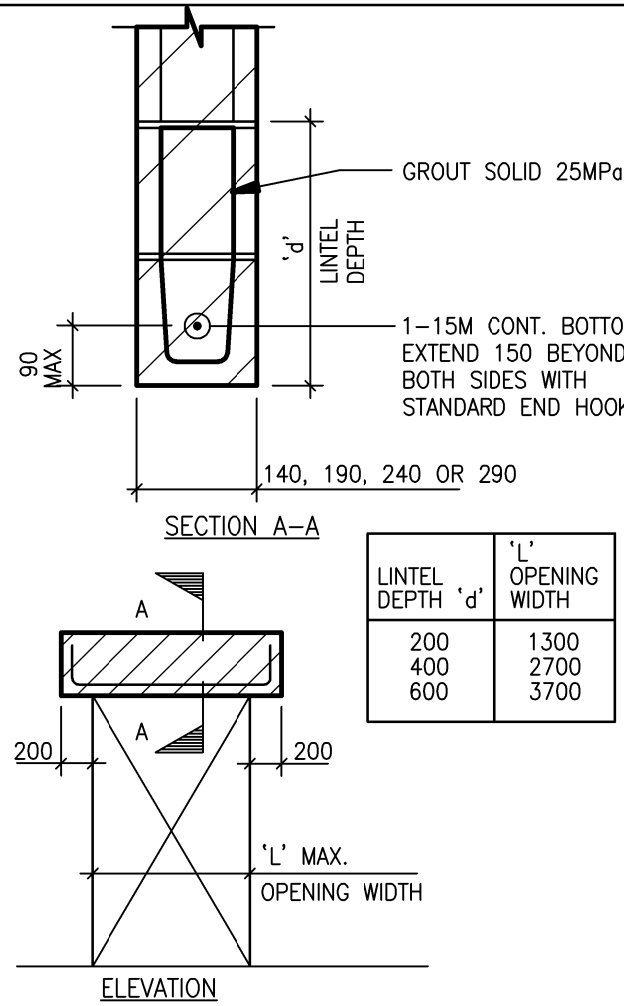


LINTEL SCHEDULES

GENERAL PURPOSE LINTELS

STEEL LINTELS		
MAXIMUM CLEAR SPAN	MATERIAL	MASONRY TYPE
1400mm	L-89 x 89 x 6.4	90 BRICK OR 90 BLOCK PER WYTHE
1800mm	L-127 x 89 x 6.4 LLV	
2200mm	L-127 x 89 x 7.9 LLV	
2800mm	L-152 x 102 x 9.5 LLV	
2000mm	2 L-89 x 64 x 6.4 LLV	140 BLOCK
1800mm	2 L-89 x 89 x 6.4	190 BLOCK
2400mm	2 L-127 x 89 x 6.4 LLV	
4200mm	S200x27 + PL 170x6	
1400mm	L-102 x 102 x 6.4 + L-127 x 102 x 6.4	240 BLOCK
3000mm	S150x19 + PL 220x6	
1200mm	S100x11 + PL 270x6	
1900mm	S150x19 + PL 270x6	
3500mm	S200x27 + PL 270x6	290 BLOCK

REINFORCED MASONRY LINTELS



CONDITIONS OF USE FOR GENERAL PURPOSE LINTEL SCHEDULE:

- | | |
|--|--|
| 1. WHERE LINTEL MARKS ARE SHOWN THIS: "L#", REFER TO SCHEDULE "LINTELS FOR IDENTIFIED OPENINGS" ON THIS DRAWING. | 8. CONNECT LINTELS DIRECTLY TO STRUCTURE WHERE INSUFFICIENT BEARING IS AVAILABLE. |
| 2. A SUITABLE LINTEL IS TO BE SUPPLIED FOR ALL MASONRY OPENINGS. | 9. LINTEL SUPPORTING EXTERIOR WYTHE OF MASONRY IN EXTERIOR WALLS SHALL BE HOT DIP GALVANIZED. |
| 3. THIS SCHEDULE IS TO BE READ IN CONJUNCTION WITH THE ARCHITECTURAL, MECHANICAL AND ELECTRICAL DRAWINGS. | 10. ALL DOUBLE ANGLE LINTELS ARE TO BE WELDED BACK-TO-BACK TOP AND BOTTOM WITH 5mm FILLET WELDS x 50mm LONG WELD AT 600mm o/c. |
| 4. THIS SCHEDULE IS TO BE USED AS A GUIDE WITH REGARD TO WALL SIZE AND OPENING WIDTH FOR ANY LINTELS NOT SPECIFICALLY NOTED ON PLAN. | 11. LINTELS IN CURVED WALLS ARE TO BE ROLLED TO REQUIRED RADIUS. |
| 5. CONCRETE BLOCK UNITS ARE HOLLOW AND UNFILLED EXCEPT FOR FIRST COURSE ABOVE LINTEL WHICH SHALL BE FILLED SOLID UNLESS NOTED OTHERWISE. | 12. MASONRY CONTROL JOINTS ARE NOT TO BE LOCATED THROUGH LINTELS. |
| 6. DO NOT SHORE LINTELS DURING WALL CONSTRUCTION. | 13. FULL HEAD JOINTS ARE REQUIRED FOR DEPTH OF LINTEL. |
| 7. PROVIDE 200mm BEARING EACH END ON 400mm LONG BY 2 COURSES DEEP OF FILLED OR SOLID MASONRY UNLESS NOTED OTHERWISE ON DRAWING. | |

LINTELS FOR IDENTIFIED OPENINGS

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NOTES FOR LINTELS FOR IDENTIFIED OPENINGS SCHEDULE:

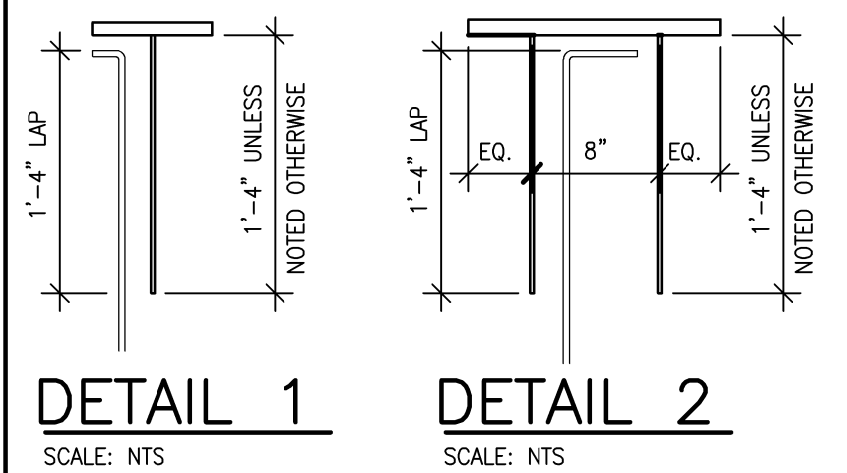
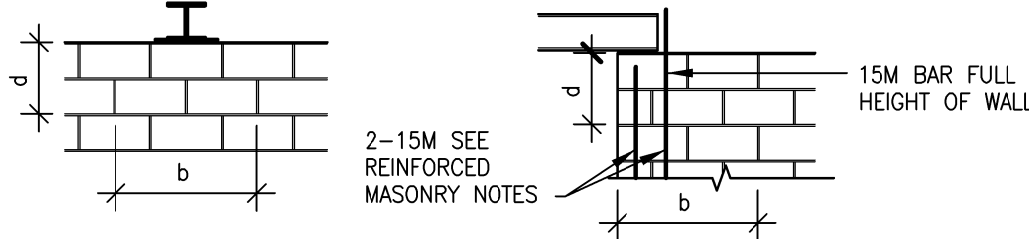
1. A SUITABLE LINTEL IS TO BE SUPPLIED FOR ALL MASONRY OPENINGS. FOR OPENINGS THROUGH MASONRY WALLS WHICH DO NOT HAVE A SPECIFIC MARK REFER TO SCHEDULE "GENERAL PURPOSE LINTELS" ON THIS DRAWING.
2. SEE PLANS FOR LINTEL MARKS.
3. LINTEL SUPPORTING EXTERIOR WYTHE OF MASONRY IN EXTERIOR WALLS SHALL BE HOT DIP GALVANIZED. SEE GENERAL PURPOSE LINTEL SCHEDULE FOR SIZE.
4. FULL HEAD JOINTS ARE REQUIRED FOR DEPTH OF MASONRY LINTEL WHEN SPECIFIED
5. GROUT FOR LINTEL TO BE 25MPa.
6. MASONRY CONTROL JOINTS ARE NOT TO BE LOCATED THROUGH MASONRY LINTELS.
7. ALL EXTERIOR LINTELS TO BE HOT-DIP GALVANIZED AFTER FABRICATION AND STRAIGHTENED TO MEET CSA S16 TOLERANCES.
8. PROVIDE 8" BEARING EACH END UNLESS NOTED OTHERWISE ON DRAWING.
9. BEARING TO BE ON 2'-0" LONG BY 2 COURSES DEEP OF FILLED MASONRY UNLESS OTHERWISE NOTED ON PLAN, DRAWING, OR BEARING PLAN SCHEDULE.

BEARING PLATE SCHEDULE

MARK	SIZE	ANCHOR SIZE	HOLD DOWN BAR	REMARKS	MINIMUM GROUTING bxd
BP1	190x190x16	1-20mm DIA. x400LG	WHEN USED AT ROOF PROVIDE 1-15M FULL HEIGHT OF WALL	DETAIL 1	600x400

NOTES:

1. ALL BEAMS AND JOISTS ARE TO BE PROVIDED WITH A BEARING PLATE. LINTELS ARE TO BE PROVIDED WITH A BEARING PLATE WHEN INDICATED ON THE DRAWINGS.
2. THE FIRST AND LAST BEARING PLATES ARE SHOWN AS THUS "BP# " ON PLAN AND ALL BEAMS AND JOISTS BETWEEN ARE TO BE PROVIDED THE SAME BEARING PLATE.
3. FILL BLOCK CORES SOLID BELOW BEARING PLATE 1'-4" LONG BY 2 COURSES DEEP UNLESS NOTED OTHERWISE.
4. CORES AT ALL HOLD DOWN BARS TO BE FILLED SOLID WITH 25MPa GROUT.
5. AT HOLD DOWN BAR SPICE LOCATIONS, LAP BARS 2'-0" MIN.
6. AT ALL HOLD DOWN BARS, PROVIDE STANDARD HOOK AT U/F OF BEARING PLATES.



GENERAL

1. GENERAL CONTRACTOR TO SITE VERIFY ALL CONDITIONS AND OR DIMENSIONS SHOWN OR IMPLIED ON THE STRUCTURAL DRAWINGS.
2. GENERAL CONTRACTOR TO CO-ORDINATE ALL STRUCTURAL DOCUMENTS AND WORK WITH ARCHITECTURAL, MECHANICAL, ELECTRICAL AND SITE SERVING DOCUMENTS AND WORK.
3. REPORT ANY DISCREPANCIES AND OR CONFLICTS IN DIMENSIONS OR DETAILS TO THE ARCHITECT FOR CLARIFICATION PRIOR TO COMMENCING THE WORK IN QUESTION.
4. PROVIDE ALL TEMPORARY NEEDLING, SHORING AND BRACING AS REQUIRED TO SAFELY COMPLETE THE WORK SHOWN ON THE STRUCTURAL DRAWINGS. SUBMIT, UPON REQUEST OF THE STRUCTURAL ENGINEER, DRAWINGS DETAILING THE TEMPORARY WORKS, SEALED SIGNED AND DATED BY A LICENSED PROFESSIONAL ENGINEER.
5. THE GENERAL CONTRACTOR IS TO NOTE THE EXISTING ROOF STRUCTURE IS 10" PRECAST CONCRETE. THE CONTRACTOR SHALL CARRY THE COST TO SCAN AND CORE DRILL ALL NEW OPENINGS REQUIRED IN THE ROOF FOR THE MECHANICAL AND ELECTRICAL SERVICES. PROVIDE A CORING PLAN SHOWING THE SIZE, SPACING AND LOCATIONS OF ALL CORED OPENINGS FOR REVIEW BY MTE PRIOR TO ANY CORES BEING COMPLETED. RELOCATE CORES AS REQUIRED TO AVOID DAMAGING THE EXISTING REINFORCING AND PRESTRESS STRANDS IN THE PRECAST PANELS.

CONCRETE AND CONCRETE REINFORCING

1. ALL CONCRETE WORK INCLUDING MATERIALS, MIXING, PLACING, FINISHING, CURING, COLD WEATHER PROTECTION, HOT WEATHER PROTECTION, FORMWORK AND RESHORING IN ACCORDANCE WITH A23.1 AND A23.3 CURRENT UNLESS NOTED OTHERWISE.
2. ALL CONCRETE REINFORCING INCLUDING MATERIALS, FABRICATION, DETAILING, LAP SPICES, PLACEMENT, FIXING AND COVER IN ACCORDANCE WITH A23.1 AND A23.3 CURRENT UNLESS NOTED OTHERWISE HERE.
3. CURE ALL SLABS ON GRADE WITH PRE-APPROVED CURING COMPOUND COMPATIBLE WITH THE PROPOSED FLOORING ADHESIVE. MAINTAIN AIR TEMPERATURE AT OR ABOVE 10°C FOR SEVEN (7) DAYS.
4. ALL SLABS TO BE LEFT EXPOSED IN THE COMPETED BUILDING TO RECEIVE TWO COATS OF A PRE-APPROVED CONCRETE SEALER IMMEDIATELY PRIOR TO TURNING THE BUILDING OVER TO THE OWNER.
5. CONCRETE PROPERTIES:

LOCATION	SPEC 28 DAY	SLUMP	AIR CONTENT	EXPOSURE CLASS
SLABS ON GRADE	25MPa	100 MAX.		N

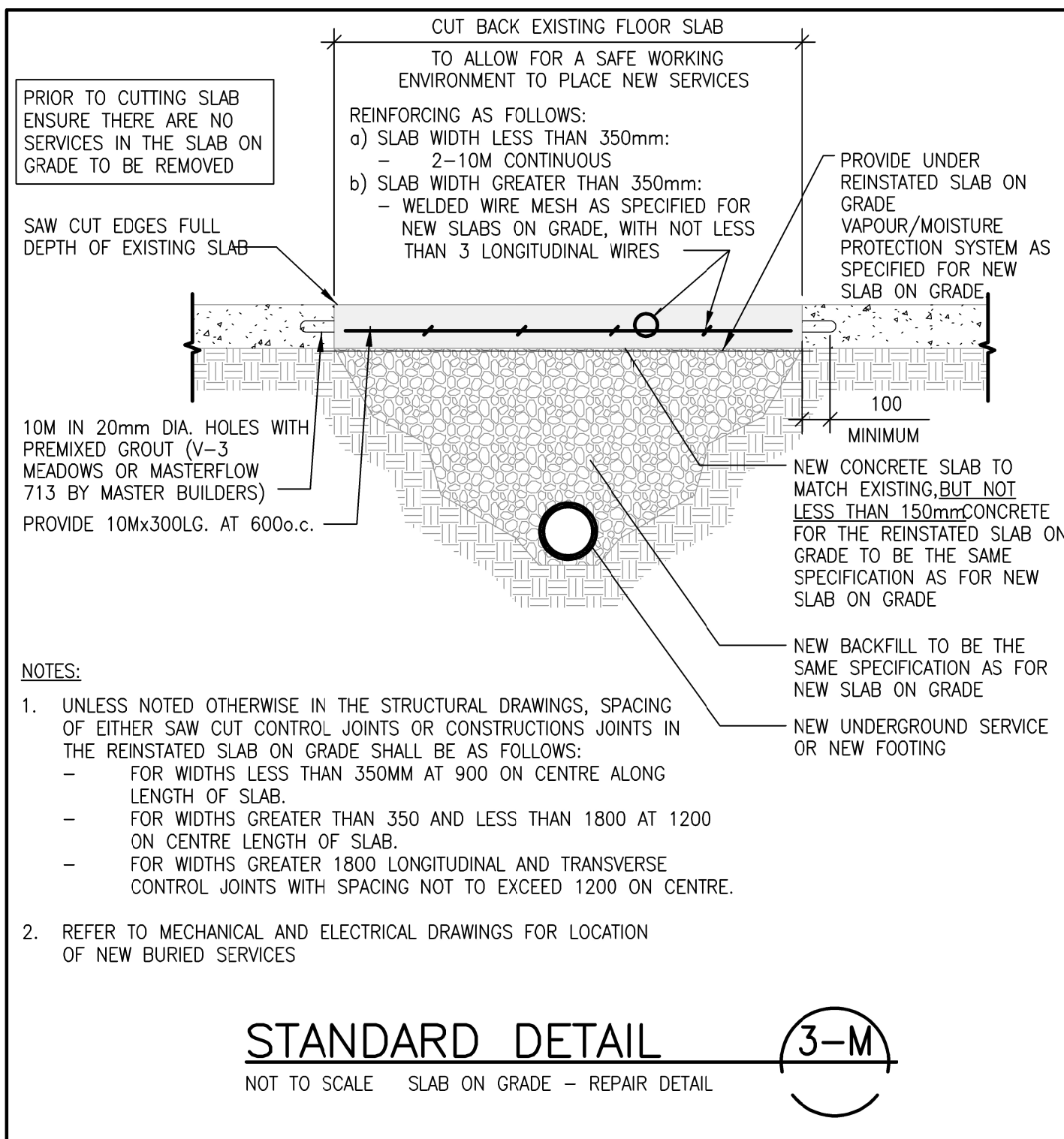
6. REINFORCING STEEL TO BE GRADE 400, WITH A MINIMUM SPECIFIED YIELD STRENGTH OF 400MPa

STRUCTURAL STEEL

1. SUBMIT FOR CONSULTANT'S REVIEW ERECTION DIAGRAMS AND FABRICATION DETAILS IN ACCORDANCE WITH THE GENERAL NOTES.
2. CONSULTANT'S REVIEW OF SHOP DRAWING DOES NOT RELEASE THE CONTRACTOR OF HIS RESPONSIBILITY FOR THE COMPLETENESS OF THE WORK NOR CO-ORDINATION WITH OTHER TRADES.
3. FABRICATION AND ERECTION OF STEEL SHALL BE IN ACCORDANCE WITH CSA S16 (CURRENT).

SHAPE	STANDARD	GRADE	MIN. YIELD STRENGTH
CANADIAN WWF & W	GSA G40.21	350W	50 Ksi
HOLLOW STRUCTURAL SECTION CLASS C	GSA G40.21	350W	50 Ksi
PLATES, CHANNELS, ANGLES	GSA G40.21	300W	50 Ksi
WWF & W NOT ROLLED IN CANADA	ASTM A572	50	50 Ksi

4. STRUCTURAL STEEL TO CONFORM TO THE FOLLOWING TABLE UNLESS NOTED OTHERWISE.
5. ALL STRUCTURAL STEEL SHALL BE SUFFICIENTLY STRAIGHT THAT VARIATIONS CANNOT BE DETERMINED WITH THE UNAIDED EYE. ALL STRUCTURAL STEEL SHALL BE THOROUGHLY CLEANED OF ALL LOOSE MILL SCALE, DIRT, OIL, OR OTHER FOREIGN MATTER BEFORE SHOP PAINTING. SHOP PAINT SHALL CONFORM TO CAN/CGSB 1.40-M89 OR CISC/CPMA STANDARD 2-75.
6. STEEL LINTELS SHALL HAVE A MINIMUM BEARING LENGTH OF 8".
7. WHERE HOT DIP GALVANIZING (HDG) IS SPECIFIED IT SHALL BE IN ACCORDANCE WITH CAN/CSA-G164-M92 (MINIMUM ZINC COATING 600 GSM).



ROOFTOP UNIT SCHEDULE			
SYMBOL	DESCRIPTION	MANUFACTURER & MODEL	REMARKS
HVAC-12.13	HEAT PUMP & GAS HEATING / ELEC (DX) COOLING ROOFTOP UNIT WITH ENERGY RECOVERY AIR FLOW: SUPPLY: 1400 CFM (860 L/S) AT 1.2" WC (0.3 KPA) ESP EXHAUST (POWERED): 1500 CFM (707 L/S) ENERGY RECOVERY: SUPPLY: 1000 CFM (471 L/S) EXHAUST: 1100 CFM (519 L/S) WINTER RECOVERY: -5F (-20C) DB / -6F (-21C) WB OAT, 79F (21C) DB / 53F (11C) WB EAT, 72.2 MBH (21.1 KW) TOTAL (60%) SUMMER RECOVERY: 88F (31C) DB / 74F (23C) WB OAT, 75F (23C) DB / 63F (17C) WB EAT, 2.3 TONS / 28.2 MBH TOTAL (8.2 KW) (69%) HEAT PUMP HEATING: 30.2 MBH (8.8 KW) AT -5F (-20C) OAT GAS HEATING: INPUT (NATURAL GAS): 120 CFH (0.94 L/S) OUTPUT: 97.2 MBH (28.4 KW) ELEC (DX) COOLING: 3.9 TONS / 47.0 MBH (13.7 KW) TOTAL, 35.2 MBH (10.3 KW) SENSIBLE	DAKIN DP5H04B	575-3-60, 171 MCA, 20 MOCP. 54"W x 103"L x 70"H (1350MM x 2575MM x 1750MM) OVERALL, 54"W x 86"L x 70"H (1350MM x 2150MM x 1750MM) CURB, 1375 LB (623 KG). PROVIDE: - PAINTED GALVANIZED EXTERIOR. - 1" (25MM) INJECTED FOAM INSULATION (R-7) C/W GALVANIZED STEEL LINER. - BOTTOM SUPPLY & RETURN CONNECTIONS. - 100% ECONOMIZER & POWERED EXHAUST FAN (DIRECT DRIVE C/W EC MOTOR). - ENERGY RECOVERY WHEEL C/W 100% BY-PASS DAMPER & 2" (50MM) MERV 8 FILTERS. - 2" (50MM) MERV 8 FILTERS & 4" (100MM) BLANK FILTER RACK. - R-32 REFRIGERANT. - HEAT PUMP / DX COOLING COIL. - STAINLESS STEEL CONDENSATE DRAIN PAN. - MODULATING INVERTER SCROLL COMPRESSORS C/W RUBBER ISOLATORS. - MODULATING HOT GAS REHEAT COIL. - SUPPLY FAN (DIRECT DRIVE C/W EC MOTOR). - GAS HEATING (MODULATING 5:1 TURNDOWN) C/W STAINLESS STEEL HEAT EXCHANGER. - HINGED ACCESS PANELS. - FLUE DISCHARGE DEFLECTOR. - LOVERED HAL GUARDS. - PHASE MONITOR PROTECTION. - DIGITAL READY CONTROLS SUITABLE FOR BAS INTEGRATION BY CONTROLS TRADE. - NON-FUSED DISCONNECT. - THRU-THE-BASE ELECTRICAL CONNECTIONS. - 24" (600MM) HIGH DOWN DISCHARGE INSULATED ROOF CURB C/W FULL PERIMETER NEOPRENE TOP GASKET.
HVAC-14	HEAT PUMP & GAS HEATING / ELEC (DX) COOLING ROOFTOP UNIT WITH ENERGY RECOVERY AIR FLOW: SUPPLY: 2400 CFM (1132 L/S) AT 1.2" WC (0.3 KPA) ESP EXHAUST (POWERED): 2500 CFM (1179 L/S) ENERGY RECOVERY: SUPPLY: 1500 CFM (707 L/S) EXHAUST: 1600 CFM (735 L/S) WINTER RECOVERY: -5F (-20C) DB / -6F (-21C) WB OAT, 79F (21C) DB / 53F (11C) WB EAT, 124.2 MBH (36.3 KW) TOTAL (80%) SUMMER RECOVERY: 88F (31C) DB / 74F (23C) WB OAT, 75F (23C) DB / 63F (17C) WB EAT, 4.1 TONS / 49.2 MBH TOTAL (14.4 KW) (79%) HEAT PUMP HEATING: 40.1 MBH (11.7 KW) AT -5F (-20C) OAT GAS HEATING: INPUT (NATURAL GAS): 300 CFH (2.35 L/S) OUTPUT: 243.0 MBH (71.1 KW) ELEC (DX) COOLING: 7.5 TONS / 90.2 MBH (26.4 KW) TOTAL, 65.0 MBH (19.0 KW) SENSIBLE	DAKIN DP5H07B	575-3-60, 24.4 MCA, 30 MOCP. 74"W x 122"L x 86"H (1850MM x 3050MM x 2150MM) OVERALL, 74"W x 100"L x 86"H (1850MM x 2500MM x 1750MM) CURB, 3071 LB (1392 KG). PROVIDE: - PAINTED GALVANIZED EXTERIOR. - 1" (25MM) INJECTED FOAM INSULATION (R-7) C/W GALVANIZED STEEL LINER. - BOTTOM SUPPLY & RETURN CONNECTIONS. - 100% ECONOMIZER & POWERED EXHAUST FAN (DIRECT DRIVE C/W EC MOTOR). - ENERGY RECOVERY WHEEL C/W 100% BY-PASS DAMPER & 2" (50MM) MERV 8 FILTERS. - 2" (50MM) MERV 8 FILTERS & 4" (100MM) BLANK FILTER RACK. - R-32 REFRIGERANT. - HEAT PUMP / DX COOLING COIL. - STAINLESS STEEL CONDENSATE DRAIN PAN. - MODULATING INVERTER SCROLL COMPRESSORS C/W RUBBER ISOLATORS. - MODULATING HOT GAS REHEAT COIL. - SUPPLY FAN (DIRECT DRIVE C/W EC MOTOR). - GAS HEATING (MODULATING 10:1 TURNDOWN) C/W STAINLESS STEEL HEAT EXCHANGER. - HINGED ACCESS PANELS. - FLUE DISCHARGE DEFLECTOR. - LOVERED HAL GUARDS. - PHASE MONITOR PROTECTION. - DIGITAL READY CONTROLS SUITABLE FOR BAS INTEGRATION BY CONTROLS TRADE. - NON-FUSED DISCONNECT. - THRU-THE-BASE ELECTRICAL CONNECTIONS. - 24" (600MM) HIGH DOWN DISCHARGE INSULATED ROOF CURB C/W FULL PERIMETER NEOPRENE TOP GASKET.
HVAC-15	HEAT PUMP & GAS HEATING / ELEC (DX) COOLING ROOFTOP UNIT WITH ENERGY RECOVERY AIR FLOW: SUPPLY: 1600 CFM (755 L/S) AT 1.2" WC (0.3 KPA) ESP EXHAUST (POWERED): 1700 CFM (802 L/S) ENERGY RECOVERY: SUPPLY: 1300 CFM (613 L/S) EXHAUST: 1400 CFM (660 L/S) WINTER RECOVERY: -5F (-20C) DB / -6F (-21C) WB OAT, 79F (21C) DB / 53F (11C) WB EAT, 85.6 MBH (25.0 KW) TOTAL (62%) SUMMER RECOVERY: 88F (31C) DB / 74F (23C) WB OAT, 75F (23C) DB / 63F (17C) WB EAT, 2.7 TONS / 33.5 MBH TOTAL (9.8 KW) (63%) HEAT PUMP HEATING: 30.7 MBH (8.9 KW) AT -5F (-20C) OAT GAS HEATING: INPUT (NATURAL GAS): 160 CFH (1.25 L/S) OUTPUT: 129.6 MBH (37.9 KW) ELEC (DX) COOLING: 5.4 TONS / 65.1 MBH (19.0 KW) TOTAL, 43.8 MBH (12.8 KW) SENSIBLE	DAKIN DP5H08B	575-3-60, 18.0 MCA, 25 MOCP. 54"W x 103"L x 70"H (1350MM x 2575MM x 1750MM) OVERALL, 54"W x 86"L x 70"H (1350MM x 2150MM x 1750MM) CURB, 1408 LB (637 KG). PROVIDE: - PAINTED GALVANIZED EXTERIOR. - 1" (25MM) INJECTED FOAM INSULATION (R-7) C/W GALVANIZED STEEL LINER. - BOTTOM SUPPLY & RETURN CONNECTIONS. - 100% ECONOMIZER & POWERED EXHAUST FAN (DIRECT DRIVE C/W EC MOTOR). - ENERGY RECOVERY WHEEL C/W 100% BY-PASS DAMPER & 2" (50MM) MERV 8 FILTERS. - 2" (50MM) MERV 8 FILTERS & 4" (100MM) BLANK FILTER RACK. - R-32 REFRIGERANT. - HEAT PUMP / DX COOLING COIL. - STAINLESS STEEL CONDENSATE DRAIN PAN. - MODULATING INVERTER SCROLL COMPRESSORS C/W RUBBER ISOLATORS. - MODULATING HOT GAS REHEAT COIL. - SUPPLY FAN (DIRECT DRIVE C/W EC MOTOR). - GAS HEATING (MODULATING 5:1 TURNDOWN) C/W STAINLESS STEEL HEAT EXCHANGER. - HINGED ACCESS PANELS. - FLUE DISCHARGE DEFLECTOR. - LOVERED HAL GUARDS. - PHASE MONITOR PROTECTION. - DIGITAL READY CONTROLS SUITABLE FOR BAS INTEGRATION BY CONTROLS TRADE. - NON-FUSED DISCONNECT. - THRU-THE-BASE ELECTRICAL CONNECTIONS. - 24" (600MM) HIGH DOWN DISCHARGE INSULATED ROOF CURB C/W FULL PERIMETER NEOPRENE TOP GASKET.
HVAC-16	HEAT PUMP & GAS HEATING / ELEC (DX) COOLING ROOFTOP UNIT WITH ENERGY RECOVERY AIR FLOW: SUPPLY: 4800 CFM (2265 L/S) AT 1.7" WC (0.4 KPA) ESP EXHAUST (POWERED): 4800 CFM (2265 L/S) ENERGY RECOVERY: SUPPLY: 1300 CFM (613 L/S) EXHAUST: 1300 CFM (613 L/S) WINTER RECOVERY: -5F (-20C) DB / -6F (-21C) WB OAT, 70F (21C) DB / 53F (11C) WB EAT, 107.2 MBH (31.3 KW) TOTAL (82%) SUMMER RECOVERY: 88F (31C) DB / 74F (23C) WB OAT, 75F (23C) DB / 63F (17C) WB EAT, 3.5 TONS / 42.7 MBH TOTAL (12.5 KW) (80%) HEAT PUMP HEATING: 59.9 MBH (17.5 KW) AT -5F (-20C) OAT GAS HEATING: INPUT (NATURAL GAS): 300 CFH (2.35 L/S) OUTPUT: 243.0 MBH (71.1 KW) ELEC (DX) COOLING: 12.0 TONS / 145.1 MBH (42.4 KW) TOTAL, 117.2 MBH (34.3 KW) SENSIBLE	DAKIN DP5H12B	208-3-60, 97.1 MCA, 125 MOCP. 74"W x 122"L x 86"H (1850MM x 3050MM x 2150MM) OVERALL, 74"W x 100"L x 86"H (1850MM x 2500MM x 1750MM) CURB, 3271 LB (1483 KG). PROVIDE: - PA

ROOFTOP UNIT SCHEDULE (CONTINUED)			
SYMBOL	DESCRIPTION	MANUFACTURER & MODEL	REMARKS
HVAC-17	GAS HEATING / ELEC (DX) COOLING ROOFTOP UNIT AIR FLOW: SUPPLY: 5800 CFM (2737 L/S) AT 1.0" WC (0.2 KPA) ESP GAS HEATING: INPUT (NATURAL GAS): 360 CFH (2.83 L/S) OUTPUT: 292.0 MBH (85.5 KW) ELEC (DX) COOLING: 12.0 TONS / 177.0 MBH (51.8 KW) TOTAL, 131.0 MBH (38.3 KW) SENSIBLE	LENNOX LG180HSM-X 15T	208-3-60, 69 MCA, 80 MOP. 91"W X 135"L X 55"H (2275MM X 3325MM X 1375MM) OVERALL, 91"W X 108"L X 55"H (2275MM X 2700MM X 1375MM) CURB, 2441 LB (1107 KG). PROVIDE: - PAINTED EXTERIOR & INTERIOR. - BOTTOM SUPPLY & RETURN CONNECTIONS. - 100% ECONOMIZER & POWERED EXHAUST FAN. - 2" (50MM) MERV 8 FILTERS. - R-454B REFRIGERANT. - DX COOLING COIL (3 STAGE). - CORROSION-RESISTANT CONDENSATE DRAIN PAN. - SCROLL COMPRESSOR C/W ISOLATORS. - SUPPLY FAN (MULTI-STAGE AIR VOLUME BELT DRIVE). - GAS HEATING (2 STAGE) C/W STAINLESS STEEL HEAT EXCHANGER. - HINGED ACCESS PANELS. - FLUE DISCHARGE DEFLECTOR. - LOWEROED HAIL GUARDS. - PHASE MONITOR PROTECTION. - DIGITAL READY CONTROLS SUITABLE FOR BAS INTEGRATION BY CONTROLS TRADING. - NON-FUSED DISCONNECT. - THRU-THE-BASE ELECTRICAL CONNECTIONS. - 2" (50MM) HIGHT DOWN DISCHARGE INSULATED ROOF CURB C/W FULL PERIMETER NEOPRENE TOP GASKET. THIS IS NOT A CURB ADAPTER FROM EX CURB TO REPLACEMENT UNIT. EX CURB TO BE REMOVED. TOP & BOTTOM DIMENSIONS OF REPLACEMENT CURB TO MATCH DIMENSIONS OF REPLACEMENT UNIT WITH SUPPLY & RETURN AIR DUCTWORK TRANSITIONS WITHIN CURB FROM EX DUCTWORK TO REPLACEMENT UNIT CONNECTIONS.

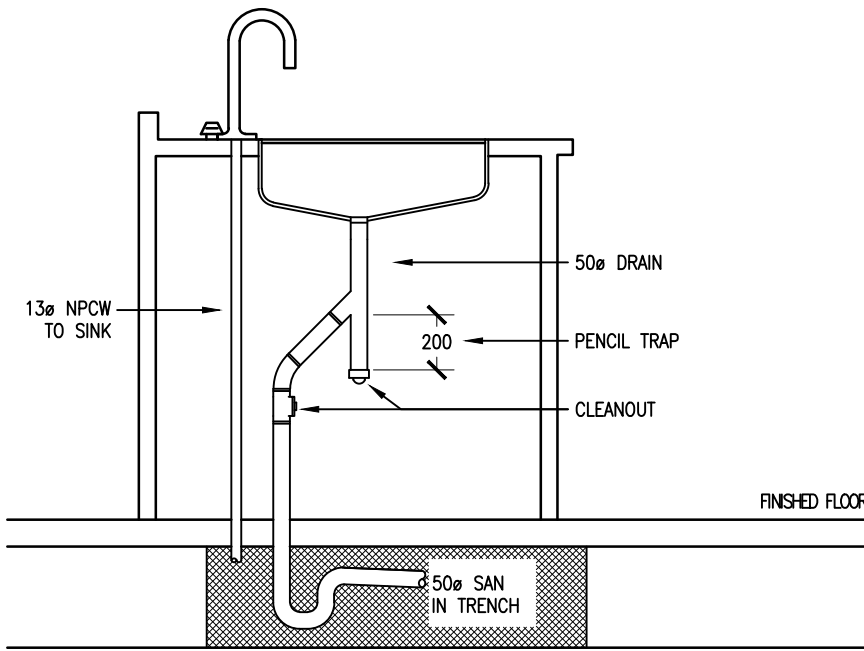
EXHAUST FAN SCHEDULE			
SYMBOL	DESCRIPTION	MANUFACTURER & MODEL	REMARKS
EF-1	ROOF-MOUNTED UPBLAST HIGH VELOCITY EXHAUST FAN AR FLOW: 1600 CFM (754 L/S) at 1.25" WC (0.31 KPA) ESP	PENNBARRY VPLUME 122-9 1X1	208-3-60, 2 HP (1.5 KW). 22" W X 22" L X 12" H (550MM X 550MM X 305MM), 445 LB (201 KG). PROVIDE: - AMCA B SPARK RESISTANT CONSTRUCTION. - STANDARD GRAY PAINT C/W AIR DRY PHENOLIC & UV PROTECTION COATING. - ALUMINUM EPOXY COATED BT-PASS & ISULATION DAMPERS. - STAINLESS STEEL HARDWARE. - ADJUSTABLE BELT DRIVE. - 45° (1125MM) CONICAL HIGH VELOCITY DISCHARGE NOZZLE. - PLENUM MIXING BOX C/W WEATHERHOOD & INLET SCREEN. - DRAIN C/W PLUG. - 18" (54MM) PLUME RISE AT 10 MPH (16 KPH). - NEMA 3R INTERNAL WIRING. - NEMA 3R NON-FUSED DISCONNECT. - WEATHER MOTOR COVER. - THERMAL OVERLOAD PROTECTION. - 24" (600 MM) HIGH INSULATED ROOF CURB C/W FULL PERIMETER NEOPRENE GASKET. - CONTROLLED BY BAS. - SET BY-PASS DAMPER TO ADMIT 810 CFM (380 L/S) O/A TO PERMIT 790 CFM (370 L/S) E/A FROM FLOOD.
EF-2,3	CEILING CABINET EXHAUST FAN AR FLOW: 200 CFM (140 L/S) at 0.3" WC (0.08 KPA) ESP	PENNBARRY ZEPHYR Z85-SC	120-1-60, 1/10 HP (77 W). PROVIDE: - GRAVITY BACKDRAFT DAMPER. - RIGHT ANGLE DISCHARGE CONFIGURATION. - ACOUSTICALLY LINED HOUSING. - UNIT-MOUNTED 120V VARIABLE SPEED CONTROLLER (FOR AIRFLOW BALANCING). - PLASTIC GRILLE. - THERMAL OVERLOAD PROTECTION. - NEOPRENE ISOLATORS. - CONTROLLED BY TIMER (PROVIDED BY ELEC TRADE).
EF-4	CEILING CABINET EXHAUST FAN AR FLOW: 100 CFM (47 L/S) at 0.3" WC (0.08 KPA) ESP	PENNBARRY ZEPHYR Z5H-SC	120-1-60, 1/10 HP (79 W). PROVIDE: - GRAVITY BACKDRAFT DAMPER. - RIGHT ANGLE DISCHARGE CONFIGURATION. - ACOUSTICALLY LINED HOUSING. - UNIT-MOUNTED 120V VARIABLE SPEED CONTROLLER (FOR AIRFLOW BALANCING). - PLASTIC GRILLE. - THERMAL OVERLOAD PROTECTION. - NEOPRENE ISOLATORS. - CONTROLLED BY OCCUPANCY (PROVIDED BY ELEC TRADE).

DIFFUSER & GRILLE SCHEDULE			
SYMBOL	DESCRIPTION	MANUFACTURER & MODEL	REMARKS
A	ADJUSTABLE SQUARE CEILING DIFFUSER	KRUEGER 1450A-F23-24X24-00-00-44	PROVIDE LAY-IN T-BAR FRAME, 24"X24" (600MM X 600MM) PANEL SIZE, WHITE.
B	SQUARE CEILING DIFFUSER	KRUEGER SH-02-F23-24X24-00-00-44	PROVIDE TYPE 2 THROW PATTERN, LAY-IN T-BAR FRAME, 24"X24" (600MM X 600MM) PANEL SIZE, WHITE.
C	EGGCRATE RETURN GRILLE	KRUEGER EGCS-F22-NONE-01-01-00-44	PROVIDE 0.5" (13MM) CORE, SURFACE-MOUNT FRAME, SCREW HOLE MOUNTING, OPPOSED BLADE DAMPER, WHITE.
D	EGGCRATE RETURN GRILLE	KRUEGER EGS-FTB-44	PROVIDE 0.5" (13MM) CORE, CHANNEL FRAME, WHITE.
E	EGGCRATE TRANSFER GRILLE	KRUEGER EGCS-F22-NONE-01-00-00-44	PROVIDE 0.5" (13MM) CORE, SURFACE-MOUNT FRAME, SCREW HOLE MOUNTING, WHITE.

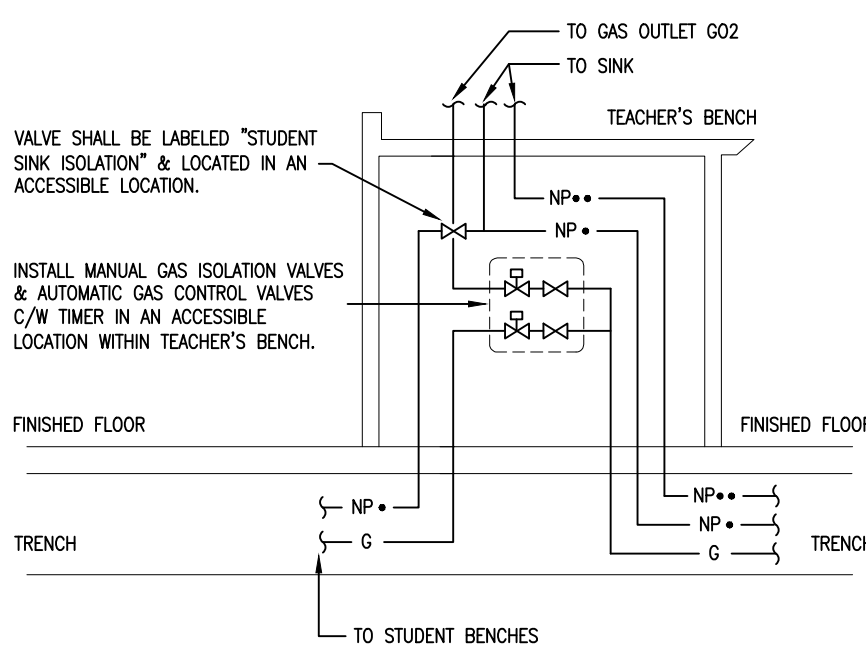
RADIANT CEILING PANEL SCHEDULE			
SYMBOL	DESCRIPTION	MANUFACTURER & MODEL	REMARKS
RP-1	CEILING-MOUNTED HEATING RADIANT PANEL HEATING: 9.4 MBH (2.8 KW) AT 0.94 GPM (0.08 L/S) & 180F (82C) SWT / 160F (71C) RWT	SIGMA SLC 24-8	234"L x 24"W (5950MM x 600MM). PROVIDE: - LINEAR ALUMINUM EXTRUDED PANELS C/W TONGUE & GROOVE JOINTS. - 0.5" (13MM) ID COPPER TUBES. - EXTRUDED ALUMINUM CHANNEL CROSS BRACES. - STANDARD WHITE FINISH.
RP-2	CEILING-MOUNTED HEATING RADIANT PANEL HEATING: 22.4 MBH (6.6 KW) AT 2.24 GPM (0.14 L/S) & 180F (82C) SWT / 160F (71C) RWT	SIGMA SLC 24-8	551"L x 24"W (1400MM x 600MM). PROVIDE: - LINEAR ALUMINUM EXTRUDED PANELS C/W TONGUE & GROOVE JOINTS. - 0.5" (13MM) ID COPPER TUBES. - EXTRUDED ALUMINUM CHANNEL CROSS BRACES. - STANDARD WHITE FINISH.
RP-3,4	CEILING-MOUNTED HEATING RADIANT PANEL HEATING: 4.5 MBH (1.3 KW) AT 0.45 GPM (0.03 L/S) & 180F (82C) SWT / 160F (71C) RWT	SIGMA SLC 24-8	112"L x 24"W (2850MM x 600MM). PROVIDE: - LINEAR ALUMINUM EXTRUDED PANELS C/W TONGUE & GROOVE JOINTS. - 0.5" (13MM) ID COPPER TUBES. - EXTRUDED ALUMINUM CHANNEL CROSS BRACES. - STANDARD WHITE FINISH.
RP-5	CEILING-MOUNTED HEATING RADIANT PANEL HEATING: 20.9 MBH (6.1 KW) AT 2.09 GPM (0.13 L/S) & 180F (82C) SWT / 160F (71C) RWT	SIGMA SLC 24-8	512"L x 24"W (1300MM x 600MM). PROVIDE: - LINEAR ALUMINUM EXTRUDED PANELS C/W TONGUE & GROOVE JOINTS. - 0.5" (13MM) ID COPPER TUBES. - EXTRUDED ALUMINUM CHANNEL CROSS BRACES. - STANDARD WHITE FINISH.
RP-6	CEILING-MOUNTED HEATING RADIANT PANEL HEATING: 12.9 MBH (3.8 KW) AT 1.29 GPM (0.08 L/S) & 180F (82C) SWT / 160F (71C) RWT	SIGMA SLC 24-8	321"L x 24"W (8150MM x 600MM). PROVIDE: - LINEAR ALUMINUM EXTRUDED PANELS C/W TONGUE & GROOVE JOINTS. - 0.5" (13MM) ID COPPER TUBES. - EXTRUDED ALUMINUM CHANNEL CROSS BRACES. - STANDARD WHITE FINISH.
RP-7	CEILING-MOUNTED HEATING RADIANT PANEL HEATING: 8.4 MBH (2.5 KW) AT 0.84 GPM (0.05 L/S) & 180F (82C) SWT / 160F (71C) RWT	SIGMA SLC 24-8	215"L x 24"W (5450MM x 600MM). PROVIDE: - LINEAR ALUMINUM EXTRUDED PANELS C/W TONGUE & GROOVE JOINTS. - 0.5" (13MM) ID COPPER TUBES. - EXTRUDED ALUMINUM CHANNEL CROSS BRACES. - STANDARD WHITE FINISH.
RP-8	CEILING-MOUNTED HEATING RADIANT PANEL HEATING: 5.0 MBH (1.5 KW) AT 0.50 GPM (0.03 L/S) & 180F (82C) SWT / 160F (71C) RWT	SIGMA SLC 24-8	120"L x 24"W (3050MM x 600MM). PROVIDE: - LINEAR ALUMINUM EXTRUDED PANELS C/W TONGUE & GROOVE JOINTS. - 0.5" (13MM) ID COPPER TUBES. - EXTRUDED ALUMINUM CHANNEL CROSS BRACES. - STANDARD WHITE FINISH.
RP-9	CEILING-MOUNTED HEATING RADIANT PANEL HEATING: 8.9 MBH (2.6 KW) AT 0.89 GPM (0.06 L/S) & 180F (82C) SWT / 160F (71C) RWT	SIGMA SLC 24-8	227"L x 24"W (5775MM x 600MM). PROVIDE: - LINEAR ALUMINUM EXTRUDED PANELS C/W TONGUE & GROOVE JOINTS. - 0.5" (13MM) ID COPPER TUBES. - EXTRUDED ALUMINUM CHANNEL CROSS BRACES. - STANDARD WHITE FINISH.
RP-10,11	CEILING-MOUNTED HEATING RADIANT PANEL HEATING: 3.9 MBH (1.2 KW) AT 0.39 GPM (0.03 L/S) & 180F (82C) SWT / 160F (71C) RWT	SIGMA SLC 12-4	185"L x 12"W (4700MM x 300MM). PROVIDE: - LINEAR ALUMINUM EXTRUDED PANELS C/W TONGUE & GROOVE JOINTS. - 0.5" (13MM) ID COPPER TUBES. - EXTRUDED ALUMINUM CHANNEL CROSS BRACES. - STANDARD WHITE FINISH.
RP-12	CEILING-MOUNTED HEATING RADIANT PANEL HEATING: 23.4 MBH (6.9 KW) AT 2.34 GPM (0.15 L/S) & 180F (82C) SWT / 160F (71C) RWT	SIGMA SLC 24-8	575"L x 24"W (14600MM x 600MM). PROVIDE: - LINEAR ALUMINUM EXTRUDED PANELS C/W TONGUE & GROOVE JOINTS. - 0.5" (13MM) ID COPPER TUBES. - EXTRUDED ALUMINUM CHANNEL CROSS BRACES. - STANDARD WHITE FINISH.

WT DAMPER SCHEDULE (HVAC-16)				
ZONE	SPACES SERVED	SIZE (MM)	AIRFLOW (L/S)	
			DESIGN	BALANCING
A1	201 ACE LIFESKILLS CLASSROOM 201A LIFESKILLS SERVTRY	500X400	880	610
A2	203 ACE DEV ED CLASSROOM 203A VESTIBULE 203C QUIET ROOM 203D QUIET ROOM	600X400	1025	710
A3	205 ACE OFFICE	250X350	220	155
A4	207 RESOURCE ROOM	350X350	410	285
A5	204A SCIENCE OFFICE	300X350	190	130
A6	802 CORRIDOR	350X400	540	375
AB	BY-PASS	850X500	-	-

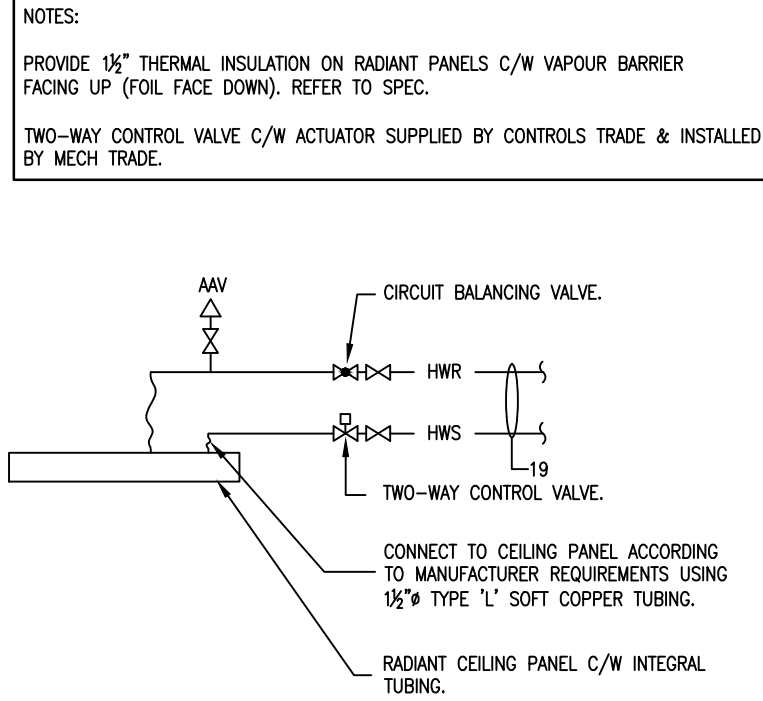
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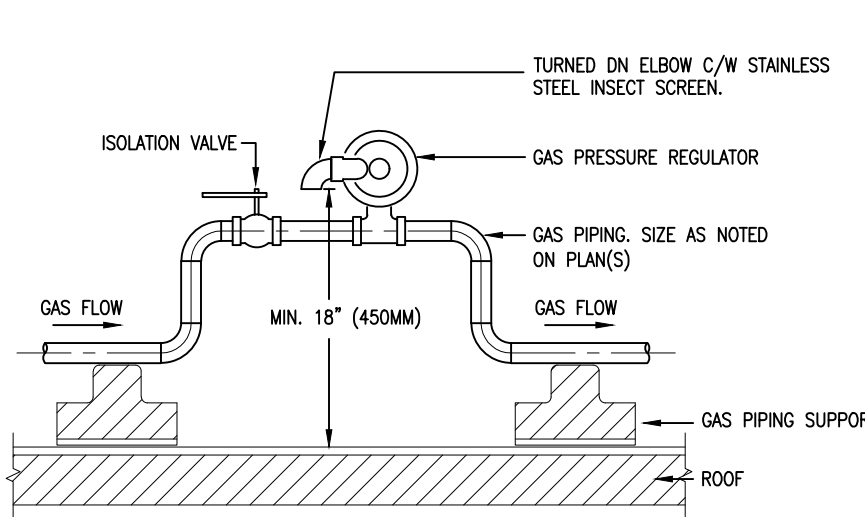
PENCIL TRAP DETAIL
SCALE: NTS



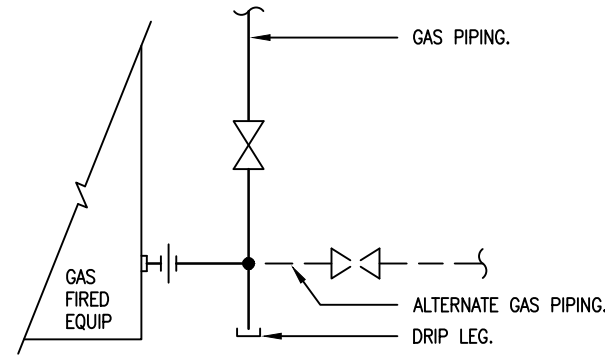
TEACHER'S BENCH PIPING DETAIL
SCALE: NTS



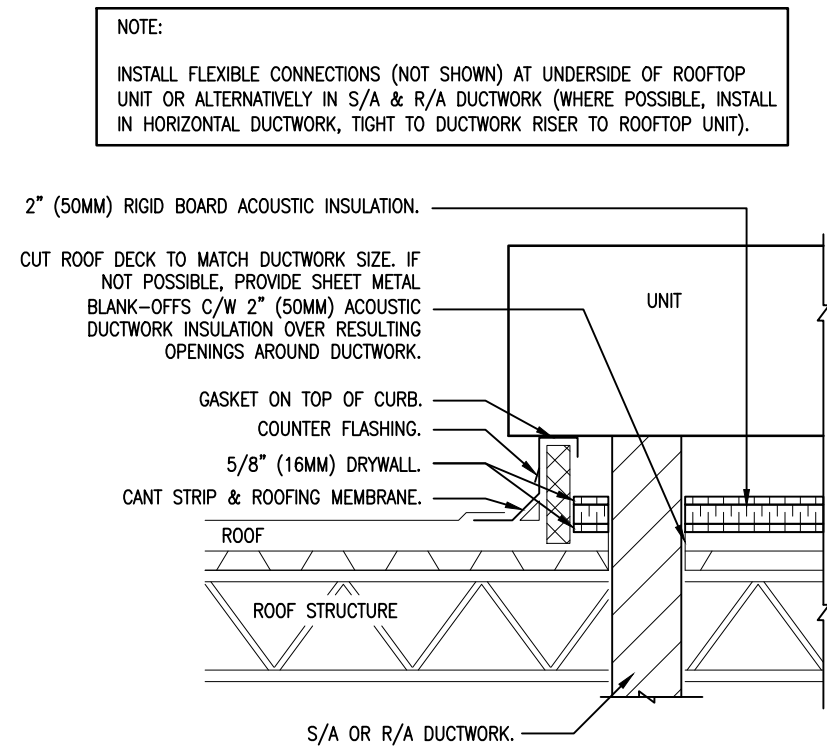
RADIANT CEILING PANEL PIPING DETAIL
SCALE: NTS



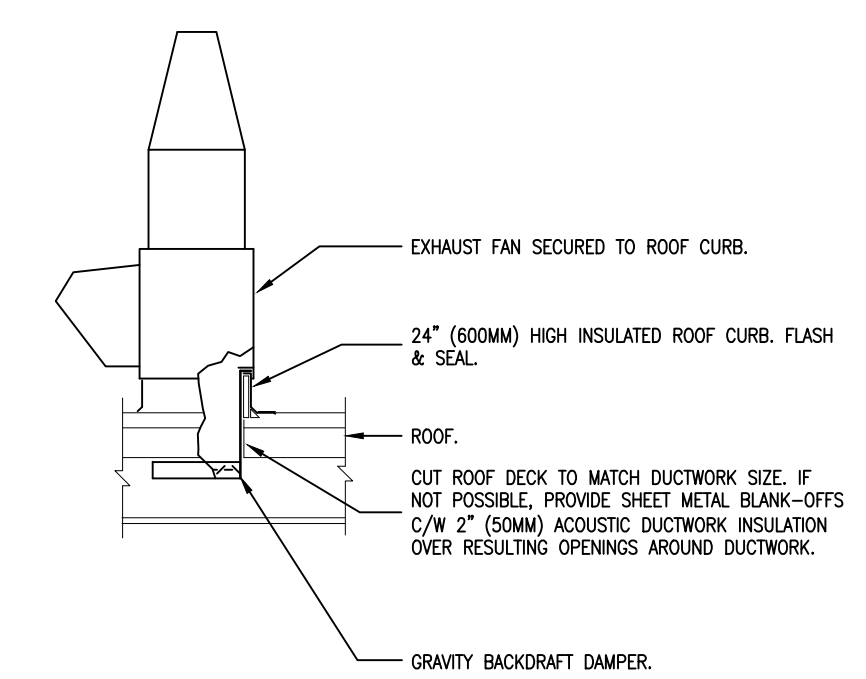
ROOF-MOUNTED GAS PRESSURE REGULATOR DETAIL
SCALE: NTS



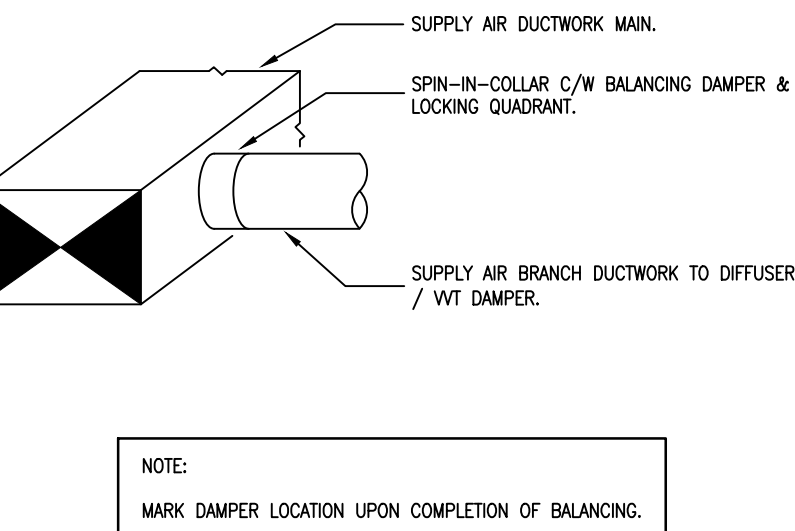
GAS CONNECTION DETAIL
SCALE: NTS



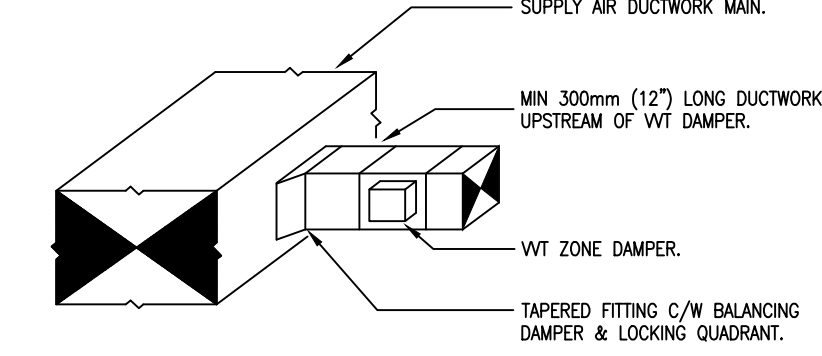
ROOFTOP UNIT DETAIL
SCALE: NTS



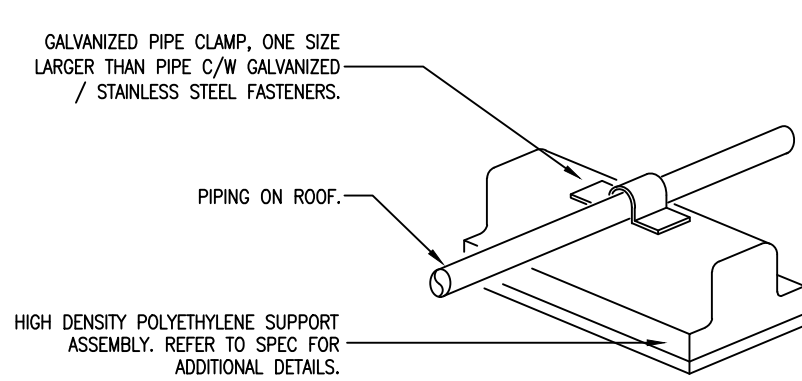
ROOF-MOUNTED EXHAUST FAN DETAIL
SCALE: NTS



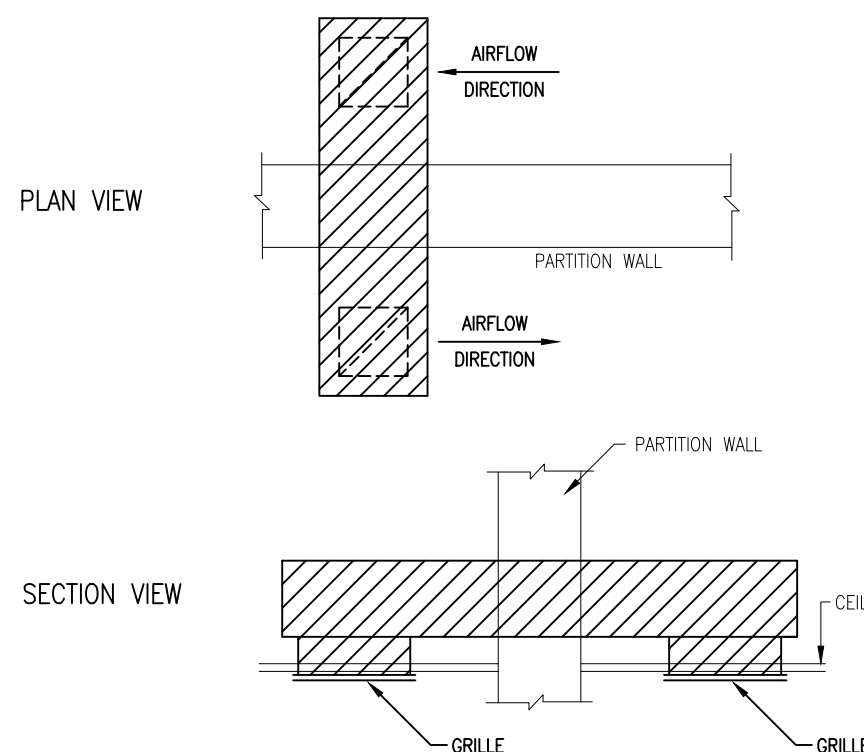
BRANCH TAKE-OFF DETAIL
SCALE: NTS



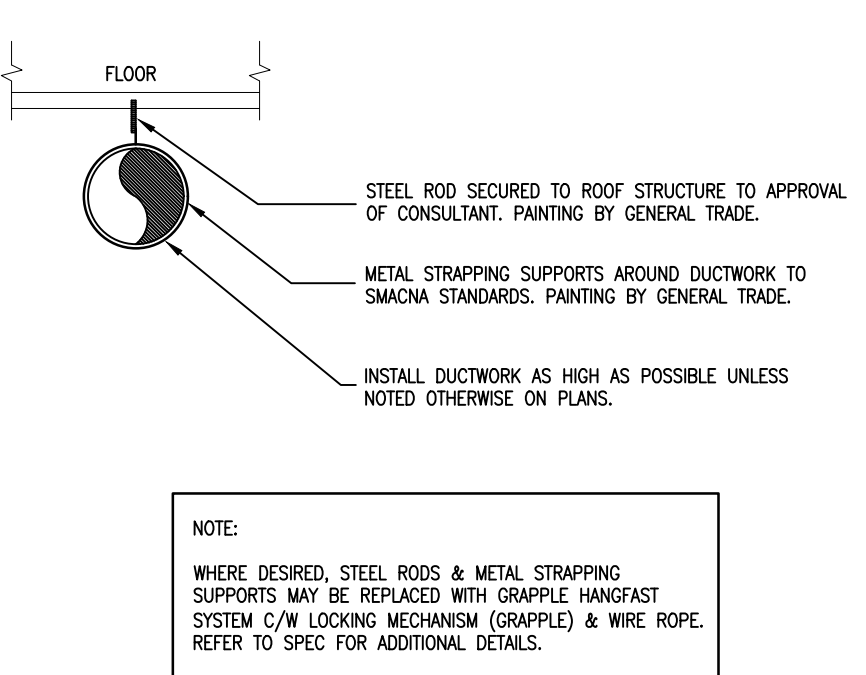
VVT DAMPER DETAIL
SCALE: NTS



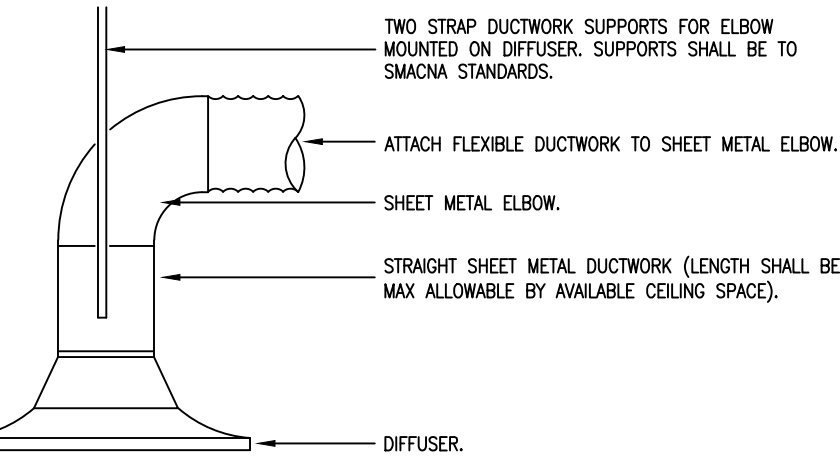
PIPING ROOF SUPPORT DETAIL
SCALE: NTS



TRANSFER DUCT DETAIL
SCALE: NTS



SPIRAL DUCT SUPPORT DETAIL
SCALE: NTS



ROUND NECK DIFFUSER DETAIL
SCALE: NTS



MNE Engineering Inc.
1206 Snyder's Rd W. Baden, ON N3A 1A4
Kitchener, Ontario N2C 2G5
(519) 894-8498
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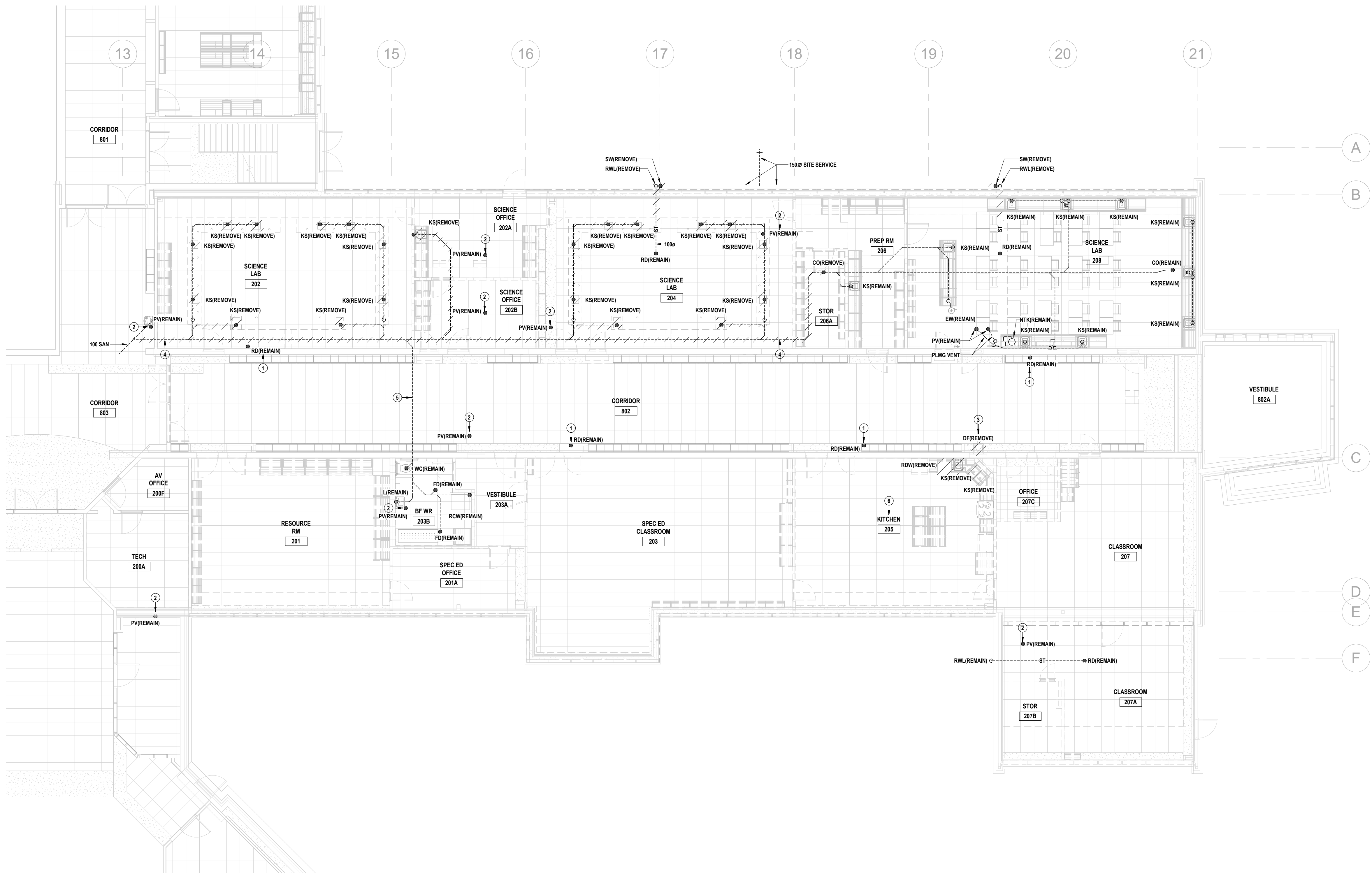
Project No. 25004

Drawn By: J.S.

Checked By: K.K.

DETAILS

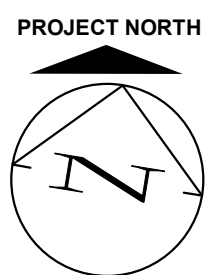
M1.3



2 GROUND FLOOR DRAINAGE DEMOLITION PLAN
M2.1 SCALE: 1"=10'

DRAWING NOTES

- 1 CONNECTION OF ROOF DRAIN TO STORM SYSTEM NOT SHOWN.
- 2 CONNECTION OF PLUMBING VENT TO SANITARY SYSTEM NOT SHOWN.
- 3 REMOVE DRINKING FOUNTAIN & TURN OVER TO OWNER.
- 4 EXACT LOCATION OF UNDERGROUND SANITARY PIPING IS UNKNOWN.
- 5 EXACT LOCATION WHERE BF WR 203B UNDERGROUND SANITARY PIPING CONNECTS TO SANITARY SYSTEM IS UNKNOWN.
- 6 EXACT LOCATION WHERE KITCHEN 205 UNDERGROUND SANITARY PIPING CONNECTS TO SANITARY SYSTEM IS UNKNOWN. REMOVE ALL ACCESSIBLE REDUNDANT PIPING & ENSURE PIPING IS CAPPED IF IT WILL REMAIN CONNECTED TO SANITARY SYSTEM.



THIS AREA OF WORK CONTAINS ASBESTOS CONTAINING MATERIALS (ACM). ALL CONTRACTORS SHALL REFER TO THE ASBESTOS AUDIT AND SECTION 01 35 43, HAZARDOUS MATERIALS FOR APPROPRIATE PROTOCOLS THAT MUST BE FOLLOWED, REGARDLESS OF ABATEMENT OPERATIONS BEING CONDUCTED OR NOT.



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22 Kennedy Road, Suite 101
Kitchener, Ontario N3C 2S5
(519) 894-9408
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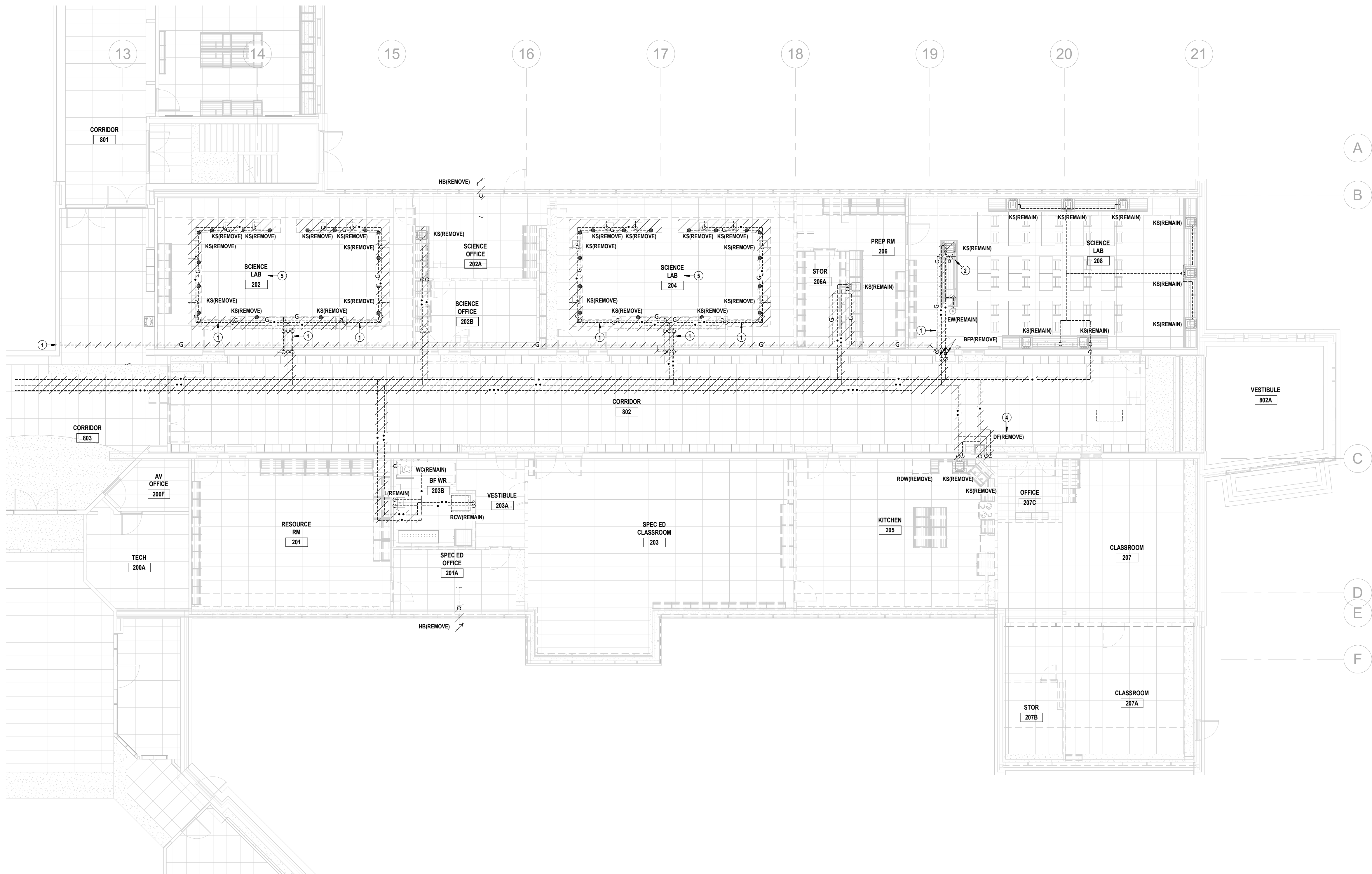
Project No.:
25004

Drawn By:
J.S.S.

Checked By:
K.K.

GROUND FLOOR DRAINAGE DEMOLITION PLAN

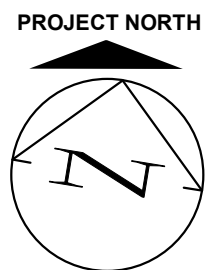
M2.1



1 GROUND FLOOR DOMESTIC WATER DEMOLITION PLAN
M2.2 SCALE: 1:100

DRAWING NOTES

- 1 REMOVE GAS PIPING BACK TO MAIN IN BOILER ROOM & CAP.
- 2 PIPING ROUTED UNDERGROUND WITHIN TRENCH.
- 3 TEACHER'S BENCH GAS CONTROLS C/W VALVE, ETC TO REMAIN.
- 4 REMOVE DRINKING FOUNTAIN & TURN OVER TO OWNER.
- 5 REMOVE GAS CONTROLS C/W VALVE, ETC AT TEACHER'S BENCH. REMOVE ALL GAS OUTLETS AT TEACHER'S & STUDENT BENCHES.



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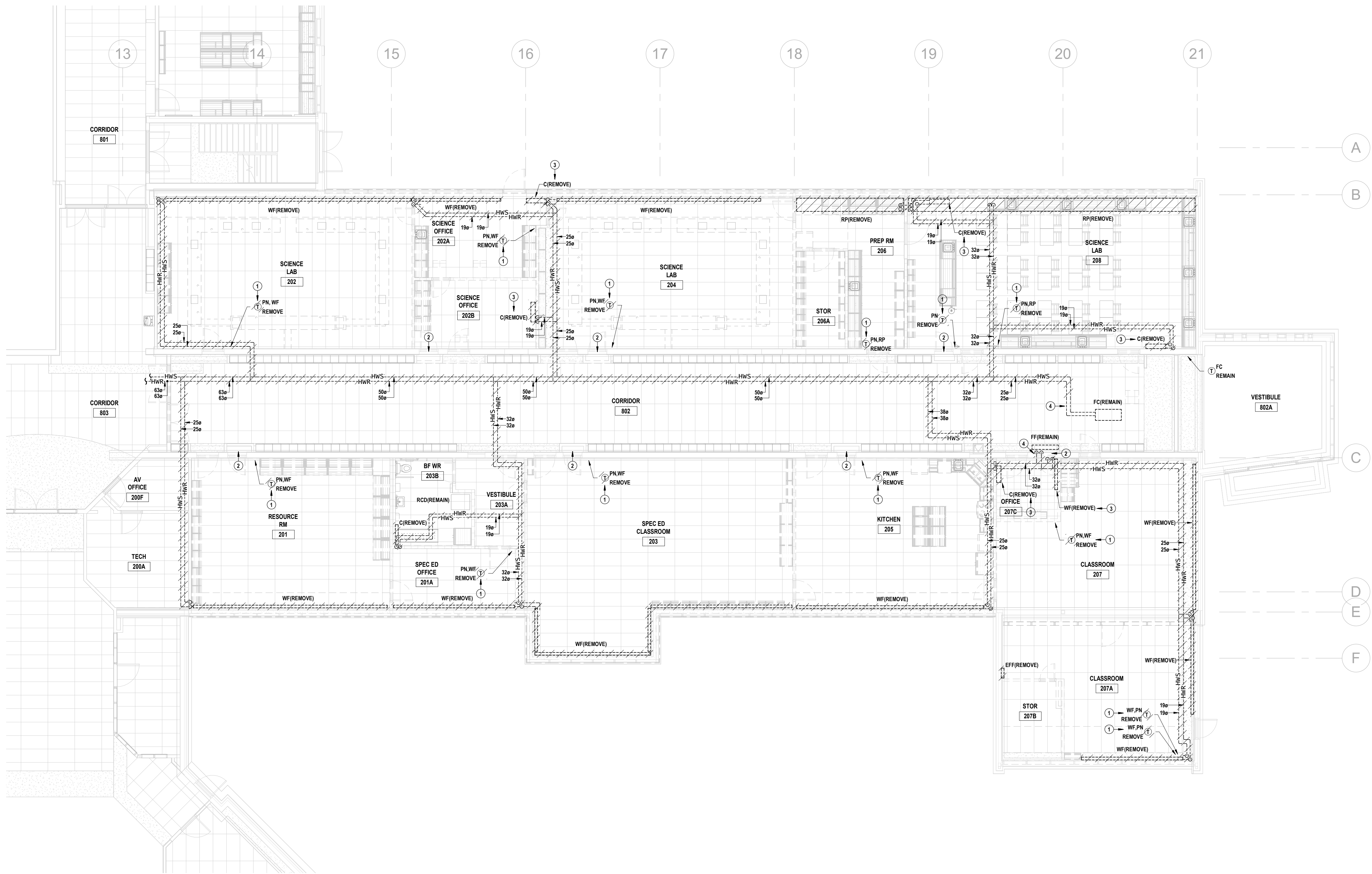
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GROUND FLOOR DOMESTIC WATER DEMOLITION
PLAN

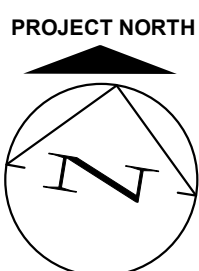
M2.2



1 GROUND FLOOR HEATING WATER DEMOLITION PLAN
M2.3 SCALE: 1:100

DRAWING NOTES

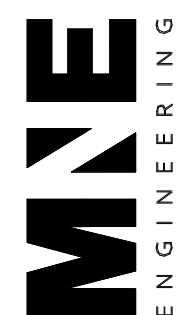
- 1 REMOVE PNEUMATIC THERMOSTAT & ASSOCIATED CONTROL VALVE C/W ALL PNEUMATIC TUBING, ETC. CAP TUBING AT MAIN.
- 2 REMOVE REDUNDANT IN-FLOOR HEATING PIPING, ETC. LOCATED IN CLOSET TO BELOW FLOOR.
- 3 REMOVE HEATER CONTROLS C/W ALL WIRING, ETC.
- 4 EXISTING FAN COIL / FORCE FLOW HEATER (AS APPLICABLE) HEATING WATER VALVING TO REMAIN.



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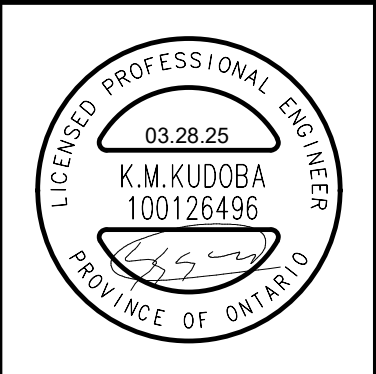
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GROUND FLOOR HEATING WATER DEMOLITION PLAN

M2.3



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GROUND FLOOR DUCTWORK DEMOLITION PLAN

M2.4

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DRAWING NOTES

- ① → REMOVE REDUNDANT UNDERGROUND TRANSITE PIPING.
- ② → TEACHER'S BENCH EXHAUST AIR DUCTWORK ROUTED BELOW FLOOR.
- ③ → REMOVE CEILING FAN C/W CONTROLS & TURN OVER TO OWNER.
- ④ → REMOVE EXHAUST FAN CONTROLS C/W ALL WIRING, ETC.
- ⑤ → REMOVE & TEMPORARILY STORE DIFFUSER / GRILLE FOR REINSTALLATION IN REPLACEMENT CEILING.





- DRAWING NOTES**
- ➔ REMOVE EXHAUST FAN CONTROLS C/W ALL WIRING, ETC.
 - ➔ GAS PIPING FROM GAS METER STATION ON GRADE.
 - ➔ REMOVE ROOFTOP UNIT CONTROLS AS REQUIRED TO SUIT REPLACEMENT UNIT.
 - ➔ REFER TO REPLACEMENT ROOFTOP UNIT SCHEDULE FOR REPLACEMENT CURB REQUIREMENTS.

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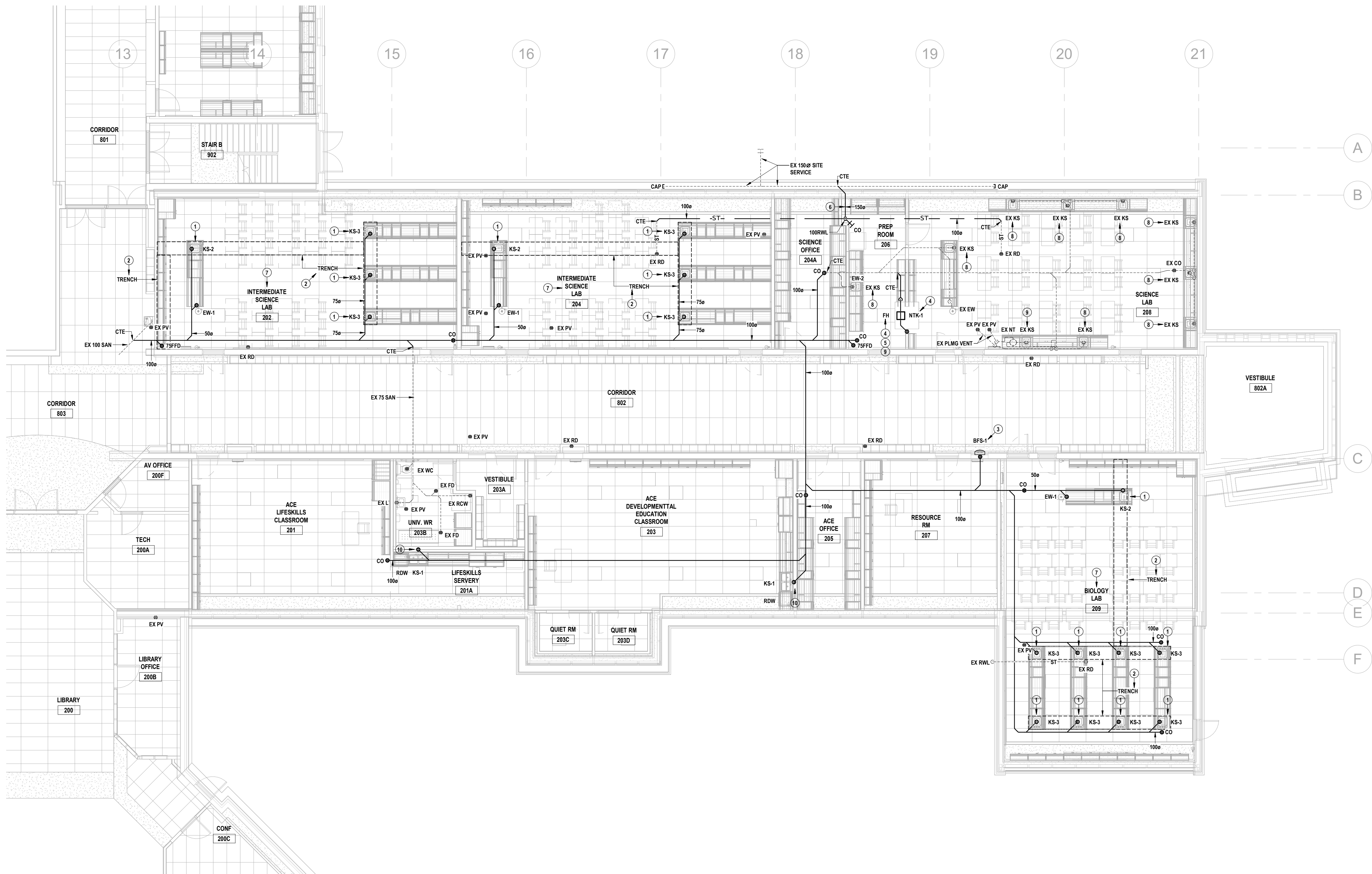
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ROOF MECHANICAL DEMOLITION PLAN

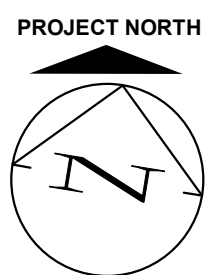
M2.5



1 GROUND FLOOR DRAINAGE RENOVATION PLAN
M3.1 SCALE: 1"=10'

DRAWING NOTES

- 1 PROVIDE PENCIL TRAP BELOW SINK AS PER DETAIL. NOTE, PENCIL TRAP IS NOT A REPLACEMENT FOR A STANDARD TRAP REQUIRED BY CODE.
- 2 TRENCH PROVIDED BY GENERAL TRADES.
- 3 INSTALL BOTTLE FILL STATION AT LOCATION OF REMOVED DRINKING FOUNTAIN. PROVIDE STAINLESS STEEL SHEET METAL AS REQUIRED TO COVER OPENING LEFT BY REMOVED DRINKING FOUNTAIN THAT REPLACEMENT BOTTLE FILL STATION DOESN'T COVER.
- 4 PROVIDE ACID RESISTANT SANITARY PIPING FROM SINK INTEGRAL TO FUME HOOD TO NEUTRALIZING TANK & FROM NEUTRALIZING TANK TO UNDERGROUND CONNECTION TO EX SANITARY PIPING. PROVIDE ACID RESISTANT VENT PIPING FOR NEUTRALIZING TANK AS PER CODE TERMINATING THROUGH ROOF.
- 5 INSTALL MANUFACTURER APPROVED FLEXIBLE PIPING BETWEEN FUME HOOD SINK & SANITARY PIPING.
- 6 THIS SECTION OF STORM PIPING TO BE ROUTED UNDERGROUND.
- 7 PROVIDE SIGNAGE FOR ALL SINKS IN THIS ROOM TO READ 'SINKS IN THIS CLASSROOM ARE NOT SUITABLE FOR ACID WASTE DISPOSAL'.
- 8 PROVIDE SIGNAGE FOR THIS SINK TO READ 'THIS SINK IS NOT SUITABLE FOR ACID WASTE DISPOSAL'.
- 9 PROVIDE SIGNAGE FOR THIS SINK TO READ 'ONLY THIS SINK TO BE USED FOR ACID WASTE DISPOSAL'.
- 10 PROVIDE Y-FITTING ON INLET SIDE OF SINK TRAP & USE FLEX HOSE TO CONNECT IT TO RESIDENTIAL DISHWASHER WITHIN MILLWORK.



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GROUND FLOOR DRAINAGE RENOVATION PLAN

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M3.1



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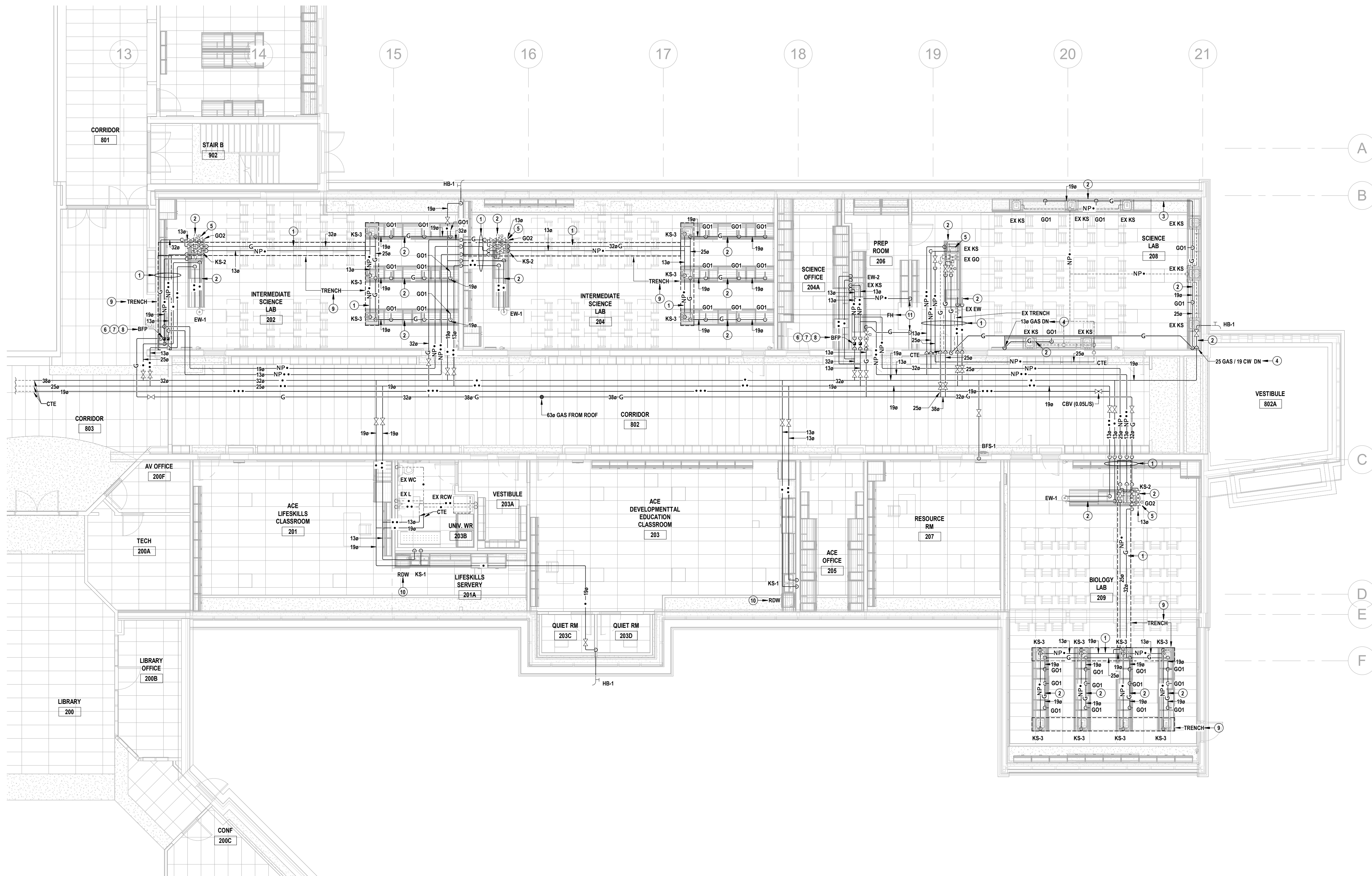
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GROUND FLOOR DOMESTIC WATER RENOVATION
PLAN

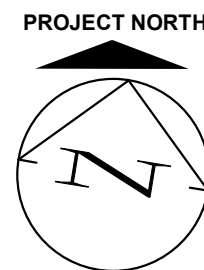
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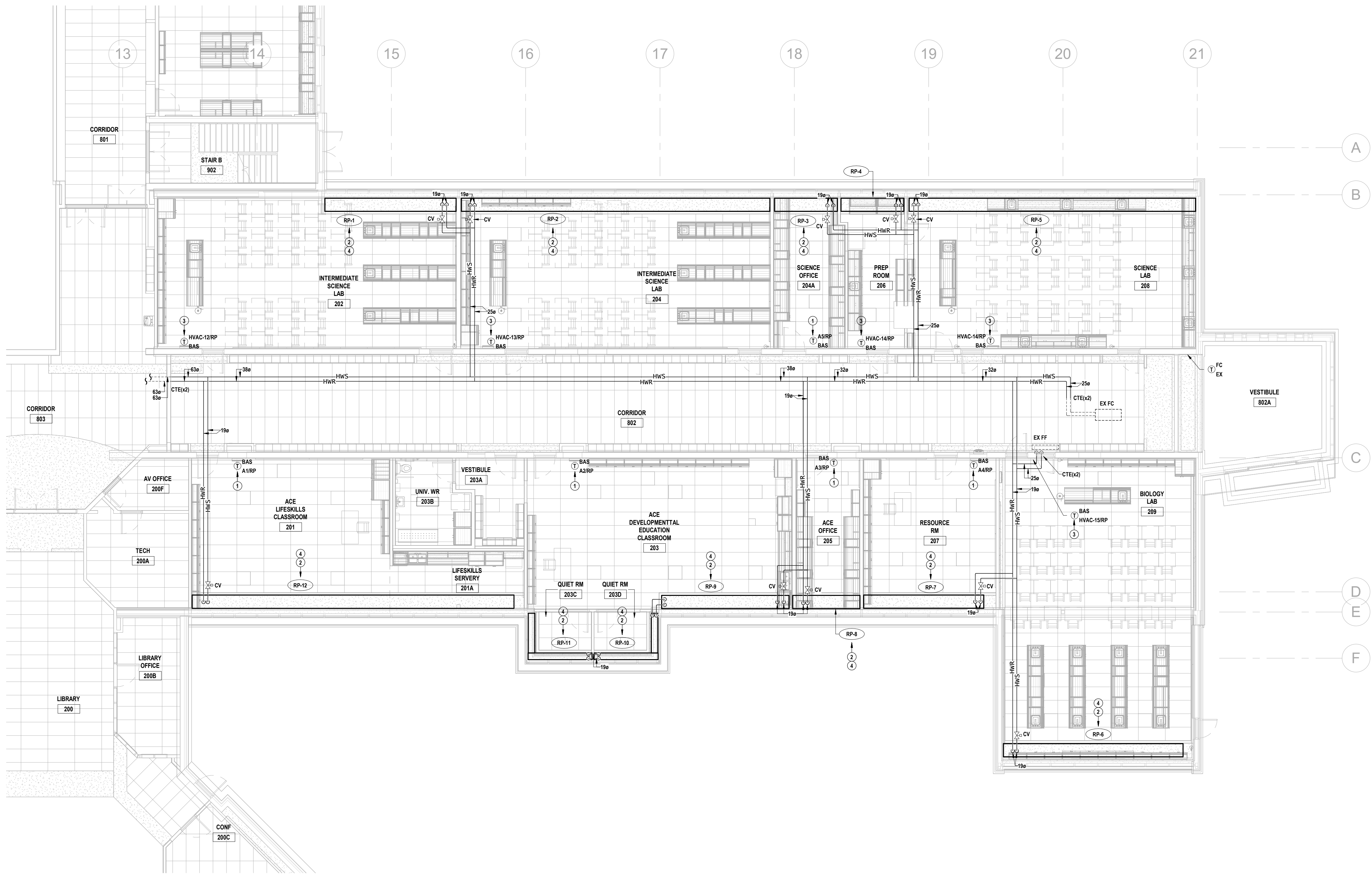
1 GROUND FLOOR DOMESTIC WATER RENOVATION PLAN
M3.2 SCALE: 1:100

DRAWING NOTES

- PIPING ROUTED UNDERGROUND WITHIN TRENCH.
- PIPING ROUTED WITH MILLWORK.
- PIPING ROUTED AT LOW LEVEL WITHIN PIPING ENCLOSURE PROVIDED BY GENERAL TRADES.
- PIPING ROUTED TO LOW LEVEL WITHIN PIPING ENCLOSURE PROVIDED BY GENERAL TRADES.
- INSTALL WATER & GAS PIPING C/W VALVING, GAS CONTROLS, ETC AS PER DETAIL.
- LOCATE BACKFLOW PREVENTERS & GAS VALVING C/W CONTROLS, ETC IN CLOSET / MILLWORK.
- PROVIDE WATTS U-009M2GT-S (25MM / 32MM) COLD WATER BACKFLOW PREVENTER C/W ISOLATION VALVES, STRAINER, UNIONS & AIR GAP (909AGC), INSTALL & TEST AS PER CODE. MOUNT CENTRELINE BETWEEN 750MM & 1500 MM ABOVE FLOOR.
- PROVIDE WATTS U-009QT-S (13MM) HOT WATER BACKFLOW PREVENTER C/W ISOLATION VALVES, STRAINER, UNIONS & AIR GAP (909AGA), INSTALL & TEST AS PER CODE. MOUNT CENTRELINE BETWEEN 750MM & 1500 MM ABOVE FLOOR.
- TRENCH PROVIDED BY GENERAL TRADES.
- PROVIDE 13MM VALVED HOT WATER PIPING FROM SINK TO RESIDENTIAL DISHWASHER.
- PROVIDE COLD WATER & GAS PIPING CONNECTIONS TO FUME HOOD SINK & GAS OUTLET, IF PERMISSIBLE, USE MANUFACTURER APPROVED FLEXIBLE PIPING.



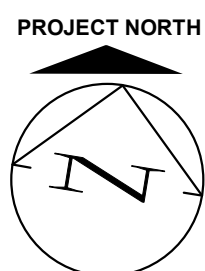
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1 GROUND FLOOR HEATING WATER RENOVATION PLAN
M3.3 SCALE: 1:100

DRAWING NOTES

- 1 ROOFTOP UNIT, VVT DAMPERS & RADIANT PANEL CONTROL VALVES TO BE CONTROLLED BY BAS.
- 2 INSTALL RADIANT PANEL SECURELY FROM STRUCTURE AS PER MANUFACTURER REQUIREMENTS. REFER TO DETAIL.
- 3 ROOFTOP UNIT & RADIANT PANEL CONTROL VALVE TO BE CONTROLLED BY BAS.
- 4 PROVIDE HEATING WATER VALVING AS PER DETAIL.



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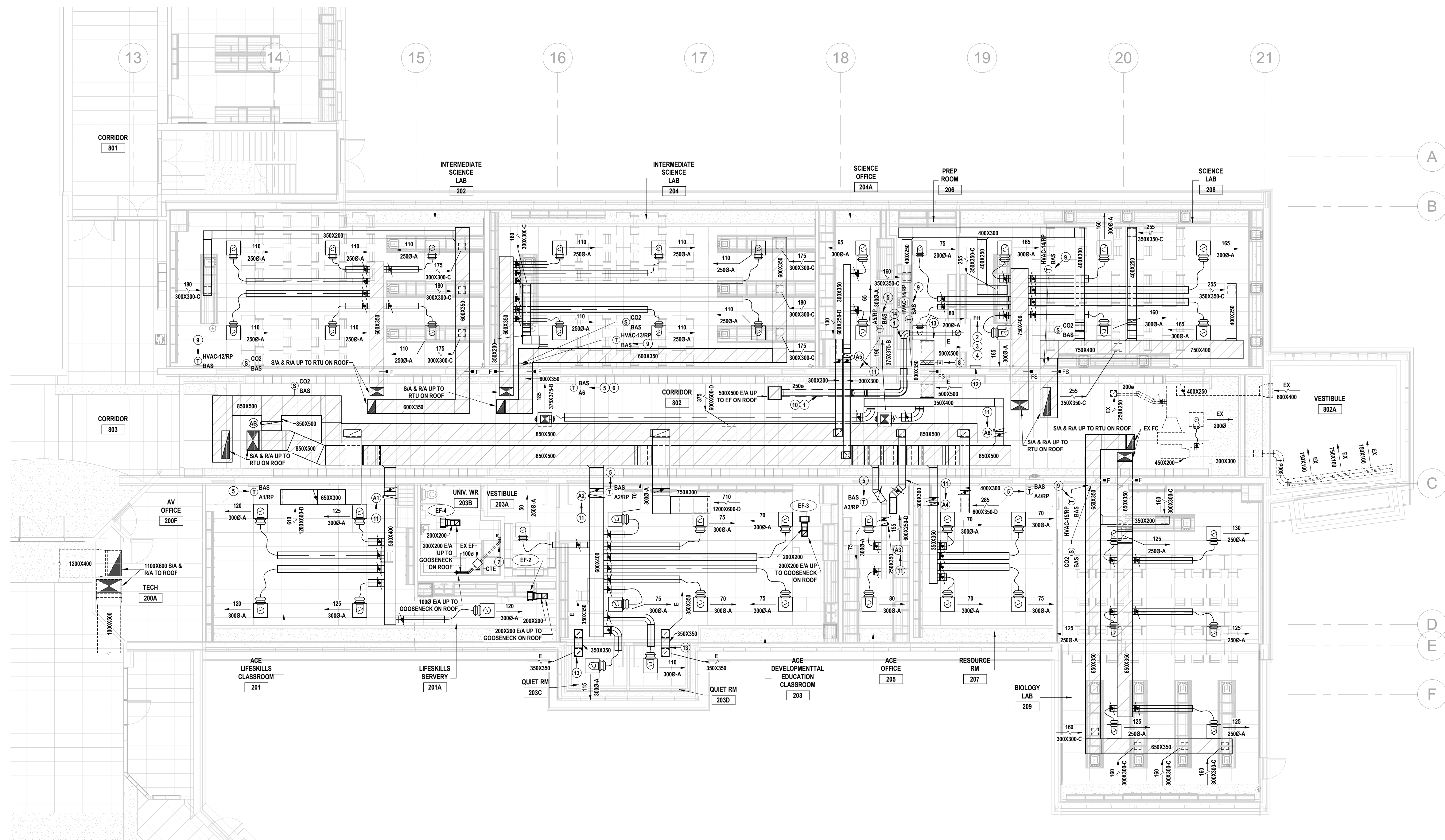
Project No.: 25004

GROUND FLOOR HEATING WATER RENOVATION PLAN

Drawn By: J.S.S.

Checked By: K.K.

M3.3



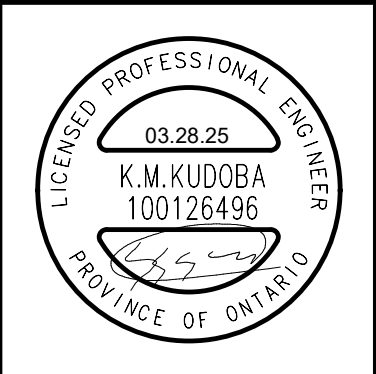
1 GROUND FLOOR DUCTWORK RENOVATION PLAN
M3.4 SCALE: 1:100

DRAWING NOTES

- ① FUME HOOD DUCTWORK TO BE STAINLESS STEEL AS PER SPEC.
- ② PROVIDE FUME HOOD TSI MONITOR FHM10 C/W SENSOR & ALARM TO IDENTIFY WHEN FACE VELOCITY HAS DROPPED BELOW A SAFE LEVEL
- ③ INTEGRAL ACID CABINET LOCATED BELOW FUME HOOD TO BE VENTED THROUGH HOOD UTILIZING KIT PROVIDED WITH HOOD.
- ④ FUME HOOD TO BE CONTROLLED BY BAS.
- ⑤ ROOFTOP UNIT, VVT DAMPERS & RADIANT PANEL CONTROL VALVES TO BE CONTROLLED BY BAS.
- ⑥ VVT DAMPER TO BE CONTROLLED BY BAS. DURING HEATING SEASON, DAMPER TO MODULATE TO SATISFY TEMPERATURE SET-POINT. DURING COOLING SEASON, DAMPER TO REMAIN CLOSED UNLESS SYSTEM IS IN VENTILATION MODE.
- ⑦ PROVIDE PVC JACKETING OVER ALL EX RESIDENTIAL CLOTHES DRYER EXHAUST AIR DUCTWORK INSULATION LOCATED BELOW CEILING.
- ⑧ MOTORIZED DAMPER TO BE CONTROLLED BY BAS.
- ⑨ ROOFTOP UNIT & RADIANT PANEL CONTROL VALVE TO BE CONTROLLED BY BAS.
- ⑩ PROVIDE TWO-LAYERS OF FIRE WRAP ON FUME HOOD EXHAUST AIR DUCTWORK LOCATED ABOVE CORRIDOR 802.
- ⑪ INSTALL VVT DAMPER AS PER DETAIL.
- ⑫ GENERAL EXHAUST SWITCH TO BE CONTROLLED BY BAS.
- ⑬ INSTALL TRANSFER DUCT AS PER DETAIL.
- ⑭ PROVIDE THERMAL INSULATION ON FUME HOOD EXHAUST AIR DUCTWORK LOCATED ABOVE PREP ROOM 206.



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MNE Engineering Inc.
22 Kennedy Road, Suite 101
Kitchener, Ontario N2C 2G5
(519) 894-9408
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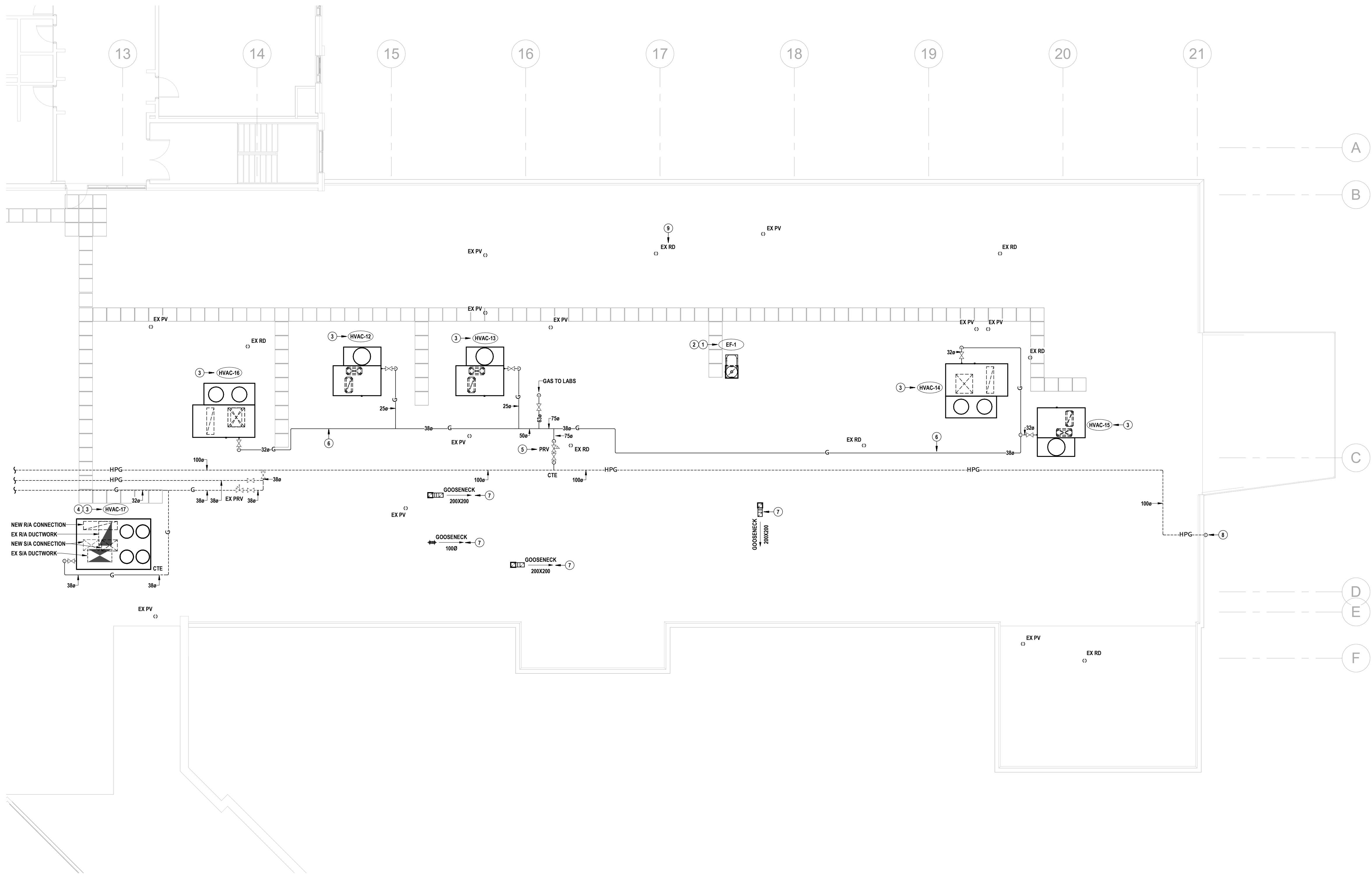
GROUND FLOOR DUCTWORK RENOVATION PLAN

Project No.: 25004

Drawn By: J.S.S.

Checked By: K.K.

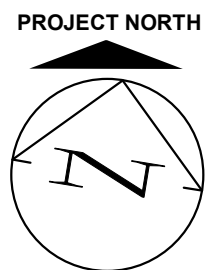
M3.4



1 ROOF MECHANICAL RENOVATION PLAN
M3.5 SCALE 1:100

DRAWING NOTES

- EXHAUST FAN TO BE CONTROLLED BY BAS. MAINTAIN 12.2M (40') BETWEEN EXHAUST & ALL ROOFTOP UNIT OUTDOOR AIR INTAKES. REFER TO DETAIL.
- INSTALL EXHAUST FAN AS PER DETAIL. FAN TO BE CONTROLLED BY BAS.
- INSTALL ROOFTOP UNIT & GAS CONNECTION AS PER DETAILS. UNIT TO BE CONTROLLED BY BAS.
- PROVIDE ROOF CURB AS PER SCHEDULE. EX RETURN AIR DUCTWORK TO TRANSITION TO NEW RETURN AIR ROOFTOP UNIT CONNECTION WITHIN CURB. NEW SUPPLY AIR ROOFTOP UNIT CONNECTION TO TRANSITION TO EX SUPPLY AIR DUCTWORK WITHIN CURB.
- INSTALL GAS PRESSURE REDUCING VALVE AS PER DETAIL.
- INSTALL GAS PIPING ON ROOF SUPPORTS AS PER DETAIL.
- PROVIDE GOOSENECK C/W TURNED DOWN ELBOWS & BIRDSCREEN. OUTLET TO TERMINATE 450MM (18") ABOVE ROOF.
- GAS PIPING FROM GAS METER STATION ON GRADE.
- PROVIDE STRAINER ON EX ROOF DRAIN.



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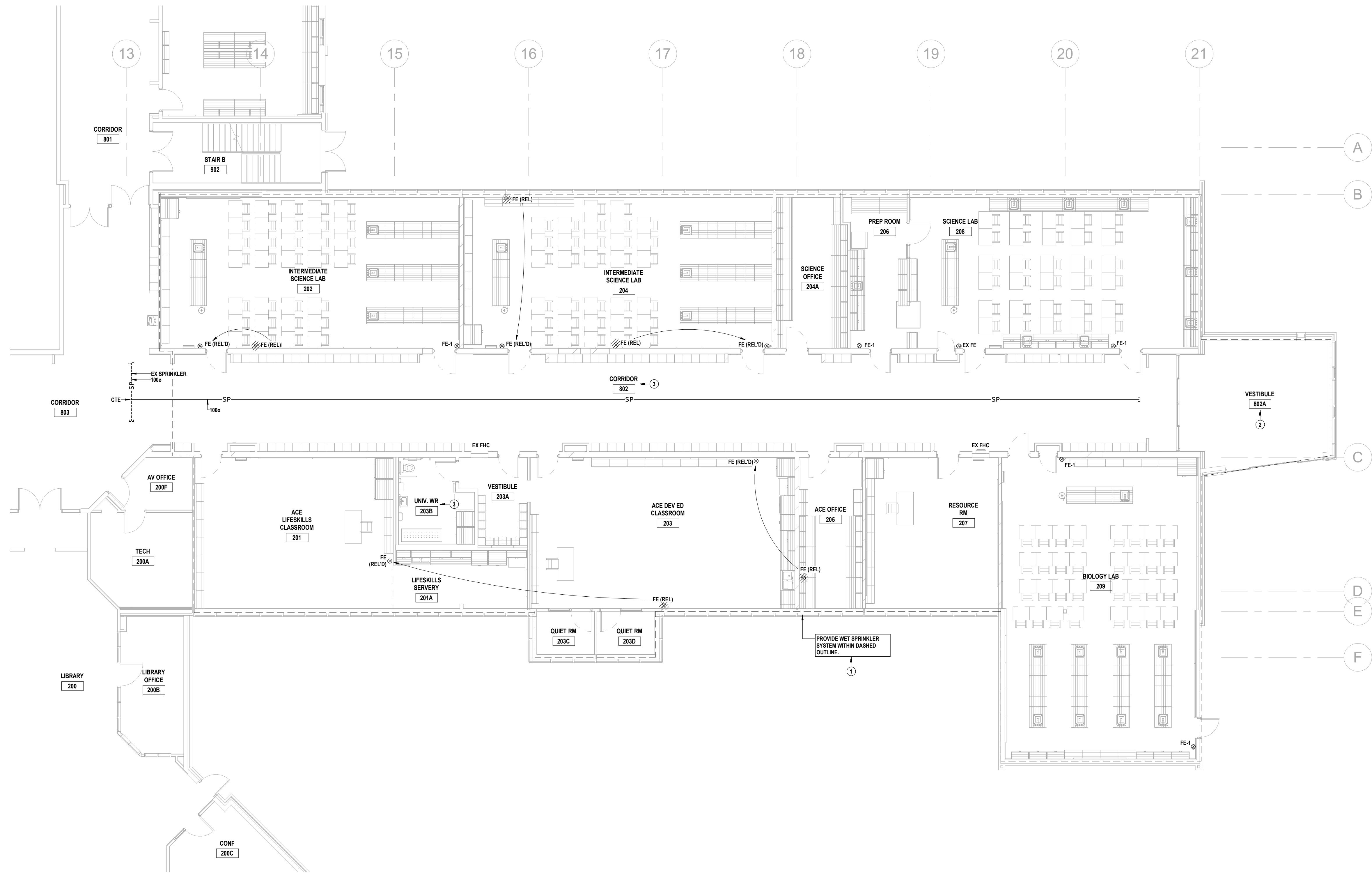
Project No.:
25004

Drawn By:
J.S.S.

Checked By:
K.K.

ROOF MECHANICAL RENOVATION PLAN

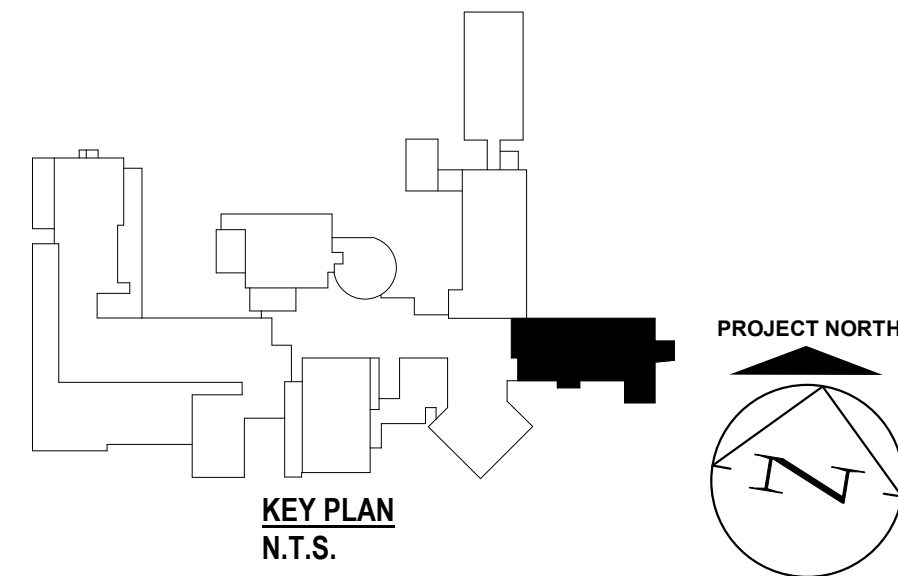
M3.5



1 GROUND FLOOR SPRINKLER PLAN
SP1.1 SCALE: 1:100

DRAWING NOTES

- ① → UNLESS NOTED OTHERWISE, AREAS TO BE SPRINKLERED HAVE DROP CEILINGS & ARE TO BE PROVIDED WITH SEMI-RECESSED SPRINKLER HEADS.
- ② → THIS AREA HAS EXPOSED CEILING & IS TO BE PROVIDED WITH UPRIGHT SPRINKLER HEADS.
- ③ → THIS AREA HAS DROP CEILING & IS TO BE PROVIDED WITH CONCEALED SPRINKLER HEADS.



KEY PLAN
N.T.S.

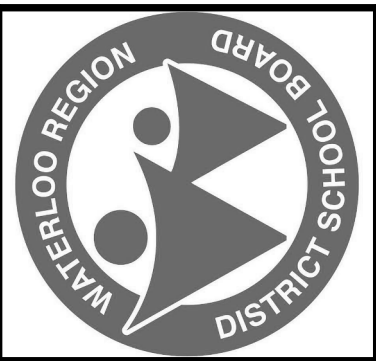
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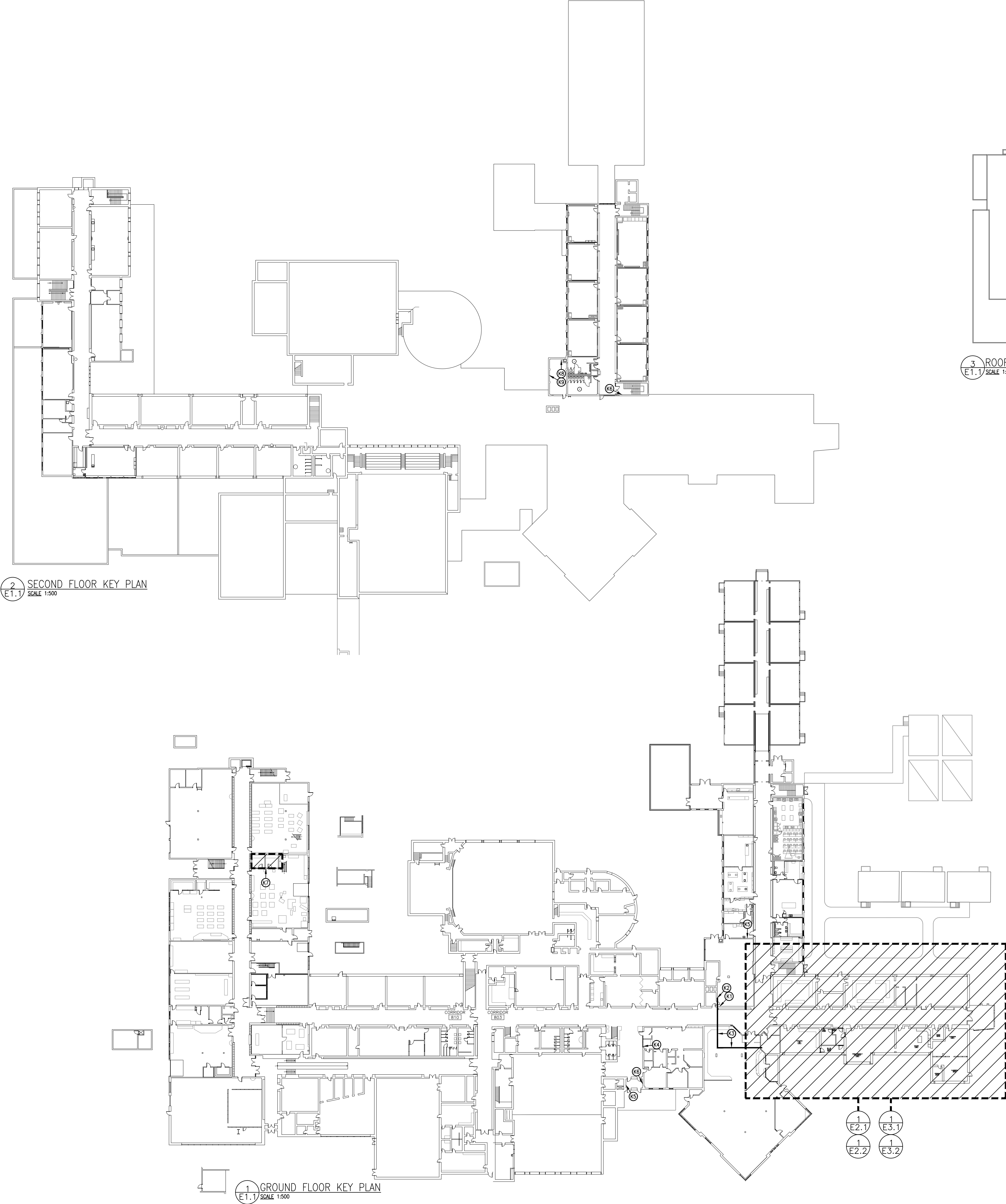
Project No.: 25004

Drawn By: J.S.S.

Checked By: K.K.

GROUND FLOOR SPRINKLER KEY PLAN, LEGEND & PLAN

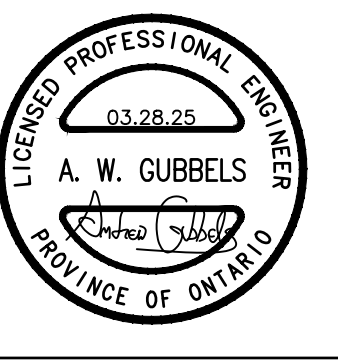
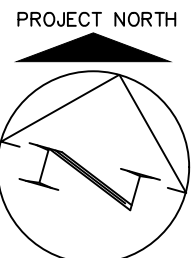
SP1.1



- KEY PLAN NOTES:**
- ① EXISTING SPLUTTER 'SA'.
 - REWORK EXISTING DISTRIBUTION EQUIPMENT TO SUIT MODIFICATIONS.
 - REFER TO SINGLE LINE DIAGRAM FOR MODIFICATIONS.
 - ② EXISTING BOARD 'BBR'.
 - REFER TO SINGLE LINE DIAGRAM FOR MODIFICATIONS.
 - ③ PROVIDE NEW FEEDER (CONDUCTORS & CONDUIT) FROM BOARD 'BBR' TO NEW HVAC UNIT.
 - REFER TO SINGLE LINE DIAGRAM.
 - SUGGESTED ROUTE INDICATED. DETERMINE OPTIMAL ROUTING ON SITE.
 - PROVIDE PULL BOXES AS REQUIRED.
 - REMOVE AND REPLACE CEILING TILES IN CORRIDOR 803, LIBRARY 200, TECH 200A, LIBRARY OFFICE 200B TO ACCOMMODATE INSTALLATION OF NEW FEEDER.
 - REWORK EXISTING CEILING-MOUNTED FIXTURES/DEVICES AND DECK MOUNTED SERVICES (NOT ALL INDICATED) TO PERMIT MECHANICAL & STRUCTURAL MODIFICATIONS.
 - SEAL ALL RATED PENETRATIONS.
 - ④ EXISTING CHUBB-EDWARDS EST4 FIRE ALARM CONTROL PANEL (FACP) SHALL REMAIN. MODIFY AS FOLLOWS:
 - DELETE EXISTING DEVICES AS INDICATED ON PLANS.
 - PROVIDE NEW INITIATING ZONE FOR HVAC-14.
 - REWORK EXISTING ADDRESSABLE INITIATING DEVICES AS OUTLINED.
 - EXTEND EXISTING LOOP AND PROVIDE NEW ADDRESSABLE INITIATING DEVICES AS OUTLINED.
 - PROVIDE NEW SIGNALING DEVICES AS OUTLINED.
 - INCLUDE FOR SYSTEM VERIFICATIONS & INTEGRATED TESTING.
 - ⑤ EXISTING EDWARDS FIRE ALARM ANNUNCIATOR PANEL (FAP) SHALL REMAIN. MODIFY ZONE LABELING TO REFLECT CONTROL PANEL ALTERATIONS.
 - ⑥ EXISTING FIRE ALARM ZONING GRAPHIC TO BE UPDATED BY OTHERS. TYPICAL FOR MULTIPLE GRAPHICS, NOT ALL INDICATED.
 - ⑦ TO ACCOMMODATE CEILING REMOVALS IN MEZZANINE 515C MODIFY THE FOLLOWING ELECTRICAL DEVICES AS FOLLOWS:
 - REMOVE AND RE-INSTALL TWO SURFACE MOUNTED LUMINAIRES. SUSPEND LUMINAIRES FROM STRUCTURE.
 - REMOVE AND RE-INSTALL ONE HEAT DETECTOR. SURFACE MOUNT TO STRUCTURE.
 - REWORK EXISTING SURFACE MOUNTED CONDUIT AND JUNCTION BOXES.
 - INCLUDE FOR STRAPPING EXISTING CONDUIT AND CABLES TO BUILDING STRUCTURE.
 - ⑧ LOCATION OF EXISTING SPRINKLER VALVES ASSOCIATED WITH THE FOLLOWING FIRE ALARM ZONES:
 - GROUND FLOOR EAST FLOW.
 - GROUND FLOOR EAST WALK.
 - PROVIDE FIRE ALARM VERIFICATION AND INTEGRATED TESTING AFTER NEW SPRINKLER WORK IS COMPLETE. COORDINATE WITH SPRINKLER TRADE.
 - ⑨ EXISTING PANEL 'WA'. REFER TO PANEL SCHEDULE FOR MODIFICATIONS.
- ALLOWANCES**
- ALLOWANCES FOR VARIOUS DIVISION 26, 27 & 28 WORKS ARE CARRIED UNDER DIVISION 01. REFER TO SPECIFICATIONS FOR DETAILS.

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DRAWING LIST	
E1.1	ELECTRICAL KEY PLANS
E2.1	PARTIAL EXISTING POWER PLAN
E2.2	PARTIAL EXISTING LIGHTING PLAN
E2.3	PARTIAL EXISTING ROOF PLAN
E3.1	PARTIAL REVISED POWER PLAN
E3.2	PARTIAL REVISED LIGHTING PLAN
E3.3	PARTIAL REVISED ROOF PLAN
E4.1	ELECTRICAL LEGEND & SCHEDULES
E4.2	PARTIAL SINGLE LINE DIAGRAM
E4.3	PARTIAL SINGLE LINE DIAGRAM & PANEL SCHEDULES
E4.4	ELECTRICAL DETAILS & SCHEMATICS



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22 Kewco Place - Box A
Richeter, Ontario N2C 2G5
(519) 884-8408
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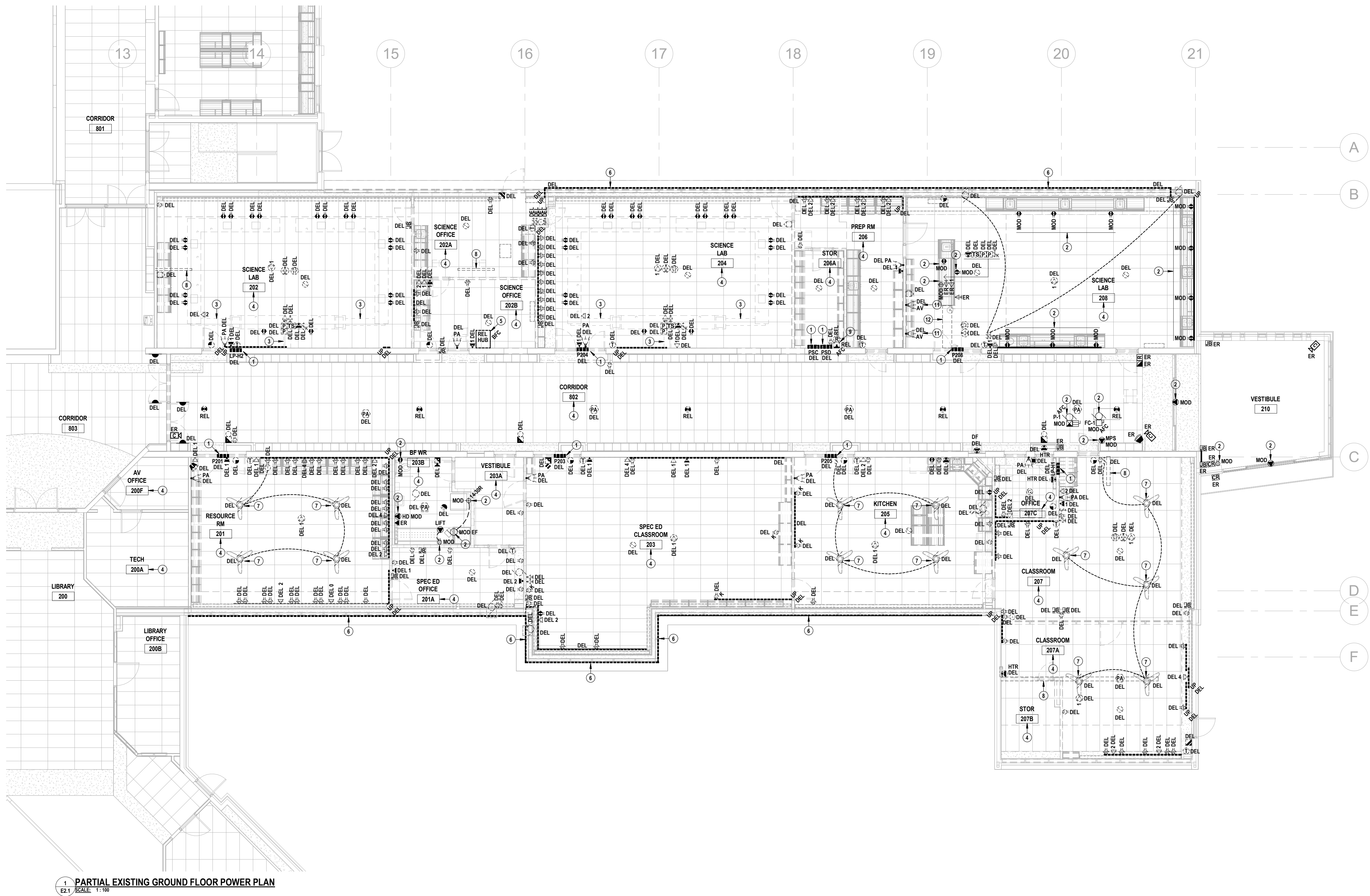
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ACE CLASSROOM & SCIENCE CLASSROOM RENOVATIONS

ELECTRICAL KEY PLANS

Project No.	25004
Drawn By:	A.W.T.
Checked By:	A.W.G.

E1.1



1 PARTIAL EXISTING GROUND FLOOR POWER PLAN
E2.1 SCALE: 1:100

EXISTING DRAWING NOTES

- DELETE EXISTING DISTRIBUTION PANEL.
 - CUT & PATCH WALL.
 - REFER TO SLD.
 - SALVAGE BREAKERS AND TURN OVER TO SCHOOL CUSTODIAN FOR FUTURE MAINTENANCE USE.
- MODIFY EXISTING DEVICE AS FOLLOWS:
 - RE-CIRCUIT FROM NEW PANEL AS OUTLINED.
 - REUSE EXISTING BRANCH WIRING WHERE POSSIBLE. EXTEND EXISTING AND PROVIDE NEW AS REQUIRED.
- DELETE REDUNDANT BRANCH WIRING IN EXISTING SERVICE TRENCH.
- REWORK EXISTING CEILING-MOUNTED FIXTURES/DEVICES, AND DECK MOUNTED SERVICES (NOT ALL INDICATED) TO PERMIT MECHANICAL & STRUCTURAL MODIFICATIONS AND CEILING REMOVALS BY OTHERS.
- RELOCATE EXISTING IT HUB. REFER TO CASH ALLOWANCE.
- DELETE SURFACE MOUNTED CONDUIT AND BRANCH WIRING. CONFIRM EXISTING IS REDUNDANT.
- REMOVE CEILING FANS AND TURN OVER TO OWNER.
- CUT AND PATCH EXISTING FLOOR FOR NEW UNDERGROUND CONDUIT. FLOOR FINISH BY OTHERS.
- RELOCATE EXTERIOR LIGHTING CONTROLS. REWORK BRANCH WIRING TO NEW PANEL.
- REMOVE AND REINSTALL EXISTING EXIT SIGN. REWORK EXISTING BRANCH WIRING TO SUIT.
- AUDIO-VIDEO SPEAKERS TO BE REMOVED BY OTHERS.
- EXISTING SERVICE TRENCH SHALL REMAIN.
 - MODIFY EXISTING BRANCH WIRING AS REQUIRED.
 - PROVIDE NEW BRANCH WIRING FOR NEW DEVICES AS INDICATED ON PLANS.

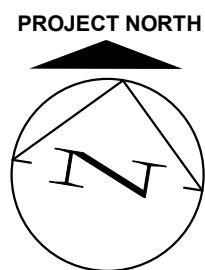
CEILING
REFER TO THE ARCHITECTURAL PLANS FOR REMOVAL OF EXISTING CEILINGS AND INSTALLATION OF NEW CEILINGS (WHERE APPLICABLE).

- THE ELECTRICAL SUBCONTRACTOR SHALL INCLUDE FOR REMOVING AND RE-SUPPORTING EXISTING CONDUIT, BOXES & CABLES TO PERMIT CEILING MODIFICATIONS.
- INCLUDE FOR STRAPPING EXISTING CONDUITS AND CABLES THAT ARE NOT PROPERLY SUPPORTED AND ARE REQUIRED TO REMAIN.
- IN THE CORRIDORS, MOVE EXISTING COMMUNICATIONS CABLING ONTO NEW HANGERS.

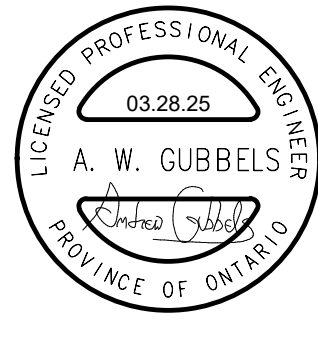
ABATEMENT
INCLUDE THE COST OF RETAINING A WRDSB-APPROVED SUBCONTRACTOR FOR THE ABATEMENT OF ALL ASBESTOS CONTAINING MATERIAL (ACM) WITHIN A 600MM RADIUS OF ANY ELECTRICAL WORK. REFER TO THE OWNER'S HAZARDOUS MATERIALS BUILDING SURVEY.

EXISTING MECHANICAL EQUIPMENT
MECHANICAL EQUIPMENT INDICATED TO BE DELETED SHALL BE REMOVED BY MECHANICAL TRADES.

- UNLESS OTHERWISE INDICATED, THE ELECTRICAL SUBCONTRACTOR SHALL DISCONNECT & REMOVE ALL LINE VOLTAGE POWER WIRING BACK TO POINT OF DISTRIBUTION. INCLUDE FOR DISCONNECTING ALL LINE VOLTAGE FEEDS TO CONTROL DEVICES.
- ALL LOW VOLTAGE CONTROL CABLING SHALL BE REMOVED BY MECHANICAL TRADES.



THIS AREA OF WORK CONTAINS ASBESTOS CONTAINING MATERIALS (ACM). ALL CONTRACTORS SHALL REFER TO THE ASBESTOS AUDIT AND SECTION 01 35 43, HAZARDOUS MATERIALS FOR APPROPRIATE PROTOCOLS THAT MUST BE FOLLOWED, REGARDLESS OF ABATEMENT OPERATIONS BEING CONDUCTED OR NOT.



MNE Engineering Inc.
22 Kennedy Road, Suite 100
Kitchener, Ontario N2C 2G5
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A.W.G.
A.W.G.



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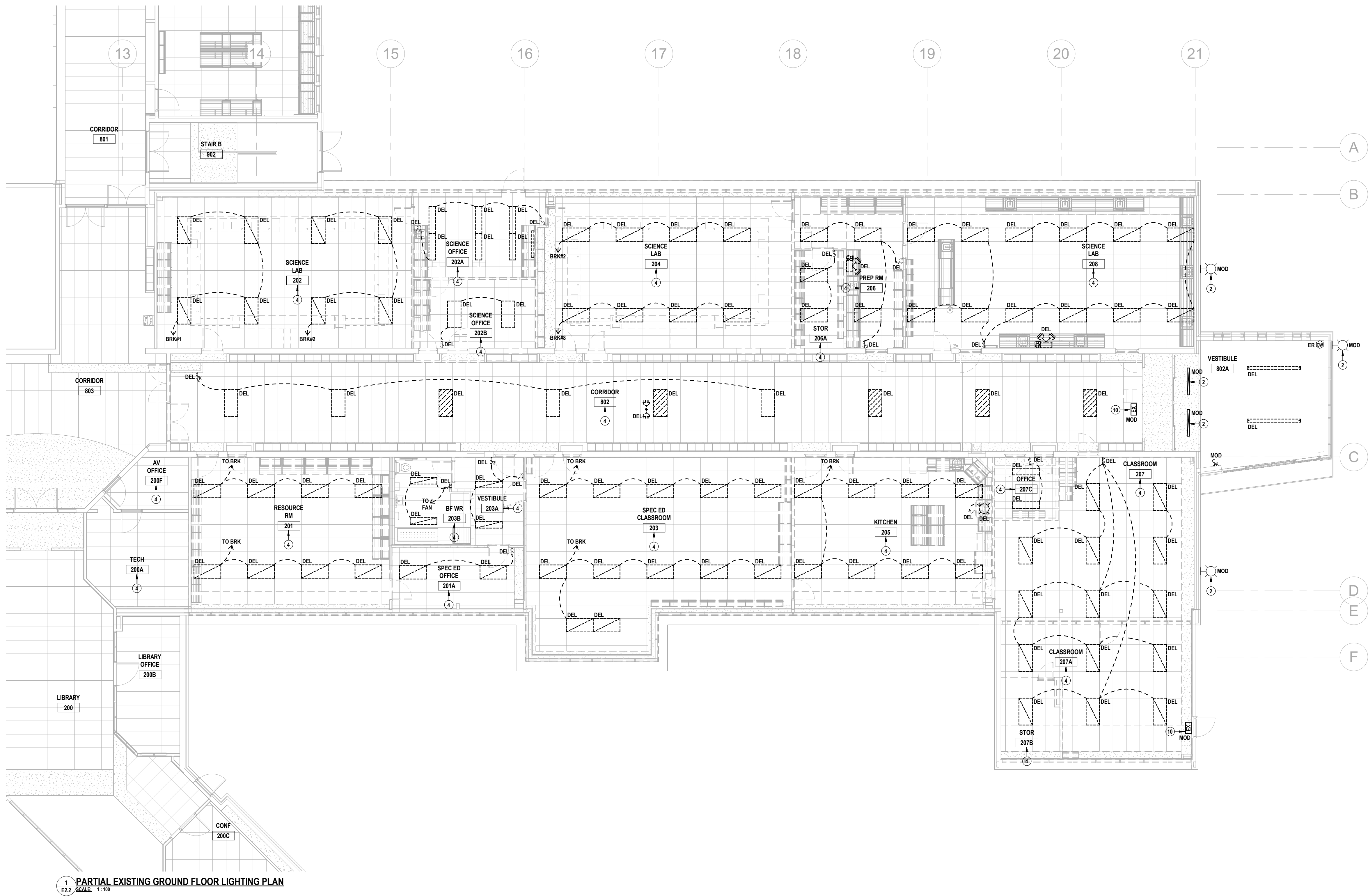
PARTIAL EXISTING POWER PLAN

Project No.: 25004

Drawn By: A.W.T.

Checked By: A.W.G.

E2.1



1 PARTIAL EXISTING GROUND FLOOR LIGHTING PLAN
E2.2 SCALE: 1:100

EXISTING DRAWING NOTES

- DELETE EXISTING DISTRIBUTION PANEL.
 - CUT & PATCH WALL.
 - REFER TO SLD.
 - SALVAGE BREAKERS AND TURN OVER TO SCHOOL CUSTODIAN FOR FUTURE MAINTENANCE USE.
- MODIFY EXISTING DEVICE AS FOLLOWS:
 - RE-CIRCUIT FROM NEW PANEL AS OUTLINED.
 - REUSE EXISTING BRANCH WIRING WHERE POSSIBLE. EXTEND EXISTING AND PROVIDE NEW AS REQUIRED.
- DELETE REDUNDANT BRANCH WIRING IN EXISTING SERVICE TRENCH.
- REWORK EXISTING CEILING-MOUNTED FIXTURES/DEVICES, AND DECK MOUNTED SERVICES (NOT ALL INDICATED) TO PERMIT MECHANICAL & STRUCTURAL MODIFICATIONS AND CEILING REMOVALS BY OTHERS.
- RELOCATE EXISTING IT HUB. REFER TO CASH ALLOWANCE.
- DELETE SURFACE MOUNTED CONDUIT AND BRANCH WIRING. CONFIRM EXISTING IS REDUNDANT.
- REMOVE CEILING FANS AND TURN OVER TO OWNER.
- CUT AND PATCH EXISTING FLOOR FOR NEW UNDERGROUND CONDUIT. FLOOR FINISH BY OTHERS.
- RELOCATE EXTERIOR LIGHTING CONTROLS. REWORK BRANCH WIRING TO NEW PANEL.
- REMOVE AND REINSTALL EXISTING EXIT SIGN. REWORK EXISTING BRANCH WIRING TO SUIT.
- AUDIO-VIDEO SPEAKERS TO BE REMOVED BY OTHERS.
- EXISTING SERVICE TRENCH SHALL REMAIN.
 - MODIFY EXISTING BRANCH WIRING AS REQUIRED.
 - PROVIDE NEW BRANCH WIRING FOR NEW DEVICES AS INDICATED ON PLANS.

CEILINGS

REFER TO THE ARCHITECTURAL PLANS FOR REMOVAL OF EXISTING CEILINGS AND INSTALLATION OF NEW CEILINGS (WHERE APPLICABLE).

- THE ELECTRICAL SUBCONTRACTOR SHALL INCLUDE FOR REMOVING AND RE-SUPPORTING EXISTING CONDUIT, BOXES & CABLES TO PERMIT CEILING MODIFICATIONS.
- INCLUDE FOR STRAPPING EXISTING CONDUITS AND CABLES THAT ARE NOT PROPERLY SUPPORTED AND ARE REQUIRED TO REMAIN.
- IN THE CORRIDORS, MOVE EXISTING COMMUNICATIONS CABLING ONTO NEW HANGERS.

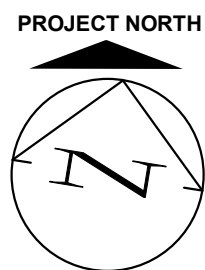
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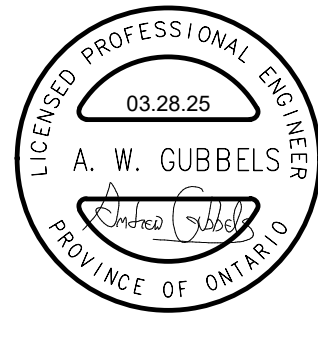
EXISTING MECHANICAL EQUIPMENT

MECHANICAL EQUIPMENT INDICATED TO BE DELETED SHALL BE REMOVED BY MECHANICAL TRADES.

- UNLESS OTHERWISE INDICATED, THE ELECTRICAL SUBCONTRACTOR SHALL DISCONNECT & REMOVE ALL LINE VOLTAGE POWER WIRING BACK TO POINT OF DISTRIBUTION. INCLUDE FOR DISCONNECTING ALL LINE VOLTAGE FEEDS TO CONTROL DEVICES.
- ALL LOW VOLTAGE CONTROL CABLING SHALL BE REMOVED BY MECHANICAL TRADES.



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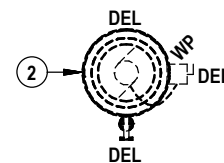
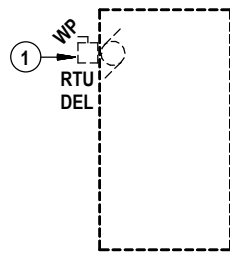
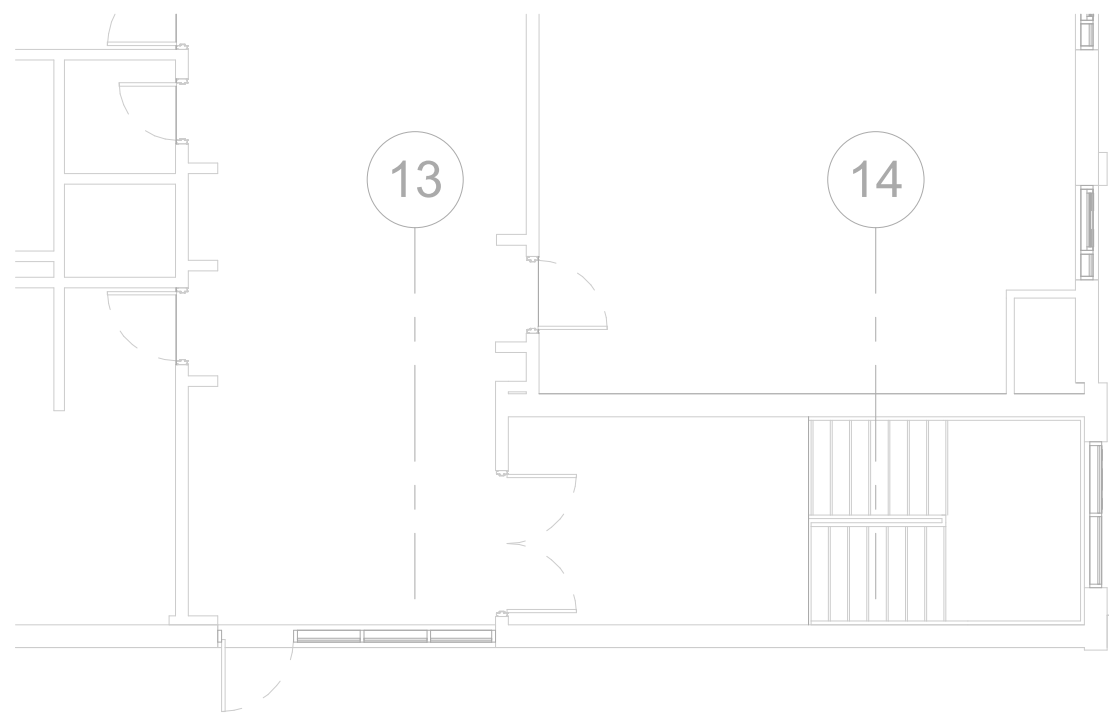
Project No.: 25004

Drawn By: A.W.T.

Checked By: A.W.G.

PARTIAL EXISTING LIGHTING PLAN

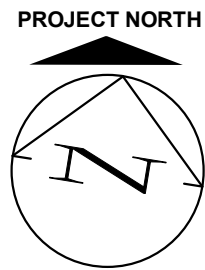
E2.2



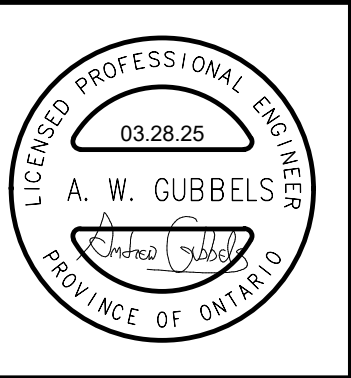
1 PARTIAL EXISTING ROOF PLAN
SCALE: 1:100

EXISTING ROOF NOTES

- 1 → EXISTING ROOFTOP UNIT TO BE DELETED & REPLACED WITH NEW BY DIVISION 23.
- DELETE EXISTING BRANCH FEEDER.
 - DELETE LOCAL DISCONNECT SWITCH.
 - DELETE CONDUIT, ASSOCIATED SUPPORTS, BOXES, ETC. (NOT ALL INDICATED).
 - REPAIR ROOF PENETRATIONS. COORDINATE WITH MECHANICAL AND ROOFING TRADES.
- 2 → EXISTING FAN TO BE DELETED BY DIVISION 23.
- DELETE EXISTING BRANCH FEEDER.
 - DELETE CONDUIT, ASSOCIATED SUPPORTS, BOXES, ETC. (NOT ALL INDICATED).
 - REPAIR ROOF PENETRATIONS. COORDINATE WITH MECHANICAL AND ROOFING TRADES.



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Kitchener, Ontario N2C 2G5
(519) 894-9408
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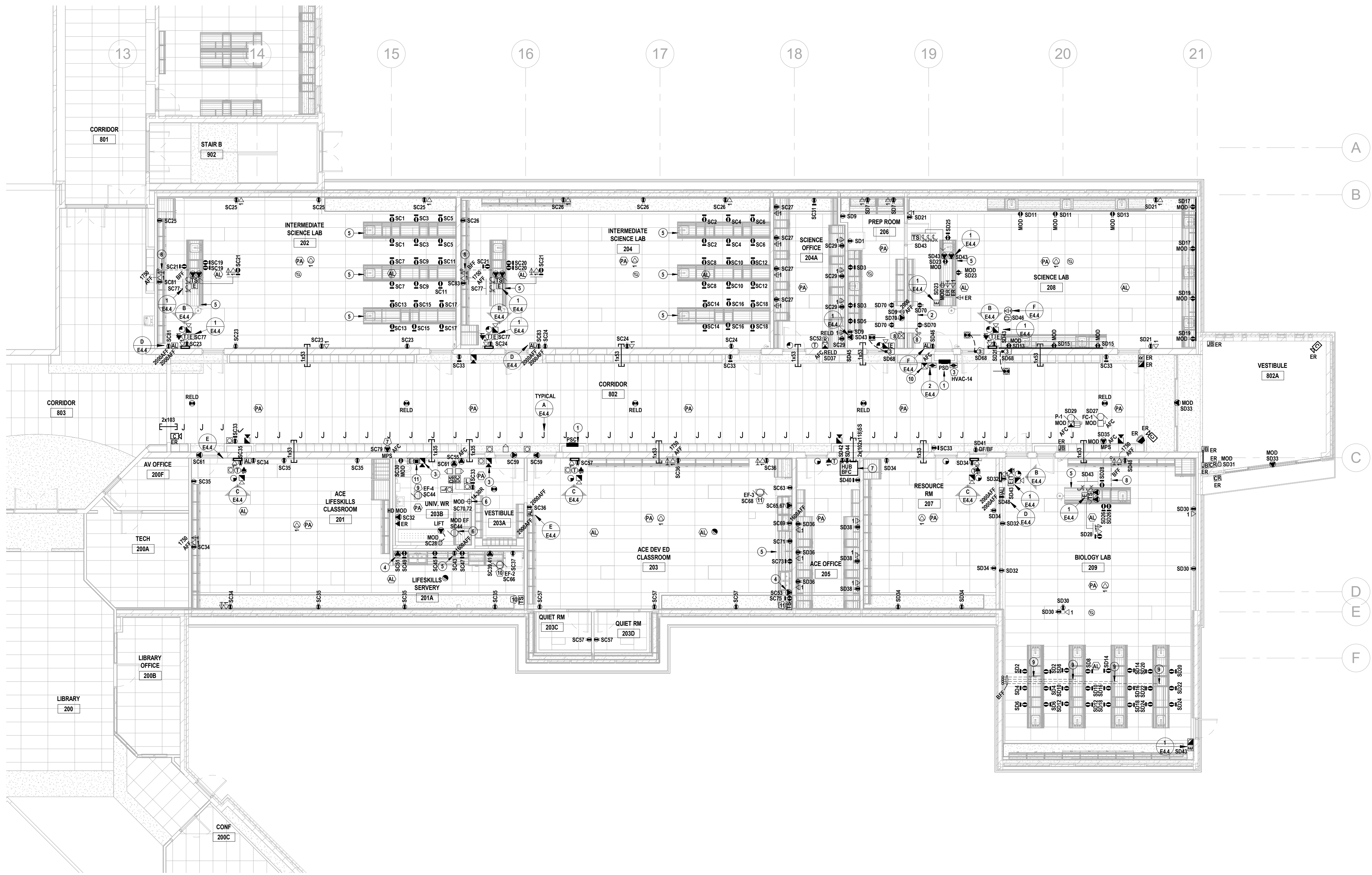
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ACE CLASSROOM & SCIENCE CLASSROOM RENOVATIONS

PARTIAL EXISTING ROOF PLAN

Project No.:	25004	Drawn By:	A.W.T.	Checked By:	A.W.G.
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E2.3



1 PARTIAL REVISED GROUND FLOOR POWER PLAN
E3.1 SCALE: 1:100

REVISED POWER NOTES

1. PROVIDE NEW DISTRIBUTION EQUIPMENT. REFER TO SLD.
2. FUME HOOD PROVIDED BY OTHERS.
 - PROVIDE A DIRECT CONNECTION TO THE POWER JUNCTION BOX ON TOP OF THE FUME HOOD. CONNECTIONS FROM THE JUNCTION BOX TO THE INTEGRAL RECEPTACLES, LIGHT AND SWITCH ARE PRE-WIRED BY THE MANUFACTURER.
 - PROVIDE RECEPTACLE ON TOP OF THE HOOD FOR ALARM KIT.
 - PROVIDE INTERLOCK SUCH THAT THE ALARM KIT IS ONLY ACTIVE WHEN THE FUME HOOD EXHAUST FAN IS ON. PROVIDE RELAYS AS REQUIRED.
3. FIELD ADJUST TO LOWER AUDIBILITY.
4. PROVIDE LIQUID-TIGHT FLEXIBLE CONNECTION FROM BOX AT LOW LEVEL TO APPLIANCE/EQUIPMENT. COORDINATE REQUIREMENTS WITH SUPPLIER(S).
5. COORDINATE INSTALLATION WITH ARCHITECTURAL DETAILS & MILLWORK SUBCONTRACTOR.
6. REWIRE CURRENT SENSING RELAY. ENSURE DRYER BOOSTER FAN IS ACTIVATED WHENEVER THE DRYER IS TURNED ON. REWIRE FAN FROM LOCAL LIGHTING CIRCUIT, UPSTREAM OF LIGHTING CONTROL.
7. COMMUNICATIONS CABINET/HUB. THE FOLLOWING SHALL BE PROVIDED BY OTHERS UNDER ALLOWANCE:
 - CABINET/HUB WITH CABLE MANAGEMENT.
 - NEW FIBRE FEED FROM MAIN TELECOMMUNICATION ROOM.
 - NEW HORIZONTAL CABLING.
 - SWITCHES & PATCH PANELS.THE ELECTRICAL SUBCONTRACTOR SHALL PROVIDE THE FOLLOWING:
 - RECEPTACLES PER PLANS.
 - PATHWAYS FOR CABLING.
 - GROUND BUS BAR & BOND CONDUCTOR FROM NEAREST DISTRIBUTION PANEL.

8. PROVIDE UNDERGROUND CONDUITS FOR POWER AND COMMUNICATIONS SERVING THE TEACHER'S BENCH.
9. PROVIDE UNDERGROUND CONDUITS FOR POWER SERVING THE STUDENT'S BENCH.
10. PROVIDE CLEARLY LABELED FIRE ALARM RELAY & CONNECTIONS FOR EQUIPMENT SHUTDOWN.
11. PROVIDE AN AID ASSISTANCE INTERCOM STATION. WHEN ACTIVATED, THE INTERCOM STATION SHALL INITIATE A CALL TO THE TELEPHONE HANDSET DESIGNATED BY OWNER. REFER TO SPECIFICATIONS FOR ADDITIONAL DETAILS.

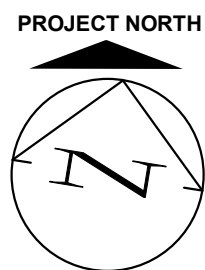
COMMUNICATIONS & SECURITY PATHWAYS
• UNLESS OTHERWISE NOTED, PROVIDE A 21MM EMT RISER CONDUIT FROM EACH OUTLET BOX TO THE NEAREST ACCESSIBLE CEILING SPACE.
• PROVIDE EMT CONDUIT SLEEVES CONCEALED APC & WITHIN WALLS, OF THE QUANTITY & DIAMETER INDICATED. SEAL ALL RATED PENETRATIONS.
• PROVIDE SELF SEALING CONDUIT SLEEVES (SS) WHERE INDICATED.
• PROVIDE OUTLET BOXES FOR ALL INDICATED DEVICES.
• ALL CONDUITS & SLEEVES SHALL BE COMPLETE WITH PULL TAPES & PLASTIC BUSHINGS.

RETURN AIR PLENUM
CEILING SPACES ARE USED AS A RETURN AIR PLENUM. THE ELECTRICAL SUBCONTRACTOR SHALL ENSURE THAT ALL NEW WIRING & CABLING WITHIN PLENUM SPACES IS TOTALLY ENCLOSED IN NON-COMBUSTIBLE RACEWAYS OR IS FT-8 RATED (ALSO KNOWN AS COMMUNICATIONS MEDIA PLENUM, OR CMP).

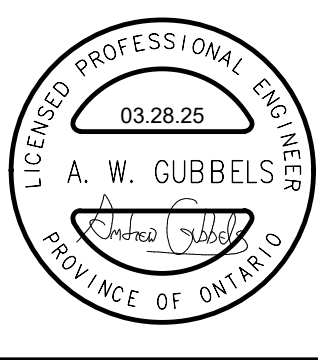
ACCESS CONTROLLED OPENINGS
AT EACH CONTROLLED OPENING, PROVIDE THE FOLLOWING CONDUITS (NOT INDICATED) FROM A CLEARLY LABELED BOX APC, FOR ACCESS CONTROL CABLING INSTALLATIONS:

- 1x16 TO EACH OF THE FOLLOWING WHERE APPLICABLE:
- MULLION MORTAR BOX FOR CURRENT TRANSFER(S).
 - DOOR HEADER.
 - AUTO OPERATOR.
 - DAY-NIGHT-OFF KEY SWITCH.
 - DOOR CONTACT(S).
 - ELECTRIC EGRESS DEVICES/DOOR STRIKE.
- 1x21 TO A SINGLE GANG BOX, UNLESS OTHERWISE SPECIFIED, FOR EACH OF THE FOLLOWING RECESSED DEVICES WHERE INDICATED:
- DOOR OPERATOR PUSH BUTTONS.
 - CARD READERS.
 - POWER DOOR INDICATORS/LOCKS.
- REFER TO DOOR ELEVATION DRAWINGS (BY OTHERS) FOR SPECIFICS.

SPRINKLERS
NEW FIRE DETECTORS ARE REQUIRED SINCE THE NEW SPRINKLER SYSTEM DOES NOT YET PROTECT THE ENTIRE FLOOR AREA.



THIS AREA OF WORK CONTAINS ASBESTOS CONTAINING MATERIALS (ACM). ALL CONTRACTORS SHALL REFER TO THE ASBESTOS AUDIT AND SECTION 01 35 43, HAZARDOUS MATERIALS FOR APPROPRIATE PROTOCOLS THAT MUST BE FOLLOWED, REGARDLESS OF ABATEMENT OPERATIONS BEING CONDUCTED OR NOT.



MNE Engineering Inc.
22 Kennedy Road, Suite 100
Kitchener, Ontario N2C 2G5
www.mneengineering.ca
(519) 894-9408



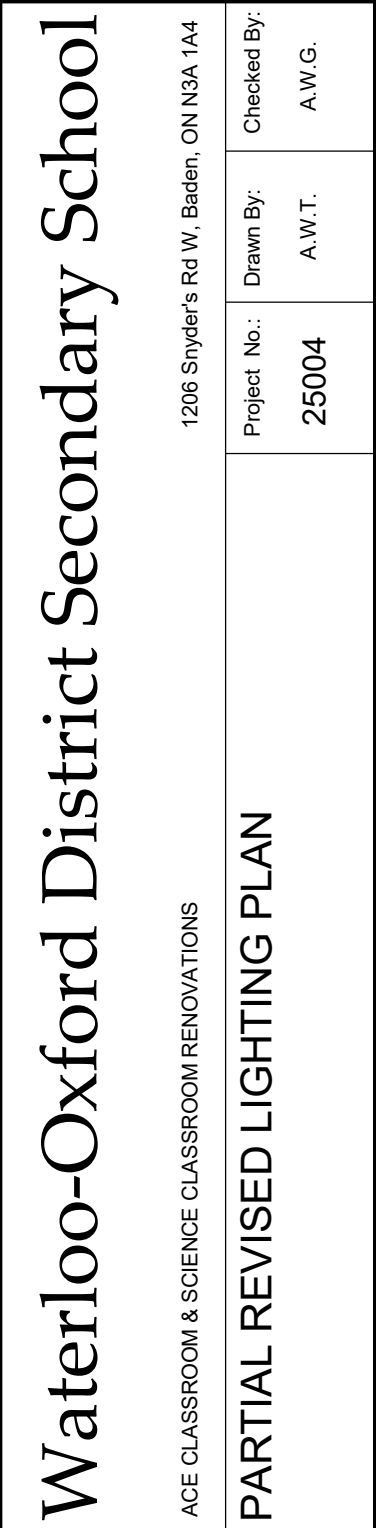
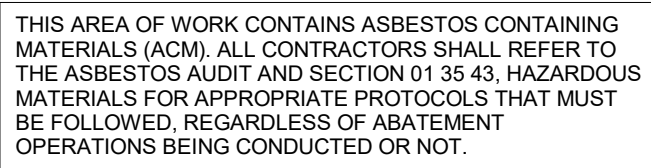
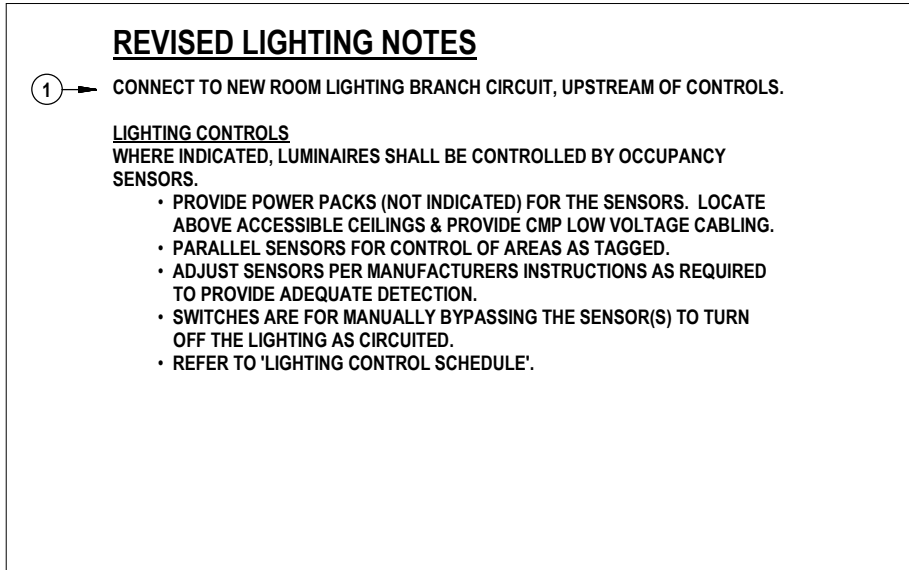
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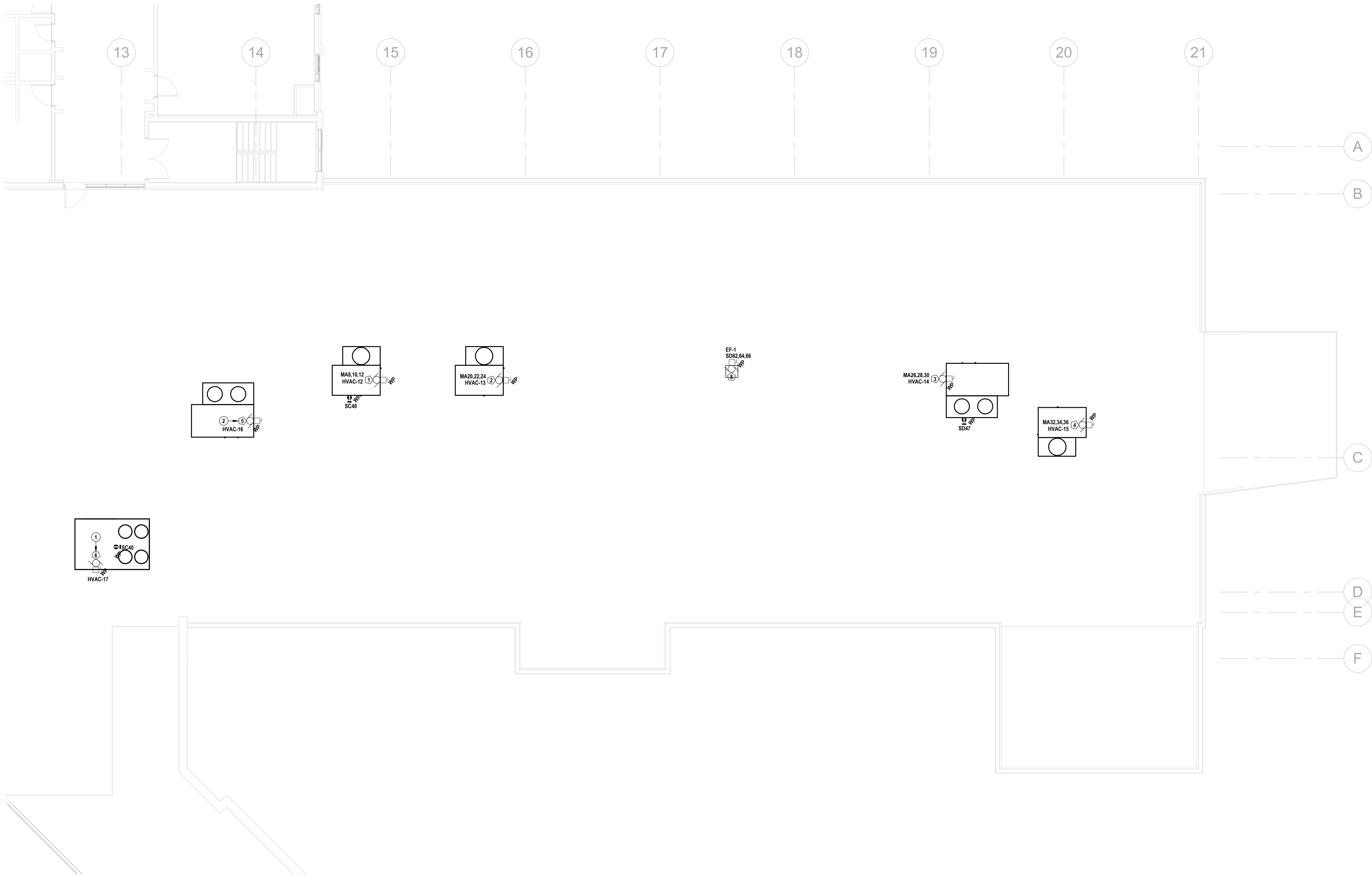
ACE CLASSROOM & SCIENCE CLASSROOM RENOVATIONS

PARTIAL REVISED POWER PLAN

Project No.: 25004
Checked By: A.W.G.
Drawn By: A.W.T.

E3.1

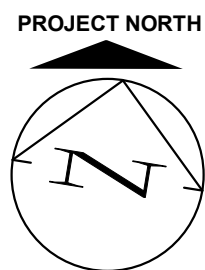




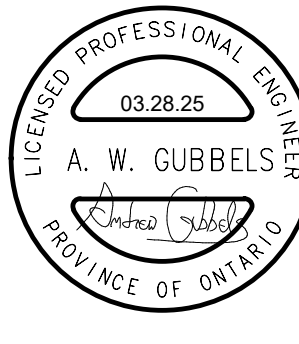
1 PARTIAL REVISED ROOF PLAN
E3.3 SCALE: 1:100

REVISED ROOF NOTES

- ① → FED FROM BOARD 'BBR'. REFER TO SINGLE LINE DIAGRAM.
② → FED FROM SPLITTER 'SA'. REFER TO SINGLE LINE DIAGRAM.



THIS AREA OF WORK CONTAINS ASBESTOS CONTAINING MATERIALS (ACM). ALL CONTRACTORS SHALL REFER TO THE ASBESTOS AUDIT AND SECTION 01 35 43, HAZARDOUS MATERIALS FOR APPROPRIATE PROTOCOLS THAT MUST BE FOLLOWED, REGARDLESS OF ABATEMENT OPERATIONS BEING CONDUCTED OR NOT.



MNE Engineering Inc.
22 Kennedy Road &
Kitchener, Ontario N2C 2S5
(519) 894-9408
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2025-03-14
ISSUED FOR TENDER & PERMIT
2025-03-28

A.W.G.
A.W.G.



Waterloo-Oxford District Secondary School

ACE CLASSROOM & SCIENCE CLASSROOM RENOVATIONS
1206 Shryder's Rd W. Baden, ON N3A 1A4

Project No.:
25004

Drawn By:
A.W.T.

Checked By:
A.W.G.

PARTIAL REVISED ROOF PLAN

E3.3

<

WIRING FOR EQUIPMENT SCHEDULE (*1)

EQUIPMENT			CHARACTERISTICS					STARTERS			ACCESSORIES	ISOLATING DEVICE	REMOTE CONTROL														WIRING		NOTES											
MECHANICAL LABEL	ELECTRICAL IDENTIFIER NO.	DESCRIPTION	SUPPLIED BY: M - DIVISIONS O - OWNERS	VOLTAGE (V)	WATTAGE (w)	HORSE POWER (hp)	MINIMUM CIRCUIT AMPS (A)	MOCP (A)	PHASE	MANUAL	MAGNETIC	COMBINATION	CONTACTOR	ADJUSTABLE FREQUENCY DRIVE	HAND-OFF-AUTO (H/A) SWITCH	PILOT LIGHT PUSHBUTTON	PILOT LIGHT	LOCAL DISCONNECT	LOCAL FUSED SWITCHABLE AT BREAKER	RECEPTACLE	VARIABLE SPEED CONTROLLER	THERMOSTAT	120V REVERSE ACTING THERMOSTAT PREZESTAT	BAS RELAY	MOTOR RELAY	ELECTRONIC TIME SWITCH	BASELINE TOP PUSHBUTTON	KEY SWITCH	PRESSURE SWITCH	LIMIT SWITCH	CONTROL PANEL	OCCUPANCY SENSOR	ON/OFF SWITCH WITH PILOT LIGHT	STOP-START PUSHBUTTON	BAS CONNECTION	INTERLOCK WITH	CONTROL VOLTAGE (V)	CONTROL CABLEING BY	POWER WIRING BY	SMOKE DAMPERS(S)
HVAC-12	1	ROOFTOP UNIT	DIVISION 26 22,23,25	M 600		17.1	20	3										M				M												M	24	M	E			
HVAC-13	2	ROOFTOP UNIT	DIVISION 21	M 600		17.1	20	3										M				M												M	24	M	E			
HVAC-14	3	ROOFTOP UNIT	OWNERS	M 600		24.4	30	3										M				M												M	24	M	E	F		
HVAC-15	4	ROOFTOP UNIT		M 600		18.0	25	3										M				M													M	24	M	E		
HVAC-16	5	ROOFTOP UNIT		M 208		97.1	125	3										M				M													M	24	M	E		
HVAC-17	6	ROOFTOP UNIT		M 208		69	80	3										M				M													M	24	M	E		
MPS	7	MECHANICAL POWER SUPPLY		M 120		0.3	15	1												E																24	M	E		
EF-1	8	FUME HOOD EXHAUST FAN		M 208	2	15	3				E				E		E	M															E			120	E	E	*3	
EF-4	9	WASHROOM EXHAUST FAN		M 120		0.1	15	1												E													E		M	120	E	E	*2	
EF-2	10	KITCHENETTE EXHAUST FAN		M 120		0.1	15	1												E						E									120	E	E			
EF-3	11	KITCHENETTE EXHAUST FAN		M 120		0.1	15	1												E							E									120	E	E		

NOTES:
 1. COORDINATE EXACT ELECTRICAL REQUIREMENTS FOR ALL EQUIPMENT WITH SHOP DRAWINGS AND ACTUAL NAMEPLATE DATA. REVISE ELECTRICAL REQUIREMENTS TO SUIT.
 2. CONTROL WITH LIGHTING. PROVIDE 20 MINUTE SHUT OFF DELAY. PROVIDE SUITABLE POWER/RELAY PACK.
 3. FAN SHALL BE CONTROLLED BY PILOT LIGHT SWITCH WHEN STARTER IS IN 'AUTO'.

TYPE	MANUFACTURER	MODEL	LAMPS QUANTITY-TYPE	MOUNTING T – T-BAR R – RECESSED S – SURFACE SD – SUSPENDED W – WALL	VOLTAGE	NOTES
AA	PEERLESS	BRMSL LLP 8FT MSLB 80CRI 40K ID800LMF 30/70 MINI ZT SCT F2 24F XX CSA DU MCSJ	35W LED	SD	120	*2, PROVIDE RIGID STEM SUSPENSION, HEIGHT TO MATCH EXISTING. REUSE EXISTING SURFACE MOUNT BOXES & MOUNTING HARDWARE WHERE POSSIBLE. PROVIDE FLAT END CAPS.
DD	STANPRO	UCFL35-15W-A-5CWH (35K)	15W LED	S	120	PROTECTIVE SHIELD BY MILLWORK CONTRACTOR. PROVIDE HARD WIRE BOX & JUMPER CONNECTORS FOR A COMPLETE INSTALL.
EBA	STANPRO	SWL EM WH TB AT	1-14W LED	T	120	
GC	LITHONIA	2BLT4 60L ADSM E21 LP935	47W LED	R	120	
GD	LITHONIA	2BLT4 72L ADSM E21 LP935	60W LED	R	120	
GE	LITHONIA	2BLT4 85L ADSM E21 LP935	67W LED	R	120	
GF	LITHONIA	2BLT4 100L ADSM E21 LP935	82W LED	R	120	
GL	LITHONIA	2BLT2 48L ADSM E21 LP935	43W LED	R	120	
GO	STANPRO	SLEXA C 2 UDC WH	4.3W LED	W	120	LETTERING SHALL BE RED AND READ 'GAS ON'
JC	LITHONIA	CPANL 2X4 AL06 (6000LM) SNW7 (35K) M2	55W LED	R	120	
JE	LITHONIA	CPANL 2X2 AL01 (4400LM) SNW7 (35K) M4	41W LED	R	120	

* NOTES:

- REFER TO SPECIFICATIONS FOR DRIVER/BALLAST/LAMPS REQUIREMENTS. LAMPS INCLUDED WITH FIXTURES UNLESS OTHERWISE OUTLINED.
- COLOR AND FINISH TO BE SELECTED BY ARCHITECT FROM LIST OF STANDARD OR CUSTOM COLORS.

USE	TYPE	MANUFACTURER	MODEL	ENVIRONMENT	MOUNTING	VOLTAGE	PIR	MICRO- PHONICS	DAY LIGHTING	nLIGHT CONTROL	WIRELESS	COMMENTS
✓	ⓐ	ACUTY	CM PDT 10	SWITCHING	CEILING	24	✓	✓		✓		EXTENDED RANGE
✓	ⓑ	ACUTY	CM PDT 9	SWITCHING	CEILING	24	✓	✓		✓		STANDARD RANGE
✓	ⓒ	ACUTY	nCM PDT 10 RUB	DIMMING	CEILING	24	✓	✓		✓		EXTENDED RANGE
✓	ⓓ	ACUTY	nCM PDT 9 RUB	DIMMING	CEILING	24	✓	✓		✓		STANDARD RANGE
✓	ⓔ	ACUTY	WSXA PDT	SWITCHING	WALL	120	✓	✓				PROGRAM FOR AUTO ON, AUTO OFF
✓	ⓕ	ACUTY	WSXA PDT	SWITCHING	WALL	120	✓	✓				PROGRAM FOR MANUAL ON, AUTO OFF
✓	ⓖ	ACUTY	nPDDMA DX	DIMMING	WALL	24				✓		ON/OFF & RAISE/LOWER

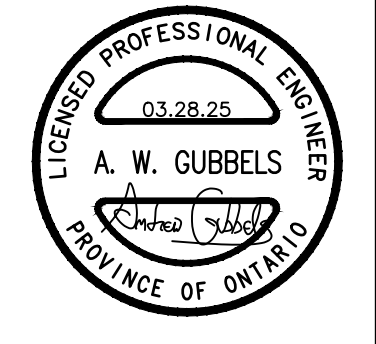
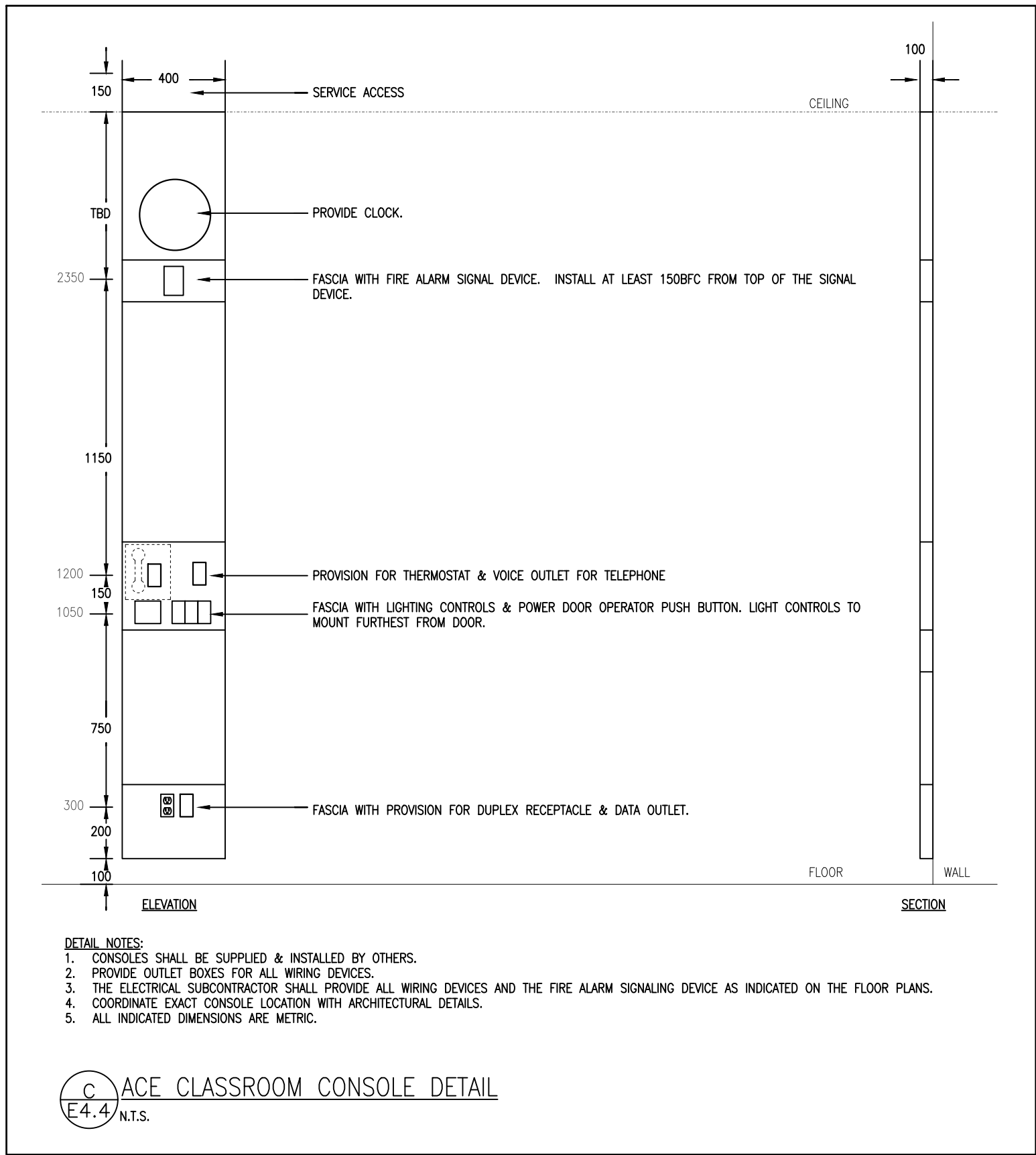
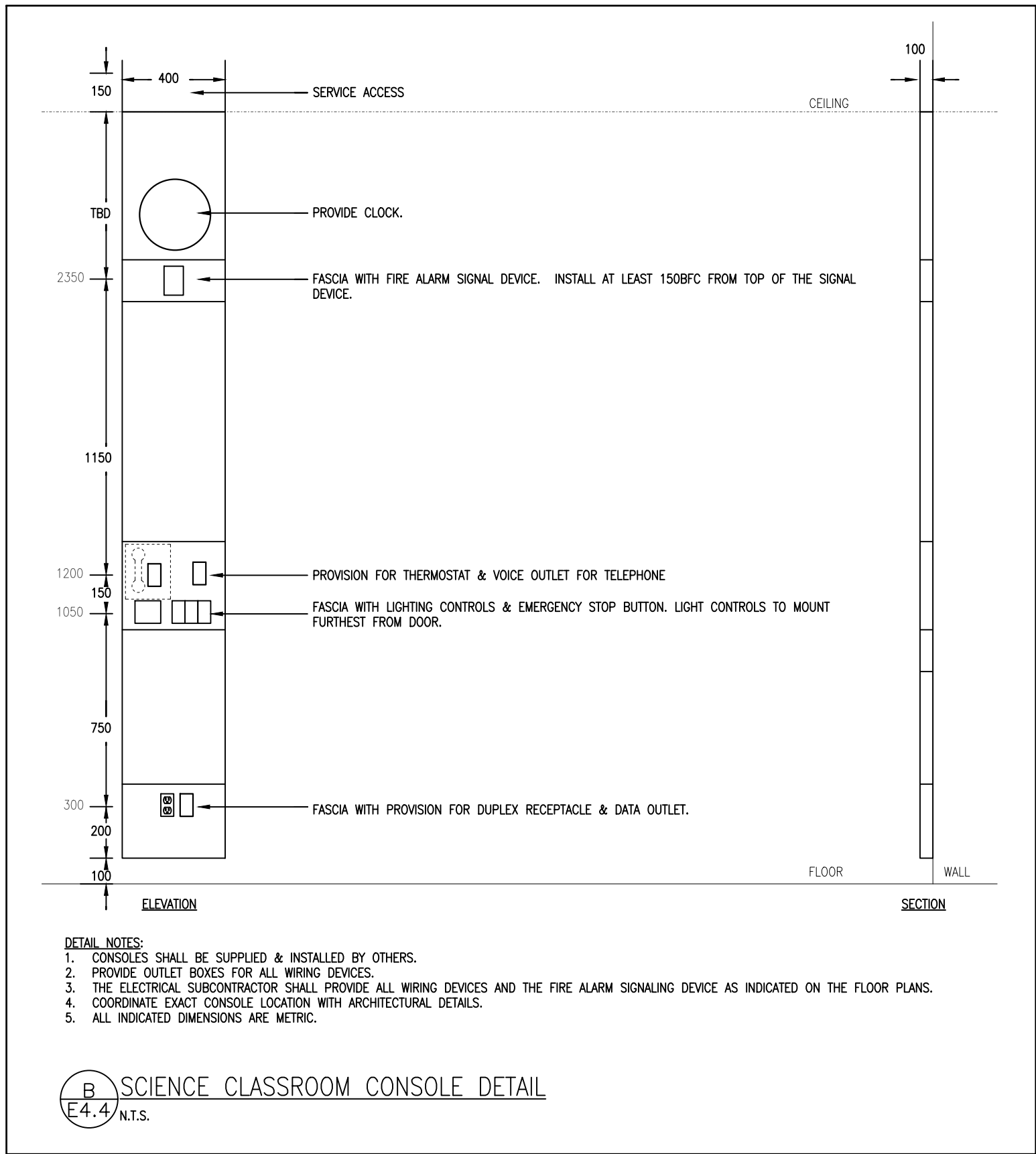
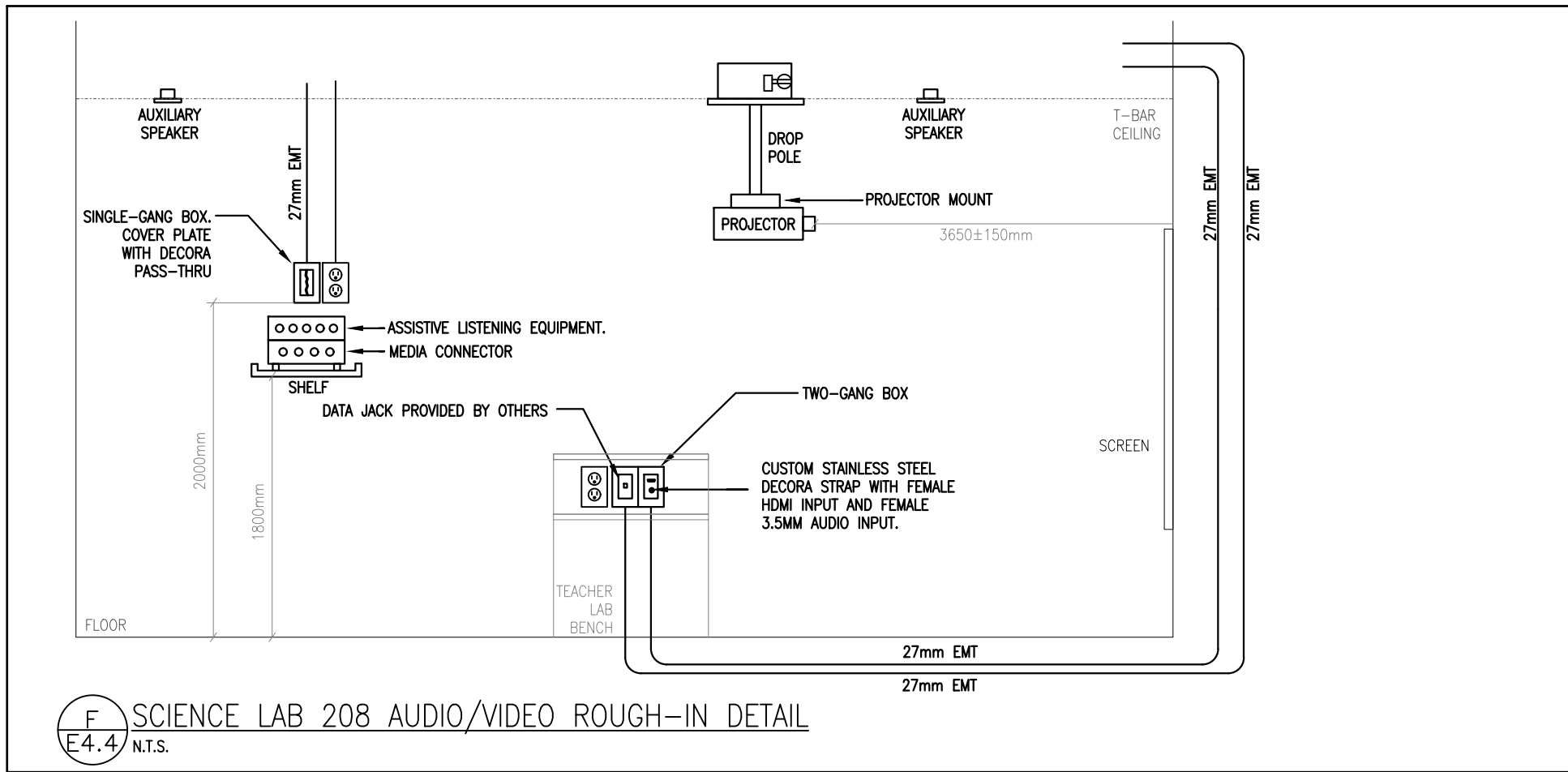
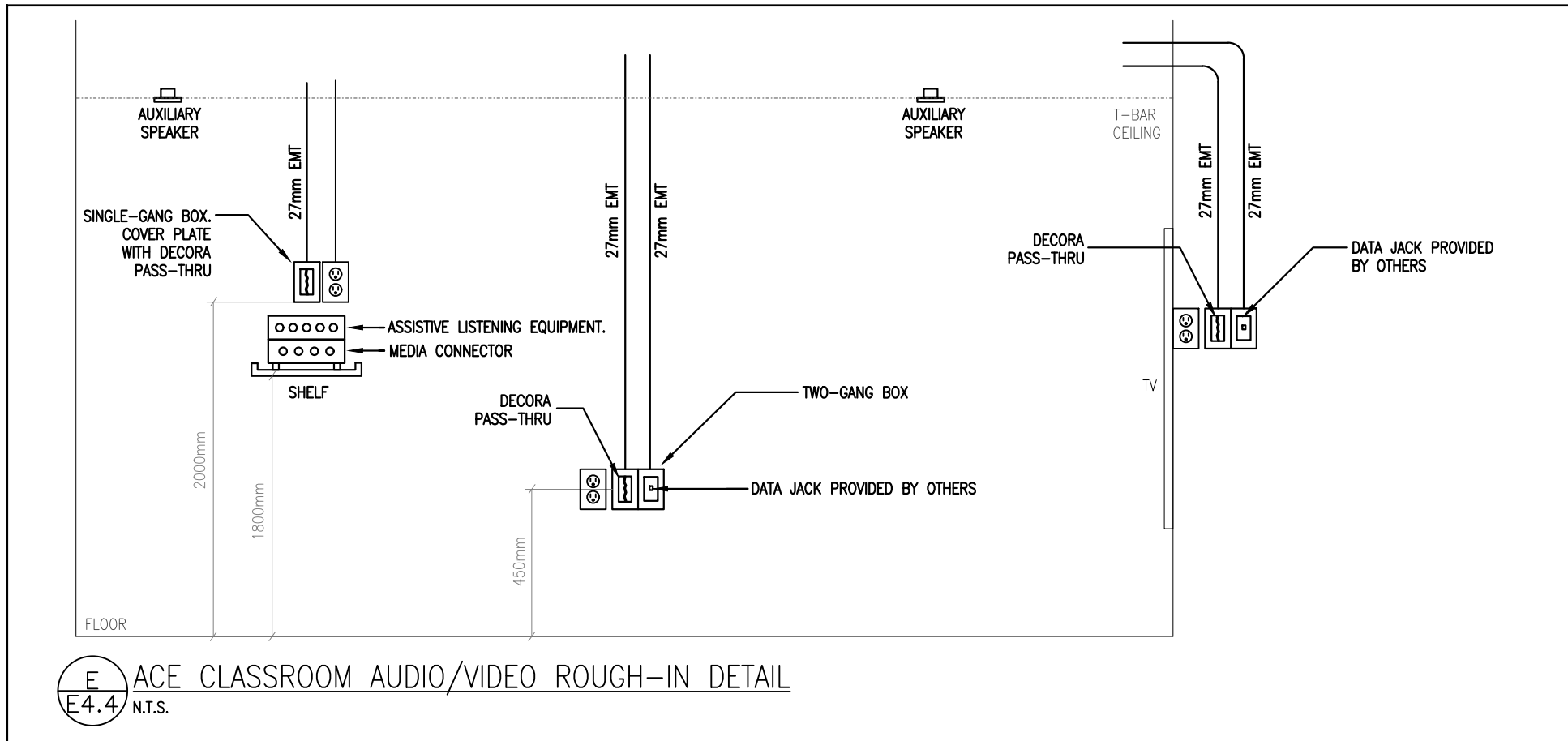
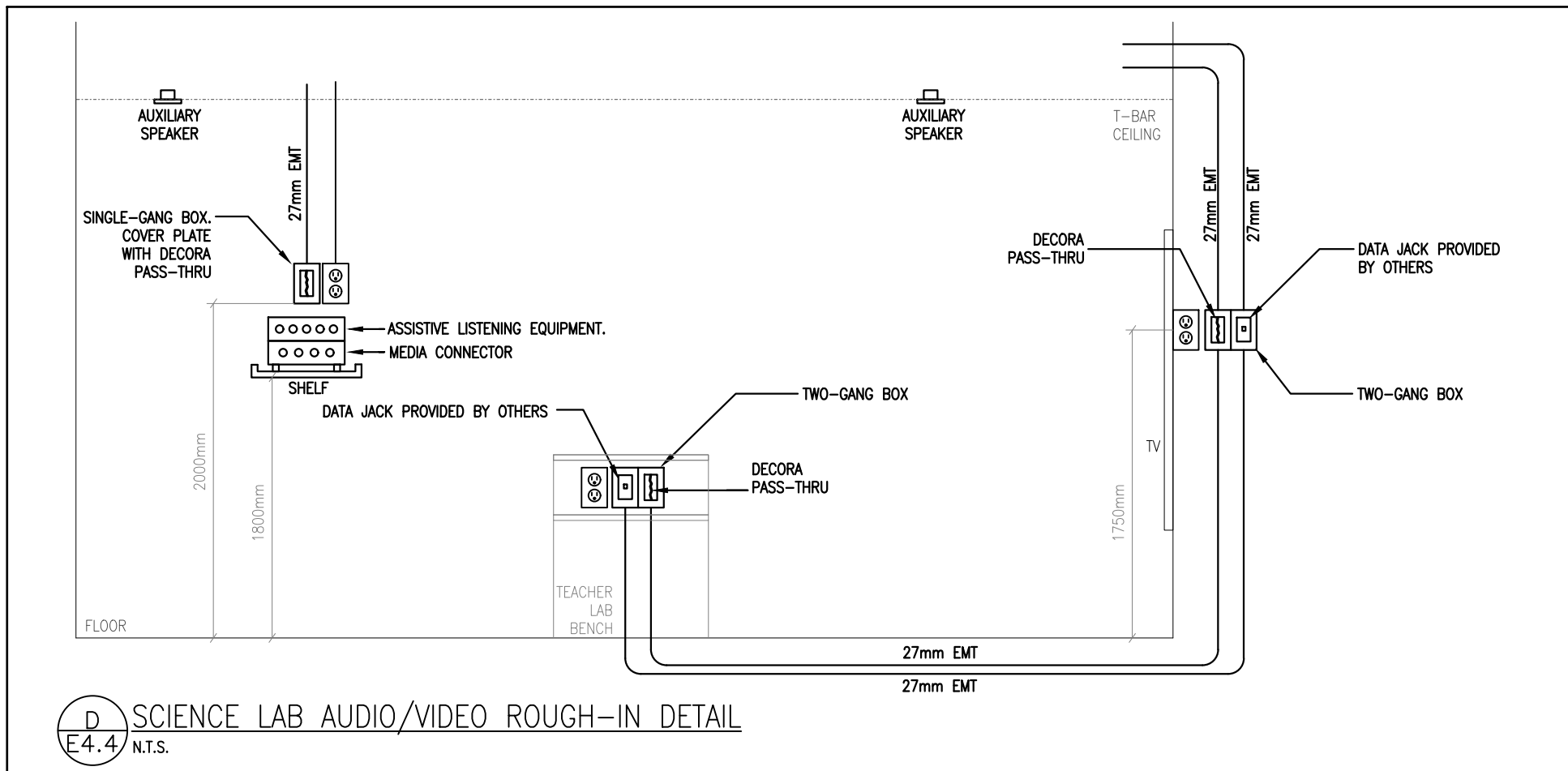
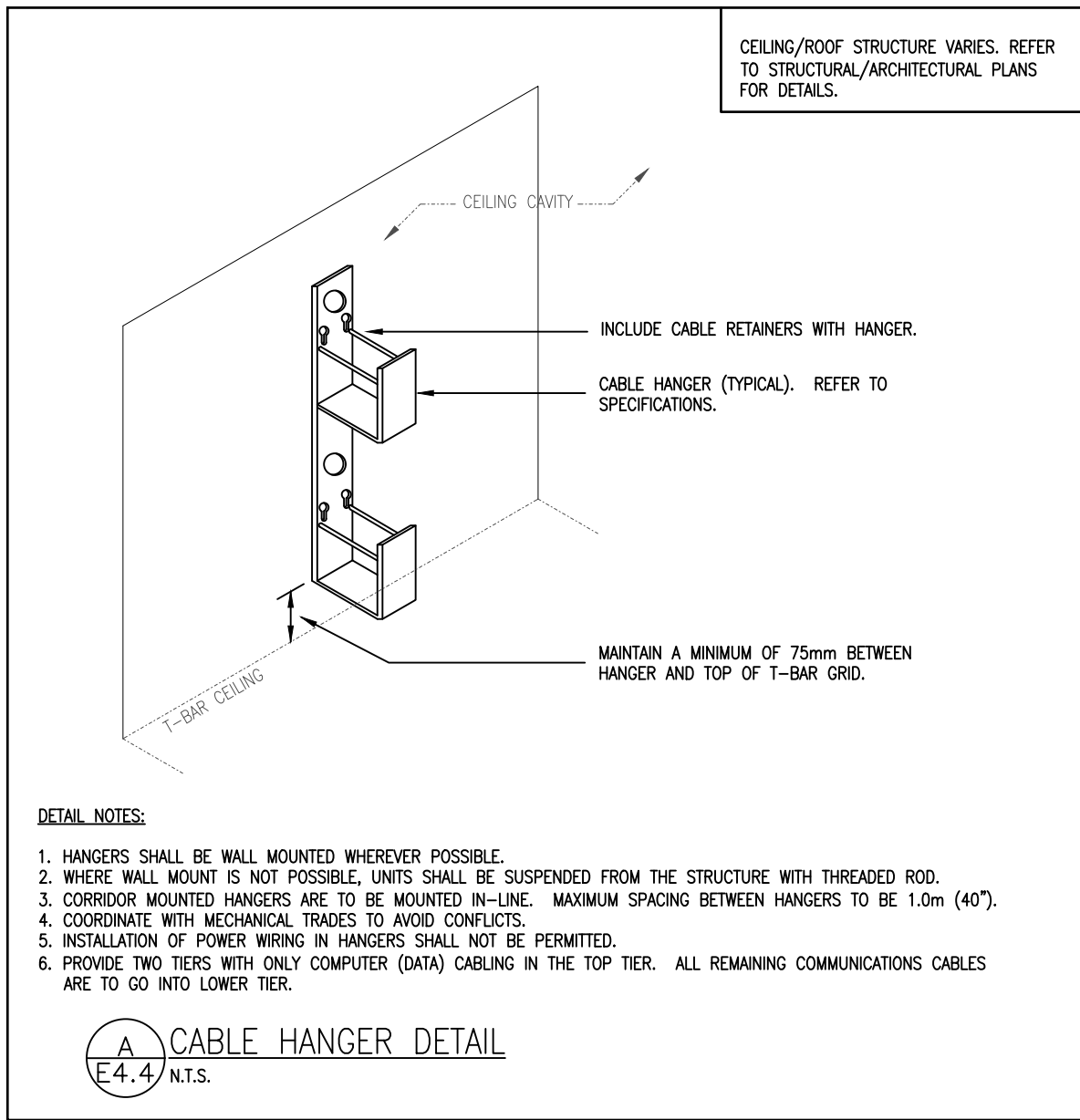
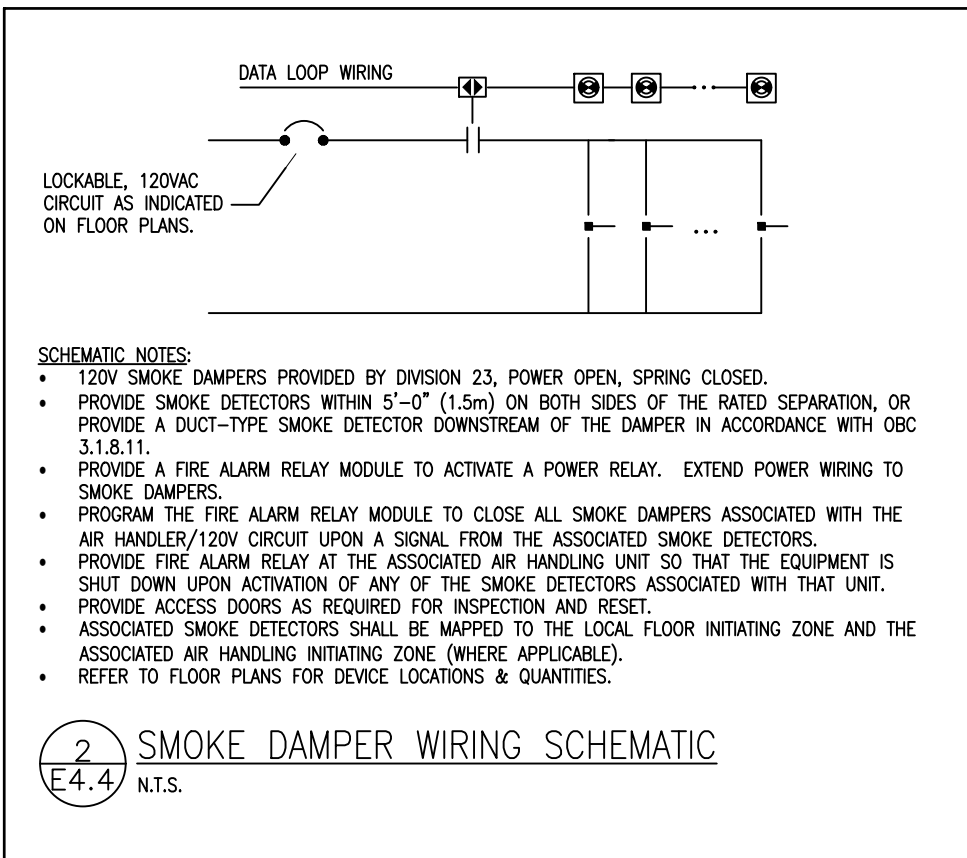
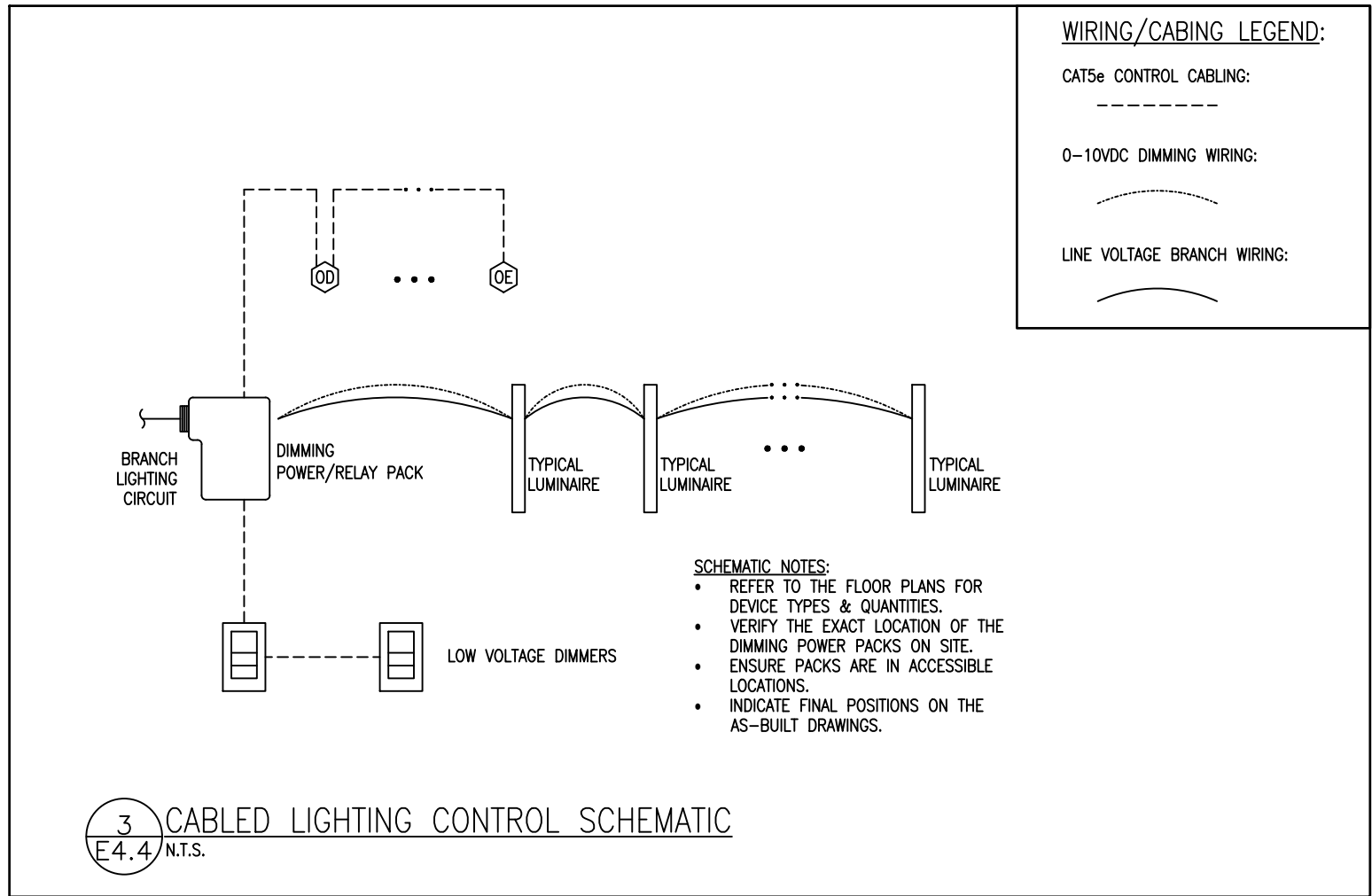
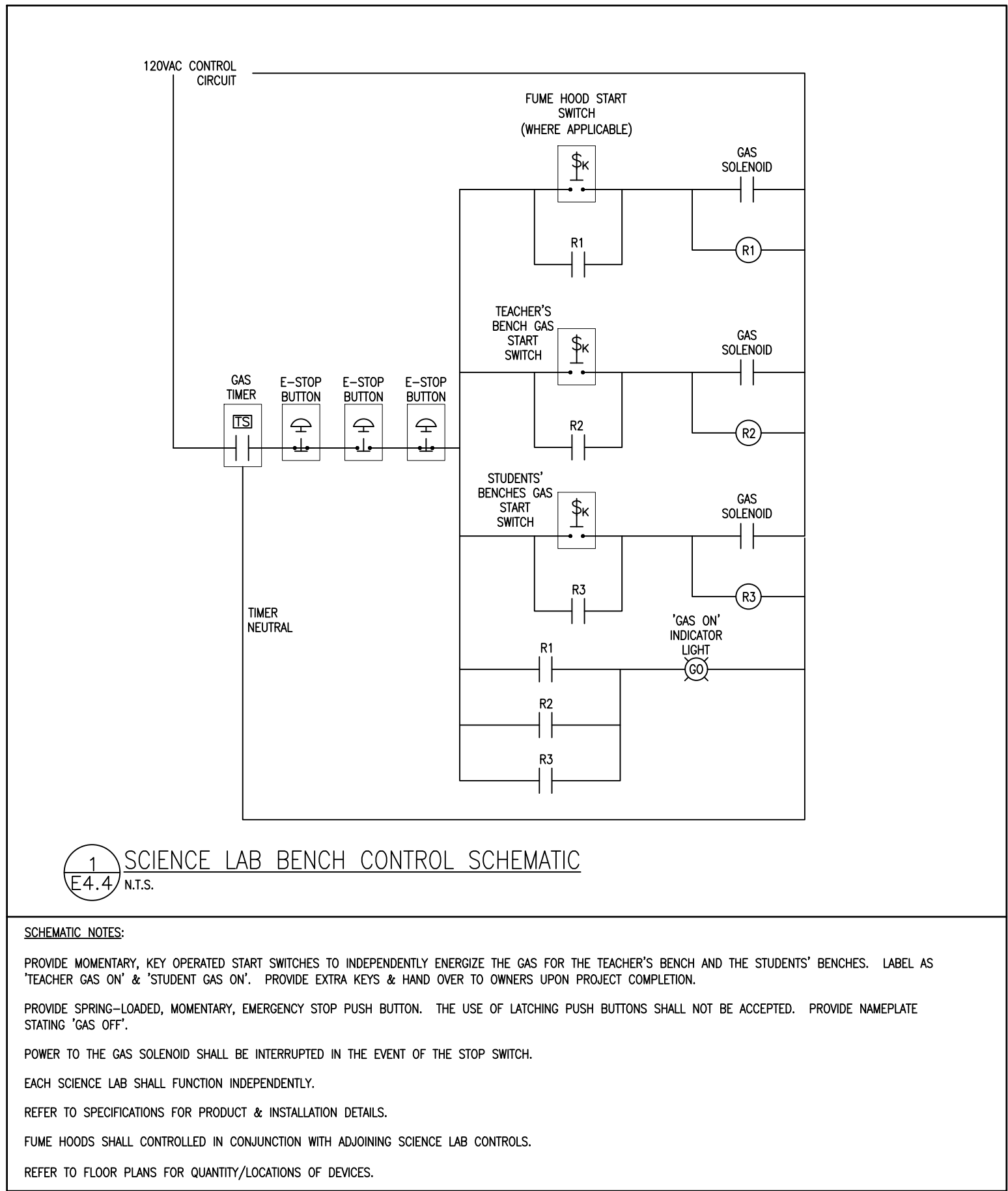
NOTES

1. PROVIDE POWER/RELAY PACKS AS REQUIRED. PACKS NOT INDICATED ON THE DRAWINGS.
2. DIVISION 26 TO PROVIDE ALL LOW VOLTAGE CABLING.

A circular professional seal for a Licensed Professional Engineer in the Province of Ontario. The outer ring contains the text "LICENSED PROFESSIONAL ENGINEER" at the top and "PROVINCE OF ONTARIO" at the bottom. In the center, the license number "03.28.25" is displayed above the name "A. W. GUBBELS". Below the name is a signature that appears to read "Andrew Gubbels".

[illegible]

Waterloo-Oxford District Secondary School 1206 Snyder's Rd W. Baden, ON N3A 1A4	
PROJECT NO. 25004 DRAWN BY: A.W.T. CHECKED BY: A.W.G.	1206 Snyder's Rd W. Baden, ON N3A 1A4



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ELECTRICAL DETAILS & SCHEMATICS				