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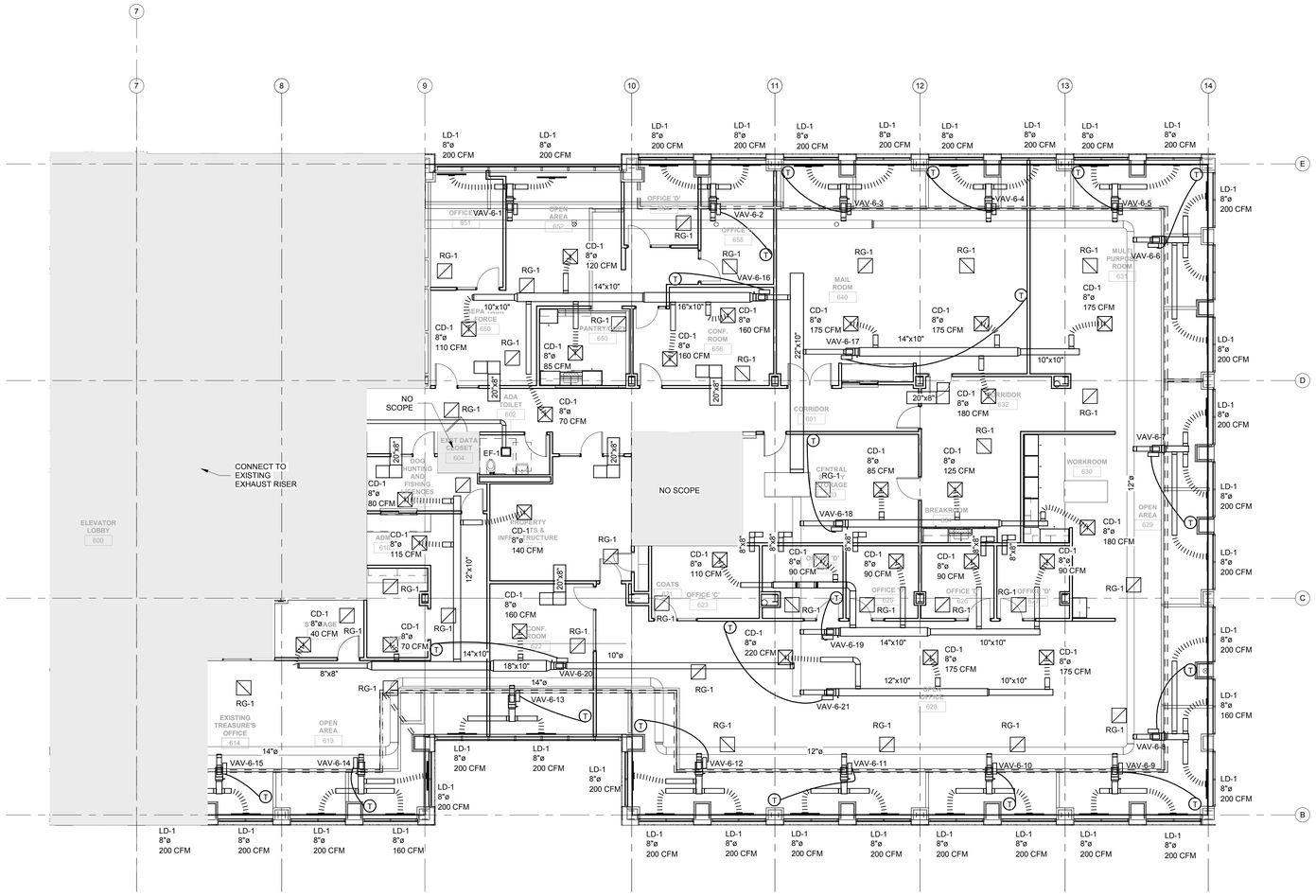

1 6TH FLOOR MECHANICAL PLAN
1/8" = 1'-0"

PROJECT NORTH

REV.	DATE	DESCRIPTION	DRW.	CHK.
	2020.07.31	ISSUED FOR PERMIT / AJ	MS	

SHEET TITLE
MECHANICAL NEW WORK PLAN

SHEET NUMBER
M106

CLIENT:

PROJECT TEAM

SEAL

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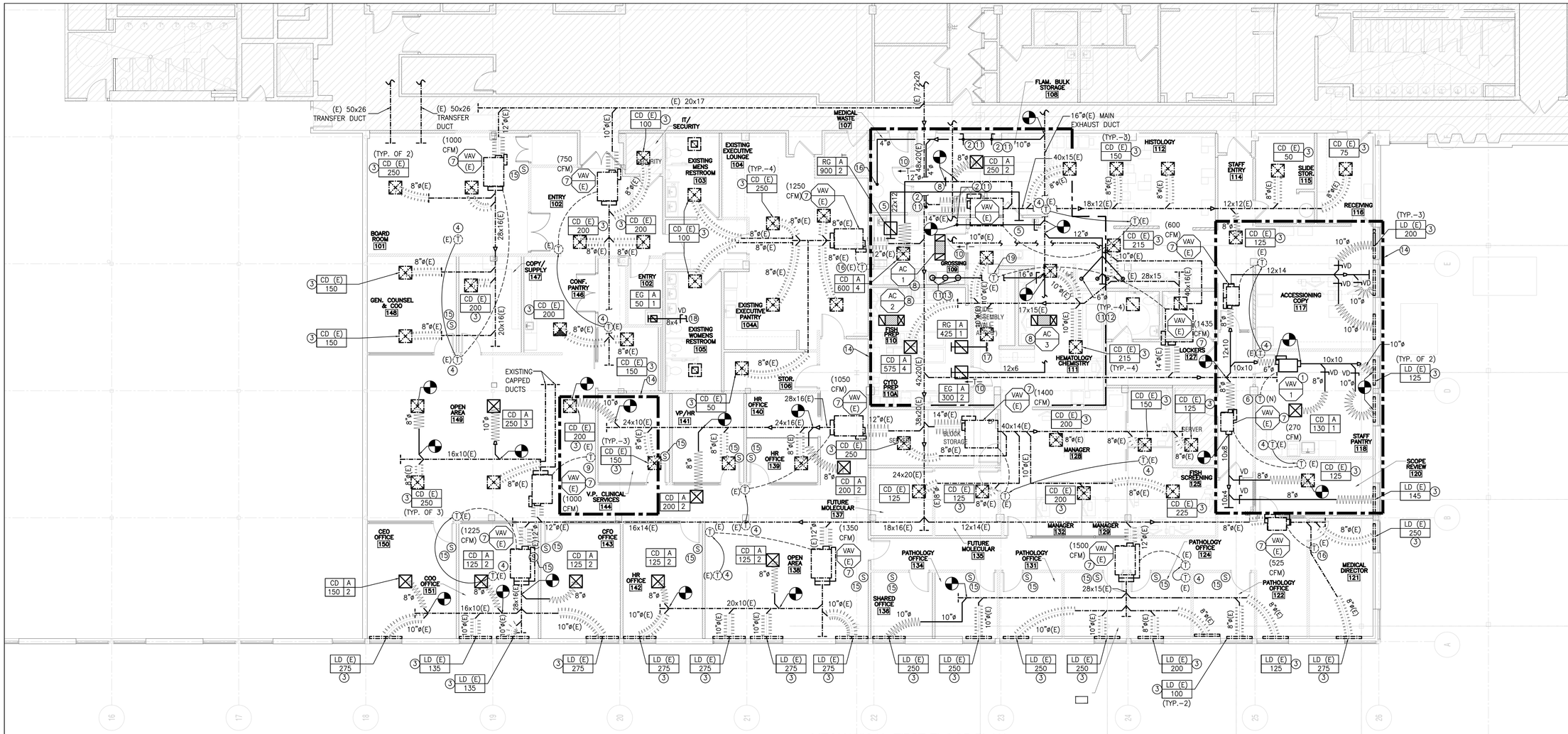


MECHANICAL FIRST FLOOR PLAN

SCALE: ⅛" = 1'-0"

MECHANICAL GENERAL NOTES:

- CONTRACTOR SHALL ENSURE THAT ALL MECHANICAL EQUIPMENT WILL BE INSTALLED IN LOCATIONS WHICH AFFORD ACCESSIBILITY FOR MAINTENANCE AND REPAIR AS PER MANUFACTURERS RECOMMENDED CLEARANCE REQUIREMENTS. COORDINATE INSTALLATION AMONG ALL TRADES TO AVOID INTERFERENCE, AND LOCATE EQUIPMENT TO PROVIDE CLEARANCE WHICH EXCEEDS THOSE RECOMMENDED BY THE EQUIPMENT MANUFACTURER.
- PROVIDE VOLUME DAMPERS ON ALL NEW SUPPLY BRANCH DUCTWORK FOR BALANCING THE SYSTEM.
- PROVIDE 1" DOOR UNDERCUT ON ALL NEW ROOM ENCLOSURES AS SHOWN.
- UPON COMPLETION OF WORK THE CONTRACTOR SHALL PROVIDE BALANCING OF THE SYSTEM BY A CERTIFIED AIR BALANCING CONTRACTOR & SUBMIT TAB REPORT.
- ALL AIR DEVICES/VAV BOXES/FLAMMABLE STORAGE CABINETS/HOODS/POINT EXHAUST SHALL BE BALANCED TO AIRFLOW VALUES INDICATED ON PLANS
- REPAIR AND/OR REPLACE DUCT INSULATION DAMAGED DURING ALL TIE-IN CONNECTION PROCEDURES. INSULATION TO MATCH MATERIAL, TYPE, AND THICKNESS CURRENTLY INSTALLED IN FIELD.

MECHANICAL KEY NOTES:

1. NEW FAN POWERED TERMINAL UNIT TO BE INSTALLED AT APPROXIMATE LOCATION ABOVE FINISHED CEILING. PROVIDE TRANSITION FITTING FROM SQUARE TO ROUND DUCT AND CONNECT NEW VAV TERMINAL UNIT. ALL DUCTWORK UPSTREAM & DOWNSTREAM OF VAV SHALL BE NEW. PROVIDE ADDITIONAL HANGERS/SUPPORTS FROM EXISTING TRUSSES TO ACCOMMODATE INSTALLATION. MECHANICAL CONTRACTOR SHALL COORDINATE LEFT OR RIGHT HAND CONTROL REQUIREMENTS WITH EXISTING CONDITIONS. CONTRACTOR SHALL COORDINATE NEW VAV CONTROLS WITH EXISTING AUTOMATIC TEMPERATURE CONTROLS SERVING EXISTING SPACE.
2. PROVIDE 4"ø EXHAUST CONNECTION FROM SIDE OF FLAMMABLE STORAGE CABINET AND TIE-INTO (E) MAIN EXHAUST SYSTEM, AS INDICATED ON PLAN.
3. REBALANCE AIR DEVICE CFM AIRFLOWS TO QUANTITIES INDICATED ON PLAN.
4. RELOCATE EXISTING THERMOSTAT TO NEW INDICATED LOCATION. EXTEND & RUN CONTROL WIRING TO NEW LOCATION. WHEN WIRING IS SHORT ON LENGTH PROVIDE NEW WIRING OF SAME MATERIAL AND TYPE CURRENTLY INSTALLED IN FIELD.
5. NEW 22x12 TRANSFER DUCT ABOVE CEILING. PROVIDE WIRE MESH SCREEN ON OPEN END OF DUCT (900 CFM FROM PLENUM).
6. MECHANICAL CONTRACTOR SHALL FURNISH AND INSTALL A PROGRAMMABLE THERMOSTAT TO CONTROL NEW VAV BOX AS SHOWN. MATCH CURRENT TYPE OF EXISTING VAV THERMOSTATS INSTALLED IN FIELD. COORDINATE ALL POWER AND CONTROL WIRING REQUIREMENTS IN FIELD.
7. REBALANCE EXISTING FAN POWERED TERMINAL UNIT TO AIRFLOW QUANTITY LISTED ON PLAN. AIRFLOW TO BE ADJUSTED TO REGULATE AIR QUANTITIES ONLY TO THE EXTENT THAT ADJUSTMENTS DO NOT CREATE OBJECTIONAL AIR MOTION OR NOISE LEVELS.
8. NEW AIR PURIFIER UNIT (AC-1, 2 & 3) TO BE SUPPORTED FROM EXISTING STRUCTURE IN ACCORDANCE WITH MFR'S INSTALLATION RECOMMENDATIONS & GUIDELINES. COORDINATE INSTALLATION WITH NEW ACOUSTICAL TILE LAY-IN CEILING SYSTEM. SUPPORT SURROUNDING TEE GRIDS WITH 9 GA. WIRE ON 24" O.C. TO BRACE CEILING FROM STRUCTURE ABOVE.
9. VERIFY LOCATION OF THERMOSTAT, CORRESPONDING TO (E) VAV, IN FIELD. MOVE THERMOSTAT TO NEW, INDICATED LOCATION. REROUTE ALL ASSOCIATED CONTROL WIRING AS NECESSARY.
10. DOOR TO BE UNDERCUT TO ALLOW TRANSFER AIR OF 150 CFM INTO SPACE.
11. PROVIDE NEW SLIDE GATE DAMPER BELOW CEILING TO BALANCE AIRFLOW THROUGH INDIVIDUAL BRANCH EXHAUST DUCTS.
12. PROVIDE (4) FOUR NEW 6"ø EXHAUST DUCTS FROM HOOD & AND TIE-IN TO EXISTING FUME EXHAUST SYSTEM. (600 CFM EXHAUST)
13. PROVIDE (3) THREE NEW 10"ø EXHAUST DUCTS FROM HOOD AND TIE-IN TO EXISTING FUME EXHAUST SYSTEM. (1800 CFM)
14. REMOVE CEILING TILES IN AREAS INDICATED TO ALLOW INSTALLATION OF NEW WORK. REPAIR AND/OR REPLACE ANY DAMAGED TILES AS REQUIRED. CEILING TILES TO MATCH MATERIAL & TYPE SPECIFIED AND IN AREAS THAT HAS EXISTING TILES CURRENTLY INSTALLED IN THE FIELD.
15. PROVIDE A NEW WALL MOUNTED AVERAGING SENSOR AND TIE-INTO RESPECTIVE FAN POWERED TERMINAL BOX THERMOSTAT.
16. PROVIDE PROTECTIVE COVERS OVER EXISTING THERMOSTATS DURING CONSTRUCTION TO PROTECT FROM DUST/DEBRIS. UPON COMPLETION OF CONSTRUCTION ACTIVITIES REMOVE COVERINGS TEST THERMOSTATS TO ENSURE PROPER OPERATIONAL FUNCTIONALITY.
17. NEW 12x8 TRANSFER DUCT ABOVE CEILING. PROVIDE WIRE MESH SCREEN ON OPEN END OF DUCT (425 CFM FROM PLENUM).
18. PROVIDE 8x4 EXHAUST DUCT FROM JANITORS CLOSET AND TIE-INTO NEAREST EXISTING TOILET EXHAUST DUCT OF ADEQUATE SIZE & CAPACITY.

Consultants:

Issuance / Revision

No.	Date	Description
	00.00.00	-

Client:

Project:

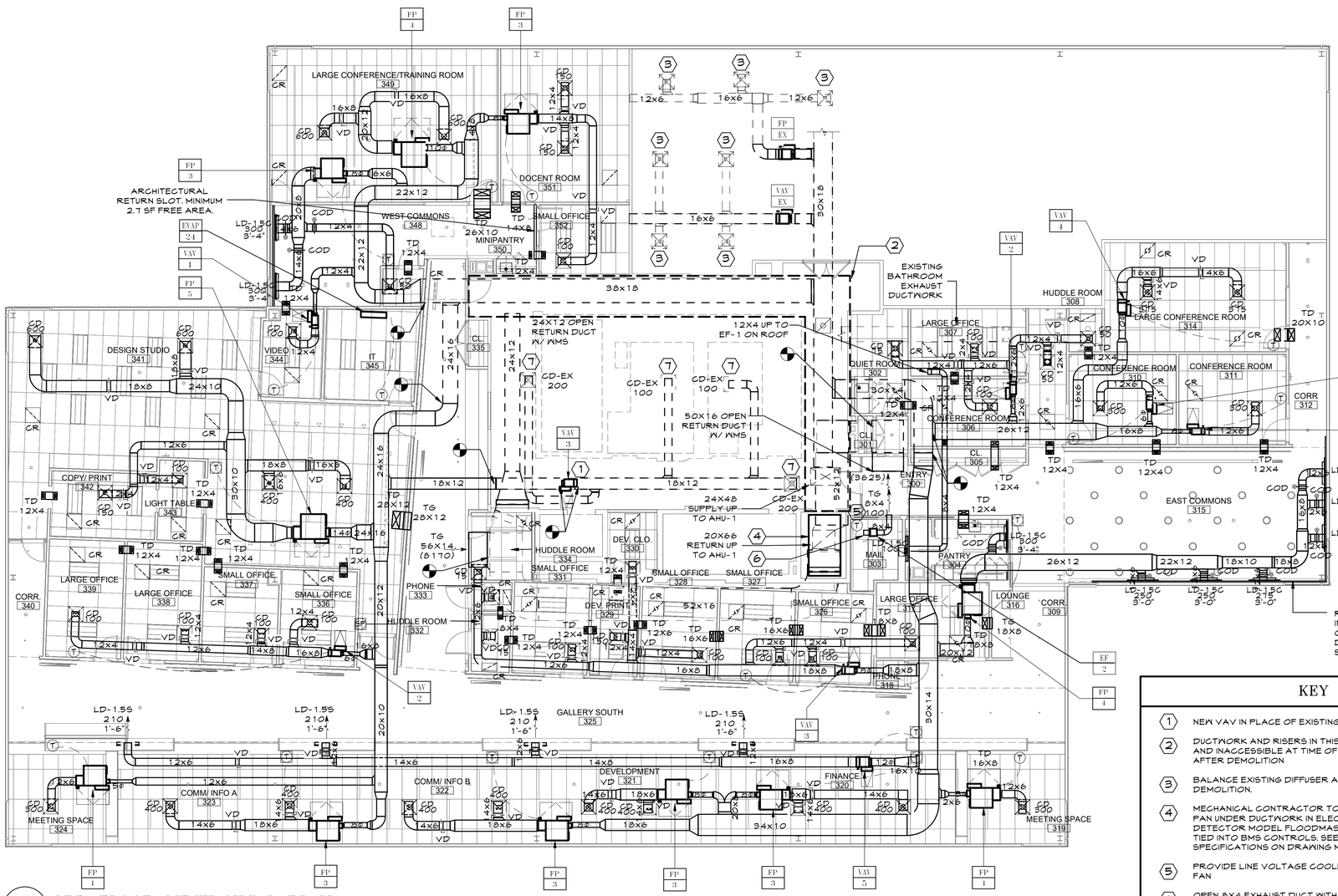
Seal:

Posen Project No.:

Submission: FOR BID / FOR PERMIT

Drawing: MECHANICAL FIRST FLOOR PLAN

Drawn By:	Checked By:	Date:
	INITIALS	06.14.2019
Scale:	Dwg No.Issue No.:	Drawing:
	M-101.00	1 of 13



1 M-103 3RD FLOOR MECHANICAL PLAN
SCALE: 1/8" = 1'-0"

KEY NOTES

1. NEW VAV IN PLACE OF EXISTING. RECONNECT TO EXISTING DUCTWORK.
2. DUCTWORK AND RISERS IN THIS AREA WERE ENCLOSED IN HARD CEILING AND INACCESSIBLE AT TIME OF SURVEY. VERIFY EXACT LOCATION AFTER DEMOLITION
3. BALANCE EXISTING DIFFUSER AND DUCTWORK TO CFM TAKEN PRIOR TO DEMOLITION.
4. MECHANICAL CONTRACTOR TO PROVIDE 53X88" SHEETMETAL DRIP PAN UNDER DUCTWORK IN ELECTRICAL ROOM. PROVIDE LEAK DETECTOR MODEL FLOODMASTER RS-096. LEAK DETECTOR TO BE TIED INTO BMS CONTROLS. SEE SEQUENCE OF OPERATIONS IN SPECIFICATIONS ON DRAWING M-013 FOR MORE DETAIL.
5. PROVIDE LINE VOLTAGE COOLING ONLY THERMOSTAT FOR EXHAUST FAN
6. OPEN 8X4 EXHAUST DUCT WITH V.M.S. EF-2 AND ASSOCIATED DUCTWORK IS LOCATED ABOVE THE CEILING.
7. REBALANCE EXISTING DIFFUSER TO NEW CFM SHOWN.

ISSUE:

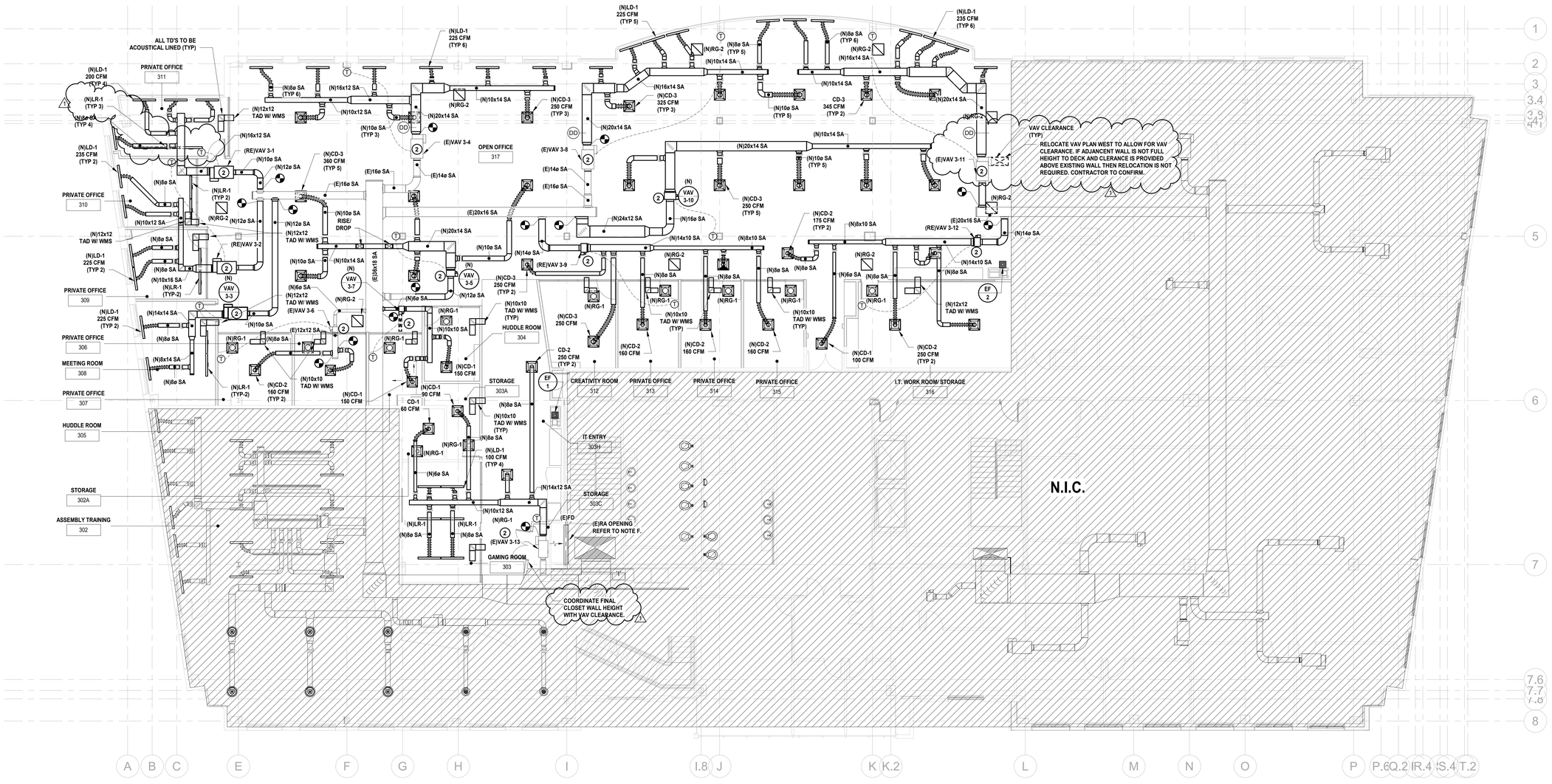
NO:	REVISION:	DATE:
1	SD - PROGRESS SET	2020.08.14
2	100% DESIGN DEVELOPMENT	2020.09.29
3	100% CONSTRUCTION DOCUMENTS	2020.11.03

PROJECT NO.:
DRAWN BY:
CHECKED BY:
SCALE: AS NOTED
PROJECT:

DRAWING TITLE:
3RD FLOOR MECHANICAL PLAN

SHEET NUMBER:
M-103.00

SHEET: 10 OF 15



1 MECHANICAL PARTIAL 3RD FLOOR NEW WORK PLAN

M-103 SCALE: 1/8" = 1'-0"

0' 2' 4' 8' 16'
SCALE BAR: 1/8"=1'-0"

NEW WORK SYSTEM NOTES:

1. GENERAL NOTES:

A. REFER TO MECHANICAL LEAD SHEET, M-001 FOR GENERAL NOTES, SYMBOLS, ABBREVIATIONS AND PROJECT SCOPE DESCRIPTIONS FOR DEMOLITION AND NEW WORK.

B. REFER TO M-300 FOR PROJECT SPECIFIC DETAILS.

C. REFER TO M-200 SERIES FOR EQUIPMENT SCHEDULES AND OTHER PROJECT INFORMATION.

D. CONTRACTOR SHALL COORDINATE REMOVAL OF MECHANICAL EQUIPMENT WITH OTHER TRADES SO AS NOT TO AFFECT THE OPERATION OF EXISTING SYSTEMS. PARTICULAR ATTENTION SHALL BE GIVEN TO UTILITY SERVICES, ELECTRIC, WATER, AND BUILDING UTILITIES.

E. CONTRACTOR SHALL VERIFY LOCATION AND SIZE OF EXISTING EQUIPMENT AND DUCTWORK AND VERIFY ROUTING AND LOCATION OF ALL ASSOCIATED SPECIALTIES PRIOR TO INITIALIZING DEMOLITION.

F. CONTRACTOR SHALL PROVIDE ALL REQUIRED EQUIPMENT, DUCTWORK, DUCT ACCESSORIES, AND APPURTENANCES TO PROVIDE A COMPLETE AND WORKING SYSTEM.

G. COORDINATION OF ALL BUILDING SIDE HVAC WORK WITH THE OWNERS CONSTRUCTION MANAGER AND ENGINEER IS A REQUIREMENT OF THIS PROJECT.

H. CONTRACTOR SHALL INSTALL ALL NEW EQUIPMENT IN STRICT ACCORDANCE WITH THE MANUFACTURER'S WRITTEN INSTRUCTIONS AND SHALL MAINTAIN ALL CLEARANCES (INSTALLATION AND MAINTENANCE) AS NOTED WITHIN THE WRITTEN INSTRUCTIONS.

I. CONTRACTOR SHALL REMOVE AND RE-INSTALL ALL EXISTING ITEMS THAT ARE REQUIRED IN ORDER TO INSTALL THE NEW WORK AS INDICATED ON THE PLANS AND IN THE SPECIFICATIONS. THESE ITEMS INCLUDE BUT ARE NOT LIMITED TO THE FOLLOWING: LIGHT FIXTURES, WIRING, ELECTRICAL CONDUIT, CEILING TILES AND GRID, ETC.

J. DUCTWORK SIZES SHOWN ARE INSIDE CLEAR. PROVIDE ACOUSTICAL LINING POST VAV AND EXTERNAL INSULATION PRE VAV. REFER TO SPECIFICATIONS.

2. NEW WORK SCOPE OF WORK NOTES:

A. SERIES FAN POWERED VAV BOXES: UNLESS OTHERWISE NOTED, EXISTING VAV BOXES ARE TO REMAIN. CONTRACTOR SHALL CONNECT NEW DUCTWORK TO EXISTING BOXES IN LOCATIONS AS NOTED ON PLANS. FOR NEW VAV BOXES AND RELOCATED BOXES, CONTRACTOR SHALL ROUTE PRIMARY AIR DUCTWORK AS SHOWN AND CONNECT TO EXISTING MAIN.

B. SHUT-OFF TYPE VAV BOXES: UNLESS OTHERWISE NOTED, EXISTING VAV BOXES ARE TO REMAIN. CONTRACTOR SHALL CONNECT NEW DUCTWORK TO EXISTING BOXES IN LOCATIONS AS NOTED ON PLANS. FOR NEW VAV BOXES AND RELOCATED BOXES, CONTRACTOR SHALL ROUTE PRIMARY AIR DUCTWORK AS SHOWN AND CONNECT TO EXISTING MAIN.

C. DUCTWORK, DUCT ACCESSORIES, HANGERS, GRILLES, REGISTERS, AND DIFFUSERS: CONTRACTOR SHALL FURNISH AND INSTALL NEW DUCTWORK (METAL AND FLEXIBLE), DUCT ACCESSORIES, HANGERS, GRILLES, REGISTERS, AND DIFFUSERS AS INDICATED ON PLAN AND SPECIFICATIONS. CONTRACTOR SHALL COORDINATE FINAL LOCATIONS OF GRILLES REGISTERS, AND DIFFUSERS WITH ARCHITECTURAL CEILING PLANS. DUCTWORK SHALL BE INSULATED AND/OR LINED AS NOTED IN THE SPECIFICATIONS. THE INSIDE CLEAR DIMENSIONS ARE INDICATED ON THE DRAWINGS. LINEAR RETURN GRILLES OPEN TO CEILING PLENUM SHALL BE INSTALLED WITH LIGHT SHIELDS AS SHOWN IN DETAIL ON M-300.

D. THERMOSTATS: CONTRACTOR SHALL FURNISH NEW THERMOSTATS (BOD: TRANE X13511527010) AND MOUNT AND WIRE THEM IN LOCATIONS AS INDICATED ON PLANS. THERMOSTATS SHALL BE MOUNTED AT 48" AFF UNLESS OTHERWISE NOTED. ALL THERMOSTAT WIRING SHALL BE SUPPORTED UTILIZING METHODS AS NOTED IN THE SPECIFICATIONS.

E. COMMISSIONING OF EXISTING AND NEW VAV BOXES: CONTRACTOR SHALL PROVIDE COMMISSIONING FOR EXISTING AND NEW VAVS. AT A MINIMUM, CONTRACTOR SHALL VERIFY SUCCESSFUL INTEGRATION OF NEW VAVS INTO BAS, OPERATION OF NEW THERMOSTATS WITH EXISTING VAVS, AND ENSURE PROPER AIRFLOW THROUGH EXISTING AND NEW VAVS.

F. TRANSFER DUCTS: CONTRACTOR SHALL PROVIDE TRANSFER DUCTS SUCH THAT RETURN AIR HAS A PATH BACK TO THE MAIN RETURN OPENINGS FOR THE FLOOR.TRANSFER DUCTS SHALL HAVE 1" ACOUSTICAL LINING AND TERMINATE TO 1"x1" WIRE MESH SCREEN.

3. NEW WORK KEYED NOTES:

GENERAL: NEW WORK NOTES ARE INDICATED WITH THE FOLLOWING SYMBOL (-) AND ARE NUMBERED AS FOLLOWS:

1. CONTRACTOR SHALL RELOCATE VAV TO LOCATION AS SHOWN. IF VAV WAS DAMAGED DURING DEMOLITION OR STORAGE CONTRACTOR SHALL REPAIR OR REPLACE IN KIND AT NO EXTRA COST TO OWNER. CONNECT DUCTWORK AS SHOWN ON PLANS. REFER TO ELECTRICAL DRAWINGS FOR POWER REQUIREMENTS.

2. CONTRACTOR SHALL PROVIDE (N) DUCTWORK AS SHOWN ON PLAN. ALL DUCTWORK POST VAV SHALL BE EQUIPPED WITH ACOUSTICAL LINING, DUCTWORK PRE VAV TO BE WRAPPED; REFER TO SPECIFICATIONS. PROVIDE (N) 8" ROUND TAKE-OFFS WITH VD'S AS SHOWN.

3. PROVIDE LINEAR DIFFUSER WITH PATTERN CONTROLLER TO DIRECT AIRFLOW AT A DOWNWARD ANGLE INTO THE SPACE.

4. FURNISH AND INSTALL NEW VAV AS SHOWN ON PLAN WITH CAPACITIES AS LISTED IN THE EQUIPMENT SCHEDULE. PROVIDE NEW THERMOSTAT AS SHOWN. COORDINATE FINAL LOCATION WITH ARCHITECT.

No.	Date	Issue or Revision
1	05.21.20	Addendum #1
	05.08.2020	Issued For Bid

Drawing Title

Scale: 1/8" = 1'-0"
USA Project No.
Drawing Date: 04.08.20
Drawing No.: M-103
Drawn By
Checked By

5/21/2020 1:27:43 PM