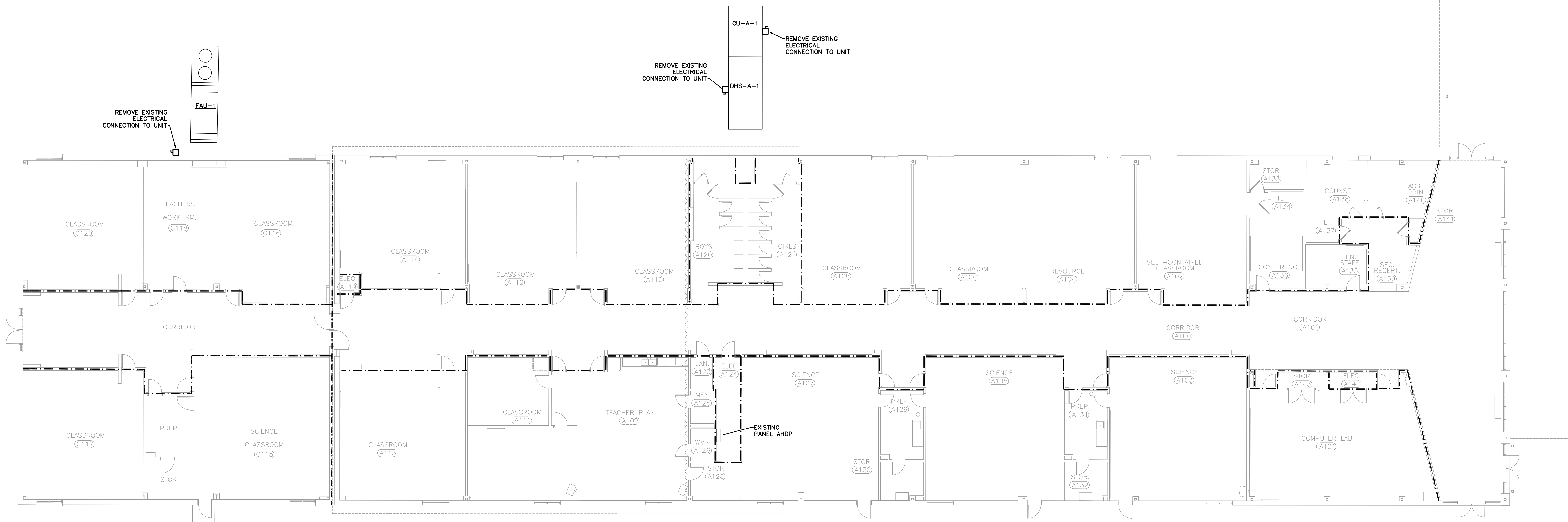


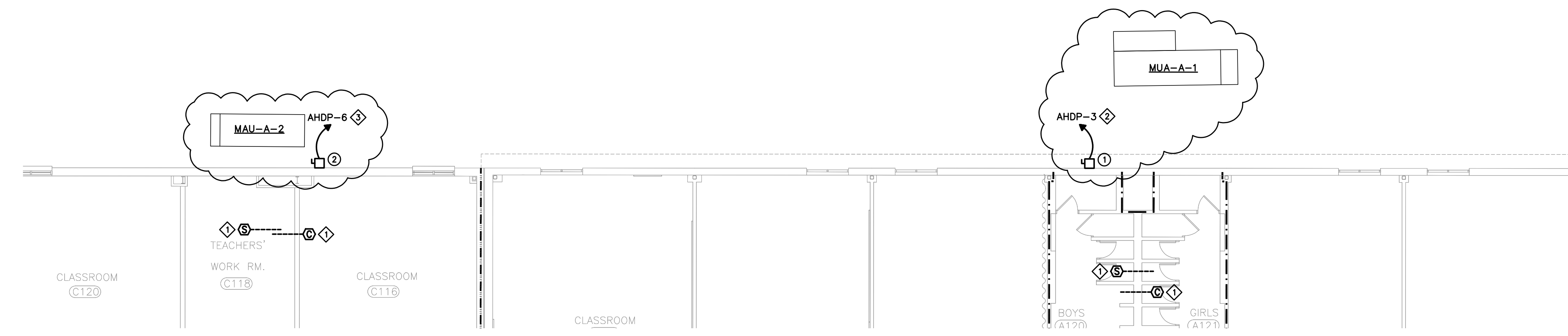
JOB NUMBER	REVISION DATES	REVISION DESCRIPTION
21-158	10/06/2022	UNIT CHANGES
DRAWN BY: SJB	07/22/2022	
CHECKED BY: WFA		
DATE		

CAROLINA FOREST HIGH
700 GARDNER LACY RD.
MYRTLE BEACH, SC, 29579
HVAC RENEWAL

ELECTRICAL FLOOR PLAN
- AREA A

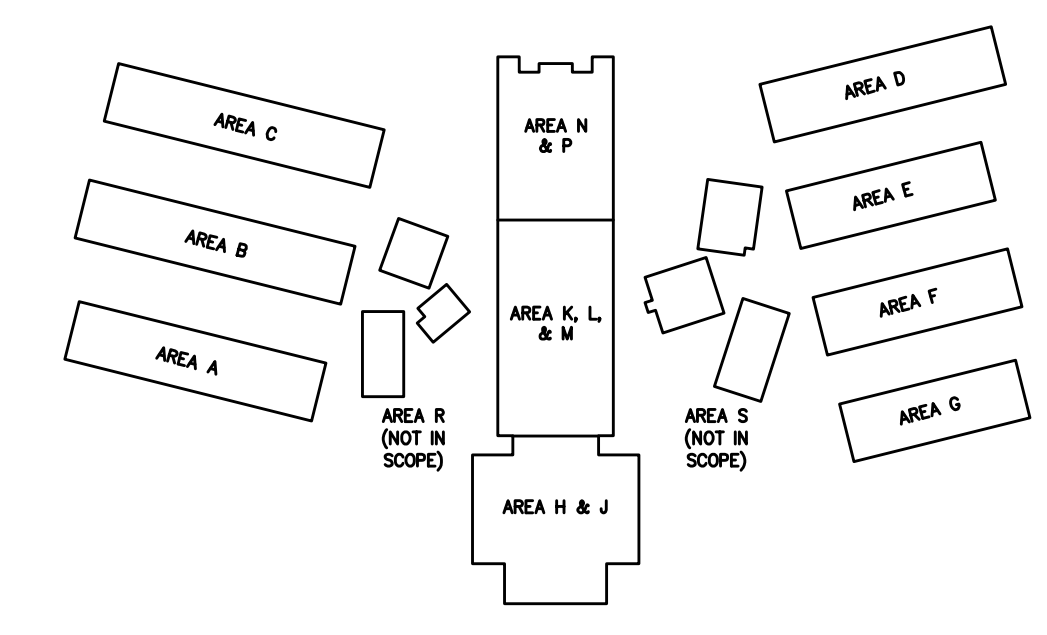


1 ELECTRICAL PLAN - AREA A - DEMOLITION
SCALE: 3/32" = 1'-0"



2 ELECTRICAL PLAN - AREA A - NEW WORK
SCALE: 3/32" = 1'-0"

- NOTES:
- ◆ CONNECT TO EXISTING ADDRESSABLE FIRE ALARM CIRCUIT.
 - ◆ CONNECT WITH 3/4" 1#8G, 1-1/4" TO NEW 70/3 CIRCUIT BREAKER IN PANEL AS INDICATED. REPLACE EXISTING 100/3 WITH NEW AS REQUIRED.
 - ◆ CONNECT WITH 3/8" 1#8G, 1" TO NEW 35/3 CIRCUIT BREAKER IN PANEL AS INDICATED. REPLACE EXISTING 40/3 WITH NEW AS REQUIRED.

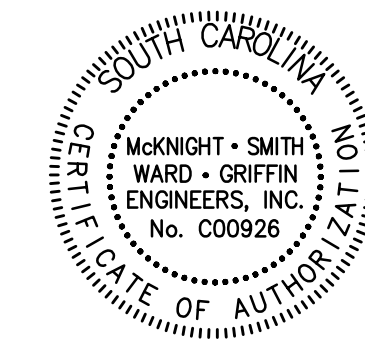


NOTE: CEILING REMOVAL IS LIMITED TO THAT REQUIRED FOR INSTALLATION OF SMOKE AND CARBON MONOXIDE DETECTORS.

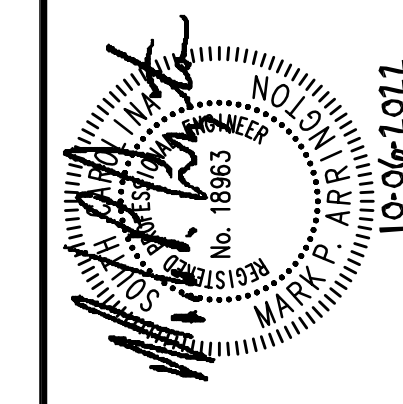
FIRE RATED WALLS	
---	1 HOUR WALL
----	2 HOUR WALL
-----	3 HOUR WALL

IT IS THE RESPONSIBILITY OF THE CONTRACTOR TO APPLY THE PROPER FIRE-SAFING DETAIL FOR ALL DUCT AND PIPE PENETRATIONS THRU FIRE-RATED WALLS AND SMOKE PARTITIONS.

NOTE: THE CONTRACTOR IS RESPONSIBLE FOR VERIFYING ALL EXISTING CONDITIONS. SUBMISSION OF BIDS IS CONSIDERED VERIFICATION THAT THE CONTRACTOR HAS VISITED THE SITE. NO EXTRAS WILL BE ALLOWED DUE TO LACK OF KNOWLEDGE OF THE EXISTING CONDITIONS.



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4223 South Boulevard
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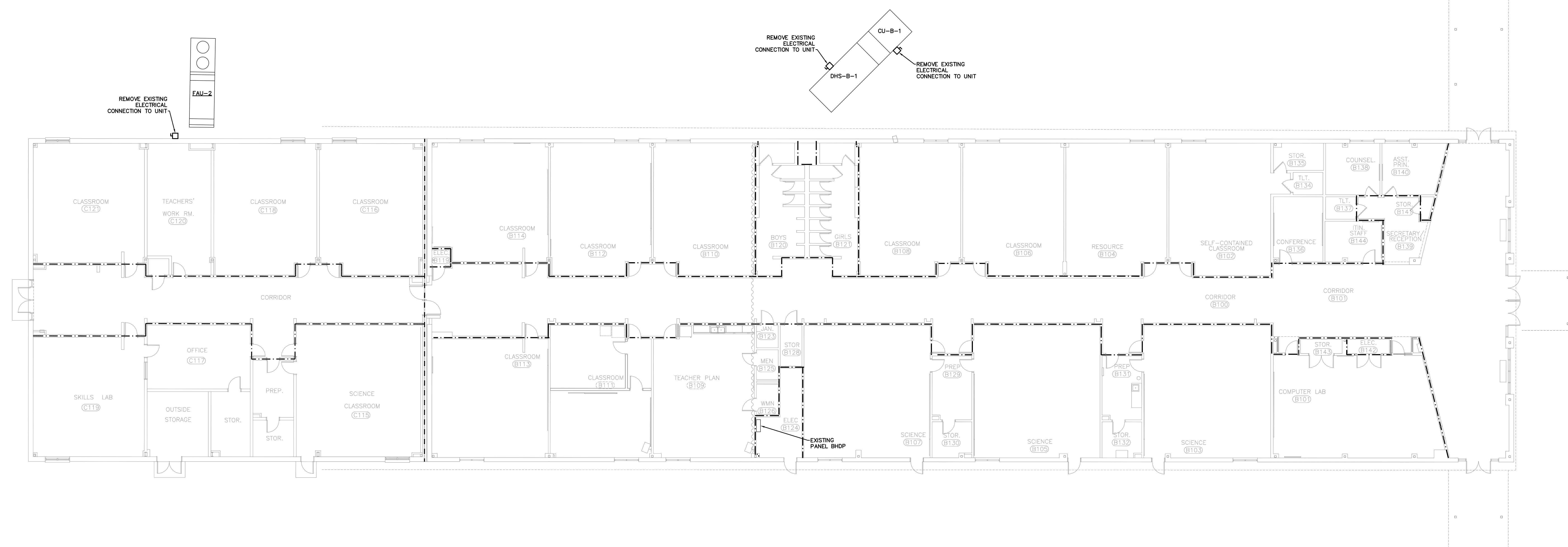


JOB NUMBER	REVISION DATES	REVISION DESCRIPTION
21-158	10/06/2022	UNIT CHANGES
21-158	07/22/2022	UNIT CHANGES

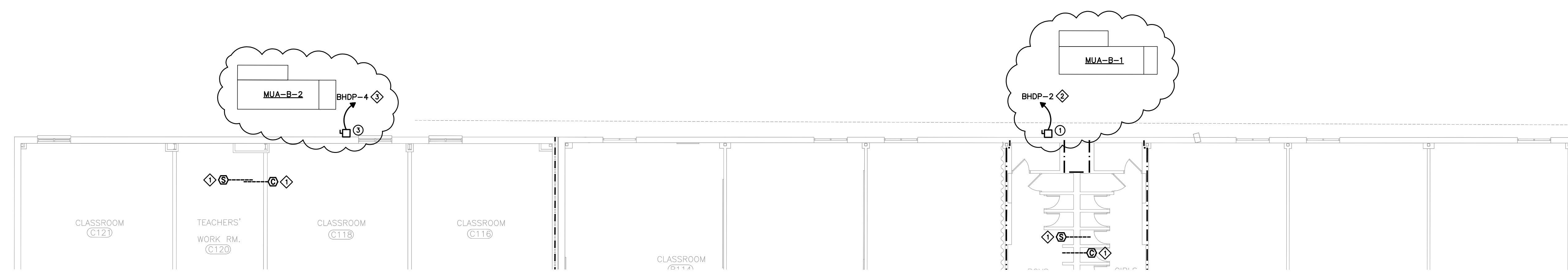
**CAROLINA FOREST HIGH
700 GARDNER LACY RD.
MYRTLE BEACH, SC, 29579
HVAC RENEWAL**

**ELECTRICAL FLOOR PLAN
- AREA B**

SHEET
E1.1
2 OF 7

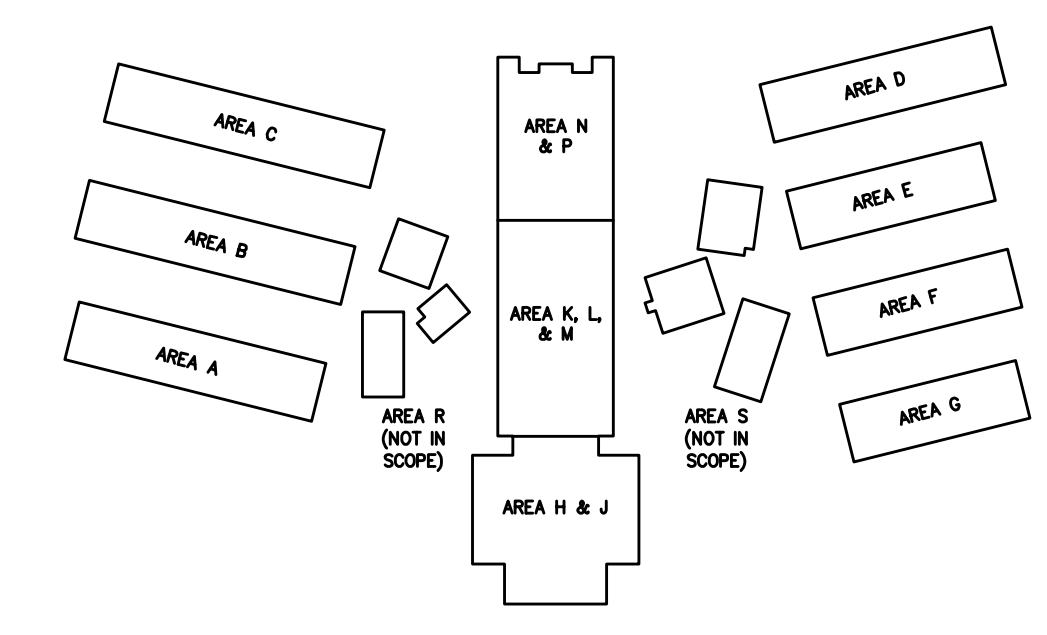


1 ELECTRICAL PLAN - AREA B - DEMOLITION
SCALE: 3/32" = 1'-0"



2 ELECTRICAL PLAN - AREA B - NEW WORK
SCALE: 3/32" = 1'-0"

- NOTES:**
- ◇ CONNECT TO EXISTING ADDRESSABLE FIRE ALARM CIRCUIT.
 - ◇ CONNECT WITH 3#4, 1#8G, 1-1/4" TO NEW 70/3 CIRCUIT BREAKER IN PANEL AS INDICATED. REPLACE EXISTING 100/3 WITH NEW AS REQUIRED.
 - ◇ CONNECT WITH 3#6, 1#8G, 1" TO NEW 35/3 CIRCUIT BREAKER IN PANEL AS INDICATED. REPLACE EXISTING 50/3 WITH NEW AS REQUIRED.

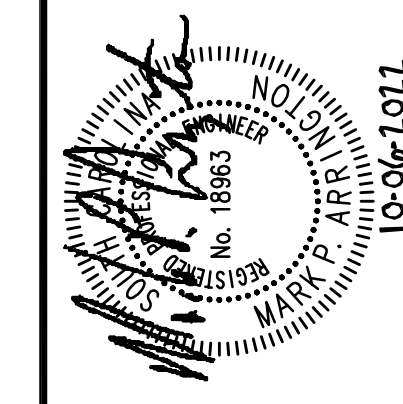
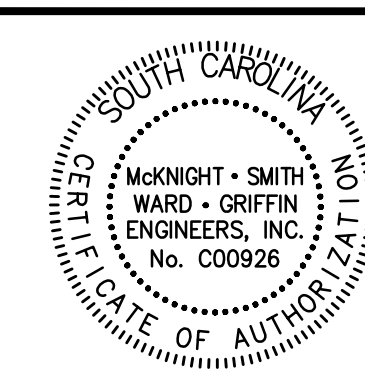


NOTE: CEILING REMOVAL IS LIMITED TO THAT REQUIRED FOR INSTALLATION OF SMOKE AND CARBON MONOXIDE DETECTORS.

FIRE RATED WALLS	
---	1 HOUR WALL
----	2 HOUR WALL
-----	3 HOUR WALL

IT IS THE RESPONSIBILITY OF THE CONTRACTOR TO APPLY THE PROPER FIRE-SAFING DETAIL FOR ALL DUCT AND PIPE PENETRATIONS THRU FIRE-RATED WALLS AND SMOKE PARTITIONS.

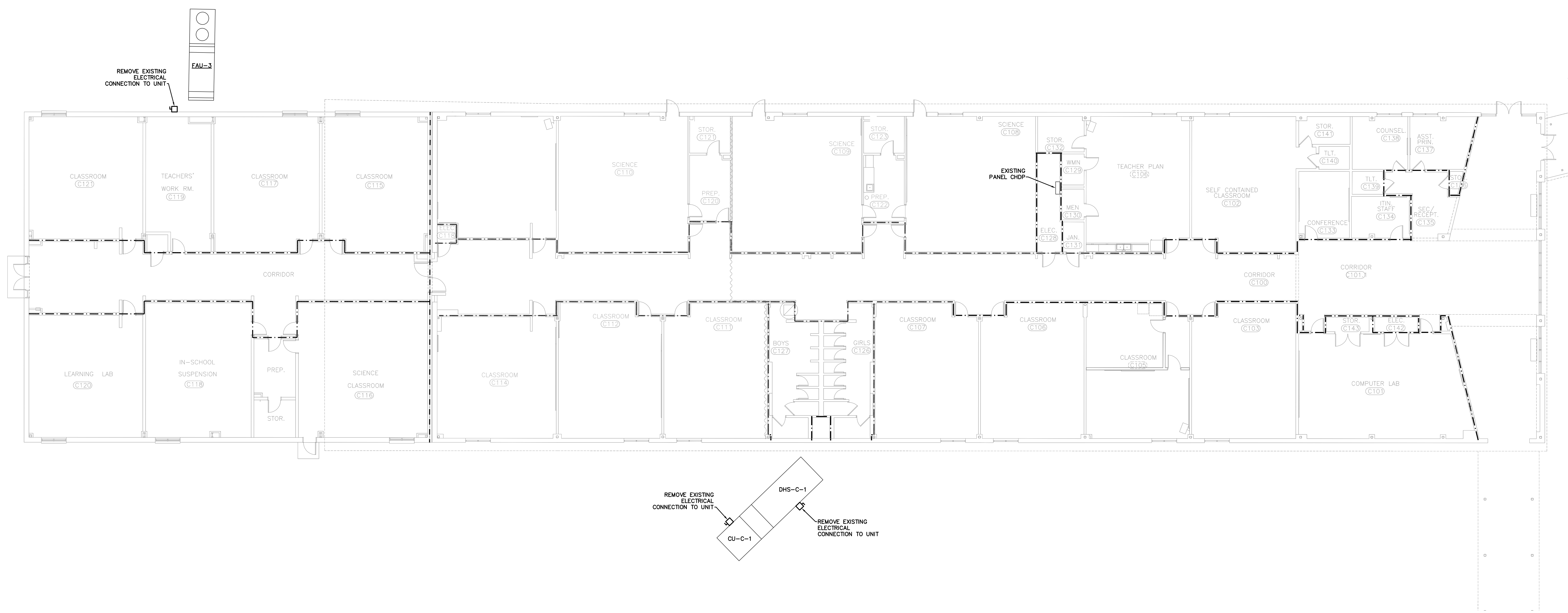
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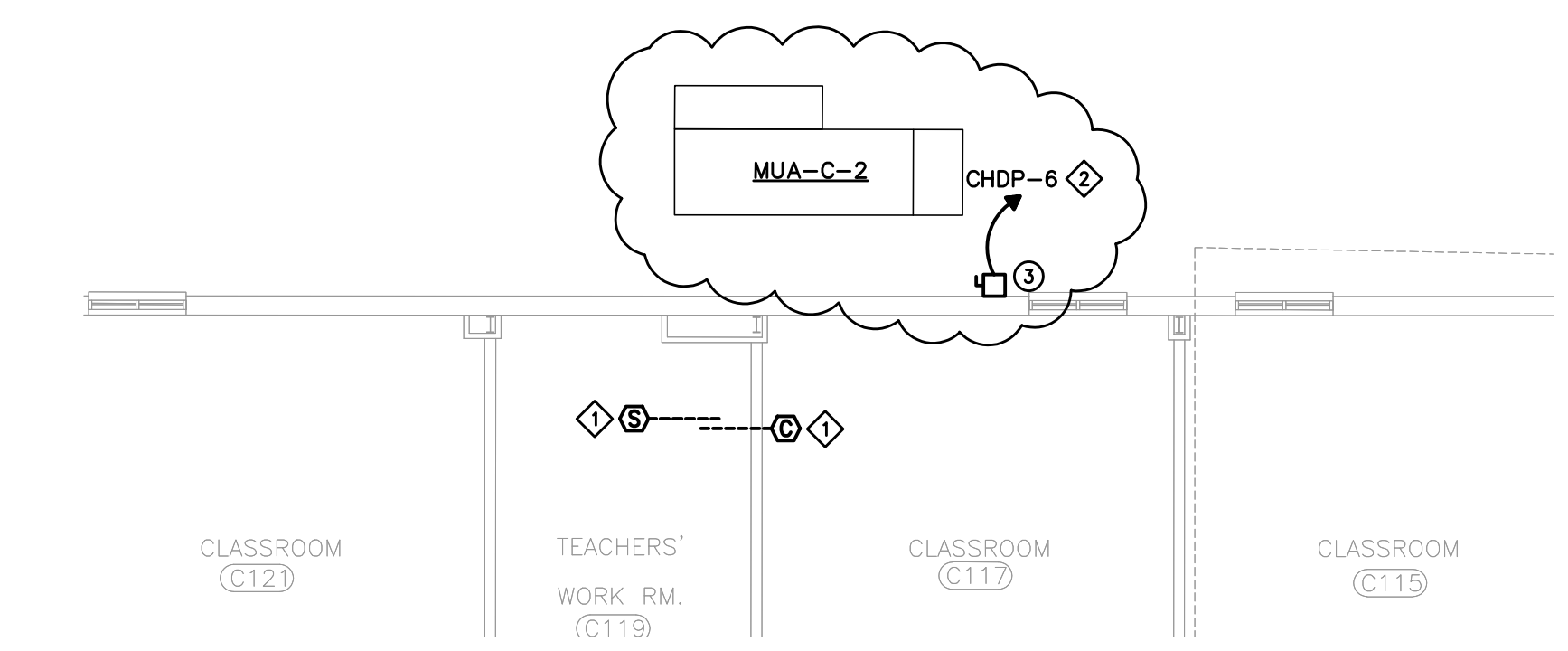
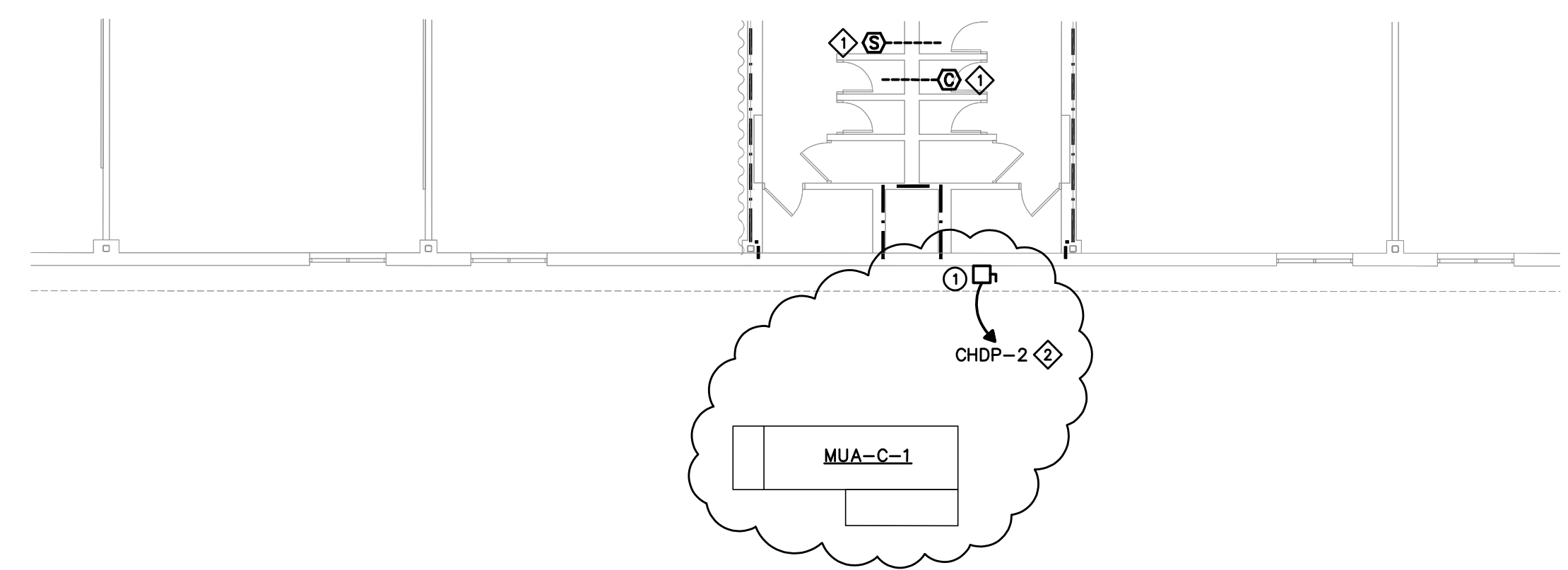
JOB NUMBER	21-158	REVISION DATES	REVISION DESCRIPTION
DESIGNED BY	SMB	10/06/2022	UNIT CHANGES
CHECKED BY	WFA	07/22/2022	
DATE			

JOB TITLE
CAROLINA FOREST HIGH
700 GARDNER LACY RD.
MYRTLE BEACH, SC, 29579
HVAC RENEWAL

SHEET TITLE
ELECTRICAL FLOOR PLAN
- AREA C



1 ELECTRICAL PLAN - AREA C - DEMOLITION
SCALE: 3/32" = 1'-0"

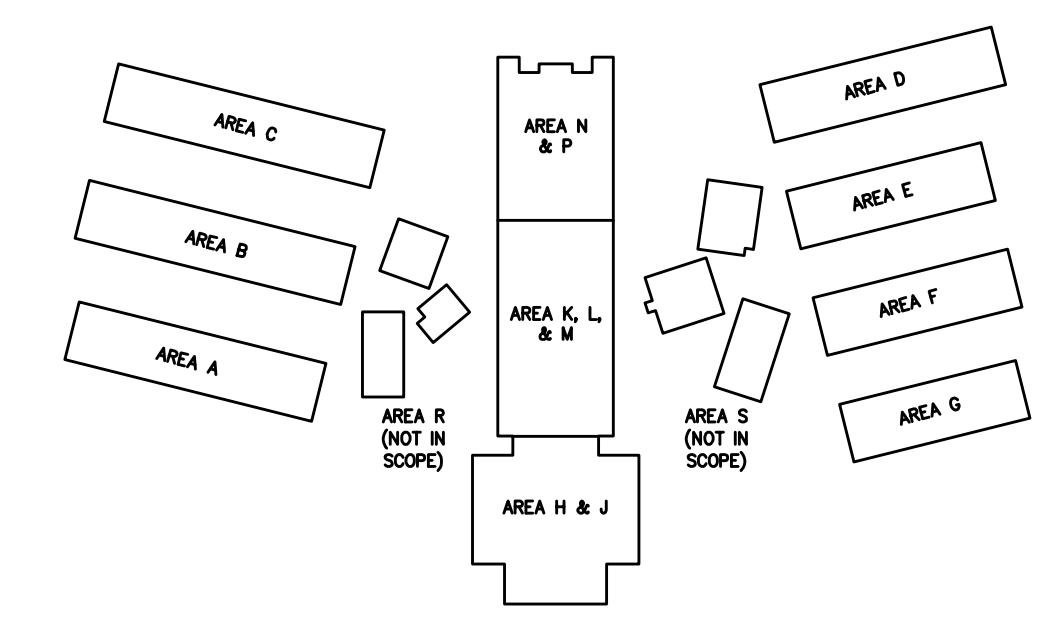


2 ELECTRICAL PLAN - AREA C - NEW WORK
SCALE: 3/32" = 1'-0"

- NOTES:**
- ◇ CONNECT TO EXISTING ADDRESSABLE FIRE ALARM CIRCUIT.
 - ◇ CONNECT WITH 3#6, 1#8G, 1" TO NEW 35/3 CIRCUIT BREAKER IN PANEL AS INDICATED. REPLACE EXISTING 50/3 WITH NEW AS REQUIRED.

3 ELECTRICAL PLAN - AREA C - NEW WORK
SCALE: 3/32" = 1'-0"

- NOTES:**
- ◇ CONNECT TO EXISTING ADDRESSABLE FIRE ALARM CIRCUIT.
 - ◇ CONNECT WITH 3#4, 1#8G, 1-1/4" TO NEW 70/3 CIRCUIT BREAKER IN PANEL AS INDICATED. REPLACE EXISTING 100/3 WITH NEW AS REQUIRED.

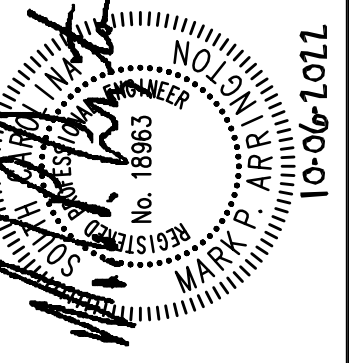
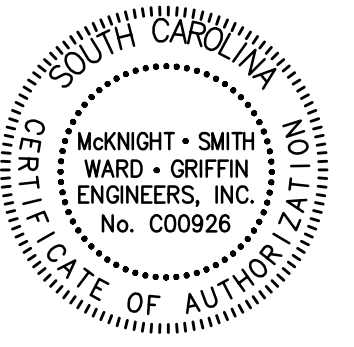


NOTE: CEILING REMOVAL IS LIMITED TO THAT REQUIRED FOR INSTALLATION OF SMOKE AND CARBON MONOXIDE DETECTORS.

FIRE RATED WALLS	
---	1 HOUR WALL
----	2 HOUR WALL
-----	3 HOUR WALL

IT IS THE RESPONSIBILITY OF THE CONTRACTOR TO APPLY THE PROPER FIRE-SAFING DETAIL FOR ALL DUCT AND PIPE PENETRATIONS THRU FIRE-RATED WALLS AND SMOKE PARTITIONS.

NOTE: THE CONTRACTOR IS RESPONSIBLE FOR VERIFYING ALL EXISTING CONDITIONS. SUBMISSION OF BIDS IS CONSIDERED VERIFICATION THAT THE CONTRACTOR HAS VISITED THE SITE. NO EXTRAS WILL BE ALLOWED DUE TO LACK OF KNOWLEDGE OF THE EXISTING CONDITIONS.



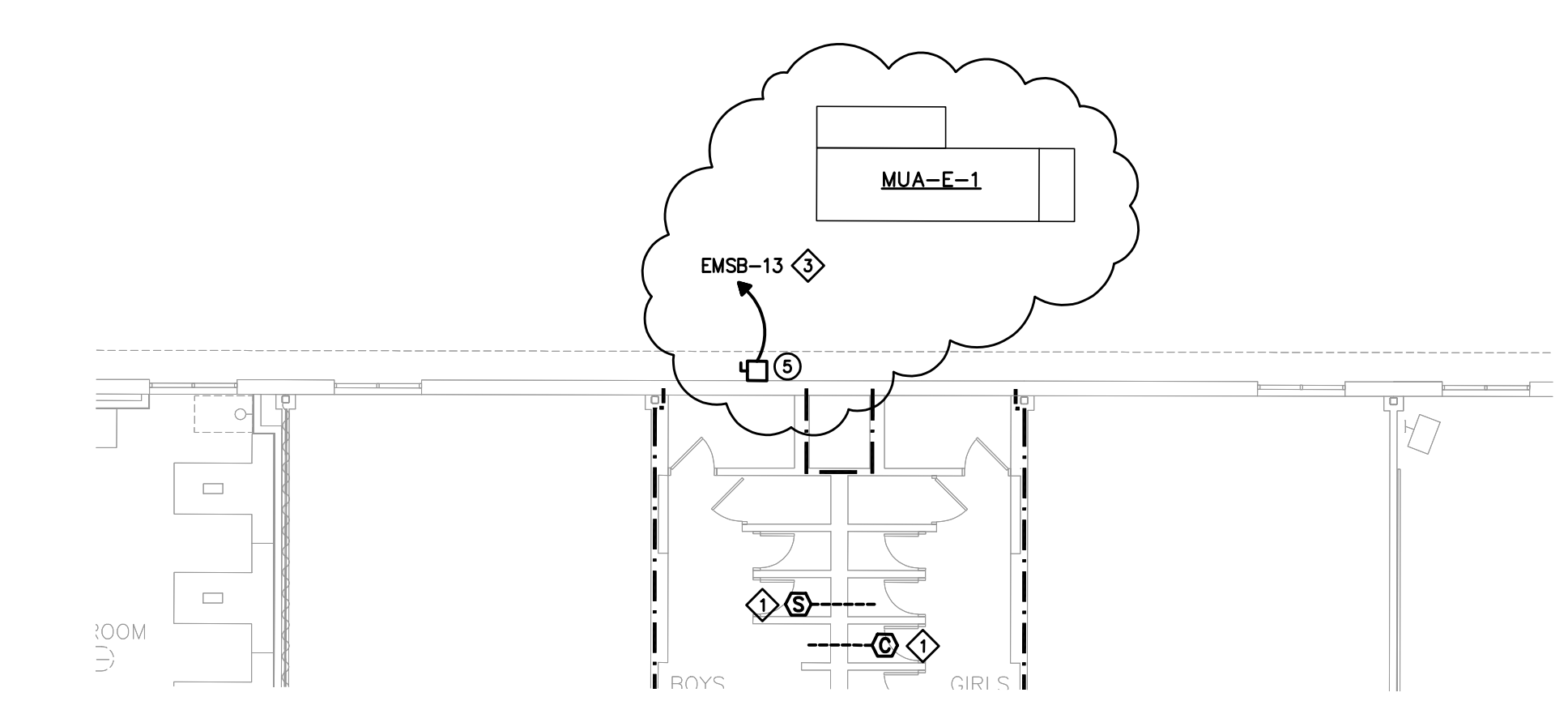
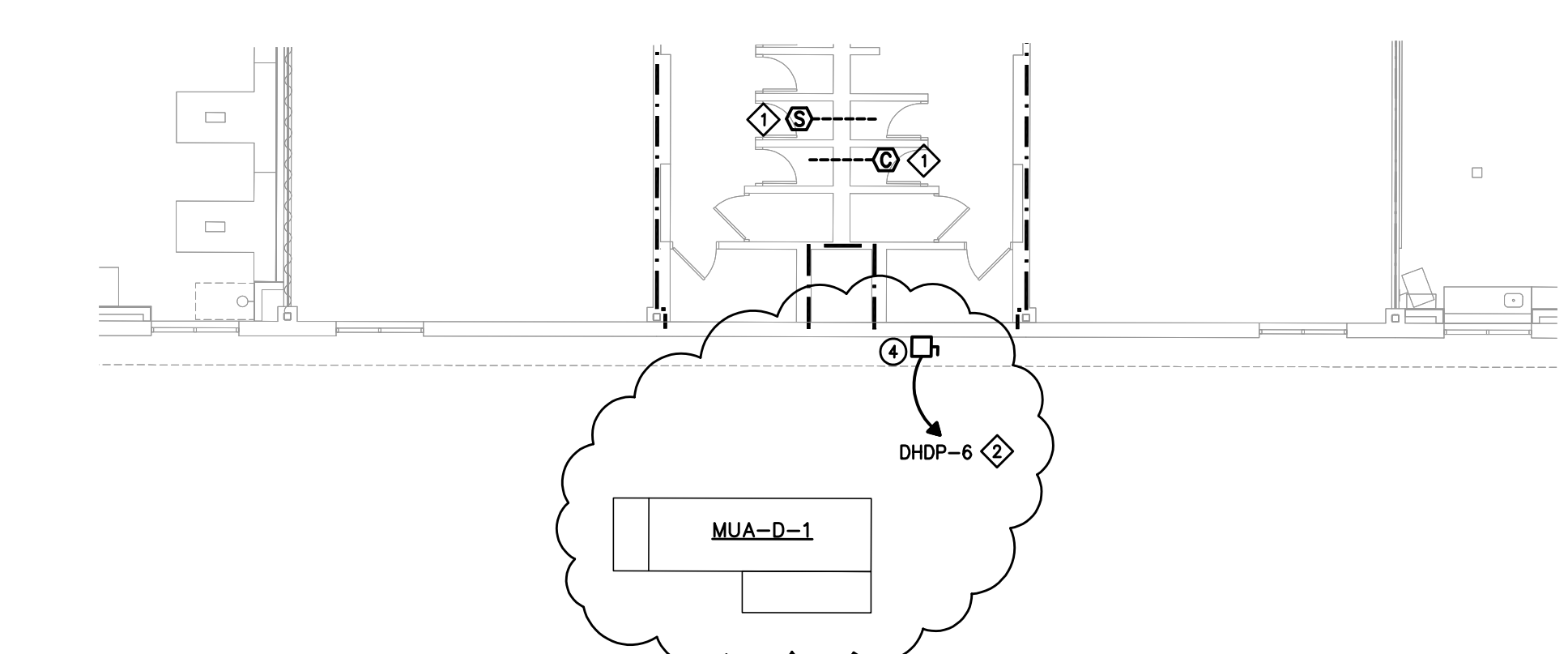
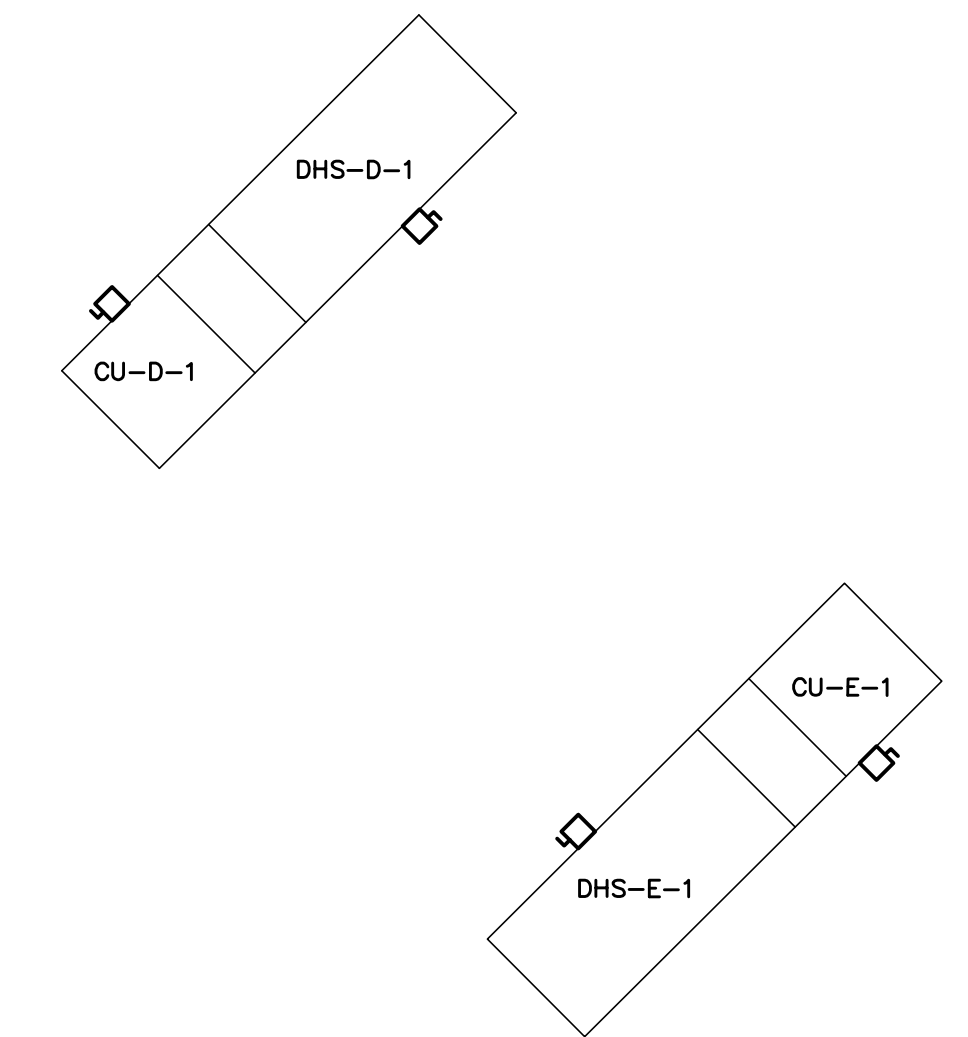
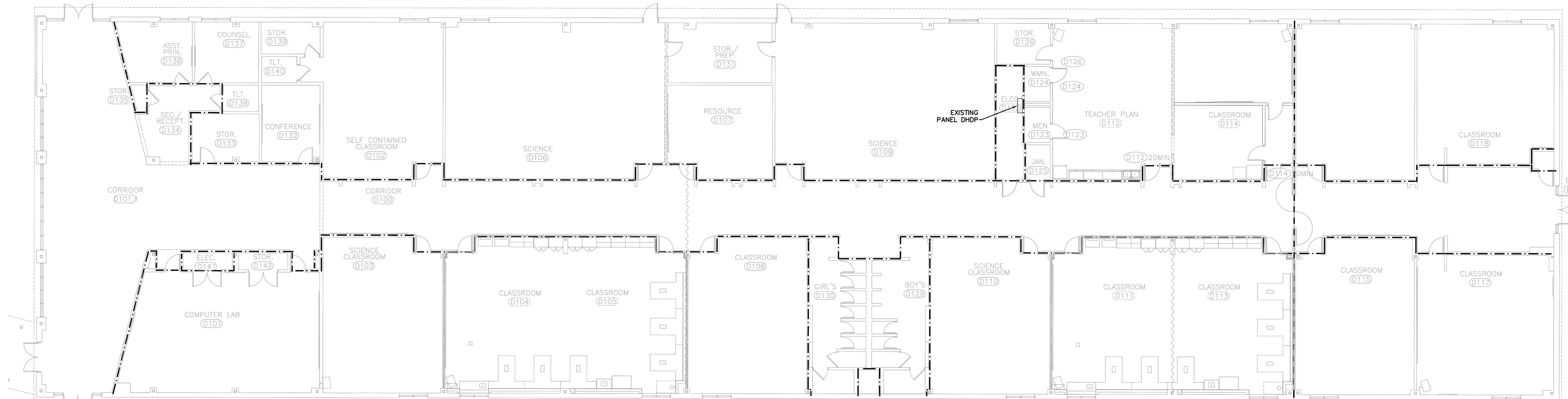
JOB NUMBER	21-158	REVISION DATES	REVISION DESCRIPTION
DESIGNED BY	SMB	10/06/2022	UNIT CHANGES
CHECKED BY	WFA	07/22/2022	
DATE			

**CAROLINA FOREST HIGH
700 GARDNER LACY RD.
MYRTLE BEACH, SC, 29579
HVAC RENEWAL**

**ELECTRICAL FLOOR PLAN
- AREAS D & E**

SHEET TITLE

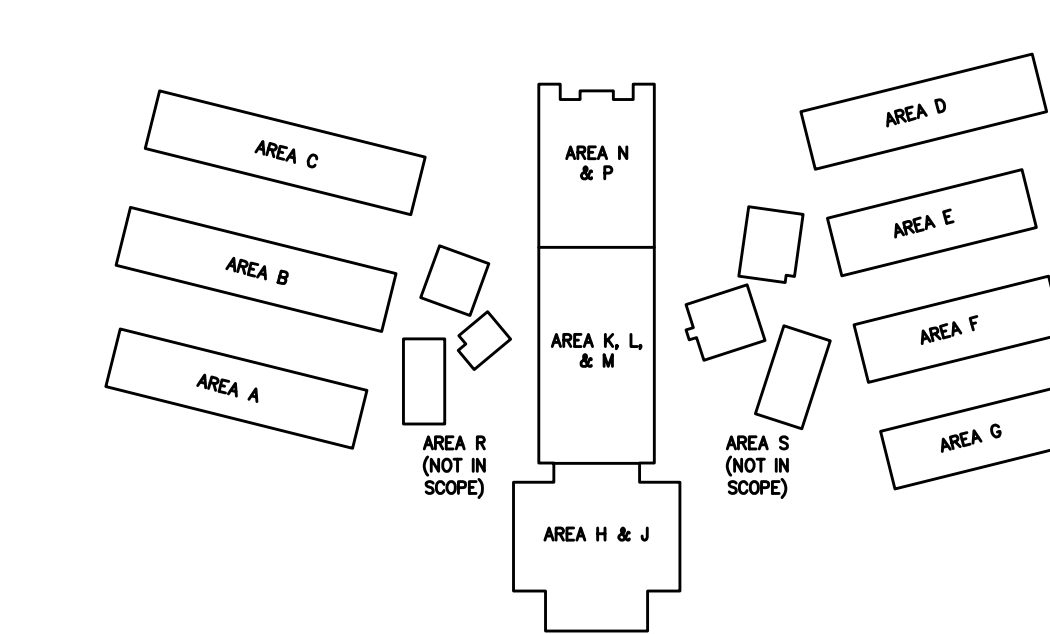
SHEET
E1.3
4 OF 7



2 ELECTRICAL PLAN - AREAS D & E - NEW WORK
SCALE: 3/32" = 1'-0"

- NOTES:
- CONNECT TO EXISTING ADDRESSABLE FIRE ALARM CIRCUIT.
 - CONNECT WITH 3#3, 1#BG, 1-1/4" TO NEW 90/3 CIRCUIT BREAKER IN PANEL AS INDICATED. REPLACE EXISTING 125/3 WITH NEW AS REQUIRED.
 - CONNECT WITH 3#4, 1#BG, 1-1/4" TO NEW 70/3 CIRCUIT BREAKER IN PANEL AS INDICATED. REPLACE EXISTING 400/3 WITH NEW AS REQUIRED.

NOTE: CEILING REMOVAL IS LIMITED TO THAT REQUIRED FOR INSTALLATION OF SMOKE AND CARBON MONOXIDE DETECTORS.

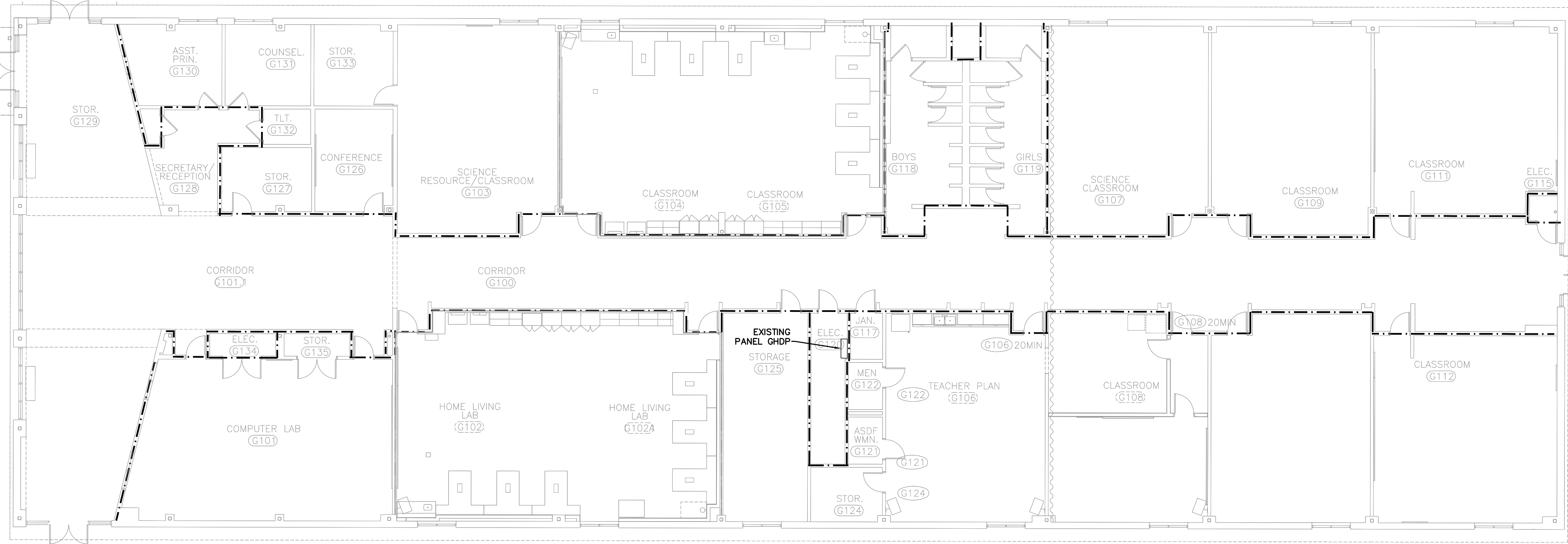
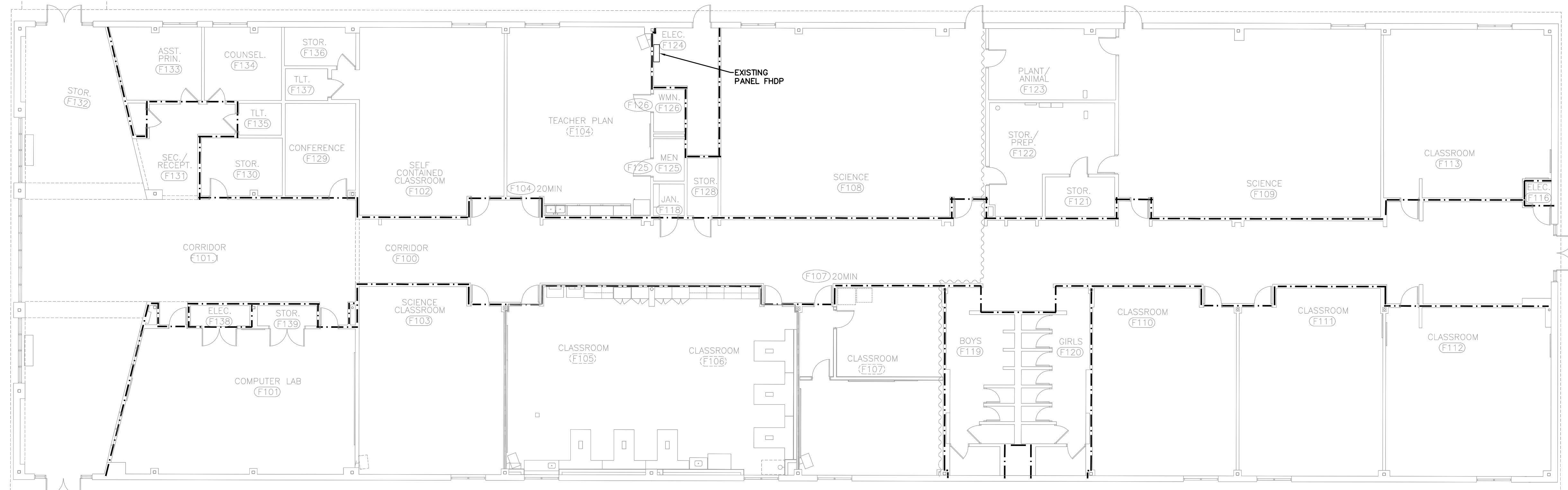
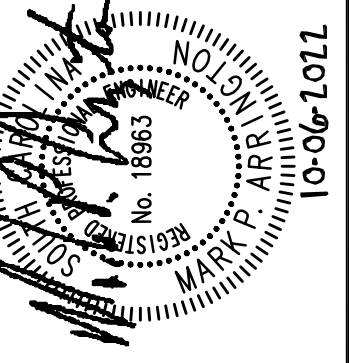
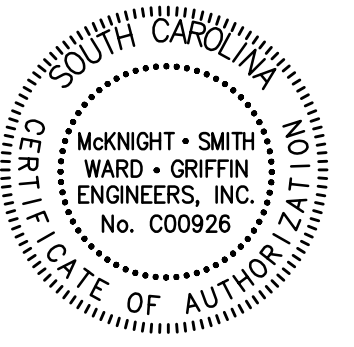


FIRE RATED WALLS	
---	1 HOUR WALL
----	2 HOUR WALL
-----	3 HOUR WALL

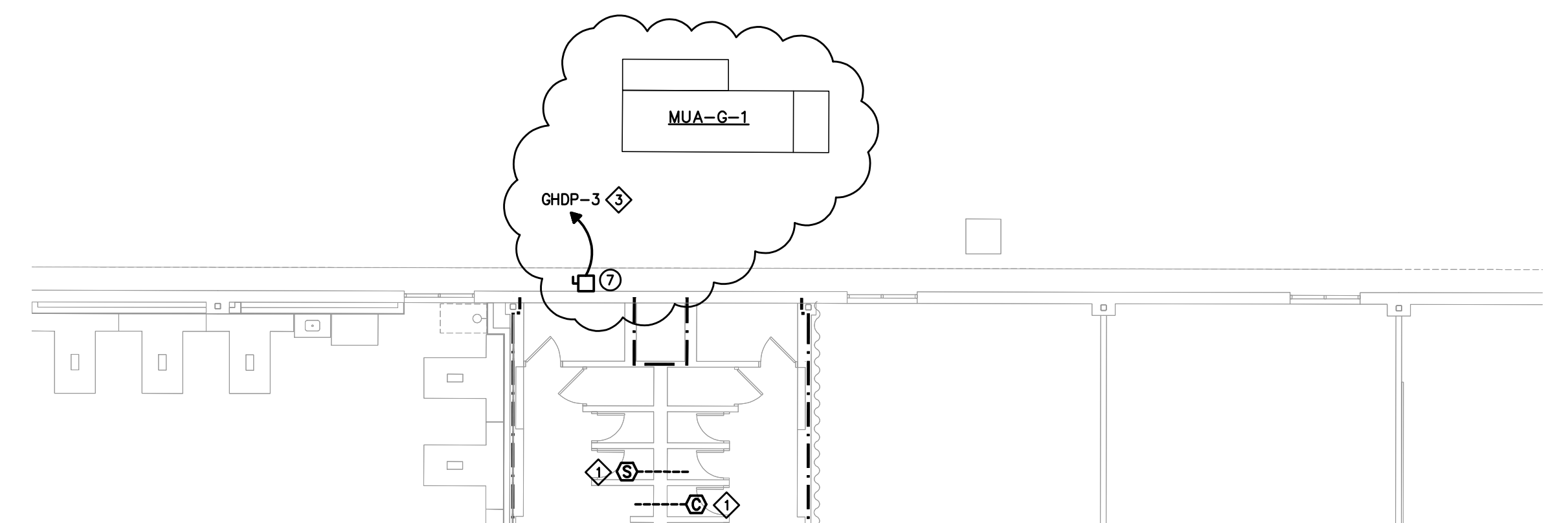
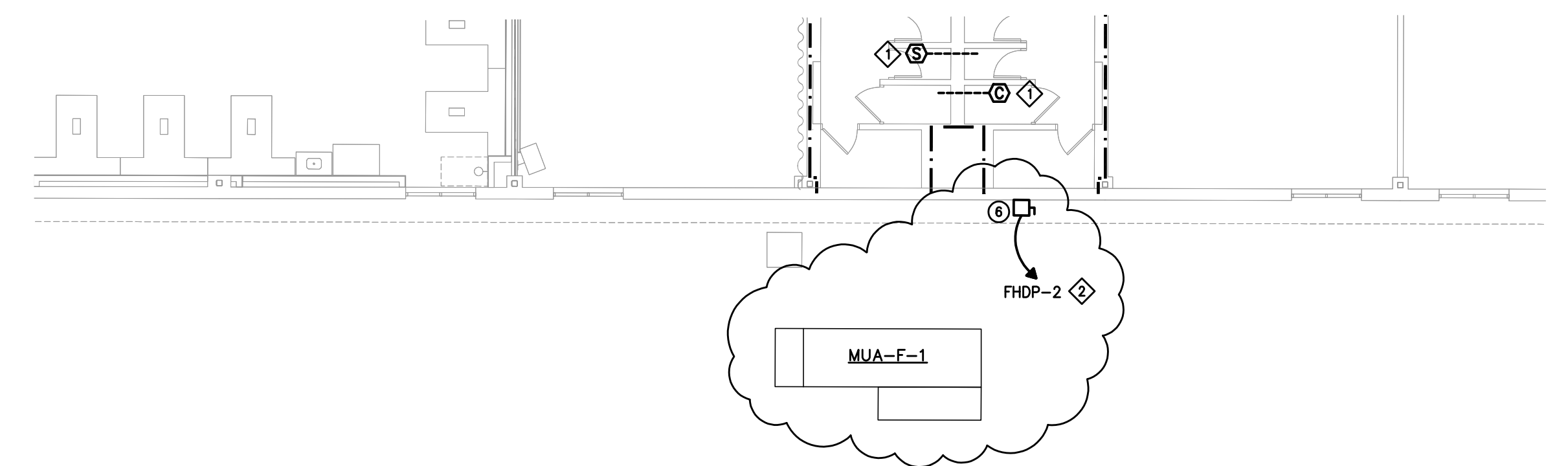
IT IS THE RESPONSIBILITY OF THE CONTRACTOR TO APPLY THE PROPER FIRE-SAFING DETAIL FOR ALL DUCT AND PIPE PENETRATIONS THRU FIRE-RATED WALLS AND SMOKE PARTITIONS.

NOTE: THE CONTRACTOR IS RESPONSIBLE FOR VERIFYING ALL EXISTING CONDITIONS. SUBMISSION OF BIDS IS CONSIDERED VERIFICATION THAT THE CONTRACTOR HAS VISITED THE SITE. NO EXTRAS WILL BE ALLOWED DUE TO LACK OF KNOWLEDGE OF THE EXISTING CONDITIONS.

1 ELECTRICAL PLAN - AREAS D & E - DEMOLITION
SCALE: 3/32" = 1'-0"



1 ELECTRICAL PLAN - AREAS F & G - DEMOLITION
SCALE: 3/32" = 1'-0"



2 ELECTRICAL PLAN - AREAS F & G - NEW WORK
SCALE: 3/32" = 1'-0"

- NOTES:
- CONNECT TO EXISTING ADDRESSABLE FIRE ALARM CIRCUIT.
 - CONNECT WITH 3#4, 1#BG, 1-1/4" TO NEW 70/3 CIRCUIT BREAKER IN PANEL AS INDICATED. REPLACE EXISTING 100/3 WITH NEW AS REQUIRED.
 - CONNECT WITH 3#6, 1#10G, 1" TO NEW 60/3 CIRCUIT BREAKER IN PANEL AS INDICATED. REPLACE EXISTING 100/3 WITH NEW AS REQUIRED.

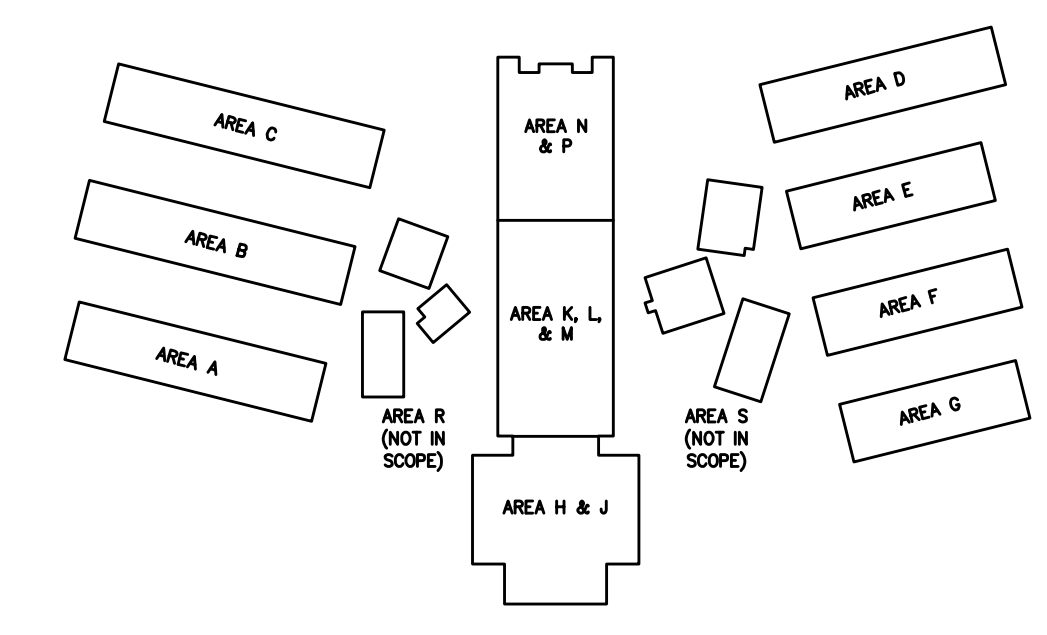
NOTE: CEILING REMOVAL IS LIMITED TO THAT REQUIRED FOR INSTALLATION OF SMOKE AND CARBON MONOXIDE DETECTORS.

FIRE RATED WALLS

---	1 HOUR WALL
----	2 HOUR WALL
-----	3 HOUR WALL

IT IS THE RESPONSIBILITY OF THE CONTRACTOR TO APPLY THE PROPER FIRE-SAFING DETAIL FOR ALL DUCT AND PIPE PENETRATIONS THRU FIRE-RATED WALLS AND SMOKE PARTITIONS.

NOTE: THE CONTRACTOR IS RESPONSIBLE FOR VERIFYING ALL EXISTING CONDITIONS. SUBMISSION OF BIDS IS CONSIDERED VERIFICATION THAT THE CONTRACTOR HAS VISITED THE SITE. NO EXTRAS WILL BE ALLOWED DUE TO LACK OF KNOWLEDGE OF THE EXISTING CONDITIONS.



SYMBOL SCHEDULE	
GENERAL SYMBOLS	
SYMBOL	DESCRIPTION
—	CONDUIT RUN CONCEALED ABOVE CEILING OR IN WALLS.
→	HOMERUN TO PANEL AND CIRCUIT(S) DESIGNATED. ARROW(S) INDICATE QUANTITY OF CIRCUITS.
◇	SPECIAL NOTE, NUMERALS IDENTIFY, SEE SCHEDULE.
⊙	SPECIAL CONNECTION TO A SPECIFIC ITEM OF EQUIPMENT. SEE CONNECTION SCHEDULE.
DISTRIBUTION	
SYMBOL	DESCRIPTION
■	ELECTRICAL PANELBOARD, SURFACE MOUNTED.
□	DISCONNECT SWITCH, NON-FUSIBLE.
⊞	DISCONNECT SWITCH, FUSIBLE.
⊕	GROUND CONNECTION.
Δ	DRY-TYPE TRANSFORMER, 480-120/208V 3-PHASE OR 208-120/208V 3-PHASE.
FIRE ALARM SYSTEM	
SYMBOL	DESCRIPTION
⊙---	FIRE ALARM SYSTEM DUCT MOUNTED PHOTOELECTRIC TYPE SMOKE DETECTOR.
⊙---	FIRE ALARM SYSTEM DUCT MOUNTED CARBON MONOXIDE DETECTOR.

EQUIPMENT CONNECTION SCHEDULE												
SYM.	EQUIPMENT	LOAD	VOLT/PHASE	DISCONNECT				CONDUCTORS	RACEWAY		NOTES	
				TYPE	RATING	POLES	TRIP/FUSE		ENCL.	TYPE		SIZE
①	MUA-A-1,B-1,C-1	6.3, 4.0, 3Ø2.1, 3.1, 1.5FLA; 2Ø16.0RLA	480/3	NFDS	100A	3	---	3R	3#4, 1#8G	LFMC	1-1/4"	
②	MUA-A-2	3.6, 2.4, 2.1, 3.1, 0.4FLA; 12.8RLA	480/3	NFDS	60A	3	---	3R	3#8, 1#10G	LFMC	3/4"	
③	MUA-B-2,C-2	2Ø3.0, 2Ø2.1, 3.1, 0.4FLA; 7.8, 8.2RLA	480/3	NFDS	60A	3	---	3R	3#8, 1#10G	LFMC	3/4"	
④	MUA-D-1	2Ø6.3, 3Ø2.1, 3.1, 1.5FLA; 2Ø23.1RLA	480/3	NFDS	100A	3	---	3R	3#3, 1#8G	LFMC	1-1/4"	
⑤	MUA-E-1	6.3, 4.0, 3Ø2.1, 3.1, 1.5FLA; 2Ø16.0RLA	480/3	NFDS	100A	3	---	3R	3#4, 1#8G	LFMC	1-1/4"	
⑥	MUA-F-1	6.3, 4.0, 3Ø2.1, 3.1, 1.5FLA; 2Ø16.0RLA	480/3	NFDS	100A	3	---	3R	3#4, 1#8G	LFMC	1-1/4"	
⑦	MUA-G-1	6.3, 4.0, 2Ø2.1, 3.1, 1.5FLA; 2Ø14.7RLA	480/3	NFDS	60A	3	---	3R	3#6, 1#10G	LFMC	1"	

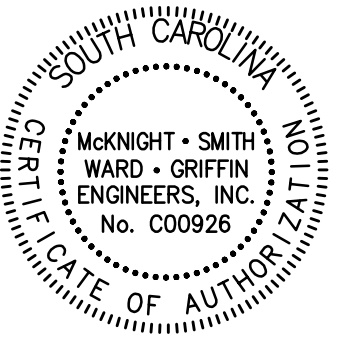
LEGEND DISCONNECT TYPES ETGB = ELECTRONIC-TRIP CIRCUIT BREAKER FDS = FUSIBLE DISCONNECT SWITCH MCP = MOTOR CIRCUIT PROTECTOR NFDS = NON-FUSIBLE DISCONNECT SWITCH ST/DS = COMBINATION STARTER/DISCONNECT SWITCH TMCB = THERMAL-MAGNETIC CIRCUIT BREAKER TOG = HP RATED TOGGLE SWITCH	DISCONNECT ENCLOSURE TYPES 1 = NEMA 1 ENCLOSURE 3R = NEMA 3R ENCLOSURE 4 = NEMA 4 ENCLOSURE 4X = NEMA 4X ENCLOSURE FPN = FUSE PER NAMEPLATE	RACEWAY TYPES EMT = ELECTRIC METALLIC TUBING FMC = FLEXIBLE METAL CONDUIT IMC = INTERMEDIATE METAL CONDUIT LFMC = LIQUID-TIGHT FLEXIBLE METAL CONDUIT PVC = NON-METALLIC PVC CONDUIT RMC = RIGID METAL CONDUIT	STARTER TYPES CFWR = COMBINATION FULL VOLTAGE, NONREVERSING CONTROL DEVICES HOA = HAND-OFF-AUTO RPL = RED PILOT LIGHT AUX = AUXILIARY CONTACTS (2 N.O., 1 N.C.) CT50 = 50 VA CONTROL TRANSFORMER
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NOTES

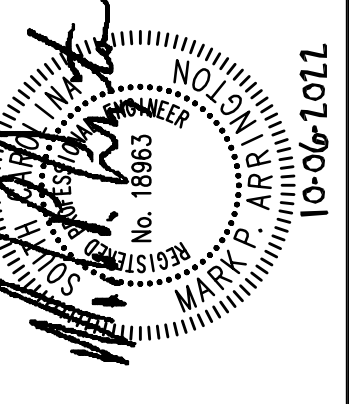
ALL ELECTRICAL CHARACTERISTICS SCHEDULED ABOVE ARE BASED ON INFORMATION AVAILABLE AT THE TIME OF DESIGN. ELECTRICAL CONTRACTOR SHALL VERIFY ELECTRICAL CHARACTERISTICS OF ALL EQUIPMENT WITH EQUIPMENT SUPPLIER(S) PRIOR TO ROUGHING, AND SHALL VERIFY EXACT LOCATION AND EXACT TYPE OF CONNECTION. ALL EQUIPMENT SHALL BE PROPERLY AND SECURELY GROUNDED. ANY SIGNIFICANT CHANGES IN LOCATION, ELECTRICAL REQUIREMENTS, OR TYPE OF CONNECTION REQUIRED FOR ANY EQUIPMENT SCHEDULED ABOVE SHALL BE BROUGHT TO THE ATTENTION OF THE ENGINEER IN WRITING PRIOR TO PROCEEDING.

CONDUCTORS AND RACEWAY SPECIFIED IN THE ABOVE SCHEDULE ARE FOR FINAL CONNECTION TO UNIT AND SHALL BE EXTENDED FROM THE DISCONNECT SHOWN ON THE FLOOR PLANS TO THE EQUIPMENT TERMINATION BOX.

CONDUIT AND BOXES REQUIRED FOR EQUIPMENT CONNECTIONS SHALL BE INSTALLED IN SUCH A WAY AS TO NOT COVER UP EQUIPMENT NAMEPLATES, SERVICE AREAS, AIR FLOW AREAS, ETC.



**McKNIGHT • SMITH
WARD • GRIFFIN**
 ENGINEERS, INCORPORATED
 4223 South Boulevard
 Charlotte, NC 28209
 704/527-2112



JOB NUMBER	21-158
DESIGNED BY	SMB
CHECKED BY	WFA
DATE	07/22/2022
REVISION DATES	10/06/2022
REVISION DESCRIPTION	UNIT CHANGES

**CAROLINA FOREST HIGH
700 GARDNER LACY RD.
MYRTLE BEACH, SC, 29579
HVAC RENEWAL**

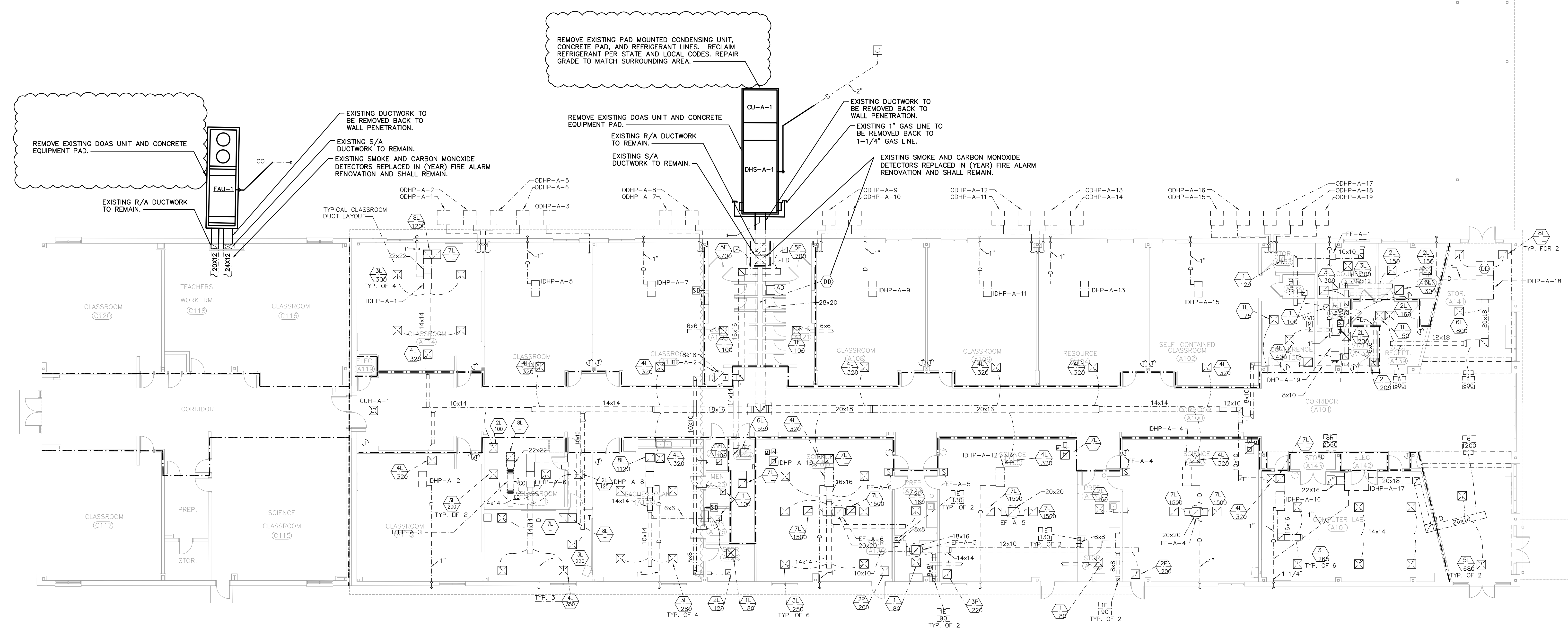
**SYMBOLS AND
SCHEDULES**

SHEET
EN.0
 6 OF 7

REVISION NUMBER	REVISION DATES	REVISION DESCRIPTION
21-158	10/06/2022	UNIT CHANGES
158	JOC	
	07/22/2022	

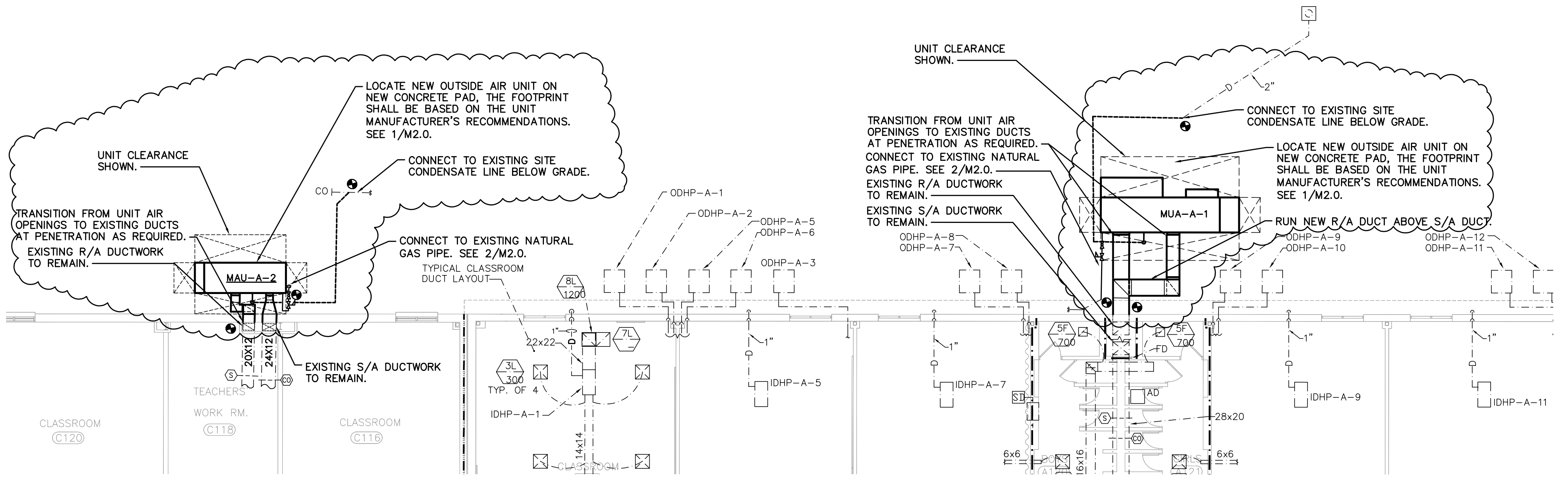
CAROLINA FOREST HIGH
700 GARDNER LACY RD.
MYRTLE BEACH, SC, 29579
HVAC RENEWAL

MECHANICAL FLOOR PLAN
AREA A



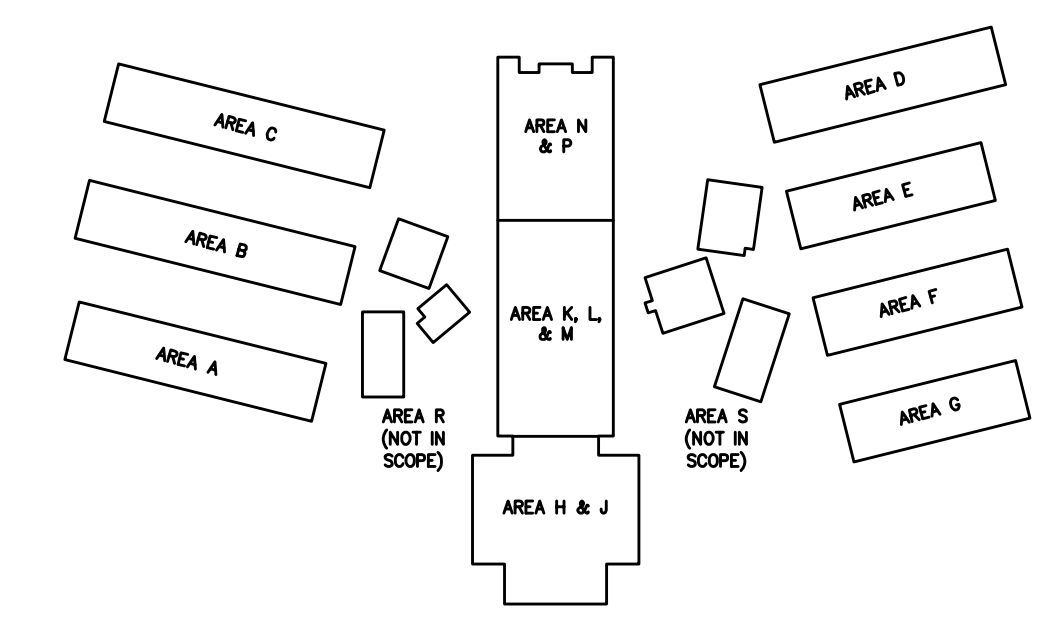
1 HVAC PLAN - DEMOLITION - AREA A
SCALE: 3/32" = 1'-0"

---	EXISTING TO REMAIN IN USE OR BE ABANDONED
---	EXISTING TO BE REMOVED
---	EXISTING TO BE RELOCATED
---	CAP DUCT



2 HVAC PLAN - NEW WORK - AREA A
SCALE: 3/32" = 1'-0"

---	NEW EQUIPMENT
---	EXISTING
---	EXISTING RELOCATED
---	EXISTING THERMOSTAT
---	CONNECT TO EXISTING

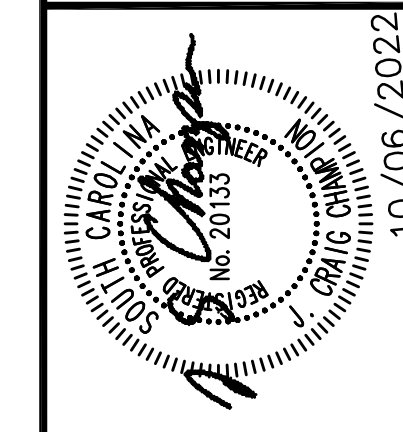
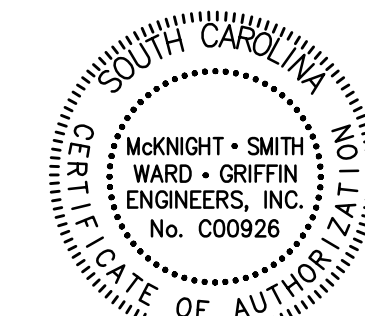


NOTE: CEILING REMOVAL IS LIMITED TO THAT REQUIRED FOR INSTALLATION OF SMOKE AND CARBON MONOXIDE DETECTORS.

---	1 HOUR WALL
---	2 HOUR WALL
---	3 HOUR WALL

IT IS THE RESPONSIBILITY OF THE CONTRACTOR TO APPLY THE PROPER FIRE-RATING DETAIL FOR ALL DUCT AND PIPE PENETRATIONS THRU FIRE-RATED WALLS AND SMOKE PARTITIONS.

NOTE: THE CONTRACTOR IS RESPONSIBLE FOR VERIFYING ALL EXISTING CONDITIONS. SUBMISSION OF BIDS IS CONSIDERED VERIFICATION THAT THE CONTRACTOR HAS VISITED THE SITE. NO EXTRAS WILL BE ALLOWED DUE TO LACK OF KNOWLEDGE OF THE EXISTING CONDITIONS.

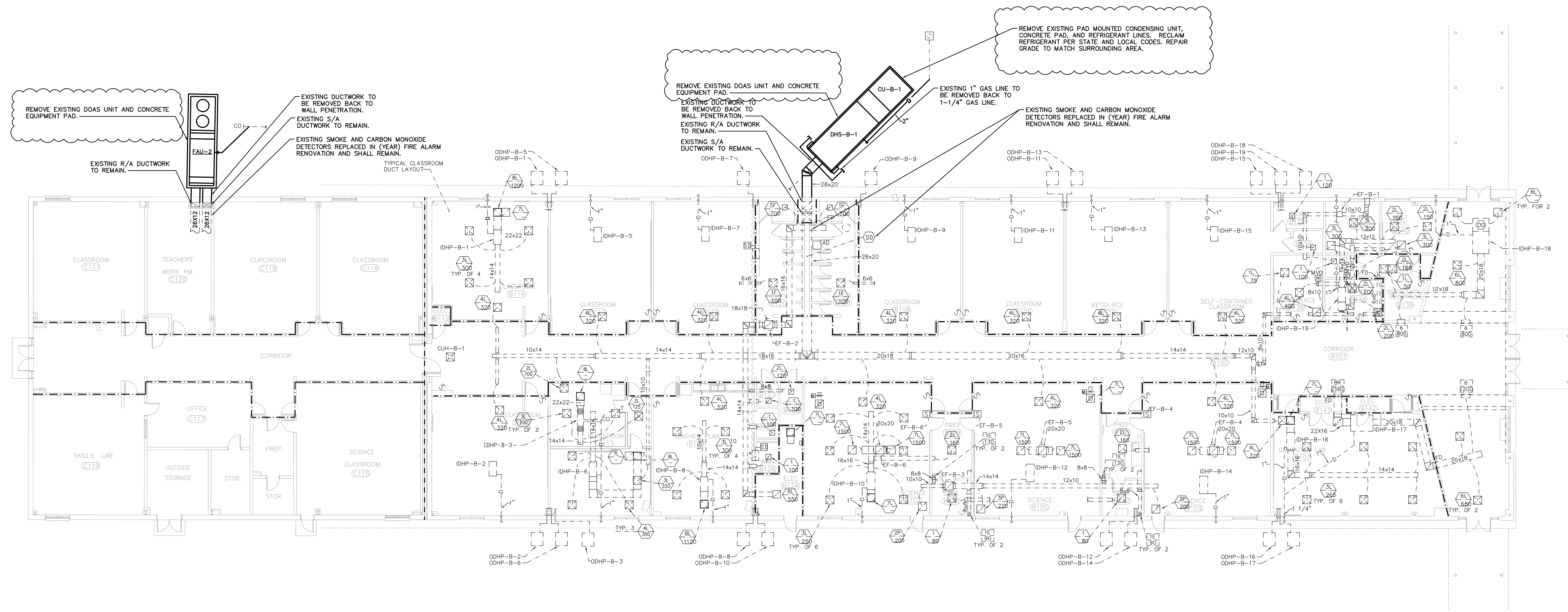


REVISION DATES	REVISION DESCRIPTION
21-158	UNIT CHANGES

JOB NUMBER	REVISION DATES	REVISION DESCRIPTION
21-158	10/06/2022	UNIT CHANGES
DESIGNED BY	JOC	
CHECKED BY	JOC	
DATE	07/22/2022	

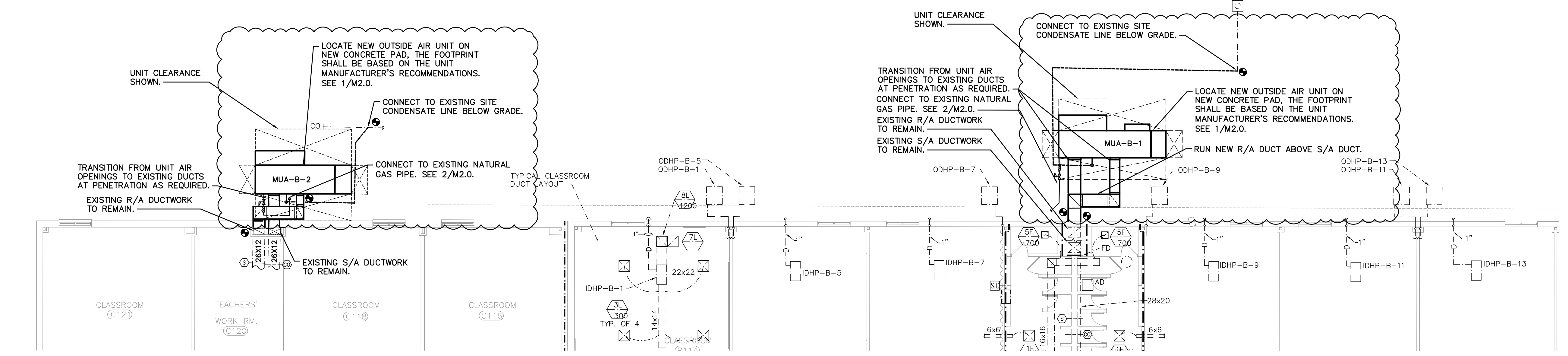
**CAROLINA FOREST HIGH
700 GARDNER LACY RD.
MYRTLE BEACH, SC, 29579
HVAC RENEWAL**

**MECHANICAL FLOOR PLAN
AREA B**



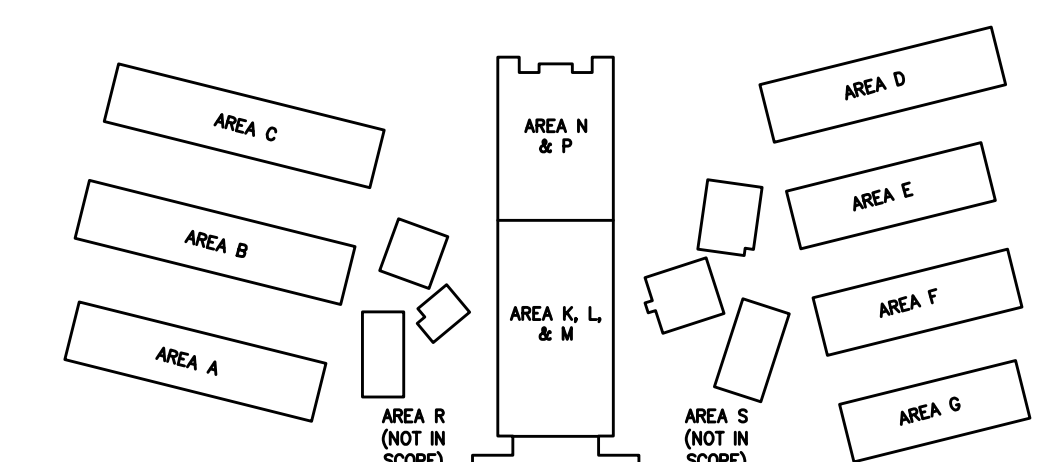
1 HVAC PLAN - DEMOLITION - AREA B
SCALE: 3/32" = 1'-0"

	EXISTING TO REMAIN IN USE OR BE ABANDONED
	EXISTING TO BE REMOVED
	EXISTING TO BE RELOCATED
	CAP DUCT



2 HVAC PLAN - NEW WORK - AREA B
SCALE: 3/32" = 1'-0"

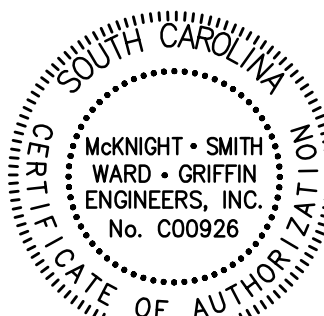
	NEW EQUIPMENT
	EXISTING
	EXISTING RELOCATED
	EXISTING THERMOSTAT
	CONNECT TO EXISTING



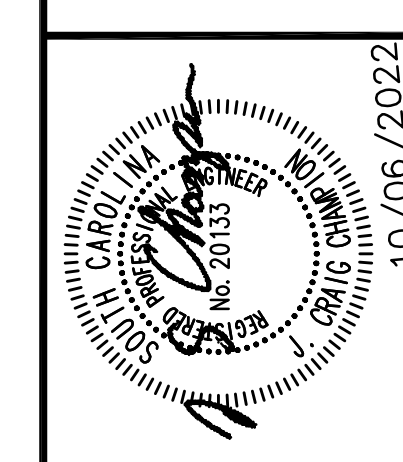
NOTE: CEILING REMOVAL IS LIMITED TO THAT REQUIRED FOR INSTALLATION OF SMOKE AND CARBON MONOXIDE DETECTORS.

	1 HOUR WALL
	2 HOUR WALL
	3 HOUR WALL

NOTE: THE CONTRACTOR IS RESPONSIBLE FOR VERIFYING ALL EXISTING CONDITIONS. SUBMISSION OF BIDS IS CONSIDERED VERIFICATION THAT THE CONTRACTOR HAS VISITED THE SITE. NO EXTRAS WILL BE ALLOWED DUE TO LACK OF KNOWLEDGE OF THE EXISTING CONDITIONS.



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ENGINEERS, INCORPORATED
4223 South Boulevard
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704/527-2112

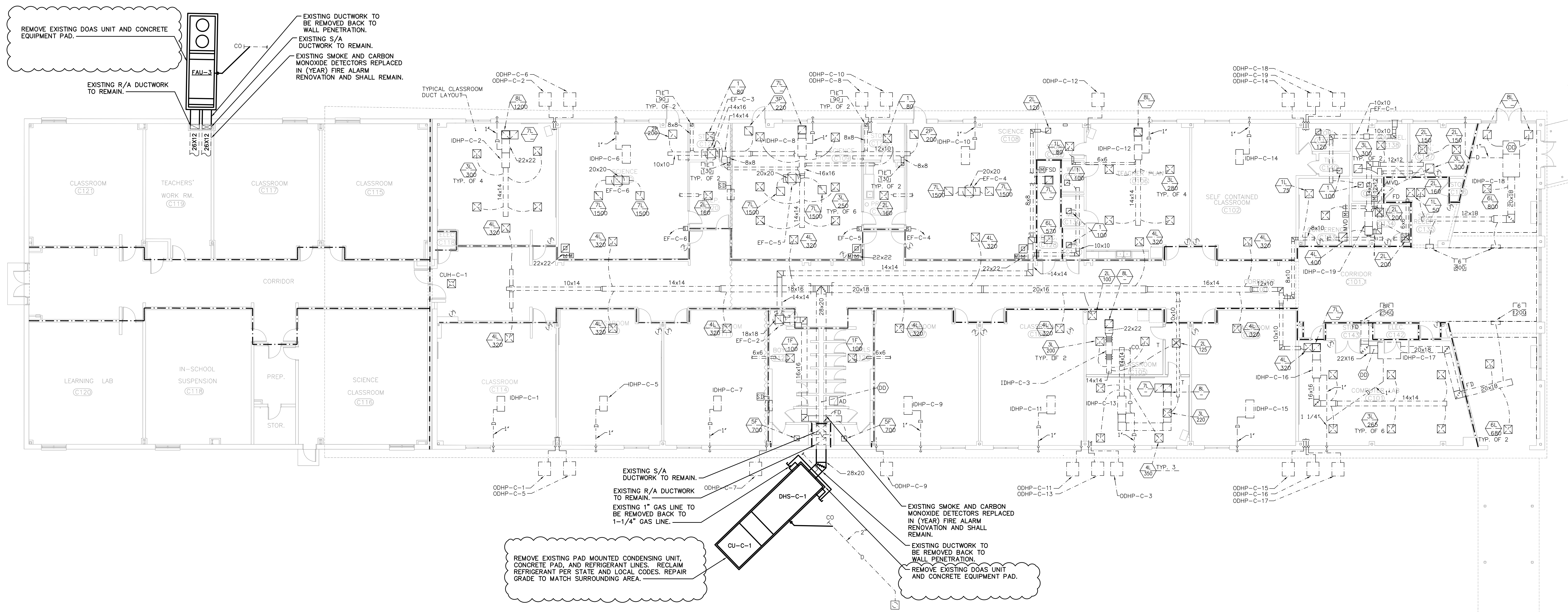


JOB NUMBER	REVISION DATES	REVISION DESCRIPTION
21-158	LMS 10/06/2022	UNIT CHANGES
CRANBY	JOC	
CHECKED BY	JOC	
DATE	07/22/2022	

CAROLINA FOREST HIGH
700 GARDNER LACY RD.
MYRTLE BEACH, SC, 29579
HVAC RENEWAL

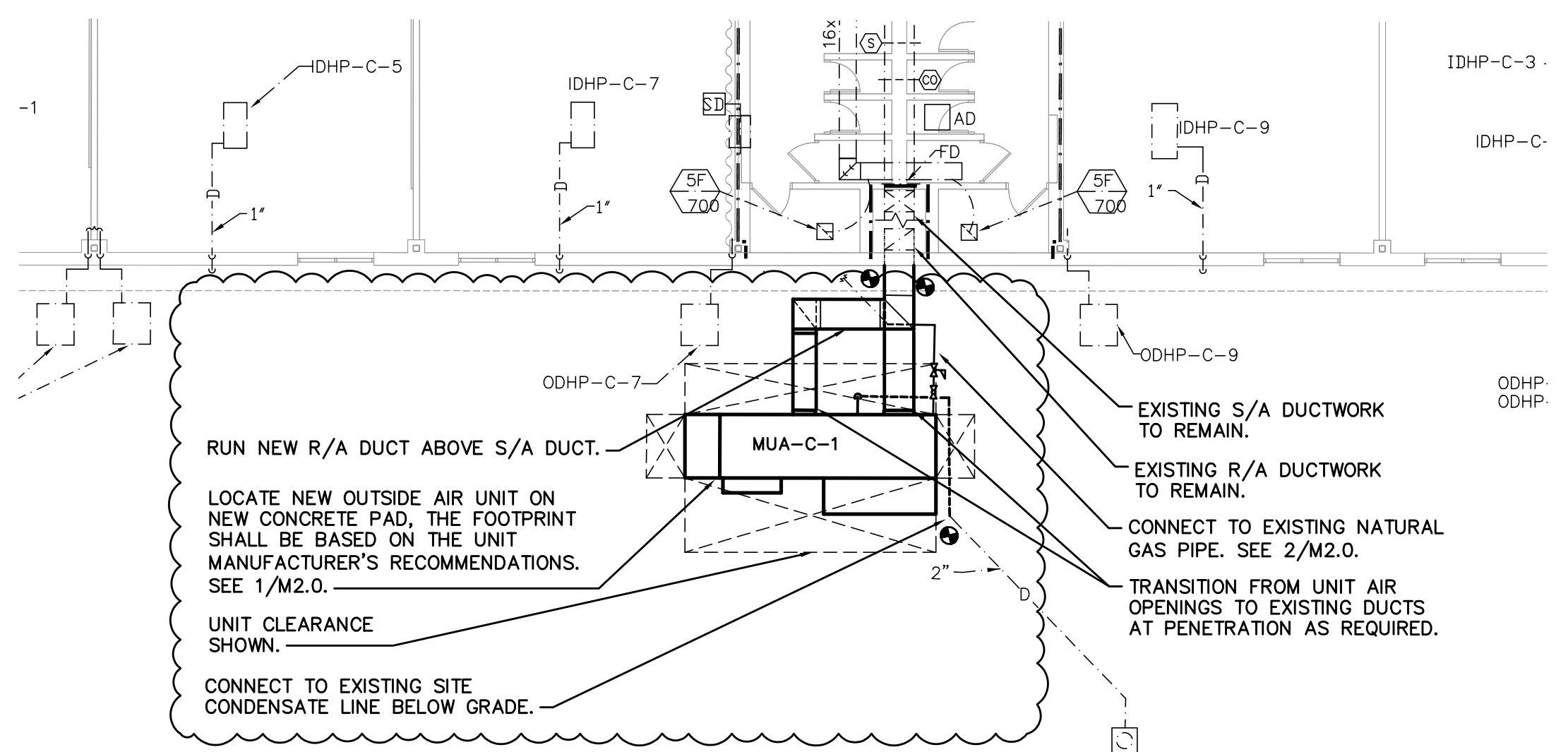
MECHANICAL FLOOR PLAN
AREA C

SHEET
M1.2
3 OF 8



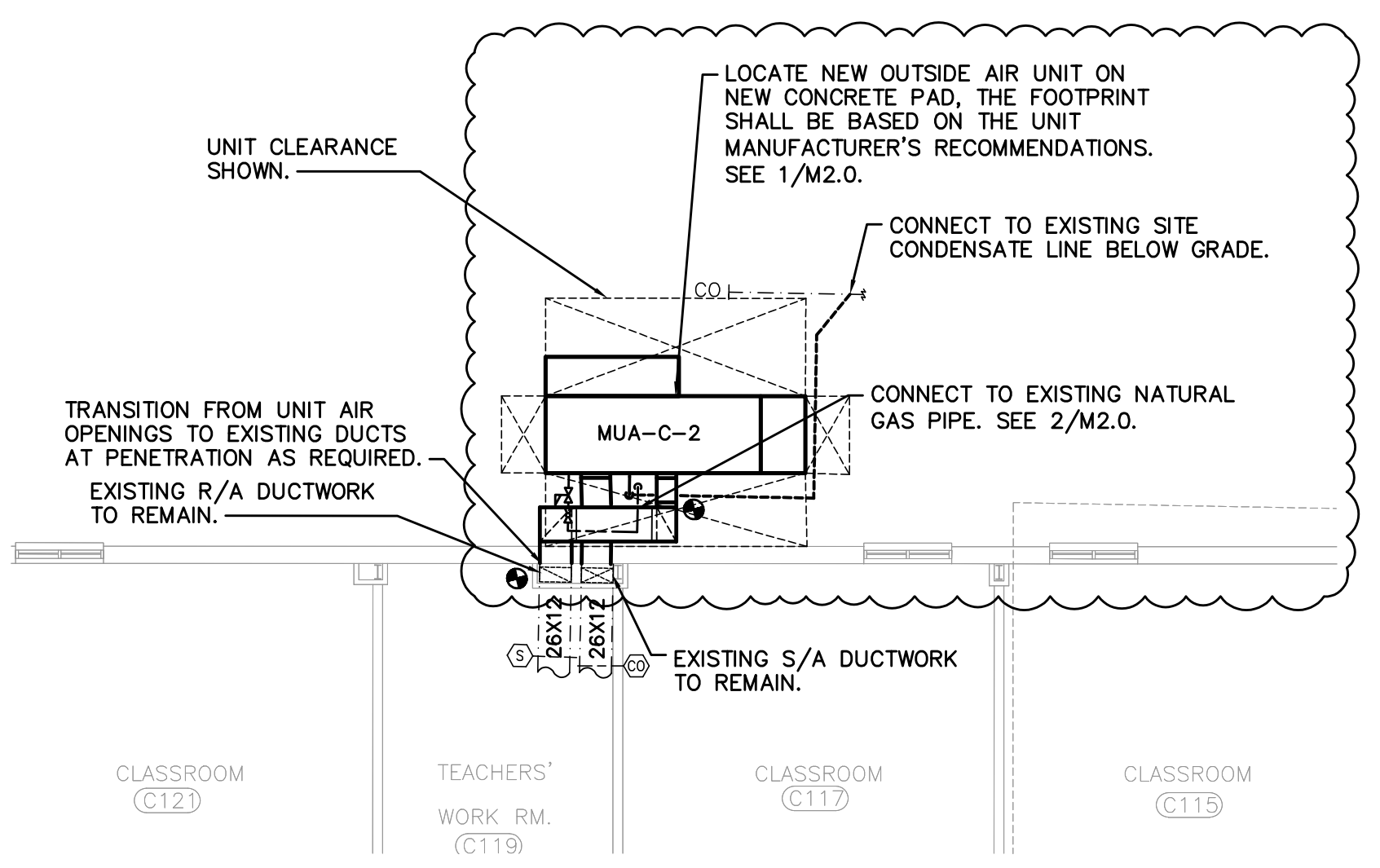
1 HVAC PLAN - DEMOLITION - AREA C
SCALE: 3/32" = 1'-0"

	EXISTING TO REMAIN IN USE OR BE ABANDONED
	EXISTING TO BE REMOVED
	EXISTING TO BE RELOCATED
	CAP DUCT



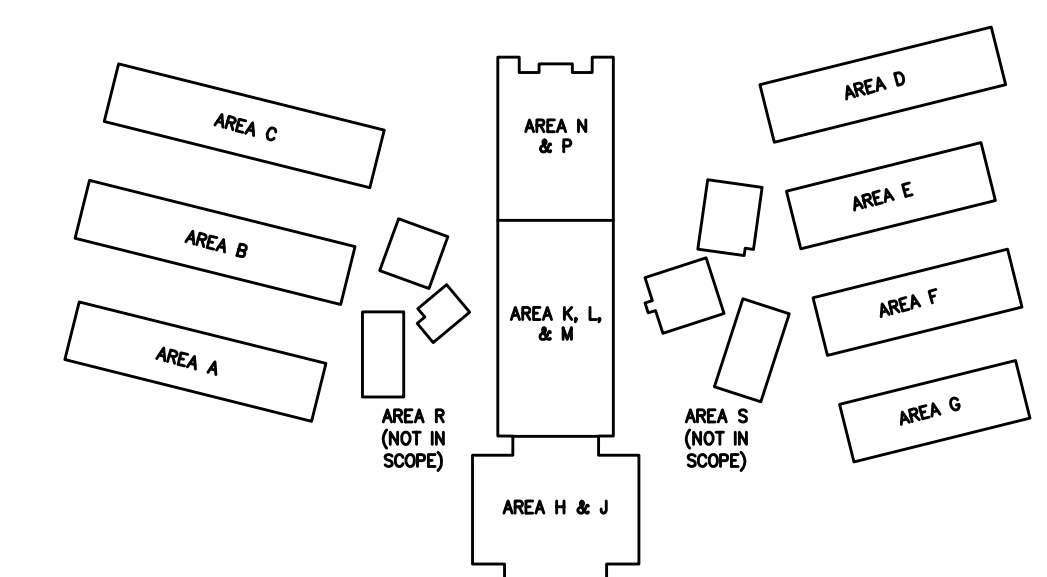
2 HVAC PLAN - NEW WORK - AREA C
SCALE: 3/32" = 1'-0"

	NEW EQUIPMENT
	EXISTING
	EXISTING RELOCATED
	EXISTING THERMOSTAT
	CONNECT TO EXISTING



3 HVAC PLAN - NEW WORK - AREA C
SCALE: 3/32" = 1'-0"

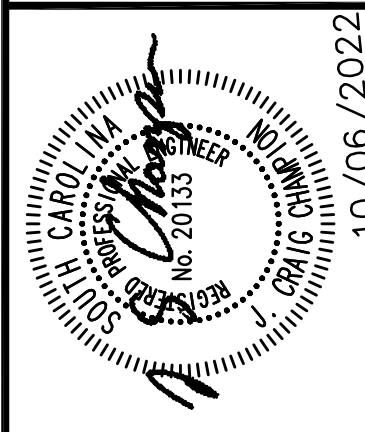
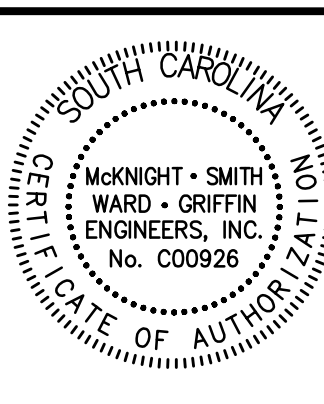
	NEW EQUIPMENT
	EXISTING
	EXISTING RELOCATED
	EXISTING THERMOSTAT
	CONNECT TO EXISTING



NOTE: CEILING REMOVAL IS LIMITED TO THAT REQUIRED FOR INSTALLATION OF SMOKE AND CARBON MONOXIDE DETECTORS.

	1 HOUR WALL
	2 HOUR WALL
	3 HOUR WALL

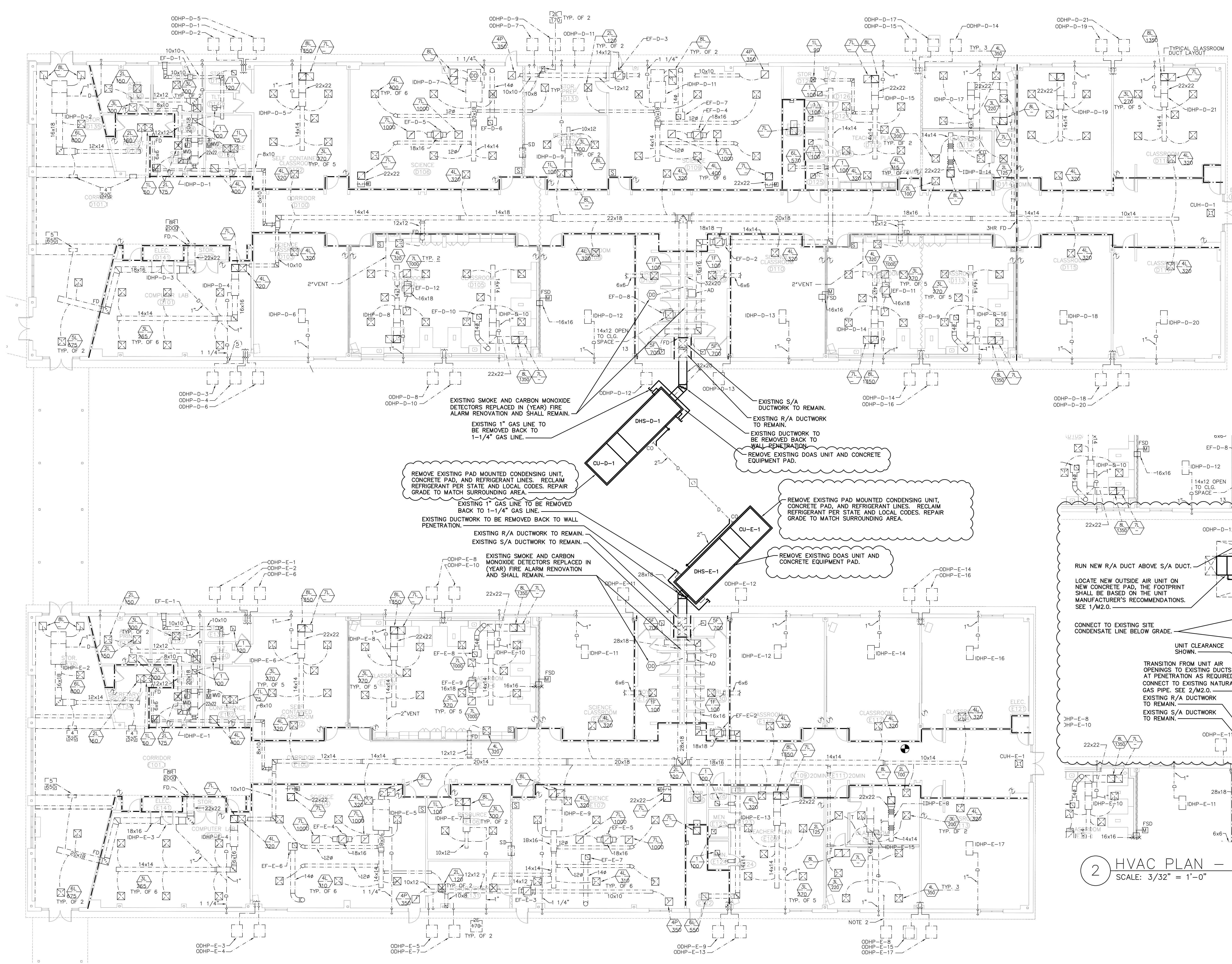
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REVISION DATES	REVISION DESCRIPTION	UNIT	CHANGES
21-158	LS	10/06/2022	
	JOC		
	JOC	07/22/2022	

**CAROLINA FOREST HIGH
700 GARDNER LACY RD.
MYRTLE BEACH, SC, 29579
HVAC RENEWAL**

**MECHANICAL FLOOR PLAN
AREA D & E**



RENOVATION LEGEND

—	NEW EQUIPMENT
- - -	EXISTING
- - -	EXISTING RELOCATED
⊕	EXISTING THERMOSTAT
⊕	CONNECT TO EXISTING

EXISTING SMOKE AND CARBON MONOXIDE DETECTORS REPLACED IN (YEAR) FIRE ALARM RENOVATION AND SHALL REMAIN.
EXISTING 1" GAS LINE TO BE REMOVED BACK TO 1-1/4" GAS LINE.

REMOVE EXISTING PAD MOUNTED CONDENSING UNIT, CONCRETE PAD, AND REFRIGERANT LINES. RECLAIM REFRIGERANT PER STATE AND LOCAL CODES. REPAIR GRADE TO MATCH SURROUNDING AREA.

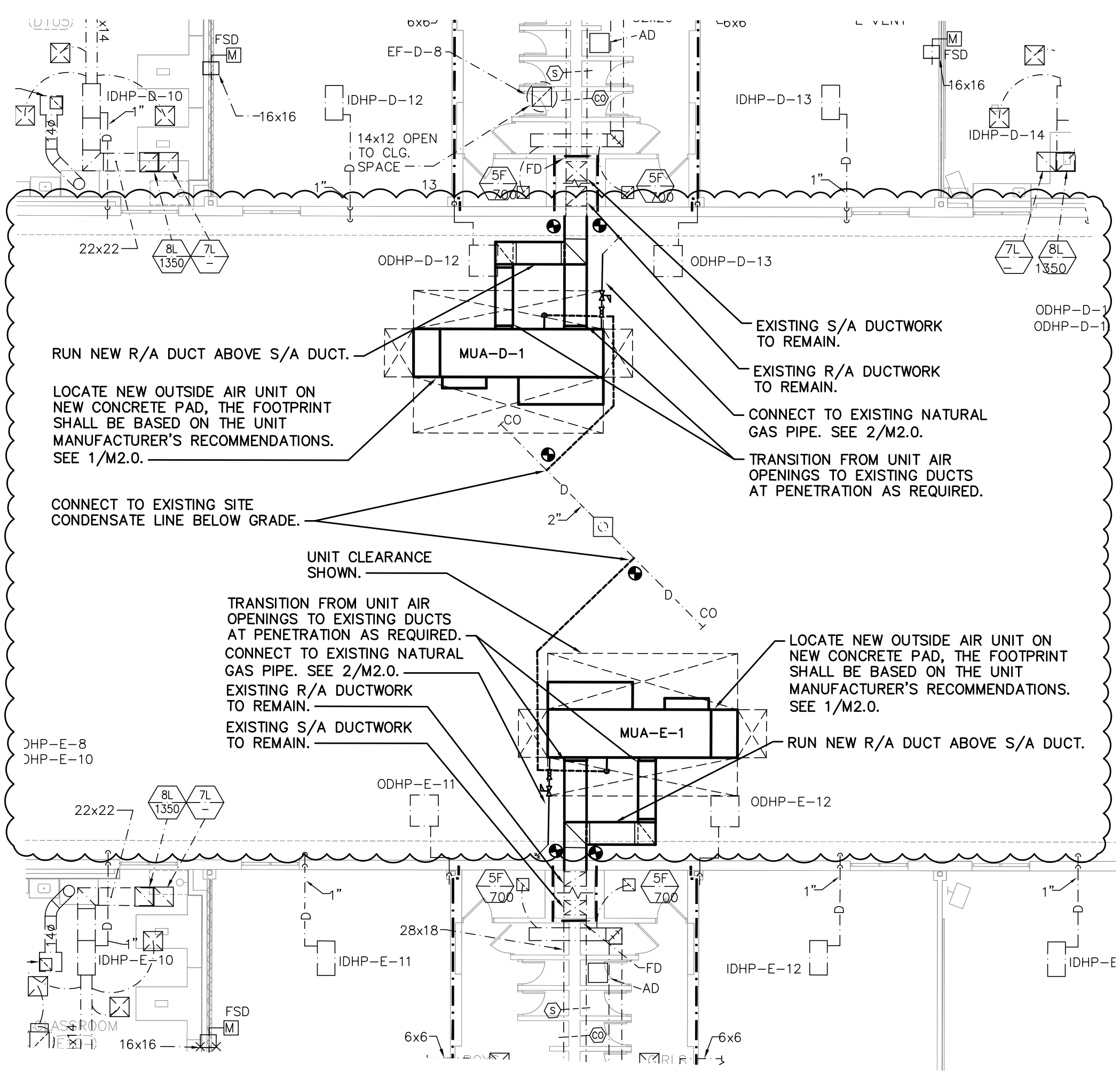
EXISTING 1" GAS LINE TO BE REMOVED BACK TO 1-1/4" GAS LINE.
EXISTING DUCTWORK TO BE REMOVED BACK TO WALL PENETRATION.

EXISTING R/A DUCTWORK TO REMAIN.
EXISTING S/A DUCTWORK TO REMAIN.

EXISTING SMOKE AND CARBON MONOXIDE DETECTORS REPLACED IN (YEAR) FIRE ALARM RENOVATION AND SHALL REMAIN.

REMOVE EXISTING PAD MOUNTED CONDENSING UNIT, CONCRETE PAD, AND REFRIGERANT LINES. RECLAIM REFRIGERANT PER STATE AND LOCAL CODES. REPAIR GRADE TO MATCH SURROUNDING AREA.

REMOVE EXISTING DOAS UNIT AND CONCRETE EQUIPMENT PAD.



2 HVAC PLAN - NEW WORK - AREA D & E
SCALE: 3/32" = 1'-0"

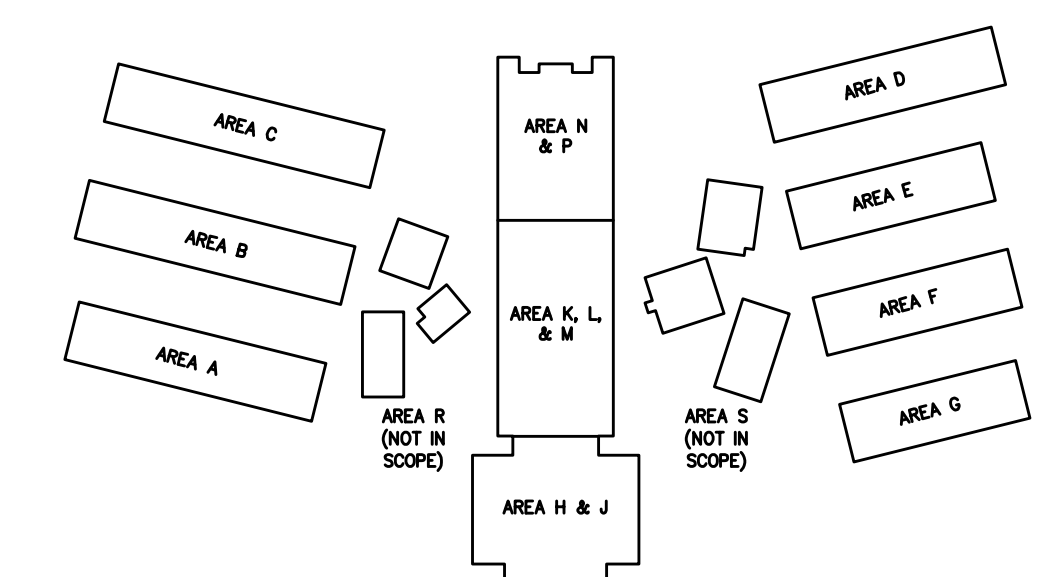
1 HVAC PLAN - DEMOLITION - AREA D & E
SCALE: 3/32" = 1'-0"

DEMOLITION LEGEND

---	EXISTING TO REMAIN IN USE OR BE ABANDONED
---	EXISTING TO BE REMOVED
- - -	EXISTING TO BE RELOCATED
---	CAP DUCT

FIRE RATED WALLS

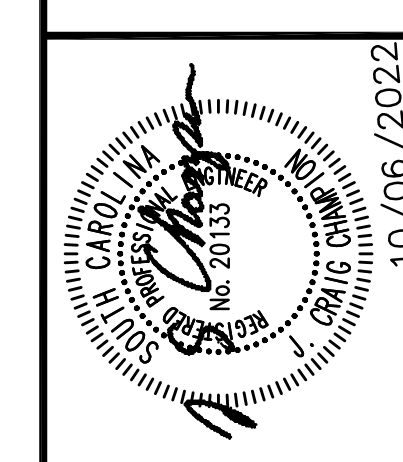
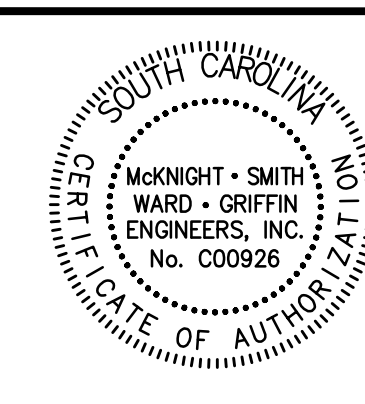
---	1 HOUR WALL
- - -	2 HOUR WALL
---	3 HOUR WALL



NOTE: THE CONTRACTOR IS RESPONSIBLE FOR VERIFYING ALL EXISTING CONDITIONS. SUBMISSION OF BIDS IS CONSIDERED VERIFICATION THAT THE CONTRACTOR HAS VISITED THE SITE. NO EXTRAS WILL BE ALLOWED DUE TO LACK OF KNOWLEDGE OF THE EXISTING CONDITIONS.

NOTE: CEILING REMOVAL IS LIMITED TO THAT REQUIRED FOR INSTALLATION OF SMOKE AND CARBON MONOXIDE DETECTORS.

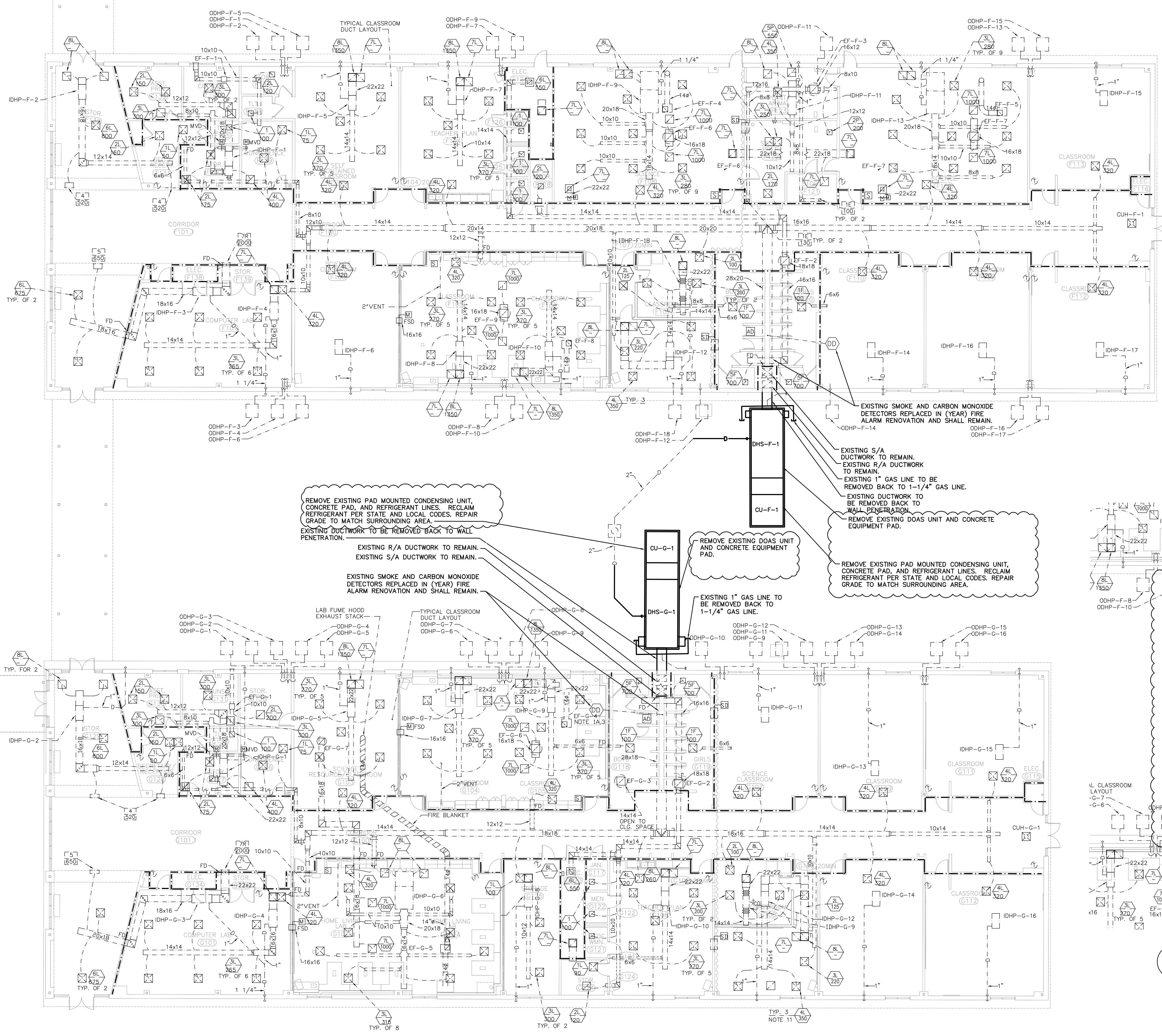
NOTE 2: EXISTING SMOKE AND CARBON MONOXIDE DETECTORS REPLACED IN (YEAR) FIRE ALARM RENOVATION AND SHALL REMAIN.



REVISION NUMBER	REVISION DESCRIPTION	DATE
1	ISSUE FOR PERMIT	07/22/2022
2	REVISED FOR RFP	10/06/2022

**CAROLINA FOREST HIGH
700 GARDNER LACY RD.
MYRTLE BEACH, SC, 29579
HVAC RENEWAL**

**MECHANICAL FLOOR PLAN
AREA F & G**



1 HVAC PLAN - DEMOLITION - AREA F & G
SCALE: 3/32" = 1'-0"

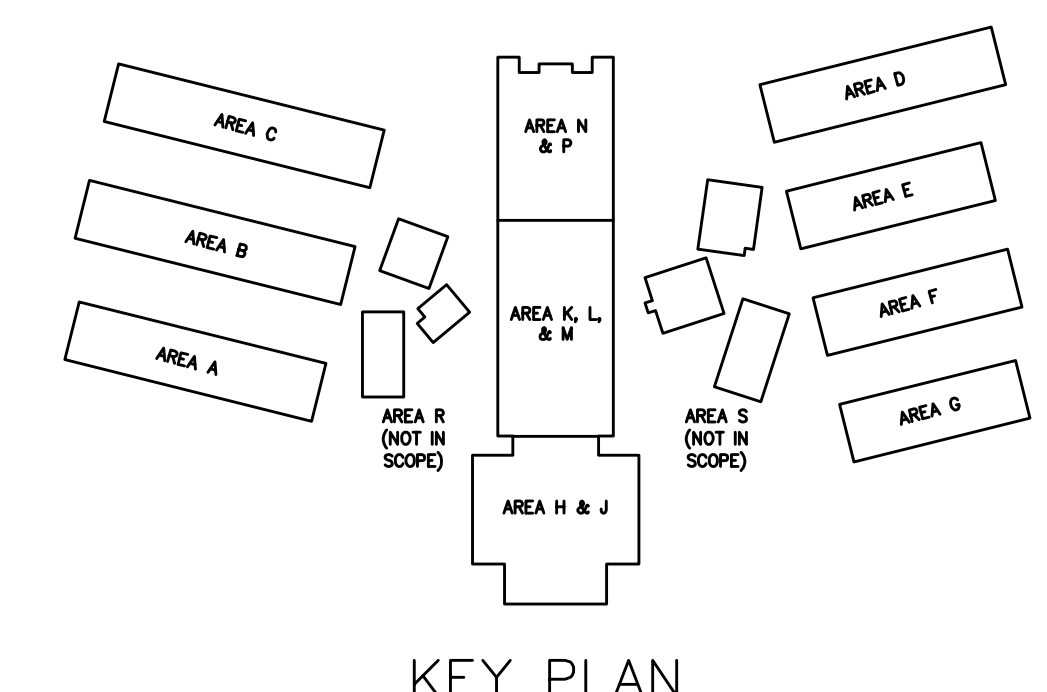
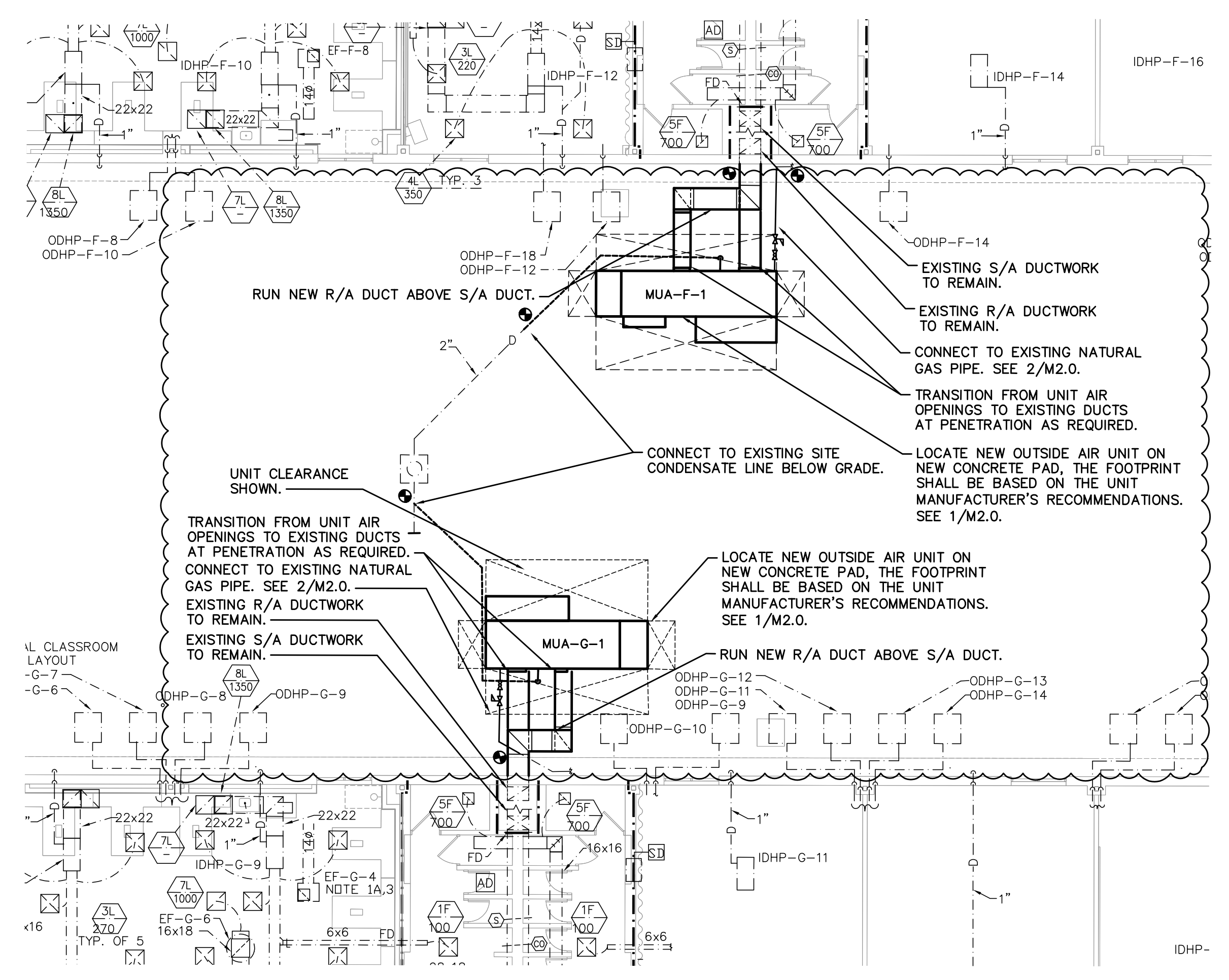
DEMOLITION LEGEND

---	EXISTING TO REMAIN IN USE OR BE ABANDONED
---	EXISTING TO BE REMOVED
---	EXISTING TO BE RELOCATED
---	CAP DUCT

2 HVAC PLAN - NEW WORK - AREA F & G
SCALE: 3/32" = 1'-0"

RENOVATION LEGEND

---	NEW EQUIPMENT
---	EXISTING
---	EXISTING RELOCATED
---	EXISTING THERMOSTAT
---	CONNECT TO EXISTING

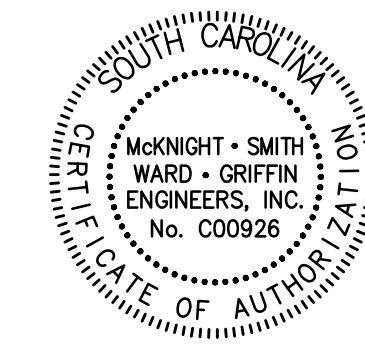


NOTE: CEILING REMOVAL IS LIMITED TO THAT REQUIRED FOR INSTALLATION OF SMOKE AND CARBON MONOXIDE DETECTORS.

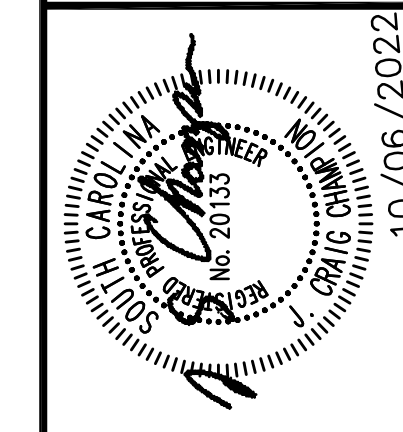
FIRE RATED WALLS

---	1 HOUR WALL
---	2 HOUR WALL
---	3 HOUR WALL

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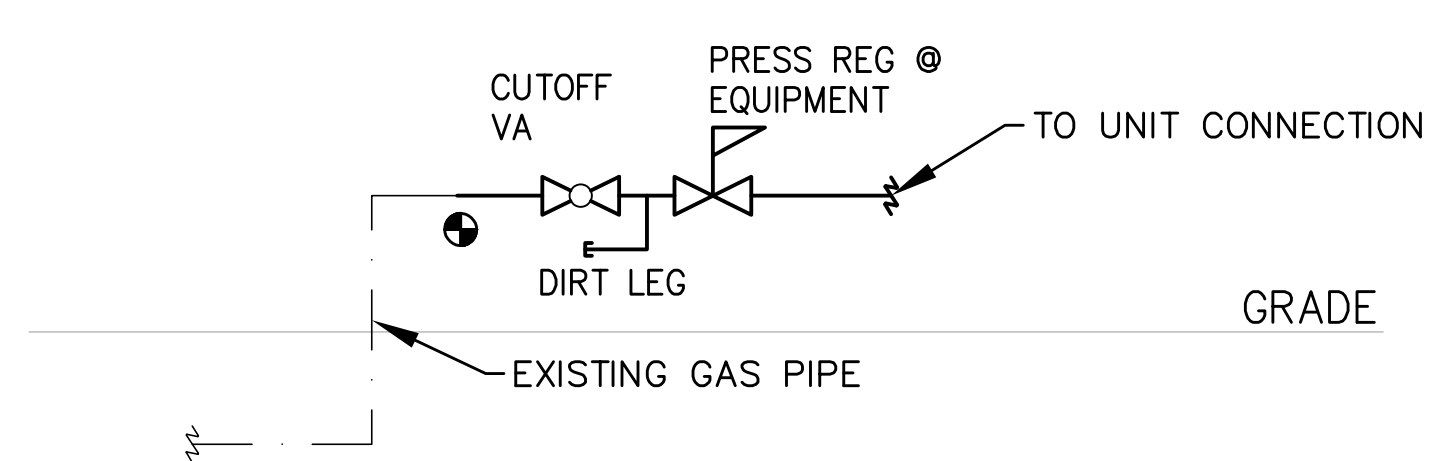
REVISION DATES	21-158	10/06/2022	UNIT CHANGES
DESIGNED BY	LMS	10/06/2022	
CHECKED BY	JOC	07/22/2022	
DATE			

**CAROLINA FOREST HIGH
700 GARDNER LACY RD.
MYRTLE BEACH, SC, 29579
HVAC RENEWAL**

**MECHANICAL SCHEDULES
AND DETAILS**

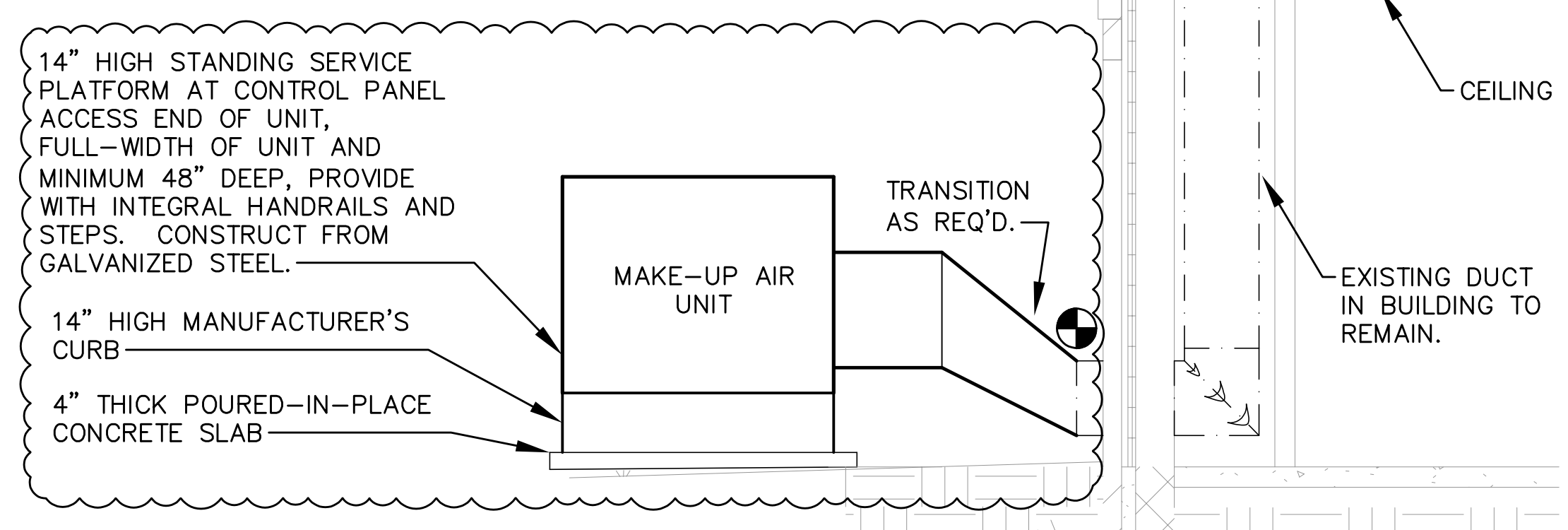
SHEET M2.0

SYMBOL		DESCRIPTION
SINGLE LINE	DOUBLE LINE	
LOW PRESSURE DUCTWORK		
10 X 12	16 X 12	DUCT SECTION - 1ST FIGURE WIDTH, 2ND DEPTH
		SQUARE TO ROUND TRANS.
		FLEX DUCTWORK
		ELBOW W/TURNING VANES
		LONG RADIUS ELBOW
EXH		EXHAUST DUCT SECTION
SA		SUPPLY DUCT SECTION
OA		OUTSIDE AIR DUCT SECTION
RA		RETURN/RELIEF AIR DUCT SECTION
TA		TRANSFER AIR DUCT SECTION
N/A		EXPOSED DUCT
		SHORT RADIUS VANED ELBOW
		CONICAL DUCT TAKE-OFF
		RECTANGULAR-TO-ROUND TAKE-OFF WITH DAMPER
		RECTANGULAR-TO-ROUND TAKE-OFF WITHOUT DAMPER
		RECTANGULAR TAKE-OFF
		LONG RADIUS TEE
		TEE W/TURNING VANES
		"Y" TAKE-OFF WITH SPLITTER DAMPER
		FIRE DAMPER "A" OR "B"
		COMBINATION FIRE/SMOKE DAMPER
		VOLUME EXTRACTOR
MISCELLANEOUS		
		THERMOSTAT
		THERMOSTAT W/ABUSE PROOF COVER, CAST ALUMINUM
		HUMIDISTAT
		CARBON DIOXIDE SENSOR
		SMOKE DAMPER
		SMOKE DETECTOR
		CONDENSATE DRAIN
		BACKDRAFT DAMPER
		MOTOR OPERATED DAMPER
		DAMPER
		MANUAL SWITCH
		SUMMER/WINTER SWITCH
A.F.F.	A.F.F.	ABOVE FINISHED FLOOR
		CAST IRON
U.N.O.	U.N.O.	UNLESS NOTED OTHERWISE



2 TYPICAL GAS EQPMT. CONNECTION
NTS

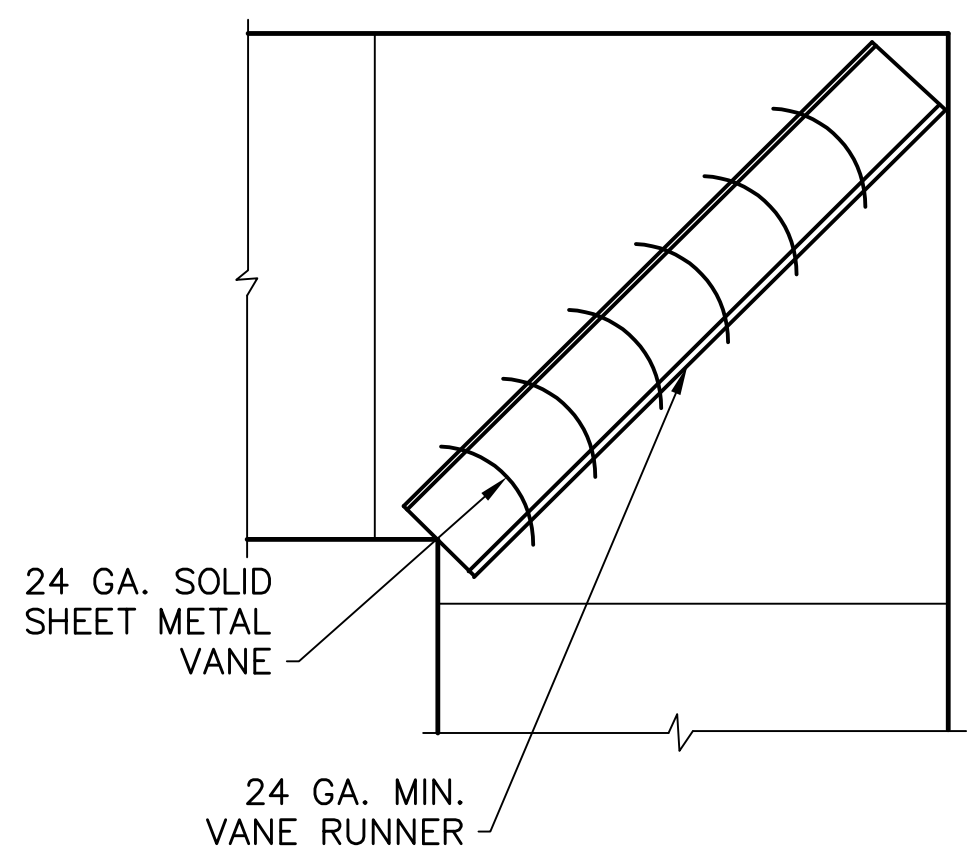
DUCTWORK EXPOSED TO WEATHER SHALL BE INSULATED BY SEALING ALL JOINTS WITH HARD CAST SEALER, APPLYING POLYSTYRENE INSULATION (THICKNESS AS REQUIRED FOR INSTALLED R-VALUE OF 8), AND COVERING WITH TWO (2) INDIVIDUAL LAYERS OF GLASSFAB AND WHITE MASTIC. PAINT TO MATCH BACKGROUND COLOR. AT CONTRACTOR'S OPTION, ALUMINUM ALL-WEATHER DUCT COVER MAY BY USED.



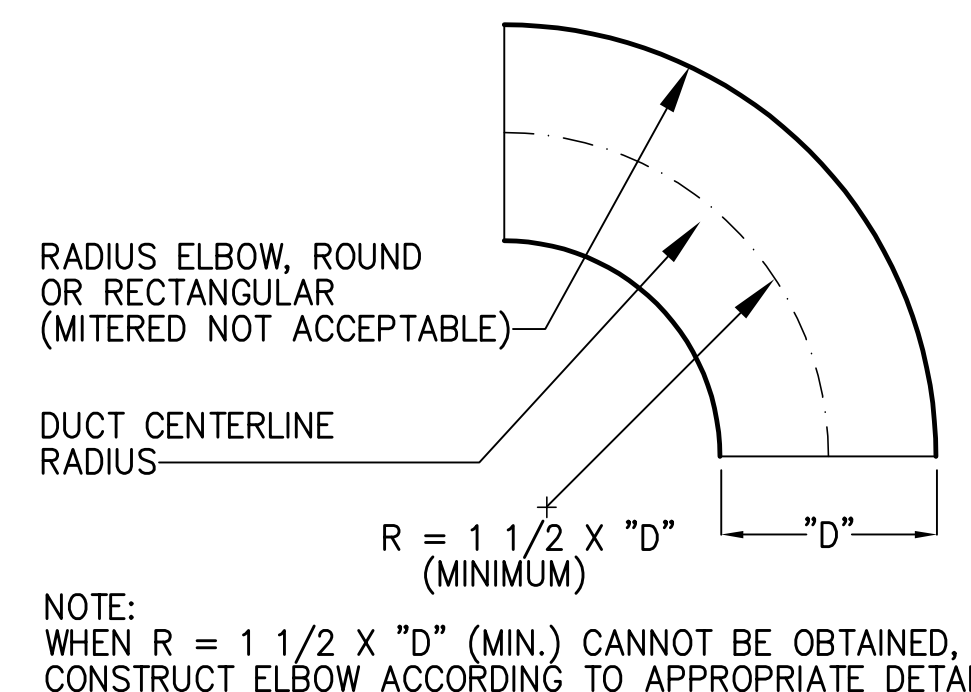
1 GRADE LEVEL MAKE-UP AIR UNIT DETAIL
SCALE: NTS

MECHANICAL SYSTEMS, SERVICE SYSTEMS AND EQUIPMENT METHOD OF COMPLIANCE	
Prescriptive	Energy Cost Budget
Thermal Zone: Horry County (3A)	
Exterior Design Conditions	
Winter Dry Bulb:	25
Summer Dry Bulb:	96
Interior Design Conditions	
Winter Dry Bulb:	70
Summer Dry Bulb:	75
Relative Humidity:	50%
Building Heating Load:	2,020 MBH
Building Cooling Load:	2,288.7 MBH
Mechanical Space Conditioning System	
Unitary:	
Description of Unit:	Packaged DOAS Unit w/ Energy Recovery
Heating Efficiency:	Refer to HVAC Equipment Schedules
Cooling Efficiency:	Refer to HVAC Equipment Schedules
Heat Output of Unit:	Refer to HVAC Equipment Schedules
Cooling Output of Unit:	Refer to HVAC Equipment Schedules
List Equipment Efficiencies:	
Equipment Schedules with Motors (Mechanical Systems)	
Motor Horsepower:	Comply w/ 2009 International Energy Code
Number of Phases:	Comply w/ 2009 International Energy Code
Minimum Efficiency:	Comply w/ 2009 International Energy Code
Motor Type:	Comply w/ 2009 International Energy Code
Number of Poles:	Comply w/ 2009 International Energy Code
Designer Statement:	
To the best of my knowledge and belief, the design of this building complies with the 2009 International Energy Conservation code.	

APPROVED MANUFACTURER LISTING	
THE FOLLOWING MANUFACTURER'S LISTING (ALPHABETICALLY ORDERED) IS PROVIDED FOR BIDDING PURPOSES AND DOES NOT IMPLY OR PROVIDE A GUARANTEE OF SUBMITTAL APPROVAL. ALL ITEMS SUBMITTED SHALL MEET OR EXCEED THE MINIMUM SPECIFIED DESIGN AND QUALITY CRITERIA IN THIS SET OF CONSTRUCTION DOCUMENTS. ANY BIDDER THAT INTENDS TO SUBMIT USING A MANUFACTURER NOT LISTED BELOW MAY REQUEST A PRIOR APPROVAL IN ACCORDANCE WITH THE ENTIRETY OF THE PROJECT BID DOCUMENTS, REFER TO THE ARCHITECT'S GENERAL CONDITIONS AND BIDDING REQUIREMENTS.	
THE BIDDER IS RESPONSIBLE FOR INCLUDING ALL COSTS ASSOCIATED WITH SUBSTITUTED EQUIPMENT, INCLUDING BUT NOT LIMITED TO, CODE AND MANUFACTURER'S REQUIRED MAINTENANCE AND ACCESS CLEARANCE, COORDINATION WITH ALL OTHER BUILDING TRADES, AND INSTALLATION OF DUCTWORK, PIPING, ETC. BIDDER SHALL BEAR RESPONSIBILITY FOR ALL ASSOCIATED COSTS AND ADDITIONAL COSTS RESULTING FROM SUBSTITUTED ITEMS SHALL NOT BE CONSIDERED FOR APPROVAL AFTER BIDS ARE AWARDED.	
ITEM	MANUFACTURER'S
100% OUTSIDE AIR MAKE-UP UNITS	TRANE, GREENHECK
FOR THE MAKE-UP AIR UNITS, TRANE SHALL BE INCLUDED AS BASE BID. OTHER MANUFACTURERS SHALL BE BID UNDER AN ALTERNATE. REFER TO SPECIFICATION SECTION 230007 FOR FURTHER CLARIFICATION.	



4 TURNING VANE DETAIL
SCALE: NTS PERMITTED ONLY WHERE RADIUS ELL WILL NOT FIT.



3 RADIUS ELBOW DETAIL
SCALE: NTS

PACKAGED ENERGY RECOVERY UNIT - GAS HEAT

Unit Tag	Area Served	EER	Supply Fan					Exhaust Fan					Condenser Fan					Cooling Performance					Natural Gas Heating Performance					Compressor					Energy Recovery Wheel					Electrical Data					Controls	Approx. Weight w/out Curb (lb.)	Model Trane	Remarks							
			Qty	CFM	ESP	HP	FLA Ea.	Qty	CFM	ESP	HP	FLA Ea.	Qty	HP	FLA Ea.	Gross Total MBH	Entering Coil (F)	Leaving Coil (F)	Reheat (F)	Unit (F)	Input Total MBH	Output Total MBH	Min. Turndown	Entering Coil (F)	Leaving Coil (F)	Electrical FLA	Qty	RLA Ea.	LRA Ea.	Outside (F) DB/WB	Supply (F) DB/WB	Return (F) DB/WB	Exhaust (F) DB/WB	Total Cap. MBH	Sensible Cap. MBH	Outside (F) DB/WB	Supply (F) DB/WB	Return (F) DB/WB	Exhaust (F) DB/WB	Total Cap. MBH	Sensible Cap. MBH	ERV Wheel Size					Electrical HP	FLA	Volts	Phase	FLA	MCA	MOCP
MUA-A-1	AREA A	19.9	1	4780	1.3	5	6.3	1	4436	1.0	3	4.0	3	1	2.1	272.0	80.4/68.4	49.8/49.5	72.1/58.70	74.0/59.4	350	280	10:1	55.4	109.4	3.13	2	16.0	140	95/80	80.4/68.4	75.0/62.5	91.5/77.0	220.79	72.02	20/15	55.4/48.0	70.0/58.5	28.3/25.4	296.14	183.58	ERC-5856C	0.50	1.50	460	3	51.1	55.1	70	1	6107	OAKD264	1-31, 33-34
MUA-A-2	AREA A	17.8	1	1600	2.0	3	3.6	1	1584	2.0	1.5	2.4	1	1	2.1	96.3	81.3/69.3	50.1/49.5	75.0/59.67	77.4/60.6	75	60	5:1	53.1	87.7	3.13	1	12.8	100	95/80	81.3/69.3	75.0/62.5	91.1/76.6	70.30	23.00	20/15	53.1/46.1	70.0/58.5	29.3/26.6	94.50	58.75	ERC-3014C	0.17	0.44	460	3	22.3	25.5	35	1	2051	OABD108	1-6, 8, 10-11, 13-31, 33-35
MUA-B-1	AREA B	19.9	1	4780	1.3	5	6.3	1	4436	1.0	3	4.0	3	1	2.1	272.0	80.4/68.4	49.8/49.5	72.1/58.70	74.0/59.4	350	280	10:1	55.4	109.4	3.13	2	16.0	140	95/80	80.4/68.4	75.0/62.5	91.5/77.0	220.79	72.02	20/15	55.4/48.0	70.0/58.5	28.3/25.4	296.14	183.58	ERC-5856C	0.50	1.50	460	3	51.1	55.1	70	1	6107	OAKD264	1-31, 33-34
MUA-B-2	AREA B	19.2	1	2100	2.0	2	3.0	1	2032	2.0	2	3.0	2	1	2.1	125.0	81.0/69.0	49.6/49.3	85.0/63.25	87.1/64.0	150	120	10:1	53.7	106.4	3.13	2	7.8/8.2	52/66.1	95/80	81.0/69.0	75.0/62.5	91.4/76.8	93.81	30.66	20/15	53.7/46.7	70.0/58.5	28.7/25.9	125.98	78.23	ERC-3622C	0.17	0.44	460	3	27.6	29.7	35	1	4008	OADG010	1-31, 33-34
MUA-C-1	AREA C	19.9	1	4780	1.3	5	6.3	1	4436	1.0	3	4.0	3	1	2.1	272.0	80.4/68.4	49.8/49.5	72.1/58.70	74.0/59.4	350	280	10:1	55.4	109.4	3.13	2	16.0	140	95/80	80.4/68.4	75.0/62.5	91.5/77.0	220.79	72.02	20/15	55.4/48.0	70.0/58.5	28.3/25.4	296.14	183.58	ERC-5856C	0.50	1.50	460	3	51.1	55.1	70	1	6107	OAKD264	1-31, 33-34
MUA-C-2	AREA C	19.2	1	2100	2.0	2	3.0	1	2032	2.0	2	3.0	2	1	2.1	125.0	81.0/69.0	49.6/49.3	85.0/63.25	87.1/64.0	150	120	10:1	53.7	106.4	3.13	2	7.8/8.2	52/66.1	95/80	81.0/69.0	75.0/62.5	91.4/76.8	93.81	30.66	20/15	53.7/46.7	70.0/58.5	28.7/25.9	125.98	78.23	ERC-3622C	0.17	0.44	460	3	27.6	29.7	35	1	4008	OADG010	1-31, 33-34
MUA-D-1	AREA D	18.5	1	5840	1.3	5	6.3	1	5645	1.0	5	6.3	3	1	2.1	333.0	80.5/68.6	50.0/49.7	72.0/58.75	74.2/59.6	250	200	10:1	55.1	86.7	3.13	2	23.1	150	95/80	80.5/68.6	75.0/62.5	90.5/76.2	267.67	87.29	20/15	55.1/47.7	70.0/58.5	30.8/27.9	359.48	223.01	ERC-5856C	0.50	1.50	460	3	67.6	73.4	90	1	6176	OAKD360	1-31, 33-34
MUA-E-1	AREA E	19.7	1	4560	1.3	5	6.3	1	4235	1.0	3	4.0	3	1	2.1	268.1	80.3/68.3	48.8/48.6	71.9/58.25	73.7/59.0	300	240	10:1	55.6	104.1	3.13	2	16.0	140	95/80	80.3/68.4	75.0/62.5	91.7/77.1	211.89	69.09	20/15	55.6/48.1	70.0/58.5	28.0/25.1	284.10	176.06	ERC-5856C	0.50	1.50	460	3	51.1	55.1	70	1	6077	OAKD264	1-31, 33-34
MUA-F-1	AREA F	19.7	1	4630	1.3	5	6.3	1	4235	1.0	3	4.0	3	1	2.1	270.1	80.5/68.5	49.3/49.1	72.1/58.55	73.9/59.2	300	240	10:1	55.2	103.0	3.13	2	16.0	140	95/80	80.5/68.5	75.0/62.5	91.7/77.2	212.57	69.35	20/15	55.2/47.8	70.0/58.5	27.8/24.9	285.07	176.73	ERC-5856C	0.50	1.50	460	3	51.1	55.1	70	1	6077	OAKD264	1-31, 33-34
MUA-G-1	AREA G	18.9	1	4240	1.3	5	6.3	1	4104	1.0	3	4.0	2	1	2.1	250	83.2/70.9	52.9/52.4	83.7/64.1	85.7/64.8	250	200	10:1	48.3	91.8	3.13	2	14.7	130	95/80	83.2/70.9	75.0/62.5	87.4/73.8	157.65	51.53	20/15	48.3/42.4	70.0/58.5	38.5/35.2	212.17	131.95	ERC-4136C	0.17	0.44	460	3	45.3	49	60	1	4372	OADG020	1-31, 33-34

- REFER TO APPROVED MANUFACTURER LIST FOR ACCEPTABLE EQUAL MANUFACTURERS. COORDINATE POWER REQUIREMENTS FOR SUBSTITUTIONS.
- PROVIDE WITH RETURN AIR RECIRC/BYPASS CAPABILITY.
- SINGLE POINT ELECTRICAL CONNECTION AND FACTORY NON-FUSED DISCONNECT.
- PROVIDE WITH MERV-8 AND MERV-13 FILTERS.
- ENTIRE UNIT TO BE STARTED BY FACTORY AUTHORIZED TECHNICIAN. PAPERWORK MUST BE SENT TO CONTRACTOR.
- PROVIDE WITH CONDENSER HAILGUARD.
- MIN. 10:1 TURNDOWN NATURAL GAS HEAT.
- POLYMER ERV WITH BYPASS DAMPERS.
- MODULATING OA/RA DAMPER FOR ECONOMIZER CONTROL.
- COND. COIL SHALL BE FURNISHED AS AN INTEGRAL PART OF THE MAKE-UP AIR UNIT, FACTORY PIPED & WIRED.
- COMPRESSORS SHALL HAVE INTERNAL VIBRATION ISOLATORS.
- PROVIDE MINIMUM 2 COMPRESSOR CIRCUITS.
- PROVIDE MINIMUM 1 DIGITAL SCROLL TYPE COMPRESSOR.
- PROVIDE 439 STAINLESS STEEL FURNACE.
- MAIN UNIT CONTROLLER PROVIDED BY CMI.
- PROVIDE SUPPLY AND EXHAUST FANS WITH PIEZO RINGS AND TAPS.
- PROVIDE SEISMICALLY RATED 14" HIGH CURB FOR INSTALLATION ON 4" THICK CONC. PAD.
- PROVIDE WITH 2" DOUBLE WALL CONSTRUCTION.
- PROVIDE WITH SUPPLY DISCHARGE AIR SENSOR.
- PROVIDE EVAPORATOR COIL WITH MINIMUM 6 ROWS.
- PROVIDE WITH MODULATING HOT GAS REHEAT.
- PROVIDE STAINLESS STEEL DRIP PAN.
- PROVIDE WITH 1 YEAR MANUFACTURER WARRANTY ON PARTS.
- PROVIDE WITH 5 YEAR WARRANTY ON DIGITAL SCROLL COMPRESSORS.
- PROVIDE WITH 5 YEAR WARRANTY ON PARTS AND LABOR PLUS.
- PROVIDE WITH 25 YEAR WARRANTY ON GAS-FIRED HEAT EXCHANGER.
- PROVIDE WITH AIR COOLED VARIABLE SPEED HEAD PRESSURE CONTROL CONDENSER.
- INSTALL DUCT MOUNTED CARBON MONOXIDE DETECTOR IN SUPPLY DUCT AND CONNECT TO NEAREST ADDRESSABLE FIRE ALARM CIRCUIT. EC TO FURNISH DETECTOR AND MC TO INSTALL. DETECTOR SHALL BE ACCESSIBLE FOR INSPECTION AND SERVICE.
- PROVIDE UNIT MANUFACTURER'S SEA COAST PROTECTIVE COATING ON ALL EXTERIOR COMPONENTS AND COOLING COIL. SEA COAST PROTECTION SHALL BE IN COMPLIANCE WITH ASTM B45 SALT SPRAY TESTING AT A MINIMUM OF 672 HOUR DURATION.
- UNDER BASE BID, PROVIDE UNIT MANUFACTURER'S STAINLESS STEEL INTERIOR PANELS IN CONTACT WITH AIRFLOW. UNDER ALTERNATE #1, PROVIDE A FACTORY APPLIED SEA COAST PROTECTION COATING FOR INTERIOR PANELS IN CONTACT WITH AIRFLOW. FACTORY APPLIED COATING SHALL BE HUSKY COAT GOLD BY BRONZ-GLOW (OR EQUAL) AND UNIT SHALL BE PROVIDED WITH A NAMEPLATE THAT CERTIFIES COATING HAS BEEN APPLIED BY COATING MANUFACTURER IN THEIR FACTORY.
- UNDER ALTERNATE #1, SEA/COAST PROTECTIVE COATINGS SHALL BE FACTORY APPLIED FOR THE CONDENSER, EVAPORATOR, AND HOT GAS REHEAT COIL. COATING FOR THE INTERIOR PANELS IN CONTACT WITH THE AIR FLOW MAY BE FIELD APPLIED AT THE MANUFACTURER'S/CONTRACTOR'S OPTION.
- NOT USED
- PROVIDE SUPPLY AND EXHAUST FANS WITH DIRECT DRIVE MOTORS W/ VFD.
- PROVIDE ISOLATION DAMPERS FOR EXHAUST FAN(S).
- MIN. 5:1 TURNDOWN NATURAL GAS HEAT.