

HVAC LEGEND (ALL MAY NOT APPLY)

Legend for HVAC symbols including Refrigeration Monitoring System Alarm Device, Space Temperature Sensor, Thermostat, and various valves and dampers.

HVAC LEGEND (ALL MAY NOT APPLY)

Legend for HVAC symbols including Pressure Gauge, Thermostatic Air Vent, Manual Air Vent, and various piping components.

HVAC LEGEND (ALL MAY NOT APPLY)

Legend for HVAC symbols including Drain Pipe, Existing Steam Condensate, Steam Condensate, and various return and supply lines.

HVAC GENERAL NOTES

General notes for HVAC installation, including material requirements, coordination with other trades, and specific installation instructions for various components.

VARIABLE FREQUENCY DRIVES

Table with columns: TAG, SERVICE, ENCLOSURE, NOTES. Lists VFD specifications for AH-1 through AH-4E.

AIR HANDLING UNITS

Table with columns: UNIT NUMBER, AREA SERVED, UNIT CONFIG, SUPPLY FAN, STEAM HEATING COIL, COOLING COIL, FILTER, and REQ'D ACCESS. Lists specifications for AH-1, AH-5, and AH-6.

CHILLER(S)

Table with columns: TAG, DESCRIPTION, EXISTING, EWT, LWT, GPM, PD, TONS, NPLV, ELECTRICAL DATA, MFR, MODEL, REQ'D ACCESS. Lists specifications for CH-1E and CH-2.

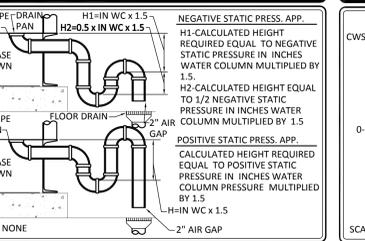
PUMPS

Table with columns: TAG, DESCRIPTION, SERVICE, MFR, MODEL, CAPACITY, MOTOR DATA, RPM, NPSH, MIN EFF, CONN. SIZE, REQ'D ACCESS. Lists specifications for P-1 through P-4.

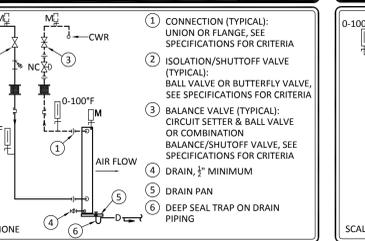
AIR TERMINAL UNITS

Table with columns: TYPE, INLET SIZE, SYSTEM, AIR FLOW, SOUND MAX, MIN, DISCH, MIN FAN, H.W. REHEAT COIL. Lists specifications for V-3 and V-4.

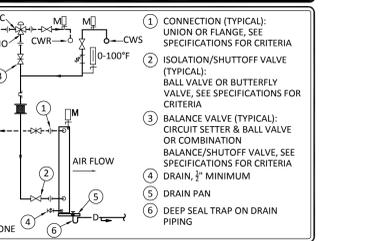
CONDENSATE DRAIN



AHU-5,6 COOLING COIL



AHU-1 COOLING COIL



FANS

Table with columns: TAG, TYPE, SERVICE / LOCATION, CFM, ESP, MAX WHEEL, RPM, MOTOR DATA, MFG, MODEL, FAN CONTROL, REQ'D ACCY. Lists specifications for various fan types.

Revisions table and project information including date (1/18/2013), issue for bid (1/31/2013), and owner review status.

Dynamix Engineering Ltd. Facility Engineering Consultants. Address: 855 Grandview Avenue, 3rd Floor, Columbus, Ohio 43215. Contact: (614)443-1178.

Professional Seal for Philip Kirk, State of Ohio Professional Engineer No. 120053.

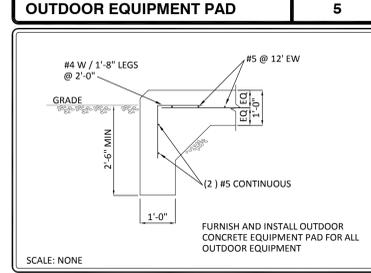
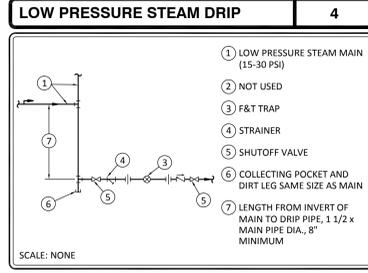
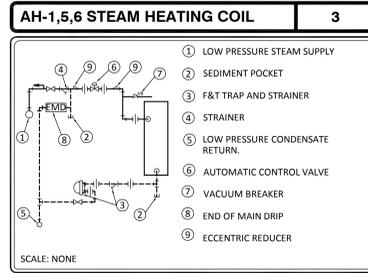
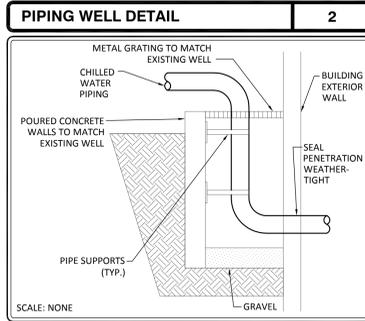
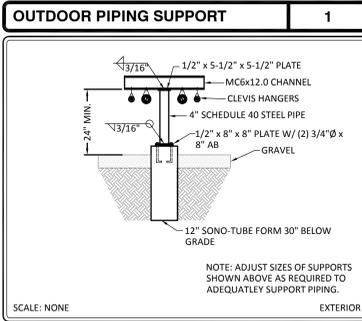
Revised By: Philip Kirk. Drawing Title: HVAC SCHEDULES AND DETAILS.

Project Title: REPLACE CONDENSING UNITS, B-305. Building Number: 305. Location: 4100 WEST THIRD ST DAYTON, OH 45428.

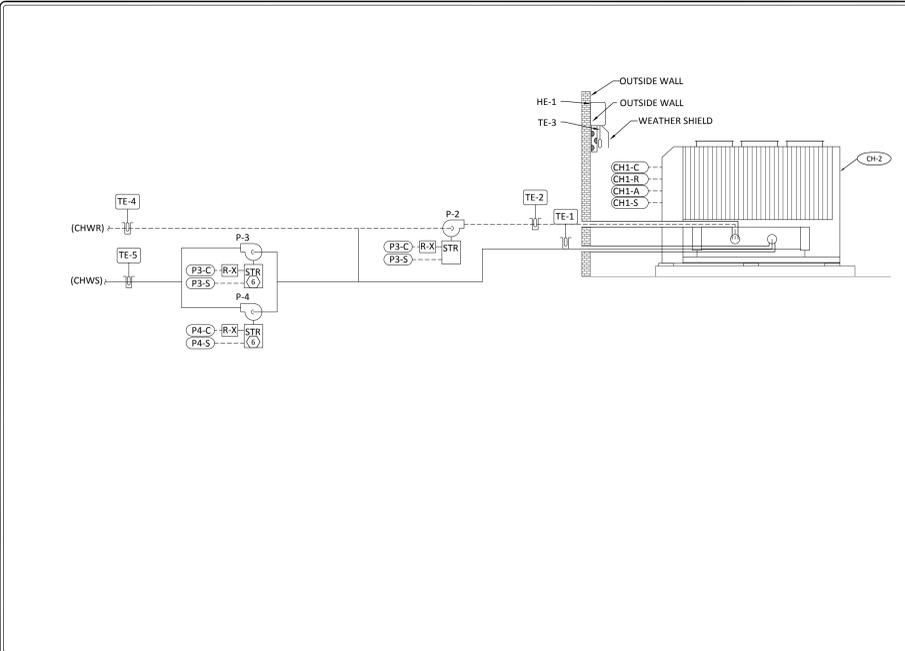
Date: 1-18-2013. Project No: 552-13-303. Drawing No: MO. VAMC, DAYTON logo.

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CHILLED WATER CONTROLS



CHILLER PLANT OPERATION SEQUENCE

SEQUENCE OF OPERATIONS (PRIMARY CHILLED WATER SYSTEM)

CHILLER ENABLE - THE CHILLER SYSTEM SHALL BE OPERATIONAL WHENEVER THE OUTSIDE AIR TEMPERATURE IS ABOVE 55 DEG F, AND ANY OF THE FOLLOWING CONDITIONS ARE MET (SPECIFIC TO ONLY THE AIR HANDLERS SERVED BY THIS CHILLER SYSTEM):

- ANY AIR HANDLER IS IN THE OCCUPIED MODE.
- ANY AIR HANDLER IS OPERATING DUE TO NIGHT SETUP HIGH TEMPERATURE, AND ECONOMIZER IS NOT AVAILABLE.

WHEN THE CHILLER SYSTEM BECOMES OPERATIONAL, THE CHILLER SHALL BE INDEXED TO OPERATE.

THE CHILLER SYSTEM SHALL STOP WHEN THE OUTSIDE AIR TEMPERATURE IS BELOW 55 DEG F, OR WHEN ALL AIR HANDLERS AND ZONED AREAS HAVE ENTERED THE UNOCCUPIED MODE.

WHEN THE CHILLER IS INDEXED TO OPERATE, ITS ASSOCIATED CHILLED WATER PUMP SHALL BE STARTED AND RUN CONTINUOUSLY. UPON PROOF OF PUMP STATUS, THE CHILLER SHALL THEN BE ENABLED TO RUN UNDER ITS OWN CONTROLS.

A FLOW SWITCH IN THE CHILLED WATER SHALL PROVE FLOW BEFORE THE COMPRESSOR ACTUALLY OPERATES. FURNISH ALL NECESSARY AUXILIARY CONTACTS AND EXTERNAL RELAYS, AND ALL WIRING (INCLUDING FLOW SWITCHES), REQUIRED TO ACCOMPLISH THE DESCRIBED START-UP, OPERATING AND SAFETY SEQUENCE DESCRIBED. ALL CHILLER CONTROL DEVICE INSTALLATION AND SET-UP SHALL BE PROVIDED UNDER THIS CONTRACT.

WHEN THE CHILLER SYSTEM'S OPERATIONAL CONDITIONS ARE NO LONGER SATISFIED, THE CHILLER SHALL BE STOPPED FIRST. AFTER A 5 MINUTE TIME DELAY, ITS ASSOCIATED CHILLED WATER PUMP SHALL BE STOPPED.

THE CHILLER SHALL UTILIZE A MINIMUM ON TIMER AND A MINIMUM OFF TIMER TO PREVENT SHORT CYCLING.

IF THE CHILLER OR ITS ASSOCIATED CHILLED WATER PUMP FAILS TO PROVE STATUS DURING THEIR OPERATION, AN ALARM SHALL BE INITIATED AT THE OPERATOR WORKSTATION.

WHEN THE OUTSIDE AIR TEMPERATURE FALLS BELOW 32 DEG F, THE PRIMARY CHILLED WATER PUMP SHALL BE STOPPED. IF THE LEAVING CHILLED WATER TEMPERATURE FROM THE CHILLER RISES ABOVE 90 DEG F, THE ASSOCIATED PUMP SHALL CYCLE OFF. IF THE OUTSIDE AIR TEMPERATURE REMAINS BELOW 32 DEG F, AND THE SUPPLY CHILLED WATER TEMPERATURE (TE-1) DROPS BELOW 40 DEG F, THE PUMPS SHALL BE ENABLE AGAIN FOR OPERATION UNTIL THE CHILLED WATER TEMPERATURE RISES ABOVE 90 DEG F. THIS PROCESS SHALL CONTINUE AS LONG AS THE OUTSIDE AIR TEMPERATURE REMAINS BELOW 32 DEG F.

CHILLER PLANT OPERATION SEQUENCE

SEQUENCE OF OPERATIONS (SECONDARY CHILLED WATER SYSTEM)

THE SECONDARY CHILLED WATER PUMPS SHALL OPERATE ON A LEAD/LAG BASIS. THE LEAD PUMP SHALL BE OPERATOR SELECTABLE AND SHALL AUTOMATICALLY ALTERNATE ON A MONTHLY BASIS. WHEN THE ALTERNATION OCCURS, THE PUMP WITH THE LEAST AMOUNT OF OVERALL TOTALIZED RUNTIME SHALL BECOME THE LEAD.

THE LEAD PUMP SHALL START AND RUN CONTINUOUSLY WHENEVER THE PRIMARY CHILLED WATER SYSTEM IS OPERATIONAL.

THE SPEED OF THE LEAD PUMP SHALL BE MODULATED TO MAINTAIN A CONSTANT DIFFERENTIAL PRESSURE AS SENSED BETWEEN THE SUPPLY AND RETURN OF SECONDARY CHILLED WATER SYSTEM. THE DIFFERENTIAL SETPOINT TO BE DETERMINED BY THE BALANCING CONTRACTOR.

- THE LOCAL DIFFERENTIAL PRESSURE SENSOR SHALL BE HARD WIRED TO THE LOCAL CONTROLLER PERFORMING THE PRESSURE CONTROL SEQUENCE.
- A REMOTE DIFFERENTIAL PRESSURE SENSOR SHALL BE USED TO RESET THE LOCAL DIFFERENTIAL PRESSURE SETPOINT WHEN THE BAS COMMUNICATIONS NETWORK IS ON-LINE AND OPERATIONAL. AS THE REMOTE DIFFERENTIAL PRESSURE VARIES FROM THE REMOTE PRESSURE SETPOINT, THE LOCAL SETPOINT SHALL BE RESET ACCORDINGLY.
- THE LOCAL AND REMOTE DIFFERENTIAL SETPOINTS SHALL BE DETERMINED BY THE BALANCING CONTRACTOR.

PUMP SEQUENCING

- IF THE SPEED OF THE LEAD PUMP EXCEEDS 90% PERCENT CAPACITY, THE LAG PUMP SHALL BE STARTED. ITS SPEED SHALL BE SLOWLY RAMPED UP, AND THE SPEED OF BOTH OPERATING PUMPS SHALL BE CONTROLLED IN UNISON TO MAINTAIN THE DIFFERENTIAL PRESSURE SETPOINT.
- WHEN BOTH THE LEAD AND LAG PUMPS ARE OPERATING, AND THE SPEED OF BOTH PUMPS IS BELOW 40% CAPACITY, THE LAG PUMP SHALL BE STOPPED.

IF THE LEAD PUMP FAILS TO PROVE STATUS DURING ITS OPERATION, THE LEAD PUMP SHALL BE STOPPED, THE LAG PUMP SHALL BE STARTED AND AN ALARM SHALL BE INITIATED AT THE OPERATOR WORKSTATION. IF THE LAG PUMP FAILS TO PROVE STATUS DURING ITS OPERATION, AN ALARM SHALL BE INITIATED AT THE OPERATOR WORKSTATION.

CHILLER PLANT OPERATION SEQUENCE

SEQUENCE OF OPERATIONS FOR EXISTING CHILLER (CH-1E)

MODIFY EXISTING CONTROLS FOR CH-2 AS REQUIRED TO ACCOMPLISH THE FOLLOWING:

IF CHILLER CH-2 LEAVING WATER TEMPERATURE RISES ABOVE THE DESIGNATED LEAVING WATER TEMPERATURE (44 DEG. F. ADJUSTABLE) FOR MORE THAN 15 MINUTES, INDEX (CH-1E) TO OPERATE.

WHEN THE CHILLER IS INDEXED TO OPERATE, THE ASSOCIATED CHILLED WATER PUMP SHALL BE STARTED AND RUN CONTINUOUSLY. UPON PROOF OF PUMP STATUS, THE CHILLER SHALL THEN BE ENABLED TO RUN UNDER ITS OWN CONTROLS.

MODIFY EXISTING CONTROLS AND/OR PROVIDE NEW SO THAT BAS CAN MONITOR AMPERAGE DRAW FROM EACH CHILLER. WHEN AMPERAGE DRAW OF (CH-1E) IS LESS THAN 25% OF (CH-1E) CAPACITY, DISABLE CH-2.

CHILLERS (CH-1E) AND CH-2 SHALL USE A MIN. ON TIMER AND MIN. OFF TIMER TO PREVENT SHORT CYCLING.

WHEN THE QUANTITY OF CHILLERS IN OPERATION CHANGES, A DELAY TIMER SHALL PREVENT ADDITIONAL STAGING FOR A PERIOD OF 15 MINUTES TO ALLOW THE SYSTEM TO STABILIZE.

CHILLER CONTROLLER POINTS

TYPE: AI - ANALOG INPUT, AO - ANALOG OUTPUT, DI - DIGITAL INPUT, DO - DIGITAL OUTPUT, PI - PULSED INPUT

FEATURES: D - DISPLAYED ON WORKSTATION GRAPHICS, M - MODIFIED/OVERRIDE FROM WORKSTATION GRAPHICS, A - ALARMS AT WORKSTATION, L - LOGGED/TRENDED AT WORKSTATION, S - TIME SCHEDULED AT WORKSTATION, G - GLOBALLY SHARED TO ALL CONTROLLERS

NOTE: *INCLUDE ALL POINTS LISTED BELOW AND PROVIDE ANY OTHER POINTS AS REQUIRED TO ACCOMPLISH THE SEQUENCE OF OPERATION.

TAG	TYPE	DESCRIPTION	QTY	D	M	A	L	S	G	NOTES
CH2-C	DO	CHILLER 2 COMMAND	1	X	X	-	-	-	-	-
CH2-R	AO	CHILLER 2 WATER RESET SETPOINT	1	X	X	-	-	-	-	-
CH2-S	DI	CHILLER 2 STATUS	1	X	X	-	-	-	-	-
CH2-A	DI	CHILLER 2 ALARM	1	X	X	-	-	-	-	-
TE-1	AI	MAIN CHILLED WATER SUPPLY TEMPERATURE	1	X	-	-	X	-	-	-
TE-2	AI	MAIN CHILLED WATER RETURN TEMPERATURE	1	X	-	-	X	-	-	-
TE-3	AI	OUTSIDE AIR TEMPERATURE	1	X	-	-	X	-	-	-
TE-4	AI	SECONDARY SUPPLY TEMPERATURE	1	X	-	-	X	-	-	-
TE-5	AI	SECONDARY RETURN TEMPERATURE	1	X	-	-	X	-	-	-
P3-C	DO	CHILLED WATER PUMP 3 COMMAND	1	X	X	-	-	-	-	-
P3-S	DI	CHILLED WATER PUMP 3 STATUS	1	X	X	-	-	-	-	-
P3-SC	AO	CHILLED WATER PUMP 3 SPEED COMMAND	1	X	X	-	-	-	-	-
P4-C	DO	CHILLED WATER PUMP 4 COMMAND	1	X	X	-	-	-	-	-
P4-S	DI	CHILLED WATER PUMP 4 STATUS	1	X	X	-	-	-	-	-
P4-SC	AO	CHILLED WATER PUMP 4 SPEED COMMAND	1	X	X	-	-	-	-	-
P2-C	DO	CHILLED WATER PUMP 2 COMMAND	1	X	X	-	-	-	-	-
P2-S	DI	CHILLED WATER PUMP 2 STATUS	1	X	X	-	-	-	-	-
P2-SC	AO	CHILLED WATER PUMP 2 SPEED COMMAND	1	X	X	-	-	-	-	-

NOTES:
1.

DESIGNER/ENGINEER	SH
CAD OPERATOR	SH
QA/QC CHECKER	SS

95% OWNER REVIEW
ISSUE FOR BID DOCUMENTS

1/18/2013
1/31/2013

Revisions

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Revised By: _____

Approved: Project Engineer
Philip Kirk

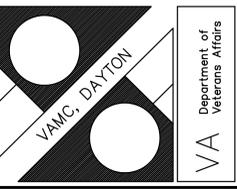
Drawing Title
HVAC SCHEDULES AND DETAILS

Project Title
REPLACE CONDENSING UNITS, B-305

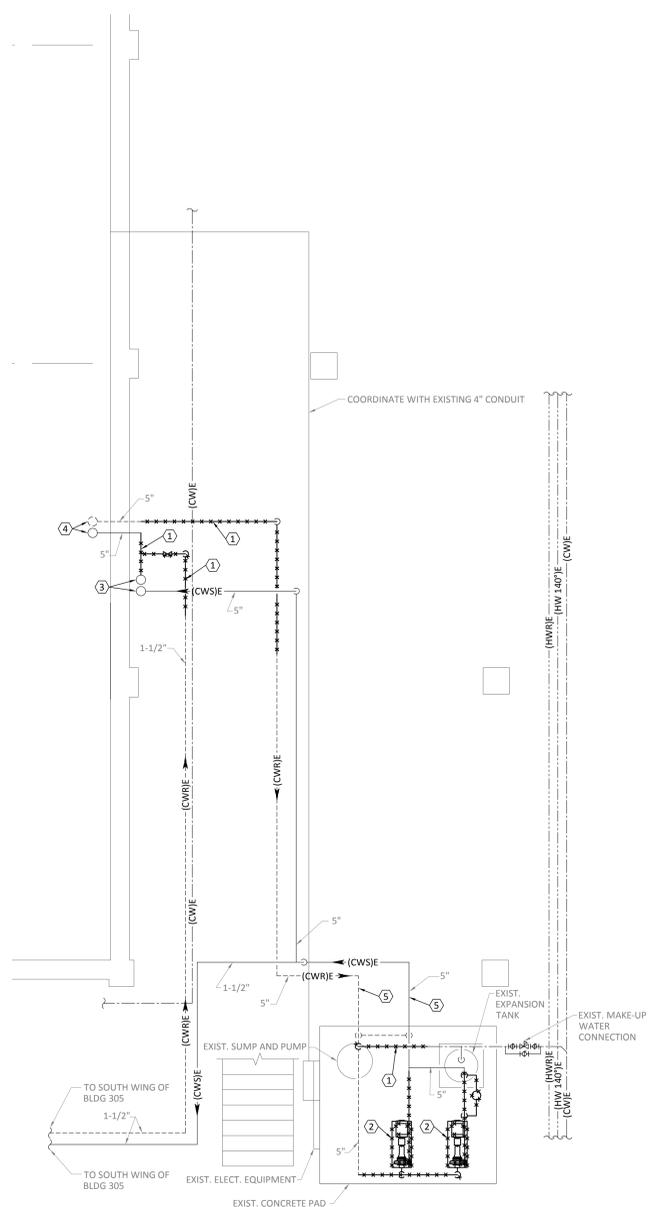
Building Number 305
Checked DYNAMIX
Drawn SH

Location 4100 WEST THIRD ST DAYTON, OH 45428

Date 1-18-2013
Project No. 552-13-303
Drawing No. M1



A three inches = one foot
 B one and one half inches = one foot
 C one inch = one foot
 D three quarters inch = one foot
 E one half inch = one foot
 F three eighths inch = one foot
 G one quarter inch = one foot
 H one eighth inch = one foot



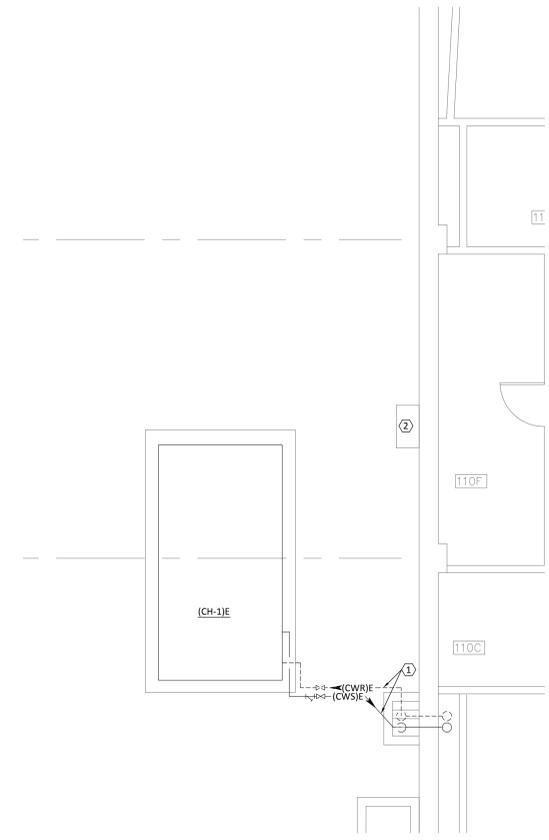
PARTIAL BASEMENT DEMOLITION FLOOR PLAN
 SCALE: 1/4"=1'-0"
 NORTH

PARTIAL BASEMENT DEMO PLAN NOTES

- 1.-REMOVE EXISTING PIPING AS SHOWN.
- 2.-REMOVE EXISTING PUMPS AND ASSOCIATED VALVES. BEFORE REMOVAL OF PUMPS, TAKE PRELIMINARY WATER FLOW MEASUREMENTS AND SUBMIT TO ENGINEER BEFORE ORDERING NEW EQUIPMENT.
- 3.-EXISTING 5" CWS AND CWR UP TO ATTIC.
- 4.-EXISTING 5" CWS AND CWR UP THRU PIPING WELL TO EXTERIOR OF BUILDING.
- 5.-REMOVE INSULATION FROM EXISTING CWS AND CWR PIPING IN CRAWL SPACE.

GENERAL ASBESTOS ABATEMENT NOTES

- A.-ALL ASBESTOS ABATEMENT SHALL BE CONDUCTED IN ACCORDANCE WITH 02 82 11 TRADITIONAL ASBESTOS ABATEMENT SPECIFICATIONS.
- B.-ABATE EXISTING ACM CAULK/PUTTY LOCATED ON METAL DUCTS AND EXISTING ACM BRIDGING ENCAPSULANT LOCATED ON FIBERGLASS DUCT INSULATION.
- C.- ABATE EXISTING ACM FLEXIBLE EQUIPMENT/DUCT CONNECTIONS.
- D.-ABATE EXISTING ACM BRIDGING ENCAPSULANT LOCATED ON FIBERGLASS PIPE INSULATION.
- E.- ALL DUCTWORK, PIPING AND FLEXIBLE CONNECTIONS SHOWN TO BE DEMOLISHED ARE TO BE ASSUMED TO BE ASBESTOS CONTAINING.



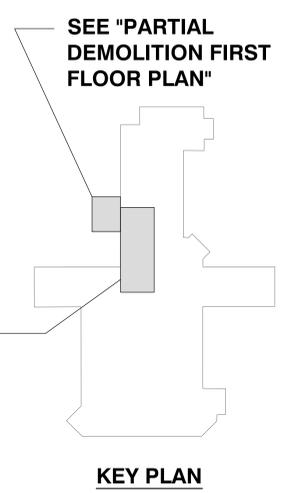
PARTIAL DEMOLITION FIRST FLOOR PLAN
 SCALE: 1/4"=1'-0"
 NORTH

PARTIAL DEMO FIRST FLOOR PLAN NOTES

- 1.-REMOVE EXISTING INSULATION AND HEAT TRACING SYSTEM FOR EXISTING CWS AND CWR PIPING. PIPING TO REMAIN.
- 2.-EXISTING CHILLER DISCONNECT SWITCH TO REMAIN.

GENERAL ASBESTOS ABATEMENT NOTES

- A.-ALL ASBESTOS ABATEMENT SHALL BE CONDUCTED IN ACCORDANCE WITH 02 82 11 TRADITIONAL ASBESTOS ABATEMENT SPECIFICATIONS.
- B.-ABATE EXISTING ACM CAULK/PUTTY LOCATED ON METAL DUCTS AND EXISTING ACM BRIDGING ENCAPSULANT LOCATED ON FIBERGLASS DUCT INSULATION.
- C.- ABATE EXISTING ACM FLEXIBLE EQUIPMENT/DUCT CONNECTIONS.
- D.-ABATE EXISTING ACM BRIDGING ENCAPSULANT LOCATED ON FIBERGLASS PIPE INSULATION.
- E.- ALL DUCTWORK, PIPING AND FLEXIBLE CONNECTIONS SHOWN TO BE DEMOLISHED ARE TO BE ASSUMED TO BE ASBESTOS CONTAINING.



SEE "PARTIAL BASEMENT DEMOLITION FLOOR PLAN"

KEY PLAN

DESIGNER/ENGINEER	SS
CAD OPERATOR	SS
QA/QC CHECKER	SS

95% OWNER REVIEW
 ISSUE FOR BID DOCUMENTS

Date	1/18/2013
Date	1/31/2013

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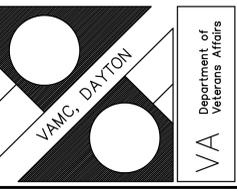
Revised By:

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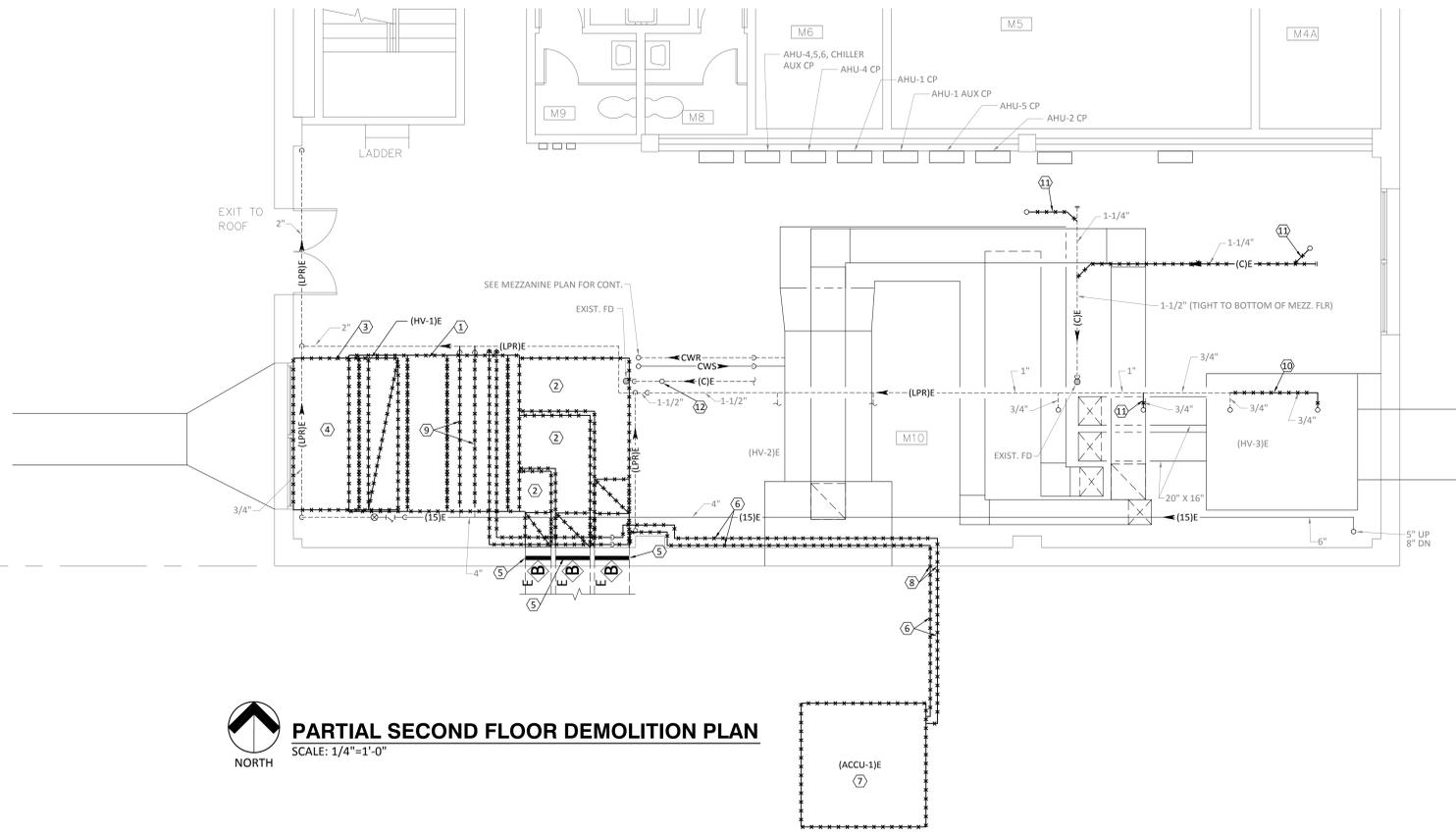
Drawing Title	FIRST FLOOR HVAC DEMOLITION PLAN
Approved: Project Engineer	Philip Kirk

Project Title	REPLACE CONDENSING UNITS, B-305
Building Number	305
Location	4100 WEST THIRD ST DAYTON, OH 45428

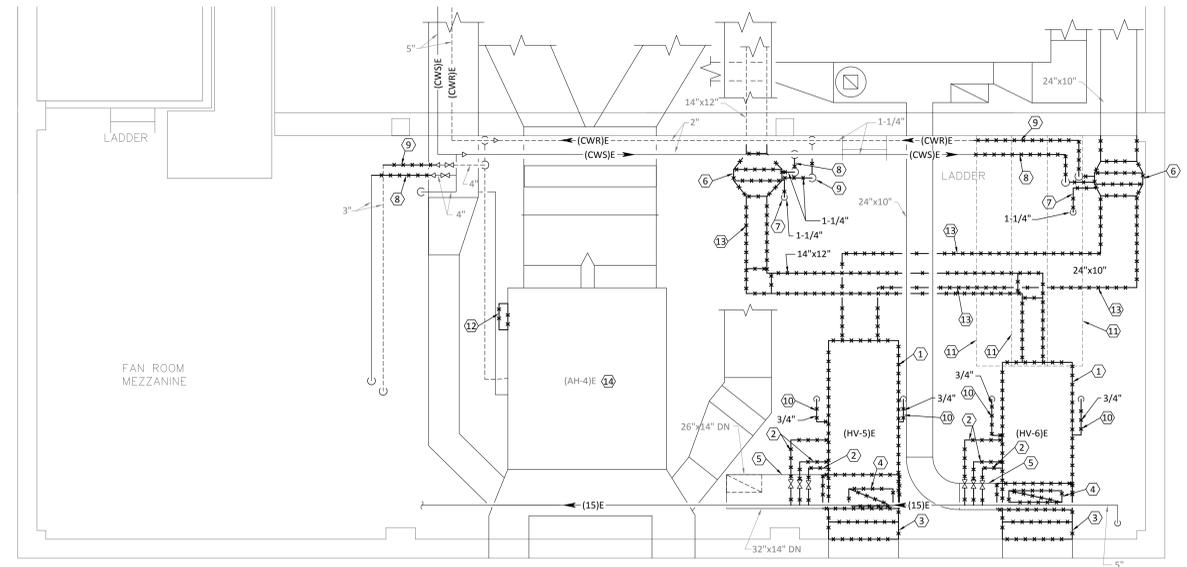
Date	1-18-2013
Project No.	552-13-303
Drawing No.	M3



three inches = one foot
 one and one half inches = one foot
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 three quarters inch = one foot
 one half inch = one foot
 three eighths inch = one foot
 one quarter inch = one foot
 one eighth inch = one foot



PARTIAL SECOND FLOOR DEMOLITION PLAN
 SCALE: 1/4"=1'-0"



PARTIAL MECHANICAL MEZZANINE DEMOLITION PLAN
 SCALE: 1/4"=1'-0"

PARTIAL SECOND FLOOR PLAN NOTES

- 1.-REMOVE EXISTING AIR HANDLER AND ASSOCIATED STRUCTURAL SUPPORTS. AIR HANDLER WILL HAVE TO BE DISASSEMBLED IN PLACE. PROVIDE ALL LABOR TO DISASSEMBLE AND REMOVE UNIT. BEFORE REMOVING EXISTING AIR HANDLER, DO PRELIMINARY AIRFLOW TESTING OF EXISTING AIR HANDLER AND ALL DIFFUSERS. SUBMIT TO ENGINEER FOR REVIEW BEFORE PURCHASING ANY NEW EQUIPMENT.
- 2.-REMOVE EXISTING SUPPLY DUCTWORK AND ALL SUPPORTS.
- 3.-REMOVE EXISTING RETURN DUCT (LOW) FROM UNIT TO LOUVER.
- 4.-REMOVE EXISTING OUTSIDE AIR DUCT (HIGH) FROM UNIT TO LOUVER.
- 5.-EXISTING FIRE DAMPERS TO REMAIN.
- 6.-REMOVE EXISTING REFRIGERANT PIPING ASSOCIATED WITH EXISTING AIR HANDLER.
- 7.-REMOVE EXISTING CONDENSING UNIT AND ASSOCIATED CONTROLS.
- 8.-PATCH WALL TO MATCH EXISTING.
- 9.-REMOVE EXISTING STEAM PIPING AND ALL ASSOCIATED ACCESSORIES.
- 10.-REMOVE EXISTING LPR BACK TO MAIN. CAP AT MAIN.
- 11.-REMOVE AC CONDENSATE DRAIN PIPING BACK TO MAIN - CAP AT MAIN.
- 12.-EXISTING 1-1/4" AC CONDENSATE DRAIN DOWN TO FLOOR DRAIN.

GENERAL ASBESTOS ABATEMENT NOTES

- A.-ALL ASBESTOS ABATEMENT SHALL BE CONDUCTED IN ACCORDANCE WITH 02 82 11 TRADITIONAL ASBESTOS ABATEMENT SPECIFICATIONS.
- B.-ABATE EXISTING ACM CAULK/PUTTY LOCATED ON METAL DUCTS AND EXISTING ACM BRIDGING ENCAPSULANT LOCATED ON FIBERGLASS DUCT INSULATION.
- C.- ABATE EXISTING ACM FLEXIBLE EQUIPMENT/DUCT CONNECTIONS.
- D.-ABATE EXISTING ACM BRIDGING ENCAPSULANT LOCATED ON FIBERGLASS PIPE INSULATION.
- E.- ALL DUCTWORK, PIPING AND FLEXIBLE CONNECTIONS SHOWN TO BE DEMOLISHED ARE TO BE ASSUMED TO BE ASBESTOS CONTAINING.

PARTIAL MEZZ. DEMO. PLAN NOTES

- 1.-REMOVE EXISTING AIR HANDLER, ASSOCIATED PIPING AND STRUCTURAL SUPPORTS. AIR HANDLER WILL HAVE TO BE DISASSEMBLED IN PLACE. PROVIDE ALL LABOR AS NECESSARY TO DISASSEMBLE AND REMOVE AIR HANDLER. BEFORE REMOVING EXISTING AIR HANDLER, DO PRELIMINARY AIRFLOW TESTING OF EXISTING AIR HANDLER AND ALL DIFFUSERS. SUBMIT TO ENGINEER FOR REVIEW BEFORE PURCHASING ANY NEW EQUIPMENT.
- 2.-REMOVE EXISTING STEAM PIPING BACK TO MAIN. CAP AT MAIN.
- 3.-REMOVE EXISTING O.A. DUCT TO LOUVER.
- 4.-REMOVE EXISTING R.A. DUCT TO LOUVER.
- 5.-EXISTING R.A. SMOKE DETECTOR TO REMAIN.
- 6.-REMOVE EXISTING COOLING COIL.
- 7.-REMOVE AC COOLING COIL CONDENSATE DRAIN BACK TO MAIN. CAP AT MAIN.
- 8.-REMOVE EXISTING CWS PIPING AS SHOWN.
- 9.-REMOVE EXISTING CWR PIPING AS SHOWN.
- 10.-REMOVE EXISTING LPR PIPING.
- 11.-REMOVE MEZZANINE FLOOR GRATING SECTION AS REQUIRED FOR INSTALLATION OF NEW UNIT. SECTIONS ARE ROUGHLY 2'-0" X 3'-2". BREAK TACK WELDS AS REQUIRED. AFTER INSTALLATION OF NEW UNITS, RE-INSTALL SECTIONS AND PROVIDE WELDS TO MATCH EXISTING.
- 12.-EXISTING COMBO DISCONNECT/MOTOR STARTER TO BE REMOVED AND REPLACED WITH NEW VFD.
- 13.-REMOVE EXISTING DUCTWORK.
- 14.-EXISTING AIR HANDLER TO REMAIN. DO PRELIMINARY AIRFLOW TESTING OF EXISTING AIR HANDLER AND ALL DIFFUSERS. SUBMIT TO ENGINEER FOR REVIEW.

GENERAL ASBESTOS ABATEMENT NOTES

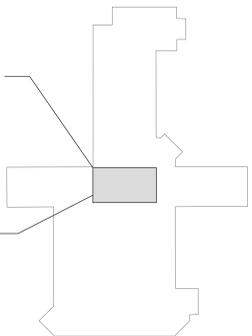
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- C.- ABATE EXISTING ACM FLEXIBLE EQUIPMENT/DUCT CONNECTIONS.
- D.-ABATE EXISTING ACM BRIDGING ENCAPSULANT LOCATED ON FIBERGLASS PIPE INSULATION.
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ROOM SCHEDULE

NO.	NAME
M1	
M2	
M2A	STAIR WELL
M2B	MOTOR AND GENERATOR
M3	PROJECTION ROOM
M3A	REWIND ROOM
M4	STORAGE
M4A	STORGE
M5	OFFICE
M6	OFFICE
M7	H.A.C.
M8	MEN
M9	WOMEN
M10	FAN ROOM
M11	STAIR WELL

SEE "PARTIAL MECHANICAL MEZZANINE DEMOLITION PLAN"

SEE "PARTIAL SECOND FLOOR DEMOLITION PLAN"



KEY PLAN

DESIGNER/ENGINEER	SS
CAD OPERATOR	SS
QA/QC CHECKER	SS

95% OWNER REVIEW ISSUE FOR BID DOCUMENTS	1/18/2013 1/31/2013
Revisions	Date

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Revised By:	
Drawing Title	SECOND FLOOR HVAC DEMOLITION PLAN
Project Title	REPLACE CONDENSING UNITS, B-305
Approved: Project Engineer	Philip Kirk
Building Number	305
Checked	DYNAMIX
Drawn	SH
Location	4100 WEST THIRD ST DAYTON, OH 45428
Date	1-18-2013
Project No.	552-13-303
Drawing No.	M4

VAMC, DAYTON
 Department of Veterans Affairs

A

B

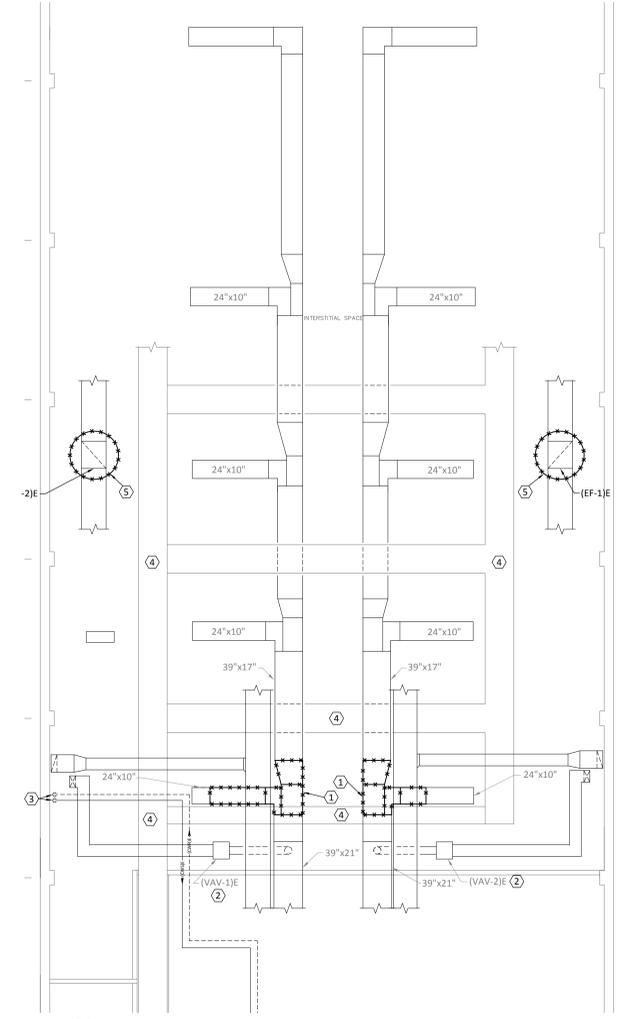
C

D

E

F

three inches = one foot
 one and one half inches = one foot
 one inch = one foot
 three quarters inch = one foot
 one half inch = one foot
 three eighths inch = one foot
 one quarter inch = one foot
 one eighth inch = one foot



PARTIAL AUDITORIUM MEZZANINE DEMOLITION PLAN
 SCALE: 1/8"=1'-0"

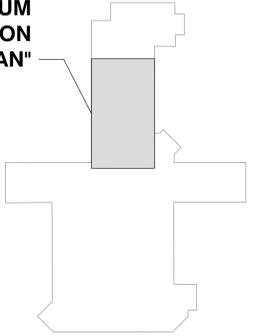
AUDITORIUM MEZZANINE DEMO PLAN NOTES

- 1.-REMOVE EXISTING DUCTWORK.
- 2.-EXISTING VAV BOX TO REMAIN.
- 3.-EXISTING CWS AND CWR DOWN TO BASEMENT. SEE "PARTIAL BASEMENT DEMOLITION PLAN" FOR CONTINUATION.
- 4.-EXISTING CATWALK. AREAS OUTSIDE CATWALK CANNOT SUPPORT WORKERS. PROVIDE ADDITIONAL TEMPORARY SCAFFOLDING AS NECESSARY. SUPPORT TEMPORARY SCAFFOLDING FROM BUILDING STRUCTURE OR CATWALK SUPPORT STRUCTURE.
- 5.-REMOVE EXISTING EXHAUST FAN AND ASSOCIATED MOTORIZED DAMPER.

GENERAL ASBESTOS ABATEMENT NOTES

- A.-ALL ASBESTOS ABATEMENT SHALL BE CONDUCTED IN ACCORDANCE WITH 02 82 13 TRADITIONAL ASBESTOS ABATEMENT SPECIFICATIONS.
- B.-ABATE EXISTING ACM CAULK/PUTTY LOCATED ON METAL DUCTS AND EXISTING ACM BRIDGING ENCAPSULANT LOCATED ON FIBERGLASS DUCT INSULATION.
- C.-ABATE EXISTING ACM FLEXIBLE EQUIPMENT/DUCT CONNECTIONS.
- D.-ABATE EXISTING ACM BRIDGING ENCAPSULANT LOCATED ON FIBERGLASS PIPE INSULATION.
- E.-ALL DUCTWORK, PIPING AND FLEXIBLE CONNECTIONS SHOWN TO BE DEMOLISHED ARE TO BE ASSUMED TO BE ASBESTOS CONTAINING.

SEE "PARTIAL AUDITORIUM MEZZANINE DEMOLITION PLAN"



KEY PLAN

DESIGNER/ENGINEER CAD OPERATOR CHECKER	1/18/2013 1/31/2013
95% OWNER REVIEW ISSUE FOR BID DOCUMENTS	Date

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 Comm. No.: 120053

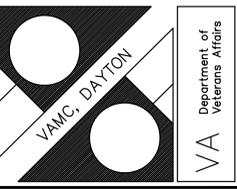


Revised By:	

Drawing Title MEZZANINE HVAC DEMOLITION PLAN
Approved: Project Engineer Philip Kirk

Project Title REPLACE CONDENSING UNITS, B-305		
Building Number 305	Checked DYNAMIX	Drawn SH
Location 4100 WEST THIRD ST DAYTON, OH 45428		

Date 1-18-2013
Project No. 552-13-303
Drawing No. M5



three inches = one foot
 one and one half inches = one foot
 one inch = one foot
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 one quarter inch = one foot
 three eighths inch = one foot
 one eighth inch = one foot

PARTIAL BASEMENT FLOOR PLAN NOTES

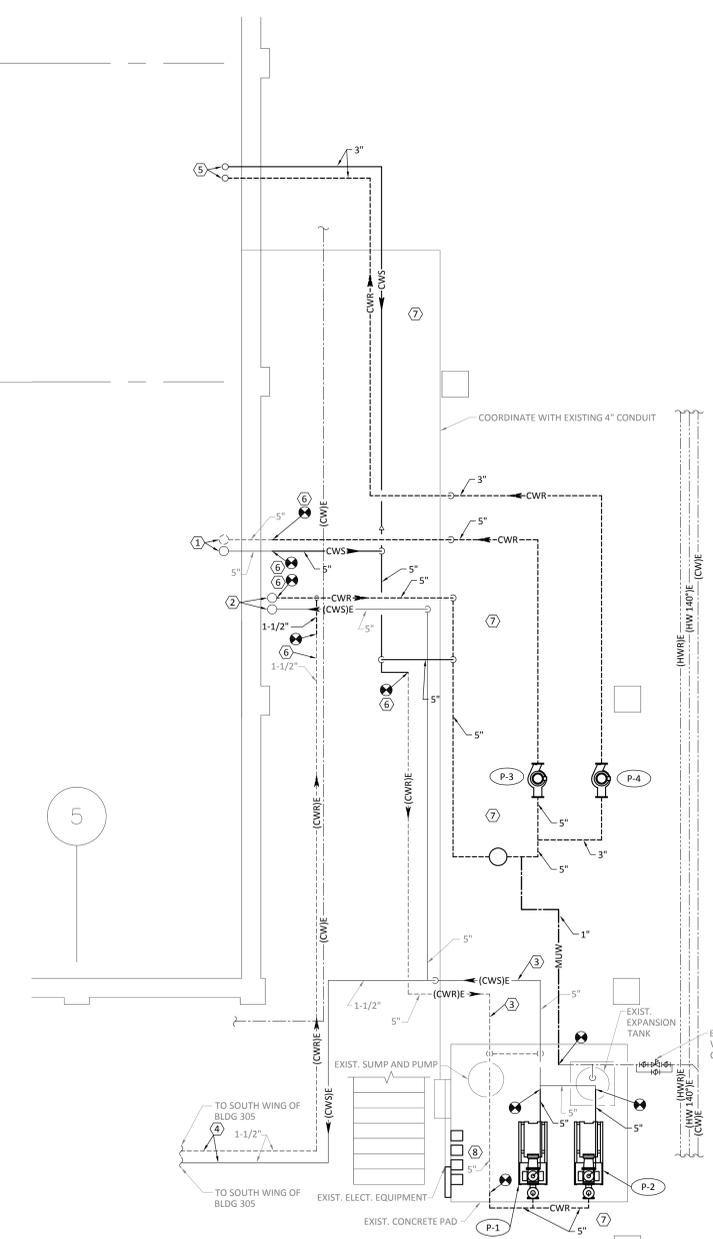
1. SEE FIRST FLOOR PLAN FOR CONTINUATION.
2. 5" CWS AND CWR UP TO MEZZANINE ABOVE AUDITORIUM.
3. PROVIDE NEW INSULATION FOR EXISTING PIPING.
4. PROVIDE NEW PIPE SUPPORTS AND HANGERS FOR 250' OF EXISTING CWS AND CWR PIPING IN SOUTH WING.
5. SEE PARTIAL FIRST FLOOR PLAN FOR CONTINUATION.
6. FIELD VERIFY EXISTING PIPE SIZE. MATCH NEW PIPE SIZE TO EXISTING.
7. SUSPEND ALL PIPING AND EQUIPMENT IN CRAWL SPACE FROM CEILING STRUCTURE. PROVIDE ASBESTOS ABATEMENT AS NECESSARY.
8. EXTEND EXISTING SUPPORT PANEL AND MOUNT NEW VFD'S FOR P-1, P-2, P-3, AND P-4. RELOCATE EXISTING CONDUIT AS NECESSARY.

PARTIAL FIRST FLOOR PLAN NOTES

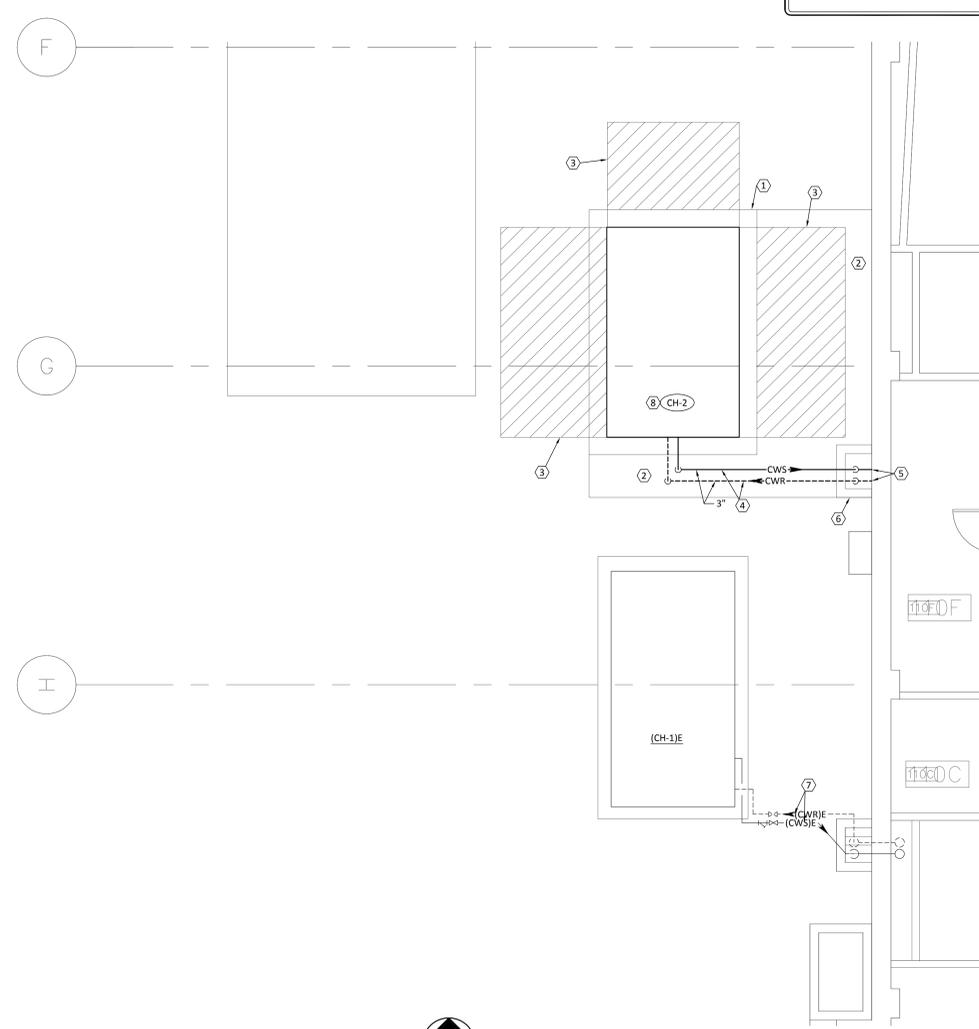
1. MOUNT CHILLER ON CONCRETE PAD. INSTALL CONCRETE PAD PER DETAIL 5 ON SHEET M1. PAD TO EXTEND 4" FROM EDGE OF UNIT/UNITS ON ALL SIDES.
2. REMOVE 6" OF TOPSOIL AND REGRADE AS NECESSARY. FURNISH AND INSTALL 6" GRAVEL SURFACE ON BLACK POLYURETHANE PLASTIC IN THIS AREA.
3. MAINTAIN CLEARANCES AS REQUIRED BY CHILLER MANUFACTURER.
4. COVER WEATHER-EXPOSED PIPING WITH ALUMINUM JACKET. MOUNT PIPING ON EQUIPMENT SUPPORTS LOCATED AT 5'-0" O.C. AND AT CHANGES IN DIRECTION. SEE PIPING SUPPORT DETAIL FOR EQUIPMENT SUPPORT DESIGN. PROVIDE NEW HEAT TRACE SYSTEM TO PREVENT FREEZING PER SPEC SECTION 22 05 33.
5. DROP PIPING DOWN INSIDE NEW PIPING WELL. SEE "PARTIAL BASEMENT FLOOR PLAN" FOR CONTINUATION.
6. PROVIDE PIPING WELL TO MATCH EXISTING WELL. DROP PIPING DOWN INSIDE WELL. COORDINATE EXACT LOCATION WITH EXISTING LANDSCAPING (BUSHES).
7. REMOVE EXISTING INSULATION AND JACKET. INSTALL NEW INSULATION WITH ALUMINUM JACKET. PROVIDE NEW HEAT TRACE SYSTEM TO PREVENT FREEZING PER SPEC SECTION 22 05 33.
8. MODIFY EXISTING BUILDING CONTROL SYSTEM TO INCORPORATE NEW CHILLER.

ROOM SCHEDULE

NO.	NAME
101	VOLUNTARY SERVICE WK RM
102	LOBBY
103	OFFICE
104	OFFICE
105	OFFICE
106	OFFICE
107	OFFICE
108	OFFICE
109A	
109B	
109C	ENTRANCE
110	WHEELCHAIR PLATFORM
110A	
110B	MUSIC ROOM
110C	OFFICE
110D	AMERICAN LEGION AUXILIARY
110E	STORAGE
110F	MUSIC ROOM
110G	OFFICE
111	STAGE
111A	
111B	REC. STORAGE
111C	REC. ISSUE OFFICE
111D	
111E	TRANSFORMER ROOM
111F	CREDIT UNION
111N	
112	MEN TOILET
112A	
113	CANTEEN
113A	DISHWASHING ROOM
113B	KITCHEN
113C	
114	REC. STORAGE
114A	STORAGE
115	BOWLING ALLEY
115A	OFFICE
115B	HOBBY STORAGE
116	H.A.C.
117	RECREATION OFFICE
118	HOBBY AREA
118A	STORAGE
119	POST OFFICE LOBBY
119A	POST OFFICE
119B	POST OFFICE
119C	
120	BILLIARD ROOM
120A	OFFICE
121	RETAIL STORE
121A	OFFICE
121B	CHIEF CANTEEN SERVICE
121C	RETAIL STORE
121D	
122	MULTI PURPOSE ROOM
122A	STORAGE
123	WOMEN LOCKER ROOM
124	H.A.C.
125	KITCHEN
126	MEN LOCKER ROOM
126A	MEN
127	WOMEN
128	OFFICE
128A	TOILET
128B	STORAGE ROOM
C-1-1	CORRIDOR
C-1-2	CORRIDOR
C-1-3	CORRIDOR
C-1-4	CORRIDOR

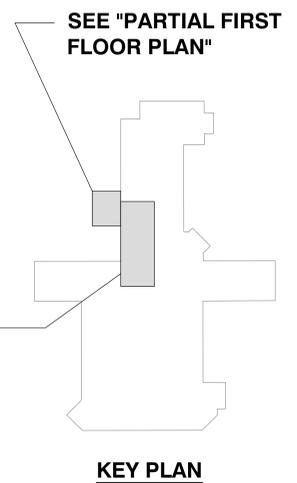


PARTIAL BASEMENT FLOOR PLAN
 SCALE: 1/4"=1'-0"
 NORTH



PARTIAL FIRST FLOOR PLAN
 SCALE: 1/4"=1'-0"
 NORTH

SEE "PARTIAL BASEMENT FLOOR PLAN"



KEY PLAN

DESIGNER/ENGINEER	SL
CAD OPERATOR	SL
QA/QC CHECKER	SL

95% OWNER REVIEW
 ISSUE FOR BID DOCUMENTS

1/18/2013
 1/31/2013

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Revised By:

Drawing Title

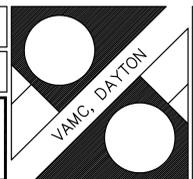
FIRST FLOOR HVAC NEW WORK PLAN
Approved: Project Engineer Philip Kirk

Project Title

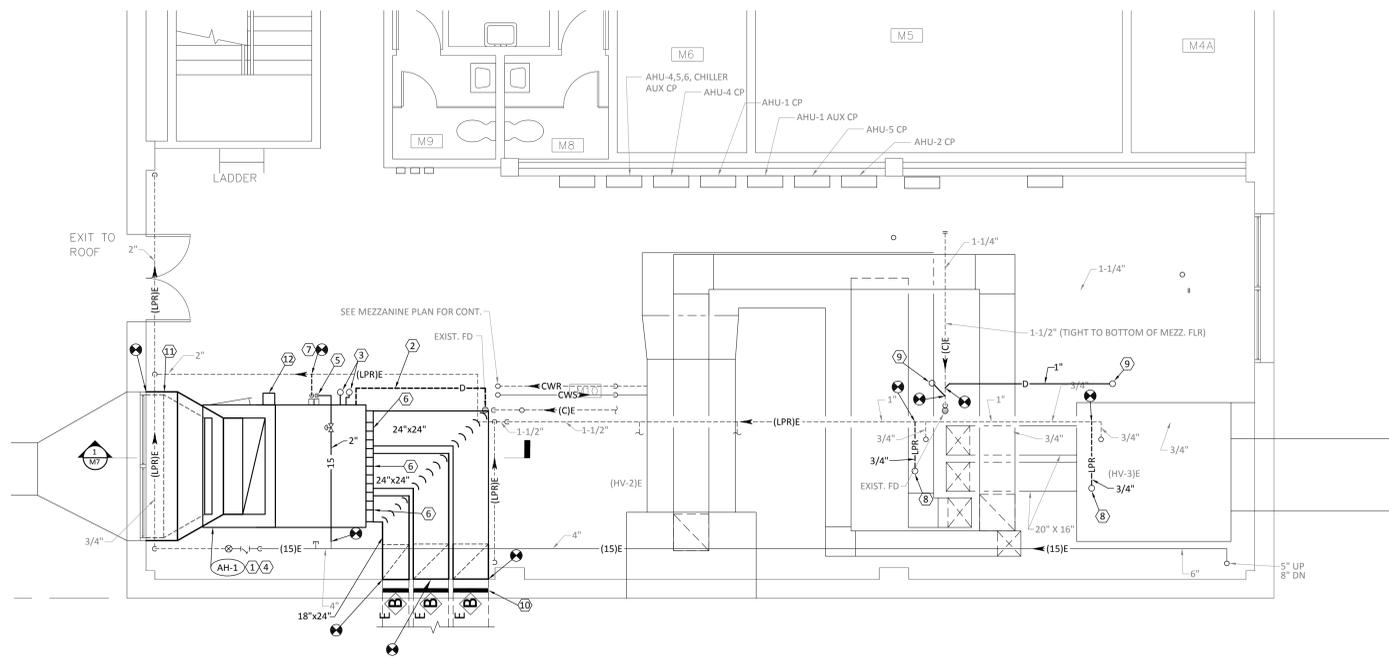
REPLACE CONDENSING UNITS, B-305
Building Number 305
Location 4100 WEST THIRD ST DAYTON, OH 45428

Date

1-18-2013
Project No. 552-13-303
Drawing No. M6

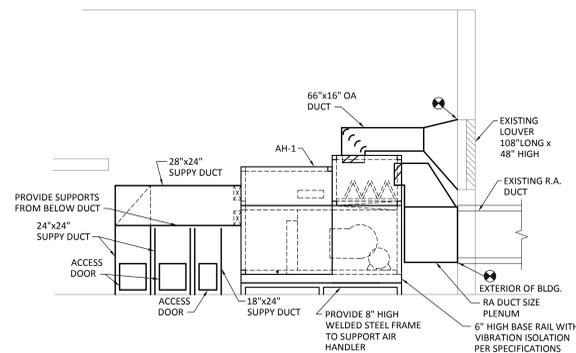


NO.	NAME
M1	
M2	
M2A	STAIR WELL
M2B	MOTOR AND GENERATOR
M3	PROJECTION ROOM
M3A	REWIND ROOM
M4	STORAGE
M4A	STORGE
M5	OFFICE
M6	OFFICE
M7	H.A.C.
M8	MEN
M9	WOMEN
M10	FAN ROOM
M11	STAIR WELL



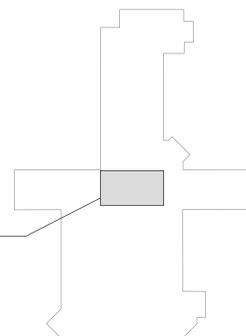
PARTIAL SECOND FLOOR PLAN
SCALE: 1/4"=1'-0"

- PARTIAL SECOND FLOOR PLAN NOTES**
- 1-MOUNT AIR HANDLER ON 12" HIGH STRUCTURAL SUPPORTS. UNIT SHALL BE ASSEMBLED IN THIS LOCATION CONTRACTOR SHALL INCLUDE IN HIS PRICE ALL LABOR TO COMPLETELY ASSEMBLE UNIT IN THIS LOCATION.
 - 2-RUN 1-1/4" AC CONDENSATE DRAIN LINE FROM AIR HANDLER COOLING COIL TO FLOOR DRAIN.
 - 3-3" CHILLED WATER SUPPLY AND RETURN UP. SEE MEZZANINE PLAN FOR CONTINUATION.
 - 4-MODIFY EXISTING CONTROLS AS NECESSARY FOR NEW AIR HANDLING UNIT.
 - 5-STEAM CONNECTION TO AIR HANDLER HEATING COIL. SEE PIPING DIAGRAMS.
 - 6-FIELD-CUT DAMPERS AND PROVIDE CONTROLS FOR MULTI-ZONE SYSTEM.
 - 7-EXTEND 1" LPR DRAIN LINE FROM HEATING COIL AND CONNECT TO EXISTING LPR LINE ON FLOOR. SEE PIPING DIAGRAMS.
 - 8-LPC UP THRU MEZZANINE FLOOR. CUT METAL GRATING AS NECESSARY.
 - 9-1" COOLING COIL CONDENSATE DRAIN LINE UP THRU MEZZANINE FLOOR. CUT METAL GRATING AS NECESSARY.
 - 10-EXISTING FIRE DAMPER TO REMAIN. CONFIRM OPERATION AND REPLACE FUSIBLE LINK.
 - 11-PROVIDE NEW SMOKE DAMPER IN RETURN DUCT.
 - 12-UNIT-MOUNTED VFD.



SECTION 1
SCALE: 1/4"=1'-0"

SEE "PARTIAL SECOND FLOOR PLAN"



KEY PLAN

DESIGNER/ENGINEER	SS
CAD OPERATOR	SS
QA/QC CHECKER	SS

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1/18/2013
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Comm. No.: 120053



Professional Seal

Revised By:

Drawing Title
SECOND FLOOR
HVAC NEW WORK PLAN

Approved: Project Engineer
Philip Kirk

Project Title
REPLACE CONDENSING
UNITS, B-305

Building Number
305

Checked
DYNAMIX

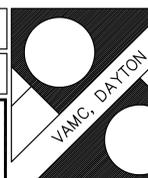
Drawn
SH

Location
4100 WEST THIRD ST
DAYTON, OH 45428

Date
1-18-2013

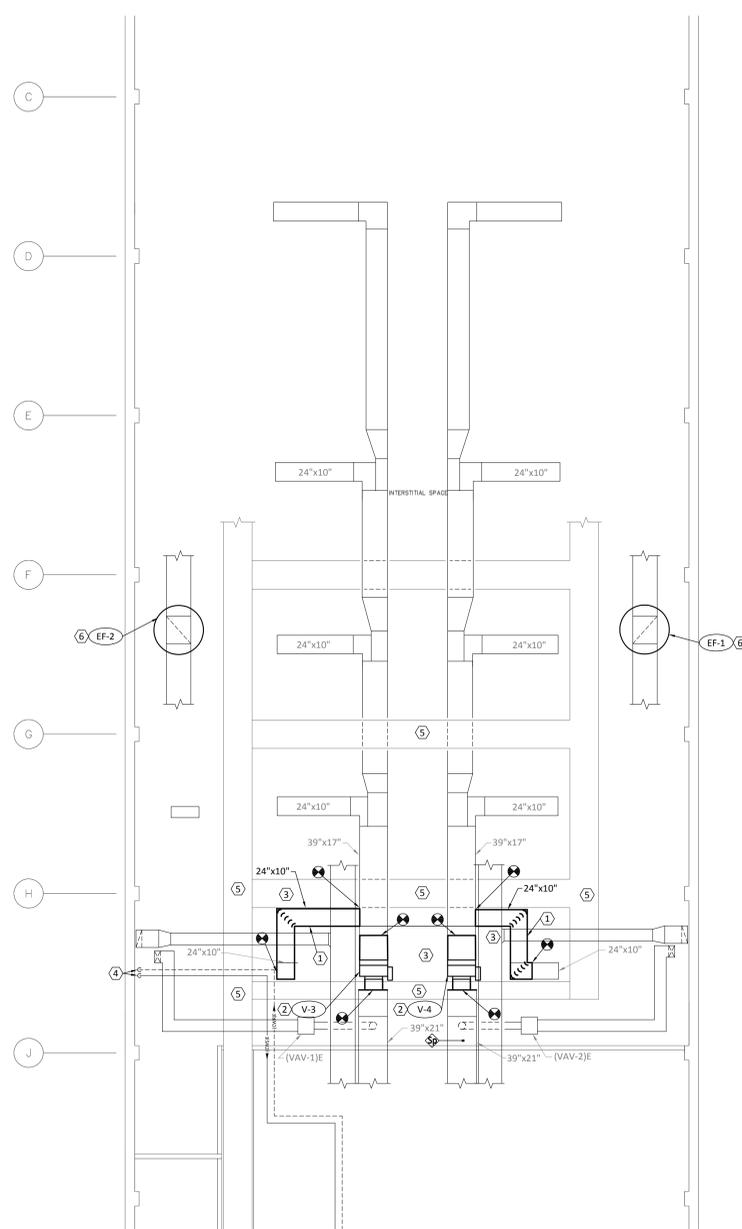
Project No.
552-13-303

Drawing No.
M7

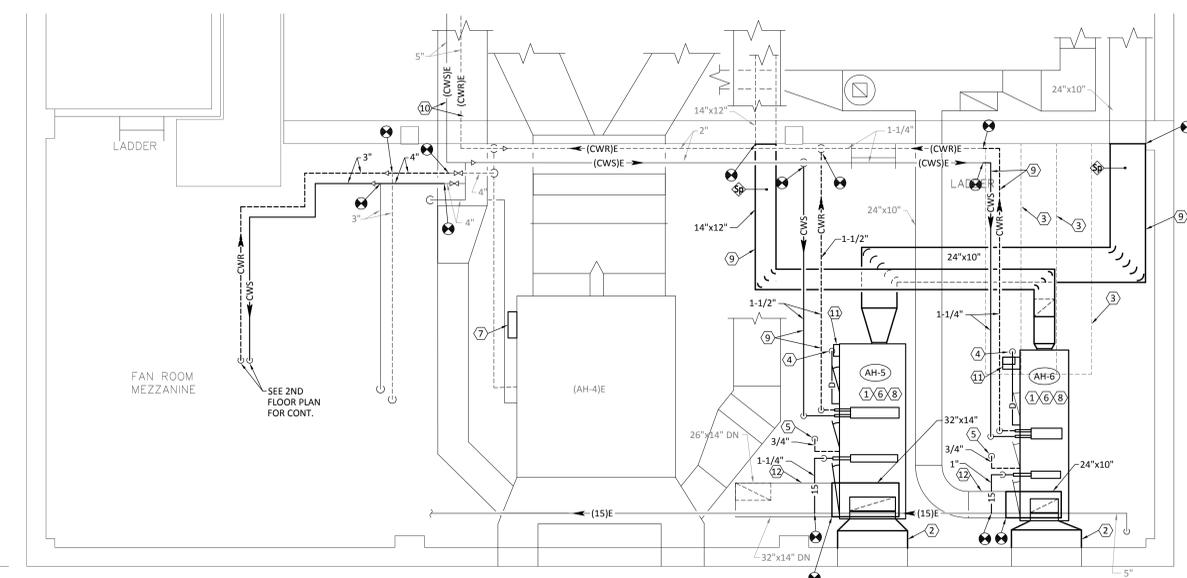


VA Department of Veterans Affairs

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 one quarter inch = one foot
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PARTIAL AUDITORIUM MEZZANINE PLAN
 SCALE: 1/8"=1'-0"
 NORTH



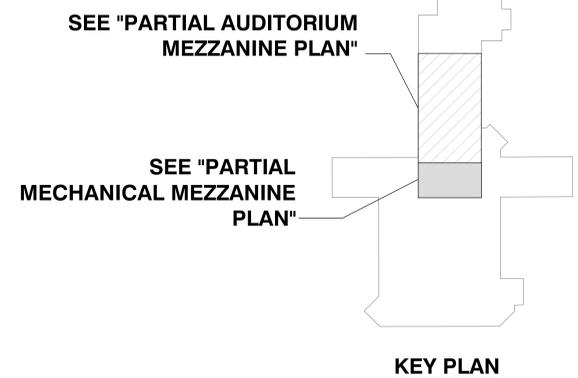
PARTIAL MECHANICAL MEZZANINE PLAN
 SCALE: 1/4"=1'-0"
 NORTH

MECH. MEZZANINE PLAN NOTES

1. UNIT SHALL BE ASSEMBLED IN THIS LOCATION CONTRACTOR SHALL INCLUDE IN HIS PRICE ALL LABOR TO COMPLETELY ASSEMBLE UNIT IN THIS LOCATION.
2. EXTEND LOUVER-SIZE PLENUM FROM EXISTING LOUVER. TRANSITION AND CONNECT PLENUM TO AIR HANDLER RETURN.
3. REMOVE EXISTING METAL GRATING AS NECESSARY TO INSTALL NEW AIR HANDLERS. PROVIDE ALL LABOR AND MATERIALS AS NECESSARY TO FIT UNITS THRU OPENING.
4. EXTEND 1" COOLING COIL CONDENSATE DRAIN LINE FROM UNIT AND DOWN THRU MEZZ. FLOOR.
5. EXTEND LPR DRAIN LINE DOWN THRU MEZZ. FLOOR.
6. SUSPEND AIR HANDLER FROM CEILING STRUCTURE ABOVE. INCLUDE VIBRATION ISOLATION. PROVIDE ADDITIONAL SUPPORT STRUCTURES AS NECESSARY.
7. FURNISH AND INSTALL NEW VFD FOR EXISTING AH-4(E). VFD SHALL BE 208/3/60, 20 HP.
8. MODIFY EXISTING CONTROLS AS NECESSARY FOR NEW AIR HANDLING UNIT AND VFD.
9. SUPPORT ALL NEW DUCTWORK AND PIPING FROM CEILING STRUCTURE. ADD ADDITIONAL SUPPORT STRUCTURES AS NECESSARY.
10. FURNISH AND INSTALL NEW PRESSURE SENSOR FOR P-1 AND P-2 AT THIS LOCATION.
11. UNIT MOUNTED VFD.
12. EXISTING DUCT SMOKE DETECTOR TO REMAIN.

AUDITORIUM MEZZANINE PLAN NOTES

1. COORDINATE EXACT LOCATION OF DUCTWORK WITH EXISTING STRUCTURE.
2. MODIFY EXISTING CONTROLS AS NECESSARY FOR NEW VAV BOX.
3. SUPPORT ALL DUCTWORK AND EQUIPMENT IN AUDITORIUM MEZZANINE FROM THE CEILING STRUCTURE.
4. CWS AND CWR DOWN. SEE "PARTIAL BASEMENT FLOOR PLAN" FOR CONTINUATION.
5. EXISTING CATWALK. AREAS OUTSIDE CATWALK CANNOT SUPPORT WORKERS. PROVIDE ADDITIONAL TEMPORARY SCAFFOLDING AS NECESSARY. SUPPORT TEMPORARY SCAFFOLDING FROM BUILDING STRUCTURE OR CATWALK SUPPORT STRUCTURE.
6. PROVIDE ADAPTER CURB TO MATCH EXISTING ROOF CURB. PROVIDE NEW MOTORIZED DAMPER AND ACTUATOR. CONNECT FAN AND DAMPER CONTROLS INTO EXISTING AH-4 CONTROLS.



DESIGNER/ENGINEER	SI
CAD OPERATOR	SI
QA/QC CHECKER	SI
95% OWNER REVIEW ISSUE FOR BID DOCUMENTS	
Date	1/18/2013 1/31/2013
Revisions	

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Revised By:	
Approved:	Project Engineer Philip Kirk

Drawing Title	MEZZANINE HVAC NEW WORK PLAN
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Project Title	REPLACE CONDENSING UNITS, B-305
Building Number	305
Checked	DYNAMIX
Drawn	SH
Location	4100 WEST THIRD ST DAYTON, OH 45428

Date	1-18-2013
Project No.	552-13-303
Drawing No.	M8

