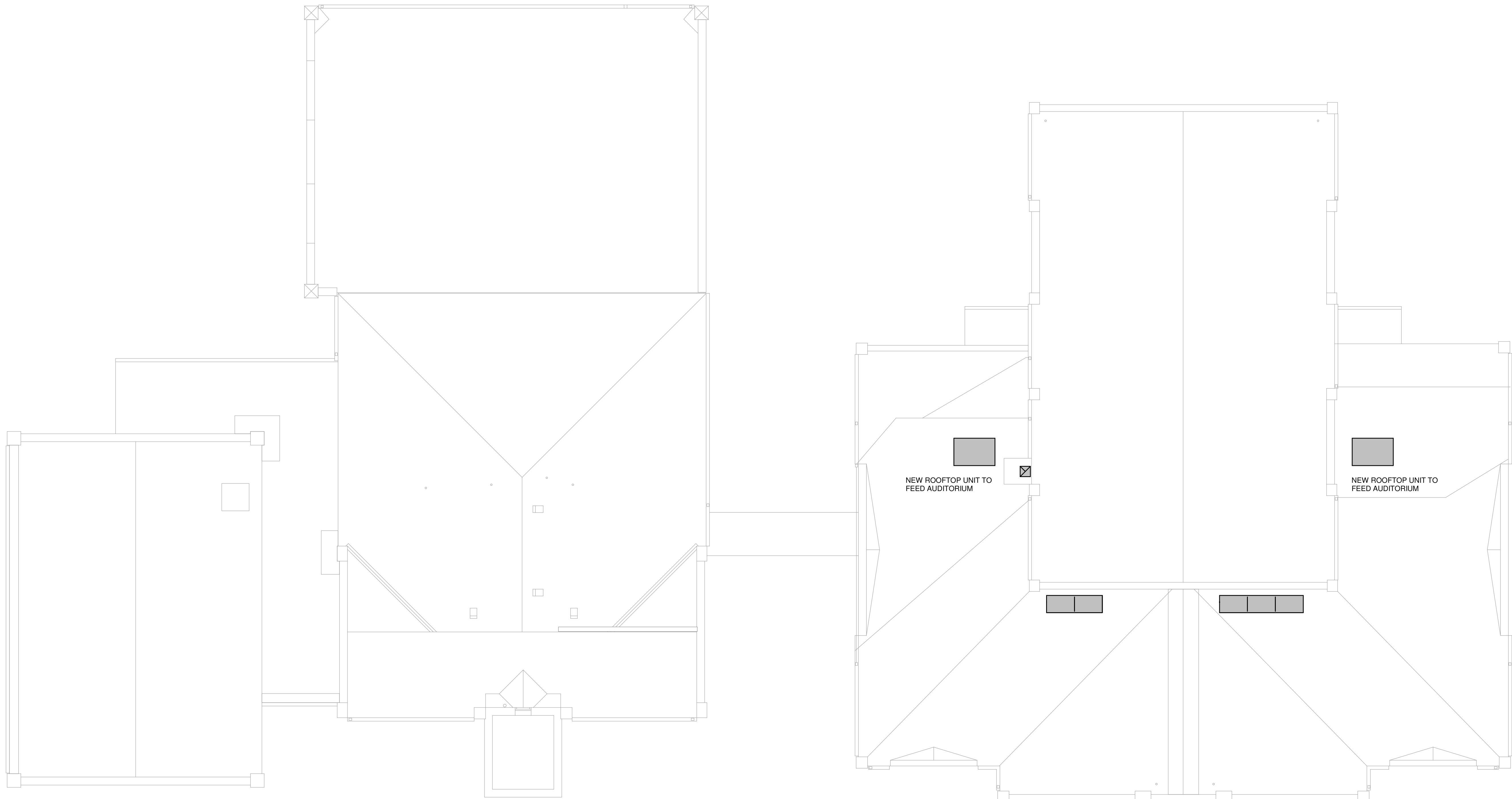
MECHANICAL DUCTWORK - LEVEL 2

M-101

KLH JOB 20692.00

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1 MECHANICAL DUCTWORK - ROOF
1/8" = 1'-0"

KEYED NOTES

NEW WORK GENERAL NOTES

- PROVIDE ALL LABOR, MATERIAL, AND EQUIPMENT NECESSARY TO COMPLETELY FURNISH, INSTALL, AND PLACE INTO OPERATION, ALL SYSTEMS SHOWN ON THE DRAWINGS AND DELINEATED IN THE SPECIFICATIONS IN ACCORDANCE WITH ALL STATE AND LOCAL CODES AND ORDINANCES. REPORT ANY KNOWN DISCREPANCIES TO THE ARCHITECT/ENGINEER PRIOR TO INSTALLATION.
- REFER TO ARCHITECTURAL REFLECTED CEILING PLANS FOR EXACT LOCATIONS OF CEILING DIFFUSERS, REGISTERS AND GRILLES.
- DO NOT SCALE DRAWINGS; REFER TO ARCHITECTURAL DRAWINGS FOR DIMENSIONED LOCATIONS OF WALLS, DOORS, WINDOWS, AND CABINETRY.
- COORDINATE WORK AND SPACE REQUIREMENTS IN CEILING SPACES WITH OTHER TRADES PRIOR TO INSTALLATION.
- COORDINATE LOCATIONS AND ORIENTATION OF ROOF MOUNTED EQUIPMENT WITH ARCHITECTURAL AND STRUCTURAL DRAWINGS. COORDINATE WALL LOUVERS WITH ARCHITECTURAL ELEVATIONS AND DETAILS.
- PROVIDE VOLUME DAMPERS AT ALL SUPPLY, RETURN, AND EXHAUST DUCT BRANCH TAKE-OFFS.
- PROVIDE TURNING VANES IN ALL 90 DEGREE MITERED ELBOWS. OMIT TURNING VANES IN ACOUSTIC LINED RETURN DUCT ELBOWS.
- PROVIDE FLEXIBLE DUCT ON INLET TO EACH CEILING DIFFUSER. CUT FLEXIBLE DUCTS TO LENGTH NEEDED AND INSTALL WITHOUT KINKS OR SHARP BENDS (BENDS WITH CENTERLINE RADIUS LESS THAN DUCT DIAMETER). SUPPORT FLEXIBLE DUCTS WITH MINIMUM 1" WIDE METAL STRAPS OR SADDLES.
- SIZES OF ACOUSTIC LINED DUCTS ARE NET INSIDE DIMENSION. INCREASE SHEET METAL SIZE ACCORDINGLY.
- RUNOUTS TO CEILING DIFFUSERS ARE THE SAME SIZE AS THE DIFFUSER NECK UNLESS NOTED OTHERWISE.
- INSTALL ALL EQUIPMENT WITH CODE REQUIRED AND MANUFACTURER RECOMMENDED MINIMUM CLEARANCES FOR SERVICE, ACCESS, AND FIRE PROTECTION. MAINTAIN A MINIMUM OF 10 FEET BETWEEN ALL OUTSIDE AIR INTAKES AND ALL EXHAUST, VENT, AND FLUE OUTLETS.
- ALL MATERIALS EXPOSED WITHIN PLENUMS SHALL BE NON-COMBUSTIBLE OR SHALL HAVE A FLAME SPREAD INDEX OF NOT MORE THAN 25 AND A SMOKE-DEVELOPED INDEX OF NOT MORE THAN 50 WHEN TESTED IN ACCORDANCE WITH ASTM E 84.
- ALL FLOOR PENETRATIONS SHALL BE COORDINATED WITH THE CONCRETE RISBS IN THE FLOOR STRUCTURE.

Renovations For:

Southgate Elementary School

6 William F. Blatt Ave.
Southgate Independent School District

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NOT FOR
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REVISIONS

08/31/18 SCHEMATIC DESIGN
10/04/18 DESIGN DEVELOPMENT

DWN: CJS CHK: KTW

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SHEET DATE 10/04/18

JOB NO.

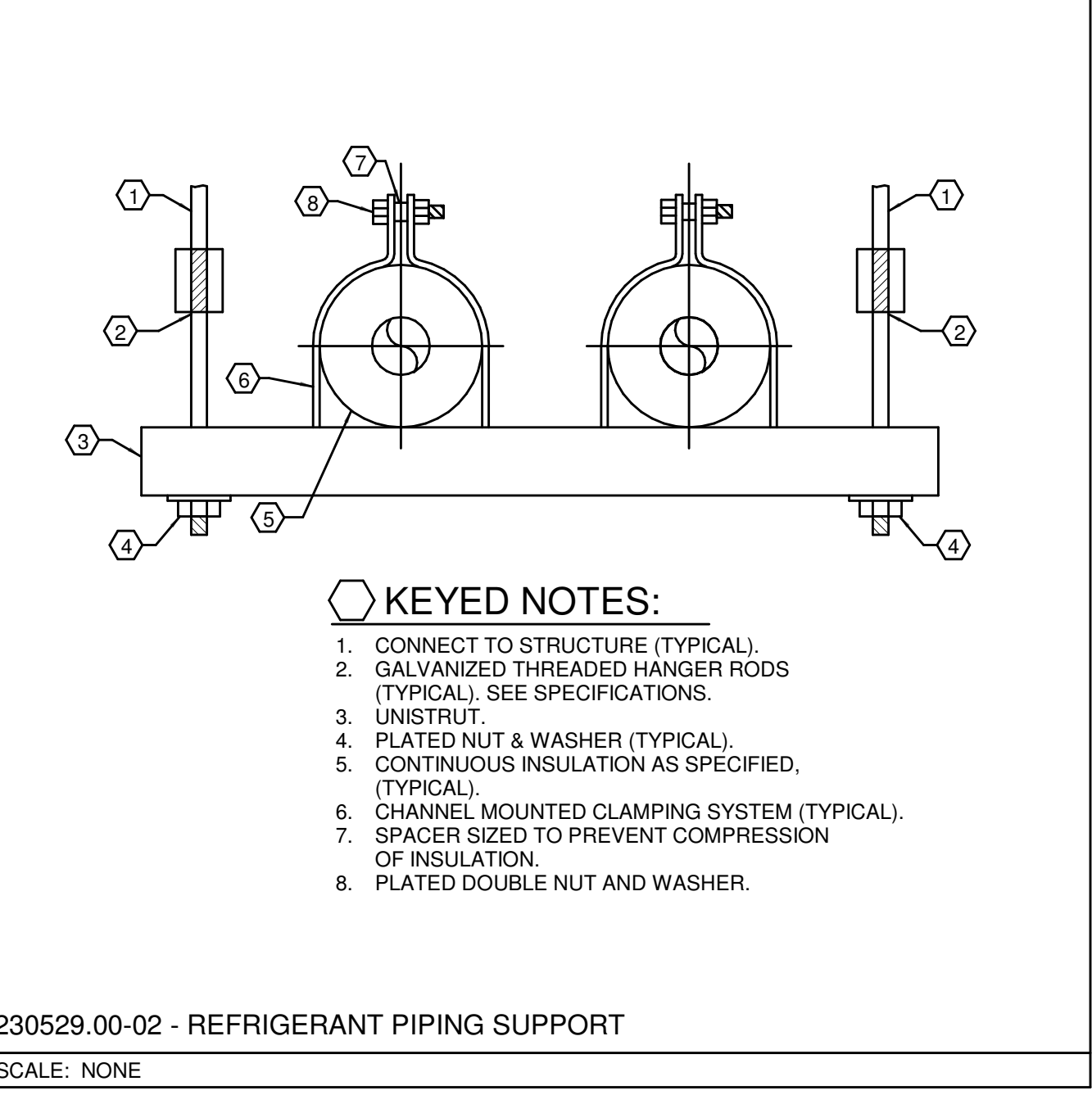
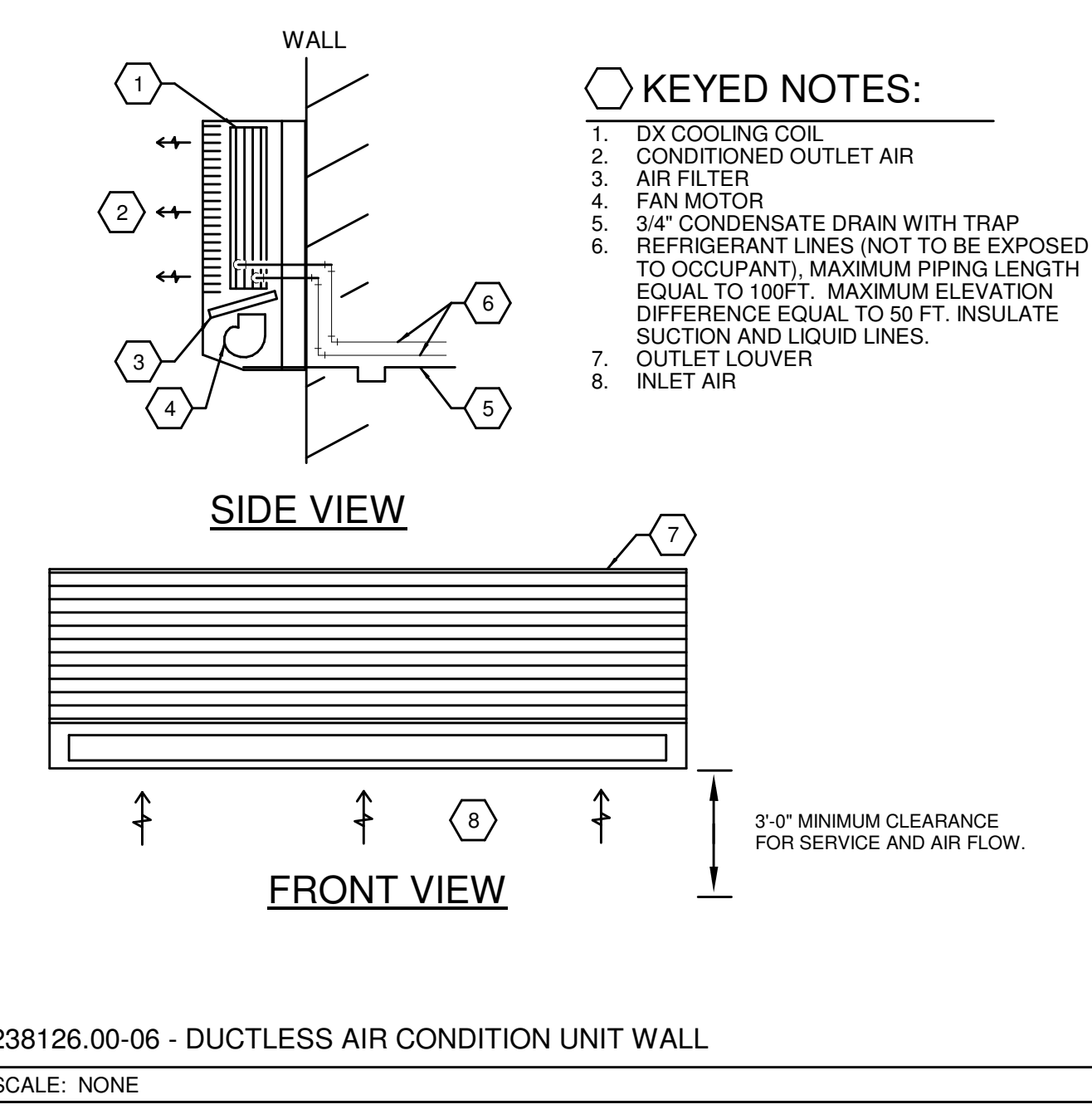
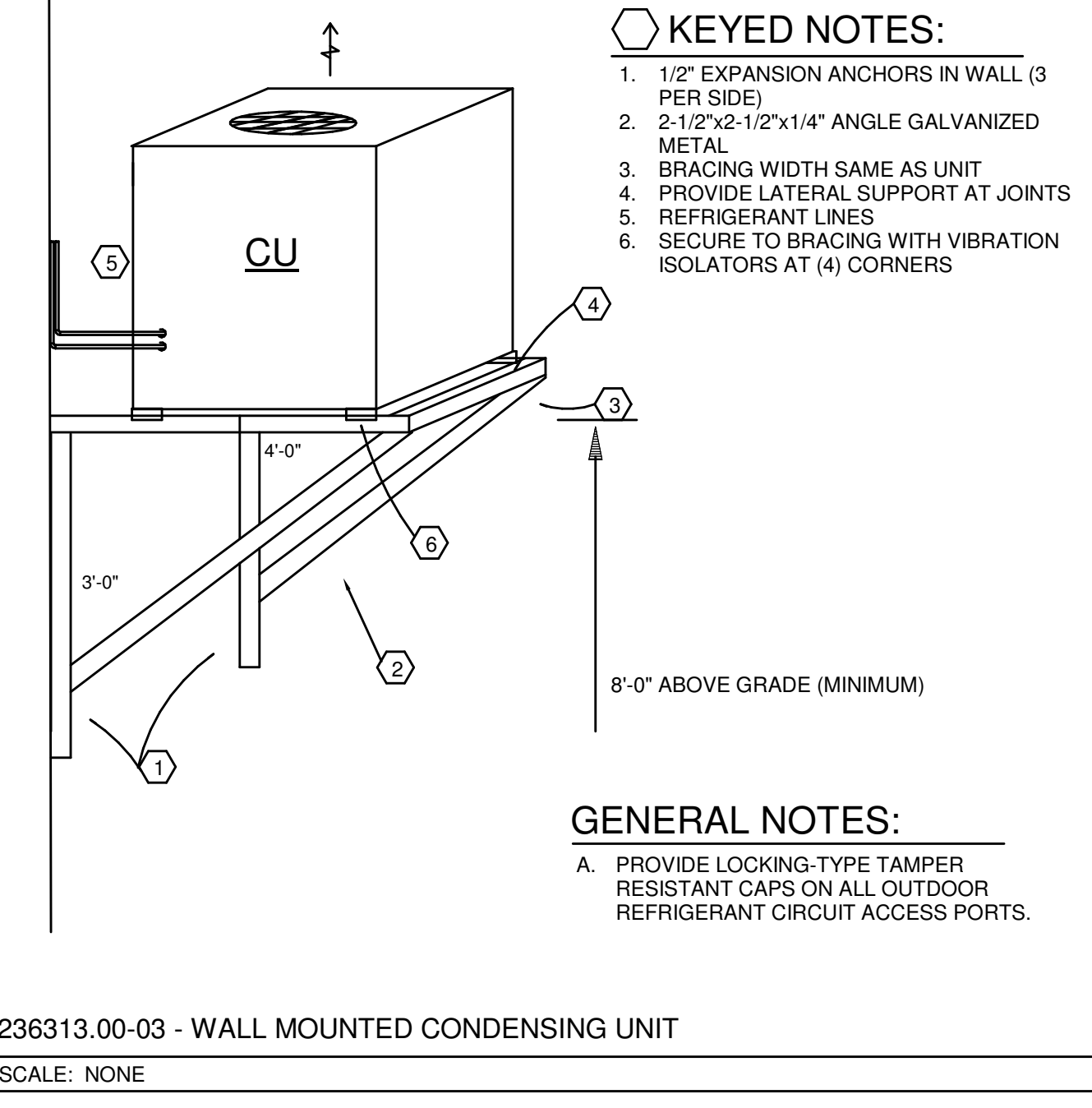
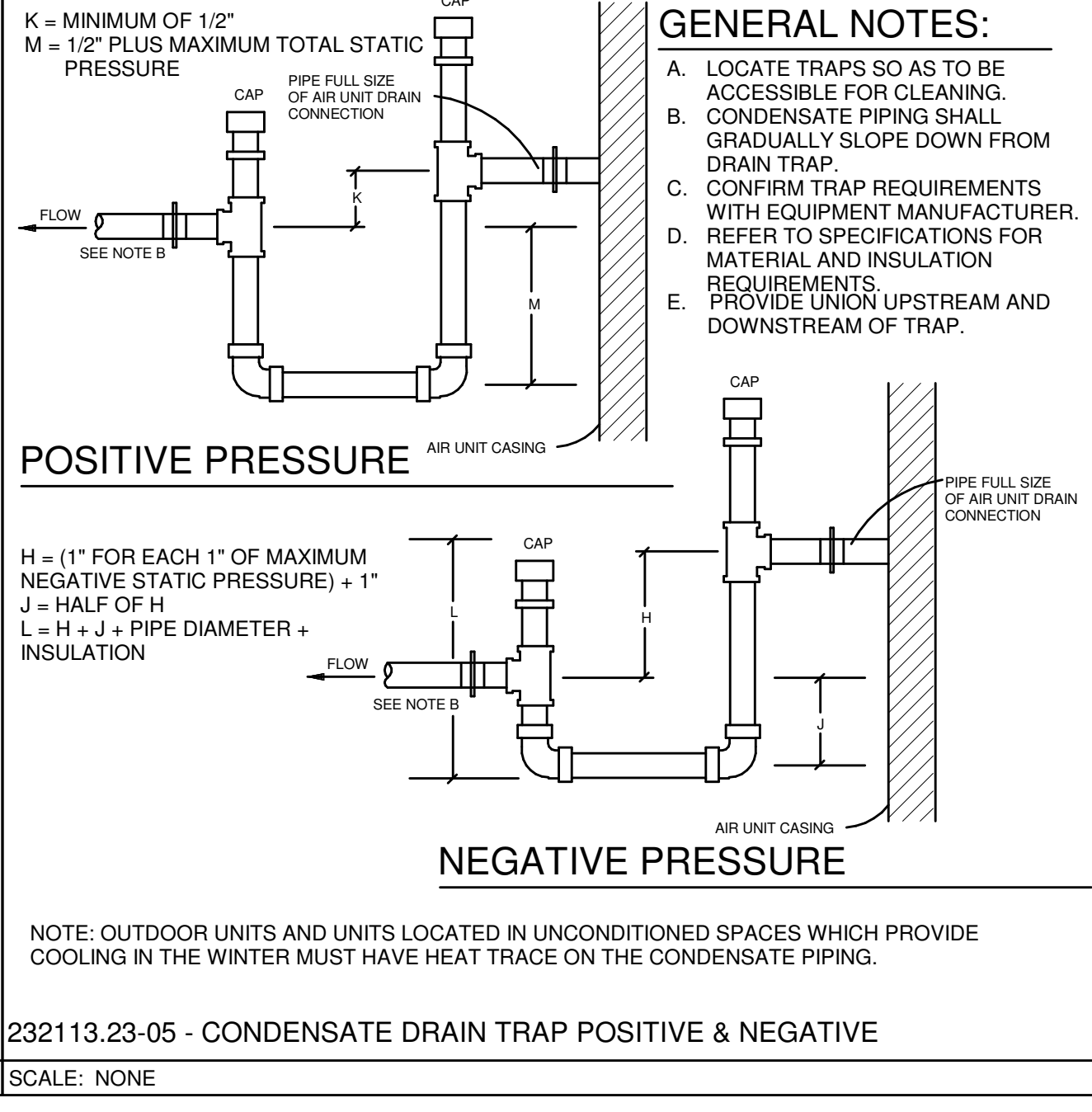
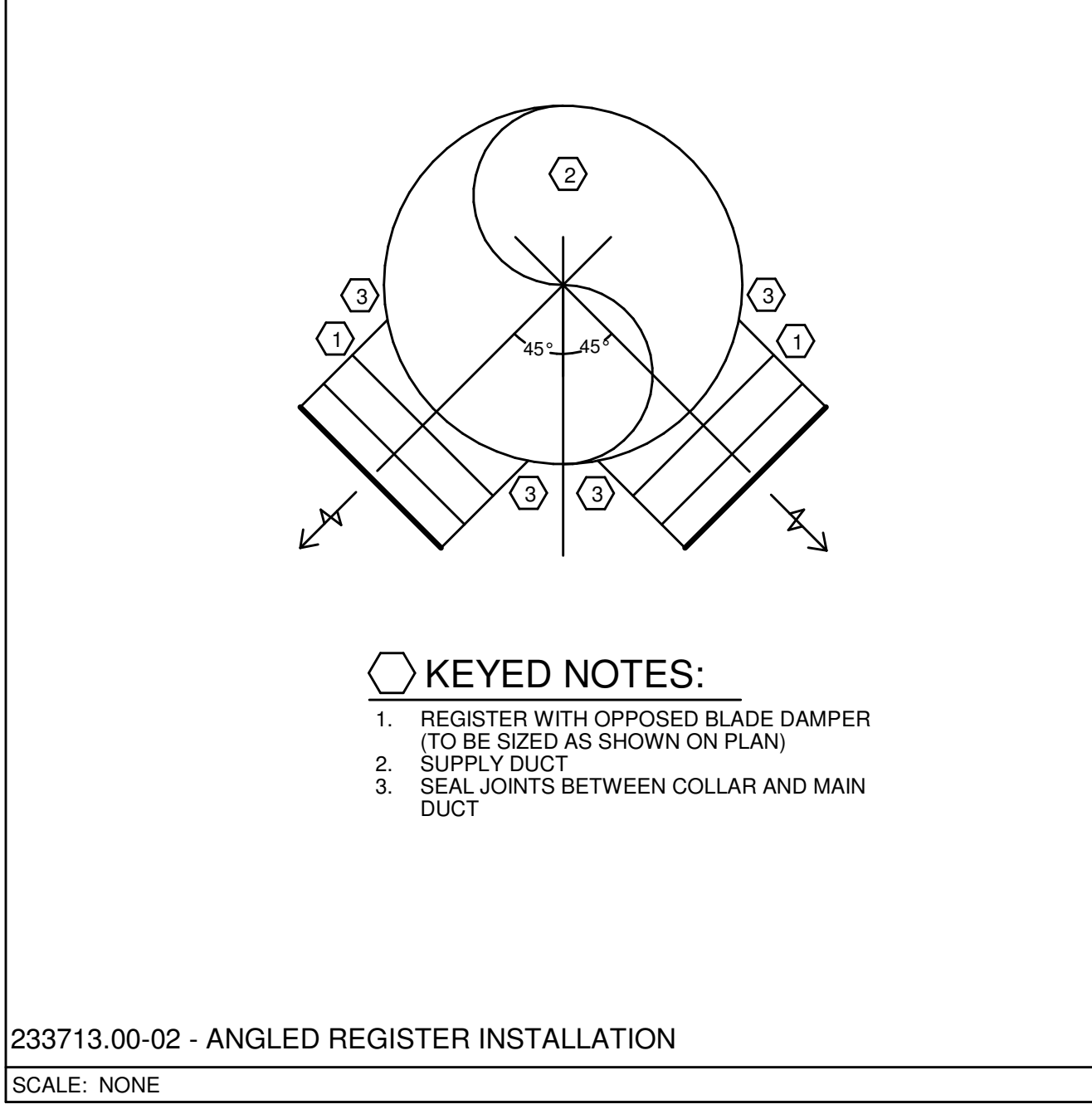
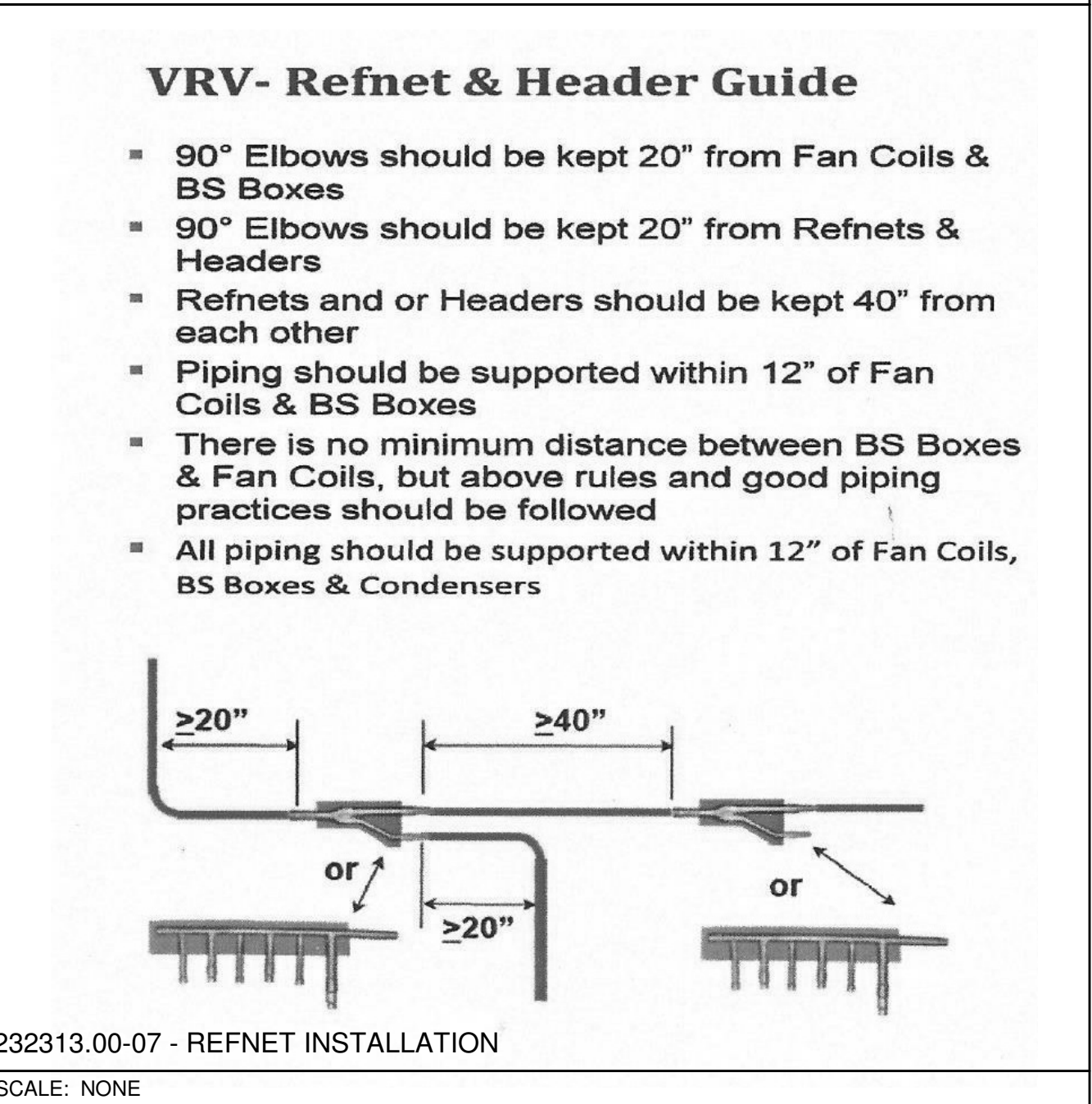
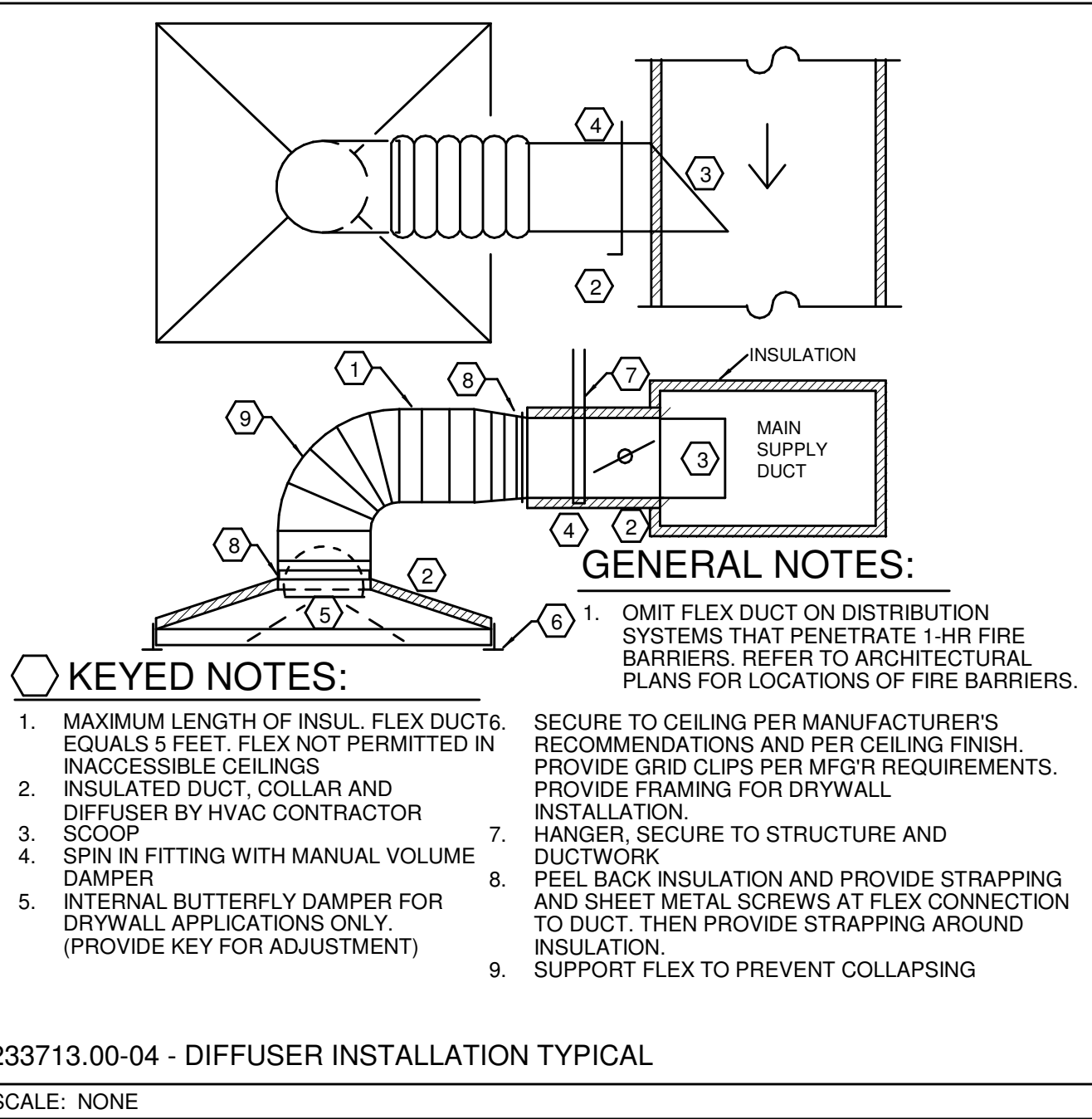
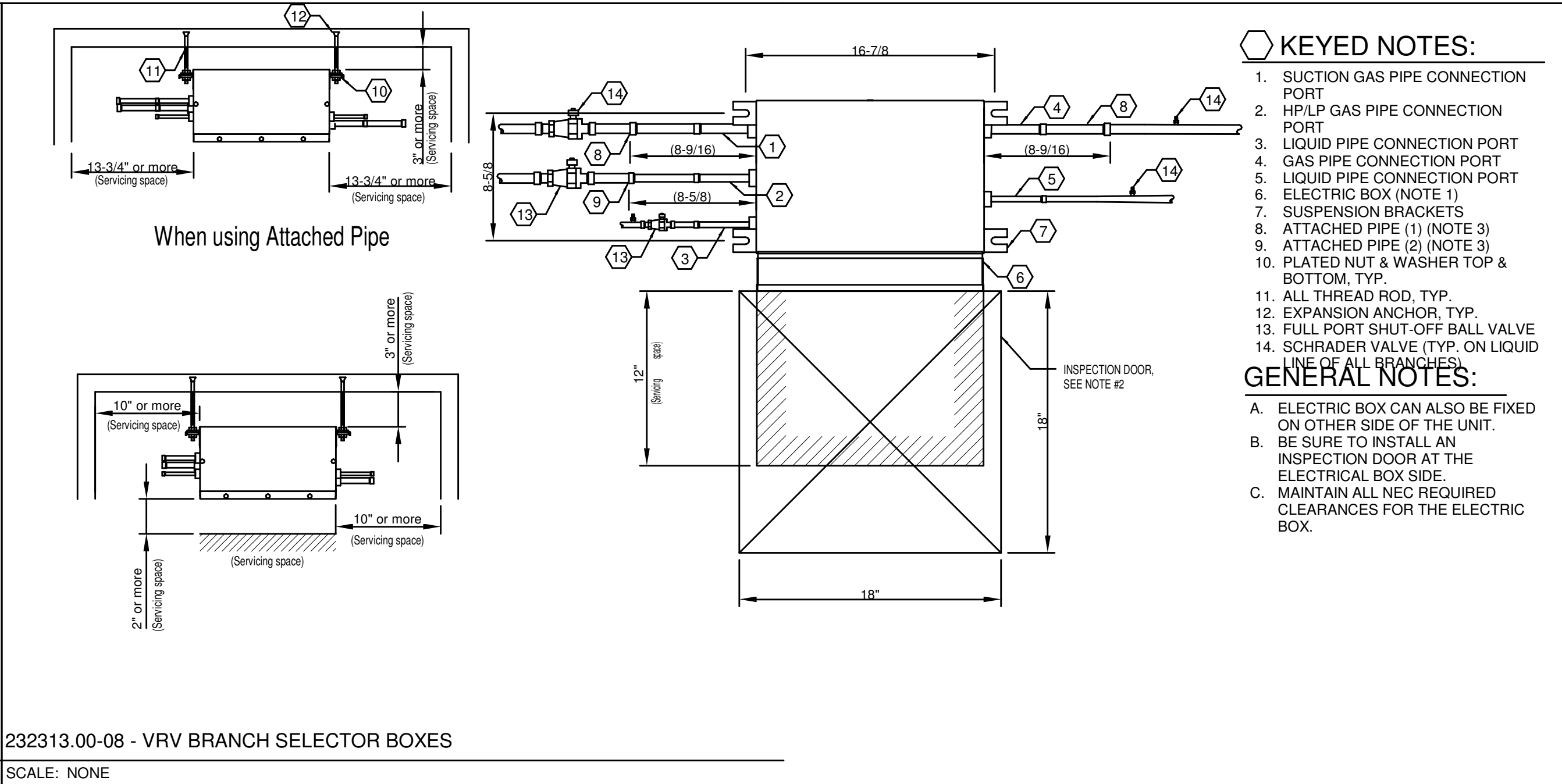
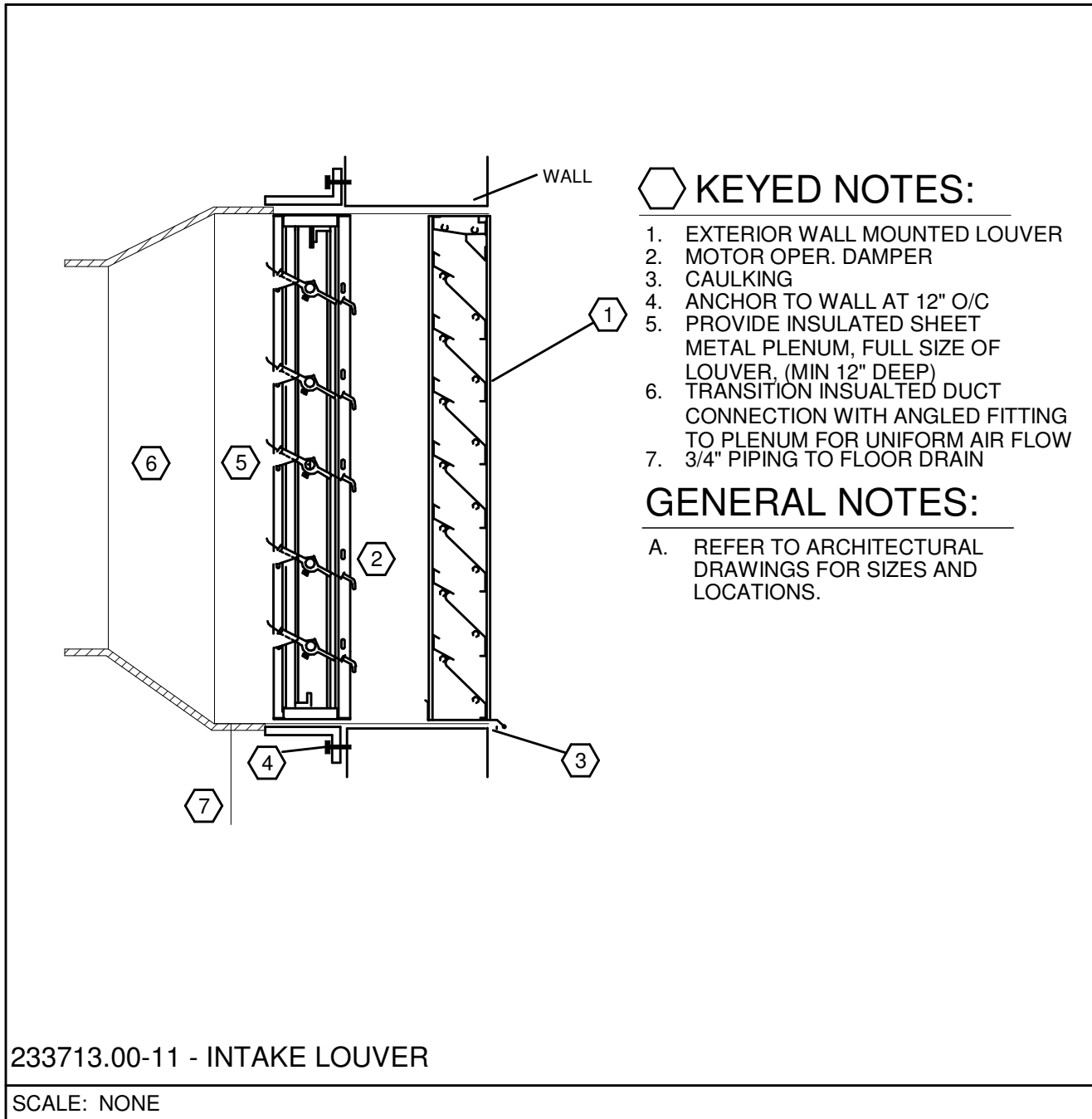
MECHANICAL
DUCTWORK -
ROOF

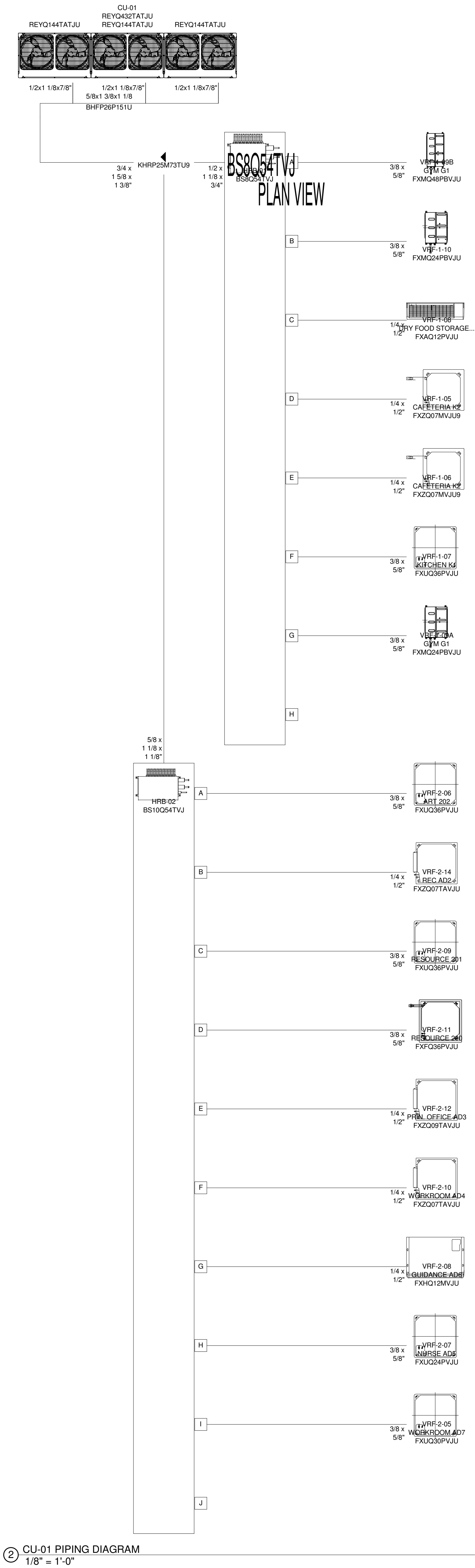
M-102

KLH JOB 20692.00

Southgate, KY
Mr. Greg Duty, Superintendent

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CU-01 PIPING DIAGRAM
1/8" = 1'-0"

CU-02 PIPING DIAGRAM
1/8" = 1'-0"

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JOB NO.

MECHANICAL -
DETAILS

M-502

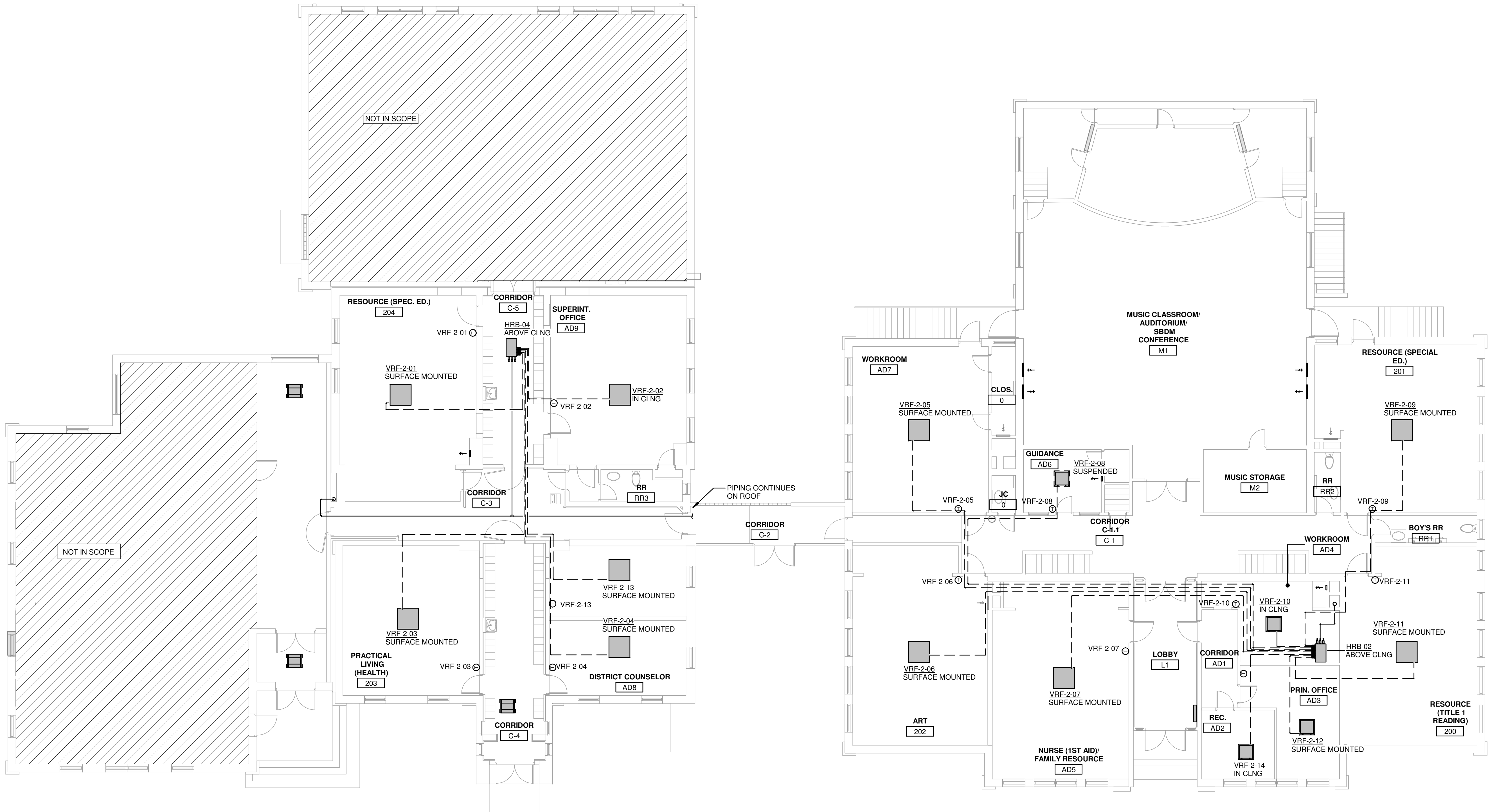
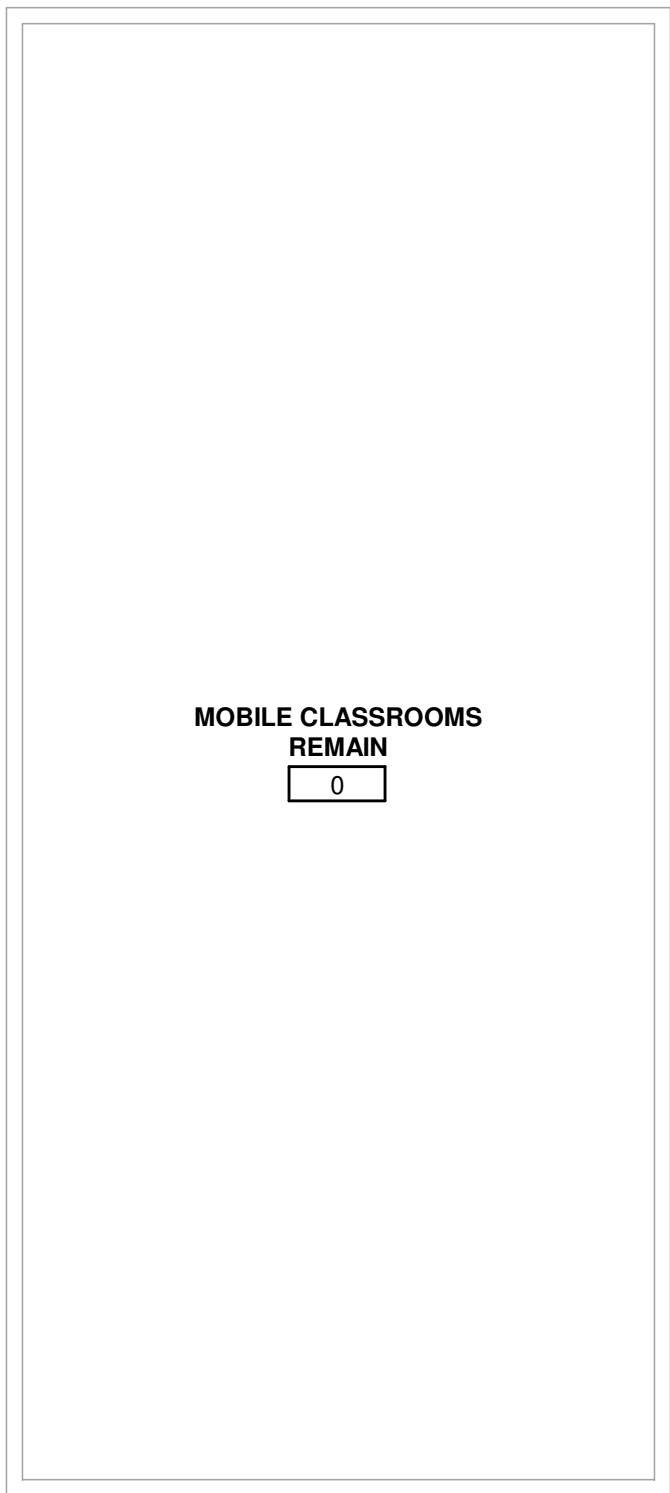
THE HEATING AND COOLING LOAD CALCULATIONS ARE BASED ON THE CLTD/CLF (COOLING LOAD TEMPERATURE DIFFERENCE/COOLING LOAD FACTOR) METHOD. ASSUMPTIONS AND EXECUTION OF THESE METHODS ARE PER ASHRAE 183-2007...

1. MOTOR DAMPER	5. INTAKE HOOD	9. ACCESS DOOR	13. FACE/BYPASS DAMPER	17. DUCT FLANGES	21. ECON POWERED EXHAUST
2. ECONOMIZER	6. VIBRATION ISOLATION	10. FLEX CONNECTIONS	14. CONDENSATE PUMP	18. BASE RAIL	22. ECON BAROMETRIC RELIEF
3. ROOF CURB	7. FLAT FILTER	11. MOUNTING COLLAR	15. MOTOR GUARD	19. HUMIDIFIER	23. HOT GAS REHEAT COIL
4. RAIL GUARDS	8. FILTER/MIXING BOX	12. HOT GAS BYPASS	16. GREASE TRAP	20. CO2 SENSORS	24. SHAFT GROUNDING BRUSHES

EQUIPMENT MARK	DESCRIPTION	VOLTS (V)	PHASE	EMERGENCY	BHP (HP)	HP (HP)	HTG (KW)	WATTS	FLA (A)	MCA (A)	OCIP (A)	DC TYPE	DC CURR	DC INST	DC WIRE	MC TYPE	MC FURN	MC INST	MC WIRE	CN TYPE	CN FURN	CN INST	CN WIRE	SD TYPE
ACU-1		120	1	NO			14.1	20				EC	EC	EC	MG	MFR	MFR	MFR	LOW	HC	HC	HC		
CU-1		240	1	NO			33.5	50				EC	EC	EC	MG	MFR	MFR	MFR	LOW	HC	HC	HC		
CU-1H		208	3	NO			16.5	20				EC	EC	EC	MG	MFR	MFR	MFR	LOW	HC	HC	HC		
CU-2	DUCTLESS SPLIT OUTDOOR CONDENSING UNIT	240	1	NO			33.5	50				EC	EC	EC	MG	MFR	MFR	MFR	LOW	HC	HC	HC		
CU-02	DUCTLESS SPLIT OUTDOOR CONDENSING UNIT	208	1				16.5	20				EC	EC	EC	MG	MFR	MFR	MFR	LOW	MFR	MFR	MFR		
CU-03	AIR COOLED CONDENSING UNIT	208	3									EC	EC	EC	MG	MFR	MFR	MFR	LOW	HC	HC	HC		
CU-03A	AIR COOLED CONDENSING UNIT	208	3				55	70				EC	EC	EC	MG	MFR	MFR	MFR	LOW	HC	HC	HC		
CU-03B	AIR COOLED CONDENSING UNIT	208	3				55	70				EC	EC	EC	MG	MFR	MFR	MFR	LOW	HC	HC	HC		
CU-03C	AIR COOLED CONDENSING UNIT	208	3				55	70				EC	EC	EC	MG	MFR	MFR	MFR	LOW	HC	HC	HC		
CU-04	AIR COOLED CONDENSING UNIT	208	3									EC	EC	EC	MG	MFR	MFR	MFR	LOW	HC	HC	HC		
CU-04A	AIR COOLED CONDENSING UNIT	208	3				55	70				EC	EC	EC	MG	MFR	MFR	MFR	LOW	HC	HC	HC		
CU-04B	AIR COOLED CONDENSING UNIT	208	3				55	70				EC	EC	EC	MG	MFR	MFR	MFR	LOW	HC	HC	HC		
DS-01	DUCTLESS SPLIT HIGH WALL UNIT	208	1				0.6	15				EC	EC	EC	MG	MFR	MFR	MFR	LOW	MFR	MFR	MFR		
DS-02	DUCTLESS SPLIT HIGH WALL UNIT	208	1				0.6	15				EC	EC	EC	MG	MFR	MFR	MFR	LOW	MFR	MFR	MFR		
ERV-01	PACKAGED AIR TO AIR ENERGY RECOVERY EQUIPMENT	208	3									EC	EC	EC	MG	MFR	MFR	MFR	BAS	HC	HC	HC		
HRB-01	VRF HEAT RECOVERY TERMINAL BOX	208	1									EC	EC	EC	MG	MFR	MFR	MFR	LOW	HC	HC	HC		
HRB-02	VRF HEAT RECOVERY TERMINAL BOX	208	1									EC	EC	EC	MG	MFR	MFR	MFR	LOW	HC	HC	HC		
HRB-03	VRF HEAT RECOVERY TERMINAL BOX	208	1									EC	EC	EC	MG	MFR	MFR	MFR	LOW	HC	HC	HC		
HRB-04	VRF HEAT RECOVERY TERMINAL BOX	208	1									EC	EC	EC	MG	MFR	MFR	MFR	LOW	HC	HC	HC		
VRF-1-01	VRF INDOOR IN CEILING CASSETTE UNIT	208	1				0.4	15				EC	EC	EC	MG	MFR	MFR	MFR	LOW	HC	HC	HC		
VRF-1-02	VRF INDOOR IN CEILING CASSETTE UNIT	208	1				1.4	15				EC	EC	EC	MG	MFR	MFR	MFR	LOW	HC	HC	HC		
VRF-1-03	VRF INDOOR IN CEILING CASSETTE UNIT	208	1				0.6	15				EC	EC	EC	MG	MFR	MFR	MFR	LOW	HC	HC	HC		
VRF-1-04	VRF INDOOR IN CEILING CASSETTE UNIT	208	1				0.3	15				EC	EC	EC	MG	MFR	MFR	MFR	LOW	HC	HC	HC		
VRF-1-05	VRF INDOOR CEILING SUSPENDED UNIT	208	1				1.4	15				EC	EC	EC	MG	MFR	MFR	MFR	LOW	HC	HC	HC		
VRF-1-06	VRF INDOOR CEILING SUSPENDED UNIT	208	1				1.4	15				EC	EC	EC	MG	MFR	MFR	MFR	LOW	HC	HC	HC		
VRF-1-07	VRF INDOOR IN CEILING CASSETTE UNIT	208	1				0.4	15				EC	EC	EC	MG	MFR	MFR	MFR	LOW	HC				

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MECHANICAL PIPING - LEVEL 2
1/8" = 1'-0"

REVISIONS
08/31/18 SCHEMATIC DESIGN
10/04/18 DESIGN DEVELOPMENT

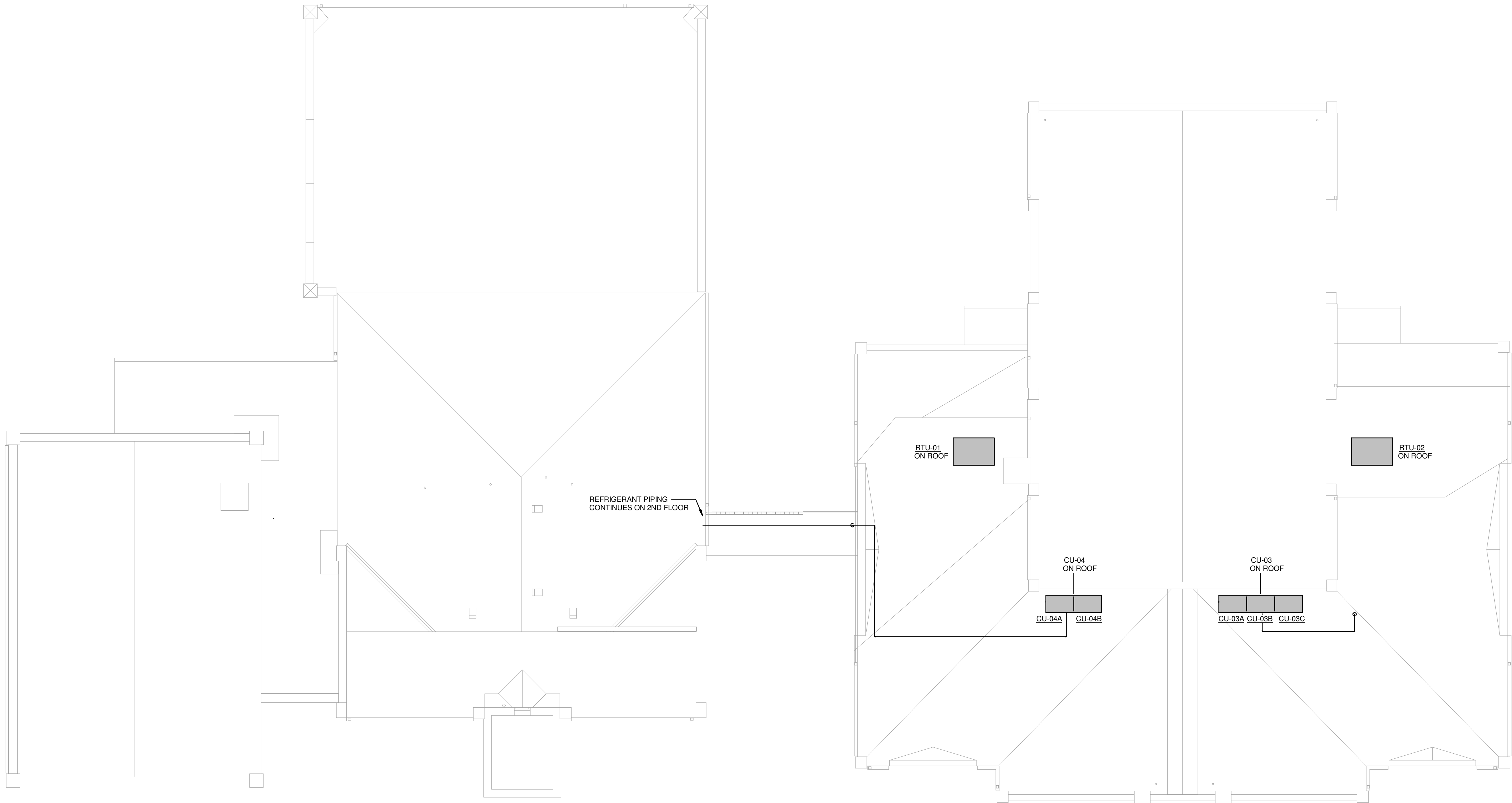
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MECHANICAL
PIPING - LEVEL
2

MP101

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① MECHANICAL PIPING - ROOF
1/8" = 1'-0"

2" REFERENCE LINE

Renovations For:

Southgate Elementary School

6 William F. Blatt Ave.
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MECHANICAL
PIPING - ROOF

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NEW YORK, NEW YORK

ELECTRIC LEGEND	
SYMBOL	DESCRIPTION
LIGHTING AND LIGHTING CONTROLS	
	LUMINAIRE (REFER TO THE LUMINAIRE SCHEDULE). NOTE THAT OTHER SHAPES MAY ALSO BE USED TO REPRESENT LUMINAIRES. SHADED LUMINAIRES DENOTE THOSE CONNECTED TO EMERGENCY OR STANDBY POWER AS APPLICABLE (UNSWITCHED LUMINAIRES ARE EGRESS LIGHTS AND/OR NIGHT-LIGHTS THAT OPERATE 24/7). A = LUMINAIRE TYPE (REFER TO THE LUMINAIRE SCHEDULE), NL = NIGHT-LIGHT (UNSWITCHED), EL = SWITCHING DESIGNATION, EL = EGRESS LUMINAIRE (UNSWITCHED OR AUTO-ON DURING UTILITY OUTAGE). CEILING-MOUNTED OCCUPANCY SENSOR - DUAL TECHNOLOGY UNLESS OTHERWISE NOTED BY TYPE. TYPE "IR" = INFRARED, TYPE "US" = ULTRASOUND.
MISCELLANEOUS	
	LOW VOLTAGE THERMOSTAT (LEFT) AND TEMPERATURE SENSOR (RIGHT). HEAVY DUTY DISCONNECT SWITCH (NON-FUSED) (LEFT). HEAVY DUTY DISCONNECT SWITCH (FUSED) (RIGHT). VARIABLE FREQUENCY DRIVE / VARIABLE SPEED DRIVE. LINE VOLTAGE MOTOR OPERATED DAMPER. ELECTRICAL PANELBOARD OR DISTRIBUTION BOARD (DIMENSIONS MAY VARY / FLUSH OR SURFACE MOUNTED AS INDICATED). OIL FILLED TRANSFORMER.
SINGLE LINE DIAGRAM	
	ELECTRIC UTILITY COMPANY METER AND ASSOCIATED CURRENT TRANSFORMERS. CUSTOMER ELECTRIC METER AND ASSOCIATED CURRENT TRANSFORMERS. HD = HIGH DENSITY METERING CABINET/BANK MOUNTED TO TIGHTLY GROUP ALL METERS TOGETHER. HEAVY DUTY DISCONNECT SWITCH (NON-FUSED)(LEFT) (FUSED)(RIGHT). SIZES MAY BE SHOWN ONLY IN SCHEDULE. ELECTRICAL PANELBOARD OR DISTRIBUTION BOARD.
WIRE / CABLE / RACEWAY	
	BRANCH CIRCUIT HOME RUN WITH PANEL NAME AND CIRCUIT NUMBER(S). CABLING / RACEWAY INSTALLED CONCEALED IN WALLS OR ABOVE CEILING. CABLING / RACEWAY INSTALLED BELOW FLOOR OR GRADE. UTILITY POLE. CONDUIT UP OR DOWN.

ABBREVIATIONS			
(R)	RELOCATE FIXTURE, EQUIPMENT OR DEVICE	IG	ISOLATED GROUND
42"	DISTANCE ABOVE FINISHED FLOOR / GRADE / PAVEMENT	LR	LEGALLY REQUIRED STANDBY LONG - INSTANTANEOUS
AF	AMP FRAME OF FUSED SWITCH OR CIRCUIT BREAKER	LSI	LONG - SHORT - INSTANTANEOUS
AFCI	ARC-FAULT CIRCUIT INTERRUPTER	LSIG	LONG - SHORT - INSTANTANEOUS - GROUND FAULT
AIC	AMPS INTERRUPTING CURRENT	MCB	MAIN CIRCUIT BREAKER
AT	AMP TRIP OF FUSED SWITCH OR CIRCUIT BREAKER	MFR	MANUFACTURER
ATS	AUTOMATIC TRANSFER SWITCH	MLO	MAIN LUGS ONLY
BAS	BUILDING AUTOMATION SYSTEM	MTS	MANUAL TRANSFER SWITCH
C.T.C.	WORK UNDER DIVISION 27 OR 28 AS APPLICABLE	MW	MICROWAVE OVEN
CH	CIRCUIT BREAKER	NIC	NOT IN CONTRACT (SHOWN FOR REFERENCE ONLY)
CH	COUNTER HEIGHT OR SPECIAL HEIGHT DEVICE	NTS	NOT TO SCALE
D	DISHWASHER	OFE	OWNER-FURNISHED EQUIPMENT - INSTALLED AND WIRED BY E.C.
E	EMERGENCY	OS	OPTIONAL STANDBY
E.C.	WORK UNDER DIVISION 26	P.C.	WORK UNDER DIVISION 22
EMS	ENERGY MANAGEMENT SYSTEM	S.C.	WORK UNDER DIVISION 21
EPO	EMERGENCY POWER OFF	SCOR	SHORT CIRCUIT CURRENT RATING
ER	EQUIPMENT ROOM	SPD	SURGE PROTECTIVE DEVICE
ERM	ENERGY REDUCTION MAINTENANCE SWITCH	ST	SHUNT TRIP
ESP	EMERGENCY STANDBY RATING	TAAC	TO ABOVE ACCESSIBLE CEILING
ETR	EXISTING TO REMAIN	TR	TAMPER RESISTANT
FWO	ELECTRIC WATER COOLER	TTB	TELEPHONE TERMINAL BOARD
EX	EXISTING	TYP	TYPICAL
FBO	FURNISHED BY OTHERS - INSTALLED AND WIRED BY E.C.	UCR	UNDER COUNTER REFRIGERATOR
FBO	FURNISHED AND INSTALLED BY OTHERS - WIRED BY E.C.	UL	UNDERWRITER'S LABORATORY
FP	RECEPTACLE TO BE USED FOR A FLAT PANEL DISPLAY	UL S.E	LISTED FOR SERVICE ENTRANCE
FWE	FURNISHED WITH EQUIPMENT BY OTHERS - INSTALLED AND WIRED BY E.C.	UNO	UNLESS NOTED OR INDICATED OTHERWISE ON DRAWINGS OR IN SPECIFICATIONS
GD	GARBAGE DISPOSAL	VFD / VSD	VARIABLE FREQUENCY / SPEED DRIVE
GFEF	GROUND FAULTY EQUIPMENT PROTECTION	VM	VENDING MACHINE
GFI / GFCI	GROUND FAULT CIRCUIT INTERRUPTER DEVICE	VP	VANDAL PROOF
GND	GROUND	WG	WIRE GUARD
H.C.	WORK UNDER DIVISION 23	WR	WEATHER RESISTANT
H.O.A.	HAND - OFF - AUTO SWITCH		

PLAN-VIEW AND GRAPHIC LINE TYPES	
WORK SHOWN BOLD-CONTINUOUS INDICATES NEW WORK (UNLESS OTHERWISE INDICATED)	
WORK SHOWN FADED INDICATES EXISTING WORK TO REMAIN OR NEW WORK BY OTHERS AS APPLICABLE (UNLESS OTHERWISE INDICATED)	
WORK SHOWN BOLD-DASHED INDICATES SELECTIVE DEMOLITION WORK (UNLESS OTHERWISE INDICATED)	

GENERAL ELECTRICAL INSTALLATION NOTES

- A. CODE COMPLIANCE: PROVIDE ALL ELECTRICAL WORK COMPLIANT WITH ALL PREVAILING CODES.
- B. LISTINGS: PROVIDE MATERIALS, COMPONENTS AND ASSEMBLED COMPONENTS WITH LISTINGS AND LABELS FROM A NATIONALLY RECOGNIZED TESTING LABORATORY (NRTL), MANUFACTURED, LISTED AND LABELED FOR THEIR INTENDED USE.
- C. RATED BUILDING SURFACES: SEPARATE DEVICE BOXES BY A MINIMUM OF 6 INCHES WHERE INSTALLED BACK-TO-BACK WITHIN DEMISING WALLS TO MAINTAIN REQUIRED FIRE AND SOUND RATING (TYPICAL OF ALL DEVICE BOXES INSTALLED ON DEMISING WALLS). PROVIDE LISTED FIRE-RATED WRAPS AROUND ALL RECESSED OUTLET, DEVICE AND EQUIPMENT BOXES IN FIRE-SMOKE RATED WALLS, CEILINGS AND FLOORS TO MEET OR EXCEED THE RESPECTIVE FIRE-SMOKE RATINGS OF THE SURFACE.
- D. RATED PENETRATIONS: SEAL ALL PENETRATIONS THROUGH FIRE-RATED AND/OR SMOKE-RATED MEMBRANES (FLOORS, WALLS, CEILINGS, ETC.) USING SEALANT PRODUCTS THAT MEET OR EXCEED THE RATING OF THE RESPECTIVE MEMBRANE.
- E. GANGED DEVICES: INSTALL WIRING DEVICES GANGED WHEREVER POSSIBLE FOR INSTANCES WHERE THEY ARE SHOWN TOGETHER. THIS INCLUDES LOCATIONS ABOVE COUNTERS AND WORK SURFACES WHERE APPLICABLE.
- F. OUTLET BOXES NEAR CORNERS: INSTALL WALL-MOUNTED SWITCHES, CONTROLS, RECEPTACLES, OUTLETS, ETC. AT LEAST 6 INCHES FROM WALL CORNERS.
- G. CONCEALEMENTS: CONCEAL ALL CONDUIT DROPS AND RISES WITHIN WALLS, AND PROVIDE FLUSH-MOUNTED WALL OUTLET BOXES UNLESS OTHERWISE INDICATED.
- H. DOCUMENTS OF OTHER TRADES: REVIEW DOCUMENTS OF OTHER TRADES, INCLUDING ARCHITECTURAL, PRIOR TO SUBMITTING A BID. PROVIDE ELECTRICAL WORK FOR EQUIPMENT, DEVICES, ETC. OF OTHER TRADES AS REQUIRED TO RENDER THEM FULLY OPERATIONAL. REFER TO ARCHITECTURAL ELEVATIONS FOR INTENDED LOCATIONS AND MOUNTING HEIGHTS FOR EQUIPMENT AND OUTLETS, ETC. PRIOR TO COMMENCING WITH ANY RELATED ROUGH-IN WORK.
- I. SCHEMATIC REPRESENTATIONS: CIRCUITING WORK SHOWN ON DRAWINGS IS FOR SCHEMATIC GENERAL GRAPHIC REPRESENTATION ONLY. DETERMINE SPECIFICS IN FIELD (POINT-TO-POINT ROUTING, HOME-RUN LOCATIONS, METHODS OF CONCEALMENT, ETC.). LOCATIONS AND ROUTING INDICATED ON PLANS ARE SCHEMATIC AND DIAGRAMMATIC IN NATURE. LAYOUT AND INSTALL ALL ELECTRICAL WORK IN STRICT COMPLIANCE WITH CHAPTER 1, PART II ARTICLE 110.26 OF THE LATEST ADOPTED EDITION OF THE NATIONAL ELECTRICAL CODE (NFPA 70).
- J. HOME-RUN DESIGNATIONS: HOME-RUN DESIGNATIONS INDICATED ON PLANS ARE SCHEMATIC DESIGNATIONS ONLY. DETERMINE EXACT CIRCUIT ASSIGNMENTS IN FIELD BASED ON FIELD CONDITIONS. PROVIDE COLOR-CODED CONDUCTOR INSULATION ACCORDINGLY, CODED PROPERLY DEPENDING ON SYSTEM, PHASE, NEUTRAL, ETC. PROVIDE EQUIPMENT AND PANELBOARD SCHEDULES THAT ACCURATELY INDICATE INSTALLED CONDITIONS.
- K. LOCAL DISCONNECTS AND CONTROLS AT EQUIPMENT: LOCAL DISCONNECTS AND LOCAL CONTROLS SHOWN AT OR ON EQUIPMENT IN PLAN VIEW ARE SHOWN FOR SCHEMATIC ASSOCIATIONS ONLY. AVOID INSTALLING DISCONNECTS OR CONTROLS ON EQUIPMENT ENCLOSURES. INSTALL ON ADJACENT WALLS OR BUILDING STRUCTURE, OR PROVIDE FIELD-FABRICATED UNISTRUT OR EQUIVALENT ASSEMBLIES AS NEEDED. PROVIDE FIELD COORDINATION WITH SITE CONDITIONS AND OTHER TRADES, AND PROVIDE ALL RELATED WORK IN STRICT COMPLIANCE WITH NFPA 70, INCLUDING ARTICLE 110.26.
- L. EQUIPMENT & LOAD COORDINATION: REFER TO AND COORDINATE WITH POWER FLOOR PLANS, EQUIPMENT SCHEDULES (INCLUDING EQUIPMENT COORDINATION SCHEDULES), DRAWINGS OF ALL TRADES, ALL DIVISIONS AND SECTIONS OF SPECIFICATIONS AND INSTALL ALLERS OF ALL TRADES BASED ON ACTUAL EQUIPMENT BEING PROVIDED. DETERMINE AND PROVIDE APPROPRIATE BREAKERS, FUSES, CONDUCTORS, CONTROLS, POWER DISTRIBUTION EQUIPMENT, ETC., PERFORM THESE SERVICES PRIOR TO FURNISHING POWER DISTRIBUTION EQUIPMENT SUBMITTALS.
- M. EXTERIOR ELECTRICAL WORK AND WORK SUBJECT TO MOISTURE: EXTERIOR ELECTRICAL WORK SHALL BE WEATHERPROOFED AND WATER-TIGHT AND SHALL BE RUST-RESISTANT. PROVIDE #10-2 CONDUCTORS FOR ALL APPLICATIONS THAT ARE BELOW GRADE OR SUBJECT TO MOISTURE. PROVIDE MINIMUM NEMA OR ENCLOSURES FOR ALL OUTDOOR EQUIPMENT AND ALL INDOOR EQUIPMENT THAT IS SUBJECT TO MOISTURE. PROVIDE NEMA 1 ENCLOSURES FOR ALL OTHER INDOOR EQUIPMENT.
- N. EQUIPMENT GROUNDING CONDUCTORS: PROVIDE EQUIPMENT GROUNDING CONDUCTORS IN STRICT COMPLIANCE WITH THE LATEST ADOPTED EDITION OF THE NATIONAL ELECTRICAL CODE (NFPA 70), INCLUDING ARTICLE 250 AND TABLE 250.122. THESE CONDUCTORS MAY OR MAY NOT BE INDICATED ON SINGLE LINE DIAGRAMS OR ELSEWHERE, BUT SHALL BE PROVIDED UNDER BASE BID NEVERTHELESS.
- O. OVERHEAD WORK: HOLD ALL NEW OVERHEAD ELECTRICAL WORK AS TIGHTLY AS POSSIBLE TO THE BOTTOM OF THE OVERHEAD STRUCTURE. DO NOT INSTALL ANY ELECTRICAL WORK WITHIN SIX INCHES OF ROOF DECKING.
- P. COORDINATION DRAWINGS: LAYOUT ALL PROPOSED RACEWAY ROUTING, ELEVATIONS, INSTALLATION METHODS, ETC. ON COORDINATION DRAWINGS AND COORDINATE ALL PROPOSED RACEWAY ROUTING WITH ALL AFFECTED TRADES PRIOR TO COMMENCING WITH WORK. IN ADDITION, REVIEW THE INFORMATION WITH ARCHITECT, ENGINEER AND OWNER FOR ALL AREAS WHERE THE RACEWAYS WILL BE VISIBLE AFTER COMPLETION OF CONSTRUCTION.
- Q. JUNCTION AND PULL BOXES: LOCATE JUNCTION AND PULL BOXES SO THAT THEY REMAIN ACCESSIBLE AFTER ALL CONSTRUCTION WORK IS COMPLETE. COORDINATE ALL WORK WITH ALL OTHER TRADES PRIOR TO COMMENCEMENT OF THE WORK. LOCATE BOXES IN A MANNER THAT AVOIDS HAVING TO USE ACCESS PANELS. IF ACCESS PANELS ARE NECESSARY, PROVIDE THEM RATED TO MEET OR EXCEED THE FIRE AND/OR SMOKE RATINGS OF THE RESPECTIVE CEILING OR WALL, AND OBTAIN APPROVAL OF DESIGN PROFESSIONALS FOR EACH LOCATION.
- R. CONDUCTOR TERMINATIONS: IN CASES WHERE CONDUCTOR SIZES ARE TOO LARGE TO FIT INTO LUGS/TERMINALS, PROVIDE APPROPRIATE FACTORY LUG KITS FOR AFFECTED EQUIPMENT IF AVAILABLE ELSEWHERE. PROVIDE INSULATED BUTT SPLICES OR EQUIVALENT METHOD, WITH TAILS SIZED TO FIT LUGS/TERMINALS. PROVIDE SPLICES IN SEPARATE BOXES IF REQUIRED BASED ON FIELD CONDITIONS, BOX SIZE LIMITATIONS, ETC. CONCEAL BOXES IN ACCESSIBLE OVERHEAD JOIST SPACES IN FINISHED REGULARLY OCCUPIED AREAS.

EXISTING CONDITIONS NOTES

- A. CONDUCTOR TRACING: PRIOR TO COMMENCEMENT OF WORK, TRACE ALL FEEDERS AND BRANCH CIRCUITS WITHIN THE PROJECT AREA, AND AFFECTED BY THE PROJECT, AND DOCUMENT THE RESULTS. DETERMINE AND DOCUMENT EXISTING LOADS, CIRCUITS AND FEEDERS WITH LOADS THAT WILL REMAIN. CREATE CURRENT AS-BUILT DIRECTORIES FOR ALL POWER DISTRIBUTION EQUIPMENT. LIKEWISE, DETERMINE AND DOCUMENT ROUTING AND SPECIFICS FOR ALL RELEVANT EXISTING CONDUITS AND PATHWAYS FOR ALL SYSTEMS. SUBMIT THIS INFORMATION TO OWNER AND DESIGN PROFESSIONALS AS INFORMATIONAL SUBMITTALS.
- B. ADDED LOADS TO EXISTING CIRCUITS: IN CASES WHERE NEW LOADS ARE INDICATED TO BE CONNECTED TO EXISTING CIRCUITS WITH EXISTING LOADS, CHECK RESULTANT LOAD IN ADVANCE TO ENSURE COLLECTIVE LOAD DOES NOT EXCEED 80 PERCENT OF THE SOURCE CIRCUIT BREAKER AMPERE RATING. IF THAT LOAD IS EXCEEDED, PROVIDE ADDITIONAL CIRCUIT HOME-RUN WORK TO SOURCE PANELBOARDS AS REQUIRED TO ACCOMMODATE THE ENTIRE RESULTANT LOAD. DETERMINE ALL APPLICABLE CONDITIONS IN FIELD PRIOR TO COMMENCEMENT OF WORK.
- C. REASSIGNMENT OF EXISTING CIRCUITS: IN CASES WHERE EXISTING CIRCUITS ARE REUSED (BASED ON INFORMATION SHOWN ON DRAWINGS OR BASED ON FIELD CONDITIONS) BUT MUST BE CONNECTED TO BREAKERS OTHER THAN THEIR ORIGINAL BREAKER, MODIFY COLOR-CODING AS REQUIRED IF THE NEW BREAKER ASSIGNMENT IS CONNECTED TO A DIFFERENT LINE/PHASE THAN THE ORIGINAL ONE. USE MEANS AND METHODS COMPLIANT WITH NFPA 70 AND WITH AUTHORITIES HAVING JURISDICTION.
- D. BREAKERS ADDED TO EXISTING PANELS: PROVIDE NEW BRANCH CIRCUIT BREAKERS, TO MATCH EXISTING IN MANUFACTURER, MODEL AND SOCRATIC RATING, AS REQUIRED TO RENDER ALL NEW AND MODIFIED ELECTRICAL WORK FULLY OPERATIONAL.
- E. POWER CONTINUITY: PROTECT EXISTING ELECTRICAL WORK SERVING EXISTING SPACES AND EQUIPMENT THAT MUST REMAIN OPERATIONAL DURING PART OR ALL OF THE CONSTRUCTION PERIOD, AND ENSURE POWER CONTINUITY IS MAINTAINED FOR SAME THROUGHOUT DURATION OF CONSTRUCTION ACTIVITIES. SEE POWER CONTINUITY NOTES ON OTHER SHEET(S) FOR FURTHER INFORMATION.

ELECTRIC DESIGN CRITERIA

APPLICABLE BUILDING CODES

2013 KENTUCKY BUILDING CODE (BASED ON THE INTERNATIONAL BUILDING CODE)
2017 NFPA 70 - NATIONAL ELECTRICAL CODE
2017 NFPA 72 - NATIONAL FIRE ALARM AND SIGNALING CODE
2012 INTERNATIONAL ENERGY CONSERVATION CODE (IECC)

TAMPER RESISTANT RECEPTACLES

PROVIDE TAMPER RESISTANT RECEPTACLES IN THE FOLLOWING TYPES OF BUILDINGS, ROOMS, AREAS, ETC. AS APPLICABLE:
HOTELS/MOTELS (THROUGHOUT).
DORMITORIES (THROUGHOUT).
BUSINESS OFFICES, CORRIDORS, WAITING ROOMS AND THE LIKE IN CLINICS, MEDICAL AND DENTAL OFFICES AND OUTPATIENT FACILITIES.
PATIENT CARE AREAS.
AUDITORIUMS.
GYMNASIUMS.
PLACES OF AWAITING TRANSPORTATION.
SKATING RINKS.
CHILD-CARE/DAY-CARE FACILITIES.
PRESCHOOL EDUCATION FACILITIES.
ELEMENTARY EDUCATION FACILITIES.
SPECIAL EDUCATION FACILITIES.
SEE ELECTRIC TAMPER RESISTANT RECEPTACLE REQUIRED SPACES SCHEDULE FOR ADDITIONAL APPLICABLE SPACES.

UTILITY COORDINATION - CONTRACTOR RESPONSIBILITY

COORDINATE UTILITY SERVICE WORK CONTAINED WITHIN THIS DRAWING SET WITH RESPECTIVE LOCAL UTILITY COMPANY. UTILITY COORDINATION HAS NOT BEEN PERFORMED AS PART OF THIS DRAWING SET. FAULT CURRENT VALUES DISPLAYED IN THE ELECTRICAL SINGLE LINE EQUIPMENT SCHEDULE ARE ASSUMED VALUES BASED ON SERVICE SIZE, AND EXPECTED UTILITY TRANSFORMER SIZE. VERIFY THE AVAILABLE FAULT CURRENT AND NOTIFY ENGINEER OF ANY DISCREPANCIES.

OBTAIN AND COMPLY WITH ALL UTILITY INSTALLATION DETAILS AND STANDARDS.

CONTACT 811 "CALL BEFORE YOU DIG" SERVICE PRIOR TO COMMENCING WITH ANY UNDERGROUND WORK.

UTILITY COORDINATION

COORDINATE UTILITY SERVICE WORK CONTAINED WITHIN THIS DRAWING SET WITH RESPECTIVE LOCAL UTILITY COMPANY. KLH HAS STARTED THIS COORDINATION PROCESS WITH UTILITY COMPANY REPRESENTATIVE LISTED BELOW AS PART OF THE DESIGN PHASE. CONTINUE THIS COORDINATION PROCESS PRIOR TO STARTING ANY WORK AND CONTINUE THROUGHOUT CONSTRUCTION PHASE.

OBTAIN AND COMPLY WITH UTILITY INSTALLATION DETAILS AND STANDARDS.

CONTACT 811 "CALL BEFORE YOU DIG" SERVICE PRIOR TO COMMENCING ANY UNDERGROUND WORK.

ELECTRIC SERVICE			
UTILITY COMPANY	DUKE ENERGY		
UTILITY CONTACT	LUKE GROTHAUS		
PHONE NUMBER	513-906-0133		
EMAIL ADDRESS	LUKE.GROTHAUS@DUKE.ENERGY.COM		
DATE(S) CONTACTED	9/17/18		
KLH CONTACT	RYAN TERRY		
ELECTRICAL SECONDARY SERVICE (OWNER-PURCHASED SECONDARY)			
TRANSFORMER			
OWNERSHIP	UTILITY		
NEW OR EXISTING	NEW		
SECONDARY VOLTAGE (V)	208V		
MAX NUMBER OF CONDUITS IN SECONDARY COMPARTMENT	8		
AVAILABLE FAULT CURRENT AT SECONDARY LUGS (A)	##,###A		
TRANSFORMER CLEARANCES			
MINIMUM DISTANCE FROM BUILDING	10FT.		
MINIMUM DISTANCE FROM EMERGENCY GENERATOR	N/A		
MAXIMUM DISTANCE FROM DRIVABLE SURFACE	N/A		
WORKING CLEARANCE			
FRONT	10 FT.		
SIDE	3 FT.		
REAR	3 FT.		
METERING			
CURRENT TRANSFORMER (CT) LOCATION	TRANSFORMER CT CABINET (PICK ONE)		
RESPONSIBILITY MATRIX (X = FURNISH AND INSTALL)	UTILITY	DIVISION 26 CONTRACTOR	
TRANSFORMER	X		
TRANSFORMER PAD		N/A	
PRIMARY CONDUIT		X	
PRIMARY CABLE	X		
TERMINATE PRIMARY CABLE	X		
SECONDARY CONDUIT		X	
SECONDARY CONDUCTORS		X	
TERMINATE SECONDARY CONDUCTORS		X	
METER SOCKET		X	
CT CABINET		X	

2" REFERENCE LINE

Renovations For:

PRELIMINARY
NOT FOR
CONSTRUCTION

REVISIONS

08/31/18 SCHEMATIC DESIGN
10/04/18 DESIGN DEVELOPMENT

DWN: RTT CHK: DTJ

PROJ. DATE 10/04/18

SHEET DATE 10/04/18

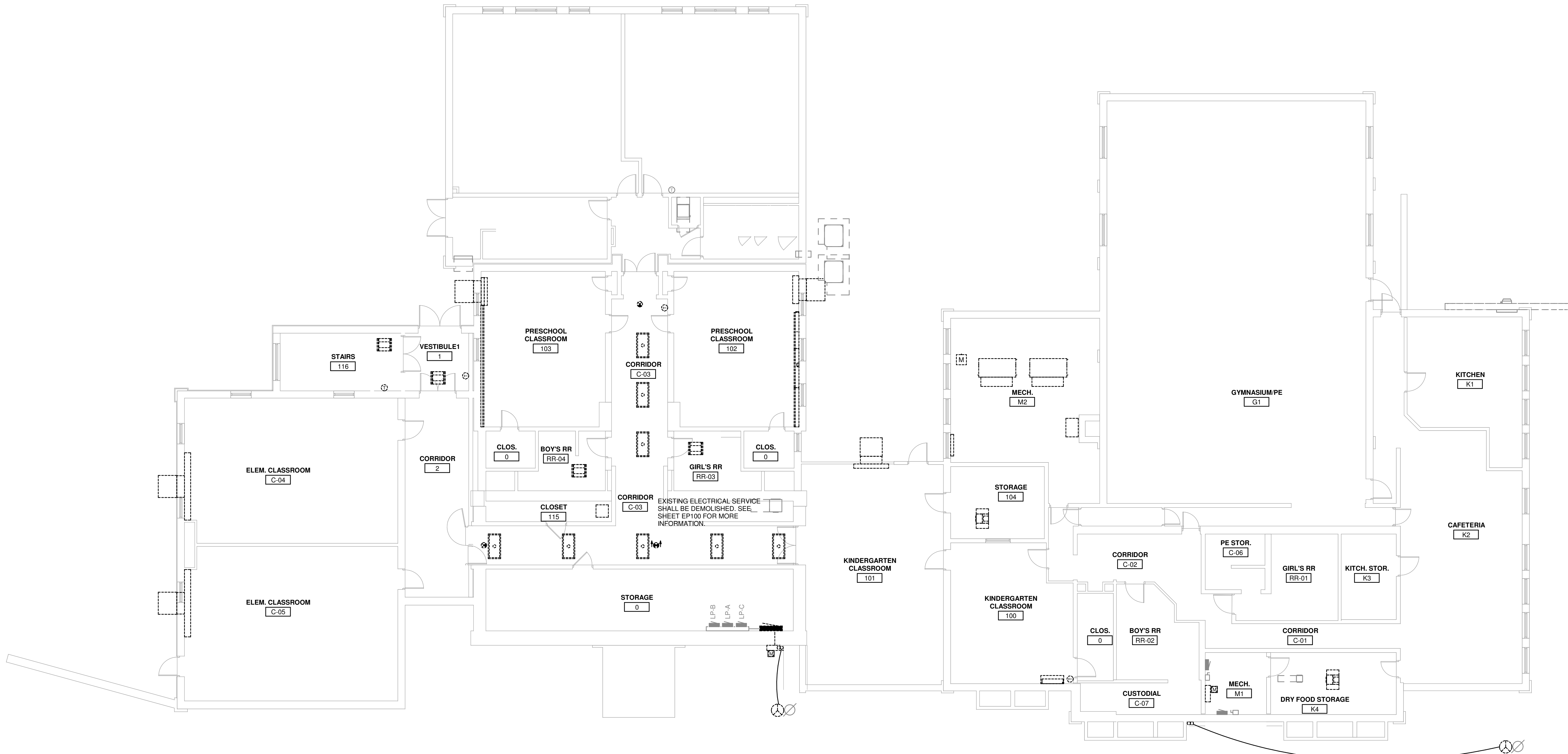
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1 ELECTRIC DEMOLITION - LEVEL 1
1/8" = 1'-0"

Renovations For:

Southgate Elementary School

6 William F. Blatt Ave.
Southgate Independent School District

Southgate, KY

Mr. Greg Duty, Superintendent

PRELIMINARY
NOT FOR
CONSTRUCTION

REVISIONS

08/31/18 SCHEMATIC DESIGN
10/04/18 DESIGN DEVELOPMENT

DWN: RTT CHK: DTJ

PROJ. DATE 10/04/18

SHEET DATE 10/04/18

JOB NO.

ELECTRIC -
LEVEL 1

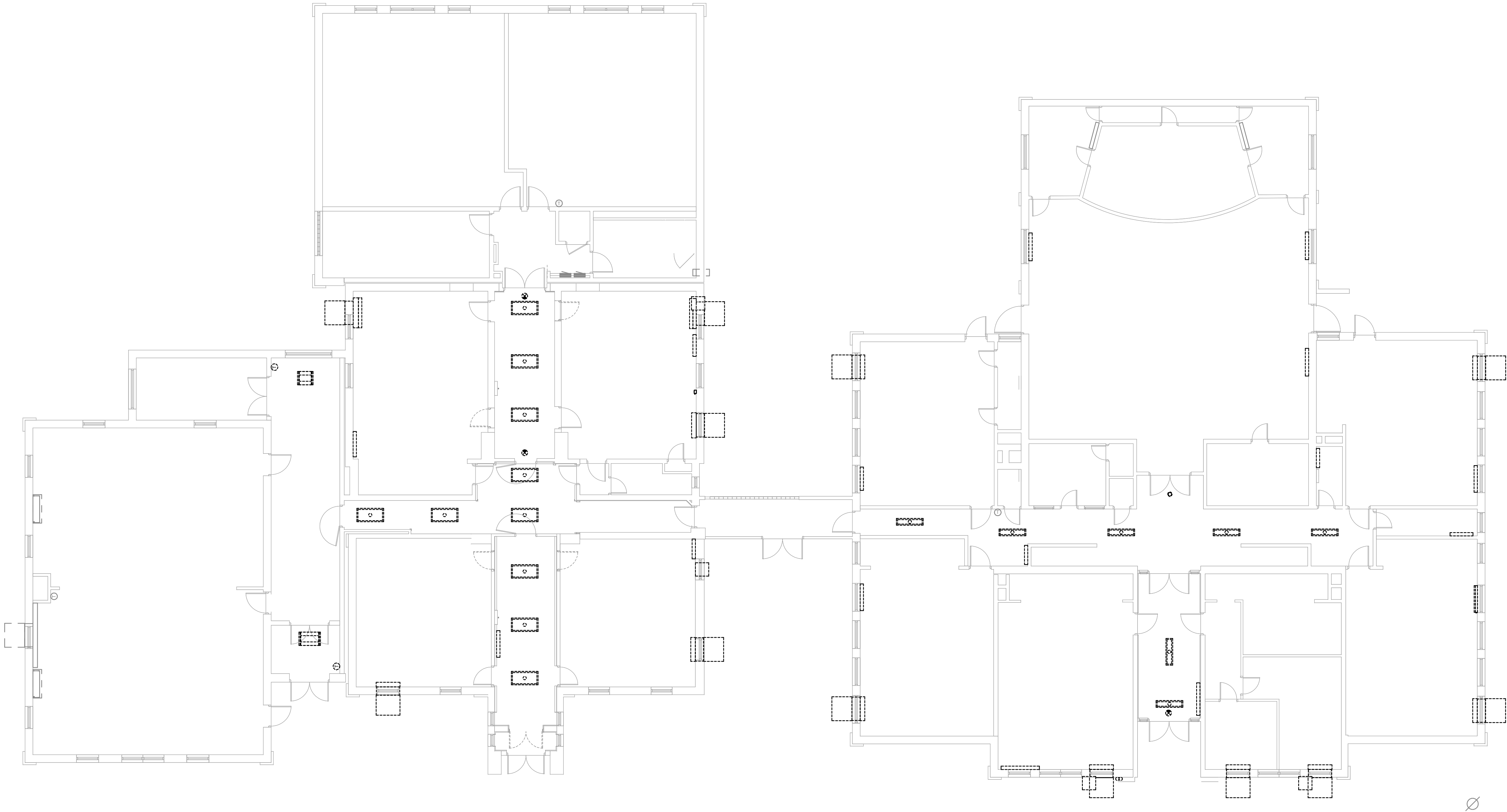
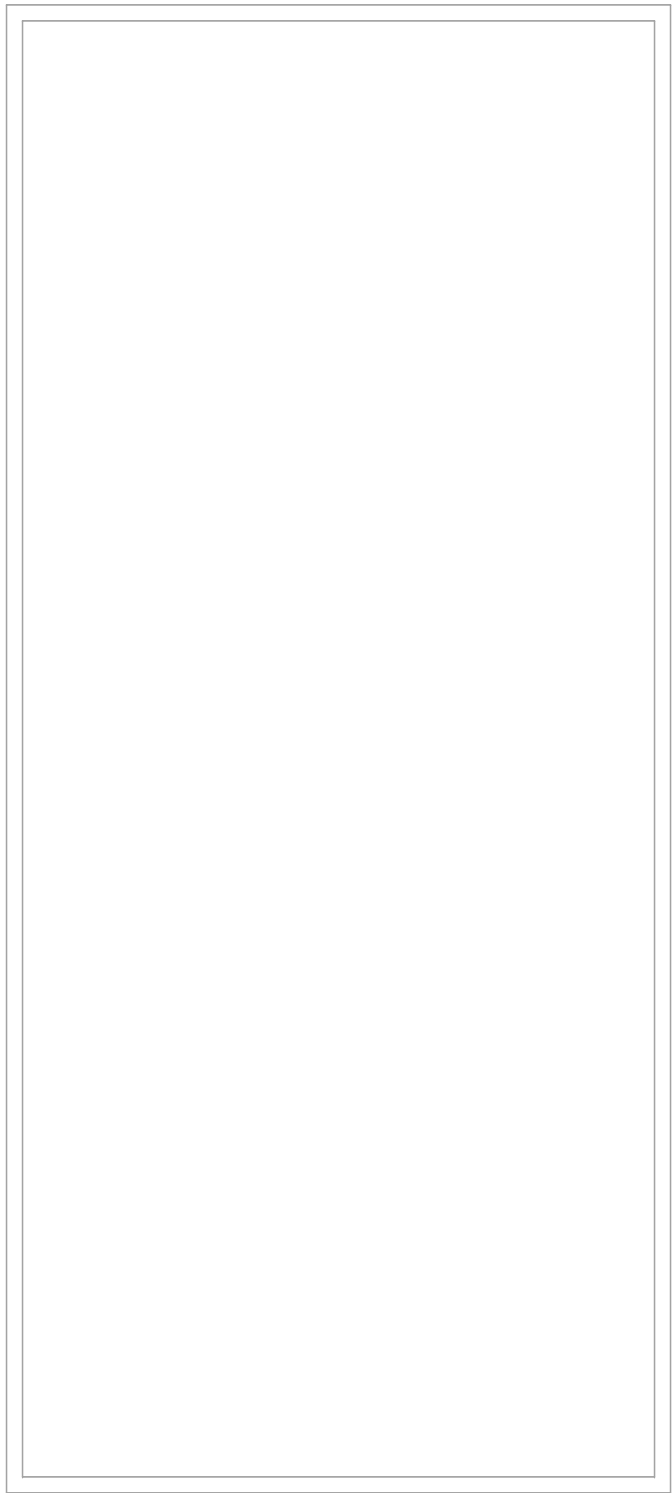
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1 ELECTRIC DEMOLITION - LEVEL 2
1/8" = 1'-0"

2" REFERENCE LINE

Renovations For:

Southgate Elementary School

6 William F. Blatt Ave.
Southgate Independent School District

Southgate, KY

Mr. Greg Duty, Superintendent

PRELIMINARY
NOT FOR
CONSTRUCTION

REVISIONS

08/31/18 SCHEMATIC DESIGN
10/04/18 DESIGN DEVELOPMENT

DWN: RTT CHK: DTJ

PROJ. DATE 10/04/18

SHEET DATE 10/04/18

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LEVEL 2

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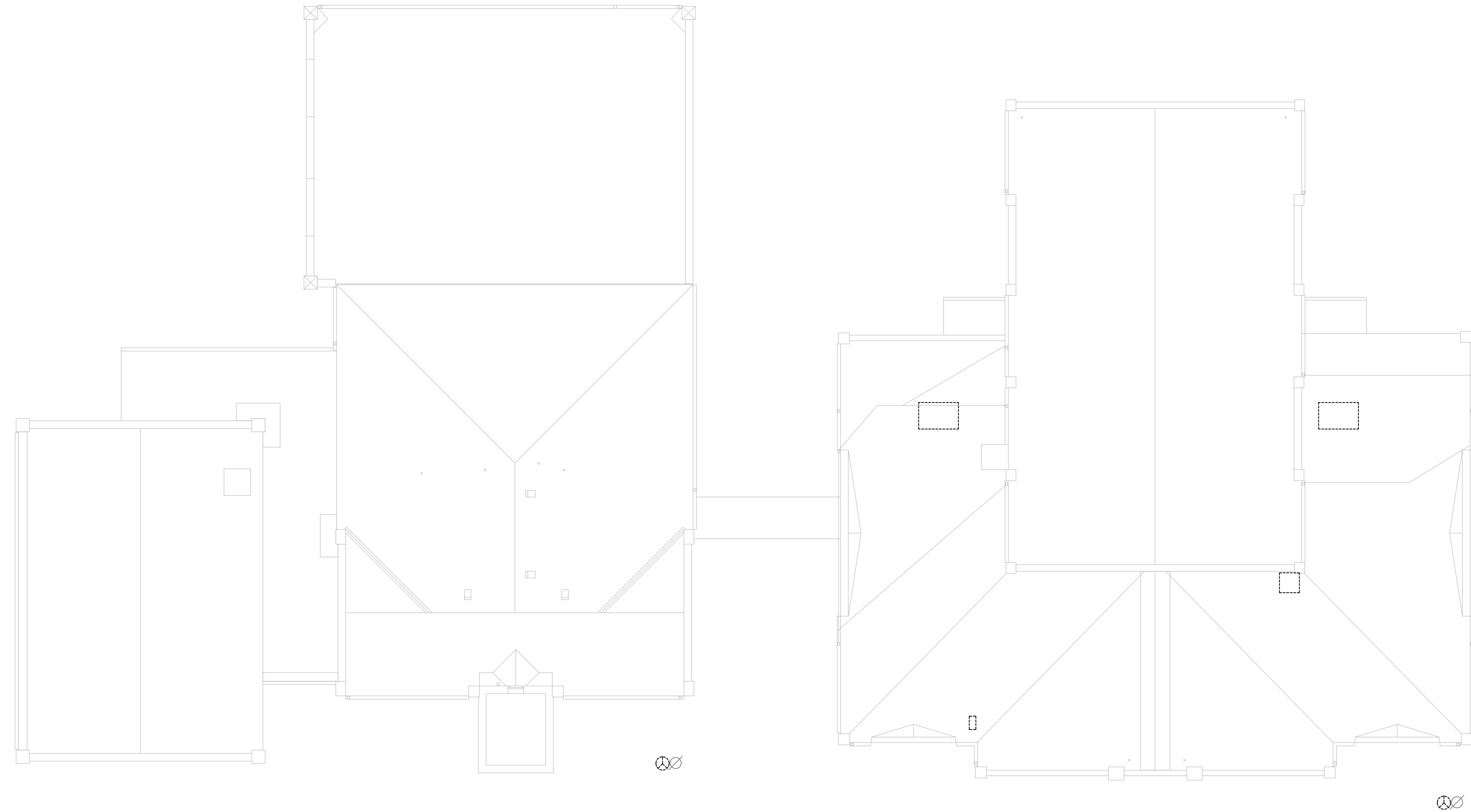
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1 ELECTRIC DEMOLITION - ROOF
1/8" = 1'-0"

2" REFERENCE LINE

Renovations For:

Southgate Elementary School

6 William F. Blatt Ave.
Southgate Independent School District

Southgate, KY

Mr. Greg Duty, Superintendent

PRELIMINARY
NOT FOR
CONSTRUCTION

REVISIONS

08/31/18 SCHEMATIC DESIGN
10/04/18 DESIGN DEVELOPMENT

DWN: RTT CHK: DTJ

PROJ. DATE 10/04/18

SHEET DATE 10/04/18

JOB NO.

ELECTRIC -
ROOF

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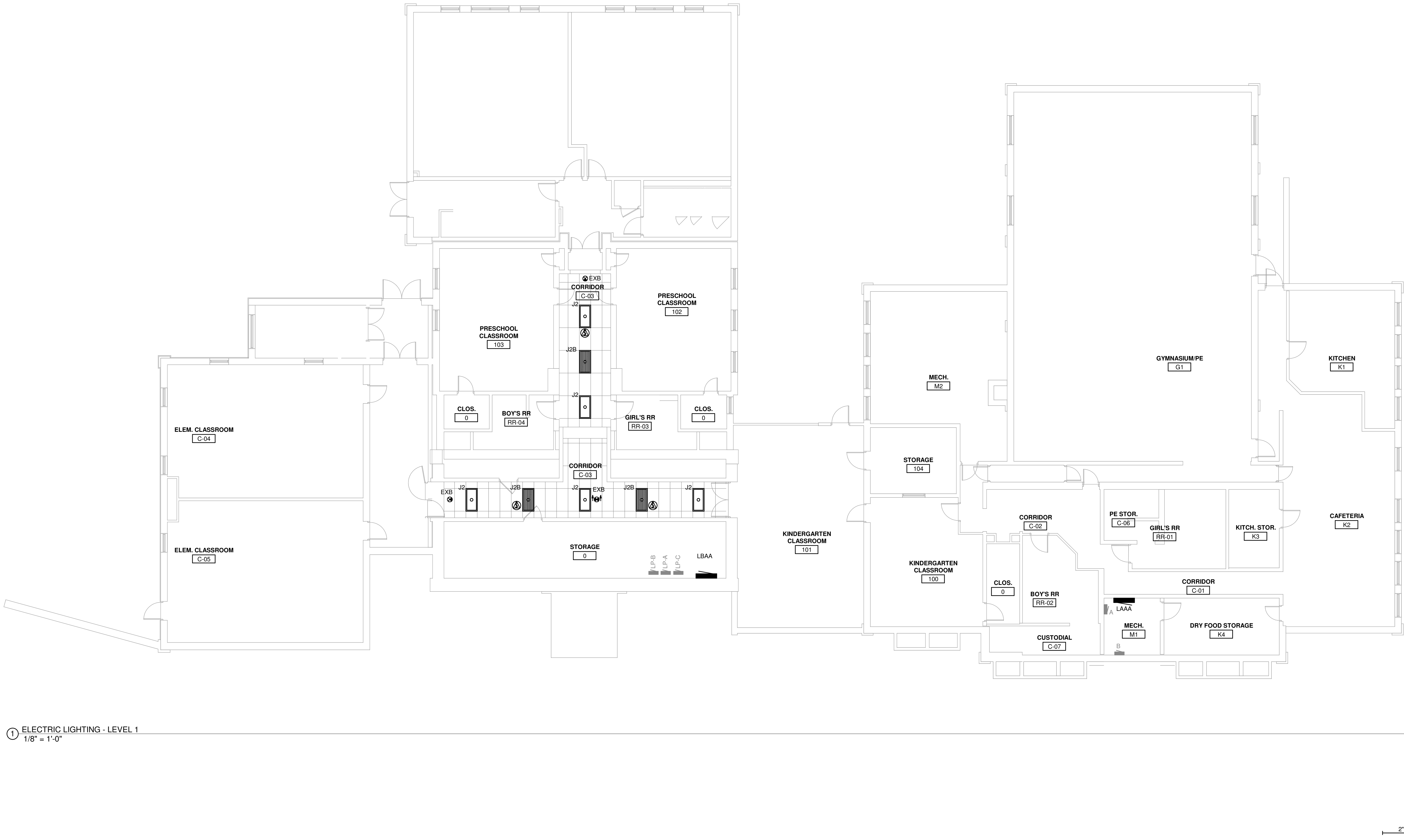


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Interior Lighting
Compliance Certificate

2012 IECC

Section 1: Project Information

Project Type: Alterations / Addition / New Construction

Section 2: Interior Lighting and Power Calculation

Floor Area (sq. ft.) Watts per sq. ft. Allowed Watts Proposed Watts Complies
#.# ##### See Below Yes

Section 3: Interior Lighting Fixture Schedule

TYPE	LAMP TYPE	BALLAST / DRIVER	LAMP QTY	COUNT	LOAD	TOTAL LOAD
EXB	5W LED, WITH SIGN	NO BALLAST	1	9	5 VA	45 VA
FF4S	23W LED, 3500K, 90+ CRI	INTEGRAL ELECTRONIC, MVOLT, DIMMABLE, COMPATIBLE WITH SPECIFIED LIGHTING CONTROLS	2	5	56 VA	280 VA
FF4SB	23W LED, 3500K, 90+ CRI	INTEGRAL ELECTRONIC, MVOLT, DIMMABLE, COMPATIBLE WITH SPECIFIED LIGHTING CONTROLS, 1400 LUMEN, EMERGENCY BATTERY PACK	1	3	56 VA	168 VA
J2	55W LED, 3500K, 85+ CRI	INTEGRAL ELECTRONIC, MVOLT, DIMMABLE, COMPATIBLE WITH SPECIFIED LIGHTING CONTROLS	1	10	55 VA	550 VA
J2B	55W LED, 3500K, 85+ CRI	INTEGRAL ELECTRONIC, MVOLT, DIMMABLE, COMPATIBLE WITH SPECIFIED LIGHTING CONTROLS, 1400 LUMEN, EMERGENCY BATTERY PACK	1	6	55 VA	330 VA
PS1	10W LED, 3500K, 85+ CRI	INTEGRAL ELECTRONIC, MVOLT, SURFACE ADAPTOR	1	1	10 VA	130 VA

GENERAL NOTES

- A. REFER TO DRAWINGS FOR MOUNTING TYPE, NUMBER OF FACES AND ARROWS OF EXIT SIGNS. VERIFY IN FIELD PRIOR TO INSTALLATION.
- B. VERIFY COMPATIBILITY WITH VOLTAGE, CONTROLS, ETC. FOR ALL LUMINAIRE COMPONENTS.
- C. COORDINATE EACH LUMINAIRE LOCATION WITH THE ARCHITECTURAL REFLECTED CEILING PLANS, CEILING INSTALLERS, ETC. AND PROVIDE APPROPRIATE MOUNTING SYSTEM REQUIRED FOR EACH LUMINAIRE. ALSO, PROVIDE PLASTER FRAMES, WALL BRACKETS, SUPPORTS, OR OTHER APPURTENANCES AS REQUIRED FOR PROPER AND COMPLETE INSTALLATIONS.
- D. WEAR CLEAN WHITE COTTON GLOVES WHEN HANDLING EXPOSED REFLECTIVE LUMINAIRE SURFACES. REMOVE PLASTIC SHIPPING BAGS ONLY AFTER INTERIOR WORK IS COMPLETE, AND CLEAN ALL SURFACES WITH CLEAN DRY CLOTHES/CLOTH.
- E. MOUNTING HEIGHTS INDICATED ARE TO THE BOTTOM OF THE LUMINAIRE, UNLESS OTHERWISE NOTED.
- F. PRODUCTS: PROVIDE PRODUCTS INDICATED ON DRAWINGS AND SCHEDULES. WHERE MULTIPLE MANUFACTURER SERIES/MODEL NUMBERS ARE LISTED FOR A SINGLE LUMINAIRE, PROVIDE ONE OF THOSE LISTED. WHERE A SPECIFIC MANUFACTURER SERIES/MODEL NUMBER IS LISTED AS BASIS-OF-DESIGN, AND WHERE IT IS STATED THAT EQUIVALENTS WILL BE CONSIDERED, ANY PROPOSED NON-LISTED LUMINAIRES ARE SUBJECT TO REVIEW BY DESIGN PROFESSIONAL(S). SUBMITTALS FOR WHICH SHALL BE FURNISHED AT LEAST 110 DAYS PRIOR TO BID DUE DATE. THESE PRE-BID SUBMITTALS SHALL CLEARLY STATE EXACTLY WHAT IS BEING PROPOSED AND SHALL DEMONSTRATE COMPLIANT EQUIVALENCY. SUCH PRE-BID SUBMITTALS WILL NOT BE CONSIDERED IF FURNISHED LESS THAN 14 DAYS PRIOR TO BID DUE DATE. SIMILAR REQUESTS FOR PROPOSED SUBSTITUTIONS MAY BE MADE ONLY AFTER BIDS ARE RECEIVED, AND ONLY IF OWNER CHOOSES TO CONSIDER SUBSTITUTION REQUESTS. DESIGN PROFESSIONAL(S) AND OWNER RESERVE THE RIGHT TO REJECT ALL PRODUCTS THAT ARE NOT DEEMED TO BE FULLY EQUIVALENT TO THE BASIS-OF-DESIGN LISTING(S). SUBMIT ALL REQUESTS AND QUESTIONS THROUGH THE FORMALLY-ESTABLISHED BIDDING PROCESS, NOT DIRECTLY TO ENGINEER.

ELECTRIC LUMINAIRE SCHEDULE

TYPE	DESCRIPTION	MANUFACTURER / SERIES	SIZE	HOUSING / MOUNTING	MATERIAL	LENS DESCRIPTION	LAMP QTY	LAMP TYPE	LAMP BASE	BALLAST / DRIVER QTY	BALLAST / DRIVER	FINISH	COMMENTS	FIXTURE LOAD	VOLTAGE
EXB	EXIT SIGN - BATTERY - THERMOPLASTIC	CHLORIDE CXKL LITHONIA LOW EL N HUBBELL CER SURELITES LPX7 WILLIAMS EXIT-EM	8"x12"x2"	UNIVERSAL, REFER TO PLAN	THERMOPLASTIC	STENCIL FACE	1	5W LED, WITH SIGN		0	NO BALLAST	WHITE	RED LETTERS, NI-CAD BATTERY OPERATION	5 VA	120 V
FF4S	LINEAR - SURFACE/PENDANT - DIRECT	FOCAL POINT SEEM 4 NULITE REGOLO PRUDENTIAL MARK ARCHITECTURAL PINELITE FOCAL POINT PINNACLE LEDALYTE AXIS LIGHTING NEO-RAYAY	3.5"x4"x3.75"	SURFACE OR PENDANT	STEEL	FROSTED	2	29W LED, 3500K, 90+ CRI	1500 LUMENS	2	INTEGRAL ELECTRONIC, MVOLT, DIMMABLE, COMPATIBLE WITH SPECIFIED LIGHTING CONTROLS		INCLUDE 48" CABLE, ADJUST PENDANT LENGTH TO 2' OFF CEILING, FIELD REPLACEABLE LED MODULE AND DRIVER	56 VA	120 V
FF4SB	LINEAR - SURFACE/PENDANT - DIRECT	FOCAL POINT SEEM 4 NULITE REGOLO PRUDENTIAL MARK ARCHITECTURAL PINELITE FOCAL POINT PINNACLE LEDALYTE AXIS LIGHTING NEO-RAYAY	3.5"x4"x3.75"	SURFACE OR PENDANT	STEEL	FROSTED	1	29W LED, 3500K, 90+ CRI	1500 LUMENS	1	INTEGRAL ELECTRONIC, MVOLT, DIMMABLE, COMPATIBLE WITH SPECIFIED LIGHTING CONTROLS, 1400 LUMEN, EMERGENCY BATTERY PACK		INCLUDE 48" CABLE, ADJUST PENDANT LENGTH TO 2' OFF CEILING, FIELD REPLACEABLE LED MODULE AND DRIVER	56 VA	120 V
J2	VOLUMETRIC	LITHONIA RTL DAYBRITE 2DL COLUMBIA LEPIC24 WILLIAMS AHT METALUX 24AC	2'x4'x3-1/8"	RECESSED (COORDINATE CEILING TYPE WITH REFLECTED CEILING PLANS)	STEEL	DUAL VOLUMETRIC ACRYLIC PRISMATIC DIFFUSER, MATTE-WHITE REFLECTOR	1	55W LED, 3500K, 85+ CRI	6000 LUMENS	1	INTEGRAL ELECTRONIC, MVOLT, DIMMABLE, COMPATIBLE WITH SPECIFIED LIGHTING CONTROLS	WHITE	FIELD REPLACEABLE LED MODULE AND DRIVER	55 VA	120 V
J2B	VOLUMETRIC - BATTERY	LITHONIA RTL DAYBRITE 2DL COLUMBIA LEPIC24 WILLIAMS AHT METALUX 24AC	2'x4'x3-1/8"	RECESSED (COORDINATE CEILING TYPE WITH REFLECTED CEILING PLANS)	STEEL	DUAL VOLUMETRIC ACRYLIC PRISMATIC DIFFUSER, MATTE-WHITE REFLECTOR	1	55W LED, 3500K, 85+ CRI	6000 LUMENS	1	INTEGRAL ELECTRONIC, MVOLT, DIMMABLE, COMPATIBLE WITH SPECIFIED LIGHTING CONTROLS, 1400 LUMEN, EMERGENCY BATTERY PACK	WHITE	FIELD REPLACEABLE LED MODULE AND DRIVER	55 VA	120 V
PS1	SURFACE ROUND	KENALL MILLENNIUM EDGE OR APPROVED EQUAL	13" DIAx3"	SURFACE	ALUMINUM	PEARLESCENT POLYCARBONATE LENS	1	10W LED, 3500K, 85+ CRI	1100 LUMENS	1	INTEGRAL ELECTRONIC, MVOLT, SURFACE ADAPTOR	WHITE	FIELD REPLACEABLE LED MODULE AND DRIVER	10 VA	120 V

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Renovations For:
Southgate Elementary School
6 William F. Blatt Ave.
Southgate Independent School District

Southgate, KY
Mr. Greg Duty, Superintendent

PRELIMINARY
NOT FOR
CONSTRUCTION

REVISIONS

08/31/18 SCHEMATIC DESIGN
10/04/18 DESIGN DEVELOPMENT

DWN: RTT CHK: DTJ

PROJ. DATE 10/04/18

SHEET DATE 10/04/18

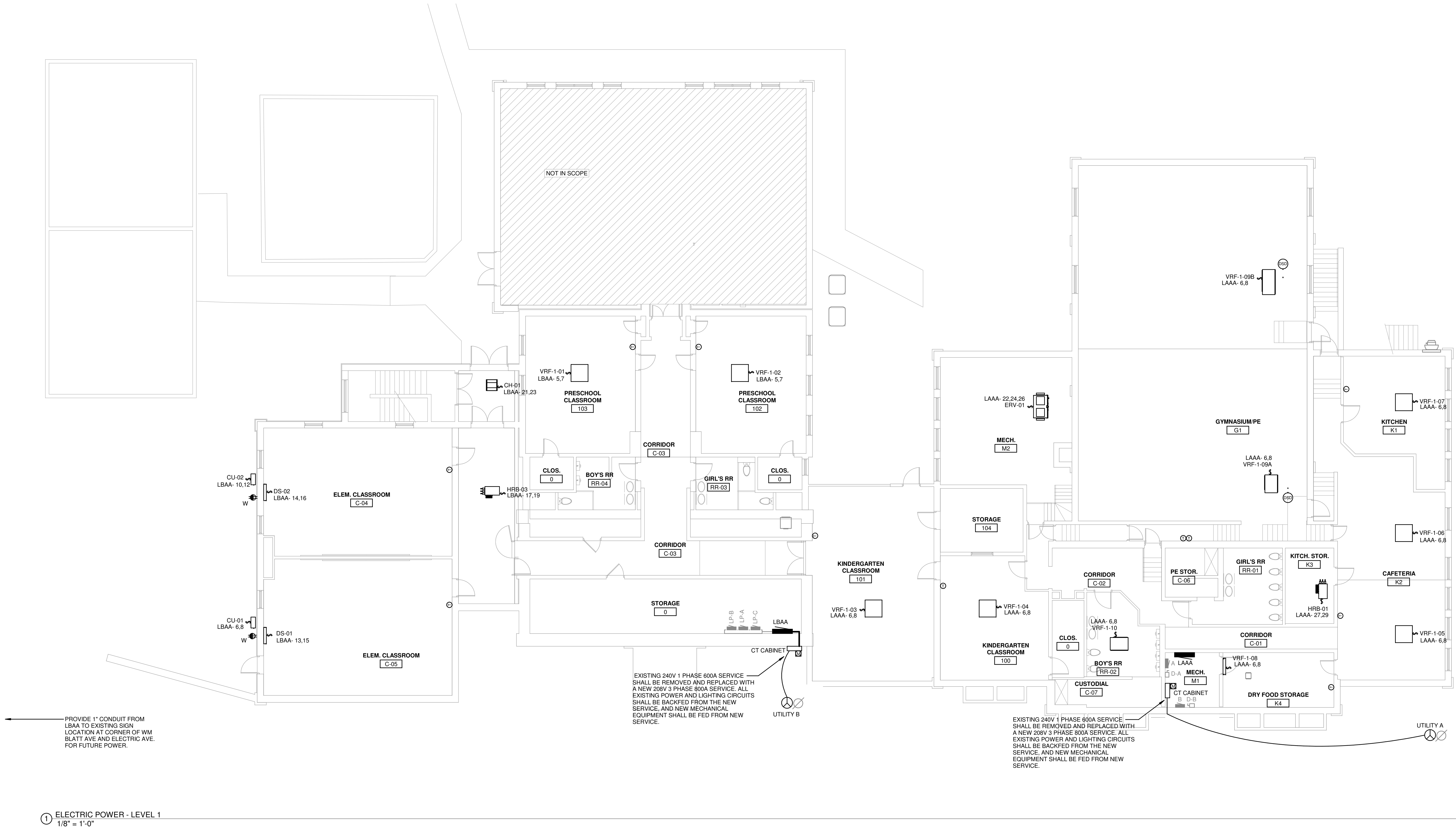
JOB NO.

ELECTRIC
LIGHTING -
LUMINAIRE
SCHEDULE

EL601

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Renovations For:

Southgate Elementary School

6 William F. Blatt Ave.
Southgate Independent School District

Southgate, KY

Mr. Greg Duty, Superintendent

PRELIMINARY
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08/31/18 SCHEMATIC DESIGN
10/04/18 DESIGN DEVELOPMENT

DWN: RTT CHK: DTJ

PROJ. DATE 10/04/18

SHEET DATE 10/04/18

JOB NO.

ELECTRIC
POWER - LEVEL
1

EP100

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08/31/18 SCHEMATIC DESIGN
10/04/18 DESIGN DEVELOPMENT

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PROJ. DATE 10/04/18
SHEET DATE 10/04/18
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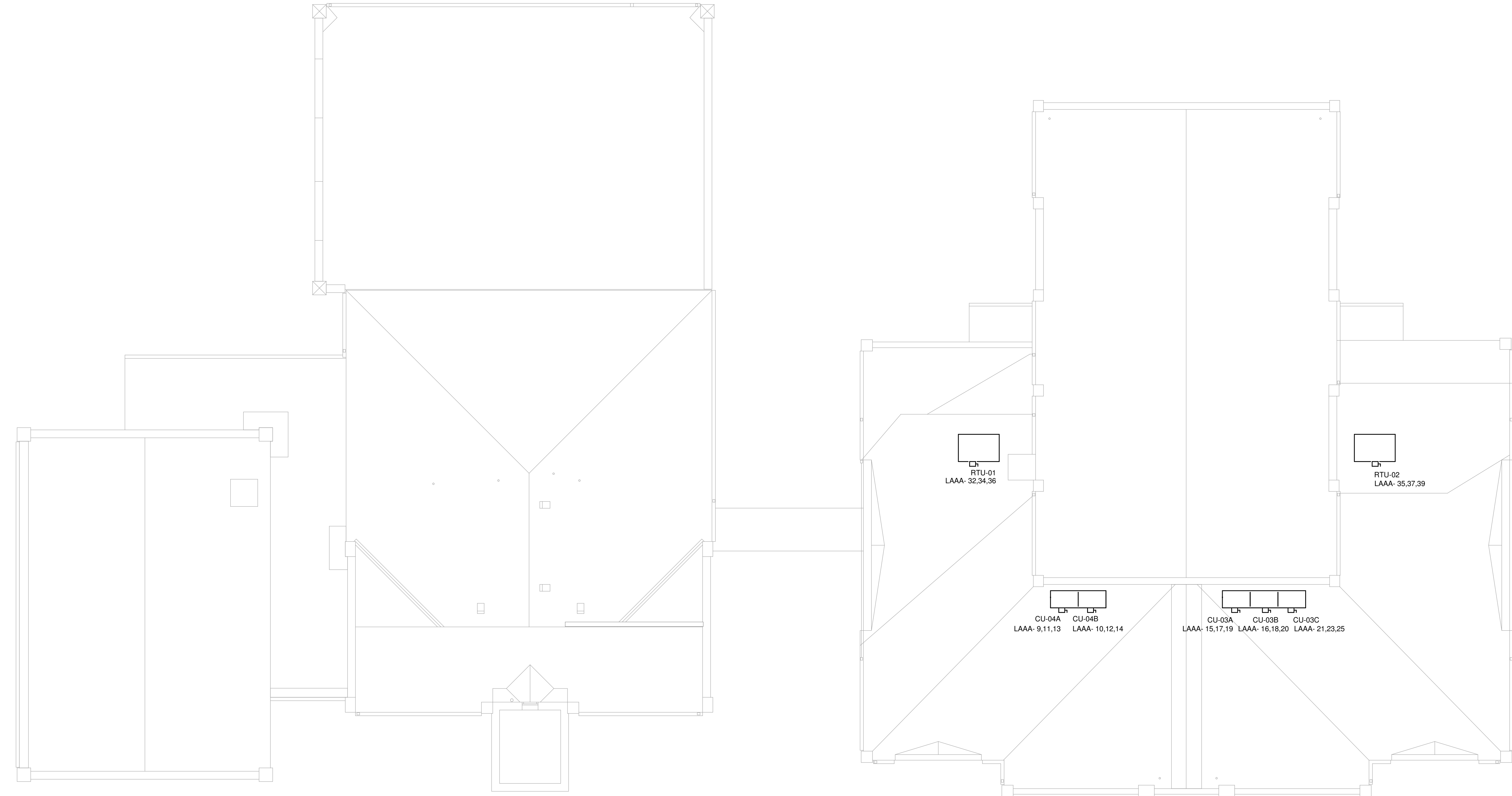
ELECTRIC
POWER - LEVEL
2

EP101

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① ELECTRIC POWER - ROOF
1/8" = 1'-0"

2" REFERENCE LINE

Renovations For:

Southgate Elementary School

6 William F. Blatt Ave.
Southgate Independent School District

Southgate, KY

Mr. Greg Duty, Superintendent

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08/31/18 SCHEMATIC DESIGN
10/04/18 DESIGN DEVELOPMENT

DWN: RTT CHK: DTJ

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JOB NO.

ELECTRIC
POWER - ROOF

EP102

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Renovations For:

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08/31/18 SCHEMATIC DESIGN
10/04/18 DESIGN DEVELOPMENT

DWN: RTT CHK: DTJ

PROJ. DATE 10/04/18

SHEET DATE 10/04/18

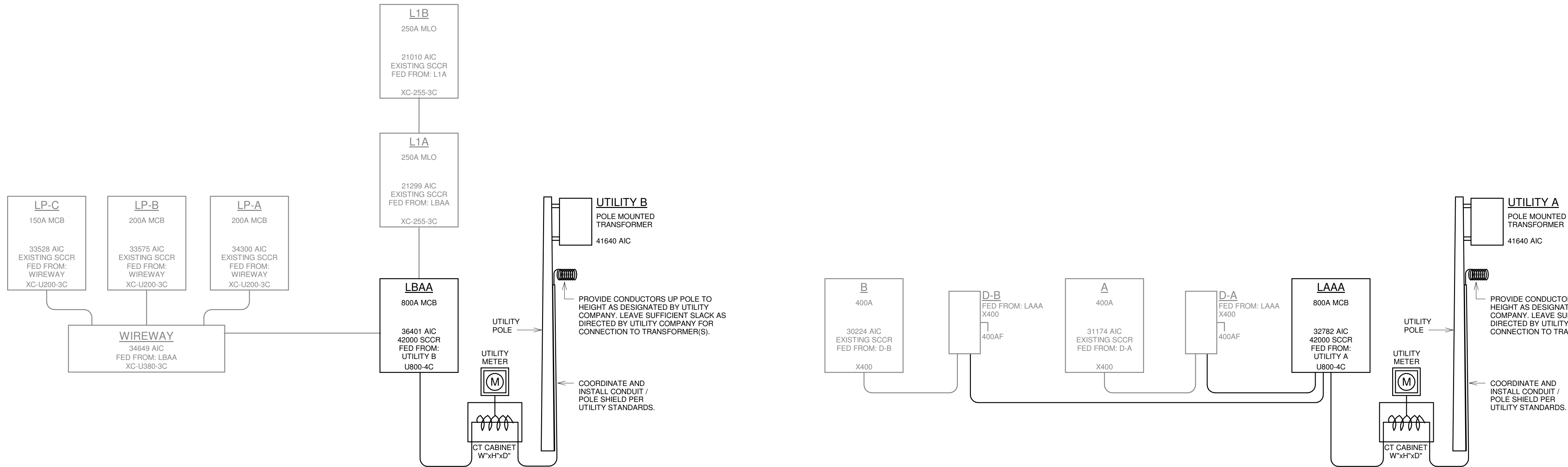
JOB NO.

ELECTRIC
POWER -
SINGLE LINE
DIAGRAM

EP601

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EQUIPMENT										PHASE										POWER BRANCH										EQUIPMENT TYPE										SUPPLY FROM										SPACE NUMBER										SPACE NAME										VOLTAGE										POLES										WIRES										DEMAND (kVA)										DEMAND (A)										MAINS RATING (A)										MAINS FRAME RATING (A)										MAINS TYPE										FEEDER ID										FEEDER										VD %										LUGS TYPE										SPD										ULISE										ENCLOSURE TYPE										200% NEUTRAL										K-RATING										FAULTY CURRENT (A)										SHORT CIRCUIT CURRENT (A)										NOTES									
UTILITY A										New Construction										NORMAL										Pole Mounted Transformer										UTILITY A										M1										MECH.										208										3										4										92.3 kVA										256 A										800										800										THERMAL MAGNETIC										U800-4C										(3) SETS OF (4) 4300 KCMIL CU IN 3' CONDUIT EACH										0.345										NEMA 3R										41640																																																																															
D-A										Existing										NORMAL										Distribution Panelboard										LAAA										M1										MECH.										208										2										3										0.0 kVA										0 A										400										400										THERMAL MAGNETIC										X400-4C										EXISTING FEEDER, AT RATING INDICATED, TO REMAIN UNLESS NOTED OTHERWISE										0.345										NEMA 1										37262										42000																																																																					
D-B										Existing										NORMAL										Branch Panelboard										D-A										M1										MECH.										208										2										3										0.0 kVA										0 A										400										400										THERMAL MAGNETIC										X400										EXISTING FEEDER, AT RATING INDICATED, TO REMAIN UNLESS NOTED OTHERWISE										0.345										NEMA 1										31174										EXISTING																																																																					
D-B										Existing										NORMAL										Safety Switch										D-B										M1										MECH.										208										2										3										0.0 kVA										0 A										400										400										THERMAL MAGNETIC										X400										EXISTING FEEDER, AT RATING INDICATED, TO REMAIN UNLESS NOTED OTHERWISE										0.345										NEMA 1										30652										EXISTING																																																																					
B										Existing										NORMAL										Branch Panelboard										B										M1										MECH.										208										2										3										0.0 kVA										0 A										400										400										THERMAL MAGNETIC										X400										EXISTING FEEDER, AT RATING INDICATED, TO REMAIN UNLESS NOTED OTHERWISE										0.345										NEMA 1										30224										EXISTING																																																																					
UTILITY B										New Construction										NORMAL										Pole Mounted Transformer										UTILITY B										0										STORAGE										208										3										4										8.5 kVA										24 A										800										800										THERMAL MAGNETIC										U800-4C										(3) SETS OF (4) 4300 KCMIL CU IN 3' CONDUIT EACH										0.013										NEMA 1										38401										42000																																																																					
LBA										New Construction										NORMAL										Distribution Panelboard										L11A										0										CORRIDOR										208										2										3										0.0 kVA										0 A										250										250										THERMAL MAGNETIC										XC-255-3C										EXISTING FEEDER, (3) 4500 KCMIL CU, (1) 114 AWG CU GND, IN 3' CONDUIT										0.013										NEMA 1										21299										EXISTING																																																																					
L1A										Existing										NORMAL										Branch Panelboard										L1B										11A										CORRIDOR										208										2										3										0.0 kVA										0 A										250										250										THERMAL MAGNETIC										XC-255-3C										EXISTING FEEDER, (3) 4500 KCMIL CU, (1) 114 AWG CU GND, IN 3' CONDUIT										0.013										NEMA 1										21011										EXISTING																																																																					
WIREWAY										Existing										NORMAL										WireWay										LBA										0										STORAGE										208										2										3										0.0 kVA										0 A										400										400										THERMAL MAGNETIC										XC-U800-3C										EXISTING FEEDER, (3) 4500 KCMIL CU										0.013										NEMA 1										34649										EXISTING																																																																					
LP-A										Existing										NORMAL										Branch Panelboard										WIREWAY										0										STORAGE										208										2										3										0.0 kVA										0 A										200										200										THERMAL MAGNETIC										XC-U200-3C										EXISTING FEEDER, (3) 450 AWG CU										0.013										NEMA 1										34300										EXISTING																																																																					
LP-B										Existing										NORMAL										Branch Panelboard										WIREWAY										0										STORAGE										208										2										3										0.0 kVA										0 A										200										200										THERMAL MAGNETIC										XC-U200-3C										EXISTING FEEDER, (3) 450 AWG CU										0.013										NEMA 1										35575										EXISTING																																																																					
LP-C										Existing										NORMAL										Branch Panelboard										WIREWAY										0										STORAGE										208										2										3										0.0 kVA										0 A										150										150										THERMAL MAGNETIC										XC-U200-3C										EXISTING FEEDER, (3) 450 AWG CU										0.013										NEMA 1										33508																																																																															

[illegible]

2" REFERENCE LINE

PANEL SCHEDULE LEGEND				(LT)	=	PROVIDE LOCK-OUT/TAG-OUT DEVICE
(EX)	=	EXISTING CIRCUIT TO REMAIN		(->)	=	CONNECT BRANCH CIRCUIT, WHICH WAS DISCONNECTED FROM ANOTHER SOURCE AS PART OF SELECTIVE DEMOLITION, TO POLE SPACE(S) INDICATED.
(#)	=	NEW CIRCUIT TO EXISTING CIRCUIT BREAKER				DETERMINE EXACT POLE ASSIGNMENT(S) BASED ON EXISTING COLOR-CODING OF THE BRANCH CIRCUIT CONDUCTOR INSULATION. PROVIDE NEW BREAKER IF REQUIRED.
(G)	=	PROVIDE GROUND-FAULT CIRCUIT INTERRUPTER (GFCI) CIRCUIT BREAKER				
(GE)	=	PROVIDE GROUND-FAULT EQUIPMENT PROTECTION (GFEP) CIRCUIT BREAKER				
(ST)	=	PROVIDE SHUNT TRIP CIRCUIT BREAKER		*	=	WIRE SIZED TO COMPENSATE FOR VOLTAGE DROP
(A)	=	PROVIDE ARC-FAULT CIRCUIT INTERRUPTER (AFCI) CIRCUIT BREAKER		+	=	REFER TO DRAWINGS FOR SPECIFICATIONS
(L)	=	PROVIDE LOCK-ON DEVICE		SL	=	SEE THE SINGLE LINE DIAGRAM / SCHEDULE FOR WIRE SIZE AND VOLTAGE DROP

PANEL SCHEDULE GENERAL NOTES

A. PROVIDE HACR RATED BREAKERS ON ALL MOTOR LOADS.

B. PROVIDE LOCKING TYPE BREAKER FOR ALL LIFE SAFETY AND NIGHT LIGHTING BRANCH CIRCUITS.

C. ALL VOLTAGE DROP CALCULATIONS AND COMPENSATED WIRE SIZES ARE BASED ON RIGHT ANGLE CIRCUIT LENGTHS TO THE LAST DEVICE. ACTUAL VOLTAGE DROP VARIES BASED ON INSTALLED WIRE LENGTH.

PANEL KEY		
--	--	--
--	--	LBAA
--	--	LAAA

PANEL NAME: LBAA																																			
SUPPLY FROM: UTILITY 0						MAINS RATING (A): 800						FAULT CURRENT (A): 36401						SURGE SUPPRESSION: ULSE:																	
LOCATION: STORAGE 0						MAINS TYPE: THERMAL MAGNETIC						SHORT CIRCUIT RATING (A): 42000						ULSE:																	
DISTRIBUTION SYSTEM: 208/120V 3PH 4W						FEEDER ID: U800-4C						LUGS TYPE:						200% NEUTRAL:																	
FEEDER: (3) SETS OF (4) #300 KCMIL CU IN 3" CONDUIT EACH						ENCLOSURE TYPE: NEMA 1						ISOLATED GROUND:																							
CKT	CIRCUIT DESCRIPTION										VD%	AWG	GND	TRIP	FRAME	POLE	A	B	C	POLE	FRAME	TRIP	GND	AWG	VD%	CIRCUIT DESCRIPTION					CKT				
1	L1A										SL	SL	SL	250 A	250 A	2	0.00	0.00			2	400 A	400 A	SL	SL	SL		WIREWAY					2		
3																		0.00	0.00														4		
5	VRF-1-01 VRF-1-02										0.128	#12	#12	15 A	15 A	2		0.08	1.54		0.08	1.54	2	20 A	20 A	#10	#10	1.823	CU-01						6
7																	0.08	1.54		0.28	1.54		2	20 A	20 A	#10	#10	2.286	CU-02						8
9	VRF-2-01 VRF-2-02 VRF-2-03 VRF-2-04 VRF-2-13										0.467	#12	#12	15 A	15 A	2					0.28	1.54	2	20 A	20 A	#10	#10	2.286	CU-02						10
11																				0.28	1.54		2	20 A	20 A	#10	#10	2.286	CU-02						12
13	DS-01										0.105	#12	#12	15 A	15 A	2	0.06	0.06				2	15 A	15 A	#12	#12	0.132	DS-02						14	
15																		0.06	0.06				2	15 A	15 A	#12	#12	0.132	DS-02						16
17	HRB-03 MOTOR CORRIDOR 2										0.058	#12	#12	20 A	20 A	2		0.04	0.06		0.04	0.06	2	20 A	20 A	#12	#12	0.086	HRB-04						18
19																	0.04	0.06		0.04	0.06		2	20 A	20 A	#12	#12	0.086	HRB-04						20
21	CH-01										0.072	#12	#12	15 A	15 A	2					0.04	0.06	2	15 A	15 A	#12	#12	0.111	CH-02 MOTOR CORRIDOR 107						22
23																				0.04	0.06		2	15 A	15 A	#12	#12	0.111	CH-02 MOTOR CORRIDOR 107						24
25	CH-03 MOTOR VESTIBULE 122										0.069	#12	#12	15 A	15 A	2	0.06	0.06				2	15 A	15 A	#12	#12	0.034	CH-04 MOTOR CORRIDOR C-4						26	
27																		0.06	0.06				2	15 A	15 A	#12	#12	0.034	CH-04 MOTOR CORRIDOR C-4						28
29																																	30		
31																																	32		
33																																	34		
35																																	36		
37																																	38		
39																																	40		
41																																	42		
TOTAL CONNECTED LOAD:											1.9 kVA	2.1 kVA	3.6 kVA																						
LOAD CLASSIFICATION		CONNECTED LOAD		DEMAND FACTOR		ESTIMATED DEMAND		NOTES:		BREAKER QUANTITIES (NEW ONLY)																									
Motor		7711 VA		110.01%		8483 VA				(8) 15A / 2P, (4) 20A / 2P, (1) 250A / 2P, (1) 400A / 2P																									
PANEL TOTALS																																			
TOTAL CONNECTED LOAD:											7.7 kVA																								
DEMAND CALCULATION NOTES:																																			
TOTAL DEMAND:											8.5 kVA																								
TOTAL DEMAND AMPS:											24 A																								

PANEL NAME: LAAA																							
SUPPLY FROM: UTILITY A					MAINS RATING (A): 800					FAULT CURRENT (A): 32782					SURGE SUPPRESSION:								
LOCATION: MECH. M1					MAINS TYPE: THERMAL MAGNETIC					SHORT CIRCUIT RATING (A): 42000					ULSE:								
DISTRIBUTION SYSTEM: 208/120V 3PH 4W					FEEDER ID: U800-4C					LUGS TYPE:					200% NEUTRAL:								
FEEDER: (3) SETS OF (4) #300 KCMIL CU IN 3" CONDUIT EACH					ENCLOSURE TYPE: NEMA 1					ISOLATED GROUND:													
CKT	CIRCUIT DESCRIPTION				VD%	AWG	GND	TRIP	FRAME	POLE	A	B	C	POLE	FRAME	TRIP	GND	AWG	VD%	CIRCUIT DESCRIPTION		CKT	
1	D-A				SL	SL	SL	400 A	400 A	2	0.00	0.00		2	400 A	400 A	SL	SL	SL	D-B	2		
3												0.00	0.00									4	
5	VRF-2-05 VRF-2-06 VRF-2-07 VRF-2-08 VRF-2-09				1.228	#12	#12	15 A	15 A	2			0.74	1.17	2	15 A	15 A	#12	#12	1.918	VRF-1-03 VRF-1-04 VRF-1-05 VRF-1-06 VRF-1-07	6	
7	VRF-2-10 VRF-2-11 VRF-2-12 VRF-2-14										0.74	1.17								VRF-1-08 VRF-1-09A VRF-1-09B VRF-1-10	8		
9												5.94	4.11									10	
11	CU-04A				0.786	#4	#8	70 A	70 A	3			5.94	4.11	3	40 A	40 A	#10	#8	1.219	CU-04B	12	
13											5.94	4.11										14	
15												5.94	5.94									16	
17	CU-03A				0.673	#4	#8	70 A	70 A	3			5.94	5.94	3	70 A	70 A	#8	#4	0.736	CU-03B	18	
19											5.94	5.94										20	
21												5.94	0.03									22	
23	CU-03C				0.787	#4	#8	70 A	70 A	3			5.94	0.03	3	20 A	20 A	#12	#12	0.027	ERV-01	24	
25											5.94	0.03										26	
27	HRB-01				0.028	#12	#12	20 A	20 A	2			0.04	0.03	2	20 A	20 A	#12	#12	0.023	HRB-02	28	
29													0.04	0.03								30	
31	EWH-01 MOTOR LOBBY L1				0.016	#12	#12	15 A	15 A	2	0.06	0.00		3	20 A	20 A	#12	#12	0	RTU-01 MOTOR	32		
33												0.06	0.00									34	
35	RTU-02 MOTOR				0	#12	#12	20 A	20 A	3	0.00											36	
37												0.00										38	
39																						40	
41																						42	
43																						44	
45																						46	
47																						48	
49																						50	
51																						52	
53																						54	
TOTAL CONNECTED LOAD:											23.9 kVA	28.0 kVA	29.9 kVA										
LOAD CLASSIFICATION		CONNECTED LOAD		DEMAND FACTOR		ESTIMATED DEMAND		NOTES:		BREAKER QUANTITIES (NEW ONLY) (3) 15A / 2P, (2) 20A / 2P, (3) 20A / 3P, (2) 400A / 2P, (1) 40A / 3P, (4) 70A / 3P													
Motor		87788 VA		105.08%		52246 VA																	

ELECTRIC EQUIPMENT SUPPLY SCHEDULE													
EQUIPMENT MARK	SUPPLY FROM	CKT	EMERG.	LOAD (KVA)	AVAILABLE FAULT CURRENT	VOLTS	POLE	HTG KW	WATT	HP	FLA (A)	MCA (A)	BREAKER RATING (A)
CH-02	LBAA	22,24		0.11	1551	208 V	2				0.6	15	15
CH-03	LBAA	25,27		0.11	1972	208 V	2				0.6	15	15
CH-04	LBAA	26,28		0.11	4303	208 V	2				0.6	15	15
CU-01	LBAA	6,8		3.09	1895	208 V	2				16.5	20	20
CU-02	LBAA	10,12		3.09	1737	208 V	2				16.5	20	20
CU-03A	LAAA	15,17,19		17.83	9236	208 V	3				55	70	70
CU-03B	LAAA	16,18,20		17.83	8894	208 V	3				55	70	70
CU-03C	LAAA	21,23,25		17.83	8566	208 V	3				55	70	70
CU-04A	LAAA	9,11,13		17.83	8566	208 V	3				55	70	70
CU-04B	LAAA	10,12,14		12.32	1422	208 V	3				38	40	40
DS-01	LBAA	13,15		0.11	1144	208 V	2				0.6	15	15
DS-02	LBAA	14,16		0.11	1108	208 V	2				0.6	15	15
ERV-01	LAAA	22,24,26		0.08	1170	208 V	3						20
EWB-01	LAAA	31,33		0.11	7261	208 V	2				0.6	15	15
HRB-01	LAAA	27,29		0.08	3620	208 V	2						20
HRB-02	LAAA	28,30		0.08	3496	208 V	2						20
HRB-03	LBAA	17,19		0.08	1833	208 V	2						20
HRB-04	LBAA	18,20		0.11	1873	208 V	2						20
VRF-1-01	LBAA	5,7		0.08	1728	208 V	2				0.4	15	15
VRF-1-02	LBAA	5,7		0.08	2171	208 V	2				0.4	15	15
VRF-1-03	LAAA	6,8		0.11	1780	208 V	2				0.6	15	15
VRF-1-04	LAAA	6,8		0.06	2846	208 V	2				0.3	15	15
VRF-1-05	LAAA	6,8		0.26	2447	208 V	2				1.4	15	15
VRF-1-06	LAAA	6,8		0.26	2197	208 V	2				1.4	15	15
VRF-1-07	LAAA	6,8		0.26	1699	208 V	2				1.4	15	15
VRF-1-08	LAAA	6,8		0.08	9963	208 V	2				0.4	15	15
VRF-1-09A	LAAA	6,8		0.34	2796	208 V	2				1.8	15	15
VRF-1-09B	LAAA	6,8		0.64	1517	208 V	2				3.4	15	15
VRF-1-10	LAAA	6,8		0.34	8547	208 V	2				1.8	15	15
VRF-2-01	LBAA	9,11		0.11	1854	208 V	2				0.6	15	15
VRF-2-02	LBAA	9,11		0.08	2364	208 V	2				0.4	15	15
VRF-2-03	LBAA	9,11		0.11	2741	208 V	2				0.6	15	15
VRF-2-04	LBAA	9,11		0.11	7886	208 V	2				0.6	15	15
VRF-2-05	LAAA	5,7		0.26	1938	208 V	2				1.4	15	15
VRF-2-06	LAAA	5,7		0.26	2881	208 V	2				1.4	15	15
VRF-2-07	LAAA	5,7		0.11	5954	208 V	2				0.6	15	15
VRF-2-08	LAAA	5,7		0.15	2676	208 V	2				0.8	15	15
VRF-2-09	LAAA	5,7		0.26	1845	208 V	2				1.4	15	15
VRF-2-10	LAAA	5,7		0.06	3996	208 V	2				0.3	15	15
VRF-2-11	LAAA	5,7		0.26	2525	208 V	2				1.4	15	15
VRF-2-12	LAAA	5,7		0.06	3871	208 V	2				0.3	15	15
VRF-2-13	LAAA	9,11		0.15	4908	208 V	2				0.8	15	15
VRF-2-14	LAAA	5,7		0.06	5206	208 V	2				0.3	15	15

HVAC ELECTRICAL COORDINATION SCHEDULE																										
ABBREVIATIONS				CONTRACTOR TYPE				MOTOR CONTROL TYPE										CONTROL TYPE								
DC	LOCAL DISCONNECT	EC	ELECTRICAL CONTRACTOR	CS	COMBINATION STARTER	TC	TIMECLOCK																			
MC	MOTOR CONTROL (POWER)	EX	EXISTING	MCC	MOTOR CONTROL STARTER	CPT	CONTROL POWER TRANSFORMER																			
SD	DUCT SMOKE DETECTOR	FP	FIRE PROTECTION CONTRACTOR	MG	MAGNETIC STARTER OR CONTACT	BAS	BUILDING AUTOMATION SYSTEM																			
CN	CONTROLS	GC	GENERAL CONTRACTOR	MS	MANUAL STARTER	LOW	LOW VOLTAGE CONTROLS																			
TS	TOGGLE SWITCH	HC	HVAC CONTRACTOR	MS	MANUAL STARTER	LINE	LINE VOLTAGE CONTROLS																			
C/B	H.A.C.R. CIRCUIT BREAKER AT SOURCE PANELBOARD	MFR	MANUFACTURER	MSR	MANUAL STARTER W/ CONTROL RELAY	RLNE	REVERSE ACTING LINE VOLTAGE THERMOSTAT																			
FUSE	FUSE AT LOCAL DISCONNECT (VERIFY FIELD RATING)	PC	PLUMBING CONTRACTOR	OV	OVERCURRENT PROTECTION	MAN	MANUAL																			
FLA	OPERATING FULL LOAD AMPS	OR	OWNER OR OTHERS			FA	FIRE ALARM																			
MCA	MINIMUM CIRCUIT AMPACITY					CO	CARBON MONOXIDE SENSOR																			
CP	CORD AND PULL CONNECTION					INT	INTEGRAL TO EQUIPMENT																			
EQUIPMENT MARK	DESCRIPTION	VOLTS (V)	PHASE	EMERGENCY	BHP (HP)	HP (HP)	HTG (KW)	WATTS	FLA (A)	MCA (A)	QCP (A)	DC TYPE	DC FURN	DC INST	DC WIRE	MC TYPE	MC FURN	MC INST	MC WIRE	CN TYPE	CN FURN	CN INST	CN WIRE	SD TYPE		
ADU-1		120	1	NO					14.1	20			EC	EC	EC	MG	MFR	MFR	MFR	LOW	HC	HC	HC			
CU-1		240	1	NO					33.5	50			EC	EC	EC	MG	MFR	MFR	MFR	LOW	HC	HC	HC			
CU-01	DUCTLESS SPLIT OUTDOOR CONDENSING UNIT	208	1						16.5	20			EC	EC	EC	MG	MFR	MFR	MFR	LOW	MFR	MFR	MFR			
CU-2		240	1	NO					33.5	50			EC	EC	EC	MG	MFR	MFR	MFR	LOW	HC	HC	HC			
CU-02	DUCTLESS SPLIT OUTDOOR CONDENSING UNIT	208	1						16.5	20			EC	EC	EC	MG	MFR	MFR	MFR	LOW	MFR	MFR	MFR			
CU-03	AIR COOLED CONDENSING UNIT	208	3										EC	EC	EC	MG	MFR	MFR	MFR	LOW	HC	HC	HC			
CU-03A	AIR COOLED CONDENSING UNIT	208	3						55	70			EC	EC	EC	MG	MFR	MFR	MFR	LOW	HC	HC	HC			
CU-03B	AIR COOLED CONDENSING UNIT	208	3						55	70			EC	EC	EC	MG	MFR	MFR	MFR	LOW	HC	HC	HC			
CU-03C	AIR COOLED CONDENSING UNIT	208	3						55	70			EC	EC	EC	MG	MFR	MFR	MFR	LOW	HC	HC	HC			
CU-04	AIR COOLED CONDENSING UNIT	208	3										EC	EC	EC	MG	MFR	MFR	MFR	LOW	HC	HC	HC			
CU-04A	AIR COOLED CONDENSING UNIT	208	3						55	70			EC	EC	EC	MG	MFR	MFR	MFR	LOW	HC	HC	HC			
CU-04B	AIR COOLED CONDENSING UNIT	208	3						38	40			EC	EC	EC	MG	MFR	MFR	MFR	LOW	HC	HC	HC			
DS-01	DUCTLESS SPLIT HIGH WALL UNIT	208	1						0.6	15			EC	EC	EC	MG	MFR	MFR	MFR	LOW	MFR	MFR	MFR			
DS-02	DUCTLESS SPLIT HIGH WALL UNIT	208	1						0.6	15			EC	EC	EC	MG	MFR	MFR	MFR	LOW	MFR	MFR	MFR			
ERV-01	PACKAGED AIR TO AIR ENERGY RECOVERY EQUIPMENT	208	3										EC	EC	EC	MG	MFR	MFR	MFR	BAS	HC	HC	HC			
HRB-01	VRF HEAT RECOVERY TERMINAL BOX	208	1										EC	EC	EC	MG	MFR	MFR	MFR	LOW	HC	HC	HC			
HRB-02	VRF HEAT RECOVERY TERMINAL BOX	208	1										EC	EC	EC	MG	MFR	MFR	MFR	LOW	HC	HC	HC			
HRB-03	VRF HEAT RECOVERY TERMINAL BOX	208	1										EC	EC	EC	MG	MFR	MFR	MFR	LOW	HC	HC	HC			
HRB-04	VRF HEAT RECOVERY TERMINAL BOX	208	1										EC	EC	EC	MG	MFR	MFR	MFR	LOW	HC	HC	HC			
VRF-1-01	VRF INDOOR IN CEILING CASSETTE UNIT	208	1						0.4	15			EC	EC	EC	MG	MFR	MFR	MFR	LOW	HC	HC	HC			
VRF-1-02	VRF INDOOR IN CEILING CASSETTE UNIT	208	1						0.4	15			EC	EC	EC	MG	MFR	MFR	MFR	LOW	HC	HC	HC			
VRF-1-03	VRF INDOOR IN CEILING CASSETTE UNIT	208	1						0.6	15			EC	EC	EC	MG	MFR	MFR	MFR	LOW	HC	HC	HC			
VRF-1-04	VRF INDOOR IN CEILING CASSETTE UNIT	208	1						0.3	15			EC	EC	EC	MG	MFR	MFR	MFR	LOW	HC	HC	HC			
VRF-1-05	VRF INDOOR CEILING SUSPENDED UNIT	208	1						1.4	15			EC	EC	EC	MG	MFR	MFR	MFR	LOW	HC	HC	HC			
VRF-1-06	VRF INDOOR CEILING SUSPENDED UNIT	208	1						1.4	15			EC	EC	EC	MG	MFR	MFR	MFR	LOW	HC	HC	HC			
VRF-1-07	VRF INDOOR IN CEILING CASSETTE UNIT	208	1						1.4	15			EC	EC	EC	MG	MFR	MFR	MFR	LOW	HC	HC	HC			
VRF-1-08	VRF INDOOR HIGH WALL UNIT	208	1						0.4	15			EC	EC	EC	MG	MFR	MFR	MFR	LOW	HC	HC	HC			
VRF-1-09A	VRF INDOOR CONCEALED DUCTED UNIT	208	1						1.8	15			EC	EC	EC	MG	MFR	MFR	MFR	LOW	HC	HC	HC		DUCT SMOKE	
VRF-1-09B	VRF INDOOR CONCEALED DUCTED UNIT	208	1						3.4	15			EC	EC	EC	MG	MFR	MFR	MFR	LOW	HC	HC	HC		DUCT SMOKE	
VRF-1-10	VRF INDOOR CONCEALED DUCTED UNIT	208	1						1.8	15			EC	EC	EC	MG	MFR	MFR	MFR	LOW	HC	HC	HC			
VRF-2-01	VRF INDOOR CEILING SUSPENDED UNIT	208	1						0.6	15			EC	EC	EC	MG	MFR	MFR	MFR	LOW	HC	HC	HC			
VRF-2-02	VRF INDOOR IN CEILING CASSETTE UNIT	208	1						0.4	15			EC	EC	EC	MG	MFR	MFR	MFR	LOW	HC	HC	HC			
VRF-2-03	VRF INDOOR CEILING SUSPENDED UNIT	208	1						0.6	15			EC	EC	EC	MG	MFR	MFR	MFR	LOW	HC	HC	HC			
VRF-2-04	VRF INDOOR CEILING SUSPENDED UNIT	208	1						0.6	15			EC	EC	EC	MG	MFR	MFR	MFR	LOW	HC	HC	HC			
VRF-2-05	VRF INDOOR CEILING SUSPENDED UNIT	208	1						1.4	15			EC	EC	EC	MG	MFR	MFR	MFR	LOW	HC	HC	HC			
VRF-2-06	VRF INDOOR CEILING SUSPENDED UNIT	208	1						1.4	15			EC	EC	EC	MG	MFR	MFR	MFR	LOW	HC	HC	HC			
VRF-2-07	VRF INDOOR CEILING SUSPENDED UNIT	208	1						0.6	15			EC	EC	EC	MG	MFR	MFR	MFR	LOW	HC	HC	HC			
VRF-2-08	VRF INDOOR CEILING SUSPENDED UNIT	208	1						0.8	15			EC	EC	EC	MG	MFR	MFR	MFR	LOW	HC	HC	HC			
VRF-2-09	VRF INDOOR CEILING SUSPENDED UNIT	208	1						1.4	15			EC	EC	EC	MG	MFR	MFR	MFR	LOW	HC	HC	HC			
VRF-2-10	VRF INDOOR IN CEILING CASSETTE UNIT	208	1						0.3	15			EC	EC	EC	MG	MFR	MFR	MFR	LOW	HC	HC	HC			
VRF-2-11	VRF INDOOR CEILING SUSPENDED UNIT	208	1						1.4	15			EC	EC	EC	MG	MFR	MFR	MFR	LOW	HC	HC	HC			
VRF-2-12	VRF INDOOR IN CEILING CASSETTE UNIT	208	1						0.3	15			EC	EC	EC	MG	MFR	MFR	MFR	LOW	HC	HC	HC			
VRF-2-13	VRF INDOOR CEILING SUSPENDED UNIT	208	1						0.8	15			EC	EC	EC	MG	MFR	MFR	MFR	LOW	HC	HC	HC			
VRF-2-14	VRF INDOOR IN CEILING CASSETTE UNIT	208	1						0.3	15			EC	EC	EC	MG	MFR	MFR	MFR	LOW	HC	HC	HC			
WH-1		120	1	NO					12.5				MFR	MFR	MFR	---	---	---	---	---	INT	MFR	MFR	MFR		
WH-2		120	1	NO					6.25				MFR	MFR	MFR	---	---	---	---	---	INT	MFR	MFR	MFR		
WH-3		120	1	NO					6.25				MFR	MFR	MFR	---	---	---	---	---	INT	MFR	MFR	MFR		