

All proposed construction must be in accordance with approved plans and specifications and must comply with the Ontario Building Code as amended and all other applicable by-laws and Federal and Provincial statutes.

FAILURE TO POST A PERMIT CARD IS AN OFFENSE UNDER THE BUILDING CODE ACT AND AN INSPECTION MAY NOT BE PERFORMED.

New - Non Residential Building Permit

BASIC BUILDING PERMIT INFORMATION

Property Location:	80 BLUEVALE ST. N	Permit #:	25 009547 000 00 PNR
Legal Description:	TRACT GERMAN COMPANY PT LOT 5	Date Issued:	May 02, 2025
Building Type:	Assembly (Group A)	# Res. Units:	0
Work Proposed:	Interior Work		

PEOPLE INFORMATION

<u>Applicant</u>	<u>Owner</u>	<u>Contractor</u>
Waterloo Region District School Board 51 Ardelt Ave. Kitchener ON N2C 2R5 Work (519) 570-0003 Mobile (519) 505-3852	WATERLOO REGION DISTRICT SCHOOL BOARD 51 Ardelt Ave. Po Box 91116 Stn C Kitchener ON N2G 4G2 Primary (519) 570-0003 x4602	WATERLOO REGION DISTRICT SCHOOL BOARD 51 Ardelt Ave. Po Box 91116 Stn C Kitchener ON N2G 4G2 Primary (519) 570-0003 x4602

SPECIAL CONDITIONS

Description: Consolidating two existing classrooms to provide a Developmental Education classroom, complete with universal washroom, dedicated storage room, and sensory space. New finishes, fixtures, and architectural woodwork in these spaces will be upgraded to suit its new program.

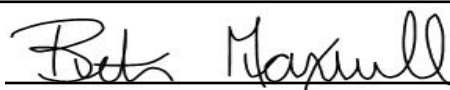
Condition:

MANDATORY INSPECTIONS

To schedule an inspection, please call the Inspection Request line at **(519) 747-8789**. The BCA requires you to notify the Inspector at the following stages of construction.

Underground Plumbing Inspection
Framing Inspection
Plumbing Rough-In Inspection
Final Plumbing Inspection
Final Inspection

Issued By:



Chief Building Official

BUILDING IDENTIFICATION



PERMIT CARD

Permit Number

25 009547 PNR

Municipal No.

80

Street Name

BLUEVALE ST N

Builder's Name

WATERLOO REGION DISTRICT SCHOOL BOARD

Owner's Name

**WATERLOO REGION
DISTRICT SCHOOL
BOARD**

Legal Description

**Legal TRACT GERMAN
COMPANY PT LOT 5**

THIS CARD MUST BE POSTED IN A CONSPICUOUS PLACE DURING CONSTRUCTION



City of Waterloo contact info :		Other Contacts:	
Building Standards General Inquiries	519.747.8712	Electrical Safety Authority	1.877.372.7233
Small Buildings Inspection Requests	519.747.6120	Waterloo North Hydro	519.886.5090
Large Buildings Inspection Requests	519.747.8789	Enbridge Gas	1.888.774.3111
Backflow Prevention Inspections	226.339.1498	Call Before You Dig	1.800.400.2255
Site Services Inspection	519.747.8517	Police (Non-Emergency)	519.570.9777
Service Center - Water Meters	519.886.2310	GRCA	1.866.900.4722
Fire Prevention	519.884.6030	Ministry of Labour	1.877.202.0008
By-Law	519.747.8785	Region Of Waterloo	519.575.4400

PLEASE CONSTRUCT IN ACCORDANCE WITH THE PERMIT DRAWINGS

THIS CARD MUST BE POSTED IN A CONSPICUOUS LOCATION DURING CONSTRUCTION

COMMITMENT TO GENERAL REVIEWS BY ARCHITECTS AND ENGINEERS

THIS FORM TO BE COMPLETED BY THE OWNER'S AUTHORIZED AGENT, AND SIGNED BY ALL CONSULTANTS RETAINED FOR GENERAL REVIEWS

Part A - Owner's Undertaking

Project Description: WRDSB-Bluevale Collegiate Institute Developmental Education Classroom & Universal Washroom Upgrade

Permit Application No.

Address of Project: 80 Bluevale St. N., Waterloo, ON N2J 3R5

Municipality: Waterloo

WHEREAS THE Ontario Building Code requires that the project described above be designed and reviewed during construction by an architect, professional engineer or both that are licensed in Ontario;

NOW THEREFORE THE Owner, being the person who intends to construct or have the building constructed hereby warrants that:

1. The undersigned architect and/or professional engineer(s) have been retained to provide general reviews of the construction of the building to determine whether the construction is in general conformity with the plans and other documents that form the basis for the issuance of a building permit, in accordance with the performance standards of the Ontario Association of Architects (OAA) and/or Professional Engineers of Ontario (PEO);
2. All general review reports by the architect and/or professional engineers will be forwarded promptly to the Chief Building Official, and
3. Should any retained architect or professional engineer cease to provide general reviews for any reason during construction, the Chief Building Official will be notified in writing immediately, and another architect or engineer will be appointed so that general review continues without interruption during construction.

The undersigned hereby certifies that he/she has read and agrees to the above

Name of Owner: Waterloo Region District School Board

Date:

Address of Owner: 51 Ardelt Ave., Kitchener, ON N2C 2R5

Telephone: 519-570-0003

Signature of Owner: Ronald Dallen
(or officer of corporation)

Digitally signed by Ronald Dallen
Date: 2025.04.23 10:30:12 -04'00'

Print Name: Ronald Dallen

Fax:

Coordinator of the work of all consultants: Maria Melo

Telephone: 519-576-2150

Address: 675 Queen Street S., Suite 111, Kitchener, ON N2M 1A1

Fax: 519-576-5499

Part B - Consultants

The undersigned architect and/or professional engineer(s) hereby certify that they have been retained to provide general reviews of the parts of construction of the building indicated, to determine whether the construction is in general conformity with the plans and other documents that form the basis for the issuance of a building permit, in accordance with the performance standards of the OAA and/or PEO.

SHADED PORTION TO BE COMPLETED BY CONSULTANTS

☒ ARCHITECT ☐ STRUCTURAL ☐ MECHANICAL ☐ ELECTRICAL ☐ SITE SERVICES ☐ OTHER (SPECIFY):

Consultant Name: WalterFedy Signature:  Print Name: Maria Melo Date: April 2, 2025


Telephone: 519-576-2150 Fax: 519-576-5499 Address: 675 Queen St. S., Suite 111, Kitchener, ON N2M 1A1

☐ ARCHITECT ☒ STRUCTURAL ☐ MECHANICAL ☐ ELECTRICAL ☐ SITE SERVICES ☐ OTHER (SPECIFY):

Consultant Name: WalterFedy Signature:  Print Name: Peter Mottola Date: April 2, 2025


Telephone: 519-576-2150 Fax: 519-576-5499 Address: 675 Queen St. S., Suite 111, Kitchener, ON N2M 1A1

☐ ARCHITECT ☐ STRUCTURAL ☒ MECHANICAL ☐ ELECTRICAL ☐ SITE SERVICES ☐ OTHER (SPECIFY):

Consultant Name: DEI Consulting Engineers Inc. Signature:  Print Name: Matthew White Date: April 3, 2025

Telephone: (519) 725-3555 Fax: Address: 55 Northland Rd. Waterloo, ON N2V 1Y8

☐ ARCHITECT ☐ STRUCTURAL ☐ MECHANICAL ☒ ELECTRICAL ☐ SITE SERVICES ☐ OTHER (SPECIFY):

Consultant Name: DEI Consulting Engineers Inc. Signature:  Print Name: Jeremy Jackson Date: April 3, 2025

Telephone: 519-725-3555 Fax: Address: 55 Northland Rd. Waterloo, ON N2V 1Y8

EABO Standard form/Endorsed by OAA, PEO and Ontario Building Officials Association


THE CITY OF

Waterloo

BUILDING INSPECTION

NOTE: THIS DEPARTMENT MUST BE NOTIFIED OF, AND APPROVE ALL CHANGES FROM THESE PLANS. ALL CONSTRUCTION TO CONFORM TO THE ONTARIO BUILDING CODE. THE BUILDER ASSUMES FULL LIABILITY FOR ERRORS AND OMISSIONS. THESE DRAWINGS MUST BE KEPT ON SITE UNTIL FINAL INSPECTION HAS BEEN COMPLETED.

2025-05-01



LARGE BUILDINGS: TO BOOK AN INSPECTION CALL THE INSPECTION REQUEST LINE AT 519-747-8789.

MATERIALS WITHIN A BUILDING REQUIRED TO BE OF NONCOMBUSTIBLE CONSTRUCTION SHALL COMPLY WITH OBC 3.1.5.

MAINTAIN MINIMUM 1100mm WIDE BARRIER FREE PATH OF TRAVEL AS PER OBC 3.8.1.3.(1).

DRAWING LIST	
ARCHITECTURE	
A001	OVERALL FLOOR PLAN AND OBC MATRIX
A101	PARTIAL DEMOLITION FLOOR AND CEILING PLANS
A201	PARTIAL FLOOR, CEILING PLANS AND STRUCTURAL DETAILS
A801	ENLARGED WASHROOM PLAN AND ELEVATIONS
A802	MILLWORK ELEVATIONS AND SECTIONS
MECHANICAL	
M1.1	MECHANICAL SCHEDULES, LEGEND, AND NOTES
M2.1	PLUMBING PART PLANS - DEMOLITION & RENOVATION
M3.1	HVAC PART PLANS - DEMOLITION & RENOVATION
M4.1	MECHANICAL SPECIFICATIONS AND DETAILS
ELECTRICAL	
E1.1	SCHEDULES, LEGEND, AND DETAILS
E2.1	ENLARGED DEMOLITION PART PLANS
E3.1	ENLARGED RENOVATION PART PLANS
E4.1	ELECTRICAL SPECIFICATIONS

The logo of the Waterloo Region District School Board is a circular emblem. It features a blue outer ring with the text "WATERLOO REGION" at the top and "DISTRICT SCHOOL BOARD" at the bottom. Inside the ring is a white stylized graphic of two figures holding hands, forming a shape reminiscent of the letters 'W' and 'D'.

WATERLOO REGION DISTRICT SCHOOL BOARD

WRDSB BLUEVALE CI DEVELOPMENTAL EDUCATION CLASSROOM RENOVATION

80 BLUEVALE ST N, WATERLOO ON N2J 3R5

WalterFedy Project No.: 2024-0057-11

ISSUED FOR BID AND PERMIT 2025.04.04

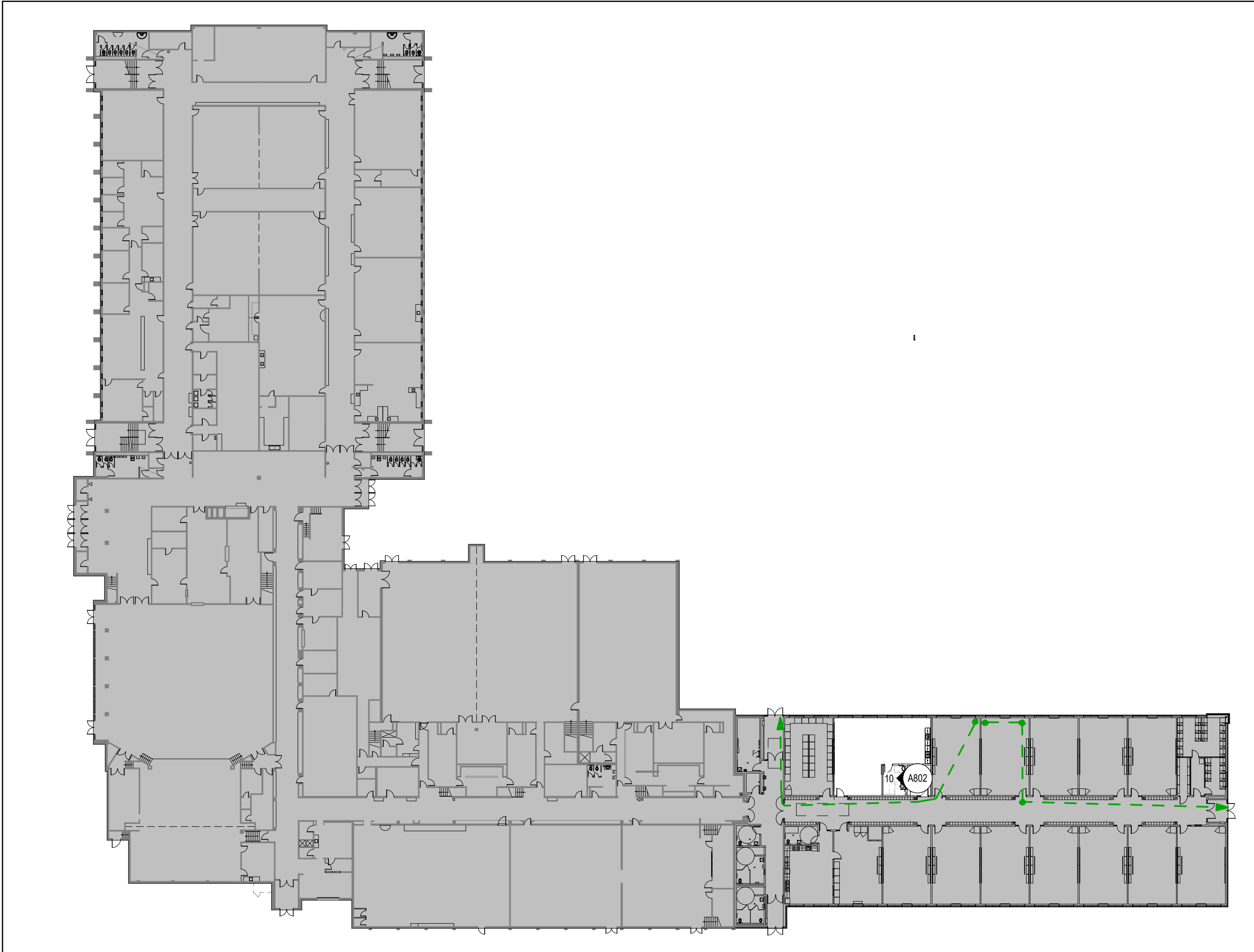
675 Queen Street South, Suite 111

Kitchener, Ontario, Canada N2M 1A1

T 519.576.2150 F 519.576.5499 walterfedy.com

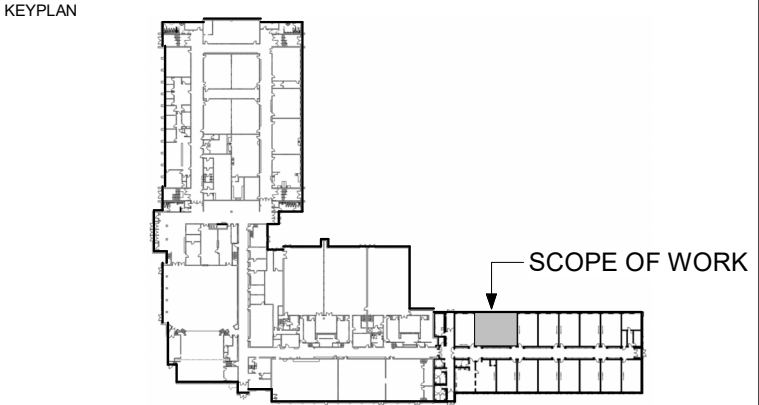
24-009547 Page 2 of 15

WALTERFEDY



1 OVERALL FLOOR PLAN - FOR REFERENCE ONLY
A001 Scale: 1 : 500

Ontario's 2012 Building Code					OBC Reference
Data Matrix Part 11					
11.1	Existing Building Classification	Describe Existing Use: GROUP A2 Construction Index: - Hazard Index: - ■ Not Applicable (no change of major occupancy)			11.2.1. T11.2.1.1A T11.2.1.1B-N
11.2	Alteration to Existing Building is	Basic Renovation ■ Extensive Renovation □			
11.3	Reduction in Performance Level	Structural	■ No	□ Yes	11.4.2. 11.4.2.1-5
		By Increase in Occupant Load	■ No	□ Yes	
		By Change of Major Occupancy	■ No	□ Yes	
		Plumbing	■ No	□ Yes	
		Sewage-System	■ No	□ Yes	
11.4	Compensating Construction	Structural	■ No	□ Yes (explain)	11.4.3. 11.4.3.2.
		-			
		Increase in Occupant Load	■ No	□ Yes (explain)	11.4.3.3.
		-			
		Change of Major Occupancy	■ No	□ Yes (explain)	11.4.3.4.
		-			
		Plumbing	■ No	□ Yes (explain)	11.4.3.5.
		-			
		Sewage System	■ No	□ Yes (explain)	11.4.3.6.
		-			
11.5	Compliance Alternatives Proposed	■ No □ Yes (give number(s))			11.5.1.
11.6	Alternative Measures Proposed	■ No □ Yes (give number(s))			11.5.2.
NOTES:					
1. FIRE RESISTANCE RATING FOR CORRIDOR IS NOT REQUIRED AS THE CORRIDOR IS SPRINKLERED. 3.3.2.5(3) AND THE FIRE SEPARATION IS WAIVED AS THE EXIT TRAVEL DISTANCE DOES NOT EXCEED 45M AS PER 3.3.2.5(4).					
2. MAJOR OCCUPANCY: GROUP A2 TO REMAIN					
3. EXISTING BUILDING AREA: 8933.7 M²					
4. AREA OF RENOVATION: 142.6 M²					
5. EXISTING BUILDING: SPRINKLERED					
6. FIRE ALARM - EXISTING					
7. TYPE OF CONSTRUCTION REQUIRED: NON-COMBUSTIBLE					
8. PLUMBING FIXTURES ADDED:					
1 UNIVERSAL WASHROOM (2 FIXTURES)					



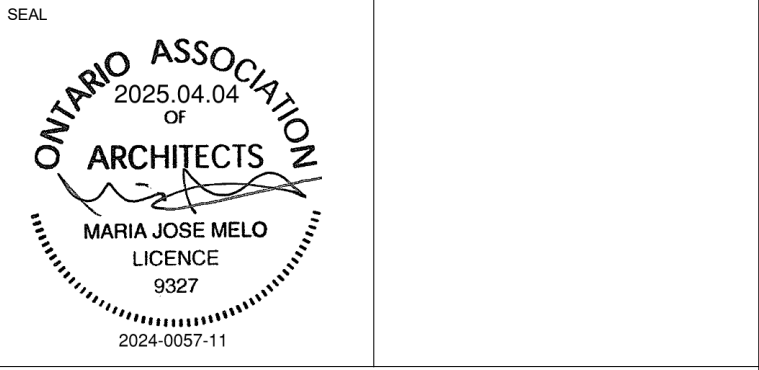
No.	ISSUANCE	DATE
1	ISSUED FOR 100% OWNER REVIEW	2025.03.19
2	ISSUED FOR BID AND PERMIT	2025.04.04

CLIENT
WATERLOO REGION DISTRICT SCHOOL BOARD
51 ARDELT AVE., KITCHENER, ON

PROJECT
WRDSB BLUEVALE CI DEVELOPMENTAL EDUCATION CLASSROOM RENOVATION
80 BLUEVALE ST N, WATERLOO ON N2J 3R5

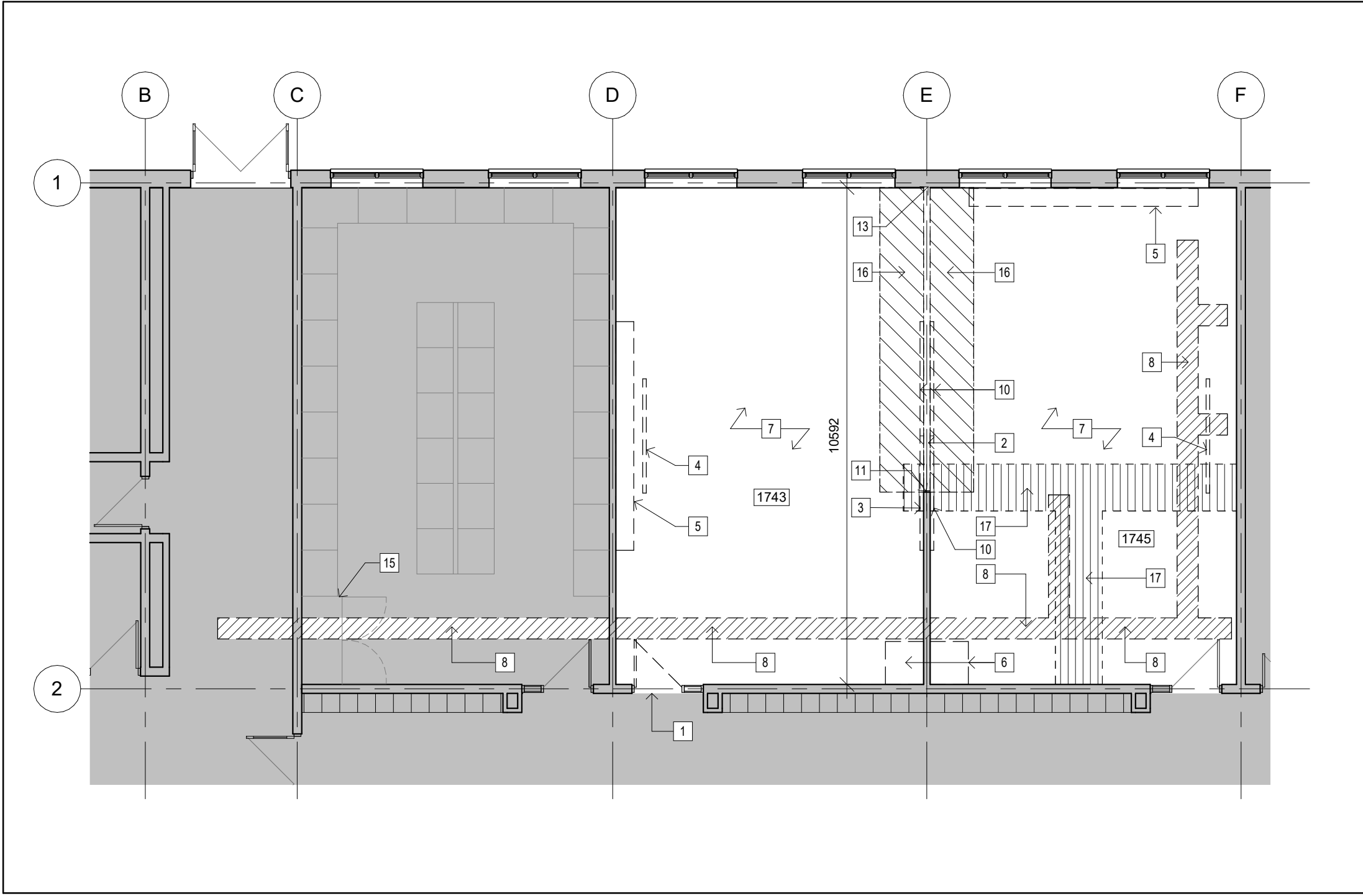
TITLE
OVERALL FLOOR PLAN AND OBC MATRIX

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-

COPYRIGHT © 2024 WalterFedy, A Part of WF Group Inc.	
SCALE: N.T.S.	SHEET NO: A001
DATE: 2025.04.04	
PROJECT NO: 2024-0057-11	
DRAWN BY: CS	
CHECKED BY: MM	



1 PARTIAL FLOOR PLAN - DEMOLITION
A101 Scale: 1 : 100

GENERAL NOTES

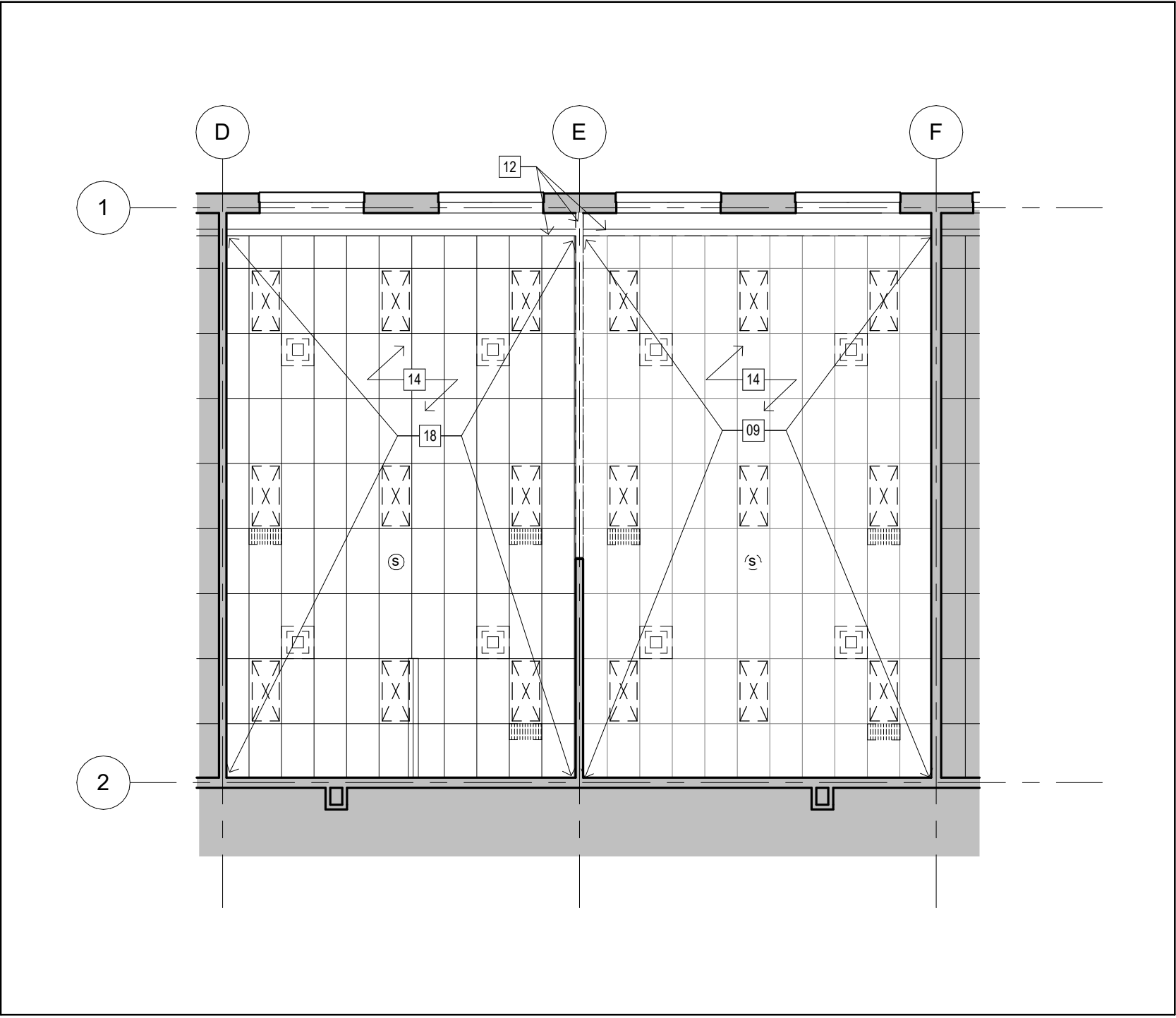
- A. CARRY OUT ALL DEMOLITION, REMOVAL AND DISPOSAL IN ACCORDANCE WITH APPLICABLE PROVINCIAL AND LOCAL REGULATIONS.
- B. EXECUTE DEMOLITION IN AN ORDERLY AND CAREFUL MANNER WITH DUE CONSIDERATION FOR ADJACENT STRUCTURES AND FINISHES.
- C. ALL NECESSARY PRECAUTIONS SHALL BE TAKEN TO GUARD AGAINST MOVEMENT OR SETTLEMENT OF THE REMAINING STRUCTURE, INCLUDING ALL NECESSARY BRACING OR SHORING THAT IS REQUIRED.
- D. ALL DEMOLITION DEBRIS TO BE DISPOSED BY DEMOLITION TRADE UNLESS OTHERWISE NOTED.
- E. ALL CONTRACTORS TO REFER TO MECHANICAL AND ELECTRICAL DRAWINGS OR DEMOLITION NOTES FOR DETAILS OF SCOPE OF MECHANICAL AND ELECTRICAL DEMOLITIONS.
- F. CONTRACTOR SHALL BE ENTIRELY RESPONSIBLE FOR, AND MAKE GOOD ALL DAMAGE TO ADJACENT FINISHED SURFACES AND ASSEMBLIES.
- G. CONTRACTOR TO ENSURE ALL EXIT SIGNAGE TO REMAIN AS INSTALLED AND ENSURE FIXTURES ARE OPERATIONAL. CONTRACTOR TO PROVIDE RE-SUPPORT AS REQUIRED TO SUIT PHASING.
- H. CONTRACTOR TO ENSURE ALL EMERGENCY LIGHT FIXTURES TO REMAIN ALONG EGRESS ROUTES.
- I. PATCH AND MAKE GOOD ANY DAMAGED FIRE ASSEMBLIES WITH CONTINUOUS FIRESTOPPING/FIREBLOCKING EQUAL TO THAT OF WALL/FLOOR.
- J. CONTRACTOR TO ENSURE ALL MANUAL PULL STATIONS AND FIRE ALARM BELLS REMAIN OPERATIONAL. IF A DEVICE MUST BE REMOVED, THE DEVICE MUST BE PROPERLY DE-PROGRAMMED BY LICENSED FIRE ALARM TECHNICIAN AND RE-ACTIVATED AT END OF WORKING DAY. FIRE WATCH MUST BE PROVIDED BY DEMOLITION/ABATEMENT TRADE WITHOUT ADDITIONAL COST TO OWNER OR CONSULTANT.
- K. CONTRACTOR TO PROVIDE DUST CONTROL AND HOARDING IN ISOLATED DEMOLITION, TYP. FOR EACH LOCATION.
- L. CONTRACTOR SHALL PATCH AND MAKE GOOD ALL FLOORS WHERE DISTURBED BY REMOVAL OF WALL ASSEMBLY AND/OR EXISTING FINISHES.
- M. IF AN ITEM IS NOT NOTED TO BE REINSTALLED OR TURNED OVER TO THE OWNER, IT SHALL BE THE RESPONSIBILITY OF THE GENERAL CONTRACTOR TO DISPOSE OF ITEMS.
- N. IT SHALL BE THE RESPONSIBILITY OF THE GENERAL CONTRACTOR TO REVIEW ALL DESIGNATED SUBSTANCES DOCUMENTATION PRIOR TO COMMENCING WORK.
- O. IT SHALL BE THE RESPONSIBILITY OF THE GENERAL CONTRACTOR TO REMOVE ALL LOOSE FURNITURE AND WALL MOUNTED DISPLAYS PRIOR TO CONSTRUCTION START.
- P. ANY MECHANICAL OR ELECTRICAL DEVICES THAT MAY BE TEMPORARILY REMOVED AND REINSTALLED FOR THIS WORK SHALL BE TESTED.
- Q. LOCATE AND DISCONNECT, CAP AND PLUG ALL GAS, WATER, SEWER, HYDRO, TELEPHONE AND OTHER SERVICES AS REQUIRED.
- R. PREPARE ALL THE SURFACES TO BE ACCEPTABLE FOR PROPOSED FINISHING AFTER DEMOLITION WORKS

DEMOLITION NOTES

- 01 REMOVE AND DISPOSE OF EXISTING DOOR C/W FRAME, SCREENS AND ALL HARDWARE. PATCH AND MAKE GOOD ALL SURFACES TO REMAIN. PREPARE OPENING TO ACCEPT NEW DOOR & FRAME.
- 02 REMOVE AND DISPOSE OF EXISTING WALL ASSEMBLY INCLUDING ALL WALL MOUNTED ACCESSORIES. COORDINATE WITH MECHANICAL AND ELECTRICAL TRADES FOR DISCONNECTING AND CAPPING OF ANY SERVICES WITHIN WALL. PATCH AND MAKE GOOD ALL SURFACES TO REMAIN TO ACCEPT PROPOSED CONSTRUCTION OR FINISH.
- 03 REMOVE EXISTING TACK BOARD AND STORE ON SITE. PREPARE WALL TO RECEIVE PAINT.
- 04 REMOVE AND HAND OVER TO OWNER EXISTING PROJECTOR SCREEN.
- 05 REMOVE AND DISPOSE OF EXISTING MILLWORK AND CASEWORK. PATCH AND MAKE GOOD ALL SURFACES TO REMAIN AND TO ACCEPT NEW WALL & FLOOR FINISH.
- 06 REMOVE AND RELOCATE EXISTING TEACHER'S CLOSET. OWNER TO COORDINATE FINAL RELOCATION.
- 07 REMOVE AND DISPOSE EXISTING FLOORING AND BASE C/W ALL ADHESIVES/GROUT. PATCH AND MAKE GOOD EXISTING SLAB/SUBSTRATE TO ACCEPT NEW FLOOR FINISH.
- 08 SAWCUT AND REMOVE PORTION OF CONCRETE FLOOR SLAB. EXCAVATE AND TRENCH AS REQUIRED FOR MECHANICAL, ELECTRICAL, STRUCTURAL, AND ARCHITECTURAL SCOPE. APPROXIMATE EXTENT SHOWN HATCHED.
- 09 REMOVE AND DISPOSE OF EXISTING SUSPENDED ACOUSTIC CEILING ASSEMBLY C/W HANGERS, FRAMING AND MISCELLANEOUS FASTENERS. COORDINATE WITH MECHANICAL AND ELECTRICAL TRADE FOR EXACT LOCATION OF DISCONNECT AND REMOVAL OF ANY SERVICE WITHIN CEILING. PATCH AND MAKE GOOD ALL SURFACES TO RECEIVE NEW CEILINGS. REFER TO MECHANICAL AND ELECTRICAL FOR COMPLETE SCOPE OF WORK.
- 10 REMOVE AND DISPOSE OF EXISTING TACK BOARD. PREPARE TO RECEIVE PAINT.
- 11 CUT EXISTING MASONRY WALL STRAIGHT AND TRUE. PROVIDE TEMPORARY LATERAL SUPPORT AS REQUIRED.
- 12 CAREFULLY REMOVE CONCRETE BLOCK, EXISTING GYPSUM WALL BOARD BULKHEAD AND VALANCE TO REMAIN UNDISTURBED.
- 13 PATCH AND MAKE GOOD EXISTING WALL.
- 14 REMOVE AND DISPOSE OF EXISTING ELECTRICAL AND MECHANICAL FIXTURES.
- 15 RELOCATE CABINET FOR TRENCHING, INFILL AND FLOORING FINISH PATCH.
- 16 GRIND CONCRETE FLOOR SMOOTH 1 METER BOTH SIDES OF THE WALL.
- 17 EXTENT OF SLAB THICKENING. SEE TRENCHING LEGEND.
- 18 EXISTING CEILING TILE AND CEILING GRID TO REMAIN. PATCH AND MAKE GOOD ANY DAMAGE TO EXISTING DUE TO DEMOLITION AND CONSTRUCTION.

TRENCHING LEGEND:

1. ALL TRENCHING DIMENSIONS ARE APPROXIMATE. GC TO SITE VERIFY TRENCHING REQUIRED TO MINIMIZE DEMOLITION OF FLOOR SLAB TYPICAL.
- SAWCUT AND REMOVE PORTION OF CONCRETE FLOOR SLAB. EXCAVATE AND TRENCH AS REQUIRED FOR MECHANICAL, ELECTRICAL, STRUCTURAL, AND ARCHITECTURAL SCOPE. APPROXIMATE EXTENT SHOWN HATCHED.
- HATCHED AREA DENOTES CONCRETE INFILL OF TRENCHING (APPROX. 190 mm THICK). FINISH FLUSH WITH ADJACENT EXISTING FLOOR FINISH. PATCH AND MAKE GOOD WITH EXISTING ADJACENT AND PREPARE SUBSTRATE TO RECEIVE NEW FLOOR FINISH - REFER TO DETAIL C206/A201 FOR SLAB-ON-GRADE REPAIR DETAIL TYPICAL.
- HATCHED AREA DENOTES EXTENT OF CONCRETE SLAB THICKENING. FINISH FLUSH WITH ADJACENT EXISTING FLOOR FINISH. PATCH AND MAKE GOOD WITH EXISTING ADJACENT AND PREPARE SUBSTRATE TO RECEIVE NEW FLOOR FINISH - REFER TO DETAIL C107/A201 FOR SLAB THICKENING DETAIL TYPICAL.

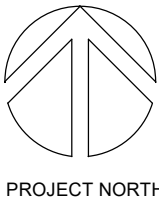
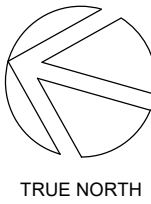
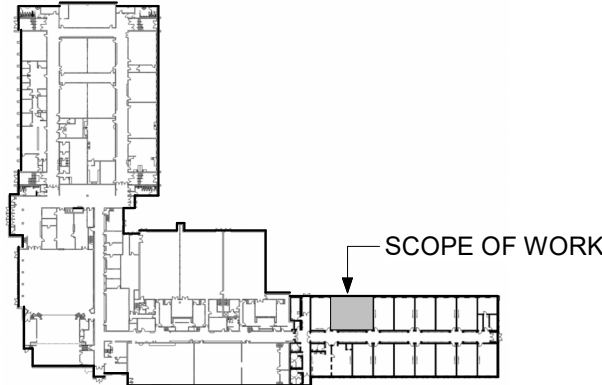


2 PARTIAL REFLECTED CEILING PLAN - DEMOLITION
A101 Scale: 1 : 100

CLIENT LOGO



KEYPLAN



No.	ISSUANCE	DATE
1	ISSUED FOR 100% OWNER REVIEW	2025.03.19
2	ISSUED FOR BID AND PERMIT	2025.04.04

CLIENT

WATERLOO REGION DISTRICT SCHOOL BOARD

51 ARDELT AVE., KITCHENER, ON

PROJECT

WRDSB BLUEVALE CI DEVELOPMENTAL EDUCATION CLASSROOM RENOVATION

80 BLUEVALE ST N, WATERLOO ON N2J 3R5

TITLE

PARTIAL DEMOLITION FLOOR AND CEILING PLANS

WALTERFEDY

TORONTO | CALGARY | EDMONTON | KITCHENER | HAMILTON

800.685.1378 walterfedy.com

SEAL



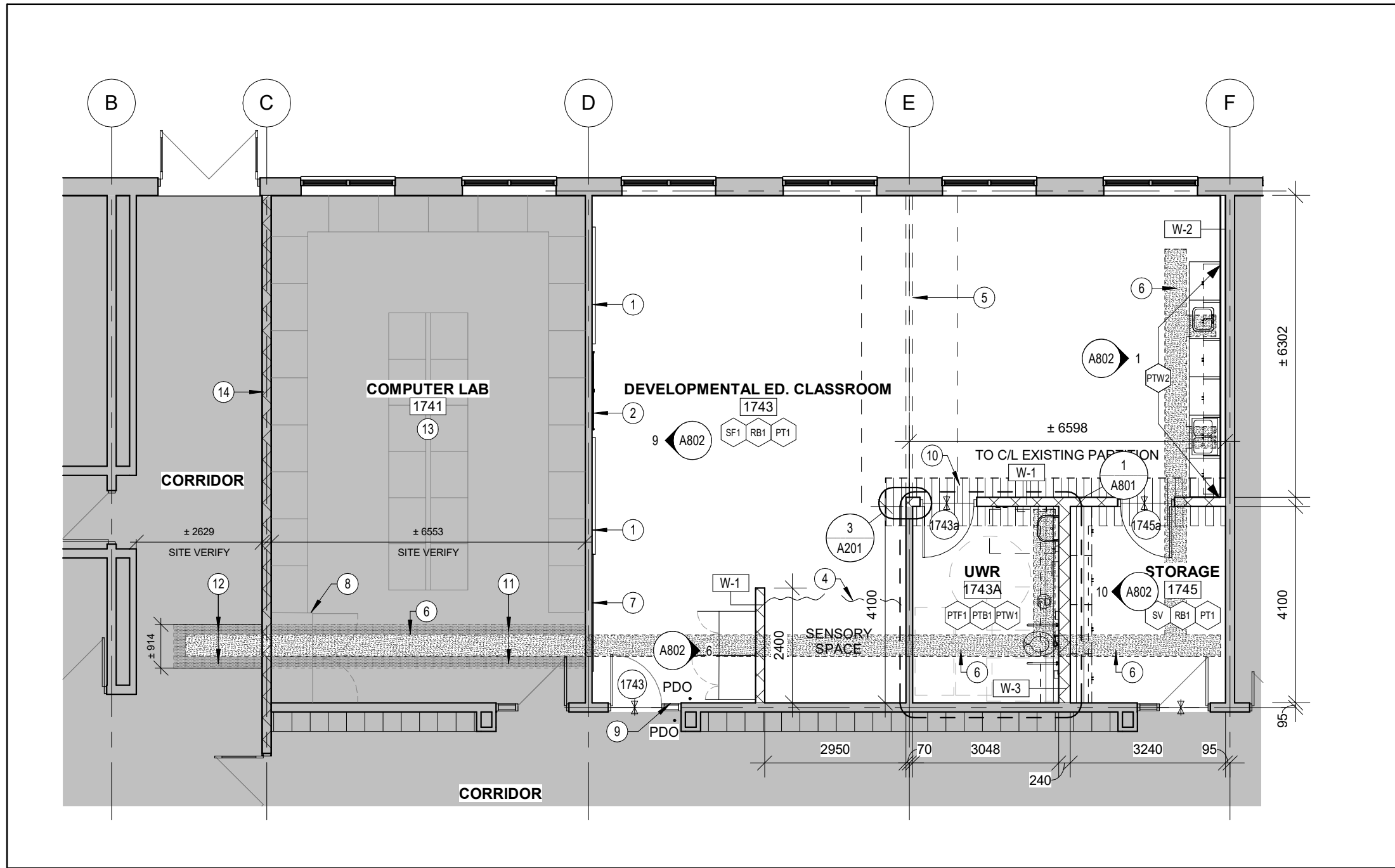
REPRODUCTION OR DISTRIBUTION FOR PURPOSES OTHER THAN AUTHORIZED BY WALTERFEDY, A PART OF WF GROUP, IS FORBIDDEN. CONTRACTORS SHALL VERIFY AND BE RESPONSIBLE FOR ALL DIMENSIONS AND CONDITIONS ON THE JOB AND REPORT ANY VARIATIONS FROM THE DIMENSIONS AND CONDITIONS SHOWN ON DRAWINGS TO WALTERFEDY, A PART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

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

SCALE :	AS NOTED
DATE :	2025.04.04
PROJECT NO :	2024-0057-11
DRAWN BY :	CS
CHECKED BY :	MM

SHEET NO :

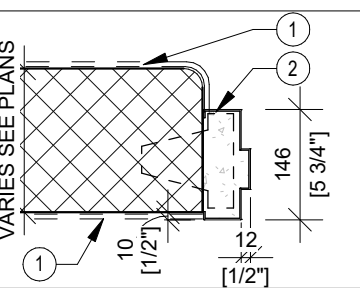
A101



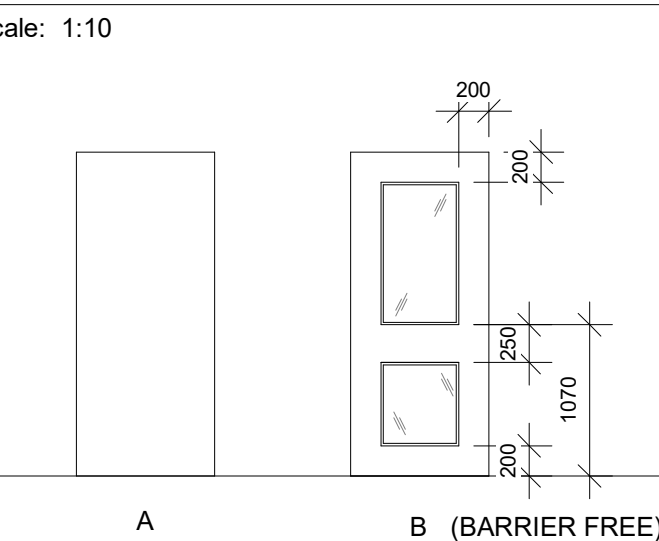
1 PARTIAL FLOOR PLAN - RENOVATION PLAN
A201 Scale: 1 : 100

GENERAL NOTES

- ALL WALLS TO EXTEND TO UIS STRUCTURAL DECK UNLESS OTHERWISE NOTED.
- ASSEMBLY CONSTRUCTION READ FROM TAG SIDE OF ASSEMBLY.
- ALL DIMENSIONS ARE APPROXIMATE, CONTRACTOR TO SITE VERIFY ALL DIMENSIONS.
- DIMENSIONING TO/FROM EXISTING CONDITIONS SHALL BE AT FACE OF EXISTING ASSEMBLY.
- PROVIDE BLOCKING AS REQUIRED TO SUPPORT WALL MOUNTED EQUIPMENT.
- REFER TO ELECTRICAL DRAWINGS FOR ALL CEILING MOUNTED EQUIPMENT SIZE AND TYPE.
- SEE MECHANICAL DRAWINGS FOR HVAC EQUIPMENT SIZE AND TYPE.
- CONTRACTOR TO PROTECT ALL EXISTING INTERIOR FINISHES, MECHANICAL, ELECTRICAL, MILLWORK AND FURNITURE TO REMAIN DURING ALL PHASES OF CONSTRUCTION.
- MAKE GOOD ALL CEILING TILE/WALLS/SURFACES AFTER CONSTRUCTION, FIX AND PAINT WALLS DAMAGED BY CONSTRUCTION AND/OR REPLACE CEILING IF DAMAGED BY CONSTRUCTION.
- FIRESTOP AND SEAL ALL PENETRATIONS THROUGH FIRE RATED ASSEMBLIES EQUAL TO ASSEMBLY RATING.
- IT IS THE RESPONSIBILITY OF THE GENERAL CONTRACTOR AND WINDOW SUB-CONTRACTOR TO VERIFY ALL DIMENSIONS AND JOB SITE CONDITIONS AND REPORT ANY DISCREPANCIES TO THE ARCHITECT PRIOR TO COMMENCING CONSTRUCTION.



DF1
Scale: 1:10



DOOR PANEL ELEVATION
Scale: 1:50

DOOR & SCREEN SCHEDULE

Door/Screen	Door/Screen					Frame		Hardware						
Mark	Width x Height x Thickness	Type / Elev	Material	Finish	Glazing	Grille	Type / Elev	Profile	Material	Finish	ULC Panics	Closer	Fire Rating	Notes
01-Level														
1743	1067x2150x45	B	HM	PNT	TGL		2	DF1	HM	PNT	No	No	-	PDO ES, OHS
1743a	1067x2150x45	A	HM	PNT			1	DF1	HM	PNT	No	No	-	PDO, ES, OHS
1745a	1067x2150x45	A	HM	PNT			1	DF1	HM	PNT	No	No	-	

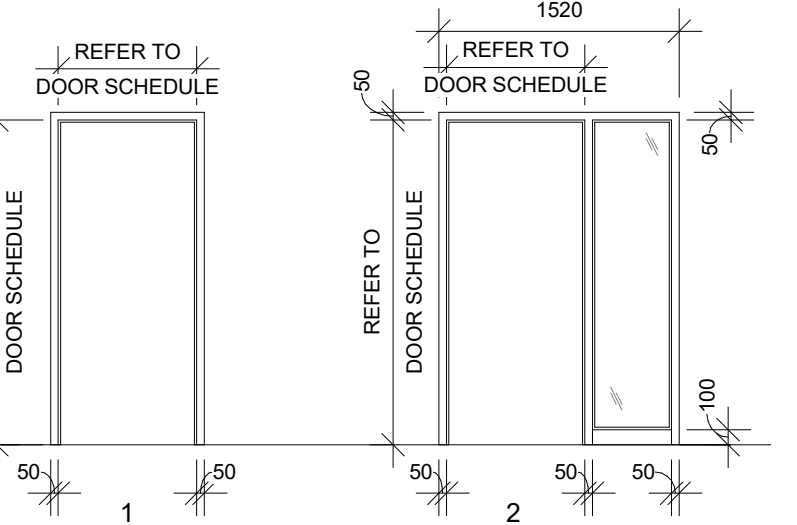
DRAWING NOTES

- PROVIDE 1220x2440mm WHITEBOARD.
- PROVIDE 70" TELEVISION WITH WALL-MOUNTED BRACKET.
- RESERVED.
- PROVIDE CURTAIN AND OVERHEAD TRACK. REFER TO STRUCTURAL DRAWINGS FOR SUPPORT.
- ALLOW FOR TOPPING TO LEVEL FLOOR AT AREA OF CMU PARTITION REMOVAL
- HATCHED AREA DENOTES CONCRETE INFILL OF TRENCHING, SEE TRENCHING LEGEND.
- RELOCATED TACK BOARD.
- REINSTATE CABINET UPON TRENCHING, INFILL AND FLOOR FINISH PATCH COMPLETION. NEW RUBBER BASE TO MATCH EXISTING.
- ROLLER SHADE, REFER TO SPECIFICATIONS.
- EXTENT OF SLAB THICKENING. SEE TRENCHING LEGEND.
- REPAIR EXISTING VCT FLOOR TILE UPON COMPLETION OF TRENCH CONCRETE INFILL. INSTALL POCELAIN FLOOR TILE. SIZE AND COLOUR TO MATCH EXISTING. APPROX. 3'-0" +/- WIDE ACROSS WIDTH OF EXISTING ROOM. PATCH AND MAKE GOOD WITH EXISTING ADJACENT FLOORING.
- REPAIR EXISTING PORCELAIN FLOOR TILE UPON COMPLETION OF TRENCH CONCRETE INFILL. INSTALL POCELAIN FLOOR TILE. SIZE AND COLOUR TO MATCH EXISTING. APPROX. 3'-0" +/- WIDE ACROSS WIDTH OF EXISTING CORRIDOR. PATCH AND MAKE GOOD WITH EXISTING ADJACENT FLOORING.
- PROVIDE SEALED DUST PROTECTION, REFER TO DIVISION 01 OF SPECIFICATIONS.
- PAINT CORRIDOR WALL ENTIRELY TO MATCH EXISTING UPON COMPLETION OF TRENCHING.

DOOR SCHEDULE LEGEND:

GENERAL NOTE:

- FRAME HEAD HEIGHT TO BE 90mm (2") UNLESS OTHERWISE NOTED. REFER TO DOOR SCHEDULE
- 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.
- WINDOW BLINDS TO BE INSTALLED AT ALL GLAZING OPENINGS.



DOOR FRAME ELEVATION
Scale: 1:50

WALL ASSEMBLIES:

- W-1 190mm CONCRETE BLOCK
- W-2 92mm GALV. METAL STUDS (20ga.) @ 400 O.C GYPSUM WALL BOARD
- W-3 240mm CONCRETE BLOCK

FINISH LEGEND:

- WALL & CEILING
- PT1 PAINT
- PT2 PAINT
- PT3 PAINT
- PTW1 PORCELAIN WALL TILE
- PTW2 PORCELAIN WALL TILE

FLOOR:

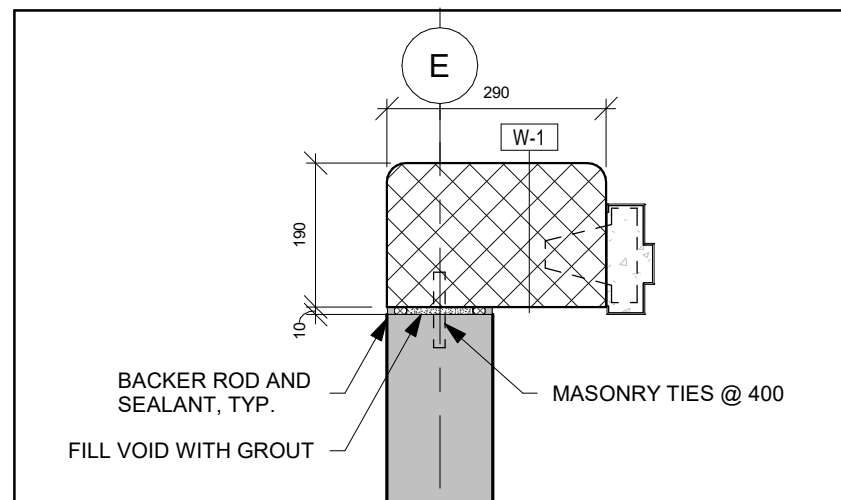
- PTF1 PORCELAIN FLOOR TILE
- SP1 SPORTS FLOORING

BASE:

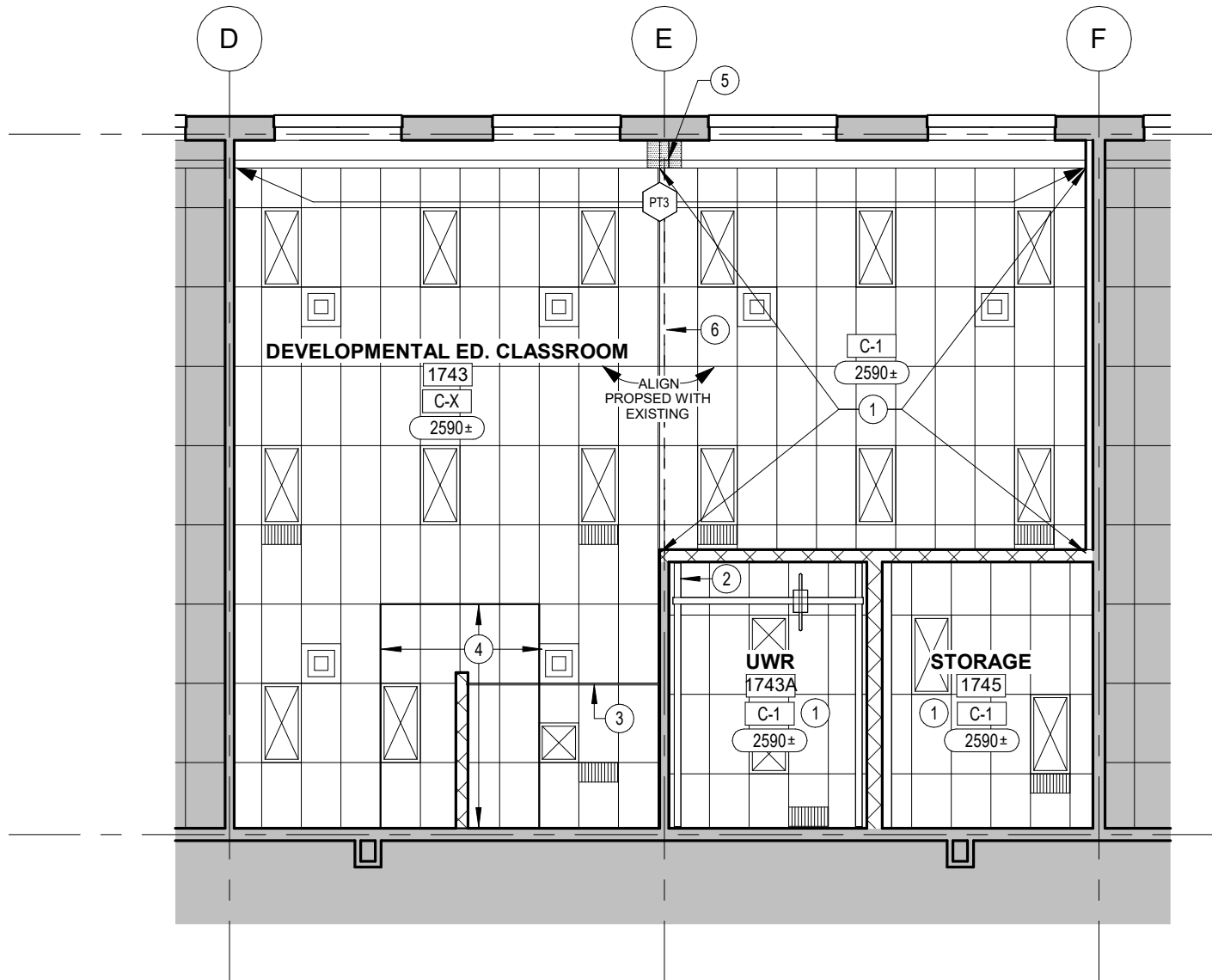
- PTB1 PORCELAIN TILE BASE
- RB1 RUBBER BASE
- TS TRANSITION STRIP

TRENCHING LEGEND:

- ALL TRENCHING DIMENSIONS ARE APPROXIMATE. GO TO SITE VERIFY TRENCHING REQUIRED TO MINIMIZE DEMOLITION OF FLOOR SLAB TYPICAL.
- SAWCUT AND REMOVE PORTION OF CONCRETE FLOOR SLAB. EXCAVATE AND TRENCH AS REQUIRED FOR MECHANICAL, ELECTRICAL, STRUCTURAL, AND ARCHITECTURAL SCOPE. APPROXIMATE EXTENT SHOWN HATCHED.
- HATCHED AREA DENOTES CONCRETE INFILL OF TRENCHING (APPROX. 190 mm THICK). FINISH FLUSH WITH ADJACENT EXISTING FLOOR FINISH. PATCH AND MAKE GOOD WITH EXISTING ADJACENT AND PREPARE SUBSTRATE TO RECEIVE NEW FLOOR FINISH - REFER TO DETAIL C206/A201 FOR SLAB-ON-GRADE REPAIR DETAIL TYPICAL.
- HATCHED AREA DENOTES EXTENT OF CONCRETE SLAB THICKENING. FINISH FLUSH WITH ADJACENT EXISTING FLOOR FINISH. PATCH AND MAKE GOOD WITH EXISTING ADJACENT AND PREPARE SUBSTRATE TO RECEIVE NEW FLOOR FINISH - REFER TO DETAIL C107/A201 FOR SLAB THICKENING DETAIL TYPICAL.



3 PLAN DETAIL
A201 Scale: 1 : 10



2 PARTIAL REFLECTED CEILING PLAN - RENOVATION
A201 Scale: 1 : 100

GENERAL RCP NOTES

- THE CONTRACTOR SHALL COMPARE THIS REFLECTED CEILING PLAN WITH ELECTRICAL LIGHTING PLANS, MECHANICAL SUPPLY, RETURN, AND EXHAUST PLANS. THE CONTRACTOR SHALL REPORT ANY OMISSIONS OR INCONSISTENCIES TO THE ARCHITECT.
- SEE ELECTRICAL DRAWINGS FOR THE LOCATIONS OF CEILING MOUNTED SMOKE DETECTORS, NURSE CALL DOME LIGHTS EXIT SIGNAGE, FIRE ALARM DEVICES, WALL MOUNTED EXIT LIGHTS, ETC.
- COORDINATE GYPSUM BOARD FURR DOWN HEIGHTS WITH FULL HEIGHT CABINETS AND INTERIOR ELEVATIONS.
- SPRINKLER HEAD LOCATIONS ARE NOT SHOWN ON ARCHITECTURAL REFLECTED CEILING PLANS. REFER TO MECH DRAWINGS FOR ANY WORK RELATED TO FIRE PROTECTION SYSTEMS.
- 18" MINIMUM VERTICAL CLEARANCE SHALL BE MAINTAINED BETWEEN THE BOTTOM OF EXTENDED SPRINKLER HEADS AND THE TOP OF ANY FILES, SHELVING, LOCKERS, ETC.
- THE CONTRACTOR SHALL VERIFY THAT ACCESS PANELS OF TYPE SPECIFIED ARE INSTALLED IN NON-ACCESSIBLE TYPE CEILINGS WHERE SERVICE OR ADJUSTMENT TO MECHANICAL, PLUMBING, OR ELECTRICAL ITEMS MAY BE REQUIRED. ACCESS PANELS SHALL BE THE FIRE RATED TYPE EQUAL TO THE RATING OF THE CEILING IN WHICH THEY OCCUR.
- WHERE EXISTING LAY-IN CEILINGS ARE TO REMAIN, THE CONTRACTOR SHALL REPLACE ANY TILE THAT HAS BEEN DAMAGED WITH MATERIALS THAT MATCH THE EXISTING FOR COLOR, TEXTURE, PATTERN, ETC.
- RELOCATE SUPPLY DRAIN AND VENT PIPES TO MAINTAIN SCHEDULED CEILING HEIGHTS. COORDINATE RELOCATIONS WITH MEP.
- LOAD BEARING STEEL STUD FOR CEILING FRAMING TO BE DESIGNED BY OTHERS.

CEILING NOTES:

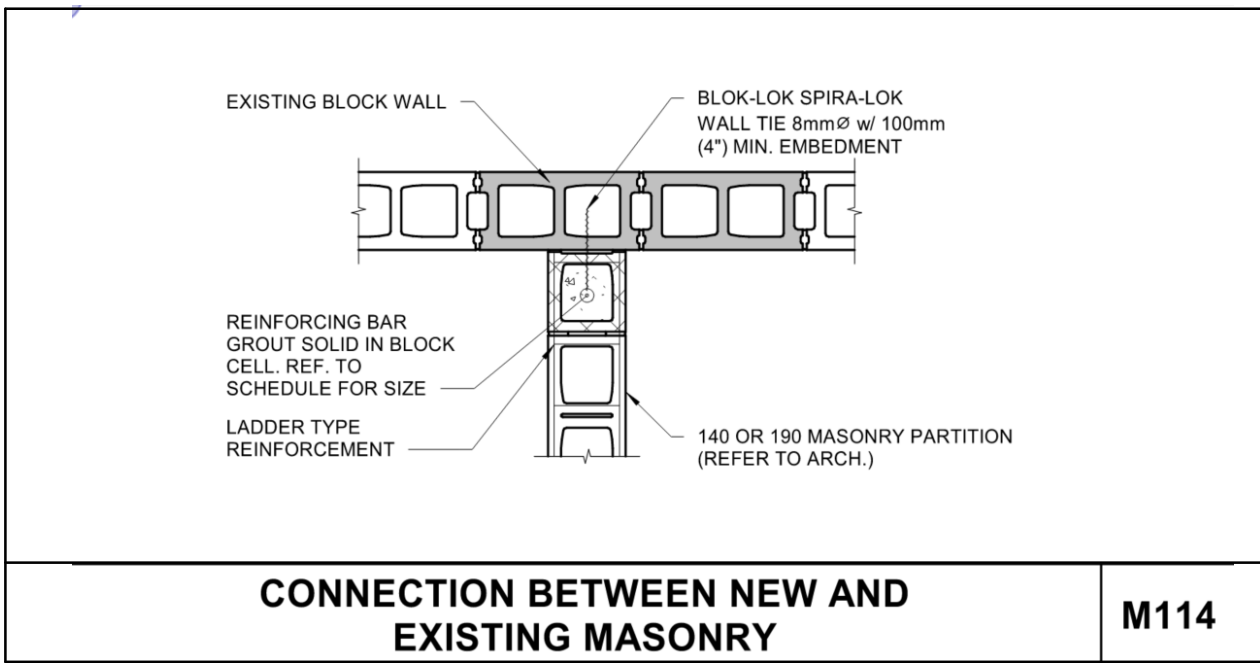
- REINSTALL EXISTING ACOUSTIC CEILING TILE IN NEW PREFINISHED METAL T-BAR SUSPENSION SYSTEM.
- OWNER SUPPLIED SELF SUPPORTED LIFT SYSTEM, GC TO PROVIDE ELECTRICAL. REFER TO SPECIFICATIONS.
- PROVIDE CURTAIN RAIL SECURED TO STRUCTURE ABOVE CEILING.
- REINSTALL T-BAR SUSPENSION SYSTEM AND ACOUSTIC CEILING TILE. MODIFY CEILING TILE AND EXISTING T-BAR TO ACCOMMODATE INSTALLATION OF CONCRETE BLOCK WALL. PATCH AND MAKE GOOD WITH EXISTING.
- MODIFY EXISTING METAL STUD FRAMING TO ALLOW FOR INSTALLATION OF NEW GYPSUM WALL BOARD INFILL. PATCH AND MAKE GOOD WITH EXISTING.
- TIE NEW PREFINISHED METAL T-BAR SUSPENSION SYSTEM INTO EXISTING CEILING GRID.

CEILING ASSEMBLIES

- C-X EXISTING ACOUSTIC CEILING TILE EXISTING CEILING GRID
- C-1 SALVAGED 610x1220 ACOUSTIC CEILING TILE NEW PREFINISHED METAL T-BAR SUSPENSION SYSTEM

REFLECTED CEILING PLAN LEGEND:

- C-1 CEILING ASSEMBLY TYPE
- XXXX UIS OF CEILING ELEVATION (MEASURED FROM FIN. FLOOR - SITE VERIFY)
- ACOUSTICAL CEILING TILE
- LIGHT FIXTURE (SEE ELEC.)
- SUPPLY AIR DIFFUSER (SEE MECH.)
- RETURN AIR DIFFUSER (SEE MECH.)



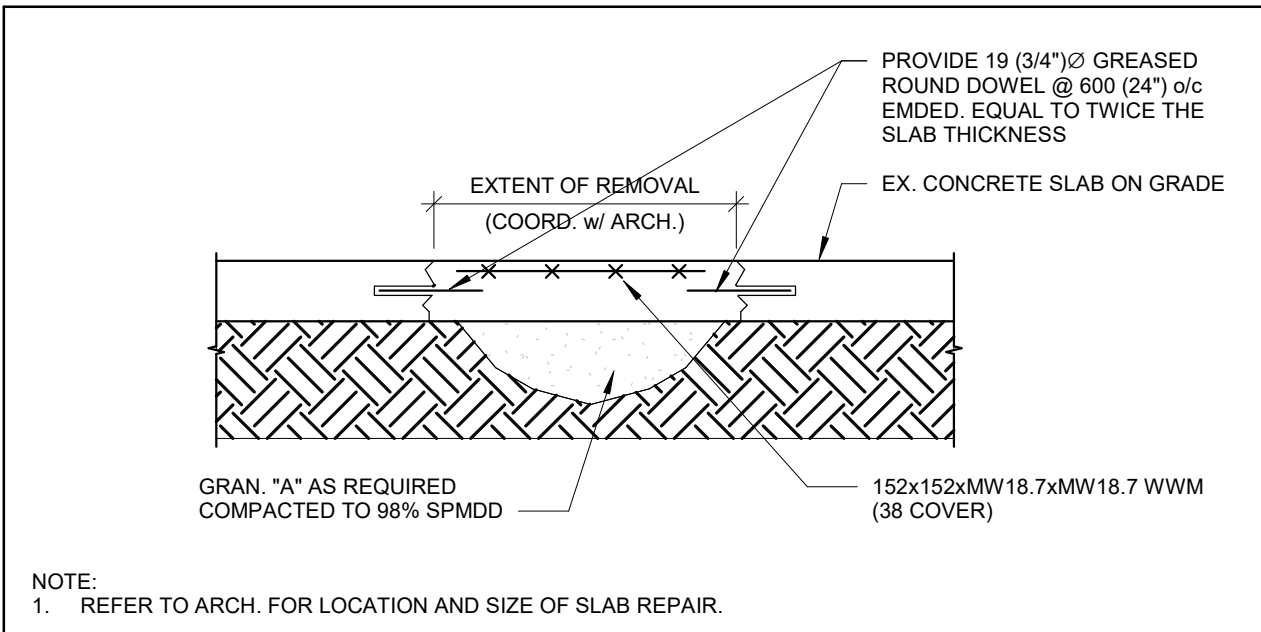
CONNECTION BETWEEN NEW AND EXISTING MASONRY

M114

INTERIOR NON-LOAD BEARING MASONRY WALL MINIMUM REINFORCEMENT				
WALL THICKNESS	LOCATION	VERTICAL REINF.	MAXIMUM HEIGHT	HORIZONTAL JOINT REINFORCEMENT
140	INTERIOR PARTITION	N/A	4000	STANDARD (3.7mm) LADDER TYPE @400
190	<1800 (6'-0")	15M@1200	4000	STANDARD (3.7mm) LADDER TYPE @400
190	<2400 (8'-0")	15M@800	4000	STANDARD (3.7mm) LADDER TYPE @400

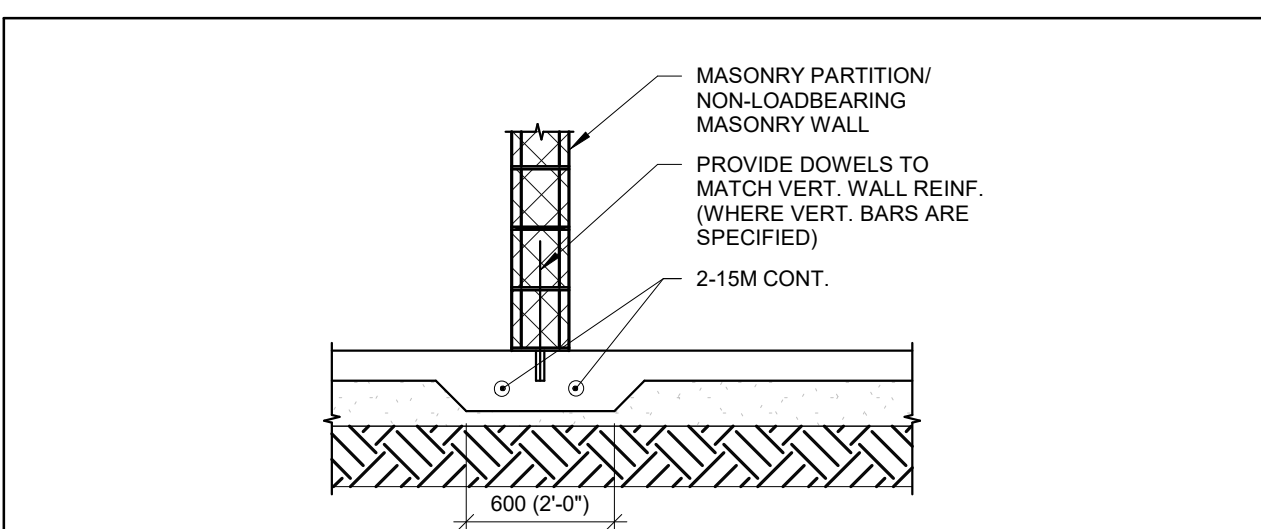
NOTES:

- PROVIDE REINFORCING FOR CONCRETE MASONRY WALLS AS PER THE SCHEDULE UNLESS NOTED OTHERWISE.
- PROVIDE DOWELS INTO CONCRETE FOUNDATIONS AND SLAB THICKENINGS TO MATCH VERTICAL WALL REINFORCEMENT. UNLESS OTHERWISE NOTED.
- REFER TO TYPICAL DETAILS FOR ADDITIONAL SUPPORT REQUIREMENTS.



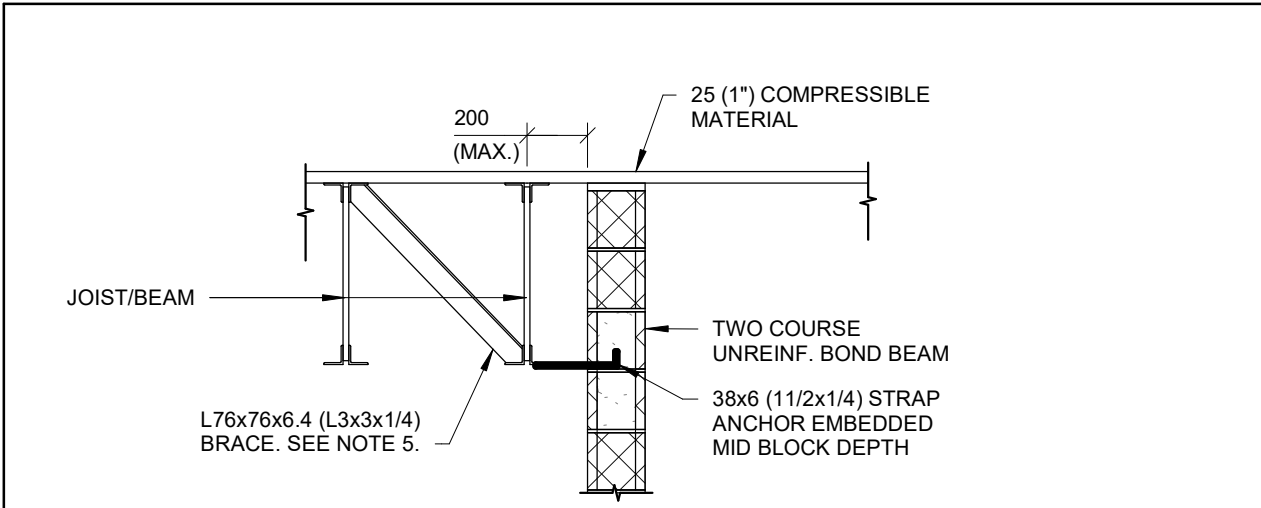
SLAB-ON-GRADE REPAIR

C206

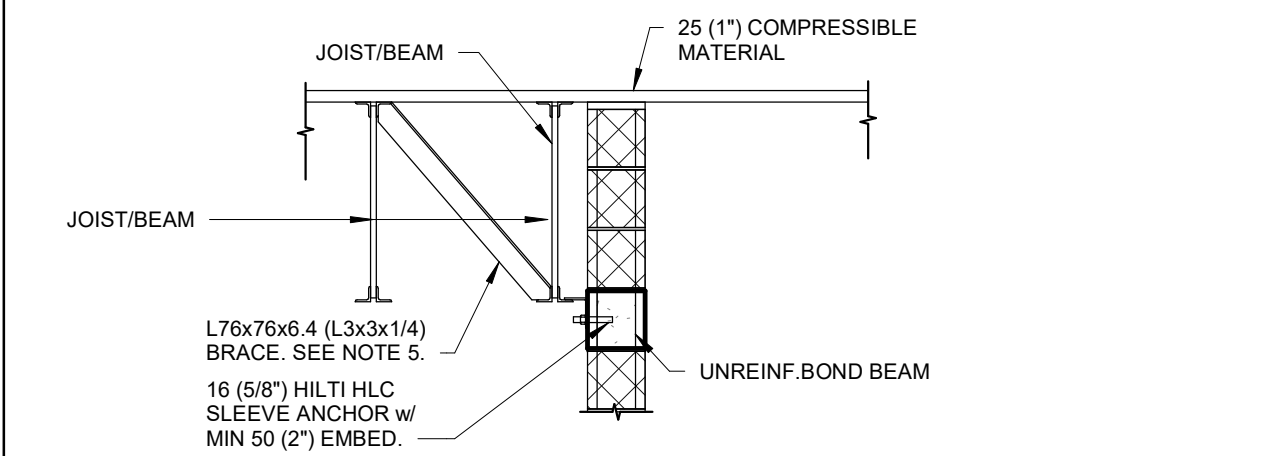


SLAB THICKENING FOR MASONRY PARTITIONS

C107



PARTITION PARALLEL TO JOIST/BEAM (ALTERNATIVE 1)



ADJACENT TO PARALLEL JOIST/BEAM (ALTERNATIVE 2)

- NOTES:
- PROVIDE LATERAL SUPPORTS AT THE TOP OF ALL INTERIOR MASONRY PARTITIONS.
 - SPACING OF LATERAL SUPPORTS NOT TO EXCEED 2000 (80").
 - THE MAXIMUM PERMITTED DISTANCE FROM THE END OF ANY WALL TO THE CENTRE OF ITS FIRST LATERAL SUPPORT IS 800 (24").
 - RETURN WALLS MAY BE USED AS A LATERAL SUPPORT, PROVIDED THAT IT IS AT LEAST 2400 (96") IN LENGTH AND IS UNINTERRUPTED BY OPENINGS.
 - EXTEND BRACE BACK TO TOP CHORD OF ADJACENT JOIST OR BEAM. BRACE CONNECTIONS ARE TO BE WELDED OR MIN 2- BOLT CONNECTION.

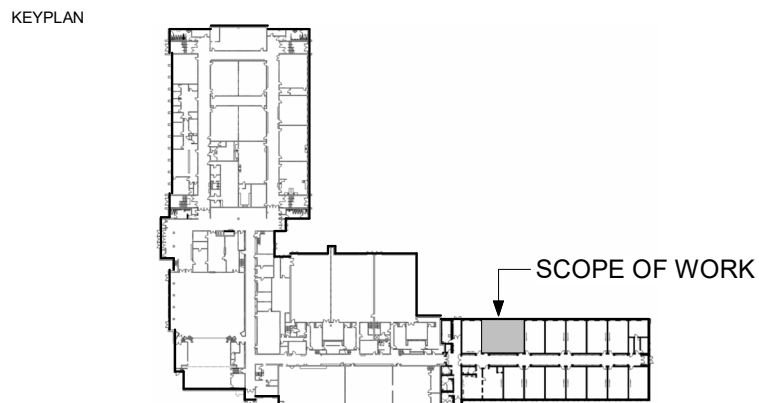
LATERAL SUPPORT FOR MASONRY PARTITIONS

M108b

STEEL LINTELS FOR NON-LOAD BEARING MASONRY WALLS				
WALL THICKNESS	SPAN	HEIGHT OF SUPPORTED MASONRY (h)		
		<1200 (4'-0")	<2600 (8'-6")	<4800 (15'-9")
190 (8")	<1200 (4'-0")	2-L89x89x6.4	2-L89x89x6.4	2-L89x89x6.4
	<1800 (6'-0")	2-L102x89x6.4	2-L102x89x6.4	2-L102x89x7.9
	<2400 (8'-0")	2-L102x89x6.4	2-L102x89x7.9	2-L127x89x7.9
	<3000 (10'-0")	2-L127x89x7.9	2-L127x89x7.9	2-L152x89x9.5
	<3600 (12'-0")	2-L127x89x7.9	2-L152x89x9.5	N/A

NOTES:

- ALL ANGLE LINTELS TO HAVE THE LONG LEG VERTICAL (LLV) UNLESS NOTED OTHERWISE.
- LINTELS TO HAVE A MINIMUM OF 200mm (8") OF BEARING ON EACH SIDE OF THE OPENING. LINTELS TO BEAR ON GROUT FILLED OR SOLID CONCRETE BLOCK. PROVIDE SHIMS AS REQUIRED FOR LEVELING.
- BACK TO BACK ANGLES SHALL BE WELDED USING 6mmx50mm LONG WELDS AT 450mm ON CENTER ALONG THE TOES AND HEELS.
- FOR LINTELS ABUTTING STEEL COLUMNS. SUPPORT WITH A L102x102x9.5 WELDED TO THE COLUMN. FOR LINTELS ABUTTING CONCRETE COLUMNS OR WALLS. SUPPORT WITH A L178x178x13 LAGGED TO THE CONCRETE USING (2) 19mm DIAMETER EXPANSION ANCHORS WITH 150mm EMBEDMENT.
- STEEL LINTELS IN EXTERIOR WALLS SHALL BE GALVANIZED.



No.	ISSUANCE	DATE
1	ISSUED FOR 100% OWNER REVIEW	2025.03.19
2	ISSUED FOR BID AND PERMIT	2025.04.04

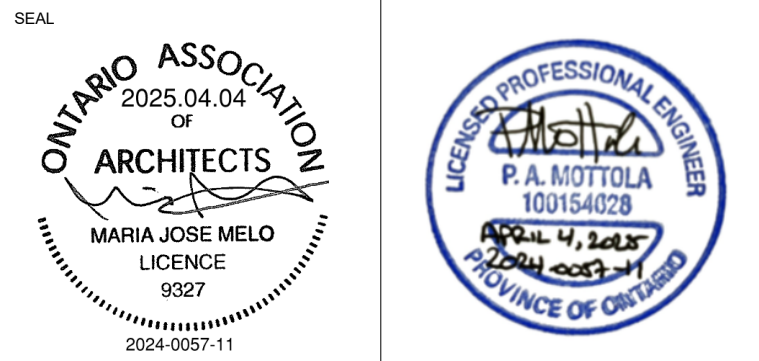
CLIENT
WATERLOO REGION DISTRICT SCHOOL BOARD
51 ARDELT AVE., KITCHENER, ON

PROJECT
WRDSB BLUEVALE CI DEVELOPMENTAL EDUCATION CLASSROOM RENOVATION
80 BLUEVALE ST N, WATERLOO ON N2J 3R5

TITLE
PARTIAL FLOOR, CEILING PLANS AND STRUCTURAL DETAILS

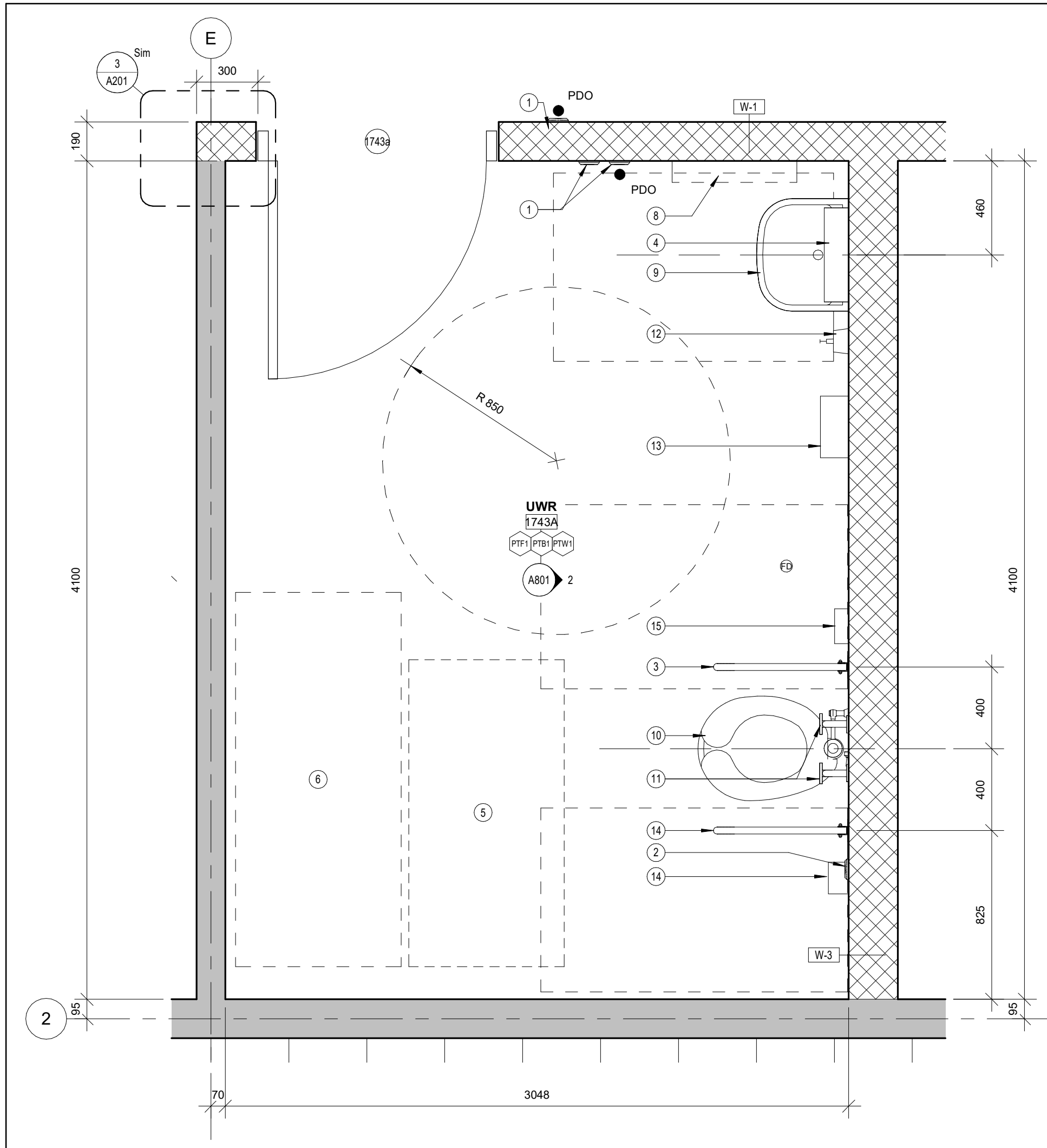
WALTERFEDY
TORONTO | CALGARY | EDMONTON | KITCHENER | HAMILTON

800.685.1378 walterfedy.com

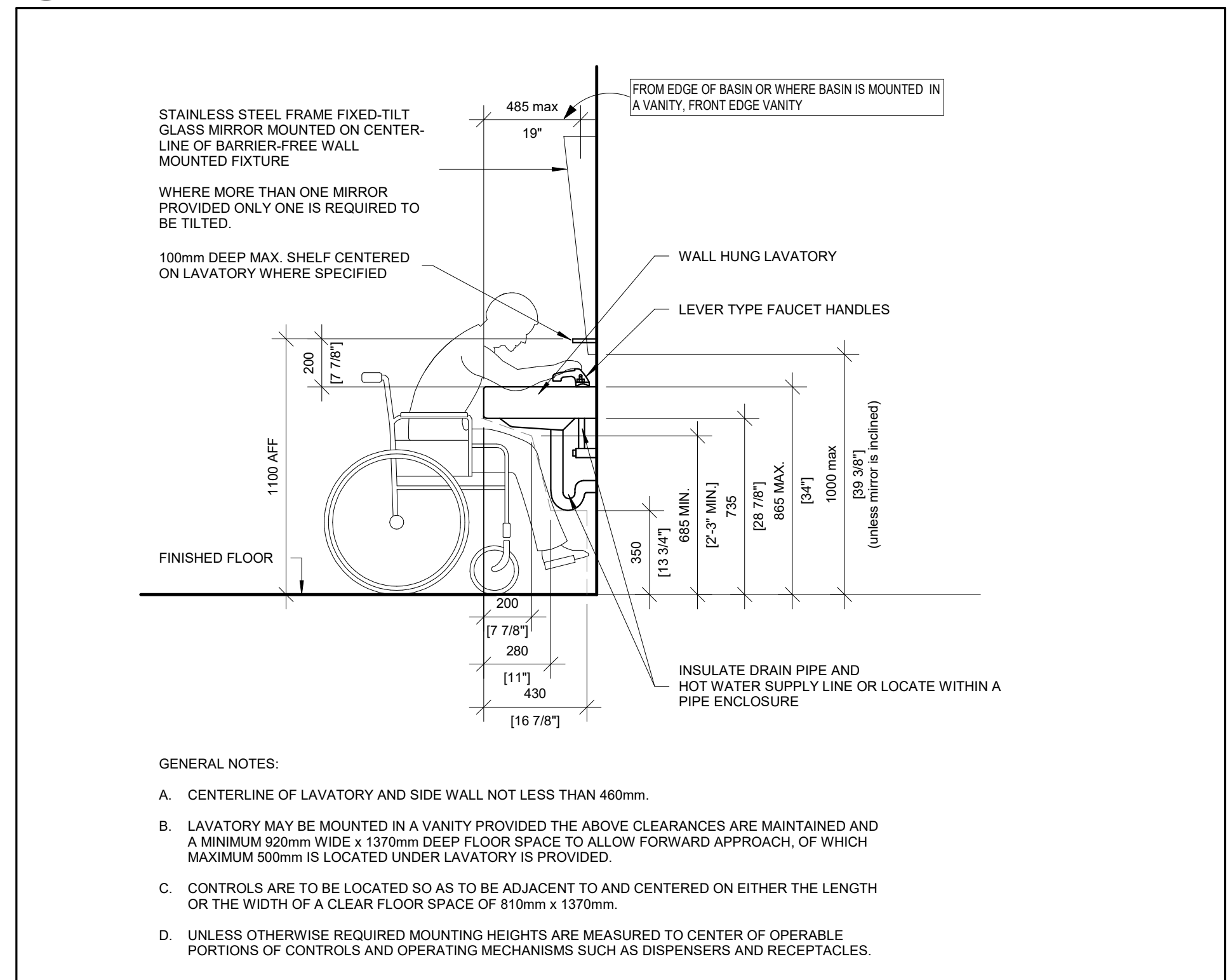


REPRODUCTION OR DISTRIBUTION FOR PURPOSES OTHER THAN AUTHORIZED BY WALTERFEDY A PART OF WF GROUP, IS FORBIDDEN. CONTRACTORS SHALL VERIFY AND BE RESPONSIBLE FOR ALL DIMENSIONS AND CONDITIONS SHOWN ON DRAWINGS TO WATERFEDY, A PART OF WF GROUP. -DO NOT SCALE THIS DRAWING-	COPYRIGHT © 2024 WalterFedy, A Part of WF Group Inc.	SHEET NO.:
SCALE: AS NOTED	DATE: 2025.04.04	
PROJECT NO: 2024-0057-11	DRAWN BY: CS	
CHECKED BY: MM		

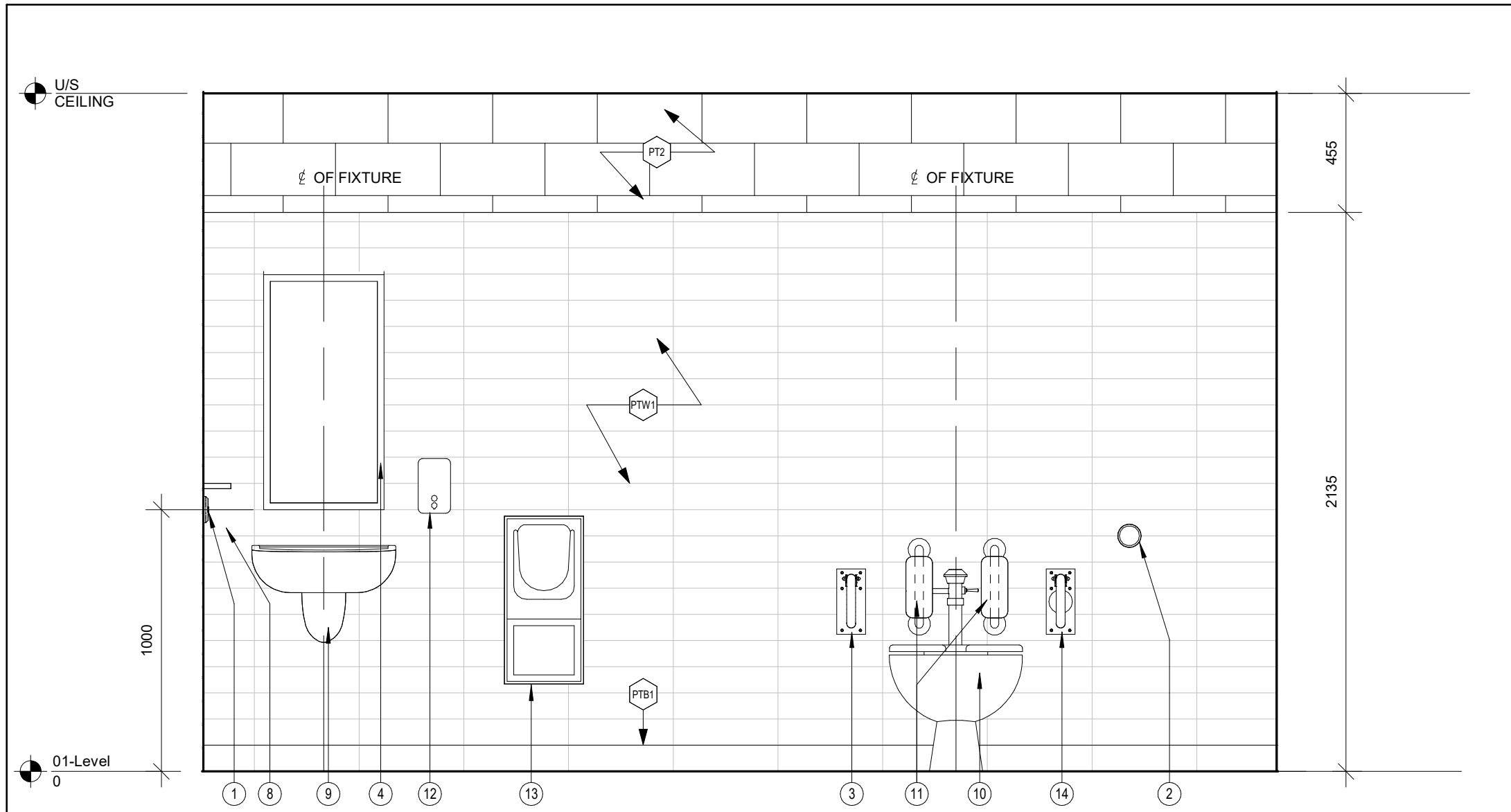
A201



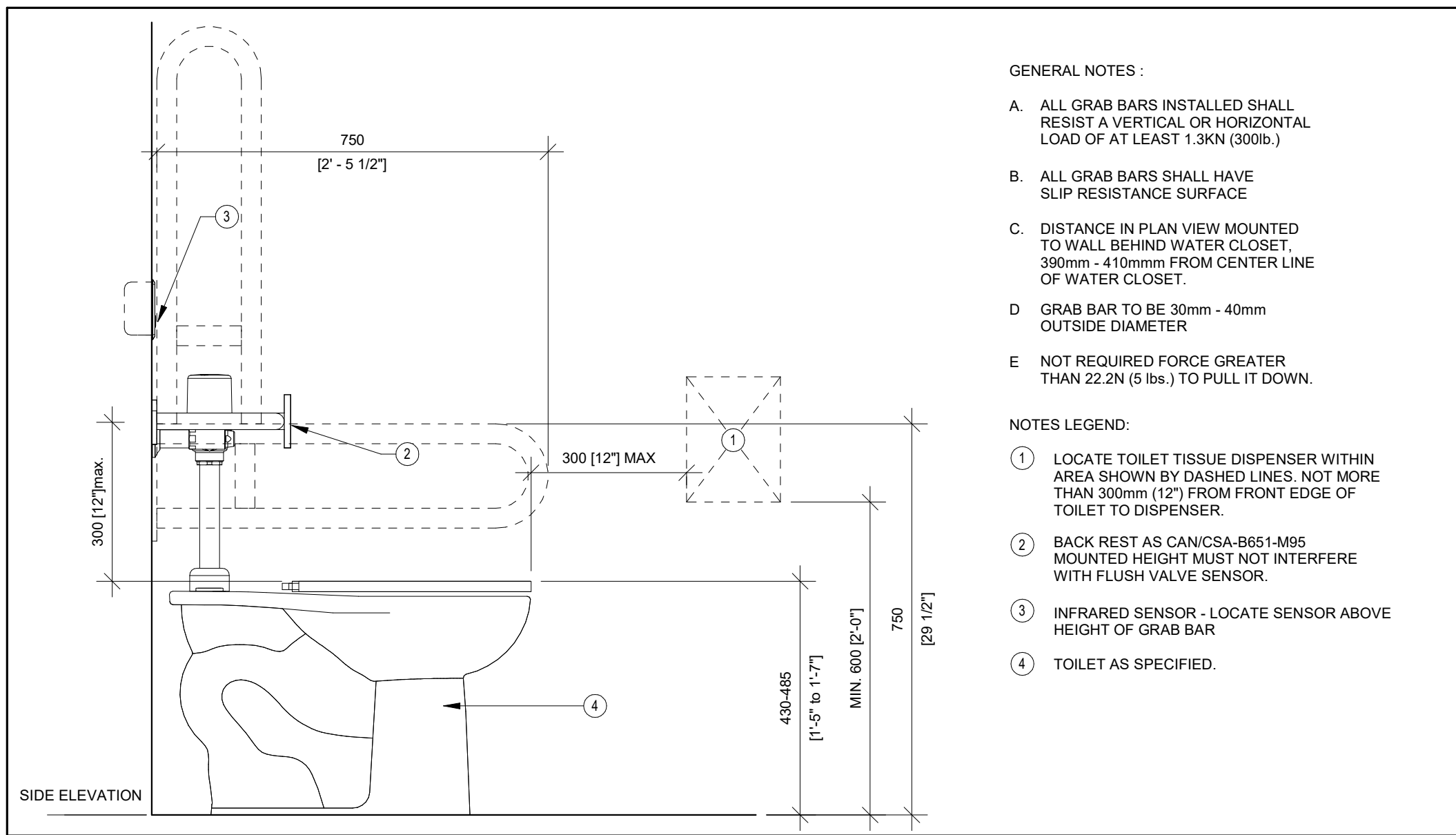
1 ENLARGED UNIVERSAL WASHROOM PLAN
A801 Scale: 1 : 20



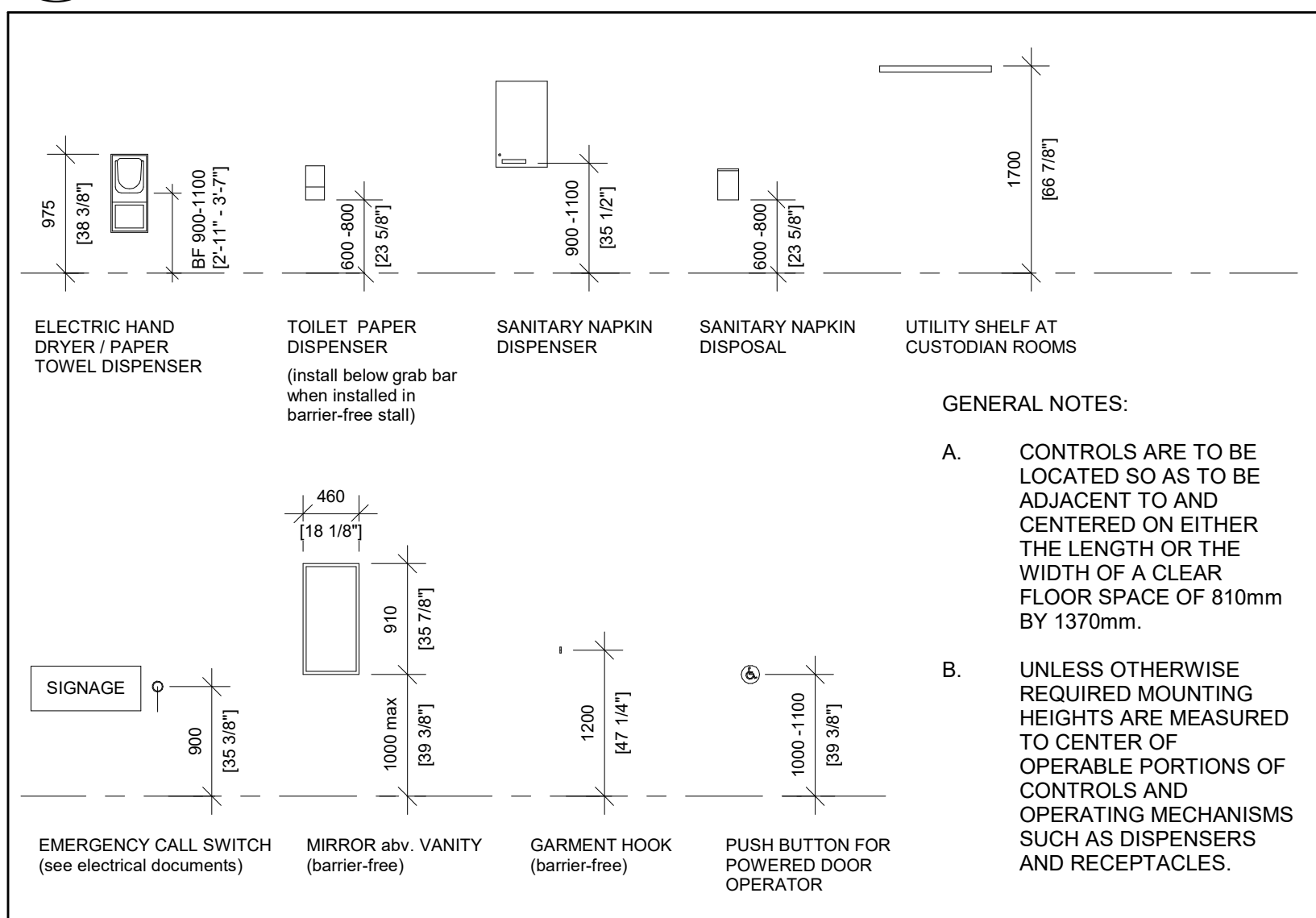
3 TYPICAL ACCESSIBLE LAVATORY MOUNTING HEIGHTS AND DISTANCES
A801 Scale: 1 : 20



2 UNIVERSAL WASHROOM INTERIOR ELEVATION - EAST
A801 Scale: 1 : 20



4 DROP DOWN GRAB BAR AND ACCESS. FOR SENSOR TOILETS W/O SEAT LID
A801 Scale: 1 : 10

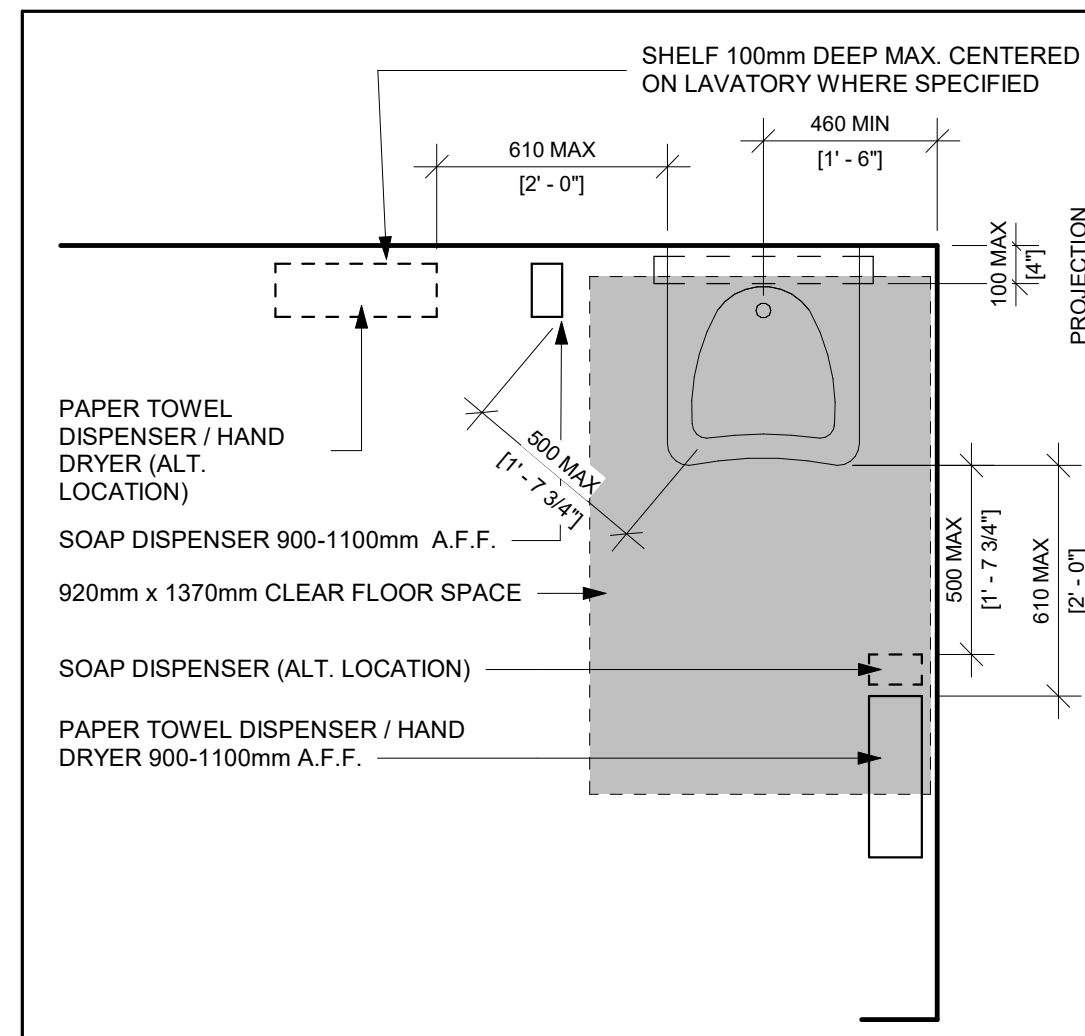


6 TYPICAL WASHROOM ACCESSORY MOUNTING HEIGHTS
A801 Scale: 1 : 50

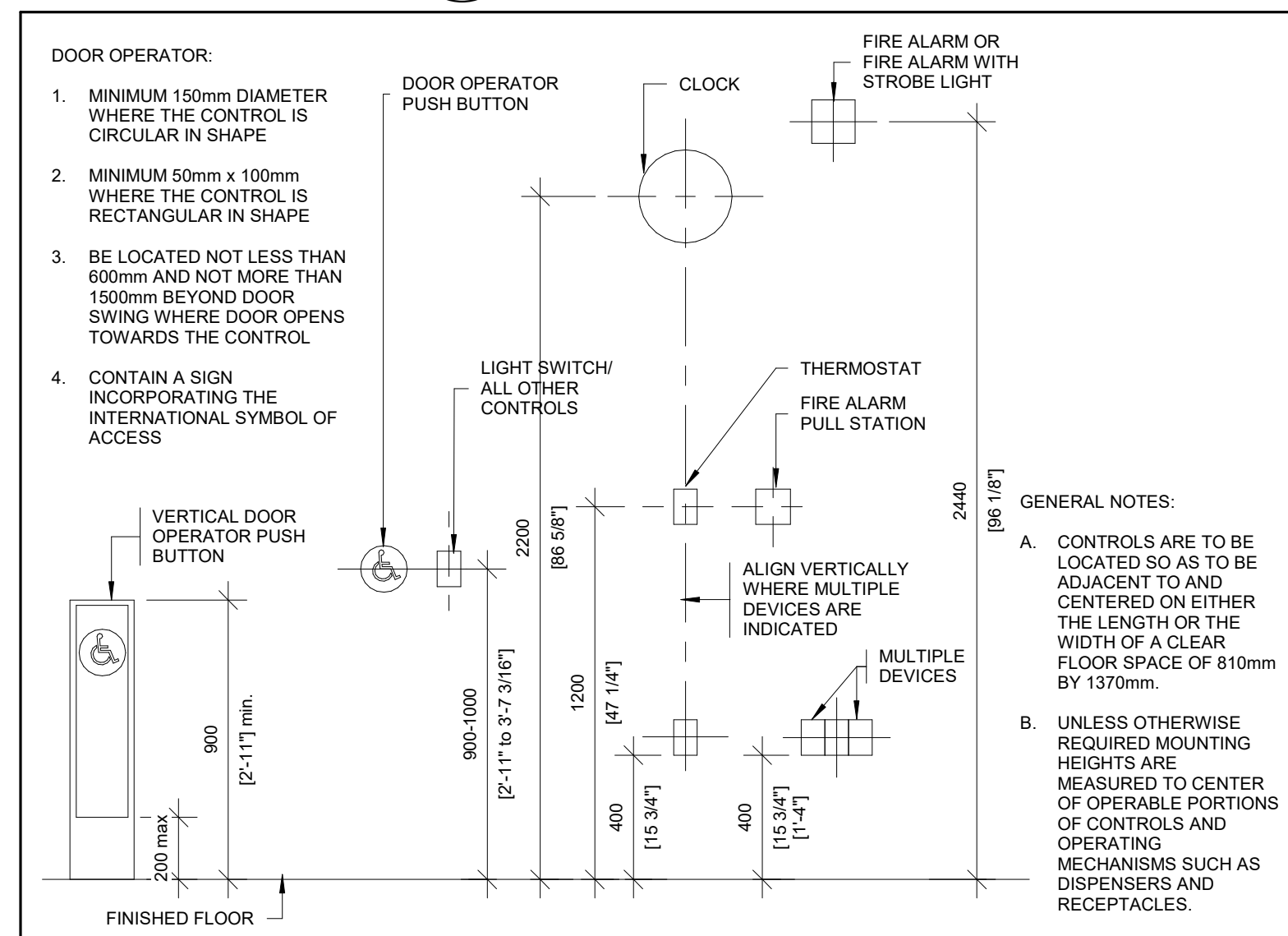
ENLARGED PLAN NOTES:

- POWER DOOR OPERATOR AND PUSH TO LOCK - REFER TO ELECTRICAL.
- EMERGENCY CALL BUTTON, LOCATED 3'-0" ABOVE FINISHED FLOOR, OBC 3.8.3.12(2) - REFER TO ELECTRICAL.
- 32MM DIA. STAINLESS STEEL SWING UP GRAB BARS, REFER TO SPECIFICATIONS.
- MIRROR, 910mm HIGH x 460mm WIDE, CENTRED ON SINK, REFER TO SPECIFICATIONS.
- CLEAR SPACE FOR ADULT SIZED CHANGE TABLE
- ADJUSTABLE ADULT SIZED CHANGE TABLE, REFER TO SPECIFICATION
- COAT HOOK, CENTRED ON DOOR, REFER TO SPECIFICATION
- UTILITY SHELF, 100mm DEEP MOUNTED 1100mm A.F.F. AND NO MORE THAN 200mm ABOVE LAVATORY, REFER TO SPECIFICATIONS.
- BARRIER-FREE LAVATORY, REFER TO MECHANICAL DRAWINGS.
- WATER CLOSET, REFER TO MECHANICAL
- BACK REST, REFER TO SPECIFICATIONS.
- SOAP DISPENSER, SUPPLIED BY OWNER INSTALLED BY G.C.
- HAND DRYER, REFER TO SPECIFICATIONS.
- 32MM DIA. STAINLESS STEEL SWING UP GRAB BARS W/ INTEGRAL TOILET PAPER HOLDER, REFER TO SPECIFICATIONS.

LIGHTING IN UNIVERSAL WASHROOM SHALL BE CONTROLLED BY A MOTION SENSOR AS REQUIRED BY OBC 3.8.3.12.(1)(k).



5 BARRIER-FREE LAVATORY PLAN
A801 Scale: 1 : 20

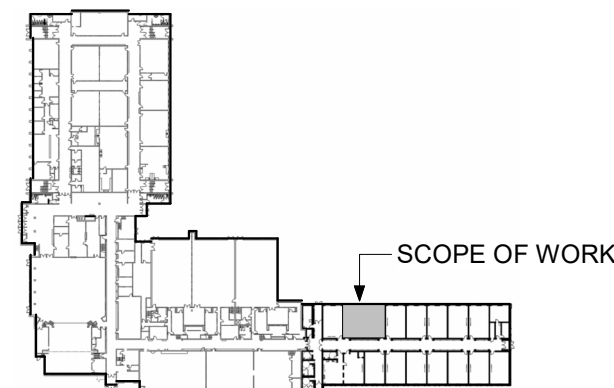


7 TYPICAL FIXTURE MOUNTING HEIGHTS
A801 Scale: 1 : 20

CLIENT LOGO



KEYPLAN



No.	ISSUANCE	DATE
1	ISSUED FOR 100% OWNER REVIEW	2025.03.19
2	ISSUED FOR BID AND PERMIT	2025.04.04

CLIENT

WATERLOO REGION DISTRICT SCHOOL BOARD

51 ARDELT AVE., KITCHENER, ON

PROJECT

WROSB BLUEVALE CI DEVELOPMENTAL EDUCATION CLASSROOM RENOVATION

80 BLUEVALE ST N, WATERLOO ON N2J 3R5

TITLE

ENLARGED WASHROOM PLAN AND ELEVATIONS

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.

2024-0057-11

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

SCALE: AS NOTED

DATE: 2025.04.04

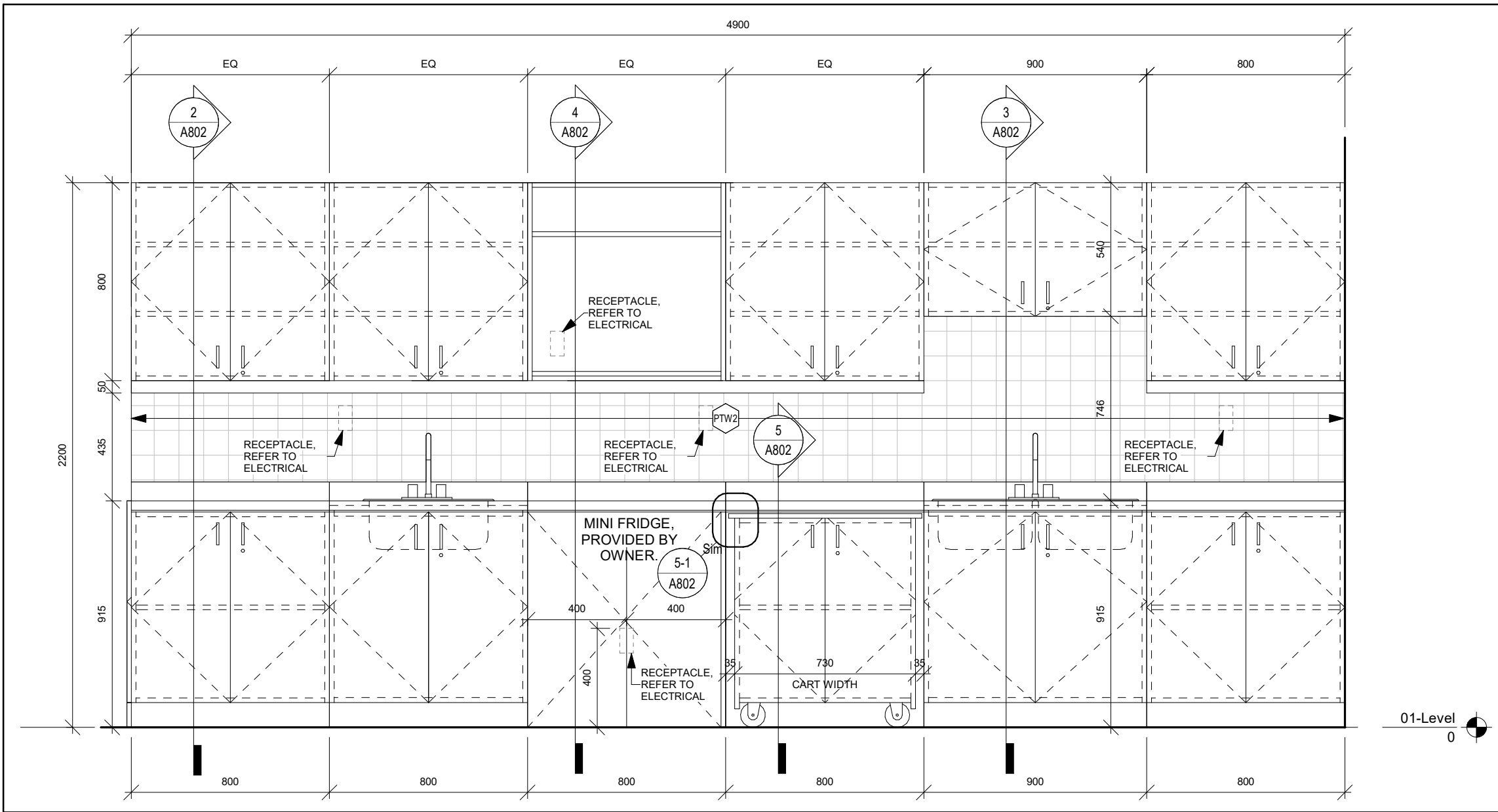
PROJECT NO: 2024-0057-11

DRAWN BY: CS

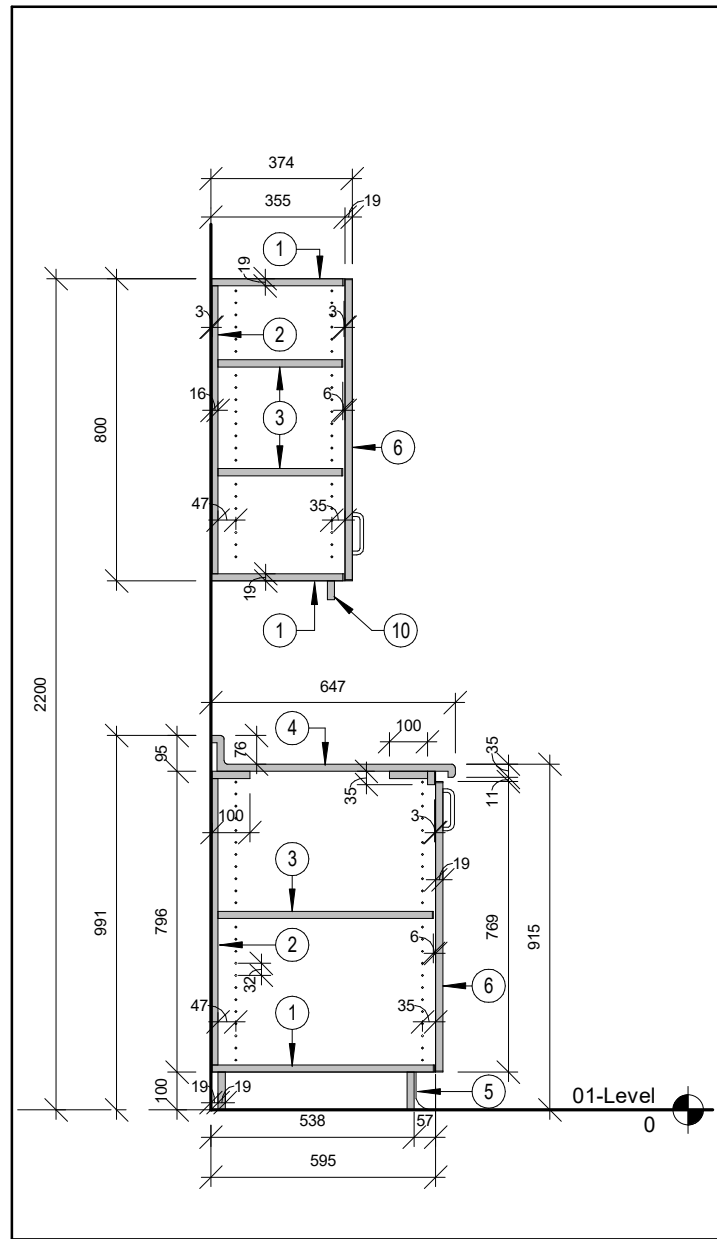
CHECKED BY: MM

SHEET NO:

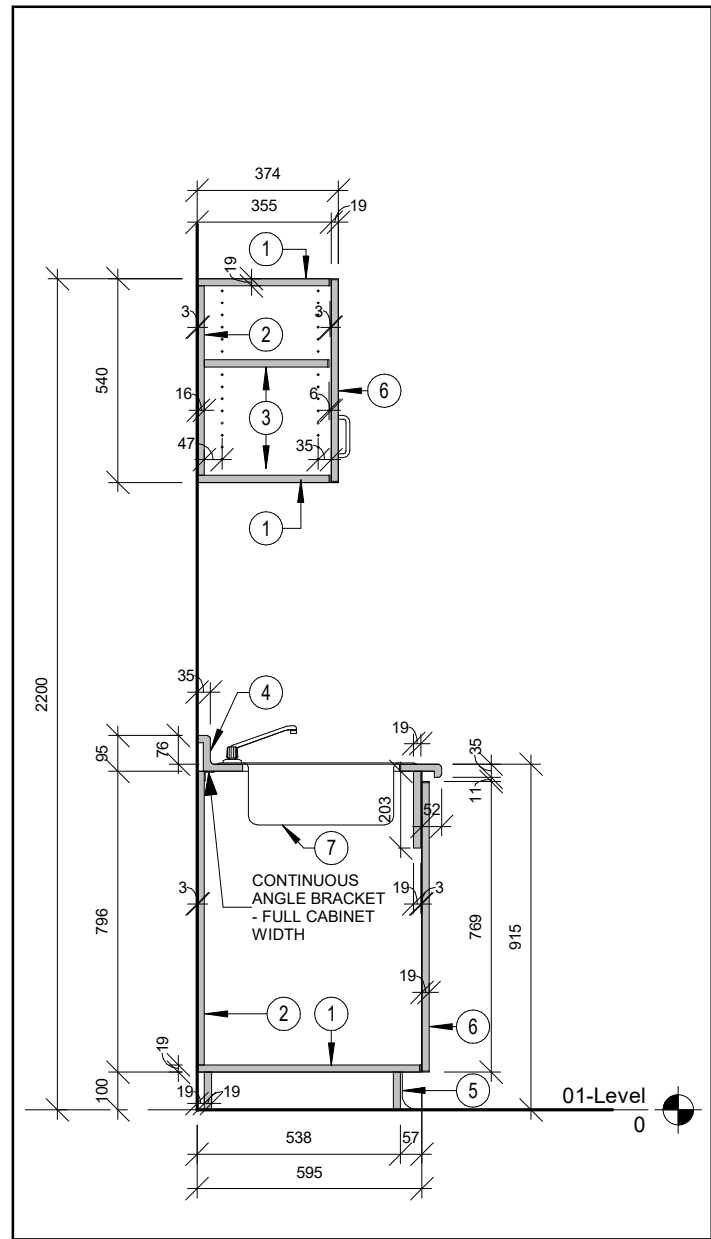
A801



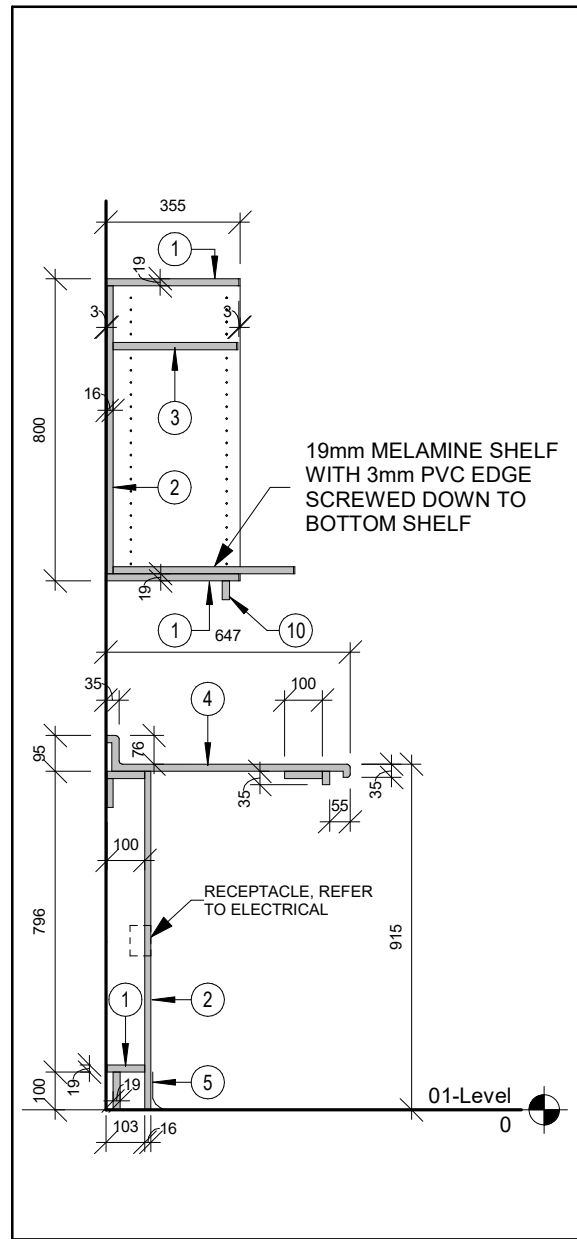
1 DEVELOPMENTAL EDUCATION CLASSROOM INTERIOR ELEVATION - EAST
A802 Scale: 1 : 20



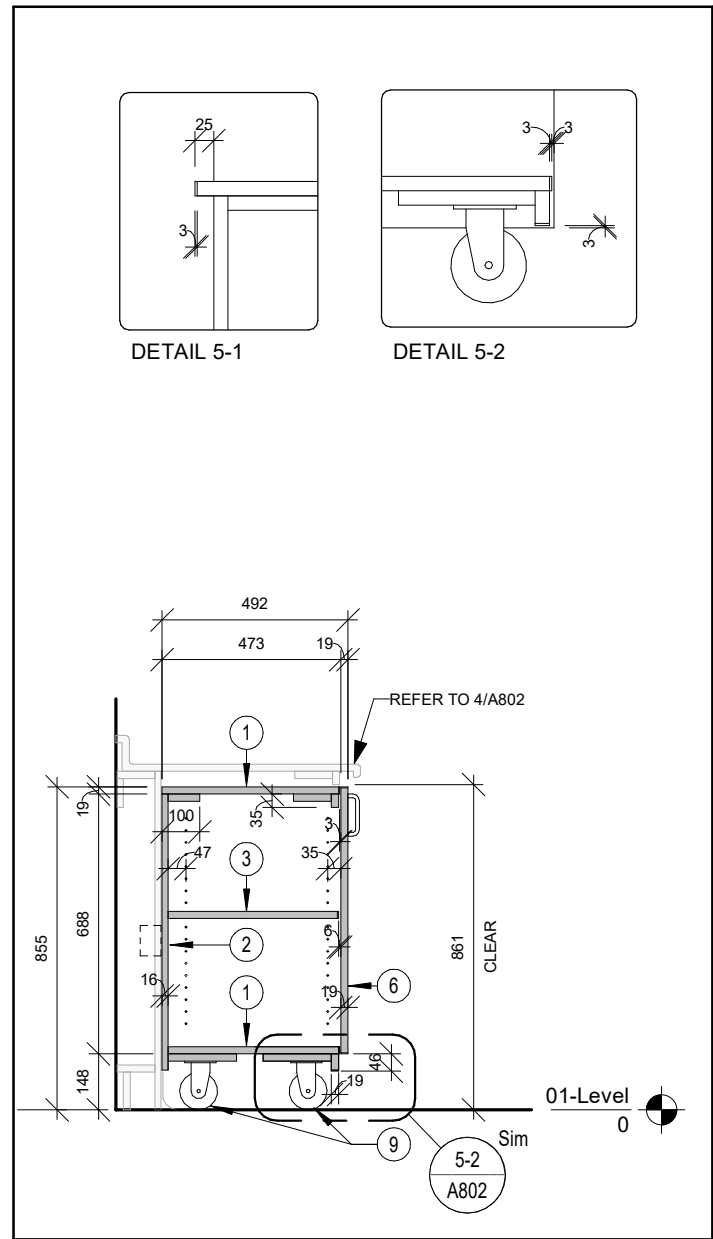
2 MILLWORK SECTION
A802 Scale: 1 : 20



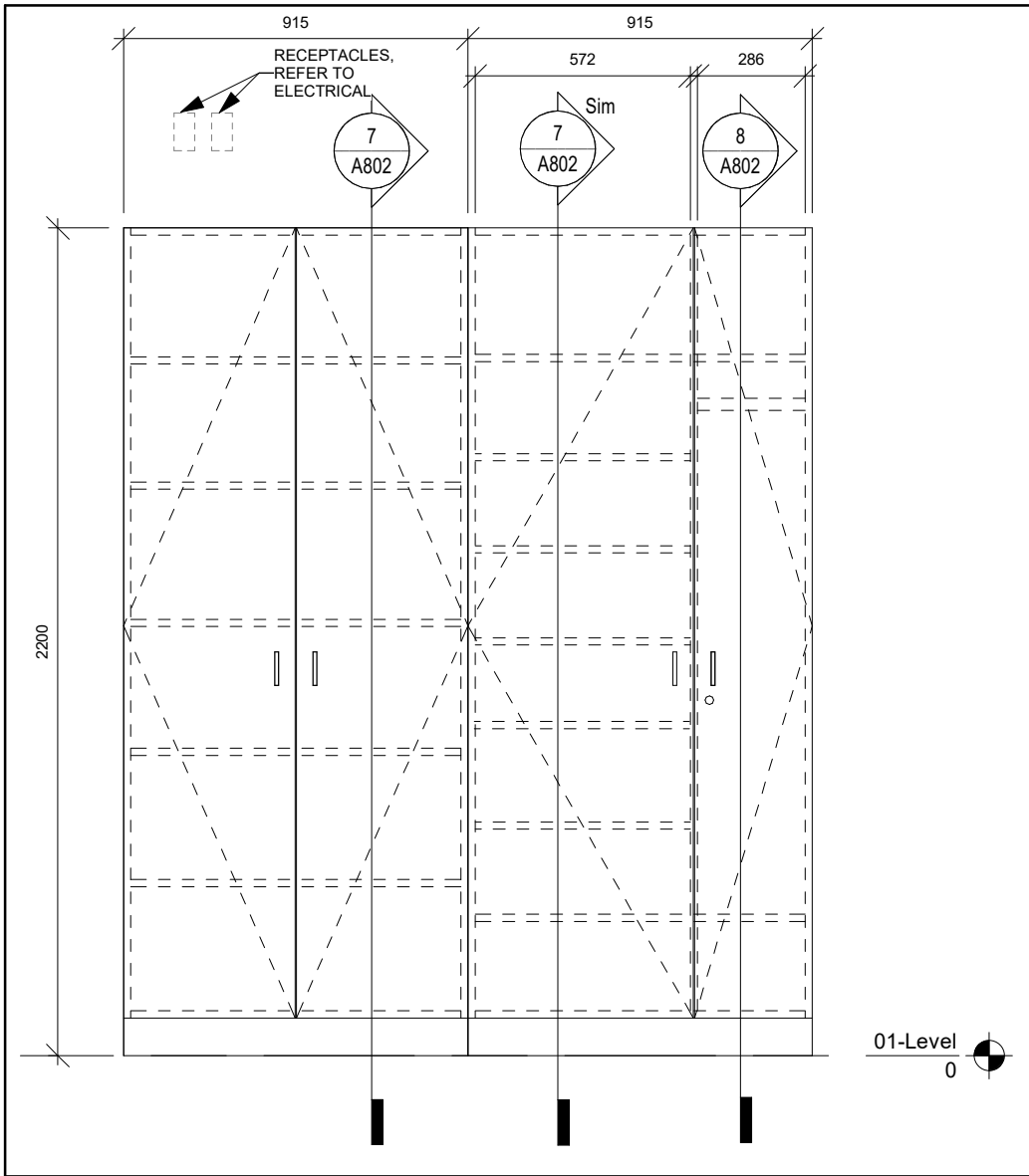
3 MILLWORK SECTION
A802 Scale: 1 : 20



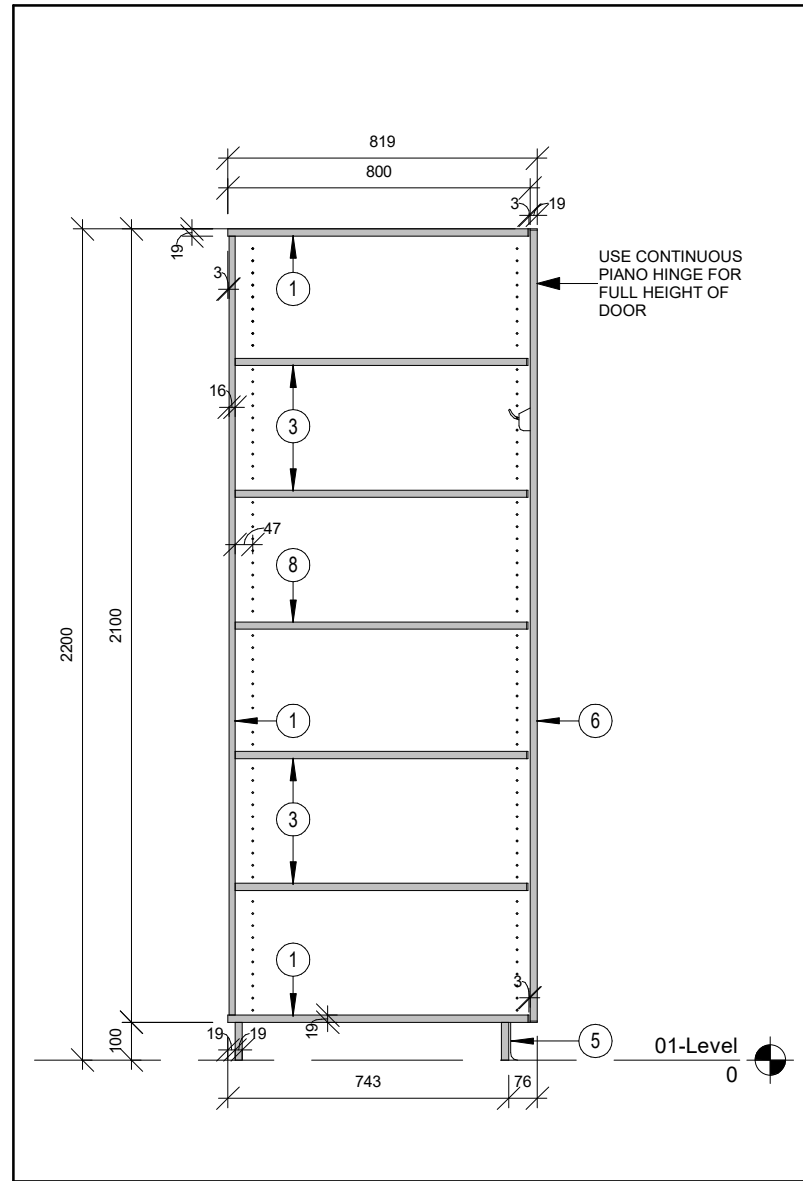
4 MILLWORK SECTION
A802 Scale: 1 : 20



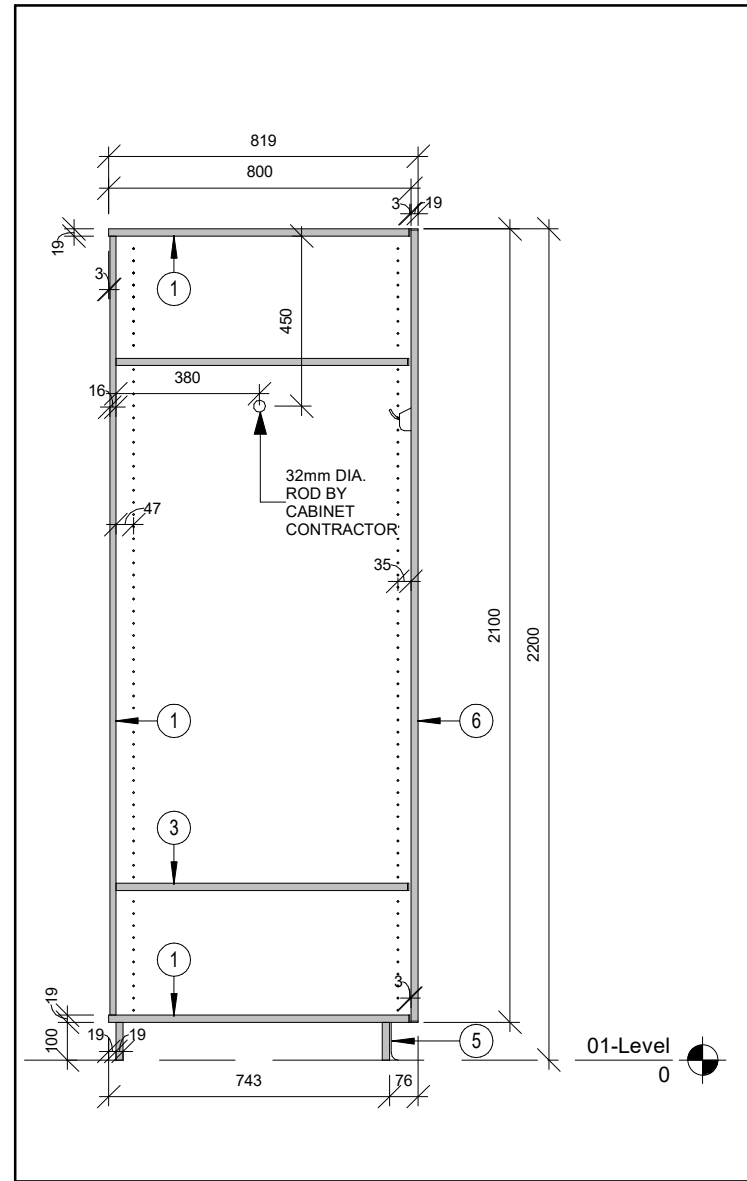
5 MILLWORK SECTION
A802 Scale: 1 : 20



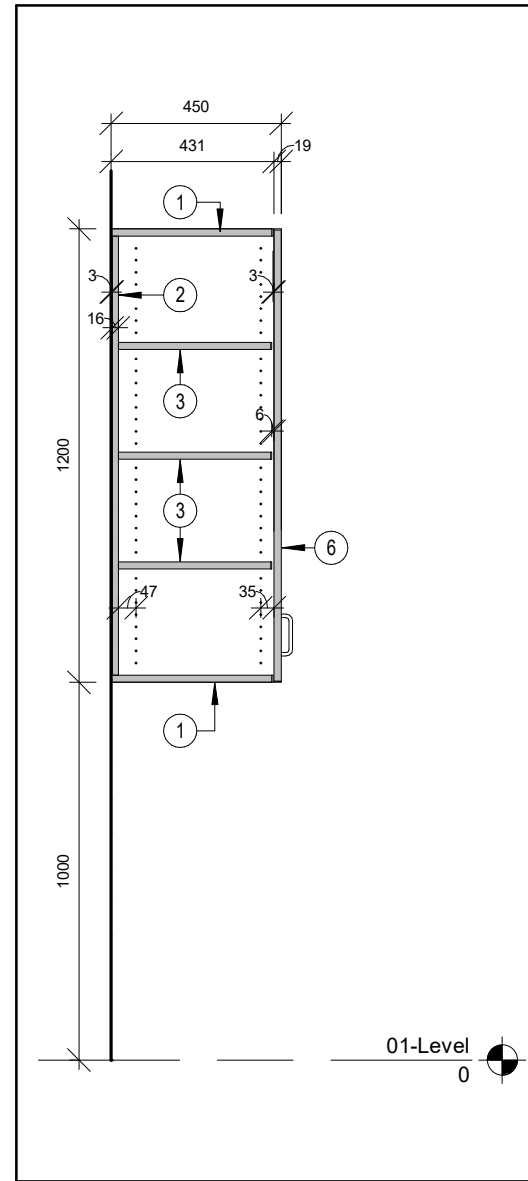
6 MILLWORK ELEVATION
A802 Scale: 1 : 20



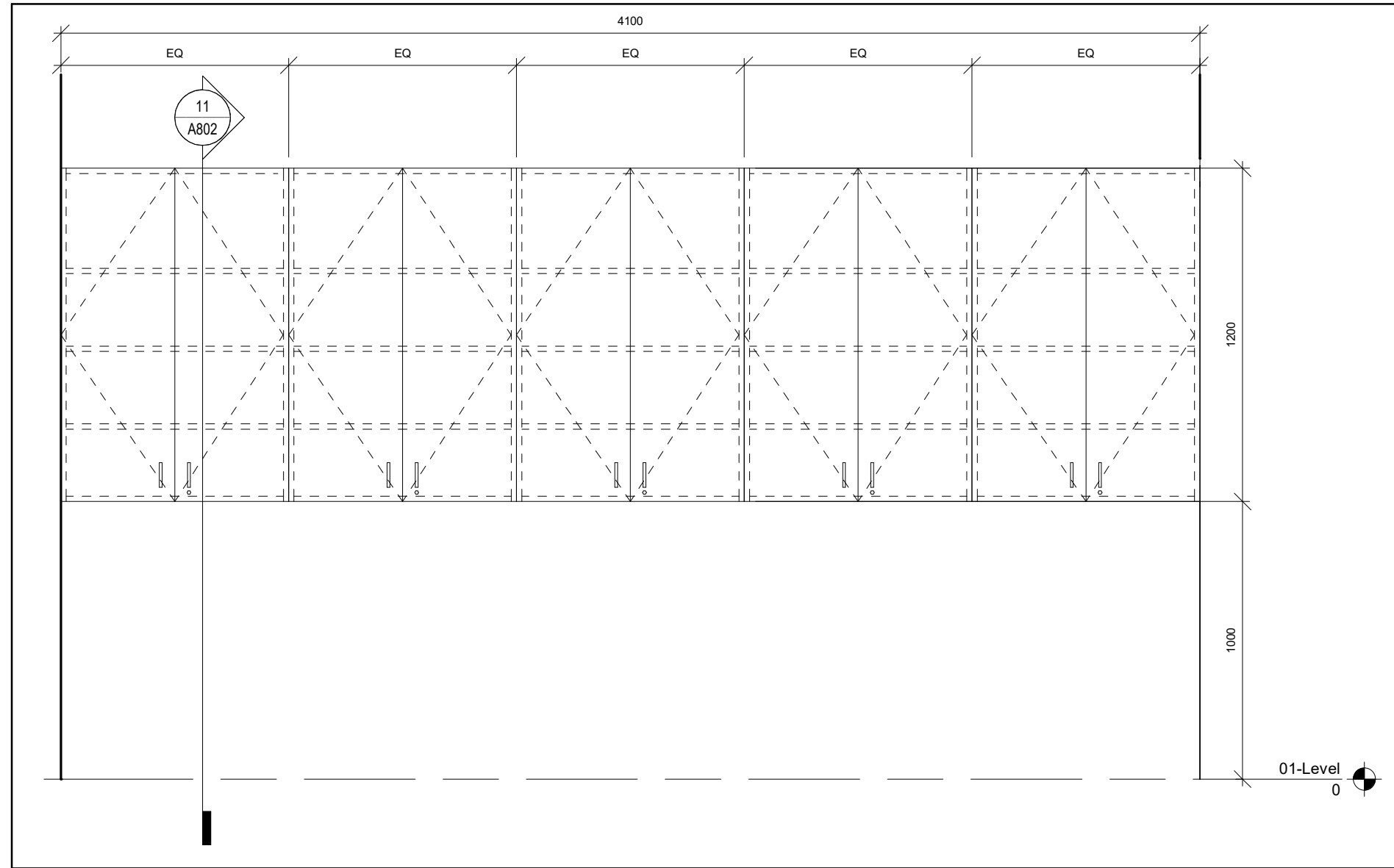
7 MILLWORK SECTION
A802 Scale: 1 : 20



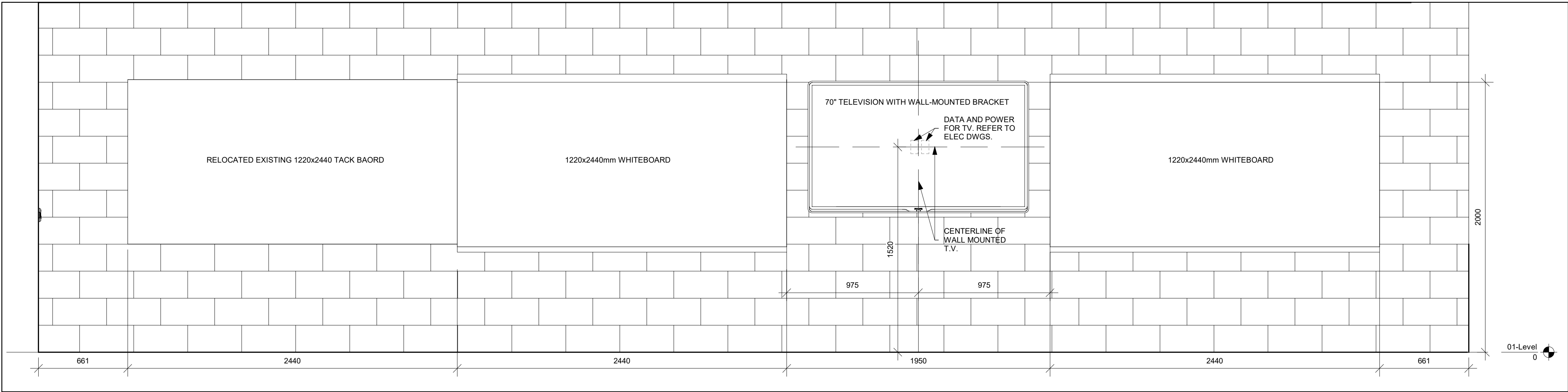
8 MILLWORK SECTION
A802 Scale: 1 : 20



11 MW SECTION
A802 Scale: 1 : 20



10 STORAGE ROOM INTERIOR ELEVATION - WEST
A802 Scale: 1 : 20



9 DEVELOPMENTAL EDUCATION CLASSROOM INTERIOR ELEVATION - WEST
A802 Scale: 1 : 20

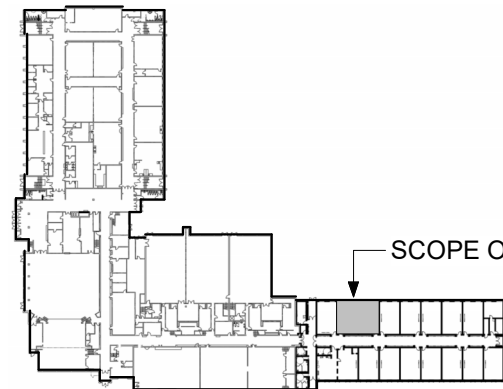
MILLWORK DRAWING NOTES:

- NOTES:
1. PROVIDE CLASSROOM CYLINDER LOCK AT ALL TEACHERS CLOSETS, REFER TO SPECIFICATIONS.
 2. PROVIDE SCHLAGE CL100PB AT ALL CABINET DOORS, REFER TO SPECIFICATIONS.
 3. 19mm MELAMINE TOP, BOTTOM C/W 3mm PVC EDGE.
 4. 16mm MELAMINE BACK C/W 3mm PVC EDGE WHERE EXPOSED.
 5. 19mm MELAMINE ADJUSTABLE SHELF WITH 3mm PVC EDGES.
 6. POST FORMED PLASTIC LAMINATE COUNTERTOP C/W 76 HIGH BACKSLASH ON STOCK.
 7. 100mm HIGH RUBBER BASE TOE KICK ON 19mm VENEER CORE PLYWOOD.
 8. 19mm MALAMINE DOOR C/W 3mm PVC EDGE ON ALL EXPOSED EDGES.
 9. STAINLESS STEEL SINK, REFER TO MECHANICAL.
 10. 19mm MELAMINE FIXED SHELF C/W 3mm PVC EDGE.
 11. LOCKABLE CASTERS, REFER TO SPECIFICATIONS.
 12. 50 HIGH MELAMINE PNAEL VALANCE x 19mm

CLIENT LOGO



KEYPLAN



No.	ISSUANCE	DATE
1	ISSUED FOR 100% OWNER REVIEW	2025.03.19
2	ISSUED FOR BID AND PERMIT	2025.04.04

CLIENT

WATERLOO REGION DISTRICT
SCHOOL BOARD

51 ARDELT AVE., KITCHENER, ON

PROJECT

WRDSB BLUEVALE CI DEVELOPMENTAL
EDUCATION CLASSROOM RENOVATION

80 BLUEVALE ST N, WATERLOO ON N2J 3R5

TITLE

MILLWORK ELEVATIONS AND
SECTIONS

WALTERFEDY

TORONTO | CALGARY | EDMONTON | KITCHENER | HAMILTON

800.685.1378 walterfedy.com

SEAL



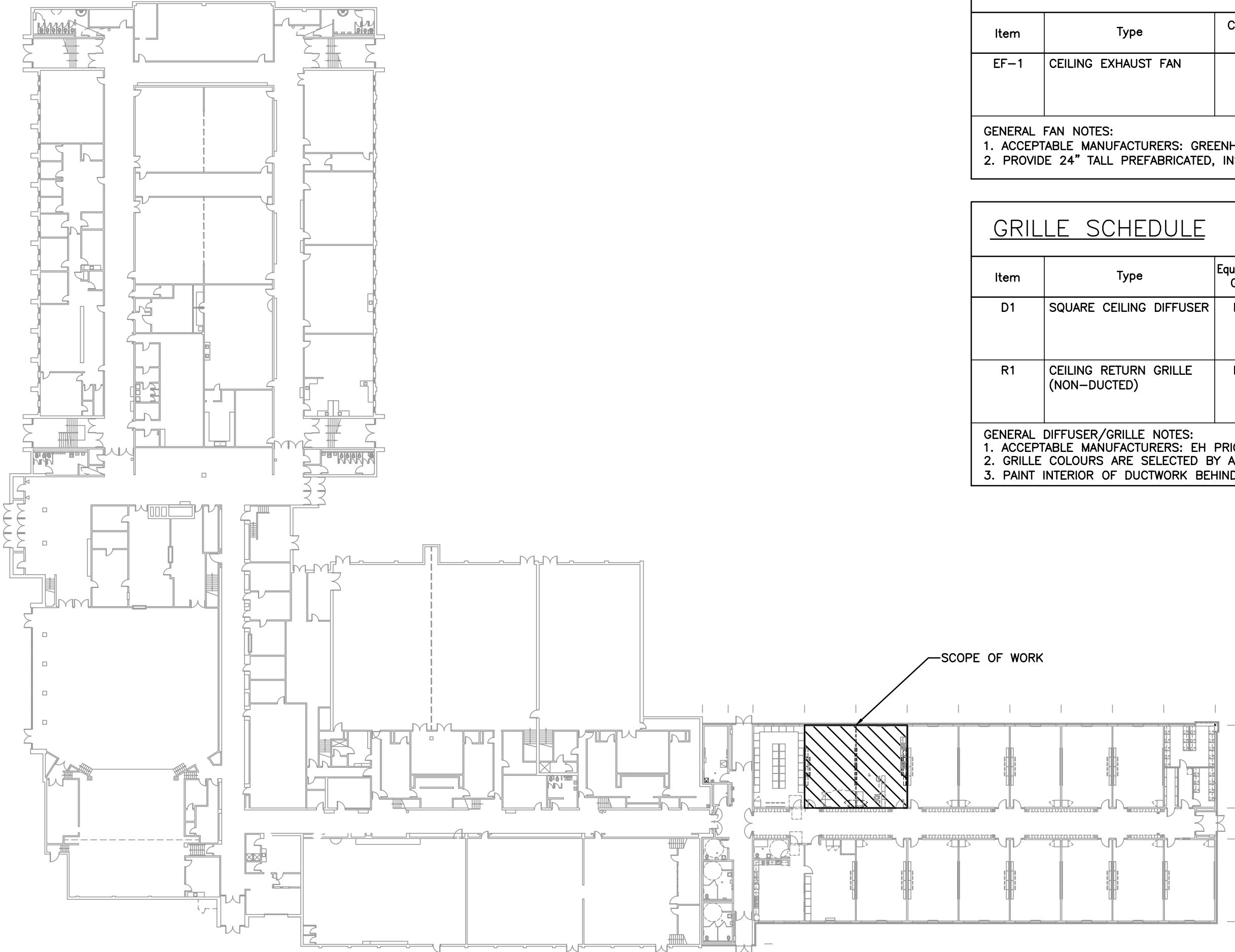
REPRODUCTION OR DISTRIBUTION FOR PURPOSES OTHER THAN AUTHORIZED BY
WALTERFEDY A PART OF WF GROUP, IS FORBIDDEN. CONTRACTORS SHALL VERIFY AND
BE RESPONSIBLE FOR ALL DIMENSIONS AND CONDITIONS ON THE JOB AND REPORT ANY
VARIATIONS FROM THE DIMENSIONS AND CONDITIONS SHOWN ON DRAWINGS TO
WALTERFEDY, A PART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

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

SCALE:	AS NOTED
DATE:	2025.04.04
PROJECT NO:	2024-0057-11
DRAWN BY:	CS
CHECKED BY:	MM

SHEET NO:

A802



KEY PLAN
SCALE: NTS

FAN SCHEDULE

Item	Type	Capacity cfm	ESP in wc	Fan Speed rpm	Motor		Acceptable Manufacturer	Description
					hp	Voltage		
EF-1	CEILING EXHAUST FAN	150	0.20	710	Fhp	120/1/60	BROAN L150MG	ACOUSTICALLY INSULATED STEEL HOUSING, CENTIFUGAL BLOWER WHEEL, 90° DISCHARGE OUTLET W/BACKDRAFT DAMPER, C/W WHITE PAINTED ENAMEL STEEL GRILLE, VIBRATION ISOLATORS. 1.8 SONES

GENERAL FAN NOTES:
1. ACCEPTABLE MANUFACTURERS: GREENHECK, PENN-BARRY, COOK, CARNES, ACME, TWIN CITY, JENCO, BUFFALO. (CEILING FANS: BROAN, GREENHECK, ZONEX)
2. PROVIDE 24" TALL PREFABRICATED, INSULATED ROOF CURB FOR ALL ROOF MOUNTED FANS.

GRILLE SCHEDULE

Item	Type	Equalizing Grid	Volume Damper	Acceptable Manufacturer		Description
				EH PRICE	SCDA	
D1	SQUARE CEILING DIFFUSER	NO	NONE	EH PRICE	SCDA	A-CONE, FULLY ADJUSTABLE, 24x24, STEEL CEILING DIFFUSER W/ROUND NECK, SUITABLE FOR LAY-IN T-BAR CEILING, OR DRYWALL CEILING WHEN C/W FRAME.
R1	CEILING RETURN GRILLE (NON-DUCTED)	NO	NONE	EH PRICE	80-CH	1/2x1/2x1/2 ALUMINUM EGGRATE CORE, C/W CHANNEL BORDER FOR LAY-IN T-BAR CEILING.

GENERAL DIFFUSER/GRILLE NOTES:
1. ACCEPTABLE MANUFACTURERS: EH PRICE, NAILOR, TITUS, KRUEGER, CARNES, METALAIRE, TUTTLE & BAILEY
2. GRILLE COLOURS ARE SELECTED BY ARCHITECT FROM STANDARD COLOUR CHART, UNLESS OTHERWISE NOTED.
3. PAINT INTERIOR OF DUCTWORK BEHIND GRILLE MATT BLACK (WHERE VISIBLE THRU GRILLE).

GENERAL NOTES

- ALL DRAWINGS ARE TO BE READ IN CONJUNCTION WITH THE PREPARED SPECIFICATION.
- THIS CONTRACTOR SHALL TRACK REVISIONS ON SITE AND SUBMIT AS-BUILTS TO CONSULTANT TO DIGITIZE. REFER TO SPECIFICATION.
- SANITARY VENT PIPING IS NOT SHOWN. PROVIDE ALL NECESSARY VENT PIPING FROM ALL FIXTURES FOR A COMPLETE SYSTEM TO ALL LOCAL PLUMBING CODE & LOCAL AUTHORITY REQUIREMENTS, CONNECTED TO EXISTING VENTS OR NEW VENTS AS REQUIRED, CO-ORDINATE VENT LOCATION(S) WITH GENERAL CONTRACTOR, MAINTAIN MIN 14"-0" FROM ANY AIR INLET (25"-0" FOR LONG TERM CARE/HOSPITALS). INSTALL VENT PIPING HIGH IN JOIST SPACE.
- WHERE DUCTWORK PENETRATES CORRIDOR WALL, CENTER DUCT(S) BETWEEN OWSJ.
- CO-ORDINATE WITH THE GENERAL CONTRACTOR ANY OWSJ BRIDGING/CROSS BRACING RELOCATION OR REMOVAL/REPLACEMENT REQUIRED FOR INSTALLATION OF DUCTWORK.
- CONTRACTOR TO LOCATE ISOLATION VALVES / FREEZE PIPING / OR OTHERWISE DRAIN SYSTEMS TO ALLOW PROPOSED WORK TO PROCEED. REFILL SYSTEMS AS INDICATED.
- UPON COMPLETION OF THE PROJECT OR UPON COMPLETION OF EACH INDIVIDUAL PHASE OF THE PROJECT THE CONTRACTORS SHALL PROVIDE THE FOLLOWING CERTIFICATES BEFORE CONFORMANCE LETTERS ARE ISSUED BY THE CONSULTANT:
- POTABLE WATER TEST (SEE SPEC 22 11 16 PART 3)

MECHANICAL LEGEND

Item	Description	Item	Description
-----	ITEM TO BE REMOVED	C---	PIPE DOWN
---+---	CUT EXISTING & CONNECT NEW PIPING	o---	PIPE UP
---▶---	FLOW DIRECTION	---I---	SCREWED OR WELDED PIPE CAP
---P---	POTABLE COLD WATER	---B---	BALL VALVE
---H---	POTABLE HOT WATER	---O---CO	FLOOR CLEANOUT
---...---	POTABLE HOT WATER RECIRC.	---C/O---	THERMOSTAT (WITH GUARD WHERE INDICATED)
--SAN-EX--	EXISTING SAN ABOVE FLOOR	---->---	TURNING VANES
--SAN-EX--	EXISTING SAN BELOW FLOOR	---X---	SUPPLY AIR DUCT
--SAN--	SANITARY ABOVE FLOOR	---Y---	RETURN/EXHAUST AIR DUCT
--SAN--	SANITARY BELOW FLOOR	---Z---	ACOUSTIC DUCT LINING
---STM-EX---	EXISTING STM ABOVE FLOOR	---A---	THERMAL INSULATION
---STM-EX---	EXISTING STM BELOW FLOOR	---B---	BRANCH LINE SPIN-IN COLLAR C/W BALANCING DAMPER
---STM---	STORM ABOVE FLOOR	---C---	MOTORIZED DAMPER
---STM---	STORM BELOW FLOOR	---D---	RECTANGULAR DUCTWORK
---CD---	CONDENSATE DRAIN	---E---	RIGID ROUND DUCT
---V---	VENT	---F---	FLEXIBLE ROUND DUCT
FD---+---	FLOOR DRAIN	---G---(Type Size Capacity)	DIFFUSER/GRILLE SIZE (imp), TYPE & CAPACITY (cfm)
---+---	TRAP PRIMER	---EX---	EXISTING DUCT (SIZE AS INDICATED)
---+---	TEE CONNECTION		

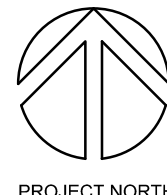
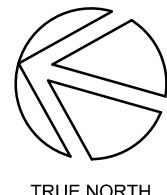
PLUMBING FIXTURE SCHEDULE

Item	Type	Connection Sizes					Fixture		Trim		Accessories	
		HW	CW	TW	Drain	Vent	Acceptable Manufacturer	Fixture Description	Acceptable Manufacturer	Trim Description	Acceptable Manufacturer	Accessory Description
WC-1	BARRIER FREE WATER CLOSET FLUSH VALVE, HANDS-FREE (HARDWIRE)		25		80	40	AMERICAN STANDARD MADERA 3461.001 KOHLER HIGHCREST K-4302 ZURN ECO VANTAGE	BARRIER FREE, 16.5" TALL TO RIM, VITREOUS CHINA, SIPHON JET, ELONGATED RIM, TOP SPUD FOR FLUSH VALVE, BOLT CAP, BOTTOM OUTLET, FLOOR-MOUNTED, 10" OR 12" ROUGH-IN, MIN 2" TRAP WAY, MAXIMUM 6 LITRES (1.6 gal) PER FLUSH.	DELTA 81T201-6-WM5HWA MOEN ZEM56000AV SLOAN 111-ES-S	EXPOSED, POLISHED CHROME PLATED, DIAPHRAGM TYPE FLUSH VALVE WITH 25MM (1") SCREWDRIVER ANGLE STOP, MOTORIZED ACTUATOR, AUTOMATIC SENSOR WITH MANUAL PUSH BUTTON OVERRIDE, VACUUM BREAKER ADJUSTABLE TAIL PIECE, AUTOMATIC 8 HR COURTESY FLUSH, RECESSED WALL MOUNTED SENSOR BOX, FLUSH CONNECTION & COUPLING FOR 40MM (1 1/2") TOP SPUD, WALL AND SPUD ESCUTCHEINS. HARDWIRED OPERATED POWER CONVERTOR, SENSOR BOX C/W COVER, VANDAL RESISTANT SCREWS, FLUSH CYCLE SET FOR 6.0 LITERS (1.6 GAL) PER FLUSH. COORDINATE SENSOR SITS ABOVE TOILET SEAT AND GRAB BARS.	SEAT: TOTO SW3056#01 WASHLET S550e	BIDET SEAT: WHITE, ELONGATED, CLOSED FRONT, WITH COVER, MOLDED SOLID ANTIMICROBIAL PLASTIC, STAINLESS STEEL CHECK HINGES, STAINLESS STEEL OR SOLID BRASS INSERT POST, INSTANT CERAMIC HEATING SYSTEM, TWIN ADJUSTABLE NOZZLES, WATER & TEMPERATURE SETTINGS, WATER PRESSURE CONTROLS, ADJUSTABLE WARM AIR DRYER, ACTIVATED CARBON DEODORIZER, SELF-CLEANING NOZZLES, SIDE ARM CONTROL. PROVIDE 1/2" WATER LINE TO BIDET. SUITABLE FOR 120/1/60
L-1	B.F WALL HUNG LAV, HANDS-FREE	15	15		32	32	AMERICAN STANDARD MURO 0954.004EC KOHLER ZURN	WALL- HUNG SINK, VITREOUS CHINA, WITH SPLASH LIP, SUPPLY OPENINGS ON 100 MM (4") CENTRES, OVERFLOW, SIZE: 521 MM x 464 MM (21 7/8" x 17 3/4").	DELTA 591T0258 & DSP-591TCB8 MOEN COMMERCIAL SLOAN	HARDWIRED ELECTRONIC FAUCET. CAST BRASS ONE PIECE BODY WITH INTEGRAL WATER PROOF INTRA-RED SENSOR AND CONNECTOR. ADJUSTABLE SENSING RANGE 76MM TO 381MM (3" TO 15") AND TIME OUT 15 TO 75 SECONDS CHROME FINISH. VANDAL RESISTANT AERATOR HAVING INTEGRAL FLOW CONTROL FOR 0.5GPM (1.9 L/MIN) @ 413 kPa (60 PSI) MAX. SENSOR ACTIVATES IN PRESENCE OF PERSON'S HANDS IN LAVATORY. C/W PLUG-IN TRANSFORMER. MECHANICAL MIXING VALVE (SET TO 105°F), SOLENOID DRIVER BOARD, ETC. SHALL BE INSTALLED IN RECESSED CONTROL BOX#DSP-591TCB8 SURFACE MOUNTED CONTROLS/DEVICES WILL NOT BE ACCEPTED.	INSULATION: MCQUIRE PROWRAP PWV8902 TRUEBRO LAV GUARD	WASTE FITTING: NPS 32 MM (1 1/4") OFFSET WASTE #33T290 WITH OPEN GRID STRAINER. P-TRAPS #33T311, SUPPLY KIT #13-2277 PROVIDE CONCEALED ARM SYSTEM Z-1232 CARRIER PROVIDE SHROUD/KNEE CONTACT GUARD #0059 020 THERMOSTAT MIXING VALVE UNDER LAV. DELTA R3070-MIXLF, POWERS LM490 OR EQUAL.
FD-1	FLOOR DRAIN				NOTED	40	J.R SMITH 2005A ZURN ZN415B MIFAB F1100-C WATTS FD-100-C-A	GENERAL DUTY CAST IRON BODY, ADJUSTABLE HEAD, NICKEL BRONZE STRAINER, INTEGRAL SEEPAGE PAN, AND CLAMPING COLLAR, USE SQUARE STRAINER IN TILED AREAS AND ROUND STRAINER ELSEWHERE. C/W TRAP PRIMER				
S-1	STAINLESS STEEL CLASSROOM SINGLE SINK	1/2	1/2		1 1/2	1 1/4	FRANKE LBS6408P-1 NOVANNI 10171	SINK: SINGLE COMPARTMENT, LEDGE-BACK. FROM 1.2 mm (18 GAUGE) THICK TYPE 302 POLISHED STAINLESS STEEL, SELF-RIMMING, UNDERCOATED, CLAMPS. OVERALL SIZES: 520 mm x 410 mm x 200 mm (20 1/2" x 16" x 8").	DELTA 26T3944 ZURN MOEN COMMERCIAL	FAUCET: CHROME PLATED BRASS, WITH GOOSENECK SWING SPOUT, AERATOR, LEVER HANDLES, WASHERLESS CONTROLS, ACCESSORIES TO LIMIT MAXIMUM FLOW RATE TO 5.7 l/min (1.5 gpm) AT 413 kPa (60 psi).		WASTE FITTING: INTEGRAL STAINLESS STEEL BASKET STRAINER/STOPPER, TAILPIECE, CAST BRASS P-TRAP WITH CLEANOUT.
S-2	STAINLESS STEEL DOUBLE SINK	1/2	1/2		1 1/2	1 1/4	FRANKE LBD6808-1 NOVANNI 2007/316	SINK: DOUBLE COMPARTMENT, LEDGE-BACK. FROM 0.9 mm (20 GAUGE) THICK TYPE 316 POLISHED STAINLESS STEEL, SELF-RIMMING, UNDERCOATED, CLAMPS. OVERALL SIZES: 1000 mm x 520 mm x 200 mm (39 1/2" x 20 3/4" x 8").	DELTA 100LF-HDF ZURN Z82300-CP8 MOEN COMMERCIAL 8701	FAUCET: CHROME PLATED BRASS, WITH SWING SPOUT, HOT LIMIT STOP, AERATOR, SINGLE LEVER HANDLE, WASHERLESS CONTROLS, ACCESSORIES TO LIMIT MAXIMUM FLOW RATE TO 8.35 l/min (2.2 gpm) AT 413 kPa (60 psi).		WASTE FITTING: INTEGRAL STAINLESS STEEL BASKET STRAINER/STOPPER, TAILPIECE, CAST BRASS P-TRAP WITH CLEANOUT.

CLIENT LOGO



KEYPLAN



No.	ISSUANCE	DATE
1	ISSUED FOR 100% OWNER REVIEW	2025.03.19
2	ISSUED FOR BID AND PERMIT	2025.04.04



The contractor shall verify all dimensions and report all errors and discrepancies to the Consultant before commencement of the work. The drawings show general arrangement of services. Follow as closely as actual building construction will permit. Obtain approval for relocation of service from Consultant before commencement of the work. The drawings do not indicate all offsets fitting and accessories which may be required. Provide the same to meet the required conditions. Drawings and specifications, etc., prepared and issued by the consultant are the property of the consultant and must be returned at the completion of the project. These documents are not to be duplicated or copied without the consent of the Consultant. Do not scale this drawing. © 2025 DEI Consulting Engineers Inc.

CLIENT

WATERLOO REGION DISTRICT SCHOOL BOARD

51 Ardelt Ave, Kitchener ON N2C 2R5

PROJECT

WRDSB Bluevale CI Dev. Ed. Classroom

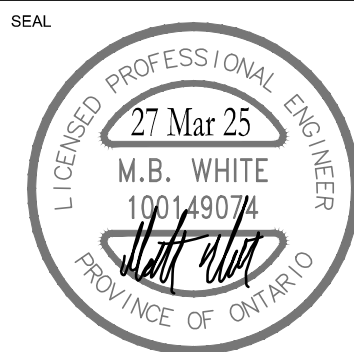
80 Bluevale St N, Waterloo ON N2J 3R5

MECHANICAL SCHEDULES, LEGEND, AND NOTES

WALTERFEDY

TORONTO | CALGARY | EDMONTON | KITCHENER | HAMILTON

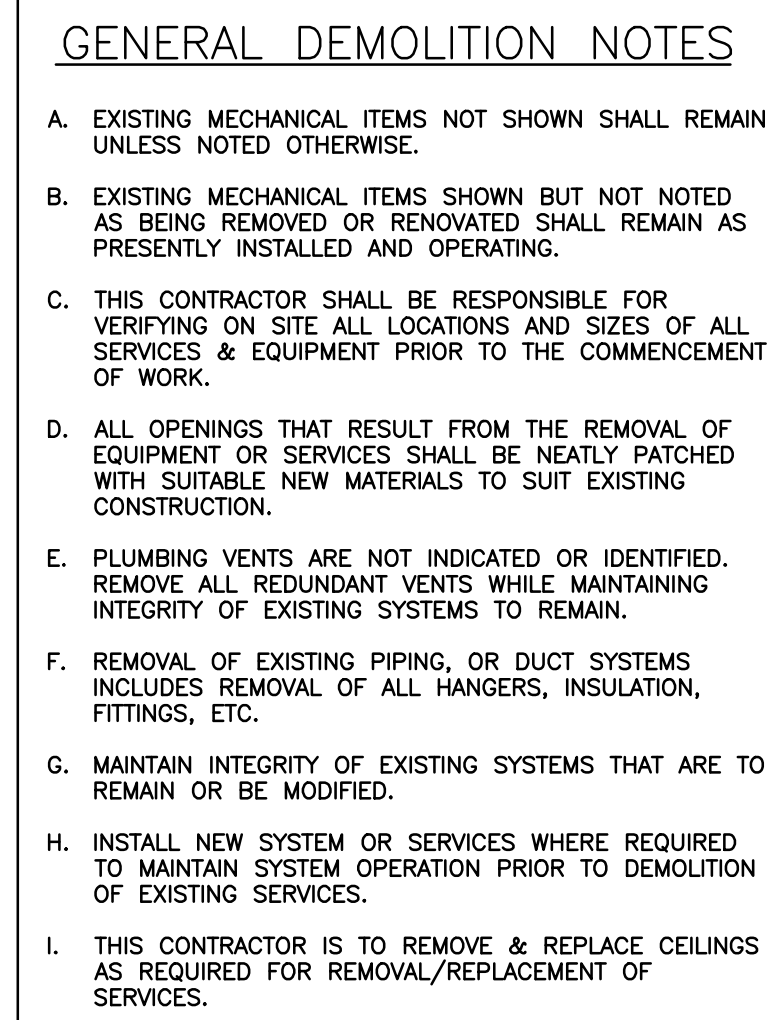
800.685.1378 walterfedy.com



SCALE : AS NOTED
DATE : 2025.03.19
PROJECT NO : 2024-0057-10
DRAWN BY : CSP
CHECKED BY : SO

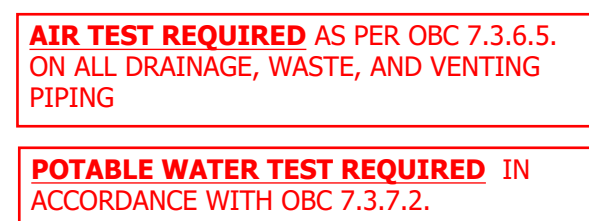
SHEET NO:

M1.1

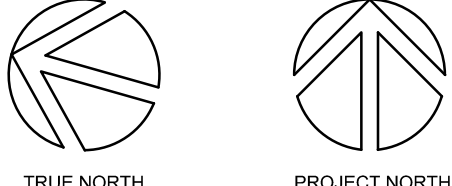
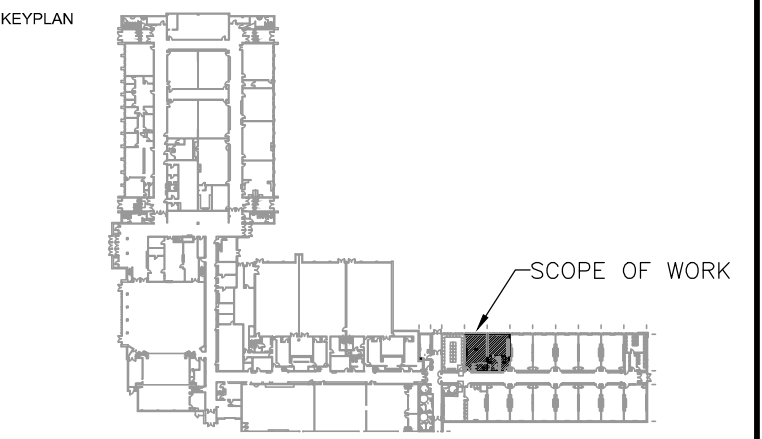


SPECIFIC DEMOLITION NOTES

1. CUT & REMOVE EXISTING 20" CW BACK TO CW MAIN.



PLUMBING RENOVATION FLOOR PLAN
SCALE: 1:50



No.	ISSUANCE	DATE
1	ISSUED FOR 100% OWNER REVIEW	2025.03.19
2	ISSUED FOR BID AND PERMIT	2025.04.04



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

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

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

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

Do not scale this drawing.

© 2025 DEI Consulting Engineers Inc.

CLIENT

WATERLOO REGION DISTRICT
SCHOOL BOARD

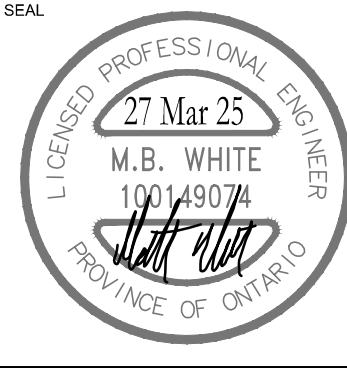
51 Ardelt Ave, Kitchener ON N2C 2R5

WRDSB Bluevale CI Dev. Ed.
Classroom
80 Bluevale St N, Waterloo ON N2J 3R5

PLUMBING PART PLANS - DEMOLITION & RENOVATION

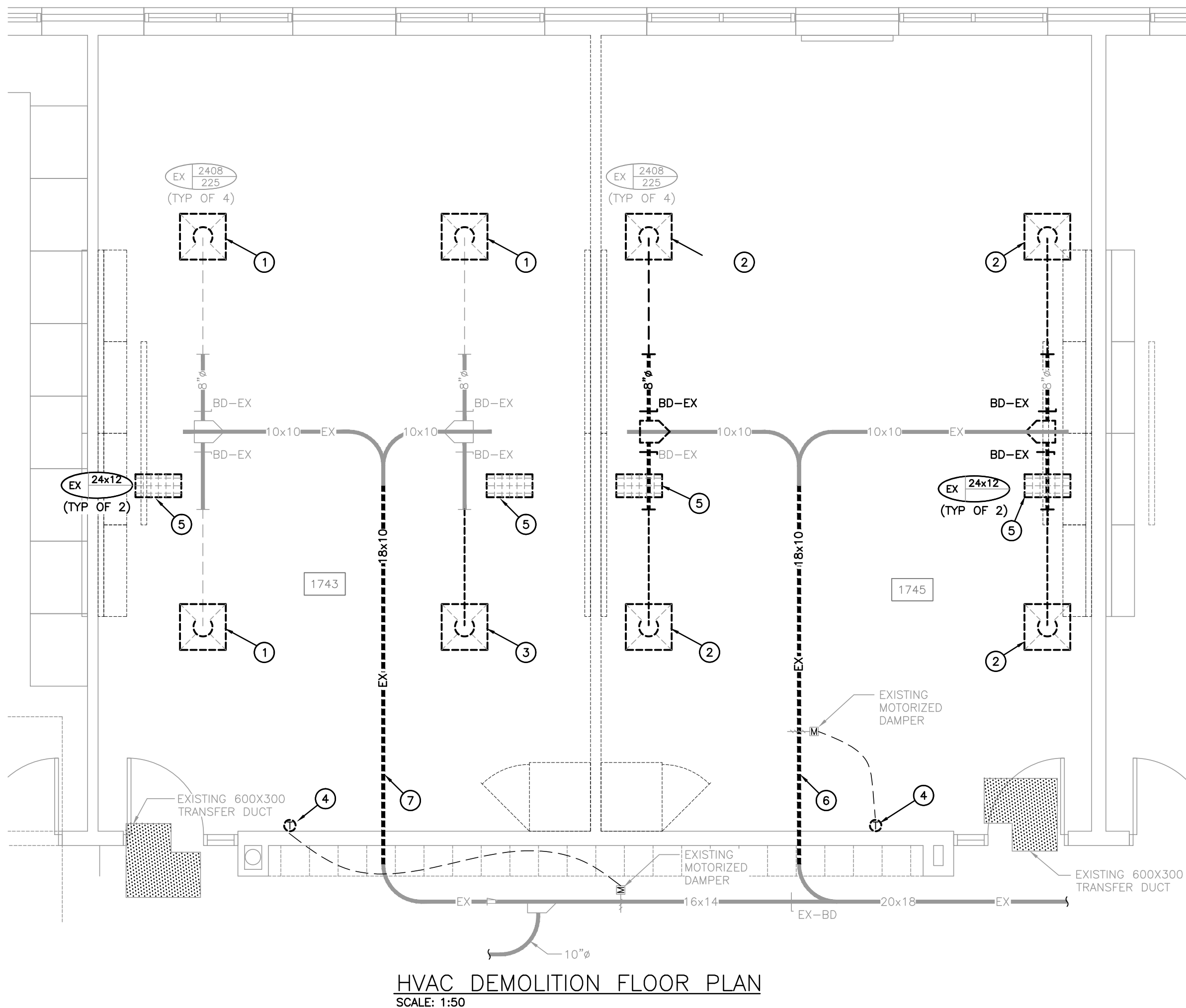
WALTERFEDY

800.685.1378 walterfedy.com

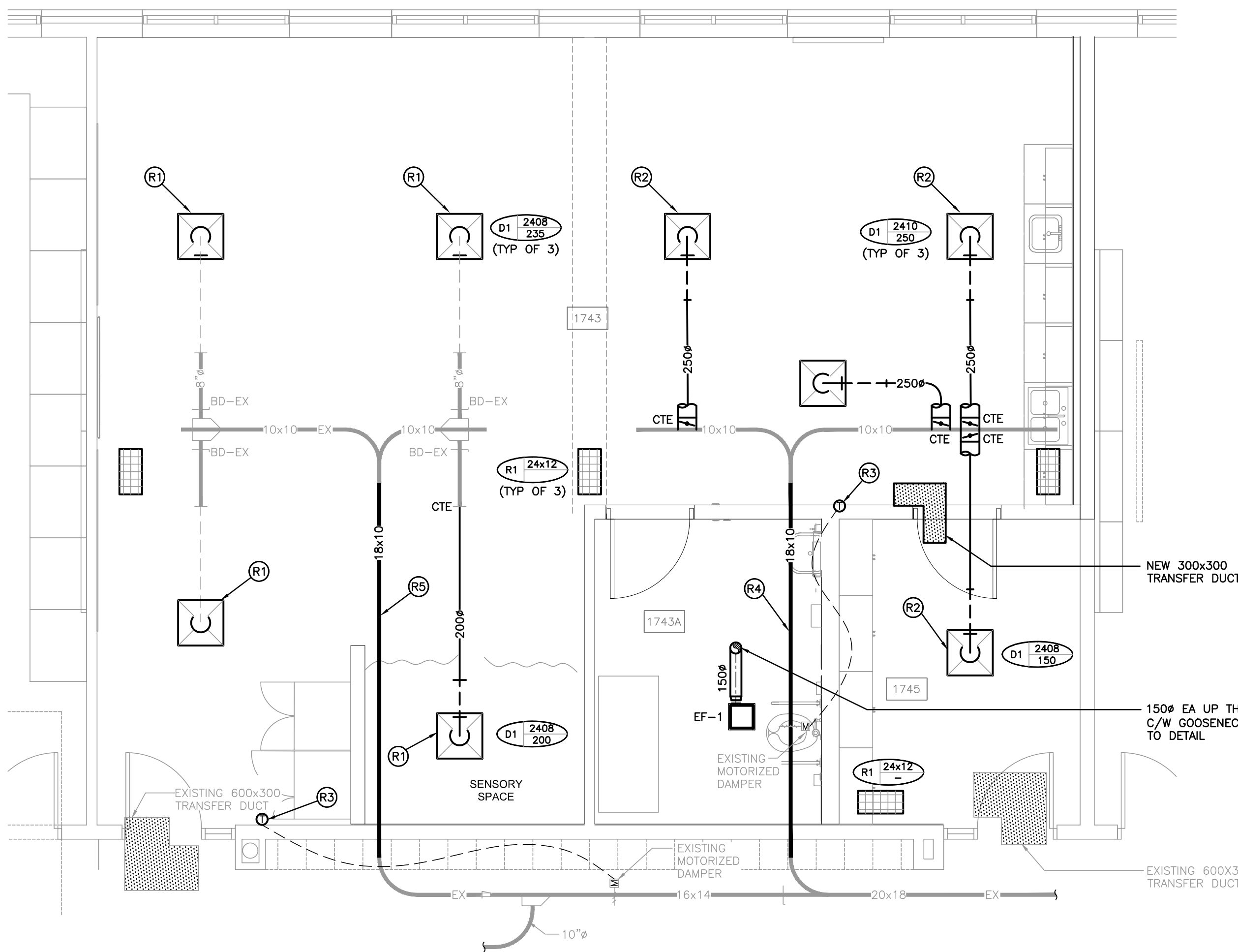


SCALE :	AS NOTED	SHEET NO: <div style="font-size: 48px; text-align: center;">M2.1</div>
DATE :	2025.03.19	
PROJECT NO :	2024-0057-10	
DRAWN BY :	CSP	
CHECKED BY :	SO	

24-009547Page 9 of 15



HVAC DEMOLITION FLOOR PLAN
SCALE: 1:50



HVAC RENOVATION FLOOR PLAN
SCALE: 1:50

GENERAL DEMOLITION NOTES

- EXISTING MECHANICAL ITEMS NOT SHOWN SHALL REMAIN UNLESS NOTED OTHERWISE.
- EXISTING MECHANICAL ITEMS SHOWN BUT NOT NOTED AS BEING REMOVED OR RENOVATED SHALL REMAIN AS PRESENTLY INSTALLED AND OPERATING.
- THIS CONTRACTOR SHALL BE RESPONSIBLE FOR VERIFYING ON SITE ALL LOCATIONS AND SIZES OF ALL SERVICES & EQUIPMENT PRIOR TO THE COMMENCEMENT OF WORK.
- ALL OPENINGS THAT RESULT FROM THE REMOVAL OF EQUIPMENT OR SERVICES SHALL BE NEATLY PATCHED WITH SUITABLE NEW MATERIALS TO SUIT EXISTING CONSTRUCTION.
- PLUMBING VENTS ARE NOT INDICATED OR IDENTIFIED. REMOVE ALL REDUNDANT VENTS WHILE MAINTAINING INTEGRITY OF EXISTING SYSTEMS TO REMAIN.
- REMOVAL OF EXISTING PIPING, OR DUCT SYSTEMS INCLUDES REMOVAL OF ALL HANGERS, INSULATION, FITTINGS, ETC.
- MAINTAIN INTEGRITY OF EXISTING SYSTEMS THAT ARE TO REMAIN OR BE MODIFIED.
- INSTALL NEW SYSTEM OR SERVICES WHERE REQUIRED TO MAINTAIN SYSTEM OPERATION PRIOR TO DEMOLITION OF EXISTING SERVICES.
- THIS CONTRACTOR IS TO REMOVE & REPLACE CEILINGS AS REQUIRED FOR REMOVAL/REPLACEMENT OF SERVICES.

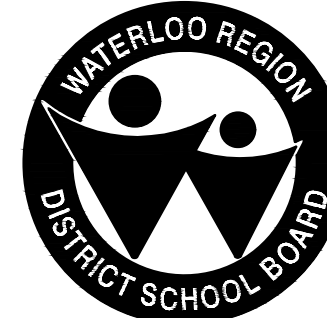
SPECIFIC DEMOLITION NOTES

- EXISTING DIFFUSER TO BE REMOVED, FLEXIBLE DUCTWORK TO REMAIN. PREPARE FOR NEW DIFFUSER CONNECTION.
- EXISTING DIFFUSER, DUCTWORK, AND BALANCING DAMPER TO BE REMOVED COMPLETE.
- EXISTING DIFFUSER AND FLEXIBLE DUCTWORK TO BE REMOVED. PREPARE BRANCH FOR NEW DIFFUSER CONNECTION.
- REMOVE COMPLETE EXISTING THERMOSTAT AND ASSOCIATED WIRING.
- EXISTING GRILLE TO BE REMOVED COMPLETE.
- TEMPORARILY REMOVE AND RE-INSTALL DUCT TO ACCOMMODATE INSTALLATION OF NEW WALL.
- CUT AND REMOVE COMPLETE EXISTING PORTION OF DUCTWORK.

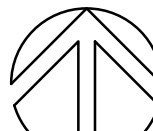
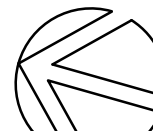
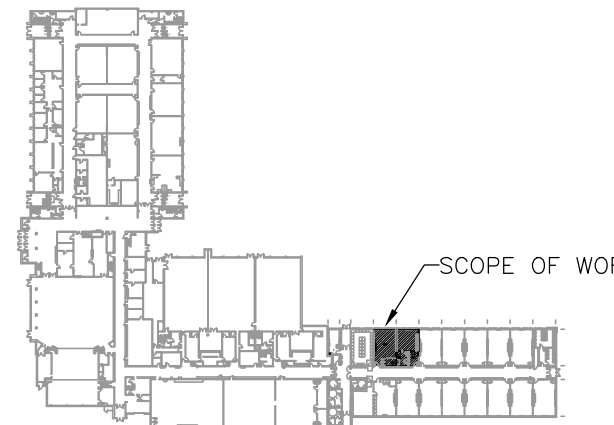
SPECIFIC RENOVATION NOTES

- CONNECT NEW DIFFUSER AND FLEX DUCT TO EXISTING BALANCING DAMPER AT DUCT BRANCH.
- CONNECT NEW DIFFUSER TO EXISTING DUCT MAIN C/W BALANCING DAMPER.
- CONNECT NEW THERMOSTAT TO EXISTING MOTORIZED DAMPER ACTUATOR. FISH EXISTING WALL AS REQUIRED TO INSTALL NEW CONTROL WIRING.
- RE-INSTALL DUCTWORK.
- OFFSET / RE-ROUTE EXISTING DUCTWORK TO ACCOMMODATE INSTALLATION OF NEW WALL.

CLIENT LOGO



KEYPLAN



TRUE NORTH

PROJECT NORTH

No.	ISSUANCE	DATE
1	ISSUED FOR 100% OWNER REVIEW	2025.03.19
2	ISSUED FOR BID AND PERMIT	2025.04.04



The contractor shall verify all dimensions and report all errors and discrepancies to the Consultant before commencement of the work.
The drawings show general arrangement of services. Follow as closely as actual building construction will permit. Obtain approval for relocation of service from Consultant before commencement of the work.
The drawings do not indicate all offsets fitting and accessories which may be required. Provide the same to meet the required conditions.
Drawings and specifications, etc., prepared and issued by the consultant are the property of the consultant and must be returned at the completion of the project. These documents are not to be duplicated or copied without the consent of the Consultant.
Do not scale this drawing.
© 2025 DEI Consulting Engineers Inc.

CLIENT

WATERLOO REGION DISTRICT SCHOOL BOARD

51 Ardelt Ave, Kitchener ON N2C 2R5

PROJECT

WRDSB Bluevale CI Dev. Ed. Classroom

80 Bluevale St N, Waterloo ON N2J 3R5

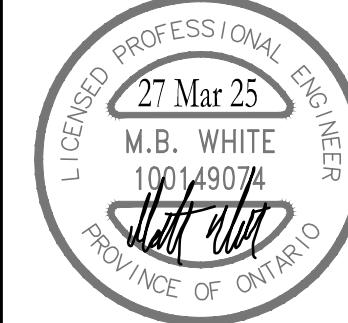
HVAC PART PLANS - DEMOLITION & RENOVATION

WALTERFEDY

TORONTO | CALGARY | EDMONTON | KITCHENER | HAMILTON

800.685.1378 walterfeddy.com

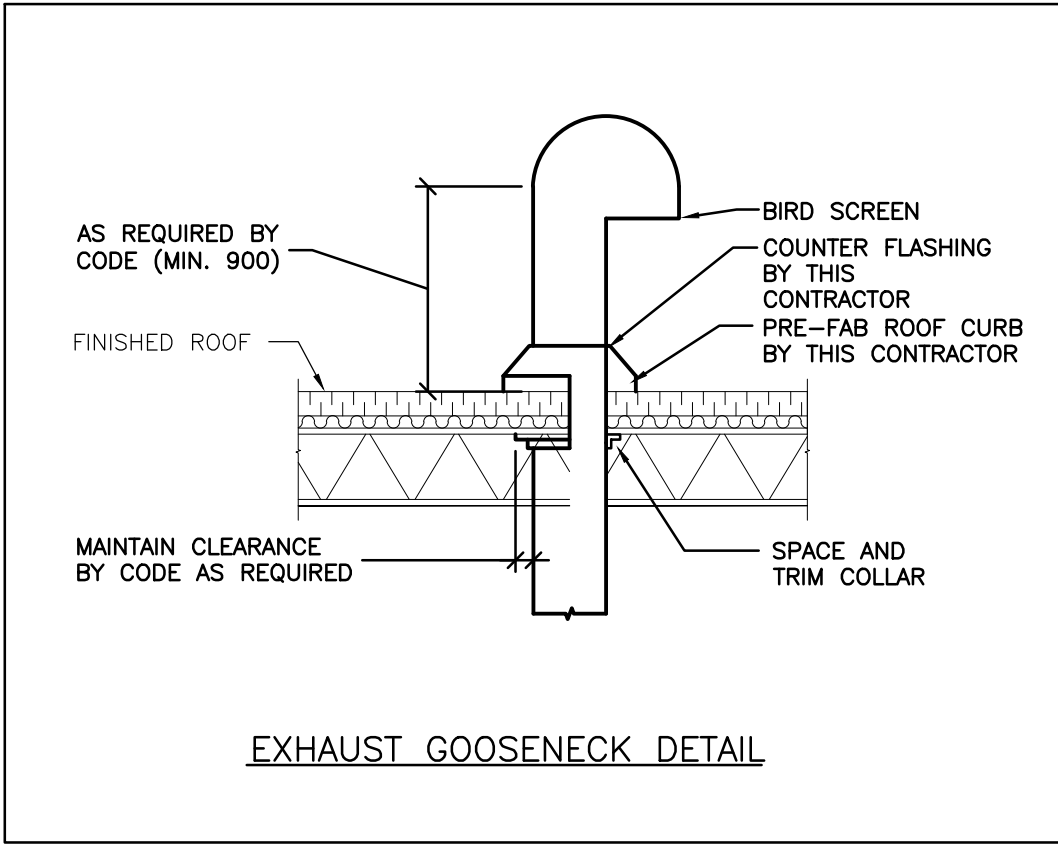
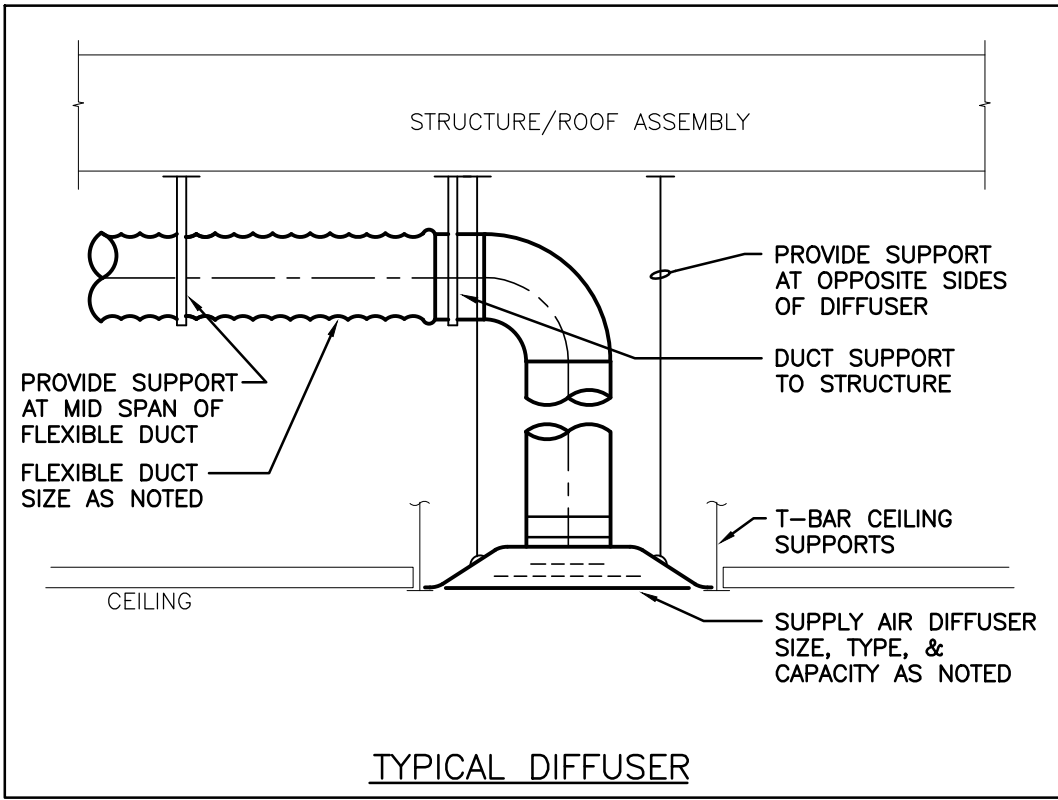
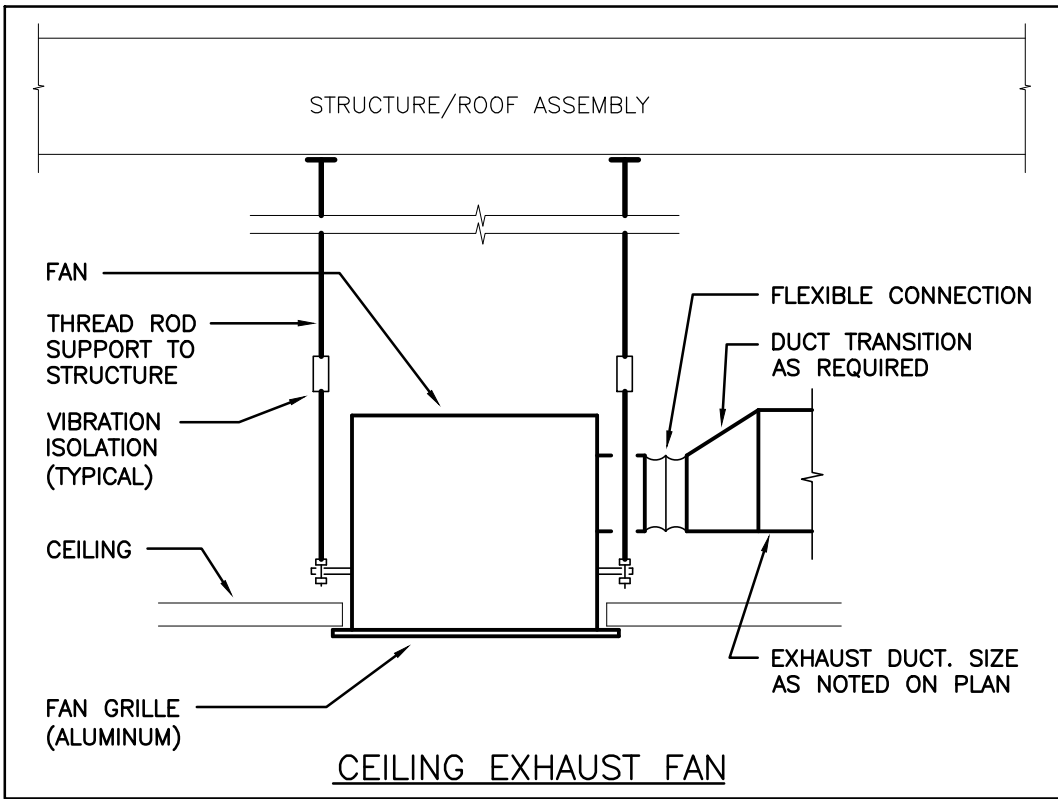
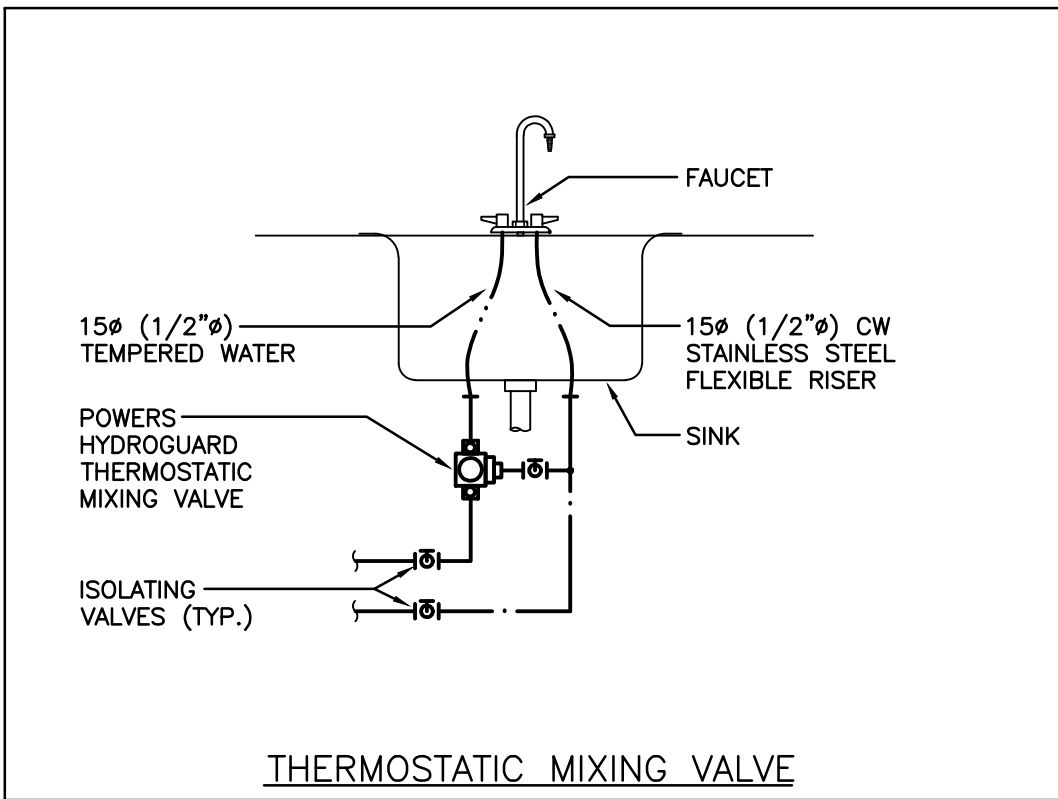
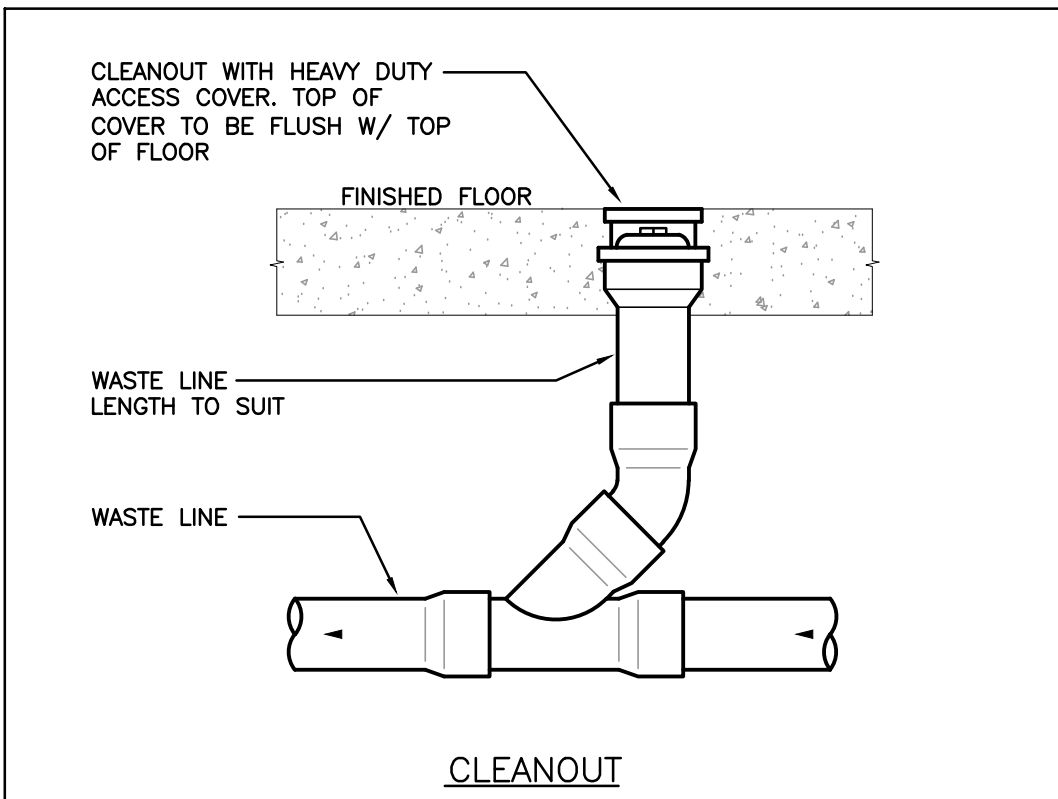
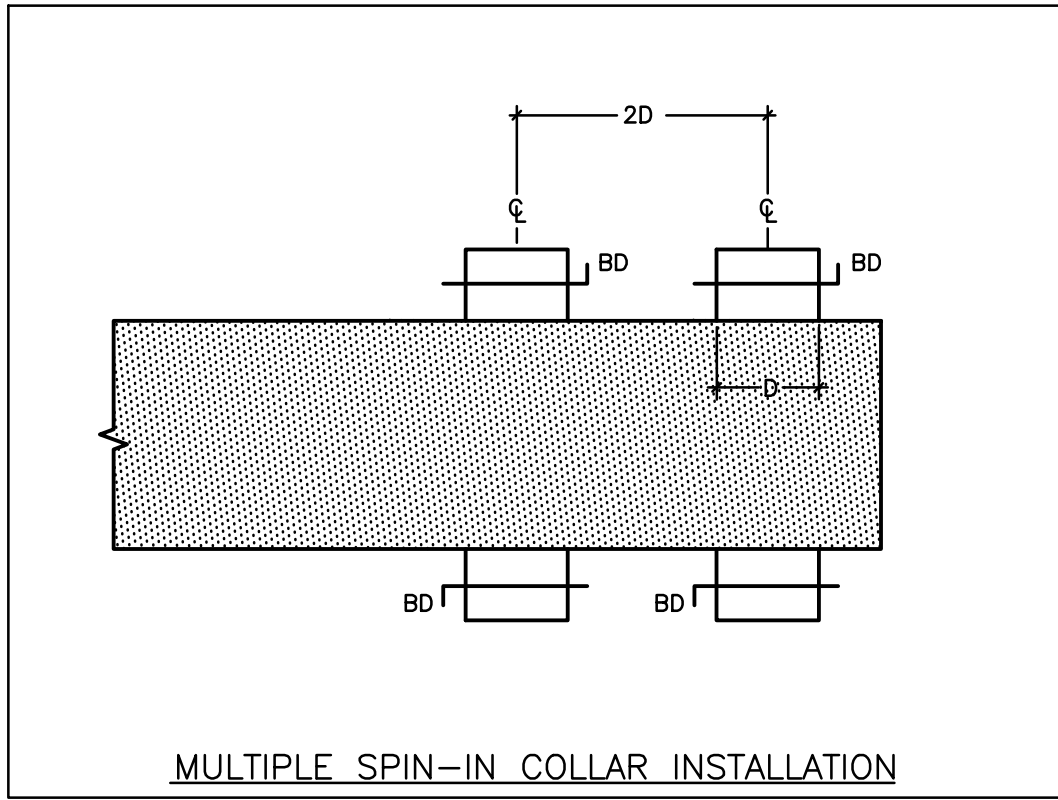
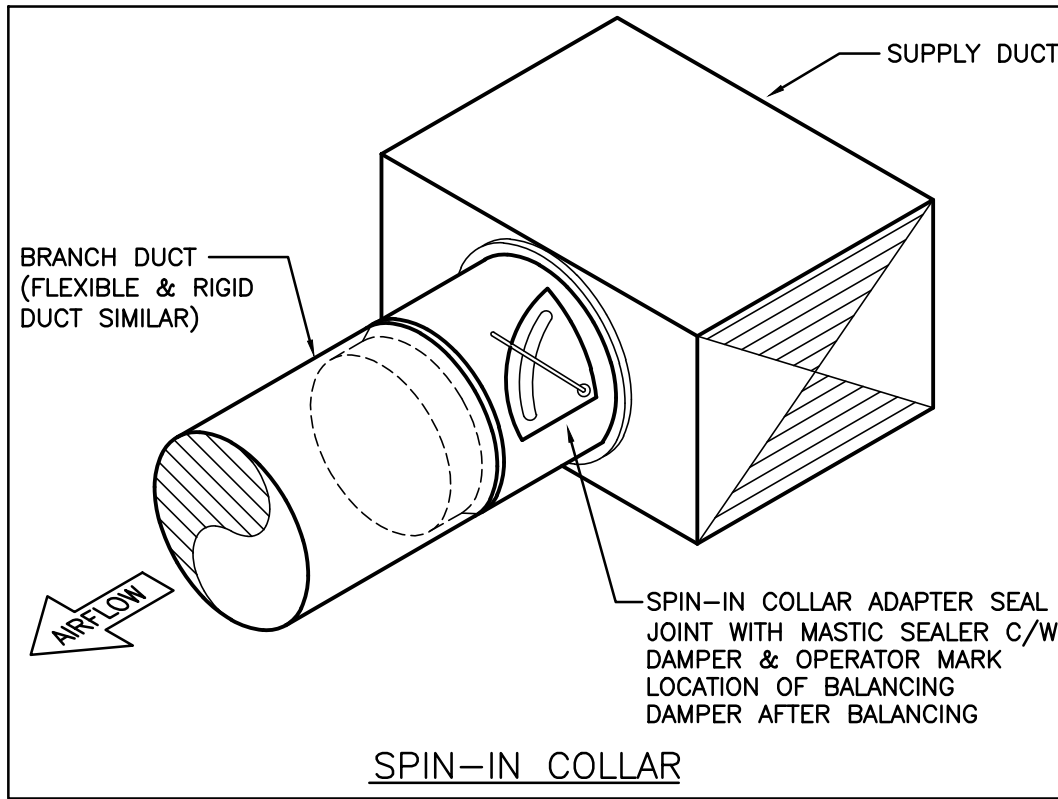
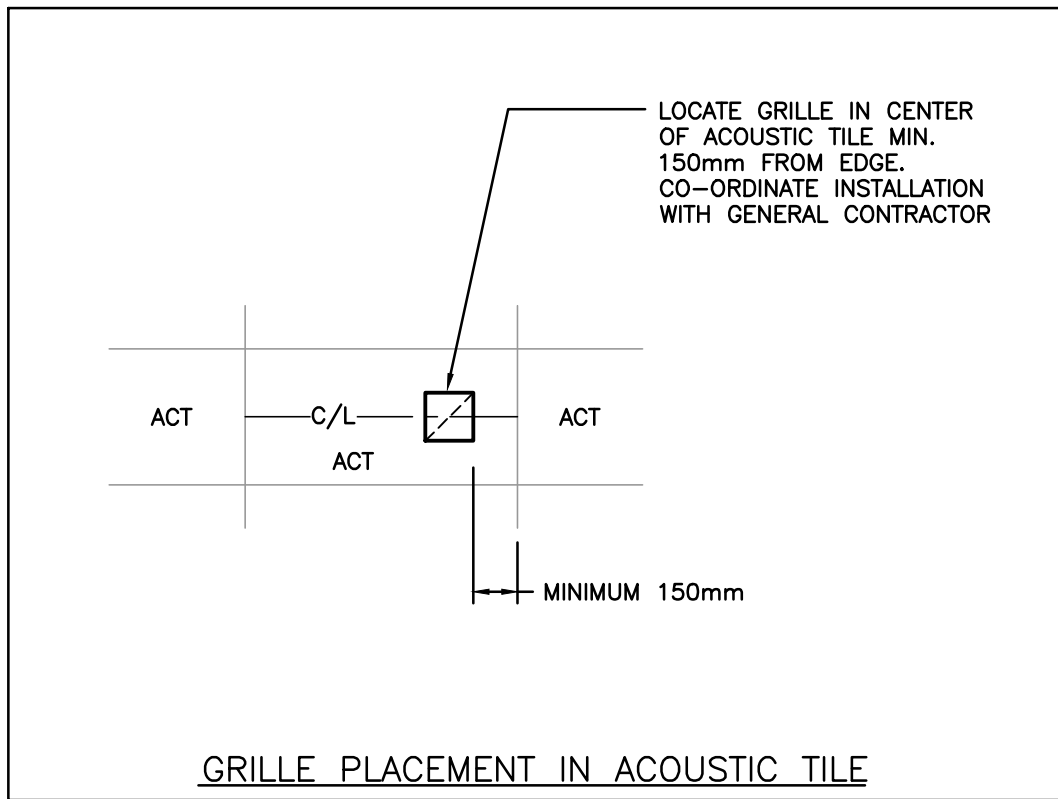
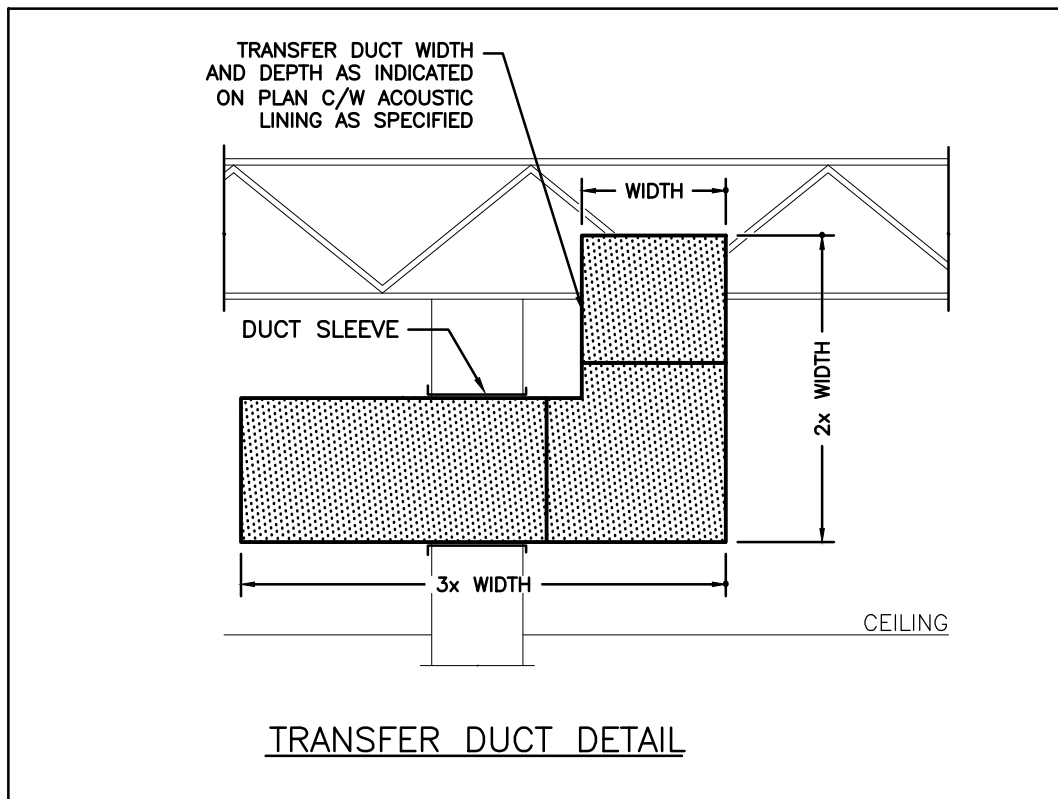
SEAL



SCALE : AS NOTED
DATE : 2025.03.19
PROJECT NO : 2024-0057-10
DRAWN BY : CSP
CHECKED BY : SO

SHEET NO:

M3.1



PART A GENERAL NOTES

1. PROVIDE LABOUR, MATERIAL AND EQUIPMENT REQUIRED TO PROVIDE A COMPLETE INSTALLATION WITH QUALITY WORKMANSHIP ACCEPTABLE TO OWNER AND CONSULTANT.
2. OBTAIN ALL PERMITS AND PAY ALL TAXES, FEES, AND OTHER COSTS INCURRED WITH THIS WORK. FILE ALL PLANS. OBTAIN ALL NECESSARY APPROVALS, CERTIFICATES. SUBMIT ALL FINAL CERTIFICATES TO THE CONSULTANT. COMPLY WITH RULES AND RECOMMENDATIONS OF THE BOARD OF FIRE UNDERWRITERS, THE CANADIAN GAS ASSOCIATION, THE LOCAL BUILDING CODE, AND ALL REQUIREMENTS OF THE LOCAL UTILITY COMPANY AND BY-LAWS. POST BUILDING PERMIT AT SITE IN ACCORDANCE WITH O.B.C. REQUIREMENTS.
3. VISIT THE SITE BEFORE SUBMITTING TENDERS TO EVALUATE ANY SITE CONDITIONS THAT MIGHT ARISE. INCLUDE ALL SITE CONDITIONS IN TENDER, EXTRAS WILL NOT BE ACCEPTED UNLESS BELIEVED TO BE REASONABLE BY THE OWNER AND CONSULTANT.
4. COORDINATE WITH OTHER CONTRACTORS INSTALLING EQUIPMENT OR MATERIAL AND ARRANGE EQUIPMENT IN PROPER RELATION WITH ALL OTHER TRADES. ENSURE SYSTEMS ARE SERVICEABLE.
5. CUTTING AND PATCHING SHALL BE BY THE CONTRACTOR REQUIRED TO INSTALL THE SERVICE.
6. THE DRAWINGS ARE DIAGRAMMATIC. THE SERVICES SHALL BE INSTALLED TO CONSERVE HEADROOM AND INTERFERE AS LITTLE AS POSSIBLE WITH THE FREE USE OF THE SPACES THROUGH WHICH THEY PASS.
7. THE MECHANICAL SYSTEMS OF THIS BUILDING MUST ACHIEVE THE ENERGY EFFICIENCY LEVELS BY CONFORMING TO ANSI/ASHRAE/IESNA 90.1 "ENERGY STANDARD FOR BUILDINGS EXCEPT LOW-RISE RESIDENTIAL BUILDINGS" AND CHAPTER 2 OF DIVISION 3 OF SB-10 PRESCRIPTIVE METHOD FROM THE ONTARIO BUILDING CODE.
8. ALL EQUIPMENT AND MATERIAL SHALL BE NEW. REPLACE ALL DAMAGED EQUIPMENT.
9. MATERIAL AND EQUIPMENT ARE NAMED IN THE SPECIFICATION TO ESTABLISH AN ACCEPTABLE STANDARD OF MATERIALS AND THE QUALITY OF WORKMANSHIP BY WHICH TO ADHERE.
10. SUBMIT SHOP DRAWINGS ELECTRONICALLY FOR ALL EQUIPMENT. THESE WILL BE REVIEWED BY THE CONSULTANT. RESUBMIT AS OFTEN AS MAY BE FOUND NECESSARY. SUBMIT ONE COMPLETE SUBMISSION INDEXED AND LABELED FOR THIS PROJECT.
11. PROVIDE ALL NECESSARY PROTECTION FOR FINISHED OR UNFINISHED WORK. ALL OPENINGS IN PIPES, DUCTS AND EQUIPMENT SHALL BE CAPPED TO ENSURE SERVICES ARE KEPT CLEAN WHEN NOT IN USE.
12. MAINTAIN INSURANCE TO FULLY PROTECT THE CONTRACTOR, OWNER AND CONSULTANT FROM ANY AND ALL CLAIMS SUCH AS UNDER THE WORKERS COMPENSATION ACT, ETC. POST PROJECT NOTIFICATION AT THE SITE IN ACCORDANCE WITH THE MINISTRY OF LABOUR REQUIREMENTS.
13. EXCAVATION AND BACK FILLING SHALL BE BY THE TRADE INSTALLING THE SERVICE. PROVIDE COMPACTED 'A' GRAVEL FOR BEDDING AND BACKFILLING AS INDICATED. REMOVE SURPLUS MATERIAL FROM SITE.
14. PROVIDE STRUCTURAL SUPPORTS, PLATFORMS, SUPPORTING RODS, HANGERS, INSERTS AND BRACKETS FOR EQUIPMENT AND SERVICES. DO NOT SUPPORT SERVICES FROM STEEL DECK.
15. INSTRUCT THE OWNER'S STAFF IN THE CARE, MAINTENANCE AND OPERATION OF THE SYSTEMS.
16. SUBMIT THREE (3) COPIES OF OPERATING AND MAINTENANCE INSTRUCTIONS IN A 3 RING BINDER LABELED FOR THE PROJECT.
17. REMOVE ALL PROTECTIVE COVERINGS, CLEAN AND POLISH ALL EQUIPMENT. FREE ALL OBSTRUCTIONS, CLEAN AND REPLACE ALL FILTERS WITH NEW, AND LEAVE ALL KEYS AND WRENCHES WITH THE OWNER.
18. ALL SURPLUS AND WASTE MATERIALS SHALL BE PROMPTLY REMOVED FROM THE PREMISES.
19. ALL AREAS NOT AFFECTED BY RENOVATION OR DEMOLITION SHALL REMAIN AS PRESENTLY INSTALLED UNLESS NOTED OTHERWISE.
20. THE OWNER WILL DECIDE WHICH ITEMS OR EQUIPMENT SLATED FOR REMOVAL THAT THEY WISH TO RETAIN AS THEIR PROPERTY AND THIS CONTRACTOR SHALL REMOVE ALL OTHER MATERIALS FROM THE PREMISES.
21. PROVIDE LAMICOID TAGS FOR IDENTIFICATION OF NEW EQUIPMENT ADDED.
22. WARRANTY ALL MATERIAL AND EQUIPMENT FOR A PERIOD OF ONE (1) YEAR AFTER FINAL ACCEPTANCE OF SYSTEM.
23. VIDEO RECORDING OF NEW & EXISTING UNDERGROUND SERVICES
PRIOR TO FINAL ACCEPTANCE OF THE NEW UNDERGROUND PLUMBING SYSTEM AND PRIOR TO POURING THE FLOOR THIS CONTRACTOR SHALL RETAIN A QUALIFIED CONTRACTOR TO VIDEO TAPE THE NEW, EXISTING AND REVISED SANITARY AND STORM DRAINAGE PIPING AND BRANCH PIPING. TRANSFER ALL VIDEOTAPE INFORMATION TO DVD. THIS CONTRACTOR SHALL FLUSH THE NEW AND EXISTING STORM AND SANITARY SYSTEM TO REMOVE ALL DEBRIS PRIOR TO FINAL VIDEO TAPING OF SYSTEMS. PROVIDE 3 COPIES OF DIGITAL RECORDING ON MEMORY STICK. IDENTIFY VIDEO ROUTING ON RECORD DRAWINGS.
24. LOCATION OF EXISTING UNDERGROUND SERVICES
THIS CONTRACTOR SHALL LOCATE EXISTING SERVICES PRIOR TO STARTING ANY WORK IN THE AFFECTED AREA. THIS CONTRACTOR SHALL USE A VIDEO CAMERA FOR THE EXISTING STORM AND/OR SANITARY DRAINAGE AT THE INDICATED CONNECTION POINT TO CONFIRM LOCATION, SIZE AND INVERT OF THE EXISTING PIPING.
25. EXISTING CONCRETE SLAB X-RAY/SCANNING
THIS CONTRACTOR SHALL RETAIN THE SERVICES OF A QUALIFIED COMPANY TO PROVIDE AND X-RAY AND/OR SCAN OF THE EXISTING BURED SERVICES IN WALL AND/OR FLOORS PRIOR TO STARTING ANY WORK IN THE AFFECTED AREA. FAILURE TO LOCATE EXISTING PIPING, CONDUIT REBAR ETC., SHALL NOT RELIEVE THIS CONTRACTOR OF REPAIR OF SAME PRIOR TO INSTALLING HIS SERVICE. THIS CONTRACTOR SHALL BE RESPONSIBLE FOR ALL REPAIRS AND/OR REPLACEMENT OF EXISTING SERVICES CAUSED BY CUTTING THE EXISTING CONCRETE SLABS AND/OR WALLS.
26. EXCAVATING AND BACKFILLING
PROVIDE ALL EXCAVATING AND BACKFILLING INSIDE AND OUTSIDE THE BUILDING FOR PLUMBING PIPES, DRAINS AND EQUIPMENT. ALL BACKFILLING SHALL BE NEW CLEAN GRANULAR 'A' FILL BROUGHT IN SPECIFICALLY FOR THE PURPOSE OF BACKFILLING TO THE UNDERSIDE OF FLOOR SLAB. ALL BACKFILLING SHALL BE COMPACTED AT INTERVALS NOT MORE THAN 150 MM (6") LAYER TO THE SATISFACTION OF THE CONSULTANT. PROVIDE EXCAVATING AND BACKFILLING OUTSIDE THE BUILDING WITH GRANULAR 'A' BROUGHT IN SPECIFICALLY FOR BACKFILLING TO A MINIMUM OF 450 MM (18") OVER THE PIPE. BACKFILLING OUTSIDE BUILDING OVER AND ABOVE THE 450 MM (18") BACKFILL AS PREVIOUSLY SPECIFIED HEREIN SHALL BE BY THE MECHANICAL CONTRACTOR AS SPECIFIED UNDER DIVISION 2. WHERE BACKFILLING OUTSIDE THE BUILDING IS NOT SPECIFIED UNDER DIVISION 2 THE MECHANICAL CONTRACTOR SHALL PROVIDE NEW CLEAN GRANULAR 'A' FILL TO GRADE LEVEL. BOTTOMS OF TRENCHES SHALL BE EXCAVATED SO THAT THE PIPE WILL BE SUPPORTED ON A 150 MM (6") COMPACTED BED OF CLEAN GRANULAR 'A' FILL. PROVIDE ALL NECESSARY PUMPING TO MAINTAIN EXCAVATION FREE OF WATER. SHOULD WATER BE ENCOUNTERED DURING EXCAVATION, THE MECHANICAL CONTRACTOR SHALL PROVIDE ALL LABOUR AND MATERIAL, INCLUDING ALL EQUIPMENT REQUIRED FOR DEWATERING THE EXCAVATION. AFTER THE WATER HAS BEEN REMOVED, THIS CONTRACTOR SHALL INSTALL A 300 MM (12") BASE OF COMPACTED 50 MM (2") CLEAR STONE COVERED WITH FILTER CLOTH BEFORE INSTALLING BACKFILL AS DETAILED AND/OR AS SPECIFIED. BE RESPONSIBLE FOR ALL WEATHER PROTECTION REQUIRED TO INSTALL PIPING AND/OR EQUIPMENT TO THE SATISFACTION OF THE CONSULTANT. BE RESPONSIBLE FOR PROVIDING ALL CLEAR STONE OR GRANULAR 'A' MATERIAL SUITABLE FOR APPLICATION TO REPLACE EXISTING SOIL NOT SUITABLE FOR BACKFILLING ABOVE THE 450 MM (18") BEDDING MATERIAL.
27. PIPE SLEEVES
PROVIDE SCHEDULE 40 STEEL PIPE SLEEVES AT POINTS WHERE PIPES PASS THROUGH MASONRY, CONCRETE OR FIRE RATED ASSEMBLIES AND AS INDICATED. GROUT SLEEVES IN PLACE. MINIMUM 6 MM (1/4") CLEARANCE ALL AROUND, BETWEEN SLEEVE AND UNINSULATED PIPE OR BETWEEN SLEEVE AND INSULATION. CAULK BETWEEN SLEEVE AND PIPE IN FOUNDATION WALLS AND BELOW GRADE FLOORS WITH WATERPROOF FIRE RETARDANT NON-HARDENING MASTIC. WHERE SLEEVES PASS THROUGH WALLS OR FLOORS, PROVIDE SPACE FOR FIRESTOPPING. WHERE PIPES PASS THROUGH FIRE RATED WALLS, FLOORS AND PARTITIONS, MAINTAIN FIRE RATING INTEGRITY. ENSURE NO CONTACT BETWEEN COPPER TUBE OR PIPE AND FERROUS SLEEVE. FILL FUTURE-USE SLEEVES WITH LIME PLASTER OR OTHER EASILY REMOVABLE FILL. CAULK EXPOSED EXTERIOR SURFACES OF FERROUS SLEEVES WITH HEAVY APPLICATION OF ZINC RICH PAINT TO CGSB 1-GP-181M-HADOT-MAR-78.
28. DUCT SLEEVES
PROVIDE MINIMUM 20 GAUGE DUCT SLEEVES WHERE DUCTS PASS THROUGH MASONRY, CONCRETE OR FIRE RATED ASSEMBLIES. MAINTAIN MINIMUM 25 MM CLEARANCE ALL AROUND OR TO THE REQUIREMENTS OF THE AUTHORITY HAVING JURISDICTION. SEAL AT WALL, AS INDICATED. WHERE DUCTS PASS THROUGH FIRE RATED WALLS, FLOORS AND PARTITIONS, MAINTAIN FIRE RATING INTEGRITY.
29. COMPLETE WRDSB ASSET WARRANTY CARD INDICATING DELETED/NEW EQUIPMENT.

PART B DEMOLITION NOTES

1. THIS PROJECT IS ONE OF A RETROFIT NATURE IN PART, AND WHICH WILL REQUIRE SOME DEMOLITION. ALLOW FOR ALL REMEDIAL WORK IN AREAS INDICATED ON THE DRAWINGS AND AS GENERALLY DEFINED IN THE RELEVANT SECTIONS OF THE SPECIFICATIONS.
2. THE SCOPE OF WORK IS ESSENTIALLY THE SELECTED DISCONNECTION AND/OR REMOVAL OF SERVICES AND/OR EQUIPMENT, PIPING, DUCTWORK ETC. AS INDICATED OR REQUIRED TO COMPLETE THE WORK.
3. THIS DIVISION IS TO LIAISE WITH THE OWNERS OR CONSULTANT FOR EQUIPMENT BEING REMOVED THAT MAY BE SUITABLE FOR REUSE TO THAT SPECIFIED OR HANDED OVER TO THE OWNER.
4. THIS DIVISION TO TAKE FULL RESPONSIBILITY FOR ANY SPECIAL TOOLS OR EQUIPMENT REQUIRED TO DISASSEMBLE OR REMOVE MATERIAL FROM BUILDING.
5. THE GENERAL EXECUTION OF THE DEMOLITION IS TO BE CARRIED OUT IN A CLEAN AND EFFICIENT MANNER.
6. DEMOLITION OF EXISTING CEILING, WALLS ETC., TO FACILITATE REMOVAL OF EXISTING SERVICES OR EQUIPMENT OR INSTALLATION OF NEW TO BE KEPT TO A MINIMUM AND THEN RESTORED TO MATCH EXISTING.
7. ALL OPENINGS OR HOLES CREATED BY REMOVAL OF EXISTING MECHANICAL SYSTEMS WHICH ARE NOT BEING REUSED ARE TO BE PATCHED WITH THE SAME MATERIAL SURROUNDING SURFACES.
8. PROTECT ALL EXISTING FURNISHINGS MATERIALS AND EQUIPMENT. ANY DAMAGE OCCURRING AS A RESULT OF THE WORK OF THIS DIVISION SHALL BE REPAIRED OR REPLACED AT THE EXPENSE OF THIS DIVISION.

MECHANICAL SPECIFICATION


9. WHERE WORK INVOLVES BREAKING INTO OR CONNECTING TO EXISTING SERVICES, CARRY OUT WORK AT TIMES DIRECTED BY THE OWNERS IN AN EXPEDIENT MANNER WITH MINIMUM DISRUPTION TO THE FACILITY AND SYSTEMS DOWNTIME.
10. WHERE UNKNOWN SERVICES ARE ENCOUNTERED, IMMEDIATELY ADVISE CONSULTANT AND CONFIRM FINDINGS IN WRITING.
11. WHERE THE LOCATION OF ANY SERVICES HAS BEEN SHOWN ON THE PLANS, SUCH INFORMATION IS NOT GUARANTEED. IT IS THIS DIVISION'S RESPONSIBILITY TO VERIFY LOCATIONS, INVERT ELEVATIONS, ETC., IMMEDIATELY AFTER MOVING ON SITE. SHOULD FOR ANY REASON THE INFORMATION OBTAINED NECESSITATES CHANGES IN PROCEDURE OR DESIGN, ADVISE THE CONSULTANT AT ONCE. IF VERIFICATION OF EXISTING CONDITIONS IS NOT DONE AT THE OUTSET AND ANY PROBLEMS ARISE, THE RESPONSIBILITY FOR SAME IS ENTIRELY THIS DIVISION'S.
12. DISCONNECT AND/OR REMOVE EQUIPMENT PIPING, DUCTWORK, ETC. AS INDICATED.
13. CAP AND CONCEAL ALL REDUNDANT AND OBSOLETE CONNECTIONS.
14. PROVIDE A LIST OF EQUIPMENT TO BE REMOVED TO THE OWNER, FOR HIS ACCEPTANCE OF SAME. REMOVE ALL EQUIPMENT FROM SITE WHICH THE OWNER DOES NOT RETAIN.
15. MAINTAIN EQUIPMENT TO BE RETAINED BY OWNER ON SITE WHERE DIRECTED BY CONSULTANT.
16. DEMOLITION OF ALL PARTS OF THE WORK MUST BE COMPLETED WITHIN THE CONFINES OF THE WORK AREA AND IN SUCH A WAY AS TO MINIMIZE THE RISK OF INJURY TO WILL NOT ADVERSELY AFFECT THE BUILDING USERS.
17. DEMOLISHED AREAS OF THE EXISTING BUILDING WILL REMAIN IN THEIR CURRENT USE IN SOME CASES. DEMOLITION IN THESE AREAS MUST BE KEPT TO THE MINIMUM REQUIRED TO COMPLETE THE WORK.
18. DEMOLITION SHALL TAKE PLACE WITHIN AREAS ISOLATED FROM ALL OTHER AREAS WITH APPROPRIATE HOARDING, SCAFFOLDING, NETTING, FENCING OR OTHER MEANS OF SECURITY BETWEEN BUILDING USERS AND THE WORK.
19. CO-ORDINATE MAKING SAFE ELECTRICAL DEVICES, CAPPING PLUMBING AND REMOVAL OF FIXTURES PRIOR TO COMMENCEMENT OF DEMOLITION.
20. ALL PIPING AND EQUIPMENT TO BE REMOVED AND/OR ABANDONED SHALL BE DRAINED PRIOR TO CAPPING AND/OR ABANDONING. DISPOSAL OF ALL LIQUIDS SHALL BE TO THE APPROVAL OF AUTHORITY OF HAVING JURISDICTION AND/OR PROVINCIAL REGULATIONS.
21. DRAIN ALL EXISTING PIPING AND DRAINAGE SYSTEMS INCLUDING ALL RELATED EQUIPMENT AS REQUIRED TO FACILITATE SYSTEM RENOVATIONS.
22. DISPOSAL OF EXISTING SYSTEM SHALL BE TO THE REQUIREMENTS OF THE LOCAL AND/OR PROVINCIAL REGULATIONS.

PART C PLUMBING NOTES

1. CONTRACTOR TO PROVIDE POTABLE WATER CERTIFICATE FOR E. COLI AND COLIFORM FORM A RECOGNIZED TESTING LABORATORY UPON COMPLETION OF THE PROJECT. WATER IS TO BE TAKEN FORM A NEW FIXTURE TO TEST THE NEW PIPING INSTALLED.
2. SERVICES CONNECT TO EXISTING SERVICES WHERE SHOWN ON DRAWINGS.
3. CODES AND REGULATIONS
SANITARY, SOIL WASTE, VENT, AND ALL WATER PIPING SHALL CONFORM AND BE INSTALLED TO THE ONTARIO PLUMBING CODE AND THE CANADIAN PLUMBING CODE, LATEST EDITION.
4. TESTING
SANITARY PIPING: ALL SANITARY PIPING SHALL BE TESTED WITH WATER UNDER THE GUIDANCE OF THE LOCAL PLUMBING INSPECTOR. SMOKE TESTS OR ANY OTHER TEST REQUIRED BY THE PLUMBING INSPECTOR SHALL ALSO BE MADE. WATER PIPING: ALL WATER PIPING SHALL BE TESTED TO 150 PSI. PRESSURE FOR NOT LESS THAN FOUR HOURS WITHOUT A LOSS IN PRESSURE.
FLUSHING AND DISINFECTING
MAINTAIN TESTABLE RP BACKFLOW PREVENTOR BETWEEN MUNICIPAL WATER AND NEW PLUMBING SYSTEM. ENSURE A MINIMUM OF 90% OF PLUMBING FIXTURES ARE INSTALLED. FLUSH WATER MAINS THROUGH AVAILABLE OUTLETS WITH A SUFFICIENT FLOW OF POTABLE WATER TO PRODUCE A VELOCITY OF 1.5 M/S, WITHIN PIPE FOR 10 MIN. OR UNTIL FOREIGN MATERIALS HAVE BEEN REMOVED AND FLUSHED WATER IS CLEAR WITH BACKFLOW PROTECTION. PROVIDE CONNECTIONS AND PUMPS FOR FLUSHING AS REQUIRED. OPEN AND CLOSE VALVES, AND OPERATE FIXTURES TO ENSURE THOROUGH FLUSHING. TAKE WATER SAMPLES AT REMOTE FIXTURES AND SERVICE CONNECTIONS.
5. PIPE AND FITTINGS
SANITARY AND VENT DRAINS: (ABOVE GRADE), MEDIUM WEIGHT CAST IRON WITH MECHANICAL RUBBER JOINTS OR TYPE DWV STORM, SANITARY AND VENT PIPING: (BELOW GRADE) PVC DRAINAGE PIPE TO SDR 35 WITH SOLVENT WELDED JOINTS. ABS DRAINAGE PIPE WITH SOLVENT WELDED JOINTS. WATER PIPING: TYPE L COPPER WITH LEAD FREE SOLDER JOINTS.
6. VALVES
ISOLATION VALVES: HOT AND COLD WATER BRONZE BODY, CLASS 150, STAINLESS STEEL BALL, FULL PORT, PTFE SEAT AND PACKING, STEEL LEVER HANDLE. MILWAUKEE BA-455, CRANE, TOYO CHECK VALVES: HOT AND COLD WATER SIZES 1/2" DIAMETER TO 2" DIAMETER CRANE FIG. 1342, OR EQUAL JENKINS, BRONZE SWING CHECK, SOLDER ENDS. CRANE FIG. 29 OR EQUAL JENKINS VERTICAL LIFT CHECK VALVE, SCREWED ENDS ON VERTICAL PIPING. GAS VALVES: SHALL BE GSA APPROVED LUBRICATED PLUG TYPE.
7. CLEAN OUTS
CLEAN OUTS: PROVIDE AND SET CLEAN OUT PLUGS IN ALL DRAINS AND SOIL PIPE LINES WHERE OBSTRUCTIONS MAY BE FOUND, AT CHANGES OF DIRECTION, AT THE BASE OF ALL SANITARY STACKS AND AT INTERVALS. LENGTHS TO THE ONTARIO PLUMBING CODE. CLEAN OUTS SHALL BE FULL SIZES OF PIPES UP TO 4" DIAMETER AND NOT LESS THAN 4" DIAMETER FOR LARGER PIPES. ANCON CO-100-R OR EQUAL.
8. TRAP PRIMERS
TRAP PRIMERS: ALL TRAPS WHERE REQUIRED BY THE CODE TO BE PRIMED OR WHERE SHOWN ON THE DRAWINGS SHALL HAVE MIFAB-MR-ENG-AG OR EQUAL PRESSURE DROP ACTIVATED TRAP SEAL PRIMER INSTALLED IN THE NEAREST COLD WATER LINE TO THE TRAP. TRAP PRIMER SHALL BE CONCEALED, PROVIDED WITH ENCLOSURE FOR INSTALLATION IN WALL AND HAVE INTEGRAL AIR GAP FOR BACKFLOW PREVENTION, PROVIDE ACCESS DOOR.
9. PLUMBING FIXTURES
FIXTURES AS LISTED ON THE DRAWINGS. ALL FIXTURES MUST BE NEW AND CLEAN WHEN THE WORK IS TAKEN OVER BY THE OWNER. ALL PLUMBING FIXTURES SHALL BE EQUIPPED WITH SUPPLY VALVES, FAUCETS, TRAPS, SUPPORTS, WATER CONNECTIONS, ESCUTCHEONS, HANGERS, BOLTS, ETC. FIXTURES SHALL BE CRANE OR EQUAL AMERICAN STANDARD, KOHLER, TRAPS: 2" DIAMETER AND SMALLER, SHALL BE CAST BRASS AND CHROME PLATED IN EXPOSED AREAS. ALL SINK TRAPS SHALL BE TWO PIECE CONSTRUCTION. ALL TRIM MUST BE CAMBRIDGE BRASS OR EQUAL. ON COMPLETION ALL FIXTURES, ACCESSORIES AND EXPOSED PIPING SHALL BE THOROUGHLY CLEANED AND LEFT READY FOR USE. AFTER FINAL INSPECTION BY THE PLUMBING INSPECTOR CAULK AROUND BASE OF ALL FIXTURES TO THE WALL OR FLOOR WITH SILICONE CAULKING.
10. PIPE INSULATION
INSULATE ALL DOMESTIC HOT AND COLD WATER PIPING AND STORM PIPING ABOVE GRADE, WITH 1" (FOR PIPING UNDER 1 1/2" DIAMETER) OR 1 1/2" (FOR PIPING 1 1/2" DIAMETER AND HIGHER) FIBERGLASS INSULATION WITH VAPOUR BARRIER. INSTALL AS PER MANUFACTURERS RECOMMENDATIONS. RECOVER EXPOSED PIPING WITH 6 OZ. CANVAS JACKET AND TWO COATS LAGGING ADHESIVE.

PART G HEATING, AIR CONDITIONING, AND VENTILATION NOTES


1. DUCTWORK TO BE CONSTRUCTED TO SMACNA STANDARDS, MEDIUM STATIC PRESSURE WITH LEAKAGE RATE OF 5% MAXIMUM. FABRICATED IN ACCORDANCE WITH RECOMMENDATIONS OF SMACNA AND ASHRAE. SEAL ALL TRANSVERSE AND LONGITUDINAL JOINTS WITH DUCT SEALER.
2. SQUARE AND RECTANGULAR DUCTS: TO SMACNA. TRANSVERSE JOINTS, LONGEST SIDE UP TO AND INCLUDING 750 MM (30"): SMACNA PROPRIETARY DUCT JOINTS.
3. GRILLES, REGISTERS AND DIFFUSERS
GRILLES, REGISTERS AND DIFFUSERS SHALL BE THE SAME MANUFACTURER. TYPE AS SHOWN ON THE DRAWING. ACCEPTABLE MATERIALS: E.H. PRICE, TITUS, NAILOR, KRUEGER, TUTTLE & BAILY, METALAIR.
4. FLEXIBLE DUCTWORK
METALLIC ALUMINUM FLEXIBLE DUCTWORK MANUFACTURED BY FLEXMASTER LTD., OR EQUAL BETWEEN BRANCH DUCTS AND GRILLES, REGISTERS AND DIFFUSERS. MAXIMUM LENGTH SHALL BE 6'-0".
5. EXHAUST FAN(S)
EXHAUST FANS OF TYPE AND PERFORMANCE IN THE SCHEDULE AS SHOWN ON THE DRAWING AND/OR HEREIN. INSTALL EXHAUST FANS AS PER MANUFACTURERS RECOMMENDATIONS. FANS SHALL BE AMCA LABELED.
6. ACOUSTIC DUCT LINER
RIGID DUCT LINER 1" THICK 36 KG/M WITH NEOPRENE LINER GLUED AND PINNED TO INSIDE SURFACE OF DUCTWORK. MINIMUM 3.0M (10') FROM ALL AIR HANDLERS AND WHERE SHOWN ON DRAWINGS. SEAL ALL EXPOSED EDGES. DUCT SIZING REPRESENTS CLEAR INSIDE DIMENSIONS.
7. DUCTWORK INSULATION
ON THE LAST 5'-0" OF ALL EXHAUST DUCTS, INCLUDING PLENUM AND ALL AIR INTAKE DUCTWORK. FIBERGLASS FOIL FACED RIGID DUCT INSULATION 1" THICK TYPE PF-335-3/4 LB. DENSITY WITH RFRK FACING. GLUE AND PIN AS PER MANUFACTURERS RECOMMENDATIONS.
ON ALL OUTDOOR AIR DUCTWORK, FIBERGLASS FOIL FORCED RIGID DUCT INSULATION 3" THICK TYPE PF-335-3/4 LB DENSITY WITH RFRK FACING. GLUE AND PIN
RECOVER ALL EXTERIOR DUCTWORK WITH TWO COATS OF MASTIC SEALER AND 28 GAUGE PREFINISHED METAL FLASHING WITH CROSSLBREKAES AND STANDING SEAMS AND BUTTHOOK JOINTS. COLOUR TO MATCH BUILDING FLASHINGS.
8. ALTERNATES AND SUBSTITUTES
SHOULD ELECTRICAL CHARACTERISTICS FOR "ALTERNATE" OR "EQUAL" EQUIPMENT DIFFER FROM EQUIPMENT SPECIFIED IT SHALL BE THE RESPONSIBILITY OF THE EQUIPMENT MANUFACTURER TO PAY ALL COSTS ASSOCIATED WITH THE REVISIONS TO THE ELECTRICAL CONTRACT.



CLIENT LOGO

KEY PLAN

No.	ISSUANCE	DATE
1	ISSUED FOR 100% OWNER REVIEW	2025.03.19
2	ISSUED FOR BID AND PERMIT	2025.04.04



DEI Consulting Engineers
MECHANICAL | ELECTRICAL | AQUATIC

55 Northland Road,
Waterloo, ON, N2V 1Y8
Phone: 5497555555
Website: deiassociates.ca
Project Number: 24385

The contractor shall verify all dimensions and report all errors and discrepancies to the Consultant before commencement of the work. The drawings show general arrangement of services. Follow as closely as actual building construction will permit. Obtain approval for relocation of service from Consultant before commencement of the work. The drawings do not indicate all offsets fitting and accessories which may be required. Provide the same to meet the required conditions. Drawings and specifications, etc., prepared and issued by the consultant are the property of the consultant and must be returned at the completion of the project. These documents are not to be duplicated or copied without the consent of the Consultant. Do not scale this drawing. © 2025 DEI Consulting Engineers Inc.

CLIENT

WATERLOO REGION DISTRICT SCHOOL BOARD

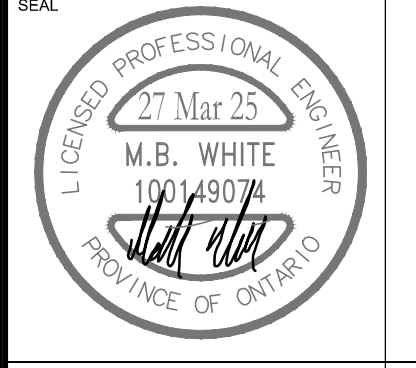
51 Ardelt Ave, Kitchener ON N2C 2R5

PROJECT

WRDSB Bluevale CI Dev. Ed. Classroom

80 Bluevale St N, Waterloo ON N2J 3R5

MECHANICAL SPECIFICATIONS AND DETAILS



27 Mar 25
M.B. WHITE
190149074
PROVINCE OF ONTARIO

SCALE : AS NOTED

DATE : 2025.03.19

PROJECT NO : 2024-0057-10

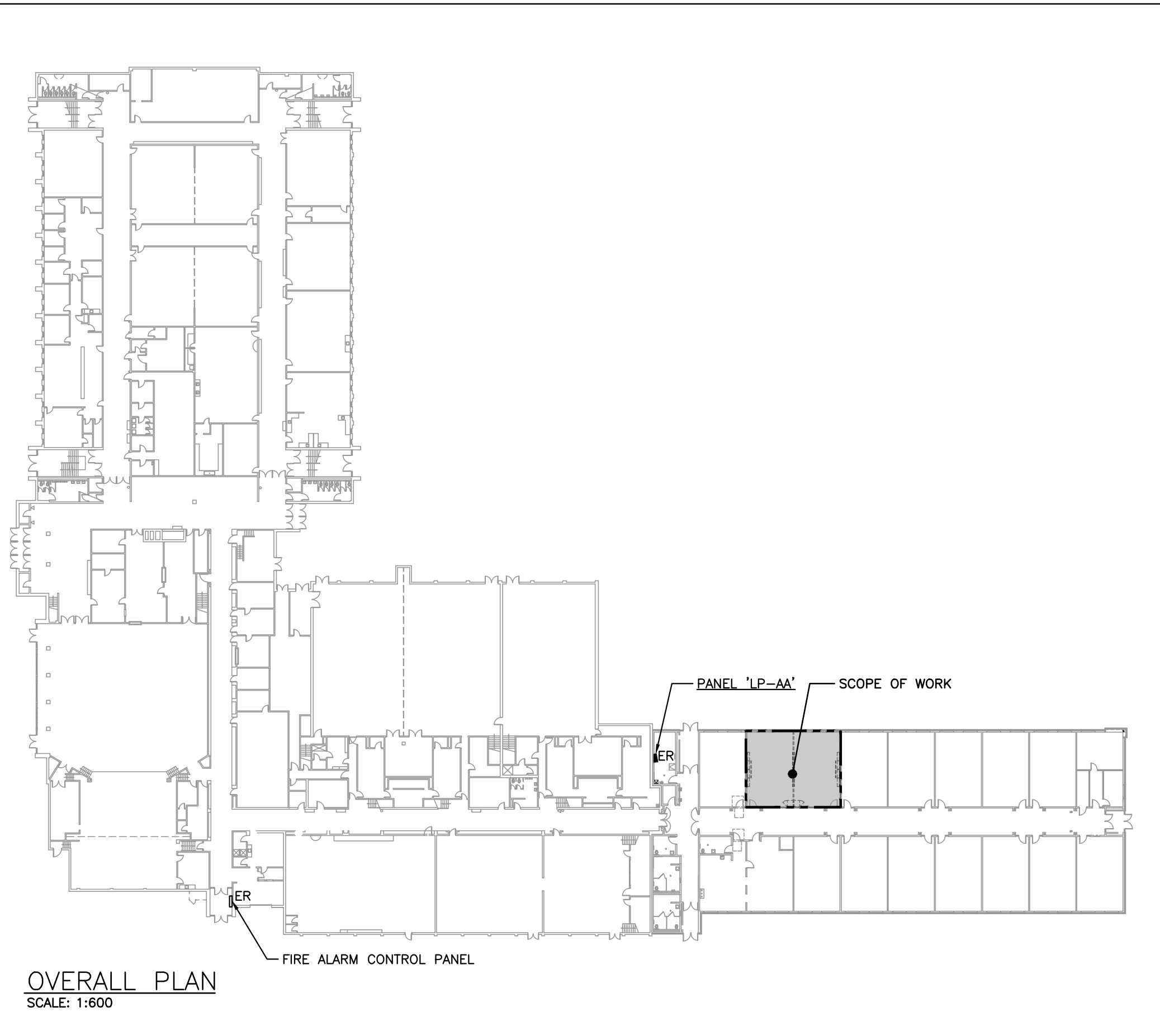
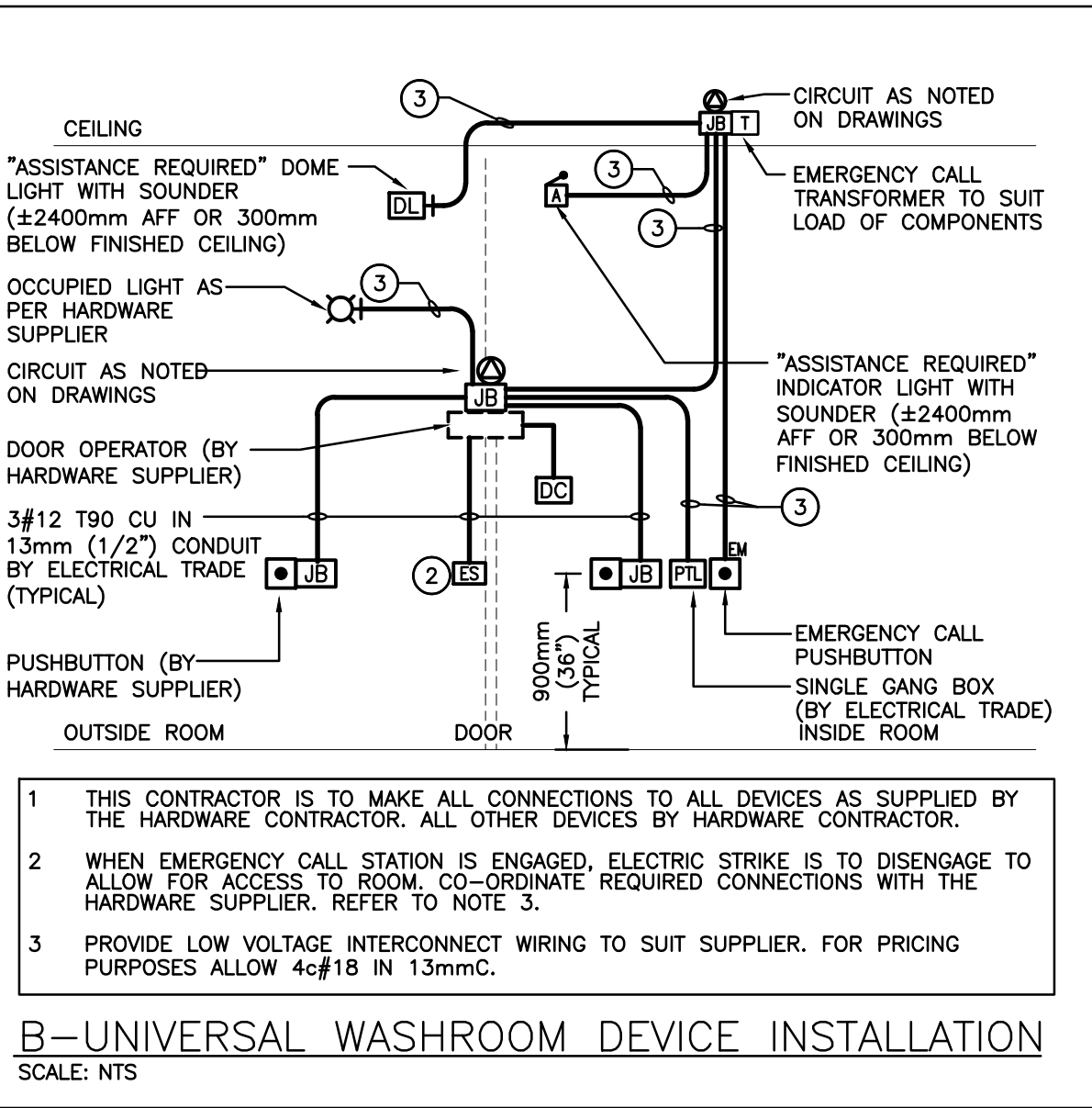
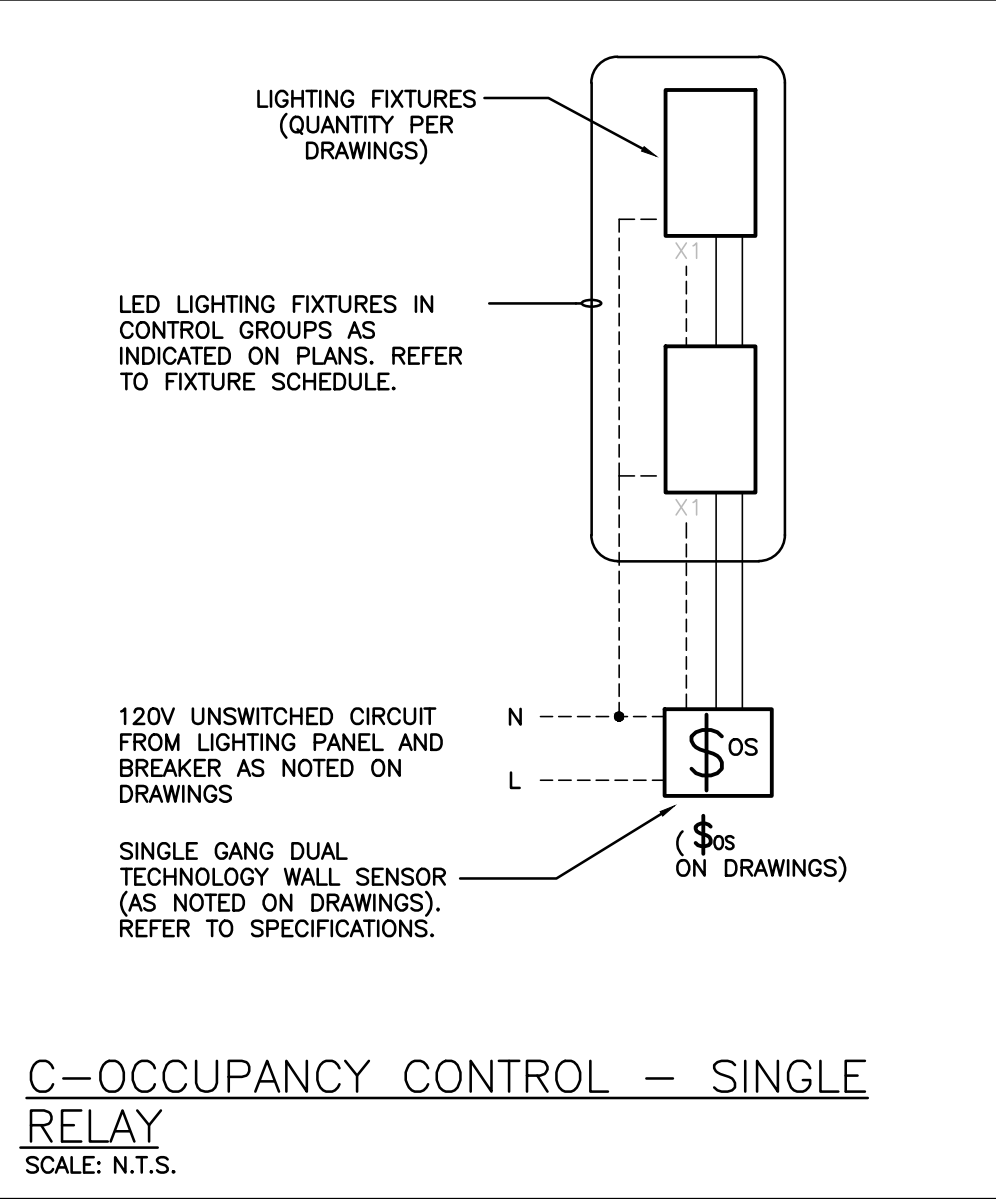
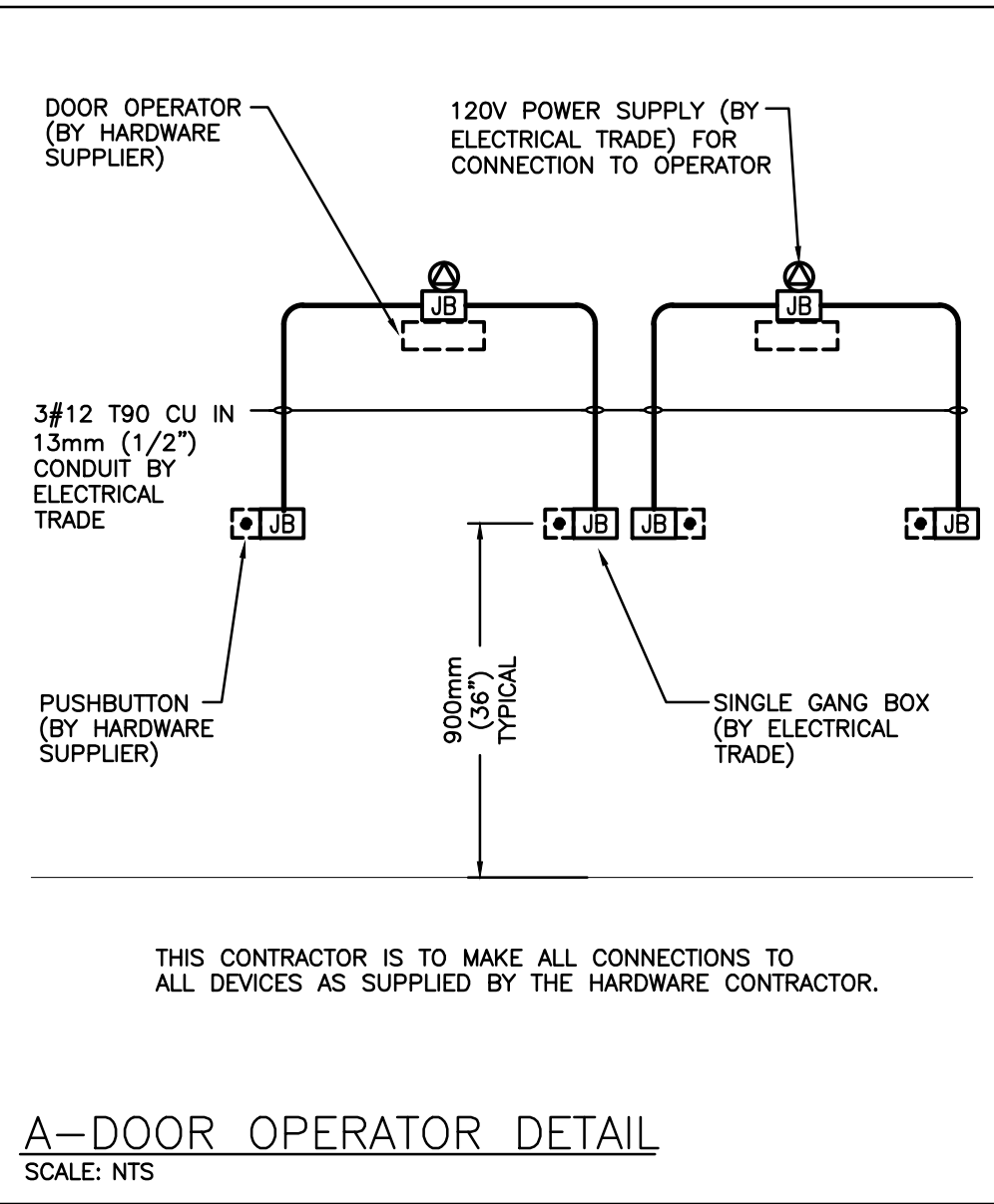
DRAWN BY : CSP

CHECKED BY : SO

SHEET NO:

M4.1

24-009547Page 11 of 15



EQUIPMENT WIRING SCHEDULE																											E=ELECTRICAL M=MECHANICAL O=OTHERS			
Description			Data			Starter			Control Device			Isolating Device			Remote Items															
Mechanical Item	Description	Provided by	Voltage	Size hp/kw/amps	Phase	Magnetic	Manual	Contact	Combination	Variable Frequency Drive	Hand/Off/Auto	On/Off Selector	Start/Stop PB	High/Low/Off	Pilot Light	Disconnect	Disconnect	Brkr/Fuse	Starter/Device Wired By	Thermostat	RA	Thermostat	Time Clock	Vac.Speed Ctrl	Interval Timer	Bus Voltage Relay	Control Panel	Wired by	Bag Auto System	Wired by
EF-1	WASHROOM CEILING FAN	M	120	FHP	1											E	E	E	E											

LIGHTING CONTROL SYSTEMS SEQUENCE OF OPERATION			
Space Type	Control Sequence / Control Device(s):		Control System
Classrooms	Sequence: ON: Lights will turn on to 50% automatically when occupancy is detected. OFF: 20 minutes after the area tied to a given room controller has been vacated, the lights will automatically turn off. MANUAL: The occupant can adjust lighting to desired level via wall station dimmer.		DIGITAL ROOM CONTROL SYSTEM
Universal Washroom	Sequence: ON: Lights turned on automatically when occupancy is detected. OFF: 10 minutes after the room has been vacated, the lights will automatically turn off.		LINE VOLTAGE OCCUPANCY CONTROL

LIGHT FIXTURE SCHEDULE									
Item	Manufacturer/Catalog Number		Voltage	Lamp	Mounting	CRI	Listings	Description	
L1	COOPER CAT. #24C22-LD5-40-LUNV-L840-CD-1 LITHONIA CAT. #2BLT4 40L ADSM MVOLT G21 LP840 SIGNIFY CAT. #2FGXG42B840-4-RS-UNV-DIM		120V	LED 4257 LUMENS 4000K 30.4W	RECESSED	80	DLC	2'x4' (610mmx1220mm) VOLUMETRIC LED TROFFER C/W SMOOTH FROSTED ACRYLIC CENTRE LENS, 1% 0-10V DIMMING DRIVER, AND WHITE FINISH.	
L2	COOPER CAT. #22C22-LD5-32-UNV-L840-CD-1 LITHONIA CAT. #2BLT2 32L ADSM MVOLT G21 LP840 SIGNIFY CAT. #2FGXG30B840-4-RS-UNV-DIM		120V	LED 3334 LUMENS 4000K 24.2W	RECESSED	80	DLC	2'x2' (610mmx610mm) VOLUMETRIC LED TROFFER C/W SMOOTH FROSTED ACRYLIC CENTRE LENS, 1% 0-10V DIMMING DRIVER, AND WHITE FINISH.	
L3	COOPER CAT. #HU1124D9SP C/W #HU109 LITHONIA CAT. #UPLD-22IN-SWW4-90CRI-WH C/W #JUCD-JB-1412 LITELINE CAT. #LEDBAR23-CCT C/W #ALFT6300-WH		120V	LED 785 LUMENS 4000K 11W	SURFACE	90	N/A	2' (610mm) LONG LOW PROFILE LED UNDERCABINET FIXTURE C/W EXTRUDED ALUMINUM HOUSING, OPTICAL LENS, WHITE FINISH, AND INTEGRAL ROCKER SWITCH. PROVIDE C/W ONE SPLICE BOX PER RUN (450W MAX) AND ALL CONNECTORS, MOUNTING ACCESSORIES, ETC. REQUIRED TO PROVIDE A COMPLETE INSTALLATION.	
L4	COOPER CAT. #HCBMFR-HCDBLS510CSD-HCBDRH LITHONIA CAT. #LBR6-NCH-AL01-SWW1-AR-LSS-MMD-MVOLT-UGZ ELITE CAT. #H4U6-LED-600/800/1000L-DIM10-MVOLT-MMD-27K/30K/40K-90-HH6-6501-SHZ-SHZ		120V	LED 1205 LUMENS 4000K 10W	RECESSED	80	DLC	6" (152mm) (610mmx610mm) LED DOWNLIGHT C/W ALUMINUM REFLECTOR, MEDIUM WIDE OPTICAL DISTRIBUTION, SWITCHABLE COLOUR TEMPERATURE AND LUMEN OUTPUT, 10% 0-10V DIMMING DRIVER, AND SEMI-SPECULAR FINISH.	
EMERG. BATT. UNIT C/W INT. HEADS (T-BAR)	AIMLITE CAT. #EBWL-EM-WHT-TB-2-ATD-VDR C/W KIT-BKT497 STANPRO CAT. #SWL-EM-WH-TB-W-AT-TP C/W KIT-BKT497 LUMACELL CAT. #LBL-EM C/W KIT-5R-L		120V	14W LED	SEMI-RECESSED	N/A	N/A	LONG LIFE, SEALED RECHARGEABLE VANDAL RESISTANT BATTERY C/W ADJUSTABLE 14W LED MODULES, POLYCARBONATE BODY, 90 MINUTE BATTERY DURATION, RECESSED IN T-BAR CEILING AS SHOWN ON PLANS, AND AUTOTEST FEATURE.	

- NOTES:
- FOR INFORMATION REGARDING DRIVER AND LENS INFORMATION REFER TO SPECIFICATION.
 - LED LUMEN VALUES QUOTED FOR FIXTURES ARE TO BE CONSIDERED MINIMUM, AND AS ABSOLUTE OR DELIVERED LUMENS. LUMEN VALUES SHOULD NOT EXCEED MORE THAN 10% OF SPECIFIED OUTPUT.
 - IF THERE ARE ANY DISCREPANCIES BETWEEN THE FIXTURE PART NUMBER AND DESCRIPTION, IT IS THE RESPONSIBILITY OF THIS CONTRACTOR TO BRING THIS TO THE ELECTRICAL CONSULTANTS ATTENTION PRIOR TO SHOP DRAWING REVIEW.

ELECTRICAL SYMBOLS		NOTE: ALL SYMBOLS MAY NOT BE USED	
LIGHTING		POWER	
	LIGHT FIXTURE TYPE AS INDICATED		WALL MOUNTED RECEPTACLE (15A-120V)
	CEILING OR WALL MOUNTED LIGHT FIXTURE TYPE AS INDICATED		WALL MOUNTED T-SLOT RECEPTACLE (20A-120V)
	BATTERY UNIT WITH INTEGRAL EMERGENCY FIXTURE (EM-X INDICATES BATTERY UNIT TYPE)		T-SLOT RECEPTACLE MTD. ABOVE COUNTER (20A-120V)
	SINGLE POLE SWITCH (3=3 WAY, 4=4 WAY, P=PILOT LIGHT, K=KEYED, DM=DIMMER, M=MOTOR RATED)		WALL MOUNTED T-SLOT SWITCHED RECEPTACLE (15A-120V)
	OCCUPANCY SENSOR (PASSIVE)		DIRECT CONNECTION
	CEILING MOUNTED MOTION SENSOR		PANEL AS INDICATED
	DIGITAL WALL DIMMER STATION		PUSH-BUTTON STATION (QUANTITY OF BUTTONS AS PER PLANS)
	DIGITAL POWER PACK		CONTACTOR
FIRE ALARM		HAND DRYER	
	ALARM STROBE		0-15 MINUTE INTERVAL TIMER
COMMUNICATIONS		ACCESS CONTROL	
	COMBINATION SINGLE VOICE COMPUTER OUTLET ROUGH-IN UNLESS OTHERWISE NOTED C/W 1" (27mm) C TO CABLE MANAGEMENT SYSTEM.		ELECTRIC STRIKE. CONFIRM ROUGHIN WITH DOOR HARDWARE.
	WIRELESS ACCESS POINT. PROVIDE 3/4" (21mm) C TO CABLE MANAGEMENT SYSTEM.		"PUSH-TO-LOCK" BUTTON
	CLOCK AS PER SPECIFICATIONS		EMERGENCY PUSH BUTTON STATION
	CEILING MOUNTED SPEAKER (AL=ASSISTIVE LISTENING, PA=PUBLIC ADDRESS)		"ASSISTANCE REQUIRED" DOME LIGHT WITH SOUNDER
	AUXILIARY ROUGH-IN FOR USE AS NOTED.	GENERAL	
STANDARD CIRCUIT LABELING		ER	INDICATES EXISTING ITEM TO REMAIN
		D	INDICATES EXISTING ITEM TO BE DELETED
		R	INDICATES EXISTING ITEM TO BE RELOCATED/IN RELOCATED POSITION
		GF	GROUND FAULT
		CLG	CEILING MOUNTED
		X	NOTE INDICATOR
		X	MECHANICAL ITEM NO.
		◇	LIGHTING CONTROL ZONE

CLIENT LOGO

KEYPLAN

TRUE NORTH PROJECT NORTH

No.	ISSUANCE	DATE
1	ISSUED FOR 100% OWNER REVIEW	2025.03.19
2	ISSUED FOR BID AND PERMIT	2025.04.04

55 Northland Road, Waterloo, ON, N2V 2Y8
Phone: 519-745-3555
Website: deiconsulting.ca
Project Number: 24381

DEI Consulting Engineers
MECHANICAL | ELECTRICAL | AQUATIC

The contractor shall verify all dimensions and report all errors and discrepancies to the Consultant before commencement of the work.
The drawings show general arrangement of services. Follow as closely as actual building construction will permit. Obtain approval for relocation of service from Consultant before commencement of the work.
The drawings do not indicate all offsets fitting and accessories which may be required. Provide the same to meet the required conditions.
Drawings and specifications, etc., prepared and issued by the consultant are the property of the consultant and must be returned at the completion of the project. These documents are not to be duplicated or copied without the consent of the Consultant.
Do not scale this drawing.
© 2025 DEI Consulting Engineers Inc.

CLIENT

WATERLOO REGION DISTRICT SCHOOL BOARD

51 Ardelt Ave, Kitchener ON N2C 2R5

PROJECT

WRDSB Bluevale CI Dev. Ed. Classroom

80 Bluevale St N, Waterloo ON N2J 3R5

SCHEDULES, LEGEND, AND DETAILS

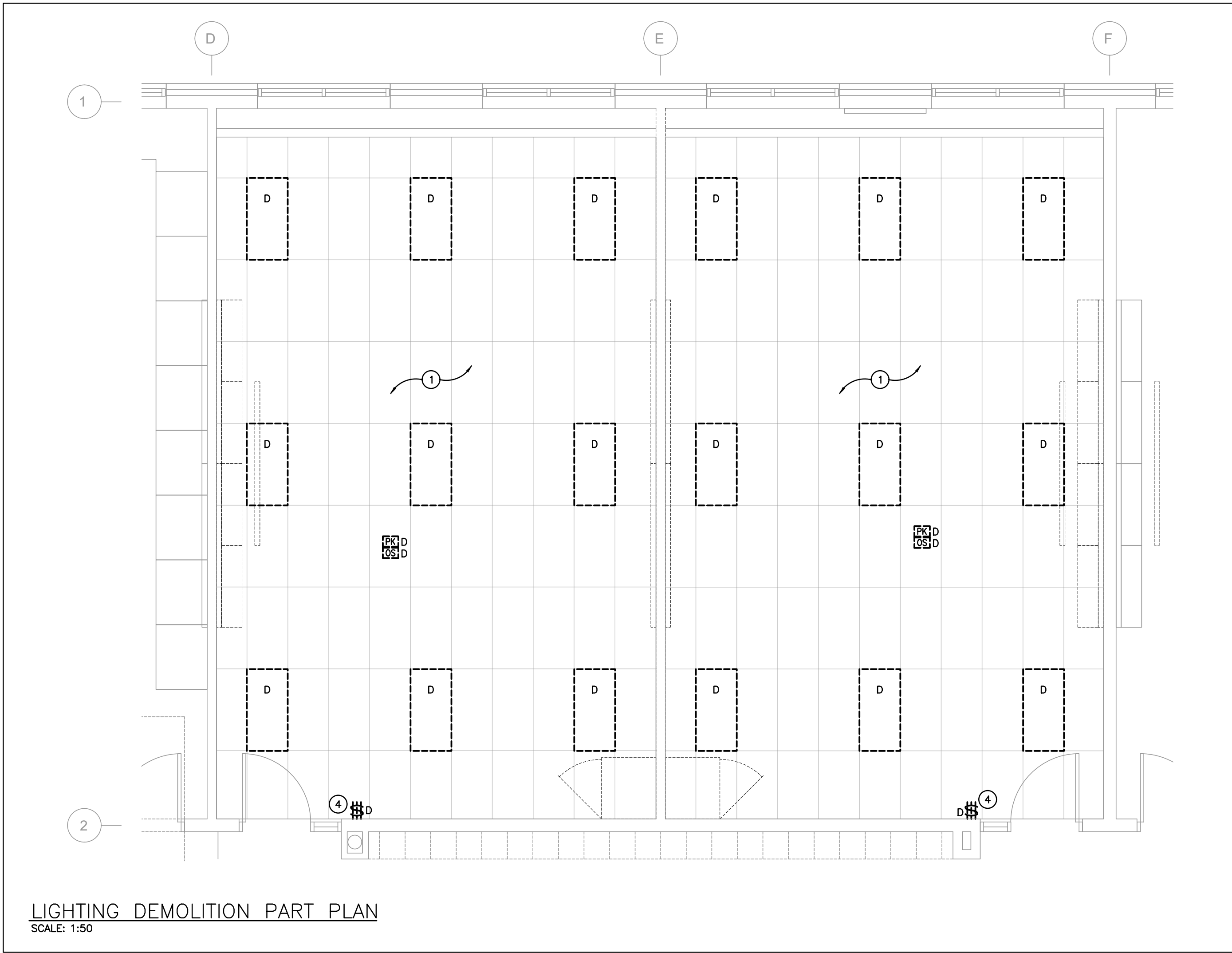
WALTERFEDY

TORONTO | CALGARY | EDMONTON | KITCHENER | HAMILTON

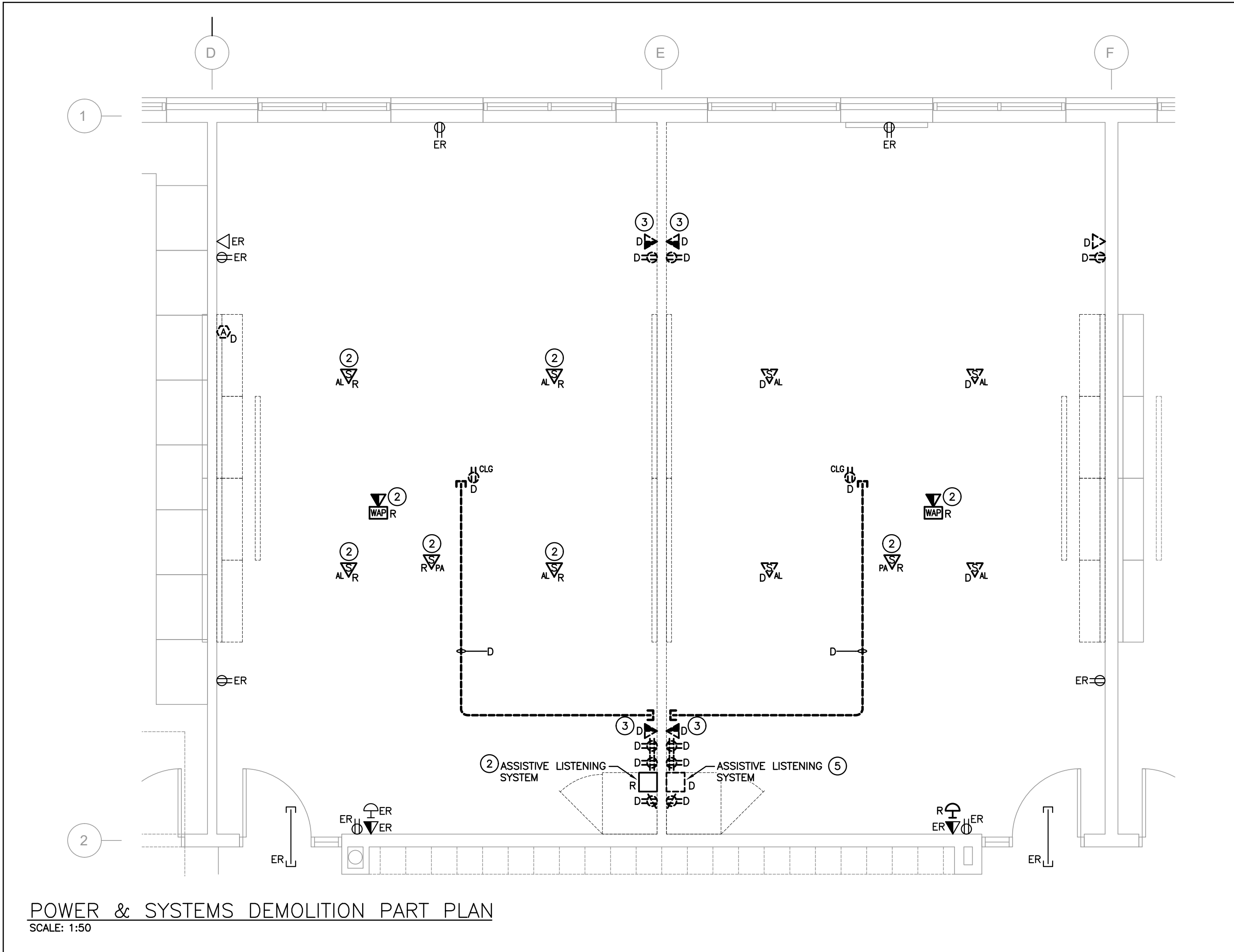
800.685.1378 walterfedy.com

SEAL

SCALE:	AS NOTED	SHEET NO:
DATE:	2025.03.19	
PROJECT NO:	2024-0057-10	
DRAWN BY:	KV	
CHECKED BY:	ASUJJ	



LIGHTING DEMOLITION PART PLAN
SCALE: 1:50



POWER & SYSTEMS DEMOLITION PART PLAN
SCALE: 1:50

GENERAL DEMOLITION NOTES

- 'ER' DENOTES EXISTING ITEM TO REMAIN.
- EXISTING ELECTRICAL EQUIPMENT NOT SHOWN SHALL REMAIN UNLESS NOTED OTHERWISE.
- 'R' INDICATES EXISTING ITEM TO BE RELOCATED. REFER TO RENOVATION DRAWINGS AND RELOCATE DEVICE AND WIRING TO SUIT. UNLESS OTHERWISE NOTED.
- 'D' INDICATES EXISTING ITEM TO BE DEMOLISHED. UNLESS OTHERWISE NOTED DISCONNECT AND REMOVE NOTED DEVICE AND WIRING BACK TO SOURCE.

SPECIFIC DEMOLITION NOTES

- 1 EXISTING FIXTURES ARE TO BE REMOVED. REWORK EXISTING WIRING AND CIRCUIT FOR RECONNECTION TO NEW. REFER TO RENOVATION PLAN FOR CONTINUATION.
- 2 MAINTAIN EXISTING DEVICE AND ASSOCIATED WIRING FOR RELOCATION AS SHOWN ON RENOVATION PLAN.
- 3 EXISTING DEVICE TO BE DEMOLISHED AND DATA CABLING COILED IN CEILING SPACE TO RE-USE IN RENOVATION PLAN.
- 4 REMOVE EXISTING DEVICE AND MAINTAIN EXISTING WIRING AND BACKBOX FOR REPLACEMENT DEVICE. REFER TO RENOVATION DRAWINGS FOR CONTINUATION. PROVIDE NEW STAINLESS STEEL COVERPLATE WITH BLANK SECTIONS TO SUIT.
- 5 CONTRACTOR TO TURN-OVER DEVICES TO SCHOOL BOARD REPRESENTATIVE.

CLIENT LOGO

KEYPLAN

TRUE NORTHPROJECT NORTH

No.	ISSUANCE	DATE
1	ISSUED FOR 100% OWNER REVIEW	2025.03.19
2	ISSUED FOR BID AND PERMIT	2025.04.04

55 Northland Road,
Waterloo, ON, N2V 2Y8
Phone: 519-745-3555
Website: deiconsulting.ca
Project Number: 24381

Consulting Engineers
MECHANICAL | ELECTRICAL | AQUATIC

The contractor shall verify all dimensions and report all errors and discrepancies to the Consultant before commencement of the work.
The drawings show general arrangement of services. Follow as closely as actual building construction will permit. Obtain approval for relocation of service from Consultant before commencement of the work.
The drawings do not indicate all offsets fitting and accessories which may be required. Provide the same to meet the required conditions.
Drawings and specifications, etc., prepared and issued by the consultant are the property of the consultant and must be returned at the completion of the project. These documents are not to be duplicated or copied without the consent of the Consultant.
Do not scale this drawing.
© 2025 DEI Consulting Engineers Inc.

CLIENT

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

PROJECT

WRDSB Bluevale CI Dev. Ed. Classroom
80 Bluevale St N, Waterloo ON N2J 3R5

ENLARGED DEMOLITION PART PLANS

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

SEAL

SCALE :	AS NOTED	SHEET NO:
DATE :	2025.03.19	E2.1
PROJECT NO :	2024-0057-10	
DRAWN BY :	KV	
CHECKED BY :	ASUJJ	

EXISTING PANEL 'LP-AA' SCHEDULE

VOLTAGE: 120/208 VOLTS
PHASE: 3P, 4W
MAINS: 225A
NEUTRAL BUS: FULL
MOUNTING: SURFACE
NOTES: EXISTING SQUARE D CAT. NQ442L2

ER	LIGHTING - 1741	20A	1	2	20A	LIGHTING - 1743	ER
ER	LIGHTING - 1745	20A	3	4	20A	LIGHTING - 1747	ER
D	SPARE	15A	5	6	15A	SPARE	D
ER	WKSTN - 1741	15A	7	8	15A	WKSTN - 1741	ER
ER	WKSTN - 1741	15A	9	10	15A	WKSTN - 1741	ER
ER	WKSTN - 1741	15A	11	12	15A	WKSTN - 1741	ER
ER	WKSTN - 1741	15A	13	14	15A	WKSTN - 1741	ER
ER	WKSTN - 1741	15A	15	16	15A	SPARE	ER
ER	WKSTN - 1741	15A	17	18	15A	PROJECTOR/TEACHING STN.	RW
ER	RECEPT - 15A	19	20	20	15A	RECEPT - HUB ROOM	RW
ER	RECEPT - 15A	21	22	22	15A	SOUND FIELD AMP	RW
ER	RECEPT - 15A	23	24	24	15A	PROJECTOR/TEACHING STN.	D
ER	RECEPT - HUB ROOM	15A	25	26	15A	SPARE IN HUB ROOM	ER
ER	RECEPT - 15A	27	28	28	15A	RECEPT	ER
ER	PROJECTOR/TEACHING STN.	15A	29	30	15A	B.A.S. PANEL	ER
ER	SOUND FIELD AMP	15A	31	32	15A	RECEPT - 1747	ER
ER	RECEPT - HK	20A	33	34	15A	RECEPT - 1747	ER
ER	EF-2	15A	35	36	15A	SPARE	RW
NB	SPARE	15A	37	38	15A	SPARE	D
D	SPARE	15A	39	40	15A	SPARE	D
D	SPARE	15A	41	42	15A	SPARE	ER

PROPOSED PANEL 'LP-AA' SCHEDULE

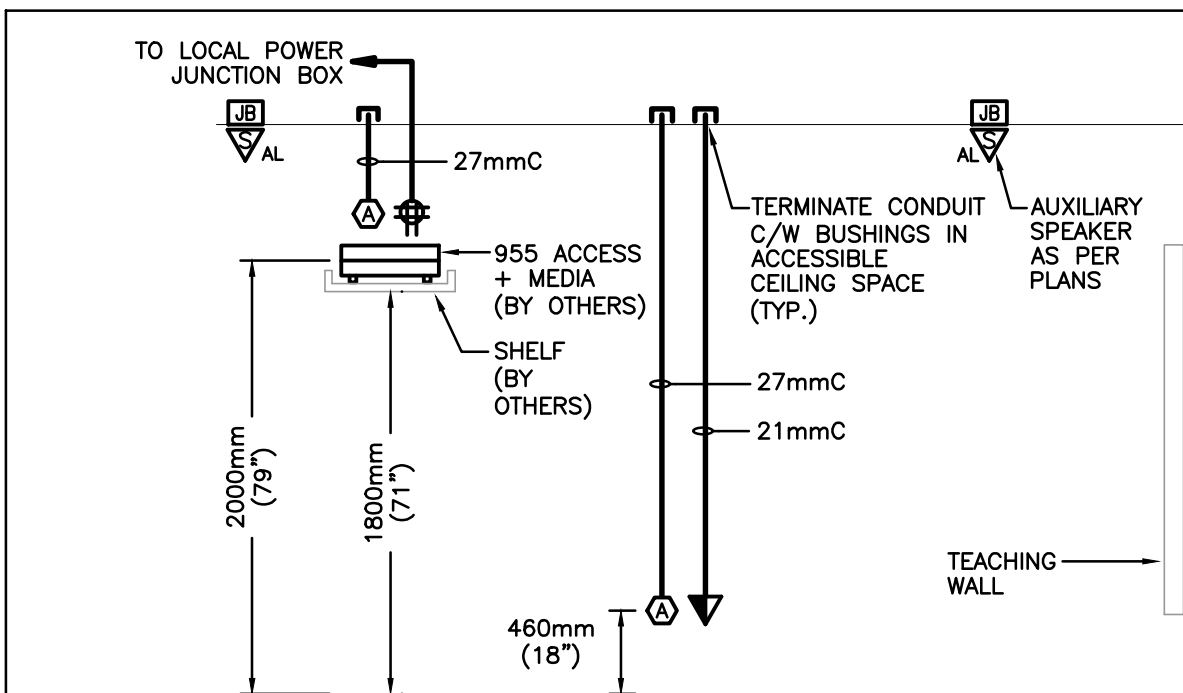
ER	LIGHTING - 1741	20A	1	2	20A	LIGHTING - 1743	ER
ER	LIGHTING - 1745	20A	3	4	20A	LIGHTING - 1747	ER
NB	1743A RECEPT	20A	5	6	20A	1743A CHANGE TABLE	NB
ER	WKSTN - 1741	15A	7	8	15A	WKSTN - 1741	ER
ER	WKSTN - 1741	15A	9	10	15A	WKSTN - 1741	ER
ER	WKSTN - 1741	15A	11	12	15A	WKSTN - 1741	ER
ER	WKSTN - 1741	15A	13	14	15A	WKSTN - 1741	ER
ER	WKSTN - 1741	15A	15	16	15A	EF-1	RW
ER	WKSTN - 1741	15A	17	18	15A	1743 DOOR OP.	RW
ER	RECEPT - 15A	19	20	20	15A	RECEPT - HUB ROOM	RW
ER	RECEPT - 15A	21	22	22	15A	1743A & 1745 DOOR OP.	RW
ER	RECEPT - 15A	23	24	24	15A	1743A AUTO FAUCET	NB
ER	RECEPT - HUB ROOM	15A	25	26	15A	SPARE IN HUB ROOM	ER
ER	RECEPT - 15A	27	28	28	15A	RECEPT	ER
ER	PROJECTOR/TEACHING STN.	15A	29	30	15A	B.A.S. PANEL	ER
ER	SOUND FIELD AMP	15A	31	32	15A	RECEPT - 1747	ER
ER	RECEPT - HK	20A	33	34	15A	RECEPT - 1747	ER
ER	EF-2	15A	35	36	15A	1743A LIFT RECEPT	RW
RW	1743 FRIDGE RECEPT	15A	37	38	20A	1743 O/C RECEPT	RW
NB	1743 MICROWAVE RECEPT	20A	39	40	20A	1743 O/C RECEPT	RW
NB	WR 1743A HAND DRYER	20A	41	42	15A	SPARE	ER

DESIGNATION

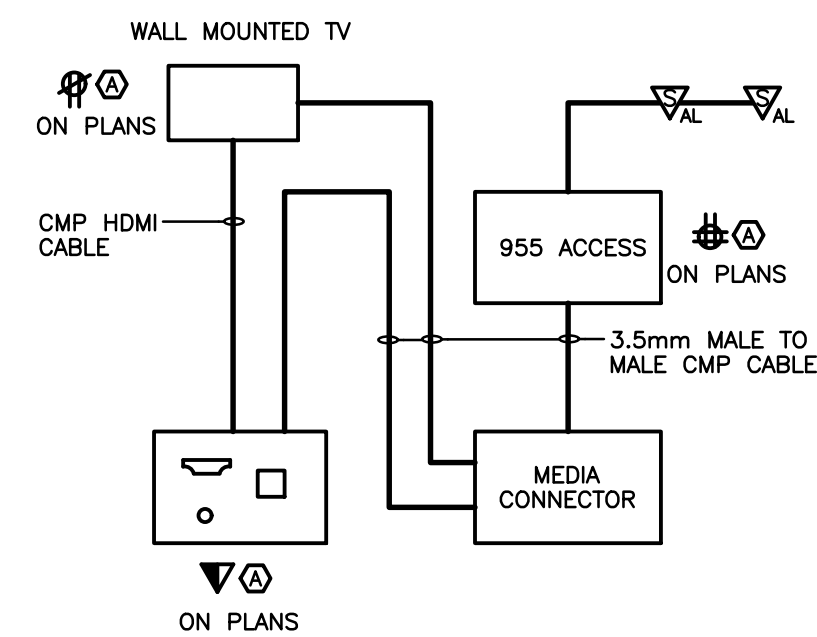
'ER' INDICATES EXISTING SERVICE AND BREAKER THAT SHOULD REMAIN UNTOUCHED
'SP' INDICATES EXISTING BREAKER THAT MAY BECOME SPARE DUE TO DEMOLITION. (CONFIRM ON SITE)
'RW' INDICATES EXISTING BREAKER THAT SHOULD BE REWIRED TO SERVICE DEVICES INDICATED ON PLAN
'SB' INDICATES SPARE BREAKER TO BE USED FOR NEW SERVICE INDICATED.
'NB' INDICATES NEW BREAKER AND WIRING TO SERVICE INDICATED. PROVIDE MOUNTING HARDWARE AS REQUIRED.
'D' INDICATES EXISTING BREAKER TO BE REMOVED COMPLETE. PROVIDE FILLER PLATES AS REQUIRED.

NOTES: THIS CONTRACTOR IS TO INVESTIGATE BREAKERS AND REVISE PANEL SCHEDULES TO SUIT RENOVATION, NOTING ANY BREAKERS THAT BECOME SPARE DUE TO DEMOLITION. THIS CONTRACTOR IS ALSO TO NOTIFY THE CONSULTANT OF ANY BREAKERS THAT ARE INDICATED TO BE DEMOLISHED OR REUSED, BUT WHICH ARE IN USE BY OTHER DEVICES OR SERVICES.

*INDICATES 5mA GROUND FAULT STYLE BREAKER



ROOM ELEVATION



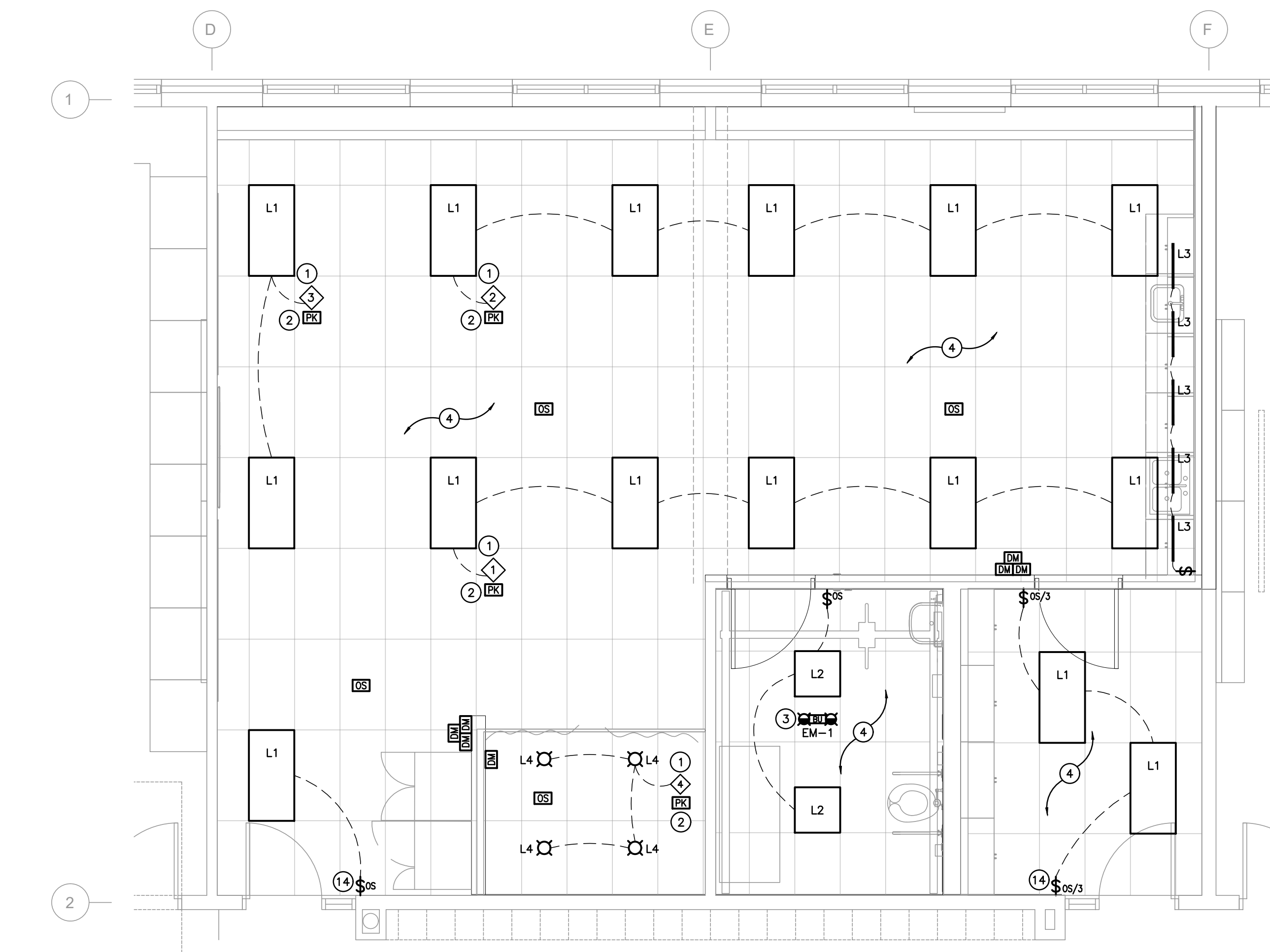
WIRING DIAGRAM

NOTES:

ASSISTIVE LISTENING SYSTEM COMPONENTS, CABLING, CONNECTIONS, SETUP AND COMMISSIONING BY SCHOOL BOARD VENDOR (TOPCAT) AS PART OF CASH ALLOWANCE SHOWN FOR REFERENCE TO ELECTRICAL CONTRACTOR. ELECTRICAL CONTRACTOR TO PROVIDE DEVICE ROUGH-INS AND OUTLETS ONLY AS SHOWN. REFER TO FLOOR PLANS FOR QUANTITIES.

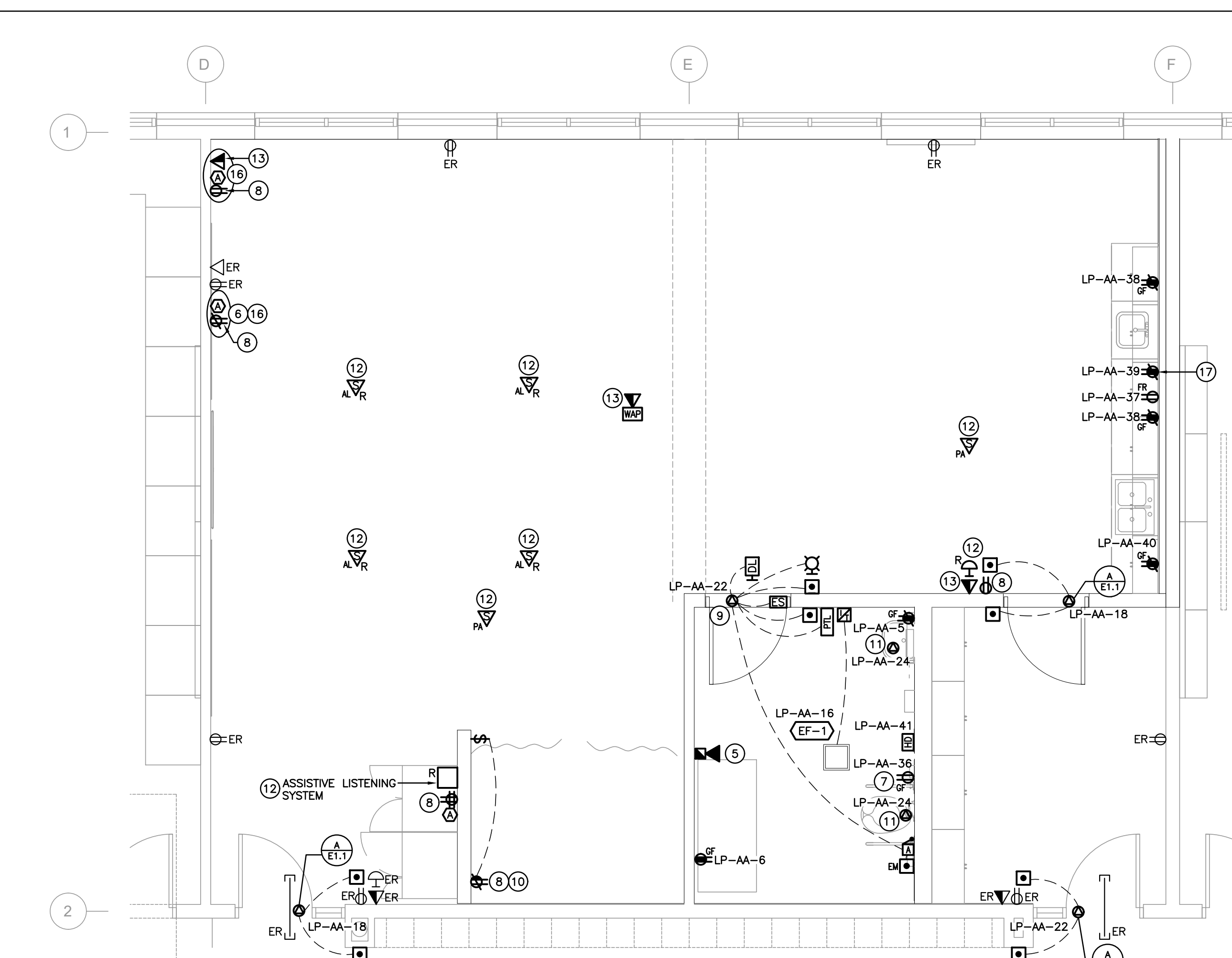
A-ASSISTIVE LISTENING SYSTEMS

SCALE: 1:50



LIGHTING RENOVATION PART PLAN

SCALE: 1:50



POWER & SYSTEMS RENOVATION PART PLAN

SCALE: 1:50

GENERAL RENOVATION NOTES

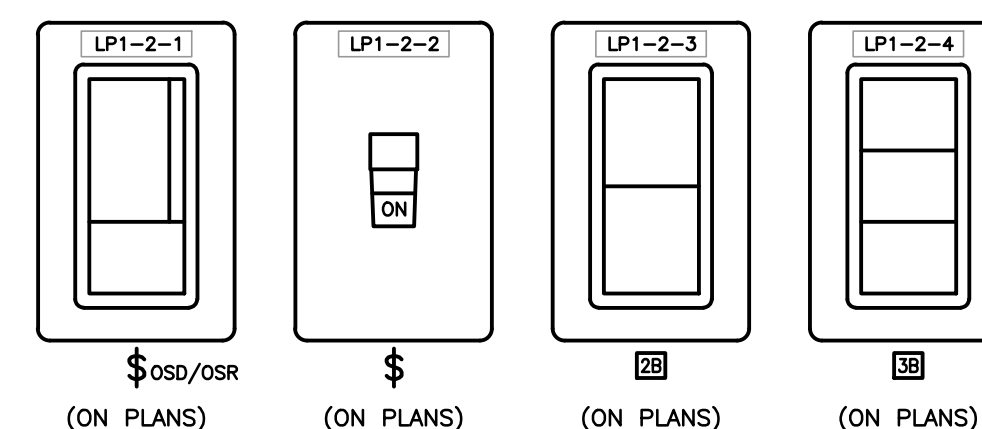
- 'ER' INDICATES EXISTING ITEM TO REMAIN.
- 'R' INDICATES EXISTING ITEM IN RELOCATED POSITION.
- ALL DEVICES SHOWN ARE NEW UNLESS OTHERWISE NOTED.
- EXISTING ELECTRICAL EQUIPMENT NOT SHOWN SHALL REMAIN UNLESS OTHERWISE NOTED.
- MAINTAIN SERVICE TO ALL EXISTING DEVICES TO REMAIN.
- REVISE PANEL DIRECTORIES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

SPECIFIC RENOVATION NOTES

- INDICATES CONTROL ZONE GROUPS OF LIGHT FIXTURES WITHIN EACH AREA. REFER TO LIGHTING CONTROL DETAILS AND SEQUENCE OF OPERATION.
- INDICATES DIGITAL RELAY(S) WITHIN ACCESSIBLE CEILING SPACE FOR CONTROL OF NOTED OCCUPANCY SENSOR(S) TO BE CONNECTED TO EXISTING LOCAL LIGHTING CIRCUIT.
- NOTED EMERGENCY BATTERY UNIT IS TO BE CONNECTED TO UNSWITCHED SIDE OF EXISTING LIGHTING CIRCUIT WITHIN ROOM.
- FIXTURES IN INDICATED AREA ARE TO BE CONNECTED TO EXISTING CIRCUIT AND NEW CONTROLS AS SHOWN.
- CONNECT NEW FIRE ALARM SIGNALING DEVICE TO EXISTING LOCAL SIGNALING CIRCUIT. RE-VERIFY PORTIONS OF ALARM SYSTEM TO CAN/ULC-S537. REFER TO SPECIFICATIONS FOR FURTHER DETAILS AND REQUIREMENTS.
- INDICATES DEVICES FOR WALL MOUNTED TELEVISION. COORDINATE MOUNTING HEIGHT WITH OWNER PRIOR TO ROUGH-IN.
- PROVIDE RECEPTACLE AT HIGH LEVEL FOR CEILING MOUNTED LIFT. RECEPTACLE TO BE INSTALLED AT 152mm BELOW FINISHED CEILING.
- INDICATED DEVICE IS TO BE CONNECTED TO EXISTING RECEPTACLE CIRCUIT WITHIN ROOM.
- PROVIDE ROUGH-IN AND DEVICES FOR UNIVERSAL WASHROOM. REFER TO UNIVERSAL WASHROOM DETAIL B/E1.1 FOR ADDITIONAL INFORMATION.
- INDICATED DEVICE IS TO BE MOUNTED 6" (152mm) BELOW CEILING. COORDINATE WITH ARCHITECTURAL ELEVATIONS PRIOR TO ROUGH-IN.
- INDICATES STEP DOWN TRANSFORMER FOR AUTOMATIC FIXTURE PROVIDED BY FIXTURE AND INSTALLED BY ELECTRICAL CONTRACTOR. ELECTRICAL CONTRACTOR TO CONNECT 120V BRANCH CIRCUIT TO STEP DOWN TRANSFORMER PRIMARY AND CONNECT TRANSFORMER SECONDARY TO EACH FIXTURE AS NOTED.
- INDICATES EXISTING DEVICE TO BE RELOCATED AND EXISTING WIRING TO BE EXTENDED TO SUIT NEW LOCATION. WIRING BY OTHERS.
- INDICATES NEW VOICE/DATA ROUGH-IN WITH CABLING AND TERMINATION BY SCHOOL BOARD VENDORS.
- MOUNT DEVICE IN BACKBOX MADE AVAILABLE DURING DEMOLITION. PROVIDE NEW STAINLESS STEEL COVERPLATE TO SUIT NEW DEVICE.
- INDICATED DEVICES ARE TO BE MOUNTED ABOVE NEW MILLWORK CABINET. COORDINATE LOCATION WITH MILLWORK ELEVATIONS.
- NOTED DEVICES ARE TO BE SURFACE MOUNTED ON EXISTING WALL USING WIREMOLD V700 SERIES SURFACE MOUNT RACEWAY SYSTEM. REFER TO SPECIFICATIONS FOR ADDITIONAL INFORMATION.
- INDICATED DEVICE IS TO BE MOUNTED WITHIN MILLWORK FOR MICROWAVE. COORDINATE MOUNTING HEIGHT WITH MILLWORK ELEVATIONS.

CIRCUIT LABELS

PROVIDE P-TOUCH LABELS INDICATING PANEL AND CIRCUIT LABEL ON ALL LIGHT SWITCH, LIGHTING CONTROL STATION, AND RECEPTACLE DEVICE FACEPLATES. INCLUDE SWITCH LEG INDICATION FOR LIGHTING CONTROLS AND SWITCHES. REFER TO SPECIFICATIONS AND DETAILS.

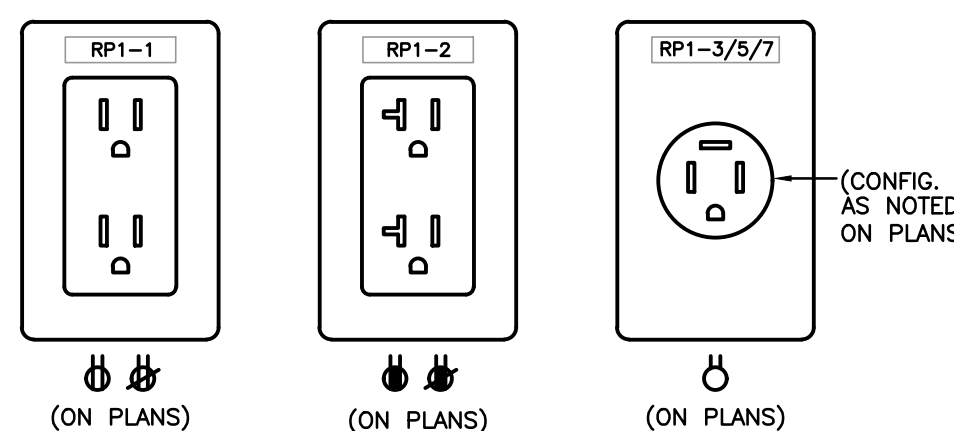


NOTES:

- LIGHT SWITCHES ARE TO BE C/W P-TOUCH LABEL.
- LABEL IS TO BE WHITE WITH TYPE-WRITTEN BLACK LETTERING AND PLACED CENTERLINE OF SWITCH AS SHOWN.
- CIRCUIT DESCRIPTOR IS TO BE C/W POWER PANEL, CIRCUIT INDICATION, AND SWITCH LEG.

B-LIGHT SWITCH LABELLING DETAIL

SCALE: 1:50



NOTES:

- RECEPTACLES ARE TO BE C/W P-TOUCH LABEL.
- LABEL IS TO BE WHITE WITH TYPE-WRITTEN BLACK LETTERING AND PLACED CENTERLINE OF RECEPTACLE AS SHOWN.
- CIRCUIT DESCRIPTOR IS TO BE C/W POWER PANEL AND CIRCUIT INDICATION.

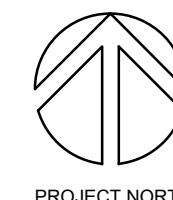
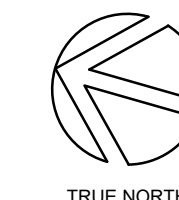
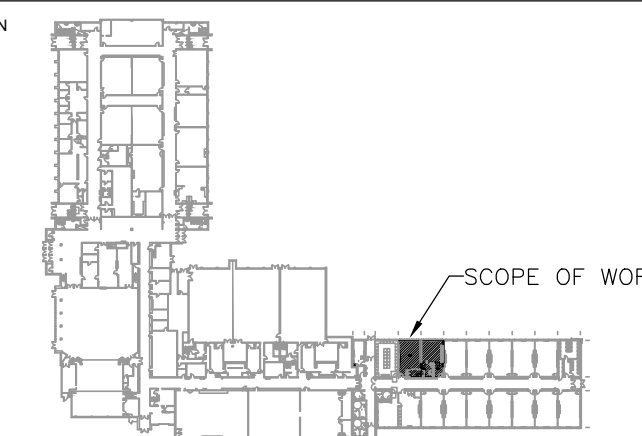
C-RECEPTACLE LABELLING DETAIL

SCALE: 1:50

CLIENT LOGO



KEYPLAN



No.	ISSUANCE	DATE
1	ISSUED FOR 100% OWNER REVIEW	2025.03.19
2	ISSUED FOR BID AND PERMIT	2025.04.04



The contractor shall verify all dimensions and report all errors and discrepancies to the Consultant before commencement of the work.
The drawings show general arrangement of services. Follow as closely as actual building construction will permit. Obtain approval for relocation of service from Consultant before commencement of the work.
The drawings do not indicate all offsets fitting and accessories which may be required. Provide the same to meet the required conditions.
Drawings and specifications, etc., prepared and issued by the consultant are the property of the consultant and must be returned at the completion of the project. These documents are not to be duplicated or copied without the consent of the Consultant.
Do not scale this drawing.
© 2025 DEI Consulting Engineers Inc.

CLIENT

WATERLOO REGION DISTRICT SCHOOL BOARD

51 Ardelt Ave, Kitchener ON N2C 2R5

PROJECT

WRDSB Bluevale CI Dev. Ed. Classroom

80 Bluevale St N, Waterloo ON N2J 3R5

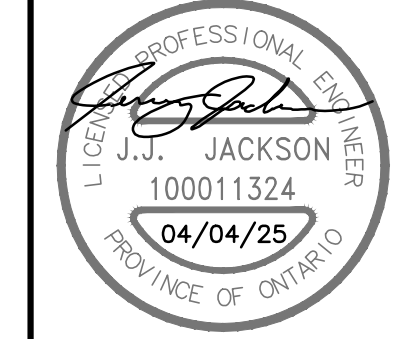
ENLARGED RENOVATION PART PLANS

WALTERFEDY

TORONTO | CALGARY | EDMONTON | KITCHENER | HAMILTON

800.685.1378 walterfedy.com

SEAL



SCALE: AS NOTED
DATE: 2025.03.19
PROJECT NO: 2024-0057-10
DRAWN BY: KV
CHECKED BY: ASUJ

SHEET NO

E3.1

ELECTRICAL SPECIFICATION

GENERAL NOTES

1. PROVIDE LABOUR MATERIAL AND EQUIPMENT REQUIRED TO PROVIDE A COMPLETE INSTALLATION WITH QUALITY WORKMANSHIP ACCEPTABLE TO THE OWNER, ARCHITECT AND CONSULTANT.
2. OBTAIN ALL PERMITS AND PAY ALL TAXES, FEES AND OTHER COSTS INCURRED WITH THIS WORK. FILE ALL PLANS. OBTAIN NECESSARY APPROVALS, CERTIFICATES AND INSPECTIONS. SUBMIT ALL FINAL CERTIFICATES TO THE CONSULTANT.
3. COMPLY WITH RULES AND RECOMMENDATIONS OF THE BOARD OF UNDERWRITERS, ELECTRICAL SAFETY AUTHORITY, THE CANADIAN STANDARDS ASSOCIATION AND ALL REQUIREMENTS OF THE LOCAL UTILITY.
4. VISIT THE SITE BEFORE SUBMITTING TENDERS TO EVALUATE ANY SITE CONDITIONS THAT MIGHT ARISE. INCLUDE ALL SITE CONDITIONS IN TENDER, EXTRAS WILL NOT BE ACCEPTED UNLESS BELIEVED TO BE REASONABLE BY THE OWNER AND CONSULTANT.
5. CUTTING AND PATCHING SHALL BE BY THE CONTRACTOR REQUIRING TO INSTALL THE SERVICE.
6. THE DRAWINGS ARE DIAGRAMMATIC, THE SERVICES SHALL BE INSTALLED TO CONSERVE HEADROOM AND INTERFERE AS LITTLE AS POSSIBLE WITH THE FREE USE OF THE SPACES THROUGH WHICH THEY PASS.
7. SUBMIT COPIES OF SHOP DRAWINGS AS PDF FILES VIA EMAIL FOR ALL MAJOR EQUIPMENT. THESE WILL BE REVIEWED BY THE CONSULTANT. RESUBMIT AS OFTEN AS MAY BE FOUND NECESSARY.
8. PROVIDE ALL NECESSARY PROTECTION FOR FINISHED OR UNFINISHED WORK. ALL OPENINGS IN CONDUITS, DUCTS AND EQUIPMENT SHALL BE CAPPED TO ENSURE SERVICES ARE KEPT CLEAN WHEN NOT IN USE.
9. MAINTAIN INSURANCE TO FULLY PROTECT THE CONTRACTOR, OWNER AND CONSULTANT FROM ANY AND ALL CLAIMS SUCH AS UNDER THE WORKMEN'S COMPENSATION ACT, ETC. POST PROJECT NOTIFICATION AT THE SITE IN ACCORDANCE WITH THE MINISTRY OF LABOUR REQUIREMENTS.
10. PROVIDE STRUCTURAL SUPPORTS, PLATFORMS, SUPPORTING RODS, HANGERS, INSERTS AND BRACKETS FOR EQUIPMENT AND SERVICES. DO NOT SUPPORT SERVICES FROM STEEL DECK.
11. INSTRUCT THE OWNER'S STAFF IN THE CARE, MAINTENANCE AND OPERATION OF THE SYSTEMS.
12. WARRANTY ALL LABOUR, MATERIAL AND EQUIPMENT FOR A PERIOD OF ONE (1) YEAR AFTER FINAL ACCEPTANCE OF SYSTEM.
13. COORDINATE WITH OTHER CONTRACTORS INSTALLING EQUIPMENT OR MATERIAL AND ARRANGE EQUIPMENT IN PROPER RELATION WITH APPARATUS OF ALL OTHER TRADES.
14. PROVIDE LAMICOID TAGS FOR IDENTIFICATION OF NEW EQUIPMENT ADDED.
15. MOUNTING HEIGHTS SHALL BE AS FOLLOWS FROM FINISHED FLOOR TO CENTERLINE OF DEVICE/EQUIPMENT (UNLESS OTHERWISE NOTED);
 - SWITCHES, DIMMERS AND SPEED CONTROLLERS: 1100mm (44")
 - WALL RECEPTACLES:
 - GENERAL: 400mm (16")
 - ABOVE TOP OF COUNTERS: 100mm (4")
 - IN MECHANICAL/ELECTRICAL ROOMS: 1100mm (44") (GANG WITH SWITCH).
 - PANEL BOARDS: 1400mm (4'-8") OR AS REQUIRED BY CODE.
 - TELEPHONE OUTLETS: 400mm (16")
 - VOICE/DATA OUTLETS: 400mm (16")
 - FIRE ALARM STATIONS: 1200mm (48")
 - FIRE ALARM SIGNAL DEVICES: 2250mm (7'-6")
 - FIRE ALARM STROBES: 2250mm (7'-6")
 - THERMOSTAT: 1200mm (44")
 - SECURITY SYSTEM MOTION DETECTORS: 300mm (12") BELOW FINISHED CEILING OR CEILING MOUNTED AS DIRECTED BY MANUFACTURER.
 - SECURITY SYSTEM KEY SWITCHES: 1100mm (44")
16. ALL AREAS NOT AFFECTED BY RENOVATION OR DEMOLITION SHALL REMAIN AS PRESENTLY INSTALLED UNLESS OTHERWISE NOTED.
17. ALL EXISTING ELECTRICAL DEVICES, OUTLET BOXES, ETC., NOT SHOWN ON DRAWINGS OR MENTIONED IN THE FOLLOWING NOTES AND INSTALLED IN WALLS SLATED FOR DEMOLITION, SHALL BE DISCONNECTED AND REMOVED COMPLETELY IN ALL RESPECTS.
18. SUBMIT ONE COPY OF OPERATING AND MAINTENANCE INSTRUCTIONS IN A THREE RING BINDER LABELED FOR THE PROJECT COMPLETE WITH ITEMIZED SECTIONS CONTAINING PROJECT DATA, SHOP DRAWINGS, ETC. UPON ACCEPTANCE OF THE OPERATION AND MAINTENANCE MANUAL BY THE CONSULTANT PROVIDE TWO ADDITIONAL COPIES BOUND IN SEPARATE THREE RING BINDERS. A PDF FILE OF THE ENTIRE MANUAL IS TO BE PROVIDED ON A USB STICK. ONLY ONE USB STICK IS TO BE PROVIDED CONTAINING BOTH THE APPROVED MANUALS AND RECORD DRAWINGS.
19. CONTRACTOR SHALL PROVIDE 2 SETS OF REPRODUCIBLE ELECTRICAL DRAWINGS. MARK THEREON ALL CHANGES AS WORK PROGRESSES AND AS CHANGES OCCUR. THIS SHALL INCLUDE FIELD AND CONTRACT CHANGES TO ELECTRICAL SYSTEMS. IDENTIFY EACH DRAWING IN LOWER RIGHT HAND CORNER IN LETTERS AT LEAST 3mm (1/8") HIGH AS FOLLOWS: -- "RECORD DRAWINGS: THIS DRAWING HAS BEEN REVISED TO SHOW ELECTRICAL SYSTEMS AS INSTALLED. (SIGNATURE OF CONTRACTOR/DATE)". SUBMIT HARD COPY TO CONSULTANT FOR APPROVAL. WHEN RETURNED, MAKE CORRECTIONS (IF ANY) AS DIRECTED. ONCE APPROVED, SUBMIT COMPLETED REPRODUCIBLE PAPER RECORD DRAWINGS AS WELL AS A SCANNED PDF COPY FILE ON USB STICK WITH OPERATING AND MAINTENANCE MANUALS.
20. CONTRACTOR SHALL PROVIDE RED LINE RECORD DRAWINGS OF EACH AND EVERY ELECTRICAL DRAWING FOR DEI CONSULTING ENGINEERS TO CAD THE RECORD DRAWINGS. THE CAD DRAWING FILES WILL BE PROVIDED TO THE OWNER AS PART OF THE MAINTENANCE MANUALS.
21. THE CONTRACTOR IS TO DETERMINE GENERAL INSPECTION FEES WITH THE ELECTRICAL SAFETY AUTHORITY AND INCLUDE AS PART OF TENDER.

BASIC MATERIALS

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

SYSTEM	COLOUR
UP TO 208V	YELLOW
VOICE SYSTEM	GREEN
DATA SYSTEM	ORANGE
SECURITY	BROWN
PUBLIC ADDRESS	BLACK
FIRE ALARM	RED

10. THIS CONTRACTOR MUST PAINT ALL SYSTEM JUNCTION BOXES AND COVERS IN CONFORMANCE WITH THE ABOVE SCHEDULE.

DRAW BREAKDOWN

1. THIS CONTRACTOR MUST SUBMIT A BREAKDOWN OF THE TENDER PRICE INTO CLASSIFICATIONS TO THE SATISFACTION OF THE CONSULTANT, WITH THE AGGREGATE OF THE BREAKDOWN TOTALING THE TOTAL CONTRACT AMOUNT. EACH ITEM MUST BE BROKEN OUT INTO MATERIAL AND LABOUR COSTS. PROGRESS CLAIMS, WHEN SUBMITTED ARE TO BE ITEMIZED AGAINST EACH ITEM OF THE DRAW BREAKDOWN. THIS SHALL BE DONE IN TABLE FORM SHOWING CONTRACT AMOUNT, AMOUNT THIS DRAW, TOTAL TO DATE, % COMPLETE AND BALANCE.
2. BREAKDOWN SHALL BE AS FOLLOWS:
 1. PERMITS AND FEES
 2. MOBILIZATION (MAXIMUM 1%)
 3. DEMOLITION
 4. BRANCH CONDUITS
 5. BRANCH WIRING
 6. LIGHTING FIXTURES
 7. FIRE ALARM SYSTEM
 8. COMMISSIONING (MINIMUM 3% BUT NOT LESS THAN \$750.00)
3. THE BREAKDOWN MUST BE APPROVED BY THE CONSULTANT PRIOR TO SUBMISSION OF THE FIRST DRAW.
4. BREAKDOWNS NOT COMPLYING TO THE ABOVE WILL NOT BE APPROVED.
5. BREAKDOWN MUST INDICATE TOTAL CONTRACT AMOUNT.
6. MOBILIZATION AMOUNT MAY ONLY BE DRAWN WHEN ALL REQUIRED SHOP DRAWINGS HAVE BEEN REVIEWED BY THE CONSULTANT.

OCCUPANCY REQUIREMENTS

1. FINAL CERTIFICATES
 1. ELECTRICAL SAFETY AUTHORITY
 2. FIRE ALARM VERIFICATION CERTIFICATE
 3. EMERGENCY LIGHTING LETTER

READY FOR TAKEOVER

1. COMPLETE THE FOLLOWING TO THE SATISFACTION OF THE CONSULTANT PRIOR TO REQUEST FOR READY FOR TAKEOVER.
 1. AS-BUILT DRAWINGS.
 2. MAINTENANCE MANUALS.
 3. SYSTEM START UP.
 4. INSTRUCTIONS TO OWNERS.
 5. LIGHTING CONTROL SYSTEM.
 6. OUTLET COVER CIRCUIT LABELS.

SHOP DRAWINGS AND PRODUCT DATA

1. FURNISH COMPLETE CATALOG DATA FOR MANUFACTURED ITEMS OF EQUIPMENT TO BE USED IN THE WORK TO CONSULTANT FOR REVIEW WITHIN 30 DAYS AFTER AWARD OF CONTRACT.
2. IF MATERIAL OR EQUIPMENT IS NOT AS SPECIFIED OR SUBMITTAL IS NOT COMPLETE, IT WILL BE REJECTED BY CONSULTANT.
3. ADDITIONAL SHOP DRAWINGS REQUIRED BY THE CONTRACTOR FOR MAINTENANCE MANUALS, SITE COPIES ETC., SHALL BE PHOTOCOPIES OF THE 'REVIEWED' SHOP DRAWINGS. ALL COSTS TO PROVIDE ADDITIONAL COPIES OF SHOP DRAWINGS SHALL BE BORNE BY THE CONTRACTOR.
4. PARTIAL SUBMITTALS WILL NOT BE ACCEPTED.
5. CATALOG DATA OR SHOP DRAWINGS FOR EQUIPMENT, WHICH ARE NOTED AS BEING REVIEWED BY CONSULTANT OR HIS ENGINEER SHALL NOT SUPERSEDE CONTRACT DOCUMENTS.
6. REVIEW COMMENTS OF CONSULTANT SHALL NOT RELIEVE THIS DIVISION FROM RESPONSIBILITY FOR DEVIATIONS FROM CONTRACT DOCUMENTS UNLESS CONSULTANT'S ATTENTION HAS BEEN CALLED TO SUCH DEVIATIONS IN WRITING AT TIME OF SUBMISSION, NOR SHALL THEY RELIEVE THIS DIVISION FROM RESPONSIBILITY FOR ERRORS IN ITEMS SUBMITTED.
7. CHECK WORK DESCRIBED BY CATALOG DATA WITH CONTRACT DOCUMENTS FOR DEVIATIONS AND ERRORS.
8. SHOP DRAWINGS AND PRODUCT DATA SHALL SHOW:
 1. MOUNTING ARRANGEMENTS.
 2. OPERATING AND MAINTENANCE CLEARANCES. E.G. ACCESS DOOR SWING SPACES.
9. SHOP DRAWINGS AND PRODUCT DATA SHALL BE ACCOMPANIED BY:
 1. DETAILED DRAWINGS OF BASES, SUPPORTS, AND ANCHOR BOLTS.
 2. MANUFACTURER TEST DATA WHERE REQUESTED.
 3. MANUFACTURER TO CERTIFY AS TO CURRENT MODEL PRODUCTION.
 4. CERTIFICATION OF COMPLIANCE TO APPLICABLE CODES.
10. STATE SIZES, CAPACITIES, BRAND NAMES, MOTOR HP, ACCESSORIES, MATERIALS, GAUGES, DIMENSIONS, AND OTHER PERTINENT INFORMATION. LIST ON CATALOG COVERS PAGE NUMBERS OF SUBMITTED ITEMS. UNDERLINE APPLICABLE DATA.
11. ONCE THESE SHOP DRAWINGS ARE RETURNED 'REVIEWED' OR 'REVIEWED AS NOTED' FABRICATION, PRODUCTION, AND INSTALLATION MAY COMMENCE. NOTE: IF A SHOP DRAWING IS RETURNED 'REVIEWED AS NOTED' THIS CONTRACTOR MUST PROVIDE WRITTEN INDICATION THAT THE COMMENTS HAVE BEEN COMPLIED WITH.
12. A PARTIAL LIST OF SHOP DRAWINGS INCLUDES:
 1. LIGHTING FIXTURES
 2. LIGHTING CONTROLS
 3. FIRESTOPPING MATERIALS
 4. WIRING DEVICES
 5. HAND DRIVERS
 6. CONTACTORS AND E-STOP SYSTEM COMPONENTS
 7. FIRE ALARM DEVICES

FIRESTOPPING

1. FIRESTOPPING MATERIAL AND INSTALLATION WITHIN ANNULAR SPACE BETWEEN CONDUITS, DUCTS, AND ADJACENT FIRE SEPARATION.
2. PROVIDE MATERIALS AND SYSTEMS CAPABLE OF MAINTAINING EFFECTIVE BARRIER AGAINST FLAME, SMOKE, AND GASES.
3. COMPLY WITH THE REQUIREMENTS OF CAN4-S115-M35, AND DO NOT EXCEED OPENING SIZED FOR WHICH THEY HAVE BEEN TESTED.
4. THE FIRESTOPPING MATERIALS ARE NOT TO SHRINK, SLUMP OR SAG AND BE FREE OF ASBESTOS, HALOGENS AND VOLATILE SOLVENTS.
5. FIRESTOPPING MATERIALS ARE TO CONSIST OF A COMPONENT SEALANT APPLIED WITH A CONVENTIONAL CAULKING GUN AND TROWEL.
6. FIRESTOP MATERIALS ARE TO BE CAPABLE OF RECEIVING FINISH MATERIALS IN THOSE AREAS, WHICH ARE EXPOSED AND SCHEDULED TO RECEIVE FINISHES.
7. FIRESTOPPING SHALL BE INSPECTED AND APPROVED BY LOCAL AUTHORITY PRIOR TO CONCEALMENT OR ENCLOSURE.
8. INSTALL MATERIAL AND COMPONENTS IN ACCORDANCE WITH ULC CERTIFICATION, MANUFACTURERS INSTRUCTIONS AND LOCAL AUTHORITY.
9. SUBMIT PRODUCT LITERATURE AND INSTALLATION MATERIAL ON FIRESTOPPING IN SHOP DRAWING AND PRODUCT DATA MANUAL.
10. ACCEPTABLE MANUFACTURERS: RECTORSOL CORPORATION (METACAUULK) PROSET SYSTEMS 3M HILTI STI FIRESTOP

NOTE: FIRE STOP MATERIAL MUST CONFORM TO REQUIREMENTS OF LOCAL AUTHORITIES HAVING JURISDICTION. CONTRACTOR TO CONFIRM PRIOR TO APPLICATION AND ENSURE MATERIAL USED IS COMPATIBLE WITH THAT USED BY OTHER TRADES ON SITE.

11. ENSURE FIRESTOP MANUFACTURER REPRESENTATIVE PERFORMS ON SITE INSPECTIONS AND CERTIFIES INSTALLATION. SUBMIT INSPECTION REPORTS/CERTIFICATION AT TIME OF SUBSTANTIAL COMPLETION.

WIRING DEVICES

1. WALL MOUNTED OCCUPANCY SENSORS (PASSIVE TECHNOLOGY), OCCUPANCY SENSORS USED IN WASHROOMS AND STORAGE ROOMS SHALL BE EITHER:
 1. WATSTOPPER CAT. #PW-301-X (COLOUR BY ARCHITECT)
 2. LEVITON CAT. #ODS15-IDX (COLOUR BY ARCHITECT)
 3. SENSOR SWITCH CAT. #WSX-X (COLOUR BY ARCHITECT)
2. PROVIDE OTHER OCCUPANCY SENSORS TO SUIT THE DETAIL(S) ON THE DRAWINGS.
3. ALL SENSORS SHALL BE SET TO 5 MINUTES "DELAY TO OFF" UNLESS OTHERWISE DIRECTED.
4. INSTALL DEVICES IN GANG TYPE OUTLET BOX WHEN MORE THAN ONE DEVICE IS REQUIRED IN ONE LOCATION.
5. STAINLESS STEEL, VERTICALLY BRUSHED, 1mm THICK, COVER PLATES FOR WIRING DEVICES MOUNTED IN FLUSH-MOUNTED OUTLET BOXES.
6. PROTECT STAINLESS STEEL COVER PLATE FINISH WITH PAPER OR PLASTIC FILM UNTIL PAINTING AND OTHER WORK IS FINISHED.
7. INSTALL SUITABLE COMMON COVER PLATES WHERE WIRING DEVICES ARE GROUPED.

LIGHTING SYSTEMS

FIXTURES ARE TO BE PROVIDED AS NOTED IN THE LIGHT FIXTURE SCHEDULE C/W THE FOLLOWING FEATURES:

1. LED
 1. FIXTURE LED'S MUST BE TESTED IN CONFORMANCE WITH IESNA LM80 STANDARD.
 2. LED'S MUST BE SELECTED USING A BINNING ALGORITHM TO ENSURE COLOUR AND LUMEN OUTPUT OF A GIVEN FIXTURE ARE CONSISTENT, AS WELL AS MEET OR SURPASS ANSI C78.377 SPECIFICATION FOR THE RATED LIFETIME OF THE FIXTURE. COLOUR ACCURACY BETWEEN PRODUCTS MUST BE WITHIN A 2-STEP MACADAM ELLIPSE.
 3. LUMINAIRES MUST BE TESTED TO IESNA LM79 BY AN INDEPENDENT APPROVED LABORATORY.
 4. LUMINAIRES MUST BE TESTED PRIOR TO SHIPPING.
 5. LUMINAIRES MUST BE ULC CERTIFIED AND APPROVED FOR USE IN CANADA.
 6. FIXTURES MUST MAINTAIN A MINIMUM OF 90% OF THEIR INITIAL LIGHT OUTPUT FOR 60,000 HOURS. SUBMIT TEST RESULTS UPON REQUEST.
 7. LUMEN VALUES INDICATED FOR FIXTURES IN THE PROJECT DOCUMENTS ARE TO BE CONSIDERED AS 'ABSOLUTE' OR 'DELIVERED' VALUES.
2. FIXTURE INSTALLATION
 1. LOCATE AND INSTALL LUMINAIRES AS INDICATED.
 2. FIXTURE SURFACE MOUNTED TO SUSPENDED CEILINGS MUST BE SECURED THROUGH CEILING ASSEMBLY TO CROSS MEMBER SUPPORTS. THESE SUPPORTS ARE TO BE STEEL CHANNELS OR ANGLES INDEPENDENTLY SECURED TO STRUCTURE USING #12 "JACK" CHAIN. EACH CHAIN MUST BE SECURED SO NO FIXTURE WEIGHT IS ADDED TO THE CEILING ASSEMBLY.
 3. PLASTER FRAMES/FLANGE KITS MUST BE PROVIDED BY THIS DIVISION FOR FIXTURES RECESSED IN PLASTER AND/OR DRYWALL CEILINGS.
 4. WHERE SPECIFIED, FIXTURES TO BE CHAIN HUNG SHALL BE HUNG USING "JACK" CHAIN WITH A CAPACITY TO SUIT THE FIXTURE WEIGHT. BRANCH CIRCUIT WIRING FEEDING THESE FIXTURES SHALL BE AC90 CABLE "TY-WRAPPED" AT 36" (900mm) INTERVALS ALONG LENGTH OF DROP. FINAL APPEARANCE MUST BE NEAT AND PROFESSIONAL.
 5. CONNECT LUMINAIRES TO LIGHTING CIRCUITS AS INDICATED.
 6. ALIGN LUMINAIRES MOUNTED IN CONTINUOUS ROWS TO FORM STRAIGHT UNINTERRUPTED LINES.
 7. ALIGN LUMINAIRES MOUNTED INDIVIDUALLY PARALLEL OR PERPENDICULAR TO BUILDING GRID LINES.
 8. ALL LIGHTING BRANCH CIRCUITS ARE TO BE PROVIDED WITH SEPARATE NEUTRALS.
7. GUARANTEE
 1. ALL LED FIXTURES AND DRIVERS ARE TO BE COMPLETE WITH A 5 YEAR GUARANTEE.
 2. THE LABOUR REQUIRED TO REPLACE THESE DRIVERS MUST BE INCLUDED IN THE ABOVE GUARANTEE.

FIRE ALARM SYSTEMS

1. INSTALLATION OF FIRE ALARM DEVICES MUST CONFORM TO ULC-S524 (LATEST EDITION).
2. ALL WIRING MUST BE COLOUR CODED, SIZED ACCORDING TO MANUFACTURER'S RECOMMENDATIONS AND CONFORM TO THE LATEST EDITION OF THE ELECTRICAL SAFETY CODE.
3. ALL EXISTING AND NEW FIRE ALARM DETECTION AND SIGNALING DEVICES RELOCATED DUE TO RENOVATIONS SHALL BE CONNECTED TO EXISTING LOCAL ZONE AS INDICATED.
4. EQUIPMENT SHALL BE SUPPLIED AND INSTALLED AS FOLLOWS;
 1. AUDIBLE/VISUAL SIGNAL DEVICES
 1. STROBE: SEMI-RECESSED, 24VDC OPERATION, COMPLETE WITH SELECTABLE 15/30/75/110 CANDELA OUTPUT (UNLESS OTHERWISE NOTED SET AT 75 CD), SYNCHRONIZED STROBE, RED FINISH, FM AND ULC LISTED. SUITABLE FOR MOUNTING ON A SINGLE GANG BOX.
5. ONCE INSTALLATION IS COMPLETE THE MANUFACTURER'S REPRESENTATIVE MUST MAKE AN INSPECTION OF THE DEVICES INSTALLED.
6. THIS TEST MUST CONFORM TO THE ONTARIO BUILDING CODE AND THE LATEST EDITION OF ULC CAN4-S537.
7. ALL COSTS ASSOCIATED WITH THIS INSPECTION BY THE CONTRACTOR AND MANUFACTURER MUST BE CARRIED IN THE TENDER PRICE.
8. THE TEST RESULTS ARE TO BE SUBMITTED TO THE CONSULTANT FOR REVIEW PRIOR TO ISSUING TO OWNER'S REPRESENTATIVES AND/OR AUTHORITIES HAVING JURISDICTION.
9. EQUIPMENT:

DEVICE	EDWARDS
EXISTING CONTROL PANEL: (ADDRESSABLE)	
1	EST QUICKSTART
AUXILIARY DEVICES:	
2 STROBE	G1R-VM

EQUIPMENT

1. DIGITAL OCCUPANCY & DAYLIGHT CONTROL SYSTEMS:
 1. PROVIDE ROOM BASED LIGHTING CONTROL SYSTEM.
 2. BASIS OF DESIGN: SENSORSWITCH ALIGHT.
 1. ACCEPTABLE ALTERNATES:
 - 1. COOPER WAXELINX CAT.
 - 2. WATSTOPPER DLM.
 3. ELECTRICAL DESIGN DRAWING LIGHTING SCHEMATICS ARE GENERIC AND MEANT TO SHOW INTENT OF CONTROLS APPROACH ONLY. CONTACT MANUFACTURER'S SALES AGENCY FOR LIGHTING CONTROL SYSTEM SCHEMATICS, WIRING DIAGRAMS, CONTROLS RISERS, AND INSTALLATION INSTRUCTIONS PRIOR TO BID.
 4. ALL DEVICES HAVE RJ-45 FEMALE PORTS. MAKING NETWORK CONTROL CABLES ON SITE IS REQUIRED.
 5. CABLING FOR SYSTEM SHALL BE CATEGORY 5E AS PER MANUFACTURER'S RECOMMENDATIONS.
 1. CABLE SHALL BE 4 PAIR, 24 AWG SOLID BARE ANNEALED COPPER CONDUCTORS, ANSI/TIA/EIA-568-B.2 AND ISO/IEC 11801 CATEGORY 5E COMPLIANT.
 2. THE JACKET SHALL BE PRINTED WITH TRU-MARK 1000' TO 0' MARKING SYSTEM, CMP (FT-6) RATED WITH OUTER SHEATH COLOUR FOR EACH LEVEL IN THE SYSTEM TO BE ACCORDING TO ADVISEMENT BY SCHOOL BOARD REPRESENTATIVE.
 3. SHALL BE SUITABLE FOR USE INDOOR, RISER OR PLENUM, AND HORIZONTAL APPLICATIONS.
 6. INSTALL THE WORK OF THIS SECTION IN ACCORDANCE WITH MANUFACTURER'S PRINTED INSTRUCTIONS UNLESS OTHERWISE INDICATED.
 7. CALIBRATE ALL SENSOR TIME DELAYS AND SENSITIVITY TO GUARANTEE PROPER DETECTION OF OCCUPANTS AND ENERGY SAVINGS.
 1. ADJUST TIME DELAY SO THAT CONTROLLED AREA REMAINS LIGHTED FOR 5 MINUTES AFTER OCCUPANT LEAVES AREA.
 8. INSTALL POWER PACKS IN ACCESSIBLE MAINTENANCE AREAS UNLESS NOTED OTHERWISE. PROVIDE ACCESS DOORS IF POWER PACKS ARE INSTALLED ABOVE DRYWALL CEILINGS.
 9. INSTALL SENSORS IN GYM WHERE NOTED ON PLAN AT MID-HEIGHT OF WALL.
 10. IT SHALL BE THE CONTRACTOR'S RESPONSIBILITY TO LOCATE AND AIM SENSORS IN THE CORRECT LOCATION REQUIRED FOR COMPLETE AND PROPER COVERAGE WITHIN THE RANGE OF COVERAGE AS PER THE MANUFACTURER'S RECOMMENDATIONS. THE LOCATIONS AND QUANTITIES OF SENSORS SHOWN ON THE DRAWINGS ARE DIAGRAMMATIC AND INDICATE ONLY THE ROOMS WHICH ARE TO BE PROVIDED WITH SENSORS. THE CONTRACTOR SHALL PROVIDE ADDITIONAL SENSORS IF REQUIRED TO PROPERLY AND COMPLETELY COVER THE RESPECTIVE ROOMS.
11. PROVIDE WRITTEN OR COMPUTER-GENERATED DOCUMENTATION ON THE COMMISSIONING OF THE SYSTEM INCLUDING ROOM BY ROOM DESCRIPTION INCLUDING:
 1. SENSOR PARAMETERS, TIME DELAYS, SENSITIVITIES, AND DAYLIGHTING SETPOINTS.
 2. SEQUENCE OF OPERATION, (E.G. MANUAL ON, AUTO OFF, ETC.)
 3. LOAD PARAMETERS (E.G. BLINK WARNING, ETC.)
12. RE-COMMISSIONING -- AFTER 30 DAYS FROM OCCUPANCY RE-CALIBRATE ALL SENSOR TIME DELAYS AND SENSITIVITIES TO MEET THE OWNER'S PROJECT REQUIREMENTS. PROVIDE A DETAILED REPORT TO THE ARCHITECT / OWNER OF RE-COMMISSIONING ACTIVITY.
13. INCLUDE THE FOLLOWING SUPPORT SERVICE VISITS TO SITE:
 1. PRE-WIRING VISIT.
 2. ASHRAE FUNCTIONAL TESTING COORDINATION VISIT.
 3. FINAL SYSTEM COMMISSIONING VISIT.
14. CONTACT OWNER REPRESENTATIVES A MINIMUM OF 30 DAYS PRIOR TO COMMISSIONING OF LIGHTING CONTROLS:
 1. DALE WIDEMAN, PROJECT COORDINATOR, DALE.WIDEMAN@WRDSB.CA
15. FACTORY COMMISSIONING
 1. UPON COMPLETION OF THE INSTALLATION, THE SYSTEM SHALL BE COMMISSIONED BY THE MANUFACTURER'S FACTORY AUTHORIZED REPRESENTATIVE WHO WILL VERIFY A COMPLETE FULLY FUNCTIONAL SYSTEM.
 2. THE ELECTRICAL CONTRACTOR SHALL PROVIDE BOTH THE MANUFACTURER AND THE ELECTRICAL ENGINEER WITH TEN WORKING DAYS WRITTEN NOTICE OF THE SYSTEM STARTUP AND ADJUSTMENT DATE.
 3. UPON COMPLETION OF THE SYSTEM COMMISSIONING THE FACTORY-AUTHORIZED TECHNICIAN SHALL PROVIDE THE PROPER TRAINING TO THE OWNER'S PERSONNEL ON THE ADJUSTMENT AND MAINTENANCE OF THE SYSTEM.
 4. FACTORY COMMISSIONING SHALL INCLUDE FUNCTIONAL TESTING AND DOCUMENTATION OF THE CONTROL SYSTEM CONFORMING TO THE "FUNCTIONAL TESTING" REQUIREMENTS INCLUDED IN THE CURRENT ASHRAE STANDARD. THIS COST SHALL BE INCLUDED IN THE TENDER PRICE.
16. CABLING INSTALLATION
 1. CABLING CONTRACTOR IS TO ADHERE TO ALL STANDARDS, REGULATIONS AND DOCUMENTS LISTED FOLLOWING.
 2. ALL PRODUCTS INSTALLED MUST MEET OR EXCEED ALL LOCAL, PROVINCIAL, AND FEDERAL BUILDING, FIRE, HEALTH, SAFETY AND ELECTRICAL CODES.
 3. THE RESPONSIBILITY OF THIS SUB-CONTRACTOR IS TO INCLUDE BUT NOT BE LIMITED TO:
 1. SUPPLY AND INSTALL CABLING TO LOCATIONS AS DETAILED ON FLOOR PLAN(S). THE CABLING CONTRACTOR SHALL USE THE CABLING SUPPORT SYSTEM (SUPPLIED BY OTHERS) TO DISTRIBUTE THE CABLES THROUGHOUT THE FACILITY. WHERE THE CABLES LEAVE THE CABLE SUPPORT SYSTEM AND EXTEND TO THE TERMINATION POINT THEY SHALL USE THE CONDUIT PROVIDED OR CABLE MANAGEMENT SYSTEM. ANY HORIZONTAL EXPOSED CABLE MUST BE INSTALLED IN SURFACE RACEWAYS EQUAL TO WIREMOLD SERIES 500/700.
 2. ALL CABLES AND COMPONENTS TO BE INSTALLED AND TERMINATED IN ACCORDANCE WITH CSA, ANSI/EIA/TIA-568 AND ITS AMENDMENTS AS WELL AS UL GUIDELINES. PARTICULAR ATTENTION MUST BE GIVEN TO MAINTAINING THE INTEGRITY OF THE PAIR TWISTS, BEND RADIUS AND ENSURING PROPER DISTANCE IS KEPT FROM FLUORESCENT LIGHT FIXTURES, ELECTRICAL CABLES, OR ANY OTHER SOURCE OF EMI.
 3. THE MAXIMUM HORIZONTAL RUN LENGTH IS NOT TO EXCEED 457 M (1,500').
 4. AVOID SCRAPING, DENTING, OR OTHERWISE DAMAGING CABLES, BEFORE, DURING OR AFTER INSTALLATION. THE CABLING CONTRACTOR WITHOUT ANY ADDITIONAL COMPENSATION SHALL REPLACE DAMAGED CABLES.
 5. ENSURE THAT ALL CABLE LENGTHS ARE SUFFICIENT TO ALLOW FOR SLACK, VERTICAL RUNS, WASTAGE, CONNECTORIZATION AND FUTURE MOVES.
 6. BUSH, REAM AND REMOVE ANY SHARP PROJECTIONS ON ALL CONDUITS PRIOR TO INSTALLATION OF COMMUNICATIONS CABLES.
 7. WHEN TERMINATING COPPER CABLES REMOVE ONLY ENOUGH CABLE JACKET TO PERFORM TERMINATION, UNTWIST Pairs A MAXIMUM OF 13 MM (1/2") FOR, ENHANCED CATEGORY 5.

EQUIPMENT

1. CONTACTORS
 1. CONTACTORS SHALL HAVE THE FOLLOWING FEATURES:
 1. CONTACTORS SHALL BE ELECTRICALLY HELD AND CONTROLLED BY PILOT DEVICES AS INDICATED AND RATED FOR TYPE OF LOAD CONTROLLED.
 2. MOUNTED IN CSA ENCLOSURE 1.
 3. INCLUDE THE FOLLOWING OPTIONS:
 1. RED INDICATING LAMP.
 2. HAND-OFF-AUTO SELECTOR SWITCH.
 4. CONTROL TRANSFORMER MOUNTED IN CONTACTOR ENCLOSURE.
 2. ACCEPTABLE MANUFACTURERS ARE AS FOLLOWS:
 1. ALLEN BRADLEY
 2. CUTLER HAMMER
 3. SIEMENS
 4. GROUP SCHNEIDER
 5. KLOCKNER MOELLER
2. HAND DRIVERS
 1. HAND DRIVERS WHERE NOTED ON THE DRAWINGS ARE TO BE SUPPLIED AND INSTALLED BY THIS DIVISION WITH THE FOLLOWING FEATURES:
 1. SURFACE MOUNTING.
 2. BRUSHED STAINLESS STEEL FINISH.
 3. AUTOMATIC ACTIVATION.
 4. RATING OF 1450W AT 120-230V UNIVERSAL.
 5. COMAC CAT. #C-100220004 (WITHOUT LED).
 6. EQUALS/ALTERNATES WILL NOT BE ACCEPTED.

CLIENT LOGO



KEYPLAN

No.	ISSUANCE	DATE
1	ISSUED FOR 100% OWNER REVIEW	2025.03.19
2	ISSUED FOR BID AND PERMIT	2025.04.04



The contractor shall verify all dimensions and report all errors and discrepancies to the Consultant before commencement of the work. The drawings show general arrangement of services. Follow as closely as actual building construction will permit. Obtain approval for relocation of service from Consultant before commencement of the work. The drawings do not indicate all offsets fitting and accessories which may be required. Provide the same to meet the required conditions. Drawings and specifications, etc., prepared and issued by the consultant are the property of the consultant and must be returned at the completion of the project. These documents are not to be duplicated or copied without the consent of the Consultant. Do not scale this drawing. © 2025 DEI Consulting Engineers Inc.

CLIENT

WATERLOO REGION DISTRICT SCHOOL BOARD

51 Ardelt Ave, Kitchener ON N2C 2R5

PROJECT

WRDSB Bluevale CI Dev. Ed. Classroom

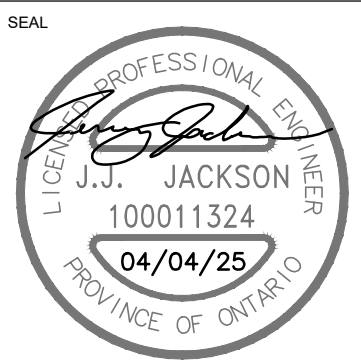
80 Bluevale St N, Waterloo ON N2J 3R5

ELECTRICAL SPECIFICATIONS

WALTERFEDY

TORONTO | CALGARY | EDMONTON | KITCHENER | HAMILTON

800.685.1378 walterfedy.com



SCALE :	AS NOTED	SHEET NO:
DATE :	2025.03.19	
PROJECT NO :	2024-0057-10	
DRAWN BY :	KV	
CHECKED BY :	ASJJ	

E4.1