

# NORTH MYRTLE BEACH MIDDLE SCHOOL MAU & DUCT REPLACEMENT

11240 SC 90, LITTLE RIVER,, SC 29566



WHOLE BUILDING SYSTEMS, LLC  
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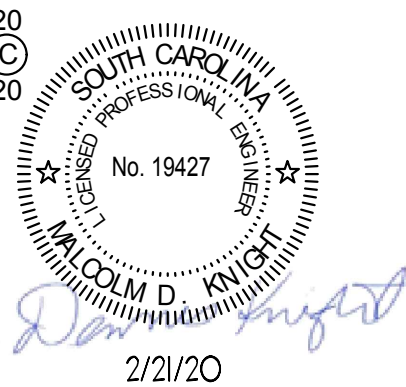
## LOCATION MAP



## NOTES

### GENERAL NOTES (APPLICABLE TO ALL SHEETS)

- A. COORDINATE ALL WORK WITH OTHER TRADES AND EXISTING CONDITIONS.
- B. VERIFY ALL DIMENSIONS IN FIELD PRIOR TO PROCURING ANY EQUIPMENT OR MATERIALS, AND PRIOR TO FABRICATING ANY WORK.



NORTH MYRTLE BEACH MIDDLE SCHOOL  
 MAU & DUCT REPLACEMENT  
 11240 SC 90, LITTLE RIVER, SC 29566

## PROJECT TEAM

### OWNER

HORRY COUNTY SCHOOLS  
OWNER'S REPRESENTATIVE: MR. MARK KOLL

### ENGINEER

WHOLE BUILDING SYSTEMS, LLC  
P.O. BOX 1845  
MT. PLEASANT, SC 29465  
  
26 BEE STREET, SUITE B  
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CONTACT: DENNIS KNIGHT  
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## CODES AND STANDARDS

### APPLICABLE BUILDING CODES AND STANDARDS

THE FOLLOWING CODES AND STANDARDS APPLY TO THE WORK OF THIS PROJECT:  
A. ALL CURRENTLY ADOPTED BUILDING CODES AND STATUTES ADOPTED BY THE STATE OF SOUTH CAROLINA INCLUDING, BUT NOT LIMITED TO:  
1. THE INTERNATIONAL BUILDING CODE (IBC), 2018 EDITION WITH SC MODIFICATIONS,  
2. THE INTERNATIONAL MECHANICAL CODE (IMC), 2018 EDITION,  
3. THE INTERNATIONAL FIRE CODE (IFC), 2018 EDITION WITH SC MODIFICATIONS,  
4. THE INTERNATIONAL ENERGY CONSERVATION CODE (IECC), 2009 EDITION,  
5. THE NATIONAL ELECTRICAL CODE (NFPA-70), 2017 EDITION WITH SC MODIFICATIONS

### SEISMIC AND WIND DESIGN CRITERIA

WIND RESTRAINT LOADING:  
1. ULTIMATE WIND SPEED (3 SEC GUST), Vult: 155 MPH  
2. BUILDING CLASSIFICATION (RISK) CATEGORY: III  
3. IMPORTANCE FACTOR: 1.15  
4. EXPOSURE CATEGORY: C  
5. MINIMUM 10 LB/SQ FT MULTIPLIED BY AREA OF THE MECHANICAL COMPONENT PROJECTED ON A VERTICAL PLANE THAT IS NORMAL TO THE WIND DIRECTION, AND 45 DEGREES EITHER SIDE OF NORMAL.

SEISMIC RESTRAINT LOADING:  
1. BUILDING CLASSIFICATION (RISK) CATEGORY: III  
2. SITE CLASSIFICATION: D  
3. Ss = 0.254  
4. S1 = 0.098  
5. SDS = 0.271  
6. SD1 = 0.156  
7. SEISMIC DESIGN CATEGORY: D (IBC 2018, TABLE 1613.3.5 (1) & (2).

SEE SEISMIC AND WIND LOAD SCHEDULE ON SHEET T2 FOR ADDITIONAL INFORMATION

PROJ. NO. : 19090001  
DATE: 2/21/2020  
DESIGNED BY: MDK  
DRAWN BY: SAM  
CHECKED BY: MDK

### REVISIONS

NO.	DATE	NOTES

TITLE PAGE

T1



## SEISMIC AND WIND LOAD REQUIREMENTS

- A. PER THE INTERNATIONAL BUILDING CODE - 2018, MECHANICAL, PLUMBING, AND ELECTRICAL EQUIPMENT AND COMPONENTS, INCLUDING THEIR SUPPORTS AND ATTACHMENTS, SHALL BE DESIGNED FOR SEISMIC FORCES IN ACCORDANCE WITH CHAPTER 13 OF ASCE 7-16.
- B. EXTERIOR EQUIPMENT (INCLUDING ROOF CURBS & ROOF RAILS) EXPOSED TO WIND SHALL BE DESIGNED AND INSTALLED TO RESIST THE WIND PRESSURES DETERMINED IN ACCORDANCE WITH CHAPTERS 26 TO 29 OF ASCE 7-16.
- C. WHERE DESIGN FOR SEISMIC AND WIND LOADS IS REQUIRED, THE MORE DEMANDING FORCE MUST BE USED.
- D. REFERENCE THE STRUCTURAL DRAWINGS FOR SITE SPECIFIC INFORMATION ON SEISMIC DESIGN CATEGORY, WIND SPEEDS, ETC. IF STRUCTURAL DRAWINGS ARE NOT INCLUDED IN THE SCOPE OF THE CONTRACT DOCUMENTS, REFERENCE THE SITE SPECIFIC SEISMIC AND WIND LOAD DESIGN INFORMATION HEREIN.
- E. ALL EQUIPMENT AND SYSTEMS FOR THIS PROJECT HAVE A COMPONENT IMPORTANCE FACTOR (I<sub>p</sub>) OF 1.0 UNLESS NOTED OTHERWISE.
- F. USE TABLE BELOW TO DETERMINE SEISMIC RESTRAINT REQUIREMENTS FOR EACH COMPONENT.
- G. FOR ALL COMPONENTS/SYSTEMS REQUIRING SEISMIC RESTRAINT, THE COMPONENT SUPPORTS AND ATTACHMENTS SHALL BE DESIGNED (CALCULATIONS AND INSTALLATION DETAILS) AND STAMPED BY A REGISTERED PROFESSIONAL ENGINEER THAT IS DIRECTLY EMPLOYED BY THE SEISMIC RESTRAINT MANUFACTURER WITH AT LEAST FIVE YEARS OF SEISMIC DESIGN EXPERIENCE, LICENSED IN THE STATE OF THE JOB LOCATION. ALL RESTRAINING DEVICES SHALL HAVE A PREAPPROVAL NUMBER FROM CALIFORNIA OSHPD OR SOME OTHER RECOGNIZED GOVERNMENT AGENCY SHOWING MAXIMUM RESTRAINT RATINGS.
- H. WHERE SEISMIC RESTRAINT IS REQUIRED, HOUSEKEEPING PADS NEEDED FOR THE INSTALLATION OF EQUIPMENT UNDER THIS CONTRACT MUST BE DESIGNED AND STAMPED BY THE SEISMIC ENGINEER. DO NOT POUR ANY HOUSEKEEPING PADS PRIOR TO THE RECEIPT OF AN APPROVED SEISMIC SUBMITTAL FROM THE ENGINEER OF RECORD. ALL HOUSEKEEPING PADS DESIGNED AS EXPANSIONS TO EXISTING PADS OR INSTALLED ON TOP OF EXISTING CONCRETE FLOOR SYSTEMS SHALL BE DOWELED INTO THE EXISTING SYSTEMS.
- I. SEISMIC RESTRAINTS FOR DUCTWORK, PIPING, CONDUIT, CABLE TRAY, AND BUS DUCT MUST BE SHOWN ON LAYOUT DRAWINGS SHOWING SPECIFIC RESTRAINT LOCATIONS ALONG WITH ACCOMPANYING DETAILS AND CALCULATIONS PER THE SEISMIC ENGINEER.

### COMPONENT/SYSTEM IMPORTANCE FACTOR (I<sub>p</sub>) SCHEDULE AND SEISMIC DESIGN INFORMATION

I <sub>p</sub> = 1.0	ALL SYSTEMS
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#### SEISMIC DESIGN INFORMATION:

- RISK CATEGORY = III
- SITE CLASSIFICATION = D
- SHORT PERIOD DESIGN SPECTRAL ACCELERATION (S<sub>d1</sub>) = 0.428
- LONG PERIOD DESIGN SPECTRAL ACCELERATION (S<sub>d5</sub>) = 0.828

### SEISMIC DESIGN CATEGORY TABLE - DESIGN CATEGORIES D, E, & F

	COMPONENT IMPORTANCE FACTOR (I <sub>p</sub> )			
	I <sub>p</sub> = 1.0		I <sub>p</sub> = 1.5	
	COMPONENT/SYSTEM IDENTIFICATION	ASCE 7-16 REFERENCE	COMPONENT/SYSTEM IDENTIFICATION	ASCE 7-16 REFERENCE
ROOF MOUNTED EQUIPMENT	RESTRAIN ALL (SEE NOTE 1)	13.1.4.6	RESTRAIN ALL	13.1.4.6
FLOOR MOUNTED EQUIPMENT	RESTRAIN ALL (SEE NOTES 1, 2)	13.1.4.6	RESTRAIN ALL	13.1.4.6
WALL MOUNTED EQUIPMENT	RESTRAIN ALL (SEE NOTES 1, 2)	13.1.4.6	RESTRAIN ALL	13.1.4.6
COMPONENT SUPPORTS	RESTRAIN ALL (SEE NOTE 1)	13.6.5	RESTRAIN ALL	13.6.5
SUSPENDED EQUIPMENT	INLINE WITH DUCT/PIPE	RESTRAIN IF > 75 LBS PROVIDE FLEX. CONN. (SEE NOTE 3)	RESTRAIN IF > 75 LBS PROVIDE FLEX. CONN. (SEE NOTE 3)	13.6.7
	NOT INLINE WITH DUCT/PIPE	RESTRAIN ALL (SEE NOTE 1)	RESTRAIN ALL	13.1.4.6
SUSPENDED DUCTILE PIPING (STEEL, ALUMINUM, COPPER, ETC.)	RESTRAIN IF > 3" (SEE NOTE 4)	13.6.8.3.3.c	RESTRAIN IF > 1" (SEE NOTE 4)	13.6.8.3.3.b
SUSPENDED NON DUCTILE PIPING (CAST IRON, PLASTIC, CERAMIC)	RESTRAIN ALL (SEE NOTE 4)	13.6.8.3.3	RESTRAIN ALL (SEE NOTE 4)	13.6.8.3.3
SUSPENDED PIPE ON TRAPEZE	RESTRAIN IF ANY PIPE ON TRAPEZE > 3" RESTRAIN IF TOTAL WEIGHT OF PIPES ON TRAPEZE > 10 LBS/FT (SEE NOTE 4)	13.6.8.3.1	RESTRAIN IF ANY PIPE ON TRAPEZE > 1" RESTRAIN IF TOTAL WEIGHT OF PIPES ON TRAPEZE > 10 LBS/FT (SEE NOTE 4)	13.6.8.3.1
DUCTWORK	RESTRAIN IF > 6 SOFT AND > 17 LBS/FT (SEE NOTES 4,5)	13.6.7	RESTRAIN IF > 6 SOFT AND > 17 LBS/FT (SEE NOTES 4,5)	13.6.7
MULTIPLE DUCTS ON TRAPEZE	RESTRAIN IF TOTAL WEIGHT OF DUCTS ON TRAPEZE > 10 LBS/FT (SEE NOTES 4,5)	13.6.7	RESTRAIN IF TOTAL WEIGHT OF DUCTS ON TRAPEZE > 10 LBS/FT (SEE NOTES 4,5)	13.1.4.6
SINGLE CONDUIT	RESTRAIN IF ≥ 2.5" (SEE NOTE 4)	13.6.5.6	RESTRAIN IF ≥ 2.5" (SEE NOTE 4)	13.6.5.6
CABLE TRAY/BUS DUCT/TRAPEZED CONDUIT	RESTRAIN IF TOTAL WEIGHT OF RACEWAY > 10 LBS/FT (SEE NOTE 4)	13.6.5.6	RESTRAIN IF TOTAL WEIGHT OF RACEWAY > 10 LBS/FT (SEE NOTE 4)	13.6.5.6
PENDANT, LAY-IN, AND CAN LIGHTS	REQUIRED (SEE NOTE 6)	13.5.6.2	REQUIRED (SEE NOTE 6)	13.5.6.2
COMPONENT CERTIFICATION	NOT REQUIRED	13.2.2	REQUIRED (SEE NOTE 7)	13.2.2

- EQUIPMENT 20 LBS. OR LESS IS EXEMPT IF THE COMPONENT IS POSITIVELY ATTACHED TO THE STRUCTURE, AND FLEXIBLE CONNECTIONS ARE PROVIDED BETWEEN THE COMPONENT AND ASSOCIATED DUCTWORK, PIPING, AND CONDUIT.
- RESTRAINTS ARE NOT REQUIRED IF THE COMPONENT WEIGHS 400 LBS. OR LESS, IS MOUNTED WITH THE CENTER OF MASS AT 4 FT OR LESS ABOVE FINISHED FLOOR, IS POSITIVELY ATTACHED TO THE STRUCTURE, AND HAS FLEXIBLE CONNECTIONS BETWEEN THE COMPONENT AND ASSOCIATED DUCTWORK, PIPING, AND CONDUIT.
- FLEXIBLE CONNECTIONS REQUIRED FOR DUCT, PIPE, AND ELECTRICAL CONNECTIONS.
- RESTRAINT IS NOT REQUIRED IF THE PIPING/DUCTWORK/CONDUIT IS SUPPORTED BY HANGERS AND EACH HANGER IN THE PIPING RUN IS 12" OR LESS IN LENGTH FROM THE TOP OF THE PIPE TO THE SUPPORTING STRUCTURE. WHERE PIPES ARE SUPPORTED ON A TRAPEZE, THE TRAPEZE SHALL BE SUPPORTED BY HANGERS HAVING A LENGTH OF 12" OR LESS. WHERE ROD HANGERS ARE USED, THEY SHALL BE EQUIPPED WITH SWIVELS, EYE NUTS, OR OTHER DEVICES TO PREVENT BENDING IN THE ROD.
- ALL DUCTWORK, REGARDLESS OF SIZE, DESIGNED TO CARRY TOXIC, HIGHLY TOXIC, OR EXPLOSIVE GASES OR USED FOR SMOKE CONTROL MUST BE RESTRAINED.
- COMPONENT CERTIFICATION MUST BE SUPPLIED BY THE EQUIPMENT MANUFACTURER AT TIME OF SUBMITTAL FOR REVIEW BY THE ENGINEER OF RECORD.

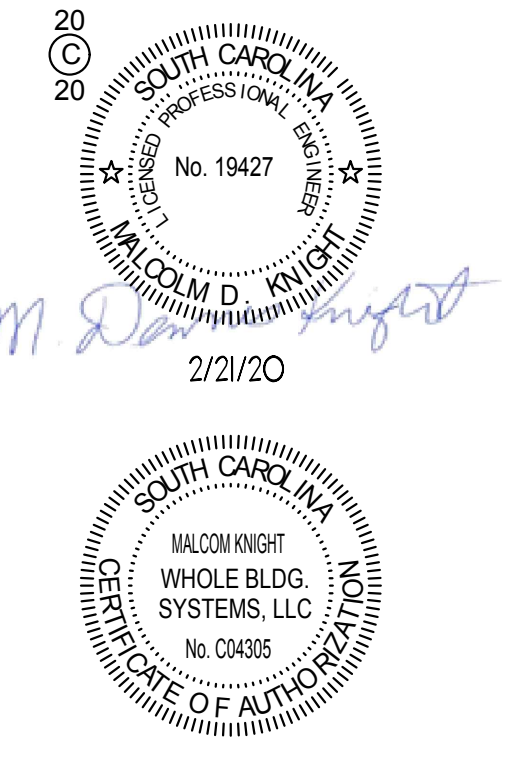
#### GENERAL NOTES:

- DRAWINGS ARE DIAGRAMMATIC IN NATURE. THE GENERAL CONTRACTOR SHALL VERIFY ALL EXISTING CONDITIONS IN THE FIELD PRIOR TO STARTING WORK.
- THE FIRST FIGURE OF DUCT SIZE INDICATES DIMENSION OF FACE SHOWN OR INDICATED. DUCT SIZES ARE NET INTERIOR DIMENSIONS.
- ACCESS PANELS IN HARD SUSPENDED CEILINGS ARE REQUIRED FOR ALL VALVES, TRAPS, DAMPERS, CLEANOUTS, CONTROLS, ETC. ACCESS PANELS SHALL BE FURNISHED AND INSTALLED UNDER THE ARCHITECTURAL SPECIFICATIONS. COORDINATE LOCATION WITH MECHANICAL INSTALLATION AND DEMONSTRATE ACCESS TO EQUIPMENT SERVED.
- SEE STANDARD EQUIPMENT DETAILS FOR CONNECTIONS TO MECHANICAL EQUIPMENT.
- DIFFUSER, REGISTER, AND GRILLE SIZES SHOWN ON FLOOR PLANS ARE NECK SIZES. PROVIDE MANUAL DAMPERS AT EACH DUCT TAKEOFF TO A SINGLE AIR TERMINAL. SEE AIR DISTRIBUTION SCHEDULE FOR UNLABELLED DUCT DIMENSIONS SERVING A SINGLE AIR DISTRIBUTION DEVICE.
- THE MAJORITY OF AIR DISTRIBUTION DEVICES ARE EXISTING AND ARE TO REMAIN WHERE LOCATED IN EXISTING CEILING. FOR NEW AIR DISTRIBUTION DEVICES LOCATED IN EXISTING CEILING, LOCATE NEW AIR DISTRIBUTION DEVICE WHERE PREVIOUS AIR DEVICE WAS LOCATED.
- EXISTING TO REMAIN (ETR) EQUIPMENT AND SYSTEMS ARE SHOWN FOR REFERENCE ONLY.
- REMOVE AND PROTECT CEILING TILES DURING DEMOLITION AND CONSTRUCTION FOR REUSE IN NEW WORK. CEILING TILES BROKEN OR DAMAGED DURING THE COURSE OF DEMOLITION AND/OR CONSTRUCTION SHALL BE REPLACED IN KIND AT NO ADDITIONAL COST TO OWNER.
- REMOVE AND PROTECT REGISTERS, DIFFUSERS, AND GRILLES FOR REUSE IN NEW WORK. CLEAN AIR DEVICES PRIOR TO REINSTALLATION. AIR DISTRIBUTION DEVICES BROKEN OR DAMAGED DURING THE COURSE OF DEMOLITION AND NEW WORK SHALL BE REPLACED IN KIND AT NO ADDITIONAL COST TO OWNER.
- AIRFLOW VALUES ARE SHOWN FOR TAB CONTRACTOR'S REFERENCE. TAB CONTRACTOR SHALL BALANCE THE SYSTEMS TO THE AIRFLOWS INDICATED. NEW AIR DEVICES ARE SHOWN WITH TAG AND AIRFLOW VALUE. SEE AIR DISTRIBUTION SCHEDULE ON SHEET M601 AND SPECIFICATIONS FOR ADDITIONAL INFORMATION.
- LOCATIONS OF RATED WALLS ARE SHOWN BASED ON LIFE SAFETY AS-BUILT PLANS. CONTRACTOR SHALL VERIFY ALL RATED WALL LOCATIONS IN THE FIELD.

#### ABBREVIATIONS

A/E	ARCHITECT / ENGINEER
AD	ACCESS DOOR
AFF	ABOVE FINISHED FLOOR
AFFMS	AIRFLOW MEASURING STATION
AP	ACCESS PANEL
APD	AIR PRESSURE DROP
BAS	BUILDING AUTOMATION SYSTEM
BDD	BACKDRAFT DAMPER
BHP	BRAKE HORSEPOWER
BTU	BRITISH THERMAL UNIT
BTUH	BRITISH THERMAL UNIT PER HOUR
CC	COOLING COIL
CFM	CUBIC FEET PER MINUTE
CM	CARBON MONOXIDE
CO	CLEAN OUT
CO2	CARBON DIOXIDE
COP	COEFFICIENT OF PERFORMANCE
CU	CONDENSING UNIT
CV	CONSTANT VOLUME
DB	DRY BULB
DDC	DIRECT DIGITAL CONTROLS
DEG	DEGREE
DOM	DOMESTIC
DHWR	DOMESTIC HOT WATER RETURN
DP	DEW POINT
DX	DIRECT EXPANSION
EA	EXHAUST AIR
EAT	ENTERING AIR TEMPERATURE
EER	ENERGY EFFICIENCY RATIO
ESP	EXTERNAL STATIC PRESSURE
ETR	EXISTING TO REMAIN
EX OR (E)	EXISTING
F	FAHREINHEIT
FA	FREE AREA
FC	FLEXIBLE CONNECTION
FT	FEET
HGR OR HGRH	HOT GAS REHEAT
HOA	HAND/OFF/AUTOMATIC
HP	HORSEPOWER
HX	HEAT EXCHANGER
HZ	HERTZ
I/O	INPUT/OUTPUT
IAQ	INDOOR AIR QUALITY
IN	INCHES
IN HG	INCHES OF MERCURY
IN WC	INCHES WATER COLUMN
IPLV	INTEGRATED PART LOAD VALUE
LAT	LEAVING AIR TEMPERATURE
LBS/HR	POUNDS PER HOUR
LF	LINEAR FOOT (FEET)
MAT	MIXED AIR TEMPERATURE
MAX	MAXIMUM
MBH	1000 BTUH
MCA	MINIMUM CIRCUIT AMPACITY
MERV	MINIMUM EFFICIENCY REPORTING VALUE
MIN	MINIMUM
MOCP	MAXIMUM OVERCURRENT PROTECTION
NA	NOT APPLICABLE
NC	NOISE CRITERIA
NOM	NOMINAL
NTS	NOT TO SCALE
OA	OUTSIDE AIR
OAD	OUTDOOR AIR DAMPER
PD	PRESSURE DROP
PPM	PARTS PER MILLION
PSI	POUNDS PER SQUARE INCH
PSIG	POUNDS PER SQUARE INCH - GAGE
RA	RETURN AIR
RH	RELATIVE HUMIDITY
RHC	REHEAT COIL
RPM	REVOLUTIONS PER MINUTE
SA	SUPPLY AIR
SA	SOUND ATTENUATOR
SAT	SUPPLY AIR TEMPERATURE
SCR	SILICON CONTROLLED RECTIFIER
SP	STATIC PRESSURE
SS	STAINLESS STEEL
TAB	TESTING, ADJUSTING, AND BALANCING
TSP	TOTAL STATIC PRESSURE
TSTAT	THERMOSTAT
VAV	VARIABLE AIR VOLUME
VFD	VARIABLE FREQUENCY DRIVE
W	WATTS
WB	WET BULB

MECHANICAL EQUIPMENT LEGEND							
SYMBOL		DESCRIPTION	SYMBOL		DESCRIPTION		
SINGLE LINE	DOUBLE LINE		SINGLE LINE	DOUBLE LINE			
<b>LOW OR MEDIUM PRESSURE DUCTWORK</b>			<b>MEDIUM PRESSURE DUCTWORK</b>				
		DUCT SECTION-1ST FIGURE WIDTH, 2ND DEPTH			DUCT TAKE-OFF: CONICAL DUCT TAKE-OFF: RECTANGULAR		
		SQUARE TO ROUND TRANS.			TEE: LONG RADIUS		
		FLEX DUCTWORK			TEE: W/TURNING VANES		
		ELBOW W/TURNING VANES					
		LONG RADIUS ELBOW					
		EXHAUST DUCT SECTION	<b>MISCELLANEOUS</b>				
		SUPPLY DUCT SECTION			THERMOSTAT		
		OUTSIDE AIR DUCT SECTION			HUMIDISTAT		
		RETURN/RELIEF AIR DUCT SECTION			CARBON MONOXIDE SENSOR		
		SHORT RADIUS VANED ELBOW			CARBON DIOXIDE SENSOR		
		FIRE DAMPER			COMBINATION FIRE/SMOKE DAMPER		
<b>LOW PRESSURE DUCTWORK</b>					SMOKE DAMPER		
		DUCT TAKE-OFF: CONICAL			SMOKE DETECTOR		
		DUCT TAKE-OFF: RECTANGULAR			CONDENSATE DRAIN		
		TEE: LONG RADIUS			BACKDRAFT DAMPER		
		TEE: W/TURNING VANES			MOTOR OPERATED DAMPER		
		T TAKE-OFF WITH SPLITTER DAMPER			DAMPER		
		2-SIDED DUCT			MANUAL SWITCH		
		FIRE DAMPER 'A' OR 'B'			SUMMER/WINTER SWITCH		
		COMB. FIRE/SMOKE DAMPER			TOP OF PIPE		
		VOLUME EXTRACTOR			BOTTOM OF PIPE		
		LINED DUCT			TOP OF DUCT		
		EXPOSED ROUND DUCT			BOTTOM OF DUCT		
		TO BE REMOVED			ABOVE FINISHED FLOOR		
		NEW DUCT			UNLESS NOTED OTHERWISE		
		NEW VOLUME DAMPER			OFFSET INTO STRUCTURE		



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 DRAWN BY: SAM  
 CHECKED BY: MDK

REVISIONS		
NO.	DATE	NOTES

**HVAC LEGEND,  
 NOTES, AND  
 ABBREVIATIONS**

**T2**



**EXISTING CONDITIONS NOTES FOR REFERENCE:**

1. ALL RA GRILLES TO BE TYPE "D" UNLESS NOTED OTHERWISE.
2. COORDINATE FINAL GRILLE & DIFFUSER LOCATION W/ ARCH. REFLECTED CEILING PLAN.
3. FIRE DAMPER (VERTICAL WALL) OR RADIATION DAMPER (HORIZONTAL) - 1 HR. PENETRATION (UNLESS OTHERWISE NOTED). ▲
4. ALL HEAT PUMPS (HP) & COND. UNITS (CU) TO BE LOCATED ON 4" THICK CONC. PAD.
5. REFRIGERANT PIPING CONCEALED WITHIN WALL SHALL BE SOFT COPPER W/ NO JOINTS INSIDE WALL.
6. COND. DRAIN BELOW GRADE TO 5'-0" OUTSIDE OF BLDG. - CONNECT TO STORM DRAIN SYSTEM BY G.C.
7. TURN DOWN WITH 2" THREADED ELBOW APPROX. AS SHOWN. SUPPLY LENGTH OF STAINLESS PIPE AND COUPLE TO EXTEND TO 6" BELOW CEILING BUT DO NOT INSTALL THROUGH CEILING. THE PIPE AND COUPLING SHALL BE TURNED OVER TO THE OWNER.

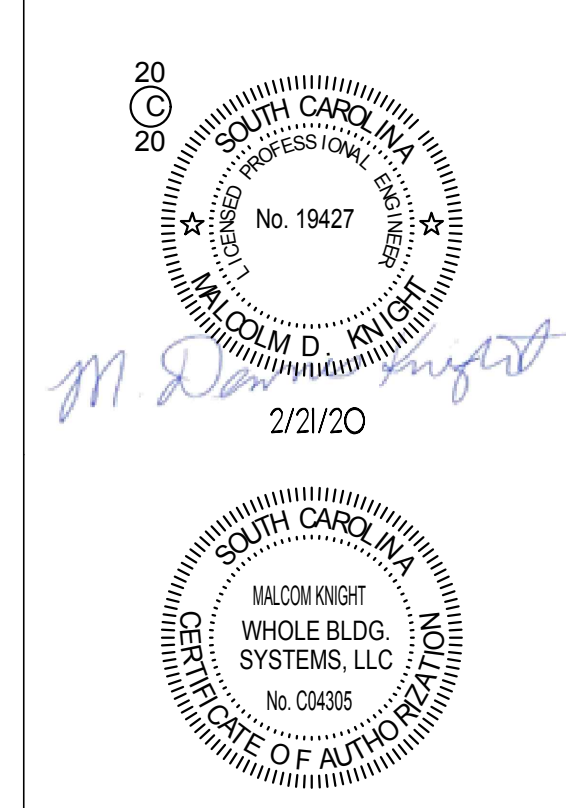
FIRE WALL DESIGNATION	
---	1 HOUR FIRE RATED
---	2 HOUR FIRE RATED
---	4 HOUR FIRE RATED

**GENERAL NOTES**

1. SEE GENERAL NOTES ON SHEETS T1 & T2.
2. SEE PROJECT SPECIFICATIONS.
3. REPORT ANY DEFICIENCIES IN EXISTING CONDITIONS TO THE ENGINEER.

**KEYED NOTES**

1. REMOVE EXISTING UNIT COMPLETE TO INCLUDE EXISTING SUPPLY AND RETURN DUCT WORK, REFRIGERANT LINES AND CONDENSATE LINE ASSOCIATED WITH EQUIPMENT. DUCT HANGERS TO REMAIN, REUSE FOR NEW SUPPLY DUCT. COORDINATE W/ HCSO. ALLOW FOR ANY DESIRED SALVAGE PRIOR TO DISPOSAL.
2. REMOVE EXISTING LOUVER COMPLETE FOR NEW DUCT INSTALLATION
3. SUPPLY TAP AND VOLUME DAMPER TO REMAIN FOR NEW INSTALLATION



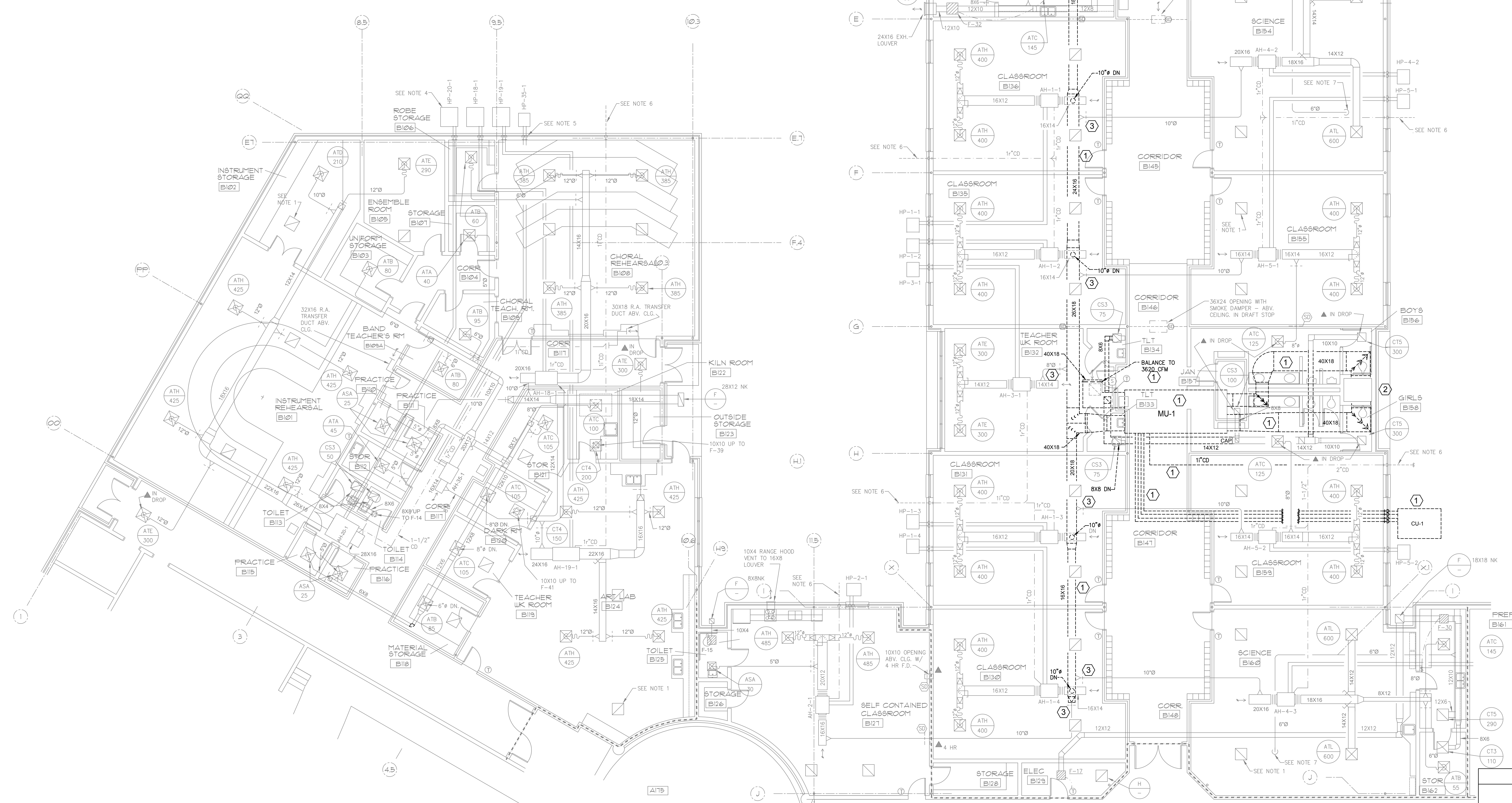
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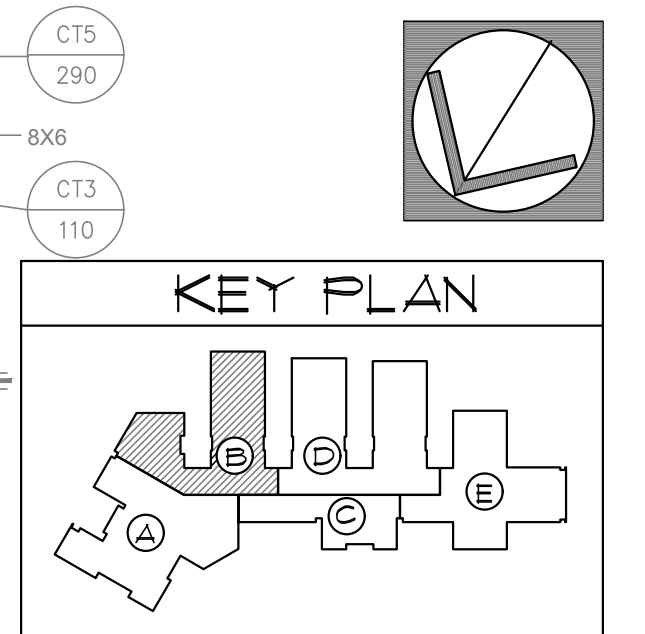
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**HVAC  
DEMOLITION  
FLOOR PLAN 'B'**

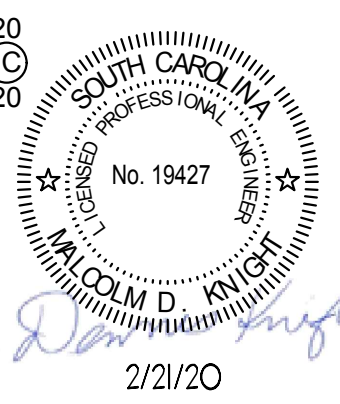
**MD1**



**1 FLOOR PLAN 'B' - HVAC DEMO**  
MD1 1/8"=1'-0"







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HVAC  
DEMOLITION  
FLOOR PLAN 'D'

MD2

**GENERAL NOTES**

1. SEE GENERAL NOTES ON SHEETS T1 & T2.
2. SEE PROJECT SPECIFICATIONS.
3. REPORT ANY DEFICIENCIES IN EXISTING CONDITIONS TO THE ENGINEER.

**KEYED NOTES**

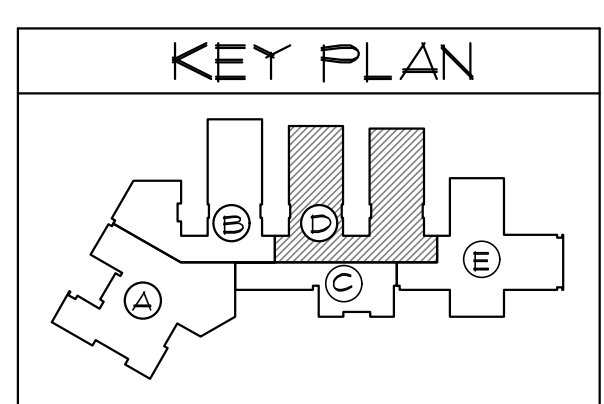
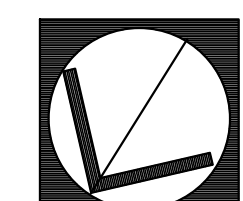
- ① REMOVE EXISTING UNIT COMPLETE TO INCLUDE EXISTING SUPPLY AND RETURN DUCT WORK, REFRIGERANT LINES AND CONDENSATE LINE ASSOCIATED WITH EQUIPMENT. DUCT HANGERS TO REMAIN, REUSE FOR NEW SUPPLY DUCT. COORDINATE W/ HCSO. ALLOW FOR ANY DESIRED SALVAGE PRIOR TO DISPOSAL.
- ② REMOVE EXISTING LOUVER COMPLETE FOR NEW DUCT INSTALLATION
- ③ DUCT, SUPPLY TAP AND VOLUME DAMPER TO REMAIN FOR NEW INSTALLATION IN CLASSROOM, REMOVE UNUSED DUCT

**EXISTING CONDITIONS NOTES FOR REFERENCE:**

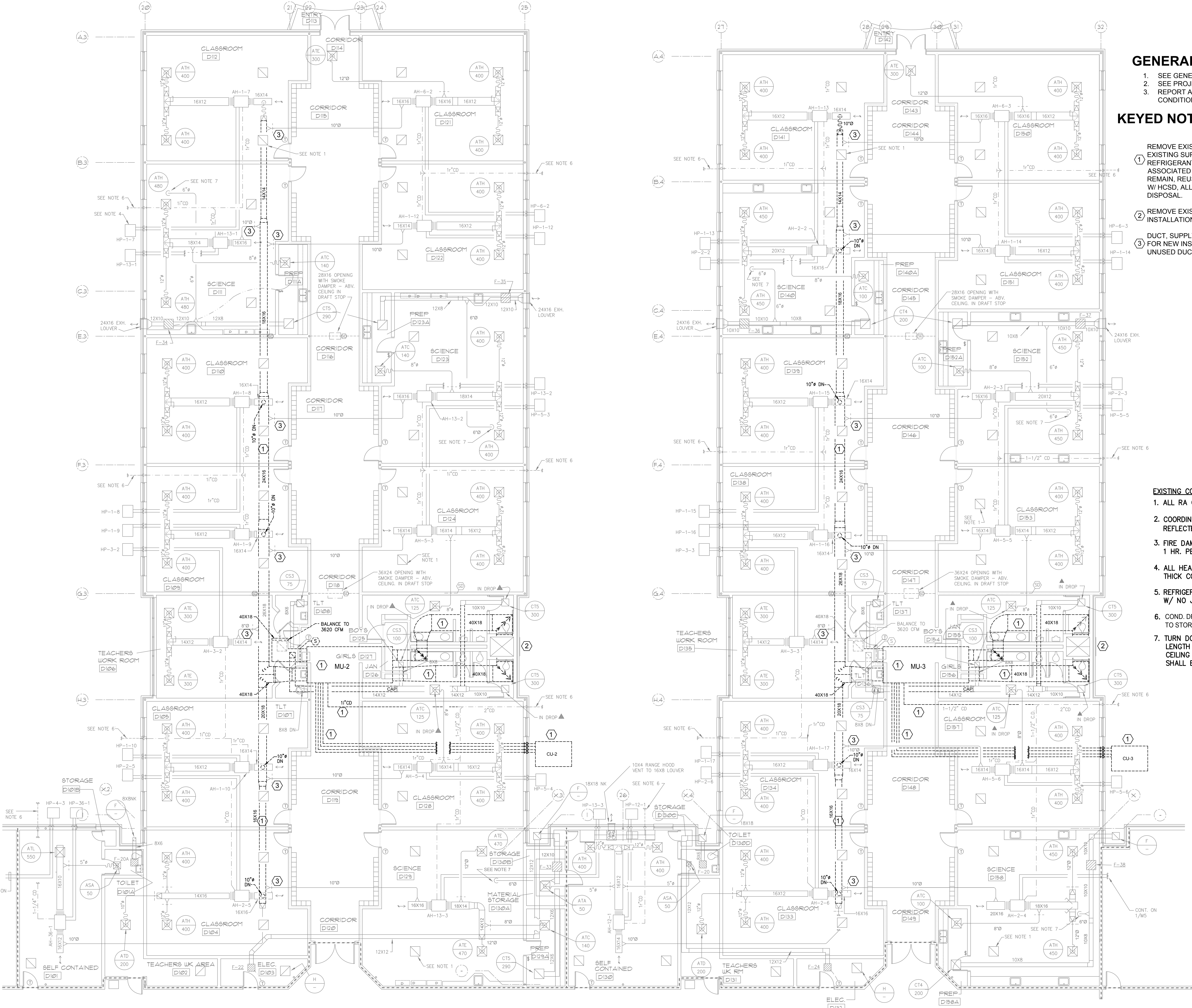
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4. ALL HEAT PUMPS (HP) & COND. UNITS (CU) TO BE LOCATED ON 4" THICK CONC. PAD.
5. REFRIGERANT PIPING CONCEALED WITHIN WALL SHALL BE SOFT COPPER W/ NO JOINTS INSIDE WALL.
6. COND. DRAIN BELOW GRADE TO 5'-0" OUTSIDE OF BLDG. - CONNECT TO STORM DRAIN SYSTEM BY G.C.
7. TURN DOWN WITH 2" THREADED ELBOW APPROX. AS SHOWN. SUPPLY LENGTH OF STAINLESS PIPE AND COUPLE TO EXTEND TO 6" BELOW CEILING BUT DO NOT INSTALL THROUGH CEILING. THE PIPE AND COUPLING SHALL BE TURNED OVER TO THE OWNER.

**FIRE WALL DESIGNATION**

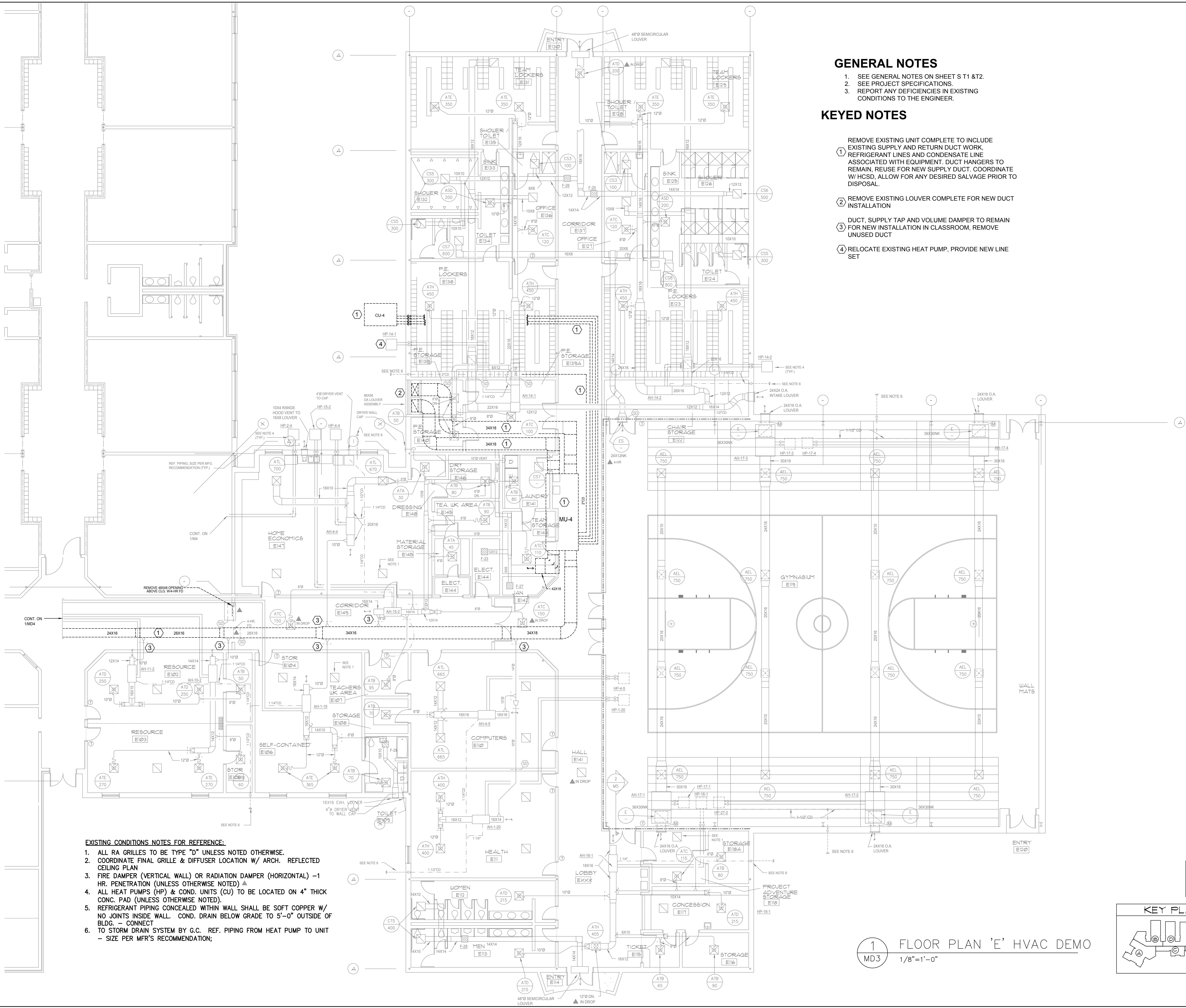
- 1 HOUR FIRE RATED
- 2 HOUR FIRE RATED
- 4 HOUR FIRE RATED



**1 FLOOR PLAN 'D' HVAC DEMO**  
 MD2 1/8"=1'-0"







**GENERAL NOTES**

1. SEE GENERAL NOTES ON SHEET S T1 & T2.
2. SEE PROJECT SPECIFICATIONS.
3. REPORT ANY DEFICIENCIES IN EXISTING CONDITIONS TO THE ENGINEER.

**KEYED NOTES**

- ① REMOVE EXISTING UNIT COMPLETE TO INCLUDE EXISTING SUPPLY AND RETURN DUCT WORK, REFRIGERANT LINES AND CONDENSATE LINE ASSOCIATED WITH EQUIPMENT. DUCT HANGERS TO REMAIN. REUSE FOR NEW SUPPLY DUCT. COORDINATE W/ HCSD, ALLOW FOR ANY DESIRED SALVAGE PRIOR TO DISPOSAL.
- ② REMOVE EXISTING LOUVER COMPLETE FOR NEW DUCT INSTALLATION
- ③ DUCT, SUPPLY TAP AND VOLUME DAMPER TO REMAIN FOR NEW INSTALLATION IN CLASSROOM, REMOVE UNUSED DUCT
- ④ RELOCATE EXISTING HEAT PUMP, PROVIDE NEW LINE SET

- EXISTING CONDITIONS NOTES FOR REFERENCE:**
1. ALL RA GRILLES TO BE TYPE "D" UNLESS NOTED OTHERWISE.
  2. COORDINATE FINAL GRILLE & DIFFUSER LOCATION W/ ARCH. REFLECTED CEILING PLAN
  3. FIRE DAMPER (VERTICAL WALL) OR RADIATION DAMPER (HORIZONTAL) - 1 HR. PENETRATION (UNLESS OTHERWISE NOTED) ▲
  4. ALL HEAT PUMPS (HP) & COND. UNITS (CU) TO BE LOCATED ON 4" THICK CONC. PAD (UNLESS OTHERWISE NOTED).
  5. REFRIGERANT PIPING CONCEALED WITHIN WALL SHALL BE SOFT COPPER W/ NO JOINTS INSIDE WALL. COND. DRAIN BELOW GRADE TO 5'-0" OUTSIDE OF BLDG. - CONNECT TO STORM DRAIN SYSTEM BY G.C. REF. PIPING FROM HEAT PUMP TO UNIT - SIZE PER MFR'S RECOMMENDATION;

**NORTH MYRTLE BEACH MIDDLE SCHOOL**  
**MAU & DUCT REPLACEMENT**  
**11240 SC90, LITTLE RIVER, SC 29566**

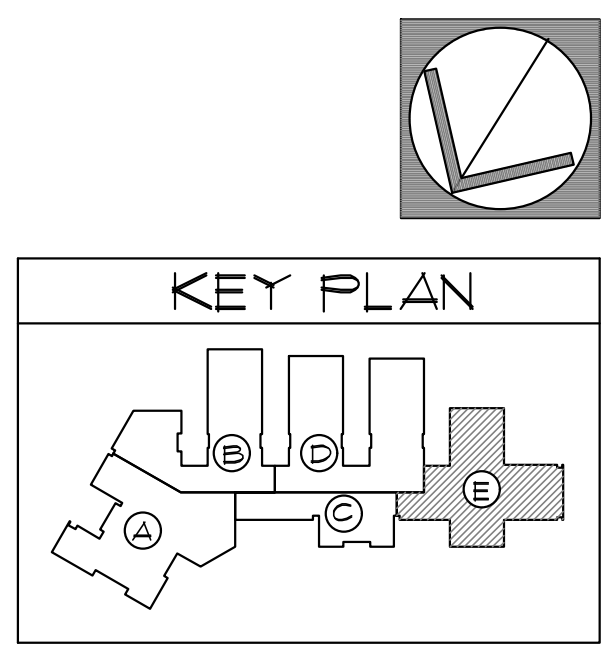
PROJ. NO. : 19090001  
 DATE: 2/21/2020  
 DESIGNED BY: MDK  
 DRAWN BY: SAM  
 CHECKED BY: MDK

REVISIONS		
NO.	DATE	NOTES

**HVAC**  
**DEMOLITION**  
**FLOOR PLAN 'E'**

**MD3**

① FLOOR PLAN 'E' HVAC DEMO  
 1/8"=1'-0"





**NORTH MYRTLE BEACH MIDDLE SCHOOL  
 MAU & DUCT REPLACEMENT  
 11240 SC90, LITTLE RIVER, SC 29566**

PROJ. NO. : 19090001  
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 CHECKED BY: MDK

REVISIONS		
NO.	DATE	NOTES

HVAC  
 DEMOLITION  
 FLOOR PLAN 'C'

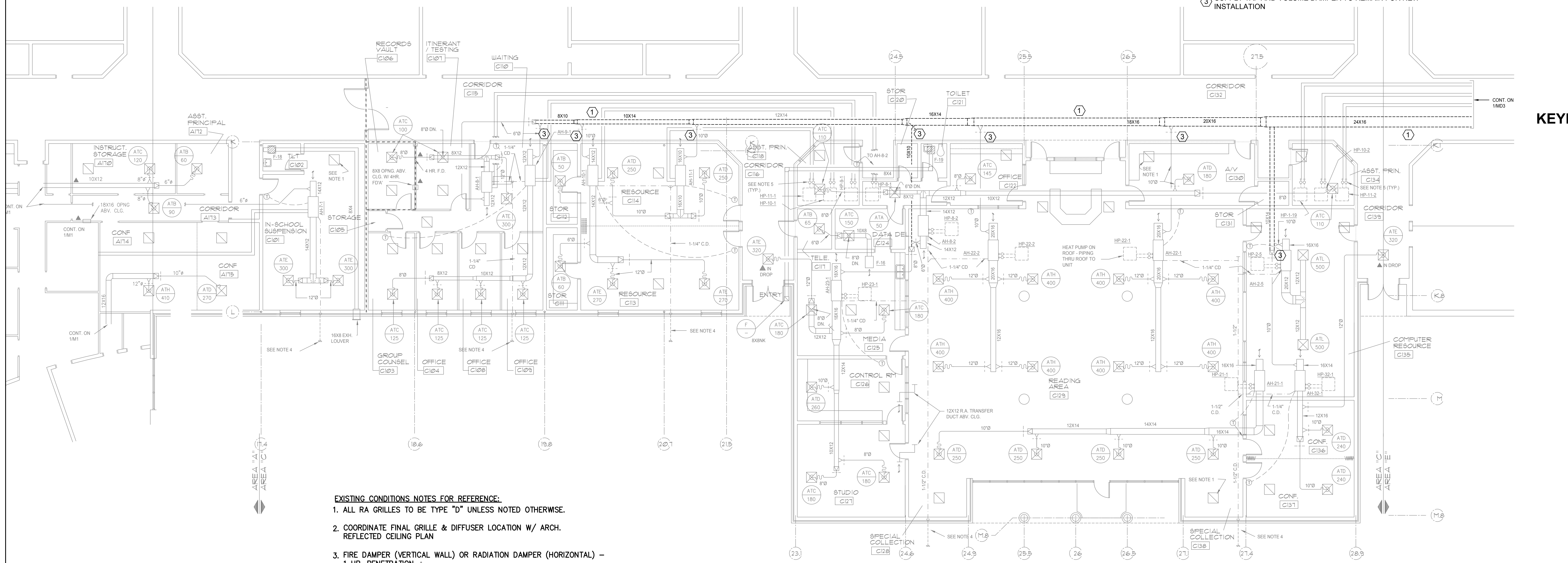
**MD4**

**GENERAL NOTES**

- SEE GENERAL NOTES ON SHEETS T1 & T2.
- SEE PROJECT SPECIFICATIONS.
- REPORT ANY DEFICIENCIES IN EXISTING CONDITIONS TO THE ENGINEER.

**KEYED NOTES**

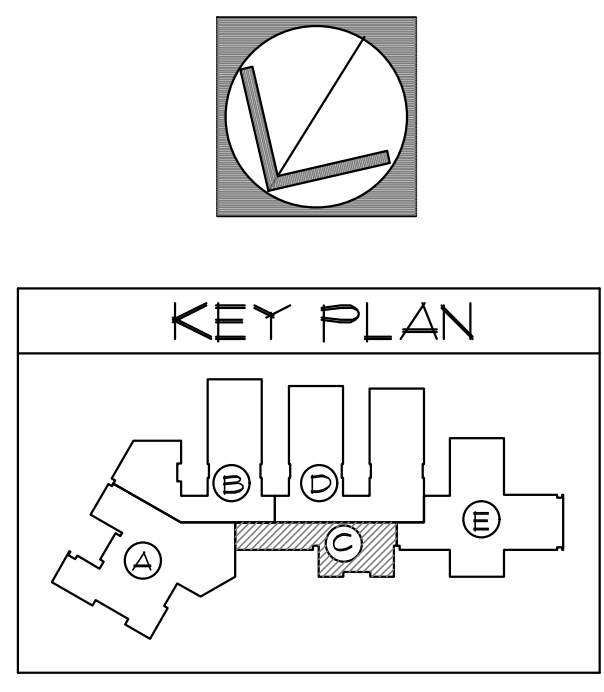
- REMOVE EXISTING UNIT COMPLETE TO INCLUDE EXISTING SUPPLY AND RETURN DUCT WORK, REFRIGERANT LINES AND CONDENSATE LINE ASSOCIATED WITH EQUIPMENT. DUCT HANGERS TO REMAIN. REUSE FOR NEW SUPPLY DUCT. COORDINATE W/ HCS.D. ALLOW FOR ANY DESIRED SALVAGE PRIOR TO DISPOSAL.
- REMOVE EXISTING LOUVER COMPLETE FOR NEW DUCT INSTALLATION
- SUPPLY TAP AND VOLUME DAMPER TO REMAIN FOR NEW INSTALLATION



- EXISTING CONDITIONS NOTES FOR REFERENCE:**
- ALL RA GRILLES TO BE TYPE "D" UNLESS NOTED OTHERWISE.
  - COORDINATE FINAL GRILLE & DIFFUSER LOCATION W/ ARCH. REFLECTED CEILING PLAN
  - FIRE DAMPER (VERTICAL WALL) OR RADIATION DAMPER (HORIZONTAL) - 1 HR. PENETRATION ▲
  - COND. DRAIN BELOW GRADE TO 5'-0" OUTSIDE OF BLDG. - CONNECT TO STORM DRAIN SYSTEM BY G.C.
  - REF. PIPING FROM HEAT PUMP TO UNIT - SIZE PER MFR'S RECOMMENDATION;

FIRE WALL DESIGNATION	
.....	1 HOUR FIRE RATED
-----	2 HOUR FIRE RATED
-----	4 HOUR FIRE RATED

**1** FLOOR PLAN 'C' HVAC DEMO  
 MD4 1/8"=1'-0"





**NORTH MYRTLE BEACH MIDDLE SCHOOL**  
**MAU & DUCT REPLACEMENT**  
**11240 SC90, LITTLE RIVER, SC 29566**

PROJ. NO. : 19090001  
 DATE: 2/2/2020  
 DESIGNED BY: MDK  
 DRAWN BY: SAM  
 CHECKED BY: MDK

REVISIONS		
NO.	DATE	NOTES

**HVAC**  
**NEW WORK**  
**FLOOR PLAN 'B'**

**M1**

**GENERAL NOTES**

1. SEE GENERAL NOTES ON SHEETS T1&T2.
2. SEE PROJECT SPECIFICATIONS.
3. REPORT ANY DEFICIENCIES IN EXISTING CONDITIONS TO THE ENGINEER.

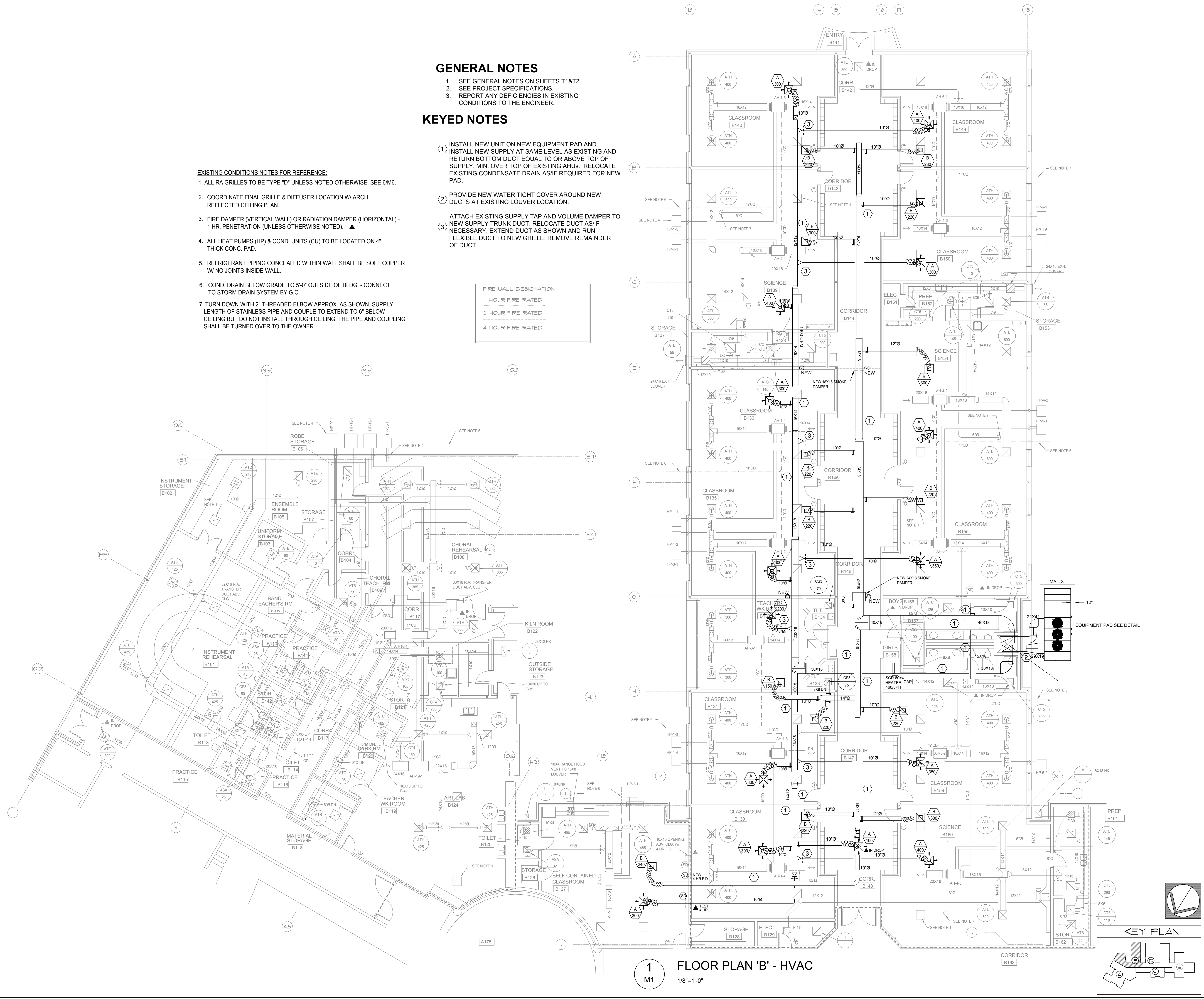
**KEYED NOTES**

- ① INSTALL NEW UNIT ON NEW EQUIPMENT PAD AND INSTALL NEW SUPPLY AT SAME LEVEL AS EXISTING AND RETURN BOTTOM DUCT EQUAL TO OR ABOVE TOP OF SUPPLY, MIN. OVER TOP OF EXISTING AHUS. RELOCATE EXISTING CONDENSATE DRAIN AS/IF REQUIRED FOR NEW PAD.
- ② PROVIDE NEW WATER TIGHT COVER AROUND NEW DUCTS AT EXISTING LOUVER LOCATION.
- ③ ATTACH EXISTING SUPPLY TAP AND VOLUME DAMPER TO NEW SUPPLY TRUNK DUCT. RELOCATE DUCT AS/IF NECESSARY. EXTEND DUCT AS SHOWN AND RUN FLEXIBLE DUCT TO NEW GRILLE. REMOVE REMAINDER OF DUCT.

**EXISTING CONDITIONS NOTES FOR REFERENCE:**

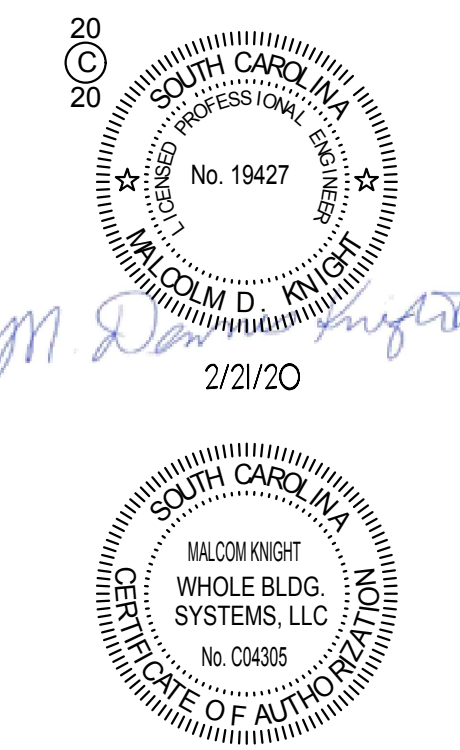
1. ALL RA GRILLES TO BE TYPE "D" UNLESS NOTED OTHERWISE. SEE 6/M6.
2. COORDINATE FINAL GRILLE & DIFFUSER LOCATION W/ ARCH. REFLECTED CEILING PLAN.
3. FIRE DAMPER (VERTICAL WALL) OR RADIATION DAMPER (HORIZONTAL) - 1 HR. PENETRATION (UNLESS OTHERWISE NOTED). ▲
4. ALL HEAT PUMPS (HP) & COND. UNITS (CU) TO BE LOCATED ON 4" THICK CONC. PAD.
5. REFRIGERANT PIPING CONCEALED WITHIN WALL SHALL BE SOFT COPPER W/ NO JOINTS INSIDE WALL.
6. COND. DRAIN BELOW GRADE TO 5'-0" OUTSIDE OF BLDG. - CONNECT TO STORM DRAIN SYSTEM BY G.C.
7. TURN DOWN WITH 2" THREADED ELBOW APPROX. AS SHOWN. SUPPLY LENGTH OF STAINLESS PIPE AND COUPLE TO EXTEND TO 6" BELOW CEILING BUT DO NOT INSTALL THROUGH CEILING. THE PIPE AND COUPLING SHALL BE TURNED OVER TO THE OWNER.

FIRE WALL DESIGNATION	
—	1 HOUR FIRE RATED
- - -	2 HOUR FIRE RATED
— · — · —	4 HOUR FIRE RATED



**1**  
**M1**    **FLOOR PLAN 'B' - HVAC**  
 1/8"=1'-0"





**NORTH MYRTLE BEACH MIDDLE SCHOOL**  
**MAU & DUCT REPLACEMENT**  
**11240 SC90, LITTLE RIVER, SC 29566**

PROJ. NO. : 19090001  
 DATE: 2/21/2020  
 DESIGNED BY: MDK  
 DRAWN BY: SAM  
 CHECKED BY: MDK

REVISIONS

NO.	DATE	NOTES

HVAC  
NEW WORK  
FLOOR PLAN 'D'

M2

**GENERAL NOTES**

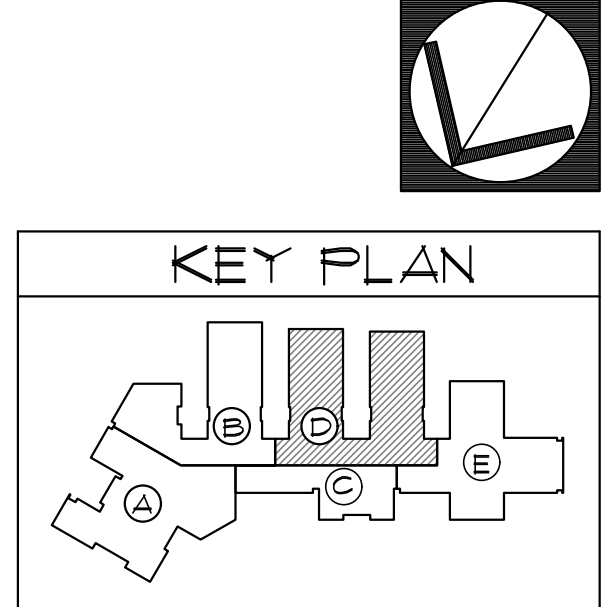
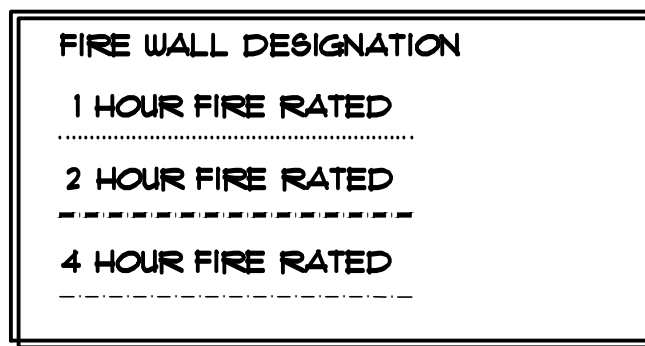
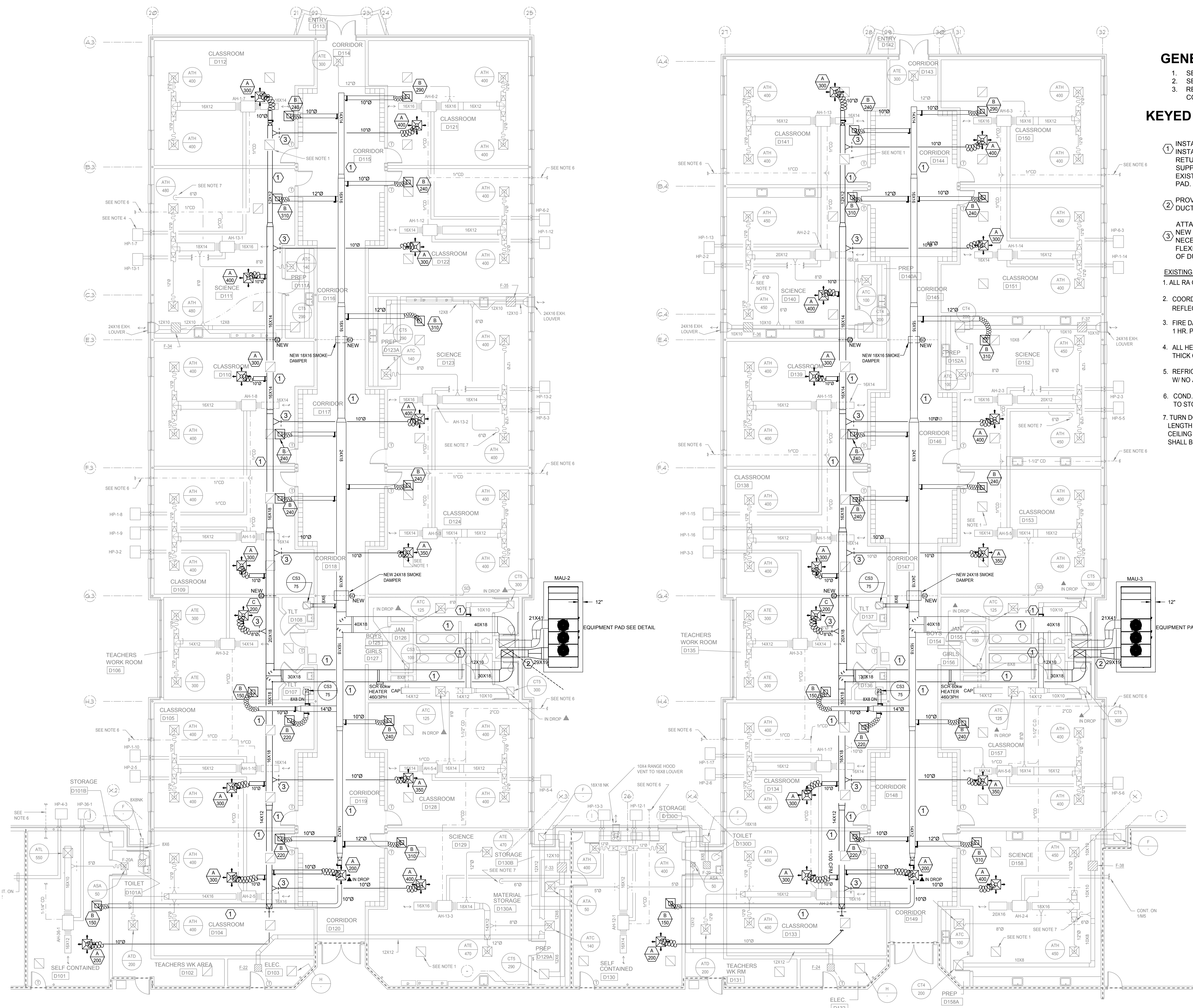
- SEE GENERAL NOTES ON SHEETS T1 & T2.
- SEE PROJECT SPECIFICATIONS.
- REPORT ANY DEFICIENCIES IN EXISTING CONDITIONS TO THE ENGINEER.

**KEYED NOTES**

- INSTALL NEW UNIT ON NEW EQUIPMENT PAD AND INSTALL NEW SUPPLY AT SAME LEVEL AS EXISTING AND RETURN BOTTOM DUCT EQUAL TO OR ABOVE TOP OF SUPPLY, MIN. OVER TOP OF EXISTING AHUS. RELOCATE EXISTING CONDENSATE DRAIN AS/IF REQUIRED FOR NEW PAD.
- PROVIDE NEW WATER TIGHT COVER AROUND NEW DUCTS AT EXISTING LOUVER LOCATION.
- ATTACH EXISTING SUPPLY TAP AND VOLUME DAMPER TO NEW SUPPLY TRUNK DUCT. RELOCATE DUCT AS/IF NECESSARY. EXTEND DUCT AS SHOWN AND RUN FLEXIBLE DUCT TO NEW GRILLE. REMOVE REMAINDER OF DUCT.

**EXISTING CONDITIONS NOTES FOR REFERENCE:**

- ALL RA GRILLES TO BE TYPE "D" UNLESS NOTED OTHERWISE. SEE 6/M6
- COORDINATE FINAL GRILLE & DIFFUSER LOCATION W/ ARCH. REFLECTED CEILING PLAN
- FIRE DAMPER (VERTICAL WALL) OR RADIATION DAMPER (HORIZONTAL) - 1 HR. PENETRATION (UNLESS OTHERWISE NOTED).
- ALL HEAT PUMPS (HP) & COND. UNITS (CU) TO BE LOCATED ON 4" THICK CONC. PAD.
- REFRIGERANT PIPING CONCEALED WITHIN WALL SHALL BE SOFT COPPER W/ NO JOINTS INSIDE WALL.
- COND. DRAIN BELOW GRADE TO 5'-0" OUTSIDE OF BLDG. - CONNECT TO STORM DRAIN SYSTEM BY G.C.
- TURN DOWN WITH 2" THREADED ELBOW APPROX. AS SHOWN. SUPPLY LENGTH OF STAINLESS PIPE AND COUPLE TO EXTEND TO 6" BELOW CEILING BUT DO NOT INSTALL THROUGH CEILING. THE PIPE AND COUPLING SHALL BE TURNED OVER TO THE OWNER.



**1 FLOOR PLAN 'D' HVAC**  
 M2 1/8"=1'-0"



**NORTH MYRTLE BEACH MIDDLE SCHOOL**  
**MAU & DUCT REPLACEMENT**  
**11240 SC90, LITTLE RIVER, SC 29566**

PROJ. NO. : 19090001  
 DATE: 2/21/2020  
 DESIGNED BY: MDK  
 DRAWN BY: SAM  
 CHECKED BY: MDK

REVISIONS		
NO.	DATE	NOTES

**HVAC**  
**NEW WORK**  
**FLOOR PLAN 'E'**

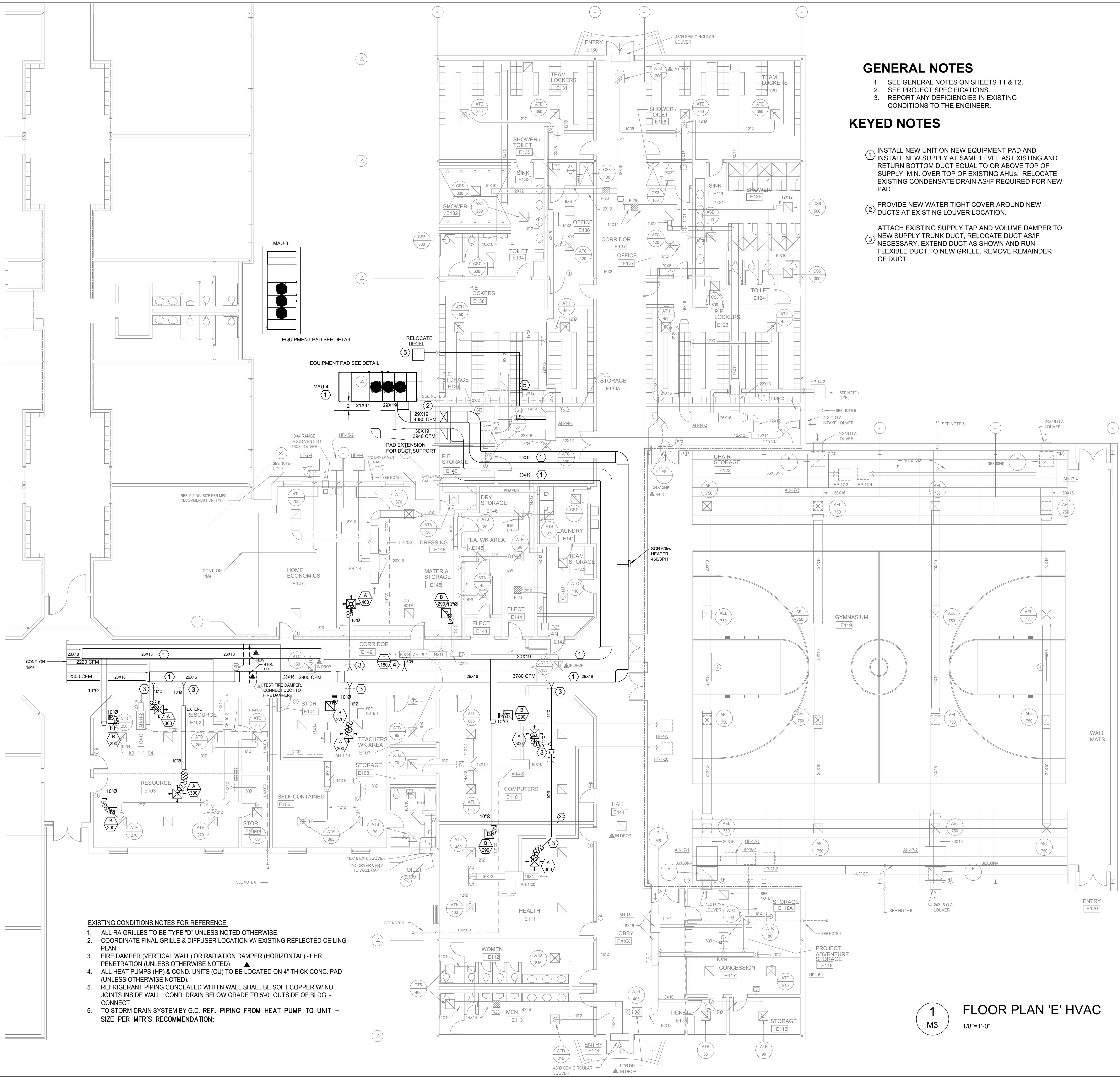
**M3**

**GENERAL NOTES**

- SEE GENERAL NOTES ON SHEETS T1 & T2.
- SEE PROJECT SPECIFICATIONS.
- REPORT ANY DEFICIENCIES IN EXISTING CONDITIONS TO THE ENGINEER.

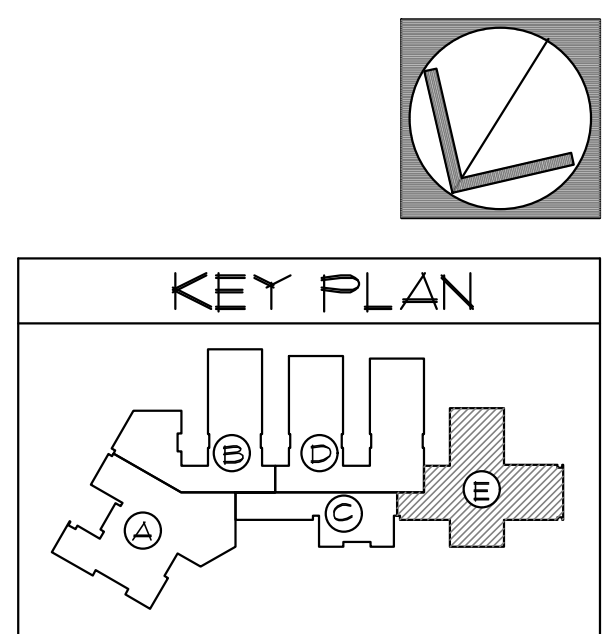
**KEYED NOTES**

- INSTALL NEW UNIT ON NEW EQUIPMENT PAD AND INSTALL NEW SUPPLY AT SAME LEVEL AS EXISTING AND RETURN BOTTOM DUCT EQUAL TO OR ABOVE TOP OF SUPPLY. MIN. OVER TOP OF EXISTING AHUS. RELOCATE EXISTING CONDENSATE DRAIN AS/IF REQUIRED FOR NEW PAD.
- PROVIDE NEW WATER TIGHT COVER AROUND NEW DUCTS AT EXISTING LOUVER LOCATION.
- ATTACH EXISTING SUPPLY TAP AND VOLUME DAMPER TO NEW SUPPLY TRUNK DUCT. RELOCATE DUCT AS/IF NECESSARY. EXTEND DUCT AS SHOWN AND RUN FLEXIBLE DUCT TO NEW GRILLE. REMOVE REMAINDER OF DUCT.



- EXISTING CONDITIONS NOTES FOR REFERENCE:**
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  - FIRE DAMPER (VERTICAL WALL) OR RADIATION DAMPER (HORIZONTAL) -1 HR. PENETRATION (UNLESS OTHERWISE NOTED) ▲
  - ALL HEAT PUMPS (HP) & COND. UNITS (CU) TO BE LOCATED ON 4" THICK CONC. PAD (UNLESS OTHERWISE NOTED).
  - REFRIGERANT PIPING CONCEALED WITHIN WALL SHALL BE SOFT COPPER W/ NO JOINTS INSIDE WALL. COND. DRAIN BELOW GRADE TO 5'-0" OUTSIDE OF BLDG. - CONNECT TO STORM DRAIN SYSTEM BY G.C. REF. PIPING FROM HEAT PUMP TO UNIT - SIZE PER MFR'S RECOMMENDATION;

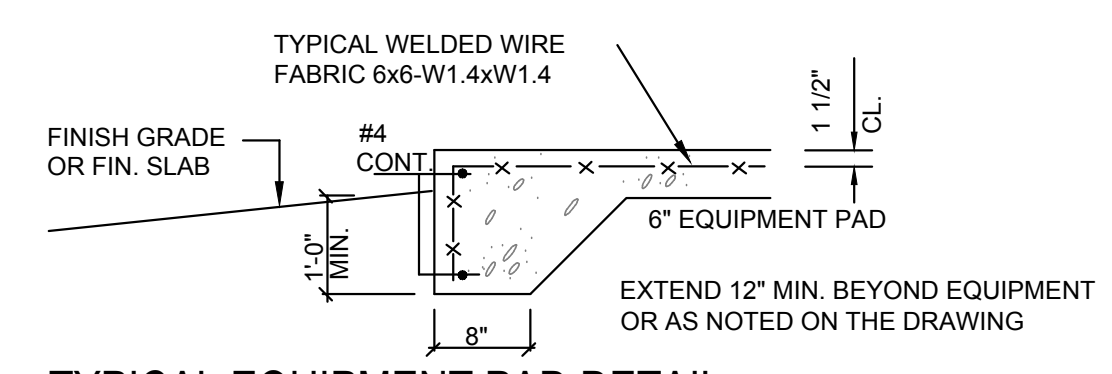
**1**  
**M3**  
**FLOOR PLAN 'E' HVAC**  
 1/8"=1'-0"



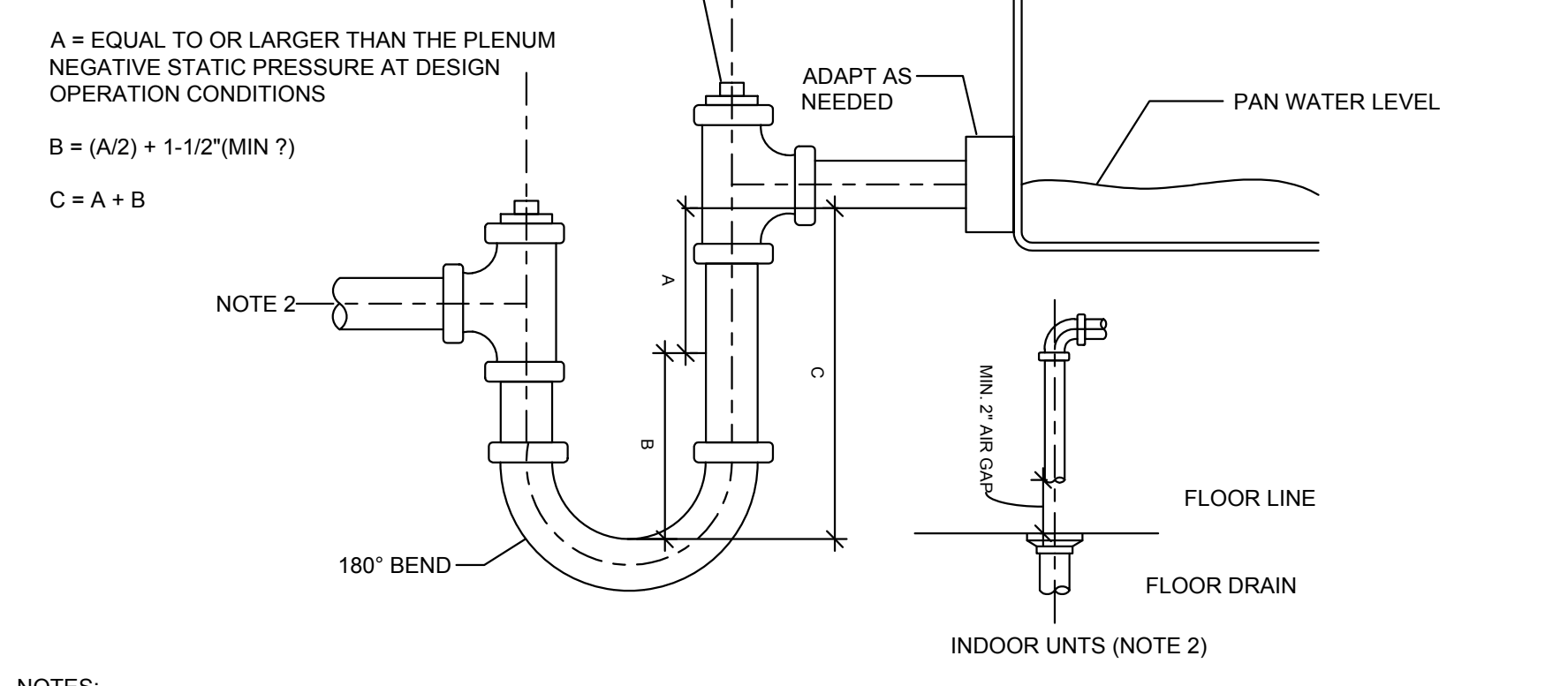


HVAC GRILLE SCHEDULE							
SYMBOL	TYPE	CFM (NOMINAL)	THROW	SIZE	MFG.	MODEL #	REMARKS
A	SUPPLY	100-250	4-WAY	8"	KRUEGER	55HR-04-8-18-F23-24X24-00-00-44	1
B	RETURN	-	1-WAY	10"X10"	KRUEGER	55RH-10X10-F23-24X24-03-00-44	1.2
C	SUPPLY	100-250	4-WAY	8"	KRUEGER	55HR-04-8-18-F22-NOE-00-00-44	1

- NOTES:**
- COORDINATE REGISTER AND GRILLE FINISHES WITH OWNER.
  - CONTRACTOR SHALL COORDINATE ALL GRILLE LOCATIONS WITH OWNER.
  - CONTRACTOR TO PROVIDE 1 CASE OF EACH FILTER TYPE, USE 1" PLEATED.
- REMARKS:**
- PROVIDE T-BAR PANEL SUPPLIED BY GRILLE MANUFACTURER FOR 2'X2' LAY-IN CEILING INSTALLATION
  - RETURN GRILLES TO BE HINGED

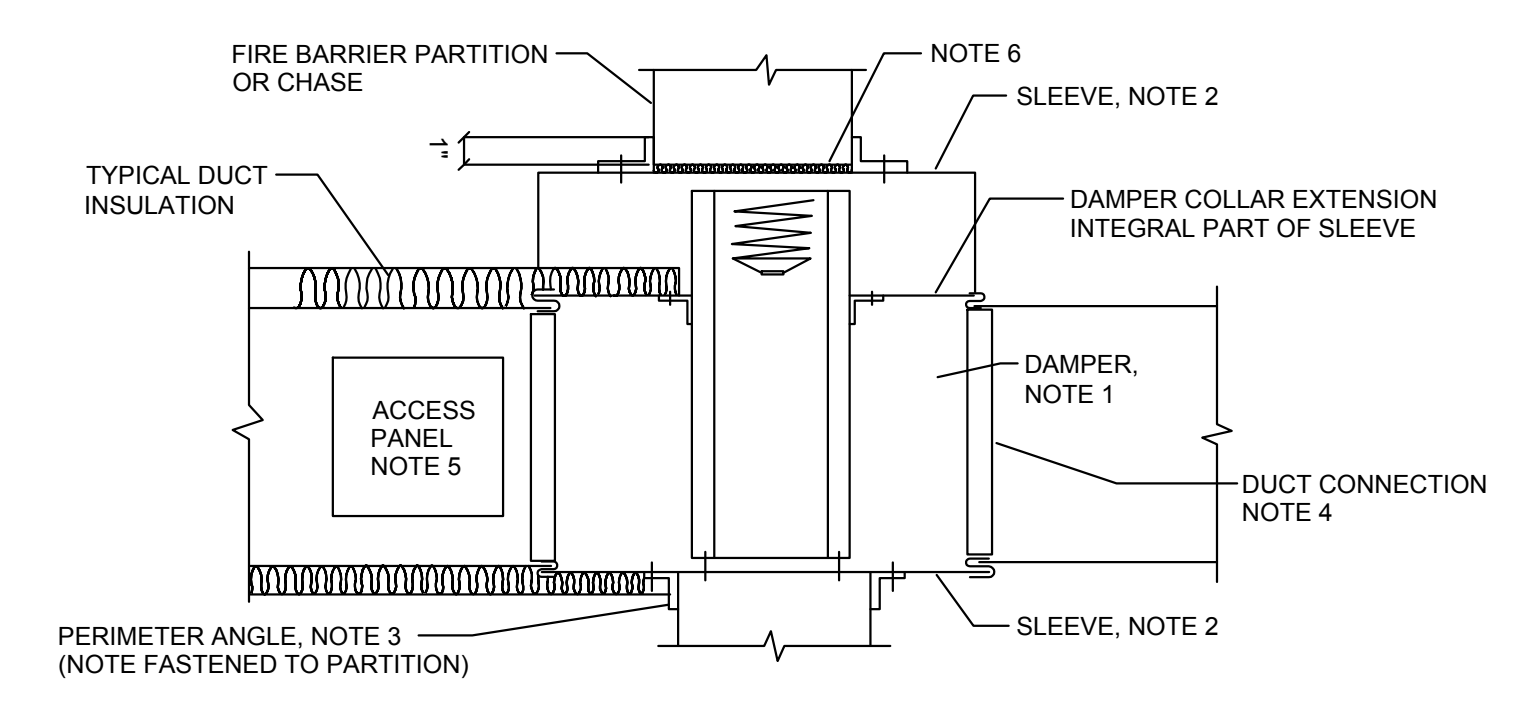


**TYPICAL EQUIPMENT PAD DETAIL**  
SCALE: NOT TO SCALE



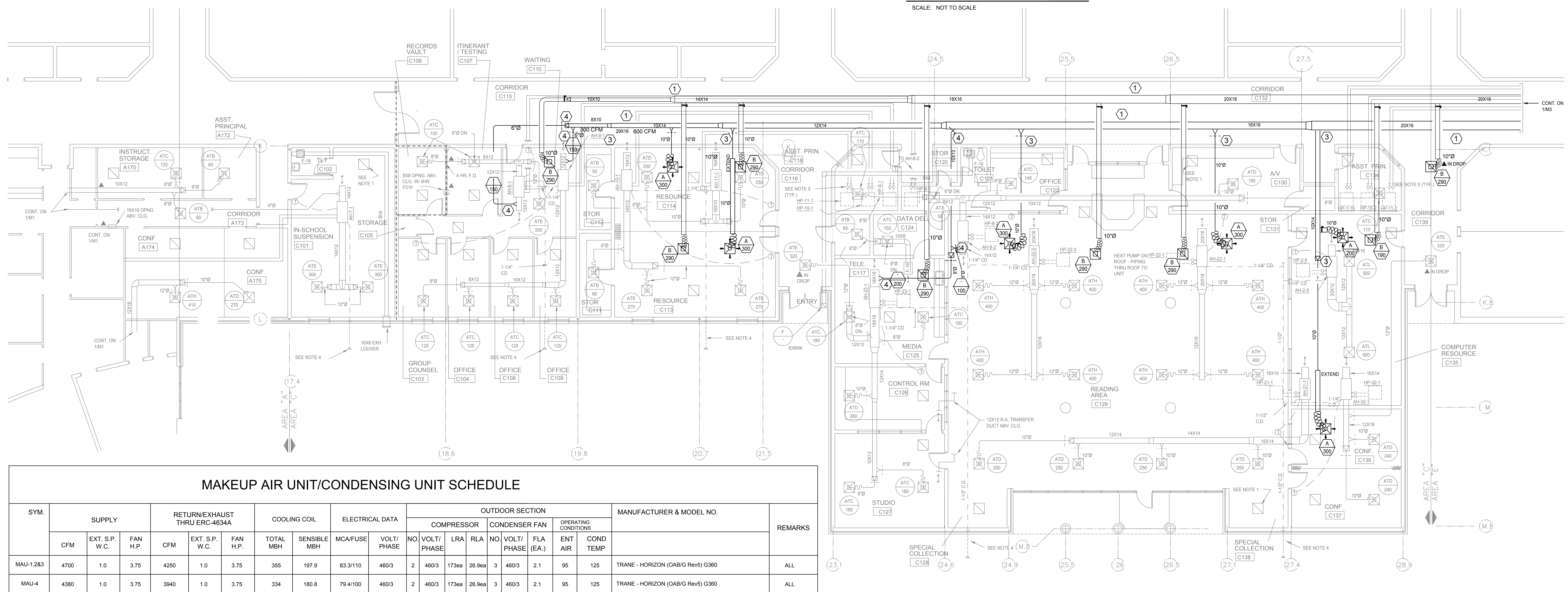
- NOTES:**
- PROVIDE CONDENSATE DRAIN TRAP SIZED AS INDICATED, OR ALTERNATIVELY AS PER EQUIPMENT MANUFACTURER'S RECOMMENDATIONS. CONTRACTOR SHALL COORDINATE TRAP HEIGHT WITH UNIT DRAIN LOCATION AND EQUIPMENT CURB. ROUTE DRAIN PIPING AS INDICATED ON DRAWINGS. FOR EQUIPMENT LOCATED ON GROUND, CONNECT TO NEAREST EXISTING 2" DRAIN TO STORM. FOR EQUIPMENT LOCATED INDOORS, PROVIDE MINIMUM 2" AIR GAP FROM FLOOR DRAINS.

**CONDENSATE DRAIN PIPING DETAIL**  
SCALE: NOT TO SCALE



- NOTES:**
- A VERTICAL DAMPER IS SHOWN. HORIZONTAL DAMPER INSTALLATION IS SIMILAR. FOLLOW DAMPER MANUFACTURER'S INSTRUCTIONS, INCLUDING FASTENER OPTIONS AND GAGES FOR SLEEVE AND PERIMETER ANGLES. FIRE DAMPERS MUST BE INSTALLED IN THE PARTITION OR FLOOR AND NOT OUTSIDE THE PENETRATION.
  - GALVANIZED SLEEVE: GAGE NOT LESS THAN CONNECTING DUCT. FASTEN SLEEVE TO DAMPER FRAME AND TO PERIMETER ANGLES.
  - PERIMETER ANGLES: GALVANIZED STEEL, NOT LESS THAN 1 1/2" X 1 1/2", 14 GAGE, TO PROVIDE 1" MINIMUM OVERLAP OF OPENING ON ALL 4 SIDES.
  - BREAKAWAY DUCT CONNECTION: CONTRACTOR'S OPTION OF TYPES SHOWN IN SMACNA. ACCESS PANELS: SIZE AND LOCATION TO PERMIT SERVICING THE FUSIBLE LINK OR LINKS.
  - PROVIDE 1 1/4" TO 1 1/2" CLEARANCE ON HEIGHT AND WIDTH, FILL OPEN SPACE WITH ROCK WOOL FIRESTOP FIBER.
  - ALL DUCT WORK RISERS WHICH ARE RUN EXPOSED, SUCH AS THRU ATTIC FLOORS AND MECHANICAL ROOM FLOORS, SHALL BE PROVIDED WITH 3" HIGH CONCRETE CURB OPENING FOR DUCT.

**FIRE DAMPER INSTALLATION DETAIL**  
SCALE: NOT TO SCALE



**MAKEUP AIR UNIT/CONDENSING UNIT SCHEDULE**

SYM.	SUPPLY			RETURN/EXHAUST THRU ERC-4634A			COOLING COIL		ELECTRICAL DATA		OUTDOOR SECTION				MANUFACTURER & MODEL NO.	REMARKS					
	CFM	EXT. S.P. W.C.	FAN H.P.	CFM	EXT. S.P. W.C.	FAN H.P.	TOTAL MBH	SENSIBLE MBH	MCA/FUSE	VOLT/PHASE	COMPRESSOR	CONDENSER FAN	FLA (EA.)	ENT AIR			COND TEMP				
MAU-1.2&3	4700	1.0	3.75	4250	1.0	3.75	355	197.9	83.3/110	460/3	2	460/3	173ea	26.9ea	3	460/3	2.1	95	125	TRANE - HORIZON (OAB/G Rev5) G360	ALL
MAU-4	4380	1.0	3.75	3940	1.0	3.75	334	180.8	79.4/100	460/3	2	460/3	173ea	26.9ea	3	460/3	2.1	95	125	TRANE - HORIZON (OAB/G Rev5) G360	ALL

- SEE SPECIFICATIONS, SUBSTITUTIONS BY CARRIER, YORK, DAIKIN, OR APPROVED EQUAL BY Horry COUNTY
- AIR TEMP. OFF COOLING COIL: 45.2°F D.B./45°F W.B.
- ENTERING AIR TEMP. OFF ERV: O.A. = 82.4°F/70.7°F R.A. = 78°F/64.8°F
- PROVIDE W/ RETURN AIR SMOKE DETECTOR

**ERC-4634A PERFORMANCE**

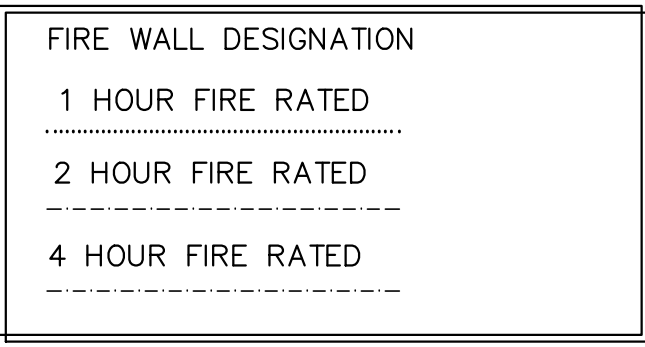
Summer Energy Recovery Performance										
SYM.	Outside Air DB	Outside Air WB	Supply Air DB	Supply Air WB	Return Air DB	Return Air WB	Exhaust Air DB	Exhaust Air WB	LATENT CAPACITY	SENSIBLE CAPACITY
MAU-1.2&3	91.0 F	79.0 F	81.8 F	69.8 F	78.0 F	64.8 F	88.2 F	76.0 F	137.42 MBH	50.41 MBH
MAU-4	91.0 F	79.0 F	82.4 F	70.7 F	78.0 F	64.8 F	87.5 F	75.1 F	108.54 MBH	41.64 MBH

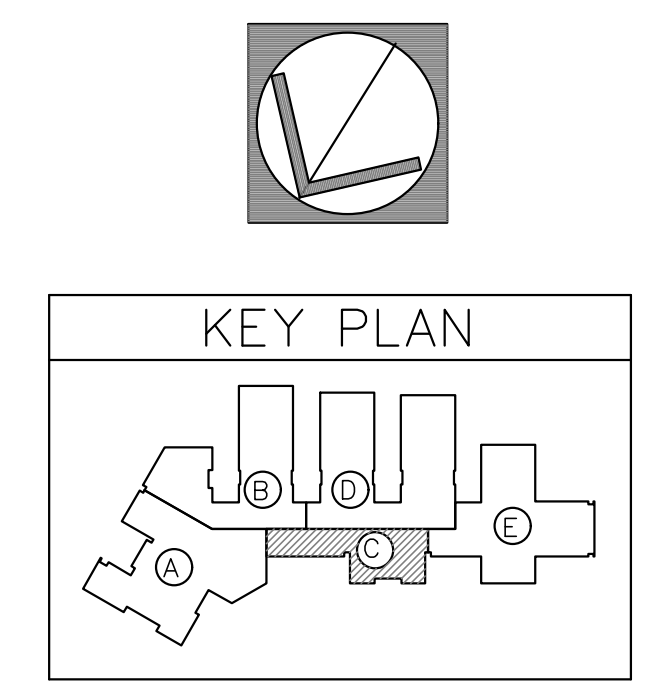
Winter Energy Recovery Performance										
SYM.	Outside Air DB	Outside Air WB	Supply Air DB	Supply Air WB	Return Air DB	Return Air WB	Exhaust Air DB	Exhaust Air WB	LATENT CAPACITY	SENSIBLE CAPACITY
MAU-1.2&3	20.0 F	15.0 F	55.3 F	48.1 F	70.0 F	30.8 F	27.6 F	58.5 F	112.27 MBH	193.83 MBH
MAU-4	20.0 F	15.0 F	53.0 F	46.0 F	70.0 F	58.5 F	33.3 F	30.6 F	88.36 MBH	160.21 MBH

- EXISTING CONDITIONS NOTES FOR REFERENCE:**
- ALL RA GRILLES TO BE TYPE "D" UNLESS NOTED OTHERWISE.
  - COORDINATE FINAL GRILLE & DIFFUSER LOCATION W/ ARCH. REFLECTED CEILING PLAN

- FIRE DAMPER (VERTICAL WALL) OR RADIATION DAMPER (HORIZONTAL) - 1 HR. PENETRATION**
- COND. DRAIN BELOW GRADE TO 5'-0" OUTSIDE OF BLDG. - CONNECT TO STORM DRAIN SYSTEM BY G.C.**



**1 FLOOR PLAN 'C' HVAC**  
1/8"=1'-0"



**NORTH MYRTLE BEACH MIDDLE SCHOOL**  
**MAU & DUCT REPLACEMENT**  
**11240 SC90, LITTLE RIVER, SC 29566**

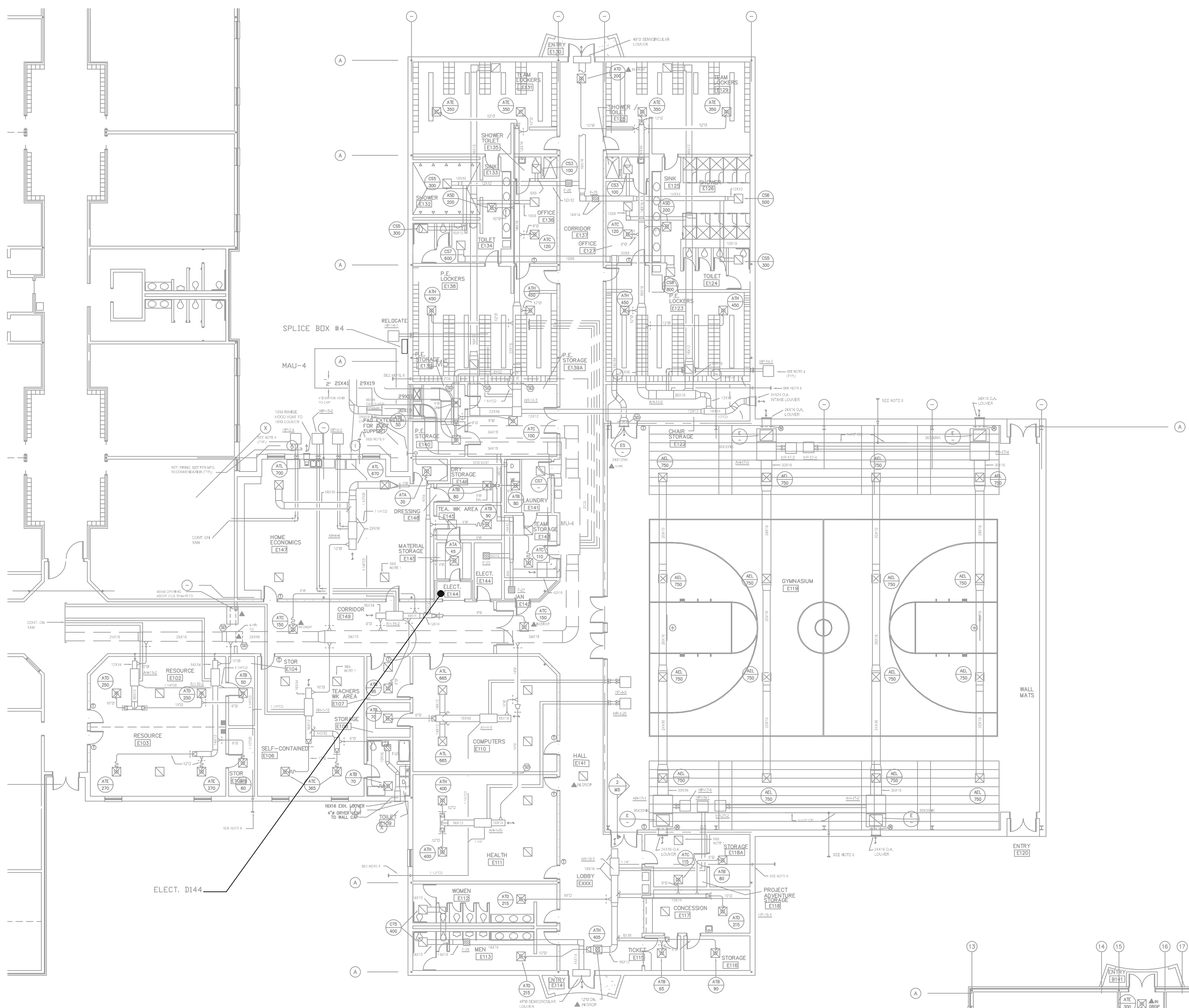
PROJ. NO. : 19090001  
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 DESIGNED BY: MDK  
 DRAWN BY: SAM  
 CHECKED BY: MDK

REVISIONS		
NO.	DATE	NOTES

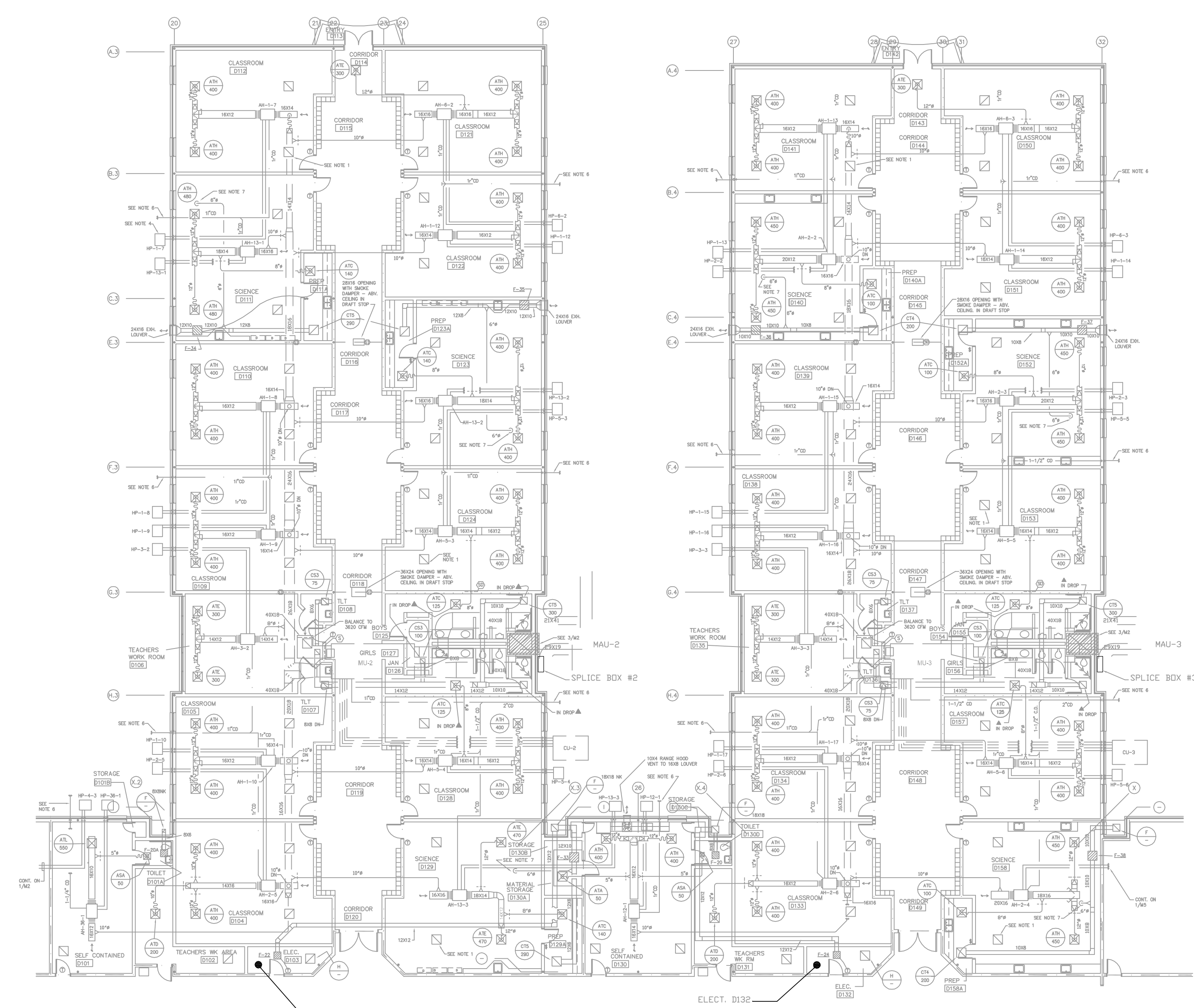
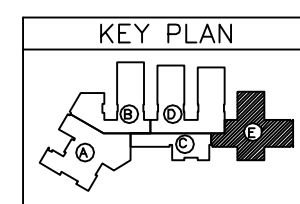
**HVAC**  
**NW WORK**  
**FLOOR PLAN 'C'**

**M4**

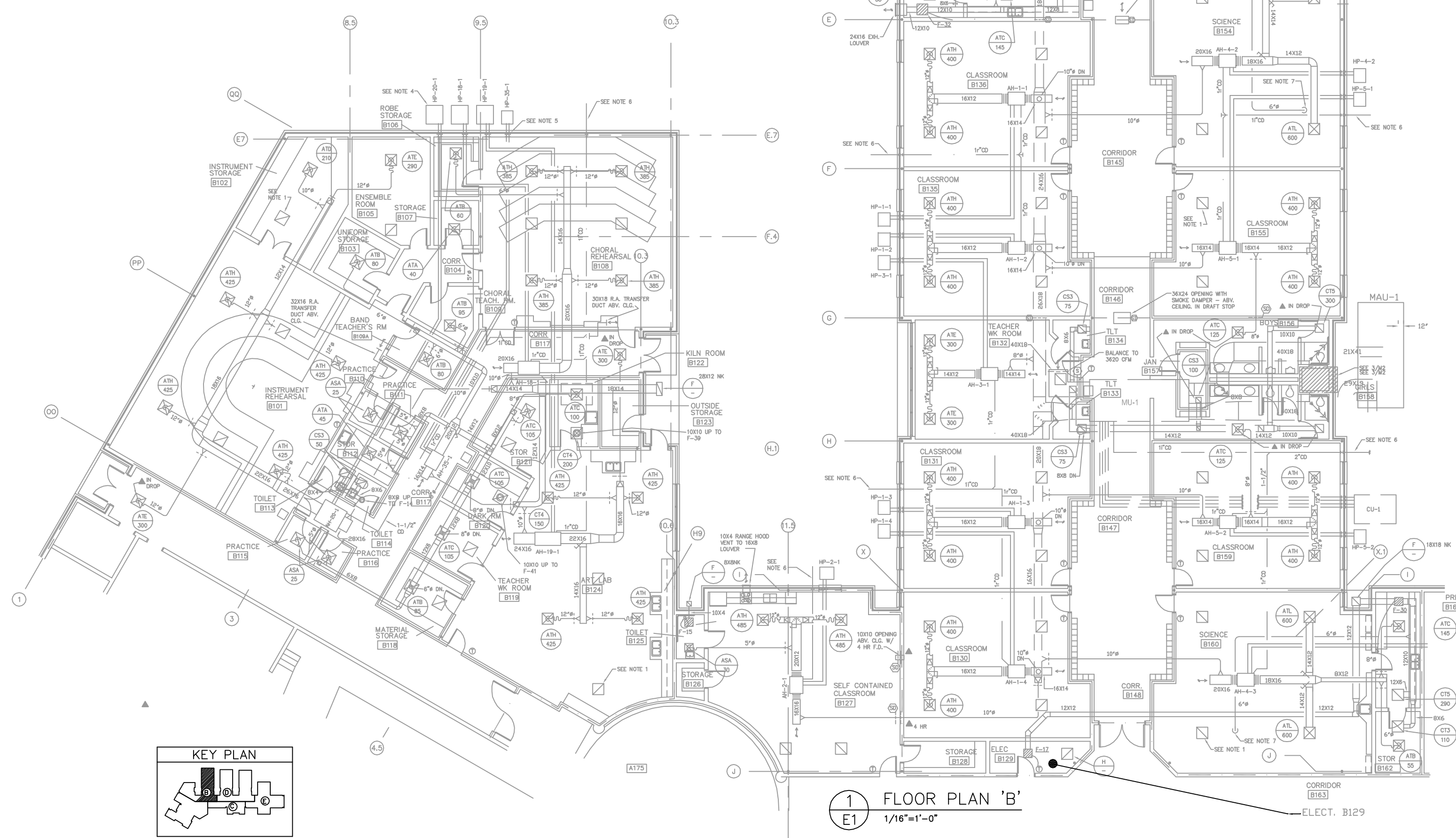
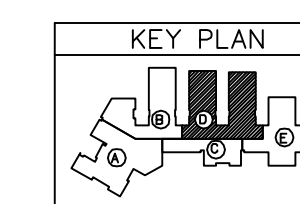




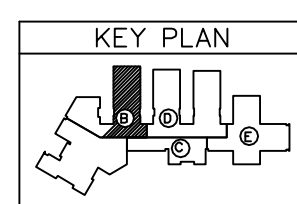
3 FLOOR PLAN 'E'  
1/16"=1'-0"



2 FLOOR PLAN 'D'  
1/16"=1'-0"

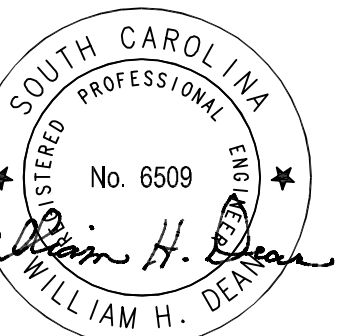
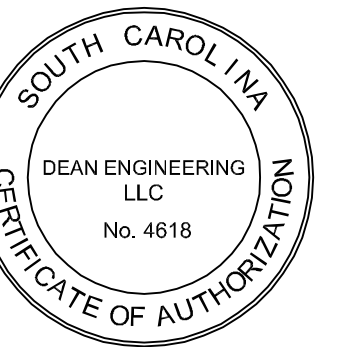


1 FLOOR PLAN 'B'  
1/16"=1'-0"



WHOLE BUILDING SYSTEMS, LLC  
26 BEE STREET  
CHARLESTON, SC 29403  
PH: (843) 837-3388  
WHOLEBUILDINGSYSTEMS.COM

DEAN ENGINEERING, LLC  
1232 PASTURE VIEW DRIVE  
HANAHAN, SC 29410  
843-743-9731



N. MYRTLE BEACH MIDDLE SCHOOL  
MAU & DUCT REPLACEMENT  
11240 SC90, LITTLE RIVER, SC 29566

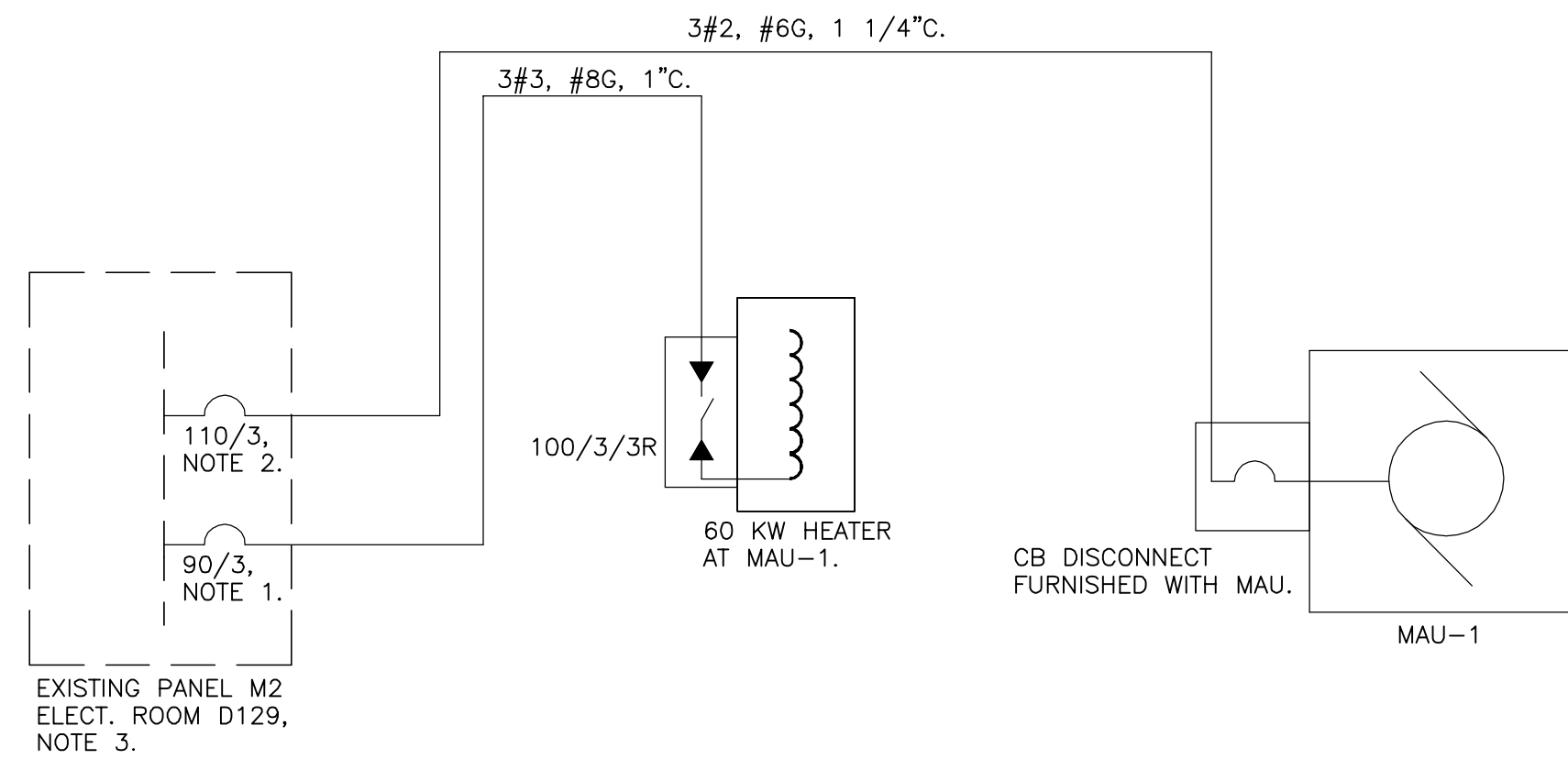
PROJ. NO.: 19025002  
DATE:  
DESIGNED BY: SAM  
DRAWN BY: SAM  
CHECKED BY: MDK

REVISIONS		
NO.	DATE	NOTES
X	XX/XX/XX	XXXXX

ELECTRICAL PLANS

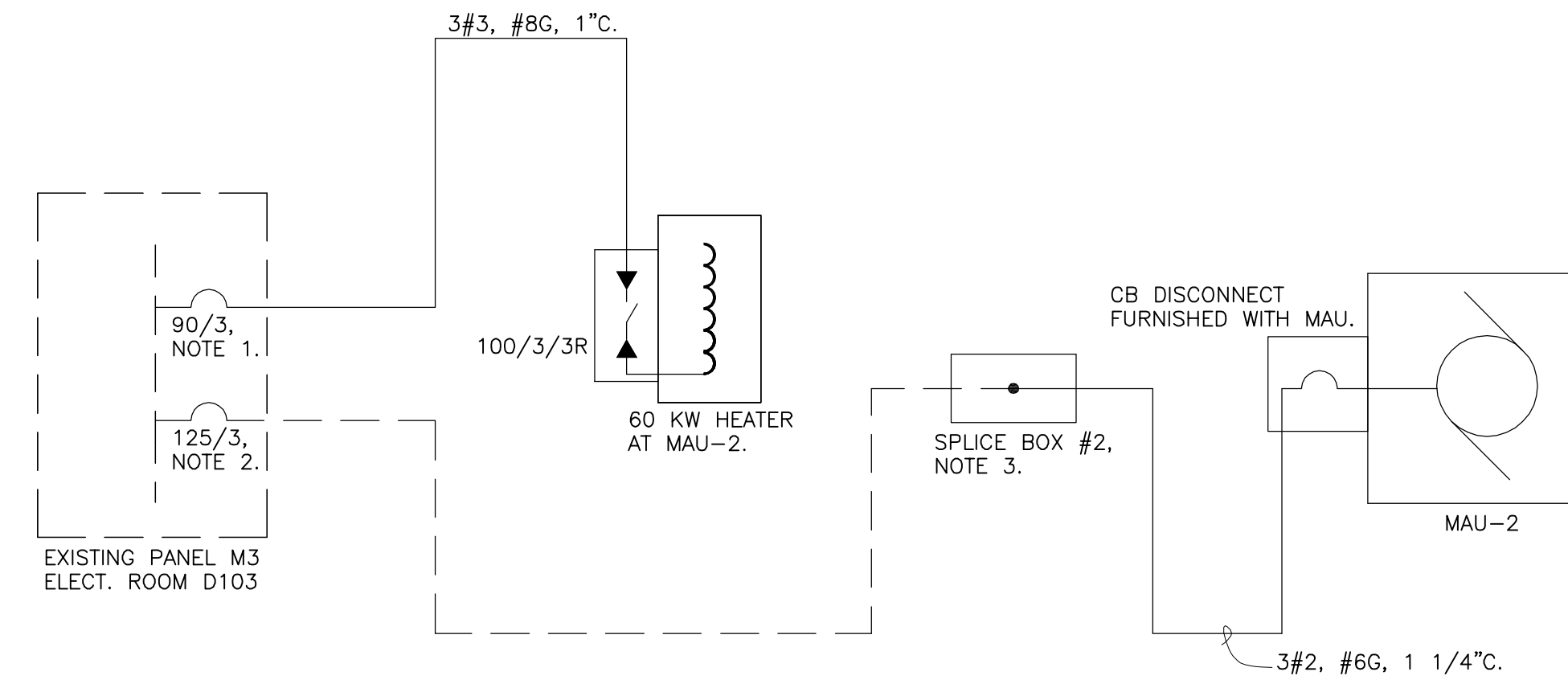
E1





1 ONE LINE DIAGRAM - PANEL M2  
E2 NTS

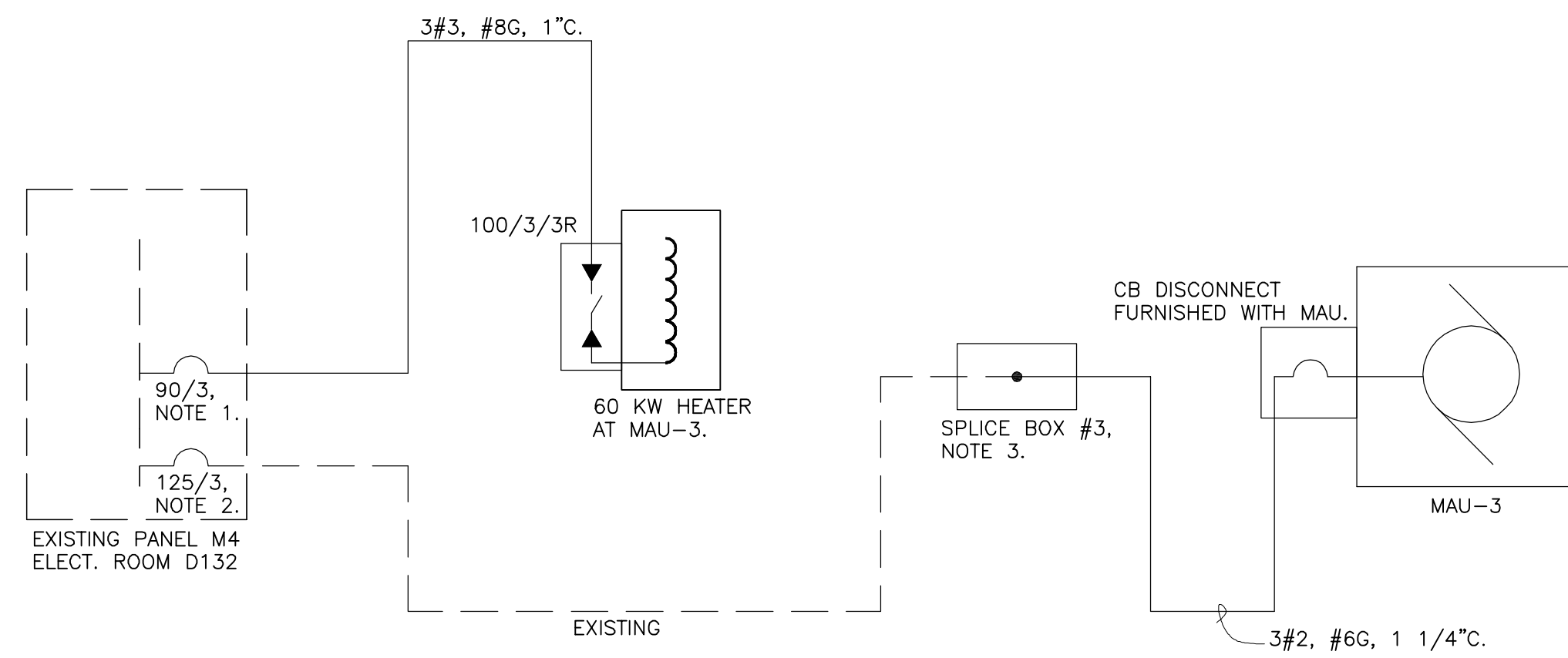
- NOTES:
1. PROVIDE NEW 90/3 CB IN EXISTING SPACE.
  2. PROVIDE NEW 110/3 CB IN EXISTING SPACE.
  3. DEMOLISH WIRE AND CONDUIT FROM 100/3 CB TO CU-1.



2 ONE LINE DIAGRAM - PANEL M3  
E2 NTS

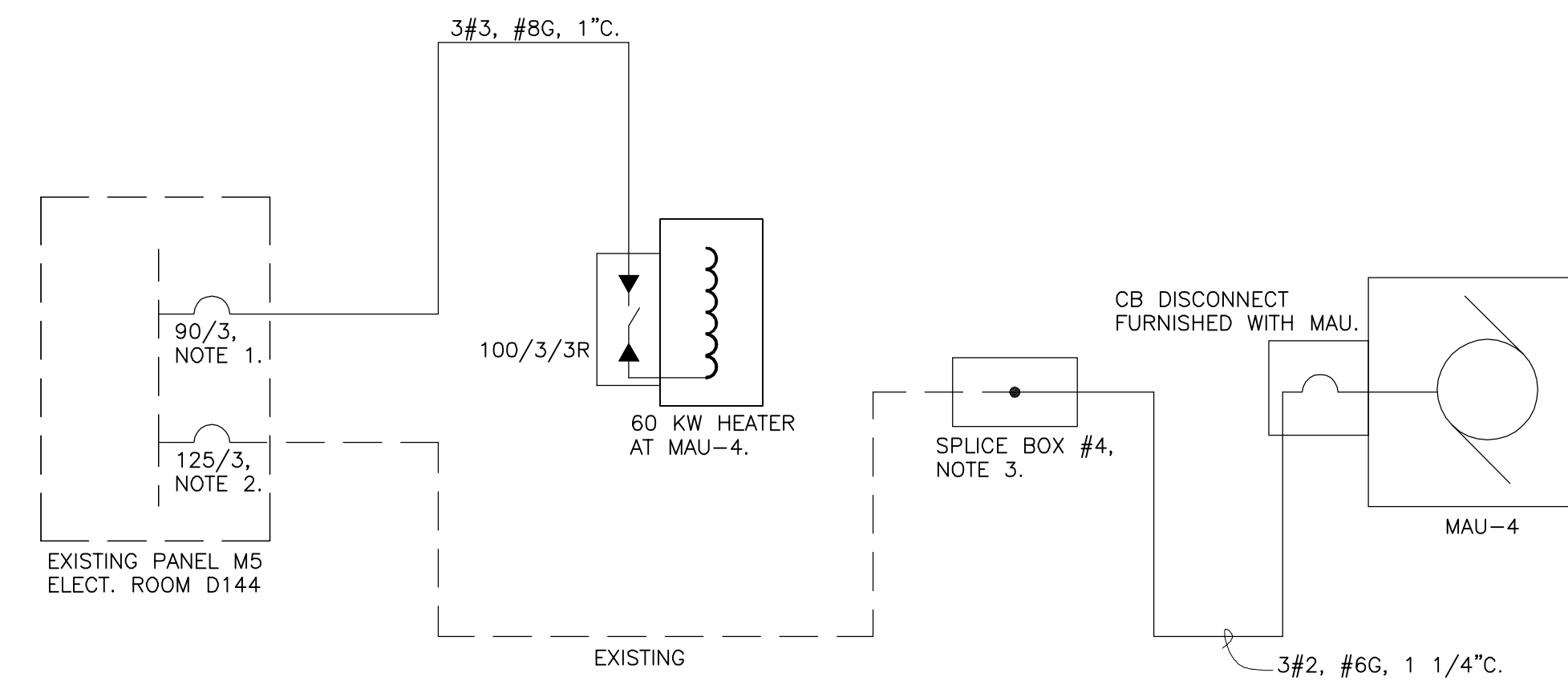
- NOTES:
1. REPLACE 20/3 SPARE WITH NEW 90/3 CB.
  2. EXISTING 125/3 BREAKER.
  3. REPLACE EXISTING DISCONNECT SWITCH WITH NEW SPLICE BOX.

- GENERAL ELECTRICAL NOTES:
1. NEW CIRCUIT BREAKERS INSTALLED IN EXISTING PANELS SHALL BE RATED 35KAIC AND SHALL MATCH EXISTING.
  2. SPLICE BOXES SHALL BE SUITABLE FOR EXTERIOR LOCATION AND SHALL BE 24"W X 12"H X 8"D.
  3. SPLICES SHALL BE BUTT TYPE, HYDRAULICALLY CRIMPED WITH 2 LAYERS OF HEAT SHRINK APPLIED.
  4. HEATERS ARE LOCATED IN THE SUPPLY DUCT OF THE MAU'S AS DESIGNATED ON THE MECHANICAL PLANS.
  5. MU-1, MU-2, MU-3 & MU-4 ARE BEING REMOVED. DEMOLISH ALL WIRE AND CONDUIT FOR THESE LOADS.



3 ONE LINE DIAGRAM - PANEL M4  
E2 NTS

- NOTES:
1. PROVIDE NEW 90/3 CB IN EXISTING SPACE.
  2. EXISTING 125/3 BREAKER.
  3. REPLACE EXISTING DISCONNECT SWITCH WITH NEW SPLICE BOX.

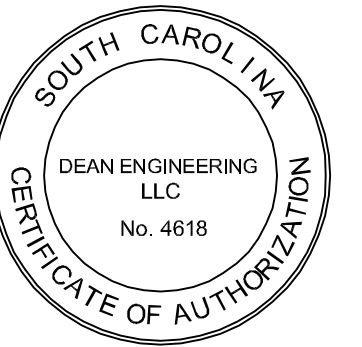


4 ONE LINE DIAGRAM - PANEL M5  
E2 NTS

- NOTES:
1. REPLACE 20/3 SPARE WITH NEW 90/3 CB.
  2. EXISTING 125/3 BREAKER.
  3. REPLACE EXISTING DISCONNECT SWITCH WITH NEW SPLICE BOX.

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ELECTRICAL  
ONE LINES &  
SCHEDULES

E2