

DANE COUNTY CONSOLIDATED FOOD SERVICE REQUEST FOR BID NO. 317020

HVAC EQUIPMENT REPLACEMENT 1000 EAST VERONA AVE, VERONA WI

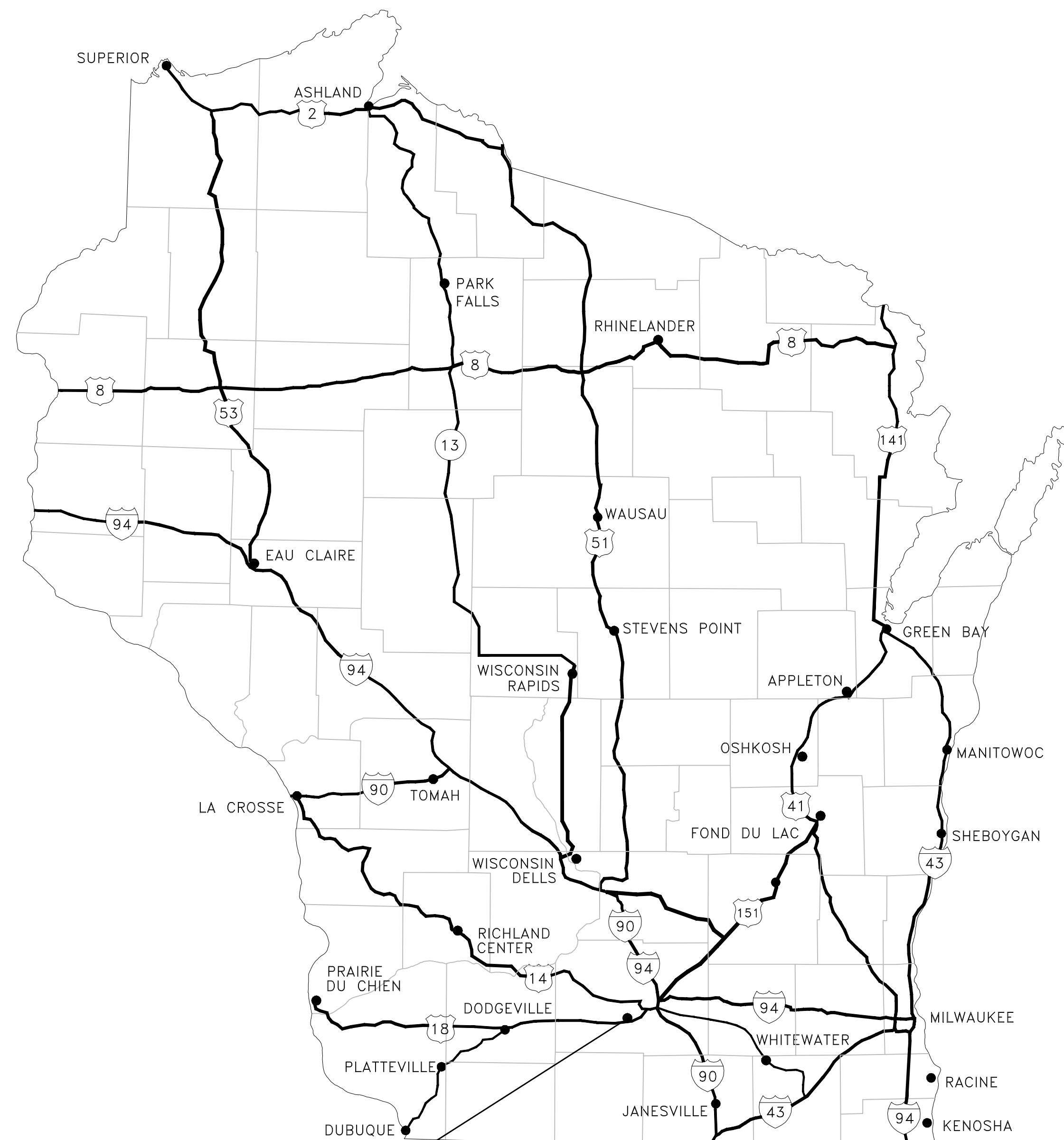
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Project No. 17-0506

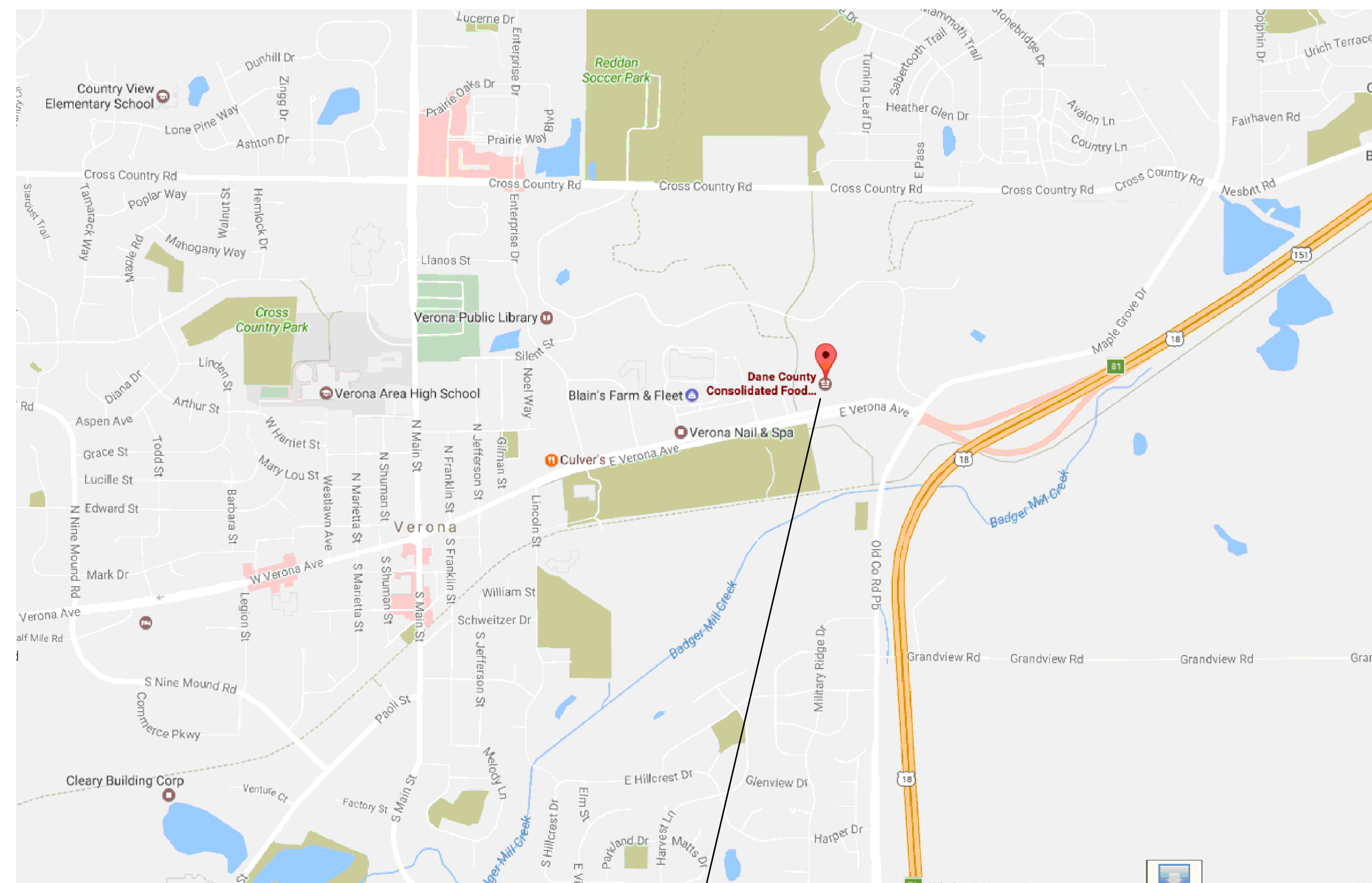
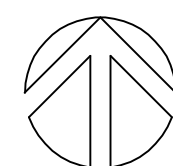
Dane County Department of Public Works,
Highway and Transportation
Public Works Engineering Division
1919 Alliant Energy Center Way
Madison, WI 53713

Notes:



VERONA

STATE OF WISCONSIN



**1000 EAST VERONA AVE
VERONA, WI**

SHEET INDEX

HVAC

T100
H100
H101
H200

**TITLE SHEET
PARTIAL LOWER LEVEL AND FIRST FLOOR DEMOLITION PLANS
PARTIAL LOWER LEVEL AND FIRST FLOOR NEW WORK PLANS
HVAC SCHEDULES, DETAILS AND PICTURES**

Date	Issuance/Revisions	Symbol
7/25/17	ISSUED FOR CONSTRUCTION	

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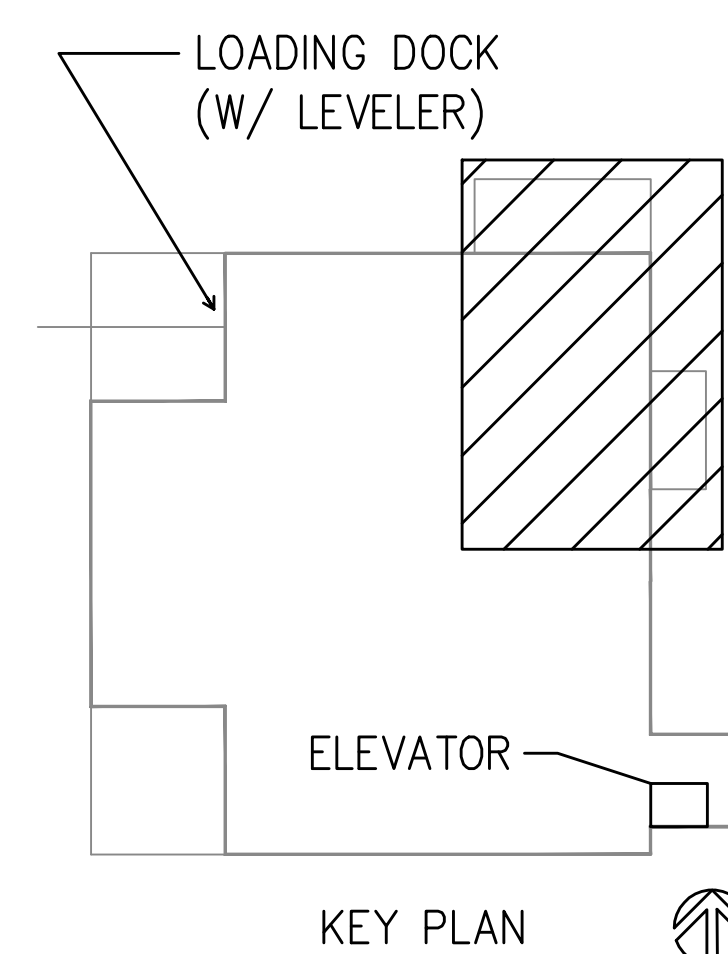
Drawing Title:
**TITLE
SHEET**

Drawn By:
FBN

Drawing No.

T100

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Drawing Title:
**PARTIAL LOWER LEVEL AND
FIRST FLOOR DEMOLITION
PLANS**

Drawn By:
FBN

Drawing No.
H100

DEMOLITION WORK BY OWNER

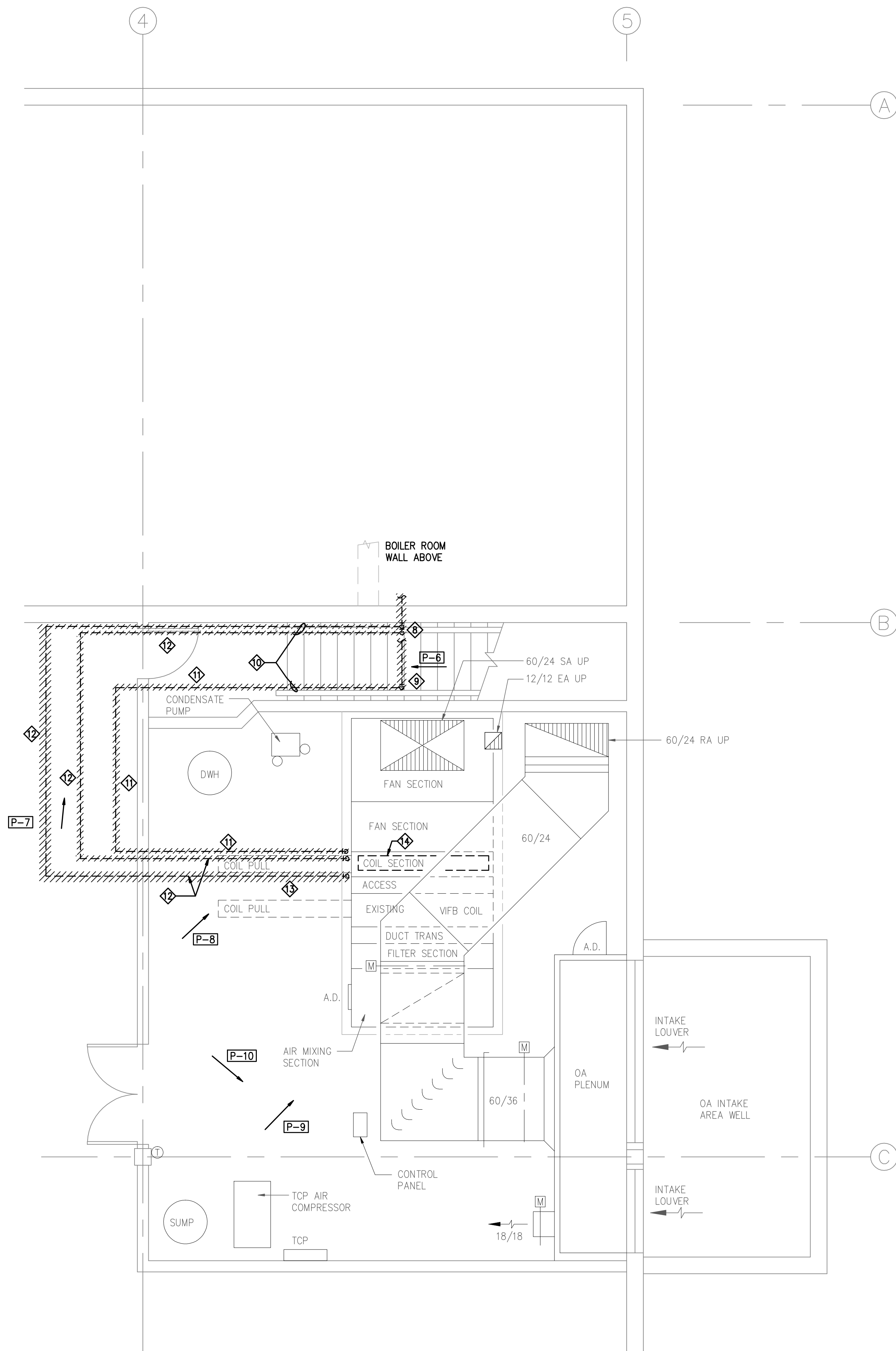
1. DANE COUNTY WILL EVACUATE AND RECLAIM THE EXISTING REFRIGERANT.
2. DANE COUNTY WILL REPLACE THE EXISTING AIR FILTERS WITH MERV 13 FILTERS BEFORE THE TESTING AND BALANCING OF THE AIR HANDLING UNIT AIR FLOW.

HVAC DEMOLITION KEY NOTES - A AND B-H100

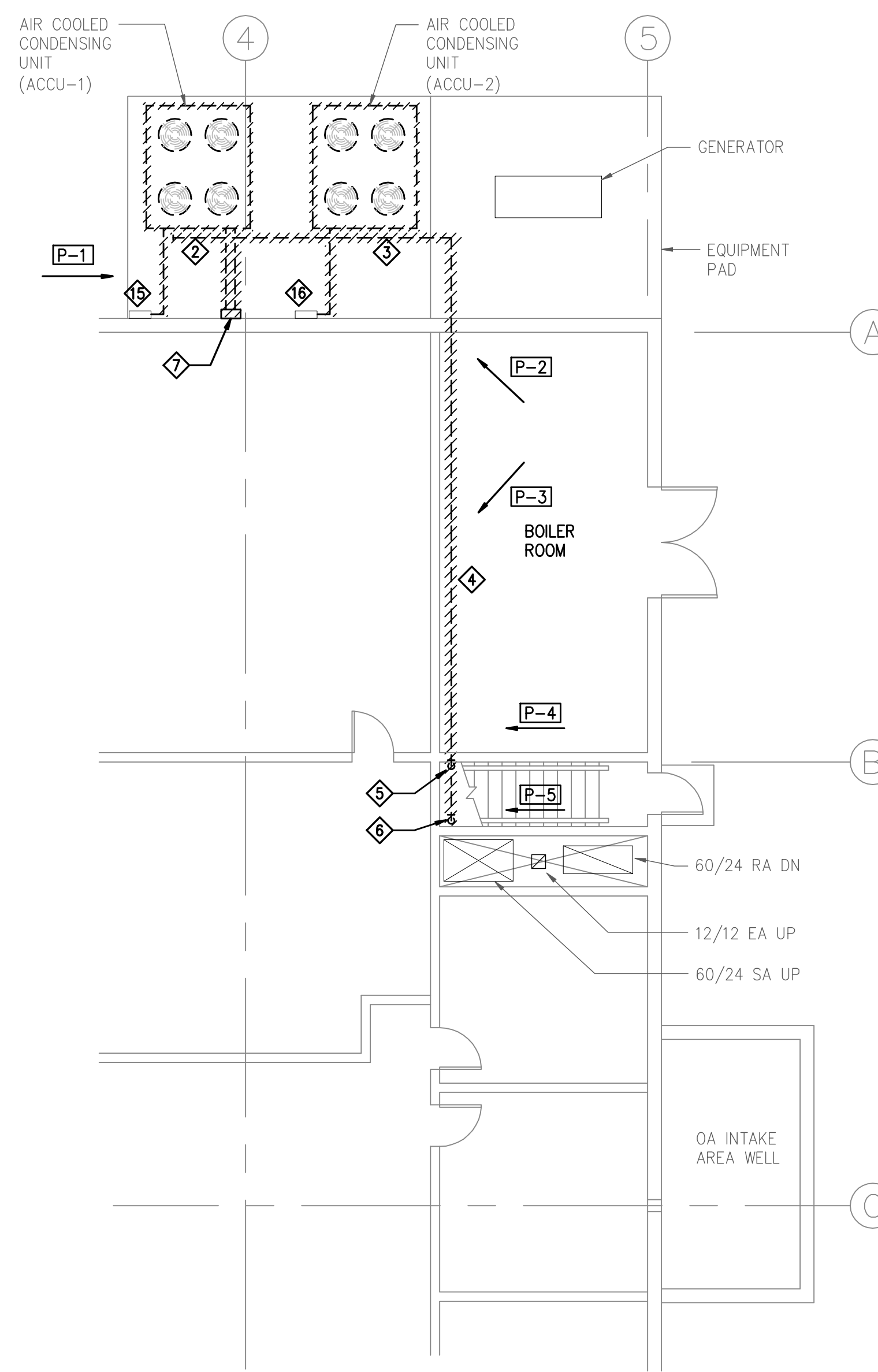
- ① REFER TO REFERENCED PHOTOS (P-#) ON SHEET H200 FOR EXISTING CONDITION AT SELECTED LOCATIONS.
- ② REMOVE 1" LIQUID, 1" HOT GAS BYPASS AND 2" SUCTION REFRIGERANT LINES TO ACCU-1.
- ③ REMOVE 1" LIQUID AND 2" SUCTION REFRIGERANT LINES TO ACCU-2.
- ④ REMOVE TWO 1" LIQUID, ONE 1" HOT GAS BYPASS AND TWO 2" SUCTION REFRIGERANT LINES INTO AND RUNNING THROUGH THE BOILER ROOM.
- ⑤ REMOVE TWO 2" SUCTION LINES THROUGH BOILER ROOM WALL AND DROPPING TO LOWER LEVEL.
- ⑥ REMOVE TWO 1" LIQUID LINES AND ONE 1" HOT GAS BYPASS LINE THROUGH BOILER ROOM WALL AND DROPPING TO LOWER LEVEL.
- ⑦ CONTROL WIRING CONNECTIONS TO CONDENSING UNITS TO BE REMOVED.
- ⑧ REMOVE TWO 2" SUCTION LINES FROM ABOVE.
- ⑨ REMOVE TWO 1" LIQUID AND ONE 1" HOT GAS BYPASS LINES FROM ABOVE.
- ⑩ EXISTING DRYWALL SOFFIT ENCLOSING REFRIGERANT PIPING LINES TO BE REMOVED AS NECESSARY TO REMOVE PIPING. SOFFITS TO BE REPLACED AFTER INSTALLATION OF NEW REFRIGERANT LINES. REFER TO DRAWING H101.
- ⑪ REMOVE TWO 1" LIQUID AND ONE 1" HOT GAS BYPASS LINES.
- ⑫ REMOVE TWO 2" SUCTION LINES.
- ⑬ REMOVE REFRIGERANT PIPING CONNECTIONS AND REFRIGERANT ACCESSORIES AT TWO COOLING COILS. REFER TO PHOTOS P-8 AND P-9 FOR PIPING AT THE AHU COILS.
- ⑭ REMOVE TWO DX COOLING COILS FROM AIR HANDLING UNIT.

ELECTRICAL DEMOLITION KEY NOTES - A-H100

- ⑮ REMOVE POWER CONNECTION TO ACCU-1 FROM DISCONNECT TO UNIT. DISCONNECT TO REMAIN TO SERVE NEW ACCU-1.
- ⑯ REMOVE POWER CONNECTION TO ACCU-2 FROM DISCONNECT TO UNIT. DISCONNECT TO REMAIN TO SERVE NEW ACCU-2.

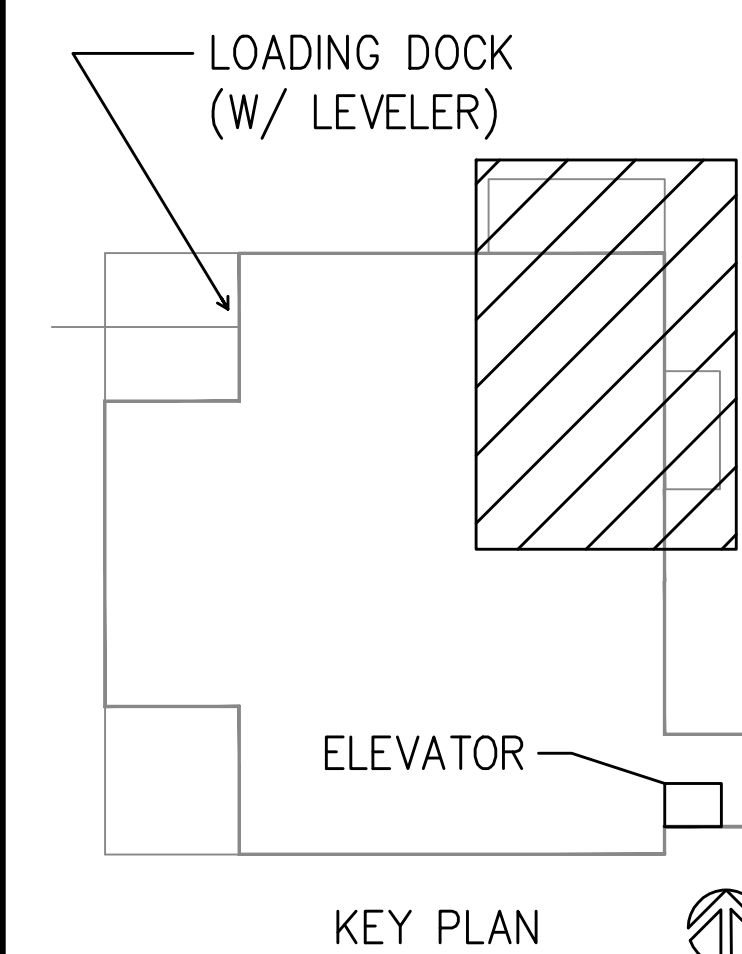


B PARTIAL LOWER LEVEL - HVAC DEMOLITION
H100 SCALE: 1/4" = 1'-0"



A PARTIAL FIRST FLOOR - HVAC DEMOLITION
H100 SCALE: 1/8" = 1'-0"

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Drawing Title:
**PARTIAL LOWER LEVEL AND
FIRST FLOOR NEW WORK
PLANS**

Drawing No.
H101

Drawn By:
FBN

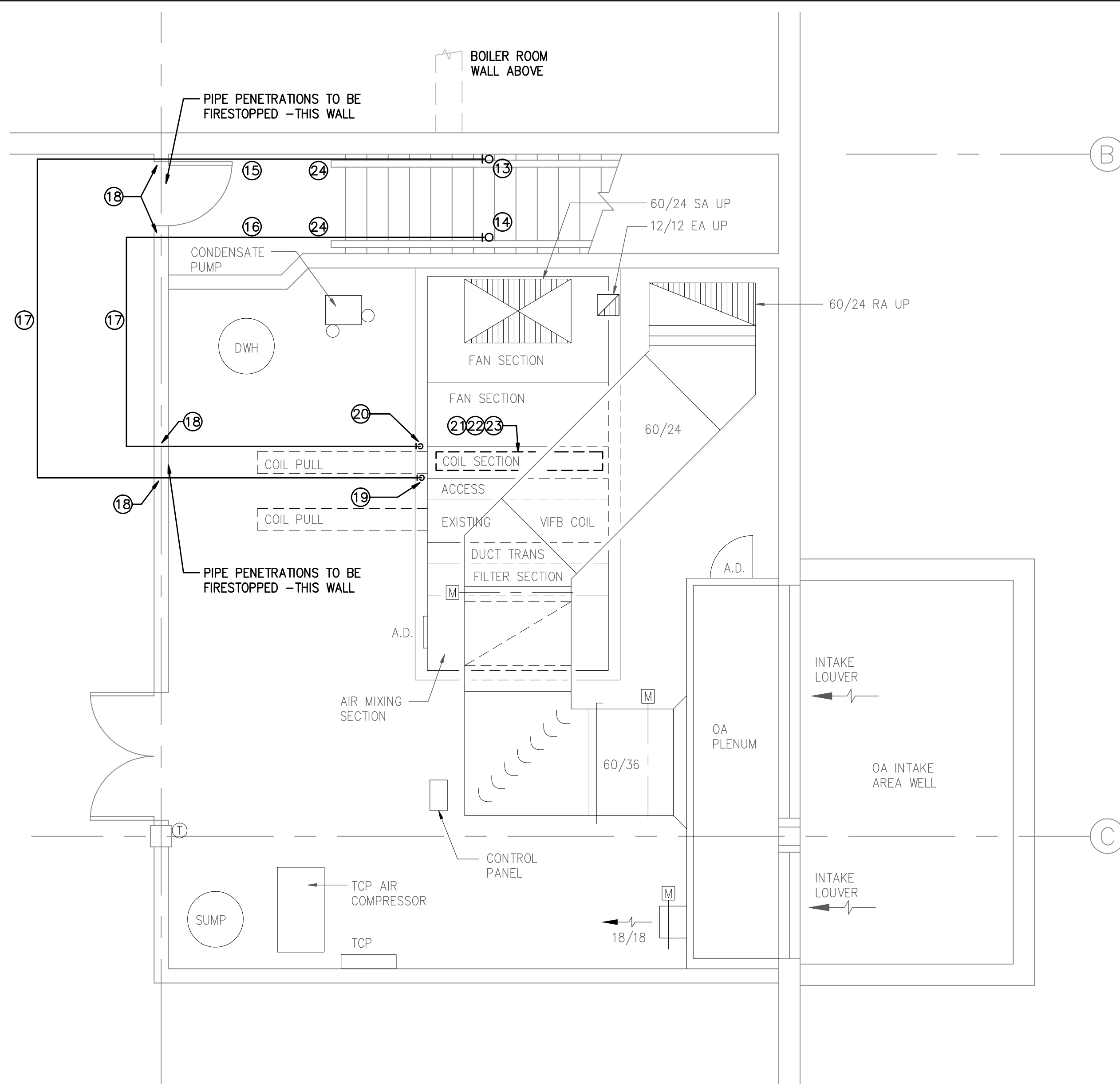
GENERAL HVAC NOTES - A AND B-H101

1. ACCU-1 AND 2 SHALL BE LOCATED ON THE EXISTING CONCRETE PADS WHICH EXTENDS 16'-1" FROM THE BUILDING AND IS 21'-10" WIDE.
2. THE LOCATIONS OF ACCU-1 AND 2 ARE BASED ON THE BASE SCHEDULED UNITS. UNITS OF OTHER MANUFACTURERS SHALL FIT ON THE EXISTING CONCRETE PAD WHILE MAINTAINING THE REQUIRED CODE AND SERVICE CLEARANCES.

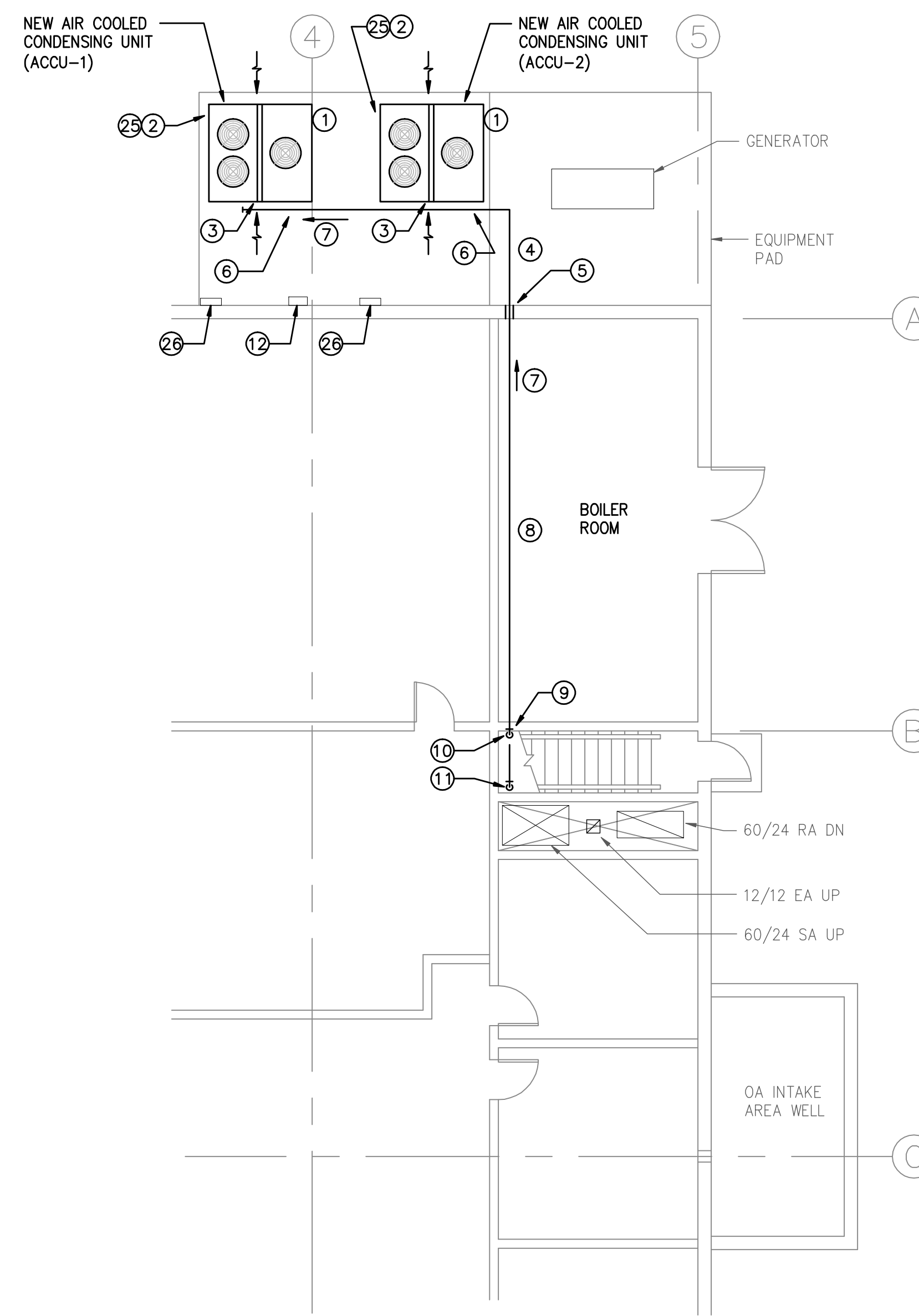
HVAC NEW WORK KEY NOTES - A AND B-H101

1. THE CONNECTIONS OF LOCATIONS FOR ACCU-1 AND 2 ARE FOR THE BASE SPECIFIED MANUFACTURERS MODEL.
2. ACCU-1 AND 2 FIELD CONTROL WIRING ENTRY.
3. REFRIGERANT CONNECTIONS. VERIFY UNIT CONNECTION SIZE. UNIT FIELD PIPING FOR THIS UNIT IS TWO LIQUID LINES 7/8 INCH EACH AND TWO SUCTION LINES 1-5/8 INCH EACH. REFER TO ACCU PIPING DETAIL.
4. UNIT FIELD PIPING FOUR 7/8 INCH LIQUID LINES AND FOUR 1-5/8 INCH SUCTION LINES.
5. ENTER BUILDING AT SAME LOCATIONS WHERE EXISTING PIPING WAS REMOVED. CORE DRILL NEW OPENING AS REQUIRED TO RUN THE 8 NEW REFRIGERANT LINES. PROVIDE SLEEVES AT WALL OPENINGS AND SEAL SLEEVE TO WALL CONSTRUCTION AND PIPING TO SLEEVE. REFER TO SPECIFICATION.
6. PROVIDE PIPE SUPPORT WITH GALVANIZED STRUT CHANNEL FASTENED TO EXISTING CONCRETE PAD (SIMILAR TO EXISTING). EXISTING MAY BE REUSED IF LOCATIONS FIT THE NEW PIPING ARRANGEMENT WITH NEW STRUT ADDED AS REQUIRED BY NEW PIPING ARRANGEMENT.
7. PITCH PIPING TOWARD THE COMPRESSOR.
8. FOUR 7/8 INCH LIQUID LINES AND FOUR 1-5/8 INCH SUCTION LINES. MOUNT ON EXISTING STRUT CHANNELS MOUNTED ON BOILER ROOM WALL. PROVIDE ADDITIONAL LENGTH OF STRUT AT SAME LOCATION AS REQUIRED TO SUPPORT THE 8 NEW LINES.
9. RUN NEW PIPING THROUGH AT SAME LOCATIONS WHERE EXISTING PIPING WAS REMOVED. CORE DRILL NEW OPENING AS REQUIRED TO RUN THE 8 NEW REFRIGERANT LINES. PIPE PENETRATIONS TO BE FIRESTOPPED.
10. FOUR SUCTION LINES DOWN TO LOWER LEVEL.
11. FOUR LIQUID LINES DOWN TO LOWER LEVEL.
12. EXISTING CONTROL JUNCTION BOXES.

13. FOUR SUCTION LINES UP TO FIRST FLOOR.
 14. FOUR LIQUID LINES UP TO FIRST FLOOR.
 15. FOUR NEW SUCTION LINES. KEEP AS CLOSE TOGETHER AND AS HIGH AS POSSIBLE. PIPING TO BE ENCLOSED IN REPAIRED/NEW DRYWALL ENCLOSURE.
 16. FOUR NEW LIQUID LINES. KEEP AS CLOSE TOGETHER AND AS HIGH AS POSSIBLE. PIPING TO BE ENCLOSED IN REPAIRED/NEW DRYWALL ENCLOSURE.
 17. RUN FOUR SUCTION AND FOUR LIQUID LINES AT APPROXIMATE LOCATION OF EXISTING LINES. COORDINATE WITH OTHER PIPING WHICH IS TO REMAIN.
 18. RUN PIPING THROUGH EXISTING OPENINGS AND CORE DRILL ADDITIONAL WALL OPENINGS REQUIRED.
 19. DROP PIPING AND CONNECT TO NEW COILS.
 20. REFER TO NEW COIL PIPING DETAIL FOR PIPING ARRANGEMENT AND REQUIRED REFRIGERANT ACCESSORIES.
 21. INSTALL NEW COILS IN PLACE OF THE EXISTING. REFER TO THE ORIGINAL AIR HANDLING UNIT SUBMITTAL FOR COIL ARRANGEMENT AND DIMENSIONS FOR REFERENCE, (INCLUDED IN THESE DRAWINGS).
 22. PROVIDE REQUIRED BLANK-OFF SHEET METAL TO PREVENT AIR BYPASS OF COILS. FIELD VERIFY THE LOCATIONS.
 23. PROVIDE A CONDENSATE DRAIN PAN BELOW THE UPPER COIL. PIPE DRAIN FROM UPPER PAN TO LOWER PAN. ENSURE NEW DRAIN PAN PITCHES TO DRAIN LOCATION AND PREVENTS PONDING OF CONDENSATE.
 24. AFTER PIPING IS COMPLETE, TESTED AND INSULATED, ENCLOSE WITH REPAIRED/NEW DRYWALL ENCLOSURE. SIMILAR TO EXISTING CONSTRUCTION INCLUDING DRYWALL FINISHING AND PAINTING TO MATCH THE EXISTING CONSTRUCTION.
- ELECTRICAL DEMOLITION KEY NOTES - A-H101**
25. ACCU-1 AND 2 FIELD ELECTRICAL POWER ENTRY.
 26. EXISTING ELECTRICAL DISCONNECT. MAKE NEW CONNECTION TO DISCONNECT AND EXTEND POWER WIRING TO NEW UNIT, PROVIDE NEW CONDUIT AND WIRE AS REQUIRED AND SIZED PER MANUFACTURER AND CODE.

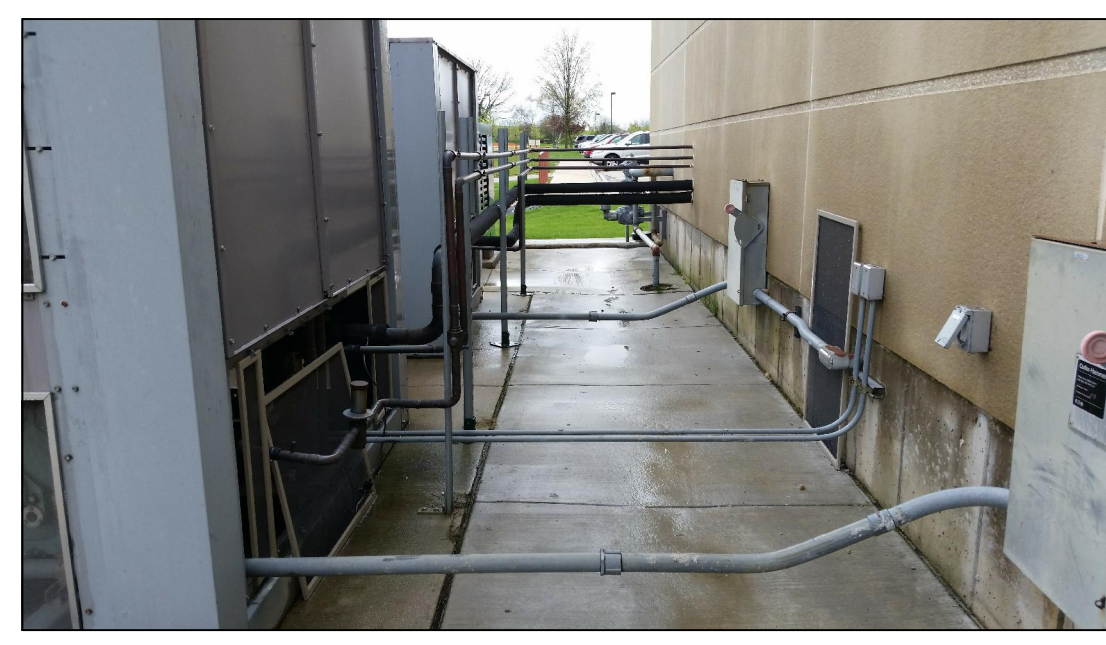


B PARTIAL LOWER LEVEL - HVAC NEW WORK
H101 SCALE: 1/4" = 1'-0"

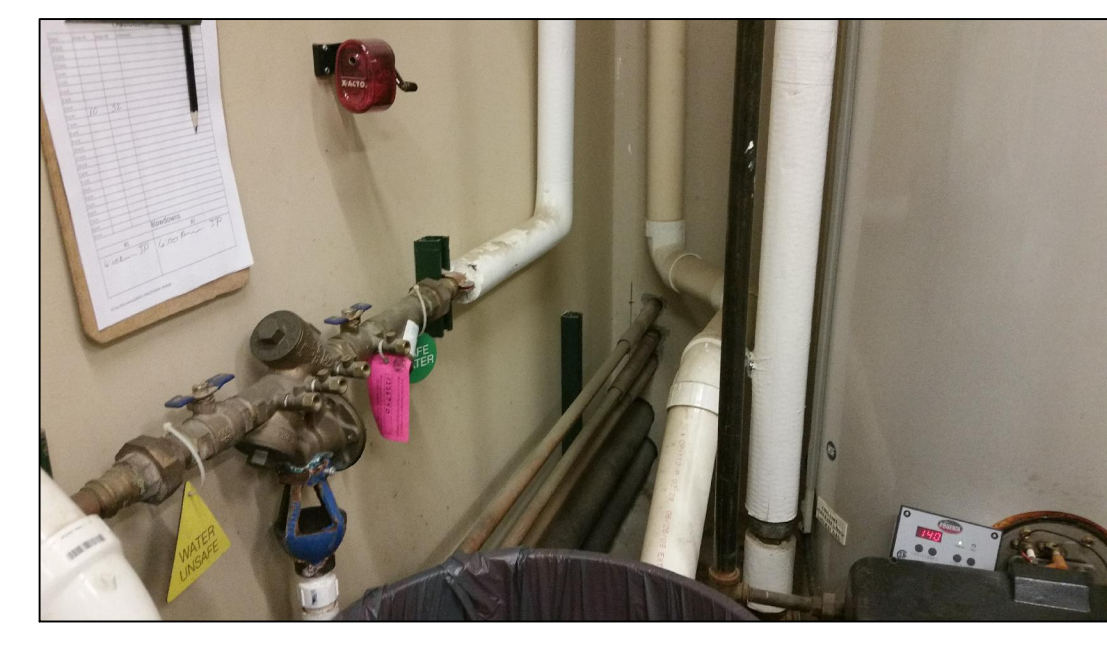


A PARTIAL FIRST FLOOR - HVAC NEW WORK
H101 SCALE: 1/8" = 1'-0"

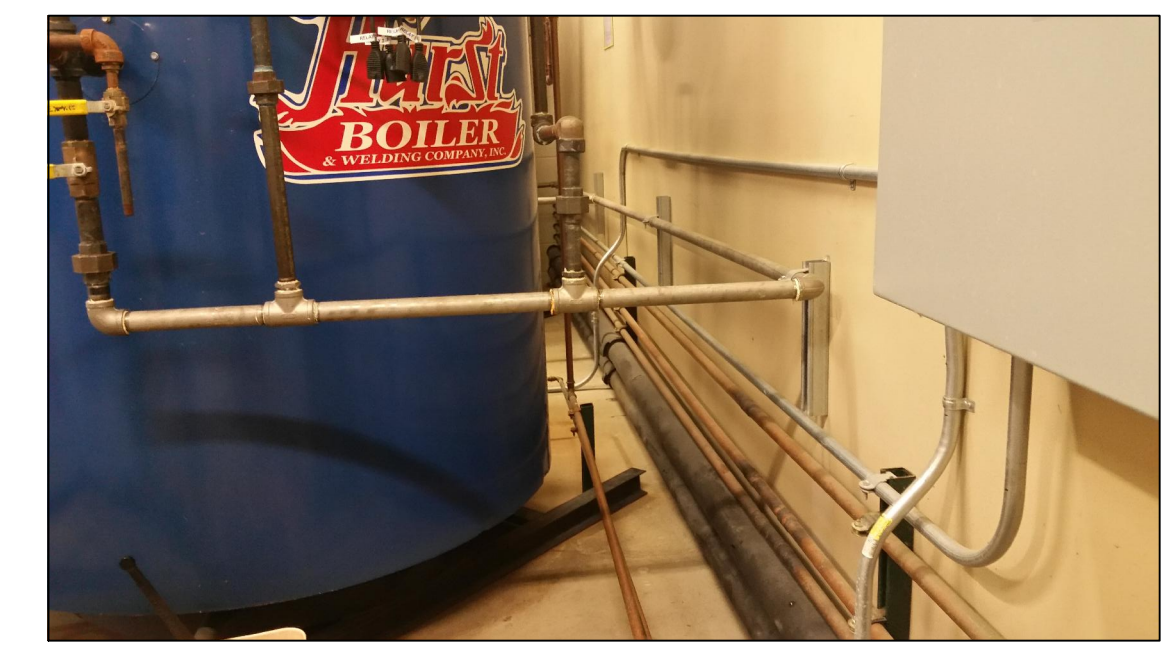
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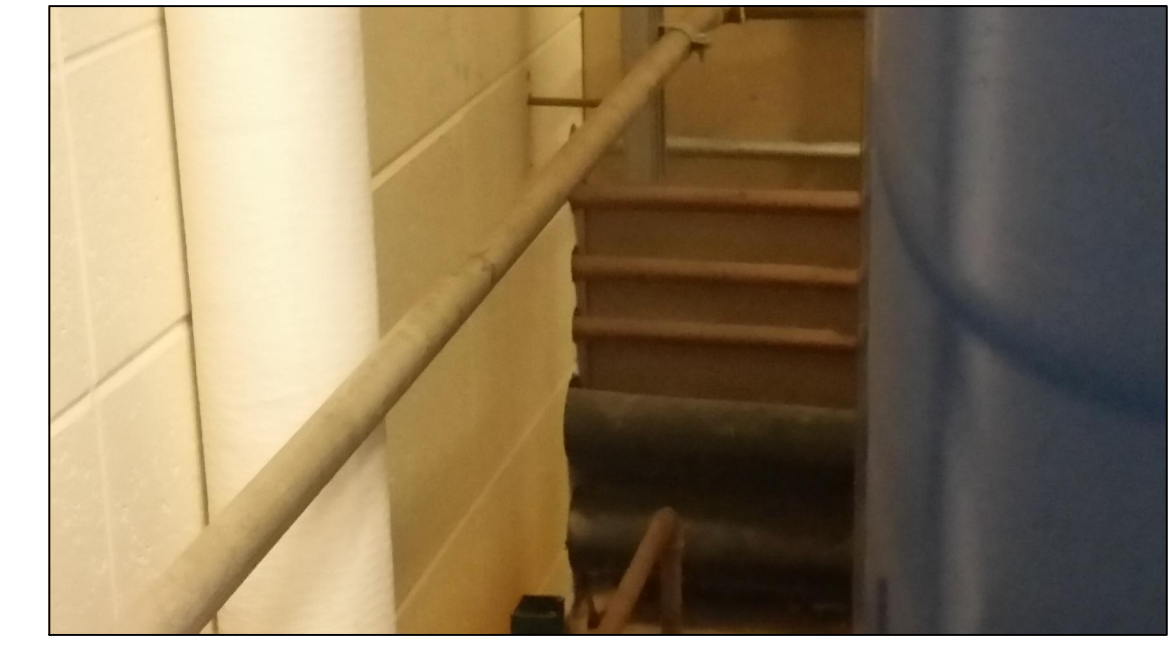
A PICTURE 'P-1'
 H200 NOT TO SCALE



B PICTURE 'P-2'
 H200 NOT TO SCALE



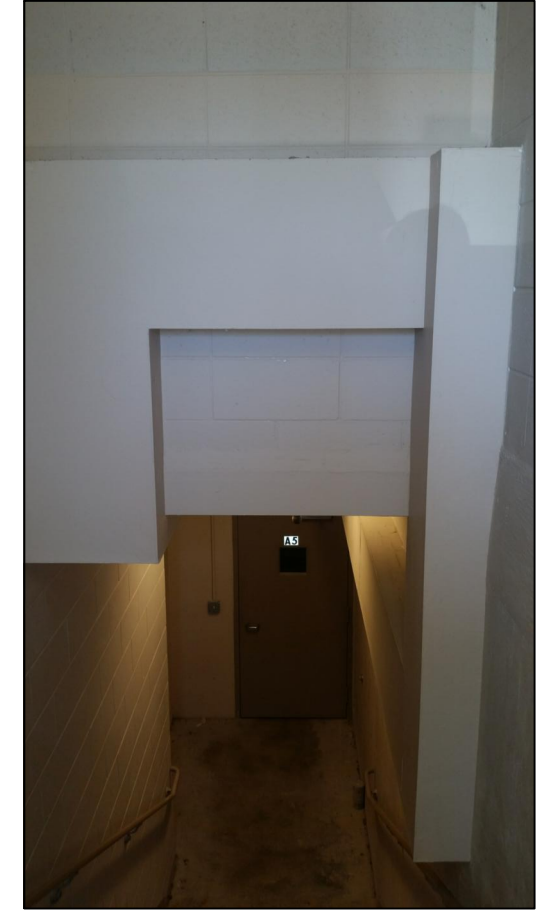
C PICTURE 'P-3'
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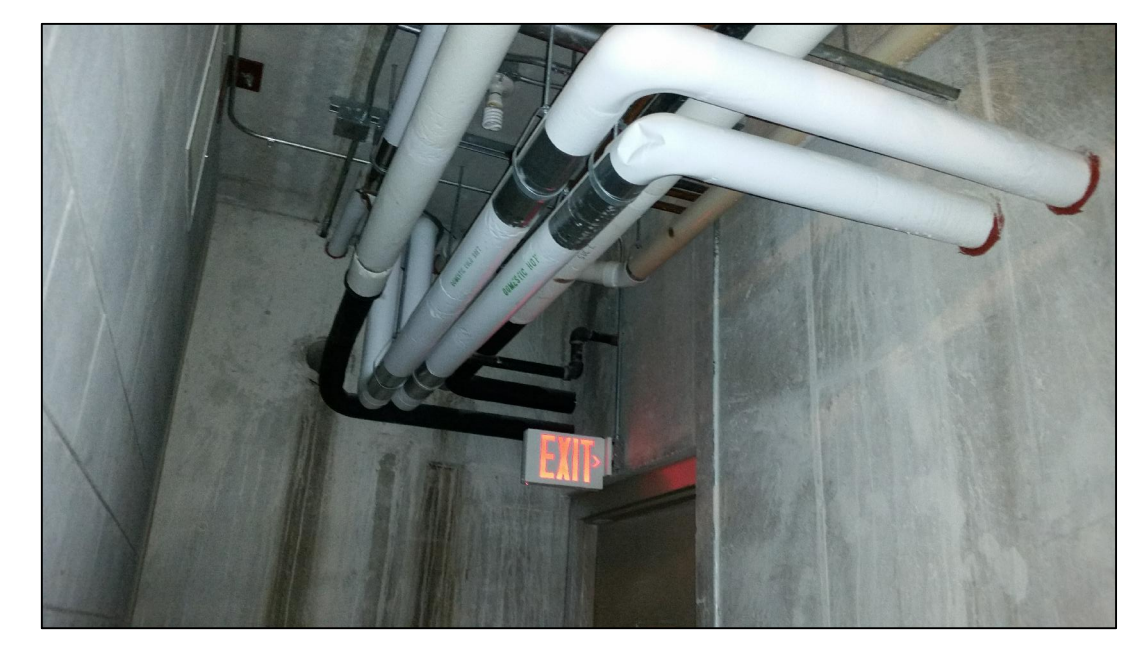
D PICTURE 'P-4'
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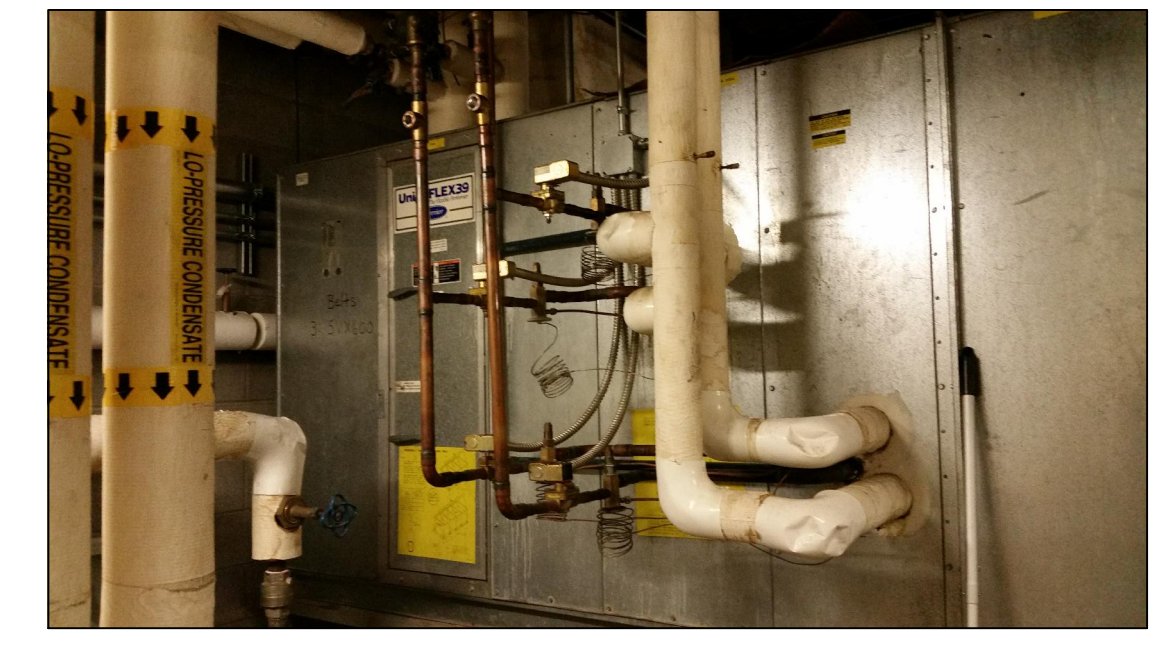
E PICTURE 'P-5'
 H200 NOT TO SCALE



F PICTURE 'P-6'
 H200 NOT TO SCALE



G PICTURE 'P-7'
 H200 NOT TO SCALE



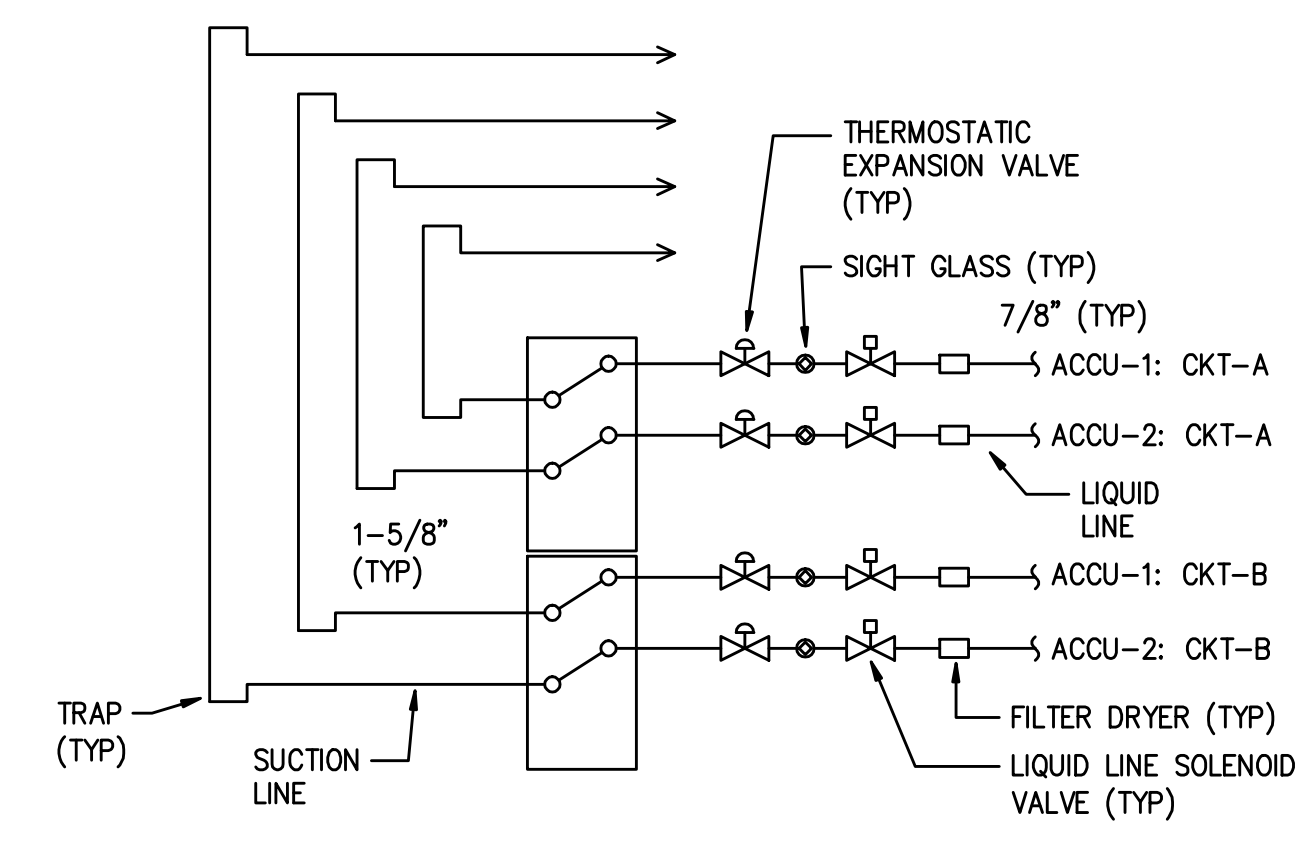
H PICTURE 'P-8'
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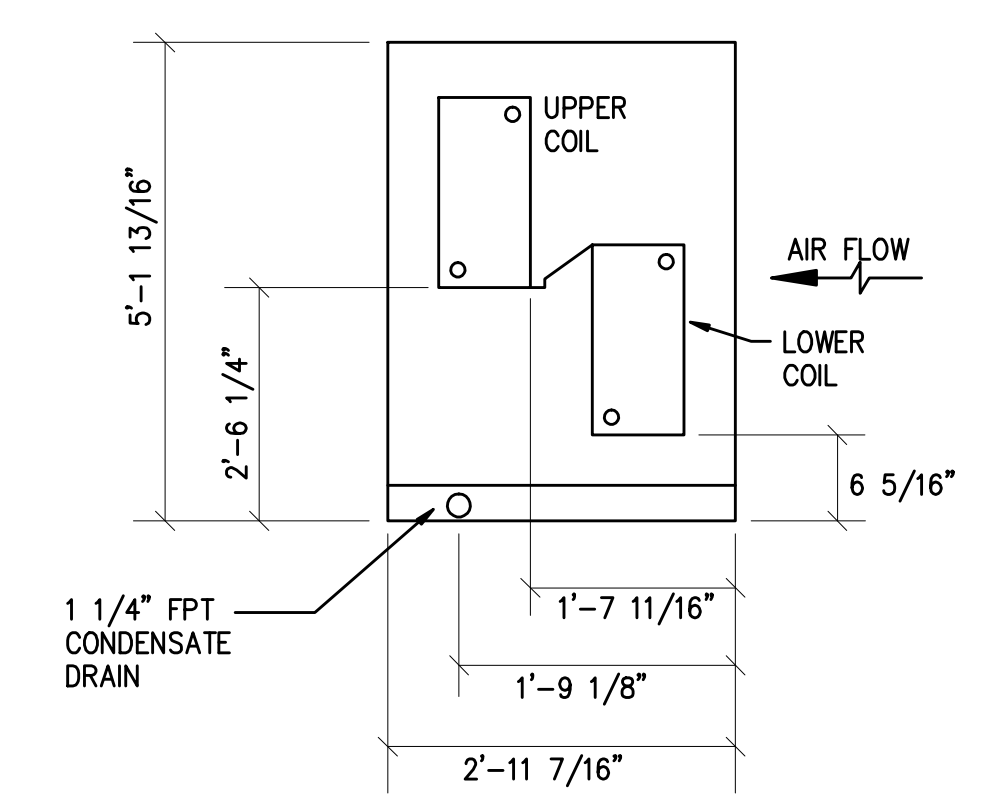
I PICTURE 'P-9'
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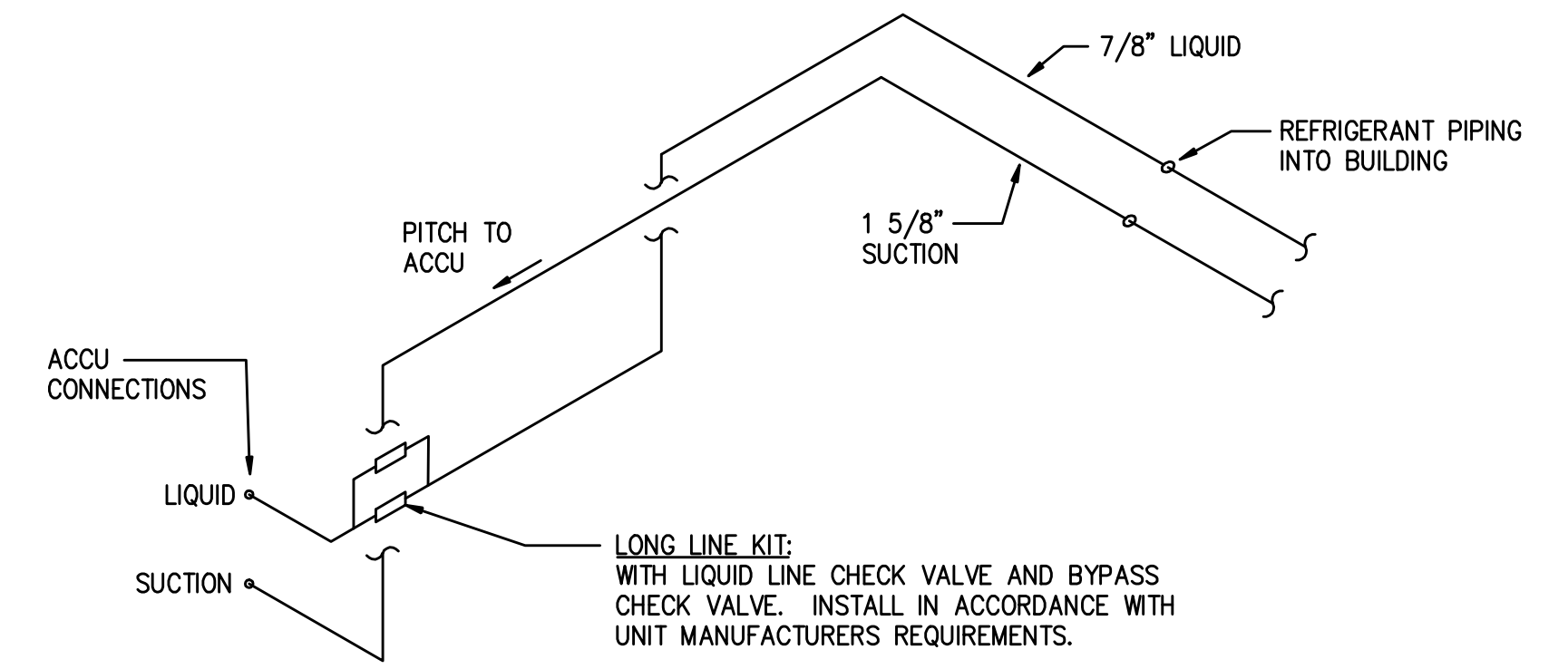
J PICTURE 'P-10'
 H200 NOT TO SCALE



NOTES:
 1. SEE NEW COIL SUBMITTALS FOR COIL CONNECTION LOCATIONS.
 2. SEE ORIGINAL COIL ARRANGEMENT FOR NEW COIL LOCATIONS.



L ORIGINAL COIL ARRANGEMENT DETAIL
 H200 NOT TO SCALE (FROM ORIGINAL PROJECT SUBMITTAL)



M ACCU PIPING DETAIL
 H200 NOT TO SCALE (TYPICAL OF FOUR SETS OF LINES (2 PER ACCU))

AIR HANDLING UNITS DX COOLING COILS																	
TAG	LOCATION	AIR FLOW (CFM)	COOLING COIL				TOTAL HEAT MBH	SENSIBLE HEAT MBH	ROWS	MAX FINS/INCH	MAX FACE VEL (FPM)	MAX AIR PD (\"WG)	DISTRIBUTORS PER COIL	SUCTION TEMP (°F)	LIQUID TEMP (°F)	REFRIGERANT	REMARKS
			DB	WB	DB	WB											
CC-1	EXIST-AHU-1	10198	91	74	56.2	56	613.9	385.79	8	11	525.8	1.35	2	48.2	110	410A	1, 2, 3, 4
CC-2	EXIST-AHU-1	10198	91	74	56.3	56	613.9	385.79	8	11	525.8	1.35	2	48.2	110	410A	1, 2, 3, 4

1. EXISTING AIR HANDLING UNIT IS A CARRIER MODEL 39NXH39 - UNIT CFM = 20,400.
 2. DUAL CIRCUIT INTERTWINED
 3. TOTAL CAPACITY BOTH COILS = 1227.8 MBH, SENSIBLE CAPACITY = 771.58 MBH
 4. INCLUDE THE FOLLOWING REQUIRED REFRIGERATION ACCESSORIES: FILTER DRIER, LIQUID LINE SOLENOID VALVE, SIGHT GLASS AND THERMOSTATIC EXPANSION VALVE.

AIR COOLED CONDENSING UNIT SCHEDULE																				
MARK	ASSOCIATED INDOOR UNIT	LOCATION	MFR	MODEL NO.	CAPACITY		REFRIG TYPE	AMBIENT TEMP °F	MIN COOL QA TEMP °F	NO OF REFRIG CIRCUITS	NO OF COMPRESS	CAPACITY STEPS	COMPRESS TYPE	NO OF COND FANS	EER	ELECTRICAL DATA			REMARKS	
					NOMINAL TONS	TOTAL MBH										MCA	MCCP	VOLTS / PHASE		
ACCU-1	AHU-1	SEE PLAN	CARRIER	38APD	50	628	R410A	95	25	2	4	23-50-73-100	SCROLL	3	14.9	112	99.1	110	480/360	1, 2, 3, 4
ACCU-2	AHU-1	SEE PLAN	CARRIER	38APD	50	628	R410A	95	25	2	4	23-50-73-100	SCROLL	3	14.9	112	99.1	110	480/360	1, 2, 3, 4

REMARKS:
 1. SINGLE POINT POWER. NON FUSED DISCONNECT.
 2. VIBRATION ISOLATION FOR OUTDOOR INSTALLATION.
 3. SECURITY GRILLES-HAIL GUARDS.
 4. LONG LINE CHECK VALVES.

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