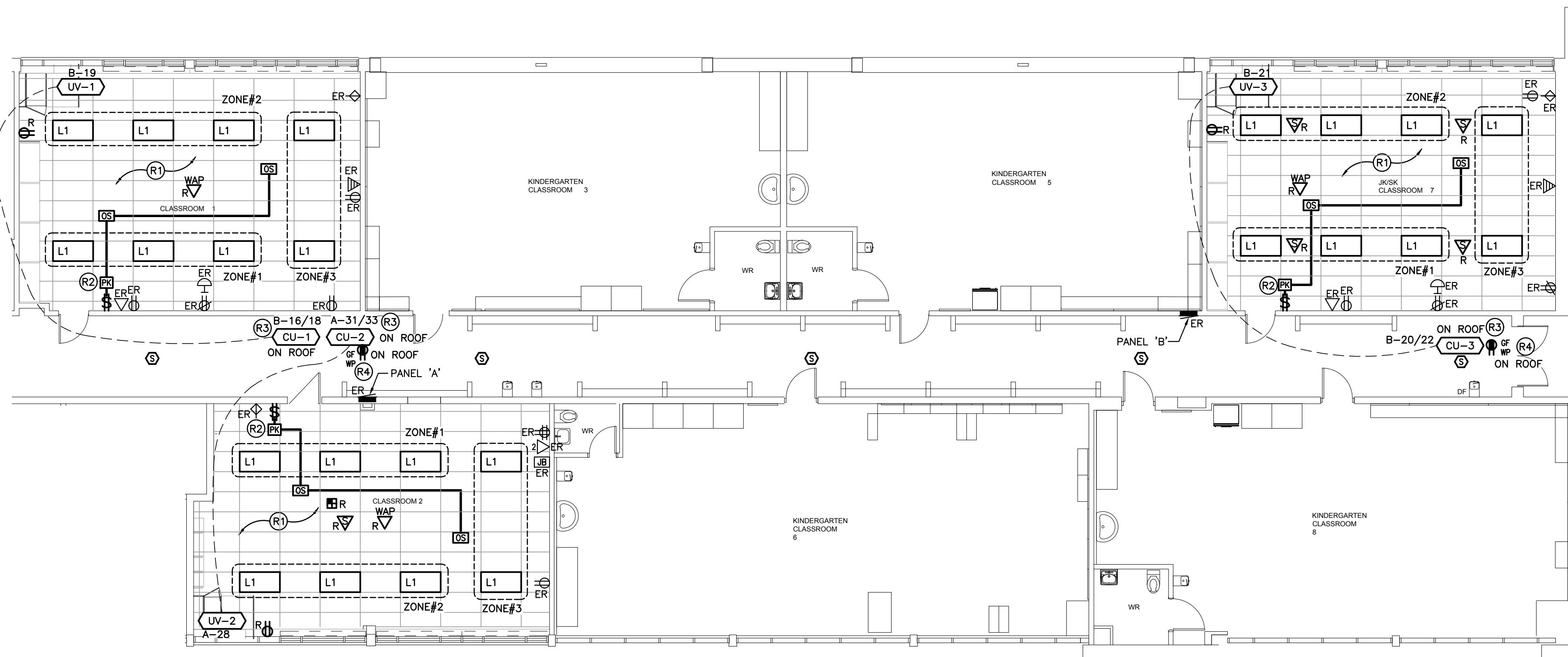


A-CLASSROOM DEMOLITION PLAN
SCALE: 1:100



B-CLASSROOM RENOVATION PLAN
SCALE: 1:100

GENERAL NOTES

- 'ER' DENOTES EXISTING ITEM TO REMAIN.
- EXISTING ELECTRICAL EQUIPMENT NOT SHOWN SHALL REMAIN UNLESS NOTED OTHERWISE.
- 'R' INDICATES EXISTING ITEM TO BE RELOCATED. REFER TO RENOVATION DRAWINGS AND RELOCATE DEVICE AND WIRING TO SUIT. UNLESS OTHERWISE NOTED.
- 'D' INDICATES EXISTING ITEM TO BE DELETED. UNLESS OTHERWISE NOTED DISCONNECT AND REMOVE NOTED DEVICE AND WIRING BACK TO SOURCE.
- ALL LIGHTING FIXTURES BEING RELOCATED SHALL BE CLEANED AND CHECKED PRIOR TO BEING REINSTALLED.

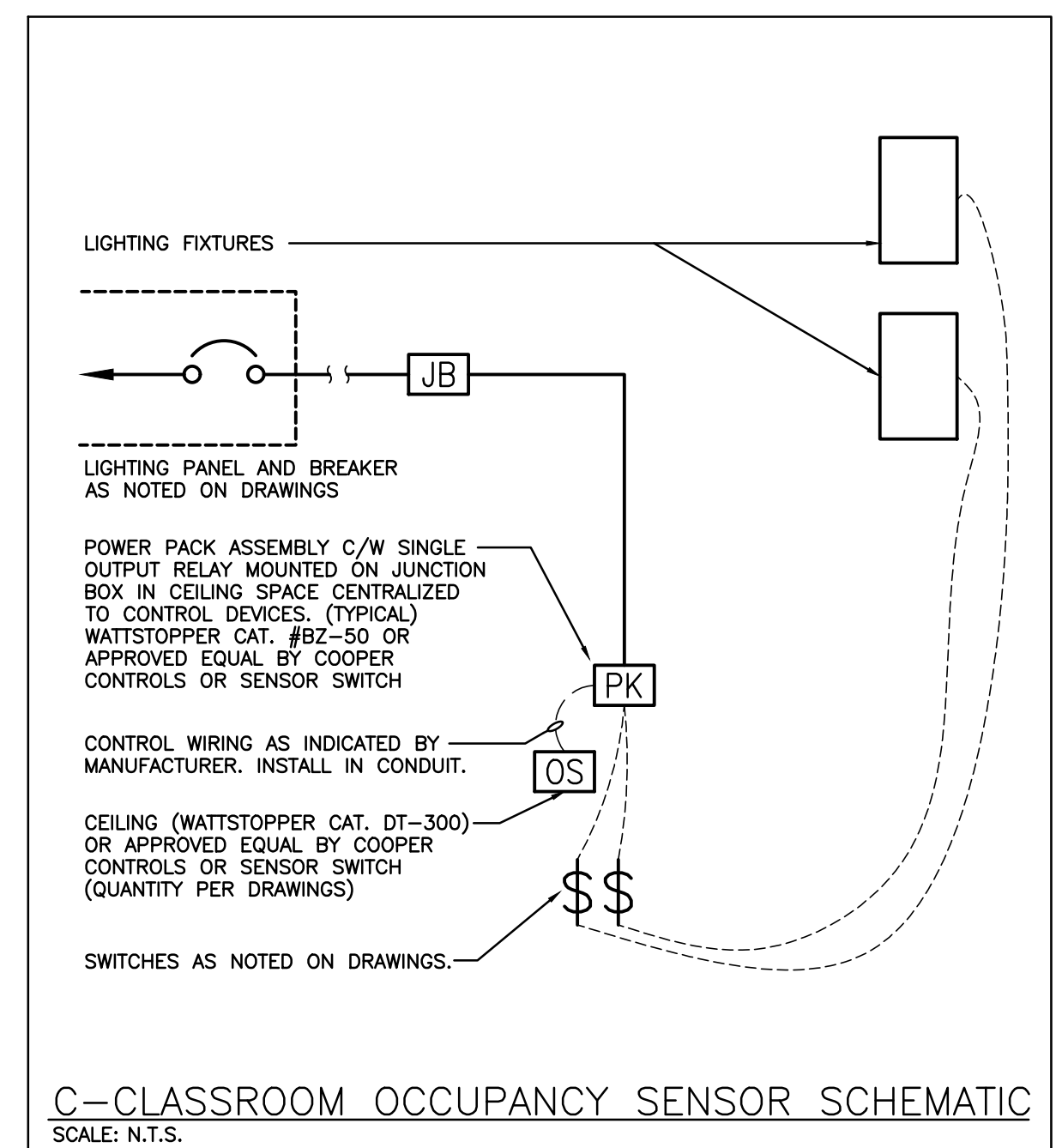
SPECIFIC DEMOLITION NOTES

- D1 CEILING WITHIN INDICATED AREA TO BE REMOVED BY GENERAL CONTRACTOR. ELECTRICAL CONTRACTOR IS TO REMOVE AND REINSTALL ALL CEILING MOUNTED DEVICES. DEVICES ARE TO BE STORED IN A DRY SAFE LOCATION DURING CONSTRUCTION. FIXTURES TO BE REMOVED AND DISPOSED OF. EXISTING CIRCUIT AND LIGHTING CONTROLS TO REMAIN FOR CONNECTION TO NEW FIXTURES. REFER TO RENOVATION PLANS.

SPECIFIC RENOVATION NOTES

- R1 INDICATES FIXTURES TO BE CONNECTED TO EXISTING CIRCUIT AND NEW CONTROLS AS SHOWN.
- R2 INDICATES POWER PACK INSTALLED WITHIN ACCESSIBLE CEILING SPACE FOR CONTROL OF NOTED MOTION SENSOR(S). REFER TO LIGHTING CONTROL DETAILS.
- R3 DISCONNECT FOR INDICATED MECHANICAL EQUIPMENT IS TO BE MOUNTED TO NEAREST DOGHOUSE.
- R4 PROVIDE T-SLOT DUPLEX GROUND FAULT PROTECTED RECEPTACLE MOUNTED TO NOTED ROOFTOP EQUIPMENT. COORDINATE LOCATION WITH MECHANICAL CONTRACTOR AND SHOP DRAWINGS. RECEPTACLE IS TO BE COMPLETE WITH "EXTRA DUTY" IN-USE COVER AND IS TO BE NEXT LESS THAN 750mm ABOVE FINISHED ROOF.

ALL RECEPTACLES ARE TO BE TAMPER RESISTANT TYPE PER 2019 OESC CODE UPDATES - RULE 26-706.

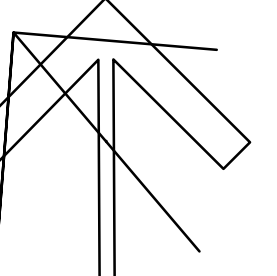


C-CLASSROOM OCCUPANCY SENSOR SCHEMATIC
SCALE: N.T.S.

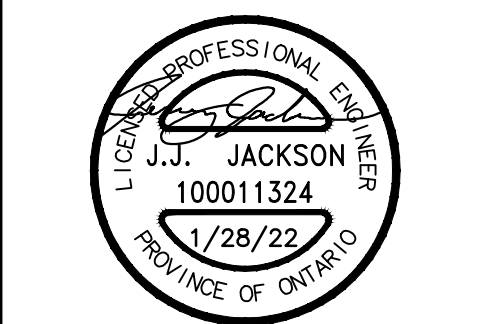
NO.	DATE	REVISION
1	2021.03.15	Issued for Tender
2	2021.04.16	Issued for Owner Review

The contractor shall verify all dimensions and report all errors and discrepancies to the Consultant before commencement of the work. The drawings show general arrangement of services. Follow as shown as actual building construction will permit. Obtain approval for relocation of service from Consultant before commencement of the work. The drawings do not indicate all offsets, fitting and accessories which may be required. Provide the same to meet the required conditions. Drawings and specifications, etc., prepared and issued by the consultant are the property of the consultant and must be returned at the completion of the project. These documents are not to be duplicated or copied without the consent of the Consultant. Do not issue the drawings. © 2022 DEI & Associates Inc.

PROJECT NORTH



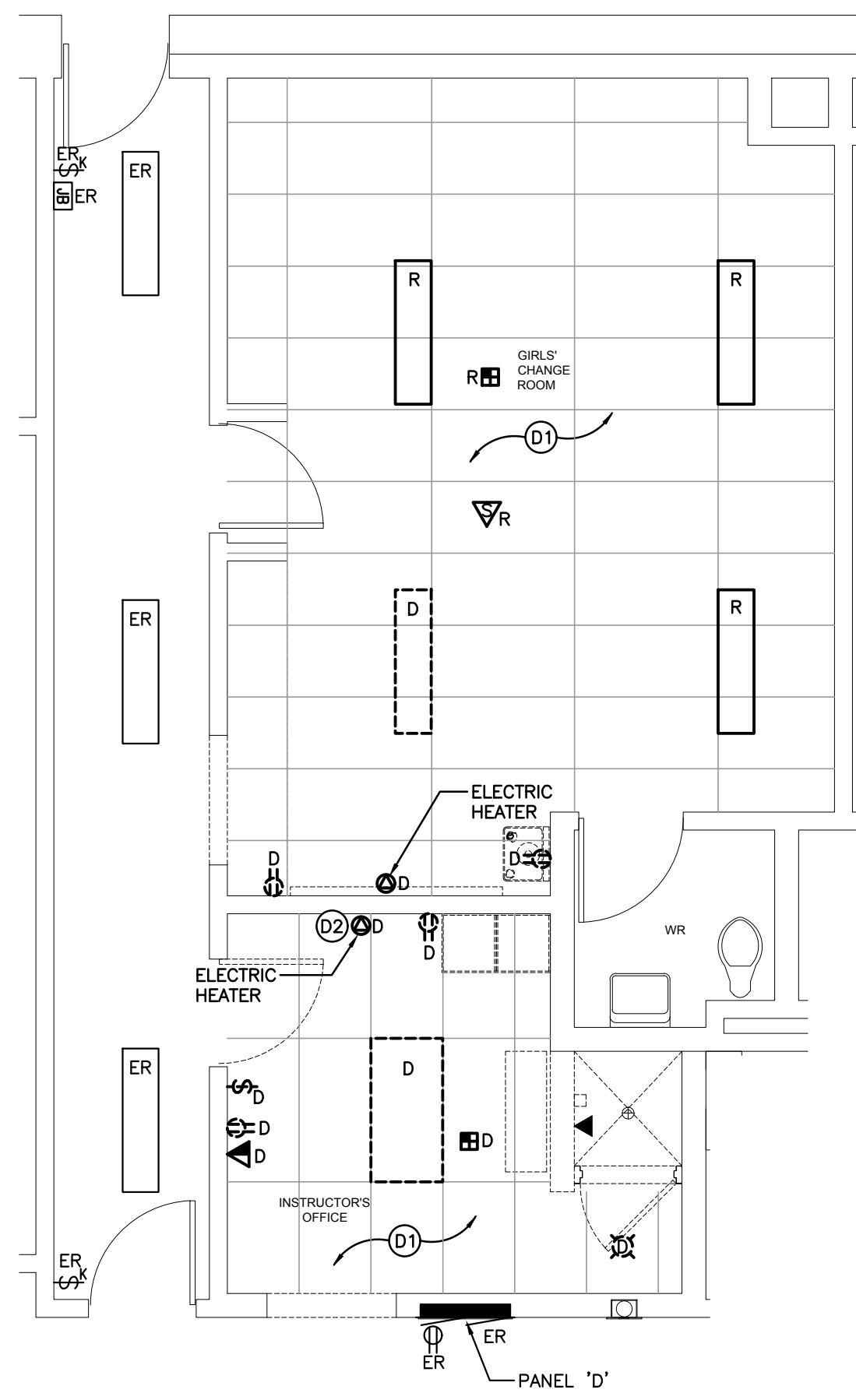
DEI
Consulting Engineers
MECHANICAL | ELECTRICAL | AQUATIC
55 Northland Road, Waterloo, ON N2V 1Y8
Phone: 519-751-5555
Website: deiassociates.ca
Project Number: 21046



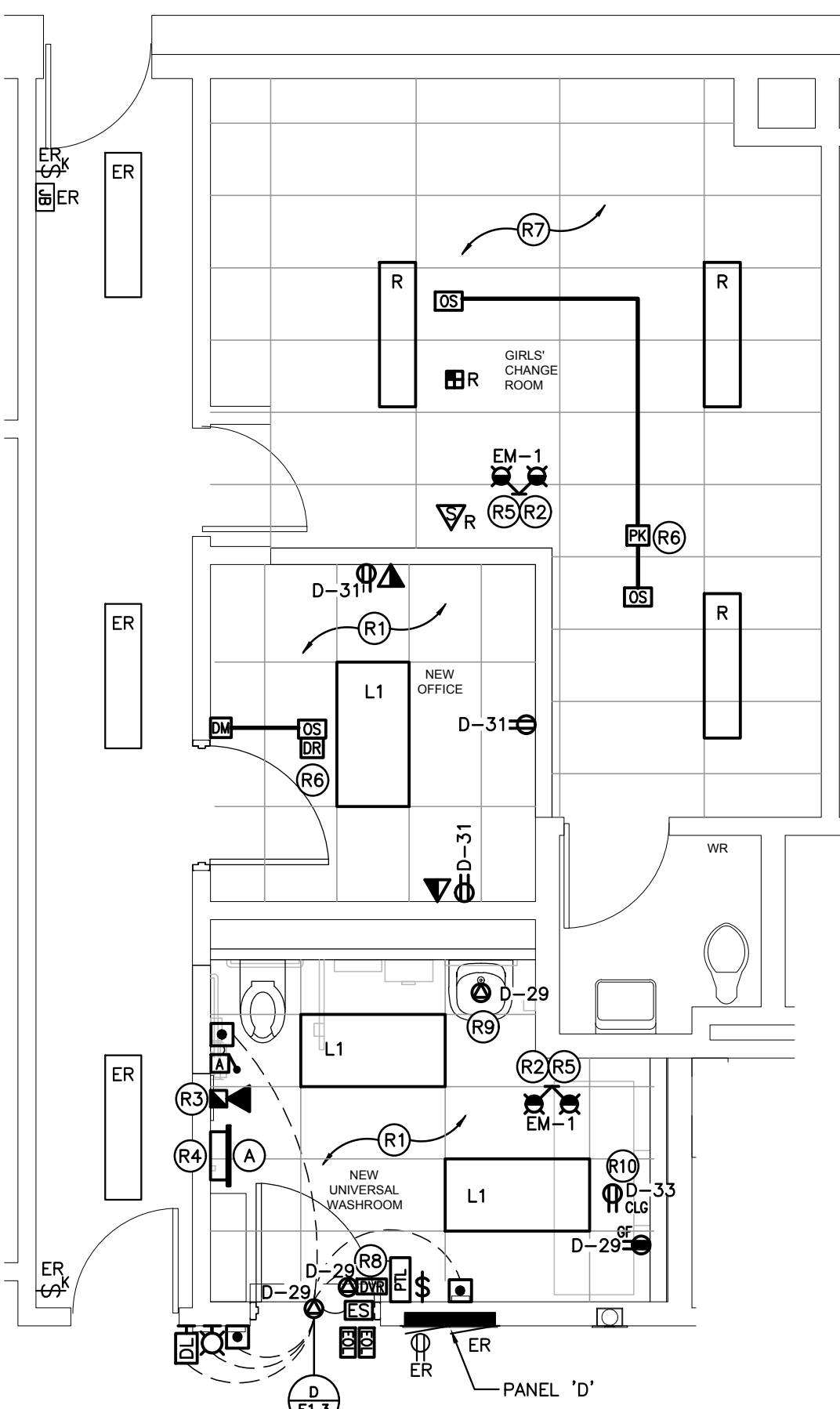
CHALMERS ST. CAMBRIDGE
- PS RENOVATIONS -
35 Chalmers St. S
Cambridge, ON
N1R 5B4

DRAWING TITLE:
ELECTRICAL DEMOLITION AND RENOVATION PLANS

PROJECT NO: A20002.6	SCALE: AS NOTED
DRAWN: [Signature]	DRAWING NO. REV. [Signature] E1.2
CHECKED: [Signature]	DATE: MAR 2021



A-WASHROOM DEMOLITION PLAN
SCALE: 1:50



B-WASHROOM RENOVATION PLAN
SCALE: 1:50

EXISTING PANEL 'D' SCHEDULE

VOLTAGE: 120/208 VOLTS
PHASE: 3P, 4W
MAINS: 225A
MOUNTING: RECESSED
NOTES: EXISTING FEDERAL PIONEER NBLP 42-4L

ER	15A	1	2	15A	ELECTRICAL HEAT	ER
ER	15A	3	4	15A	ELECTRICAL HEAT	ER
ER	2P	5	6	15A	ELECTRICAL HEAT	ER
ER	15A	7	8	15A	ELECTRICAL HEAT	ER
ER	15A	9	10	15A	ELECTRICAL HEAT	ER
ER	3P	11	12		ELECTRICAL HEAT	ER
ER	15A	13	14	3P	ELECTRICAL HEAT	ER
ER	15A	15	16	15A	KITCHEN HOOD FAN	ER
ER	15A	17	18	15A	DRINKING FOUNTAIN	ER
ER	15A	19	20	15A	STOVE REC.	ER
ER	15A	21	22	2P		ER
ER	15A	23	24	15A	BASKET BALL NET	ER
ER	15A	25	26	2P	WINCH	ER
ER		27	28		SPACE	ER
ER		29	30		SPACE	ER
ER		31	32		SPACE	ER
ER		33	34		SPACE	ER
ER		35	36		SPACE	ER
ER		37	38		SPACE	ER
ER		39	40		SPACE	ER
ER		41	42		SPACE	ER

PROPOSED PANEL 'D' SCHEDULE

ER	15A	1	2	15A	ELECTRICAL HEAT	ER
ER	15A	3	4	15A	ELECTRICAL HEAT	ER
ER	2P	5	6	15A	ELECTRICAL HEAT	ER
ER	15A	7	8	15A	ELECTRICAL HEAT	ER
ER	15A	9	10	15A	ELECTRICAL HEAT	ER
ER	3P	11	12		ELECTRICAL HEAT	ER
ER	15A	13	14	3P	ELECTRICAL HEAT	ER
ER	15A	15	16	15A	KITCHEN HOOD FAN	ER
ER	15A	17	18	15A	DRINKING FOUNTAIN	ER
ER	15A	19	20	15A	STOVE REC.	ER
ER	15A	21	22	2P		ER
ER	15A	23	24	15A	BASKET BALL NET	ER
ER	15A	25	26	2P	WINCH	ER
ER		27	28		SPACE	ER
ER		29	30		SPACE	ER
ER		31	32		SPACE	ER
ER		33	34		SPACE	ER
ER		35	36		SPACE	ER
ER		37	38		SPACE	ER
ER		39	40		SPACE	ER
ER		41	42		SPACE	ER

DESIGNATION

'ER' INDICATES EXISTING SERVICE AND BREAKER THAT SHOULD REMAIN UNTOUCHED
'SP' INDICATES EXISTING BREAKER THAT MAY BECOME SPARE DUE TO DEMOLITION. (CONFIRM ON SITE)
'RW' INDICATES EXISTING BREAKER THAT SHOULD BE REWIRED TO SERVICE DEVICES INDICATED ON PLAN
'SB' INDICATES SPARE BREAKER TO BE USED FOR NEW SERVICE INDICATED.
'NB' INDICATES NEW BREAKER AND WIRING TO SERVICE INDICATED. PROVIDE MOUNTING HARDWARE AS REQUIRED.
'D' INDICATES EXISTING BREAKER TO BE REMOVED COMPLETE. PROVIDE FILLER PLATES AS REQUIRED.
NOTES: THIS CONTRACTOR IS TO INVESTIGATE BREAKERS AND REVISE PANEL SCHEDULES TO SUIT RENOVATION, NOTING ANY BREAKERS THAT BECOME SPARE DUE TO DEMOLITION. THIS CONTRACTOR IS ALSO TO NOTIFY THE CONSULTANT OF ANY BREAKERS THAT ARE INDICATED TO BE DEMOLISHED OR REUSED, BUT WHICH ARE IN USE BY OTHER DEVICES OR SERVICES.

GENERAL NOTES

- 'ER' DENOTES EXISTING ITEM TO REMAIN.
- EXISTING ELECTRICAL EQUIPMENT NOT SHOWN SHALL REMAIN UNLESS NOTED OTHERWISE.
- 'R' INDICATES EXISTING ITEM TO BE RELOCATED. REFER TO RENOVATION DRAWINGS AND RELOCATE DEVICE AND WIRING TO SUIT. UNLESS OTHERWISE NOTED.
- 'D' INDICATES EXISTING ITEM TO BE DELETED. UNLESS OTHERWISE NOTED DISCONNECT AND REMOVE NOTED DEVICE AND WIRING BACK TO SOURCE.
- ALL LIGHTING FIXTURES BEING RELOCATED SHALL BE CLEANED AND CHECKED PRIOR TO BEING REINSTALLED.

SPECIFIC DEMOLITION NOTES

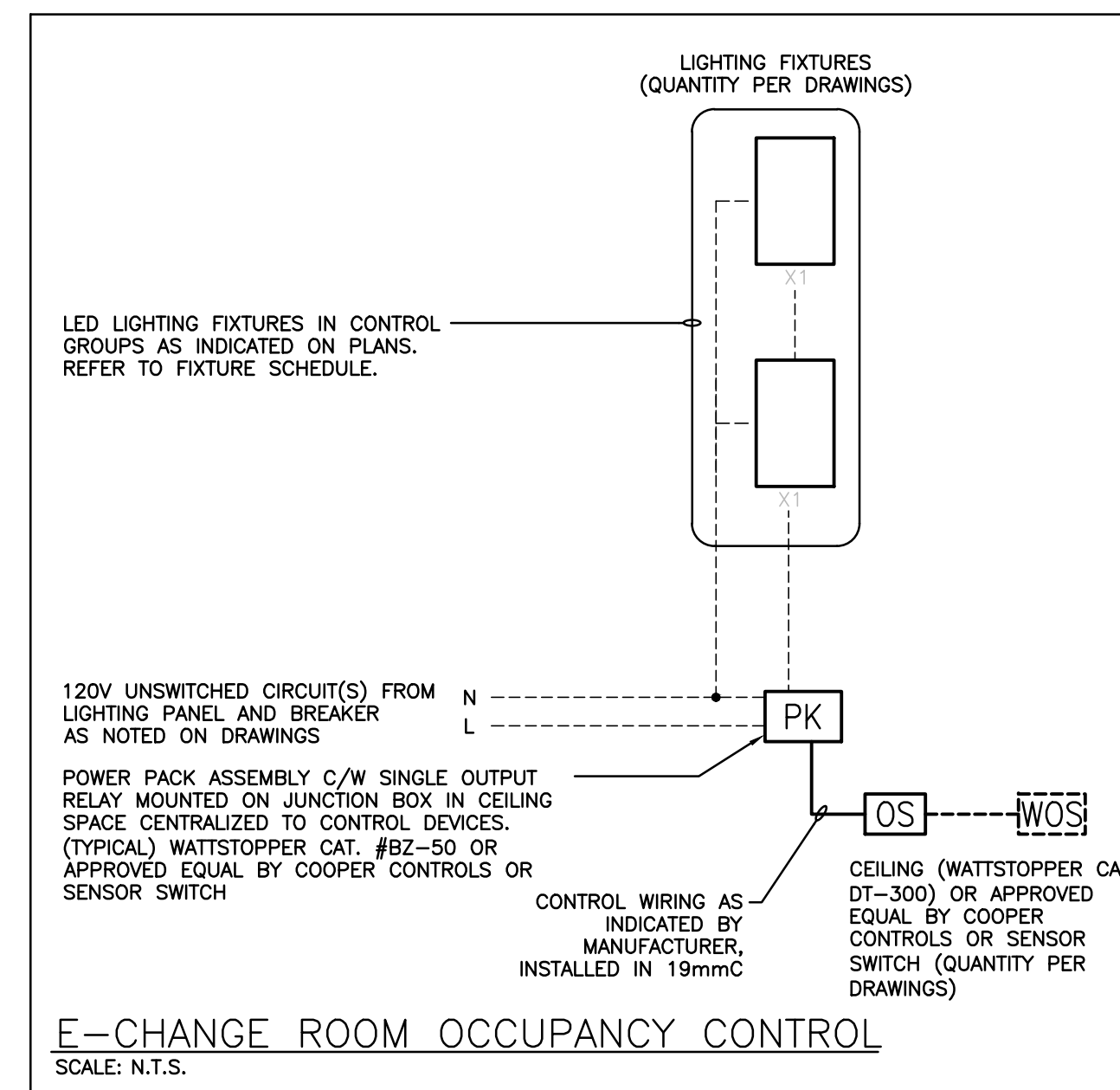
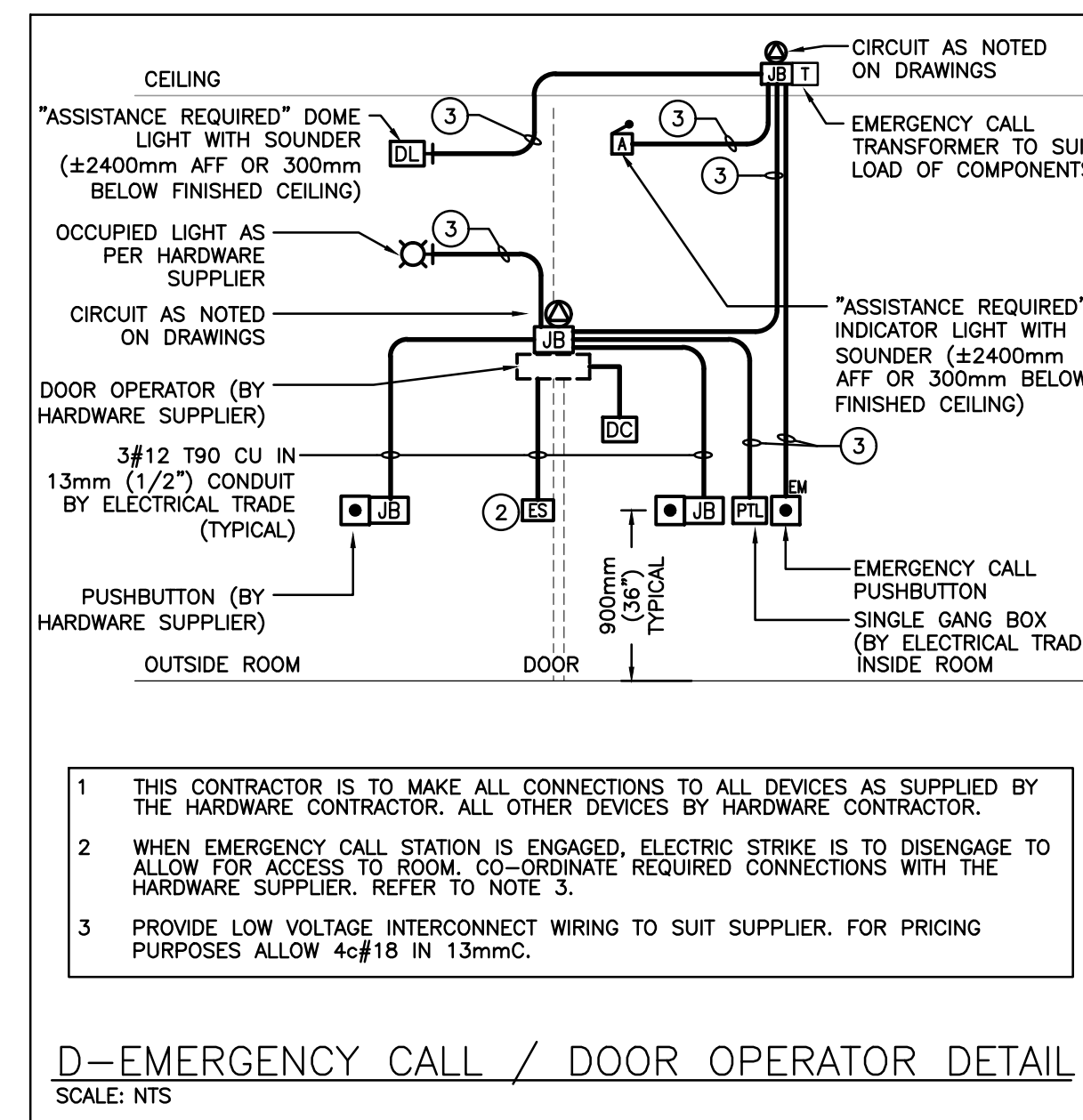
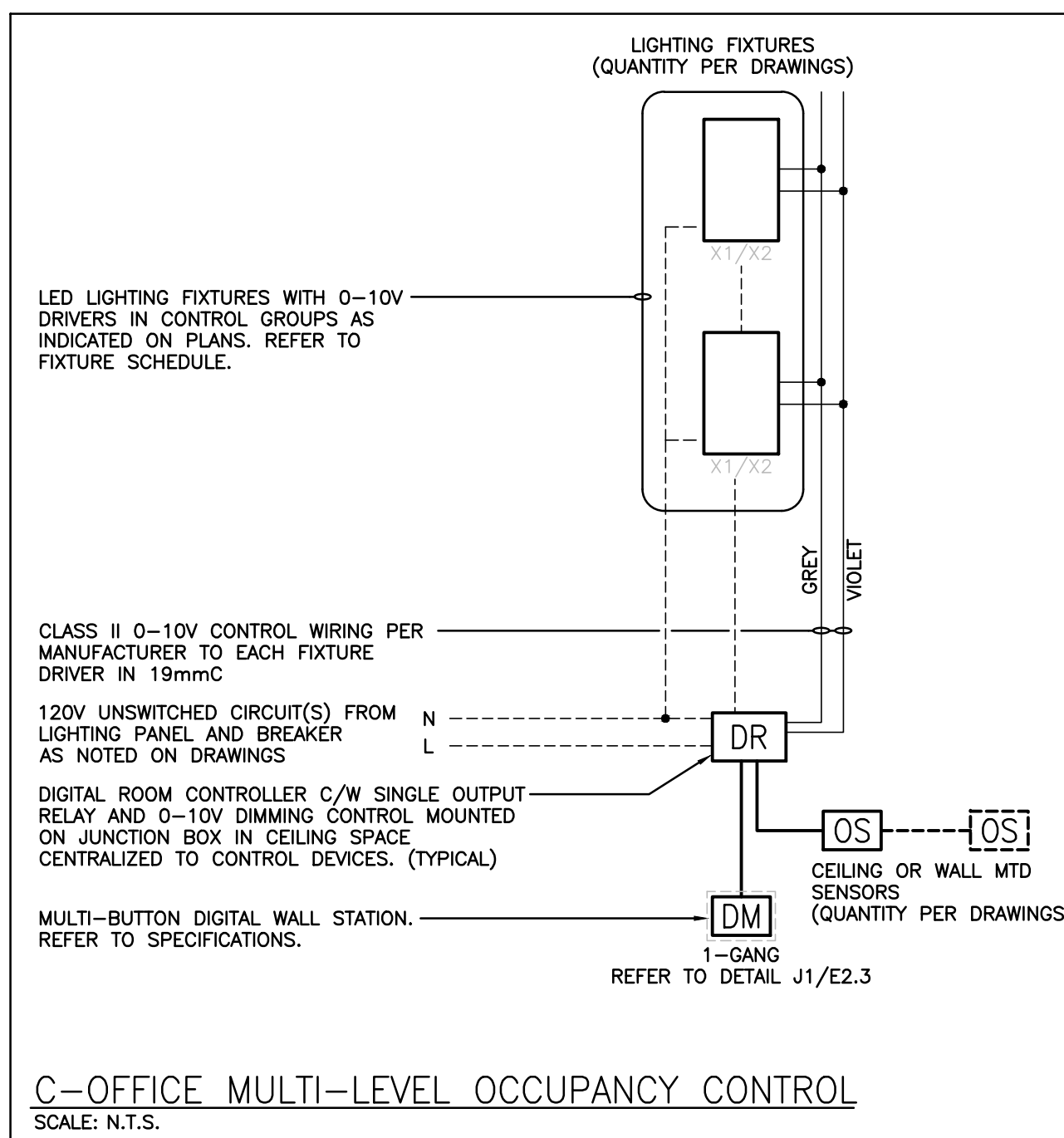
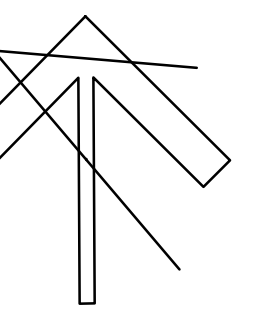
- D1 CEILING WITHIN INDICATED AREA TO BE REMOVED BY GENERAL CONTRACTOR. ELECTRICAL CONTRACTOR IS TO REMOVE AND REINSTALL ALL CEILING MOUNTED DEVICES. DEVICES ARE TO BE STORED IN A DRY SAFE LOCATION DURING CONSTRUCTION. FIXTURES TO BE REMOVED AND DISPOSED OF AS NOTED. EXISTING CIRCUIT AND LIGHTING CONTROLS TO REMAIN FOR CONNECTION TO NEW FIXTURES. REFER TO RENOVATION PLANS.
- D2 THIS CONTRACTOR IS TO DISCONNECT AND REMOVE EXISTING ELECTRIC HEATER. MAINTAIN CIRCUIT FOR RECONNECTION TO NEW HEATER. EXTEND CIRCUIT AS REQUIRED.

SPECIFIC RENOVATION NOTES

- R1 INDICATES FIXTURES TO BE CONNECTED TO EXISTING CIRCUIT AND NEW CONTROLS AS SHOWN.
- R2 INDICATED DEVICE IS TO BE CEILING MOUNTED. PROVIDE ADEQUATE SUPPORT.
- R3 INDICATES NEW STROBES TO BE INSTALLED ON SIGNAL CIRCUIT. CONTRACTOR IS TO PROVIDE BOOSTER MODULE FOR NEW SIGNAL DEVICE(S).
- R4 CONNECT HEATER TO CIRCUIT MADE AVAILABLE DURING DEMOLITION. EXTEND CIRCUIT AS REQUIRED.
- R5 CONNECT NEW EMERGENCY BATTERY UNIT TO UNSWITCHED SIDE OF EXISTING LIGHTING BRANCH CIRCUIT WHICH SERVES THIS AREA.
- R6 INDICATES POWER PACK/DIGITAL ROOM CONTROLLER INSTALLED WITHIN ACCESSIBLE CEILING SPACE FOR CONTROL OF NOTED MOTION SENSOR(S). REFER TO LIGHTING CONTROL DETAILS.
- R7 INDICATES FIXTURES TO BE CONNECTED TO EXISTING CIRCUIT AND CONTROLLED AS SHOWN.
- R8 INDICATES POWER AND FIRE ALARM CONNECTIONS TO SMOKE/FIRE DAMPERS AT DUCT TRANSFER. COORDINATE EXACT LOCATION/CONNECTION REQUIREMENTS WITH MECHANICAL CONTRACTOR. SMOKE/FIRE DAMPER AND ASSOCIATED DETECTOR TO BE PROVIDED AND INSTALLED BY MECHANICAL CONTRACTOR.
- R9 INDICATES 120V FEED TO 24VDC STEP DOWN TRANSFORMER LEVEL FOR AUTOMATIC PLUMBING FIXTURE(S). COORDINATE EXACT LOCATION AND INSTALLATION WITH MECHANICAL TRADE.
- R10 INDICATES RECEPTACLE IN CEILING ABOVE CHANGE TABLE IS FOR FUTURE LIFT.

ALL RECEPTACLES ARE TO BE TAMPER RESISTANT TYPE PER 2019 OESC CODE UPDATES - RULE 26-706.

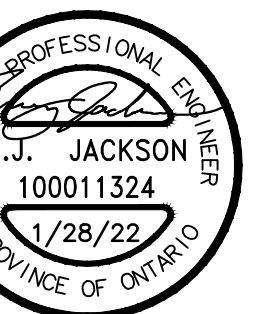
PROJECT NORTH



HEATER SCHEDULE

FOR INFORMATION REGARDING EQUAL MANUFACTURERS REFER TO SPECIFICATION.

Item	Manufacturer/Catalog Number
A	2000 WATT 208 VOLT SINGLE PHASE FAN FORCED HEATER C/W SURFACE MOUNTING BOX, INTEGRAL TAMPERPROOF THERMOSTAT AND STANDARD FACTORY FINISH TO SUIT ARCHITECT. OUELLET CAT. #0AC02008-T



CHALMERS ST. CAMBRIDGE - PS RENOVATIONS -

35 Chalmers St. S
Cambridge, ON
N1R 5B4

DRAWING TITLE: ELECTRICAL DEMOLITION AND RENOVATION PLANS

PROJECT NO: A20002.6	SCALE: AS NOTED
DRAWN: [blank]	DRAWING NO.: REV. [blank]
CHECKED: [blank]	E1.3
DATE: MAR 2021	

ELECTRICAL SPECIFICATION

GENERAL NOTES

- .1 PROVIDE LABOUR MATERIAL AND EQUIPMENT REQUIRED TO PROVIDE A COMPLETE INSTALLATION WITH QUALITY WORKMANSHIP ACCEPTABLE TO THE OWNER, ARCHITECT AND CONSULTANT.
.2 OBTAIN ALL PERMITS AND PAY ALL TAXES, FEES AND OTHER COSTS INCURRED WITH THIS WORK. FILE ALL PLANS, OBTAIN NECESSARY APPROVALS, CERTIFICATES AND INSPECTIONS. SUBMIT ALL FINAL CERTIFICATES TO THE CONSULTANT.
.3 COMPLY WITH RULES AND RECOMMENDATIONS OF THE BOARD OF UNDERWRITERS, ELECTRICAL SAFETY AUTHORITY, THE CANADIAN STANDARDS ASSOCIATION AND ALL REQUIREMENTS OF THE LOCAL UTILITY.
.4 VISIT THE SITE BEFORE SUBMITTING TENDERS TO EVALUATE ANY SITE CONDITIONS THAT MIGHT ARISE. INCLUDE ALL SITE CONDITIONS IN TENDER, EXTRAS WILL NOT BE ACCEPTED UNLESS BELIEVED TO BE REASONABLE BY THE OWNER AND CONSULTANT.
.5 CUTTING AND PATCHING SHALL BE BY THE CONTRACTOR REQUIRING TO INSTALL THE SERVICE.
.6 THE DRAWINGS ARE DIAGRAMMATIC, THE SERVICES SHALL BE INSTALLED TO CONSERVE HEADROOM AND INTERFERE AS LITTLE AS POSSIBLE WITH THE FREE USE OF THE SPACES THROUGH WHICH THEY PASS.
.7 SUBMIT COPIES OF SHOP DRAWINGS PDF FILES VIA EMAIL FOR ALL MAJOR EQUIPMENT. THESE WILL BE REVIEWED BY THE CONSULTANT. RESUBMIT AS OFTEN AS MAY BE FOUND NECESSARY.
.8 PROVIDE ALL NECESSARY PROTECTION FOR FINISHED OR UNFINISHED WORK. ALL OPENINGS IN CONDUITS, DUCTS AND EQUIPMENT SHALL BE CAPPED TO ENSURE SERVICES ARE KEPT CLEAN WHEN NOT IN USE.
.9 MAINTAIN INSURANCE TO FULLY PROTECT THE CONTRACTOR, OWNER AND CONSULTANT FROM ANY AND ALL CLAIMS SUCH AS UNDER THE WORKMEN'S COMPENSATION ACT, ETC. POST PROJECT NOTIFICATION AT THE SITE IN ACCORDANCE WITH THE MINISTRY OF LABOUR REQUIREMENTS.
.10 PROVIDE STRUCTURAL SUPPORTS, PLATFORMS, SUPPORTING ROOFS, HANGERS, INSERTS AND BRACKETS FOR EQUIPMENT AND SERVICES. DO NOT SUPPORT SERVICES FROM STEEL DECK.
.11 INSTRUCT THE OWNER'S STAFF IN THE CARE, MAINTENANCE AND OPERATION OF THE SYSTEMS.
.12 WARRANTY ALL LABOUR, MATERIAL AND EQUIPMENT FOR A PERIOD OF TWO (2) YEARS AFTER FINAL ACCEPTANCE OF SYSTEM.
.13 COORDINATE WITH OTHER CONTRACTORS INSTALLING EQUIPMENT OR MATERIAL AND ARRANGE EQUIPMENT IN PROPER RELATION WITH APPARATUS OF ALL OTHER TRADES.
.14 PROVIDE LAMICOID TAGS FOR IDENTIFICATION OF NEW EQUIPMENT ADDED.
.15 MOUNTING HEIGHTS SHALL BE AS FOLLOWS FROM FINISHED FLOOR TO CENTERLINE OF DEVICE/EQUIPMENT (UNLESS OTHERWISE NOTED):
- SWITCHES, DIMMERS AND SPEED CONTROLLERS: 1100mm (44")
- WALL RECEPTACLES:
- GENERAL: 400mm (16")
- ABOVE TOP OF COUNTERS: 100mm (4")
- IN MECHANICAL/ELECTRICAL ROOMS: 1100mm (44") (GANG WITH SWITCH).
- FIRE ALARM STROBES: 2250mm (7'-6")
.16 ALL AREAS NOT AFFECTED BY RENOVATION OR DEMOLITION SHALL REMAIN AS PRESENTLY INSTALLED UNLESS OTHERWISE NOTED.
.17 ALL EXISTING ELECTRICAL DEVICES, OUTLET BOXES, ETC., NOT SHOWN ON DRAWINGS OR MENTIONED IN THE FOLLOWING NOTES AND INSTALLED IN WALLS SLATED FOR DEMOLITION, SHALL BE DISCONNECTED AND REMOVED COMPLETELY IN ALL RESPECTS.
.18 SUBMIT ONE COPY OF OPERATING AND MAINTENANCE INSTRUCTIONS IN A THREE RING BINDER LABELED FOR THE PROJECT COMPLETE WITH ITEMIZED SECTIONS CONTAINING PROJECT DATA, SHOP DRAWINGS, ETC. UPON ACCEPTANCE OF THE OPERATION AND MAINTENANCE MANUAL BY THE CONSULTANT PROVIDE TWO ADDITIONAL COPIES BOUND IN SEPARATE THREE RING BINDERS, A PDF FILE OF THE ENTIRE MANUAL IS TO BE PROVIDED ON A USB STICK. ONLY ONE USB STICK IS TO BE PROVIDED CONTAINING BOTH THE APPROVED MANUALS AND RECORD DRAWINGS.
.19 CONTRACTOR SHALL PROVIDE 2 SETS OF REPRODUCIBLE ELECTRICAL DRAWINGS. MARK THEREON ALL CHANGES AS WORK PROGRESSES AND AS CHANGES OCCUR. THIS SHALL INCLUDE FIELD AND CONTRACT CHANGES TO ELECTRICAL SYSTEMS. IDENTIFY EACH DRAWING IN LOWER RIGHT HAND CORNER IN LETTERS AT LEAST 3mm (1/8") HIGH AS FOLLOWS: - RECORD DRAWINGS: THIS DRAWING HAS BEEN REVISED TO SHOW ELECTRICAL SYSTEMS AS INSTALLED. (SIGNATURE OF CONTRACTOR)(DATE) SUBMIT HARD COPY TO CONSULTANT FOR APPROVAL. WHEN RETURNED, MAKE CORRECTIONS (IF ANY) AS DIRECTED. ONCE APPROVED, SUBMIT COMPLETED REPRODUCIBLE PAPER RECORD DRAWINGS AS WELL AS A SCANNED PDF COPY FILE ON USB STICK WITH OPERATING AND MAINTENANCE MANUALS.
.20 THE CONTRACTOR WILL INCLUDE REDLINES FOR EACH AND EVERY ELECTRICAL DRAWING FOR DEI & ASSOCIATES INC. TO CAD THE RECORD DRAWINGS. THE CAD DRAWING FILES WILL BE PROVIDED TO THE OWNER AS PART OF THE MAINTENANCE MANUALS.

BASIC MATERIALS

- .1 JUNCTION, OUTLET AND PULL BOXES MUST BE APPROVED TO SUIT INSTALLATION METHODS AND ENVIRONMENT.
.2 CONDUIT MUST BE CONCEALED UNLESS INSTALLED IN SERVICE OR STORAGE ROOMS.
.3 CONDUIT MUST BE INSTALLED PARALLEL AND PERPENDICULAR TO BUILDING LINES IN A NEAT AND WORKMANLIKE MANNER.
.4 ALL FEEDER AND BRANCH CIRCUIT WIRING MUST BE COPPER, T90 RATING/STYLE RUN IN EMT CONDUIT WITH INTERNAL INSULATED GREEN GROUND WIRE UNLESS NOTED OTHERWISE. MINIMUM WIRE SIZE SHALL BE #12 AND MINIMUM CONDUIT SIZE SHALL BE 3/4" (19mm).
.5 AC90 CABLE MAY BE USED FOR BRANCH CIRCUIT WIRING IN STEEL STUD WALLS AND "DROPS" IN T-BAR CEILING AREAS TO LIGHT FIXTURES AND FIRE ALARM DEVICES. LENGTH OF DROP MUST BE LIMITED TO 8'-0" (2400mm).
.6 WHERE DEVICES ARE TO BE INSTALLED ON EXISTING WALLS IN FINISHED AREA, WHICH CANNOT BE FISHED, INSTALL FEEDS IN A SURFACE METAL RACEWAY EQUAL TO WIREMOLD V700 SERIES.
.7 COLOUR CODE CONDUITS, BOXES AND METALLIC SHEATHED CABLES.
.8 CODE WITH PLASTIC TAPE OR PAINT AT POINTS WHERE CONDUIT OR CABLE ENTERS WALL, CEILING, OR FLOOR, AND AT 15m(45') INTERVALS.
.9 COLOUR BANDS MUST BE 25mm(1") WIDE AND CODED AS FOLLOWS FOR NOTED SYSTEMS.
SYSTEM COLOUR
UP TO 208V YELLOW
FIRE ALARM RED

DRAW BREAKDOWN

- .1 THIS CONTRACTOR MUST SUBMIT A BREAKDOWN OF THE TENDER PRICE INTO CLASSIFICATIONS TO THE SATISFACTION OF THE CONSULTANT, WITH THE AGGREGATE OF THE BREAKDOWN TOTALING THE TOTAL CONTRACT AMOUNT. EACH ITEM MUST BE BROKEN OUT INTO MATERIAL AND LABOUR COSTS. PROGRESS CLAIMS, WHEN SUBMITTED ARE TO BE ITEMIZED AGAINST EACH ITEM OF THE DRAW BREAKDOWN. THIS SHALL BE DONE IN TABLE FORM SHOWING CONTRACT AMOUNT, AMOUNT THIS DRAW, TOTAL TO DATE, % COMPLETE AND BALANCE.
.2 BREAKDOWN SHALL BE AS FOLLOWS:
.1 PERMITS AND FEES
.2 MOBILIZATION (MAXIMUM 1%)
.3 DEMOLITION
.4 BRANCH CONDUITS
.5 BRANCH WIRING
.6 LIGHTING FIXTURES
.7 FIRE ALARM SYSTEM DEVICES
.8 WIRING FOR MECHANICAL EQUIPMENT
.9 AUXILIARY SYSTEM ROUGH-INS
.10 CONTRACT CLOSEOUT (MINIMUM 3% BUT NO LESS THAN \$1,500.00)
.3 THE BREAKDOWN MUST BE APPROVED BY THE CONSULTANT PRIOR TO SUBMISSION OF THE FIRST DRAW.
.4 BREAKDOWNS NOT COMPLYING TO THE ABOVE WILL NOT BE APPROVED.
.5 BREAKDOWN MUST INDICATE TOTAL CONTRACT AMOUNT.
.6 MOBILIZATION AMOUNT MAY ONLY BE DRAWN WHEN ALL REQUIRED SHOP DRAWINGS HAVE BEEN REVIEWED BY THE CONSULTANT.

WIRING DEVICES

- .1 GENERAL PURPOSE AC SWITCHES MUST CONFORM TO CSA C22.2 NO. 111 (LATEST EDITION).
.2 15 OR 20 A, 120 V, SINGLE POLE, DOUBLE POLE, THREE-WAY, OR FOUR-WAY SWITCHES.
.3 INSTALL SWITCHES IN GANG TYPE OUTLET BOX WHEN MORE THAN ONE SWITCH IS REQUIRED IN ONE LOCATION.
.4 RECEPTACLES, PLUGS, AND OTHER SIMILAR WIRING DEVICES MUST CONFORM TO CSA C22.2 NO. 42 (LATEST EDITION).
.5 DUPLEX RECEPTACLES, CSA TYPE 5-15 R, 125 V, 15 A, U, GROUND, WITH THE FOLLOWING FEATURES:
.1 UREA MOLDED HOUSING WITH COLOUR AS SELECTED BY ARCHITECT.
.2 SUITABLE FOR NO. 10 AWG FOR BACK AND SIDE WIRING.
.3 BREAK-OFF LINKS FOR USE AS SPLIT RECEPTACLES.
.4 EIGHT BACK WIRED ENTRANCES, FOUR SIDE WIRING SCREWS.
.5 TRIPLE WIRE CONTACTS AND RIVETED GROUNDING CONTACTS.
.6 ACCEPTABLE MATERIALS:
.1 TAMPER RESISTANT RECEPTACLE: HUBBELL CAT. #BR15TR
.2 TAMPER RESISTANT T-SLOT RECEPTACLE: HUBBELL CAT. #BR20TR
.3 TAMPER RESISTANT GROUND FAULT PROTECTED RECEPTACLE: HUBBELL CAT. #GFTR15
.4 TAMPER RESISTANT GROUND FAULT PROTECTED T-SLOT RECEPTACLE: HUBBELL CAT. #GFTR20
.7 OTHER RECEPTACLES WITH AMPACITY AND VOLTAGE AS INDICATED. COLOUR BY ARCHITECT.
.8 ACCEPTABLE ALTERNATE MANUFACTURERS INCLUDE:
PASS & SEYMOUR
LEVITON
.9 WALL MOUNTED OCCUPANCY SENSORS (PASSIVE TECHNOLOGY), OCCUPANCY SENSORS USED IN STORAGE AND SERVICE ROOMS SHALL BE EITHER:
.1 WATTSTOPPER CAT. #PW-100-VOLT-X (COLOUR BY ARCHITECT)
.2 SENSOR SWITCH CAT. #WSD-VOLT-X (COLOUR BY ARCHITECT)
.3 EQUAL BY COOPER CONTROLS
.10 WHERE NOTED ON THE DRAWINGS, THE WALL MOUNTED SWITCH STYLE OCCUPANCY SENSOR USED IN ADMINISTRATIVE OFFICES AND SEMINAR/MEETING ROOMS SHALL BE A DUAL TECHNOLOGY WITH EITHER SINGLE OR DOUBLE RELAY (CIRCUIT) AS NOTED ON THE DRAWINGS. COLOUR TO SUIT ARCHITECT. SWITCHES SHALL BE EITHER:
.1 SINGLE RELAY (CIRCUIT): WATTSTOPPER CAT. #DW-100
.2 DUAL RELAY (CIRCUIT): WATTSTOPPER CAT. #DW-200
.3 APPROVED EQUAL:
.1 SENSOR SWITCH
.2 COOPER CONTROLS
NOTE: FOR DUAL RELAY SWITCHES, PROGRAM THE SENSORY FOR 15 MINUTE OFF DELAY, ENABLED WAL-THRU, AUDIBLE ALERT ENABLED, RELAY 1 ON MODE: AUTO ON, RELAY 2 ON MODE: MANUAL ON.
.11 PROVIDE OTHER OCCUPANCY SENSORS TO SUIT THE DETAIL(S) ON THE DRAWINGS.
.12 ALL SENSORS SHALL BE SET TO 5 MINUTES "DELAY TO OFF" UNLESS OTHERWISE DIRECTED.
.13 OCCUPANCY SENSORS:
.1 INSTALL POWER PACKS IN ACCESSIBLE MAINTENANCE AREAS.
.2 PROVIDE ACCESS DOORS IF POWER PACKS ARE INSTALLED ABOVE DRYWALL CEILINGS.
.3 IT SHALL BE THE CONTRACTOR'S RESPONSIBILITY TO LOCATE AND AIM SENSORY IN THE CORRECT LOCATION REQUIRED FOR COMPLETE AND PROPER COVERAGE WITHIN THE RANGE OF COVERAGE AS PER THE MANUFACTURER'S RECOMMENDATIONS. THE LOCATIONS AND QUANTITIES OF SENSORS SHOWN ON THE DRAWINGS ARE DIAGRAMMATIC AND INDICATE ONLY THE ROOMS WHICH ARE TO BE PROVIDED WITH SENSORS. THE CONTRACTOR SHALL PROVIDE ADDITIONAL SENSORS IF REQUIRED TO PROPERLY AND COMPLETELY COVER THE RESPECTIVE ROOMS.
.4 IT IS THE CONTRACTOR'S RESPONSIBILITY TO ARRANGE A PRE-INSTALLATION MEETING WITH THE MANUFACTURER'S FACTORY AUTHORIZED REPRESENTATIVE, AT THE FACILITY, TO VERIFY PLACEMENT TO SENSORS AND INSTALLATION CRITERIA.
.5 THE CONTRACTOR SHALL ALSO PROVIDE THE ON-SITE TRAINING NECESSARY TO FAMILIARIZE THE OWNER'S PERSONNEL WITH THE OPERATION, USE, ADJUSTMENT AND PROBLEM SOLVING DIAGNOSIS OF THE OCCUPANCY SENSING DEVICES SYSTEMS.
.6 UPON COMPLETION OF THE INSTALLATION, THE SYSTEM SHALL BE COMPLETELY COMMISSIONED BY THE MANUFACTURER'S FACTORY AUTHORIZED TECHNICIAN WHO WILL VERIFY ALL ADJUSTMENTS AND SENSOR PLACEMENT TO ENSURE A TROUBLE-FREE OCCUPANCY-BASED LIGHTING CONTROL. SUBMIT COMMISSIONING REPORT WITH CLOSE-OUT DOCUMENTS.
.14 INSTALL DEVICES IN GANG TYPE OUTLET BOX WHEN MORE THAN ONE DEVICE IS REQUIRED IN ONE LOCATION.
.15 SHEET STEEL UTILITY BOX COVER FOR WIRING DEVICES INSTALLED IN SURFACE MOUNTED UTILITY BOXES.
.16 STAINLESS STEEL, VERTICALLY BRUSHED, 1mm THICK COVER PLATES FOR WIRING DEVICES MOUNTED IN FLUSH-MOUNTED OUTLET BOXES.
.17 SHEET METAL COVER PLATES FOR WIRING DEVICES MOUNTED IN SURFACE-MOUNTED FS OR FD TYPE CONDUIT BOXES.
.18 PROTECT STAINLESS STEEL COVER PLATE FINISH WITH PAPER OR PLASTIC FILM UNTIL PAINTING AND OTHER WORK IS FINISHED.
.19 INSTALL SUITABLE COMMON COVER PLATES WHERE WIRING DEVICES ARE GROUPED.

FIRE ALARM SYSTEMS

- .1 INSTALLATION OF FIRE ALARM DEVICES MUST CONFORM TO ULC-S524 (LATEST EDITION).
.2 ALL WIRING MUST BE COLOUR CODED, SIZED ACCORDING TO MANUFACTURER'S RECOMMENDATIONS AND CONFORM TO THE LATEST EDITION OF THE ELECTRICAL SAFETY CODE.
.3 ALL NEW FIRE ALARM DETECTION AND SIGNALING DEVICES ADDED DUE TO RENOVATIONS AND ADDITIONS SHALL BE CONNECTED TO EXISTING LOCAL ZONE OR NEW ZONE AS INDICATED.
.4 EQUIPMENT SHALL BE SUPPLIED AND INSTALLED AS FOLLOWS:
.1 AUTOMATIC ALARM INITIATING DEVICES
.1 MANUAL ALARM STATIONS: PULL LEVER STYLE, WALL MOUNTED SEMI-FLUSH TYPE, NON-CODED SINGLE POLE NORMALLY OPEN CONTACT FOR SINGLE STAGE, ENGLISH SIGNAGE
.2 THERMAL FIRE DETECTORS: FIXED TEMPERATURE, NON-RESTORABLE, RATED 57C OR 88C AS INDICATED.
.3 THERMAL FIRE DETECTORS: COMBINATION FIXED TEMPERATURE AND RATE OF RISE, NON-RESTORABLE FIXED TEMPERATURE ELEMENT, SELF-RESTORING RATE OF RISE, FIXED TEMPERATURE 57C OR 88C, RATE OF RISE 8.3C PER MINUTE.
.4 SMOKE DETECTOR: CEILING MOUNTED, PHOTO ELECTRIC TYPE, VISUAL ALARM INDICATOR, COMPLETE WITH RELAY BASE WHERE NOTED.
.5 SMOKE DETECTOR: PHOTO ELECTRIC TYPE AIR DUCT TYPE WITH SAMPLING TUBES WITH PROTECTIVE HOUSING.
.1 PLUG-IN TYPE WITH FIXED BASE.
.2 WIRE-IN BASE ASSEMBLY WITH INTEGRAL RED ALARM LED, AND TERMINALS FOR REMOTE ALARM LED.
.2 AUDIBLE/VISUAL SIGNAL DEVICES
.1 STROBE: SEMI-RECESSED, 24VDC OPERATION, COMPLETE WITH SELECTABLE 15/30/75/110 CANDELA OUTPUT (UNLESS OTHERWISE NOTED SET AT 75 CD), SYNCHRONIZED STROBE, RED FINISH, FM AND ULC LISTED. SUITABLE FOR MOUNTING ON A SINGLE GANG BOX.
.2 250mm (10") BELLS: SURFACE MOUNTED BELL, VIBRATION TYPE 24VDC, 10", 94DBA RATING AT 3000mm (10'), RED FINISH, FM AND ULC LISTED.
NOTE:
.1 SIGNAL DEVICES WITH INTEGRAL STROBE LIGHTS IN HIGH ABUSE AREAS (I.E. GYMNASIUM, CHANGE ROOMS, ETC.) MUST BE PROVIDED WITH PROTECTIVE WIREGUARDS.
.2 ANY SURFACE MOUNTED SIGNAL DEVICES MUST BE PROVIDED WITH SUITABLE BACKBOXES SUPPLIED BY THE MANUFACTURER.
.3 END-OF-LINE DEVICES
.1 END-OF-LINE DEVICES TO CONTROL SUPERVISORY CURRENT IN ALARM CIRCUITS AND SIGNALING CIRCUITS, SIZED TO ENSURE CORRECT SUPERVISORY CURRENT FOR EACH CIRCUIT. OPEN, SHORT OR GROUND FAULT IN ANY CIRCUIT WILL ALTER SUPERVISORY CURRENT IN THAT CIRCUIT, PRODUCING AUDIBLE AND VISIBLE ALARM AT MAIN CONTROL PANEL AND REMOTELY AT ANNUNCIATORS.
.5 ONCE INSTALLATION IS COMPLETE THE MANUFACTURER'S REPRESENTATIVE MUST MAKE AN INSPECTION OF THE DEVICES INSTALLED.
.6 THIS TEST MUST CONFORM TO THE ONTARIO BUILDING CODE AND THE LATEST EDITION OF ULC CAN4-S537.
.7 ALL COSTS ASSOCIATED WITH THIS INSPECTION BY THE CONTRACTOR AND MANUFACTURER MUST BE CARRIED IN THE TENDER PRICE.
.8 UPON SUCCESSFUL COMPLETION OF TESTING THE MANUFACTURER MUST SUBMIT TO THE CONTRACTOR AND CONSULTANT:
- A CERTIFICATE OF VERIFICATION
- FIELD TECHNICIAN VERIFICATION SHEETS FOR EACH DEVICE VERIFIED (INCLUDE COPIES OF SAME IN MAINTENANCE MANUALS)
.9 THE TEST RESULTS ARE TO BE SUBMITTED TO THE CONSULTANT FOR REVIEW PRIOR TO ISSUING TO OWNER'S REPRESENTATIVES AND/OR AUTHORITIES HAVING JURISDICTION.

Table with 2 columns: DEVICE and EDWARDS. Rows include CONTROL PANEL (CONVENTIONAL /ADDRESSABLE) EST 3X, INTELLIGENT DEVICES, SMOKE DETECTORS SIGA-PS, MONITOR MODULE SIGA-MM1, CONTROL MODULE SIGA-CR, ISOLATOR MODULE SIGA-IM, AUXILIARY DEVICES, and STROBE G1R-VM.

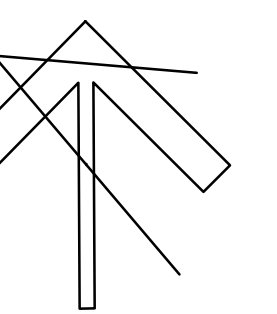
EQUIPMENT

- .1 HAND DRYERS
.1 HAND DRYERS WHERE NOTED ON THE DRAWINGS ARE TO BE SUPPLIED AND INSTALLED BY THIS DIVISION WITH THE FOLLOWING FEATURES:
.1 SURFACE MOUNTING.
.2 FIXED NOZZLE.
.3 WHITE FINISH WITH AUTOMATIC ACTIVATION.
.4 RATING OF 1000W, 120V, THREE SPEED, SET TO MEDIUM SPEED AND LOW HEAT.
.5 WORLD DRYER CAT. #SMARTDRI
.6 APPROVED ALTERNATE: AMERICAN DRYER CAT. #GXT

Revision table with columns for NO, DATE, and REVISION. Includes entries for 'Issued for Tender' and 'Issued for Owner Review'.

The contractor shall verify all dimensions and report all errors and discrepancies to the Consultant before commencement of the work. The drawings show general arrangement of services. Follow all details as shown on drawings unless otherwise noted. Obtain approval for relocation of services from Consultant before commencement of the work. The drawings do not indicate all offsets, fitting and accessories which may be required. Provide the same to meet the required conditions. Drawings and specifications, etc., prepared and issued by the consultant are the property of the consultant and must be returned at the completion of the project. These documents are not to be duplicated or copied without the consent of the consultant. © 2022 DEI & Associates Inc.

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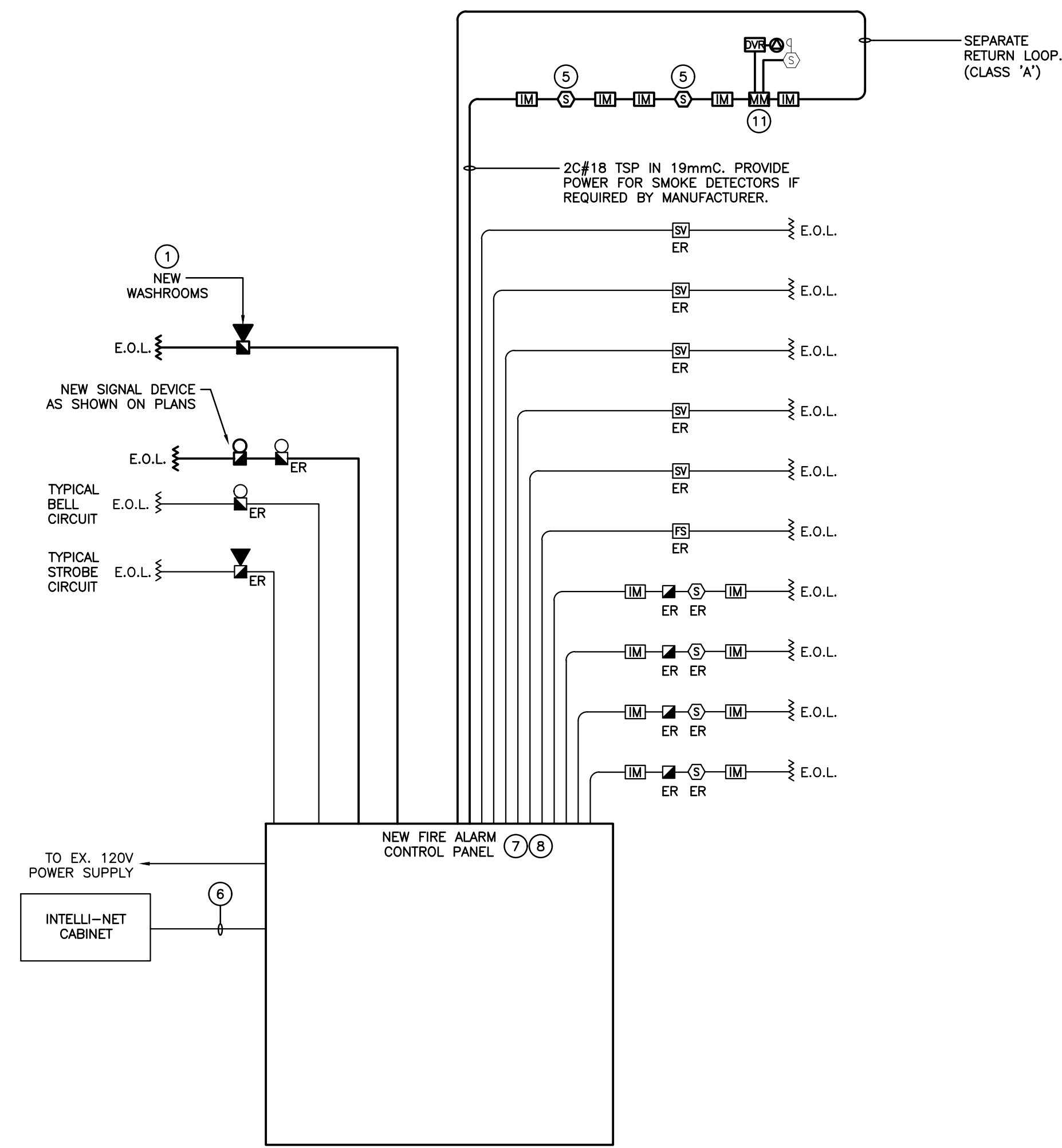


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Project information table including PROJECT NO. (A20002.6), SCALE (AS NOTED), DRAWING NO. (E.1), and DATE (MAR 2021).



GROUND FLOOR

FIRE ALARM RISER DIAGRAM

B-FIRE ALARM RISER DIAGRAM AND SCHEDULE
SCALE: NTS

FIRE ALARM ANNUNCIATOR SCHEDULE

Zone	Description	Alarm	Supervisory	Existing
1	NORTH WING	●		●
2	SOUTH WING	●		●
3	EAST WING	●		●
4	UPPER NORTH WING	●		●
5	PORTABLES	●		●
6	EAST WING SPRINKLER FLOW	●		●
7	BACKFLOW VALVE SV1		●	●
8	BACKFLOW VALVE SV2		●	●
9	EAST WING VALVE SV3		●	●
10	STANDPIPE SV4		●	●
11	FIRE SMOKE DAMPERS	●		
12				
13				
14				
15				
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22				
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24				
25				

NOTES

- REFER TO FLOOR PLANS FOR EXACT LOCATION AND QUANTITIES OF DEVICES.
- CONTRACTOR IS TO CONFIRM WIRE SIZE (BASED UPON LENGTH OF CIRCUIT RUN AND QUANTITY OF SIGNALS) FOR SIGNAL CIRCUIT WITH MANUFACTURER.
- PROVIDE THE REQUIRED NUMBER OF SIGNAL CIRCUITS TO SUIT THE QUANTITY OF STROBES. SIGNAL CIRCUITS ARE TO BE ALTERNATED.
- LOCATE END OF LINE RESISTORS AND ISOLATOR MODULES IN SERVICE ROOMS AT ±1.8M AFF. PROVIDE LAMICOID LABEL INDICATING ZONE LABEL AND NUMBER.
- INDICATES NEW ADDRESSABLE SMOKE DETECTORS TO BE CROSS ZONED WITH EXISTING CONVENTIONAL ZONE(S). REFER TO OVERALL PLAN ON DRAWING E1.1 FOR NEW SMOKE DETECTORS TO BE INSTALLED OUTSIDE "AREA OF WORK".
- RECONNECT TO EXISTING INTELLI-NET CABINET.
- PROVIDE WITHIN CONTROL PANEL ADDITIONAL CONTACTS FOR "FIRE ALARM SYSTEM TROUBLE" AND "FIRE ALARM SYSTEM ACTIVATED" CONDITION AND CO-ORDINATE WITH CONTROLS CONTRACTOR TO COMPLETE CONNECTION/INTERFACE OF THESE SYSTEMS.
- EXISTING CONVENTIONAL FIRE ALARM CONTROL PANEL SHALL BE DISCONNECTED AND REMOVED COMPLETE. ALL EXISTING INITIATING / SIGNAL WIRING IS TO REMAIN FOR RECONNECTION TO NEW HYBRID PANEL.
- INDICATES CONVENTIONAL LOOP MODULE FOR EXISTING PORTABLE CLASSROOM DEVICES.
- INDICATES (CONVENTIONAL TYPE) DEVICES WITHIN EXISTING PORTABLE CLASSROOMS.
- INDICATES 120V POWER AND FIRE ALARM CONNECTIONS TO SMOKE/FIRE DAMPER WITH INTEGRAL SMOKE DETECTOR. COORDINATE EXACT LOCATION/CONNECTION REQUIREMENTS WITH MECHANICAL CONTRACTOR. SMOKE/FIRE DAMPER AND ASSOCIATED INTEGRAL SMOKE DETECTOR TO BE PROVIDED AND INSTALLED BY MECHANICAL CONTRACTOR. PROVIDE MONITORING MODULE(S) PER SMOKE/FIRE DAMPER TO 120V POWER SUPPLY CONNECTION TO THE DAMPER ACTUATOR, AND INTEGRAL SMOKE DETECTOR ALARM AS SIGNAL. A TROUBLE CONDITION SHALL BE ACTIVATED DUE TO THE LOSS OF AC POWER AT THE MAIN CONTROL PANEL, CONSISTING OF AUDIBLE AND VISUAL TROUBLE SIGNAL UNTIL ACKNOWLEDGED BY OPERATOR.

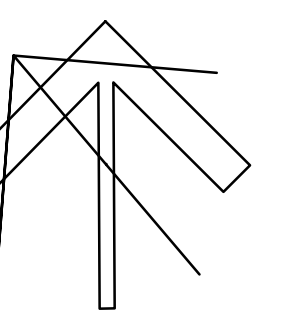
PHASING OF FIRE ALARM SYSTEMS

THE EXISTING FIRE ALARM SYSTEM MUST REMAIN IN OPERATION THROUGHOUT CONSTRUCTION OF THE NEW SYSTEM. CONTRACTOR SHALL INSTALL NEW WIRING FOR ALL REPLACEMENT DEVICES TO ACCESSIBLE LOCATION FOR FINAL SWITCHOVER TO NEW DEVICE UPON REMOVAL OF EXISTING. PERFORM VERIFICATION IN STAGES WHICH WILL ALLOW FOR MINIMAL DOWNTIME DURING SWITCHOVER. INCLUDE FOR MULTIPLE VERIFICATIONS AS NECESSARY. FIRE WATCH SHALL BE PROVIDED WHENEVER PROTECTION IS NOT ABLE TO BE MAINTAINED. INCLUDE IN CONTRACT FOR INTERCONNECTION BETWEEN THE NEW AND EXISTING SYSTEMS DURING SWITCHOVER. MAINTAIN EXISTING MONITORING UNTIL SUCH TIME AS NEW MONITORING IS IN PLACE. THE CONTRACTOR IS TO INCLUDE IN THE TENDER THE PROVISION AND INSTALLATION OF ADDITIONAL FIRE ALARM DEVICES NOT INDICATED ON THIS DRAWING. REFER TO SPECIFICATIONS.

NO.	DATE	REVISION
1	2021.03.31	Issued for Tender
2	2021.04.16	Issued for Owner Review

The contractor shall verify all dimensions and report all errors and discrepancies to the Consultant before commencement of the work. The drawings show general arrangement of services. Follow as shown or actual building construction will prevail. Obtain approval for relocation of services from Consultant before commencement of the work. The drawings do not indicate all offsets, fittings and accessories which may be required. Provide the same to meet the required conditions. Drawings and specifications, etc., prepared and issued by the consultant are the property of the consultant and must be returned at the completion of the project. These documents are not to be duplicated or copied without the consent of the Consultant. Do not issue this drawing. © 2022 DEI & Associates Inc.

PROJECT NORTH



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DRAWING TITLE:
FIRE ALARM RISER

PROJECT NO: A20002.6	SCALE: AS NOTED
DRAWN:	DRAWING NO. REV. E3.1
CHECKED:	
DATE: MAR 2021	