GENERAL NOTES
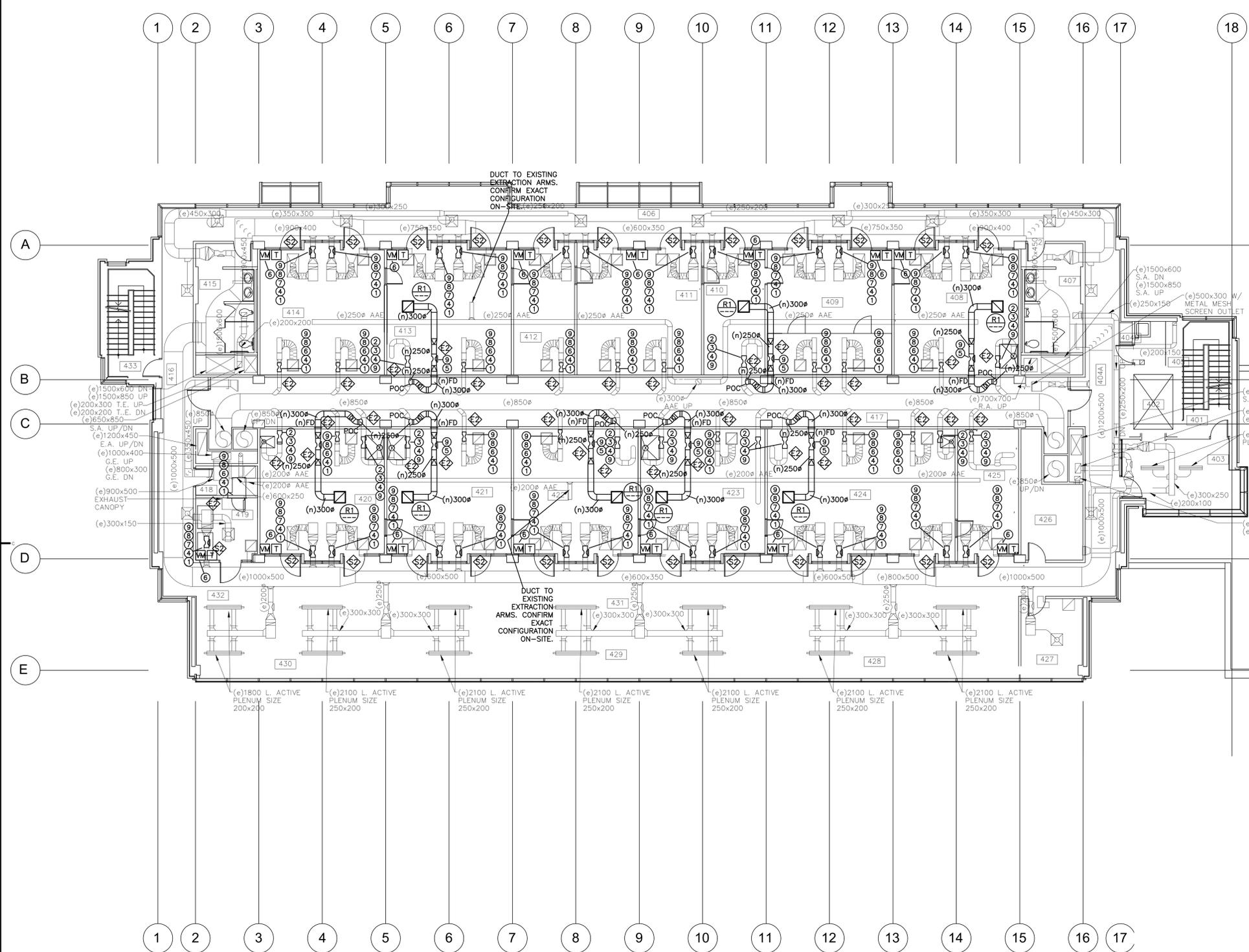
1. REMOVE ALL EXISTING 2-POSITION SUPPLY AND GENERAL EXHAUST PNEUMATIC-CONTROLLED AIR VALVES AND REPLACE WITH VARIABLE AIR VOLUME SUPPLY AND GENERAL EXHAUST ELECTRONIC-CONTROLLED AIR VALVES. ACTUATORS SHALL BE ELECTRONIC, FAST-ACTING. ALL COMPONENTS SHALL BE REMOVED AND REPLACED (I.E. NONE OF THE EXISTING COMPONENTS MAY BE RE-USED). REMOVE AND REPLACE EXISTING DUCTWORK TO/FROM AIR VALVE AS REQUIRED TO INSTALL NEW AIR VALVE AS REQUIRED BY MANUFACTURER (I.E. WITH REQUIRED STRAIGHT SECTIONS FOR INLET/OUTLET, ETC.). CONFIRM ALL OTHER REQUIREMENTS, PROVIDE ADDITIONAL COMPONENTS, INCLUDING ALL WIRING, TRANSFORMERS, CONTROLLERS AND ROOM INTEGRATORS, AS NECESSARY TO PROVIDE FULLY FUNCTIONAL SYSTEM. SEE DRAWINGS & SPECIFICATIONS FOR ALL REQUIREMENTS. REMOVE ALL EXISTING PNEUMATIC TUBING ASSOCIATED WITH AIR VALVES TO BE REPLACED, CAP TUBING AT NEARBY MAIN.

2. REMOVE ALL EXISTING 2-POSITION FUME HOOD EXHAUST PNEUMATIC-CONTROLLED AIR VALVES AND REPLACE WITH VARIABLE AIR VOLUME FUME HOOD EXHAUST ELECTRONIC-CONTROLLED AIR VALVES. ACTUATORS SHALL BE ELECTRONIC, FAST-ACTING. ALL COMPONENTS SHALL BE REMOVED AND REPLACED (I.E. NONE OF THE EXISTING COMPONENTS MAY BE RE-USED). REMOVE AND REPLACE EXISTING DUCTWORK TO/FROM AIR VALVE AS REQUIRED TO INSTALL NEW AIR VALVE AS REQUIRED BY MANUFACTURER (I.E. WITH REQUIRED STRAIGHT SECTIONS FOR INLET/OUTLET, ETC.). CONFIRM ALL OTHER REQUIREMENTS, PROVIDE ADDITIONAL COMPONENTS, INCLUDING ALL WIRING, TRANSFORMERS, CONTROLLERS AND ROOM INTEGRATORS, AS NECESSARY TO PROVIDE FULLY FUNCTIONAL SYSTEM. SEE DRAWINGS & SPECIFICATIONS FOR ALL REQUIREMENTS. REMOVE ALL EXISTING PNEUMATIC TUBING ASSOCIATED WITH AIR VALVES TO BE REPLACED, CAP TUBING AT NEARBY MAIN.

3. REMOVE AND REPLACE THE FOLLOWING EXISTING FUME HOOD CONTROL COMPONENTS, INCLUDING ALL OF THEIR ASSOCIATED COMPONENTS AND WIRING, (A) FUME HOOD DISPLAY/MONITOR (FHD); (B) VERTICAL SASH MONITOR (VSS); AND (C) ZONE PRESENCE / HOOD OCCUPANCY SENSOR (ZPS). ALL NEW DEVICES SHALL BE COMPATIBLE WITH NEW VARIABLE AIR VOLUME FUME HOOD EXHAUST AIR VALVES AND CONTROLLERS. CONNECT DEVICES INTO NEW FUME HOOD MONITOR. CONFIRM ALL OTHER REQUIREMENTS, PROVIDE ADDITIONAL COMPONENTS, INCLUDING ALL WIRING, TRANSFORMERS, CONTROLLERS AND ROOM INTEGRATORS, AS NECESSARY TO PROVIDE FULLY FUNCTIONAL SYSTEM. SEE DRAWINGS & SPECIFICATIONS FOR ALL REQUIREMENTS.

4. REMOVE AND REPLACE EXISTING COMMUNICATION WIRING. PROVIDE NEW WIRING AS REQUIRED FOR NEW AIR VALVE AND CONTROLLER REQUIREMENTS. CONTRACTOR TO CONFIRM SPECIFIC REQUIREMENTS OF COMMUNICATION WIRING WITH MANUFACTURER (TO BE EITHER LON, BACNET MS/TP OR BACNET IP BASED COMMUNICATION). REMOVE ALL REDUNDANT EXISTING CONTROL WIRING. REMOVE ALL EXISTING PNEUMATIC TUBING ASSOCIATED WITH AIR VALVES TO BE REPLACED, CAP TUBING AT NEARBY MAIN.

5. PROVIDE NEW GENERAL EXHAUST ELECTRONIC AIR VALVE. CONNECT INTO EXHAUST AIR DUCTWORK DOWNSTREAM OF EXISTING FUME HOOD EXHAUST AIR VALVE (I.E. DO NOT CONNECT BETWEEN THE FUME HOOD AND THE FUME HOOD CONTROL VALVE). REFER TO VENTILATION LAYOUTS FOR LOCATIONS, SIZING AND CONNECTION REQUIREMENTS.
   - PROVIDE NEW FIRE DAMPER (FD) WITHIN NEW DUCTWORK WHERE IT PENETRATES THE WALL BETWEEN THE SERVICE CORRIDOR AND LABORATORY SPACE.
   - CONNECT NEW SERVICES (n) INTO EXISTING SERVICES (e) TO REMAIN INSTALLED, POINT OF CONNECTION (P.O.C.). MODIFY EXISTING TO THE FULL EXTENT REQUIRED TO COMPLETE CONNECTION. CONFIRM AND DETERMINE EXACT LOCATIONS, SIZES AND ELEVATIONS ON-SITE.
   ACTUATORS SHALL BE ELECTRONIC, FAST-ACTING. INSTALL NEW AIR VALVE AS REQUIRED BY MANUFACTURER (I.E. WITH REQUIRED STRAIGHT SECTIONS FOR INLET/OUTLET, ETC.). CONFIRM ALL OTHER REQUIREMENTS, PROVIDE ADDITIONAL COMPONENTS, INCLUDING ALL WIRING, TRANSFORMERS, CONTROLLERS AND ROOM INTEGRATORS, AS NECESSARY TO PROVIDE FULLY FUNCTIONAL SYSTEM. SEE DRAWINGS & SPECIFICATIONS FOR ALL REQUIREMENTS.

6. PROVIDE NEW WALL-MOUNTED VIEW MONITOR / CONTROLLER FOR LABORATORY VENTILATION SYSTEM ("VM"). CONFIRM ALL OTHER REQUIREMENTS, PROVIDE ADDITIONAL COMPONENTS, INCLUDING ALL WIRING, TRANSFORMERS AND CONTROLLERS, AS NECESSARY TO PROVIDE FULLY FUNCTIONAL SYSTEM. REMOVE AND REPLACE EXISTING WALL-MOUNTED THERMOSTATS WITH NEW ELECTRONIC TEMPERATURE THERMOSTAT ("T") COMPLETE WITH TEMPERATURE SENSOR, HUMIDITY SENSOR, DISPLAY, LABORATORY VENTILATION OVERRIDE AND SET-POINT ADJUSTMENT. THERMOSTAT TO BE COMPATIBLE WITH NEW AIR VALVE CONTROLLERS AND CONTROL PACKAGE. MANUFACTURER TO CONFIRM ALL OTHER REQUIREMENTS. PROVIDE ADDITIONAL COMPONENTS AS NECESSARY TO PROVIDE FUNCTIONAL SYSTEM.

7. EXISTING BELIMO MODULATING ZONE REHEAT CONTROL VALVE TO REMAIN, TO BE CONTROLLED VIA THE RESPECTIVE AIR VALVE CONTROLLER. PROVIDE ALL WIRING NECESSARY BETWEEN AIR VALVE CONTROLLER AND CONTROL VALVE. MANUFACTURER TO CONFIRM ALL OTHER REQUIREMENTS. PROVIDE ADDITIONAL COMPONENTS AS NECESSARY TO PROVIDE FUNCTIONAL SYSTEM.

8. PROVIDE NEW ROOM OCCUPANCY FOR EACH ENTRY DOORWAY INTO ROOM. CONNECT INTO LABORATORY VENTILATION SYSTEM. CONFIRM ALL OTHER REQUIREMENTS, PROVIDE ADDITIONAL COMPONENTS, INCLUDING ALL WIRING, TRANSFORMERS, CONTROLLERS AND ROOM INTEGRATORS, AS NECESSARY TO PROVIDE FULLY FUNCTIONAL SYSTEM. SEE DRAWINGS & SPECIFICATIONS FOR ALL REQUIREMENTS.

9. ALL ELECTRICAL (120V) WIRING, INCLUDING CIRCUIT BREAKERS, SHALL BE PROVIDED (I.E. SUPPLIED & INSTALLED) BY THE CONTRACTOR. ALL LOW VOLTAGE (24V) WIRING, INCLUDING 120/24VDC CONTROL TRANSFORMERS, SHALL BE PROVIDED (I.E. SUPPLIED & INSTALLED) BY THE CONTRACTOR. ALL NETWORK/COMMUNICATION WIRING, INCLUDING DATA CONNECTIONS & DROPS, SHALL BE PROVIDED (I.E. SUPPLIED & INSTALLED) BY THE CONTRACTOR.

01 / H3 — LEVEL 4 VENTILATION LAYOUT
SCALE: 1:100

Plan annotations (partial)

DUCT TO EXISTING EXTRACTION ARMS. CONFIRM EXACT CONFIGURATION ON-SITE.

(e)1800 L. ACTIVE PLENUM SIZE 200x200
(e)2100 L. ACTIVE PLENUM SIZE 250x200
(e)2100 L. ACTIVE PLENUM SIZE 250x200
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(e)2100 L. ACTIVE PLENUM SIZE 250x200

Key Plan

MST – MAIN SERVICE TOWER
VESC – VULCAN EAST SERVICE CORRIDOR

1	ISSUED FOR TENDER	JUL 24 2020
revisions		date

project / projet

ELLIS LABORATORY VENTILATION UPGRADES BEDFORD INSTITUTE OF OCEANOGRAPHY DARTMOUTH, N.S.

drawing / dessin

LEVEL 4 VENTILATION PLAN

designed D.G.I.		conçu
date	JULY 24, 2020	
drawn D.G.I.		dessiné
date	JULY 24, 2020	
approved D.G.I.		approuvé
date	JULY 24, 2020	
Tender		Soumission
PWGSC Project Manager	Administrateur de projets TPSGC	
project number		no. du projet

project number: **R.082149.003**

drawing no. / no. du dessin

H3