
ELECTRICAL ADDENDUM

Project:
CAMH 250 College relocation

Project No:
22048

ADDENDUM No. E-1

Issued: Aug 31, 2022

THIS ADDENDUM IS ISSUED PRIOR TO TENDER CLOSING TO PROVIDE CERTAIN REVISIONS TO THE WORKS. REVISIONS COVERED BY THIS ADDENDUM SHALL BE IN ACCORDANCE WITH SPECIFICATION REQUIREMENTS AND CONTRACT DOCUMENTS. INCORPORATE THE REVISIONS REQUESTED HEREIN IN THE TENDER PRICE.

Note: All the drawings that are re-issued for this addendum are dated Aug 22, 2023 in the title block.

1. General

- a) Entire drawing set has been reissued, with areas of change highlighted with revision 'clouds or 'bubbles'.
- b) Additional information is provided herein as clarification items to supplement the plans.
- c) Refer to separate and unit prices for revised request for allowances pertaining to
 - a. Faulty LED lighting replacement
 - b. Defective data outlet jack replacement

2. Refer to Drawing C1.1, through C2.06

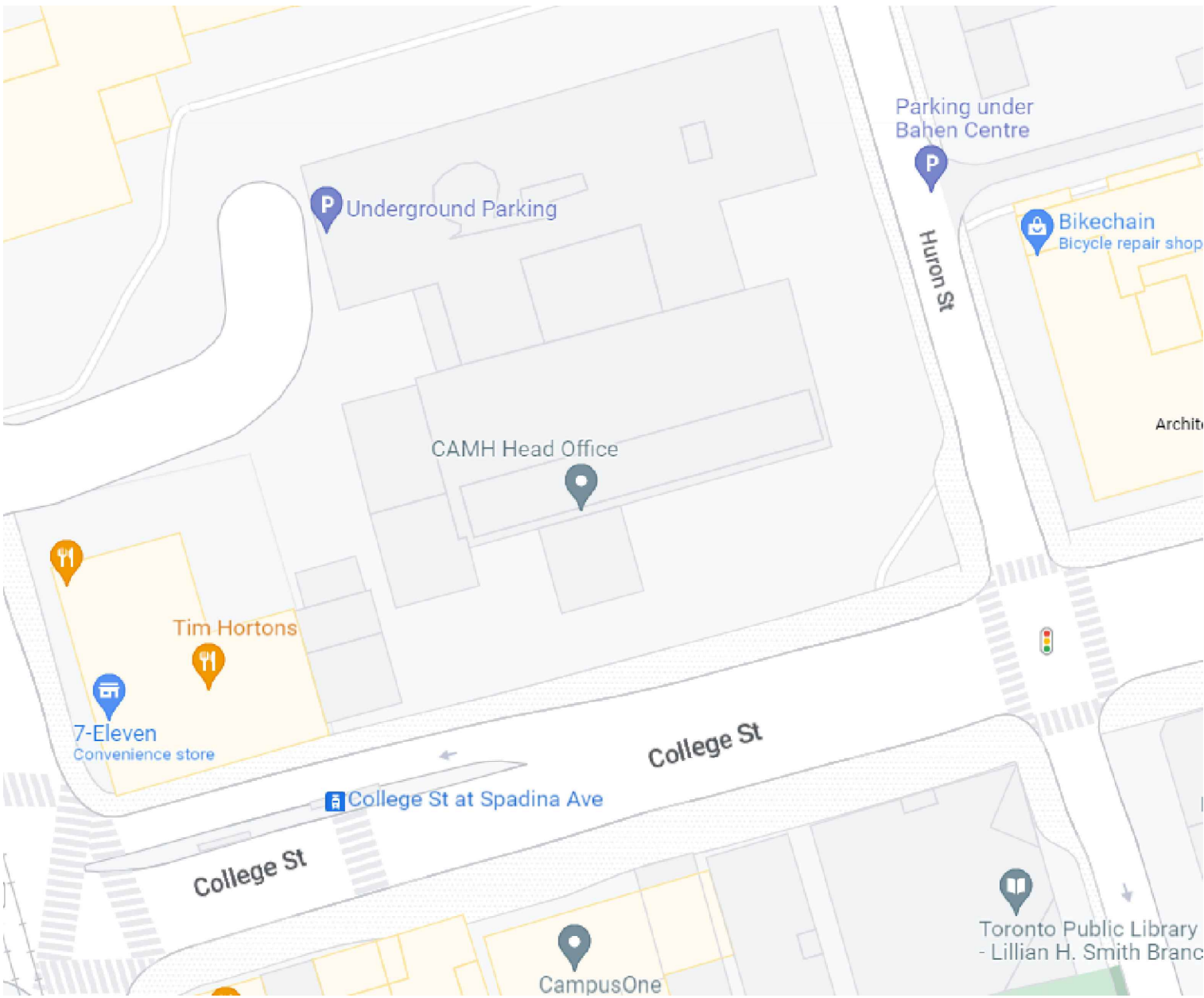
- a) Clarification on patch cord requirements,
 - a. All patch cords at new rack and all patch cords at workstations, are to be provided and installed by the electrical/comms contractor.
 - b. Patch cords at rack are designated as 12" length.
 - c. Patch cords at workstations are designated as 12' in length.
- b) Clarification on allowance for 10% of defective or nonoperational outlets, refer to demolition drawings E3.00, E3.02, E3.04, E3.06, E3.08 & E3.10 for existing outlets to be maintained.
- c) Clarification, all new data outlets are to be wired to new rack located on 9th floor in room 950.
- d) Clarification, delete reference to swing out rack, unit is a 4 post fixed type.
- e) Clarification, new fibre backbone and tie cable shall consist of 6- 50/125 micron multimode strands of laser optimized, OM4 cable to certified to support 10G Ethernet at 500 m. Fibre backbone cable must be installed in conduit as required for an active air plenum ceiling. Plenum-rated innerduct is acceptable.
- f) All terminations shall be SC type.

CAMH

250 COLLEGE RELOCATION

250 College TS
Toronto, ON

PROJECT # 22-048



DOCUMENTS	ISSUED	DATE	DRAWING LIST	
ELECTRICAL DRAWINGS	ISSUED FOR COST CONSULTANT	2023.04.11	E1.1	ELECTRICAL SPECIFICATIONS
ELECTRICAL DRAWINGS	ISSUED FOR PRE-TENDER COSTING	2023.07.17	E1.2	ELECTRICAL LEGEND
ELECTRICAL DRAWINGS	ISSUED FOR TENDER	2023.08.08	E1.3	LUMINAIRE SCHEDULE AND NOTES
ELECTRICAL DRAWINGS	ISSUED FOR PERMIT	2023.08.11	E2.01	1ST FLOOR LIGHTING – DEMOLITION
ELECTRICAL DRAWINGS	ISSUED FOR ADDENDUM E-1	2023.08.22	E2.02	1ST FLOOR LIGHTING – NEW
			E2.03	1ST FLOOR LIGHTING – DEMOLITION
			E2.04	1ST FLOOR LIGHTING – NEW
			E2.05	8TH FLOOR LIGHTING – DEMOLITION
			E2.06	8TH FLOOR LIGHTING – NEW
			E2.07	9TH FLOOR LIGHTING – DEMOLITION
			E2.08	9TH FLOOR LIGHTING – NEW
			E2.09	10TH FLOOR LIGHTING – DEMOLITION
			E2.10	10TH FLOOR LIGHTING – NEW
			E2.11	11TH FLOOR LIGHTING – DEMOLITION
			E2.12	11TH FLOOR LIGHTING – NEW
			E3.01	1ST FLOOR POWER & SYSTEMS – DEMOLITION
			E3.02	1ST FLOOR POWER & SYSTEMS – NEW
			E3.03	1ST FLOOR POWER & SYSTEMS – DEMOLITION
			E3.04	1ST FLOOR POWER & SYSTEMS – NEW
			E3.05	8TH FLOOR POWER & SYSTEMS – DEMOLITION
			E3.06	8TH FLOOR POWER & SYSTEMS – NEW
			E3.07	9TH FLOOR POWER & SYSTEMS – DEMOLITION
			E3.08	9TH FLOOR POWER & SYSTEMS – NEW
			E3.09	10TH FLOOR POWER & SYSTEMS – DEMOLITION
			E3.10	10TH FLOOR POWER & SYSTEMS – NEW
			E3.11	11TH FLOOR POWER & SYSTEMS – DEMOLITION
			E3.12	11TH FLOOR POWER & SYSTEMS – NEW
			C1.1	COMMUNICATION SPECIFICATIONS AND DETAIL
			C2.1	1ST FLOOR COMMUNICATIONS PLAN – NEW
			C2.2	1ST FLOOR COMMUNICATIONS PLAN – NEW
			C2.3	8TH FLOOR COMMUNICATIONS PLAN – NEW
			C2.4	9TH FLOOR COMMUNICATIONS PLAN – NEW
			C2.5	10TH FLOOR COMMUNICATIONS PLAN – NEW
			C2.6	11TH FLOOR COMMUNICATIONS PLAN – NEW

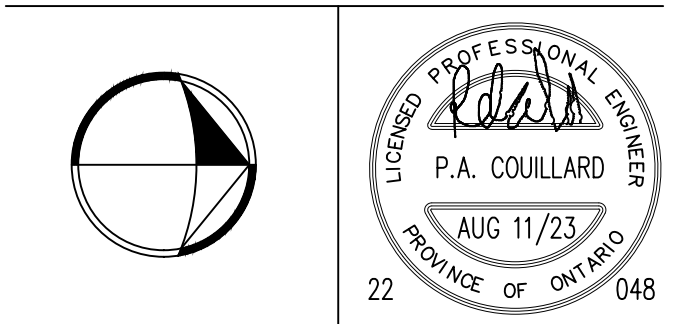

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ELECTRICAL SPECIFICATIONS

ELECTRICAL GENERAL REQUIREMENTS		
1	General Conditions	
2	The clauses in the General Conditions, Labour Conditions, Supplementary Conditions and Instructions to Bidders shall be considered an integral part of these specifications and shall govern the electrical work to be done.	
2	Codes and Regulations	
2.1	All work shall be done in accordance with the latest editions of the Ontario Building Code, Ontario Electrical Safety Code, C.S.A. Standards, U.L.C., N.F.P.A., O.S.H.A. and local regulations and with the requirements of all applicable inspection Authorities Having Jurisdiction. Additionally, all work shall comply with Owner's requirements and conform to base building standards.	
3	Permits and Approvals	
3.1	Obtain and pay for all required approvals, permits and notices and pay all inspection fees, taxes and all other applicable costs whatsoever connected with the electrical work. Provide Certificate of Acceptance from the local ESA Inspection Department.	
4	Intent	
4.1	It is the intent of these drawings and specifications that the Contractor provide complete and fully operational systems. All miscellaneous items and ancillary components required to achieve this shall be provided and all costs shall be included in the tender price.	
5	Definitions	
5.1	The terms 'provide' or 'supply and install' shall be understood to mean that the Contractor shall supply and install, inclusive of all labour, materials and testing, for the equipment or system which is being referenced.	
6	Site Visit	
6.1	Study the electrical drawings and the documents of all other trades and visit the site during tender in order to establish the full extent of the work and to determine existing job conditions. Include in the tender price for the total scope of work including but not limited to removing, reworking of all existing electrical equipment and wiring to successfully execute all work described. Include in bid for discrepancies, if any, shown on these drawings relating to existing conditions.	
7	Insurance	
7.1	Provide insurance for the duration of the project to protect the building Owner, Tenant and Trades from all claims. Submit at the time of the bid proof of an amount in accordance with the bid form requirements or acceptable to the Owner.	
8	Workers Compensation	
8.1	The Contractor shall provide the Owner with current certificates of clearance from the Workplace Safety and Insurance Board (WSIB) valid throughout the course of the contract.	
9	Contract Documents	
9.1	The drawings for the work of this division are diagrammatic in nature intended to convey the scope of work, general arrangement and sizes of equipment and approximate location of wiring devices and other devices.	
9.2	Any discrepancies between the Architectural/Interior Design, Mechanical, Security, Audio-Visual, Communications, Food Service or other drawings and the Electrical drawings shall be reported to the Consultant prior to roughing in the electrical services.	
9.3	Whenever differences occur between floor plans and details/diagrams or between drawings and specifications the maximum condition shall govern and be included in the tender price.	
10	Site Measurements	
10.1	All dimensions and measurements shall be determined on the site. Drawings are diagrammatic intended to show general arrangement and some technical details only and shall not be scaled for dimensions or measurements.	
11	Demolition	
11.1	Complete extent of demolition is not shown. Make allowances for any new or existing services, devices or equipment relocations necessary to complete the work. The Contractor is responsible for all device and fixture counts and shall supply sufficient quantities of new devices or fixtures to complete the work as intended by the drawings. Allow for all costs in the tender price.	
12	Interruption to Building Services	
12.1	All work shall be performed without power shutdown of any operating systems without the express written approval of the work. The work shall be so arranged to keep the required number of shutdowns to a minimum. All required power shutdowns shall be performed during premium time, during overnight hours, and shall be pre-arranged at least five business days in advance with the Owner's representative. All allowances for same shall be included in tender price.	
13	Temporary Power	
13.1	The electrical trade shall be responsible for providing temporary power and lighting, as required by all other trades, to do the work. Coordinate requirements with phasing of work and make all necessary allowances.	
14	Removal of Existing Equipment	
14.1	Remove any abandoned wiring from the areas defined on the drawings. Wiring in walls and ceilings which are to be demolished shall also be removed as required. Wiring of circuits that are to be removed shall be removed all the way back to the corresponding circuit breaker panel or other overcurrent protective device. Any wiring which may become disconnected because of demolition, which is not intended to be removed, shall be reconnected.	
14.2	Wiring, conduit and equipment which is required to maintain services to other parts of the building shall be temporarily supported or relocated as required.	
14.3	Unless indicated otherwise, equipment, devices and materials that are stated or shown as "to be removed" shall become the property of the Contractor and shall be removed from the site. Unless indicated otherwise, light fixtures, exit lights, emergency remote heads, fire alarm system devices and wall dimmers that are to be removed shall be returned and turned over to Owner at a designated storage space in the building. Any other equipment that is shown to be retained by the Owner shall also be moved to a designated storage space in the building.	
15	Relocation of Devices	
15.1	Devices and outlets are shown on the drawings in the required locations. Notwithstanding the foregoing, it shall be understood that any electrical outlet, device or lighting fixture may be relocated by the Owner's Representative or the Consultant 15 feet from the location shown without additional charge provided such relocation is made before the affected conduits and boxes are roughed in. Additionally, verify that all existing devices that are to remain fall within the room shown on the new plans. Allow for relocation of existing devices where required.	
15.2	Allow for removal and re-installation of existing wall devices to permit new architectural finishes, and for temporary removal of ceiling fixtures and devices where T-bar ceilings to be temporarily removed.	
16	Scheduling and Delivery	
16.1	All work during construction shall be properly scheduled and coordinated with the other Trades, the Owner and the Tenant. Include in the tender price for all necessary premium time to suit the Owner's or General Contractor's construction schedule.	
16.2	A delivery schedule of all major equipment including lighting fixtures to be provided under this contract shall be submitted to the General Contractor at the beginning of the project. Failure to identify delivery problems or unnecessary delay in ordering equipment may result in delay claims against the Contractor.	
17	Shop Drawings	
17.1	Submit electronically in PDF format shop drawings for power distribution equipment, lighting fixtures, lighting controls, panelboards, disconnect switches, wiring devices, etc., prior to installation for approval.	
17.2	Each shop drawing shall be reviewed and stamped as being correct by the General Contractor and the appropriate trade before submission to the Consultant for review. Shop drawings which are not stamped in this manner shall be returned 'not reviewed'.	
18	As-built Drawings	
18.1	Keep a record set of drawings on site at all times which shall clearly indicate the exact location of all outlets, devices, lighting fixtures, feeder runs, distribution equipment, junction boxes, pull boxes, EOL's, etc. The record drawings shall also include any deviations from the design drawings and all changes issued via change notice or site instruction or other changes made during the course of construction. The information on these drawings shall be incorporated onto the as-built drawings at the completion of the project.	
18.2	Submit as-built drawings at the completion of the project in the form of AutoCAD release 2010 or later. Obtain and pay for a cad disk of drawing files. The Contractor may obtain the Consultant's AutoCAD drawing files at a cost of \$125.00 per drawing. The as-built drawings shall incorporate all the information from the record drawings recorded during construction. Submit the completed record drawings and the cad files, in AutoCAD release 2010 or later, to the Consultant for review. Following the Consultant's review submit the record drawings, three (3) sets of prints of the as-builts and a USB or CD disk of the as-built drawings in CAD and PDF to the Landlord or Owner as part of the close-out documents.	
18.3	The Consultant's stamp and logo shall be removed from the as-built drawings. The drawings shall be clearly marked as AS-BUILT and shall include the Contractor's name.	
19	Close-out Documents	
19.1	After completion of the project submit the following documents for Consultant's review. - Electrical Safety Authority Inspection Report. - Fire Alarm Installation Letter. - Fire Alarm Verification Report and Certificate. - Light Fixture Independent Support Letter. - Emergency lighting performance letter. - Arc Flash and Short Circuit Coordination Studies - Warranty letter. - Maintenance Manuals including all Reviewed and Stamped shop drawings.	
19.2	Following Consultant's review submit Close-out Documents including three (3) sets of the Maintenance Manuals to the Owner.	
20	Warranty	
20.1	The Contractor shall provide a one-year "parts and labour" warranty on all facilities, equipment and devices, effective on the date of acceptance of the work, even if the devices are installed and connected before this date. The warranty shall	
20.2	The Contractor shall repair and/or replace at no extra cost any defects in materials or workmanship that occur during the warranty period. Work to be done at a time that is suitable to the Landlord or Tenant.	
21	Final Inspection	
21.1	At the completion of the work the Contractor shall contact the Owner's representative and Summit Engineering to perform a final inspection.	
21.2	In areas where ceiling tiles have been installed it will necessary to remove portions of the ceiling tiles for inspection and then re-install them. Include for all costs in the tender price.	
21.3	All equipment must be cleaned and tested before final acceptance by the Consultant.	
22	Changes to the Contract	
22.1	Where extra work of any kind is required obtain written instructions from the Owner or Architect/Design Consultant before proceeding. The Contractor will receive payment for authorized changes only.	
22.2	For each change submit a quotation c/w breakdown of material, labour, overhead and profit. Labour units shall be based on the latest National Electrical Contractors Association (NECA) manual column one (1) for the duration of the project. Material pricing shall be based on the latest National Price Guide system with appropriate trade discounts.	
22.3	Hourly labour rates shall be inclusive of all ancillary charges for supervision, electrical inspection, hand tools, as-builts, parking, clean-up, elevator downtime and additional bonding. No other ancillary charges will be permitted.	
23	Underground Work	
23.1	For all underground work it is the Contractor's responsibility to verify with the Owner and the local Utilities for locations of all existing underground services prior to digging. Include for all costs in tender price.	
24	Noise and Vibration	
24.1	All electrical equipment shall operate without objectionable noise or vibration and to the Owner's satisfaction.	
25	Restrictions	
25.1	Communications rooms and closets are designed for communications equipment and security DGP's. Do not locate any type of power distribution equipment or power risers within these rooms.	
MATERIALS AND INSTALLATION		
26	General Conditions	
26.1	Unless otherwise specifically provided, all materials and equipment installed shall be new, unused, and bear approval or certification labels indicating conformity with CSA standards. All new materials and equipment shall match base building standards unless shown otherwise.	
26.2	Provide all materials, equipment and labour necessary to perform the complete work as indicated.	
26.3	All work shall be performed in a professional and expert manner to the satisfaction of the Architect/Design Consultant. Any work that is deemed to unsatisfactory shall be replaced without extra cost to the Owner.	
26.4	Damage to any system occurring during execution of the work shall be rectified at the Contractor's expense.	
26.5	The construction site shall be kept clean and any debris shall be removed from the site throughout the construction period and at completion of the work.	
27	Routing of Equipment	
27.1	All wiring shall be run concealed wherever possible. Where wiring is run exposed, it shall be installed parallel to the building structure and present a neat appearance.	
27.2	In general, wiring shall be run concealed in finished areas and exposed in unfinished areas and mechanical and electrical room service spaces.	
27.3	New conduits and shall be carefully routed to avoid interference with existing services. Routing of conduits within existing riser rooms shall be reviewed and approved by the building Owner prior to installation. Any existing services that interfere with the new installation shall be relocated under this contract. Become familiar with any such conditions during the contractor walk-through and allow for all costs in the tender price.	
27.4	The routing of new conduits shall be approved by the Owner's representative or the Consultant before they are installed. They shall not be attached to mechanical or other equipment.	
28	Cutting and Patching	
28.1	All cutting, patching and painting required to perform the electrical work shall be included in this contract unless otherwise advised by the General Contractor.	
29	Directories	
29.1	Clearly amend all existing panelboard directories which may be affected by work done under this contract. Amended directories shall be typewritten. New panelboards shall be equipped with a typed directory of circuits showing room number, type of load and wattage.	
30	Location of Luminaires	
30.1	All luminaires shall be new and as specified on the drawings and specifications except where noted otherwise for existing luminaires to be re-used. Re-used luminaires shall be thoroughly cleaned and re-lamped prior to putting into use again.	
30.2	All luminaires shall be supplied complete with all required accessory items such as yokes, trim rings, frame adjusters and other ancillary components as required for a complete and proper installation.	
30.3	For exact location of all lighting fixtures and light switches refer to architectural reflected ceiling plans and details where applicable.	
30.4	Ensure that all lighting fixtures within rooms are controlled by switches, where switches are shown. Where two or more switches are shown in one room and the room contains emergency fixtures, the switch closest to the door shall be on the emergency power circuit.	
31	Lamps and Fuses	
31.1	All luminaires shall be complete with suitable lamps in accordance with the luminaire schedule. Include a shop drawing of proposed lamp along with every luminaire shop drawing submitted.	
31.2	Fluorescent, HID and LED lamps shall be guaranteed for a period of one year from the date of acceptance. Low voltage, halogen and incandescent lamps shall be guaranteed for a period of six months from the date of final acceptance.	
31.3	At completion the job shall be left completely lamped and fused, including all existing and new fixtures and exit signs within the project boundary. Clean and repair all existing fixtures affected by this work. Provide new lenses in existing fixtures where lenses are missing or damaged.	
32	Ballasts	
32.1	Ballasts shall be manufactured to the latest applicable CSA standards and shall meet or exceed the requirements of the OEM manufacturers.	
32.2	Ballast voltage shall be as noted in the luminaire schedule or as required to suit the circuiting shown on the drawings.	
32.3	Submit ballast manufacturer's technical data with each luminaire shop drawing.	
33	Exit Signs	
33.1	Unless otherwise noted, all exit signs shall be new, pictogram style, LED type with voltage rating to suit the circuiting shown on the drawings, or to match existing exit lighting voltage.	
33.2	Exit signs shall be single or double face with directional arrows as noted on the drawings.	
33.3	(not used).	
33.4	All exit signs shall have no light leakage from joints or fittings, have canopy and/or stem hanger to match the housing and shall meet the requirements of standard CSA C860.	
33.5	Ensure that exit sign circuit breakers are locked in the 'ON' position.	
33.6	Ensure that new or relocated exit signs are positioned to be clearly visible along the intended path of egress and that no ceiling or wall mounted obstructions interfere with or block the visibility of the exit sign. In the event that the building inspector or the consultant finds the sign is obstructed from view or interferes with other systems the contractor shall relocate the sign at no extra cost.	
34	Occupancy Sensors	
34.1	Provide a complete and fully operational occupancy sensing lighting control system as shown on the drawings and specified herein.	
34.2	Locate all equipment in accordance with the manufacturer's recommendations and as indicated on the drawings.	
34.3	All sensors to arrive on site factory preset to the maximum time delay setting.	
34.4	Final sensitivity adjustment and time delay setting of all sensors shall be carried out 72 hours prior to substantial completion by the Contractor and as directed by the Consultant.	
34.5	Adjust all occupancy sensors individually to operate as intended for the size and shape of the space where installed.	
35	Core Drilling and Sealing	
35.1	Before core drilling floor slab or structural walls, scan slab or walls and have the locations accepted by the building Owner and Structural Engineer in writing. Any existing building services damaged by core drilling must be repaired immediately at no cost to the Owner. Obtain all necessary approvals prior to scanning and core drilling. Include for all costs in tender price. Core drilling and core drilling of floors to be carried out after normal working hours and at a time acceptable to the Owner. Schedule core drilling with Owner at least 10 days in advance of performing the work.	
35.2	Where conduits pass through fire rated walls or floors, and/or where core drilling is performed, provide fire stopping material listed with, and bearing label of CSA and ULC, and maintain existing fire rating of building component penetrations.	
36	Fastenings and Supports	
36.1	Fasten exposed conduit or cables to building structure using steel straps or channels. Use beam clamps to secure conduit to exposed steel work. Suspended support systems: U shape, single channel (hot dip galvanized) to suit load to be carried, surface-mounted or suspended with threaded rod as indicated or required. Support equipment, conduit or cables using clips, spring-loaded bolts, cable clamps designed as accessories to basic channel members. Do not use wire lashing or perforated strap to support or secure raceways or cables.	
36.2	Independently support from structure all new and relocated suspended, surface or T-bar mounted luminaires using two (2) or more lengths of Weldless 'Single Jack' bright zinc plated steel chain, Canadian Standard #10 gauge, 13 links per foot. Do not support lighting fixtures or other devices from the ceiling support system. Fluorescent fixtures with linear lamps shall be supported with minimum two chains per 4' length of fixture. Downlight fixtures shall be supported with minimum one chain.	
37	Access Doors	
37.1	Provide all access doors where required to service all new and existing equipment. Access panels shall be equal to Lehigh and shall be compatible with ceiling/floor type and finish. Access doors shall be recessed type with a drawal inflit. Electrical services are to be coordinated to minimize the number of access panel locations required. Coordinate location and sizes with the Consultant. Submit installation drawing(s) to the Architect/Interior Designer for review indicating size and location of all proposed access locations prior to proceeding with the installation.	
38	Laminate and Identification	
38.1	All new equipment shall be identified with laminate nameplates. Colour shall be black background with white lettering for power distribution equipment and red background with white lettering for fire alarm DGP's and panels. Wording on all laminate plates shall be approved by the Consultant and the building Owner prior to engraving.	
38.2	All conductors including neutrals and grounds shall be logged in all junction boxes, device outlet boxes and panelboards for easy identification for testing and maintenance purposes.	
39	Wire and Cable	
39.1	Unless shown otherwise, all wires shall be copper with RW-90 insulation, 600V rating for 120/208V system and 1000V rating for 240/416V and 347/600V systems, and minimum #12 gauge or as specified. #12 and #10 shall be solid, #8 and larger shall be stranded. In damp locations and underground, they shall be RWU-90 XLNPK type. All conductors shall be sized for a maximum 2% voltage drop. Provide copper ground wire sized per Code in all branch and power feeder conduits whether or not same is shown on drawings.	
39.2	Wiring between VFDs and motors shall be VFD rated cable, size as noted. Symmetrical design with (3) stranded tinned copper circuit conductors + (3) symmetrical bare copper grounds, 2 spiral copper tape shields (100% coverage), XLPE insulation, black PVC jacket; 1000V UL, equal to Belden type 2952. Install cable in EMT. Final connection to motor in flexible conduit.	
39.3	Provide a separate neutral conductor for each circuit. Do not share neutrals.	
39.4	Lugs for power feeders shall be solderless set screw type or long barrel double crimp type as required.	
40	Conduits	
40.1	All conduits indoors shall be steel EMT except as otherwise noted. EMT couplings and connectors shall be steel set-screw type or compression concrete light, die cast set-screw type is not acceptable. Connectors shall be with nylon insulation.	
40.2	Flexible armoured cable (BX) shall be permitted only for down-drops from junction boxes to luminaires and for vertical drops in partitions unless prohibited by Code or building standards. BX cable shall not be used in any exposed areas unless otherwise noted. BX cable runs in ceiling spaces shall not exceed 3m (10') in length. Do not terminate BX cable directly into panelboards.	
40.3	Final connections to motors and transformers shall be made with flexible metal conduit (minimum 1m length).	
40.4	Provide armoured cable "TECK" where shown. All wiring under access floors shall be in TECK or flexible steelite conduit.	
40.5	Outdoor conduits shall be rigid galvanized steel or rigid PVC.	
40.6	Underground and concrete encased conduits shall be rigid PVC.	
40.7	All conduits for communications wiring shall be installed with bushings at each end. Provide pull strings in all empty conduits.	
40.8	Provide approved expansion joints where required by Code and/or as shown.	
41	Pull Boxes	
41.1	Only certain pull boxes may be indicated on the drawings. Provide a minimum of one pull box for every 30m (100') of conduit run with each 90 degree bend equating to a 9m (30') run of conduit.	
41.2	Do not install more than two (2) 90 degree bends between two pull boxes.	
41.3	Provide identification nameplates on all pull boxes.	
42	Pull Strings	
42.1	Provide nylon pull strings in all empty conduits.	
43	Grounding and Bonding	
43.1	Provide all grounding as per the latest edition of the Ontario Electrical Safety Code and local regulations. Megger all power circuit feeders and isolated ground feeders. If resistance to ground on any feeder is below that required by CSA or other governing authorities, these feeders shall be considered defective and shall be replaced.	
43.2	Perform ground continuity and resistance tests on the grounding system using method appropriate to site conditions and to approval of Engineer and local Authorities Having Jurisdiction over the installation. Perform all required tests before energizing the electrical system.	
43.3	Provide separate green insulated ground conductor in every feeder and branch wiring power conduit.	
43.4	Provide bonding conductor for non-current-carrying conductive parts of electrical equipment, metal raceway, armoured cable per O.E.S.C. and table 16.	
43.5	Provide equipotential bonding for non-electrical equipment per O.E.S.C.	
44	Mechanical Wiring	
44.1	Coordinate all equipment supplied by other trades to ensure voltage and amperage compatibility with design documents prior to equipment being ordered and prior to rough-in of circuits to same.	
44.2	Unless shown otherwise, Division 15 Contractor shall provide all starters and control wiring for HVAC equipment and all other equipment under Division 15. Division 16 Contractor shall receive and install all starters and shall provide line side and load side line voltage wiring and required disconnect switches. Confirm all requirements and equipment locations with Division 15 Contractor prior to rough-in.	
44.3	Control wiring including conduit for all mechanical equipment shall be supplied and installed by Division 15.	
44.4	Fan switches shall be supplied by Division 15 for installation and wiring by Division 16.	
45	Wiring Devices and Outlet Boxes	
45.1	All wiring devices and coverplates shall be specification grade.	
45.2	Duplex receptacles shall be decoara style, specification grade, 15A, 120V unless otherwise noted. Refer to Architect/Interior Designer's power and communications plans for exact location and mounting height of receptacles and all other wiring devices and outlet boxes. In millwork areas refer to the Architect/Interior Designer's millwork details for this information. Where Architect/Interior Designer's power and communications plans are not available have the Architect/Interior Designer or Owner mark the locations on site prior to rough-in. Verify colour with Architect/Design Consultant prior to installation.	
45.3	Local switches shall be decoara style, specification grade, 20A with voltage rating as required to suit the voltage of the load being controlled. Verify exact location, mounting height and colour with the Architect/Design Consultant prior to installation.	
45.4	Flush mounted devices shall have stainless steel coverplates unless otherwise noted.	
45.5	Junction boxes on walls with acoustic panels shall be extended flush with finish of the acoustic panels.	
45.6	Outletts shall not be installed back-to-back in partitions. Stagger to prevent sound transfer.	
46	Wall Dimmers	
46.1	Dimmers shall be fluorescent, LED or low voltage type as required to suit the load being controlled.	
46.2	Individual dimmers shall be sized for the total load being controlled plus 25% spare capacity.	
46.3	All dimmers and coverplates shall be specification grade.	
47	Systems Furniture	
47.1	Coordinate exact requirements for power and communication feeds to workstations with workstation supplier prior to rough-in. Provide all final power and voice/dataconnections and disconnections to workstations as required to suit the new layout. Allow for all costs in the tender price.	
48	Fire Alarm System	
48.1	All new devices shall match the existing system in manufacturer and types. Verify with the existing system manufacturer during the tender period all requirements, wiring and specifications for new devices shown on the drawings. Include for any new circuits, modules, amplifiers, programming and set-up that may be required in the existing fire alarm control panels. Obtain a verification certificate from the fire alarm system manufacturer or maintenance agent for all modifications to the fire alarm system and/or devices.	
48.2	Unless otherwise shown, reconnect existing fire alarm system devices and retain in working order throughout construction.	
48.3	Provide for all 120V power connections to suit the requirements of the fire alarm system.	
48.4	Contractor and/or Owner to verify with the City prior to the fire alarm verification and coordinate if City Inspector wants to be present at the time of verification.	
48.5	All fire alarm work shall conform to Standards CAN/ULC-SS24, CAN/ULC-SS36 and O.B.C. Fire alarm verification shall conform to Standards CAN/ULC-SS37 and CAN/ULC-S1001 (Integrated Systems Testing of Fire Protection and Life Safety Systems).	
50	Circuiting	
50.1	Circuiting shown is for grouping purposes only. Verify exact circuits available on site and provide new circuits and breakers as required. Indicate exact circuits used on the as-built drawings. Balance loads within 10% across all phases and submit test report for review by the Consultant.	
50.2	Contractor shall re-use existing spare circuits within the space that may be found during demolition prior to running new circuits from panels.	
50.3	Existing emergency and normal circuits for general lighting may not be as shown. Ensure final circuiting of all lighting, including normal circuits, emergency power circuits and night light fixtures to be as shown on the drawings.	
50.4	The work shall be complete and shall include all junction and pull boxes, sockets, connections, raceways, fittings, supports, etc., and all the necessary and appropriate hardware, whether or not it is shown on the drawings for complete and fully operational systems. Identify each junction/pull box according to the panel and circuit number of the wires it contains.	
51	Power Distribution Equipment - General	
51.1	The products shall be of same manufacturer as base building unless approved otherwise by the Owner. Where approved otherwise products shall be as manufactured by Cutler-Hammer, Schneider or Siemens.	
51.2	All transformers, distribution panels, and branch circuit panelboards shall be complete with copper bus (or windings), and shall be of same type and manufacture as existing in base building unless otherwise noted.	
51.3	Provide sprinkler proof enclosures for all power distribution equipment in sprinklered buildings.	
51.4	Ensure that all neutrals of all transformers are grounded to the building ground system in accordance with O.E.S.C. and table 16. Verify location of appropriate building grounding point on site during tender period.	
51.5	All fuses shall be HRC type "J" with time delay unless shown otherwise.	
51.6	Provide 4" high concrete housekeeping pad under all power distribution equipment that is to be floor mounted, whether or not same is shown on the drawings.	
52	Not Used	
53	Plywood Backboards	
53.1	Plywood backboards shall be of the highest quality fire retardant fir, 19mm thick, primed and painted with fire retardant paint.	
53.2	All electrical equipment shall be mounted on plywood backboards.	
53.3	Provide plywood backboards in communications rooms, sized as noted on the drawings.	
54	Cable Tray	
54.1	The cable tray system shown on the drawings shall be CER 'BT' series Cable Tray System, or Wiremold Cabletray approved equal, comprised of 0.187" diam. zinc plated steel wire that has been welded into a 2" x 4" steel grid that can be custom cut to size on site.	
54.2	Width shall be as noted on the drawings. Depth of tray system shall be 4". Refer to floor plan for routing.	
54.3	Cable Tray shall be comprised of 10' sections, custom cut sections, 'L' connections and 'T' connections as required to suit layout shown on the floor plan. Inner bends of all turns shall be rounded to suit ease of cable pulling.	
54.4	Finish shall be standard black finish.	
54.5	All custom cuts shall be made in accordance with manufacturer's instructions.	
54.6	The complete cable tray system shall be installed at the same elevation and be horizontally level. Confirm exact mounting height on site with Architect prior to commencing installation. Where changes in elevation are required due to obstructions on site, these shall be made in accordance with the manufacturer's instructions while maintaining the continuity of the cable tray system.	
54.7	Provide all mounting hardware as required to suit installation.	
54.8	Provide #2 AWG bare copper ground wire throughout cable tray system and connect to each section of tray using split bolt connector. Connect to building grounding system.	
55	Testing	
55.1	Provide all testing and start-up for each system to suit the manufacturer's requirements and to satisfactorily demonstrate to the Owner and Consultant that the system and/or equipment are operating in accordance with its intended purpose.	
55.2	Provide all required testing to suit the local Authorities Having Jurisdiction.	
55.3	All costs involved with all testing shall be fully borne by this Contractor. All testing and commissioning where some will cause electrical service interruptions to the building shall be performed during overnight hours.	
55.4	Upon completion of installation turn off all non-emergency lighting in presence of the Consultant and demonstrate all luminaires that are intended to be on emergency power circuits are correctly connected to these circuits. Take emergency lighting readings with only the emergency lights in operation and submit to the Consultant for review. Contractor and/or Owner to verify with the City prior to the emergency lighting testing and coordinate if City Inspector wants to be present at the time of testing.	
56	Circuit Breaker	
Bolt-on moulded case circuit breaker, quick make, quick break type, for manual and automatic operation. Single handle for multi pole applications. Magnetic instantaneous trip elements to operate only when value of current reaches setting. Trip setting on breaker with adjustable trips to range from 3 to 8 times current rating. Interrupting capacity to match existing or as noted. Moulded case circuit breaker to operate by means of thermal and magnetic tripping devices to provide inverse time current tripping and instantaneous tripping for short circuit protection. For breaker over 150A, shall be complete with interchangeable trip. For breaker more than 200A shall be solid state type with LSI adjustable overload long time delay, short circuit short time delay and short circuit instantaneous trip.		



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01	COST CONSULTANT	2023.04.11	DK
NO.	REVISION	DATE	BY



SIGNATURE

Project

CAM250 COLLEGE
RELOCATION
TORONTO, ONTARIO

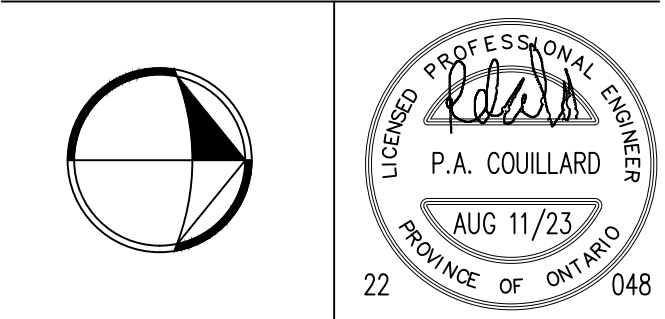
Drawing Title

ELECTRICAL SPECIFICATIONS

Date	MARCH 2023	Drawing No. E11
Scale	N.T.S.	
Drawn By	D.K.	
Approved By	P.C.	
File No.		
Project No.	22048	

ELECTRICAL LEGEND					
SYMBOL	DESCRIPTION	SYMBOL	DESCRIPTION	SYMBOL	DESCRIPTION
	EXISTING LUMINAIRE TO REMAIN.		CEILING MOUNTED DUPLEX RECEPTACLE.		SECURITY DOOR ACCESS READER.(CARD/TOUCH)
	EXISTING LUMINAIRE TO BE REMOVED OR RELOCATED.		FLUSH MOUNTED FLOOR FITTING C/W 15A, 120V DUPLEX RECEPTACLES AND PROVISIONS FOR COMMUNICATIONS AND AV WHERE INDICATED. REFER TO DETAILS FOR TYPE. FLUSH MOUNTED IN CONCRETE.		SECURITY DOOR CONTACT.
	EXISTING LUMINAIRE IN RELOCATED POSITION		FLOOR MOUNTED DUPLEX RECEPTACLE, 15A, 120V.		SECURITY SYSTEM EXIT PUSH BUTTON.
	NEW LUMINAIRE		FLOOR MOUNTED QUADPLEX RECEPTACLE.		SECURITY MAGLOCK.
	CROSS HATCHING OR EM DENOTES LUMINAIRE CONNECTED TO EMERGENCY POWER		LOW PROFILE FLOOR MOUNTED COMBINATION 120V DUPLEX RECEPTACLE(S) AND PROVISIONS FOR COMMUNICATIONS. REFER TO DETAILS FOR TYPE.		SECURITY ELECTRIC STRIKE.
	TRACK LIGHTING. LENGTH OF TRACK TO SCALE, QUANTITY OF FIXTURE HEADS AS INDICAED.		DIRECT CONNECTION TO SYSTEMS FURNITURE. 'T' DENOTES FLOOR MOUNTED, 'W' DENOTES WALL BASE FEED, 'WF' DENOTES FLOOR MOUNTED FED FROM WIREMOLD, 'P' DENOTES PACK POLE SUPPLIED WITH SYSTEMS FURNITURE. REFER TO DETAILS AND SYSTEMS FURNITURE SCHEDULE WHERE APPLICABLE.		SECURITY CAMERA.
	COVE LIGHT.		WALL MOUNTED TELEPHONE OUTLET BOX. REFER TO DETAIL.		SECURITY KEY PAD.
	LINEAR OR STRIP LIGHT LUMINAIRE, CEILING MOUNTED.		DATA OUTLET, WALL MOUNTED OR AS OTHERWISE SHOWN. REFER TO DETAILS. 'C' DENOTES MOUNTED ABOVE T-BAR CEILING.		SECURITY MOTION SENSOR.
	LINEAR OR STRIP LIGHT LUMINAIRE, WALL MOUNTED.		WIRELESS ACCESS POINT		INTERCOM STATION ('M' DENOTES MASTER).
	WALL WASHER LUMINAIRE. CEILING MOUNTED (RECESSED OR SURFACE).		WALL MOUNTED COMBINATION TELEPHONE/DATA OUTLET BOX. REFER TO DETAILS.		SECURITY CURRENT TRANSFER DEVICE.
	DOWNLIGHT LUMINAIRE. CEILING MOUNTED (RECESSED OR SURFACE).		WALL MOUNTED CABLE TV OUTLET BOX. REFER TO DETAIL.		DURESS BUTTON
	WALL MOUNTED LUMINAIRE.		VOICE/DATA OUTLETS MOUNTED IN TABLETOP MONUMENT. MONUMENT SUPPLIED BY OTHERS. PROVIDE JACKS AND TERMINATE COMMUNICATIONS CABLING AT MONUMENT. COORDINATE ALL WORK WITH AV CONTRACTOR AND CONFIGURATION OF TABLE.		PUSH BUTTON
	PENDANT MOUNTED LUMINAIRE.		POWER POLE WITH DEVICES AS SHOWN.		AUTOMATIC DOOR OPERATOR
	LUMINAIRE DESIGNATOR. LETTER DENOTES TYPE. REFER TO LUMINAIRE SCHEDULE.		FLOOR OR WALL MOUNTED RACEWAY C/W QUANTITY OF DEVICES INDICATED AND BARRIER FOR 2-COMPARTMENTS. WIREMOLD 4000 SERIES WITH SCUFFCOAT FINISH COLOUR AS DIRECTED BY ARCHITECT, UNLESS OTHERWISE NOTED. FEED FROM RECESSED EMT OR FLEXIBLE CONDUITS INSIDE WALL/COLUMN FROM ACCESSIBLE CEILING SPACE, FOR POWER AND DATA.		MAGNETIC DOOR HOLD OPEN DEVICE
	CEILING MOUNTED EXIT LIGHT C/W FACES AND ARROWS AS INDICATED. ARROWS INDICATE ILLUMINATED FACES AND DIRECTION. BARS INDICATE ILLUMINATED FACES ONLY.		CONDUITS/WIRING IN FLOOR BELOW OR CONNECTRAC, AS INDICATED.		HANDICAP OPERATOR PUSHBUTTON. SUPPLIED BY OTHERS, INSTALLED AND WIRED BY DIV. 16.
	WALL MOUNTED EXIT LIGHT C/W FACES AND ARROWS AS INDICATED. ARROWS INDICATE ILLUMINATED FACES AND DIRECTION. BARS INDICATE ILLUMINATED FACES ONLY.		DIRECT CONNECTION TO EQUIPMENT AS INDICATED.		SINGLE PHASE MOTOR CONNECTION (OR AS INDICATED ON PLANS).
	EMERGENCY D.C. BATTERY UNIT C/W UNIT MOUNTED HEADS (QUANTITY OF HEADS AS INDICATED). MOUNTED AT 8'-0" A.F.F.		DISCONNECT SWITCH. PROVIDE SAFETY DISCONNECT AT ALL MOTORS WHERE REQUIRED BY CODE, WHETHER SHOWN OR NOT ON FLOOR PLANS.		CONTACTOR.
	REMOTE EMERGENCY D.C. LAMP UNIT (NUMBER OF HEADS AS INDICATED). MOUNTED AT 8'-0" A.F.F. 'C' DENOTES CEILING MOUNT.		COMBINATION MAGNETIC STARTER BY DIV. 15..		VARIABLE SPEED DRIVE BY DIV. 15.
	SINGLE POLE LINE VOLTAGE LIGHT SWITCH. VOLTAGE TO SUIT LOAD CONTROLLED.		PANEL (RECESSED OR SURFACE).		DISTRIBUTION TRANSFORMER. K13 OR HARMONIC MITIGATING AS INDICATED.
	3-WAY LINE VOLTAGE LIGHT SWITCH. VOLTAGE TO SUIT LOAD CONTROLLED.		JUNCTION BOX. 'C' DENOTED CEILING MOUNTED, 'F' DENOTES FLOOR MOUNTED, 'A' DENOTES UNDER ACCESS FLOOR, 'B' DENOTES BLANKED OFF, 'TR' DENOTES TRANSITION BOXES FOR UNDERCARPET CABLING SYSTEM.		TIMER - PARAGON EC7000 SERIES.
	MANUAL MOTOR PROTECTION SWITCH C/W PILOT LIGHT.		DOOR BELL SYSTEM DOOR BUZZER.		DOOR BELL SYSTEM CHIME/BELL.
	EXHAUST FAN SWITCH, DECORA STYLE, COLOUR WHITE C/W WHITE COVERPLATE, SUPPLIED BY DIV. 15, INSTALLED BY DIV. 16.		PROJECTOR		JUNCTION BOX
	KEY OPERATED SWITCH.		HANDICAP PUSH BUTTON		FIRE ALARM PULL STATION.
	WALL MOUNTED OCCUPANCY SENSOR. LINE VOLTAGE DUAL TECHNOLOGY OCCUPANCY SENSOR. VOLTAGE TO SUIT LOAD CONTROLLED.		SMOKE DETECTOR-CEILING OR WALL MOUNTED AS SHOWN.		THERMAL DETECTOR CEILING OR WALL MOUNTED AS SHOWN.
	WALL MOUNTED OCCUPANCY SENSOR DIMMER. DUAL TECHNOLOGY OCCUPANCY SENSOR C/W 120V OR 347V POWER PACK AS REQUIRED AND ALL OTHER REQUIRED ACCESSORIES. VOLTAGE TO SUIT LOAD CONTROLLED.		SPRINKLER SYSTEM FLOW SWITCH BY DIV. 15 CONNECTED TO FA SYSTEM BY DIV. 16.		SPRINKLER SYSTEM LOW WATER PRESSURE SWITCH BY DIV. 15 CONNECTED TO FA SYSTEM BY DIV. 16.
	CEILING MOUNTED OCCUPANCY SENSOR C/W 120V OR 347V POWER PACK AS REQUIRED AND ALL OTHER REQUIRED ACCESSORIES.		SPRINKLER SYSTEM ALARM CHECK VALVE BY DIV. 15 CONNECTED TO FA SYSTEM BY DIV. 16.		SPRINKLER SYSTEM SUPERVISED VALVE BY DIV. 15 CONNECTED TO FA SYSTEM BY DIV. 16.
	GANGED SWITCHES.		LIFE SAFETY SYSTEM STROBE LIGHT WALL OR CEILING MOUNTED AS SHOWN.		FIRE FIGHTERS TELEPHONE HANDSET. FLUSH MOUNTED UNLESS OTHERWISE NOTED.
	DIMMER SWITCH. RATING AND TYPE TO SUIT LOAD.		EMERGENCY VOICE COMMUNICATIONS SPEAKER CEILING OR WALL MOUNTED AS SHOWN. FLUSH MOUNTED UNLESS OTHERWISE NOTED.		EMERGENCY VOICE COMMUNICATIONS SPEAKER COMPLETE WITH STROBE LIGHT, CEILING OR WALL MOUNTED AS SHOWN. FLUSH MOUNTED UNLESS OTHERWISE NOTED.
	PROJECTION SCREEN SWITCH. SUPPLIED BY OTHERS AND INSTALLED C/W WIRING BY ELECTRICAL CONTRACTOR.		FIRE ALARM PULL STATION.		SMOKE DETECTOR-CEILING OR WALL MOUNTED AS SHOWN.
	LOW VOLTAGE SWITCH TIED TO LOW VOLTAGE LIGHTING CONTROL SYSTEM.		THERMAL DETECTOR CEILING OR WALL MOUNTED AS SHOWN.		SPRINKLER SYSTEM FLOW SWITCH BY DIV. 15 CONNECTED TO FA SYSTEM BY DIV. 16.
	MOTORIZED BLIND CONTROL SWITCH. SUPPLIED BY OTHERS AND INSTALLED C/W WIRING BY DIV. 16.		SPRINKLER SYSTEM LOW WATER PRESSURE SWITCH BY DIV. 15 CONNECTED TO FA SYSTEM BY DIV. 16.		SPRINKLER SYSTEM ALARM CHECK VALVE BY DIV. 15 CONNECTED TO FA SYSTEM BY DIV. 16.
	LIGHTING CONTROL TOUCH SCREEN.		SPRINKLER SYSTEM SUPERVISED VALVE BY DIV. 15 CONNECTED TO FA SYSTEM BY DIV. 16.		LIFE SAFETY SYSTEM STROBE LIGHT WALL OR CEILING MOUNTED AS SHOWN.
	POWER AND COMMUNICATIONS		FIRE FIGHTERS TELEPHONE HANDSET. FLUSH MOUNTED UNLESS OTHERWISE NOTED.		EMERGENCY VOICE COMMUNICATIONS SPEAKER CEILING OR WALL MOUNTED AS SHOWN. FLUSH MOUNTED UNLESS OTHERWISE NOTED.
	WALL MOUNTED DUPLEX RECEPTACLE, 15A, 120V UNLESS OTHERWISE NOTED.		EMERGENCY VOICE COMMUNICATIONS SPEAKER COMPLETE WITH STROBE LIGHT, CEILING OR WALL MOUNTED AS SHOWN. FLUSH MOUNTED UNLESS OTHERWISE NOTED.		SMOKE DETECTOR-CEILING OR WALL MOUNTED AS SHOWN.
	WALL MOUNTED DUPLEX RECEPTACLE, 20A, 120V T-SLOT (CSA 5-20R) UNLESS OTHERWISE NOTED.		FIRE ALARM PULL STATION.		SMOKE DETECTOR-CEILING OR WALL MOUNTED AS SHOWN.
	RECEPTACLE MOUNT OVER COUNTER OR MOUNT 42" (1065mm) AFF		THERMAL DETECTOR CEILING OR WALL MOUNTED AS SHOWN.		SPRINKLER SYSTEM FLOW SWITCH BY DIV. 15 CONNECTED TO FA SYSTEM BY DIV. 16.
	RECEPTACLE FOR TV		SPRINKLER SYSTEM LOW WATER PRESSURE SWITCH BY DIV. 15 CONNECTED TO FA SYSTEM BY DIV. 16.		SPRINKLER SYSTEM ALARM CHECK VALVE BY DIV. 15 CONNECTED TO FA SYSTEM BY DIV. 16.
	RECEPTACLE FOR FRIDGE		SPRINKLER SYSTEM SUPERVISED VALVE BY DIV. 15 CONNECTED TO FA SYSTEM BY DIV. 16.		LIFE SAFETY SYSTEM STROBE LIGHT WALL OR CEILING MOUNTED AS SHOWN.
	RECEPTACLE FOR MICROWAVE		FIRE FIGHTERS TELEPHONE HANDSET. FLUSH MOUNTED UNLESS OTHERWISE NOTED.		EMERGENCY VOICE COMMUNICATIONS SPEAKER CEILING OR WALL MOUNTED AS SHOWN. FLUSH MOUNTED UNLESS OTHERWISE NOTED.
	RECEPTACLE FOR DISHWASHER		EMERGENCY VOICE COMMUNICATIONS SPEAKER COMPLETE WITH STROBE LIGHT, CEILING OR WALL MOUNTED AS SHOWN. FLUSH MOUNTED UNLESS OTHERWISE NOTED.		SMOKE DETECTOR-CEILING OR WALL MOUNTED AS SHOWN.
	WALL MOUNTED DUPLEX RECEPTACLE WITH GROUND FAULT INTERRUPTER.		FIRE ALARM PULL STATION.		SMOKE DETECTOR-CEILING OR WALL MOUNTED AS SHOWN.
	WALL OR POWER POLE MOUNTED SINGLE RECEPTACLE. 15A, 120V U-GROUND OR AS OTHERWISE INDICATED BY CSA CONFIGURATION OR VOLTAGE AND AMPERAGE AS INDICATED. 'C' DENOTES MOUNTED ABOVE T-BAR CEILING.		THERMAL DETECTOR CEILING OR WALL MOUNTED AS SHOWN.		SPRINKLER SYSTEM FLOW SWITCH BY DIV. 15 CONNECTED TO FA SYSTEM BY DIV. 16.
	WALL MOUNTED QUAD RECEPTACLE.		SPRINKLER SYSTEM LOW WATER PRESSURE SWITCH BY DIV. 15 CONNECTED TO FA SYSTEM BY DIV. 16.		SPRINKLER SYSTEM ALARM CHECK VALVE BY DIV. 15 CONNECTED TO FA SYSTEM BY DIV. 16.
	SINGLE U-GROUND 15A, 120V RECESSED CLOCK RECEPTACLE, MOUNT AT HEIGHT INDICATED ON ARCHITECT'S DRAWINGS.		SPRINKLER SYSTEM SUPERVISED VALVE BY DIV. 15 CONNECTED TO FA SYSTEM BY DIV. 16.		LIFE SAFETY SYSTEM STROBE LIGHT WALL OR CEILING MOUNTED AS SHOWN.

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01	COST CONSULTANT	2023.04.11	DK
NO.	REVISION	DATE	BY



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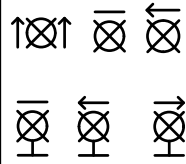
Project

CAMH 250 COLLEGE
RELOCATION
TORONTO, ONTARIO

Drawing Title

ELECTRICAL LEGEND

Date	MARCH 2023	Drawing No. E1.2
Scale	N.T.S.	
Drawn By	D.K.	
Approved By	P.C.	
File No.		
Project No.	22048	

LUMINAIRE SCHEDULE	
SYMBOL	DESCRIPTION
'A'	LOW PROFILE SURFACE MOUNTED, WRAPAROUND, LED, 2900 LUM, 3500K, LUMAX#WNLLED-29L-35K-48-9
'W'	LINEAR WALL MOUNTED DIRECT/INDIRECT, LED, WHITE FINISH, 108/1290 LUM BARTCO#BSS722-45-35-D-1-H1-HA-WM-SN-WH
	GREEN RUNNING MAN PICTOGRAM EDGE LIT EXIT SIGN, CSA 22.2 No. 141 STANDARD, 120/347V UNIVERSAL VOLTAGE AC, 6V-24V DC, WHITE FINISH, CLEAR ACRYLIC PANEL WITH PICTOGRAM LEGEND AND WHITE LED LIGHT SOURCE, EXTRUDED ALUMINUM TRIM, C860 APPROVED, SINGLE OR DOUBLE-FACE WITH DIRECTIONAL INDICATORS AND MOUNTING AS REQUIRED. FOR FINISHED CEILING AND WALL MOUNTING, PROVIDE FLUSH MOUNTED RECESSED BACK BOX WITH FLUSH MOUNTED WHITE TRIM PLATE. WHERE EXIT SIGN IS REQUIRED TO BE SUSPENDED, PROVIDE ALL REQUIRED MOUNTING ACCESSORIES FOR A COMPLETE INSTALLATION. EXACT COLOUR/FINISH SHALL BE DETERMINED BY THE ARCHITECT DURING THE SHOP DRAWING REVIEW STAGE. BEGHELLI 'GUIDA' OR APPROVED EQUAL.

SPECIAL NOTES – FIRE ALARM SYSTEM	
1.	EXISTING FIRE ALARM SYSTEM IS MANUFACTURED BY XXX. ELECTRICAL CONTRACTOR SHALL PROVIDE ALL FIRE ALARM SYSTEM WORK INDICATED ON THE DRAWINGS.
2.	ELECTRICAL CONTRACTOR SHALL BE RESPONSIBLE FOR THE REMOVAL, RELOCATION, SUPPLY AND INSTALLATION OF ALL FIRE ALARM SYSTEM DEVICES AND ANCILLARY EQUIPMENT. ALL NEW FIRE ALARM SYSTEM DEVICES AND EQUIPMENT SHALL MATCH EXISTING.
3.	ALL FIRE ALARM FINAL TIE-IN, TESTING AND VERIFICATIONS SHALL BE PERFORMED BY THE BASE BUILDING FIRE ALARM MAINTENANCE CONTRACTOR. ELECTRICAL CONTRACTOR SHALL RETAIN THE SERVICES OF THE BASE BUILDING FIRE ALARM MAINTENANCE CONTRACTOR TO PERFORM THIS WORK AND SHALL INCLUDE AL THE COSTS IN THE TENDER.
4.	ALL FIRE ALARM SYSTEM RE-PROGRAMMING SHALL BE PERFORMED BY THE BASE BUILDING FIRE ALARM MANUFACTURER. THE ELECTRICAL CONTRACTOR SHALL RETAIN THE SERVICES OF THE BASE BUILDING FIRE ALARM MANUFACTURER TO PERFORM THIS WORK AND SHALL INCLUDE ALL THE COSTS IN THE TENDER PRICE.
5.	THE ELECTRICAL CONTRACTOR SHALL COORDINATE WITH FIRE ALARM MAINTENANCE CONTRACTOR AND MANUFACTURER DURING THE TENDER PERIOD TO CONFIRM ALL WIRING REQUIREMENTS NECESSARY TO PERFORM THE FIRE ALARM WORK. NO EXTRA COSTS WILL BE PERMITTED AS A RESULT OF FAILURE BY THE CONTRACTOR TO OBTAIN THE NECESSARY INFORMATION. ELECTRICAL CONTRACTOR SHALL PURCHASE ALL REQUIRED FIRE ALARM EQUIPMENT, DEVICES, AMPLIFIERS AND ANCILLARY COMPONENTS FROM BASE BUILDING FIRE ALARM MANUFACTURER.
6.	ELECTRICAL CONTRACTOR SHALL MAKE ARRANGEMENTS WITH THE OWNER PRIOR TO ANY WORK ON THE FIRE ALARM SYSTEM.
7.	ALL FIRE ALARM WORK SHALL REQUIRE FIRE WATCH.
8.	REFER ALSO TO ELECTRICAL SPECIFICATIONS SECTION 48.
7.	ELECTRICAL CONTRACTOR TO OBTAIN THE CONTACT PERSON OF THE BASE BUILDING FIRE ALARM MAINTENANCE CONTRACTOR FROM THE OWNER.

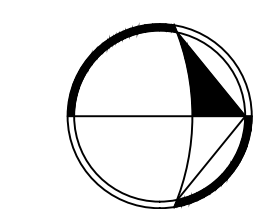
LIGHTING NOTES	
1.	WITHIN 10 WORKING DAYS OF CONTRACT AWARD, THE CONTRACTOR SHALL PROVIDE SUBMITTALS FOR ALL SPECIFIED LUMINAIRES FOR THE REVIEW BY THE DESIGN TEAM. THE SUBMITTALS SHALL INCLUDE LUMINAIRE CATALOG CUTS INDICATING THE FOLLOWING: – MANUFACTURER'S NAME AND COMPLETE CATALOG NUMBER – FIXTURE TYPE DESIGNATION – COMPLETE DIMENSIONS AND FINISHES – FIXTURE PHOTOMETRIC TEST DATA FROM AN INDEPENDENT TESTING LABORATORY. – ALL FIXTURE ACCESSORIES WHEN SPECIFIED – WHERE FIXTURE OPTIONS ARE AVAILABLE IT SHALL BE CLEARLY INICATED WHICH OPTIONS ARE SELECTED OR APPLICABLE FOR THIS SUBMISSION – LAMP TYPE, QUANTITY PER LUMINAIRE, WATTAGE, LUMEN OUTPUT, RATED LIFE, COLOUR TEMPERATURE, COLOUR RENDERING INDEX AND BEAM SPREAD AS APPLICABLE – BALLAST TYPE, VOLTAGE AND MANUFACTURER AS APPLICABLE – LED DRIVER TYPE, VOLTAGE AND MANUFACTURER AS APPLICABLE
2.	SUBMITTALS FOR CUSTOM LUMINAIRES SHALL ALSO INCLUDE SCALED DRAWINGS SHOWING THE LAYOUT AND DIMENSIONS OF ALL FIXTURE COMPONENTS AND ACCESSORIES, THE METHOD OF INSTALLATION AND A COMPLETE BILL OF MATERIALS.
3.	CONTRACTOR SHALL CONFIRM THAT LUMINAIRE VOLTAGES ARE COMPATIBLE WITH THEIR APPLICATION AND SYSTEM CIRCUITING PRIOR TO ORDERING FIXTURES.
4.	CONTRACTOR SHALL CONFIRM THAT LUMINAIRE CEILING TRIMS ARE COMPATIBLE WITH THEIR APPLICATION PRIOR TO ORDERING FIXTURES.
5.	LUMINAIRES, LAMPS AND RELATED DEVICES PROVIDED UNDER THIS CONTRACT SHALL CARRY THE APPROVAL LABEL OF CSA FOR THE SPECIFIC APPLICATION IN WHICH THEY ARE USED.
6.	THE STATEMENT 'ARCHITECT OR DESIGNER TO CONFIRM PAINT FINISH' SHALL BE INTERPRETED TO MEAN THAT THE PAINT FINISH OF THE LUMINAIRE SHALL MATCH THE APPEARANCE OF THE PAINT CHIP OR COLOUR NUMBER PROVIDED BY THE ARCHITECT DURING THE SHOP DRAWING SUBMITTAL REVIEW PROCESS.
7.	CONTRACTOR SHALL PROVIDE THE CORRECT SIZE OF SECONDARY WIRING FROM REMOTE TRANSFORMERS AND/OR REMOTE BALLASTS/LED DRIVERS AS REQUIRED TO KEEP VOLTAGE DROP IN THE SECONDARY WIRING BELOW 3% OF THE RATED VOLTAGE.
8.	ALL WALL MOUNTED DIMMER SWITCHES SHALL BE WHITE FINISH C/W MATCHING WHITE COVERPLATE, UNLESS NOTED OTHERWISE. DIMMERS SWITCHES SHALL BE SUPPLIED TO ENSURE COMPATIBILITY WITH INTENDED APPLICATION I.E. ELECTRONIC LOW VOLTAGE TRANSFORMER OR FLUORESCENT BALLAST OR PARTICULAR TYPE OF LED DRIVER SUPPLIED WITH THAT LUMINAIRE. CONFIRM WITH ARCHITECT/INTERIOR DESIGN EXACT FINISH COLOUR PRIOR TO ORDERING.
9.	REFER TO THE ARCHITECT/INTERIOR DESIGNER'S FLOOR PLANS AND ELEVATION DRAWINGS FOR INFORMATION REGARDING MOUNTING HEIGHTS OF ALL WALL MOUNTED LUMINAIRES. WHERE THIS INFORMATION IS NOT INDICATED THE CONTRACTOR SHALL CONFIRM EXACT MOUNTING HEIGHT WITH THE DESIGN CONSULTANT PRIOR TO ROUGHING IN ANY ELECTRICAL SERVICES.
10.	EXACT LOCATION OF ANY REMOTE MOUNTED TRANSFORMERS, BALLASTS OR LED DRIVERS SHALL BE CONFIRMED ON SITE. DEVICES TO BE LOCATED IN AN ACCESSIBLE LOCATION (ACCESSIBLE CEILING, ELECTRICAL ROOM OR BELOW COUNTER). DO NOT EXCEED LEAD LENGTHS RECOMMENDED BY LIGHTING MANUFACTURER.
11.	CONFIRM THE EXACT MOUNTING HEIGHT OF ALL SUSPENDED LUMINAIRES WITH THE ARCHITECT/INTERIOR DESIGNER OR DESIGN CONSULTANT PRIOR TO INSTALLATION.

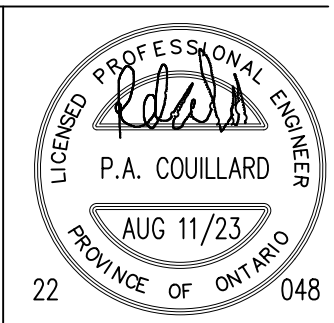
GENERAL NOTES	
1.	REFER TO ARCHITECTURAL/INTERIOR DESIGN DOCUMENTS FOR PHASING REQUIREMENTS AND ALLOW FOR ALL COSTS TO COMPLY WITH THESE REQUIREMENTS.
2.	REFER TO ARCHITECTURAL/INTERIOR DESIGN DRAWINGS FOR ALL FIRE RATED AND SMOKE RATED WALLS. SEAL ALL CONDUIT PENETRATIONS THROUGH SUCH WALLS IN ACCORDANCE WITH SPECIFICATIONS.
3.	COORDINATE WORK WITH THE GENERAL CONTRACTOR TO LEAST INTERFERE WITH THE OWNER'S USE OF THE FACILITY. GENERAL CONTRACTOR MAY REQUIRE WORK INTERRUPTIONS DURING THE DAY AND MAY REQUIRE CERTAIN WORK TO BE PERFORMED ON PREMIUM TIME AT NIGHT OR ON WEEKENDS.
4.	COMPLETE EXTENT OF DEMOLITION IS NOT SHOWN. TENDERERS SHALL REVIEW THE SITE TOGETHER WITH THE DOCUMENTS OF ALL OTHER TRADES TO DETERMINE THE FULL EXTENT OF DEMOLITION. MAKE ALL ALLOWANCES FOR ANY NEW OR EXISTING SERVICES, DEVICES, OR EQUIPMENT RELOCATIONS NECESSARY TO COMPLETE THE WORK AS INTENDED BY THE DRAWINGS. ALLOW FOR ALL COSTS.
5.	VISIT AND EXAMINE CAREFULLY THE BUILDING SO AS TO BECOME FAMILIAR WITH EXISTING CONDITIONS AND DIFFICULTIES THAT WILL ATTEND THE EXECUTION OF THE WORK, BEFORE SUBMITTING PROPOSALS. SUBMISSION OF A PROPOSAL WILL BE EVIDENCE THAT SUCH EXAMINATION HAS BEEN MADE AND LATER CLAIMS FOR LABOUR, EQUIPMENT OR MATERIALS BECAUSE OF DIFFICULTIES ENCOUNTERED, WILL NOT BE RECOGNIZED.
6.	ELECTRICAL DRAWINGS ARE DIAGRAMMATIC ONLY. FOR EXACT LOCATION OF ALL LIGHTING FIXTURES, SWITCHES, DIMMERS, RECEPTACLES, ETC., REFER TO ARCHITECTURAL/INTERIOR DESIGN DRAWINGS AND ELEVATIONS.
7.	WHERE RELOCATION OF EXISTING LUMINAIRES AND DEVICES IS INVOLVED, ADDITIONAL LUMINAIRES AND DEVICES MAY BE REQUIRED. CONTRACTOR TO CONFIRM QUANTITIES REQUIRED. ADDITIONAL LUMINAIRES AND DEVICES REQUIRED SHALL BE SUPPLIED AND INSTALLED BY ELECTRICAL CONTRACTOR. LUMINAIRES AND DEVICES TO MATCH EXISTING BASE BUILDING STANDARD AND/OR AS SPECIFIED.
8.	ALLOW FOR REMOVAL AND RE-INSTALLATION OF EXISTING DEVICES TO PERMIT NEW ARCHITECTURAL/INTERIOR DESIGN FINISHES. REMOVE AND RE-INSTALL ALL CEILING MOUNTED LUMINAIRES AND DEVICES WHERE T-BAR CEILING TILES ARE TO BE TEMPORARILY REMOVED OR REPLACED. REVIEW ARCHITECTURAL/INTERIOR DESIGN PLANS DURING TENDER PERIOD TO DETERMINE FULL EXTENT OF THE WORK.
9.	CONTRACTOR SHALL NOT RE-USE RECEPTACLES AND SWITCHES FROM DEMOLITION. ALL RECEPTACLES AND SWITCHES INSTALLED SHALL BE NEW.
10.	COORDINATE EXACT REQUIREMENTS FOR POWER AND COMMUNICATION FEEDS TO WORKSTATIONS WITH WORKSTATION SUPPLIER PRIOR TO ROUGH-IN.
11.	NOT ALL REQUIRED FEEDERS AND BRANCH CIRCUIT CONDUITS ARE SHOWN ON THE FLOOR PLANS. REFER TO SINGLE LINE DIAGRAM AND PANEL SCHEDULES FOR ADDITIONAL INFORMATION.
12.	FOR X-RAY WORK GUIDELINES AND REQUIREMENTS REFER TO THE ELECTRICAL GENERAL REQUIREMENTS THAT FORM PART OF THE ELECTRICAL SPECIFICATIONS.
13.	CIRCUITING IS SHOWN FOR GROUPING PURPOSES ONLY. EXISTING CIRCUITS THAT ARE TO REMAIN ARE NOT SHOWN ON PANEL SCHEDULES OR ON FLOOR PLANS. CONTRACTOR SHALL MAINTAIN/REWORK EXISTING CIRCUITS AS REQUIRED AND INSTALL NEW CIRCUITS IN REMAINING BREAKER POSITIONS IN PANELS. SHOW FINAL CIRCUIT NUMBERS USED ON FLOOR PLANS AND PROVIDE FINAL PANEL SCHEDULES ON THE AS-BUILT DRAWINGS AND PANEL DIRECTORIES IN THE PANELS. TYPICAL FOR ALL PANELS.
14.	ALL REDUNDANT OR UNUSED BRANCH WIRING THAT IS REMOVED DURING DEMOLITION SHALL BE CUT BACK TO SOURCE PANEL AND DISCONNECTED FROM PANEL. THESE CIRCUITS SHALL BE IDENTIFIED AS SPARE AND BE MADE AVAILABLE FOR RE-USE.
15.	ENSURE THAT NEW OR RELOCATED RUNNING MAN SIGNS ARE POSITIONED TO BE CLEARLY VISIBLE ALONG THE INTENDED PATH OF EGRESS AND THAT NO CEILING OR WALL MOUNTED OBSTRUCTIONS INTERFERE WITH OR BLOCK THE VISIBILITY OF THE RUNNING MAN SIGN. IN THE EVENT THAT THE BUILDING INSPECTOR OR THE CONSULTANT FINDS THE SIGN IS OBSTRUCTED FROM VIEW THE CONTRACTOR SHALL RELOCATE THE SIGN AT NO EXTRA COST. INCLUDE IN TENDER PRICE FOR THE SUPPLY AND INSTALLATION OF FIVE (5) ADDITIONAL RUNNING MAN SIGNS C/W WIRING TO NEAREST AVAILABLE RUNNING MAN SIGN IN THE EVENT THAT THE BUILDING INSPECTOR REQUESTS ADDITIONAL SIGNS DURING FINAL INSPECTION BY THE CITY. ALLOW FOR MAXIMUM WIRING DISTANCE TO NEAREST SIGN.
16.	INCLUDE IN TENDER PRICE FOR THE SUPPLY AND INSTALLATION OF SEVEN (7) ADDITIONAL FIRE ALARM SPEAKERS C/W WIRING TO NEAREST AVAILABLE CIRCUIT IN THE EVENT THAT THE BUILDING INSPECTOR REQUESTS ADDITIONAL DEVICES DURING FINAL INSPECTION BY THE CITY. ALLOW FOR MAXIMUM WIRING DISTANCE TO NEAREST CIRCUIT.
17.	REFER TO MECHANICAL DRAWINGS FOR EXACT SIZE, LOCATION, AND ELECTRICAL REQUIREMENTS FOR ALL MOTORS AND MECHANICAL EQUIPMENT. COORDINATE WITH MECHANICAL CONTRACTOR AND PROVIDE ELECTRICAL CONNECTIONS AS REQUIRED FOR A COMPLETE AND FULLY OPERABLE SYSTEM.
18.	CONTRACTOR SHALL COORDINATE WITH ALL "VENDOR" TRADES FURNISHING EQUIPMENT REQUIRING ELECTRICAL CONNECTIONS. CHECK CAREFULLY ALL CONSTRUCTION DRAWINGS AND SPECIFICATIONS THAT ARE PART OF THIS PROJECT TO INSURE COMPLIANCE WITH VENDOR REQUIREMENTS. NO EXTRA CHARGES SHALL BE ACCEPTED BY OWNER, AFTER BIDDING FOR SUCH EQUIPMENT AND LABOR.
19.	COORDINATE WORK WITH FIELD CONDITIONS AND OTHER TRADES AND INSTALL CONDUIT AND BOXES TO CLEAR EMBEDDED DUCTS, OPENINGS AND OTHER STRUCTURAL FEATURES.
20.	NOT ALL OF THE REQUIRED BOXES, CONDUITS, WIRING AND SLEEVING ARE SHOWN ON THE DRAWINGS. ONLY MAJOR ITEMS ARE SHOWN. COORDINATE AND PROVIDE ALL WORK AS REQUIRED FOR PROPER DEMOLITION AND INSTALLATION.
21.	NO WIRING SHALL BE DONE PRIOR TO THE CONTRACTOR'S REVIEW OF THE PROJECT EQUIPMENT SHOP DRAWINGS. COORDINATE FIELD CONDITIONS WITH THE DESIGN DOCUMENTS. ANY DISCREPANCIES SHALL BE BROUGHT TO THE ARCHITECT/INTERIOR DESIGNER/ENGINEER'S ATTENTION FOR FINAL RESOLUTION. WORK THAT HAS TO BE REPLACED DUE TO LACK OF PROPER SHOP DRAWING COORDINATION SHALL BE DONE AT CONTRACTOR'S EXPENSE.
22.	ALL OUTLETS BOXES SHALL BE PROVIDED WITH PROPER COVER PLATES.
23.	CIRCUITS ARE SIZED ASSUMING NO MORE THAN THREE CURRENT CARRYING CONDUCTORS IN A SINGLE CONDUIT. FOR CONDUITS CONTAINING MORE THAN THREE, PROVIDE APPROPRIATE DE-RATING OF CONDUCTORS PER APPLICABLE CODES.
24.	EXCEPT AS NOTED, ALL EXISTING LUMINAIRES AND POWER & SYSTEMS DEVICES AND WIRING THAT ARE TO BE REMOVED SHALL BECOME THE PROPERTY OF THE CONTRACTOR AND SHALL BE REMOVED FROM THE SITE, UNLESS OTHERWISE NOTED. THE EXCEPTION ARE THE BASE BUILDING LUMINAIRES, EXIT SIGNS AND SPEAKERS THAT ARE TO BE TURNED OVER TO THE OWNER AND MOVED TO A DESIGNATED LOCATION IN THE BUILDING AS INSTRUCTED BY THE OWNER.
25.	CONTRACTOR SHALL ENSURE THAT ALL EXISTING DEVICES THAT ARE TO REMAIN IN THE ROOM SHOWN ON THE NEW PLANS AND DO NOT INTERFERE WITH NEW PARTITION WALLS. ALLOW FOR RELOCATION OF DEVICES WHERE REQUIRED.
26.	CLEARLY MARK ALL EXPOSED CONDUITS, PULL BOXES, JUNCTION BOXES, ETC. TO INDICATE THE NATURE OF THE SERVICES AS PER BASE BUILDING STANDARDS.
27.	ALL WORK ASSOCIATED WITH THE CORE DRILLING, POWER SHUTDOWNS, MODIFICATIONS TO BASE BUILDING LIFE SAFETY, EMERGENCY LIGHTING, LOW VOLTAGE LIGHTING CONTROL AND SECURITY SYSTEM SHALL BE PERFORMED AFTER REGULAR BUSINESS HOURS AND AT THE TIMES APPROVED BY THE OWNER.
28.	IDENTIFY ALL EXISTING AND NEW RECEPTACLES AND SYSTEMS FURNITURE CONNECTION BOXES WITH PANEL AND CIRCUIT NUMBER ON TYPEWRITTEN LABEL.
29.	ALL LIGHTING FIXTURES (EXISTING, RELOCATED, AND NEW) TO BE PROPERLY SUPPORTED FROM THE BUILDING STRUCTURE. ALL NEW AND/OR RENOVATED LIGHTING FIXTURES TO BE COMPLETE WITH LUMINAIRE DISCONNECT. PROVIDE NEW LUMINAIRE DISCONNECT ON ALL EXISTING LIGHTING FIXTURES THAT ARE TO BE RENOVATED.
30.	ENSURE THAT ALL ELECTRICAL, LIFE SAFETY SERVICES AND SERVICES FOR EXISTING LUMINAIRES AND DEVICES THAT ARE REQUIRED TO REMAIN IN SERVICE SHALL DO SO.
31.	BE RESPONSIBLE AND PAY FOR ANY DAMAGE TO THE BUILDING INCURRED BY WORK OF THIS CONTRACTOR OR REPAIR TO THE SATISFACTION OF THE OWNER AND CONSULTANT.
32.	CARRY OUT THE WORK WITH A MINIMUM OF NOISE, DUST AND DISTURBANCE.



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01	COST CONSULTANT	2023.04.11	DK
NO.	REVISION	DATE	BY





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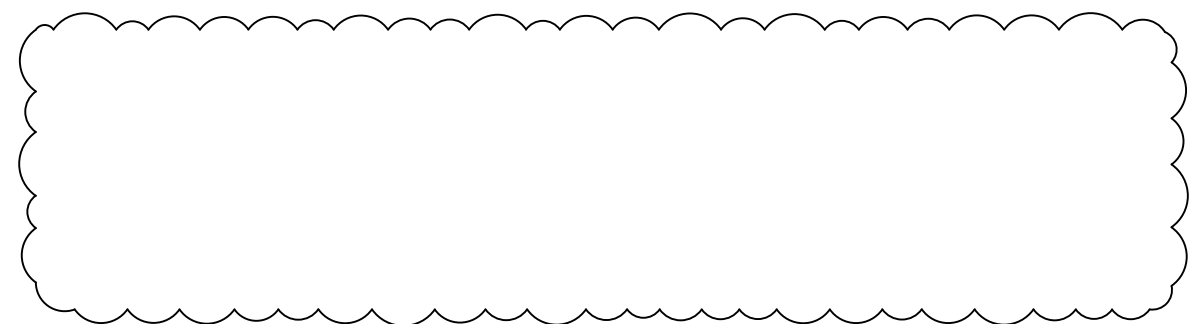
Project

**CAMH 250 COLLEGE
RELOCATION
TORONTO, ONTARIO**

Drawing Title

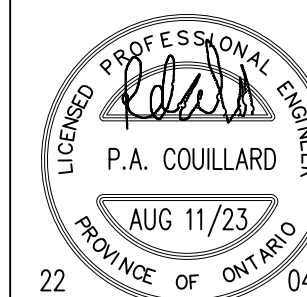
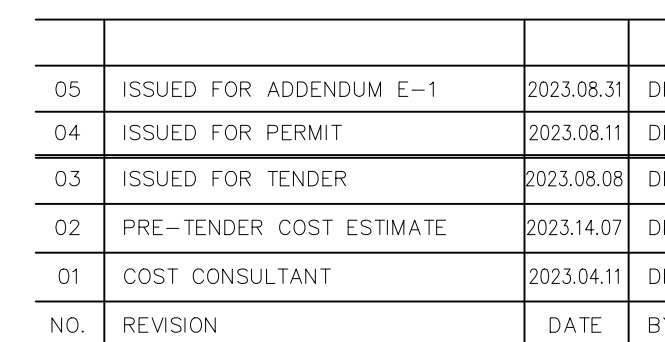
LUMINAIRE SCHEDULE AND
NOTES

Date	MARCH 2023	Drawing No. E1.3
Scale	N.T.S.	
Drawn By	D.K.	
Approved By	P.C.	
File No.		
Project No.	22048	



N-1 ALL EXISTING LIGHTING FIXTURES TO REMAIN AS PRESENTLY INSTALLED. CHECK FOR NON OPERATIONAL 'LAMPS' AND REPORT FINDINGS TO ENGINEER.

1. EXACT LOCATION OF ALL EXISTING LUMINAIRES, LIGHT SWITCHES, DIMMERS ETC. SHALL BE CONFIRMED ON SITE.
2. ALL LUMINAIRES, LIGHT SWITCHES AND DIMMERS SHOWN ON THIS DRAWING ARE EXISTING TO REMAIN UNLESS OTHERWISE SHOWN WITH AN "R" TO BE REMOVED. CUT BACK AND REMOVE ALL UNUSED CONDUITS AND WIRING BACK TO SOURCE PANEL. REMOVE ALL LUMINAIRES, LIGHT SWITCHES, DIMMERS AND WIRING FROM WALLS AND CEILINGS THAT ARE TO BE DEMOLISHED.
3. CONTRACTOR SHALL BE AWARE THAT NOT ALL EXISTING LUMINAIRES, LIGHT SWITCHES, DIMMERS, SWITCHES AND DEVICES ARE TO BE REMOVED AS NECESSARILY INDICATED ON THIS PLAN. CONTRACTOR SHALL STILL BE RESPONSIBLE FOR REMOVING ALL SUCH ITEMS AS REQUIRED TO FACILITATE THE COMPLETE DEMOLITION.
4. WHERE THE REMOVAL OF LUMINAIRES, LIGHT SWITCHES AND DIMMERS AFFECT THE OPERATION OF EXISTING LUMINAIRES, LIGHT SWITCHES AND DIMMERS TO REMAIN, CONTRACTOR SHALL REPLACE/MAKE GOOD BRANCH WIRING AS REQUIRED TO ENSURE CONTINUITY OF OPERATION OF REMAIN LUMINAIRES, LIGHT SWITCHES AND DIMMERS
5. ALL EXISTING LUMINAIRES, LIGHT SWITCHES, DIMMERS WHICH ARE NO LONGER REQUIRED SHALL BE REMOVED AND DISPOSED OF OFF SITE.
6. REFER TO NEW PLAN FOR NEW LOCATION OF RELOCATED LUMINAIRES, DEVICES AND EQUIPMENT.
7. REMOVE ALL REDUNDANT LINE VOLTAGE AND LOW VOLTAGE CONDUIT AND WIRING IN CEILING SPACE WHICH IS NOT IN USE.



Date	MARCH 2023	
Scale	1/8"=1'-0"	
Drawn By	D.K.	
Approved By	P.C.	Drawing No.
File No.		E2.0
Project No.	22048	

E2.00



DRAWING REFERENCE NOTES:

- (N-1) EXISTING EMERGENCY POWERED SWITCH LIGHTING FIXTURE TO BE DISCONNECTED FROM EMERGENCY CONTROL RELAY AND WIRED TO BE CONTROLLED FROM NORMAL LIGHTING SWITCH CIRCUIT.

SEP/IDENTIFIED PRICES

CONTRACTOR TO CARRY COST TO REPLACE APPROXIMATELY 10% OF ALL EXISTING FIXTURE LAMPS WITH NEW LED "RETROFIT" STYLE T8/T5 FORMAT LAMPS. EXACT QUANTITIES AND STYLES TO BE VERIFIED ON SITE.

REFER TO BID FORM APPENDIX "C"

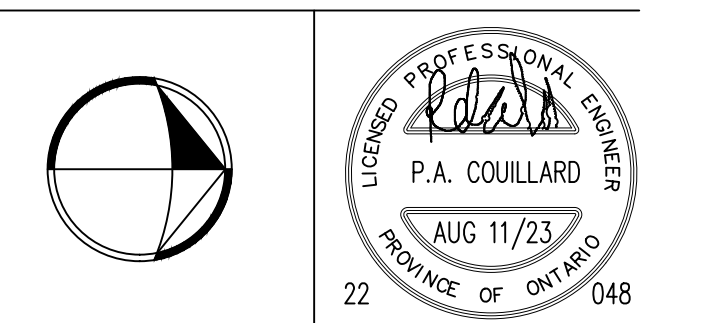
DRAWING GENERAL NOTES:

- ALL LIGHTING AND CONTROLS THIS DRAWING ARE EXISTING UNLESS NOTED AS NEW.
- REFER TO THE ARCHITECT'S REFLECTED CEILING PLAN FOR THE EXACT LOCATION OF ALL CEILING MOUNTED LUMINAIRES.
- EXACT LOCATION OF ALL EXISTING LUMINAIRES AND LIGHT SWITCHES/CONTROLS SHALL BE CONFIRMED ON SITE
- REFER TO THE ARCHITECT'S DRAWINGS FOR THE EXACT LOCATION AND MOUNTING HEIGHT OF ALL WALL MOUNTED LIGHT AND DIMMER SWITCHES. ALL WALL MOUNTED LIGHT AND DIMMER SWITCHES SHALL BE MOUNTED FOR BARRIER FREE, BETWEEN 36" AFF AND 43" AFF. COORDINATE WITH ARCHITECT ON SITE FOR EXACT LOCATION PRIOR TO COMMENCEMENT OF WORK.
- ALL WALL MOUNTED EXIT SIGNS, EMERGENCY LIGHTING BATTERY UNITS AND REMOTE EMERGENCY HEADS SHALL BE MOUNTED AT 8'-0" AFF UNLESS OTHERWISE NOTED.
- ALL LIGHTING FIXTURES ARE TO BE LOCATED AS REQUIRED ON THE JOB TO CLEAR DUCTS, PIPING, EQUIPMENT, AND/OR MECHANICAL UNITS. THE LOCATIONS SHOWN ON THIS PLAN ARE APPROXIMATE.
- ALLOW FOR TEMPORARY REMOVAL AND RE-INSTALLATION OF EXISTING LUMINAIRES AND OTHER CEILING MOUNTED DEVICES THAT ARE TO REMAIN, AS REQUIRED TO PERMIT INSTALLATION OF HVAC SYSTEMS. REFER TO MECHANICAL DRAWINGS FOR EXTENT OF SCOPE OF WORK. COORDINATE ALL WORK WITH MECHANICAL DIVISION CONTRACTOR.
- WHEN RELOCATING BASE BUILDING LIGHTING FIXTURES, EXTEND EXISTING CIRCUITS AS REQUIRED. MATCH EXISTING BRANCH WIRING METHOD.
- ALL RELOCATED BASE BUILDING LUMINAIRES SHALL BE TIED INTO LOCAL LIGHTING CIRCUITS AS REQUIRED USING SAME WIRING METHOD AS EXISTING FIXTURE.
- ALL CONDUITS AND WIRING IN FINISHED AREAS AND AREAS WITH SUSPENDED TILE OR WHITE GYPSUM

BOARD CEILINGS SHALL BE RUN CONCEALED.

- ALL CONDUITS AND WIRING IN OPEN CEILING AREAS SHALL BE RUN TIGHT TO THE UNDERSIDE OF THE CEILING DECK. DO NOT SUSPEND CONDUITS MID-SPAN.
- ALL LIGHT SWITCHES SHALL BE ROCKER STYLE, DECORA TYPE, WHITE WITH MATCHING COVERPLATE. VOLTAGE TO SUIT LOAD CONTROLLED.
- ALL DIMMER SWITCHES SHALL BE LUTRON DIVA TYPE 0-10V DIMMING PROTOCOL OR ELV DIMMING PROTOCOL, WHITE FINISH, RATED FOR CONNECTED LOAD PLUS 25% SPARE CAPACITY WITH MATCHING COVERPLATE, UNLESS NOTED OTHERWISE. PROVIDE CORRECT DIMMER TYPE TO SUIT LOAD CONTROLLED. ALL WIRING REQUIREMENTS PER MANUFACTURER'S RECOMMENDATIONS.
- ALL OCCUPANCY SENSOR SWITCHES SHALL DECORA TYPE, WHITE WITH MATCHING COVERPLATE. MANUAL/AUTO CONTROL, COLOUR WHITE, FLUSH MOUNTED. DUAL TECHNOLOGY, 120V VOLTAGE RATING TO SUIT LOAD CONTROLLED, UNLESS NOTED OTHERWISE. PROVIDE GANGED COVERPLATE WHERE THERE ARE MORE THAN ONE (1) SWITCH.
- ALL OCCUPANCY SENSOR DIMMER SWITCHES SHALL BE DECORA TYPE, DUAL TECHNOLOGY SINGLE CIRCUIT WALL SWITCH TYPE OCCUPANCY SENSOR, 120V RATED, MANUAL/AUTO CONTROL, COLOUR WHITE, FLUSH MOUNTED. VOLTAGE RATING TO SUIT LOAD CONTROLLED, UNLESS NOTED OTHERWISE. PROVIDE MATCHING COVERPLATE. PROVIDE GANGED COVERPLATE WHERE THERE ARE MORE THAN ONE (1) DIMMER SWITCH.
- SINGLE LIGHT SWITCHES OR OCCUPANCY SENSOR SWITCHES SHALL CONTROL ALL LIGHTING WITHIN ROOM EXCEPT AS NOTED OTHERWISE. WHERE MULTIPLE SWITCHES ARE SHOWN EACH SWITCH TO CONTROL INDICATED ZONE.
- ALL LIGHT SWITCHES AND DIMMER SWITCHES SHOWN ARE NEW, UNLESS NOTED OTHERWISE. CONTRACTOR MAY BE PERMITTED TO RE-USE EXISTING BACK BOXES IF LOCATIONS ARE SUITABLE OTHERWISE NEW BACK BOXES SHALL BE PROVIDED.
- EMERGENCY LIGHTING IS PRESENTLY FED FROM A BACKUP GENERATOR SOURCE AND SHALL REMAIN AS PRESENTLY INSTALLED UNLESS NOTED OTHERWISE. ALL NEW IDENTIFIED EMERGENCY LIGHTING FIXTURES SHALL BE WIRED TO LOCAL EMERGENCY CIRCUIT.

05	ISSUED FOR ADDENDUM E-1	2023.08.31	DK
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02	PRE-TENDER COST ESTIMATE	2023.14.07	DK
01	COST CONSULTANT	2023.04.11	DK
NO.	REVISION	DATE	BY



SIGNATURE

Project

**CAMH 250 COLLEGE
RELOCATION
TORONTO, ONTARIO**

Drawing Title

**GROUND FLOOR NORTH
LIGHTING - NEW**

Date	MARCH 2023	Drawing No. E2.01
Scale	1/8"=1'-0"	
Drawn By	D.K.	
Approved By	P.C.	
File No.		
Project No.	22048	



SEP/IDENTIFIED PRICES

CONTRACTOR TO CARRY COST TO REPLACE APPROXIMATELY 10% OF ALL EXISTING FIXTURE LAMPS WITH NEW LED 'RETROFIT' STYLE T8/T5 FORMAT LAMPS. EXACT QUANTITIES AND STYLES TO BE VERIFIED ON SITE.

REFER TO BID FORM APPENDIX 'C'

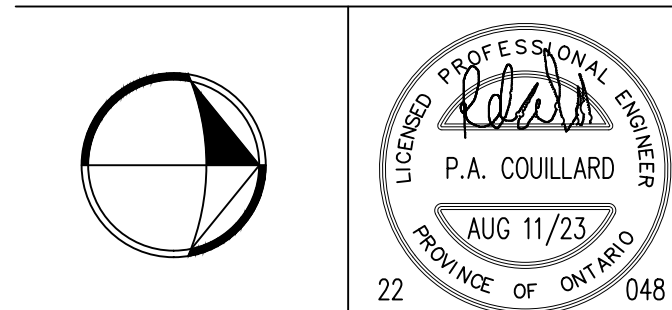
DRAWING REFERENCE NOTES:

- (N-1) EXISTING EMERGENCY POWERED SWITCH LIGHTING FIXTURE TO BE DISCONNECTED FROM EMERGENCY CONTROL RELAY AND WIRED TO BE CONTROLLED FROM NORMAL LIGHTING SWITCH CIRCUIT.
- (N-2) EXISTING ROOM LIGHTING CONTROL TO BE REWORKED TO CONSOLIDATE CONTROL TO ONE SWITCH.

DRAWING GENERAL NOTES:

- ALL LIGHTING AND CONTROLS THIS DRAWING ARE EXISTING UNLESS NOTED AS NEW.
- REFER TO THE ARCHITECT'S REFLECTED CEILING PLAN FOR THE EXACT LOCATION OF ALL CEILING MOUNTED LUMINAIRES.
- EXACT LOCATION OF ALL EXISTING LUMINAIRES AND LIGHT SWITCHES/CONTROLS SHALL BE CONFIRMED ON SITE.
- REFER TO THE ARCHITECT'S DRAWINGS FOR THE EXACT LOCATION AND MOUNTING HEIGHT OF ALL WALL MOUNTED LIGHT AND DIMMER SWITCHES. ALL WALL MOUNTED LIGHT AND DIMMER SWITCHES SHALL BE MOUNTED FOR BARRIER FREE, BETWEEN 36" AFF AND 43" AFF. COORDINATE WITH ARCHITECT ON SITE FOR EXACT LOCATION PRIOR TO COMMENCEMENT OF WORK.
- ALL WALL MOUNTED EXIT SIGNS, EMERGENCY LIGHTING BATTERY UNITS AND REMOTE EMERGENCY HEADS SHALL BE MOUNTED AT 8'-0" AFF UNLESS OTHERWISE NOTED.
- ALL LIGHTING FIXTURES ARE TO BE LOCATED AS REQUIRED ON THE JOB TO CLEAR DUCTS, PIPING, EQUIPMENT, AND/OR MECHANICAL UNITS. THE LOCATIONS SHOWN ON THIS PLAN ARE APPROXIMATE.
- ALLOW FOR TEMPORARY REMOVAL AND RE-INSTALLATION OF EXISTING LUMINAIRES AND OTHER CEILING MOUNTED DEVICES THAT ARE TO REMAIN, AS REQUIRED TO PERMIT INSTALLATION OF HVAC SYSTEMS. REFER TO MECHANICAL DRAWINGS FOR EXTENT OF SCOPE OF WORK. COORDINATE ALL WORK WITH MECHANICAL DIVISION CONTRACTOR.
- WHEN RELOCATING BASE BUILDING LIGHTING FIXTURES, EXTEND EXISTING CIRCUITS AS REQUIRED. MATCH EXISTING BRANCH WIRING METHOD.
- ALL RELOCATED BASE BUILDING LUMINAIRES SHALL BE TIED INTO LOCAL LIGHTING CIRCUITS AS REQUIRED USING SAME WIRING METHOD AS EXISTING FIXTURE.
- ALL CONDUITS AND WIRING IN FINISHED AREAS AND AREAS WITH SUSPENDED TILE OR WHITE GYPSUM BOARD CEILINGS SHALL BE RUN CONCEALED.
- ALL CONDUITS AND WIRING IN OPEN CEILING AREAS SHALL BE RUN TIGHT TO THE UNDERSIDE OF THE CEILING DECK. DO NOT SUSPEND CONDUITS MID-SPAN.
- ALL LIGHT SWITCHES SHALL BE ROCKER STYLE, DECORA TYPE, WHITE WITH MATCHING COVERPLATE. VOLTAGE TO SUIT LOAD CONTROLLED.
- ALL DIMMER SWITCHES SHALL BE LUTRON DIVA TYPE 0-10V DIMMING PROTOCOL OR ELV DIMMING PROTOCOL, WHITE FINISH, RATED FOR CONNECTED LOAD PLUS 25% SPARE CAPACITY WITH MATCHING COVERPLATE, UNLESS NOTED OTHERWISE. PROVIDE CORRECT DIMMER TYPE TO SUIT LOAD CONTROLLED. ALL WIRING REQUIREMENTS PER MANUFACTURER'S RECOMMENDATIONS.
- ALL OCCUPANCY SENSOR SWITCHES SHALL BE DECORA TYPE, WHITE WITH MATCHING COVERPLATE. MANUAL/AUTO CONTROL, COLOUR WHITE, FLUSH MOUNTED, DUAL TECHNOLOGY, 120V VOLTAGE RATING TO SUIT LOAD CONTROLLED, UNLESS NOTED OTHERWISE. PROVIDE GANGED COVERPLATE WHERE THERE ARE MORE THAN ONE (1) SWITCH.
- ALL OCCUPANCY SENSOR DIMMER SWITCHES SHALL BE DECORA TYPE, DUAL TECHNOLOGY SINGLE CIRCUIT WALL SWITCH TYPE OCCUPANCY SENSOR, 120V RATED, MANUAL/AUTO CONTROL, COLOUR WHITE, FLUSH MOUNTED. VOLTAGE RATING TO SUIT LOAD CONTROLLED, UNLESS NOTED OTHERWISE. PROVIDE MATCHING COVERPLATE. PROVIDE GANGED COVERPLATE WHERE THERE ARE MORE THAN ONE (1) DIMMER SWITCH.
- SINGLE LIGHT SWITCHES OR OCCUPANCY SENSOR SWITCHES SHALL CONTROL ALL LIGHTING WITHIN ROOM EXCEPT AS NOTED OTHERWISE. WHERE MULTIPLE SWITCHES ARE SHOWN EACH SWITCH TO CONTROL INDICATED ZONE.
- ALL LIGHT SWITCHES AND DIMMER SWITCHES SHOWN ARE NEW, UNLESS NOTED OTHERWISE. CONTRACTOR MAY BE PERMITTED TO RE-USE EXISTING BACK BOXES IF LOCATIONS ARE SUITABLE OTHERWISE NEW BACK BOXES SHALL BE PROVIDED.

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SIGNATURE

Project

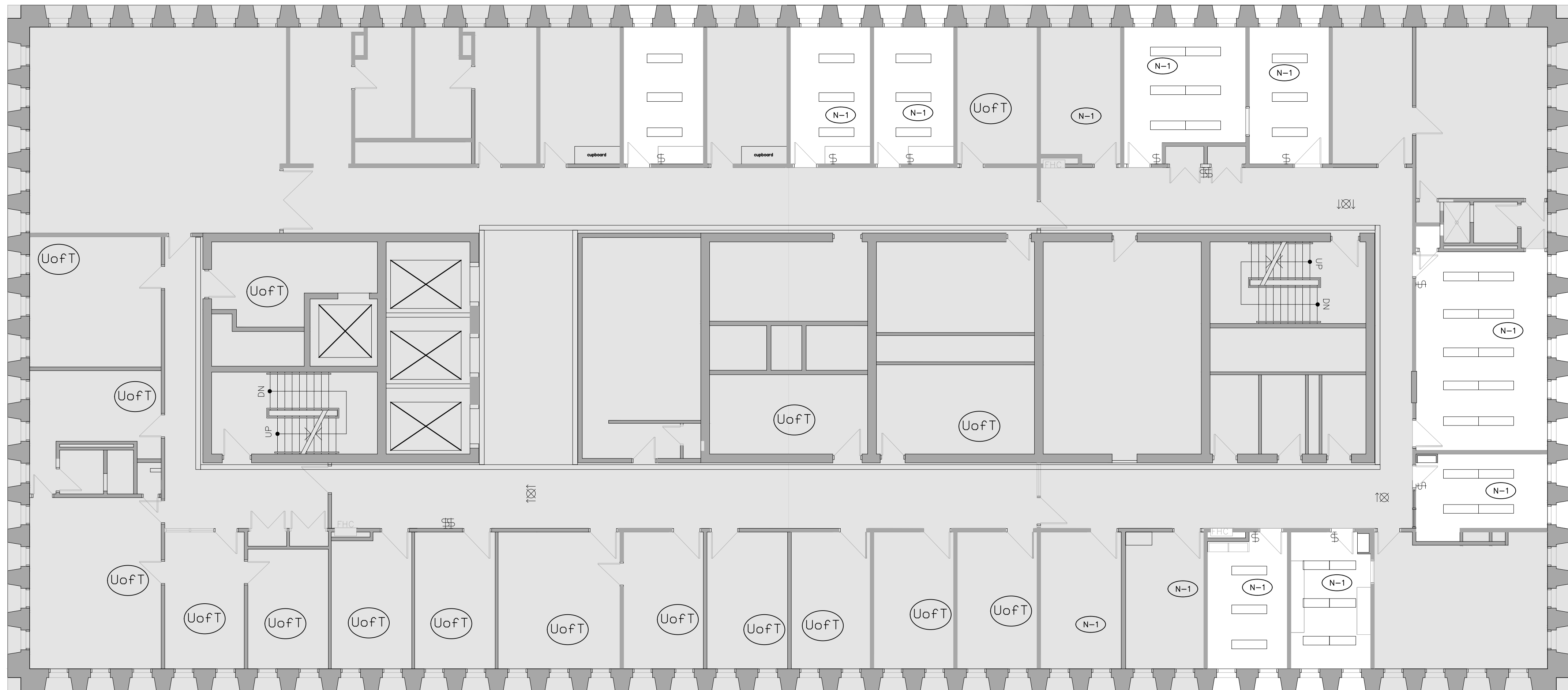
**CAMH 250 COLLEGE
RELOCATION
TORONTO, ONTARIO**

Drawing Title

**GROUND FLOOR SOUTH
LIGHTING - NEW**

Date MARCH 2023
Scale 1/8"=1'-0"
Drawn By D.K.
Approved By P.C.
File No.
Project No. 22048

Drawing No. E2.03



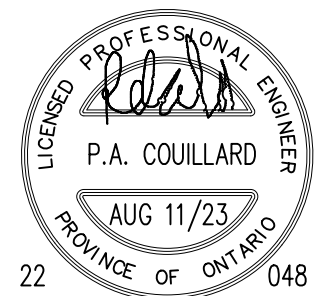
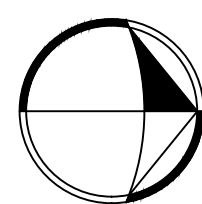
DRAWING REFERENCE NOTES:

- (N-1) ALL EXISTING LIGHTING FIXTURES TO REMAIN AS PRESENTLY INSTALLED. CHECK FOR NON OPERATIONAL 'LAMPS' AND REPORT FINDINGS TO ENGINEER.

GENERAL DEMOLITION NOTES:

1. EXACT LOCATION OF ALL EXISTING LUMINAIRES, LIGHT SWITCHES, DIMMERS ETC. SHALL BE CONFIRMED ON SITE.
2. ALL LUMINAIRES, LIGHT SWITCHES AND DIMMERS SHOWN ON THIS DRAWING ARE EXISTING TO REMAIN UNLESS OTHERWISE SHOWN WITH AN 'R' TO BE REMOVED. CUT BACK AND REMOVE ALL UNUSED CONDUITS AND WIRING BACK TO SOURCE PANEL. REMOVE ALL LUMINAIRES, LIGHT SWITCHES, DIMMERS AND WIRING FROM WALLS AND CEILINGS THAT ARE TO BE DEMOLISHED.
3. CONTRACTOR SHALL BE AWARE THAT NOT ALL EXISTING LUMINAIRES, LIGHT SWITCHES, DIMMERS, EQUIPMENT AND DEVICES REQUIRED TO BE REMOVED ARE NECESSARILY INDICATED ON THIS PLAN. CONTRACTOR SHALL STILL BE RESPONSIBLE FOR REMOVING ALL SUCH ITEMS AS REQUIRED TO FACILITATE THE COMPLETE DEMOLITION.
4. WHERE THE REMOVAL OF LUMINAIRES, LIGHT SWITCHES AND DIMMERS AFFECT THE OPERATION OF EXISTING LUMINAIRES, LIGHT SWITCHES AND DIMMERS TO REMAIN, CONTRACTOR SHALL REPLACE/MAKE GOOD BRANCH WIRING AS REQUIRED TO ENSURE CONTINUITY OF OPERATION OF REMAIN LUMINAIRES, LIGHT SWITCHES AND DIMMERS
5. ALL EXISTING LUMINAIRES, LIGHT SWITCHES, DIMMERS WHICH ARE NO LONGER REQUIRED SHALL BE REMOVED AND DISPOSED OF OFF SITE.
6. REFER TO NEW PLAN FOR NEW LOCATION OF RELOCATED LUMINAIRES, DEVICES AND EQUIPMENT.
7. REMOVE ALL REDUNDANT LINE VOLTAGE AND LOW VOLTAGE CONDUIT AND WIRING IN CEILING SPACE WHICH IS NOT IN USE.

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01	COST CONSULTANT	2023.04.11	DK
NO.	REVISION	DATE	BY



SIGNATURE

Project

**CAMH 250 COLLEGE
RELOCATION
TORONTO, ONTARIO**

Drawing Title

**8TH FLOOR LIGHTING –
DEMOLITION**

Date MARCH 2023

Scale 1/8"=1'-0"

Drawn By D.K.

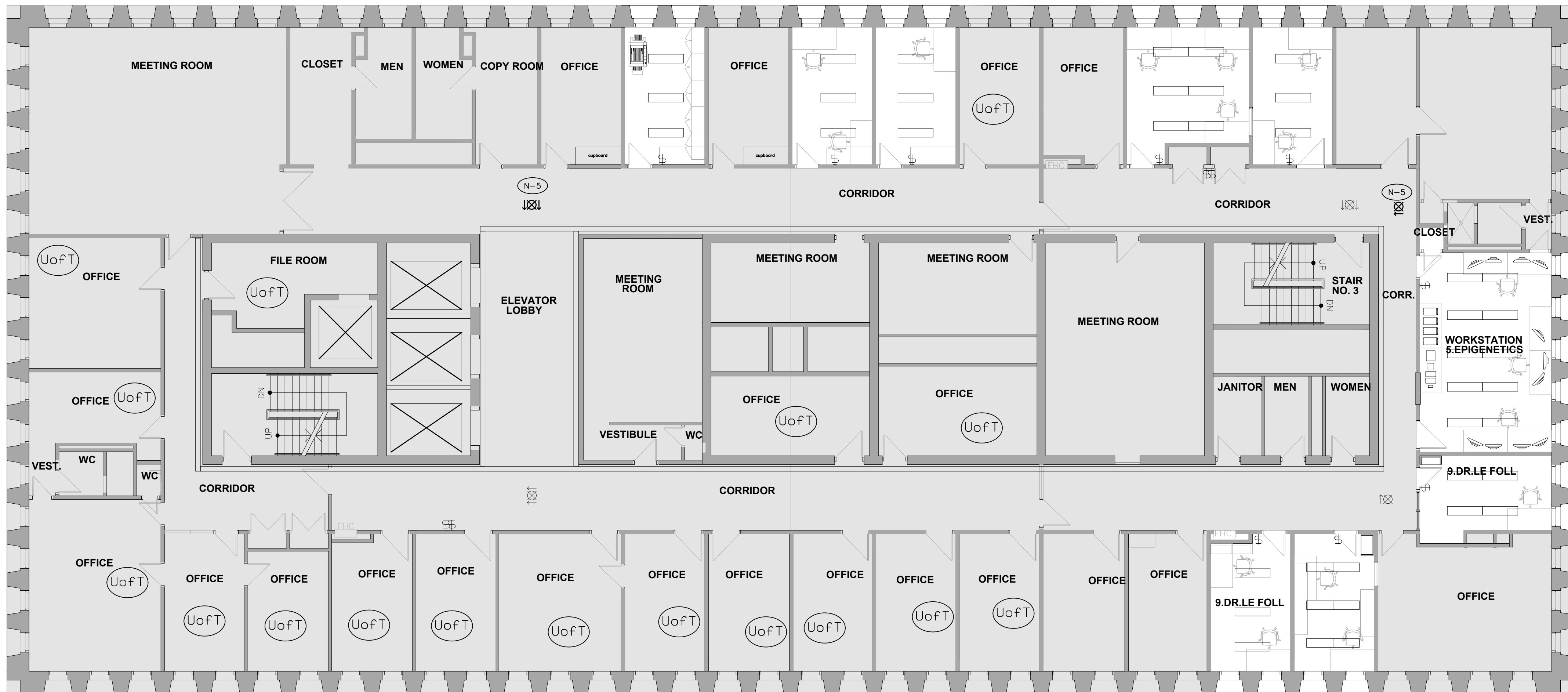
Approved By P.C.

File No.

Project No. 22048

Drawing No.

E2.04



DRAWING REFERENCE NOTES:

- (N-1) NEW FIXTURE TO BE INSTALLED IN PLACE OF REMOVED FIXTURE. COORDINATE MOUNTING AND WIRE TO EXISTING CIRCUIT AND CONTROL.
- (N-2) PROVIDE BLANK COVER ON EXISTING JUNCTION BOX, MAKE SAFE ALL REDUNDANT WIRING.
- (N-3) EXTEND EXISTING CIRCUIT TO NEW FIXTURE LOCATION AND WIRE TO OPERATE IN CONJUNCTION WITH ROOM LIGHTING AND CONTROL.
- (N-4) PROVIDE NEW OCCUPANCY SENSOR, MODIFY EXISTING WIRING TO CONTROL CORRIDOR COVE LIGHTING FROM NEW SENSORS, PROVIDE NEW RELAYS
- (N-5) WIRE NEW EXIT SIGN TO EXISTING LOCAL EXIT SIGN POWER/EMERGENCY POWER SOURCE

SEP/IDENTIFIED PRICES

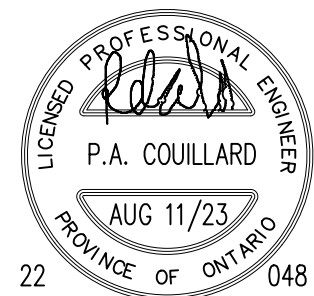
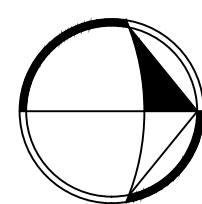
CONTRACTOR TO CARRY COST TO REPLACE APPROXIMATELY 10% OF ALL EXISTING FIXTURE LAMPS WITH NEW LED 'RETROFIT' STYLE T8/T5 FORMAT LAMPS. EXACT QUANTITIES AND STYLES TO BE VERIFIED ON SITE.

REFER TO BID FORM APPENDIX 'C'

DRAWING GENERAL NOTES:

- REFER TO THE ARCHITECT'S REFLECTED CEILING PLAN FOR THE EXACT LOCATION OF ALL CEILING MOUNTED LUMINAIRES.
- EXACT LOCATION OF ALL EXISTING LUMINAIRES AND LIGHT SWITCHES/CONTROLS SHALL BE CONFIRMED ON SITE
- REFER TO THE ARCHITECT'S DRAWINGS FOR THE EXACT LOCATION AND MOUNTING HEIGHT OF ALL WALL MOUNTED LIGHT AND DIMMER SWITCHES. ALL WALL MOUNTED LIGHT AND DIMMER SWITCHES SHALL BE MOUNTED FOR BARRIER FREE, BETWEEN 36" AFF AND 43" AFF. COORDINATE WITH ARCHITECT ON SITE FOR EXACT LOCATION PRIOR TO COMMENCEMENT OF WORK.
- ALL WALL MOUNTED EXIT SIGNS, EMERGENCY LIGHTING BATTERY UNITS AND REMOTE EMERGENCY HEADS SHALL BE MOUNTED AT 8'-0" AFF UNLESS OTHERWISE NOTED.
- ALL LIGHTING FIXTURES ARE TO BE LOCATED AS REQUIRED ON THE JOB TO CLEAR DUCTS, PIPING, EQUIPMENT, AND/OR MECHANICAL UNITS. THE LOCATIONS SHOWN ON THIS PLAN ARE APPROXIMATE.
- ALLOW FOR TEMPORARY REMOVAL AND RE-INSTALLATION OF EXISTING LUMINAIRES AND OTHER CEILING MOUNTED DEVICES THAT ARE TO REMAIN, AS REQUIRED TO PERMIT INSTALLATION OF HVAC SYSTEMS. REFER TO MECHANICAL DRAWINGS FOR EXTENT OF SCOPE OF WORK. COORDINATE ALL WORK WITH MECHANICAL DIVISION CONTRACTOR.
- WHEN RELOCATING BASE BUILDING LIGHTING FIXTURES, EXTEND EXISTING CIRCUITS AS REQUIRED. MATCH EXISTING BRANCH WIRING METHOD.
- ALL RELOCATED BASE BUILDING LUMINAIRES SHALL BE TIED INTO LOCAL LIGHTING CIRCUITS AS REQUIRED USING SAME WIRING METHOD AS EXISTING FIXTURE.
- ALL CONDUITS AND WIRING IN FINISHED AREAS AND AREAS WITH SUSPENDED TILE OR WHITE GYPSUM BOARD CEILINGS SHALL BE RUN CONCEALED.
- ALL CONDUITS AND WIRING IN OPEN CEILING AREAS SHALL BE RUN TIGHT TO THE UNDERSIDE OF THE CEILING DECK. DO NOT SUSPEND CONDUITS MID-SPAN.
- ALL LIGHT SWITCHES SHALL BE ROCKER STYLE, DECORA TYPE, WHITE WITH MATCHING COVERPLATE. VOLTAGE TO SUIT LOAD CONTROLLED.
- ALL DIMMER SWITCHES SHALL BE LUTRON DVA TYPE 0-10V DIMMING PROTOCOL OR ELV DIMMING PROTOCOL, WHITE FINISH, RATED FOR CONNECTED LOAD PLUS 25% SPARE CAPACITY WITH MATCHING COVERPLATE, UNLESS NOTED OTHERWISE. PROVIDE CORRECT DIMMER TYPE TO SUIT LOAD CONTROLLED. ALL WIRING REQUIREMENTS PER MANUFACTURER'S RECOMMENDATIONS.
- ALL OCCUPANCY SENSOR SWITCHES SHALL DECORA TYPE, WHITE WITH MATCHING COVERPLATE. MANUAL/AUTO CONTROL, COLOUR WHITE, FLUSH MOUNTED. DUAL TECHNOLOGY. 120V VOLTAGE RATING TO SUIT LOAD CONTROLLED, UNLESS NOTED OTHERWISE. PROVIDE GANGED COVERPLATE WHERE THERE ARE MORE THAN ONE (1) SWITCH.
- ALL OCCUPANCY SENSOR DIMMER SWITCHES SHALL BE DECORA TYPE, DUAL TECHNOLOGY SINGLE CIRCUIT WALL SWITCH TYPE OCCUPANCY SENSOR, 120V RATED, MANUAL/AUTO CONTROL, COLOUR WHITE, FLUSH MOUNTED. VOLTAGE RATING TO SUIT LOAD CONTROLLED, UNLESS NOTED OTHERWISE. PROVIDE MATCHING COVERPLATE. PROVIDE GANGED COVERPLATE WHERE THERE ARE MORE THAN ONE (1) DIMMER SWITCH.
- SINGLE LIGHT SWITCHES OR OCCUPANCY SENSOR SWITCHES SHALL CONTROL ALL LIGHTING WITHIN ROOM EXCEPT AS NOTED OTHERWISE. WHERE MULTIPLE SWITCHES ARE SHOWN EACH SWITCH TO CONTROL INDICATED ZONE.
- ALL LIGHT SWITCHES AND DIMMER SWITCHES SHOWN ARE NEW, UNLESS NOTED OTHERWISE. CONTRACTOR MAY BE PERMITTED TO RE-USE EXISTING BACK BOXES IF LOCATIONS ARE SUITABLE OTHERWISE NEW BACK BOXES SHALL BE PROVIDED.

05	ISSUED FOR ADDENDUM E-1	2023.08.31	DK
04	ISSUED FOR PERMIT	2023.08.11	DK
03	ISSUED FOR TENDER	2023.08.08	DK
02	PRE-TENDER COST ESTIMATE	2023.14.07	DK
01	COST CONSULTANT	2023.04.11	DK
NO.	REVISION	DATE	BY



SIGNATURE

Project

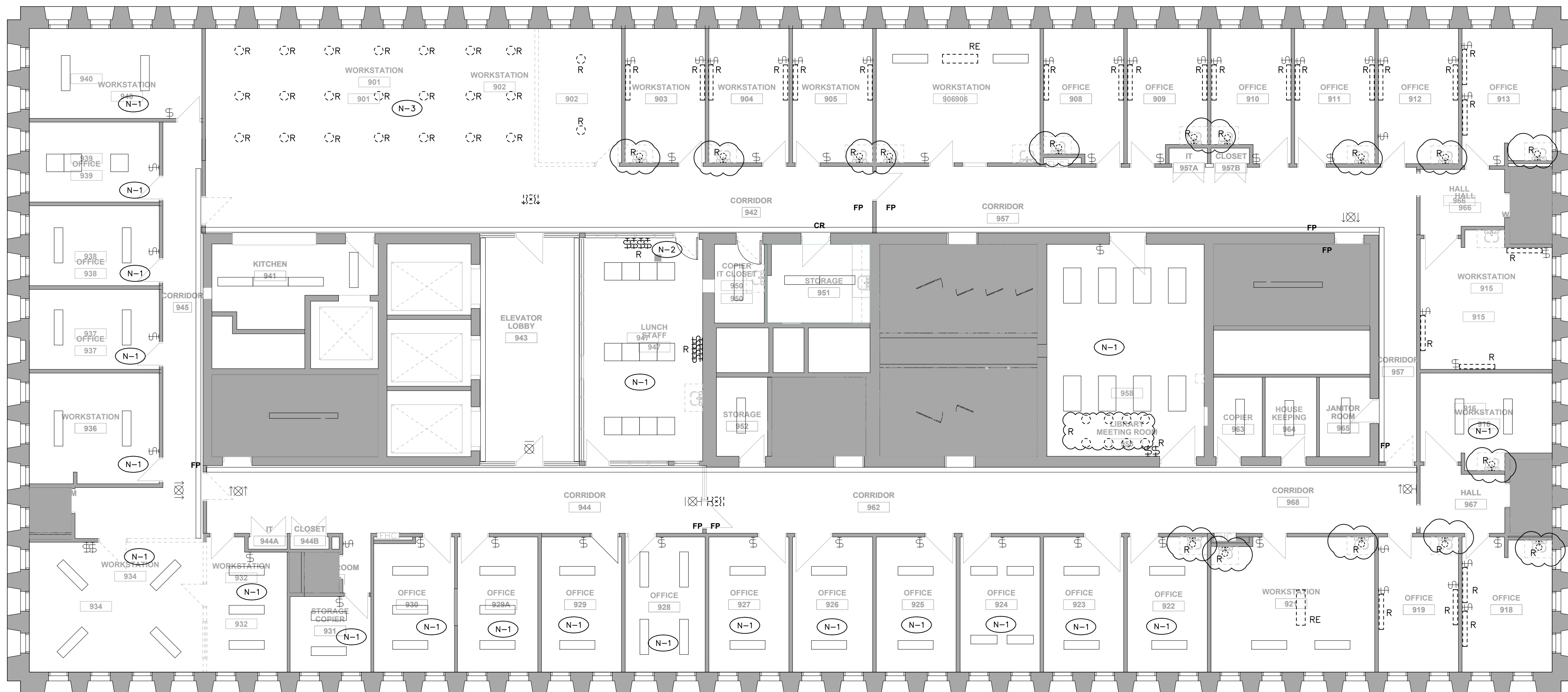
**CAMH 250 COLLEGE
RELOCATION
TORONTO, ONTARIO**

Drawing Title

8TH FLOOR LIGHTING – NEW

Date	MARCH 2023
Scale	1/8"=1'-0"
Drawn By	D.K.
Approved By	P.C.
File No.	
Project No.	22048

Drawing No.
E2.05



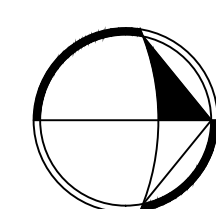
DRAWING REFERENCE NOTES:

- (N-1) ALL EXISTING LIGHTING FIXTURES TO REMAIN AS PRESENTLY INSTALLED. CHECK FOR NON OPERATIONAL 'LAMPS' AND REPORT FINDINGS TO ENGINEER.
- (N-2) EXISTING CORRIDOR LIGHTING SWITCHES TO BE DISCONNECTED AND REMOVED, WIRING TO BE MODIFIED AS NOTED IN NEW PLANS.
- (N-3) WHERE POTLIGHTS ARE REMOVED, REFER TO NEW PLANS FOR REPLACEMENT FIXTURE INSTALLATION. PROVIDE NEW COPPERPLATES FOR REMOVED FIXTURES THAT ARE NOT REPLACED.

GENERAL DEMOLITION NOTES:

- EXACT LOCATION OF ALL EXISTING LUMINAIRES, LIGHT SWITCHES, DIMMERS ETC. SHALL BE CONFIRMED ON SITE.
- ALL LUMINAIRES, LIGHT SWITCHES AND DIMMERS SHOWN ON THIS DRAWING ARE EXISTING TO REMAIN UNLESS OTHERWISE SHOWN WITH AN 'R' TO BE REMOVED. CUT BACK AND REMOVE ALL UNUSED CONDUITS AND WIRING BACK TO SOURCE PANEL. REMOVE ALL LUMINAIRES, LIGHT SWITCHES, DIMMERS AND WIRING FROM WALLS AND CEILINGS THAT ARE TO BE DEMOLISHED.
- CONTRACTOR SHALL BE AWARE THAT NOT ALL EXISTING LUMINAIRES, LIGHT SWITCHES, DIMMERS, EQUIPMENT AND DEVICES REQUIRED TO BE REMOVED ARE NECESSARILY INDICATED ON THIS PLAN. CONTRACTOR SHALL STILL BE RESPONSIBLE FOR REMOVING ALL SUCH ITEMS AS REQUIRED TO FACILITATE THE COMPLETE DEMOLITION.
- WHERE THE REMOVAL OF LUMINAIRES, LIGHT SWITCHES AND DIMMERS AFFECT THE OPERATION OF EXISTING LUMINAIRES, LIGHT SWITCHES AND DIMMERS TO REMAIN, CONTRACTOR SHALL REPLACE/MAKE GOOD BRANCH WIRING AS REQUIRED TO ENSURE CONTINUITY OF OPERATION OF REMAIN LUMINAIRES, LIGHT SWITCHES AND DIMMERS
- ALL EXISTING LUMINAIRES, LIGHT SWITCHES, DIMMERS WHICH ARE NO LONGER REQUIRED SHALL BE REMOVED AND DISPOSED OF OFF SITE.
- REFER TO NEW PLAN FOR NEW LOCATION OF RELOCATED LUMINAIRES, DEVICES AND EQUIPMENT.
- REMOVE ALL REDUNDANT LINE VOLTAGE AND LOW VOLTAGE CONDUIT AND WIRING IN CEILING SPACE WHICH IS NOT IN USE.

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01	COST CONSULTANT	2023.04.11	DK
NO.	REVISION	DATE	BY



SIGNATURE

Project

**CAMH 250 COLLEGE
RELOCATION
TORONTO, ONTARIO**

Drawing Title

**9TH FLOOR LIGHTING –
DEMOLITION**

Date MARCH 2023

Scale 1/8"=1'-0"

Drawn By D.K.

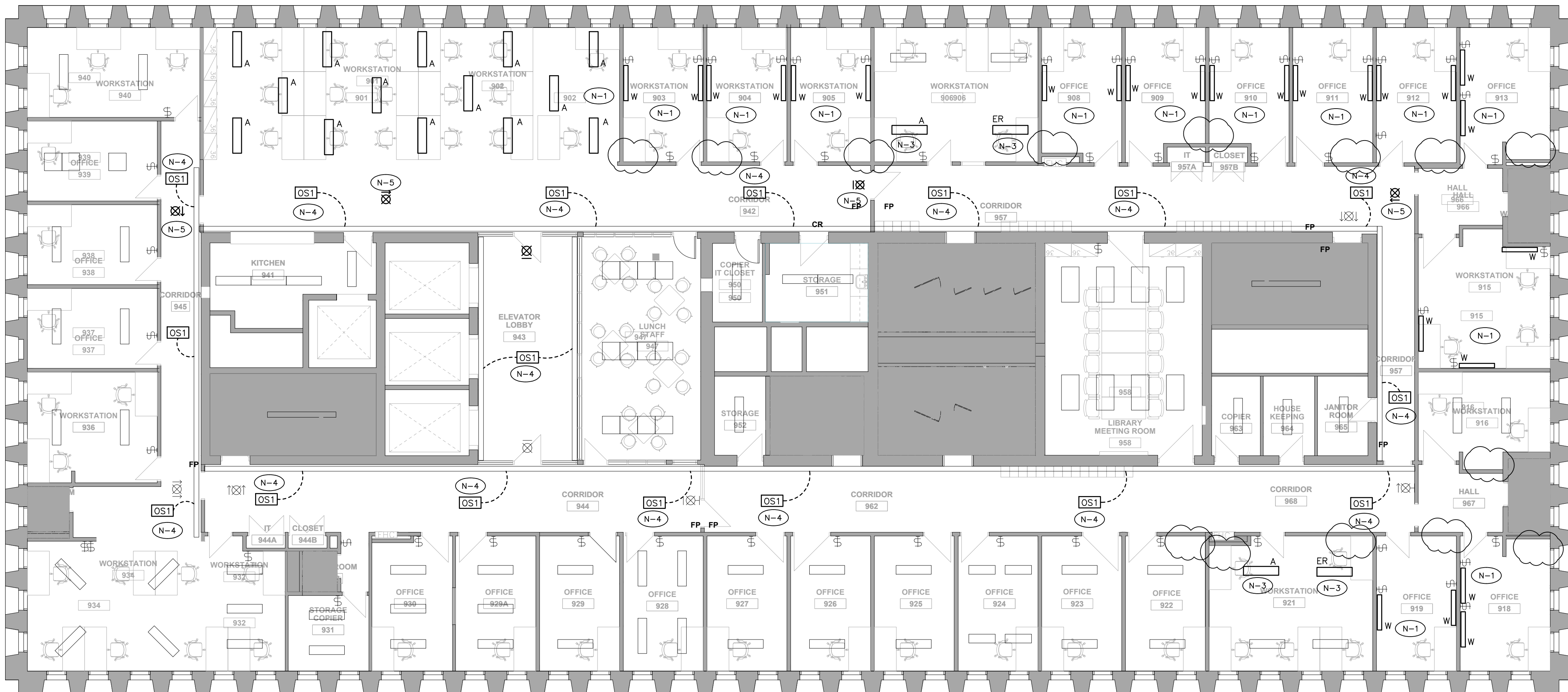
Approved By P.C.

File No.

Project No. 22048

Drawing No.

E2.06



DRAWING REFERENCE NOTES:

- (N-1) NEW FIXTURE TO BE INSTALLED IN PLACE OF REMOVED FIXTURE. COORDINATE MOUNTING AND WIRE TO EXISTING CIRCUIT AND CONTROL.
- (N-2) PROVIDE BLANK COVER ON EXISTING JUNCTION BOX, MAKE SAFE ALL REDUNDANT WIRING.
- (N-3) EXTEND EXISTING CIRCUIT TO NEW FIXTURE LOCATION AND WIRE TO OPERATE IN CONJUNCTION WITH ROOM LIGHTING AND CONTROL.
- (N-4) PROVIDE NEW OCCUPANCY SENSOR, MODIFY EXISTING WIRING TO CONTROL CORRIDOR COVE LIGHTING FROM NEW SENSORS, PROVIDE NEW RELAYS
- (N-5) WIRE NEW EXIT SIGN TO EXISTING LOCAL EXIT SIGN POWER/EMERGENCY POWER SOURCE

DRAWING GENERAL NOTES:

- REFER TO THE ARCHITECT'S REFLECTED CEILING PLAN FOR THE EXACT LOCATION OF ALL CEILING MOUNTED LUMINAIRES.
- EXACT LOCATION OF ALL EXISTING LUMINAIRES AND LIGHT SWITCHES/CONTROLS SHALL BE CONFIRMED ON SITE
- REFER TO THE ARCHITECT'S DRAWINGS FOR THE EXACT LOCATION AND MOUNTING HEIGHT OF ALL WALL MOUNTED LIGHT AND DIMMER SWITCHES. ALL WALL MOUNTED LIGHT AND DIMMER SWITCHES SHALL BE MOUNTED FOR BARRIER FREE, BETWEEN 36" AFF AND 43" AFF. COORDINATE WITH ARCHITECT ON SITE FOR EXACT LOCATION PRIOR TO COMMENCEMENT OF WORK.
- ALL WALL MOUNTED EXIT SIGNS, EMERGENCY LIGHTING BATTERY UNITS AND REMOTE EMERGENCY HEADS SHALL BE MOUNTED AT 8'-0" AFF UNLESS OTHERWISE NOTED.
- ALL LIGHTING FIXTURES ARE TO BE LOCATED AS REQUIRED ON THE JOB TO CLEAR DUCTS, PIPING, EQUIPMENT, AND/OR MECHANICAL UNITS. THE LOCATIONS SHOWN ON THIS PLAN ARE APPROXIMATE.
- ALLOW FOR TEMPORARY REMOVAL AND RE-INSTALLATION OF EXISTING LUMINAIRES AND OTHER CEILING MOUNTED DEVICES THAT ARE TO REMAIN, AS REQUIRED TO PERMIT INSTALLATION OF HVAC SYSTEMS. REFER TO MECHANICAL DRAWINGS FOR EXTENT OF SCOPE OF WORK. COORDINATE ALL WORK WITH MECHANICAL DIVISION CONTRACTOR.
- WHEN RELOCATING BASE BUILDING LIGHTING FIXTURES, EXTEND EXISTING CIRCUITS AS REQUIRED. MATCH EXISTING BRANCH WIRING METHOD.
- ALL RELOCATED BASE BUILDING LUMINAIRES SHALL BE TIED INTO LOCAL LIGHTING CIRCUITS AS REQUIRED USING SAME WIRING METHOD AS EXISTING FIXTURE.
- ALL CONDUITS AND WIRING IN FINISHED AREAS AND AREAS WITH SUSPENDED TILE OR WHITE GYPSUM BOARD CEILINGS SHALL BE RUN CONCEALED.

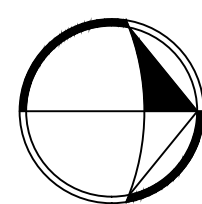
- ALL CONDUITS AND WIRING IN OPEN CEILING AREAS SHALL BE RUN TIGHT TO THE UNDERSIDE OF THE CEILING DECK. DO NOT SUSPEND CONDUITS MID-SPAN.
- ALL LIGHT SWITCHES SHALL BE ROCKER STYLE, DECORA TYPE, WHITE WITH MATCHING COVERPLATE. VOLTAGE TO SUIT LOAD CONTROLLED.
- ALL DIMMER SWITCHES SHALL BE LUTRON DVA TYPE 0-10V DIMMING PROTOCOL OR ELY DIMMING PROTOCOL, WHITE FINISH, RATED FOR CONNECTED LOAD PLUS 25% SPARE CAPACITY WITH MATCHING COVERPLATE, UNLESS NOTED OTHERWISE. PROVIDE CORRECT DIMMER TYPE TO SUIT LOAD CONTROLLED. ALL WIRING REQUIREMENTS PER MANUFACTURER'S RECOMMENDATIONS.
- ALL OCCUPANCY SENSOR SWITCHES SHALL DECORA TYPE, WHITE WITH MATCHING COVERPLATE. MANUAL/AUTO CONTROL, COLOUR WHITE, FLUSH MOUNTED. DUAL TECHNOLOGY. 120V VOLTAGE RATING TO SUIT LOAD CONTROLLED, UNLESS NOTED OTHERWISE. PROVIDE GANGED COVERPLATE WHERE THERE ARE MORE THAN ONE (1) SWITCH.
- ALL OCCUPANCY SENSOR DIMMER SWITCHES SHALL BE DECORA TYPE, DUAL TECHNOLOGY SINGLE CIRCUIT WALL SWITCH TYPE OCCUPANCY SENSOR, 120V RATED, MANUAL/AUTO CONTROL, COLOUR WHITE, FLUSH MOUNTED. VOLTAGE RATING TO SUIT LOAD CONTROLLED, UNLESS NOTED OTHERWISE. PROVIDE MATCHING COVERPLATE. PROVIDE GANGED COVERPLATE WHERE THERE ARE MORE THAN ONE (1) DIMMER SWITCH.
- SINGLE LIGHT SWITCHES OR OCCUPANCY SENSOR SWITCHES SHALL CONTROL ALL LIGHTING WITHIN ROOM EXCEPT AS NOTED OTHERWISE. WHERE MULTIPLE SWITCHES ARE SHOWN EACH SWITCH TO CONTROL INDICATED ZONE.
- ALL LIGHT SWITCHES AND DIMMER SWITCHES SHOWN ARE NEW, UNLESS NOTED OTHERWISE. CONTRACTOR MAY BE PERMITTED TO RE-USE EXISTING BACK BOXES IF LOCATIONS ARE SUITABLE OTHERWISE NEW BACK BOXES SHALL BE PROVIDED.
- EMERGENCY LIGHTING IS PRESENTLY FED FROM A BACKUP GENERATOR SOURCE AND SHALL REMAIN AS PRESENTLY INSTALLED UNLESS NOTED OTHERWISE. ALL NEW IDENTIFIED EMERGENCY LIGHTING FIXTURES SHALL BE WIRED TO LOCAL EMERGENCY CIRCUIT.

SEP/IDENTIFIED PRICES

CONTRACTOR TO CARRY COST TO REPLACE APPROXIMATELY 10% OF ALL EXISTING FIXTURE LAMPS WITH NEW LED "RETROFIT" STYLE T8/T5 FORMAT LAMPS. EXACT QUANTITIES AND STYLES TO BE VERIFIED ON SITE.

REFER TO BID FORM APPENDIX 'C'

05	ISSUED FOR ADDENDUM E-1	2023.08.31	DK
04	ISSUED FOR PERMIT	2023.08.11	DK
03	ISSUED FOR TENDER	2023.08.08	DK
02	PRE-TENDER COST ESTIMATE	2023.14.07	DK
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NO.	REVISION	DATE	BY



SIGNATURE

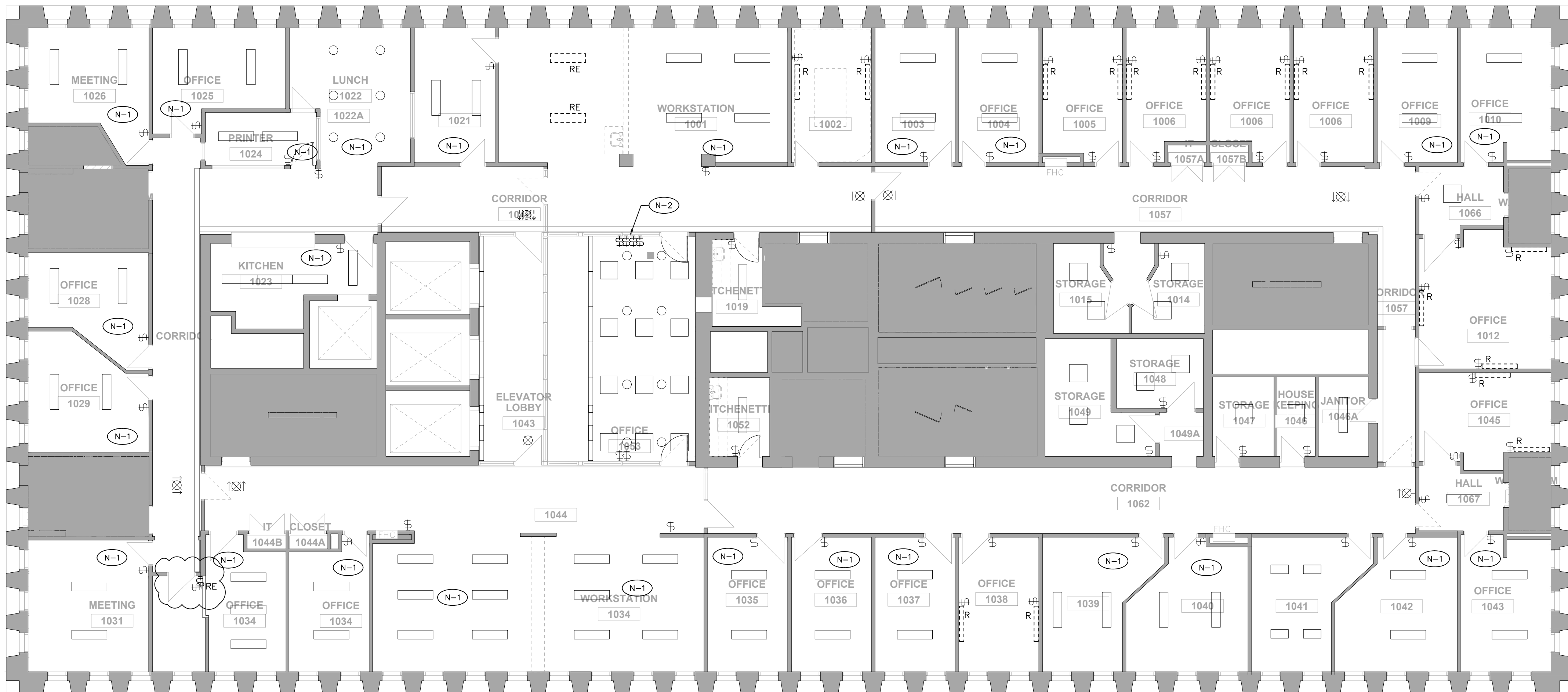
Project

**CAMH 250 COLLEGE
RELOCATION
TORONTO, ONTARIO**

Drawing Title

9TH FLOOR LIGHTING – NEW

Date	MARCH 2023	Drawing No. E2.07
Scale	1/8"=1'-0"	
Drawn By	D.K.	
Approved By	P.C.	
File No.		
Project No.	22048	



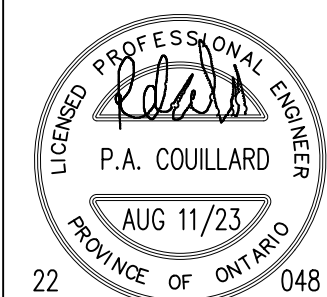
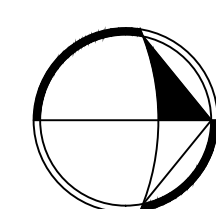
DRAWING REFERENCE NOTES:

- (N-1) ALL EXISTING LIGHTING FIXTURES TO REMAIN AS PRESENTLY INSTALLED. CHECK FOR NON OPERATIONAL 'LAMPS' AND REPORT FINDINGS TO ENGINEER.
- (N-2) EXISTING CORRIDOR LIGHTING SWITCHES TO BE DISCONNECTED AND REMOVED, WIRING TO BE MODIFIED AS NOTED IN NEW PLANS.
- (N-3) WHERE POTLIGHTS ARE REMOVED, REFER TO NEW PLANS FOR REPLACEMENT FIXTURE INSTALLATION. PROVIDE NEW COPPERPLATES FOR REMOVED FIXTURES THAT ARE NOT REPLACED.

GENERAL DEMOLITION NOTES:

- EXACT LOCATION OF ALL EXISTING LUMINAIRES, LIGHT SWITCHES, DIMMERS ETC. SHALL BE CONFIRMED ON SITE.
- ALL LUMINAIRES, LIGHT SWITCHES AND DIMMERS SHOWN ON THIS DRAWING ARE EXISTING TO BE REMAIN UNLESS OTHERWISE SHOWN WITH AN 'R' TO BE REMOVED. CUT BACK AND REMOVE ALL UNUSED CONDUITS AND WIRING BACK TO SOURCE PANEL. REMOVE ALL LUMINAIRES, LIGHT SWITCHES, DIMMERS AND WIRING FROM WALLS AND CEILINGS THAT ARE TO BE DEMOLISHED.
- CONTRACTOR SHALL BE AWARE THAT NOT ALL EXISTING LUMINAIRES, LIGHT SWITCHES, DIMMERS, EQUIPMENT AND DEVICES REQUIRED TO BE REMOVED ARE NECESSARILY INDICATED ON THIS PLAN. CONTRACTOR SHALL STILL BE RESPONSIBLE FOR REMOVING ALL SUCH ITEMS AS REQUIRED TO FACILITATE THE COMPLETE DEMOLITION.
- WHERE THE REMOVAL OF LUMINAIRES, LIGHT SWITCHES AND DIMMERS AFFECT THE OPERATION OF EXISTING LUMINAIRES, LIGHT SWITCHES AND DIMMERS TO REMAIN, CONTRACTOR SHALL REPLACE/MAKE GOOD BRANCH WIRING AS REQUIRED TO ENSURE CONTINUITY OF OPERATION OF REMAIN LUMINAIRES, LIGHT SWITCHES AND DIMMERS
- ALL EXISTING LUMINAIRES, LIGHT SWITCHES, DIMMERS WHICH ARE NO LONGER REQUIRED SHALL BE REMOVED AND DISPOSED OF OFF SITE.
- REFER TO NEW PLAN FOR NEW LOCATION OF RELOCATED LUMINAIRES, DEVICES AND EQUIPMENT.
- REMOVE ALL REDUNDANT LINE VOLTAGE AND LOW VOLTAGE CONDUIT AND WIRING IN CEILING SPACE WHICH IS NOT IN USE.

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02	PRE-TENDER COST ESTIMATE	2023.14.07	DK
01	COST CONSULTANT	2023.04.11	DK
NO.	REVISION	DATE	BY



SIGNATURE

Project

**CAMH 250 COLLEGE
RELOCATION
TORONTO, ONTARIO**

Drawing Title

**10TH FLOOR LIGHTING –
DEMOLITION**

Date MARCH 2023

Scale 1/8"=1'-0"

Drawn By D.K.

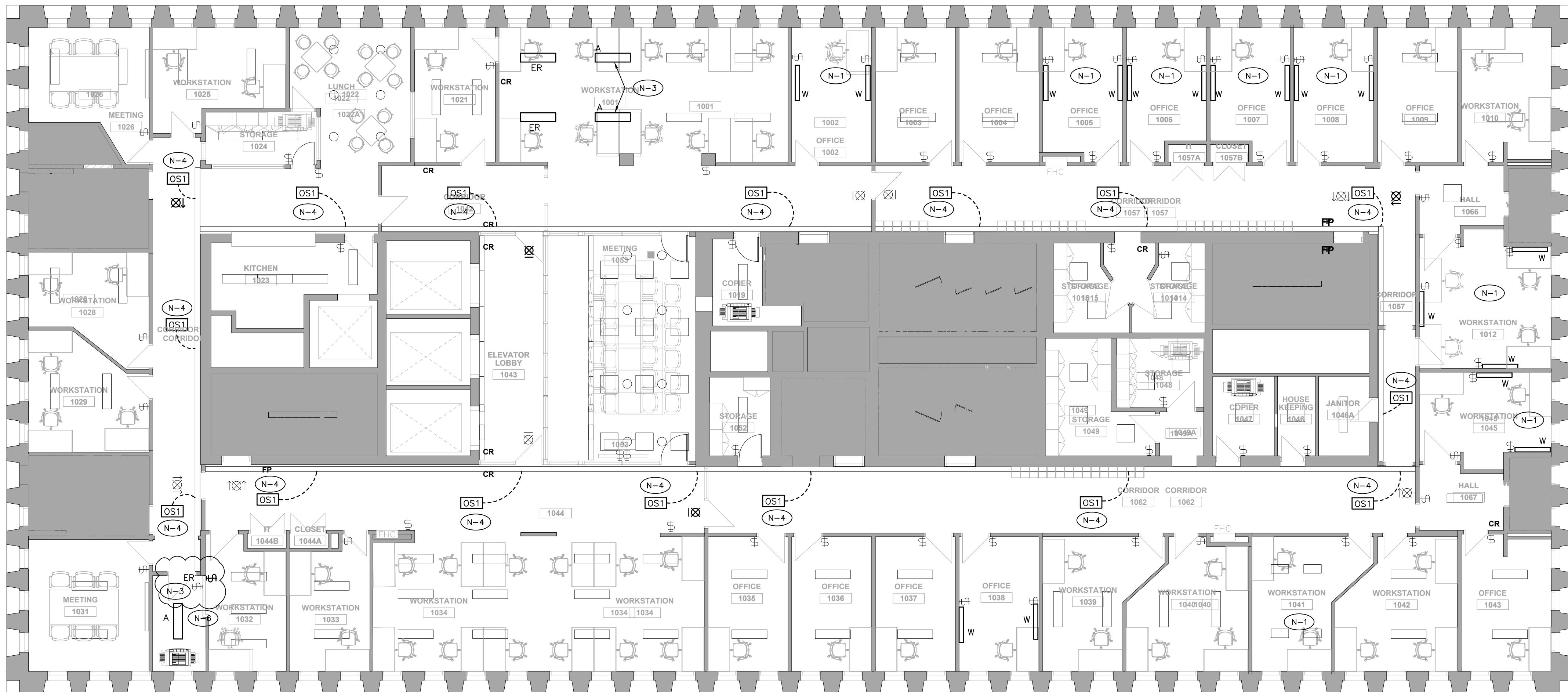
Approved By P.C.

File No.

Project No. 22048

Drawing No.

E2.08



DRAWING REFERENCE NOTES:

- N-1** NEW FIXTURE TO BE INSTALLED IN PLACE OF REMOVED FIXTURE. COORDINATE MOUNTING AND WIRE TO EXISTING CIRCUIT AND CONTROL.
- N-2** PROVIDE BLANK COVER ON EXISTING JUNCTION BOX, MAKE SAFE ALL REDUNDANT WIRING.
- N-3** EXTEND EXISTING CIRCUIT TO NEW FIXTURE LOCATION AND WIRE TO OPERATE IN CONJUNCTION WITH ROOM LIGHTING AND CONTROL.
- N-4** PROVIDE NEW OCCUPANCY SENSOR, MODIFY EXISTING WIRING TO CONTROL CORRIDOR COVE LIGHTING FROM NEW SENSORS, PROVIDE NEW RELAYS
- N-5** WIRE NEW EXIT SIGN TO EXISTING LOCAL EXIT SIGN POWER/EMERGENCY POWER SOURCE
- N-6** REWORK EXISTING SWITCH CONTROL AND PROVIDE ADDITIONAL SWITCH IN NEW WALL FOR

SEP/IDENTIFIED PRICES

CONTRACTOR TO CARRY COST TO REPLACE APPROXIMATELY 100 OF EXISTING FIXTURE LAMPS WITH NEW LED "RETROFIT" STYLE T8/T5 FORMAT LAMPS. EXACT QUANTITIES AND STYLES TO BE VERIFIED ON SITE.

REFER TO BID FORM APPENDIX "C"

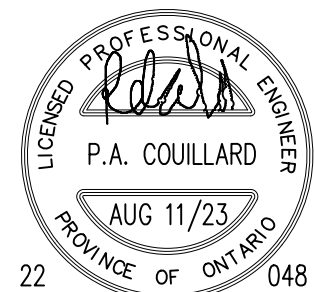
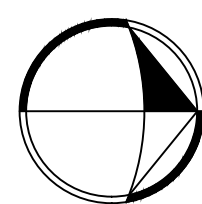
DRAWING GENERAL NOTES:

REVISED ROOM LIGHTING CONTRL

1. REFER TO THE ARCHITECT'S REFLECTED CEILING PLAN FOR THE EXACT LOCATION OF ALL CEILING MOUNTED LUMINAIRES.
2. EXACT LOCATION OF ALL EXISTING LUMINAIRES AND LIGHT SWITCHES/CONTROLS SHALL BE CONFIRMED ON SITE
3. REFER TO THE ARCHITECT'S DRAWINGS FOR THE EXACT LOCATION AND MOUNTING HEIGHT OF ALL WALL MOUNTED LIGHT AND DIMMER SWITCHES. ALL WALL MOUNTED LIGHT AND DIMMER SWITCHES SHALL BE MOUNTED FOR BARRIER FREE, BETWEEN 36" AFF AND 43" AFF. COORDINATE WITH ARCHITECT ON SITE FOR EXACT LOCATION PRIOR TO COMMENCEMENT OF WORK.
4. ALL WALL MOUNTED EXIT SIGNS, EMERGENCY LIGHTING BATTERY UNITS AND REMOTE EMERGENCY HEADS SHALL BE MOUNTED AT 8'-0" AFF UNLESS OTHERWISE NOTED.
5. ALL LIGHTING FIXTURES ARE TO BE LOCATED AS REQUIRED ON THE JOB TO CLEAR DUCTS, PIPING, EQUIPMENT, AND/OR MECHANICAL UNITS. THE LOCATIONS SHOWN ON THIS PLAN ARE APPROXIMATE.
6. ALLOW FOR TEMPORARY REMOVAL AND RE-INSTALLATION OF EXISTING LUMINAIRES AND OTHER CEILING MOUNTED DEVICES THAT ARE TO REMAIN, AS REQUIRED TO PERMIT INSTALLATION OF HVAC SYSTEMS. REFER TO MECHANICAL DRAWINGS FOR EXTENT OF SCOPE OF WORK. COORDINATE ALL WORK WITH MECHANICAL DIVISION CONTRACTOR.
7. WHEN RELOCATING BASE BUILDING LIGHTING FIXTURES, EXTEND EXISTING CIRCUITS AS REQUIRED. MATCH EXISTING BRANCH WIRING METHOD.
8. ALL RELOCATED BASE BUILDING LUMINAIRES SHALL BE TIED INTO LOCAL LIGHTING CIRCUITS AS REQUIRED USING SAME WIRING METHOD AS EXISTING FIXTURE.
9. ALL CONDUITS AND WIRING IN FINISHED AREAS AND AREAS WITH SUSPENDED TILE OR WHITE GYPSUM BOARD CEILINGS SHALL BE RUN CONCEALED.

10. ALL CONDUITS AND WIRING IN OPEN CEILING AREAS SHALL BE RUN TIGHT TO THE UNDERSIDE OF THE CEILING DECK. DO NOT SUSPEND CONDUITS MID-SPAN.
11. ALL LIGHT SWITCHES SHALL BE ROCKER STYLE, DECORA TYPE, WHITE WITH MATCHING COVERPLATE. VOLTAGE TO SUIT LOAD CONTROLLED.
12. ALL DIMMER SWITCHES SHALL BE LUTRON DVA TYPE 0-10V DIMMING PROTOCOL OR ELV DIMMING PROTOCOL, WHITE FINISH, RATED FOR CONNECTED LOAD PLUS 25% SPARE CAPACITY WITH MATCHING COVERPLATE, UNLESS NOTED OTHERWISE. PROVIDE CORRECT DIMMER TYPE TO SUIT LOAD CONTROLLED. ALL WIRING REQUIREMENTS PER MANUFACTURER'S RECOMMENDATIONS.
13. ALL OCCUPANCY SENSOR SWITCHES SHALL DECORA TYPE, WHITE WITH MATCHING COVERPLATE. MANUAL/AUTO CONTROL, COLOUR WHITE, FLUSH MOUNTED. DUAL TECHNOLOGY. 120V VOLTAGE RATING TO SUIT LOAD CONTROLLED, UNLESS NOTED OTHERWISE. PROVIDE GANGED COVERPLATE WHERE THERE ARE MORE THAN ONE (1) SWITCH.
14. ALL OCCUPANCY SENSOR DIMMER SWITCHES SHALL BE DECORA TYPE, DUAL TECHNOLOGY SINGLE CIRCUIT WALL SWITCH TYPE OCCUPANCY SENSOR, 120V RATED, MANUAL/AUTO CONTROL, COLOUR WHITE, FLUSH MOUNTED. VOLTAGE RATING TO SUIT LOAD CONTROLLED, UNLESS NOTED OTHERWISE. PROVIDE MATCHING COVERPLATE. PROVIDE GANGED COVERPLATE WHERE THERE ARE MORE THAN ONE (1) DIMMER SWITCH.
15. SINGLE LIGHT SWITCHES OR OCCUPANCY SENSOR SWITCHES SHALL CONTROL ALL LIGHTING WITHIN ROOM EXCEPT AS NOTED OTHERWISE. WHERE MULTIPLE SWITCHES ARE SHOWN EACH SWITCH TO CONTROL INDICATED ZONE.
16. ALL LIGHT SWITCHES AND DIMMER SWITCHES SHOWN ARE NEW, UNLESS NOTED OTHERWISE. CONTRACTOR MAY BE PERMITTED TO RE-USE EXISTING BACK BOXES IF LOCATIONS ARE SUITABLE OTHERWISE NEW BACK BOXES SHALL BE PROVIDED.

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01	COST CONSULTANT	2023.04.11	DK
NO.	REVISION	DATE	BY



SIGNATURE

Project

**CAMH 250 COLLEGE
RELOCATION
TORONTO, ONTARIO**

Drawing Title

**10TH FLOOR LIGHTING –
NEW**

Date MARCH 2023

Scale 1/8"=1'-0"

Drawn By D.K.

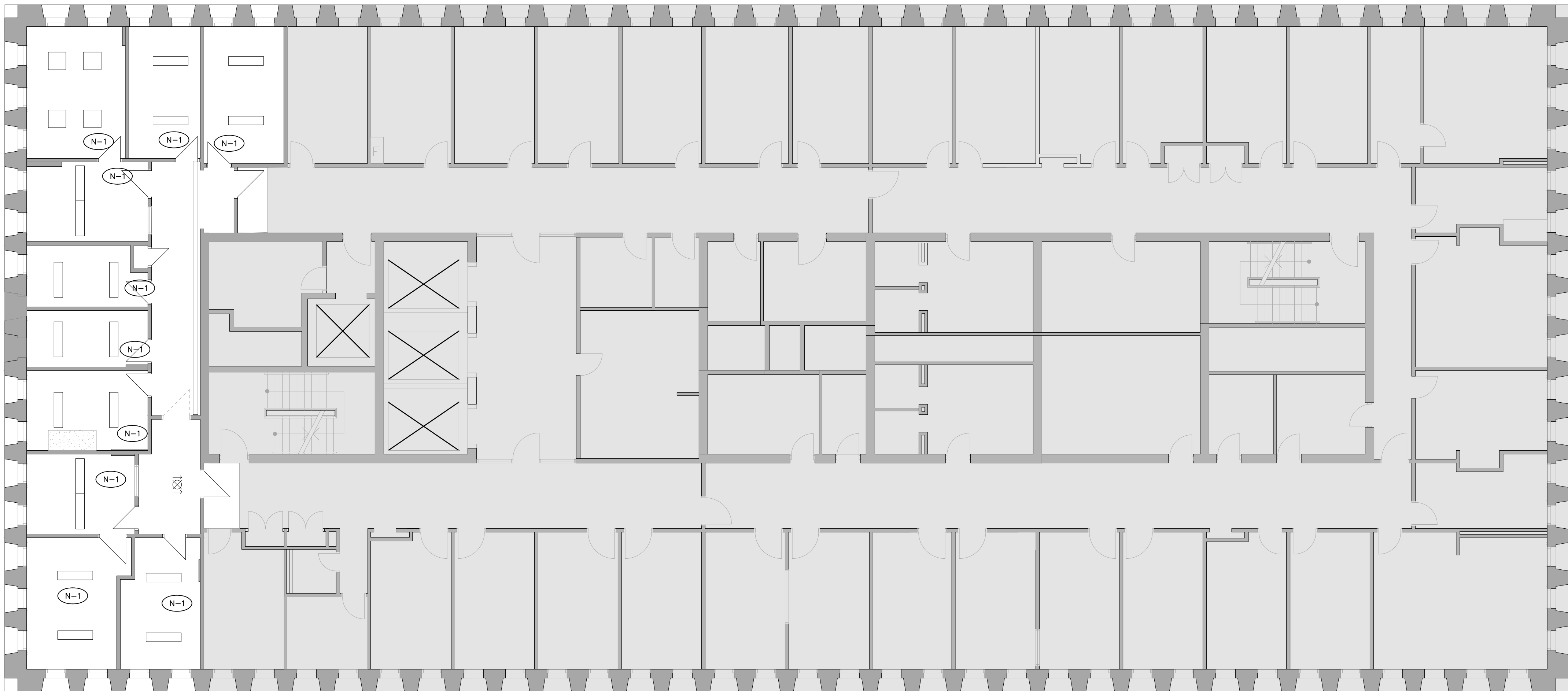
Approved By P.C.

File No.

Project No. 22048

Drawing No.

E2.09

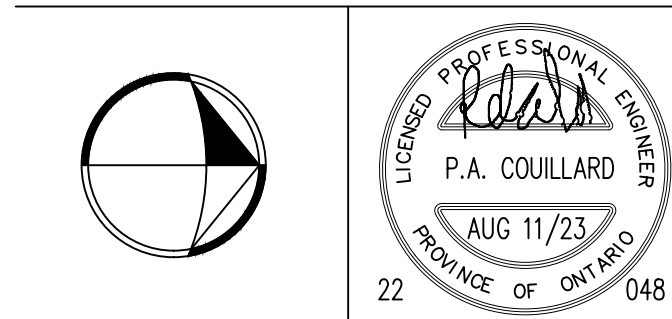


DRAWING REFERENCE NOTES:

N-1 ALL EXISTING LIGHTING FIXTURES TO REMAIN AS PRESENTLY INSTALLED. CHECK FOR NON OPERATIONAL 'LAMPS' AND REPORT FINDINGS TO ENGINEER.

- GENERAL DEMOLITION NOTES:**
- EXACT LOCATION OF ALL EXISTING LUMINAIRES, LIGHT SWITCHES, DIMMERS ETC. SHALL BE CONFIRMED ON SITE.
 - ALL LUMINAIRES, LIGHT SWITCHES AND DIMMERS SHOWN ON THIS DRAWING ARE EXISTING TO BE REMAIN UNLESS OTHERWISE SHOWN WITH AN 'R' TO BE REMOVED. CUT BACK AND REMOVE ALL UNUSED CONDUITS AND WIRING BACK TO SOURCE PANEL. REMOVE ALL LUMINAIRES, LIGHT SWITCHES, DIMMERS AND WIRING FROM WALLS AND CEILINGS THAT ARE TO BE DEMOLISHED.
 - CONTRACTOR SHALL BE AWARE THAT NOT ALL EXISTING LUMINAIRES, LIGHT SWITCHES, DIMMERS, EQUIPMENT AND DEVICES REQUIRED TO BE REMOVED ARE NECESSARILY INDICATED ON THIS PLAN. CONTRACTOR SHALL STILL BE RESPONSIBLE FOR REMOVING ALL SUCH ITEMS AS REQUIRED TO FACILITATE THE COMPLETE DEMOLITION.
 - WHERE THE REMOVAL OF LUMINAIRES, LIGHT SWITCHES AND DIMMERS AFFECT THE OPERATION OF EXISTING LUMINAIRES, LIGHT SWITCHES AND DIMMERS TO REMAIN, CONTRACTOR SHALL REPLACE/MAKE GOOD BRANCH WIRING AS REQUIRED TO ENSURE CONTINUITY OF OPERATION OF REMAIN LUMINAIRES, LIGHT SWITCHES AND DIMMERS
 - ALL EXISTING LUMINAIRES, LIGHT SWITCHES, DIMMERS WHICH ARE NO LONGER REQUIRED SHALL BE REMOVED AND DISPOSED OF OFF SITE.
 - REFER TO NEW PLAN FOR NEW LOCATION OF RELOCATED LUMINAIRES, DEVICES AND EQUIPMENT.
 - REMOVE ALL REDUNDANT LINE VOLTAGE AND LOW VOLTAGE CONDUIT AND WIRING IN CEILING SPACE WHICH IS NOT IN USE.

05	ISSUED FOR ADDENDUM E-1	2023.08.31	DK
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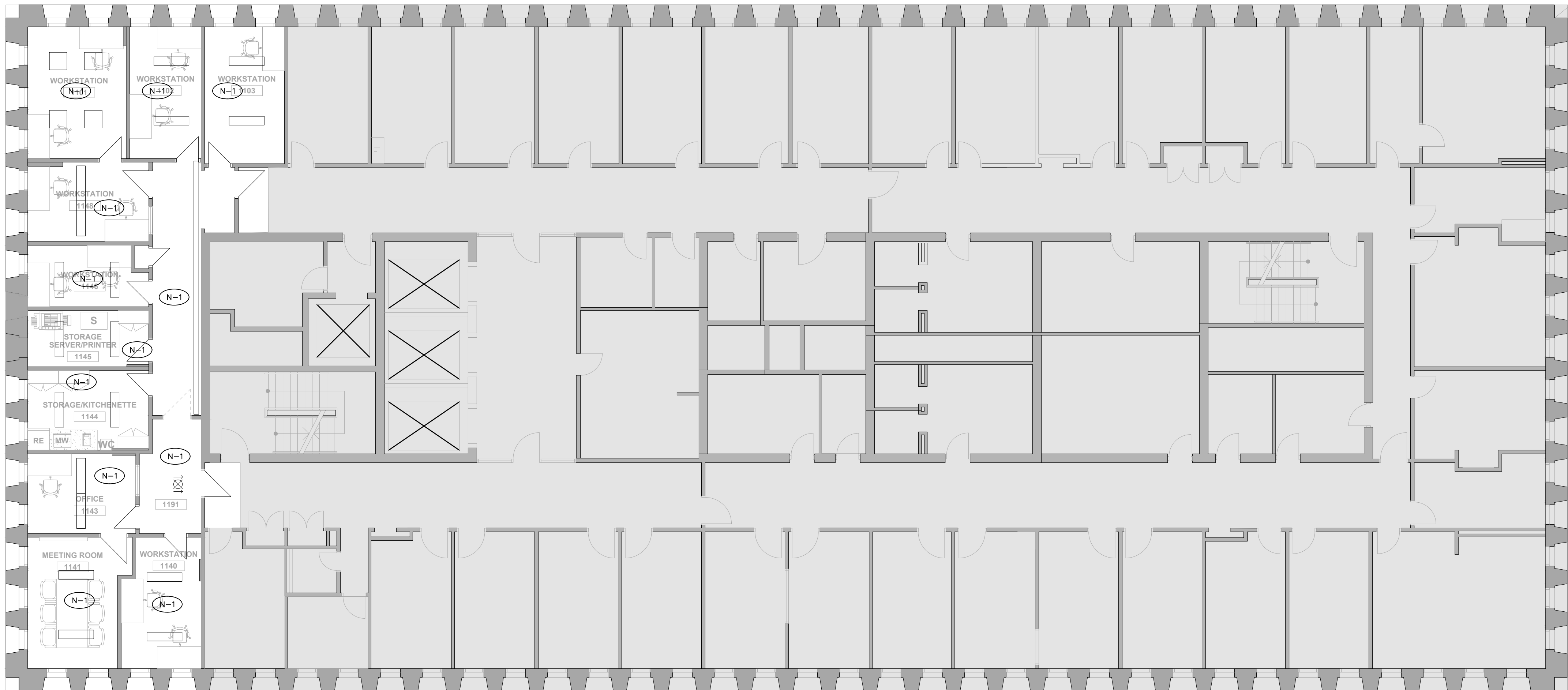
Project

**CAMH 250 COLLEGE
RELOCATION
TORONTO, ONTARIO**

Drawing Title

**11TH FLOOR LIGHTING –
DEMOLITION**

Date	MARCH 2023	Drawing No. E2.10
Scale	1/8"=1'-0"	
Drawn By	D.K.	
Approved By	P.C.	
File No.		
Project No.	22048	



DRAWING REFERENCE NOTES:

- N-1** ALL EXISTING LIGHTING THIS AREA TO REMAIN AS PRESENTLY INSTALLED.

SEP/IDENTIFIED PRICES

CONTRACTOR TO CARRY COST TO REPLACE APPROXIMATELY 10% OF ALL EXISTING FIXTURE LAMPS WITH NEW LED 'RETROFIT' STYLE T8/T5 FORMAT LAMPS. EXACT QUANTITIES AND STYLES TO BE VERIFIED ON SITE.

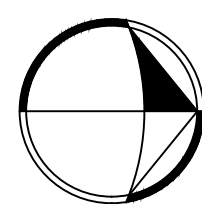
REFER TO BID FORM APPENDIX 'C'

DRAWING GENERAL NOTES:

- REFER TO THE ARCHITECT'S REFLECTED CEILING PLAN FOR THE EXACT LOCATION OF ALL CEILING MOUNTED LUMINAIRES.
- EXACT LOCATION OF ALL EXISTING LUMINAIRES AND LIGHT SWITCHES/CONTROLS SHALL BE CONFIRMED ON SITE.
- REFER TO THE ARCHITECT'S DRAWINGS FOR THE EXACT LOCATION AND MOUNTING HEIGHT OF ALL WALL MOUNTED LIGHT AND DIMMER SWITCHES. ALL WALL MOUNTED LIGHT AND DIMMER SWITCHES SHALL BE MOUNTED FOR BARRIER FREE, BETWEEN 36" AFF AND 43" AFF. COORDINATE WITH ARCHITECT ON SITE FOR EXACT LOCATION PRIOR TO COMMENCEMENT OF WORK.
- ALL WALL MOUNTED EXIT SIGNS, EMERGENCY LIGHTING BATTERY UNITS AND REMOTE EMERGENCY HEADS SHALL BE MOUNTED AT 8'-0" AFF UNLESS OTHERWISE NOTED.
- ALL LIGHTING FIXTURES ARE TO BE LOCATED AS REQUIRED ON THE JOB TO CLEAR DUCTS, PIPING, EQUIPMENT, AND/OR MECHANICAL UNITS. THE LOCATIONS SHOWN ON THIS PLAN ARE APPROXIMATE.
- ALLOW FOR TEMPORARY REMOVAL AND RE-INSTALLATION OF EXISTING LUMINAIRES AND OTHER CEILING MOUNTED DEVICES THAT ARE TO REMAIN, AS REQUIRED TO PERMIT INSTALLATION OF HVAC SYSTEMS. REFER TO MECHANICAL DRAWINGS FOR EXTENT OF SCOPE OF WORK. COORDINATE ALL WORK WITH MECHANICAL DIVISION CONTRACTOR.
- WHEN RELOCATING BASE BUILDING LIGHTING FIXTURES, EXTEND EXISTING CIRCUITS AS REQUIRED. MATCH EXISTING BRANCH WIRING METHOD.
- ALL RELOCATED BASE BUILDING LUMINAIRES SHALL BE TIED INTO LOCAL LIGHTING CIRCUITS AS REQUIRED USING SAME WIRING METHOD AS EXISTING FIXTURE.
- ALL CONDUITS AND WIRING IN FINISHED AREAS AND AREAS WITH SUSPENDED TILE OR WHITE GYPSUM BOARD CEILINGS SHALL BE RUN CONCEALED.

- ALL CONDUITS AND WIRING IN OPEN CEILING AREAS SHALL BE RUN TIGHT TO THE UNDERSIDE OF THE CEILING DECK. DO NOT SUSPEND CONDUITS MID-SPAN.
- ALL LIGHT SWITCHES SHALL BE ROCKER STYLE, DECORA TYPE, WHITE WITH MATCHING COVERPLATE. VOLTAGE TO SUIT LOAD CONTROLLED.
- ALL DIMMER SWITCHES SHALL BE LUTRON DIVA TYPE 0-10V DIMMING PROTOCOL OR ELV DIMMING PROTOCOL, WHITE FINISH, RATED FOR CONNECTED LOAD PLUS 25% SPARE CAPACITY WITH MATCHING COVERPLATE, UNLESS NOTED OTHERWISE. PROVIDE CORRECT DIMMER TYPE TO SUIT LOAD CONTROLLED. ALL WIRING REQUIREMENTS PER MANUFACTURER'S RECOMMENDATIONS.
- ALL OCCUPANCY SENSOR SWITCHES SHALL DECORA TYPE, WHITE WITH MATCHING COVERPLATE. MANUAL/AUTO CONTROL, COLOUR WHITE, FLUSH MOUNTED. DUAL TECHNOLOGY, 120V VOLTAGE RATING TO SUIT LOAD CONTROLLED, UNLESS NOTED OTHERWISE. PROVIDE GANGED COVERPLATE WHERE THERE ARE MORE THAN ONE (1) SWITCH.
- ALL OCCUPANCY SENSOR DIMMER SWITCHES SHALL BE DECORA TYPE, DUAL TECHNOLOGY SINGLE CIRCUIT WALL SWITCH TYPE, OCCUPANCY SENSOR, 120V RATED, MANUAL/AUTO CONTROL, COLOUR WHITE, FLUSH MOUNTED. VOLTAGE RATING TO SUIT LOAD CONTROLLED, UNLESS NOTED OTHERWISE. PROVIDE MATCHING COVERPLATE. PROVIDE GANGED COVERPLATE WHERE THERE ARE MORE THAN ONE (1) DIMMER SWITCH.
- SINGLE LIGHT SWITCHES OR OCCUPANCY SENSOR SWITCHES SHALL CONTROL ALL LIGHTING WITHIN ROOM EXCEPT AS NOTED OTHERWISE. WHERE MULTIPLE SWITCHES ARE SHOWN EACH SWITCH TO CONTROL INDICATED ZONE.
- ALL LIGHT SWITCHES AND DIMMER SWITCHES SHOWN ARE NEW, UNLESS NOTED OTHERWISE. CONTRACTOR MAY BE PERMITTED TO RE-USE EXISTING BACK BOXES IF LOCATIONS ARE SUITABLE OTHERWISE NEW BACK BOXES SHALL BE PROVIDED.

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NO.	REVISION	DATE	BY



SIGNATURE

Project

**CAMH 250 COLLEGE
RELOCATION
TORONTO, ONTARIO**

Drawing Title

**11TH FLOOR LIGHTING -
NEW**

Date MARCH 2023

Scale 1/8"=1'-0"

Drawn By D.K.

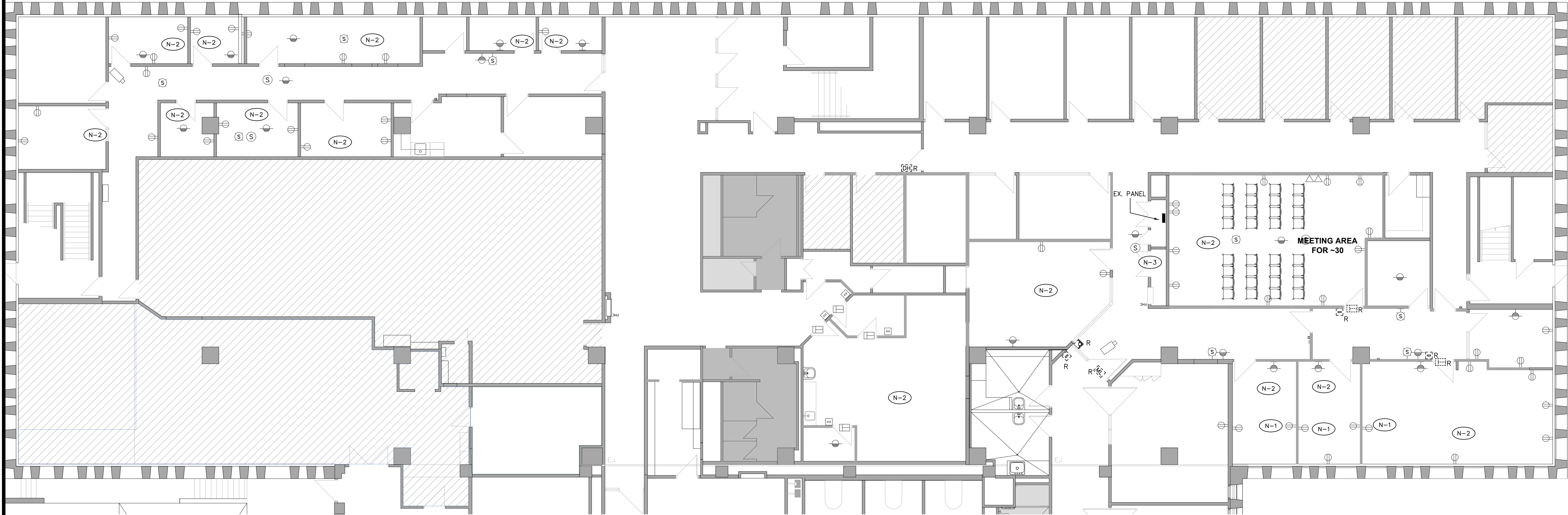
Approved By P.C.

File No.

Project No. 22048

Drawing No.

E2.11



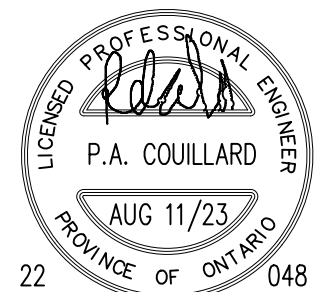
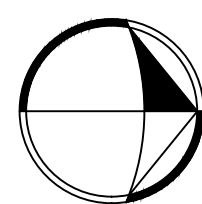
DRAWING REFERENCE NOTES:

- N-1 EXISTING DEVICE TO BE REPLACED WITH NEW SURFACE MOUNTED DEVICE, REFER TO NEW FLOORPLAN FOR LOCATION
- N-2 EXISTING DEVICE(S) TO BE MAINTAINED AS PRESENTLY INSTALLED UNLESS NOTED OTHERWISE
- N-3 EXISTING IT CLOSET SHOWN FOR REFERENCE AND COORDINATION.

DRAWING GENERAL NOTES:

1. EXACT LOCATION OF ALL EXISTING RECEPTACLES AND OTHER DEVICES/EQUIPMENT SHALL BE CONFIRMED ON SITE.
2. ALL EXISTING FIRE ALARM DEVICES (HORN STROBES, PULL STATIONS, DETECTORS, SPEAKERS ETC...) AND BACKGROUND PAGING SYSTEM SPEAKERS TO REMAIN AS PRESENTLY INSTALLED UNLESS NOTED OTHERWISE.
3. IN GENERAL ALL EXISTING SECURITY AND ACCESS CONTROL DEVICES, MAGNETIC LOCKS, DOOR HOLDERS, CCTV CAMERAS TO BE DISCONNECTED AND TURNED OVER TO THE OWNER. WIRING SHALL BE PULLED BACK TO CEILING VOID, COILED AND TAGGED. OWNER TO MAKE SAFE CONNECTION AT SOURCE END. REFER TO NEW PLANS FOR DEVICES TO BE REINSTALLED.
4. ALL RECEPTACLES AND OTHER DEVICES/EQUIPMENT SHOWN ON THIS DRAWING ARE EXISTING TO REMAIN UNLESS OTHERWISE SHOWN WITH AN 'R' TO BE REMOVED OR NOTED. CUT BACK AND REMOVE ALL UNUSED CONDUITS AND WIRING BACK TO SOURCE PANEL. REMOVE ALL DEVICES AND WIRING FROM WALLS THAT ARE TO BE DEMOLISHED. ALL EXISTING DEVICES AND WIRING THAT ARE TO BE DEMOLISHED ARE NOT NECESSARILY SHOWN. CONTRACTOR SHALL VISIT THE SITE DURING TENDER PERIOD TO ASCERTAIN THE FULL SCOPE OF DEMOLITION.
5. ALL EXISTING RECEPTACLES AND DEVICES/EQUIPMENT ON WALLS TO BE DEMOLISHED SHALL ALSO BE REMOVED. THESE DEVICES MAY NOT ALL NECESSARILY BE INDICATED ON THIS PLAN. CONTRACTOR SHALL VISIT THE SITE DURING TENDER PERIOD TO ASCERTAIN THE FULL SCOPE OF DEMOLITION. CONTRACTOR SHALL BE RESPONSIBLE FOR REMOVING ALL SUCH ITEMS AS REQUIRED TO FACILITATE THE COMPLETE DEMOLITION.
6. WHERE RECEPTACLES AND DEVICES/EQUIPMENT ARE REMOVED, CUT BACK AND REMOVE CONDUIT AND WIRING THAT IS NO LONGER REQUIRED BACK TO SOURCE PANEL, OR LAST DEVICE TO REMAIN AND REMOVE.
7. ALL EXISTING ELECTRICAL EQUIPMENT OR DEVICE WHICH IS NO LONGER REQUIRED SHALL BE OFFERED TO THE OWNER FOR RECLAMATION AT THEIR DISCRETION, OTHERWISE REMOVED AND DISPOSED OF OFF SITE.
8. WHERE REMOVAL OF RECEPTACLES, DEVICES/EQUIPMENT AFFECTS THE OPERATION OF EXISTING RECEPTACLES, DEVICES/EQUIPMENT TO REMAIN, THE CONTRACTOR SHALL REPLACE/MAKE GOOD BRANCH WIRING AS REQUIRED TO ENSURE CONTINUITY OF OPERATION OF REMAINING RECEPTACLES, DEVICES/EQUIPMENT.
9. NOT ALL MECHANICAL EQUIPMENT TO BE REMOVED IS NECESSARILY INDICATED ON THIS PLAN. REFER TO THE MECHANICAL DRAWINGS FOR EXTENT OF MECHANICAL DEMOLITION WORK. DISCONNECT EXISTING MECHANICAL EQUIPMENT WHICH IS BEING REMOVED. CUT BACK CONDUIT AND WIRING TO SOURCE ELECTRICAL PANEL. MAINTAIN ELECTRICAL SERVICES TO EXISTING MECHANICAL EQUIPMENT WHICH IS TO REMAIN IN SERVICE. REPLACE BRANCH WIRING AS NEEDED.
10. ALL EXISTING HORIZONTAL COMMUNICATIONS CABLING IS TO REMAIN AS PRESENTLY INSTALLED. CABLING NOT SHOWN. ALL EXISTING COMMUNICATIONS CABLING SHALL BE TESTED BY THE OWNER AND REPLACED BY THEIR FORCES
11. REMOVE ALL REDUNDANT LINE VOLTAGE AND LOW VOLTAGE CONDUIT AND WIRING SPACE WHICH IS NOT IN USE.
12. CONTRACTOR SHALL BE AWARE THAT NOT ALL EXISTING EQUIPMENT AND DEVICES REQUIRED TO BE REMOVED ARE NECESSARILY INDICATED ON THIS PLAN. CONTRACTOR SHALL STILL BE RESPONSIBLE FOR REMOVING ALL SUCH ITEMS AS REQUIRED TO FACILITATE THE COMPLETE DEMOLITION.
13. REFER TO NEW PLAN FOR NEW LOCATION OF RELOCATED DEVICES AND EQUIPMENT.
14. ALL EXISTING ELECTRIC DOOR STRIKE LOCKING DEVICES TO BE REMOVED AND REPLACED AS PER THE ARCHITECTURAL SCOPE. ALL WORK BY OTHERS.

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01	COST CONSULTANT	2023.04.11	DK
NO.	REVISION	DATE	BY



SIGNATURE

Project

**CAMH 250 COLLEGE
RELOCATION
TORONTO, ONTARIO**

Drawing Title

**GROUND FLOOR NORTH
POWER & SYSTEMS –
DEMOLITION**

Date	MARCH 2023	Drawing No. E3.00
Scale	1/8"=1'-0"	
Drawn By	D.K.	
Approved By	P.C.	
File No.		
Project No.	22048	



DRAWING REFERENCE NOTES:

- N-1 EXISTING DEVICE TO BE REPLACED WITH NEW SURFACE MOUNTED DEVICE, PROVIDE NEW WIREMOLD BOX AND COVERPLATE, EXTEND WIRING TO DEVICE.
- N-2 NEW COMM DEVICE TO BE SURFACE MOUNTED, UTILIZE SURFACE WIREMOLD BOX AND RACEWAY, RUN RACEWAY AT HIGH LEVEL AND TERMINATE IN CORRIDOR CEILING VOID. ALL CABLING TO RUN THROUGH CEILING SPACE TO NEW RACK IN ROOM 931
- N-3 NEW DEVICE TO BE SURFACE MOUNTED, WIRE TO ADJACENT OUTLET, UTILIZE SURFACE WIREMOLD BOX AND RACEWAY, PROVIDE ALL WIRING.
- N-4 RELOCATED DEVICE TO BE INSTALLED IN NEW SURFACE MOUNTED WIREMOLD BOX AND COVERPLATE, EXTEND WIRING TO DEVICE.
- N-5 NEW DEVICE TO BE SURFACE MOUNTED, WIRE TO EXISTING PANEL, UTILIZE SURFACE WIREMOLD BOX AND RACEWAY, PROVIDE ALL WIRING. CONCEAL WIRING IN CORRIDOR CEILING SPACE TO PANEL
- N-6 PROVIDE VERTICAL SERVICE "PAC" POLE C/W DEVICES AS NOTED. CONCEAL WIRING THROUGH CEILING SPACE.
- N-7 NEW DEVICES TO BE SURFACE MOUNTED IN WIREMOLD CS000 2 SECTION WIREWAY. PROVIDE ALL COVERS AND ACTIVATIONS. RACEWAY TO RISE TO CEILING. RUN NEW WIRING IN CEILING, COORDINATE ON SITE.
- N-8 PROVIDE 4-15A 1P BREAKERS IN PANEL FOR NEW CIRCUITS. NUMBERS SHOWN ARE FOR REFERENCE ONLY, UPDATE PANEL DIRECTORY.
- N-9 DOOR ACCESS DEVICES RELOCATED FROM OTHER FLOOR/AREA. PROVIDE ROUGH IN, DEVICE INSTALLATION AND WIRING BY OWNERS SUBCONTRACTOR.

SECURITY NOTES

1. EXISTING CCTV & SECURITY ACCESS SYSTEM IS EXISTING TO BE MAINTAINED. ALL CAMERAS SHOWN IN NEW PLAN ARE EXISTING TO REMAIN OR RELOCATED FROM PRESENT POSITION TO NEW LOCATION.
2. NEW OR RELOCATED DEVICES/INSTALLATIONS SHOWN SHALL BE ROUGHED IN BY THE ELECTRICAL CONTRACTOR, ALL WIRING AND DEVICES BY THE OWNERS SECURITY CONTRACTOR.
3. WHERE CARD READER AND DOOR STRIKES ARE NOTED AS RELOCATED, 'ER', THE INTENT IS TO EXTEND THE EXISTING CONTROL CIRCUIT/POWER TO THE NEW LOCATION FROM THE LOCAL PANEL. INSTALLATION TO BE REPROGRAMMED BY THE SECURITY CONTRACTOR.
4. COORDINATE ALL REWORK WITH OWNERS APPROVED SECURITY CONTRACTOR.

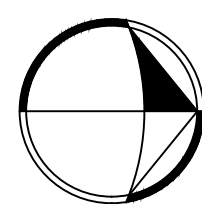
TYPICAL DOOR STATION CONTROL, DEVICES AS FOLLOWS; (CARD READER ON EXTERIOR SIDE ONLY)



DRAWING GENERAL NOTES:

1. REFER TO THE ARCHITECT'S DRAWINGS FOR THE EXACT LOCATION AND MOUNTING HEIGHT OF ALL RECEPTACLES AND COMMUNICATIONS OUTLET BOXES. WHERE THIS INFORMATION IS NOT INDICATED HAVE THE OWNER OR ARCHITECT VERIFY EXACT LOCATIONS ON SITE PRIOR TO ROUGHING IN. DO NOT SCALE LOCATIONS FROM ELECTRICAL DRAWINGS. OUTLETS INSTALLED WITHOUT APPROVED LOCATIONS SHALL BE RELOCATED AT THE CONTRACTOR'S EXPENSE.
2. ALL RECEPTACLES AND COMMUNICATIONS OUTLET BOXES SHALL BE MOUNTED AT 16" AFF AS MEASURED TO THE CENTRE-LINE OF THE DEVICE UNLESS OTHERWISE NOTED IN ARCHITECTURAL DRAWINGS. WHERE MOUNTED ADJACENT TO EXISTING, MATCH EXISTING HEIGHT.
3. REPORT ANY DISCREPANCIES BETWEEN THIS PLAN AND THE ARCHITECT'S POWER AND COMMUNICATIONS PLAN TO THE CONSULTANT PRIOR TO ROUGHING IN ANY SERVICES.
4. ALL DUPLEX RECEPTACLES SHALL BE DECORA TYPE, WHITE FINISH. PROVIDE WITH MATCHING WHITE COLOUR COVERPLATE.
5. WHERE POWER AND COMMUNICATIONS OUTLET BOXES ARE SHOWN ADJACENT TO EACH OTHER PROVIDE GANGED COVERPLATE SIZE AS REQUIRED. REFER TO DETAIL.
6. DO NOT INSTALL OUTLETS BACK TO BACK.
7. ALL WALL MOUNTED WIRING DEVICE BACK BOXES SHALL BE FLUSH MOUNTED WITH CONDUIT VERTICALLY CONCEALED AND HORIZONTAL CONDUITS SHALL BE TIGHT TO UNDERSIDE OF DECK/SLAB UNLESS OTHERWISE NOTED. IN OPEN CEILING AREAS, TAKE SPECIAL CARE TO NEATLY RUN THE CONDUITS TO NOT BE VISIBLE AS MUCH AS POSSIBLE. SELECT CONDUIT ROUTINGS ACCORDINGLY.
8. PROVIDE BLANK WHITE COVERPLATES OVER ALL EXISTING BLANK WALLBOXES THAT ARE TO REMAIN, UNLESS OTHERWISE NOTED.
9. IN AREAS WHERE COUNTERS OR OTHER MILLWORK ARE PROVIDED, COORDINATE EXACT LOCATION OF OUTLETS AND WIRING WITH MILLWORK AND ARCHITECT.
10. FOR PLUG-IN EQUIPMENT, CONFIRM CSA CONFIGURATION OF REQUIRED RECEPTACLE PRIOR TO PURCHASE AND INSTALLATION.
11. SUPPLY AND INSTALL EQUIPMENT DISCONNECT SWITCHES IN STRICT COMPLIANCE WITH CODE REQUIREMENTS (NOT ALL LOCAL DISCONNECT SWITCHES ARE SHOWN).
12. PROVIDE ALL EMPTY CONDUITS C/W PULL STRINGS AND BACK BOXES AS REQUIRED TO SUIT THE COMPLETE INSTALLATION OF THE COMMUNICATIONS SYSTEMS (VOICE, DATA, CATV) AND SECURITY SYSTEMS (ACCESS CONTROL AND CCTV).
13. ALL EMPTY CONDUITS FOR COMMUNICATIONS OUTLETS SHALL BE TERMINATED WITH BUSHING AT END OF CONDUIT. IN OPEN CEILING AREAS EXTEND ALL EMPTY CONDUITS FOR COMMUNICATIONS SYSTEMS AS REQUIRED SO THAT COMMUNICATIONS CONTRACTOR DOES NOT NEED TO RUN FREE AIR CABLING THAT WILL BE VISIBLE.
14. REFER TO MECHANICAL DRAWINGS FOR EXACT LOCATION AND MOUNTING HEIGHT OF ALL HVAC AND PLUMBING EQUIPMENT. CONFIRM EXACT LOCATION OF ALL MECHANICAL EQUIPMENT WITH MECHANICAL CONTRACTOR PRIOR TO ROUGHING IN ELECTRICAL SERVICES.
15. STARTER LOAD SIDE WIRING SHALL BE THE SAME AS LINE SIDE WIRING.
16. ALL STARTERS AND PUMP CONTROLLERS SUPPLIED BY MECHANICAL CONTRACTOR. ELECTRICAL CONTRACTOR TO PROVIDE ALL LINE AND LOAD SIDE POWER WIRING AND CONDUIT, AND REQUIRED ISOLATION SWITCH AT THE MOTOR.
17. ELECTRICAL CONTRACTOR SHALL PROVIDE 15A, 120V JUNCTION BOX OUTLETS MOUNTED IN CEILING SPACE FOR USE BY THE MECHANICAL CONTROLS CONTRACTOR FOR CONTROLS POWER. THE LOCATIONS SHALL BE AS INDICATED ON THIS DRAWING. ALL LOAD SIDE 120V TERMINATIONS SHALL BE PROVIDED BY MECHANICAL CONTRACTOR.
18. PROVIDE NEW EVAC SPEAKERS WHERE INDICATED AND CONNECT TO EXISTING SPEAKER CIRCUITS AND EXTEND WIRING AS REQUIRED. VERIFY CIRCUIT LOADING WITH FIRE ALARM MANUFACTURER AND PROVIDE NEW CIRCUITS AND/OR ADDITIONAL AMPLIFICATION EQUIPMENT AS REQUIRED. RUN NEW CIRCUITS TO FIRE ALARM DGP. NEW SPEAKERS TO MATCH EXISTING.
19. CIRCUITING SHOWN IS FOR GROUPING PURPOSES ONLY. THE CONTRACTOR SHALL VERIFY EXACT CIRCUIT NUMBERS TO BE USED ON SITE AND SHALL INDICATE EXACT NUMBERS USED ON THE AS-BUILT DRAWINGS.

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NO.	REVISION	DATE	BY



SIGNATURE

Project

**CAMH 250 COLLEGE
RELOCATION
TORONTO, ONTARIO**

Drawing Title

**GROUND FLOOR NORTH
POWER & SYSTEMS –
NEW**

Date	MARCH 2023	Drawing No. E3.01
Scale	1/8"=1'-0"	
Drawn By	D.K.	
Approved By	P.C.	
File No.		
Project No.	22048	



DRAWING REFERENCE NOTES:

- N-1 EXISTING DEVICE TO BE REPLACED WITH NEW SURFACE MOUNTED DEVICE, PROVIDE NEW WIREMOLD BOX AND COVERPLATE, EXTEND WIRING TO DEVICE.
- N-2 NEW COMM DEVICE TO BE SURFACE MOUNTED, UTILIZE SURFACE WIREMOLD BOX AND RACEWAY, RUN RACEWAY AT HIGH LEVEL AND TERMINATE IN CORRIDOR CEILING VOID. ALL CABLING TO RUN THROUGH CEILING SPACE TO NEW RACK IN ROOM 166
- N-3 NEW DEVICE TO BE SURFACE MOUNTED, WIRE TO ADJACENT OUTLET, UTILIZE SURFACE WIREMOLD BOX AND RACEWAY, PROVIDE ALL WIRING.
- N-4 RELOCATED DEVICE TO BE INSTALLED IN NEW SURFACE MOUNTED WIREMOLD BOX AND COVERPLATE, EXTEND WIRING TO DEVICE.
- N-5 NEW DEVICE TO BE SURFACE MOUNTED, WIRE TO EXISTING PANEL, UTILIZE SURFACE WIREMOLD BOX AND RACEWAY, PROVIDE ALL WIRING. CONCEAL WIRING IN CORRIDOR CEILING SPACE TO PANEL.
- N-6 PROVIDE VERTICAL SERVICE 'PAC' POLE C/W DEVICES AS NOTED. CONCEAL WIRING THROUGH CEILING SPACE.
- N-7 NEW DEVICES TO BE SURFACE MOUNTED IN WIREMOLD G5000 2 SECTION WIREWAY. PROVIDE ALL COVERS AND ACTIVATIONS. RACEWAY TO RISE TO CEILING. RUN NEW WIRING IN CEILING, COORDINATE ON SITE.
- N-8 PROVIDE 4-15A 1P BREAKERS IN PANEL FOR NEW CIRCUITS. NUMBERS SHOWN ARE FOR REFERENCE ONLY, UPDATE PANEL DIRECTORY.
- N-9 DOOR ACCESS DEVICES RELOCATED FROM OTHER FLOOR/AREA. PROVIDE ROUGH IN, DEVICE INSTALLATION AND WIRING BY OWNERS SUBCONTRACTOR.

DRAWING GENERAL NOTES:

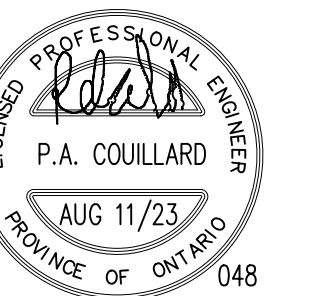
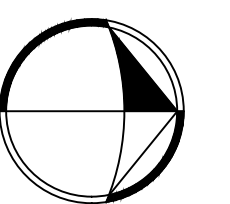
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- ALL RECEPTACLES AND COMMUNICATIONS OUTLET BOXES SHALL BE MOUNTED AT 16" AFF AS MEASURED TO THE CENTRE-LINE OF THE DEVICE UNLESS OTHERWISE NOTED IN ARCHITECTURAL DRAWINGS. WHERE MOUNTED ADJACENT TO EXISTING, MATCH EXISTING HEIGHT.
- REPORT ANY DISCREPANCIES BETWEEN THIS PLAN AND THE ARCHITECT'S POWER AND COMMUNICATIONS PLAN TO THE CONSULTANT PRIOR TO ROUGHING IN ANY SERVICES.
- ALL DUPLEX RECEPTACLES SHALL BE DECORA TYPE, WHITE FINISH. PROVIDE WITH MATCHING WHITE COLOUR COVERPLATE.
- WHERE POWER AND COMMUNICATIONS OUTLET BOXES ARE SHOWN ADJACENT TO EACH OTHER PROVIDE GANGED COVERPLATE SIZE AS REQUIRED. REFER TO DETAIL.
- DO NOT INSTALL OUTLETS BACK TO BACK.
- ALL WALL MOUNTED WIRING DEVICE BACK BOXES SHALL BE FLUSH MOUNTED WITH CONDUIT VERTICALLY CONCEALED AND HORIZONTAL CONDUITS SHALL BE TIGHT TO UNDERSIDE OF DECK/SLAB UNLESS OTHERWISE NOTED. IN OPEN CEILING AREAS, TAKE SPECIAL CARE TO NEATLY RUN THE CONDUITS TO NOT BE VISIBLE AS MUCH AS POSSIBLE. SELECT CONDUIT ROUTINGS ACCORDINGLY.
- PROVIDE BLANK WHITE COVERPLATES OVER ALL EXISTING BLANK WALLBOXES THAT ARE TO REMAIN, UNLESS OTHERWISE NOTED.
- IN AREAS WHERE COUNTERS OR OTHER MILLWORK ARE PROVIDED, COORDINATE EXACT LOCATION OF OUTLETS AND WIRING WITH MILLWORK AND ARCHITECT.
- FOR PLUG-IN EQUIPMENT, CONFIRM CSA CONFIGURATION OF REQUIRED RECEPTACLE PRIOR TO PURCHASE AND INSTALLATION.
- SUPPLY AND INSTALL EQUIPMENT DISCONNECT SWITCHES IN STRICT COMPLIANCE WITH CODE REQUIREMENTS (NOT ALL LOCAL DISCONNECT SWITCHES ARE SHOWN).
- PROVIDE ALL EMPTY CONDUITS C/W PULL STRINGS AND BACK BOXES AS REQUIRED TO SUIT THE COMPLETE INSTALLATION OF THE COMMUNICATIONS SYSTEMS (VOICE, DATA, CATV) AND SECURITY SYSTEMS (ACCESS CONTROL AND CCTV).
- ALL EMPTY CONDUITS FOR COMMUNICATIONS OUTLETS SHALL BE TERMINATED WITH BUSHING AT END OF CONDUIT. IN OPEN CEILING AREAS EXTEND ALL EMPTY CONDUITS FOR COMMUNICATIONS SYSTEMS AS REQUIRED SO THAT COMMUNICATIONS CONTRACTOR DOES NOT NEED TO RUN FREE AIR CABLING THAT WILL BE VISIBLE.
- REFER TO MECHANICAL DRAWINGS FOR EXACT LOCATION AND MOUNTING HEIGHT OF ALL HVAC AND PLUMBING EQUIPMENT. CONFIRM EXACT LOCATION OF ALL MECHANICAL EQUIPMENT WITH MECHANICAL CONTRACTOR PRIOR TO ROUGHING IN ELECTRICAL SERVICES.
- STARTER LOAD SIDE WIRING SHALL BE THE SAME AS LINE SIDE WIRING.
- ALL STARTERS AND PUMP CONTROLLERS SUPPLIED BY MECHANICAL CONTRACTOR. ELECTRICAL CONTRACTOR TO PROVIDE ALL LINE AND LOAD SIDE POWER WIRING AND CONDUIT, AND REQUIRED ISOLATION SWITCH AT THE MOTOR.
- ELECTRICAL CONTRACTOR SHALL PROVIDE 15A, 120V JUNCTION BOX OUTLETS MOUNTED IN CEILING SPACE FOR USE BY THE MECHANICAL CONTROLS CONTRACTOR FOR CONTROLS POWER. THE LOCATIONS SHALL BE AS INDICATED ON THIS DRAWING. ALL LOAD SIDE 120V TERMINATIONS SHALL BE PROVIDED BY MECHANICAL CONTRACTOR.
- PROVIDE NEW EVAC SPEAKERS WHERE INDICATED AND CONNECT TO EXISTING SPEAKER CIRCUITS AND EXTEND WIRING AS REQUIRED. VERIFY CIRCUIT LOADING WITH FIRE ALARM MANUFACTURER AND PROVIDE NEW CIRCUITS AND/OR ADDITIONAL AMPLIFICATION EQUIPMENT AS REQUIRED. RUN NEW CIRCUITS TO FIRE ALARM DGP. NEW SPEAKERS TO MATCH EXISTING.
- CIRCUITING SHOWN IS FOR GROUPING PURPOSES ONLY. THE CONTRACTOR SHALL VERIFY EXACT CIRCUIT NUMBERS TO BE USED ON SITE AND SHALL INDICATE EXACT NUMBERS USED ON THE AS-BUILT DRAWINGS.

SECURITY NOTES

- EXISTING CCTV & SECURITY ACCESS SYSTEM IS EXISTING TO BE MAINTAINED, ALL CAMERAS SHOWN IN NEW PLAN ARE EXISTING TO REMAIN OR RELOCATED FROM PRESENT POSITION TO NEW LOCATION.
- NEW OR RELOCATED DEVICES/INSTALLATIONS SHOWN SHALL BE ROUGHED IN BY THE ELECTRICAL CONTRACTOR, ALL WIRING AND DEVICES BY THE OWNERS SECURITY CONTRACTOR.
- WHERE CARD READER AND DOOR STRIKES ARE NOTED AS RELOCATED, 'ER', THE INTENT IS TO EXTEND THE EXISTING CONTROL CIRCUIT/POWER TO THE NEW LOCATION FROM THE LOCAL PANEL. INSTALLATION TO BE REPROGRAMMED BY THE SECURITY CONTRACTOR.
- COORDINATE ALL REWORK WITH OWNERS APPROVED SECURITY CONTRACTOR.

ES TYPICAL DOOR STATION CONTROL, DEVICES AS FOLLOWS; (CARD READER ON EXTERIOR SIDE ONLY)

05	ISSUED FOR ADDENDUM E-1	2023.08.31	DK
04	ISSUED FOR PERMIT	2023.08.11	DK
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02	PRE-TENDER COST ESTIMATE	2023.14.07	DK
01	COST CONSULTANT	2023.04.11	DK
NO.	REVISION	DATE	BY



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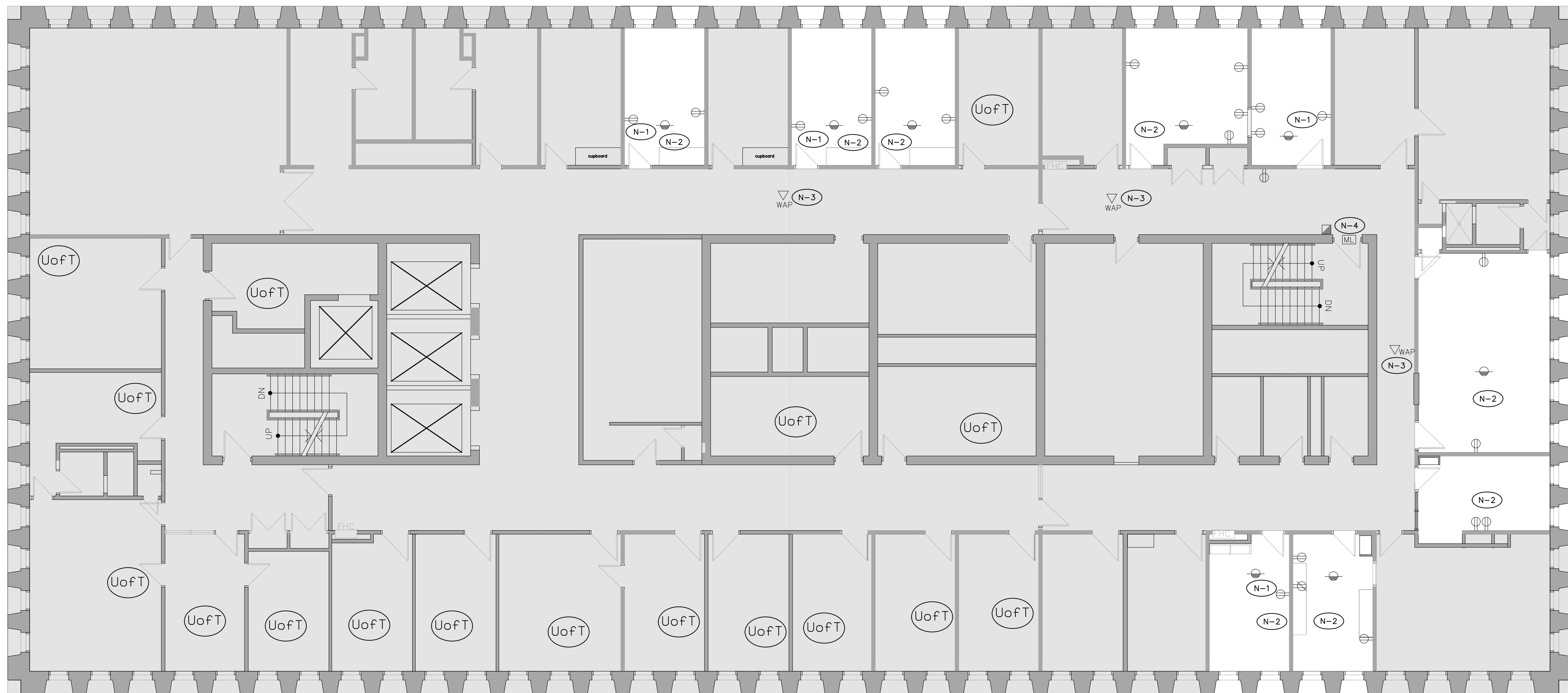
Project

**CAMH 250 COLLEGE
RELOCATION
TORONTO, ONTARIO**

Drawing Title

**GROUND FLOOR SOUTH
POWER & SYSTEMS – NEW**

Date	MARCH 2023	Drawing No. E3.03
Scale	1/8"=1'-0"	
Drawn By	D.K.	
Approved By	P.C.	
File No.		
Project No.	22048	



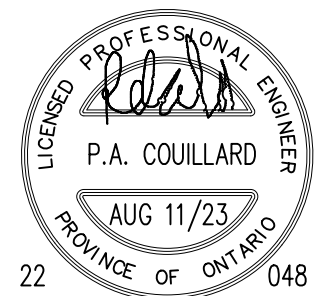
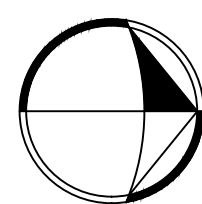
DRAWING REFERENCE NOTES:

- N-1** EXISTING DEVICE TO BE REPLACED WITH NEW SURFACE MOUNTED DEVICE, REFER TO NEW FLOORPLAN FOR LOCATION
- N-2** EXISTING DEVICE(S) TO BE MAINTAINED AS PRESENTLY INSTALLED UNLESS NOTED OTHERWISE
- N-3** EXISTING WAP SHOWN FOR REFERENCE, OWNER TO IMPLEMENT NEW AS NOTED ON NEW PLANS.
- N-4** EXISTING MAGNETIC DOOR LOCK REMAINING IN SERVICE TO BE TESTED AND VERIFIED TO BE FUNCTIONAL AND OPERATIONAL. MAKE GOOD ALL INSTALLATIONS TO BE FULLY OPERATIONAL.

DRAWING GENERAL NOTES:

- EXACT LOCATION OF ALL EXISTING RECEPTACLES AND OTHER DEVICES/EQUIPMENT SHALL BE CONFIRMED ON SITE.
- ALL EXISTING FIRE ALARM DEVICES (HORN STROBES, PULL STATIONS, DETECTORS, SPEAKERS ETC...) AND BACKGROUND PAGING SYSTEM SPEAKERS TO REMAIN AS PRESENTLY INSTALLED UNLESS NOTED OTHERWISE.
- IN GENERAL ALL EXISTING SECURITY AND ACCESS CONTROL DEVICES, MAGNETIC LOCKS, DOOR HOLDERS, CCTV CAMERAS TO BE DISCONNECTED AND TURNED OVER TO THE OWNER. WIRING SHALL BE PULLED BACK TO CEILING VOID, COILED AND TAGGED. OWNER TO MAKE SAFE CONNECTION AT SOURCE END. REFER TO NEW PLANS FOR DEVICES TO BE REINSTALLED.
- ALL RECEPTACLES AND OTHER DEVICES/EQUIPMENT SHOWN ON THIS DRAWING ARE EXISTING TO REMAIN UNLESS OTHERWISE SHOWN WITH AN 'R' TO BE REMOVED OR NOTED. CUT BACK AND REMOVE ALL UNUSED CONDUITS AND WIRING BACK TO SOURCE PANEL. REMOVE ALL DEVICES AND WIRING FROM WALLS THAT ARE TO BE DEMOLISHED. ALL EXISTING DEVICES AND WIRING THAT ARE TO BE DEMOLISHED ARE NOT NECESSARILY SHOWN. CONTRACTOR SHALL VISIT THE SITE DURING TENDER PERIOD TO ASCERTAIN THE FULL SCOPE OF DEMOLITION.
- ALL EXISTING RECEPTACLES AND DEVICES/EQUIPMENT ON WALLS TO BE DEMOLISHED SHALL ALSO BE REMOVED. THESE DEVICES MAY NOT ALL NECESSARILY BE INDICATED ON THIS PLAN. CONTRACTOR SHALL VISIT THE SITE DURING TENDER PERIOD TO ASCERTAIN THE FULL SCOPE OF DEMOLITION. CONTRACTOR SHALL BE RESPONSIBLE FOR REMOVING ALL SUCH ITEMS AS REQUIRED TO FACILITATE THE COMPLETE DEMOLITION.
- WHERE RECEPTACLES AND DEVICES/EQUIPMENT ARE REMOVED, CUT BACK AND REMOVE CONDUIT AND WIRING THAT IS NO LONGER REQUIRED BACK TO SOURCE PANEL, OR LAST DEVICE TO REMAIN AND REMOVE.
- ALL EXISTING ELECTRICAL EQUIPMENT OR DEVICE WHICH IS NO LONGER REQUIRED SHALL BE OFFERED TO THE OWNER FOR RECLAMATION AT THEIR DISCRETION, OTHERWISE REMOVED AND DISPOSED OF OFF SITE.
- WHERE REMOVAL OF RECEPTACLES, DEVICES/EQUIPMENT AFFECTS THE OPERATION OF EXISTING RECEPTACLES, DEVICES/EQUIPMENT TO REMAIN, THE CONTRACTOR SHALL REPLACE/MAKE GOOD BRANCH WIRING AS REQUIRED TO ENSURE CONTINUITY OF OPERATION OF REMAINING RECEPTACLES, DEVICES/EQUIPMENT.
- NOT ALL MECHANICAL EQUIPMENT TO BE REMOVED IS NECESSARILY INDICATED ON THIS PLAN. REFER TO THE MECHANICAL DRAWINGS FOR EXTENT OF MECHANICAL DEMOLITION WORK. DISCONNECT EXISTING MECHANICAL EQUIPMENT WHICH IS BEING REMOVED. CUT BACK CONDUIT AND WIRING TO SOURCE ELECTRICAL PANEL. MAINTAIN ELECTRICAL SERVICES TO EXISTING MECHANICAL EQUIPMENT WHICH IS TO REMAIN IN SERVICE. REPLACE BRANCH WIRING AS NEEDED.
- ALL EXISTING HORIZONTAL COMMUNICATIONS CABLING IS TO REMAIN AS PRESENTLY INSTALLED. CABLING NOT SHOWN. ALL EXISTING COMMUNICATIONS CABLING SHALL BE TESTED BY THE OWNER AND REPLACED BY THEIR FORCES
- REMOVE ALL REDUNDANT LINE VOLTAGE AND LOW VOLTAGE CONDUIT AND WIRING SPACE WHICH IS NOT IN USE.
- CONTRACTOR SHALL BE AWARE THAT NOT ALL EXISTING EQUIPMENT AND DEVICES REQUIRED TO BE REMOVED ARE NECESSARILY INDICATED ON THIS PLAN. CONTRACTOR SHALL STILL BE RESPONSIBLE FOR REMOVING ALL SUCH ITEMS AS REQUIRED TO FACILITATE THE COMPLETE DEMOLITION.
- REFER TO NEW PLAN FOR NEW LOCATION OF RELOCATED DEVICES AND EQUIPMENT.
- ALL EXISTING ELECTRIC DOOR STRIKE LOCKING DEVICES TO BE REMOVED AND REPLACED AS PER THE ARCHITECTURAL SCOPE. ALL WORK BY OTHERS.

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03	ISSUED FOR TENDER	2023.08.08	DK
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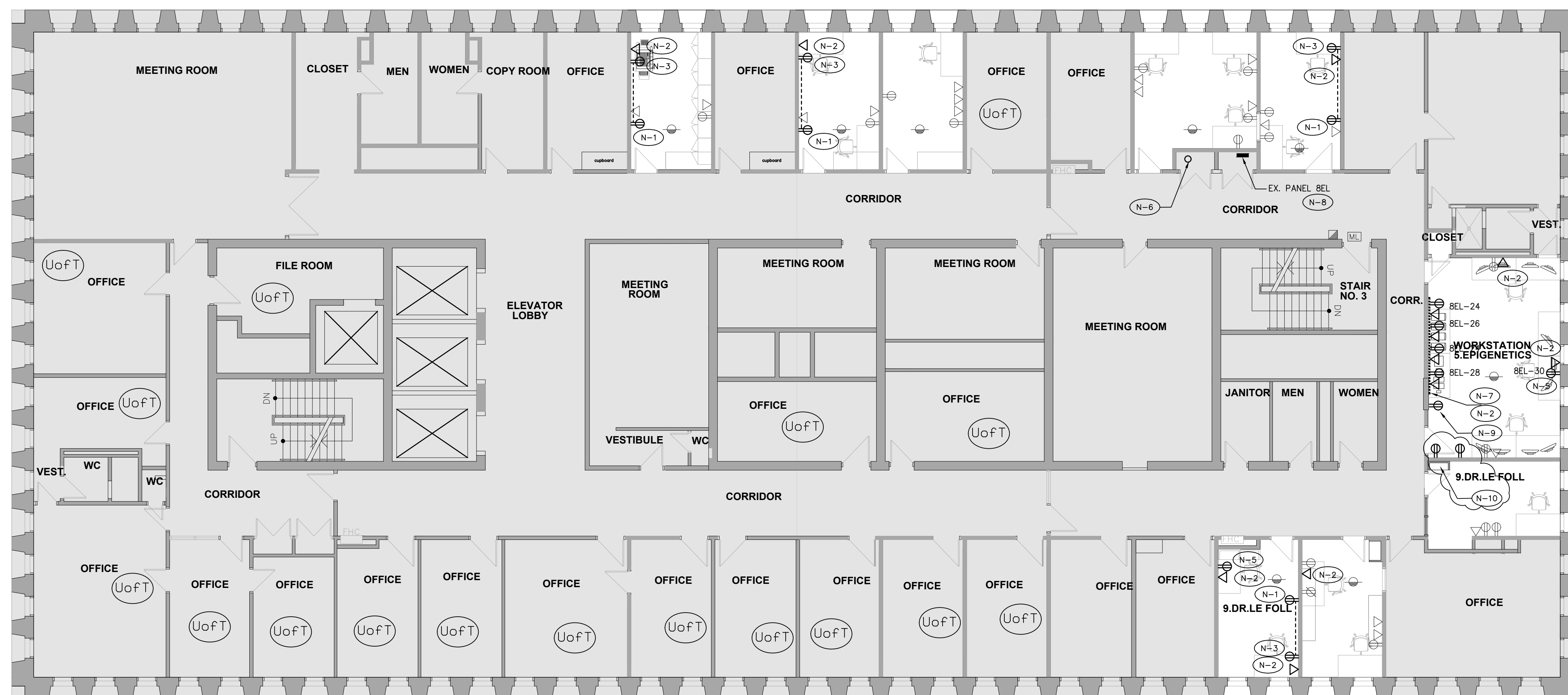
Project

**CAMH 250 COLLEGE
RELOCATION
TORONTO, ONTARIO**

Drawing Title

**8TH FLOOR
POWER & SYSTEMS –
DEMOLITION**

Date	MARCH 2023	Drawing No. E3.04
Scale	1/8"=1'-0"	
Drawn By	D.K.	
Approved By	P.C.	
File No.		
Project No.	22048	



1. EXISTING CCTV & SECURITY ACCESS SYSTEM IS EXISTING TO BE MAINTAINED, ALL CAMERAS SHOWN IN NEW PLAN ARE EXISTING TO REMAIN OR RELOCATED FROM PRESENT POSITION TO NEW LOCATION.
2. NEW OR RELOCATED DEVICES/INSTALLATIONS SHOWN SHALL BE ROUGHED IN BY THE ELECTRICAL CONTRACTOR, ALL WIRING AND DEVICES BY THE OWNERS SECURITY CONTRACTOR.
3. WHERE CARD READER AND DOOR STRIKES ARE NOTED AS RELOCATED, 'ER', THE INTENT IS TO EXTEND THE EXISTING CONTROL CIRCUIT/POWER TO THE NEW LOCATION FROM THE LOCAL PANEL. INSTALLATION TO BE REPROGRAMMED BY THE SECURITY CONTRACTOR.
4. COORDINATE ALL REWORK WITH OWNERS APPROVED SECURITY CONTRACTOR.

ES

N-1 EXISTING DEVICE TO BE REPLACED WITH NEW SURFACE MOUNTED DEVICE, PROVIDE NEW WIREMOLD BOX AND COVERPLATE, EXTEND WIRING TO DEVICE.

N-2 NEW COMM DEVICE TO BE SURFACE MOUNTED, UTILIZE SURFACE WIREMOLD BOX AND RACEWAY, RUN RACEWAY AT HIGH LEVEL AND TERMINATE IN CORRIDOR CEILING VOID, ALL CABLEING TO RUN THROUGH CEILING SPACE TO NEW RACK IN ROOM 950

N-3 NEW DEVICE TO BE SURFACE MOUNTED, WIRE TO ADJACENT OUTLET, UTILIZE SURFACE WIREMOLD BOX AND RACEWAY, PROVIDE ALL WIRING.

N-4 RELOCATED DEVICE TO BE INSTALLED IN NEW SURFACE MOUNTED WIREMOLD BOX AND COVERPLATE, EXTEND WIRING TO DEVICE.

N-5 NEW DEVICE TO BE SURFACE MOUNTED, WIRE TO EXISTING PANEL, UTILIZE SURFACE WIREMOLD BOX AND RACEWAY, PROVIDE ALL WIRING, CONCEAL WIRING IN CORRIDOR CEILING SPACE TO PANEL

N-6 PROVIDE CONDUIT SLEEVE THROUGH FLOOR FOR ~~NEW COMM WIRING~~

N-7 NEW DEVICES TO BE SURFACE MOUNTED IN WIREMOLD GS000 2 SECTION WIREWAY. PROVIDE ALL COVERS AND ACTIVATIONS. RACEWAY TO RISE TO CEILING, ~~RUN NEW WIRING IN CEILING, COORDINATE ON SITE.~~

N-8 PROVIDE 4-15A 1P BREAKERS FOR NEW RECEPTACLES. CCTS 24,26,28,30

N-9 PROVIDE 20A 1 RECEPTACLE WIRED TO EMERGENCY POWER PANEL ON 11TH FLOOR. DEVICE SHALL BE RED IN COLOUR. DEDICATED CIRCUIT FOR OWNER SUPPLIED UPS.

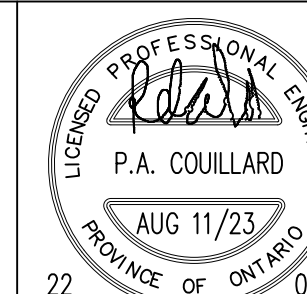
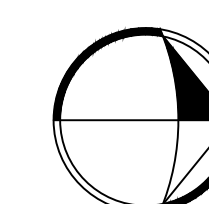
N-10 PROVIDE 2-20A RECEPTACLES, WIRED TO PANEL 8-EL, PROVIDE 2-120A 1P BREAKERS.

1. REFER TO THE ARCHITECT'S DRAWINGS FOR THE EXACT LOCATION AND MOUNTING HEIGHT OF ALL RECEPTACLES AND COMMUNICATIONS OUTLET BOXES. WHERE THIS INFORMATION IS NOT INDICATED HAVE THE OWNER OR ARCHITECT VERIFY EXACT LOCATIONS ON SITE PRIOR TO BEGINNING IN. DO NOT SCALE LOCATIONS FROM ELECTRICAL DRAWINGS. OUTLETS INSTALLED WITHOUT APPROVED LOCATIONS SHALL BE RELOCATED AT THE CONTRACTOR'S EXPENSE.
2. ALL RECEPTABLES AND COMMUNICATIONS OUTLET BOXES SHALL BE MOUNTED AT 16" AFF AS MEASURED TO THE CENTRE-LINE OF THE DEVICE UNLESS OTHERWISE NOTED IN ARCHITECTURAL DRAWINGS. WHERE MOUNTED ADJACENT TO EXISTING, MATCH EXISTING HEIGHT.
3. REPORT ANY DISCREPANCIES BETWEEN THIS PLAN AND THE ARCHITECT'S POWER AND COMMUNICATIONS PLAN TO THE CONSULTANT PRIOR TO ROUGHING IN ANY SERVICES.
4. ALL DUPLEX RECEPTABLES SHALL BE DECORA TYPE, WHITE FINISH. PROVIDE WITH MATCHING WHITE COLOUR COVERPLATE.
5. WHERE POWER AND COMMUNICATIONS OUTLET BOXES ARE SHOWN ADJACENT TO EACH OTHER PROVIDE GANGED COVERPLATE SIZE AS REQUIRED. REFER TO DETAIL.
6. DO NOT INSTALL OUTLETS BACK TO BACK.
7. ALL WALL MOUNTED WIRING DEVICE BACK BOXES SHALL BE FLUSH MOUNTED WITH CONDUIT VERTICALLY CONCEALED AND HORIZONTAL CONNECTIONS SHALL BE TIGHT TO UNDERSIDE OF DECK/SLAB UNLESS OTHERWISE NOTED. IN OPEN CEILING AREAS, TAKE SPECIAL CARE TO NEATLY RUN THE CONDUITS TO NOT BE VISIBLE AS MUCH AS POSSIBLE. SELECT CONDUIT ROUTINGS ACCORDINGLY.
8. PROVIDE BLANK WHITE COVERPLATES OVER ALL EXISTING BLANK WALLBOXES THAT ARE TO REMAIN, UNLESS OTHERWISE NOTED.
9. IN AREAS WHERE COUNTERS OR OTHER MILLWORK ARE PROVIDED, COORDINATE EXACT LOCATION OF OUTLETS AND WIRING WITH MILLWORK AND ARCHITECT.
10. FOR PLUG-IN EQUIPMENT, CONFIRM CSA CONFIGURATION OF REQUIRED RECEPTACLE PRIOR TO PURCHASE AND INSTALLATION.

REQUIREMENTS (NOT ALL LOCAL DISCONNECT SWITCHES ARE SHOWN).

11. PROVIDE ALL EMPTY CONDUITS C/W FULL STRINGS AND BACK BOXES AS REQUIRED TO SUIT THE COMPLETE INSTALLATION OF THE COMMUNICATIONS SYSTEMS (VOICE, DATA, CATV) AND SECURITY SYSTEMS (ACCESS CONTROL AND CCTV).
12. ALL EMPTY CONDUITS FOR COMMUNICATIONS OUTLETS SHALL BE TERMINATED WITH BUSHING AT END OF CONDUIT. IN OPEN CEILING AREAS EXTEND ALL EMPTY CONDUITS FOR COMMUNICATIONS SYSTEMS AS REQUIRED SO THAT COMMUNICATIONS CONTRACTOR DOES NOT NEED TO RUN FREE AIR CABLING THAT WILL BE VISIBLE
13. REFER TO MECHANICAL DRAWINGS FOR EXACT LOCATION AND MOUNTING HEIGHT OF ALL HVAC AND PLUMBING EQUIPMENT. CONFIRM EXACT LOCATION OF ALL MECHANICAL EQUIPMENT WITH MECHANICAL CONTRACTOR PRIOR TO ROUGHING IN ELECTRICAL SERVICES.
14. STARTER LOAD SIDE WIRING SHALL BE THE SAME AS LINE SIDE WIRING.
15. ALL STARTERS AND PUMP CONTROLLERS SUPPLIED BY MECHANICAL CONTRACTOR. ELECTRICAL CONTRACTOR TO PROVIDE ALL LINE AND LOAD SIDE POWER WIRING AND CONDUIT, AND REQUIRED ISOLATION SWITCH AT THE MOTOR.
16. ELECTRICAL CONTRACTOR SHALL PROVIDE 15A, 120V JUNCTION BOX OUTLETS MOUNTED IN CEILING SPACE FOR USE BY THE MECHANICAL CONTROLS CONTRACTOR FOR CONTROLS POWER. THESE LOCATIONS MUST BE AS INDICATED ON THIS DRAWING. ALL LOAD SIDE 120V TERMINATIONS SHALL BE PROVIDED BY MECHANICAL CONTRACTOR.
17. PROVIDE NEW EVAC SPEAKERS WHERE INDICATED AND CONNECT TO EXISTING SPEAKER CIRCUITS AND EXTEND WIRING AS REQUIRED. VERIFY CIRCUIT LOADING WITH FIRE ALARM MANUFACTURER AND PROVIDE NEW CIRCUITS AND/OR ADDITIONAL AMPLIFICATION EQUIPMENT AS REQUIRED. RUN NEW CIRCUITS TO FIRE ALARM DGP. NEW SPEAKERS TO MATCH EXISTING.
18. CIRCUITING SHOWN IS FOR GROUPING PURPOSES ONLY. THE CONTRACTOR SHALL VERIFY EXACT CIRCUIT NUMBERS TO BE USED ON SITE AND SHALL INDICATE EXACT NUMBERS USING THE AS-BUILT DRAWINGS.

05	ISSUED FOR ADDENDUM E-1	2023.08.31
04	ISSUED FOR PERMIT	2023.08.11
03	ISSUED FOR TENDER	2023.08.08
02	PRE-TENDER COST ESTIMATE	2023.14.07
01	COST CONSULTANT	2023.04.11
NO.	REVISION	DATE



Project

**CAMH 250 COLLEGE
RELOCATION
TORONTO, ONTARIO**

8TH FLOOR
POWER & SYSTEMS – NEW

Project No. 22048

E3.05



5 Pitcairn Crescent, Toronto, ON M4A 1P5
Tel. (416) 488-8899



- DRAWING GENERAL NOTES:

- | | | | |
|----|---|-----|---|
| 1. | EXACT LOCATION OF ALL EXISTING RECEPTACLES AND OTHER DEVICES/EQUIPMENT SHALL BE CONFIRMED ON SITE. | 8. | WHERE REMOVAL OF RECEPTABLES, DEVICES/EQUIPMENT AFFECTS THE OPERATION OF EXISTING RECEPTABLES, DEVICES/EQUIPMENT TO REMAIN, THE CONTRACTOR SHALL REPLACE/MAKE GOOD BRANCH WIRING AS REQUIRED TO ENSURE CONTINUITY OF OPERATION OF REMAINING RECEPTABLES, DEVICES/EQUIPMENT. |
| 2. | ALL EXISTING FIRE ALARM DEVICES (HORN STROKES, FULL STATIONS, DETECTORS, SPEAKERS ETC...) AND BACKGROUND PAGING SYSTEM SPEAKERS TO REMAIN AS PRESENTLY INSTALLED UNLESS NOTED OTHERWISE. | 9. | NOT ALL MECHANICAL EQUIPMENT TO BE REMOVED IS NECESSARILY INDICATED ON THIS PLAN. REFER TO THE MECHANICAL DRAWINGS FOR EXTENT OF MECHANICAL DEMOLITION WORK. DISCONNECT EXISTING MECHANICAL EQUIPMENT WHICH IS BEING REMOVED, CUT BACK CONDUIT AND WIRING TO SOURCE ELECTRICAL PANEL. MAINTAIN ELECTRICAL SERVICES TO EXISTING MECHANICAL EQUIPMENT WHICH IS TO REMAIN IN SERVICE. REPLACE BRANCH WIRING AS NEEDED. |
| 3. | IN GENERAL, ALL EXISTING SECURITY AND ACCESS CONTROL DEVICES, MAGNETIC LOCKS, DOOR HOLDERS, CCTV CAMERAS TO BE DISCONNECTED AN TURNED OVER TO THE OWNER. WIRING SHALL BE PULLED BACK TO CEILING VOID, COILED AND TAGGED. OWNER TO MAKE SAFE CONNECTION AT SOURCE END. REFER TO NEW PLANS FOR DEVICES TO BE REINSTALLED. | 10. | ALL EXISTING HORIZONTAL COMMUNICATIONS CABLING IS TO REMAIN AS PRESENTLY INSTALLED. CABLING NOT SHOWN. ALL EXISTING COMMUNICATIONS CABLING SHALL BE TESTED BY THE OWNER AND REPLACED BY THEIR FORCES |
| 4. | ALL RECEPTABLES AND OTHER DEVICES/EQUIPMENT SHOWN ON THIS DRAWING ARE EXISTING TO REMAIN UNLESS OTHERWISE SHOWN WITH AN "R" TO BE REMOVED OR NOTED. CUT BACK AND REMOVE ALL UNUSED CONDUITS AND WIRING BACK TO SOURCE PANEL. REMOVE ALL DEVICES AND WIRING FROM WALLS THAT ARE TO BE DEMOLISHED. ALL EXISTING DEVICES AND WIRING THAT ARE TO BE DEMOLISHED ARE NOT NECESSARILY SHOWN. CONTRACTOR SHALL VISIT THE SITE DURING TENDER PERIOD TO ASCERTAIN THE FULL SCOPE OF DEMOLITION. | 11. | REMOVE ALL REDUNDANT LINE VOLTAGE AND LOW VOLTAGE CONDUIT AND WIRING SPACE WHICH IS NOT IN USE. |
| 5. | ALL EXISTING RECEPTABLES AND DEVICES/EQUIPMENT ON WALLS TO BE DEMOLISHED SHALL ALSO BE REMOVED. THESE DEVICES MAY NOT ALL NECESSARILY BE INDICATED ON THIS PLAN. CONTRACTOR SHALL VISIT THE SITE DURING TENDER PERIOD TO ASCERTAIN THE FULL SCOPE OF DEMOLITION. CONTRACTOR SHALL BE RESPONSIBLE FOR REMOVING ALL SUCH ITEMS AS REQUIRED TO FACILITATE THE COMPLETE DEMOLITION. | 12. | CONTRACTOR SHALL BE AWARE THAT NOT ALL EXISTING EQUIPMENT AND DEVICES REQUIRED TO BE REMOVED ARE NECESSARILY INDICATED ON THIS PLAN. CONTRACTOR SHALL STILL BE RESPONSIBLE FOR REMOVING ALL SUCH ITEMS AS REQUIRED TO FACILITATE THE COMPLETE DEMOLITION. |
| 6. | WHERE RECEPTABLES AND DEVICES/EQUIPMENT ARE REMOVED, CUT BACK AND REMOVE CONDUIT AND WIRING THAT IS NO LONGER REQUIRED BACK TO SOURCE PANEL, OR LAST DEVICE TO REMAIN AND REMOVE. | 13. | REFER TO NEW PLAN FOR NEW LOCATION OF RELOCATED DEVICES AND EQUIPMENT. |
| 7. | ALL EXISTING ELECTRICAL EQUIPMENT OR DEVICE WHICH IS NO LONGER REQUIRED SHALL BE OFFERED TO THE OWNER FOR RECLAMATION AT THEIR DISCRETION, OTHERWISE REMOVED AND DISPOSED OF OFF SITE. | 14. | ALL EXISTING ELECTRIC DOOR STRIKE LOCKING DEVICES TO BE REMOVED AND REPLACED AS PER THE ARCHITECTURAL SCOPE. ALL WORK BY OTHERS. |



SIGNATURE

Project

**CAMH 250 COLLEGE
RELOCATION
TORONTO, ONTARIO**

Drawing Title

9TH FLOOR
POWER & SYSTEMS —
DEMOLITION

Date MARCH 2023

Scale $1/8"=1'-0"$

Drawn By D.K

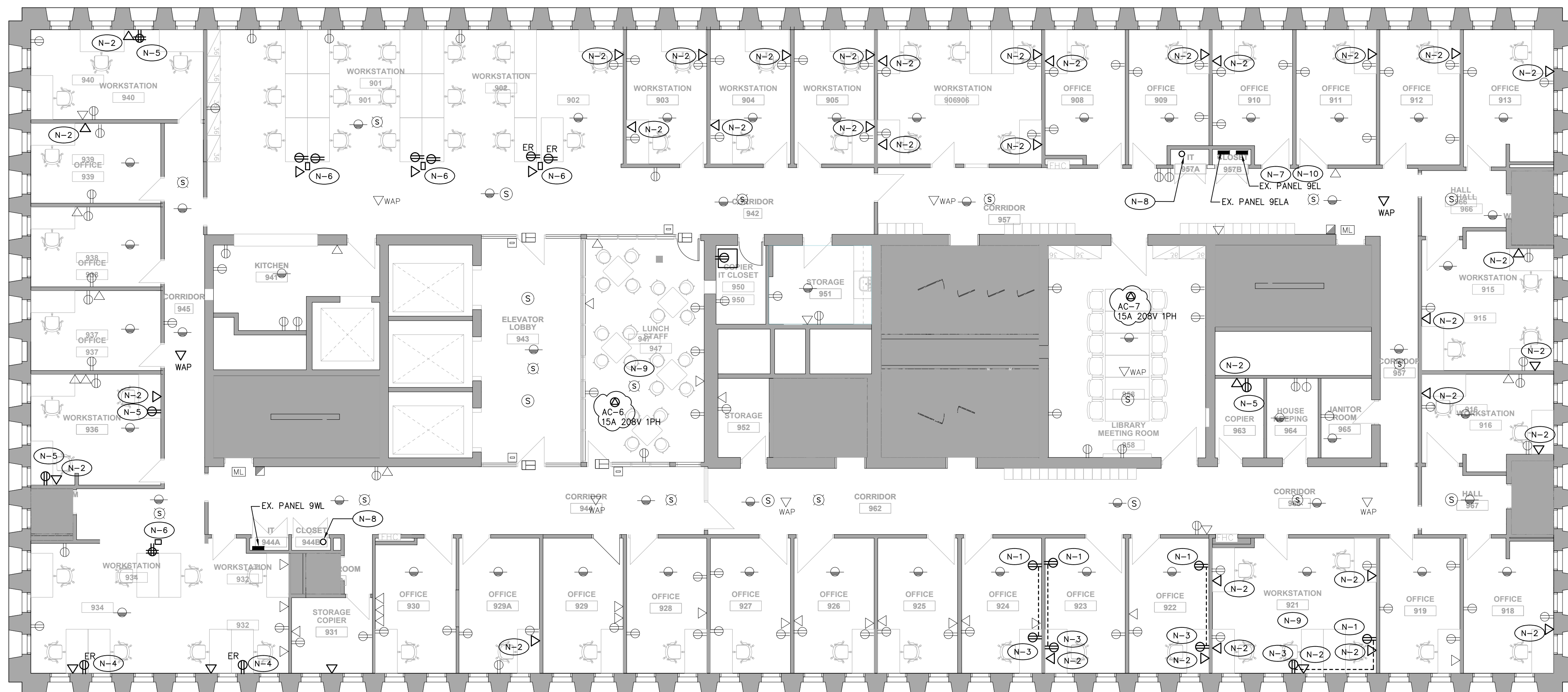
Approved By P.C.

File No.

Drawing No.

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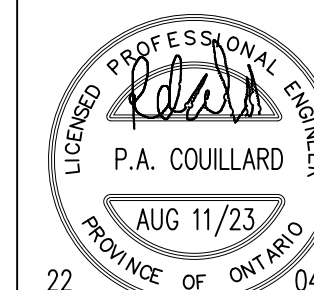
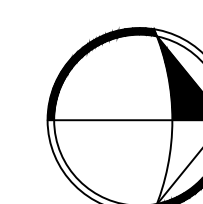
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2. NEW OR RELOCATED DEVICES/INSTALLATIONS SHOWN SHALL BE ROUGHED IN BY THE ELECTRICAL CONTRACTOR, ALL WIRING AND DEVICES BY THE OWNERS SECURITY CONTRACTOR.
3. WHERE CARD READER AND DOOR STRIKES ARE NOTED AS RELOCATED, 'ER', THE INTENT IS TO EXTEND THE EXISTING CONTROL CIRCUIT/POWER TO THE NEW LOCATION FROM THE LOCAL PANEL. INSTALLATION TO BE REPROGRAMMED BY THE SECURITY CONTRACTOR.
4. COORDINATE ALL REWORK WITH OWNERS APPROVED SECURITY CONTRACTOR.

TYPICAL

- N-1 EXISTING DEVICE TO BE REPLACED WITH NEW SURFACE MOUNTED DEVICE, PROVIDE NEW WIREMOLD BOX AND COVERPLATE, EXTEND WIRING TO DEVICE.
- N-2 NEW COMM DEVICE TO BE SURFACE MOUNTED, UTILIZE SURFACE WIREMOLD BOX AND RACEWAY, RUN RACEWAY AT HIGH LEVEL AND TERMINATE IN CORRIDOR CEILING VOID. ALL CABLING TO RUN THROUGH CEILING SPACE TO NEW RACK IN ROOM 931
- N-3 NEW DEVICE TO BE SURFACE MOUNTED, WIRE TO ADJACENT OUTLET, UTILIZE SURFACE WIREMOLD BOX AND RACEWAY, PROVIDE ALL WIRING.
- N-4 RELOCATED DEVICE TO BE INSTALLED IN NEW SURFACE MOUNTED WIREMOLD BOX AND COVERPLATE, EXTEND WIRING TO DEVICE.
- N-5 NEW DEVICE TO BE SURFACE MOUNTED, WIRE TO EXISTING PANEL, UTILIZE SURFACE WIREMOLD BOX AND RACEWAY, PROVIDE ALL WIRING. CONCEAL WIRING IN CORRIDOR CEILING SPACE TO PANEL.
- N-6 PROVIDE VERTICAL SERVICE 'PAC' POLE C/W DEVICES AS NOTED. CONCEAL WIRING THROUGH CEILING SPACE.
- N-7 EXISTING PANEL, PROVIDE NEW BREAKERS FOR ADDED BRANCH DEVICES ON 9TH AND 10TH FLOORS, PROVIDE 5-15A 1P BREAKERS.
- N-8 PROVIDE 1-4" CONDUIT SLEEVE AND FIRE SEAL FOR NEW VERTICAL COMMS WIRING. COORDINATE ON SITE.
- N-9 EXISTING DEVICES THIS ROOM SHALL BE EXTENDED TO NEW WALL FACE OF DRYWALL RESURFACING. PROVIDE ALL BOX EXTENSIONS TO RUN
- N-10 PROVIDE 2-15A 2P BREAKERS FOR AC-6, AC-7

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- REFER TO THE ARCHITECT'S DRAWINGS FOR THE EXACT LOCATION AND MOUNTING HEIGHT OF ALL RECEPTACLES AND COMMUNICATIONS OUTLET BOXES. WHERE THIS INFORMATION IS NOT INDICATED HAVE THE OWNER OR ARCHITECT VERIFY EXACT LOCATIONS ON SITE PRIOR TO ROUGHING IN. DO NOT SCALE LOCATIONS FROM ELECTRICAL DRAWINGS. OUTLETS INSTALLED WITHOUT APPROVED LOCATIONS SHALL BE RELOCATED AT THE CONTRACTOR'S EXPENSE.
2. ALL RECEPTABLES AND COMMUNICATIONS OUTLET BOXES SHALL BE MOUNTED AT 16" AFF AS MEASURED TO THE CENTRE-LINE OF THE DEVICE UNLESS OTHERWISE NOTED IN ARCHITECTURAL DRAWINGS. WHERE MOUNTED ADJACENT TO EXISTING, MATCH EXISTING HEIGHT.
3. REPORT ANY DISCREPANCIES BETWEEN THIS PLAN AND THE ARCHITECT'S POWER AND COMMUNICATIONS PLAN TO THE CONSULTANT PRIOR TO ROUGHING IN ANY SERVICES.
4. ALL DUPLEX RECEPTABLES SHALL BE DECORA TYPE, WHITE FINISH. PROVIDE WITH MATCHING WHITE COLOUR COVERPLATE.
5. WHERE POWER AND COMMUNICATIONS OUTLET BOXES ARE SHOWN ADJACENT TO EACH OTHER PROVIDE GANGED COVERPLATE SIZE AS REQUIRED. REFER TO DETAIL.
6. DO NOT INSTALL OUTLETS BACK TO BACK.
7. ALL WALL MOUNTED WIRING DEVICE BACK BOXES SHALL BE FLUSH MOUNTED WITH CONDUIT VERTICALLY CONCEALED AND HORIZONTAL CONDUITS SHALL BE TIGHT TO UNDERSIDE OF DECK/SLAB UNLESS OTHERWISE NOTED. IN OPEN CEILING AREAS, TAKE SPECIAL CARE TO NEATLY RUN THE CONDUITS TO NOT BE VISIBLE AS MUCH AS POSSIBLE. SELECT CONDUIT ROUTINGS ACCORDINGLY.
8. PROVIDE BLANK WHITE COVERPLATES OVER ALL EXISTING BLANK WALLBOXES THAT ARE TO REMAIN, UNLESS OTHERWISE NOTED.
9. IN AREAS WHERE COUNTERS OR OTHER MILLWORK ARE PROVIDED, COORDINATE EXACT LOCATION OF OUTLETS AND WIRING WITH MILLWORK AND ARCHITECT.
10. FOR PLUG-IN EQUIPMENT, CONFIRM CSA CONFIGURATION OF REQUIRED RECEPTACLE PRIOR TO PURCHASE AND INSTALLATION.
11. REQUIREMENTS (NOT ALL LOCAL DISCONNECT SWITCHES ARE SHOWN).
12. PROVIDE ALL EMPT CYCLOUTS C/W PULL STRINGS AND BACK BOXES AS REQUIRED TO SUIT THE COMPLETE INSTALLATION OF THE COMMUNICATIONS SYSTEMS (VOICE, DATA, CATV) AND SECURITY SYSTEMS (ACCESS CONTROL AND CCTV).
13. ALL EMPT CYCLOUTS FOR COMMUNICATIONS OUTLETS SHALL BE TERMINATED WITH BUSHING AT END OF CONDUIT. IN OPEN CEILING AREAS EXTEND ALL EMPT CYCLOUTS FOR COMMUNICATIONS SYSTEMS AS REQUIRED SO THAT COMMUNICATIONS CONTRACTOR DOES NOT NEED TO RUN FREE AIR CABLING THAT WILL BE VISIBLE
14. REFER TO MECHANICAL DRAWINGS FOR EXACT LOCATION AND MOUNTING HEIGHT OF ALL HVAC AND PLUMBING EQUIPMENT. EXACT LOCATION OF ALL MECHANICAL EQUIPMENT WITH MECHANICAL CONTRACTOR PRIOR TO ROUGHING IN ELECTRICAL SERVICES.
15. STARTER LOAD SIDE WIRING SHALL BE THE SAME AS LINE SIDE WIRING.
16. ALL STARTERS AND PUMP CONTROLLERS SUPPLIED BY MECHANICAL CONTRACTOR. ELECTRICAL CONTRACTOR TO PROVIDE ALL LINE AND LOAD SIDE POWER WIRING AND CONDUIT, AND REQUIRED ISOLATION SWITCH AT THE MOTOR.
17. ELECTRICAL CONTRACTOR SHALL PROVIDE 15A, 120V JUNCTION BOX OUTLETS MOUNTED IN CELING SPACE FOR USE BY THE MECHANICAL CONTROLS CONTRACTOR FOR CONTROLS POWER. THE RELATIONS SHALL BE AS INDICATED ON THIS DRAWING. ALL LOAD SIDE 120V TERMINATIONS SHALL BE PROVIDED BY MECHANICAL CONTRACTOR.
18. PROVIDE NEW EVA. SPEAKERS WHERE INDICATED AND CONNECT TO EXISTING SPEAKER CIRCUITS AND EXTEND WIRING AS REQUIRED. VERIFY CIRCUIT LOADING WITH FIRE ALARM MANUFACTURER AND PROVIDE NEW CIRCUITS AND/OR ADDITIONAL AMPLIFICATION EQUIPMENT AS REQUIRED. RUN NEW CIRCUITS TO FIRE ALARM DOP. NEW SPEAKERS TO MATCH EXISTING.
19. CIRCUITING NUMBER IS FOR GROUPING PURPOSES ONLY. THE CONTRACTOR SHALL VERIFY EXACT CIRCUIT NUMBERS TO BE USED ON SITE AND SHALL INDICATE EXACT NUMBERS USED ON THE AS-BUILT DRAWINGS.

05	ISSUED FOR ADDENDUM E-1	2023.08.31	D
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03	ISSUED FOR TENDER	2023.08.08	D
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01	COST CONSULTANT	2023.04.11	D
NO.	REVISION	DATE	B



Project

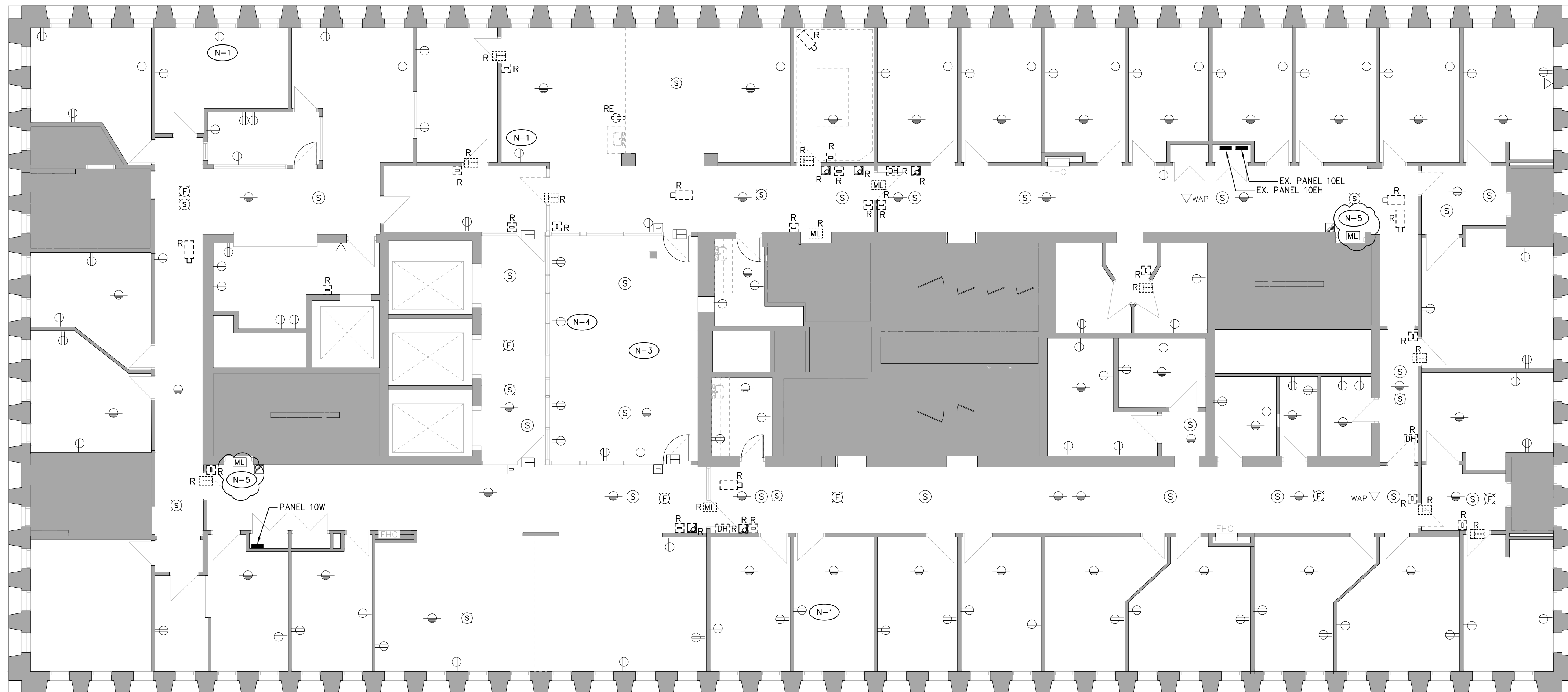
**CAMH 250 COLLEGE
RELOCATION
TORONTO, ONTARIO**

9TH FLOOR
POWER & SYSTEMS – NEW

Project No. 22048

E3.07

1



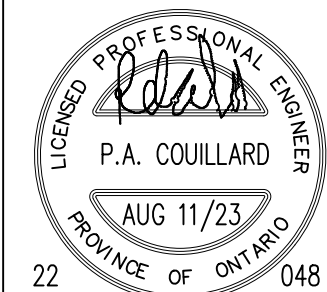
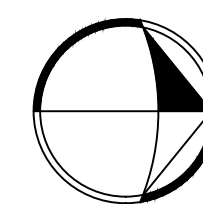
DRAWING REFERENCE NOTES:

- N-1 EXISTING DEVICE TO BE REPLACED WITH NEW SURFACE MOUNTED DEVICE, REFER TO NEW FLOORPLAN FOR LOCATION
- N-2 RELOCATED DEVICE TO BE INSTALLED IN NEW SURFACE MOUNTED WIREMOLD BOX AND COVERPLATE, EXTEND WIRING TO DEVICE, REFER TO NEW FLOORPLAN FOR LOCATION
- N-3 EXISTING ANCILLARY SYSTEMS, DEVICES, NURSE CALL STATION, ANNUNCIATORS AND ALERT SYSTEMS, ETC... (NOT ALL SYSTEMS SHOWN) IN NURSING STATION TO BE DECOMMISSIONED, DEVICES TURNED OVER TO OWNER AND WIRING CUT BACK TO CEILING VOID AND MADE SAFE.
- N-4 EXISTING EMERGENCY POWER OUTLET TO BE RELOCATED AS NOTED ON NEW PLAN.
- N-5 EXISTING MAGNETIC DOOR LOCK REMAINING IN SERVICE TO BE TESTED AND VERIFIED TO BE FUNCTIONAL AND OPERATIONAL, MAKE GOOD ALL INSTALLATIONS TO BE FULLY OPERATIONAL.

DRAWING GENERAL NOTES:

- EXACT LOCATION OF ALL EXISTING RECEPTACLES AND OTHER DEVICES/EQUIPMENT SHALL BE CONFIRMED ON SITE.
- ALL EXISTING FIRE ALARM DEVICES (HORN STROBES, PULL STATIONS, DETECTORS, SPEAKERS ETC...) AND BACKGROUND PAGING SYSTEM SPEAKERS TO REMAIN AS PRESENTLY INSTALLED UNLESS NOTED OTHERWISE.
- IN GENERAL ALL EXISTING SECURITY AND ACCESS CONTROL DEVICES, MAGNETIC LOCKS, DOOR HOLDERS, CCTV CAMERAS TO BE DISCONNECTED AND TURNED OVER TO THE OWNER. WIRING SHALL BE PULLED BACK TO CEILING VOID, COILED AND TAGGED. OWNER TO MAKE SAFE CONNECTION AT SOURCE END. REFER TO NEW PLANS FOR DEVICES TO BE REINSTALLED.
- ALL RECEPTACLES AND OTHER DEVICES/EQUIPMENT SHOWN ON THIS DRAWING ARE EXISTING TO REMAIN UNLESS OTHERWISE SHOWN WITH AN 'R' TO BE REMOVED OR NOTED. CUT BACK AND REMOVE ALL UNUSED CONDUITS AND WIRING BACK TO SOURCE PANEL. REMOVE ALL DEVICES AND WIRING FROM WALLS THAT ARE TO BE DEMOLISHED. ALL EXISTING DEVICES AND WIRING THAT ARE TO BE DEMOLISHED ARE NOT NECESSARILY SHOWN. CONTRACTOR SHALL VISIT THE SITE DURING TENDER PERIOD TO ASCERTAIN THE FULL SCOPE OF DEMOLITION.
- ALL EXISTING RECEPTACLES AND DEVICES/EQUIPMENT ON WALLS TO BE DEMOLISHED SHALL ALSO BE REMOVED. THESE DEVICES MAY NOT ALL NECESSARILY BE INDICATED ON THIS PLAN. CONTRACTOR SHALL VISIT THE SITE DURING TENDER PERIOD TO ASCERTAIN THE FULL SCOPE OF DEMOLITION. CONTRACTOR SHALL BE RESPONSIBLE FOR REMOVING ALL SUCH ITEMS AS REQUIRED TO FACILITATE THE COMPLETE DEMOLITION.
- WHERE RECEPTACLES AND DEVICES/EQUIPMENT ARE REMOVED, CUT BACK AND REMOVE CONDUIT AND WIRING THAT IS NO LONGER REQUIRED BACK TO SOURCE PANEL, OR LAST DEVICE TO REMAIN AND REMOVE.
- ALL EXISTING ELECTRICAL EQUIPMENT OR DEVICE WHICH IS NO LONGER REQUIRED SHALL BE OFFERED TO THE OWNER FOR RECLAMATION AT THEIR DISCRETION, OTHERWISE REMOVED AND DISPOSED OF OFF SITE.
- WHERE REMOVAL OF RECEPTACLES, DEVICES/EQUIPMENT AFFECTS THE OPERATION OF EXISTING RECEPTACLES, DEVICES/EQUIPMENT TO REMAIN, THE CONTRACTOR SHALL REPLACE/MAKE GOOD BRANCH WIRING AS REQUIRED TO ENSURE CONTINUITY OF OPERATION OF REMAINING RECEPTACLES, DEVICES/EQUIPMENT.
- NOT ALL MECHANICAL EQUIPMENT TO BE REMOVED IS NECESSARILY INDICATED ON THIS PLAN. REFER TO THE MECHANICAL DRAWINGS FOR EXTENT OF MECHANICAL DEMOLITION WORK. DISCONNECT EXISTING MECHANICAL EQUIPMENT WHICH IS BEING REMOVED. CUT BACK CONDUIT AND WIRING TO SOURCE ELECTRICAL PANEL. MAINTAIN ELECTRICAL SERVICES TO EXISTING MECHANICAL EQUIPMENT WHICH IS TO REMAIN IN SERVICE. REPLACE BRANCH WIRING AS NEEDED.
- ALL EXISTING HORIZONTAL COMMUNICATIONS CABLING IS TO REMAIN AS PRESENTLY INSTALLED. CABLING NOT SHOWN. ALL EXISTING COMMUNICATIONS CABLING SHALL BE TESTED BY THE OWNER AND REPLACED BY THEIR FORCES
- REMOVE ALL REDUNDANT LINE VOLTAGE AND LOW VOLTAGE CONDUIT AND WIRING SPACE WHICH IS NOT IN USE.
- CONTRACTOR SHALL BE AWARE THAT NOT ALL EXISTING EQUIPMENT AND DEVICES REQUIRED TO BE REMOVED ARE NECESSARILY INDICATED ON THIS PLAN. CONTRACTOR SHALL STILL BE RESPONSIBLE FOR REMOVING ALL SUCH ITEMS AS REQUIRED TO FACILITATE THE COMPLETE DEMOLITION.
- REFER TO NEW PLAN FOR NEW LOCATION OF RELOCATED DEVICES AND EQUIPMENT.
- ALL EXISTING ELECTRIC DOOR STRIKE LOCKING DEVICES TO BE REMOVED AND REPLACED AS PER THE ARCHITECTURAL SCOPE. ALL WORK BY OTHERS.

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01	COST CONSULTANT	2023.04.11	DK
NO.	REVISION	DATE	BY



SIGNATURE

Project

**CAMH 250 COLLEGE
RELOCATION
TORONTO, ONTARIO**

Drawing Title

**10TH FLOOR
POWER & SYSTEMS –
DEMOLITION**

Date MARCH 2023

Scale 1/8"=1'-0"

Drawn By D.K.

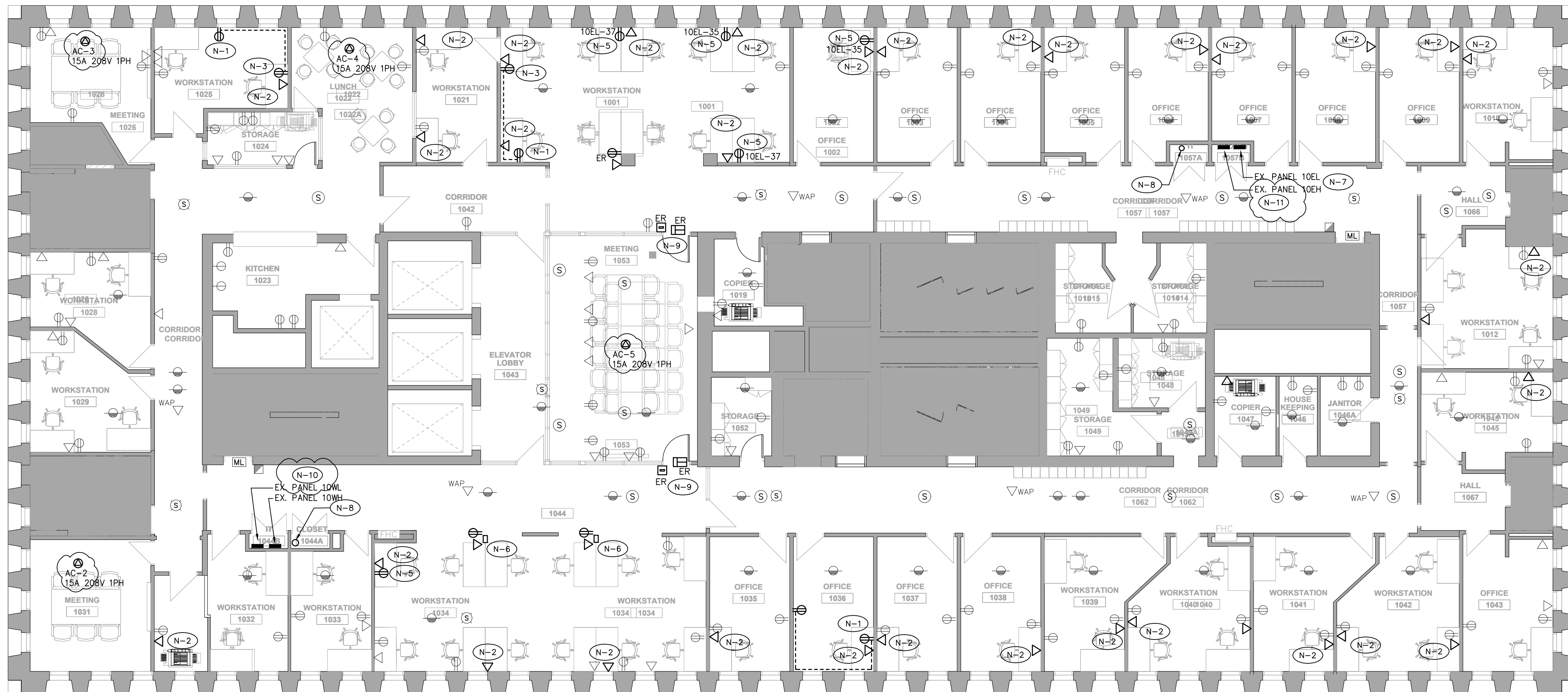
Approved By P.C.

File No.

Project No. 22048

Drawing No.

E3.08



SECURITY NOTES

- EXISTING CCTV & SECURITY ACCESS SYSTEM IS EXISTING TO BE MAINTAINED. ALL CAMERAS SHOWN IN NEW PLAN ARE EXISTING TO REMAIN OR RELOCATED FROM PRESENT POSITION TO NEW LOCATION.
- NEW OR RELOCATED DEVICES/INSTALLATIONS SHOWN SHALL BE ROUGHED IN BY THE ELECTRICAL CONTRACTOR, ALL WIRING AND DEVICES BY THE OWNERS SECURITY CONTRACTOR.
- WHERE CARD READER AND DOOR STRIKES ARE NOTED AS RELOCATED, 'ER', THE INTENT IS TO EXTEND THE EXISTING CONTROL CIRCUIT/POWER TO THE NEW LOCATION FROM THE LOCAL PANEL. INSTALLATION TO BE REPROGRAMMED BY THE SECURITY CONTRACTOR.
- COORDINATE ALL REWORK WITH OWNERS APPROVED SECURITY CONTRACTOR.

TYPICAL DOOR STATION CONTROL, DEVICES AS FOLLOWS; (CARD READER ON EXTERIOR SIDE ONLY)



DRAWING REFERENCE NOTES:

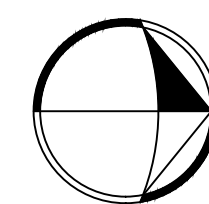
- (N-1) EXISTING DEVICE TO BE REPLACED WITH NEW SURFACE MOUNTED DEVICE, PROVIDE NEW WIREMOLD BOX AND COVERPLATE, EXTEND WIRING TO DEVICE.
- (N-2) NEW COMM DEVICE TO BE SURFACE MOUNTED, UTILIZE SURFACE WIREMOLD BOX AND RACEWAY, RUN RACEWAY AT HIGH LEVEL AND TERMINATE IN CORRIDOR CEILING VOID. ALL CABLING TO RUN THROUGH CEILING SPACE TO NEW RACK IN ROOM 931
- (N-3) NEW DEVICE TO BE SURFACE MOUNTED, WIRE TO ADJACENT OUTLET, UTILIZE SURFACE WIREMOLD BOX AND RACEWAY, PROVIDE ALL WIRING.
- (N-4) RELOCATED DEVICE TO BE INSTALLED IN NEW SURFACE MOUNTED WIREMOLD BOX AND COVERPLATE, EXTEND WIRING TO DEVICE.
- (N-5) NEW DEVICE TO BE SURFACE MOUNTED, WIRE TO EXISTING PANEL, UTILIZE SURFACE WIREMOLD BOX AND RACEWAY, PROVIDE ALL WIRING. CONCEAL WIRING IN CORRIDOR CEILING SPACE TO PANEL.
- (N-6) PROVIDE VERTICAL SERVICE 'PAC' POLE C/W DEVICES AS NOTED. CONCEAL WIRING THROUGH CEILING SPACE.
- (N-7) REPLACE BREAKER 35,37 WITH 2-15A 1P BREAKERS FOR NEW CIRCUITS.
- (N-8) PROVIDE 1-4"CONDUIT SLEEVE AND FIRE SEAL FOR NEW VERTICAL COMMS WIRING. COORDINATE ON SITE
- (N-9) DOOR ACCESS DEVICES RELOCATED FROM OTHER FLOOR/AREA. PROVIDE ROUGH IN, DEVICE INSTALLATION AND WIRING BY OWNERS SUBCONTRACTOR.
- (N-10) PROVIDE 2-15A 2P BREAKERS FOR AC-2 AC-5
- (N-11) PROVIDE 2-15A 2P BREAKERS FOR AC-3 AC-4

DRAWING GENERAL NOTES:

- REFER TO THE ARCHITECT'S DRAWINGS FOR THE EXACT LOCATION AND MOUNTING HEIGHT OF ALL RECEPTACLES AND COMMUNICATIONS OUTLET BOXES. WHERE THIS INFORMATION IS NOT INDICATED HAVE THE OWNER OR ARCHITECT VERIFY EXACT LOCATIONS ON SITE PRIOR TO ROUGHING IN. DO NOT SCALE LOCATIONS FROM ELECTRICAL DRAWINGS. OUTLETS INSTALLED WITHOUT APPROVED LOCATIONS SHALL BE RELOCATED AT THE CONTRACTOR'S EXPENSE.
- ALL RECEPTACLES AND COMMUNICATIONS OUTLET BOXES SHALL BE MOUNTED AT 16" AFF AS MEASURED TO THE CENTRE-LINE OF THE DEVICE UNLESS OTHERWISE NOTED IN ARCHITECTURAL DRAWINGS. WHERE MOUNTED ADJACENT TO EXISTING, MATCH EXISTING HEIGHT.
- REPORT ANY DISCREPANCIES BETWEEN THIS PLAN AND THE ARCHITECT'S POWER AND COMMUNICATIONS PLAN TO THE CONSULTANT PRIOR TO ROUGHING IN ANY SERVICES.
- ALL DUPLEX RECEPTACLES SHALL BE DECORA TYPE, WHITE FINISH. PROVIDE WITH MATCHING WHITE COLOUR COVERPLATE.
- WHERE POWER AND COMMUNICATIONS OUTLET BOXES ARE SHOWN ADJACENT TO EACH OTHER PROVIDE GANGED COVERPLATE SIZE AS REQUIRED. REFER TO DETAIL.
- DO NOT INSTALL OUTLETS BACK TO BACK.
- ALL WALL MOUNTED WIRING DEVICE BACK BOXES SHALL BE FLUSH MOUNTED WITH CONDUIT VERTICALLY CONCEALED AND HORIZONTAL CONDUITS SHALL BE TIGHT TO UNDERSIDE OF DECK/SLAB UNLESS OTHERWISE NOTED. IN OPEN CEILING AREAS, TAKE SPECIAL CARE TO NEATLY RUN THE CONDUITS TO SIZE AS REQUIRED AS MUCH AS POSSIBLE. SELECT CONDUIT ROUTINGS ACCORDINGLY.
- PROVIDE BLANK WHITE COVERPLATES OVER ALL EXISTING BLANK WALLBOXES THAT ARE TO REMAIN, UNLESS OTHERWISE NOTED.
- IN AREAS WHERE COUNTERS OR OTHER MILLWORK ARE PROVIDED, COORDINATE EXACT LOCATION OF OUTLETS AND WIRING WITH MILLWORK AND ARCHITECT.
- FOR PLUG-IN EQUIPMENT, CONFIRM CSA CONFIGURATION OF REQUIRED RECEPTACLE PRIOR TO PURCHASE AND INSTALLATION.

- SUPPLY AND INSTALL EQUIPMENT DISCONNECT SWITCHES IN STRICT COMPLIANCE WITH CODE REQUIREMENTS (NOT ALL LOCAL DISCONNECT SWITCHES ARE SHOWN).
- PROVIDE ALL EMPTY CONDUITS C/W PULL STRINGS AND BACK BOXES AS REQUIRED TO SUIT THE COMPLETE INSTALLATION OF THE COMMUNICATIONS SYSTEMS (VOICE, DATA, CATV) AND SECURITY SYSTEMS (ACCESS CONTROL AND CCTV).
- ALL EMPTY CONDUITS FOR COMMUNICATIONS OUTLETS SHALL BE TERMINATED WITH BUSHING AT END OF CONDUIT. IN OPEN CEILING AREAS EXTEND ALL EMPTY CONDUITS FOR COMMUNICATIONS SYSTEMS AS REQUIRED SO THAT COMMUNICATIONS CONTRACTOR DOES NOT NEED TO RUN FREE AIR CABLING THAT WILL BE VISIBLE.
- REFER TO MECHANICAL DRAWINGS FOR EXACT LOCATION AND MOUNTING HEIGHT OF ALL HVAC AND PLUMBING EQUIPMENT. CONFIRM EXACT LOCATION OF ALL MECHANICAL EQUIPMENT WITH MECHANICAL CONTRACTOR PRIOR TO ROUGHING IN ELECTRICAL SERVICES.
- STARTER LOAD SIDE WIRING SHALL BE THE SAME AS LINE SIDE WIRING.
- ALL STARTERS AND PUMP CONTROLLERS SUPPLIED BY MECHANICAL CONTRACTOR. ELECTRICAL CONTRACTOR TO PROVIDE ALL LINE AND LOAD SIDE POWER WIRING AND CONDUIT, AND REQUIRED ISOLATION SWITCH AT THE MOTOR.
- ELECTRICAL CONTRACTOR SHALL PROVIDE 15A, 120V JUNCTION BOX OUTLETS MOUNTED IN CEILING SPACE FOR USE BY THE MECHANICAL CONTROLS CONTRACTOR FOR CONTROLS POWER. THE LOCATIONS SHALL BE AS INDICATED ON THIS DRAWING. ALL LOAD SIDE 120V TERMINATIONS SHALL BE PROVIDED BY MECHANICAL CONTRACTOR.
- PROVIDE NEW EVAC SPEAKERS WHERE INDICATED AND CONNECT TO EXISTING SPEAKER CIRCUITS AND EXTEND WIRING AS REQUIRED. VERIFY CIRCUIT LOADING WITH FIRE ALARM MANUFACTURER AND PROVIDE NEW CIRCUITS AND/OR ADDITIONAL AMPLIFICATION EQUIPMENT AS REQUIRED. RUN NEW CIRCUITS TO FIRE ALARM DSP. NEW SPEAKERS TO MATCH EXISTING.
- CIRCUITING SHOWN IS FOR GROUPING PURPOSES ONLY. THE CONTRACTOR SHALL VERIFY EXACT CIRCUIT NUMBERS TO BE USED ON SITE AND SHALL INDICATE EXACT NUMBERS USED ON THE AS-BUILT DRAWINGS.

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NO.	REVISION	DATE	BY



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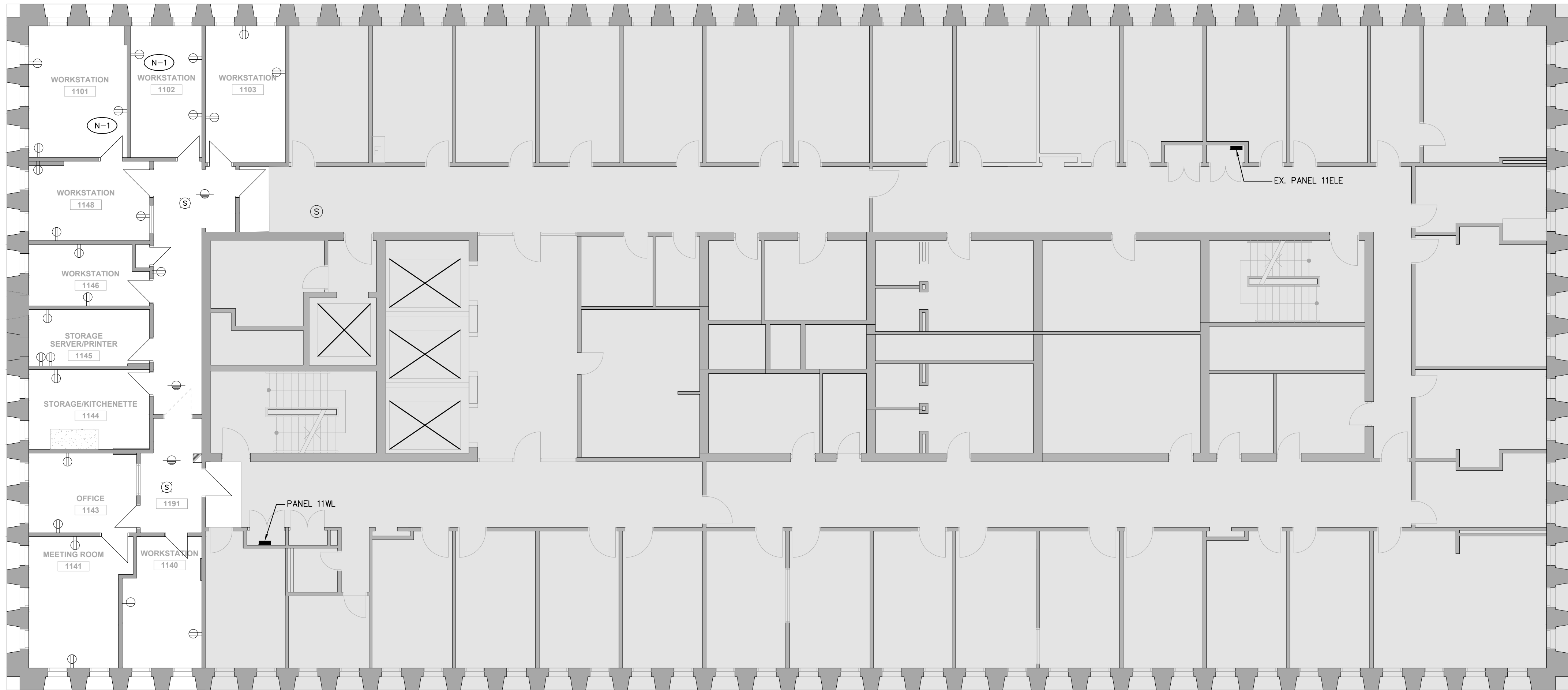
Project

**CAMH 250 COLLEGE
RELOCATION
TORONTO, ONTARIO**

Drawing Title

**10TH FLOOR
POWER & SYSTEMS – NEW**

Date	MARCH 2023	Drawing No. E3.09
Scale	1/8"=1'-0"	
Drawn By	D.K.	
Approved By	P.C.	
File No.		
Project No.	22048	



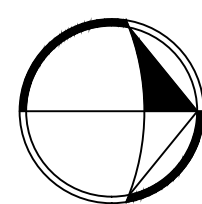
DRAWING REFERENCE NOTES:

- N-1** EXISTING DEVICE TO BE REPLACED WITH NEW SURFACE MOUNTED DEVICE, REFER TO NEW FLOORPLAN FOR LOCATION
- N-2** RELOCATED DEVICE TO BE INSTALLED IN NEW SURFACE MOUNTED WIREMOLD BOX AND COVERPLATE, EXTEND WIRING TO DEVICE. REFER TO NEW FLOORPLAN FOR LOCATION
- N-3** EXISTING ANCILLARY SYSTEMS, DEVICES, NURSE CALL STATION, ANNUNCIATORS AND ALERT SYSTEMS, ETC... (NOT ALL SYSTEMS SHOWN) IN NURSING STATION TO BE DECOMMISSIONED, DEVICES TURNED OVER TO OWNER AND WIRING CUT BACK TO CEILING VOID AND MADE SAFE.

DRAWING GENERAL NOTES:

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- REFER TO NEW PLAN FOR NEW LOCATION OF RELOCATED DEVICES AND EQUIPMENT.
- ALL EXISTING ELECTRIC DOOR STRIKE LOCKING DEVICES TO BE REMOVED AND REPLACED AS PER THE ARCHITECTURAL SCOPE. ALL WORK BY OTHERS.

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NO.	REVISION	DATE	BY



SIGNATURE

Project

**CAMH 250 COLLEGE
RELOCATION
TORONTO, ONTARIO**

Drawing Title

**11TH FLOOR
POWER & SYSTEMS –
DEMOLITION**

Date MARCH 2023

Scale 1/8"=1'-0"

Drawn By D.K.

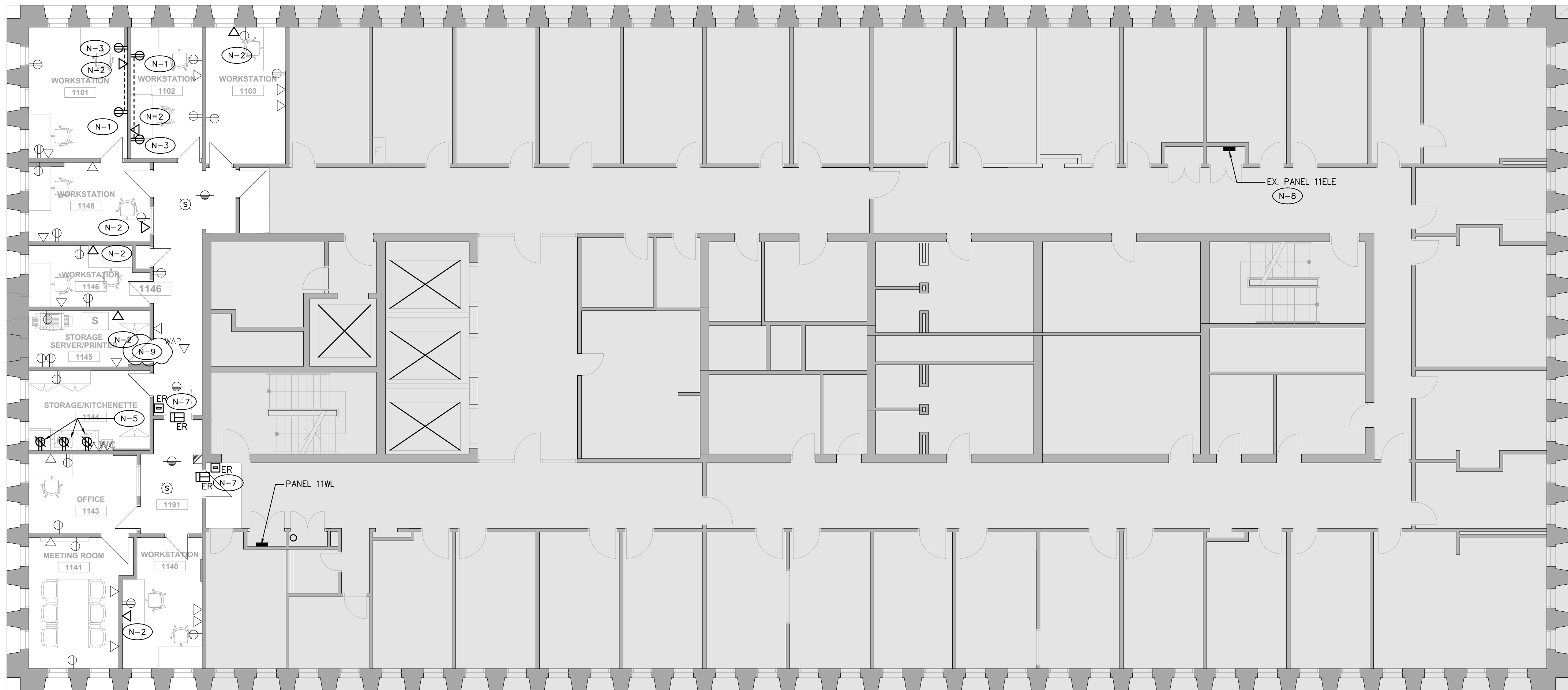
Approved By P.C.

File No.

Project No. 22048

Drawing No.

E3.10



SECURITY NOTES

- EXISTING CCTV & SECURITY ACCESS SYSTEM IS EXISTING TO BE MAINTAINED. ALL CAMERAS SHOWN IN NEW PLAN ARE EXISTING TO REMAIN OR RELOCATED FROM PRESENT POSITION TO NEW LOCATION.
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- COORDINATE ALL REWORK WITH OWNERS APPROVED SECURITY CONTRACTOR.

TYPICAL DOOR STATION CONTROL, DEVICES AS FOLLOWS; (CARD READER ON EXTERIOR SIDE ONLY)

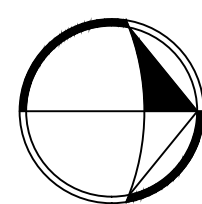


DRAWING REFERENCE NOTES:

- EXISTING DEVICE TO BE REPLACED WITH NEW SURFACE MOUNTED DEVICE, PROVIDE NEW WIREMOLD BOX AND COVERPLATE, EXTEND WIRING TO DEVICE.
- NEW COMM DEVICE TO BE SURFACE MOUNTED, UTILIZE SURFACE WIREMOLD BOX AND RACEWAY, RUN RACEWAY AT HIGH LEVEL AND TERMINATE IN CORRIDOR CEILING VOID. ALL CABLING TO RUN THROUGH CEILING SPACE TO NEW RACK IN ROOM 931
- NEW DEVICE TO BE SURFACE MOUNTED, WIRE TO ADJACENT OUTLET, UTILIZE SURFACE WIREMOLD BOX AND RACEWAY, PROVIDE ALL WIRING.
- RELOCATED DEVICE TO BE INSTALLED IN NEW SURFACE MOUNTED WIREMOLD BOX AND COVERPLATE, EXTEND WIRING TO DEVICE.
- NEW DEVICE TO BE SURFACE MOUNTED, WIRE TO EXISTING PANEL, UTILIZE SURFACE WIREMOLD BOX AND RACEWAY, PROVIDE ALL WIRING. CONCEAL WIRING IN CORRIDOR CEILING SPACE TO PANEL
- PROVIDE VERTICAL SERVICE 'PAC' POLE C/W DEVICES AS NOTED. CONCEAL WIRING THROUGH CEILING SPACE.
- DOOR ACCESS DEVICES RELOCATED FROM OTHER FLOOR/AREA. PROVIDE ROUGH IN, DEVICE INSTALLATION AND WIRING BY OWNERS SUBCONTRACTOR.
- PROVIDE NEW 20A BREAKER FOR EMERGENCY OUTLET ON 8TH FLOOR. POWER TO DROP IN CLOSET RISES TO ROOM 819
- WIRE NEW EXHAUST FAN EF-1 TO LOCAL LIGHTING CIRCUIT. (POWER ONLY)

- EXACT LOCATION OF ALL EXISTING RECEPTACLES AND OTHER DEVICES/EQUIPMENT SHALL BE CONFIRMED ON SITE.
- ALL RECEPTACLES AND OTHER DEVICES/EQUIPMENT SHOWN ON THIS DRAWING ARE EXISTING TO REMAIN UNLESS OTHERWISE SHOWN WITH AN 'R' TO BE REMOVED OR NOTED. CUT BACK AND REMOVE ALL UNUSED CONDUITS AND WIRING BACK TO SOURCE PANEL. REMOVE ALL DEVICES AND WIRING FROM WALLS THAT ARE TO BE DEMOLISHED. ALL EXISTING DEVICES AND WIRING THAT ARE TO BE DEMOLISHED ARE NOT NECESSARILY SHOWN. CONTRACTOR SHALL VISIT THE SITE DURING TENDER PERIOD TO ASCERTAIN THE FULL SCOPE OF DEMOLITION.
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- ALL EXISTING ELECTRICAL EQUIPMENT OR DEVICE WHICH IS NO LONGER REQUIRED SHALL BE REMOVED AND DISPOSED OF OFF SITE.
- WHERE REMOVAL OF RECEPTACLES, DEVICES/EQUIPMENT AFFECTS THE OPERATION OF EXISTING RECEPTACLES, DEVICES/EQUIPMENT TO REMAIN, THE CONTRACTOR SHALL REPLACE/MAKE GOOD BRANCH WIRING AS REQUIRED TO ENSURE CONTINUITY OF OPERATION OF REMAINING RECEPTACLES, DEVICES/EQUIPMENT.
- NOT ALL MECHANICAL EQUIPMENT TO BE REMOVED IS NECESSARILY INDICATED ON THIS PLAN. REFER TO THE MECHANICAL DRAWINGS FOR EXTENT OF MECHANICAL DEMOLITION WORK. DISCONNECT EXISTING MECHANICAL EQUIPMENT WHICH IS BEING REMOVED. CUT BACK CONDUIT AND WIRING TO SOURCE ELECTRICAL PANEL. MAINTAIN ELECTRICAL SERVICES TO EXISTING MECHANICAL EQUIPMENT WHICH IS TO REMAIN IN SERVICE. REPLACE BRANCH WIRING AS NEEDED.
- INCLUDE FOR THE REMOVAL OF ANY EXISTING REDUNDANT HORIZONTAL COMMUNICATIONS CABLING. CABLING NOT SHOWN. VERIFY EXTENT OF THE WORK DURING TENDER PERIOD. COORDINATE WITH GENERAL CONTRACTOR TO HAVE THE COMMUNICATIONS CONTRACTOR VERIFY IF ANY EXISTING CABLING IS LIVE AND SHOULD REMAIN.
- REMOVE ALL REDUNDANT LINE VOLTAGE AND LOW VOLTAGE CONDUIT AND WIRING SPACE WHICH IS NOT IN USE.
- CONTRACTOR SHALL BE AWARE THAT NOT ALL EXISTING EQUIPMENT AND DEVICES REQUIRED TO BE REMOVED ARE NECESSARILY INDICATED ON THIS PLAN. CONTRACTOR SHALL STILL BE RESPONSIBLE FOR REMOVING ALL SUCH ITEMS AS REQUIRED TO FACILITATE THE COMPLETE DEMOLITION.
- REFER TO NEW PLAN FOR NEW LOCATION OF RELOCATED DEVICES AND EQUIPMENT.

05	ISSUED FOR ADDENDUM E-1	2023.08.31	DK
04	ISSUED FOR PERMIT	2023.08.11	DK
03	ISSUED FOR TENDER	2023.08.08	DK
02	PRE-TENDER COST ESTIMATE	2023.14.07	DK
01	COST CONSULTANT	2023.04.11	DK
NO.	REVISION	DATE	BY



SIGNATURE

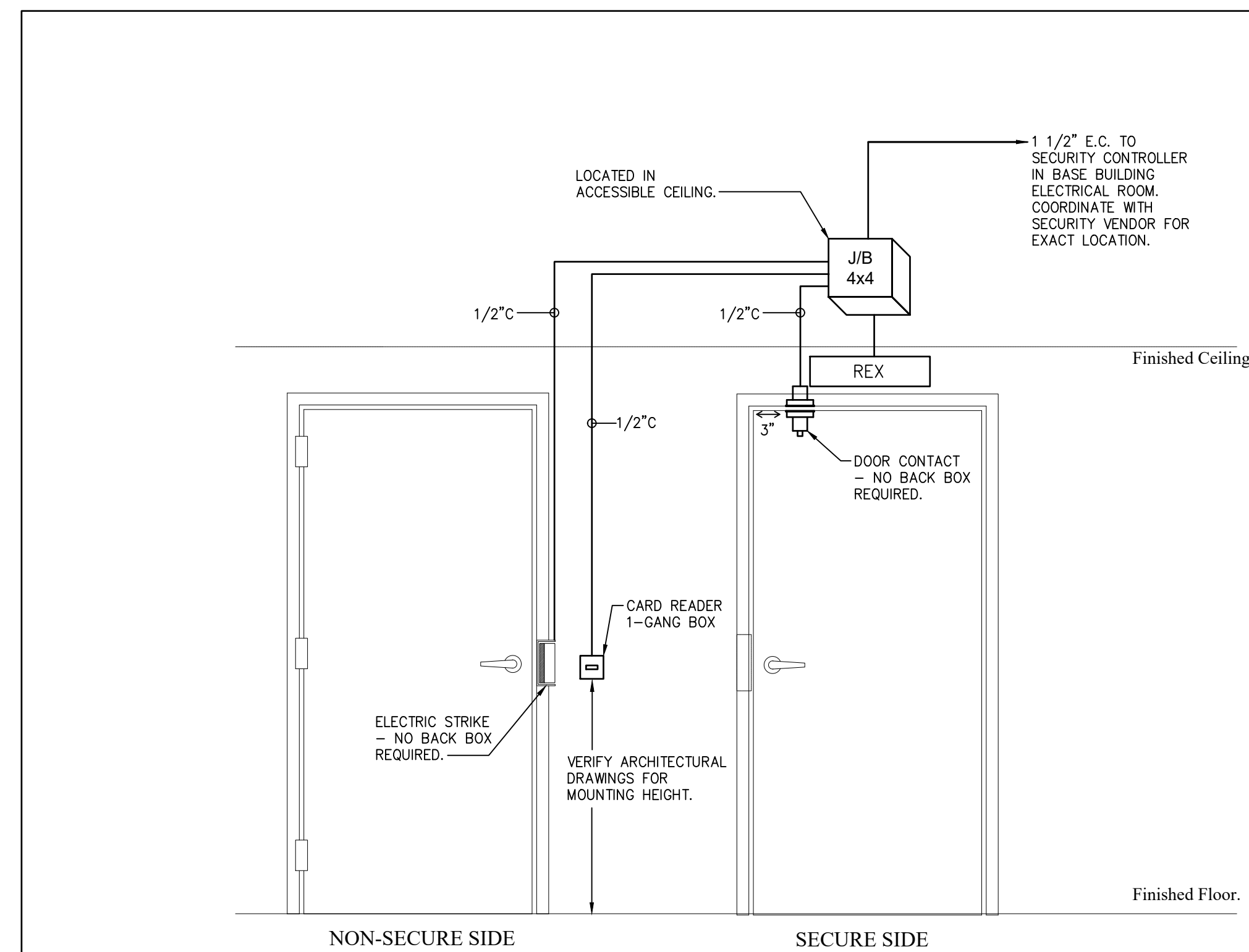
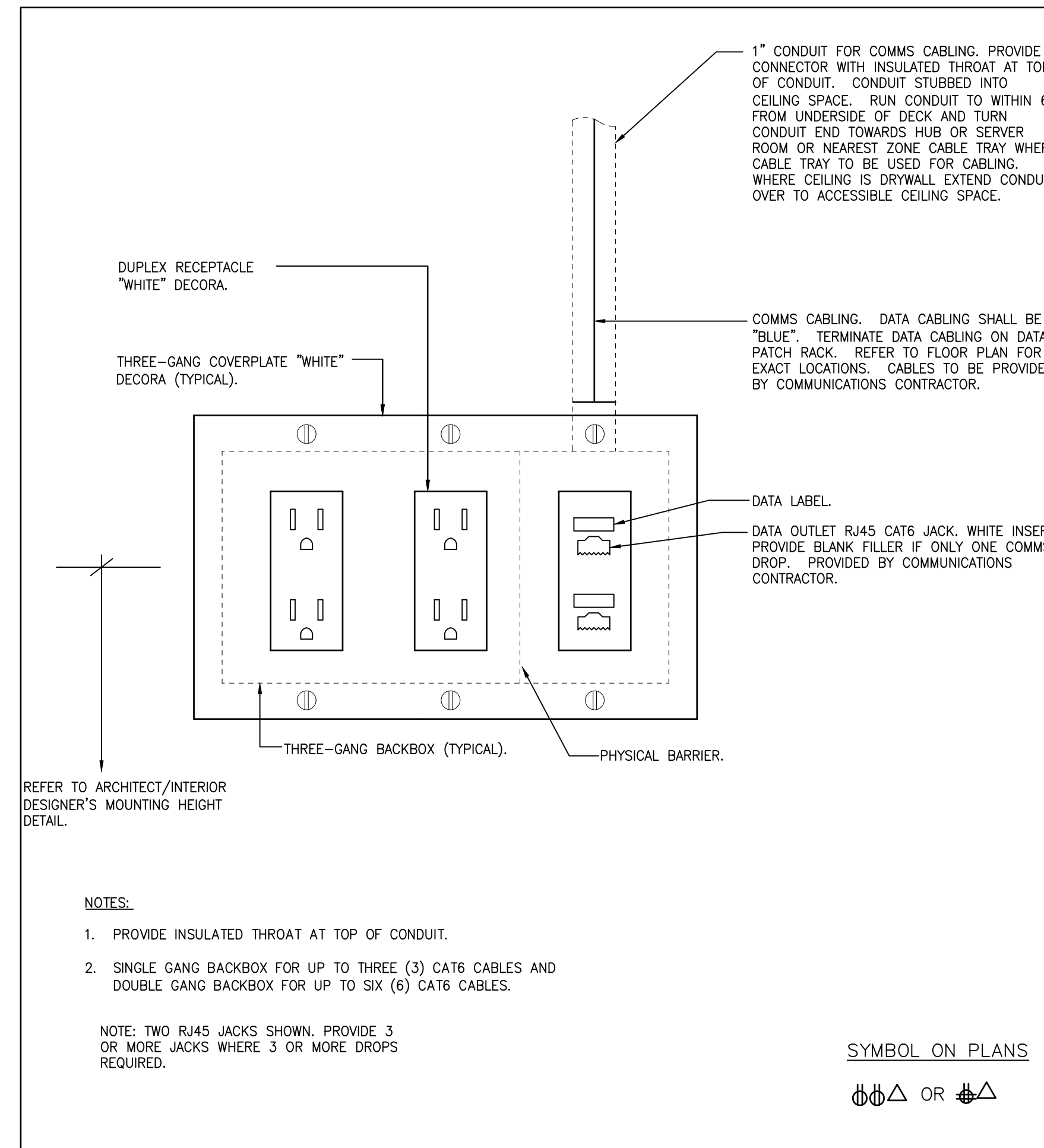
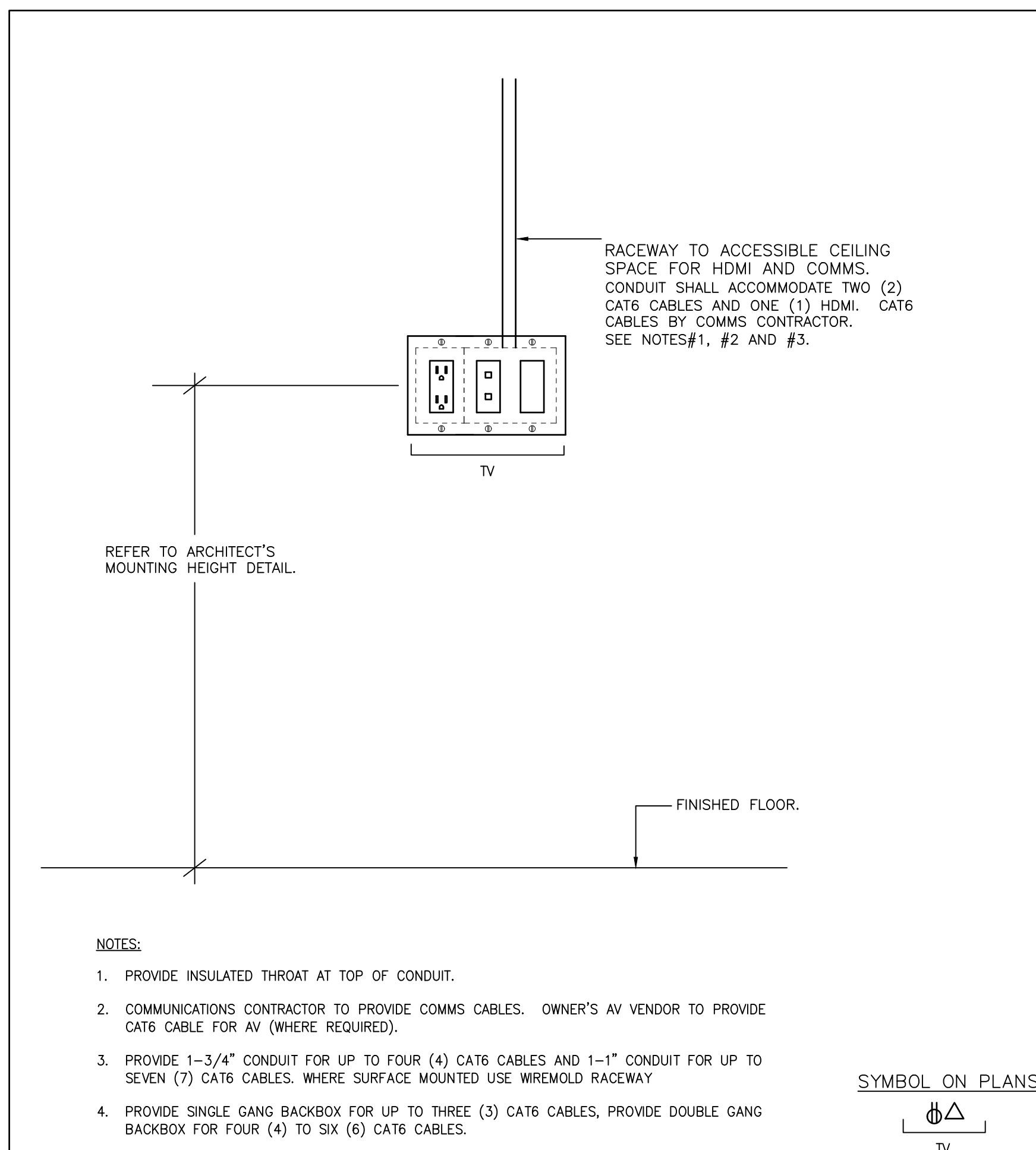
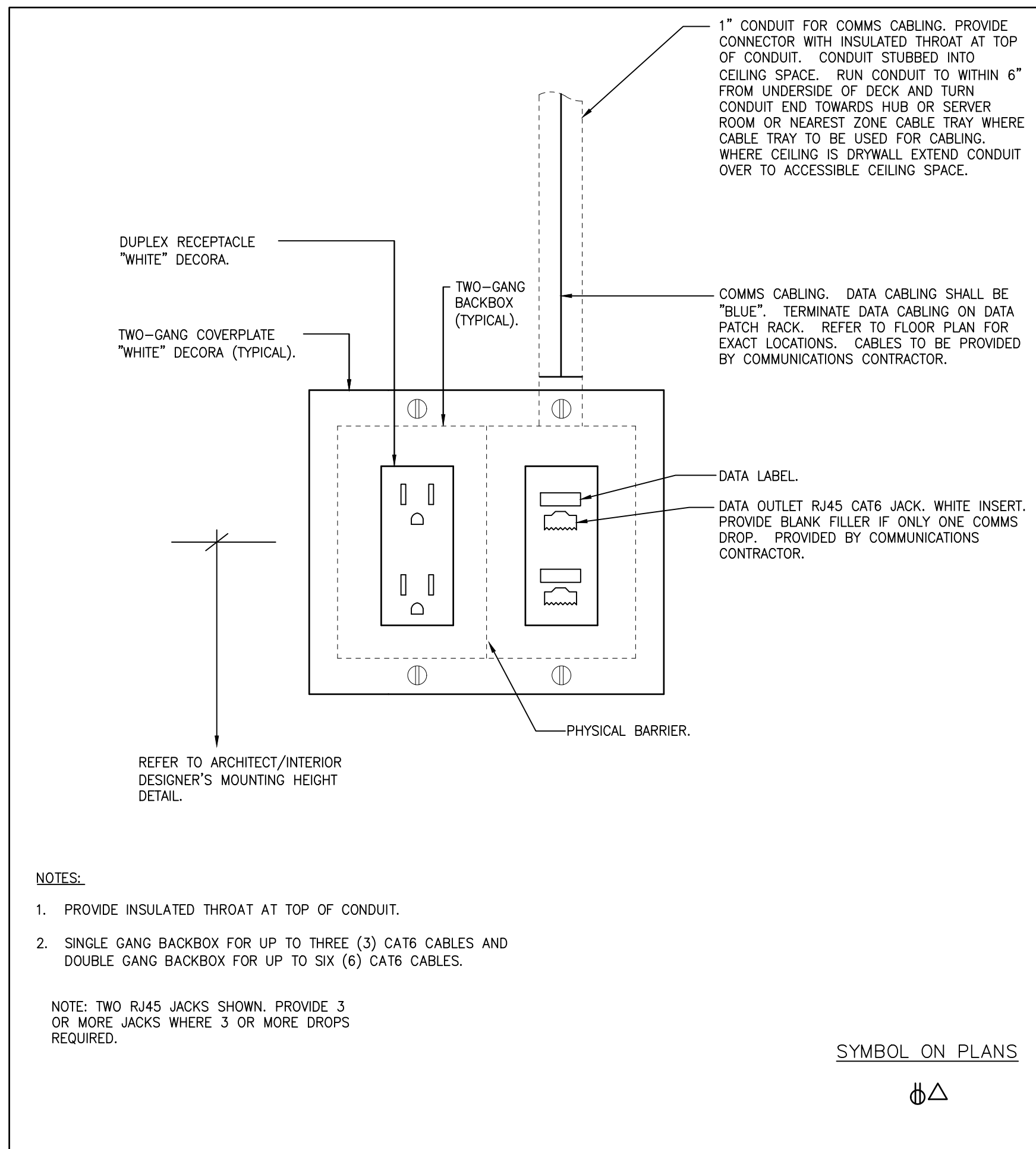
Project

**CAMH 250 COLLEGE
RELOCATION
TORONTO, ONTARIO**

Drawing Title

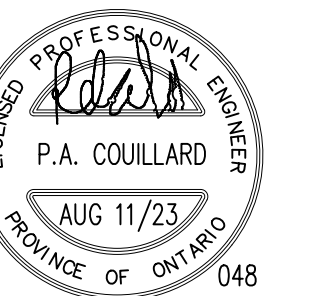
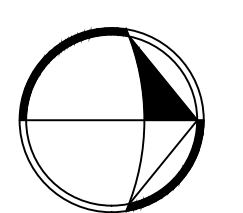
**11TH FLOOR
POWER & SYSTEMS – NEW**

Date	MARCH 2023	Drawing No. E3.11
Scale	1/8"=1'-0"	
Drawn By	D.K.	
Approved By	P.C.	
File No.		
Project No.	22048	



- NOTES:**
1. DIVISION 16 CONTRACTOR SHALL BE RESPONSIBLE FOR ALL ROUGH-IN WORK. THIS INCLUDES, BUT IS NOT LIMITED TO THE FOLLOWING: CONDUIT WITH PULL STRINGS, BACK BOXES, JUNCTION BOXES AND 120V POWER PROMOVIONS.
 2. DIVISION 16 CONTRACTOR SHALL SHALL CONFIRM EXACT ELECTRICAL REQUIREMENTS WITH SECURITY SYSTEM MANUFACTURER/CONTRACTOR. CONDUIT AND BACK BOX SIZES SHALL BE AS REQUIRED. REFER TO DESIGNER'S DRAWINGS FOR EXACT LOCATIONS AND MOUNTING HEIGHTS.
 3. PROVIDE FLUSH MOUNTED BACK BOX FOR FINISHED AREAS, SURFACE MOUNTED OTHERWISE. PROVIDE BACK BOXES FOR ALL NEW AND/OR RELOCATED SECURITY SYSTEM DEVICES.
 4. CONFIRM ALL BACK BOX SIZES WITH SECURITY SUB-CONTRACTOR PRIOR TO ROUGH-IN.
 5. WHERE APPLICABLE LOCATE MAIN JUNCTION BOX AT EACH DOOR ON SECURE SIDE OF DOOR IN ACCESSIBLE CEILING SPACE.
 6. COORDINATE ALL ROUGH-IN WORK WITH SECURITY VENDOR AND IN ACCORDANCE WITH DOOR AND HARDWARE REQUIREMENTS.

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03	ISSUED FOR TENDER	2023.08.08	DK
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01	COST CONSULTANT	2023.04.11	DK
NO.	REVISION	DATE	BY



SIGNATURE

Project

**CAMH 250 COLLEGE
RELOCATION
TORONTO, ONTARIO**

Drawing Title

ELECTRICAL
DETAILS

Date	MARCH 2023	
Scale	AS NOTED	
Drawn By	D.K.	
Approved By	P.C.	Drawing No. E4.01
File No.		
Project No.	22048	

STRUCTURED CABLING GENERAL REQUIREMENTS

- 0 Structured Cabling Specifications and Scope of Work
- 0.1 Refer to drawing C2.1 for Structured Cabling Specifications and Scope of Work.
- 1 General Conditions
- 1.1 The clauses in the General Conditions, Labour Conditions, Supplementary Conditions and Instructions to Bidders shall be considered an integral part of these specifications and shall govern the electrical work to be done.
- 2 Codes and Regulations
- 2.1 All work shall be done in accordance with the latest editions of the Ontario Building Code, Ontario Electrical Safety Code, C.S.A. Standards, U.L.C., N.F.P.A., O.S.H.A. and local regulations and with the requirements of all applicable Inspection Authorities Having Jurisdiction. Additionally, all work shall comply with Owner's requirements and conform to base building standards.
- 3 Permits and Approvals
- 3.1 Obtain and pay for all required approvals, permits and notices and pay all inspection fees, taxes and all other applicable costs whatsoever connected with the structured cabling work.
- 4 Intent
- 4.1 It is the intent of these drawings and specifications that the Contractor provide complete and fully operational systems. All miscellaneous items and ancillary components required to achieve this shall be provided and all costs shall be included in the tender price.
- 5 Definitions
- 5.1 The terms 'provide' or 'supply and install' shall be understood to mean that the Contractor shall supply and install, inclusive of all labour, materials and testing, for the equipment or system which is being referenced.
- 6 Site Visit
- 6.1 Study the electrical drawings and the documents of all other trades and visit the site during tender in order to establish the full extent of the work and to determine existing job conditions. Include in the tender price for the total scope of work including but not limited to removing, rerouting of all existing electrical/communications equipment and wiring to successfully execute all work described. Include in bid for discrepancies, if any, shown on these drawings relating to existing conditions.
- 7 Insurance
- 7.1 Provide insurance for the duration of the project to protect the building Owner, Tenant and Trades from all claims. Submit at the time of the bid proof of an amount in accordance with the bid form requirements or acceptable to the Owner.
- 8 Workers Compensation
- 8.1 The Contractor shall provide the Owner with current certificates of clearance from the Workplace Safety and Insurance Board (WSIB) valid throughout the course of the contract.
- 9 Contract Documents
- 9.1 The drawings for the work of this division are diagrammatic in nature intended to convey the scope of work, general arrangement and sizes of equipment and approximate location of wiring devices and other devices.
- 9.2 Any discrepancies between the Architectural/Interior Design, Mechanical, Security, Audio-Visual, Communications, Food Service or other drawings and the Electrical or Communications drawings shall be reported to the Consultant prior to roughing in the electrical services.
- 9.3 Whenever differences occur between floor plans and details/diagrams or between drawings and specifications the maximum condition shall govern and be included in the tender price.
- 10 Site Measurements
- 10.1 All dimensions and measurements shall be determined on the site. Drawings are diagrammatic intended to show general arrangement and some technical details only and shall not be scaled for dimensions or measurements.
- 11 Scheduling and Delivery
- 11.1 All work during construction shall be properly scheduled and coordinated with the other Trades, the Owner and the Tenant. Include in the tender price for all necessary premium time to suit the Owner's or General Contractor's construction schedule.
- 11.2 A delivery schedule of all major equipment including equipment racks and cabinets to be provided under this contract shall be submitted to the General Contractor at the beginning of the project. Failure to identify delivery problems or unnecessary delay in ordering equipment may result in delay claims against the Contractor.
- 12 Shop Drawings and Submittals
- 12.1 Submit copies of the certification of the company and names of staff that will be performing the installation and termination of the installation to provide proof of compliance of this spec.
- 12.2 Submit appropriate cut sheets and samples for all products, hardware and cabling.
- 12.3 Submit electronically in PDF format shop drawings for all structured cabling components and equipment, prior to installation for approval.
- 12.4 Each shop drawing shall be reviewed and stamped as being correct by the General Contractor and the appropriate trade before submission to the Consultant for review. Shop drawings which are not stamped in this manner shall be returned 'not reviewed'.
- 13 As-built Drawings
- 13.1 Keep a record set of drawings on site at all times which shall clearly indicate the exact location of all data drops, devices, equipment racks, cabling runs, etc.. The record drawings shall also include any deviations from the design drawings and all changes issued via change notice or site instruction or other changes made during the course of construction. The information on these drawings shall be incorporated onto the as-built drawings at the completion of the project.
- 13.2 Submit as-built drawings at the completion of the project in the form of AutoCAD release 2010 or later. Obtain and pay for a cad disk of drawing files. The Contractor may obtain the Consultant's AutoCAD drawing files at a cost of \$100.00 per drawing. The as-built drawings shall incorporate all the information from the record drawings recorded during construction. Submit the completed record drawings and the cad files, in AutoCAD release 2010 or later, to the Consultant for review. Following the Consultant's review submit the record drawings, one set of prints of the as-builts and a cad disk of the as-built drawings to the Landlord or Owner as part of the close-out documents.
- 13.3 The Consultant's stamp and logo shall be removed from the as-built drawings. The drawings shall be clearly marked as AS-BUILT and shall include the Contractor's name.
- 14 Close-out Documents
- 14.1 After completion of the project submit the following documents for Consultant's review.
- Structured Cabling Certification Report.
 - Warranty letter.
 - Maintenance Manuals including all Reviewed and Stamped shop drawings.
- 14.2 Following Consultant's review submit Close-out Documents including three (3) sets of the Maintenance Manuals to the Owner.
- 15 Warranty
- 15.1 The Contractor shall provide a one-year "parts and labour" warranty on all facilities, equipment and devices, effective on the date of acceptance of the work, even if the devices are installed and connected before this date. The warranty shall cover the complete installation.
- 15.2 The Contractor shall repair and/or replace at no extra cost any defects in materials or workmanship that occur during the warranty period. Work to be done at a time that is suitable to the Owner or Tenant.
- 16 Final Inspection
- 16.1 At the completion of the work the Contractor shall contact the Owner's representative and Summit Engineering to perform a final inspection.
- 16.2 In areas where ceiling tiles have been installed it will necessary to remove portions of the ceiling tiles for inspection and then re-install them. Include for all costs in the tender price.
- 16.3 All equipment must be cleaned and tested before final acceptance by the Consultant.
- 17 Changes to the Contract
- 17.1 Where extra work of any kind is required obtain written instructions from the Owner or Architect/Design Consultant before proceeding. The Contractor will receive payment for authorized changes only.
- 17.2 For each change submit a quotation c/w breakdown of material, labour, overhead and profit. Labour units shall be based on the latest National Electrical Contractors Association (NECA) manual column one (1) for the duration of the project. Material pricing shall be based on the latest National Price Guide system with appropriate trade discounts.
- 17.3 Hourly labour rates shall be inclusive of all ancillary charges for supervision, electrical inspection, hand tools, as-builts, parking, clean-up, elevator downtime and additional bonding. No other ancillary charges will be permitted.
- 18 Noise and Vibration
- 18.1 All equipment shall operate without objectionable noise or vibration and to the Owner's satisfaction.
- 19 Materials and Installation
- 19.1 Unless otherwise specifically provided, all materials and equipment installed shall be new, unused, and bear approval or certification labels indicating conformity with CSA standards.
- 19.2 Provide all materials, equipment and labour necessary to perform the complete work as indicated.
- 19.3 All work shall be performed in a professional and expert manner to the satisfaction of the Architect/Design Consultant. Any work that is deemed to unsatisfactory shall be replaced without extra cost to the Owner.
- 19.4 Damage to any system occurring during execution of the work shall be rectified at the Contractor's expense.
- 19.5 The construction site shall be kept clean and any debris shall be removed from the site throughout the construction period and at completion of the work.
- 19.6 The work included under these specifications consists of furnishing all labor, equipment, materials, and supplies and performing all operations necessary to complete the installation of this structured cabling system in compliance with the specifications and drawings. The Contractor will provide and install all of the required material to form a complete system whether specifically addressed in the technical specifications or not.
- 20 General
- 20.1 The Structured Cabling system shall be designed in accordance with the recommendations contained in the ANSI/TIA/EIA-J-STD-607 Communications Bonding and Grounding Standard.
- 20.2 Labeling shall be done in accordance with the recommendations made in the ANSI/TIA/EIA-606-A document, manufacturer's recommendations and best industry practices.
- 20.3 The Contractor shall effectively protect the Owner's facilities, equipment and materials from dust, dirt and damage during construction.
- 20.4 A plastic or nylon pull cord with a minimum test rating of 90 Kg shall be co-installed with all cable installed in any conduit.
- 21 Cable Handling
- 21.1 The Contractor shall ensure that there is no rough handling, kinking, denting or abrasion of the cable, and that the cable shall not be left on the ground where it may be stepped on.
- 21.2 When installing cables, care shall be exercised to avoid sharp bends, protruding metal edges and unnecessary stress. The minimum bending radius of category 6 cables shall be 2.5 cm and minimum bending radius of other cables shall be 10 times of outside jacket diameter.
- 21.3 Sharp metal edges in cable trays which could cut the cable shall be smoothed and the cable dressed away from these edges. Dropouts shall be provided for cables leaving horizontal trays.
- 21.4 All cable installation shall be done in a neat and tidy fashion, with cable routing closely following building lines.
- 21.5 Cable shall be neatly arranged by full cable combing with no crossovers within the bundle.
- 21.6 Cables must not exhibit sheath deformation due to over-tightening. If cable forming is not performed to the satisfaction of the Owner, the Contractor shall be responsible to reform the bundles at no cost to the Owner.
- 21.7 The Contractor shall neatly dress all cables within the Communications room to follow building lines. The objective being, to provide a reasonable amount of slack into each cable run, while at the same time provide neatness and promote order as the cables migrate from the point-of-entry to the termination point. No slack loops are permitted.
- 21.8 Bundles may be formed in Communication rooms using Velcro fasteners. Communications Rooms include the Server Room and the two Communications Closets.
- 21.9 In Communication rooms, horizontal cables shall be bundled separately from entrance and backbone cables. Cable bundles are not to exceed 24 cables per bundle in any communications room, and are not to exceed 40 cables per bundle in any other location.
- 22 Interference
- 22.1 Proximity to potential sources of electromagnetic interference (e.g., motors and transformers that share distribution space, copiers used in work areas) must be avoided when installing Communications cable pathways. To avoid electromagnetic interference the following minimum clearances shall be provided:
- 120 cm from large motors or transformers.
 - 30 cm from conduit and cables used for electrical power distribution.
 - 12 cm from fluorescent lighting.
- 22.2 Pathways shall cross perpendicular to LED or fluorescent lighting and electrical power cables or conduits.
- 22.3 Unless specified to the contrary in the outlet specification or drawings, each drop conduit or Communications outlet shall be connected to the nearest cable tray by approved J-Hook system.
- 22.4 The Contractor shall leave the manufacturer recommended amount of slack within the outlet box following termination, as too much slack at the point of termination may result in testing failures and too little slack can compromise future maintenance. No slack loops are permitted.
- 22.5 No cables are to be left un-terminated unless specified.
- 23 Standards
- 23.1 The Structured Cabling system shall conform to the following standards where applicable:
- ANSI/TIA -568-C.0, Generic Telecommunications Cabling for Customer Premises
 - ANSI/TIA 568 - C.1, Commercial Building Telecommunications Cabling Standard
 - ANSI/TIA 568 - C.2, Balanced, Twisted-Pair Telecommunications Cabling and Components Standard
 - TIA -569-B, Commercial Building Standard for Telecommunications Pathways and Spaces
 - ANSI/TIA - 606-A, Administration Standard for Commercial Telecommunications Infrastructure
 - ANSI/TIA - 607-A, Commercial Building Grounding Requirements for Telecommunications
 - ANSI/TIA - 942, Telecommunications Infrastructure Standard for Data Centres
 - Class E ISO/IEC 11801 2nd edition
 - Class E - CENELEC EN50173
 - ANSI/TIA 455-17 Optical Fiber End Preparation and Examination
 - NECA/FOA 301-2009 Installation and Testing of Fiber Optic Cables
- 23.2 This document does not replace any code, either partially or wholly. The contractor must be aware of local codes that may impact this project.
- 23.3 The Contractor shall provide proof of current CSV status and shall provide confirmation of their certification to the owner.
- 23.4 In case of conflict, it will comply with the most stringent requirements. It will also comply with manufacturer's recommendations and installation guides, and best industry practices.
- 24 4-Post Racks
- 24.1 The telecommunications rack shall meet EIA/ECA-310-E standards, be 45U, constructed of steel and capable of accepting 19" wide EIA equipment. The rack shall include adjustable front and rear equipment mounting rails. The equipment mounting rails shall be #12-24 or #10-32 style mounting. The adjustable equipment mounting rails shall include printed rack unit numbering and can be flipped by the user for either numbers up or numbers down. The rack shall accept shelf units and equipment brackets. The front and rear structural posts of the rack shall be capable of mounting Vertical Cable Managers and accessories such as power outlet units, slack spools, zero RU/bracket thermal ducting and vertical filler panels. The rack shall also accept optional casters mounted to the bottom of the rack. The construction method shall ensure an electrically bonded structure for ease of grounding.
- 25 Vertical Cable Manager
- 25.1 The vertical cable manager shall be 7" High, 8" wide and 12" deep. It will consist of a metal backbone with cable management fingers that align with EIA rack spacings. The fingers shall be molded out of plastic and provide integral bend radius control throughout the entire length. The backbone shall have pass through holes for front to back cabling, with the option to blank off with a plug. The manager shall accept a metal, hinged, push-to-close door that can open to the right or left. The door support brackets shall be integrated into the manager with no assembly required. The manager shall accept plastic slack management spools that can be repositioned as required. The vertical panel shall be able to manage all the cable on the rack without the aid of horizontal cable managers.
- 26 Vertical PDU
- 26.1 Vertical rack mount PDU, surge protected, 20A, 120V, 12 x NEMA 5-20R RECEPTACLES, c/w 10' power cord and LS-20P connector.

STRUCTURED CABLING SPECIFICATIONS & SCOPE OF WORK

- 1.0 DEMOLITION, FOR DEMOLITION SCOPE REFER TO NOTE BELOW.
- 1.1 THE COMMUNICATIONS CONTRACTOR SHALL PROVIDE ALL STRUCTURED CABLING WORK AS SHOWN. COMMUNICATIONS CONTRACTOR SHALL INSTALL AN END-TO-END SOLUTION FOR DATA BETWEEN PATCH PANELS AND OUTLETS. INCLUDE ALL COSTS IN TENDER PRICE FOR A COMPLETE AND OPERATIONAL SYSTEM. REFER TO STRUCTURED CABLING GENERAL REQUIREMENTS ON DRAWING C-1.1.
2. THE SCOPE OF WORK OF THE COMMUNICATIONS CONTRACTOR SHALL BE ALL THE WORK NORMAL TO THE HORIZONTAL CABLING INSTALLATION INCLUDING BUT NOT LIMITED TO ALL CABLING, JACKS/INSERTS, COVERPLATES, PATCH PANELS, CABLE MANAGERS, WORKSTATION DATA FITTINGS, ETC. ALL AS INDICATED AS BY COMMUNICATIONS CONTRACTOR ON THE FOLLOWING DRAWINGS AND DETAILS:
- DRAWINGS C-1.1, C-2.1 - COMPLETE DRAWINGS
 - DRAWINGS E-4.1, E-4.2, E-4.3 - COMPLETE DRAWING.
 - DRAWINGS E-3.1 - PROVIDED FOR REFERENCE AS INDICATED IN NOTE 18 BELOW.
- EXCEPT WHERE NOTED OTHERWISE ALL EMPTY CONDUITS AND BACKBOXES FOR THE COMMUNICATIONS HORIZONTAL CABLING SYSTEM SHALL BE PROVIDED BY THE ELECTRICAL CONTRACTOR. ALL LINE VOLTAGE WORK SHALL BE PROVIDED BY THE ELECTRICAL CONTRACTOR.
3. THE COMPLETE HORIZONTAL CABLING INSTALLATION AND CERTIFICATION SHALL COMPLY WITH TIA/EIA-568A STANDARD. THE COMMUNICATIONS CONTRACTOR SHALL BE A CERTIFIED SYSTEM CONTRACTOR OF THE CABLING AND TERMINATION PRODUCTS THAT THEY PROPOSE TO INSTALL. ALL WORK SHALL CONFORM TO ALL APPLICABLE CODES AND STANDARDS AND TO BEST INDUSTRY PRACTICES. THE CONTRACTOR SHALL ACCEPT COMPLETE RESPONSIBILITY FOR THE DESIGN, INSTALLATION, ACCEPTANCE TESTING AND CERTIFICATION OF THE CABLING SYSTEMS.
4. BIDDERS SHALL IDENTIFY THE MANUFACTURER AND MODEL OF THE PRODUCTS THAT THEY ARE PROPOSING AND INCLUDE IN THE BID SUBMISSION.
5. MAINTAIN 568A OR 568B WRING SCHEME THROUGHOUT. VERIFY WITH OWNER PRIOR TO INSTALLATION.
6. PROVIDE DATA CABLING CAT 6 CERTIFICATION. CERTIFICATION REPORT SHALL BE SUBMITTED FOR REVIEW/RECORDS.
7. ALL NEW DATA CABLES SHALL BE 4-PAIR CAT 6, FT-6 PLENUM RATED, CABLES SHALL BE COLOUR BLUE. PROVIDE PRINTED LABELS AT BOTH ENDS OF ALL CABLES.
9. ALL NEW JACKS THROUGHOUT SHALL BE RJ45, CAT 6, AND MADE WITH INSERTS COLOUR BLUE. PROVIDE NEW PRINTED LABELS FOR EACH JACK.
10. ALL CABLING INSTALLED IN ACOUSTIC PANEL/T-BAR CEILINGS SHALL BE SUPPORTED BY THE EXISTING CABLE TRAYS AND J-HOOKS WHERE AVAILABLE. PROVIDE NEW J-HOOKS AS REQUIRED. ALLOW FOR 50 J-HOOKS IN TENDER PRICE AND PROVIDE A SEPARATE PRICE FOR EACH ADDITIONAL J-HOOK THAT MAY BE REQUIRED. MAXIMUM SPACING BETWEEN J-HOOKS 5'. INSTALL CABLES IN NEAT AND ORGANIZED BUNDLES AND DO NOT LAY CABLES ON THE T-BAR CEILING. ALL CABLING INSTALLED IN DRYWALL CEILINGS AND OPEN CEILINGS SHALL BE CONCEALED IN CONDUITS. RUN ALL CABLING TO SYSTEMS FURNITURE VIA PACK POLES SUPPLIED WITH SYSTEMS FURNITURE, OR VIA BASE FEEDS FROM WALL OR THROUGH FLOOR AS SHOWN. RUN ALL CABLING TO WALL OUTLETS AS PER DETAILS ON DETAILS DRAWINGS.
11. AT ALL WORKSTATIONS PROVIDE DATA JACKS C/W FURNITURE MANUFACTURER SPECIFIC FACEPLATES/BRACKETS AND LABELS FOR A COMPLETE INSTALLATION. COORDINATE EXACT REQUIREMENTS WITH SYSTEMS FURNITURE MANUFACTURERS/SUPPLIERS AT TIME OF TENDER.
12. ALL DATA CABLES SHALL TERMINATE IN EXISTING IT ROOM (GROUND FLOOR) AND 9TH FLOOR NEW RACK (FLOORS 8,9,10,11) AS NOTED
13. PROVIDE LABELS AS PER NEW DATA DROP NUMBERS. LABELS APPLIED AT BOTH ENDS OF ALL CABLES, ON DATA JACKS AND AT PATCH PANEL JACKS. VERIFY AND CONFIRM NUMBERING SCHEME WITH OWNER PRIOR TO INSTALLATION. DROP NUMBERS SHALL BE PROVIDED BY THE COMMUNICATIONS CONTRACTOR DURING THE INSTALLATION ON SITE. DROP NUMBERS SHALL BE MARKED UP ON THESE FLOOR PLANS AND SHALL BE USED TO CREATE THE FINAL AS-BUILT DRAWINGS. AS-BUILT DRAWINGS SHALL BE PROVIDED IN AUTOCAD BY THE COMMUNICATIONS CONTRACTOR.
14. NEW PATCH CORDS AT THE RACK OR AT THE USER END ARE NOT REQUIRED IN THIS PROJECT. OWNER WILL PROVIDE AND INSTALL ALL PATCH CORDS.
15. WIRELESS ACCESS POINTS (WAP) WILL BE POE WITH 1-DATA DROP PER POINT AS SHOWN. AT EACH WAP LOCATION PROVIDE A SURFACE MOUNT LAN JACK ABOVE T-BAR CEILINGS OR FLUSH MOUNT AT DRYWALL CEILINGS. PROVIDE 20' SERVICE LOOPS.
16. PROVIDE AS BUILT DRAWINGS IN AUTOCAD. PROVIDE A SOFT COPY AND FRAMED PRINTED FINISHED CABLING DRAWING WITHIN SERVER ROOM FOR FUTURE REFERENCE.

▷ SYMBOL ON THE COMMS DRAWINGS DENOTES DATA OUTLET LOCATION. QUANTITY OF DROPS AS SHOWN.

ON THESE DRAWINGS "1 DATA DROP" DENOTES ONE CABLE RUN FROM JACK IN PATCH PANEL TO JACK AT USER OUTLET LOCATION.

DEMOLITION SCOPE:

ALL EXISTING CABLING AND INFRASTRUCTURE SHALL REMAIN AS PRESENTLY INSTALLED.

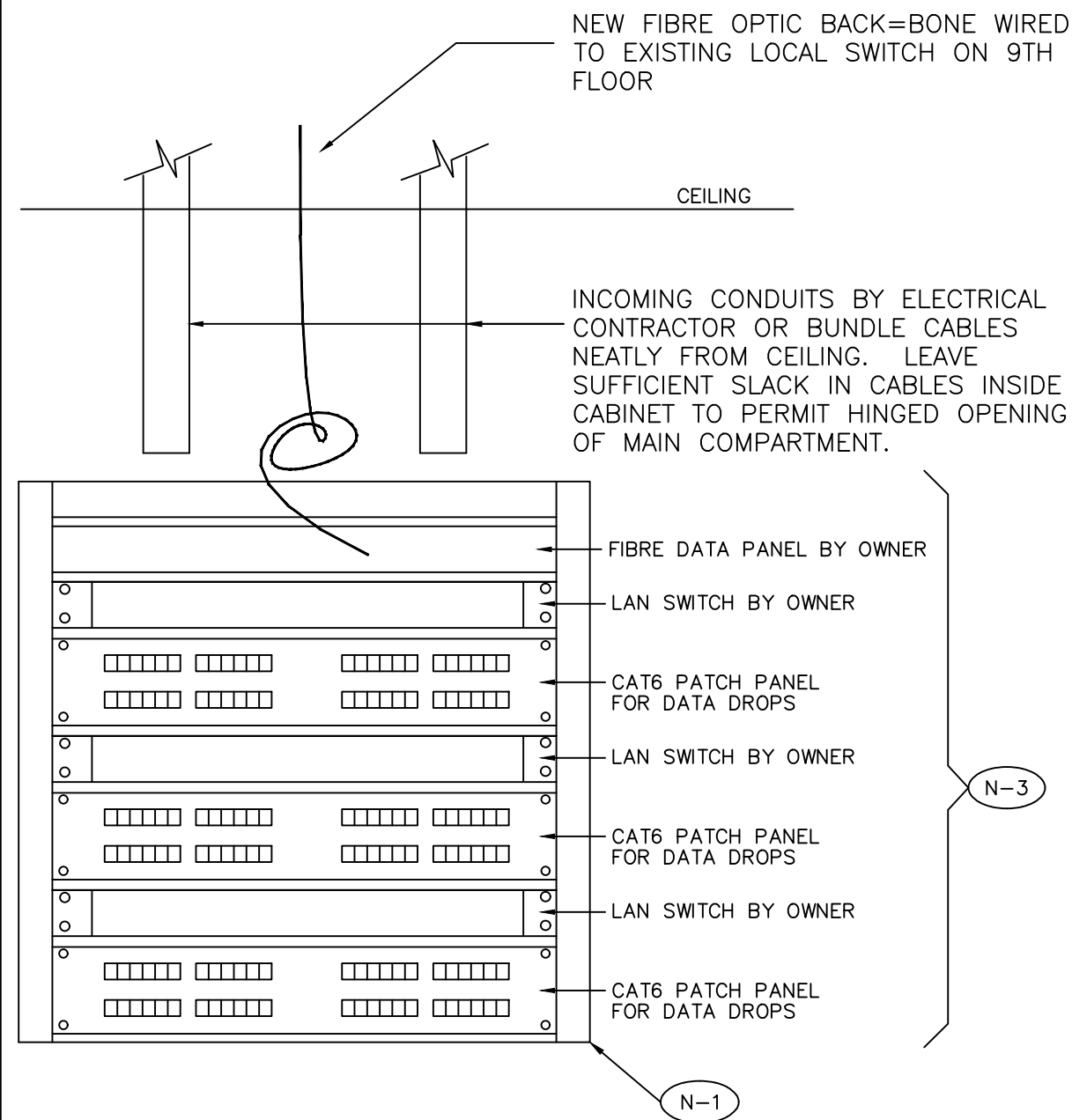
SPECIAL NOTES:

IT IS ASSUMED THAT ALL EXISTING DATA OUTLETS ARE OPERATIONAL AND FUNCTIONING PROPERLY.

IN THE EVENT THAT AN EXISTING DEVICE IS DEFECTIVE, ADVISE OWNER AND GET DIRECTION ON REQUIRED ACTIONS.

CONTRACTOR TO CARRY A CASH ALLOWANCE TO REWIRE 10% OF EXISTING OUTLETS SHOWN ON PLANS. TYPICAL SCOPE IS TO REPLACE EXISTING WIRING FROM OUTLET TO EXISTING SOURCE RACK.

ALLOW FOR A LENGTH OF 75M FOR EACH NEW CABLE INSTALLATION AS PER NOTE ABOVE



NOTES:

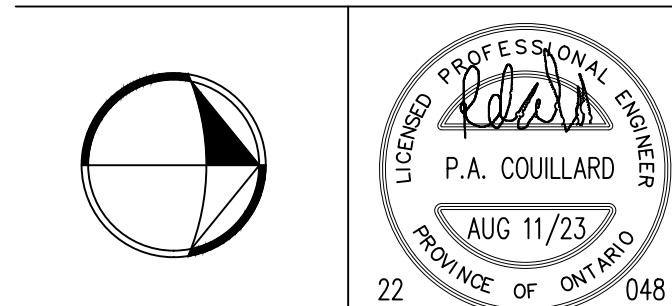
N-1 NEW IT PATCH RACK, WALL MOUNTED SWING OUT STYLE.
-PROVIDE VERTICAL CABLE MANAGERS
-PROVIDE HORIZONTAL CABLE MANAGERS

N-2 ALL WORK AND EQUIPMENT SHOWN ON THIS DETAIL SHALL BE SUPPLIED AND INSTALLED BY THE COMMUNICATIONS CONTRACTOR, UNLESS NOTED OTHERWISE.

N-3 PROVIDE SUFFICIENT PATCH PANELS TO COMPLETE THE INSTALLATION AS PER THE FLOOR PLANS.

**Summit Engineering Inc.**
5 Pitcairn Crescent, Toronto, ON M4A 1P5
Tel. (416) 488-8899

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Project

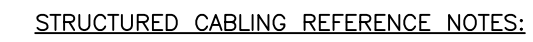
**CAMH 250 COLLEGE
RELOCATION
TORONTO, ONTARIO**

Drawing Title

**COMMUNICATION
SPECIFICATIONS AND DETAIL**

Date	MARCH 2023	Drawing No. C1.1
Scale	N.T.S.	
Drawn By	D.K.	
Approved By	P.C.	
File No.		
Project No.	22048	

Date	MARCH 2023	
Scale	1/8"=1'-0"	
Drawn By	D.K.	
Approved By	P.C.	Drawing No.
File No.		C2.1
Project No.	22048	

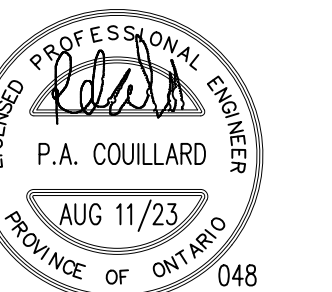
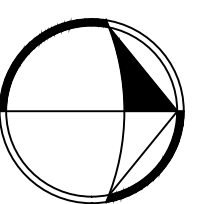
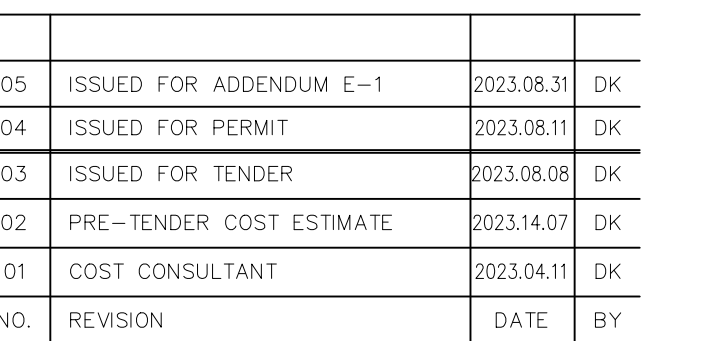


1. THE COMMUNICATIONS CONTRACTOR SHALL PROVIDE ALL STRUCTURED CABLING WORK AS SHOWN. COMMUNICATIONS CONTRACTOR SHALL INSTALL AN END-TO-END SOLUTION FOR DATA BETWEEN PATCH PANELS AND OUTLETS. INCLUDE ALL COSTS IN TENDER PRICE FOR A COMPLETE AND OPERATIONAL SYSTEM. REFER TO STRUCTURED CABLING GENERAL REQUIREMENTS ON DRAWING C1.0.
2. THE SCOPE OF WORK OF THE COMMUNICATIONS CONTRACTOR SHALL BE ALL THE WORK NORMAL TO THE HORIZONTAL CABLING INSTALLATION INCLUDING BUT NOT LIMITED TO ALL CABLING JACKS/INSERTS, COVERPLATES, PATCH PANELS, CABLE MANAGERS, COILED SLEEVES AT WORKSTATIONS, ETC, ALL AS INDICATED AS BY COMMUNICATIONS CONTRACTOR ON THE FOLLOWING DRAWINGS AND DETAILS:
 - DRAWINGS C10, C11 – COMPLETE DRAWINGS
 - DRAWING E42, E43 – DETAILS
 - DRAWING E31 – FOR REFERENCE ONLY

EXCEPT WHERE NOTED OTHERWISE ALL EMPTY CONDUITS AND BACKBOXES FOR THE COMMUNICATIONS HORIZONTAL CABLING SYSTEM SHALL BE PROVIDED BY THE ELECTRICAL CONTRACTOR. ALL LINE VOLTAGE WORK SHALL BE PROVIDED BY THE ELECTRICAL CONTRACTOR.

- SYMBOL ON THIS DRAWING DENOTES USER DATA OUTLET LOCATION. QUANTITY OF DROPS AS SHOWN.

ON THESE DRAWINGS "1 DATA DROP" DENOTES ONE (1) CABLE RUN FROM JACK IN PATCH PANEL TO JACK AT USER OUTLET LOCATION.



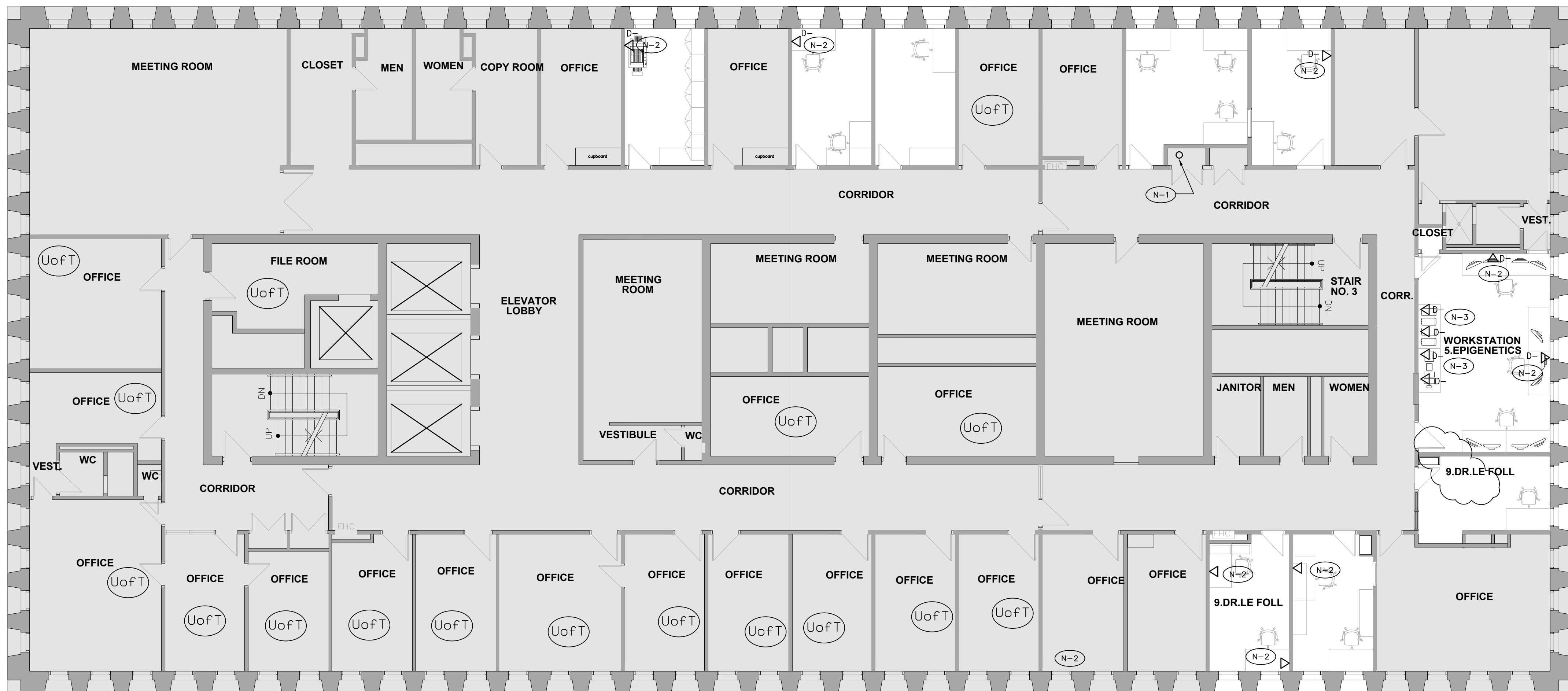
SIGNATURE

Project

Drawing Title

1ST FLOOR –
COMMUNICATIONS – NEW

Date	MARCH 2023	
Scale	1/8"=1'-0"	
Drawn By	D.K.	
Approved By	P.C.	Drawing No. C2.1
File No.		
Project No.	22048	



STRUCTURED CABLING REFERENCE NOTES:

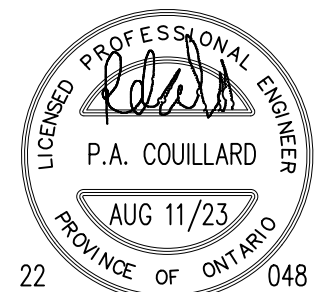
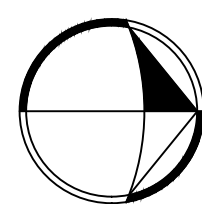
- N-1 ALL NEW STRUCTURED CABLING TO RISE/DROP THIS LOCATION TO NEW IT RACK ON 9TH FLOOR.
- N-2 NEW DEVICE TO BE SURFACE MOUNTED, RUN WIRING IN RACEWAY. ALL CABLING TO RUN THROUGH CEILING SPACE TO NEW RACK IN ROOM 950
- N-3 OUTLETS INSTALLED IN SURFACE WIREWAY, REFER TO POWER PLANS.

- ▽ ONE (1) CAT6 CABLE TO THE DATA OUTLET
- 2
▽ TWO (2) CAT6 CABLES TO THE DATA OUTLET

- THE COMMUNICATIONS CONTRACTOR SHALL PROVIDE ALL STRUCTURED CABLING WORK AS SHOWN. COMMUNICATIONS CONTRACTOR SHALL INSTALL AN END-TO-END SOLUTION FOR DATA BETWEEN PATCH PANELS AND OUTLETS. INCLUDE ALL COSTS IN TENDER PRICE FOR A COMPLETE AND OPERATIONAL SYSTEM. REFER TO STRUCTURED CABLING GENERAL REQUIREMENTS ON DRAWING C.1.0.
- THE SCOPE OF WORK OF THE COMMUNICATIONS CONTRACTOR SHALL BE ALL THE WORK NORMAL TO THE HORIZONTAL CABLING INSTALLATION INCLUDING BUT NOT LIMITED TO ALL CABLING, JACKS/INSERTS, COVERPLATES, PATCH PANELS, CABLE MANAGERS, COILED SLEEVES AT WORKSTATIONS, ETC. ALL AS INDICATED AS BY COMMUNICATIONS CONTRACTOR ON THE FOLLOWING DRAWINGS AND DETAILS:
 - DRAWINGS C10, C11 – COMPLETE DRAWINGS
 - DRAWING E42, E43 – DETAILS
 - DRAWING E31 – FOR REFERENCE ONLYEXCEPT WHERE NOTED OTHERWISE ALL EMPTY CONDUITS AND BACKBOXES FOR THE COMMUNICATIONS CONTRACTOR SHALL BE PROVIDED BY THE ELECTRICAL CONTRACTOR. ALL LINE VOLTAGE WORK SHALL BE PROVIDED BY THE ELECTRICAL CONTRACTOR.
- THE COMPLETE NEWLY INSTALLED HORIZONTAL CABLING INSTALLATION AND CERTIFICATION SHALL COMPLY WITH TIA/EIA-568B STANDARD. THE COMMUNICATIONS CONTRACTOR SHALL BE A CERTIFIED SYSTEM CONTRACTOR OF THE CABLING AND TERMINATION PRODUCTS THAT THEY PROPOSE TO INSTALL. ALL WORK SHALL CONFORM TO ALL APPLICABLE CODES AND STANDARDS AND TO BEST INDUSTRY PRACTICES. THE CONTRACTOR SHALL ACCEPT COMPLETE RESPONSIBILITY FOR THE DESIGN, INSTALLATION, ACCEPTANCE TESTING AND CERTIFICATION OF THE CABLING SYSTEMS.
- BIDDERS SHALL IDENTIFY THE MANUFACTURER AND MODEL OF THE PRODUCTS THAT THEY ARE PROPOSING AND INCLUDE IN THE BID SUBMISSION.
- MAINTAIN 568A WIRING SCHEME THROUGHOUT. VERIFY WITH OWNER PRIOR TO INSTALLATION.
- PROVIDE DATA CABLING CAT 6 CERTIFICATION. CERTIFICATION REPORT SHALL BE SUBMITTED FOR REVIEW/RECORDS.
- VOICE SYSTEM WILL BE VOIP ON THIS PROJECT.
- ALL NEW CABLES FOR DATA SHALL BE 4-PAIR CAT 6, FT-6 PLENUM RATED, COLOUR BLUE. PROVIDE PRINTED LABELS AT BOTH ENDS OF ALL CABLES.
- ALL NEW JACKS THROUGHOUT SHALL BE RJ45, CAT 6, AND MADE WITH BLUE INSERTS. PROVIDE NEW PRINTED LABELS FOR EACH JACK.
- ALL CABLING INSTALLED IN T-BAR CEILINGS SHALL BE SUPPORTED BY J-HOOKS. MAXIMUM SPACING BETWEEN J-HOOKS 5'. INSTALL CABLING IN NEAT AND ORGANIZED BUNDLES AND DO NOT LAY CABLES ON THE T-BAR CEILING. RUN ALL CABLING TO SYSTEMS FURNITURE VIA PATCH POLES SUPPLIED WITH SYSTEMS FURNITURE, OR VIA BASE FEEDS FROM WALL OR THROUGH FLOOR AS SHOWN. RUN ALL CABLING TO WALL OUTLETS AS PER DETAILS ON DETAILS DRAWINGS. ALL CABLING IN DRYWALL CEILINGS SHALL BE RUN IN CONDUIT TO NEAREST ACCESSIBLE CEILING OR TO IT/SERVER ROOM.
- AT ALL WORKSTATIONS PROVIDE DATA JACKS C/W FURNITURE MANUFACTURER SPECIFIC FACEPLATES/BACKETS AND LABELS FOR A COMPLETE INSTALLATION. COORDINATE EXACT REQUIREMENTS WITH SYSTEMS FURNITURE MANUFACTURERS/SUPPLIERS AT TIME OF TENDER.
- ALL DATA CABLES SHALL TERMINATE IN SERVER/IT ROOM 931 IN THE WALL MOUNTED DATA PATCH RACK. REFER TO DETAIL 1/C10 FOR PATCH RACK DETAIL AND FURTHER INSTRUCTIONS.
- ALL DATA DROPS SHALL TERMINATE IN PATCH PANELS AS SHOWN. COMMUNICATIONS CONTRACTOR TO PROVIDE PATCH PANEL AND 44U FLOOR MOUNTED 4-POST RACK. UPSTREAM INTERCONNECTION TO THIS CABINET WILL BE BY OWNER. CONFIRM REQUIREMENTS FOR CABINET WITH OWNER.
- PROVIDE SUFFICIENT NEW CAT 6 PATCH PANELS AND HORIZONTAL CABLE MANAGERS IN THE DATA PATCH RACK TO COMPLETE THE INSTALLATION AS INTENDED.
- PROVIDE LABELS AS PER NEW DROP NUMBERS SHOWN ON THESE PLANS OR AS INSTRUCTED BY OWNER. LABELS APPLIED AT BOTH ENDS OF ALL CABLES, ON DATA JACKS AND AT PATCH PANEL JACKS.

- PROVIDE PATCH CORDS OF SAME SPEC AS ABOVE. QUANTITY: ALLOW FOR TWO PER DROP, ONE AT 12" AND ONE AT 12" PER DROP. VERIFY EXACT LENGTHS AND COLOUR OF PATCH CORDS WITH OWNER AND COORDINATE LENGTH WITH PATCH RACK LAYOUT PRIOR TO ORDERING. ETHERNET SWITCHES, FIBER PATCH PANELS, BACKBONE CABLING, ETC. TO BE PROVIDED BY OWNER, NOT IN THIS CONTRACT. COORDINATE ALL WORK AT RACK WITH OWNER.
 - WIRELESS ACCESS POINTS (WAP) WILL BE POE WITH 1-DATA DROP PER POINT AS SHOWN. AT EACH WAP LOCATION PROVIDE A SURFACE MOUNT LAN JACK ABOVE T-BAR CEILINGS OR FLUSH MOUNT AT DRYWALL CEILINGS. PROVIDE 10' SERVICE LOOPS.
 - INCLUDE IN TENDER PRICE FOR SUPPLY AND INSTALLATION OF ADDITIONAL FIVE (5) CAT 6 DATA DROPS TO OFFICES OR WORKSTATIONS, OVER AND ABOVE THE QUANTITIES SHOWN ON THE PLANS. ALLOW FOR MAXIMUM DISTANCE. OWNER MAY REQUEST THESE AT ANY TIME DURING CONSTRUCTION PERIOD.
 - REFER TO FLOOR PLANS ON DRAWING E31 AND TO DETAILS ON DRAWING E42, E43 FOR THE SPECIFIC ROUTING OF ALL DROPS TO THE WORKSTATIONS, WALL OUTLETS, FLOOR MOUNTED OUTLETS, ETC. IE: VIA PAC POLES, WALL BASE FEEDS, FED VIA WIREMOLD 4000 RACEWAYS, FED THROUGH FLOOR TRENCH, OR BASE FEEDS THROUGH FLOOR SLAB. ALLOW FOR SUFFICIENT CABLE LENGTHS TO SUIT THE ASSOCIATED CABLE ROUTES.
 - PROVIDE AS BUILT DRAWINGS IN CAD. PROVIDE A SUFFICIENT COPY AND FRAMED PRINTED FINISHED CABLING DRAWING WITHIN SERVER ROOM FOR FUTURE REFERENCE.
- ON THESE DRAWINGS "1 DATA DROP" DENOTES ONE (1) CABLE RUN FROM JACK IN PATCH PANEL TO JACK AT USER OUTLET LOCATION.
- LAST NUMBER USED:
CAT-6 DATA: D-

05	ISSUED FOR ADDENDUM E-1	2023.08.31	DK
04	ISSUED FOR PERMIT	2023.08.11	DK
03	ISSUED FOR TENDER	2023.08.08	DK
02	PRE-TENDER COST ESTIMATE	2023.14.07	DK
01	COST CONSULTANT	2023.04.11	DK
NO.	REVISION	DATE	BY



SIGNATURE

Project

**CAMH 250 COLLEGE
RELOCATION
TORONTO, ONTARIO**

Drawing Title

**8TH FLOOR –
COMMUNICATIONS – NEW**

Date MARCH 2023

Scale 1/8"=1'-0"

Drawn By D.K.

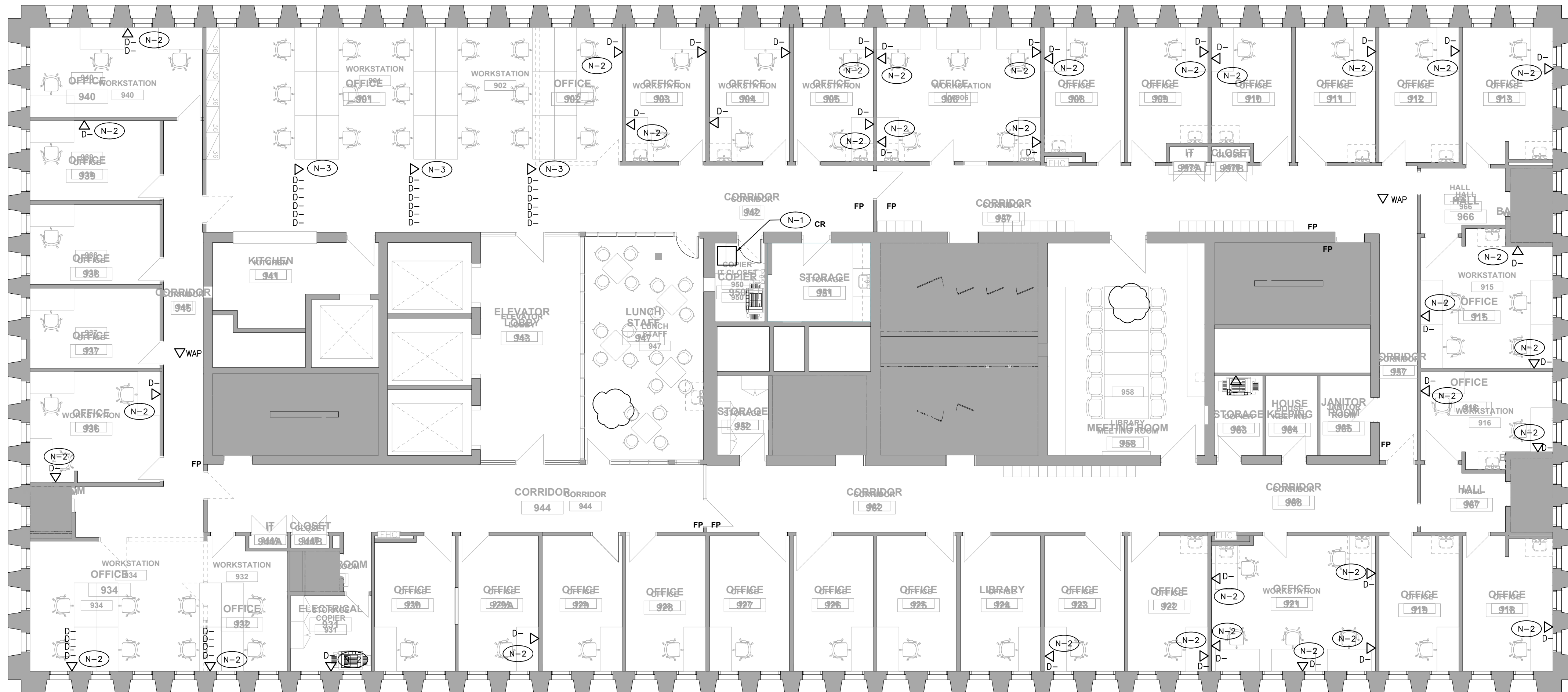
Approved By P.C.

File No.

Project No. 22048

Drawing No.

C2.2



STRUCTURED CABLING REFERENCE NOTES:

- (N-1) APPROXIMATE LOCATION OF PROPOSED NEW IT ROOM. ALL NEW STRUCTURED CABLING TO BE TERMINATED THIS LOCATION, PROVIDE NEW DEDICATED WALL MOUNTED PATCH PANEL ON WALL.
- (N-2) NEW DEVICE TO BE SURFACE MOUNTED, RUN WIRING IN RACEWAY. ALL CABLING TO RUN THROUGH CEILING SPACE TO NEW RACK IN ROOM 950
- (N-3) DEVICES MOUNTED IN PAC POLE. REFER TO POWER PLANS.

- THE COMMUNICATIONS CONTRACTOR SHALL PROVIDE ALL STRUCTURED CABLING WORK AS SHOWN. COMMUNICATIONS CONTRACTOR SHALL INSTALL AN END-TO-END SOLUTION FOR DATA BETWEEN PATCH PANELS AND OUTLETS. INCLUDE ALL COSTS IN TENDER PRICE FOR A COMPLETE AND OPERATIONAL SYSTEM. REFER TO STRUCTURED CABLING GENERAL REQUIREMENTS ON DRAWING C.1.0.
- THE SCOPE OF WORK OF THE COMMUNICATIONS CONTRACTOR SHALL BE ALL THE WORK NORMAL TO THE HORIZONTAL CABLING INSTALLATION INCLUDING BUT NOT LIMITED TO ALL CABLING, JACKS/INSERTS, COVERPLATES, PATCH PANELS, CABLE MANAGERS, COILED SLEEVES AT WORKSTATIONS, ETC. ALL AS INDICATED AS BY COMMUNICATIONS CONTRACTOR ON THE FOLLOWING DRAWINGS AND DETAILS:
 - DRAWINGS C10, C11 - COMPLETE DRAWINGS
 - DRAWING E42, E43 - DETAILS
 - DRAWING E31 - FOR REFERENCE ONLY
- EXCEPT WHERE NOTED OTHERWISE ALL EMPTY CONDUITS AND BACKBOXES FOR THE COMMUNICATIONS HORIZONTAL CABLING SYSTEM SHALL BE PROVIDED BY THE ELECTRICAL CONTRACTOR. ALL LINE VOLTAGE WORK SHALL BE PROVIDED BY THE ELECTRICAL CONTRACTOR.
- BIDDERS SHALL IDENTIFY THE MANUFACTURER AND MODEL OF THE PRODUCTS THAT THEY ARE PROPOSING AND INCLUDE IN THE BID SUBMISSION.
- MAINTAIN 568A WIRING SCHEME THROUGHOUT. VERIFY WITH OWNER PRIOR TO INSTALLATION.

- PROVIDE DATA CABLING CAT 6 CERTIFICATION. CERTIFICATION REPORT SHALL BE SUBMITTED FOR REVIEW/RECORDS.
- VOICE SYSTEM WILL BE VOIP ON THIS PROJECT.
- ALL NEW CABLES FOR DATA SHALL BE 4-PAIR CAT 6, FT-6 PLENUM RATED, COLOUR BLUE. PROVIDE PRINTED LABELS AT BOTH ENDS OF ALL CABLES.
- ALL NEW JACKS THROUGHOUT SHALL BE RJ45, CAT 6, AND MADE WITH BLUE INSERTS. PROVIDE NEW PRINTED LABELS FOR EACH JACK.
- ALL CABLING INSTALLED IN T-BAR CEILINGS SHALL BE SUPPORTED BY J-HOOKS. MAXIMUM SPACING BETWEEN J-HOOKS 5'. INSTALL CABLING IN NEAT AND ORGANIZED BUNDLES AND DO NOT LAY CABLES ON THE T-BAR CEILING. RUN ALL CABLING TO SYSTEMS FURNITURE VIA PATCH PANELS SUPPLIED WITH SYSTEMS FURNITURE, OR VIA BASE FEEDS FROM WALL OR THROUGH FLOOR AS SHOWN. RUN ALL CABLING TO WALL OUTLETS AS PER DETAILS ON DETAILS DRAWINGS. ALL CABLING IN DRYWALL CEILINGS SHALL BE RUN IN CONDUIT TO NEAREST ACCESSIBLE CEILING OR TO IT/SERVER ROOM.
- AT ALL WORKSTATIONS PROVIDE DATA JACKS C/W FURNITURE MANUFACTURER SPECIFIC FACEPLATES/BRACKETS AND LABELS FOR A COMPLETE INSTALLATION. COORDINATE EXACT REQUIREMENTS WITH SYSTEMS FURNITURE MANUFACTURERS/SUPPLIERS AT TIME OF TENDER.
- ALL DATA DROPS SHALL TERMINATE IN SERVER/IT ROOM 931 IN THE WALL MOUNTED DATA PATCH RACK. REFER TO DETAIL 1/C10 FOR PATCH RACK DETAIL AND FURTHER INSTRUCTIONS.
- ALL DATA DROPS SHALL TERMINATE IN PATCH PANELS AS SHOWN. COMMUNICATIONS CONTRACTOR TO PROVIDE PATCH PANEL AND 44U FLOOR MOUNTED 4-POST RACK. UPSTREAM INTERCONNECTION TO THIS CABINET WILL BE BY OWNER. CONFIRM REQUIREMENTS FOR CABINET WITH OWNER.
- PROVIDE SUFFICIENT NEW CAT 6 PATCH PANELS AND HORIZONTAL CABLE MANAGERS IN THE DATA PATCH RACK TO COMPLETE THE INSTALLATION AS INTENDED.
- PROVIDE LABELS AS PER NEW DROP NUMBERS SHOWN ON THESE PLANS OR AS INSTRUCTED BY OWNER. LABELS APPLIED AT BOTH ENDS OF ALL CABLES, ON DATA JACKS AND AT PATCH PANEL JACKS.

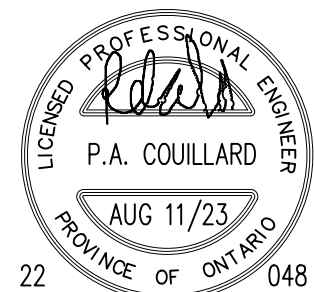
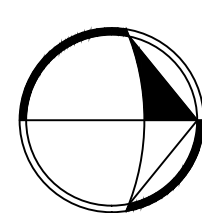
- PROVIDE PATCH CORDS OF SAME SPEC AS ABOVE. QUANTITY: ALLOW FOR TWO PER DROP, ONE AT 12" AND ONE AT 12' PER DROP. VERIFY EXACT LENGTHS AND COLOUR OF PATCH CORDS WITH OWNER AND COORDINATE LENGTH WITH PATCH RACK LAYOUT PRIOR TO ORDERING. ETHERNET SWITCHES, FIBER PATCH PANELS, BACKBONE CABLING, ETC. TO BE PROVIDED BY OWNER, NOT IN THIS CONTRACT. COORDINATE ALL WORK AT RACK WITH OWNER.
- WIRELESS ACCESS POINTS (WAP) WILL BE POE WITH 1-DATA DROP PER POINT AS SHOWN. AT EACH WAP LOCATION PROVIDE A SURFACE MOUNT LAN JACK ABOVE T-BAR CEILINGS OR FLUSH MOUNT AT DRYWALL CEILINGS. PROVIDE 10' SERVICE LOOPS.
- INCLUDE IN TENDER PRICE FOR SUPPLY AND INSTALLATION OF ADDITIONAL FIVE (5) CAT 6 DATA DROPS TO OFFICES OR WORKSTATIONS, OVER AND ABOVE THE QUANTITIES SHOWN ON THE PLANS. ALLOW FOR MAXIMUM DISTANCE. OWNER MAY REQUEST THESE AT ANY TIME DURING CONSTRUCTION PERIOD.
- REFER TO FLOOR PLANS ON DRAWING E31 AND TO DETAILS ON DRAWING E42, E43 FOR THE SPECIFIC ROUTING OF ALL DROPS TO THE WORKSTATIONS, WALL OUTLETS, FLOOR MOUNTED OUTLETS, ETC. IE: VIA PAC POLES, WALL BASE FEEDS, FED VIA WIREMOLD 4000 RACEWAYS, FED THROUGH FLOOR TRENCH, OR BASE FEEDS THROUGH FLOOR SLAB. ALLOW FOR SUFFICIENT CABLE LENGTHS TO SUIT THE ASSOCIATED CABLE ROUTES.
- PROVIDE AS BUILT DRAWINGS IN CAD. PROVIDE A SOFT COPY AND FRAMED PRINTED FINISHED CABLING DRAWING WITHIN SERVER ROOM FOR FUTURE REFERENCE.

SYMBOL ON THIS DRAWING DENOTES USER DATA OUTLET LOCATION. QUANTITY OF DROPS AS SHOWN.

ON THESE DRAWINGS "1 DATA DROP" DENOTES ONE (1) CABLE RUN FROM JACK IN PATCH PANEL TO JACK AT USER OUTLET LOCATION.

LAST NUMBER USED:
CAT-6 DATA: D-

NO.	REVISION	DATE	BY
05	ISSUED FOR ADDENDUM E-1	2023.08.31	DK
04	ISSUED FOR PERMIT	2023.08.11	DK
03	ISSUED FOR TENDER	2023.08.08	DK
02	PRE-TENDER COST ESTIMATE	2023.14.07	DK
01	COST CONSULTANT	2023.04.11	DK



SIGNATURE

Project

**CAMH 250 COLLEGE
RELOCATION
TORONTO, ONTARIO**

Drawing Title

**9TH FLOOR –
COMMUNICATIONS – NEW**

Date MARCH 2023

Scale 1/8"=1'-0"

Drawn By D.K.

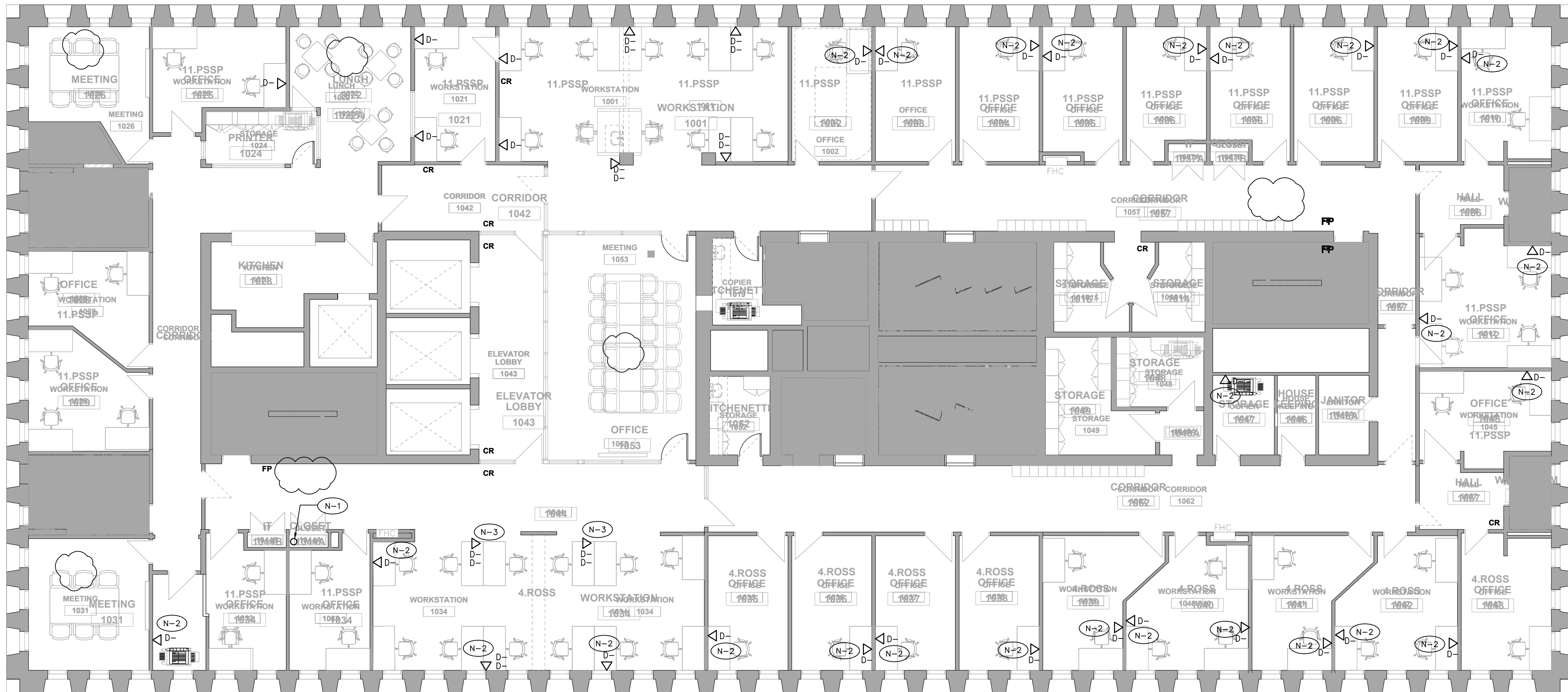
Approved By P.C.

File No.

Project No. 22048

Drawing No.

C2.3



STRUCTURED CABLING REFERENCE NOTES:

- (N-1) ALL NEW STRUCTURED CABLING TO RISE/DROP THIS LOCATION TO NEW IT RACK ON 9TH FLOOR.
- (N-2) NEW DEVICE TO BE SURFACE MOUNTED, RUN WIRING IN RACEWAY. ALL CABLING TO RUN THROUGH CEILING SPACE TO NEW RACK IN ROOM 950
- (N-3) DEVICES MOUNTED IN PAC POLE. REFER TO POWER PLANS.

- ▽ ONE (1) CAT6 CABLE TO THE DATA OUTLET
- ▽ TWO (2) CAT6 CABLES TO THE DATA OUTLET

1. THE COMMUNICATIONS CONTRACTOR SHALL PROVIDE ALL STRUCTURED CABLING WORK AS SHOWN. COMMUNICATIONS CONTRACTOR SHALL INSTALL AN END-TO-END SOLUTION FOR DATA BETWEEN PATCH PANELS AND OUTLETS. INCLUDE ALL COSTS IN TENDER PRICE FOR A COMPLETE AND OPERATIONAL SYSTEM. REFER TO STRUCTURED CABLING GENERAL REQUIREMENTS ON DRAWING C.1.0.
2. THE SCOPE OF WORK OF THE COMMUNICATIONS CONTRACTOR SHALL BE ALL THE WORK NORMAL TO THE HORIZONTAL CABLING INSTALLATION INCLUDING BUT NOT LIMITED TO ALL CABLING, JACKS/INSERTS, COVERPLATES, PATCH PANELS, CABLE MANAGERS, COILED SLEEVES AT WORKSTATIONS, ETC. ALL AS INDICATED AS BY COMMUNICATIONS CONTRACTOR ON THE FOLLOWING DRAWINGS AND DETAILS:
 - DRAWINGS C10, C11 - COMPLETE DRAWINGS
 - DRAWING E42, E43 - DETAILS
 - DRAWING E31 - FOR REFERENCE ONLYEXCEPT WHERE NOTED OTHERWISE ALL EMPTY CONDUITS AND BACKBOXES FOR THE COMMUNICATIONS HORIZONTAL CABLING SYSTEM SHALL BE PROVIDED BY THE ELECTRICAL CONTRACTOR. ALL LINE VOLTAGE WORK SHALL BE PROVIDED BY THE ELECTRICAL CONTRACTOR.
- *** ALL EXISTING STRUCTURED CABLING SHALL REMAIN IN SERVICE AND UNTOUCHED UNLESS NOTED SPECIFICALLY AS TO BE REMOVED. THE EXISTING SYSTEM IS MAINTAINED BY THE OWNER AND ANY CHANGES OR UPGRADES WILL BE BY THE OWNERS FORCES.
3. THE COMPLETE NEWLY INSTALLED HORIZONTAL CABLING INSTALLATION AND CERTIFICATION SHALL COMPLY WITH TIA/EIA-568B STANDARD. THE COMMUNICATIONS CONTRACTOR SHALL BE A CERTIFIED SYSTEM CONTRACTOR OF THE CABLING AND TERMINATION PRODUCTS THAT THEY PROPOSE TO INSTALL. ALL WORK SHALL CONFORM TO ALL APPLICABLE CODES AND STANDARDS AND TO BEST INDUSTRY PRACTICES. THE CONTRACTOR SHALL ACCEPT COMPLETE RESPONSIBILITY FOR THE DESIGN, INSTALLATION, ACCEPTANCE TESTING AND CERTIFICATION OF THE CABLING SYSTEMS.
4. BIDDERS SHALL IDENTIFY THE MANUFACTURER AND MODEL OF THE PRODUCTS THAT THEY ARE PROPOSING AND INCLUDE IN THE BID SUBMISSION.
5. MAINTAIN 568A WIRING SCHEME THROUGHOUT. VERIFY WITH OWNER PRIOR TO INSTALLATION.
6. PROVIDE DATA CABLING CAT 6 CERTIFICATION. CERTIFICATION REPORT SHALL BE SUBMITTED FOR REVIEW/RECORDS.
7. VOICE SYSTEM WILL BE VOIP ON THIS PROJECT.
8. ALL NEW CABLES FOR DATA SHALL BE 4-PAIR CAT 6, FT-6 PLENUM RATED, COLOUR BLUE. PROVIDE PRINTED LABELS AT BOTH ENDS OF ALL CABLES.
9. ALL NEW JACKS THROUGHOUT SHALL BE RJ45, CAT 6, AND MADE WITH BLUE INSERTS. PROVIDE NEW PRINTED LABELS FOR EACH JACK.
10. ALL CABLING INSTALLED IN T-BAR CEILINGS SHALL BE SUPPORTED BY J-HOOKS. MAXIMUM SPACING BETWEEN J-HOOKS 5'. INSTALL CABLING IN NEAT AND ORGANIZED BUNDLES AND DO NOT LAY CABLES ON THE T-BAR CEILING. RUN ALL CABLING TO SYSTEMS FURNITURE VIA PACK POLES SUPPLIED WITH SYSTEMS FURNITURE, OR VIA BASE FEEDS FROM WALL OR THROUGH FLOOR AS SHOWN. RUN ALL CABLING TO WALL OUTLETS AS PER DETAILS ON DETAILS DRAWINGS. ALL CABLING IN DRYWALL CEILINGS SHALL BE RUN IN CONDUIT TO NEAREST ACCESSIBLE CEILING OR TO IT/SERVER ROOM.
11. AT ALL WORKSTATIONS PROVIDE DATA JACKS C/W FURNITURE MANUFACTURER SPECIFIC FACEPLATES/BACKETS AND LABELS FOR A COMPLETE INSTALLATION. COORDINATE EXACT REQUIREMENTS WITH SYSTEMS FURNITURE MANUFACTURERS/SUPPLIERS AT TIME OF TENDER.
12. ALL DATA CABLES SHALL TERMINATE IN SERVER/IT ROOM 931 IN THE WALL MOUNTED DATA PATCH RACK. REFER TO DETAIL 1/C10 FOR PATCH RACK DETAIL AND FURTHER INSTRUCTIONS.
13. ALL DATA DROPS SHALL TERMINATE IN PATCH PANELS AS SHOWN. COMMUNICATIONS CONTRACTOR TO PROVIDE PATCH PANEL AND 44U FLOOR MOUNTED 4-POST RACK. UPSTREAM INTERCONNECTION TO THIS CABINET WILL BE BY OWNER. CONFIRM REQUIREMENTS FOR CABINET WITH OWNER.
14. PROVIDE SUFFICIENT NEW CAT 6 PATCH PANELS AND HORIZONTAL CABLE MANAGERS IN THE DATA PATCH RACK TO COMPLETE THE INSTALLATION AS INTENDED.
15. PROVIDE LABELS AS PER NEW DROP NUMBERS SHOWN ON THESE PLANS OR AS INSTRUCTED BY OWNER. LABELS APPLIED AT BOTH ENDS OF ALL CABLES, ON DATA JACKS AND AT PATCH PANEL JACKS.

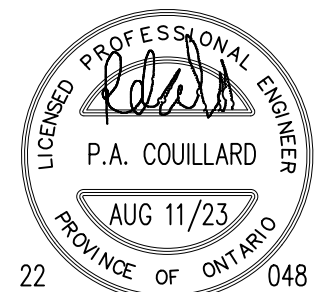
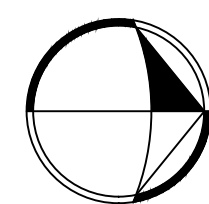
16. PROVIDE PATCH CORDS OF SAME SPEC AS ABOVE. QUANTITY: ALLOW FOR TWO PER DROP, ONE AT 12" AND ONE AT 12" PER DROP. VERIFY EXACT LENGTHS AND COLOUR OF PATCH CORDS WITH OWNER AND COORDINATE LENGTH WITH PATCH RACK LAYOUT PRIOR TO ORDERING. ETHERNET SWITCHES, FIBER PATCH PANELS, BACKBONE CABLING, ETC. TO BE PROVIDED BY OWNER, NOT IN THIS CONTRACT. COORDINATE ALL WORK AT RACK WITH OWNER.
17. WIRELESS ACCESS POINTS (WAP) WILL BE POE WITH 1-DATA DROP PER POINT AS SHOWN. AT EACH WAP LOCATION PROVIDE A SURFACE MOUNT LAN JACK ABOVE T-BAR CEILINGS OR FLUSH MOUNT AT DRYWALL CEILINGS. PROVIDE 10' SERVICE LOOPS.
18. INCLUDE IN TENDER PRICE FOR SUPPLY AND INSTALLATION OF ADDITIONAL FIVE (5) CAT 6 DATA DROPS TO OFFICES OR WORKSTATIONS, OVER AND ABOVE THE QUANTITIES SHOWN ON THE PLANS. ALLOW FOR MAXIMUM DISTANCE. OWNER MAY REQUEST THESE AT ANY TIME DURING CONSTRUCTION PERIOD.
19. REFER TO FLOOR PLANS ON DRAWING E31 AND TO DETAILS ON DRAWING E42, E43 FOR THE SPECIFIC ROUTING OF ALL DROPS TO THE WORKSTATIONS, WALL OUTLETS, FLOOR MOUNTED OUTLETS, ETC. E: VIA PAC POLES, WALL BASE FEEDS, FED VIA WIREMOLD 4000 RACEWAYS, FED THROUGH FLOOR TRENCH, OR BASE FEEDS THROUGH FLOOR SLAB. ALLOW FOR SUFFICIENT CABLE LENGTHS TO SUIT THE ASSOCIATED CABLE ROUTES.
20. PROVIDE AS BUILT DRAWINGS IN CAD. PROVIDE A SOFT COPY AND FRAMED PRINTED FINISHED CABLING DRAWING WITHIN SERVER ROOM FOR FUTURE REFERENCE.

SYMBOL ON THIS DRAWING DENOTES USER DATA OUTLET LOCATION. QUANTITY OF DROPS AS SHOWN.

ON THESE DRAWINGS "1 DATA DROP" DENOTES ONE (1) CABLE RUN FROM JACK IN PATCH PANEL TO JACK AT USER OUTLET LOCATION.

LAST NUMBER USED:
CAT-6 DATA: D--

05	ISSUED FOR ADDENDUM E-1	2023.08.31	DK
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NO.	REVISION	DATE	BY



SIGNATURE

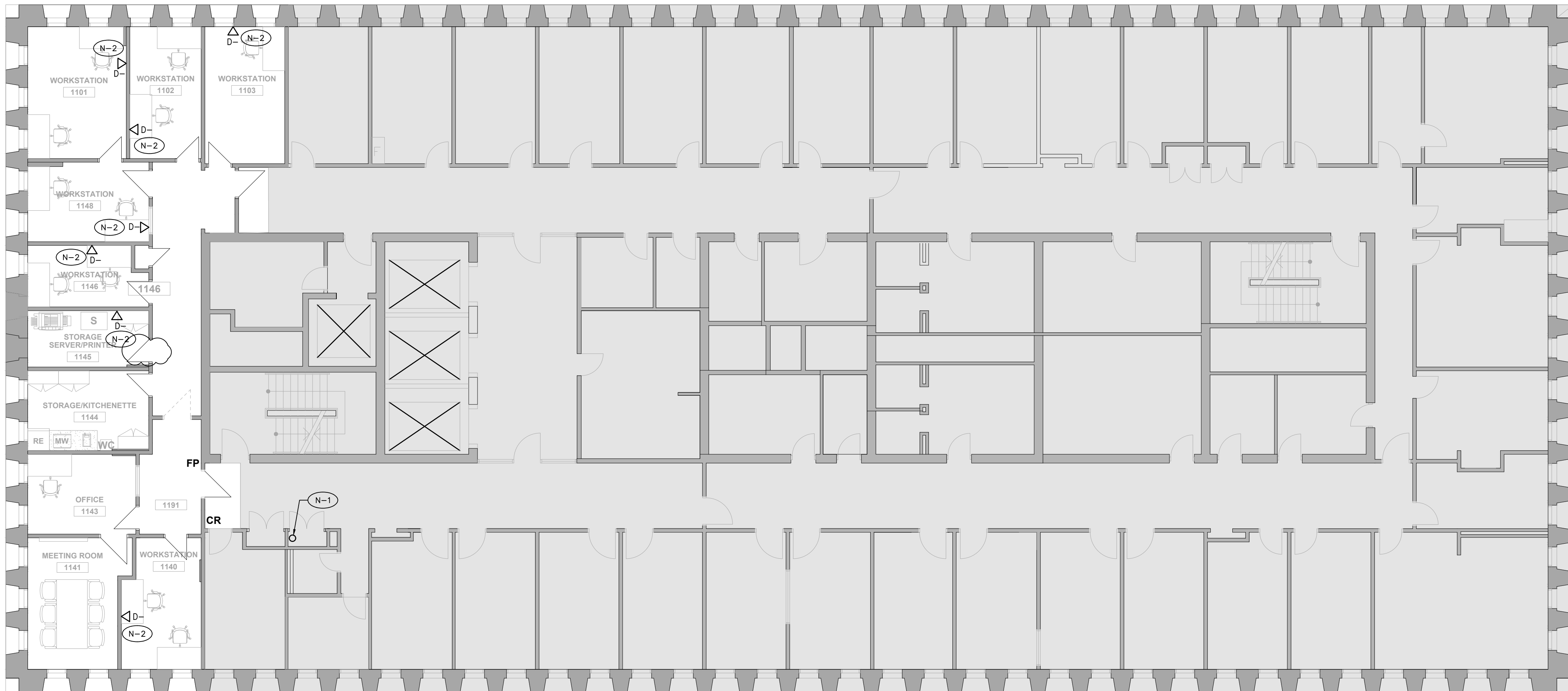
Project

**CAMH 250 COLLEGE
RELOCATION
TORONTO, ONTARIO**

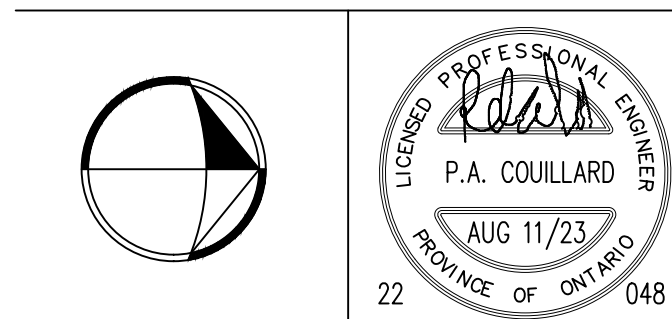
Drawing Title

**10TH FLOOR –
COMMUNICATIONS – NEW**

Date	MARCH 2023	Drawing No. C2.4
Scale	1/8"=1'-0"	
Drawn By	D.K.	
Approved By	P.C.	
File No.		
Project No.	22048	



05	ISSUED FOR ADDENDUM E-1	2023.08.31	DK
04	ISSUED FOR PERMIT	2023.08.11	DK
03	ISSUED FOR TENDER	2023.08.08	DK
02	PRE-TENDER COST ESTIMATE	2023.14.07	DK
01	COST CONSULTANT	2023.04.11	DK
NO.	REVISION	DATE	BY



SIGNATURE

Project

**CAMH 250 COLLEGE
RELOCATION
TORONTO, ONTARIO**

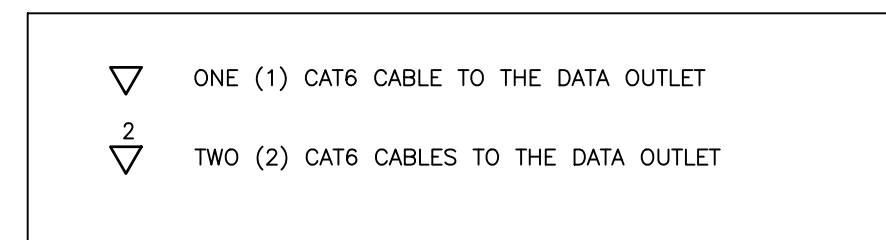
Drawing Title

**11TH FLOOR –
COMMUNICATIONS – NEW**

Date MARCH 2023
Scale 1/8"=1'-0"
Drawn By D.K.
Approved By P.C.
File No.
Project No. 22048
Drawing No. C2.5

STRUCTURED CABLING REFERENCE NOTES:

- (N-1) ALL NEW STRUCTURED CABLING TO RISE/DROP THIS LOCATION TO NEW IT RACK ON 9TH FLOOR.
- (N-2) NEW DEVICE TO BE SURFACE MOUNTED, RUN WIRING IN RACEWAY. ALL CABLING TO RUN THROUGH CEILING SPACE TO NEW RACK IN ROOM 950



- THE COMMUNICATIONS CONTRACTOR SHALL PROVIDE ALL STRUCTURED CABLING WORK AS SHOWN. COMMUNICATIONS CONTRACTOR SHALL INSTALL AN END-TO-END SOLUTION FOR DATA BETWEEN PATCH PANELS AND OUTLETS. INCLUDE ALL COSTS IN TENDER PRICE FOR A COMPLETE AND OPERATIONAL SYSTEM. REFER TO STRUCTURED CABLING GENERAL REQUIREMENTS ON DRAWING C.1.0.
- THE SCOPE OF WORK OF THE COMMUNICATIONS CONTRACTOR SHALL BE ALL THE WORK NORMAL TO THE HORIZONTAL CABLING INSTALLATION INCLUDING BUT NOT LIMITED TO ALL CABLING, JACKS/INSERTS, COVERPLATES, PATCH PANELS, CABLE MANAGERS, COILED SLEEVES AT WORKSTATIONS, ETC. ALL AS INDICATED AS BY COMMUNICATIONS CONTRACTOR ON THE FOLLOWING DRAWINGS AND DETAILS:
 - DRAWINGS C10, C11 – COMPLETE DRAWINGS
 - DRAWING E42, E43 – DETAILS
 - DRAWING E31 – FOR REFERENCE ONLYEXCEPT WHERE NOTED OTHERWISE ALL EMPTY CONDUITS AND BACKBOXES FOR THE COMMUNICATIONS HORIZONTAL CABLING SYSTEM SHALL BE PROVIDED BY THE ELECTRICAL CONTRACTOR. ALL LINE VOLTAGE WORK SHALL BE PROVIDED BY THE ELECTRICAL CONTRACTOR.
- *** ALL EXISTING STRUCTURED CABLING SHALL REMAIN IN SERVICE AND UNTOUCHED UNLESS NOTED SPECIFICALLY AS TO BE REMOVED. THE EXISTING SYSTEM IS MAINTAINED BY THE OWNER AND ANY CHANGES OR UPGRADES WILL BE BY THE OWNERS FORCES.
- THE COMPLETE NEWLY INSTALLED HORIZONTAL CABLING INSTALLATION AND CERTIFICATION SHALL COMPLY WITH TIA/EIA-568B STANDARD. THE COMMUNICATIONS CONTRACTOR SHALL BE A CERTIFIED SYSTEM CONTRACTOR OF THE CABLING AND TERMINATION PRODUCTS THAT THEY PROPOSE TO INSTALL. ALL WORK SHALL CONFORM TO ALL APPLICABLE CODES AND STANDARDS AND TO BEST INDUSTRY PRACTICES. THE CONTRACTOR SHALL ACCEPT COMPLETE RESPONSIBILITY FOR THE DESIGN, INSTALLATION, ACCEPTANCE TESTING AND CERTIFICATION OF THE CABLING SYSTEMS.
- BIDDERS SHALL IDENTIFY THE MANUFACTURER AND MODEL OF THE PRODUCTS THAT THEY ARE PROPOSING AND INCLUDE IN THE BID SUBMISSION.
- MAINTAIN 568A WIRING SCHEME THROUGHOUT. VERIFY WITH OWNER PRIOR TO INSTALLATION.
- PROVIDE DATA CABLING CAT 6 CERTIFICATION. CERTIFICATION REPORT SHALL BE SUBMITTED FOR REVIEW/RECORDS.
- VOICE SYSTEM WILL BE VOIP ON THIS PROJECT.
- ALL NEW CABLES FOR DATA SHALL BE 4-PAIR CAT 6, FT-6 PLENUM RATED, COLOUR BLUE. PROVIDE PRINTED LABELS AT BOTH ENDS OF ALL CABLES.
- ALL NEW JACKS THROUGHOUT SHALL BE RJ45, CAT 6, AND MADE WITH BLUE INSERTS. PROVIDE NEW PRINTED LABELS FOR EACH JACK.
- ALL CABLING INSTALLED IN T-BAR CEILINGS SHALL BE SUPPORTED BY J-HOOKS. MAXIMUM SPACING BETWEEN J-HOOKS 5'. INSTALL CABLING IN NEAT AND ORGANIZED BUNDLES AND DO NOT LAY CABLES ON THE T-BAR CEILING. RUN ALL CABLING TO SYSTEMS FURNITURE VIA PACK POLES SUPPLIED WITH SYSTEMS FURNITURE, OR VIA BASE FEEDS FROM WALL OR THROUGH FLOOR AS SHOWN. RUN ALL CABLING TO WALL OUTLETS AS PER DETAILS ON DETAILS DRAWINGS. ALL CABLING IN DRYWALL CEILINGS SHALL BE RUN IN CONDUIT TO NEAREST ACCESSIBLE CEILING OR TO IT/SERVER ROOM.
- AT ALL WORKSTATIONS PROVIDE DATA JACKS C/W FURNITURE MANUFACTURER SPECIFIC FACEPLATES/BRAKETS AND LABELS FOR A COMPLETE INSTALLATION. COORDINATE EXACT REQUIREMENTS WITH SYSTEMS FURNITURE MANUFACTURERS/SUPPLIERS AT TIME OF TENDER.
- ALL DATA CABLES SHALL TERMINATE IN SERVER/IT ROOM 931 IN THE WALL MOUNTED DATA PATCH RACK. REFER TO DETAIL 1/C10 FOR PATCH RACK DETAIL AND FURTHER INSTRUCTIONS.
- ALL DATA DROPS SHALL TERMINATE IN PATCH PANELS AS SHOWN. COMMUNICATIONS CONTRACTOR TO PROVIDE PATCH PANEL AND 44U FLOOR MOUNTED 4-POST RACK. UPSTREAM INTERCONNECTION TO THIS CABINET WILL BE BY OWNER. CONFIRM REQUIREMENTS FOR CABINET WITH OWNER.
- PROVIDE SUFFICIENT NEW CAT 6 PATCH PANELS AND HORIZONTAL CABLE MANAGERS IN THE DATA PATCH RACK TO COMPLETE THE INSTALLATION AS INTENDED.
- PROVIDE LABELS AS PER NEW DROP NUMBERS SHOWN ON THESE PLANS OR AS INSTRUCTED BY OWNER. LABELS APPLIED AT BOTH ENDS OF ALL CABLES, ON DATA JACKS AND AT PATCH PANEL JACKS.
- PROVIDE PATCH CORDS OF SAME SPEC AS ABOVE. QUANTITY: ALLOW FOR TWO PER DROP, ONE AT 12" AND ONE AT 12" PER DROP. VERIFY EXACT LENGTHS AND COLOUR OF PATCH CORDS WITH OWNER AND COORDINATE LENGTH WITH PATCH RACK LAYOUT PRIOR TO ORDERING. ETHERNET SWITCHES, FIBER PATCH PANELS, BACKBONE CABLING, ETC. TO BE PROVIDED BY OWNER, NOT IN THIS CONTRACT. COORDINATE ALL WORK AT RACK WITH OWNER.
- WIRELESS ACCESS POINTS (WAP) WILL BE POE WITH 1-DATA DROP PER POINT AS SHOWN. AT EACH WAP LOCATION PROVIDE A SURFACE MOUNT LAN JACK ABOVE T-BAR CEILINGS OR FLUSH MOUNT AT DRYWALL CEILINGS. PROVIDE 10' SERVICE LOOPS.
- INCLUDE IN TENDER PRICE FOR SUPPLY AND INSTALLATION OF ADDITIONAL FIVE (5) CAT 6 DATA DROPS TO OFFICES OR WORKSTATIONS, OVER AND ABOVE THE QUANTITIES SHOWN ON THE PLANS. ALLOW FOR MAXIMUM DISTANCE. OWNER MAY REQUEST THESE AT ANY TIME DURING CONSTRUCTION PERIOD.
- REFER TO FLOOR PLANS ON DRAWING E31 AND TO DETAILS ON DRAWING E42, E43 FOR THE SPECIFIC ROUTING OF ALL DROPS TO THE WORKSTATIONS, WALL OUTLETS, FLOOR MOUNTED OUTLETS, ETC. IE: VIA PAC POLES, WALL BASE FEEDS, FED VIA WIREMOLD 4000 RACEWAYS, FED THROUGH FLOOR TRENCH, OR BASE FEEDS THROUGH FLOOR SLAB. ALLOW FOR SUFFICIENT CABLE LENGTHS TO SUIT THE ASSOCIATED CABLE ROUTES.
- PROVIDE AS BUILT DRAWINGS IN CAD. PROVIDE A SOFT COPY AND FRAMED PRINTED FINISHED CABLING DRAWING WITHIN SERVER ROOM FOR FUTURE REFERENCE.

SYMBOL ON THIS DRAWING DENOTES USER DATA OUTLET LOCATION. QUANTITY OF DROPS AS SHOWN.

ON THESE DRAWINGS "1 DATA DROP" DENOTES ONE (1) CABLE RUN FROM JACK IN PATCH PANEL TO JACK AT USER OUTLET LOCATION.

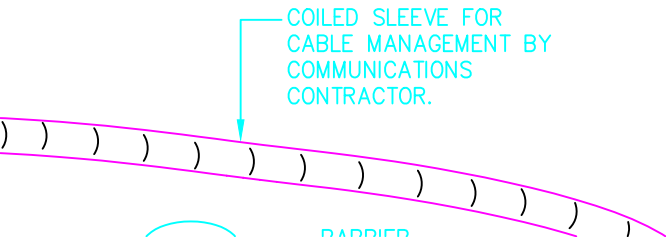
LAST NUMBER USED:
CAT-6 DATA: D-

WORKSTATIONS AND 2-1”
IS BETWEEN FOUR (4) AND
CONDUIT(S) WHERE CLUSTER

SYMBOL ON PLANS



DETAIL



ELECTRICAL SPECIFICATIONS

ELECTRICAL GENERAL REQUIREMENTS

1 General Conditions

The clauses in the General Conditions, Labour Conditions, Supplementary Conditions and Instructions to Bidders shall be considered an integral part of these specifications and shall govern the electrical work to be done.

2 Codes and Regulations

All work shall be done in accordance with the latest editions of the Ontario Building Code, Ontario Electrical Safety Code, C.S.A. Standards, U.L.C., N.F.P.A., O.S.S.A. and local regulations and with the requirements of all applicable inspection Authorities Having Jurisdiction. Additionally, all work shall comply with Owner's requirements and conform to base building standards.

3 Permits and Approvals

Obtain and pay for all required approvals, permits and notices and pay all inspection fees, taxes and all other applicable costs whatsoever connected with the electrical work. Provide Certificate of Acceptance from the local ISA Inspection Department.

4 Intent

It is the intent of these drawings and specifications that the Contractor provide complete and fully operational systems. All miscellaneous items and ancillary components required to achieve this shall be provided and all costs shall be included in the tender price.

5 Definitions

The terms 'provide' or 'supply and install' shall be understood to mean that the Contractor shall supply and install, inclusive of all labour, materials and testing, for the equipment or system which is being referenced.

6 Site Visit

Study the electrical drawings and the documents of all other trades and visit the site during tender in order to establish the full extent of the work and to determine existing job conditions. Include in the tender price for the total scope of work including but not limited to removing, reworking of all existing electrical equipment and wiring to successfully execute all work described. Include in bid for discrepancies, if any, shown on these drawings relating to existing conditions.

7 Insurance

Provide insurance for the duration of the project to protect the building Owner, Tenant and Trades from all claims. Submit at the time of the bid proof of an amount in accordance with the bid form requirements or acceptable to the Owner.

8 Workers Compensation

The Contractor shall provide the Owner with current certificates of clearance from the Workplace Safety and Insurance Board (WSIB) valid throughout the course of the contract.

9 Contract Documents

The drawings for the work of this division are diagrammatic in nature intended to convey the scope of work, general arrangement and sizes of equipment and approximate location of wiring devices and other devices.

Any discrepancies between the Architectural/Interior Design, Mechanical, Security, Audio-Visual, Communications, Food Service or other drawings and the Electrical drawings shall be reported to the Consultant prior to roughing in the electrical services.

Wherever differences occur between floor plans and details/diagrams or between drawings and specifications the maximum condition shall govern and be included in the tender price.

10 Site Measurements

All dimensions and measurements shall be determined on the site. Drawings are diagrammatic intended to show general arrangement and some technical details only and shall not be scaled for dimensions or measurements.

11 Demolition

Complete extent of demolition is not shown. Make allowances for any new or existing services, devices or equipment relocations necessary to complete the work. The Contractor is responsible for all device and fixture counts and shall supply sufficient quantities of new devices or fixtures to complete the work as intended by the drawings. Allow for all costs in the tender price.

12 Interruption to Building Services

All work shall be performed without power shutdown of any operating systems without the express written approval of the the work. The work shall be so arranged to keep the required number of shutdowns to a minimum. All required power shutdowns shall be performed during premium time, during overnight hours, and shall be pre-arranged at least five business days in advance with the Owner's representative. All allowances for power shall be included in tender price.

13 Temporary Power

The electrical trade shall be responsible for providing temporary power and lighting, as required by all other trades, to do the work. Coordinate requirements with phasing of work and make all necessary allowances.

14 Removal of Existing Equipment

Remove any abandoned wiring from the areas defined on the drawings. Wiring in walls and ceilings which are to be demolished shall also be removed as required. Wiring of circuits that are to be removed shall be removed all the way back to the corresponding circuit breaker panel or other overcurrent protective device. Any wiring which may become disconnected because of demolition, which is not intended to be removed, shall be reconnected.

Wiring, conduit and equipment which is required to maintain services to other parts of the building shall be temporarily supported or relocated as required.

Unless indicated otherwise, equipment, devices and materials that are stated or shown as "to be removed" shall become the property of the Contractor and shall be removed from the site. Unless indicated otherwise, light fixtures, exit lights, emergency remote heads, fire alarm system devices and wall dimmers that are to be removed shall be cartoned and turned over to Owner at a designated storage space in the building. Any other equipment that is shown to be retained by the Owner shall also be moved to a designated storage space in the building.

15 Relocation of Devices

Devices and outlets are shown on the drawings in the required locations. Notwithstanding the foregoing, it shall be understood that any electrical outlet, device or lighting fixture may be relocated by the Owner's Representative or the Consultant 15 feet from the location shown without attach relocation is made before the effects are provided such relocation is made before the effects are roughed in. Additionally, verify that all existing devices that are to remain fall within the room shown on the new plans. Allow for relocation of existing devices where required.

Allow for removal and re-installation of existing wall devices to permit new architectural finishes, and for temporary removal of ceiling fixtures and devices where T-bar ceilings to be temporarily removed.

16 Scheduling and Delivery

All work during construction shall be properly scheduled and coordinated with the other Trades, the Owner and the Tenant. Include in the tender price for all necessary premium time to suit the Owner's or General Contractor's construction schedule.

A delivery schedule of all major equipment including lighting fixtures to be provided under this contract shall be submitted to the General Contractor at the beginning of the project. Failure to identify delivery problems or unnecessary delay in ordering equipment may result in delay claims against the Contractor.

17 Shop Drawings

Submit electronically in PDF format shop drawings for power distribution equipment, lighting fixtures, lighting controls, panelboards, disconnect switches, wiring devices, etc. prior to installation for approval.

Each shop drawing shall be reviewed and stamped as being correct by the General Contractor and the appropriate trade before submission to the Consultant for review. Shop drawings which are not stamped in this manner shall be returned not reviewed.

18 As-Built Drawings

Keep a record set of drawings on site at all times which shall clearly indicate the exact location of all outlets, devices, lighting fixtures, feeder runs, distribution equipment, junction boxes, pull boxes, EOL's, etc. The record drawings shall also include any deviations from the design drawings and all changes issued as change notice or site instruction or other changes made during the course of construction. The information on these drawings shall be incorporated onto the as-built drawings at the completion of the project.

Submit as-built drawings at the completion of the project in the form of AutoCAD release 2010 or later. Obtain and pay for a cad disk of drawing files. The Contractor may obtain the Consultant's AutoCAD drawing files at a cost of \$125.00 per drawing. The as-built drawings shall incorporate all the information from the record drawings recorded during construction. Submit the completed record drawings and the cad files, in AutoCAD release 2010 or later, to the Consultant for review. Following the Consultant's review submit the record drawings, three (3) sets of prints of the as-builts and a USB or CD disk of the as-built drawings in CAD and PDF to the Landlord or Owner as part of the close-out documents.

The Consultant's stamp and logo shall be removed from the as-built drawings. The drawings shall be clearly marked as AS-BUILT and shall include the Contractor's name.

19 Close-out Documents

After completion of the project submit the following documents for Consultant's review.

- Electrical Safety Authority Inspection Report
- Fire Alarm Installation Letter
- Fire Alarm Verification Report and Certificate
- Light Fixture Independent Support Letter
- Emergency lighting conformance letter
- Arc Flash and Short Circuit Coordination Studies
- Warranty letter
- Maintenance Manuals including all Reviewed and Stamped shop drawings.

Following Consultant's review submit Close-out Documents including three (3) sets of the Maintenance Manuals to the Owner.

20 Warranty

The Contractor shall provide a one-year "parts and labour" warranty on all facilities, equipment and devices, effective on the date of acceptance of the work, even if the devices are installed and connected before this date. The warranty shall cover the complete installation.

The Contractor shall repair and/or replace at no extra cost any defects in materials or workmanship that occur during the warranty period. Work to be done at a time that is suitable to the Landlord or Tenant.

21 Final Inspection

At the completion of the work the Contractor shall contact the Owner's representative and Summit Engineering to perform a final inspection.

In areas where ceiling tiles have been installed it will necessary to remove portions of the ceiling tiles for inspection and then

re-install them. Include for all costs in the tender price.

All equipment must be cleaned and tested before final acceptance by the Consultant.

22 Changes to the Contract

Where extra work of any kind is required obtain written instructions from the Owner or Architect/Design Consultant before proceeding. The Contractor will receive payment for authorized changes only.

For each change submit a quotation c/w breakdown of material, labour, overhead and profit. Labour units shall be based on the latest National Electrical Contractors Association (NECA) manual column one (1) for the duration of the project. Material pricing shall be based on the latest National Price Guide system with appropriate trade discounts.

Hourly labour rates shall be inclusive of all ancillary charges for supervision, electrical inspection, hand tools, as-builts, parking, clean-up, elevator downtime and additional bonding. No other ancillary charges will be permitted.

23 Underground Work

For all underground work it is the Contractor's responsibility to verify with the Owner and the local Utilities for locations of all existing underground services prior to digging. Include for all costs in tender price.

24 Noise and Vibration

All electrical equipment shall operate without objectionable noise or vibration and to the Owner's satisfaction.

25 Restrictions

Communications rooms and closets are designed for communications equipment and security DGP's. Do not locate any type of power distribution equipment or power risers within these rooms.

MATERIALS AND INSTALLATION

26 General Conditions

Unless otherwise specifically provided, all materials and equipment installed shall be new, unused, and bear approval or certification labels indicating conformity with CSA standards. All new materials and equipment shall match base building standards unless shown otherwise.

Provide all materials, equipment and labour necessary to perform the complete work as indicated.

All work shall be performed in a professional and expert manner to the satisfaction of the Architect/Design Consultant. Any work that is deemed to unsatisfactory shall be replaced without extra cost to the Owner.

Damage to any system occurring during execution of the work shall be rectified at the Contractor's expense.

The construction site shall be kept clean and any debris shall be removed from the site throughout the construction period and at completion of the work.

27 Routing of Equipment

All wiring shall be run concealed wherever possible. Where wiring is run exposed, it shall be installed parallel to the building structure and present a neat appearance.

In general, wiring shall be run concealed in finished areas and exposed in unfinished areas and mechanical and electrical room service spaces.

New conduits and shall be carefully routed to avoid interference with existing services. Routing of conduits within existing riser rooms shall be reviewed and approved by the building Owner prior to installation. Any existing services that interfere with the new installation shall be relocated under this contract. Become familiar with any such conditions during the contractor walk-through and allow for all costs in the tender price.

The routing of new conduits shall be approved by the Owner's representative or the Consultant before they are installed. They shall not be attached to mechanical or other equipment.

28 Cutting and Patching

All cutting, patching and painting required to perform the electrical work shall be included in this contract unless otherwise advised by the General Contractor.

29 Directories

Obtain approval of existing panelboard directories which may be affected by work done under this contract. Amended directories shall be typewritten. New panelboards shall be equipped with a typed directory of circuits showing room number, type of load and wattage.

30 Location of Luminaires

All luminaires shall be new and as specified on the drawings and specifications except where noted otherwise for existing luminaires to be re-used. Re-used luminaires shall be thoroughly cleaned and re-lamped prior to putting into use again.

All luminaires shall be supplied complete with all required accessory items such as yokes, trim rings, frame adjusters and other ancillary components as required for a complete and proper installation.

For exact location of all lighting fixtures and light switches refer to architectural reflected ceiling plans and details where applicable.

Ensure that all lighting fixtures within rooms are controlled by switches, where switches are shown. Where two or more switches are shown in one room and the room contains emergency fixtures, the switch closest to the door shall be on the emergency or relocated as required.

31 Lamps and Fixtures

All luminaires shall be complete with suitable lamps in accordance with the luminaire schedule. Include a shop drawing of proposed lamp along with every luminaire shop drawing submitted.

Fluorescent, HID and LED lamps shall be guaranteed for a period of one year from the date of acceptance. Low voltage, halogen and incandescent lamps shall be guaranteed for a period of six months from the date of final acceptance.

At completion the job shall be left completely lamped and fused, including all existing and new fixtures and exit signs within the project boundary. Clean and repair all existing fixtures affected by this project. Provide new lenses in existing fixtures where lenses are missing or damaged.

32 Exit Signs

Unless otherwise noted, all exit signs shall be new, pictogram style, LED type with voltage rating to suit the circuiting shown on the drawings, or to match existing exit lighting voltage.

Exit signs shall be single or double face with directional arrows as noted on the drawings.

(not used).

All exit signs shall have no light leakage from joints or fittings, have canopy and/or stem hanger to match the housing and shall meet the requirements of standard CSA C860.

Ensure that exit sign circuit breakers are locked in the "ON" position.

Ensure that new or relocated exit signs are positioned to be clearly visible along the intended path of egress and that no ceiling or wall mounted obstructions interfere with or block the visibility of the exit sign. In the event that the building inspector or the consultant finds the sign is obstructed from view or interferes with other systems the contractor shall relocate the sign at no extra cost.

34 Occupancy Sensors

Provide a complete and fully operational occupancy sensing lighting control system as shown on the drawings and specified herein.

Locate all equipment in accordance with the manufacturer's recommendations and as indicated on the drawings.

All sensors to arrive on site factory preset to the maximum time delay setting.

Final sensitivity adjustment and time delay setting of all sensors shall be carried out 72 hours prior to substantial completion by the Contractor and as directed by the Consultant.

Adjust all occupancy sensors individually to operate as intended for the size and shape of the space where installed.

35 Core Drilling and Sealing

Before core drilling floor slab or structural walls, scan slab or walls and have the locations accepted by the building Owner and Structural Engineer in writing. Any existing building services damaged by core drilling must be repaired immediately at no cost to the Owner. Obtain all necessary approvals prior to scanning and core drilling. Include for all costs in tender price. Core-drilling and core drilling of floors to be carried out after normal working hours and at a time acceptable to the Owner. Schedule core drilling with Owner at least 10 days in advance of performing the work.

Where conditions pass through fire rated walls or floors, and/or where core drilling is performed, provide fire stopping material listed with, and bearing label of CSA and ULC, and maintain existing fire rating of building component penetrations.

36 Fastenings and Supports

Fasten exposed conduit or cables to building structure using steel straps or channels. Use beam clamps to secure conduit to exposed steel work. Supported support systems (U shape, single channel (not to be galvanized) to suit load to be carried, surface-mounted or suspended with threaded rod as indicated or required. Support equipment, conduit or cables using clips, spring-loaded bolts, cable clamps designed as accessories to basic channel members. Do not use wire lashing or perforated strap to support or secure raceways or cables.

Independently support all cable and related suspended, surface or T-bar mounted luminaires using two (2) or more lengths of "Weldless Single Jack" bright zinc plated steel chain, Canadian Standard #10 gauge, 13 links per foot. Do not support lighting fixtures or other devices from the ceiling support system. Fluorescent fixtures with linear lamps shall be supported with minimum two chains per 4' length of fixture. Downlight fixtures shall be supported with minimum one chain.

37 Access Doors

Provide all access doors where required to service all new and existing equipment. Access panels shall be equal to Lehigh and shall be compatible with ceiling/wall type and finish. Access doors shall be recessed type with a drywall infill. Electrical services are to be coordinated to minimize the number of access panel locations required. Coordinate location and sizes with the Consultant. Submit installation drawing(s) to the Architect/Interior Designer for review indicating size and location of all proposed access locations prior to proceeding with the installation.

38 Laminate and Identification

All new equipment shall be identified with laminate nametags. Colour shall be black background with white lettering for power distribution equipment and red background with white lettering for fire alarm DGP's and panels. Marking on all laminate plates shall be approved by the Consultant and the building Owner prior to engraving.

All conductors including neutrals and grounds shall be tagged in all junction boxes, device outlet boxes and panelboards for easy identification for testing and maintenance purposes.

39 Wire and Cable

For all underground overhead, all wires shall be copper with RM-90 insulation, 600V rating for 120/208V system and 1000V rating for 240/416V and 347/600V systems, and minimum #12 gauge or as specified. #12 and #10 shall be solid, #8 and larger shall be stranded. In many locations, outside the building and underground, they shall be RMH-90 30kV type. All conductors shall be sized for a maximum 2% voltage drop. Provide copper ground wire sized per Code in all branch and power feeder conduits whether or not same is shown on drawings.

Wiring between VFDs and motors shall be VFD rated cable, size as noted. Symmetrical design with (3) stranded lined copper circuit conductors + (3) symmetrical bare copper grounds, 2 spiral copper type shields (100% coverage), RPE insulation, black PVC jacket, 1000V UL, equal to Belden type 2952, install cable in EMT. Final connection to motor in flexible conduit.

Provide a separate neutral conductor for each circuit. Do not share neutrals.

Lugs for power feeders shall be solderless set screw type or long barrel double crimp type as required.

40 Conduits

All conduits indoors shall be steel EMT except as otherwise noted. EMT couplings and connectors shall be steel set-screw type or compression concrete rigid, die cast set-screw type is not acceptable. Connectors shall be with nylon insulation.

Flexible armored cable (BX) shall be permitted only for down-drops from junction boxes to luminaires and for vertical drops in partitions unless prohibited by Code or building standards. BX cable shall not be used in any exposed areas unless otherwise noted. BX cable runs in ceiling spaces shall not exceed 3m (10') in length. Do not terminate BX cable directly into panelboards.

Final connections to motors and transformers shall be made with flexible metal conduit (minimum 1m length).

Provide armored cable "TECK" where shown. All wiring under access floors shall be in TECK or flexible sealrite conduit.

Outdoor conduits shall be rigid galvanized steel or rigid PVC.

Underground and concrete encased conduits shall be rigid PVC.

All conduits for communications wiring shall be installed with bushings at each end. Provide pull strings in all empty conduits.

Provide approved expansion joints where required by Code and/or as shown.

41 Pull Boxes

Only certain pull boxes may be indicated on the drawings. Provide a minimum of one pull box for every 30m (100') of conduit run with each 90 degree bend equating to a 9m (30') run of conduit.

Do not install more than two (2) 90 degree bends between two pull boxes.

Provide identification nametags on all pull boxes.

42 Pull Strings

Provide nylon pull strings in all empty conduits.

43 Grounding and Bonding

Provide all grounding as per the latest edition of the Ontario Electrical Safety Code and local regulations. Master all power circuit feeders and isolated ground feeders. If resistance to ground on any feeder is below that required by CSA or other governing authorities, these feeders shall be considered defective and shall be replaced.

Perform ground continuity and resistance tests on the grounding system using method appropriate to site conditions and to approval of Engineer and local Authorities Having Jurisdiction over the installation. Perform all required tests before energizing the electrical system.

Provide separate green insulated ground conductor in every feeder and branch wiring power conduit.

Provide bonding conductor for non-current-carrying conductive parts of electrical equipment, metal raceway, armored cable per O.E.S.C. and table 16.

Provide equipotential bonding for non-electrical equipment per O.E.S.C.

44 Mechanical Wiring

Coordinate all equipment supplied by other trades to ensure voltage and amperage compatibility with design documents prior to equipment being ordered and prior to rough-in of circuits to same.

Unless shown otherwise, Division 15 Contractor shall provide all starters and control wiring for HVAC equipment and all other equipment and systems provided under Division 15. Division 16 Contractor shall receive and install all starters and shall provide the location on site prior to rough-in. Verify colour with Architect/Design Consultant prior to installation.

Control wiring including conduit for all mechanical equipment shall be supplied and installed by Division 15.

Fire switches shall be supplied by Division 15 for installation and wiring by Division 16.

45 Wiring Devices and Outlet Boxes

All wiring devices and coverplates shall be specification grade.

Duplex receptacles shall be decoara style, specification grade, 15A, 120V unless otherwise noted. Refer to Architect/Interior Designer's power and communications plans for exact location and mounting height of receptacles and all other wiring devices and outlet boxes. In millwork areas refer to the Architect/Interior Designer's millwork details for this information. Where Architect/Interior Designer's power and communications plans are not available have the Architect/Interior Designer or Owner mark the locations on site prior to rough-in. Verify colour with Architect/Design Consultant prior to installation.

Local switches shall be decoara style, specification grade, 20A with voltage rating as required to suit the voltage of the load being controlled. Verify exact location, mounting height and colour with the Architect/Design Consultant prior to installation.

Flush mounted devices shall have stainless steel coverplates unless otherwise noted.

Junction boxes on walls with acoustic panels shall be extended flush with finish of the acoustic panels.

Outlets shall not be installed back-to-back in partitions. Stagger to prevent sound transfer.

46 Wall Dimmers

Dimmers shall be fluorescent, LED or low voltage type as required to suit the load being controlled.

Individual dimmers shall be sized for the total load being controlled plus 25% spare capacity.

Ensure that all dimmer and coverplates shall be specification grade.

47 Systems Furniture

Coordinate exact requirements for power and communication feeds to workstations with workstation supplier prior to rough-in. Provide all final power and voice/dataconnections and disconnections to workstations as required to suit the new layout. Allow for all costs in the tender price.

48 Fire Alarm System

All new devices shall match the existing system in manufacturer and types. Verify with the existing system manufacturer during the tender period all requirements, wiring and specifications for new devices shown on the drawings, include for any new circuits, modules, amplifiers, programming and set-up that may be required in the existing fire alarm control panels. Obtain a verification certificate from the fire alarm system manufacturer or maintenance agent for all modifications to the fire alarm system and/or devices.

Unless otherwise shown, reconnect existing fire alarm system devices and retain in working order throughout construction.

Provide for all 120V power connections to suit the requirements of the fire alarm system.

Contractor and/or Owner to verify with the City prior to the fire alarm verification and coordinate if City inspector wants to be present at the time of verification.

All fire alarm work shall conform to Standards CAN/ULC-5524, CAN/ULC-5536 and O.B.C. Fire alarm verification shall conform to Standards CAN/ULC-5537 and CAN/ULC-S1001 (Integrated Systems Testing of Fire Protection and Life Safety Systems).

49 Security System

Provide new or modify existing conduits, device box bases, pull strings and conductors required for the modifications to the security system as shown on the drawings or required by the security system contractor. The Electrical Contractor shall coordinate all requirements with the Owner's Security Contractor during the tender period and shall include for all costs.

Provide for all 120V power connections to suit the requirements of the security system.

50 Circuiting

Circuiting shown is for grouping purposes only. Verify exact circuits available on site and provide new circuits and breakers as required. Indicate exact circuits used on the as-built drawings. Balance loads within 10% across all phases and submit test report for review by the Consultant.

Contractor shall re-use existing spare circuits within the space that may be found during demolition prior to running new circuits from panels.

Existing emergency and normal circuits for general lighting may not be as shown. Ensure final circuiting of all lighting, including

normal circuits, emergency power circuits and night light fixtures to be as shown on the drawings.

The work shall be complete and shall include all junction and pull boxes, sockets, connections, raceways, fittings, supports, etc., and all the necessary and appropriate hardware, whether or not it is shown on the drawings for complete and fully operational systems. Identify each junction/pull box according to the panel and circuit number of the wires it contains.

51 Power Distribution Equipment - General

The products shall be of same manufacturer as base building unless approved otherwise by the Owner. Where approved otherwise products shall be as manufactured by Cutler-Hammer, Schneider or Siemens.

All transformers, distribution panels, and branch circuit panelboards shall be complete with copper bus (or windings), and shall be of same type and manufacture as existing in base building unless otherwise noted.

Provide sprinkler proof enclosures for all power distribution equipment in sprinklered buildings.

Ensure that all neutrals of all transformers are grounded to the building ground system in accordance with O.E.S.C. and table 16. Verify location of appropriate building grounding point on site during tender period.

All fuses shall be HRC type "J" with time delay unless shown otherwise.

Provide 4" high concrete houskeeping pad under all power distribution equipment that is to be floor mounted, whether or not same is shown on the drawings.

52 Not Used

53 Plywood Backboards

Plywood backboards shall be of the highest quality fire retardant fir, 19mm thick, primed and painted with fire retardant paint.

All electrical equipment shall be mounted on plywood backboards.

Provide plywood backboards in communications rooms, sized as noted on the drawings.

54 Cable Tray

The cable tray system shown on the drawings shall be CER "BT" series Cable Tray System, or Wremold Cablofil approved equal, comprised of 0.187" diam. zinc plated steel wire that has been welded into a 2" x 4" steel grid that can be custom cut to size on site.

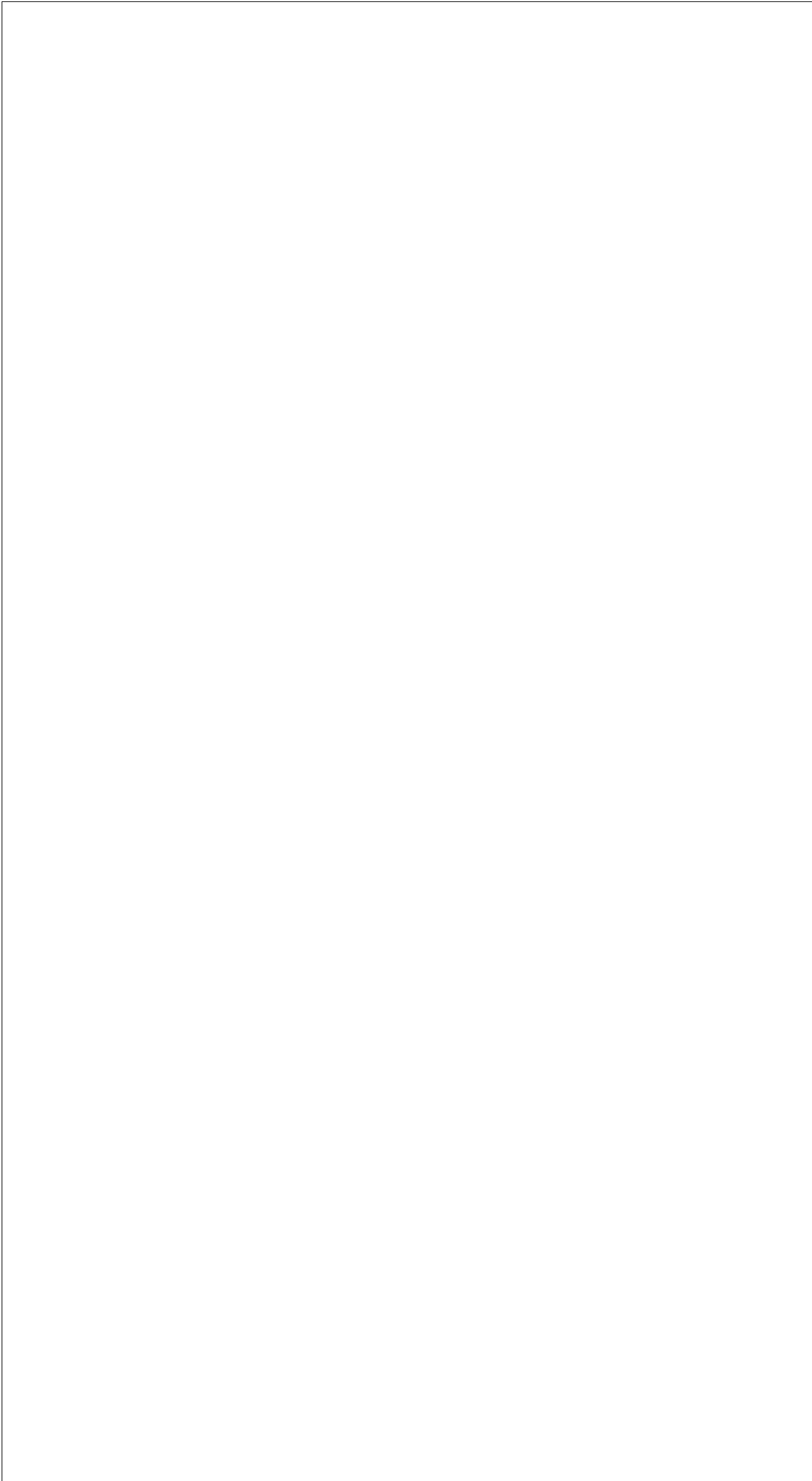
Width shall be as noted on the drawings. Depth of tray system shall be 4". Refer to floor plan for routing.

Cable Tray shall be comprised of 10' sections, custom cut sections, 'L' connections and 'T' connections as required to suit layout shown on the floor plan. Inner bends of all turns shall be rounded to suit ease of cable pulling.

Finish shall be standard black finish.

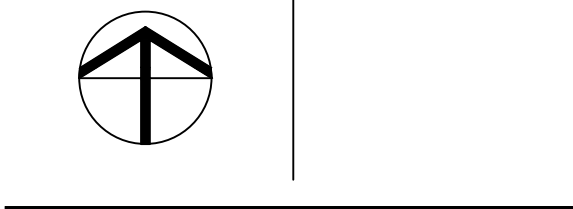
All custom cuts shall be made in accordance with manufacturer's instructions.

The complete cable tray system shall be installed at the same elevation and be horizontally level. Confirm exact mounting height on site with Architect prior to commencing installation. Where changes in elevation are required due to obstructions on site, these shall be made in accordance with the manufacturer



ELECTRICAL LEGEND					
SYMBOL	DESCRIPTION	SYMBOL	DESCRIPTION	SYMBOL	DESCRIPTION
	EXISTING LUMINAIRE TO REMAIN.		CEILING MOUNTED DUPLEX RECEPTACLE.		SECURITY ROUGH-IN
	EXISTING LUMINAIRE TO BE REMOVED OR RELOCATED.		FLUSH MOUNTED FLOOR FITTING C/W 15A, 120V DUPLEX RECEPTABLES AND PROVISIONS FOR COMMUNICATIONS AND AV WHERE INDICATED. REFER TO DETAILS FOR TYPE. FLUSH MOUNTED IN CONCRETE.		SECURITY CARD READER.
	NEW LUMINAIRE OR EXISTING LUMINAIRE IN RELOCATED POSITION		FLOOR MOUNTED DUPLEX RECEPTACLE, 15A, 120V.		SECURITY DOOR CONTACT.
	CROSS HATCHING OR EM DENOTES LUMINAIRE CONNECTED TO EMERGENCY POWER		FLOOR MOUNTED QUADPLEX RECEPTACLE.		SECURITY SYSTEM EXIT PUSH BUTTON.
	TRACK LIGHTING. LENGTH OF TRACK TO SCALE, QUANTITY OF FIXTURE HEADS AS INDICATED		LOW PROFILE FLOOR MOUNTED COMBINATION 120V DUPLEX RECEPTACLE(S) AND PROVISIONS FOR COMMUNICATIONS. REFER TO DETAILS FOR TYPE.		SECURITY MAGLOCK.
	COVE LIGHT.		DIRECT CONNECTION TO SYSTEMS FURNITURE. "F" DENOTES FLOOR MOUNTED, "W" DENOTES WALL BASE FEED, "WF" DENOTES FLOOR MOUNTED FED FROM WIREMOLD, "P" DENOTES POLE POLE SUPPLIED WITH SYSTEMS FURNITURE. REFER TO DETAILS AND SYSTEMS FURNITURE SCHEDULE WHERE APPLICABLE.		SECURITY ELECTRIC STRIKE.
	LINEAR OR STRIP LIGHT LUMINAIRE, CEILING MOUNTED.		WALL MOUNTED TELEPHONE OUTLET BOX. REFER TO DETAIL.		SECURITY CAMERA.
	LINEAR OR STRIP LIGHT LUMINAIRE, WALL MOUNTED.		DATA OUTLET, WALL MOUNTED OR AS OTHERWISE SHOWN. REFER TO DETAILS. "C" DENOTES MOUNTED ABOVE T-BAR CEILING.		SECURITY KEY PAD.
	WALL WASHER LUMINAIRE. CEILING MOUNTED (RECESSED OR SURFACE).		WIRELESS ACCESS POINT		SECURITY MOTION SENSOR.
	DOWNLIGHT LUMINAIRE. CEILING MOUNTED (RECESSED OR SURFACE).		WALL MOUNTED COMBINATION TELEPHONE/DATA OUTLET BOX. REFER TO DETAILS.		INTERCOM STATION ("W" DENOTES MASTER).
	WALL MOUNTED LUMINAIRE.		WALL MOUNTED CABLE TV OUTLET BOX. REFER TO DETAIL.		SECURITY CURRENT TRANSFER DEVICE.
	PENDANT MOUNTED LUMINAIRE.		VOICE/DATA OUTLETS MOUNTED IN TABLE-TOPO MONUMENT. MONUMENT SUPPLIED BY OTHERS. PROVIDE JACKS AND TERMINATE COMMUNICATIONS CABLEING AT MONUMENT. COORDINATE ALL WORK WITH AV CONTRACTOR AND CONFIGURATION OF TABLE.		DURESS BUTTON
	LUMINAIRE DESIGNATOR. LETTER DENOTES TYPE. REFER TO LUMINAIRE SCHEDULE.		POWER POLE WITH DEVICES AS SHOWN.		PUSH BUTTON
	CEILING MOUNTED EXIT LIGHT C/W FACES AND ARROWS AS INDICATED. ARROWS INDICATE ILLUMINATED FACES AND DIRECTION. BARS INDICATE ILLUMINATED FACES ONLY.		FLOOR OR WALL MOUNTED BACKWAY C/W QUANTITY OF DEVICES INDICATED AND BARRIER FOR 2-COMPARTMENTS. WIREMOLD 4000 SERIES WITH SCUFFCOAT FINISH COLOUR AS DIRECTED BY ARCHITECT, UNLESS OTHERWISE NOTED. FEED FROM RECESSED, EMT OR FLEXIBLE CONDUITS IN/SE W/ COLUMN FROM ACCESSIBLE CEILING SPACE, FOR POWER AND DATA.		AUTOMATIC DOOR OPERATOR
	EMERGENCY D.C. BATTERY UNIT C/W UNIT MOUNTED HEADS (QUANTITY OF HEADS AS INDICATED). MOUNTED AT 8'-0" A.F.F.		CONDUITS/WIRING IN FLOOR BELOW OR CONNECTRAC, AS INDICATED.		AUDIO_VSUAL ROUGH-IN
	REMOTE EMERGENCY D.C. LAMP UNIT (NUMBER OF HEADS AS INDICATED). MOUNTED AT 8'-0" A.F.F. "C" DENOTES CEILING MOUNT.		HANDICAP OPERATOR PUSHBUTTON. SUPPLIED BY OTHERS. INSTALLED AND WREED BY DIV. 16.		AV SPEAKER.
	SINGLE POLE LINE VOLTAGE LIGHT SWTCH. VOLTAGE TO SUIT LOAD CONTROLLED.		DIRECT CONNECTION TO EQUIPMENT AS INDICATED.		ADDITIONAL NOMENCLATURE
	3-WAY LINE VOLTAGE LIGHT SWITCH. VOLTAGE TO SUIT LOAD CONTROLLED.		SINGLE PHASE MOTOR CONNECTION (OR AS INDICATED ON PLANS).		DENOTES REFER TO NOTE N-1.
	MANUAL MOTOR PROTECTION SWITCH C/W PILOT LIGHT.		DISCONNECT SWITCH. PROVIDE SAFETY DISCONNECT AT ALL MOTORS WHERE REQUIRED BY CODE, WHETHER SHOWN OR NOT ON FLOOR PLANS.		DENOTES EXISTING EQUIPMENT TO REMAIN UNLESS OTHERWISE NOTED.
	EXHAUST FAN SWITCH. DECORA STYLE. COLOUR WHITE C/W WHITE COVERPLATE. SUPPLIED BY DIV. 15, INSTALLED BY DIV. 16.		CONTACTOR.		DENOTES EXISTING EQUIPMENT TO BE REMOVED/OR RELOCATED.
	KEY OPERATED SWITCH.		COMBINATION MAGNETIC STARTER BY DIV. 15..		EXISTING IN RELOCATED POSITION
	WALL MOUNTED OCCUPANCY SENSOR. LINE VOLTAGE DUAL TECHNOLOGY OCCUPANCY SENSOR. VOLTAGE TO SUIT LOAD CONTROLLED.		VARIABLE SPEED DRIVE BY DIV. 15.		DENOTES TO RELOCATE EXISTING DEVICE.
	CEILING MOUNTED OCCUPANCY SENSOR C/W 120V OR 347V POWER PACK AS REQUIRED AND ALL OTHER REQUIRED ACCESSORIES.		PANEL (RECESSED OR SURFACE).		ABOVE FINISHED FLOOR.
	GANGED SWITCHES.		DISTRIBUTION TRANSFORMER. K13 OR HARMONIC MITIGATING AS INDICATED.		DENOTES ROUGH-IN FOR FUTURE DEVICE.
	DIMMER SWITCH. RATING AND TYPE TO SUIT LOAD.		PROJECTOR		DENOTES TWISTLOCK RECEPTACLE.
	PROJECTION SCREEN SWITCH. SUPPLIED BY OTHERS AND INSTALLED C/W WIRING BY ELECTRICAL CONTRACTOR.		JUNCTION BOX		DENOTES MOUNTED ABOVE COUNTER OR OTHER LEVEL AS NOTED ON DESIGNER'S DRAWINGS.
	LOW VOLTAGE SWITCH TIED TO LOW VOLTAGE LIGHTING CONTROL SYSTEM.		FIRE ALARM PANEL (RECESSED OR SURFACE). "TAGP" DENOTES FIRE ALARM CONTROL PANEL. "TAAP" DENOTES FIRE ALARM ANNUNCIATOR PANEL.		DENOTES MOUNTED UNDER COUNTER OR OTHER LEVEL AS NOTED ON DESIGNER'S DRAWINGS.
	MOTORIZED BLIND CONTROL SWITCH. SUPPLIED BY OTHERS AND INSTALLED C/W WIRING BY DIV. 16.		FIRE ALARM PULL STATION.		DENOTES CEILING MOUNTED.
	LIGHTING CONTROL TOUCH SCREEN.		LIFE SAFETY SYSTEM STROBE LIGHT WALL OR CEILING MOUNTED		DENOTES LUMINAIRE ON NIGHT LIGHT CIRCUIT.
	ZOOM MEETING CAMERA		LIFE SAFETY HORN CEILING OR WALL MOUNTED		DENOTES SEPARATE CIRCUIT.
	POWER AND COMMUNICATIONS		LIFE SAFETY HORN-STROBE CEILING OR WALL MOUNTED		DENOTES REMOVE AND RE-INSTALL IN SIMILAR LOCATION
	WALL MOUNTED DUPLEX RECEPTACLE, 15A, 120V UNLESS OTHERWISE NOTED.		SMOKE DETECTOR - CEILING OR WALL MOUNTED		DENOTES EMERGENCY POWER.
	WALL MOUNTED DUPLEX RECEPTACLE, 20A, 120V T-SLOT (CSA 5-20R) UNLESS OTHERWISE NOTED.		THERMAL DETECTOR CEILING OR WALL MOUNTED		DENOTES RECEPTACLE WITH USB POWER.
	WALL MOUNTED DUPLEX SPLIT RECEPTACLE.		CARBON MONOXIDE DETECTOR CEILING OR WALL MOUNTED		DENOTES EMPTY CONDUIT COMPLETE WITH PULL STRING.
	RECESSED CLOCK STYLE DUPLEX RECEPTACLE FOR WALL MOUNTED TV.		DUCT TYPE SMOKE DETECTOR.		DENOTES COMPLETE WITH.
	RECESSED CLOCK STYLE QUADPLEX RECEPTACLE FOR WALL MOUNTED TV.		120V POWERED SMOKE ALARM C/W A VISUAL SIGNALLING COMPONENT AND BATTERY BACKUP.		DENOTES COMPLETE WITH MICROWAVE.
	WALL MOUNTED DUPLEX RECEPTACLE WITH GROUND FAULT INTERRUPTER.		120V POWERED CARBON MONOXIDE ALARM C/W A VISUAL SIGNALLING COMPONENT AND BATTERY BACKUP.		DENOTES COMPLETE WITH DISHWASHER.
	WALL OR POWER POLE MOUNTED SINGLE RECEPTACLE, 15A, 120V U-GROUND OR AS OTHERWISE INDICATED BY CSA CONFIGURATION OR VOLTAGE AND AMPERAGE AS INDICATED. "C" DENOTES MOUNTED ABOVE T-BAR CEILING.		120V POWERED COMBINATION OF SMOKE AND CARBON MONOXIDE ALARM C/W A VISUAL SIGNALLING COMPONENT AND BATTERY BACKUP.		
	WALL MOUNTED QUAD RECEPTACLE.		SPRINKLER SYSTEM FLOW SWITCH BY DIV. 15 CONNECTED TO FA SYSTEM BY DIV. 16.		
	SINGLE U-GROUND 15A, 120V RECESSED CLOCK RECEPTACLE, MOUNT AT HEIGHT INDICATED ON ARCHITECT'S DRAWINGS.		SPRINKLER SYSTEM LOW WATER PRESSURE SWITCH BY DIV. 15 CONNECTED TO FA SYSTEM BY DIV. 16.		
			SPRINKLER SYSTEM ALARM CHECK VALVE BY DIV. 15 CONNECTED TO FA SYSTEM BY DIV. 16.		
			FIRE ALARM CONTROL MODULE		
			FIRE ALARM MONITOR MODULE		
			ELECTRO-MAGNETIC DOOR HOLD OPEN DEVICE		

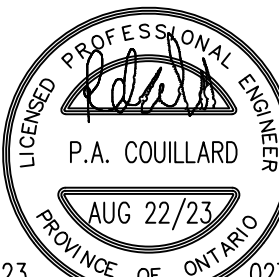
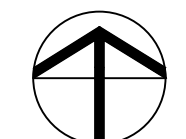
DRAWING LIST	
DRAWING No.	DESCRIPTION
E-01-1	ELECTRICAL SPECIFICATIONS
E-01-2	ELECTRICAL LEGEND AND DRAWING LIST
E-01-3	LUMINAIRE SCHEDULE AND NOTES
E-02-0	GROUND FLOOR LIGHTING - DEMOLITION
E-02-1	GROUND FLOOR LIGHTING - NEW
E-02-2	SECOND FLOOR LIGHTING - DEMOLITION
E-02-3	SECOND FLOOR LIGHTING - NEW
E-03-0	GROUND FLOOR POWER & SYSTEMS - DEMOLITION
E-03-1	GROUND FLOOR POWER & SYSTEMS - NEW
E-03-2	SECOND FLOOR POWER & SYSTEMS - DEMOLITION
E-03-3	SECOND FLOOR POWER & SYSTEMS - NEW
E-04-1	ELECTRICAL DETAILS
E-04-2	ELECTRICAL DETAILS
E-04-3	ELECTRICAL DETAILS
E-05-1	POWER DISTRIBUTION DIAGRAM AND PANEL SCHEDULES
E-05-2	POWER DISTRIBUTION DIAGRAM AND PANEL SCHEDULES

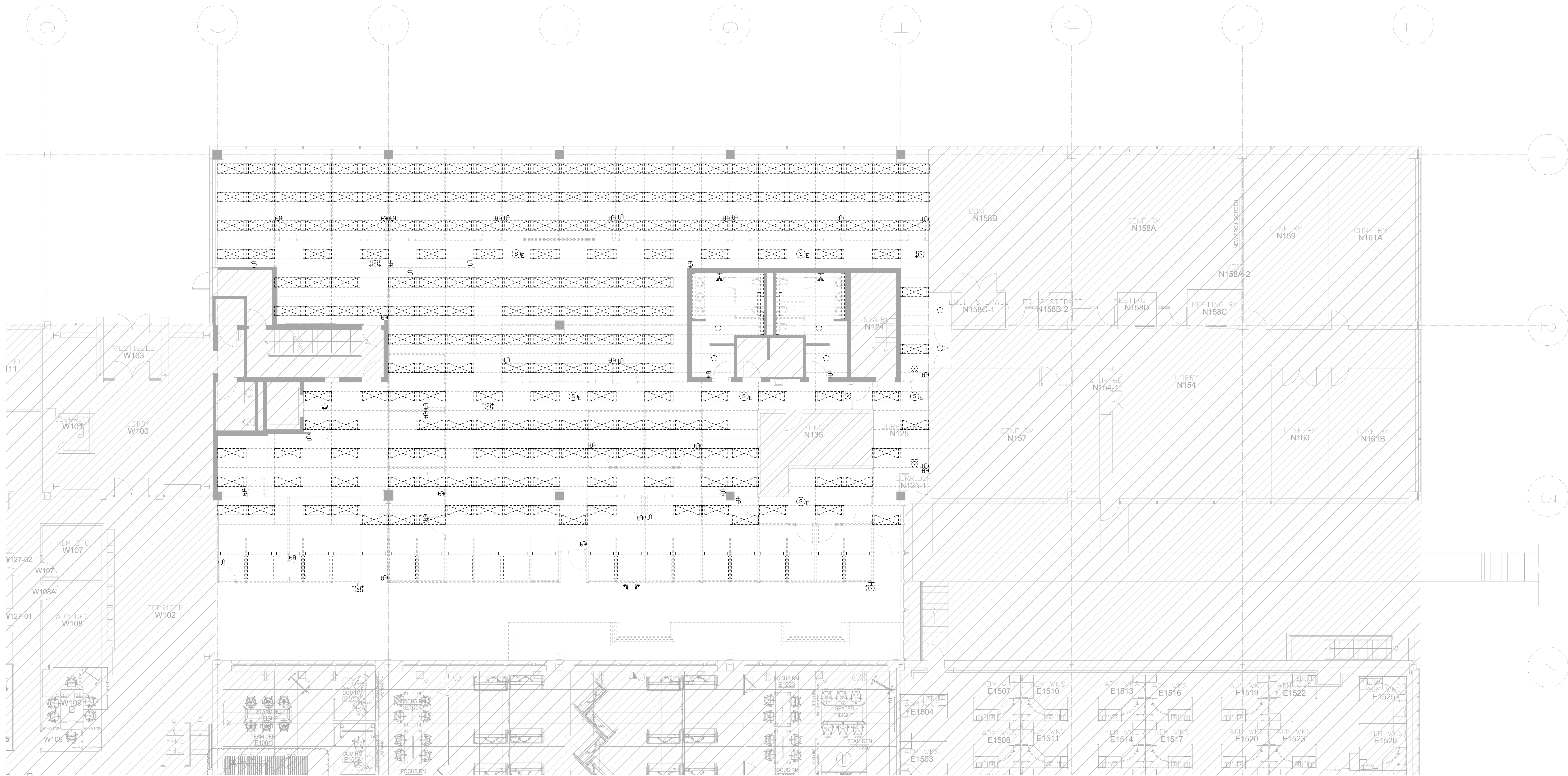




























LUMINAIRE SCHEDULE	
SYMBOL	DESCRIPTION
	GREEN RUNNING MAN PICTORAM EDGE UT EXIT SIGN, CSA 22-2 No. 141 STANDARD, 120/247V UNIVERSAL VOLTAGE, AC, WHITE FINISH, CLEAR ACRYLIC PANEL WITH PICTORAM LEGEND AND WHITE LED LIGHT SOURCE, EXTRUDED ALUMINUM TRIM, C860 APPROVED, SINGLE OR DOUBLE-FACE WITH DIRECTIONAL INDICATORS AND MOUNTING AS REQUIRED. FOR FINISHED CEILING AND WALL MOUNTING, PROVIDE FLUSH MOUNTED RECESSED BACK BOX WITH FLUSH MOUNTED WHITE TRIM PLATE. WHERE EXIT SIGN IS REQUIRED TO BE SUSPENDED, PROVIDE ALL REQUIRED MOUNTING ACCESSORIES FOR A COMPLETE INSTALLATION. EXACT COLOUR/FINISH SHALL BE DETERMINED BY THE ARCHITECT DURING THE SHOP DRAWING REVIEW STAGE. LUMACELL #FLD# SERIES, OR STANDPRO OR BEGHELLI * GUADA APPROVED EQUAL
'L14'	24"x48" ARCTURA BACKLIGHTING ECO WALL OR CEILING LED PANEL, 2250 DELIVERED LUMENS, 24V, 25WATTS, 3000K, 200 RICH, 0-10V DIMMING, PREMIUM RATED WIRING, LCO LISTED, PANEL SUPPLIED BY THE CEILING MANUFACTURER UNDER THE CC, INSTALLED AND CONNECTED BY ELECTRICAL CONTRACTOR, ELECTRICAL CONTRACTOR TO INCLUDING CUTTING OF SOME OF THE PANELS THAT MUST BE REDUCED FROM 24"x48". REFER TO ARCHITECTURAL DRAWINGS FOR QUANTITIES OF PANELS TO BE CUT.
'L16'	CHAIN SUSPENDED 4FT LONG LED STRIP LIGHT, 4655 LUMENS LIGHT ENGINE (35W, 3000K, 80CRI, 120V UNIVERSAL DRIVER WITH 0-10V DIMMING, STEEL HOUSING, FROSTED ACRYLIC LENS AND WHITE FINISH. INCLUDE SITE ADJUSTABLE CHAIN HANGERS AND ALL REQUIRED MOUNTING ACCESSORIES. LFP CAT.#554-35W-U-30-FRAL

LUMINAIRE SCHEDULE	
SYMBOL	DESCRIPTION
'LA'	Artemis 2A Recessed Adjustable LED Downlight with diffusing lens and 60-degree optics. New Construction Housing Mfg. Series - #AR2A-FL-A90-660-30-15-DL-01-08/915-LCS-120, Lamp: LED, 3000K Lamp: LED, 3000K, 90CRI Finish: Flange- White, Baffle -Silver Total Wattage: 16.8W Driver: Integral, 0-10V Dimming Voltage: 120V Contact: Wayne Thomson, Studio 1112 - 416-778-8346 or studio1112@bellnet.ca
'LB'	Artemis 2A Recessed Adjustable LED Downlight with diffusing lens and 60-degree optics. New Construction Housing Mfg. Series - #AR2A-FL-A90-660-30-15-DL-01-08/915-LCS-120, Lamp: LED, 3000K Lamp: LED, 3000K, 90CRI Finish: Flange- White, Baffle -Silver Total Wattage: 16.8W Driver: Integral, 0-10V Dimming Voltage: 120V Contact: Wayne Thomson, Studio 1112 - 416-778-8346 or studio1112@bellnet.ca
'L2'	8 ft. Linear LS1911K LED Suspension Fixture, square profile with 119.3 degree beam angle. c/w 2 x 6ft. aircraft cables. Mfg. Jyslight- #LS1911K-BK-6"-30-A/ALM-XX-24V-SP2 Lamp: LED, 3000K, 90CRI Finish: Black Total Wattage: 48.8W (6.1W/ft.) Driver: Remote, 0-10V Dimming Voltage: 120V Contact: Wayne Thomson, Studio 1112 - 416-778-8346 or studio1112@bellnet.ca
'L2A'	L1-246 ft. Linear LS1911K LED Suspension Fixture, square profile with 119.3 degree beam angle. c/w 2 x 6ft. aircraft cables. Mfg. Jyslight- #LS1911K-BK-6"-30-A/ALM-XX-24V-SP2 Lamp: LED, 3000K, 90CRI Finish: Black Total Wattage: 36.0W (6.1W/ft.) Driver: Remote, 0-10V Dimming Voltage: 120V Contact: Wayne Thomson, Studio 1112 - 416-778-8346 or studio1112@bellnet.ca
'L2B'	4 ft. Linear LS1911K LED Suspension Fixture, square profile with 119.3 degree beam angle. c/w 2 x 6ft. aircraft cables. Mfg. Jyslight- #LS1911K-BK-4"-30-A/ALM-XX-24V-SP2 Lamp: LED, 3000K, 90CRI Finish: Black Total Wattage: 24.4W (6.1W/ft.) Driver: Remote, 0-10V Dimming Voltage: 120V Contact: Wayne Thomson, Studio 1112 - 416-778-8346 or studio1112@bellnet.ca
'L3'	Torus LED Pendant, 24" diam. x 2" Ht. c/w 6ft. adjustable cable Mfg. Sonnenman - #2870.25 Lamp: LED, 3000K, 90CRI Finish: Satin Black Total Wattage: 28W Driver: Integral, Trac/ELV, 0-10V dimming Voltage: 120V Contact: Wayne Thomson, Studio 1112 - 416-778-8346 or studio1112@bellnet.ca
'L3A'	Torus LED Pendant, 32" diam. x 2" Ht. c/w 6ft. adjustable cable Mfg. Sonnenman - #2872.25 Lamp: LED, 3000K, 90CRI Finish: Satin Black Total Wattage: 42W Driver: Integral, Trac/ELV, 0-10V dimming Voltage: 120V Contact: Wayne Thomson, Studio 1112 - 416-778-8346 or studio1112@bellnet.ca
'L4'	Bocci 14 Series, Single Pendant c/w mini canopy - diam. 30mm (1.2"), 4" diam. clear glass sphere, LED, with adjustable coax cable up to 10 ft. c/w remote dimmable transformers as required. Hanging heights TBD with Interior Architects. Class II installation - does not mount to standard 1-box, 5 fixtures per transformer. Mfg. Bocci- Cot. #141.1m Lamp: LED, 2500K, 80 CRI Finish: Clear Glass, Brushed Nickel Canopy, Braided metal Coax cable Wattage: 1.5W Driver: Remote, dimming Voltage: 120V Contact: Wayne Thomson, Studio 1112 - 416-778-8346 or studio1112@bellnet.ca
'L5'	Linear LED Recessed Fixture (quantity & length as per drawings) Mfg. Jyslight- #LE2513-SV-X-30-A/ALM-XX-24V-IP2 Lamp: LED, 3000K Finish: Silver Total Wattage: 4.4W/ft. Driver: Remote, 0-10V Dimming Voltage: 120V Contact: Wayne Thomson, Studio 1112 - 416-778-8346 or studio1112@bellnet.ca
'L6A'	Djembe Ceiling Fixture - 16.38" Diam. x 8.27" Ht. Mfg. Morset- Cot. #C42.21 Lamp: LED, 3000K, 90CRI Finish: TBD Total Wattage: 19W Driver: Integral, 0-10V Dimming Voltage: 120V Contact: Wayne Thomson, Studio 1112 - 416-778-8346 or studio1112@bellnet.ca
'L6B'	Djembe Ceiling Fixture - 16.54" Diam. x 11.02" Ht. Mfg. Morset- Cot. #C42.28 Lamp: LED, 3000K, 90CRI Finish: TBD Total Wattage: 19W Driver: Integral, 0-10V Dimming Voltage: 120V Contact: Wayne Thomson, Studio 1112 - 416-778-8346 or studio1112@bellnet.ca
'L7'	L1-?Pendant X3 Assemble at 72" Diam. 3 arms @ 36" ea. Downlight only with embedded 3000K LED. Standard hanging length 5ft. Mfg. Asline- Cot. # LW-ED-X3-60K-1-30-1-010-ASHe-PFBK-WH-9S-N Lamp: LED, 3000K, 90CRI Finish: White Ash with Eco Series Black Paint Finish. Canopy -White & Cable finish-Black Total Wattage: 56W Driver: Integral, 0-10V dimmable driver. Voltage: 120V Contact: Wayne Thomson, Studio 1112 - 416-778-8346 or studio1112@bellnet.ca
'L8'	Djembe Pendant Fixture, Size- 25.4" Diam x 13.78" Ht. Mfg. Morset- Cot. # Djembe 65.35 Lamp: LED, 3000K, 90CRI Finish: TBD Total Wattage: 25W Driver: Integral, Trac/ / 0-10V Dimming Voltage: 120V Contact: Wayne Thomson, Studio 1112 - 416-778-8346 or studio1112@bellnet.ca
'L9A' & 'L9B'	Discovery Suspension- 70cm Diam. c/w Transparent Diffuser. Mfg. Artemis- #1999138A Lamp: LED, 3000K, >90CRI Finish: Black Total Wattage: 41W Driver: Integral, 0-10V Dimming Voltage: 120V Contact: Wayne Thomson, Studio 1112 - 416-778-8346 or studio1112@bellnet.ca
'L10'	Linear LED Recessed Fixture (quantity & length as per drawings) Mfg. Jyslight- #LE2513-SV-X-30-A/ALM-XX-24V-IP2 Lamp: LED, 3000K Finish: Silver Total Wattage: 4.4W/ft. Driver: Remote, 0-10V Dimming Voltage: 120V Contact: Wayne Thomson, Studio 1112 - 416-778-8346 or studio1112@bellnet.ca
'L11'	Studio Medium Pendant, Dia. 4" x H. 7 7/8", Base Output, 49 Degree Optic and Soft Focus Lens Mfg. Selenion- Cot. #1780-C-P-80-830-50-120-52-010/ 1725 Lamp: LED, 3000K, 80CRI Finish: Matte Brass Total Wattage: 26.9W Driver: Integral, 0-10V Dimming Voltage: 120V Contact: Wayne Thomson, Studio 1112 - 416-778-8346 or studio1112@bellnet.ca
'L12' (L12A, B, C, D)	Bola Sphere Pendant c/w 11 - 6" Bola Canopies & Bola Swags. Quantities & sizes of spheres: 3 x 8" diam./ 4 x 6" diam./ 2 x 5.68mm./ & 2 x 4.68mm. Cord length = 8.8ft. extra feed cables. Mfg. Fusto- # BOLA SPH 4 XX/ BOLA SPH 5 XX/ BOLA SPH 6 XX/ BOLA SPH 8 XX/ BOLA CANOPY XX Lamp: LED, 3000K, 90CRI Finish: TBD Total Wattage: 129W Driver: Integral, 0-10V & ELV Dimming Voltage: 120V Contact: Wayne Thomson, Studio 1112 - 416-778-8346 or studio1112@bellnet.ca
'L13'	Djembe Ceiling Fixture - 16.38" Diam. x 8.27" Ht. Mfg. Morset- Cot. #C42.21 Lamp: LED, 3000K, 90CRI Finish: Grey RAL 7002 Total Wattage: 19W Driver: Integral, 0-10V Dimming Voltage: 120V Contact: Wayne Thomson, Studio 1112 - 416-778-8346 or studio1112@bellnet.ca
'L15'	Circ 111 Surface Mounted - Downlight Only. Compound S Shape Customized to replicate curves as shown on IA drawings. c/w Opal acrylic lens. Mfg. Solero - # CURVE-11-4-324W-LED-UNV-3000K-D-OPL LENS-RB-CM-DM-COLR WH Lamp: LED, 3000K Finish: White Total Wattage: 324W Driver: Integral, 0-10V Dimming Voltage: 120V Contact: Wayne Thomson, Studio 1112 - 416-778-8346 or studio1112@bellnet.ca

SPECIAL NOTES – FIRE ALARM SYSTEM	
<div>1. EXISTING FIRE ALARM SYSTEM IS MIRCOW FX-3500 ADDRESSABLE SYSTEM. INCLUDE ALL MIRCOW COSTS IN THE TENDER PRICE.</div> <div>2. THE ELECTRICAL CONTRACTOR SHALL PROVIDE ALL FIRE ALARM SYSTEM WORK INDICATED ON THE DRAWINGS.</div> <div>3. THE ELECTRICAL CONTRACTOR SHALL BE RESPONSIBLE FOR THE REMOVAL, RELOCATION, SUPPLY AND INSTALLATION OF ALL FIRE ALARM SYSTEM DEVICES AND ANCUARY EQUIPMENT. ALL NEW FIRE ALARM SYSTEM DEVICES AND EQUIPMENT SHALL MATCH EXISTING.</div> <div>4. ALL FIRE ALARM FINAL, TIE-IN, TESTING AND VERIFICATIONS SHALL BE PERFORMED BY THE BASE BUILDING FIRE ALARM MAINTENANCE CONTRACTOR. ELECTRICAL CONTRACTOR SHALL RETAIN THE SERVICES OF THE FIRE ALARM MAINTENANCE CONTRACTOR TO PERFORM THIS WORK AND SHALL INCLUDE MIRCOW'S COSTS IN THE TENDER.</div> <div>5. ALL FIRE ALARM RE-PROGRAMMING SHALL BE PERFORMED BY MIRCOW. ELECTRICAL CONTRACTOR SHALL RETAIN THE SERVICES OF MIRCOW TO PERFORM THIS WORK AND SHALL INCLUDE MIRCOW'S COSTS IN THE TENDER.</div> <div>6. THE ELECTRICAL CONTRACTOR SHALL COORDINATE WITH FIRE ALARM MAINTENANCE CONTRACTOR AND/OR MIRCOW DURING THE TENDER PERIOD TO CONFIRM ALL WIRING REQUIREMENTS NECESSARY TO PERFORM THE FIRE ALARM WORK. NO EXTRA COSTS WILL BE PERMITTED AS A RESULT OF FAILURE BY THE CONTRACTOR TO OBTAIN THE NECESSARY INFORMATION. THE ELECTRICAL CONTRACTOR SHALL PURCHASE ALL REQUIRED FIRE ALARM AND EMC PACING EQUIPMENT, AMPLIFIERS AND ANCUARY COMPONENTS FROM MIRCOW OR FIRE ALARM MAINTENANCE CONTRACTOR.</div> <div>7. ELECTRICAL CONTRACTOR SHALL MAKE ARRANGEMENTS WITH THE LANDLORD PRIOR TO ANY WORK ON THE FIRE ALARM SYSTEM.</div> <div>8. ALL FIRE ALARM WORK SHALL REQUIRE FIRE WATCH.</div> <div>9. REFER ALSO TO ELECTRICAL SPECIFICATIONS SECTION 48.</div> <div>10. FIRE ALARM MAINTENANCE CONTRACTOR: Bob Francis Georgian Bay Fire & Safety Ltd. Tel: 905-475-1606 Ext. 8607 Cell: 647-321-6862 Email: bfrancis@gbfire.com</div>	
LIGHTING NOTES	
<div>1. WITHIN 10 WORKING DAYS OF CONTRACT AWARD, THE CONTRACTOR SHALL PROVIDE SUBMITTALS FOR ALL SPECIFIED LUMINAIRES FOR THE REVIEW BY THE DESIGN TEAM. THE SUBMITTALS SHALL INCLUDE LUMINAIRE CATALOG CUTS INDICATING THE FOLLOWING: - MANUFACTURER'S NAME AND COMPLETE CATALOG NUMBER - FIXTURE TYPE, DESIGNATION - COMPLETE DIMENSIONS AND FINISHES - FIXTURE PHOTOMETRIC TEST DATA FROM AN INDEPENDENT TESTING LABORATORY. - ALL FIXTURE ACCESSORIES WHEN SPECIFIED. - WHERE FIXTURE OPTIONS ARE AVAILABLE IT SHALL BE CLEARLY INDICATED WHICH OPTIONS ARE SELECTED OR APPLICABLE FOR THIS SUBMISSION. - LAMP TYPE, QUANTITY PER LUMINAIRE, WATTAGE, LUMEN OUTPUT, RATED LIFE, COLOUR TEMPERATURE, COLOUR RENDERING INDEX AND BEAM SPREAD AS APPLICABLE - BALLAST TYPE, VOLTAGE AND MANUFACTURER AS APPLICABLE - LED DRIVER TYPE, VOLTAGE AND MANUFACTURER AS APPLICABLE</div> <div>2. SUBMITTALS FOR CUSTOM LUMINAIRES SHALL ALSO INCLUDE SCALED DRAWINGS SHOWING THE LAYOUT AND DIMENSIONS OF ALL FIXTURE COMPONENTS AND ACCESSORIES, THE METHOD OF INSTALLATION AND A COMPLETE BILL OF MATERIALS.</div> <div>3. CONTRACTOR SHALL CONFIRM THAT LUMINAIRE VOLTAGES ARE COMPATIBLE WITH THEIR APPLICATION AND SYSTEM CIRCUITING PRIOR TO ORDERING FIXTURES.</div> <div>4. CONTRACTOR SHALL CONFIRM THAT LUMINAIRE CEILING TRIMS ARE COMPATIBLE WITH THEIR APPLICATION PRIOR TO ORDERING FIXTURES.</div> <div>5. LUMINAIRES, LAMPS AND RELATED DEVICES PROVIDED UNDER THIS CONTRACT SHALL CARRY THE APPROVAL LABEL OF CSA FOR THE SPECIFIC APPLICATION IN WHICH THEY ARE USED.</div> <div>6. THE STATEMENT "ARCHITECT OR DESIGNER TO CONFIRM PAINT FINISH" SHALL BE INTERPRETED TO MEAN THAT THE PAINT FINISH OF THE LUMINAIRE SHALL MATCH THE APPEARANCE OF THE PAINT CHIP OR COLOUR NUMBER PROVIDED BY THE ARCHITECT DURING THE SHOP DRAWING SUBMITTAL REVIEW PROCESS.</div> <div>7. CONTRACTOR SHALL PROVIDE THE CORRECT SIZE OF SECONDARY WIRING FROM REMOTE TRANSFORMERS AND/OR REMOTE BALLASTS/LED DRIVERS AS REQUIRED TO KEEP VOLTAGE DROP IN THE SECONDARY WIRING BELOW 3% OF THE RATED VOLTAGE.</div> <div>8. ALL WALL MOUNTED DIMMER SWITCHES SHALL BE WHITE FINISH C/W MATCHING WHITE COVERPLATE, UNLESS NOTED OTHERWISE. DIMMERS SWITCHES SHALL BE SUPPLIED TO ENSURE COMPATIBILITY WITH INTENDED APPLICATION I.E. ELECTRONIC LOW VOLTAGE TRANSFORMER OR FLUORESCENT BALLAST ON PARTICULAR TYPE OF LED DRIVER SUPPLIED WITH THAT LUMINAIRE. CONFIRM WITH ARCHITECT/INTERIOR DESIGN EXACT FINISH COLOUR PRIOR TO ORDERING.</div> <div>9. REFER TO THE ARCHITECT/INTERIOR DESIGNER'S FLOOR PLANS AND ELEVATION DRAWINGS FOR INFORMATION REGARDING MOUNTING HEIGHTS OF ALL WALL MOUNTED LUMINAIRES WHERE THIS INFORMATION IS NOT INDICATED THE CONTRACTOR SHALL CONFIRM EXACT MOUNTING HEIGHT WITH THE DESIGN CONSULTANT PRIOR TO ROUGHING IN ANY ELECTRICAL SERVICES.</div> <div>10. EXACT LOCATION OF ANY REMOTE MOUNTED TRANSFORMERS, BALLASTS OR LED DRIVERS SHALL BE CONFIRMED ON SITE. DEVICES TO BE LOCATED IN AN ACCESSIBLE LOCATION (ACCESSIBLE CEILING, ELECTRICAL ROOM OR BELOW COUNTER). DO NOT EXCEED LEAD LENGTHS RECOMMENDED BY LIGHTING MANUFACTURER.</div> <div>11. CONFIRM THE EXACT MOUNTING HEIGHT OF ALL SUSPENDED LUMINAIRES WITH THE ARCHITECT/INTERIOR DESIGNER OR DESIGN CONSULTANT PRIOR TO INSTALLATION.</div>	

GENERAL NOTES	
<div>1. REFER TO ARCHITECTURAL/INTERIOR DESIGN DOCUMENTS FOR PHASING REQUIREMENTS AND ALLOW FOR ALL COSTS TO COMPLY WITH THESE REQUIREMENTS.</div> <div>2. REFER TO ARCHITECTURAL/INTERIOR DESIGN DRAWINGS FOR ALL FIRE RATED AND SMOKE RATED WALLS. SEAL ALL CONDUIT PENETRATIONS THROUGH SUCH WALLS IN ACCORDANCE WITH SPECIFICATIONS.</div> <div>3. COORDINATE WORK WITH THE GENERAL CONTRACTOR TO LEAST INTERFERE WITH THE OWNER'S USE OF THE FACILITY. GENERAL CONTRACTOR MAY REQUIRE WORK INTERRUPTIONS DURING THE DAY AND MAY REQUIRE CERTAIN WORK TO BE PERFORMED ON PREMISE THE AT NIGHT OR ON WEEKENDS.</div> <div>4. COMPLETE EXTENT OF DEMOLITION IS NOT SHOWN. TENDERERS SHALL REVIEW THE DOCUMENTS OF ALL OTHER TRADES TO DETERMINE THE FULL EXTENT OF DEMOLITION. MAKE ALL ALLOWANCES FOR ANY NEW OR EXISTING SERVICES, DEVICES OR EQUIPMENT RELOCATIONS NECESSARY TO COMPLETE THE WORK AS INTENDED BY THE DRAWINGS. ALLOW FOR ALL COSTS.</div> <div>5. VISIT AND EXAMINE CAREFULLY THE BUILDING SO AS TO BECOME FAMILIAR WITH EXISTING CONDITIONS AND DIFFICULTIES THAT WILL AFFECT THE EXECUTION OF THE WORK, BEFORE SUBMITTING PROPOSALS. SUBMISSION OF A PROPOSAL WILL BE EVIDENCE THAT SUCH EXAMINATION HAS BEEN MADE AND LATER CLAIMS FOR LABOUR, EQUIPMENT OR MATERIALS BECAUSE OF DIFFICULTIES ENCOUNTERED, WILL NOT BE RECONSIDERED.</div> <div>6. ELECTRICAL DRAWINGS ARE DIAGNAMATIC ONLY. FOR EXACT LOCATION OF ALL LIGHTING FIXTURES, SWITCHES, DIMMERS, RECEPTACLES, ETC., REFER TO ARCHITECTURAL/INTERIOR DESIGN DRAWINGS AND ELEVATIONS.</div> <div>7. WHERE RELOCATION OF EXISTING LUMINAIRES AND DEVICES IS INVOLVED, ADDITIONAL LUMINAIRES AND DEVICES MAY BE REQUIRED. CONTRACTOR TO CONFIRM QUANTITIES REQUIRED; ADDITIONAL LUMINAIRES AND DEVICES REQUIRED SHALL BE SUPPLIED AND INSTALLED BY ELECTRICAL CONTRACTOR. LUMINAIRES AND DEVICES TO MATCH EXISTING BASE BUILDING STANDARD AND/OR AS SPECIFIED.</div> <div>8. ALLOW FOR REMOVAL AND RE-INSTALLATION OF EXISTING DEVICES TO PERMIT NEW ARCHITECTURAL/INTERIOR DESIGN FINISHES. REMOVE AND RE-INSTALL ALL CEILING MOUNTED LUMINAIRES WHERE T-BAR CEILING TILES ARE TO BE TEMPORARILY REMOVED OR REPLACED. REVIEW ARCHITECTURAL/INTERIOR DESIGN PLANS DURING TENDER PERIOD TO DETERMINE FULL EXTENT OF THE WORK.</div> <div>9. CONTRACTOR SHALL NOT RE-USE RECEPTACLES AND SWITCHES FROM DEMOLITION. ALL RECEPTACLES AND SWITCHES INSTALLED SHALL BE NEW.</div> <div>10. COORDINATE EXACT REQUIREMENTS FOR POWER AND COMMUNICATION FEES TO WORKSTATIONS WITH WORKSTATION SUPPLIER PRIOR TO ROUGH-IN.</div> <div>11. NOT ALL REQUIRED FEEDERS AND BRANCH CIRCUIT CONDUITS ARE SHOWN ON THE FLOOR PLANS. REFER TO SINGLE LINE DIAGRAM AND PANEL SCHEDULES FOR ADDITIONAL INFORMATION.</div> <div>12. FOR X-RAY WORK GUIDELINES AND REQUIREMENTS REFER TO THE ELECTRICAL GENERAL REQUIREMENTS THAT FORM PART OF THE ELECTRICAL SPECIFICATIONS.</div> <div>13. CIRCUITING IS SHOWN FOR GROUPING PURPOSES ONLY. EXISTING CIRCUITS THAT ARE TO REMAIN ARE NOT SHOWN ON PANEL SCHEDULES OR ON FLOOR PLANS. CONTRACTOR SHALL MAINTAIN REWORK AS REQUIRED AND INSTALL NEW CIRCUITS IN REMAINING BREAKER POSITIONS IN PANELS. SHOW FINAL CIRCUIT NUMBERS USED ON FLOOR PLANS AND PROVIDE FINAL PANEL SCHEDULES ON THE AS-BUILT DRAWINGS AND PANEL DIRECTORIES IN THE PANELS. TYPICAL FOR ALL PANELS.</div> <div>14. ALL REDUNDANT OR UNUSED BRANCH WIRING THAT IS REMOVED DURING DEMOLITION SHALL BE CUT BACK TO SOURCE PANEL AND DISCONNECTED FROM PANEL. THESE CIRCUITS SHALL BE IDENTIFIED AS SPARE AND BE MADE AVAILABLE FOR RE-USE.</div> <div>15. ENSURE THAT NEW OR RELOCATED RUNNING MAN SIGNS ARE POSTIONED TO BE CLEARLY VISIBLE ALONG THE INTENDED PATH OF EGRESS AND THAT NO OBSCURING OR SIGN MOUNTED OBSTRUCTIONS INTERFERE WITH OR BLOCK THE VISIBILITY OF THE RUNNING MAN SIGN. IN THE EVENT THAT THE BUILDING INSPECTOR OR THE CONSULTANT FINDS THE SIGN IS OBSTRUCTED FROM VIEW THE CONTRACTOR SHALL RELOCATE THE SIGN AT NO EXTRA COST. INCLUDE IN TENDER PRICE FOR THE SUPPLY AND INSTALLATION OF FOUR (4) ADDITIONAL RUNNING MAN SIGNS C/W WIRING TO NEAREST AVAILABLE RUNNING MAN SIGN IN THE EVENT THAT THE BUILDING INSPECTOR REQUESTS ADDITIONAL SIGNS DURING FINAL INSPECTION BY THE CITY. ALLOW FOR MAXIMUM WIRING DISTANCE TO NEAREST SIGN.</div> <div>16. INCLUDE IN TENDER PRICE FOR THE SUPPLY AND INSTALLATION OF THREE (3) ADDITIONAL FIRE ALARM HORNS C/W WIRING TO NEAREST AVAILABLE CIRCUIT IN THE EVENT THAT THE BUILDING INSPECTOR REQUESTS ADDITIONAL DEVICES DURING FINAL INSPECTION BY THE CITY. ALLOW FOR MAXIMUM WIRING DISTANCE TO NEAREST CIRCUIT.</div> <div>17. REFER TO MECHANICAL DRAWINGS FOR EXACT SIZE, LOCATION, AND ELECTRICAL REQUIREMENTS FOR ALL MOTORS AND MECHANICAL EQUIPMENT. COORDINATE WITH MECHANICAL CONTRACTOR AND PROVIDE ELECTRICAL CONNECTIONS AS REQUIRED FOR A COMPLETE AND FULLY OPERABLE SYSTEM.</div> <div>18. CONTRACTOR SHALL COORDINATE WITH ALL "VENDOR" TRADES FURNISHING EQUIPMENT REQUIRING ELECTRICAL CONNECTIONS. CHECK CAREFULLY ALL CONSTRUCTION DRAWINGS AND SPECIFICATIONS THAT ARE PART OF THIS PROJECT TO INSURE COMPLIANCE WITH VENDOR REQUIREMENTS. NO EXTRA CHARGES SHALL BE ACCEPTED BY OWNER, AFTER BIDDING FOR SUCH EQUIPMENT AND LABOR.</div> <div>19. COORDINATE WORK WITH FIELD CONDITIONS AND OTHER TRADES AND INSTALL CONDUIT AND BOXES TO CLEAR EMBEDDED DUCTS, OPENINGS AND OTHER STRUCTURAL FEATURES.</div> <div>20. NOT ALL OF THE REQUIRED BOXES, CONDUITS, WIRING AND SLEEVING ARE SHOWN ON THE DRAWINGS. ONLY MAJOR ITEMS ARE SHOWN. COORDINATE AND PROVIDE ALL WORK AS REQUIRED FOR PROPER DEMOLITION AND INSTALLATION.</div> <div>21. NO WIRING SHALL BE DONE PRIOR TO THE CONTRACTOR'S REVIEW OF THE PROJECT EQUIPMENT SHOP DRAWINGS. COORDINATE FIELD CONDITIONS WITH THE DESIGN DOCUMENTS. ANY DISCREPANCIES SHALL BE BROUGHT TO THE ARCHITECT/INTERIOR DESIGNER/ENGINEER'S ATTENTION FOR FINAL RESOLUTION. WORK THAT HAS TO BE DEFERRED DUE TO LACK OF PROPER SHOP DRAWING COORDINATION SHALL BE DONE AT CONTRACTOR'S EXPENSE.</div> <div>22. ALL OUTLETS BOXES SHALL BE PROVIDED WITH PROPER COVER PLATES.</div> <div>23. CIRCUITS ARE SIZED ASSUMING NO MORE THAN THREE CURRENT CARRYING CONDUCTORS IN A SINGLE CONDUIT. FOR CONDUITS CONTAINING MORE THAN THREE, PROVIDE APPROPRIATE DE-RATING OF CONDUCTORS PER APPLICABLE CODES.</div> <div>24. EXCEPT AS NOTED, ALL EXISTING LUMINAIRES AND POWER & SYSTEMS DEVICES AND WIRING THAT ARE TO BE REMOVED SHALL BECOME THE PROPERTY OF THE CONTRACTOR AND SHALL BE REMOVED FROM THE SITE, UNLESS OTHERWISE NOTED. THE EXCEPTION ARE THE BASE BUILDING LUMINAIRES, EXIT SIGNS AND SPEAKERS THAT ARE TO BE TURNED OVER TO THE LANDLORD AND MOVED TO A DESIGNATED LOCATION IN THE BUILDING AS INSTRUCTED BY THE LANDLORD.</div> <div>25. CONTRACTOR SHALL ENSURE THAT ALL EXISTING DEVICES THAT ARE TO REMAIN IN THE ROOM SHOWN ON THE NEW PLANS AND DO NOT INTERFERE WITH NEW PARTITION WALLS. ALLOW FOR RELOCATION OF DEVICES WHERE REQUIRED.</div> <div>26. CLEARLY MARK ALL EXPOSED CONDUITS, PULL BOXES, JUNCTION BOXES, ETC. TO INDICATE THE NATURE OF THE SERVICES AS PER BASE BUILDING STANDARDS.</div> <div>27. ALL WORK ASSOCIATED WITH THE CORE DRILLING, POWER SHUTDOWNS, MODIFICATIONS TO BASE BUILDING LIFE SAFETY, EMERGENCY LIGHTING, LOW VOLTAGE LIGHTING CONTROL AND SECURITY SYSTEM SHALL BE PERFORMED AFTER REGULAR BUSINESS HOURS AND AT THE TIMES APPROVED BY THE LANDLORD.</div> <div>28. IDENTIFY ALL EXISTING AND NEW RECEPTACLES AND SYSTEMS FURNITURE CONNECTION BOXES WITH PANEL AND CIRCUIT NUMBER ON TYPEWRITTEN LABEL.</div> <div>29. ALL LIGHTING FIXTURES (EXISTING, RELOCATED, AND NEW) TO BE PROPERLY SUPPORTED FROM THE BUILDING STRUCTURE. ALL NEW AND/OR RENOVATED LIGHTING FIXTURES TO BE COMPLETE WITH LUMINAIRE DISCONNECT. PROVIDE NEW LUMINAIRE DISCONNECT ON ALL EXISTING LIGHTING FIXTURES THAT ARE TO BE RENOVATED.</div> <div>30. ENSURE THAT ALL ELECTRICAL, LIFE SAFETY SERVICES AND SERVICES FOR EXISTING LUMINAIRES AND DEVICES THAT ARE REQUIRED TO REMAIN IN SERVICE SHALL DO SO.</div> <div>31. BE RESPONSIBLE AND PAY FOR ANY DAMAGE TO THE BUILDING INCURRED BY WORK OF THIS CONTRACTOR OR REPAIR TO THE SATISFACTION OF THE OWNER AND CONSULTANT.</div> <div>32. CARRY OUT THE WORK WITH A MINIMUM OF NOISE, DUST AND DISTURBANCE.</div>	
<div>BASE BUILDING LIGHTING FIXTURES ARE RECESSED AIR HANDLING FLUORESCENT FIXTURE 347V C/W 10' CORD. CONTRACTOR TO RETURN THE UNUSED BASE BUILDING FIXTURES TO THE LANDLORD.</div>	
<div>No. Date By Description</div> <div>Issue:</div> <div>GENERAL NOTES</div> <div>THIS DRAWING IS THE PROPERTY OF POI AND NOT TO BE REPRODUCED WITHOUT WRITTEN PERMISSION</div> <div>ALL MEASUREMENTS MUST BE CHECKED AND VERIFIED ON SITE BY CONTRACTOR AND REPORT ANY DISCREPANCIES TO POI BEFORE PROCEEDING WITH THE WORK.</div> <div>DO NOT SCALE DRAWINGS.</div> <div>BCN:</div> <div></div> <div><div></div><div>Project Name: JOHNSON & JOHNSON NORTH BUILDING 19 GREENBELT DRIVE TORONTO, ON M3C 1L9</div></div> <div><div>Project No.: 10157 (ME#23027) Date: 21AUG23 Scale: N.T.S.</div><div>Drawn By: CAD Checked By: PC</div></div> <div><div>Drawing Title: LUMINAIRE SCHEDULE AND NOTES</div><div>Dwg No:</div></div>	



REFLECTED CEILING PLAN LEGEND	REFLECTED CEILING PLAN GENERAL NOTES
 EXISTING CEILING FIXTURE	1. EXISTING CEILING FIXTURES SHALL BE REMOVED OR RELOCATED AS SHOWN ON THIS DRAWING.
 NEW CEILING FIXTURE	2. NEW CEILING FIXTURES SHALL BE INSTALLED AS SHOWN ON THIS DRAWING.
 EXISTING CEILING SWITCH	3. EXISTING CEILING SWITCHES SHALL BE REMOVED OR RELOCATED AS SHOWN ON THIS DRAWING.
 NEW CEILING SWITCH	4. NEW CEILING SWITCHES SHALL BE INSTALLED AS SHOWN ON THIS DRAWING.
 EXISTING CEILING DIMMER	5. EXISTING CEILING DIMMERS SHALL BE REMOVED OR RELOCATED AS SHOWN ON THIS DRAWING.
 NEW CEILING DIMMER	6. NEW CEILING DIMMERS SHALL BE INSTALLED AS SHOWN ON THIS DRAWING.
 EXISTING CEILING FIRE ALARM SPEAKER	7. EXISTING CEILING FIRE ALARM SPEAKERS SHALL BE REMOVED OR RELOCATED AS SHOWN ON THIS DRAWING.
 NEW CEILING FIRE ALARM SPEAKER	8. NEW CEILING FIRE ALARM SPEAKERS SHALL BE INSTALLED AS SHOWN ON THIS DRAWING.
 EXISTING CEILING FIRE ALARM PULL STATION	9. EXISTING CEILING FIRE ALARM PULL STATIONS SHALL BE REMOVED OR RELOCATED AS SHOWN ON THIS DRAWING.
 NEW CEILING FIRE ALARM PULL STATION	10. NEW CEILING FIRE ALARM PULL STATIONS SHALL BE INSTALLED AS SHOWN ON THIS DRAWING.
 EXISTING CEILING FIRE ALARM CONTROL PANEL	11. EXISTING CEILING FIRE ALARM CONTROL PANELS SHALL BE REMOVED OR RELOCATED AS SHOWN ON THIS DRAWING.
 NEW CEILING FIRE ALARM CONTROL PANEL	12. NEW CEILING FIRE ALARM CONTROL PANELS SHALL BE INSTALLED AS SHOWN ON THIS DRAWING.
 EXISTING CEILING FIRE ALARM NOTIFICATION APPLIANCE	13. EXISTING CEILING FIRE ALARM NOTIFICATION APPLIANCES SHALL BE REMOVED OR RELOCATED AS SHOWN ON THIS DRAWING.
 NEW CEILING FIRE ALARM NOTIFICATION APPLIANCE	14. NEW CEILING FIRE ALARM NOTIFICATION APPLIANCES SHALL BE INSTALLED AS SHOWN ON THIS DRAWING.
 EXISTING CEILING FIRE ALARM CONTROL UNIT	15. EXISTING CEILING FIRE ALARM CONTROL UNITS SHALL BE REMOVED OR RELOCATED AS SHOWN ON THIS DRAWING.
 NEW CEILING FIRE ALARM CONTROL UNIT	16. NEW CEILING FIRE ALARM CONTROL UNITS SHALL BE INSTALLED AS SHOWN ON THIS DRAWING.
 EXISTING CEILING FIRE ALARM CONTROL PANEL	17. EXISTING CEILING FIRE ALARM CONTROL PANELS SHALL BE REMOVED OR RELOCATED AS SHOWN ON THIS DRAWING.
 NEW CEILING FIRE ALARM CONTROL PANEL	18. NEW CEILING FIRE ALARM CONTROL PANELS SHALL BE INSTALLED AS SHOWN ON THIS DRAWING.
 EXISTING CEILING FIRE ALARM NOTIFICATION APPLIANCE	19. EXISTING CEILING FIRE ALARM NOTIFICATION APPLIANCES SHALL BE REMOVED OR RELOCATED AS SHOWN ON THIS DRAWING.
 NEW CEILING FIRE ALARM NOTIFICATION APPLIANCE	20. NEW CEILING FIRE ALARM NOTIFICATION APPLIANCES SHALL BE INSTALLED AS SHOWN ON THIS DRAWING.
 EXISTING CEILING FIRE ALARM CONTROL UNIT	21. EXISTING CEILING FIRE ALARM CONTROL UNITS SHALL BE REMOVED OR RELOCATED AS SHOWN ON THIS DRAWING.
 NEW CEILING FIRE ALARM CONTROL UNIT	22. NEW CEILING FIRE ALARM CONTROL UNITS SHALL BE INSTALLED AS SHOWN ON THIS DRAWING.
 EXISTING CEILING FIRE ALARM CONTROL PANEL	23. EXISTING CEILING FIRE ALARM CONTROL PANELS SHALL BE REMOVED OR RELOCATED AS SHOWN ON THIS DRAWING.
 NEW CEILING FIRE ALARM CONTROL PANEL	24. NEW CEILING FIRE ALARM CONTROL PANELS SHALL BE INSTALLED AS SHOWN ON THIS DRAWING.
 EXISTING CEILING FIRE ALARM NOTIFICATION APPLIANCE	25. EXISTING CEILING FIRE ALARM NOTIFICATION APPLIANCES SHALL BE REMOVED OR RELOCATED AS SHOWN ON THIS DRAWING.
 NEW CEILING FIRE ALARM NOTIFICATION APPLIANCE	26. NEW CEILING FIRE ALARM NOTIFICATION APPLIANCES SHALL BE INSTALLED AS SHOWN ON THIS DRAWING.

GENERAL DEMOLITION NOTES:

1. EXACT LOCATION OF ALL EXISTING LUMINAIRES, LIGHT SWITCHES, DIMMERS, FIRE ALARM SPEAKERS ETC. SHALL BE CONFIRMED ON SITE.
2. ALL LUMINAIRES, LIGHT SWITCHES, DIMMERS AND FIRE ALARM SPEAKERS SHOWN ON THIS DRAWING ARE EXISTING TO BE DISCONNECTED AND REMOVED UNLESS OTHERWISE SHOWN WITH AN 'E' OR OTHERWISE NOTED AS EXISTING TO REMAIN. CUT BACK AND REMOVE ALL UNUSED CONDUITS AND WIRING BACK TO SOURCE PANEL. REMOVE ALL LUMINAIRES, LIGHT SWITCHES, DIMMERS AND WIRING FROM WALLS AND CEILINGS THAT ARE TO BE DEMOLISHED.
3. LUMINAIRES, LIGHT SWITCHES, DIMMERS AND FIRE ALARM SPEAKERS DENOTED WITH AN 'E' ARE EXISTING TO REMAIN IN PLACE AND OPERATIONAL.
4. CONTRACTOR SHALL BE AWARE THAT NOT ALL EXISTING LUMINAIRES, LIGHT SWITCHES, DIMMERS, EQUIPMENT AND DEVICES REQUIRED TO BE REMOVED ARE NECESSARILY INDICATED ON THIS PLAN. CONTRACTOR SHALL STILL BE RESPONSIBLE FOR REMOVING ALL SUCH ITEMS AS REQUIRED TO FACILITATE THE COMPLETE DEMOLITION.
5. WHERE THE REMOVAL OF LUMINAIRES, LIGHT SWITCHES AND DIMMERS AFFECT THE OPERATION OF EXISTING LUMINAIRES, LIGHT SWITCHES AND DIMMERS TO REMAIN, CONTRACTOR SHALL REPLACE/MAKE GOOD BRANCH WIRING AS REQUIRED TO ENSURE CONTINUITY OF OPERATION OF REMAIN LUMINAIRES, LIGHT SWITCHES AND DIMMERS.
6. ALL EXISTING LUMINAIRES, LIGHT SWITCHES, DIMMERS WHICH ARE NO LONGER REQUIRED SHALL BE REMOVED AND DISPOSED OF OFF SITE.
7. REFER TO NEW PLAN FOR NEW LOCATION OF RELOCATED LUMINAIRES, DEVICES AND EQUIPMENT.
8. REMOVE ALL REDUNDANT LINE VOLTAGE AND LOW VOLTAGE CONDUIT AND WIRING IN CEILING SPACE WHICH IS NOT IN USE.

DRAWING REFERENCE NOTES:

- N-1 RELOCATE EXISTING EXIT SIGN. REFER TO DRAWING E-2.1 FOR RELOCATED POSITION.
- N-2 RELOCATE EXISTING MASTER SWITCH. REFER TO DRAWING E-2.1 FOR RELOCATED POSITION.
- N-3 RELOCATE EXISTING FIRE ALARM SPEAKER. REFER TO DRAWING E-2.1 FOR RELOCATED POSITION.
- N-4 ALL BASE BUILDING LUMINAIRES, EXIT SIGNS AND FIRE ALARM SPEAKERS WHICH WILL NOT BE RE-USED SHALL BE RETURNED TO BASE BUILDING AT A DESIGNATED STORAGE SPACE IN THE BUILDING. COORDINATE WITH BASE BUILDING REPRESENTATIVE FOR EXACT LOCATION.
- N-5 REMOVE OR RELOCATE ALL EXISTING TRANSFORMERS IN CEILING SPACE. INCLUDE IN TENDER FOR REMOVAL OR RELOCATION OF TWO (2) TRANSFORMERS IN SOUTH AREA.
- N-6 REMOVE OR RELOCATE ALL EXISTING JUNCTION BOXES IN CEILING SPACE IN THE AREA WHERE THE WOOD CEILING WILL BE INSTALLED. INCLUDE IN TENDER FOR REMOVAL OR RELOCATION OF FIVE (5) JBS IN SOUTH AREA.
- N-7 REMOVE OR RELOCATE ALL EXISTING TRANSFORMERS IN CEILING SPACE. INCLUDE IN TENDER FOR REMOVAL OR RELOCATION OF TWO (2) TRANSFORMERS IN NORTH AREA.
- N-8 DEMOLISH ALL EXISTING LIGHTING FIXTURES IN ELEVATOR LOBBY. REUSE EXISTING NORMAL LIGHTING AND EMERGENCY LIGHTING CIRCUITS. CONNECT NEW LIGHTS TO THE EXISTING LIGHTING CONTROL IN ELEVATOR LOBBY.

1. REFER TO THE ARCHITECT'S REFLECTED CEILING PLAN FOR THE EXACT LOCATION OF ALL CEILING MOUNTED LUMINAIRES.
2. EXACT LOCATION OF ALL EXISTING LUMINAIRES AND LIGHT SWITCHES/CONTROLS SHALL BE CONFIRMED ON SITE.
3. REFER TO THE ARCHITECT'S DRAWINGS FOR THE EXACT LOCATION AND MOUNTING HEIGHT OF ALL WALL MOUNTED LIGHT AND DIMMER SWITCHES. ALL WALL MOUNTED LIGHT AND DIMMER SWITCHES SHALL BE MOUNTED FOR BARRIER FREE, BETWEEN 36" AFF AND 43" AFF. COORDINATE WITH ARCHITECT ON SITE FOR EXACT LOCATION PRIOR TO COMMENCEMENT OF WORK.
4. ALL EXIT SIGNS ON THIS PLAN SHALL BE NEW, TYPE AS NOTED, UNLESS OTHERWISE NOTED, WITH AC VOLTAGE INPUTS AS NOTED. DO NOT RE-USE ANY OF THE EXISTING EXIT SIGNS, UNLESS OTHERWISE NOTED. CORRECT TO NEAREST AVAILABLE EXISTING EXIT LIGHTING CIRCUIT FOR AC OR PROVIDE NEW CIRCUIT. DO NOT OVERLOAD CIRCUIT. PROVIDE BREAKER LOCK-ON DEVICE ON ALL EXIT SIGN CIRCUITS.
5. ALL CEILING MOUNTED EXIT SIGNS AND REMOTE EMERGENCY HEADS IN OPEN CEILING AREAS SHALL BE STEM MOUNTED TO 9'-0" AFF UNLESS OTHERWISE NOTED. STEMS SHALL BE PAINTED WHITE. EXACT MOUNTING SHALL BE AS REQUIRED TO CLEAR MECHANICAL SERVICES AND BEAMS, ETC. AND TO ENSURE EXIT SIGNS BE COMPLETELY VISIBLE.
6. ALL WALL MOUNTED EXIT SIGNS, EMERGENCY LIGHTING BATTERY UNITS AND REMOTE EMERGENCY HEADS SHALL BE MOUNTED AT 8'-0" AFF UNLESS OTHERWISE NOTED.
7. ALL LIGHTING FIXTURES ARE TO BE LOCATED AS REQUIRED ON THE JOB TO LOCATE DUCTS, PIPING, EQUIPMENT, AND/OR MECHANICAL UNITS. THE LOCATIONS SHOWN ON THIS PLAN ARE APPROXIMATE.
8. ALLOW FOR TEMPORARY REMOVAL AND RE-INSTALLATION OF EXISTING LUMINAIRES AND OTHER CEILING MOUNTED DEVICES THAT ARE TO REMAIN, AS REQUIRED TO PERMIT INSTALLATION OF HVAC SYSTEMS. REFER TO MECHANICAL DRAWINGS FOR EXTENT OF SCOPE OF WORK. COORDINATE ALL WORK WITH MECHANICAL DIVISION CONTRACTOR.
9. WHEN RELOCATING BASE BUILDING LIGHTING FIXTURES, EXTEND EXISTING CIRCUITS AS REQUIRED. MATCH EXISTING BRANCH WIRING METHOD.
10. ALL RELOCATED BASE BUILDING LUMINAIRES SHALL BE TIED INTO LOCAL LIGHTING CIRCUITS AS REQUIRED USING SAME WIRING METHOD AS EXISTING FIXTURE.
11. THE EXISTING NORMAL POWER BASE BUILDING LIGHTING CIRCUITS ARE PRESENTLY CONTROLLED BY THE BASE BUILDING LOW VOLTAGE RELAYS AND CONTACTORS. CONTRACTOR SHALL MODIFY THESE RELAYS/CONTACTORS AND RE-WIRE ENTIRE LIGHTING SYSTEM AS REQUIRED AND AS INDICATED.
12. ALL CONDUITS AND WIRING IN FINISHED AREAS AND AREAS WITH SUSPENDED TILE OR WHITE GYPSUM BOARD CEILINGS SHALL BE RUN CONCEALED.
13. ALL CONDUITS AND WIRING IN OPEN CEILING AREAS SHALL BE RUN TIGHT TO THE UNDERSIDE OF THE CEILING DECK. DO NOT SUSPEND CONDUITS MID-SPAN.
14. ALL LIGHT SWITCHES SHALL BE ROCKER STYLE, DECORA TYPE, WHITE WITH MATCHING COVERPLATE. VOLTAGE TO SUIT LOAD CONTROLLED.
15. ALL DIMMER SWITCHES SHALL BE LUTRON DIVA TYPE 0-10V DIMMING PROTOCOL, OR ELV DIMMING PROTOCOL, WHITE FINISH, RATED FOR CONNECTED LOAD WITH 25% SPARE CAPACITY WITH MATCHING COVERPLATE, UNLESS NOTED OTHERWISE. PROVIDE CORRESPONDING DIMMER TYPE TO SUIT LOAD CONTROLLED. ALL WIRING REQUIREMENTS PER MANUFACTURER'S RECOMMENDATIONS.
16. ALL OCCUPANCY SENSOR SWITCHES SHALL DECORA TYPE, WHITE WITH MATCHING COVERPLATE. MANUAL/AUTO CONTROL, COLOUR WHITE, FLUSH MOUNTED. DUAL TECHNOLOGY, 120V OR 347V VOLTAGE RATING TO SUIT LOAD CONTROLLED, UNLESS NOTED OTHERWISE. PROVIDE GANGED COVERPLATE WHERE THERE ARE MORE THAN ONE (1) SWITCH.
17. ALL OCCUPANCY SENSOR DIMMER SWITCHES SHALL BE DECORA TYPE, DUAL TECHNOLOGY SINGLE CIRCUIT WALL SWITCH TYPE OCCUPANCY SENSOR, 120V RATED, MANUAL/AUTO CONTROL, COLOUR WHITE, FLUSH MOUNTED. VOLTAGE RATING TO SUIT LOAD CONTROLLED, UNLESS NOTED OTHERWISE. PROVIDE MATCHING COVERPLATE. PROVIDE GANGED COVERPLATE WHERE THERE ARE MORE THAN ONE (1) DIMMER SWITCH.
18. SINGLE LIGHT SWITCHES OR OCCUPANCY SENSOR SWITCHES SHALL CONTROL ALL LIGHTING WITHIN ROOM EXCEPT AS NOTED OTHERWISE. WHERE MULTIPLE SWITCHES ARE SHOWN EACH SWITCH TO CONTROL INDICATED ZONE.
19. ALL LIGHT SWITCHES AND DIMMER SWITCHES SHOWN ARE NEW, UNLESS NOTED OTHERWISE. CONTRACTOR MAY BE PERMITTED TO RE-USE EXISTING BACK BOXES IF LOCATIONS ARE SUITABLE OTHERWISE NEW BACK BOXES SHALL BE PROVIDED.
20. ALL NORMAL POWER LIGHTING CIRCUITS SHALL BE CONTROLLED THROUGH THE BASE BUILDING LOW VOLTAGE RELAY SYSTEM. CONTRACTOR SHALL MODIFY THESE RELAYS/CONTACTORS AND RE-WIRE ENTIRE LIGHTING SYSTEM AS REQUIRED AND/OR AS INDICATED.
21. EMERGENCY LIGHTING LAYOUT SHOWN IS THE FINAL REQUIREMENT. THE CONTRACTOR SHALL VERIFY THE EXISTING EMERGENCY LIGHTING FIXTURE LOCATIONS ON SITE AND SHALL RELOCATE AS REQUIRED TO SUIT THE FINAL EMERGENCY LIGHTING LAYOUT SHOWN.
22. PROVIDE CHAIN SUSPENSION TO CEILING SLAB/DECK OF ALL NEW AND RELOCATED LIGHTING FIXTURES THROUGHOUT.

(N-1) ALL NEW EXIT SIGNS SHALL BE EDGE-LIT PICTORAM TYPE, TO MATCH THE ONES IN EXISTING CERIDIAN SPACE. CONNECT EXIT SIGNS TO EXISTING ON FLOOR EXIT SIGN CIRCUIT. EXTEND, RE-WORK AND/OR PROVIDE NEW WIRING AND CONDUIT TO SUIT. DO NOT OVERLOAD CIRCUIT. PROVIDE NEW CIRCUIT BREAKER AND BRANCH WIRING AS REQUIRED.

(N-2) EXISTING EXIT SIGN IN RELOCATED POSITION. EXTEND AND/OR REWOK EXISTING WIRING AND CONDUIT TO SUIT. REFER TO DRAWING E-2.0 FOR EXISTING POSITION.

(N-3) EXISTING MASTER SWITCHES IN RELOCATED POSITION. EXTEND AND/OR REWOK EXISTING WIRING AND CONDUIT TO SUIT. REFER TO DRAWING E-2.0 FOR EXISTING POSITION. MASTER SWITCHES 'M1', 'M2' AND 'M3' SHALL CONTROL NORMAL POWER LIGHTING OF THE RESPECTIVE AREAS SHOWN. RE-WORK EXISTING LUMINAIRE BRANCH CIRCUITING AS REQUIRED TO SUIT.

(N-4) EXISTING FIRE ALARM SPEAKER IN RELOCATED POSITION. EXTEND AND/OR REWOK EXISTING WIRING AND CONDUIT TO SUIT. REFER TO DRAWING E-2.0 FOR EXISTING POSITION.

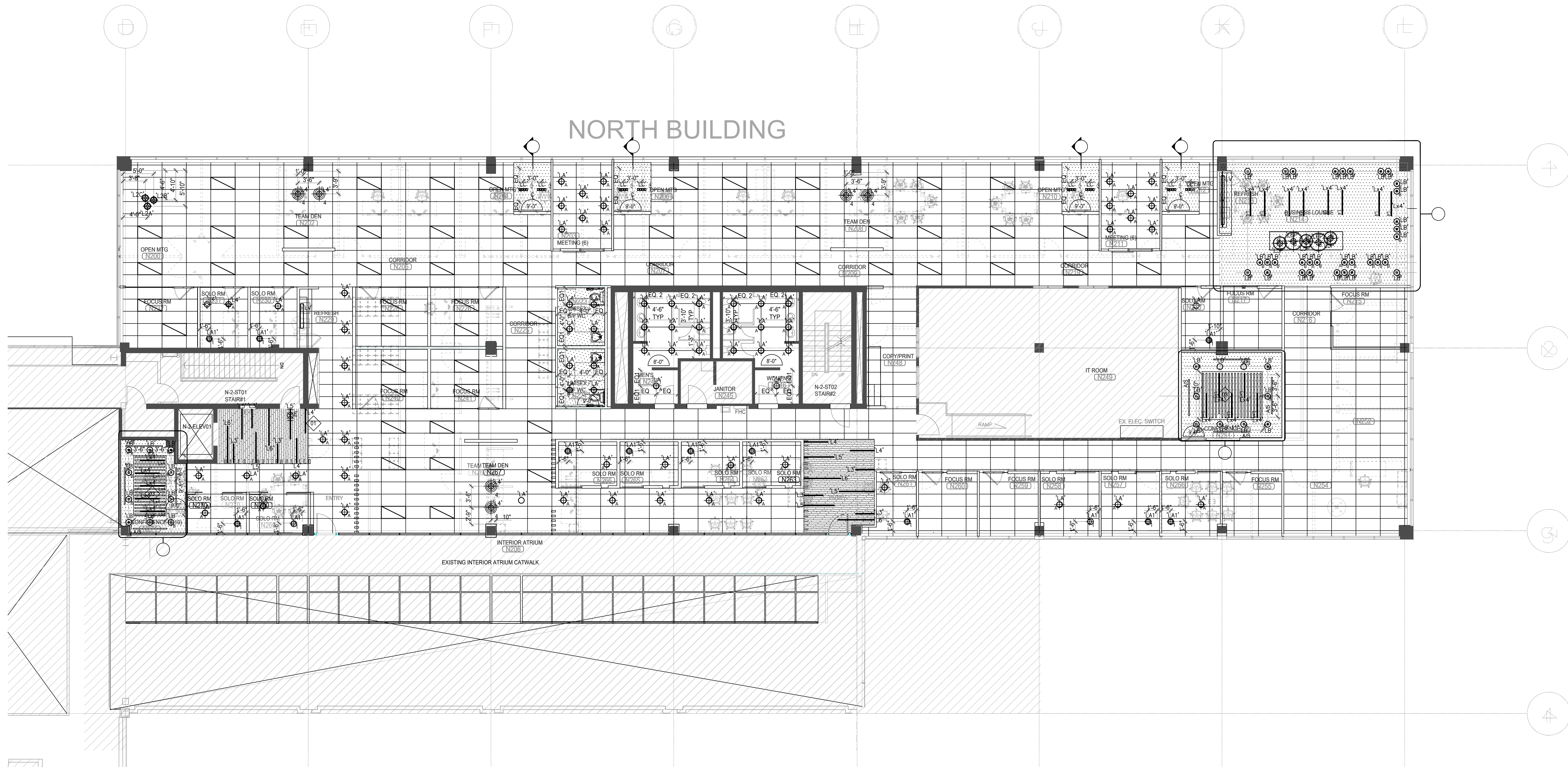
347V-120V STEP DOWN EPOXY ENCAPSULATED WEATHER PROOF TRANSFORMER TO BE LOCATED IN ACCESSIBLE CEILING. CONTRACTOR TO COORDINATE ON SITE FOR EXACT LOCATION. RE-USE EXISTING NEAREST AVAILABLE 347V NORMAL LIGHTING CIRCUIT, AND CONNECT TO PRIMARY SIDE OF TRANSFORMER. RE-WORK AND/OR PROVIDE NEW BRANCH CIRCUITING TO SUIT. STEP DOWN TRANSFORMER SHALL FEED 120V NORMAL POWER LUMINAIRES IN ROOMS 4018, 4020, AND 4021.

(N-6) 347V-120V STEP DOWN EPOXY ENCAPSULATED WEATHER PROOF TRANSFORMER TO BE LOCATED IN ACCESSIBLE CEILING. CONTRACTOR TO COORDINATE ON SITE FOR EXACT LOCATION. RE-USE EXISTING NEAREST AVAILABLE 347V NORMAL LIGHTING CIRCUIT, AND CONNECT TO PRIMARY SIDE OF TRANSFORMER. RE-WORK AND/OR PROVIDE NEW BRANCH CIRCUITING TO SUIT. STEP DOWN TRANSFORMER SHALL FEED 120V NORMAL POWER LUMINAIRES IN ROOMS 4004, 4005, 4009, 4010, 4011, 4012 AND 4013.

(N-7) RECONNECT EXISTING LIGHTING FIXTURE TO EMERGENCY LIGHTING CIRCUIT.

(N-8) 347V-120V STEP DOWN EPOXY ENCAPSULATED WEATHER PROOF TRANSFORMER TO BE LOCATED IN ACCESSIBLE CEILING. CONTRACTOR TO COORDINATE ON SITE FOR EXACT LOCATION. RE-USE EXISTING NEAREST AVAILABLE 347V NORMAL LIGHTING CIRCUIT, AND CONNECT TO PRIMARY SIDE OF TRANSFORMER. RE-WORK AND/OR PROVIDE NEW BRANCH CIRCUITING TO SUIT. STEP DOWN TRANSFORMER SHALL FEED ALL 120V EMERGENCY POWER LUMINAIRES NORTHEAST AREA.

(N-9) 347V-120V STEP DOWN EPOXY ENCAPSULATED WEATHER PROOF TRANSFORMERS TO BE LOCATED IN ACCESSIBLE CEILING. CONTRACTOR TO COORDINATE ON SITE FOR EXACT LOCATION. RE-USE EXISTING NEAREST AVAILABLE 347V NORMAL LIGHTING CIRCUIT, AND CONNECT TO PRIMARY SIDE OF TRANSFORMER. RE-WORK AND/OR PROVIDE NEW BRANCH CIRCUITING TO SUIT. STEP DOWN TRANSFORMER SHALL FEED 120V NORMAL POWER LUMINAIRES IN NORTHEAST OPEN AREA, BALANCE THE LOAD TO TWO (2) TRANSFORMERS SO NO TRANSFORMER WILL BE OVERLOADED.

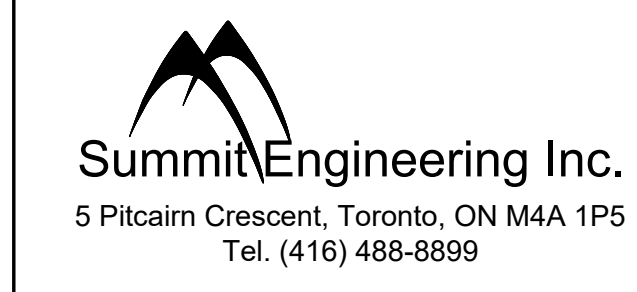


DRAWING GENERAL NOTES:

- REFER TO THE ARCHITECT'S REFLECTED CEILING PLAN FOR THE EXACT LOCATION OF ALL CEILING MOUNTED LUMINAIRES.
- EXACT LOCATION OF ALL EXISTING LUMINAIRES AND LIGHT SWITCHES/CONTROLS SHALL BE CONFIRMED ON SITE
- REFER TO THE ARCHITECT'S DRAWINGS FOR THE EXACT LOCATION AND MOUNTING HEIGHT OF ALL WALL MOUNTED LIGHT AND DIMMER SWITCHES. ALL WALL MOUNTED LIGHT AND DIMMER SWITCHES SHALL BE MOUNTED FOR BARRIER FREE, BETWEEN 36" AFF AND 43" AFF. COORDINATE WITH ARCHITECT ON SITE FOR EXACT LOCATION PRIOR TO COMMENCEMENT OF WORK.
- ALL EXIT SIGNS ON THIS PLAN SHALL BE NEW, TYPE AS NOTED, UNLESS OTHERWISE NOTED, WITH AC VOLTAGE INPUTS AS REQUIRED. DO NOT RE-USE ANY OF THE EXISTING EXIT SIGNS, UNLESS OTHERWISE NOTED. CONNECT TO NEAREST AVAILABLE EXISTING EXIT LIGHTING CIRCUIT FOR AC OR PROVIDE NEW CIRCUIT. DO NOT OVERLOAD CIRCUIT. PROVIDE BREAKER LOCK-ON DEVICE ON ALL EXIT SIGN CIRCUITS.
- ALL CEILING MOUNTED EXIT SIGNS AND REMOTE EMERGENCY HEADS IN OPEN CEILING AREAS SHALL BE STEM MOUNTED TO 9'-0" AFF UNLESS OTHERWISE NOTED. STEMS SHALL BE PAINTED WHITE. EXACT MOUNTING SHALL BE AS REQUIRED TO CLEAR MECHANICAL SERVICES AND BEAMS, ETC. AND TO ENSURE EXIT SIGNS BE COMPLETELY VISIBLE.
- ALL WALL MOUNTED EXIT SIGNS, EMERGENCY LIGHTING BATTERY UNITS AND REMOTE EMERGENCY HEADS SHALL BE MOUNTED AT 8'-0" AFF UNLESS OTHERWISE NOTED.
- ALL LIGHTING FIXTURES ARE TO BE LOCATED AS REQUIRED ON THE JOB TO CLEAR DUCTS, PIPING, EQUIPMENT, AND/OR MECHANICAL UNITS. THE LOCATIONS SHOWN ON THIS PLAN ARE APPROXIMATE.
- ALLOW FOR TEMPORARY REMOVAL AND RE-INSTALLATION OF EXISTING LUMINAIRES AND OTHER CEILING MOUNTED DEVICES THAT ARE TO REMAIN, AS REQUIRED TO PERMIT INSTALLATION OF HVAC SYSTEMS. REFER TO MECHANICAL DRAWINGS FOR EXTENT OF SCOPE OF WORK. COORDINATE ALL WORK WITH MECHANICAL DIVISION CONTRACTOR.
- WHEN RELOCATING BASE BUILDING LIGHTING FIXTURES, EXTEND EXISTING CIRCUITS AS REQUIRED. MATCH EXISTING BRANCH WIRING METHOD.
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- ALL CONDUITS AND WIRING IN FINISHED AREAS AND AREAS WITH SUSPENDED TILE OR WHITE GYPSUM BOARD CEILINGS SHALL BE RUN CONCEALED.
- ALL CONDUITS AND WIRING IN OPEN CEILING AREAS SHALL BE RUN TIGHT TO THE UNDERSIDE OF THE CEILING DECK. DO NOT SUSPEND CONDUITS MID-SPAN.
- ALL LIGHT SWITCHES SHALL BE ROCKER STYLE, DECORA TYPE, WHITE WITH MATCHING COVERPLATE. VOLTAGE TO SUIT LOAD CONTROLLED.
- ALL DIMMER SWITCHES SHALL BE LUTRON DIVA TYPE 0-10V DIMMING PROTOCOL OR ELV DIMMING PROTOCOL, WHITE FINISH, RATED FOR CONNECTED LOAD PLUS 25% SPARE CAPACITY WITH MATCHING COVERPLATE, UNLESS NOTED OTHERWISE. PROVIDE CORRECT DIMMER TYPE TO SUIT LOAD CONTROLLED. ALL WIRING REQUIREMENTS PER MANUFACTURER'S RECOMMENDATIONS.
- ALL OCCUPANCY SENSOR SWITCHES SHALL BE DECORA TYPE, WHITE WITH MATCHING COVERPLATE, MANUAL/AUTO CONTROL, COLOUR WHITE, FLUSH MOUNTED. DUAL TECHNOLOGY, 120V OR 347V VOLTAGE RATING TO SUIT LOAD CONTROLLED, UNLESS NOTED OTHERWISE. PROVIDE GANGED COVERPLATE WHERE THERE ARE MORE THAN ONE (1) SWITCH.
- ALL OCCUPANCY SENSOR DIMMER SWITCHES SHALL BE DECORA TYPE, DUAL TECHNOLOGY SINGLE CIRCUIT WALL SWITCH TYPE OCCUPANCY SENSOR, 120V RATED, MANUAL/AUTO CONTROL, COLOUR WHITE, FLUSH MOUNTED. VOLTAGE RATING TO SUIT LOAD CONTROLLED, UNLESS NOTED OTHERWISE. PROVIDE MATCHING COVERPLATE. PROVIDE GANGED COVERPLATE WHERE THERE ARE MORE THAN ONE (1) DIMMER SWITCH.
- SINGLE LIGHT SWITCHES OR OCCUPANCY SENSOR SWITCHES SHALL CONTROL ALL LIGHTING WITHIN ROOM EXCEPT AS NOTED OTHERWISE. WHERE MULTIPLE SWITCHES ARE SHOWN EACH SWITCH TO CONTROL INDICATED ZONE.
- ALL LIGHT SWITCHES AND DIMMER SWITCHES SHOWN ARE NEW, UNLESS NOTED OTHERWISE. CONTRACTOR MAY BE PERMITTED TO RE-USE EXISTING BACK BOXES IF LOCATIONS ARE SUFFICIENTLY OTHERWISE NEW BACK BOXES SHALL BE PROVIDED.
- ALL NORMAL POWER LIGHTING CIRCUITS SHALL BE CONTROLLED THROUGH THE BASE BUILDING LOW VOLTAGE RELAY SYSTEM. CONTRACTOR SHALL MODIFY THESE RELAYS/CONTACTORS AND RE-WIRE ENTIRE LIGHTING SYSTEM AS REQUIRED AND/OR AS INDICATED.
- EMERGENCY LIGHTING LAYOUT SHOWN IS THE FINAL REQUIRED. THE CONTRACTOR SHALL VERIFY THE EXISTING EMERGENCY LIGHTING FIXTURE LOCATIONS ON SITE AND SHALL RELOCATE AS REQUIRED TO SUIT THE FINAL EMERGENCY LIGHTING LAYOUT SHOWN.
- PROVIDE CHAIN SUSPENSION TO CEILING SLAB/DECK OF ALL NEW AND RELOCATED LIGHTING FIXTURES THROUGHOUT.

DRAWING REFERENCE NOTES:

- ALL NEW EXIT SIGNS SHALL BE EDGE-LIT PICTOGRAM TYPE, TO MATCH THE ONES IN EXISTING CERIDIAN SPACE. CONNECT EXIT SIGNS TO EXISTING ON FLOOR EXIT SIGN CIRCUIT. EXTEND, RE-WORK AND/OR PROVIDE NEW WIRING AND CONDUIT TO SUIT. DO NOT OVERLOAD CIRCUIT. PROVIDE NEW CIRCUIT BREAKER AND BRANCH WIRING AS REQUIRED.
- EXISTING EXIT SIGN IN RELOCATED POSITION. EXTEND AND/OR REWORK EXISTING WIRING AND CONDUIT TO SUIT. REFER TO DRAWING E-2.0 FOR EXISTING POSITION.
- EXISTING MASTER SWITCHES IN RELOCATED POSITION. EXTEND AND/OR REWORK EXISTING WIRING AND CONDUIT TO SUIT. REFER TO DRAWING E-2.0 FOR EXISTING POSITION. MASTER SWITCHES "M1", "M2" AND "M3" SHALL CONTROL NORMAL POWER LIGHTING OF THE RESPECTIVE AREAS SHOWN. RE-WORK EXISTING LUMINAIRE BRANCH CIRCUITING AS REQUIRED TO SUIT.
- EXISTING FIRE ALARM SPEAKER IN RELOCATED POSITION. EXTEND AND/OR REWORK EXISTING WIRING AND CONDUIT TO SUIT. REFER TO DRAWING E-2.0 FOR EXISTING POSITION.
- 347V-120V STEP DOWN EPOXY ENCAPSULATED WEATHER PROOF TRANSFORMER TO BE LOCATED IN ACCESSIBLE CEILING. CONTRACTOR TO COORDINATE ON SITE FOR EXACT LOCATION. RE-USE EXISTING NEAREST AVAILABLE 347V NORMAL LIGHTING CIRCUIT, AND CONNECT TO PRIMARY SIDE OF TRANSFORMER. RE-WORK AND/OR PROVIDE NEW BRANCH CIRCUITING TO SUIT. STEP DOWN TRANSFORMER SHALL FEED 120V NORMAL POWER LUMINAIRES IN ROOMS 4018, 4020, AND 4021.
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- 347V-120V STEP DOWN EPOXY ENCAPSULATED WEATHER PROOF TRANSFORMER TO BE LOCATED IN ACCESSIBLE CEILING. CONTRACTOR TO COORDINATE ON SITE FOR EXACT LOCATION. RE-USE EXISTING NEAREST AVAILABLE 347V EMERGENCY LIGHTING CIRCUIT, AND CONNECT TO PRIMARY SIDE OF TRANSFORMER. RE-WORK AND/OR PROVIDE NEW BRANCH CIRCUITING TO SUIT. STEP DOWN TRANSFORMER SHALL FEED ALL 120V EMERGENCY POWER LUMINAIRES NORTHEAST AREA.
- 347V-120V STEP DOWN EPOXY ENCAPSULATED WEATHER PROOF TRANSFORMERS TO BE LOCATED IN ACCESSIBLE CEILING. CONTRACTOR TO COORDINATE ON SITE FOR EXACT LOCATION. RE-USE EXISTING NEAREST AVAILABLE 347V NORMAL LIGHTING CIRCUIT, AND CONNECT TO PRIMARY SIDE OF TRANSFORMER. RE-WORK AND/OR PROVIDE NEW BRANCH CIRCUITING TO SUIT. STEP DOWN TRANSFORMER SHALL FEED 120V NORMAL POWER LUMINAIRES IN NORTHEAST OPEN AREA. BALANCE THE LOAD TO TWO (2) TRANSFORMERS SO NO TRANSFORMER WILL BE OVERLOADED.



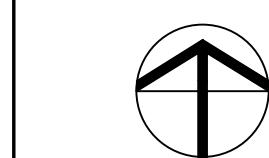
Revision:			
No.	Date	By	Description

GENERAL NOTES

DO NOT SCALE DRAWINGS.

DO NOT SCALE DRAWINGS.

DOI: 10.1002/for



Project No.: 10157 (ME#23027)	Drawn By: CAD
Date: 21AUG23	Checked By: PC
Scale: 1/8"=1'-0"	

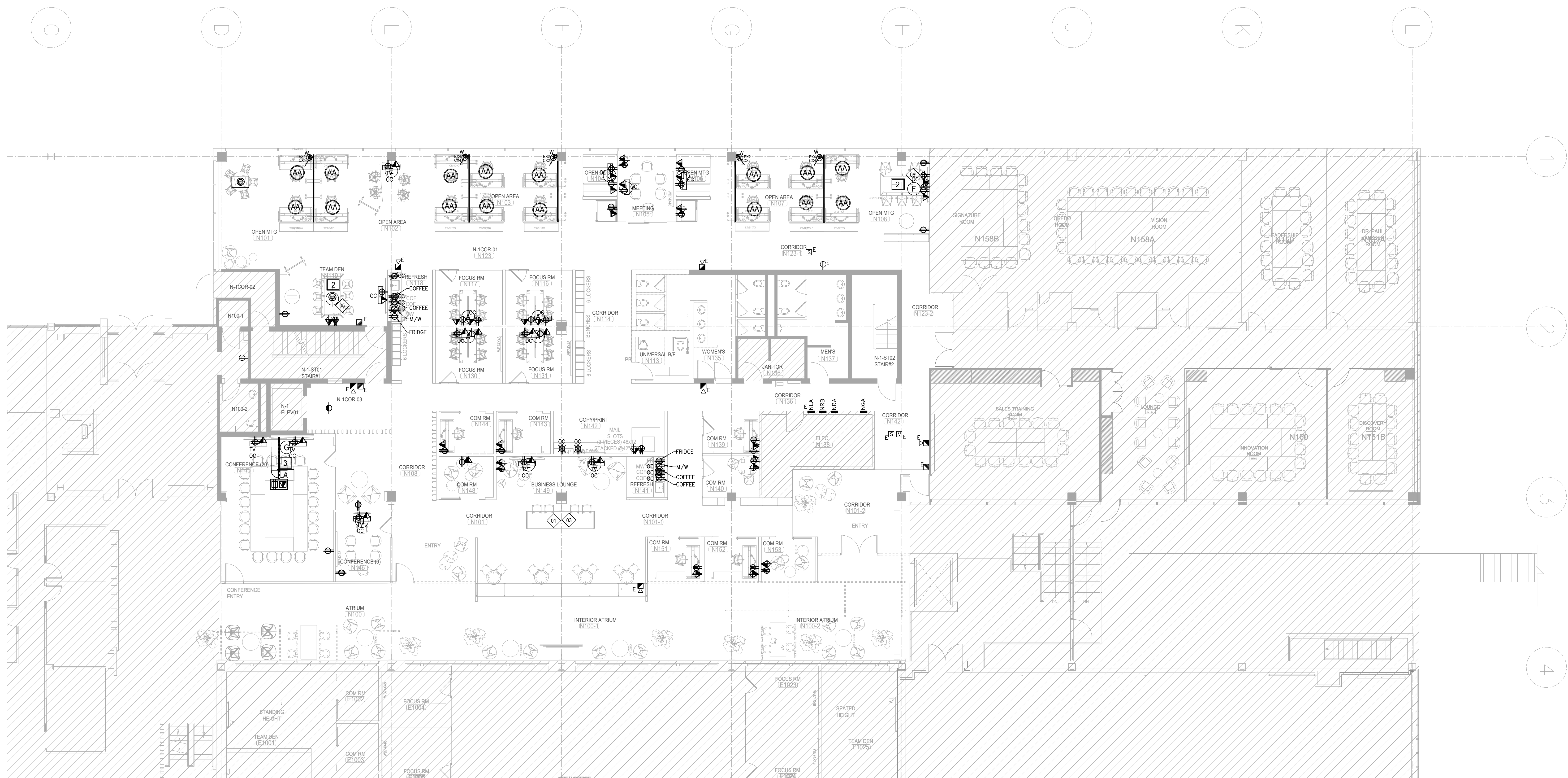
Drawing Title:
GROUND FLOOR
POWER & SYSTEMS - DEMOLITION

Dwg No:

E-03-0

- N-1 ELECTRICAL CONTRACTOR SHALL BE RESPONSIBLE TO DISCONNECT AND REMOVE ALL EXISTING VOLTAGE AND DATA CABLES THROUGHOUT ENTIRE PROJECT AREA. EXISTING CABLEING SHALL NOT BE RE-USED.
- N-2 EXISTING SURFACE MOUNT PANEL TO BE REMOVED, CUT THE WIRING BACK TO THE SOURCE. THESE PANELS MAY NEED TO BE REINSTALLED IF THE EXISTING PANELS IN ELECTRICAL ROOM DO NOT HAVE SUFFICIENT CIRCUITS OR OVERLOAD. STORE THESE PANELS UNTIL THE COMPLETE OF THE PROJECT.
- N-3 EXISTING SUMP PUMP POWER CONNECTION TO BE RELOCATED. REFER TO DRAWING E-3.1 FOR DETAIL.
- N-4 RELOCATE EXISTING RECEPTACLE TO NEW FURRED OUT WALL. REFER TO DRAWING E-3.1 FOR DETAIL.
- N-5 DISCONNECT POWER CONNECTION FOR EXISTING FLOOR MOUNTED AC UNIT. COORDINATE ALL WORK WITH OWNER. CONTRACTOR SHALL PROVIDE ALL NECESSARY LABOUR AND MATERIAL TO SITE INVESTIGATE EXACT PANEL SOURCE CURRENTLY FEEDING THE EQUIPMENT. PULL ALL WIRING AND CONDUIT BACK TO SOURCE, OR LAST EQUIPMENT TO REMAIN, AND REMOVE. PROVIDE UPDATED TYPED PANEL DIRECTORY.
- N-6 DISCONNECT AND REMOVE ASSOCIATED WIREMOLD RACEWAY WHERE APPLICABLE.
- N-7 REMOVE THE DATA OUTLET AND EXISTING COMM CABLE. PROVIDE BLANK COVER PLATE IF THE DATA OUTLET AND POWER RECEPTACLE ARE USING A GANGED COVERPLATE. IF THEY ARE NOT GANGED, REMOVE THE DATA CABLEBOX AS WELL.

1. EXACT LOCATION OF ALL EXISTING RECEPTACLES AND OTHER DEVICES/EQUIPMENT SHALL BE CONFIRMED ON SITE.
2. ALL RECEPTACLES AND OTHER DEVICES/EQUIPMENT SHOWN ON THIS DRAWING ARE EXISTING TO BE DISCONNECTED AND REMOVED UNLESS OTHERWISE SHOWN WITH AN "E" TO REMAIN OR NOTED. CUT BACK AND REMOVE ALL UNUSED CONDUITS AND WIRING BACK TO SOURCE PANEL. REMOVE ALL DEVICES AND WIRING FROM WALLS THAT ARE TO BE DEMOLISHED. ALL EXISTING DEVICES AND WIRING THAT ARE TO BE DEMOLISHED ARE NOT NECESSARILY SHOWN. CONTRACTOR SHALL VISIT THE SITE DURING TENDER PERIOD TO ASCERTAIN THE FULL SCOPE OF DEMOLITION.
3. ALL EXISTING RECEPTACLES AND DEVICES/EQUIPMENT ON WALLS TO BE DEMOLISHED SHALL ALSO BE REMOVED. THESE DEVICES MAY NOT ALL NECESSARILY BE INDICATED ON THIS PLAN. CONTRACTOR SHALL VISIT THE SITE DURING TENDER PERIOD TO ASCERTAIN THE FULL SCOPE OF DEMOLITION. CONTRACTOR SHALL BE RESPONSIBLE FOR REMOVING ALL SUCH ITEMS AS REQUIRED TO FACILITATE THE COMPLETE DEMOLITION.
4. WHERE RECEPTACLES AND DEVICES/EQUIPMENT ARE REMOVED, CUT BACK AND REMOVE CONDUIT AND WIRING THAT IS NO LONGER REQUIRED BACK TO SOURCE PANEL, OR LAST DEVICE TO REMAIN AND REMOVE.
5. ALL EXISTING ELECTRICAL EQUIPMENT OR DEVICES WHICH IS NO LONGER REQUIRED SHALL BE REMOVED AND DISPOSED OF OFF SITE.
6. WHERE REMOVAL OF RECEPTACLES, DEVICES/EQUIPMENT AFFECTS THE OPERATION OF EXISTING RECEPTACLES, DEVICES/EQUIPMENT TO REMAIN, THE CONTRACTOR SHALL REPLACE/MAKE GOOD BRANCH WIRING AS REQUIRED TO ENSURE CONTINUITY OF OPERATION OF REMAINING RECEPTACLES, DEVICES/EQUIPMENT.
7. NOT ALL MECHANICAL EQUIPMENT TO BE REMOVED IS NECESSARILY INDICATED ON THIS PLAN. REFER TO THE MECHANICAL DRAWINGS FOR EXTENT OF MECHANICAL DEMOLITION WORK. DISCONNECT EXISTING MECHANICAL EQUIPMENT WHICH IS BEING REMOVED. CUT BACK CONDUIT AND WIRING TO SOURCE ELECTRICAL PANEL. MAINTAIN ELECTRICAL SERVICES TO EXISTING MECHANICAL EQUIPMENT WHICH IS TO REMAIN IN SERVICE. REPLACE BRANCH WIRING AS NEEDED.
8. INCLUDE FOR THE REMOVAL OF ANY EXISTING REDUNDANT HORIZONTAL COMMUNICATIONS CABLING, CABLING NOT SHOWN, VERIFY EXTENT OF THE WORK DURING TENDER PERIOD. COORDINATE WITH GENERAL CONTRACTOR TO HAVE THE COMMUNICATIONS CONTRACTOR VERIFY IF ANY EXISTING CABLING IS LIVE AND SHOULD REMAIN.
9. REMOVE ALL REDUNDANT LINE VOLTAGE AND LOW VOLTAGE CONDUIT AND WIRING SPACE WHICH IS NOT IN USE.
10. CONTRACTOR SHALL BE AWARE THAT NOT ALL EXISTING EQUIPMENT AND DEVICES REQUIRED TO BE REMOVED ARE NECESSARILY INDICATED ON THIS PLAN. CONTRACTOR SHALL STILL BE RESPONSIBLE FOR REMOVING ALL SUCH ITEMS AS REQUIRED TO FACILITATE THE COMPLETE DEMOLITION.
11. REFER TO NEW PLAN FOR NEW LOCATION OF RELOCATED DEVICES AND EQUIPMENT.

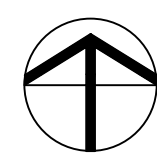


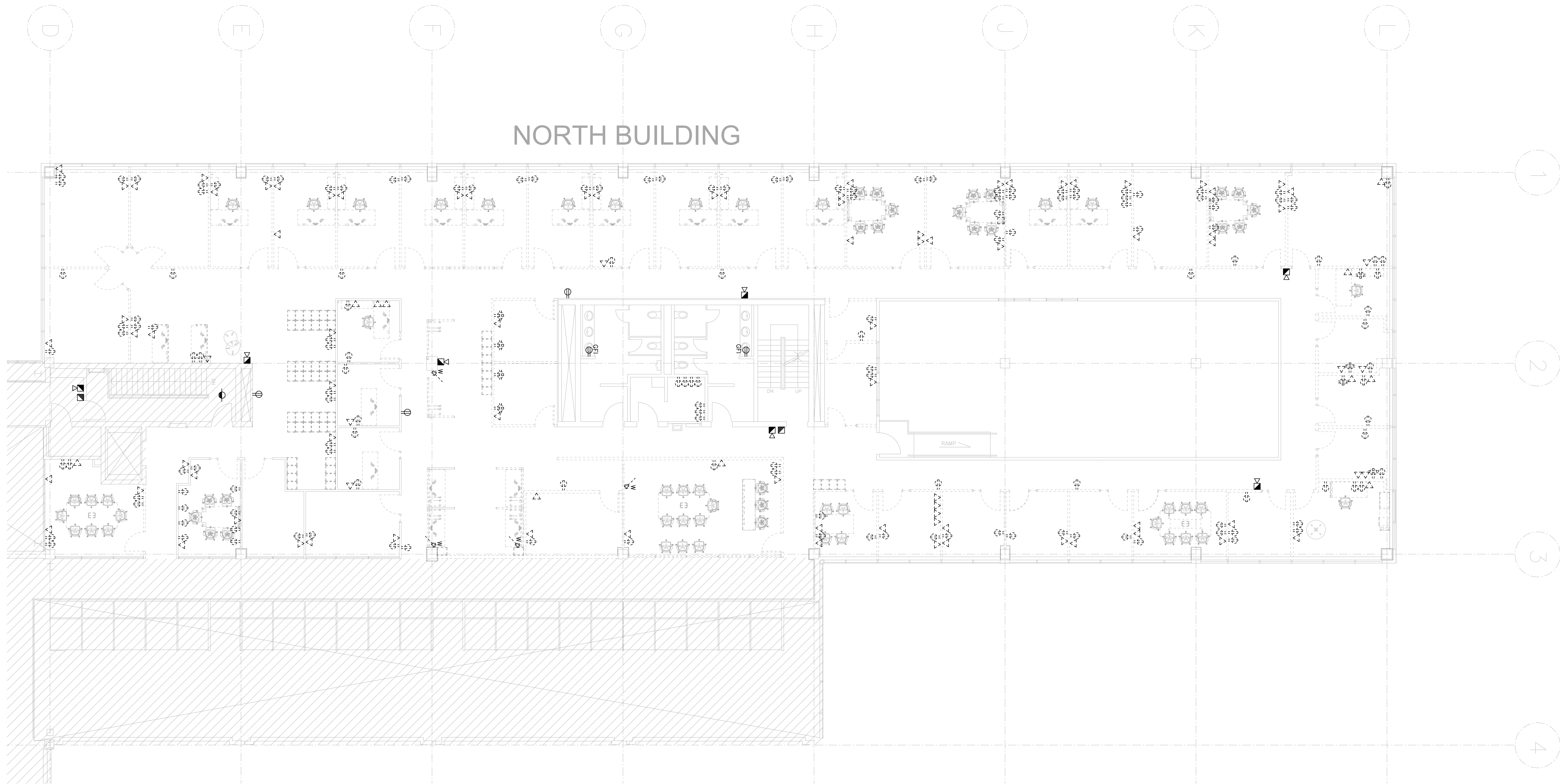
DRAWING REFERENCE NOTES:

- N-1 OVER COUNTER RECEPTACLES TO BE MOUNTED HORIZONTALLY AT THE BACK SPLASH.
- N-2 RE-USE EXISTING BRANCH CIRCUIT PREVIOUSLY FEEDING SUMP PUMP FOR THE NEW SUMP PUMP LOCATION. EXTEND, RE-WORK AND/OR PROVIDE NEW WIRING AND CONDUIT TO SUIT.
- N-3 EXISTING RECEPTACLE AT RELOCATED POSITION TO SUIT NEW FURRED OUT WALL. RE-WORK AND/OR PROVIDE NEW WIRING AND CONDUIT TO SUIT.
- N-4 RECEPTACLE SHALL BE SURFACE MOUNTED ON THE TABLE LEG. COORDINATE EXACT LOCATION WITH ARCHITECT/OWNER ON SITE PRIOR TO COMMENCEMENT OF WORK. THIS IS TYPICAL FOR ALL ROOMS WHERE TABLE IS LOCATED IN THE CENTRE OF THE ROOM. REFER TO DETAILS IN DRAWING E-4.3 FOR ADDITIONAL INFORMATION.
- N-5 CONDUIT FOR COMMS SHALL BE STUBBED UP AT FLOOR LEVEL. COORDINATE EXACT STUB UP LOCATION WITH ARCHITECT/OWNER ON SITE PRIOR TO COMMENCEMENT OF WORK. THIS IS TYPICAL FOR ALL ROOMS WHERE TABLE IS LOCATED IN THE CENTRE OF THE ROOM. REFER TO DETAILS IN DRAWING E-4.3 FOR ADDITIONAL INFORMATION.

DRAWING GENERAL NOTES:

- REFER TO THE ARCHITECT'S DRAWINGS FOR THE EXACT LOCATION AND MOUNTING HEIGHT OF ALL RECEPTACLES AND COMMUNICATIONS OUTLET BOXES. WHERE THIS INFORMATION IS NOT INDICATED HAVE THE OWNER OR ARCHITECT VERIFY EXACT LOCATIONS ON SITE PRIOR TO ROUGHING IN. DO NOT SCALE LOCATIONS FROM ELECTRICAL DRAWINGS. OUTLETS INSTALLED WITHOUT APPROVED LOCATIONS SHALL BE RELOCATED AT THE CONTRACTOR'S EXPENSE.
- ALL RECEPTACLES AND COMMUNICATIONS OUTLET BOXES SHALL BE MOUNTED AT 16" AFF AS MEASURED TO THE CENTRE-LINE OF THE DEVICE UNLESS OTHERWISE NOTED IN ARCHITECTURAL DRAWINGS.
- REPORT ANY DISCREPANCIES BETWEEN THIS PLAN AND THE ARCHITECT'S POWER AND COMMUNICATIONS PLAN TO THE CONSULTANT PRIOR TO ROUGHING IN ANY SERVICES.
- ALL DUPLEX RECEPTACLES SHALL BE DECORA TYPE, WHITE FINISH. PROVIDE WITH MATCHING WHITE COLOUR COVERPLATE. REPLACE ALL EXISTING DUPLEX RECEPTACLES THAT ARE TO REMAIN WITH NEW DECORA RECEPTACLES AND COVERPLATES AS SPECIFIED.
- WHERE POWER AND COMMUNICATIONS OUTLET BOXES ARE SHOWN ADJACENT TO EACH OTHER PROVIDE GANGED COVERPLATE SIZE AS REQUIRED. REFER TO DETAIL.
- DO NOT INSTALL OUTLETS BACK TO BACK.
- ALL WALL MOUNTED WIRING DEVICE BACK BOXES SHALL BE FLUSH MOUNTED WITH CONDUIT VERTICALLY CONCEALED AND HORIZONTAL CONDUITS SHALL BE TIGHT TO UNDERSIDE OF DECK/SLAB UNLESS OTHERWISE NOTED. IN OPEN CEILING AREAS, TAKE SPECIAL CARE TO NEATLY RUN THE CONDUITS TO NOT BE VISIBLE AS MUCH AS POSSIBLE. SELECT CONDUIT ROUTINGS ACCORDINGLY.
- PROVIDE BLANK WHITE COVERPLATES OVER ALL EXISTING BLANK WALLBOXES THAT ARE TO REMAIN, UNLESS OTHERWISE NOTED.
- IN AREAS WHERE COUNTERS OR OTHER MILLWORK ARE PROVIDED, COORDINATE EXACT LOCATION OF OUTLETS AND WIRING WITH MILLWORK AND ARCHITECT.
- FOR PLUG-IN EQUIPMENT, CONFIRM CSA CONFIGURATION OF REQUIRED RECEPTACLE PRIOR TO PURCHASE AND INSTALLATION.
- SUPPLY AND INSTALL EQUIPMENT DISCONNECT SWITCHES IN STRICT COMPLIANCE WITH CODE REQUIREMENTS (NOT ALL LOCAL DISCONNECT SWITCHES ARE SHOWN).
- PROVIDE ALL EMPTY CONDUITS C/W PULL STRINGS AND BACK BOXES AS REQUIRED TO SUIT THE COMPLETE INSTALLATION OF THE COMMUNICATIONS SYSTEMS (VOICE, DATA, CATV) AND SECURITY SYSTEMS (ACCESS CONTROL AND CCTV).
- ALL EMPTY CONDUITS FOR COMMUNICATIONS OUTLETS SHALL BE TERMINATED WITH BUSHING AT END OF CONDUIT. IN OPEN CEILING AREAS EXTEND ALL EMPTY CONDUITS FOR COMMUNICATIONS SYSTEMS AS REQUIRED SO THAT COMMUNICATIONS CONTRACTOR DOES NOT NEED TO RUN FREE AIR CABLING THAT WILL BE VISIBLE.
- REFER TO MECHANICAL DRAWINGS FOR EXACT LOCATION AND MOUNTING HEIGHT OF ALL HVAC AND PLUMBING EQUIPMENT. CONFIRM EXACT LOCATION OF ALL MECHANICAL EQUIPMENT WITH MECHANICAL CONTRACTOR PRIOR TO ROUGHING IN ELECTRICAL SERVICES.
- STARTER LOAD SIDE WIRING SHALL BE THE SAME AS LINE SIDE WIRING.
- ALL STARTERS AND PUMP CONTROLLERS SUPPLIED BY MECHANICAL CONTRACTOR. ELECTRICAL CONTRACTOR TO PROVIDE ALL LINE AND LOAD SIDE POWER WIRING AND CONDUIT, AND REQUIRED ISOLATION SWITCH AT THE MOTOR.
- ELECTRICAL CONTRACTOR SHALL PROVIDE 15A, 120V JUNCTION BOX OUTLETS MOUNTED IN CEILING SPACE FOR USE BY THE MECHANICAL CONTRACTOR FOR CONTROLS POWER. THE LOCATIONS SHALL BE AS INDICATED ON THIS DRAWING. ALL LOAD SIDE 120V TERMINATIONS SHALL BE PROVIDED BY MECHANICAL CONTRACTOR.
- PROVIDE NEW EVAC SPEAKERS WHERE INDICATED AND CONNECT TO EXISTING SPEAKER CIRCUITS AND EXTEND WIRING AS REQUIRED. VERIFY CIRCUIT LOADING WITH FIRE ALARM MANUFACTURER AND PROVIDE NEW CIRCUITS AND/OR ADDITIONAL AMPLIFICATION EQUIPMENT AS REQUIRED. RUN NEW CIRCUITS TO FIRE ALARM DCP. NEW SPEAKERS TO MATCH EXISTING.
- CIRCUITING SHOWN IS FOR GROUPING PURPOSES ONLY. THE CONTRACTOR SHALL VERIFY EXACT CIRCUIT NUMBERS TO BE USED ON SITE AND SHALL INDICATE EXACT NUMBERS USED ON THE AS-BUILT DRAWINGS.





DRAWING REFERENCE NOTES:

- N-1** ELECTRICAL CONTRACTOR SHALL BE RESPONSIBLE TO DISCONNECT AND REMOVE ALL EXISTING VOICE AND DATA CABLING THROUGHOUT ENTIRE PROJECT AREA. EXISTING CABLING SHALL NOT BE RE-USED.
- N-2** EXISTING SURFACE MOUNT PANEL TO BE REMOVED, CUT THE WIRING BACK TO THE SOURCE PANEL. THESE PANELS MAY NEED TO BE REINSTALLED IF THE EXISTING PANELS IN ELECTRICAL ROOM DO NOT HAVE SUFFICIENT CIRCUITS OR OVERLOAD. STORE THESE PANELS UNTIL THE COMPLETE OF THE PROJECT.
- N-3** EXISTING SLUMP PUMP POWER CONNECTION TO BE RELOCATED. REFER TO DRAWING E-3.1 FOR DETAIL.
- N-4** RELOCATE EXISTING RECEPTACLE TO NEW FURRED OUT WALL. REFER TO DRAWING E-3.1 FOR DETAIL.
- N-5** DISCONNECT POWER CONNECTION FOR EXISTING FLOOR MOUNTED AC UNIT. COORDINATE ALL WORK WITH OWNER. CONTRACTOR SHALL PROVIDE ALL NECESSARY LABOUR AND MATERIAL TO SITE. INVESTIGATE EXACT PANEL SOURCE CURRENTLY FEEDING THE EQUIPMENT. PULL ALL WIRING AND CONDUIT BACK TO SOURCE, OR LAST EQUIPMENT TO REMAIN, AND REMOVE. PROVIDE UPDATED TYPED PANEL DIRECTORY.
- N-6** DISCONNECT AND REMOVE ASSOCIATED WIREMOLD RACEWAY WHERE APPLICABLE.
- N-7** REMOVE THE DATA OUTLET AND EXISTING COMM. CABLE. PROVIDE BLANK COVER PLATE IF THE DATA OUTLET AND POWER RECEPTACLE ARE USING A GANGED COVERPLATE. IF THEY ARE NOT GANGED, REMOVE THE DATA BACKBOX AS WELL.

DRAWING GENERAL NOTES:

- EXACT LOCATION OF ALL EXISTING RECEPTACLES AND OTHER DEVICES/EQUIPMENT SHALL BE CONFIRMED ON SITE.
- ALL RECEPTACLES AND OTHER DEVICES/EQUIPMENT SHOWN ON THIS DRAWING ARE EXISTING TO BE DISCONNECTED AND REMOVED UNLESS OTHERWISE SHOWN WITH AN 'E' TO REMAIN OR NOTED. CUT BACK AND REMOVE ALL UNUSED CONDUITS AND WIRING BACK TO SOURCE PANEL. REMOVE ALL DEVICES AND WIRING FROM WALLS THAT ARE TO BE DEMOLISHED. ALL EXISTING DEVICES AND WIRING THAT ARE TO BE DEMOLISHED ARE NOT NECESSARILY SHOWN. CONTRACTOR SHALL VISIT THE SITE DURING TENDER PERIOD TO ASCERTAIN THE FULL SCOPE OF DEMOLITION.
- ALL EXISTING RECEPTACLES AND DEVICES/EQUIPMENT ON WALLS TO BE DEMOLISHED SHALL ALSO BE REMOVED. THESE DEVICES MAY NOT ALL NECESSARILY BE INDICATED ON THIS PLAN. CONTRACTOR SHALL VISIT THE SITE DURING TENDER PERIOD TO ASCERTAIN THE FULL SCOPE OF DEMOLITION. CONTRACTOR SHALL BE RESPONSIBLE FOR REMOVING ALL SUCH ITEMS AS REQUIRED TO FACILITATE THE COMPLETE DEMOLITION.
- WHERE RECEPTACLES AND DEVICES/EQUIPMENT ARE REMOVED, CUT BACK AND REMOVE CONDUIT AND WIRING THAT IS NO LONGER REQUIRED BACK TO SOURCE PANEL, OR LAST DEVICE TO REMAIN AND REMOVE.
- ALL EXISTING ELECTRICAL EQUIPMENT OR DEVICE WHICH IS NO LONGER REQUIRED SHALL BE REMOVED AND DISPOSED OF OFF SITE.
- WHERE REMOVAL OF RECEPTACLES, DEVICES/EQUIPMENT AFFECTS THE OPERATION OF EXISTING RECEPTACLES, DEVICES/EQUIPMENT TO REMAIN, THE CONTRACTOR SHALL REPLACE/MAKE GOOD BRANCH WIRING AS REQUIRED TO ENSURE CONTINUITY OF OPERATION OF REMAINING RECEPTACLES, DEVICES/EQUIPMENT.
- NOT ALL MECHANICAL EQUIPMENT TO BE REMOVED IS NECESSARILY INDICATED ON THIS PLAN. REFER TO THE MECHANICAL DRAWINGS FOR EXTENT OF MECHANICAL DEMOLITION WORK. DISCONNECT EXISTING MECHANICAL EQUIPMENT WHICH IS BEING REMOVED. CUT BACK CONDUIT AND WIRING TO SOURCE ELECTRICAL PANEL. MAINTAIN ELECTRICAL SERVICES TO EXISTING MECHANICAL EQUIPMENT WHICH IS TO REMAIN IN SERVICE. REPLACE BRANCH WIRING AS NEEDED.
- INCLUDE FOR THE REMOVAL OF ANY EXISTING REDUNDANT HORIZONTAL COMMUNICATIONS CABLING, CABLING NOT SHOWN. VERIFY EXTENT OF THE WORK DURING TENDER PERIOD. COORDINATE WITH GENERAL CONTRACTOR TO HAVE THE COMMUNICATIONS CONTRACTOR VERIFY IF ANY EXISTING CABLING IS LIVE AND SHOULD REMAIN.
- REMOVE ALL REDUNDANT LINE VOLTAGE AND LOW VOLTAGE CONDUIT AND WIRING SPACE WHICH IS NOT IN USE.
- CONTRACTOR SHALL BE AWARE THAT NOT ALL EXISTING EQUIPMENT AND DEVICES REQUIRED TO BE REMOVED ARE NECESSARILY INDICATED ON THIS PLAN. CONTRACTOR SHALL STILL BE RESPONSIBLE FOR REMOVING ALL SUCH ITEMS AS REQUIRED TO FACILITATE THE COMPLETE DEMOLITION.
- REFER TO NEW PLAN FOR NEW LOCATION OF RELOCATED DEVICES AND EQUIPMENT.

DRAWING REFERENCE NOTES:

- N-1
- OVER COUNTER RECEPTACLES TO BE MOUNTED HORIZONTALLY AT THE BACK SPLASH.
- N-2
- RE-USE EXISTING BRANCH CIRCUIT PREVIOUSLY FEEDING SUMP PUMP FOR THE NEW SUMP PUMP LOCATION. EXTEND, RE-WORK AND/OR PROVIDE NEW WIRING AND CONDUIT TO SUIT.
- N-3
- EXISTING RECEPTACLE AT RELOCATED POSITION TO SUIT NEW FURRED OUT WALL. RE-WORK AND/OR PROVIDE NEW WIRING AND CONDUIT TO SUIT.
- N-4
- RECEPTACLE SHALL BE SURFACE MOUNTED ON THE TABLE LEG. COORDINATE EXACT LOCATION WITH ARCHITECT/OWNER ON SITE PRIOR TO COMMENCEMENT OF WORK. THIS IS TYPICAL FOR ALL ROOMS WHERE TABLE IS LOCATED IN THE CENTRE OF THE ROOM. REFER TO DETAILS IN DRAWING E-4.3 FOR ADDITIONAL INFORMATION.
- N-5
- CONDUIT FOR COMMS SHALL BE STUBBED UP AT FLOOR LEVEL. COORDINATE EXACT STUB UP LOCATION WITH ARCHITECT/OWNER ON SITE PRIOR TO COMMENCEMENT OF WORK. THIS IS TYPICAL FOR ALL ROOMS WHERE TABLE IS LOCATED IN THE CENTRE OF THE ROOM. REFER TO DETAILS IN DRAWING E-4.3 FOR ADDITIONAL INFORMATION.

DRAWING GENERAL NOTES:

- REFER TO THE ARCHITECT'S DRAWINGS FOR THE EXACT LOCATION AND MOUNTING HEIGHT OF ALL RECEPTACLES AND COMMUNICATIONS OUTLET BOXES. WHERE THIS INFORMATION IS NOT INDICATED HAVE THE OWNER OR ARCHITECT VERIFY EXACT LOCATIONS ON SITE PRIOR TO ROUGHING IN. DO NOT SCALE LOCATIONS FROM ELECTRICAL DRAWINGS. OUTLETS INSTALLED WITHOUT APPROVED LOCATIONS SHALL BE RELOCATED AT THE CONTRACTOR'S EXPENSE.
- ALL RECEPTACLES AND COMMUNICATIONS OUTLET BOXES SHALL BE MOUNTED AT 16" AFF AS MEASURED TO THE CENTRE-LINE OF THE DEVICE UNLESS OTHERWISE NOTED IN ARCHITECTURAL DRAWINGS.
- REPORT ANY DISCREPANCIES BETWEEN THIS PLAN AND THE ARCHITECT'S POWER AND COMMUNICATIONS PLAN TO THE CONSULTANT PRIOR TO ROUGHING IN ANY SERVICES.
- ALL DUPLEX RECEPTACLES SHALL BE DECORA TYPE, WHITE FINISH. PROVIDE WITH MATCHING WHITE COLOUR COVERPLATE. REPLACE ALL EXISTING DUPLEX RECEPTACLES THAT ARE TO REMAIN WITH NEW DECORA RECEPTACLES AND COVERPLATES AS SPECIFIED.
- WHERE POWER AND COMMUNICATIONS OUTLET BOXES ARE SHOWN ADJACENT TO EACH OTHER PROVIDE GANGED COVERPLATE SIZE AS REQUIRED. REFER TO DETAIL.
- DO NOT INSTALL OUTLETS BACK TO BACK.
- ALL WALL MOUNTED WIRING DEVICE BACK BOXES SHALL BE FLUSH MOUNTED WITH CONDUIT VERTICALLY CONCEALED AND HORIZONTAL CONDUITS SHALL BE TIGHT TO UNDERSIDE OF DECK/SLAB UNLESS OTHERWISE NOTED. IN OPEN CEILING AREAS, TAKE SPECIAL CARE TO NEATLY RUN THE CONDUITS TO NOT BE VISIBLE AS MUCH AS POSSIBLE. SELECT CONDUIT ROUTINGS ACCORDINGLY.
- PROVIDE BLANK WHITE COVERPLATES OVER ALL EXISTING BLANK WALLBOXES THAT ARE TO REMAIN, UNLESS OTHERWISE NOTED.
- IN AREAS WHERE COUNTERS OR OTHER MILLWORK ARE PROVIDED, COORDINATE EXACT LOCATION OF OUTLETS AND WIRING WITH MILLWORK AND ARCHITECT.
- FOR PLUG-IN EQUIPMENT, CONFIRM CSA CONFIGURATION OF REQUIRED RECEPTACLE PRIOR TO PURCHASE AND INSTALLATION.
- SUPPLY AND INSTALL EQUIPMENT DISCONNECT SWITCHES IN STRICT COMPLIANCE WITH CODE REQUIREMENTS (NOT ALL LOCAL DISCONNECT SWITCHES ARE SHOWN).
- PROVIDE ALL EMPTY CONDUITS C/W PULL STRINGS AND BACK BOXES AS REQUIRED TO SUIT THE COMPLETE INSTALLATION OF THE COMMUNICATIONS SYSTEMS (VOICE, DATA, CATV) AND SECURITY SYSTEMS (ACCESS CONTROL AND CCTV).
- ALL EMPTY CONDUITS FOR COMMUNICATIONS OUTLETS SHALL BE TERMINATED WITH BUSHING AT END OF CONDUIT. IN OPEN CEILING AREAS EXTEND ALL EMPTY CONDUITS FOR COMMUNICATIONS SYSTEMS AS REQUIRED SO THAT COMMUNICATIONS CONTRACTOR DOES NOT NEED TO RUN FREE AIR CABLEING THAT WILL BE VISIBLE.
- REFER TO MECHANICAL DRAWINGS FOR EXACT LOCATION AND MOUNTING HEIGHT OF ALL HVAC AND PLUMBING EQUIPMENT. CONFIRM EXACT LOCATION OF ALL MECHANICAL EQUIPMENT WITH MECHANICAL CONTRACTOR PRIOR TO ROUGHING IN ELECTRICAL SERVICES.
- STARTER LOAD SIDE WIRING SHALL BE THE SAME AS LINE SIDE WIRING.
- ALL STARTERS AND PUMP CONTROLLERS SUPPLIED BY MECHANICAL CONTRACTOR. ELECTRICAL CONTRACTOR TO PROVIDE ALL LINE AND LOAD SIDE POWER WIRING AND CONDUIT, AND REQUIRED ISOLATION SWITCH AT THE MOTOR.
- ELECTRICAL CONTRACTOR SHALL PROVIDE 15A, 120V JUNCTION BOX OUTLETS MOUNTED IN CEILING SPACE FOR USE BY THE MECHANICAL CONTROLS CONTRACTOR FOR CONTROLS POWER. THE LOCATIONS SHALL BE AS INDICATED ON THIS DRAWING. ALL LOAD SIDE 120V TERMINATIONS SHALL BE PROVIDED BY MECHANICAL CONTRACTOR.
- PROVIDE NEW EVAC SPEAKERS WHERE INDICATED AND CONNECT TO EXISTING SPEAKER CIRCUITS AND EXTEND WIRING AS REQUIRED. VERIFY CIRCUIT LOADING WITH FIRE ALARM MANUFACTURER AND PROVIDE NEW CIRCUITS AND/OR ADDITIONAL AMPLIFICATION EQUIPMENT AS REQUIRED. RUN NEW CIRCUITS TO FIRE ALARM DGP. NEW SPEAKERS TO MATCH EXISTING.
- CIRCUITING SHOWN IS FOR GROUPING PURPOSES ONLY. THE CONTRACTOR SHALL VERIFY EXACT CIRCUIT NUMBERS TO BE USED ON SITE AND SHALL INDICATE EXACT NUMBERS USED ON THE AS-BUILT DRAWINGS.

Revision:			
No.	Date	By	Description

No.	Date	By	Description
Issue:			

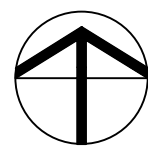
GENERAL NOTES

THIS DRAWING IS THE PROPERTY OF POI AND NOT TO BE REPRODUCED WITHOUT WRITTEN PERMISSION

ALL MEASUREMENTS MUST BE CHECKED AND VERIFIED ON SITE BY CONTRACTOR AND REPORT ANY DISCREPANCIES TO POI BEFORE PROCEEDING WITH THE WORK.

DO NOT SCALE DRAWINGS.

BCIN:



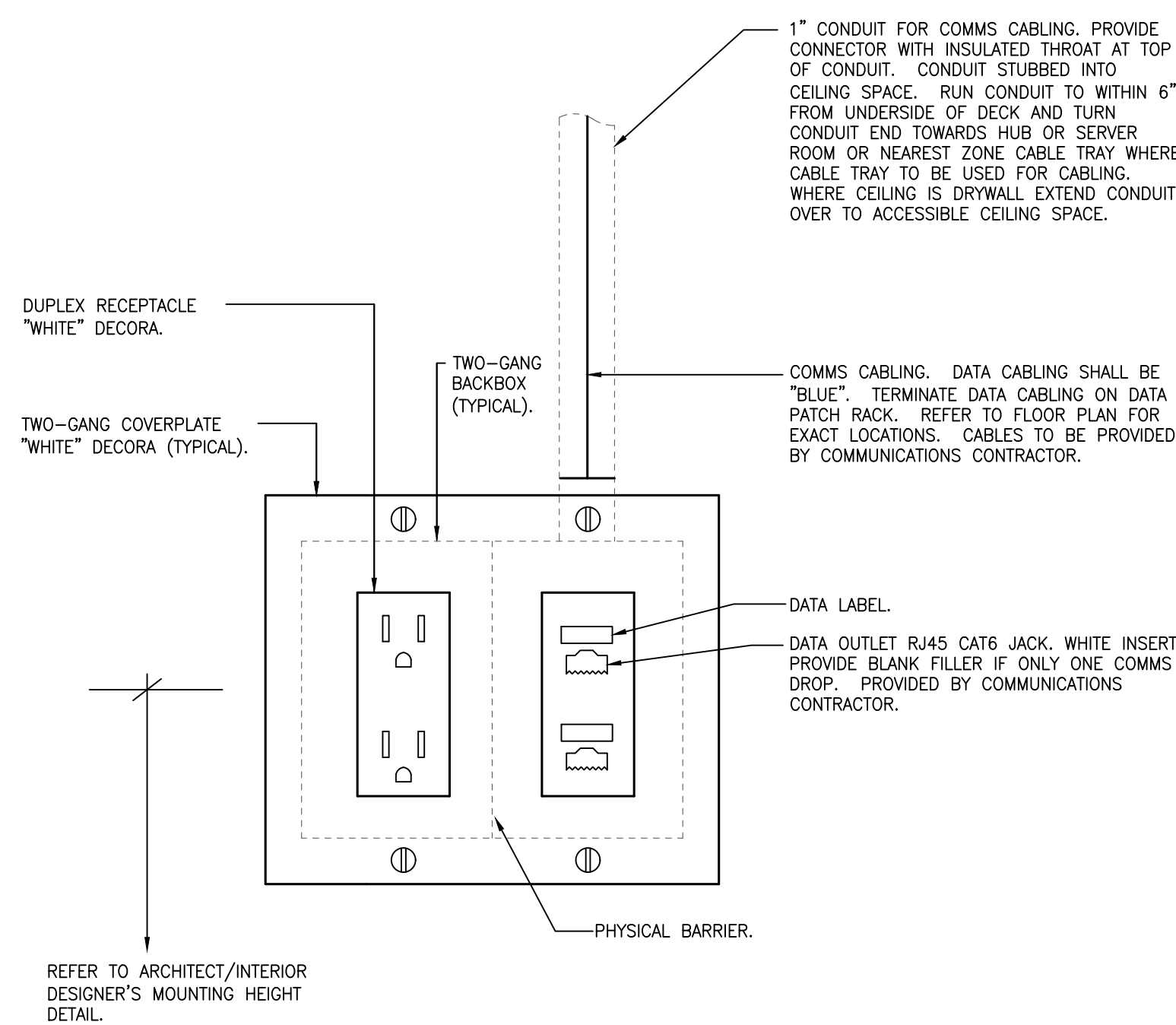
Project Name:
JOHNSON & JOHNSON
NORTH BUILDING
19 GREENBELT DRIVE
TORONTO, ON M3C 1L9

Project No.: 10157 (ME#23027) Date: 21AUG23 Scale: 1/8"=1'-0"	Drawn By: CAD Checked By: PC
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Drawing Title:
SECOND FLOOR
POWER & SYSTEMS - NEW

Dwg No:

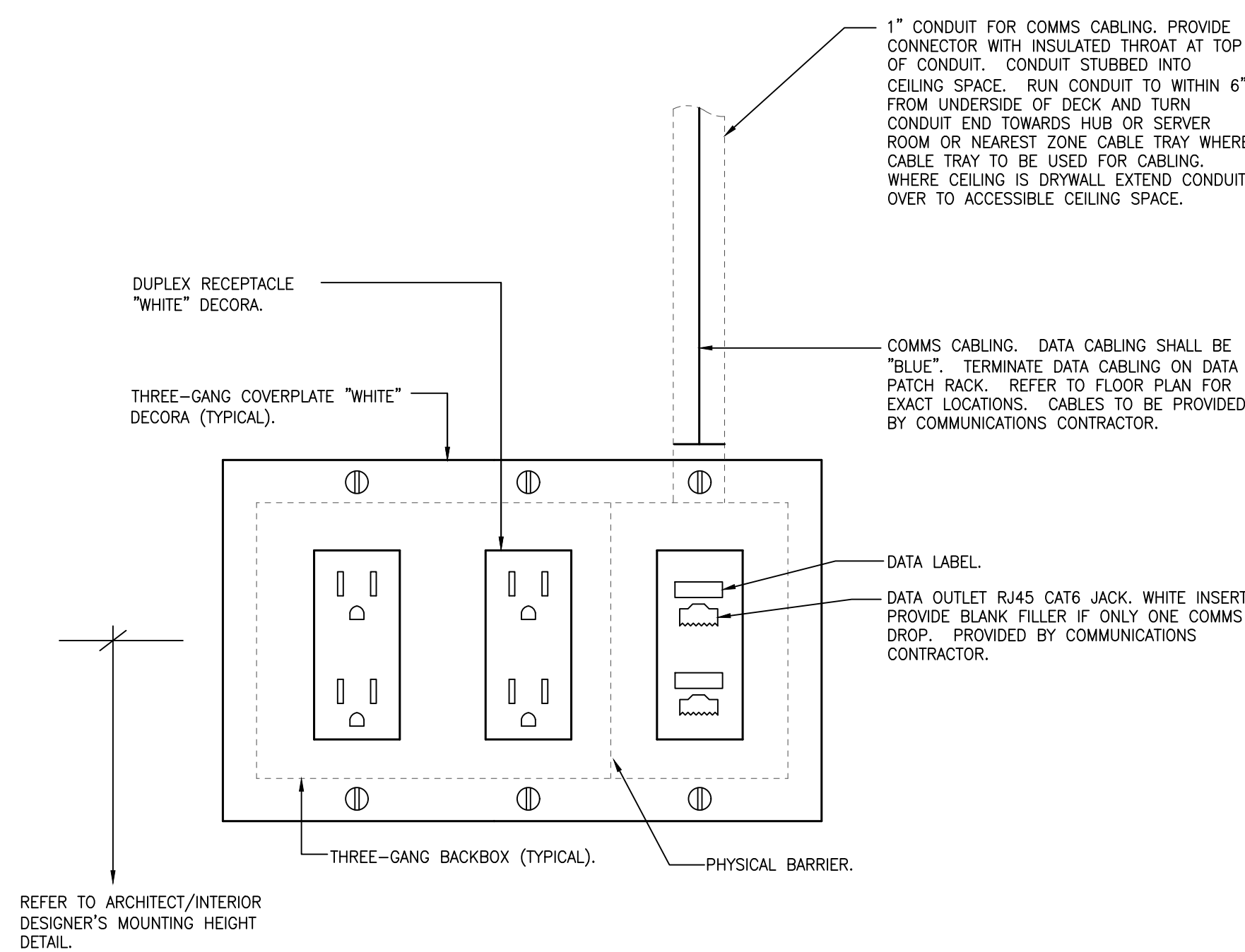
E-03-3



- NOTES:
1. PROVIDE INSULATED THROAT AT TOP OF CONDUIT.
 2. SINGLE GANG BACKBOX FOR UP TO THREE (3) CAT6 CABLES AND DOUBLE GANG BACKBOX FOR UP TO SIX (6) CAT6 CABLES.
- NOTE: TWO RJ45 JACKS SHOWN. PROVIDE 3 OR MORE JACKS WHERE 3 OR MORE DROPS REQUIRED.

SYMBOL ON PLANS

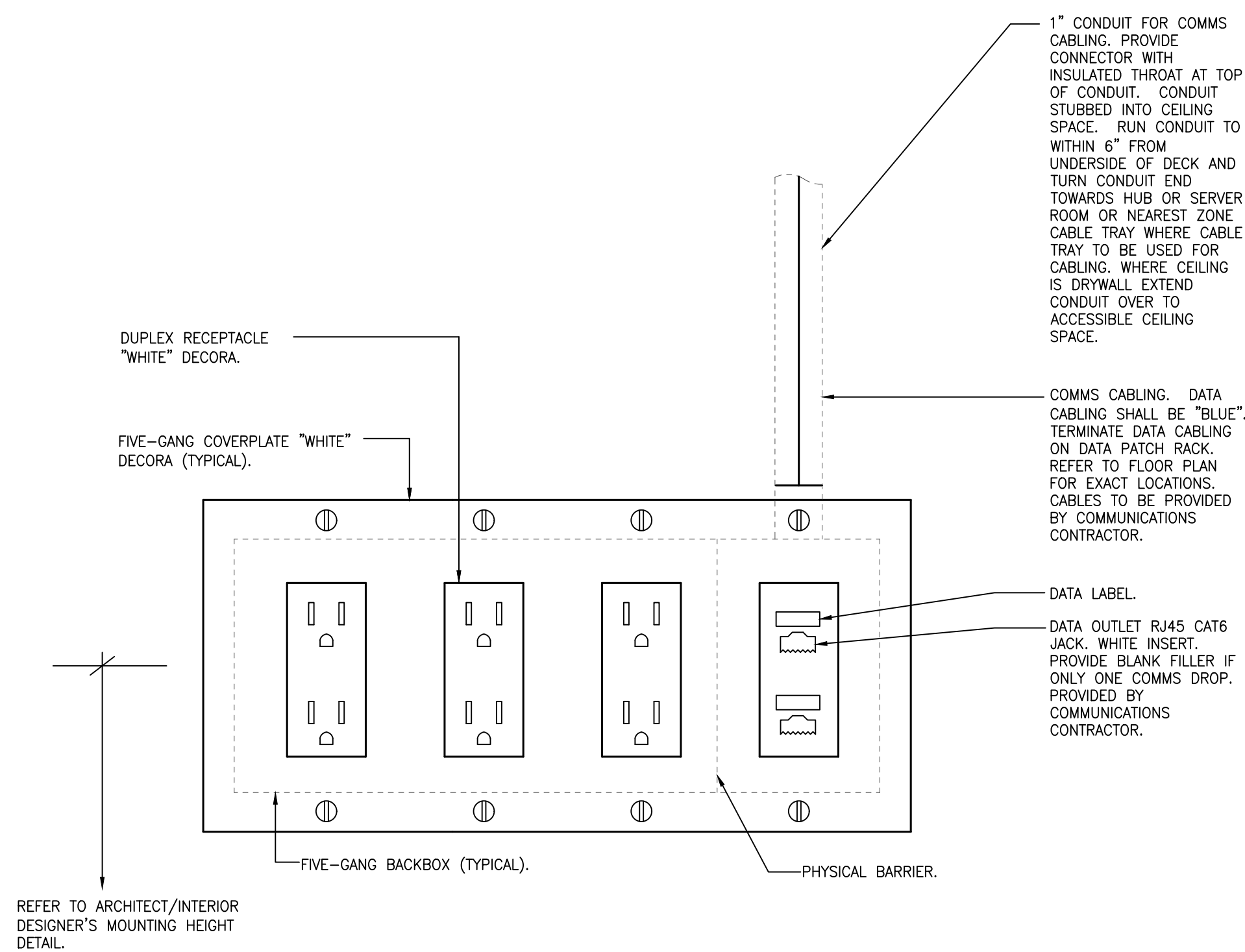
1 TYPICAL POWER/COMMUNICATIONS WALL GROUPING DETAIL (PRIVATE OFFICE)
 E-4.1 SCALE: NTS



- NOTES:
1. PROVIDE INSULATED THROAT AT TOP OF CONDUIT.
 2. SINGLE GANG BACKBOX FOR UP TO THREE (3) CAT6 CABLES AND DOUBLE GANG BACKBOX FOR UP TO SIX (6) CAT6 CABLES.
- NOTE: TWO RJ45 JACKS SHOWN. PROVIDE 3 OR MORE JACKS WHERE 3 OR MORE DROPS REQUIRED.

SYMBOL ON PLANS

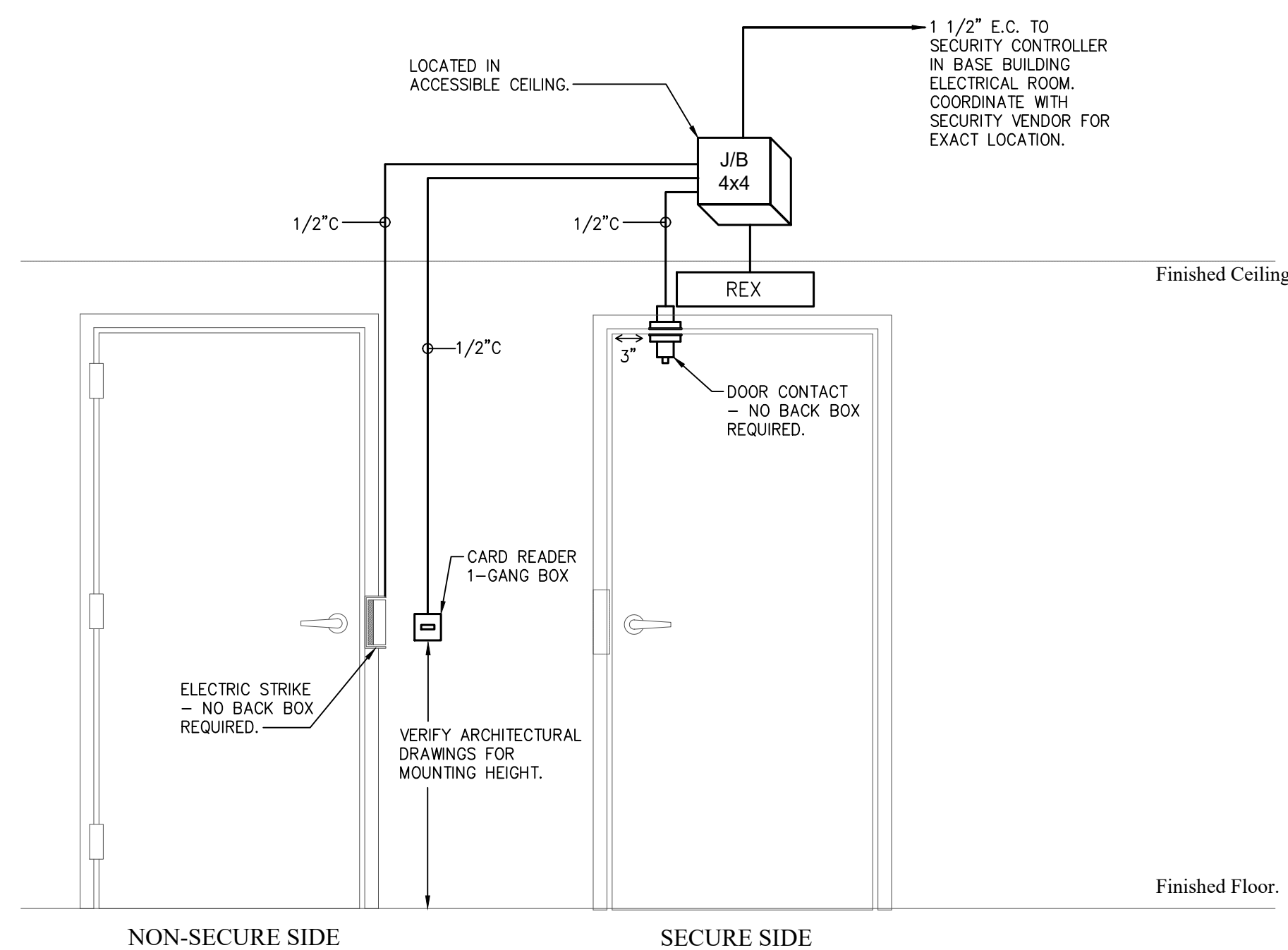
2 TYPICAL POWER/COMMUNICATIONS WALL GROUPING DETAIL (PRIVATE OFFICE)
 E-4.2 SCALE: NTS



- NOTES:
1. PROVIDE INSULATED THROAT AT TOP OF CONDUIT.
 2. SINGLE GANG BACKBOX FOR UP TO THREE (3) CAT6 CABLES AND DOUBLE GANG BACKBOX FOR UP TO SIX (6) CAT6 CABLES.
- NOTE: TWO RJ45 JACKS SHOWN. PROVIDE 3 OR MORE JACKS WHERE 3 OR MORE DROPS REQUIRED.

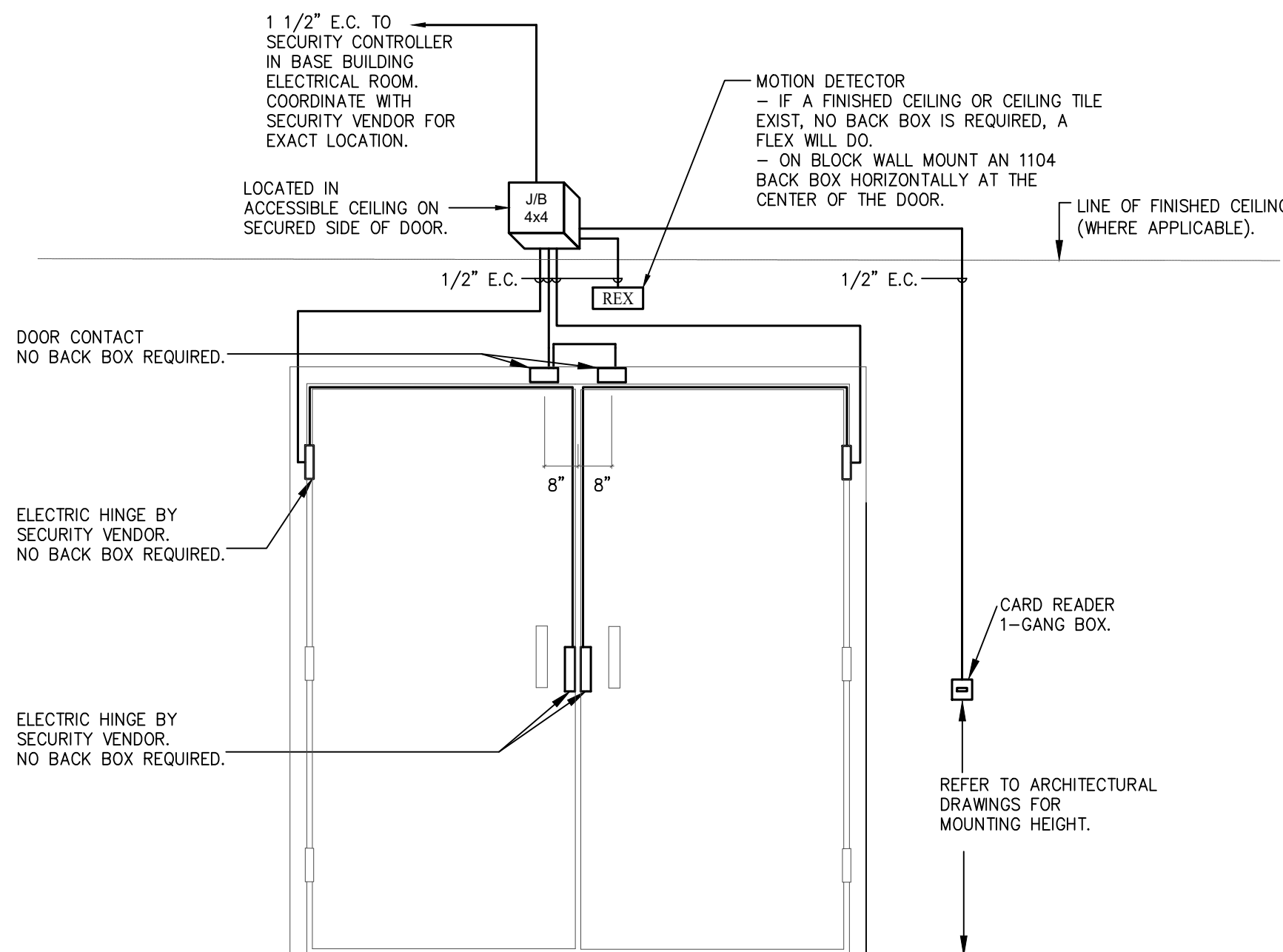
SYMBOL ON PLANS

3 TYPICAL POWER/COMMUNICATIONS WALL GROUPING DETAIL (PRIVATE OFFICE)
 E-4.3 SCALE: NTS



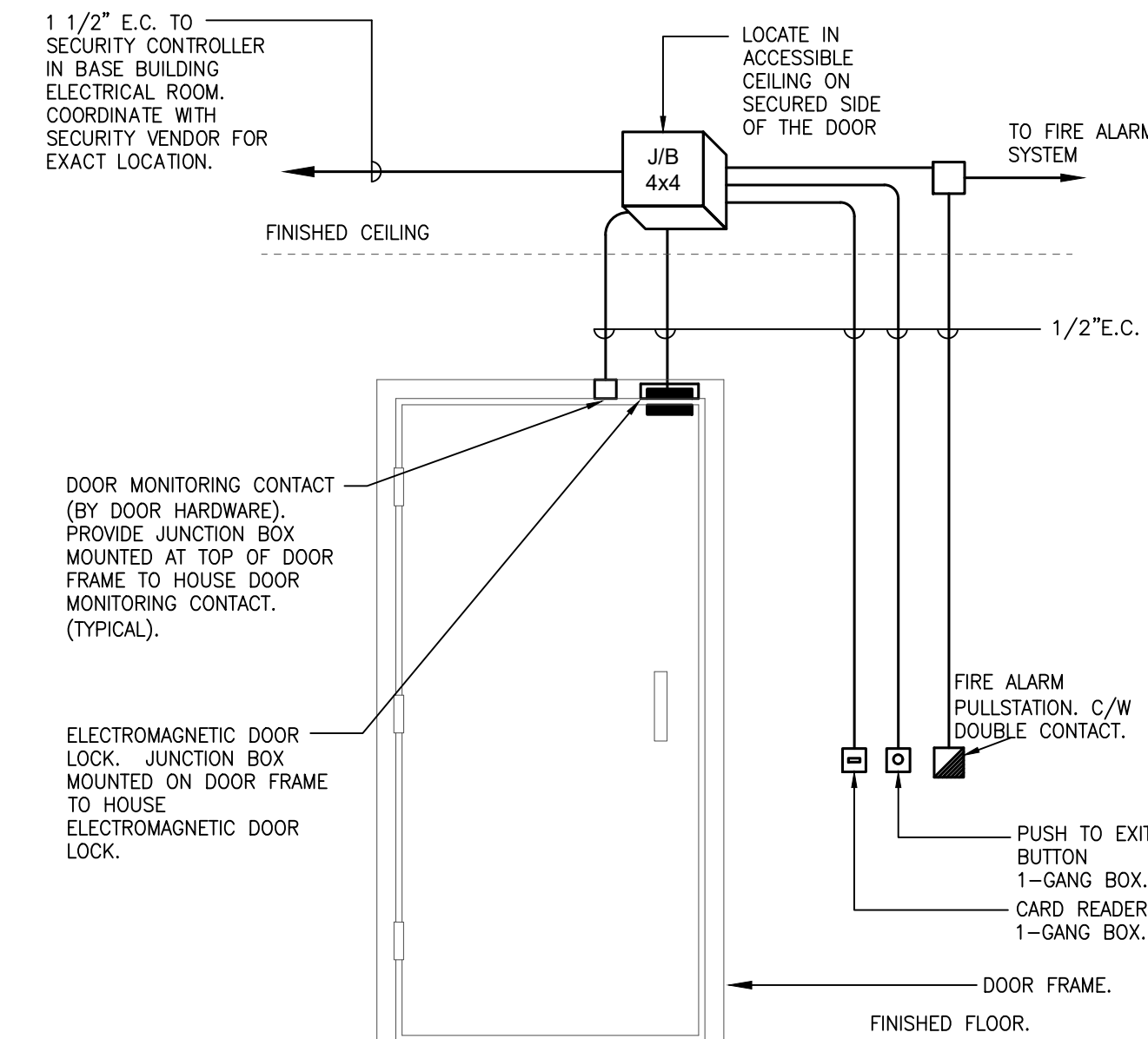
- NOTES:
1. DIVISION 16 CONTRACTOR SHALL BE RESPONSIBLE FOR ALL ROUGH-IN WORK. THIS INCLUDES, BUT IS NOT LIMITED TO EMPTY CONDUIT WITH PULL STRINGS, BACK BOXES, JUNCTION BOXES AND 120V POWER PROVISIONS.
 2. DIVISION 16 CONTRACTOR SHALL CONFIRM EXACT ELECTRICAL REQUIREMENTS WITH SECURITY SYSTEM MANUFACTURER/CONTRACTOR. CONDUIT AND BACK BOX SIZES SHALL BE AS REQUIRED. REFER TO DESIGNER'S DRAWINGS FOR EXACT LOCATIONS AND MOUNTING HEIGHTS.
 3. PROVIDE FLUSH MOUNTED BACK BOX FOR FINISHED AREAS, SURFACE MOUNTED OTHERWISE. PROVIDE BACK BOXES FOR ALL NEW AND/OR RELOCATED SECURITY SYSTEM DEVICES.
 4. CONFIRM ALL BACK BOX SIZES WITH SECURITY SUB-CONTRACTOR PRIOR TO ROUGH-IN.
 5. WHERE APPLICABLE LOCATE MAIN JUNCTION BOX AT EACH DOOR ON SECURE SIDE OF DOOR IN ACCESSIBLE CEILING SPACE.
 6. COORDINATE ALL ROUGH-IN WORK WITH SECURITY VENDOR AND IN ACCORDANCE WITH DOOR AND HARDWARE REQUIREMENTS.

4 SECURITY DOOR DETAIL - SINGLE DOOR ELECTRIC STRIKE
 E-4.4 SCALE: NTS



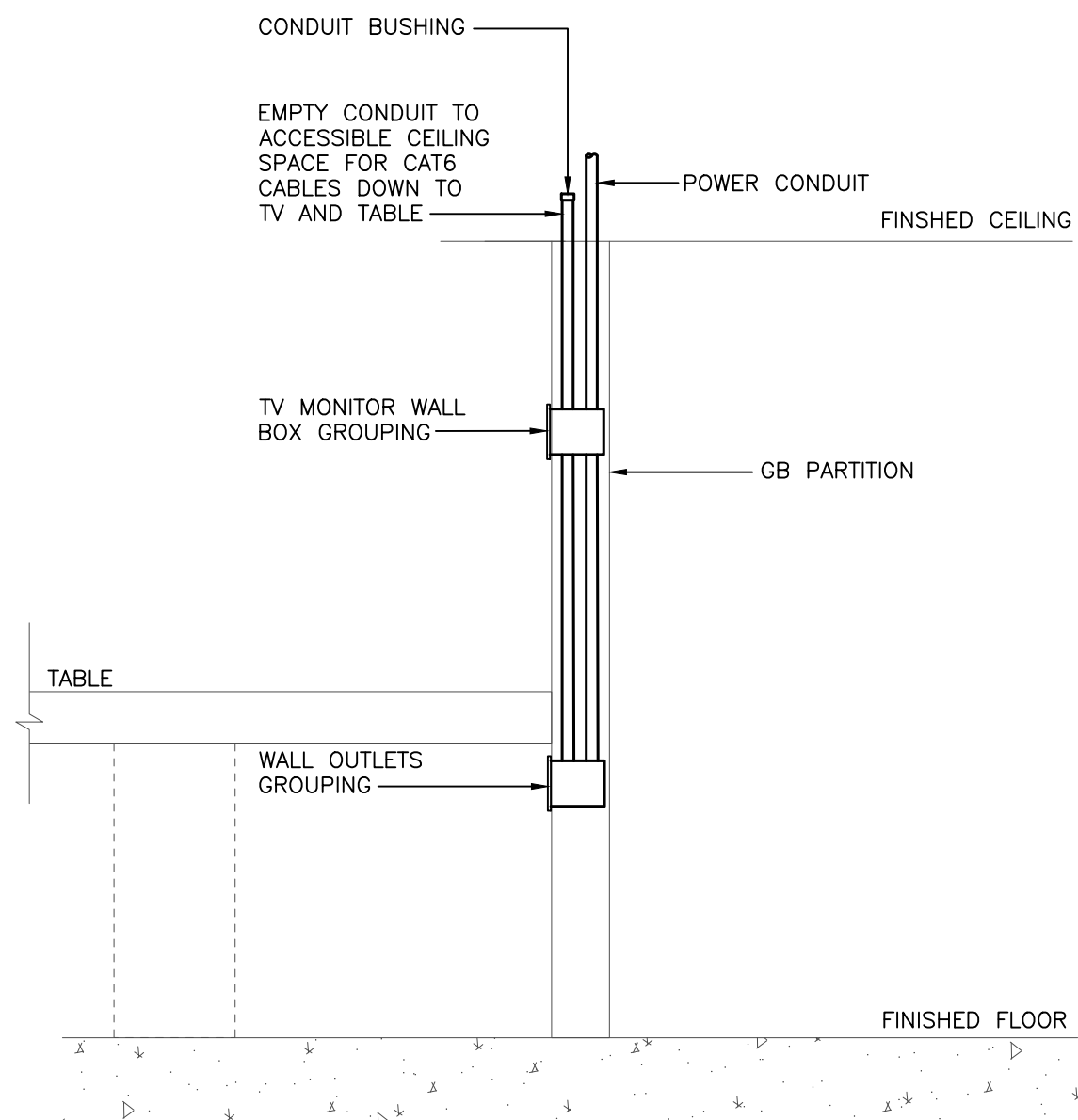
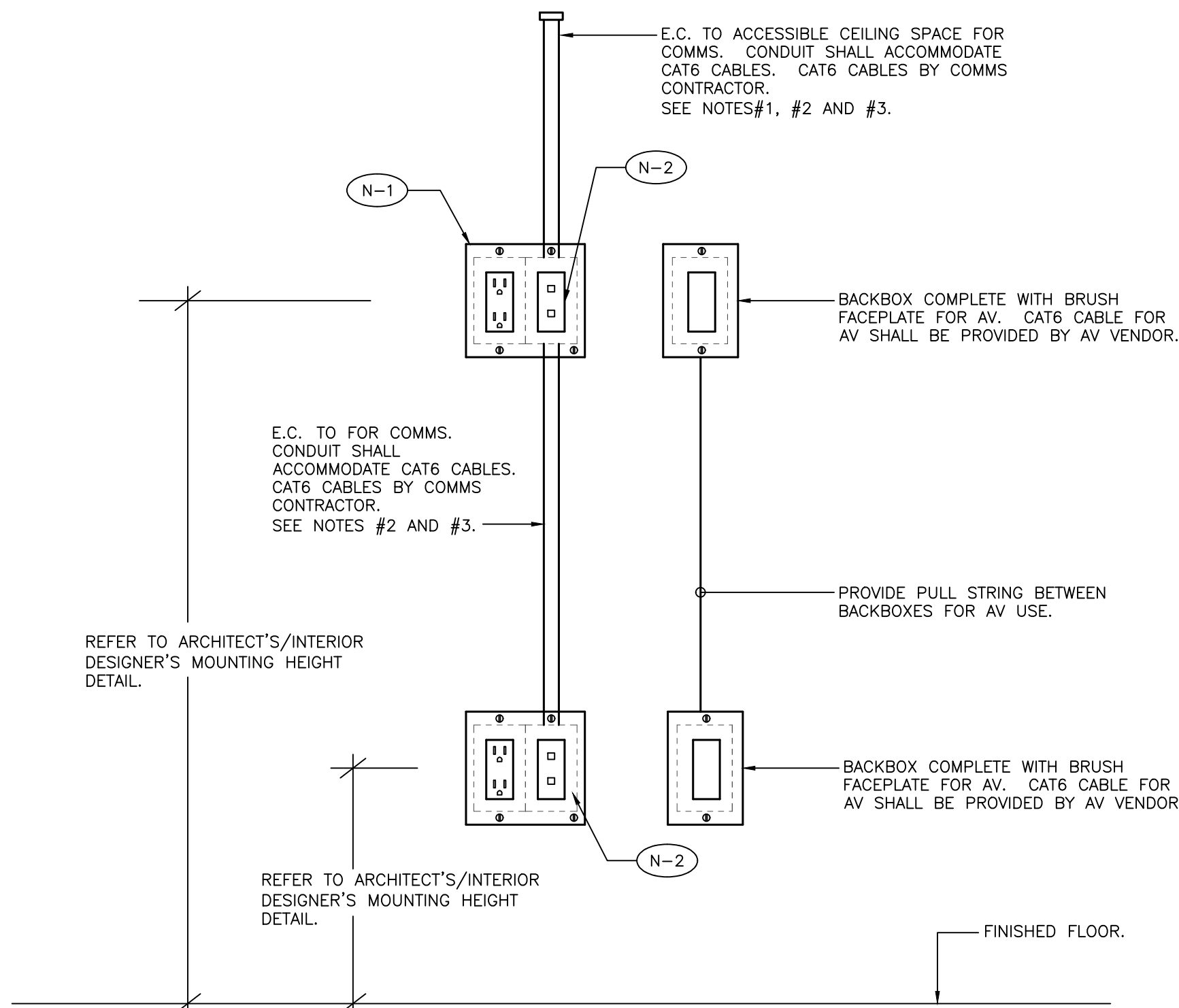
- NOTES:
1. DIVISION 16 CONTRACTOR SHALL BE RESPONSIBLE FOR ALL ROUGH-IN WORK. THIS INCLUDES, BUT IS NOT LIMITED TO EMPTY CONDUIT WITH PULL STRINGS, BACK BOXES, JUNCTION BOXES AND 120V POWER PROVISIONS.
 2. THIS DETAIL IS DIAGRAMMATIC ONLY. DIVISION 16 CONTRACTOR SHALL CONFIRM EXACT ELECTRICAL REQUIREMENTS WITH SECURITY SYSTEM MANUFACTURER/CONTRACTOR. CONDUIT AND BACK BOX SIZES SHALL BE AS REQUIRED. REFER TO DESIGNER'S DRAWINGS FOR EXACT LOCATIONS AND MOUNTING HEIGHTS.
 3. PROVIDE FLUSH MOUNTED BACK BOX FOR FINISHED AREAS, SURFACE MOUNTED OTHERWISE. PROVIDE BACK BOXES FOR ALL NEW AND/OR RELOCATED SECURITY SYSTEM DEVICES.
 4. CONFIRM ALL BACK BOX SIZES WITH SECURITY CONTRACTOR PRIOR TO ROUGH-IN.
 5. PROVIDE PULL STRINGS IN ALL EMPTY CONDUITS.
 6. WHERE APPLICABLE LOCATE MAIN JUNCTION BOX AT EACH DOOR ON SECURE SIDE OF DOOR IN ACCESSIBLE CEILING SPACE.
 7. CONDUCTORS AND DEVICES, INCLUDING SECURITY SYSTEM PROGRAMMING AND SET-UP ARE SUPPLIED AND INSTALLED BY SECURITY CONTRACTOR. ALL OTHER WORK BY DIVISION 16 CONTRACTOR.
 8. FIRE ALARM SYSTEM INTERFACE TO SECURITY SYSTEM WHERE APPLICABLE, INCLUDING VERIFICATION, BY DIVISION 16 CONTRACTOR.
 9. PROVIDE APPROVED CURRENT TRANSFER DEVICE AT DOUBLE DOORS WHERE REQUIRED.
 10. UNLESS NOTED OTHERWISE, GENERAL CONTRACTOR TO CARRY ALL COSTS OF SECURITY SYSTEM CONTRACTOR IN TENDER PRICE.
 11. COORDINATE WITH OWNER FOR EXACT LOCATION OF SECURITY CONTROLLER.

5 SECURITY DOOR DETAIL ELECTRIC STRIKE DOUBLE DOOR
 E-4.5 SCALE: N.T.S.



- NOTES:
1. DIVISION 16 CONTRACTOR SHALL BE RESPONSIBLE FOR ALL ROUGH-IN WORK. THIS INCLUDES, BUT IS NOT LIMITED TO EMPTY CONDUIT WITH PULL STRINGS, BACK BOXES, JUNCTION BOXES AND 120V POWER PROVISIONS.
 2. THIS DETAIL IS DIAGRAMMATIC ONLY. DIVISION 16 CONTRACTOR SHALL CONFIRM EXACT ELECTRICAL REQUIREMENTS WITH OWNER'S SECURITY SYSTEM MANUFACTURER/CONTRACTOR. CONDUIT, WIRING REQUIREMENTS AND BACK BOX SIZES, LOCATIONS AND MOUNTING HEIGHTS SHALL BE AS REQUIRED. NO EXTRA COST WILL BE ALLOWED FOR FAILURE TO DO SO.
 3. PROVIDE FLUSH MOUNTED BACK BOX FOR FINISHED AREAS WHERE PRACTICABLE, SURFACE MOUNTED OTHERWISE. PROVIDE BACK BOXES FOR ALL NEW AND/OR RELOCATED SECURITY SYSTEM DEVICES.
 4. CONFIRM ALL BACK BOX SIZES WITH SECURITY SUB-CONTRACTOR PRIOR TO ROUGH-IN.
 5. PROVIDE PULL STRINGS IN ALL EMPTY CONDUITS.
 6. WHERE APPLICABLE LOCATE MAIN JUNCTION BOX AT EACH DOOR ON SECURE SIDE OF DOOR IN ACCESSIBLE CEILING SPACE.
 7. CONDUCTORS AND DEVICES, INCLUDING SECURITY SYSTEM PROGRAMMING AND SET-UP ARE SUPPLIED AND INSTALLED BY SECURITY CONTRACTOR. ALL OTHER WORK BY DIVISION 16 CONTRACTOR.
 8. DIVISION 16 CONTRACTOR TO PROVIDE ALL WIRING TO FIRE ALARM PULL STATION AND FROM PULL STATION TO MAGLOCK POWER SUPPLY. PROVIDE FIRE ALARM SYSTEM INTERFACE TO SECURITY SYSTEM WHERE APPLICABLE, INCLUDING VERIFICATION.
 9. SUPPLY, INSTALLATION, TESTING AND PROGRAMMING OF SECURITY SYSTEM COMPONENTS, INCLUDING SUPPLY AND INSTALLATION OF SECURITY SYSTEM CONDUCTORS SHALL BE BY THE SECURITY CONTRACTOR. UNLESS NOTED OTHERWISE, GENERAL CONTRACTOR TO CARRY ALL COSTS OF SECURITY SYSTEM CONTRACTOR IN TENDER PRICE.
 10. OBTAIN AND PROVIDE THE SECURITY CONTRACTOR WITH VERIFICATION OF THE PULL STATION BY AN APPROVED 3RD PARTY INCLUDING, CERTIFICATES CAN/ULC-S524 FROM CABLE CONTRACTOR AND CAN/ULC-S537 FROM LIFE SAFETY COMPANY INSTALLER AND SCHEDULE THE REQUIRED TESTS WITH SECURITY CONTRACTOR SO THAT THE MAGLOCKS CAN BE VISITED AT THE SAME TIME. INCLUDE IN BID PRICE FOR SECOND FULL ROUND OF TESTING AND VERIFICATION IN THE PRESENCE OF THE BUILDING INSPECTOR.
 11. PULL STATION HORIZONTAL DISTANCE FROM DOOR AS PER CODE REQUIREMENTS.
 12. COORDINATE WITH OWNER FOR EXACT LOCATION OF SECURITY CONTROLLER.

6 SECURITY DOOR DETAIL - SINGLE DOOR MAGLOCK
 E-4.6 SCALE: N.T.S.



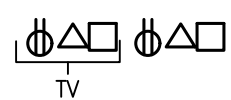
NOTES:

1. PROVIDE INSULATED THROAT AT TOP OF CONDUIT.
2. COMMUNICATIONS CONTRACTOR TO PROVIDE COMMS CABLES. OWNER'S AV VENDOR TO PROVIDE CAT6 CABLE FOR AV (WHERE REQUIRED).
3. PROVIDE 1-3/4" CONDUIT FOR UP TO FOUR (4) CAT6 CABLES AND 1-1" CONDUIT FOR UP TO SEVEN (7) CAT6 CABLES.
4. PROVIDE SINGLE GANG BACKBOX FOR UP TO THREE (3) CAT6 CABLES, PROVIDE DOUBLE GANG BACKBOX FOR FOUR (4) TO SIX (6) CAT6 CABLES.

NOTES:

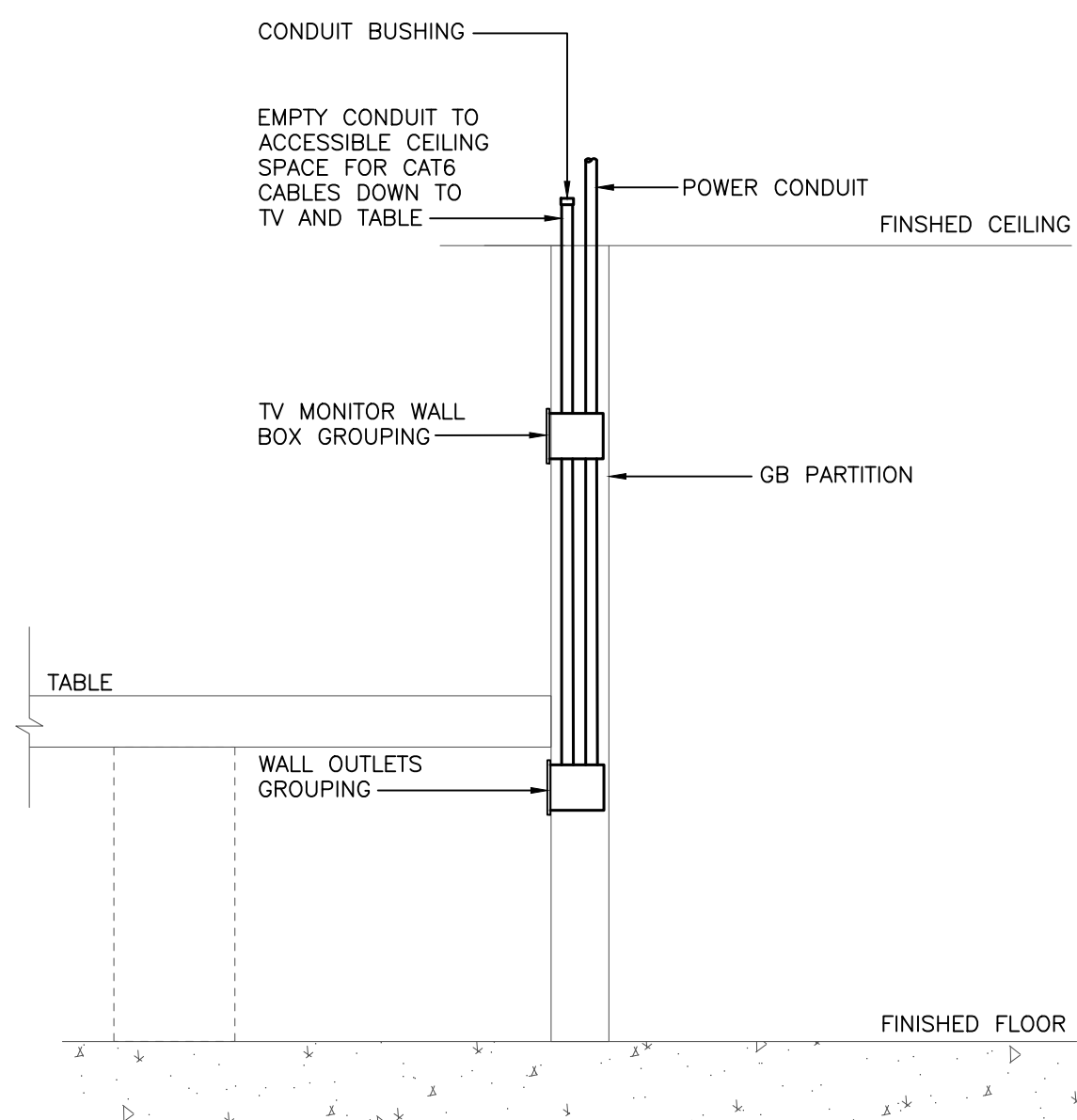
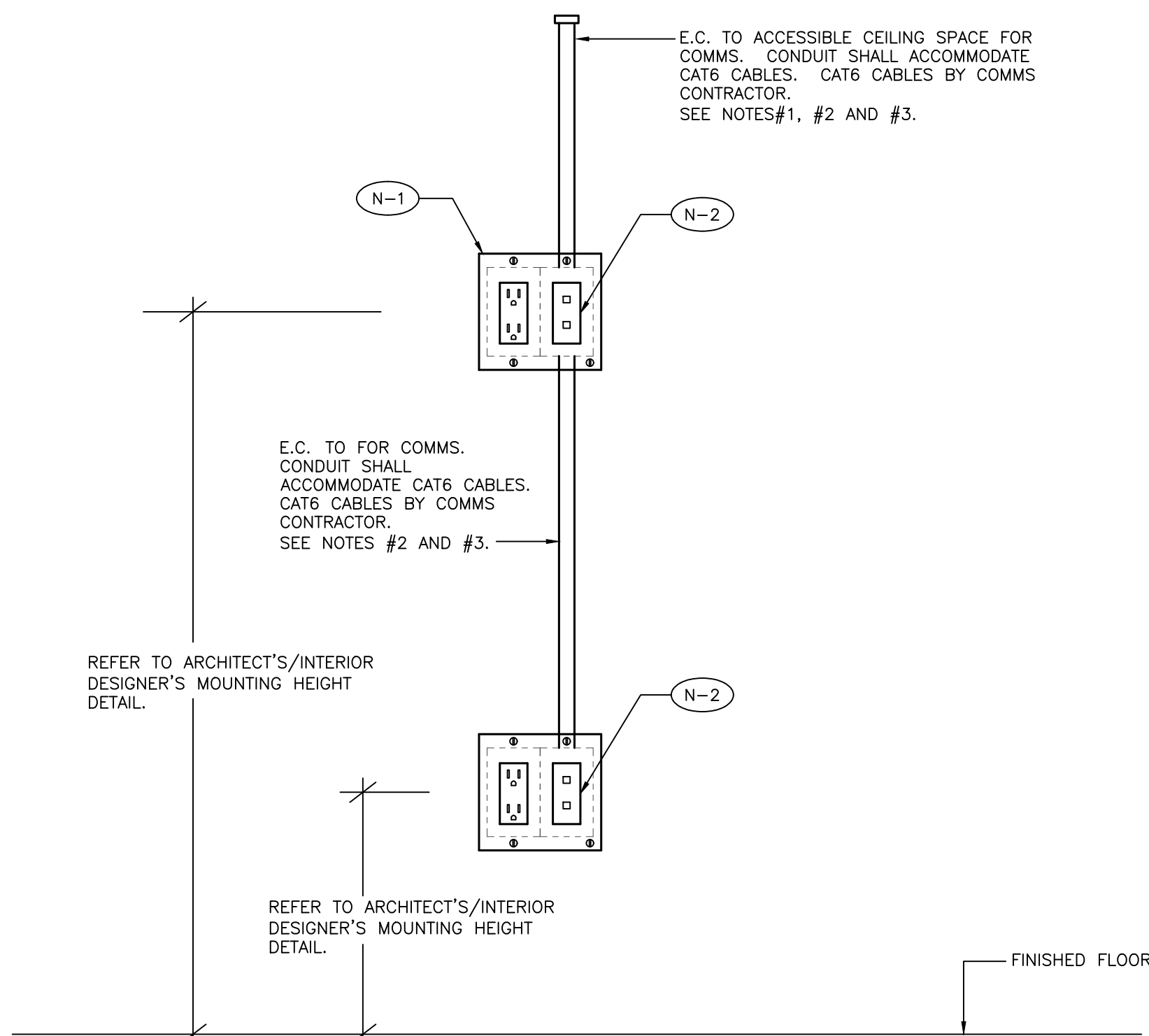
- (N-1) PROVIDE ONE (1) DUPLEX RECEPTACLE FOR ONE (1) TV AND TWO (2) DUPLEX RECEPTACLES FOR TWO (2) TVs. REFER TO FLOOR PLAN.
- (N-2) REFER TO FLOOR PLAN FOR THE QUANTITIES OF DATA JACKS. PROVIDE BLANK FILLER IF ONLY ONE COMMS DROP.

SYMBOL ON PLANS



1 TABLE CONNECTION DETAIL (FOR NON-ZOOM ROOMS WHERE TABLE IS AGAINST THE WALL AND 1 OR 2 TVs)

E-4-2 SCALE: NTS



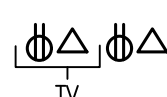
NOTES:

1. PROVIDE INSULATED THROAT AT TOP OF CONDUIT.
2. COMMUNICATIONS CONTRACTOR TO PROVIDE COMMS CABLES. OWNER'S AV VENDOR TO PROVIDE CAT6 CABLE FOR AV (WHERE REQUIRED).
3. PROVIDE 1-3/4" CONDUIT FOR UP TO FOUR (4) CAT6 CABLES AND 1-1" CONDUIT FOR UP TO SEVEN (7) CAT6 CABLES.
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NOTES:

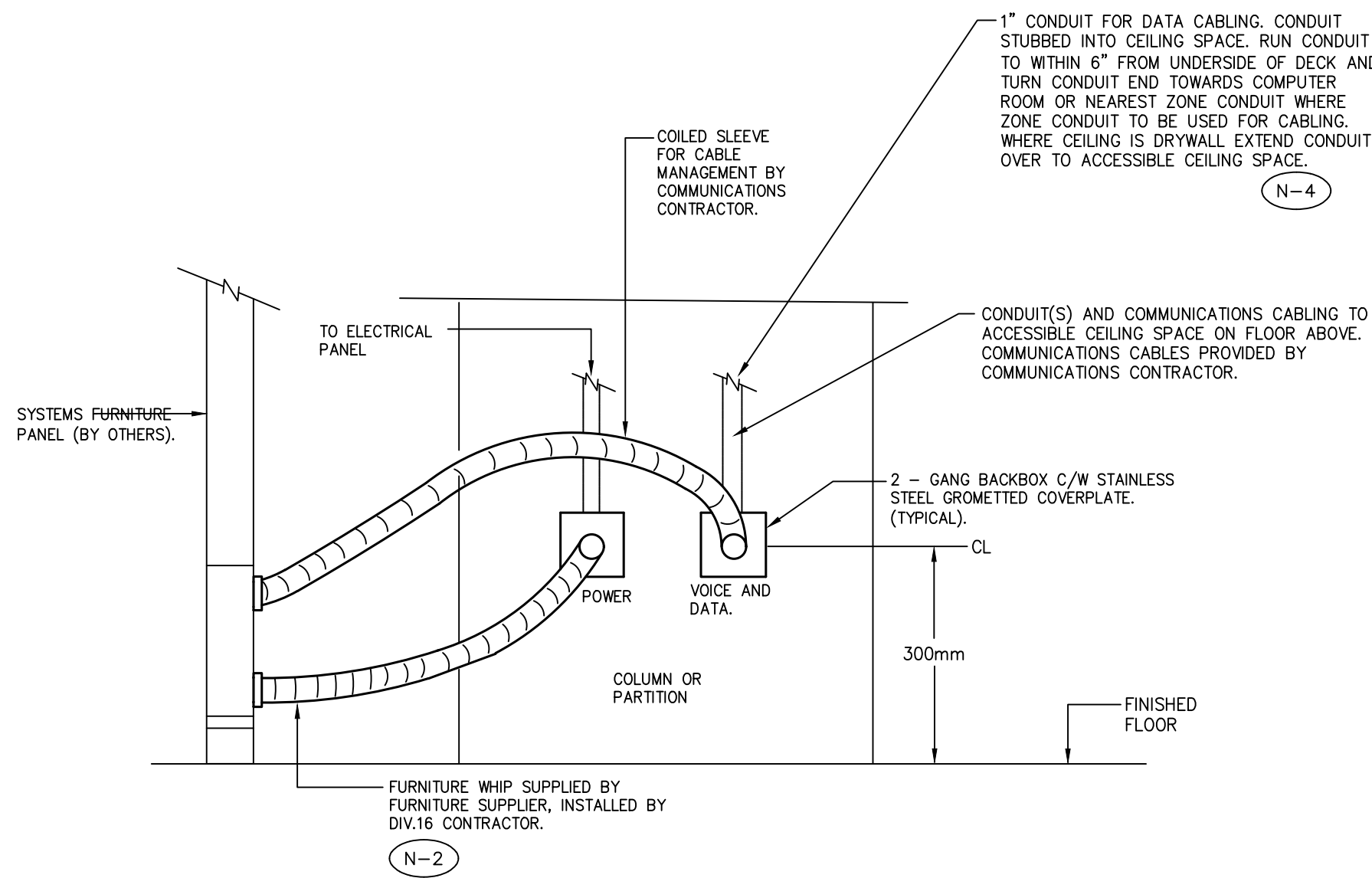
- (N-1) PROVIDE ONE (1) DUPLEX RECEPTACLE FOR ONE (1) TV AND TWO (2) DUPLEX RECEPTACLES FOR TWO (2) TVs. REFER TO FLOOR PLAN.
- (N-2) REFER TO FLOOR PLAN FOR THE QUANTITIES OF DATA JACKS. PROVIDE BLANK FILLER IF ONLY ONE COMMS DROP.

SYMBOL ON PLANS



2 TABLE CONNECTION DETAIL (FOR ZOOM ROOMS WHERE TABLE IS AGAINST THE WALL AND 1 OR 2 TVs)

E-4-2 SCALE: NTS



NOTES:

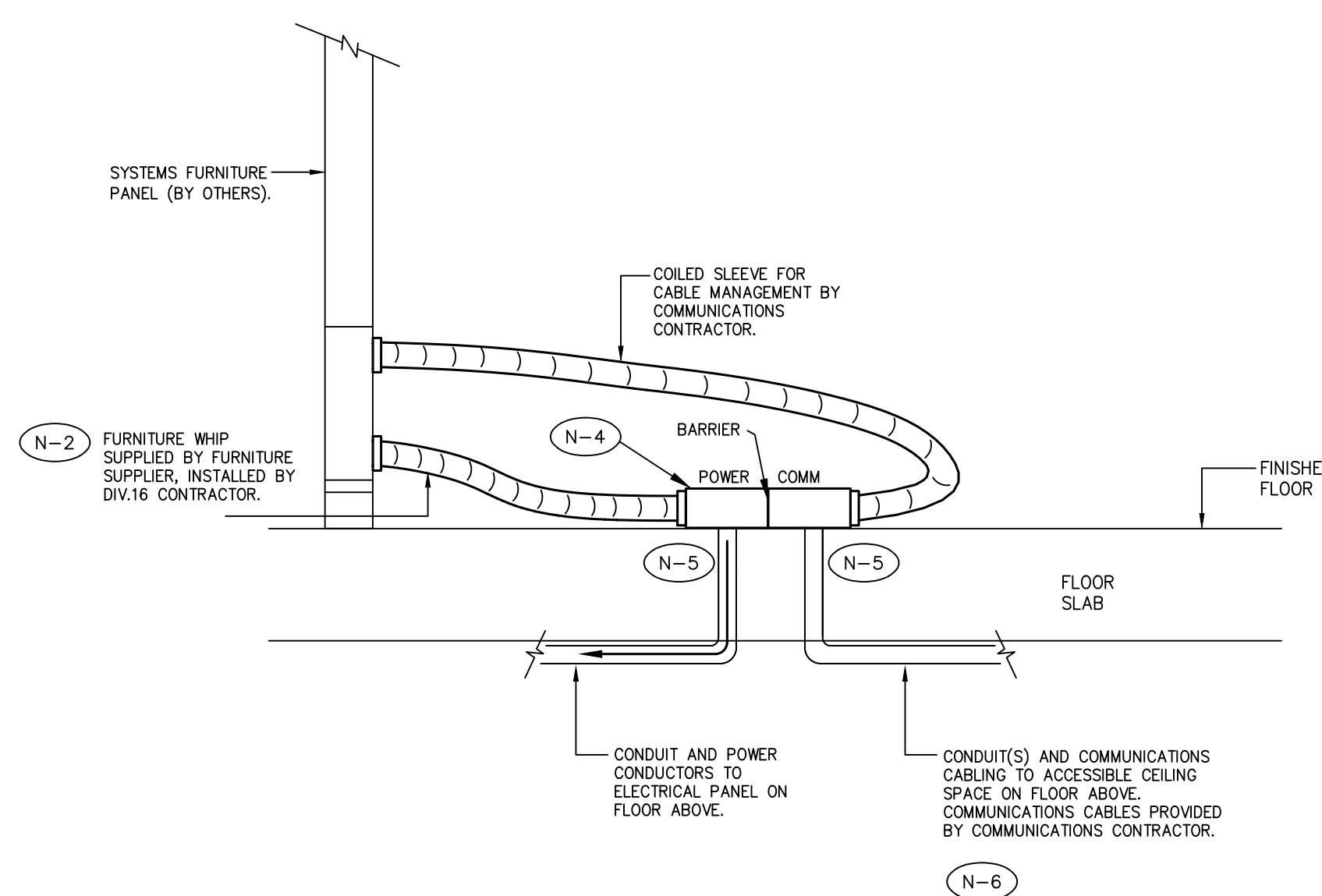
- (N-1) COORDINATE EXACT REQUIREMENTS WITH FURNITURE SUPPLIER/INSTALLER PRIOR TO ROUGH-IN.
- (N-2) LIQUID TIGHT SHALL BE FT4 PVC JACKET, COLOUR TO SUIT INTERIOR DESIGNER'S REQUIREMENTS. SUPPLIED BY FURNITURE SUPPLIER.
- (N-3) DIV. 16 SHALL PERFORM ALL FINAL POWER CONNECTIONS IN FURNITURE. COMMUNICATIONS CONTRACTOR SHALL PROVIDE DATA OUTLET INSTALLATION/CONNECTIONS IN FURNITURE.
- (N-4) PROVIDE 1-1" CONDUIT FOR UP TO THREE(3) WORKSTATIONS AND 2-1" CONDUITS WHERE CLUSTER OF WORKSTATIONS IS BETWEEN FOUR (4) AND SIX (6). PROVIDE ADDITIONAL BACKBOX AND CONDUIT(S) WHERE CLUSTER OF WORKSTATIONS IS SEVEN (7) OR HIGHER.

SYMBOL ON PLANS



3 WALL MOUNTED FURNITURE FEED CONNECTION DETAIL

E-4-2 SCALE: NTS



NOTES:

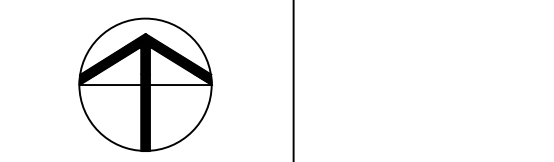
- (N-1) COORDINATE EXACT REQUIREMENTS WITH FURNITURE SUPPLIER/INSTALLER PRIOR TO ROUGH-IN.
- (N-2) LIQUID TIGHT SHALL BE FT4 PVC JACKET, COLOUR TO SUIT INTERIOR DESIGNER'S REQUIREMENTS. SUPPLIED BY FURNITURE SUPPLIER.
- (N-3) DIV. 16 SHALL PERFORM ALL FINAL POWER CONNECTIONS IN FURNITURE. COMMUNICATIONS CONTRACTOR SHALL PROVIDE VOICE/DATA OUTLET INSTALLATION/CONNECTIONS IN FURNITURE.
- (N-4) SURFACE FLOOR MOUNTED LOW PROFILE POWER AND COMMUNICATIONS SERVICE FITTING FOR SYSTEMS FURNITURE BASE FEED-IN CONNECTION, COLOUR BLACK, HELLMARK CAT. #FA-00-00-B OR EQUAL BY CANADIAN ELECTRICAL RACEWAYS.
- (N-5) X-RAY AND DRILL THROUGH CONCRETE FLOOR. OBTAIN APPROVAL BY BASE BUILDING STRUCTURAL ENGINEER. PROVIDE FIRESTOP. ALL X-RAY AND CORE DRILLING WORK BELOW THE FLOOR SHALL BE DONE DURING OVERTIME HOURS.
- (N-6) PROVIDE 1-1" CONDUIT FOR UP TO THREE (3) WORKSTATIONS AND 2-1" CONDUITS WHERE CLUSTER OF WORKSTATIONS IS BETWEEN FOUR (4) AND SIX (6). PROVIDE ADDITIONAL CONDUIT(S) WHERE CLUSTER OF WORKSTATIONS IS SEVEN (7) OR HIGHER.

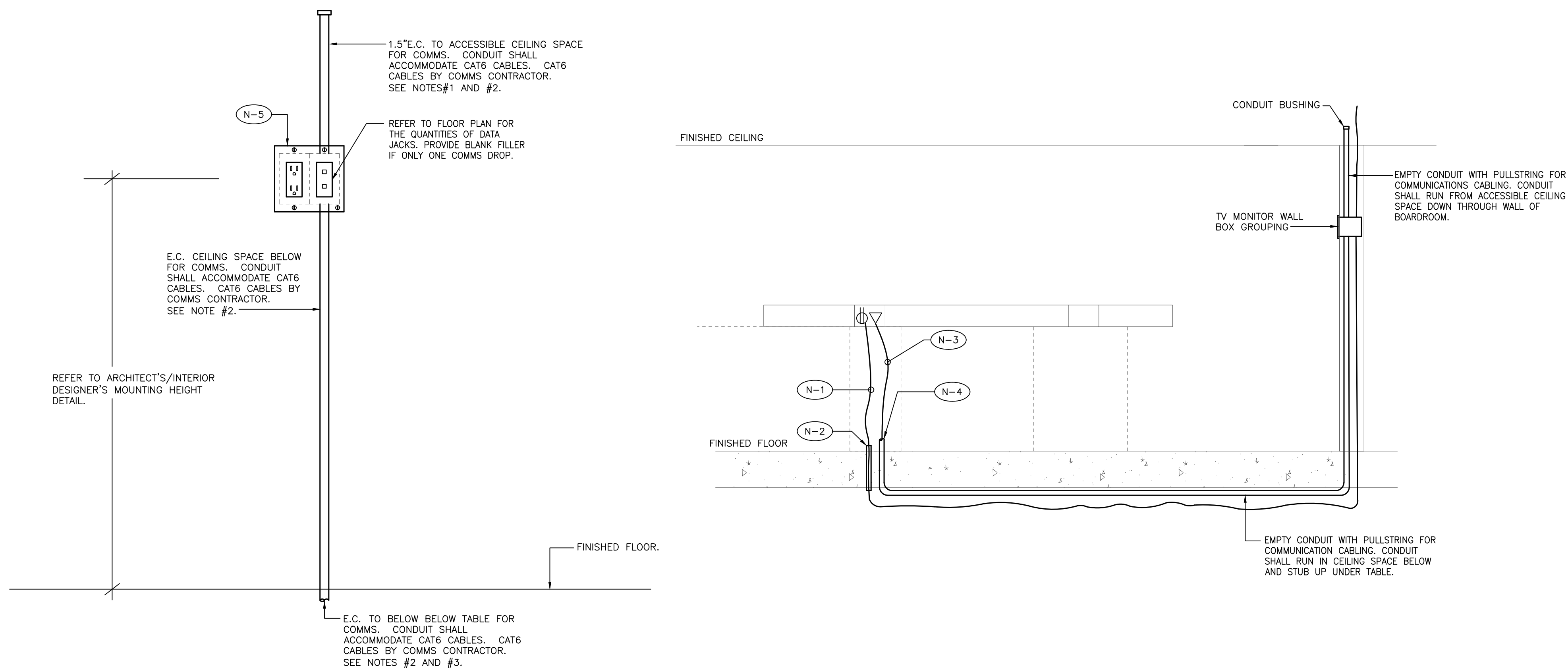
SYMBOL ON PLANS



4 FLOOR MOUNTED FURNITURE FEED CONNECTION DETAIL

E-4-2 SCALE: NTS



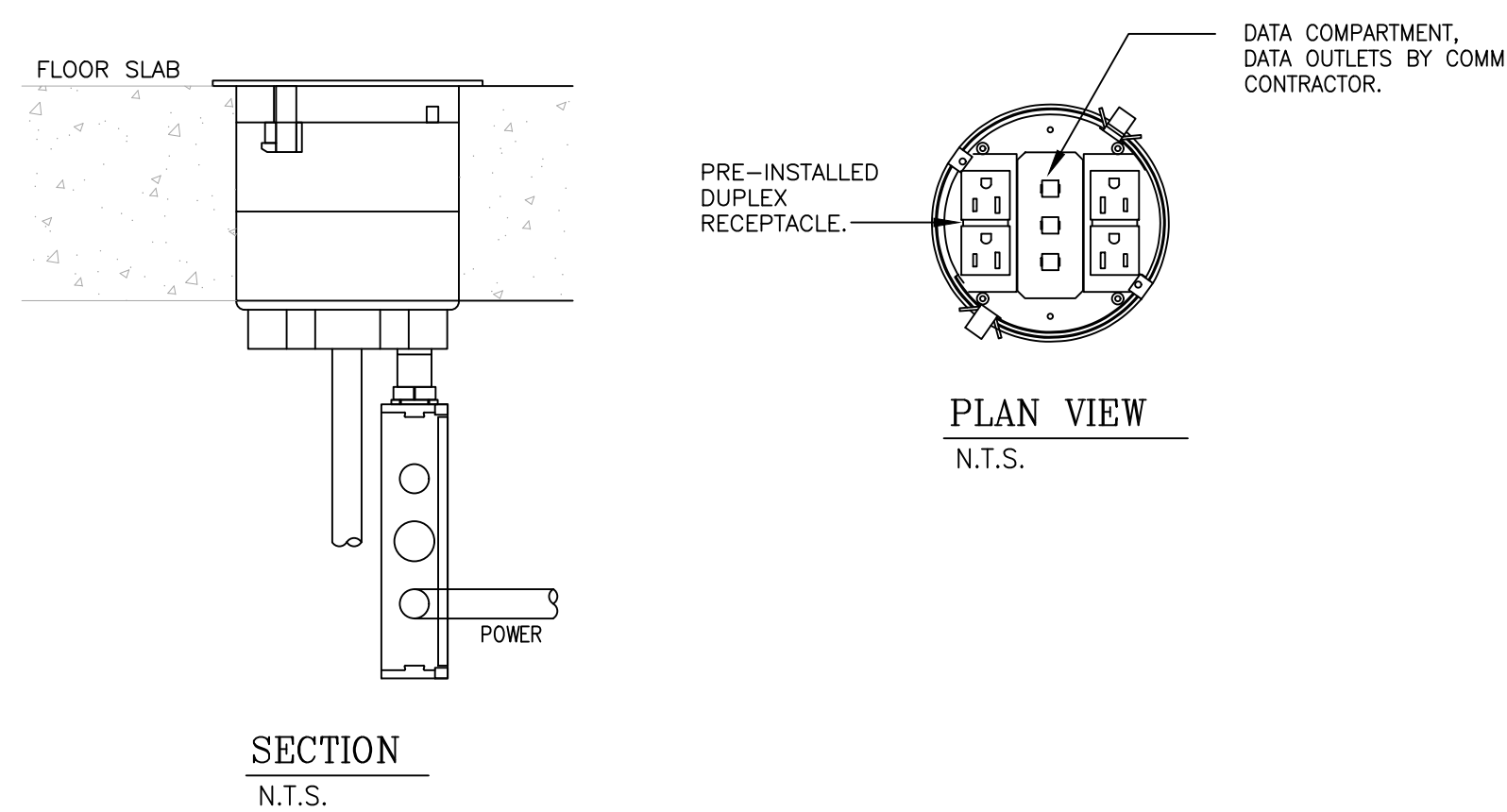


- NOTES:
1. PROVIDE INSULATED THROAT AT TOP OF CONDUIT.
 2. COMMUNICATIONS CONTRACTOR TO PROVIDE COMMS CABLES.
 3. E.C. SHALL TERMINATE AT FINISHED FLOOR BELOW TABLE. EXACT LOCATION TO BE COORDINATED ON SITE WITH ARCHITECT/OWNER PRIOR TO COMMENCEMENT OF WORK. PROVIDE ALL NECESSARY FIRE STOP TO MAINTAIN FIRE RATING OF FLOOR.

PROVIDE 1-3/4" CONDUIT FOR UP TO FOUR (4) CAT6 CABLES AND 1-1" CONDUIT FOR UP TO SEVEN (7) CAT6 CABLES. PROVIDE SINGLE GANG BACKBOX FOR UP TO THREE (3) CAT6 CABLES. PROVIDE DOUBLE GANG BACKBOX FOR FOUR (4) TO SIX (6) CAT6 CABLES.

- NOTES:
- N-1 POWER CABLEING VIA BX FROM CEILING BELOW TO RECEPTACLE. RECEPTACLE SHALL BE SURFACE MOUNTED ON TABLE LEG OR UNDERSIDE OF TABLE. COORDINATE EXACT LOCATION OF RECEPTACLE WITH ARCHITECT/OWNER PRIOR TO COMMENCEMENT OF WORK.
 - N-2 PROVIDE SLEEVE FOR BX TO PENETRATE THROUGH SLAB. PROVIDE ALL NECESSARY FIRE STOPPING INSIDE AND OUTSIDE OF SLEEVE TO MAINTAIN THE INTEGRITY OF FIRE RATING.
 - N-3 CAT6 CABLES TO BE TERMINATED TO DATA OUTLET IN TABLE CUBBY.
 - N-4 PROVIDE ALL NECESSARY FIRE STOPPING INSIDE AND OUTSIDE OF CONDUIT TO MAINTAIN THE INTEGRITY OF FIRE RATING.
 - N-5 PROVIDE ONE (1) DUPLEX RECEPTACLE FOR ONE (1) TV AND TWO (2) DUPLEX RECEPTACLES FOR TWO (2) TVs. REFER TO FLOOR PLAN.

1 TABLE CONNECTION DETAIL (FOR ROOMS WHERE TABLE AT THE CENTRE OF THE ROOM AND 1 OR 2 TVs)
E-4-3 SCALE: NTS

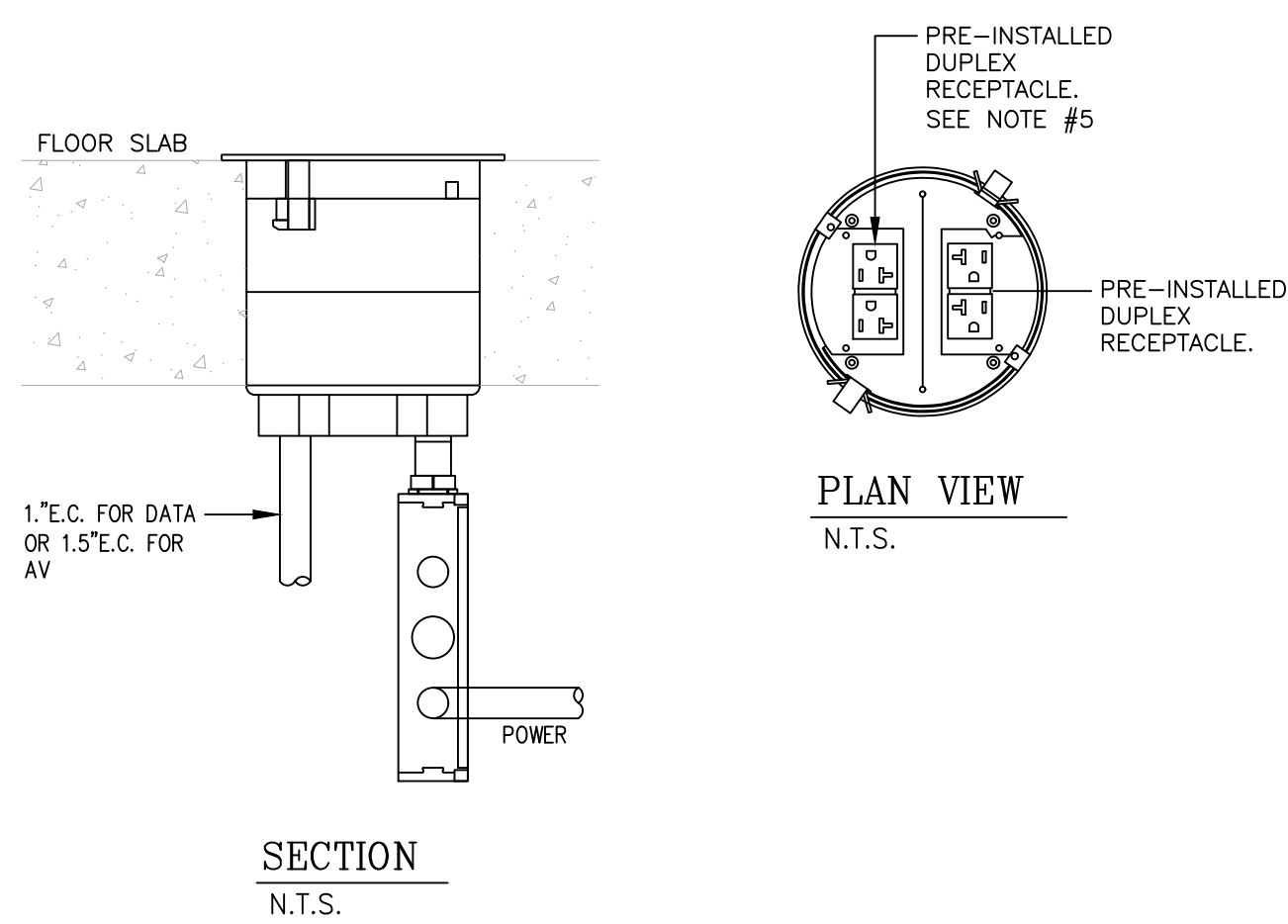


- NOTES:
1. PROVIDE X-RAY AND CUT FLOOR SLAB FOR NEW FLOOR BOX. SUBMIT TO STRUCTURAL ENGINEER FOR APPROVAL.
 2. COORDINATE EXACT FLOOR BOX LOCATION ON SITE AND CONFIRM NO INTERFERENCE ON THE CEILING BELOW THE FLOOR BOX LOCATION. INSTALL FLOOR BOX TO SUIT SITE CONDITION.
 3. PROVIDE ALL DEVICE MOUNTING PLATES IN FLOOR BOX.
 4. FLOOR BOX SHALL BE WIREMOLD 6" EVOLUTION SERIES OR WELLMARK APPROVED EQUIVALENT C/W 2 DUPLEX RECEPTACLES AND THREE (3) DATA OUTLETS AS SHOWN. DATA OUTLET SHALL BE PROVIDED BY COMM CONTRACTOR. FINISH SHALL BE BLACK.

SYMBOL ON PLANS

D04-
D04-
D04-

3 POWER/DADA/AV RECESSED FLOOR BOX DETAIL
E-4-3 SCALE: NTS

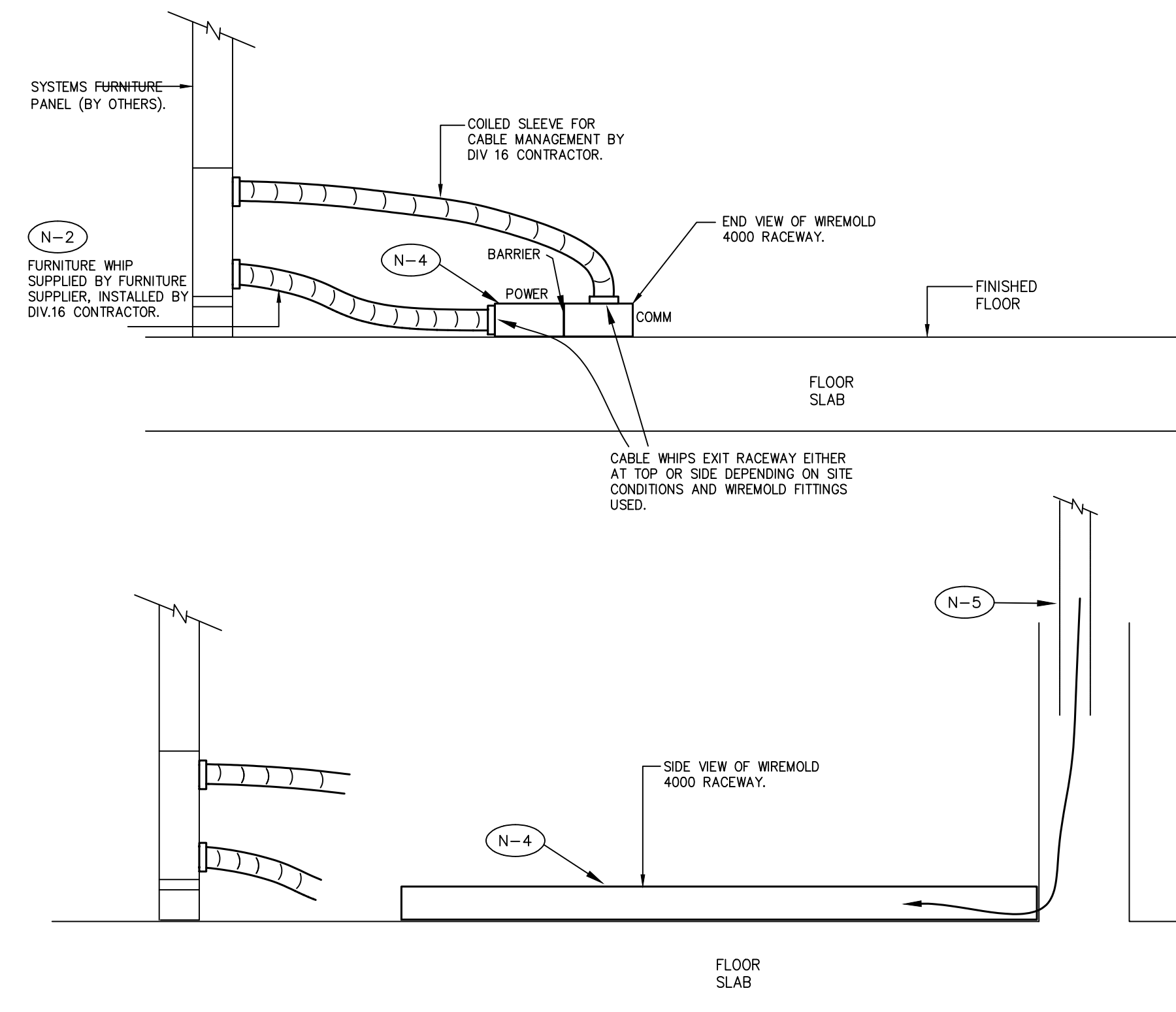


- NOTES:
1. PROVIDE X-RAY AND CUT FLOOR SLAB FOR NEW FLOOR BOX. SUBMIT TO STRUCTURAL ENGINEER FOR APPROVAL.
 2. COORDINATE EXACT FLOOR BOX LOCATION ON SITE AND CONFIRM NO INTERFERENCE ON THE CEILING BELOW THE FLOOR BOX LOCATION. INSTALL FLOOR BOX TO SUIT SITE CONDITION.
 3. PROVIDE ALL DEVICE MOUNTING PLATES IN FLOOR BOX.
 4. FLOOR BOX SHALL BE WIREMOLD 4" EVOLUTION 44TOP4R SERIES OR WELLMARK APPROVED EQUIVALENT C/W 2 DUPLEX RECEPTACLES. FINISH SHALL BE BLACK.
 5. FOR TYPE 'PA', FLOOR BOX SHALL INCLUDE ONE (1) DUPLEX RECEPTACLE ONLY.

SYMBOL ON PLANS

PA

4 POWER RECESSED FLOOR BOX DETAIL
E-4-3 SCALE: NTS

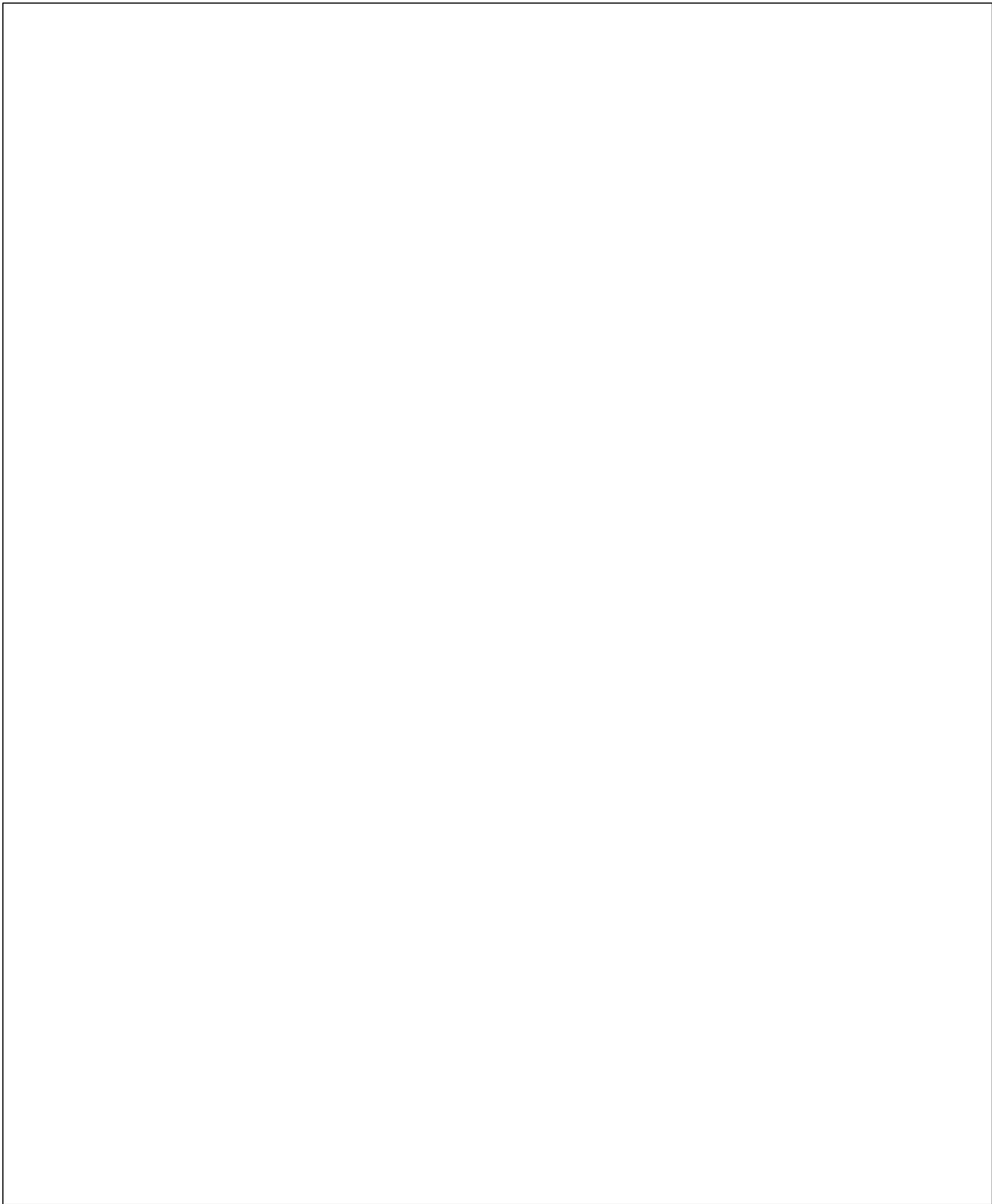


- NOTES:
- N-1 COORDINATE EXACT REQUIREMENTS WITH FURNITURE SUPPLIER/INSTALLER PRIOR TO ROUGH-IN.
 - N-2 LIQUID TIGHT SHALL BE FT4 PVC JACKET. COLOUR TO SUIT INTERIOR DESIGNER'S REQUIREMENTS. SUPPLIED BY FURNITURE SUPPLIER.
 - N-3 DIV 16 SHALL PERFORM ALL FINAL POWER AND COMMUNICATIONS CONNECTIONS IN FURNITURE.
 - N-4 SURFACE FLOOR MOUNTED WIREMOLD 4000 SERIES WIREWAY C/W BARRIER FOR POWER AND COMMUNICATIONS CABLEING COMPARTMENTS. PROVIDE ALL NECESSARY WIREMOLD FITTINGS FOR FLEX CONDUIT EXT FROM WIREWAY.
 - N-5 FEED POWER AND COMMUNICATIONS WIRING TO FLOOR TRAY FROM WALL WITH QUANTITY AND SIZE OF CONDUITS AS NOTED IN DETAIL 1/E402.

SYMBOL ON PLANS

WVF

2 FLOOR MOUNTED FURNITURE FEED CONNECTION FROM WIREMOLD DETAIL
E-4-3 SCALE: NTS



Revision:			
No.	Date	By	Description

No.	Date	By	Description
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Issue:

GENERAL NOTES

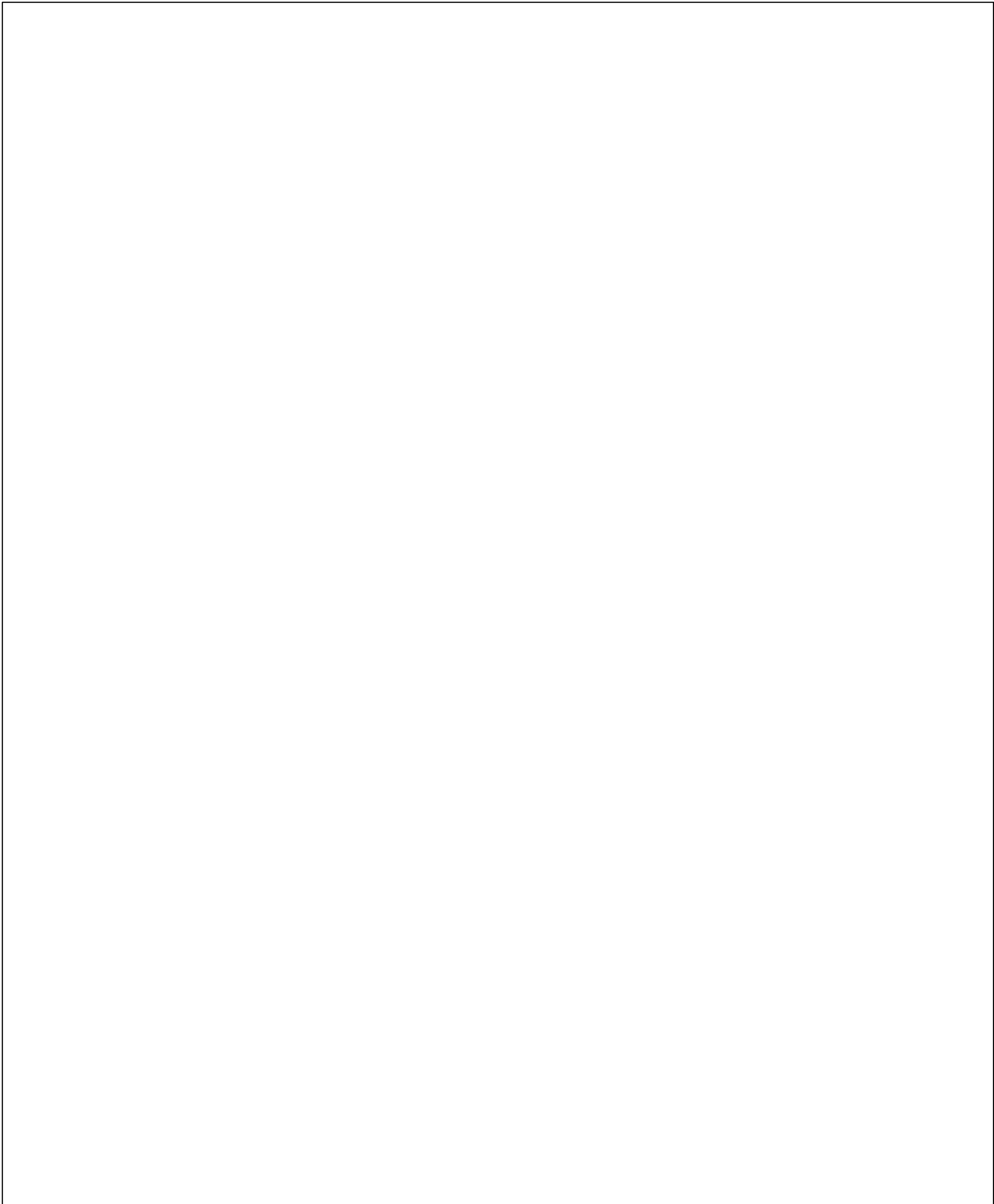
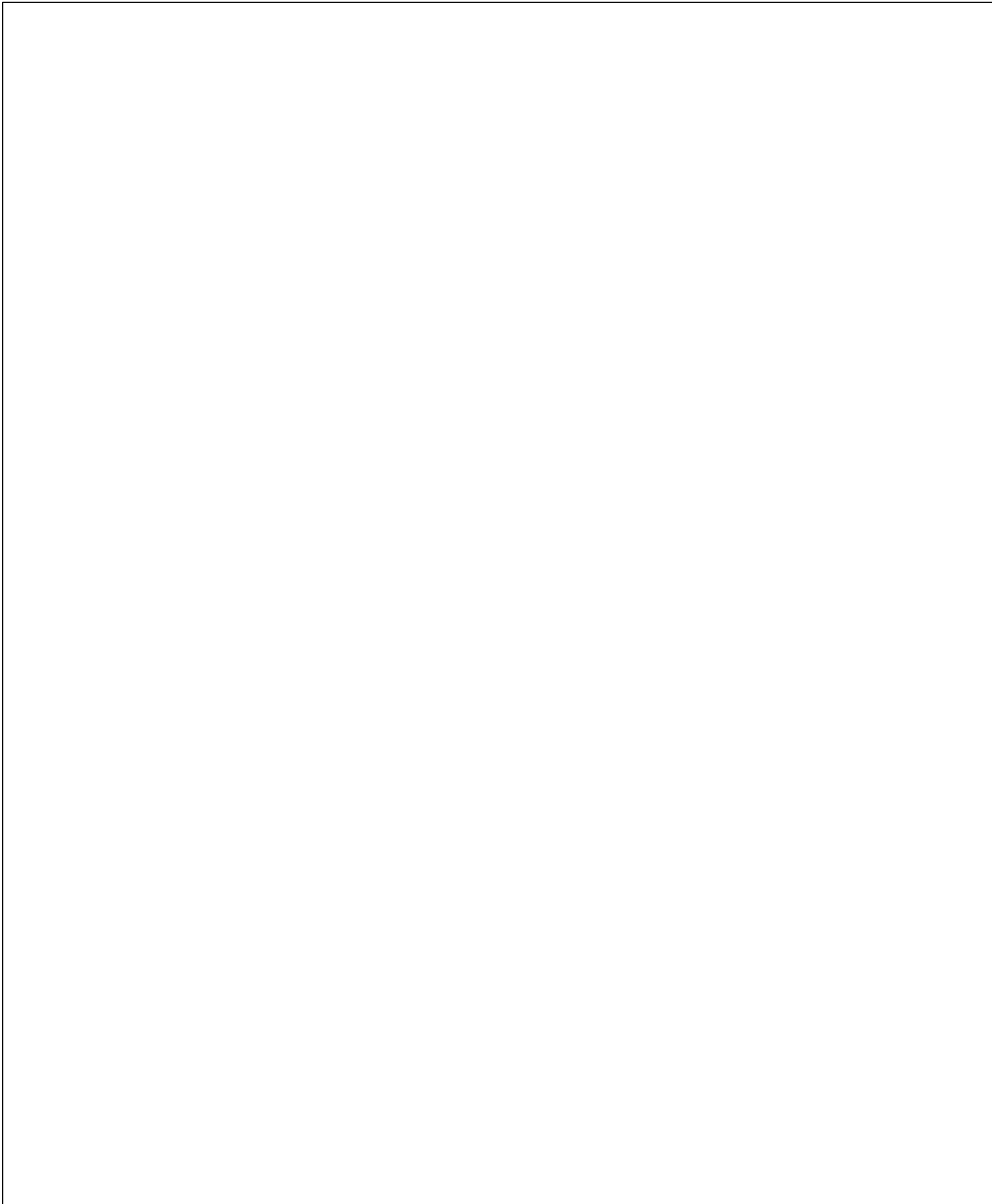
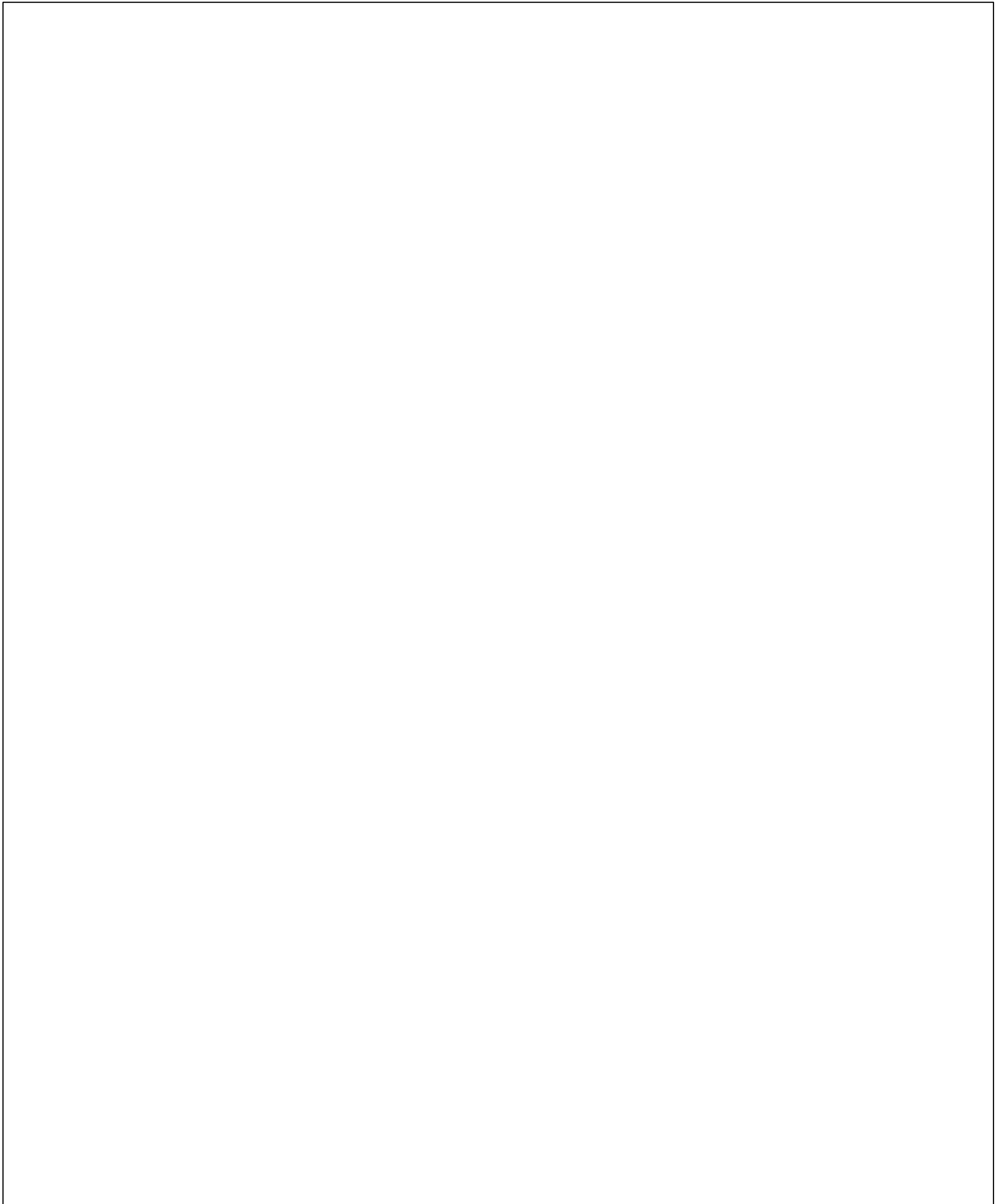
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ALL MEASUREMENTS MUST BE CHECKED AND VERIFIED ON SITE BY CONTRACTOR AND REPORT ANY DISCREPANCIES TO POI BEFORE PROCEEDING WITH THE WORK.

DO NOT SCALE DRAWINGS.

BCIN:





Revision:			
No.	Date	By	Description

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Issue:

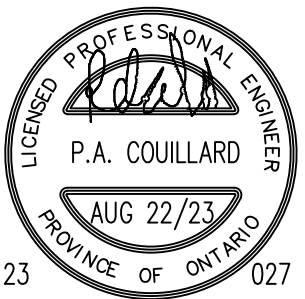
GENERAL NOTES

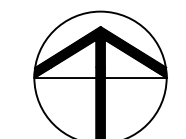
THIS DRAWING IS THE PROPERTY OF POI AND NOT TO BE REPRODUCED WITHOUT WRITTEN PERMISSION

ALL MEASUREMENTS MUST BE CHECKED AND VERIFIED ON SITE BY CONTRACTOR AND REPORT ANY DISCREPANCIES TO POI BEFORE PROCEEDING WITH THE WORK.

DO NOT SCALE DRAWINGS.

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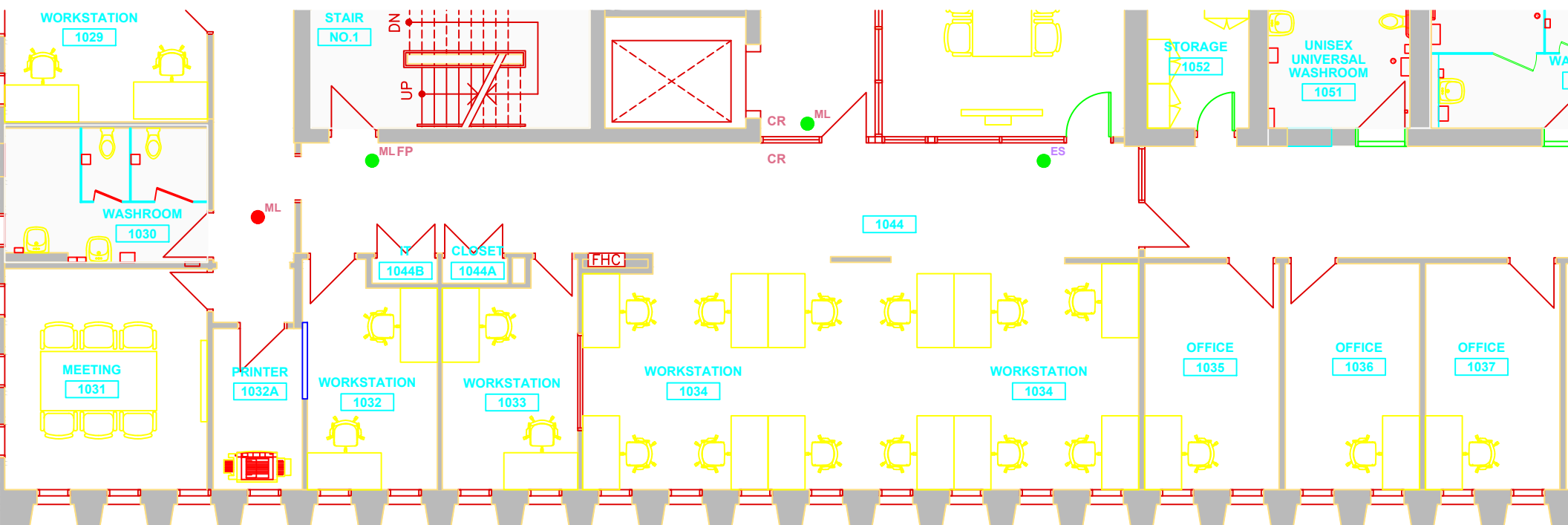
Project Name:
JOHNSON & JOHNSON
NORTH BUILDING
19 GREENBELT DRIVE
TORONTO, ON M3C 1L9

Project No.:
10157 (ME#23027)
Date:
21AUG23
Scale:
N.T.S.

Drawn By:
CAD
Checked By:
PC

Drawing Title:
POWER DISTRIBUTION
DIAGRAM AND PANEL
SCHEDULES

Dwg No:
E-05-2



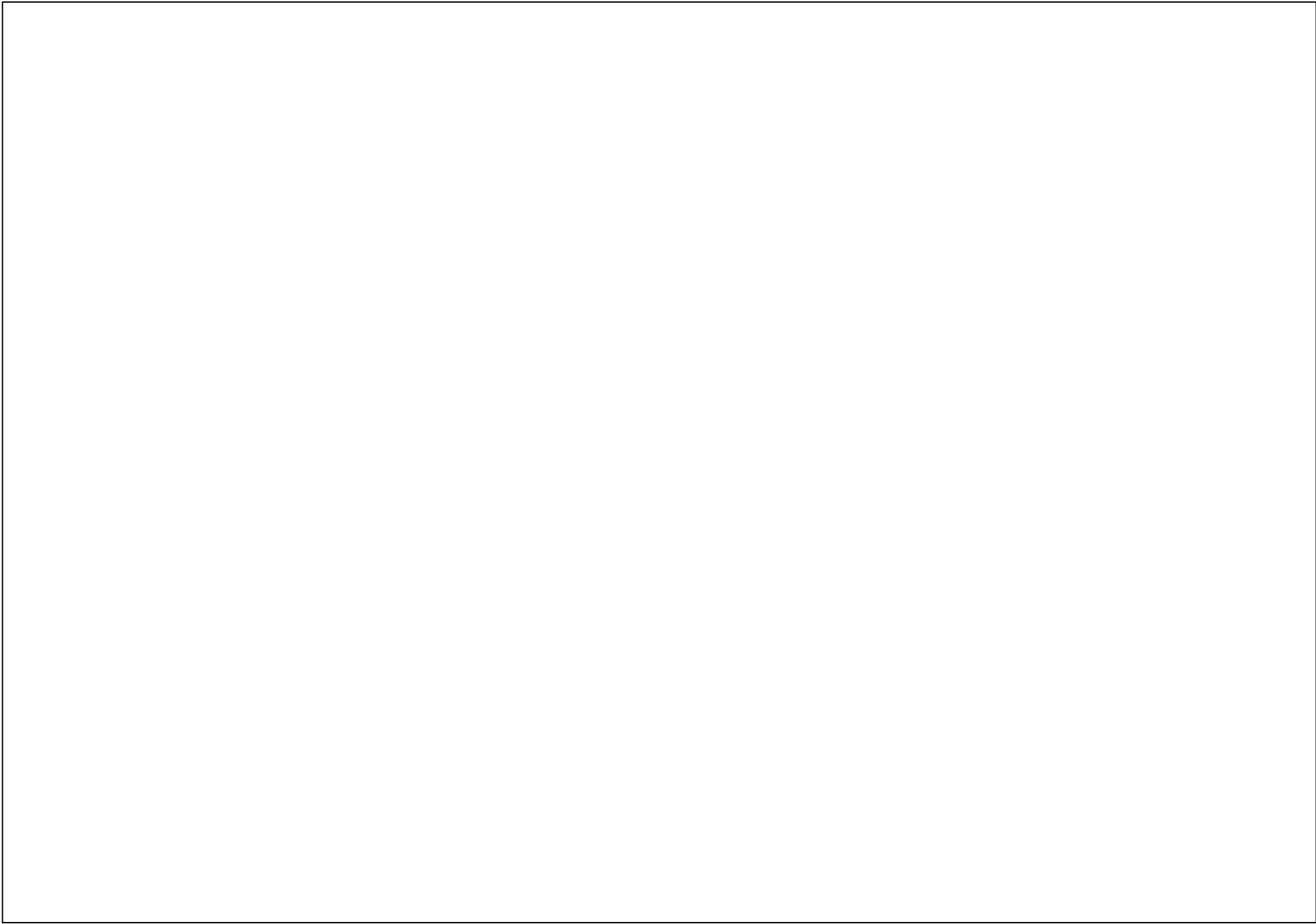
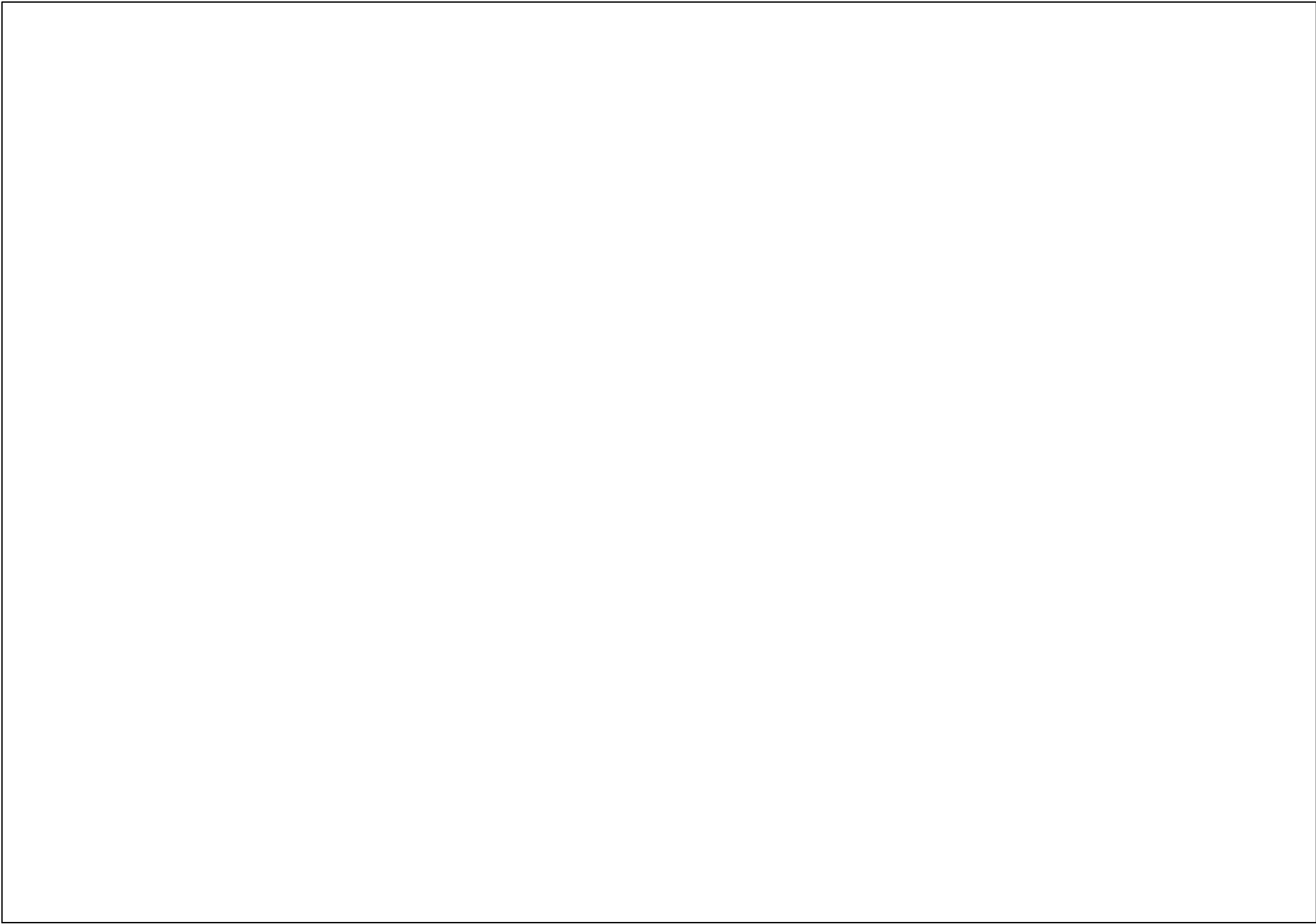
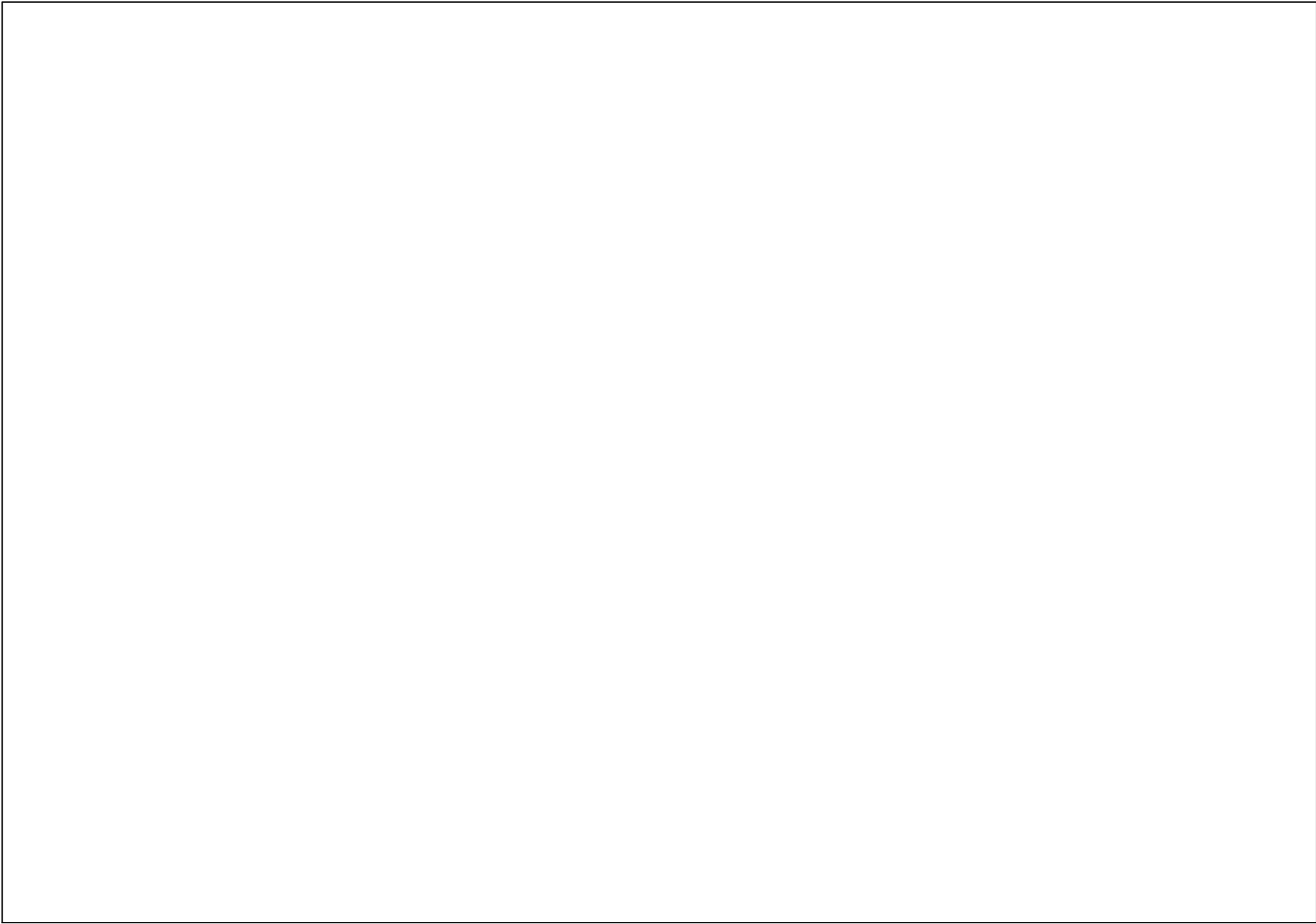
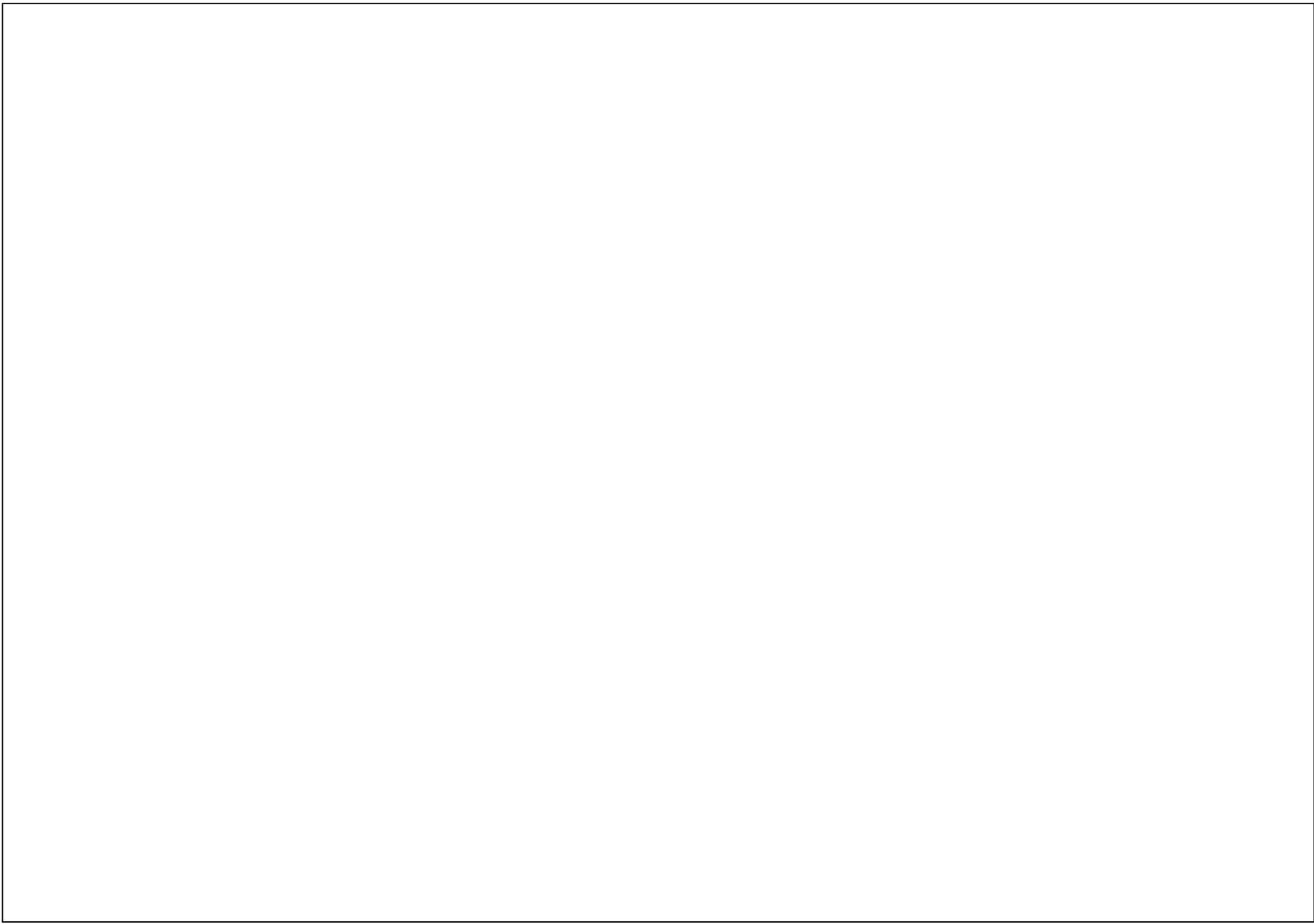
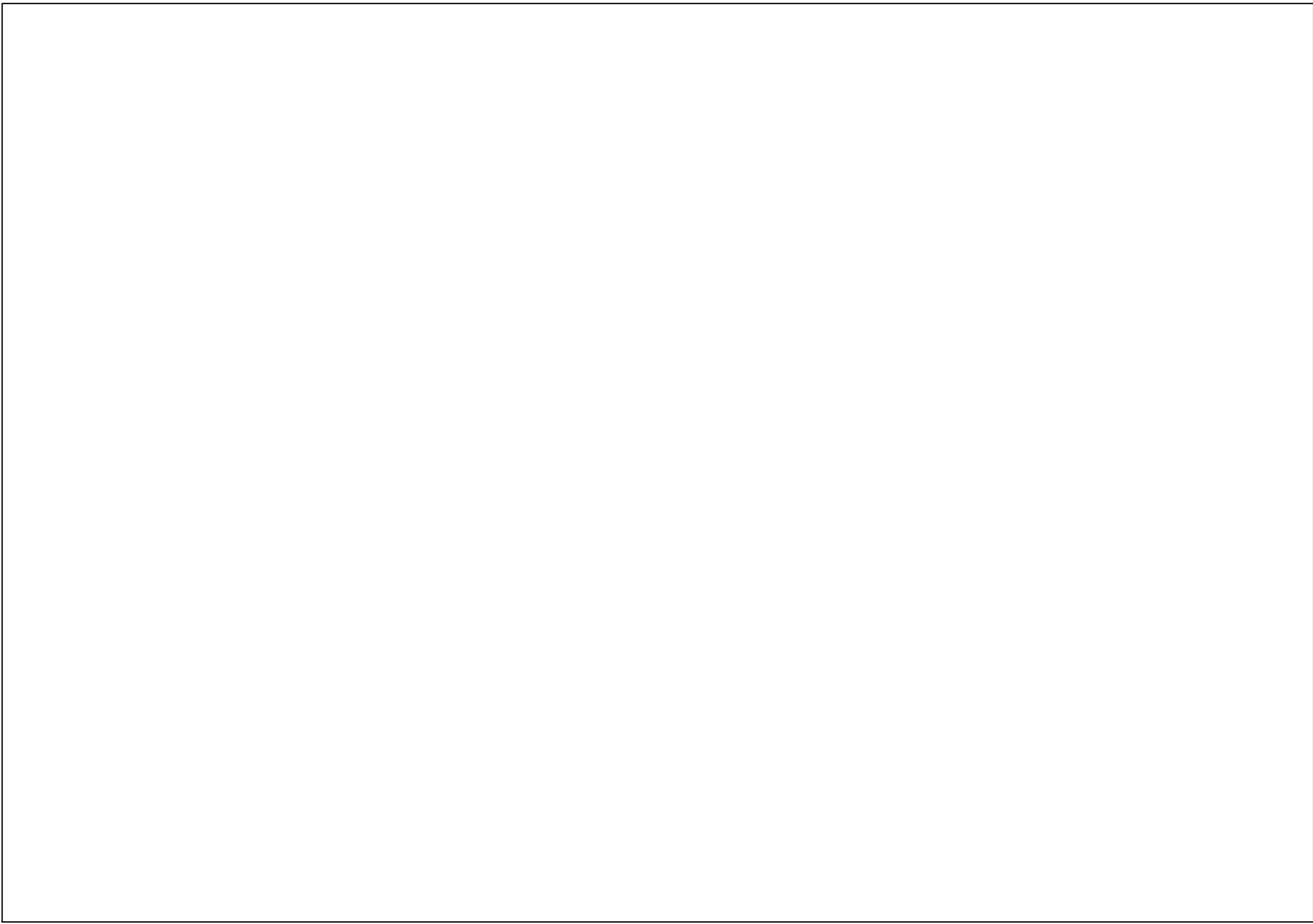


LIST OF CONSULTANTS
AND DRAWINGS.

DY MM YR

AS NOTED

XX



SHEET ISSUANCE		
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Sheet Title 3
Sheet Title 4
Sheet Title 5
Sheet Title 6

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AS NOTED

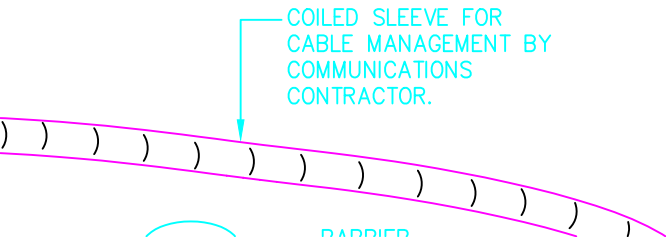
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WORKSTATIONS AND 2-1”
IS BETWEEN FOUR (4) AND
CONDUIT(S) WHERE CLUSTER

SYMBOL ON PLANS



DETAIL



ELECTRICAL SPECIFICATIONS

ELECTRICAL GENERAL REQUIREMENTS

- 1 **General Conditions**
- 1.1 The clauses in the General Conditions, Labour Conditions, Supplementary Conditions and Instructions to Bidders shall be considered an integral part of these specifications and shall govern the electrical work to be done.
- 2 **Codes and Regulations**
- 2.1 All work shall be done in accordance with the latest editions of the Ontario Building Code, Ontario Electrical Safety Code, CSA Standards, ULCC, NFPA, O.S.H.A. and local regulations and with the requirements of all applicable Inspection Authorities Having Jurisdiction. Additionally, all work shall comply with Owner's requirements and conform to base building standards.
- 3 **Permits and Approvals**
- 3.1 Obtain and pay for all required approvals, permits and notices and pay all inspection fees, taxes and all other applicable costs whatsoever connected with the electrical work. Provide Certificate of Acceptance from the local ESA Inspection Department.
- 4 **Intent**
- 4.1 It is the intent of these drawings and specifications that the Contractor provide complete and fully operational systems. All miscellaneous items and ancillary components required to achieve this shall be provided and all costs shall be included in the tender price.
- 5 **Definitions**
- 5.1 The terms 'provide' or 'supply and install' shall be understood to mean that the Contractor shall supply and install, inclusive of all labour, materials and testing, for the equipment or system which is being referenced.
- 6 **Site Visit**
- 6.1 Study the electrical drawings and the documents of all other trades and visit the site during tender in order to establish the full extent of the work and to determine existing job conditions. Include in the tender price for the total scope of work including but not limited to removing, reworking of all existing electrical equipment and wiring to successfully execute all work described. Include in bid for discrepancies, if any, shown on these drawings relating to existing conditions.
- 7 **Insurance**
- 7.1 Provide insurance for the duration of the project to protect the building Owner, Tenant and Trades from all claims. Submit all the time of the bid proof of an amount in accordance with the bid form requirements or acceptable to the Owner.
- 8 **Workers Compensation**
- 8.1 The Contractor shall provide the Owner with current certificates of clearance from the Workplace Safety and Insurance Board (WSIB) valid throughout the course of the contract.
- 9 **Contract Documents**
- 9.1 The drawings for this work division are diagrammatic in nature intended to convey the scope of work, general arrangement and sizes of equipment and approximate location of wiring devices and other devices.
- 9.2 Any discrepancies between the Architectural/Interior Design, Mechanical, Security, Audio-Visual, Communications, Food Service or other drawings and the Electrical drawings shall be reported to the Consultant prior to routing in the electrical services.
- 9.3 Whenever differences occur between floor plans and details/diagrams or between drawings and specifications the maximum condition shall govern and be included in the tender price.
- 10 **Site Measurements**
- 10.1 All dimensions and measurements shall be determined on the site. Drawings are diagrammatic intended to show general arrangement and some technical details only and shall not be scaled for dimensions or measurements.
- 11 **Demolition**
- 11.1 Complete extent of demolition is not shown. Make allowances for any new or existing services, devices or equipment relocations necessary to complete the work. The Contractor is responsible for all device and fixture counts and shall supply sufficient quantities of new devices or fixtures to complete the work as intended by the drawings. Allow for all costs in the tender price.
- 12 **Interruption to Building Services**
- 12.1 All work shall be performed without power shutdown of any operating systems without the express written approval of the building Owner. The work shall be so planned as to keep the minimum number of shutdowns to a minimum. All required power shutdowns shall be performed during premium time, during overnight hours, and shall be pre-arranged at least five business days in advance with the Owner's representative. All allowances for same shall be included in tender price.
- 13 **Temporary Power**
- 13.1 The electrical trade shall be responsible for providing temporary power and lighting, as required by all other trades, to do the work. Coordinate requirements with phasing of work and make all necessary allowances.
- 14 **Removal of Existing Equipment**
- 14.1 Remove any abandoned wiring from the areas defined on the drawings. Wiring in walls and ceilings which are to be demolished shall also be removed as required. Wiring of circuits that are to be removed shall be removed all the way back to the corresponding circuit breaker panel or other overcurrent protective device. Any wiring which may become disconnected because of demolition, which is not intended to be removed, shall be reconnected.
- 14.2 Wiring, conduit and equipment which is required to maintain services to other parts of the building shall be temporarily supported or relocated as required.
- 14.3 Unless indicated otherwise, equipment, devices and materials that are slated or shown as "to be removed" shall become the property of the Contractor and shall be removed from the site. Unless indicated otherwise, light fixtures, and all other emergency remote head and alarm devices and wall dimmers that are to be removed shall be cartoned and turned over to Owner at a designated storage space in the building. Any other equipment that is shown to be retained by the Owner shall also be moved to a designated storage space in the building. Unless otherwise as directed by Owner.
- 15 **Relocation of Devices**
- 15.1 Devices and outlets are shown on the drawings in the required locations. Notwithstanding the foregoing, it shall be understood that any electrical outlet, device or lighting fixture may be relocated by the Owner's Representative or the Consultant 15 feet from the location shown without additional charge providing such relocation is made before the affected conduits and boxes are roughed in. Additionally, verify that all existing devices that are to remain fall within the room shown on the new plans. Allow for relocation of existing devices where required.
- 15.2 Allow for removal and re-installation of existing wall devices to permit new architectural finishes, and for temporary removal of ceiling fixtures and devices where T-bar ceilings to be temporarily removed.
- 16 **Scheduling and Delivery**
- 16.1 All work during construction shall be properly scheduled and coordinated with the other Trades, the Owner and the Tenant. Include in the tender price for all necessary premium time to suit the Owner's or General Contractor's construction schedule.
- 16.2 A delivery schedule of all major equipment including lighting fixtures to be provided under this contract shall be submitted to the General Contractor at the beginning of the project. Failure to identify delivery problems or unnecessary delay in ordering equipment may result in delay claims against the Contractor.
- 17 **Shop Drawings**
- 17.1 Submit electronically in PDF format shop drawings for power distribution equipment, lighting fixtures, lighting controls, panelboards, disconnect switches, wiring devices, etc., prior to installation for approval.
- 17.2 Each shop drawing shall be reviewed and stamped as being correct by the General Contractor and the appropriate trade before submission to the Consultant for review. Shop drawings which are not stamped in this manner shall be returned "not reviewed".
- 18 **As-built Drawings**
- 18.1 Keep a record set of drawings on site at all times which shall clearly indicate the exact location of all outlets, devices, lighting fixtures, feeder runs, distribution equipment, junction boxes, pull boxes, EOL's, etc. The record drawings shall also include any deviations from the design drawings and all changes issued via change notice or site instruction or other change made during the course of construction. The information on these drawings shall be incorporated onto the as-built drawings at the completion of the project.
- 18.2 Submit as-built drawings at the completion of the project in the form of AutoCAD release 2010 or later. Obtain and pay for a cad disk of drawing files. The Contractor may obtain the Consultant's AutoCAD drawing files at a cost of \$125.00 per drawing. The as-built drawings shall incorporate all the information from the record drawings recorded during construction. Submit the completed record drawings and the cad files, in AutoCAD release 2010 or later, to the Consultant for review. Following the Consultant's review submit the record drawings, one set of prints of the as-built and a USB thumb drive/cad disk of the as-built drawings to the Landlord or Owner as part of the close-out documents.
- 18.3 The Consultant's stamp and logo shall be removed from the as-built drawings. The drawings shall be clearly marked as AS-BUILT and shall include the Contractor's name.
- 19 **Close-out Documents**
- 19.1 After completion of the project submit the following documents for Consultant's review.
- Electrical Safety Authority Inspection Report.
 - Fire Alarm Verification Report and Certificate.
 - Warranty letter.
 - Maintenance Manuals including all Reviewed and Stamped shop drawings.
 - Emergency lighting installation certificate.
- 20 **Warranty**
- 20.1 The Contractor shall provide a one-year "parts and labour" warranty on all facilities, equipment and devices, effective on the date of acceptance of the work, even if the devices are installed and connected before this date. The warranty shall cover the complete installation.
- 20.2 The Contractor shall repair and/or replace at no extra cost any defects in materials or workmanship that occur during the warranty period. Work to be done at a time that is suitable to the Landlord or Tenant.
- 21 **Final Inspection**
- 21.1 At the completion of the work the Contractor shall contact the Owner's representative and Summitt Engineering to perform a final inspection.
- 21.2 In areas where ceiling tiles have been installed it will necessary to remove portions of the ceiling tiles for inspection and then re-install them. Include for all costs in the tender price.
- 21.3 All equipment must be cleaned and tested before final acceptance by the Consultant.

22 **Changes to the Contract**

- 22.1 Where extra work of any kind is required obtain written instructions from the Owner or Architect/Design Consultant before proceeding. The Contractor will receive payment for authorized changes only.
- 22.2 For each change submit a quotation c/w breakdown of material, labour, overhead and profit. Labour units shall be based on the latest National Electrical Contractors Association (NECA) manual column one (1) for the duration of the project. Material prices shall be based on the latest National Price Guide system with appropriate trade discounts.
- 22.3 Hourly labour rates shall be inclusive of all ancillary charges for supervision, electrical inspection, hand tools, as-builtting, parking, clean-up, elevator downtime and additional bonding. No other ancillary charges will be permitted.
- 23 **Underground Work**
- 23.1 For all underground work it is the Contractor's responsibility to verify with the Owner and the local Utilities for locations of all existing underground services prior to digging. Include for all costs in tender price.
- 24 **Noise and Vibration**
- 24.1 All electrical equipment shall operate without objectionable noise or vibration and to the Owner's satisfaction.
- 25 **Restrictions**
- 25.1 Communications rooms and closets are designed for communications equipment and security DGP's. Do not locate any type of power distribution equipment or power risers within these rooms.
- MATERIALS AND INSTALLATION**
- 26 **General Conditions**
- 26.1 Unless otherwise specifically provided, all materials and equipment installed shall be new, unused, and bear approval or certification labels indicating conformity with CSA standards. All new materials and equipment shall match base building standards unless shown otherwise.
- 26.2 Provide all materials, equipment and labour necessary to perform the complete work as indicated.
- 26.3 All work shall be performed in a professional and expert manner to the satisfaction of the Architect/Design Consultant. Any work that is deemed to unsatisfactory shall be replaced without extra cost to the Owner.
- 26.4 Damage to any system occurring during execution of the work shall be rectified at the Contractor's expense.
- 26.5 The construction site shall be kept clean and any debris shall be removed from the site throughout the construction period and at completion of the work.
- 27 **Routing of Equipment**
- 27.1 All wiring shall be run concealed wherever possible. Where wiring is run exposed, it shall be installed parallel to the building structure and provide a neat appearance.
- 27.2 In general, wiring shall be run concealed in finished areas and exposed in unfinished areas and mechanical and electrical room service spaces.
- 27.3 New conduits and shall be carefully routed to avoid interference with existing services. Routing of conduits within existing riser rooms shall be reviewed and approved by the building Owner prior to installation. Any existing services that interfere with the new installation shall be relocated under this contract. Become familiar with any such conditions during the contractor pre-bid walk-through and the tender price.
- 27.4 The routing of new conduits shall be approved by the Owner's representative or the Consultant before they are installed. They shall not be attached to mechanical or other equipment.
- 28 **Cutting and Patching**
- 28.1 All cutting, patching and painting required to perform the electrical work shall be included in this contract unless otherwise advised by the General Contractor.
- 29 **Directories**
- 29.1 Amend all existing panelboard directories which may be affected by work done under this contract. Amended directories shall be typewritten. New panelboards shall be equipped with a typed directory of circuits showing room number, type of load and wattage.
- 30 **Location of Luminaires**
- 30.1 All luminaires shall be new and as specified on the drawings and specifications except where noted otherwise for existing luminaires to be re-used. Re-used luminaires shall be thoroughly cleaned and re-lamped prior to putting into use again.
- 30.2 All luminaires shall be supplied complete with all required accessory items such as yokes, trim rings, frame adjusters and other ancillary components as required for a complete and proper installation.
- 30.3 For exact location of all lighting fixtures and light switches refer to architectural reflected ceiling plans and details where applicable.
- 30.4 Ensure that all lighting fixtures within rooms are controlled by switches, where switches are shown. Where two or more switches are shown for one room and the room contains emergency fixtures, the switch closest to the door shall be on the emergency power circuit.
- 31 **Lamps and Fuses**
- 31.1 All luminaires shall be complete with suitable lamps in accordance with the luminaire schedule. Include a shop drawing of proposed lamps along with every luminaire shop drawing submitted.
- 31.2 Fluorescent, HID and LED lamps shall be guaranteed for a period of one year from the date of acceptance. Low voltage, halogen and incandescent lamps shall be guaranteed for a period of six months from the date of final acceptance.
- 31.3 At completion the job shall be left completely lamped and fused, including all existing and new fixtures and exit signs within the project boundary. Open and repair all existing fixtures affected by this work. Provide new lenses in existing fixtures where lenses are missing or damaged.
- 32 **Ballasts**
- 32.1 Ballasts shall be manufactured to the latest applicable CSA standards and shall meet or exceed the requirements of the OEM manufacturers.
- 32.2 Ballast voltage shall be as noted in the luminaire schedule or as required to suit the circulating shown on the drawings.
- 32.3 Submit ballast manufacturer's technical data with each luminaire shop drawing.
- 33 **Exit Signs**
- 33.1 Unless otherwise noted, all exit signs shall be new, pictogram style, LED type with voltage rating to suit the circulating shown on the drawings, or to match existing exit lighting voltage.
- 33.2 Exit signs shall be single or double face with directional arrows as noted on the drawings.
- 33.3 (not used).
- 33.4 All exit signs shall have no light leakage from joints or fittings, have canopy and/or stem hanger to match the housing and shall meet the requirements of standard CSA C800.
- 33.5 Ensure that exit sign circuit breakers are locked in the 'ON' position.
- 33.6 Ensure that new or relocated exit signs are positioned to be clearly visible along the intended path of egress and that no ceiling or wall mounted obstructions interfere with or block the visibility of the exit sign. In the event that the building inspector or the consultant finds the sign is obstructed from view or interferes with other systems the contractor shall relocate the sign at no extra cost.
- 34 **Occupancy Sensors**
- 34.1 Provide a complete and fully operational occupancy sensing lighting control system as shown on the drawings and specified herein.
- 34.2 Locate all equipment in accordance with the manufacturer's recommendations and as indicated on the drawings.
- 34.3 All sensors to arrive on site factory preset to the maximum time delay setting.
- 34.4 Final sensitivity adjustment and time delay setting of all sensors shall be carried out 72 hours prior to substantial completion by the Contractor and as directed by the Consultant.
- 35 **Core Drilling and Sealing**
- 35.1 Before core drilling floor slab or structural walls, scan slab or walls and have the locations accepted by the building Owner and Structural Engineer in writing. Any existing building services damaged by core drilling must be repaired immediately at no cost to the Owner. Obtain all necessary approvals prior to scanning and core drilling. Include for all costs in tender price. X-raying and core drilling of floors to be carried out after normal working hours and at a time acceptable to the Owner. Schedule core drilling with Owner at least 10 days in advance of performing the work.
- 35.2 Where conduits pass through fire rated walls or floors, and/or where core drilling is performed, provide fire stopping material listed with, and bearing label of CSA and ULCC, and maintain existing fire rating of building component penetrations.
- 36 **Fastenings and Supports**
- 36.1 Fasten exposed conduit or cables to building structure using steel straps or channels. Use beam clamps to secure conduit to exposed steel work. Suspended support systems: U shape, single channel (not dip galvanized) to suit load to be carried, surface-mounted or suspended with threaded rod as indicated or required. Support equipment, conduit or cables using clips, spring-loaded bolts, cable clamps designed as accessories to basic channel members. Do not use wire lashing or perforated strap to support or secure raceways or cables.
- 36.2 Independently support from structure all new and relocated suspended, surface or T-bar mounted luminaires using two (2) or more lengths of Weldless 'Single Jack' bright zinc plated steel chain, Canadian Standard #10 gauge, 13 links per foot. Do not support lighting fixtures or other devices from the ceiling support system. Fluorescent fixtures with linear lamps shall be supported with minimum two chains per 4' length of fixture. Downlight fixtures shall be supported with minimum one chain.
- 37 **Access Doors**
- 37.1 Provide all access doors where required to service all new and existing equipment. Access panels shall be equal to LePage and shall be compatible with ceiling/wall type and finish. Access doors shall be recessed type with a drywall infill. Electrical services are to be coordinated to minimize the number of access door locations required. Coordinate location and sizes with the Consultant. Submit installation drawing(s) to the Architect/Interior Designer for review indicating size and location of all proposed access locations prior to proceeding with the installation.

38 **Laminate and Identification**

- 38.1 All new equipment shall be identified with laminate nameplates. Colour shall be black background with white lettering for power distribution equipment and red background with white lettering for fire alarm DGP's and panels. Wiring on all laminate plates shall be approved by the Consultant and the building Owner prior to engraving.
- 38.2 All conductors including neutrals and grounds shall be tagged in all junction boxes, device outlet boxes and panelboards for easy identification for testing and maintenance purposes.
- 39 **Wire and Cable**
- 39.1 Unless shown otherwise, all wires shall be copper with RW-90 insulation, 600V rating, and minimum #12 gauge or as specified. #12 and #10 shall be solid, #8 and larger shall be stranded. In damp locations, outside the building and underground, they shall be THW-90 XLW type. All conductors shall be sized for a maximum 2% voltage drop. Provide copper ground wire sized per Code in all branch and power feeder conduits whether or not same is shown on drawings.
- 39.2 Provide a separate neutral conductor for each circuit. Do not share neutrals.
- 39.3 Lugs for power feeders shall be solderless set screw type or long barrel double crimp type as required.
- 40 **Conduits**
- 40.1 All conduits indoors shall be steel EMT except as otherwise noted. EMT couplings and connectors shall be steel concrete tight. Connectors shall be with nylon insulation.
- 40.2 Flexible armored cable (BX) shall be permitted only for down-drops from junction boxes to luminaires and for vertical drops in partitions unless prohibited by Code or building standards. BX cable shall not be used in any exposed areas unless otherwise noted. BX cable runs in ceiling spaces shall not exceed 3m (10') in length. Do not terminate BX cable directly into panelboards.
- 40.3 Final connections to motors and transformers shall be made with flexible metal conduit (minimum 1m length).
- 40.4 Provide armored cable "TECK" where shown. All wiring under access floors shall be in TECK or flexible sealtite conduit.
- 40.5 Outdoor conduits shall be rigid galvanized steel or rigid PVC.
- 40.6 Underground and concrete encased conduits shall be rigid PVC.
- 40.7 All conduits for communications wiring shall be installed with bushings at each end. Provide pull strings in all empty conduits.
- 40.8 Provide approved expansion joints where required by Code and/or as shown.
- 41 **Pull Boxes**
- 41.1 Only certain pull boxes may be indicated on the drawings. Provide a minimum of one pull box for every 30m (100') of conduit run with each 90 degree bend equating to a 9m (30') run of conduit.
- 41.2 Do not install more than two (2) 90 degree bends between two pull boxes.
- 41.3 Provide identification nameplates on all pull boxes.
- 42 **Pull Strings**
- 42.1 Provide nylon pull strings in all empty conduits.
- 43 **Grounding**
- 43.1 Provide all grounding as per the latest edition of the Ontario Electrical Safety Code and local regulations. Megger all power circuit, feeders and isolated ground feeders. If resistance to ground on any feeder is below that required by CSA or other governing authorities, these feeders shall be considered defective and shall be replaced.
- 43.2 Perform ground continuity and resistance tests on the grounding system using method appropriate to site conditions and to approval of Engineer and local Authorities Having Jurisdiction over the installation. Perform all required tests before energizing the electrical system.
- 43.3 Provide separate green insulated ground conductor in every feeder and branch wiring power conduit.
- 44 **Mechanical Wiring**
- 44.1 Coordinate all equipment supplied by other trades to ensure voltage and amperage compatibility with design documents prior to equipment being ordered and prior to rough-in of circuits to same.
- 44.2 Unless shown otherwise, Mechanical Contractor shall provide all starters and control wiring for HVAC equipment and all other equipment and systems provided under Mechanical Division. Electrical Contractor shall receive and install all starters and shall provide line side and load side line voltage wiring and required disconnect switches. Confirm all requirements and equipment locations with Mechanical Contractor prior to rough-in.
- 44.3 Control wiring including conduit for all mechanical equipment shall be supplied and installed by Mechanical Division.
- 44.4 Fan switches shall be supplied by Mechanical Division for installation and wiring by Electrical Division.
- 45 **Wiring Devices and Outlet Boxes**
- 45.1 All wiring devices and coverplates shall be specification grade.
- 45.2 Duplex receptacles shall be decoo style, specification grade, 15A, 120V unless otherwise noted. Refer to Architect/Interior Designer's power and communications plans for exact location and mounting height of receptacles and all other wiring devices and outlet boxes. In millwork areas refer to the Architect/Interior Designer's millwork details for this information. Where Architect/Interior Designer's power and communications plans are not available have the Architect/Interior Designer or Owner mark the locations on site prior to rough-in. Verify colour with Architect/Design Consultant prior to installation.
- 45.3 Local switches shall be decoo style, specification grade, 20A with voltage rating as required to suit the voltage of the load being controlled. Verify exact location, mounting height and colour with the Architect/Design Consultant prior to installation.
- 45.4 Flush mounted devices shall have matching coverplates unless otherwise noted.
- 45.5 Junction boxes on walls with acoustic panels shall be extended flush with finish of the acoustic panels.
- 45.6 Outlets shall not be installed back-to-back in partitions. Stagger to prevent sound transfer.
- 46 **Wall Dimmers**
- 46.1 Dimmers shall be fluorescent, LED or low voltage type as required to suit the load being controlled.
- 46.2 Individual dimmers shall be sized for the total load being controlled plus 25% spare capacity.
- 46.3 Dimmers shall be colour white with matching white coverplate. Unless noted otherwise.
- 46.4 All dimmers and coverplates shall be specification grade.
- 47 **Systems Furniture**
- 47.1 Coordinate exact requirements for power and communication feeds to workstations with workstation supplier prior to rough-in. Provide all final power and voice/data connections and disconnections to workstations as required to suit the new layout. Allow for all costs in the tender price.
- 48 **Fire Alarm System**
- 48.1 All new devices shall match the existing system in manufacturer and types. Verify with the existing system manufacturer during the tender period all requirements, wiring and specifications for new devices shown on the drawings, include for any new circuits, modules, amplifiers, programming and set-up that may be required in the existing fire alarm control panels. Obtain a verification certificate from the fire alarm system manufacturer or maintenance agent for all modifications to the fire alarm system and/or devices.
- 48.2 Unless otherwise shown, reconnect existing fire alarm system devices and retain in working order throughout construction.
- 48.3 Provide for all 120V power connections to suit the requirements of the fire alarm system.
- 48.4 Contractor and/or Owner to verify with the City prior to the fire alarm verification and coordinate if City Inspector wants to be present at the time of verification.
- 49 **Security System**
- 49.1 Provide new or modify existing conduits, device back boxes, pull strings and conductors required for the modifications to the security system as shown on the drawings or required by the security system contractor. The Electrical Contractor shall coordinate all requirements with the Owner's Security Contractor during the tender period and shall include for all costs.
- 49.2 Provide for all 120V power connections to suit the requirements of the security system.
- 50 **Circuiting**
- 50.1 Circuiting shown is for grouping purposes only. Verify exact circuits available on site and provide new circuits and breakers as required. Indicate exact circuits used on the as-built drawings. Balance loads within 10% across all phases and submit test report for review by the Consultant.
- 50.2 Contractor shall re-use existing spare circuits within the space that may be found during demolition prior to running new circuits from panels.
- 50.3 Existing emergency and normal circuits for general lighting may not be as shown. Ensure final circuiting of all lighting, including normal circuits, emergency power circuits and night light fixtures to be as shown on the drawings.
- 50.4 The work shall be complete and shall include all junction and pull boxes, sockets, connections, raceways, fittings, supports, etc. and all the necessary and appropriate hardware, whether or not it is shown on the drawings for complete and fully operational systems. Identify each junction/pull box according to the panel and circuit number of the wires it contains.
- 51 **Power Distribution Equipment - General**
- 51.1 The products shall be of some manufacturer as base building unless approved otherwise by the Owner. Where approved otherwise products shall be as manufactured by Cutler-Hammer, Schneider or Siemens.
- 51.2 All transformers, distribution panels, and branch circuit panelboards shall be complete with copper bus (or windings), and shall be of some type and manufacture as existing in base building unless otherwise noted.
- 51.3 Provide sprinkler proof enclosures for all power distribution equipment in sprinklered buildings.
- 51.4 Ensure that all neutrals of all transformers are grounded to the building ground system in accordance with tables 16A and 16B of the O.H.T.S.C. Verify location of appropriate building grounding point on site during tender period.
- 51.5 All fuses shall be HRC type "V" with time delay unless shown otherwise.
- 51.6 Provide 4" high concrete housekeeping pad under all power distribution equipment that is to be floor mounted, whether or not same is shown on the drawings.

52 **Transformers**


- 52.1 All distribution transformers shall be dry type with copper windings and minimum K13 rated with electrostatically shielded windings. Transformers shall be complete with double lugs to accommodate double neutrals. Approved manufacturers are Hammond, Paygor, Rex.
- 52.2 Where harmonic mitigation transformers are specified to be used they shall be Harmony Series as manufactured by Minus or approved equal as manufactured by Powermatics.
- 52.3 Unless otherwise shown mount all transformers up to and including 45kVA from ceiling or wall using suitable suspension rods or framework. Mount transformers 75kVA and above on floor on 100mm high concrete housekeeping pad. Provide external oil diversion pads.
- 52.4 Make primary and secondary connections with flexible metal conduits.
- 53 **Plywood Backboards**
- 53.1 Plywood backboards shall be of the highest quality fire retardant fir, 19mm thick, primed and painted with fire retardant paint.
- 53.2 All electrical equipment shall be mounted on plywood backboards.
- 53.3 Provide plywood backboards in communications rooms, sized as noted on the drawings.
- 54 **Cable Tray**
- 54.1 The cable tray system shown on the drawings shall be CER 'BT' series Cable Tray System, or Wiremold Cabotfi approved equal, comprised of 0.187" diam. zinc plated steel wire that has been welded into a 2" x 4" steel grid that can be custom cut to size on site.
- 54.2 Width shall be as noted on the drawings. Depth of tray system shall be 4". Refer to floor plan for routing.
- 54.3 Cable Tray shall be comprised of 10' sections, custom cut sections, 'L' connections and 'T' connections as required to suit layout shown on the floor plan. Inner bends of all turns shall be rounded to suit ease of cable pulling.
- 54.4 Finish shall be standard black finish.
- 54.5 All custom cuts shall be made in accordance with manufacturer's instructions.
- 54.6 The complete cable tray system shall be installed at the same elevation and be horizontally level. Confirm exact mounting height on site with Architect prior to commencing installation. Where changes in elevation are required due to obstructions on site, these shall be made in accordance with the manufacturer's instructions while maintaining the continuity of the cable tray system.
- 54.7 Provide all mounting hardware as required to suit installation.
- 54.8 Provide #2 AWG bare copper ground wire throughout cable tray system and connect to each section of tray using split bolt connector. Connect to building grounding system.
- 55 **Testing**
- 55.1 Provide all testing and start-up for each system to suit the manufacturer's requirements and to satisfactorily demonstrate to the Owner and Consultant that the system and/or equipment are operating in accordance with its intended purpose.
- 55.2 Provide all required testing to suit the local Authorities Having Jurisdiction.
- 55.3 All costs involved with all testing shall be fully borne by this Contractor. All testing and commissioning where some will cause electrical service interruptions to the building shall be performed during overnight hours.
- 55.4 Upon completion of installation turn off all non-emergency lighting in presence of the Consultant and demonstrate all luminaires that are intended to be on emergency power circuits are correctly connected to these circuits. Take emergency lighting readings with only the emergency lighting in operation and submit to the Consultant for review. Contractor and/or Owner to verify with the City prior to the emergency lighting testing and coordinate if City Inspector wants to be present at the time of testing.
- 56 **Arc Flash Assessment**
- 56.1 Division 16 contractor shall retain the services of a specialized consultant to provide Arc Flash assessment of all new power panelboards, transformers, splices, etc. per the requirements of CSA 1440, NFPA 70 and IEEE 1584. Contractor shall organize all electrical data including transformer impedances, cable lengths, device makes/models/ratings/settings, etc. As required for the assessments. Provide Arc Flash warning labels on all the new equipment. Submit Arc Flash assessment report containing summary of analysis performed, results, calculations and recommendations.
- 57 **Equipment Specifications**
- 57.1 **Circuit Breaker:** Bolt-on moulded case circuit breaker, quick make, quick break type, for manual and automatic operation. Single handle for multi-pole applications. Magnetic instantaneous trip elements to operate only when value of current reaches setting. Trip setting on breaker with adjustable trips to range from 3 to 8 times current rating. Interrupting capacity to match existing or as noted. Moulded case circuit breaker to operate by means of thermal and magnetic tripping devices to provide inverse time current tripping and instantaneous tripping for short circuit protection for frame sizes over 150A, shall be complete with interchangeable trips. For frame size 400A and larger, shall be solid state type.

N.T.S.

ELECTRICAL
SPECIFICATIONS

E-01-1

ELECTRICAL LEGEND			
SYMBOL	DESCRIPTION	SYMBOL	DESCRIPTION
	EXISTING LUMINAIRE TO REMAIN.		CEILING MOUNTED DUPLEX RECEPTACLE.
	EXISTING LUMINAIRE TO BE REMOVED OR RELOCATED.		FLUSH MOUNTED FLOOR FITTING. C/W 15A, 120V DUPLEX RECEPTABLES AND PROVISIONS FOR COMMUNICATIONS, AND AV WIRING INDICATED. REFER TO DETAILS FOR TYPE. FLUSH MOUNTED IN CONCRETE.
	NEW LUMINAIRE OR EXISTING LUMINAIRE IN RELOCATED POSITION		FLOOR MOUNTED DUPLEX RECEPTACLE, 15A, 120V.
	CROSS HATCHING OR EM DENOTES LUMINAIRE CONNECTED TO EMERGENCY POWER		FLOOR MOUNTED QUADPLEX RECEPTACLE.
	TRACK LIGHTING. LENGTH OF TRACK TO SCALE, QUANTITY OF FIXTURE HEADS AS INDICATED.		LOW PROFILE FLOOR MOUNTED COMBINATION 120V DUPLEX RECEPTABLE(S) AND PROVISIONS FOR COMMUNICATIONS. REFER TO DETAILS FOR TYPE.
	COVE LIGHT.		DIRECT CONNECTION TO SYSTEMS FURNITURE. 'Y' DENOTES FLOOR MOUNTED, 'W' DENOTES WALL BASE FEED, 'W' DENOTES FLOOR MOUNTED FED FROM WIREMOLD, 'T' DENOTES PACE POLE SUPPLIED WITH SYSTEMS FURNITURE. REFER TO DETAILS AND SYSTEMS FURNITURE SCHEDULE WHERE APPLICABLE.
	LINEAR OR STRIP LIGHT LUMINAIRE, CEILING MOUNTED.		WALL MOUNTED TELEPHONE OUTLET BOX. REFER TO DETAIL.
	LINEAR OR STRIP LIGHT LUMINAIRE, WALL MOUNTED.		DATA OUTLET, WALL MOUNTED OR AS OTHERWISE SHOWN. REFER TO DETAILS. 'C' DENOTES MOUNTED ABOVE T-BAR CEILING.
	WALL WASHER LUMINAIRE. CEILING MOUNTED (RECESSED OR SURFACE).		WIRELESS ACCESS POINT
	DOWNLIGHT LUMINAIRE. CEILING MOUNTED (RECESSED OR SURFACE).		WALL MOUNTED COMBINATION TELEPHONE/DATA OUTLET BOX. REFER TO DETAILS.
	WALL MOUNTED LUMINAIRE.		WALL MOUNTED CABLE TV OUTLET BOX. REFER TO DETAIL.
	PENDANT MOUNTED LUMINAIRE.		VOICE/DATA OUTLETS MOUNTED IN TABLETOP MONUMENT. MONUMENT SUPPLIED BY OTHERS. PROVIDE JACKS AND TERMINATE COMMUNICATIONS CABLING AT MONUMENT. COORDINATE ALL WORK WITH AV CONTRACTOR AND CONFIGURATION OF TABLE.
	LUMINAIRE DESIGNATOR. LETTER DENOTES TYPE. REFER TO LUMINAIRE SCHEDULE.		POWER POLE WITH DEVICES AS SHOWN.
	CEILING MOUNTED EXIT LIGHT C/W FACES AND ARROWS AS INDICATED. ARROWS INDICATE ILLUMINATED FACES AND DIRECTION. BARS INDICATE ILLUMINATED FACES ONLY.		FLOOR OR WALL MOUNTED RACEWAY C/W QUANTITY OF DEVICES INDICATED AND BARRIER FOR 2-COMPARTMENTS. WIREMOLD 4000 SERIES WITH SCUFFCOAT FINISH COLOUR AS DIRECTED BY ARCHITECT, UNLESS OTHERWISE NOTED. FEED FROM RECESSED EXIT OR FLEXIBLE CONDUITS INSIDE WALL/COLUMN FROM ACCESSIBLE CEILING SPACE, FOR POWER AND DATA.
	EMERGENCY D.C. BATTERY UNIT C/W UNIT MOUNTED HEADS (QUANTITY OF HEADS AS INDICATED). MOUNTED AT 8'-0" A.F.F. 'C' DENOTES CEILING MOUNT.		CONDUITS/WIRING IN FLOOR BELOW OR CONNECTRAC, AS INDICATED.
	REMOTE EMERGENCY D.C. LAMP UNIT (NUMBER OF HEADS AS INDICATED). MOUNTED AT 8'-0" A.F.F. 'C' DENOTES CEILING MOUNT.		HANDICAP OPERATOR PUSH-BUTTON. SUPPLIED BY OTHERS, INSTALLED AND WIRED BY DIV. 16.
	SINGLE POLE LINE VOLTAGE LIGHT SWITCH. VOLTAGE TO SUIT LOAD CONTROLLED.		DIRECT CONNECTION TO EQUIPMENT AS INDICATED.
	3-WAY LINE VOLTAGE LIGHT SWITCH. VOLTAGE TO SUIT LOAD CONTROLLED.		SINGLE PHASE MOTOR CONNECTION (OR AS INDICATED ON PLANS).
	MANUAL MOTOR PROTECTION SWITCH C/W PILOT LIGHT.		DISCONNECT SWITCH. PROVIDE SAFETY DISCONNECT AT ALL MOTORS WHERE REQUIRED BY CODE, WHETHER SHOWN OR NOT ON FLOOR PLANS.
	EXHAUST FAN SWITCH, DECORA STYLE, COLOUR WHITE C/W WHITE COVERPLATE, SUPPLIED BY DIV. 15, INSTALLED BY DIV. 16.		CONTACTOR.
	KEY OPERATED SWITCH.		COMBINATION MAGNETIC STARTER BY DIV. 15..
	WALL MOUNTED OCCUPANCY SENSOR. LINE VOLTAGE DUAL TECHNOLOGY OCCUPANCY SENSOR. VOLTAGE TO SUIT LOAD CONTROLLED.		VARIABLE SPEED DRIVE BY DIV. 15.
	WALL MOUNTED OCCUPANCY SENSOR DIMMER. DUAL TECHNOLOGY OCCUPANCY SENSOR C/W 120V OR 347V POWER PACK AS REQUIRED AND ALL OTHER REQUIRED ACCESSORIES. VOLTAGE TO SUIT LOAD CONTROLLED.		PANEL (RECESSED OR SURFACE).
	CEILING MOUNTED OCCUPANCY SENSOR C/W 120V OR 347V POWER PACK AS REQUIRED AND ALL OTHER REQUIRED ACCESSORIES.		DISTRIBUTION TRANSFORMER. K13 OR HARMONIC MITIGATING AS INDICATED.
	GANGED SWITCHES.		JUNCTION BOX. 'C' DENOTED CEILING MOUNTED, 'T' DENOTES FLOOR MOUNTED, 'A' DENOTES UNDER ACCESS FLOOR, 'B' DENOTES BEHIND OFF, 'TR' DENOTES TRANSITION BOXES FOR UNDERCARPET CABLING SYSTEM.
	DIMMER SWITCH. RATING AND TYPE TO SUIT LOAD.		TIMER - PARAGON EC7000 SERIES.
	PROJECTION SCREEN SWITCH. SUPPLIED BY OTHERS AND INSTALLED C/W WIRING BY ELECTRICAL CONTRACTOR.		DOOR BELL SYSTEM DOOR BUZZER.
	LOW VOLTAGE SWITCH TIED TO LOW VOLTAGE LIGHTING CONTROL SYSTEM.		DOOR BELL SYSTEM CHIME/BELL.
	MOTORIZED BLIND CONTROL SWITCH. SUPPLIED BY OTHERS AND INSTALLED C/W WIRING BY DIV. 16.		PROJECTOR
	LIGHTING CONTROL TOUCH SCREEN.		JUNCTION BOX
	ZOOM MEETING CAMERA		HANDICAP PUSH BUTTON
	POWER AND COMMUNICATIONS		FIRE ALARM
	WALL MOUNTED DUPLEX RECEPTACLE, 15A, 120V UNLESS OTHERWISE NOTED.		FIRE ALARM PULL STATION.
	WALL MOUNTED DUPLEX RECEPTACLE, 20A, 120V T-SLOT (CSA 5-20R) UNLESS OTHERWISE NOTED.		SMOKE DETECTOR-CEILING OR WALL MOUNTED AS SHOWN.
	WALL MOUNTED DUPLEX SPLIT RECEPTACLE.		THERMAL DETECTOR CEILING OR WALL MOUNTED AS SHOWN.
	RECESSED CLOCK STYLE DUPLEX RECEPTACLE FOR WALL MOUNTED TV.		SPRINKLER SYSTEM FLOW SWITCH BY DIV. 15 CONNECTED TO FA SYSTEM BY DIV. 16.
	RECESSED CLOCK STYLE QUADPLEX RECEPTACLE FOR WALL MOUNTED TV.		SPRINKLER SYSTEM LOW WATER PRESSURE SWITCH BY DIV. 15 CONNECTED TO FA SYSTEM BY DIV. 16.
	WALL MOUNTED DUPLEX RECEPTACLE WITH GROUND FAULT INTERRUPTER.		SPRINKLER SYSTEM ALARM CHECK VALVE BY DIV. 15 CONNECTED TO FA SYSTEM BY DIV. 16.
	WALL OR POWER POLE MOUNTED SINGLE RECEPTACLE. 15A, 120V U-GROUND OR AS OTHERWISE INDICATED BY CSA CONFIGURATION OR VOLTAGE AND AMPERAGE AS INDICATED. 'C' DENOTES MOUNTED ABOVE T-BAR CEILING.		SPRINKLER SYSTEM SUPERVISED VALVE BY DIV. 15 CONNECTED TO FA SYSTEM BY DIV. 16.
	WALL MOUNTED QUAD RECEPTACLE		LIFE SAFETY SYSTEM STROBE LIGHT WALL OR CEILING MOUNTED AS SHOWN.
	SINGLE U-GROUND 15A, 120V RECESSED CLOCK RECEPTACLE, MOUNT AT HEIGHT INDICATED ON ARCHITECT'S DRAWINGS.		FIREFIGNHTERS TELEPHONE HANSET. FLUSH MOUNTED UNLESS OTHERWISE NOTED.
			EMERGENCY VOICE COMMUNICATIONS SPEAKER CEILING OR WALL MOUNTED AS SHOWN. FLUSH MOUNTED UNLESS OTHERWISE NOTED.
			EMERGENCY VOICE COMMUNICATIONS SPEAKER COMPLETE WITH STROBE LIGHT, CEILING OR WALL MOUNTED AS SHOWN. FLUSH MOUNTED UNLESS OTHERWISE NOTED.

LUMINAIRE SCHEDULE	
SYMBOL	DESCRIPTION
	GREEN RUNNING MAN PICTOGRAM EDGE LT EXIT SIGN, CSA 22.2 No. 141 STANDARD, 130/247V UNIVERSAL VOLTAGE AC, WHITE FINISH, CLEAR ACRYLIC PANEL WITH PICTOGRAM LEGEND AND WHITE LED LIGHT SOURCE, EXTRUDED ALUMINUM TRIM, 2800 APPROVED, SINGLE OR DOUBLE-GLAZE WITH DIRECTIONAL INDICATORS AND MOUNTING AS REQUIRED, TOP FINISHED CEILING AND WALL MOUNTING, PROVIDE FLUSH MOUNTED RECESSED BACK BOX WITH FLUSH MOUNTED WHITE TRIM PLATE, WHERE EXIT SIGN IS REQUIRED TO BE SUSPENDED, PROVIDE ALL REQUIRED MOUNTING ACCESSORIES FOR A COMPLETE INSTALLATION. EXACT COLOUR/FINISH SHALL BE DETERMINED BY THE ARCHITECT DURING THE SHOP DRAWING REVIEW STAGE. LUMACELL #LDE* SERIES, OR STANDPRO OR BEGHELLI* GUIDA* APPROVED EQUAL.
'L14'	24"x48" ARKURA BACKLIGHTING ECO WALL OR CEILING LED PANEL, 2250 DELIVERED LUMENS, 24W, 50W/HTS, 3000K, CR 80+, 0-10V DIMMING, FLEXUM MATCH WIRING, ILC LISTED, PANEL SUPPLIED BY THE CEILING MANUFACTURER UNDER THE GC, INSTALLED AND CONNECTED BY ELECTRICAL CONTRACTOR. ELECTRICAL CONTRACTOR TO INCLUDING CUTTING OF SOME OF THE PANELS THAT MUST BE RECEIVED FROM 24"x48". REFER TO ARCHITECTURAL DRAWINGS FOR QUANTITIES OF PANELS TO BE CUT.
'L16'	CHAIN SUSPENDED 4FT LONG LED STRIP LIGHT, 4855 LUMENS LIGHT ENGINE (35W), 3000K, 80CRI, 120V UNIVERSAL DRIVER WITH 0-10V DIMMING. STEEL HOUSING, PROTECTED ACRYLIC LENS AND NEOPEN FINISH- INCLUDE SITE ADJUSTABLE CHAIN HANGERS AND ALL REQUIRED MOUNTING ACCESSORIES. ILP CAT.#554-35W-U-30-FRML

LUMINAIRE SCHEDULE	
SYMBOL	DESCRIPTION
'L'A'	Artemis 2A Recessed Adjustable LED Downlight with diffusing lens and 60-degree optics. New Construction Housing Mfg: Sento -- #AR2A-FL-490-660-30-15-DL-01-08/915-LCS-120, Lamp: LED, 3000K Lamp: LED, 3000K, 90CRI Finish: Flange- White, Baffle -Silver Total Wattage: 16.8W Driver: Integral, 0-10V Dimming Voltage: 120V Contact: Wayne Thomson, Studio 1112 - 416-778-8346 or studio1112@belfnet.ca
'L'B'	Artemis 2A Recessed Adjustable LED Downlight with diffusing lens and 60-degree optics. New Construction Housing Mfg: Sento -- #AR2A-FL-490-660-30-15-DL-01-08/915-LCS-120, Lamp: LED, 3000K Lamp: LED, 3000K, 90CRI Finish: Flange- White, Baffle -Silver Total Wattage: 16.8W Driver: Integral, 0-10V Dimming Voltage: 120V Contact: Wayne Thomson, Studio 1112 - 416-778-8346 or studio1112@belfnet.ca
'L'2'	8 ft Linear LS1911K LED Suspension Fixture, square profile with 119.3 degree beam angle. c/w 2 x 6ft. aircraft cables. Mfg: Jorlight-- #LS1911K-BK-6'-30-A/JLM-XX-24V-SP2 Lamp: LED, 3000K, 90CRI Finish: Black Total Wattage: 48.6W (6.1W/ft.) Driver: Remote, 0-10V Dimming Voltage: 120V Contact: Wayne Thomson, Studio 1112 - 416-778-8346 or studio1112@belfnet.ca
'L'2A'	LT-246 ft. Linear LS1911K LED Suspension Fixture, square profile with 119.3 degree beam angle. c/w 2 x 6ft. aircraft cables. Mfg: Jorlight-- #LS1911K-BK-6'-30-A/JLM-XX-24V-SP2 Lamp: LED, 3000K, 90CRI Finish: Black Total Wattage: 36.6W (6.1W/ft.) Driver: Remote, 0-10V Dimming Voltage: 120V Contact: Wayne Thomson
'L'2B'	4 ft Linear LS1911K LED Suspension Fixture, square profile with 119.3 degree beam angle. c/w 2 x 6ft. aircraft cables. Mfg: Jorlight-- #LS1911K-BK-4'-30-A/JLM-XX-24V-SP2 Lamp: LED, 3000K, 90CRI Finish: Black Total Wattage: 24.4W (6.1W/ft.) Driver: Remote, 0-10V Dimming Voltage: 120V Contact: Wayne Thomson, Studio 1112 - 416-778-8346 or studio1112@belfnet.ca
'L'3'	Torus LED Pendant, 24" diam x 2' Ht. c/w 6ft. adjustable cable Mfg: Sonnenen -- #2870.25 Lamp: LED, 3000K, 90CRI Finish: Satin Black Total Wattage: 28W Driver: Integrge, Triac/ELV, 0-10V dimming Voltage: 120V Contact: Wayne Thomson, Studio 1112 - 416-778-8346 or studio1112@belfnet.ca
'L'3A'	Torus LED Pendant, 32" diam x 2' Ht. c/w 6ft. adjustable cable Mfg: Sonnenen -- #2872.25 Lamp: LED, 3000K, 90CRI Finish: Satin Black Total Wattage: 42W Driver: Integrge, Triac/ELV, 0-10V dimming Voltage: 120V Contact: Wayne Thomson, Studio 1112 - 416-778-8346 or studio1112@belfnet.ca
'L'4'	Bocci 14 Series, Single Pendant c/w mini canopy - diam. 30mm (1.2), 4" diam. clear glass sphere, LED, with adjustable coax cable up to 10 ft. c/w remote dimmable transformers as required. Hanging heights TBD with interior Architects. Class II installation - does not mount to standard j-box, 3 fixtures per transformer. Mfg: Bocci-- Cat. #14.1m Lamp: LED, 2500K, 80 CRI Finish: Clear Glass, Brushed Nickel Canopy, Braided metal Coax cable Wattage: 1.5W Driver: Remote Dimming Voltage: 120V Contact: Wayne Thomson, Studio 1112 - 416-778-8346 or studio1112@belfnet.ca
'L'5'	Linear LED Recessed Fixture (quantity & length as per drawings) Mfg: Jorlight-- #LEZ513-SV-X-30-A/JLM-XX-24V-IP2 Lamp: LED, 3000K Finish: Silver Total Wattage: 4.6W/ft Driver: Remote, 0-10V Dimming Voltage: 120V Contact: Wayne Thomson, Studio 1112 - 416-778-8346 or studio1112@belfnet.ca
'L'6A'	Djembe Ceiling Fixture - 16.38" Diam. x 8.27" Ht. Mfg: Morset-- Cat. #J42.21 Lamp: LED, 3000K, 90CRI Finish: T80 Total Wattage: 19W Driver: Integral, 0-10V Dimming Voltage: 120V Contact: Wayne Thomson, Studio 1112 - 416-778-8346 or studio1112@belfnet.ca
'L'6B'	Djembe Ceiling Fixture - 16.54" Diam. x 11.02" Ht. Mfg: Morset-- Cat. #J42.28 Lamp: LED, 3000K, 90CRI Finish: T80 Total Wattage: 19W Driver: Integral, 0-10V Dimming Voltage: 120V Contact: Wayne Thomson, Studio 1112 - 416-778-8346 or studio1112@belfnet.ca
'L'7'	LT-7Pendant X3 Assembly at 72" Diam. 3 arms @ 36" ea. Downlight only with embedded 3000K LED. Standard hanging length 5ft. Mfg: Asline-- Cat. # LT-EB-X3-60N-1-30-1-010-ASHe-PYBK-WH-B5-H Lamp: LED, 30000K, 90CRI Finish: White Ash with Eco Series Back Paint Finish. Canopy -White & Cable Finish- Black Total Wattage: 56W Driver: Integral, 0-10VDC dimmable driver. Voltage: 120V Contact: Wayne Thomson, Studio 1112 - 416-778-8346 or studio1112@belfnet.ca
'L'8'	Djembe Pendant Fixture, Size= 25.4" Diam x 13.78" Ht. Mfg: Morset-- Cat. # Djembe 65.35 Lamp: LED, 3000K, 90CRI Finish: T80 Total Wattage: 25W Driver: Integrge, Triac/ D-10V Dimming Voltage: 120V Contact: Wayne Thomson, Studio 1112 - 416-778-8346 or studio1112@belfnet.ca
'L'9A' & 'L'9B'	Discovery Suspension-- 70cm Diam. c/w Transparent Diffuser. Mfg: Artemide-- #1999135A Lamp: LED, 3000K, >90CRI Finish: Black Total Wattage: 41W Driver: Integral, 0-10V Dimming Voltage: 120V Contact: Wayne Thomson, Studio 1112 - 416-778-8346 or studio1112@belfnet.ca
'L'10'	Linear LED Recessed Fixture (quantity & length as per drawings) Mfg: Jorlight-- #LEZ513-SV-X-30-A/JLM-XX-24V-IP2 Lamp: LED, 3000K Finish: Silver Total Wattage: 4.4W/ft Driver: Remote, 0-10V Dimming Voltage: 120V Contact: Wayne Thomson, Studio 1112 - 416-778-8346 or studio1112@belfnet.ca
'L'11'	Studio Medium Pendant, Dia: 4" x H: 7 7/8", Base Output, 49 Degree Optic and Soft Focus Lens Mfg: Systeme-- Cat. #1780-C-P-B0-830-50-120-52-D16/ 1725 Lamp: LED, 3000K, 80CRI Finish: Matte Black Total Wattage: 26.5W Driver: Integrge, 0-10V Dimming Voltage: 120V Contact: Wayne Thomson, Studio 1112 - 416-778-8346 or studio1112@belfnet.ca
'L'12' (L12A, B, C, D)	Bola Sphere Pendant c/w 11 - 6" Bola Canopies & Bola Swags. Quantities & sizes of spheres: 3 x 8" diam./ 4 x 6" diam./ 2 x 5.6dm./ & 2 x 4.6dm. Cord length = 8.8ft+ extra field cuttable. Mfg: Pablo-- # BOLA SPH 4 XX/ BOLA SPH 5 XX/ BOLA SPH 6 XX/ BOLA SPH 8 XX/ BOLA CANOPY XX Lamp: LED, 3000K, 95CRI Finish: T80 Total Wattage: 132W Driver: Integral, 0-10V & ELV Dimming Voltage: 120V Contact: Wayne Thomson, Studio 1112 - 416-778-8346 or studio1112@belfnet.ca
'L'13'	Djembe Ceiling Fixture - 16.38" Diam. x 8.27" Ht. Mfg: Morset-- Cat. #J42.21 Lamp: LED, 3000K, 90CRI Finish: Grey RAL 7002 Total Wattage: 19W Driver: Integral, 0-10V Dimming Voltage: 120V Contact: Wayne Thomson, Studio 1112 - 416-778-8346 or studio1112@belfnet.ca
'L'15'	Cic 111 Surface Mounted - Downlight Only. Compound S Shape Customized to replicate curves as shown on it drawings. c/w Optal acrylic lens. Mfg: Solera -- # CURVE-11-4-324W-LED-UNV-3000K-D-OPL LENS-RB-CM-DM-COLOR IH Lamp: LED, 3000K Finish: White Total Wattage: 324W Driver: Integral, 0-10V Dimming Voltage: 120V Contact: Wayne Thomson, Studio 1112 - 416-778-8346 or studio1112@belfnet.ca

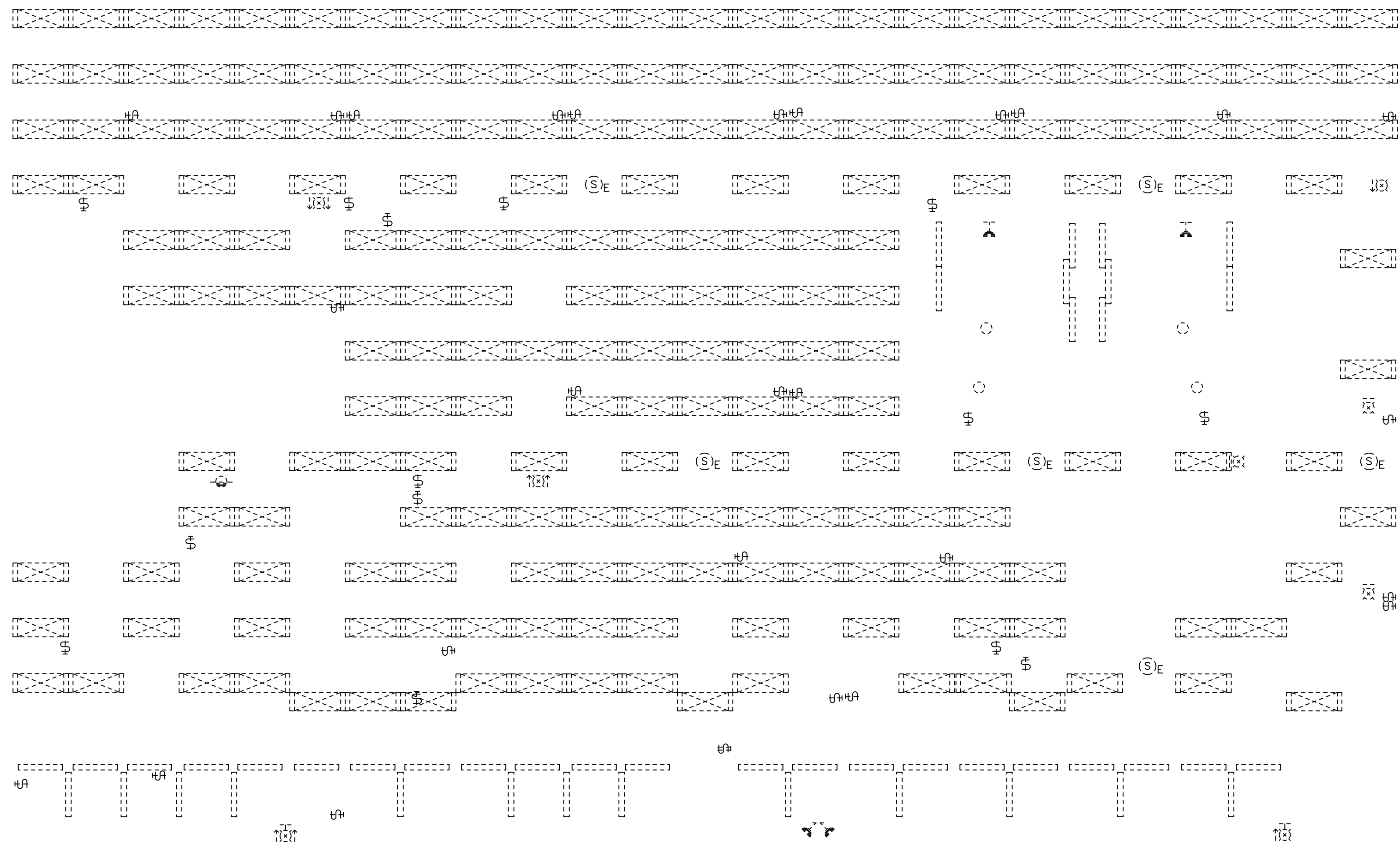
SPECIAL NOTES – FIRE ALARM SYSTEM	
<div>1. EXISTING FIRE ALARM SYSTEM IS MANUFACTURED BY CHUBB EDWARDS (ESTS). INCLUDE ALL CHUBB EDWARDS'S COSTS IN THE TENDER PRICE.</div> <div>2. THE ELECTRICAL CONTRACTOR SHALL PROVIDE ALL FIRE ALARM SYSTEM WORK INDICATED ON THE DRAWINGS.</div> <div>3. THE ELECTRICAL CONTRACTOR SHALL BE RESPONSIBLE FOR THE REMOVAL, RELOCATION, SUPPLY AND INSTALLATION OF ALL FIRE ALARM SYSTEM DEVICES AND ANCILLARY EQUIPMENT. ALL NEW FIRE ALARM SYSTEM DEVICES AND EQUIPMENT SHALL MATCH EXISTING.</div> <div>4. ALL FIRE ALARM FINAL TIE-IN, TESTING AND VERIFICATIONS SHALL BE PERFORMED BY THE BASE BUILDING FIRE ALARM MAINTENANCE CONTRACTOR, SAGE FIRE PROTECTION EAST INC. (RICK BERWICK; TEL: 416-740-3000). ELECTRICAL CONTRACTOR SHALL RETAIN THE SERVICES OF SAGE FIRE PROTECTION EAST INC. TO PERFORM THIS WORK AND SHALL INCLUDE SAGE FIRE PROTECTION EAST INC.'S COSTS IN THE TENDER.</div> <div>5. ALL FIRE ALARM RE-PROGRAMMING SHALL BE PERFORMED BY CHUBB EDWARDS. ELECTRICAL CONTRACTOR SHALL RETAIN THE SERVICES OF CHUBB EDWARDS TO PERFORM THIS WORK AND SHALL INCLUDE CHUBB EDWARDS'S COSTS IN THE TENDER.</div> <div>6. THE ELECTRICAL CONTRACTOR SHALL COORDINATE WITH SAGE FIRE PROTECTION EAST INC. AND/OR CHUBB EDWARDS DURING THE TENDER PERIOD TO CONFIRM ALL WIRING REQUIREMENTS NECESSARY TO PERFORM THE FIRE ALARM WORK. NO EXTRA COSTS WILL BE PERMITTED AS A RESULT OF FAILURE BY THE CONTRACTOR TO OBTAIN THE NECESSARY INFORMATION. THE ELECTRICAL CONTRACTOR SHALL PURCHASE ALL REQUIRED FIRE ALARM AND EVAC PACING EQUIPMENT, AMPLIFIERS AND ANCILLARY COMPONENTS FROM SAGE FIRE PROTECTION EAST INC. AND/OR CHUBB EDWARDS.</div> <div>7. ELECTRICAL CONTRACTOR SHALL MAKE ARRANGEMENTS WITH THE LANDLORD PRIOR TO ANY WORK ON THE FIRE ALARM SYSTEM.</div> <div>8. ALL FIRE ALARM WORK SHALL REQUIRE FIRE WATCH.</div> <div>9. REFER ALSO TO ELECTRICAL SPECIFICATIONS SECTION 48.</div>	
LIGHTING NOTES	
<div>1. WITHIN 10 WORKING DAYS OF CONTRACT AWARD, THE CONTRACTOR SHALL PROVIDE SUBMITTALS FOR ALL SPECIFIED LUMINAIRES FOR THE REVIEW BY THE DESIGN TEAM. THE SUBMITTALS SHALL INCLUDE LUMINAIRE CATALOG CUTS INDICATING THE FOLLOWING: -- MANUFACTURER'S NAME AND COMPLETE CATALOG NUMBER -- FIXTURE TYPE DESIGNATION -- COMPLETE DIMENSIONS AND FINISHES -- FIXTURE PHOTOMETRIC TEST DATA FROM AN INDEPENDENT TESTING LABORATORY. -- ALL FIXTURE ACCESSORIES WHEN SPECIFIED -- WHERE FIXTURE OPTIONS ARE AVAILABLE IT SHALL BE CLEARLY INDICATED WHICH OPTIONS ARE SELECTED OR APPLICABLE FOR THIS SUBMISSION -- LAMP TYPE, QUANTITY PER LUMINAIRE, WATTAGE, LUMEN OUTPUT, RATED LIFE, COLOUR TEMPERATURE, COLOUR RENDERING INDEX AND BEAM SPREAD AS APPLICABLE -- REMOTEING INDEX AND MANUFACTURER AS APPLICABLE -- LED DRIVER TYPE, VOLTAGE AND MANUFACTURER AS APPLICABLE</div> <div>2. SUBMITTALS FOR CUSTOM LUMINAIRES SHALL ALSO INCLUDE SCALED DRAWINGS SHOWING THE LAYOUT AND DIMENSIONS OF ALL FIXTURE COMPONENTS AND ACCESSORIES, THE METHOD OF INSTALLATION AND A COMPLETE BILL OF MATERIALS.</div> <div>3. CONTRACTOR SHALL CONFIRM THAT LUMINAIRE VOLTAGES ARE COMPATIBLE WITH THEIR APPLICATION AND SYSTEM CIRCUITING PRIOR TO ORDERING FIXTURES.</div> <div>4. CONTRACTOR SHALL CONFIRM THAT LUMINAIRE CEILING TRIMS ARE COMPATIBLE WITH THEIR APPLICATION PRIOR TO ORDERING FIXTURES.</div> <div>5. LUMINAIRES, LAMPS AND RELATED DEVICES PROVIDED UNDER THIS CONTRACT SHALL CARRY THE APPROVAL LABEL OF CSA FOR THE SPECIFIC APPLICATION IN WHICH THEY ARE USED.</div> <div>6. THE STATEMENT 'ARCHITECT OR DESIGNER TO CONFIRM PAINT FINISH' SHALL BE INTERPRETED TO MEAN THAT THE PAINT FINISH OF THE LUMINAIRE SHALL MATCH THE APPEARANCE OF THE PAINT CHIP OR COLOUR NUMBER PROVIDED BY THE ARCHITECT DURING THE SHOP DRAWING SUBMITTAL REVIEW PROCESS.</div> <div>7. CONTRACTOR SHALL PROVIDE THE CORRECT SIZE OF SECONDARY WIRING FROM REMOTE TRANSFORMERS AND/OR REMOTE BALLASTS/LED DRIVERS AS REQUIRED TO KEEP VOLTAGE DROP IN THE SECONDARY WIRING BELOW 3% OF THE RATED VOLTAGE.</div> <div>8. ALL WALL MOUNTED DIMMER SWITCHES SHALL BE WHITE FINISH C/W MATCHING WHITE COVERPLATE, UNLESS NOTED OTHERWISE. DIMMERS SWITCHES SHALL BE SUPPLIED TO ENSURE COMPATIBILITY WITH INTENDED APPLICATION I.E. ELECTRONIC LOW VOLTAGE TRANSFORMER OR FLUORESCENT BALLAST OR PARTICULAR TYPE OF LED DRIVER SUPPLIED WITH THAT LUMINAIRE. CONFIRM WITH ARCHITECT/INTERIOR DESIGNER EXACT FINISH COLOUR PRIOR TO ORDERING.</div> <div>9. REFER TO THE ARCHITECT/INTERIOR DESIGNER'S FLOOR PLANS AND ELEVATION DRAWINGS FOR INFORMATION REGARDING MOUNTING HEIGHTS OF ALL WALL MOUNTED LUMINAIRES. WHERE THIS INFORMATION IS NOT INDICATED THE CONTRACTOR SHALL CONFIRM EXACT MOUNTING HEIGHT WITH THE DESIGN CONSULTANT PRIOR TO ROUGHING IN ANY ELECTRICAL SERVICES.</div> <div>10. EXACT LOCATION OF ANY REMOTE MOUNTED TRANSFORMERS, BALLASTS OR LED DRIVERS SHALL BE CONFIRMED ON SITE. DEVICES TO BE LOCATED IN AN ACCESSIBLE LOCATION (ACCESSIBLE CEILING, ELECTRICAL ROOM OR BELOW COUNTER). DO NOT EXCEED LEAD LENGTHS RECOMMENDED BY LIGHTING MANUFACTURER.</div> <div>11. CONFIRM THE EXACT MOUNTING HEIGHT OF ALL SUSPENDED LUMINAIRES WITH THE ARCHITECT/INTERIOR DESIGNER OR DESIGN CONSULTANT PRIOR TO INSTALLATION.</div>	



























GENERAL NOTES	
<div>1. REFER TO ARCHITECTURAL/INTERIOR DESIGN DOCUMENTS FOR PHASING REQUIREMENTS AND ALLOW FOR ALL COSTS TO COMPLY WITH THESE REQUIREMENTS.</div> <div>2. REFER TO ARCHITECTURAL/INTERIOR DESIGN DRAWINGS FOR ALL FIRE RATED AND SMOKE RATED WALLS. SEAL ALL CONDUIT PENETRATIONS THROUGH SUCH WALLS IN ACCORDANCE WITH SPECIFICATIONS.</div> <div>3. COORDINATE WORK WITH THE GENERAL CONTRACTOR TO LEAST INTERFERE WITH THE OWNER'S USE OF THE FACILITY. GENERAL CONTRACTOR MAY REQUIRE WORK INTERRUPTIONS DURING THE DAY AND MAY REQUIRE CERTAIN WORK TO BE PERFORMED ON PREMIUM TIME AT NIGHT OR ON WEEKENDS.</div> <div>4. COMPLETE EXTENT OF DEMOLITION IS NOT SHOWN. TENDERERS SHALL REVIEW THE SITE TOGETHER WITH THE DOCUMENTS OF ALL OTHER TRADES TO DETERMINE THE FULL EXTENT OF DEMOLITION. MAKE ALL ALLOWANCES FOR ANY NEW OR EXISTING SERVICES, DEVICES, OR EQUIPMENT RELOCATIONS NECESSARY TO COMPLETE THE WORK AS INTENDED BY THE DRAWINGS. ALLOW FOR ALL COSTS.</div> <div>5. VISIT AND EXAMINE CAREFULLY THE BUILDING SO AS TO BECOME FAMILIAR WITH EXISTING CONDITIONS AND DIFFICULTIES THAT WILL ATTEND THE EXECUTION OF THE WORK, BEFORE SUBMITTING PROPOSALS. SUBMISSION OF A PROPOSAL WILL BE EVIDENCE THAT SUCH EXAMINATION HAS BEEN MADE AND LATER CLAIMS FOR LABOUR, EQUIPMENT OR MATERIALS BECAUSE OF DIFFICULTIES ENCOUNTERED WILL NOT BE RECOGNIZED.</div> <div>6. ELECTRICAL DRAWINGS ARE DIAGRAMMATIC ONLY. FOR EXACT LOCATION OF ALL LIGHTING FIXTURES, SWITCHES, DIMMERS, RECEPTACLES, ETC., REFER TO ARCHITECTURAL/INTERIOR DESIGN DRAWINGS AND ELEVATIONS.</div> <div>7. WHERE RELOCATION OF EXISTING LUMINAIRES AND DEVICES IS INVOLVED, ADDITIONAL LUMINAIRES AND DEVICES MAY BE REQUIRED. CONTRACTOR TO CONFIRM QUANTITIES REQUIRED. ADDITIONAL LUMINAIRES AND DEVICES REQUIRED SHALL BE SUPPLIED AND INSTALLED BY ELECTRICAL CONTRACTOR. LUMINAIRES AND DEVICES TO MATCH EXISTING BASE BUILDING STANDARD AND/OR AS SPECIFIED.</div> <div>8. ALLOW FOR REMOVAL AND RE-INSTALLATION OF EXISTING DEVICES TO PERMIT NEW ARCHITECTURAL/INTERIOR DESIGN FINISHES. REMOVE AND RE-INSTALL ALL CEILING MOUNTED LUMINAIRES AND DEVICES WHERE 1-INCH CEILING TILES ARE TO BE TEMPORARILY REMOVED OR REPLACED. REVIEW ARCHITECTURAL/INTERIOR DESIGN PLANS DURING TENDER PERIOD TO DETERMINE FULL EXTENT OF THE WORK.</div> <div>9. CONTRACTOR SHALL NOT RE-USE RECEPTACLES AND SWITCHES FROM DEMOLITION. ALL RECEPTACLES AND SWITCHES INSTALLED SHALL BE NEW.</div> <div>10. COORDINATE EXACT REQUIREMENTS FOR POWER AND COMMUNICATION FEEDS TO WORKSTATIONS WITH WORKSTATION SUPPLIER PRIOR TO ROUGH-IN.</div> <div>11. NOT ALL REQUIRED FEEDERS AND BRANCH CIRCUIT CONDUITS ARE SHOWN ON THE FLOOR PLANS. REFER TO SINGLE LINE DIAGRAM AND PANEL SCHEDULES FOR ADDITIONAL INFORMATION.</div> <div>12. FOR X-RAY WORK GUIDELINES AND REQUIREMENTS REFER TO THE ELECTRICAL GENERAL REQUIREMENTS THAT FORM PART OF THE ELECTRICAL SPECIFICATIONS.</div> <div>13. CIRCUITING IS SHOWN FOR GROUPING PURPOSES ONLY. EXISTING CIRCUITS THAT ARE TO REMAIN ARE NOT SHOWN ON PANEL SCHEDULES OR ON FLOOR PLANS. CONTRACTOR SHALL MAINTAIN/REWORK EXISTING CIRCUITS AS REQUIRED AND INSTALL NEW CIRCUITS IN REMAINING BREAKER POSITIONS IN PANELS. SHOW FINAL CIRCUIT NUMBERS USED ON FLOOR PLANS AND PROVIDE FINAL PANEL SCHEDULES ON THE AS-BUILT DRAWINGS AND PANEL DIRECTORIES IN THE PANELS. TYPICAL FOR ALL PANELS.</div> <div>14. ALL REDUNDANT OR UNUSED BRANCH WIRING THAT IS REMOVED DURING DEMOLITION SHALL BE CUT BACK TO SOURCE PANEL AND DISCONNECTED FROM PANEL. THESE CIRCUITS SHALL BE IDENTIFIED AS SPARE AND BE MADE AVAILABLE FOR RE-USE.</div> <div>15. ENSURE THAT NEW OR RELOCATED RUNNING MAN SIGNS ARE POSTIONED TO BE CLEARLY VISIBLE ALONG THE INTENDED PATH OF EGRESS AND THAT NO CEILING OR WALL MOUNTED OBSTRUCTIONS INTERFERE WITH OR BLOCK THE VISIBILITY OF THE RUNNING MAN SIGN. IN THE EVENT THAT THE BUILDING INSPECTOR OR THE CONSULTANT FINDS THE SIGN IS OBSTRUCTED FROM VIEW, THE CONTRACTOR SHALL RE-LOCATE THE SIGN AT NO EXTRA COST. INCLUDE IN TENDER PRICE FOR THE SUPPLY AND INSTALLATION OF FIVE (5) ADDITIONAL RUNNING MAN SIGNS C/W WIRING TO NEAREST AVAILABLE RUNNING MAN SIGN IN THE EVENT THAT THE BUILDING INSPECTOR REQUESTS ADDITIONAL SIGNS DURING FINAL INSPECTION BY THE CITY. ALLOW FOR MAXIMUM WIRING DISTANCE TO NEAREST SIGN.</div> <div>16. INCLUDE IN TENDER PRICE FOR THE SUPPLY AND INSTALLATION OF THREE (3) ADDITIONAL FIRE ALARM SPEAKERS C/W WIRING TO NEAREST AVAILABLE CIRCUIT IN THE EVENT THAT THE BUILDING INSPECTOR REQUESTS ADDITIONAL DEVICES DURING FINAL INSPECTION BY THE CITY. ALLOW FOR MAXIMUM WIRING DISTANCE TO NEAREST CIRCUIT.</div> <div>17. REFER TO MECHANICAL DRAWINGS FOR EXACT SIZE, LOCATION, AND ELECTRICAL REQUIREMENTS FOR ALL MOTORS AND MECHANICAL EQUIPMENT. COORDINATE WITH MECHANICAL CONTRACTOR AND PROVIDE ELECTRICAL CONNECTIONS AS REQUIRED FOR A COMPLETE AND FULLY OPERABLE SYSTEM.</div> <div>18. CONTRACTOR SHALL COORDINATE WITH ALL "VENDOR" TRADES FURNISHING EQUIPMENT REQUIRING ELECTRICAL CONNECTIONS. CHECK CAREFULLY ALL CONSTRUCTION DRAWINGS AND SPECIFICATIONS THAT ARE PART OF THIS PROJECT TO INSURE COMPLIANCE WITH VENDOR REQUIREMENTS. NO EXTRA CHARGES SHALL BE ACCEPTED BY OWNER, AFTER BIDDING FOR SUCH EQUIPMENT AND LABOR.</div> <div>19. COORDINATE WORK WITH FIELD CONDITIONS AND OTHER TRADES AND INSTALL CONDUIT AND BOXES TO CLEAR EMBEDDED DUCTS, OPENINGS AND OTHER STRUCTURAL FEATURES.</div> <div>20. NOT ALL OF THE REQUIRED BOXES, CONDUITS, WIRING AND SLEEVING ARE SHOWN ON THE DRAWINGS. ONLY MAJOR ITEMS ARE SHOWN. COORDINATE AND PROVIDE ALL WORK AS REQUIRED FOR PROPER DEMOLITION AND INSTALLATION.</div> <div>21. NO WIRING SHALL BE DONE PRIOR TO THE CONTRACTOR'S REVIEW OF THE PROJECT EQUIPMENT SHOP DRAWINGS. COORDINATE FIELD CONDITIONS WITH DESIGN DOCUMENTS. ANY DISCREPANCIES SHALL BE BROUGHT TO THE ARCHITECT/INTERIOR DESIGNER/ENGINEER'S ATTENTION FOR FINAL RESOLUTION. WORK THAT HAS TO BE REPLACED DUE TO LACK OF PROPER SHOP DRAWING COORDINATION SHALL BE DONE AT CONTRACTOR'S EXPENSE.</div> <div>22. ALL OUTLETS BOXES SHALL BE PROVIDED WITH PROPER COVER PLATES.</div> <div>23. CIRCUITS ARE SIZED ASSUMING NO MORE THAN THREE CURRENT CARRYING CONDUCTORS IN A SINGLE CONDUIT. FOR CONDUITS CONTAINING MORE THAN THREE, PROVIDE APPROPRIATE DE-RATING OF CONDUCTORS PER APPLICABLE CODES.</div> <div>24. EXCEPT AS NOTED, ALL EXISTING LUMINAIRES AND POWER & SYSTEMS DEVICES AND WIRING THAT ARE TO BE REMOVED SHALL BECOME THE PROPERTY OF THE CONTRACTOR AND SHALL BE REMOVED FROM THE SITE, UNLESS OTHERWISE NOTED. THE EXCEPTION ARE THE BASE BUILDING LUMINAIRES, EXIT SIGNS AND SPEAKERS THAT ARE TO BE TURNED OVER TO THE LANDLORD AND MOVED TO A DESIGNATED LOCATION IN THE BUILDING AS INSTRUCTED BY THE LANDLORD.</div> <div>25. CONTRACTOR SHALL ENSURE THAT ALL EXISTING DEVICES THAT ARE TO REMAIN IN THE ROOM SHOWN ON THE NEW PLANS AND DO NOT INTERFERE WITH NEW PARTITION WALLS. ALLOW FOR RELOCATION OF DEVICES WHERE REQUIRED.</div> <div>26. CLEARLY MARK ALL EXPOSED CONDUITS, PULL BOXES, JUNCTION BOXES, ETC. TO INDICATE THE NATURE OF THE SERVICES AS PER BASE BUILDING STANDARDS.</div> <div>27. ALL WORK ASSOCIATED WITH THE CORE DRILLING, POWER SHUTDOWNS, MODIFICATIONS TO BASE BUILDING LIFE SAFETY, EMERGENCY LIGHTING, LOW VOLTAGE LIGHTING CONTROL, AND SECURITY SYSTEM SHALL BE PERFORMED AFTER REGULAR BUSINESS HOURS AND AT THE TIMES APPROVED BY THE LANDLORD.</div> <div>28. IDENTIFY ALL EXISTING AND NEW RECEPTACLES AND SYSTEMS FURNITURE CONNECTION BOXES WITH PANEL AND CIRCUIT NUMBER OR TYPEWRITTEN LABEL.</div> <div>29. ALL LIGHTING FIXTURES (EXISTING, RELOCATED, AND NEW) TO BE PROPERLY SUPPORTED FROM THE BUILDING STRUCTURE. ALL NEW AND/OR RENOVATED LIGHTING FIXTURES TO BE COMPLETE WITH LUMINAIRE DISCONNECT. PROVIDE NEW LUMINAIRE DISCONNECT ON ALL EXISTING LIGHTING FIXTURES THAT ARE TO BE RENOVATED.</div> <div>30. ENSURE THAT ALL ELECTRICAL, LIFE SAFETY SERVICES AND SERVICES FOR EXISTING LUMINAIRES AND DEVICES THAT ARE REQUIRED TO REMAIN IN SERVICE SHALL DO SO.</div> <div>31. BE RESPONSIBLE AND PAY FOR ANY DAMAGE TO THE BUILDING INCURRED BY WORK OF THIS CONTRACTOR OR REPAIR TO THE SATISFACTION OF THE OWNER AND CONSULTANT.</div> <div>32. CARRY OUT THE WORK WITH A MINIMUM OF NOISE, DUST AND DISTURBANCE.</div>	

BASE BUILDING LIGHTING FIXTURES ARE RECESSED AIR HANDLING FLUORESCENT FIXTURE 347V C/W 10' CORD, CONTRACTOR TO RETURN THE UNUSED BASE BUILDING FIXTURES TO THE LANDLORD.

N.T.S.

GENERAL, LIGHTING AND
SPECIAL NOTES AND
LUMINAIRE SCHEDULE



REFLECTED CEILING PLAN LEGEND	REFLECTED CEILING PLAN GENERAL NOTES
 EXISTING AREA OUT OF SCOPE OF WORK	1. CONTRACTOR SHALL VERIFY ALL EXISTING LUMINAIRES, LIGHT SWITCHES, DIMMERS, AND FIRE ALARM SPEAKERS ARE IN PLACE AND OPERATIONAL. IF ANY ARE FOUND TO BE DEFECTIVE OR MISSING, THEY SHALL BE REPAIRED OR REPLACED AT THE CONTRACTOR'S EXPENSE.
 NEW AREA IN SCOPE OF WORK	2. CONTRACTOR SHALL VERIFY ALL EXISTING LUMINAIRES, LIGHT SWITCHES, DIMMERS, AND FIRE ALARM SPEAKERS ARE IN PLACE AND OPERATIONAL. IF ANY ARE FOUND TO BE DEFECTIVE OR MISSING, THEY SHALL BE REPAIRED OR REPLACED AT THE CONTRACTOR'S EXPENSE.
 EXISTING AREA IN SCOPE OF WORK	3. CONTRACTOR SHALL VERIFY ALL EXISTING LUMINAIRES, LIGHT SWITCHES, DIMMERS, AND FIRE ALARM SPEAKERS ARE IN PLACE AND OPERATIONAL. IF ANY ARE FOUND TO BE DEFECTIVE OR MISSING, THEY SHALL BE REPAIRED OR REPLACED AT THE CONTRACTOR'S EXPENSE.
 NEW AREA IN SCOPE OF WORK	4. CONTRACTOR SHALL VERIFY ALL EXISTING LUMINAIRES, LIGHT SWITCHES, DIMMERS, AND FIRE ALARM SPEAKERS ARE IN PLACE AND OPERATIONAL. IF ANY ARE FOUND TO BE DEFECTIVE OR MISSING, THEY SHALL BE REPAIRED OR REPLACED AT THE CONTRACTOR'S EXPENSE.
 EXISTING AREA IN SCOPE OF WORK	5. CONTRACTOR SHALL VERIFY ALL EXISTING LUMINAIRES, LIGHT SWITCHES, DIMMERS, AND FIRE ALARM SPEAKERS ARE IN PLACE AND OPERATIONAL. IF ANY ARE FOUND TO BE DEFECTIVE OR MISSING, THEY SHALL BE REPAIRED OR REPLACED AT THE CONTRACTOR'S EXPENSE.
 NEW AREA IN SCOPE OF WORK	6. CONTRACTOR SHALL VERIFY ALL EXISTING LUMINAIRES, LIGHT SWITCHES, DIMMERS, AND FIRE ALARM SPEAKERS ARE IN PLACE AND OPERATIONAL. IF ANY ARE FOUND TO BE DEFECTIVE OR MISSING, THEY SHALL BE REPAIRED OR REPLACED AT THE CONTRACTOR'S EXPENSE.
 EXISTING AREA IN SCOPE OF WORK	7. CONTRACTOR SHALL VERIFY ALL EXISTING LUMINAIRES, LIGHT SWITCHES, DIMMERS, AND FIRE ALARM SPEAKERS ARE IN PLACE AND OPERATIONAL. IF ANY ARE FOUND TO BE DEFECTIVE OR MISSING, THEY SHALL BE REPAIRED OR REPLACED AT THE CONTRACTOR'S EXPENSE.
 NEW AREA IN SCOPE OF WORK	8. CONTRACTOR SHALL VERIFY ALL EXISTING LUMINAIRES, LIGHT SWITCHES, DIMMERS, AND FIRE ALARM SPEAKERS ARE IN PLACE AND OPERATIONAL. IF ANY ARE FOUND TO BE DEFECTIVE OR MISSING, THEY SHALL BE REPAIRED OR REPLACED AT THE CONTRACTOR'S EXPENSE.
 EXISTING AREA IN SCOPE OF WORK	9. CONTRACTOR SHALL VERIFY ALL EXISTING LUMINAIRES, LIGHT SWITCHES, DIMMERS, AND FIRE ALARM SPEAKERS ARE IN PLACE AND OPERATIONAL. IF ANY ARE FOUND TO BE DEFECTIVE OR MISSING, THEY SHALL BE REPAIRED OR REPLACED AT THE CONTRACTOR'S EXPENSE.
 NEW AREA IN SCOPE OF WORK	10. CONTRACTOR SHALL VERIFY ALL EXISTING LUMINAIRES, LIGHT SWITCHES, DIMMERS, AND FIRE ALARM SPEAKERS ARE IN PLACE AND OPERATIONAL. IF ANY ARE FOUND TO BE DEFECTIVE OR MISSING, THEY SHALL BE REPAIRED OR REPLACED AT THE CONTRACTOR'S EXPENSE.
 EXISTING AREA IN SCOPE OF WORK	11. CONTRACTOR SHALL VERIFY ALL EXISTING LUMINAIRES, LIGHT SWITCHES, DIMMERS, AND FIRE ALARM SPEAKERS ARE IN PLACE AND OPERATIONAL. IF ANY ARE FOUND TO BE DEFECTIVE OR MISSING, THEY SHALL BE REPAIRED OR REPLACED AT THE CONTRACTOR'S EXPENSE.
 NEW AREA IN SCOPE OF WORK	12. CONTRACTOR SHALL VERIFY ALL EXISTING LUMINAIRES, LIGHT SWITCHES, DIMMERS, AND FIRE ALARM SPEAKERS ARE IN PLACE AND OPERATIONAL. IF ANY ARE FOUND TO BE DEFECTIVE OR MISSING, THEY SHALL BE REPAIRED OR REPLACED AT THE CONTRACTOR'S EXPENSE.
 EXISTING AREA IN SCOPE OF WORK	13. CONTRACTOR SHALL VERIFY ALL EXISTING LUMINAIRES, LIGHT SWITCHES, DIMMERS, AND FIRE ALARM SPEAKERS ARE IN PLACE AND OPERATIONAL. IF ANY ARE FOUND TO BE DEFECTIVE OR MISSING, THEY SHALL BE REPAIRED OR REPLACED AT THE CONTRACTOR'S EXPENSE.
 NEW AREA IN SCOPE OF WORK	14. CONTRACTOR SHALL VERIFY ALL EXISTING LUMINAIRES, LIGHT SWITCHES, DIMMERS, AND FIRE ALARM SPEAKERS ARE IN PLACE AND OPERATIONAL. IF ANY ARE FOUND TO BE DEFECTIVE OR MISSING, THEY SHALL BE REPAIRED OR REPLACED AT THE CONTRACTOR'S EXPENSE.
 EXISTING AREA IN SCOPE OF WORK	15. CONTRACTOR SHALL VERIFY ALL EXISTING LUMINAIRES, LIGHT SWITCHES, DIMMERS, AND FIRE ALARM SPEAKERS ARE IN PLACE AND OPERATIONAL. IF ANY ARE FOUND TO BE DEFECTIVE OR MISSING, THEY SHALL BE REPAIRED OR REPLACED AT THE CONTRACTOR'S EXPENSE.
 NEW AREA IN SCOPE OF WORK	16. CONTRACTOR SHALL VERIFY ALL EXISTING LUMINAIRES, LIGHT SWITCHES, DIMMERS, AND FIRE ALARM SPEAKERS ARE IN PLACE AND OPERATIONAL. IF ANY ARE FOUND TO BE DEFECTIVE OR MISSING, THEY SHALL BE REPAIRED OR REPLACED AT THE CONTRACTOR'S EXPENSE.
 EXISTING AREA IN SCOPE OF WORK	17. CONTRACTOR SHALL VERIFY ALL EXISTING LUMINAIRES, LIGHT SWITCHES, DIMMERS, AND FIRE ALARM SPEAKERS ARE IN PLACE AND OPERATIONAL. IF ANY ARE FOUND TO BE DEFECTIVE OR MISSING, THEY SHALL BE REPAIRED OR REPLACED AT THE CONTRACTOR'S EXPENSE.
 NEW AREA IN SCOPE OF WORK	18. CONTRACTOR SHALL VERIFY ALL EXISTING LUMINAIRES, LIGHT SWITCHES, DIMMERS, AND FIRE ALARM SPEAKERS ARE IN PLACE AND OPERATIONAL. IF ANY ARE FOUND TO BE DEFECTIVE OR MISSING, THEY SHALL BE REPAIRED OR REPLACED AT THE CONTRACTOR'S EXPENSE.
 EXISTING AREA IN SCOPE OF WORK	19. CONTRACTOR SHALL VERIFY ALL EXISTING LUMINAIRES, LIGHT SWITCHES, DIMMERS, AND FIRE ALARM SPEAKERS ARE IN PLACE AND OPERATIONAL. IF ANY ARE FOUND TO BE DEFECTIVE OR MISSING, THEY SHALL BE REPAIRED OR REPLACED AT THE CONTRACTOR'S EXPENSE.
 NEW AREA IN SCOPE OF WORK	20. CONTRACTOR SHALL VERIFY ALL EXISTING LUMINAIRES, LIGHT SWITCHES, DIMMERS, AND FIRE ALARM SPEAKERS ARE IN PLACE AND OPERATIONAL. IF ANY ARE FOUND TO BE DEFECTIVE OR MISSING, THEY SHALL BE REPAIRED OR REPLACED AT THE CONTRACTOR'S EXPENSE.
 EXISTING AREA IN SCOPE OF WORK	21. CONTRACTOR SHALL VERIFY ALL EXISTING LUMINAIRES, LIGHT SWITCHES, DIMMERS, AND FIRE ALARM SPEAKERS ARE IN PLACE AND OPERATIONAL. IF ANY ARE FOUND TO BE DEFECTIVE OR MISSING, THEY SHALL BE REPAIRED OR REPLACED AT THE CONTRACTOR'S EXPENSE.
 NEW AREA IN SCOPE OF WORK	22. CONTRACTOR SHALL VERIFY ALL EXISTING LUMINAIRES, LIGHT SWITCHES, DIMMERS, AND FIRE ALARM SPEAKERS ARE IN PLACE AND OPERATIONAL. IF ANY ARE FOUND TO BE DEFECTIVE OR MISSING, THEY SHALL BE REPAIRED OR REPLACED AT THE CONTRACTOR'S EXPENSE.
 EXISTING AREA IN SCOPE OF WORK	23. CONTRACTOR SHALL VERIFY ALL EXISTING LUMINAIRES, LIGHT SWITCHES, DIMMERS, AND FIRE ALARM SPEAKERS ARE IN PLACE AND OPERATIONAL. IF ANY ARE FOUND TO BE DEFECTIVE OR MISSING, THEY SHALL BE REPAIRED OR REPLACED AT THE CONTRACTOR'S EXPENSE.
 NEW AREA IN SCOPE OF WORK	24. CONTRACTOR SHALL VERIFY ALL EXISTING LUMINAIRES, LIGHT SWITCHES, DIMMERS, AND FIRE ALARM SPEAKERS ARE IN PLACE AND OPERATIONAL. IF ANY ARE FOUND TO BE DEFECTIVE OR MISSING, THEY SHALL BE REPAIRED OR REPLACED AT THE CONTRACTOR'S EXPENSE.
 EXISTING AREA IN SCOPE OF WORK	25. CONTRACTOR SHALL VERIFY ALL EXISTING LUMINAIRES, LIGHT SWITCHES, DIMMERS, AND FIRE ALARM SPEAKERS ARE IN PLACE AND OPERATIONAL. IF ANY ARE FOUND TO BE DEFECTIVE OR MISSING, THEY SHALL BE REPAIRED OR REPLACED AT THE CONTRACTOR'S EXPENSE.
 NEW AREA IN SCOPE OF WORK	26. CONTRACTOR SHALL VERIFY ALL EXISTING LUMINAIRES, LIGHT SWITCHES, DIMMERS, AND FIRE ALARM SPEAKERS ARE IN PLACE AND OPERATIONAL. IF ANY ARE FOUND TO BE DEFECTIVE OR MISSING, THEY SHALL BE REPAIRED OR REPLACED AT THE CONTRACTOR'S EXPENSE.

GENERAL DEMOLITION NOTES:

1. EXACT LOCATION OF ALL EXISTING LUMINAIRES, LIGHT SWITCHES, DIMMERS, FIRE ALARM SPEAKERS ETC. SHALL BE CONFIRMED ON SITE.
2. ALL LUMINAIRES, LIGHT SWITCHES, DIMMERS AND FIRE ALARM SPEAKERS SHOWN ON THIS DRAWING ARE EXISTING TO BE DISCONNECTED AND REMOVED UNLESS OTHERWISE SHOWN WITH AN 'E' OR OTHERWISE NOTED AS EXISTING TO REMAIN. CUT BACK AND REMOVE ALL UNUSED CONDUITS AND WIRING BACK TO SOURCE PANEL. REMOVE ALL LUMINAIRES, LIGHT SWITCHES, DIMMERS AND WIRING FROM WALLS AND CEILINGS THAT ARE TO BE DEMOLISHED.
3. LUMINAIRES, LIGHT SWITCHES, DIMMERS AND FIRE ALARM SPEAKERS DENOTED WITH AN 'E' ARE EXISTING TO REMAIN IN PLACE AND OPERATIONAL.
4. CONTRACTOR SHALL BE AWARE THAT NOT ALL EXISTING LUMINAIRES, LIGHT SWITCHES, DIMMERS, EQUIPMENT AND DEVICES REQUIRED TO BE REMOVED ARE NECESSARILY INDICATED ON THIS PLAN. CONTRACTOR SHALL STILL BE RESPONSIBLE FOR REMOVING ALL SUCH ITEMS AS REQUIRED TO FACILITATE THE COMPLETE DEMOLITION.
5. WHERE THE REMOVAL OF LUMINAIRES, LIGHT SWITCHES AND DIMMERS AFFECT THE OPERATION OF EXISTING LUMINAIRES, LIGHT SWITCHES AND DIMMERS TO REMAIN, CONTRACTOR SHALL REPLACE/MAKE GOOD BRANCH WIRING AS REQUIRED TO ENSURE CONTINUITY OF OPERATION OF REMAIN LUMINAIRES, LIGHT SWITCHES AND DIMMERS.
6. ALL EXISTING LUMINAIRES, LIGHT SWITCHES, DIMMERS WHICH ARE NO LONGER REQUIRED SHALL BE REMOVED AND DISPOSED OF OFF SITE.
7. REFER TO NEW PLAN FOR NEW LOCATION OF RELOCATED LUMINAIRES, DEVICES AND EQUIPMENT.
8. REMOVE ALL REDUNDANT LINE VOLTAGE AND LOW VOLTAGE CONDUIT AND WIRING IN CEILING SPACE WHICH IS NOT IN USE.

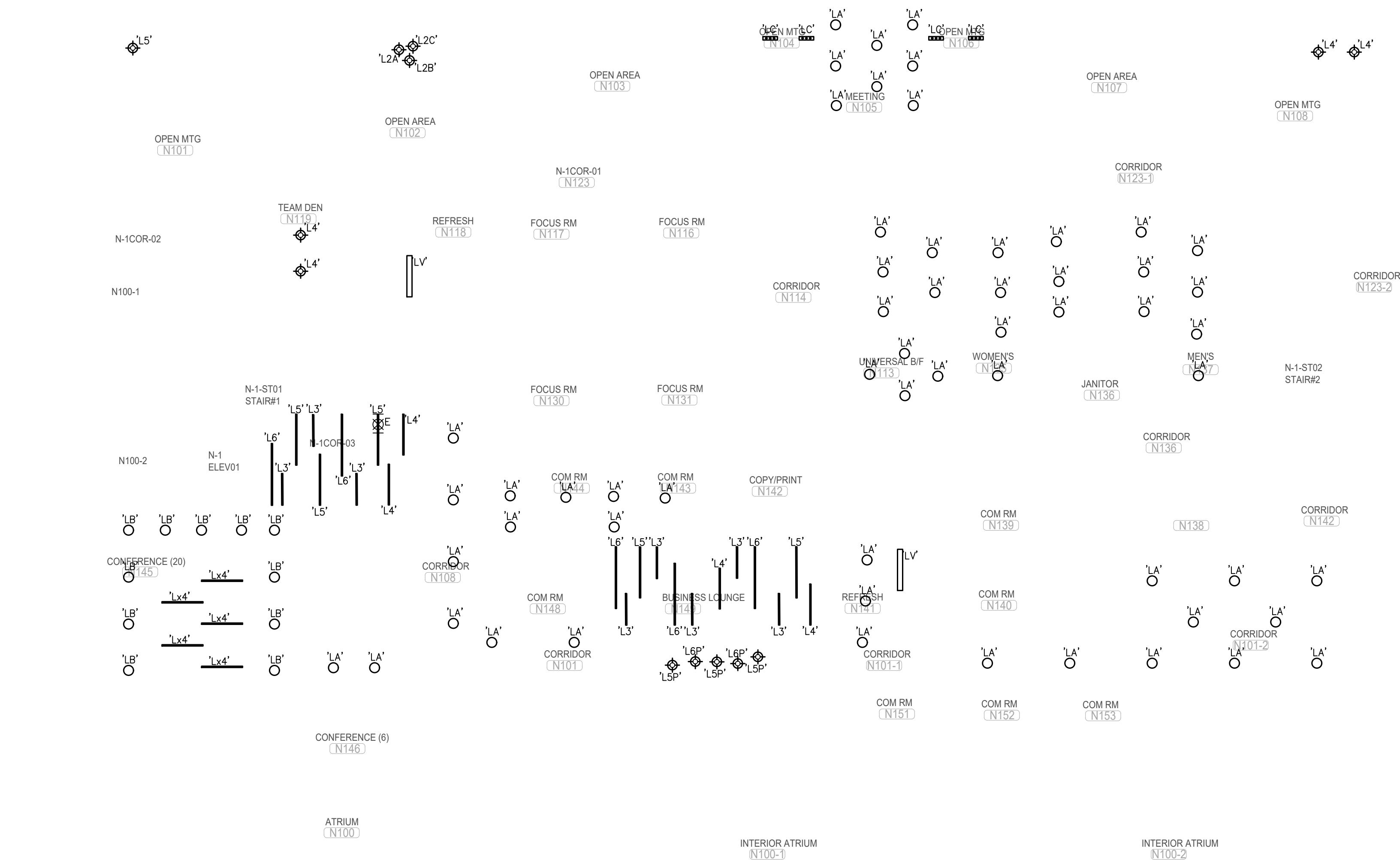
DRAWING REFERENCE NOTES:

- N-1** RELOCATE EXISTING EXIT SIGN. REFER TO DRAWING E-2.1 FOR RELOCATED POSITION.
- N-2** RELOCATE EXISTING MASTER SWITCH. REFER TO DRAWING E-2.1 FOR RELOCATED POSITION.
- N-3** RELOCATE EXISTING FIRE ALARM SPEAKER. REFER TO DRAWING E-2.1 FOR RELOCATED POSITION.
- N-4** ALL BASE BUILDING LUMINAIRES, EXIT SIGNS AND FIRE ALARM SPEAKERS WHICH WILL NOT BE RE-USED SHALL BE RETURNED TO BASE BUILDING AT A DESIGNATED STORAGE SPACE IN THE BUILDING. COORDINATE WITH BASE BUILDING REPRESENTATIVE FOR EXACT LOCATION.
- N-5** REMOVE OR RELOCATE ALL EXISTING TRANSFORMERS IN CEILING SPACE. INCLUDE IN TENDER FOR REMOVAL OR RELOCATION OF TWO (2) TRANSFORMERS IN SOUTH AREA.
- N-6** REMOVE OR RELOCATE ALL EXISTING JUNCTION BOXES IN CEILING SPACE IN THE AREA WHERE THE WOOD CEILING WILL BE INSTALLED. INCLUDE IN TENDER FOR REMOVAL OR RELOCATION OF FIVE (5) JBS IN SOUTH AREA.
- N-7** REMOVE OR RELOCATE ALL EXISTING TRANSFORMERS IN CEILING SPACE. INCLUDE IN TENDER FOR REMOVAL OR RELOCATION OF TWO (2) TRANSFORMERS IN NORTH AREA.
- N-8** DEMOLISH ALL EXISTING LIGHTING FIXTURES IN ELEVATOR LOBBY. REUSE EXISTING NORMAL LIGHTING AND EMERGENCY LIGHTING CIRCUITS. CONNECT NEW LIGHTS TO THE EXISTING LIGHTING CONTROL IN ELEVATOR LOBBY.

1/8"=1'-0"

GROUND FLOOR
LIGHTING - DEMOLITION

E-02-0



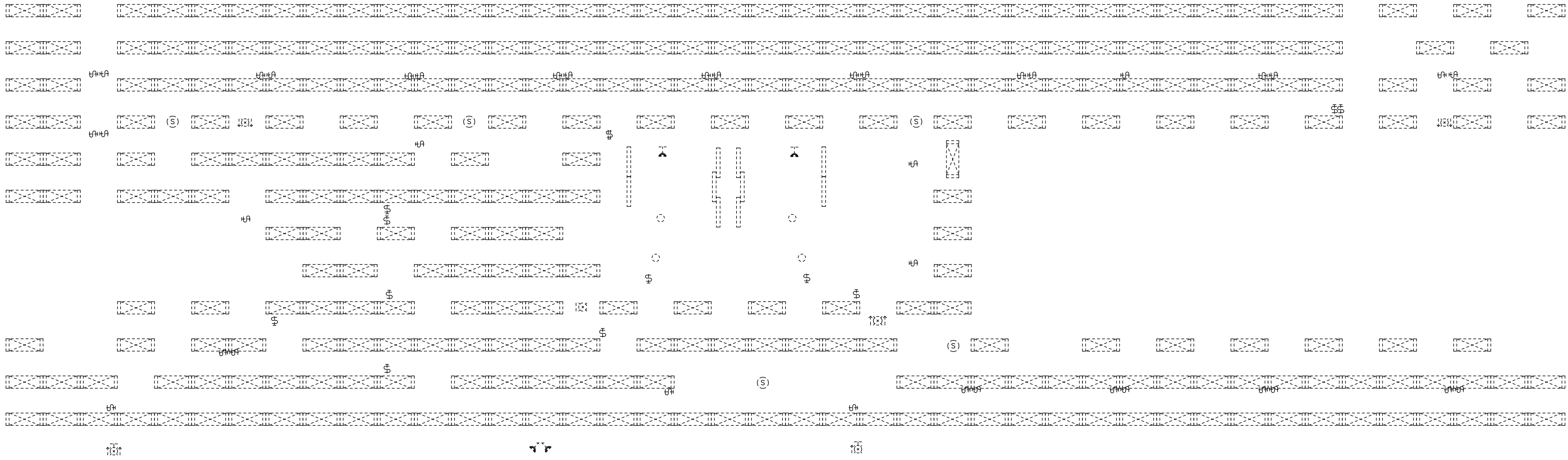
DRAWING GENERAL NOTES:

- REFER TO THE ARCHITECT'S REFLECTED CEILING PLAN FOR THE EXACT LOCATION OF ALL CEILING MOUNTED LUMINAIRES.
- EXACT LOCATION OF ALL EXISTING LUMINAIRES AND LIGHT SWITCHES/CONTROLS SHALL BE CONFIRMED ON SITE
- REFER TO THE ARCHITECT'S DRAWINGS FOR THE EXACT LOCATION AND MOUNTING HEIGHT OF ALL WALL MOUNTED LIGHT AND DIMMER SWITCHES. ALL WALL MOUNTED LIGHT AND DIMMER SWITCHES SHALL BE MOUNTED FOR BARRIER FREE, BETWEEN 36" AFF AND 43" AFF. COORDINATE WITH ARCHITECT ON SITE FOR EXACT LOCATION PRIOR TO COMMENCEMENT OF WORK.
- ALL EXIT SIGNS ON THIS PLAN SHALL BE NEW, TYPE AS NOTED, UNLESS OTHERWISE NOTED, WITH AC VOLTAGE INPUTS AS REQUIRED. DO NOT RE-USE ANY OF THE EXISTING EXIT SIGNS, UNLESS OTHERWISE NOTED. CONNECT TO NEAREST AVAILABLE EXISTING EXIT LIGHTING CIRCUIT FOR AC OR PROVIDE NEW CIRCUIT. DO NOT OVERLOAD CIRCUIT. PROVIDE BREAKER LOCK-ON DEVICE ON ALL EXIT SIGN CIRCUITS.
- ALL CEILING MOUNTED EXIT SIGNS AND REMOTE EMERGENCY HEADS IN OPEN CEILING AREAS SHALL BE STEM MOUNTED TO 9'-0" AFF UNLESS OTHERWISE NOTED. STEMS SHALL BE PAINTED WHITE. EXACT MOUNTING SHALL BE AS REQUIRED TO CLEAR MECHANICAL SERVICES AND BEAMS, ETC. AND TO ENSURE EXIT SIGNS BE COMPLETELY VISIBLE.
- ALL WALL MOUNTED EXIT SIGNS, EMERGENCY LIGHTING BATTERY UNITS AND REMOTE EMERGENCY HEADS SHALL BE MOUNTED AT 8'-0" AFF UNLESS OTHERWISE NOTED.
- ALL LIGHTING FIXTURES ARE TO BE LOCATED AS REQUIRED ON THE JOB TO CLEAR DUCTS, PIPING, EQUIPMENT, AND/OR MECHANICAL UNITS. THE LOCATIONS SHOWN ON THIS PLAN ARE APPROXIMATE.
- ALLOW FOR TEMPORARY REMOVAL AND RE-INSTALLATION OF EXISTING LUMINAIRES AND OTHER CEILING MOUNTED DEVICES THAT ARE TO REMAIN, AS REQUIRED TO PERMIT INSTALLATION OF HVAC SYSTEMS. REFER TO MECHANICAL DRAWINGS FOR EXTENT OF SCOPE OF WORK. COORDINATE ALL WORK WITH MECHANICAL DIVISION CONTRACTOR.
- WHEN RELOCATING BASE BUILDING LIGHTING FIXTURES, EXTEND EXISTING CIRCUITS AS REQUIRED. MATCH EXISTING BRANCH WIRING METHOD.
- ALL RELOCATED BASE BUILDING LUMINAIRES SHALL BE TIED INTO LOCAL LIGHTING CIRCUITS AS REQUIRED USING SAME WIRING METHOD AS EXISTING FIXTURE.
- THE EXISTING NORMAL POWER BASE BUILDING LIGHTING CIRCUITS ARE PRESENTLY CONTROLLED BY THE BASE BUILDING LOW VOLTAGE RELAYS AND CONTACTORS. CONTRACTOR SHALL MODIFY THESE RELAYS/CONTACTORS AND RE-WIRE ENTIRE LIGHTING SYSTEM AS REQUIRED AND AS INDICATED.
- ALL CONDUITS AND WIRING IN FINISHED AREAS AND AREAS WITH SUSPENDED TILE OR WHITE GYPSUM BOARD CEILINGS SHALL BE RUN CONCEALED.
- ALL CONDUITS AND WIRING IN OPEN CEILING AREAS SHALL BE RUN TIGHT TO THE UNDERSIDE OF THE CEILING DECK. DO NOT SUSPEND CONDUITS MID-SPAN.
- ALL LIGHT SWITCHES SHALL BE ROCKER STYLE, DECORA TYPE, WHITE WITH MATCHING COVERPLATE. VOLTAGE TO SUIT LOAD CONTROLLED.
- ALL DIMMER SWITCHES SHALL BE LUTRON DWA TYPE 0-10V DIMMING PROTOCOL OR ELV DIMMING PROTOCOL, WHITE FINISH, RATED FOR CONNECTED LOAD PLUS 25% SPARE CAPACITY WITH MATCHING COVERPLATE, UNLESS NOTED OTHERWISE. PROVIDE CORRECT DIMMER TYPE TO SUIT LOAD CONTROLLED. ALL WIRING REQUIREMENTS PER MANUFACTURER'S RECOMMENDATIONS.
- ALL OCCUPANCY SENSOR SWITCHES SHALL DECORA TYPE, WHITE WITH MATCHING COVERPLATE. MANUAL/AUTO CONTROL, COLOUR WHITE, FLUSH MOUNTED. DUAL TECHNOLOGY. 120V OR 347V VOLTAGE RATING TO SUIT LOAD CONTROLLED, UNLESS NOTED OTHERWISE. PROVIDE GANGED COVERPLATE WHERE THERE ARE MORE THAN ONE (1) SWITCH.
- ALL OCCUPANCY SENSOR DIMMER SWITCHES SHALL BE DECORA TYPE, DUAL TECHNOLOGY SINGLE CIRCUIT WALL SWITCH TYPE OCCUPANCY SENSOR, 120V RATED, MANUAL/AUTO CONTROL, COLOUR WHITE, FLUSH MOUNTED. VOLTAGE RATING TO SUIT LOAD CONTROLLED, UNLESS NOTED OTHERWISE. PROVIDE MATCHING COVERPLATE. PROVIDE GANGED COVERPLATE WHERE THERE ARE MORE THAN ONE (1) DIMMER SWITCH.
- SINGLE LIGHT SWITCHES OR OCCUPANCY SENSOR SWITCHES SHALL CONTROL ALL LIGHTING WITHIN ROOM EXCEPT AS NOTED OTHERWISE. WHERE MULTIPLE SWITCHES ARE SHOWN EACH SWITCH TO CONTROL INDICATED ZONE.
- ALL LIGHT SWITCHES AND DIMMER SWITCHES SHOWN ARE NEW, UNLESS NOTED OTHERWISE. CONTRACTOR MAY BE PERMITTED TO RE-USE EXISTING BACK BOXES IF LOCATIONS ARE SUITABLE OTHERWISE NEW BACK BOXES SHALL BE PROVIDED.
- ALL NORMAL POWER LIGHTING CIRCUITS SHALL BE CONTROLLED THROUGH THE BASE BUILDING LOW VOLTAGE RELAY SYSTEM. CONTRACTOR SHALL MODIFY THESE RELAYS/CONTACTORS AND RE-WIRE ENTIRE LIGHTING SYSTEM AS REQUIRED AND/OR AS INDICATED.
- EMERGENCY LIGHTING LAYOUT SHOWN IS THE FINAL REQUIRED. THE CONTRACTOR SHALL VERIFY THE EXISTING EMERGENCY LIGHTING FIXTURE LOCATIONS ON SITE AND SHALL RELOCATE AS REQUIRED TO SUIT THE FINAL EMERGENCY LIGHTING LAYOUT SHOWN.
- PROVIDE CHAIN SUSPENSION TO CEILING SLAB/DECK OF ALL NEW AND RELOCATED LIGHTING FIXTURES THROUGHOUT.

1/8"=1'-0"

GROUND FLOOR LIGHTING - NEW

E-02-1



GENERAL DEMOLITION NOTES:

1. EXACT LOCATION OF ALL EXISTING LUMINAIRES, LIGHT SWITCHES, DIMMERS, FIRE ALARM SPEAKERS ETC. SHALL BE CONFIRMED ON SITE.
2. ALL LUMINAIRES, LIGHT SWITCHES, DIMMERS AND FIRE ALARM SPEAKERS SHOWN ON THIS DRAWING ARE EXISTING TO BE DISCONNECTED AND REMOVED UNLESS OTHERWISE SHOWN WITH AN 'E' OR OTHERWISE NOTED AS EXISTING TO REMAIN. CUT BACK AND REMOVE ALL UNUSED CONDUITS AND WIRING BACK TO SOURCE PANEL. REMOVE ALL LUMINAIRES, LIGHT SWITCHES, DIMMERS AND WIRING FROM WALLS AND CEILINGS THAT ARE TO BE DEMOLISHED.
3. LUMINAIRES, LIGHT SWITCHES, DIMMERS AND FIRE ALARM SPEAKERS DENOTED WITH AN 'E' ARE EXISTING TO REMAIN IN PLACE AND OPERATIONAL.
4. CONTRACTOR SHALL BE AWARE THAT NOT ALL EXISTING LUMINAIRES, LIGHT SWITCHES, DIMMERS, EQUIPMENT AND DEVICES REQUIRED TO BE REMOVED ARE NECESSARILY INDICATED ON THIS PLAN. CONTRACTOR SHALL STILL BE RESPONSIBLE FOR REMOVING ALL SUCH ITEMS AS REQUIRED TO FACILITATE THE COMPLETE DEMOLITION.
5. WHERE THE REMOVAL OF LUMINAIRES, LIGHT SWITCHES AND DIMMERS AFFECT THE OPERATION OF EXISTING LUMINAIRES, LIGHT SWITCHES AND DIMMERS TO REMAIN, CONTRACTOR SHALL REPLACE/MAKE GOOD BRANCH WIRING AS REQUIRED TO ENSURE CONTINUITY OF OPERATION OF REMAIN LUMINAIRES, LIGHT SWITCHES AND DIMMERS
6. ALL EXISTING LUMINAIRES, LIGHT SWITCHES, DIMMERS WHICH ARE NO LONGER REQUIRED SHALL BE REMOVED AND DISPOSED OF OFF SITE.
7. REFER TO NEW PLAN FOR NEW LOCATION OF RELOCATED LUMINAIRES, DEVICES AND EQUIPMENT.
8. REMOVE ALL REDUNDANT LINE VOLTAGE AND LOW VOLTAGE CONDUIT AND WIRING IN CEILING SPACE WHICH IS NOT IN USE.

DRAWING REFERENCE NOTES:

- (N-1) RELOCATE EXISTING EXIT SIGN. REFER TO DRAWING E-2.1 FOR RELOCATED POSITION.
- (N-2) RELOCATE EXISTING MASTER SWITCH. REFER TO DRAWING E-2.1 FOR RELOCATED POSITION.
- (N-3) RELOCATE EXISTING FIRE ALARM SPEAKER. REFER TO DRAWING E-2.1 FOR RELOCATED POSITION.
- (N-4) ALL BASE BUILDING LUMINAIRES, EXIT SIGNS AND FIRE ALARM SPEAKERS WHICH WILL NOT BE RE-USED SHALL BE RETURNED TO BASE BUILDING AT A DESIGNATED STORAGE SPACE IN THE BUILDING. COORDINATE WITH BASE BUILDING REPRESENTATIVE FOR EXACT LOCATION.
- (N-5) REMOVE OR RELOCATE ALL EXISTING TRANSFORMERS IN CEILING SPACE. INCLUDE IN TENDER FOR REMOVAL OR RELOCATION OF TWO (2) TRANSFORMERS IN SOUTH AREA.
- (N-6) REMOVE OR RELOCATE ALL EXISTING JUNCTION BOXES IN CEILING SPACE IN THE AREA WHERE THE WOOD CEILING WILL BE INSTALLED. INCLUDE IN TENDER FOR REMOVAL OR RELOCATION OF FIVE (5) JBS IN SOUTH AREA.
- (N-7) REMOVE OR RELOCATE ALL EXISTING TRANSFORMERS IN CEILING SPACE. INCLUDE IN TENDER FOR REMOVAL OR RELOCATION OF TWO (2) TRANSFORMERS IN NORTH AREA.
- (N-8) DEMOLISH ALL EXISTING LIGHTING FIXTURES IN ELEVATOR LOBBY. REUSE EXISTING NORMAL LIGHTING AND EMERGENCY LIGHTING CIRCUITS. CONNECT NEW LIGHTS TO THE EXISTING LIGHTING CONTROL IN ELEVATOR LOBBY.

1/8"=1'-0"

SECOND FLOOR
LIGHTING - DEMOLITION

E-02-2

DRAWING REFERENCE NOTES:

- N-1
- ALL NEW EXIT SIGNS SHALL BE EDGE-LIT PICTOGRAM TYPE, TO MATCH THE ONES IN EXISTING CERDIAN SPACE. CONNECT EXIT SIGNS TO EXISTING ON FLOOR EXIT SIGN CIRCUIT. EXTEND, RE-WORK AND/OR PROVIDE NEW WIRING AND CONDUIT TO SUIT. DO NOT OVERLOAD CIRCUIT. PROVIDE NEW CIRCUIT BREAKER AND BRANCH WIRING AS REQUIRED.
- N-2
- EXISTING EXIT SIGN IN RELOCATED POSITION. EXTEND AND/OR REWORK EXISTING WIRING AND CONDUIT TO SUIT. REFER TO DRAWING E-2.0 FOR EXISTING POSITION.
- N-3
- EXISTING MASTER SWITCHES IN RELOCATED POSITION. EXTEND AND/OR REWORK EXISTING WIRING AND CONDUIT TO SUIT. REFER TO DRAWING E-2.0 FOR EXISTING POSITION. MASTER SWITCHES "M1", "M2" AND "M3" SHALL CONTROL NORMAL POWER LIGHTING OF THE RESPECTIVE AREAS SHOWN. RE-WORK EXISTING LUMINAIRE BRANCH CIRCUITING AS REQUIRED TO SUIT.
- N-4
- EXISTING FIRE ALARM SPEAKER IN RELOCATED POSITION. EXTEND AND/OR REWORK EXISTING WIRING AND CONDUIT TO SUIT. REFER TO DRAWING E-2.0 FOR EXISTING POSITION.
- N-5
- 347V-120V STEP DOWN EPOXY ENCAPSULATED WEATHER PROOF TRANSFORMER TO BE LOCATED IN ACCESSIBLE CEILING. CONTRACTOR TO COORDINATE ON SITE FOR EXACT LOCATION. RE-USE EXISTING NEAREST AVAILABLE 347V NORMAL LIGHTING CIRCUIT, AND CONNECT TO PRIMARY SIDE OF TRANSFORMER. RE-WORK AND/OR PROVIDE NEW BRANCH CIRCUITING TO SUIT. STEP DOWN TRANSFORMER SHALL FEED 120V NORMAL POWER LUMINAIRES IN ROOMS 4016, 4020, AND 4021.
- N-6
- 347V-120V STEP DOWN EPOXY ENCAPSULATED WEATHER PROOF TRANSFORMER TO BE LOCATED IN ACCESSIBLE CEILING. CONTRACTOR TO COORDINATE ON SITE FOR EXACT LOCATION. RE-USE EXISTING NEAREST AVAILABLE 347V NORMAL LIGHTING CIRCUIT, AND CONNECT TO PRIMARY SIDE OF TRANSFORMER. RE-WORK AND/OR PROVIDE NEW BRANCH CIRCUITING TO SUIT. STEP DOWN TRANSFORMER SHALL FEED 120V NORMAL POWER LUMINAIRES IN ROOMS 4004, 4005, 4009, 4010, 4011, 4012 AND 4013.
- N-7
- RECONNECT EXISTING LIGHTING FIXTURE TO EMERGENCY LIGHTING CIRCUIT.
- N-8
- 347V-120V STEP DOWN EPOXY ENCAPSULATED WEATHER PROOF TRANSFORMER TO BE LOCATED IN ACCESSIBLE CEILING. CONTRACTOR TO COORDINATE ON SITE FOR EXACT LOCATION. RE-USE EXISTING NEAREST AVAILABLE 347V EMERGENCY LIGHTING CIRCUIT, AND CONNECT TO PRIMARY SIDE OF TRANSFORMER. RE-WORK AND/OR PROVIDE NEW BRANCH CIRCUITING TO SUIT. STEP DOWN TRANSFORMER SHALL FEED ALL 120V EMERGENCY POWER LUMINAIRES NORTHEAST AREA.
- N-9
- 347V-120V STEP DOWN EPOXY ENCAPSULATED WEATHER PROOF TRANSFORMERS TO BE LOCATED IN ACCESSIBLE CEILING. CONTRACTOR TO COORDINATE ON SITE FOR EXACT LOCATION. RE-USE EXISTING NEAREST AVAILABLE 347V NORMAL LIGHTING CIRCUIT, AND CONNECT TO PRIMARY SIDE OF TRANSFORMER. RE-WORK AND/OR PROVIDE NEW BRANCH CIRCUITING TO SUIT. STEP DOWN TRANSFORMER SHALL FEED 120V NORMAL POWER LUMINAIRES IN NORTHEAST OPEN AREA. BALANCE THE LOAD TO TWO (2) TRANSFORMERS SO NO TRANSFORMER WILL BE OVERLOADED.

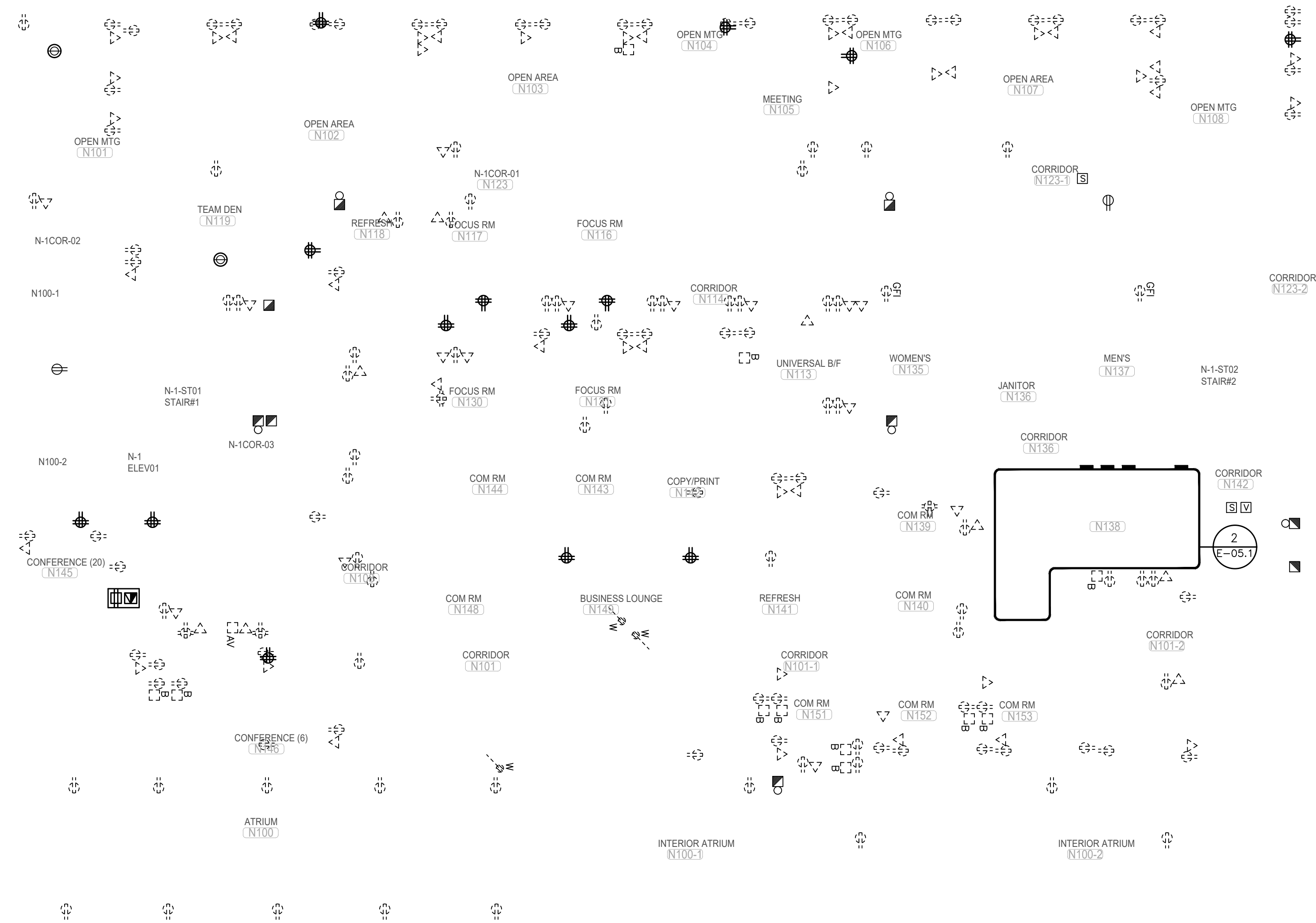
DRAWING GENERAL NOTES:

- REFER TO THE ARCHITECT'S REFLECTED CEILING PLAN FOR THE EXACT LOCATION OF ALL CEILING MOUNTED LUMINAIRES.
- EXACT LOCATION OF ALL EXISTING LUMINAIRES AND LIGHT SWITCHES/CONTROLS SHALL BE CONFIRMED ON SITE
- REFER TO THE ARCHITECT'S DRAWINGS FOR THE EXACT LOCATION AND MOUNTING HEIGHT OF ALL WALL MOUNTED LIGHT AND DIMMER SWITCHES. ALL WALL MOUNTED LIGHT AND DIMMER SWITCHES SHALL BE MOUNTED FOR BARRIER FREE, BETWEEN 36" AFF AND 43" AFF. COORDINATE WITH ARCHITECT ON SITE FOR EXACT LOCATION PRIOR TO COMMENCEMENT OF WORK.
- ALL EXIT SIGNS ON THIS PLAN SHALL BE NEW, TYPE AS NOTED, UNLESS OTHERWISE NOTED, WITH AC VOLTAGE INPUTS AS REQUIRED. DO NOT RE-USE ANY OF THE EXISTING EXIT SIGNS, UNLESS OTHERWISE NOTED. CONNECT TO NEAREST AVAILABLE EXISTING EXIT LIGHTING CIRCUIT FOR AC OR PROVIDE NEW CIRCUIT. DO NOT OVERLOAD CIRCUIT. PROVIDE BREAKER LOCK-ON DEVICE ON ALL EXIT SIGN CIRCUITS.
- ALL CEILING MOUNTED EXIT SIGNS AND REMOTE EMERGENCY HEADS IN OPEN CEILING AREAS SHALL BE STEM MOUNTED TO 9'-0" AFF UNLESS OTHERWISE NOTED. STEMS SHALL BE PAINTED WHITE. EXACT MOUNTING SHALL BE AS REQUIRED TO CLEAR MECHANICAL SERVICES AND BEAMS, ETC. AND TO ENSURE EXIT SIGNS BE COMPLETELY VISIBLE.
- ALL WALL MOUNTED EXIT SIGNS, EMERGENCY LIGHTING BATTERY UNITS AND REMOTE EMERGENCY HEADS SHALL BE MOUNTED AT 8'-0" AFF UNLESS OTHERWISE NOTED.
- ALL LIGHTING FIXTURES ARE TO BE LOCATED AS REQUIRED ON THE JOB TO CLEAR DUCTS, PIPING, EQUIPMENT, AND/OR MECHANICAL UNITS. THE LOCATIONS SHOWN ON THIS PLAN ARE APPROXIMATE.
- ALLOW FOR TEMPORARY REMOVAL AND RE-INSTALLATION OF EXISTING LUMINAIRES AND OTHER CEILING MOUNTED DEVICES THAT ARE TO REMAIN, AS REQUIRED TO PERMIT INSTALLATION OF HVAC SYSTEMS. REFER TO MECHANICAL DRAWINGS FOR EXTENT OF SCOPE OF WORK. COORDINATE ALL WORK WITH MECHANICAL DIVISION CONTRACTOR.
- WHEN RELOCATING BASE BUILDING LIGHTING FIXTURES, EXTEND EXISTING CIRCUITS AS REQUIRED. MATCH EXISTING BRANCH WIRING METHOD.
- ALL RELOCATED BASE BUILDING LUMINAIRES SHALL BE TIED INTO LOCAL LIGHTING CIRCUITS AS REQUIRED USING SAME WIRING METHOD AS EXISTING FIXTURE.
- THE EXISTING NORMAL POWER BASE BUILDING LIGHTING CIRCUITS ARE PRESENTLY CONTROLLED BY THE BASE BUILDING LOW VOLTAGE RELAYS AND CONTACTORS. CONTRACTOR SHALL MODIFY THESE RELAYS/CONTACTORS AND RE-WIRE ENTIRE LIGHTING SYSTEM AS REQUIRED AND AS INDICATED.
- ALL CONDUITS AND WIRING IN FINISHED AREAS AND AREAS WITH SUSPENDED TILE OR WHITE GYPSUM BOARD CEILINGS SHALL BE RUN CONCEALED.
- ALL CONDUITS AND WIRING IN OPEN CEILING AREAS SHALL BE RUN TIGHT TO THE UNDERSIDE OF THE CEILING DECK. DO NOT SUSPEND CONDUITS MID-SPAN.
- ALL LIGHT SWITCHES SHALL BE ROCKER STYLE, DECORA TYPE, WHITE WITH MATCHING COVERPLATE. VOLTAGE TO SUIT LOAD CONTROLLED.
- ALL DIMMER SWITCHES SHALL BE LUTRON DVA TYPE 0-10V DIMMING PROTOCOL OR ELV DIMMING PROTOCOL, WHITE FINISH, RATED FOR CONNECTED LOAD PLUS 25% SPARE CAPACITY WITH MATCHING COVERPLATE, UNLESS NOTED OTHERWISE. PROVIDE CORRECT DIMMER TYPE TO SUIT LOAD CONTROLLED. ALL WIRING REQUIREMENTS PER MANUFACTURER'S RECOMMENDATIONS.
- ALL OCCUPANCY SENSOR SWITCHES SHALL DECORA TYPE, WHITE WITH MATCHING COVERPLATE. MANUAL/AUTO CONTROL, COLOUR WHITE, FLUSH MOUNTED. DUAL TECHNOLOGY. 120V OR 347V VOLTAGE RATING TO SUIT LOAD CONTROLLED, UNLESS NOTED OTHERWISE. PROVIDE GANGED COVERPLATE WHERE THERE ARE MORE THAN ONE (1) SWITCH.
- ALL OCCUPANCY SENSOR DIMMER SWITCHES SHALL BE DECORA TYPE, DUAL TECHNOLOGY SINGLE CIRCUIT WALL SWITCH TYPE OCCUPANCY SENSOR, 120V RATED, MANUAL/AUTO CONTROL, COLOUR WHITE, FLUSH MOUNTED. VOLTAGE RATING TO SUIT LOAD CONTROLLED, UNLESS NOTED OTHERWISE. PROVIDE MATCHING COVERPLATE. PROVIDE GANGED COVERPLATE WHERE THERE ARE MORE THAN ONE (1) DIMMER SWITCH.
- SINGLE LIGHT SWITCHES OR OCCUPANCY SENSOR SWITCHES SHALL CONTROL ALL LIGHTING WITHIN ROOM EXCEPT AS NOTED OTHERWISE. WHERE MULTIPLE SWITCHES ARE SHOWN EACH SWITCH TO CONTROL INDICATED ZONE.
- ALL LIGHT SWITCHES AND DIMMER SWITCHES SHOWN ARE NEW, UNLESS NOTED OTHERWISE. CONTRACTOR MAY BE PERMITTED TO RE-USE EXISTING BACK BOXES IF LOCATIONS ARE SUITABLE OTHERWISE NEW BACK BOXES SHALL BE PROVIDED.
- ALL NORMAL POWER LIGHTING CIRCUITS SHALL BE CONTROLLED THROUGH THE BASE BUILDING LOW VOLTAGE RELAY SYSTEM. CONTRACTOR SHALL MODIFY THESE RELAYS/CONTACTORS AND RE-WIRE ENTIRE LIGHTING SYSTEM AS REQUIRED AND/OR AS INDICATED.
- EMERGENCY LIGHTING LAYOUT SHOWN IS THE FINAL REQUIRED. THE CONTRACTOR SHALL VERIFY THE EXISTING EMERGENCY LIGHTING FIXTURE LOCATIONS ON SITE AND SHALL RELOCATE AS REQUIRED TO SUIT THE FINAL EMERGENCY LIGHTING LAYOUT SHOWN.
- PROVIDE CHAIN SUSPENSION TO CEILING SLAB/DECK OF ALL NEW AND RELOCATED LIGHTING FIXTURES THROUGHOUT.

1/8"=1'-0"

SECOND FLOOR LIGHTING -
NEW

E-02-3



DRAWING REFERENCE NOTES:

- N-1 ELECTRICAL CONTRACTOR SHALL BE RESPONSIBLE TO DISCONNECT AND REMOVE ALL EXISTING VOICE AND DATA CABLING THROUGHOUT ENTIRE PROJECT AREA. EXISTING CABLING SHALL NOT BE RE-USED.
- N-2 EXISTING SURFACE MOUNT PANEL TO BE REMOVED. CUT THE WIRING BACK TO THE SOURCE PANEL. THESE PANELS MAY NEED TO BE REINSTALLED IF THE EXISTING PANELS IN ELECTRICAL ROOM DO NOT HAVE SUFFICIENT CIRCUITS OR OVERLOAD. STORE THESE PANELS UNTIL THE COMPLETE OF THE PROJECT.
- N-3 EXISTING SLUMP PUMP POWER CONNECTION TO BE RELOCATED. REFER TO DRAWING E-3.1 FOR DETAIL.
- N-4 RELOCATE EXISTING RECEPTACLE TO NEW FURRED OUT WALL. REFER TO DRAWING E-3.1 FOR DETAIL.
- N-5 DISCONNECT POWER CONNECTION FOR EXISTING FLOOR MOUNTED AC UNIT. COORDINATE ALL WORK WITH OWNER. CONTRACTOR SHALL PROVIDE ALL NECESSARY LABOUR AND MATERIAL TO SITE. INVESTIGATE EXACT PANEL SOURCE CURRENTLY FEEDING THE EQUIPMENT. PULL ALL WIRING AND CONDUIT BACK TO SOURCE, OR LAST EQUIPMENT TO REMAIN, AND REMOVE. PROVIDE UPDATED TYPED PANEL DIRECTORY.
- N-6 DISCONNECT AND REMOVE ASSOCIATED WIREMOLD RACEWAY WHERE APPLICABLE.
- N-7 REMOVE THE DATA OUTLET AND EXISTING COMM CABLE. PROVIDE BLANK COVER PLATE IF THE DATA OUTLET AND POWER RECEPTACLE ARE USING A GANGED COVERPLATE. IF THEY ARE NOT GANGED, REMOVE THE DATA BACKBOX AS WELL.

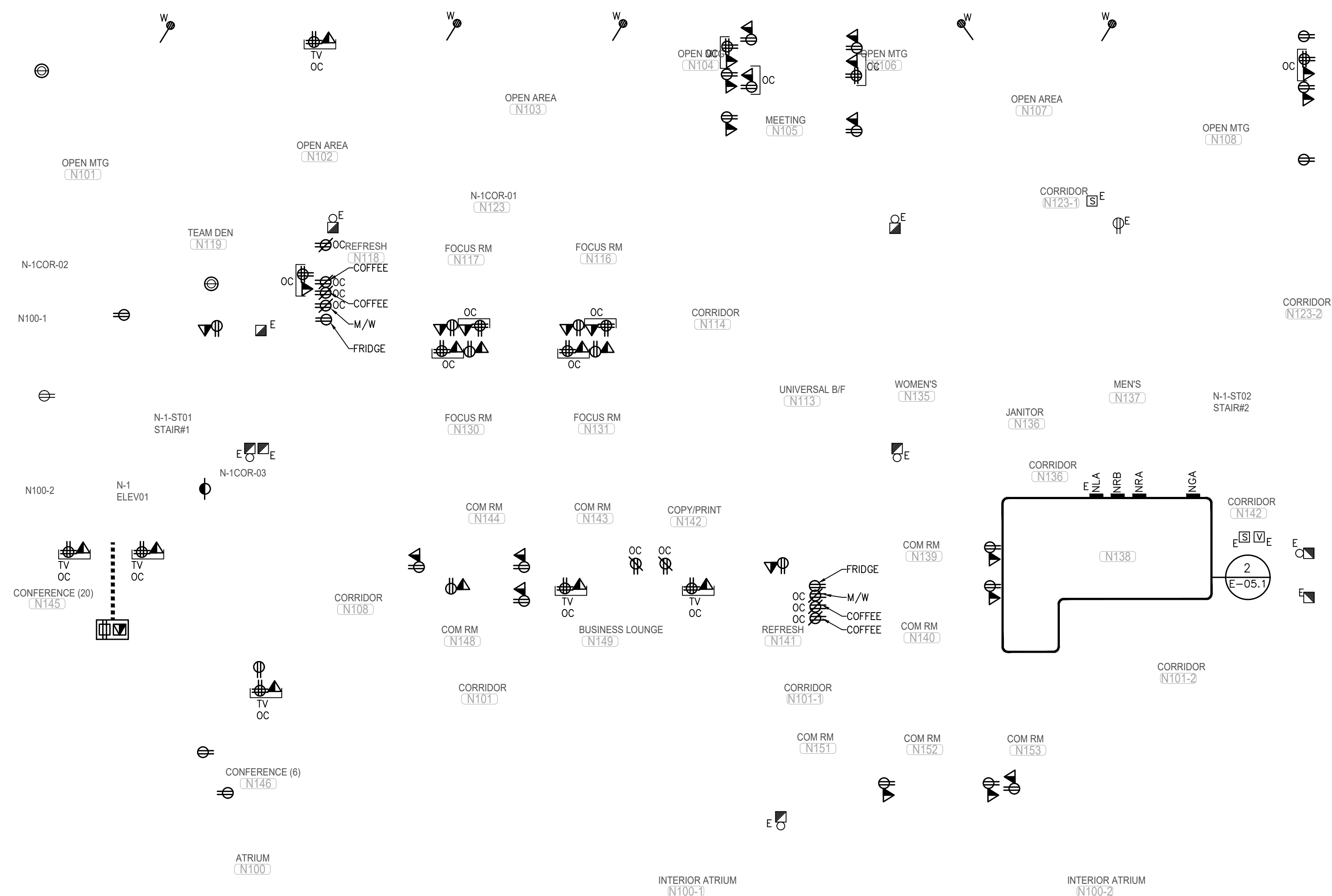
DRAWING GENERAL NOTES:

1. EXACT LOCATION OF ALL EXISTING RECEPTACLES AND OTHER DEVICES/EQUIPMENT SHALL BE CONFIRMED ON SITE.
2. ALL RECEPTACLES AND OTHER DEVICES/EQUIPMENT SHOWN ON THIS DRAWING ARE EXISTING TO BE DISCONNECTED AND REMOVED UNLESS OTHERWISE SHOWN WITH AN "E" TO REMAIN OR NOTED. CUT BACK AND REMOVE ALL UNUSED CONDUITS AND WIRING BACK TO SOURCE PANEL. REMOVE ALL DEVICES AND WIRING FROM WALLS THAT ARE TO BE DEMOLISHED. ALL EXISTING DEVICES AND WIRING THAT ARE TO BE DEMOLISHED ARE NOT NECESSARILY SHOWN. CONTRACTOR SHALL VISIT THE SITE DURING TENDER PERIOD TO ASCERTAIN THE FULL SCOPE OF DEMOLITION.
3. ALL EXISTING RECEPTACLES AND DEVICES/EQUIPMENT ON WALLS TO BE DEMOLISHED SHALL ALSO BE REMOVED. THESE DEVICES MAY NOT ALL NECESSARILY BE INDICATED ON THIS PLAN. CONTRACTOR SHALL VISIT THE SITE DURING TENDER PERIOD TO ASCERTAIN THE FULL SCOPE OF DEMOLITION. CONTRACTOR SHALL BE RESPONSIBLE FOR REMOVING ALL SUCH ITEMS AS REQUIRED TO FACILITATE THE COMPLETE DEMOLITION.
4. WHERE RECEPTACLES AND DEVICES/EQUIPMENT ARE REMOVED, CUT BACK AND REMOVE CONDUIT AND WIRING THAT IS NO LONGER REQUIRED BACK TO SOURCE PANEL, OR LAST DEVICE TO REMAIN AND REMOVE.
5. ALL EXISTING ELECTRICAL EQUIPMENT OR DEVICE WHICH IS NO LONGER REQUIRED SHALL BE REMOVED AND DISPOSED OF OFF SITE.
6. WHERE REMOVAL OF RECEPTACLES, DEVICES/EQUIPMENT AFFECTS THE OPERATION OF EXISTING RECEPTACLES, DEVICES/EQUIPMENT TO REMAIN, THE CONTRACTOR SHALL REPLACE/MAKE GOOD BRANCH WIRING AS REQUIRED TO ENSURE CONTINUITY OF OPERATION OF REMAINING RECEPTACLES, DEVICES/EQUIPMENT.
7. NOT ALL MECHANICAL EQUIPMENT TO BE REMOVED IS NECESSARILY INDICATED ON THIS PLAN. REFER TO THE MECHANICAL DRAWINGS FOR EXTENT OF MECHANICAL DEMOLITION WORK. DISCONNECT EXISTING MECHANICAL EQUIPMENT WHICH IS BEING REMOVED. CUT BACK CONDUIT AND WIRING TO SOURCE ELECTRICAL PANEL. MAINTAIN ELECTRICAL SERVICES TO EXISTING MECHANICAL EQUIPMENT WHICH IS TO REMAIN IN SERVICE. REPLACE BRANCH WIRING AS NEEDED.
8. INCLUDE FOR THE REMOVAL OF ANY EXISTING REDUNDANT HORIZONTAL COMMUNICATIONS CABLING, CABLING NOT SHOWN. VERIFY EXTENT OF THE WORK DURING TENDER PERIOD. COORDINATE WITH GENERAL CONTRACTOR TO HAVE THE COMMUNICATIONS CONTRACTOR VERIFY IF ANY EXISTING CABLING IS LIVE AND SHOULD REMAIN.
9. REMOVE ALL REDUNDANT LINE VOLTAGE AND LOW VOLTAGE CONDUIT AND WIRING SPACE WHICH IS NOT IN USE.
10. CONTRACTOR SHALL BE AWARE THAT NOT ALL EXISTING EQUIPMENT AND DEVICES REQUIRED TO BE REMOVED ARE NECESSARILY INDICATED ON THIS PLAN. CONTRACTOR SHALL STILL BE RESPONSIBLE FOR REMOVING ALL SUCH ITEMS AS REQUIRED TO FACILITATE THE COMPLETE DEMOLITION.
11. REFER TO NEW PLAN FOR NEW LOCATION OF RELOCATED DEVICES AND EQUIPMENT.

1/8"=1'-0"

GROUND FLOOR
POWER & SYSTEMS - DEMOLITION

E-03-0



DRAWING REFERENCE NOTES:

- N-1 OVER COUNTER RECEPTACLES TO BE MOUNTED HORIZONTALLY AT THE BACK SPLASH.
- N-2 RE-USE EXISTING BRANCH CIRCUIT PREVIOUSLY FEEDING SUMP PUMP FOR THE NEW SUMP PUMP LOCATION. EXTEND, RE-WORK AND/OR PROVIDE NEW WIRING AND CONDUIT TO SUIT.
- N-3 EXISTING RECEPTACLE AT RELOCATED POSITION TO SUIT NEW FURRED OUT WALL. RE-WORK AND/OR PROVIDE NEW WIRING AND CONDUIT TO SUIT.
- N-4 RECEPTACLE SHALL BE SURFACE MOUNTED ON THE TABLE LEG. COORDINATE EXACT LOCATION WITH ARCHITECT/OWNER ON SITE PRIOR TO COMMENCEMENT OF WORK. THIS IS TYPICAL FOR ALL ROOMS WHERE TABLE IS LOCATED IN THE CENTRE OF THE ROOM. REFER TO DETAILS IN DRAWING E-4.3 FOR ADDITIONAL INFORMATION.
- N-5 CONDUIT FOR COMMS SHALL BE STUBBED UP AT FLOOR LEVEL. COORDINATE EXACT STUB UP LOCATION WITH ARCHITECT/OWNER ON SITE PRIOR TO COMMENCEMENT OF WORK. THIS IS TYPICAL FOR ALL ROOMS WHERE TABLE IS LOCATED IN THE CENTRE OF THE ROOM. REFER TO DETAILS IN DRAWING E-4.3 FOR ADDITIONAL INFORMATION.

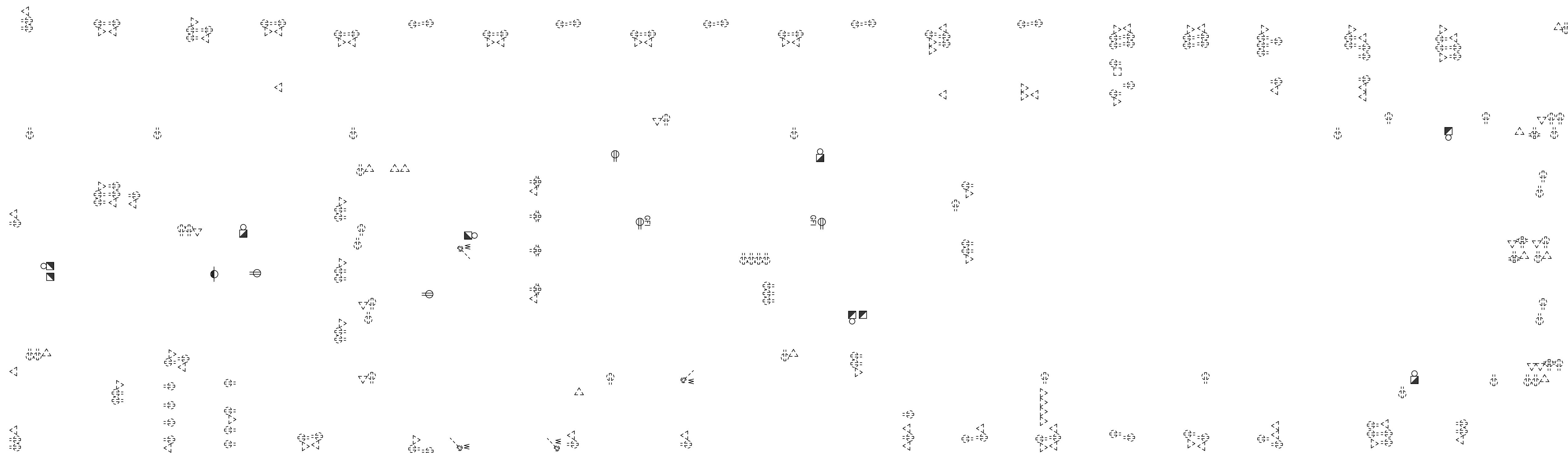
DRAWING GENERAL NOTES:

- REFER TO THE ARCHITECT'S DRAWINGS FOR THE EXACT LOCATION AND MOUNTING HEIGHT OF ALL RECEPTACLES AND COMMUNICATIONS OUTLET BOXES. WHERE THIS INFORMATION IS NOT INDICATED HAVE THE OWNER OR ARCHITECT VERIFY EXACT LOCATIONS ON SITE PRIOR TO ROUGHING IN. DO NOT SCALE LOCATIONS FROM ELECTRICAL DRAWINGS. OUTLETS INSTALLED WITHOUT APPROVED LOCATIONS SHALL BE RELOCATED AT THE CONTRACTOR'S EXPENSE.
- ALL RECEPTACLES AND COMMUNICATIONS OUTLET BOXES SHALL BE MOUNTED AT 16" AFF AS MEASURED TO THE CENTRE-LINE OF THE DEVICE UNLESS OTHERWISE NOTED IN ARCHITECTURAL DRAWINGS.
- REPORT ANY DISCREPANCIES BETWEEN THIS PLAN AND THE ARCHITECT'S POWER AND COMMUNICATIONS PLAN TO THE CONSULTANT PRIOR TO ROUGHING IN ANY SERVICES.
- ALL DUPLEX RECEPTACLES SHALL BE DECORA TYPE, WHITE FINISH. PROVIDE WITH MATCHING WHITE COLOUR COVERPLATE. REPLACE ALL EXISTING DUPLEX RECEPTACLES THAT ARE TO REMAIN WITH NEW DECORA RECEPTACLES AND COVERPLATES AS SPECIFIED.
- WHERE POWER AND COMMUNICATIONS OUTLET BOXES ARE SHOWN ADJACENT TO EACH OTHER PROVIDE GANGED COVERPLATE SIZE AS REQUIRED. REFER TO DETAIL.
- DO NOT INSTALL OUTLETS BACK TO BACK.
- ALL WALL MOUNTED WIRING DEVICE BACK BOXES SHALL BE FLUSH MOUNTED WITH CONDUIT VERTICALLY CONCEALED AND HORIZONTAL CONDUITS SHALL BE TIGHT TO UNDERSIDE OF DECK/SLAB UNLESS OTHERWISE NOTED. IN OPEN CEILING AREAS, TAKE SPECIAL CARE TO NEATLY RUN THE CONDUITS TO NOT BE VISIBLE AS MUCH AS POSSIBLE. SELECT CONDUIT ROUTINGS ACCORDINGLY.
- PROVIDE BLANK WHITE COVERPLATES OVER ALL EXISTING BLANK WALLBOXES THAT ARE TO REMAIN, UNLESS OTHERWISE NOTED.
- IN AREAS WHERE COUNTERS OR OTHER MILLWORK ARE PROVIDED, COORDINATE EXACT LOCATION OF OUTLETS AND WIRING WITH MILLWORK AND ARCHITECT.
- FOR PLUG-IN EQUIPMENT, CONFIRM CSA CONFIGURATION OF REQUIRED RECEPTACLE PRIOR TO PURCHASE AND INSTALLATION.
- SUPPLY AND INSTALL EQUIPMENT DISCONNECT SWITCHES IN STRICT COMPLIANCE WITH CODE REQUIREMENTS (NOT ALL LOCAL DISCONNECT SWITCHES ARE SHOWN).
- PROVIDE ALL EMPTY CONDUITS C/W PULL STRINGS AND BACK BOXES AS REQUIRED TO SUIT THE COMPLETE INSTALLATION OF THE COMMUNICATIONS SYSTEMS (VOICE, DATA, CATV) AND SECURITY SYSTEMS (ACCESS CONTROL AND CCTV).
- ALL EMPTY CONDUITS FOR COMMUNICATIONS OUTLETS SHALL BE TERMINATED WITH BUSHING AT END OF CONDUIT. IN OPEN CEILING AREAS EXTEND ALL EMPTY CONDUITS FOR COMMUNICATIONS SYSTEMS AS REQUIRED SO THAT COMMUNICATIONS CONTRACTOR DOES NOT NEED TO RUN FREE AIR CABLING THAT WILL BE VISIBLE.
- REFER TO MECHANICAL DRAWINGS FOR EXACT LOCATION AND MOUNTING HEIGHT OF ALL HVAC AND PLUMBING EQUIPMENT. CONFIRM EXACT LOCATION OF ALL MECHANICAL EQUIPMENT WITH MECHANICAL CONTRACTOR PRIOR TO ROUGHING IN ELECTRICAL SERVICES.
- STARTER LOAD SIDE WIRING SHALL BE THE SAME AS LINE SIDE WIRING.
- ALL STARTERS AND PUMP CONTROLLERS SUPPLIED BY MECHANICAL CONTRACTOR. ELECTRICAL CONTRACTOR TO PROVIDE ALL LINE AND LOAD SIDE POWER WIRING AND CONDUIT, AND REQUIRED ISOLATION SWITCH AT THE MOTOR.
- ELECTRICAL CONTRACTOR SHALL PROVIDE 15A, 120V JUNCTION BOX OUTLETS MOUNTED IN CEILING SPACE FOR USE BY THE MECHANICAL CONTROLS CONTRACTOR FOR CONTROLS POWER. THE LOCATIONS SHALL BE AS INDICATED ON THIS DRAWING. ALL LOAD SIDE 120V TERMINATIONS SHALL BE PROVIDED BY MECHANICAL CONTRACTOR.
- PROVIDE NEW EVAC SPEAKERS WHERE INDICATED AND CONNECT TO EXISTING SPEAKER CIRCUITS AND EXTEND WIRING AS REQUIRED. VERIFY CIRCUIT LOADING WITH FIRE ALARM MANUFACTURER AND PROVIDE NEW CIRCUITS AND/OR ADDITIONAL AMPLIFICATION EQUIPMENT AS REQUIRED. RUN NEW CIRCUITS TO FIRE ALARM DCP, NEW SPEAKERS TO MATCH EXISTING.
- CIRCUITING SHOWN IS FOR GROUPING PURPOSES ONLY. THE CONTRACTOR SHALL VERIFY EXACT CIRCUIT NUMBERS TO BE USED ON SITE AND SHALL INDICATE EXACT NUMBERS USED ON THE AS-BUILT DRAWINGS.

1/8"=1'-0"

GROUND FLOOR
POWER & SYSTEMS - NEW

E-03-1



DRAWING REFERENCE NOTES:

- N-1 ELECTRICAL CONTRACTOR SHALL BE RESPONSIBLE TO DISCONNECT AND REMOVE ALL EXISTING VOICE AND DATA CABLING THROUGHOUT ENTIRE PROJECT AREA. EXISTING CABLING SHALL NOT BE RE-USED.
- N-2 EXISTING SURFACE MOUNT PANEL TO BE REMOVED. CUT THE WIRING BACK TO THE SOURCE PANEL. THESE PANELS MAY NEED TO BE REINSTALLED IF THE EXISTING PANELS IN ELECTRICAL ROOM DO NOT HAVE SUFFICIENT CIRCUITS OR OVERLOAD. STORE THESE PANELS UNTIL THE COMPLETE OF THE PROJECT.
- N-3 EXISTING SLUMP PUMP POWER CONNECTION TO BE RELOCATED. REFER TO DRAWING E-3.1 FOR DETAIL.
- N-4 RELOCATE EXISTING RECEPTACLE TO NEW FURRED OUT WALL. REFER TO DRAWING E-3.1 FOR DETAIL.
- N-5 DISCONNECT POWER CONNECTION FOR EXISTING FLOOR MOUNTED AC UNIT. COORDINATE ALL WORK WITH OWNER. CONTRACTOR SHALL PROVIDE ALL NECESSARY LABOUR AND MATERIAL TO SITE. INVESTIGATE EXACT PANEL SOURCE CURRENTLY FEEDING THE EQUIPMENT. PULL ALL WIRING AND CONDUIT BACK TO SOURCE, OR LAST EQUIPMENT TO REMAIN, AND REMOVE. PROVIDE UPDATED TYPED PANEL DIRECTORY.
- N-6 DISCONNECT AND REMOVE ASSOCIATED WIREMOLD RACEWAY WHERE APPLICABLE.
- N-7 REMOVE THE DATA OUTLET AND EXISTING COMM. CABLE. PROVIDE BLANK COVER PLATE IF THE DATA OUTLET AND POWER RECEPTACLE ARE USING A GANGED COVERPLATE. IF THEY ARE NOT GANGED, REMOVE THE DATA BACKBOX AS WELL.

DRAWING GENERAL NOTES:

1. EXACT LOCATION OF ALL EXISTING RECEPTACLES AND OTHER DEVICES/EQUIPMENT SHALL BE CONFIRMED ON SITE.
2. ALL RECEPTACLES AND OTHER DEVICES/EQUIPMENT SHOWN ON THIS DRAWING ARE EXISTING TO BE DISCONNECTED AND REMOVED UNLESS OTHERWISE SHOWN WITH AN "E" TO REMAIN OR NOTED. CUT BACK AND REMOVE ALL UNUSED CONDUITS AND WIRING BACK TO SOURCE PANEL. REMOVE ALL DEVICES AND WIRING FROM WALLS THAT ARE TO BE DEMOLISHED. ALL EXISTING DEVICES AND WIRING THAT ARE TO BE DEMOLISHED ARE NOT NECESSARILY SHOWN. CONTRACTOR SHALL VISIT THE SITE DURING TENDER PERIOD TO ASCERTAIN THE FULL SCOPE OF DEMOLITION.
3. ALL EXISTING RECEPTACLES AND DEVICES/EQUIPMENT ON WALLS TO BE DEMOLISHED SHALL ALSO BE REMOVED. THESE DEVICES MAY NOT ALL NECESSARILY BE INDICATED ON THIS PLAN. CONTRACTOR SHALL VISIT THE SITE DURING TENDER PERIOD TO ASCERTAIN THE FULL SCOPE OF DEMOLITION. CONTRACTOR SHALL BE RESPONSIBLE FOR REMOVING ALL SUCH ITEMS AS REQUIRED TO FACILITATE THE COMPLETE DEMOLITION.
4. WHERE RECEPTACLES AND DEVICES/EQUIPMENT ARE REMOVED, CUT BACK AND REMOVE CONDUIT AND WIRING THAT IS NO LONGER REQUIRED BACK TO SOURCE PANEL, OR LAST DEVICE TO REMAIN AND REMOVE.
5. ALL EXISTING ELECTRICAL EQUIPMENT OR DEVICE WHICH IS NO LONGER REQUIRED SHALL BE REMOVED AND DISPOSED OF OFF SITE.
6. WHERE REMOVAL OF RECEPTACLES, DEVICES/EQUIPMENT AFFECTS THE OPERATION OF EXISTING RECEPTACLES, DEVICES/EQUIPMENT TO REMAIN, THE CONTRACTOR SHALL REPLACE/MAKE GOOD BRANCH WIRING AS REQUIRED TO ENSURE CONTINUITY OF OPERATION OF REMAINING RECEPTACLES, DEVICES/EQUIPMENT.
7. NOT ALL MECHANICAL EQUIPMENT TO BE REMOVED IS NECESSARILY INDICATED ON THIS PLAN. REFER TO THE MECHANICAL DRAWINGS FOR EXTENT OF MECHANICAL DEMOLITION WORK. DISCONNECT EXISTING MECHANICAL EQUIPMENT WHICH IS BEING REMOVED. CUT BACK CONDUIT AND WIRING TO SOURCE ELECTRICAL PANEL. MAINTAIN ELECTRICAL SERVICES TO EXISTING MECHANICAL EQUIPMENT WHICH IS TO REMAIN IN SERVICE. REPLACE BRANCH WIRING AS NEEDED.
8. INCLUDE FOR THE REMOVAL OF ANY EXISTING REDUNDANT HORIZONTAL COMMUNICATIONS CABLING. CABLING NOT SHOWN. VERIFY EXTENT OF THE WORK DURING TENDER PERIOD. COORDINATE WITH GENERAL CONTRACTOR TO HAVE THE COMMUNICATIONS CONTRACTOR VERIFY IF ANY EXISTING CABLING IS LIVE AND SHOULD REMAIN.
9. REMOVE ALL REDUNDANT LINE VOLTAGE AND LOW VOLTAGE CONDUIT AND WIRING SPACE WHICH IS NOT IN USE.
10. CONTRACTOR SHALL BE AWARE THAT NOT ALL EXISTING EQUIPMENT AND DEVICES REQUIRED TO BE REMOVED ARE NECESSARILY INDICATED ON THIS PLAN. CONTRACTOR SHALL STILL BE RESPONSIBLE FOR REMOVING ALL SUCH ITEMS AS REQUIRED TO FACILITATE THE COMPLETE DEMOLITION.
11. REFER TO NEW PLAN FOR NEW LOCATION OF RELOCATED DEVICES AND EQUIPMENT.

1/8"=1'-0"

SECOND FLOOR
POWER & SYSTEMS - DEMOLITION

E-03-2

DRAWING REFERENCE NOTES:

- N-1 OVER COUNTER RECEPTACLES TO BE MOUNTED HORIZONTALLY AT THE BACK SPLASH.
- N-2 RE-USE EXISTING BRANCH CIRCUIT PREVIOUSLY FEEDING SUMP PUMP FOR THE NEW SUMP PUMP LOCATION. EXTEND, RE-WORK AND/OR PROVIDE NEW WIRING AND CONDUIT TO SUIT.
- N-3 EXISTING RECEPTACLE AT RELOCATED POSITION TO SUIT NEW FURRED OUT WALL. RE-WORK AND/OR PROVIDE NEW WIRING AND CONDUIT TO SUIT.
- N-4 RECEPTACLE SHALL BE SURFACE MOUNTED ON THE TABLE LEG. COORDINATE EXACT LOCATION WITH ARCHITECT/OWNER ON SITE PRIOR TO COMMENCEMENT OF WORK. THIS IS TYPICAL FOR ALL ROOMS WHERE TABLE IS LOCATED IN THE CENTRE OF THE ROOM. REFER TO DETAILS IN DRAWING E-4.3 FOR ADDITIONAL INFORMATION.
- N-5 CONDUIT FOR COMMS SHALL BE STUBBED UP AT FLOOR LEVEL. COORDINATE EXACT STUB UP LOCATION WITH ARCHITECT/OWNER ON SITE PRIOR TO COMMENCEMENT OF WORK. THIS IS TYPICAL FOR ALL ROOMS WHERE TABLE IS LOCATED IN THE CENTRE OF THE ROOM. REFER TO DETAILS IN DRAWING E-4.3 FOR ADDITIONAL INFORMATION.

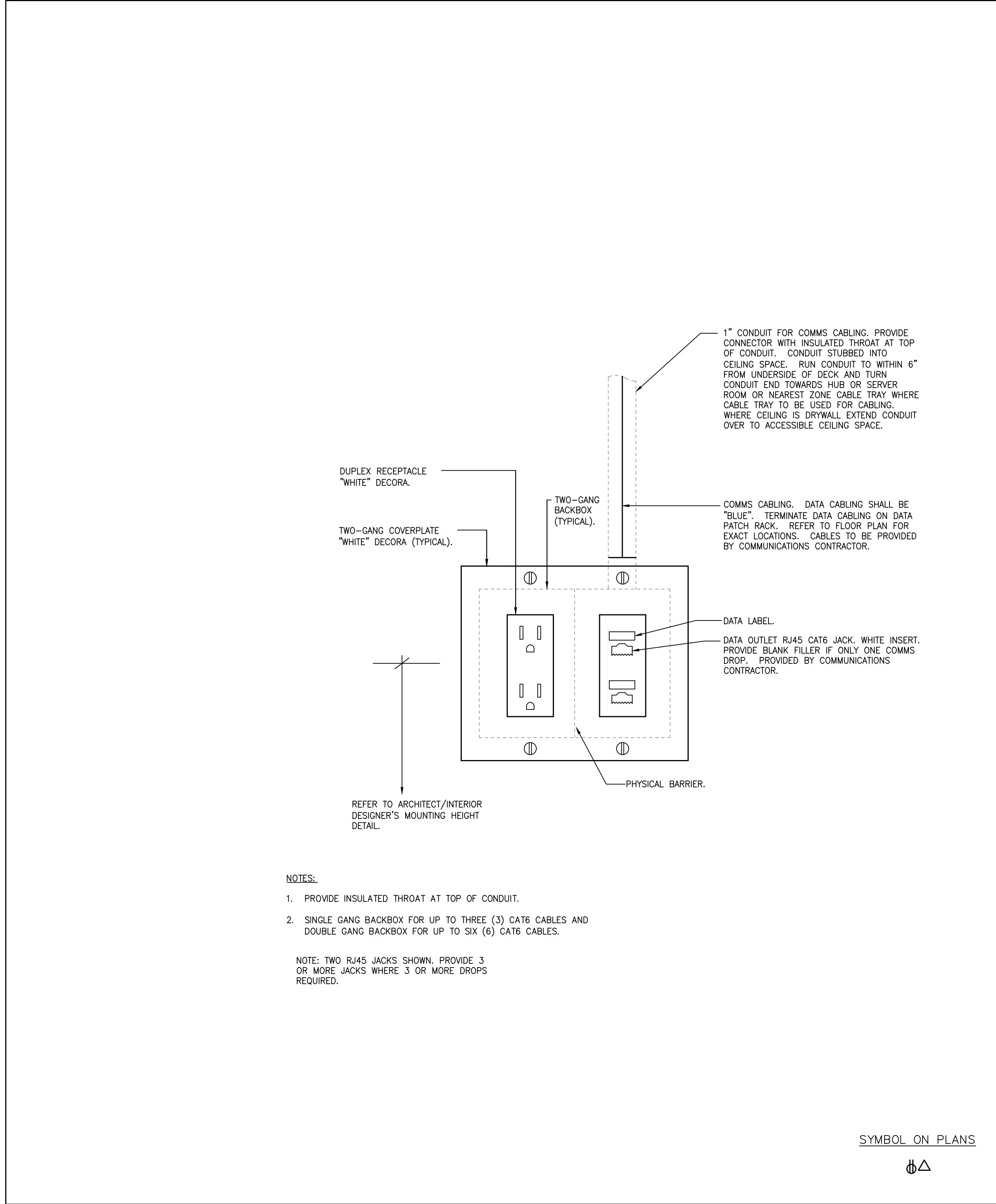
DRAWING GENERAL NOTES:

- REFER TO THE ARCHITECT'S DRAWINGS FOR THE EXACT LOCATION AND MOUNTING HEIGHT OF ALL RECEPTACLES AND COMMUNICATIONS OUTLET BOXES. WHERE THIS INFORMATION IS NOT INDICATED HAVE THE OWNER OR ARCHITECT VERIFY EXACT LOCATIONS ON SITE PRIOR TO ROUGHING IN. DO NOT SCALE LOCATIONS FROM ELECTRICAL DRAWINGS. OUTLETS INSTALLED WITHOUT APPROVED LOCATIONS SHALL BE RELOCATED AT THE CONTRACTOR'S EXPENSE.
- ALL RECEPTACLES AND COMMUNICATIONS OUTLET BOXES SHALL BE MOUNTED AT 16" AFF AS MEASURED TO THE CENTRE-LINE OF THE DEVICE UNLESS OTHERWISE NOTED IN ARCHITECTURAL DRAWINGS.
- REPORT ANY DISCREPANCIES BETWEEN THIS PLAN AND THE ARCHITECT'S POWER AND COMMUNICATIONS PLAN TO THE CONSULTANT PRIOR TO ROUGHING IN ANY SERVICES.
- ALL DUPLEX RECEPTACLES SHALL BE DECORA TYPE, WHITE FINISH. PROVIDE WITH MATCHING WHITE COLOUR COVERPLATE. REPLACE ALL EXISTING DUPLEX RECEPTACLES THAT ARE TO REMAIN WITH NEW DECORA RECEPTACLES AND COVERPLATES AS SPECIFIED.
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- PROVIDE BLANK WHITE COVERPLATES OVER ALL EXISTING BLANK WALLBOXES THAT ARE TO REMAIN, UNLESS OTHERWISE NOTED.
- IN AREAS WHERE COUNTERS OR OTHER MILLWORK ARE PROVIDED, COORDINATE EXACT LOCATION OF OUTLETS AND WIRING WITH MILLWORK AND ARCHITECT.
- FOR PLUG-IN EQUIPMENT, CONFIRM CSA CONFIGURATION OF REQUIRED RECEPTACLE PRIOR TO PURCHASE AND INSTALLATION.
- SUPPLY AND INSTALL EQUIPMENT DISCONNECT SWITCHES IN STRICT COMPLIANCE WITH CODE REQUIREMENTS (NOT ALL LOCAL DISCONNECT SWITCHES ARE SHOWN).
- PROVIDE ALL EMPTY CONDUITS C/W PULL STRINGS AND BACK BOXES AS REQUIRED TO SUIT THE COMPLETE INSTALLATION OF THE COMMUNICATIONS SYSTEMS (VOICE, DATA, CATV) AND SECURITY SYSTEMS (ACCESS CONTROL AND CCTV).
- ALL EMPTY CONDUITS FOR COMMUNICATIONS OUTLETS SHALL BE TERMINATED WITH BUSHING AT END OF CONDUIT. IN OPEN CEILING AREAS EXTEND ALL EMPTY CONDUITS FOR COMMUNICATIONS SYSTEMS AS REQUIRED SO THAT COMMUNICATIONS CONTRACTOR DOES NOT NEED TO RUN FREE AIR CABLING THAT WILL BE VISIBLE.
- REFER TO MECHANICAL DRAWINGS FOR EXACT LOCATION AND MOUNTING HEIGHT OF ALL HVAC AND PLUMBING EQUIPMENT. CONFIRM EXACT LOCATION OF ALL MECHANICAL EQUIPMENT WITH MECHANICAL CONTRACTOR PRIOR TO ROUGHING IN ELECTRICAL SERVICES.
- STARTER LOAD SIDE WIRING SHALL BE THE SAME AS LINE SIDE WIRING.
- ALL STARTERS AND PUMP CONTROLLERS SUPPLIED BY MECHANICAL CONTRACTOR. ELECTRICAL CONTRACTOR TO PROVIDE ALL LINE AND LOAD SIDE POWER WIRING AND CONDUIT, AND REQUIRED ISOLATION SWITCH AT THE MOTOR.
- ELECTRICAL CONTRACTOR SHALL PROVIDE 15A, 120V JUNCTION BOX OUTLETS MOUNTED IN CEILING SPACE FOR USE BY THE MECHANICAL CONTROLS CONTRACTOR FOR CONTROLS POWER. THE LOCATIONS SHALL BE AS INDICATED ON THIS DRAWING. ALL LOAD SIDE 120V TERMINATIONS SHALL BE PROVIDED BY MECHANICAL CONTRACTOR.
- PROVIDE NEW EVAC SPEAKERS WHERE INDICATED AND CONNECT TO EXISTING SPEAKER CIRCUITS AND EXTEND WIRING AS REQUIRED. VERIFY CIRCUIT LOADING WITH FIRE ALARM MANUFACTURER AND PROVIDE NEW CIRCUITS AND/OR ADDITIONAL AMPLIFICATION EQUIPMENT AS REQUIRED. RUN NEW CIRCUITS TO FIRE ALARM DCP, NEW SPEAKERS TO MATCH EXISTING.
- CIRCUITING SHOWN IS FOR GROUPING PURPOSES ONLY. THE CONTRACTOR SHALL VERIFY EXACT CIRCUIT NUMBERS TO BE USED ON SITE AND SHALL INDICATE EXACT NUMBERS USED ON THE AS-BUILT DRAWINGS.

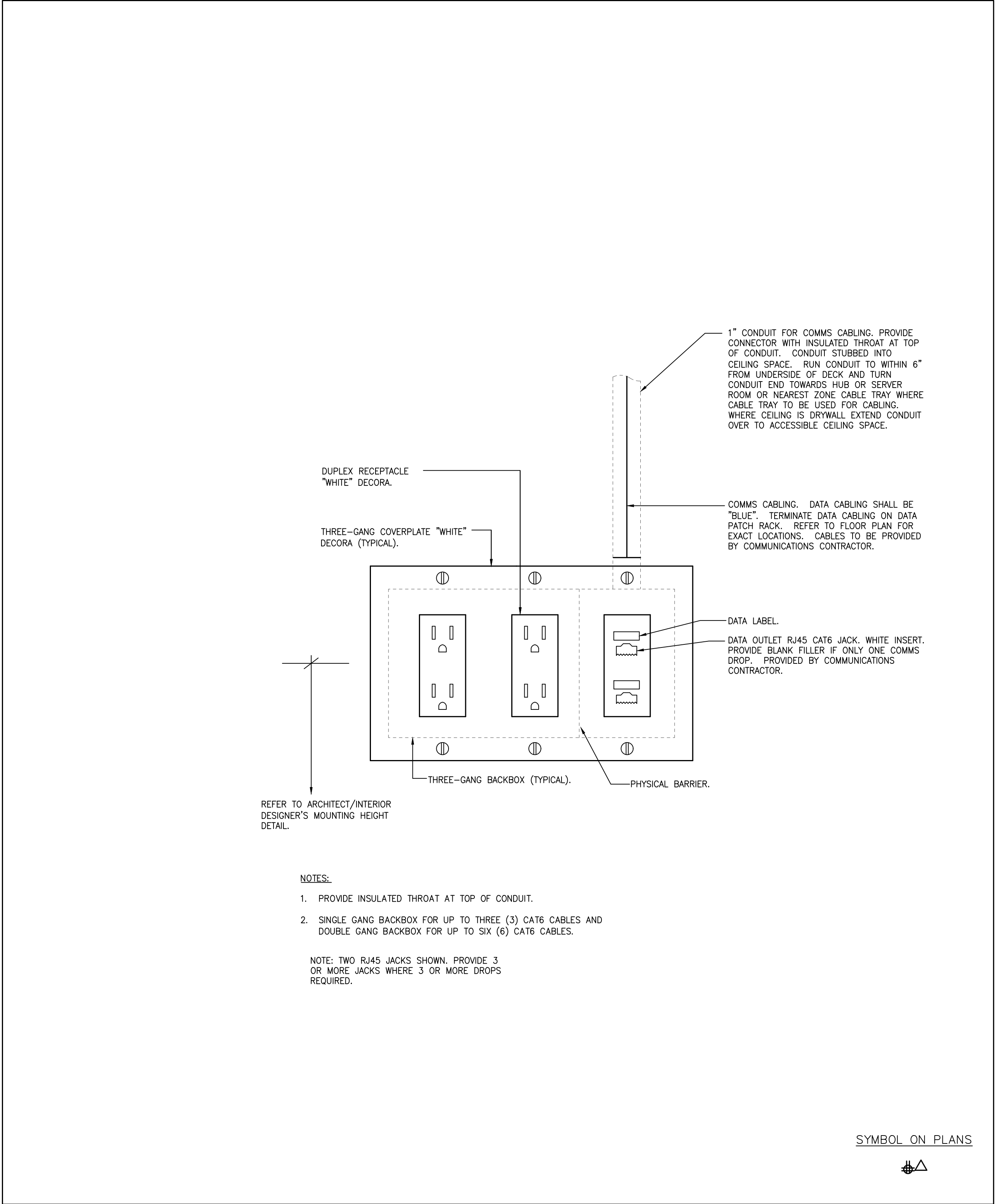
1/8"=1'-0"

SECOND FLOOR
POWER & SYSTEMS - NEW

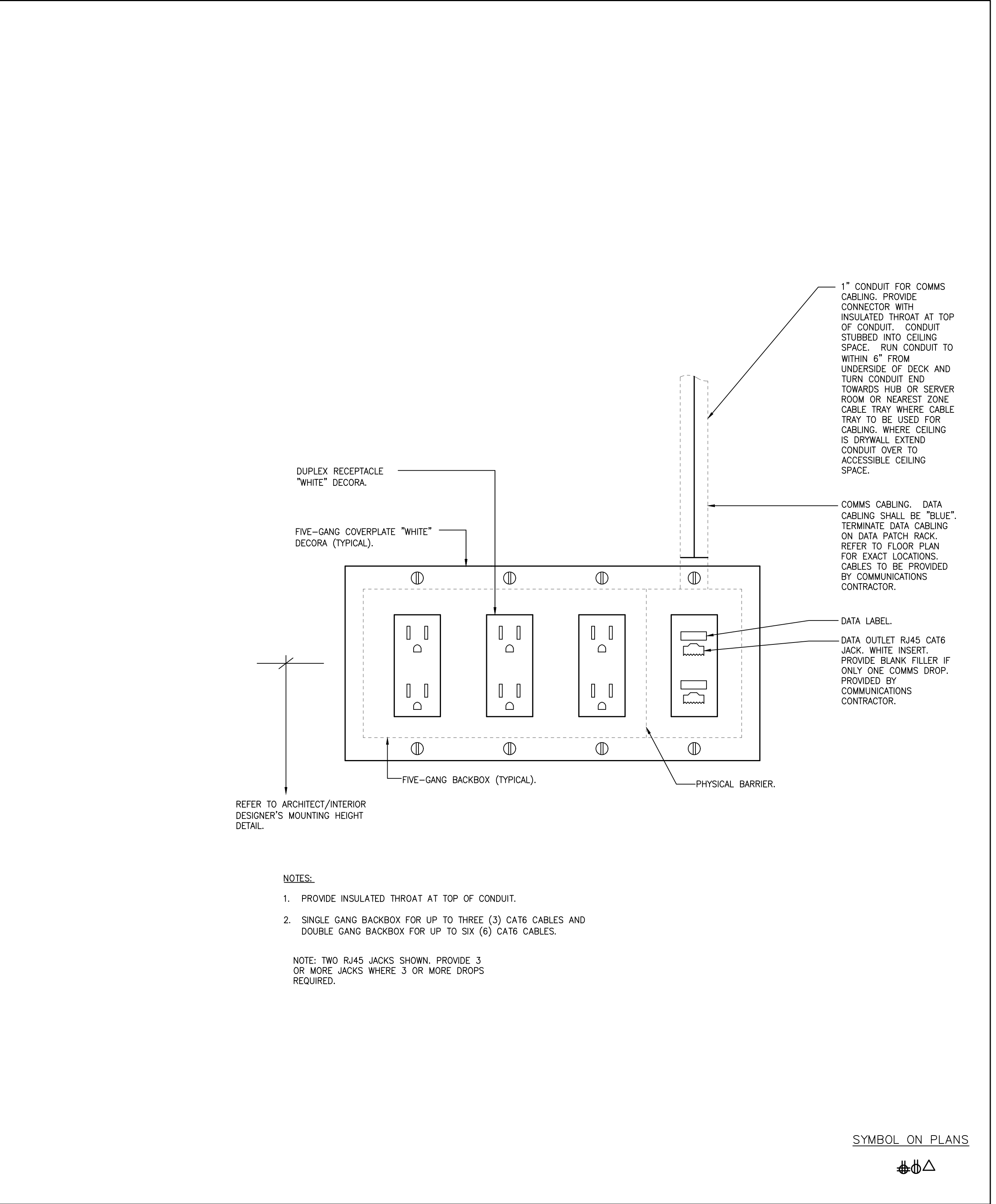
E-03-3



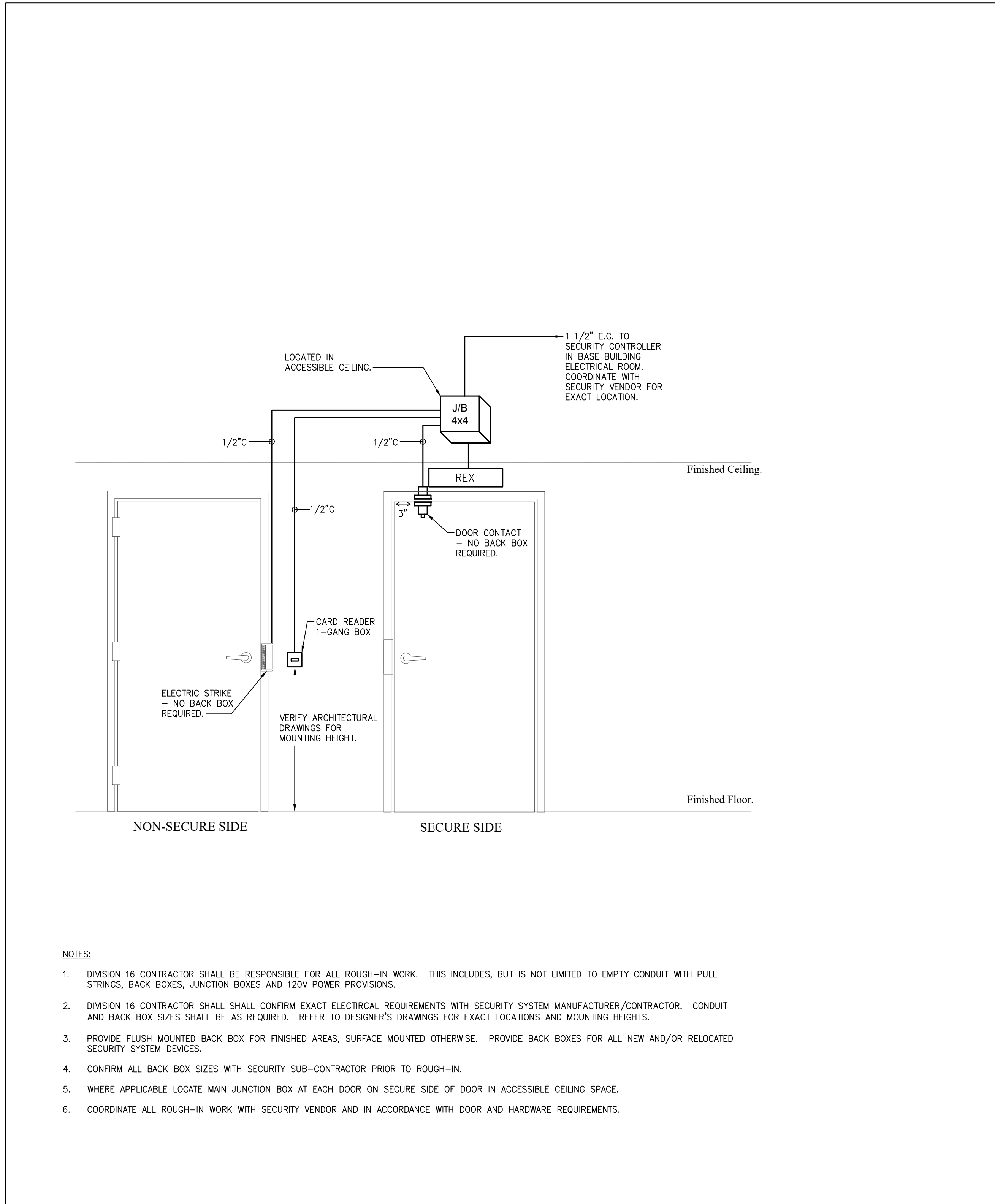
1 TYPICAL POWER/COMMUNICATIONS WALL GROUPING DETAIL
E-4.1 SCALE: NTS



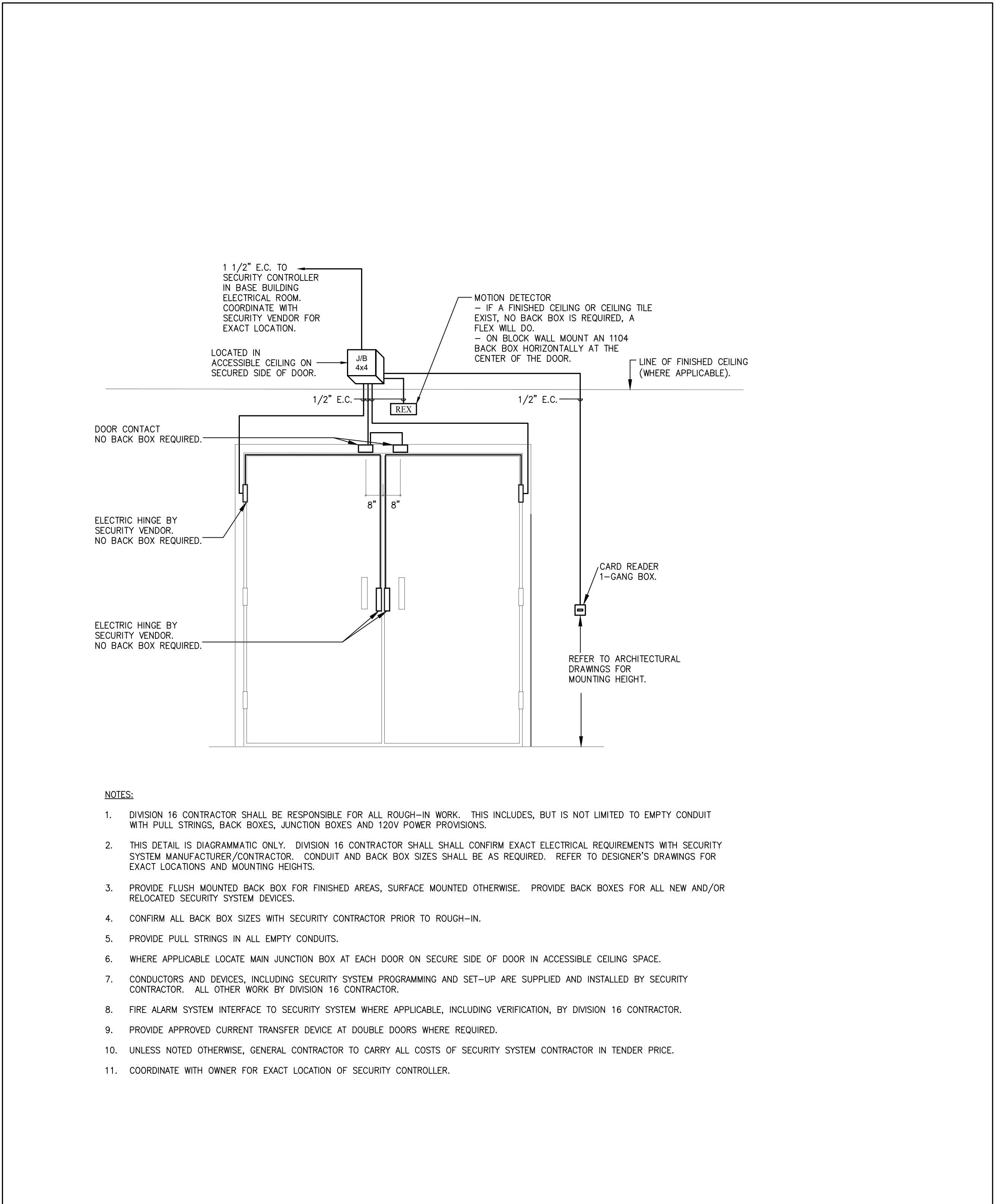
2 TYPICAL POWER/COMMUNICATIONS WALL GROUPING DETAIL
E-4.1 SCALE: NTS



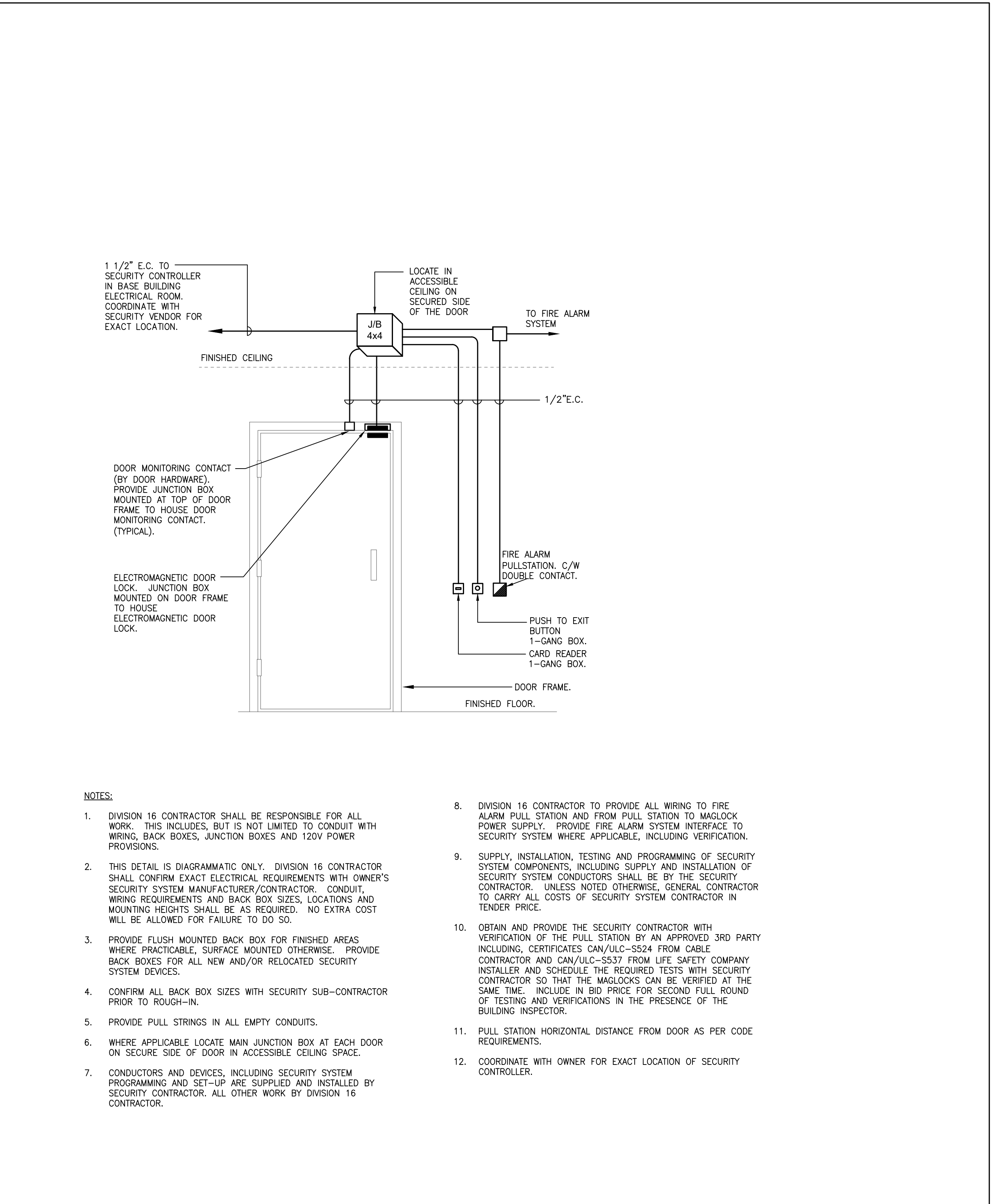
3 TYPICAL POWER/COMMUNICATIONS WALL GROUPING DETAIL (PRIVATE OFFICE)
E-4.1 SCALE: NTS



4 SECURITY DOOR DETAIL - SINGLE DOOR ELECTRIC STRIKE
E-4.1 SCALE: NTS



5 SECURITY DOOR DETAIL ELECTRIC STRIKE DOUBLE DOOR
E-4.1 SCALE: N.T.S.

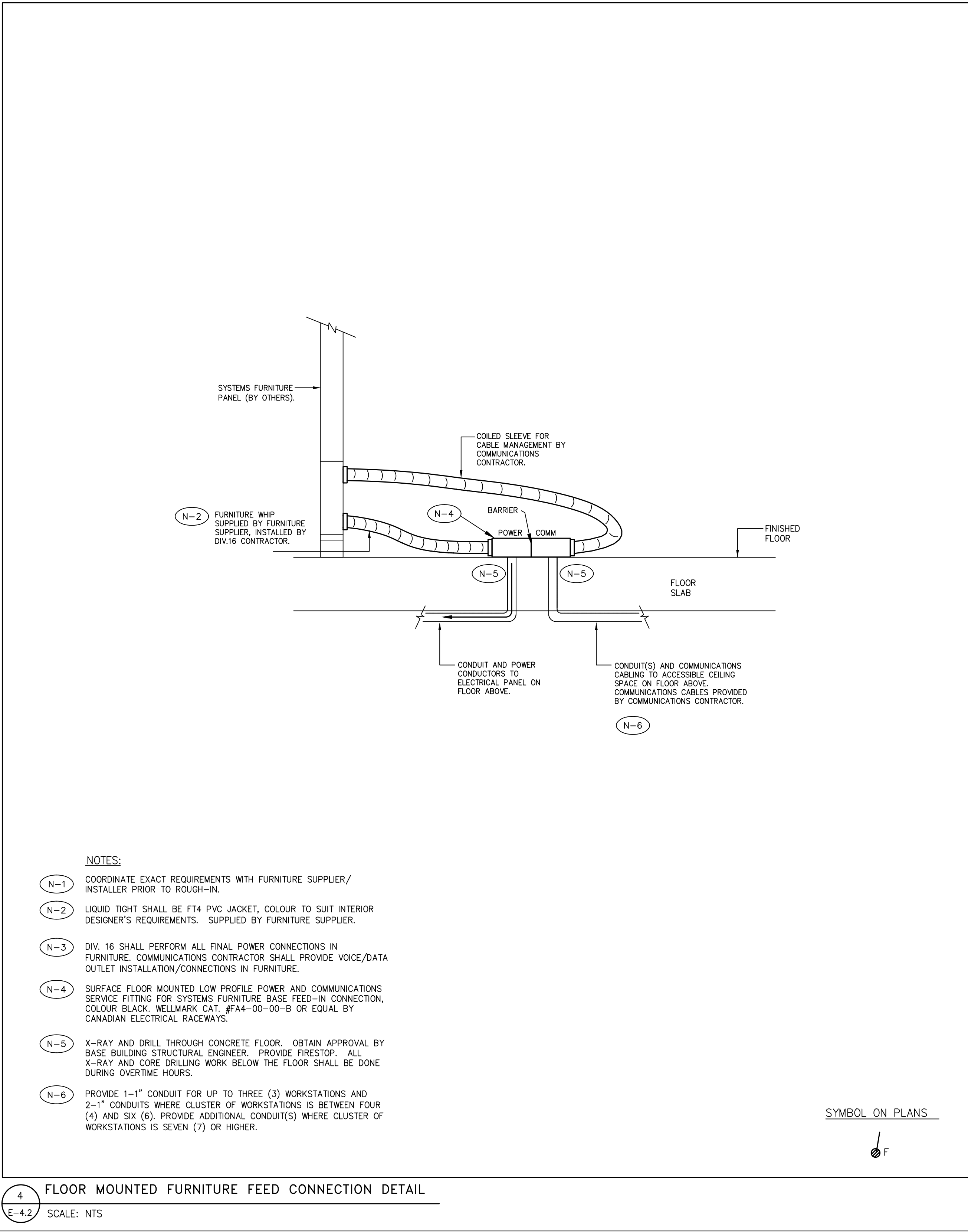
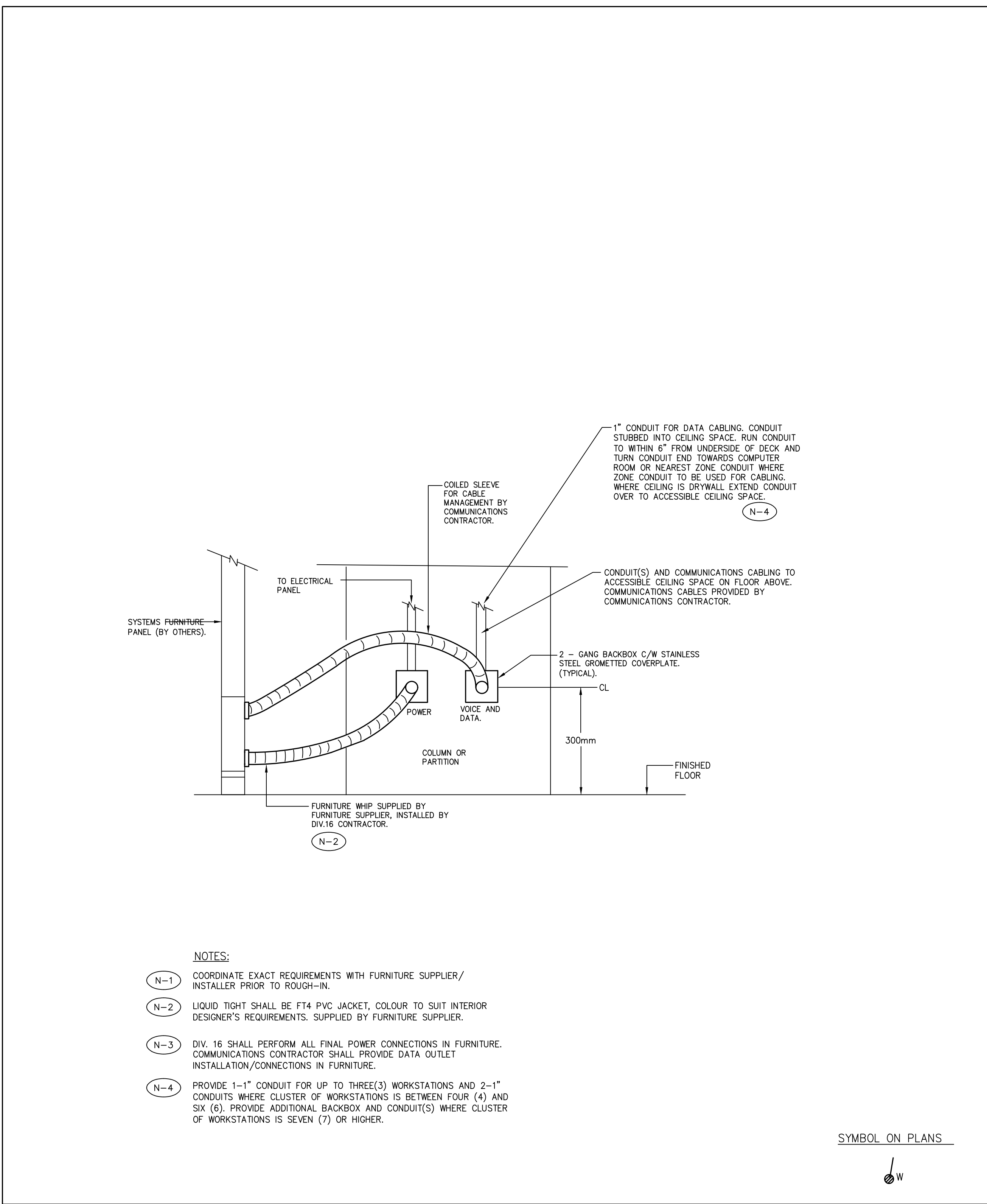
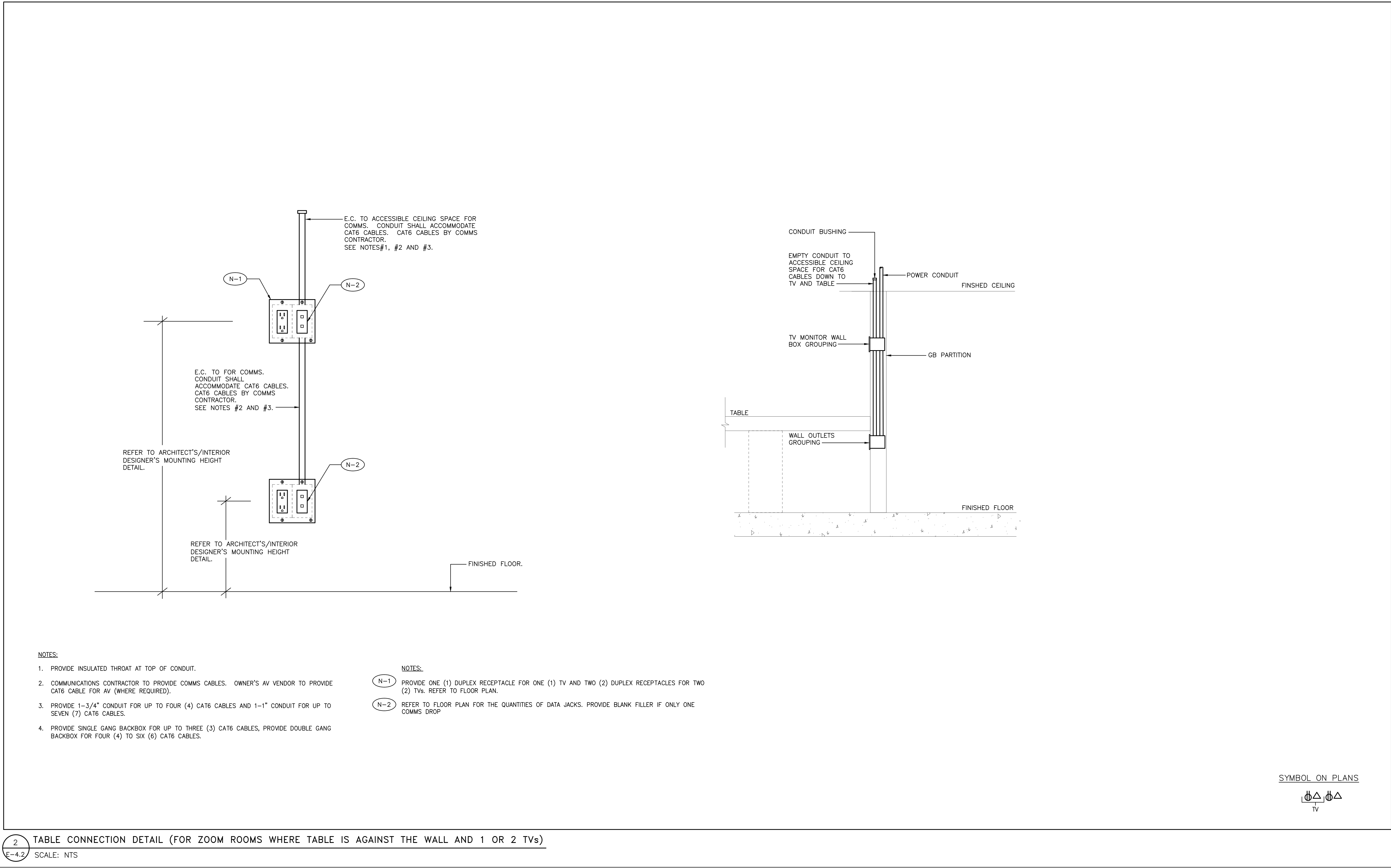
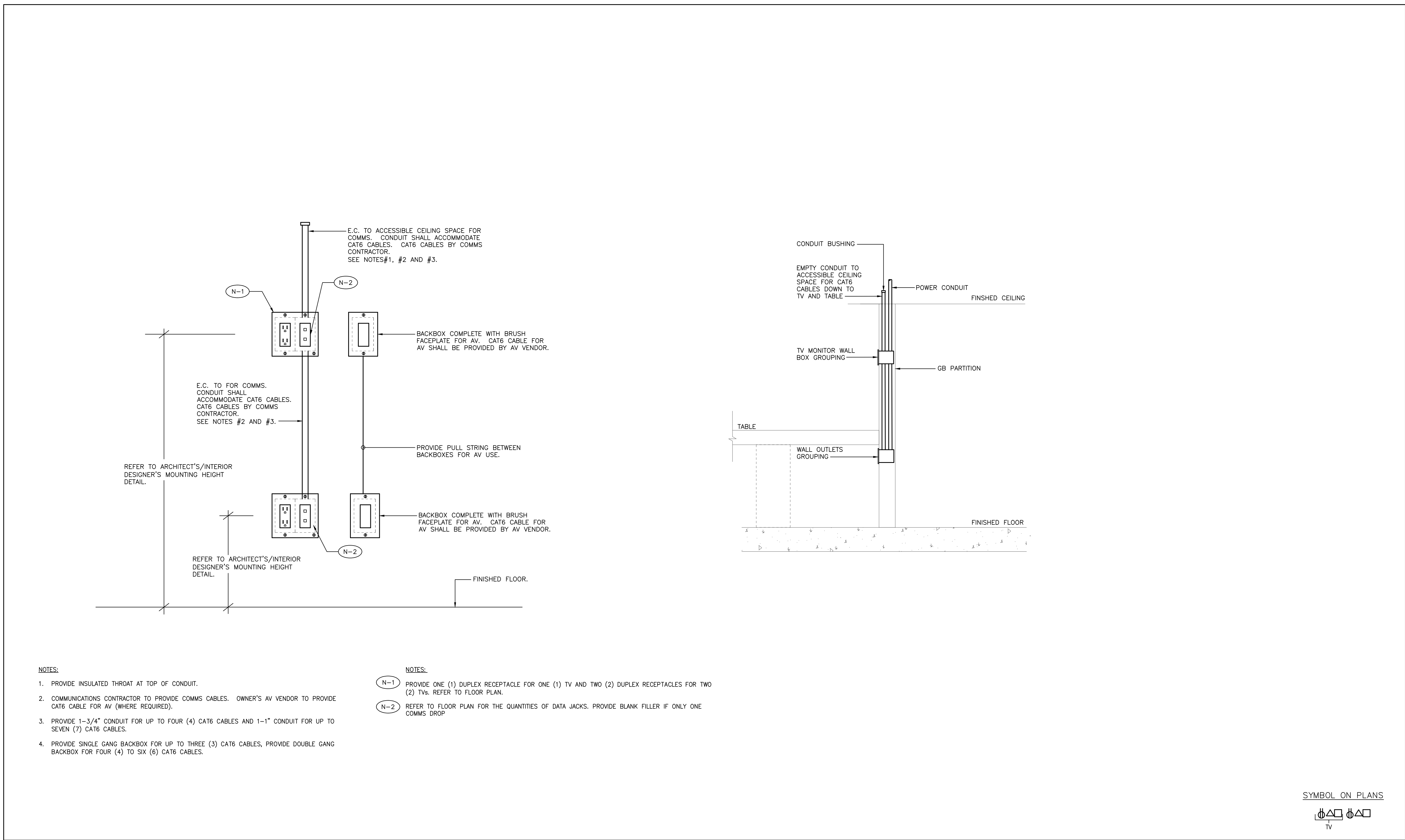


6 SECURITY DOOR DETAIL - SINGLE DOOR MAGLOCK
E-4.1 SCALE: N.T.S.

N.T.S.

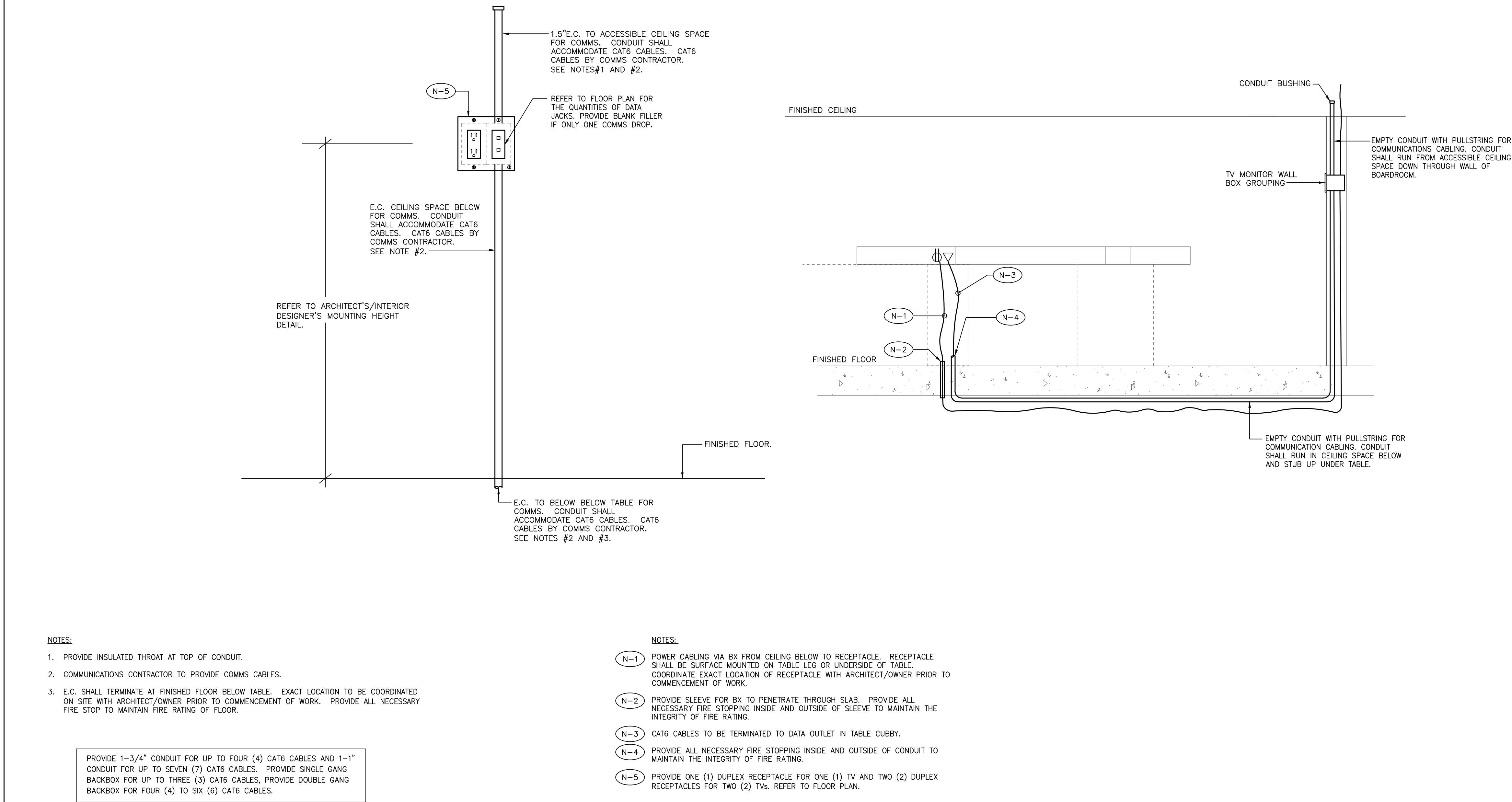
ELECTRICAL
DETAILS

E-04-1



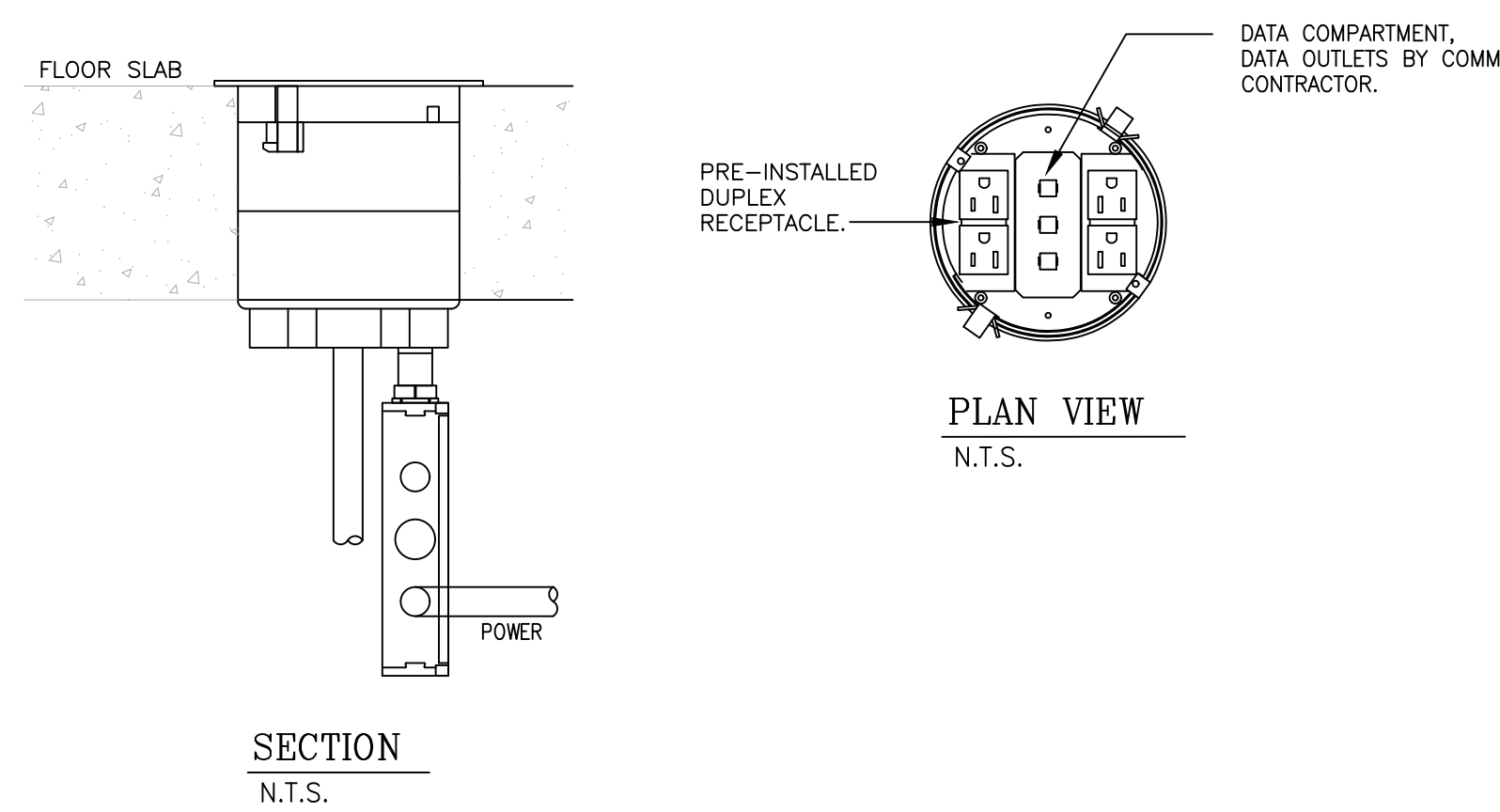
N.T.S.

ELECTRICAL
DETAILS



1 TABLE CONNECTION DETAIL (FOR ROOMS WHERE TABLE AT THE CENTRE OF THE ROOM AND 1 OR 2 TVs)

E-4.3 SCALE: NTS



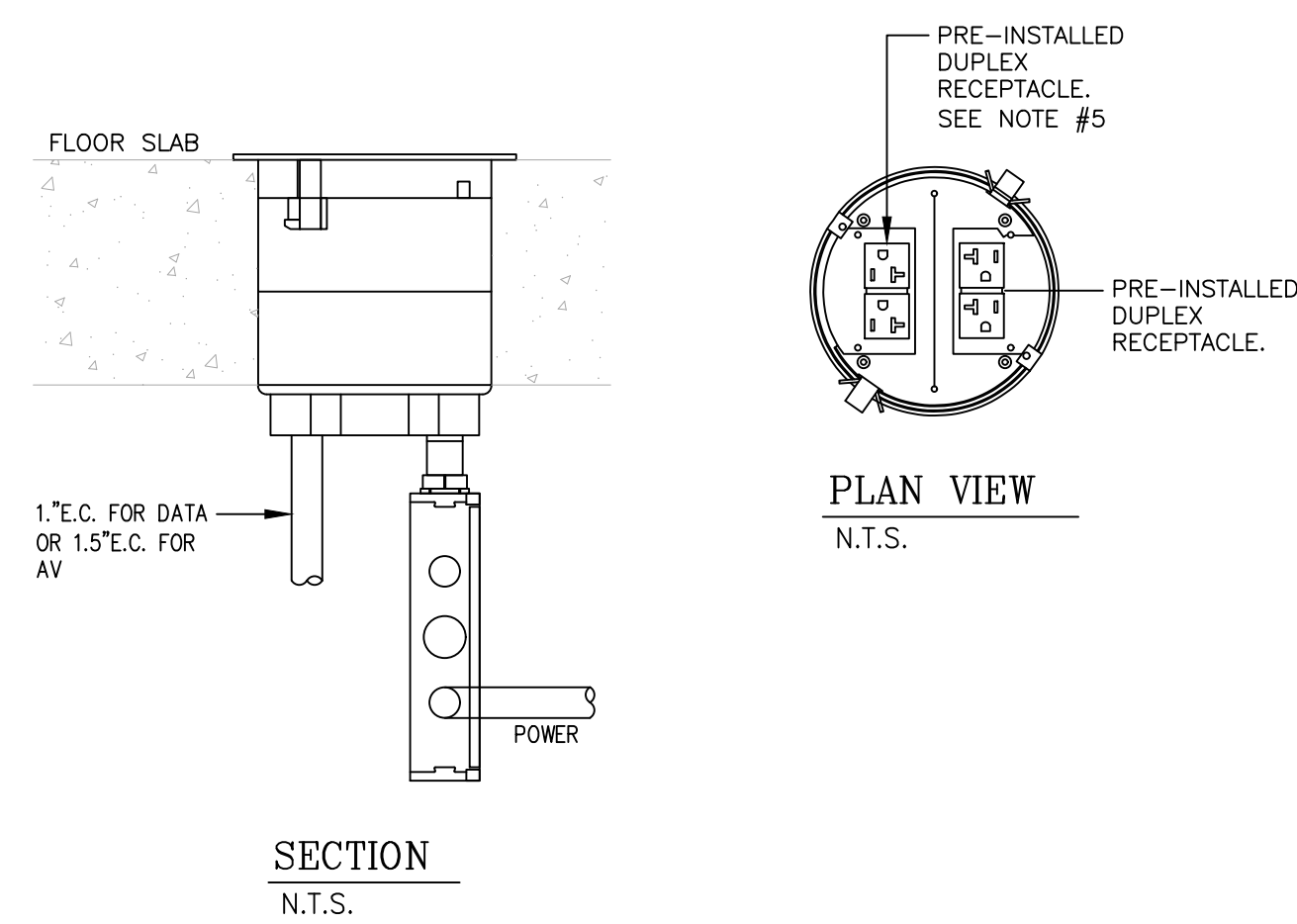
- NOTES:
1. PROVIDE X-RAY AND CUT FLOOR SLAB FOR NEW FLOOR BOX. SUBMIT TO STRUCTURAL ENGINEER FOR APPROVAL.
 2. COORDINATE EXACT FLOOR BOX LOCATION ON SITE AND CONFIRM NO INTERFERENCE ON THE CEILING BELOW THE FLOOR BOX LOCATION. INSTALL FLOOR BOX TO SUIT SITE CONDITION.
 3. PROVIDE ALL DEVICE MOUNTING PLATES IN FLOOR BOX.
 4. FLOOR BOX SHALL BE WIREMOLD 4" EVOLUTION SERIES OR WELLMARK APPROVED EQUIVALENT C/W 2 DUPLEX RECEPTACLES AND THREE (3) DATA OUTLETS AS SHOWN. DATA OUTLET SHALL BE PROVIDED BY COMM CONTRACTOR. FINISH SHALL BE BLACK.

SYMBOL ON PLANS

D04--
D04--
D04--

3 POWER/DADA/AV RECESSED FLOOR BOX DETAIL

E-4.3 SCALE: NTS



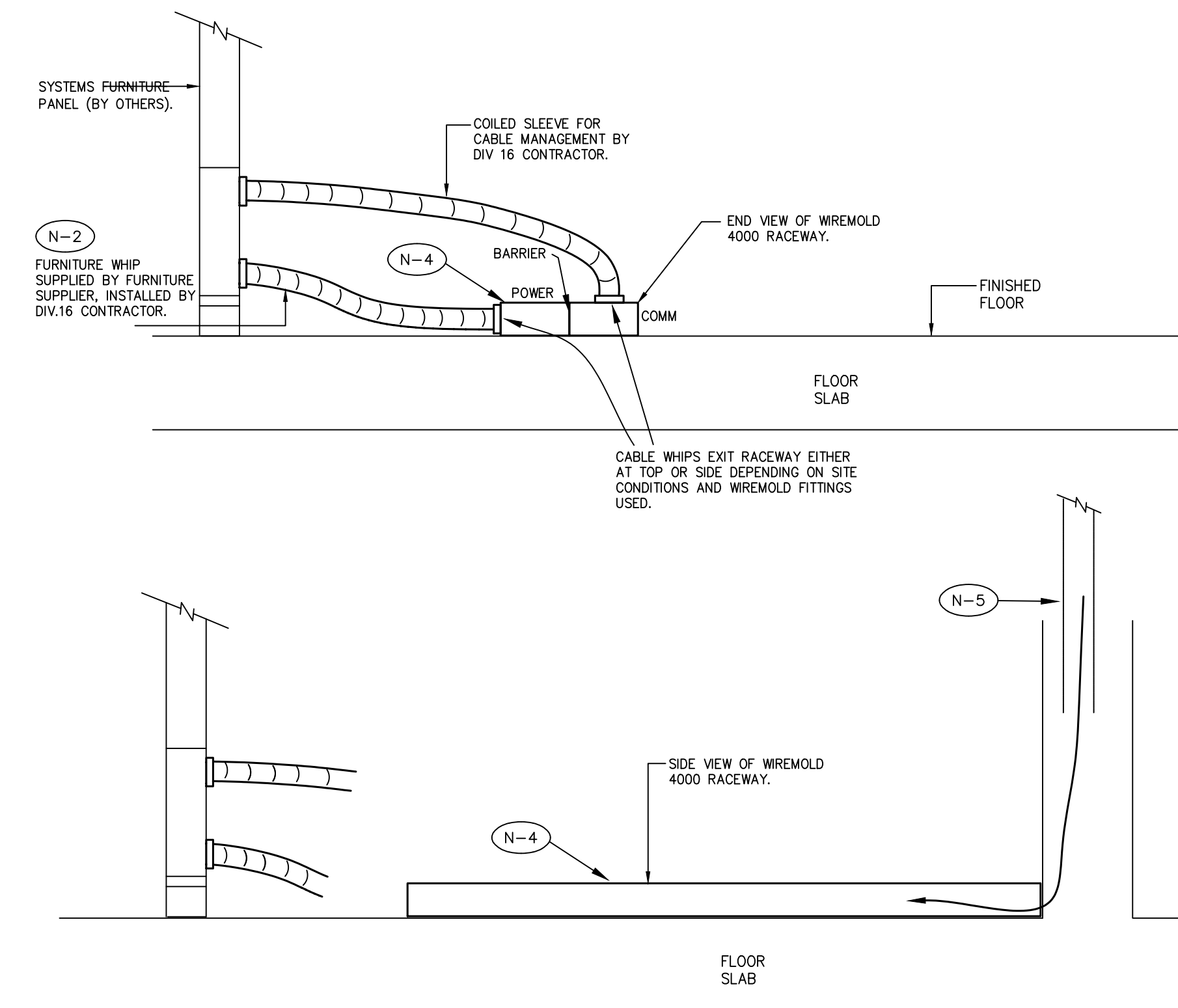
- NOTES:
1. PROVIDE X-RAY AND CUT FLOOR SLAB FOR NEW FLOOR BOX. SUBMIT TO STRUCTURAL ENGINEER FOR APPROVAL.
 2. COORDINATE EXACT FLOOR BOX LOCATION ON SITE AND CONFIRM NO INTERFERENCE ON THE CEILING BELOW THE FLOOR BOX LOCATION. INSTALL FLOOR BOX TO SUIT SITE CONDITION.
 3. PROVIDE ALL DEVICE MOUNTING PLATES IN FLOOR BOX.
 4. FLOOR BOX SHALL BE WIREMOLD 4" EVOLUTION 4ATCP4R SERIES OR WELLMARK APPROVED EQUIVALENT C/W 2 DUPLEX RECEPTACLES. FINISH SHALL BE BLACK.
 5. FOR TYPE 'PA', FLOOR BOX SHALL INCLUDE ONE (1) DUPLEX RECEPTACLE ONLY.

SYMBOL ON PLANS

D04--
D04--
PA

4 POWER RECESSED FLOOR BOX DETAIL

E-4.3 SCALE: NTS



NOTES:

- (N-1) COORDINATE EXACT REQUIREMENTS WITH FURNITURE SUPPLIER/INSTALLER PRIOR TO ROUGH-IN.
- (N-2) LIQUID TIGHT SHALL BE FTA PVC JACKET, COLOUR TO SUIT INTERIOR DESIGNER'S REQUIREMENTS. SUPPLIED BY FURNITURE SUPPLIER.
- (N-3) DIV. 16 SHALL PERFORM ALL FINAL POWER AND COMMUNICATIONS CONNECTIONS IN FURNITURE.
- (N-4) SURFACE FLOOR MOUNTED WIREMOLD 4000 SERIES WIREWAY C/W BARRIER FOR POWER AND COMMUNICATIONS CABLEING COMPARTMENTS. PROVIDE ALL NECESSARY WIREMOLD FITTINGS FOR FLEX CONDUIT EXIT FROM WIREWAY.
- (N-5) FEED POWER AND COMMUNICATIONS WIRING TO FLOOR TRAY FROM WALL WITH QUANTITY AND SIZE OF CONDUITS AS NOTED IN DETAIL 1/E402.

SYMBOL ON PLANS

D04--
D04--
D04--

2 FLOOR MOUNTED FURNITURE FEED CONNECTION FROM WIREMOLD DETAIL

E-4.3 SCALE: NTS

N.T.S.

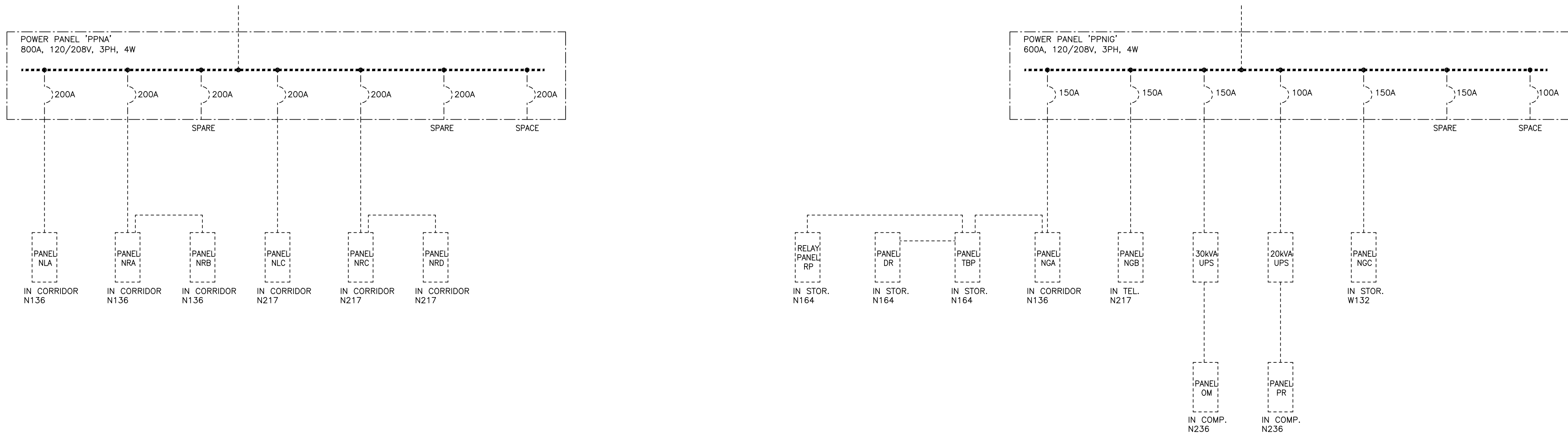
ELECTRICAL
DETAILS

LEGEND:

NEW EQUIPMENT OF FEEDER

EXISTING EQUIPMENT OR FEEDER TO REMAIN

EXISTING EQUIPMENT OR FEEDER TO BE REMOVED



1 POWER DISTRIBUTION RISER DIAGRAM
SCALE: N.T.S.

LEGEND

EXISTING PANEL PPNIG

EXISTING PANEL PPNA

EXISTING 70A AUTOMATIC TRANSFER SWITCH

EXISTING 600V SERVICE ENTRANCE SWITCHBOARD

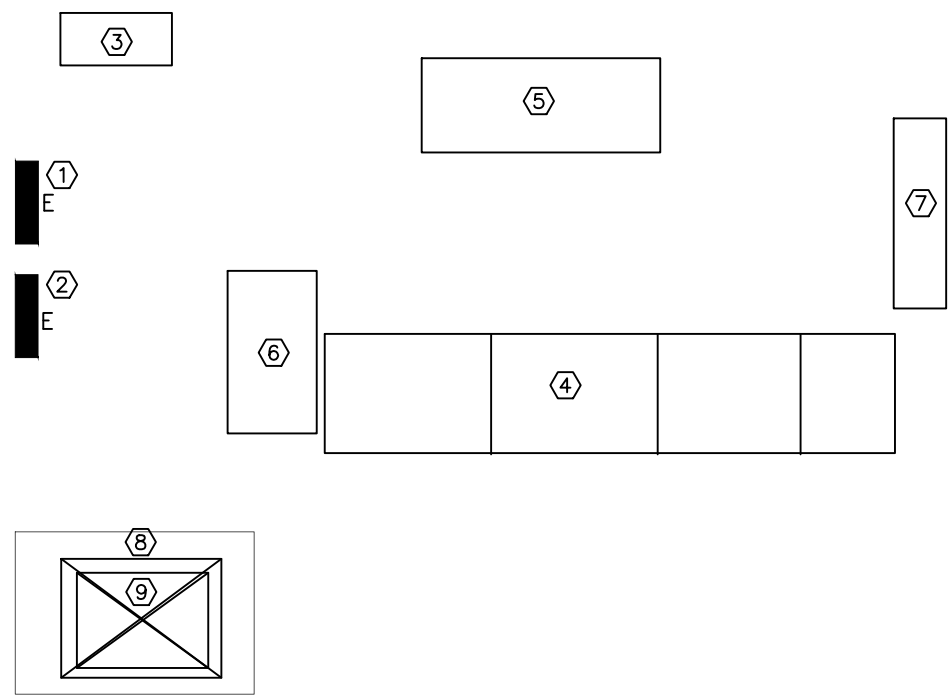
EXISTING 30kVA UPS

EXISTING 20kVA UPS

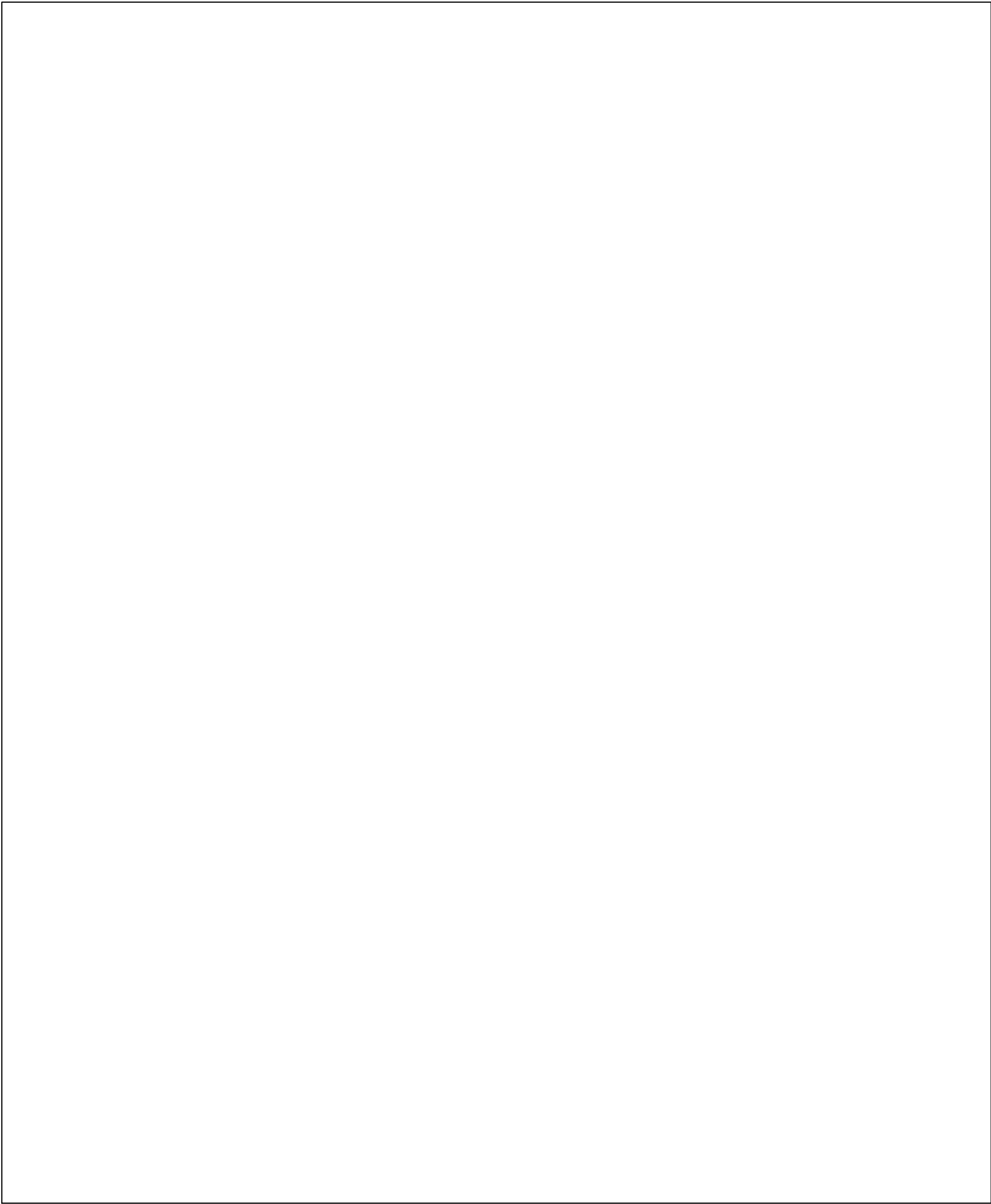
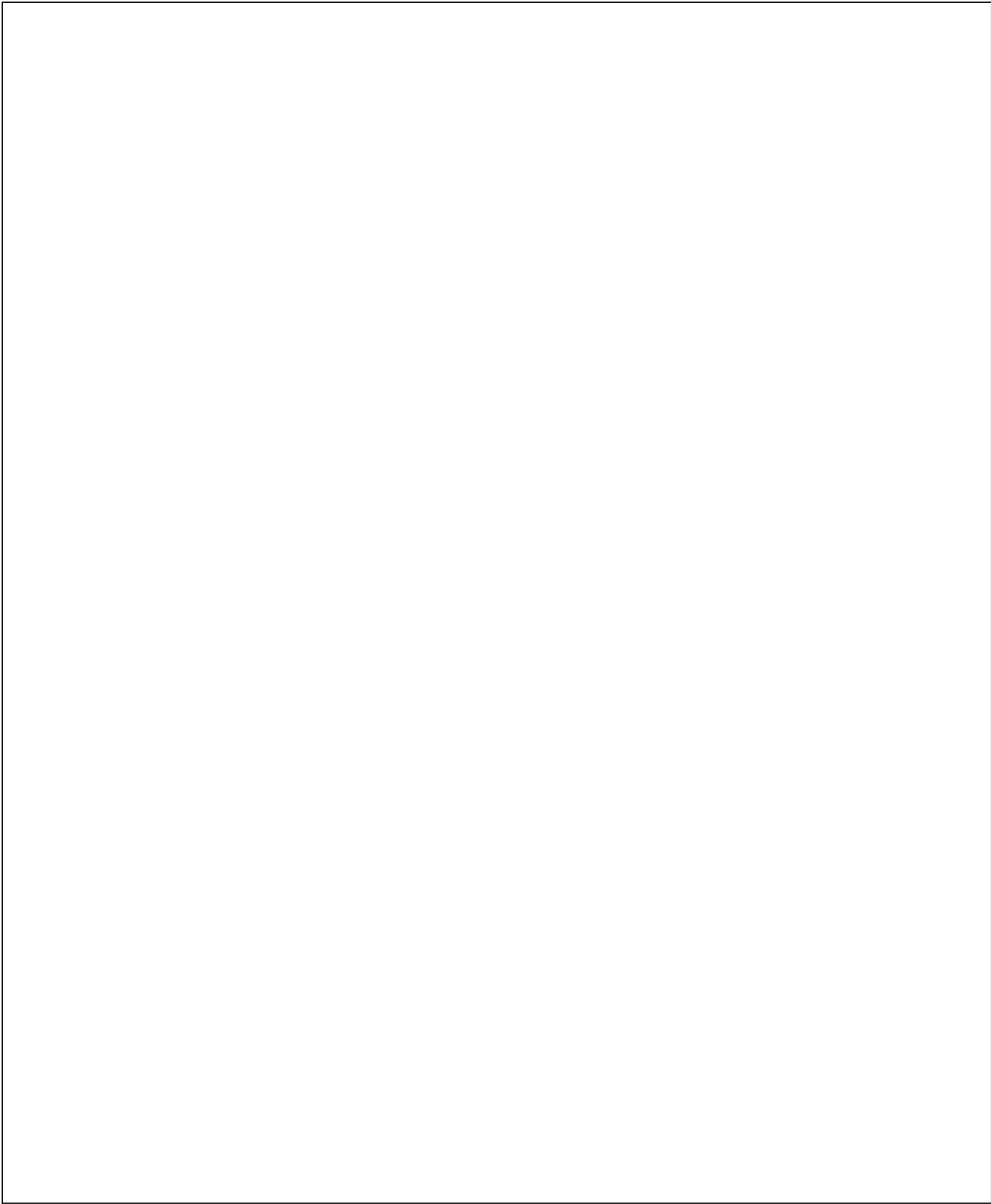
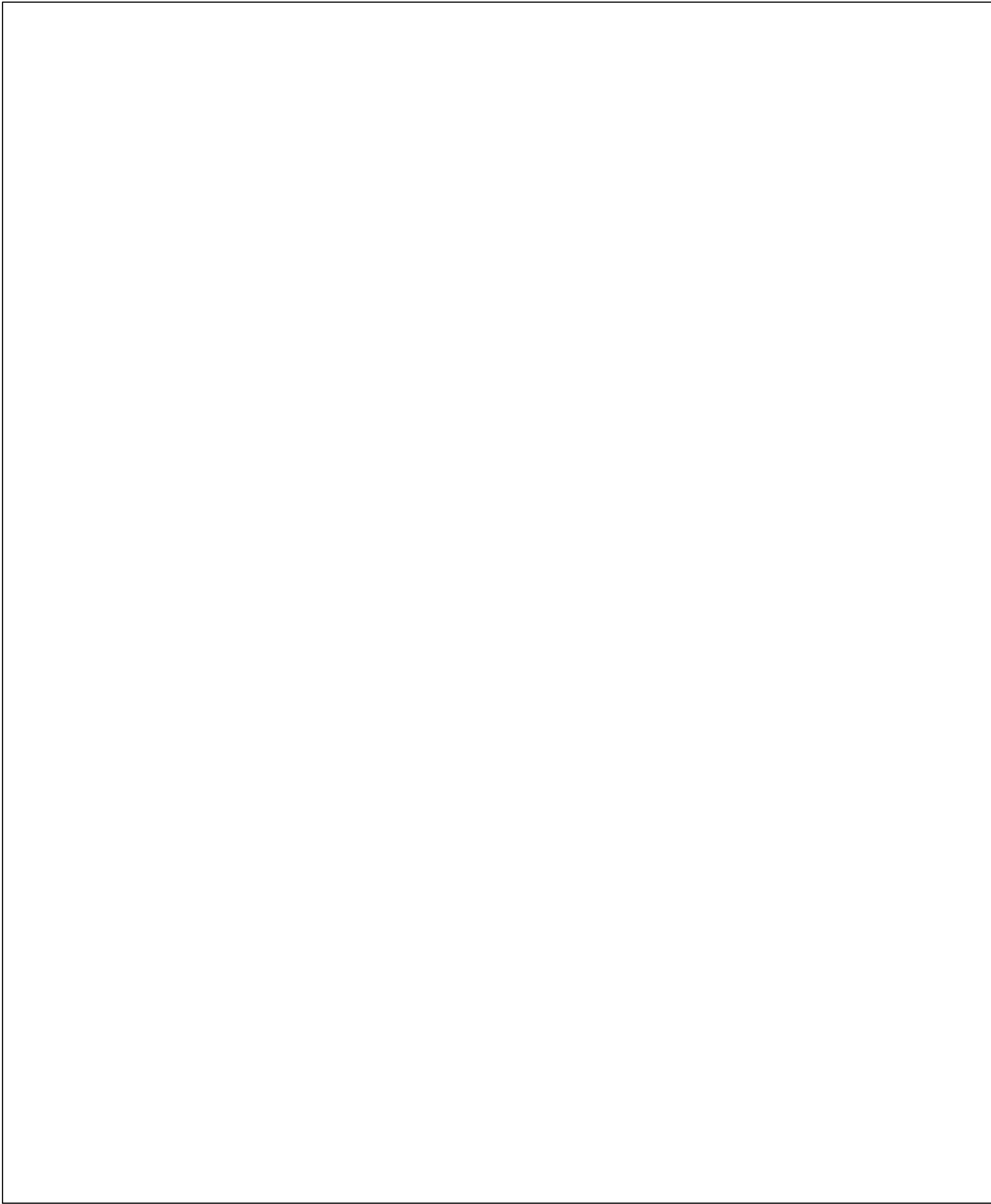
EXISTING METERING CABINET

EXISTING 225kVA TRANSFORMER, 600V-120/208V, 3PH MOUNT ON FLOOR

EXISTING 150kVA TRANSFORMER, 600V-120/208V, 3PH MOUNT AT HIGH LEVEL



2 FLOOR MOUNTED FURNITURE FEED CONNECTION DETAIL
SCALE: 1/4"=1'-0"



N.T.S.
POWER DISTRIBUTION
DIAGRAM AND PANEL
SCHEDULES

E-05-2

3. Refer to Drawing E-2.00 thru to E2.09

- a) Remove all wall mounted vanity lighting fixtures on 9th floor.
- b) All existing lighting circuits are 120V
- c) In room 1032, provide one additional fixture, type 'A1' and wall switch, room is divided in two sections. Wire to local existing lighting circuit.

4. Refer to Drawing E-3.00 thru to E3.09

- a) G3000 wiremold is a typo, all surface raceway is 2 – compartment Legrand G5000 series.
- b) Note changes to mag door locks and card reader installations.
- c) Note changes to existing door key switch access control.
- d) Note testing of existing magnetic door locks that are to remain.
- e) Provide 2-20A 120V power supply and receptacles for A/C units in EPIGENETICS room on the 8th floor. Exact location to be coordinated on site. Wire from panel 8EL.
- f) Provide power to various VRF fan units in rooms, 947, 958, 1022,1026,1031,1053,1141.
Provide 15A 2P breakers in local panels.
- g) Provide power to VRF condenser on roof. Provide 60A 3P (208V) breaker in local panel in room 1031. Refer to Mechanical plans for rooftop unit location. No drawings provided in electrical set.
- h) Wire new fan EF-1 to local lighting power on 11th floor room 1145.

End of Addendum #E-1