



Addendum #1

Bid Opportunity: 23-7367-RFT - King Edward Public School Accessibility Upgrade including Elevator and Washrooms

Closing Date: Friday, April 21, 2023 2:00 PM

The following issued by the Board shall form part of the Bid / Proposal Solicitation document. The revisions and additions noted herein along with any attachments shall be read in conjunction with all other related documents. This Addendum shall, take precedence over the previously issued documents where differences occur. Receipt of this addendum must be acknowledged in the Bidding System, bids&tenders.

If you have already submitted a Bid / Proposal, it will be automatically withdrawn as a result of this addendum. You must resubmit the Bid / Proposal acknowledging all addenda and revising your Bid / Proposal to comply with all addenda.

Question 1:

Please confirm if there will be terrazzo repair, or new terrazzo required for this project. There is a specification for terrazzo, but it is not identified on the room finish schedule or on the drawings.

Answer 1:

Delete section 09410 Terrazzo Poured in Place. No terrazzo repair is required.

Question 2:

Section 12522 of the specification calls for a motorized shading system to be installed in the gymnasium. Please provide quantities and sizes, or issue a drawing showing the extent of the installation.

Answer 2:

Delete Section 12522 from the specifications. No motorized shading system is required.

Question 3:

On drawing A8.1 door AL1 D1 calls for a 60 minute fire rating. Aluminum doors cannot be fire rated. Will the curtainwall framing need to be fire rates as well? Fire rated curtain wall is available but is very expensive and has a long lead time.

Answer 3:

Door AL1 D2 is not required to be fire rated. Delete note indicating that this door is to be 60 MIN. fire rated from drawings. The curtain framing is not required to be fire rated.

Question 4:

The specifications call for Kawneer 560 swing doors; drawing A8.1 shows sliding doors. Please provide specifications for the sliding aluminum door shown.

Answer 4:

Refer to Section 08460 AUTOMATIC SLIDING DOOR Attached with this Addendum for the Specification for the Sliding doors on the main entrance. Main entrance door AL1 D2 is required to be sliding door, not a swing door.

AMENDMENT TO ARCHITECTURAL DRAWINGS

- Substitute sheets A0.2, A0.3 and A0.4 with the updated drawings attached to this Addendum 1.

AMENDMENT TO ELECTRICAL DRAWINGS

- Substitute sheet E3.1 with the updated drawing attached to this Addendum 1.

AMENDMENT TO SPECIFICATIONS

- Include attached Section 08460 Automatic Sliding Doors to the Specifications
- Include attached Section 075130 Built-Up Bituminous Roofing to the Specifications
- Remove Section 09410 Terrazzo Poured in Place from the Specifications.
- Remove Section 12522 Motorized Shading System from the specifications.

AMENDMENT TO MECHANICAL AND ELECTRICAL SPECIFICATIONS

- Include all items from Addendum 01 M&E-BAS Schematics attached to this Addendum 1 to the Specifications.

END OF ADDENDUM

PART 1 - GENERAL

1. RELATED DOCUMENTS

1. Drawings and general provisions of the Contract, including General and Supplementary Conditions and Division 1 Specification Sections, apply to this Section.

2. SUMMARY

1. This section includes the following types of automatic entrance doors:
2. Exterior and interior, bi-parting, sliding automatic entrance doors with sidelites.

3. REFERENCES

- B. Unit as described complies with current ANSI/BHMA 156.10 American National Standard for Power Operated Pedestrian Doors. Unit to comply with ANSI/UL 325-1997 standard for Door, Window operators and Systems. Unit to be cUL approved for use in Canada.

1. DEFINITIONS

- C. Activation Device: Device that, when actuated, sends an electrical signal to the door operator to open the door.
1. Knowing act: Consciously initiating the powered opening of a low energy door using acceptable methods including wall mounted switches such as push plates and controlled access devices such as keypads, card readers and key switches.
- D. Safety Device: A device that detects the presence of an object or person within a zone where injury could occur and provides a signal to stop the movement of the door.
- E. AAADM: American Association of Automatic Door Manufacturers.

1.2 PERFORMANCE REQUIREMENTS

- A. General: Provide doors that have been designed and fabricated to comply with specified performance requirements, as demonstrated by testing manufacturer's corresponding standard systems.
- B. Compliance:
1. ANSI/BHMA A156.10 American National Standard for Power Operated Pedestrian Doors.
 2. UL 325 listed.
 3. cUL listed.
- C. Automatic door equipment accommodates medium to heavy pedestrian traffic.

- D. Automatic Door equipment accommodates up to the following weights for active leaf doors:
 - 1. Bi-part doors: 220 lbs (150 kg) per active leaf.
- E. Operating Temperature Range: -31° F to 122° F (-35° C to 50° C).
- F. Motion and Presence detection System: Uses planar K-band microwave technology to detect motion and focused active infrared technology to detect presence in a single housing.
- G. Entrapment Force Requirements:
 - 1. Power Operated Sliding Doors: Not more than 30 lbf (133 N) required to prevent stopped door from closing.
 - 2. Sliding doors provided with a breakaway device shall require no more than 50 lbf (222N) applied 1 inch (25 mm) from the leading edge of the lock stile for the breakout panel to open.

1.3 SUBMITTALS

- A. Comply with Division 01 - Submittal Procedures.
- B. Product Data: Manufacturer's product data sheets including installation details, material descriptions, dimensions of individual components and profiles, fabrication, operational descriptions and finishes.
- C. Shop Drawings: Submit manufacturer's shop drawings, including elevations, sections and details, indicating dimensions, materials, and fabrication of doors, frames, sidelites, operator, motion /presence sensor control device, anchors, hardware, finish, options, accessories and power requirements.
- D. Samples: Submit manufacturer's samples of aluminum finish.
- E. Manufacturers Field Reports: Submit manufacturer's field reports from AAADM certified technician of inspection and approval of doors for compliance with ANSI/BHMA A156.10 after completion of installation.
- F. Operating and Maintenance Manuals: Provide manufacturers operating and maintenance manuals for each item comprising the complete door opening installation in quantity as required in Division 01, Closeout Submittals. The manual to include the name, address, and contact information of the manufacturers providing the hardware and their nearest service representatives. The final copies delivered after completion of the installation test to include spare parts list.
- G. Warranties and Maintenance: Special warranties and maintenance agreements specified in this Section.

1.4 QUALITY ASSURANCE

.1 Company specializing in manufacturing the products specified in this section shall have minimum ten years experience and be a member of the American Association of Automatic Door Manufacturers (AAADM). Prior to placing door in operation, an AAADM technician should inspect the doors for compliance with current ANSI/BHMA 156.10 American National Standard for Power Operated Pedestrian Doors.

.2 Manufacturer to provide FACTORY owned central dispatch system for warranty. System to be available 24 hours a day, 365 days per year with a

factory employee to obtain malfunction information and dispatch appropriate service agency to the customer location. For example, toll free 1-800-95-BESAM to be prominently displayed on header of each operator.

1.5 PROJECT CONDITIONS

- A. Field Measurements: Verify actual dimensions of openings to receive automatic entrances by field measurements before fabrication and indicate on shop drawings.

1.6 COORDINATION

- A. Coordinate sizes and locations of recesses in concrete floors for recessed tracks and thresholds if applicable. Concrete, reinforcement and formwork are specified in Division 03.
- B. Electrical System Roughing-in: Coordinate layout and installation of automatic entrances with connections to power supplies and access control system as applicable.

1.7 WARRANTY

- A. General Warranty: Reference Division 01, General Requirements. Special warranties specified in this Article shall not deprive Owner of other rights Owner may have under other provisions of the Contract Documents and shall be in addition to, and run concurrent with, other warranties made by Contractor under requirements of the Contract Documents.
- B. Automatic Entrance Doors shall be free of defects in material and workmanship for a period of Two (2) years from the date of substantial completion.
- C. During the warranty period a factory-trained technician shall perform service and repairs. A safety inspection shall be performed after each adjustment or repair and a completed inspection form shall be submitted to the Owner.
- D. During the warranty period all warranty work, including but not limited to emergency service, shall be performed during normal business hours.
- E. Manufacturer shall have in place a dispatch procedure that shall be available 24 hours a Day, 7 Days a week for emergency call back service.

PART 2 - PRODUCTS

2.1 MANUFACTURER

- A. Manufacturer: Besam Entrance Solutions, distributed by Besam Canada Inc., Streetsville, Ontario 1-888-608-9242.
Substitutions: Requests for substitution and product approval in compliance with the specifications must be submitted in writing and in accordance with the procedures outlined in Division 1, Section, "Substitution Procedures". Approval of requests is at the discretion of the architect and owner.

2.2 SLIDING AUTOMATIC ENTRANCES

- A. Model: Besam UniSlide sliding automatic doors. (Basis of Design):

1. Aluminum doors and frames with sidelites and active door leaves.
2. Overhead concealed, electro-mechanical, microprocessor controlled, sliding door operator.
3. Operator housing, guide system and door carriers.

B. Sliding Automatic Entrance Doors Configuration:

1. Bi-parting, full breakout, door system.
 1. Configuration: Bi-parting, four equal panel door unit with two operable leaves and two pocketed sidelite units.
 2. Traffic Pattern: Two-way.
 3. Emergency Breakaway Capability: Interior sliding leaves and sidelite units.
 4. Mounting: Overhead header installed between jambs.
- 2.
3. Dimensions: 10'-0" (3050 mm) overall width of unit to provide minimum 48" (1220 mm) opening Confirm door package dimensions as indicated on Architectural drawings.

2.3 ALUMINUM DOORS AND FRAMES

A. Doors and Frames: Extruded Aluminum, Alloy 6063-T5.

1. Door panels shall have a minimum .125" structural wall thickness including adjoining horizontal members and perimeter frames where applicable.
2. Door Construction shall be by means of an integrated corner block with ½ inch all-thread through bolt from each stile.
3. Glass Stops shall be .062" wall thickness and shall provide security function as a standard by means of a fixed non-removable exterior section with glazing to be performed from the interior only. Glazing stops that allow for glass removal from the exterior shall not be deemed as equivalent.
4. The sliding door system shall include two interlocks securing the leading stile of the sidelite and the butt stile of the sliding door panel together
5. Weather-stripping shall be provided by means of replaceable heavy pile mohair. Complementing mohair weather-stripping shall be provided on joining vertical and lead edge stiles. Single pile weather stripping between the carrier and the header on the lead stile(s) of the sidelite(s) and the pivot stile(s) of the sliding door(s). Bottom rails shall be provided with an adjustable nylon sweep.
6. Vertical Stiles shall be wide stile 5" (127 mm).
7. Bottom Rails shall be standard 7 inch (178 mm).
8. Intermediate Muntin shall be 4 inch (102 mm).

B. Glass: Glazing shall comply with ANSI Z97.1. Refer to Section 08400 for glass to be installed in exterior aluminum entrance doors and sidelights and at interior vestibule aluminum entrance doors and sidelights.

C. Door Carriers: Manufacturer's standard carrier assembly that allows vertical adjustment.

1. Roller Wheels: Two (2) Steel roller wheels, 1-3/4 inch (44 mm) diameter, per active door leaf for operation over replaceable Delrin track. Single journal with sealed oil impregnated bearings.
2. Two (2) Self-aligning anti-risers per leaf.
- D. Framing Members: Provide automatic entrances as complete assemblies. Manufacturer's standard extruded aluminum framing reinforced as required to support loads.
 1. Vertical Jamb shall be 1-3/4 inches (44 mm) by 4-1/2 inches (114 mm).
- E. Header: Manufacturer's standard extruded aluminum header unit extending full width of entrance unit to conceal door operators, carrier assemblies, and roller track, complete with hinged access panel for service of door operator, and controls.
 1. Span: Maximum 14'-0" (4.3 m) without intermediate supports when using 1/4-inch glass.
 2. Size: 7-3/4-inches (187 mm) wide by 6-7/8-inches (175 mm) high.
 3. Hinge Point: Continuous hinge at top of header allows for complete access to operator and internal electronic and mechanical assemblies.
 4. Design: Manufacturer's standard closed header.
- F. Hardware: Provide manufacturer's standard hardware as required for operation indicated.
 1. Breakaway arms and bottom pivot assemblies shall be supplied by the manufacturer and shall be adjustable to comply with applicable codes.
 1. Wind resistant hydraulic damper to control movement of breakout panels.
 2. Locking hardware shall be provided as indicated.
 1. Electrified slide lock shall automatically lock the sliding function of the entrance when the door panels are in the closed position.
 - 1) [Fail secure operation: Slide lock shall lock the sliding function of the door panels upon loss of power.
 2. Two point locking system with throw rod into carrier arm and mortise hookbolt. (Bi-parting sliding door system).
 - 1) Interior Side: Keyed cylinder. Lock indicators shall be provided if required by code.
 - 2) Exterior Side: Keyed cylinder.
 3. Exit devices with automatic slide locking hardware on secured doors. Automatic locking for the sliding door when the door control switch is in the closed position.
 - 1) Adams-Rite 8600 Series, concealed vertical rod exit device mounted to active doors (interior sliding doors)
 - a) Keyed cylinder option.
 - 2) Exterior jamb mounted key switch to unlock sliding door operation.
 3. Keyed cylinders shall be provided as indicated.
 1. Keyed cylinder specified in Section 08700 – Finish Door Hardware.
- G. Guide Track/Threshold: Manufacturer's threshold as indicated.
 1. 1/2 inch high by 4-1/2 inch width continuous aluminum threshold with integral track shall span the entire width of the sliding door header and fit between the vertical framing members. Threshold design shall allow for optional extruded ramps to securely interlock to flat section to meet ADA requirements.

1. Recessed mounted threshold.
2. Aluminum guide track integrated in the bottom of the sidelite portion of the sliding automatic door assembly.
 1. Recessed mounted track.
3. Aluminum guide track adjacent to the sidelite portion of the sliding automatic door assembly.
 1. Recessed mounted track.

2.4 SLIDING DOOR OPERATOR

- A. Door Operator and Controller:
 1. Shall be a Besam electro-mechanical controlled unit utilizing a high-efficiency, energy efficient, DC motor requiring a minimum of 3 amp current draw, allowing 5 door systems on one 20 amp circuit. The supplied system shall have the capability to operate at full performance well beyond a brown out and high line voltage conditions (85V – 265V) sensing changes and adjusting automatically. The operator shall allow an adjustable hold open time delay of 0 to 60 seconds and have internal software to incorporate a self-diagnostic system.
- B. Microprocessor Control Box:
 1. Besam factory-adjusted configuration, with opening and closing speeds set to comply with ANSI/BHMA A156.10 requirements. Should the drive train operations deviate from design criteria ranges, Watchdog Control Circuit Monitoring will assume command of the system and shut down the automatic function allowing a secondary supervisory circuit to perform as a backup.
 2. Selector switch to be interior jamb mounted and shall allow the following functions to be engaged when switch is turned to the appropriate setting. Switch shall be a multi- position **keyed cylinder**.
 1. "Off"
 2. "Exit Only" One way traffic allowing automatic operation from the interior only.
 3. "Two Way Traffic" allowing automatic operation from exterior and interior.
 4. "Partial Opening" energy saving door position allows door to only open partially upon activation from exterior and interior.
 5. "Hold Open" doors activated and held in the full open position.

2.5 ACTIVATION AND SAFETY CONTROL DEVICES

- A. General: Provide the types of activation and safety devices specified in accordance with ANSI/BHMA standards, for the condition of exposure and for long-term, maintenance-free operation under normal traffic load for type of occupancy indicated. Coordinate activation and safety devices with door operation and door operator mechanisms.
- B. Combination Activation Motion Sensor/Safety Presence Sensor:
 1. Shall be a sliding door sensor utilizing K-band microwave technology to detect motion and focused active infrared technology to detect presence, combined in a single housing surface mounted on each side of the header.
 - a. The motion detecting microwave portion of the sensor shall be capable of bi-directional and uni-directional sensing capability.

- b. Presence sensor shall remain active at all times.
 - c. The sensor shall communicate with the automatic door operator through a self-monitoring connection that allows the door to go into a fail safe mode preventing the door from closing in the event of a sensor failure.
 - 2. Motion/presence detecting sensors to be field installed and adjusted.
- 2.6 ELECTRICAL
- A. High-Efficiency DC Motor: Maximum of 3A current draw. Allow for 3 operators to run on one 20 Amp circuit.
 - B. Power: Self-detecting line voltage capable control. 120 VAC through 240 VAC, 50/60 Hz, 3A-incoming power with solid earth ground connection for each door system.
 - C. Wiring: Separate channel raceway free from moving parts.
 - D. Brown out / high voltage capability: System has capability to operate at full performance well beyond brown out and high voltage line conditions (85 V – 265 V) sensing changes and adjusting automatically.
 - E. Convenience Battery: Shall be concealed in header and capable of full operation with blackout conditions, including sensor capabilities for minimum of 100 cycles.
 - F. Digital Cycle Counter: Battery powered, 7 digit LCD cycle counter with a reset feature to track door usage cycles. The battery has a 15+ year life span.
- 2.7 GENERAL FINISH REQUIREMENTS
- A. Comply with NAAMM's "Metal Finishes Manual for Architectural and Metal Products" for recommendations for applying and designating finishes.
- 2.8 ALUMINUM FINISHES
- A. Anodized Finish:
 - 1. Clear, AA- M12C22A31, Class II, 0.010 mm.

PART 3 - EXECUTION

- 3.1 EXAMINATION
- A. Examine doors and frames, with Installer present, for compliance with requirements for installation tolerances, wall and floor construction, and other conditions affecting performance.
 - B. Examine roughing-in for electrical source power to verify actual locations of wiring connections.
 - C. Proceed only after such discrepancies or conflicts have been resolved.
- 3.2 INSTALLATION
- A. Do not install damaged components. Fit frame joints to produce hairline joints free of burrs and distortion. Rigidly secure non-movement joints.
 - B. Entrances: Install automatic entrances plumb and true in alignment with established lines and grades without warp or rack of framing members and doors. Anchor securely in place.
 - 1. Install surface mounted hardware using concealed fasteners to greatest extent possible.

2. Set headers, carrier assemblies, tracks, operating brackets and guides level and true to location with anchorage for permanent support.
- C. Door Operators: Connect door operators to electrical power distribution system as specified in Division 16 Sections.
- D. Glazing: Glaze sliding automatic entrance door panels in accordance with the Glass Association of North America (GANA) Glazing Manual, published recommendations of glass product manufacturer, and published instructions of automatic entrance system manufacturer.
- E. Sealants: Comply with requirements specified in Section 07900 "Joint Sealants" to provide weather tight installation.
 1. Set thresholds, bottom guide and track systems and framing members in full bed of oil base caulking compound, conforming to CGSB 19-GP-6.
 2. Seal perimeter of framing members with CWS sealant by Dow Corning.
- F. Signage: Apply signage on both sides of each door and sidelite as required by ANSI/BHMA A156.10 and manufacturers installation instructions.

3.3 FIELD QUALITY CONTROL

- A. Manufacturers Field Services:
 1. Manufacturer's representative shall provide technical assistance and guidance for installation of doors.
 2. Before placing doors into operation, AAADM certified technician shall inspect and approve doors for compliance with ANSI/BHMA A156.10. Certified technician shall be approved by manufacturer.

3.4 ADJUSTING

- A. Adjust door operators, controls and hardware for smooth and safe operation and for weather tight closure. Adjust doors in compliance with ANSI/BHMA A156.10.

3.5 CLEANING AND PROTECTION

- A. Clean adjacent surfaces soiled by door installation.
- B. Clean glass and metal surfaces promptly after installation. Remove excess sealants, compounds, dirt and other substances. Repair damages finish to match original finish.
 1. Comply with requirements in Division 08 Section Glazing for cleaning and maintaining glass.

3.6 DEMONSTRATION

- A. Engage a factory-authorized representative to train Owner's maintenance personnel to adjust, operate, and maintain safe operation of the door.

END OF SECTION

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- 1 General
- 1.1 INSTRUCTIONS
 - .1 Comply with the Instructions to Bidders, the General Conditions of the Contract, the Supplementary Conditions and the General Requirements of Division 01.
 - .2 Report in writing to the General Contractor any defects of surfaces or work prepared by other Sections which affect the quality or dimensions of the Work. Commencement of work implies acceptance of existing conditions and work by others.
- 1.2 SECTION INCLUDES
 - .1 Cold Applied Built-up bituminous roofing system.
- 1.3 RELATED SECTIONS
 - .1 Section 04 20 00 – Unit Masonry: Connection of wall vapour barrier system to roofing system.
 - .2 Section 05 31 23 – Steel Roof Decking.
 - .3 Section 06 10 00 - Rough Carpentry: cants, blocking and curbs.
 - .4 Section 07 62 00 - Sheet Metal Flashing and Trim.
 - .5 Section 07 72 00 - Roof Accessories: Manufactured hatches
 - .6 Division 22 – Plumbing
- 1.4 REFERENCES
 - .1 ASTM C931/931M-01: Standard Specification for Exterior Gypsum Soffit Board.
 - .2 ASTM D4601-98: Standard Specification for Asphalt-Coated Glass Fibre Base Sheet Used In Roofing.
 - .3 CSA A123.4 M1979: Bitumen for Use in Construction of Built Up Roof Coverings and Dampproofing and Waterproofing Systems.
 - .4 CGSB 37 GP 9Ma: Primer, Asphalt, Unfilled, for Asphalt Roofing, Dampproofing and Waterproofing.
 - .5 CGSB 37-GP-52M: Roofing and Waterproofing Membrane, Sheet Applied, Elastomeric.
 - .6 CAN/CGSB 51.33 M89: Vapour Barrier Sheet, Excluding Polyethylene, for Use in Building Construction.
 - .7 CAN/ULC-S704-2001: Standard for Thermal Insulation, Polyurethane and Polyisocyanurate Boards, Faced.
 - .8 CAN/ULC-S706-02: Standard for Wood Fibre Thermal Insulation for Buildings.
 - .9 Ontario Building Code 5.2.2.2. Determination of Wind Load (see appendix A)
 - 1. Must be in compliance with Ontario Building Code Act: sections 3.1.15 (Roof Covering) and 5.2.2.2 (Determination and Wind Load) or Part 11 (Renovations); and all support sections

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2. Submit evidence of compliance by a Third Party Verified Listed Assembly (such as Underwriters Laboratory; Factory Mutual or Florida Building Code)

1.5 SYSTEM DESCRIPTION

- .1 Install at specified Roof Areas; - Cold Process Built Up Roof System Gravelled
 - .1 Prime any new metal or wood components using Tremprime WB that are to receive asphaltic materials.
 - .2 Install 0.5" DensDeck Prime into Low Rise Foam Adhesive.
 - .3 Install self-adhering AVC membrane and associated primer over existing deck.
 - .4 Install 2 layers of 3" Polyisocyanurate into Low Rise Foam Insulation Adhesive.
 - .5 Install tapered insulation as per drawings into Low Rise Foam Insulation Adhesive.
 - .6 Install 0.5" Asphalt Coated Fiberboard into Low Rise Foam Insulation Adhesive.
 - .7 A built up roof membrane – 3 Ply Cold Process
 - .8 Install Roofing Membrane as follows:
 - (1) Plies: Three
 - (2) Ply Type: Composite Felt, Three plies.
 - (3) Interply Adhesive: Burmastic Cold Process Adhesive
 - .9 Surfacing: 3/8" Clean round pea gravel, free of all fines, splinters etc. into Cold Process Flood Coat.
- .2 Specified Flashings and accessories: Install flashings at all roof perimeters, projections, and drains incorporating:
 - .1 Reinforced EPDM/SBR Rubber sheet adhered with Elastomeric Bedding Adhesive as per detail drawings.
 - .2 Provide Products that are compatible with one another under field conditions, as demonstrated by roofing manufacturer.
 - .3 Provide watertight roofing system capable of resisting specified uplift pressures, thermally induced movement and exposure to weather without failing during the specified warranty period.
 - .4 Shop Drawings for Sloped Insulation: Indicate degree of slope and layout of sloping insulation on roof surfaces. Ensure positive drainage to roof drains. Provide drawings for crickets and roof drain sumps as required.

1.6 CERTIFICATES

- .1 Manufacturer Certificates: Signed by roofing manufacturer verifying that installer is approved, authorized or licensed by manufacturer to install specified Products.
- .2 Installer Certificates: Signed by installer verifying that they have the specified qualifications described below.
- .3 Copy of Manufacturer's 20 Year Warranty.

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1.7 TEST REPORTS

- .1 Manufacturer Field Inspection Reports: manufacturer's written acceptance of roofing installation based on daily inspections.

1.8 QUALITY ASSURANCE

- .1 Manufacturer: qualified manufacturer having roofing systems listed by UL and approved for use by Factory Mutual.
- .2 Installer: a company and persons specializing in the application cold process built up roofing, with documented experience and approved to apply roofing system by manufacturer.

Vendor Approved Contractors are as follows:

Atlas Apex Roofing (Kitchener) Inc – (519)894-4422

D. Thackeray Roofing Company Ltd – (519)745-7386

Flynn Canada Ltd (Cambridge) – (519)624-8797

Lafleche Roofing Services (800)387-1549

Nedlaw Roofing Ltd – (519)648-2218

Schreiber Brothers Ltd – (905)561-7780

Semple Gooder Roofing Ltd – (519)623-3300

Spinton Roofing Ltd – (905)575-3686

Triumph Roofing & Sheet Metal Inc – (416)534-8877

Wm. Green Roofing Ltd – (519)822-6414

- .3 Conform to CRCA Roofing Specifications and roofing membrane manufacturer's instructions.

1.9 PRE-INSTALLATION MEETINGS

- .1 Conduct pre-installation meeting.
- .2 Meeting: prior to commencement of deck installation, review and document methods and procedures related to roof deck and roofing system construction, including the following:
 - .1 Participants: authorized representatives of the General Contractor, Consultant, Owner, Roofing Subcontractor, Roofing Manufacturer, and installers of roof accessories and roof-mounted equipment.
 - .2 Review methods and procedures related to roofing installation, including manufacturer's written installation instructions.
 - .3 Review construction schedule and confirm availability of Products, Subcontractor personnel, equipment and facilities.
 - .4 Review deck installation criteria and finishes for conformance with roofing system criteria, including issues of flatness and fastening.

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- .5 Review structural loading conditions and limitations of roof deck both during and after roofing application.
- .6 Review flashing details, special roofing details, roof drainage, roof penetrations, equipment curbs, and other conditions affecting roofing installation.
- .7 Review governing regulatory requirements, and requirements for insurance and certificates as applicable.
- .8 Review safety requirements, including temporary fall-arrest measures.
- .9 Review field quality control procedures.

1.10 DELIVERY, STORAGE AND HANDLING

- .1 Deliver and store Products undamaged in original containers with manufacturer's labels and seals intact.
- .2 Store Products in designated areas elevated off the ground and protected from ultra-violet radiation, inclement weather and construction activities.
- .3 Store solvent-based liquids away from excessive heat and open flame.
- .4 Store adhesives and sealants at temperature above -5 degrees Celsius.
- .5 Store membrane rolls on end, dry, and protected from moisture and damage. Cover rolls, insulation and other moisture-sensitive Products with tarpaulins.
- .6 Store Products on roof deck in a manner to prevent overloading the structure and properly secured to prevent movement due to wind or other forces.

1.11 SITE CONDITIONS

- .1 Protect adjacent properties from damage as a result of contract operations.
- .2 Protect the Work and the Owner's property from damage as a result of contract operations.
- .3 Confine equipment, material storage, and operations of workers to limits indicated by laws, ordinances, permits, and prior arrangements with the Owner.
- .4 Do not interrupt or hamper occupant operations without prior written approval.
- .5 Remove progressively all debris created by the execution of the Work and dispose of same at appropriate disposal sites.
- .6 Alert the General Contractor to the expected presence of odours, fumes, or dust and co-ordinate the shielding of ventilation equipment or scheduling of process to achieve acceptable abatement.
- .7 Upon completion of the work, leave premises in original order and condition.

1.12 ENVIRONMENTAL REQUIREMENTS

- .1 Do not install roofing during weather that might adversely affect the performance of the system.
- .2 Do not install roofing over surfaces that are wet, icy, dirty or otherwise unacceptable to the system being installed.

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- .3 Secure the Work in a safe and watertight fashion before the onset of inclement weather and at the end of each day's work.

1.13 WARRANTY

- .1 Submit warranties in accordance with the General Conditions of the Contract.
- .2 Installer's Warranty: standard 2 year warranty, commencing from the date of Substantial Performance of the Work.
- .3 Manufacturer's Warranty: a written guarantee that the manufacturer will replace, at no cost to the Owner, any portion of the roofing membrane which experiences actual leaks resulting from defects in the manufacture of the membrane for a period of 20 years, commencing from the date of Substantial Performance of the Work.

1.14 MAINTENANCE

- .1 The Manufacturer shall issue a non-prorated warranty for a period of Twenty Years. All components from the vapour retarder up shall be covered under this warranty.
- .2 Warranty shall include inspections in years 2 and 5, 10 & 15 of the warranty. The following duties shall be carried out at no extra cost to the Owner as required, by the Manufacturer.
 - .1 sealing of flashing seams
 - .2 filling of pitch pockets
 - .3 repairs to blisters and ridges
 - .4 caulking at metal details as required
 - .5 written inspection report
 - .6 removal of light debris from the roof and premises
 - .7 cleaning of drain screens.
- .3 Documentation shall be provided that the manufacturer has personnel to carry out above noted warranty requirements and has a history of providing these for a minimum of 5 years.
- .4 Upon satisfactory completion, the warranty and all construction information regarding the roof installation shall be placed on an Online Roof Management Program at no additional cost to the Owner.
- .5 Prior to the 2 year expiration of the contractor's warranty, the manufacturer shall carry out an Infra-Red Scan of the roof areas completed under this contract.

2 Products

2.1 PRODUCTS

- .1 All primers, adhesives, sealants (including hardener), joint filler, grout, epoxy, sealers, and finishes applied on site and within weather barrier shall meet environmental requirements for low emitting materials.

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2.2 MANUFACTURERS

.1 Manufacturers of cold-applied built-up asphalt roofing systems having Products considered acceptable for use as per Tender 6862-KP-18:

.1 Tremco Canada.

2.3 MATERIALS

.1 Primer:

.1 Tremprime WB by Tremco.

.2 Insulation and Substrate Board: To provide an average R Value of 35.

- (1) DensDeck Prime 0.5"
- (2) Insulation 2 layers of Polyisocyanurate 2 1/2"
- (3) Overlay Insulation – 0.5" Asphalt Coated Fiberboard.
- (4) Tapered Insulation & Sumps: Posi-Slope.

.2 Insulation and Substrate Board Adhesive

.1 Low Rise Foam Insulation Adhesive by Tremco.

.3 Vapour Retarder

.1 AVC Membrane and Primer.

.4 Flashing Membrane

.1 TRA membrane

.5 Cold Applied BUR. Burmastic by Tremco

.1 Three Ply Composite Ply Felt

.6 Reinforcing Membrane:

.1 Burmesh by Tremco.

.7 Ballast:

.1 3/8" Pea Gravel free of fines and long splinters.

2.4 ACCESSORIES

.1 Stack Flashings: Prefabricated aluminum sleeves as manufactured by Thaler Metal Industries or equivalent.

.2 Drains: Prefabricated drains as manufactured by Altra Metal Specialties – Mode ABD-CR-X-SS: Aluminum Body Roof Drain complete with clamping ring.

.3 Metal Flashings and Coping

.1 All interior projections, curbs, walls and perimeter details shall be covered with metal counter flashings.

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.2 Two-piece gooseneck flashings are to be installed around all electrical projections.

.4 Sealant

.1 One-part polyurethane – approved product and manufacturer – Dymonic by Tremco.

3 Execution

3.1 PREPARATION – ROOF AREAS AS PER DRAWINGS

.1 Examine all drains and report any plugged drains to the Inspector. Any drains not reported and found plugged at the end of the contract will be deemed the responsibility of the contractor. Use temporary plugs during roof removal operations and remove before the end of each working day or when rain is imminent.

.2 Remove existing metal cap flashings at tie-ins and store for reinstallation.

.3 Verify acceptability of deck, projections, curbs, parapets, walls and other constructions as these pertain to the roofing work and its expected performance.

.4 Correct any deficiencies in these constructions or advise General Contractor of conditions believed to be beyond the Scope of Work.

.5 Fill and pack all joints, cracks, seams, and openings in the deck and its appurtenances to prevent air leakage from the building interior.

3.2 ROOF DECK

.1 Deck reattachment:

.1 Mechanically reattach loose sections of deck to steel or wood support members according to existing fastening pattern.

.2 Deck replacement:

.1 Remove defective decking. Examine supports. If unsound, contact General Contractor immediately for future action.

.2 Install new decking in accordance with appropriate building regulations and CSSBI, (Canadian Sheet Steel Building Institute).

.3 Deck protection (Metal):

.1 Remove loose flaking rust, down to clean, dust free, sound metal surface.

.2 Apply one coat of rust inhibitive paint over prepared surface at the rate of 6 m²/litre (250 ft²/gal).

3.3 AIR BARRIER

.1 Apply primer and install on to substrate, overlapping side and end laps in conformance with manufacturer's written recommendations. Begin work at bottom of slopes, unroll and align on substrate. Ensure all edges are supported.

.2 Remove release sheet and adhere membrane, working in sections to avoid wrinkles in membrane.

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.3 Seal membrane at insulation perimeters and around penetrations to ensure sealed connections with base sheet at upstands.

.4 Sprayed in Place Foam:

.1 Fill all cavities and joints with foam according to manufacturer's directions.

3.4 CARPENTRY

.1 Wood Blocking

.1 Construct wood blocking as per details. Blocking, or several thicknesses of wood may be necessary so that the top of the nailer will be level with the top of the roof insulation or top of the deck (if no insulation is used).

.2 Offset blocking layers 300mm (12 inches) and weave corners.

.3 Assemble blocking using two staggered rows of nailing. Space nails in any row a maximum of 600mm (24 inches) on centre. Within 2440mm (8 feet) of outside corners, reduce maximum spacing to 300mm (12 inches) on centre.

.2 Wood Cants

.1 Install wood cants over nailer. Nail two (2) rows staggered. Spacing in any one (1) row shall not exceed 600 mm (24 inches). Within 2440 mm (8 feet) of outside corner, spacing shall not exceed 300 mm (12 inches) in any one (1) row. Mitre all inside and outside corners of the wood cant.

3.5 THERMAL BARRIER UNDERLAY BOARD

.1 Fully adhere thermal barrier underlay board to metal roof deck using Low Rise Foam Adhesive at manufacturers recommended rate.

3.6 VAPOUR RETARDER

.1 Self-Adhering Membrane

.1 Apply primer and install on to substrate, overlapping side and end laps in conformance with manufacturer's written recommendations. Begin work at bottom of slopes, unroll and align on substrate. Ensure all edges are supported.

.2 Remove release sheet and adhere membrane, working in sections to avoid wrinkles in membrane.

.3 Seal membrane at insulation perimeters and around penetrations to ensure sealed connections with base sheet at upstands.

3.7 INSULATION

.1 NB: Adhered with Low Rise Foam Insulation Adhesive

.1 Firmly butt each insulation board to surrounding boards. Do not jam or deform owners.

.2 Minimize elevation variation between boards at joints to provide level surface to accommodate subsequent roofing.

.3 Stagger joints at least 150mm (6 inches).

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- .4 Leave no voids at blocking, penetrations, walls, or parapets.
- .5 At all drains and scuppers slope insulation for a radius of 1200 mm (48 inches) to ensure positive drainage.
- .6 Adhere insulation into ribbons of low rise foam insulation adhesive in ½" to ¾" beads approximately 12" o.c. and 6" o.c. at perimeter details.
- .7 Immediately after placement, walk insulation boards into adhesive to achieve solid contact.

3.8 COLD APPLIED BUR

- .1 Three Ply – Cold
 - .1 Starting at the low point of the Roof, install three (3) plies of ply sheet, shingle fashion. Overlap starter strips 660 mm (26 inches) with first ply, then overlap each succeeding ply 625 mm (24 2/3 inches). Place ply sheets to ensure water will flow over or parallel to; but never against exposed edges.
 - .2 Embed into Cold Process Adhesive, 300, 600 and 900 mm (12, 24 and 36 inch) wide plies to start and finish roof membrane along roof edges and terminations.
 - .3 Solidly coat each ply of felt for the full width with Cold Process Adhesive. Immediately after installation, broom and/or roll ply sheet. Ensure complete and continuous seal and contact between adhesive and felts, including ends, edges and laps without wrinkles, fish mouths, or blisters.
 - .4 Extend all plies to the top edge of all cant strips and cut off evenly.
 - .5 Apply uniform and continuous pressure to exposed edge and end laps to ensure complete adhesion.
 - .6 Avoid walking on plies until adhesive has set.
 - .7 Overlap previous days' work 600 mm (24 inches) as required.
 - .8 Cut out fishmouths/side laps which are not completely sealed and patch. Replace all sheets which are not fully and continuously bonded.
 - .9 Lap ply membrane ends 150 (6 inches). Stagger end laps 1 metre (3 feet) minimum.
 - .10 Adhesive application rate: Minimum 1.0 Litres/Sq. Metre (2.5 Gals per 100 Sq. ft).

3.9 TEMPORARY WATERSTOP/TIE-INS

- .1 Remove embedded gravel, dirt and debris from top ply of felt along termination for a distance of 450 mm (18 inches).
- .2 Extend roofing system at least 300 mm (12 inches) onto prepared area installing insulation fillers as required.
- .3 Seal edge with 150 mm (6 inch) wide reinforcing membrane embedded between alternate courses of temporary waterstop adhesive.
- .4 At beginning of next day's work, remove temporary connection by cutting felts evenly along edge of existing roof system and remove insulation fillers.

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.5 Temporary waterstop adhesive application rate:

.1 Cold 3.3 l/m² (12 ft²/gallon)

3.10 PERMANENT WATERSTOP/TIE-INS

- .1 Remove embedded gravel, dirt and debris from top ply of felt along termination for a distance of 450 mm (18 inches).
- .2 Install 450 mm (18 inch) wide ply sheet(s) from exposed deck to the existing roofing with a continuous application of permanent waterstop adhesive.
- .3 Extend roofing system beyond permanent waterstop ply sheet and at least 300 mm (12 inches) onto prepared area of adjacent roofing.
- .4 Seal leading edge of new membrane with 300 mm (12 inch) wide reinforcing membrane embedded between alternate courses of flashing adhesive.
- .5 Permanent waterstop adhesive application rate:

.1 Cold Adhesive 3.3 l/m² (12 ft²/gallon)

3.11 FLASHINGS

- .1 Canted eave with fascia: Elastomeric sheeting including replacement of Gravel Stop Details.
 - .1 Extend reinforced elastomeric sheeting over outside face of cant and fascia and secure to underside of fascia. Mechanically fasten with 38 mm (1.5 inch) common roofing nails, 200 mm (8 inches) on centre.
 - .2 Extend reinforced elastomeric sheeting down over cant strip and embed in flashing adhesive onto roof surface a minimum of 150 mm (6 inches).
 - .3 Ensure complete bond and continuity without wrinkles or voids. Lap sheeting ends 100 mm (4 inches); and adhere with flashing adhesive.
 - .4 Overcoat lap edges with end lap stripping adhesive and membrane.
 - .5 Tie in leading edge of sheeting with stripping ply membrane embedded between alternate courses of stripping ply adhesive.
- .2 Low parapet wall flashing: Elastomeric Sheeting
 - .1 The exposed joint between the wall and deck shall be sealed securely to provide a complete air seal.
 - .2 Adhere elastomeric sheeting completely to flashing surface, cant, and roofing with flashing adhesive.
 - .3 Ensure complete bond and continuity without wrinkles or voids. Lap sheeting ends 100 mm (4 inches); and adhere with flashing adhesive.
 - .4 Extend elastomeric sheeting up and over parapet at least 38 mm (1.5 inches) and face nail with 38 mm (1.5 inches) common roofing nails, 200 mm (8 inches) O.C.
 - .5 Overcoat lap edges with end lap stripping adhesive and membrane.

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- .6 Tie in leading edge of sheeting with stripping ply membrane embedded between alternate courses of stripping ply adhesive.
- .3 Wall Flashing: Elastomeric Sheeting
 - .1 The exposed joint between the wall and deck shall be sealed securely to provide and complete air seal.
 - .2 Adhere elastomeric sheeting completely to flashing surface, cant and roofing with flashing adhesive.
 - .3 Ensure complete bond and continuity without wrinkles or voids. Lap sheeting ends 100 mm (4 inches) and adhere with flashing adhesive.
 - .4 Elastomeric sheeting width: sufficient to extend at least 150 mm (6 inches) beyond toe of the cant onto roof surface and 200 mm (8 inches) above the roof surface.
 - .5 Secure the top of the elastomeric sheeting to the vertical plane with a flashing termination bar. Mechanically fasten 300 mm (12 inches) O.C. Overcoat bar with end lap stripping adhesive and membrane.
 - .6 Overcoat lap edges with end lap stripping adhesive and membrane.
 - .7 Tie in leading edge of sheeting with stripping ply membrane embedded between alternate courses of stripping ply adhesive.
 - .8 Flashing detail shall conform to drawing entitled, Base Flashing for wall flashing (with thru-wall counterflashing).
- .4 Soil Stack Flashings:
 - .1 Apply elastomeric flashing adhesive to the prepared area and place aluminum base over the pipe and set into the flashing adhesive.
 - .2 Prime flange.
 - .3 Install elastomeric sheeting with stripping ply adhesive and membrane.
 - .4 Cover flange completely. Extend flashing at least 100mm (4 inches) onto adjacent roofing. Remove wrinkles and voids. Lap flashing ply ends 100mm (inches).
 - .5 Tie in leading edge of sheeting with stripping ply membrane embedded between alternate courses of stripping ply adhesive.
- .5 Pitch pans:
 - .1 Apply 1.5 mm (1/16 inch) uniform layer of flashing adhesive to surface receiving metal flange.
 - .2 Install pre-manufactured pitch pan into adhesive. Prime flange prior to installation.
 - .3 Pitch pans shall be a 24-gauge galvanised steel, a minimum 100 mm (4 inches) high. There shall be at least 50 mm (2 inches) clearance between the projection and side wall.
 - .4 Adhere elastomeric sheeting completely to flashing surface with flashing adhesive. Cover flange completely. Extend flashing at least 100mm (4 inches) onto adjacent roofing. Ensure complete bond and continuity without wrinkles and voids. Lap sheeting ends 100mm (inches).

+VG Project No. 22059

- .5 Overcoat lap edges with end lap stripping adhesive and membrane.
- .6 Tie in leading edge of sheeting with stripping ply membrane embedded between alternate courses of stripping ply adhesive.
- .7 Fill pitch pan 25 mm (1 inch) from top with pitch pan base filler.
- .8 Fill remainder with pitch pan topping mastic. The mastic shall be crowned in order to ensure water run-off.
- .9 Install metal cap and caulk opening.

3.12 METAL FLASHINGS

- .1 Installation of metal flashing shall be in accordance with the metal flashing section of the Canadian Roofing Contractors' Association (CRCA) manual.

3.13 SURFACING APPLICATION

- .1 Gravel Finish
 - .1 Prior to application of surface treatment system, contractor shall inspect roof with manufacturer's representative.
 - .2 Ensure surface is clean and dry. Flood coat the entire roof with specified flood coat bitumen at the rate of 6 gallons per square (cold adhesive) or 60 lbs. per square
 - .3 Immediately broadcast minimum 25 kg per sq. metre (500 lbs. per 100 sq. ft.) of new, clean, dry roofing gravel. Cover flood coat material completely.
 - .4 Rake out gravel to provide a neat even surface.

3.14 CLEANING

- .1 Refer to Section 01 74 00.
- .2 Clean drains of debris, ensuring free drainage.
- .3 Clean adjacent roof surfaces, levels and ground level areas of debris and excess Products.

3.15 PROTECTION

- .1 Adequately protect Products and work from damage by weather, traffic and other causes.
- .2 At the end of each Working Day, seal exposed edges of roofing membrane to be watertight.
- .3 Protect adjacent Work from damage. Repair damage.

END OF SECTION

April 12, 2023

Client: +VG Architects – The Ventin Group Ltd.
50 Dalhousie Street
Brantford, ON N3T 2H8

RE: WRDSB King Edward PS – Elevator Addition
Kitchener, ON

Job #: 22084

Attn: Ariosto Montisano, B.Arch., March, Architectural Designer

ADDENDUM 01

MECHANICAL

Item 1

- 1.0 Reference Specification Section 25 40 11 'Building Control System'
- .1 Attached BAS schematics to be added to the end of Specification Section 25 40 11 'Building Control System'.

Item 2

- 2.0 Reference Drawing M1.8 and Attached Sketch AD01-M01
- .1 In Ex. Seminar Rm. X35, removed existing pneumatic thermostat and all redundant pneumatic tubing back to source.
 - .2 In New Office N41, provide new DDC TCV and thermostat as per attached Sketch AD01-M01.

ELECTRICAL

Item 1

- 1.0 Reference Drawing E1.2
- .1 Revise equals for fixture Type 'B' from LITHONIA 'ZL1N SERIES' to "LITHONIA CAT. #CSS-L48-AL03-MVOLT-SWW3-80CRI C/W #WGCSS within LED Light Fixture Schedule.
 - .2 Revise equals for fixture Type 'C' from 'GOTHAM CAT. #EVO6-40/15-AR-WD-LSS-MVOLT-GZ1-TRW' to 'LITHONIA CAT. #LDN6-40/15-AR-WD-LSS-TRW-MVOLT-GZ1' within LED Light Fixture Schedule.
 - .3 Revise equals for fixture Type 'C' from 'ELITE CAT. #HH6-LED-1500L-DIM10-MVOLT-WD-40K-90-HH6-6501-CL-WH to 'LIGHTOLIER CAT. #6RN-C6L15840MZ10U-C6RDLXX' within LED Light Fixture Schedule.



Item 2

2.0 Reference Attached Re-Issued Drawing E3.1

- .1 Provide rough-in for voice/data drop within elevator machine room as shown on attached re-issued Drawing E3.1.
- .2 Revise location of temporary fire alarm control panel as shown on attached re-issued drawing E3.1. Add Note 17 to suit. Remove previous proposed location and Note 2 on Drawing E3.2.

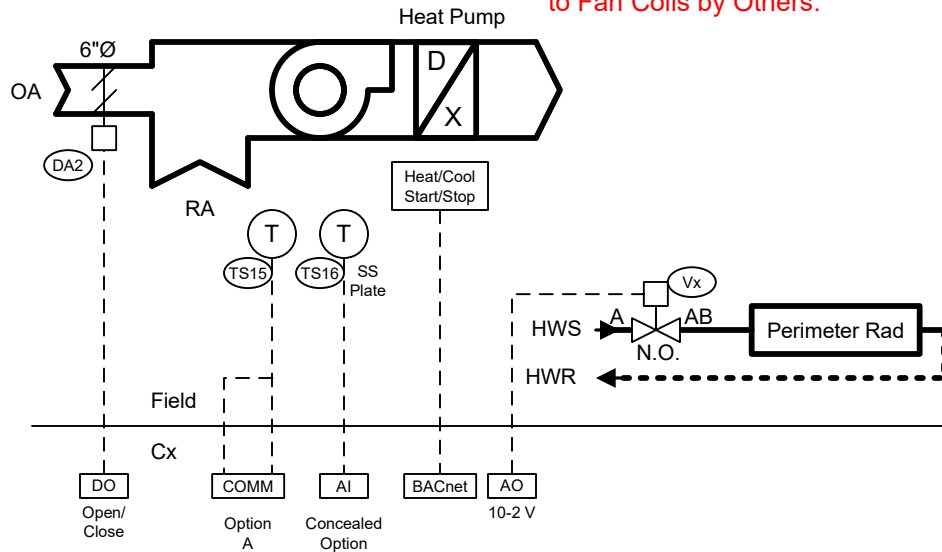


Steve Oatley, Senior Mechanical Designer,
Partner

22084 Addendum 01 (M&E-BAS Schematics)(reissued dwg E3.1)(AD01-M01) Apr 12 23
so/sad/cp/mb

DUCTLESS SPLIT AC

Wiring from Condensing Unit to Fan Coils by Others.



Provide BACnet MS/TP network from EC-BOS

SEQUENCE OF OPERATION

The room temperature sensor cycles the fan coil to maintain the occupied cooling setpoint and modulates the rad valve to maintain the heating setpoint. The cooling setpoint is 2°C higher than the heating setpoint with a minimum of 23.5°C. The outdoor air damper opens when occupied. The ductless split is disabled when unoccupied or when the outside air temperature is below the global mechanical cooling disable setpoint (initially 12/14°C). A minimum off-time of 5 minutes is provided. An alarm is generated if the room temperature is too cold (14/16°C) or too hot (38/36°C).

Notes:

1. Remove controls for DS-20 in Sp. Ed Room 37 and move to Vest N31.
2. Sp. Ed Room 37 becomes rooms N13, N14 and N15.
3. Remove redundant pneumatics in demolition drawings.

4 Systems as Shown						
Room	Unit	DX Clg (tons)	Rad (MBh)	Rad Vlv (Vx)	Stat	Notes
Floor Plan A						
Vest 2 N31	AC-20	1	9.09	V1	Plate	ex AC-20 relocated
Vest 2 N21	AC-22	1	22.4	V1	Plate	
Floor Plan B						
Office N14	AC-21	0.75	-	-	A	Stat from AC-20
Office N15	AC-23	0.75	17.2	Ex	A	Existing rad valve

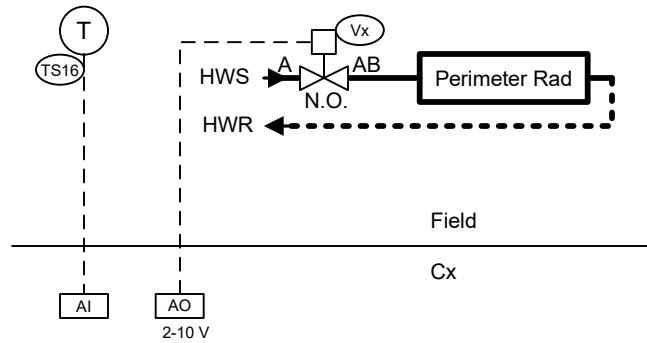
Job #:
Job Name: King Edward PS
Elevator Addition

Owner:
Waterloo Region
District School Board

Drawn By:
Revision Date:
April 10, 2023

Title: Ductless Split Heat-Pumps

PERIMETER RADIATION



1 System as Shown			
<u>Room</u>	<u>Rad</u>	<u>Rad Vlv</u>	<u>Notes</u>
	<u>(MBh)</u>	<u>(Vx)</u>	
Vest N16	CUH	-	
Vest N292	7.4	V1	TCV in N16 below
Vest N30	3.46	V1	TCV in N20 below

SEQUENCE OF OPERATION

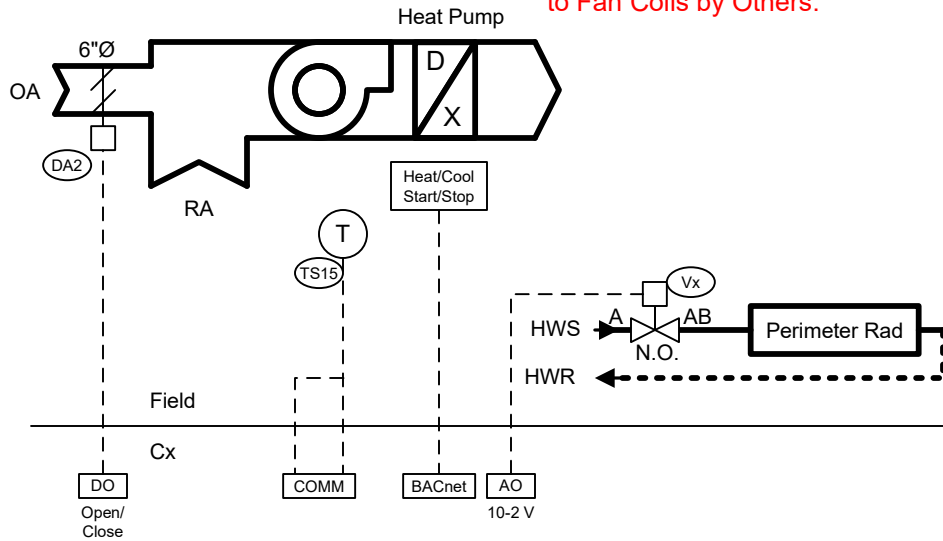
The room temperature sensor modulates the valve for heating to maintain setpoint, which is reduced during unoccupied hours. Local setpoint adjust and pushbutton override is provided.

An alarm is generated at the BAS if the room temperature is too cold (14/16°C) or too hot (38/36°C).

	Job #:	Owner: Waterloo Region District School Board	Drawn By:	Title: Elevator Vestibule Heating	2
	Job Name: King Edward PS Elevator Addition		Revision Date: April 10, 2023		

DUCTLESS SPLIT AC

Wiring from Condensing Unit
to Fan Coils by Others.



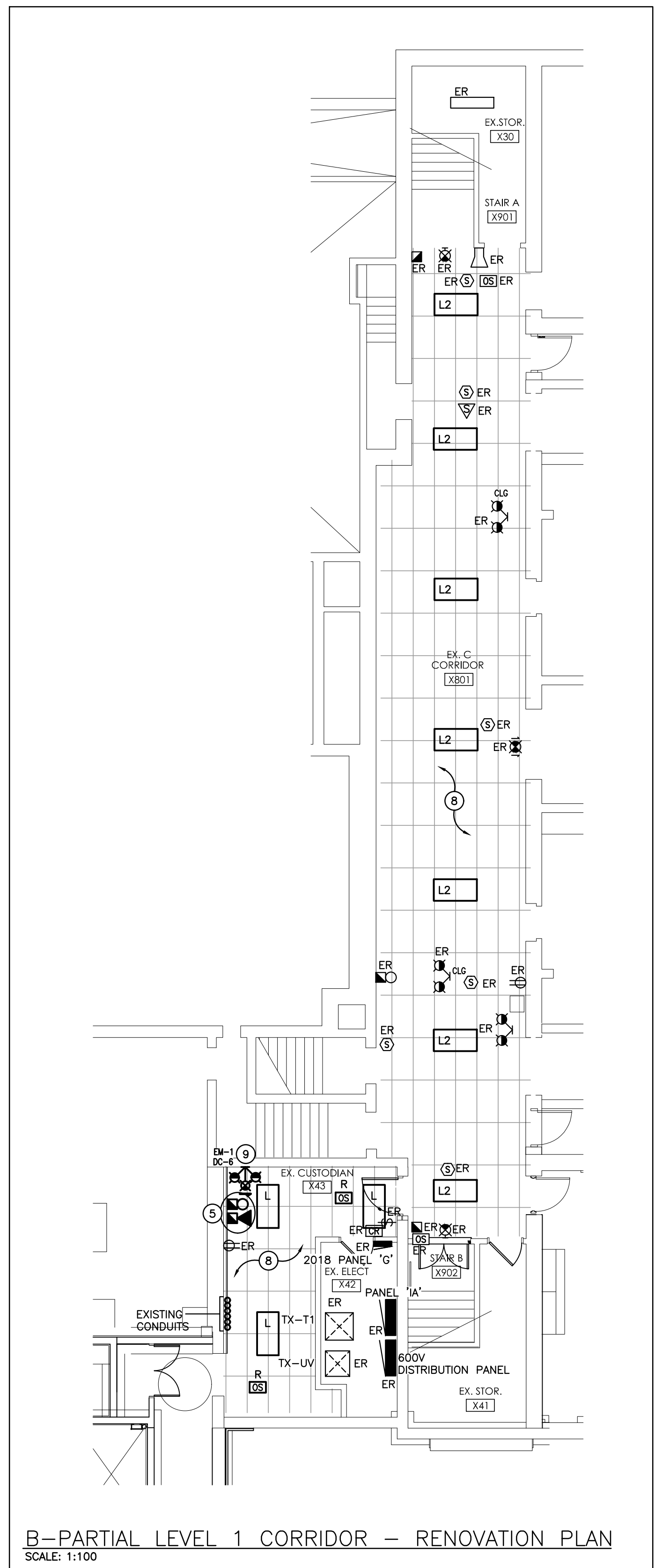
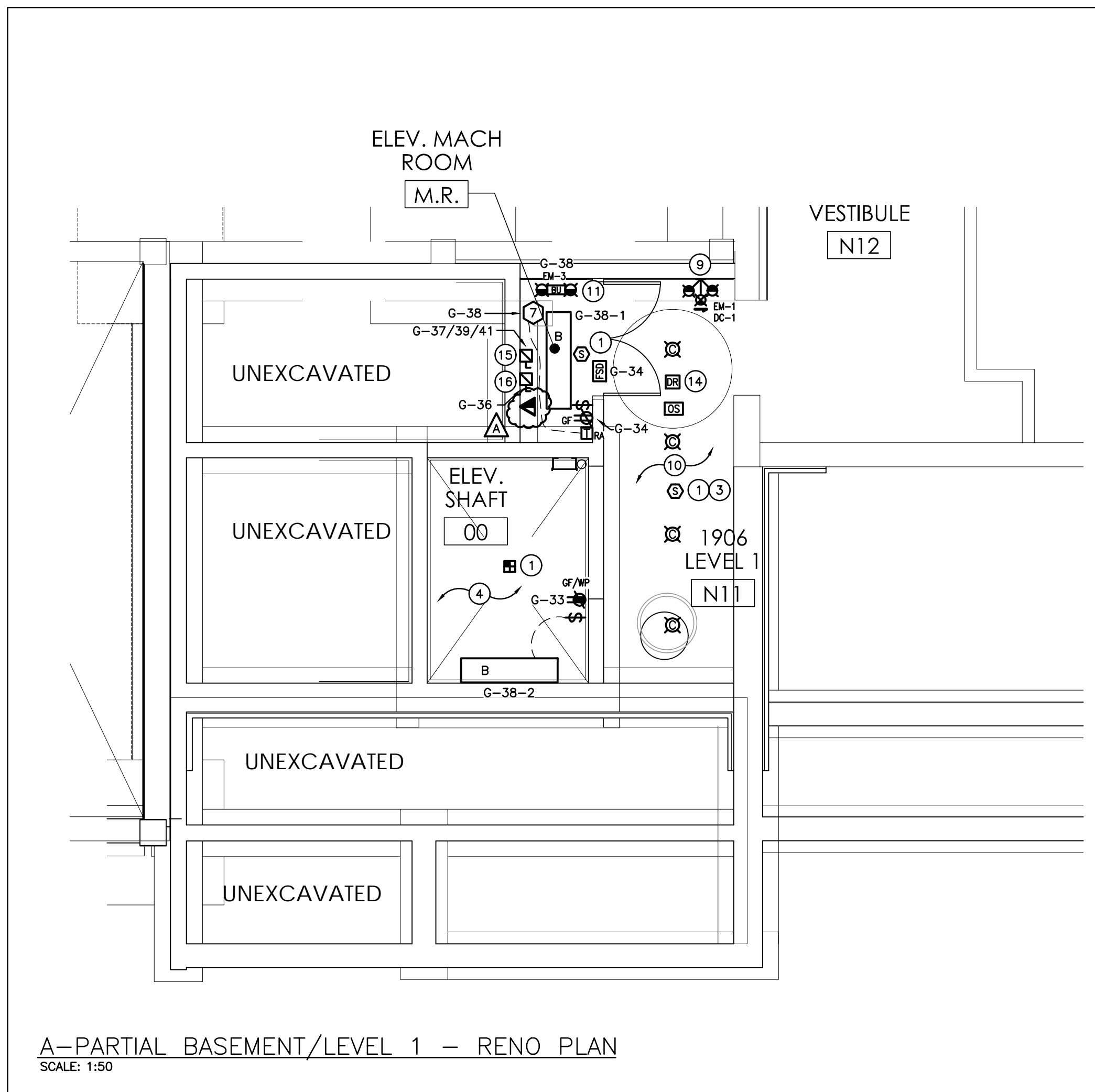
Provide BACnet MS/TP network
from EC-BOS

SEQUENCE OF OPERATION

The room temperature sensor cycles the fan coil to maintain the occupied cooling setpoint and modulates the rad valve to maintain the heating setpoint. The cooling setpoint is 2°C higher than the heating setpoint with a minimum of 23.5°C. The outdoor air damper opens when occupied. The ductless split is disabled when unoccupied or when the outside air temperature is below the global mechanical cooling disable setpoint (initially 12/14°C). A minimum off-time of 5 minutes is provided. An alarm is generated if the room temperature is too cold (14/16°C) or too hot (38/36°C).

4 Systems as Shown					
Room	Unit	DX Clg (tons)	Rad (MBh)	Rad Vlv (Vx)	Notes
Floor Plan C, Level 1					
Office N40	AC-24	0.75	-	-	
Office N41	AC-25	0.75	17.2	V1	
Floor Plan C, Level 2					
Room N36	AC-26	0.75	-	-	
Room N37	AC-27	0.75	36.96	V2	

	Job #:	Owner: Waterloo Region District School Board	Drawn By:	Title: Ductless Split Heat Pumps 2	3
	Job Name: King Edward PS Elevator Addition		Revision Date: April 10, 2023		



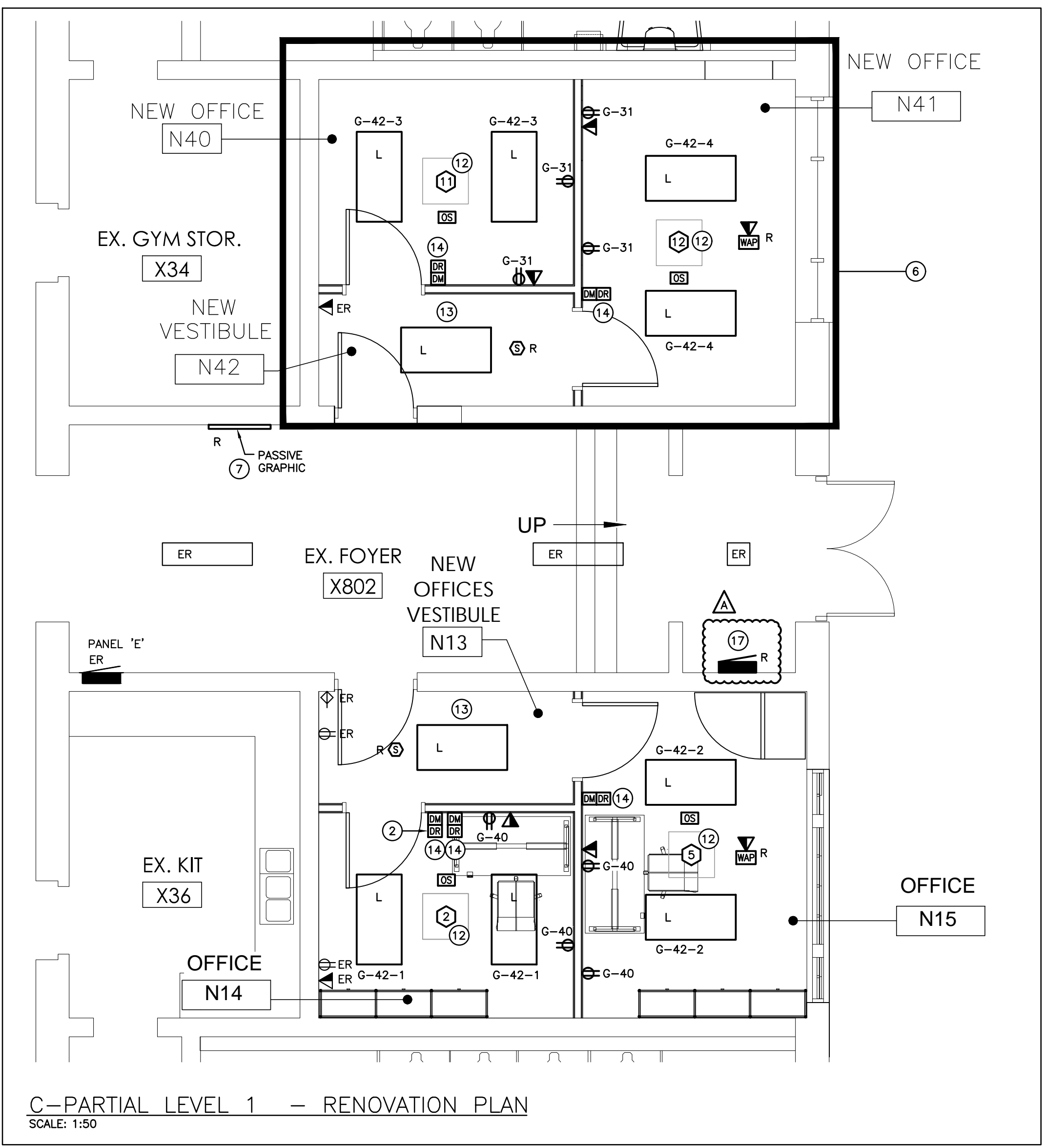
GENERAL RENOVATION NOTES

- 'ER' INDICATES EXISTING ITEM TO REMAIN.
- 'R' INDICATES EXISTING ITEM IN RELOCATED POSITION.
- ALL DEVICES SHOWN ARE NEW UNLESS OTHERWISE NOTED.
- EXISTING ELECTRICAL EQUIPMENT NOT SHOWN SHALL REMAIN UNLESS OTHERWISE NOTED.
- MAINTAIN SERVICE TO ALL EXISTING DEVICES TO REMAIN.
- REVISE PANEL DIRECTORIES TO SUIT CHANGES (TYPED).

ALL RECEPTACLES ARE TO BE TAMPERPROOF RESISTANT TYPE AS PER LATEST OESC 26-706.

INDICATES EXISTING WALL TO BE FISHED TO FEED INDICATED DEVICE. IF WALL CANNOT BE FISHED PROVIDE SURFACE MOUNT WIREMOLD 700 SERIES.

- SPECIFIC RENOVATION NOTES**
- THROUGH PROGRAMMING WHEN INDICATED DETECTOR IS IN ALARM, ASSOCIATED RELAY IN CONTROL PANEL IS TO CLOSE AND SEND SIGNAL TO ELEVATOR CONTROLLER.
 - INDICATES DIMMER SWITCH FOR CONTROL OF NEW LIGHTING WITHIN EXISTING CORRIDOR X801. PROVIDE LAMICOID LABEL FOR SWITCH.
 - INDICATES NEW FIRE ALARM INITIATING DEVICE IN ELEVATOR LOBBY CONNECTED TO NEW ADDRESSABLE LOOP AND CROSS-ZONED TO EXISTING FLOOR INITIATING ALARM ZONE. REFER TO FIRE ALARM RISER.
 - INDICATED DEVICES TO BE INSTALLED IN ELEVATOR/LIFT PIT. COORDINATE WITH ELEVATOR SHOP DRAWINGS.
 - CONNECT INDICATED DEVICE TO THE LOCAL SIGNAL CIRCUIT. ALL WIRING MUST BE SUPERVISED.
 - WORK WITHIN INDICATED AREA IS TO BE CARRIED AS A CASH ALLOWANCE. REFER TO ARCHITECTURAL PACKAGE FOR CASH ALLOWANCE INFORMATION.
 - ELECTRICAL CONTRACTOR SHALL REPLACE EXISTING PASSIVE GRAPHIC WITH UPDATED TO SUIT NEW LOCATION.
 - INDICATED LIGHTING WITHIN AREA TO BE CONNECTED TO EXISTING CORRIDOR LIGHTING AND LIGHTING CONTROLS.
 - INDICATES NEW EMERGENCY BATTERY UNIT TO BE CONNECTED TO UNSWITCHED SIDE OF LOCAL LIGHTING CIRCUIT.
 - INDICATED LIGHTING WITHIN AREA TO BE CONNECTED TO EXISTING CORRIDOR LIGHTING. REWORK CONTROLS TO SUIT NEW LAYOUT.
 - INDICATED DEVICE IS TO BE CEILING MOUNTED. PROVIDE ADEQUATE SUPPORT.
 - INDICATED MECHANICAL ITEM TO BE FED THROUGH CONDENSING UNIT. REFER TO EQUIPMENT WIRING SCHEDULE FOR ADDITIONAL INFORMATION. FEED WITH 3#12 T90 CU IN 21mmC.
 - INDICATED LIGHTING WITHIN AREA TO BE CONNECTED TO EXISTING CORRIDOR LIGHTING. REWORK CONTROLS TO SUIT NEW LAYOUT.
 - INDICATES DIGITAL ROOM CONTROLLER(S) INSTALLED WITHIN ACCESSIBLE CEILING SPACE FOR CONTROL OF NOTED OCCUPANCY SENSOR(S). REFER TO LIGHTING CONTROL DETAILS.
 - INDICATES FUSED DISCONNECT (C/W TWO SETS OF AUXILIARY CONTACTS) FOR ELEVATOR CONTROLLER. REFER TO DISTRIBUTION RISER DIAGRAM FOR ADDITIONAL INFORMATION COORDINATE WITH ELEVATOR SHOP DRAWINGS PRIOR TO ROUGH-IN.
 - INDICATES 30A SINGLE POLE FUSIBLE DISCONNECT C/W 15A CLASS J FUSE FOR ELEVATOR CAB LIGHTING. COORDINATE WITH ELEVATOR SHOP DRAWINGS PRIOR TO ROUGH-IN.
 - INDICATES TEMPORARY LOCATION FIRE ALARM CONTROL PANEL TO BE RELOCATED FROM DEMO AREA. WIRE NEW FIRE ALARM ZONES THROUGH PATHWAY OF RE-ROUTED EXISTING ZONE WIRING TO TEMPORARY LOCATION TO ALLOW FOR TERMINATION AT FINAL LOCATION.



REVISIONS

NO.	DATE	PARTICULAR
1	04/14/2022	COORDINATION SET
2	09/08/2022	COORDINATION SET
3	11/24/2022	COORDINATION SET
4	01/13/2023	COORDINATION SET
5	02/02/2023	ISSUED FOR PERMIT
6	04/04/2023	ISSUED FOR TENDER
A	04/12/2023	ISSUED FOR ADDENDUM

NOTES:

The contractor shall verify all dimensions and report all errors and discrepancies to the Consultant before commencement of the work.

The drawings show general arrangement of services. Follow as closely as actual building construction will permit. Obtain approval for relocation of service from Consultant before commencement of the work.

The drawings do not indicate all offsets fitting and accessories which may be required. Provide the same to meet the required conditions.

Drawings and specifications, etc., prepared and issued by the consultant are the property of the consultant and must be returned at the completion of the project. These documents are not to be duplicated or copied without the consent of the Consultant.

Do not scale the drawing.

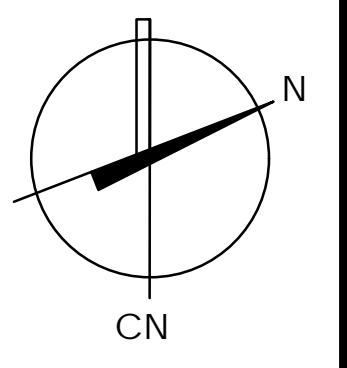
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CLIENT
 WATERLOO REGION DISTRICT SCHOOL BOARD, 51 ARDELT AVENUE, KITCHENER, ONTARIO, N2C 2R5

PROJECT:
 22059
 KING EDWARD PS ELEVATOR ADDITION
 709 KING STREET WEST, KITCHENER, ON N2G 1E3

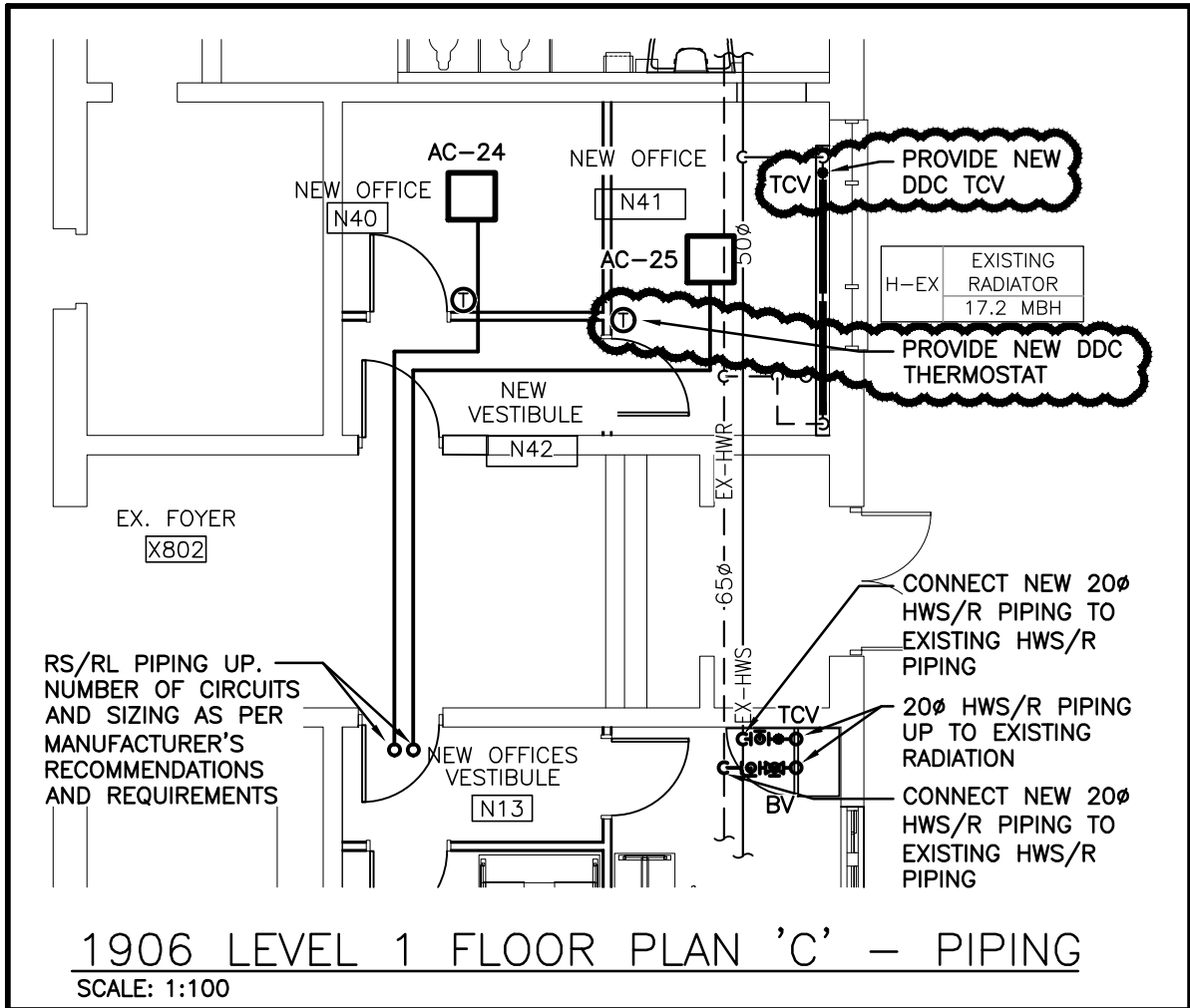
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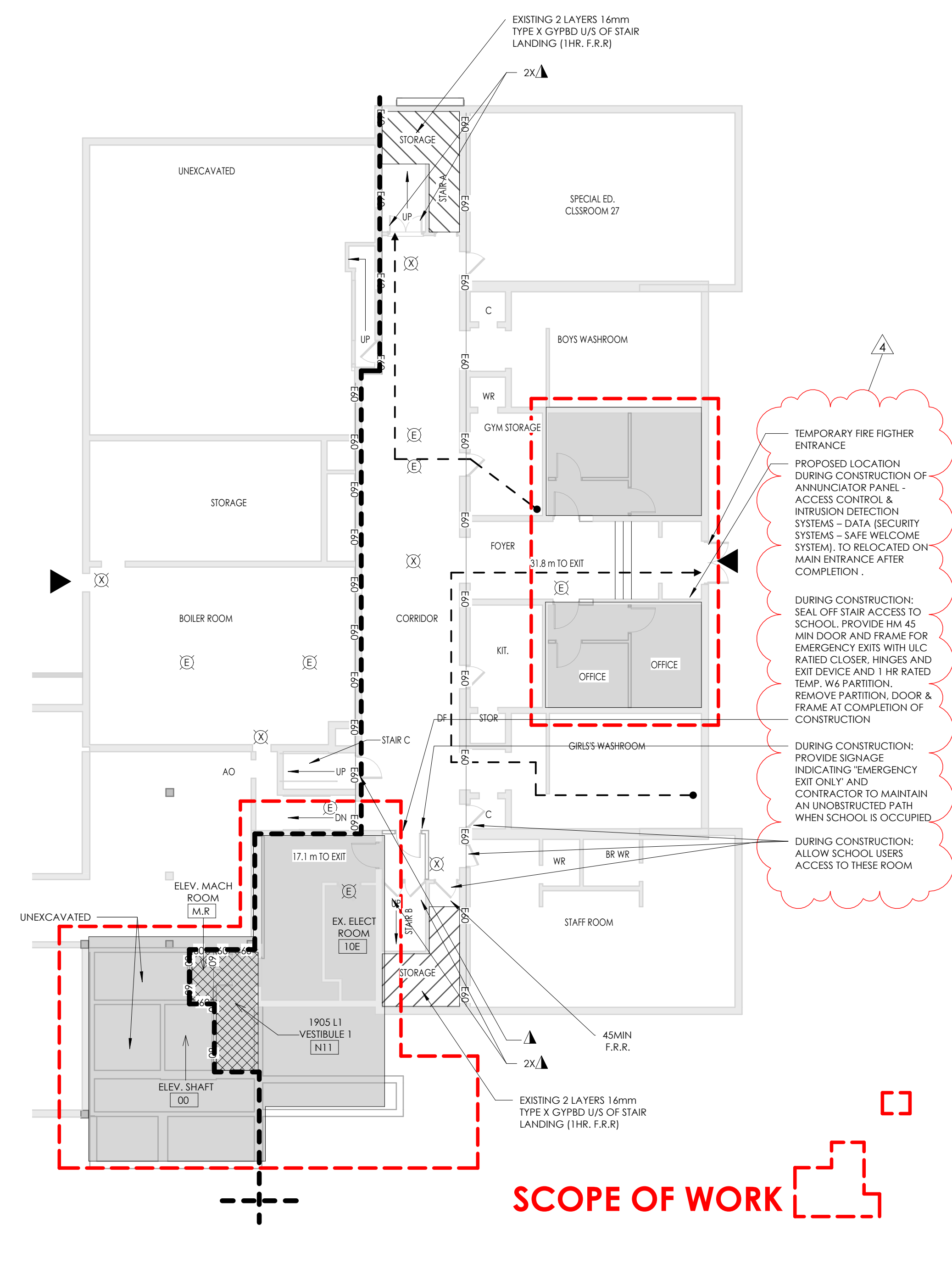
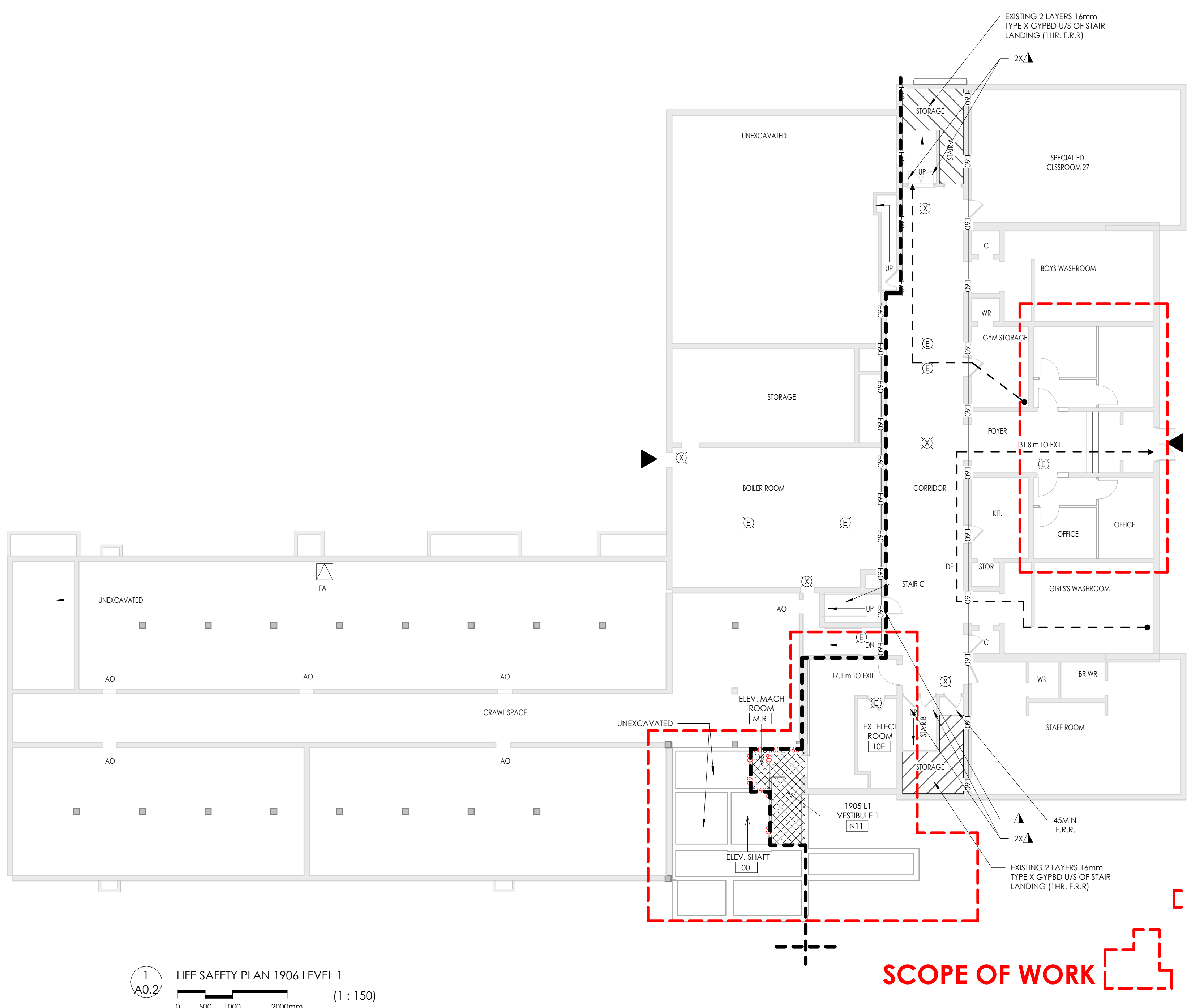


RENOVATION PLANS

E3.1

All dimensions and measurements must be checked in the field and verified by the General Contractor.





LIFE SAFETY LEGENDS

- ▲ HOLD-OPEN DEVICES
- (X) EXIT LIGHTING
- (E) EMERGENCY LIGHTING
- EXIT 4 EXIT NUMBER
- 60—60— 1 HR. FIRE SEPARATION RATING
- ← TRAVEL DISTANCE IN METERS
- EXIT LIGHT W/ DIRECTIONAL ARROW COORD W/ ELECT DWGS
- ▲ EXIT DOORS
- Ⓜ POWER DOOR OPERATOR
- PUSH BUTTON FOR POWER DOOR OPERATOR
- OFEC / FE FIRE EXTINGUISHER / FIRE EXTINGUISHER & CABINET (1500mm MAX. A/F/F TO TOP OF EXTINGUISHER FOR UNDER 18KG'S) (1100mm MAX. A/F/F TO TOP OF EXTINGUISHER OVER 18KG. 3. NOT EQUIP. D W/ WHEELS) VERIFY W/ LOCAL AUTHORITIES

CONCERNING EXTENT OF FIRE STOPPING:
ALL PARTITIONS FORMING PART OF A FIRE SEPARATION SHALL BE COMPLETELY FIRE STOPPED & SMOKE SEALED. THIS INCLUDES ALL CORRIDOR WALLS AS WELL AS THE RATED FIRE SEPARATIONS NOTED ABOVE INCLUDING 0 HR. FIRE SEPARATION RATINGS. ALL OTHER FULL HEIGHT PARTITIONS NEED NOT BE FIRE STOPPED BUT SHALL HAVE MINERAL WOOL TIGHTLY PACKED. THIS INCLUDES ALL (FULL HEIGHT) MASONRY AND GYPSUM BOARD WALLS. INCLUDE FIRE STOPPING IN ROOF STRUCTURE.

COORD. W/ A4 DWGS. FOR TYPICAL FIRE STOPPING & ACOUSTICAL SEALING DETAILS.

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- NOTES**
- MIN. HEADRM. CLEARANCE 2.1m IN EVERY ACCESS TO EXIT REQ. D 3.3.1.8
 - COORDINATE ALL NEW EXIT LIGHT LOCATIONS WITH ELECTRICAL DRAWINGS.

HATCH IDENTIFICATION MARKER LEGEND

- ▨ EXTENTS OF 1HR. FLOOR ASSEMBLY RATING COORD. W/ QBC MATRIX FOR ASSEMBLY RATING DESIGN

ABBREVIATION

AO	ACCESS OPENING
BFWR	BARRIER FREE WASHROOM
C	CUSTODIAN
DF	DRINKING FOUNTAIN
FA	FLOOR ACCESS
EL	ELECTRICAL ROOM
KIT	KITCHEN
STOR	STORAGE
WR	WASHROOM
GUID	GUIDANCE

Revision Schedule

Particular	Date	No.
ISSUED FOR COORDINATION	03/06/2023	1
ISSUED FOR 98% SET PERMIT	11/29/2022	2
ISSUED FOR TENDER & PERMIT	04/05/2023	3
ADDENDUM 1	14/04/2023	4

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CLIENT
WATERLOO REGION DISTRICT SCHOOL BOARD, 51 ARDELT AVENUE, KITCHENER, ONTARIO, N2C 2R5

PROJECT:
22059
KING EDWARD PS ELEVATOR ADDITION
709 KING STREET WEST, KITCHENER, ON N2G 1E3

ORIGINAL PAGE SIZE ARCH D - 24" X 36"

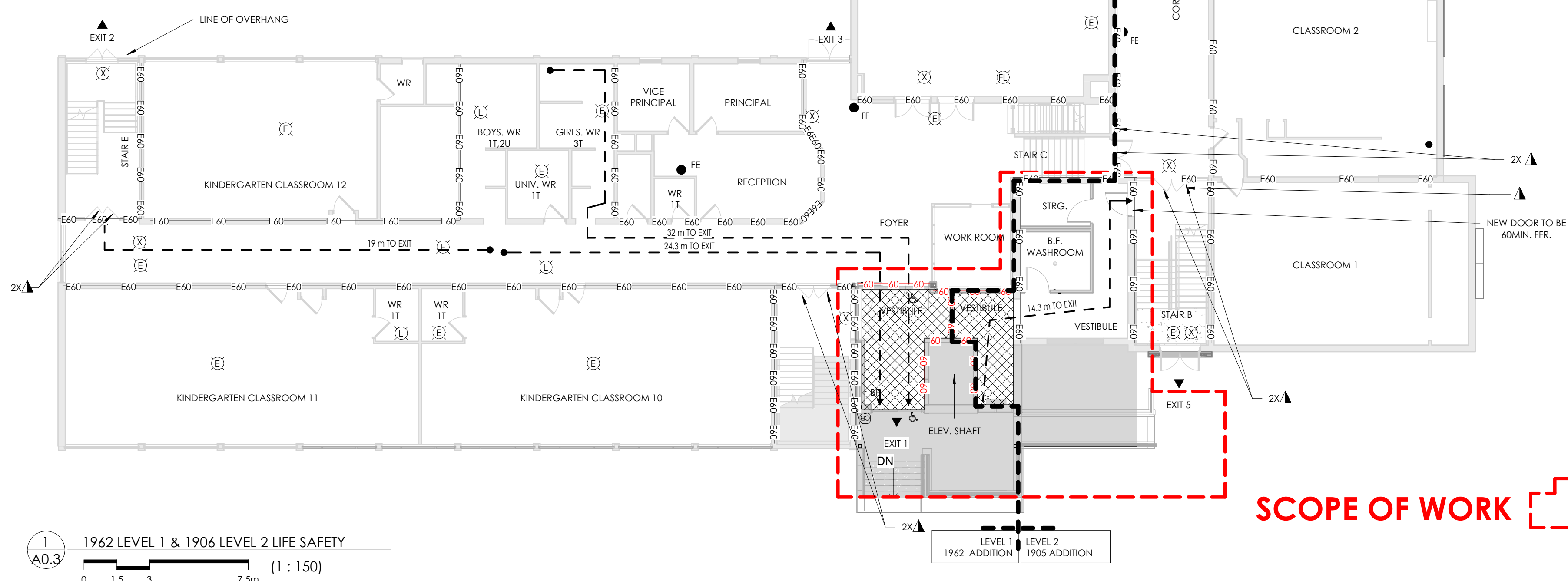
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LIFE SAFETY PLAN 1906 LEVEL 1

A0.2

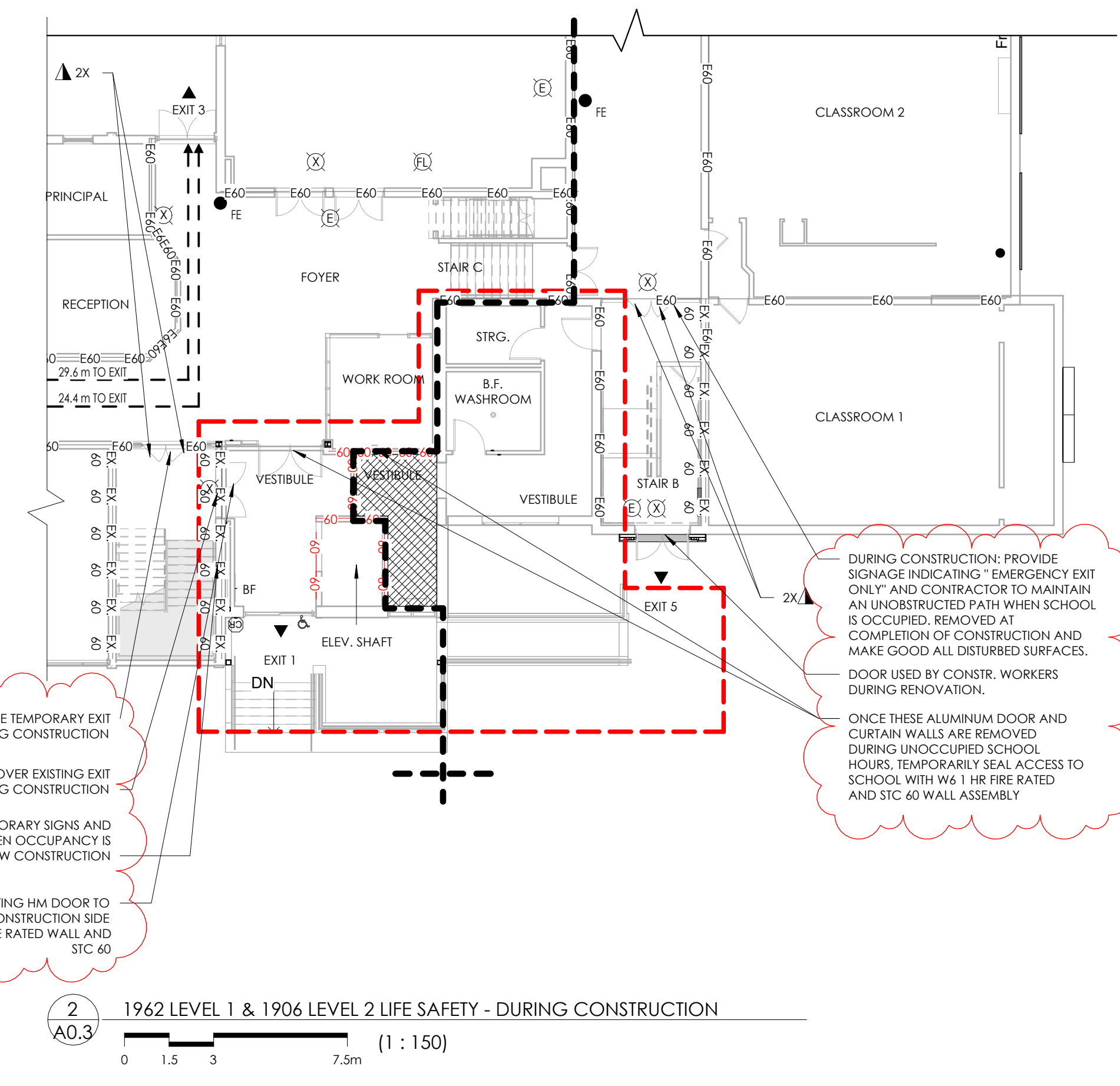
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SCOPE OF WORK

1 A0.3 1962 LEVEL 1 & 1906 LEVEL 2 LIFE SAFETY (1 : 150)



2 A0.3 1962 LEVEL 1 & 1906 LEVEL 2 LIFE SAFETY - DURING CONSTRUCTION (1 : 150)

LIFE SAFETY LEGENDS

- ▲ HOLD-OPEN DEVICES
- ⓧ EXIT LIGHTING
- ⓔ EMERGENCY LIGHTING
- EXIT 4 EXIT NUMBER
- 60 — 60 — 1 HR. FIRE SEPARATION RATING
- ← TRAVEL DISTANCE IN METERS
- EXIT LIGHT W/ DIRECTIONAL ARROW COORD. W/ ELECT DWGS
- ▲ EXIT DOORS
- ♿ POWER DOOR OPERATOR
- BF PUSH BUTTON FOR POWER DOOR OPERATOR
- OFEC / FE FIRE EXTINGUISHER / FIRE EXTINGUISHER & CABINET (1500mm MAX. A/F/F TO TOP OF EXTINGUISHER FOR UNDER 18KG'S) (1100mm MAX. A/F/F TO TOP OF EXTINGUISHER OVER 18KG'S NOT EQUIP. D/W WHEELS) VERIFY W/ LOCAL AUTHORITIES

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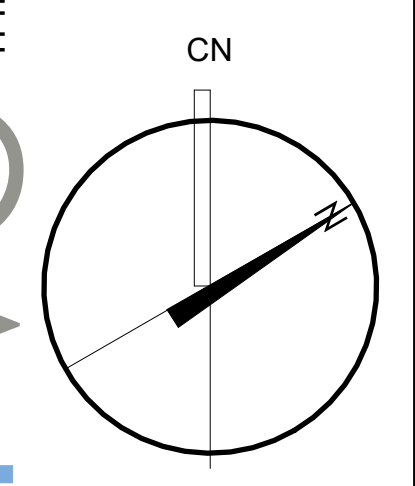


CLIENT
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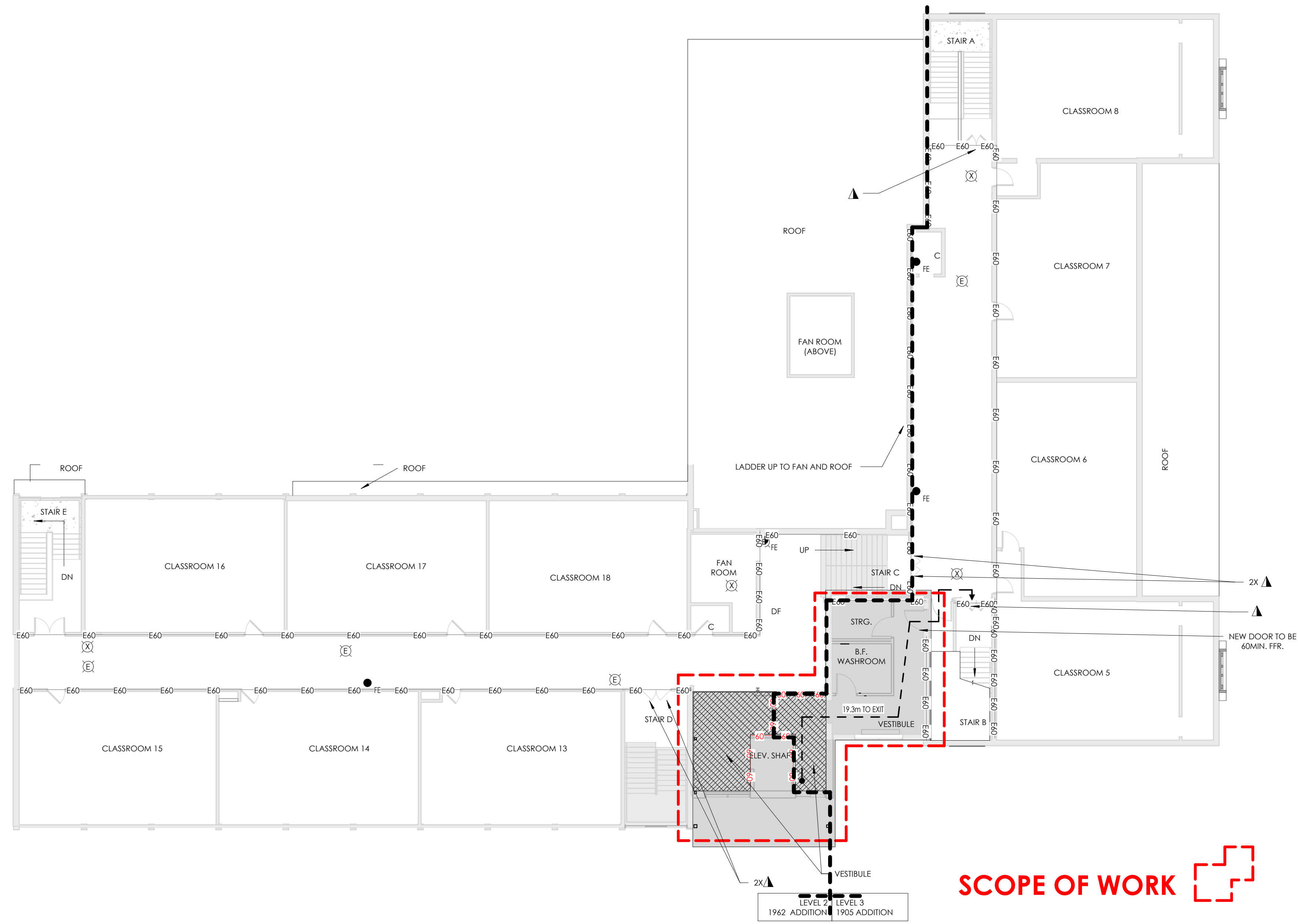
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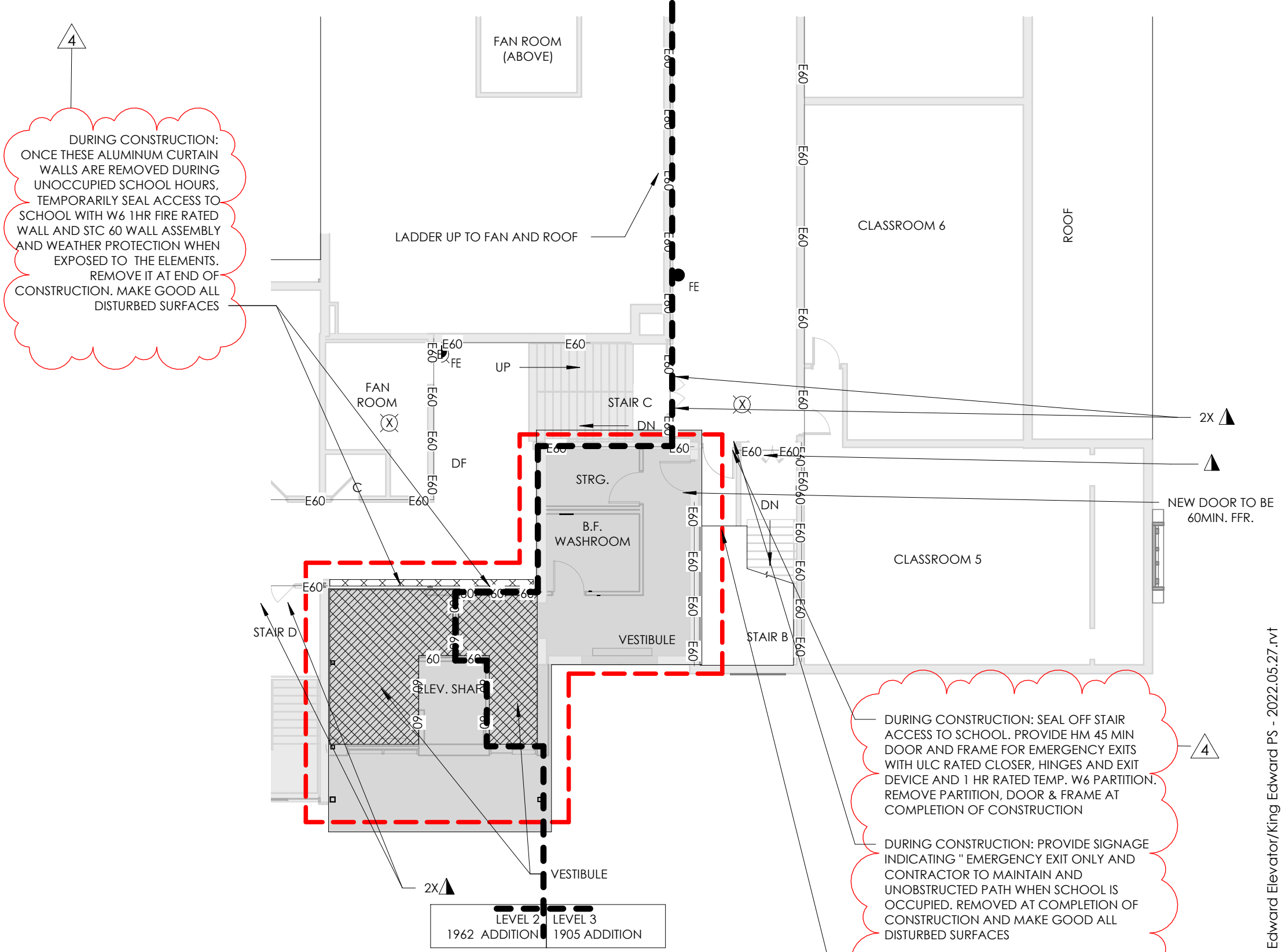


A0.3

LIFE SAFETY PLAN 1962 LEVEL 1 & 1906 LEVEL 2



SCOPE OF WORK



1 1962 LEVEL 2 & 1906 LEVEL 3 FLOOR PLAN LIFE SAFETY
A0.4
0 1.5 3 7.5m (1 : 150)

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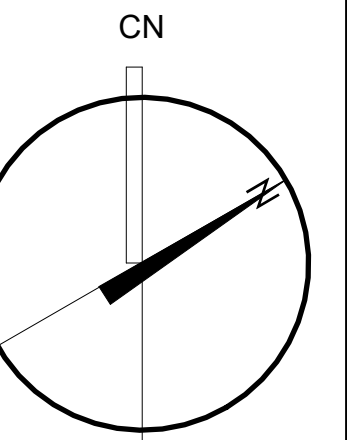


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