

FRONT OF YONGE PUBLIC SCHOOL - ARCHITECTURAL SERVICES

1504 COUNTY ROAD 2, MALLORYTOWN, ON, K0E 1R0

ELECTRICAL



Client

DRAWING LIST

SYMBOL	DESCRIPTION
E0.1	ELECTRICAL LEGENDS, DETAILS, LIGHTING FIXTURE SCHEDULE AND KEY PLAN
E0.2	ELECTRICAL SPECIFICATIONS AND HYDRO ONE DETAILS
E0.3	ELECTRICAL SITE PLAN
E0.4A	PARTIAL SINGLE LINE DIAGRAM - DEMOLITION WORK
E0.4B	PARTIAL SINGLE LINE DIAGRAM - NEW WORK
E0.5A	ELECTRICAL PANEL SCHEDULES - DEMOLITION WORK
E0.5B	ELECTRICAL PANEL SCHEDULES - NEW WORK
E0.6	SYSTEM COORDINATION/SHORT CIRCUIT/DEVICE EVALUATION & ARC FLASH STUDY
E1.1	LIGHTING AND FIRE ALARM - DEMOLITION WORK
E1.2	LIGHTING AND FIRE ALARM - NEW WORK
E2.1	POWER AND SYSTEMS - DEMOLITION WORK
E2.2	POWER AND SYSTEMS - NEW WORK
E2.3	POWER AND SYSTEMS ROOF - DEMOLITION WORK
E2.4	POWER AND SYSTEMS ROOF - NEW WORK
E3.1	PORTABLE WORK

ABBREVIATION LEGEND

SYMBOL	DESCRIPTION
C	CEILING MOUNTED
R	DISCONNECT AND REMOVE C/W WIRING AND CONDUIT
E	EXISTING TO REMAIN
ER	EXISTING TO BE RELOCATED
EN	EXISTING IN NEW LOCATION
GFI	GROUND FAULT INTERRUPTING
GND	GROUND
UP	UTILITY/HYDRO POLE
MSB	MAIN SWITCHBOARD
EF	EXHAUST FAN
WG	WIREGUARD
WP	WEATHER PROOF
HD	HAND DRYER

LINETYPE LEGEND

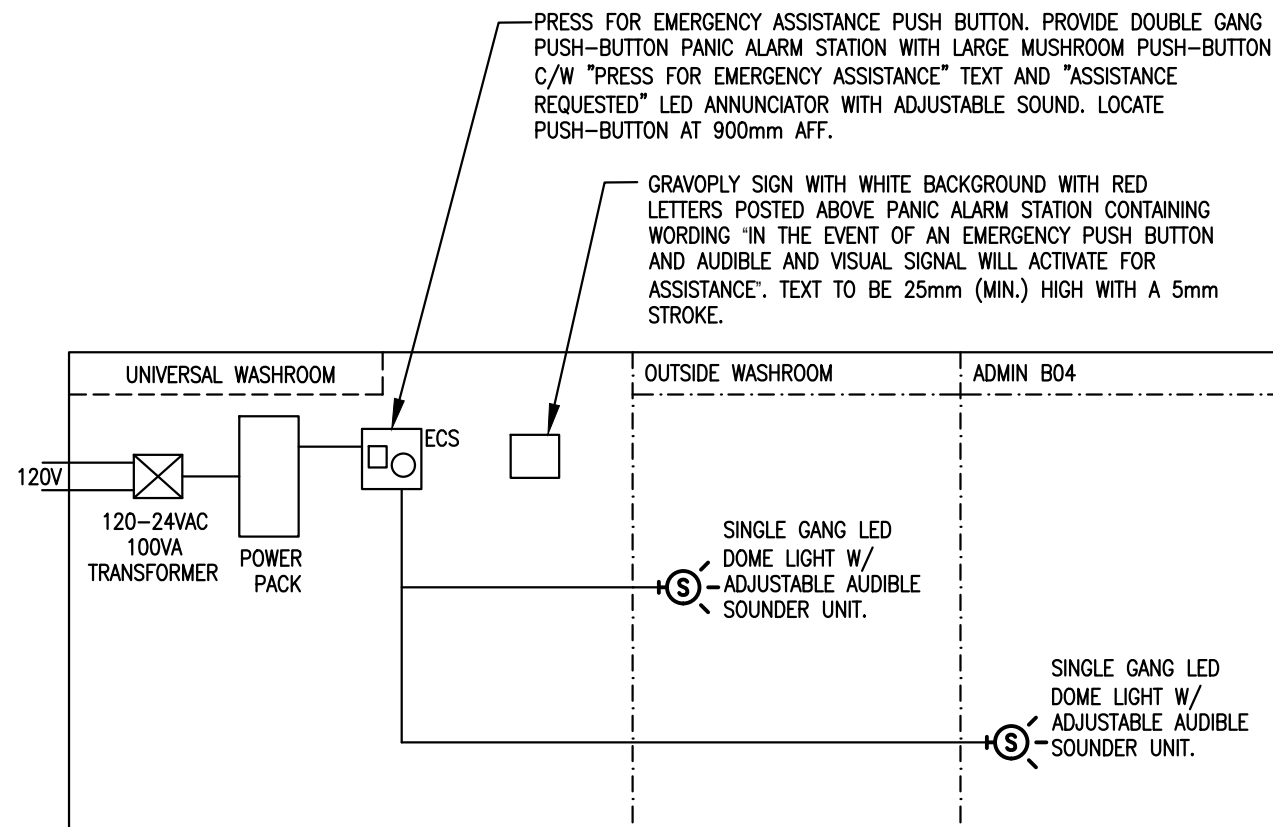
SYMBOL	DESCRIPTION
—	NEW WORK
- - -	EXISTING
- - - - -	DEMOLITION
- - - - -	CEILING GRID
- - - - -	UNDERGROUND SERVICES

LIGHTING & FIRE ALARM LEGEND

SYMBOL	DESCRIPTION
1	LIGHT FIXTURE - TYPE AS SHOWN
E	EXISTING LIGHT FIXTURE TO REMAIN
ER	EXISTING LIGHT FIXTURE TO BE DISCONNECTED AND REMOVED OR RELOCATED TO SUIT NEW LAYOUT.
EN	EXISTING LIGHT FIXTURE RELOCATED TO SUIT NEW LAYOUT
⊙	CEILING MOUNTED LIGHT FIXTURE - TYPE AS SHOWN
⊙	WALL MOUNTED LIGHT FIXTURE - TYPE AS SHOWN
\$	SINGLE GANG WALL MOUNTED SWITCH
\$	TWO GANG MOUNTED SWITCH WITH DIMMING
\$	THREE GANG MOUNTED SWITCH
\$OS	OCCUPANCY SENSOR SWITCH
\$OS/M	MOTOR RATED OCCUPANCY SENSOR SWITCH
OS	CEILING MOUNTED OCCUPANCY SENSOR
⊗ ⊗	CEILING/WALL MOUNTED EXIT LIGHT, SINGLE OR DOUBLE-FACE AS SHOWN
⊗ ⊗	CEILING/WALL MOUNTED EXIT LIGHT C/W INTEGRATED DUAL REMOTE HEADS
⊗	EMERGENCY BATTERY UNIT C/W RECEPTACLE AND LIGHTING HEADS
⊗	REMOTE EMERGENCY LIGHTING SINGLE HEAD
⊗	REMOTE EMERGENCY LIGHTING DUAL HEAD - WALL MOUNTED
⊗	REMOTE EMERGENCY LIGHTING DUAL HEAD - CEILING MOUNTED
FACP	FIRE ALARM CONTROL PANEL
⊕	FIRE ALARM HEAT DETECTOR
⊕	FIRE ALARM SMOKE DETECTOR
⊕	FIRE ALARM BELL
F	FIRE ALARM HORN
F	FIRE ALARM COMBINATION HORN/STROBE
F	FIRE ALARM PULL STATION
DH	FIRE ALARM DOOR HOLD OPEN DEVICE

POWER & SYSTEMS LEGEND

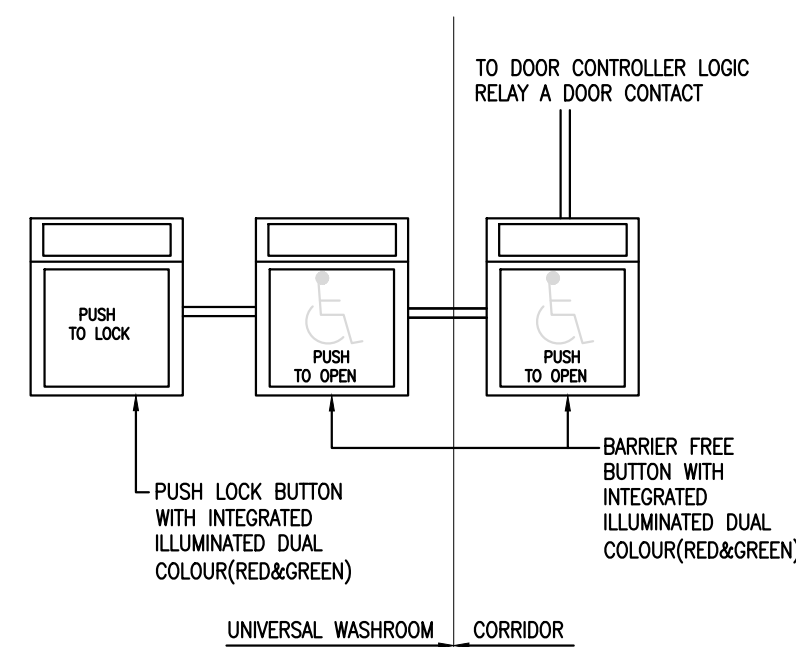
SYMBOL	DESCRIPTION
⊕	15A, 120V WALL MOUNTED DUPLEX RECEPTACLE
⊕ GFI	GROUND FAULT INTERRUPTING RECEPTACLE
⊕	RECEPTACLE INSTALLED OVER COUNTER
⊕	5-20R HOUSEKEEPING RECEPTACLE
⊕	SPECIAL RECEPTACLE
⊕	120V JUNCTION BOX, 250x250x150mm UNLESS NOTED OTHERWISE
⊕	DISCONNECT SWITCH
⊕	TRANSFORMER
⊕	SINGLE PHASE ELECTRIC MOTOR
⊕	THREE PHASE ELECTRIC MOTOR - HORSEPOWER AS SHOWN
⊕	SURFACE MOUNTED PANEL
⊕	RECESSED PANEL
⊕	BARRIER-FREE DOOR OPERATOR C/W PUSHBUTTONS
⊕	FLEXIBLE CONDUIT
⊕	CONDUIT DOWN
⊕	CONDUIT UP
⊕	HARDWIRED CONNECTION
⊕	METER
⊕	BASEBOARD HEATER
⊕	SURFACE MOUNTED HEATER
⊕	STAGE LIFT CONTROLLER
⊕	PUBLIC ADDRESS (P/A) SPEAKER, CEILING/WALL MOUNTED
⊕	UAW PUSH TO LOCK DOOR BUTTON
⊕	UAW LOCKED WHEN LIT
⊕	UAW PUSH TO OPEN DOOR BUTTON
⊕	UAW OCCUPIED WHEN LIT
⊕	UAW EMERGENCY PUSH BUTTON
⊕	UAW ASSISTANCE REQUIRED SIGN
⊕	UAW DOME LIGHT
⊕	DATA OUTLET
⊕	TV OUTLET
⊕	MOTION SENSOR
⊕	ELECTRIC STRIKE
⊕	FIRE ALARM RELAY



- NOTES
1. PROVIDE TRANSFORMER AND POWER SUPPLY IN ACCESSIBLE CEILING SPACE NEARBY PUSH BUTTON STATION.
 2. PROVIDE ALERT/EMERGENCY DEVICES AS INDICATED. COORDINATE EXACT MOUNTING AND LOCATION WITH PROJECT MANAGER. DEVICES TO BE INSTALLED TO MEET BARRIER FREE ACCESS REQUIREMENTS BETWEEN 900mm AND 1100mm. REFER TO ARCHITECTURE FOR SPECIFIC MOUNTING HEIGHTS.
 3. PANIC ALARM IS SILENCED / RESET FROM INSIDE THE ACCESSIBLE UNIT WASHROOM. NO CALLS CAN BE RESET / SILENCED REMOTELY FROM ADMIN B04 (OR DESIGNATED LOCATION).
 4. BASIS OF DESIGN IS EDWARDS 65380N1-G5.

1 UNIVERSAL WASHROOM DETAIL

E0.1 NTS



- NOTES
1. BACK BOXES AND CONDUIT BY ELECTRICAL CONTRACTOR. BARRIER FREE DEVICES/EQUIPMENT & LOW VOLTAGE WIRING BY HARDWARE CONTRACTOR. REFER TO ARCHITECTURAL HARDWARE SCHEDULE.
 2. COORDINATE SIZES OF BACK BOXES WITH HARDWARE CONTRACTOR TO SLAT DEVICES SEND PROVIDER CONDUIT TO BE MIN. 19mm C/W PULL STRING THROUGHOUT.
 3. PROVIDE POWER TO DOOR OPERATOR MOTOR/CONTROLLER. COORDINATED ON SITE WITH INSTALLER.
 4. REFER TO ARCHITECTURAL DRAWINGS AND SPECIFICATIONS FOR MOUNTING HEIGHT OF BARRIER FREE DEVICES FOR INSTALLATION OF BACK BOXES AND IN ACCORDANCE WITH OBC BARRIER FREE REQUIREMENTS.

2 UNIVERSAL WASHROOM DOOR CONTROL DETAIL

E0.1 NTS

LIGHTING FIXTURE SCHEDULE

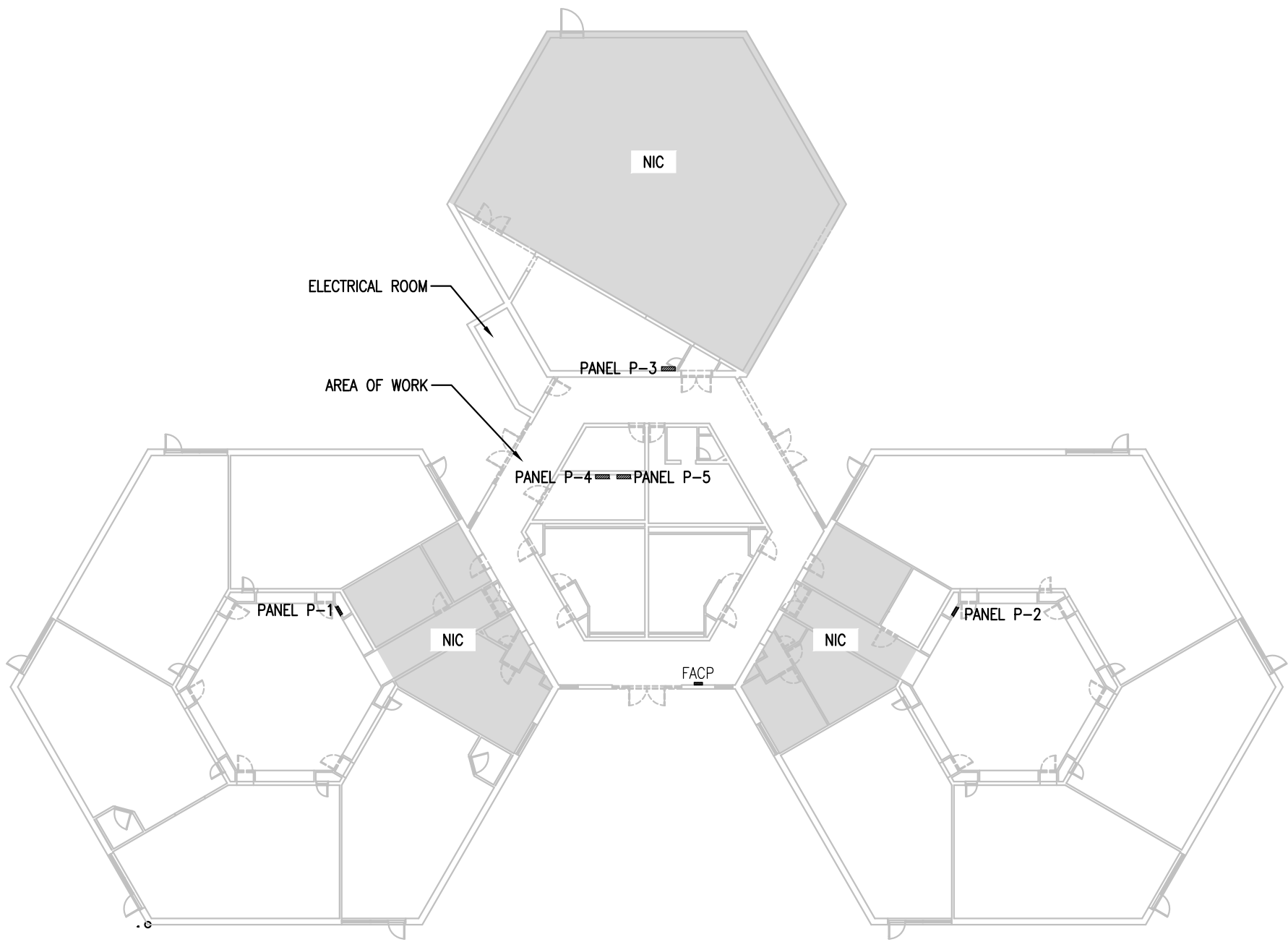
TYPE	DESCRIPTION	CATALOG NUMBER	TYPE	WATTS	COLOUR	VOLT	MOUNTING	REMARKS
1	2x4 LED PANEL	PHILLIPS DAY-BRITE CFI SERIES	LED	40W	3500K	120V	CEILING T-BAR	SELECTABLE CCT AND WATTS
2	1x8 LED LINEAR FIXTURE	PHILLIPS DAY-BRITE	LED	83W	3500K	120V	CEILING SUSPENDED	FIXTURES SUSPENDED ABOVE WASHROOM VANITIES TO MATCH EXISTING ROW MOUNTED C/W AIRCRAFT CABLE
3	6" LED POT LIGHT	LIGHTOLIER M6R-DL-25-9CS	LED	30W	3500K	120V	CEILING DRYWALL	C/W DRYWALL RETROFIT KIT
4	2x2 LED PANEL	PHILLIPS DAY-BRITE CFI SERIES	LED	40W	3500K	120V	CEILING T-BAR	SELECTABLE CCT AND WATTS
5	2' LED STRIP LIGHT	PHILLIPS DAY-BRITE OWL240L-840-UNV	LED	14W	3500K	120V	CEILING SURFACE	C/W WIRE GUARD
6	2' LED STRIP LIGHT W/ INTEGRATED SWITCH	-	LED	14W	3500K	120V	LIFT PIT SURFACE	C/W PIT MOUNTED LIGHT SWITCH. REFER TO DETAIL 3/E0.1

- NOTES
1. PROVIDE ALL HARDWARE AND ANCILLARIES FOR A COMPLETE INSTALLATION.
 2. COORDINATE EXACT FIXTURE MOUNTING HEIGHTS, COLOUR TEMPERATURES AND LOCATIONS WITH ARCHITECTURAL DRAWINGS.
 3. LIGHT FIXTURES ARE TO BE MADE IN CANADA AND SOURCED FROM CANADIAN SUPPLIERS. ANY DEVIATIONS ARE TO BE CLEARLY STATED AT SHOP DRAWING STAGE.



3 TYPICAL STAGE LIFT LIGHT & RECEPTACLE INSTALLATION

E0.1 NTS



4 KEY PLAN

E0.1 NTS

THE ENGINEER WIVES ANY AND ALL RESPONSIBILITY AND LIABILITY FOR PROBLEMS WHICH ARISE FROM FAILURE TO FOLLOW THESE PLANS, SPECIFICATIONS AND THE DESIGN INTENT THEY CONVEY, OR FOR PROBLEMS WHICH ARISE FROM OTHER FAILURE TO OBTAIN AND / OR FOLLOW THE ENGINEER'S GUIDANCE WITH RESPECT TO ANY ERRORS, OMISSIONS, INCONSISTENCIES, AMBIGUITIES OR CONFLICTS WHICH ARE ALLEGED.

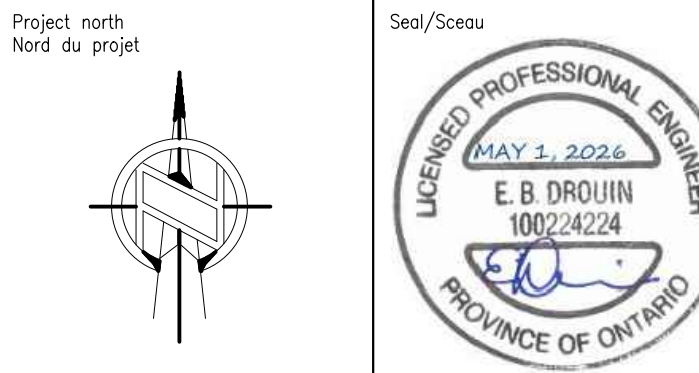
THIS DRAWING IS THE PROPERTY OF GOODKEY WEEDMARK & ASSOCIATES LIMITED AND ALL COPYRIGHTS ARE RESERVED. NO USE OF THIS DRAWING MAY BE MADE WITHOUT EXPRESS WRITTEN CONSENT. DO NOT SCALE DRAWINGS

L'INGÉNIEUR DÉCLINE TOUTE RESPONSABILITÉ DÉCOULANT DE PROBLÈMES FAISANT SUITE AU NON RESPECT DES PLANS, DES DÉTAILS ET DE L'INTENTION DU CONCEPT QU'ILS INDICENT OU DE TOUS LES PROBLÈMES POUVANT RÉSULTER DU DÉFAUT D'OBTENIR ET / OU DE SUIVRE LES CONSEILS DE L'INGÉNIEUR EN CE QUI CONCERNE LES ERREURS, OMISSIONS, INCONSISTANCES, AMBIGUITÉS OU CONFLITS ALLEGUÉS.

CE DESSIN EST LA PROPRIÉTÉ LITTÉRAIRE DE GOODKEY WEEDMARK & ASSOCIATES LIMITED ET TOUS LES DROITS SONT RÉSERVÉS. L'UTILISATION EST INTERDITE SANS LE CONSENTEMENT ÉCRIT DE L'AUTEUR. NE PAS MESURER LES DESSINS À L'ÉCHELLE



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FRONT OF YONGE PUBLIC SCHOOL - ARCHITECTURAL SERVICES

ELECTRICAL LEGENDS, DETAILS, LIGHTING FIXTURE SCHEDULE AND KEY PLAN

Scale	AS NOTED	Project no./No. du projet	2026-140
Échelle		Design by	D.CHANDLER
Conçu par		Drawn by	D.CHANDLER
Dessiné par		Reviewed by	E.DROUIN
Examiné par			

E0.1

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- ELECTRICAL SPECIFICATIONS:**
1. COMPLY WITH THE REQUIREMENTS OF THE INSTRUCTIONS TO BIDDERS, THE GENERAL CONDITIONS OF THE CONTRACT AND THE SUPPLEMENTARY GENERAL CONDITIONS INCLUDED IN THE TENDER DOCUMENTS.
 2. CONTRACTOR SHALL FOLLOW THE BIDDING DOCUMENT PROJECT SCHEDULE. UPON AWARD, CONTRACTOR SHALL SUBMIT WORK SCHEDULE AND EQUIPMENT DELIVERY SCHEDULE TO PROJECT MANAGER & ENGINEER FOR REVIEW AND APPROVAL.
 3. ALL WORK TO BE CONDUCTED DURING HOURS SPECIFIED BY THE PROJECT MANAGER.
 4. ALL INSTALLATIONS SHALL BE IN ACCORDANCE WITH ALL APPLICABLE CODES AND BY-LAWS AND BE INSTALLED BY LICENSED WORKERS SKILLED IN THAT PARTICULAR PORTION OF THE CONTRACT.
 5. ANY CONFLICT OR QUESTIONS THAT ARISE IN RELATION TO THE DESIGN DOCUMENTS DURING THE TENDER PERIOD SHALL BE BROUGHT TO THE ATTENTION OF THE ENGINEER. IF THIS PROCEDURE IS NOT FOLLOWED, REROUTING AND MODIFICATION AS REQUIRED TO COMPLETE THE WORK SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR.
 6. GIVE ALL NOTICES, OBTAIN ALL NECESSARY PERMITS AND PAY ALL APPLICABLE FEES AND INSPECTION COSTS AND DELIVER TO ENGINEER ALL NECESSARY FINAL CERTIFICATES OF INSPECTION AND APPROVAL WHICH MAY BE REQUIRED BY AUTHORITIES HAVING JURISDICTION OVER WORK, AS EVIDENCE THAT WORK INSTALLED CONFORMS WITH LAWS AND REGULATIONS OF ALL GOVERNING AUTHORITIES. BEFORE FINAL CERTIFICATE OF PAYMENT MAY BE CONSIDERED DUE, FURNISH COPIES OF ALL DRAWINGS AS MAY BE REQUIRED TO COMPLY WITH ABOVE. NOTIFY INSPECTION AUTHORITIES IN SUFFICIENT TIME FOR THEM TO INSPECT WORK.
 7. EXAMINE SITE AND LOCAL CONDITIONS AFFECTING WORK UNDER THIS DIVISION TO ENSURE THAT WORK UNDER THIS DIVISION CAN BE SATISFACTORILY CARRIED OUT WITHOUT CHANGES TO DRAWINGS. NO ALLOWANCE WILL BE MADE LATER FOR ANY EXPENSE INCURRED THROUGH FAILURE TO MAKE THIS EXAMINATION. START OF WORK WILL BE DEEMED EVIDENCE OF ACCEPTANCE OF, AND SATISFACTION WITH, EXISTING CONDITIONS.
 8. GUARANTEE ALL WORK FOR 12 MONTHS FROM THE DATE OF ACCEPTANCE.
 9. ENSURE THAT ALL PRECAUTIONS ARE TAKEN TO PROTECT ALL PERSONNEL FROM HAZARDS DURING THE WORK. PROTECT ALL EQUIPMENT FROM DAMAGE FROM ANY CAUSE INCLUDING WEATHER.
 10. USE ONLY NEW, FULLY CSA AND ULC APPROVED FOR USE AS INSTALLED MATERIALS, AND TO MEET THIS SPECIFICATION IN ALL RESPECTS, UNLESS OTHERWISE NOTED.
 11. CANADIAN PRODUCTS AND MANUFACTURERS ARE TO BE PRIORITIZED, WHERE THIS IS NOT POSSIBLE, THE CONTRACTOR TO HIGHLIGHT THE COUNTRY OF ORIGIN AND MANUFACTURER OF EVERY ALTERNATIVE PRODUCT AND PROVIDE JUSTIFICATION FOR THE USE OF OVERSEAS PRODUCTS OR MANUFACTURERS.
 12. INSPECT ALL EQUIPMENT UPON DELIVERY AND NOTIFY PROJECT ENGINEER OF ANY DAMAGE OR DEFICIENCIES.
 13. COORDINATE MATERIAL STORAGE WITH THE SITE SUPERINTENDENT AND OTHER TRADES.
 14. DURING THE COURSE OF CONSTRUCTION AND UPON COMPLETION, REMOVE ALL RUBBISH AND WASTE RESULTING FROM THIS WORK, TO THE SATISFACTION OF THE ENGINEER. CHECK, CLEAN AND REPAINT WHERE NECESSARY, ALL ELECTRICAL EQUIPMENT AND LEAVE IN A FIRST CLASS CONDITION.
 15. THE WORK AS COVERED BY THESE SPECIFICATIONS AND PLANS IS INTENDED TO COMPLY EXACTLY WITH THE LATEST RULES AND REGULATIONS OF ALL GOVERNING AUTHORITIES, AND THESE RULES ARE TO BE CONSIDERED AN INTEGRAL PART OF THESE SPECIFICATIONS. ALL REFERENCES TO CODES AND STANDARDS ARE TO THE LATEST ACCEPTED EDITIONS. IN CASE OF CONFLICT, NOTIFY ENGINEER IMMEDIATELY FOR CLARIFICATION PRIOR TO PROCEEDING.
 16. MANUFACTURER'S INSTRUCTIONS REGARDING THE HANDLING, INSTALLATION AND TESTING OF EQUIPMENT SPECIFIED HEREIN SHALL BE CONSIDERED PART OF THIS SPECIFICATION.
 17. PROVIDE ELECTRONIC COPY (PDF FORMAT) OF SHOP DRAWINGS FOR ALL SYSTEMS AND EQUIPMENT FOR REVIEW.
 18. SUBMIT ELECTRONIC (PDF FORMAT) COPY OF OPERATION & MAINTENANCE (O&M) MANUALS FOR REVIEW IN ADVANCE OF PROJECT CLOSEOUT. PROVIDE A COPY OF THE FOLLOWING IN THE MANUALS:
 - a. LETTER OF WARRANTY.
 - b. ELECTRICAL SAFETY AUTHORITY (ESA) INSPECTION CERTIFICATE.
 - c. CITY INSPECTION REPORT.
 - d. FIRE ALARM VERIFICATION REPORT.
 - e. UPDATED PANEL SCHEDULES C/W ELECTRICAL COMPANY'S NAME AND DATE.
 - f. SHOP DRAWINGS.
 - g. AS BUILT DRAWINGS.
 - h. LIGHTING CONTROL SCHEDULING.
 - i. EXIT AND EMERGENCY LIGHTING CERTIFICATION LETTER.
 - j. ALL MECHANICAL EQUIPMENT TEST AND START UP REPORTS.
 - k. LIST OF SUPPLIERS C/W ADDRESS AND PHONE NUMBERS.
 - l. SEISMIC REVIEW LETTER SEALED BY P. ENG.
 19. SUPPLY ALL NECESSARY TOOLS, EQUIPMENT AND PERSONNEL AND PROVIDE DEMONSTRATION AND TRAINING TO OPERATING AND MAINTENANCE PERSONNEL IN OPERATING, CONTROLLING, ADJUSTING, TROUBLESHOOTING AND SERVICING OF ALL SYSTEMS AND EQUIPMENT DURING REGULAR WORK HOURS, PRIOR TO ACCEPTANCE.
 20. AFTER AWARD OF CONTRACT, SUBMIT A DETAILED COST BREAKDOWN INDICATING MATERIAL AND LABOUR COSTS FOR EACH PORTION OF THE WORK, INCLUDING DEMOLITION, LIGHTING, POWER DISTRIBUTION, COMMUNICATIONS, FIRE ALARM, ETC. TO BE APPROVED BY THE ENGINEER.
 21. THE DRAWINGS SHALL BE CONSIDERED TO SHOW THE GENERAL CHARACTER AND SCOPE OF THE WORK AND NOT NECESSARILY THE EXACT DETAILS OF THE PROVISION OF THE WORK. PROVISION OF THE WORK SHALL BE COMPLETE WITH ALL ACCESSORIES REQUIRED FOR A COMPLETE AND OPERATIVE INSTALLATION.
 22. THESE ELECTRICAL DRAWINGS AND SPECIFICATIONS SHALL BE READ IN CONJUNCTION WITH ALL OTHER CONSULTANT'S DRAWINGS AND SPECIFICATIONS.
 23. PRIOR TO PROCEEDING WITH WORK, COORDINATE WORK WITH ALL OTHER TRADES TO AVOID INTERFERENCE AND PROVIDE INTERFERENCE DRAWINGS AS PART OF SHOP DRAWING SUBMISSION.
 24. THE WORD "PROVIDE" SHALL DENOTE "SUPPLY, INSTALL, CONNECT AND TEST".
 25. **DEMOLITION NOTES:**
 - a. UNLESS OTHERWISE NOTED, MATERIALS FOR REMOVAL BECOME THE CONTRACTOR'S PROPERTY AND SHALL BE TAKEN FROM SITE AND DISPOSED OF IN ACCORDANCE WITH ALL APPLICABLE CODES, STANDARDS AND REGULATIONS.
 - b. DISCONNECT AND MAKE SAFE ALL SYSTEMS TO BE DEMOLISHED INCLUDING PANELS, FEEDERS, BRANCH CIRCUITS AND EQUIPMENT BY OTHER DIVISIONS. COORDINATE WITH OTHER DIVISIONS.
 - c. MAINTAIN EXISTING REMAINING CIRCUITS, SYSTEMS, ETC., WHICH PASS THROUGH AND/OR ARE IN CLOSE PROXIMITY OF AREA OF CONSTRUCTION. PROVIDE NECESSARY COMPONENTS TO MAINTAIN SYSTEMS. ENSURE COMPONENTS WILL BE CONCEALED WHEN CONSTRUCTION IS COMPLETE.
 - d. RENSTATE IMMEDIATELY ANY REMAINING EXISTING SYSTEMS INADVERTENTLY INTERRUPTED DURING CONSTRUCTION.
 - e. THE DRAWINGS INDICATE KNOWN CONDITIONS AND MAY NOT INDICATE ALL DEMOLITION REQUIREMENTS. ELECTRICAL CONTRACTOR SHALL VISIT THE SITE PRIOR TO TENDER SUBMISSION AND VERIFY REQUIREMENTS.
 - f. REMOVE REDUNDANT CONDUIT AND WIRING BACK TO SOURCE UNLESS OTHERWISE NOTED, AND MAKE SAFE.
 - g. DEVICES FROM DEMOLITION ARE NOT TO BE REUSED UNLESS NOTED OTHERWISE. NEW DEVICES SHALL BE SUPPLIED WHERE NECESSARY.
 - h. AFTER DEMOLITION WORK IS COMPLETE AND MINIMUM THREE (3) WORKING DAYS PRIOR TO PROCEEDING WITH NEW WORK, NOTIFY ENGINEER FOR INSPECTION.
 26. **LABELLING:**
 - a. FOR ALL NEW, RELOCATED AND EXISTING-TO-REMAIN ELECTRICAL DEVICES WITHIN THE CONTRACT AREA, PROVIDE CLEAR "BROTHER P-TOUCH" LABELS INDICATING CIRCUIT AND PANEL AT ALL EQUIPMENT, DEVICES, RECEPTACLES AND JUNCTION BOXES. FOR DEDICATED RECEPTACLE, INCLUDE THE WORD "DED" C/W CIRCUIT NUMBER.
 - b. PROVIDE LAMACOID LABELS ON DISCONNECT SWITCHES, MOTOR STARTERS, TRANSFORMERS AND PANELS. CLEARLY INDICATE EQUIPMENT CONTROLLED OR AREA SERVICED AS WELL AS FEEDER SOURCE. INDICATE FUSE SIZE AND TYPE ON FUSED DISCONNECTS SWITCHES. LETTERING TO BE BACK ON WHITE BACKGROUND, MINIMUM 25mm HIGH.
 - c. TRACE EXISTING CIRCUITS AND UPDATE PANEL SCHEDULES.
 27. **PROVIDE CUTTING, PATCHING AND CORING OF ALL SURFACES REQUIRED TO FIT THE ELECTRICAL EQUIPMENT. CHECK WITH BUILDING MANAGEMENT PRIOR TO CORE DRILLING AND CUTTING OF FLOOR SLAB, REGARDING BUILDING PROCEDURES. PRIOR TO SLAB CUTTING OR CORING, SCAN THE SLAB AND COORDINATE TO MINIMIZE CUTTING OF REINFORCING STEEL. FIRE STOP ALL NEW FIRE RATED PENETRATIONS. OBTAIN WRITTEN VERIFICATION PRIOR TO PROCEEDING. CUTTING TORCHES SHALL NOT BE USED FOR MAKING HOLES. PATCHED SURFACES ARE TO BE PRIME FINISHED, READY FOR FINAL COVERING BY OTHERS.**

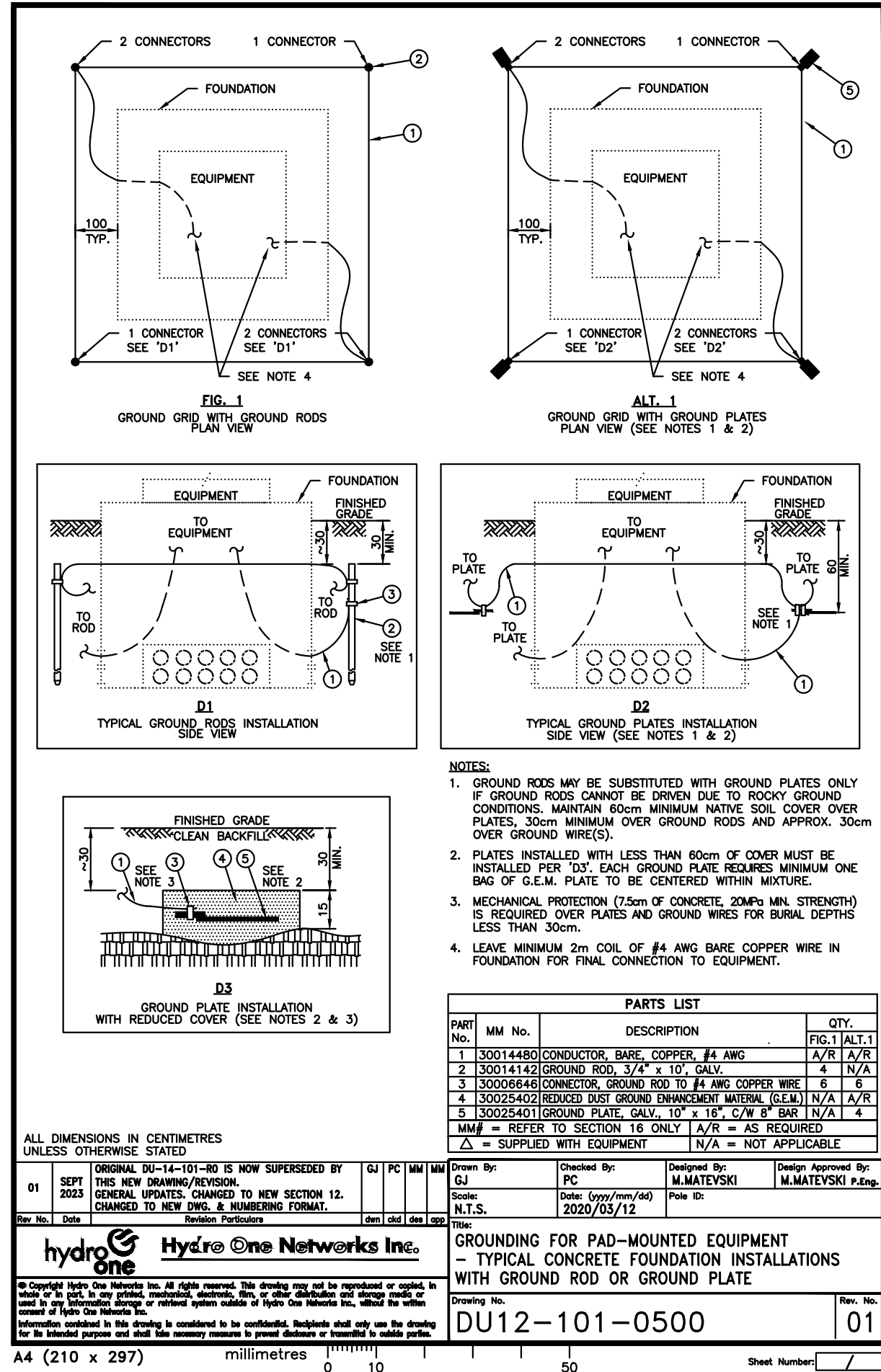
- a. FIRE AND SMOKE STOPPING:
 - i. PROVIDE FIRE AND SMOKE STOPPING WHERE CONDUITS, CABLES, TRAYS, ETC. PENETRATE FLOOR SLABS OR FIRE RATED WALLS WITH A ULC LISTED PUTTY, EQUAL TO 3M CAULK CP22 OR PUTTY 303. USE FIRESTOP BLOCKS FOR LARGER OPENINGS, EQUAL TO HILT CFS-BL.
 - ii. PROVIDE FIRE RATED PUTTY PADS ON OUTLETS PENETRATING FIRE RATED PARTITIONS.
 - iii. INSTALLATION OF FIRE STOPPING PRODUCTS SHALL BE COMPLETED BY TRAINED MANUFACTURER REPRESENTATIVES.
- b. SEISMIC RESTRAINT SYSTEMS (SRS):
 - i. PROVIDE DESIGN, SUPPLY AND INSTALLATION OF COMPLETE SRS FOR ALL SYSTEMS AND EQUIPMENT SPECIFIED FOR INSTALLATION ON THIS PROJECT AS PER APPLICABLE CODES AND STANDARDS.
 - ii. DESIGN TO BE BY LICENSED PROFESSIONAL ENGINEER SPECIALIZING IN DESIGN OF SRS. INCLUDE ALL COSTS ASSOCIATED WITH THIS WORK AS IT RELATES TO THESE DRAWINGS AND SPECIFICATIONS. SUBMIT DESIGN SKETCHES AND INSTALLATION REQUIREMENTS C/W PROFESSIONAL STAMP PRIOR TO START OF INSTALLATION.
 - iii. SUBMITTALS TO INCLUDE FULL DETAILS OF DESIGN CRITERIA.
- c. ANCHORING METHODS:
 - i. ELECTRICAL EQUIPMENT, FIXTURES, CABLE TRAY, CONDUIT AND CABLEING IS TO BE SECURELY ANCHORED OR FASTENED TO THE BUILDING STRUCTURE USING DRILLED HOLE WEDGE ANCHORS FOR CONCRETE STRUCTURES OR STEEL CLAMPS FOR STEEL STRUCTURES.
 - ii. AIR, FUEL OR POWDER ACTUATED DEVICES OR ANY OTHER EQUIVALENT TYPE OF FASTENING DEVICES ARE NOT TO BE USED.
 - iii. WHERE ANCHORING METHOD FORMS PART OF SEISMIC RESTRAINT REQUIREMENTS, ANCHORING METHODS TO COMPLY WITH SEISMIC RESTRAINT SYSTEMS (SRS).
- d. LUMINAIRE SUPPORTS:
 - i. FOR RECESSED OR SURFACE MOUNTED LIGHTING IN SUSPENDED CEILING INSTALLATIONS, SUPPORT LUMINAIRES INDEPENDENTLY, BY MEANS OF A MINIMUM OF TWO CHAIN HANGERS BOLTED TO DIAGONAL CORNERS OF THE FIXTURE BODY AND SECURED TO BUILDING STRUCTURE IN ACCORDANCE WITH APPLICABLE ELECTRICAL CODE, AND SEISMIC RESTRAINT SYSTEMS (SRS). DO NOT SECURE ANY EQUIPMENT, FIXINGS OR ANCILLARIES TO ROOF DECK.
- e. GROUNDING AND BONDING:
 - i. PROVIDE GROUNDING AND BONDING OF ALL EQUIPMENT WITH APPROVED FITTINGS AND CONDUCTORS OF AMPLIFIED CAPACITY IN ACCORDANCE WITH APPLICABLE ELECTRICAL CODE. ALL CONDUCTORS SHALL HAVE GREEN INSULATION OR BE COLOUR CODED WITH PERMANENTLY ATTACHED GREEN TAPE 21mm WIDE AT EACH END. PROVIDE INSULATED GROUND/BONDING CONDUCTOR IN EACH CONDUIT.
- f. WIRING AND RACEWAYS:
 - i. ALL INTERIOR WIRING SHALL BE COPPER RW90 #12 CONDUCTOR MINIMUM.
 - ii. ALL EXTERIOR UNDERGROUND WIRING TO BE COPPER RWU-90, MINUS 40°C RATED.
 - iii. AC-90 (BX) MAY BE USED IN REMOVABLE CEILINGS AND METAL PARTITION WALLS, MAXIMUM LENGTH 3 METERS.
 - iv. INTERIOR RACEWAYS SHALL BE THIN WALL ELECTRICAL METALLIC TUBING (EMT) UNLESS OTHERWISE INDICATED. CONDUITS TO BE COMPLETE WITH STEEL SET-SCREW COUPLINGS AND CONNECTORS AND NYLON BUSHING.
 - v. EXTERIOR RACEWAYS SHALL BE RIGID PVC C/W EXPANSION FITTINGS UNLESS OTHERWISE INDICATED.
 - vi. PROVIDE FS TYPE BOXES AND FACEPLATES FOR SURFACE MOUNTED DEVICES. BURIED RACEWAYS SHALL BE DB2 UNLESS OTHERWISE INDICATED.
 - vii. COLOUR CODING SHALL MATCH BASEBUILDING STANDARDS. COLOUR CODE CONDUITS AND BOXES CODE WITH PLASTIC TAPE OR PAINT WHERE CONDUITS ENTER WALLS, CEILING, OR FLOOR AND AT 15 METERS INTERVALS.
 - viii. USE LIQUID TIGHT FLEXIBLE METAL CONDUIT FOR CONNECTION TO MOTORS AND EQUIPMENT IN DAMP, WET OR CORROSIVE LOCATIONS.
 - ix. SURFACE CONDUIT TO RUN PARALLEL OR PERPENDICULAR TO BUILDING LINES. ALL CONDUITS AND JUNCTION BOXES TO BE ANCHORED TO THE BUILDING STRUCTURE.
 - x. PROVIDE A POLYPROPYLENE PULL STRING IN ALL EMPTY CONDUITS.
 - xi. REMOVE AND DISPOSE OF ANY REDUNDANT EXISTING CONDUIT AND WIRING.
 - xii. MINIMUM SIZE CONDUIT TO BE 21mm UNLESS SPECIFIED OTHERWISE.
 - xiii. ENSURE ALL EXISTING CEILING MOUNTED BOXES ARE CLOSED PRIOR TO COMPLETION OF PROJECT. PROVIDE LABELLED AND COLOUR CODED COVER PLATES (I.E. PANEL NAME AND CIRCUIT NUMBER) AS REQUIRED.
 - xiv. WIRING TO BE COLOUR CODED AS PER UICSB STANDARDS.
- g. DEVICES, SWITCHES AND RECEPTACLES TO BE SPECIFICATION GRADE WITH COVER PLATES AND COLOUR AS SPECIFIED:
 - i. STANDARD RECEPTACLE: WHITE DEVICE, STAINLESS STEEL COVER PLATE
 - ii. LIGHT SWITCH: WHITE DEVICE, STAINLESS STEEL COVER PLATE
 - iii. BASIS OF DESIGN: HUBBELL OR LEVITON COMMERCIAL GRADE, HEAVY DUTY, WHITE
- h. MOUNTING HEIGHTS:

UNLESS NOTED OTHERWISE, MOUNTING HEIGHT FOR ALL ELECTRICAL DEVICES SHALL MEET "BARRIER-FREE" CODE REQUIREMENTS. MOUNTING HEIGHTS IDENTIFIED ARE MEASURED FROM FLOOR TO CENTRELINE OF DEVICE UNLESS SPECIFIED OR INDICATED OTHERWISE.

 - i. 400mm A.F.F. FOR STANDARD HEIGHT RECEPTACLES, VOICE/DATA OUTLETS, ETC.
 - ii. 1100mm A.F.F. FOR LIGHT SWITCHES, AND ALL OTHER CONTROLS.
 - iii. 175mm ABOVE TOP OF COUNTERS OR COUNTER BACK SPLASHES.
 - iv. 1100mm A.F.F. FOR WALL MOUNTED SPEAKERS, BELLS, ETC.
 - v. WALL MOUNTED FIRE ALARM AUDIBLE AND VISUAL SIGNAL DEVICES SHALL BE INSTALLED NOT LESS THAN 2300mm TO TOP OF DEVICE, OR 150mm BELOW CEILING WHERE CEILING HEIGHTS DO NOT ALLOW IN ACCORDANCE WITH CAN/ULC S-524.
- i. LUMINAIRES:
 - a. PROVIDE LIGHTING FIXTURES, COMPLETE WITH LAMPS AND ALL REQUIRED ACCESSORIES, AS INDICATED IN LIGHT FIXTURE SCHEDULE.
 - b. DO NOT MOUNT FIXTURES ABOVE PIPES, DUCTS OR EQUIPMENT. CHECK LAYOUTS OF WORK BY OTHER TRADES ON PROJECTS AND PLAN COOPERATIVELY WITH OTHERS TO AVOID CONFLICT. PROVIDE LONGER HANGERS TO CLEAR OBSTRUCTIONS, IN EVENT OF UNWIDELY TIGHT LOCATIONS. PROVIDE CHAIN HANGERS FOR ALL FIXTURES IN T-BAR CEILINGS.
 - c. CLEAN LAMPS, LENSES, INTERIOR AND VISIBLE SURFACES OF LUMINAIRES. REPLACE DEFECTIVE LAMPS, BALLASTS, DRIVERS, LENSES, ETC.
 - d. ADD, RELOCATE AND CONNECT LIGHT FIXTURES TO SUIT INDICATED LAYOUT, EXTEND CONDUIT AND WIRING AS NECESSARY AND CONNECT LUMINAIRES TO NEW AND EXISTING CIRCUITS AND CONTROLS. TURN OVER SURPLUS FIXTURES TO OWNER.
 - e. WHERE AIR SUPPLY TROFFERS ARE BEING RELOCATED BY MECHANICAL CONTRACTOR TO EXISTING LIGHT FIXTURE, ELECTRICAL CONTRACTOR TO COORDINATE DISCONNECTION AND RECONNECTION AS REQUIRED.
- j. EXIT LIGHTS:
 - i. TO CSA C22.2 NO.141, CSA C860, ISO 3864-1 AND ISO 7010.
 - ii. STEEL FRAME, OPAL DIFFUSER PANEL, PICTOGRAM PANEL WITH MULTIPLE FILMS FOR DIRECTED SELECTION, AND CLEAR PROTECTIVE PANEL. LED LAMP WITH 25-YEAR RATED LIFE. PICTOGRAM PANEL SHALL CONSIST OF GREEN PICTOGRAM AND WHITE GRAPHIC SYMBOL.
 - iii. SUITABLE FOR 120V TO 347V NORMAL SUPPLY AND 6VDC TO 24VDC EMERGENCY SUPPLY.
 - iv. DIE CAST MOUNTING BRACKET FOR WALL, CEILING, OR END MOUNTING AS INDICATED.
 - v. CONNECT EXIT LIGHTS TO AC AND DC SUPPLIES.
 - vi. ADD/REMOVE DIRECTIONAL ARROWS TO SUIT FLOOR PLAN LAYOUT.
 - vii. ENSURE THE DEVICE HAS 610mm CLEARANCE FROM ANY SPRINKLER HEAD.
 - viii. HOUSING COLOUR: WHITE.
 - ix. BASIS OF DESIGN: LUMACELL ENERGI-LITE -SINGLE FACE # LIFE X50 -EXIT/EMERGENCY LIGHT COMBINATION #BLMCE 2MT 9W
- k. UNIT EQUIPMENT FOR EMERGENCY LIGHTING:
 - i. PROVIDE EMERGENCY LIGHTING AS SHOWN ON DRAWINGS AND AS SPECIFIED HEREIN. USE 6-24VDC UNITS CONSISTING OF A SEALED LEAD BATTERY UNIT, WITH HI-LO SOLID STATE CHARGER, CONTROLS, TEST SWITCH, A.C. AND HI-CHARGE PILOT LIGHTS, LONG LIFE SEALED LEAD BATTERY IN 18-GAUGE STEEL CASE COMPLETE WITH MOUNTING BRACKET. UNIT TO BE PROVIDED WITH 3-CONDUCTOR POWER CORD TO PLUG INTO WALL MOUNTED RECEPTACLE.
 - ii. EMERGENCY LIGHTS ARE NORMALLY OFF, AND BATTERY TO BE KEPT FULLY CHARGED BY AUTOMATIC CHARGER. ON FAILURE OF NORMAL POWER, EMERGENCY LIGHTS MUST COME ON AUTOMATICALLY.
 - iii. PROVIDE BATTERY UNITS WITH SUFFICIENT CAPACITY TO PROVIDE 90% VOLTAGE AFTER 30 MINUTES OF OPERATION WITH CONNECTED LOAD PLUS 50% SPARE CAPACITY. BATTERY TO CARRY A 10 YEAR PRO-RATA WARRANTY IN ADDITION TO THE 12 MONTH GUARANTEE ON TOTAL UNIT.
 - iv. REMOTE LIGHTING HEADS TO BE DUAL HEAD 4W, 6-24VDC, LED MR16 LAMPS IN DIE CAST METAL HEAD WITH FULLY ADJUSTABLE AIMING. RUN WIRING IN CONDUIT MINIMUM #10 AWG OR AS RECOMMENDED BY MANUFACTURER, VOLTAGE DROP AT ANY REMOTE HEAD SHALL NOT EXCEED 2%.
BASIS OF DESIGN: LUMACELL BATTERY EMERGI-LITE -2 LAMP HEADS-JESL -DOUBLE REMOTE HEADS-JEF590

- SINGLE REMOTE HEAD-JEF79
- a. FIRE ALARM:
 - i. EXISTING FIRE ALARM SYSTEM IS SINGLE STAGE EDWARDS EST.
 - ii. ALL WORK BEING CARRIED OUT ON THE FIRE SAFETY SYSTEMS MUST BE RECORDED IN THE LOGBOOK EVERY DAY, IN ADDITION TO THE REQUIREMENT OF A SIGNED WORK PERMIT.
 - iii. IF THE CONTRACTOR DOING WORK ON THE FIRE ALARM SYSTEM IS NOT THE "MAINTENANCE" CONTRACTOR, THE MAINTENANCE CONTRACTOR MUST BE ADVISED IN ADVANCE.
 - b. NOTIFY AND DEMONSTRATE THE COMPLETE SYSTEM TO OWNER'S AND BUILDING INSPECTION'S REPRESENTATIVES ONLY AFTER TESTING AND VERIFICATION PERFORMANCE HAVE BEEN COMPLETED AND ALL DEFICIENCIES RECTIFIED. IN THEIR PRESENCE, DEMONSTRATE THE PROPER FUNCTIONING OF THE SYSTEM. HAVE SYSTEM MANUFACTURER'S CERTIFIED TECHNICIAN PRESENT.
 - c. ALL FIRE ALARM DEVICES TO REMAIN IN OPERATION AT ALL TIMES. PROTECT SMOKE DETECTORS FROM DUST EXPOSURE DURING CONSTRUCTION.
 - d. ENSURE FIRE ALARM SYSTEM IS OPERATIONAL AT THE END OF EACH SHIFT.
 - e. ADJUST FIRE ALARM AUDIBLE DEVICE TAP SETTINGS TO MEET APPLICABLE CODES FOR SOUND LEVELS WITHIN THE AFFECTED SPACE. ADVISE ENGINEER OF ANY ISSUES WHICH ARISE FROM CONFLICT WITH THE CODES PRIOR TO COMMENCING THE WORK.
 - f. TEST FINAL INSTALLATION AND PROVIDE VERIFICATION OF FIRE ALARM SYSTEMS IN ACCORDANCE WITH CAN/ULC S537 LATEST EDITION. VERIFICATION REPORT SHALL INCLUDE MEASURED dB LEVELS.
 - g. POWER NOTES:
 - i. ENSURE EXISTING REMAINING OUTLETS IN AFFECTED AREA ARE FUNCTIONAL.
 - ii. DO NOT MOUNT WALL OUTLETS BACK TO BACK. LEAVE MINIMUM 300mm SPACE BETWEEN OUTLETS. STAGGER OUTLETS WITHIN ALTERNATE STUD CAVITIES. DO NOT ANCHOR BACK TO BACK OUTLETS TO THE SAME STUD.
 - h. OUTLETS LOCATION:
 - i. EXACT LOCATION AND MOUNTING HEIGHTS OF OUTLETS TO BE COORDINATE WITH ARCHITECTURAL DRAWINGS PRIOR TO ROUGH IN. REFER TO ARCHITECTURAL DRAWINGS FOR MILLWORK, FURNITURE, SCREENS, COMPONENTS (I.E. TV, DRINKING FOUNTAIN, ETC) FOR REQUIREMENTS.
 - ii. BRING TO THE ATTENTION OF THE ARCHITECT ANY CONFLICTS OR REQUIRED CLARIFICATION.
 - iii. CHANGE OF LOCATION OF OUTLETS AT NO EXTRA COST OR CREDIT, PROVIDING DISTANCE DOES NOT EXCEED 300mm, AND INFORMATION IS GIVEN BEFOREHAND.
 - iv. FAILING TO COORDINATE, THE CONTRACTOR WILL MODIFY THE INSTALLATION AT HIS EXPENSE, IF REQUIRED.
 - v. OUTLETS LOCATED LESS THAN 1500mm FROM A SINK, SHOWER STALL OR BATH TUB SHALL BE GFI CLASS A PROTECTED.
 - vi. OUTLETS LOCATED IN FIRE-RATED WALLS SHALL BE SPACED MINIMUM 600mm APART IN DIFFERENT STUD CAVITIES AND HAVE FIRE RATED PUTTY PADS.
 - i. MECHANICAL EQUIPMENT WIRING:
 - a. PROVIDE ALL WIRING TO MECHANICAL EQUIPMENT, OBTAIN MECHANICAL SHOP DRAWINGS AND RECONFIRM FEEDER AND BREAKER REQUIREMENTS PRIOR TO INSTALLATION. NOTIFY ENGINEER OF ANY DISCREPANCIES.
 - j. MOLDED CASE CIRCUIT BREAKERS:
 - a. INTERIOR RACEWAYS SHALL BE SQUARE D.
 - b. BOLT-ON MOLDED CASE CIRCUIT BREAKER: QUICK-MAKE, QUICK-BREAK TYPE, FOR MANUAL AND AUTOMATIC OPERATION WITH TEMPERATURE COMPENSATION FOR 40°C AMBIENT.
 - c. COMMON-TRIP BREAKERS: WITH SINGLE HANDLE FOR MULTI-POLE APPLICATIONS.
 - d. MOLDED CASE CIRCUIT BREAKER TO OPERATE AUTOMATICALLY BY MEANS OF THERMAL AND MAGNETIC TRIPPING DEVICES TO PROVIDE INVERSE TIME CURRENT TRIPPING, COMPLETE WITH LONG (L), SHORT (S), INSTANTANEOUS (I), GROUND FAULT (G) TRIPPING AND OTHER OPTIONS WHERE INDICATED.
 - k. FIELD QUALITY CONTROL:
 - a. MINIMUM THREE (3) WORKING DAYS PRIOR TO CLOSING CEILING, NOTIFY THE ENGINEER FOR CEILING INSPECTION.
 - b. CONDUCT AND PAY FOR THE FOLLOWING TESTS:
 - i. POWER GENERATION, 600V AND 120V POWER DISTRIBUTION INCLUDING PHASING, VOLTAGE AND GROUNDING.
 - ii. LIGHTING AND CONTROLS.
 - iii. MOTORS AND ASSOCIATED CONTROL EQUIPMENT
 - iv. EMERGENCY LIGHTING SYSTEMS: FIRE ALARM, ACCESS CONTROL AND SECURITY, PUBLIC ADDRESS.
 - v. INSULATION INTEGRITY TESTING
 - vi. HOT SPOT TESTING BY INFRARED SCANNER
 - c. SUBMIT TEST PROCEDURES AND INFORM ENGINEER AT LEAST 7 DAYS BEFORE SCHEDULED TESTS. ENGINEER TO WITNESS TESTS AT HIS DISCRETION.
 - d. CONTRACTOR TO NOTIFY PROJECT MANAGER IN WRITING MINIMUM OF THREE (3) WORKING DAYS BEFORE SCHEDULED SUBSTANTIAL COMPLETION TO ARRANGE INTERIM INSPECTION AND EQUIPMENT STARTUP. NOTIFY PROJECT MANAGER IN WRITING OF ANY CHANGES IN SCHEDULE.
 - e. CONTRACTOR SHALL ALLOW FOR COMMISSIONING AS PER PROJECT INTEGRATED SYSTEMS TESTING (CAN/ULC-S1001).

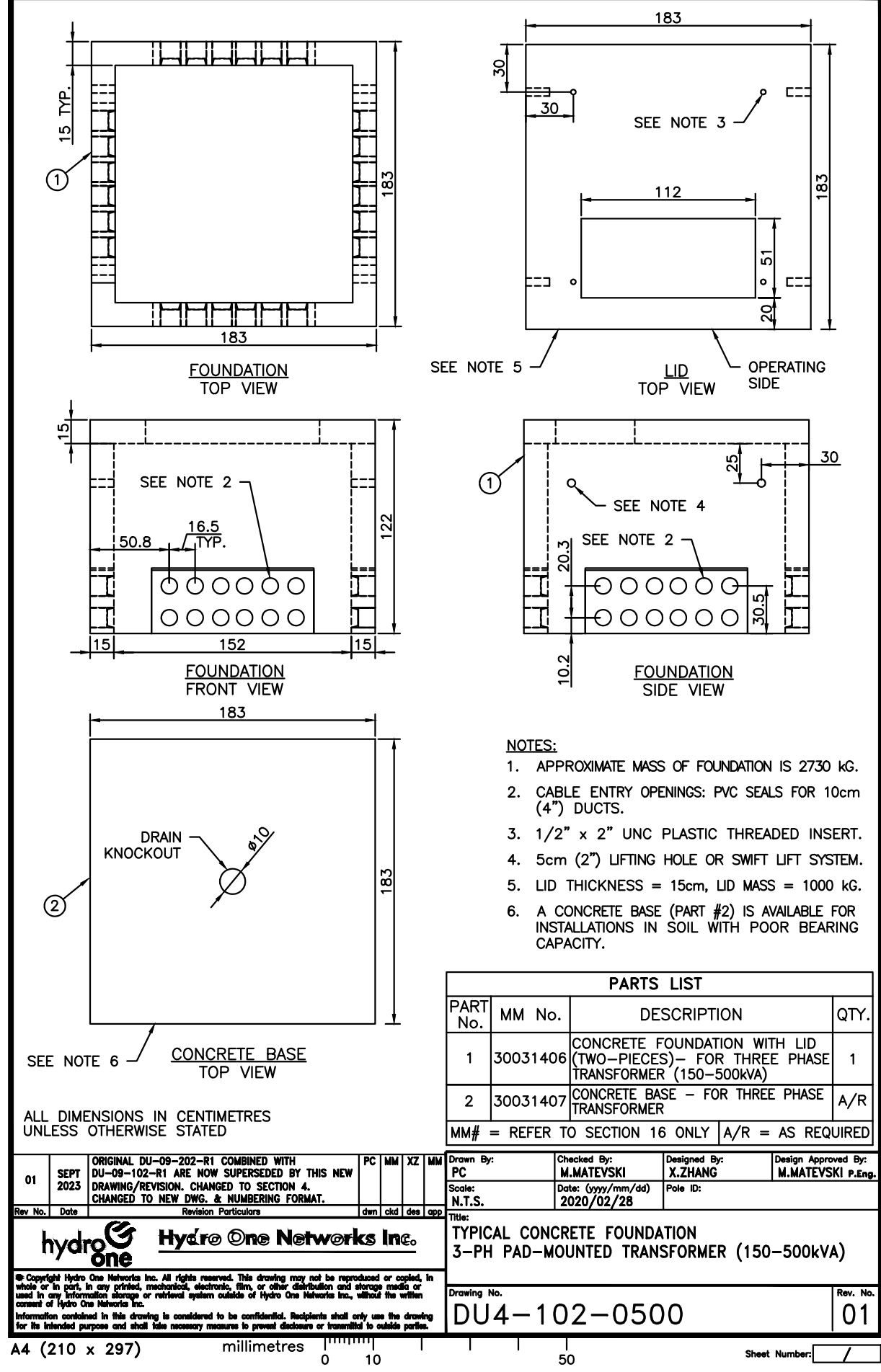
UNDERGROUND DISTRIBUTION STANDARDS



DU12-101 GROUNDING FOR PAD MOUNTED EQUIPMENT DETAIL

1 E0.2 NTS

UNDERGROUND DISTRIBUTION STANDARDS



DU4-102 CONCRETE FOUNDATION INSTALLATION DETAIL

2 E0.2 NTS



Client

DATE	REVISION	REF
2026-05-01	ISSUED FOR PERMIT/TENDER	-
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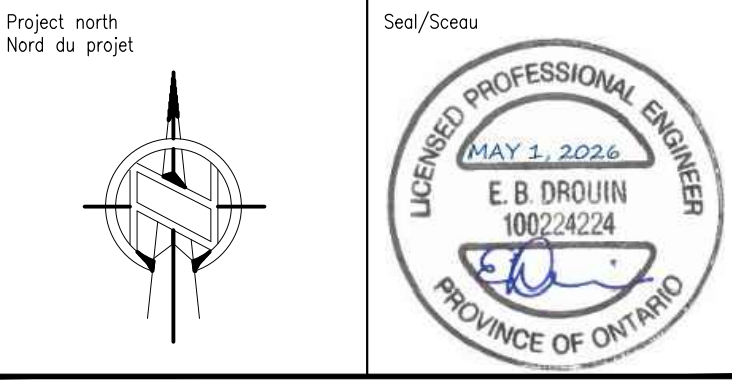
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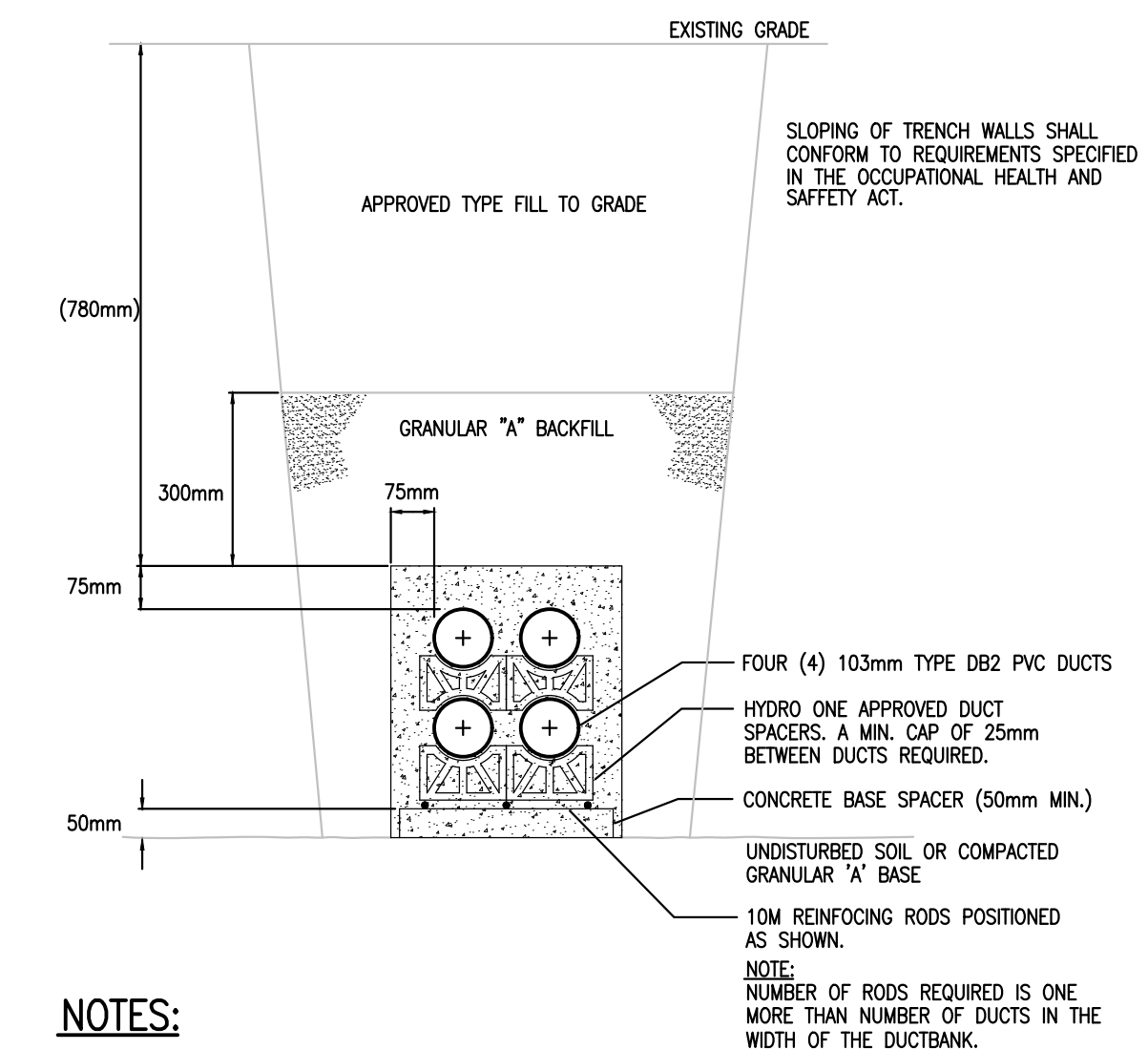
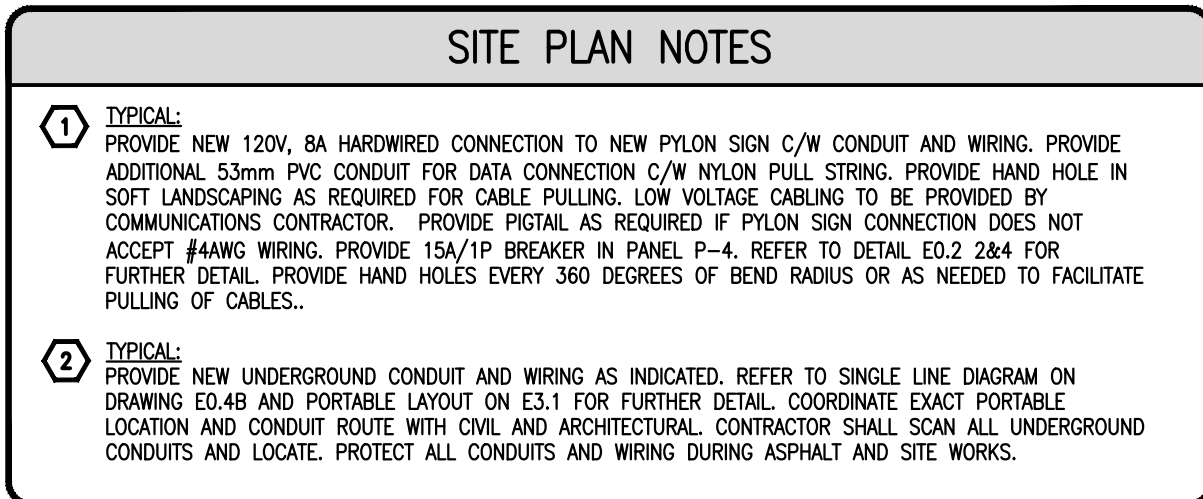
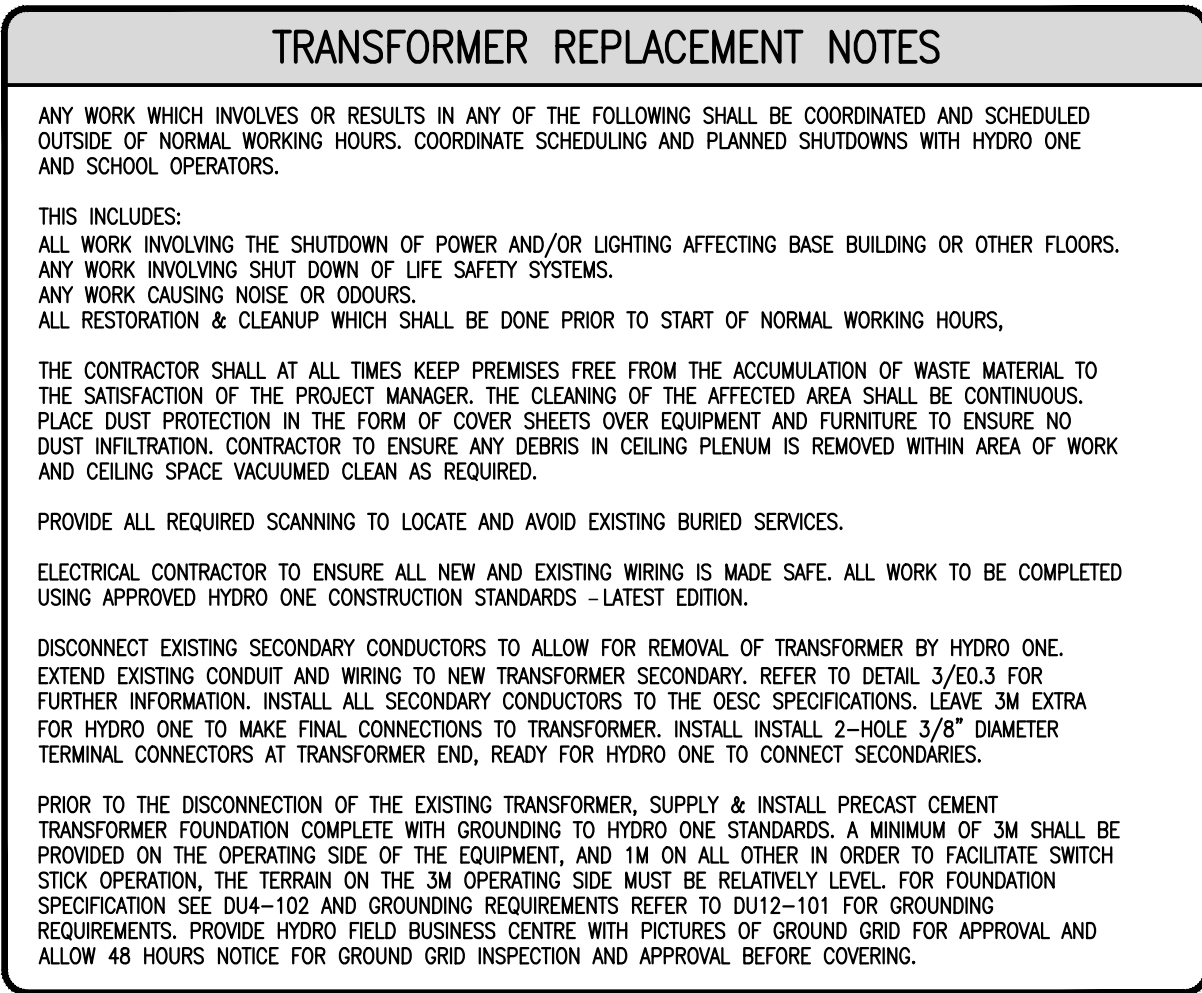
FRONT OF YONGE PUBLIC SCHOOL - ARCHITECTURAL SERVICES

Drawing title/Titre du dessin

ELECTRICAL SPECIFICATIONS AND HYDRO ONE DETAILS

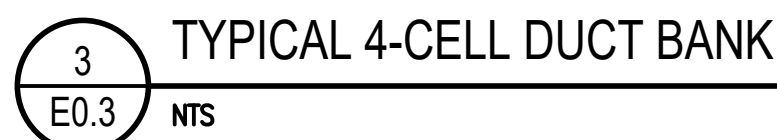
Scale	AS NOTED	Project no./No. du projet	2026-140
Échelle		Design by	D.CHANDLER
Design by	D.CHANDLER	Drawing/Design	
Conçu par		Drawn by	D.CHANDLER
Dessiné par		Reviewed by	E.DROUIN
Examiné par			

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- NOTES:**

 1. CSA C222 No. 211-1 APPLIES TO ALL PVC DUCTING.
 2. ONLY MATERIAL APPROVED BY HYDRO ONE TO BE USED.
 3. DUCT JOINTS TO BE GLUED USING AN APPROVED "PVC" SOLVENT, WHEN APPLICABLE.
 4. REINFORCING RODS FULL LENGTH OF CONCRETE ENCASED DUCTS, OVERLAP JOINTS AND TIE AT BOTH ENDS. DRILL AND DOWEL RODS TO CONCRETE STRUCTURE.
 5. DUCT SPACERS TO BE PLACED AT A MAXIMUM OF 1500mm AND WITHIN 150mm OF COUPLING. PLASTIC DUCT SPACERS TO BE USED ONLY IF CONCRETE DUCT SPACERS ARE UNAVAILABLE.
 6. FORMS REQUIRED FOR FULL LENGTH OF CONCRETE ENCASED DUCT STRUCTURE.
 7. DUCTS AND TRENCHES MUST BE INSPECTED BY HYDRO ONE BEFORE ANY CONCRETE IS POURED.
 8. ALL UNDERGROUND UTILITIES MUST BE CONTACTED AND ALL NECESSARY PERMITS MUST BE OBTAINED BY OWNER OR CONTRACTOR.
 9. CONTRACTOR MUST ENSURE THAT ALL DUCTS ARE CLEANED, RODDED AND THAT A 6mm POLYPROPYLENE ROPE IS LEFT IN EACH DUCT.



2026-05-01	ISSUED FOR PERMIT/TENDER	-
2026-03-20	ISSUED FOR 66%	-
DATE	REVISION	REF

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Project/Projet

FRONT OF YONGE PUBLIC
SCHOOL - ARCHITECTURAL
SERVICES

Drawing title/Titre du dessin

ELECTRICAL SITE PLAN

Scale Échelle	AS NOTED	Project no./No. du projet 2026-140
Design by Conçu par	D.CHANDLER	Drawing/Dessin
Drawn by Dessiné par	D.CHANDLER	E0.3
Reviewed by Examiné par	E.DROUIN	

OF 14

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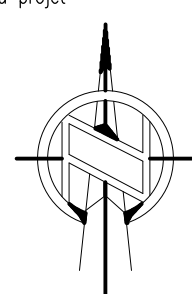
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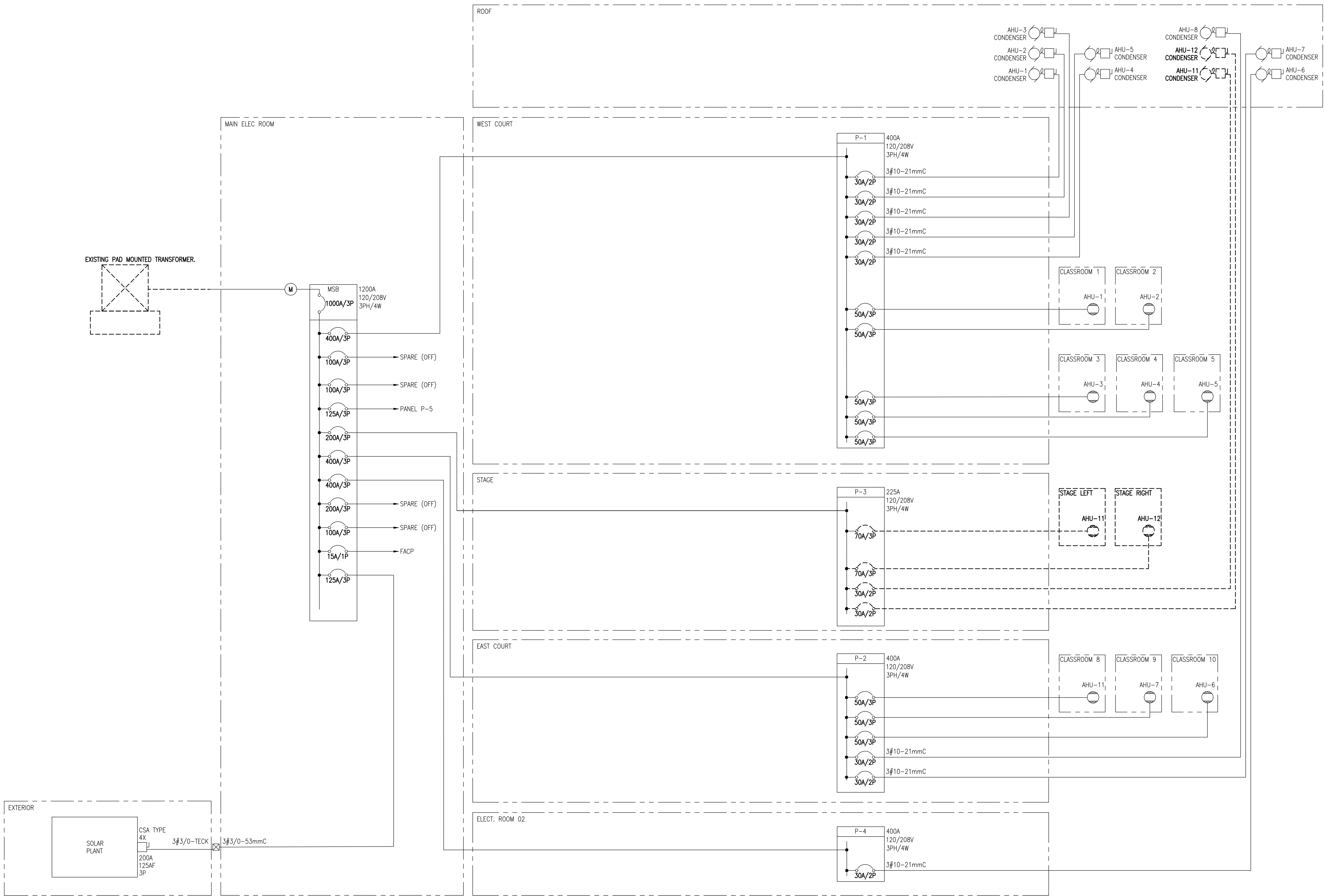
Project/Projet

FRONT OF YONGE PUBLIC SCHOOL - ARCHITECTURAL SERVICES

Drawing title/Titre du dessin

PARTIAL SINGLE LINE - DEMOLITION WORK

Scale Échelle	AS NOTED	Project no./No. du projet 2026-140
Design by Conçu par	D.CHANDLER	Drawing/Dessin
Drawn by Dessiné par	D.CHANDLER	E0.4A OF 14
Reviewed by Examiné par	E.DROUIN	



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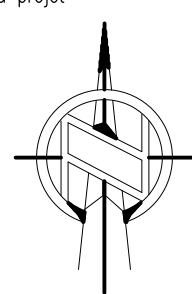
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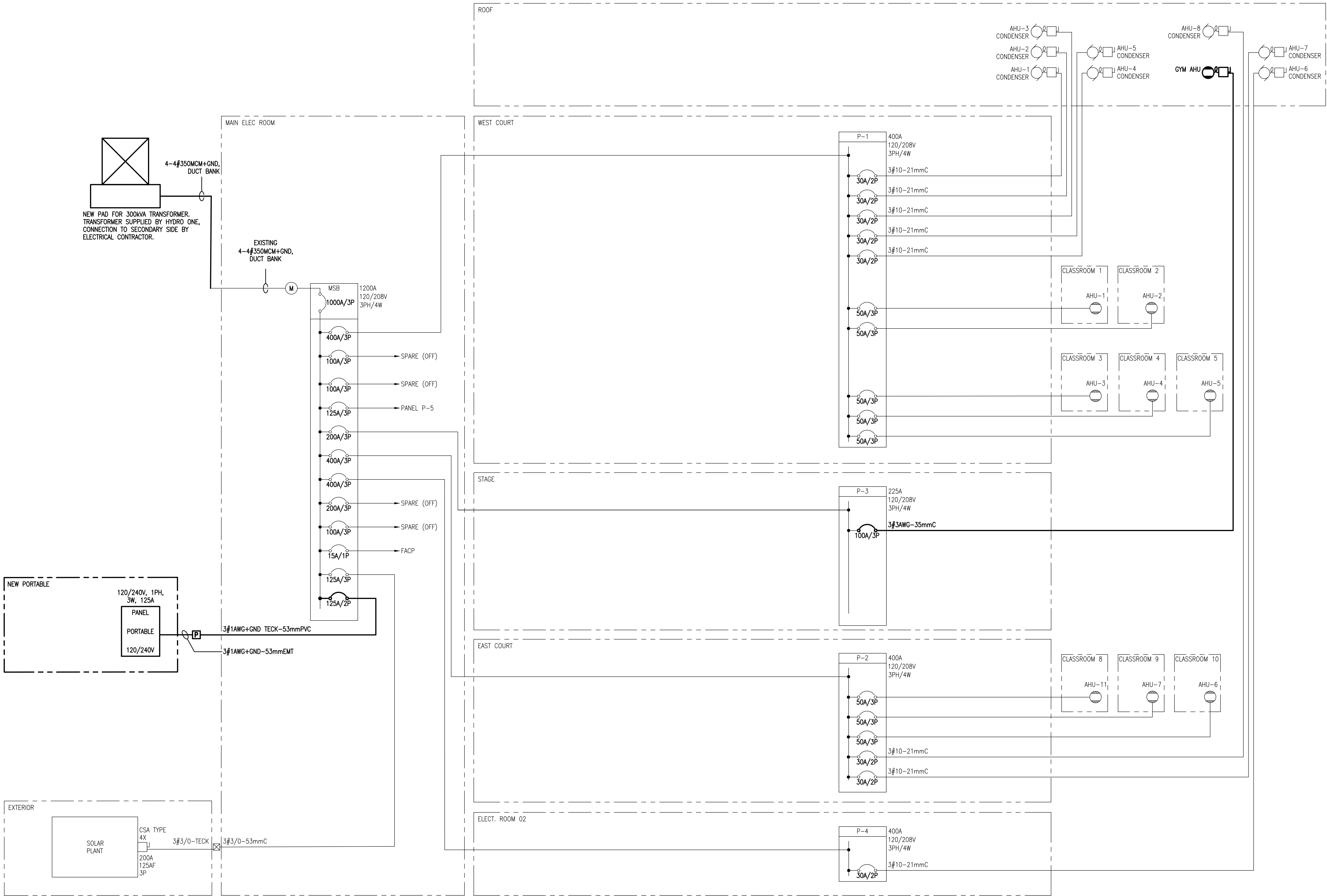
FRONT OF YONGE PUBLIC SCHOOL - ARCHITECTURAL SERVICES

Drawing title/Titre du dessin

PARTIAL SINGLE LINE - NEW WORK

Scale	AS NOTED	Project no./No. du projet	2026-140
Échelle			
Design by	D.CHANDLER	Drawing/Dessin	
Conçu par			
Drawn by	D.CHANDLER		
Dessiné par			
Reviewed by	E.DROUIN		
Examiné par			

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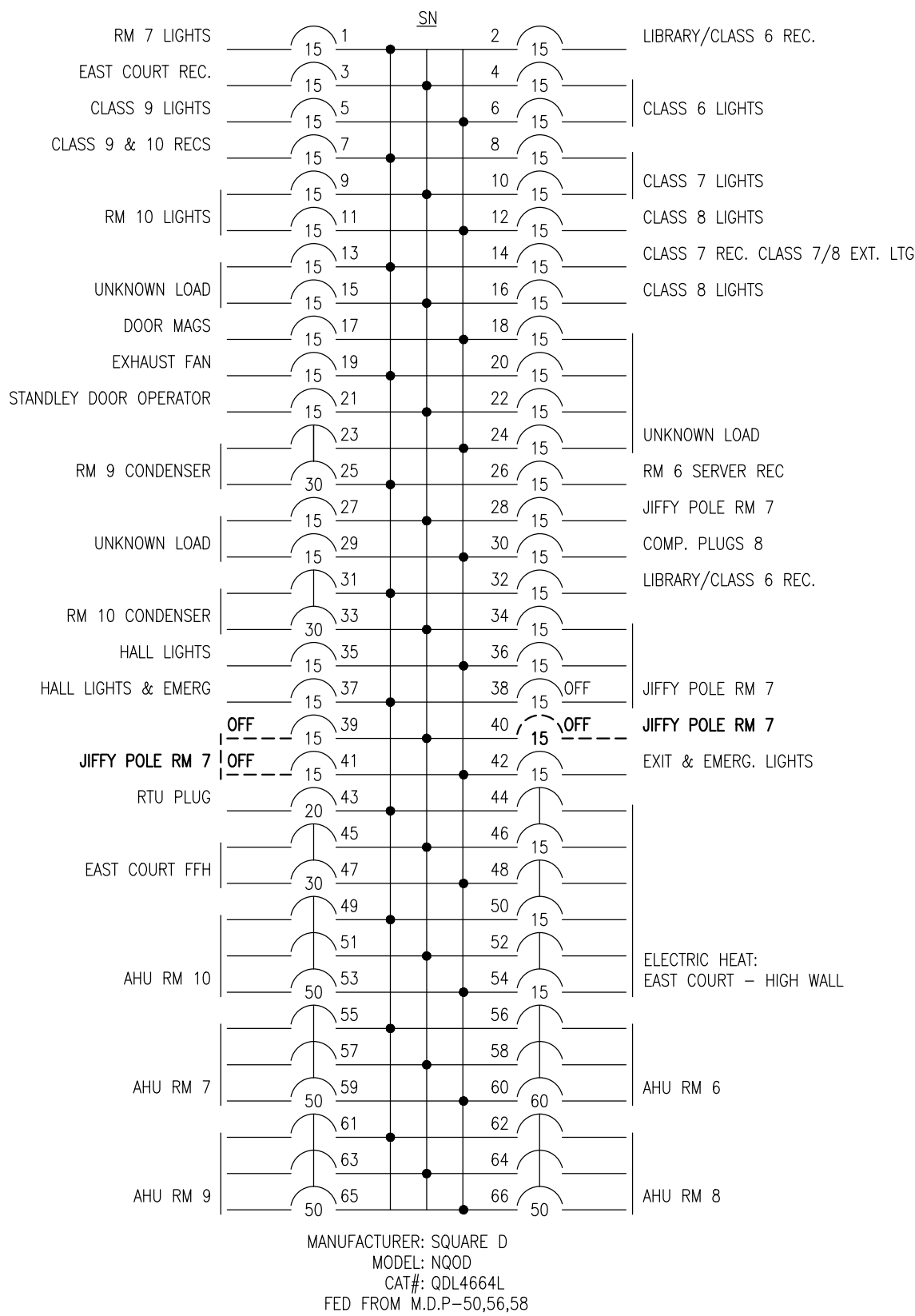


Client

EXISTING
PANEL

P-2

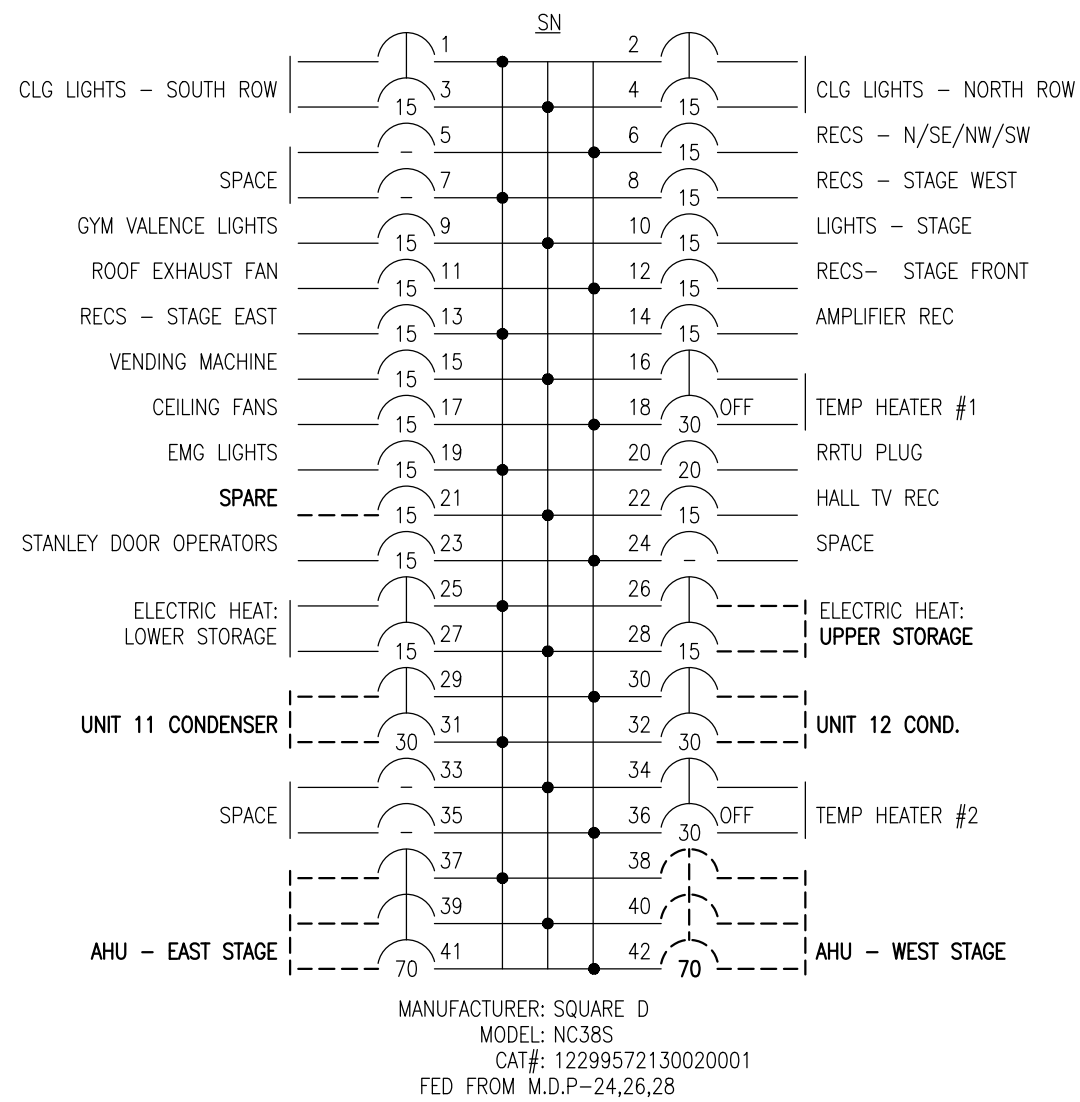
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PHASE 3PH
WIRE 4W
RATING AMPS 400A
TRIM RECESSED



EXISTING
PANEL

P-3

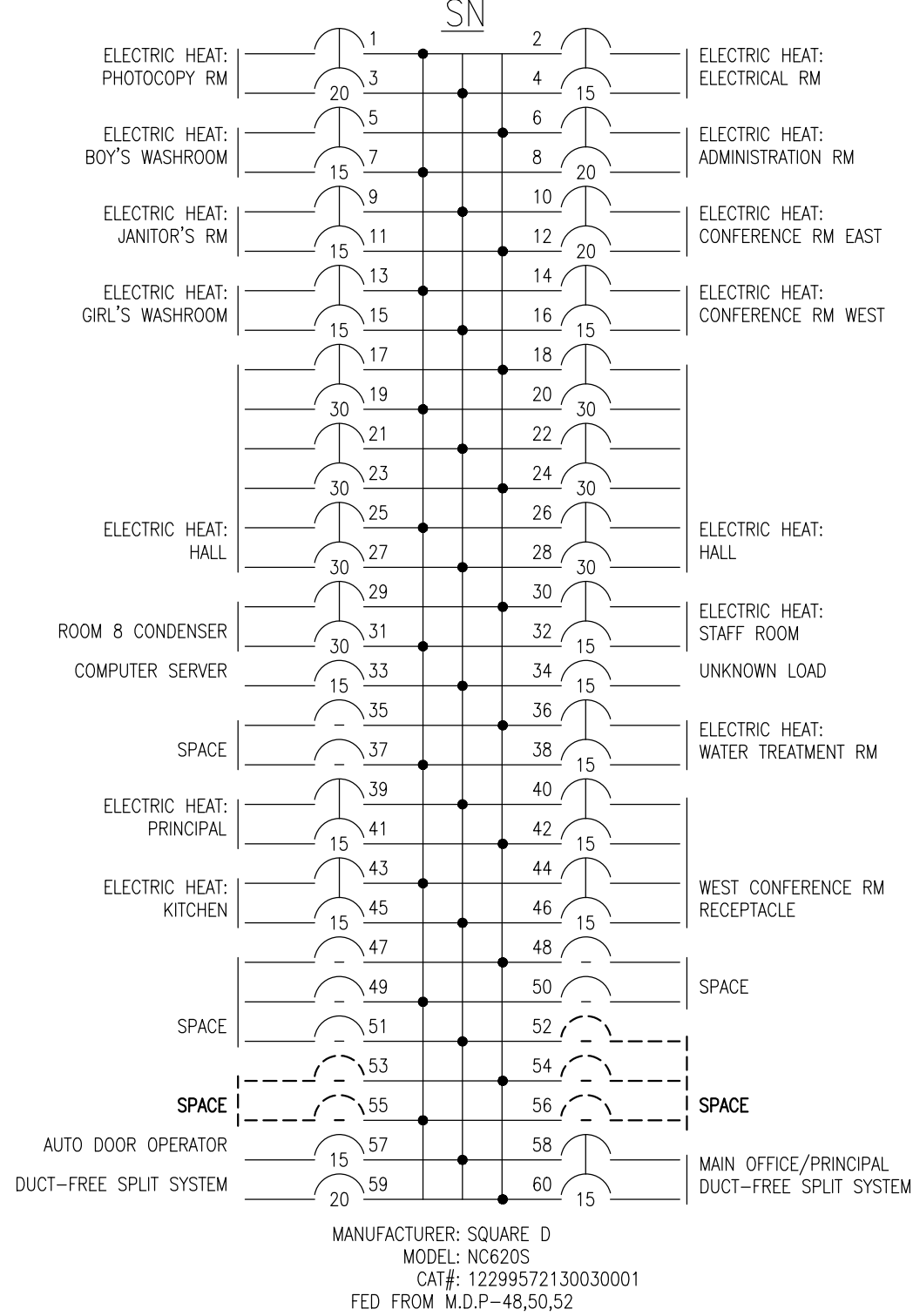
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PHASE 3PH
WIRE 4W
RATING AMPS 225A
TRIM SURFACE



EXISTING
PANEL

P-4

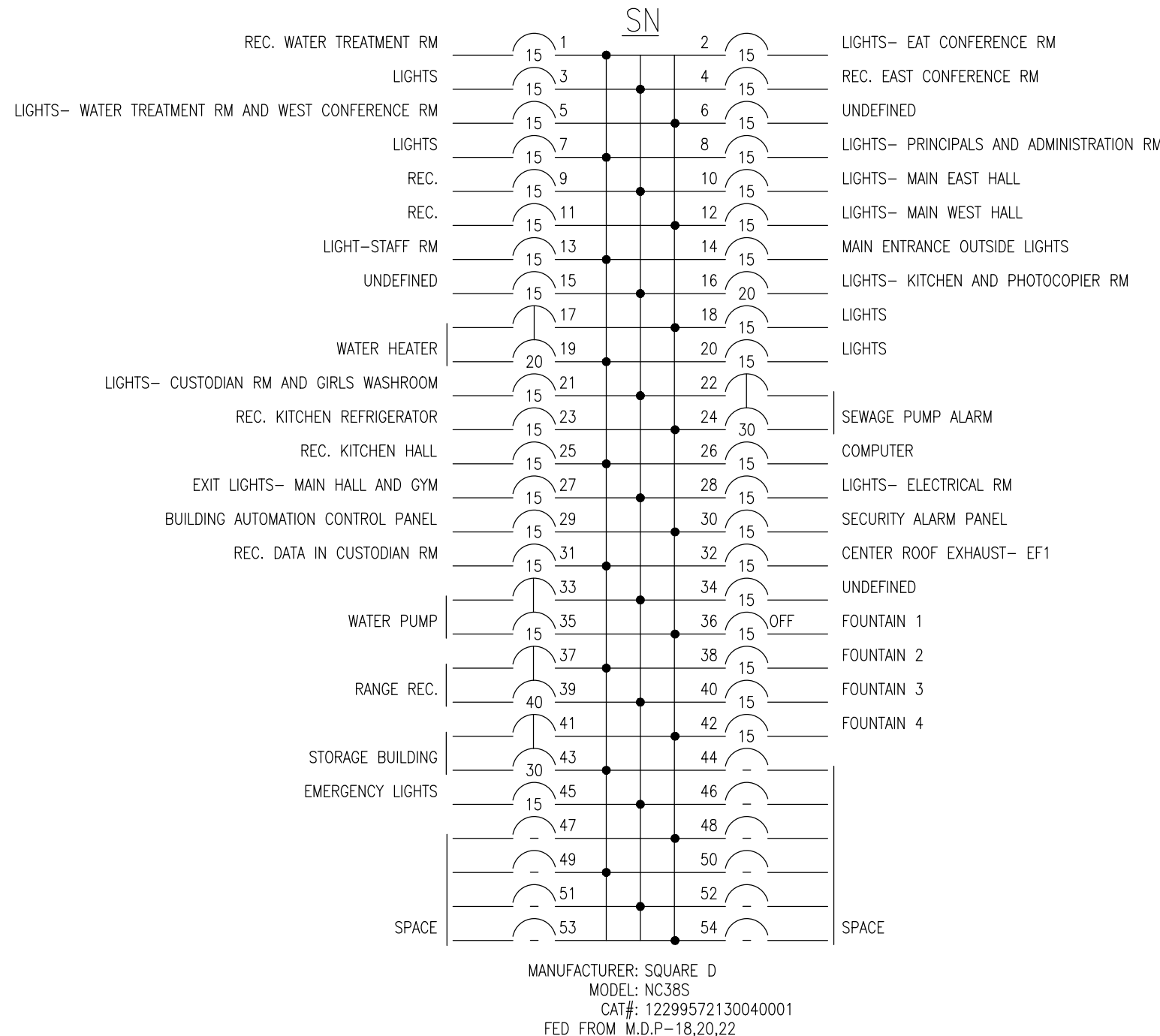
VOLTAGE 120/208V
PHASE 3PH
WIRE 4W
RATING AMPS 400A
TRIM SURFACE



EXISTING
PANEL

P-5

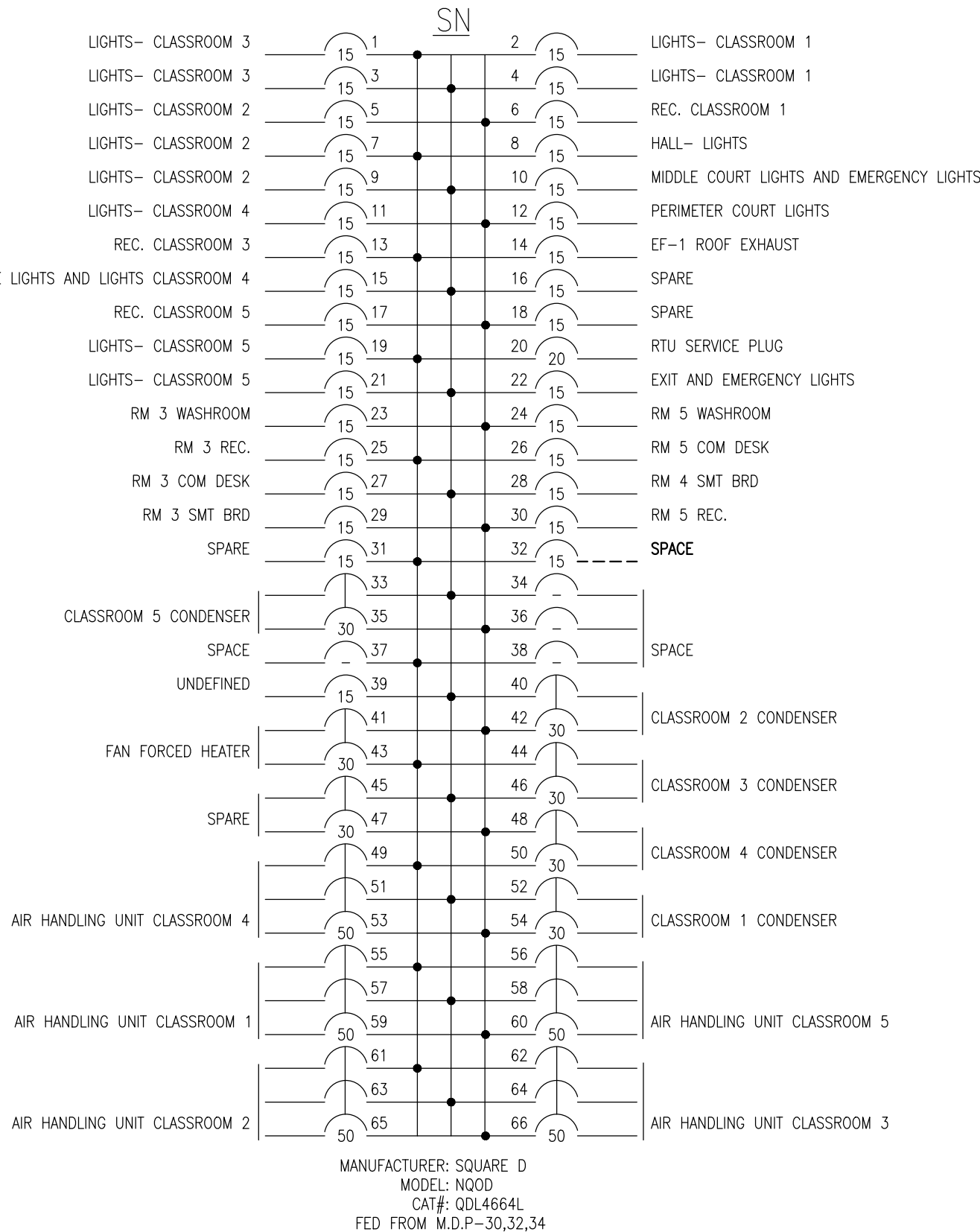
VOLTAGE 120/208V
PHASE 3ø
WIRE 4W
RATING AMPS 225A
TRIM SURFACE



EXISTING
PANEL

P-1

VOLTAGE 120/208V
PHASE 3ø
WIRE 4W
RATING AMPS 400A
TRIM RECESSED



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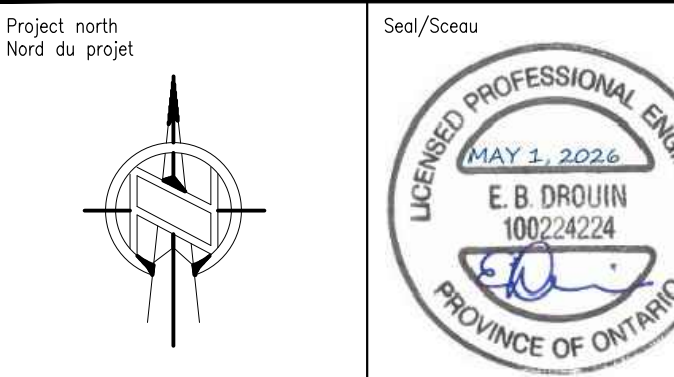
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Project/Projet

FRONT OF YONGE PUBLIC
SCHOOL - ARCHITECTURAL
SERVICES

Drawing Title/Titre du dessin

ELECTRICAL PANEL
SCHEDULES-
DEMOLITION WORK

Scale Échelle	AS NOTED	Project no./No. du projet 2026-140
Design by Conçu par	D.CHANDLER	Drawing/Dessin
Drawn by Dessiné par	D.CHANDLER	E0.5A
Reviewed by Examiné par	E.DROUIN	of 14

SYSTEM COORDINATION/SHORT CIRCUIT/DEVICE EVALUATION & ARC FLASH STUDY

1.1 CODES AND STANDARDS

1. INSTITUTE OF ELECTRICAL AND ELECTRONICS ENGINEERS (IEEE)
 1. IEEE 242-2001, IEEE RECOMMENDED PRACTICE FOR PROTECTION AND COORDINATION OF INDUSTRIAL AND COMMERCIAL POWER SYSTEMS.
 2. IEEE 1584-2011, IEEE GUIDE FOR PERFORMING ARC-FLASH HAZARD CALCULATIONS – AMENDMENT 2.
2. NATIONAL FIRE PROTECTION ASSOCIATION (NFPA)
 1. NFPA (FIRE) 70E, STANDARD FOR ELECTRICAL SAFETY IN THE WORKPLACE, 2021 EDITION.

1.2 SUBMITTALS

1. THE RESULTS OF THE SHORT-CIRCUIT, PROTECTIVE DEVICE COORDINATION AND ARC FLASH HAZARD ANALYSIS STUDIES SHALL BE SUMMARIZED IN A FINAL REPORT. TWO (2) BOUND COPIES OF THE COMPLETE FINAL REPORT SHALL BE SUBMITTED, ALONG WITH ELECTRONIC PDF VERSION.
2. THE REPORT SHALL INCLUDE THE FOLLOWING SECTIONS:
 1. EXECUTIVE SUMMARY.
 2. DESCRIPTIONS, PURPOSE, BASIS AND SCOPE OF THE STUDY.
 3. TABULATIONS OF CIRCUIT BREAKER, FUSE AND OTHER PROTECTIVE DEVICE RATINGS VERSUS CALCULATED SHORT CIRCUIT DUTIES.
 4. PROTECTIVE DEVICE TIME VERSUS CURRENT COORDINATION CURVES, TABULATIONS OF RELAY AND CIRCUIT BREAKER TRIP UNIT SETTINGS, FUSE SELECTION.
 5. FAULT CURRENT CALCULATIONS INCLUDING A DEFINITION OF TERMS AND GUIDE FOR INTERPRETATION OF THE COMPUTER PRINTOUT.
 6. DETAILS OF THE INCIDENT ENERGY AND FLASH PROTECTION BOUNDARY CALCULATIONS.
 7. RECOMMENDATIONS FOR SYSTEM IMPROVEMENTS, WHERE NEEDED.
 8. ONE-LINE DIAGRAM.

1.3 QUALIFICATIONS

1. THE SHORT-CIRCUIT/DEVICE EVALUATION, PROTECTIVE DEVICE COORDINATION AND ARC FLASH HAZARD ANALYSIS STUDIES SHALL BE PERFORMED OR REVIEWED AND SEALED BY A LICENSED PROFESSIONAL ELECTRICAL ENGINEER REGISTERED TO PRACTICE IN THE PROVINCE OF ONTARIO SKILLED IN PERFORMING AND INTERPRETING THE POWER SYSTEM STUDIES.
2. THE LICENSED PROFESSIONAL ELECTRICAL ENGINEER SHALL BE A FULL-TIME EMPLOYEE OF THE EQUIPMENT MANUFACTURER OR AN APPROVED ENGINEERING FIRM.
3. THE REGISTERED PROFESSIONAL ELECTRICAL ENGINEER SHALL HAVE A MINIMUM OF FIVE (5) YEARS OF EXPERIENCE IN PERFORMING POWER SYSTEM STUDIES.
4. THE EQUIPMENT MANUFACTURER OR APPROVED ENGINEERING FIRM SHALL DEMONSTRATE EXPERIENCE WITH ARC FLASH HAZARD ANALYSIS BY SUBMITTING NAMES OF AT LEAST TEN ACTUAL ARC FLASH HAZARD ANALYSIS IT HAS PERFORMED IN THE PAST YEAR.

1.4 GENERAL

1. INCLUDE IN THE TENDER ALL COSTS FOR PREPARATION OF A COMPLETE SYSTEM COORDINATION/SHORT CIRCUIT/ DEVICE EVALUATION STUDY AND ARC FLASH HAZARD ANALYSIS IN ACCORDANCE WITH IEEE 242, 'RECOMMENDED PRACTICE FOR PROTECTION AND COORDINATION OF INDUSTRIAL AND COMMERCIAL POWER SYSTEMS', AND IEEE 1584, 'GUIDE FOR PERFORMING ARC-FLASH HAZARD CALCULATIONS'.
2. THE SCOPE OF THE STUDIES SHALL INCLUDE:
 1. THE STUDY SHALL INCLUDE ALL RELEVANT DISTRIBUTION AND PROTECTIVE DEVICES WITHIN THE FOLLOWING SCOPE:
 1. UPSTREAM FROM THE LOCAL UTILITY FEEDER PROTECTION DEVICES.
 2. DOWNSTREAM TO THE AFFECTED BRANCH CIRCUIT PANELS.

1.5 COORDINATION STUDY

1. THE WORK OF THE COORDINATION STUDY SHALL INCLUDE:
 1. LIAISON WITH THE LOCAL UTILITY FOR INFORMATION ON RELAYS AND OTHER PROTECTIVE DEVICES, AND SYSTEM AND SUBSTATION CAPACITIES WHICH AFFECT THE COORDINATION OF THIS SYSTEM FOR BOTH PRIMARY AND ANY STANDBY FEEDERS.
 2. LIAISON WITH DISTRIBUTION EQUIPMENT AND SWITCHGEAR MANUFACTURERS TO OBTAIN ACTUAL TRIP CURVES OF EXISTING AND PROPOSED PROTECTIVE DEVICES FOR NEW & EXISTING EQUIPMENT.
 3. SENDING A TRAINED AND QUALIFIED REPRESENTATIVE ON SITE TO GATHER DATA ON EXISTING EQUIPMENT WITHIN THE SCOPE OF THE STUDY, SUCH AS TRANSFORMERS, CABLES, AND LENGTHS, BREAKERS, FUSES, AND ALL ADJUSTABLE PROTECTIVE DEVICE SETTINGS. THE INFORMATION GATHERED WILL INCLUDE THE METHOD OF INSTALLATION WHERE SUCH INSTALLATION IMPACTS UPON THE STUDY (E.G. METHOD OF CABLE INSTALLATION REFLECTING UPON THE ALLOWABLE AMPACITY OF THE CABLE).
 4. RECOMMENDATIONS SHALL BE INCLUDED, LISTING ALL DEFICIENCIES WITHIN THE SCOPE OF THE STUDY AND PROPOSING METHODS OF CORRECTION FOR EACH DEFICIENCY.
2. THE COORDINATION STUDY REPORT SHALL INCLUDE THE FOLLOWING:
 1. EACH TIME-CURRENT GRAPH SHALL BE PRINTED IN COLOUR. THE SELECTED COLOURS WILL ALLOW THE END-USER TO EASILY DISCRIMINATE BETWEEN DIFFERENT DEVICE CURVES, ESPECIALLY ON COMPLICATED GRAPHS WHERE DEVICES OVERLAP.
 2. THE TIME-CURRENT CURVES SHALL BE DRAWN ON SPECIAL LOG-LOG GRAPHS WITH TIME COORDINATE RANGE OF 0.01 TO 1,000 SECONDS AND CURRENT COORDINATE RANGES OF 4 ORDERS. SEPARATE GRAPHS ARE TO BE PROVIDED FOR PHASE AND GROUND PROTECTION FOR EACH PORTION OF THE SYSTEM.
 3. THE ENTIRE DISTRIBUTION SYSTEM SHALL BE SUBDIVIDED INTO PORTIONS SO THAT THE CURVE FOR EACH DEVICE CLEARLY SHOWS ITS RELATIONSHIP TO ASSOCIATED UPSTREAM AND DOWNSTREAM DEVICES. THE COORDINATION STUDY SHOULD SEPARATE THE EMERGENCY POWER FROM THE NORMAL POWER DISTRIBUTIONS. EACH GRAPH FOR A PORTION OF THE SYSTEM SHALL INCLUDE/SHOW THE FOLLOWING:
 1. THE PORTION OF THE DISTRIBUTION SYSTEM REPRESENTED BY THE DEVICES ON THE GRAPH SHALL BE REPRESENTED BY A SINGLE LINE DIAGRAM DRAWN IN THE CORNER OF THE TIME-CURRENT COORDINATION GRAPH.
 2. EACH DEVICE CURVE SHALL END AT THE 3 PHASE SYMMETRICAL FAULT LEVEL CALCULATED FOR THAT BUS.
 3. CABLE, BUS, OR CONDUCTOR DAMAGE CURVES SHALL BE SHOWN WHERE APPROPRIATE. ALL TRANSFORMER INRUSH, DAMAGE AND OVERLOAD CURVES SHALL BE SHOWN.
 4. MOTOR STARTING CURVES AND PROTECTIVE DEVICES SHALL BE SHOWN FOR ALL MOTORS LARGER THAN 75 HP.
 5. ON THE GRAPHS, OR ON THE SAME PAGE AS THE GRAPH, ALL PROTECTIVE DEVICE CURVES WITHIN THE SCOPE OF THE GRAPH SHALL BE SHOWN WITH THE FOLLOWING INFORMATION:
 1. RELAY CURVES WITH TEXT INDICATING: MANUFACTURER, TYPE, CURRENT TRANSFORMER SIZE, TAP OR PICKUP SETTING, TIME DIAL SETTINGS, AND CURVE TYPE.
 2. FUSE CURVES WITH AVERAGE MELTING CURVE FOR LOW VOLTAGE FUSES AND MINIMUM MELT AND TOTAL CLEARING FOR HIGH VOLTAGE FUSES WITH TEXT INDICATING: MANUFACTURER, TYPE, AMPACITY, VOLTAGE, AND SPEED.
 3. STATIC-TRIP BREAKER CURVES WITH TEXT INDICATING: BREAKER AND TRIP UNIT MANUFACTURER AND TYPE, CURRENT TRANSFORMER AND SENSOR TYPE, AND ALL TRIP UNIT SETTINGS.
 4. THERMAL-MAGNETIC BREAKER CURVES WITH TEXT INDICATING: BREAKER TYPE, TRIP RATING, AND INSTANTANEOUS TRIP SETTINGS.
 3. INCLUDE TABLES WITHIN THE STUDY THAT CLEARLY LIST ALL PROTECTIVE DEVICES WITHIN THE SCOPE OF THE STUDY AND ALL ASSOCIATED INFORMATION. THESE TABLES ARE TO BE BASED ON SETTINGS ESTABLISHED AND NOTED IN THE COORDINATION CURVES. THE TABLES SHALL BE LOGICALLY ARRANGED AND GROUPED TO EFFECTIVELY PRESENT THE FOLLOWING INFORMATION. THE TABLES SHALL INCLUDE:
 1. RELAYS, INCLUDING MANUFACTURER, TYPE, CURVE, CT, AND ALL PROTECTIVE SETTINGS.
 2. TRANSFORMERS, INCLUDING SIZE, TYPE, MANUFACTURER, CONFIGURATION, VOLTAGE, AND IMPEDANCE.
 3. FUSES, INCLUDING MANUFACTURER, TYPE, AMPACITY, VOLTAGE, SPEED.
 4. STATIC TRIP UNITS, INCLUDING MANUFACTURER, TYPE, CT, SENSOR OR PLUG, ALL PROTECTIVE SETTINGS.
 5. THERMAL-MAGNETIC TRIP UNITS, INCLUDING MANUFACTURER, RATING, AND INSTANTANEOUS SETTING.
 6. MOTOR PROTECTORS (OVERLOADS), INCLUDING MANUFACTURER, TYPE, RATING, ALL PROTECTIVE SETTINGS.
 7. ALL PROTECTIVE DEVICES SHALL BE LISTED WITH CLEAR DESCRIPTIVE TEXT TO IDENTIFY THEIR PLACE WITHIN THE DISTRIBUTION SYSTEM.
 8. ALL PROTECTIVE DEVICES SHALL HAVE A REFERENCE TO THE TIME-CURRENT GRAPH WHERE THEY ARE SHOWN.
 4. THE TABLES SHALL LIST ALL EXISTING AND RECOMMENDED SETTINGS OF ALL PROTECTIVE DEVICES WITHIN THE SCOPE OF THE STUDY. THIS WILL ALLOW THE END-USER TO IDENTIFY AND PLAN FOR REQUIRED CHANGES TO PROTECTIVE DEVICE SETTINGS, AND TO DETERMINE WHICH SETTINGS HAVE BEEN IMPLEMENTED AND MODIFIED.

1.6 SHORT CIRCUIT/DEVICE EVALUATION STUDY

1. THE WORK OF THE SHORT CIRCUIT STUDY SHALL INCLUDE:
 1. EVALUATION AND DOCUMENTATION OF THREE PHASE SINGLE PHASE & GROUND FAULT SHORT CIRCUIT FAULT LEVELS AT ALL DISTRIBUTION BUSES, MOTOR CONTROL CENTRES AND MAIN PANEL BOARD LOCATIONS WITHIN THE SCOPE LISTED ABOVE.
 2. THE OUTPUT OF THE SHORT CIRCUIT STUDY SHALL BE A PRINTED TABULATION OF ASYMMETRICAL AND SYMMETRICAL RMS SHORT CIRCUIT CURRENT VALUES FOR BOTH INTERRUPTING DUTY AND MOMENTARY DUTY, INCLUDING X/R RATIOS.
 3. ALL SIGNIFICANT SOURCES AND IMPEDANCES SHALL BE EVALUATED, INCLUDING BUT NOT LIMITED TO, UTILITY AND EMERGENCY SOURCES, MOTORS, CABLES AND THEIR LENGTHS, TRANSFORMERS, REACTORS, AND ANY OTHER DEVICES IMPACTING UPON THE AVAILABLE SHORT CIRCUIT.
2. THE WORK OF THE DEVICE EVALUATION STUDY SHALL INCLUDE:
 1. ALL PERTINENT INTERRUPTING DEVICES WITHIN THE SCOPE OF THE JOB SHALL BE LISTED WITH ITS INTERRUPTING RATING OR ITS SERIES INTERRUPTING RATING AS APPLICABLE.
 2. A CROSS REFERENCE IN TABLE FORM SHALL BE PROVIDED WHETHER THE PROTECTIVE DEVICES AT EACH BUS ARE APPROPRIATE FOR THE AVAILABLE FAULT CURRENT AT EACH BUS.

1.7 ARC FLASH HAZARD ANALYSIS

1. ARC FLASH HAZARD ANALYSIS:
 1. THE ARC FLASH HAZARD ANALYSIS SHALL BE PERFORMED ACCORDING TO THE IEEE 1584 EQUATIONS THAT ARE PRESENTED IN NFPA (FIRE) 70E, ANNEX D.
 2. THE FLASH PROTECTION BOUNDARY AND THE INCIDENT ENERGY SHALL BE CALCULATED AT ALL SIGNIFICANT LOCATIONS IN THE ELECTRICAL DISTRIBUTION SYSTEM (SWITCHBOARDS, SWITCHGEAR, MOTOR-CONTROL CENTRES, PANELBOARDS, BUSWAY AND SPLITTERS) WHERE WORK COULD BE PERFORMED ON ENERGIZED PARTS.
 3. THE ARC-FLASH HAZARD ANALYSIS SHALL INCLUDE ALL LOCATIONS IN THE SYSTEMS.
 4. SAFE WORKING DISTANCES SHALL BE BASED UPON THE CALCULATED ARC FLASH BOUNDARY CONSIDERING AN INCIDENT ENERGY OF 1.2 CAL/CM².
 5. WHEN APPROPRIATE, THE SHORT CIRCUIT CALCULATIONS AND THE CLEARING TIMES OF THE PHASE OVERCURRENT DEVICES WILL BE RETRIEVED FROM THE SHORT-CIRCUIT AND COORDINATION STUDY MODEL. GROUND OVERCURRENT RELAYS SHOULD NOT BE TAKEN INTO CONSIDERATION WHEN DETERMINING THE CLEARING TIME WHEN PERFORMING INCIDENT ENERGY CALCULATIONS.
 6. THE SHORT-CIRCUIT CALCULATIONS AND THE CORRESPONDING INCIDENT ENERGY CALCULATIONS FOR MULTIPLE SYSTEM SCENARIOS MUST BE COMPARED AND THE GREATEST INCIDENT ENERGY MUST BE UNIQUELY REPORTED FOR EACH EQUIPMENT LOCATION. CALCULATIONS MUST BE PERFORMED TO REPRESENT THE MAXIMUM AND MINIMUM CONTRIBUTIONS OF FAULT CURRENT MAGNITUDE FOR ALL NORMAL AND EMERGENCY OPERATING CONDITIONS. THE MINIMUM CALCULATION WILL ASSUME THAT THE UTILITY CONTRIBUTION IS AT A MINIMUM AND WILL ASSUME A MINIMUM MOTOR CONTRIBUTION (ALL MOTORS OFF). CONVERSELY, THE MAXIMUM CALCULATION WILL ASSUME A MAXIMUM CONTRIBUTION FROM THE UTILITY AND WILL ASSUME THE MAXIMUM AMOUNT OF MOTORS TO BE OPERATING. CALCULATIONS SHALL TAKE INTO CONSIDERATION THE PARALLEL OPERATION OF SYNCHRONOUS GENERATORS WITH THE ELECTRIC UTILITY, WHERE APPLICABLE.
 7. THE INCIDENT ENERGY CALCULATIONS MUST CONSIDER THE ACCUMULATION OF ENERGY OVER TIME WHEN PERFORMING ARC FLASH CALCULATIONS ON BUSES WITH MULTIPLE SOURCES. ITERATIVE CALCULATIONS MUST TAKE INTO ACCOUNT THE CHANGING CURRENT CONTRIBUTIONS, AS THE SOURCES ARE INTERRUPTED OR DECREMENTED WITH TIME. FAULT CONTRIBUTION FROM MOTORS AND GENERATORS SHOULD BE DECREMENTED AS FOLLOWS:
 1. FAULT CONTRIBUTION FROM INDUCTION MOTORS SHOULD NOT BE CONSIDERED BEYOND 3-5 CYCLES.
 2. FAULT CONTRIBUTION FROM SYNCHRONOUS MOTORS AND GENERATORS SHOULD BE DECAYED TO MATCH THE ACTUAL DECREMENT OF EACH AS CLOSELY AS POSSIBLE (E.G. CONTRIBUTIONS FROM PERMANENT MAGNET GENERATORS WILL TYPICALLY DECAY FROM 10 PER UNIT TO 3 PER UNIT AFTER 10 CYCLES).
 8. FOR EACH EQUIPMENT LOCATION WITH A SEPARATELY ENCLOSED MAIN DEVICE (WHERE THERE IS ADEQUATE SEPARATION BETWEEN THE LINE SIDE TERMINALS OF THE MAIN PROTECTIVE DEVICE AND THE WORK LOCATION), CALCULATIONS FOR INCIDENT ENERGY AND FLASH PROTECTION BOUNDARY SHALL INCLUDE BOTH THE LINE AND LOAD SIDE OF THE MAIN BREAKER.
 9. WHEN PERFORMING INCIDENT ENERGY CALCULATIONS ON THE LINE SIDE OF A MAIN BREAKER (AS REQUIRED PER ABOVE) THE LINE SIDE AND LOAD SIDE CONTRIBUTIONS MUST BE INCLUDED IN THE FAULT CALCULATION.
 10. MIS-COORDINATION SHOULD BE CHECKED AMONGST ALL DEVICES WITHIN THE BRANCH CONTAINING THE IMMEDIATE PROTECTIVE DEVICE UPSTREAM OF THE CALCULATION LOCATION AND THE CALCULATION SHOULD UTILIZE THE FASTEST DEVICE TO COMPUTE THE INCIDENT ENERGY FOR THE CORRESPONDING LOCATION.
 11. ARC FLASH CALCULATIONS SHALL BE BASED ON ACTUAL OVERCURRENT PROTECTIVE DEVICE CLEARING TIME. MAXIMUM CLEARING TIME WILL BE CAPPED AT 2 SECONDS BASED ON IEEE 1584 SECTION B.1.2, WHERE IT IS NOT PHYSICALLY POSSIBLE TO MOVE OUTSIDE OF THE FLASH PROTECTION BOUNDARY IN LESS THAN 2 SECONDS DURING AN ARC FLASH EVENT. A MAXIMUM CLEARING TIME BASED ON THE SPECIFIC SITUATION.
2. THE ELECTRICAL CONTRACTOR SHALL ENSURE THAT THE RECOMMENDATIONS OF THE STUDY ARE IMPLEMENTED AS PART OF THE CONTRACT.

2.1 FIELD ADJUSTMENT

1. ADJUST RELAY AND PROTECTIVE DEVICE SETTINGS ACCORDING TO THE RECOMMENDED SETTINGS TABLE PROVIDED BY THE COORDINATION STUDY. FIELD ADJUSTMENTS TO BE COMPLETED BY THE ENGINEERING SERVICE DIVISION OF THE EQUIPMENT MANUFACTURER UNDER THE STARTUP AND ACCEPTANCE TESTING CONTRACT PORTION.
2. MAKE MINOR MODIFICATIONS TO EQUIPMENT AS REQUIRED TO ACCOMPLISH CONFORMANCE WITH SHORT CIRCUIT AND PROTECTIVE DEVICE COORDINATION STUDIES.
3. NOTIFY OWNER IN WRITING OF ANY REQUIRED MAJOR EQUIPMENT MODIFICATIONS.

2.2 ARC FLASH WARNING LABELS

1. THE CONTRACTOR OF THE ARC FLASH HAZARD ANALYSIS SHALL PROVIDE A 89 MM X 127 MM (3.5 IN.) THERMAL TRANSFER TYPE LABEL OF HIGH ADHESION POLYESTER FOR EACH WORK LOCATION ANALYZED.
2. ALL LABELS WILL BE BASED ON RECOMMENDED OVERCURRENT DEVICE SETTINGS AND WILL BE PROVIDED AFTER THE RESULTS OF THE ANALYSIS HAVE BEEN PRESENTED TO THE OWNER AND AFTER ANY SYSTEM CHANGES, UPGRADES OR MODIFICATIONS HAVE BEEN INCORPORATED IN THE SYSTEM.
3. THE LABEL SHALL INCLUDE THE FOLLOWING INFORMATION, AT A MINIMUM:
 1. LOCATION DESIGNATION
 2. NOMINAL VOLTAGE
 3. FLASH PROTECTION BOUNDARY
 4. HAZARD RISK CATEGORY, PPE
 5. INCIDENT ENERGY
 6. WORKING DISTANCE
 7. ENGINEERING REPORT NUMBER, REVISION NUMBER AND ISSUE DATE.
 8. LABELS SHALL BE MACHINE PRINTED, WITH NO FIELD MARKINGS.
4. ARC FLASH LABELS SHALL BE PROVIDED IN THE FOLLOWING MANNER AND ALL LABELS SHALL BE BASED ON RECOMMENDED OVERCURRENT DEVICE SETTINGS:
 1. FOR EACH 600, AND APPLICABLE 208 VOLT PANELBOARD, ONE ARC FLASH LABEL SHALL BE PROVIDED.
 2. FOR EACH MOTOR CONTROL CENTRE, ONE ARC FLASH LABEL SHALL BE PROVIDED.
 3. FOR EACH LOW VOLTAGE SWITCHBOARD, ONE ARC FLASH LABEL SHALL BE PROVIDED.
 4. FOR EACH SWITCHGEAR, ONE ARC FLASH LABEL SHALL BE PROVIDED.
 5. FOR MEDIUM VOLTAGE SWITCHES ONE ARC FLASH LABEL SHALL BE PROVIDED.



Client

2026-05-01	ISSUED FOR PERMIT/TENDER	--
2026-03-20	ISSUED FOR 66%	--
DATE	REVISION	REF

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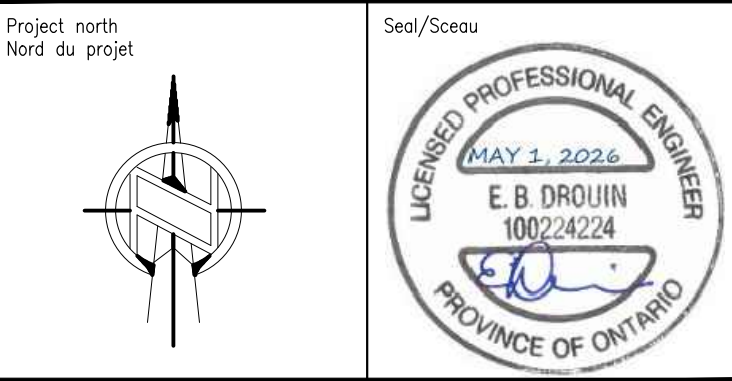
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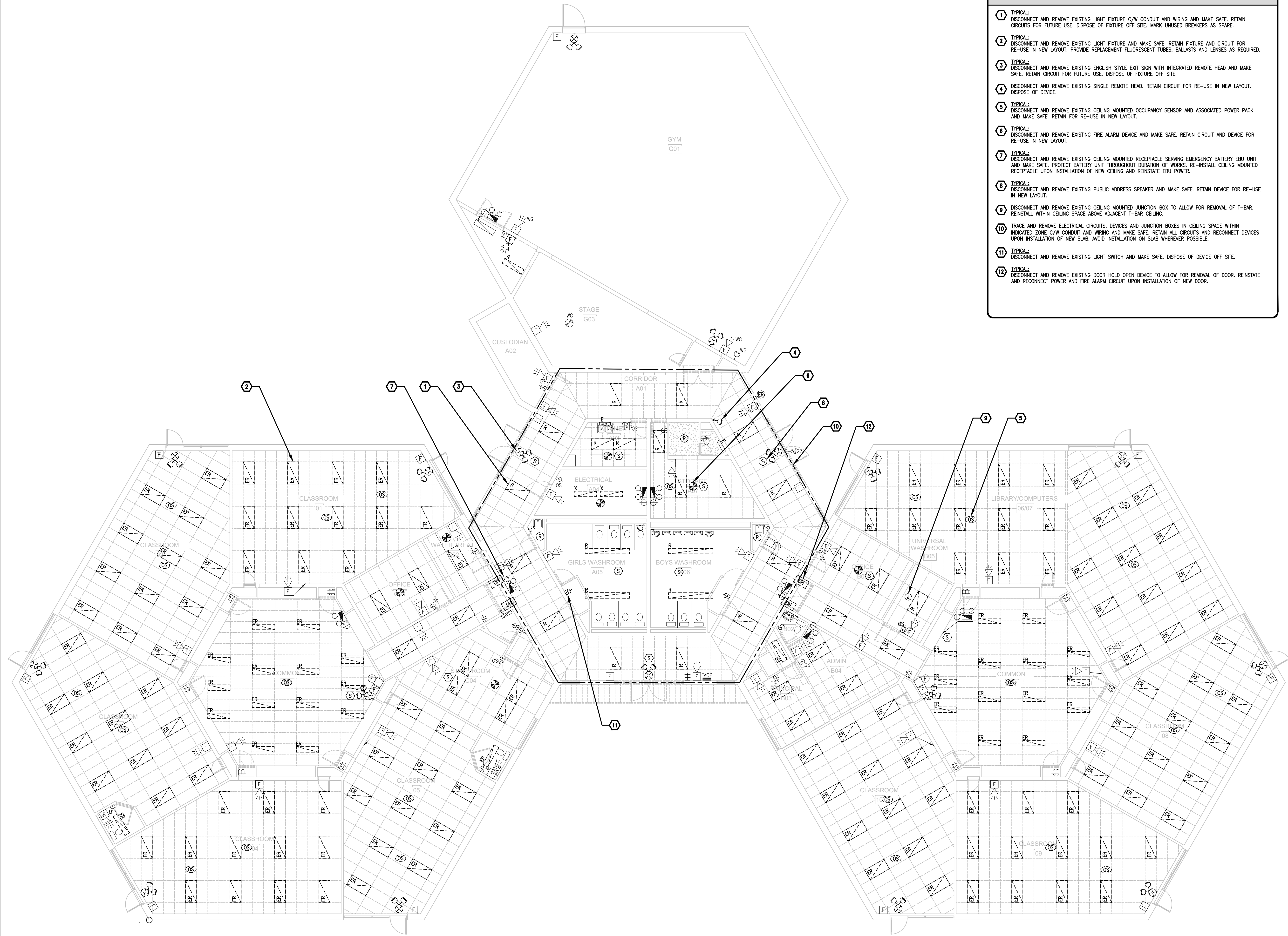
Project/Projet

FRONT OF YONGE PUBLIC SCHOOL - ARCHITECTURAL SERVICES

Drawing title/Titre du dessin

SYSTEM COORDINATION/ SHORT CIRCUIT/DEVICE EVALUATION & ARC FLASH STUDY

Scale Échelle	AS NOTED	Project no./No. du projet 2026-140
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Drawn by Dessiné par	D.CHANDLER	
Reviewed by	E.DROUIN	
Examined par		



- LIGHTING AND FIRE ALARM – DEMOLITION NOTES
- 1

TYPICAL:
DISCONNECT AND REMOVE EXISTING LIGHT FIXTURE C/W CONDUIT AND WIRING AND MAKE SAFE. RETAIN CIRCUITS FOR FUTURE USE. DISPOSE OF FIXTURE OFF SITE. MARK UNUSED BREAKERS AS SPARE.
- 2

TYPICAL:
DISCONNECT AND REMOVE EXISTING LIGHT FIXTURE AND MAKE SAFE. RETAIN FIXTURE AND CIRCUIT FOR RE-USE IN NEW LAYOUT. PROVIDE REPLACEMENT FLUORESCENT TUBES, BALLASTS AND LENSES AS REQUIRED.
- 3

TYPICAL:
DISCONNECT AND REMOVE EXISTING ENGLISH STYLE EXIT SIGN WITH INTEGRATED REMOTE HEAD AND MAKE SAFE. RETAIN CIRCUIT FOR FUTURE USE. DISPOSE OF FIXTURE OFF SITE.
- 4

DISCONNECT AND REMOVE EXISTING SINGLE REMOTE HEAD. RETAIN CIRCUIT FOR RE-USE IN NEW LAYOUT. DISPOSE OF DEVICE.
- 5

TYPICAL:
DISCONNECT AND REMOVE EXISTING CEILING MOUNTED OCCUPANCY SENSOR AND ASSOCIATED POWER PACK AND MAKE SAFE. RETAIN FOR RE-USE IN NEW LAYOUT.
- 6

TYPICAL:
DISCONNECT AND REMOVE EXISTING FIRE ALARM DEVICE AND MAKE SAFE. RETAIN CIRCUIT AND DEVICE FOR RE-USE IN NEW LAYOUT.
- 7

TYPICAL:
DISCONNECT AND REMOVE EXISTING CEILING MOUNTED RECEPTACLE SERVING EMERGENCY BATTERY EBU UNIT AND MAKE SAFE. PROTECT BATTERY UNIT THROUGHOUT DURATION OF WORKS. RE-INSTALL CEILING MOUNTED RECEPTACLE UPON INSTALLATION OF NEW CEILING AND REINSTATE EBU POWER.
- 8


TYPICAL:
DISCONNECT AND REMOVE EXISTING PUBLIC ADDRESS SPEAKER AND MAKE SAFE. RETAIN DEVICE FOR RE-USE IN NEW LAYOUT.
- 9

DISCONNECT AND REMOVE EXISTING CEILING MOUNTED JUNCTION BOX TO ALLOW FOR REMOVAL OF T-BAR. REINSTALL WITHIN CEILING SPACE ABOVE ADJACENT T-BAR CEILING.
- 10

TRACE AND REMOVE ELECTRICAL CIRCUITS, DEVICES AND JUNCTION BOXES IN CEILING SPACE WITHIN INDICATED ZONE C/W CONDUIT AND WIRING AND MAKE SAFE. RETAIN ALL CIRCUITS AND RECONNECT DEVICES UPON INSTALLATION OF NEW SLAB. AVOID INSTALLATION ON SLAB WHEREVER POSSIBLE.
- 11

TYPICAL:
DISCONNECT AND REMOVE EXISTING LIGHT SWITCH AND MAKE SAFE. DISPOSE OF DEVICE OFF SITE.
- 12

TYPICAL:
DISCONNECT AND REMOVE EXISTING DOOR HOLD OPEN DEVICE TO ALLOW FOR REMOVAL OF DOOR. REINSTATE AND RECONNECT POWER AND FIRE ALARM CIRCUIT UPON INSTALLATION OF NEW DOOR.



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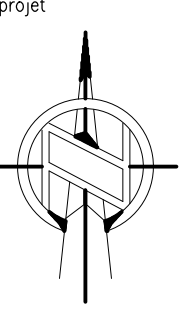


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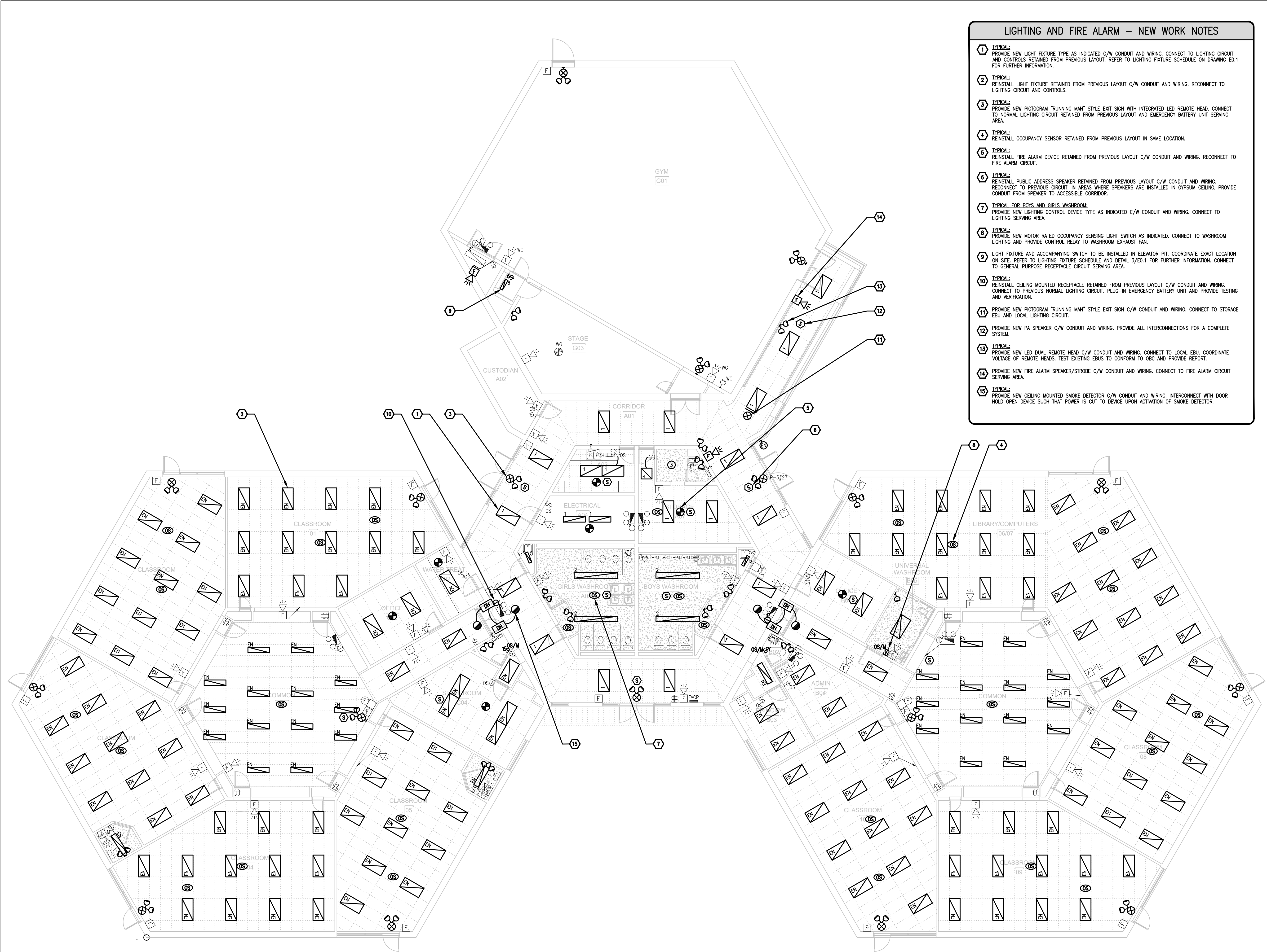
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FRONT OF YONGE PUBLIC
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LIGHTING AND FIRE ALARM -
DEMOLITION WORK

Scale Échelle	AS NOTED	Project no./No. du projet 2026-140
Design by Conçu par	D.CHANDLER	Drawing/Dessin
Drawn by Dessiné par	D.CHANDLER	E1.1 of 14
Reviewed by Examiné par	E.DROUIN	



- LIGHTING AND FIRE ALARM – NEW WORK NOTES
- 1

TYPICAL:
PROVIDE NEW LIGHT FIXTURE TYPE AS INDICATED C/W CONDUIT AND WIRING. CONNECT TO LIGHTING CIRCUIT AND CONTROLS RETAINED FROM PREVIOUS LAYOUT. REFER TO LIGHTING FIXTURE SCHEDULE ON DRAWING E0.1 FOR FURTHER INFORMATION.
- 2

TYPICAL:
REINSTALL LIGHT FIXTURE RETAINED FROM PREVIOUS LAYOUT C/W CONDUIT AND WIRING. RECONNECT TO LIGHTING CIRCUIT AND CONTROLS.
- 3

TYPICAL:
PROVIDE NEW PICTOGRAM "RUNNING MAN" STYLE EXIT SIGN WITH INTEGRATED LED REMOTE HEAD. CONNECT TO NORMAL LIGHTING CIRCUIT RETAINED FROM PREVIOUS LAYOUT AND EMERGENCY BATTERY UNIT SERVING AREA.
- 4

TYPICAL:
REINSTALL OCCUPANCY SENSOR RETAINED FROM PREVIOUS LAYOUT IN SAME LOCATION.
- 5

TYPICAL:
REINSTALL FIRE ALARM DEVICE RETAINED FROM PREVIOUS LAYOUT C/W CONDUIT AND WIRING. RECONNECT TO FIRE ALARM CIRCUIT.
- 6

TYPICAL:
REINSTALL PUBLIC ADDRESS SPEAKER RETAINED FROM PREVIOUS LAYOUT C/W CONDUIT AND WIRING. RECONNECT TO PREVIOUS CIRCUIT. IN AREAS WHERE SPEAKERS ARE INSTALLED IN GYPSUM CEILING, PROVIDE CONDUIT FROM SPEAKER TO ACCESSIBLE CORRIDOR.
- 7

TYPICAL FOR BOYS AND GIRLS WASHROOM:
PROVIDE NEW LIGHTING CONTROL DEVICE TYPE AS INDICATED C/W CONDUIT AND WIRING. CONNECT TO LIGHTING SERVING AREA.
- 8

TYPICAL:
PROVIDE NEW MOTOR RATED OCCUPANCY SENSING LIGHT SWITCH AS INDICATED. CONNECT TO WASHROOM LIGHTING AND PROVIDE CONTROL RELAY TO WASHROOM EXHAUST FAN.
- 9

LIGHT FIXTURE AND ACCOMPANYING SWITCH TO BE INSTALLED IN ELEVATOR PIT. COORDINATE EXACT LOCATION ON SITE. REFER TO LIGHTING FIXTURE SCHEDULE AND DETAIL 3/E0.1 FOR FURTHER INFORMATION. CONNECT TO GENERAL PURPOSE RECEPTACLE CIRCUIT SERVING AREA.
- 10

TYPICAL:
REINSTALL CEILING MOUNTED RECEPTACLE RETAINED FROM PREVIOUS LAYOUT C/W CONDUIT AND WIRING. CONNECT TO PREVIOUS NORMAL LIGHTING CIRCUIT. PLUG-IN EMERGENCY BATTERY UNIT AND PROVIDE TESTING AND VERIFICATION.
- 11


PROVIDE NEW PICTOGRAM "RUNNING MAN" STYLE EXIT SIGN C/W CONDUIT AND WIRING. CONNECT TO STORAGE EBU AND LOCAL LIGHTING CIRCUIT.
- 12

PROVIDE NEW PA SPEAKER C/W CONDUIT AND WIRING. PROVIDE ALL INTERCONNECTIONS FOR A COMPLETE SYSTEM.
- 13

TYPICAL:
PROVIDE NEW LED DUAL REMOTE HEAD C/W CONDUIT AND WIRING. CONNECT TO LOCAL EBU. COORDINATE VOLTAGE OF REMOTE HEADS. TEST EXISTING EBUS TO CONFORM TO OBC AND PROVIDE REPORT.
- 14

PROVIDE NEW FIRE ALARM SPEAKER/STROBE C/W CONDUIT AND WIRING. CONNECT TO FIRE ALARM CIRCUIT SERVING AREA.
- 15

TYPICAL:
PROVIDE NEW CEILING MOUNTED SMOKE DETECTOR C/W CONDUIT AND WIRING. INTERCONNECT WITH DOOR HOLD OPEN DEVICE SUCH THAT POWER IS CUT TO DEVICE UPON ACTIVATION OF SMOKE DETECTOR.



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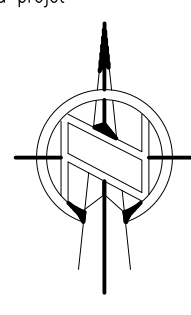


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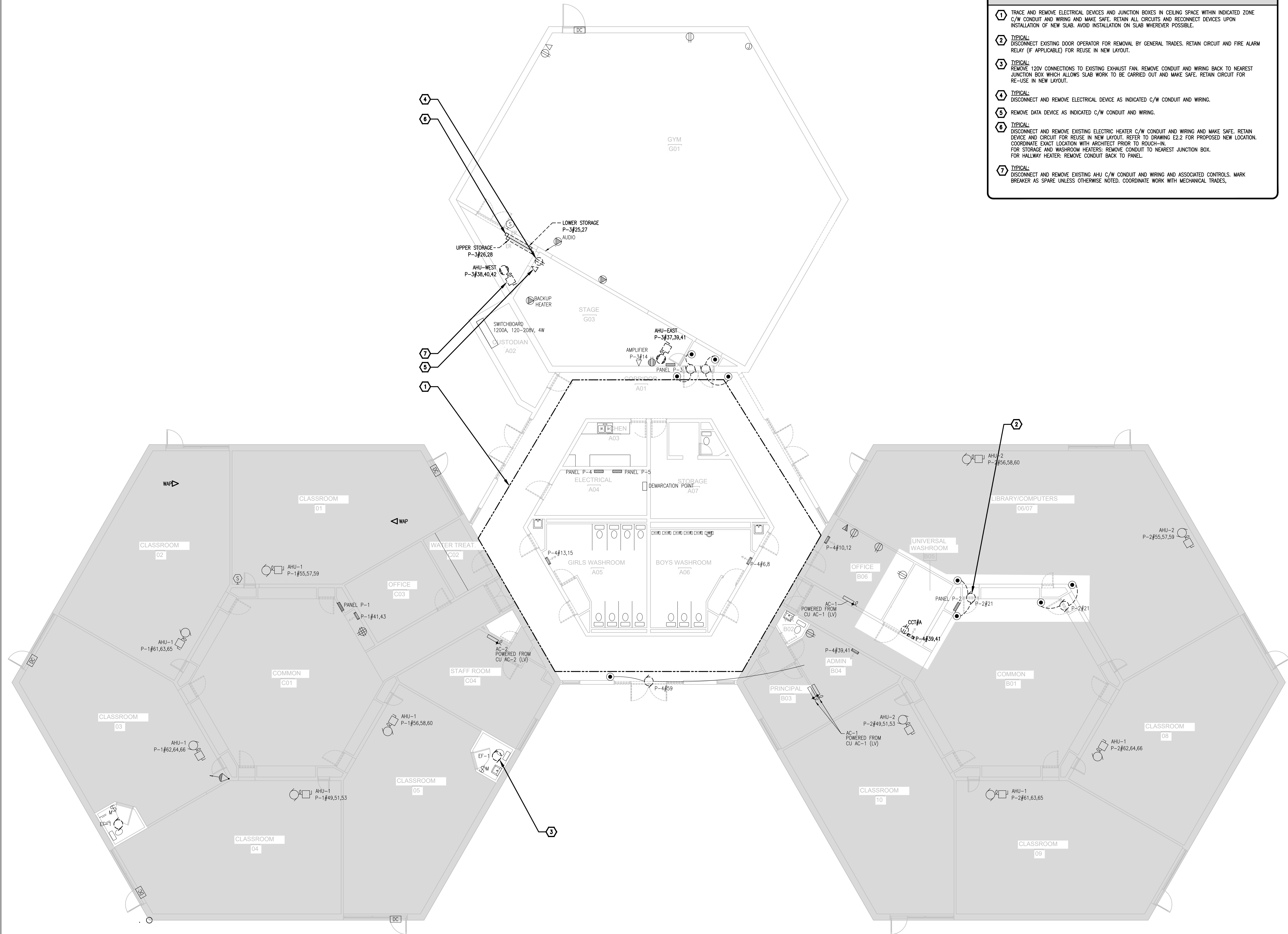
FRONT OF YONGE PUBLIC
SCHOOL - ARCHITECTURAL
SERVICES

Drawing title/Titre du dessin

LIGHTING AND FIRE ALARM -
NEW WORK

Scale Échelle	AS NOTED	Project no./No. du projet 2026-140
Design by Conçu par	D.CHANDLER	Drawing/Dessin
Drawn by Dessiné par	D.CHANDLER	E1.2
Reviewed by Examiné par	E.DROUIN	

of 14



- POWER AND SYSTEMS – DEMOLITION NOTES**
- 1. TRACE AND REMOVE ELECTRICAL DEVICES AND JUNCTION BOXES IN CEILING SPACE WITHIN INDICATED ZONE C/W CONDUIT AND WIRING AND MAKE SAFE. RETAIN ALL CIRCUITS AND RECONNECT DEVICES UPON INSTALLATION OF NEW SLAB. AVOID INSTALLATION ON SLAB WHEREVER POSSIBLE.
 - 2. TYPICAL: DISCONNECT EXISTING DOOR OPERATOR FOR REMOVAL BY GENERAL TRADES. RETAIN CIRCUIT AND FIRE ALARM RELAY (IF APPLICABLE) FOR REUSE IN NEW LAYOUT.
 - 3. TYPICAL: REMOVE 120V CONNECTIONS TO EXISTING EXHAUST FAN. REMOVE CONDUIT AND WIRING BACK TO NEAREST JUNCTION BOX WHICH ALLOWS SLAB WORK TO BE CARRIED OUT AND MAKE SAFE. RETAIN CIRCUIT FOR RE-USE IN NEW LAYOUT.
 - 4. TYPICAL: DISCONNECT AND REMOVE ELECTRICAL DEVICE AS INDICATED C/W CONDUIT AND WIRING.
 - 5. REMOVE DATA DEVICE AS INDICATED C/W CONDUIT AND WIRING.
 - 6. TYPICAL: DISCONNECT AND REMOVE EXISTING ELECTRIC HEATER C/W CONDUIT AND WIRING AND MAKE SAFE. RETAIN DEVICE AND CIRCUIT FOR REUSE IN NEW LAYOUT. REFER TO DRAWING E2.2 FOR PROPOSED NEW LOCATION. COORDINATE EXACT LOCATION WITH ARCHITECT PRIOR TO ROUGH-IN. FOR STORAGE AND WASHROOM HEATERS: REMOVE CONDUIT TO NEAREST JUNCTION BOX. FOR HALLWAY HEATER: REMOVE CONDUIT BACK TO PANEL.
 - 7. TYPICAL: DISCONNECT AND REMOVE EXISTING AHU C/W CONDUIT AND WIRING AND ASSOCIATED CONTROLS. MARK BREAKER AS SPARE UNLESS OTHERWISE NOTED. COORDINATE WORK WITH MECHANICAL TRADES.



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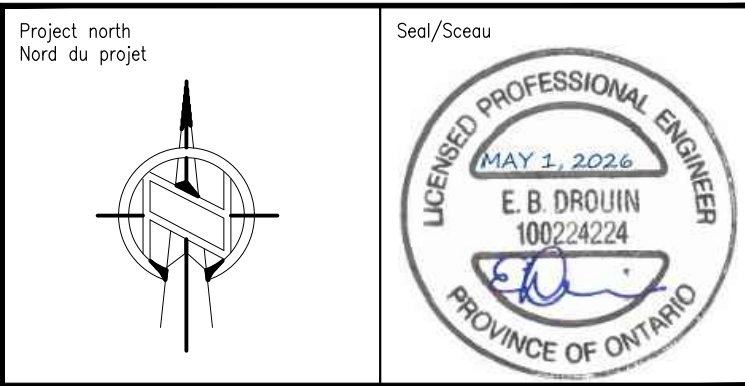
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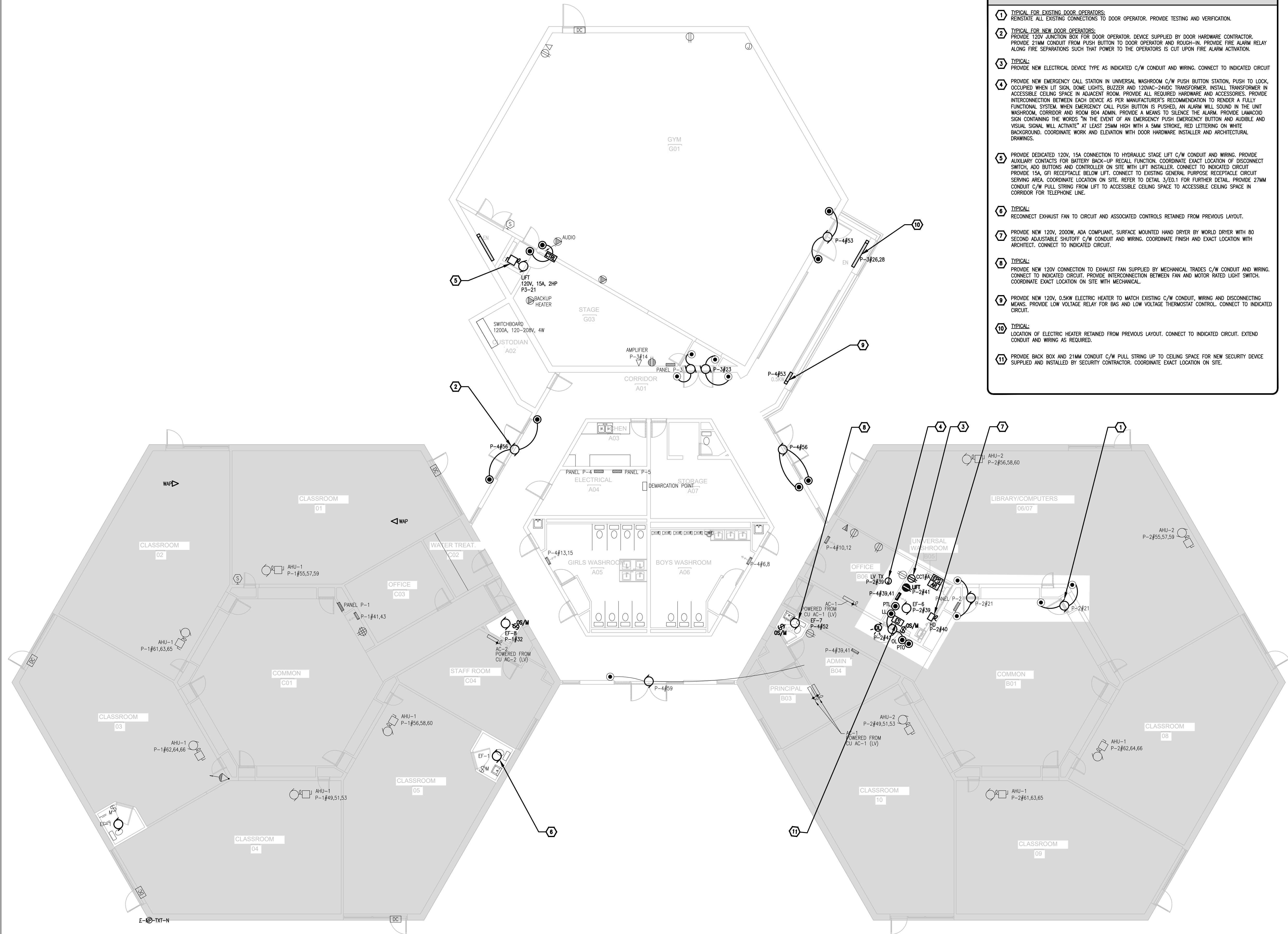
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Project/Projet	
FRONT OF YONGE PUBLIC SCHOOL - ARCHITECTURAL SERVICES	
Drawing title/Titre du dessin	
POWER AND SYSTEMS - DEMOLITION WORK	
Drawing title/Titre du dessin	
POWER AND SYSTEMS - DEMOLITION WORK	
Scale	AS NOTED
Échelle	AS NOTED
Design by	D.CHANDLER
Conçu par	D.CHANDLER
Drawn by	D.CHANDLER
Dessiné par	D.CHANDLER
Reviewed by	E.DROUIN
Examiné par	E.DROUIN
Project no./No. du projet	2026-140
Drawing/Dessin	E2.1
of	14



POWER AND SYSTEMS – NEW WORK NOTES

1. **TYPICAL FOR EXISTING DOOR OPERATORS:**
REINSTATE ALL EXISTING CONNECTIONS TO DOOR OPERATOR. PROVIDE TESTING AND VERIFICATION.
2. **TYPICAL FOR NEW DOOR OPERATORS:**
PROVIDE 120V JUNCTION BOX FOR DOOR OPERATOR. DEVICE SUPPLIED BY DOOR HARDWARE CONTRACTOR. PROVIDE 21MM CONDUIT FROM PUSH BUTTON TO DOOR OPERATOR AND ROUGH-IN. PROVIDE FIRE ALARM RELAY ALONG FIRE SEPARATIONS SUCH THAT POWER TO THE OPERATORS IS CUT UPON FIRE ALARM ACTIVATION.
3. **TYPICAL:**
PROVIDE NEW ELECTRICAL DEVICE TYPE AS INDICATED C/W CONDUIT AND WIRING. CONNECT TO INDICATED CIRCUIT
4. **PROVIDE NEW EMERGENCY CALL STATION IN UNIVERSAL WASHROOM C/W PUSH BUTTON STATION, PUSH TO LOCK, OCCUPIED WHEN LIT SIGN, DOME LIGHTS, BUZZER AND 120VAC-24VDC TRANSFORMER. INSTALL TRANSFORMER IN ACCESSIBLE CEILING SPACE IN ADJACENT ROOM. PROVIDE ALL REQUIRED HARDWARE AND ACCESSORIES. PROVIDE INTERCONNECTION BETWEEN EACH DEVICE AS PER MANUFACTURER'S RECOMMENDATION TO RENDER A FULLY FUNCTIONAL SYSTEM. WHEN EMERGENCY CALL PUSH BUTTON IS PUSHED, AN ALARM WILL SOUND IN THE UNIT WASHROOM, CORRIDOR AND ROOM B04 ADMIN. PROVIDE A MEANS TO SILENCE THE ALARM. PROVIDE LAMACOID SIGN CONTAINING THE WORDS "IN THE EVENT OF AN EMERGENCY PUSH EMERGENCY BUTTON AND AUDIBLE AND VISUAL SIGNAL WILL ACTIVATE" AT LEAST 25MM HIGH WITH A 5MM STROKE, RED LETTERING ON WHITE BACKGROUND. COORDINATE WORK AND ELEVATION WITH DOOR HARDWARE INSTALLER AND ARCHITECTURAL DRAWINGS.**
5. **PROVIDE DEDICATED 120V, 15A CONNECTION TO HYDRAULIC STAGE LIFT C/W CONDUIT AND WIRING. PROVIDE AUXILIARY CONTACTS FOR BATTERY BACK-UP RECALL FUNCTION. COORDINATE EXACT LOCATION OF DISCONNECT SWITCH, ADD BUTTONS AND CONTROLLER ON SITE WITH LIFT INSTALLER. CONNECT TO INDICATED CIRCUIT. PROVIDE 15A, GF RECEPTACLE BELOW LIFT. CONNECT TO EXISTING GENERAL PURPOSE RECEPTACLE CIRCUIT SERVING AREA. COORDINATE LOCATION ON SITE. REFER TO DETAIL 3/E0.1 FOR FURTHER DETAIL. PROVIDE 27MM CONDUIT C/W PULL STRING FROM LIFT TO ACCESSIBLE CEILING SPACE TO ACCESSIBLE CEILING SPACE IN CORRIDOR FOR TELEPHONE LINE.**
6. **TYPICAL:**
RECONNECT EXHAUST FAN TO CIRCUIT AND ASSOCIATED CONTROLS RETAINED FROM PREVIOUS LAYOUT.
7. **PROVIDE NEW 120V, 2000W, ADA COMPLIANT, SURFACE MOUNTED HAND DRYER BY WORLD DRYER WITH 80 SECOND ADJUSTABLE SHUTOFF C/W CONDUIT AND WIRING. COORDINATE FINISH AND EXACT LOCATION WITH ARCHITECT. CONNECT TO INDICATED CIRCUIT.**
8. **TYPICAL:**
PROVIDE NEW 120V CONNECTION TO EXHAUST FAN SUPPLIED BY MECHANICAL TRADES C/W CONDUIT AND WIRING. CONNECT TO INDICATED CIRCUIT. PROVIDE INTERCONNECTION BETWEEN FAN AND MOTOR RATED LIGHT SWITCH. COORDINATE EXACT LOCATION ON SITE WITH MECHANICAL.
9. **PROVIDE NEW 120V, 0.5KW ELECTRIC HEATER TO MATCH EXISTING C/W CONDUIT, WIRING AND DISCONNECTING MEANS. PROVIDE LOW VOLTAGE RELAY FOR BAS AND LOW VOLTAGE THERMOSTAT CONTROL. CONNECT TO INDICATED CIRCUIT.**
10. **TYPICAL:**
LOCATION OF ELECTRIC HEATER RETAINED FROM PREVIOUS LAYOUT. CONNECT TO INDICATED CIRCUIT. EXTEND CONDUIT AND WIRING AS REQUIRED.
11. **PROVIDE BACK BOX AND 21MM CONDUIT C/W PULL STRING UP TO CEILING SPACE FOR NEW SECURITY DEVICE SUPPLIED AND INSTALLED BY SECURITY CONTRACTOR. COORDINATE EXACT LOCATION ON SITE.**



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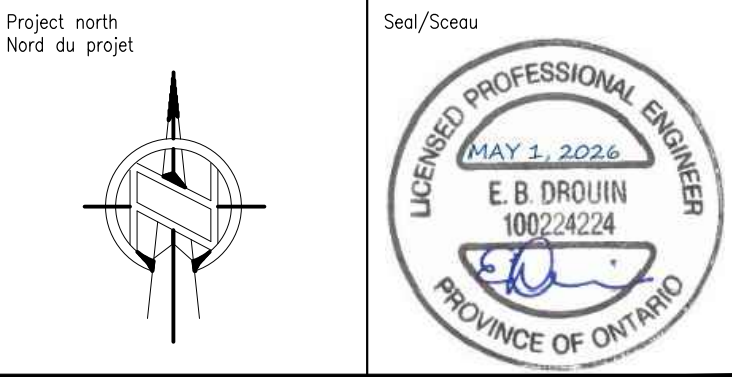
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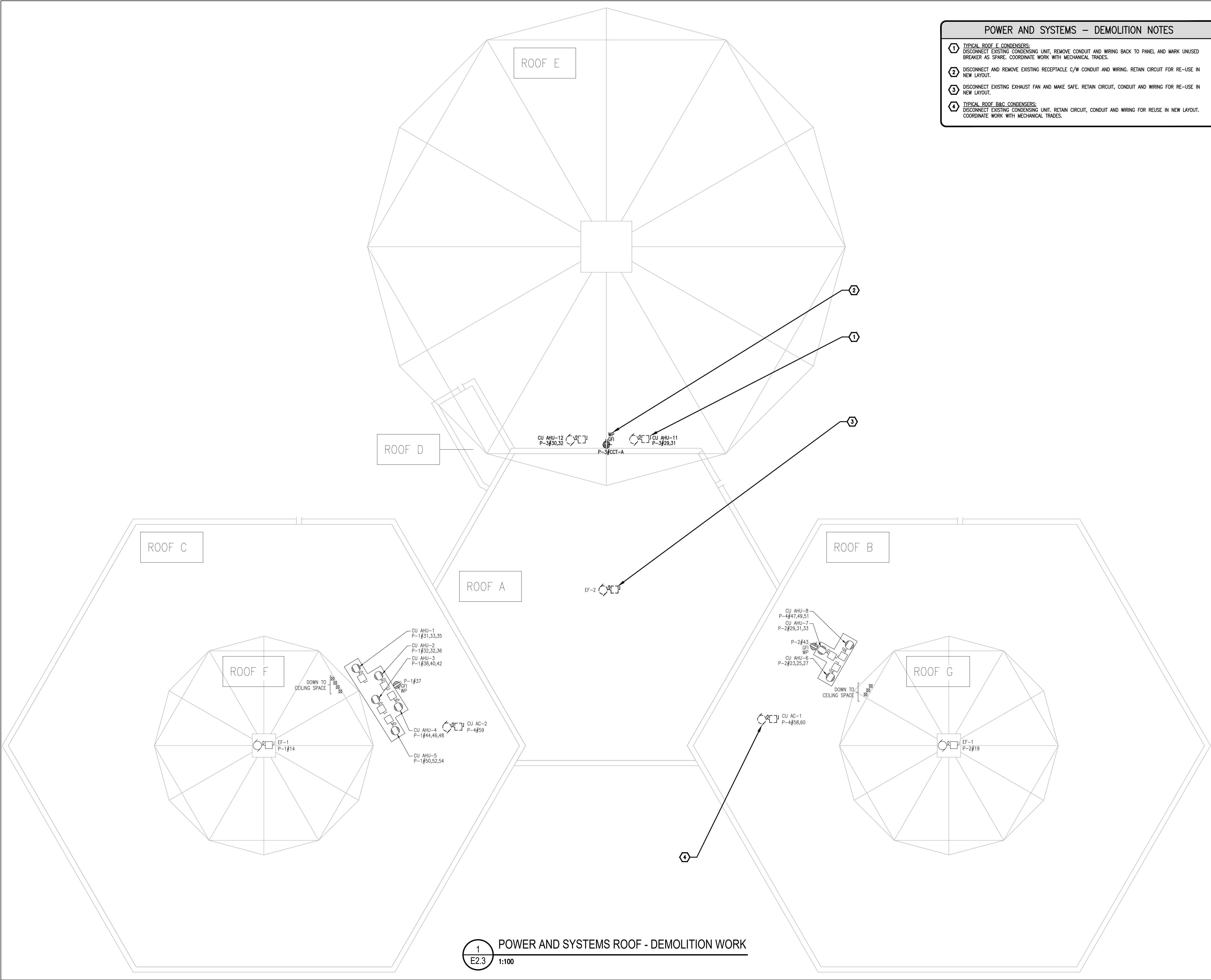
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Project/Projet
FRONT OF YONGE PUBLIC SCHOOL - ARCHITECTURAL SERVICES

Drawing title/Titre du dessin
POWER AND SYSTEMS - NEW WORK

Scale Échelle	AS NOTED	Project no./No. du projet 2026-140
Design by Conçu par	D.CHANDLER	Drawing/Dessin E2.2
Drawn by Dessiné par	D.CHANDLER	Examined by E.DROUIN
Reviewed by	E.DROUIN	of 14



POWER AND SYSTEMS – DEMOLITION NOTES

1

TYPICAL ROOF E CONDENSERS:
DISCONNECT EXISTING CONDENSING UNIT, REMOVE CONDUIT AND WIRING BACK TO PANEL AND MARK UNUSED BREAKER AS SPARE. COORDINATE WORK WITH MECHANICAL TRADES.

2


DISCONNECT AND REMOVE EXISTING RECEPTACLE C/W CONDUIT AND WIRING. RETAIN CIRCUIT FOR RE-USE IN NEW LAYOUT.

3

DISCONNECT EXISTING EXHAUST FAN AND MAKE SAFE. RETAIN CIRCUIT, CONDUIT AND WIRING FOR RE-USE IN NEW LAYOUT.

4

TYPICAL ROOF B&C CONDENSERS:
DISCONNECT EXISTING CONDENSING UNIT, RETAIN CIRCUIT, CONDUIT AND WIRING FOR REUSE IN NEW LAYOUT. COORDINATE WORK WITH MECHANICAL TRADES.



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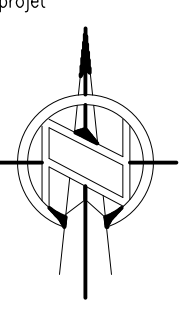


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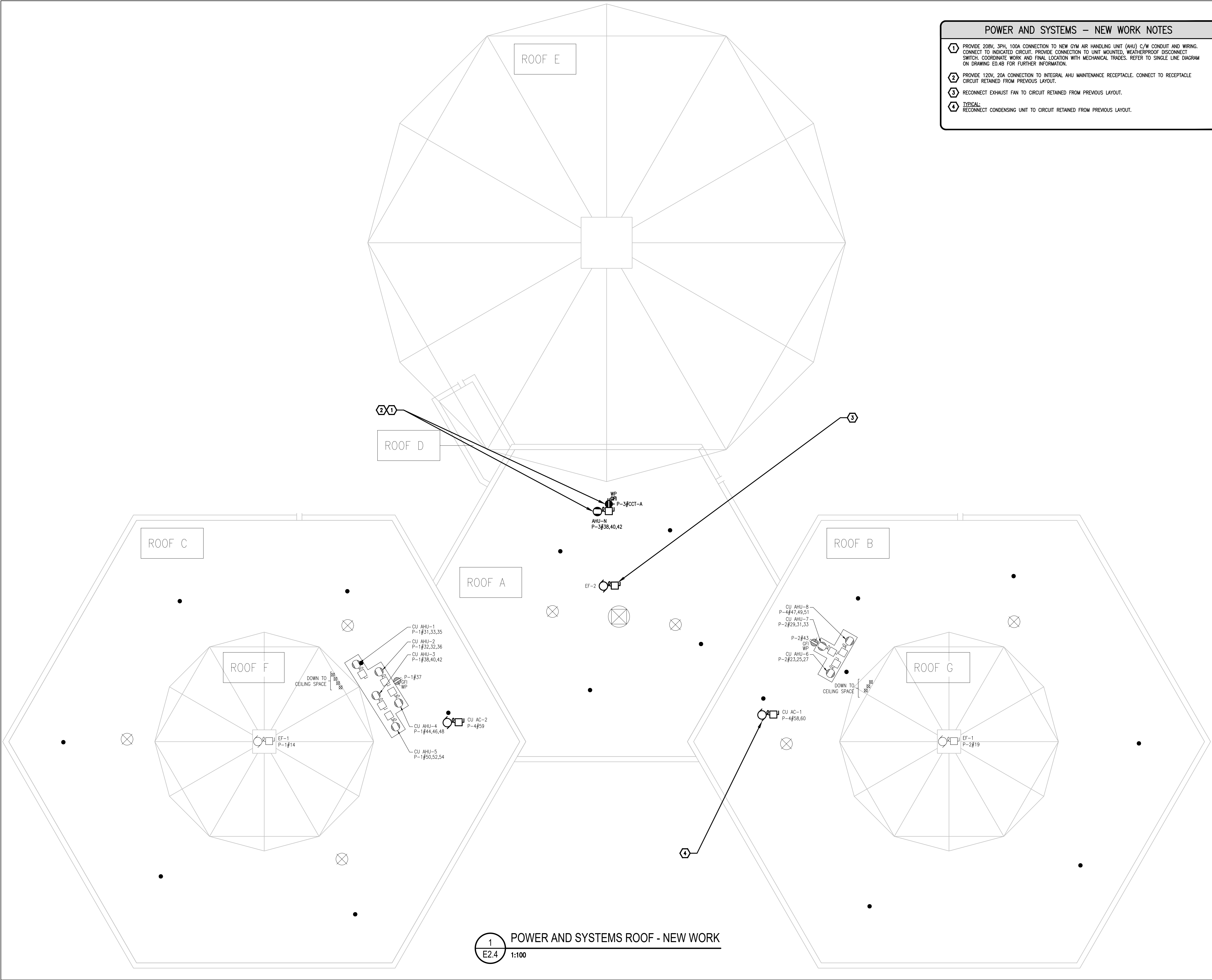
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POWER AND SYSTEMS
ROOF -
DEMOLITION WORK

Scale Échelle	AS NOTED	Project no./No. du projet 2026-140
Design by Conçu par	D.CHANDLER	E2.3 OF 14
Drawn by Dessiné par	D.CHANDLER	
Reviewed by Examiné par	E.DROUIN	



POWER AND SYSTEMS – NEW WORK NOTES

1

PROVIDE 208V, 3PH, 100A CONNECTION TO NEW GYM AIR HANDLING UNIT (AHU) C/W CONDUIT AND WIRING. CONNECT TO INDICATED CIRCUIT. PROVIDE CONNECTION TO UNIT MOUNTED, WEATHERPROOF DISCONNECT SWITCH. COORDINATE WORK AND FINAL LOCATION WITH MECHANICAL TRADES. REFER TO SINGLE LINE DIAGRAM ON DRAWING E0.4B FOR FURTHER INFORMATION.

2


PROVIDE 120V, 20A CONNECTION TO INTEGRAL AHU MAINTENANCE RECEPTACLE. CONNECT TO RECEPTACLE CIRCUIT RETAINED FROM PREVIOUS LAYOUT.

3

RECONNECT EXHAUST FAN TO CIRCUIT RETAINED FROM PREVIOUS LAYOUT.

4

TYPICAL:
RECONNECT CONDENSING UNIT TO CIRCUIT RETAINED FROM PREVIOUS LAYOUT.



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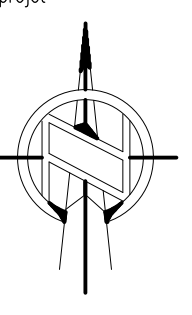


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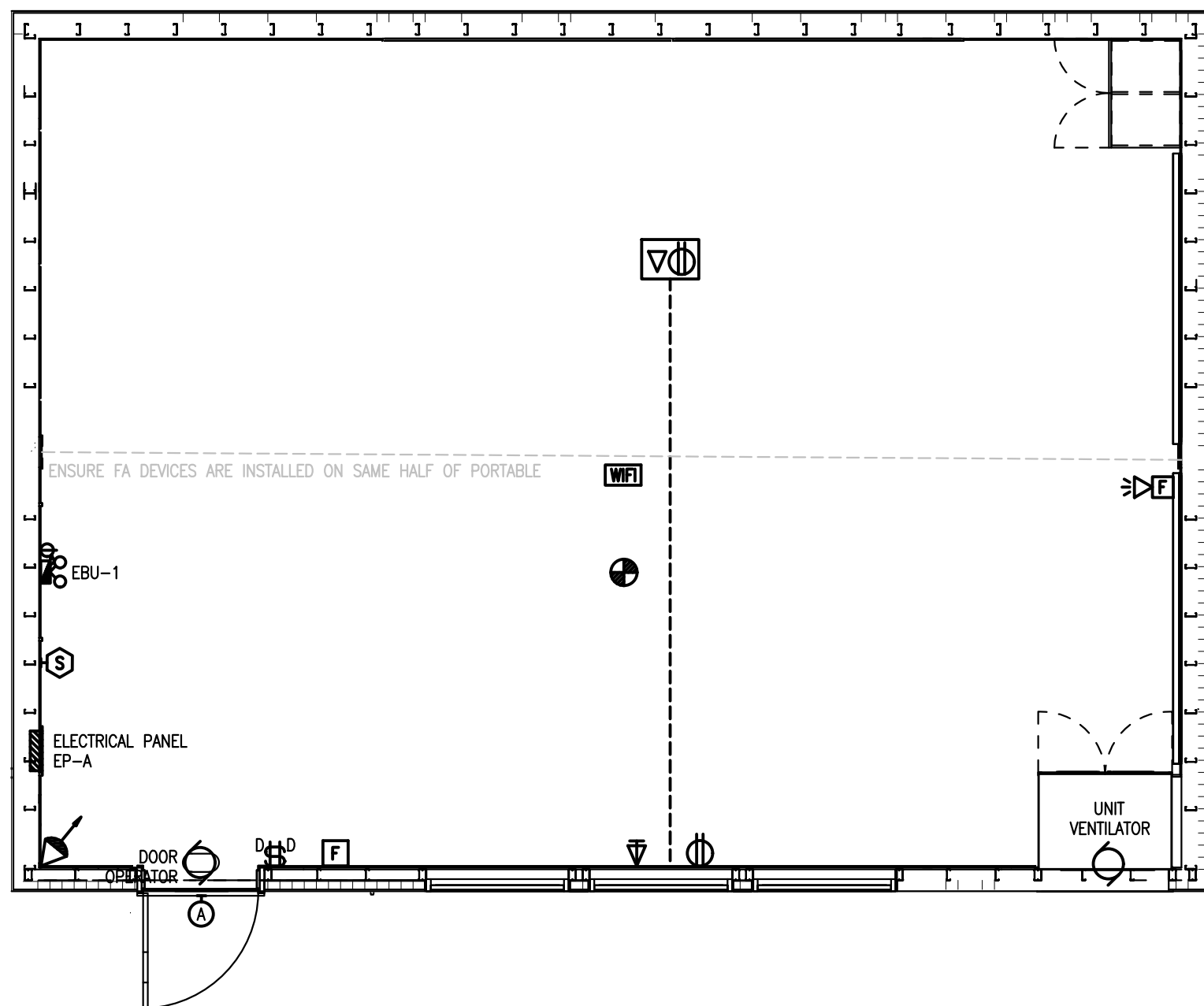
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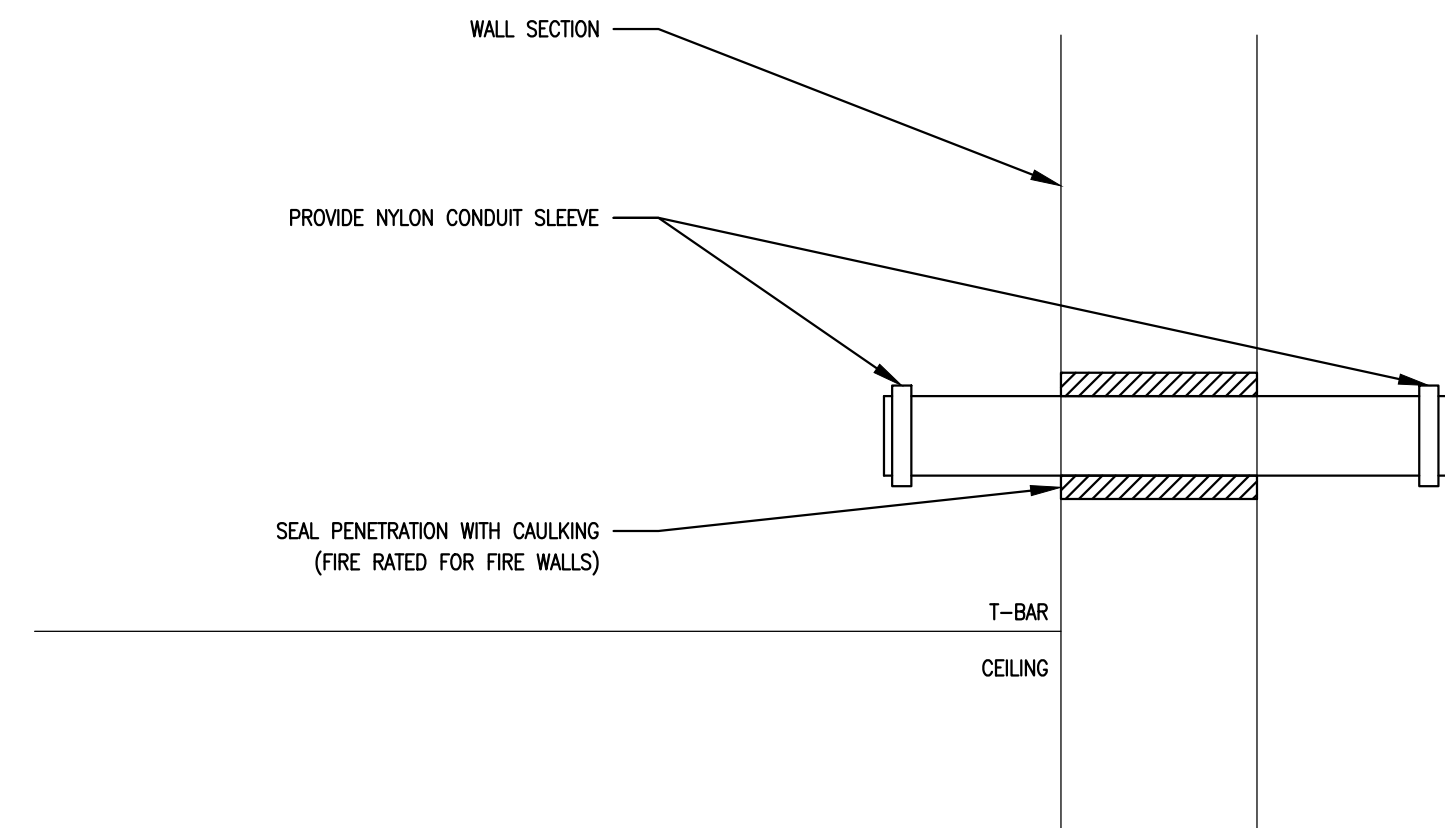
Scale Échelle	AS NOTED	Project no./No. du projet 2026-140
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Drawn by Dessiné par	D.CHANDLER	
Reviewed by Examiné par	E.DROUIN	

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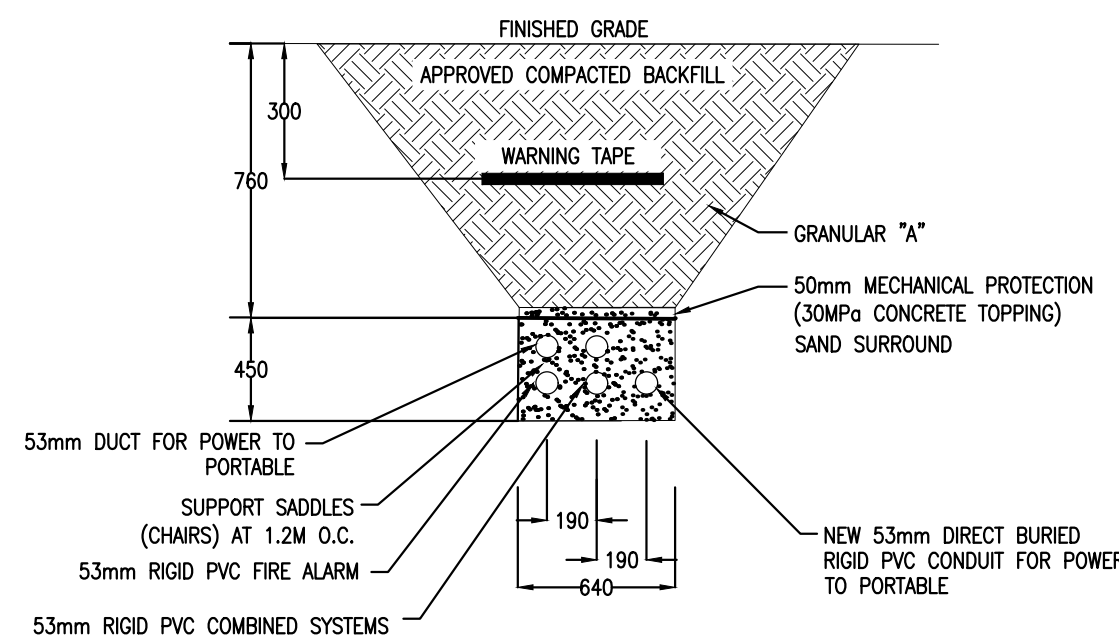
1
E3.1 T.S.

TYPICAL PORTABLE LIGHTING, POWER AND SYSTEM LAYOUT



3
E3.1 T.S.

TYPICAL PORTABLE TRENCH DETAIL



5
E3.1 T.S.

TYPICAL PORTABLE TRENCH DETAIL

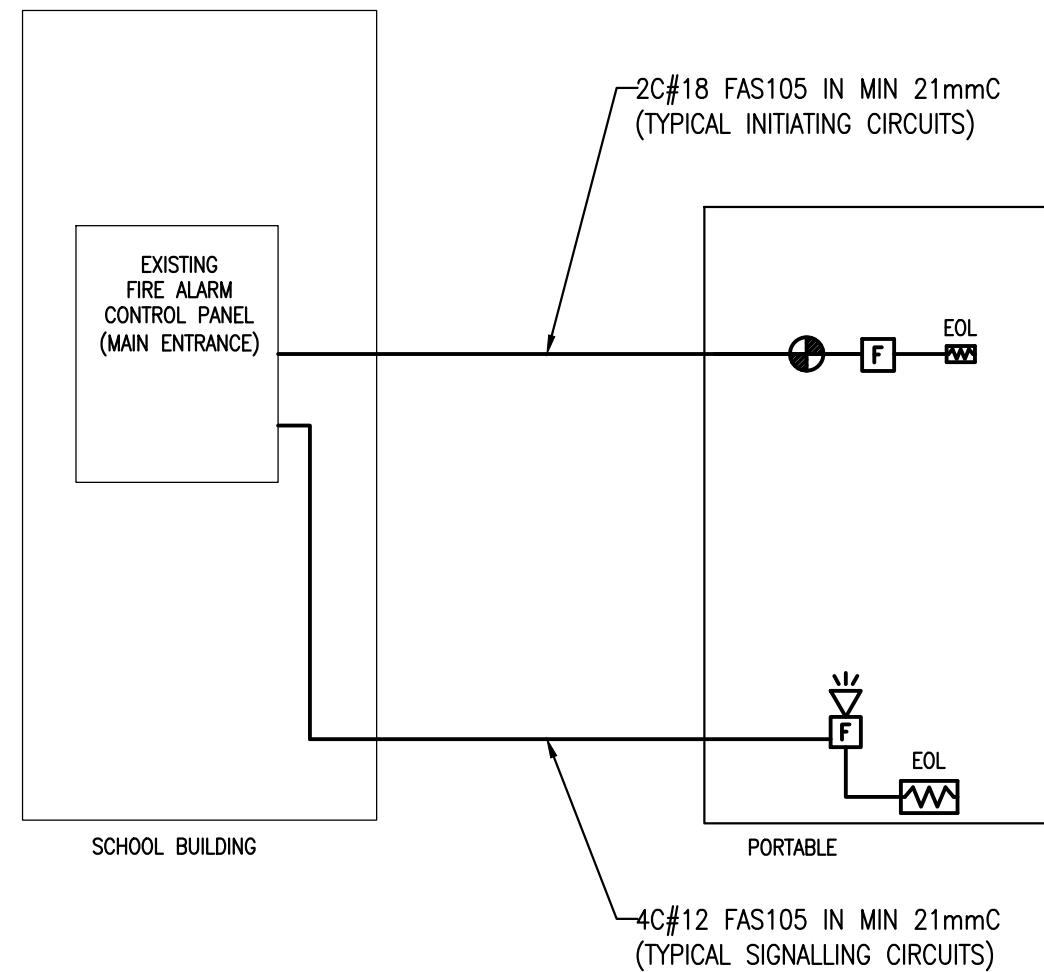
Electrical Circuit Schedule EP-A						
Location:	CLASSROOM	Volts:	120/240 1PH	Phases:	1	Wires: 3
						Mains Rating: 125A
Circuit Number	Circuit Description	Trip	Poles	A	B	
A-1	RECEPTACLES	15 A	1	875 VA	0 VA	
A-2,4	UNIT VENTILATOR	100 A	2	7500 VA	7500 VA	
A-3	LED LIGHT	15 A	1	0 VA	450 VA	
A-5	DOOR OPERATOR	15 A	1	500 VA	0 VA	
A-10	SPACE	0 A	1	0 VA	0 VA	
A-11	SPACE	0 A	1	0 VA	0 VA	
A-12	SPACE	0 A	1	0 VA	0 VA	
A-13	SPACE	0 A	1	0 VA	0 VA	
Grand total: 12				8875 VA	7950 VA	

GENERAL NOTES

- PORTABLE CONDUITS SHALL BE:
 - PVC BELOW & ABOVE GRADE AND ON EXTERIOR WALL. PVC TO EMT TRANSITION INSIDE CEILING.
 - EMT ABOVE GRADE IN INTERIOR HEATED LOCATIONS.
 - LIQUID TIGHT EMT ABOVE GRADE IN DAMP OR WET LOCATIONS.
- ALL EMPTY CONDUITS SHALL HAVE PULL CORDS.
- SEAL ALL CONDUITS WITH DUCT SEAL PUTTY AT BOTH ENDS.
- RUN CONDUIT TIGHT TO UNDERSIDE OF PORTABLE CLASSROOMS.
- PROVIDE EXPANSION FITTING WHERE PVC CONDUITS RISE UP OUT OF GROUND AT PORTABLES.
- PROVIDE 90° (LB) FITTINGS AT CONDUIT BENDS ABOVE GRADE.
- NO EXPOSED CABLES ARE TO BE INSTALLED ACROSS CEILINGS OR WALLS. ALL EXPOSED CONDUIT TO BE PAINTED TO MATCH AND ROUTING TO BE APPROVED BY UCDSB PRIOR TO INSTALLATION. WHERE CABLES ARE INSTALLED ABOVE DROP CEILINGS OR CEILINGS WITH ACCESS ABOVE THEM J HOOKS MUST BE UTILIZED. CADDY CAT ON PRODUCT LINE OR EQUIVALENT SPACED NO MORE THAN 1524MM APART. J HOOKS TO BE UTILIZED ON ALL RUNS IN CEILING ACCESS SPACES. CABLES ARE NOT TO BE INSTALLED THROUGH OPEN WEB STEEL JOISTS. SUPPORT OFF BOTTOM OF JOIST WITH J HOOK AND DO NOT FASTEN TO T BAR PENCIL RODS.
- SEAL ALL OPENINGS IN PORTABLE CLASSROOM BUILDING ENVELOPE. CREATED OR LEFT EXPOSED BY ELECTRICAL WORK TO PREVENT INGRESS OF MOISTURE.
- CORING FOR ELECTRICAL WORK BY THIS TRADE.
- TEST ALL HORIZONTAL UTP CABLES (CAT-5E AND CAT-6) AS DESCRIBED BELOW. CORRECT DEFICIENCIES AND REPEAT TEST AS NECESSARY. SUBMIT RECORD OF RESULTS IN ELECTRONIC FORMAT TO CONSULTANT FOR REVIEW. INCLUDE TEST REPORT IN O&M MANUAL.
 - PERFORM TEST FOR PERMANENT LINK AND CHANNEL ON INSTALLED CABLES INCLUDING SPARES USING CERTIFIED LEVEL IIE TESTER TO: TIA/EIA-568-A.1.
- FOR ALL CABLEING, PROVIDE AT LEAST 1 METER AT EACH END FOR CONNECTIONS.
- PROVIDE FIRE STOPPING FOR ALL CONDUIT/WIRING PENETRATIONS THROUGH GROUND AND SECOND FLOOR WALLS AND FLOOR ASSEMBLIES.
- PROVIDE NOTIFICATION FOR SHUT DOWN OF POWER AND CONNECTION OF NEW CIRCUIT BREAKER TO PRECAST UTILITY SHED. UCDSB PROJECT MANAGER TO BE INFORMED AT LEAST 48 HOURS PRIOR TO SHUT DOWN.
- FIRE STOP ALL OPENINGS FOR ELECTRICAL WORK IN VERTICAL AND HORIZONTAL FIRE-RATED ASSEMBLIES CREATED FOR OR USED BY WORK UNDER THIS PROJECT WITH ULC FIRE STOP SYSTEM. ASSUME THAT BOILER ROOM, STAIRWELL, AND CORRIDOR ARE FIRE-RATED ASSEMBLIES.
- ALL CONDUITS WHICH DO NOT TERMINATE IN A BOX OR FITTING SHALL BE PROVIDED WITH A NYLON BUSHING.
- ALL EMPTY CONDUITS SHALL HAVE PULL CORDS.
- SEAL ALL CONDUITS WHICH ENTER OR LEAVE A BUILDING WITH DUCT SEAL PUTTY AT BOTH ENDS.
- PROVIDE EXPANSION FITTING WHERE PVC CONDUITS RISE UP OUT OF GROUND AT PORTABLES.
- PROVIDE 90° (LB) FITTINGS AT CONDUIT BENDS ABOVE GRADE.
- SEAL ALL OPENINGS IN PORTABLE CLASSROOM BUILDING ENVELOPE. CREATED OR LEFT EXPOSED BY ELECTRICAL WORK TO PREVENT INGRESS OF MOISTURE.
- CORING FOR ELECTRICAL WORK INCLUDED IN CONTRACT. REFER TO ARCHITECTURAL.
- SECURITY SYSTEM WORK INCLUDING: TERMINATIONS, SECURITY SYSTEM COMPONENTS AND SYSTEM PROGRAMMING. THE PARTS AND INSTALLATION SHOULD BE DONE BY CONTRACTOR.
- ALL LOW-VOLTAGE CABLEING AND TELEPHONE, DATA, WIRELESS, AND PA SYSTEM WORK INCLUDING: TERMINATIONS, COMPONENTS, AND SYSTEM PROGRAMMING TO BE PROVIDED BY UCDSB PRE-APPROVED LOW-VOLTAGE CONTRACTOR.
- PROVIDE CROSS CONNECTIONS TO ALL SIDES OF PORTABLE AND ENSURE ALL DEVICES ARE OPERATIONAL.
- PROVIDE BREAKERS IN PANEL EP-A AS INDICATED. REFER TO SCHEDULE ON THIS DRAWING FOR FURTHER DETAIL.
- PROVIDE 240V, 2-POLE CONNECTION TO 3 TON UNIT VENTILATOR C/W CONDUIT AND WIRING. CONNECT TO INDICATED CIRCUIT. COORDINATE EXACT REQUIREMENTS AND LOCATION WITH VENTILATOR PROVIDER.
- PROVIDE 120V CONNECTION TO DOOR OPERATOR C/W CONDUIT AND WIRING. PROVIDE ALL INTERCONNECTIONS REQUIRED FOR A COMPLETE SYSTEM.
- PROVIDE CONNECTION TO ATCO SUPPLIED GROUND ROD. COORDINATE EXACT LOCATION ON SITE.

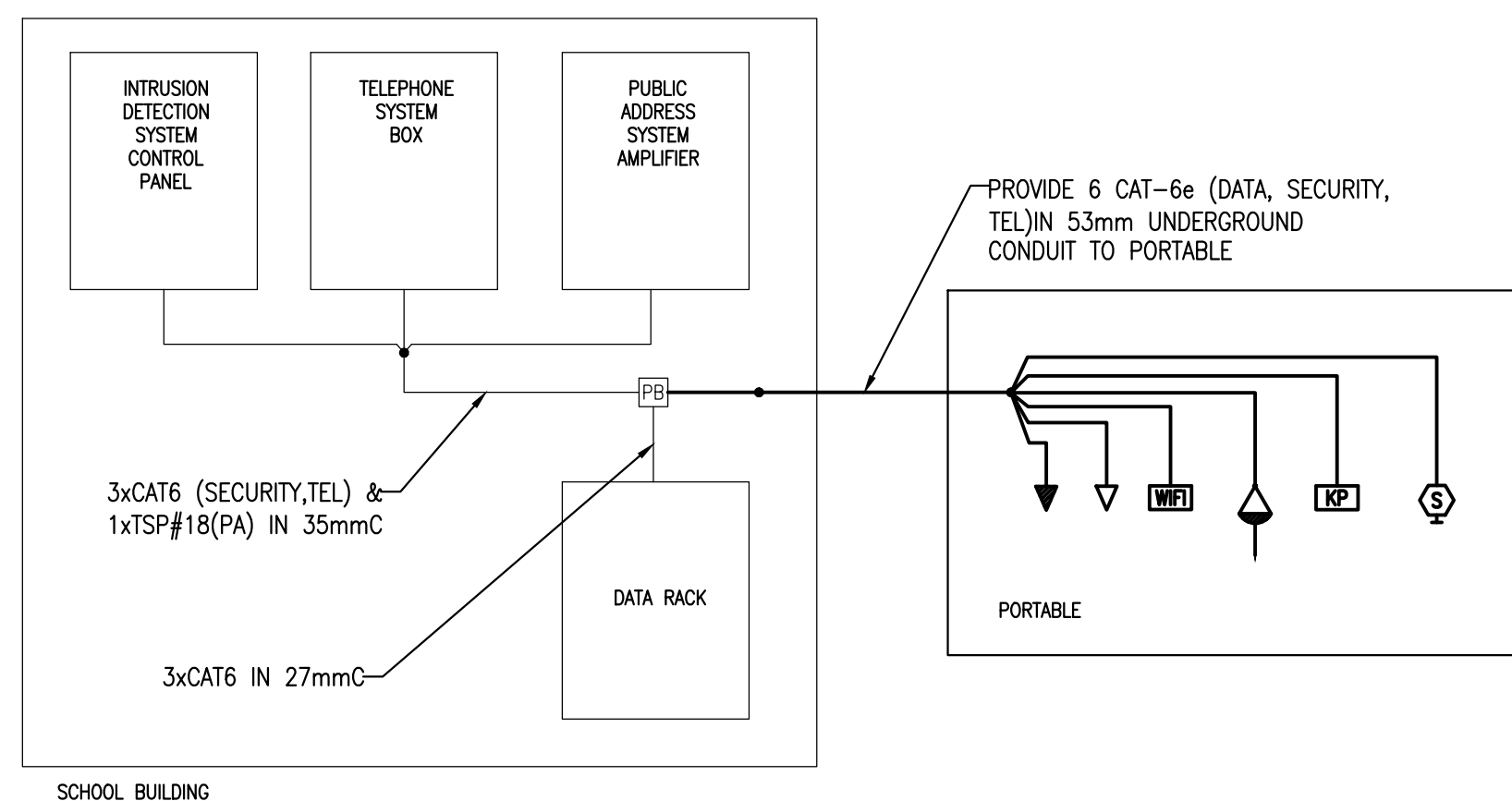
FIRE ALARM RISER NOTES

- REFER TO LAYOUT FOR EXACT NUMBER OF DEVICES.
- FIRE ALARM SIGNALING CIRCUITS ARE SHOWN DIAGRAMMATICALLY. PROVIDE SUFFICIENT NUMBER OF SIGNALING CIRCUITS FOR NUMBER OF DEVICES INDICATED PLUS 25% SPARE CAPACITY.
- PRE-PAINT ALL CONCEALED FIRE ALARM CONDUIT FITTINGS AND JUNCTION BOX COVERS RED SPRAY PAINT ON CONDUIT SECTIONS WILL NOT BE ACCEPTED. ALTERNATIVELY, PROVIDE CONDUIT WITH RED FACTORY FINISH IN CONCEALED AREAS IDENTIFY CIRCUITS IN EACH JUNCTION BOX WITH PERMANENT BLACK MARKER ON JUNCTION BOX COVER.
- EXPOSED CONDUIT IN FINISHED AREAS SHALL BE PRIME AND THEN PAINTED WITH 2 COATS OF FINISH COLOUR TO MATCH WALL/CEILING EXPOSED CONDUIT NEED NOT BE PAINTED IN SERVICE ROOMS, BOILER ROOMS, ELECTRICAL ROOMS OR SPRINKLER ROOMS.
- SURFACE MOUNT DEVICES TO BE COMPLETE WITH MANUFACTURER'S PRE-PAINTED OUTLET BOX. BOX COLOUR TO MATCH DEVICE. MIN CONDUIT SIZE TO BE 21mm EMT. WHERE MANUFACTURER'S BACK BOX IS NOT AVAILABLE (I.E. CEILING MOUNTED DEVICES) PROVIDE DIE-CAST RAB BOXES. FINISHED TO MATCH DEVICE COLOUR.
- ALL WIRING (DRY LOCATIONS) SHALL BE RUN IN EMT EXCEPT FOR DEVICE DROPS IN SUSPENDED CEILINGS AS SHOWN IN FIRE DETECTOR INSTALLATION DETAIL. CONDUIT SHALL BE USED FOR MAIN RUNS.
- ROUTE CONDUIT PARALLEL OR PERPENDICULAR TO BUILDING LINES. ROUTE EXPOSED CONDUIT SO THAT IT IS AS INCONSPICUOUS AS POSSIBLE.
- PATCHING AND PAINTING BY THIS TRADE CUT HOLES FOR CEILING MOUNTED DEVICES IN T-BAR AND GYPSUM BOARD CEILING WITH APPROPRIATELY SIZED HOLE SAW TO MINIMIZE PATCHING. PRIME AND PAINT AT WALL AND CEILING PATCHING LOCATIONS TO MATCH EXISTING WALL/CEILING COLOUR.
- PROVIDE FIRE ALARM VERIFICATION TO CAN/ULC-5537-21 SECTION 7 - SYSTEM MODIFICATIONS UPON COMPLETION OF THE WORK. PROVIDE ULC FORMAT REPORT.
- LINE ISOLATOR MODULES AND END-OF-LINE DEVICES ARE NOT SHOWN ON PLAN. PROVIDE PER CAN/ULC-5524-19 AND OBC REQUIREMENTS.
- T-TAPPING (UNSUPERVISED CLASS 'B' WIRING NOT PERMITTED. JOINTS AT DEVICES ONLY EXCEPT WHERE INDICATED PULL REPLACE CONDUCTORS TO NEXT DEVICE.



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E3.1 T.S.

PARTIAL FIRE ALARM RISER DIAGRAM

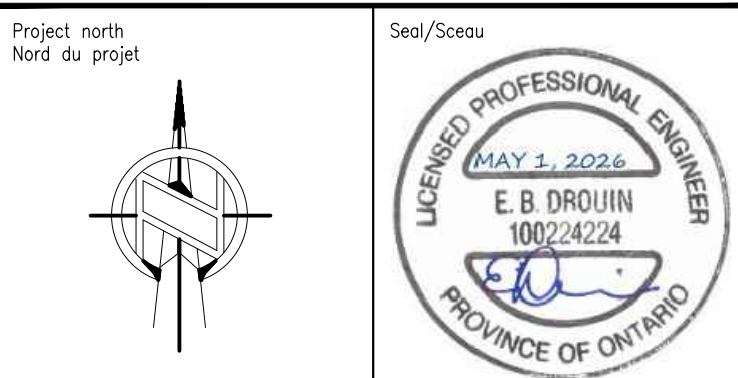


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E3.1 T.S.

PARTIAL COMMUNICATION SYSTEMS RISER DIAGRAM

COMM SYSTEMS NOTES

- RACEWAYS FOR COMMUNICATION SYSTEMS BY DIVISION 26. COMMUNICATION SYSTEM CABLES TERMINATIONS, TESTING AND CONFIGURATION WHERE REQUIRED BY COMMUNICATIONS CONTRACTOR.
- RACEWAYS FOR COMMUNICATION SYSTEMS BY DIVISION 26. INTRUSION DETECTION (SECURITY) SYSTEM CABLES TERMINATIONS, TESTING AND CONFIGURATION WHERE REQUIRED BY COMMUNICATIONS CONTRACTOR.
- TEST ALL HORIZONTAL UTP CABLES (CAT 6) AS DESCRIBED BELOW. CORRECT DEFICIENCIES AND REPEAT TEST AS NECESSARY. SUBMIT RECORD OF RESULTS IN ELECTRONIC FORMAT TO CONSULTANT FOR REVIEW INCLUDE TEST REPORT IN O&M MANUAL.
 - PERFORM TEST FOR PERMANENT LINK AND CHANNEL ON INSTALLED CABLES INCLUDING SPARES USING CERTIFIED LEVEL IIE TESTER TO TIA/EIA-568-A.1.
 - WIRING REQUIRED FOR EACH PORTABLE
 - CAT 6 BLUE FOR DATA
 - CAT 6 RED FOR WIRELESS
 - PHONE PA CAT 6 WHITE
 - SECURITY CAT 6 YELLOW
 - RED FIRE ALARM
- THE CONTRACTOR SHALL BE RESPONSIBLE FOR PHONE, DATA, SECURITY AND FIRE ALARM FOR ALL PROGRAMMING. THE CONTRACTOR SHALL DENOTE, SUPPLY, INSTALL, CONNECT, TEST AND VERIFY THE NEW SYSTEM.



FRONT OF YONGE PUBLIC SCHOOL - ARCHITECTURAL SERVICES

Drawing title/Titre du dessin

TYPICAL PORTABLE ELECTRICAL LAYOUT, PARTIAL FIRE ALARM RISER DIAGRAM

Scale Echelle	AS NOTED	Project no./No. du projet 2026-140
Design by Conçu par	D.CHANDLER	Drawing/Dessin
Drawn by Dessiné par	D.CHANDLER	E3.1
Reviewed by Examiné par	E.DROUIN	