



Addendum # 1
**Bid Opportunity: 26-7857-RFT - Kitchener Waterloo
Collegiate and Vocational School Health and Physical
Education Renovation**
Closing Date: Thursday, April 30, 2026 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If you have already submitted a Bid / Proposal, it will be automatically withdrawn as a result of this addendum.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:

Can we move the closing date?

Answer 1:

Closing date and time will remain unchanged.

Question 2:

Please confirm if ADO/PDO is covered by Cash Allowance - Door Hardware?

Answer 2:

PDO operators are included under allowance.

Question 3:

Please clarify if floor and wall tile are matte or bright

Answer 3:

The floor tiles are matte finish while the wall tiles to be glossy.

Question 4:

Please advise if only the shower room is to be aluminum duct and the remainder is to be galvanized.

Answer 4:

This is correct. The shower room is to be aluminum duct; the remainder of the ductwork is to match the written specifications.

Question 5:

Can aluminum duct be changed to stainless steel?

Answer 5:

This is an acceptable alternative. The requirement is non-ferrous (i.e., will not rust in high-humidity environment) and no seams on internal face of ductwork (where possible) to avoid collection of condensation.

Question 6:

Is the shower room ductwork to be welded?

Answer 6:

Welding is acceptable. Other solutions for duct sealing may be accepted provided they ensure there is no path for collected moisture to leak out of the ductwork

Question 7:

Olympia Tile Colour and Dimension Gold 4x16 is not available. This colour is only available in 4x4. Please clarify.

Answer 7:

If Olympia Tile Colour & Dimension Gold is not available in 4" x 16", provide Olympia Tile Colour & Dimension Citron, 4" x 16" as an acceptable equivalent.

Attachments

WalterFedy's Addendum 1

This Addendum amends and forms part of the Bidding and Contract Documents for the above Project as follows:

CHANGES TO SPECIFICATIONS

ARCHITECTURAL

Section 01 01 00 – Table of Contents

1. Remove entire section from the bid documents and replace with attached section 01 01 00 (R1) – Table of Contents.

Section 01 21 00 – Allowances

1. Remove entire section from the bid documents and replace with attached section 01 21 00 (R1) - Allowances. Changes include:
 - a. Add 1.4.8 Fire Alarm – Signal Circuit 6 – Rewire cash allowance in the amount of **\$55,000.00**
 - b. Modify 1.4 Total of all allowances to **\$246,000.00**

Section 04 22 00 - Concrete Masonry Units

1. Remove entire section from the bid document and replace with attached section 04 22 00 (R1) – Concrete Masonry Units. Changes include:
 - a. Requirements for new exterior wall block.

Division 07 – Thermal and Moisture Protection

1. Add section 07 42 00 - Aluminum Composite Material (ACM) Panels
2. Remove section 07 92 00–Joint Sealants entirely from the bid document and replace with attached section 07 92 00 (R1).

MECHANICAL

Section 23 37 13 – Grilles and Diffusers

1. Refer to Item 2.2 MATERIALS:
Add Item .2 per below:
 - .2 Force Flow Heater Grille (Front Entry Vestibule)
 - .1 Provide 16 gauge, heavy-duty, corrosion-resistant steel, removable front panel for existing Sigma force flow heater.

CHANGES TO DRAWINGS

ARCHITECTURAL

Drawing A204 - LEVEL 01 VESTIBULE RESTORATION WORK

1. Remove drawing A204 from the bid document and replace with attached drawing. Changes include:
 1. Modify Detail 2/A204:
 - a. Modify the extent of ceiling work/modify ceiling note.
 - b. Modify Doors V11 and V12/modify door note.
 - c. Modify Window W1/modify window note to include a 150mm curb below.

- d. Add Interior Lighting note to:
"REMOVE AND REPLACE EXISTING LIGHTS WITH NEW. PATCH AND REPAIR AS REQUIRED TO COMPLETE SCOPE OF WORK, TYP. REFER TO ELECTRICAL DRAWINGS"
2. Modify Detail 3/A204
 - a. Modify doors V11 and V12
 - b. Add curb below window
3. Modify Detail 6/A204
 - a. Modify window replacement note to:
"REMOVE AND REPLACE EXISTING WINDOW IN ITS ENTIRETY. CONTRACTOR TO SITE VERIFY. REFER TO 9/A204-P1 FOR CURB ADDITION DETAILS
4. Add Detail 9/A204 for Window Curb Detail

Drawing A301 – PARTIAL SOUTH ELEVATION AND RESTORATION WORK

1. Remove drawing A301 from the bid document and replace it with attached drawing. Changes include:
 1. Modify Detail 3/A301:
 - a. Add note to include removal and replacement of existing mechanical grate cover.
"REMOVE AND DISPOSE OF EXISTING GRATE COVER ONLY. PROVIDE NEW METAL GRATE COVER TO MATCH EXISTING OPENING SIZE AND CONFIGURATION. VERIFY ALL DIMENSIONS ON SITE. NEW GRATE SHALL MAINTAIN OR EXCEED EXISTING FREE AIRFLOW AREA AND SHALL NOT RESTRICT HEATER PERFORMANCE. PROVIDE POWDER-COATED FINISH TO MATCH EXISTING. ENSURE SECURE AND FLUSH INSTALLATION. REFER TO MECHANICAL SPECIFICATION.

Drawing A901- DOOR AND WINDOW SCHEDULE

1. Remove drawing A901 from the bid document and replace it with attached drawing. Changes include:
 - a. Modify all Door heights for Lower Level 02 FF to be 2150mm instead of 2134mm.
 - b. Replace doors (V11 and V12) from double doors to single doors with fixed sidelights.
 - c. Modify door V12 only to include Electric Strike for access key fob.
 - d. Modify door Frames annotations.
 - e. Add note #17 to include Electric Strike.
 - f. Add Window Elevation

STRUCTURAL

Drawing S2-2 – CONCRETE STAIR FRAMING AND SECTIONS

1. Remove drawing S2-2 from the bid document and replace with attached drawing. Changes include:
 - a. Add rainwater leader note and photo

MECHANICAL

Drawing MD03 – LEVEL 1 PLUMBING AND DRAINAGE DEMOLITION

1. Remove drawing MD03 from the bid document and replace with attached drawing. Changes include:
 - a. Add Demolition Note 4
 - b. Add existing thermostatic mixing valve and piping to be removed/retained.

Drawing M201- LEVEL 1 PLUMBING AND DRAINAGE PLAN

1. Remove drawing M201 from the bid document and replace with attached drawing. Changes include:
 - a. Add Drawing Note 8
 - b. Add reinstalled thermostatic mixing valve and associated piping

ELECTRICAL**Drawing E201 – LIGHTING LAYOUT**

1. Remove drawing E201 from the bid document and replace with attached drawing. Changes include:
 - a. Add Drawing Detail 3 – Level 01 Vestibule Renovation
 - b. Add Drawing Note 1 to Detail 3 – Provide 3 recessed type 'A' light fixtures in new gypsum board ceiling. Connect to existing lighting circuit and controls for a complete installation.

Drawing E301 – POWER AND SYSTEMS LAYOUT

1. Remove drawing E301 from the bid document and replace with attached drawing. Changes include:
 - a. Add Drawing Note 15
 - b. Add Drawing Detail 3 – Level 01 Vestibule Renovation
 - c. Drawing Detail 3 – Provide power supply, electric strike, and all required components on door shown for a complete installation. Provide 120V, 15A circuit in local panel to power supply at this door.

END OF ADDENDUM

ATTACHMENTS

Section 01 01 00

Section 01 21 00

Section 04 22 00

Section 07 42 00

Section 07 92 00

A204, A301, A901, S2-2, MD03, M201, E201, E301

00 01 00 Consultant/Professional Seals	6
DIVISION 00 – BIDDING AND CONTRACT DOCUMENTS	7
00 21 13 - Instructions to Bidders.....	7
00 21 14– General Contractors, Subcontractors, Prequalified Rosters	20
00 21 15 – Scope of Work	22
00 31 34 – Subsurface Investigation Report	23
Appendix 00 31 34A – Soil Report	24
Appendix 00 41 13A – Asset and Warranty Card.....	25
00 56 13 – Definitions Stipulated Price.....	26
00 72 13 – Standard Terms and Condition	28
00 73 00 “The Supplementary Conditions”	66
DIVISION 01 - GENERAL REQUIREMENTS	124
01 14 00 – Work Restrictions.....	124
01 19 00 – Specifications and Documents	126
01 21 00 (R1) – Allowances	128
01 31 00 – Project Managing And Coordination.....	131
01 32 00 – Construction Progress Documentation.....	137
01 33 00 – Submittal Procedures.....	140
01 35 17 – Fire Safety Procedures	145
Appendix 013517-A Contractor Hot Work Permit.....	153
01 35 23 – Health And Safety	154
01 35 43 –Designated Substances	159
Appendix 01 35 43A Asbestos Audit Report.....	164
Appendix 01 35 34B– Lead Report	165
01 42 00 – References	166
01 45 00 – Quality Control.....	171
01 51 00 – Temporary Utilities	178
01 53 00 – Temporary Construction Facilities	183
01 54 00 – Materials and Equipment.....	189
01 61 00 – Product Requirements	192
01 70 00 – Examination and Preparation	197
01 73 30 – Execution and Cutting and Patching.....	200
01 74 00 – Cleaning and Waste Management.....	204
01 78 10 – Closeout Submittals and Requirements.....	208
01 78 40 – Maintenance Requirements	214
01 79 00 – Demonstration and Training	217

DIVISION 00 – BIDDING AND CONTRACT DOCUMENTS

DIVISION 00 – PROCUREMENT AND CONTRACTING REQUIREMENTS

00 31 00 Available Project Information

DIVISION 01 – GENERAL REQUIREMENTS

01 35 00 Delegated Design

01 35 16 Alteration Project Requirements

01 73 29 Cutting and Patching

DIVISION 02 – EXISTING CONDITIONS

02 41 20 Selective Interior Demolition

DIVISION 03 – CONCRETE

03 35 00 Concrete Finishing

DIVISION 04 – MASONRY

04 22 00 (R1) Concrete Unit Masonry

DIVISION 05 – METALS

05 50 00 Metal Fabrications

DIVISION 06 – WOOD, PLASTICS, AND COMPOSITES

06 10 00 Rough Carpentry

06 40 00 Architectural Woodwork

DIVISION 07 – THERMAL AND MOISTURE PROTECTION

07 21 19.19 Foam-In-Place Sealant

07 42 00 Aluminum Composite Material (ACM) Panels

07 84 00 Firestopping and Smoke Seals

07 92 00 (R1) Joint Sealants

DIVISION 08 – DOORS AND OPENINGS

08 03 14 Wood Door and Frame Restoration

08 11 13 Metal Doors and Frames

08 31 00 Access Doors and Panels

08 44 13 Glazed Aluminum Framing Systems

08 80 50 Glazing

08 87 53 Glazing Films

DIVISION 09 – FINISHES

09 05 13 Mechanical Preparation of Flooring Substrates

09 05 23 Common Work Results for Flooring Preparation

09 21 16 Gypsum Board Assemblies

09 30 13 Tiling

09 51 13 Acoustical Panel Ceilings

09 54 00 Wood Plank Ceilings

09 60 00 Finish Schedule

09 65 13 Resilient Base

09 65 66 Resilient Sports Flooring

09 66 13.10 Terrazzo Restoration

09 84 53 Sound Barrier Mullion Trim Cap

09 91 00 Painting

DIVISION 10 – SPECIALTIES

10 21 13.17 Phenolic Core Change Room Compartments
10 25 00 PVC Panels
10 28 10 Toilet and Bath Accessories
10 51 13 Metal Lockers

DIVISION 20 – MECHANICAL

20 05 05 Mechanical Work General Instructions
20 05 10 Basic Mechanical Materials and Methods
20 05 25 Mechanical Insulation
20 05 55 Testing, Adjusting, and Balancing

DIVISION 21 – FIRE SUPPRESSION

21 12 00 Fire Protection Systems

DIVISION 22 – PLUMBING

22 11 16 Domestic Water Piping and Valves
22 13 16 Drainage Waste and Vent Piping and Valves
22 13 18 Drainage and Vent Piping Specialties

DIVISION 23 – HEATING, VENTILATION AND AIR CONDITIONING (HVAC)

23 21 13 Hydronic Piping and Valves
23 31 05 Standard Ductwork
23 33 00 Duct System Dampers and Accessories
23 36 00 Air Terminal Units
23 37 13 Grilles and Diffusers
23 82 00 Radiation Units

DIVISION 26 – ELECTRICAL

26 05 00 Common Work Results for Electrical
26 05 02 Firestopping and Smoke Seal Systems
26 05 05 Demolition and Revision Work
26 05 19 Wire and Cable
26 05 33 Raceway and Boxes for Electrical
26 05 53 Identification for Electrical Systems
26 09 23 Lighting Controls
26 27 00 Low-Voltage Distribution Equipment
26 27 26 Wiring Devices
26 28 13 Fuses
26 28 16 Disconnect Switches
26 28 23 Contactors

26 29 00	Motor Starters
26 50 00	Lighting
26 52 13	Emergency and Exit Lighting
26 60 00	Miscellaneous Equipment and Appliances

DIVISION 28 – ELECTRONIC SAFETY AND SECURITY

28 31 00	Fire Detection and Alarm (Alterations)
----------	--

01 21 00 – Allowances

1.0 GENERAL

1.1. RELATED SECTIONS

- .1 Section 01 45 00 – Quality Control.
- .2 This section describes requirements applicable to all Sections within Divisions 02 to 49.

1.2. GENERAL

- .1 Allowances included herein are for items of Work which could not be fully quantified prior to Bidding.
- .2 Expend each allowance as directed by the Consultant. Work covered by allowances shall be performed for such amounts and by such persons as directed by Consultant.
- .3 Funds will be expended by means of Cash Allowance allocations and contingency allowance allocations.
- .4 Progress payments for Work and Products authorized under allowances will be made in accordance with the payment terms set out in the Conditions of the Contract.
- .5 The Contractor shall bid the work involved and submit the Bids received to the Consultant and the Board, for approval
- .6 The Contractor shall submit 3 bids unless directed by the Board.

1.3. CASH ALLOWANCES

- .1 Cash allowances, cover the net cost to the Contractor of services, products, construction machinery and equipment, freight, handling, unloading, storage, installation where indicated, and other authorized expenses incurred in performing the Work. Cash allowances shall not be included by a subcontractor in the amount for their subcontract work.
- .2 Supply only allowances shall include:
 - .1 Net cost of Products.
 - .2 Delivery to Site.
 - .3 Applicable taxes and duties, excluding HST.
- .3 Supply and install allowances shall include:
 - .1 Net cost of Products.
 - .2 Delivery to Site.
 - .3 Unloading, storing, handling or products on site.
 - .4 Installation, finishing and commissioning of products.

- .5 Applicable taxes and duties, excluding HST.
- .4 Inspection and testing allowances shall include:
 - .1 Net cost of inspection and testing services.
 - .2 Applicable taxes and duties, excluding HST.
- .5 Other costs related to work covered by cash allowances are not covered by the allowance, but shall be included in the Contract Price.
- .6 Where costs under a cash allowance exceed the amount of the allowance, the Contractor will be compensated for any excess incurred and substantiated plus an allowance for overhead and profit as set out in the Contract Documents.
- .7 Progress payments on accounts of work authorized under cash allowances shall be included in the monthly certificate for payment.
- .8 Submit, before application for final payment, copies of all invoices and statements from suppliers and subcontractors for work which has been paid from cash allowances.

1.4. ALLOWANCES SCHEDULE

Include in the Bid Price a cash allowance of to address the cost of the following items:

1	Designated Substance Removal. (Additional removal not already identified in the ACM Summary report)	\$6000
2	Independent Testing & Inspection (soil, concrete, mortar, structural steel, air barrier, paving, painting) (As directed by the Consultant)	\$10,000
3	Data and security installation and network equipment (Including terminations)	\$20,000
4	Furniture and Equipment	\$50,000
5	Remedial Painting (in addition to painting in contract)	\$10,000
6	Public Address (PA) systems. (Including all cabling and hardware)	\$15,000
7	Door Hardware	\$80,000
8	<i>Fire Alarm – Signal Circuit 6 – Rewire and Replace</i>	<i>\$55,000</i>

<i>Total of all Allowances</i>	\$191,000
	\$246,000

END OF SECTION

Part 1 General

1.1 RELATED REQUIREMENTS

- .1 Section 05 50 00 - Metal Fabrications.
- .2 **Section 07 42 00 - Aluminum Composite Material (ACM) Panels.**
- .3 Section 07 92 00 - Joint Sealants.
- .4 Section 08 11 13 - Metal Doors and Frames.
- .5 Section 09 91 00 - Painting.

1.2 REFERENCES

- .1 ASTM International:
 - .1 ASTM A116-22, Standard Specification for Metallic-Coated, Steel Woven Wire Fence Fabric.
 - .2 ASTM A123/A123M-24, Standard Specification for Zinc (Hot-Dip Galvanized) Coatings on Iron and Steel Products.
 - .3 ASTM A153/A153M-23, Standard Specification for Zinc Coating (Hot-Dip) on Iron and Steel Hardware.
 - .4 ASTM A240/A240M-25a, Standard Specification for Chromium and Chromium-Nickel Stainless Steel Plate, Sheet, and Strip for Pressure Vessels and for General Applications.
 - .5 ASTM A307-21, Standard Specification for Carbon Steel Bolts, Studs, and Threaded Rod 60 000 PSI Tensile Strength.
 - .6 ASTM A496/A496M-07, Standard Specification for Steel Wire, Deformed, for Concrete Reinforcement. (Withdrawn 2013)
 - .7 ASTM A563/A563M-24, Standard Specification for Carbon and Alloy Steel Nuts (Inch and Metric).
 - .8 ASTM A641/A641M-19(2025), Standard Specification for Zinc-Coated (Galvanized) Carbon Steel Wire.
 - .9 ASTM A653/A653M-25a Standard Specification for Steel Sheet, Zinc-Coated (Galvanized) or Zinc-Iron Alloy-Coated (Galvannealed) by the Hot-Dip Process.
 - .10 ASTM A1011/A1011M-25, Standard Specification for Steel, Sheet and Strip, Hot-Rolled, Carbon, Structural, High-Strength Low-Alloy and High-Strength Low-Alloy with Improved Formability, and Ultra-High Strength.
 - .11 ASTM B633-23, Standard Specification for Electrodeposited Coatings of Zinc on Iron and Steel.
 - .12 ASTM C73-23, Standard Specification for Calcium Silicate Brick (Sand-Lime Brick).
 - .13 ASTM C140/C140M-26, Standard Test Methods for Sampling and Testing Concrete Masonry Units and Related Units.
 - .14 ASTM C207-24, Standard Specification for Hydrated Lime for Masonry Purposes.
 - .15 ASTM C216-24, Standard Specification for Facing Brick (Solid Masonry Units Made of Clay or Shale).
 - .16 ASTM C549-23, Standard Specification for Perlite Loose Fill Insulation.
 - .17 ASTM E336-25a, Standard Test Method for Measurement of Airborne Sound Attenuation between Rooms in Buildings.

- .18 ASTM E488/E488M-22, Standard Test Methods for Strength of Anchors in Concrete Elements.
- .19 ASTM F593-24, Standard Specification for Stainless Steel Bolts, Hex Cap Screws, and Studs.
- .20 ASTM F594-24, Standard Specification for Stainless Steel Nuts.
- .21 ASTM F738M-02(2008), Standard Specification for Stainless Steel Metric Bolts, Screws, and Studs. (Withdrawn 2015)
- .22 ASTM F836M-20, Standard Specification for Style 1 Stainless Steel Metric Nuts (Metric). (Withdrawn 2023)
- .23 ASTM F3125/F3125M-25a, Standard Specification for High Strength Structural Bolts, Steel and Alloy Steel, Heat Treated, Inch Dimensions 120 ksi and 150 ksi Minimum Tensile Strength, and Metric Dimensions (830 MPa) and 150 ksi (1040 MPa) Minimum Tensile Strength.
- .2 Brick Industry Association (BIA):
 - .1 Technical Note No. 20-2018, Cleaning Brickwork.
- .3 Canadian Standards Association (CSA International):
 - .1 CSA A23.1:24/A23.2:24, Concrete materials and methods of concrete Construction/Test methods and standard practices for concrete.
 - .2 CSA-A165 Series-14 (R2019), CSA Standards on Concrete Masonry Units (Consists of A165.1, A165.2, and A165.3).
 - .3 CAN/CSA A179-14 (R2024), Mortar and Grout for Unit Masonry.
 - .4 CSA A370-14 (R2023), Connectors for Masonry.
 - .5 CAN/CSA A371-14 (R2024), Masonry Construction for Buildings.
 - .6 CSA-A3000-18, Cementitious Materials Compendium, Includes Update No. 1 and Errata (2021)
 - .7 CSA G30.18-21, Carbon Steel Bars for Concrete Reinforcement.
 - .8 CSA S304:24, Design of Masonry Structures.
- .4 South Coast Air Quality Management District (SCAQMD), California State:
 - .1 SCAQMD Rule 1168-22, Adhesive and Sealant Applications

1.3 ADMINISTRATIVE REQUIREMENTS

- .1 Coordination:
 - .1 Coordinate lines, levels and coursing with work of other Sections.
 - .2 Obtain built-in items prior to start of this work.
- .2 Pre-Installation Meetings: convene pre-installation meeting one week prior to beginning work of this Section and on-site installation, with Contractor, Subcontractor, material supplier and Consultant in accordance with Section 01 31 00 - Project Managing and Coordination to:
 - .1 Verify project requirements including specification and details for project.
 - .2 Confirm required mortar, grout and concrete testing; review batch control and grouting procedures.
 - .3 **Co-ordination with related Work including, but not limited to, air/vapour membranes and insulation.**
 - .4 Coordinate crack control measures.
 - .5 Review requirements for reinforcement at corners and wall intersections.
 - .6 Confirm trowelled or tooled joints to concealed and exposed masonry faces.

- .7 Review methods for controlling efflorescence during construction.

1.4 ACTION SUBMITTALS / INFORMATIONAL SUBMITTALS

- .1 Submit product data in accordance with Section 01 33 00 - Submittal Procedures.
 - .1 Provide manufacturer's printed product literature, specifications and data sheet. Indicate masonry types, shapes, sizes, and textures.
 - .2 Cementitious Materials:
 - .1 Include brand, type, and name of manufacturer for site mixed mortar materials.
 - .2 Submit proposed mix proportions and sand analysis reports and compressive strength reports on the proposed mortar mix(es).
 - .2 Shop Drawings: Submit shop drawings indicating the following:
 - .1 Indicate sizes, profiles, and coursing for concrete masonry units.
 - .2 Detail bending and placement of unit masonry reinforcing bars, including elevations of reinforced walls if required.
 - .3 ***Detail corner units, end dam units, and other special applications for fabricated flashings.***
 - .3 Submit samples in accordance with Section 01 33 00 - Submittal Procedures.
 - .1 Provide duplicate full-size samples of each type of scheduled masonry unit; showing size, colour, design and finish.
 - .2 Obtain review comments from Consultant prior to ordering.

1.5 QUALITY ASSURANCE

- .1 Conform to CAN/CSA A371, except as modified by this specification.
- .2 The masonry Subcontractor shall be a member in good standing with the Ontario Masonry Contractors' Association.
- .3 The masonry Subcontractor shall have a minimum of five years of experience on projects of similar size and magnitude and shall provide continuous active supervision by a journeyman mason while masonry work is in progress.
- .4 Masonry work shall be performed by experienced, qualified journeyman masons under the direct and continual full-time supervision of certified masons.
- .5 Before starting masonry work establish mix proportions based on the limitations set out in Table 2 of CSA A179.
- .6 Test laboratory prepared samples of the proposed mortar(s) for compressive strength in accordance with CSA A179, by a laboratory approved by the Owner. The Owner will pay for the initial cost of mortar testing. Any re-testing required as a result of the original test failing will be borne by the Contractor.
- .7 Connectors and joint reinforcement shall conform to CSA A370.
- .8 Miscellaneous masonry accessories, and their use where not otherwise specified but shown or required for proper completion of the Work, shall conform to CSA A371.

1.6 DELIVERY, STORAGE, AND HANDLING

- .1 Deliver masonry units on pallets or cubes, suitably protected from road grime and moisture absorption due to exposure to rain or melting snow.
- .2 Unload and store on dry, level areas, without direct contact with the ground.

- .3 Remove plastic wrappings from concrete masonry units and cover with waterproof coverings which will provide protection from the elements but allow for air circulation.
- .4 Deliver cement, lime, and mortar in dry condition with manufacturer's label intact and store under waterproof cover and protected from elements.
- .5 Packaging Waste Management
 - .1 Separate and recycle waste materials in accordance with Section 01 74 00 - Cleaning and Waste Management.

1.7 SITE CONDITIONS

- .1 Ambient Conditions: maintain materials and surrounding air temperature to:
 - .1 Minimum 5 degrees C prior to, during, and 48 hours after completion of masonry work.
 - .2 Maximum 32 degrees C prior to, during, and 48 hours after completion of masonry work.
- .2 Provide adequate bracing for masonry during construction and until permanent lateral supports are in place.

Part 2 Products

2.1 CONCRETE MASONRY UNITS

- .1 Standard Concrete Masonry Units: to CSA A165.1 and as follows:
 - .1 Classification: H/15/C/M.
 - .2 Size: As indicated on Drawings.
 - .3 Special shapes: provide plain end units for exposed corners as indicated on Drawings. Lintels and bond beams are constructed using knock-out lintel units. Provide additional special shapes as indicated.

2.2 MORTAR AND GROUT MATERIALS

- .1 Use same brands of materials and source of aggregate for entire project.
- .2 Cement:
 - .1 Portland Cement: to CSA-A3000, Type GU - General use hydraulic cement (Type 10) gray colour.
- .3 Aggregate: supplied by one supplier.
 - .1 Fine Aggregate: to CSA A179, manufactured sand.
 - .2 Course Aggregate: to CSA A179.
- .4 Water: clean and potable.
- .5 Lime:
 - .1 Hydrated Lime: to CSA A179, Type S.
- .6 Mortar Mixes
 - .1 Mortar for interior masonry:
 - .1 Non-Loadbearing: N based on proportion specifications.
 - .2 Pointing Mortar: CSA A179, Type N using property specification.

- .7 Mortar Mixing:
 - .1 Mix mortar ingredients in accordance with CSA A179 in quantities needed for immediate use.
 - .2 Maintain sand uniformly damp immediately before mixing process.
 - .3 Do not use admixtures, including pigments, air entraining agents, accelerators, retarders, water repellent agents, or other admixtures; unless approved in writing by the Consultant.
 - .4 Do not use anti-freeze compounds including calcium chloride or chloride based compounds.
 - .5 Use a batch type mixer in accordance with CSA A179.
 - .6 Pointing mortar: prehydrate pointing mortar by mixing ingredients dry, then mix again adding just enough water to produce damp unworkable mix that will retain its form when pressed into ball. Allow to stand for not less than one hour no more than two hours then remix with sufficient water to produce mortar of proper consistency for pointing.
 - .7 Re-temper mortar only within two hours of mixing, when water is lost by evaporation.
 - .8 Use mortar within 2 hours after mixing at temperatures of 32 degrees C, or 2 ½ hours at temperatures under 10 degrees C.
- .8 Grout Mixes:
 - .1 Bond Beams: grout mix 20 MPa strength at 28 days; 200-275 mm slump; mixed in accordance with CSA A179 coarse grout.
 - .2 Lintels: grout mix 20 MPa strength at 28 days; 200-250 mm slump; mixed in accordance with CSA A179 coarse grout.
 - .3 Grout: Minimum compressive strength of 20 MPa at 28 days. Maximum aggregate size and grout slump: CSA A179.
- .9 Grout Mixing:
 - .1 Mix batched and delivered grout in accordance with CSA-A23.1 transit mixed.
 - .2 Mix grout ingredients in quantities needed for immediate use in accordance with CSA A179 coarse grout.
 - .3 Add admixtures in accordance with manufacturer's instructions; mix uniformly.
 - .4 Do not use calcium chloride or chloride based admixtures.
- .10 Mix Tests:
 - .1 Testing Mortar Mix:
 - .1 Test mortar to requirements of Section 01 45 00 - Quality Control, and in accordance with CSA A179, for proportion specification. Test prior to construction and during construction for:
 - .1 Compressive strength.
 - .2 Consistency.
 - .3 Mortar aggregate ratio.
 - .4 Sand/cement ratio.
 - .5 Water content and water/cement ratio.
 - .6 Air content.
 - .7 Splitting tensile strength

- .2 Testing Grout Mix:
 - .1 Test grout to requirements of Section 01 45 00 - Quality Control, and in accordance with CSA A179, for proportion specification. Test prior to construction and during construction for:
 - .1 Compressive strength.
 - .2 Sand/cement ratio.
 - .3 Water content and water/cement ratio.
 - .4 Slump.

2.3 GALVANIZING

- .1 The following galvanizing requirements apply to steel anchors, ties, reinforcing and accessories where requirements are not otherwise specifically listed:
 - .1 Ties and Reinforcing:
 - .1 Mill Galvanized (Interior Use): In accordance with ASTM A116, Class 3
 - .2 Hot Dip Galvanized (Exterior, including inner wythe of exterior wall construction and High Humidity Use): In accordance with ASTM A153/A153M, Class B-2.
 - .2 Hot Dip Hardware and Bolts: In accordance with ASTM A153/A153M, Class B-2 regardless of location.
 - .3 Hot Dip Sheet Steel: In accordance with ASTM A653/653M, Coating Designation Z600, regardless of location.
 - .4 Structural Shapes and Pipes: In accordance with ASTM A123/A123M, Grade 85, regardless of location.

2.4 REINFORCEMENT

- .1 Bar reinforcement: Steel to CAN/CSA A371 and CSA G30.18, Grade 400 W.
- .2 Masonry Joint Reinforcement: In accordance with to CAN/CSA A371 and ASTM A496/A496M, with corrosion protection in accordance with CSA S304 and CSA A370, and as follows:
 - .1 Interior Walls: Hot dip galvanized, carbon steel.
 - .2 Wire Size for Side Rods: W1.7 or 3.8 mm diameter.
 - .3 Wire Size for Cross Rods: W1.7 or 3.8 mm diameter.
 - .4 Spacing of Cross Rods, Tabs, and Cross Ties: At a maximum of 400 mm O/C.
 - .5 Lengths: A minimum of 3000 mm, with prefabricated corner and tee units.
- .3 Connectors: In accordance with to CSA A370 and CSA S304 with hot dip galvanized finish.
- .4 Single Wythe Masonry Joint Reinforcement: Either ladder or truss type with single pair of side rods.
 - .1 Basis-of-Design Materials:
 - .1 Ladder BL10 and Truss BL30, Blok Lok.

2.5 TIES AND ANCHORS

- .1 Ties and anchors specified in this section shall be designed in accordance with CSA A370 for non-conventional masonry connectors as follows:
 - .1 Deflection: Maximum 2 mm, including free play, when acted upon by a lateral load of 0.45 kN, in all possible positions of adjustment.
 - .2 Positive restraint at position of maximum adjustment.
 - .3 Free play of multi-component ties maximum 1.2 mm when assembled in all possible configurations.
 - .4 Anchors shall allow vertical adjustment but resist tension and compression forces perpendicular to plane of wall.
- .2 Lateral Partition Supports (Top of Wall Anchors):
 - .1 Angle Support: Fabricated from 2.657 mm core metal thickness angled steel plate having 75 mm long legs fastened to deck structure to allow vertical movement of masonry assembly; hot dip galvanized.
 - .1 Basis-of-Design Materials:
 - .1 PTA 422, Blok Lok.
 - .2 Plate Support: Fabricated from 2.657 mm core metal thickness steel plate with 10 mm diameter metal 150 mm long welded to plate having closed end plastic tube fitted over rod that allows rod to move in and out of tube; hot dip galvanized after fabrication.
 - .1 Basis-of-Design Materials:
 - .1 PTA 420, Blok Lok.
 - .3 Rigid T-Intersection Anchors: Fabricate from steel bars 38 mm wide x 6 mm thick x 600 mm long with ends turned up 50 mm or with cross pins at installers option; hot dip galvanized.
 - .4 Anchor Bolts: Headed steel bolts in accordance with ASTM A307, Grade A; with ASTM A563/A563M hex nuts and, where indicated, flat washers; hot-dip galvanized in accordance with ASTM A153/A153M, Class C.
 - .5 Post Installed Anchors: Provide chemical or torque controlled expansion anchors, with capability to sustain, without failure, a load equal to six times the load imposed when installed in solid or grouted unit masonry and equal to four times the load imposed when installed in concrete when tested in accordance with ASTM E488/E488M conducted by a qualified independent testing agency, and as follows:
 - .1 Indoor Locations: Carbon-steel components zinc-plated in accordance with ASTM B633, Class Fe/Zn 5.
 - .2 Outdoor and High Humidity Locations: Alloy Group 1 or 2 stainless steel bolts complying with ASTM F593/F738M and nuts complying with ASTM F594/ASTM F836M.
 - .3 Fastening Into Solid Concrete or Solidly Grouted Installation: Two component, injectable adhesive specifically manufactured for use in installing dowels or threaded anchor rods and inserts into new or existing concrete or grout, and as follows:
 - .1 Epoxy Composition: Sealed packaging containing resin, hardener, cement and water; components.
 - .2 Curing Time: Rapid set, high strength and stiffness; maximum time 45 minutes at 20°C.

- .3 Basis-of-Design Materials:
 - .1 HIT HY150 System, Hilti Inc., no Substitutions Accepted.
- .4 Fastening through Hollow Wall Installation: Two component, injectable adhesive specifically manufactured for use in installing dowels or threaded anchor rods and inserts, with cylindrical mesh screen tube into new or existing masonry cavity wall, and as follows:
 - .1 Epoxy Composition: Sealed packaging containing resin, hardener, cement and water.
 - .2 Curing Time: Rapid set, high strength and stiffness; maximum time 60 minutes at 20°C.
 - .3 Basis-of-Design Materials:
 - .1 HIT HY20 System, Hilti Inc., no Substitutions Accepted.
- .5 Fastening to Hollow Wall Installation: Two component, injectable adhesive specifically manufactured for use in installing dowels or threaded anchor rods and inserts, with cylindrical mesh screen tube into new or existing masonry cavity wall, and as follows:
 - .1 Epoxy Composition: Sealed packaging containing resin, hardener, cement and water.
 - .2 Curing Time: Rapid set, high strength and stiffness; maximum time 60 minutes at 20°C.
 - .3 Basis-of-Design Materials:
 - .1 HIT HY20 System, Hilti Inc., no Substitutions Accepted.
- .6 Toggle Bolts: Tumble wing type, class and style as required for supported construction.

2.6 FLASHING

- .1 **Coordinate supply and installation of flexible flashing materials with Section 07 42 00 Aluminum Composite Material (ACM) Panels, provide only materials that are compatible with acceptable materials listed.**
- .2 **Butyl Rubber Base Flashing: minimum 1.2 mm thick butyl sheet rubber strips.**
- .3 **Sheet Steel Base Flashing: minimum 0.60 mm thick, to ASTM A653/A653M, formed as detailed, galvanized with Z275 zinc coating.**
- .4 **Modified Bitumen Base Flashing: SBS modified sheet membrane, minimum 1.0 mm thick self-adhering type.**
- .5 **Through Wall and Flexible Flashings: Install flexible membranes where required to maintain flow direction to divert water away from face of building envelope.**
 - .1 **Basis-of-Design Materials:**
 - .1 **Bakor Blueskin TWF, Henry Company.**
 - .2 **Mighty Flash, Hohmann & Banard Inc.**

2.7 ACCESSORIES

- .1 Joint Sealants: As specified under Section 07 92 00 - Joint Sealants, and as follows:
 - .1 Vertical Sealant: Colour to match **brick masonry**.
 - .2 Horizontal Sealant: Colour to match mortar.
- .2 Joint Filler: Control Joint Fillers: Preformed rubber, neoprene or polyvinylchloride, size and profile to suit intended application, and as indicated on drawings.

2.8 CLEANING COMPOUNDS

- .1 Use low VOC products in compliance with SCAQMD Rule 1168.
- .2 Compatible with substrate and acceptable to concrete masonry manufacturer for use on products.

Part 3 Execution

3.1 EXAMINATION

- .1 Verify surfaces and conditions are ready to accept work of this Section.
- .2 Examine work of other Sections upon which work of this section is dependent. Should discrepancies be found which affect the proper performance of the work of this section, do not commence work until such discrepancies have been resolved.
- .3 Perform work with minimal cutting and patching.

3.2 PREPARATION

- .1 Protect adjacent finished materials from damage due to masonry work.

3.3 APPLICATION

- .1 Manufacturer's Instructions: comply with manufacturer's written recommendations, including product technical bulletins, handling, storage and installation instructions, and datasheets.

3.4 INSTALLATION: GENERAL

- .1 Construction to conform to CAN/CSA A371.
- .2 Where mortar has started to harden at units requiring repositioning, remove and replace with fresh mortar.
- .3 Masonry horizontal and vertical joints to be 10 mm thick except where adjustments are necessary to maintain the bond pattern or to adjust coursing.

3.5 INSTALLATION: CONCRETE MASONRY UNITS

- .1 Standard concrete block units:
 - .1 Bond: running.
 - .2 Coursing height: 200 mm for one block and one joint.
 - .3 Jointing: concave where exposed or where paint or other finish coating is specified.
- .2 Build in miscellaneous items such as bearing plates, steel angles, bolts, anchors, inserts, sleeves and conduits.
- .3 Construct masonry walls using running bond unless otherwise noted.
- .4 Build around frames previously set and braced. Fill behind hollow frames within masonry walls with mortar or grout and embed anchors.
- .5 Fit masonry closely against electrical and plumbing outlets so collars, plates and covers overlap and conceal cuts.
- .6 Install movement joints and keep free of mortar where indicated.

- .7 Hollow Units: spread mortar setting bed from outside edge of face shells. Gauge amount of mortar on top and end of unit to create full joints, equivalent to shell thickness. Avoid excess mortar.
- .8 Solid Units: apply mortar over entire vertical and horizontal surfaces. Avoid bridging of airspace between brick veneer and backup wall with mortar.
- .9 Ensure compacted head joints. Use full or face-shell joint as indicated.
- .10 Tamp units firmly into place.
- .11 Do not adjust masonry units after mortar has set. Where resetting of masonry is required, remove, clean and reset units in new mortar.
- .12 Tool exposed joints concave; strike concealed joints flush.
- .13 After mortar has achieved initial set up, tool joints.
- .14 Do not interrupt bond below or above openings.

3.6 TOLERANCES

- .1 Tolerances for standard concrete unit masonry tolerances in accordance with CSA A165.1, supplemented as follows:
 - .1 Maximum variation between units within specific job lot not to exceed 2 mm.
 - .2 No parallel edge length, width or height dimension for individual unit to differ by more than 2 mm.
 - .3 Out of square tolerance not to exceed 2 mm.

3.7 INSTALLATION: CONNECTORS AND REINFORCEMENT

- .1 Supply and install masonry connectors and reinforcement in accordance with CSA A370, CAN/CSA A371, CSA-A23.1 and CSA-S304.1 unless indicated otherwise.
- .2 Supply and install additional reinforcement to masonry as indicated and as required for seismic loads in accordance with building code requirements.

3.8 BONDING AND TYING

- .1 Install unit, adjustable, joint reinforcement where indicated and in accordance with CSA A370, CAN/CSA A371, and manufacturer's instructions.
 - .1 Install horizontal joint reinforcement 400 mm on centre.
 - .2 Place masonry joint reinforcement in first and second horizontal joints above and below openings. Extend minimum 400 mm each side of opening.
 - .3 Place joint reinforcement continuous in first and second joint below top of walls.
 - .4 Lap joint reinforcement ends minimum 200 mm.
 - .5 Connect joint corners and intersections with strap anchors 400 mm on centre.

3.9 REINFORCED LINTELS AND BOND BEAMS

- .1 Reinforce masonry beams, masonry lintels and bond beams as indicated.
- .2 Place and grout reinforcement in accordance with CSA-S304, CAN/CSA A371, and CSA A179.
- .3 Support and position reinforcing bars in accordance with CAN/CSA A371.

3.10 GROUTING

- .1 Grout masonry in accordance with CSA S304.1, CAN/CSA A371 and CSA A179 and as indicated.

3.11 ANCHORS

- .1 Supply and install metal anchors in accordance with CSA A370 and CAN/CSA A371 as indicated.

3.12 LATERAL SUPPORT AND ANCHORAGE

- .1 Supply and install lateral support and anchorage in accordance with CSA S304.1 and as indicated.

3.13 CONTROL AND EXPANSION JOINTS

- .1 Install control and expansion joint materials in unit masonry as masonry progresses; do not allow materials to span control and expansion joints without provision to allow for in-plane wall or partition movement.
- .2 Form control joints in concrete masonry consisting of a complete vertical break free from mortar using one of the following methods:
 - .1 Break joint reinforcement at control joints, but extend bond beam reinforcing 400 mm into wall across control joint and wrap with 0.15 mm polyethylene bond breaker.
 - .2 Fit bond breaker strips into hollow contour in ends of concrete masonry units on one side of control joint; fill resultant core with grout and rake out joints in exposed faces for application of sealant.
 - .3 Install preformed control joint gaskets designed to fit standard sash block.
 - .4 Install interlocking units designed for control joints; install bond breaker strips at joint; keep head joints free and clear of mortar or rake out joint for application of sealant.
 - .5 Install temporary foam plastic filler in head joints and remove filler when unit masonry is complete for application of sealant.
 - .6 Refer to Drawings for control and expansion joint locations, and vertical reinforcing requirements; confirm location with Consultant before installation; confirm with Consultant where not shown on Drawings.
- .3 Install a minimum 10 mm high horizontal, pressure relieving joints by inserting a compressible filler, sealant and backer rod specified in Section 07 92 00 - Joint Sealants; locate horizontal, pressure relieving joints beneath shelf angles supporting masonry.

3.14 FIELD BENDING

- .1 Do not field bend reinforcement and connectors except where indicated or authorized by Consultant.
- .2 When field bending is authorized, bend without heat, applying a slow and steady pressure.
- .3 Replace bars and connectors which develop cracks or splits.

3.15 INSTALLATION: FLASHINGS

- .1 ***Build in flashings in masonry in accordance with CAN/CSA A371.***
 - .1 ***Install flashings at base of cavity wall and where cavity is interrupted by horizontal members or supports and as shown on drawings.***

.2 In cavity walls and veneered walls, carry flashings from front edge of exterior cladding material, then up backing not less than 150 mm, and as follows:

.1 For masonry backing embed or bond flashing 25 mm in joint.

.3 Lap joints 150 mm and seal with adhesive.

.2 Form flashing (end dams) at lintels, sills and wall ends to prevent water from travelling horizontally past flashing ends.

3.16 REPAIR/RESTORATION

- .1 Upon completion of masonry, fill holes and cracks, remove loose mortar and repair defective work.
- .2 Place safety devices and signs near work areas as indicated and directed; seal or repair openings and joints where there is potential risk of water or chemical infiltration through the wall assembly.
- .3 Rinse off masonry until no indications of chemicals are present; rinse from bottom to top and from top to bottom; cleanup work area as work progresses; remove debris and waste from site at end of each work day.

3.17 FIELD QUALITY CONTROL

- .1 Site Tests, Inspection: as follows:
 - .1 Concrete masonry units will be sampled and tested by independent testing agency appointed and paid by Owner in accordance with CSA S304.1.
 - .2 Notify inspection agency minimum of 24 hours in advance of requirement for tests.

3.18 CLEANING

- .1 Clean in accordance with Section 01 74 11 - Cleaning and Waste Management.
- .2 Concrete Unit Masonry:
 - .1 Progress Cleaning:
 - .1 Standard Concrete Unit Masonry:
 - .1 Allow mortar droppings on masonry to partially dry then remove by means of trowel, followed by rubbing lightly with small piece of block. Clean wall surface with suitable brush or burlap.
- .3 Upon completion of installation, remove surplus materials, rubbish, tools and equipment barriers.
- .4 Waste Management: separate waste materials for reuse and recycling in accordance with Section 01 74 00 - Cleaning and Waste Management.

END OF SECTION

Part 1 General

1.1 RELATED REQUIREMENTS

- .1 Section 01 35 00 - Delegated Design
- .2 Section 04 22 00 - Concrete Unit Masonry.
- .3 Section 06 10 00 - Rough Carpentry.
- .4 Section 07 92 00 - Joint Sealants.

1.2 REFERENCES

- .1 Aluminum Association, Inc. (AA)
 - .1 AA DAF-45-2003 (R2009), Designation System for Aluminum Finishes.
- .2 American Aluminum Manufacturers Association (AAMA):
 - .1 AAMA 2605-22, Voluntary Specification, Performance Requirements and Test Procedures for Superior Performing Organic Coatings on Aluminum Extrusions and Panels. (With Test Procedures and Performance Requirements Appendix)
 - .2 AAMA 509-22, Voluntary Test and Classification Method for Drained and Back Ventilated Rain Screen Wall Cladding System.
 - .3 AAMA 2605-22 Voluntary Specifications, Performance Requirements and Test Procedures for Superior Performing Organic Coatings on Aluminum Extrusion and Panels (With Coil Coating Appendix)
- .3 American Society for Testing and Materials International (ASTM)
 - .1 ASTM A240/A240M-25a, Standard Specification for Chromium and Chromium-Nickel Stainless Steel Plate, Sheet, and Strip for Pressure Vessels and for General Applications.
 - .2 ASTM A480/A480M-25b, Standard Specification for General Requirements for Flat-Rolled Stainless and Heat-Resisting Steel Plate, Sheet, and Strip.
 - .3 ASTM A653/A653M-25a, Specification for Steel Sheet, Zinc-Coated (Galvanized) or Zinc-Iron Alloy-Coated (Galvannealed) by the Hot-Dip Process.
 - .4 ASTM A755/A755M-18(2024), Standard Specification for Steel Sheet, Metallic Coated by the Hot-Dip Process and Prepainted by the Coil-Coating Process for Exterior Exposed Building Products.
 - .5 ASTM A792/A792M-25, Standard Specification for Steel Sheet, 55% Aluminum-Zinc Alloy-Coated by the Hot-Dip Process.
 - .6 ASTM B209/B209M-24, Standard Specification for Aluminum and Aluminum-Alloy Sheet and Plate.
 - .7 ASTM C297/C297M-16(2024), Standard Test Method for Flatwise Tensile Strength of Sandwich Constructions.
 - .8 ASTM D523-25, Standard Test Method for Specular Gloss.
 - .9 ASTM D1781-98(2021), Standard Test Method for Climbing Drum Peel for Adhesives.
- .4 Canadian Sheet Steel Building Institute (CSSBI)
 - .1 CSSBI 20M-2017, Standard for Sheet Steel Cladding for Industrial, Commercial and Institutional Building Applications.
 - .2 CSSBI S8-2018, Quality and Performance Specification for Prefinished Sheet Steel Used for Building Products.

- .5 Canadian Standards Association (CSA)
 - .1 CSA S157-17/S157.1-17 (R2022), Strength Design in Aluminum/Commentary on CSA S157-17, Strength Design in Aluminum.
 - .2 CSA S136-16 (R2021), North American Specification for the Design of Cold Formed Steel Structural Members
 - .3 CSA W47.2-11(R2025), Certification of Companies for Fusion Welding of Aluminum, Includes Update No. 1 (2011), Update No. 2 (2012).
- .6 Health Canada/Workplace Hazardous Materials Information System (WHMIS)
 - .1 SDS - Safety Data Sheets.
- .7 Underwriters Laboratories of Canada (ULC)
 - .1 ULC 134, Standard Method of Fire Test of Exterior Wall Assemblies. (CAN/ULC-S134-22)

1.3 ADMINISTRATIVE REQUIREMENTS

- .1 Convene pre-installation meeting one week prior to beginning [work of this Section] [and] [on-site installation], with Contractor, Consultant, installer, manufacturer's representative to:
 - .1 Verify project requirements.
 - .2 Review installation and substrate conditions.
 - .3 Co-ordination with other building subtrades.
 - .4 Review manufacturer's installation instructions and warranty requirements.
- .2 Manufacturer's representative shall also provide frequent inspection visits during the course of work of this Section to assure quality and competence of panel installation.

1.4 ACTION SUBMITTALS / INFORMATIONAL SUBMITTALS

- .1 Submit product data in accordance with Section 01 33 00 - Submittal Procedures:
 - .1 Submit manufacturer's printed product literature, specifications and datasheet.
 - .2 Submit WHMIS SDS - Safety Data Sheets acceptable to Labour Canada, and Health and Welfare Canada.
- .2 Submit shop drawings in accordance with Section 01 33 00 - Submittal Procedures:
 - .1 Indicate layout, profiles and product components including anchorage, accessories, finish colours and textures.
 - .2 Include details showing thickness and dimensions of the various system parts, fastening and anchoring methods, locations of joints and gaskets and location and configuration of movement joints.
- .3 Submit samples in accordance with Section 01 33 00 - Submittal Procedures:
 - .1 Submit duplicate 300 x 300 mm samples of composite panel in thickness specified from representative materials, finishes and colours. Include clips, anchors, supports, fasteners, closures, and other panel accessories for assembly approval.
- .4 Manufacturer's Instructions:
 - .1 Submit manufacturer's installation instructions and special handling criteria, installation sequence and cleaning procedures.

- .5 Submit quality control submittals in accordance with Section 01 45 00 - Quality Control.
 - .1 Test Reports: certified test reports showing compliance with specified performance characteristics and physical properties.
 - .2 Certificates: submit certificates signed by manufacturer certifying that composite wall panels comply with specified performance characteristics and physical properties.
- .6 Manufacturers' Field Reports: Submit copies of manufacturers field reports.

1.5 QUALITY ASSURANCE

- .1 Installer Qualifications: Engage experienced installer with a minimum of five years experience who has completed systems similar in material, design, and extent to that indicated for Project and with record of successful performance and is approved by manufacturer.
- .2 Retain a professional engineer, registered in the province of the Work, to design fabrication and erection of the Work of this Section in accordance with applicable Building Code and Contract Document requirements including, but not limited to, the following:
 - .1 Seal and signature to shop drawings and design submittals requiring structural engineering.
 - .2 Site review and certification of installed components.
 - .3 Completion of Letters or Commitment and Supervision specified in Section 01 35 00 – Delegated Design.
 - .4 Manufacturer's Engineering Recommendations: Perform composite wall panel work in accordance with written recommendations from panel manufacturer.
 - .5 Verify panel thickness based on maximum deflections provided in this Section and to suit building location and configuration.
- .3 Mock-ups:
 - .1 Mock-ups: construct mock-ups in accordance with Section 01 45 00 - Quality Control and to requirements supplemented as follows:
 - .1 Provide mock-up for evaluation of surface finishes and workmanship.
 - .2 Construct mock-up indicating relationship between wall panels, air spaces, air/vapour retarder membrane, windows, and doors.
 - .3 Co-ordinate type and location of mock-ups with project requirements.
 - .4 Accepted units will be used as standard for acceptance of production units.
 - .5 Remove and replace units which are not accepted.
 - .6 Do not proceed with remaining work until workmanship, colour, and finish are reviewed by Consultant.
 - .7 Refinish mock-up area as required to produce acceptable work.
 - .8 When accepted, mock-up will demonstrate minimum standard of quality required for this work.
 - .1 Approved mock-up may remain as part of finished work.

1.6 DELIVERY, STORAGE, AND HANDLING

- .1 Deliver, store and handle materials in accordance with Section 01 61 00 - Product Requirements.

- .2 Deliver, store and protect material in accordance with panel manufacturer's recommendations.
- .3 Do not expose panels with strippable film to direct sunlight or extreme heat.
- .4 Packaging Waste Management
 - .1 Separate and recycle waste materials in accordance with Section 01 74 00 - Cleaning and Waste Management.

Part 2 Products

2.1 MANUFACTURERS

- .1 Acceptable Manufacturers: Subject to compliance with requirements specified in this Section, manufacturers offering products that may be incorporated into the Work include; but are not limited to, the following:
 - .1 Alucobond Plus, Alcan Composites Inc.
 - .2 Alcotex, Alcotex Inc.
 - .3 Accumet 2000, Flynn.
 - .4 Alpolic, Mitsubishi Chemical.
 - .5 Reynobond, Reynolds American Manufacturing.

2.2 PERFORMANCE/DESIGN CRITERIA

- .1 Maximum deflection not to exceed L/180 under system's own weight plus wind load (positive and negative) loads acting normal to the plane in accordance with the Building Code Climatic Data, wind load 1:30 years.
- .2 Calculate live load deflections in accordance with CSSBI 20M, as modified by the requirements of this Section.
- .3 Provide for movement of components without causing buckling, failure of joint seals, undue stress on fasteners when subject to seasonal temperature range from -40°C (-40°F) to +50°C (120°F), and seismic and wind loads noted.
- .4 Include expansion joints to accommodate movement in wall system and between wall system and building structure, where these movements are caused by deflection of building structure, and accommodate these movements, without permanent distortion, damage to infills, racking of joints, breakage of seals, or water penetration.
- .5 Provide for positive drainage to the exterior of all water entering or condensation occurring within the system.
- .6 Final review and acceptance of work completed by this Section shall be carried out by the manufacturer's representative, the Consultant, Contractor and the Subcontractor.

2.3 COMPOSITE METAL PANEL MATERIALS

- .1 Composite aluminum panel: Aluminum sheets thermally bonded in continuous process, under tension, to thermoplastic core with no glues or adhesives between dissimilar materials, and as follows:
 - .1 Total Composite Thickness: 4 mm.
 - .2 Aluminum Face Sheets:
 - .1 Thickness: 0.51 mm.

- .2 Factory Finish: coil coated with fluoropolymer paint to AAMA 2605, Clear anodized to Aluminum Association (AA) Architectural Class 1, AA-C22-A41, or Colour anodized to Aluminum Association (AA) Architectural Class 1, AA-C22-A44.
- .3 Colour: as indicated on drawings. Confirm colour with Consultant prior to ordering.
Core: non-combustible, tested to ULC S134.
- .3 Bond Integrity: tested for resistance to delamination as follows:
 - .1 Bond Strength: 10.3 MPa minimum to ASTM C297.
 - .2 Peel Strength: 100 N mm/mm minimum to ASTM D1781.
 - .3 No degradation in bond performance after 8 hours of submersion in boiling water and after 21 days of immersion in water at 21 degrees C.
- .2 Aluminum extrusions:
 - .1 Alloy: AA-6063-T5.
 - .2 Colour: Mill finish where non-exposed.
- .3 Stiffeners:
 - .1 Alloy: AA-6063-T5.
 - .2 Colour: Mill finish.

2.4 SYSTEM BACK-UP MATERIALS

- .1 Sub-girts: Structural quality steel to ASTM A653, with Z275 zinc coating to ASTM A792, adjustable double-angle profile as indicated to accept panel with structural attachment to building frame.
- .2 Provide blocking and bracing required for panel system.
- .3 Isolation Tape: Manufacturers standard material for separating dissimilar metals from direct contact.
- .4 Stiffeners, as required: Minimum 25 mm x 25 mm aluminum, bonded to the full length of face sheet using double sided high bond isolating tape to prevent weather staining and frost lines to the face of the panel. Bonding tape to be protected with continuous bead of caulking on both sides of stiffeners, type as recommended by manufacturer.
- .5 Insulation Fastenings: Corrosion resistant, galvanized bugle head screws with 38 mm diameter washer, 25 mm minimum penetration into framing.
- .6 Rigid Insulation: DuPont™ Styrofoam™ Brand Cavtymate™, or approved equivalent. Thickness as indicated on Drawings.
- .7 Air/Vapour Retarder (Self-adhering membrane): Self adhering SBS modified bitumen reinforced membrane; having low temperature formulation appropriate for installation requirements; tested in accordance with ASTM E96 and ASTM E2178, and having the following nominal properties:
 - .1 Low Temperature Flexibility: Less than -20°C
 - .2 Thickness: 1.0 mm
 - .3 Acceptable Materials:
 - .1 Perm-A-Barrier Wall Membrane, Grace.
 - .2 Blueskin SA, Henry Company.
 - .3 Soprastick 1100T, Soprema.
 - .4 ExoAir 110, Tremco.

.5 Air-Shield, W. R. Meadows.

- .8 Through Wall Membranes: Manufacturer's recommended reinforced self adhesive, compatible with air and vapour membrane and that will not become plastic and extrude onto finished surfaces when exposed to high wall temperatures. Soprema SOPRASEAL STICK FLASHPRO, or approved equivalent.

2.5 FABRICATION

- .1 Aluminum wall panels and components shall comply with details as indicated on drawings and as indicated in shop drawings.
- .2 All components shall be factory fabricated ready for field installation. All components shall match quality and installation of accepted mock-up specified above.
- .3 Tolerances:
- .1 Panel bow shall not exceed 0.8% of panel overall dimension in width or length.
 - .2 Panel dimensions shall allow for field adjustment and thermal movement.
 - .3 Panel lines, breaks and curves shall be sharp, smooth and free of warps or buckles.
 - .4 Panel shall be visually flat.
 - .5 Panel surfaces shall be free of scratches or marks caused during fabrication.

2.6 ACCESSORIES

- .1 Panel Stiffeners: structurally fastened or restrained at ends, secured to rear face of composite panel with silicone or double sided high bond isolating tape to prevent weather staining and frost lines to the face of the panel as recommended by panel manufacturer, size stiffeners to maintain panel flatness to specified tolerances, material as recommended by manufacturer.
- .2 System Sealants: Sealants within the panel system, as recommended by manufacturer, colour to be selected by Consultant.
- .3 Gaskets: Santoprene or EPDM as recommended by manufacturer.
- .4 Flashings: Fabricate flashing from 1.57 mm minimum thickness aluminum sheet. Where exposed to view, finish to match adjacent panels. Provide lap strip under flashing at abutted conditions; with lapped surfaces sealed with a full-bed of non-hardening sealant.
- .5 Fasteners:
- .1 Attachment of the panel system to the primary panel structural supports shall be made using manufacturer's recommended fasteners.
 - .2 Typical joinery shall be attached with concealed, non-corrosive fasteners. When exposed fasteners are required in isolated conditions, the fastener shall be obscured in the panel joinery, exposed fasteners shall be stainless steel.
- .6 Insulation Adhesive: Manufacturer's recommended trowel applied adhesive compatible with membrane system and insulation.

Part 3 Execution

3.1 PREPARATION

- .1 Obtain all dimensions from job site.
- .2 Ensure all structural support is aligned and condition is acceptable.

- .3 Building surfaces shall be smooth, clean and dry, and free from defects detrimental to the installation of the system. Notify Contractor of conditions not acceptable for installation of system.
- .4 Inspect wall system and components before installation and verify that there is no shipping damage.
- .5 Do not install damaged panels; repair or replace as required for smooth and consistent finished appearance.

3.2 INSTALLATION

- .1 Compliance: comply with manufacturer's written recommendations or specifications, including product technical bulletins, handling, storage and installation instructions, and datasheets.
- .2 Install composite panels in accordance with manufacturer's written instructions and shop drawings.
 - .1 Allow for thermal movement.
- .3 Install air/vapour retarder membrane in accordance with the manufacturer's instructions.
 - .1 Prepare surfaces in accordance with manufacturer's written requirements for type of substrate; free from voids, spalled areas, loose aggregates or sharp points; clean surfaces to remove contaminants that could affect bond such as grease or wax, dust, dirt and debris and as follows:
 - .1 Masonry Substrates: Apply air and vapour barrier membranes to masonry substrates having smooth flush mortar joints; fill voids and holes with lean mortar mix, non-shrinking grout or parge coat.
 - .2 Adjacent Materials: Treat construction joints and install flashings as recommended by manufacturer.
 - .2 Apply primer to substrates when required by manufacturer at rate recommended by manufacturer; cover primed substrates on same day, reapply primer when work cannot be completed on the same day.
 - .3 Install air and vapour membranes in accordance with manufacturer's written requirements, using appropriate equipment and skilled workers and as follows:
 - .1 Holes and Tears: Repair holes and tears with compatible membrane materials; overlap affected surface area by a minimum of 100 mm and seal edges of repair with manufacturer's recommended mastic material.
 - .2 Transition Membranes: Connect air and vapour membranes to adjacent assemblies having pre-installed transition membranes at openings and other assemblies; install transition membranes where required to maintain continuity of building envelope.
 - .3 Corner Details and Protrusions: Cover inside corners and protrusions, centred and installed in direct contact with the substrate with no voids under the membrane strip; reinforce outside corners by double lapping or stripping as required by membrane manufacturer.
 - .4 Through Wall and Flexible Flashings: Install flexible membranes where required to maintain flow direction to divert water away from face of building envelope.
 - .4 Separate air and vapour membranes from incompatible materials and provide manufacturer's recommended transition materials required to maintain continuity of building envelope.

- .5 Inspect membrane installation at end of each day of work and before installation of insulation; seal upper edge of membrane with mastic at end of day's work when precipitation is anticipated or when work is expected to be delayed or interrupted by more than one day.
- .4 Install both layers of girts as indicated on drawings and to ensure no air gap between girts and insulation boards.
- .5 Install girts attached to structural support or wall framing, using recommended fasteners.
- .6 Install insulation between girts forming tight to following applied girt to maintain continuous thermal barrier.
- .7 Erect panels plumb, level and true.
- .8 Do not install component parts that are observed to be defective, including warped, bowed, dented, scraped and broken members.
- .9 Install exterior metal cladding to structural support by hidden mechanical fasteners.
- .10 Install pre-formed corners and end enclosures, sealed to arrest direct weather penetration.
- .11 Ensure panels aligned vertically and horizontally.
- .12 Assemble and secure wall system so stresses on sealants are within manufacturers' recommended limits.
- .13 Separate dissimilar metals; use appropriate gasket and fasteners to minimize corrosive or electrolytic action between metals.
- .14 Install flashings to divert all moisture and condensation to exterior. Trim and flash around doors, louvers, and windows. Use only membrane flashing supported by insulation per architectural details.

3.3

CLEANING

- .1 Remove strippable film coating (if used) as soon as possible after surrounding material has been installed.
- .2 Remove all excess materials, debris and equipment at completion.
- .3 Clean all panels clean and free of all grime and dirt.
- .4 Touch-up damaged finishes with manufacturer's recommended touch-up paint.

END OF SECTION

Part 1 General

1.1 RELATED REQUIREMENTS

- .1 Division 03 - Cast-In-Place Concrete.
- .2 Section 06 40 00 - Architectural Woodwork.
- .3 **Section 07 42 00 - Aluminum Composite Material (ACM) Panels.**
- .4 Section 08 11 13 - Metal Doors and Frames.
- .5 Section 08 31 00 - Access Doors and Panels.
- .6 Section 09 21 16 - Gypsum Board Assemblies.
- .7 Section 09 30 13 - Tiling.
- .8 Section 09 65 00 - Resilient Sports Flooring.
- .9 Division 23 - Mechanical.
- .10 Other technical sections as required.

1.2 REFERENCES

- .1 American Society for Testing and Materials International, (ASTM)
 - .1 ASTM C794-18(2022), Standard Test Method for Adhesion-in-Peel of Elastomeric Joint Sealants.
 - .2 ASTM C834-17(2023), Standard Specification for Latex Sealants.
 - .3 ASTM C919-24, Standard Practice for Use of Sealants in Acoustical Applications.
 - .4 ASTM C920-18(2024), Standard Specification for Elastomeric Joint Sealants.
 - .5 ASTM C1193-25, Standard Guide for Use of Joint Sealants.
 - .6 ASTM C1330-23, Standard Specification for Cylindrical Sealant Backing for Use with Cold Liquid-Applied Sealants.
 - .7 ASTM C1521-19(2025), Standard Practice for Evaluating Adhesion of Installed Weatherproofing Sealant Joints.
 - .8 ASTM D2240-15(2021), Standard Test Methods for Rubber Property, Durometer Hardness.
- .2 Department of Justice Canada (Jus)
 - .1 Canadian Environmental Protection Act, 1999 (2018) (CEPA).
- .3 Health Canada/Workplace Hazardous Materials Information System (WHMIS)
 - .1 SDS - Safety Data Sheets.
- .4 Sealant, Waterproofing, and Restoration Institute (SWRI) publication – Sealants: The Professionals' Guide 2013.
- .5 South Coast Air Quality Management District (SCAQMD), California State
 - .1 SCAQMD Rule 1168-05, Adhesives and Sealants Applications.
- .6 Transport Canada (TC)
 - .1 Transportation of Dangerous Goods Act, 1992 (2019 ammend.) (TDGA).
- .7 Underwriters Laboratories of Canada (ULC)
 - .1 CAN/ULC 115-2018, Standard Method of Fire Tests of Firestop Systems.

1.3 ACTION SUBMITTALS / INFORMATIONAL SUBMITTALS

- .1 Submit product data in accordance with Section 01 33 00 - Submittal Procedures.
 - .1 Submit WHMIS SDS - Safety Data Sheets. WHMIS SDS acceptable to Labour Canada and Health and Welfare Canada for sealants. Indicate VOC content.
- .2 Submit samples in accordance with Section 01 33 00 - Submittal Procedures.
 - .1 Provide colour samples of the actual sealants for approval; painted or printed colour charts are not acceptable.
- .3 When required by Consultant, submit test certificates from an approved Canadian materials testing laboratory indicating that sealants meet the requirements of the standards specified, and that the tests have been conducted in accordance with ASTM D2240.
- .4 Submit manufacturer's printed product literature, specifications and data sheet. Indicate the following:
 - .1 Caulking compound.
 - .2 Primers.
 - .3 Sealing compound, each type, including compatibility when different sealants are in contact with each other.
 - .4 Manufacturers Sample Warranty.
- .5 Submit manufacturer's installation instructions for each product used.

1.4 QUALITY ASSURANCE

- .1 Caulking shall be performed by a caulking contractor with minimum three years successful experience in Work of similar size and complexity.
- .2 Before performing Work of this Section, submit the names of proposed materials. If specified using Standards, indicate Qualification Number.
- .3 Compatibility: Ensure sealants are compatible with adjacent materials and are approved by manufacture for use with adjacent materials.
- .4 Mock-Ups
 - .1 Construct mock-up in accordance with Section 01 45 00 - Quality Control.
 - .2 Before performing caulking work do sample applications of each type of sealant for approval. Site locations for sample applications shall be designated by Consultant. Approved samples shall form standard for this project and no work of inferior quality will be allowed. Start no final work until approval of samples is given by the Consultant.

1.5 DELIVERY, STORAGE, AND HANDLING

- .1 Deliver, handle, store and protect materials in accordance with Section 01 61 00 - Product Requirements.
- .2 Deliver containers labelled and sealed, complete with written application and maintenance instructions.
- .3 Store materials in a dry heated enclosure in accordance with manufacturer's instructions.
- .4 Remove from site and dispose of packaging materials at appropriate recycling facilities.
- .5 Place materials defined as hazardous or toxic in designated containers.
- .6 Handle and dispose of hazardous materials in accordance with the CEPA, TDGA, Regional and Municipal regulations.

- .7 Unused sealant material must not be disposed of into sewer system, into streams, lakes, onto ground or in other location where it will pose health or environmental hazard.
- .8 Divert unused joint sealing material from landfill to official hazardous material collections site approved by Consultant.
- .9 Empty plastic joint sealer containers are not recyclable. Do not dispose of empty containers with plastic materials destined for recycling.
- .10 Fold up metal banding, flatten, and place in designated area for recycling.
- .11 Packaging Waste Management
 - .1 Separate and recycle waste materials in accordance with Section 01 74 00 - Cleaning and Waste Management.

1.6 SITE CONDITIONS

- .1 Environmental Limitations:
 - .1 Do not proceed with installation of joint sealants under following conditions:
 - .1 When ambient and substrate temperature conditions are outside limits permitted by joint sealant manufacturer or are below 4.4 degrees C.
 - .2 When joint substrates are wet.
- .2 Joint-Width Conditions:
 - .1 Do not proceed with installation of joint sealants where joint widths are less than those allowed by joint sealant manufacturer for applications indicated.
- .3 Joint-Substrate Conditions:
 - .1 Do not proceed with installation of joint sealants until contaminants capable of interfering with adhesion are removed from joint substrates.
 - .2 Substrate must be clean, dry, and frost free.

1.7 WARRANTY

- .1 Contractor hereby warrants that caulking work will not leak, crack, crumble, melt, shrink, run, lose adhesion or stain adjacent surfaces in accordance with General Conditions, but for three years.
- .2 Provide Warranty for sealants to include in maintenance manuals as specified in Section 01 78 10 - Closeout Submittals and Requirements.

Part 2 Products

2.1 MANUFACTURERS

- .1 Acceptable Manufacturers: Subject to compliance with requirements in this Section and as recommended by the manufacturer, manufacturers offering products that may be incorporated into the Work include the following:
 - .1 Master Builders Solutions (previously BASF, Sonneborn).
 - .2 Chemtron Manufacturing Ltd.
 - .3 DuPont
 - .4 GE Silicones Limited.
 - .5 Loxon, Sherwin Williams
 - .6 MAPEI Inc.
 - .7 Pecora

- .8 Sika Chemical of Canada Ltd.
- .9 Tremco Ltd.

2.2 PERFORMANCE/DESIGN CRITERIA

- .1 Sealant system shall satisfy following requirements for duration of warranty period:
 - .1 Waterproof, flexible, and thermally compatible with substrate under applicable service conditions.
 - .2 Provide a weather-tight seal that does not allow moisture penetration.
 - .3 Shall not debond, crack, or craze.
 - .4 Shall not leak.
- .2 Reference to products does not relieve manufacturer of responsibility to comply fully with specified criteria.

2.3 SEALANT MATERIALS

- .1 Do not use caulking that emits strong odours, contains toxic chemicals or is not certified as mould resistant in air handling units.
- .2 When low toxicity caulks are not possible, confine usage to areas which offgas to exterior, are contained behind air barriers, or are applied several months before occupancy to maximize offgas time.
- .3 Unless otherwise specified, VOC content limits of sealants shall be in accordance with SCAQMD Rule 1168 and as follows:
 - .1 Architectural Materials:
 - .1 Sealants: VOC content limit 250 g/L.
 - .2 Sealant Primers for Non-Porous Surfaces: VOC content limit 250 g/L.
 - .3 Sealant Primers for Porous Surfaces: VOC content limit 775 g/L.
 - .2 All Other Applications:
 - .1 Sealants: VOC content limit 420 g/L.
 - .2 Sealant Primers: VOC content limit 750 g/L.

2.4 SEALANT MATERIAL DESIGNATIONS

- .1 Type S-1: Acrylic Latex One Part, Shore A Hardness 20, to ASTM C834.
 - .1 Acceptable Materials:
 - .1 Latacalk, Chemtron.
 - .2 Sonolac, BASF Sonneborn.
 - .3 Latex 100, Tremco.
- .2 Type S-2: Silicone Sealant; mould and mildew resistant.
 - .1 To ASTM C920; type S; grade NS; class 50; use NT, G, and A.
 - .1 Acceptable Materials:
 - .1 Multiseal, Chemtron.
 - .2 795 Silicone, DuPont.
 - .3 SCS2000, GE.
 - .4 895 NST, Pecora
 - .5 Spectrem 2 Silicone, Tremco Inc.

- .1 To ASTM C920; type S; grade NS; class 50; use NT, G, and A.
 - .1 Acceptable Materials:
 - .1 790 Silicone, DuPont.
 - .2 SilPruf SCS 2000, GE.
 - .3 890 NST, Pecora
 - .4 Spectrem 1 Silicone, Tremco Inc.
 - .2 To ASTM C920; type S; grade NS; class 25; use NT, G, and A.
 - .1 Acceptable Materials:
 - .1 OmniPlus, BASF Sonneborn.
 - .2 786 Silicone, DuPont.
 - .3 SCS1700, General Electric.
 - .4 898 NST, Pecora
 - .5 Trensil 200, Tremco Inc.
- .3 Type S-3: Silicone Sealant; general construction and air-seal sealant.
 - .1 To ASTM C920: type S; grade NS; class 25; use NT, M, G, A, O.
 - .1 Acceptable Materials:
 - .1 790 or 795 Silicone, DuPont.
- .4 Type S-5: Acoustical Sealant; interior, non-skimming, non-hardening, simple component synthetic rubber sealant.
 - .1 Acceptable Materials:
 - .1 Metaseal, Chemtron.
 - .2 AIS 919, Pecora
 - .3 Acoustical Sealant, Tremco.
- .5 **Type S-6: Multi-component polyurethane sealant; chemical curing, exterior wall sealant.**
 - .1 **To ASTM C920: type M; grade NS; class 50; use T, NT, M, A, O.**
 - .2 **Acceptable Materials:**
 - .1 **MasterSeal NP2, BASF.**
 - .2 **Thioplast 400, Chemtron.**
 - .3 **830, Isoflex.**
 - .4 **Dynatrol II, Pecora**
 - .5 **Sikaflex 2c NS, Sika.**
 - .6 **Dymeric, Tremco.**
- .6 Type S-7: Single-component polyurethane or hybrid sealant; non-sag, for general construction.
 - .1 To ASTM C920: type S; grade NS; class 25; use NT, M, A, O, T.
 - .2 Acceptable Materials:
 - .1 Masterseal NPI or 150, BASF Sonneborne.
 - .2 Multiflex, Chemtron.
 - .3 H1 or S1, Loxon
 - .4 Mapeflex P1, MAPEI Inc.
 - .5 Dynatrol I-XL Hybrid, Pecora

- .6 Sikaflex 1a or SikaHyflex 150LM, Sika.
- .7 Dymonic FC, Tremco Inc.
- .8 Pourthane NS, W.R. Meadows Canada.

2.5 COLOURS

- .1 Colours: To match adjacent materials, as selected by Consultant, from manufacturer's standard colour range.

2.6 SEALANT SELECTION

- .1 Where no specified type of sealant is shown or specified, choose one of the sealants specified in this Section appropriate for its location.
- .2 Make sealant selections consistent with manufacturer's recommendations.
- .3 Use acrylic sealant Type S-1 only on the interior and only in situations where little or no movement can occur.
- .4 Use mould & mildew resistant silicone sealant Type S-2 for non-moving joints in washrooms . Do not use on floors.
- .5 Use silicone general construction sealant Type S-3 or Type S-6 and S-7 for all joints, interior and exterior, where no other specific sealant type specified. Use Type S-6 for joints over 19 mm.
- .6 Use acoustical sealant Type S-5 and air seal sealant Type S-3 only where they will be fully concealed and only where no constant or consistent air pressure difference will exist across the joint.

2.7 ACCESSORIES

- .1 Preformed Compressible and Non-Compressible back-up materials that are non-staining, compatible with joint substrate, sealants, primers, and other joint fillers, and are approved for applications indicated by sealant manufacturer based on site experience and laboratory testing.
 - .1 Rod Type Sealant Backings:
 - .1 ASTM C1330, Type C (closed cell material with a surface skin), Type O (open cell material) or Type B (bi-cellular material with a surface skin).
 - .2 Use any of the preceding types, as approved in writing by joint sealant manufacturer for joint application indicated.
 - .3 Size and density to control sealant depth and otherwise contribute to producing optimum sealant performance.
 - .4 Non-adhering to sealant, to maintain two sided adhesion across joint.
 - .2 High Density Foam.
 - .1 Extruded closed cell polyvinyl chloride (PVC), extruded polyethylene, closed cell, Shore A hardness 20, tensile strength 140 to 200 kPa, extruded polyolefin foam, 32 kg/m³ density, or neoprene foam backer, size as recommended by manufacturer.
 - .3 Bond Breaker Tape.
 - .1 Polyethylene bond breaker tape or other tape recommended by sealant manufacturer which will not bond to sealant.

- .2 Preformed Sealants
 - .1 Preformed Silicone Sealant System: Manufacturer's standard system consisting of pre-cured low modulus silicone extrusion, in sizes to fit joint widths indicated, combined with a neutral curing silicone sealant for bonding extrusions to substrates:
 - .1 Acceptable Materials:
 - .1 DuPont; 123 Silicone Seal.
 - .2 GE Silicones; UltraSpan US1100.
 - .3 Tremco; Spectrem Ez Seal.
 - .3 Primer: Non-staining type as recommended by sealant manufacturer.
 - .4 Joint Cleaner: Non-corrosive solvent type recommended by sealant manufacturer for applicable substrate materials.
 - .5 Bond Breaker: Pressure-sensitive plastic tape that will not bond to sealants.

Part 3 Execution

3.1 PROTECTION

- .1 Protect installed Work of other trades from staining or contamination.

3.2 EXAMINATION

- .1 Carefully inspect surfaces, materials to receive sealants and verify they are physically capable of retaining sealant bond.
- .2 Verify that fillers and backing provided under other Sections properly installed.
- .3 Grind joint surfaces if required to achieve adequate surface preparation.

3.3 PREPARATION

- .1 Prepare surfaces in accordance with manufacturer's instructions.
- .2 Examine joint sizes and conditions to establish correct depth to width relationship for installation of backup materials and sealants.
- .3 Maintain workmanship of highest quality in accordance with best trade practice.
- .4 Ensure that joint forming materials are compatible with sealant.
- .5 Clean bonding joint surfaces of harmful matter substances including dust, rust, oil grease, and other matter which may impair Work. Wire brush loose materials and other foreign matter which might impair adhesion of sealant.
- .6 Use air stream to blow out dirt and water from crevices.
- .7 Ensure joint surfaces are dry and frost free.
- .8 Prime all porous material (e.g. wood, masonry, concrete, ceramic or paver tile, etc).
- .9 Prime other joints when recommended by manufacturer. Use a brush that will reach all parts of the joints. Mask adjoining surfaces with tape prior to priming to prevent staining.

3.4 PRIMING

- .1 Where necessary to prevent staining, mask adjacent surfaces prior to priming and caulking.

- .2 Prime sides of joints in accordance with sealant manufacturer's instructions immediately prior to caulking.

3.5 BACKUP MATERIAL

- .1 Use backer rod as specified, to limit depth of sealant and to act as bond breaker at back of joint.
- .2 Install joint filler to achieve correct joint depth and shape, with approximately 30% compression.
- .3 Where depth of joint does not permit the use of backer rod apply paper masking tape to back of joint to act as bond breaker.
- .4 Ensure that no joints are formed which are bonded on adjacent sides where there is any possibility of movement.

3.6 MIXING

- .1 Mix materials in strict accordance with sealant manufacturer's instructions.

3.7 APPLICATION

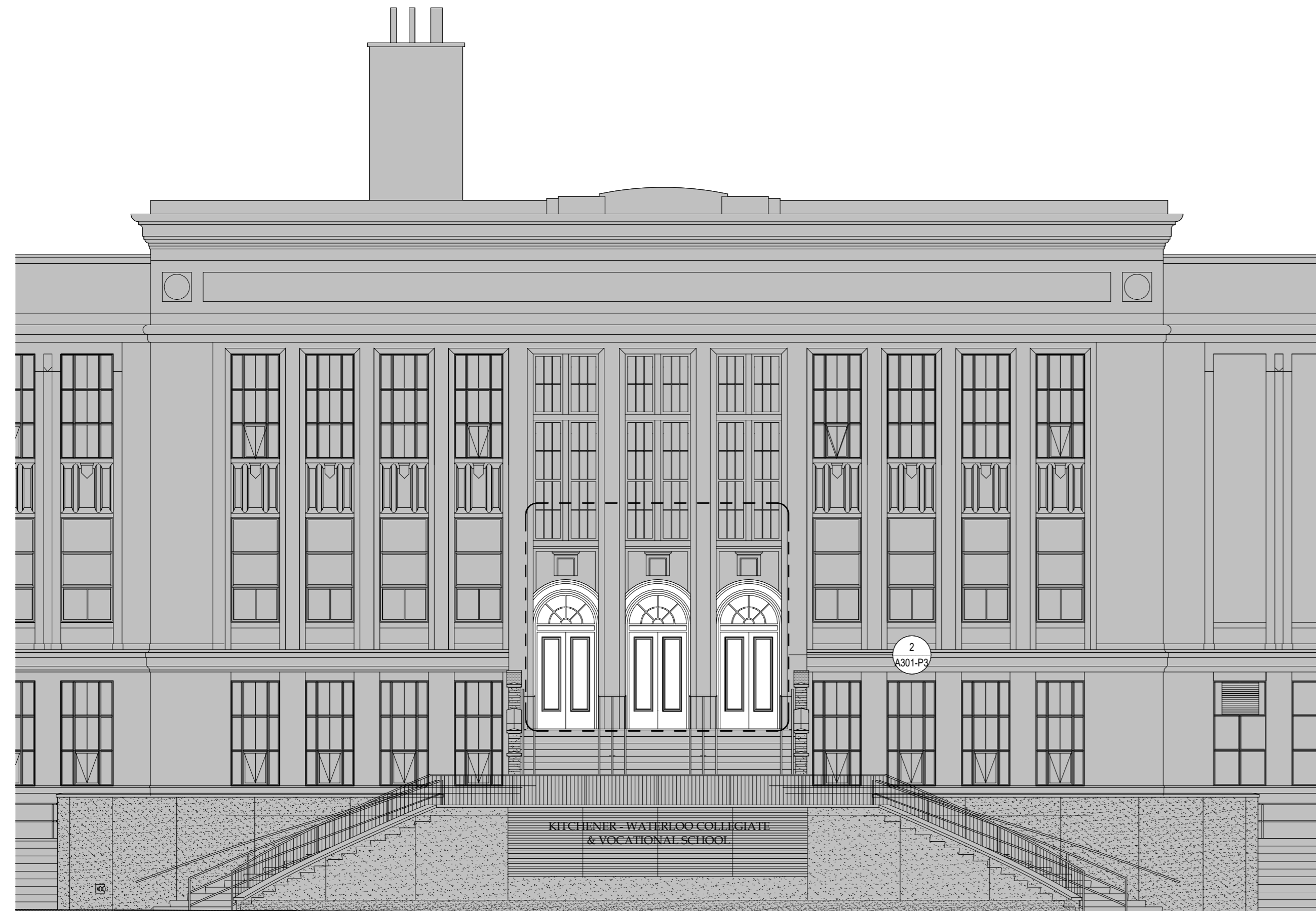
- .1 Apply sealant in strict accordance with manufacturer's recommendations.
- .2 For joints where movement is possible, apply backer rod to achieve a joint depth of one half the joint width but not less than 9 mm; for joints larger than 25 mm use a depth of 13 mm.
- .3 Use pressure gun fitted with suitable nozzle. Use sufficient pressure to fill voids and joints solid.
- .4 Form surface of sealant smooth, free from ridges, wrinkles, sags, or air pockets and imbedded impurities. Neatly tool surface to a slight concave appearance.
- .5 Tool sealants to achieve air tight joints. Use wet tools as required.
- .6 Ensure bead is solid, filling entire space between sides and bedding material, exerting sufficient pressure to obtain maximum bond, by allowing sealant to bulge out in advance of nozzle.
- .7 Apply sealant within recommended temperature ranges. Consult manufacturer when sealant cannot be applied within recommended temperature range.
- .8 Seal perimeters of hollow metal door frames on both sides.
- .9 Seal control joints in gypsum boards, and junctures between interior partitions with exterior walls.
- .10 Seal **window and** door frames around the inside perimeter, so that an airtight seal is obtained, as indicated on drawings.
- .11 Seal joints in floors and walls and around service and mechanical and electrical fixture penetrations.
- .12 Seal at all locations where dissimilar material meet.
- .13 Curing
 - .1 Cure sealants in accordance with sealant manufacturer's instructions.
 - .2 Do not cover up sealants until proper curing has taken place.
 - .3 On porous surfaces allow sealant to cure overnight, and remove excess by light wire brushing.

3.8

CLEANING

- .1 Clean adjacent surfaces immediately and leave Work neat and clean.
- .2 Remove excess and droppings, using recommended cleaners as work progresses.
- .3 Remove masking tape after initial set of sealant.
- .4 Correct staining and discolouring of adjacent surfaces as directed by Consultant.

END OF SECTION



1 DOOR RESTORATION - PARTIAL ELEVATION
A301 Scale: 1 : 100

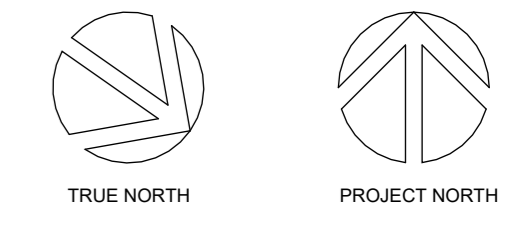


2 DOOR RESTORATION - PARTIAL ENLARGED ELEVATION DETAIL
A301 Scale: 1 : 25

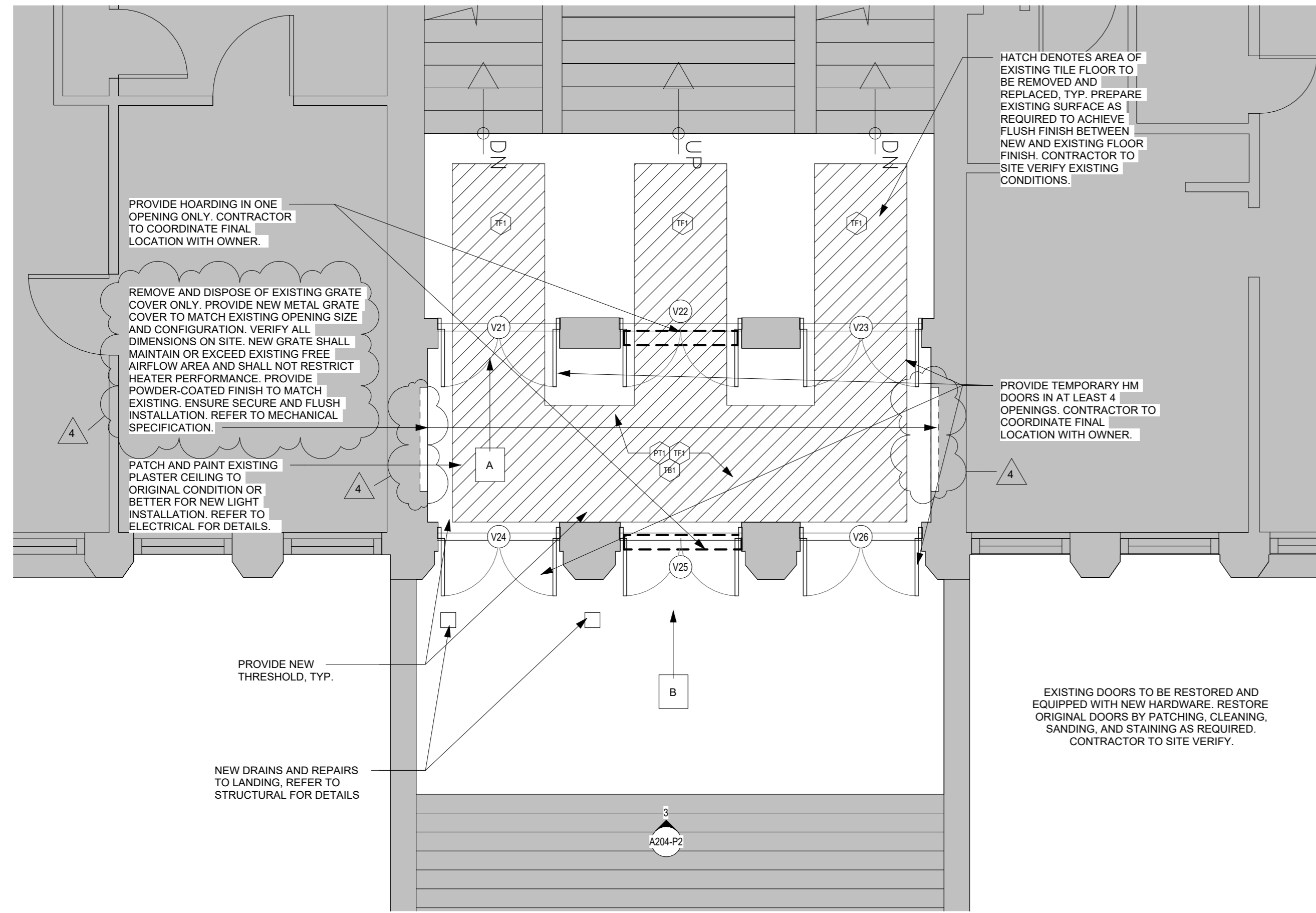
EXISTING TRANSOM TO BE REFINISHED. RESTORE ORIGINAL TRANSOM BY PATCHING, CLEANING, SANDING, AND STAINING AS REQUIRED. CONTRACTOR TO SITE VERIFY.

EXISTING DOORS TO BE REFINISHED AND EQUIPPED WITH NEW HARDWARE. RESTORE ORIGINAL DOORS BY PATCHING, CLEANING, SANDING, AND STAINING AS REQUIRED. CONTRACTOR TO SITE VERIFY.

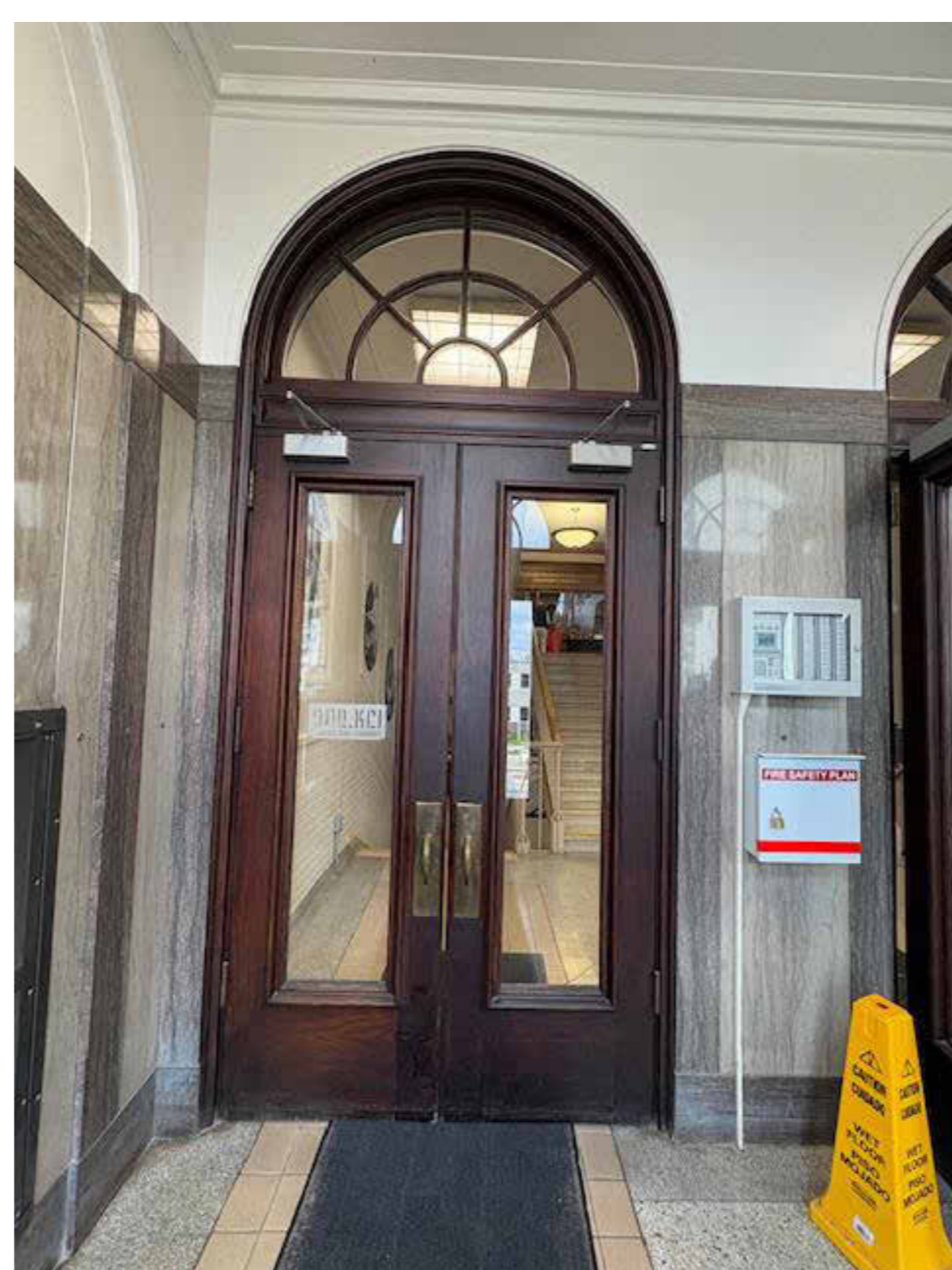
EXISTING FRAMES TO BE REFINISHED. RESTORE ORIGINAL FRAMES BY PATCHING, CLEANING, SANDING, AND STAINING AS REQUIRED. CONTRACTOR TO SITE VERIFY.



No.	ISSUANCE	DATE
1	ISSUED FOR SD REPORT	2026-01-13
2	ISSUED FOR 100% CD	2026-03-05
3	ISSUED FOR BID AND PERMIT	2026-04-02
4	ISSUED FOR ADDENDUM 001	2026-04-24



3 DOOR RESTORATION KEY PLAN
A301 Scale: 1 : 50



4 LEVEL 02 DOOR RESTORATION IMAGE 1
A301 Scale: 1 : 400



5 LEVEL 02 DOOR RESTORATION IMAGE 2
A301 Scale: 1 : 400

NOTCH DOOR LITE FRAME ON INTERIOR FACE TO SUIT INSTALLATION OF NEW PANIC HARDWARE, TYP. HARDWARE TO BE MOUNTED AT 914mm AFF TO COMPLY WITH OBC. CONTRACTOR TO SITE VERIFY.

CLIENT
WATERLOO REGION DISTRICT SCHOOL BOARD
51 Ardelt Ave, Kitchener, ON N2C 2R5

PROJECT
KCI - HEALTH AND PHYSICAL EDUCATION RENOVATION
787 King St W, Kitchener, ON N2G 2G5

TITLE
PARITAL SOUTH ELEVATION & DOOR RESTORATION WORK

WALTERFEDY
TORONTO | CALGARY | EDMONTON | KITCHENER | HAMILTON
800.685.1378 walterfedy.com

REPRODUCTION OR DISTRIBUTION FOR PURPOSES OTHER THAN AUTHORIZED BY WALTERFEDY, A PART OF WF GROUP, IS PROHIBITED. CONTRACTORS SHALL VERIFY AND BE RESPONSIBLE FOR ALL DIMENSIONS AND CONDITIONS ON THE JOB AND REPORT ANY VARIATIONS FROM THE DIMENSIONS AND CONDITIONS SHOWN ON DRAWINGS TO WALTERFEDY, A PART OF WF GROUP. - DO NOT SCALE THIS DRAWING -

SCALE:	AS NOTED	SHEET NO:
DATE:	2026-03-09	A301
PROJECT NO:	2025-4029-10	
DRAWN BY:	SM	
CHECKED BY:	JK	

DOOR & SCREEN SCHEDULE - with Legend

REFER TO TYPICAL DETAILS FOR DOOR TYPE ELEVATIONS, FRAMES AND DETAILS

Mark	Door Size WxHxT	Door/Screen				Frame				Hardware				Rating		Notes
		Type / Elev	Material	Finish	Glazing	Type / Elev	Profile	Material	Finish	ULC	Closer	Threshold	Weather Strip	Fire Rating	Temp. Rise	
LOWER LEVEL 02 FF																
000A	915x2150x45	A	HM	PNT	-	A	DF2	HM	PNT							10
000B	915x2150x45	A	HM	PNT	-	A	DF2	HM	PNT							10
000C	915x2150x45	A	HM	PNT	-	A	DF2	HM	PNT							10
000D	915x2150x45	A	HM	PNT	-	A	DF2	HM	PNT							1, 2
002	2-915x2150x45	A	HM	PNT	-	B	DF2	HM	PNT							16
070	915x2150x45	A	HM	PNT	-	YES - 20" x 16"	A	DF2	HM	PNT						16
070A	915x2150x45	A	HM	PNT	-		A	DF2	HM	PNT						1, 2
070B	915x2150x45	A	HM	PNT	-		A	DF2	HM	PNT						10
070C	915x2150x45	A	HM	PNT	-		A	DF2	HM	PNT						1, 2
071	915x2150x45	A	HM	PNT	-		A	DF2	HM	PNT						16
071A	915x2150x45	A	HM	PNT	-	YES - 20" x 16"	A	DF2	HM	PNT						1, 2
071B	915x2150x45	A	HM	PNT	-		A	DF2	HM	PNT						10
071C	915x2150x45	A	HM	PNT	-		A	DF2	HM	PNT						1, 2
LEVEL 01 FF																
V11	965x1980x45	G	AL	ANO	DTGL	C	EX	AL	ANO	Yes	Yes	Yes	Yes			17. SINGLE DOOR WITH FIXED SIDELIGHT TO SUIT EXISTING ROUGH OPENING. SITE VERIFY.
V12	965x1980x45	G	AL	ANO	DTGL	C	EX	AL	ANO	Yes	Yes	Yes	Yes			17. SINGLE DOOR WITH FIXED SIDELIGHT TO SUIT EXISTING ROUGH OPENING. SITE VERIFY.
LEVEL 02 FF																
V21	2-760x2413x45	EX	EX	S&V	EX	EX	EX	EX	S&V	Yes						SITE VERIFY DOOR DIMENSIONS
V22	2-760x2413x45	EX	EX	S&V	EX	EX	EX	EX	S&V	Yes						SITE VERIFY DOOR DIMENSIONS
V23	2-760x2413x45	EX	EX	S&V	EX	EX	EX	EX	S&V	Yes						SITE VERIFY DOOR DIMENSIONS
V24	2-760x2413x45	EX	EX	S&V	EX	EX	EX	EX	S&V	Yes		Yes	Yes			SITE VERIFY DOOR DIMENSIONS
V25	2-760x2413x45	EX	EX	S&V	EX	EX	EX	EX	S&V	Yes		Yes	Yes			SITE VERIFY DOOR DIMENSIONS
V26	2-760x2413x45	EX	EX	S&V	EX	EX	EX	EX	S&V	Yes		Yes	Yes			SITE VERIFY DOOR DIMENSIONS
Grand total: 21																

DOOR HARDWARE (REF. DOOR SCHEDULE)

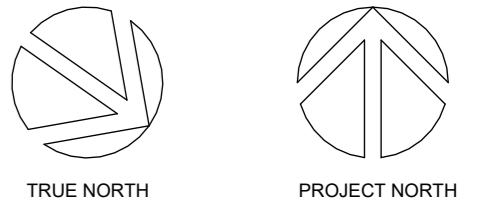
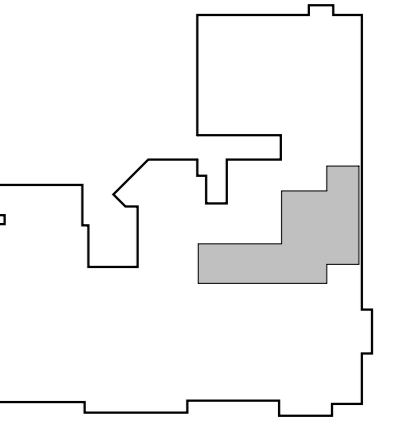
NOTES

- PDO - POWER DOOR OPERATOR
 - PTL - PUSH TO LOCK
 - UNDERCUT
 - STOREROOM LOCKSET
 - STAINLESS STEEL 48" PULL
 - EXIT LOCKSET
 - PASSAGE LOCKSET
 - MIN. FOUR (4) BUTT HINGES
 - 12 GAUGE STAINLESS STEEL KICK PLATE
 - PRIVACY LOCKSET
 - STAINLESS STEEL DOOR PULL
 - ULC DOOR CLOSER
 - SMOKE SEAL
 - FLOOR STOP
 - WALL STOP
 - CLASSROOM LOCKSET
 - ELECTRIC STRIKE
1. SHOULD A PROPONENT (GENERAL CONTRACTOR) FIND A DISCREPANCY BETWEEN THE DOOR, FRAME, AND HARDWARE SCHEDULES AND THE DRAWING PLANS, THE CONTRACTOR SHALL REPORT THE DISCREPANCIES TO THE ENGINEER BEFORE PROCEEDING WITH THE WORK, OR THE CONTRACTOR SHALL BE DEEMED LIABLE FOR THE COST INCURRED TO SUPPLY THE DOOR, FRAME AND HARDWARE.
2. ANY DOOR, FRAMES AND HARDWARE QUERIES SHALL BE IDENTIFIED DURING THE TENDERING PROCESS OR WILL BE ASSUMED INCLUDED IN THE CONTRACTORS TENDER QUOTATION.
3. DOORS, FRAMES, HARDWARE, AND GLAZING LOCATED WITHIN A FIRE SEPARATION OR WALLS REQUIRED TO HAVE A FIRE RATING, AS SHOWN ON THE DRAWING PLANS, SHALL BE ASSUMED TO BE FIRE RATED. MEETING REQUIREMENTS FOR DOORS, FRAMES, HARDWARE, AND GLAZINGS TO MATCH THE ASSEMBLIES REQUIRED FIRE RESISTANCE RATING.
4. FOR DETERMINING FRAME PROFILE WIDTHS REFER TO THE DRAWING PLANS AND THE OVERALL WALL THICKNESS, AS SHOWN ON THE WALL TYPE SCHEDULE.

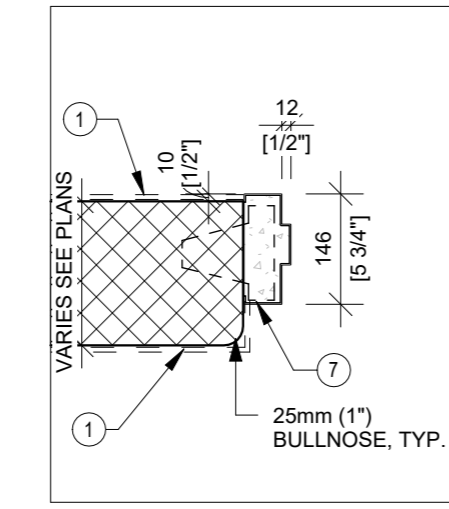
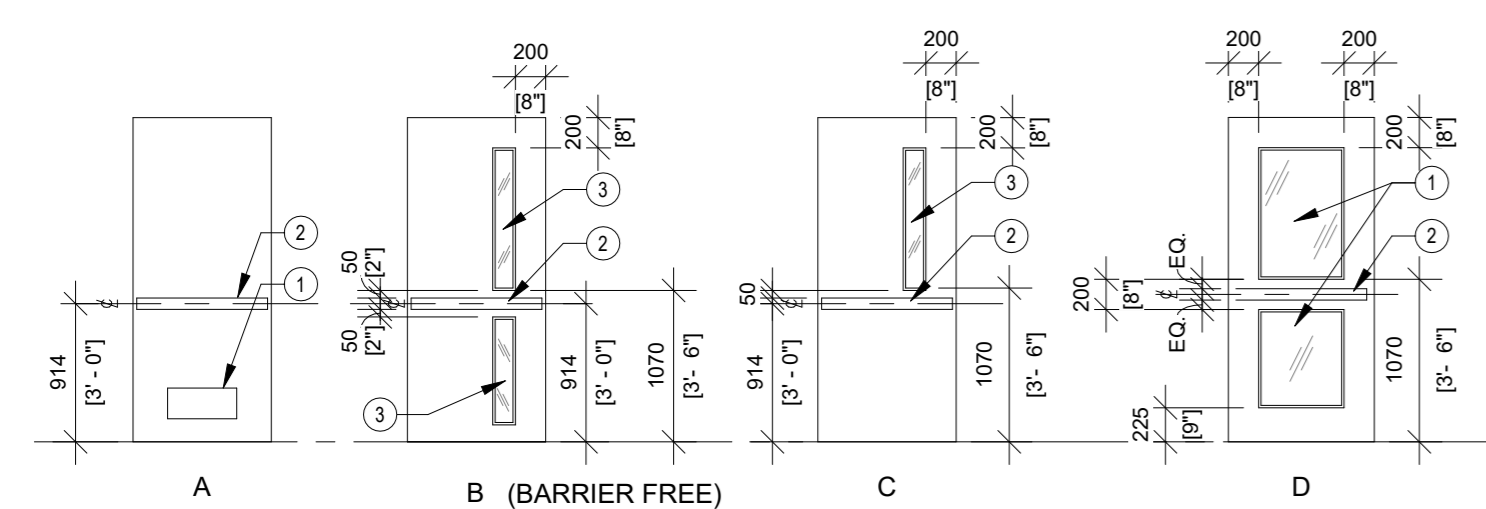
CLIENT LOGO



KEYPLAN

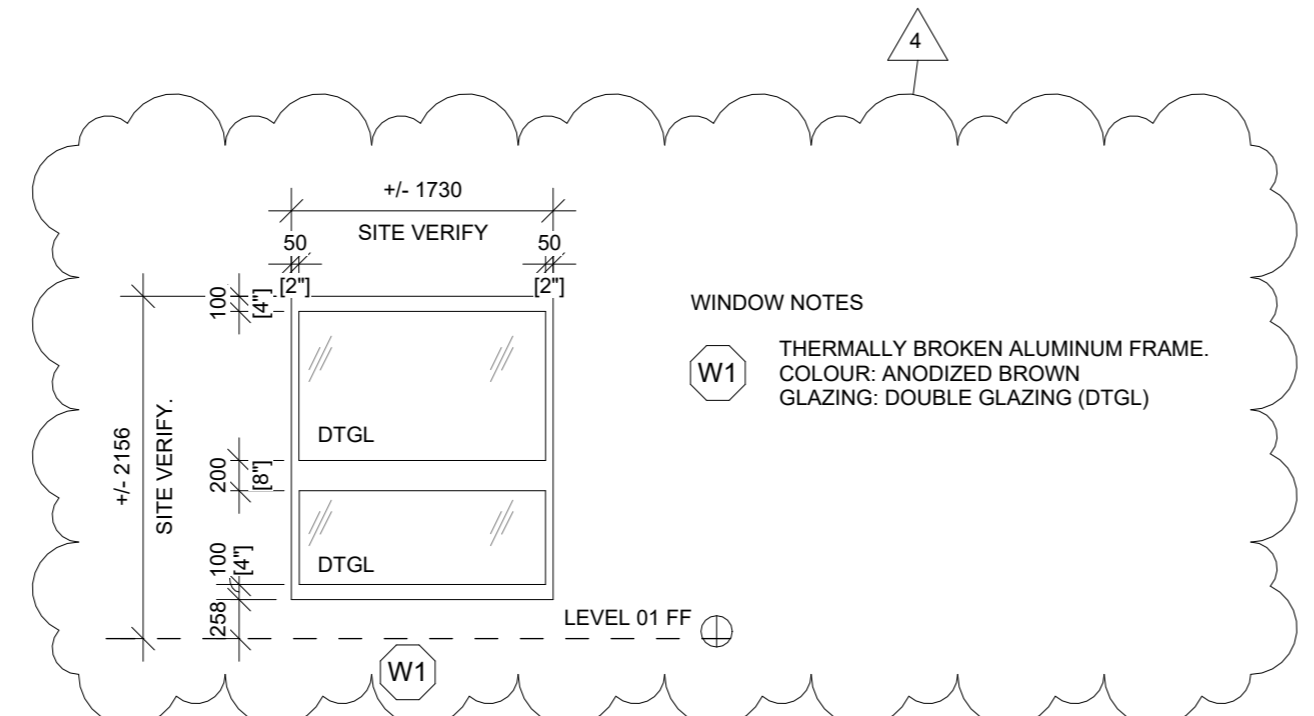
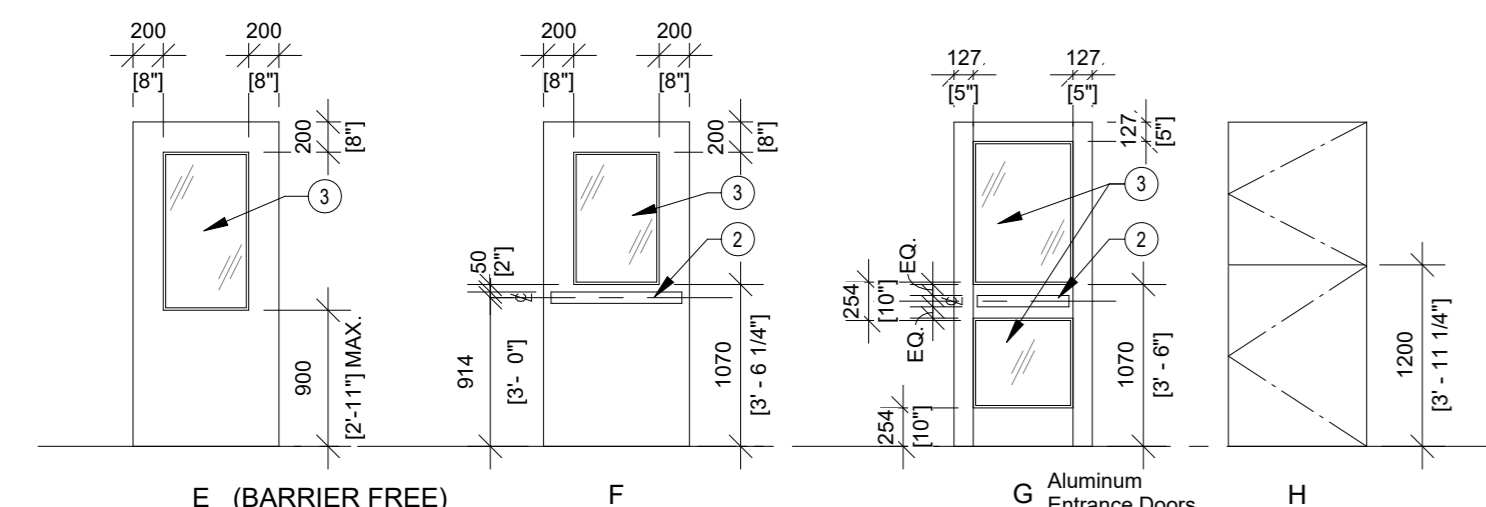


No.	ISSUANCE	DATE
1	ISSUED FOR SD REPORT	2026-01-13
2	ISSUED FOR 100% CD	2026-03-05
3	ISSUED FOR BID AND PERMIT	2026-04-02
4	ISSUED FOR ADDENDUM 001	2026-04-24



LEGEND

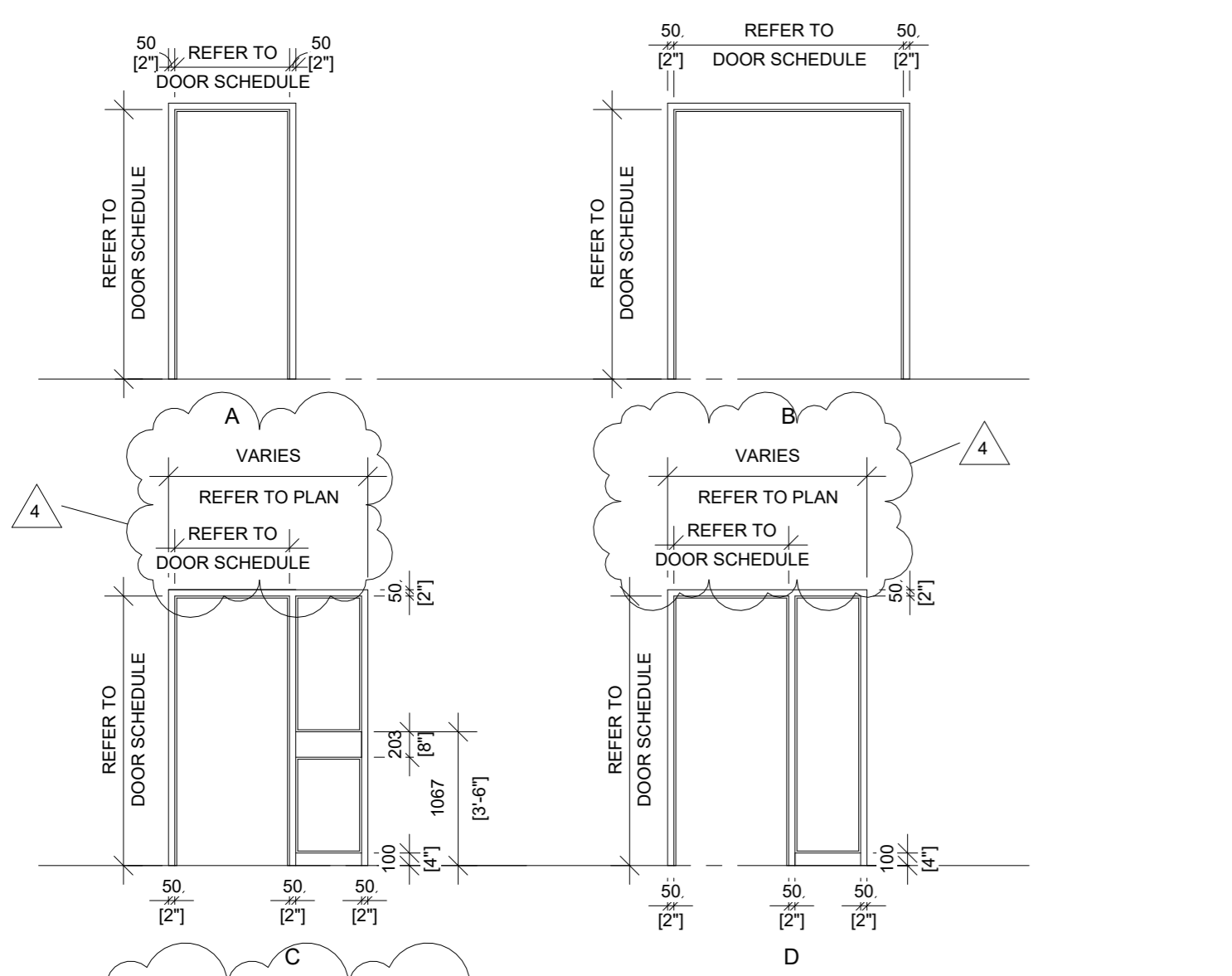
1 Line of base below	8 Sealant	17 Aluminum door, refer to spec.
2 Provide "blueskin" membrane flashing, lap and seal to air/vapour barrier	9 Metal gable support as required	18 Jamb anchor clip
3 Provide "blueskin" membrane flashing, lap and seal to metal liner and to frame	10 Concrete block below sill	19 Spot grout
4 Backer rod and sealant typical (keep sealant flush to edge of frame)	11 G.W.B. wrap-around frame	20 3-piece knock-down steel frame
5 Thermally broken insulated frame	12 Wood shim	
6 Aluminum angle clips	13 Wood trim (see spec for species and finish)	GENERAL NOTE:
7 Block lintel refer to structural drawings	14 Double steel stud	A. See spec for concrete block corner treatment
8 Fill with grout (typical)	15 Wood stud	Frame head height to be 50mm (2") unless otherwise noted. Refer to door schedule
	16 Gypsum Wall Board	C. For glazing type refer to door schedule



GENERAL NOTE:
All doors located in a required barrier free path of travel as described in OBC 3.8.1.3 to be minimum door width 965mm [3'-2"] and 1015mm [3'-4"] with panic set.

LEGEND

- Aluminum louvre, where indicated on door schedule.
- Panic hardware, refer to door schedule
- For glazing type where indicated on door schedule and fire resistance rating, refer to door schedule



GENERAL NOTE:

- FRAME HEAD HEIGHT TO BE 50mm (2") UNLESS OTHERWISE NOTED. REFER TO DOOR SCHEDULE FOR GLAZING TYPE AND RATING REFER TO DOOR SCHEDULE

CLIENT

WATERLOO REGION DISTRICT SCHOOL BOARD

51 Ardelt Ave, Kitchener, ON N2C 2R5

PROJECT

KCI - HEALTH AND PHYSICAL EDUCATION RENOVATION

787 King St W, Kitchener, ON N2G 2G5

TITLE

DOOR AND WINDOW SCHEDULE

WALTERFEDY

TORONTO | CALGARY | EDMONTON | KITCHENER | HAMILTON

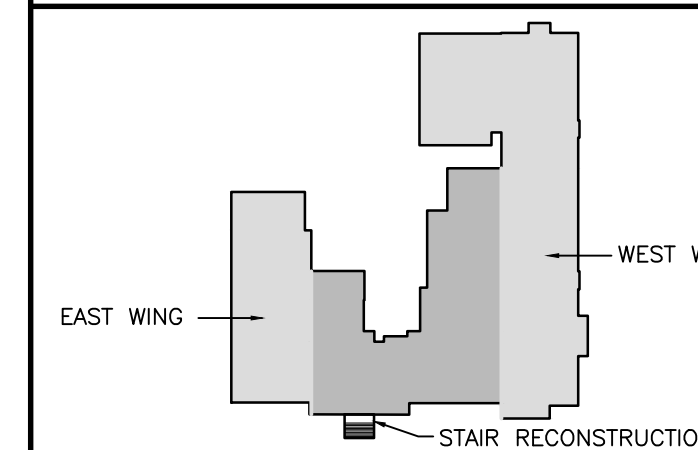
800.685.1378 walterfedy.com

SEAL

REPRODUCTION OR DISTRIBUTION FOR PURPOSES OTHER THAN AUTHORIZED BY WALTERFEDY. A PART OF WF GROUP. IS FORBIDDEN. CONTRACTORS SHALL VERIFY AND BE RESPONSIBLE FOR ALL DIMENSIONS AND CONDITIONS ON THE JOB AND REPORT ANY VARIATIONS FROM THE DIMENSIONS AND CONDITIONS SHOWN ON DRAWINGS TO WALTERFEDY. A PART OF WF GROUP. - DO NOT SCALE THIS DRAWING -

COPYRIGHT © 2024 WalterFedy, A Part of WF Group Inc.

SCALE:	AS NOTED	SHEET NO:
DATE:	2026-04-20	A901
PROJECT NO:	2025-4029-10	
DRAWN BY:	HA	
CHECKED BY:	JK	



date	issued
2026.02.13	ISSUED FOR 60% OWNER'S REVIEW
2026.03.04	ISSUED FOR 100% CD
2026.04.02	ISSUED FOR BID AND PERMIT
2026.04.24	ISSUED FOR ADDENDUM 001

date	revision	no.

customer
WATERLOO REGION DISTRICT SCHOOL BOARD
 51 ARDELT AVENUE, KITCHENER

project
KCI - HEALTH PHYSICAL EDUCATION RENOVATION
 787 KING ST. W, KITCHENER, ONTARIO

title
CONCRETE STAIR FRAMING AND SECTIONS

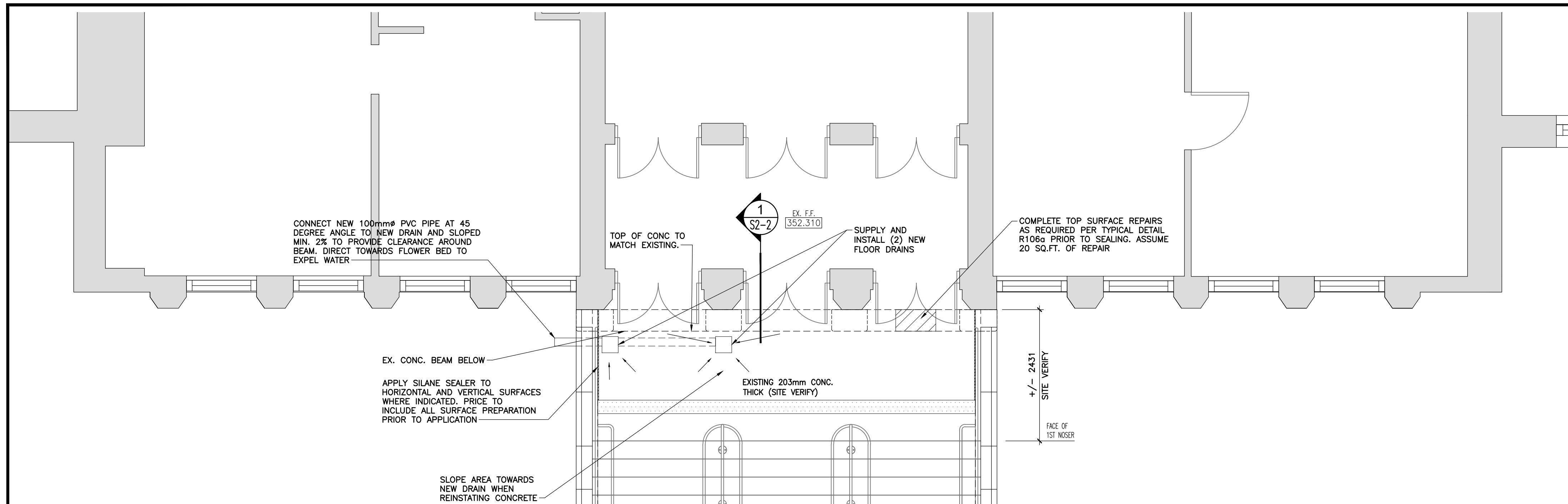
WALTERFEDY

TORONTO | CALGARY | EDMONTON | KITCHENER | HAMILTON

800.685.1378 walterfedy.com

REPRODUCTION OR DISTRIBUTION FOR PURPOSES OTHER THAN AUTHORIZED BY WALTERFEDY, A PART OF WF GROUP, IS FORBIDDEN. CONTRACTORS SHALL VERIFY AND BE RESPONSIBLE FOR ALL DIMENSIONS AND CONDITIONS ON THE JOB AND REPORT ANY VARIATIONS FROM THE DIMENSIONS AND CONDITIONS SHOWN ON DRAWINGS TO WALTERFEDY, A PART OF WF GROUP. - DO NOT SCALE THIS DRAWING -

scale:	AS NOTED	sheet no.:	S2-2
date:	2026.04.02		
job no.:	2025-4029-10		
CAD file:	2025-4029-10		
drawn by:	KS		
checked by:			

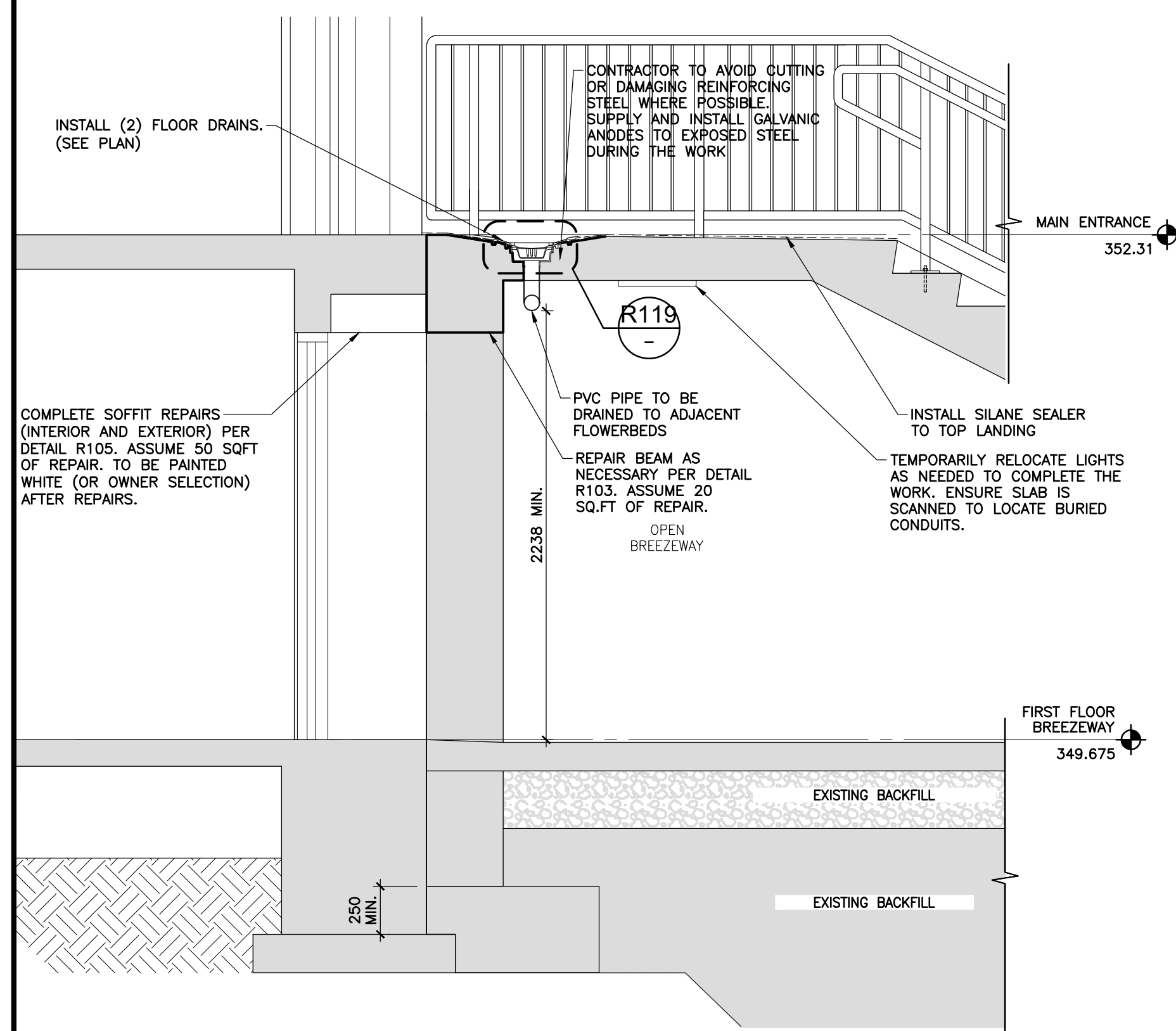


CONCRETE STAIR FRAMING PLAN

1:50

GENERAL SCOPE OF WORK

1. SUPPLY AND INSTALL TWO NEW FLOOR DRAINS WHERE INDICATED.
2. INSTALL INSULATED PVC PIPES TO EXPEL WATER TO ADJACENT FLOWERBEDS AS INDICATED.
3. INSTALL SILANE SEALER ON TOP LANDING CONCRETE AREAS AND UPTURNS
4. PROVIDE CONSTRUCTION SIGNAGE AND HOARDING AS REQUIRED TO COMPLETE THE WORK.



SECTION THROUGH STAIR

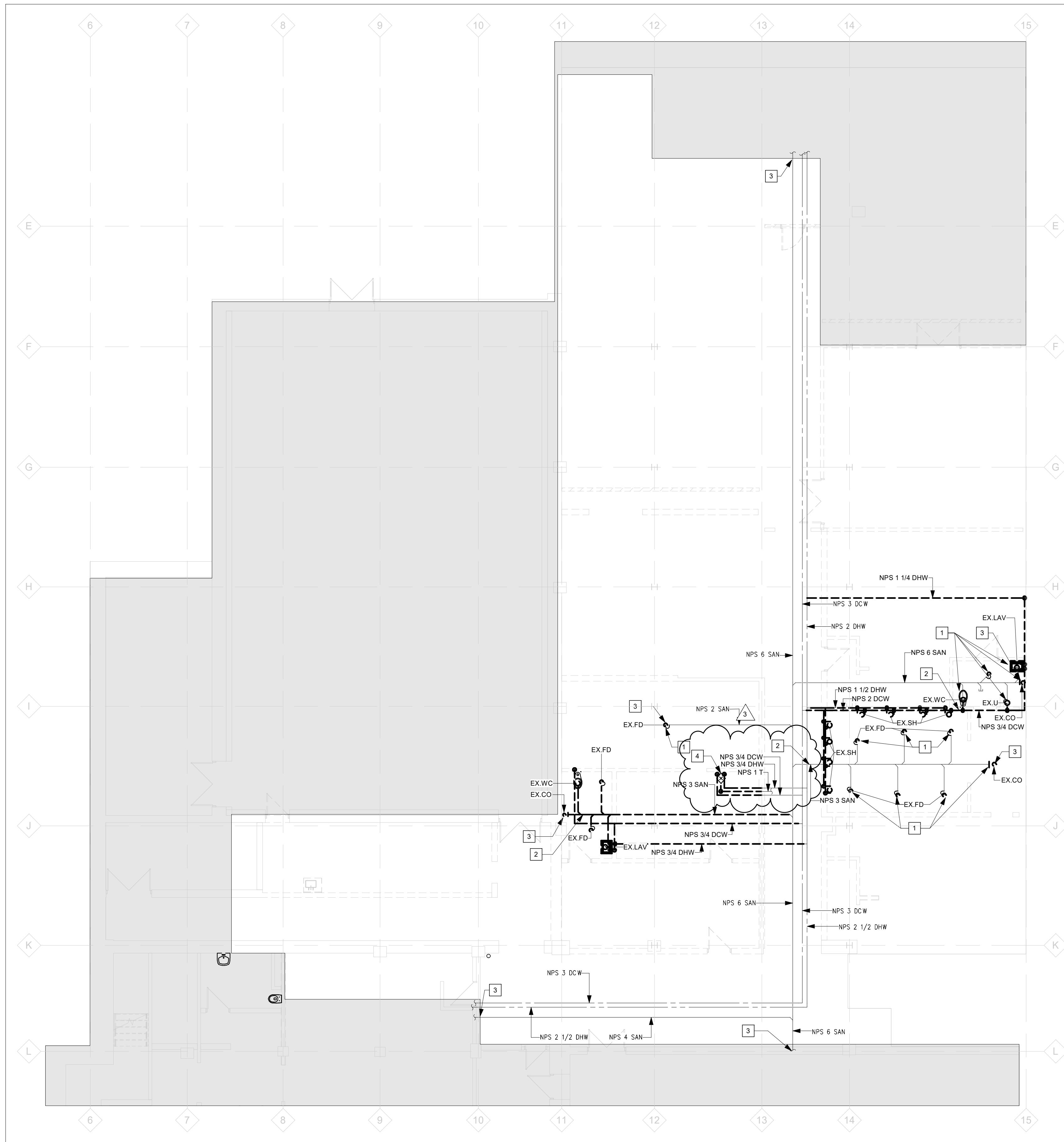
1:25



F. CONCRETE REPAIR PROCEDURE

UNIT RATES APPLY TO ALL CONCRETE REPAIRS (SEE PLANS AND TYPICAL REPAIR DETAILS). REFER TO BID FORM FOR MORE INFORMATION ON PRICING.

1. LOCATE APPROXIMATE EXTENT OF DELAMINATED CONCRETE BY HAMMER SOUNDING OR CHAIN DRAG, AND MARK ALL AREAS TO BE REPAIRED WITH CHALK. REVIEW QUANTITIES AND REPAIRS AREAS WITH THE CONSULTANT PRIOR TO PROCEEDING WITH THE WORK. THE CONSULTANT IS TO BE NOTIFIED AT LEAST 48 HOURS IN ADVANCE OF REVIEW.
2. THE CONTRACTOR IS RESPONSIBLE FOR PREPARING AND COORDINATING A MOCK-UP WITH THE CONSULTANT, DEMONSTRATING ADEQUATE PERFORMANCE OF THE CONTENT IN THIS SECTION. THE CONTRACTOR MUST ENSURE THAT THE QUALITY OF THE MOCK-UP IS MAINTAINED FOR REPAIRED AREAS.
3. VERIFY THE LOCATION OF EXISTING REINFORCING STEEL PRIOR TO CUTTING OR CHIPPING CONCRETE. IT IS THE RESPONSIBILITY OF THE CONTRACTOR TO ENSURE THAT THE REINFORCING STEEL IS NOT CUT OR DAMAGED PRIOR TO OR DURING CONCRETE REMOVAL.
4. PROVIDE TEMPORARY SHORING TO SAFELY SUPPORT STRUCTURE AS REQUIRED, PER SECTION A.
5. SAW CUT PERIMETER OF AREA TO BE REPAIRED. SAW CUTS TO BE A MINIMUM 13 (1/2") DEEP WITH THE FOLLOWING STIPULATIONS:
 - 5.1. SAW CUT OVER-RUN AT CORNERS OF REPAIR AREA IS NOT PERMITTED. TO AVOID SAW CUT OVER-RUN, CHIP CORNERS TO A VERTICAL EDGE.
 - 5.2. SHOULD THE EXISTING REINFORCING STEEL HAVE INSUFFICIENT COVER TO PERMIT 13 (1/2") DEEP SAW CUT, CHIP THE PERIMETER TO A VERTICAL EDGE AT REINFORCING STEEL LOCATIONS.
 - 5.3. FEATHERED EDGES ARE NOT PERMITTED.
6. REMOVE CONCRETE WITH APPROPRIATELY SIZED CHIPPING HAMMERS (PER SPEC) TO SOUND CONCRETE. EXTEND CONCRETE REMOVAL SUCH THAT A MINIMUM OF 50 (2") OF CORROSION-FREE IS EXPOSED.
7. FOR SURFACE REPAIRS, CONCRETE TO BE REMOVED AT LEAST 25 (1") BEHIND EXPOSED REINFORCING STEEL. REFER TO CONCRETE REPAIR DETAILS.
8. CONCRETE TO BE ROUGHENED TO A MINIMUM SURFACE PROFILE OF CSP7 (6mm OR 1/4" AMPLITUDE), AS DIRECTED BY ICRI 310.2.R. REMOVE BRUISED CONCRETE SUBSTRATE WEAKENED BY MICROCRACKING, AT THE DIRECTION OF THE CONSULTANT, WITH DRY ABRASIVE OR HIGH-PRESSURE WATER-BLASTING WITH OR WITHOUT ABRASIVE.
9. CLEAN EXISTING STEEL BY REMOVING ALL LOOSE CORROSION, DUST, DIRT, OR ANY OTHER LATENCIES BY MECHANICAL MEANS. IN ACCORDANCE WITH SPECIFICATIONS, CLEANING BY MECHANICAL WIRE WHEEL OR ABRASIVE BLAST ARE APPROVED METHODS.
10. REINFORCE STEEL WITH EXTENSIVE CORROSION IS TO BE CUT OUT AND REPLACED AT THE DIRECTION OF THE CONSULTANT. SPLICE REINFORCING STEEL WITH THE APPROPRIATE LAP SPLICE, OR WITH REBAR COUPLERS THAT ARE ACCEPTABLE TO THE CONSULTANT. EXTENT OF CONCRETE REMOVAL SHALL BE INCREASED AS REQUIRED TO ALLOW FOR THE APPROPRIATE LAP SPLICE. WELDING REBAR IS NOT PERMITTED UNLESS PERMITTED BY THE CONSULTANT.
11. RE-TIE EXPOSED REINFORCING STEEL, AS REQUIRED.
12. COAT ALL EXPOSED REINFORCING STEEL, AS REQUIRED.
13. COAT CONCRETE REPAIR AREA WITH SLURRY COAT OR BONDING AGENT, IF SPECIFIED, ONTO SATURATED SURFACE-DRY SUBSTRATE IMMEDIATELY PRIOR TO PLACING THE CONCRETE REPAIR MATERIALS. STANDING WATER AT THE REPAIR ARE IS NOT PERMITTED.
14. SUPPLY, PLACE, FINISH AND CURE REPAIR MATERIAL PER SPECIFICATIONS AND MANUFACTURER'S RECOMMENDATIONS. IF THERE ARE DISCREPANCIES BETWEEN THE MANUFACTURER'S REQUIREMENTS/BEST PRACTICES AND THE CONSULTANT SPECIFICATIONS, THE MANUFACTURER'S REQUIREMENTS/BEST PRACTICES SHALL GOVERN.
15. ALL CONCRETE REPAIRS TO BE FORMED OR TROWELED SMOOTH, UNLESS OTHERWISE NOTED.
16. WHERE THE EXISTING STRUCTURE HAS CHAMFERED CORNERS FOR AREAS TO BE REPAIRED, PROVIDE FORMED CHAMFERS TO MATCH EXISTING.

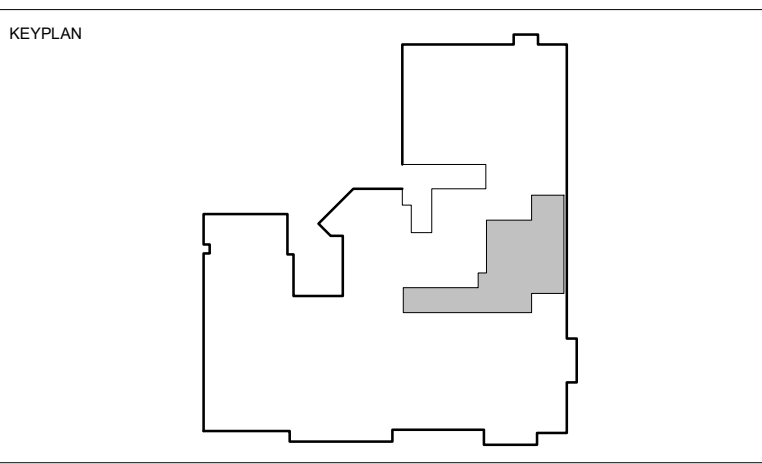


DEMOLITION NOTES

- 1 DEMOLISH EXISTING FIXTURE/FLOOR DRAIN/CLEAN OUT AND CAP SANITARY PIPING.
- 2 CUT BACK VENT PIPING INTO CEILING. RETAIN VENT PIPING CONNECTION WHERE VENT LEAVES THIS ROOM FOR FUTURE CONNECTION.
- 3 SCOPE EXISTING SANITARY DRAINAGE SYSTEM PRIOR TO DEMOLITION. NOTE PIPE INVERTS, EXISTING PIPE ROUTING, AND IDENTIFY ANY DAMAGE TO EXISTING PIPES.
- 4 REMOVE EXISTING THERMOSTATIC MIXING VALVE, AND ASSOCIATED ACCESSORIES (SHUTOFF VALVES, THERMOSTAT, SWITCH, ETC.) AND RETAIN FOR FUTURE REINSTALLATION. PRIOR TO DEMOLITION, TRACE TEMPERED WATER (OUTLET) PIPING TO DETERMINE FIXTURE(S) SERVED AND PROVIDE FIXTURE LIST TO CONSULTANT AS AN RFI.

1 LEVEL 1 PLUMBING AND DRAINAGE DEMOLITION
MD03 Scale: 1:100

CLIENT LOGO



No.	ISSUANCE	DATE
1	ISSUED FOR 100% CD	2026-03-04
2	ISSUED FOR BID & PERMIT	2026-03-26
3	ISSUED FOR ADDENDUM 001	2026-04-24

CLIENT
WATERLOO REGION DISTRICT SCHOOL BOARD
51 Ardelt Ave, Kitchener, ON N2C 2R5

PROJECT
KCI - HEALTH AND PHYSICAL EDUCATION RENOVATION
787 King St W, Kitchener, ON N2G 2G5

TITLE
LEVEL 1 PLUMBING AND DRAINAGE DEMOLITION

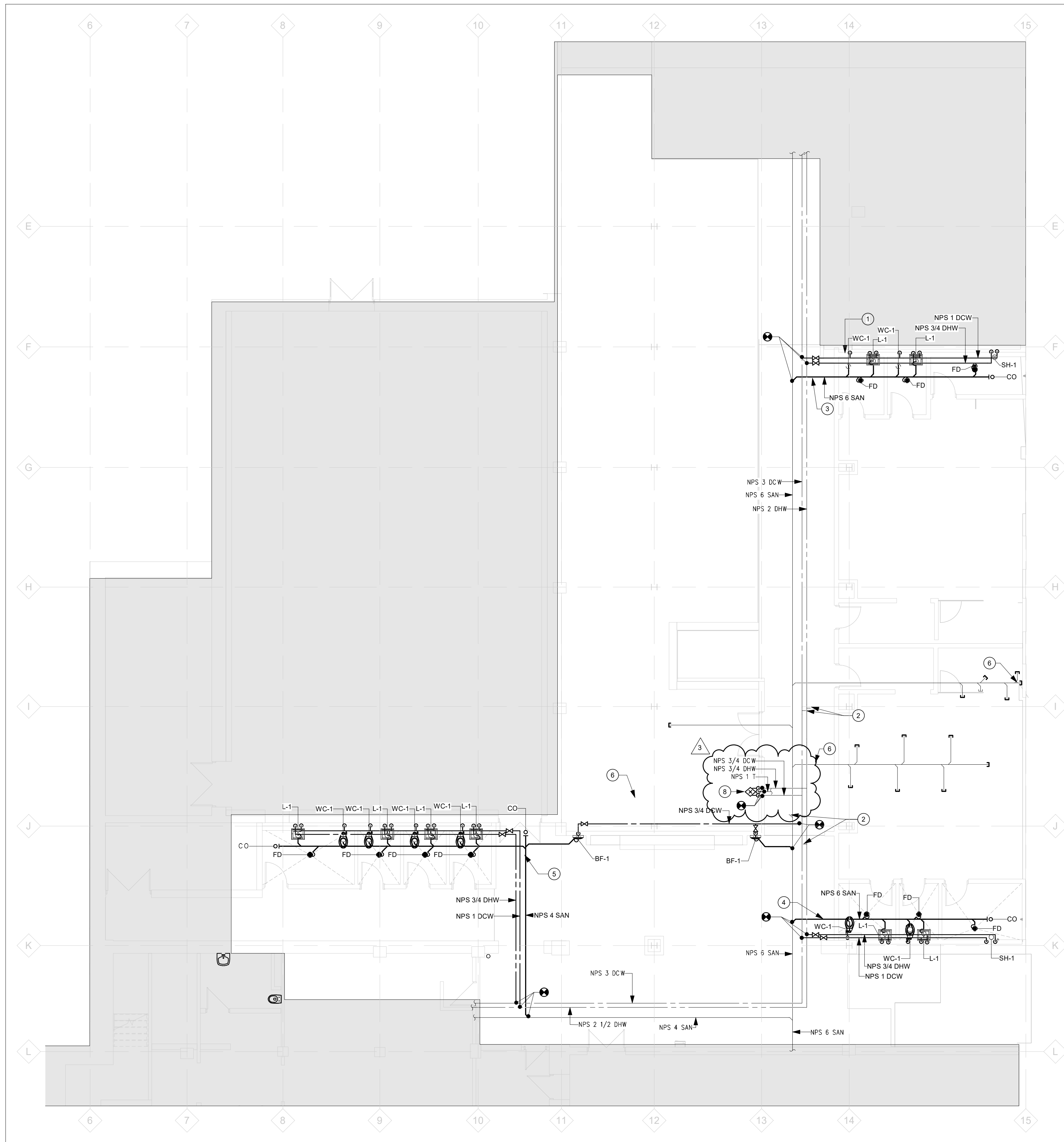
WALTERFEDY
TORONTO | CALGARY | EDMONTON | KITCHENER | HAMILTON
800.685.1378 walterfedy.com

SEAL

REPRODUCTION OR DISTRIBUTION FOR PURPOSES OTHER THAN AUTHORIZED BY WALTERFEDY, A PART OF WF GROUP, IS FORBIDDEN. CONTRACTORS SHALL VERIFY AND BE RESPONSIBLE FOR ALL DIMENSIONS AND CONDITIONS ON THE JOB AND REPORT ANY VARIATIONS FROM THE DIMENSIONS AND CONDITIONS SHOWN ON DRAWINGS TO WALTERFEDY, A PART OF WF GROUP. - DO NOT SCALE THIS DRAWING -

COPYRIGHT © 2026 WalterFedy, A Part of WF Group Inc.

SCALE:	AS NOTED	SHEET NO.:
DATE:	2026-03-04	MD03
PROJECT NO.:	2026-0006-10	
DRAWN BY:	GM	
CHECKED BY:	SW	



DRAWING NOTES

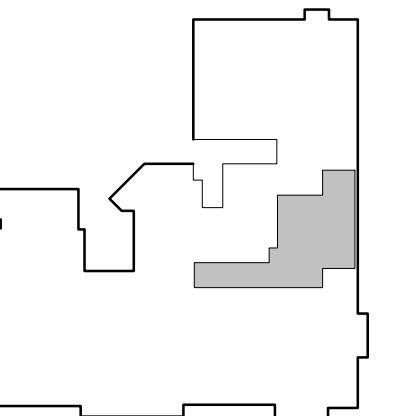
- 1 FLUSH BUTTON ON ACCESS SIDE FOR THIS WATER CLOSET.
- 2 CAP PIPING.
- 3 CONNECT FIXTURE VENT TO EXISTING VENT AT GRIDLINE I.
- 4 CONNECT FIXTURE VENT TO EXISTING VENT BETWEEN GRIDLINES I AND J.
- 5 CONNECT FIXTURE VENT TO EXISTING VENT AT GRIDLINE J.
- 6 APPROXIMATE LOCATION OF EXISTING VENT PIPING UP TO ROOF.
- 8 REINSTALL RETAINED THERMOSTATIC MIXING VALVE ON THIS WALL AND RECONNECT PIPING TO EXISTING AT CEILING LEVEL. REINSTALL ALL OTHER RETAINED DEVICES (SHUTOFF VALVES, THERMOMETER, SWITCH, ETC.) ON WALL ADJACENT TO VALVE. PROVIDE LOCKABLE CAGE AROUND VALVE ASSEMBLY TO PREVENT DAMAGE TO SYSTEM. SIZE NEW PIPING TO MATCH EXISTING.

1 LEVEL 1 PLUMBING AND DRAINAGE
M201 Scale: 1:100

CLIENT LOGO



KEYPLAN



No.	ISSUANCE	DATE
1	ISSUED FOR 100% CD	2026-03-04
2	ISSUED FOR BID & PERMIT	2026-03-26
3	ISSUED FOR ADDENDUM 001	2026-04-24

CLIENT
WATERLOO REGION DISTRICT SCHOOL BOARD
51 Ardelt Ave, Kitchener, ON N2C 2R5

PROJECT
KCI - HEALTH AND PHYSICAL EDUCATION RENOVATION
787 King St W, Kitchener, ON N2G 2G5

TITLE
LEVEL 1 PLUMBING AND DRAINAGE PLAN

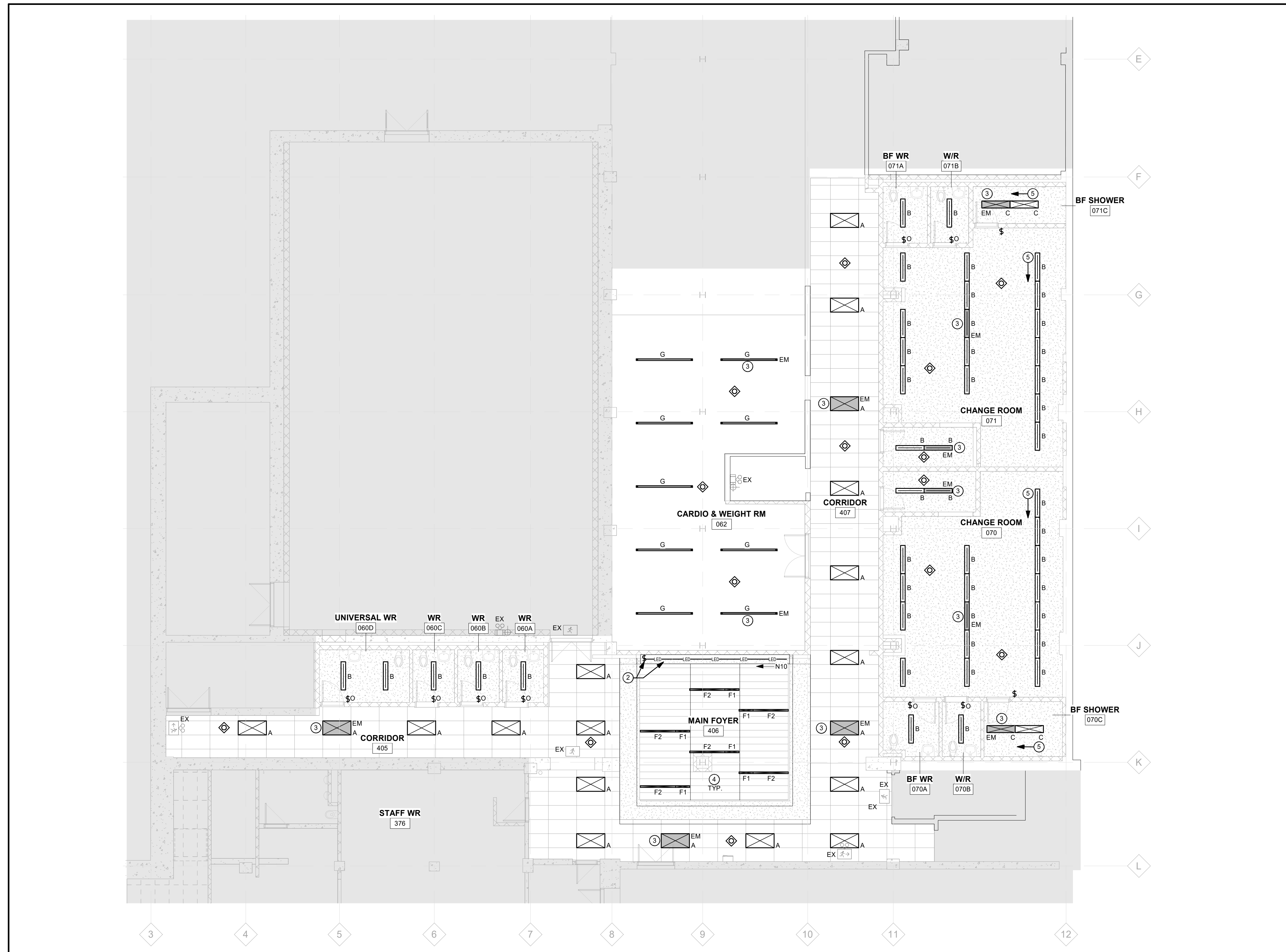
WALTERFEDY
TORONTO | CALGARY | EDMONTON | KITCHENER | HAMILTON
800.685.1378 walterfedy.com

SEAL

REPRODUCTION OR DISTRIBUTION FOR PURPOSES OTHER THAN AUTHORIZED BY WALTERFEDY, A PART OF WF GROUP, IS FORBIDDEN. CONTRACTORS SHALL VERIFY AND BE RESPONSIBLE FOR ALL DIMENSIONS AND CONDITIONS ON THE JOB AND REPORT ANY VARIATIONS FROM THE DIMENSIONS AND CONDITIONS SHOWN ON DRAWINGS TO WALTERFEDY, A PART OF WF GROUP. - DO NOT SCALE THIS DRAWING -

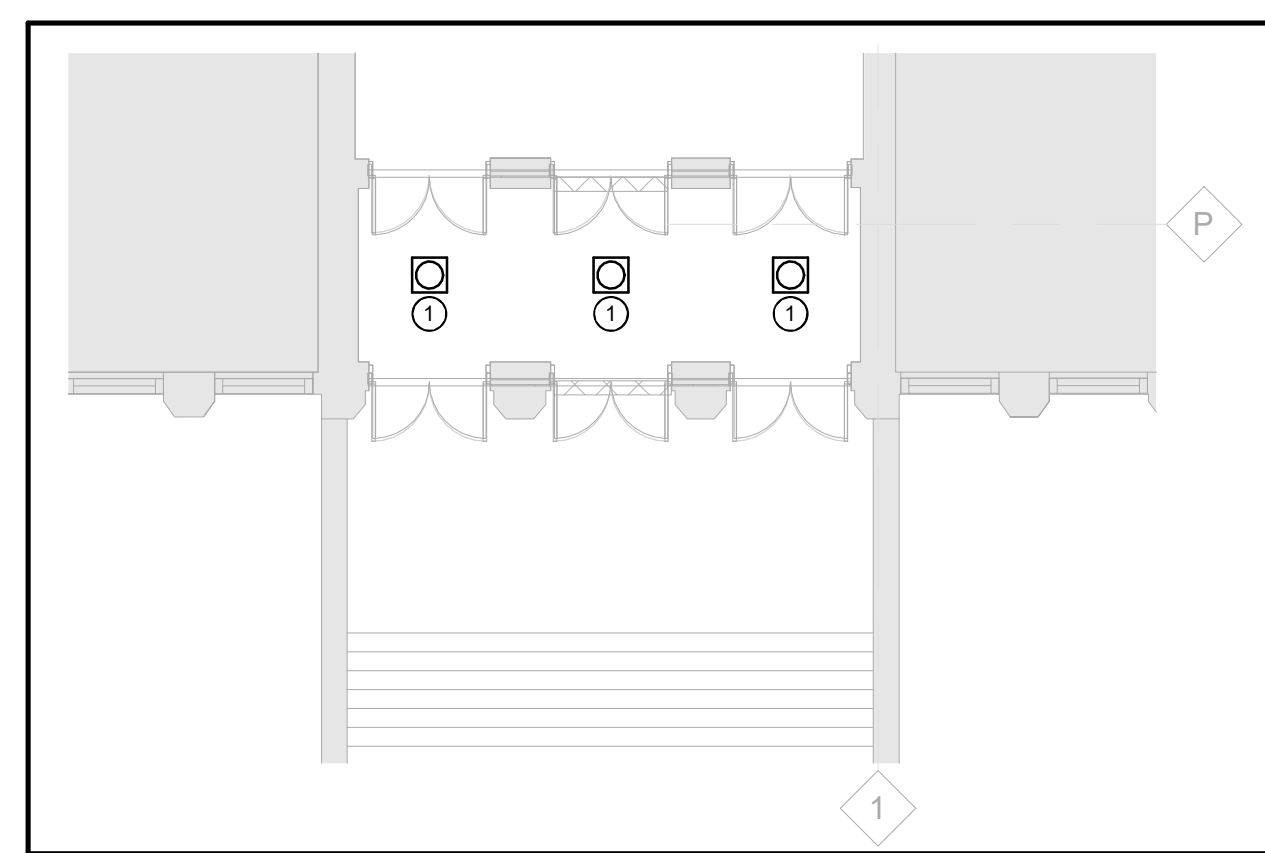
COPYRIGHT © 2026 WalterFedy, A Part of WF Group Inc.

SCALE:	AS NOTED	SHEET NO.:
DATE:	2026-03-04	M201
PROJECT NO.:	2026-0006-10	
DRAWN BY:	GM	
CHECKED BY:	SW	



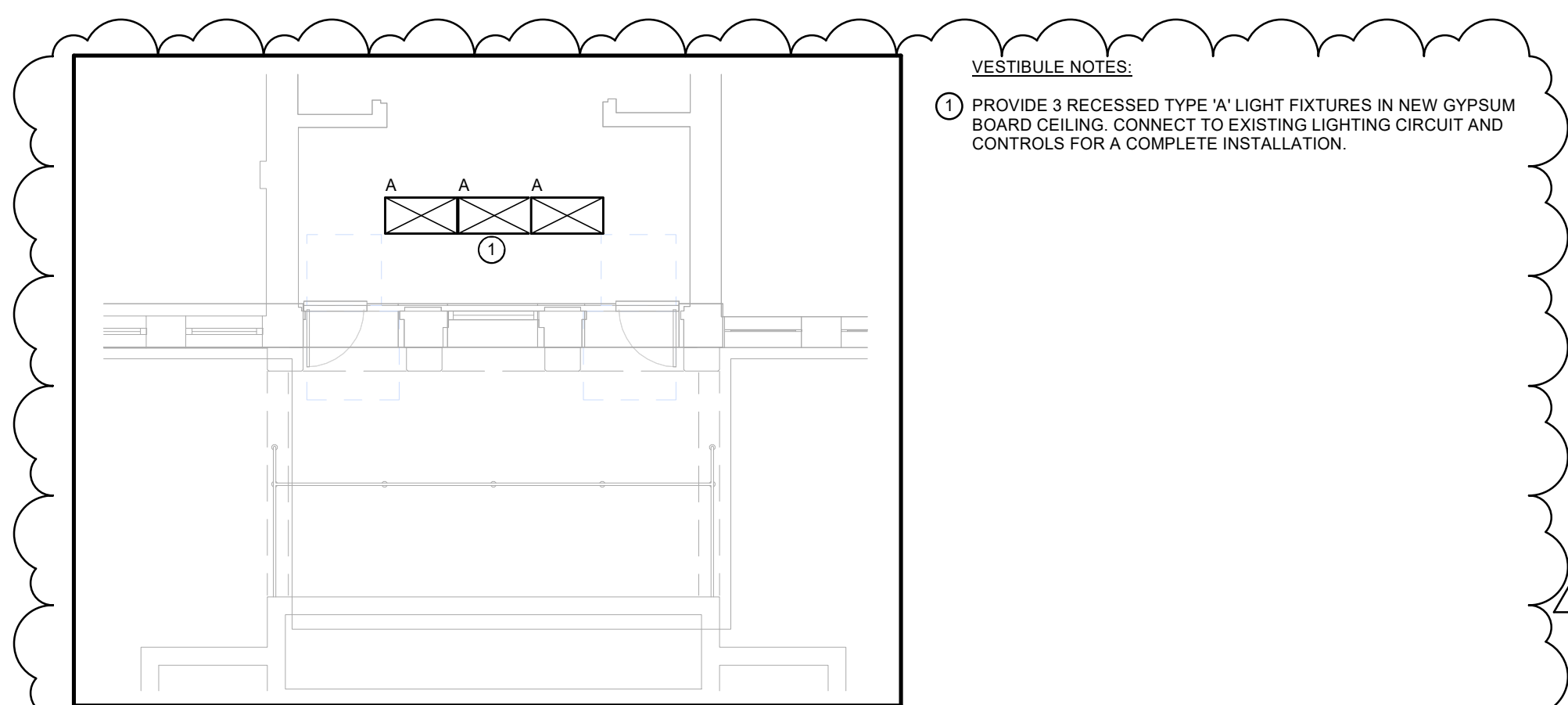
- ELECTRICAL NOTES:**
- UTILIZE CIRCUITS MADE AVAILABLE DURING DEMOLITION TO FEED NEW LIGHTING.
 - LIGHTING MOUNTED IN DISPLAY CASE - REFER TO ARCHITECTURAL DETAIL FOR EXACT LOCATION. SWITCH FOR LIGHTING TO BE MOUNTED IN LOWER SECTION OF DISPLAY CASE. PROVIDE QUANTITY OF FIXTURES TO SUIT WIDTH OF DISPLAY CASE.
 - EMERGENCY LIGHTING FIXTURES (NOTED AS 'EM') TO BE FED FROM EXISTING OR SPARE CIRCUITS IN PANEL P-EW.
 - WIRING CONNECTIONS FOR LIGHT FIXTURES MOUNTED IN DECORATIVE WOOD CEILING ARE TO BE MADE IN ADJACENT ACCESSIBLE CEILING SPACE. NO JUNCTION BOXES ARE TO BE LOCATED ABOVE DECORATIVE WOOD CEILING.
 - COORDINATE LOCATION OF LIGHT FIXTURES WITH RADIANT HEATING PANELS.

1 LOWER LEVEL LIGHTING LAYOUT
E201 Scale: 1 : 100



2 LEVEL 02 MAIN ENTRANCE
E201 Scale: 1 : 100

- FRONT ENTRANCE LIGHTING NOTES:**
- DISCONNECT, REMOVE AND TURN OVER TO OWNER (AT THEIR DISCRETION - OR REMOVE FROM SITE AND DISPOSE OF PROPERLY) EXISTING LIGHT FIXTURE. PROVIDE NEW LIGHT FIXTURES (AS: ADAMS VICTORIAN GLOBE PENDANT LIGHT, BRONZE, CLEAR GLASS GLOBE ORB, 3-LIGHT VERSION, 3x800mm LAMPS, 3500K 15" DIA, APPROX.) AND INSTALL IN ORIGINAL LOCATIONS. UTILIZE EXISTING CIRCUIT AND CONNECT COMPLETE. PATCHING AND PAINTING OF CEILING BY OTHERS.



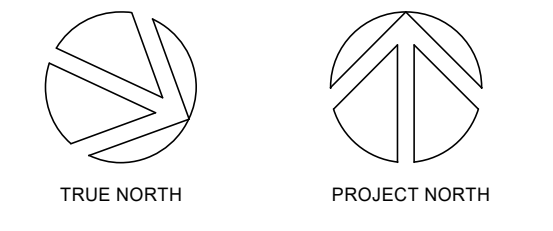
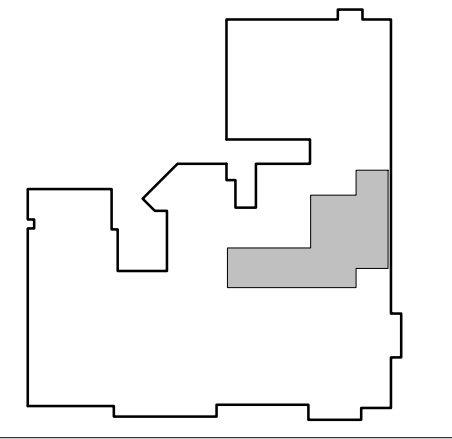
3 LEVEL 01 - VESTIBULE RENOVATION
E201 Scale: 1 : 100

- VESTIBULE NOTES:**
- PROVIDE 3 RECESSED TYPE 'A' LIGHT FIXTURES IN NEW GYPSUM BOARD CEILING. CONNECT TO EXISTING LIGHTING CIRCUIT AND CONTROLS FOR A COMPLETE INSTALLATION.

CLIENT LOGO



KEYPLAN



No.	ISSUANCE	DATE
1	ISSUED FOR 100% CD	2026-03-05
2	ISSUED FOR BID AND PERMIT	2026-03-26
3	ISSUED FOR ADDENDUM 001	2026-04-24

CLIENT
WATERLOO REGION DISTRICT SCHOOL BOARD
51 Ardelt Ave, Kitchener, ON N2C 2R5

PROJECT
KCI - HEALTH AND PHYSICAL EDUCATION RENOVATION
787 King St. W, Kitchener, ON N2G 2G5

TITLE
LIGHTING LAYOUT

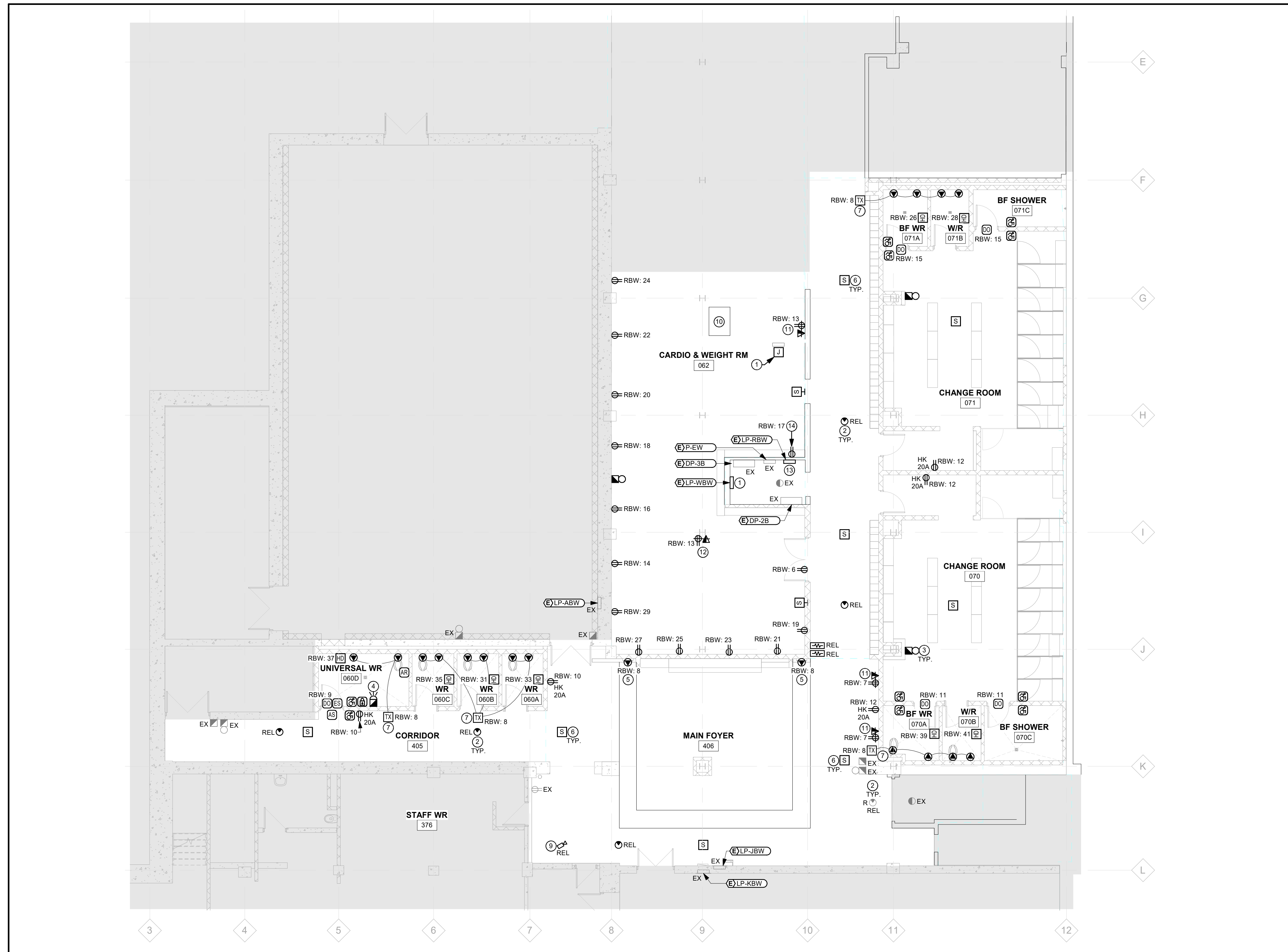
WALTERFEDY
TORONTO | CALGARY | EDMONTON | KITCHENER | HAMILTON
800.685.1378 walterfedy.com

SEAL

REPRODUCTION OR DISTRIBUTION FOR PURPOSES OTHER THAN AUTHORIZED BY WALTERFEDY, A PART OF WF GROUP, IS FORBIDDEN. CONTRACTORS SHALL VERIFY AND BE RESPONSIBLE FOR ALL DIMENSIONS AND CONDITIONS ON THE JOB AND REPORT ANY VARIATIONS FROM THE DIMENSIONS AND CONDITIONS SHOWN ON DRAWINGS TO WALTERFEDY, A PART OF WF GROUP. - DO NOT SCALE THIS DRAWING -

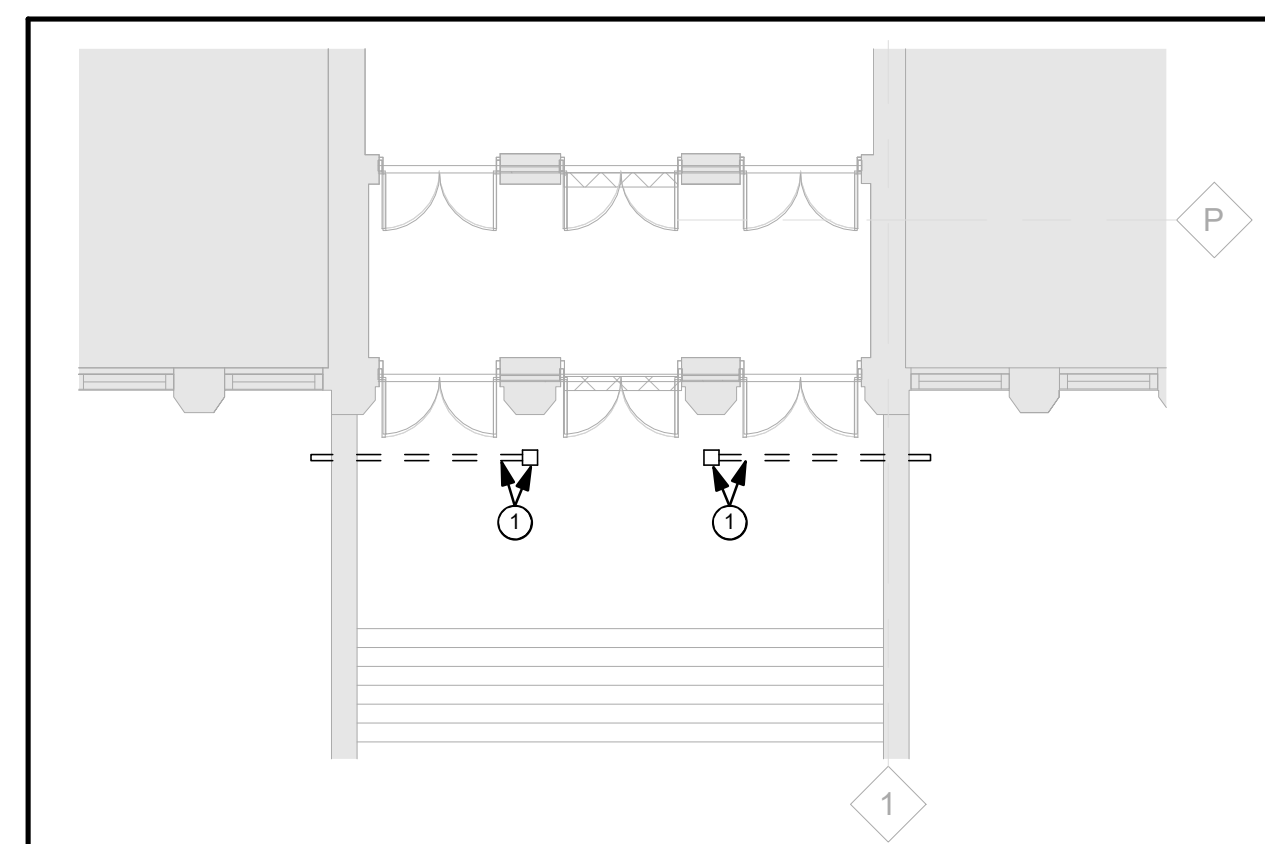
COPYRIGHT © 2026 WalterFedy, A Part of WF Group Inc.	
SCALE:	AS NOTED
DATE:	2026-02-01
PROJECT NO.:	2025-4029-10
DRAWN BY:	D.E.
CHECKED BY:	T.D.

E201



1 LOWER LEVEL POWER AND SYSTEMS LAYOUT

E301 Scale: 1 : 100



2 LEVEL 02 MAIN ENTRANCE

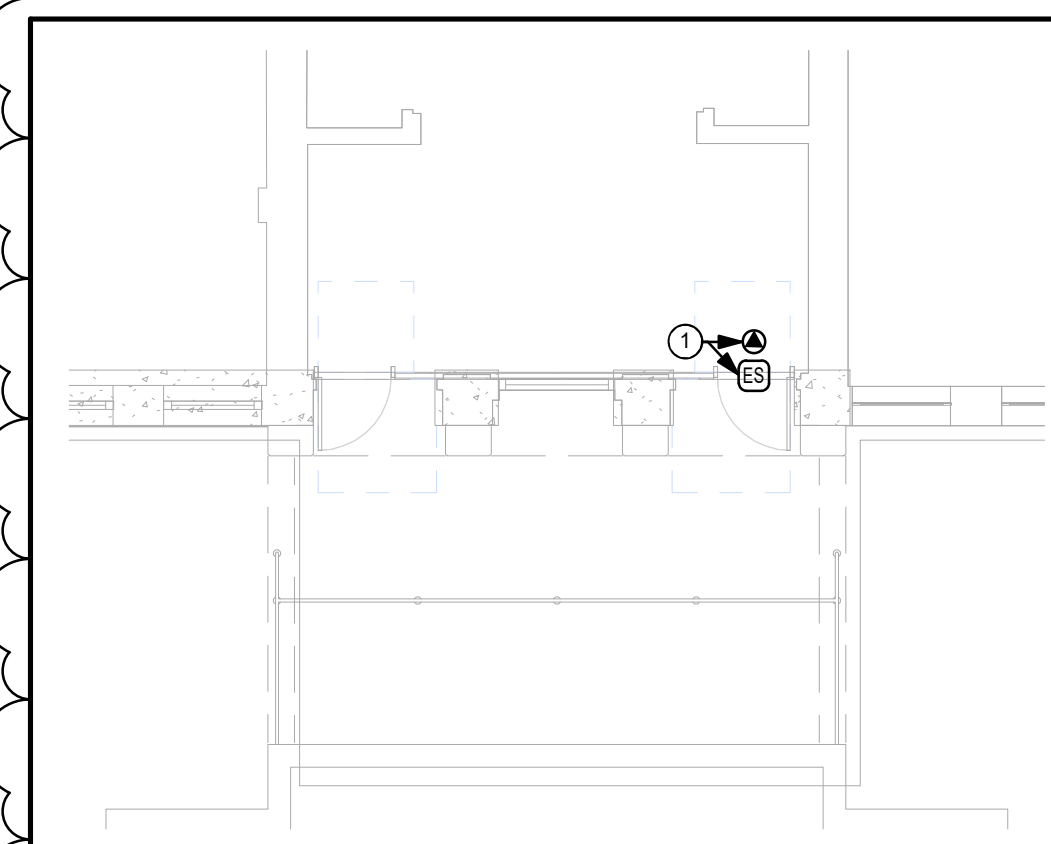
E301 Scale: 1 : 100

FRONT ENTRANCE DRAIN NOTES:

- 1 PROVIDE HEAT TRACE (2 PASSES AT 2 LOCATIONS) ON NEW FLOOR DRAINS AT BUILDING FRONT ENTRANCE. COORDINATE EXACT LENGTH AND DETAILS ON SITE PRIOR TO ORDERING MATERIALS. PROVIDE THE FOLLOWING COMPONENTS (OR APPROVED EQUALS) AND ALL REQUIRED COMPONENTS FOR A COMPLETE INSTALLATION:
 CABLE - RAYCHEM GM-1XT ICESTOP HEATING CABLE (120V)
 CONTROLLER - RAYCHEM ECW-GF ELECTRONIC (SENSING AMBIENT AIR). C/W 30mA GROUND FAULT PROTECTION
 POWER CONNECTION GLAND - RAYCHEM C75-100-A (TO BE CONNECTED VIA Y-FITTING)
 END SEAL CONNECTOR - RAYCHEM RAYCLIC-E END SEAL

VESTIBULE NOTES:

- 1 PROVIDE POWER SUPPLY (120V, 15A CIRCUIT IN LOCAL PANEL), ELECTRIC STRIKE, AND ALL REQUIRED COMPONENTS FOR A COMPLETE INSTALLATION.



3 LEVEL 01 - VESTIBULE RENOVATION

E301 Scale: 1 : 100

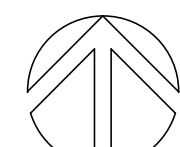
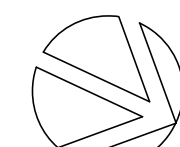
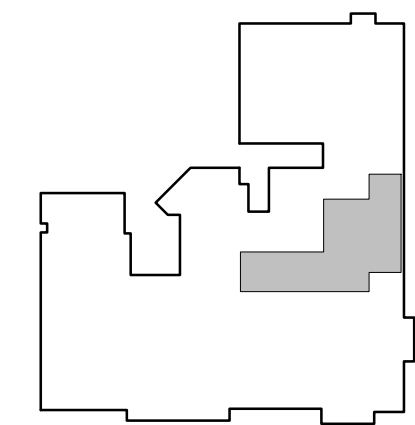
ELECTRICAL NOTES:

- 1 EXISTING PANEL LP-WBW TO BE REPLACED WITH NEW IN EXISTING ELECTRICAL ROOM. PROVIDE SUITABLE SPLICE AND EXTEND FEEDER TO NEW LOCATION IN ELECTRICAL ROOM. PROVIDE JUNCTION BOX ABOVE ORIGINAL PANEL LOCATION TO SPLICE EXISTING CIRCUITS AND EXTEND TO NEW PANEL LOCATION. PROVIDE BREAKERS TO MATCH EXISTING RATINGS - SEE PANEL SCHEDULE.
- 2 EXISTING CEILING MOUNTED FIRE ALARM DEVICES ARE TO BE REINSTALLED IN LOCATIONS SHOWN ON NEW CEILING AND RE-VERIFIED.
- 3 WIRE NEW FIRE ALARM DEVICES TO EXISTING LOCAL DETECTION AND NOTIFICATION CIRCUITS.
- 4 PROVIDE FIRE ALARM STROBE IN UNIVERSAL WASHROOM AND ALL REQUIRED COMPONENTS (POWER SUPPLY, WIRING, ETC.) TO ENABLE THIS FUNCTIONALITY.
- 5 PROVIDE GFCI CIRCUIT FOR NEW BOTTLE FILLER.
- 6 PROVIDE NEW PAGING SYSTEM SPEAKERS COMPATIBLE WITH EXISTING PAGING SYSTEM AND CONNECT TO EXISTING CIRCUITS.
- 7 TRANSFORMERS FOR WASHROOM FIXTURES REQUIRING POWER ARE TO BE LOCATED ABOVE NEAREST ACCESSIBLE CEILING.
- 8 UPDATE ALL PANEL SCHEDULES WHERE REQUIRED TO REFLECT CHANGES MADE DURING RENOVATION.
- 9 LOCATION OF RELOCATED SECURITY CAMERA. COORDINATE FINAL LOCATION AND AIMING WITH OWNER'S SECURITY INSTALLER AS REQUIRED.
- 10 PROVIDE 208V, 15A, 3PH CIRCUIT TO FEED FAN POWERED BOX. UTILIZE EXISTING SPARE 15A, 3 POLE BREAKER IF AVAILABLE OR PROVIDE NEW AS REQUIRED.
- 11 NEW WALL MOUNTED TV MONITOR LOCATION. COORDINATE FINAL LOCATION/MOUNTING HEIGHT OF POWER AND DATA DEVICES - TO BE HIDDEN BEHIND SCREEN.
- 12 NEW CEILING MOUNTED TV MONITOR LOCATION. COORDINATE FINAL LOCATION/MOUNTING HEIGHT OF POWER AND DATA DEVICES AT COLUMN/CEILING.
- 13 NEW PANEL LP-RBW TO REPLACE EXISTING PANEL IN ORIGINAL LOCATION. CONNECT TO EXISTING POWER SUPPLY AT THIS LOCATION. REFER TO PANEL SCHEDULE ON DRAWING E901 (120/208V, 100A, 3PH, 4W, 42 CCT). CIRCUITS 1-5 ARE EXISTING LOADS - RECONNECT TO EXISTING CIRCUITS.
- 14 SOUND SYSTEM TO BE INSTALLED AT APPROX. THIS LOCATION. ALL SOUND SYSTEM SPEAKERS ARE TO TERMINATE AT THIS LOCATION.
- 15 ALL NEW ELECTRIC HAND DRYERS ARE SUPPLIED AND INSTALLED BY OWNER. ROUGH-IN AND POWER SUPPLY BY ELECTRICAL CONTRACTOR.

CLIENT LOGO



KEYPLAN



TRUE NORTH PROJECT NORTH

No.	ISSUANCE	DATE
1	ISSUED FOR 100% CD	2026-03-05
2	ISSUED FOR BID AND PERMIT	2026-03-26
3	ISSUED FOR ADDENDUM 001	2026-04-24

CLIENT

WATERLOO REGION DISTRICT SCHOOL BOARD

51 Ardelt Ave, Kitchener, ON N2C 2R5

PROJECT

KCI - HEALTH AND PHYSICAL EDUCATION RENOVATION

787 King St. W, Kitchener, ON N2G 2G5

TITLE

POWER AND SYSTEMS LAYOUT

WALTERFEDY

TORONTO | CALGARY | EDMONTON | KITCHENER | HAMILTON

800.685.1378 walterfedy.com

SEAL

REPRODUCTION OR DISTRIBUTION FOR PURPOSES OTHER THAN AUTHORIZED BY WALTERFEDY, A PART OF WF GROUP, IS FORBIDDEN. CONTRACTORS SHALL VERIFY AND BE RESPONSIBLE FOR ALL DIMENSIONS AND CONDITIONS ON THE JOB AND REPORT ANY VARIATIONS FROM THE DIMENSIONS AND CONDITIONS SHOWN ON DRAWINGS TO WALTERFEDY, A PART OF WF GROUP. - DO NOT SCALE THIS DRAWING -

COPYRIGHT © 2026 WalterFedy, A Part of WF Group Inc.

SCALE:	AS NOTED	SHEET NO.:
DATE:	2026-02-01	E301
PROJECT NO.:	2025-4029-10	
DRAWN BY:	D.E.	
CHECKED BY:	T.D.	