LEARNING FOR LIFE. CREATING THE FUTURE

PICKERING COLLEGE

# REQUEST FOR PROPOSAL

*Innovation Hub Construction Phase*

16945 Bayview Avenue, Newmarket, Ontario L3Y 3W7

## 1. Invitation and project overview

Pickering College invites qualified general contractors to submit a lump sum proposal for the Innovation Hub Renovation Phase at its Newmarket campus in accordance with the attached documents.

The project renovates part of the lower level to create an Innovation Hub and associated teaching/support spaces. The successful contractor will be responsible for providing all labour, materials, equipment, supervision, permits, coordination, testing, commissioning, and closeout documentation necessary to complete the project, subject to written addenda and clarifications.

Pickering College shall not be obligated in any manner to any respondent unless and until a written agreement has been duly executed between Pickering College and the respondent. Pickering College reserves the right to pursue negotiations with some or none of the respondents and may, but is not required to, issue further requests later to one, some or none of the respondents. Pickering College may choose not to pursue any further discussions with any of the respondents. No rights shall arise from the submission of a Proposal, or any negotiations and Pickering College shall bear no liability for any costs or expenses incurred by anyone providing a Proposal.

Pickering College reserves the right to select at their discretion any or none of the submitted Proposals for further discussion, regardless of the financial performance, and/or to cancel this process at any time at its discretion.

## 2. Project team

Owner: Pickering College.

Architectural Consultant: Architecture Counsel Inc., 4 Clinton Place, Toronto, ON M6G 1J9.

Mechanical and Electrical Consultant: Sharma & Partners, 85 Curlew Drive, North York, ON M3A 2P8.

Owner representative / RFP contact:

- Zaid Haymoor – 416-822-3780 – zhaymoor@pickeringcollege.on.ca
- Steve Barratt – 289-716-1876 – sbarratt@pickeringcollege.on.ca

## 3. Tender documents and document precedence

The tender documents comprise:

- Architectural drawings – issued by Architecture Counsel Inc.
- Mechanical drawings – issued by Sharma and Partners
- Electrical drawings - issued by Sharma and Partners
- Project specifications, schedules, and supplementary documents where applicable
- All written addenda issued during tender period

Bidders shall review and coordinate all disciplines, report missing or conflicting information during the question period, and include the work shown in the complete issued tender package. The drawing issue dates and sheet lists for the mechanical and electrical packages shall be confirmed before release.

## 4. Scope of work

The successful contractor shall provide all labour, materials, equipment, supervision, subcontractors, temporary facilities, hoarding and dust protection, additional demolition as needed and services necessary to complete the project in accordance with the issued architectural, mechanical, and electrical drawings, specifications, and applicable addenda.

The scope of work includes, but is not limited to:

- Selective demolition and preparation of existing areas.
- Architectural construction, partitions, doors, glazing, and interior finishes.
- Mechanical, electrical, plumbing, and associated building services including all associated building services, modifications, connections, and commissioning as required.
- Fire protection and life safety systems, including sprinkler system installation, fire alarm systems, smoke and fire detectors, and all associated devices and components, as required by the drawings and specifications.
- Structural modifications and exterior/roof work where indicated.
- Coordination of all trades, including protection of existing facilities and maintaining safe access to occupied school areas.
- All required permits, inspections, testing, and commissioning, as applicable.
- Final cleaning, deficiency correction, warranties, and project closeout documentation.
- Any service shutdowns would need to be coordinated with Pickering College 48hrs ahead of time.
- The Contractor shall obtain and provide acceptable Vulnerable Sector Screening (VSS) clearances for all workers and site personnel assigned to the project. All screenings must be completed and accepted prior to workers commencing work on site.
- Operational School and Site Safety: The school will remain operational throughout the duration of the project. The Contractor shall take all necessary precautions to ensure the safety and security of students, school staff, parents, and visitors always. All work activities shall be coordinated to minimize disruption to school operations. Appropriate barricades, signage, access controls, and separation of construction areas from occupied school areas shall be maintained.
- IT and Security Cabling: IT cabling and security system cabling are expressly excluded from the Contractor's scope of work and will be completed separately by Pickering College. The General Contractor shall provide and install conduits only, as indicated and specified in the contract drawings.
- Furniture and Equipment: All furniture and equipment required for the project shall be supplied by Pickering College and are excluded from the General Contractor's supply scope, except where otherwise specifically indicated in the contract drawings and specifications. The General Contractor shall include the supply, fabrication, and installation of all millwork as indicated in the contract drawings and specifications.
- Note: Abatement of designated substances has already been completed in the area.

The contractor shall review all tender documents, verify existing site conditions, and identify any discrepancies or required clarifications prior to submitting their bid.

All work shown or specified in the tender documents shall be included in the tender price unless expressly identified as an exclusion or alternate in the accepted bid documents.

## 5. Schedule and milestones

Issue date: Tuesday - November 11, 2026

Mandatory site visit: Tuesday - November 17, 2026 – 10:00AM

Tender closing date/time: Tuesday - November 24, 2026 – 2:00PM

Anticipated award: Tuesday - December 1, 2026

Site mobilization: Monday - December 7, 2026

Completion: Friday - April 30, 2027

Bidders shall provide a realistic baseline schedule showing procurement lead times, demolition, rough-ins, inspections, finishes, commissioning and owner turnover. Identify critical-path items and any assumptions concerning access or approvals.

## 6. Site visit and bidder questions

Written questions due before: Thursday, November 19, 2026 – 12:00 PM

Submit questions to Zaid Haymoor. Oral interpretations are not binding; clarifications will be issued in writing to all invited proponents.

## 7. Proposal submission requirements

Submit one electronic PDF proposal to:

- zhaymoor@pickeringcollege.on.ca

- sbarratt@pickeringcollege.on.ca

Include:

- Signed cover letter and firm contact;
- Lump-sum price and itemized breakdown **using the bid sheet provided**;
- Exclusions, assumptions, qualifications and proposed alternates;
- Key personnel – specifically project manager and site supervisor;
- Similar occupied-school/institutional project experience;
- Subcontractor list;
- WSIB clearance, insurance evidence and safety program;
- Proposed warranty and closeout approach;
- Acknowledgement of addenda;
- Proposal validity period

## 9. Pricing schedule

Complete all amounts in Canadian dollars. Show HST separately.

**Pricing Form**
**Construction**

| | | | |
|---|---|---|---|
| **Proponent to input requested information only in permitted cells (in blue)** | | | |
| **Proponent Name:** | | **Legend** | |
| **RFP Number** | [Insert RFP Number] | SQ.M - Square Meter | EA - Each |
| **RFP Project Title** | Pickering College Innovation Hub | SQ.FT - Square Feet | CA - Cash Allowance |
| **Address:** | 16945 Bayview Ave, Newmarket ON | LM - Linear Meter | |

| | | | | | |
|---|---|---|---|---|---|
| | | | | LF - Linear Foot | |
| | | | | LS - Lump Sum | |

**Scope of Work Total Price Table**

| ITEM NUMBER | ITEM DESCRIPTION | UNIT OF MEASURE | QTY | UNIT PRICE | ITEM PRICE |
|---|---|---|---|---|---|
| Division 01 | General Requirements | | | | |
| 0.1 | Site Requirements, including insurance | LS | 1 | | |
| 0.2 | Mobilization and Demobilization, including Project Management | LS | 1 | | |
| Division 02 | Existing Conditions | | | | |
| 0.1 | Doors, ceiling, Concrete slab and masonry wall remediation | LS | 1 | | |
| 0.2 | Fire system cable routing investigation | LS | 1 | | |
| Division 03 | Concrete | | | | |
| 0.1 | Floor leveling | LS | 1 | | |
| Division 05 | Metals | | | | |
| 0.1 | Exterior Cladding - EW1 as per the drawings and specifications | | | | |
| Division 06 | Wood, Plastics and Composites | | | | |
| 0.1 | Millwork denoted in the drawings | LS | 1 | | |
| 0.2 | Corian trough sink | LS | 1 | | |
| Division 07 | Thermal and Moisture Protection | | | | |
| 0.1 | Sheet waterproofing (at new WC) | LS | 1 | | |
| 0.2 | Joint sealants and caulking | LS | 1 | | |
| Division 08 | Openings | | | | |
| 0.1 | Doors and Frames - Interior Hollow metal non-rated | LS | 1 | | |
| 0.2 | Doors and Frames - Interior Solid Core Wood non-rated | LS | 1 | | |
| 0.4 | Doors Operators and electrical strike | LS | 1 | | |
| 0.5 | Door Hardware | LS | 1 | | |
| 0.6 | Access panels | LS | 1 | | |
| 0.7 | Interior Screens | LS | 1 | | |
| 0.9 | FLM-1 safety strip film | LS | 1 | | |
| Division 09 | Finishes | | | | |
| 0.1 | Drywall partitions - P1 as per the drawings | LS | 1 | | |

| | | | | | |
|---|---|---|---|---|---|
| 0.2 | Drywall partitions - P2a as per the drawings | LS | 1 | | |
| 0.3 | Drywall partitions - P3 as per the drawings | LS | 1 | | |
| 0.4 | Drywall partitions - P3a as per the drawings | LS | 1 | | |
| 0.5 | Drywall Partitions - F1 as per the drawings | LS | 1 | | |
| 0.6 | Drywall Partitions - F2a as per the drawings | LS | 1 | | |
| 0.7 | C1 Drywall ceiling and support system | LS | 1 | | |
| 0.8 | C2 ACT-1 ceiling and support system | LS | 1 | | |
| 0.9 | C3 Tectum Blades ACB-1 and support system | LS | 1 | | |
| 0.10 | C4 Tectum Ceiling Panel ACP-1 and support system | LS | 1 | | |
| 0.12 | Tile PCT-1 - wall and base | LS | 1 | | |
| 0.13 | Drywall trims | LS | 1 | | |
| 0.14 | Schluter products as noted on trims and floor transitions | LS | 1 | | |
| 0.15 | Paint - all interior surfaces including walls, ceilings, exposed M&E services, and new frames | LS | 1 | | |
| 0.16 | Paint - existing and new doors and frames | LS | 1 | | |
| 0.17 | FLM-2 Whiteboard film | LS | 1 | | |
| 0.18 | CONC-1 w/ epoxy finish | | | | |
| Division 10 | Specialties | | | | |
| 0.1 | WB-1 whiteboards | LS | 1 | | |
| Division 12 | Furnishings | | | | |
| 0.1 | Roller Blinds | LS | 1 | | |
| Division 20 | Basic Mechanical | | | | |
| 0.1 | As denoted on drawings and specifications | LS | 1 | | |
| Division 21 | Fire Suppression | | | | |
| 0.1 | Sprinkler system | LS | 1 | | |
| Division 22 | Plumbing | | | | |
| 0.1 | As denoted on the drawings and specifications | LS | 1 | | |
| Division 23 | HVAC | | | | |
| 0.1 | As denoted on the drawings and specs | LS | 1 | | |
| Division 26 | Electrical | | | | |
| 0.1 | General | LS | 1 | | |
| 0.2 | Interior lighting and lighting control | LS | 1 | | |
| 0.3 | Power and Distribution | LS | 1 | | |
| 0.4 | Security | LS | 1 | | |

| | | | | | |
|---|---|---|---|---|---|
| 0.5 | Stair lift and accessories | LS | 1 | | |
| Division 28 | Fire Alarm | | | | |
| 0.1 | As denoted on the drawings and specs to be executed by Pickering College Base Building Vendor | LS | 1 | | |
| CA | Cash Allowances | | | | |
| 0.1 | Cash Allowance - Testing and Inspection | CA | 1 | $ 5,000.00 | $ 5,000.00 |
| 0.2 | Cash Allowance - Firestopping (out of scope) | CA | 1 | $ 5,000.00 | $ 5,000.00 |
| 0.3 | Cash Allowance - Fire Alarm and Life Safety (for any scope deviations due to site conditions) | CA | 1 | $ 10,000.00 | $ 10,000.00 |
| 0.4 | Door Hardware | CA | 1 | $ 40,000.00 | $ 40,000.00 |
| 0.5 | Floor slab repair | CA | 1 | $ 10,000.00 | $ 10,000.00 |
| | | | | **TOTAL PRICE INCLUDING CASH ALLOWANCES (excluding H.S.T)** | **$** |

| Alternate Price Table | | | | | |
|---|---|---|---|---|---|
| **ITEM NUMBER** | **ITEM DESCRIPTION** | **UNIT OF MEASURE** | **QUANTITY** | **ADD** | **DEDUCT** |
| **A** | **Alternate Pricing** | | | | |
| A.1 | Provide the following in place of CONC-1 epoxy floor: Polished sealed concrete | LS | 1 | | |
| A.2 | Provide flip-top mitre saw bed for MW03e | LS | 1 | | |
| | | | | | |
| | | | | | |

Provide unit rates for concealed-condition work and a separate schedule of proposed alternates, credits and long-lead items. Do not treat cash allowances as confirmed unless formally issued by the owner/consultant.

## 10. Contract, payment and insurance

Form of agreement: CCDC 2 with supplementary conditions.

Progress payments, holdback, change authorization, insurance limits, indemnities and warranty requirements will be governed by the executed contract and applicable law. Do not assume that the owner will pay for uninstalled materials without written contract provisions and appropriate supporting documentation.

## 11. Evaluation and award

The owner intends to evaluate completeness and responsiveness, relevant experience, personnel and subcontractor capacity, schedule credibility, understanding of occupied-campus constraints, pricing transparency and overall value. The owner may seek clarifications, negotiate, reject proposals or cancel the procurement subject to the final issued RFP terms.

## 12. Proposal acknowledgement

We acknowledge receipt of the RFP and addenda – Titled “Innovation Hub – Construction Phase”, have examined the site and documents, and offer to complete the stated work for the price and within the schedule submitted, subject only to the listed qualifications.

Company: _____ Authorized signatory: _____

Date: _____ Contact: _____

# PICKERING COLLEGE

Innovation Hub Construction Phase

16945 Bayview Ave, Newmarket, ON
L3Y 3W7




Architecture Counsel

**Architectural Consultant**
Architecture Counsel Inc.

4 Clinton Place
Toronto, ON M6G 1J9
T 416-603-1515

**Mechanical & Electrical Consultant**
Sharma & Partners

85 Curlew Drive
North York ON M3A 2P8
(416) 291-8822

**ISSUED FOR TENDER**

**NOVEMBER 6, 2026**

**Name of Practice:**
Architecture Counsel
4 Clinton Place
Toronto, ON M6G 1J9

**Name of Project:**
Pickering College – Innovation Hub Construction Phase

**Location:**
16945 Bayview Ave, Newmarket ON, L3Y 3W7

**Date:**
2026-10-05

**2024 Ontario Building Code Data Matrix**
**Part 11 – Renovation**

**Building Code Reference ***

| | | | |
|---|---|---|---|
| 11.00 | Building Code Version: | ☐ Reg. 163/24 Last Amendment ☐ Reg. 447/24 | |
| 11.01 | Project Type: | ☐ Addition ☒ Renovation ☐ Addition and renovation<br>☐ Change of use<br>Description: Interior renovation of workshop space | [A] 1.3.3.36 |
| 11.02 | Major Occupancy Classification: | Occupancy: A2 Use: Primary and Secondary School | 3.1.2.1.(3) 3.1.4.1.(1), and 11.2.1. |
| 11.03 | Superimposed Major Occupancies: | ☒ No ☐ Yes<br>Description: | 11.2, 3.2.2.5. to 3.2.2.8. and 2.2.1. |
| 11.04 | Building Area (m²): | Description: Existing New Total<br>Basement level 457.1m² 0m² 457.1m²<br>Total 457.1m² 0m² 457.1m²<br>Insert additional lines as needed | [A] 1.4.1.2., 11.2., and 11.3. |
| 11.05 | Building Height: | 1 Storeys above grade 10.3 m (H) Above grade<br>1 Storeys below grade<br>Insert additional lines as needed | [A] 1.4.1.2., 3.2.1., 3.2.2.2., and 11.3. |
| 11.06 | Number of Streets/ Firefighter Access: | 1 street(s) | 3.2.2.10., 3.2.5., 2.2.4.1., and 11.3. |
| 11.07 | Building Size: | ☐ Small ☒ Medium ☐ Large ☐ > Large | 11.2.1.1., and 11.2.1.1.B/S. |
| 11.08 | Existing Building Classification: | Change in Major Occupancy: ☐ Yes ☒ Not Applicable (no change of major occupancy)<br>Construction Index: 0<br>Hazard Index: 0<br>Importance Category: ☐ Low ☐ Normal ☐ High ☐ Post-disaster<br>Insert additional lines as needed | 10.1.2., 11.2.1.1.A., 11.2.1.1.B to N, 4.1.2.1.(3), 2.3.1., and 9.3.2.1.(2) |
| 11.09 | Renovation Type: | ☒ Basic Renovation ☐ Extensive Renovation | 11.3.3.1., and 11.3.3.2. |
| 11.10 | Occupant Load | Floor Level/Area: Occupancy Type: Based On: Occupant Load (Persons):<br>Basement level A2 Design 70<br>Insert additional lines as needed | 3.1.17., 2.1.2.2., and 11.4.2.2. |
| 11.11 a | Plumbing Fixture Requirements | Ratio: M:F = 50/50 Except as otherwise noted<br>Floor Level/Area: Occupant Load: OBC Reference: WCs Required: WCs Provided:<br>Basement level 70 /A 5 6 (2 washrooms are provided on the basement floor.)<br>Insert additional lines as needed | 3.7.4., 11.3.4., 11.3.5., 11.4.2.4., and 11.4.2.5. |
| 11.11 b | Plumbing Fixture Requirements continued: | Floor Level/Area: Barrier-free Type Required: Barrier-free Type Provided: Universal Washrooms Required: Universal Washrooms Provided:<br>Basement level 0 0 0 0<br>Insert additional lines as needed | Tables 3.8.2.3.A. and 3.8.2.3.B. This part of the school is not currently barrier-free. Barrier-free washrooms are provided in other areas of the school. |
| 11.12 | Barrier-free Design: | ☐ Yes ☒No Existing building is not barrier-free<br>Number: 0 Existing<br>Barrier-free Entrances: | 11.3.1.2., 11.3.2., 11.3.3.2. |
| 11.13 | Reduction in Performance Level: | Structural: ☒ No ☐ Yes<br>By increase in occupant load: ☒ No ☐ Yes<br>By change of major occupancy: ☒ No ☐ Yes<br>Plumbing: ☒ No ☐ Yes<br>Sewage systems: ☒ No ☐ Yes<br>Extension of buildings of combustible construction: ☒ No ☐ Yes | 11.4.2.1.<br>11.4.2.2.<br>11.4.2.3.<br>11.4.2.4.<br>11.4.2.5.<br>11.4.2.6. |
| 11.14 | Compensating Construction: | ☒ No ☐ Yes<br>Structural: ☐ No ☐ Yes (Describe)<br>Increase in occupant load: ☐ No ☐ Yes (Describe)<br>Change of major occupancy: ☐ No ☐ Yes (Describe)<br>Plumbing: ☐ No ☐ Yes (Describe)<br>Sewage systems: ☐ No ☐ Yes (Describe)<br>Extension of buildings of combustible construction: ☐ No ☐ Yes (Describe) | 11.4.3.1.<br>11.4.3.2.<br>11.4.3.3.<br>11.4.3.4.<br>11.4.3.5.<br>11.4.3.6.<br>11.4.3.7. |
| 11.15 | Compliance Alternatives Proposed: | ☒ No ☐ Yes (list numbers and describe)<br>(list numbers and describe)<br>Insert additional lines as needed | 11.5.1. |
| 11.16 | Alternative Solutions | (list numbers and describe)<br>Insert additional lines as needed | [A] 1.2.1.1., and 12.2.1. |
| 11.17 | Notes: | The Pickering College Dining Hall Building is more than 5 years old. This renovation is subject to Part 11 of the OBC, per clause 11.2.1.1(3), the requirements of 3.2.2.1. to 3.2.2.83. are not applicable provided that they maintain the performance level of the existing building and there is no change of use.<br>Insert additional lines as needed | |

* *All references are to Division B of the OBC, unless preceded by [A] for Division A and [C] for Division C.*

## TYPICAL ABBREVIATIONS

| | | | | | |
|---|---|---|---|---|---|
| @ | AT | GA | GAUGE | R | RISER |
| # | NUMBER | GALV | GALVANIZED | RA | RETURN AIR |
| % | PERCENT(AGE) | GB | GRAB BAR | RAD | RADIUS |
| | | GFA | GROSS FLOOR AREA | RCP | REFLECTED CEILING PLAN |
| AC | AIR CONDITIONING | GL | GRID LINE | RD | ROOF DRAIN |
| ACP | ACOUSTIC PANEL | GFRC | GLASS FIBRE REINFORCED CONCRETE | REC | RECEPTACLE |
| ACT | ACOUSTIC CEILING TILE | GL | GLASS / GLAZING (SEE GLASS TYPES) | REQ'D | REQUIRED |
| ADJ | ADJUSTABLE | GWB | GYPSUM BOARD | RFL | RESILIENT FLOORING |
| ADO | AUTOMATIC DOOR OPERATOR | | | RH | RIGHT-HAND |
| AFF | ABOVE FINISHED FLOOR | H | HUMIDISTAT | RHR | RIGHT-HAND REVERSE |
| AL | ALUMINUM | HB | HOSE BIB | RM | ROOM |
| ALN | ALIGN | HD | HEAT DETECTOR | RO | ROUGH OPENING |
| AP | ACCESS PANEL | HDR | HAND DRYER | RUB | RUBBER WALL BASE |
| APPROX | APPROX(IMATELY) | HM | HOLLOW METAL | RWL | RAIN WATER LEADER |
| AR | 'REQUEST FOR ASSISTANCE' BUTTON | HR | HOUR | RWS | ROLLER WINDOW SHADE |
| ARCH | ARCHITECTURE(AL) | HSS | HOLLOW STRUCTURAL STEEL | | |
| ASTM | AMERICAN SOCIETY FOR TESTING AND MATERIALS | HT | HEIGHT | S | SOUTH |
| AUTO | AUTOMATIC | HW | HOT WATER | S/A | SUPPLY AIR |
| AUX | AUXILIARY | | | SA | SECURITY ACCESS |
| AVB | AIR & VAPOUR BARRIER | IC | INTERCOM | SAFB | SOUND ATTENUATION FIRE BLANKETS |
| AV/IT | AUDIO VIDEO / INFORMATION TECHNOLOGY | ID | INSIDE DIAMETER | SAN | SANITARY |
| AVM | AIR, VAPOUR, & MOISTURE BARRIER | INCL | INCLUDING | SC | SCUPPER |
| | | INFO | INFORMATION | SCW | SOLID CORE WOOD |
| BD | BOARD | INS | INSULATION (SEE INSULATION TYPES) | SCR | SCREEN |
| BF | BARRIER FREE | INT | INTERIOR | SD | SOAP DISPENSER |
| BLDG | BUILDING | | | SEC | SECTION |
| BLKHD | BULKHEAD | JC | JANITOR'S CLOSET | SHF | SHELF |
| BRK | BRICK | JT | JOINT | SIM | SIMILAR |
| BSMT | BASEMENT | | | SP | SPRINKLER |
| BTM | BOTTOM | KP | KEY PAD | SPEC | SPECIFICATION |
| | | KS | KEY SWITCH | SQ | SQUARE |
| CA | CLEAR ANODIZED | | | SSG | STRUCTURAL SILICONE GLAZING |
| C/C | CENTRE TO CENTRE | LAV | LAVATORY | SSM | SOLID SURFACING MATERIAL |
| CG | CORNER GUARD | LD | LIMITING DISTANCE | SST | STAINLESS STEEL |
| CH | COAT HOOK | LVL | LEVEL | ST | STONE |
| CJ | CONTROL JOINT | LT | LIGHT FIXTURE | STOR | STORAGE |
| C/L | CENTRE LINE | LH | LEFT-HAND(ED) | STRUC | STRUCTURAL |
| CLG | CEILING | LHR | LEFT-HAND REVERSE | | |
| CMU | CONCRETE MASONRY UNIT | LIN | LINEAR | T | TREAD(S) |
| COL | COLUMN | LP | LOW POINT | TB | TACK BOARD |
| CONC | CONCRETE | LS | LIGHT SWITCH | TOC | TOP OF CURB |
| CONST | CONSTRUCTION | | | TEL | TELEPHONE |
| CONT | CONTINUOUS | M | METRE | TEMP | TEMPERATURE |
| CORR | CORRIDOR | m3 | CUBIC METRE | TER | TERRAZZO |
| CP | CONTROL PANEL | MAX | MAXIMUM | T&G | TONGUE & GROOVE |
| CPT | CARPET / CARPET TILE | MDF | MEDIUM DENSITY FIBREBOARD | TGL | TRIPLE GLAZING |
| CR | CARD READER | MECH | MECHANICAL | TH | THERMOSTAT |
| CSA | CANADIAN STANDARDS ASSOCIATION | MED | MEDIUM | THK | THICK |
| CU | CUBIC | MET | METAL | TO | TOP OF |
| C/W | COMPLETE WITH | MEZZ | MEZZANINE | TP | TOILET PAPER DISPENSER |
| CW | COLD WATER | MFR | MANUFACTURER(R) | TRANS | TRANSITION |
| | | MIN | MINIMUM | TWF | THROUGH WALL FLASHING |
| DA | DATA OUTLET | MIR | MIRROR(ED) | TWSI | TACTILE WALKING SURFACE INDICATOR |
| DET | DETAIL | MISC | MISCELLANEOUS | TYP | TYPICAL |
| DF | DRINKING FOUNTAIN | mm | MILLIMETER | | |
| DGL | DOUBLE GLAZING (INSULATED) (SEE DGL TYPES) | MOD-BIT | MODIFIED BITUMEN | U/C | UNDERCUT |
| DIA | DIAMETER | MTG | MOUNTING | U/G | UNDER GROUND |
| DIM | DIMENSION | MW | MILLWORK (#) | UL | UNDERWRITERS' LABORATORIES USA |
| DIST | DISTANCE | | | ULC | UNDERWRITERS' LABORATORIES CANADA |
| DIV | DIVISION | N | NORTH | U/P | UTILITY (HYDRO) POLE |
| DN | DOWN | NBC | NATIONAL BUILDING CODE | UR | URINAL |
| DR | DOOR | ND | NAPKIN DISPOSAL (SANITARY) | U/S | UNDERSIDE |
| DRB | DOOR RELEASE BUTTON | NFA | NET FLOOR AREA | | |
| DW | DISHWASHER | NFC | NATIONAL FIRE CODE | VB | VAPOUR BARRIER |
| DWG | DRAWING | NFHB | NON-FREEZE HOSE BIB | VCT | VINYL COMPOSITE TILE |
| | | NIC | NOT IN CONTRACT | VERT | VERTICAL |
| E | EAST | NO | NUMBER | VEST | VESTIBULE |
| EA | EACH | NOM | NOMINAL | V.I.F. | VERIFY IN FIELD |
| EAA | EMERGENCY AUDIBLE ALERT | NTS | NOT TO SCALE | VTF | VINYL TILE FLOORING |
| ELEC | ELECTRIC(AL) | NV | NAPKIN VENDOR (SANITARY) | VWC | VINYL WALL COVERING |
| ELEV | ELEVATION (DATUM) | | | | |
| EQ | EQUAL | OBC | ONTARIO BUILDING CODE | W | WINDOW |
| EW | EMERGENCY EYE WASH | O/C | ON CENTRE | W/ | WITH |
| EXG | EXISTING | OD | OUTSIDE DIAMETER | WA | WAVE ACTUATOR |
| EXP JT | EXPANSION JOINT | OH | OVERHEAD | WAP | WIRELESS ACCESS POINT |
| EXT | EXTERIOR | OWL | OCCUPIED WHEN LIT INDICATOR | WB | WHITE BOARD |
| | | | | WBPT | WHITE BOARD PAINT(ED) |
| FAPS | FIRE ALARM PULL STATION | PA | PUBLIC ADDRESS | WC | WATER CLOSET |
| FAAP | FIRE ALARM ANUNCIATOR PANEL | PB | PUSH BUTTON (DOOR OPERATOR) | WD | WOOD |
| FASS | FIRE ALARM SPEAKER/STROBE | PCONC | POLISHED CONCRETE | WD-FL | WOOD FLOORING |
| FASP | FIRE ALARM SPEAKER | PCT | PORCELAIN CERAMIC TILE | WF | WIDE FLANGE |
| FAST | FIRE ALARM STROBE | P.LAM | PLASTIC LAMINATE | WI | WROUGHT IRON |
| FD | FLOOR DRAIN | PLY | PLYWOOD | WP | WATERPROOFING |
| FDN | FOUNDATION | POL | POLISHED | WPM | WATERPROOF MEMBRANE |
| FEC | FIRE EXTINGUISHER CABINET | PR | 'PRESS TO RESET' BUTTON | WR | WASHROOM |
| FFL | FINISHED FLOOR LEVEL | PREFAB | PREFABRICATE(ED) | WS | WEATHERSTRIP |
| FHC | FIRE HOSE CABINET | PREFIN | PREFINISHED | | |
| FIN | FINISH(ED) | PT | PAINT(ED) | | |
| FL | FLOOR | PTD | PAPER TOWEL DISPENSER | | |
| FLM | FILM | PTL | PUSH TO LOCK | | |
| FR | FIRE RATED | PTWR | PAPER TOWEL DISPENSER / WASTE RECEPTACLE | | |
| FRR | FIRE RESISTANCE RATING | PVC | POLYVINYL CHLORIDE | | |
| FTG | FOOTING | PVG | PAVING | | |

## GENERAL DEMOLITION NOTES

1. THE INTENT OF THIS DRAWING IS TO OUTLINE THE SCOPE OF WORK FOR THE DEMOLITION REQUIRED FOR THIS PROJECT. IT IS THE CONTRACTOR'S RESPONSIBILITY TO ENSURE THAT ALL DEMOLITION FOR THE PROJECT IS PERFORMED AS REQUIRED FOR INSTALLATION OF NEW WORK.
2. COORDINATE PHASING OF DEMOLITION WITH SITE PROJECT / CONSTRUCTION MANAGER.
3. REFER TO STRUCTURAL, MECHANICAL, ELECTRICAL, AV/IT/SECURITY DRAWINGS FOR ADDITIONAL ASSOCIATED DEMOLITION WITHIN SCOPE OF THIS PROJECT.
4. REFER TO ALL DRAWINGS FOR FULL EXTENT OF WORK ASSOCIATED WITH THE INSTALLATION OF SERVICES, ETC., SHOWN ON ALL DRAWINGS. REFER TO STRUCTURAL, MECHANICAL, ELECTRICAL, AV/IT/SECURITY DRAWINGS FOR ALL ASSOCIATED DEMOLITION WORK. (EXAMPLES: PLUMBING/HEATING MODIFICATIONS IN EXISTING BUILDING, INSTALLATION OF NEW DUCTS IN EXISTING BUILDING, ETC.).
5. CONSTRUCTION IS NOT TO INTERFERE WITH USE OF EXISTING AREAS. WHICH ARE TO REMAIN OPERATIONAL. MAINTAIN FREE AND SAFE PASSAGE TO AND FROM EXISTING AREAS.
6. DURING DEMOLITION AND CONSTRUCTION, ANY DAMAGE TO EXISTING FINISHES, MILLWORK, FLOORING, CEILING, ETC. OTHER THAN INDICATED IN THESE DRAWINGS SHALL BE REPAIRED BY THE CONTRACTOR AT NO COST TO THE TENANT. IF THE SCOPE OF DEMOLITION IS UNCLEAR, NOTIFY ARCHITECT FOR CLARIFICATIONS.
7. REMOVE CAREFULLY, BUBBLE WRAP AND STORE FOR REUSE ANY LIGHT FIXTURES, ELECTRICAL DEVICES, BOXES AND ASSOCIATED WIRING ON SURFACES TO BE DEMOLISHED OR MODIFIED (REFER TO ELEC. DWGS). HAND OVER TO OWNER ANY ITEMS THAT ARE NOT TO BE REUSED. ALL OTHER DEMOLISHED ITEMS TO BE REMOVED FROM THE SITE IN A TIMELY MANNER.
8. WHERE EXISTING WALLS AND BUILDING FITTINGS ARE BEING REMOVED, MAKE GOOD SUBSTRATES TO RECEIVE NEW SPECIFIED MATERIALS AND FINISHES.
9. PATCH, REPAIR & MAKE GOOD EXISTING FLOOR TO BE SMOOTH, LEVEL, AND VOID OF WAVES, MATERIAL BUMPS OR DEPRESSIONS. READY EXISTING FLOOR TO ACCEPT NEW SPECIFICATIONS AND FLOOR MANUFACTURER'S REQUIREMENTS. SEE FINISH SCHEDULE. PROVIDE SELF-LEVELING CONCRETE TOPPING AS REQUIRED TO MAKE FLOORING SURFACE FLUSH AND SLOPED TO DRAINS.
10. WHERE NEW CEILING MATERIALS ARE INDICATED, INSTALL A COMPLETELY NEW CEILING SYSTEM. SEE INTERIOR FINISHES SCHEDULE & REFLECTED CEILING PLAN.
11. REMOVE OR CAP ALL EXISTING ABANDONED PIPES IN WALLS & FLOORS.
12. INSPECT EXISTING DOORS (INCLUDING FRAMES AND HARDWARE) NOTED AS "TO REMAIN" AND ENSURE THAT ALL COMPONENTS ARE IN GOOD WORKING ORDER. REPAIR OR REPLACE, TO MATCH, ANY DAMAGED OR DEFECTIVE COMPONENTS.
13. PROTECT EXISTING GLAZING AND FRAMES TO REMAIN DURING DEMOLITION AND CONSTRUCTION.
14. GC RESPONSIBLE TO REMOVE AND DISPOSE ALL LEFT-OVER ITEMS, INCLUDING CONSTRUCTION EQUIPMENT AND MATERIALS FROM THE AREA OF CONSTRUCTION.

## REFLECTED CEILING PLAN DEMOLITION NOTES

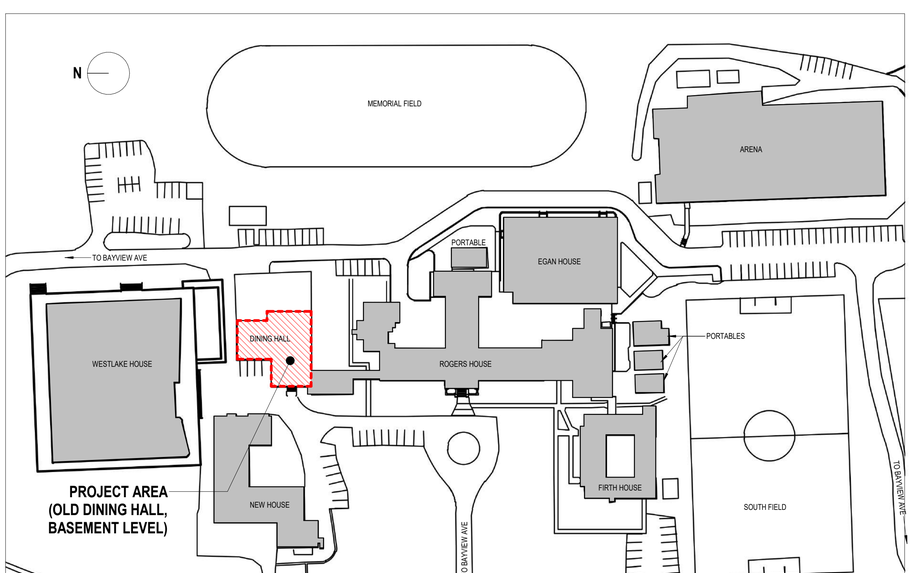
1. DRAWINGS SHALL BE SITE VERIFIED FOR DETAILED LAYOUT AND DIMENSIONS. ALL DISCREPANCIES BETWEEN DRAWINGS AND EXISTING CONDITIONS SHALL BE BROUGHT TO THE ATTENTION OF THE CONSULTANT.
2. EXISTING FIRE-RATED CEILING TO REMAIN.
3. EXISTING SPRINKLER SYSTEM TO REMAIN.
4. EXISTING HEAT DETECTORS AND ALARMS TO REMAIN.
5. ALL ELECTRICAL/DATA/PHONE/CABLE TELEVISION DEMOLITION TO BE COORDINATED WITH OWNER ON SITE.
6. REMOVE CAREFULLY, BUBBLE WRAP AND STORE FOR REUSE ANY LIGHT FIXTURES, ELECTRICAL DEVICES, BOXES, AND ASSOCIATED WIRING ON SURFACES TO BE DEMOLISHED OR MODIFIED (REFER TO ELEC. DWGS). HAND OVER TO OWNER OR LANDLORD ANY ITEMS THAT ARE NOT TO BE REUSED AS REQUESTED BY THE OWNER OR LANDLORD. ALL OTHER DEMOLISHED ITEMS ARE TO BE REMOVED FROM THE SITE IN A TIMELY MANNER.
7. PROVIDE DUST-FREE, INSULATED GYPSUM WALLBOARD HOARDING AS REQ'D. REVIEW THE LOCATION OF ALL HOARDING WITH THE OWNER ON THE SITE BEFORE COMMENCING WORK.

## GENERAL PARTITION NOTES

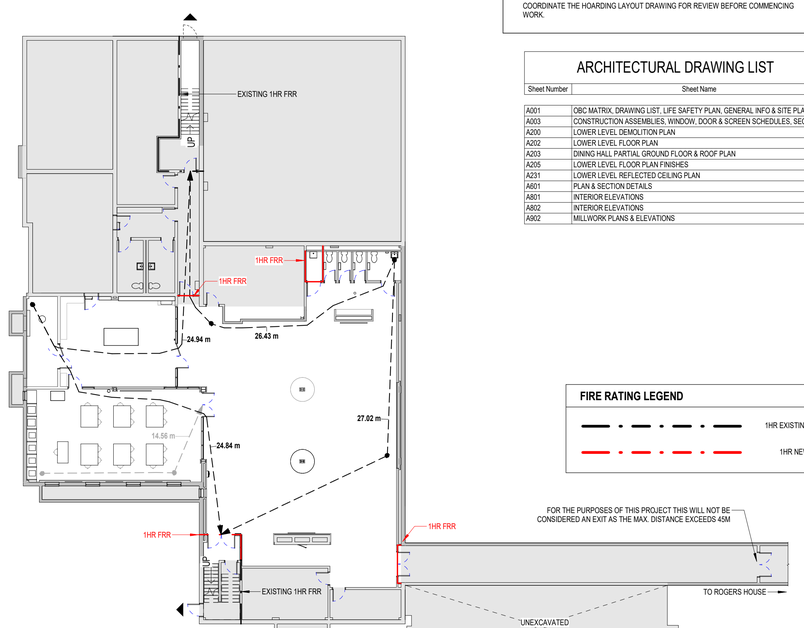
1. THIS DRAWING IS TO BE READ IN CONJUNCTION WITH MECHANICAL AND ELECTRICAL DRAWINGS AND SPECIFICATIONS. REPORT ANY DISCREPANCIES TO THE DESIGNER FOR CLARIFICATION.
2. ALL THE NUMERAL DIMENSIONS ARE HARD DIMENSIONS. CONTRACTOR TO REPORT ANY DISCREPANCIES TO DESIGNER ONCE PARTITIONS HAVE BEEN CHALKED ON SITE.
3. NEW PARTITIONS ARE TO BE CHALKED ON SITE AND APPROVED BY THE DESIGNER PRIOR TO INSTALLATION OF FLOOR AND CEILING TRACK.
4. CONTRACTOR SHALL BE RESPONSIBLE TO FULFILL ALL REQUIREMENTS OF DESIGN / LISTED ASSEMBLIES, INCLUDING APPROVED MATERIALS AND CONSTRUCTION METHODS.
5. PARTITION WALLS TO CARRY TO U/S OF SLAB UNLESS OTHERWISE NOTED.
6. PROVIDE GWB ABOVE ALL SCREENS AND DOORS TO U/S OF SLAB UNLESS NOTED OTHERWISE. STC RATING OF ADJACENT WALL TO BE CARRIED.
7. THE CONTRACTOR IS TO ENSURE VARYING PARTITION THICKNESS TO COORDINATE WITH DOOR FRAME SIZES. REPORT ANY DISCREPANCIES TO DESIGNER FOR CLARIFICATION.
8. PROVIDE ABUSE-RESISTANT GYPSUM WALL BOARD IN CORRIDORS, LOBBIES, AND WAITING AREAS TO A MINIMUM OF 1600MM ABOVE FINISHED FLOOR.
9. PROVIDE TWO LAYERS OF 9MM GYPSUM WALL BOARD AT ALL CURVED PARTITIONS.
10. PROVIDE MOISTURE AND MOULD-RESISTANT BOARD AT ALL WASHROOMS AND JANITOR'S CLOSETS. PROVIDE TILE BACKER BOARD WHERE TILES ARE SPECIFIED.
11. PROVIDE CONCEALED CONTINUOUS BLOCKING AT PARTITIONS AS REQUIRED. REFER TO PLANS, SECTIONS, AND INTERIOR ELEVATIONS FOR LOCATIONS OF MILLWORK, VANITIES, SINKS, WASHROOM ACCESSORIES, AND ANY OTHER ITEMS THAT REQUIRE BLOCKING.
12. STAGGER DRYWALL SEAMS WHEN 2 OR MORE LAYERS OF DRYWALL ARE REQUIRED.
13. WALLS NOTED AS "0-HR / NON-RATED FIRE SEPARATION ASSEMBLIES" ARE TO BE "SMOKE SEALED" AT ALL OPENINGS.
14. REINFORCE STUDS AT DUCT OPENINGS.
15. THE CONTRACTOR IS TO REPAIR DAMAGE TO EXISTING PARTITIONS AND/OR EXISTING FIRE SEPARATIONS WITHIN THE AREA OF SCOPE OF WORK SHOWN AS TO REMAIN. RATINGS ARE TO MATCH EXISTING.
16. PROVIDE HEAVY GAUGE STUDS WHEN REQUIRED, REVIEW WITH CONSULTANT PRIOR TO INSTALL.
17. ALL OPENINGS TO BE PREPARED TO ACCEPT NEW WINDOWS AND DOORS AS PER MANUFACTURER'S SPECIFICATIONS.
18. PROVIDE RATED ASSEMBLY WHERE NOTED ON LIFE SAFETY PLANS; OTHERWISE, NON-RATED ASSEMBLY IS ACCEPTABLE.
19. PROVIDE 13MM AIR SPACE BETWEEN FURRING WALL STUDS & EXISTING STRUCTURE/WALL ASSEMBLY. REFER TO PLANS FOR PARTITIONS WITH LARGER AIR SPACE.
20. REPAINT ENTIRE WALL TO MATCH EXISTING WHEREVER NEW WORK REPAIRS HAVE BEEN COMPLETED OR WHERE ANY DAMAGE TO EXISTING FINISHES HAS OCCURRED DURING CONSTRUCTION. VERIFY ALL FINISHES TO BE MATCHED ON SITE.
21. SOUND BATTS IN PARTITIONS ARE TO CONTINUE BEHIND POWER AND DATA OUTLETS WITHOUT INTERRUPTION.
22. STAGGER OUTLETS OCCURRING ON OPPOSITE SIDES OF THE SAME PARTITION TO MAINTAIN ACOUSTICAL INTEGRITY.
23. THE CONTRACTOR IS TO ENSURE THAT ALL DRYWALL IS FLUSH, CLEAN, AND FREE OF DUST PRIOR TO APPLICATION OF ALL NEW FINISHES.
24. IF NOT ANNOTATED, ASSUME PARTITION TYPE TO BE 'P2A'.
25. ACOUSTIC PARTITIONS:
   a. TO ACHIEVE PARTITION STC RATING, THE FULL PERIMETER OF THE PARTITION TO BE SEALED TO THE SURROUNDING STRUCTURE WITH NON-HARDENING ACOUSTIC SEALANT. ALL PENETRATIONS FOR ELECTRICAL, MECHANICAL SYSTEMS, OR ANY OTHER SERVICES SHALL MAINTAIN THE STC RATING OF THE PARTITION.
   b. PROVIDE ACOUSTIC SEALS AROUND ALL PENETRATIONS IN ACOUSTIC WALL ASSEMBLIES.
   c. FOR GAPS LESS THAN 12MM, SEAL BOTH SIDES OF EACH GAP WITH NON-HARDENING CAULKING. CELL FOAM MATERIAL (E.G., BACKER ROD) TO BE USED TO FILL THE GAPS PRIOR TO CAULKING IF NECESSARY.
   d. FOR GAPS MORE THAN 12MM, REFER TO ARCHITECTURAL AND MECHANICAL FOR SEAL DETAIL. REVIEW WITH CONSULTANT IF REQUIRED.
   e. DO NOT LOCATE ELECTRICAL OUTLET BOXES BACK-TO-BACK IN THE SAME STUD CAVITY OF ANY STC-RATED PARTITION. WHERE BOXES MUST BE PLACED, WRAP BOXES IN PUTTY PAD OR APPROVED ALTERNATIVE. REFER TO ELECTRICAL.
   f. ALL DRAINPIPES TO BE WRAPPED, REFER TO MECHANICAL.
   g. CREATE A DISCONTINUITY IN PARTITION GYPSUM BOARDS INTERSECTING WITH ANOTHER PARTITION, TO REDUCE FLANKING NOISE TRANSFER. REFER TO ARCHITECTURAL DETAIL.
   h. UNLESS OTHERWISE NOTED, STEEL STUDS IN STC-RATED SINGLE-STUD PARTITIONS MUST BE 25 GAUGE. PROVIDE RESILIENT CHANNEL IF HEAVIER STUDS ARE USED.

## GENERAL CONSTRUCTION NOTES:

1. ARCHITECTURAL DRAWINGS AND SPECIFICATIONS ARE TO BE READ IN CONJUNCTION WITH SCOPES OF WORK, SPECIFICATIONS, AND THE MECHANICAL, ELECTRICAL, AND ACOUSTIC DOCUMENTS.
2. DRAWINGS SHALL BE SITE VERIFIED FOR DETAILED LAYOUT AND DIMENSIONS. GENERAL CONTRACTOR IS TO NOTIFY ARCHITECT IMMEDIATELY IF EXISTING AS-BUILT CONSTRUCTION DIFFERS FROM THESE DRAWINGS.
3. IT IS THE CONTRACTOR'S RESPONSIBILITY TO OBTAIN ALL NECESSARY PERMITS REQUIRED BY RELEVANT AUTHORITIES PRIOR TO COMMENCEMENT OF WORK.
4. COORDINATE ALL MATTERS OF SECURITY OR SITE ACCESS WITH LANDLORD AND/OR THEIR REPRESENTATIVES.
5. ALL WORK SHALL CONFORM TO THE REQUIREMENTS OF THE CURRENT LOCAL BUILDING CODES, THE NATIONAL FIRE CODE, AND ALL OTHER STANDARDS OR BY-LAWS FROM AUTHORITIES HAVING JURISDICTION.
6. SUBMIT REQUIRED CHANGES TO THE ARCHITECT FOR APPROVAL PRIOR TO COMMENCEMENT OF WORK.
7. PROVIDE MODIFICATIONS TO THE EXISTING LIFE SAFETY SYSTEMS AS SHOWN ON THE DRAWINGS AND AS REQUIRED TO COMPLETE NEW WORK. PROVIDE TESTING AND VERIFICATIONS AS REQUIRED. REFER TO MECHANICAL AND ELECTRICAL DRAWINGS FOR COORDINATION, SPECIFICATIONS, AND LOCATIONS.
8. MAKE GOOD ANY EXISTING WORK AND/OR FINISHES THAT ARE MODIFIED OR AFFECTED BY NEW CONSTRUCTION. REPAIR AND FINISH TO MATCH NEW ANY SURFACES (WALL, FLOORS, CEILING, ETC.) THAT ARE DAMAGED BY THE INSTALLATION OR DEMOLITION OF ANY ITEMS THAT ARE PART OF THIS CONTRACT.
9. VERIFY ALL ROUGH OPENING DIMENSIONS ON SITE.
10. REFER TO STRUCTURAL, MECHANICAL, ELECTRICAL, AV/IT/SECURITY DRAWINGS FOR OTHER APPLICABLE NOTES.
11. CONTRACTOR IS TO PROVIDE MECHANICAL AND ELECTRICAL INTERFERENCE DRAWINGS TO COORDINATE THE LOCATIONS OF NEW AND RELOCATED SERVICES, DEVICES, ETC. WITH THE EXISTING CONDITIONS TO THE CONSULTANTS FOR REVIEW PRIOR TO STARTING WORK.
12. EXISTING SERVICES AND UTILITIES MUST BE ADJUSTED TO SUIT THE INTENT OF NEW WORK.
13. ALL EXISTING SPRINKLERS THROUGHOUT THE BUILDING ARE TO BE ADJUSTED TO SUIT THE NEW DESIGN BY THE FIRE PROTECTION CONTRACTOR. SPRINKLER DRAWINGS TO BE SUBMITTED & APPROVED BY LOCAL MUNICIPALITY PRIOR TO PROCEEDING WITH THE WORK.
14. ALL NEW CONDUIT AND PIPING FOR ELECTRICAL AND MECHANICAL ITEMS ARE TO BE CONCEALED WITHIN WALLS OR THE ACCESS FLOOR CAVITY WHEREVER POSSIBLE, UNLESS OTHERWISE NOTED. LAYOUT AND VERIFY ALL LOCATIONS WITH CONSULTANTS BEFORE COMMENCING INSTALLATION. ALL EXPOSED CONDUIT AND PIPING ARE TO BE INSTALLED TIGHT TO THE CEILING SLAB. GANGED TOGETHER NEAT AND ORDERLY WHERE POSSIBLE AND INTERSECT AT 90°. REFER ALSO TO MECHANICAL AND ELECTRICAL DRAWINGS.
15. ALL NEW INTERIOR PARTITIONS ARE TO EXTEND TO U/S OF EXISTING STRUCTURE UNLESS NOTED OTHERWISE. PROVIDE TIEBACKS & ADDITIONAL BRACING AS REQUIRED TO SUIT HEIGHT SPANS OF STUDS.
16. MAINTAIN ALL EXISTING FIRE RATINGS OF EXISTING WALLS/FLOORS/CEILINGS; PATCH, REPAIR AND MAKE GOOD OF ALL MATERIALS AS REQUIRED TO MAINTAIN INTEGRITY OF FIRE RATING. SITE VERIFY EXISTING FIRE-RATINGS; ADVISE ARCHITECT OF ALL WORK.
17. ALL CONSTRUCTION ASSEMBLIES NOTING FRAMING OF STRUCTURAL STEEL STUDS ARE TO BE DESIGNED BY PROFESSIONAL ENGINEER. SHOP DRAWINGS (STAMPED BY P.ENG) ARE TO BE SUBMITTED & APPROVED PRIOR TO PROCEEDING WITH THE WORK.
18. ALL STRUCTURAL SUPPORTS AND FRAMING NOT TO BE BY MISCELLANEOUS METAL ARE TO BE DESIGNED BY PROFESSIONAL ENGINEER. SHOP DRAWINGS (STAMPED BY P.ENG) ARE TO BE SUBMITTED & APPROVED PRIOR TO PROCEEDING WITH THE WORK. TBLK DISCLAIMER.
19. WASHROOMS, WATER PROOFING MEMBRANE TO BE PROVIDED AT FULL FLOOR EXTENT.
   a. EXTEND MEMBRANE UP WALLS FULL HEIGHT AT WASHROOMS WITH SHOWERS.
   b. EXTEND MEMBRANE UP WALLS 1200MM AFF AT ALL OTHER WASHROOMS
20. ALL EXISTING HANDRAILS AND GUARDS TO REMAIN, UNLESS NOTED OTHERWISE. PATCH, CLEAN AND PAINT.
21. WHERE NEW FINISHES ARE TO BE INSTALLED AROUND EXISTING SERVICES, GC TO REVIEW CUT LINE/SEAM LINES WITH CONSULTANT PRIOR TO INSTALLATION.
22. WALL TYPES ARE GENERIC. PROVIDE FURRING AROUND COLUMNS, MECHANICAL AND ELECTRICAL ITEMS/DEVICES AS REQUIRED. EXISTING WALL TYPES AS INDICATED ON DRAWINGS TAKE FROM BASE BUILDING DRAWINGS AND MAY NOT REFLECT SITE CONDITIONS ACCURATELY.
23. PROVIDE ALL CONSTRUCTION HOARDING AND SIGNAGE AS REQUIRED TO COMPLETE REQUIRED PHASING AND SEPARATION OF WORK. HOARDING IS TO BE SEALED, INSULATED STUD WALL CONSTRUCTION UNLESS OTHERWISE APPROVED WITH THE OWNER. ALL HOARDING IS TO PROVIDE DUST-FREE PROTECTION TO ALL NEIGHBOURING AREAS, AND SUCH IS TO INCLUDE SEALED BULKHEADS ABOVE EXISTING CEILINGS AS REQUIRED. PROVIDE EXISTING DOORS & EXISTING SIGNAGE IN CONSTRUCTION HOARDING TO EGRESS DOORS AS REQUIRED BY CODE. VERIFY AND COORDINATE THE HOARDING LAYOUT DRAWING FOR REVIEW BEFORE COMMENCING WORK.




2 A001 SITE PLAN
1 : 1000




1 A001 LOWER LEVEL LIFE SAFETY PLAN - DEMO PHASE
1 : 200

**FIRE RATING LEGEND**

1HR EXISTING

1HR NEW

## ARCHITECTURAL DRAWING LIST

| Sheet Number | Sheet Name |
|---|---|
| A001 | OBC MATRIX, DRAWING LIST, LIFE SAFETY PLAN, GENERAL INFO & SITE PLAN |
| A003 | CONSTRUCTION ASSEMBLIES, WINDOW, DOOR & SCREEN SCHEDULES, SECTION |
| A200 | LOWER LEVEL DEMOLITION PLAN |
| A202 | LOWER LEVEL FLOOR PLAN |
| A203 | DINING HALL PARTIAL GROUND FLOOR & ROOF PLAN |
| A205 | LOWER LEVEL FLOOR PLAN FINISHES |
| A231 | LOWER LEVEL REFLECTED CEILING PLAN |
| A601 | PLAN & SECTION DETAILS |
| A801 | INTERIOR ELEVATIONS |
| A802 | INTERIOR ELEVATIONS |
| A902 | MILLWORK PLANS & ELEVATIONS |


# Architecture Counsel

4 CLINTON PL, TORONTO, ON M6G 1J9 T 416-603-1515



All drawings and specifications are the property of the architect. The contractor shall verify all dimensions and information on site and report any discrepancy to architect before proceeding.


| | DATE | REVISION |
|---|---|---|
| 2 | 2026.11.06 | ISSUED FOR TENDER |
| 1 | 2026.10.06 | ISSUED FOR PERMIT |

ONTARIO ASSOCIATION OF ARCHITECTS

## INTERIOR PARTITION ASSEMBLIES

| TYPE | DIAGRAM | DESCRIPTION | TOTAL DIM. | FIRE RATING | REF. LISTING | ACOUSTIC | COMMENTS |
|---|---|---|---|---|---|---|---|
| P1 | | - 6X8X16 CONCRETE BLOCK TO MATCH EXISTING | 150mm | 1HR | | | |
| P2a | | - 16mm GWB-1<br>- 92mm METAL STUDS @ 610mm O.C.<br>- 75mm INS-1<br>- 16mm GWB-1 | 124mm | 1HR | SA-870717<br>CGC SA-200 | STC - 49 | PROVIDE GWB-4 WHERE WALLS ARE REQUIRED TO BE FIRE RERATED. PROVIDE GWB-1 AT ALL OTHER LOCATIONS. |
| P3 | | - 16mm GWB-1<br>- 152mm METAL STUDS @ 610mm O.C.<br>- 16mm GWB-1 | 184mm | 1HR | ULC W453 | STC - 41 | PROVIDE GWB-4 WHERE WALLS ARE REQUIRED TO BE FIRE RERATED. PROVIDE GWB-1 AT ALL OTHER LOCATIONS. |
| P3a | | - 16mm GWB-1<br>- 152mm METAL STUDS @ 610mm O.C.<br>- 152mm INS-1<br>- 16mm GWB-1 | 184mm | 1HR | ULC W453 | STC - 51 | PROVIDE GWB-4 WHERE WALLS ARE REQUIRED TO BE FIRE RERATED. PROVIDE GWB-1 AT ALL OTHER LOCATIONS. |
| F1 | | - 16mm GWB-2, TYPE X<br>- 41mm FURRING CHANNELS @ 405mm O.C.<br>- 13mm AIR SPACE B/W EXG. STRUCTURE | 57mm | | | | |
| F2a | | - 16mm GWB-1<br>- 92mm METAL STUDS @ 405mm O.C.<br>- 90mm INS-1<br>- 13mm AIR SPACE B/W EXG. STRUCTURE | 108mm | | | | |
| F3a | | - 16mm GWB-1<br>- 152mm METAL STUDS @ 405mm O.C.<br>- 150mm INS-1<br>- 13mm AIR SPACE B/W EXG. STRUCTURE | 168mm | | | | |
| EW1 | | - METAL FLASHING MET-1<br>- 12mm EXTERIOR SHEATHING W/ VPM-1<br>- 152mm METAL STUDS @ 405mm O.C. C/W 152mm INS-1 INSULATION<br>- AVB-1<br>- 16mm GWB-1 | 180mm | | | | |

## CEILING TYPES

| TYPE | DIAGRAM | DESCRIPTION |
|---|---|---|
| C1 | | **GWB CEILING**<br>- EXISTING STRUCTURE<br>- SUSPENSION CABLES<br>- 38mm CARRYING CHANNELS @ 1200mm O.C.<br>- 22mm FURRING CHANNELS @ 405mm O.C.<br>- 16mm GWB-1, PROVIDE 16mm GWB-3 AT WASHROOMS AND JANITOR CLOSET, PROVIDE 16mm GWB-4 WHERE FIRE RATING IS REQUIRED |
| C2 | | **ACOUSTIC CEILING TILES**<br>- EXISTING CONCRETE STRUCTURE<br>- METAL SUSPENSION SYSTEM<br>- ACT-1 (REF. TO RCP FOR TILE SIZE & PATTERN) |
| C3 | | **TECTUM BLADES CEILING**<br>- EXISTING STRUCTURE TO BE PAINTED<br>- EXG AND NEW SERVICES TO BE PAINTED<br>- SUSPENSION SYSTEM C/W STEEL CHANNEL & AIRCRAFT CABLES<br>- ACB-1 TECTUM BLADES<br>- PANEL JOINTS TO BE STAGGERED<br>- REF. TO RCP FOR SPACING |
| C4 | | **FIXED SOUND-APSORPTIVE PANEL SYSTEM**<br>- EXG EXPOSED CONCRETE DECK OR C1 GWB CEILING<br>- ACP-1 TECTUM PANELS<br>- PANEL JOINTS TO BE STAGGERED |

## FLOOR THRESHOLD

| TYPE | DESCRIPTION |
|---|---|
| TH1 | **EXG TO CONC-1**<br>CONC-1 — EXG LINOLEUM FLOORING<br>STAINLESS STEEL TRIM OR MANUFACTURER'S PROPRIETARY THRESHOLD |

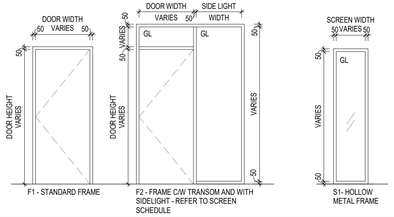
## MATERIAL LEGEND

| | |
|---|---|
| ACB-1 | ARMSTRONG TECTUM BLADES AND BAFFLES, SQUARE EDGES, SIZE: 50mm THK x 460mm H, COLOUR: ALLOW FOR UP TO (4) COLOURS TO BE SELECTED AT A LATER DATE FROM MANUFACTURER'S FULL RANGE |
| ACP-1 | FIXED SOUND-ABSORPTIVE PANEL SYSTEM, TECTUM FINALE PANELS BY ARMSTRONG, THICKNESS 38mm, LENGTH 1220MM, WIDTH 610mm, COLOUR: NATURAL. PAINTED FASTENERS TO MATCH PANEL COLOUR. BOTH LONG AND SHORT EDGES BEVELLED. DRYWALL GRID MOUNTING TYPE |
| AVB-1 | AIR/VAPOUR BARRIER |
| BL-1 | GLAMOURLINE DARKSOURCE, 4-PLY VINYL, COLOUR: FOR LATER LATER SELECTION BY CONSULTANT FROM MANUFACTURER'S FULL RANGE, HOUSING AND HEMBAR: CLEAR ANODIZED |
| CONC-1 | EXISTING CONCRETE W/ LEVELLING COMPOUND UP TO 25mm THK AS REQUIRED THROUGHOUT THE SPACE C/W EPOXY FLOOR FINISH. EPOXY FLOOR FINISH, EPOXY FLOORING, SIKAFLOOR MORRITEX BROADCAST SYSTEM, COLOUR TBD. ALLOW FOR CUSTOM COLOUR |
| FLM-1<br>FLM-2 | 50mm SAFETY FILM STRIP, 3M FASARA CLOUD SH2FGCL<br>WHITEBOARD WALL FINISH, 3M DI-NOC WHITEBOARD FINISH, WH-111, 920mm x 10m, 3M ID 7000008067. PROVIDE LEVEL 4 GWB FINISH TO ACCEPT WHITEBOARD FILM |
| GL-1<br>GL-2<br>GL-3 | 13mm, TEMPERED, CLEAR GLASS<br>45MIN FIRE RATED<br>6mm, MIRROR |
| GWB-1<br>GWB-3<br>GWB-4<br>GWB-5<br>GWB-6 | GYPSUM WALL BOARD, PLAIN<br>GYPSUM WALL BOARD, GLASS SCRIM MOISTURE RESISTANT<br>GYPSUM WALL BOARD TYPE-X<br>GYPSUM WALL BOARD; ABUSE RESISTANT<br>16mm CEMENT BOARD TILE BACKER |
| INS-1 | MINERAL FIBRE SEMI-RIGID INSULATION (ROCKWOOL CAVITY ROCK) |
| MET-1 | 18 GA FLAT GALVANIZED STEEL EXTERIOR CLADDING, COLOUR TO BE SELECTED FROM MANUFACTURER'S STANDARD FINISHES. ACCEPTABLE MANUFACTURERS: VICWEST, AGWAY |
| MET-2<br>MET-3 | STAINLESS STEEL 304 COUNTERTOP W/ BACKSPLASH AND MARINE EDGE<br>COLD-ROLLED STEEL, POWDERCOAT TO MATCH PT-1a, SATIN FINISH |
| PCT-1 | PORCELAIN CERAMIC TILE, OLYMPIA TILE, LOOP SERIES, BEIGE MATTE, 30 CM X 60 CM (EX.LP.BGE.1224.MT) |
| PLAM-1 | PLASTIC LAMINATE, WILSONART, COLOUR: LINEN D427-60, FINISH: MATTE |
| PT-1a<br>PT-1b<br>PT-1c<br>PT-2<br>PT-3 | WALL PAINT, EGGSHELL FINISH, RESERVED<br>CEILING PAINT, MATTE FINISH, RESERVED<br>DRY-FALL PAINT FOR EXPOSED SERVICES AND STRUCTURE, MATTE FINISH, RESERVED<br>DOOR / DOOR FRAME PAINT, SEMI-GLOSS FINISH, RESERVED<br>1HR RATED INTUMESCENT PAINT |
| RFL-1 | VINYL STAIR TREADS AND NOSINGS, TARKETT, ANGLEFIT RUBBER TREAD WITH INTEGRATED RISER, TEXTURE: HAMMERED, COLOUR: GREY HAZE WG |
| RUB-1 | RUBBER BASE, TARKETT MANDALAY 4.5", COLOUR: TBD |
| VPM-1 | VAPOUR-PERMEABLE MEMBRANE |
| WB-1 | WHITEBOARD, ASI 1/2" 'ES' PORCELAIN ENAMEL COATED MAGNETIC WRITING SURFACE, LOW GLOSS, WHITE |
| WD-1<br>WD-2<br>WD-2a | SOLID MAPLE BUTCHER BLOCK COUNTERTOP, 38mm THK, CLEAR SEALANT<br>SOLID, WHITE OAK, RIFT CUT, SEALED (CLEAR), MATTE FINISH<br>VENEER, WHITE OAK, RIFT CUT, SEALED (CLEAR), MATTE FINISH |

## SYMBOL LEGEND

- WALL SECTION REFERENCE — INDICATES SECTION / DETAIL NUMBER; INDICATES REFERENCE TO A SIMILAR DETAIL DRAWING; INDICATES DRAWING SHEET NUMBER
- BUILDING SECTION REFERENCE
- GRID LINE
- PROJECT ELEVATION
- GEODETIC ELEVATION
- REVISION NUMBER
- CENTRELINE MARK
- MATERIAL / FINISH TAG
- MILLWORK TAG
- DOOR TAG
- DETAIL REFERENCE — INDICATES REFERENCE TO A SIMILAR DETAIL DRAWING
- BUILDING ELEVATION REFERENCE — INDICATES DETAIL NUMBER; INDICATES DRAWING SHEET NUMBER
- INTERIOR ELEVATION REFERENCE
- ROOM NAME & ROOM NUMBER TAG
- WALL & INTERIOR PARTITION TYPE
- TRIM TYPE
- CEILING TYPE — CEILING HEIGHT ELEVATION A.F.F.
- ROOF TYPE
- WINDOW & SCREEN TYPE
- FLOORING TYPE
- BASE TYPE
- THRESHOLD TYPE

## FRAME TYPES



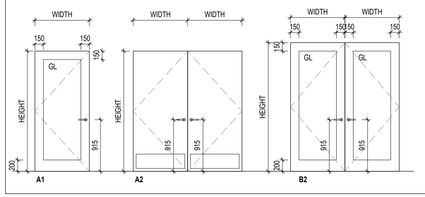

## INT. SCREEN TYPE




## BASE TYPES

| TYPE | DIAGRAM | DESCRIPTION |
|---|---|---|
| B1 | REF. TO FLOOR PLANS FOR PARTITION TYPE; RUBBER BASE; PERIMETER CAULKED FOR ACOUSTIC SEAL AT PARTITIONS; FLOOR FINISH — RUBBER BASE SECTION<br>13mm REVEAL; RUBBER BASE; FLOOR FINISH; 115; DOOR FRAME; TRIM RUBBER BASE TIGHT AGAINST DOOR FRAME — RUBBER BASE ELEVATION | |

## DOOR TYPES




## ABBREVIATION LEGEND

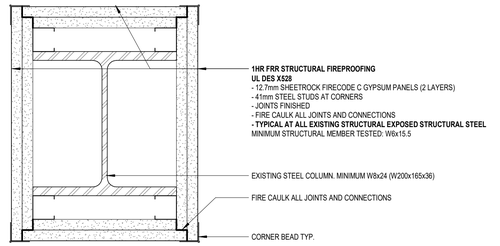
| | |
|---|---|
| HM | HOLLOW METAL |
| PT | PAINTED |
| SCW | SOLID CORE WOOD |
| WD | WOOD |
| GL | GLAZING |

## DOOR SCHEDULE

| DOOR NUMBER | DOOR TYPE | DOOR WIDTH | DOOR HEIGHT | DOOR MATERIAL | DOOR FINISH | GLASS TYPE | FRAME MATERIAL | FRAME FINISH | FRAME TYPE | FIRE RATING (MIN) | COMMENTS | Level |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| D01A | A1 | 965 | 2134 | SCW | WD-2a | N/A | HM | PT | | 45 MIN | JANITOR CLOSET | LOWER LEVEL |
| D01B | A1 | 760 | 2134 | SCW | WD-2a | N/A | HM | PT | | | SINGLE STALL WASHROOM, PROVIDE 25mm UNDERCUT | LOWER LEVEL |
| D01C | A1 | 760 | 2134 | SCW | WD-2a | N/A | HM | PT | | | SINGLE STALL WASHROOM, PROVIDE 25mm UNDERCUT | LOWER LEVEL |
| D01D | A1 | 760 | 2134 | SCW | WD-2a | N/A | HM | PT | | | SINGLE STALL WASHROOM, PROVIDE 25mm UNDERCUT | LOWER LEVEL |
| D01E | A1 | 965 | 2134 | SCW | WD-2a | N/A | HM | PT | | | SINGLE STALL WASHROOM, PROVIDE 25mm UNDERCUT | LOWER LEVEL |
| D02A | B2 | 854 | 2388 | SCW | WD-2a | GL-1 | HM | PT | | | KEY | LOWER LEVEL |
| D02B | A1 | 965 | 2134 | SCW | WD-2a | N/A | HM | PT | | | KEY | LOWER LEVEL |
| D03A | B2 | 850 | 2390 | SCW | WD-2a | GL-1 | HM | PT | | | KEY | LOWER LEVEL |
| D03B | A2 | 1700 | 2134 | SCW | WD-2a | N/A | HM | PT | | | | LOWER LEVEL |
| D04a | B2 | 965 | 2134 | SCW | WD-2a | GL-2 | HM | PT | | 45 MIN | PANIC BAR, KEY CARD | LOWER LEVEL |
| D04b | B2 | 965 | 2134 | SCW | WD-2a | GL-2 | HM | PT | | 45 MIN | KEY CARD | LOWER LEVEL |
| D05 | A2 | 1700 | 2134 | HM | PT | N/A | HM | PT | | 45 MIN | PANIC BAR | LOWER LEVEL |
| D06 | A2 | 965 | 2134 | SCW | WD-2a | GL-2 | HM | PT | | 45 MIN | PANIC BAR, KEY CARD | LOWER LEVEL |

**DOOR NOTES:**

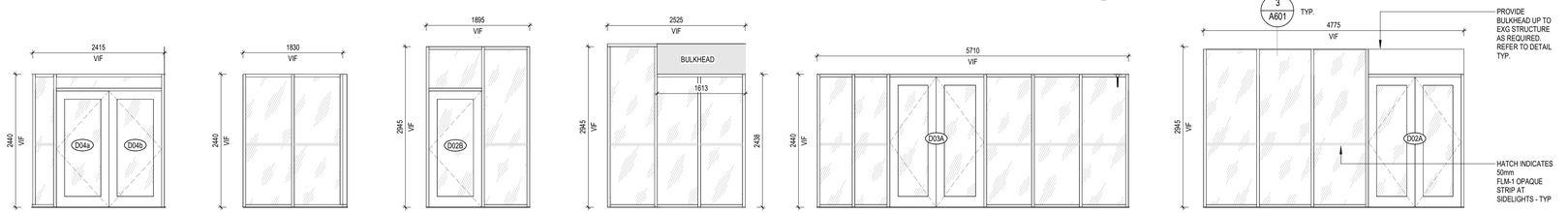
1. DOOR HARDWARE BY CASH ALLOWANCE
2. SOLID CORE WOOD (SCW) DOORS ACCEPTABLE MANUFACTURERS:
   A. BAILLARGEON BY MASONITE ARCHITECTURAL
   B. LAMBTON DOORS
3. HOLLOW METAL (HM) DOORS ACCEPTABLE MANUFACTURERS:
   A. ALL STEEL DOORS 2000 LTD.
   B. APEX INDUSTRIES INC.
   C. ARTEK DOOR (1985) LTD.
   D. DAYBAR INDUSTRIES LTD.
   E. FLEMING-BARON DOOR PRODUCTS.
   F. M.J. DALEY MANUFACTURING CO. LTD.
   G. TRILLIUM STEEL DOORS LIMITED.
   H. VISION HOLLOW METAL LIMITED.



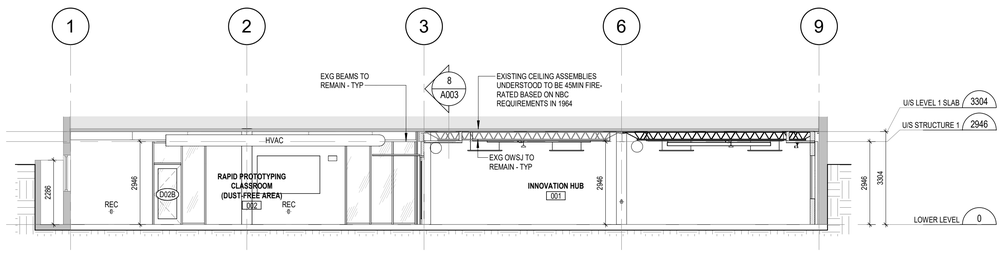

10 A003 PLAN DETAIL - STRUCTURAL FIREPROOFING
1 : 5

## SCREEN SCHEDULE (WIP)

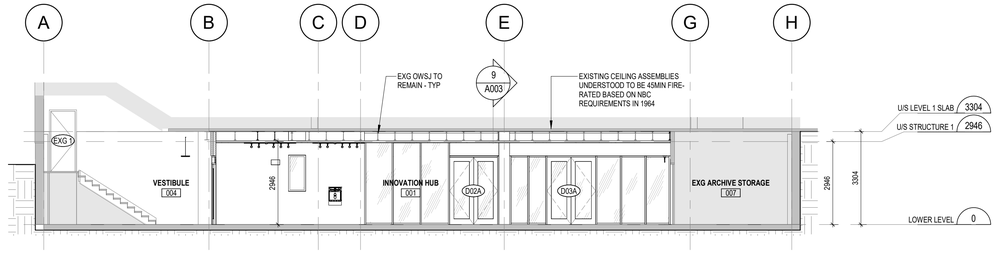
| MARK | WIDTH | HEIGHT | FRAME MATERIAL | GLAZING TYPE | FRR | COMMENTS |
|---|---|---|---|---|---|---|
| S202 | 4774 | 2946 | HM | GL-1 | | |
| S203 | 1281 | 2440 | HM | GL-1 | | |
| S204 | 2546 | 2946 | HM | GL-1 | | |
| S205 | 1896 | 2946 | HM | GL-1 | | |
| S206 | 1830 | 2440 | HM | GL-2 | 1 HR | |
| S207 | 2414 | 2440 | HM | GL-2 | 1 HR | |




7 A003 S207 1 : 50
6 A003 S206 1 : 50
5 A003 S205 1 : 50
4 A003 S204 1 : 50
3 A003 S203 1 : 50
2 A003 S202 1 : 50




9 A003 BUILDING SECTION B
1 : 100




8 A003 BUILDING SECTION A
1 : 100


Architecture Counsel
4 CLINTON PL, TORONTO, ON M6G 1J9 T 416-603-1515



All drawings and specifications are the property of the architect. The contractor shall verify all dimensions and information on site and report any discrepancy to architect before proceeding.


**HATCH LEGEND**

- EXG WALL TO REMAIN
- OUT OF SCOPE
- NEW SCOPE OF WORK

| | | |
|---|---|---|
| 2 | 2026.11.06 | ISSUED FOR TENDER |
| 1 | 2026.10.06 | ISSUED FOR PERMIT |
| | DATE | REVISION |

ONTARIO ASSOCIATION OF ARCHITECTS — OLIVER ANTHONY BECK LICENCE 6729

# PICKERING COLLEGE

16945 Bayview Ave, Newmarket, ON L3Y 3W7

## CONSTRUCTION ASSEMBLIES, WINDOW, DOOR & SCREEN SCHEDULES, SECTION

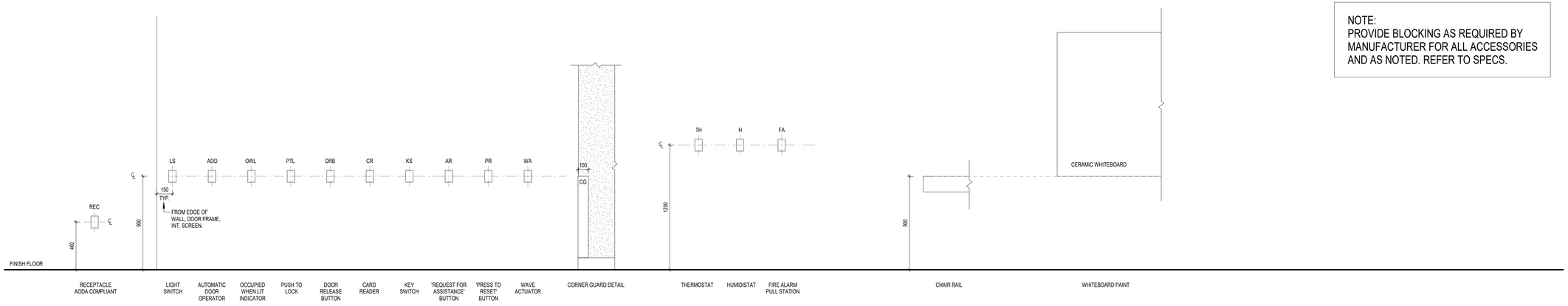
| | |
|---|---|
| Scale: | As indicated |
| Drawn by: | CL |
| Reviewed by: | CL/OB |
| Job number: | 25168 |
| Plot date: | 2026.11.06 |

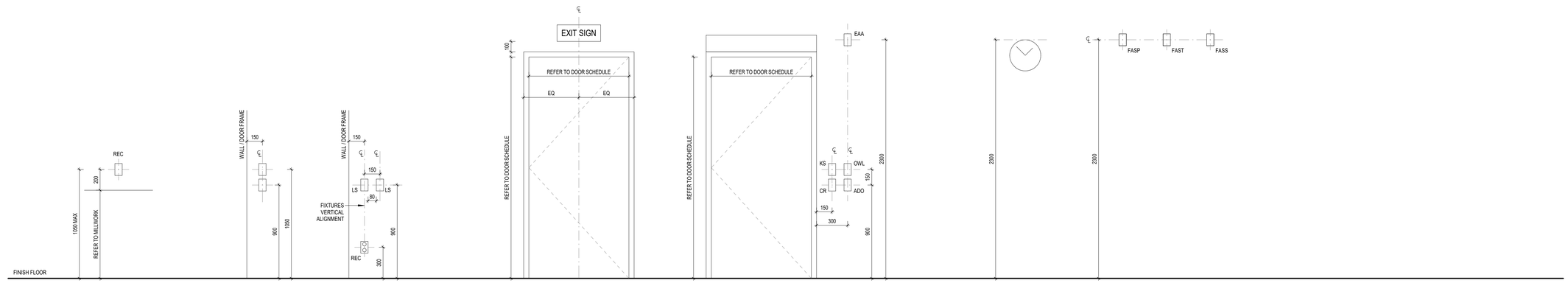
Drawing number:

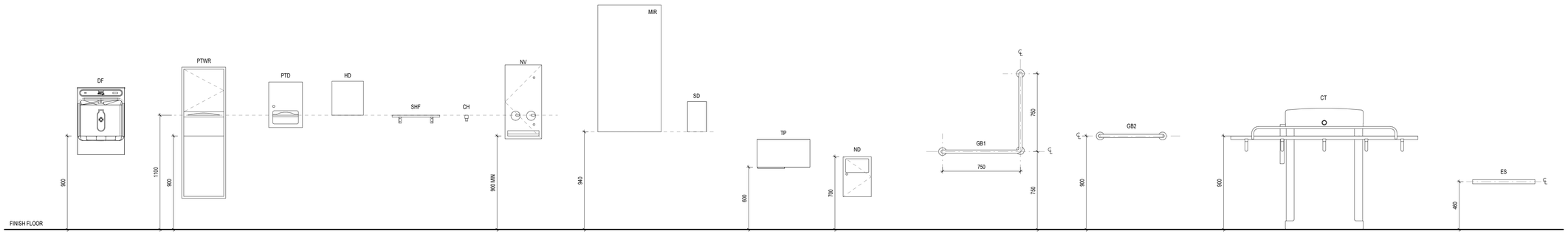
A003

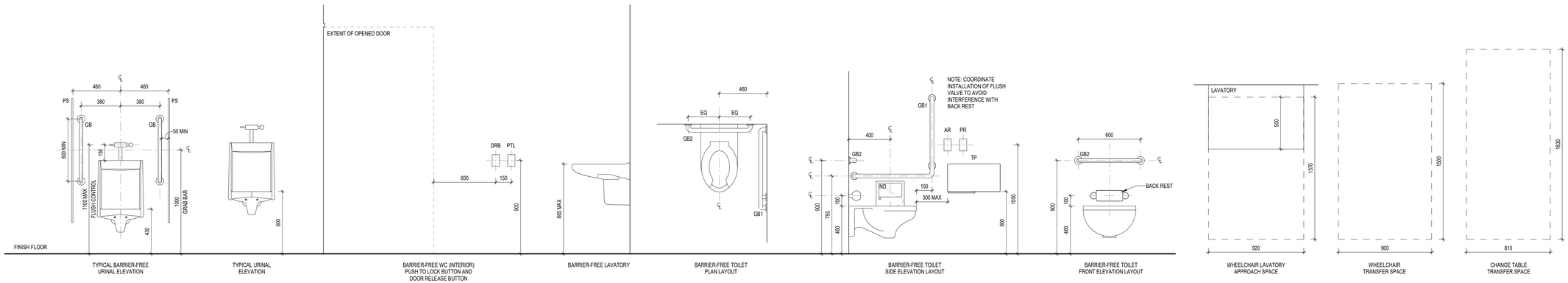

2026-11-10 5:44:35 PM Autodesk Docs://Pickering College Innovation Hub and Wellness Space/Pickering College Innovation Hub V03 - Proposed Tender.rvt

NOTE:
PROVIDE BLOCKING AS REQUIRED BY MANUFACTURER FOR ALL ACCESSORIES AND AS NOTED. REFER TO SPECS.





Architecture Counsel
4 CLINTON PL, TORONTO, ON M6G 1J9 T 416-603-1515



All drawings and specifications are the property of the architect. The contractor shall verify all dimensions and information on site and report any discrepancy to architect before proceeding.


| | DATE | REVISION |
|---|---|---|
| 1 | 2026.11.06 | ISSUED FOR TENDER |

ONTARIO ASSOCIATION OF ARCHITECTS
OLIVER ANTHONY BECK
LICENCE
6729

# PICKERING COLLEGE

16945 Bayview Ave, Newmarket, ON L3Y 3W7

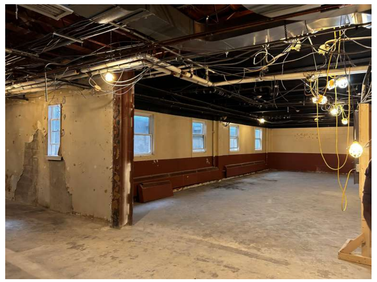
## TYPICAL MOUNTING HEIGHTS

| | |
|---|---|
| Scale: | 1 : 20 |
| Drawn by: | CL / TB |
| Reviewed by: | Checker |
| Job number: | 25168 |
| Plot date: | 2026.11.06 |

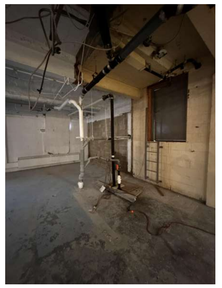
Drawing number:

A004

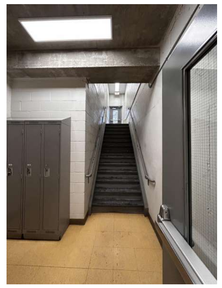

2026-11-06 5:33:05 PM Autodesk Docs://Pickering College Innovation Hub and Wellness Space/Pickering College Innovation Hub V03 - Proposed Tender.rvt



1.



2.



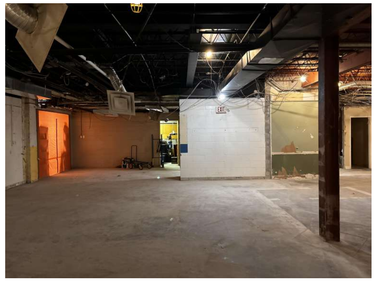
3.



4.



5.



6.

**DEMOLITION & SITE PREPARATION NOTES**

**GENERAL NOTES**

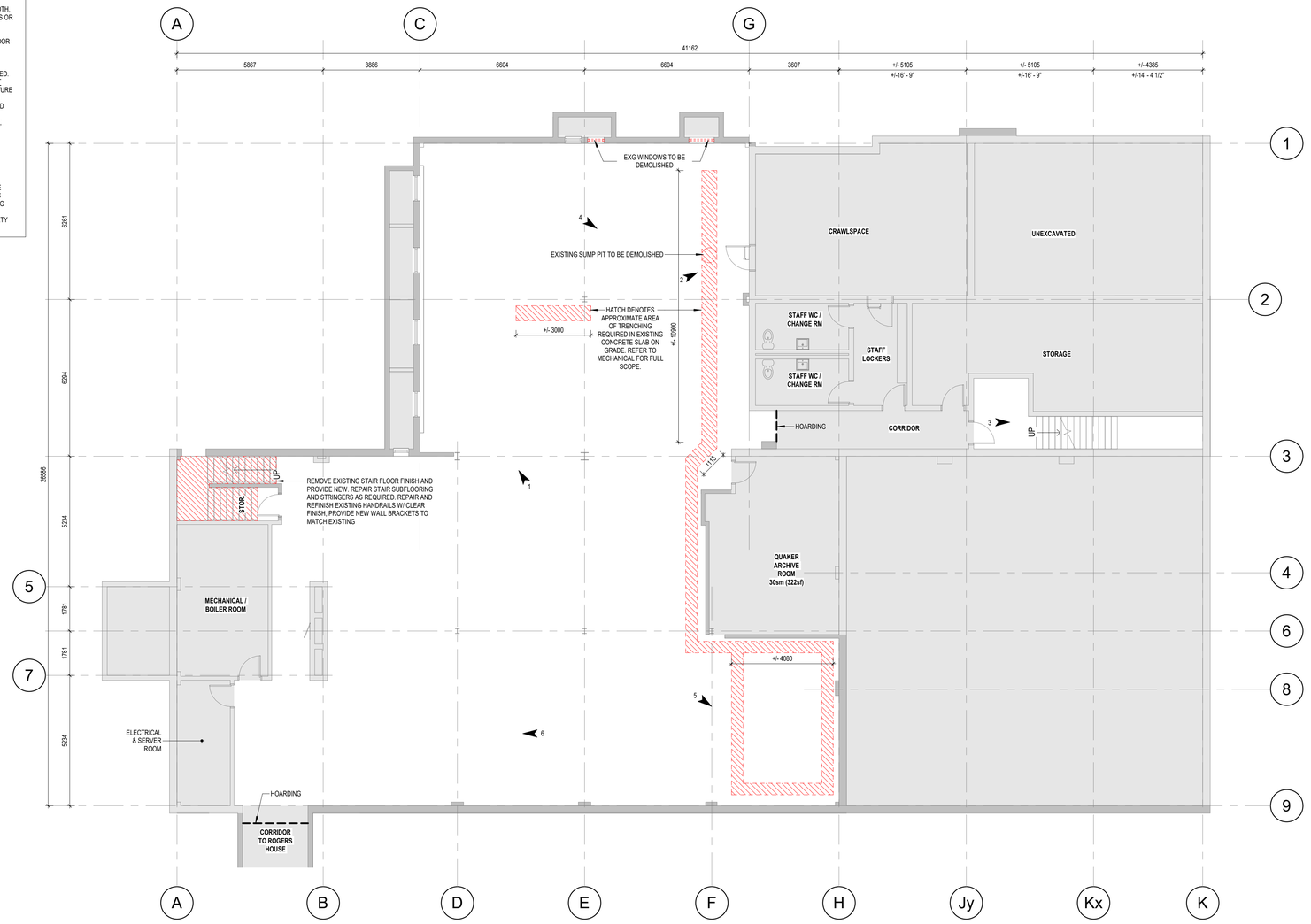
1. THE INTENT OF THIS DRAWING IS TO OUTLINE THE SCOPE OF WORK FOR THE DEMOLITION REQUIRED FOR THIS PROJECT. IT IS THE CONTRACTOR'S RESPONSIBILITY TO ENSURE THAT ALL DEMOLITION FOR THE PROJECT IS PERFORMED AS REQUIRED.
2. REFER TO STRUCTURAL, MECHANICAL, ELECTRICAL, CIVIL DRAWINGS FOR ADDITIONAL ASSOCIATED DEMOLITION WITHIN THE SCOPE OF THIS PROJECT.
3. DURING DEMOLITION AND CONSTRUCTION, ANY DAMAGE TO EXG. ITEMS TO REMAIN SHALL BE REPAIRED BY THE CONTRACTOR AT NO COST TO THE OWNER. ITEMS INCLUDE BUT ARE NOT LIMITED TO, INTERIOR & EXTERIOR FINISHES, ROOFING, WINDOWS, FLOORING, CEILING, MILLWORK, ETC. IF THE SCOPE OF DEMOLITION IS UNCLEAR, NOTIFY ARCHITECT FOR CLARIFICATIONS.
4. WHERE EXG. SURFACES ARE DISTURBED DUE TO DEMOLITION OR ALTERATION AND NOT REQUIRED TO BE COVERED WITH NEW FINISHES, SUCH SURFACES SHALL BE MADE GOOD TO MATCH EXG. MATERIALS AND FINISHES.
5. WHERE EXG. WALLS AND BUILDING FITMENTS ARE BEING REMOVED, MAKE GOOD SUBSTRATES TO RECIEVE NEW SPECIFIED MATERIALS AND FINISHES.
6. WHERE EXG. FINISHES ARE BEING MAINTAINED, CONTRACTOR TO PROVIDE PROTECTION THOUGHOUT CONSTRUCTION.
7. MAINTAIN INTEGRITY OF EXG. FIRE RATINGS THROUGHOUT, WHERE APPLICABLE. PATCH, REPAIR & MAKE GOOD OF ALL MATERIALS AS REQUIRED. SITE VERIFY EXG. FIRE-RATINGS & APPLICABLE ULC/BUILDING CODE CONSTRUCTION ASSEMBLIES.
8. ALL BIDDERS SHALL VISIT THE SITE AND THOROUGHLY EXAMINE EXG. CONDITIONS IN ORDER TO FAMILIARIZE THEMSELVES WITH THE EXTENT OF THE DEMOLITION AND REMOVAL OF WORK REQUIRED TO PROPERLY EXECUTE THE DEMOLITION PORTION OF THE CONTRACT. IF THE SCOPE OF DEMOLITION IS UNCLEAR, NOTIFY ARCHITECT FOR CLARIFICATIONS PRIOR TO SUBMITTING TENDER BID.
9. WHERE CEILINGS ARE TO BE DEMOLISHED, SALVAGE AND RETURN TO OWNER ALL EXISTING CEILING MOUNTED EQUIPMENT INCLUDING BUT NOT LIMITED TO LIGHTS, SIGNAGE ETC. DEMOLISH UNUSED CONDUIT AND WIRES TO SOURCE.

**ARCHITECTURAL:**

1. WINDOWS & DOORS:
   - A. PROTECT ALL EXG. WINDOWS AND DOORS TO REMAIN.
   - B. PATCH, REPAIR AND MAKE GOOD INTERIOR FINISHES, AT PERIMETER OF ALL WINDOWS AND DOOR OPENINGS.
2. FLOORING:
   - A. PATCH, REPAIR & MAKE GOOD EXG. FLOOR TO BE SMOOTH, LEVELLED AND VOID OF WAVES, MATERIALS AND BUMPS OR DEPRESSIONS. READY EXG. FLOOR TO ACCEPT NEW SPECIFICATIONS AND FLOOR MANUFACTURER'S REQUIREMENTS. SEE FINISH SCHEDULE. REFER TO FLOOR FINISHES PLAN AND SPECIFICATIONS.
3. WALLS & WALL BASE:
   - A. REMOVE ALL WALL BASE.
   - B. PATCH, REPAIR & FILL ALL EXG. WALLS TO BE MAINTAINED.
4. MISCELLANEOUS ITEMS, SIGNAGE, FURNITURE, EQUIPMENT
   - A. ALL EXG. MISC. ITEMS, SIGNAGE, TACK BOARDS, FURNITURE AND EQUIPMENT TO BE REMOVED BY OWNER PRIOR TO CONSTRUCTION. ANY REMAINING ITEMS TO BE REMOVED AND DISPOSED OF BY GC.
   - B. DEMOLISH ALL CURTAINS, BASKETS, CAGES, SWITCHES, DEVICES, FIXTURES, ACCESS PANELS, ETC.

**MECHANICAL:** (REFER TO MECHANICAL DRAWINGS FOR ADDITIONAL DETAILS)

1. EXG. SERVICES:
   - A. EXG. FIRE SYSTEM EQUIPMENT, INCLUDING AND NOT LIMITED TO, FIRE HOSE CABINETS, PULL STATIONS, FIRE ALARMS, ARE TO REMAIN. REMOVE AND RE-INSTATE AS REQUIRED. TESTING AND VERIFICATION OF ALL EXISTING DEVICES TO MEET INTENT OF NEW WORK.
   - B. MAINTAIN FIRE-RATING INTEGRITY, REFER TO LIFE SAFETY PLAN.




2 A200 BASEMENT DEMOLITION PLAN
1 : 100


Architecture Counsel

4 CLINTON PL, TORONTO, ON M6G 1J9 T 416-603-1515



All drawings and specifications are the property of the architect. The contractor shall verify all dimensions and information on site and report any discrepancy to architect before proceeding.


Project North / True North

**HATCH LEGEND**

- EXG WALL TO REMAIN
- OUT OF SCOPE
- NEW SCOPE OF WORK
- EXG WALLS / FIXTURES TO BE DEMOLISHED

| | DATE | REVISION |
|---|---|---|
| 2 | 2026.11.06 | ISSUED FOR TENDER |
| 1 | 2026.10.06 | ISSUED FOR PERMIT |

ONTARIO ASSOCIATION OF ARCHITECTS
OLIVER ANTHONY BECK
LICENCE 6729

# PICKERING COLLEGE

16945 Bayview Ave, Newmarket, ON L3Y 3W7

# LOWER LEVEL DEMOLITION PLAN

| | |
|---|---|
| Scale: | As indicated |
| Drawn by: | CL |
| Reviewed by: | CL/OB |
| Job number: | 25168 |
| Plot date: | 2026.11.06 |

Drawing number:

A200


2026-11-06 5:33:07 PM Autodesk Docs://Pickering College Innovation Hub and Wellness Space/Pickering College Innovation Hub V03 - Proposed Tender.rvt




## HATCH LEGEND

- EXG WALL TO REMAIN
- OUT OF SCOPE
- NEW SCOPE OF WORK

1 A202 LOWER LEVEL FLOOR PLAN - ENLARGED
1 : 50


# Architecture Counsel

4 CLINTON PL, TORONTO, ON M6G 1J9 T 416-603-1515



All drawings and specifications are the property of the architect. The contractor shall verify all dimensions and information on site and report any discrepancy to architect before proceeding.


Project North True North

| | | |
|---|---|---|
| 2 | 2026.11.06 | ISSUED FOR TENDER |
| 1 | 2026.10.06 | ISSUED FOR PERMIT |
| | DATE | REVISION |

ONTARIO ASSOCIATION OF ARCHITECTS
OLIVER ANTHONY BECK
LICENCE 6729

# PICKERING COLLEGE

16945 Bayview Ave, Newmarket, ON L3Y 3W7

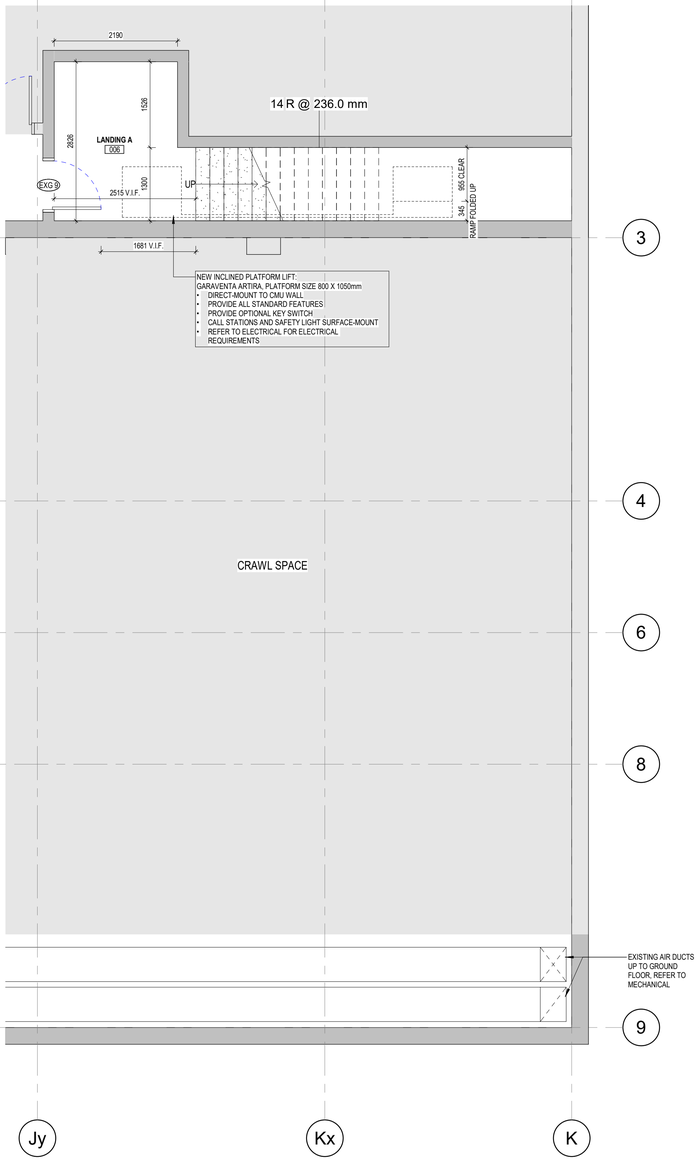
# LOWER LEVEL FLOOR PLAN

| | |
|---|---|
| Scale: | 1 : 50 |
| Drawn by: | CL |
| Reviewed by: | CL/OB |
| Job number: | 25168 |
| Plot date: | 2026.11.06 |

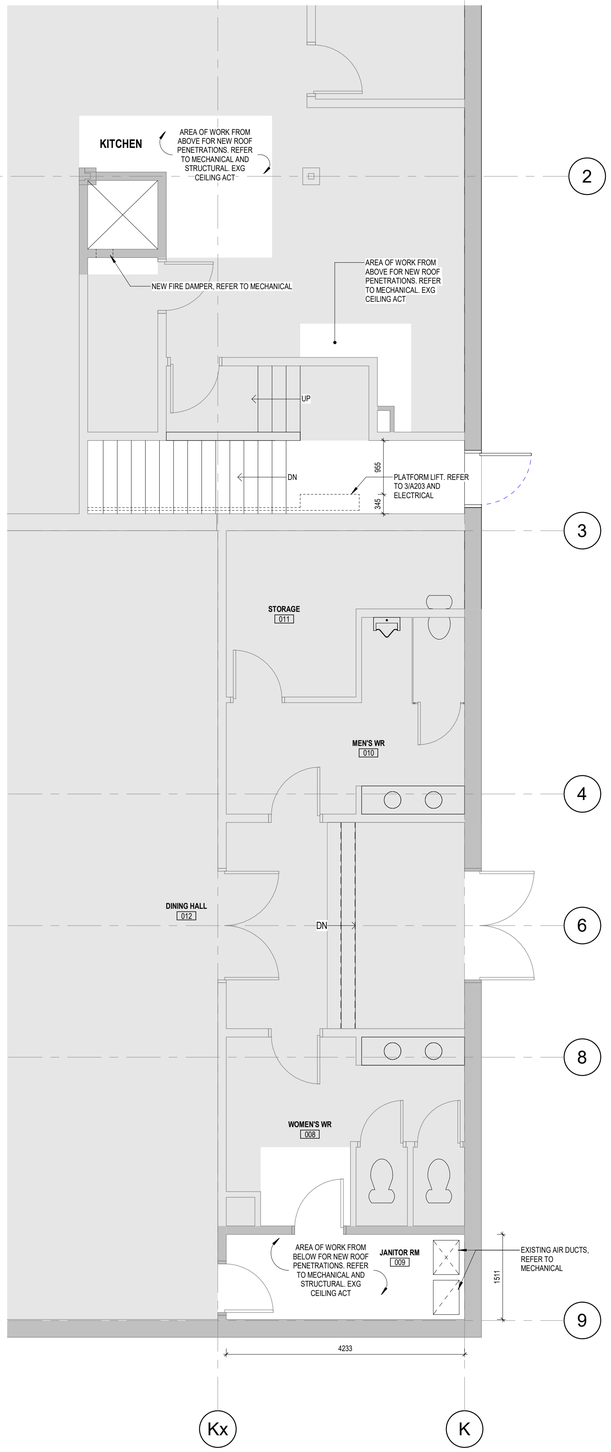
Drawing number:

A202

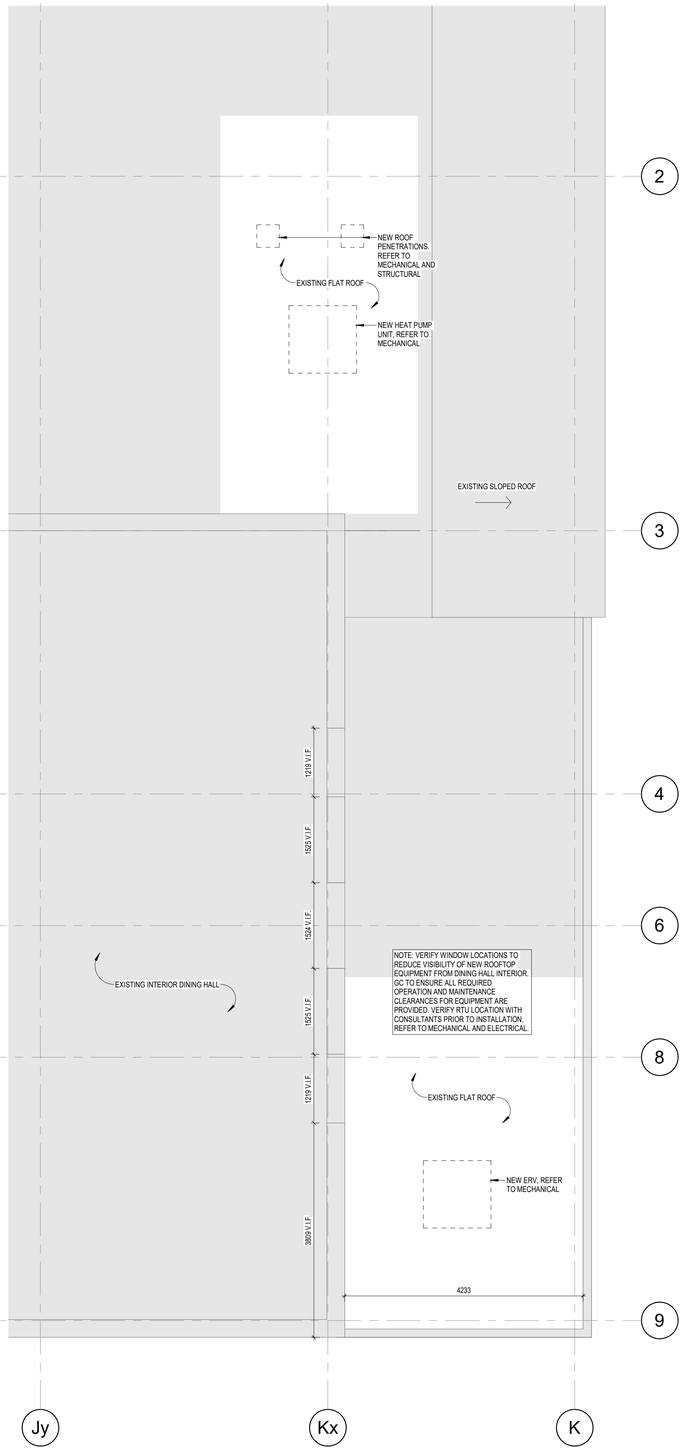

2026-11-10 5:46:31 PM Autodesk Docs://Pickering College Innovation Hub and Wellness Space/Pickering College_Innovation Hub V03 - Proposed Tender.rvt




3 A203 LOWER LEVEL PARTIAL (REAR STAIR)
1 : 50




1 A203 DINING HALL PARTIAL GROUND FLOOR PLAN
1 : 50




2 A203 DINING HALL PARTIAL ROOF PLAN
1 : 50


# Architecture Counsel

4 CLINTON PL, TORONTO, ON M6G 1J9 T 416-603-1515



All drawings and specifications are the property of the architect. The contractor shall verify all dimensions and information on site and report any discrepancy to architect before proceeding.


Project North / True North

**HATCH LEGEND**

- EXG WALL TO REMAIN
- OUT OF SCOPE
- NEW SCOPE OF WORK

| | DATE | REVISION |
|---|---|---|
| 2 | 2026.11.06 | ISSUED FOR TENDER |
| 1 | 2026.10.06 | ISSUED FOR PERMIT |

ONTARIO ASSOCIATION OF ARCHITECTS
OLIVER ANTHONY BECK
LICENCE
6729

## PICKERING COLLEGE

16945 Bayview Ave, Newmarket, ON L3Y 3W7

## DINING HALL PARTIAL GROUND FLOOR & ROOF PLAN

| | |
|---|---|
| Scale: | 1 : 50 |
| Drawn by: | CL |
| Reviewed by: | CL/OB |
| Job number: | 25168 |
| Plot date: | 2026.11.06 |

Drawing number:

# A203


2026-11-06 5:33:08 PM Autodesk Docs://Pickering College Innovation Hub and Wellness Space/Pickering College Innovation Hub V03 - Proposed Tender.rvt

## WALL FINISH LEGEND & GENERAL NOTES

### GC SUPPLIED & INSTALLED ITEMS

- STORAGE MILLWORK
- PLUMBING FIXTURES

### OWNER SUPPLIED & INSTALLED ITEMS

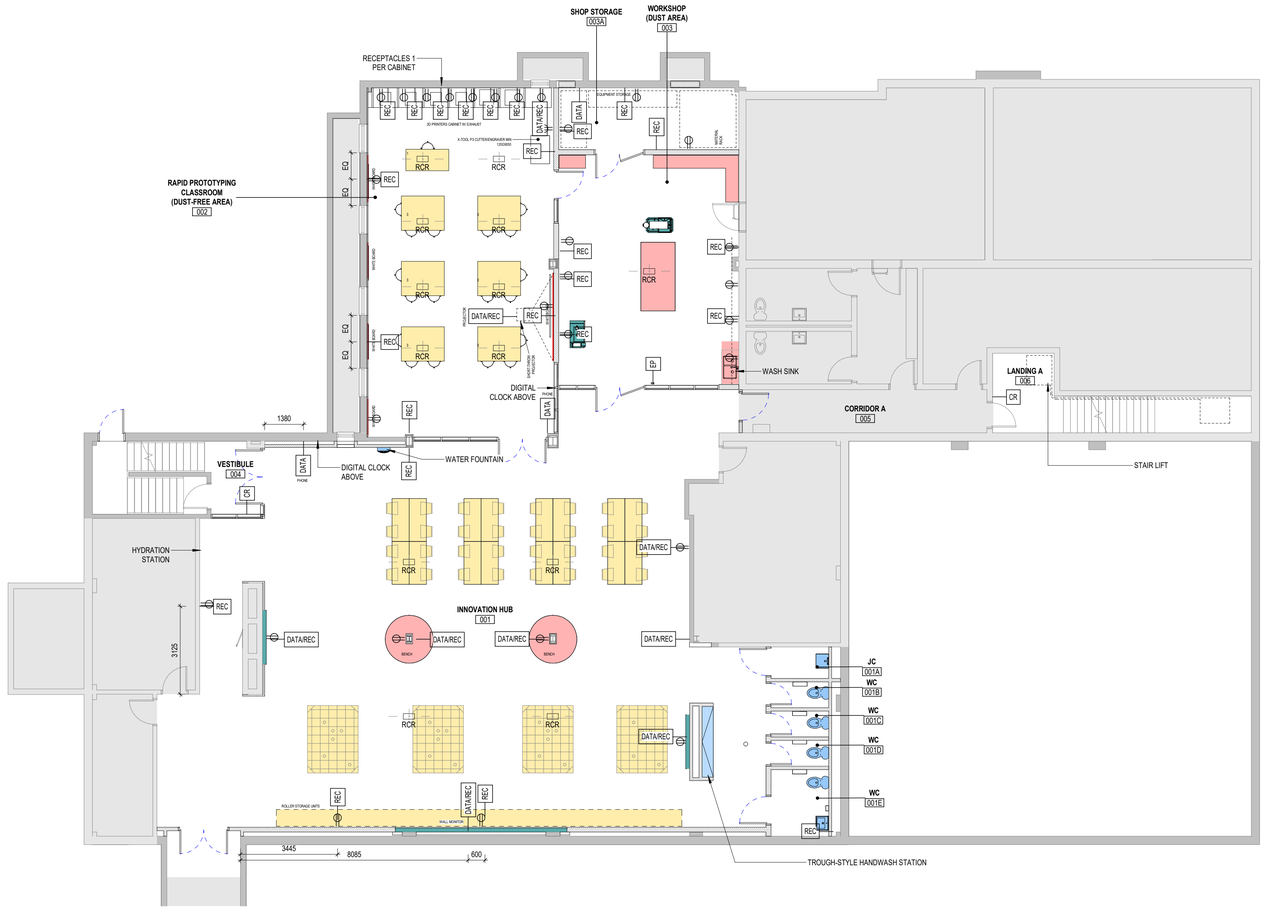
- NEW FURNITURE
- EQUIPMENT
- MACHINERY
- WHITEBOARD

### ELECTRICAL LEGEND

- CR — CARD READER
- DATA — DATA OUTLET
- FP — FIRE PULL
- REC — POWER RECEPTACLE
- RCR — CEILING MOUNTED RETRACTABLE DATA & POWER CABLE REEL
- FLR — FLOOR MOUNTED RECEPTACLE
- EP — EMERGENCY PAGER

## ROOM FINISHES SCHEDULE

| ROOM NO. | ROOM NAME | FOOR FINISH | WALL BASE | WALL FINISH | CEILING FINISH | COMMENTS |
|---|---|---|---|---|---|---|
| 001 | INNOVATION HUB | CONC-1 | B1 | PT | PT | |
| 001A | JC | CONC-1 | B1 | PCT-1 | PT | |
| 001B | WC | CONC-1 | N/A | PCT-1 | PT | |
| 001C | WC | CONC-1 | N/A | PCT-1 | PT | |
| 001D | WC | CONC-1 | N/A | PCT-1 | PT | |
| 001E | WC | CONC-1 | N/A | PCT-1 | PT | |
| 001F | ROBOT STORAGE CLOSET | CONC-1 | B1 | PT | PT | |
| 002 | RAPID PROTOTYPING CLASSROOM(DUST-FREE AREA) | CONC-1 | B1 | PT | PT | |
| 003 | WORKSHOP(DUST AREA) | CONC-1 | B1 | PT | PT | |
| 003A | SHOP STORAGE | CONC-1 | B1 | PT | PT | |
| 003B | ACCESS CLOSET | CONC-1 | 1B | PT | PT | |
| 004 | VESTIBULE | CONC-1 | B1 | PT | PT | |
| 005 | CORRIDOR A | CONC-1 | EXG | PT | PT | |
| 006 | LANDING A | CONC-1 | EXG | N/A | N/A | |
| 008 | WOMEN'S WR | | | | | |
| 009 | JANITOR RM | | | | | |
| 010 | MEN'S WR | | | | | |
| 011 | STORAGE | | | | | |
| 012 | DINING HALL | | | | | |



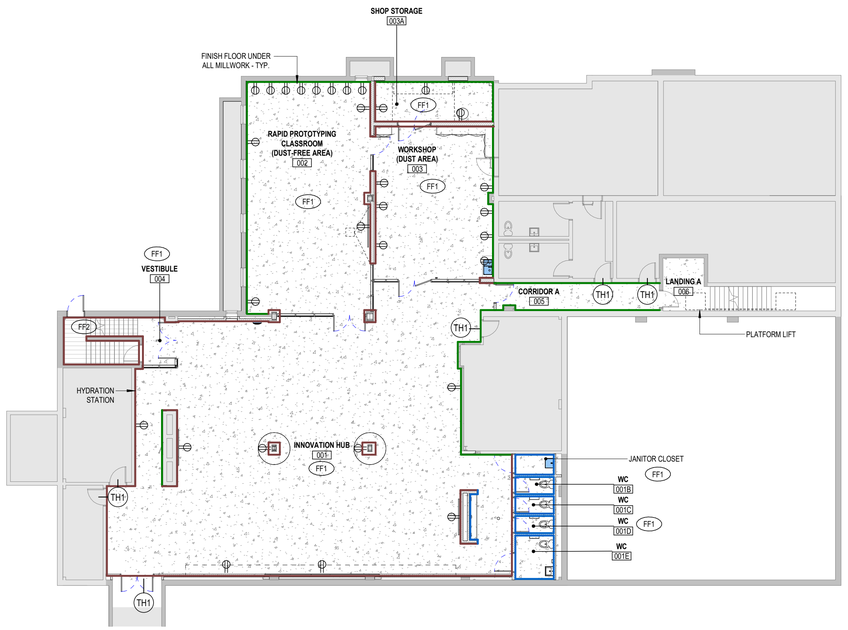

1 A205 LOWER LEVEL FF&E
1 : 100

## FLOORING TYPE

| TYPE | DESCRIPTION | |
|---|---|---|
| FF1 | CONC-1 | |
| FF2 | RFL-1 | |

## WALL FINISH LEGEND & GENERAL NOTES

- SEALED BIRCH PLY (OPTION)
- PAINTED MASONRY
- PAINTED GWB
- TILE




2 A205 LOWER LEVEL FINISHES
1 : 150


Architecture Counsel

4 CLINTON PL, TORONTO, ON M6G 1J9 T 416-603-1515



All drawings and specifications are the property of the architect. The contractor shall verify all dimensions and information on site and report any discrepancy to architect before proceeding.


Project North / True North

## HATCH LEGEND

- EXG WALL TO REMAIN
- OUT OF SCOPE
- NEW SCOPE OF WORK

| | DATE | REVISION |
|---|---|---|
| 1 | 2026.11.06 | ISSUED FOR TENDER |

ONTARIO ASSOCIATION OF ARCHITECTS — OLIVER ANTHONY BECK — LICENCE 6729

# PICKERING COLLEGE

16945 Bayview Ave, Newmarket, ON L3Y 3W7

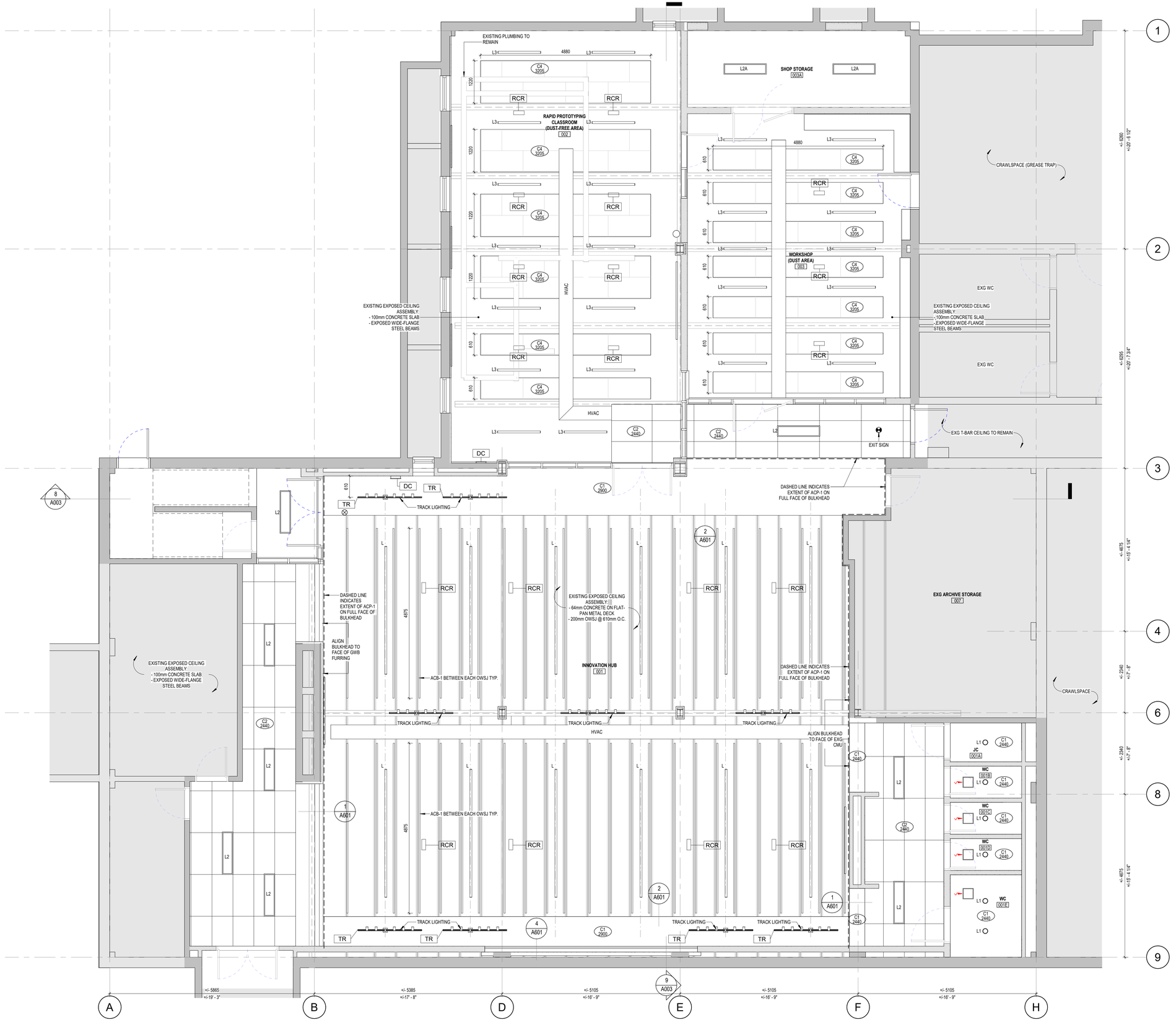
# LOWER LEVEL FLOOR PLAN FINISHES

| | |
|---|---|
| Scale: | As indicated |
| Drawn by: | CL / TB |
| Reviewed by: | Checker |
| Job number: | 25168 |
| Plot date: | 2026.11.06 |

Drawing number:

A205


2026-11-06 5:33:09 PM Autodesk Docs://Pickering College Innovation Hub and Wellness Space/Pickering College Innovation Hub V03 - Proposed Tender.rvt





# Architecture Counsel

4 CLINTON PL, TORONTO, ON M6G 1J9 T 416-603-1515



All drawings and specifications are the property of the architect. The contractor shall verify all dimensions and information on site and report any discrepancy to architect before proceeding.


Project North / True North

## HATCH LEGEND

- EXG WALL TO REMAIN
- OUT OF SCOPE
- NEW SCOPE OF WORK

| | | |
|---|---|---|
| 2 | 2026.11.06 | ISSUED FOR TENDER |
| 1 | 2026.10.06 | ISSUED FOR PERMIT |
| | DATE | REVISION |

ONTARIO ASSOCIATION OF ARCHITECTS — OLIVER ANTHONY BECK LICENCE 6729

# PICKERING COLLEGE

16945 Bayview Ave, Newmarket, ON L3Y 3W7

# LOWER LEVEL REFLECTED CEILING PLAN

| | |
|---|---|
| Scale: | 1 : 50 |
| Drawn by: | CL |
| Reviewed by: | CL/OB |
| Job number: | 25168 |
| Plot date: | 2026.11.06 |

Drawing number:

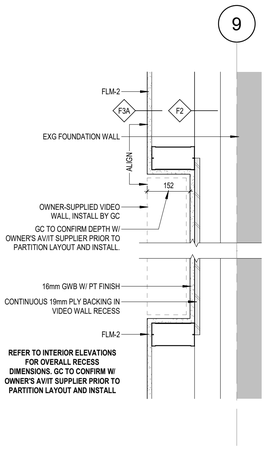
**A231**


2026-11-06 5:33:09 PM Autodesk Docs://Pickering College Innovation Hub and Wellness Space/Pickering College Innovation Hub V03 - Proposed Tender.rvt

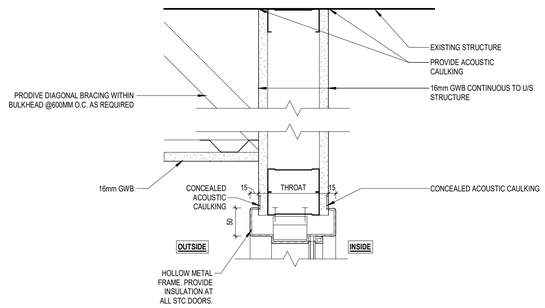
Architecture Counsel

4 CLINTON PL, TORONTO, ON M6G 1J9 T 416-603-1515

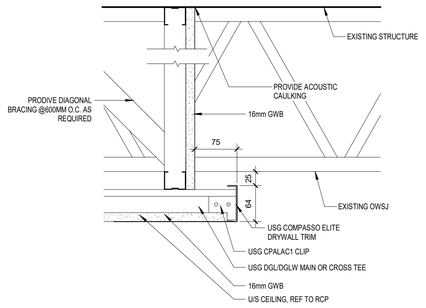
All drawings and specifications are the property of the architect.
The contractor shall verify all dimensions and information on site
and report any discrepancy to architect before proceeding.



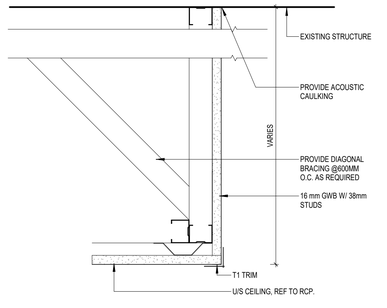

4 A601 SECTION - VIDEO WALL
1 : 10




3 A601 SECTION - CEILING DETAIL @ GWB BULKHEAD ABOVE SCREENS
1 : 5




2 A601 SECTION - CEILING DETAIL @ GWB BULKHEAD 2
1 : 5




1 A601 SECTION - CEILING DETAIL @ GWB BULKHEAD 1
1 : 5

| | DATE | REVISION |
|---|---|---|
| 1 | 2026.11.06 | ISSUED FOR TENDER |

ONTARIO ASSOCIATION OF ARCHITECTS
OLIVER ANTHONY BECK
LICENCE
6729

# PICKERING COLLEGE

16945 Bayview Ave, Newmarket, ON L3Y 3W7

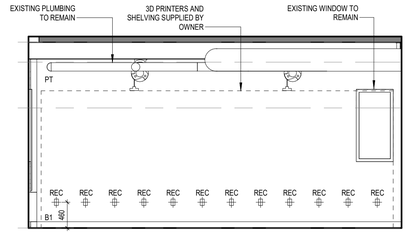
## PLAN & SECTION DETAILS

| | |
|---|---|
| Scale: | As indicated |
| Drawn by: | CL |
| Reviewed by: | CL/OB |
| Job number: | 25168 |
| Plot date: | 2026.11.06 |

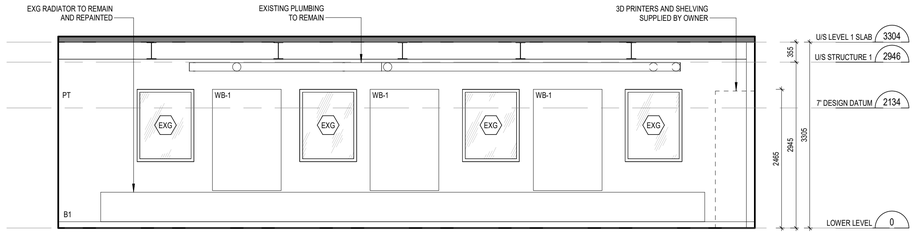
Drawing number:

A601

2026-11-06 5:33:10 PM Autodesk Docs://Pickering College Innovation Hub and Wellness Space/Pickering College, Innovation Hub V03 - Proposed Tender.rvt



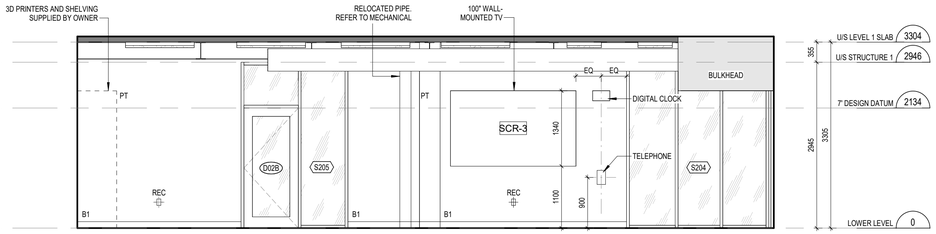

8 A801 CLASSROOM - N
1 : 50



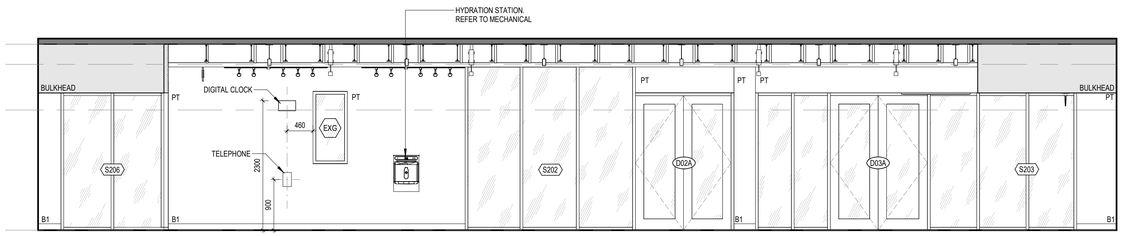

7 A801 CLASSROOM - W
1 : 50



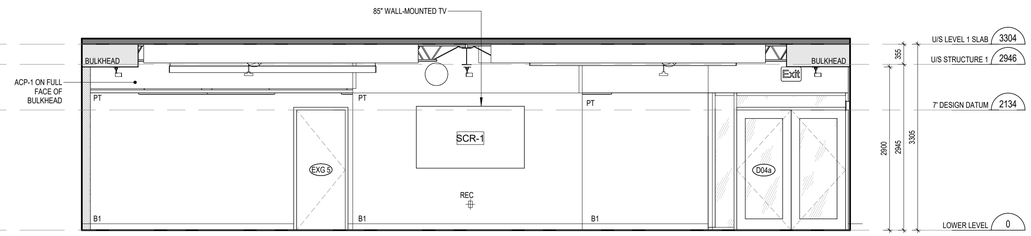

5 A801 CLASSROOM - S
1 : 50



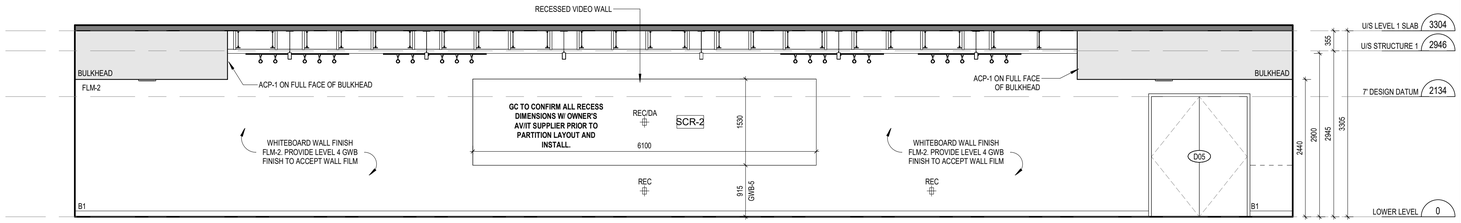

6 A801 CLASSROOM - E
1 : 50



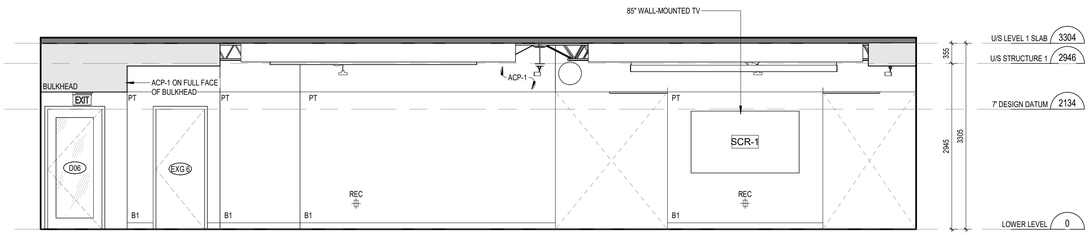

4 A801 INNOVATION HUB - N
1 : 50




3 A801 INNOVATION HUB - W
1 : 50




2 A801 INNOVATION HUB - S
1 : 50




1 A801 INNOVATION HUB - E
1 : 50


# Architecture Counsel

4 CLINTON PL, TORONTO, ON M6G 1J9 T 416-603-1515



All drawings and specifications are the property of the architect. The contractor shall verify all dimensions and information on site and report any discrepancy to architect before proceeding.


Project North / True North

1 2026.11.06 ISSUED FOR TENDER
DATE REVISION

ONTARIO ASSOCIATION OF ARCHITECTS
OLIVER ANTHONY BECK
LICENCE
6729

# PICKERING COLLEGE

16945 Bayview Ave, Newmarket, ON L3Y 3W7

# INTERIOR ELEVATIONS

| | |
|---|---|
| Scale: | 1 : 50 |
| Drawn by: | CL / TB |
| Reviewed by: | Checker |
| Job number: | 25168 |
| Plot date: | 2026.11.06 |

Drawing number:

A801


2026-11-10 5:46:32 PM Autodesk Docs://Pickering College Innovation Hub and Wellness Space/Pickering College Innovation Hub V03 - Proposed Tender.rvt

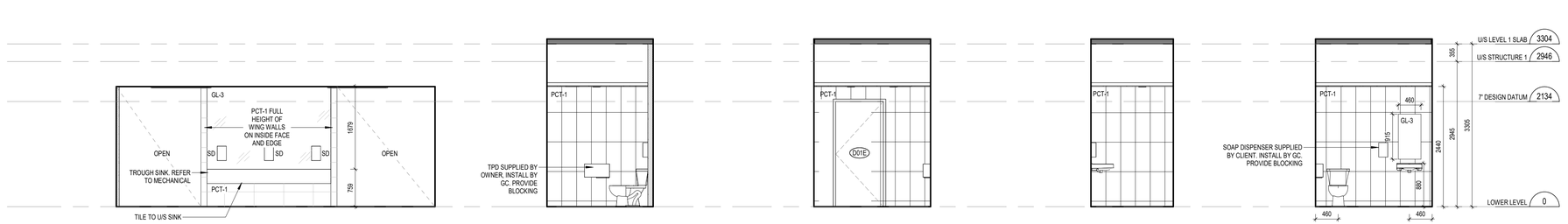
# Architecture Counsel

4 CLINTON PL, TORONTO, ON M6G 1J9 T 416-603-1515



All drawings and specifications are the property of the architect. The contractor shall verify all dimensions and information on site and report any discrepancy to architect before proceeding.


Project North / True North



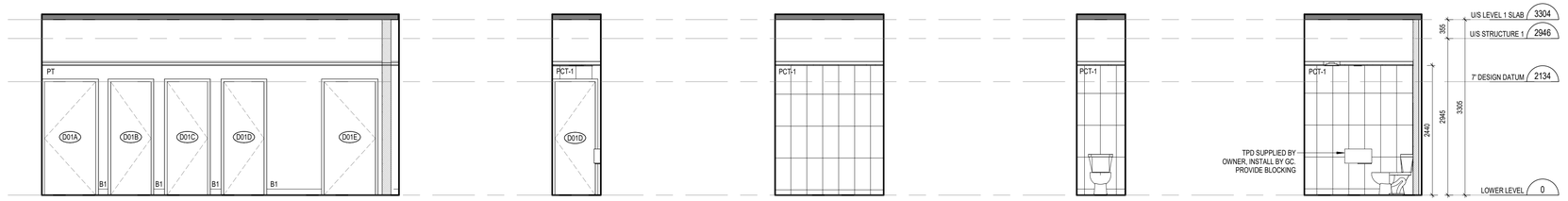

14 A802 WASHROOM ENTRANCES - WEST 1 : 50

13 A802 BF WASHROOM - NORTH 1 : 50

12 A802 BF WASHROOM - WEST 1 : 50

11 A802 BF WASHROOM - SOUTH 1 : 50

10 A802 BARRIER FREE WASHROOM - EAST 1 : 50



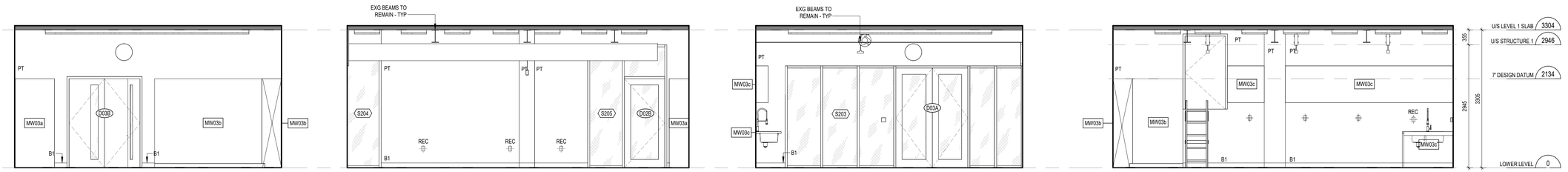

9 A802 WASHROOM ENTRANCES - EAST 1 : 50

8 A802 TYP. WASHROOM - WEST 1 : 50

7 A802 TYP. WASHROOM - SOUTH 1 : 50

6 A802 TYP. WASHROOM - EAST 1 : 50

5 A802 TYPICAL WASHROOM - SOUTH 1 : 50




4 A802 WOODSHOP - N 1 : 50

3 A802 WOODSHOP - W 1 : 50

2 A802 WOODSHOP - S 1 : 50

1 A802 WOODSHOP - E 1 : 50

1 2026.11.06 ISSUED FOR TENDER
DATE REVISION

ONTARIO ASSOCIATION OF ARCHITECTS
OLIVER ANTHONY BECK
LICENCE 6729

# PICKERING COLLEGE

16945 Bayview Ave, Newmarket, ON L3Y 3W7

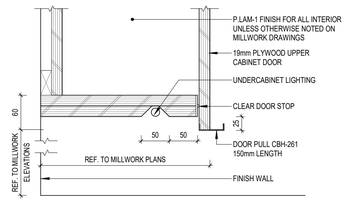
# INTERIOR ELEVATIONS

| | |
|---|---|
| Scale: | 1 : 50 |
| Drawn by: | CL / TB |
| Reviewed by: | Checker |
| Job number: | 25168 |
| Plot date: | 2026.11.06 |

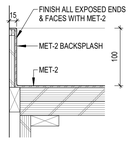
Drawing number:

**A802**

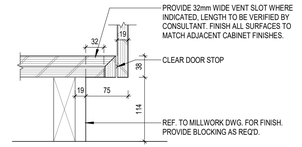

2026-11-10 5:46:34 PM Autodesk Docs://Pickering College Innovation Hub and Wellness Space/Pickering College Innovation Hub V03 - Proposed Tender.rvt



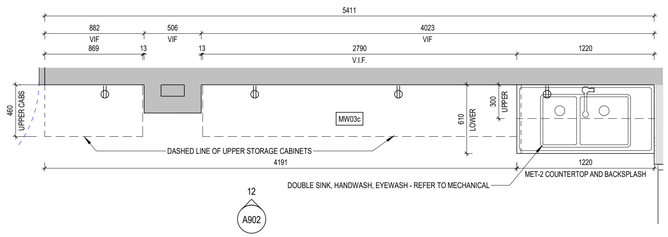

14 A902 U2_UNDERSIDE OF CABINET DETAIL
1 : 5



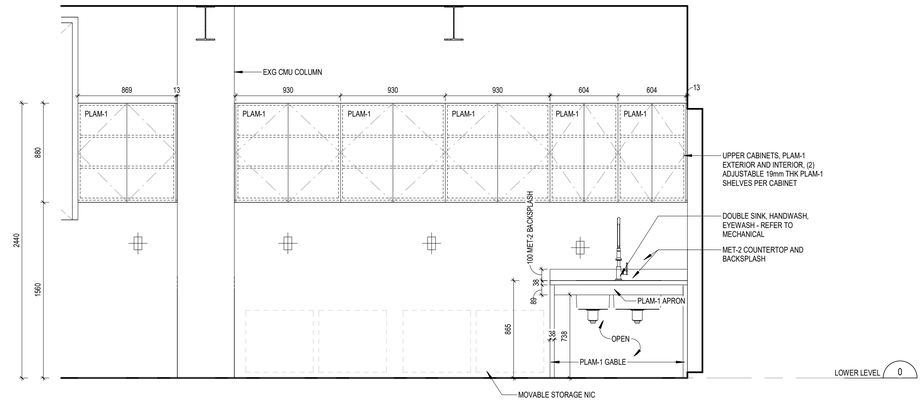

11 A902 BS2_SST COUNTERTOP BACKSPLASH
1 : 5



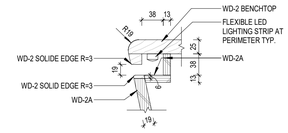

10 A902 B1_BASE DETAIL
1 : 5



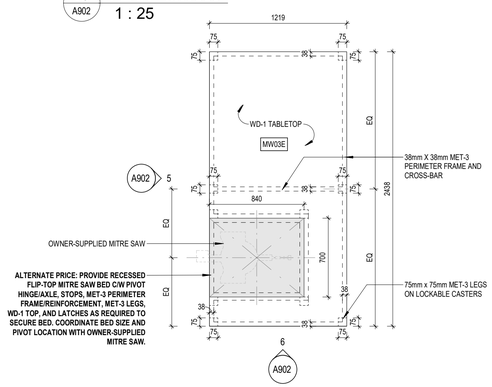

13 A902 PLAN - MW03c
1 : 25



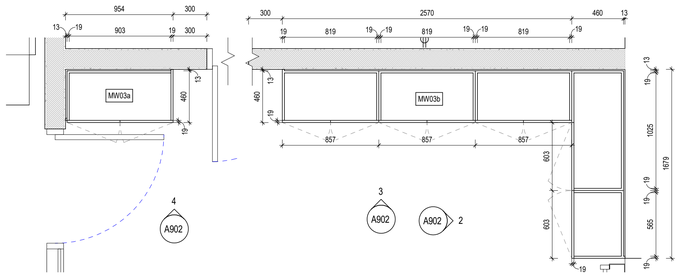

12 A902 ELEVATION - MW03c
1 : 25



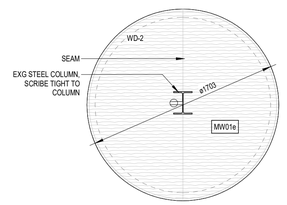

15 A902 BENCH LIGHTING
1 : 5



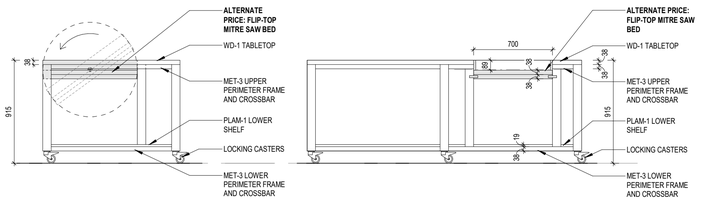

9 A902 PLAN - MW03e
1 : 25




8 A902 PLAN - MW03b
1 : 25

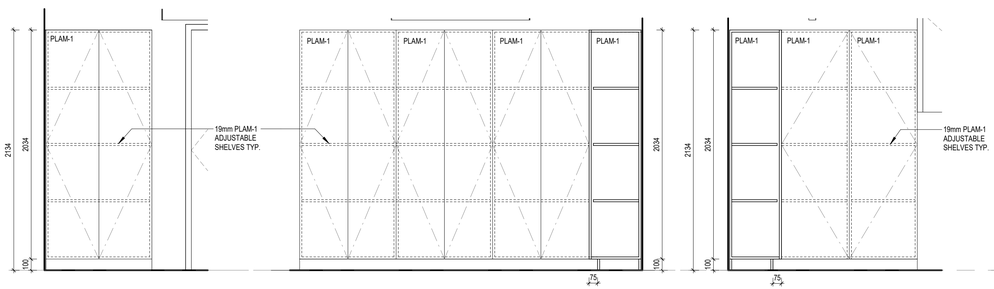



7 A902 PLAN - MW01e
1 : 25




6 A902 FRONT ELEVATION - MW03e
1 : 25

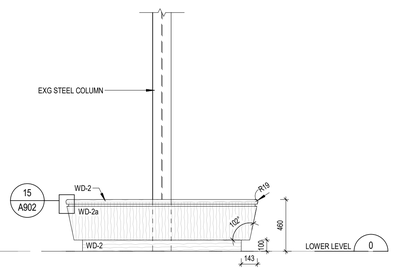
5 A902 SIDE ELEVATION - MW03e
1 : 25




4 A902 ELEVATION - MW03a - N
1 : 25

3 A902 ELEVATION - MW03b - N
1 : 25

2 A902 ELEVATION - MW03b - E
1 : 25




1 A902 ELEVATION - MW01e
1 : 25


# Architecture Counsel

4 CLINTON PL, TORONTO, ON M6G 1J9 T 416-603-1515



All drawings and specifications are the property of the architect. The contractor shall verify all dimensions and information on site and report any discrepancy to architect before proceeding.


Project North / True North

1 2026.11.06 ISSUED FOR TENDER
DATE REVISION

ONTARIO ASSOCIATION OF ARCHITECTS
OLIVER ANTHONY BECK
LICENCE 6729

# PICKERING COLLEGE

16945 Bayview Ave, Newmarket, ON L3Y 3W7

## MILLWORK PLANS & ELEVATIONS

| | |
|---|---|
| Scale: | As indicated |
| Drawn by: | CL / TB |
| Reviewed by: | Checker |
| Job number: | 25168 |
| Plot date: | 2026.11.06 |

Drawing number:

A902


Autodesk Docs://Pickering College Innovation Hub and Wellness Space/Pickering College Innovation Hub V03 - Proposed Tender.rvt
2026-11-06 5:33:12 PM

GENERAL

1. CONFORM TO THE REQUIREMENTS OF THE CURRENT ONTARIO BUILDING CODE AND ANY OTHER ACTS OF AUTHORITY HAVING JURISDICTION.
2. STRUCTURAL DRAWINGS ARE TO BE USED CONCURRENTLY WITH ALL OTHER PROJECT CONTRACT DOCUMENTS.
3. BEFORE PROCEEDING WITH WORK, COMPARE ALL DIMENSIONS AND INFORMATION SHOWN ON THE STRUCTURAL DRAWINGS WITH THE ARCHITECTURAL AND REPORT DISCREPANCIES TO THE ENGINEER.
4. DO NOT SCALE THE DRAWINGS.
5. REFER TO THE ARCHITECTURAL AND OTHER DRAWINGS FOR DIMENSIONING, ELEVATIONS, PITS, DEPRESSIONS, TRENCHES AND THE LIKE.
6. DESIGN LOADS SHALL NOT BE EXCEEDED DURING CONSTRUCTION.
7. THE CONTRACTOR IS TO DETERMINE THE NEED FOR AND PROVIDE TEMPORARY WORKS.
8. IT IS A CONDITION OF THE STRUCTURAL DESIGN THAT 'KIEFFER STRUCTURAL ENGINEERING' SHALL BE RETAINED TO INSPECT THE INSTALLATION OF STRUCTURAL COMPONENTS, UNLESS OTHERWISE APPROVED.
9. STRUCTURAL DRAWINGS DO NOT INCLUDE THE DESIGN OF GUARDS, STAIRS AND OTHER ARCHITECTURAL ELEMENTS.

DESIGN NOTES

1. THE BUILDING IS DESIGNATED TO THE NORMAL IMPORTANCE CATEGORY AND PART 9, AS DEFINED IN THE OBC 2024.
2. STRUCTURAL ELEMENTS HAVE BEEN DESIGNED IN ACCORDANCE WITH THE CURRENT:
   - i) CSA A23.3 - REINFORCED CONCRETE ELEMENTS
   - ii) CAN/CSA S16 - STEEL ELEMENTS
   - iii) CSA O86 - TIMBER ELEMENTS
   - iv) CSA S304.1 - MASONRY ELEMENTS
3. LATERAL FORCES ON STRUCTURAL FRAME
   1. THE LATERAL FORCES ARE RESISTED BY SHEAR WALLS.
   2. WIND:
      - i) THE DESIGN OF THE STRUCTURE FOR WIND IS BASED ON AN HOURLY WIND PRESSURE OF 0.44 kPa (BASED ON 1/50 YEAR RETURN).
      - ii) EXPOSURE CONDITION: ROUGH TERRAIN
      - iii) THE IMPORTANCE FACTOR, Iw, FOR WIND DESIGN IS 1.0 ULS AND 0.75 SLS.
      - iv) THE DESIGN WIND FORCES HAVE BEEN CALCULATED IN ACCORDANCE WITH THE ONTARIO BUILDING CODE 2024 AND WITH THE SIMPLE PROCEDURE DESCRIBED IN THE USER'S GUIDE - NBC - STRUCTURAL COMMENTARIES (PART 4).
5. LATERAL FORCES ON FOUNDATION WALLS
   - i) WALLS RETAINING EARTH ARE DESIGNED TO SAFELY WITHSTAND A HORIZONTAL PRESSURE AT ANY DEPTH (h) GIVEN BY THE EXPRESSION:
   - ii) P = K ((GAMMA)*h + q) , WHERE
     - K IS THE LATERAL EARTH PRESSURE COEFFICIENT
     - P IS THE PRESSURE EXERTED HORIZONTALLY
     - h IS THE DEPTH BELOW GRADE
     - (GAMMA) IS THE UNIT WEIGHT OF SOIL
     - q IS THE SURCHARGE ON THE GROUND SURFACE
   - iii) FOUNDATION AND OTHER WALLS RETAINING EARTH HAVE BEEN DESIGNED FOR SURCHARGE OF 4.8 kPa.
   - iv) THE WALLS HAVE BEEN DESIGNED ASSUMING THAT THERE IS FREE-DRAINING BACKFILL, OR THAT OTHER PROVISIONS HAVE BEEN MADE, SUCH THAT THE WALLS ARE NOT SUBJECT TO HYDROSTATIC PRESSURE.
   - v) IN ACCORDANCE WITH OBC Cl.9.4.4.6, THE WALLS HAVE BEEN DESIGNED USING K=1.0, AND □=4,7 kN/m3.
6. SNOW LOADS ON ROOFS
   - i) THE ROOFS HAVE BEEN DESIGNED WITH Ss = 2.0 kPa AND Sr = 0.4 kPa.
   - ii) THE IMPORTANCE FACTOR, IS, IS 1.0 FOR ULS AND 0.9 FOR SLS.
   - iii) ADDITIONAL SNOW ACCUMULATIONS ADJACENT TO HIGHER WALLS, ROOFS AND MECHANICAL UNITS ARE INDICATED ON THE DRAWINGS.
8. WIND UPLIFT OF ROOFS
   - i) ALL ROOF ELEMENTS INCLUDING JOISTS, METAL DECK, AND THEIR CONNECTIONS TO THE STRUCTURE ARE TO BE DESIGNED FOR UPWARD SUCTION DUE TO WIND.
9. LIVE AND OTHER LOADS
   - i) L/360 LIVE
   - ii) L/360 DEAD
   - iii) L/240 TOTAL

EXISTING CONDITIONS

1. THE DRAWINGS ASSUME THAT THE EXISTING STRUCTURE IS OF GOOD QUALITY AND HAS NOT DETERIORATED SIGNIFICANTLY. EXISTING STRUCTURAL MEMBERS ARE REASONABLY PLUMB, FREE OF HOLES AND NOTCHES, HAVE ADEQUATE BEARING AND IN GOOD CONDITION OTHERWISE.
2. ASSUMED LOCATION AND DIRECTION OF STRUCTURAL MEMBERS ARE SHOWN ON THE DRAWINGS. MINIMUM EXISTING STRUCTURAL MEMBERS ARE NOTED WHERE LOADS ARE BEING REVISED. THE CONTRACTOR IS TO VERIFY THE ASSUMPTIONS ON THE DRAWINGS ARE CORRECT AND NOTIFY THE ENGINEER IMMEDIATELY OF ANY DISCREPANCIES. THE ENGINEER WILL REVIEW AND REVISE THE DRAWINGS AS REQUIRED.
3. EXISTING FOUNDATIONS ARE ASSUMED TO BE ADEQUATE, NOTIFY THE ENGINEER IF ANY SIGNS OF SETTLEMENT ARE APPARENT. WHERE FOUNDATION LOADS ARE BEING MODIFIED, MINIMUM FOOTING SIZES AND SOIL BEARING VALUES ARE NOTED. THE CONTRACTOR IS TO VERIFY THE MINIMUMS THROUGH GEOTECHNICAL SOILS INVESTIGATION.
4. DETERMINE THE NEED FOR AND DESIGN SHORING, BRACING, NEEDLING, SCAFFOLDING, AND THE LIKE, IN ACCORDANCE WITH THE REQUIREMENTS OF THE ONTARIO BUILDING CODE. SUPERIMPOSED LIVE LOADS, CONSTRUCTION LOADS, WIND LOADS AND LATERAL STABILITY SHALL BE CONSIDERED.

MASONRY

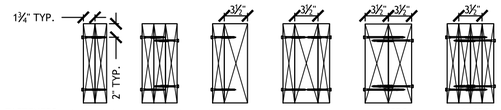
1. ALL MASONRY UNITS SHALL COMPLY WITH THE REQUIREMENTS OF CSA STANDARD A371-04, MINIMUM NET AREA COMPRESSIVE STRENGTH, 15 MPa.
2. GROUT FILL - MINIMUM 28-DAY COMPRESSIVE STRENGTH, 10 MPA AND A 200-250 MM SLUMP.
3. MORTAR - CONFORM TO THE REQUIREMENTS OF CSA STANDARD A179-04, TYPE S.
4. WHERE REINFORCING BARS, DOWELS, ANCHOR BOLTS, ETC. ARE SHOWN EMBEDDED IN MASONRY, BUILD THESE TIGHT INTO MASONRY VOIDS WITH GROUT FILL.

WOOD

1. SAWN LUMBER
   - i) CONFORM TO THE REQUIREMENTS OF CSA-O141
   - ii) SPECIES - SPRUCE-PIN-FIR
   - iii) GRADE - No1/No2
   - iv) ALL WOOD EXPOSED TO WEATHER AND EARTH TO BE PRESSURE TREATED IN ACCORDANCE WITH CSA O80.
2. PLYWOOD SHEATHING
   - i) CONFORM TO THE REQUIREMENTS OF CSA O121 AND CSA O151
7. LAMINATED VENEER LUMBER (LVL)
   - i) BENDING MEMBERS PROPERTIES - E = 2.0x10^6 psi, Fb = 4,805 psi
9. CONNECTIONS
   - i) WOOD CONNECTIONS ARE IN THE SCOPE OF THE CONTRACTOR, UNLESS NOTED. USE APPROPRIATE 'SIMPSON STRONG-TIE' (OR APPROVED EQUIVALENT) HANGERS, COLUMN CAPS/BASES, ANGLES, STRAPS AND THE LIKE. WHERE STANDARD WOOD CONNECTORS ARE NOT APPROPRIATE, HAVE CUSTOM CONNECTION DESIGNED AND FABRICATED.
   - ii) NAILS ARE TO BE COMMON STEEL WIRE NAILS CONFORMING TO THE REQUIREMENTS OF ASTM F1667 OR CSA B111. NAILS SHALL HAVE A MINIMUM DIAMETER (CORRESPONDING TO NAIL LENGTH) AS FOLLOWS: 2.87mm (FOR 57mm LONG NAILS); 3.25mm (62mm LONG); 3.66mm (76mm AND 82mm LONG); 4.88mm (102mm LONG).
   - iii) WOOD SCREWS ARE TO CONFORM TO THE REQUIREMENTS OF ASTM B18.6.1. REFER TO CSA O86 FOR DIAMETER AND MINIMUM YIELD STRENGTH INFORMATION.
   - iv) BOLTS, NUTS AND WASHERS: ASTM A307 OR SAE J429 GRADE 2.
   - v) LAG SCREWS ARE TO CONFORM TO THE REQUIREMENTS OF ASTM B18.2.1

## BUILT-UP LSL AND LVL BEAMS

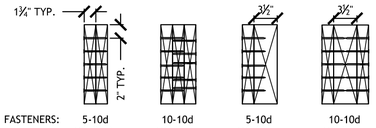
### TYPICAL BEAM FASTENING: SCREWING




| FASTENERS: | 2-3½" SDS @1'-4"c/c | 4-3½" SDS @1'-4"c/c | 2-3½" SDS @1'-4"c/c | 4-3½" SDS @1'-4"c/c | 4-6" SDS @1'-4"c/c | 4-6" SDS @1'-4"c/c |
|---|---|---|---|---|---|---|
| CAPACITY: | 1300 PLF | 980 PLF | 980 PLF | 870 PLF | 3060 PLF | 1020 PLF |

NOTES:
1. ALL SCREWS TO BE 'SIMPSON' 'SDS' SCREWS OR AS APPROVED.
2. CAPACITY IS NOTED FOR SIDE-LOADED BEAMS. WHERE CAPACITIES ARE EXCEEDED TOP LOAD BEAMS
3. DETAILS FOR MAXIMUM 14" DEEP BEAMS.
4. 7" WIDE BEAMS TO BE SIDE LOADED FROM BOTH SIDES.
5. WHEN FASTENERS ARE ON BOTH SIDES, STAGGER FASTENERS ON THE FAR SIDE SO THEY FALL HALF WAY BETWEEN NEAR SIDE FASTENERS.

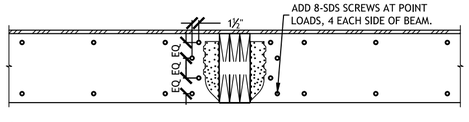
### TYPICAL BEAM FASTENING: NAILING




| FASTENERS: | 5-10d @1'-0"c/c | 10-10d @1'-0"c/c | 5-10d @1'-0"c/c | 10-10d @1'-0"c/c |
|---|---|---|---|---|
| CAPACITY: | 865 PLF | 650 PLF | 650 PLF | 575 PLF |

NOTES:
1. ALL NAILS TO BE 10d(0.128"Ø) 3" LONG.
2. CAPACITY IS NOTED FOR SIDE-LOADED BEAMS. WHERE CAPACITIES ARE EXCEEDED USE SCREWED FASTENING OR TOP LOAD BEAMS.
3. DETAILS FOR MAXIMUM 14" DEEP BEAMS.
4. 7" WIDE BEAMS TO BE SIDE LOADED FROM BOTH SIDES.
5. WHEN FASTENERS ARE ON BOTH SIDES, STAGGER FASTENERS ON THE FAR SIDE SO THEY FALL HALF WAY BETWEEN NEAR SIDE FASTENERS.

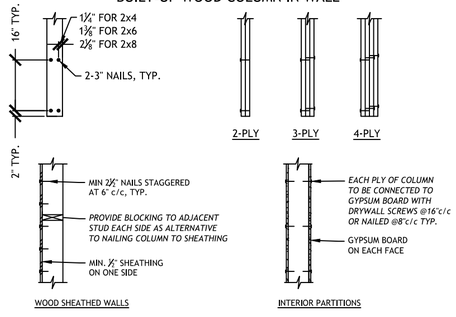
### TYPICAL FASTENING AT POINT LOAD



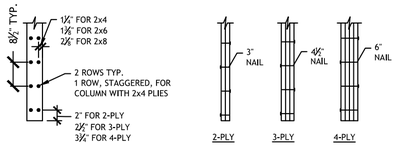

NOTES:
1. ALL SCREWS TO BE 'SIMPSON' 'SDS' SCREWS OR AS APPROVED.
2. MAXIMUM POINT LOAD CAPACITY IS 23 kN. WHERE LOAD IS EXCEEDED PROVIDE TOP MOUNT HANGER.
3. PROVIDE TOP MOUNT HANGERS WHEN BEARING ON 7" WIDE BEAMS.

## BUILT UP WOOD POSTS

### BUILT-UP WOOD COLUMN IN WALL




### FREE STANDING BUILT-UP WOOD COLUMN




NOTES:
1. NO SPLICES SHALL BE MADE IN ANY BUILT-UP WOOD COLUMNS.
2. DETAILS ABOVE ONLY APPLY TO SPF COLUMNS.
3. ALL NAILS TO BE COMMON WIRE NAILS.

KIEFFER STRUCTURAL ENGINEERING


**CONTACT INFORMATION**

ADDRESS: 259 GERRARD STREET EAST, TORONTO, ON M5A 2G1

PHONE: (416) 924-7890
EMAIL: matthew@kieffer.ca


**SEAL**

LICENSED PROFESSIONAL ENGINEER
2026.10.30
M. T. KIEFFER
100230705
PROVINCE OF ONTARIO

| DATE | ISSUED FOR |
|---|---|
| 2026.10.30 | PERMIT |
| | |
| | |
| | |
| | |
| | |
| | |

**DRAWING LIST**

| | |
|---|---|
| S001 | GENERAL NOTES & TYPICAL DETAILS |
| S101-S102 | PLANS |

**PROJECT NAME / ADDRESS**

PICKERING COLLEGE, NEWMARKET, ON, L3Y 3W7

**SHEET TITLE**

GENERAL NOTES AND TYPICAL DETAILS

**SCALE**

NTS

**DRAWN BY**

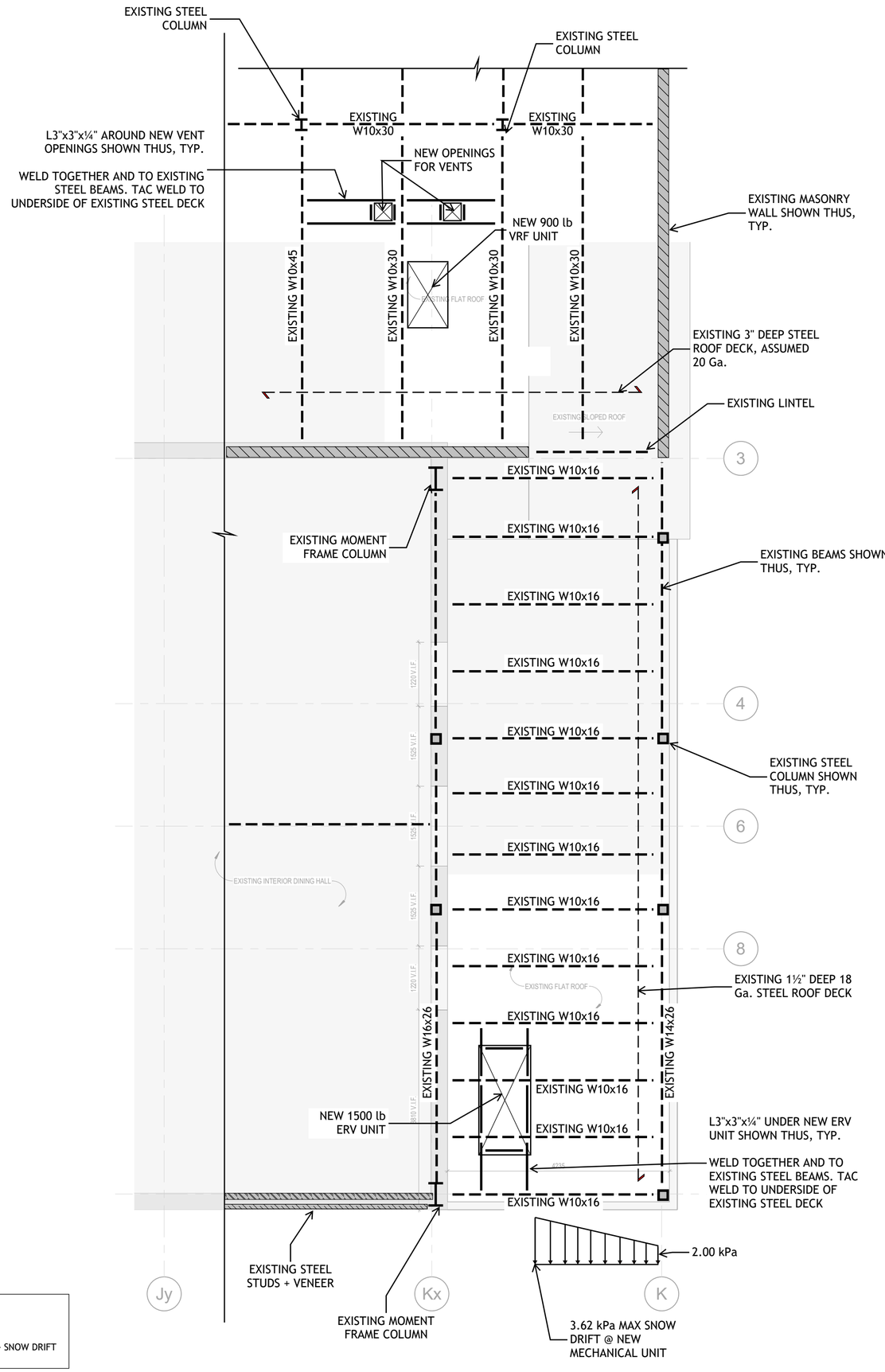
OA

**PROJECT NUMBER**

25385

**PAGE**

S001




**PLAN NOTES**

1. SUPERIMPOSED LOADS USED IN THE DESIGN:
   - ROOF DEAD: 1.18 kPa
   - ROOF SNOW: 2.24 kPa (Ss = 2.0 kPa) + SNOW DRIFT
   - MECHANICAL LIVE: 3.60 kPa

KIEFFER STRUCTURAL ENGINEERING


**CONTACT INFORMATION**

ADDRESS: 259 GERRARD STREET EAST, TORONTO, ON M5A 2G1

PHONE: (416) 924-7890
EMAIL: matthew@kieffer.ca


**SEAL**

LICENSED PROFESSIONAL ENGINEER
2026.10.30
M. T. KIEFFER
100230705
PROVINCE OF ONTARIO

| DATE | ISSUED FOR |
|---|---|
| 2026.10.30 | PERMIT |
| | |
| | |
| | |
| | |
| | |
| | |

**DRAWING LIST**

| | |
|---|---|
| S001 | GENERAL NOTES & TYPICAL DETAILS |
| S101-S102 | PLANS |

**PROJECT NAME / ADDRESS**

PICKERING COLLEGE, NEWMARKET, ON, L3Y 3W7

**SHEET TITLE**

NEW ROOFTOP MECHANICAL UNITS

**SCALE**

3/16"=12"

**DRAWN BY**

OA

**PROJECT NUMBER**

25385

**PAGE**

S101

# ELECTRICAL LEGEND

## POWER

| SYMBOL | DESCRIPTION |
|---|---|
| | 120V, 15A DUPLEX U-GROUND RECEPTACLE UNLESS OTHERWISE NOTED. |
| 20A | DUPLEX RECEPTACLE AS ABOVE, CSA 5-20A TYPE. |
| | SAME AS ABOVE EXCEPT CONNECT TO CONTROLLED CIRCUIT. RECEPTACLE SHALL BE GREY COLOUR. |
| | DOUBLE DUPLEX RECEPTACLE IN A COMMON COVER PLATE. |
| | 120V, 15A SINGLE RECEPTACLE. VOLTAGE/AMPERAGE AND TYPE AS INDICATED. |
| | SPECIAL RECEPTACLE. VOLTAGE/AMPERAGE AND TYPE AS INDICATED. |
| | RECEPTACLES AS ABOVE BUT MOUNTED ABOVE COUNTER OR 42"AFF. |
| GFI WP TL | RECEPTACLE AS ABOVE SUBSCRIPTS DENOTE SPECIAL TYPE AS PER ABBREVIATION LIST. |
| | 120V, 15A CEILING MOUNTED DUPLEX RECEPTACLE AS SPECIFIED. |
| | BREAKER. SIZE AS NOTED. |
| | UNFUSED DISCONNECT SWITCH. SIZE TO SUIT OR AS NOTED. SEE ABBREVIATION FOR OTHER SUBCRIPTS. |
| | MOTOR AS INDICATED. INCLUDE FINAL CONNECTION. |
| | COMBINATION LINE VOLTAGE MOTOR STARTER AND SWITCH. |
| | LINE VOLTAGE MOTOR STARTER. SEE SPECIFICATION FOR SCOPE OF WORK. |
| | JUNCTION BOX AS INDICATED. |
| PL | 120V DIRECT CONNECTION FOR USE AS NOTED. INCLUDE FINAL CONNECTION. 'PL' DENOTES FOR ELECTRONIC PLUMBING FIXTURES. |
| | SPECIAL DIRECT CONNECTION FOR USE AS NOTE. INCLUDE FINAL CONNECTION. |
| LP"A" LP"B" | FLUSH OR SURFACE MOUNTED ELECTRICAL PANEL RESPECTIVELY. |
| | ELECTRIC HEATER. BASEBOARD/FORCED-AIR RESPECTIVELY. TYPE AS INDICATED. |
| A 2KW | ELECTRIC HEATER DESCRIPTION. LETTER DENOTES TYPE. NUMBER DENOTES WATTAGE. |
| | PUSHBUTTON FOR USE AS NOTED. |
| SD | SELF CONTAINED SMOKE DETECTOR (NOT CONNECTED TO FIRE ALARM SYSTEM) |
| TS | TIMESWITCH |
| EPO | EMERGENCY POWER-OFF PUSHBUTTON TO BE INTERLOCKED WITH ALL PANELBOARDS / EQUIPMENT WITH THE SAME ROOM. |

## LIGHTING

| SYMBOL | DESCRIPTION |
|---|---|
| F1 | STRIP LIGHT IN COVE OR VALENCE. LENGTH SHOWN TO SCALE ON THE DRAWINGS. LETTER DENOTES TYPE. |
| F2 F3 | LUMINAIRE, CEILING OR WALL MOUNTED RESPECTIVELY. LETTER DENOTES TYPE. |
| F2 NL | LUMINAIRE AS ABOVE BUT CONNECTED TO NIGHT LIGHT CIRCUIT. |
| F2 EM | LUMINAIRE AS ABOVE BUT CONNECTED TO EMERGENCY OR NORMAL & EMERGENCY LIGHT CIRCUITS WITH BY-PASS UNIT - SEE SPEC FOR MORE DETAILS |
| A1 A2 | CEILING OR WALL MOUNTED LUMINAIRE RESPECTIVELY. LETTER DENOTES TYPE. |
| A1 NL A2 NL | LUMINAIRE AS ABOVE BUT CONNECTED TO NIGHT LIGHT CIRCUIT. |
| A1 EM A2 EM | LUMINAIRE AS ABOVE BUT CONNECTED TO EMERGENCY OR NORMAL & EMERGENCY LIGHT CIRCUITS WITH BY-PASS UNIT - SEE SPEC FOR MORE DETAILS |
| | CEILING OR WALL MOUNTED ILLUMINATED EXIT SIGN RESPECTIVELY. SINGLE OR DOUBLE FACED AS INDICATED BY FILLED IN PORTION(S) WITH ARROW(S) AS INDICATED. |
| | SURFACE MOUNTED SINGLE OF DOUBLE EMERGENCY LIGHTING REMOTE HEAD. CEILING OR WALL MOUNTED AS SHOWN. |
| BU1 | EMERGENCY BATTERY NIT "BU1" C/W LIGHTING HEAD(S) AS SHOWN ON PLAN. |
| $ $ $ | 15A/20A 120V SINGLE POLE TOGGLE SWITCH(ES) WITH ONE, TWO OR THREE-GANG COVERPLATE RESPECTIVELY. SWITCHES RATING TO SUIT LIGHTING LOADS & BREAKER SIZE. |

## FIRE ALARM

| SYMBOL | DESCRIPTION |
|---|---|
| | FIRE ALARM HORN/STROBE COMBINATION. NUMBER DENOTES TYPE |
| | FIRE ALARM HORN |
| | FIRE ALARM MANUAL PULL STATION (WITH AND WITHOUT COVER). |
| SD | FIRE ALARM SMOKE DETECTOR |
| SA | SELF CONTAINED SMOKE ALARM (COMBINATION SMOKE DETECTOR AND AUDIBLE ALARM, NOT CONNECTED TO FIRE ALARM SYSTEM) |
| SD | SELF CONTAINED SMOKE DETECTOR (NOT CONNECTED TO FIRE ALARM SYSTEM) |
| HD | FIRE ALARM HEAT DETECTOR, COMBINATION FIXED TEMPERATURE AND RATE-OF-RISE. |
| 190 | FIRE ALARM HEAT DETECTOR, FIXED TEMPERATURE (EG. 190'F) |
| FACP FACP | RECESSED OR SURFACE MOUNTED FIRE ALARM CONTROL PANEL/OR ANNUNCIATOR AS NOTED. FACP: FIRE ALARM CONTROL PANEL FAAP: FIRE ALARM ANNUNCIATOR PANEL |

## ABBREVIATIONS

| SYMBOL | DESCRIPTION |
|---|---|
| WP | WEATHERPROOF |
| GFI | GROUND FAULT INTERRUPTER |
| MD | MOTORIZED DAMPER |
| A-1 | PANEL "A", CIRCUIT #1. |
| AUX. | AUXILIARY CONTACT |
| RTU | ROOF TOP UNIT |
| AFF | ABOVE FINISHED FLOOR |
| TL | TWIST-LOCK |
| N | NEW |
| ER | DENOTES EXISTING TO BE RELOCATED |
| EX | EXISTING TO REMAIN |
| R | EXISTING TO BE REMOVED |
| RP | RELOCATED POSITION |
| CL | CEILING MOUNTED |
| D DWG | DETAIL # DRAWING WHERE DETAIL IS SHOWN. |

## SECURITY

| SYMBOL | DESCRIPTION |
|---|---|
| DC | SECURITY SYSTEM, DOOR CONTACT. |
| CR | SECURITY SYSTEM, CARD READER |
| ES | SECURITY SYSTEM, ELECTRIC STRIKE |
| KP | SECURITY SYSTEM, KEY PAD |
| PB | SECURITY SYSTEM, PANIC BUTTON |
| REX | SECURITY SYSTEM, REQUEST TO EXIT MOTION SENSOR |
| SS | SECURITY SYSTEM, MOTION SENSOR |
| | CCTV SYSTEM CAMERA |
| EM | EMERGENCY PAGER (REQUIRES DATA DROP) |

## COMMUNICATION / AV SYSTEM

| SYMBOL | DESCRIPTION |
|---|---|
| | TELEPHONE OUTLET (VOIP, PROVIDE DATA) |
| | DATA OUTLET |
| | COMBINATION TELEPHONE/DATA OUTLET.SEE |
| | OUTLET AS ABOVE BUT MOUNTED ABOVE COUNTER OR 42"AFF. |
| | FLOOR MOUNTED TELEPHONE, DATA OR COMBINATION AS SPECIFIED. |
| S | SPEAKER (OTHER THAN FIRE ALARM) WITH OUTLET FOR WALL OR CEILING MOUNTED. |
| PA | PUBLIC ANNOUNCEMENT SPEAKER (OTHER THAN FIRE ALARM) WITH OUTLET FOR WALL OR CEILING MOUNTED. |
| AV | AV SPEAKER WITH OUTLET FOR WALL OR CEILING MOUNTED. |
| | DIGITAL CLOCK OUTLET TO BE C/W SINGLE GANG BOX AND CONDUIT BACK TO MASTER CLOCK CONTROLLER. REQUIRES DATA DROP |
| TV | CATV OUTLET. REFER TO SCOPE OF WORK. |
| | CEILING OR WALL MOUNTED WIRELESS ACCESS POINT |
| | INTERCOM STATION |
| | SCHOOL BELL |

## ELECTRICAL DRAWING LIST

| NUMBER | DESCRIPTION |
|---|---|
| E0.1 | ELECTRICAL LEGEND, DRAWING LIST AND NOTES |
| E0.2 | PANEL SCHEDULES |
| E0.3 | SINGLE LINE DIAGRAM AND DETAILS |
| E0.4 | GROUND FLOOR KEY PLAN |
| E1.1 | BASEMENT POWER - DEMOLITION |
| E1.2 | BASEMENT LIGHTING - DEMOLITION |
| E2.1 | BASEMENT POWER - NEW LAYOUT |
| E2.2 | BASEMENT LIGHTING - NEW LAYOUT |
| E2.3 | RROF PART PLAN - DEMO & NEW LAYOUT |
| E3.1 | ELECTRICAL SPECIFICATION |

## NOTES RE. VOICE/DATA SYSTEM

VOICE AND DATA SYSTEM SHALL BE PROVIDED BY COLLEGE VENDOR.

THIS ELECTRICAL CONTRACTOR SHALL PROVIDE THE FOLLOWING:

1. TELEPHONE OUTLET SHALL BE SINGLE GANG BOX C/W 3/4"C TO ZONE CONDUIT.
2. DATA OUTLET SHALL BE SINGLE BOX C/W 3/4"C TO ZONE CONDUIT.
3. COMBINATION TELEPHONE/DATA OUTLET SHALL BE SINGLE GANG C/W 3/4"C TO ZONE CONDUIT.
4. PROVIDE EMPTY CONDUITS. ALL CONDUITS SHALL BE C/W PULL STRING. PROVIDE 2" CONDUIT (OR AS PER SYSTEM PROVIDER) FROM RENOVATED AREA TO IT ROOM.
5. PROVIDE ZONE CONDUIT/BOXES FOR VOICE AND DATA CABLING.
6. CEILING PLENUM IS RETURN AIR PLENUM AND ALLOWED FOR FT6 RATING CABLES ONLY.
7. LOCATION AND QUANTITY OF OUTLETS ARE SHOWN ON FLOOR PLAN.
8. REFER TO FLOOR PLAN FOR LOCATION AND NUMBER OUT OUTLETS.
9. THIS CONTRACTOR TO PROVIDE TELECOMMUNICATIONS GROUNDING BUSBARS (TGB). BARS TO MEET REQUIREMENTS OF TIA/EIA 607 AND CONFORM TO BICSI RECOMMENDATIONS. PROVIDE GROUNDING AND BONDING AS REQUIRED.

## MASTER CLOCK SYSTEM

THE COLLAGE IS EQUIPPED WITH MASTER CLOCK SYSTEM.

THIS CONTRACTOR TO PROVIDE BACK BOXES AND CONDUITS WITH PULL STRINGS.
CABLING WILL BE DONE BY COLLEGE VENDER. COORDINATE WITH COLLEAGUE VENDER AS REQUIRED.

## WIRELESS ACCESS POINTS INSTALLATION

PROVIDE EMPTY CONDUITS FROM EACH AP (ACCESS POINT) POSITION TO EXISITNG IT ROOM, ENSURING THAT THE TOTAL PERMISSIBLE WIRE LENGTH OF 55 M IS NOT EXCEEDED.

THE APs SHALL USE CEILING OR WALL MOUNT STYLE AND BE POSITIONED BELOW THE CEILING (WHERE APPLICABLE). PROVIDE BACK BOXES.

CABLING, FINAL CONNECTIONS AND COMMISSIONING WILL BE DONE BY COLLEGE VENDER. COORDINATE WITH VENDER AS REQUIRED.

## LUMINAIRE SCHEDULE

### TYPE 'L'

SUSPENDED LINEAR, UP AND DOWN LED, 4FT LONG, 4.5" HIGH

LAMP: LED, 3500K, 90 CRI,
DIRECT 1000LM/FT; INDIRECT 500LM/FT
VOLTAGE: 120V, 51.6W, DIMMING 0-10V
FINISH: BLACK
PROVIDE BLACK STEM SUPPORTS. STEM LENGTH TO SUIT LIGHT ELEVATION. ELEVATION TO BE AS PER ARCHITECT.

MANUFACTURER: LUMENWERX,
VIA2PDI-HLO-FH-W102-SW-90-1000-500-35-4FT OR APPROVED EQUAL

### TYPE 'L1'

RECESSED ROUND POT LIGHT FIXTURES, 4" DIAM.,
LAMP: LED, 3500K, 80+ CRI, 1500LM, SPECULAR CLEAR REFLECTOR
VOLTAGE: 120V, 15W, DIMMING 0-10V, 1%
FINISH: WHITE COLOUR

MANUFACTURER: LIGHTOLIER, SIGNIFY
CAT.#P4R DL 15 835 CL Z10 U
OR APPROVED EQUAL

### TYPE 'L2'

RECESSED MOUNTED 1X4 SELECTABLE BACKLIT FLAT PANEL,

LAMP: LED, 3500K, 90 CRI, 4293LM
VOLTAGE: 120V, 37W, DIMMING 0-10V
FINISH: WHITE

MANUFACTURER: DAY-BRITE BY SIGNIFY, 1SBP3040L8CS-4-UN3-DIM OR APPROVED EQUAL

### TYPE 'L2a'

SAME AS TYPE 'L2' BUT SURFACE MOUNTED
PROVIDE SURFACE MOUNT FIELD ASSEMBLY KIT FSF14

### TYPE 'L3'

SUSPENDED LINEAR, UP AND DOWN LED, 4FT LONG, 4.5" HIGH

IP65 RATED, DUST TIGHT, WIPE DOWN APPLICATION
LAMP: LED, 3500K, 90 CRI,
DIRECT 750LM/FT; INDIRECT 750LM/FT
VOLTAGE: 120V, 60W, DIMMING 0-10V
FINISH: BLACK
PROVIDE BLACK STEM SUPPORTS. STEM LENGTH TO SUIT LIGHT ELEVATION. ELEVATION TO BE AS PER ARCHITECT.

MANUFACTURER: LUMENWERX,
VIA2SEALPDI-IP65EC-IP65-EPDO-W102-90-750-750-35-4FT OR APPROVED EQUAL

### TYPE 'TR'

TRACK WITH LED TRACK LIGHTS.
TRACK LENGTH TO BE CUSTOM AS PER DRAWINGS. PROVIDE CONNECTORS AND ALL REQUIRED ACCESSORIES TO CREATE CONTINUOUS TRACK
REFER TO FLOOR PLANS FOR NUMBER OF TRACK LIGHTS
LIGHTS ELEVATION ABOVE FLOOR TO BE AS PER ARCHITECT.

TRACK:
BASIC TRACK SYSTEM, SERIES 60 LIGHTOLIER BY SIGNIFY,
FINISH: MATTE BLACK

TRACK LIGHTS:
MOUNTING: TRACK, PROVIDE LIGHTOLIER ADAPTER, 350° ROTATION, 89° TILT
VOLTAGE: 120V, 17W, (0-10V) 1% DIMMING DRIVER
FINISH: HOUSING SATIN BLACK, LAYERED FINE
LAMP: LED, 3500K, 90+CRI, 1500LM
BEAM: WIDE BEAM 34°

MANUFACTURER: LIGHTOLIER BY SIGNIFY, MS-SERIES TRACK LIGHTS
CAT.# 3DTH-L-BKST-LF-15L-WB-35K-2

CONTRACTOR TO INCLUDE FOR FINAL LOCATION OF TRACK LIGHT ADJUSTMENT ON SITE BASED ON BEST LIGHTING COVERAGE OF WALL. FINAL LOCATION TO BE COORDINATED WITH ARCHITECT

## SECURITY SYSTEMS NOTES

RESPONSIBILITIES:

1. BY THIS ELECTRICAL CONTRACTOR:
   - PROVIDE ALL WIRING (INCLUDING LOW VOLTAGE WIRING, WIRING FOR SECURITY ETC.), CONDUITS & JUNCTION BOXES.
   - EXPOSED CONDUITS IN PUBLIC AREAS MUST BE SOLID RIGID CONDUITS WITH THREADED FITTINGS.
   - METAL FLEX CONDUITS ALLOWED TO BE INSTALLED ABOVE DROP CEILING OR WITHIN PLENUM SPACE ONLY WHEN INSTALLATION OF GRC/EMT IS NOT PRACTICAL DUE TO CONGESTION. METAL FLEX CONDUIT TO BE FULLY SECURED USING TWO SCREW CLIPS
   - WIRING SHALL BE SOLID COPPER CONDUCTORS, RISER RATED AND INSTALLED IN CONDUITS.
   - INSTALL FIRE RATED ELECTRIC STRIKE ON FIRE RATED DOORS
   - ALL LOW VOLTAGE WIRING HALL BE #22AWG, STRANDED AND S SHIELDED AND INSTALLED IN CONDUIT OR PLENUM RATED IN HOLLOW METAL DOOR FRAME WHERE ACCESSIBLE.
   - MINIMUM CONDUIT SIZE TO BE 3/4".
   - REFER TO COLLEGE SECURITY SYSTEM PROVIDER FOR WIRING REQUIREMENTS AND COORDINATE WITH DOOR HARDWARE SUPPLIER REQUIREMENTS
   - NEW CAMERAS ARE POE (POWER OVER ETHERNET). COLLEGE SECURITY SYSTEM PROVIDER WILL PROVIDE CAMERAS.
2. BY SECURITY SYSTEM PROVIDER:
   - FINAL CONNECTIONS, FRONT END DEVICES, PROGRAMMING AND COMMISSIONING OF DOOR CONTROL SYSTEM AND SECURITY CAMERAS. THIS ELECTRICAL CONTRACTOR TO COORDINATE AS REQUIRED.
3. BY GENERAL CONTRACTOR:
   - PROVIDE DOOR CONTROL DEVICES SUCH AS TRANSFER HINGE, CARD READER, DOOR CONTROLLER, DOOR CONTACTS ETC. THIS ELECTRICAL CONTRACTOR TO COORDINATE AS REQUIRED.
   - GENERAL CONTRACTOR WILL HIRE COLLEGE APPROVED BASE BUILDING CONTRACTOR TO INSTALL ACCESS CONTROL AND CCTV SYSTEM
4. THIS CONSTRICTOR TO COORDINATE WITH SECURITY SYSTEM PROVIDER AS REQUIRED.

## OCCUPANCY SENSOR SCHEDULE

OC — FLUSH WALL MOUNTED DUAL TECHNOLOGY OCCUPANCY SENSOR SWITCH:
- AUTO-ON WITH MANUAL OFF SWITCH.
- FITS A STANDARD SWITCH BOX WITH DECORA COVER PLATE.
- ADJUSTABLE TIME DELAY BETWEEN 30 SECONDS AND 30 MINUTES.
- ADJUSTABLE INTEGRATED NATURAL LIGHT LEVEL SENSOR BETWEEN 2 AND 1000 FOOT CANDLES.
- 5 YEAR WARRANTY.

WATT-STOPPER CAT.# DW-100-120-1.

OC — SURFACE CEILING/WALL MOUNTED DUAL TECHNOLOGY OCCUPANCY SENSOR, ROOM SENSORS.
- UP TO 2000 SQ.FT. OR WALKING COVERAGE.
- SENSITIVITY ADJUSTMENT.
- ADJUSTABLE TIME DELAY BETWEEN 1 SECONDS TO 30 MINUTES.
- 5 YEAR WARRANTY.

WATT-STOPPER CAT.# DT-200 SERIES.

NOTES:

1. ADJUST SENSITIVITY OF SENSORS TO SUIT ROOM/AREA SIZE AND CONFIGURATION TO PREVENT SENSORS FROM "SEEING" OUTSIDE THE ROOM.
2. ADJUST LIGHT LEVEL SENSORS TO 65 FOOT CANDLES.
3. ADJUST TIME DELAY TO 30 MINUTES.
4. FINAL LOCATIONS OF SENSORS SHALL BE AS RECOMMENDED BY MANUFACTURERS. AVOID CLOSE PROXIMITY TO DIFFUSERS.
5. ALLOW IN CONTRACT LABOUR TO ADJUST SENSORS A SECOND TIME TO OWNER'S DIRECTIVES.
6. PROVIDE MINIMUM TWO TIMES SETTING BY WATTS-STOPPER REPRESENTATIVE.
7. COORDINATE WITH WATTS-STOPPER AND ALLOW IN CONTRACTOR TO HIRE WATTS-STOPPER REPRESENTATIVE FOR SETTING, PROGRAM, TRAINING OWNER STAFF, ETC.. TO INSURE WATTS-STOPPER CONTROL SYSTEM IN GOOD OPERATIONAL CONDITION.
8. ROOM CONTROLLERS ARE NOT SHOWN ON DRAWINGS. PROVIDE ROOM CONTROLLERS WHERE REQUIRED. COORDINATE WITH WATTS-STOPPER FOR EXACT REQUIRED QUANTITY.
   STORAGE AREA LIGHTS ARE 347V, RETAIL AREA LIGHTS ARE 120V.
9. THIS CONTRACTOR SHALL PROVIDE REQUIRED QUANTITY OF CAT.5E OR CAT6 CABLES TO SUIT.
10. FINAL LOCATION OF NEW SENSORS IN STORAGE AREA TO BE COORDINATED WITH WATT-STOPPER REPRESENTATIVE

## EMERGENCY BATTERY UNIT SPECIFICATIONS

### BATTERY UNITS

BATTERY UNIT SHALL BE LUMACELL CAT. #BG24S SERIES WITH CAPACITY 720W AND EQUAL BY EMERGILITE, DUALITE OR BEGHELLI. UNITS SHALL BE FOR OPERATION ON 120 VOLT - 10 YEARS LIFE BATTERY - WITH NUMBER OF HEADS INDICATED ON THE DRAWINGS. UNITS SHALL BE PLUG-IN TYPE WITH SEALED PURE LEAD BATTERIES. THE CHARGER SHALL BE COMPLETELY AUTOMATIC, SOLID STATE TYPE BROWN OUT FEATURE, CAPABLE OF FULLY RECHARGING DISCHARGED BATTERY IN 24 HOURS. TRANSFER DEVICE SHALL AUTOMATICALLY SWITCH LOAD ON AT POWER FAILURE AND OFF ON RETURN OF NORMAL POWER. UNITS SHALL HAVE LOW VOLTAGE DISCONNECT FEATURE. PROVIDE DUPLEX POWER OUTLET FOR EACH BATTERY UNIT.

### REMOTE HEADS 'DC'

SINGLE AND DOUBLE REMOTE HEADS SHALL BE MR16, 24V, 6W, LED LAMPS
EMERGENCY LIGHTING REMOTE HEADS SHALL BE WHITE.
LUMACELL CAT. #MQM SERIES OR APPROVED EQUAL.

### EXIT SIGN 'X'

SINGLE FACE OR DOUBLE FACE AS PER DRAWING, UNIVERSAL MOUNTED LED SIGN, GREEN RUNNING MAN PICTOGRAM, ALUMINUM HOUSING, LESS THAN 3W LED, 120VAC & 24VDC INPUT. GREEN MAN ON WHITE FACE, SELF-POWERED.

LUMACELL CAT.# LA SERIES OR APPROVED EQUAL

## POWER REELS

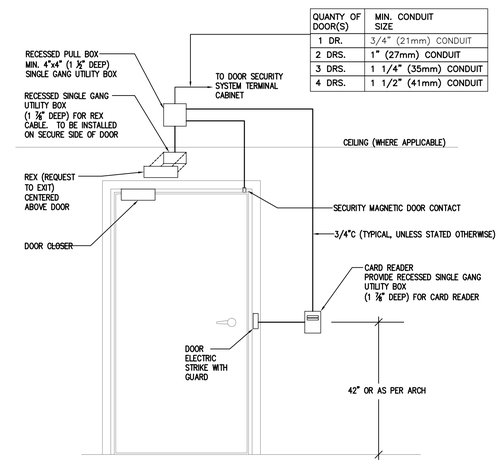
POWER REELS TO BE SUPPLIED AND INSTALLED BY THIS ELECTRICAL CONTRACTOR. REFER TO FLOOR PLANS FOR REELS LOCATIONS.

POWER REEL TO BE ULC LISTED, COMPLETED WITH RETRACTABLE 25FT LONG CORD WITH QUAD FEMALE RECEPTACLES (QUAD RB MOBILE END), 20A, 120V, IN-LINE GFCI, METAL CASE, ADJUSTABLE CORD STOPPER. PROVIDE SUPPORT BRACKETS AND ATTACHED TO CONCRETE SLAB ABOVE. SUPPORTS TO BE CUSTOM LENGTH SO THAT REEL IS IMMEDIATELY BELOW CEILING TILES. FOR CEILING TYPE REFER TO ARCH. DRAWINGS.

POWER REELS TO BE PLUG-IN TYPE ON FIXED END OF CORD.

PROVIDE GFI POWER OUTLETS NEXT TO REEL.

MANUFACTURE:
LEGRAND, PASS & SEYMOUR, 1000 SERIES, PART NO. PSCRCD123G25R20




NOTES:

1. ALL CONDUITS TO BE ROUTED BEHIND FINISHED SURFACES / WITHIN WALLS UNLESS SPECIFICALLY STATED OTHERWISE. ANY EXPOSED DEVICES OR WIRES TO BE MOUNTED ON INSIDE OF SECURE SIDE.
2. ALL WIRING TO BE BROUGHT TO DEVICE(S) USING FLEX OR CONDUIT. FLEX CONDUIT TO BE UTILIZED ONLY WHERE INSTALLATION OF GRC IS NOT PRACTICAL
3. UNLESS OTHERWISE NOTED, MINIMUM CONDUIT IS 21mmC.
4. ALL CONDUITS SHALL BE COMPLETE WITH PULL STRING.
5. ALL WIRING WILL BE PROVIDED BY CLIENT'S SYSTEM PROVIDER. THIS CONTRACTOR TO COORDINATE AS REQUIRED. CONFIRM BACK BOXES, JUNCTION BOXES AND CONDUIT SIZES WITH SYSTEM PROVIDER.
6. ALL CONDUITS AND JUNCTION BOXES MUST BE INSTALLED ON SECURED SIDE OF DOOR
7. DIAGRAM IS PROVIDED FOR REFERENCE ONLY. FOR TYPE AND NUMBER OF DEVICES REFER TO FLOOR PLANS

1 / E0.1 SECURITY DOOR WITH CARD READER
SCALE: N.T.S.


Architecture Counsel
4 CLINTON PL, TORONTO, ON M6G 1J9 T 416-603-1515



All drawings and specifications are the property of the architect. The contractor shall verify all dimensions and information on site and report any discrepancy to architect before proceeding.


Project North / True North


SHARMA & PARTNERS INC.
Mechanical and Electrical Engineers
85 Curlew Drive, Unit 108, Toronto, Ontario M3A 2P8
Tel.: (416)291-8822


LICENCE PROFESSIONAL ENGINEER A. PROTKIN 06/11/26 PROVINCE OF ONTARIO

SPI PROJECT#: 2026-1010

| | DATE | REVISION |
|---|---|---|
| 2. | 2026.11.06 | ISSUED FOR TENDER |
| 1. | 2026.10.05 | ISSUED FOR PERMIT |

PICKERING COLLEGE INNOVATION HUB
16945 Bayview Ave, Newmarket, ON L3Y 3W7

ELECTRICAL LEGEND, DRAWING LIST AND NOTES

Scale: N.T.S.
Drawn by: CAD
Reviewed by: AP
Job number: 25168
Plot date: 2026.11.06

Drawing number:
E0.1

## PANEL A (EXISTING)

120/208V,3PH,4W

TYPE: BOLT-ON
MAINS: 225 AMPS
MOUNTING: SURFACE

LOCATION: ELECTRICAL & SERVER ROOM

| | LOAD | DESCRIPTION | BREAKER | CIRCUITS | BREAKER | DESCRIPTION | LOAD | |
|---|---|---|---|---|---|---|---|---|
| | | BOILER PUMP | 15A | 1 2 | 70A | SERVERY PANEL G | | |
| | | BOILER PUMP | 15A | 3 4 | | | | |
| | | BOILER PUMP | 15A | 5 6 | 3P | | | |
| | | BOILER PUMP | 15A | 7 8 | 70A | BASEMENT PANEL B | | (1) |
| | | SPARE | 15A | 9 10 | | | | |
| | | HALL LIGHTS | 15A | 11 12 | 3P | | | |
| | | EXITS & EMERGENCY LIGHTS | 15A | 13 14 | 15A | EXITS & EMERG. LIGHTS (BASEMENT) | | |
| | | EXISTING LOAD | 15A | 15 16 | 15A | HEAT MAIN ROOM | | |
| (1) | | SPARE | 15A | 17 18 | 15A | SPARE | | |
| (1) | | SPARE | 15A | 19 20 | 15A | 1ST FL SOUTH HALL RECEPT. | | |
| | | RECEP. WEST WALL PANEL | 15A | 21 22 | 15A | EMERG. LIGHTS (DINING RM, LOBBY, WEST DINING RM) | | |
| | | SPARE | 20A | 23 24 | 15A | 1ST FL SOUTH RECEPT. | | |
| | | EXISTING LOAD | 15A | 25 26 | 15A | EMERG. LIGHTS, HALL RECEPT. | | |
| | | KEY RM HALLWAY LIGHTS | 15A | 27 28 | 15A | EXISTING LOAD | | |
| | | SPARE | 20A | 29 30 | 15A | DINING HALL ENTRY POTS | | |
| | | BATTERY UNIT 3 EXITS 1ST FLOOR | 15A | 31 32 | 15A | EXISTING LOAD | | |
| | | A/C LOUNGE (NORTH) | 30A | 33 34 | 15A | SPARE | | |
| | | | 2P | 35 36 | 15A | EXISTING LOAD | | |
| | | A/C LOUNGE (SOUTH) | 30A | 37 38 | 15A | EXISTING LOAD | | |
| | | | 2P | 39 40 | 2P | | | |
| | | HEAT EXCHANGER | 15A | 41 42 | 15A | SPARE | | |
| | | RECEPT. LARGE COUNTER | 15A | 43 44 | 2P | SPARE | | |
| | | RECEPT. LARGE COUNTER | 15A | 45 46 | 15A | SECURITY PANEL | | |
| | | AUTO DOOR | 20A | 47 48 | 15A | SPARE | | (1) |
| | | LIGHTS LOUNGE | 15A | 49 50 | 2P | SPARE | | |
| | | RECEPT. LOUNGE | 15A | 51 52 | 15A | SPARE | | (1) |
| | | RECEPT. LARGE COUNTER | 15A | 53A 54 | 2P | SPARE | | |
| | | RECEPT. LOUNGE / ELEVATOR | 15A | 53B | | | | |
| | | RECEPT. LOUNGE | 15A | 55 56 | 15A | EXISTING LOAD | | |
| | | RECEPT. LOUNGE HALLWAY | 15A | 57A 58 | 15A | EXISTING LOAD | | |
| | | RECEPT. LOUNGE HALLWAY | 15A | 57B | | | | |
| | | LOUNGE WASHROOM HEATER | 15A | 59 60 | 15A | SUMP PUMP | | |
| | | | 2P | 61 62 | 50A | HVAC MEZZANINE | | |
| | | LOUNGE WASHROOM HEATER | 15A | 63 64 | | | | |
| | | | 2P | 65 66 | 3P | | | |
| | | FLOOR & WALL RECEPT. LOUNGE | 15A | 67A 68 | 40A | ART ROOM A/C | | (1) |
| | | FLOOR & WALL RECEPT. LOUNGE | 15A | 67B | | | | |
| | | FRONT LIGHT LOUNGE | 15A | 69 70 | | | | |
| | | LOUNGE FLOOR + HALL RECEPT. | 15A | 71A 72 | 3P | | | |
| | | FIRE DOOR NOT ENTER SIGN | 15A | 71B | | | | |
| | | OUTSIDE LIGHTS | 15A | 73 74 | 15A | EXISTING LOAD | | |
| | | OUTSIDE RECEPT. | 15A | 75 76 | 15A | SPARE | | |
| | | REAR POST LIGHTS | 20A | 77 78 | 20A | ART ROOM VENT TABLE | | |
| | | HEAT PUMP UNDER FLOOR | 15A | 79A 80 | 15A | PHONE RECPET. | | |
| | | SPARE | 15A | 79B | | | | |
| | | SPRINKLER PUMP | 15A | 81 82 | 20A | HEAD MASTER COURTYARD RECEPT. | | |
| | | COURTYARD TIMER | 15A | 83 84 | 20A | HEAD MASTER COURTYARD RECEPT. | | |

NOTES:
EXISITNG PANEL CAT.#NQOD484L225 BY SQUARE D, 225A, 208/120V, 3PH, 4W
PANEL IS FED FROM MAIN ELECTRICAL ROOM
EXISTING PANEL DIRECTOR IS PROVIDED FOR REFERENCE ONLY. THIS CONTRACTOR TO INCLUDE FOR SITE INVESTIGATION TO CONFIRM ALL CIRCUITS.
IDENTIFY ALL CIRCUITS FEEDING LOADS OUTSIDE OF RENOVATED AREA.
UPDATE DIRECTORY AFTER DEMOLITION IS COMPLETED
MARK BREAKERS AS "SPARE" AFTER ALL LOADS ON THE CIRCUIT AND REMOVED.
(1) REPLACE EXISITNG BREAKER AND WIRE NEW LOAD

## PANEL A (EXIS. REVISED)

120/208V,3PH,4W

TYPE: BOLT-ON
MAINS: 225 AMPS
MOUNTING: SURFACE

LOCATION: ELECTRICAL & SERVER ROOM

| | LOAD | DESCRIPTION | BREAKER | CIRCUITS | BREAKER | DESCRIPTION | LOAD | |
|---|---|---|---|---|---|---|---|---|
| | | BOILER PUMP | 15A | 1 2 | 70A | SERVERY PANEL G | | |
| | | BOILER PUMP | 15A | 3 4 | | | | |
| | | BOILER PUMP | 15A | 5 6 | 3P | | | |
| | | BOILER PUMP | 15A | 7 8 | 60A | ERV-1 | | (1) |
| | | SPARE | 15A | 9 10 | | | | |
| | | HALL LIGHTS | 15A | 11 12 | 3P | | | |
| | | EXITS & EMERGENCY LIGHTS | 15A | 13 14 | 15A | EXITS & EMERG. LIGHTS (BASEMENT) | | |
| | | EXISTING LOAD | 15A | 15 16 | 15A | HEAT MAIN ROOM | | |
| (1) | | HP-1.3 | 15A | 17 18 | 15A | SPARE | | |
| | | | 2P | 19 20 | 15A | 1ST FL SOUTH HALL RECEPT. | | |
| | | RECEP. WEST WALL PANEL | 15A | 21 22 | 15A | EMERG. LIGHTS (DINING RM, LOBBY, WEST DINING RM) | | |
| | | SPARE | 20A | 23 24 | 15A | 1ST FL SOUTH RECEPT. | | |
| | | EXISTING LOAD | 15A | 25 26 | 15A | EMERG. LIGHTS, HALL RECEPT. | | |
| | | KEY RM HALLWAY LIGHTS | 15A | 27 28 | 15A | EXISTING LOAD | | |
| | | SPARE | 20A | 29 30 | 15A | DINING HALL ENTRY POTS | | |
| | | BATTERY UNIT 3 EXITS 1ST FLOOR | 15A | 31 32 | 15A | EXISTING LOAD | | |
| | | A/C LOUNGE (NORTH) | 30A | 33 34 | 15A | SPARE | | |
| | | | 2P | 35 36 | 15A | EXISTING LOAD | | |
| | | A/C LOUNGE (SOUTH) | 30A | 37 38 | 15A | EXISTING LOAD | | |
| | | | 2P | 39 40 | 2P | | | |
| | | HEAT EXCHANGER | 15A | 41 42 | 15A | SPARE | | |
| | | RECEPT. LARGE COUNTER | 15A | 43 44 | 2P | SPARE | | |
| | | RECEPT. LARGE COUNTER | 15A | 45 46 | 15A | SECURITY PANEL | | |
| | | AUTO DOOR | 20A | 47 48 | 15A | HP-1.1 | | (1) |
| | | LIGHTS LOUNGE | 15A | 49 50 | 2P | | | |
| | | RECEPT. LOUNGE | 15A | 51 52 | 15A | HP-1.2 | | (1) |
| | | RECEPT. LARGE COUNTER | 15A | 53A 54 | 2P | | | |
| | | RECEPT. LOUNGE / ELEVATOR | 15A | 53B | | | | |
| | | RECEPT. LOUNGE | 15A | 55 56 | 15A | EXISTING LOAD | | |
| | | RECEPT. LOUNGE HALLWAY | 15A | 57A 58 | 15A | EXISTING LOAD | | |
| | | RECEPT. LOUNGE HALLWAY | 15A | 57B | | | | |
| | | LOUNGE WASHROOM HEATER | 15A | 59 60 | 15A | SUMP PUMP | | |
| | | | 2P | 61 62 | 50A | HVAC MEZZANINE | | |
| | | LOUNGE WASHROOM HEATER | 15A | 63 64 | | | | |
| | | | 2P | 65 66 | 3P | | | |
| | | FLOOR & WALL RECEPT. LOUNGE | 15A | 67A 68 | 45A | VRF-1 | | |
| | | FLOOR & WALL RECEPT. LOUNGE | 15A | 67B | | | | |
| | | FRONT LIGHT LOUNGE | 15A | 69 70 | | | | (1) |
| | | LOUNGE FLOOR + HALL RECEPT. | 15A | 71A 72 | 3P | | | |
| | | FIRE DOOR NOT ENTER SIGN | 15A | 71B | | | | |
| | | OUTSIDE LIGHTS | 15A | 73 74 | 15A | EXISTING LOAD | | |
| | | OUTSIDE RECEPT. | 15A | 75 76 | 15A | SPARE | | |
| | | REAR POST LIGHTS | 20A | 77 78 | 20A | ART ROOM VENT TABLE | | |
| | | HEAT PUMP UNDER FLOOR | 15A | 79A 80 | 15A | PHONE RECPET. | | |
| | | SPARE | 15A | 79B | | | | |
| | | SPRINKLER PUMP | 15A | 81 82 | 20A | HEAD MASTER COURTYARD RECEPT. | | |
| | | COURTYARD TIMER | 15A | 83 84 | 20A | HEAD MASTER COURTYARD RECEPT. | | |

## PANEL B (NEW)

120/208V,3PH,4W

TYPE: BOLT-ON
MAINS: 225 AMPS
MOUNTING: SURFACE MOUNTED

LOCATION: ELECTRICAL & SERVER ROOM

| | LOAD | DESCRIPTION | BREAKER | CIRCUITS | BREAKER | DESCRIPTION | LOAD | |
|---|---|---|---|---|---|---|---|---|
| | | 3D PRINTER – PROTOTYPING RM | 20A | 1 2 | 20A | 3D PRINTER – PROTOTYPING RM | | |
| | | 3D PRINTER – PROTOTYPING RM | 20A | 3 4 | 20A | 3D PRINTER – PROTOTYPING RM | | |
| | | 3D PRINTER – PROTOTYPING RM | 20A | 5 6 | 20A | 3D PRINTER – PROTOTYPING RM | | |
| | | 3D PRINTER – PROTOTYPING RM | 20A | 7 8 | 20A | 3D PRINTER – PROTOTYPING RM | | |
| | | 3D PRINTER – PROTOTYPING RM | 20A | 9 10 | 20A | 3D PRINTER – PROTOTYPING RM | | |
| | | 3D PRINTER – PROTOTYPING RM | 20A | 11 12 | 20A | 3D PRINTER – PROTOTYPING RM | | |
| | | GFI, LASER CUTTER – PROTOTYPING RM | 15A | 13 14 | 20A | 3D PRINTER – PROTOTYPING RM | | |
| | | POWER REEL – PROTOTYPING RM | 20A | 15 16 | 20A | POWER REEL – PROTOTYPING RM | | |
| | | POWER REEL – PROTOTYPING RM | 20A | 17 18 | 20A | POWER REEL – PROTOTYPING RM | | |
| | | POWER REEL – PROTOTYPING RM | 20A | 19 20 | 20A | POWER REEL – PROTOTYPING RM | | |
| | | POWER REEL – PROTOTYPING RM | 20A | 21 22 | 20A | POWER REEL – PROTOTYPING RM | | |
| | | TV – PROTOTYPING RM | 15A | 23 24 | 20A | RECEPTS – PROTOTYPING RM | | |
| | | WATER STATION, GFI | 15A | 25 26 | 15A | WATER STATION, GFI | | |
| | | POWER REEL – INNOVATION HUB | 20A | 27 28 | 20A | POWER REEL – INNOVATION HUB | | |
| | | POWER REEL – INNOVATION HUB | 20A | 29 30 | 20A | POWER REEL – INNOVATION HUB | | |
| | | SECURITY | 15A | 31 32 | 15A | PLUMBING FIXTURES, GFI | | |
| | | MECHANICAL CONTROLS | 15A | 33 34 | 15A | SPARE | | |
| | | TV – INNOVATION HUB | 15A | 35 36 | 15A | TV – INNOVATION HUB | | |
| | | TV – INNOVATION HUB | 15A | 37 38 | 20A | RECEPT. JANITOR'S ROOM | | |
| | | BATTERY UNIT BU | 15A | 39 40 | 20A | RECEPT. WC 001E | | |
| | | STAIR LIFT ACCESSORIES | 15A | 41 42 | 20A | STAIR PLATFORM LIFT | | |
| | | RECEPTS, INNOVATION HUB | 15A | 43 44 | 2P | | | |
| | | RECEPTS, INNOVATION HUB | 15A | 45 46 | 15A | HALL LIGHTS + SUMP PUMP | | (1) |
| | | EXTERIOR RECEPTACLE (BY KITCHEN) | 15A | 47 48 | 15A | LIGHTS + EXTERIOR OUTLET | | (1) |
| | | | 2P | 49 50 | 15A | ARCHIVE DUCT HEATER | | (1) |
| (1) | | EXISTING LOAD | 20A | 51 52 | 2P | | | |
| (1) | | LIGHTS | 15A | 53 54 | 20A | ARCHIVE HEAT PUMP | | (1) |
| (1) | | EXISTING LOAD | 15A | 55 56 | 2P | | | |
| (1) | | MAINTENANCE SHOP LIGHTS | 15A | 57 58 | 15A | PAY BOY LIGHTS | | (1) |
| (1) | | SHOP & WASHROOM LIGHTS | 15A | 59 60 | 15A | LIGHTS | | (1) |
| (1) | | STAIRWELL & CORRIDOR LIGHTS | 15A | 61 62 | | SPACE | | |
| (1) | | HALLWAY RECEPTACLE | 15A | 63 64 | | SPACE | | |
| | | PANEL 'C' | 80A | 65 66 | | SPACE | | |
| | | | 3P | 67 68 | 20A | OUTDOOR RECEPTIVE | | |
| | | LIGHTS – PROTOTYPING | 20A | 69 70 | 20A | LIGHTS – INNOVATION HUB | | |
| | | LIGHTS – WORKSHOP | 20A | 71 72 | 20A | LIGHTS – INNOVATION HUB | | |
| | | SPARE | 20A | 73 74 | 20A | LIGHTS – INNOVATION HUB | | |
| | | SPACE | | 75 76 | 20A | RECEPTS. INNOVATION HUB | | |
| | | SPACE | | 77 78 | | SPACE | | |
| | | SPACE | | 79 80 | | SPACE | | |

PANEL TO BE PROVIDED WITH MAIN SWITCH
PANEL FINISH TO BE CUSTOM AS PER ARCHITECT
(1) CIRCUIT TO REMAIN FULLY FUNCTIONAL. RE-WIRE FROM OLD REMOVED PANEL TO NEW PANEL IN NEW LOCATION

## PANEL B (EXISTING)

120/208V,3PH,4W

TYPE: BOLT-ON
MAINS: XXX AMPS
MOUNTING: SURFACE

LOCATION: LOCKER ROOM

| | LOAD | DESCRIPTION | BREAKER | CIRCUITS | BREAKER | DESCRIPTION | LOAD | |
|---|---|---|---|---|---|---|---|---|
| | | SPARE (FORMER MAKER ROOM SUB-PANEL) | 60A | 1 2 | 15A | HALL LIGHTS + SUMP PUMP | | (1) |
| | | | 2P | 3 4 | 15A | LIGHTS + EXTERIOR OUTLET | | (1) |
| (1) | | EXTERIOR RECEPTACLE (BY KITCHEN) | 15A | 5 6 | 15A | SPARE | | |
| | | | 2P | 7 8 | 2P | | | |
| | | WASHROOM / SHOWER | 15A | 9 10 | 20A | SPARE | | |
| | | WATER COOLER | 15A | 11 12 | 2P | | | |
| (1) | | EXISTING LOAD | 20A | 13 14 | 20A | SPARE | | |
| (1) | | PAY BOY LIGHTS | 15A | 15 16 | 2P | | | |
| (1) | | LIGHTS | 15A | 17 18 | 20A | SPARE | | |
| (1) | | EXISTING LOAD | 15A | 19 20 | 15A | ARCHIVE DUCT HEATER | | (1) |
| (1) | | MAINTENANCE SHOP LIGHTS | 15A | 21 22 | 2P | | | |
| (1) | | SHOP & WASHROOM LIGHTS | 15A | 23 24 | 20A | ARCHIVE HEAT PUMP | | (1) |
| (1) | | STAIRWELL & CORRIDOR LIGHTS | 15A | 25 26 | 2P | | | |
| (1) | | HALLWAY RECEPTACLE | 15A | 27 28 | 35A | DUCT HEATER | | |
| | | SPACE | | 29 30 | | | | |
| (1) | | LIGHTS | 15A | 31 32 | 3P | | | |
| | | SPACE | | 33 34 | | SPACE | | |
| | | SPACE | | 35 36 | | SPACE | | |
| | | SPACE | | 37 38 | | SPACE | | |
| | | SPACE | | 39 40 | | SPACE | | |
| | | SPACE | | 41 42 | | SPACE | | |

NOTES:
EXISTING PANEL DIRECTOR IS PROVIDED FOR REFERENCE ONLY. THIS CONTRACTOR TO INCLUDE FOR SITE INVESTIGATION TO CONFIRM ALL CIRCUITS. REPORT ANY DISCREPANCIES.
IDENTIFY ALL CIRCUITS FEEDING LOADS OUTSIDE OF RENOVATED AREA.
PANEL TO BE REMOVED. ENSURE ALL LOADS OUTSIDE OF RENOVATION AREAS ARE RE-WIRED TO NEW PANEL.
(1) CIRCUIT FOR LOADS OUTSIDE OF RENOVATED AREA. CIRCUIT TO REMAIN FULLY FUNCTIONAL. RE-WIRE TO NEW PANEL IN NEW LOCATION

## PANEL C (NEW)

120/208V,3PH,4W

TYPE: BOLT-ON
MAINS: 225 AMPS
MOUNTING: RECESSED

LOCATION: SHOP STORAGE 003A

| | LOAD | DESCRIPTION | BREAKER | CIRCUITS | BREAKER | DESCRIPTION | LOAD | |
|---|---|---|---|---|---|---|---|---|
| | 1HP | FAN EF-1 | 15A | 1 2 | 15A | FAN EF-3 | 1HP | |
| | | | 3P | 3 4 | | | | |
| | | | | 5 6 | 3P | | | |
| | 075HP | FAN EF-2 | 20A | 7 8 | 25A | SUMP PUMPS SP-1A & SP-1B | 2x2HP | |
| (1) | | POWER REEL – WORKSHOP | 20A | 9 10 | | | | |
| (1) | | POWER REEL – WORKSHOP | 20A | 11 12 | 3P | | | |
| (1) | | RECEPTACLE – WORKSHOP | 20A | 13 14 | 20A | POWER REEL – WORKSHOP | | (1) |
| (1) | | RECEPTACLE – WORKSHOP | 20A | 15 16 | 20A | RECEPTACLES – WORKSHOP | | (1) |
| (1) | | RECEPTACLE – WORKSHOP | 15A | 17 18 | 20A | RECEPTACLES – WORKSHOP | | (1) |
| (1) | | RECEPTACLE – WORKSHOP | 15A | 19 20 | 20A | RECEPTACLES – WORKSHOP | | (1) |
| | | RECEPTACLE – WORKSHOP | 15A | 21 22 | 15A | MECHANICAL; CONTROLS | | |
| | | SPACE | | 23 24 | 20A | RECEPTACLES – SHOP STORAGE | | |
| | | SPACE | | 25 26 | 20A | RECEPTACLES – SHOP STORAGE | | |
| | | SPACE | | 27 28 | | SPACE | | |
| | | SPACE | | 29 30 | | SPACE | | |
| | | SPACE | | 31 32 | | SPACE | | |
| | | SPACE | | 33 34 | | SPACE | | |
| | | SPACE | | 35 36 | | SPACE | | |
| | | SPACE | | 37 38 | | SPACE | | |
| | | SPACE | | 39 40 | | SPACE | | |
| | | SPACE | | 41 42 | | SPACE | | |
| | | SPACE | | 43 44 | | SPACE | | |

PANEL TO BE PROVIDED WITH MAIN SWITCH
AND VANDAL PROOF LOCKABLE DOOR
(1) CIRCUIT TO BE CONNECTED TO "EPO" (EMERGENCY POWER OFF) PUSHBUTTON TO CUT POWER TO CIRCUIT WHEN "EPO" IS PUSHED


# Architecture Counsel

4 CLINTON PL, TORONTO, ON M6G 1J9 T 416-603-1515



All drawings and specifications are the property of the architect. The contractor shall verify all dimensions and information on site and report any discrepancy to architect before proceeding.


Project North / True North


SHARMA & PARTNERS INC.
*Mechanical and Electrical Engineers*
*85 Curlew Drive, Unit 108, Toronto, Ontario M3A 2P8*
*Tel.: (416)291-8822*


LICENCED PROFESSIONAL ENGINEER A. PROTKIN 06/11/26 PROVINCE OF ONTARIO

*SPI PROJECT#: 2026-1010*

| | DATE | REVISION |
|---|---|---|
| 2. | 2026.11.06 | ISSUED FOR TENDER |
| 1. | 2026.10.05 | ISSUED FOR PERMIT |

# PICKERING COLLEGE INNOVATION HUB

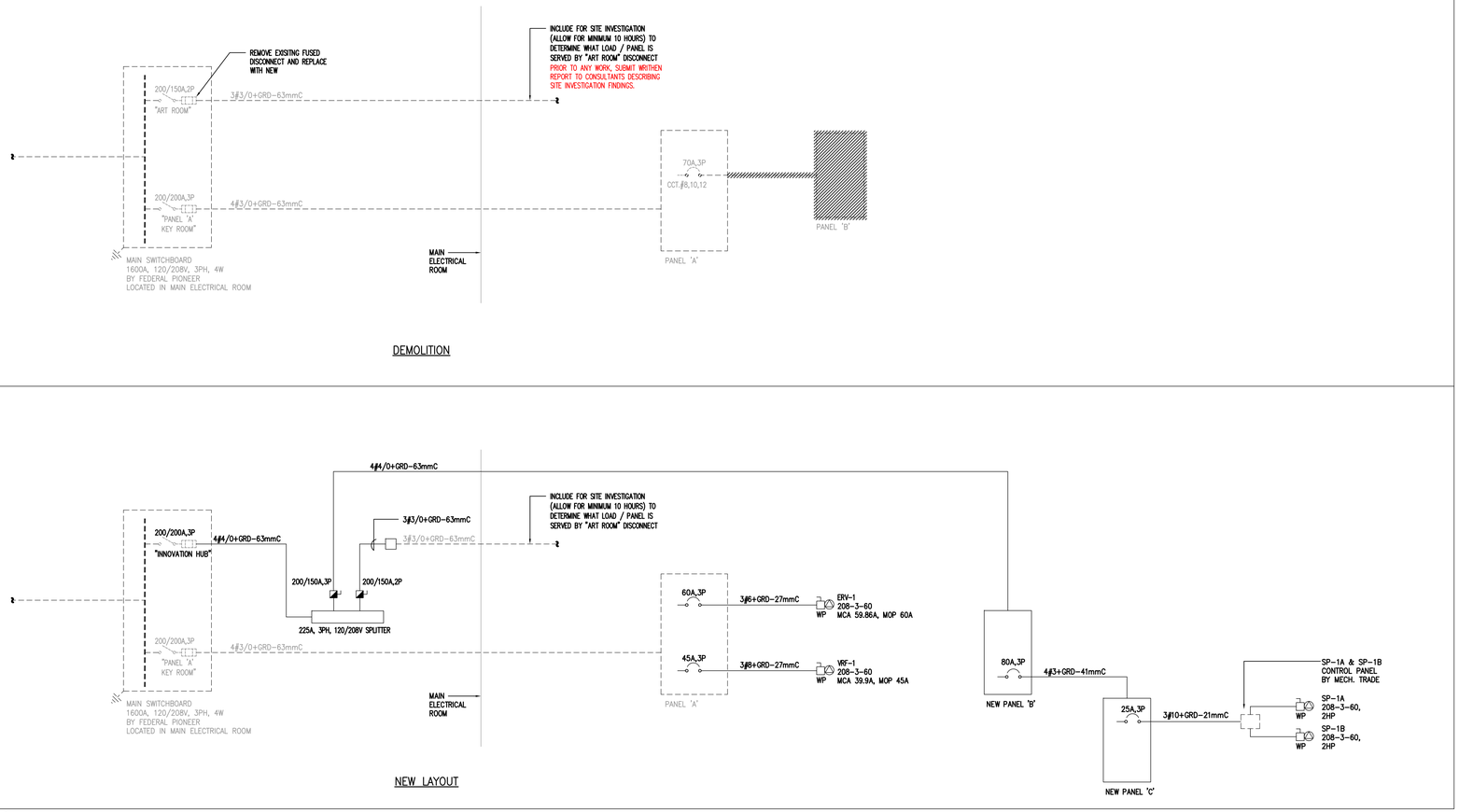
16945 Bayview Ave, Newmarket, ON L3Y 3W7

# PANEL SCHEDULES

| | |
|---|---|
| Scale: | N.T.S. |
| Drawn by: | CAD |
| Reviewed by: | AP |
| Job number: | 25168 |
| Plot date: | 2026.11.06 |

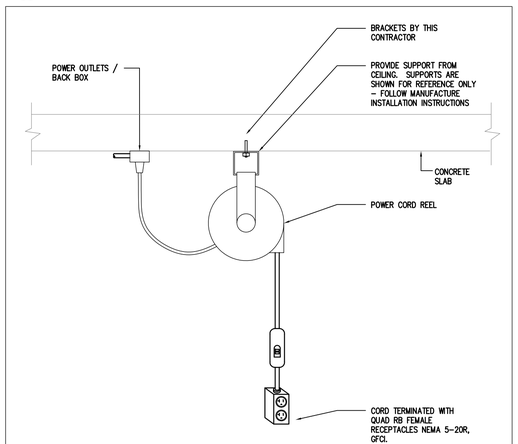
Drawing number:

# E0.2



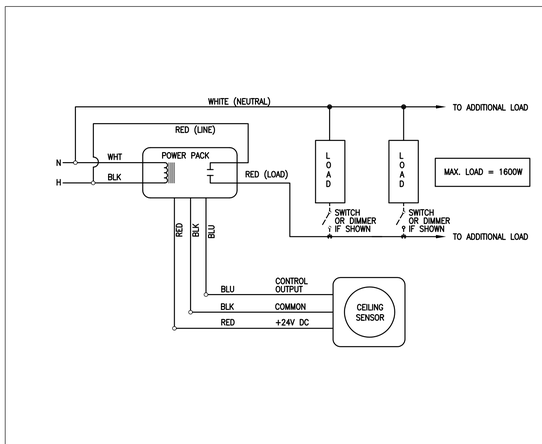

1 E0.3 SINGLE LINE DIAGRAM – DEMO & NEW LAYOUT

SCALE: N.T.S.



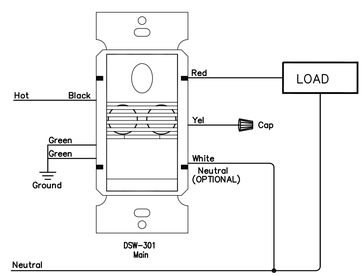

2 E0.3 POWER CORD REEL INSTALALTION DETAIL

SCALE: N.T.S.




2 E0.3 SINGLE SENSOR & SINGLE CIRCUIT OCCUPANCY SENSOR CONTROL WIRING DIAGRAM

SCALE: N.T.S.




3 E0.3 TYPICAL STANDALONE WALLBOX DUAL TECH OCCUPANCY SENSOR SWITCHES (ON/OFF)

SCALE: N.T.S.


# Architecture Counsel

4 CLINTON PL, TORONTO, ON M6G 1J9 T 416-603-1515



All drawings and specifications are the property of the architect. The contractor shall verify all dimensions and information on site and report any discrepancy to architect before proceeding.


Project North True North


SHARMA & PARTNERS INC.

*Mechanical and Electrical Engineers*

*85 Curlew Drive, Unit 108, Toronto, Ontario M3A 2P8*

*Tel.: (416)291-8822*

*SPI PROJECT#: 2026-1010*


LICENCED PROFESSIONAL ENGINEER A. PROTKIN 06/11/26 PROVINCE OF ONTARIO

| | | |
|---|---|---|
| 2. | 2026.11.06 | ISSUED FOR TENDER |
| 1. | 2026.10.05 | ISSUED FOR PERMIT |
| | DATE | REVISION |

## PICKERING COLLEGE INNOVATION HUB

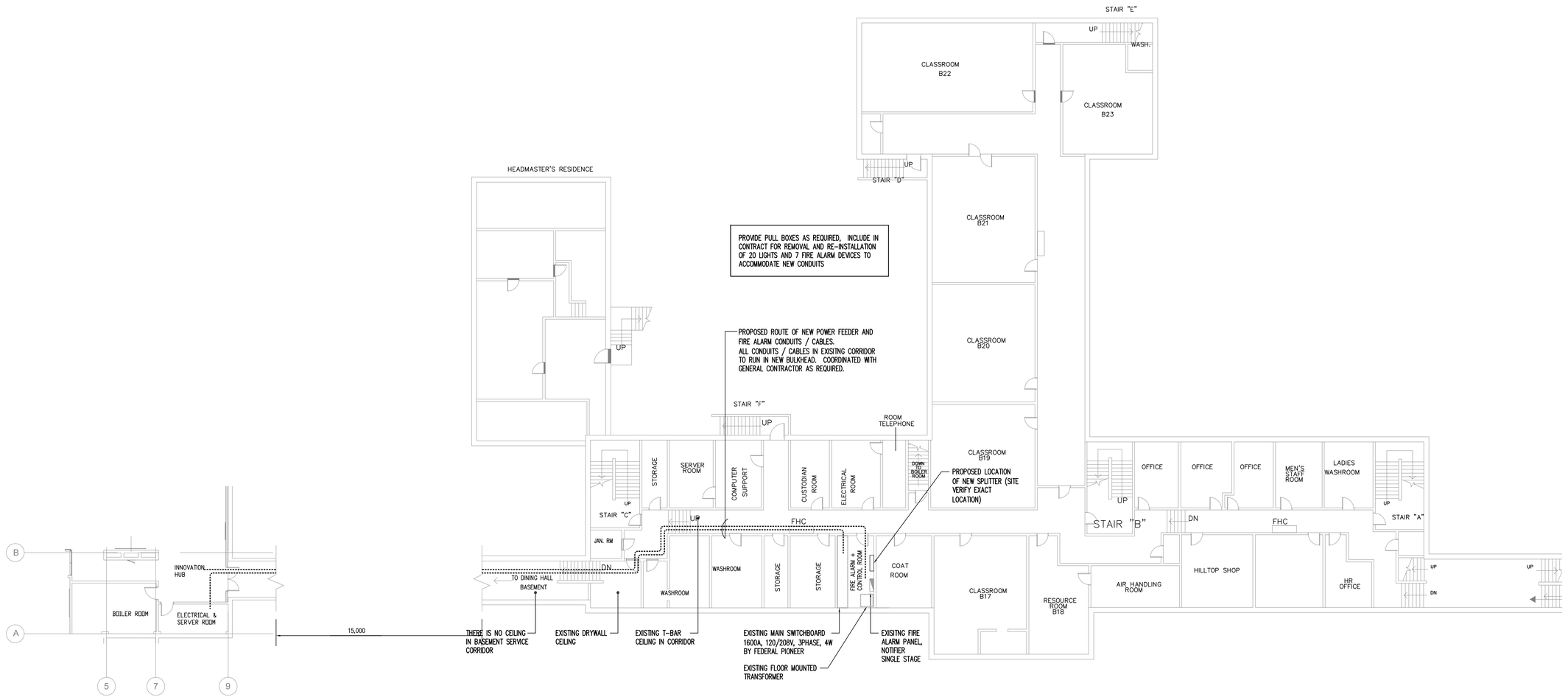
16945 Bayview Ave, Newmarket, ON L3Y 3W7

## SINGLE LINE DIAGRAM AND DETAILS

| | |
|---|---|
| Scale: | N.T.S. |
| Drawn by: | CAD |
| Reviewed by: | AP |
| Job number: | 25168 |
| Plot date: | 2026.11.06 |

Drawing number:

# E0.3





# Architecture Counsel

4 CLINTON PL, TORONTO, ON M6G 1J9 T 416-603-1515



All drawings and specifications are the property of the architect. The contractor shall verify all dimensions and information on site and report any discrepancy to architect before proceeding.


Project North / True North


SHARMA & PARTNERS INC.

*Mechanical and Electrical Engineers*

*85 Curlew Drive, Unit 108, Toronto, Ontario M3A 2P8*

*Tel.: (416)291-8822*

*SPI PROJECT#: 2026-1010*


LICENCED PROFESSIONAL ENGINEER A. PROTKIN 06/11/26 PROVINCE OF ONTARIO

| | | |
|---|---|---|
| 2. | 2026.11.06 | ISSUED FOR TENDER |
| 1. | 2026.10.05 | ISSUED FOR PERMIT |
| | DATE | REVISION |

# PICKERING COLLEGE INNOVATION HUB

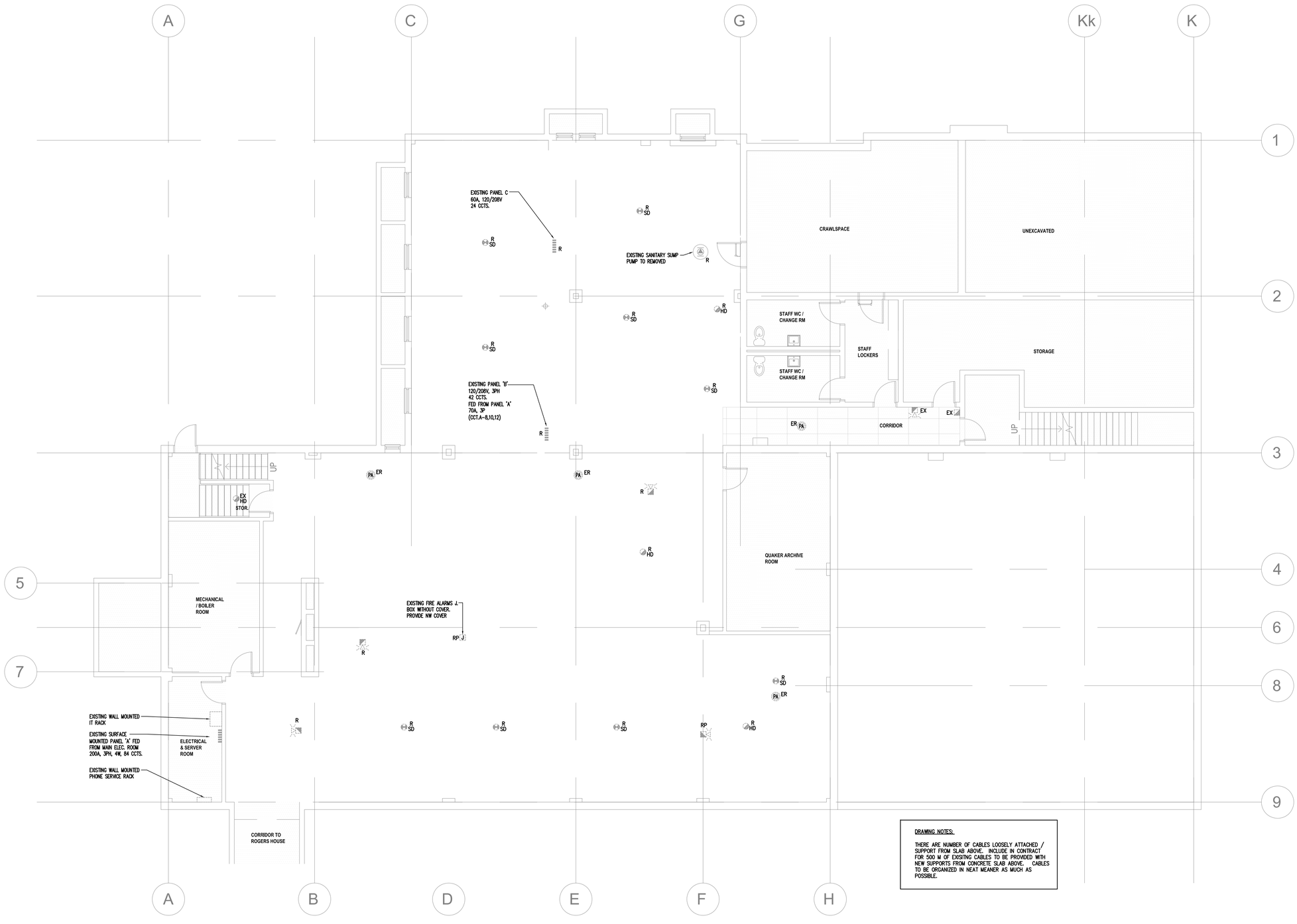
16945 Bayview Ave, Newmarket, ON L3Y 3W7

## GROUND FLOOR KEY PLAN

| | |
|---|---|
| Scale: | 1:150 |
| Drawn by: | CAD |
| Reviewed by: | AP |
| Job number: | 25168 |
| Plot date: | 2026.11.06 |

Drawing number:

**E0.4**




DRAWING NOTES:

THERE ARE NUMBER OF CABLES LOOSELY ATTACHED / SUPPORT FROM SLAB ABOVE. INCLUDE IN CONTRACT FOR 500 M OF EXISTING CABLES TO BE PROVIDED WITH NEW SUPPORTS FROM CONCRETE SLAB ABOVE. CABLES TO BE ORGANIZED IN NEAT MEANER AS MUCH AS POSSIBLE.


# Architecture Counsel

4 CLINTON PL, TORONTO, ON M6G 1J9 T 416-603-1515



All drawings and specifications are the property of the architect. The contractor shall verify all dimensions and information on site and report any discrepancy to architect before proceeding.


Project North True North


SHARMA & PARTNERS INC.

*Mechanical and Electrical Engineers*

*85 Curlew Drive,*
*Unit 108, Toronto,*
*Ontario*
*M3A 2P8*
*Tel.: (416)291-8822*

*SPI PROJECT#: 2026-1010*


LICENCED PROFESSIONAL ENGINEER
A. PROTKIN
06/11/26
PROVINCE OF ONTARIO

| | DATE | REVISION |
|---|---|---|
| 2. | 2026.11.06 | ISSUED FOR TENDER |
| 1. | 2026.10.05 | ISSUED FOR PERMIT |

# PICKERING COLLEGE INNOVATION HUB

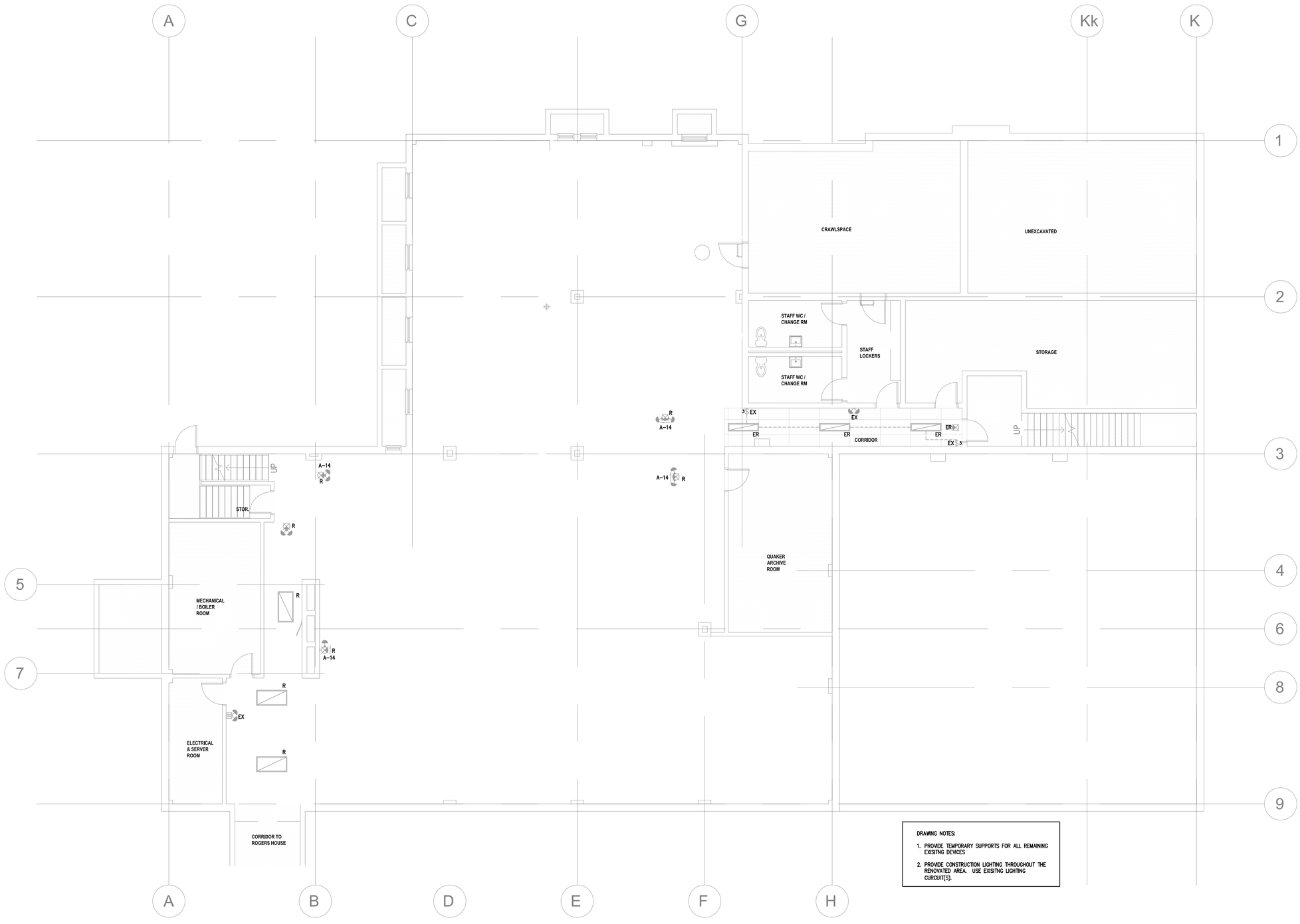
16945 Bayview Ave, Newmarket, ON L3Y 3W7

# BASEMENT POWER DEMOLITION

| | |
|---|---|
| Scale: | 1:75 |
| Drawn by: | CAD |
| Reviewed by: | AP |
| Job number: | 25168 |
| Plot date: | 2026.11.06 |

Drawing number:

# E1.1




# Architecture Counsel

4 CLINTON PL, TORONTO, ON M6G 1J9 T 416-603-1515

All drawings and specifications are the property of the architect. The contractor shall verify all dimensions and information on site and report any discrepancy to architect before proceeding.

Project North / True North

SHARMA & PARTNERS INC.
*Mechanical and Electrical Engineers*
*85 Curlew Drive, Unit 108, Toronto, Ontario M3A 2P8*
*Tel.: (416)291-8822*

*SPI PROJECT#: 2026-1010*

LICENCED PROFESSIONAL ENGINEER A. PROTKIN 06/11/26 PROVINCE OF ONTARIO

| | | |
|---|---|---|
| 2. | 2026.11.06 | ISSUED FOR TENDER |
| 1. | 2026.10.05 | ISSUED FOR PERMIT |
| | DATE | REVISION |

## PICKERING COLLEGE INNOVATION HUB

16945 Bayview Ave, Newmarket, ON L3Y 3W7

## BASEMENT LIGHTING DEMOLITION

| | |
|---|---|
| Scale: | 1:75 |
| Drawn by: | CAD |
| Reviewed by: | AP |
| Job number: | 25168 |
| Plot date: | 2026.11.06 |

Drawing number:

# E1.2

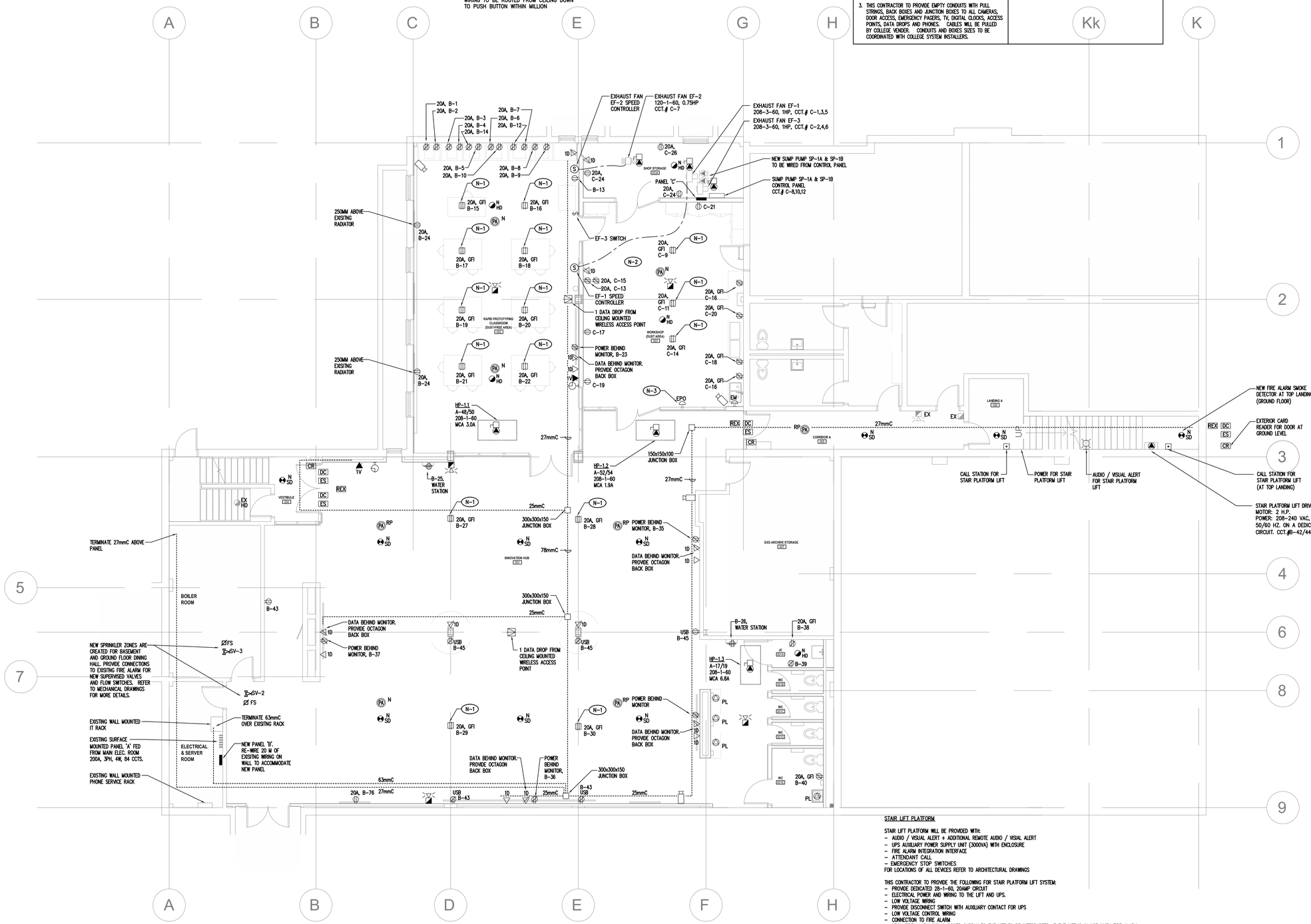
## DRAWING NOTES

1. IN ADDITION TO DATA DROPS SHOWN ON DRAWING PROVIDE DATA DROP TO EACH:
   SECURITY CAMERA
   MASTER CLOCK
   WIRELESS ACCESS POINT
   PHONE OUTLET
   EMERGENCY PAGER
2. THE DRAWING INCLUDES PROPOSED CONDUIT ROUTES FOR SOME DEVICES (PARTIAL ROUTING IS SHOWN TO INDICATE INTENT ONLY). NOT ALL CONDUITS ARE SHOWN. PROVIDE CONDUITS TO ALL DEVICES AS REQUIRED.
3. THIS CONTRACTOR TO PROVIDE EMPTY CONDUITS WITH PULL STRINGS, BACK BOXES AND JUNCTION BOXES TO ALL CAMERAS, DOOR ACCESS, EMERGENCY PAGERS, TV, DIGITAL CLOCKS, ACCESS POINTS, DATA DROPS AND PHONES. CABLES WILL BE PULLED BY COLLEGE VENDER. CONDUITS AND BOXES SIZES TO BE COORDINATED WITH COLLEGE SYSTEM INSTALLERS.
4. UNLESS STATED OTHERWISE PROVIDE
   SINGLE GANG BACK BOX FOR SECURITY CAMERAS
   SINGLE GANG BACK BOX FOR DATA DROP AND PHONE OUTLET
5. ALL WIRING IN EXPOSED AREAS TO BE IN CONDUITS. ENSURE CONDUITS RUN PARALLEL TO WALLS IN NEAT AND ORGANIZED MANNER. CONDUITS WILL BE PAINTED BY GENERAL CONTRACTOR
6. REFER TO ARCHITECTURAL DRAWINGS FOR EXACT LOCATIONS AND ELEVATIONS OF RECEPTACLE AND OTHER DEVICES

N-1 POWER REEL WITH CEILING MOUNTED POWER OUTLET (TYPICAL)

N-2 ALL EQUIPMENT AND DEVICES WITHIN WORKSHOP 003 AREA TO BE DUST PROOF AND TO BE PROVIDED IN ACCORDANCE WITH SECTION 18 OF OESC

N-3 EMERGENCY POWER OFF PUSHBUTTON TO BE LOCATED ON GLASS WALL MILLION. WIRING TO BE ROUTED FROM CEILING DOWN TO PUSH BUTTON WITHIN MILLION




### STAIR LIFT PLATFORM

STAIR LIFT PLATFORM WILL BE PROVIDED WITH:
- AUDIO / VISUAL ALERT + ADDITIONAL REMOTE AUDIO / VISIAL ALERT
- UPS AUXILIARY POWER SUPPLY UNIT (3000VA) WITH ENCLOSURE
- FIRE ALARM INTEGRATION INTERFACE
- ATTENDANT CALL
- EMERGENCY STOP SWITCHES

FOR LOCATIONS OF ALL DEVICES REFER TO ARCHITECTURAL DRAWINGS

THIS CONTRACTOR TO PROVIDE THE FOLLOWING FOR STAIR PLATFORM LIFT SYSTEM:
- PROVIDE DEDICATED 28-1-60, 20AMP CIRCUIT
- ELECTRICAL POWER AND WIRING TO THE LIFT AND UPS.
- LOW VOLTAGE WIRING
- PROVIDE DISCONNECT SWITCH WITH AUXILIARY CONTACT FOR UPS
- LOW VOLTAGE CONTROL WIRING
- CONNECTION TO FIRE ALARM
  UPON FIRE ALARM SIGNAL POWER SUPPLY TO THE LIFT TO BE INTERRUPTED. IF THE LIFT IS IN USE WHEN FIRE ALARM SOUNDS, THE LIFT TO ONLY ALLOW PLATFORM TO TRAVEL TO DESIGNATED LANDING (GROUND FLOOR).

FOLLOW MANUFACTURE INSTALLATION AND WIRING INSTRUCTIONS


# Architecture Counsel

4 CLINTON PL, TORONTO, ON M6G 1J9 T 416-603-1515



All drawings and specifications are the property of the architect. The contractor shall verify all dimensions and information on site and report any discrepancy to architect before proceeding.


Project North / True North


SHARMA & PARTNERS INC.

*Mechanical and Electrical Engineers*

*85 Curlew Drive, Unit 108, Toronto, Ontario M3A 2P8*
*Tel.: (416)291-8822*


LICENCED PROFESSIONAL ENGINEER A. PROTKIN 06/11/26 PROVINCE OF ONTARIO

*SPI PROJECT#: 2026-1010*

| | | |
|---|---|---|
| 2. | 2026.11.06 | ISSUED FOR TENDER |
| 1. | 2026.10.05 | ISSUED FOR PERMIT |
| | DATE | REVISION |

# PICKERING COLLEGE INNOVATION HUB

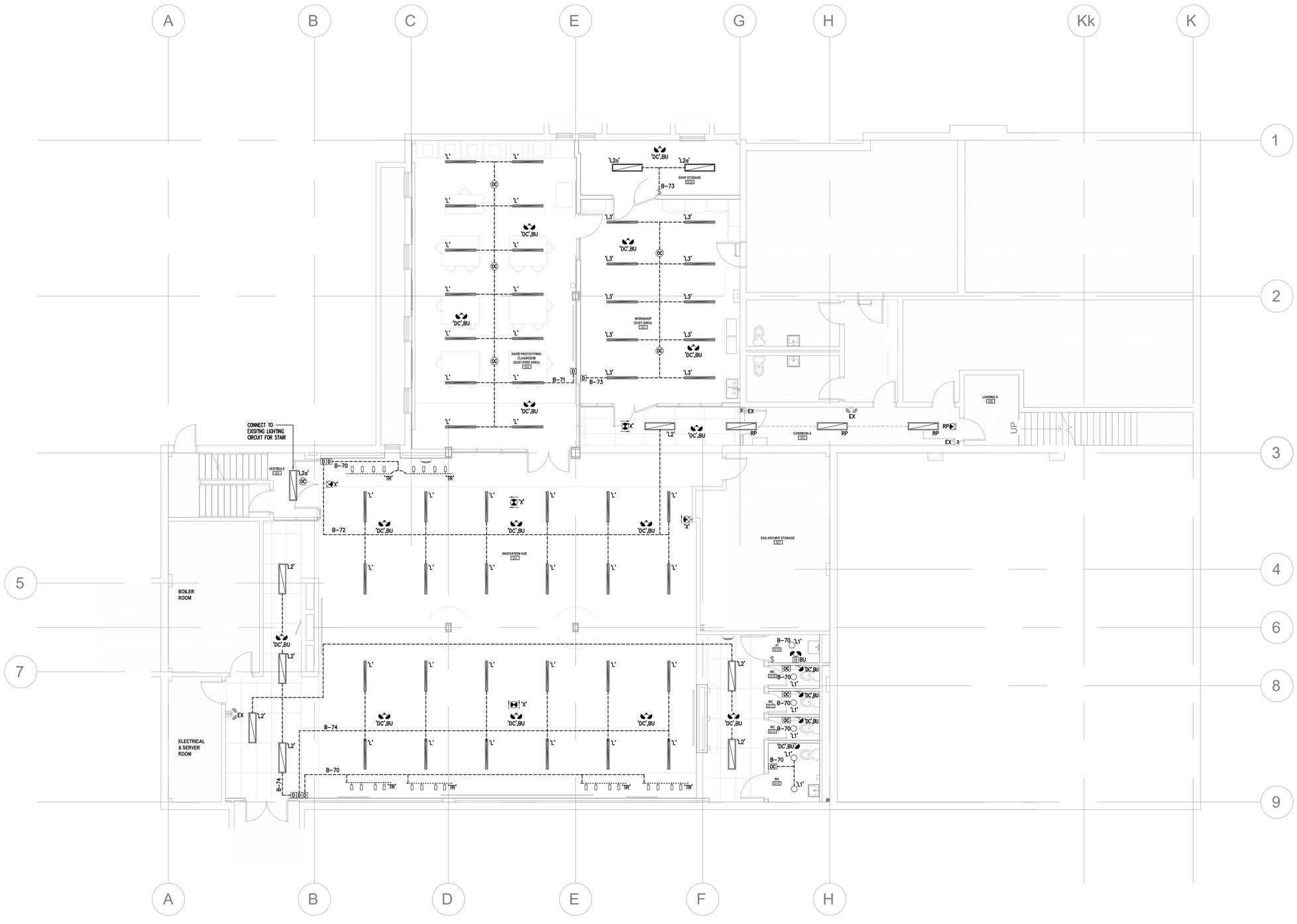
16945 Bayview Ave, Newmarket, ON L3Y 3W7

## BASEMENT POWER NEW LAYOUT

| | |
|---|---|
| Scale: | 1:75 |
| Drawn by: | CAD |
| Reviewed by: | AP |
| Job number: | 25168 |
| Plot date: | 2026.11.06 |

Drawing number:

# E2.1




# Architecture Counsel

4 CLINTON PL, TORONTO, ON M6G 1J9 T 416-603-1515

All drawings and specifications are the property of the architect. The contractor shall verify all dimensions and information on site and report any discrepancy to architect before proceeding.

Project North True North

SHARMA & PARTNERS INC.
*Mechanical and Electrical Engineers*
*85 Curlew Drive, Unit 108, Toronto, Ontario M3A 2P8*
*Tel.: (416)291-8822*

*SPI PROJECT#: 2026-1010*

LICENCED PROFESSIONAL ENGINEER A. PROTKIN 06/11/26 PROVINCE OF ONTARIO

| | | |
|---|---|---|
| 2. | 2026.11.06 | ISSUED FOR TENDER |
| 1. | 2026.10.05 | ISSUED FOR PERMIT |
| | DATE | REVISION |

## PICKERING COLLEGE INNOVATION HUB

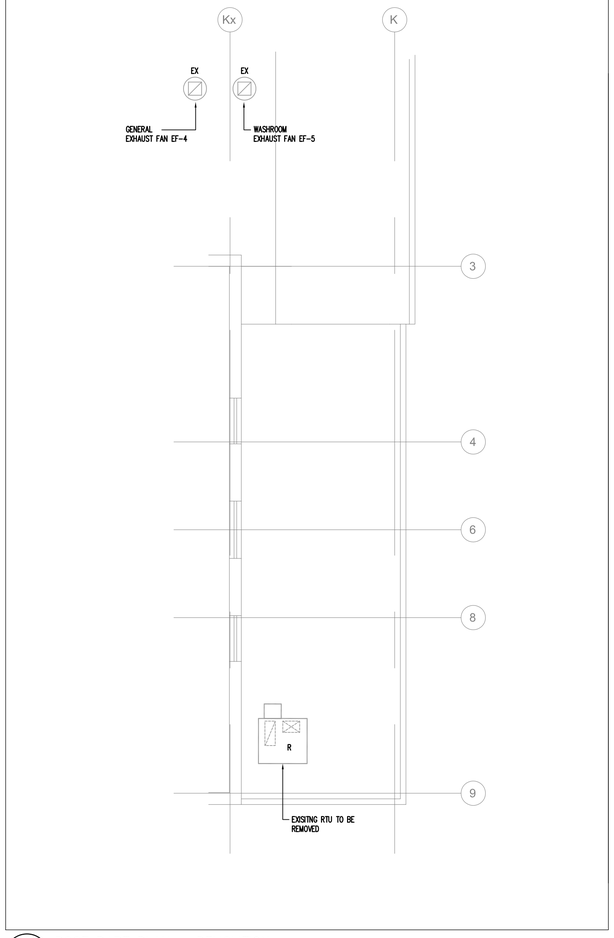
16945 Bayview Ave, Newmarket, ON L3Y 3W7

## BASEMENT LIGHTING NEW LAYOUT

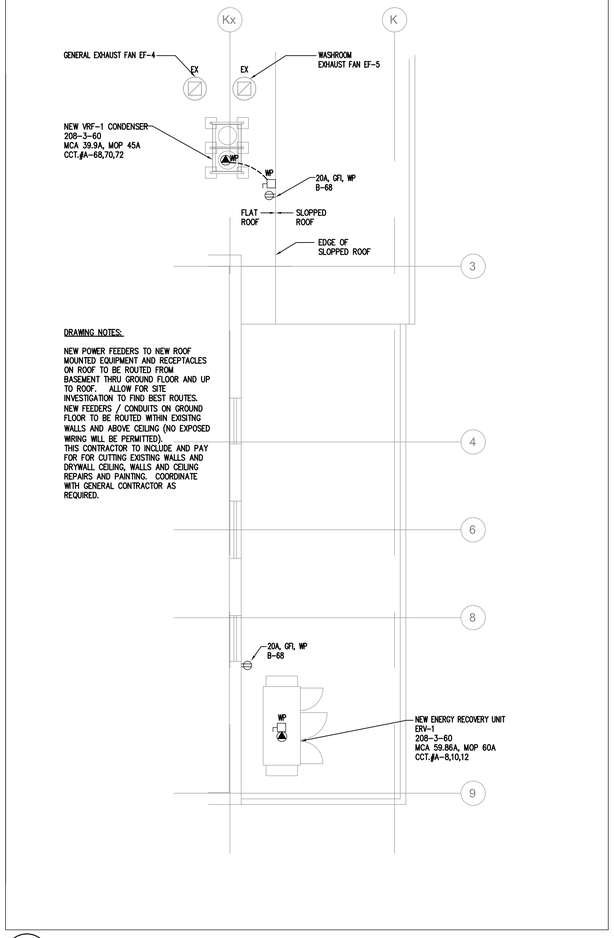
| | |
|---|---|
| Scale: | 1:75 |
| Drawn by: | CAD |
| Reviewed by: | AP |
| Job number: | 25168 |
| Plot date: | 2026.11.06 |

Drawing number:

# E2.2




1 / E2.3 ROOF PART PLAN – DEMOLITION
SCALE: 1:75




2 / E2.3 ROOF PART PLAN – NEW LAYOUT
SCALE: 1:75

# Architecture Counsel

4 CLINTON PL, TORONTO, ON M6G 1J9 T 416-603-1515

All drawings and specifications are the property of the architect. The contractor shall verify all dimensions and information on site and report any discrepancy to architect before proceeding.

Project North / True North

SHARMA & PARTNERS INC.
*Mechanical and Electrical Engineers*
*85 Curlew Drive,*
*Unit 108, Toronto,*
*Ontario*
*M3A 2P8*
*Tel.: (416)291-8822*

*SPI PROJECT#: 2026-1010*

LICENCED PROFESSIONAL ENGINEER
A. PROTKIN
06/11/26
PROVINCE OF ONTARIO

| | DATE | REVISION |
|---|---|---|
| 2. | 2026.11.06 | ISSUED FOR TENDER |
| 1. | 2026.10.05 | ISSUED FOR PERMIT |

## PICKERING COLLEGE INNOVATION HUB

16945 Bayview Ave, Newmarket, ON L3Y 3W7

## ROOF PART PLAN DEMO & NEW LAYOUT

| | |
|---|---|
| Scale: | 1:75 |
| Drawn by: | CAD |
| Reviewed by: | AP |
| Job number: | 25168 |
| Plot date: | 2026.11.06 |

Drawing number:

**E2.3**

# ELECTRICAL SPECIFICATION

## GENERAL ELECTRICAL CONDITIONS – SECTION 16050

1. COMPLY WITH GENERAL CONDITIONS OF THE CONTRACT AND DIVISION 15, MECHANICAL SPECIFICATIONS. DIVISION 15 SHALL BE THE PRIME CONTRACTOR.

2. THIS SECTION APPLIES TO ALL SECTIONS OF DIVISION 16.

3. PROVIDE EACH ITEM MENTIONED OR INDICATED OF QUALITY AND SUBJECT TO QUALIFICATIONS NOTED; PERFORM ACCORDING TO CONDITIONS STATED EACH OPERATION PRESCRIBED; AND PROVIDE THEREFORE ALL LABOUR, MATERIAL, EQUIPMENT, INCIDENTALS AND SERVICES REQUIRED TO COMPLETE THE INSTALLATION.

4. OTHER WORK BY THIS DIVISION

   1. PAINTING OF EXPOSED CONDUITS, UNFINISHED ELECTRICAL EQUIPMENT: UNDER DIVISION 16.
   2. CONCRETE WORK – UNDER DIVISION 16.
   3. CUTTING AND PATCHING WILL BE BY DIVISION 16. PATCHING SHALL BE OF SAME MATERIAL AS SURROUNDING AREA AND SHALL BE PAINTED OR FINISHED TO MATCH EXISTING.

5. MAKE A SET OF WHITE PRINTS AND AS THE JOB PROGRESSES, MARK ON CHANGES MADE THROUGH ANY APPROVED CHANGE ORDER AS WELL AS THE LOCATION OF FEEDERS, CONDUIT RUNS, JUNCTION BOXES, AND ALL CHANGES IN CIRCUITING, LOCATION OF EQUIPMENT, RUNS OF CONDUITS, WIRING, ETC. FROM THAT ORIGINALLY SHOWN, SO THAT ON THE COMPLETION OF THE JOB THE RECORD DRAWINGS WILL SHOW THE EXACT LOCATION AS ACTUALLY INSTALLED. RECORD DRAWINGS SHALL BE KEPT AT THE SITE AND SHALL BE BROUGHT UP TO DATE AS THE WORK PROGRESSES. SUBMIT COMPLETED RECORD DRAWINGS BEFORE FINAL CERTIFICATE OF JOB ACCEPTANCE IS ISSUED.

6. THE FOLLOWING DOCUMENTS SHALL BE SUBMITTED TO THE CONSULTANT ON THE COMPLETION OF THE PROJECT AS DESCRIBED ABOVE:

   – ESA ELECTRICAL INSPECTION CERTIFICATE
   – FIRE ALARM VERIFICATION REPORT
   – EMERGENCY LIGHTS TEST REPORT
   – AS_BUILT DRAWINGS (AUTOCAD, PDF AND HARD COPY). AS–BUILT DRAWINGS SHALL RECORD ALL CHANGES TO DESIGN.
   – OPERATION AND MAINTENANCE MANUALS.
   – GUARANTEE
   – OTHER CERTIFICATES SPECIFIED.

7. ALL MATERIAL SHALL BE STORED NEATLY AND OUT OF THE WAY. CLEAN UP DAILY ALL REFUSE CAUSED BY WORK.

8. BIND WITHIN A HARD_COVERED, LOOSE_LEAF BINDER, A COMPLETE SET OF MANUFACTURER'S OPERATING AND MAINTENANCE INSTRUCTIONS SHOWING ALL MAJOR ELECTRICAL EQUIPMENT AND SYSTEMS. INCLUDE SHOP DRAWINGS AND DETAIL DRAWINGS. INSTRUCTIONS SHALL BE COMPLETE FOR INSTALLATION, OPERATION AND MAINTENANCE. SPARE PART SUPPLIERS, LISTS AND ADDRESSES SHALL BE INCLUDED. MAKE ANY ADDITIONS AND/OR CORRECTIONS REQUIRED BY THE CONSULTANT AND SUBMIT TWO CORRECT COPIES TO THE CONSULTANT. INSTRUCTIONS SHALL BE REVIEWED WITH THE OPERATING PERSONNEL TO ENSURE A THOROUGH UNDERSTANDING OF THE EQUIPMENT AND ITS OPERATION.

9. EXAMINE THE SITE, EXISTING EQUIPMENT AND THE LOCAL CONDITIONS AFFECTING THE WORK UNDER THIS CONTRACT. NO ALLOWANCE WILL BE MADE SUBSEQUENTLY FOR ANY OBVIOUS CONSIDERATIONS OVERLOOKED.

10. AFTER THE WORK IS COMPLETE BUT BEFORE FINAL PAYMENT, GIVE THE OWNER A WRITTEN GUARANTEE THAT YOU WILL, AT NO CHARGE TO THE OWNER, REPLACE OR REPAIR ANY DEFECTS IN WORKMANSHIP AND MATERIALS NOT DUE, IN THE OPINION OF THE ARCHITECT TO MISUSE OR NEGLECT. GUARANTEE SHALL COVER A PERIOD OF 12 MONTHS FROM THE DATE OF ACCEPTANCE OF THE WORK BY THE ARCHITECT. THIS GUARANTEE SHALL IN NO WAY SUPPLANT ANY OTHER GUARANTEE OR GUARANTEES OF LONGER PERIOD, BUT SHALL BE BINDING ON ALL OTHER WORK NOT OTHERWISE COVERED.

11. ALL WORK SHALL COMPLY STRICTLY TO THE REQUIREMENTS OF THE LATEST EDITIONS OF THE CANADIAN ELECTRICAL CSA CODE AS ADOPTED AND AMENDED BY PROVINCIAL REGULATIONS AND THE BUILDING CODE. THESE CODES AND ANY ADDITIONAL REQUIREMENTS OF THE POWER UTILITY SHALL FORM AN INTEGRAL PART OF THIS SPECIFICATION. WHERE DRAWINGS CALL FOR EQUIPMENT, WIRING OR OTHER REQUIREMENTS EXCEEDING THE MINIMUM REQUIREMENTS OF THE CODE, THE DRAWINGS SHALL BE FOLLOWED.

12. BEFORE STARTING ANY WORK, SUBMIT THE REQUIRED NUMBER OF COPIES OF THE ELECTRICAL DRAWINGS TO THE POWER AUTHORITY AND ELECTRICAL INSPECTION DEPARTMENT REGIONAL OFFICE, FOR THEIR APPROVAL AND COMMENTS.

13. PAY ALL FEES FOR EXAMINATION OF DRAWINGS AND OBTAIN ALL PERMITS REQUIRED AND PAY ALL PERMIT AND INSPECTION FEES.

14. ARRANGE FOR INSPECTION OF ALL WORK BY THE POWER AUTHORITY AND INSPECTION DEPARTMENT. ON COMPLETION OF THE WORK, PRESENT TO THE OWNER THE FINAL UNCONDITIONAL CERTIFICATE OF APPROVAL.

15. ON AWARD OF CONTRACT, SUBMIT FOR REVIEW LIST OF DELIVERY DATES AND ELECTRONIC COPY OF SHOP DRAWINGS FOR ALL EQUIPMENT.

16. ALL MATERIALS SHALL BE NEW AND FREE FROM DEFECTS, NOISE AND VIBRATION. ALL EQUIPMENT SHALL BE CSA APPROVED.

17. SCHEDULE AND COORDINATE ALL WORK WITH OTHER TRADES. RELOCATE OR REPLACE CONDUIT OR EQUIPMENT WHICH INTERFERES WITH OTHER TRADES DUE TO LACK OF COORDINATION WITH OTHER TRADES.

18. THE OWNER SHALL HAVE TEMPORARY USE OF INSTALLATION PRIOR TO FINAL ACCEPTANCE.

19. ALL CLAIMS FOR EXTRAS SHALL BE SUPPORTED BY WRITTEN AUTHORIZATION AND SHALL BE SUBMITTED WITH ITEMIZED MATERIAL AND LABOUR COSTS BREAKDOWNS. THE FORMAT OF THE BREAKDOWN SHALL FOLLOW THAT OF THE CHANGE DOCUMENT (I.E. THAT OF THE NOTICE OF CHANGE, SITE INSTRUCTION, CHANGE DIRECTIVE, ETC.). MATERIALS SHALL BE PRICED AT COST INCLUDING ANY DISCOUNT. LABOUR UNITS SHALL BE BASED ON CECA AND NECA LABOUR UNIT TABLES SUITABLE FOR THE TYPE OF WORK INVOLVED. THERE SHALL BE NO EXTRA CLAIM FOR RELOCATION OF ANY EQUIPMENT WITHIN 10 FEET (3M) FROM THE ORIGINAL LOCATION, PROVIDED THAT THE CHANGE IS MADE BEFORE INSTALLATION.

20. ALL ELECTRICAL EQUIPMENT MOUNTED AND CONNECTED BY THIS CONTRACTOR, WHETHER SUPPLIED BY HIM OR NOT, SHALL BE IDENTIFIED BY MEANS OF PLASTIC NAMEPLATES.

21. WIRING

   1. ALL WIRING SHALL BE CONCEALED EXCEPT IN UNFINISHED AREAS AND IN AREAS NOTED WHERE WIRING MAY BE INSTALLED IN SURFACE CONDUITS.
   2. RIGID STEEL CONDUITS SHALL BE USED IN:
      - ALL EXPOSED WIRING SUBJECT TO MECHANICAL DAMAGE,
      - ALL AREAS REQUIRED BY CODE.
   3. EMT CONDUITS MAY BE USED WHERE PERMITTED BY CODE:
      - EXPOSED WIRING,
      - IN FURRED WALLS.
   4. ARMOURED FLEXIBLE CABLE TYPE AC90 (BX CABLE) MAY BE USED AS DROP CABLE FROM JUNCTION BOX TO LIGHT FIXTURES, RECEPTACLES AND MOTORS IF RUN IN HOLLOW PARTITIONS OR IN DRY ACCESSIBLE CEILING SPACES. MAXIMUM LENGTH 20FT.
   5. FLEXIBLE CONDUIT SHALL BE USED FOR FINAL SHORT CONNECTIONS BETWEEN OUTLET AND ELECTRICAL EQUIPMENT SUCH AS RECESSED FIXTURES, MOTORS, TRANSFORMERS, MOTORIZED EQUIPMENT AND FIXED APPLIANCES. FLEXIBLE CONDUIT IN MECHANICAL ROOMS AND ON THE EXTERIOR WALL SHALL BE PVC JACKETED, LIQUID TIGHT.
   6. HOME RUNS OF WIRING TO PANELS SHALL BE IN CONDUITS.

22. ALL LOW VOLTAGE AND MULTI CONDUCTOR CABLES SHALL BE INSTALLED IN CONDUIT.

23. ALL CONDUCTORS SHALL BE COPPER 600 VOLT GRADE WITH INSULATION TYPE RW90. MINIMUM CONDUCTOR SIZE SHALL BE #12 AWG AND COLOUR CODED. WIRE CONNECTIONS SHALL BE MADE WITH PRESSURE TYPE SOLDERLESS CONNECTORS WITH VINYL INSULATING CAPS AND LOCKING RINGS.

   1. MAXIMUM LENGTH FOR 15 AMP, 120/208 VOLT BRANCH CIRCUIT HOME RUNS SHALL BE AS FOLLOWS:

| LOAD | #12 AWG | #10 AWG |
|---|---|---|
| RECEPTACLE | 65 FT (20M) | OVER 65 FT (20M) |
| LIGHTING | 90 FT (27M) | OVER 90 FT (27M) |

24. UNLESS OTHERWISE NOTED ON THE ARCHITECTURAL AND ELECTRICAL DRAWINGS, MOUNTING HEIGHTS OF EQUIPMENT ABOVE FINISHED FLOOR FROM CENTRE LINE OF THE MOUNTING BOX SHALL BE AS FOLLOWS:

   1. TOP OF PANEL BOARD – 78" (1980MM)
   2. LIGHT SWITCH – 43" (1100MM)
   3. MOTOR STARTER/THERMOSTAT – SAME AS LIGHT SWITCH
   4. RECEPTACLE, TELEPHONE, DATA, ETC. – 18" (460MM)
   5. RECEPTACLES IN MECHANICAL ROOMS AND OTHER UNFINISHED AREAS – 47" (1200MM)

25. SUPPLY AND INSTALL ALL NECESSARY ACCESS DOORS IN WALLS AND CEILINGS FOR ELECTRICAL DEVICES AND EQUIPMENT INCLUDING BUT NOT LIMITED TO DISCONNECTS, JUNCTION BOXES ETC . WHERE NECESSARY, DOORS SHALL BE RATED TO SUIT FIRE ASSEMBLY RATING.

26. IF NUMBER OF CONDUCTORS IN ANY ONE CONDUIT EXCEEDS 6 LINE CONDUCTORS, CONDUCTOR SIZE SHALL BE INCREASED TO ALLOW FOR DERATING AS REQUIRED BY CODE.

27. MECHANICAL TRADE WILL SUPPLY ALL STARTERS, CONTROL TRANSFORMERS AND CONTROLS FOR EQUIPMENT SUPPLIED BY THEM AND WILL MOUNT ALL THESE EXCEPT FOR WALL MOUNTED STARTERS AND WALL MOUNTED LINE VOLTAGE CONTROLS, WHICH SHALL BE MOUNTED BY ELECTRICAL TRADE. ELECTRICAL TRADE SHALL DO ALL POWER WIRING, WHICH IS WIRING THAT CARRIES THE LOAD CURRENT OF THE MOTOR, HEATER, HOT WATER TANK OR OTHER EQUIPMENT SUPPLIED BY MECHANICAL TRADE. MECHANICAL TRADE WILL DO ALL OTHER RELATED WIRING. REFER TO MECHANICAL DRAWINGS AND COORDINATE WITH MECHANICAL TRADE FOR POWER REQUIREMENTS AND LOCATIONS OF DEVICES AND CONTROL EQUIPMENT.

28. PROVIDE ELECTRICAL SERVICE 'GOOSENECK' TYPE FLASHING FOR ANY SERVICES PENETRATING ROOF FOR WATERTIGHT INSTALLATION.

29. ALL CONDUITS AND OUTLET BOXES SHALL BE SUPPORTED FROM THE BUILDING SURFACES AND SHALL NOT BE SUPPORTED FROM OTHER CONDUITS, DUCTS OR PIPES.

30. PROVIDE FIRE STOPS. FIRE STOPS SHALL SEAL OFF ALL FIRE RATED WALLS AND CEILINGS. FIRE STOPS SHALL BE CSA AND UL LISTED AND SHALL BE DESIGNED FOR APPLICATION REQUIRED TO MEET THE VARIOUS FIRE RATED SEPARATIONS. FIRE STOP SHALL BE HILTI, TREMSTOP MANUFACTURED BY TREMCO, 3M OR EQUAL.

## RACEWAY, ELECTRICAL DEVICES AND CONTROLS – SECTION 16100

1. PROVIDE ALL MATERIAL, EQUIPMENT AND LABOUR REQUIRED FOR A COMPLETE AND ADEQUATE INSTALLATION OF ELECTRICAL MATERIALS AS SHOWN ON THE DRAWINGS AND AS DESCRIBED HEREIN.

2. SWITCHES SHALL BE UNLESS OTHERWISE INDICATED, PASS & SEYMOUR, WHITE, DECORA TYPE AS FOLLOWS:

   .1 SPECIFICATION GRADE 15A 20A
   SINGLE POLE 120V 2601–W 2621–W
   3_WAY 120V 2603–W 2623–W
   4_WAY 120V 2604–W 2624–W

   .2 SWITCHES OF EQUAL QUALITY AS MANUFACTURED BY BRYANT, ARROW HART, LEVITON,HUBBLE.

3. COVERPLATES FOR RECEPTACLES, LIGHT SWITCHES, TELEPHONE, DATA AND TV OUTLETS SHALL BE STAINLESS STEEL.

OUTLET BOXES SHALL BE ELECTRO GALVANIZED AND MADE OF CODE GAUGE STEEL. WHERE MORE THAN ONE DEVICE IS SHOWN ON PLAN, A MULTI–GANG BOX SHALL BE USED. OFFSET OUTLET BOXES, SHOWN BACK TO BACK IN PARTITIONS, HORIZONTALLY TO MINIMIZE NOISE TRANSMISSION BETWEEN ADJACENT AREAS. OUTLET BOX FOR DEVICES MOUNTED SIDE BY SIDE OR ONE ABOVE THE OTHER SHALL BE SEPARATED BY A MINIMUM OF ONE INCH (25MM).

## SERVICES AND DISTRIBUTION – SECTION 16400

1. PROVIDE ALL MATERIAL, EQUIPMENT AND LABOUR REQUIRED FOR A COMPLETE AND ADEQUATE DISTRIBUTION SYSTEM AS DESCRIBED HEREIN.

2. POWER PANELS

   .1 PROVIDE PANELBOARDS AS CALLED FOR ON THE DRAWINGS.

   .2 POWER PANELS SHALL CONTAIN CIRCUIT BREAKERS. FUSIBLE UNITS WILL NOT BE ACCEPTED IN LIEU OF BREAKERS.

   .3 PANELBOARDS AND DISTRIBUTION PANELS
   .1 PANELBOARDS SHALL BE INDUSTRIAL QUALITY, COMPLETE WITH COPPER BUS, COPPER GROUND BUS, MAIN BREAKER, DESIGNED FOR USE WITH BOLT–ON, THERMALLY COMPENSATED, TRIP–FREE CIRCUIT BREAKERS; 2 POLE AND 3 POLE CIRCUIT BREAKERS SHALL HAVE COMMON TRIP HANDLES. TIE HANDLES ARE NOT ACCEPTABLE.
   .2 CIRCUIT BREAKERS SHALL BE AMBIENT COMPENSATED TYPE, CALIBRATED AT 40°C AND BE OF THE BOLT–ON TYPE, WITHOUT ANY PLUG–IN CONNECTIONS. MULTI–POLE BREAKERS SHALL HAVE COMMON TRIP. CIRCUIT BREAKERS FOR 120/208 VOLT APPLICATION SHALL HAVE A MINIMUM SYMMETRICAL INTERRUPTING RATING OF 10,000 AMPS; FOR 600 VOLT APPLICATIONS, THE RATING SHALL BE MINIMUM 35,000 AMPS. ALL INTERRUPTING RATINGS SHALL MATCH EXISTING.
   .3 PANELBOARDS ENCLOSURE SHALL BE DEAD FRONT CONSTRUCTION WITH HINGED DOOR HAVING LATCH AND KEY.
   .4 PANELS TO BE FACTORY–FINISHED GREY ASA NO. 61 (OR GREEN PANTONE 335C FOR EMERGENCY POWER).
   .5 PROVIDE TYPEWRITTEN DIRECTORY INFORMATION, PROTECTED WITH PLASTIC COVER.

   .4 PANELBOARDS SHALL BE COMPLETED WITH 200% RATED NEUTRAL.

   .5 SURFACE–MOUNTED PANELBOARDS SHALL BE COMPLETE WITH DRIP SHIELD AND WEATHER PROOF CONNECTORS.

   .6 MOUNTING HEIGHT OF THE PANELBOARDS SHALL BE 4'–6" FROM FINISHED FLOOR TO CENTRE OF THE PANELBOARDS. THE TOP BREAKER OF THE PANELBOARDS SHALL BE NOT MORE THAN 6'–0" FROM FINISHED FLOOR.

   .7 BALANCE THE CONNECTED LOADS ACROSS THE PHASES ON THE PANEL, WITHIN 5%.

   .8 PANELBOARDS SHALL CONFORM TO CSA REQUIREMENTS.

   .9 PANELBOARDS SHALL BE MANUFACTURED BY SCHNEIDER, SIEMENS OR EATON.

3. PROVIDE FEEDER CIRCUIT BREAKERS AS CALLED FOR ON THE DRAWINGS. FEEDER CIRCUIT BREAKERS SHALL HAVE A SHORT CIRCUIT INTERRUPTING CAPACITY TO MATCH EXISTING POWER DISTRIBUTION BOARD. WHERE INTERRUPTING CAPACITY IS NOT EVIDENT, CONSULT WITH U. OF T. REPRESENTATIVE.

4. PROVIDE CIRCUIT BREAKERS OFF THE SPLITTER AS CALLED FOR ON THE DRAWINGS. CIRCUIT BREAKERS OFF THE SPLITTER SHALL BE MOLDED CASE TYPE IN EEMAC–1 ENCLOSURE. CIRCUIT BREAKERS SHALL BE SCHNEIDER, EATON OR SIEMENS.

5. TANDEM DOUBLE DENSITY CIRCUIT BREAKERS ARE NOT ACCEPTABLE.

6. ALL MATERIALS AND EQUIPMENT SHALL BE CSA OR ONTARIO ELECTRICAL SAFETY SPECIAL INSPECTION APPROVED AND BEAR EVIDENCE OF SAME.

7. ALL CURRENT CARRYING MATERIAL SHALL BE COPPER, INCLUDING BUT NOT LIMITED TO PANELBOARD BUS, SPLITTER BUS, TRANSFORMER WINDINGS, AND WIRING.

8. CIRCUIT BREAKERS SHALL HAVE AMPACITY AND FRAME SIZE SHOWN ON THE DRAWINGS. BREAKERS SHALL HAVE DEFINITE OFF AND TRIP POSITIONS WITH PROVISIONS FOR PADLOCKING. BREAKERS SHALL BE BOLTED TO THE BUS. TWO AND THREE POLE BREAKERS SHALL HAVE COMMON TRIPS.

9. UNLESS OTHERWISE NOTED, TWO AND THREE POLE MOULDED CASE CIRCUIT BREAKERS SHALL HAVE A MINIMUM INTERRUPTING CAPACITY OF 22KA RMS SYMMETRICAL, AND 10KA RMS SYMMETRICAL FOR SINGLE POLE.

10. EACH BREAKER SHALL HAVE A LAMACOID NAMEPLATE ATTACHED WITH CONTACT CEMENT OR SCREWS. NAMEPLATE SHALL CARRY NAME OF EQUIPMENT OR PANEL SERVED BY THE UNIT OR BREAKER.

11. ALL THE POWER DISTRIBUTION EQUIPMENT SHALL HAVE PERMANENT IDENTIFICATION LAMICOID NAME PLATES IDENTIFYING SOURCE OF POWER SUPPLY AND CONNECTED LOAD.

12. DISCONNECT SWITCHES SHALL BE TYPE A, HORSEPOWER RATED, 'SWITCHMATIC' BY FEDERAL PIONEER OR EQUAL BY SQUARE D, CUTLER–HAMMER, SIEMENS. USE ENCLOSED BREAKERS (FUSIBLE DISCONNECTS ARE NOT ACCEPTABLE).

13. PANELBOARD TO BE CUSTOM FINISH AS PER ARCHITECT.

14. SUBMIT SHOP DRAWINGS FOR NEW PANEL.

## LIGHTING – SECTION 16450

1. SUPPLY AND INSTALL ALL LIGHTING FIXTURES, LAMPS, AND ALL REQUIRED ACCESSORIES AS INDICATED ON THE DRAWINGS BY LETTER TYPE AND AS HEREINAFTER SPECIFIED.

2. SUBMIT SHOP DRAWINGS FOR EACH LIGHTING FIXTURE TYPE.

3. REPLACE AND INSTALL WITHOUT EXTRA COST TO THE OWNER:

   – LED LIGHTS WITHIN 90 DAYS

4. DRIVERS FOR LED LIGHTS TO BE DIMMABLE (0–10) WHERE DIMMING CONTROL IS SHOWN.

5. ALL LIGHTING FIXTURES, INCLUDING THOSE MOUNTED IN SUSPENDED CEILING, TO BE SUPPORTED FROM BUILDING STRUCTURE.

6. COORDINATE THE INSTALLATION OF LIGHTING FIXTURE WITH ALL TRADES TO PROVIDE SPACING INTENDED.

7. FIXTURES SHALL BE PROPERLY CLEANED AND LEFT CLEAN AND DUST_FREE. ANY FIXTURE SHOWING MARKS OR SCRATCHES DUE TO HANDLING OR TOOL MARKS SHALL BE REPLACED.

## WORKING IN EXISTING BUILDING AND CONTINUITY OF SERVICES – SECTION 16500

1. MECHANICAL AND ELECTRICAL ALTERATIONS AND ADDITIONS ARE BEING MADE IN THE EXISTING AREAS AS NOTED ON MECHANICAL DRAWINGS AND SPECIFICATIONS.

2. VISIT THE SITE AND EXAMINE THE EXISTING CONDITIONS AND ALL TENDERING DOCUMENTS, DRAWINGS AND SPECIFICATIONS. MAKE ALL NECESSARY ALLOWANCES IN TENDER PRICE FOR REMOVAL, RELOCATION, REROUTING, RECONNECTION OF EXISTING ELECTRICAL EQUIPMENT AND WIRING AS MAY BE NECESSARY FOR THE EXECUTION AND COMPLETION OF THIS PROJECT. NO ALLOWANCE WILL BE MADE LATER FOR ANY EXPENSE INCURRED BY THIS TRADE THROUGH FAILURE TO MAKE THIS EXAMINATION.

3. REMOVE AND/OR RELOCATE AND REINSTALL ALL WIRING AND EQUIPMENT AS NECESSARY TO ACCOMMODATE MECHANICAL ALTERATIONS AND ADDITIONS INDICATED ON THE DRAWINGS. WIRING LOCATED IN AREAS BEING ALTERED OR DEMOLISHED, BUT FEEDING OUTLETS OR EQUIPMENT REQUIRED TO REMAIN IN SERVICE SHALL BE REROUTED AS REQUIRED TO MAINTAIN THE CONTINUITY OF THESE SERVICES.

4. EXISTING ELECTRICAL EQUIPMENT REMOVED AND INDICATED FOR REUSE SHALL BE CLEANED BEFORE INSTALLATION. ALL UNUSED CONDUIT ENTRANCE OPENINGS SHALL BE SEALED, ALL DEFECTIVE COMPONENTS SHALL BE REPLACED BEFORE REINSTALLATION.

5. ALL WIRING SHALL BE RUN CONCEALED WHERE POSSIBLE EXCEPT THAT CONDUITS IN UNFINISHED AREAS AND ON EXISTING WALLS AND CEILING MAY BE INSTALLED ON SURFACE.

6. REWORK EXISTING POWER SERVICE AND DISTRIBUTION TO SUIT MECHANICAL EQUIPMENT REVISIONS. PROVIDE NEW POWER PANEL, SPLITTER AND FUSIBLE UNITS, ETC., AS REQUIRED.

7. SUPPLY, INSTALL AND MAINTAIN ALL REQUIRED TEMPORARY WIRING TO OCCUPIED AREAS AT ALL TIMES. PROVIDE ADEQUATE PROTECTION TO EXISTING WIRING AND EQUIPMENT SERVING THE EXISTING AND NEW WORK AND PARTICULARLY WHERE WIRING AND ELECTRICAL EQUIPMENT HAVE BECOME EXPOSED TO MECHANICAL INJURY OR MOISTURE IN THE COURSE OF ALTERATIONS OR NEW WORK.

8. POWER SHUTDOWN, IF REQUIRED, MUST BE COORDINATED WITH CLIENT'S REPRESENTATIVE.

9. FIRE ALARM SHUTDOWN, IF REQUIRED, MUST BE COORDINATED WITH THE CLIENT'S REPRESENTATIVE. AT THE END OF EACH WORKING DAY, ENSURE FIRE ALARM IS FULLY FUNCTIONAL AND THE BUILDING IS PROTECTED. OTHERWISE, PROVIDE FIRE WATCH DURING TIMES WHEN FIRE ALARM SYSTEM OR PART OF THE SYSTEMS OR ZONES ARE DISCONNECTED.

10. CERTAIN ITEMS ARE IDENTIFIED ON THE DRAWINGS AS EXISTING EQUIPMENT TO BE 'REMOVED': DISCONNECT SAID EQUIPMENT AND MAKE SAFE. OBSOLETE CONDUITS AND CABLES SHALL BE DISCONNECTED FROM THEIR SOURCE OF SUPPLY, CUT BACK TO A SUITABLE POINT.

11. ALL UNUSED FUSED SWITCHES AND CIRCUIT BREAKERS SHALL BECOME SPARE. PROVIDE NEW, UP–DATED DIRECTORIES FOR PANELS.

12. CERTAIN ITEMS ARE IDENTIFIED ON THE DRAWINGS AS EXISTING EQUIPMENT 'RELOCATED': DISCONNECT SAID EQUIPMENT FROM ITS PRESENT SOURCE AND AFTER RELOCATION, RECONNECT AND REINSTALL ALL ELECTRICAL COMPONENTS. PROVIDE NEW DISCONNECTS TO SUIT EQUIPMENT RATING.

13. ALL EXISTING EQUIPMENT AND MATERIAL NOT REQUIRED IN THE FINAL INSTALLATION SHALL BE CAREFULLY REMOVED AT THE APPROPRIATE TIME AND SHALL BE DISPOSED OF EXCEPT STARTERS FOR MECHANICAL EQUIPMENT BEING HANDED BACK TO THE CLIENT.

## FIRE ALARM SYSTEM – SECTION 16720

1. THE FIRE ALARM SYSTEM IS EXISTING NOTIFIER, SINGLE STAGE PANEL.

2. THIS CONTRACTOR TO HIRE AND PAY FOR FIRE ALARM CONTRACTOR AS REQUIRED FOR COMPLETE AND FUNCTIONAL SYSTEM.

3. NEW SMOKE DETECTOR, SPEAKERS, HORN/STROBE, PULL STATION AND ALL FIRE ALARM DEVICES AND ACCESSORIES SHALL BE COMPATIBLE WITH THE EXISTING SYSTEM.

4. PROVIDE NEW FIRE ALARM DEVICES AS SHOWN. REPLACE / REMOVE EXISTING DEVICES AS INDICATED ON THE DRAWINGS. ALL NEW DEVICES TO BE ADDRESSABLE TYPE (FOR HYBRID OR FULLY ADDRESSABLE SYSTEMS), OTHERWISE, CONVENTIONAL TO SUIT EXISTING SYSTEM. RE–WIRE AS REQUIRED. PROVIDE NEW LOOPS COMPLETED WITH LINE RESISTORS ETC. AS REQUIRED FOR COMPLETE AND FUNCTIONAL SYSTEM. RECONNECT ALL EXISTING ZONES AND DEVICES AS REQUIRED.

5. PROVIDE ALL REQUIRED MODIFICATIONS TO THE EXISTING SYSTEM (ADDITIONAL RELAYS, MODULES ETC.) TO ACCOMMODATE NEW DEVICES AND ZONES.

6. COMPLETE INSTALLATION SHALL COMPLY WITH THE REQUIREMENTS OF CAN/ULC–S524 "STANDARD FOR THE INSTALLATION OF FIRE ALARM SYSTEMS" AND SHALL BE VERIFIED TO CAN/ULC–S537 "STANDARD FOR THE VERIFICATION OF FIRE ALARM SYSTEMS". WHERE THE REQUIREMENTS OF THIS SECTION EXCEED THE MINIMUM REQUIREMENTS OF THE ULC STANDARD, THESE SPECIFICATIONS SHALL GOVERN.

7. WIRING:

   .1 SEPARATION OF WIRING SHALL ADHERE TO SUGGESTED WIRING AND INSTALLATION GUIDE OF CAN/ULC–S524.

   .2 WIRING SHALL BE SIZED IN ACCORDANCE WITH CLASS 2 REQUIREMENTS, BUT SHALL BE PROTECTED FROM MECHANICAL INJURY OR OTHER INJURIOUS CONDITIONS SUCH AS MOISTURE. EXCESSIVE HEAT OR CORROSIVE ACTION IN ACCORDANCE WITH CLASS I REQUIREMENTS. CONDUCTORS SHALL BE SOLID COPPER. THE MINIMUM SIZE OF ANY CONDUCTOR SHALL BE:

   FOR ALARM RECEIVING CIRCUIT #18 AWG TWISTED SHIELDED PAIRS. IN NO CASE SHALL THE WIRE RESISTANCE IN THESE CIRCUITS EXCEED 50 OHMS.

   .3 FOR AUDIBLE SIGNAL CIRCUITS #14 AWG FOR 1 OR 2 CONDUCTORS IN A CABLE. #18 AWG FOR 3 OR 4 CONDUCTORS IN A CABLE. IN NO CASE SHALL THE VOLTAGE DROP TO ANY SIGNAL EXCEED 10%.

   .4 RATING OF CABLE SHALL BE 90 DEGREES C AND 300 VOLT MINIMUM.

   WIRING SHALL BE INSTALLED IN CONDUIT AND IN ANY CASE SHALL CONFORM TO THE SYSTEM MANUFACTURER'S RECOMMENDATIONS. ALL CONDUITS SHALL BE GROUNDED PER CLASS 1 WIRING.

8. VERIFICATION AND CERTIFICATION OF EQUIPMENT:

   .1 THAT THE TYPE OF EQUIPMENT INSTALLED IS THAT DESIGNATED IN THE SPECIFICATIONS.

   .2 THAT THE WIRING CONNECTIONS TO ALL EQUIPMENT COMPONENTS SHOW THAT THE INSTALLER UNDERTOOK TO HAVE OBSERVED ULC AND CSA REQUIREMENTS.

   .3 THAT EQUIPMENT OF THE MANUFACTURER'S MANUFACTURE HAS BEEN INSTALLED IN ACCORDANCE WITH THE MANUFACTURER'S RECOMMENDATIONS, AND THAT ALL SIGNALING DEVICES OF WHATEVER MANUFACTURE HAVE BEEN OPERATED OR TESTED TO VERIFY THEIR OPERATION.

   .4 THAT THE SUPERVISORY WIRING OF THOSE ITEMS OF EQUIPMENT CONNECTED TO A SUPERVISED CIRCUIT IS OPERATING AND THAT THE GOVERNMENTAL REGULATIONS, IF ANY, CONCERNING SUCH SUPERVISORY WIRING, HAVE BEEN MET TO THE SATISFACTION OF INSPECTING OFFICIALS.

   .5 THE MANUFACTURER SHALL SUPPLY REASONABLE AMOUNTS OF TECHNICAL ASSISTANCE WITH RESPECT TO ANY CHANGES NECESSARY TO CONFORM TO THE ABOVE. DURING THE PERIOD OF INSPECTION BY THE MANUFACTURER, MAKE AVAILABLE TO THE MANUFACTURER ELECTRICIANS AS DESIGNATED BY THE MANUFACTURER.

   .6 OPEN FLAME AND SMOKE ARE NOT TO BE USED FOR TESTING.

9. COMPLETION OF THE INSPECTION AND WHEN ALL OF THE ABOVE CONDITIONS HAVE BEEN COMPLIED WITH, THE MANUFACTURER SHALL ISSUE TO THE CONSULTANT:

   .1 A COPY OF THE INSPECTING TECHNICIAN'S REPORT SHOWING LOCATION OF EACH DEVICE AND CERTIFYING THE TEST RESULTS OF EACH DEVICE.

   .2 A CERTIFICATE OF VERIFICATION CONFIRMING THAT THE INSPECTION HAS BEEN COMPLETE AND SHOWING THE CONDITIONS UPON WHICH SUCH INSPECTION AND CERTIFICATION HAVE BEEN RENDERED.

   .3 PROOF OF LIABILITY INSURANCE FOR THE INSPECTION.

10. INTEGRATED SYSTEMS TESTING

   .1 PERFORM INTEGRATED SYSTEM TESTING IN ACCORDANCE WITH CAN/ULCS1001; 'INTEGRATED SYSTEMS TESTING OF FIRE PROTECTION AND LIFE SAFETY SYSTEMS'.
   .2 THE ELECTRICAL CONTRACTOR SHALL CO–ORDINATE AND CO–OPERATE WITH THE INTEGRATED TESTING COORDINATOR.
   .3 PROVIDE ALL REQUIRED DOCUMENTATION, TEST REPORTS, CERTIFICATES AND VERIFICATION REPORTS TO THE INTEGRATED TESTING COORDINATOR.
   .4 ADVISE THE INTEGRATED TESTING COORDINATOR IN WRITING THAT THE SYSTEMS HAVE BEEN INSTALLED IN ACCORDANCE WITH THE DESIGN AND ARE READY FOR INTEGRATED TESTING.
   .5 SUPPLY LABOUR AND MATERIALS TO PROVIDE ASSISTANCE WITH THE DEMONSTRATION OF SYSTEM OPERATION TO THE INTEGRATED TESTING
   .6 COORDINATOR WITH THE INTEGRATED SYSTEM TESTING AS OUTLINED IN CAN/ ULCS1001. PROVIDE THESE SERVICES FOR SUCH PERIOD, AND FOR AS MANY VISITS AS NECESSARY TO SATISFACTORILY DEMONSTRATE PROPER SYSTEM OPERATION TO THE INTEGRATED TESTING COORDINATOR.
   .7 MAKE ADJUSTMENTS AND RECTIFICATIONS NECESSARY TO CORRECT DEFICIENCIES NOTED DURING INTEGRATED SYSTEM TESTING AND PROVIDE LABOUR AND MATERIALS AS NECESSARY FOR RE–TESTING OF SYSTEMS AFTER CORRECTION.

ALL COSTS INVOLVED IN THIS INSPECTION SHALL BE INCLUDED IN THE TENDER PRICE


Architecture Counsel

4 CLINTON PL, TORONTO, ON M6G 1J9 T 416-603-1515



All drawings and specifications are the property of the architect. The contractor shall verify all dimensions and information on site and report any discrepancy to architect before proceeding.


Project North True North


SHARMA & PARTNERS INC.

*Mechanical and Electrical Engineers*

*85 Curlew Drive, Unit 108, Toronto, Ontario M3A 2P8*
*Tel.: (416)291–8822*

LICENCE PROFESSIONAL ENGINEER A. PROTKIN 06/11/26 PROVINCE OF ONTARIO


*SPI PROJECT#: 2026–1010*

| | | |
|---|---|---|
| 2. | 2026.11.06 | ISSUED FOR TENDER |
| 1. | 2026.10.05 | ISSUED FOR PERMIT |
| | DATE | REVISION |

PICKERING COLLEGE INNOVATION HUB

16945 Bayview Ave, Newmarket, ON L3Y 3W7

ELECTRICAL SPECIFICATION

| | |
|---|---|
| Scale: | N.T.S. |
| Drawn by: | CAD |
| Reviewed by: | AP |
| Job number: | 25168 |
| Plot date: | 2026.11.06 |

Drawing number:

E3.1

# MECHANICAL LEGEND

## PLUMBING

| SYMBOL | DESCRIPTION |
|---|---|
| DCW | DOMESTIC COLD WATER |
| DHW | DOMESTIC HOT WATER |
| DHWR | DOMESTIC HOT WATER RECIRCULATION |
| EDCW | EXISTING DOMESTIC COLD WATER |
| EDHW | EXISTING DOMESTIC HOT WATER |
| EDHWR | EXISTING DOMESTIC HOT WATER RECIRCULATION |
| V | SANITARY VENT LINE |
| EV | EXISTING SANITARY VENT LINE |
| SANB | BURIED SANITARY DRAIN |
| SAN | SUSPENDED SANITARY DRAIN |
| SAN | SANITARY DRAIN IN CEILING SPACE OF FLOOR BELOW |
| PSAN | SANITARY PUMPED DISCHARGE |
| ESANB | EXISTING BURIED SANITARY DRAIN |
| ESAN | EXISTING SUSPENDED SANITARY DRAIN |
| ESAN | EXISTING SANIT. DRAIN IN CEILING SPACE OF FLOOR BELOW |
| EPSAN | EXISTING SANITARY PUMPED DISCHARGE |
| STMB | BURIED STORM DRAIN |
| STM | SUSPENDED STORM DRAIN |
| STM | STORM DRAIN IN CEILING SPACE OF FLOOR BELOW |
| PSTM | STORM PUMPED DISCHARGE |
| ESTMB | EXISTING BURIED STORM DRAIN |
| ESTM | EXISTING SUSPENDED STORM DRAIN |
| ESTM | EXIS. STORM DRAIN IN CEILING SPACE OF FLOOR BELOW |
| EPSTM | EXISTING STORM PUMPED DISCHARGE |
| CO | CLEANOUT PLUG |
| CO | FLOOR CLEANOUT |
| C | CONDENSATE DRAIN (GRAVITY) |
| EC | EXISTING CONDENSATE DRAIN (GRAVITY) |
| PC | PUMPED CONDENSATE DRAIN |
| EPC | EXISTING PUMPED CONDENSATE DRAIN |
| | ELBOW, TURNED DOWN AND TURNED UP |
| | BRANCH – TOP CONNECTION |
| | BRANCH – BOTTOM CONNECTION |
| WH | INTERIOR WALL HYDRANT |
| NFWH | EXTERIOR NON FREEZE WALL HYDRANT |
| HB | INTERIOR HOSE BIB |
| FD | FLOOR DRAIN |
| FFD | FUNNEL FLOOR DRAIN |
| HD | HUB DRAIN |

## HVAC (PIPING)

| SYMBOL | DESCRIPTION |
|---|---|
| HTS | HEATING WATER SUPPLY |
| HTR | HEATING WATER RETURN |
| EHTS | EXISTING HEATING WATER SUPPLY |
| EHTR | EXISTING HEATING WATER RETURN |
| RS | REFRIGERANT SUCTION |
| RL | REFRIGERANT LIQUID |
| ERS | EXISTING REFRIGERANT SUCTION |
| ERL | EXISTING REFRIGERANT LIQUID |

## VALVES & PIPING FITTINGS

| SYMBOL | DESCRIPTION |
|---|---|
| | GATE VALVE |
| | CHECK VALVE |
| | RELIEF VALVE |
| | STRAINER |
| | BALL VALVE |
| | TWO–WAY AUTOMATIC CONTROL VALVE |
| | THREE–WAY AUTOMATIC CONTROL VALVE |
| | CIRCUIT BALANCING VALVE |
| CTE | CONNECT NEW SERVICES TO EXISTING |

## VENTILATION

| | |
|---|---|
| | DUCTWORK (DOUBLE LINE) |
| | EXISTING DUCTWORK (DOUBLE LINE) |
| | DUCTWORK (SINGLE LINE) |
| | EXISTING DUCTWORK (SINGLE LINE) |
| | ACOUSTICALLY LINED DUCTWORK (DOUBLE LINE) |
| | ACOUSTICALLY LINED DUCTWORK (SINGLE LINE) |
| | THERMALLY INSULATED DUCTWORK (DOUBLE LINE) |
| | THERMALLY INSULATED DUCTWORK (SINGLE LINE) |
| | DUCTWORK (DOUBLE LINE) WITH FIRE RATED WRAP |
| | DUCTWORK (SINGLE LINE) WITH FIRE RATED WRAP |
| | FLEXIBLE DUCT |
| | EXISTING FLEXIBLE DUCT |
| | SUPPLY DUCT UP (RECTANGULAR) |
| | ROUND DUCT UP |
| | RETURN DUCT UP |
| | SUPPLY DUCT DOWN |
| | ROUND DUCT DOWN |
| | RETURN DUCT DOWN |
| | CHANGE IN DUCT ELEVATION |
| | DUCT MOUNTED EQUIPMENT WITH FLEXIBLE CONNECTORS |
| | DUCT SILENCER |
| | LINEAR OR SLOT DIFFUSER |
| | SPIN ON FITTING WITH FLEXIBLE DUCT |
| | EXISTING SPIN ON FITTING WITH FLEXIBLE DUCT |
| BD | MANUAL BALANCING DAMPER |
| FD | FIRE DAMPER |
| MD | AUTOMATIC (MOTORIZED) DAMPER |
| | RETURN OR EXHAUST AIR GRILLE |
| | EXISTING RETURN OR EXHAUST AIR GRILLE |
| | SQUARE SUPPLY AIR DIFFUSER |
| | EXISTING SQUARE SUPPLY AIR DIFFUSER |
| | SIDEWALL GRILLE |
| | EQUIPMENT |
| | EXISTING EQUIPMENT |
| T | THERMOSTAT |
| T | EXISTING THERMOSTAT |
| | EXISTING SERVICES OR EQUIPMENT TO BE REMOVED |

## ABBREVIATIONS

| SYMBOL | DESCRIPTION |
|---|---|
| HP | HEAT PUMP UNIT |
| HWT | HOT WATER STORAGE TANK |
| AFF | ABOVE FINISHED FLOOR |
| EX | EXISTING TO REMAIN |
| ER | DENOTES EXISTING TO BE RELOCATED |
| N | NEW |
| R | DENOTES EXISTING TO BE REMOVED |
| N.I.C. | NOT IN CONTRACT |
| CTE | CONNECT TO EXISTING |
| | EXISTING SERVICES / EQUIPMENT TO BE REMOVED |

## FIRE PROTECTION

| SYMBOL | DESCRIPTION |
|---|---|
| SP | SPRINKLER LINE |
| SPD | SPRINKLER DRAIN |
| F | FIRE LINE |
| ESP | EXISTING SPRINKLER LINE |
| ESPD | EXISTING SPRINKLER DRAIN |
| EF | EXISTING FIRE LINE |
| | PENDANT SPRINKLER HEAD |
| | UPRIGHT SPRINKLER HEAD |
| C | UPRIGHT SPRINKLER HEAD WITH PROTECTIVE CAGE |
| | SIDEWALL SPRINKLER HEAD |
| | CONCEALED TYPE SPRINKLER HEAD |
| | EXISTING SPRINKLER HEAD |
| | EXISTING SPRINKLER HEAD |
| | SPRINKLER ZONE BORDER LINE |
| FDC | FIRE DEPARTMENT CONNECTION |
| SVC | SPRINKLER ZONE VALVE CABINET (RECESSED TYPE) |
| FHC | FIRE HOSE CABINET (SURFACE MOUNTED) |
| FHC | FIRE HOSE CABINET (RECESSED) |
| F.E. F.E. | FIRE EXTINGUISHER (WITH AND WITHOUT ENCLOSURE) |

## GENERAL

| SYMBOL | DESCRIPTION |
|---|---|
| X / M–XXX | SECTION No.<br>DRAWING No. |
| X / M–XX | DETAIL No.<br>DRAWING No.<br>FOR CONTINUATION, SEE DETAIL No. /DRAWING No. |
| N–X | REFER TO NOTE "X" ON THIS DRAWING |
| X,XX / XXX | TYPE OF GRILLE OR DIFFUSER<br>AIR QUANTITY (L/S)<br>GRILLE / DIFFUSER FACE SIZE OR NECK SIZE |

## MECHANICAL DRAWING LIST

| NUMBER | DESCRIPTION |
|---|---|
| M0.1 | MECHANICAL LEGEND, DRAWING LIST |
| M0.2 | MECHANICAL EQUIPMENT SCHEDULES |
| M0.3 | MECHANICAL DIAGRAMS |
| M0.4 | MECHANICAL DETAILS |
| M1.1 | BASEMENT HVAC – DEMOLITION |
| M1.2 | BASEMENT PLUMBING – DEMOLITION |
| M1.3 | GROUND FLOOR AND ROOF PART PLAN MECHANICAL DEMOLITION |
| M2.1 | BASEMENT HVAC – NEW LAYOUT |
| M2.2 | BASEMENT PLUMBING – NEW LAYOUT |
| M2.3 | GROUND FLOOR AND ROOF PART PLAN MECHANICAL NEW LAYOUT |
| M2.4 | BASEMENT FIRE PROTECTION – NEW LAYOUT |
| M3.1 | MECHANCIAL SPECIFICATION |


Architecture Counsel

4 CLINTON PL, TORONTO, ON M6G 1J9 T 416-603-1515



All drawings and specifications are the property of the architect. The contractor shall verify all dimensions and information on site and report any discrepancy to architect before proceeding.


Project North / True North


SHARMA & PARTNERS INC.

*Mechanical and Electrical Engineers*

*85 Curlew Drive, Unit 108, Toronto, Ontario M3A 2P8*

*Tel.: (416)291–8822*


LICENCED PROFESSIONAL ENGINEER A. PROTKIN 06/11/26 PROVINCE OF ONTARIO

*SPI PROJECT#: 2026–1010*

| | | |
|---|---|---|
| 2. | 2026.11.06 | ISSUED FOR TENDER |
| 1. | 2026.10.05 | ISSUED FOR PERMIT |
| | DATE | REVISION |

PICKERING COLLEGE INNOVATION HUB

16945 Bayview Ave, Newmarket, ON L3Y 3W7

MECHANICAL LEGEND, DRAWING LIST

| | |
|---|---|
| Scale: | N.T.S. |
| Drawn by: | CAD |
| Reviewed by: | AP |
| Job number: | 25168 |
| Plot date: | 2026.11.06 |

Drawing number:

M0.1

## ENERGY RECOVERY VENTILATOR

| REF. LETTER | AREA SERVED / DESIGNATION | UNIT MAKE | MODEL | FAN | CAPACITY L/S | E.S.P. PA | FILTERS | | FAN | | | | | ELECTRIC PRE-HEAT | | | | | HEAT EXCHANGER | | | | | | | | ELECTRIC DATA (UNIT ONLY) | | | | ELECTRIC DATA (UNIT+PREHEAT ELEC. COIL) | | | | REMARKS |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | | | LOCATION | TYPE | V-PH-HZ | HP | DRIVE | FAN RPM | VFD | CAPACITY, KW | CONTROL | COILS | EAT(C) | EAT(C) | SEASON | OUTDOOR AIR | | RETURN AIR | | SUPPLY AIR | | EXHAUST AIR | | V-PH-HZ | FLA | MCA | MOP | V-PH-HZ | FLA | MCA | MOP | |
| | | | | | | | | | | | | | | | | | | | | DB(C) | WB(C) | DB(C) | WB(C) | DB(C) | WB(C) | DB(C) | WB(C) | | | | | | | | | |
| ERV-1 | INNOVATION HUB | ALDES | PE20E | SUPPLY | 760 | 310 | SUPPLY | 50mm 85% MERV 13 | 208-3-60 | 2.5 | DIRECT | 2583 | ECM | 13 | SCR | 1 | -22 | -10 | SUMMER | 30 | 23 | 23.9 | 17.2 | 26 | 20.5 | 28.3 | 20.5 | 208-3-60 | 17.8 | 19.3 | - | 208-3-60 | 47.89 | 59.86 | 60 | OUTDOOR ERV, DOUBLE WALL CONTRACTION. PROVIDE ROOF SUPPORTS |
| | | | | EXHAUST | 672 | 310 | RETURN | 50mm 30% MERV 8 | 208-3-60 | 2.5 | DIRECT | 2410 | ECM | | | | | | WINTER | -10 | -12.7 | 22.2 | 12.2 | 9.4 | 3.8 | 0.5 | -2.7 | | | | | | | | | |

NOTES:
1. UNIT TO BE SUITABLE FOR OUTDOOR INSTALLATION, DOUBLE WALL CONSTRUCTION WITH MIN. 1 IN INSULATION, EXTERIOR 22 GA PRE-PAINTED STEEL, INTERIOR 22 GA GALVANIZED STEEL
2. UNIT TO BE MODULATING SUPPLY AND RETURN AIR FLOW BASED ON CO2 LEVEL IN RETURN AIR DUCT. PROVIDE DUCT MOUNTED CO2 SENSOR
3. UNIT TO HAVE ONE POWER CONNECTION.
4. BOTTOM SUPPLY AND RETURN DUCT CONNECTIONS
5. PROVIDE PROGRAMMABLE TIMER TO ENERGIZE AND DE-ENERGIZE UNIT
6. UNIT TO HAVE FEATURES FOR FUTURE CONNECTION TO BUILDING AUTOMATION SYSTEM.

## FAN COIL UNITS SCHEDULE

| TAG | VRF SYSTEM VRF-1 | AREA SERVED | | FAN COIL UNIT TYPE | MAKER | MODEL | AIR | CAPACITY | | | | REFRIGERANT TYPE | COND. DRAIN, MM | ELECTRICAL DATA | | | REMARKS |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | ROOMS SERVED | FLOOR | | | | CAPACITY CFM HI-MID-LO | E.S.P. IN.W.G. | RATED COOLING BTU/H | TOTAL COOLING BTU/H | SENS. COOLING BTU/H | TOTAL HEATING BTU/H | | | V/PH/HZ | MCA AMP | FUSE AMP | |
| HP-1.1 | VRF-1 | RAPID PROTOTYPING CLASSROOM | BASEMENT | HORIZONTAL, DUCTED | DAIKIN | FXMA30AAVJU | 1094/847/795 | 0.8 | 30,000 | 29,204 | 20,658 | 34,000 | R-32 | 25 | 208-1-60 | 3.0 | 15 | PROVIDE P-TRAP, CONDENSATE DRAIN TO BE ROUTED TO CLOSEST HUB DRAIN |
| HP-1.2 | VRF-1 | WORKSHOP | BASEMENT | HORIZONTAL, DUCTED | DAIKIN | FXMA18AAVJU | 635/565/512 | 0.8 | 18,000 | 17,452 | 12,647 | 20,000 | R-32 | 25 | 208-1-60 | 1.9 | 15 | PROVIDE CONDENSATE PUMP, CONDENSATE DRAIN TO BE ROUTED TO CLOSEST HUB DRAIN |
| HP-1.3 | VRF-1 | INNOVATION HUB | BASEMENT | HORIZONTAL, DUCTED | DAIKIN | FXMA96AAVJU | 2965/2506/1838 | 0.8 | 96,000 | 92,647 | 64,761 | 107,996 | R-32 | 25 | 208-1-60 | 6.8 | 15 | PROVIDE P-TRAP, CONDENSATE DRAIN TO BE ROUTED TO CLOSEST HUB DRAIN |

NOTES:
VRF SYSTEM INCLUDING THERMOSTAT TO HAVE FEATURES FOR FUTURE CONNECTION TO BUILDING AUTOMATION SYSTEM.

## AIR SOURCE HEAT PUMP CONDENSING UNIT (VRF SYSTEM)

| NO. | AREA SERVED | MAKE | MODEL | COOLING, BTU/H | HEATING, BTU/H | | REFRIG. | SAFETY CLASS | ELECTRICAL DATA | | | WEIGHT KG | COMMENTS |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | NOMINAL AT 95°F OA | RATED | AT -4°F | AT -13°F | | | V-PH-HZ | MCA | MOCP | |
| VRF-1 | INNOVATION HUB AREAS | DAIKIN | RXYA120AATJA | 119,000 | 114,000 | 114,000 | 81,600 | 74,400 | R-32 | A2L | 208-3-60 | 39.9 | 45 | 350 | |

NOTES:
VRF SYSTEM TO BE FOR ULTRA LOWER OUTSIDE TEMPERATURE FOR HEATING (NOT LESS THAN -13F)

## REGISTERS, GRILLES & DIFFUSERS SCHEDULE

| REF. LETTER | APPLICATION | MANUFACTURER DATA | | OPPOSED BLADE DAMPER | FINISH | REMARKS |
|---|---|---|---|---|---|---|
| | | SELECTION MFG. | MODEL DESCRIPTION AND SIZE (in x in) | | | |
| A | SUPPLY AIR GRILLE | EH PRICE | 520 LOUVERED, STEEL SIZE AS SHOWN ON DWGS. 20MM SPACING DOUBLE DEFLECTION | YES | WHITE | FRAME & BORDER TO SUIT APPLICATION |
| B | EGGCRATE RETURN GRILLE | EH PRICE | 50R 12x12x12 ALUMINUM CORE, SIZE AS SHOWN | NO | WHITE | FRAME & BORDER TO SUIT APPLICATION |
| C | RETURN / EXHAUST GRILLE | EH PRICE | 535 STEEL SIZE AS SHOWN ON DWGS 20 MM SPACING, 35° DEFLECTION | NO | WHITE | FRAME & BORDER TO SUIT APPLICATION |

NOTES:
DIFFUSERS AND GRILLES IN DRYWALL CEILING TO BE PROVIDED WITH BALANCING DAMPERS AT GRILLE / DIFFUSER
PROVIDE GRILLES WITH FILTERS WHERE INDICATED ON FLOOR PLANS

## PLUMBING FIXTURE SCHEDULE

WATER CLOSET TYPE "WC" (WALL MOUNTED)

.1 AMERICAN STANDARD WATER CLOSET "GLENWALL VORMAX", ELONGATED, SIPHON ACTION, BACK OUTLET GRAVITY FLUSH, COMBINATION OF BOWL AND TANK, HIGH-EFFICIENCY TOILET, LOW CONSUMPTION 1.28 GPF (4.8 LPF), DUAL INJECTION FLUSH VALVES, TRIM LEVER SIDE (LEFT OR RIGHT) REFER TO ARCH. DRAWINGS.
MODEL #2882107 (LEFT SIDE TRIM) OR #2882108 (RIGHT SIDE TRIM)

.2 SEAT: AMERICAN STANDARD #5901.100 HEAVY DUTY OPEN FRONT, FOR ELONGATED BOWL, WITH SLOW CLOSE SNAP-OFF HINGE LESS COVER.

.3 CARRIER: ZURN Z1201-N_3, ADJUSTABLE HORIZONTAL SIPHON JET WATER CLOSET CARRIER SYSTEM, FLOOR MOUNTED PRE-FAB SLOTTED FOOT SUPPORTS

.4 SUPPLY WITH STOP

WALL HANG LAVATORY "LAV (BARRIER FREE)

.1 DURAVIT VITAL # 0309600000 WALL MOUNTED SINK, SQUARE, FAUCET DECK, SINGLE FAUCET HOLE, OVERFLOW
OVERALL DIMENSIONS: 23 ⅝" X 21 ½"" X 7" (600MM X 545MM X 180MM).

.2 PROVIDE MOUNTING KIT FOR WALL HANG INSTALLATION

.3 AMERICAN STANDARD #6056 105, AC POWERED, SINGLE INLET SELECTRONIC INNSBROOK ELECTRONIC PROXIMITY FAUCET, WITH CAST SPOUT, VANDAL RESISTANT SOLID CAST BRASS LEAD-FREE BODY, 1.9 LPM (0.5 GPM) VANDAL RESISTANT AERATOR. PROVIDE INTEGRAL LOW VOLTAGE TRANSFORMER (120V POWER SUPPLY).

.4 PROVIDE THERMOSTATIC MIXING VALVE. AMERICAN STANDARD MODEL 605XTWV. VALVE TO BE CONNECTED DIRECTLY TO SOLENOID INLET AND BE HOUSED IN MATCHING ENCLOSURE. PROVIDE RECESSED S.S. ENCLOSURE

.5 TRAP: 1 ¼"(32') CP CAST BRASS ADJUSTABLE P-TRAP - POLISHED CHROME "P" TRAP WITH CLEANOUT SLIP JOINT INLET AND FEMALE OUTLET. (PROVIDE NPS 1-1/4" M.I.P. ADAPTOR COMPLETE WITH CP DEEP ESCUTCHEON.) EXPOSED PIPING TO BE INSULATED AND PROVIDED WITH PVC JACKETING.

.5 CARRIER: CONCEALED ARMS SUPPORT CARRIER

.6 ALL DEVICES TO BE INSTALLED BELOW DECK RECESSED. PROVIDE BACK BOX TO HOUSE ALL DEVICES. BOX TO BE COMPLETE WITH STAINLESS STEEL ACCESS PANEL. NO EXPOSED DEVICES OR PIPING WILL BE PERMITTED.

LAVATORY "LAV-1" (TROUGH SINK)

SINK: MONOLITH BASIN 2,700MM X 600MM X 105MM - GLACIER WHITE BY ARDEC GROUP.

PIPE SKIRT: REMOVABLE, STAINLESS STEEL, CUSTOM MADE TO SUIT SINK, 2,700MM LONG. VIRONNE PIPESKIRT BY ARDEC GROUP.

SINK TO BE PROVIDED WITH 3 (THREE) FAUCETS TYPE 'F'. PROVIDE REQUIRED OPENINGS FOR FAUCET.

FOLLOW MANUFACTURE INSTALLATION INSTRUCTIONS AND COORDINATE WITH GENERAL CONTRACTOR AS REQUIRED.

"F" FAUCET FOR TROUGH SINK

FAUCET: "TOTO" #TEL101-D10E SELF-GENERATING HYDRO-POWERED ECO-POWER SYSTEM, FAUCET TO HAVE MAXIMUM OF 10 SECONDS ON-DEMAND FLOW (0.18GPC). SELF-ADJUSTING SENSOR, POLISHED CHROME FINISH.
1.0 GPM, 1/2" WATER SUPPLY MALE THREADED.
THERMOSTATIC MIXING VALVE: MODEL TLM10

ALL PIPING, VALVES AND ACCESSORIES TO BE INSTALLED BEHIND SINK SKIRT.

**NO EXPOSED PIPING OR DEVICES WILL BE PERMITTED**

EYE WASH STATION "EW"

YEYWASH DRENCH HOSE, DECK MOUNTED,
MODEL H-9459 BY ULINE
PROVIDE MIXING VALVE. VALVE TO BE LOCATED BELOW COUNTER IN LOWER CABINET

JANITOR SINK TYPE "JS"

.1 STERN WILLIAMS MOP SINK MODEL SB802: 24" X 24" X 12" (610MM X 610MM X 305MM DEEP) RECEPTOR COMPOSED OF PEARL GREY MARBLE CHIPS AND WHITE PORTLAND CEMENT, WITH NPS 3 DRAIN WITH S.S. STRAINER.

.2 FAUCET: T-10-VB MOP SERVICE SINK FAUCET WITH VACUUM BREAKER, ADJUSTABLE TOP BRACE, ¾" HOSE THREAD ON SPOUT WITH BRACKET HOOK INLET 8" ON CENTRE, CHROME FINISH

.3 HOSE AND WALL HOOK: T-35, 36" LONG HOSE, WITH ¾" CHROME COUPLING. S.S. WALL BRACKET

.4 MOP HANGER: T-40, S.S. MOP HANGER, 24" LONG WITH 3 RUBBER SPRING LOADED GRIPS.

.5 PROVIDE SPLASH CATCHER PANEL ON ONE SIDE (ON WALL BEHIND SINK). PANEL TO BE 20 GA, TYPE 304 STAINLESS STEEL. PANEL TO BE 5FT HIGH.

DRINKING WATER FOUNTAIN "WF"

.1 ELKAY BOTTLE FILLING STATION AND SWIRLFLO SINGLE FOUNTAIN, HIGH EFFICINCY, FILTERED, REFRIGERATED, STAINLESS STEEL, MODEL LZWS-SFGRN8K.

EZH2O BOTTLE FILLING STATION & SWIRLFLO®SINGLE FOUNTAIN HIGH EZH2O® BOTTLE FILLING STATION & SWIRLFLO®SINGLE FOUNTAIN HIGH (GALLONS PER HOUR) OF 50°F DRINKING WATER, BASED ON 80°F INLET WATER AND 90°F AMBIENT, PER ASHRAE 18 TESTING.
UNIT TO ANTIMICROBIAL*, FILTERED, GREEN TICKER™, HANDS FREE, HIGH EFFICIENCY, ANTIMICROBIAL*, FILTERED, GREEN TICKER™, HANDS FREE, HIGH EFFICIENCY, GUARD ® STREAMSAVER ™BUBBLER.
ELECTRONIC BOTTLE FILLER SENSOR WITH MECHANICAL FRONT BUBBLER BUTTON ACTIVATION.
PRODUCT SHALL BE WALL MOUNT (INWALL FRAME/PLATE), FOR INDOOR APPLICATIONS, SERVING 2 STATION(S).

CAPACITY: 8.0 GPH
POWER: 120-1-60, FLA 1A, RATED 260 W

FOLLOW MANUFACTURE INSTALLATION INSTRUCTIONS

FLOOR DRAIN "FD"

FLOOR DRAINS SHALL BE ZURN ZXN-415-A DURA COATED CAST IRON BODY WITH ANCHOR FLANGE, CAST IRON REVERSIBLE WATERPROOFING CLAMP WITH WEEPHOLES, SEEPAGE COLLECTION SUMP AND 5" (127MM) DIAMETER X " (12.7MM) THICK POLISHED NICKEL BRONZE STRAINER OR EQUAL IN WATTS, ANCON OR J.R. SMITH. FOR TILED AREAS, USE ZURN ZXN-415-H WITH 6" X 6" (152MM X 152MM) X " (12.7MM) THICK POLISHED NICKEL BRONZE STRAINER. DRAIN SIZE CONNECTION AS SHOWN ON DRAWINGS

DOUBLE COMPARTMENT S.S. SINK "S" (BARRIER FREE)

SINK:
DOUBLE BOWL TOP MOUNT SINK, MODEL ALBD4405P ADA BY FRANKE COMMERCIAL, WITH 3 FAUCET HOLES SPACED 8" CNETERS.
DOUBLE BOWL, 18 GAUGE, TYPE 304 STAINLESS STEEL,
OVERALL DIMENSIONS: LENGTH 31 ½"(794MM) X WIDTH 18 ⅞"(478MM) X DEPTH 5"(127MM)
MOUNTING KIT TO BE PROVIDED, FULLY UNDERCOATED TO REDUCE CONDENSATION AND RESONANCE, 89 MM (3-1/2") CRUMB CUP WASTE ASSEMBLY WITH 38 MM (1-1/2") TAILPIECE.

FAUCET:
CHICAGO FAUCETS, MODEL 786-GN8AE35VPABCP, MANUAL FAUCET, 8" FIXED CENTERS, 8" SWING GOOSENECK SPOUT, PRESSURE COMPENSATING AERATOR 1.5 GPM,
VANDAL PROOF 4" WRISTBLADE HANDLES
FAUCET SUPPLIES, CHROME PLATED FINISH POLISHED BRASS, COMMERCIAL DUTY 1/4 TURN BALL VALVE ANGLE STOPS, 13 MM (1/2") I.D. INLET X 127 MM (5") HORIZONTAL EXTENSION TUBES, CONVERTIBLE 1/4 TURN/LOOSE KEY HANDLES, ESCUTCHEON AND FLEXIBLE COPPER RISERS.

PROVIDE MASON JAR TYPE SEDIMENT TRAP. SEDIMENT TRAP TO BE LOCATED INSIDE CABINET NEXT TO SINK.

ENSURE ALL PLUMBING CONNECTIONS ARE INSTALLED NEATLY AT BACK AS HIGH AS POSSIBLE TO ACCOMMODATED ACCESSIBLE COUNTER WITH SINK.
DRAIN TO BE INSULATED WITH PVC JACKETING

## PLUMBING FIXTURE SERVICE REQUIREMENTS

| No. | DESIGNATION | MINIMUM SERVICE CONNECTION SIZE | | | |
|---|---|---|---|---|---|
| | | DRAIN | COLD WATER | HOT WATER | VENT |
| "WC" | WATER CLOSET | 75 | 12 | - | AS PER CODE |
| "LAV" | LAVATORY | 32 | 12 | 12 | AS PER CODE |
| "LAV-1" | LAVATORY | 50 | NOTE 1 | NOTE 1 | AS PER CODE |
| "JS" | JANITOR'S MOP RECEPTOR | 50 | 12 | 12 | AS PER CODE |
| "FD" | FLOOR DRAIN | 75 | - | - | VENT & PRIME AS PER CODE |
| "WF" | WATER COOLER | 32 | 12 | - | AS PER CODE |
| "EW" | EYE WASH | - | 12 | 12 | AS PER CODE |

NOTE 1: 12ø DCW & DHW PER FAUCET

## PUMP SCHEDULE

| TAG | DESIGNATION | LOC'N | MAKE | MODEL | FLUID | PERFORMANCE DATA | | | | CONSTRUCTION DATA | ELECTRIC DATA | | | REMARKS |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | | CAPACITY GPM | TOT. DYN. HEAD FT HEAD | R.P.M. | WORK TEMP. °F | TYPE | V-PH-HZ | MOTOR HP | VFD | |
| SP-1A | SANITARY SUMP PUMP | BASEMENT | PETAIR | WGL20 | SEWER | 35 | 30 | 3450 | 65 | CAST IRON, GRINDER, SUBMERSIBLE | 208-3-60 | 2 | NO | MYERS/PENTAIR DUPLEX GRINDER PUMPS. ONE DUTY, ONE STAND-BY. PROVIDE DUPLEX PUMP CONTROL PANEL, HIGH / LOW FLOATS & ALARMS |
| SP-1B | SANITARY SUMP PUMP | BASEMENT | PETAIR | WGL20 | SEWER | 35 | 30 | 3450 | 65 | CAST IRON, GRINDER, SUBMERSIBLE | 208-3-60 | 2 | NO | |

NOTES:
PUMPS TO BE GRINDER.
ACCEPTABLE MANUFACTURES: MYERS / PENAIR, SCARBOROGH, LIBERTY

## FAN SCHEDULE

| REF. LETTER | AREA SERVED / DESIGNATION | MANUFACTURE | MODEL | CAPACITY L/S | E.S.P. PA | ECLECTIC | | DRIVE | FAN RPM | REMARKS |
|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | | V-PH-HZ | HP | | | |
| EF-1 | PROTOTYPING ROOM - FUMEARM EXHAUST | GREENHECK | FPB-90F-M10 | 165 | 1250 | 208-3-60 | 1.0 | DIRECT | 3500 | SPARK A CONSTRUCTION |
| EF-2 | PROTOTYPING ROOM - 3D PRINTERS EXHAUST | GREENHECK | SQ-98-VG | 183 | 375 | 120-1-60 | 0.75 | DIRECT | 2138 | WITH REMOTE SPEED CONTROLLER |
| EF-3 | PROTOTYPING ROOM - LASER CUTTER | GREENHECK | FPB-90H-M10 | 188 | 750 | 208-3-60 | 1.0 | DIRECT | 3500 | SPARK A CONSTRUCTION |

NOTES:
PROVIDE SPEED CONTROLLER AT EF-3 FOR BALANCING. FAN TO BE CONTROLLED BY ON/OFF SWITCH AT LASER CUTTER
TYPICAL FOR ALL: PROVIDE SUPPORTS, VIBRATION ISOLATORS, FLEX. CONNECTIONS (FLEX. CONNECTION TO BE SUITABLE FOR SYSTEM PRESSURE) ON INLET AND OUTLET ETC.


Architecture Counsel
4 CLINTON PL, TORONTO, ON M6G 1J9 T 416-603-1515



All drawings and specifications are the property of the architect. The contractor shall verify all dimensions and information on site and report any discrepancy to architect before proceeding.


Project North / True North


SHARMA & PARTNERS INC.
Mechanical and Electrical Engineers
85 Curlew Drive, Unit 108, Toronto, Ontario M3A 2P8
Tel.: (416)291-8822


SPI PROJECT#: 2026-1010

LICENCED PROFESSIONAL ENGINEER A. PROTKIN 06/11/26 PROVINCE OF ONTARIO

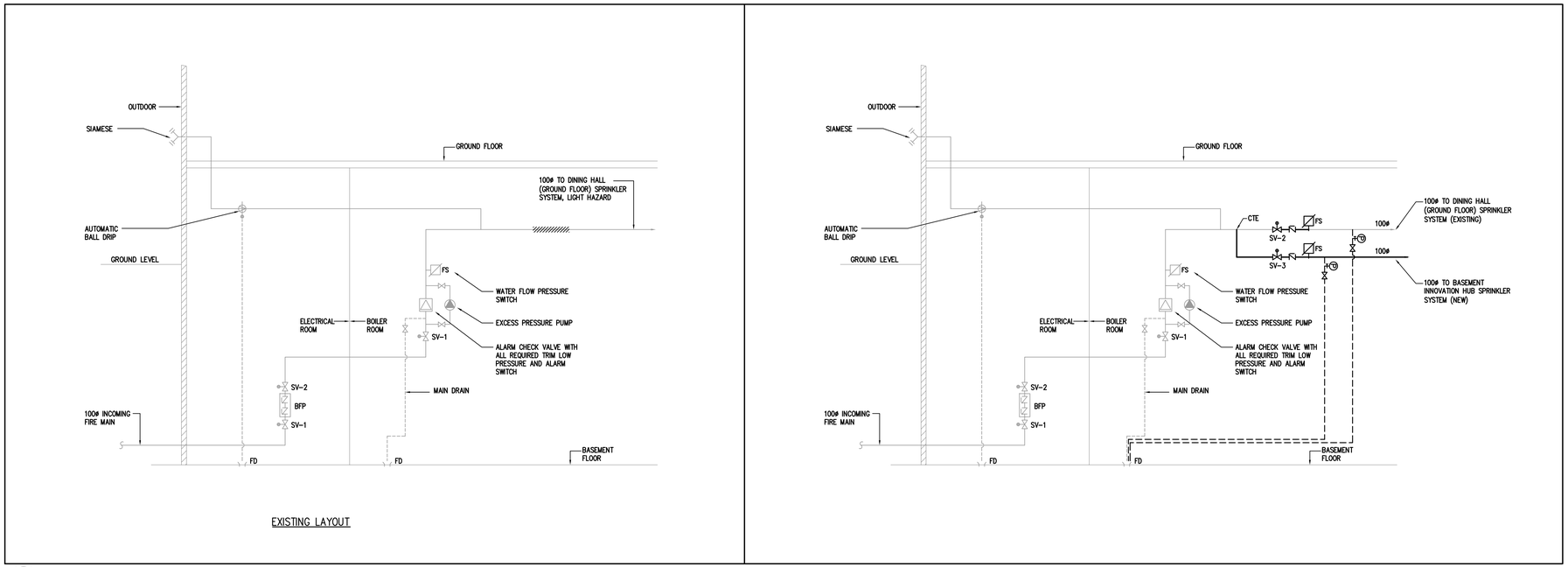
| | DATE | REVISION |
|---|---|---|
| 2. | 2026.11.06 | ISSUED FOR TENDER |
| 1. | 2026.10.05 | ISSUED FOR PERMIT |

PICKERING COLLEGE INNOVATION HUB
16945 Bayview Ave, Newmarket, ON L3Y 3W7

MECHANICAL EQUIPMENT SCHEDULES

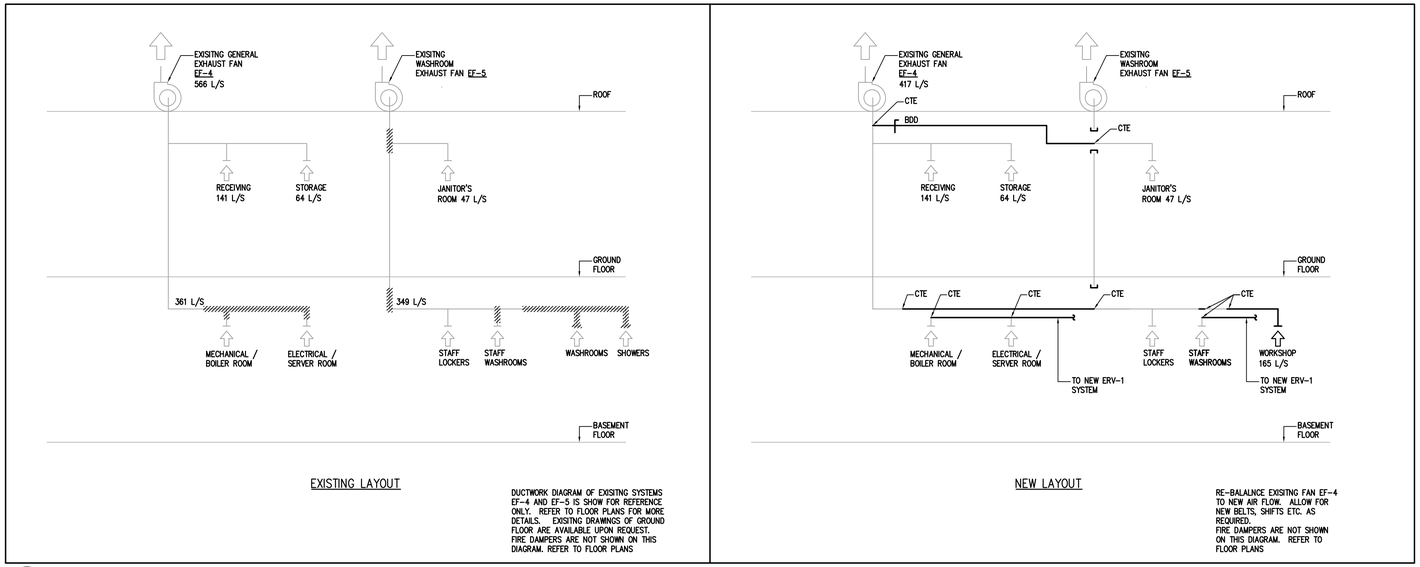
| | |
|---|---|
| Scale: | N.T.S. |
| Drawn by: | CAD |
| Reviewed by: | AP |
| Job number: | 25168 |
| Plot date: | 2026.11.06 |

Drawing number:
M0.2




1 M0.3 SPRINKLER ASSEMBLY

SCALE: N.T.S.




2 M0.3 EXISTING DUCTWORK DIAGRAM (EF-4 AND EF-5)

SCALE: N.T.S.


# Architecture Counsel

4 CLINTON PL, TORONTO, ON M6G 1J9 T 416-603-1515



All drawings and specifications are the property of the architect. The contractor shall verify all dimensions and information on site and report any discrepancy to architect before proceeding.


Project North True North


SHARMA & PARTNERS INC.

*Mechanical and Electrical Engineers*

*85 Curlew Drive, Unit 108, Toronto, Ontario M3A 2P8*

*Tel.: (416)291-8822*


LICENCED PROFESSIONAL ENGINEER A. PROTKIN 06/11/26 PROVINCE OF ONTARIO

*SPI PROJECT#: 2026-1010*

| | | |
|---|---|---|
| 2. | 2026.11.06 | ISSUED FOR TENDER |
| 1. | 2026.10.05 | ISSUED FOR PERMIT |
| | DATE | REVISION |

## PICKERING COLLEGE INNOVATION HUB

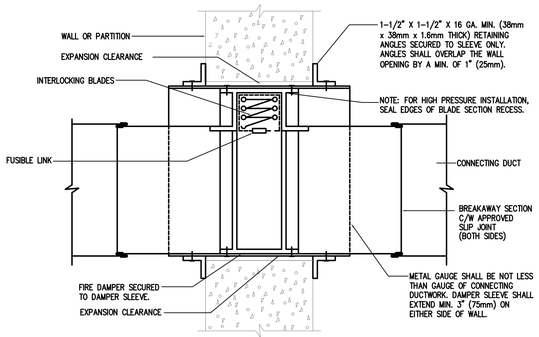
16945 Bayview Ave, Newmarket, ON L3Y 3W7

## MECHANICAL DIAGRAMS

| | |
|---|---|
| Scale: | N.T.S. |
| Drawn by: | CAD |
| Reviewed by: | AP |
| Job number: | 25168 |
| Plot date: | 2026.11.06 |

Drawing number:

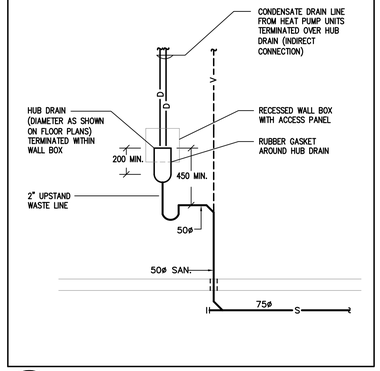
**M0.3**



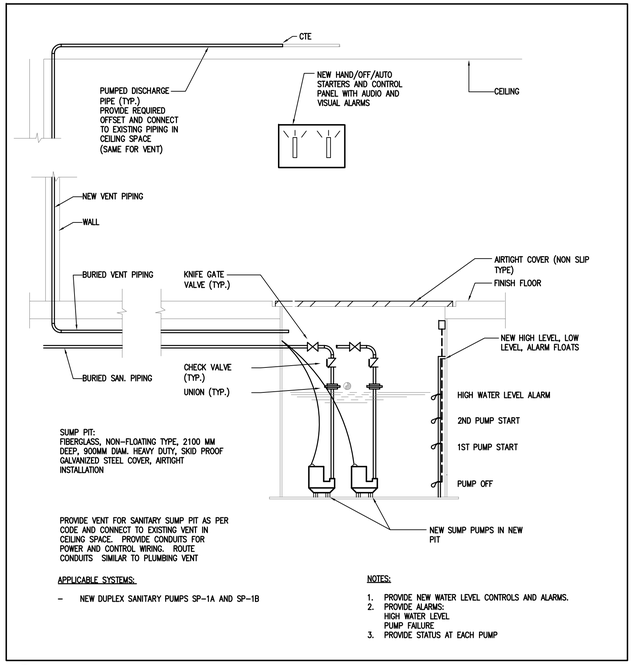

NOTES : ① HORIZONTAL INSTALLATION SHALL BE SIMILAR, BUT DAMPER SHALL BE C/W S.S. CLOSURE SPRING.
② SEAL BREAKAWAY SECTIONS AFTER INSTALLATION. FOR HIGH PRESSURE INSTALLATIONS, PROVIDE DUCT TAPE ON JOINTS AFTER SEALING.
③ PROVIDE ACCESS DOOR IN DUCT FOR FIRE DAMPER

THIS DETAIL ONLY APPLIES TO DUCT THRU WALL. FOR DUCT THRU FIRE RATED WALL WITH WALL MOUNTED GRILLE FOLLOW SPECIFIC MANUFACTURE INSTALLATION INSTRUCTIONS

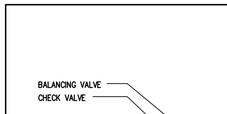
1 M0.4 TYPICAL DETAIL OF VERTICAL MOUNTED FIRE DAMPER INSTALLATION
SCALE: N.T.S.




2 M0.4 TYPICAL CONDANSATE DRAIN INSTALLATION
SCALE: N.T.S.

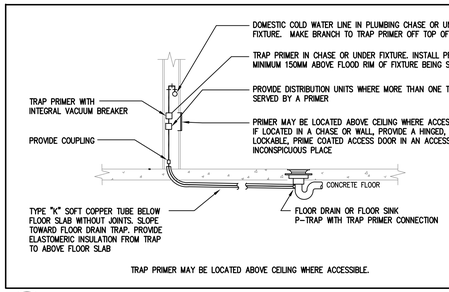



3 M0.4 TYPICAL SUMP PUMP SYSTEM CONTROL, MONITORING & ALARM
N.T.S.



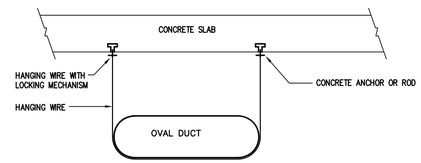

THIS DETAIL IS APPLICABLE TO ALL DHWR MAIN BRANCHES

4 M0.4 DHWR PIPE BRANCH VALVE ARRANGEMENT
SCALE: N.T.S.

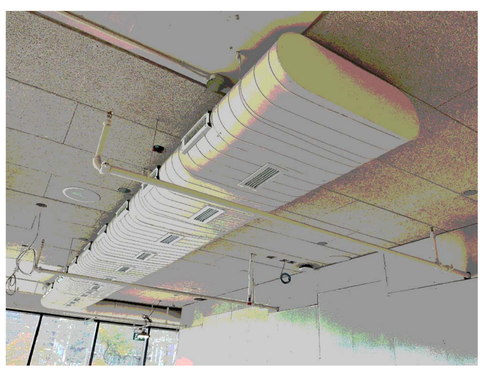



TRAP PRIMER MAY BE LOCATED ABOVE CEILING WHERE ACCESSIBLE.

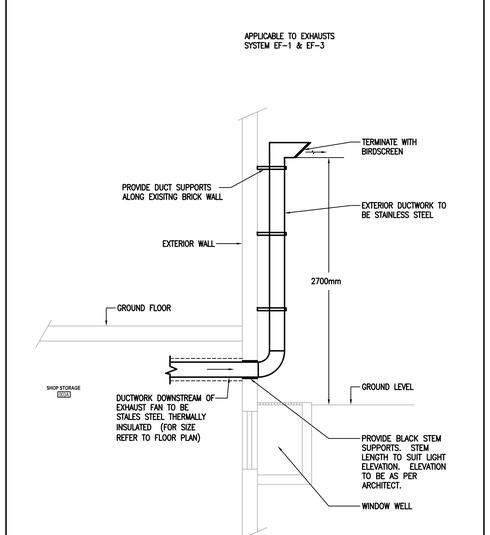
5 M0.4 FLOOR DRAIN WITH PRIMER
SCALE: N.T.S.



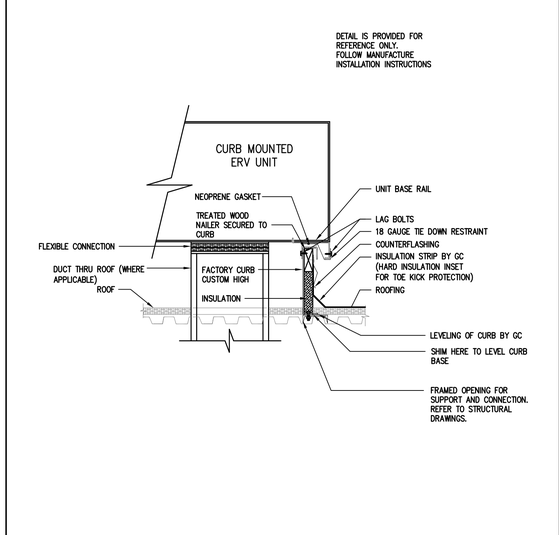

NOTES:
THIS DETAIL APPLIES TO ALL EXPOSED DUCTWORK
ALL DUCTWORK TO BE HUNG FROM BUILDING CONSTRUCTION NOT TO BE SUPPORTED FROM HUNG CEILING OR OTHER SERVICES.
HANGING SYSTEM TO BE AS ON PHOTO BELOW
DUCTWORK TO BE INSTALLED AS HIGH AS POSSIBLE



6 M0.4 DUCT SUPPORT INSTALLATION
SCALE: N.T.S.




7 M0.4 DUCT TERMINATION AT EXTERIOR WALL
SCALE: N.T.S.




8 M0.4 ROOF MOUNTED ERV UNIT CURB ASSEMBLY DETAIL
SCALE: N.T.S.

# Architecture Counsel

4 CLINTON PL, TORONTO, ON M6G 1J9 T 416-603-1515

All drawings and specifications are the property of the architect. The contractor shall verify all dimensions and information on site and report any discrepancy to architect before proceeding.

Project North True North

SHARMA & PARTNERS INC.
*Mechanical and Electrical Engineers*
*85 Curlew Drive, Unit 108, Toronto, Ontario M3A 2P8*
*Tel.: (416)291-8822*

*SPI PROJECT#: 2026-1010*

LICENCED PROFESSIONAL ENGINEER A. PROTKIN 06/11/26 PROVINCE OF ONTARIO

| | | |
|---|---|---|
| 2. | 2026.11.06 | ISSUED FOR TENDER |
| 1. | 2026.10.05 | ISSUED FOR PERMIT |
| | DATE | REVISION |

## PICKERING COLLEGE INNOVATION HUB

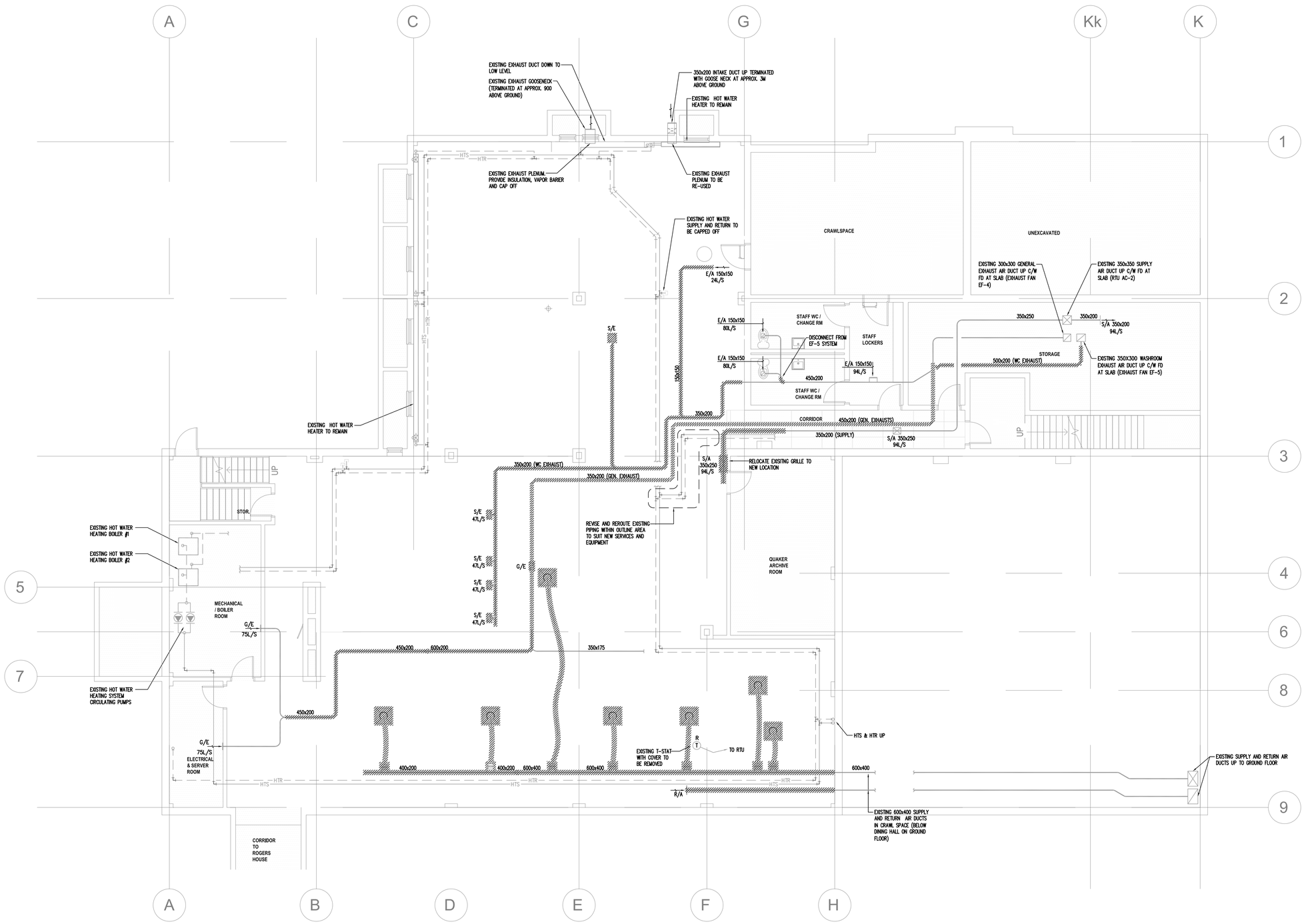
16945 Bayview Ave, Newmarket, ON L3Y 3W7

## MECHANICAL DETAILS

| | |
|---|---|
| Scale: | N.T.S. |
| Drawn by: | CAD |
| Reviewed by: | AP |
| Job number: | 25168 |
| Plot date: | 2026.11.06 |

Drawing number:

**M0.4**




# Architecture Counsel

4 CLINTON PL, TORONTO, ON M6G 1J9 T 416-603-1515

All drawings and specifications are the property of the architect. The contractor shall verify all dimensions and information on site and report any discrepancy to architect before proceeding.

Project North True North

SHARMA & PARTNERS INC.
*Mechanical and Electrical Engineers*
*85 Curlew Drive, Unit 108, Toronto, Ontario M3A 2P8*
*Tel.: (416)291-8822*

*SPI PROJECT#: 2026-1010*

LICENCED PROFESSIONAL ENGINEER A. PROTKIN 06/11/26 PROVINCE OF ONTARIO

| | | |
|---|---|---|
| 2. | 2026.11.06 | ISSUED FOR TENDER |
| 1. | 2026.10.05 | ISSUED FOR PERMIT |
| | DATE | REVISION |

## PICKERING COLLEGE INNOVATION HUB

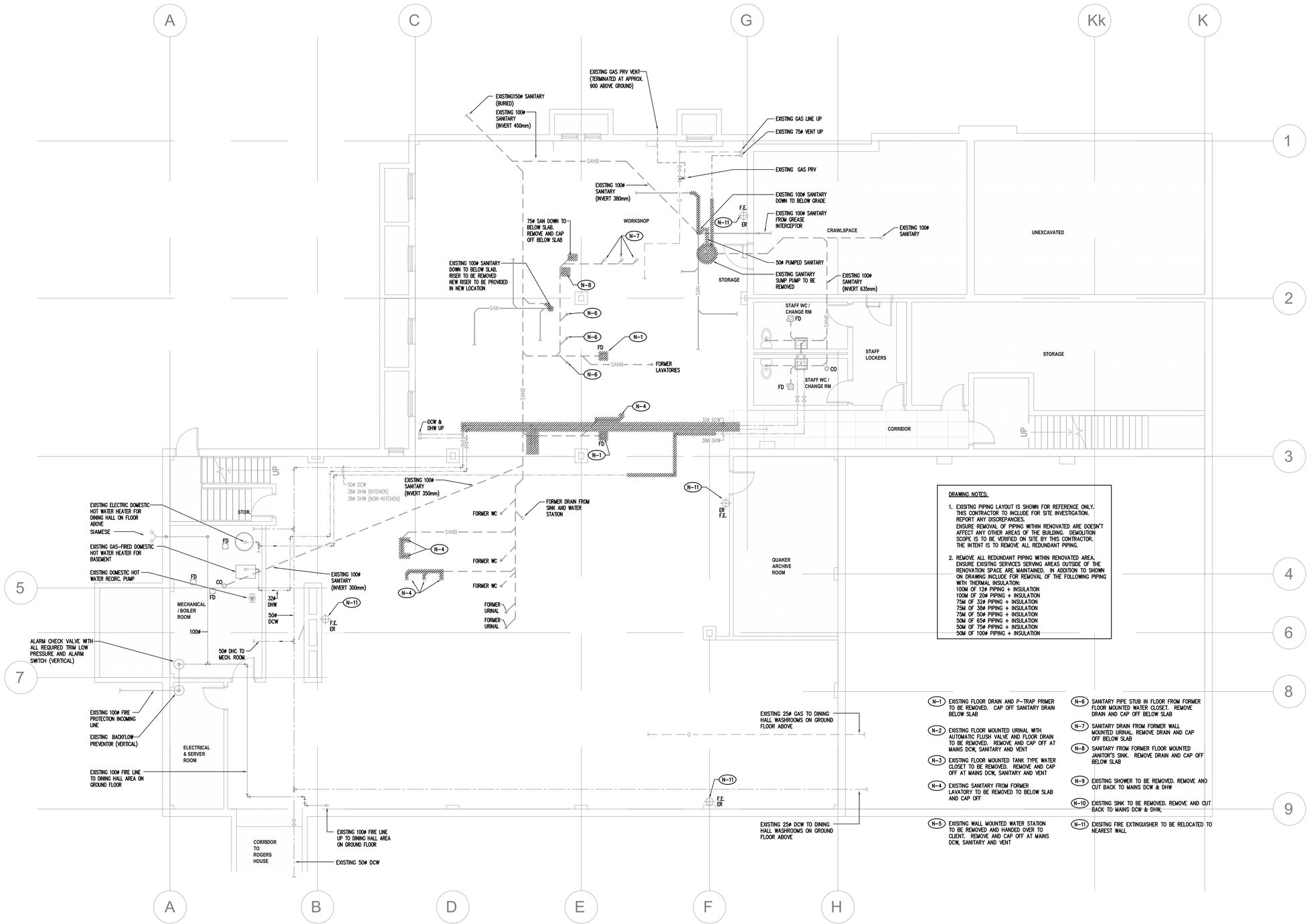
16945 Bayview Ave, Newmarket, ON L3Y 3W7

## BASEMENT HVAC DEMOLITION

| | |
|---|---|
| Scale: | 1:75 |
| Drawn by: | CAD |
| Reviewed by: | AP |
| Job number: | 25168 |
| Plot date: | 2026.11.06 |

Drawing number:

# M1.1




DRAWING NOTES:

1. EXISTING PIPING LAYOUT IS SHOWN FOR REFERENCE ONLY. THIS CONTRACTOR TO INCLUDE FOR SITE INVESTIGATION. REPORT ANY DISCREPANCIES. ENSURE REMOVAL OF PIPING WITHIN RENOVATED ARE DOESN'T AFFECT ANY OTHER AREAS OF THE BUILDING. DEMOLITION SCOPE IS TO BE VERIFIED ON SITE BY THIS CONTRACTOR. THE INTENT IS TO REMOVE ALL REDUNDANT PIPING.
2. REMOVE ALL REDUNDANT PIPING WITHIN RENOVATED AREA. ENSURE EXISTING SERVICES SERVING AREAS OUTSIDE OF THE RENOVATION SPACE ARE MAINTAINED. IN ADDITION TO SHOWN ON DRAWING INCLUDE FOR REMOVAL OF THE FOLLOWING PIPING WITH THERMAL INSULATION:
   100M OF 12ø PIPING + INSULATION
   100M OF 20ø PIPING + INSULATION
   75M OF 32ø PIPING + INSULATION
   75M OF 38ø PIPING + INSULATION
   75M OF 50ø PIPING + INSULATION
   50M OF 65ø PIPING + INSULATION
   50M OF 75ø PIPING + INSULATION
   50M OF 100ø PIPING + INSULATION

N-1 EXISTING FLOOR DRAIN AND P-TRAP PRIMER TO BE REMOVED. CAP OFF SANITARY DRAIN BELOW SLAB

N-2 EXISTING FLOOR MOUNTED URINAL WITH AUTOMATIC FLUSH VALVE AND FLOOR DRAIN TO BE REMOVED. REMOVE AND CAP OFF AT MAINS DCW, SANITARY AND VENT

N-3 EXISTING FLOOR MOUNTED TANK TYPE WATER CLOSET TO BE REMOVED. REMOVE AND CAP OFF AT MAINS DCW, SANITARY AND VENT

N-4 EXISTING SANITARY FROM FORMER LAVATORY TO BE REMOVED TO BELOW SLAB AND CAP OFF

N-5 EXISTING WALL MOUNTED WATER STATION TO BE REMOVED AND HANDED OVER TO CLIENT. REMOVE AND CAP OFF AT MAINS DCW, SANITARY AND VENT

N-6 SANITARY PIPE STUB IN FLOOR FROM FORMER FLOOR MOUNTED WATER CLOSET. REMOVE DRAIN AND CAP OFF BELOW SLAB

N-7 SANITARY DRAIN FROM FORMER WALL MOUNTED URINAL. REMOVE DRAIN AND CAP OFF BELOW SLAB

N-8 SANITARY FROM FORMER FLOOR MOUNTED JANITOR'S SINK. REMOVE DRAIN AND CAP OFF BELOW SLAB

N-9 EXISTING SHOWER TO BE REMOVED. REMOVE AND CUT BACK TO MAINS DCW & DHW

N-10 EXISTING SINK TO BE REMOVED. REMOVE AND CUT BACK TO MAINS DCW & DHW.

N-11 EXISTING FIRE EXTINGUISHER TO BE RELOCATED TO NEAREST WALL


# Architecture Counsel

4 CLINTON PL, TORONTO, ON M6G 1J9 T 416-603-1515



All drawings and specifications are the property of the architect. The contractor shall verify all dimensions and information on site and report any discrepancy to architect before proceeding.


Project North True North


SHARMA & PARTNERS INC.

*Mechanical and Electrical Engineers*

*85 Curlew Drive, Unit 108, Toronto, Ontario M3A 2P8*
*Tel.: (416)291-8822*


LICENCE PROFESSIONAL ENGINEER A. PROTKIN 06/11/26 PROVINCE OF ONTARIO

*SPI PROJECT#: 2026-1010*

| | | |
|---|---|---|
| 2. | 2026.11.06 | ISSUED FOR TENDER |
| 1. | 2026.10.05 | ISSUED FOR PERMIT |
| | DATE | REVISION |

# PICKERING COLLEGE INNOVATION HUB

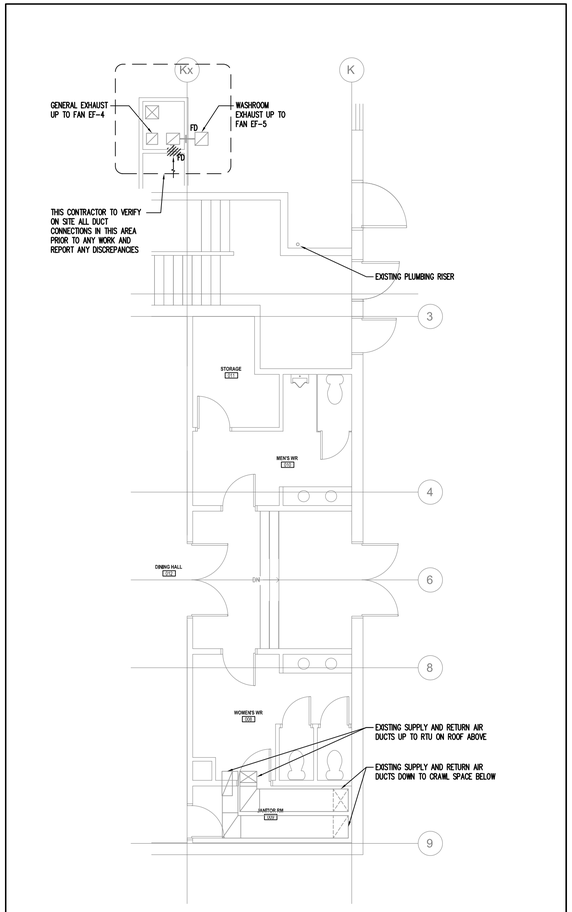
16945 Bayview Ave, Newmarket, ON L3Y 3W7

# BASEMENT PLUMBING DEMOLITION

| | |
|---|---|
| Scale: | 1:75 |
| Drawn by: | CAD |
| Reviewed by: | AP |
| Job number: | 25168 |
| Plot date: | 2026.11.06 |

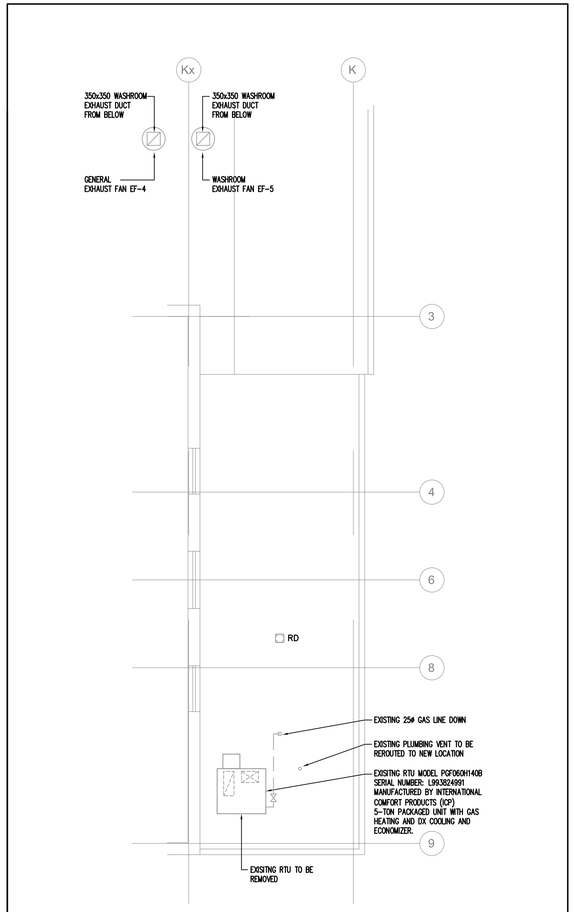
Drawing number:

**M1.2**




1 M1.3 GROUND FLOOR PART PLAN

SCALE: 1:75




2 M1.3 ROOF PART PLAN – DEMOLITION

SCALE: 1:75


# Architecture Counsel

4 CLINTON PL, TORONTO, ON M6G 1J9 T 416-603-1515



All drawings and specifications are the property of the architect. The contractor shall verify all dimensions and information on site and report any discrepancy to architect before proceeding.


Project North True North


SHARMA & PARTNERS INC.

*Mechanical and Electrical Engineers*

*85 Curlew Drive, Unit 108, Toronto, Ontario M3A 2P8*

*Tel.: (416)291-8822*

*SPI PROJECT#: 2026-1010*


LICENCED PROFESSIONAL ENGINEER A. PROTKIN 06/11/26 PROVINCE OF ONTARIO

| | DATE | REVISION |
|---|---|---|
| 2. | 2026.11.06 | ISSUED FOR TENDER |
| 1. | 2026.10.05 | ISSUED FOR PERMIT |

PICKERING COLLEGE INNOVATION HUB

16945 Bayview Ave, Newmarket, ON L3Y 3W7

# GROUND FLOOR AND ROOF PART PLAN MECHANICAL DEMOLITION

| | |
|---|---|
| Scale: | 1:75 |
| Drawn by: | CAD |
| Reviewed by: | AP |
| Job number: | 25168 |
| Plot date: | 2026.11.06 |

Drawing number:

M1.3

DRAWING NOTES:

1. DUCTWORK IN EXPOSED (NO CEILING) AREAS TO BE OVAL.
2. SUPPLY DUCTWORK IN CEILING SPACE TO BE PROVIDED WITH EXTERNAL THERMAL INSULATION.
3. ALL FIRE DAMPERS TO BE TYPE 'B' (FUSE OUTSIDE OF AIR STREAM).
4. REPLACE THERMAL INSULATION ON ALL EXISTING PIPING. NEW INSULATION TO BE PROVIDED WITH PVC JACKETING
5. PROVIDE SUPPORTS FOR ALL HEAT PUMPS AND FANS FROM SLAB ABOVE. INCLUDE FOR VIBRATION ISOLATORS. SUPPORTS TO SUIT EQUIPMENT DIMENSIONS, WEIGHT ETC.
6. EXISTING PIPING IS NOT SHOWN ON THIS DRAWING. REFER TO DEMOLITION FLOOR PLAN FOR EXISTING SERVICES.
5. DUCTWORK AND PIPING ARE SHOWN DIAGRAMMATICALLY. THIS CONTRACTOR TO COORDINATE ON SITE AND PROVIDE OFFSETS ETC. TO SUIT SITE CONDITIONS.

EXHAUST FAN EF-1 (FUMEARM EXHAUST) SEQUENCE OF OPERATION:

- FAN TO BE TURNED ON / OFF FROM WALL MOUNTED SPEED CONTROLLER BY CLASSROOM INSTRUCTOR AS REQUIRED.
- SPEED CONTROLLER IS FOR BALANCING AND AIR FLOW ADJUSTMENT ONLY. SET UP SPEED TO PROVIDE 165L/S OF EXHAUST AIR FLOW. PROVIDE TAG NEXT TO SPEED CONTROLLER STATING FAN SPEED.

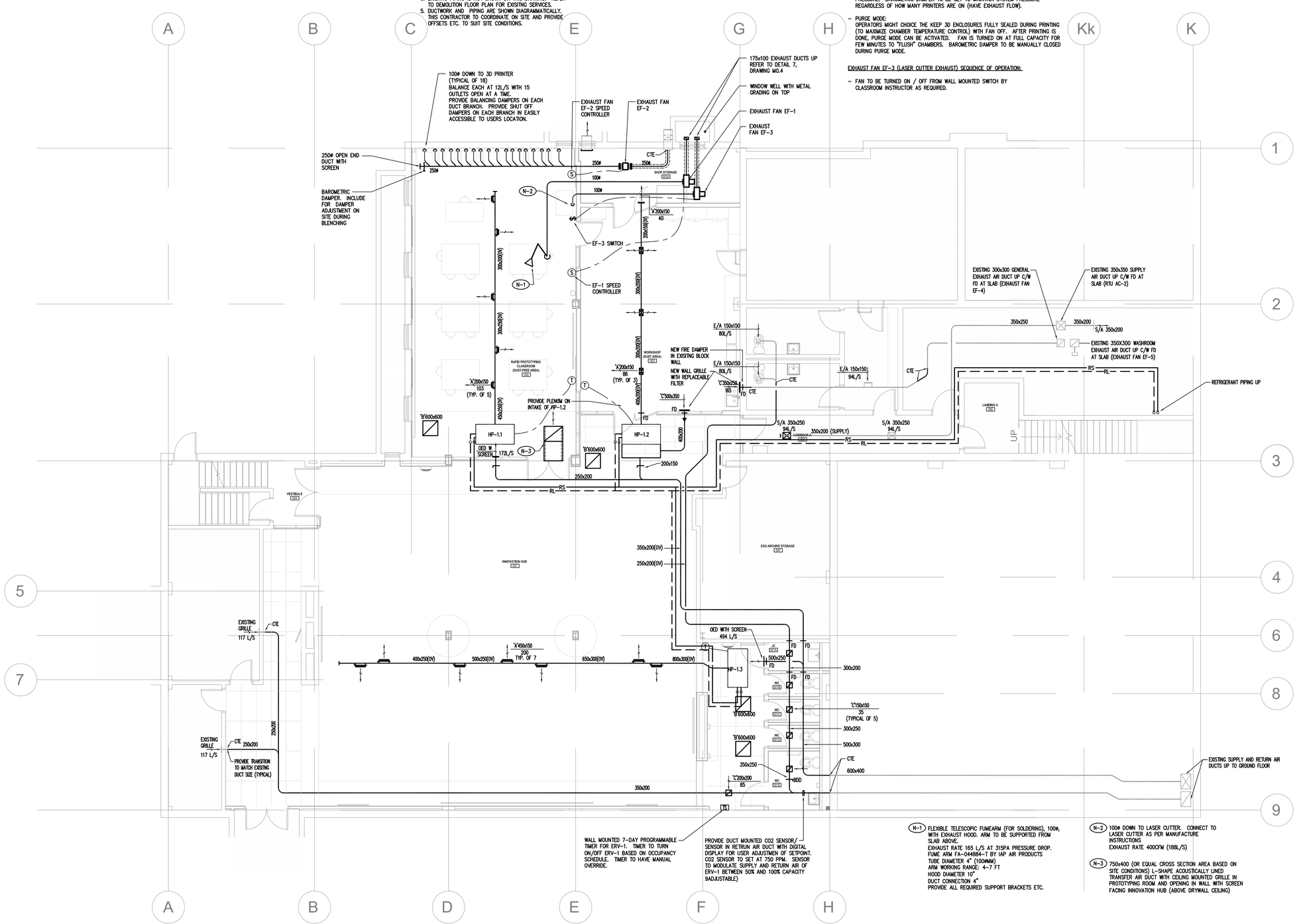
DUCTWORK TO BE HEAVY GAUGE SUITABLE FOR HIGH PRESSURE SYSTEMS

EXHAUST FAN EF-2 (3D PRINTERS) SEQUENCE OF OPERATION:

- FAN TO BE TURNED ON / OFF FROM WALL MOUNTED SPEED CONTROLLER BY CLASSROOM INSTRUCTOR AS REQUIRED.
- NORMAL OPERATION:
  BALANCE EACH DUCT BRANCH AT 252FM. TOTAL AIR FLOW OF EXHAUST SYSTEM IS BASED ON 15 OUT OF 18 DUCT BRANCHES OPEN AT A TIME (ALLOW FOR 2 ADDITIONAL FIELD ADJUSTMENTS BASED ON USERS REQUIREMENTS)
  SET FAN SPEED AND PROVIDE TAG NEXT TO WALL MOUNTED SPEED CONTROLLER IDENTIFYING SPEED SETTING FOR NORMAL OPERATION.
  ADJUST BAROMETRIC DAMPER AS REQUIRED TO MAINTAIN FIELD MEASURED SYSTEM PRESSURE. BAROMETRIC DAMPER TO BE SET TO MAINTAIN SYSTEM PRESSURE REGARDLESS OF HOW MANY PRINTERS ARE ON (HAVE EXHAUST FLOW).
- PURGE MODE:
  OPERATORS MIGHT CHOICE THE KEEP 3D ENCLOSURES FULLY SEALED DURING PRINTING (TO MAXIMIZE CHAMBER TEMPERATURE CONTROL) WITH FAN OFF. AFTER PRINTING IS DONE, PURGE MODE CAN BE ACTIVATED. FAN IS TURNED ON AT FULL CAPACITY FOR FEW MINUTES TO "FLUSH" CHAMBERS. BAROMETRIC DAMPER TO BE MANUALLY CLOSED DURING PURGE MODE.

EXHAUST FAN EF-3 (LASER CUTTER EXHAUST) SEQUENCE OF OPERATION:

- FAN TO BE TURNED ON / OFF FROM WALL MOUNTED SWITCH BY CLASSROOM INSTRUCTOR AS REQUIRED.




N-1 FLEXIBLE TELESCOPIC FUMEARM (FOR SOLDERING), 100ø, WITH EXHAUST HOOD. ARM TO BE SUPPORTED FROM SLAB ABOVE.
EXHAUST RATE 165 L/S AT 315PA PRESSURE DROP.
FUME ARM FA-044884-T BY IAP AIR PRODUCTS
TUBE DIAMETER 4" (100MMW)
ARM WORKING RANGE: 4-7 FT
HOOD DIAMETER 10"
DUCT CONNECTION 4"
PROVIDE ALL REQUIRED SUPPORT BRACKETS ETC.

N-2 100ø DOWN TO LASER CUTTER. CONNECT TO LASER CUTTER AS PER MANUFACTURE INSTRUCTIONS
EXHAUST RATE 400CFM (188L/S)

N-3 750x400 (OR EQUAL CROSS SECTION AREA BASED ON SITE CONDITIONS) L-SHAPE ACOUSTICALLY LINED TRANSFER AIR DUCT WITH CEILING MOUNTED GRILLE IN PROTOTYPING ROOM AND OPENING IN WALL WITH SCREEN FACING INNOVATION HUB (ABOVE DRYWALL CEILING)

# Architecture Counsel

4 CLINTON PL, TORONTO, ON M6G 1J9 T 416-603-1515

All drawings and specifications are the property of the architect. The contractor shall verify all dimensions and information on site and report any discrepancy to architect before proceeding.

Project North / True North

SHARMA & PARTNERS INC.
*Mechanical and Electrical Engineers*
*85 Curlew Drive, Unit 108, Toronto, Ontario M3A 2P8*
*Tel.: (416)291-8822*

LICENCED PROFESSIONAL ENGINEER A. PROTKIN 06/11/26 PROVINCE OF ONTARIO

*SPI PROJECT#: 2026-1010*

| | | |
|---|---|---|
| 2. | 2026.11.06 | ISSUED FOR TENDER |
| 1. | 2026.10.05 | ISSUED FOR PERMIT |
| | DATE | REVISION |

## PICKERING COLLEGE INNOVATION HUB

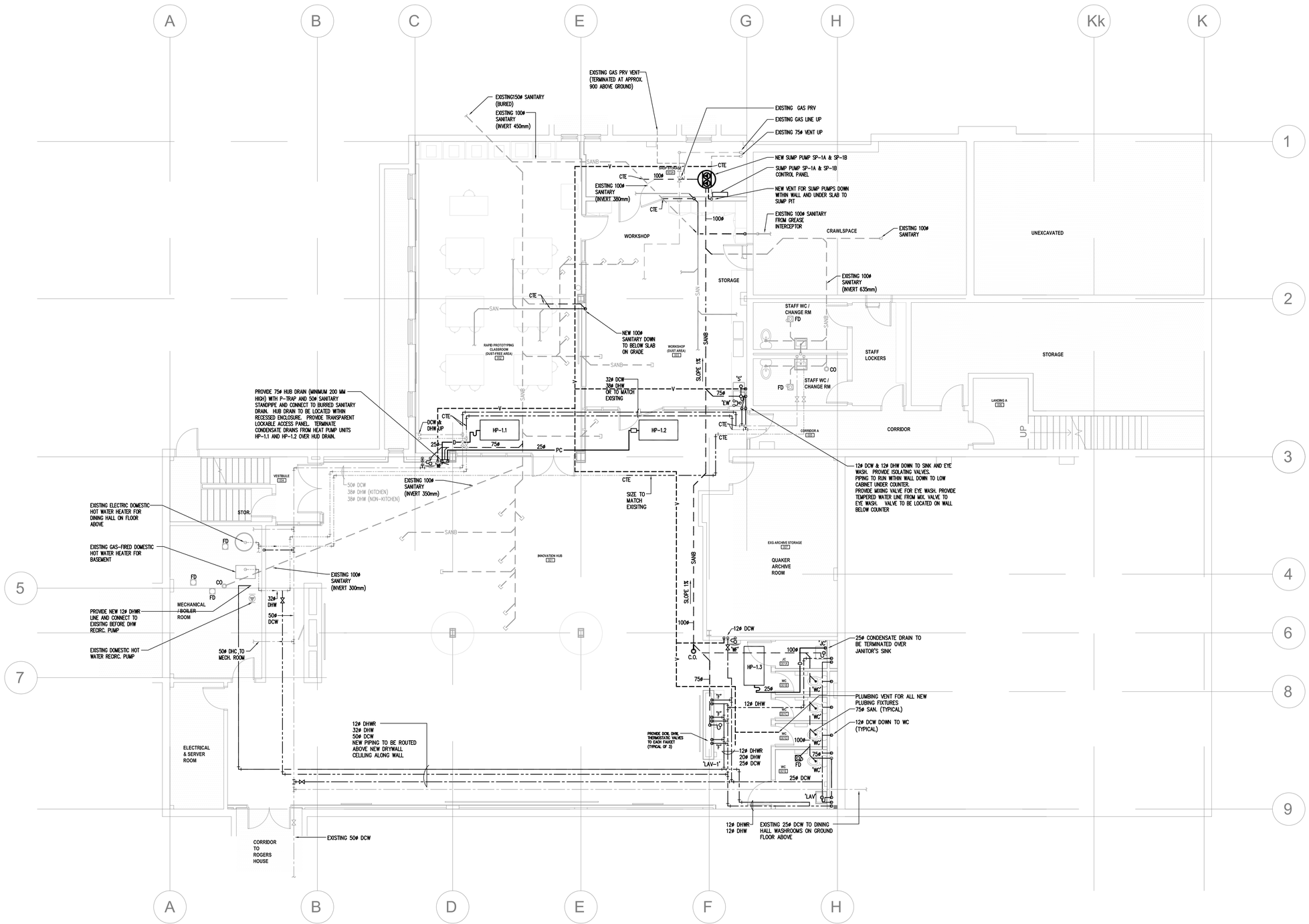
16945 Bayview Ave, Newmarket, ON L3Y 3W7

## BASEMENT HVAC NEW LAYOUT

| | |
|---|---|
| Scale: | 1:75 |
| Drawn by: | CAD |
| Reviewed by: | AP |
| Job number: | 25168 |
| Plot date: | 2026.11.06 |

Drawing number:

# M2.1




# Architecture Counsel

4 CLINTON PL, TORONTO, ON M6G 1J9 T 416-603-1515

All drawings and specifications are the property of the architect. The contractor shall verify all dimensions and information on site and report any discrepancy to architect before proceeding.

Project North True North

SHARMA & PARTNERS INC.
*Mechanical and Electrical Engineers*
*85 Curlew Drive, Unit 108, Toronto, Ontario M3A 2P8*
*Tel.: (416)291-8822*

*SPI PROJECT#: 2026-1010*

LICENCED PROFESSIONAL ENGINEER A. PROTKIN 06/11/26 PROVINCE OF ONTARIO

| | | |
|---|---|---|
| 2. | 2026.11.06 | ISSUED FOR TENDER |
| 1. | 2026.10.05 | ISSUED FOR PERMIT |
| | DATE | REVISION |

## PICKERING COLLEGE INNOVATION HUB

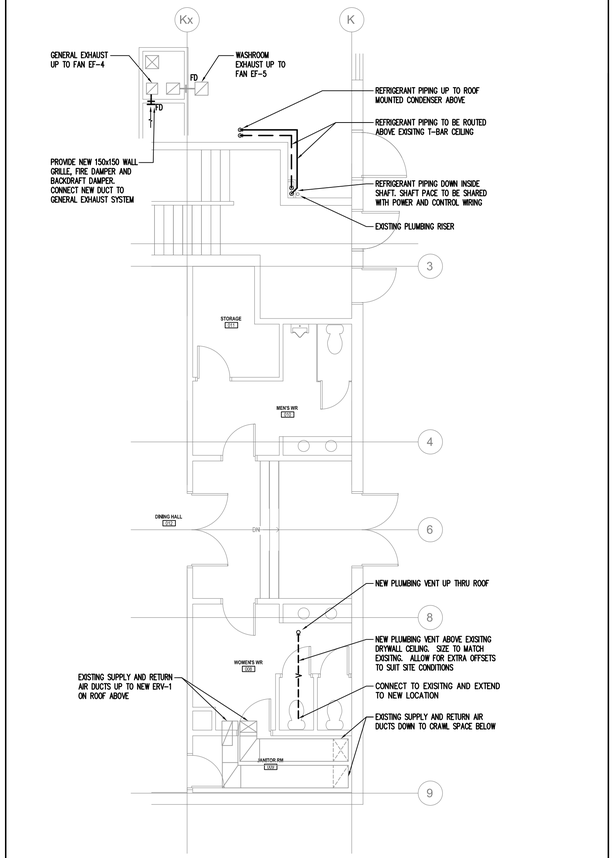
16945 Bayview Ave, Newmarket, ON L3Y 3W7

## BASEMENT PLUMBING NEW LAYOUT

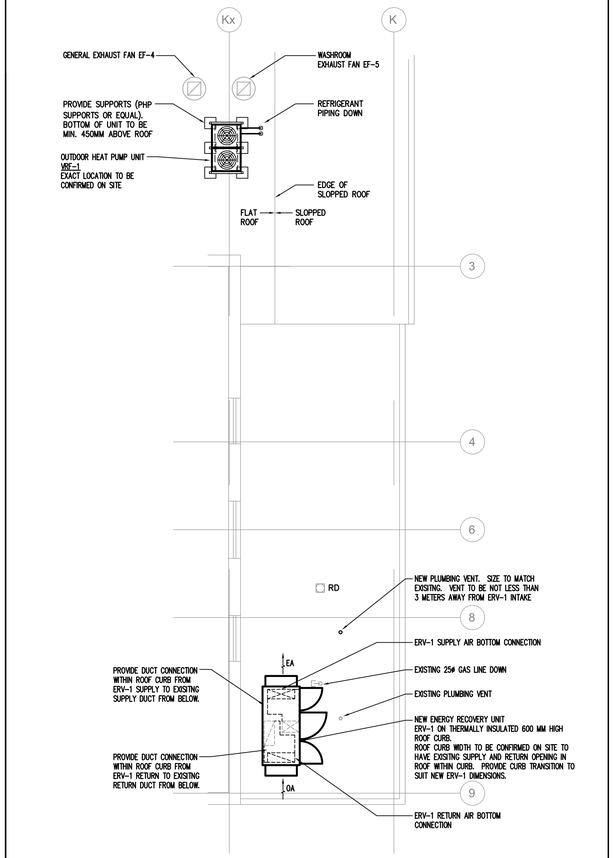
| | |
|---|---|
| Scale: | 1:75 |
| Drawn by: | CAD |
| Reviewed by: | AP |
| Job number: | 25168 |
| Plot date: | 2026.11.06 |

Drawing number:

# M2.2




1 M2.3 GROUND FLOOR PART PLAN – NEW LAYOUT
SCALE: 1:75




2 M2.3 ROOF PART PLAN – NEW LAYOUT
SCALE: 1:75


# Architecture Counsel

4 CLINTON PL, TORONTO, ON M6G 1J9 T 416-603-1515



All drawings and specifications are the property of the architect. The contractor shall verify all dimensions and information on site and report any discrepancy to architect before proceeding.


Project North True North


SHARMA & PARTNERS INC.

*Mechanical and Electrical Engineers*

*85 Curlew Drive, Unit 108, Toronto, Ontario M3A 2P8*
*Tel.: (416)291-8822*

*SPI PROJECT#: 2026-1010*


LICENCED PROFESSIONAL ENGINEER A. PROTKIN 06/11/26 PROVINCE OF ONTARIO

| | DATE | REVISION |
|---|---|---|
| 2. | 2026.11.06 | ISSUED FOR TENDER |
| 1. | 2026.10.05 | ISSUED FOR PERMIT |

PICKERING COLLEGE INNOVATION HUB

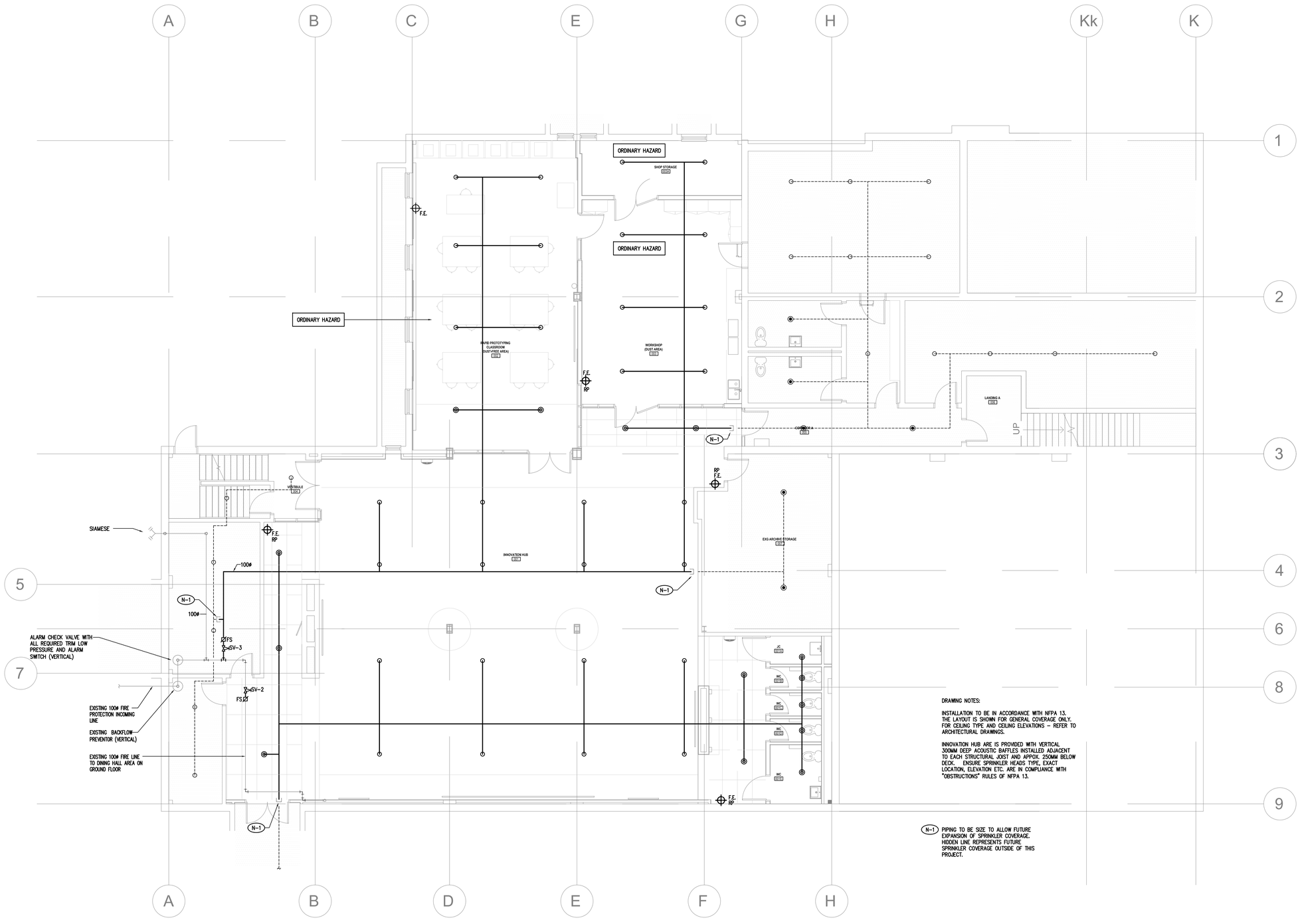
16945 Bayview Ave, Newmarket, ON L3Y 3W7

# GROUND FLOOR AND ROOF PART PLAN MECHANICAL NEW LAYOUT

| | |
|---|---|
| Scale: | 1:75 |
| Drawn by: | CAD |
| Reviewed by: | AP |
| Job number: | 25168 |
| Plot date: | 2026.11.06 |

Drawing number:

M2.3




DRAWING NOTES:

INSTALLATION TO BE IN ACCORDANCE WITH NFPA 13. THE LAYOUT IS SHOWN FOR GENERAL COVERAGE ONLY. FOR CEILING TYPE AND CEILING ELEVATIONS – REFER TO ARCHITECTURAL DRAWINGS.

INNOVATION HUB ARE IS PROVIDED WITH VERTICAL 300MM DEEP ACOUSTIC BAFFLES INSTALLED ADJACENT TO EACH STRUCTURAL JOIST AND APPOX. 250MM BELOW DECK. ENSURE SPRINKLER HEADS TYPE, EXACT LOCATION, ELEVATION ETC. ARE IN COMPLIANCE WITH "OBSTRUCTIONS" RULES OF NFPA 13.

(N-1) PIPING TO BE SIZE TO ALLOW FUTURE EXPANSION OF SPRINKLER COVERAGE. HIDDEN LINE REPRESENTS FUTURE SPRINKLER COVERAGE OUTSIDE OF THIS PROJECT.


# Architecture Counsel

4 CLINTON PL, TORONTO, ON M6G 1J9 T 416-603-1515



All drawings and specifications are the property of the architect. The contractor shall verify all dimensions and information on site and report any discrepancy to architect before proceeding.


Project North True North


SHARMA & PARTNERS INC.

*Mechanical and Electrical Engineers*

*85 Curlew Drive, Unit 108, Toronto, Ontario M3A 2P8*
*Tel.: (416)291-8822*

*SPI PROJECT#: 2026-1010*


LICENCED PROFESSIONAL ENGINEER A. PROTKIN 06/11/26 PROVINCE OF ONTARIO

| | DATE | REVISION |
|---|---|---|
| 2. | 2026.11.06 | ISSUED FOR TENDER |
| 1. | 2026.10.05 | ISSUED FOR PERMIT |

# PICKERING COLLEGE INNOVATION HUB

16945 Bayview Ave, Newmarket, ON L3Y 3W7

## BASEMENT FIRE PROTECTION NEW LAYOUT

| | |
|---|---|
| Scale: | 1:75 |
| Drawn by: | CAD |
| Reviewed by: | AP |
| Job number: | 25168 |
| Plot date: | 2026.11.06 |

Drawing number:

**M2.4**

# MECHANICAL SPECIFICATION

## GENERAL MECHANICAL CONDITIONS – SECTION 15050

1. CONFORM TO INSTRUCTIONS TO BIDDERS, GENERAL CONDITIONS AND GENERAL REQUIREMENTS.
2. THIS SECTION 15050 SHALL APPLY TO ALL DIVISION 15 SECTIONS.
3. BEFORE SUBMITTING TENDERS, EXAMINE SITE, EXISTING SERVICES AND ALL DRAWINGS. EXTRAS WILL NOT BE ALLOWED FOR FAILURE TO DO SO.
4. PROVIDE ALL LABOUR, MATERIALS AND EQUIPMENT NECESSARY TO EXECUTE THE WORK SHOWN AND DESCRIBED. INSTALLATION OF MATERIALS SHALL MEET ALL APPLICABLE PROVINCIAL, FEDERAL AND MUNICIPAL REQUIREMENTS.
5. OBTAIN PERMITS AND PAY ALL FEES FOR WORK AND REQUIRED INSPECTIONS.
6. ANY REFRIGERATION SYSTEM EXCEEDING 5 TONS MUST BE TSSA REGISTERED AND FIELD APPROVED. ARRANGE AND PAY FOR REQUIRED INSPECTIONS.
7. MAINTAIN LIABILITY INSURANCE TO PROTECT OWNER AND THE CONTRACTOR FROM ANY AND ALL CLAIMS UNDER THE WORKER'S COMPENSATION ACT.
8. THE DRAWINGS SHALL BE CONSIDERED DIAGRAMMATIC ONLY. ALL MEASUREMENTS SHALL BE TAKEN FROM BUILDING SITE AND ARCHITECT'S DRAWINGS.
9. ALL MATERIALS SHALL CONFORM TO CSA, HEPC AND CEC REQUIREMENTS AND SHALL BEAR CSA LABEL. GAS FIRED EQUIPMENT SHALL BEAR CGA LABEL.
10. ALL EXISTING SERVICES MUST BE MAINTAINED AT ALL TIMES DURING CONSTRUCTION. THIS CONTRACTOR TO PROVIDE ALL NECESSARY TEMPORARY LINES, ETC. SO AS TO CARRY OUT THE ABOVE.
11. TEMPORARY LIGHT, POWER AND WATER BY GENERAL CONTRACTOR.
12. ALL CUTTING AND PATCHING FOR MECHANICAL WORK WILL BE THE RESPONSIBILITY OF THIS SUB-CONTRACTOR. HIRE SPECIALIZED TRADES TO DO THIS WORK. X-RAY FLOORS PRIOR TO CUTTING AND COORDINATE FOR AFTER HOUR X -RAY OF THE FLOOR.
13. PROVIDE TEMPORARY BUILDINGS AND MATERIAL STORAGE AS REQUIRED AND BE RESPONSIBLE FOR ANY LOSS OR DAMAGE THERETO.
14. DUCTWORK AND PIPPING PENETRATION THRU WALL / CEILING
    WHERE EXPOSED DUCTWORK OR PIPING PENETRATES WALL OR CEILING PROVIDE FRAME OR TRIM AROUND PERIMETER OF THE DUCT OR PIPE FOR NEAT APPEARANCE. THIS IS IN ADDITION TO SMOKE SEAL REQUIREMENTS.
15. SUBMIT SAMPLES OF MATERIALS WHEN REQUIRED.
16. SUBMIT ELECTRONIC COPIES OF SHOP DRAWINGS FOR REVIEW COVERING MAJOR MANUFACTURED ITEMS, I.E. PLUMBING FIXTURES, VRF SYSTEM, ENERGY RECOVERY VENTILATOR , CONTROLS ETC.
17. WHERE SUBSTITUTIONS ARE MADE FOR EQUIPMENT SPECIFIED BY NAME OR MODEL NUMBER, BE FULLY RESPONSIBLE FOR CAPACITIES AS WELL AS PHYSICAL FIT OF SUBSTITUTED MATERIALS.
18. SUPPLY AND LOCATE ALL BASES, SUPPORTS, SLEEVES, CURBS, ETC. REQUIRED FOR THIS WORK. FLASHING BY ROOF TRADES. COUNTERFLASHING BY THIS CONTRACTOR.
19. UNLESS OTHERWISE NOTED, ALL MOTORS 1/2 HP AND UNDER SHALL BE 115/1/60, MOTORS OVER 1/2 HP SHALL BE OF 3 PHASE VOLTAGE AVAILABLE ON PROJECT.
20. SUPPLY PROPER STARTERS WITH OVERLOAD PROTECTION AND DISCONNECT SWITCHES FOR POWERED MECHANICAL EQUIPMENT AND HAND OVER TO ELECTRICAL CONTRACTOR FOR INSTALLATION. THIS DOES NOT INCLUDE ISOLATION SWITCHES, UNLESS STATED SPECIFICALLY.
21. ALL POWER WIRING BY ELECTRICAL CONTRACTOR, CONTROL AND INTERLOCK WIRING BY MECHANICAL CONTRACTOR. CONTROL WIRING IN RETURN AIR CEILING SPACES SHALL BE FT-6 OR INSTALLED IN CONDUIT.
    A. UNLESS SPECIFICALLY NOTED, OTHERWISE ALL WIRING BY THIS CONTRACTOR.
22. SUPPLY AND INSTALL ALL NECESSARY ACCESS DOORS FOR MECHANICAL EQUIPMENT INCLUDING ENTERING AND LEAVING SIDES OF ALL COILS, FIRE DAMPERS ETC. WHERE NECESSARY, DOORS SHALL BE RATED TO SUIT FIRE ASSEMBLY RATING.
23. DO ALL EXCAVATING AND BACKFILLING FOR MECHANICAL WORK.
    A. BACKFILL FROM BOTTOM OF TRENCH, AROUND PIPE AND TO 600MM (24") ABOVE PIPE SHALL BE CLEAN SAND, COMPACTED MECHANICALLY IN 150MM (6") LAYERS TO 95% MODIFIED PROCTOR DENSITY. REMAINDER OF TRENCH SHALL BE BACKFILLED UTILIZING NATIVE MATERIAL COMPACTED IN 6" LAYERS.
    B. EXTERIOR BACKFILL ABOVE 600MM (24") ABOVE PIPES IN AREAS TO HAVE CONCRETE WALKS OR ASPHALT PAVING SHALL BE O.H.O. GRANULAR CLASS B COMPACTED IN MAXIMUM 150MM (6"). REMAINDER OF TRENCH SHALL BE BACKFILLED UTILIZING NATIVE MATERIAL COMPACTED IN 6" LAYERS.
    C. EXTERIOR BACKFILL ABOVE 600MM (24") ABOVE PIPES IN AREAS TO RECEIVE SOD OR SEED SHALL BE CLEAN FILLED, FREE FROM ORGANIC MATERIAL AND DEBRIS, PLACED IN MAXIMUM 300MM (12") LAYERS.
    D. ALL UNUSED EXCAVATED MATERIAL SHALL BE REMOVED FROM SITE.
24. PIPE HANGERS SHALL BE CLEVIS SPLIT TYPE WITH MILD STEEL RODS. FOR COPPER PIPE USE PLASTIC INSERTS. USE OVERSIZED HANGERS AND SADDLES FOR C.W. PIPING. DO NOT SUPPORT EQUIPMENT, DUCTS OR PIPING FROM ROOF DECK WITHOUT PERMISSION FROM ARCHITECTS. SUPPLY AND INSTALL NECESSARY STEEL TO TRANSFER LOAD TO STRUCTURAL MEMBERS.
25. PROVIDE CONCRETE OR METAL CURBS OR SLEEVES AROUND ALL MECHANICAL ROOM FLOOR PENETRATIONS WHERE ROOM IS NOT LOCATED ON GRADE. SEAL ALL OPENINGS WATERTIGHT.
26. ALL DISSIMILAR METAL (STEEL-COPPER, ETC.) SHALL BE SEPARATED USING GASKETS AND INSULATING WASHERS OR WATTS "DI-ELECTRIC" FITTINGS.
27. INSTALL CHROME-PLATED ESCUTCHEONS WHERE BRANCH PIPES PASS THROUGH FINISHED SURFACE.
28. KEEP ACCURATE RECORD OF "AS-BUILT" DRAWINGS AND SUBMIT THESE BEFORE FINAL CERTIFICATE OF COMPLETION. BURIED SERVICES MUST BE DIMENSIONED. PROVIDE ELECTRONIC FILES IN AUTOCAD AND PDF FORMAT OF THE AS_BUILT DRAWINGS TO CONSULTANT FOR REVIEW AND VERIFICATION. AFTER VERIFIED, PROVIDE ALSO HARD COPY.
29. ALL SURFACES MUST BE LEFT CLEAN AND SMOOTH, READY FOR PAINTING BY GENERAL TRADES.
30. IDENTIFY ALL PIPING. USE STENCILS OR COLOUR CODES AND DIRECTIONAL ARROWS.
31. IDENTIFY ALL FANS, STARTERS, REMOTE CONTROL AND ALL OTHER EQUIPMENT AS TO SERVICE BY A BLACK LAMACOID ENGRAVED NAMEPLATE WITH WHITE CORE, FIRMLY AFFIXED WITH SCREWS TO EACH UNIT.
32. PROVIDE FIRE STOPPING AND SMOKE SEALS.
    A. PRIMERS TO MANUFACTURER'S RECOMMENDATIONS FOR SPECIFIC MATERIAL, SUBSTRATE, AND END USE.
    B. DAMMING AND BACKUP MATERIALS, SUPPORTS AND ANCHORING DEVICES TO BE TO MANUFACTURER'S RECOMMENDATIONS; AND IN ACCORDANCE WITH TESTED ASSEMBLY BEING INSTALLED AS ACCEPTABLE TO AUTHORITY HAVING JURISDICTION.
    C. SEALANTS FOR VERTICAL JOINTS TO BE NON-SAGGING.
    D. FIRESTOP AND SMOKE SEAL AROUND MECHANICAL AND ELECTRICAL ASSEMBLIES PENETRATING NON-RATED FIRE SEPARATIONS.
    E. RIGID DUCTS WITH DIMENSIONS GREATER THAN 1300 MM TO BE FIRE STOPPED BY BEAD OF FIRE STOPPING MATERIAL BETWEEN RETAINING ANGLE AND FIRE SEPARATION, AND BETWEEN RETAINING ANGLE AND DUCT, ON EACH SIDE OF FIRE SEPARATION.
    F. REMOVE EXCESS MATERIALS AND DEBRIS AND CLEAN ADJACENT SURFACES IMMEDIATELY AFTER APPLICATION.
    G. REMOVE TEMPORARY DAMS AFTER INITIAL SET OF FIRE STOPPING AND SMOKE SEAL MATERIALS.
33. ON COMPLETION OF THE WORK, REMOVE FROM THE PREMISES ALL TOOLS, DEBRIS, SURPLUS AND WASTE MATERIALS RESULTING FROM OPERATIONS UNDER THIS SECTION. CLEAN ALL EQUIPMENT AND LEAVE ALL ITEMS IN PERFECT ORDER READY FOR OPERATION.
34. AFTER ACCEPTANCE, INSTRUCT OWNER IN EQUIPMENT OPERATION AND PROVIDE HIM WITH OPERATING AND MAINTENANCE MANUALS STANDARDS AND EXTENDED WARRANTY DOCUMENTS, INSPECTION CERTIFICATES AND COPIES OF SHOP DRAWINGS OF INSTALLED EQUIPMENT.
35. THE CONTRACTOR SHALL, BEFORE FINAL PAYMENT IS MADE, GUARANTEE ALL MATERIALS AND WORKMANSHIP SUPPLIED BY HIM IN THE PERFORMANCE OF THIS CONTRACT FOR A PERIOD OF ONE YEAR FROM DATE OF FINAL ACCEPTANCE AND SHALL, WHEN CALLED UPON, MAKE GOOD WITHOUT FURTHER COST TO THE OWNER SUCH DEFECTS AS MAY APPEAR WITHIN THIS PERIOD.
36. SHOULD ANY DISCREPANCY APPEAR BETWEEN THESE SPECIFICATIONS AND THE DRAWINGS TO CAUSE DOUBT AS TO THE TRUE MEANING AND INTENT OF THE DRAWINGS AND SPECIFICATIONS, A RULING SHALL BE OBTAINED FROM THE ARCHITECT CONSULTANT BEFORE SUBMITTING THE TENDER. IF THIS IS NOT DONE IT WILL BE ASSUMED THAT THE MORE EXPENSIVE ALTERNATIVE HAS BEEN INCLUDED IN THE CONTRACT.
37. ANY ERROR OR INCONSISTENCY IN THE DRAWINGS OR SPECIFICATIONS NOTED AFTER AWARD OF CONTRACT MUST BE REPORTED TO THE ARCHITECT CONSULTANT BEFORE COMMENCING WORK.
38. THE OMISSION OR INCORRECT MENTION OF WORK, MATERIALS, ETC. THAT ARE INDISPENSABLE TO THE COMPLETED WORK, IS NOT TO BE INTERPRETED AS RELIEVING OF THE NECESSITY OF PROVIDING SUCH WORK, MATERIALS, ETC. AT NO EXPENSE TO THE OWNER.
39. ALLOW FOR CONNECTIONS TO EXISTING SYSTEMS DURING AFTER HOURS OR WEEKENDS, INCLUDING BUT NOT LIMITED TO PLUMBING AND DRAINAGE, WATER PIPING, HEATING SYSTEMS, ELECTRICAL AND CONTROL CONNECTIONS. COORDINATE WITH THE CLIENT FOR ANY SHUT DOWN IN ADVANCE IN WRITING. FOR CONNECTIONS TO HEATING / COOLING WATER PIPES ALLOW FOR FREEZING OF PIPES – DRAINAGE OF THE EXISTING SYSTEMS WILL NOT BE PERMITTED.
40. "RE-ROUTING" DENOTES REMOVAL OF EXISTING AND INSTALLATION OF NEW SERVICES INCLUDING NEW THERMAL INSULATION.
41. WHERE NEW CONNECTION IS MADE TO EXISTING PIPING OR DUCTWORK INCLUDE FOR NEW THERMAL INSULATION AND JACKETING ON THE EXISTING DUCT / PIPE.

## SPRINKLERS – SECTION 15330

1. ALTER THE EXISTING SPRINKLER SYSTEM TO ADD NEW SPRINKLER ZONES FOR GROUND FLOOR AND BASEMENT. BASEMENT SPRINKLER SYSTEM IS NEW.
2. THIS IS PERFORMANCE SPECIFICATION ONLY. PREPARE SPRINKLER SHOP DRAWINGS FOR SUBMISSION TO ENGINEER, UNDERWRITERS AND BUILDING DEPARTMENT FOR APPROVAL PRIOR TO INSTALLATION. ENGINEERS DRAWINGS INDICATE GENERAL AREAS TO BE SPRINKLERED ONLY. THIS CONTRACTOR TO PROVIDE HYDRAULIC CALCULATIONS PREPARED AND STAMPED BY PROFESSIONAL ENGINEER ON ONTARIO. HYDRANT TEST IS AVAILABLE UPON REQUEST. THIS CONTRACTOR TO SUBMIT ALL REQUIRED DOCUMENT TO THE BUILDING DEPARTMENT (AND OTHER DEPARTMENTS AS APPLICABLE). OBTAIN PERMITS AND PAY ALL FEES FOR AND REQUIRED INSPECTIONS.
3. SPRINKLER WORK SHALL BEGIN INSIDE BUILDING AT MAIN COLD WATER HEADER WHERE INDICATED ON DRAWINGS.
4. PIPING MATERIALS
    A. BLACK STEEL SCHEDULE 40 CONFORMING TO ASTM A120 OR ASTM A53. SCHEDULE 30 PIPE MAY BE USED IN SIZES (200MM) 8" AND LARGER. LIGHT WALL PIPE WITH ROLL GROOVE FOR MECHANICAL COUPLINGS MAY BE USED FOR ALL PIPING WHERE PERMITTED BY CODES AND AUTHORITIES. THE "PRESSFIT" PIPING SYSTEM MAY BE USED IN SIZES UP TO AND INCLUDING (50MM) 2".
    B. FITTINGS SHALL BE CAST IRON, MALLEABLE IRON OR STEEL WELDING TYPE. SCREWED UNIONS AND COUPLINGS SHALL BE USED ON PIPING (50MM) 2" AND SMALLER. SCREWED COUPLINGS, FLANGES, OR WELDING SHALL BE USED TO JOINT PIPING (65MM) 2-1/2" AND LARGER, EXCEPT WHERE MECHANICAL COUPLINGS ARE ALLOWED AS SPECIFIED HEREIN.
    C. MECHANICAL COUPLINGS AND FITTINGS SUCH AS "FIRELOCK" AND "PRESSFIT" MANUFACTURED BY VICTAULIC WHICH ARE ULC LISTED FOR FIRE PROTECTION SERVICE AND MEETING WITH THE APPROVAL OF THE INSURANCE UNDERWRITING AGENCY AND GOVERNING CODES MAY BE USED TO JOIN ABOVE GROUND PIPING.
5. SYSTEM SHALL BE COMPLETE WITH ALL NECESSARY PIPING, HANGERS, HEADS, DRAINS, SUPERVISED VALVES, FLOW SWITCHES ETC., ALL IN STRICT ACCORDANCE WITH STANDARDS AS STIPULATED IN THE NATIONAL FIRE PREVENTION ASSOCIATION NFPA 13 AS REVISED TO DATE AND/OR AS APPROVED BY THE LOCAL FIRE DEPARTMENT AND BUILDING DEPARTMENT.
6. IN GENERAL, SYSTEM SHALL BE INSTALLED IN ACCORDANCE WITH "LIGHT HAZARD OCCUPANCY" AND ORDINARY HAZARD OCCUPANCY (WHERE INDICATED ON THE DRAWINGS) STANDARDS.
7. ALL HEADS UNLESS NOTED OTHERWISE SHALL BE EQUAL TO GRINNELL "DURO SPEED". LOW HEADS SHALL BE EQUIPPED WITH GUARDS.
8. WHERE SUSPENDED CEILINGS OCCUR, PIPING SHALL BE CONCEALED ABOVE CEILINGS, HEADS SHALL BE CHROME PLATED RECESSED PENDANT TYPE IN AREAS WHERE THERE ARE NO SUSPENDED CEILINGS, HEADS SHALL BE UPRIGHT TYPE WITH PLAIN BRONZE FINISH. SUBMIT SAMPLES TO ARCHITECT FOR APPROVAL BEFORE INSTALLATION.
9. CONTRACTOR SHALL PAY ALL NECESSARY CHARGES HE INCURS FROM UNDERWRITERS FOR THEIR REVIEW OF THESE DRAWINGS.
10. WHERE SPRINKLER HEAD IS SHOWN TO BE RELOCATED, EXTEND PIPING TO NEW LOCATION AND PROVIDE NEW SPRINKLER HEAD. ONLY NEW SPRINKLERS TO BE INSTALLED.
11. WHERE CEILINGS ARE RAISED OR LOWERED, ADJUST HEADS TO SUIT NEW CEILING HEIGHTS.
12. WHERE CEILINGS ARE REMOVED AND REPLACED, REMOVE AND REPLACE HEADS AS REQUIRED TO PERMIT EXECUTION OF NECESSARY WORK.

## PLUMBING & DRAINAGE INSIDE THE BUILDING – SECTION 15400

1. ALL WORK SHALL BE EXECUTED BY LICENSED PLUMBERS.
2. FOR PVC PIPING: INSTALLER/PLUMBER TO CONTACT IPEX FOR ON-SITE TRAINING (AT NO CHARGE) PRIOR TO START OF INSTALLATION.
3. ALL PLUMBING AND DRAINAGE WORK SHALL BE INSTALLED AS REQUIRED BY ONTARIO BUILDING CODE, REVISED TO DATE, AND SHALL MEET THE REQUIREMENTS OF ALL PROVINCIAL AND MUNICIPAL AUTHORITIES HAVING JURISDICTION.
4. INCLUDE ALL PIPING, FITTINGS AND EQUIPMENT SHOWN ON DRAWINGS OR DESCRIBED IN SPECIFICATIONS. ALL ITEMS NOT MENTIONED BUT UNDERSTOOD TO BE NECESSARY TO COMPLETE THE PLUMBING SYSTEM SHALL BE INCLUDED. PIPING MATERIAL AND FITTING TO BE SUITABLE FOR SYSTEM PRESSURE AND REQUIRED SMOKE AND FIRE RATING. FOLLOW MANUFACTURE INSTALLATION AND APPLICATION INSTRUCTIONS.
5. MAKE ALL NECESSARY CONNECTIONS TO EXISTING SERVICES.
6. ALL BURIED SANITARY AND STORM DRAINAGE PIPING SHALL BE IPEX BDS PVC SDR 35 PIPE WITH SOLVENT JOINTS (CAST IRON MECHANICAL JOINTS). 8" (200MM) AND OVER USE IPEX RING-TITE PVC SDR 35 PIPE WITH GASKETED JOINTS.
7. ALL ABOVE GROUND SANITARY AND STORM DRAINAGE PIPING SHALL BE IPEX SYSTEM 15 PVC DWV WITH ONE-STEP CEMENT FOR SIZES UP TO 6'(150MM) AND TWO-STEP CEMENT WITH PRIMER FOR SIZES 8'(200MM) AND LARGER. (CAST IRON MECHANICAL JOINT OR DWV COPPER). USE IPEX SYSTEM XFR PVC DWV IN AIR PLENUMS OR BUILDINGS CLASSIFIED AS HIGH BUILDINGS. PVC PIPING IS NOT PERMITTED IN VERTICAL SERVICE SPACES.
8. ABOVE GROUND WATER PIPING SHALL BE TYPE 'L" COPPER C/W 95/5 SOLDER JOINTS. FOR 2" (50MM) AND OVER, VITAULIC ROLL-GROOVED JOINTING WILL BE ACCEPTED. AS AN ALTERNATE FOR DCW ONLY, USE IPEX AQUARISE CPVC PIPE, FITTINGS AND VALVES WITH ONE-STEP CEMENT FOR SIZES UP TO 2'(50MM) AND TWO-STEP CEMENT WITH PRIMER FOR SIZES 2-1/2'(65MM) AND LARGER.
9. BURIED DOMESTIC WATER PIPING SHALL BE COPPER TYPE "K" OR CEMENT LINED DUCTILE IRON. PVC APPROVED FOR MUNICIPAL POTABLE WATER. BURIED INCOMING FIRE LINE SHALL BE CEMENT LINED DUCTILE IRON.
10. ALL ABOVE GROUND VENT PIPING SHALL IPEX SYSTEM 15 PVC DWV WITH ONE-STEP CEMENT FOR SIZES UP TO 6'(150MM) AND TWO-STEP CEMENT WITH PRIMER FOR SIZES 8'(200MM) AND LARGER (CAST IRON WITH MECHANICAL JOINT OR DWV COPPER). USE IPEX SYSTEM XFR PVC DWV IN AIR PLENUMS OR BUILDINGS CLASSIFIED AS HIGH BUILDINGS.
11. BURIED VENT PIPING MAY BE ABS PLASTIC SOLVENT WELD.
12. WHERE PVC PIPING TO BE USED, THE PIPING PRESSURE, SMOKE AND FIRE RATING TO BE SUITABLE FOR APPLICATION.
13. ALL FIRE PROTECTION PIPING TO BE "THINWALL" PIPE WITH GROOVED FITTINGS.
14. VALVES UP TO 2" (50MM) SHALL BE FULL THROAT BRONZE BALL VALVES. 2 1/2" (65MM) AND OVER SHALL BE BUTTERFLY VALVES.
15. SUPPLY AND INSTALL ALL GREASE INTERCEPTORS, PLUMBING FIXTURES, CLEANOUTS, HOSE BIBBS, FLOOR DRAINS, COMBINATION DRAINS, ROOF DRAINS, HOT WATER TANKS, PUMPS, ETC. AS SHOWN ON DRAWINGS AND LISTED IN SCHEDULES.
16. VISIBLE SINK DRAINAGE TRAPS AND SUPPLY PIPING SHALL BE CHROME PLATED.
17. CLEANOUTS SHALL BE INSTALLED AS REQUIRED BY CODE AND WHERE SHOWN AND SHALL SUIT FLOORING MATERIAL.
18. PROVIDE PRESSURE ACTIVATED TRAP SEAL PRIMERS FOR ALL FLOOR DRAINS.
19. PROVIDE HAMMER ARRESTORS ON DCW AND DHW SUPPLIES TO FIXTURE (OR GROUP OF FIXTURES) AND WHERE REQUIRED.
20. FIRE HOSE CABINETS SHALL BE FULLY RECESSED AS SHOWN TO CONTAIN LISTED 1 1/2" (40MM) HOSE, RACK AND VALVE AND ANI 1/2" (40MM) LEXXAN FOG-SOLID STREAM NOZZLE CHROME PLATED, AND A FIRE EXTINGUISHER. HOSE LENGTH SHALL BE 75 FT. (22.5M). ALL EXPOSED PARTS INCLUDING RACK, VALVES, PIPE FITTINGS SHALL BE CHROME PLATED. WHERE REQUIRED, PROVIDE ULC LISTED PRESSURE RESTRICTING HOSE VALVES.
21. PROVIDE APPROVED BACKFLOW PREVENTORS ON ALL INSIDE AND OUTSIDE HOSE BIBBS. ON MECHANICAL EQUIPMENT CONNECTIONS, USE REDUCED PRESSURE TYPE BACKFLOW PREVENTORS.
22. ALL SPRINKLER INSTALLATIONS SHALL BE INSTALLED AS STIPULATED IN NFPA 13.
23. DOMESTIC COLD AND HOT WATER PIPING (INCLUDING PVC PIPING) SHALL BE INSULATED WITH 1" (25MM) THICK FIBREGLAS PIPE INSULATION WITH ASJ. USE 1 1/2" (40MM) MATERIAL FOR PIPING 2" AND OVER. HORIZONTAL RUNS OF SANITARY AND STORM DRAINS SHALL BE INSULATED IN A SIMILAR MANNER. IN EXPOSED AREAS FINISH WITH CANVAS OR P.V.C. JACKETTING. INSULATE ALSO COLD WATER METERS. PVC DRAINAGE PIPING NEED NOT BE INSULATED.
24. ROOF DRAIN BODIES TO BE INSULATED, AND AREAS EXPOSED TO BE FINISHED WITH CANVAS OR PVC JACKETTING.
25. SUPPLY AND INSTALL ALL FIRE EXTINGUISHERS AS REQUIRED BY CODE.
26. SEE FIXTURE SCHEDULE FOR PLUMBING FIXTURE TYPES.
27. SUPPLY AND INSTALL WHEEL HANDLE OR SCREW FIXTURES STOP VALVE ON THE HOT AND COLD WATER SUPPLY TO EVERY FIXTURE ON THE JOB, IN ADDITION TO THE VALVE OR FAUCET ON THE FIXTURE ITSELF.
28. PROTECT ALL FIXTURES UNTIL HANDED OVER TO THE OWNER. ALL FIXTURES SHALL BE C/W NECESSARY TRIM, TRAP SUPPLIES, STOPS, TAIL PIECES, TRAPS, GASKETS, ETC.
29. PROVIDE CONCRETE THRUST BLOCKS AT EVERY TURN OF DIRECTION AND WHERE SHOWN ON DRAWINGS FOR DOMESTIC BURIED WATER AND BURIED FIRE LINE.
30. AFTER COMPLETION OF PIPING INSTALLATION PROVIDE SYSTEM FLUSHING. SUBMIT REPORT UPON COMPLETION.
31. ALL EXISTING DRAIN LINES TO BE PRESSURE WASHED AND VIDEO INSPECTED BY PLUMBING CONTRACTOR, PRIOR TO COMMENCEMENT OF WORK.

## WARM AIR HEATING, VENTILATING & AIR CONDITIONING – SECTION 15850

1. SUPPLY AND INSTALL ALL HEATING, VENTILATION AND AIR HANDLING EQUIPMENT AS SHOWN ON DRAWINGS.
2. SUPPLY AND INSTALL DUCTWORK AS INDICATED ON DRAWING. DUCTWORK SHALL BE FABRICATED AND INSTALLED IN STRICT ACCORDANCE WITH LATEST SMACNA STANDARDS AND SHALL BE MANUFACTURED OF GALVANIZED STEEL UNLESS SPECIFICALLY NOTED OTHERWISE.
3. INSTALL MANUAL BALANCING DAMPERS AT ALL BRANCH TAKEOFFS AND IN OTHER LOCATIONS WHERE NECESSARY FOR SYSTEM BALANCING.
4. FLEXIBLE DUCTS SHALL BE ALUMINUM HELICALLY WOUND SPIRAL DUCT, EQUAL TO FLEXMASTER T/L, MAXIMUM 10 FT. LENGTH. PROVIDE ACOUSTIC FLEX EQUAL TO FLEXMASTER MODEL T/L-A, WHERE DUCTS ARE TO BE INTERNALLY INSULATED. USE CLASS A FIRE-RATED FLEXIBLE DUCTS WITH A FLAME SPREAD RATING BETWEEN ZERO AND 25 IN CEILING RETURN AIR PLENUMS.
5. INSTALL 6" (150MM) APPROVED FLEXIBLE CONNECTOR ON DUCT CONNECTIONS TO RESILIENTLY MOUNTED HEAT PUMP UNITS, ERV UNIT.
6. WHERE SHOWN, DUCTWORK SHALL BE LINED INTERNALLY WITH (1/2") (1") (12MM) (25MM) FACED FLEXIBLE DUCT LINER. SHOWN SIZES ARE CLEAR INSIDE DIMENSIONS, INCREASE DUCT SIZE ACCORDINGLY.
    SIMILARLY LINE SUPPLY AND RETURN DUCTS 10 FT. (3M) FROM ALL ROOFTOP AC UNITS AND INDOOR AIR HANDLER/AND HEAT PUMPS.
7. SUPPLY ALL GRILLES AND DIFFUSERS WHERE SHOWN ON DRAWINGS. FINISH SHALL BE OFF-WHITE BAKED ENAMEL.
8. THE REFRIGERANT LINES SHALL BE SIZED FOR A PRESSURE DROP OF NOT MORE THAN 14 KPA (2 PSI). REFRIGERANT PIPE SHALL BE TYPE L NITROGEN CHARGED ACR GRADE COPPER WITH FORGED BRASS OR WROUGHT COPPER REFRIGERATION FITTINGS. ALL JOINTS SHALL BE BRAZED. SAE FLARED FITTINGS ARE NOT ACCEPTED.
9. PROVIDE SIGHT GLASSES FOR ALL LIQUID LINES AND SPORLAN LIQUID LINE DRIERS AHEAD OF EACH THERMO EXPANSION VALVE. PROVIDE SOLENOID VALVE AHEAD OF EACH EXPANSION VALVE. SUCTION LINES SHALL BE PROPERLY LOOPED IN ORDER TO ALLOW THE RETURN OF OIL TO RETURN TO THE COMPRESSOR. PROVIDE NECESSARY WIRING TO OPERATE CONDENSER AND DX SOLENOID.
10. REFRIGERANT SUCTION LINES SHALL BE INSULATED WITH 3/4" (19MM) THICK ARMAFLEX INSULATION, WITH CEMENTED JOINTS. LIQUID LINES OUTDOORS EXPOSED TO SUNLIGHT SHALL ALSO BE SIMILARLY INSULATED. COVER EXTERIOR INSULATION WITH ALUMINUM JACKETTING.
11. INCLUDE FOR STARTUP OF VRF SYSTEM AND ERV SYSTEM. SUBMIT REPORTS.
12. CENTRIFUGAL FANS SHALL BE COMPLETE WITH BELT GUARDS WITH TACHOMETER OPENINGS.
13. ALL BACKDRAFT AND ELECTRIC MOTORIZED DAMPERS SHALL BE LOW LEAKAGE TYPE.
14. ALL EXTERIOR DUCTWORK SHALL BE INTERNALLY INSULATED WITH 1/2" (12MM) OF COATED FIBREGLAS DUCT INSULATION. INSULATE THE EXTERIOR WITH 2" (50MM) OF RIGID INSULATION AND FINISH WITH ALUMINUM JACKETTING, BANDED ON AND SEALED WITH SILICONE OR SIMILAR SEALER. (TOTAL INSULATION VALUE R-12). DUCTWORK IN UNHEATED SPACES SHALL ALSO BE INSULATED TO R-12.
15. EXHAUST AIR DUCTWORK WITHIN 5 FT. (1500MM) OF A WALL OR ROOF, AND ALL OUTSIDE AIR INTAKE DUCTWORK, SHALL BE EXTERNALLY INSULATED WITH 2 1/2" (38MM) THICK FOIL FACED FLEXIBLE FIBREGLAS DUCT INSULATION (R-10). APPLY USING RECOMMENDED ADHESIVE AND TAPE ALL JOINTS USING VAPOUR BARRIER TAPE. ALL AIR CONDITIONED AIR SUPPLY DUCTWORK, UNLESS SPECIFICALLY NOTED OTHERWISE, SHALL BE INSULATED IN A SIMILAR MANNER USING 1" MATERIAL. INSULATION INSTALLED IN CEILING RETURN AIR PLENUM TO BE FIRE-RATED OR PLENUM RATED.
16. SUPPLY AND INSTALL ELECTRIC DUCT HEATERS OF SIZE AND TYPE AS SHOWN ON DRAWINGS. INCLUDE AIR FLOW SWITCH, CONTACTORS, SAFETY CUTOUTS, CONTROL TRANSFORMER, SCR CONTROLLER ETC.
17. PROVIDE ALL MOTORIZED DAMPERS TO OPEN AND CLOSE AS RESPECTIVE FANS START AND STOP.
18. SUPPLY AND INSTALL ALUMINUM WEATHER LOUVRES WHERE SHOWN. 4" (100MM) [6" (150MM)] STORMPROOF BLADE C/W BIRDSCREEN, LOUVRE COLOUR TO ARCHITECT'S APPROVAL. BLANK OFF ALL UNUSED SECTIONS WITH INSULATED SHEETMETAL.
19. ADJUST ALL FAN SPEEDS TO DELIVER SHOWN AIR QUANTITIES. BALANCE ALL AIR SYSTEMS AND SUPPLY WRITTEN AIR BALANCING REPORTS IN ELECTRONIC FORMAT. INCLUDE NECESSARY SPARE BELTS PULLEYS FOR FIELD ADJUSTMENT AND REPLACEMENT OF FILTERS. SET AIR SYSTEMS CONTROLS AND DEMONSTRATE OPERATION TO OWNER'S REPRESENTATIVE.

## VRF SYSTEM – SECTION 15960

PART – 1 GENERAL

1.1 SUMMARY

.1 SCOPE OF WORK:

.1 SUPPLY AND INSTALL SPLIT-SYSTEM AIR CONDITIONING SYSTEMS. PROVIDE ALL NECESSARY REFRIGERANT SYSTEM COMPONENTS, RELAYS, CONTACTORS, STARTERS, DISCONNECTS.

1.2 SUBMITTALS

.1 SHOP DRAWINGS

.1 SUBMIT PRODUCT DATA FOR SPLIT-SYSTEM AIR CONDITIONING SYSTEMS AND RELATED EQUIPMENT. SHOP DRAWINGS SHALL INCLUDE, BUT NOT BE LIMITED TO:

.1 COMPLETE SPECIFICATIONS.

.2 PRODUCT DATA SHEETS INDICATING RATED CAPACITIES, WEIGHT, AND SOUND POWER LEVELS.

.3 REFRIGERANT PIPING DIAGRAM SHOWING ALL REQUIRED COMPONENTS (VALVING, FILTER-DRIER, SIGHT GLASS, TRAPS).

.4 POWER AND CONTROL WIRING DIAGRAMS.

.5 PHYSICAL OUTLINE DIMENSION DRAWING SHOWING REQUIRED CLEARANCES, WEIGHTS, AND LOCATION AND SIZE OF CONNECTION ENTRIES.

PART – 2 PRODUCTS

2.1 SPLIT-SYSTEM HEAT PUMP SYSTEM

.1 GENERAL

.1 THE NEW AIR COOLED HEAT PUMP SYSTEM SHALL CONSIST OF A WALL MOUNTED PACKAGED EVAPORATOR SECTIONS AND MATCHING OUTDOOR UNIT. REFER TO EQUIPMENT SCHEDULES ON DRAWINGS.

.2 THE UNITS SHALL BE MADE WITHIN NORTH AMERICA. THE UNITS SHALL BE LISTED BY INTERTEK TESTING SERVICE (ITS) AND BEAR THE ETL LABEL. ALL WIRING SHALL BE IN ACCORDANCE WITH THE NATIONAL ELECTRICAL CODE (N.E.C.). THE UNITS SHALL BE RATED IN ACCORDANCE WITH ARI STANDARD 210/240 AND BEAR THE ARI LABEL. THE UNITS SHALL BE MANUFACTURED IN A FACILITY CERTIFIED TO ISO 9001.

.3 THE CONDENSING UNIT SHALL CONTAIN AN R-410 REFRIGERANT CHARGE FOR THE EVAPORATOR SECTION AND CONDENSER SECTION. SYSTEM SEER SHALL MEET OR EXCEED REQUIREMENTS OF THE ASHRAE 90.1 LATEST EDITION.

.2 WARRANTY

.1 THE UNITS SHALL HAVE A MANUFACTURER'S WARRANTY FOR A PERIOD OF ONE (1) YEAR FROM DATE OF INSTALLATION. THE COMPRESSOR SHALL HAVE A WARRANTY OF FIVE (5) YEARS FROM DATE OF INSTALLATION. IF, DURING THIS PERIOD, ANY PART SHOULD FAIL TO FUNCTION PROPERLY DUE TO DEFECTS IN WORKMANSHIP OR MATERIAL, IT SHALL BE REPLACED OR REPAIRED AT THE DISCRETION OF THE MANUFACTURER.

.2 THIS WARRANTY DOES NOT INCLUDE LABOR.

.3 INDOOR UNIT

.1 THE INDOOR UNIT SHALL BE FACTORY ASSEMBLED AND WIRED. THE CABINET SHALL BE FABRICATED OF GALVANNEALED STEEL, FINISHED IN OFFWHITE WITH CORROSION INHIBITING POLYESTER POWDER-COATED PAINT.

.2 THE EVAPORATOR FANS SHALL BE A FORWARD CURVE CENTRIFUGAL TYPE, DYNAMICALLY BALANCED AND DIRECTLY MOUNTED TO THE MOTOR SHAFTS. THE MOTORS SHALL BE PSC TYPE WITH INTERNAL THERMAL OVERLOAD PROTECTION. THE SUPPLY LOUVERS SHALL BE DUAL ADJUSTABLE F