

CITY OF NEWTON, MASSACHUSETTS
PURCHASING DEPARTMENT
purchasing@newtonma.gov
Fax (617) 796-1227

January 21, 2022

ADDENDUM #1
INVITATION FOR BID #22-33

POLICE HEADQUARTERS HVAC SYSTEM IMPROVEMENTS

THIS ADDENDUM IS TO: ANSWER THE QUESTIONS BELOW AND TO PROVIDE AMENDED PROJECT DRAWINGS, ATTACHED:

A. QUESTIONS:

Q1. Are we removing the existing dropped ceiling tiles and grid and replacing them with new ceiling tiles and grid or re-using the existing ceiling tiles and grid?

A1. The project will be reusing the grid and the existing tiles in all the spaces with exception of the following: Rooms 002, 003, 006, 007 011, 012, 103, 104, 105, 200, 208, 209, 220. These rooms are lobbies, restrooms, or locker rooms and, together with Rooms 204 and 205, all have hard ceilings. Any work done in these areas should be done via existing access panels and, if there aren't any existing panels, then open what will be required to do the work, and then patch, tape, finish, and paint to match existing.

Room 015 Processing (?) is the only space in the secured area that has fan coil units located above the ceiling. The holding and detention area (Rooms 017 – 029), shouldn't need to be accessed. Any work above the ceilings should be able to be performed from Corridor 008. Any work done in these areas should be done via existing access panels and, if there aren't any existing panels, then remove the hard ceiling as required, then patch, tape, and finish.

Q2. Have the ceilings above the dropped ceilings been tested for asbestos? If not, who is responsible for testing and removing the ceilings if asbestos is detected? Also, will these ceilings have to be replaced when the work above is completed or left open for future access?

A2. Based on testing done on 30 April 2021, no asbestos as detected in the any of the samples of the plaster ceiling.

Q3. Please provide hatch marked architectural drawing indicating all locations and types of ceilings that are to be removed for the installation of new duct work and equipment.

A3. Ceilings are to be removed and replaced on an as needed basis in order to facilitate the connection of the outside air ductwork to the appropriate fan coil unit (throughout the building). New exhaust ductwork will be added above the ceiling space.

Q4. Keynote 1A on Drawing M-1.1 and M-2.1 indicate the replacement of the control valves at the existing FCU's are to be included in Alternate #1 yet none of the FCU's are tagged with this keynote. Keynote 2 on Drawings M-1.2, M-2.2 and M-3.2 appears to indicate the replacement of the control valves at the existing FCU's would be in the base bid as no alternate is referenced. Please review and provide clarification.

A4. The Keynotes on Drawings M-1.1 and M-2.1 have been updated to reflect that the valve work will be included in the Base Bid.

Q5. Keynote 2A and 2B on Drawing M-3.1 appear to reference the wrong alternate. Alternate #2 is work associated with the firing range upgrades. Please review and provide clarification.

A5. The Keynotes on M-3.1 have been updated to reflect that the Alternate should be #1 for the DDC Head End. Please note that the valve work is part of the Base Bid

Q6. Does the existing fuel oil piping to be removed contain any residual fuel oil? If so, who is responsible for the removal and disposal of the fuel oil?

A6. The Fuel Oil Tank was removed from service approximately 20 plus years ago. The Contractor is to assume that there will be some residual fuel oil in the piping and dispose of the fuel oil and piping in accordance with MA DEP Regulations.

Q7. Is there a budget for this project?

A7. \$800,000

Q8. Please indicate on Drawing M-2.2 where the refrigeration and condensate piping at AC-1-5 is to be routed and terminated. Please indicate on Drawing M-2.2 where the condensate piping for AC-1-1, AC-1-2, AC-1-3 and AC-1-4 is to be routed and terminated.

A8. There is existing 1-1/4" condensate drain piping that traverses Rooms 117 and 119, where it turns and goes down to the basement level via the existing chase. M-2.2 has been updated to show the routing of the all the refrigerant piping. The 1-1/4" Condensate Drain Piping is now shown. The replacement fan coil units should reuse the existing condensate drain piping, and all new equipment has been connected to the appropriate piping system.

Q9. Please indicate on Drawing M-1.2 where the condensate piping for FCU-B-9, AC-B-1 and AC-B-2 is to be routed and terminated.

A9. There is an existing condensate drain that is being disconnected as part of the demo work. This drain should be re-piped as required to connect to AC-B-2.

The 1-1/4" condensate drain line comes down from the first floor into the corner of Room 030, AC-B-1 should tie into that drain line.

FCU-B-9 shall tie into the existing condensate drain piping in the corridor.

Drawing M-1.2 has been updated to show this.

Q10. Is the existing duct chase that is to be used to route the refrigeration piping from the basement to the roof accessible at all floor levels without the need to open the walls of the chase to provide piping support? If not, please indicate where piping supports are acceptable to avoid opening the chase walls.

A10. The chase runs from the second floor down to the basement. The refrigerant lines will need to offset on the second floor above the ceiling to get over to the existing pitch pocket, which will be replaced. There does not appear to be any opening in the existing chase wall that would be large enough to facilitate this work. The copper piping/tubing should be supported every 10 feet in the vertical. So there would be a minimum of one pipe support per floor. The chase will need to be opened in order to perform this work and then it will have to be patch, tape, finish, and paint to match existing.

Q11. Please indicate on Drawing M-2.2 where the condensate piping for FCU-1-8, 9, 10, 11 and 12 is to be routed and terminated.

A11. The drawings have been updated to show that there is existing 1-1/4" condensate drain pipe that is connected to the existing fan coil units that are coming out. Connect the replacement FCUs (1-8,1-9,1-10, and 1-11) to the original condensate drain piping. FCU 1-12 is a new unit and M-2.2 has been updated to show the connection into the existing drainage piping.

Q12. Considering the cost of the gas permit for the City of Newton will this permit fee be waived?

A12. Gas permit cost is waived

Q13. Are the VFD for the for the CHWP, HWP & BP come mounted on the pumps or need to be mounted on the wall? And are these to be installed by electrical contractor?

A13. All VFDs are provided by the HVAC Contractor, and they are integral with the pumps.

Q14. Reference E-2 – A carbon monoxide CO detector is indicated to be provided by HVAC, is this CO detector need to be monitor by the Fire Alarm system?

A14. No, the carbon monoxide detector is not required to be monitored by the fire alarm. However, the CO detector will be monitored by the BMS. The note on M-1.3 has been updated accordingly.

Q15. Are all of the [DO] damper operators provided by HVAC to be wired and installed by HVAC?

A15. All 24 VAC systems will be wired by the HVAC's subcontractor who will install, wire, and program all new control valves, and damper actuators, The HVAC contractor will install the dampers, and control valves as called for in the specifications or shown on the plans.

Q16. Branch wiring is to be provide to a junction box as indicated on the electrical drawings for the dampers operator and wiring to be pick up from this junction box to the damper operator(s) by others. Please confirm.

A16. Correct – The Electrical Contractor will not be responsible for this wiring. The Automatic Temperature Controls (ATC) Sub-Contractor is responsible for all the 24 VAC wiring of the control system.

Q17. All [CP] DDC controller receptacles on a floor level to be wire to the same (1) 20A-1P 120V circuit breaker and no dedicated circuit per controller receptacle is required. Please confirm.

A17. Correct

Q18. All [CP] DDC controller to be installed by HVAC?

A18. DDC Controllers will be installed by the ATC Sub-Contractor, as part of the HVAC Contractor's work.

Q19. All [CP] DDC controller require for the power cord to be wired by electrical contractor?

A19. Electrical Drawings have been updated to show that the DDC Controllers are to be hardwired.

Q20. Reference E-2 Alternate #3 at Sallyport, the three [DO] have a Keynote #12 which indicates to disconnect and make safe. Is this the correct keynote?

A20. Correct. Note also calls to disconnect and remove disconnecting means, wire, conduit, and appurtenances.

Q21. Pitch pocket and seal for roof penetration to be provided by others?

A21. The pitch pocket and seal for the roof penetration will be provided by the HVAC Contractor since they will be acting as the General Contractor on this project

Q22. Is there presently a Fire Alarm maintenance contractor for the site?

A22. Currently there is no Fire Alarm Maintenance Contractor. Work on this system is done by the Wires Division of the Fire Department.

Q23. Project schedule start date and completion date?

A23. There is a project schedule. The project is projected to run from 17 February 2022 through to 17 October 2022.

B. DRAWINGS

The following attached drawings are being reissued with changes. Changes have been clouded and a brief description of the changes are listed below.

Drawing E-2: DDC Controllers are shown as hardwired now. Add the removal of AC-1 from Room 03 and added AC/B-2 as a replacement. Corrected the power supply for the AC/B-1. Changed the location of the automatic glycol feeder and added the Carbon Monoxide Sensor.

Drawing E-3: DDC Controllers are shown as hardwired now. Included the removal of three outside units for the existing heat pumps system serving Rooms 118, and 119. Panel Circuits have been added for those pieces of equipment that were thought to have been feed from the Outside Units.

Drawing E-4: DDC Controller are shown as hardwired now. Moved panels from the XO office to their actual location in the workroom.

Drawing E-5: Power to the Outdoor Units for the backup cooling system for Dispatch were updated. Exterior Lighting added to the roof hatch.

Drawing M-1.1: Keynoted 1A was converted to a General Note clarify what portion of the work the control valves and dampers were to be priced.

Drawing M-1.2: Removed the control panel addition from Alternate #1 to the Base Bid. Clarified the location of the existing condensate drain line and how the new equipment attached to it.

Drawing M-1.3: Removed the note about tying the Carbon Monoxide Sensor into the fire alarm system, but left it connected to the BMS. Clarified that the Fuel Oil Piping was to be cut and capped at the wall inside the boiler room. Updated the note about when the DDC Controller is to be added.

Drawing M-2.1: Converted the Note about valves to a General Note and removed the reference to Alternate #1.

Drawing M-2.2: Removed the reference of the adding the control panel under Alt #1, and added the condensate drain piping and refrigerant lines between the chase and the new units.

Drawing M-3.1: Reworked the note about control valves to remove the reference to Alternate #1. Updated the Keynote 2B to read 1B.

Drawing M-3.2: Removed reference to Alternate #1 in reference to the DDC Controller.

Drawing M-5: Fixed the reference for the fan detail to point to M-8.1 instead of M-5.

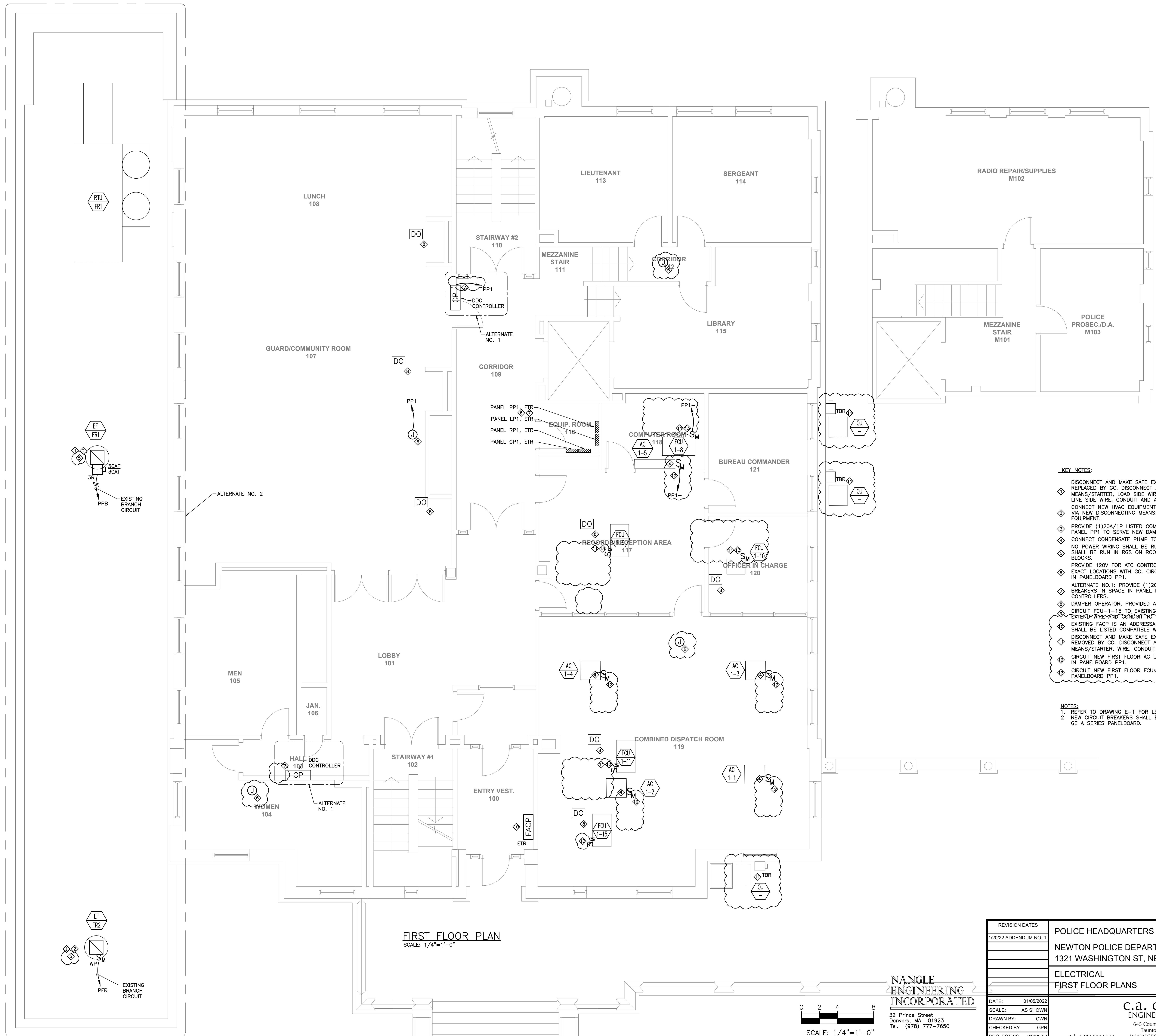
All other terms and conditions of this bid remain unchanged.

**PLEASE ENSURE THAT YOU ACKNOWLEDGE ALL ADDENDA ON YOUR
BID FORM. FAILURE TO ACKNOWLEDGE ALL ADDENDA COULD
RESULT IN REJECTION OF YOUR BID AS NONRESPONSIVE.**

Thank you.

A handwritten signature in black ink that reads "Nicholas Read". The signature is written in a cursive, slightly slanted style.

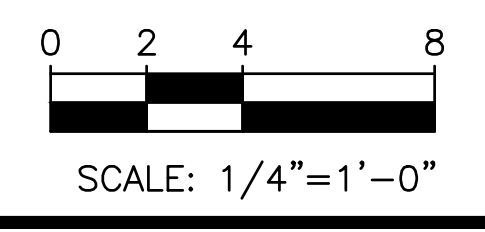
Nicholas Read
Chief Procurement Officer



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

- KEY NOTES:**
- ◇ DISCONNECT AND MAKE SAFE EXISTING MECHANICAL EQUIPMENT TO BE REPLACED BY GC. DISCONNECT AND REMOVE ASSOCIATED DISCONNECTING MEANS/STARTER, LOAD SIDE WIRE, CONDUIT AND APPURTENANCES. RETAIN LINE SIDE WIRE, CONDUIT AND APPURTENANCES FOR REUSE.
 - ◇ CONNECT NEW HVAC EQUIPMENT TO EXISTING LINE SIDE WIRE AND CONDUIT VIA NEW DISCONNECTING MEANS. EXTEND WIRE AND CONDUIT TO NEW EQUIPMENT.
 - ◇ PROVIDE (1)20A/1P LISTED COMPATIBLE CIRCUIT BREAKER IN SPACE IN PANEL PP1 TO SERVE NEW DAMPER OPERATOR ATC CONTROLS.
 - ◇ CONNECT CONDENSATE PUMP TO BRANCH CIRCUIT SERVING AC UNIT NO POWER WIRING SHALL BE RUN WITHIN FIRING RANGE. NEW WIRING SHALL BE RUN IN RGS ON ROOF SUPPORTED BY DURABLOCK SUPPORT BLOCKS.
 - ◇ PROVIDE 120V FOR ATC CONTROLS FOR DAMPER OPERATOR. COORDINATE EXACT LOCATIONS WITH GC. CIRCUIT TO SPARE 20A/1P CIRCUIT BREAKER IN PANELBOARD PP1.
 - ◇ ALTERNATE NO.1: PROVIDE (1)20A/1P LISTED COMPATIBLE CIRCUIT BREAKERS IN SPACE IN PANEL PP1 TO SERVE NEW FIRST FLOOR DDC CONTROLLERS.
 - ◇ DAMPER OPERATOR, PROVIDED AND WIRED BY GC.
 - ◇ CIRCUIT FCU-1-15 TO EXISTING BRANCH CIRCUIT SERVING FCU-1-11.
 - ◇ EXTEND WIRE AND CONDUIT TO NEW EQUIPMENT.
 - ◇ EXISTING FACP IS AN ADDRESSABLE EST RMDP-IN. ALL NEW DEVICES SHALL BE LISTED COMPATIBLE WITH EXISTING FACP.
 - ◇ DISCONNECT AND MAKE SAFE EXISTING MECHANICAL EQUIPMENT TO BE REMOVED BY GC. DISCONNECT AND REMOVE ASSOCIATED DISCONNECTING MEANS/STARTER, WIRE, CONDUIT AND APPURTENANCES BACK TO SOURCE.
 - ◇ CIRCUIT NEW FIRST FLOOR AC UNITS TO SPARE 20A/2P CIRCUIT BREAKER IN PANELBOARD PP1.
 - ◇ CIRCUIT NEW FIRST FLOOR FCUs TO SPARE 20A/2P CIRCUIT BREAKER IN PANELBOARD PP1.

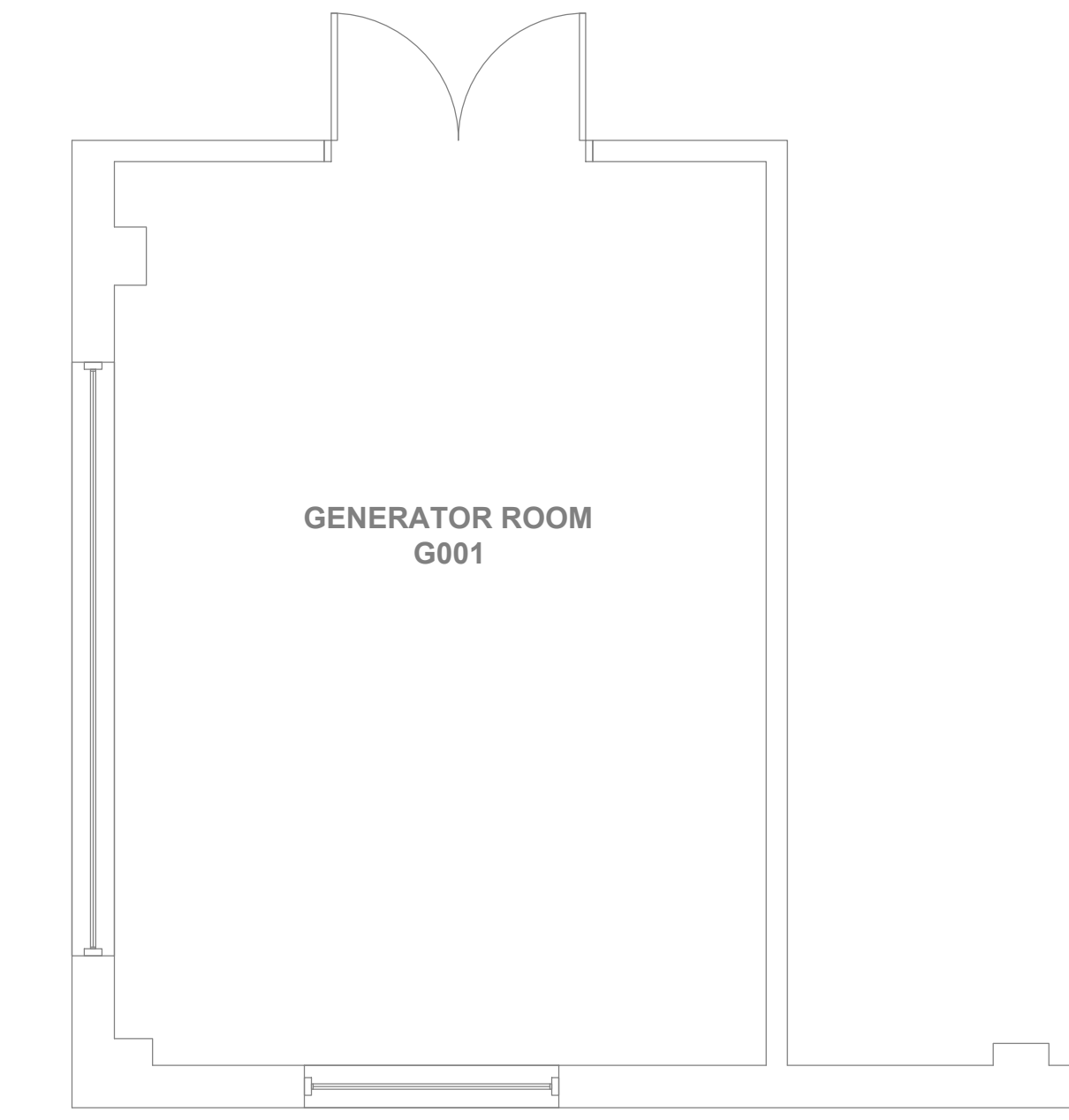
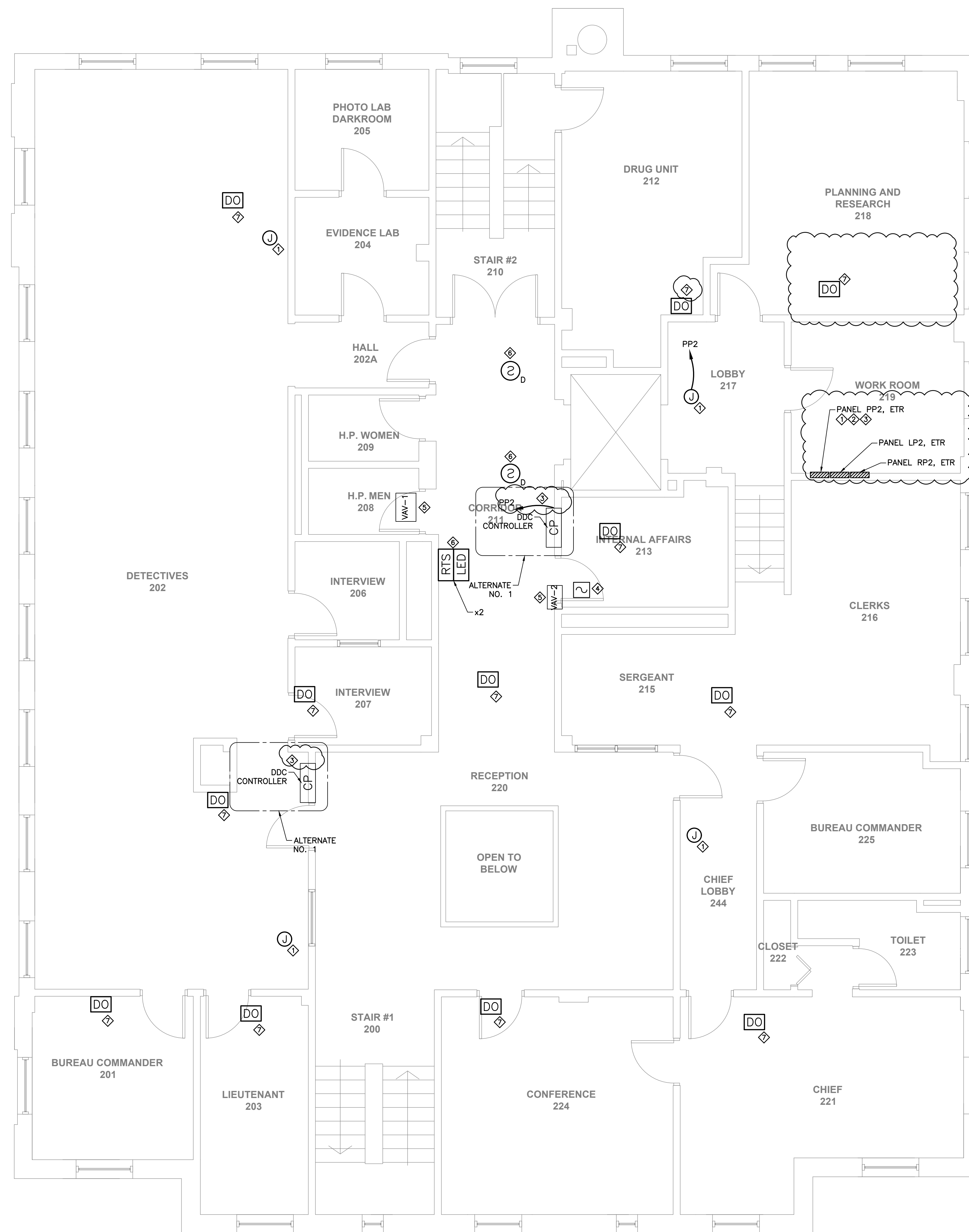
- NOTES:**
1. REFER TO DRAWING E-1 FOR LEGEND AND GENERAL NOTES.
 2. NEW CIRCUIT BREAKERS SHALL BE LISTED COMPATIBLE WITH EXISTING GE A SERIES PANELBOARD.



NANGLE ENGINEERING INCORPORATED
32 Prince Street
Danvers, MA 01923
Tel. (978) 777-7650

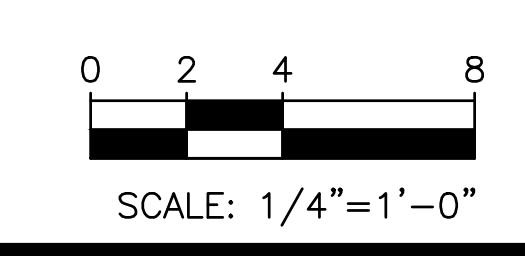
REVISION DATES	POLICE HEADQUARTERS HVAC IMPROVEMENTS NEWTON POLICE DEPARTMENT 1321 WASHINGTON ST, NEWTON, MA 02465	STAMP
1/20/22 ADDENDUM NO. 1		
DATE: 01/05/2022	ELECTRICAL FIRST FLOOR PLANS	DRAWING NUMBER E-3
SCALE: AS SHOWN		
DRAWN BY: CWN		
CHECKED BY: GPN		
PROJECT NO: 21025.00	c.a. crowley. ENGINEERING, INC. 645 County Street, Suite 6 Taunton, MA 02780 tel. (508) 884-5094 WWW.CROWLEYENG.COM fax. (508) 884-5099	

NA:2021 - Project - Folder: 21016 Newton Police Station Drawings 21016E.dwg



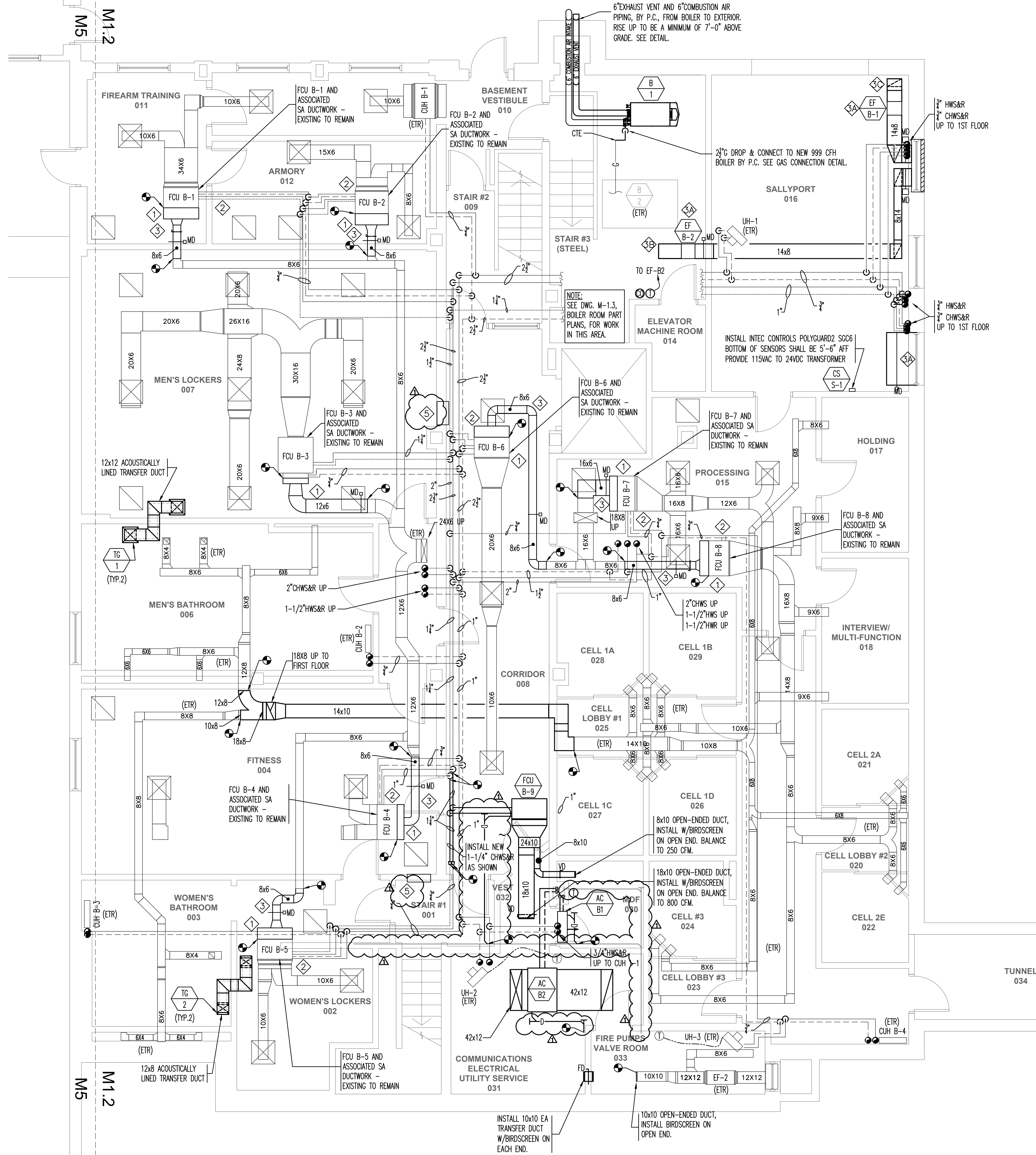
SECOND FLOOR PLAN
SCALE: 1/4"=1'-0"

- KEY NOTES:**
- ◇ PROVIDE 120V FOR ATC CONTROLS FOR DAMPER OPERATORS. COORDINATE EXACT LOCATIONS WITH GC. CIRCUIT TO SPARE 20A/1P CIRCUIT BREAKER IN PANELBOARD RP2.
 - ◇ AT PANEL PP2, REPLACE (1) SPARE 40A/3P & (1) SPARE 30A/2P CIRCUIT BREAKERS WITH (2) 50A/3P LISTED COMPATIBLE CIRCUIT BREAKERS TO SERVE NEW DUCT.
 - ◇ ALTERNATE NO.1: CIRCUIT NEW SECOND FLOOR DDC CONTROLLERS TO SPARE 20A/1P BREAKER IN PANEL PP2.
 - ◇ DISCONNECT AND REMOVE VFD THAT SERVES RTU-1.
 - ◇ DISCONNECT AND MAKE SAFE EXISTING MECHANICAL EQUIPMENT TO BE REMOVED BY GC. DISCONNECT AND REMOVE ASSOCIATED DISCONNECTING MEANS/STARTER, WIRE, CONDUIT AND APPURTENANCES BACK TO SOURCE.
 - ◇ FURNISH AND WIRE DUCT SMOKE DETECTORS, HOUSINGS AND SAMPLING TUBES COMPATIBLE WITH EXISTING EST ADDRESSABLE FACP. DETECTORS AND SAMPLING TUBES TO BE INSTALLED BY GC. PROVIDE RTS/LEDs AND LOCATE AS DIRECTED BY NFD. PROVIDE ALL WIRING, DEVICES, PROGRAMMING AND TESTING AS REQUIRED TO SHUT DOWN ASSOCIATED RTU UPON DUCT SMOKE DETECTOR ALARM.
 - ◇ DAMPER OPERATOR, PROVIDED AND WIRED BY GC.
- NOTES:**
1. REFER TO DRAWING E-1 FOR LEGEND AND GENERAL NOTES.
 2. NEW CIRCUIT BREAKERS SHALL BE LISTED COMPATIBLE WITH EXISTING GE A SERIES PANELBOARD.



ANGLE ENGINEERING INCORPORATED
32 Prince Street
Danvers, MA 01923
Tel. (978) 777-7650

REVISION DATES	POLICE HEADQUARTERS HVAC IMPROVEMENTS NEWTON POLICE DEPARTMENT 1321 WASHINGTON ST, NEWTON, MA 02465	STAMP
1/20/22 ADDENDUM NO. 1		
DATE: 01/05/2022	ELECTRICAL SECOND FLOOR PLAN	DRAWING NUMBER E-4
SCALE: AS SHOWN		
DRAWN BY: CWN		
CHECKED BY: GPN		
PROJECT NO: 21025.00	c.a. crowley. ENGINEERING, INC. 645 County Street, Suite 6 Taunton, MA 02780 www.crowleyeng.com tel. (508) 884-5094 fax. (508) 884-5099	



- GENERAL NOTES:**
- CONTRACTOR SHALL VERIFY THE EXACT LOCATIONS OF ALL EQUIPMENT, DUCTWORK, PIPING AND ASSOCIATED ACCESSORIES WITH EXISTING CONDITIONS IN THE FIELD. DRAWINGS ARE DIAGRAMMATIC AND INDICATE APPROXIMATE LOCATIONS OF THE APPARATUS. ANY DISCREPANCIES IN THE FIELD SHALL BE BROUGHT TO THE ATTENTION OF THE ENGINEER FOR CLARIFICATION.
 - ALL ELECTRICAL WORK RELATED TO THE CONNECTION OR DISCONNECTIONS OF EQUIPMENT TO OR FROM THE BUILDING'S ELECTRICAL SYSTEM SHALL BE DONE BY A LICENSED ELECTRICIAN. THE ELECTRICIAN SHALL MAKE SAFE ALL EQUIPMENT TO BE DEMOED. REFER TO ELECTRICAL PLANS FOR MORE INFORMATION AND EXTENT OF WORK.
 - ALL MECHANICAL EQUIPMENT FEED COMPONENT SHORT CIRCUIT CURRENT RATINGS (SCCR) SHALL MEET OR EXCEED THE MAXIMUM AIC RATING OF THE ELECTRICAL PANEL FROM WHICH IT IS SERVED.
 - MAINTAIN SERVICE CLEARANCES IN FRONT OF AND ABOVE ELECTRICAL EQUIPMENT. NO PIPING OR DUCTWORK SHALL BE ROUTED ABOVE ELECTRICAL ROOMS OR EQUIPMENT.
 - THE EXISTING EQUIPMENT, PIPING, DUCTWORK, CONTROLS, AND OTHER ACCESSORIES SHALL BE REMOVED COMPLETELY UNLESS OTHERWISE NOTED. THIS SHALL INCLUDE ALL BASES, HANGERS, SUPPORTS, ANCHORS, ETC. ALL DEMOLISHED ITEMS SHALL BE DISPOSED OF IN A PROPER AND LEGAL MANNER. ALL WALL, CEILING, FLOOR, AND ROOF OPENINGS ASSOCIATED WITH THE REMOVED APPARATUS SHALL BE PROPERLY IN FILLED, CAPPED, AND/OR PATCHED TO MATCH EXISTING.
 - THE CONTRACTOR SHALL REMOVE THE ASSOCIATED SENSORS, THERMOSTATS, ACTUATORS, METERS, VALVES OR DAMPERS, TIMERS, AND SWITCHES. REMOVE ALL CONTROL WIRING AND MAKE SAFE. REMOVE COMPRESSED AIR PIPING BACK TO THE NEAREST BRANCH OR MAIN. CUT AND CAP THE COMPRESSED AIR PIPING ENSURING THAT IT IS SEALED AIR TIGHT.

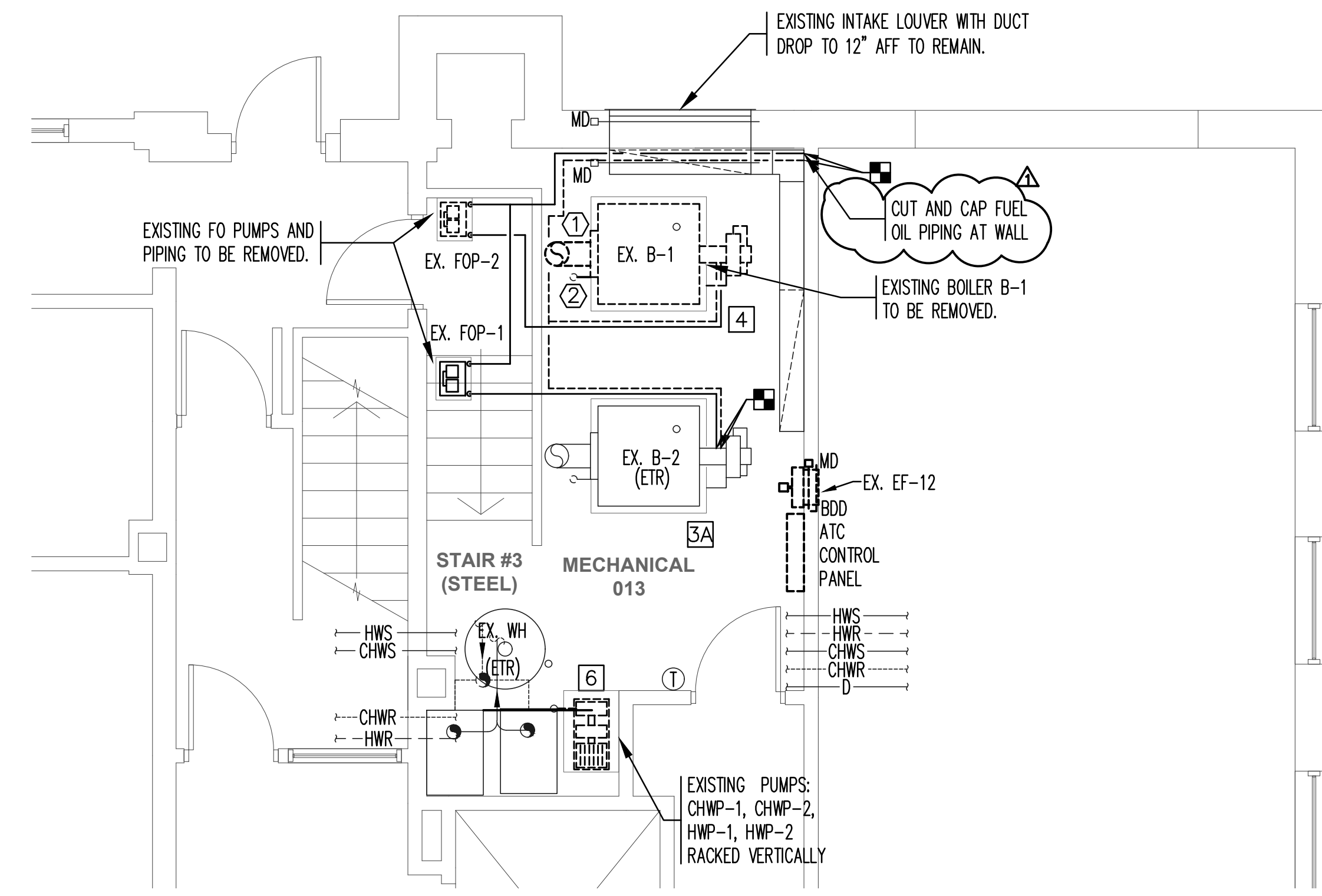
- KEY NOTES:**
- MOUNT A NEW RETURN AIR PLENUM TO THE RETURN AIR COLLAR OF THIS FAN COIL. CONNECT THE EXISTING OUTDOOR AIR DUCTWORK TO THE NEW RETURN AIR PLENUM. REPLACE THE EXISTING BALANCING DAMPERS WITH NEW, AND INSTALL A MODULATING OPPOSABLE BLADE DAMPER AS SHOWN IN THE DETAIL ON SHEET M8.1.
 - REPLACE THE EXISTING THREE-WAY CONTROL VALVE WITH A NEW TWO WAY CONTROL VALVE. CUT BACK OR REMOVE THE PIPING ATTACHED TO THE THIRD LEG AND PERMANENTLY CAP. VALVE ACTUATOR SHALL BE FULLY MODULATING AND COMPLY THE REQUIREMENTS OF THE SPECIFICATION.
 - BALANCE THE OUTSIDE AIRFLOW AS SHOWN ON THE OUTSIDE AIR (VENTILATION AIR) FLOW DIAGRAM ON M-6.3. BALANCE THE HEATING HOT WATER AND CHILLED WATER FLOWS THROUGH THE COILS. FLOW REQUIREMENTS FOR HOT WATER ARE SHOWN ON THE HW RISER DIAGRAM ON DWG M-6.1. FLOW REQUIREMENTS FOR CHILLED WATER ARE SHOWN ON THE CHW DIAGRAM ON DWG. 6.2.
 - REPLACE THE EXISTING T-STAT THAT CONTROLS THIS FAN COIL WITH A NEW T-STAT, HUMIDITY, CARBON DIOXIDE MONITOR. INSTALL AN OCCUPANCY IN A CORNER AT THE CEILING LEVEL. WIRE BOTH BACK TO THE NEW FCU OR NEARBY CONTROLLER. PATCH THE WALL AND ENSURE THAT THE RATING OF THE WALL IS MAINTAINED.
 - COORDINATED LOCATION OF NEW DDC CONTROLLER
 - INSTALL NEW EXHAUST DUCTWORK AND CONNECT TO NEW EXHAUST FAN EF B-1. DUCT THE DISCHARGE SIDE OF THE FAN OVER AND DOWN TO THE EXISTING LOUVER IN THE UPPER HALF OF THE WINDOW. INSTALL A NEW LOW LEAKAGE DAMPER IN THE DUCTWORK AT THE LOUVER. INTERLOCK THE EF WITH INTAKE DAMPER SO THAT THE FAN WILL NOT OPERATE WITH THE EXHAUST AND INLET LOUVER DAMPERS CLOSED. (SEE SEQUENCE OF OPERATIONS) (ADD ALTERNATE #3).
 - INSTALL 1/2" x 1/2" BIRD SCREEN TO THE OPENING. ATTACH A FIXED LOUVER REGISTER TO THE END OF THE EXHAUST DUCTWORK. SEE DETAIL AND SPECIFICATION FOR FURTHER INFORMATION.
 - EXTEND DUCT TIGHT AGAINST THE OUTSIDE WALL AND DROP DOWN TO 36 INCHES A.F.F. ADD SUPPORT FROM THE FLOOR FOR THE DUCTWORK PER THE DETAIL AND SPECIFICATION. INSTALL 1/2" x 1/2" BIRD SCREEN BEHIND THE REGISTER.

1 BASEMENT HVAC NEW WORK PLAN
SCALE: 1/4" = 1'-0"

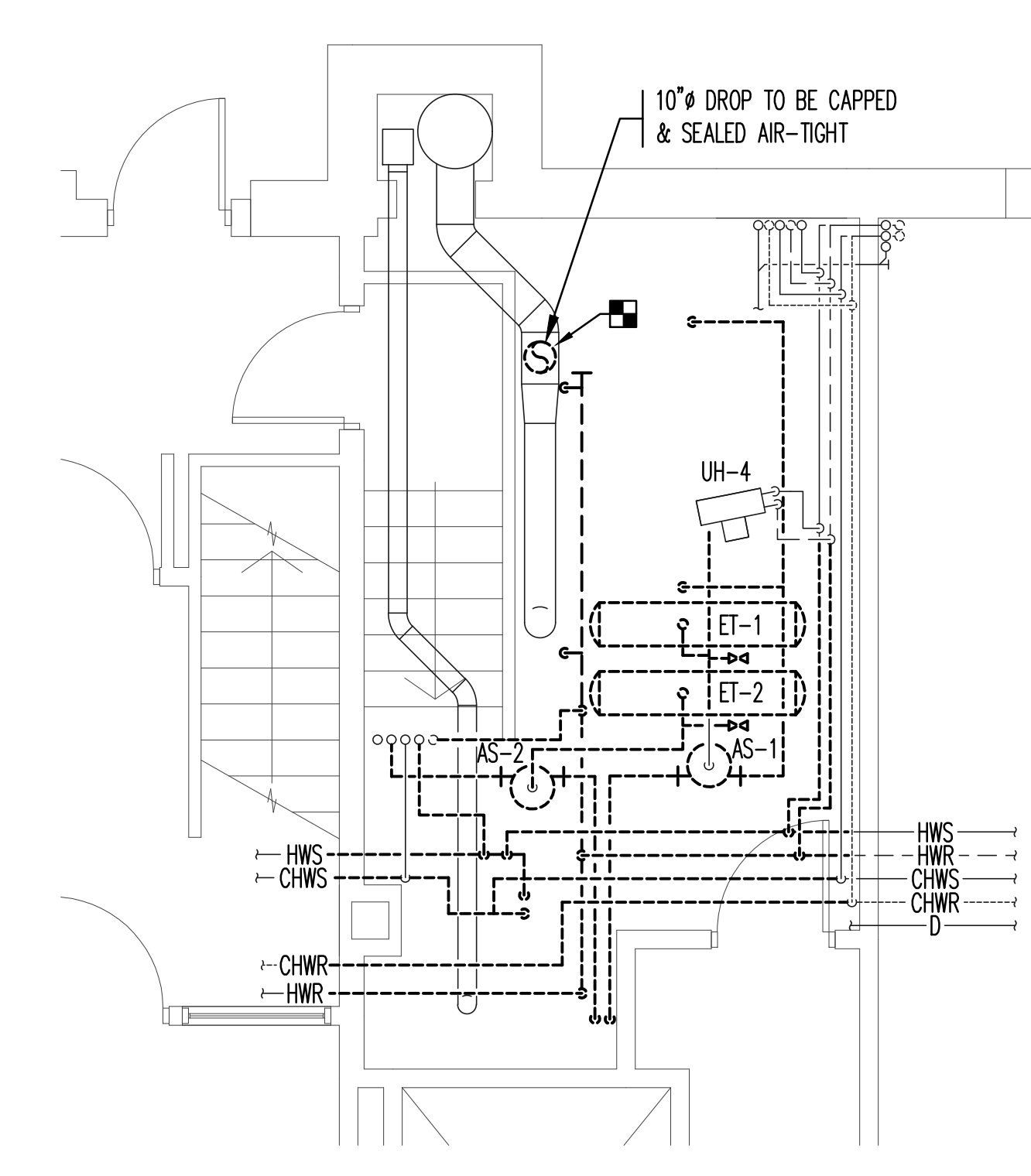
REVISION DATES	POLICE HEADQUARTERS HVAC IMPROVEMENTS NEWTON POLICE DEPARTMENT 1321 WASHINGTON ST, NEWTON, MA 02465 BASEMENT HVAC NEW WORK PLAN	STAMP
ADDENDUM 1 01/20/2022		
DATE: 01/05/2022	c.a. crowley. ENGINEERING, INC. 645 County Street, Suite 6 Taunton, MA 02780 WWW.CROWLEYENG.COM tel. (508) 884-5094 fax. (508) 884-5099	DRAWING NUMBER M-1.2
SCALE: AS NOTED		
DRAWN BY: FV/JC		
CHECKED BY: TSM/MV		
PROJECT NO: 21025.00		

GENERAL NOTES:

- CONTRACTOR SHALL VERIFY THE EXACT LOCATIONS OF ALL EQUIPMENT, DUCTWORK, PIPING AND ASSOCIATED ACCESSORIES WITH EXISTING CONDITIONS IN THE FIELD. DRAWINGS ARE DIAGNOSTIC AND INDICATE APPROXIMATE LOCATIONS OF THE APPARATUS. ANY DISCREPANCIES IN THE FIELD SHALL BE BROUGHT TO THE ATTENTION OF THE ENGINEER FOR CLARIFICATION.
- ALL ELECTRICAL WORK RELATED TO THE CONNECTION OR DISCONNECTIONS OF EQUIPMENT TO OR FROM THE BUILDING'S ELECTRICAL SYSTEM SHALL BE DONE BY A LICENSED ELECTRICIAN. THE ELECTRICIAN SHALL MAKE SAFE ALL EQUIPMENT TO BE DEMO'ED. REFER TO ELECTRICAL PLANS FOR MORE INFORMATION AND EXTENT OF WORK.
- ALL MECHANICAL EQUIPMENT FEED COMPONENT SHORT CIRCUIT CURRENT RATINGS (SCCR) SHALL MEET OR EXCEED THE MAXIMUM AIC RATING OF THE ELECTRICAL PANEL FROM WHICH IT IS SERVED.
- MAINTAIN SERVICE CLEARANCES IN FRONT OF AND ABOVE ELECTRICAL EQUIPMENT. NO PIPING OR DUCTWORK SHALL BE ROUTED ABOVE ELECTRICAL ROOMS OR EQUIPMENT.
- THE EXISTING EQUIPMENT, PIPING, DUCTWORK, CONTROLS, AND OTHER ACCESSORIES SHALL BE REMOVED COMPLETELY UNLESS OTHERWISE NOTED. THIS SHALL INCLUDE ALL BASES, HANGERS, SUPPORTS, ANCHORS, ETC. ALL DEMOLISHED ITEMS SHALL BE DISPOSED OF IN A PROPER AND LEGAL MANNER. ALL WALL, CEILING, FLOOR, AND ROOF OPENINGS ASSOCIATED WITH THE REMOVED APPARATUS SHALL BE PROPERLY IN FILLED, CAPPED, AND/OR PATCHED TO MATCH EXISTING.
- THE CONTRACTOR SHALL REMOVE THE ASSOCIATED SENSORS, THERMOSTATS, ACTUATORS, METERS, VALVES OR DAMPERS, TIMERS, AND SWITCHES. REMOVE ALL CONTROL WIRING AND MAKE SAFE. REMOVE COMPRESSED AIR PIPING BACK TO THE NEAREST BRANCH OR MAIN. CUT AND CAP THE COMPRESSED AIR PIPING ENSURING THAT IT IS SEALED AIR TIGHT.



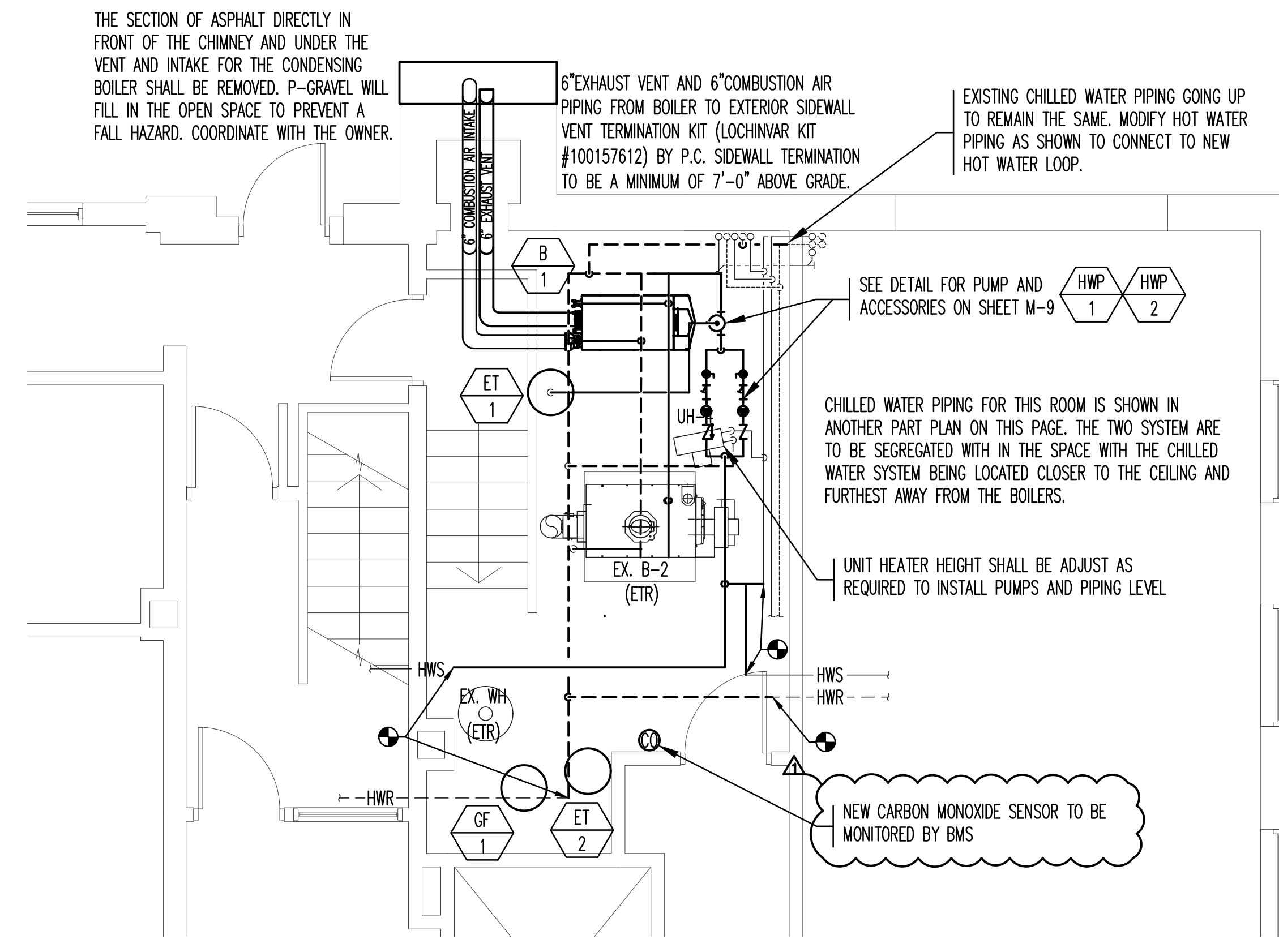
2 BOILER ROOM EQUIPMENT DEMO
SCALE: 1/4" = 1'-0"



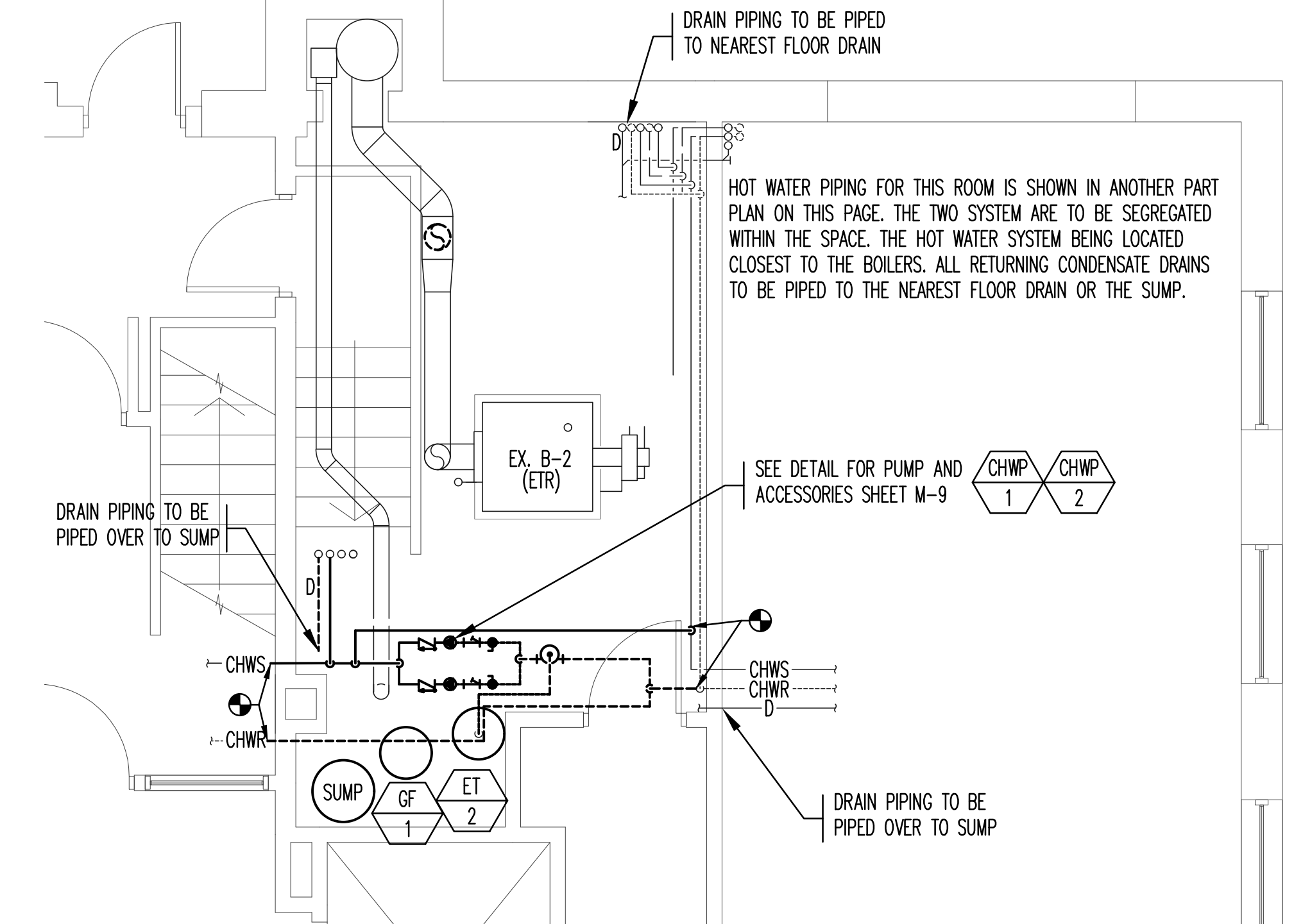
1 BOILER ROOM PIPING DEMO (HOT AND CHILLED)
SCALE: 1/4" = 1'-0"

KEY NOTES:

- MOUNT A NEW RETURN AIR PLENUM TO THE RETURN AIR COLLAR OF THIS FAN COIL. CONNECT THE EXISTING OUTDOOR AIR DUCTWORK TO THE NEW RETURN AIR PLENUM. REPLACE THE EXISTING BALANCING DAMPERS WITH NEW, AND INSTALL A MODULATING OPPOSABLE BLADE DAMPER AS SHOWN IN THE DETAIL ON SHEET M8.1.
- REPLACE THE EXISTING THREE-WAY CONTROL VALVE WITH A NEW TWO WAY CONTROL VALVE. CUT BACK OR REMOVE THE PIPING ATTACHED TO THE THIRD LEG AND PERMANENTLY CAP. VALVE ACTUATOR SHALL BE FULLY MODULATING AND COMPLY THE REQUIREMENTS OF THE SPECIFICATION.
- BALANCE THE OUTSIDE AIRFLOW AS SHOWN ON THE OUTSIDE AIR (VENTILATION AIR) FLOW DIAGRAM ON M-6.3. BALANCE THE HEATING HOT WATER AND CHILLED WATER FLOWS THROUGH THE COILS. FLOW REQUIREMENTS FOR HOT WATER ARE SHOWN ON THE HW RISER DIAGRAM ON DWS M-6.1. FLOW REQUIREMENTS FOR CHILLED WATER ARE SHOWN ON THE CHW DIAGRAM ON DWS. 6.2.
- REPLACE THE EXISTING T-STAT THAT CONTROLS THIS FAN COIL WITH A NEW T-STAT, HUMIDITY, CARBON DIOXIDE MONITOR. INSTALL AN OCCUPANCY IN A CORNER AT THE CEILING LEVEL. WIRE BOTH BACK TO THE NEW FCU OR NEARBY CONTROLLER. PATCH THE WALL AND ENSURE THAT THE RATING OF THE WALL IS MAINTAINED.
- COORDINATED LOCATION OF NEW DDC CONTROLLER

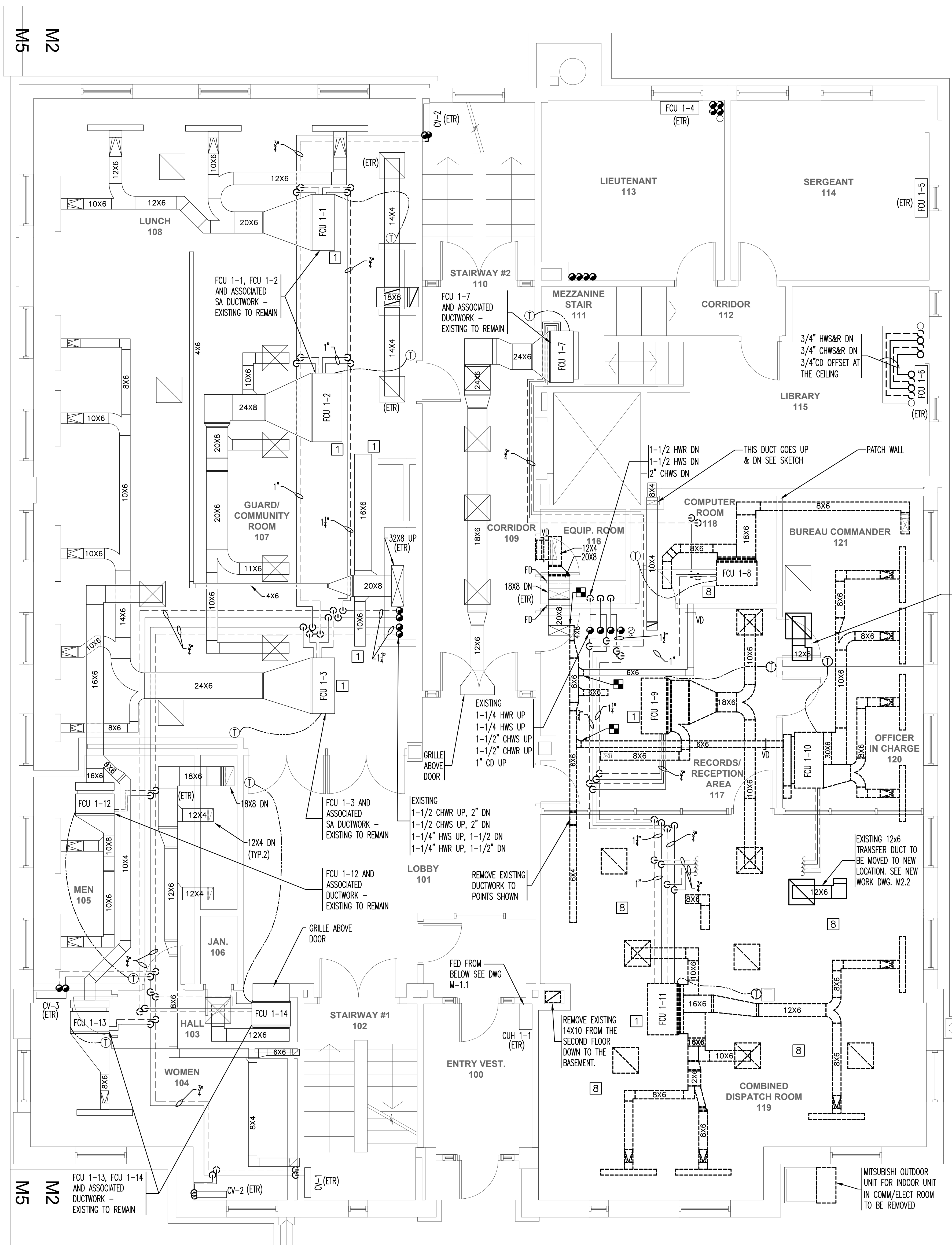


3 BOILER ROOM NEW HEATING HOT SERVICE
SCALE: 1/4" = 1'-0"

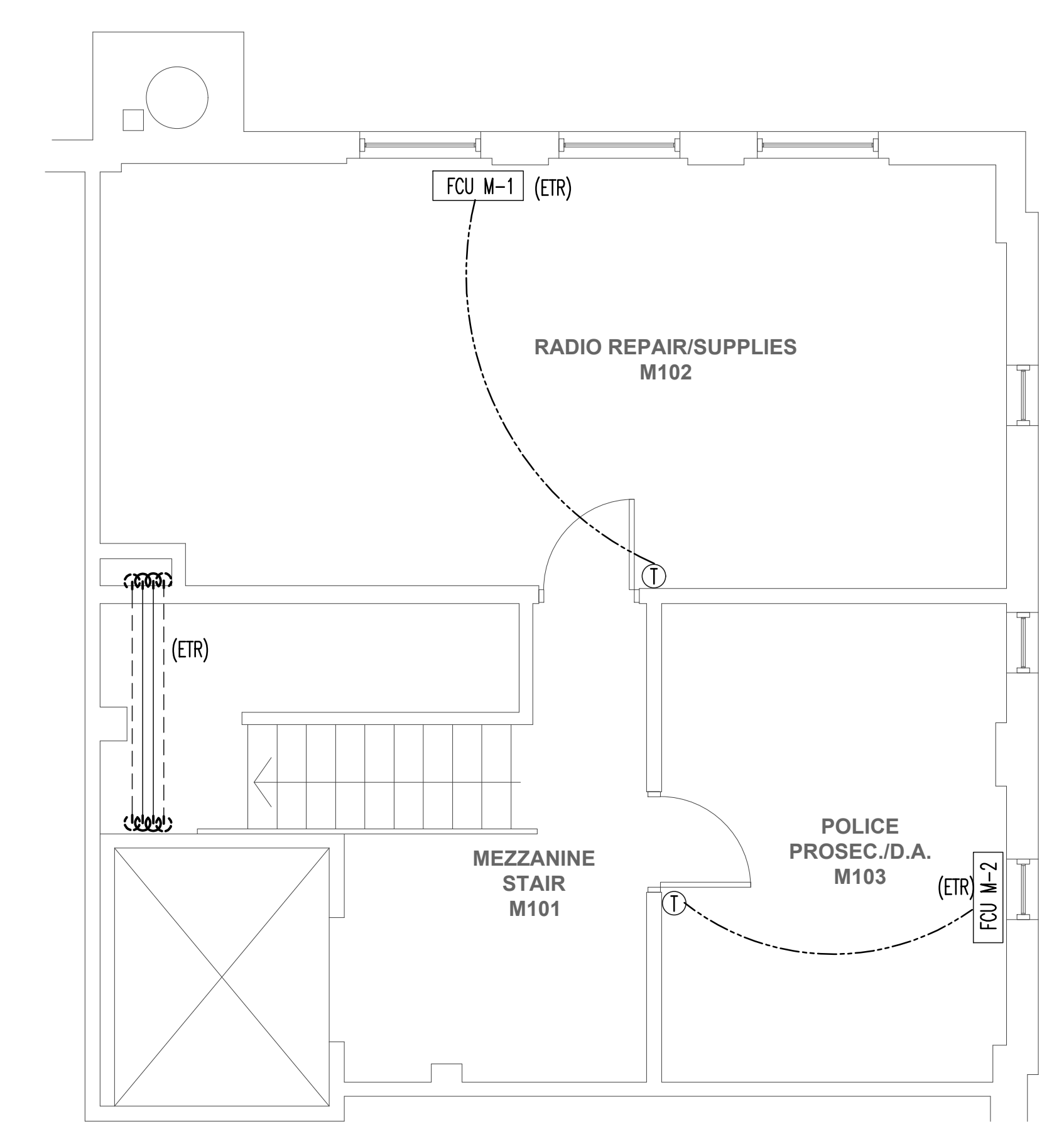


4 BOILER ROOM NEW CHILLED WATER PIPING
SCALE: 1/4" = 1'-0"

REVISION DATES	POLICE HEADQUARTERS HVAC IMPROVEMENTS NEWTON POLICE DEPARTMENT 1321 WASHINGTON ST, NEWTON, MA 02465 BOILER ROOM DEMO & NEW WORK PART PLANS	STAMP
ADDENDUM 1 01/20/2022		
DATE: 01/05/2022	c.a. crowley. ENGINEERING, INC. 645 County Street, Suite 6 Taunton, MA 02780 tel. (508) 884-5094 WWW.CROWLEYENG.COM fax. (508) 884-5099	DRAWING NUMBER
SCALE: AS NOTED		M-1.3
DRAWN BY: FV/JC		
CHECKED BY: TS/MV		
PROJECT NO: 21025.00		



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



2 MEZZANINE HVAC DEMOLITION PLAN
SCALE: 1/4" = 1'-0"

DEMOLITION KEY NOTES:

- 1 REMOVE BIRD SCREEN FROM THE END OF THE OUTSIDE AIR DUCTWORK AND THE RETURN SECTION OF THE FAN COIL UNIT. VERIFY DUCT SIZE, AND RETURN OPENING.
 - 2 REMOVE TRANSFER DUCTWORK AND RESTORE WALL TO ITS RATED RESISTANCE.
 - 3 COORDINATE THE SHUTDOWN AND REMOVAL OF THE EXHAUST SYSTEM FOR PHOTO LAB DARKROOM, AND EVIDENCE LAB WITH THE OWNER. COORDINATE WITH THE ELECTRICAL CONTRACTOR TO MAKE SAFE EF-9 AND EF-11 FOR REMOVAL OFF THE ROOF. DISCONNECT AND DROP THE ASSOCIATED DUCTWORK FOR EF-9 AND EF-11, AND ASSOCIATED DUCT SUPPORTS. PERMANENTLY CAP THE OPENING IN THE ROOF PER THE DETAIL INCLUDED WITH THESE DOCUMENTS, AND THE SPECIFICATION.
 - 4 COORDINATE SHUTDOWN OF THE HOT WATER SYSTEMS WITH THE OWNER. CUT BACK THE PIPING THAT WAS SERVING THE EXISTING ROOFTOP UNIT. REMOVAL SUPPLY AND RETURN PIPING FOR THE RTU BETWEEN THE RISER AND THE RTU AS SHOWN ON THE PLANS.
 - 5 COORDINATE SHUTDOWN OF THE CHILLED SYSTEMS WITH THE OWNER. CUT BACK THE PIPING THAT WAS SERVING THE EXISTING ROOFTOP UNIT. REMOVAL SUPPLY AND RETURN PIPING FOR THE RTU BETWEEN THE RISER AND THE RTU AS SHOWN ON THE PLANS.
 - 6 DISCONNECT ALL THE EXHAUST DUCTWORK CONNECTING TO THE EXHAUST FANS ON THE ROOF. CUT THE DUCTWORK BACK ENOUGH TO ALLOW FOR A TRANSITION ONTO THE SECOND FLOOR TO BE COMBINED TO TIE INTO THE EXHAUST AIR OPENING ON THE UNDERSIDE OF THE NEW DOAS.
 - 7 RECLAIM THE REFRIGERANT FROM ACCU-1 OUTDOOR UNIT (SEE SHEET M-2.1 FOR LOCATION). REFRIGERANT SHALL BE DISPOSED OF IN AN EPA APPROVED METHOD. REMOVE ALL REFRIGERANT PIPING, AND THE ASSOCIATED INDOOR UNIT. COORDINATE WITH THE ELECTRICIAN TO DISCONNECT THE UNITS FROM BUILDING POWER AND MAKE SAFE.
 - 8 COORDINATE WITH THE ELECTRICIAN TO DISCONNECT THE UNITS FROM BUILDING POWER AND MAKE SAFE. RECLAIM THE REFRIGERANT FROM ACCU-1 & ACCU-2 OUTDOOR UNIT HANGING OFF THE SIDE OF THE BUILDING. REFRIGERANT SHALL BE DISPOSED OF IN AN EPA APPROVED METHOD. REMOVE ALL REFRIGERANT PIPING, AND THE ASSOCIATED INDOOR UNITS FROM THE COMBINED DISPATCH CENTER. COORDINATE WITH OWNER AND STAFF ON WORK SCHEDULES AND AREAS. THIS SPACE MUST STAY IN OPERATION WHILE WORK IS BEING PERFORMED.
- GENERAL NOTE FOR SHEET: THIS WORK WILL INCLUDE REMOVING AND REPLACEMENT OF THE EXISTING CONTROL VALVES FOR THE HOT AND CHILLED WATER COILS OF THE FAN COILS THAT ARE GOING TO BE REPLACED UNDER THIS ADD ALTERNATE. THE EXISTING VALVES ARE SHOWN AS BEING PNEUMATIC THREE-WAY VALVES. THE VALVES SHALL BE REMOVED AND THE PNEUMATIC TUBE CUT BACK AT THE MAIN AND PERMANENTLY CAPPED.
- 1B (ADD ALTERNATE #1) WHEN ALL OF THE PNEUMATIC CONTROLS HAVE BEEN REMOVED FROM THE BUILDING AND THERE ARE NO OTHER USED OF COMPRESSED AIR THEN HAVE THE ELECTRICIAN MAKE THE COMPRESSOR SAFE FOR REMOVAL, AND TURN OVER TO THE OWNER.

GENERAL NOTES:

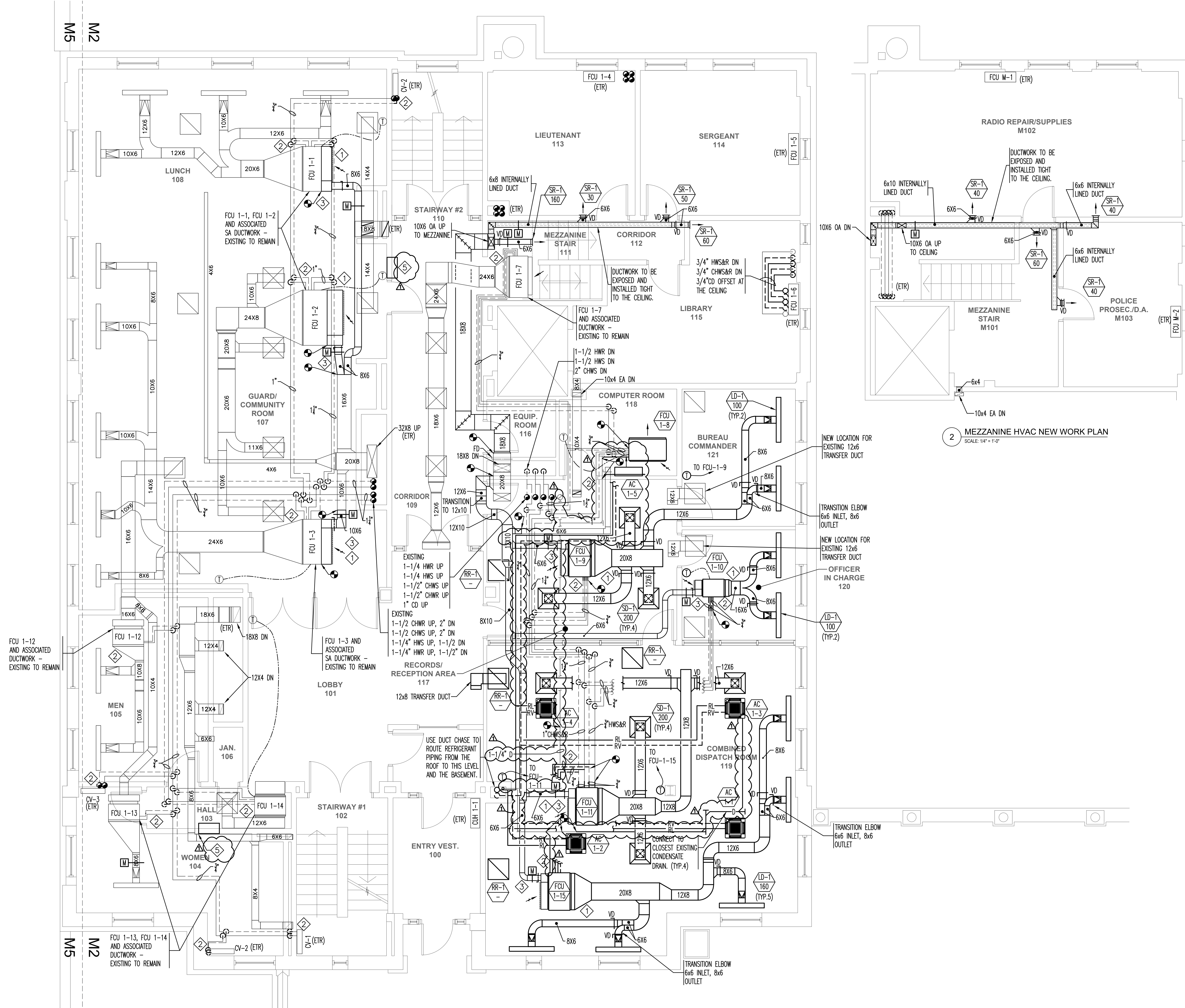
1. CONTRACTOR SHALL VERIFY THE EXACT LOCATIONS OF ALL EQUIPMENT, DUCTWORK, PIPING AND ASSOCIATED ACCESSORIES WITH EXISTING CONDITIONS IN THE FIELD. DRAWINGS ARE DIAGRAMMATIC AND INDICATE APPROXIMATE LOCATIONS OF THE APPARATUS. ANY DISCREPANCIES IN THE FIELD SHALL BE BROUGHT TO THE ATTENTION OF THE ENGINEER FOR CLARIFICATION.
2. ALL ELECTRICAL WORK RELATED TO THE CONNECTION OR DISCONNECTIONS OF EQUIPMENT TO OR FROM THE BUILDING'S ELECTRICAL SYSTEM SHALL BE DONE BY A LICENSED ELECTRICIAN. THE ELECTRICIAN SHALL MAKE SAFE ALL EQUIPMENT TO BE DEMOED. REFER TO ELECTRICAL PLANS FOR MORE INFORMATION AND EXTENT OF WORK.
3. ALL MECHANICAL EQUIPMENT FEED COMPONENT SHORT CIRCUIT CURRENT RATINGS (SCCR) SHALL MEET OR EXCEED THE MAXIMUM AIC RATING OF THE ELECTRICAL PANEL FROM WHICH IT IS SERVED.
4. MAINTAIN SERVICE CLEARANCES IN FRONT OF AND ABOVE ELECTRICAL EQUIPMENT. NO PIPING OR DUCTWORK SHALL BE ROUTED ABOVE ELECTRICAL ROOMS OR EQUIPMENT.
5. THE EXISTING EQUIPMENT, PIPING, DUCTWORK, CONTROLS, AND OTHER ACCESSORIES SHALL BE REMOVED COMPLETELY UNLESS OTHERWISE NOTED. THIS SHALL INCLUDE ALL BASES, HANGERS, SUPPORTS, ANCHORS, ETC. ALL DEMOLISHED ITEMS SHALL BE DISPOSED OF IN A PROPER AND LEGAL MATTER. ALL WALL, CEILING, FLOOR, AND ROOF OPENINGS ASSOCIATED WITH THE REMOVED APPARATUS SHALL BE PROPERLY FILLED, CAPPED, AND/OR PATCHED TO MATCH EXISTING.
6. THE CONTRACTOR SHALL REMOVE THE ASSOCIATED SENSORS, THERMOSTATS, ACTUATORS, METERS, VALVES OR DAMPERS, TIMERS, AND SWITCHES. REMOVE ALL CONTROL WIRING AND MAKE SAFE. REMOVE COMPRESSED AIR PIPING BACK TO THE NEAREST BRANCH OR MAIN. CUT AND CAP THE COMPRESSED AIR PIPING ENSURING THAT IT IS SEALED AIR TIGHT.

DEMOLITION NOTES:

1. THIS PROJECT INVOLVES CONSTRUCTION INSIDE AN EXISTING STRUCTURE. INFORMATION CONTAINED ON THIS DRAWING WAS OBTAIN FROM THE BEST AVAILABLE INFORMATION AND IS NOT INTENDED TO LIMIT THE SCOPE OF WORK.
2. CONTRACTOR SHALL VISIT THE SITE PRIOR TO SUBMITTAL OF BID TO DETERMINE CONDITIONS AFFECTING THE EXECUTION OF THE WORK. AFTER VISITING THE SITE, REQUEST SUCH FURTHER INFORMATION AND/OR CLARIFICATION AS NECESSARY TO UNDERSTAND THE WORK REQUIRED AND TO PROPERLY ESTIMATE THE COST. CONTRACTORS, BY SUBMITTING A BID, ARE DEEMED TO BE COMPLETELY FAMILIAR WITH THE EXISTING CONDITION OF THE BUILDING AS IT INFLUENCES THE WORK DESCRIBED.
3. DEMOLITION WORK SHALL COMPLY WITH OSHA AND ALL APPLICABLE STATE AND LOCAL CODES.
4. REMOVE AND LEGALLY DISPOSE OF ITEMS ASSOCIATED WITH THIS PROJECT AREA, UNLESS OTHERWISE NOTED. CONSTRUCTION MANAGER SHALL CLARIFY WITH OWNER ALL ITEMS THAT SHALL REMAIN THE PROPERTY OF THE OWNER PRIOR TO DISPOSAL. ITEMS TO BE SALVAGED MAY BE REMOVED FROM THE SITE AS WORK PROGRESSES. SALVAGED ITEMS MUST BE TRANSPORTED FROM THE SITE AS THEY ARE REMOVED.
5. PROTECTION: ENSURE THE SAFE PASSAGE OF PERSONS IN AND AROUND THE BUILDING DURING DEMOLITION. PREVENT INJURY TO PERSONS AND DAMAGE TO PROPERTY. PROVIDE ADEQUATE SHORING AND BRACING TO PREVENT COLLAPSE. IMMEDIATELY REPAIR DAMAGED PROPERTY TO THE CONDITION BEFORE BEING DAMAGED. TAKE EFFECTIVE MEASURES TO PREVENT WINDBLOWN DUST. ANY PROPERTY OR ITEMS DAMAGED DURING THE PROGRESS OF THE DEMOLITION WORK, INCLUDING ANY DAMAGE CAUSED BY THE TRANSPORTING OF MATERIALS OR EQUIPMENT, SHALL BE REPAIRED AND/OR REPLACED.
6. UTILITIES: MAINTAIN UTILITIES EXCEPT THOSE REQUIRING REMOVAL OR RELOCATION. KEEP UTILITIES IN SER VICE AND PROTECT FROM DAMAGE. DO NOT INTERRUPT UTILITIES SERVING USED AS OCCUPIED AREAS WITHOUT FIRST OBTAINING PERMISSION FROM THE UTILITY COMPANY AND THE OWNER. BE SURE THAT LOCATIONS OF UTILITIES IN VICINITY ARE KNOWN AND IDENTIFIED AS "IN SERVICE" OR "SHUTDOWN". PROVIDE TEMPORARY SERVICES AS REQUIRED.
7. DISCONNECT, DEMOLISH, AND REMOVE MECHANICAL SYSTEMS, EQUIPMENT, AND COMPONENTS INDICATED TO BE REMOVED.
 - a. PIPING TO BE REMOVED: REMOVE ALL REFRIGERANT AND CONDENSATE DRAIN PIPING ASSOCIATED WITH SPLIT SYSTEMS TO BE REMOVED. COORDINATE ANY SHUTDOWNS REQUIRED WITH OWNER PRIOR TO COMMENCING.
 - b. PIPING TO BE ABANDONED IN PLACE SHALL BE DRAINED & CAPPED WITH SAME OR COMPATIBLE PIPING MATERIAL. ONLY PIPING WHICH IS ASSOCIATED WITH SYSTEMS TO REMAIN ACTIVE SHALL BE MAINTAINED. REFER TO THE PLANS AND SPECIFICATIONS FOR PATCHING WALLS.
 - c. DUCTS TO BE REMOVED: REMOVE PORTION OF DUCTS INDICATED TO BE REMOVED AND CAP REMAINING DUCTS WITH SAME OR COMPATIBLE DUCTWORK MATERIAL AS REQUIRED. REFER TO THE PLANS AND SPECIFICATIONS FOR PATCHING WALLS.
 - d. DUCTS TO BE ABANDONED IN PLACE: CAP DUCTS WITH SAME OR COMPATIBLE DUCTWORK MATERIAL.
 - e. EQUIPMENT TO BE REMOVED: DISCONNECT AND CAP SER VICES AND REMOVE EQUIPMENT. EQUIPMENT SHALL BE REMOVED FROM PREMISES AND LEGALLY DISPOSED OF.
 - f. EQUIPMENT TO BE REMOVED AND REINSTALLED: DISCONNECT AND CAP SERVICES AND REMOVE, CLEAN, AND STORE EQUIPMENT; WHEN APPROPRIATE, REINSTALL, RECONNECT, AND MAKE EQUIPMENT OPERATIONAL.
 - g. EQUIPMENT TO BE REMOVED AND SALVAGED: DISCONNECT AND CAP SER VICES AND REMOVE EQUIPMENT AND DELIVER TO OWNER. COORDINATE WITH OWNER PRIOR TO DEMOLITION WORK COMMENCES REGARDING ANY ITEMS TO BE TURNED OVER TO THE OWNER.
8. IF PIPE, INSULATION, OR EQUIPMENT TO REMAIN IS DAMAGED IN APPEARANCE OR IS UNSERVICEABLE, REMOVE DAMAGED OR UNSERVICEABLE PORTIONS AND REPLACE WITH NEW PRODUCTS OF EQUAL CAPACITY AND QUALITY.

REVISION DATES	STAMP
ADDENDUM 1 01/20/2022	POLICE HEADQUARTERS HVAC IMPROVEMENTS NEWTON POLICE DEPARTMENT 1321 WASHINGTON ST, NEWTON, MA 02465 FIRST FLOOR & MEZZANINE HVAC DEMOLITION PLAN
DATE: 01/05/2022	c.a. crowley. ENGINEERING, INC. 645 County Street, Suite 6 Taunton, MA 02780 tel. (508) 884-5094 WWW.CROWLEYENG.COM fax. (508) 884-5099
SCALE: AS NOTED	
DRAWN BY: FJV/JC	
CHECKED BY: TSM/MV	
PROJECT NO: 21025.00	
	DRAWING NUMBER
	M-2.1

M5
M2



1 FIRST FLOOR HVAC NEW WORK PLAN
SCALE: 1/4" = 1'-0"

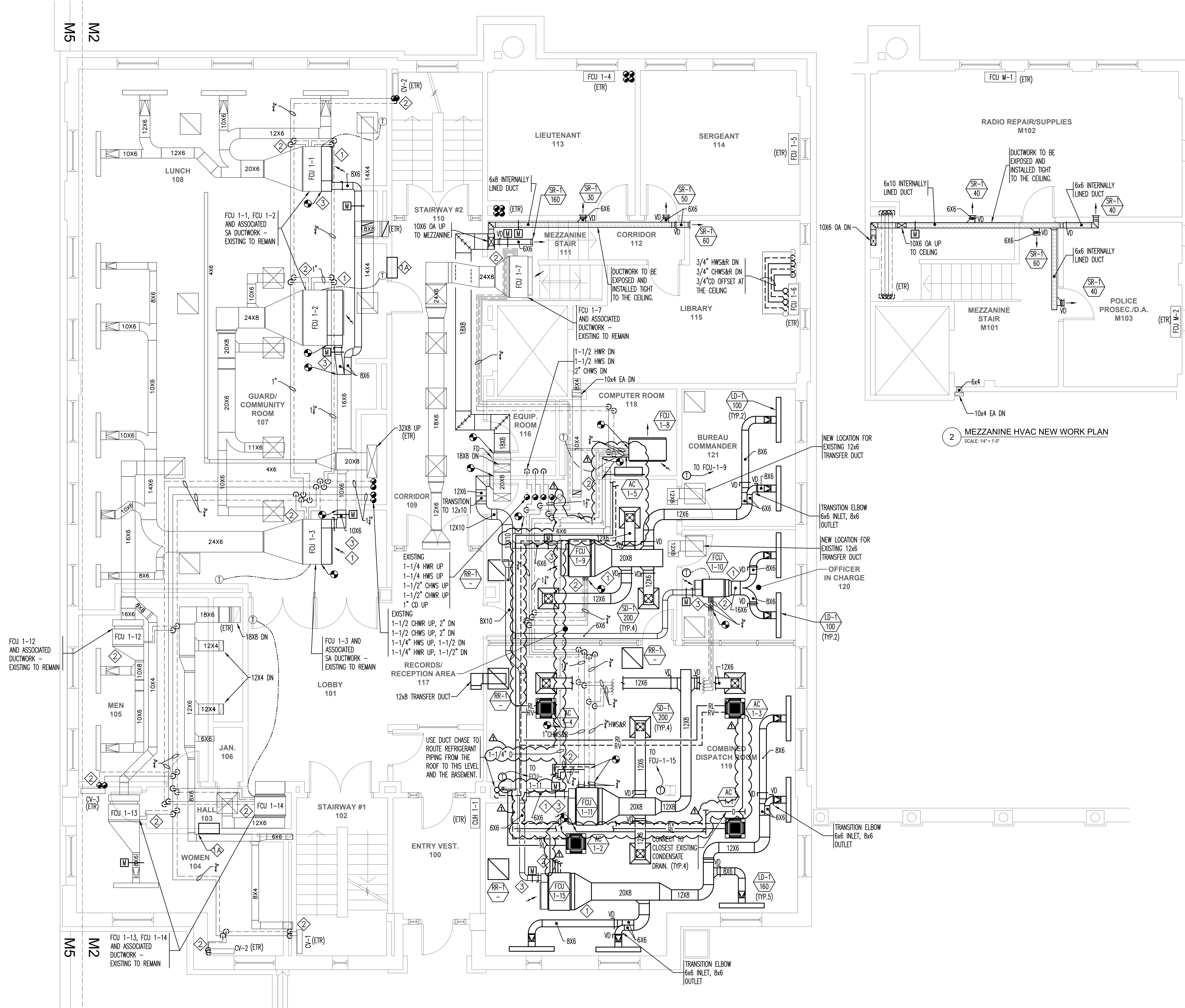
2 MEZZANINE HVAC NEW WORK PLAN
SCALE: 1/4" = 1'-0"

- GENERAL NOTES:**
- CONTRACTOR SHALL VERIFY THE EXACT LOCATIONS OF ALL EQUIPMENT, DUCTWORK, PIPING AND ASSOCIATED ACCESSORIES WITH EXISTING CONDITIONS IN THE FIELD. DRAWINGS ARE DIAGRAMMATIC AND INDICATE APPROXIMATE LOCATIONS OF THE APPARATUS. ANY DISCREPANCIES IN THE FIELD SHALL BE BROUGHT TO THE ATTENTION OF THE ENGINEER FOR CLARIFICATION.
 - ALL ELECTRICAL WORK RELATED TO THE CONNECTION OR DISCONNECTIONS OF EQUIPMENT TO OR FROM THE BUILDING'S ELECTRICAL SYSTEM SHALL BE DONE BY A LICENSED ELECTRICIAN. THE ELECTRICIAN SHALL MAKE SURE ALL EQUIPMENT TO BE DEMO'ED. REFER TO ELECTRICAL PLANS FOR MORE INFORMATION AND EXTENT OF WORK.
 - ALL MECHANICAL EQUIPMENT FEED COMPONENT SHORT CIRCUIT CURRENT RATINGS (SCCR) SHALL MEET OR EXCEED THE MAXIMUM AIC RATING OF THE ELECTRICAL PANEL FROM WHICH IT IS SERVED.
 - MAINTAIN SERVICE CLEARANCES IN FRONT OF AND ABOVE ELECTRICAL EQUIPMENT. NO PIPING OR DUCTWORK SHALL BE ROUTED ABOVE ELECTRICAL ROOMS OR EQUIPMENT.
 - THE EXISTING EQUIPMENT, PIPING, DUCTWORK, CONTROLS, AND OTHER ACCESSORIES SHALL BE REMOVED COMPLETELY UNLESS OTHERWISE NOTED. THIS SHALL INCLUDE ALL BASES, HANGERS, SUPPORTS, ANCHORS, ETC. ALL DEMOLISHED ITEMS SHALL BE DISPOSED OF IN A PROPER AND LEGAL MANNER. ALL WALL, CEILING, FLOOR, AND ROOF OPENINGS ASSOCIATED WITH THE REMOVED APPARATUS SHALL BE PROPERLY IN FILLED, CAPPED, AND/OR PATCHED TO MATCH EXISTING.
 - THE CONTRACTOR SHALL REMOVE THE ASSOCIATED SENSORS, THERMOSTATS, ACTUATORS, METERS, VALVES OR DAMPERS, TIMERS, AND SWITCHES. REMOVE ALL CONTROL WIRING AND MAKE SAFE. REMOVE COMPRESSED AIR PIPING BACK TO THE NEAREST BRANCH OR MAIN. CUT AND CAP THE COMPRESSED AIR PIPING ENSURING THAT IT IS SEALED AIR TIGHT.

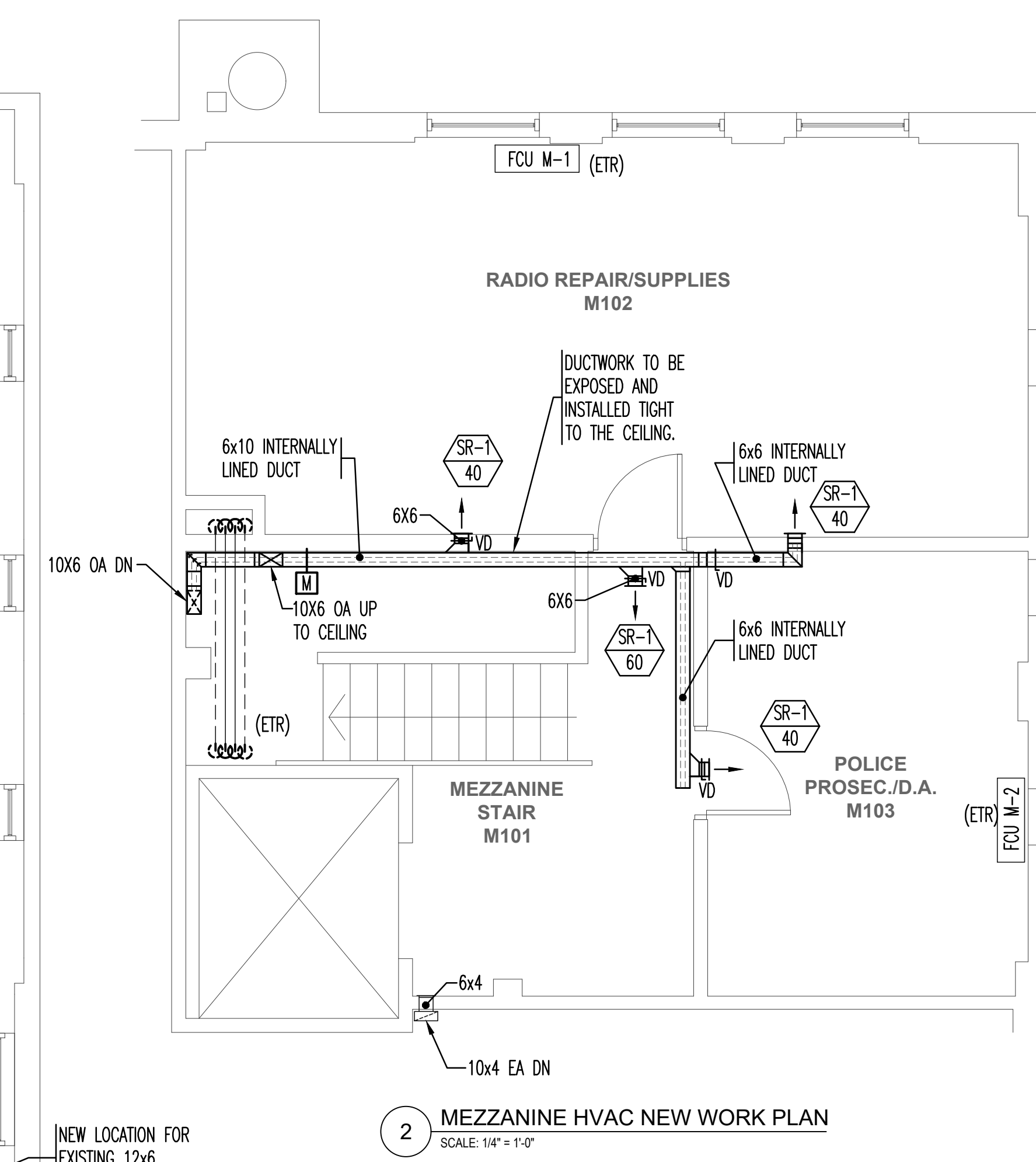
- KEY NOTES:**
- MOUNT A NEW RETURN AIR PLENUM TO THE RETURN AIR COLLAR OF THIS FAN COIL. CONNECT THE EXISTING OUTDOOR AIR DUCTWORK TO THE NEW RETURN AIR PLENUM. REPLACE THE EXISTING BALANCING DAMPERS WITH NEW, AND INSTALL A MODULATING OPPOSABLE BLADE DAMPER AS SHOWN IN THE DETAIL ON SHEET M9.X.
 - REPLACE THE EXISTING THREE-WAY CONTROL VALVE WITH A NEW TWO WAY CONTROL VALVE. CUT BACK OR REMOVE THE PIPING ATTACHED TO THE THIRD LEG AND PERMANENTLY CAP. VALVE ACTUATOR SHALL BE FULLY MODULATING AND COMPLY THE REQUIREMENTS OF THE SPECIFICATION.
 - BALANCE THE OUTSIDE AIRFLOW AS SHOWN ON THE OUTSIDE AIR (VENTILATION AIR) FLOW DIAGRAM ON M-6.3. BALANCE THE HEATING HOT WATER AND CHILLED WATER FLOWS THROUGH THE COILS. FLOW REQUIREMENTS FOR HOT WATER ARE SHOWN ON THE HW RISER DIAGRAM ON DWG M-6.1. FLOW REQUIREMENTS FOR CHILLED WATER ARE SHOWN ON THE CHW DIAGRAM ON DWG. 6.2.
 - REPLACE THE EXISTING T-STAT THAT CONTROLS THIS FAN COIL WITH A NEW T-STAT, HUMIDITY, CARBON DIOXIDE MONITOR. INSTALL AN OCCUPANCY IN A CORNER AT THE CEILING LEVEL. WIRE BOTH BACK TO THE NEW FCU OR NEARBY CONTROLLER. PATCH THE WALL AND ENSURE THAT THE RATING OF THE WALL IS MAINTAINED.
 - COORDINATED LOCATION OF NEW DDC CONTROLLER

REVISION DATES	POLICE HEADQUARTERS HVAC IMPROVEMENTS NEWTON POLICE DEPARTMENT 1321 WASHINGTON ST, NEWTON, MA 02465 FIRST FLOOR & MEZZANINE HVAC NEW WORK PLAN	STAMP
ADDENDUM 1 01/20/2022		
DATE: 01/05/2022	<p>c.a. crowley. ENGINEERING, INC. 645 County Street, Suite 6 Taunton, MA 02780 WWW.CROWLEYENG.COM tel. (508) 884.5094 fax. (508) 884.5099</p>	DRAWING NUMBER
SCALE: AS NOTED		M-2.2
DRAWN BY: FV/JC		
CHECKED BY: TS/MV		
PROJECT NO: 21025.00		

M5
M2



1 FIRST FLOOR HVAC NEW WORK PLAN
SCALE: 1/4" = 1'-0"

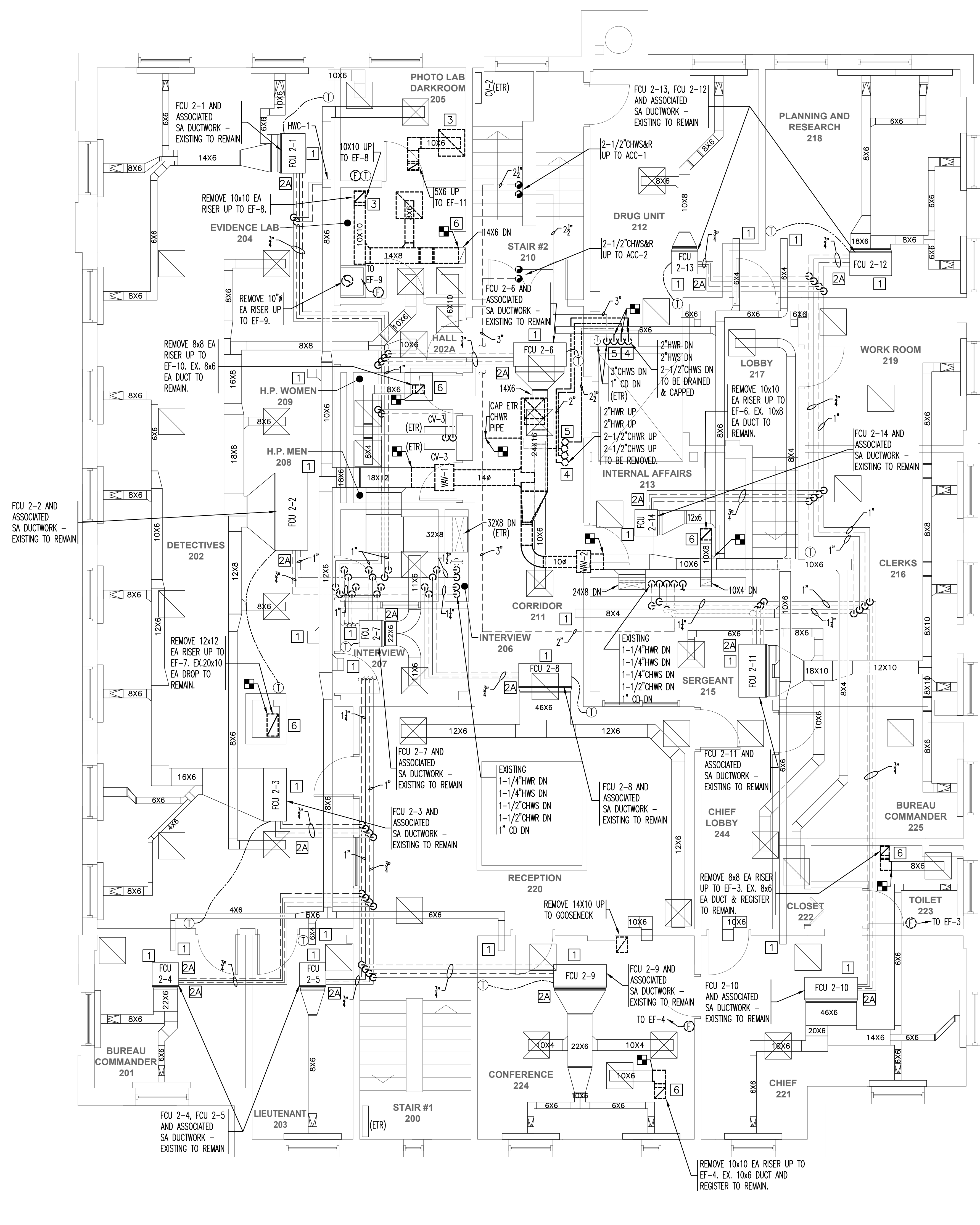


2 MEZZANINE HVAC NEW WORK PLAN
SCALE: 1/4" = 1'-0"

- GENERAL NOTES:**
- CONTRACTOR SHALL VERIFY THE EXACT LOCATIONS OF ALL EQUIPMENT, DUCTWORK, PIPING AND ASSOCIATED ACCESSORIES WITH EXISTING CONDITIONS IN THE FIELD. DRAWINGS ARE DIAGRAMMATIC AND INDICATE APPROXIMATE LOCATIONS OF THE APPARATUS. ANY DISCREPANCIES IN THE FIELD SHALL BE BROUGHT TO THE ATTENTION OF THE ENGINEER FOR CLARIFICATION.
 - ALL ELECTRICAL WORK RELATED TO THE CONNECTION OR DISCONNECTIONS OF EQUIPMENT TO OR FROM THE BUILDING'S ELECTRICAL SYSTEM SHALL BE DONE BY A LICENSED ELECTRICIAN. THE ELECTRICIAN SHALL MAKE SURE ALL EQUIPMENT TO BE DEMO'ED. REFER TO ELECTRICAL PLANS FOR MORE INFORMATION AND EXTENT OF WORK.
 - ALL MECHANICAL EQUIPMENT FEED COMPONENT SHORT CIRCUIT CURRENT RATINGS (SCCR) SHALL MEET OR EXCEED THE MAXIMUM AIC RATING OF THE ELECTRICAL PANEL FROM WHICH IT IS SERVED.
 - MAINTAIN SERVICE CLEARANCES IN FRONT OF AND ABOVE ELECTRICAL EQUIPMENT. NO PIPING OR DUCTWORK SHALL BE ROUTED ABOVE ELECTRICAL ROOMS OR EQUIPMENT.
 - THE EXISTING EQUIPMENT, PIPING, DUCTWORK, CONTROLS, AND OTHER ACCESSORIES SHALL BE REMOVED COMPLETELY UNLESS OTHERWISE NOTED. THIS SHALL INCLUDE ALL BASES, HANGERS, SUPPORTS, ANCHORS, ETC. ALL DEMOLISHED ITEMS SHALL BE DISPOSED OF IN A PROPER AND LEGAL MANNER. ALL WALL, CEILING, FLOOR, AND ROOF OPENINGS ASSOCIATED WITH THE REMOVED APPARATUS SHALL BE PROPERLY IN FILLED, CAPPED, AND/OR PATCHED TO MATCH EXISTING.
 - THE CONTRACTOR SHALL REMOVE THE ASSOCIATED SENSORS, THERMOSTATS, ACTUATORS, METERS, VALVES OR DAMPERS, TIMERS, AND SWITCHES. REMOVE ALL CONTROL WIRING AND MAKE SAFE. REMOVE COMPRESSED AIR PIPING BACK TO THE NEAREST BRANCH OR MAIN. CUT AND CAP THE COMPRESSED AIR PIPING ENSURING THAT IT IS SEALED AIR TIGHT.

- KEY NOTES:**
- MOUNT A NEW RETURN AIR PLENUM TO THE RETURN AIR COLLAR OF THIS FAN COIL. CONNECT THE EXISTING OUTDOOR AIR DUCTWORK TO THE NEW RETURN AIR PLENUM. REPLACE THE EXISTING BALANCING DAMPERS WITH NEW, AND INSTALL A MODULATING OPPOSABLE BLADE DAMPER AS SHOWN IN THE DETAIL ON SHEET M9.X.
 - REPLACE THE EXISTING THREE-WAY CONTROL VALVE WITH A NEW TWO WAY CONTROL VALVE. CUT BACK OR REMOVE THE PIPING ATTACHED TO THE THIRD LEG AND PERMANENTLY CAP. VALVE ACTUATOR SHALL BE FULLY MODULATING AND COMPLY THE REQUIREMENTS OF THE SPECIFICATION.
 - BALANCE THE OUTSIDE AIRFLOW AS SHOWN ON THE OUTSIDE AIR (VENTILATION AIR) FLOW DIAGRAM ON M-6.3. BALANCE THE HEATING HOT WATER AND CHILLED WATER FLOWS THROUGH THE COILS. FLOW REQUIREMENTS FOR HOT WATER ARE SHOWN ON THE HW RISER DIAGRAM ON DWG M-6.1. FLOW REQUIREMENTS FOR CHILLED WATER ARE SHOWN ON THE CHW DIAGRAM ON DWG. 6.2.
 - REPLACE THE EXISTING T-STAT THAT CONTROLS THIS FAN COIL WITH A NEW T-STAT, HUMIDITY, CARBON DIOXIDE MONITOR. INSTALL AN OCCUPANCY IN A CORNER AT THE CEILING LEVEL. WIRE BOTH BACK TO THE NEW FCU OR NEARBY CONTROLLER. PATCH THE WALL AND ENSURE THAT THE RATING OF THE WALL IS MAINTAINED.
 - COORDINATED LOCATION OF NEW DDC CONTROLLER (ADD ALTERNATE #1)

REVISION DATES	POLICE HEADQUARTERS HVAC IMPROVEMENTS NEWTON POLICE DEPARTMENT 1321 WASHINGTON ST., NEWTON, MA 02465 FIRST FLOOR & MEZZANINE HVAC NEW WORK PLAN	STAMP
ADDENDUM 1 01/20/2022		
DATE: 01/05/2022	<p>c.a. crowley. ENGINEERING, INC. 645 County Street, Suite 6 Taunton, MA 02780 WWW.CROWLEYENG.COM</p>	DRAWING NUMBER
SCALE: AS NOTED		M-2.2
DRAWN BY: FV/JC		
CHECKED BY: TS/MV		
PROJECT NO: 21025.00	tel.: (508) 884.5094	fax.: (508) 884.5099



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

GENERAL NOTES:

- CONTRACTOR SHALL VERIFY THE EXACT LOCATIONS OF ALL EQUIPMENT, DUCTWORK, PIPING AND ASSOCIATED ACCESSORIES WITH EXISTING CONDITIONS IN THE FIELD. DRAWINGS ARE DIAGRAMMATIC AND INDICATE APPROXIMATE LOCATIONS OF THE APPARATUS. ANY DISCREPANCIES IN THE FIELD SHALL BE BROUGHT TO THE ATTENTION OF THE ENGINEER FOR CLARIFICATION.
- ALL ELECTRICAL WORK RELATED TO THE CONNECTION OR DISCONNECTIONS OF EQUIPMENT TO OR FROM THE BUILDING'S ELECTRICAL SYSTEM SHALL BE DONE BY A LICENSED ELECTRICIAN. THE ELECTRICIAN SHALL MAKE SAFE ALL EQUIPMENT TO BE DEMOTED. REFER TO ELECTRICAL PLANS FOR MORE INFORMATION AND EXTENT OF WORK.
- ALL MECHANICAL EQUIPMENT FEED COMPONENT SHORT CIRCUIT CURRENT RATINGS (SCCR) SHALL MEET OR EXCEED THE MAXIMUM AIC RATING OF THE ELECTRICAL PANEL FROM WHICH IT IS SERVED.
- MAINTAIN SERVICE CLEARANCES IN FRONT OF AND ABOVE ELECTRICAL EQUIPMENT. NO PIPING OR DUCTWORK SHALL BE ROUTED ABOVE ELECTRICAL ROOMS OR EQUIPMENT.
- THE EXISTING EQUIPMENT, PIPING, DUCTWORK, CONTROLS, AND OTHER ACCESSORIES SHALL BE REMOVED COMPLETELY UNLESS OTHERWISE NOTED. THIS SHALL INCLUDE ALL BASES, HANGERS, SUPPORTS, ANCHORS, ETC. ALL DEMOLISHED ITEMS SHALL BE DISPOSED OF IN A PROPER AND LEGAL MANNER. ALL WALL, CEILING, FLOOR, AND ROOF OPENINGS ASSOCIATED WITH THE REMOVED APPARATUS SHALL BE PROPERLY FILLED, CAPPED, AND/OR PATCHED TO MATCH EXISTING.
- THE CONTRACTOR SHALL REMOVE THE ASSOCIATED SENSORS, THERMOSTATS, ACTUATORS, METERS, VALVES OR DAMPERS, TIMERS, AND SWITCHES. REMOVE ALL CONTROL WIRING AND MAKE SAFE. REMOVE COMPRESSED AIR PIPING BACK TO THE NEAREST BRANCH OR MAIN. CUT AND CAP THE COMPRESSED AIR PIPING ENSURING THAT IT IS SEALED AIR TIGHT.

DEMOLITION KEY NOTES:

- REMOVE BIRD SCREEN FROM THE END OF THE OUTSIDE AIR DUCTWORK AND THE RETURN SECTION OF THE FAN COIL UNIT. VERIFY DUCT SIZE, AND RETURN OPENING.
- REMOVE TRANSFER DUCTWORK AND RESTORE WALL TO ITS RATED RESISTANCE. COORDINATE THE SHUTDOWN AND REMOVAL OF THE EXHAUST SYSTEM FOR PHOTO LAB DARKROOM, AND EVIDENCE LAB WITH THE OWNER. COORDINATE WITH THE ELECTRICAL CONTRACTOR TO MAKE SAFE EF-9 AND EF-11 FOR REMOVAL OFF THE ROOF. DISCONNECT AND DROP THE ASSOCIATED DUCTWORK FOR EF-9 AND EF-11, AND ASSOCIATED DUCT SUPPORTS. PERMANENTLY CAP THE OPENING IN THE ROOF PER THE DETAIL INCLUDED WITH THESE DOCUMENTS, AND THE SPECIFICATION.
- COORDINATE SHUTDOWN OF THE HOT WATER SYSTEMS WITH THE OWNER. CUT BACK THE PIPING THAT WAS SERVING THE EXISTING ROOFTOP UNIT. REMOVAL SUPPLY AND RETURN PIPING FOR THE RTU BETWEEN THE RISER AND THE RTU AS SHOWN ON THE PLANS. DRAIN & CAP PERMANENTLY REMAINING PIPE.
- COORDINATE SHUTDOWN OF THE CHILLED SYSTEMS WITH THE OWNER. CUT BACK THE PIPING THAT WAS SERVING THE EXISTING ROOFTOP UNIT. REMOVAL SUPPLY AND RETURN PIPING FOR THE RTU BETWEEN THE RISER AND THE RTU AS SHOWN ON THE PLANS. DRAIN AND CAP PERMANENTLY REMAINING PIPE.
- DISCONNECT ALL THE EXHAUST DUCTWORK CONNECTING TO THE EXHAUST FANS ON THE ROOF. CUT THE DUCTWORK BACK ENOUGH TO ALLOW FOR A TRANSITION ONTO THE SECOND FLOOR TO BE COMBINED TO TIE INTO THE EXHAUST AIR OPENING ON THE UNDERSIDE OF THE NEW DOAS.

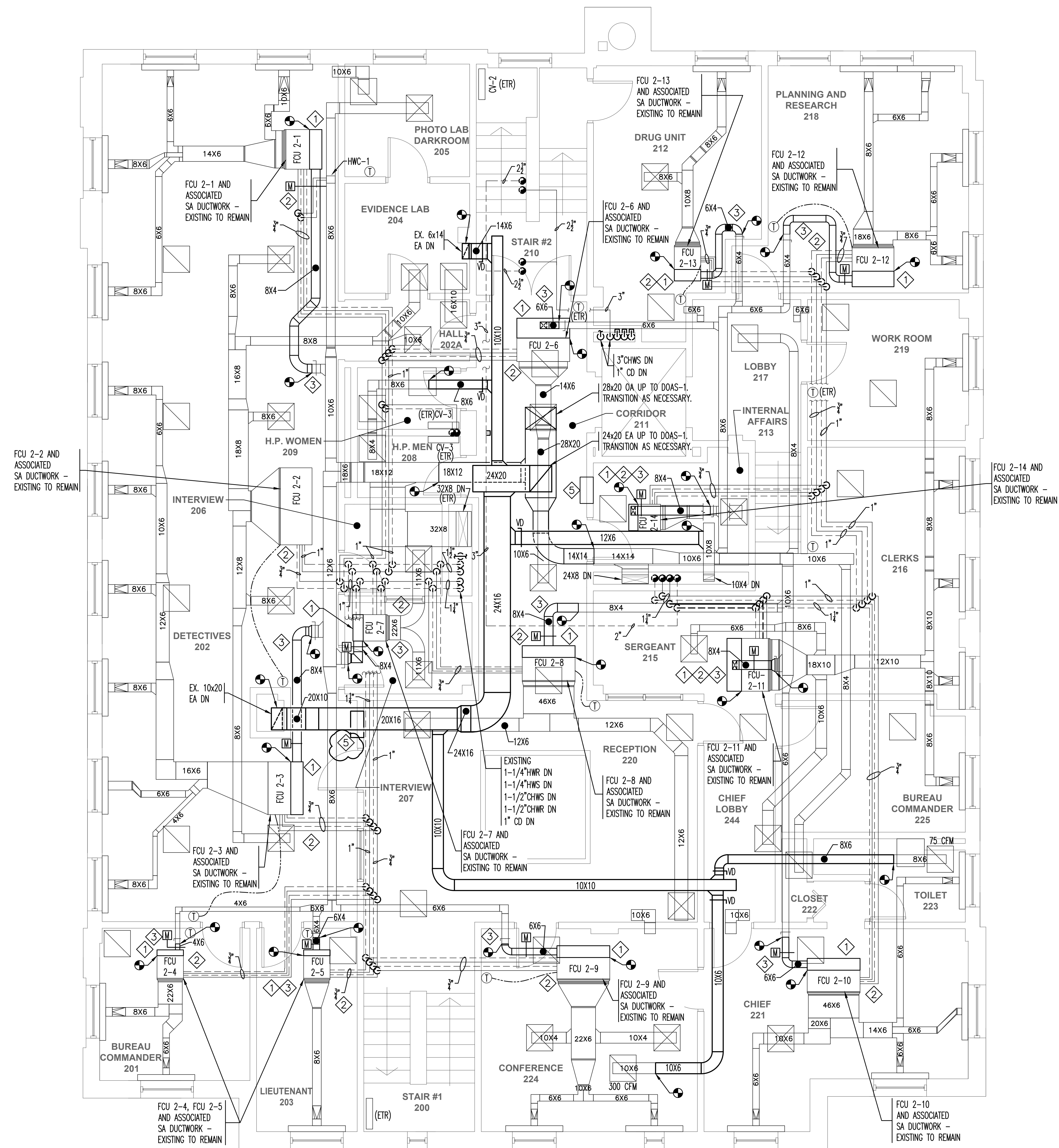
2A BASE BID WORK: THE EXISTING CONTROL VALVES FOR THE HOT AND CHILLED WATER COILS OF THE FAN COILS ARE GOING TO BE REPLACED UNDER THIS ADD ALTERNATE. THE EXISTING VALVES ARE SHOWN AS BEING PNEUMATIC THREE-WAY VALVES. THE VALVES SHALL BE REMOVED AND THE PNEUMATIC TUBE CUT BACK AT THE MAIN AND PERMANENTLY CAPPED.

1B (ADD ALTERNATE #) WHEN ALL OF THE PNEUMATIC CONTROLS HAVE BEEN REMOVED FROM THE BUILDING AND THERE ARE NO OTHER USES OF COMPRESSED AIR THEN HAVE THE ELECTRICIAN MAKE THE COMPRESSOR SAFE FOR REMOVAL AND TURN OVER TO THE OWNER.

DEMOLITION NOTES:

- THIS PROJECT INVOLVES CONSTRUCTION INSIDE AN EXISTING STRUCTURE. INFORMATION CONTAINED ON THIS DRAWING WAS OBTAIN FROM THE BEST AVAILABLE INFORMATION AND IS NOT INTENDED TO LIMIT THE SCOPE OF WORK.
- CONTRACTOR SHALL VISIT THE SITE PRIOR TO SUBMITTAL OF BID TO DETERMINE CONDITIONS AFFECTING THE EXECUTION OF THE WORK. AFTER VISITING THE SITE, REQUEST SUCH FURTHER INFORMATION AND/OR CLARIFICATION AS NECESSARY TO UNDERSTAND THE WORK REQUIRED AND TO PROPERLY ESTIMATE THE COST. CONTRACTORS, BY SUBMITTING A BID, ARE DEEMED TO BE COMPLETELY FAMILIAR WITH THE EXISTING CONDITION OF THE BUILDING AS IT INFLUENCES THE WORK DESCRIBED.
- DEMOLITION WORK SHALL COMPLY WITH OSHA AND ALL APPLICABLE STATE AND LOCAL CODES.
- REMOVE AND LEGALLY DISPOSE OF ITEMS ASSOCIATED WITH THIS PROJECT AREA, UNLESS OTHERWISE NOTED. CONSTRUCTION MANAGER SHALL CLARIFY WITH OWNER ALL ITEMS THAT SHALL REMAIN THE PROPERTY OF THE OWNER PRIOR TO DISPOSAL. ITEMS TO BE SALVAGED MAY BE REMOVED FROM THE SITE AS WORK PROGRESSES. SALVAGED ITEMS MUST BE TRANSPORTED FROM THE SITE AS THEY ARE REMOVED.
- PROTECTION: ENSURE THE SAFE PASSAGE OF PERSONS IN AND AROUND THE BUILDING DURING DEMOLITION. PREVENT INJURY TO PERSONS AND DAMAGE TO PROPERTY. PROVIDE ADEQUATE SHORING AND BRACING TO PREVENT COLLAPSE. IMMEDIATELY REPAIR DAMAGED PROPERTY TO THE CONDITION BEFORE BEING DAMAGED. TAKE EFFECTIVE MEASURES TO PREVENT WINDBLOWN DUST. ANY PROPERTY OR ITEMS DAMAGED DURING THE PROGRESS OF THE DEMOLITION WORK, INCLUDING ANY DAMAGE CAUSED BY THE TRANSPORTING OF MATERIALS OR EQUIPMENT, SHALL BE REPAIRED AND/OR REPLACED.
- UTILITIES: MAINTAIN UTILITIES EXCEPT THOSE REQUIRING REMOVAL OR RELOCATION. KEEP UTILITIES IN SERVICE AND PROTECT FROM DAMAGE. DO NOT INTERRUPT UTILITIES SERVING USED AS OCCUPIED AREAS WITHOUT FIRST OBTAINING PERMISSION FROM THE UTILITY COMPANY AND THE OWNER. BE SURE THAT LOCATIONS OF UTILITIES IN VICINITY ARE KNOWN AND IDENTIFIED AS "IN SERVICE" OR "SHUT/DOWN". PROVIDE TEMPORARY SERVICES AS REQUIRED.
- DISCONNECT, DEMOLISH, AND REMOVE MECHANICAL SYSTEMS, EQUIPMENT, AND COMPONENTS INDICATED TO BE REMOVED.
 - PIPING TO BE REMOVED: REMOVE ALL REFRIGERANT AND CONDENSATE DRAIN PIPING ASSOCIATED WITH SPLIT SYSTEMS TO BE REMOVED. COORDINATE ANY SHUTDOWNS REQUIRED WITH OWNER PRIOR TO COMMENCING.
 - PIPING TO BE ABANDONED IN PLACE SHALL BE DRAINED & CAPPED WITH SAME OR COMPATIBLE PIPING MATERIAL. ONLY PIPING WHICH IS ASSOCIATED WITH SYSTEMS TO REMAIN ACTIVE SHALL BE MAINTAINED. REFER TO THE PLANS AND SPECIFICATIONS FOR PATCHING WALLS.
 - DUCTS TO BE REMOVED: REMOVE PORTION OF DUCTS INDICATED TO BE REMOVED AND CAP REMAINING DUCTS WITH SAME OR COMPATIBLE DUCTWORK MATERIAL AS REQUIRED. REFER TO THE PLANS AND SPECIFICATIONS FOR PATCHING WALLS.
 - DUCTS TO BE ABANDONED IN PLACE: CAP DUCTS WITH SAME OR COMPATIBLE DUCTWORK MATERIAL.
 - EQUIPMENT TO BE REMOVED: DISCONNECT AND CAP SER VICES AND REMOVE EQUIPMENT. EQUIPMENT SHALL BE REMOVED FROM PREMISES AND LEGALLY DISPOSED OF.
 - EQUIPMENT TO BE REMOVED AND REINSTALLED: DISCONNECT AND CAP SERVICES AND REMOVE, CLEAN, AND STORE EQUIPMENT; WHEN APPROPRIATE, REINSTALL, RECONNECT, AND MAKE EQUIPMENT OPERATIONAL.
 - EQUIPMENT TO BE REMOVED AND SALVAGED: DISCONNECT AND CAP SER VICES AND REMOVE EQUIPMENT AND DELIVER TO OWNER. COORDINATE WITH OWNER PRIOR TO DEMOLITION WORK COMMENCES REGARDING ANY ITEMS TO BE TURNED OVER TO THE OWNER.

REVISION DATES	POLICE HEADQUARTERS HVAC IMPROVEMENTS	STAMP
ADDENDUM 1 01/20/2022	NEWTON POLICE DEPARTMENT 1321 WASHINGTON ST, NEWTON, MA 02465	
	SECOND FLOOR HVAC DEMOLITION PLAN	
DATE: 01/05/2022	c.a. crowley. ENGINEERING, INC. 645 County Street, Suite 6 Taunton, MA 02780 tel. (508) 884-5094 WWW.CROWLEYENG.COM fax. (508) 884-5099	DRAWING NUMBER
SCALE: AS NOTED		M-3.1
DRAWN BY: FV/JJC		
CHECKED BY: TS/MV		
PROJECT NO: 21025.00		

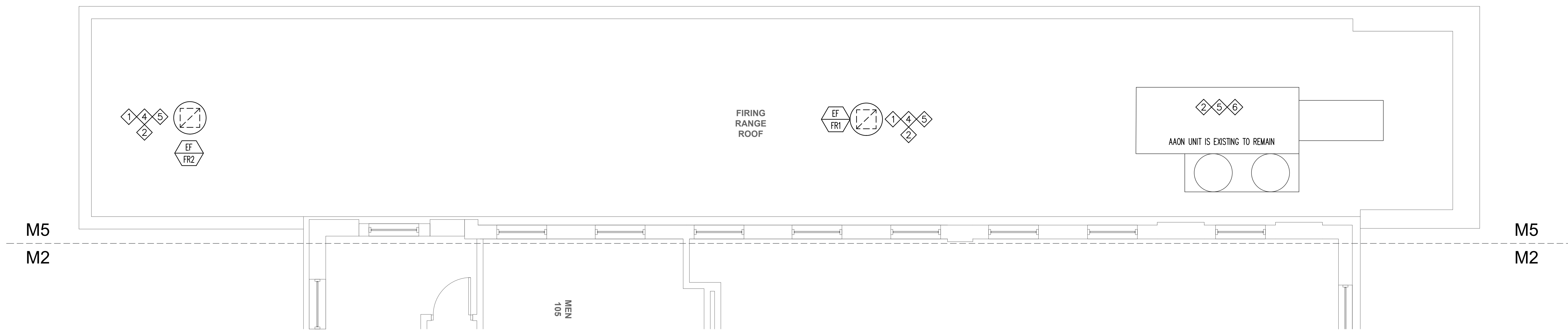


- GENERAL NOTES:**
1. CONTRACTOR SHALL VERIFY THE EXACT LOCATIONS OF ALL EQUIPMENT, DUCTWORK, PIPING AND ASSOCIATED ACCESSORIES WITH EXISTING CONDITIONS IN THE FIELD. DRAWINGS ARE DIAGRAMMATIC AND INDICATE APPROXIMATE LOCATIONS OF THE APPARATUS. ANY DISCREPANCIES IN THE FIELD SHALL BE BROUGHT TO THE ATTENTION OF THE ENGINEER FOR CLARIFICATION.
 2. ALL ELECTRICAL WORK RELATED TO THE CONNECTION OR DISCONNECTIONS OF EQUIPMENT TO OR FROM THE BUILDING'S ELECTRICAL SYSTEM SHALL BE DONE BY A LICENSED ELECTRICIAN. THE ELECTRICIAN SHALL MAKE SAFE ALL EQUIPMENT TO BE DEMOED. REFER TO ELECTRICAL PLANS FOR MORE INFORMATION AND EXTENT OF WORK.
 3. ALL MECHANICAL EQUIPMENT FEED COMPONENT SHORT CIRCUIT CURRENT RATINGS (SCCR) SHALL MEET OR EXCEED THE MAXIMUM AIC RATING OF THE ELECTRICAL PANEL FROM WHICH IT IS SERVED.
 4. MAINTAIN SERVICE CLEARANCES IN FRONT OF AND ABOVE ELECTRICAL EQUIPMENT. NO PIPING OR DUCTWORK SHALL BE ROUTED ABOVE ELECTRICAL ROOMS OR EQUIPMENT.
 5. THE EXISTING EQUIPMENT, PIPING, DUCTWORK, CONTROLS, AND OTHER ACCESSORIES SHALL BE REMOVED COMPLETELY UNLESS OTHERWISE NOTED. THIS SHALL INCLUDE ALL BASES, HANGERS, SUPPORTS, ANCHORS, ETC. ALL DEMOLISHED ITEMS SHALL BE DISPOSED OF IN A PROPER AND LEGAL MANNER. ALL WALL, CEILING, FLOOR, AND ROOF OPENINGS ASSOCIATED WITH THE REMOVED APPARATUS SHALL BE PROPERLY IN FILLED, CAPPED, AND/OR PATCHED TO MATCH EXISTING.
 6. THE CONTRACTOR SHALL REMOVE THE ASSOCIATED SENSORS, THERMOSTATS, ACTUATORS, METERS, VALVES OR DAMPERS, TIMERS, AND SWITCHES. REMOVE ALL CONTROL WIRING AND MAKE SAFE. REMOVE COMPRESSED AIR PIPING BACK TO THE NEAREST BRANCH OR MAIN. CUT AND CAP THE COMPRESSED AIR PIPING ENSURING THAT IT IS SEALED AIR TIGHT.
 7. PATCH ALL OPENINGS IN THE SHAFT WALL AND MAKE SURE THAT THE FIRE RATING IS MAINTAINED.

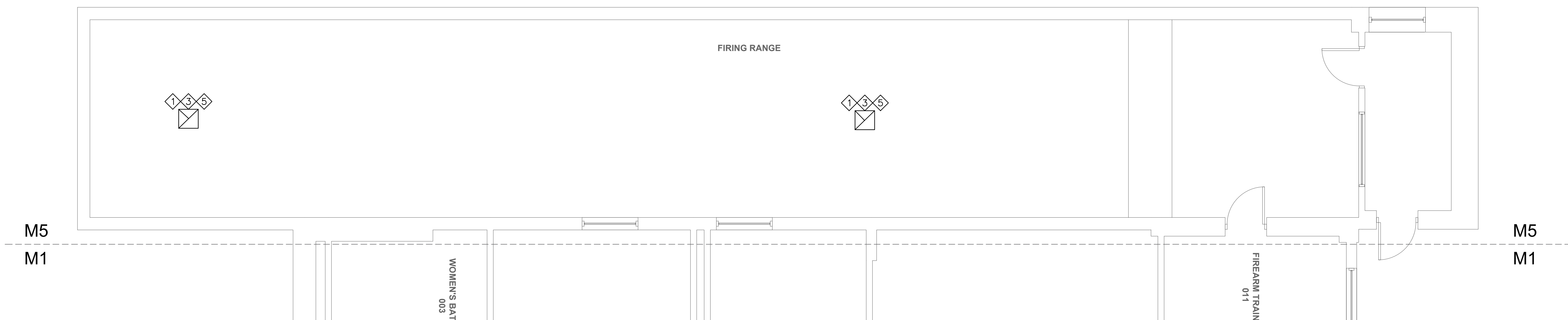
- KEY NOTES:**
- 1 MOUNT A NEW RETURN AIR PLENUM TO THE RETURN AIR COLLAR OF THIS FAN COIL. CONNECT THE EXISTING OUTDOOR AIR DUCTWORK TO THE NEW RETURN AIR PLENUM. REPLACE THE EXISTING BALANCING DAMPERS WITH NEW, AND INSTALL A MODULATING OPPOSABLE BLADE DAMPER AS SHOWN IN THE DETAIL ON SHEET M9.X.
 - 2 REPLACE THE EXISTING THREE-WAY CONTROL VALVE WITH A NEW TWO WAY CONTROL VALVE. CUT BACK OR REMOVE THE PIPING ATTACHED TO THE THIRD LEG AND PERMANENTLY CAP. VALVE ACTUATOR SHALL BE FULLY MODULATING AND COMPLY THE REQUIREMENTS OF THE SPECIFICATION.
 - 3 BALANCE THE OUTSIDE AIRFLOW AS SHOWN ON THE OUTSIDE AIR (VENTILATION AIR) FLOW DIAGRAM ON M-6.3. BALANCE THE HEATING HOT WATER AND CHILLED WATER FLOWS THROUGH THE COILS. FLOW REQUIREMENTS FOR HOT WATER ARE SHOWN ON THE HW RISER DIAGRAM ON DWG M-6.1. FLOW REQUIREMENTS FOR CHILLED WATER ARE SHOWN ON THE CHW DIAGRAM ON DWG. 6.2.
 - 4 REPLACE THE EXISTING T-STAT THAT CONTROLS THIS FAN COIL WITH A NEW T-STAT, HUMIDITY, CARBON DIOXIDE MONITOR. INSTALL AN OCCUPANCY IN A CORNER AT THE CEILING LEVEL. WIRE BOTH BACK TO THE NEW FCU OR NEARBY CONTROLLER. PATCH THE WALL AND ENSURE THAT THE RATING OF THE WALL IS MAINTAINED.
- 5 COORDINATED LOCATION OF NEW DDC CONTROLLER

1 SECOND FLOOR HVAC NEW WORK PLAN
SCALE: 1/4" = 1'-0"

REVISION DATES	ADDENDUM 1 01/20/2022	POLICE HEADQUARTERS HVAC IMPROVEMENTS NEWTON POLICE DEPARTMENT 1321 WASHINGTON ST, NEWTON, MA 02465 SECOND FLOOR HVAC NEW WORK PLAN	STAMP
DATE:	01/05/2022	c.a. crowley. ENGINEERING, INC. 645 County Street, Suite 6 Taunton, MA 02780 tel. (508) 884-5094 WWW.CROWLEYENG.COM fax. (508) 884-5099	DRAWING NUMBER
SCALE:	AS NOTED		M-3.2
DRAWN BY:	FV/JC		
CHECKED BY:	TS/MV		
PROJECT NO.	21025.00		



2 FIRING RANGE ROOF WORK PLAN
SCALE: 1/4" = 1'-0"



1 FIRING RANGE INSIDE WORK PLAN
SCALE: 1/4" = 1'-0"

KEY NOTES: (ADD ALTERNATE #2 UPGRADE FIRING RANGE CONTROLS)

- ◇ REMOVE EXISTING EXHAUST FAN, BACKDRAFT DAMPER AND INSTALL NEW FILTRATION BOX CURB ADAPTOR, NEW EXHAUST FAN WITH NEW CLASS 1 MOTORIZED DAMPER WITH AMCA 5000 LABEL. DAMPER ACTUATOR SHALL BE SHIPPED PRE-WIRED TO THE EXHAUST FAN, AND THE EXHAUST FAN CONTROLLER SHALL BE CONFIGURED TO PROVIDE A CONSTANT PRESSURE DROP ACROSS THE FILTER. EXHAUST FANS SHALL BE GREENHECK, LORNE COOK, ACME, PENNBARRY, TWIN CITY OR APPROVED EQUAL AND AS CALLED FOR BY THE EXHAUST FAN SCHEDULE.
- ◇ ALL POWER AND CONTROL WIRING SHALL RUN EXTERNAL TO THE BUILDING AND BE INSTALLED IN ACCORDANCE WITH MA ELECTRICAL CODE, SEE ELECTRICAL DRAWINGS FOR ELECTRICAL REQUIREMENTS.
- ◇ ADD A NEW THERMOSTAT ON THE INSIDE FACE OF THE EXHAUST AIR DUCTWORK AS SHOWN IN THE EXHAUST FAN DETAIL ON PAGE M-8.1.
- ◇ ALL NEW CURB ADAPTOR/EXTENSIONS AND FILTER BOXES SHALL BE INSULATED TO A R-VALUE OF 25. SEAL THE EXISTING CURB TO THE INTERNAL STRUCTURE AIR TIGHT. FILTER BOX SHALL BE CAMEL MAGNA/PACK OR EQUAL.
- ◇ BALANCE EXHAUST FAN TO THE VALUES SHOWN IN THE EXHAUST FAN SCHEDULE. RE-BALANCE THE EXISTING AAON UNIT TO 2,500 CFM.
- ◇ REVIEW EXISTING CONTROLLER AND ENSURE THAT CONTROLLER IS COMPATIBLE WITH EXECUTING THE SEQUENCE OF OPERATIONS FOR THIS SPACE AS SPECIFIED IN THE SPECIFICATIONS. UPDATE CONTROLLER AS REQUIRED.

EQUIPMENT NOTE:

FURNISH AND INSTALL ONE (1) HEPA FILTER HOUSING, INCLUDE TWO (2) HEPA 99.97% HC HEPAS, AND ONE (1) 30/30 PRE-FILTER, PER EXHAUST FAN. COORDINATE WITH THE ATC CONTRACTOR THE LOCATION OF THE MOTORIZED DAMPER, AND TEMPERATURE AND HUMIDITY SENSOR.
 FILTER HOUSING: PART NUMBER 7073204; MAGNA PACK 1X2 HEPA HOUSING WITH PRE-FILTER TRACK.
 FILTER 24X24X2 30/30 PRE-FILTER.
 24X24X11-1/2 99.97% HC HEPA.

REVISION DATES	POLICE HEADQUARTERS HVAC IMPROVEMENTS NEWTON POLICE DEPARTMENT 1321 WASHINGTON ST, NEWTON, MA 02465	STAMP
ADDENDUM 1 01/20/2022		
DATE: 01/05/2022	FIRING RANGE HVAC WORK PLAN	DRAWING NUMBER M-5
SCALE: AS NOTED		
DRAWN BY: FV/JC		
CHECKED BY: TS/MV		
PROJECT NO: 21025.00		
c.a. crowley. ENGINEERING, INC. 645 County Street, Suite 6 Taunton, MA 02780 tel.: (508) 884.5094 WWW.CROWLEYENG.COM fax.: (508) 884.5099		