DRAWING LIST

ARCHITECTURE

A001	ASSEMBLIES,LEGENDS, NOTES AND DOOR AND SCREEN SCHEDULE
A101	OVERALL SITE PLAN AND OBC MATRIX
A201	DEMOLITON PLANS
A202	ENLARGED FLOOR PLANS, DETAILS
A203	REFLECTED CEILING PLANS AND TYPICAL DETAILS
A501	SECTION DETAILS

STRUCTURAL

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S002	TYPICAL DETAILS
S201	PARTIAL GROUND FLOOR PLAN AND SECTIONS

MECHANICAL

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M1.2	DETAILS
M2.1	GROUND FLOOR PART PLANS 'A' & 'B' - DEMOLITION - DRAINAGE, PIPING, HEATING & DUCTWORK
M3.1	GROUND FLOOR PART PLANS 'A' - DRAINAGE, PIPING, DUCTWORK & SPRINKLER
M4.2	MECHANICAL SPECIFICATION

ELECTRICAL

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E2.1	WASHROOMS/CORRIDOR PARTIAL GROUND FLOOR - DEMOLITION PLANS
E2.2	WASHROOMS/CORRIDOR PARTIAL GROUND FLOOR - RENOVATION PLANS
E2.3	SCIENCE LAB #107 - DEMOLITION AND RENOVATION PLANS
E3.1	ELECTRICAL SPECIFICATIONS 1 OF 2
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WATERLOO REGION DISTRICT SCHOOL BOARD

PRESTON HIGH PS - RAMP AND WASHROOM RENOVATIONS

550 Rose St. Cambridge, ON N3H 2E6

WalterFedy Project No.: 2023-0705-11

ISSUED FOR BID & PERMIT 2024-03-13

EMERGENCY LIGHTING SHALL BE PROVIDED FOR MIN ½ HR TO AN AVERAGE LEVEL OF AT LEAST 10lx IN AREAS REQUIRED BY 3.2.7.3.(1)

ANY RENOVATIONS TO THE EXISTING SPRINKLER SYSTEM WILL REQUIRE A "RENOVATION SPRINKLER SYSTEM VERIFICATION CERTIFICATE" COMPLETED AND RETURNED TO FIELD INSPECTOR

PLEASE CALL THE INSPECTOR BEFORE COMMENCEMENT OF CONSTRUCTION

NEITHER THE GRANTING OF A PERMIT NOR REVIEWING OF SPECS & DRAWINGS NOR INSPECTIONS MADE DURING INSTALLATION BY THE OFFICIAL HAVING JURISDICTION SHALL RELIEVE THE OWNER FROM REQUIREMENTS OF THE ONTARIO BUILDING CODE AND ANY OTHER REFERENCED REQUIREMENTS

THE ARCHITECT OR PROFESSIONAL ENGINEER OR BOTH SHALL BE RESPONSIBLE FOR THE FIELD REVIEW OF THIS BUILDING DURING THE COURSE OF CONSTRUCTION TO ENSURE CONFORMANCE TO THE DESIGN

CITY OF CAMBRIDGE
BUILDING DIVISION

THESE PLANS HAVE BEEN EXAMINED FOR COMPLIANCE WITH THE ONTARIO BUILDING CODE REQUIREMENTS. A BUILDING PERMIT IS IN ORDER TO ISSUE SUBJECT TO ANY CHANGES NOTED UNDER THE CONDITION THAT THE BUILDING WILL BE CONSTRUCTED IN ACCORDANCE WITH THE CODE

2024-05-15

ASBESTOS REMOVAL AND REPAIR MUST BE PERFORMED IN ACCORDANCE WITH O. REG. 278/05 AND OCCUPATIONAL HEALTH AND SAFETY ACT. ASBESTOS WASTE MUST BE DISPOSED IN ACCORDANCE WITH ONTARIO REGULATION 347 AND THE ENVIRONMENTAL PROTECTION ACT.

675 Queen Street South, Suite 111
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WALTERFEDY

ABBREVIATIONS

ACT	ACOUSTIC CEILING TILE
AFF	ABOVE FINISHED FLOOR
ALT	ALTERNATE
ASTM	AMERICAN SOCIETY FOR TESTING AND MATERIALS
AC	AIR CONDITIONING
ALUM	ALUMINUM
ARCH	ARCHITECTURAL
ASPH	ASPHALT
BD	BOARD
BLK	BLOCK
BM	BEAM
BRK	BRICK
BLDG	BUILDING
BLKG	BLOCKING
BOT	BOTTOM
BRKT	BRACKET
CB	CATCH BASIN
CEM	CEMENT
CER	CERAMIC
CFM	CUBIC FEET PER MINUTE
CG	CORNER GUARD
CGSB	CANADIAN GENERAL STANDARD BOARD
CH	COAT HOOK
CHH	COAT HOOK HANDICAPPED
CI	CAST IRON
CJ	CONTROL JOINT
Cm	CENTIMETER
CONC	CONCRETE
CORR	CORRIDOR
CR	CARD READER
CT	CERAMIC TILE
CW	COLD WATER
CL	CENTRE LINE
COL	COLUMN
CONT	CONTINUOUS
CPT	CARPET
CSA	CANADIAN STANDARDS ASSOCIATION
CTR	CENTRE
C/W	COMPLETE WITH
DBL	DOUBLE
DET	DETAIL
DIA	DIAMETER
DIM	DIMENSION
DO	DITTO
DR	DOOR
DS	DOWNSPOUT
DWG	DRAWING
E	EAST
EA	EACH
EIFS	EXTERIOR INSULATION FINISH SYSTEMS
ELEV	ELEVATION
ELEC	ELECTRIC(AL)
ENCL	ENCLOSURE
ENG	ENGINEER
ENT	ENTRANCE
EQ	EQUAL
EXP	EXPOSED
EXPAN JT	EXPANSION JOINT
EXT	EXTERIOR
FA	FIRE ALARM
FAS	FIRE ALARM STATION
FD	FLOOR DRAIN
FDN	FOUNDATION
FE	FIRE EXTINGUISHER
FEC	FIRE EXTINGUISHER CABINET
FF	FINISH FLOOR
FFD	FUNNEL FLOOR DRAIN
FH	FIRE HYDRANT
FHC	FIRE HOSE CABINET
FHV	FIRE HOSE VALVE
FIN	FINISHED
FLUOR	FLUORESCENT
FT	FOOT or FEET
FTG	FOOTING
FURR	FURRING
FVC	FIRE VALVE CABINET
GA	GAUGE
GAL	GALVANIZED
GB	GRAB BAR
GEN	GENERATOR
GF	GROUND FLOOR
GL	GLASS
GR	GRADE
GRAN A	GRANULAR A
GRAN B	GRANULAR B
GWB	GYPSUM WALL BOARD
HB	HOSE BIBB
HC	HANDICAPPED
HM	HOLLOW METAL
HORIZ	HORIZONTAL
HP	HYDRO POLE
HR	HOUR
HT	HEIGHT
HW	HOT WATER
ID	INSIDE DIAMETER
INCAN	INCANDESCENT
INSUL	INSULATION or INSULATED
INV	INVERT
JAN	JANITOR'S CLOSET
JT	JOINT
JST	JOIST
KD	KNOCK DOWN
KO	KNOCK OUT
KP	KICK PLATE
LAB	LABORATORY
LAM	LAMINATE
LAV	LAVATORY
LED	LIGHT EMITTING DIODE
M	MEN'S
m	METERS
MAS	MASONRY
MAX	MAXIMUM
MECH	MECHANICAL
MET	METAL
MEZZ	MEZZANINE
MFR	MANUFACTURER
MIN	MINIMUM
MIR	MIRROR
MIRH	MIRROR HANDICAPPED
MISC	MISCELLANEOUS
mm	MILIMETER
MO	MASONRY OPENING
MPH	MOP HOLDER
N	NORTH
ND	NAPKIN DISPOSAL
NIC	NOT IN CONTRACT
NFPA	NATIONAL FIRE PREVENTION ASSOCIATION
No.	NUMBER
NOM	NOMINAL
NTS	NOT TO SCALE
OA	OVERALL
OBC	ONTARIO BUILDING CODE
OC	ON CENTRE
OD	OUTSIDE DIAMETER
O/H	OVERHEAD
OH	OPPOSITE HAND
OPNG	OPENING
OPP	OPPOSITE
OWSJ	OPEN WEB STEEL JOIST
PTN	PARTIITON
PCONC	PRECAST CONCRETE
PG	PIPE GUARD
PL	PLATE
PLAM	PLASTIC LAMINATE
PLEXI	PLEXIGLASS
PLYWD	PLYWOOD
PNT	PAINT
POL	POLISHED
PR	PAIR
PSF	POUNDS PER SQUARE FOOT
PSI	POUNDS PER SQUARE INCH
PT	POINT
PVC	POLYVINYL CHLORIDE
QT	QUARRY TILE
R	RADIUS
RCP	REFLECTED CEILING PLAN
RD	ROOF DRAIN REINFORCE
REQ'D	REQUIRED
RESIL	RESILIENT
REV	REVISION
RM	ROOM
RO	ROUGH OPENING
RWL	RAIN WATER LEADER
S	SOUTH
SCH	SCHEDULE
SD	SOAP DISPENSER
SEAL	SEALANT
SECT	SECTION
SF	SQUARE FEET
SHROD/C	SHOWER ROD WITH CURTAIN
SHT	SHEET
SIM	SIMILAR
SN	STAIR NOSING
SP	STANDPIPE
SPEC	SPECIFICATION
SQ	SQUARE
S.S.	STAINLESS STEEL
STD	STANDARD
STL	STEEL
STRUCT	STRUCTURAL
SYM	SYMMETRICAL
TB	TACK BOARD
TD	TRENCH DRAIN
TEL	TELEPHONE
T & G	TONGUE & GROOVE
THK	THICK
THR	TRESHOLD
T.O.	TOP OF
TYP	TYPICAL
U/C	UNDERCUT
U/G	UNDERGROUND
UL	UNDERWRITER LABORATORY
UNFIN	UNFINISHED
UON	UNLESS OTHERWISE NOTED
U/S	UNDERSIDE
UTIL	UTILITY
VCT	VINYL COMPOSITION TILE
VEST	VESTIBULE
W	WEST
WC	WATER CLOSET
WD	WOOD
WHTR	WATER HEATER
WP	WATERPROOF(ING)
WR	WASHROOM
WS	WEATHERSTRIPPING
WT	WEIGHT
WWF	WELDED WIRE FABRIC
WWM	WELDED WIRE MESH

General Annotations

Building Section Tag — Ref / 00a / A000

Wall Section Tag — Ref / 00a / A000

Callout Tag — SIM / 00a / A000

Exterior Elevation Tag — 00a / A000

Interior Elevation Tag — 1 Ref; Ref; Ref; 1 Ref / A000

Grid Marker — 00x NEW; 01 EXISTING

Revision — 1i

North Arrow — Can be rotated for the True North in the titleblock family.

Level Marker — Level Name

View Title — 1 / A101 View Name, Scale: 1:100

Room Tags

ROOM NAME 0000	Name & Number
ROOM NAME 0000 / 0,000 m²	Name, Number & Primary Area
ROOM NAME 0000 / 0,000 m² / 00,000 SF	Name, Number & Primary and Secondary Areas
0000	Room Number
0000 / 0,000 m²	Number & Primary Area
0000 / 0,000 m² / 00,000 SF	Number & Primary and Secondary Areas
XXX	ID Finish Tag
Number & Interior Design Finishes: 0000 0000; F0 B0 W0 F0 B0 W0 C1	

Family Tags

Wall Tag: WX-0x	Equipment & Furniture Tag: 000
Material Tag: ?	Drawing Note Symbol: 00
Door Tag: 0000	Multi-Leader: TEXT

Curtian Wall, Window, Louver & Screen Tag	Drawing NoteTags	Roof Tag: R-00
CW1 interior; W22 exterior	000 drawing note; 000 demolition note	Floor Tag: F-00

Ceiling/Soffit Tags

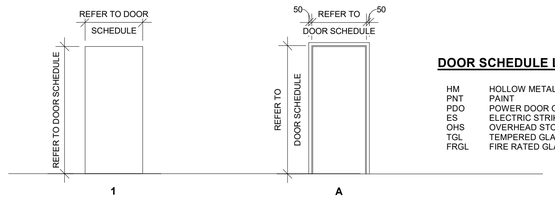
w/ ceiling/soffit height	w/o ceiling/soffit height	only ceiling/soffit height

Building Entry Symbols - Site Planning

Building Entrance (Primary)	Building Entrance (Secondary)	BF Barrier Free (Primary)	BF Barrier Free (Secondary)	OH Overhead Door (Optional)

DOOR & SCREEN SCHEDULE

Door/Screen Mark	Width x Height x Thickness	Door/Screen Type / Elev	Material	Finish	Glazing	Grille	Frame Type / Elev	Profile	Material	Finish	Hardware ULC Panics	Closer	Threshold	Weather Strip	Fire Rating	Notes
LEVEL 01																
104A	813x2134x44	1	HM	PNT	-	-	A	DF1	HM	PNT	No	No	No	No	-	OHS
104	915x2134x44	1	HM	PNT	-	-	A	DF1	HM	PNT	No	No	No	No	-	OHS
102	965x2134x44	1	HM	PNT	-	-	A	DF1	HM	PNT	No	Yes	No	No	-	ES,OHS, PDO
101	965x2134x44	1	HM	PNT	-	-	A	DF1, DF2	HM	PNT	No	Yes	No	No	-	ES,OHS, PDO
105	915x2134x44	1	HM	PNT	-	-	A	DF1	HM	PNT	No	No	No	No	-	OHS
164	813x2134x44	1	HM	PNT	-	-	A	DF1	HM	PNT	No	No	No	No	-	OHS



DOOR SCHEDULE LEGEND

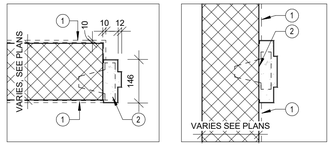
HM	HOLLOW METAL
PNT	PAINT
PDO	POWER DOOR OPERATOR
ES	ELECTRIC STRIKE
OHS	OVERHEAD STOP
TGL	TEMPERED GLASS
FRGL	FIRE RATED GLASS

GENERAL NOTE

1. FRAME HEAD HEIGHT TO BE 50mm (2") UNLESS OTHERWISE NOTED. REFER TO DOOR SCHEDULE
2. 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.

1 / A001 DOOR PANEL ELEVATION — Scale: 1 : 50

2 / A001 DOOR FRAME ELEVATION — Scale: 1 : 50



LEGEND

1. LINE OF BASE BELOW - SEE FINISHES PLAN FOR BASE MATERIAL
2. FILL WITH GROUT (TYPICAL)

GENERAL NOTE

A. REFER TO SPEC. FOR CONCRETE BLOCK CORNER TREATMENT.
B. FOR GLAZING TYPE REFER TO DOOR SCHEDULE.

3 / A001 DOOR FRAME PROFILES — Scale: 1 : 10

CLIENT LOGO

WATERLOO REGION DISTRICT SCHOOL BOARD

No.	ISSUANCE	DATE
1	ISSUED FOR BID & PERMIT	2024-03-13

CLIENT

WATERLOO REGION DISTRICT SCHOOL BOARD

51 ARDELT AVE, KITCHENER, ON N2C 2R5

PROJECT

PRESTON HIGH PS - RAMP AND WASHROOM RENOVATIONS

550 Rose St. Cambridge, ON N3H 2E6

TITLE

ASSEMBLIES,LEGENDS, NOTES AND DOOR AND SCREEN SCHEDULE

WALTERFEDY

KITCHENER | HAMILTON | TORONTO

800.685.1378 walterfedy.com

SEAL

ONTARIO ASSOCIATION OF ARCHITECTS
2024.03.07
MARIA JOSE MELO
LICENCE
9327

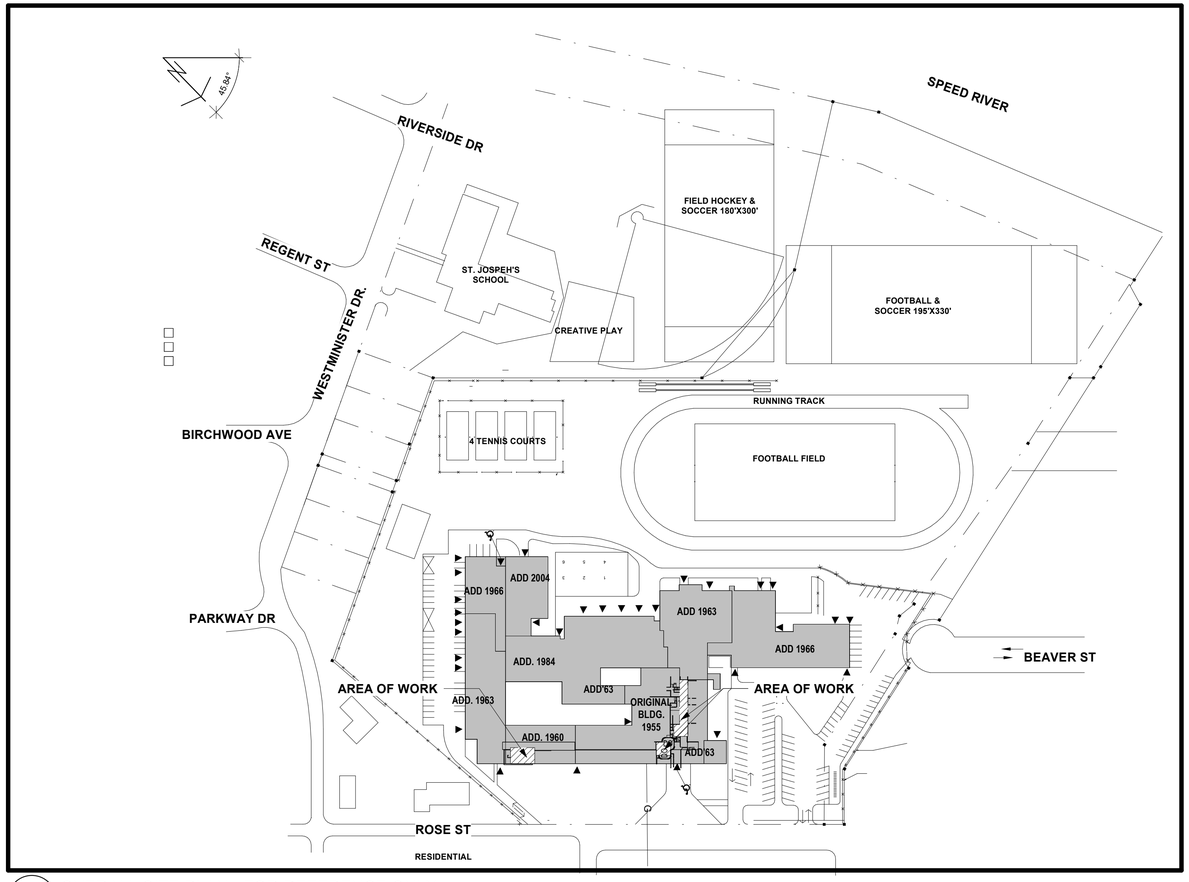
SCALE :	As indicated
DATE :	2024-03-06
WRDSB PROJECT NO :	23-7377-RFT
PROJECT NO :	2023-0705-11
DRAWN BY :	SY/AD
CHECKED BY :	MM

SHEET NO : **A001**

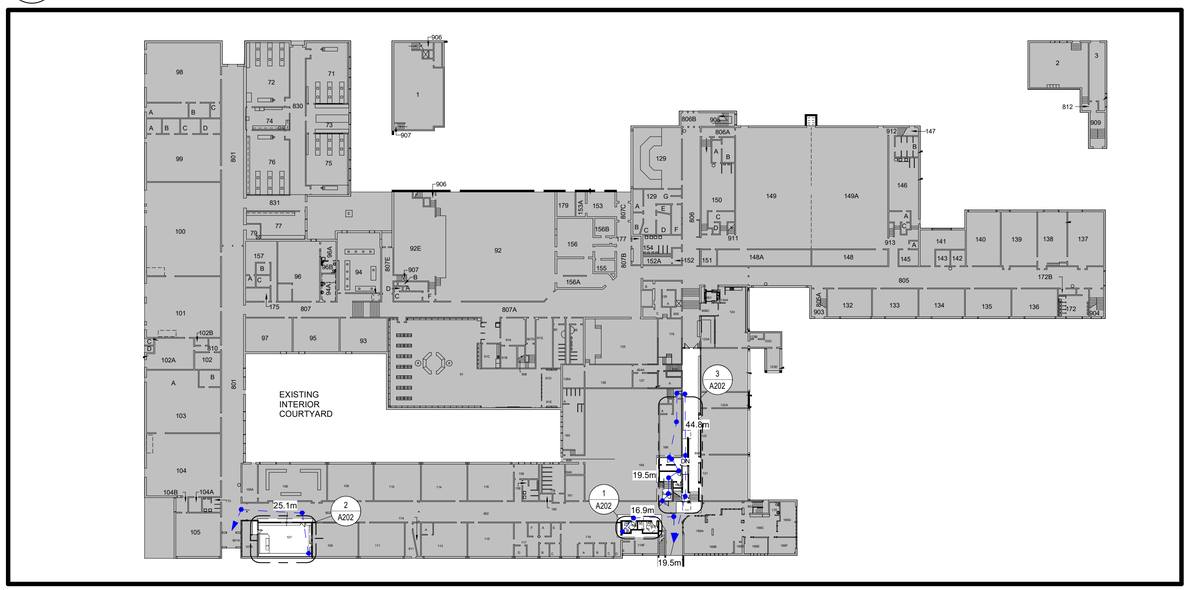
Ontario's 2012 Building Code Data Matrix Part 11					OBC Reference
11.1	Existing Building Classification	Describe Existing Use: GROUP A2 (SECONDARY SCHOOL) Construction Index: - Hazard Index: - ■ Not Applicable (no change of major occupancy)			11.2.1. T11.2.1.1A T11.2.1.1B-N
11.2	Alteration to Existing 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 - Renovation to existing single use washroom into accessible washroom - fixture count to remain unchanged	■ No	□ Yes (explain)	11.4.3.5.
		Sewage System - Renovation to existing single use washroom into accessible washroom - fixture count to remain unchanged	■ 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.

OBC NOTES:

1. MAJOR OCCUPANCY: GROUP A2 TO REMAIN (SECONDARY SCHOOL)
2. EXISTING BUILDING AREA: **12,098.64 m² (130,228.67 SF)**
3. GROSS BUILDING AREA: **17,190.6 m² (185,038 SF) EXISTING**
4. AREA OF RENOVATION: **220.8 m² (2377 SF)**
5. EXISTING BUILDING: SPRINKLERED
6. FIRE ALARM - EXISTING TO REMAIN
7. IN AN ELEMENTARY OR SECONDARY SCHOOL, A HAZARDOUS CLASSROOM SHALL BE SEPARATED FROM THE REMAINDER OF THE BUILDING BY A FIRE-SEPARATION HAVING A FIRE-RESISTANCE RATING NOT LESS THAN, 30 MIN WHERE THE BUILDING IS SPRINKLERED. AS CLASSROOM 107 IS AN EXISTING SCIENCE LAB, SHOULD ANY FIRE RATINGS BE DISTURBED ALONG THE CLASSROOM, THEY SHALL BE REPAIRED AND MAINTAINED TO HAVE A 30 MIN. FIRE RESISTANCE RATING. 3.3.2.2(4)(B).
8. FIRE RESISTANCE RATING FOR THE CORRIDOR IS NOT REQUIRED AS THE CORRIDOR IS SPRINKLERED. 3.3.2.5(3) AND FIRE SEPARATION IS WAIVED AS THE EXIT TRAVEL DISTANCE DOES NOT EXCEED 45M AS PER 3.3.2.5(4).



1 A101 OVERALL SITE PLAN - FOR REFERENCE ONLY
Scale: 1 : 1500



2 A101 OVERALL FLOOR PLAN
Scale: 1 : 600

CLIENT LOGO

TRUE NORTH PROJECT NORTH

No.	ISSUANCE	DATE
1	ISSUED FOR BID & PERMIT	2024-03-13

CLIENT

WATERLOO REGION DISTRICT SCHOOL BOARD

51 ARDELT AVE, KITCHENER, ON N2C 2R5

PROJECT

PRESTON HIGH PS - RAMP AND WASHROOM RENOVATIONS

550 Rose St. Cambridge, ON N3H 2E6

TITLE

OVERALL SITE PLAN AND OBC MATRIX

WALTERFEDY

KITCHENER | HAMILTON | TORONTO

800.685.1378 walterfedy.com

SEAL

ONTARIO ASSOCIATION OF ARCHITECTS
2024.03.07
MARIA JOSE MELO
LICENCE
9327

SCALE :	As indicated
DATE :	2024-03-06
WRDSB PROJECT NO :	23-7377-RFT
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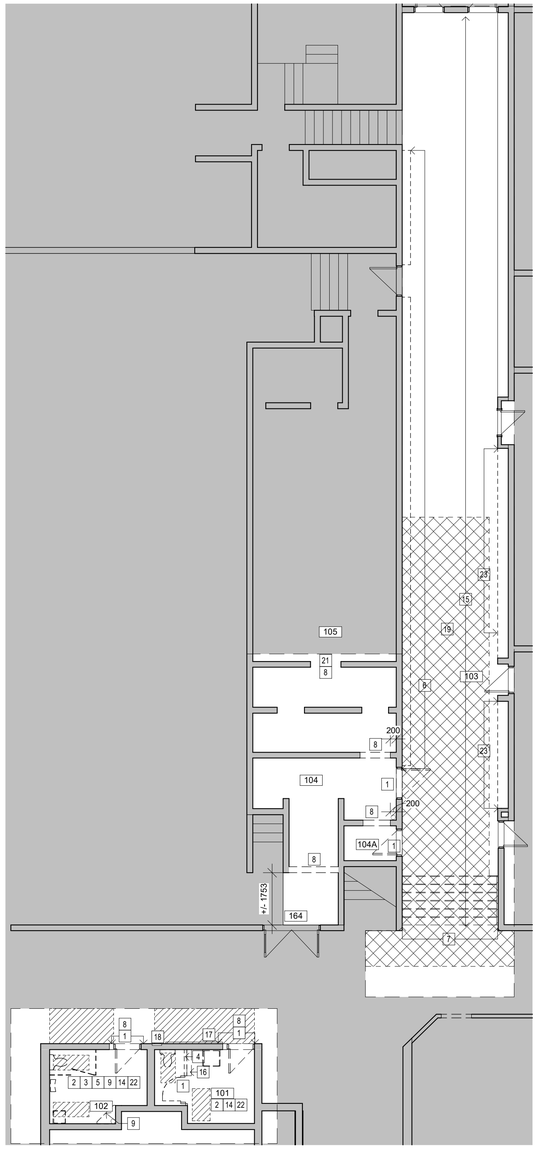
DRAWN BY :	SY/AD
CHECKED BY :	MM

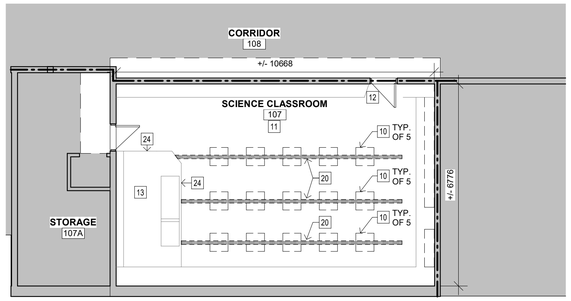
SHEET NO :

A101



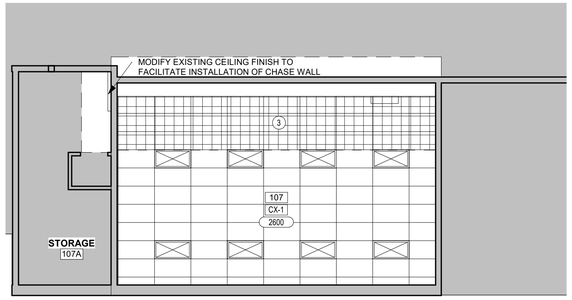
3 A201 PARTIAL DEMO GROUND FLOOR PLAN

Scale: 1 : 100



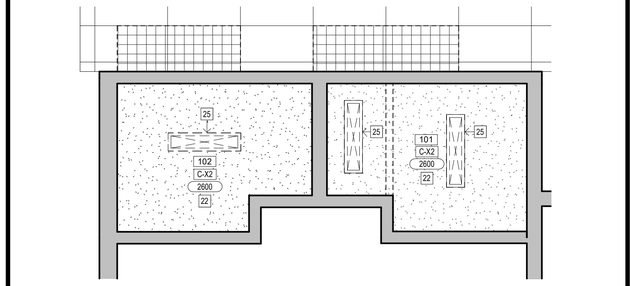
1 A201 PARTIAL DEMO GROUND FLOOR PLAN - SCIENCE LAB

Scale: 1 : 100



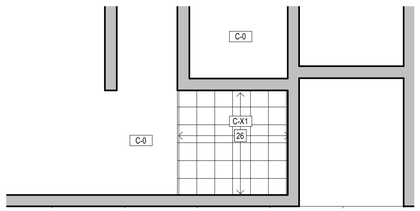
2 A201 PARTIAL DEMO REFLECTED CEILING PLAN - SCIENCE LAB

Scale: 1 : 100



4 A201 PARTIAL DEMO REFLECTED CEILING PLAN - WASHROOMS

Scale: 1 : 50



5 A201 PARTIAL DEMO REFLECTED CEILING PLAN - STORAGE & GYM

Scale: 1 : 50

CEILING NOTES

1. INSTALL ACOUSTIC CEILING TILES C/W WITH T-BAR AND SURFACE MOUNTED LIGHTS (APPROX. 1200 SF) FROM TOP OF LANDING TO NEXT SET OF DOUBLE DOORS IN CORRIDOR AREA
2. MAINTAIN 1980mm MINIMUM HEADROOM ABOVE FLOOR LEVEL ALONG THE RAMP WHOLE RAMP AND NEW STAIR
3. REMOVE AND DISPOSE OF EXISTING ACOUSTIC CEILING TILES. CAREFULLY REMOVE SECTIONS OF EXISTING T-BAR SUSPENSION SYSTEM AS REQUIRED FOR ELECTRICAL SCOPE OF WORK. RE-INSTALL EXISTING T-BAR SUSPENSION SYSTEM AND REWORK AS REQUIRED UPON COMPLETION OF WORK ABOVE CEILING. REPLACE ALL CEILING TILES WITH NEW. PROTECT ANY MECHANICAL / ELECTRICAL DEVICES TO REMAIN.
4. GENERAL CONTRACTOR TO NOTIFY CONSULTANT AT COMMENCEMENT OF CONSTRUCTION REGARDING THE FEASIBILITY OF RAISING THE SUSPENDED ACOUSTIC CEILING TILE ASSEMBLY COMPLETE, BEYOND WHAT IT IS SPECIFIED IN THE DRAWINGS.

CEILING ASSEMBLIES

- C-0 — EXISTING EXPOSED CEILING
- C-X1 — ACOUSTIC CEILING TILE ASSEMBLY WITH EXISTING METAL T-BAR SUSPENSION SYSTEM. REMOVE AS REQUIRED FOR MECH. / ELEC. / STRUC. SCOPE AND RE-INSTALL UPON COMPLETION WITH NEW ACOUSTIC CEILING TILES
- C-X2 — EXISTING GYPSUM CEILING TO BE LEFT UNDISTURBED UNLESS OTHERWISE NOTED
- C-1 — 610 x 1220 ACOUSTIC CEILING TILE WITH PREFINISHED METAL T-BAR SUSPENSION SYSTEM
- C-2 — 16mm GYPSUM WALL BOARD 22mm METAL FURRING CHANNELS @ 400mm O.C. 64mm CARRYING CHANNELS @ 600mm O.C.

CEILING LEGEND

- DENOTES AREAS NOT IN SCOPE
- C-1 — CEILING ASSEMBLY
- XXXX — CEILING HEIGHT ABOVE FINISHED FLOOR
- RECESSED LED LIGHT FIXTURE, REFER TO ELEC. DRAWINGS FOR TYPE AND SIZE
- MECHANICAL SUPPLY AIR DIFFUSER, REFER TO MECHANICAL DRAWINGS FOR TYPE AND SIZE
- RETURN AIR GRILLE, REFER TO MECHANICAL DRAWINGS FOR TYPE AND SIZE
- 1 HR. FIRE RESISTANCE RATING
- HATCHED AREA DENOTES APPROX. AREA OF CEILING REMOVAL AND REWORK.

ROOM LEGEND

101	WASHROOM 1
102	WASHROOM 2
103	CORRIDOR
104	MAIN OFFICE STORAGE
104A	STORAGE ROOM
105	BOYS' CHANGE ROOM
107	SCIENCE CLASSROOM
107A	STORAGE
108	CORRIDOR
164	GYMNASIUM

GENERAL DEMOLITION NOTES

A. DRAWING TO BE READ IN CONJUNCTION W/ ALL OTHER CONTRACT DOCUMENTS INCLUDING ABATEMENT SPECIFICATION. COORDINATE w/ OTHER TRADES PRIOR TO COMMENCING WORK.

B. CARRY OUT ALL DEMOLITION, REMOVAL AND DISPOSAL IN ACCORDANCE WITH APPLICABLE PROVINCIAL AND LOCAL REGULATIONS.

C. EXECUTE DEMOLITION IN AN ORDERLY AND CAREFUL MANNER WITH DUE CONSIDERATION FOR ADJACENT STRUCTURES AND FINISHES.

D. 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.

E. ALL DEMOLITION DEBRIS TO BE REMOVED AND DISPOSED OF PER PROVINCIAL AND LOCAL REGULATIONS.

F. REFER TO MECHANICAL AND ELECTRICAL DRAWINGS AND/OR DEMOLITION NOTES FOR DETAILS OF MECHANICAL AND ELECTRICAL DEMOLITIONS.

G. CONTRACTOR SHALL BE ENTIRELY RESPONSIBLE FOR, AND MAKE GOOD ALL DAMAGE TO ADJACENT FINISHED SURFACES AND ASSEMBLIES.

H. 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.

I. CONTRACTOR TO ENSURE ALL EMERGENCY LIGHT FIXTURES TO REMAIN ALONG EGRESS ROUTES.

J. PATCH AND MAKE GOOD ANY DAMAGED FIRE ASSEMBLIES WITH CONTINUOUS FIRESTOPPING/FIREBLOCKING EQUAL TO THAT OF WALL/FLOOR.

K. 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.

L. CONTRACTOR TO PROVIDE DUST CONTROL AND HOARDING IN ISOLATED DEMOLITION, TYP. FOR EACH LOCATION.

M. CONTRACTOR SHALL PATCH AND MAKE GOOD ALL FLOORS WHERE DISTURBED BY REMOVAL OF WALL ASSEMBLY AND/OR EXISTING FINISHES.

N. 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.

O. IT SHALL BE THE RESPONSIBILITY OF THE GENERAL CONTRACTOR TO REVIEW ALL DESIGNATED SUBSTANCES DOCUMENTATION PRIOR TO COMMENCING WORK.

P. IT SHALL BE THE RESPONSIBILITY OF THE GENERAL CONTRACTOR TO REMOVE ALL LOOSE FURNITURE AND WALL MOUNTED DISPLAYS PRIOR TO CONSTRUCTION START.

Q. ANY MECHANICAL OR ELECTRICAL DEVICES THAT MAY BE TEMPORARILY REMOVED AND REINSTALLED FOR THIS WORK SHALL BE TESTED.

R. LOCATE AND DISCONNECT, CAP AND PLUG ALL GAS, WATER, SEWER, HYDRO, TELEPHONE AND OTHER SERVICES AS REQUIRED.

S. PREPARE ALL THE SURFACES TO BE ACCEPTABLE FOR PROPOSED FINISHING AFTER DEMOLITION WORKS

T. OBTAIN SCHOOL APPROVAL OF DEMOLITION SCHEDULE AND LOCATION OF BINS.

DEMOLITION NOTES

1. REMOVE EXISTING DOOR C/W FRAME AND ALL HARDWARE. PATCH AND MAKE GOOD ALL ADJACENT SURFACES TO REMAIN.
2. REMOVE AND DISPOSE OF EXISTING PLUMBING FIXTURES. DISCONNECT AND CAP ALL SERVICES AS REQ'D. REFER TO MECH. DWGS FOR SCOPE OF WORK..
3. REMOVE AND DISPOSE OF EXISTING WASHROOM PARITIONS C/W DOORS, MISC. STRAPS, ANCHORS, AND FASTENERS.
4. REMOVE AND DISPOSE OF EXISTING CONC. BLOCK WALL FULL HEIGHT C/W TERRAZZO BASE. PATCH AND MAKE GOOD ALL ADJACENT SURFACES TO REMAIN.
5. EXISTING MILLWORK TO BE REMOVED AND RETURNED TO OWNER C/W MISC. ACHORS / BLOCKING USED TO SECURE ITEMS AS REQ'D FOR AREA OF RENOVATION. PATCH AND MAKE GOOD ALL SURFACES TO REMAIN TO ACCEPT PROPOSED FINISHES.
6. REMOVE MILLWORK DISPLAY CASE IN ITS ENTIRETY C/W FASTENERS AND ANCHORS. PLAQUES TO BE CAREFULLY STORED ON SITE AND RE-INSTALLED WITHIN NEW MILLWORK DISPLAY CASE.
7. CAREFULLY REMOVE EXISTING TERRAZZO STAIRS, COMPLETE. PATCH AND REPAIR ADJACENT TERRAZZO SURFACES TO REMAIN.
8. SAWCUT AND REMOVE PORTION OF EXISTING MASONRY WALL ASSEMBLY TO ACCEPT PROPOSED DOOR AND FRAME.
9. EXISTING PLUMBING PIPE AND CLEAN OUT TO REMAIN EXPOSED
10. REMOVE AND DISPOSE OF EXISTING STUDENT BENCH DESK, COMPLETE. REFER TO ELECTRICAL FOR RECEPTACLES REMOVAL.
11. REMOVE EXISTING VCT TILE C/W ADHESIVES. REPAIR MILLWORK AREAS TO MATCH EXISTING AS REQUIRED UPON REMOVAL OF THE FLOOR TILES.
12. PATCH AND MAKE GOOD TO ALL SURFACES INCLUDING MILLWORK WALL PANELING AS REQUIRED BY ELECTRICAL SCOPE OF WORK, REFER TO ELECTRICAL.
13. FLOORING BASE AND MILLWORK TO REMAIN UNDISTURBED AT RAISED PODIUM.
14. EXISTING SECTIONS OF TERRAZZO FLOORING, REQUIRED FOR TRENCHING (REFER TO HATCH SHOWING APPROXIMATE AREAS). PREPARE SURFACE IN ITS ENTIRETY TO RECEIVE PROPOSED FLOORING FINISH.
15. REMOVE ACOUSTIC CEILING TILE C/W TBAR AND RAISE 8" TO ACCOMMODATE REQUIRED HEAD HEIGHT FOR RAMP (MINIMUM HEADROOM REQUIRED BY OBC IS 1980mm).
16. REMOVE EXISTING SHELVING AROUND PIPE.
17. REMOVE AND DISPOSE OF TACKBOARDS C/W FASTENERS AND PATCH AND MAKE GOOD TO ADJACENT SURFACES.
18. EXISTING ELECTRICAL PANEL TO REMAIN.
19. REMOVE EXISTING TERRAZZO FLOORING TO ACCOMMODATE THE NEW RAMP. PATCH AND REPAIR EXISTING TERRAZZO FLOOR FINISH AND BASE TO MATCH EXISTING.
20. REMOVE EXISTING GAS PIPING C/W FLOOR TRENCH LIDS, CAP SERVICES AT TEACHERS DESK, REFER TO MECHANICAL.
21. REMOVE AND DISPOSE OF EXISTING WALL TILE C/W TERRAZO BASE TO ACCOMMODATE NEW DOOR AND FRAME. PATCH AND MAKE GOOD ALL ADJACENT SURFACES TO REMAIN.
22. REMOVE AND DISPOSE OF EXISTING GYPSUM CEILING AND METAL SUPPORT FRAMING IN ITS ENTIRETY, PATCH AND MAKE GOOD ALL ADJACENT SURFACES TO REMAIN TO ACCEPT NEW CEILING.
23. REMOVE AND DISPOSE OF EXISTING LOCKERS. REMOVE TERRAZZO FLOOR FINISH UP TO EXISTING JOINT AT EXISTING TERRAZZO COVE BASE TO REMAIN. PATCH AND MAKE GOOD ALL ADJACENT SURFACES TO REMAIN.
24. WOOD COVE BASE TO BE REMOVED TO ACCOMMODATE NEW RUBBER COVE BASE.
25. REMOVE AND DISPOSE OF EXISTING LIGHT FIXTURE. SEE ELECTRICAL DRAWINGS FOR DETAILS.
26. REMOVE AND DISPOSE OF EXISTING 300X300 CEILING TILE C/W TBAR IN ITS ENTIRETY, PATCH AND MAKE GOOD ALL ADJACENT SURFACES TO REMAIN TO ACCEPT NEW CEILING.

TRENCHING LEGEND

1. ALL TRENCHING DIMENSIONS ARE APPROXIMATE, GC TO SITE VERIFY TRENCHING REQUIRED TO MINIMIZE DEMOLITION OF FLOOR SLAB TYPICAL.

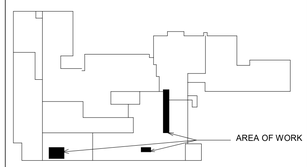
HATCHED AREA DENOTES APPROXIMATE EXTENT TO SAWCUT AND REMOVE PORTION OF CONCRETE FLOOR SLAB. EXCAVATE AND TRENCH AS REQUIRED FOR MECHANICAL, ELECTRICAL, STRUCTURAL, AND ARCHITECTURAL SCOPE. APPROXIMATE EXTENT SHOWN HATCHED.

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 SURFACE AND PREPARE SUBSTRATE TO RECEIVE NEW FLOOR FINISH - REFER TO DETAIL C206/S002 FOR SLAB-ON-GRADE REPAIR DETAIL TYPICAL.

HATCHED AREA DENOTES APPROXIMATE EXTENT OF REMOVAL OF TERRAZZO FLOORING AND CONCRETE SLAB. REFER TO STRUCTURAL DRAWINGS AND DETAILS FOR DEMOLITION SCOPE. CONTRACTOR TO SITE VERIFY THE EXTENT OF REMOVAL.

CLIENT LOGO

WATERLOO REGION DISTRICT SCHOOL BOARD



TRUE NORTH

PROJECT NORTH

No.	ISSUANCE	DATE
1	ISSUED FOR BID & PERMIT	2024-03-13

CLIENT

WATERLOO REGION DISTRICT SCHOOL BOARD

51 ARDELT AVE, KITCHENER, ON N2C 2R5

PROJECT

PRESTON HIGH PS - RAMP AND WASHROOM RENOVATIONS

550 Rose St. Cambridge, ON N3H 2E6

TITLE

DEMOLITON PLANS

WALTERFEDY

KITCHENER | HAMILTON | TORONTO

800.685.1378 walterfedy.com

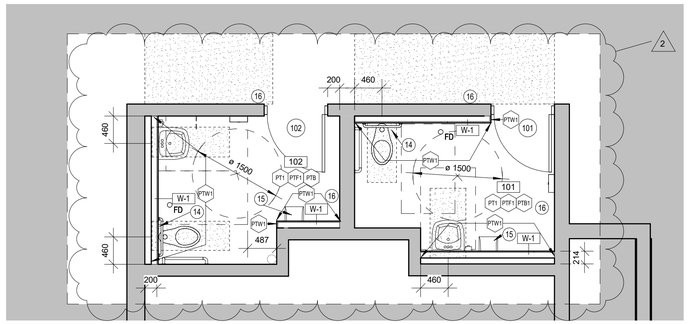
SEAL

ONTARIO ASSOCIATION OF ARCHITECTS
2024.03.07
MARIA JOSE MELO
LICENCE
9327

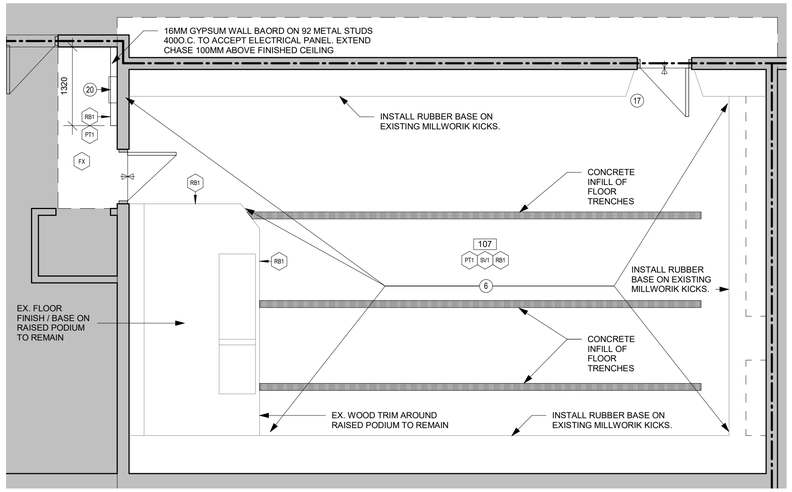
SCALE :	As indicated
DATE :	2024-03-06
WRDSB PROJECT NO :	23-7377-RFT
PROJECT NO :	2023-0705-11
DRAWN BY :	SY/AD
CHECKED BY :	MM

SHEET NO :

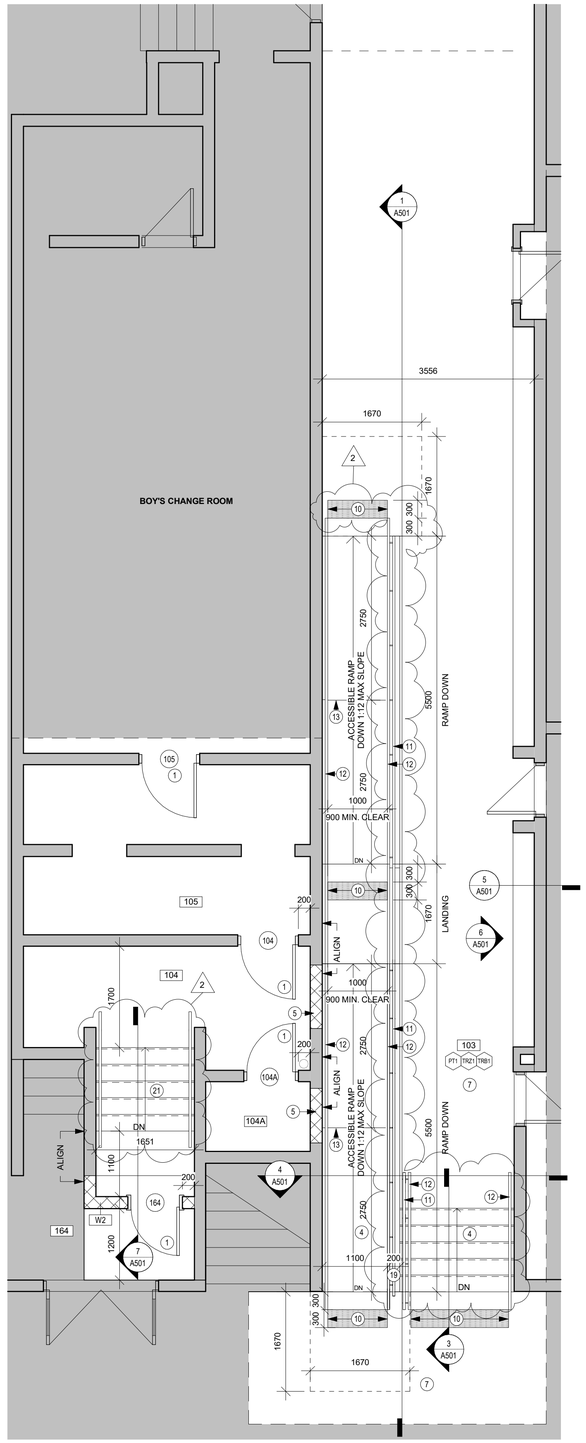
A201



1 A202 — PARTIAL GROUND FLOOR AND FINISHES PLAN - WASHROOMS
Scale: 1 : 50



2 A202 — PARTIAL GROUND FLOOR AND FINISHES PLAN - SCIENCE LAB
Scale: 1 : 50



3 A202 — BARRIER FREE RAMP LAYOUT
Scale: 1 : 50

DRAWING LEGEND

- HATCH DENOTES AREA NOT IN ARCHITECTURAL SCOPE OF WORK - TYP.
- HATCH DENOTES AREA OF DEMOLITION.
- EXISTING WALL(S) TO REMAIN.
- EXISTING WALL(S) TO BE DEMOLISHED.
- NEW WALL - REFER TO WALL ASSEMBLY LEGEND FOR DETAILS. (W-1)
- (0000) DOOR NUMBER
- FD FLOOR DRAIN, REFER TO MECH.
- CO CLEAN OUT DRAIN, REFER TO MECH.
- (1) DEMOLITION NOTE SYMBOL
- (1) RENOVATION NOTE SYMBOL
- FIRE RESISTANCE RATING 0HR
- FIRE RESISTANCE RATING 30 MIN.
- FIRE RESISTANCE RATING 1 HR
- TRAVEL DISTANCE

EXISTING DOOR(S) TO BE DEMOLISHED. | EXISTING DOOR(S) TO REMAIN | NEW DOOR.

GENERAL NOTES

A. ALL WALLS TO EXTEND TO U/S STRUCTURAL DECK UNLESS OTHERWISE NOTED.
B. ASSEMBLY CONSTRUCTION READ FROM TAG SIDE OF ASSEMBLY.
C. ALL DIMENSIONS ARE APPROXIMATE, CONTRACTOR TO SITE VERIFY ALL DIMENSIONS.
D. DIMENSIONING TO/FROM EXISTING CONDITIONS SHALL BE AT FACE OF EXISTING ASSEMBLY.
E. PROVIDE BLOCKING AS REQUIRED TO SUPPORT WALL MOUNTED EQUIPMENT.
F. REFER TO ELECTRICAL DRAWINGS FOR ALL CEILING MOUNTED EQUIPMENT SIZE AND TYPE.
G. SEE MECHANICAL DRAWINGS FOR HVAC EQUIPMENT SIZE AND TYPE.
H. CONTRACTOR TO PROTECT ALL EXISTING INTERIOR FINISHES, MECHANICAL, ELECTRICAL, MILLWORK AND FURNITURE TO REMAIN DURING ALL PHASES OF CONSTRUCTION.
I. FIRESTOP AND SEAL ALL PENETRATIONS THROUGH FIRE RATED ASSEMBLIES EQUAL TO ASSEMBLY RATING.
J. MAKE GOOD ALL CEILING TILE/WALLS/SURFACES AFTER CONSTRUCTION, FIX AND PAINT WALLS DAMAGED BY CONSTRUCTION AND/OR REPLACE CEILING IF DAMAGED BY CONSTRUCTION AT NO EXPENSE TO THE SCHOOL BOARD.
K. REMOVE AND REINSTALL CEILINGS REQ'D TO BE DISTURBED DURING DEMOLITION AND CONSTRUCTION WHERE NEEDED. ADJUST CEILINGS ACCORDINGLY WHERE REQUIRED.
L. IT IS THE RESPONSIBILITY OF THE CONTRACTOR TO REFER TO ASBESTOS AUDIT PRIOR TO DEMOLITION WORKS.
M. EXISTING INSTALLATIONS ABOVE EXISTING LAY-IN (ACOUSTIC) CEILINGS ARE CONSIDERED VISIBLE, ABLE TO BE SEEN, EXISTING CONDITIONS AND FULL ACCESS WILL BE GRANTED TO BIDDERS FOR THOROUGH INSPECTION AT THE MANDATORY SITE VISIT AND OTHER TIMES PRIOR TO BID. SCHEDULE ADDITIONAL VISITS IN WRITING WITH THE OWNER. NO EXTRAS WILL BE GRANTED FOR TRADE FAILURE TO IDENTIFY EXISTING CONDITIONS, OR COORDINATE WITH OTHER DRAWINGS AND TRADES, WHICH AFFECTS PROPER INSTALLATION, MODIFICATION TO EXISTING SYSTEMS, OR SUBSEQUENT REWORK.
O. PROVIDE FIRESTOPPING AROUND LEVEL 1 FLOOR PENETRATIONS AROUND NEW PLUMBING WHERE THE PIPING PASSES THROUGH THE EXISTING FLOOR TO MATCH EXISTING FIRE RATING.

DRAWING NOTES

1. INSTALL HOLLOW METAL DOOR AND FRAME. TO MATCH EXISTING COLOUR.
2. INSTALL NEW BARRIER FREE LAVATORY. REFER TO MECHANICAL.
3. INSTALL PORCELAIN FLOOR TILE AND BASE.
4. NEW CONCRETE RAMP AND STAIRS TO BE FINISHED WITH PORCELAIN TILE. REFER TO STRUCTURAL
5. INFILL EXISTING OPENING WITH CONCRETE BLOCK. PATCH AND PAINT.
6. INSTALL SHEET VINYL FLOOR C/W TRANSITION INTO CORRIDOR AND CLOSET 107A.
7. PATCH TERRAZZO FLOORING BASE TO MATCH EXISTING AS REQUIRED BY FLOOR DEMOLITION.
8. RESERVED
9. RESERVED
10. TACTILE WALKING SURFACE INDICATOR.
11. STAINLESS STEEL GUARD. 38mm STAINLESS PIPE TOP AND BOTTOM RAIL, 38mm STAINLESS PIPE POSTS SECURED TO CONCRETE CURB, 12mm DIAMETER STAINLESS PICKETS @100mm o.c. MAX
12. 38mm STAINLESS PIPE HANDRAIL
13. SAWCUT CONTROL JOINT IN CONCRETE RAMP AND CURB.
14. INSTALL NEW BARRIER FREE WATER CLOSET, FLUSHING CONTROLS TO BE OPERABLE FROM THE TRANSFER SIDE. REFER TO MECHANICAL.
15. HAND DRYER, REFER TO ELECTRICAL. REFER TO TYPICAL DETAILS FOR HEIGHT REQUIREMENTS AND CLEARANCES.
16. PDO AND PUSH TO LOCK, REFER TO ELECTRICAL.
17. PATCH AND MAKE GOOD TO ALL SURFACES INCLUDING MILLWORK WALL PANELING AS REQUIRED BY ELECTRICAL SCOPE OF WORK, REFER TO ELECTRICAL.
18. 25 CONCRETE CHAMFER - TYPICAL.
19. REFER TO STRUCTURAL FOR CONCRETE FINISHING FOR CURB.
20. NEW RECESSED ELECTRICAL PANEL, REFER TO ELECTRICAL
21. GALVANIZED SERVICE STAIR

FINISH LEGEND

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

BASE:
- PTB1 PORCELAIN TILE BASE
- TRB1 TERRAZZO BASE
- RB1 RUBBER BASE
- TRANSITION STRIP

FLOOR:
- PTF1 PORCELAIN FLOOR TILE
- SV1 SHEET VINYL
- TR21 TERRAZZO FLOOR TILE
- FX EXISTING FLOORING TO REMAIN

WALL ASSEMBLIES

- W-X EXISTING WALL ASSEMBLY TO REMAIN.
- W-1 92mm METAL STUDS @ 400mm O.C; 16mm CEMENT BOARD
- W-2 190mm CONCRETE BLOCK

ROOM LEGEND.

101	WASHROOM 1
102	WASHROOM 2
103	CORRIDOR
104	MAIN OFFICE STORAGE
104A	STORAGE ROOM
105	BOYS' CHANGE ROOM
107	SCIENCE CLASSROOM
107A	STORAGE
108	CORRIDOR
164	GYMNASIUM

TRENCHING LEGEND

1. ALL TRENCHING DIMENSIONS ARE APPROXIMATE, GC TO SITE VERIFY TRENCHING REQUIRED TO MINIMIZE DEMOLITION OF FLOOR SLAB TYPICAL.

HATCHED AREA DENOTES APPROXIMATE EXTENT TO 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 SURFACE AND PREPARE SUBSTRATE TO RECEIVE NEW FLOOR FINISH - REFER TO DETAIL C206/S002 FOR SLAB-ON-GRADE REPAIR DETAIL TYPICAL.

HATCHED AREA DENOTES APPROXIMATE EXTENT OF REMOVAL OF TERRAZZO FLOORING AND CONCRETE SLAB. REFER TO STRUCTURAL DRAWINGS AND DETAILS FOR DEMOLITION SCOPE. CONTRACTOR TO SITE VERIFY THE EXTENT OF REMOVAL.

CLIENT LOGO

TRUE NORTH | PROJECT NORTH

No.	ISSUANCE	DATE
1	ISSUED FOR BID & PERMIT	2024-03-13
2	RE-ISSUED FOR PERMIT	2024-05-13

CLIENT
WATERLOO REGION DISTRICT SCHOOL BOARD
51 ARDELT AVE, KITCHENER, ON N2C 2R5

PROJECT
PRESTON HIGH PS - RAMP AND WASHROOM RENOVATIONS
550 Rose St. Cambridge, ON N3H 2E6

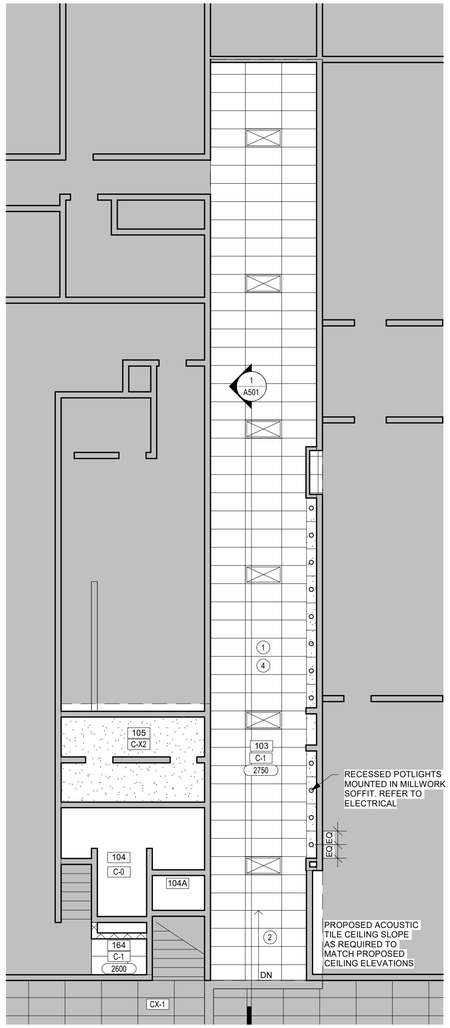
TITLE
ENLARGED FLOOR PLANS, DETAILS

WALTERFEDY
KITCHENER | HAMILTON | TORONTO
800.685.1378 walterfedy.com

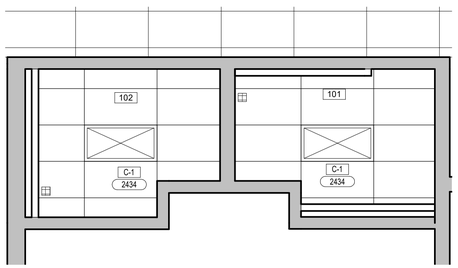
SEAL
ONTARIO ASSOCIATION OF ARCHITECTS
2024.05.13
MARIA JOSE MELO
LICENCE
9327

SCALE :	As indicated
DATE :	2024-03-06
WRDSB PROJECT NO :	23-7377-RFT
PROJECT NO :	2023-0705-11
DRAWN BY :	SY/AD
CHECKED BY :	MM

SHEET NO : A202



3 A203 PARTIAL REFLECTED CEILING PLAN
Scale: 1 : 100



6 A203 PARTIAL REFLECTED CEILING PLAN - WASHROOMS
Scale: 1 : 50

GENERAL NOTES :

A. ALL GRAB BARS INSTALLED SHALL RESIST A VERTICAL OR HORIZONTAL LOAD OF AT LEAST 1.3KN (300lb.)

B. ALL GRAB BARS SHALL HAVE SLIP RESISTANCE SURFACE

C. DISTANCE IN PLAN VIEW FROM CENTRELINE OF TOILET TO WALL SHALL BE 460min.-480max. (18 1/8" - 18 7/8"max.)

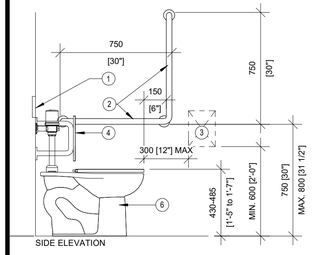
D. GRAB BAR TO BE 30mm - 40mm OUTSIDE DIAMETER

E. GRAB BAR CLEARANCE OF 38mm - 50mm FROM WALL TO INSIDE SURACE OF THE BAR

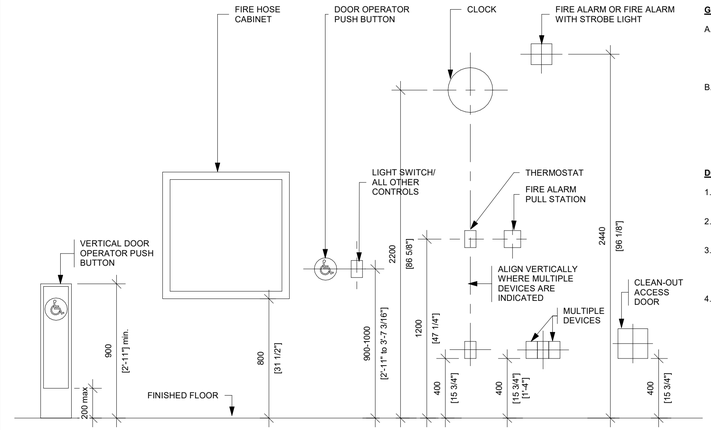
F. FLUSH CONTROLS TO BE ON THE TRANSFER SIDE.

NOTES LEGEND:

1. INFRARED SENSOR TO BE WALL MOUNTED ABOVE GRAB BAR
2. 'L' SHAPED GRAB BAR 750mm (30") LONG HORIZONTAL AND VERTICAL COMPONENTS.
3. LOCATE TOILET TISSUE DISPENSER WITHIN AREA SHOWN BY DASHED LINES. NOT MORE THAN 300mm (12") FROM FRONT EDGE OF TOILET TO DISPENSER.
4. BACK REST AS CAN/CSA-B651-M95 MOUNTED HEIGHT MUST NOT INTERFERE WITH FLUSH VALVE SENSOR.
5. RESERVED.
6. TOILET AS SPECIFIED.



1 A203 TYPICAL B.F. 'L' GRAB BAR ELEVATION
Scale: 1 : 20



GENERAL NOTES:

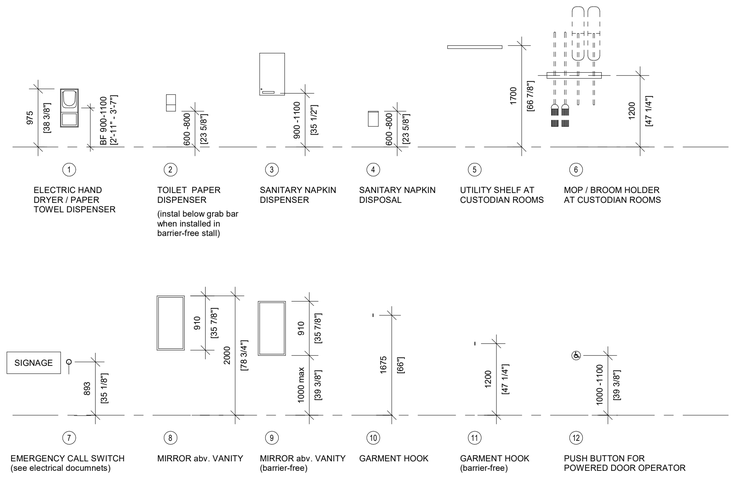
A. CONTROLS ARE TO BE LOCATED SO AS TO BE ADJACENT TO AND CENTRED ON EITHER THE LENGTH OR THE WIDTH OF A CLEAR FLOOR SPCE OF 810mm BY 1370mm.

B. UNLESS OTHERWISE REQUIRED MOUNTING HEIGHTS ARE MEASURED TO CENTRE OF OPERABOLE PORTIONS OF CONTROLS AND OPERATING MECHANISMS SUCH AS DISPENSERS AND RECEPTACLES.

DOOR OPERATOR:

1. MINIMUM 150mm DIAMETER WHERE THE CONTROL IS CIRCULAR IN SHAPE
2. MINIMUM 50mm x 100mm WHERE THE CONTROL IS RECTANGULAR IN SHAPE
3. BE LOCATED NOT LESS THAN 600mm AND NOT MORE THAN 1500mm BEYOND DOOR SWING WHERE DOOR OPENS TOWARDS THE CONTROL
4. CONTAIN A SIGN INCORPORATING THE INTERNATIONAL SYMBOL OF ACCESS

2 A203 TYPICAL FIXTURE MOUNTING HEIGHTS
Scale: 1 : 20



GENERAL NOTES:

A. CONTROLS ARE TO BE LOCATED SO AS TO BE ADJACENT TO AND CENTRED ON EITHER THE LENGTH OR THE WIDTH OF A CLEAR FLOOR SPCE OF 810mm BY 1370mm.

B. UNLESS OTHERWISE REQUIRED MOUNTING HEIGHTS ARE MEASURED TO CENTRE OF OPERABOLE PORTIONS OF CONTROLS AND OPERATING MECHANISMS SUCH AS DISPENSERS AND RECEPTACLES.

4 A203 TYPICAL WASHROOM ACCESSORY MOUNTING HEIGHTS
Scale: 1 : 50

ROOM LEGEND

101	WASHROOM 1
102	WASHROOM 2
103	CORRIDOR
104	MAIN OFFICE STORAGE
104A	STORAGE ROOM
105	BOYS' CHANGE ROOM
107	SCIENCE CLASSROOM
107A	STORAGE
108	CORRIDOR
164	GYMNASIUM

CEILING NOTES

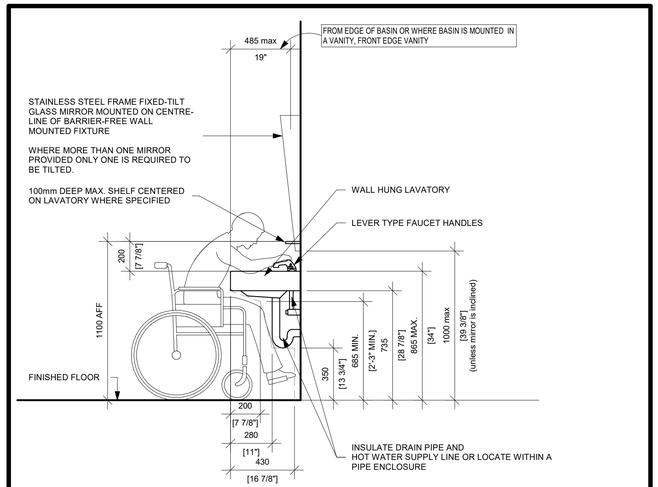
1. INSTALL ACOUSTIC CEILING TILES C/W WITH T-BAR AND SURFACE MOUNTED LIGHTS (APPROX. 1200 SF) FROM TOP OF LANDING TO NEXT SET OF DOUBLE DOORS IN CORRIDOR AREA
2. MAINTAIN 1980mm MINIMUM HEADROOM ABOVE FLOOR LEVEL ALONG THE RAMP WHOLE RAMP AND NEW STAIR
3. REMOVE AND DISPOSE OF EXISTING ACOUSTIC CEILING TILES. CAREFULLY REMOVE SECTIONS OF EXISTING T-BAR SUSPENSION SYSTEM AS REQUIRED FOR ELECTRICAL SCOPE OF WORK. RE-INSTALL EXISTING T-BAR SUSPENSION SYSTEM AND REWORK AS REQUIRED UPON COMPLETION OF WORK ABOVE CEILING. REPLACE ALL CEILING TILES WITH NEW. PROTECT ANY MECHANICAL / ELECTRICAL DEVICES TO REMAIN.
4. GENERAL CONTRACTOR TO NOTIFY CONSULTANT AT COMMENCEMENT OF CONSTRUCTION REGARDING THE FEASIBILITY OF RAISING THE SUSPENDED ACOUSTIC CEILING TILE ASSEMBLY COMPLETE, BEYOND WHAT IT IS SPECIFIED IN THE DRAWINGS.

CEILING ASSEMBLIES

- C-0 — EXISTING EXPOSED CEILING
- C-X1 — ACOUSTIC CEILING TILE ASSEMBLY WITH EXISTING METAL T-BAR SUSPENSION SYSTEM. REMOVE AS REQUIRED FOR MECH. / ELEC. / STRUC. SCOPE AND RE-INSTALL UPON COMPLETION WITH NEW ACOUSTIC CEILING TILES
- C-X2 — EXISTING GYPSUM CEILING TO BE LEFT UNDISTURBED UNLESS OTHERWISE NOTED
- C-1 — 610 x 1220 ACOUSTIC CEILING TILE WITH PREFINISHED METAL T-BAR SUSPENSION SYSTEM
- C-2 — 16mm GYPSUM WALL BOARD 22mm METAL FURRING CHANNELS @ 400mm O.C. 64mm CARRYING CHANNELS @ 600mm O.C.

CEILING LEGEND

- DENOTES AREAS NOT IN SCOPE
- C-1 — CEILING ASSEMBLY
- XXXX — CEILING HEIGHT ABOVE FINISHED FLOOR
- RECESSED LED LIGHT FIXTURE, REFER TO ELEC. DRAWINGS FOR TYPE AND SIZE
- MECHANICAL SUPPLY AIR DIFFUSER, REFER TO MECHANICAL DRAWINGS FOR TYPE AND SIZE
- RETURN AIR GRILLE, REFER TO MECHANICAL DRAWINGS FOR TYPE AND SIZE
- 1 HR. FIRE RESISTANCE RATING
- HATCHED AREA DENOTES APPROX. AREA OF CEILING REMOVAL AND REWORK.



GENERAL NOTES:

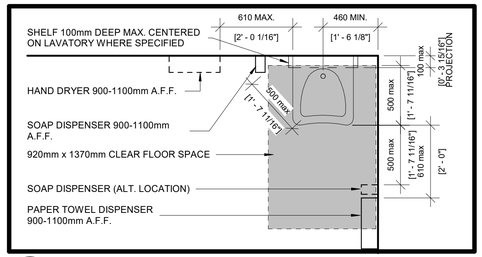
A. CENTERLINE OF LAVATORY AND SIDE WALL NOT LESS THAN 460mm.

B. LAVATORY MAY BE MOUNTED IN A VANITY PROVIDED THE ABOVE CLEARANCES ARE MAINTAINED AND A MINIMUM 920mm WIDE x 1370mm DEEP FLOOR SPACE TO ALLOW FORWARD APPROACH, OF WHICH MAXIMUM 500mm IS LOCATED UNDER LAVATORY IS PROVIDED.

C. CONTROLS ARE TO BE LOCATED SO AS TO BE ADJACENT TO AND CENTERED ON EITHER THE LENGTH OR THE WIDTH OF A CLEAR FLOOR SPACE OF 810mm x 1370mm.

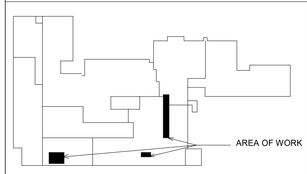
D. UNLESS OTHERWISE REQUIRED MOUNTING HEIGHTS ARE MEASURED TO CENTER OF OPERABLE PORTIONS OF CONTROLS AND OPERATING MECHANISMS SUCH AS DISPENSERS AND RECEPTACLES.

5 A203 ACCESSIBLE LAVATORY MOUNTING HEIGHTS AND DISTANCES
Scale: 1 : 20



7 A203 BARRIER-FREE LAVATORY PLAN
Scale: 1 : 25

CLIENT LOGO



TRUE NORTH PROJECT NORTH

No.	ISSUANCE	DATE
1	ISSUED FOR BID & PERMIT	2024-03-13

CLIENT

WATERLOO REGION DISTRICT SCHOOL BOARD

51 ARDELT AVE, KITCHENER, ON N2C 2R5

PROJECT

PRESTON HIGH PS - RAMP AND WASHROOM RENOVATIONS

550 Rose St. Cambridge, ON N3H 2E6

TITLE

REFLECTED CEILING PLANS AND TYPICAL DETAILS

WALTERFEDY
KITCHENER | HAMILTON | TORONTO
800.685.1378 walterfedy.com

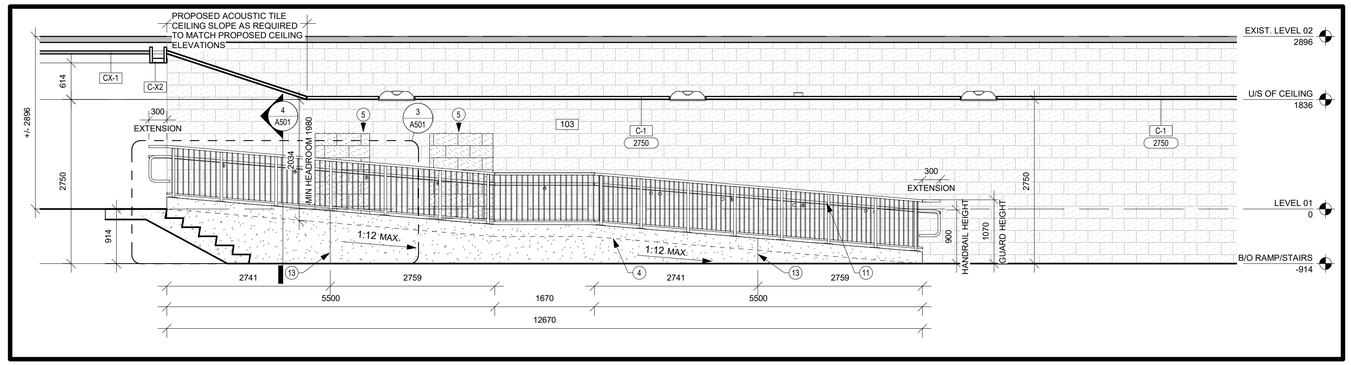
SEAL

ONTARIO ASSOCIATION OF ARCHITECTS
2024.03.07
MARIA JOSE MELO
LICENCE
9327

SCALE :	As indicated
DATE :	2024-03-06
WRDSB PROJECT NO :	23-7377-RFT
PROJECT NO :	2023-0705-11
DRAWN BY :	SY/AD
CHECKED BY :	MM

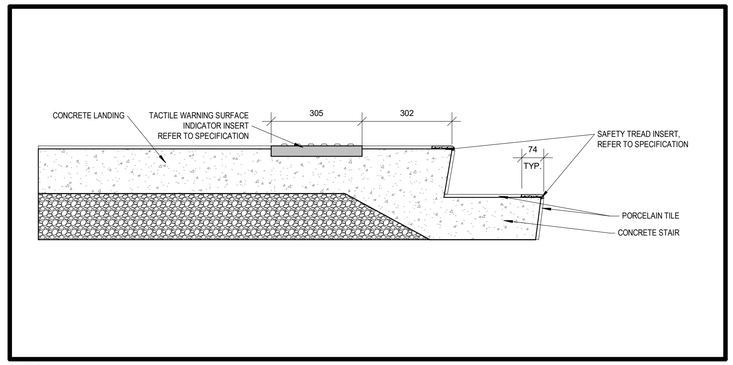
SHEET NO :

A203



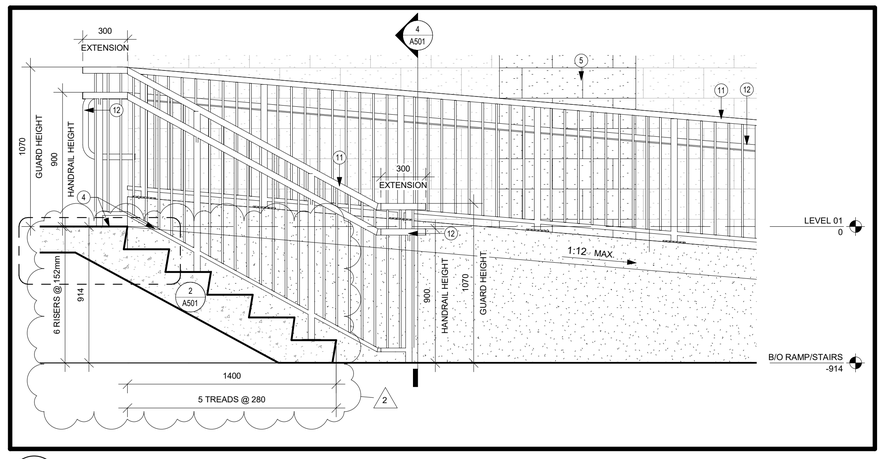
1 A501 SECTION DETAIL - RAMP

Scale: 1 : 50



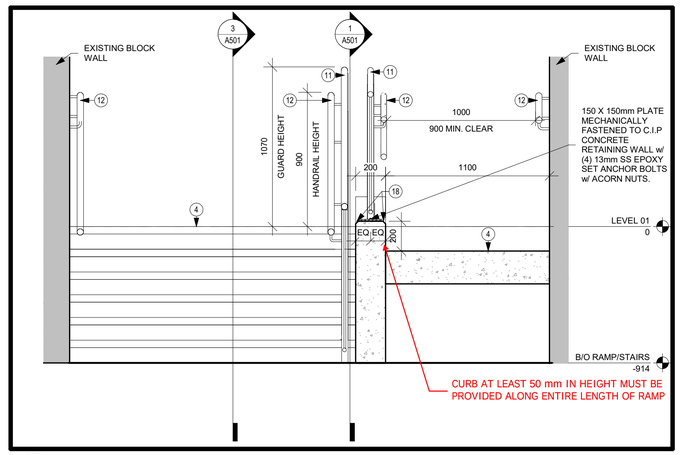
2 A501 TACTILE WARNING PLATE AND STAIR SAFETY TREAD INSERT DETAIL

Scale: 1 : 10



3 A501 SECTION DETAIL - STAIRS

Scale: 1 : 20

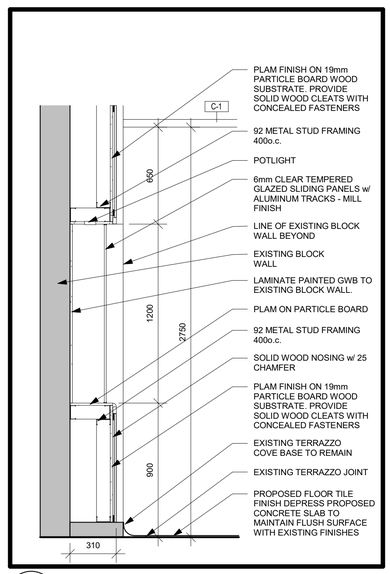


4 A501 CROSS SECTION DETAIL - RAMP

Scale: 1 : 20

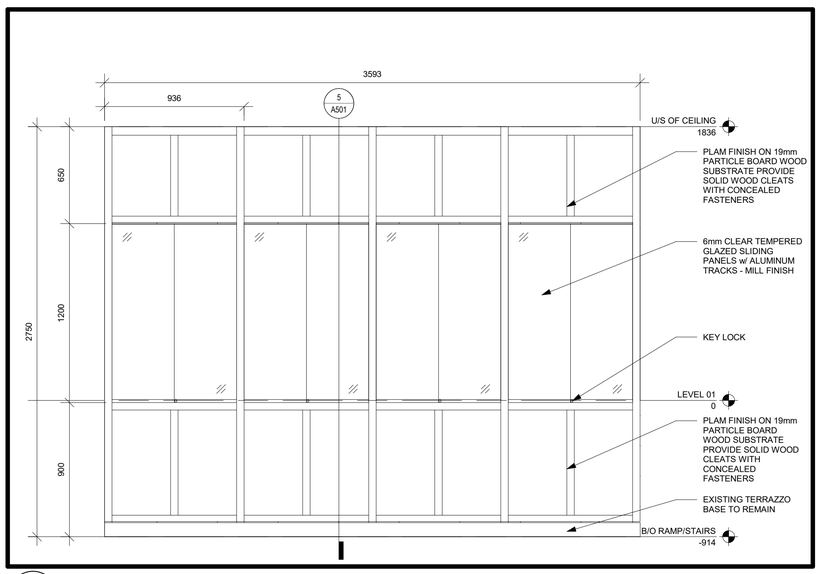
DRAWING NOTES

1. INSTALL HOLLOW METAL DOOR AND FRAME. TO MATCH EXISTING COLOUR.
2. INSTALL NEW BARRIER FREE LAVATORY. REFER TO MECHANICAL.
3. INSTALL PORCELAIN FLOOR TILE AND BASE.
4. NEW CONCRETE RAMP AND STAIRS TO BE FINISHED WITH PORCELAIN TILE. REFER TO STRUCTURAL
5. INFILL EXISTING OPENING WITH CONCRETE BLOCK. PATCH AND PAINT.
6. INSTALL SHEET VINYL FLOOR C/W TRANSITION INTO CORRIDOR AND CLOSET 107A.
7. PATCH TERRAZO FLOORING BASE TO MATCH EXISTING AS REQUIRED BY FLOOR DEMOLITION.
8. RESERVED
9. RESERVED
10. TACTILE WALKING SURFACE INDICATOR.
11. STAINLESS STEEL GUARD. 38mm STAINLESS PIPE TOP AND BOTTOM RAIL, 38mm STAINLESS PIPE POSTS SECURED TO CONCRETE CURB, 12mm DIAMETER STAINLESS PICKETS @100mm o.c. MAX
12. 38mm STAINLESS PIPE HANDRAIL
13. SAWCUT CONTROL JOINT IN CONCRETE RAMP AND CURB.
14. INSTALL NEW BARRIER FREE WATER CLOSET, FLUSHING CONTROLS TO BE OPERABLE FROM THE TRANSFER SIDE. REFER TO MECHANICAL.
15. HAND DRYER, REFER TO ELECTRICAL. REFER TO TYPICAL DETAILS FOR HEIGHT REQUIREMENTS AND CLEARANCES.
16. PDO AND PUSH TO LOCK, REFER TO ELECTRICAL.
17. PATCH AND MAKE GOOD TO ALL SURFACES INCLUDING MILLWORK WALL PANELING AS REQUIRED BY ELECTRICAL SCOPE OF WORK, REFER TO ELECTRICAL.
18. 25 CONCRETE CHAMFER - TYPICAL.
19. REFER TO STRUCTURAL FOR CONCRETE FINISHING FOR CURB.
20. NEW RECESSED ELECTRICAL PANEL, REFER TO ELECTRICAL
21. GALVANIZED SERVICE STAIR



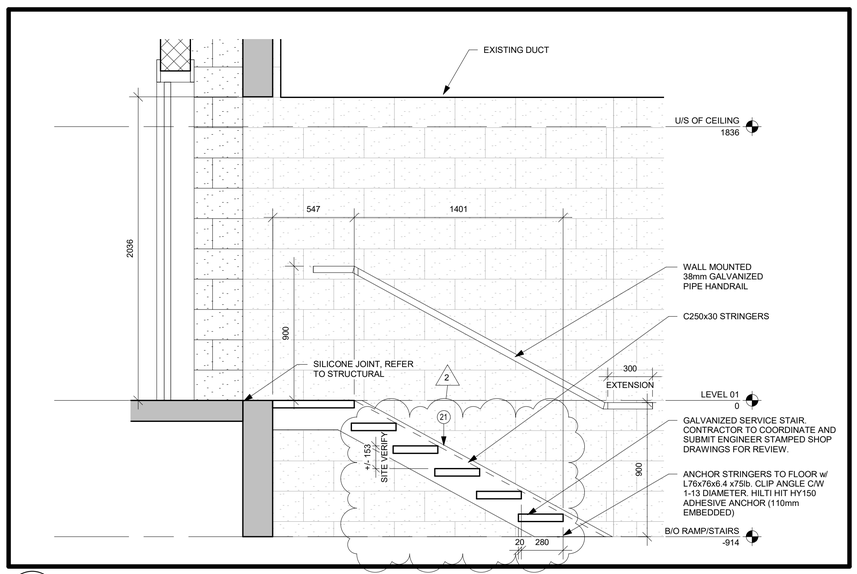
5 A501 SECTION DETAIL - DISPLAY CASE

Scale: 1 : 20



6 A501 INTERIOR ELEVATION - DISPLAY CASE

Scale: 1 : 20



7 A501 SECTION DETAIL - STORAGE STAIRS

Scale: 1 : 20

CLIENT LOGO

No.	ISSUANCE	DATE
1	ISSUED FOR BID & PERMIT	2024-03-13
2	RE-ISSUED FOR PERMIT	2024-05-13

CLIENT

WATERLOO REGION DISTRICT SCHOOL BOARD

51 ARDELT AVE, KITCHENER, ON N2C 2R5

PROJECT

PRESTON HIGH PS - RAMP AND WASHROOM RENOVATIONS

550 Rose St. Cambridge, ON N3H 2E6

TITLE

SECTION DETAILS

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CHECKED BY :	MM

SHEET NO :

A501

A. GENERAL

1. MATERIALS AND WORKMANSHIP SHALL CONFORM TO THE 2012 ONTARIO BUILDING CODE AND ANY APPLICABLE ACTS OF THE AUTHORITY HAVING JURISDICTION.
2. READ THE STRUCTURAL DRAWINGS IN CONJUNCTION WITH THE SPECIFICATIONS, AND ALL OTHER CONTRACT DOCUMENTS.
3. VERIFY ALL STRUCTURAL DIMENSIONS WITH THE CIVIL, ARCHITECTURAL, MECHANICAL AND ELECTRICAL DRAWINGS. REPORT ANY DISCREPANCIES TO THE ENGINEER BEFORE PROCEEDING WITH THE WORK.
4. THE MOST STRINGENT REQUIREMENT GOVERNS WHERE DISCREPANCIES OCCUR WITHIN THE CONTRACT DOCUMENTS, INCLUDING APPLICABLE CODES, STANDARDS AND ACTS.
5. REFER TO THE ARCHITECTURAL, MECHANICAL AND ELECTRICAL DRAWINGS FOR LOCATIONS AND SIZES OF OPENINGS, DEPRESSIONS, GROOVES, CURBS, CHAMFERS, SLOPES, SLEEVES, EQUIPMENT BASES, HOUSEKEEPING PADS, TRENCHES, SUMP PITS AND EMBEDDED ITEMS NOT SHOWN ON THE STRUCTURAL DRAWINGS.
6. OPENINGS AND SLEEVES SHOWN ARE LOCATED AND DIMENSIONED FOR STRUCTURAL DETAILING PURPOSES ONLY. COORDINATE THE EXACT SIZES AND LOCATIONS WITH THE CONSULTANT AND APPLICABLE TRADES DURING CONSTRUCTION. REPORT ANY CONFLICTS TO THE CONSULTANT.
7. DO NOT CUT, DRILL OR ALTER STRUCTURAL MEMBERS WITHOUT PERMISSION FROM THE CONSULTANT, UNLESS NOTED ON THE DRAWINGS.
8. THE STRUCTURAL DRAWINGS ARE FOR THE COMPLETED PROJECT. THE CONTRACTOR IS RESPONSIBLE FOR SITE SAFETY, TEMPORARY WORKS AND STABILITY OF THE STRUCTURE DURING CONSTRUCTION.
9. CONSTRUCTION LOADS SHALL NOT EXCEED THE DESIGN LOADS SHOWN ON THE DRAWINGS.
10. PROVIDE ALL TEMPORARY SHORING, BRACING, HOARDING AND PROTECTION NECESSARY TO COMPLETE THE WORK AND COMPLY WITH APPLICABLE REGULATIONS. TEMPORARY WORKS TO BE DESIGNED AND INSPECTED BY A PROFESSIONAL ENGINEER WHO IS RETAINED BY THE CONTRACTOR.
11. TEMPORARY SHORING IS SHOWN CONCEPTUALLY ON THE STRUCTURAL DRAWINGS WHERE NECESSARY TO PROVIDE DESIGN LOADS FOR DESIGN OF SHORING SYSTEMS, ILLUSTRATE DESIGN INTENT, OR TO INDICATE REQUIREMENTS FOR MAINTAINING STABILITY OF THE STRUCTURE. IT DOES NOT REPRESENT A COMPLETE SHORING SYSTEM, NOR ALL THE TEMPORARY WORKS NECESSARY TO COMPLETE CONSTRUCTION OF THE PROJECT.

B. EXISTING CONDITIONS

1. EXISTING STRUCTURE AND DIMENSIONS SHOWN ON THE DRAWINGS ARE APPROXIMATE, AND ARE PROVIDED TO CONVEY DESIGN INTENT ONLY. THE DESIGN IS BASED ON THE INFORMATION CONTAINED IN THE RECORD DRAWINGS FOR THE EXISTING BUILDINGS, AND ON LIMITED SITE OBSERVATIONS. VERIFY EXISTING CONDITIONS PRIOR TO COMMENCING THE WORK. NOTIFY THE CONSULTANT OF ANY DISCREPANCIES OR CONDITIONS ENCOUNTERED THAT COULD POTENTIALLY AFFECT THE WORK, AND OBTAIN DIRECTION BEFORE PROCEEDING.
2. LOCATE ALL EXISTING BURIED UTILITIES AND STRUCTURES. REFER TO CIVIL, MECHANICAL, AND ELECTRICAL DOCUMENTS FOR APPROXIMATE LOCATION OF ALL PROPOSED AND KNOWN EXISTING SERVICES. REMOVE, RELOCATE OR PROVIDE PROTECTION DURING CONSTRUCTION, AS DIRECTED BY THE CONSULTANT.
3. PROTECT EXISTING STRUCTURES FROM DAMAGE DURING CONSTRUCTION. PATCH AND MAKE GOOD ALL EXISTING BUILDING ELEMENTS DISTURBED OR DAMAGED AS PART OF THE WORK.

C. STRUCTURAL MASONRY

1. PERFORM WORK IN ACCORDANCE WITH CSA A371.
2. LINTELS:
   - 2.1. PROVIDE LINTELS OVER ALL OPENINGS THROUGH MASONRY WALLS SHOWN ON THE ARCHITECTURAL DRAWINGS, AND AS REQUIRED FOR MECHANICAL AND ELECTRICAL TRADES.
   - 2.2. PROVIDE STEEL LINTELS UNLESS NOTED OTHERWISE.
   - 2.3. REFER TO THE STEEL LINTELS FOR NON-LOAD BEARING MASONRY WALLS TABLE FOR LINTEL REQUIREMENTS FOR ALL NON-LOAD BEARING WALLS, UNLESS NOTED OTHERWISE.
   - 2.4. REFER TO THE STRUCTURAL DRAWINGS FOR LOAD BEARING MASONRY WALLS FOR LINTEL REQUIREMENTS FOR ALL LOAD BEARING WALLS, UNLESS NOTED OTHERWISE.

D. DEMOLITION

1. CARRY OUT ALL DEMOLITION, REMOVAL AND DISPOSAL IN ACCORDANCE WITH APPLICABLE PROVINCIAL AND LOCAL REGULATIONS.
2. PROTECT ADJACENT STRUCTURES, FINISHES AND SERVICES FROM DAMAGE DURING DEMOLITION WORK.
3. 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.
4. CONTRACTOR TO VERIFY ALL DIMENSIONS ON SITE AND MAKE MODIFICATIONS TO SUIT EXISTING SITE CONDITIONS.
5. SCAN CONCRETE FOR EMBEDDED CONDUIT OR SERVICES PRIOR TO DEMOLITION/SAW-CUTTING.
6. WHEN PERFORMING SLAB-ON-GRADE AND STAIR REMOVALS, CONTRACTOR SHALL TAKE CARE NOT TO UNDERMINE ADJACENT EXISTING BLOCK WALLS AND SLAB-ON-GRADE. PROVIDE TEMPORARY SHORING AS REQUIRED.
7. REPORT ALL DISCREPANCIES TO THE ENGINEER FOR CONFIRMATION/CLARIFICATION PRIOR TO COMMENCEMENT OF ANY DEMOLITION SCOPE.
8. ALL DEMOLITION DEBRIS TO BE DISPOSED OF OFF SITE.
9. DEMOLITION CONTRACTOR SHALL BE ENTIRELY RESPONSIBLE FOR AND MAKE GOOD ALL DAMAGE TO ADJACENT FINISHED SURFACES AND ASSEMBLIES.

E. MATERIALS

1. STRUCTURAL CONCRETE:
   - 1.1. CONCRETE: CONFORMING TO CSA A23.1 AND PER THE CONCRETE DESIGN PROPERTIES TABLE.
   - 1.2. REINFORCING BARS: CONFORMING TO CSA G30.18, GRADE 400R (OR 400W WHERE WELDING IS REQUIRED). ALL REINFORCING TO BE BLACK STEEL UNLESS NOTED.
   - 1.3. WELDED WIRE REINFORCING: CONFORMING TO ASTM A185/A185M, WITH MINIMUM YIELD STRENGTH OF 450 MPa, OR 386 MPa FOR DIAMETERS LESS THAN MW7.7 (3.1mm).
2. STRUCTURAL STEEL:
   - 2.1. CHANNELS AND ANGLES — CSA-G40.20/G40.21, GRADE 350W
   - 2.2. PLATES, RODS AND BARS — CSA-G40.20/G40.21, GRADE 300W
   - 2.3. STRUCTURAL BOLTS — ASTM A325/A325M
   - 2.4. NUTS AND WASHERS — ASTM A563/A563M AND ASTM F436/436M
   - 2.5. WELDING ELECTRODES — E49XX
3. STRUCTURAL MASONRY:
   - 3.1. CONCRETE MASONRY UNITS: CONFORMING TO CSA 165, 15 MPa MINIMUM COMPRESSIVE STRENGTH AT 28 DAYS.
   - 3.2. MASONRY GROUT: CONFORMING TO CSA 179, 15 MPa MINIMUM COMPRESSIVE STRENGTH AT 28 DAYS, 10mm (3/8") MAXIMUM AGGREGATE SIZE, 250 mm (10") SLUMP.
   - 3.3. MORTAR: CONFORMING TO CSA 179, TYPE S FOR LOAD BEARING WALLS, TYPE N OTHERWISE.
   - 3.4. MASONRY TIES: CONFORMING TO CSA A370.
   - 3.5. REINFORCING BARS: CONFORMING TO CSA G30.18, GRADE 400R (OR 400W WHERE WELDING IS REQUIRED). ALL REINFORCING TO BE BLACK STEEL UNLESS NOTED.
   - 3.6. BED JOINT REINFORCING: LADDER TYPE, SIDE RODS CONFORMING TO ASTM A82, HOT-DIPPED GALVANIZED UNLESS NOTED, TYPE BL BY BLOK-LOK OR APPROVED ALTERNATE.
4. NON-SHRINK GROUT: NON-METALLIC, 35 MPa MINIMUM COMPRESSIVE STRENGTH AT 28 DAYS.

F. FOUNDATIONS AND EARTHWORKS

1. CONFIRM LOCATION OF ALL OVERHEAD AND UNDERGROUND SERVICES PRIOR TO EXCAVATING, AND NOTIFY CONSULTANTS OF ANY CONFLICTS. PROVIDE PROTECTION AS REQUIRED TO EXISTING SERVICES.
2. MATCH EXISTING FOUNDING ELEVATIONS WHERE NEW FOOTINGS ARE CONSTRUCTED ADJACENT TO EXISTING FOUNDATIONS, UNLESS NOTED OTHERWISE.
3. CONSTRUCT FOOTINGS ON UNDISTURBED NATIVE SOIL, WITH A MINIMUM BEARING CAPACITY OF 75 kPa SLS AND 100 kPa ULS. BEARING SURFACES SHALL BE APPROVED BY THE GEOTECHNICAL ENGINEER IMMEDIATELY BEFORE PLACING FOUNDATION CONCRETE.
4. THE LINE OF SLOPE BETWEEN ADJACENT FOOTINGS OR EXCAVATIONS, OR ALONG STEPPED FOOTINGS SHALL NOT EXCEED A RISE OF 7 IN A RUN OF 10. MAXIMUM STEP SHALL BE 600 (2'-0").
5. KEEP EXCAVATIONS FREE OF WATER.
6. PROTECT EXISTING ADJACENT STRUCTURES AND SUBGRADE FROM DAMAGE OR DISTURBANCE DURING CONSTRUCTION. PROVIDE UNDERPINNING OR TEMPORARY SHORING WHERE NECESSARY TO PERFORM THE WORK.
7. USE HAND-OPERATED EQUIPMENT ONLY TO COMPACT SUBGRADE WITHIN 1800 (6'-0") OF FOUNDATION WALLS. USE OF HEAVY EQUIPMENT WITHIN THIS DISTANCE IS NOT PERMITTED.
8. EARTH-FORMED FOUNDATIONS ARE NOT PERMITTED UNLESS SHOWN ON THE DRAWINGS OR APPROVED BY THE CONSULTANT IN WRITING. PROVIDE MINIMUM 75 (3") COVER TO REINFORCING FOR EARTH FORMED SURFACES.
9. STOCKPILE EXCAVATED MATERIAL ON-SITE AS DIRECTED, AND REMOVE AND DISPOSE OF ALL MATERIAL THAT IS CONTAMINATED, UNSUITABLE FOR RE-USE, OR IN EXCESS OF THE WORK.

G. GENERAL REVIEW

1. WALTERFEDY WILL PERFORM PERIODIC FIELD REVIEWS OF A REPRESENTATIVE SAMPLE OF THE WORK TO CONFIRM THAT THE WORK FOR WHICH WE ARE RESPONSIBLE IS IN GENERAL CONFORMANCE WITH THE DRAWINGS AND SPECIFICATIONS.
2. GENERAL REVIEW OF WORK DESIGNED BY OTHER PROFESSIONAL ENGINEERS (STAMPED SHOP DRAWINGS) IS TO BE PERFORMED BY THE ENGINEER RESPONSIBLE FOR THAT DESIGN. SUBMIT FIELD REVIEW REPORTS TO THE CONSULTANT.
3. COOPERATE WITH CONSULTANTS AND INDEPENDENT INSPECTION AND TESTING AGENCIES RETAINED TO PERFORM FIELD REVIEW. PROVIDE ACCESS AND ASSISTANCE AS REQUIRED FOR THE SAFE PERFORMANCE OF THEIR WORK.
4. PROVIDE REASONABLE NOTICE FOR FIELD REVIEWS AND INSPECTIONS OF COMPLETED WORK, PRIOR TO CONCEALING OR ATTACHING TO THE WORK.
5. FIELD REVIEW DOES NOT RELIEVE THE CONTRACTOR OF THEIR RESPONSIBILITY FOR ACCURACY, QUALITY AND CONFORMANCE OF THE WORK WITH THE CONTRACT DOCUMENTS.

H. SUBMITTALS

1. SUBMIT THE FOLLOWING ERECTION AND FABRICATION SHOP DRAWINGS TO THE CONSULTANT FOR REVIEW PRIOR TO FABRICATION:
   - 1.1. CONCRETE REINFORCING BARS
   - 1.2. CONCRETE MIX DESIGN
   - 1.3. ALL TESTING AND FIELD REPORTS PREFORMED BY OTHERS
2. SHOP DRAWINGS WILL BE REVIEWED SOLELY TO ASCERTAIN GENERAL CONFORMANCE WITH THE DESIGN CONCEPT. THE CONSULTANT'S REVIEW DOES NOT RELIEVE THE CONTRACTOR OF RESPONSIBILITY FOR ERRORS AND OMISSIONS IN THE SHOP DRAWING OR RESPONSIBILITY FOR MEETING THE REQUIREMENTS OF THE CONTRACT DOCUMENTS.

I. TESTING AND INSPECTION

1. AN INDEPENDENT TESTING AND INSPECTION COMPANY WILL BE RETAINED ON BEHALF OF THE OWNER TO PERFORM QUALITY ASSURANCE VERIFICATION OF THE WORK. COORDINATE TESTING AND INSPECTION OF THE WORK, AND ENSURE COPIES OF ALL INSPECTION REPORTS ARE DISTRIBUTED TO THE CONSULTANT AND OWNER IN A TIMELY MANNER.
2. COOPERATE WITH CONSULTANTS AND INDEPENDENT INSPECTION AND TESTING AGENCIES RETAINED TO PERFORM FIELD REVIEW. PROVIDE ACCESS AND ASSISTANCE AS REQUIRED FOR THE SAFE PERFORMANCE OF THEIR WORK.
3. TO ENSURE THAT FIELD REVIEWS OCCUR AT THE APPROPRIATE STAGE OF THE CONSTRUCTION, THE CONTRACTOR SHALL PROVIDE WALTERFEDY WITH A CONSTRUCTION SCHEDULE PRIOR TO STARTING THE WORK, PERIODIC PROGRESS UPDATES, AND AT LEAST 48 HOURS NOTICE FOR SITE VISITS FOR THE FOLLOWING WORK:
   - 3.1. PLACEMENT OF INSULATION AND REBAR PRIOR TO PLACING CONCRETE.
4. TESTING AND INSPECTION SHALL BE PROVIDED FOR THE FOLLOWING:
   - 4.1. SUBGRADE BEARING CAPACITY
   - 4.2. SUBGRADE COMPACTION
   - 4.3. REINFORCING STEEL PLACEMENT
   - 4.4. PLASTIC CONCRETE PROPERTIES
   - 4.5. CONCRETE COMPRESSIVE STRENGTH
5. PROVIDE REASONABLE NOTICE FOR FIELD REVIEWS AND INSPECTIONS OF COMPLETED WORK, PRIOR TO CONCEALING OR ATTACHING TO THE WORK.
6. FIELD REVIEW, TESTING AND INSPECTION DOES NOT RELIEVE THE CONTRACTOR OF THEIR RESPONSIBILITY FOR ACCURACY, QUALITY AND CONFORMANCE OF THE WORK WITH THE CONTRACT DOCUMENTS.

J. STRUCTURAL MASONRY

1. PERFORM WORK IN ACCORDANCE WITH CSA A371.
2. REFER TO THE ARCHITECTURAL DRAWINGS FOR NON-LOAD BEARING MASONRY PARTITIONS NOT SHOWN ON THE STRUCTURAL DRAWINGS. PROVIDE MINIMUM REINFORCING AND LINTELS IN NON-LOAD BEARING MASONRY WALLS PER SCHEDULES ON THE STRUCTURAL DRAWINGS. THESE WALLS AND LINTELS ARE NOT DETAILED ON THE STRUCTURAL DRAWINGS.
3. PROVIDE CONTROL JOINTS PER THE SPECIFICATION, AND IS INDICATED ON THE ARCHITECTURAL DRAWINGS. MAXIMUM SPACING OF CONTROL JOINTS TO BE 7650 (25'-0") UNLESS NOTED OTHERWISE.
4. FILL MASONRY UNITS WITH GROUT AS FOLLOWS:
   - 4.1. ALL CELLS CONTAINING REINFORCING.
   - 4.2. ALL CELLS CONTAINING DOWELS, ANCHORS, OR OTHER STRUCTURAL CONNECTORS.
   - 4.3. ALL CELLS IN PARAPETS.
   - 4.4. CELLS BELOW BEARING CONNECTIONS PER STRUCTURAL DRAWINGS.
   - 4.5. AS INDICATED ON THE STRUCTURAL DRAWINGS.
5. PROVIDE CLEANOUTS AT BASE OF WALL LIFTS TO VERIFY PROPER PLACEMENT OF GROUT.
6. PLACE GROUT IN MAXIMUM 3000 (10'-0") LIFTS. THE MAXIMUM LIFT HEIGHT IS REDUCED TO 1500 (5'-0") IF NO CLEANOUTS ARE PROVIDED.
7. TERMINATE GROUT PLACEMENT 25 (1") BELOW TOP OF UPPER UNIT FOR HORIZONTAL CONSTRUCTION JOINTS IN GROUTED BLOCK CELLS. HORIZONTAL CONSTRUCTION JOINTS ARE REQUIRED WHERE GROUT PLACEMENT IS INTERRUPTED FOR A DURATION OF GREATER THAN 1 HOUR.
8. BUILD MASONRY TIGHTLY INTO WEBS OF STEEL BEAMS BEARING ON WALLS, WEBS OF STEEL COLUMNS AND AROUND JOIST SHOES, UNLESS NOTED OTHERWISE.
9. ENSURE THAT EMBEDDED ITEMS DO NOT AFFECT THE STRUCTURAL INTEGRITY OF THE MASONRY WALL OR IMPACT PLACEMENT OF REINFORCING.
10. PROVIDE TEMPORARY BRACING TO MAINTAIN STABILITY OF WALLS UNTIL HORIZONTAL SUPPORTING ELEMENTS ARE IN-PLACE.
11. BEARING SUPPORTS:
    - 11.1. PROVIDE MINIMUM 200 (8") DEEP SOLID OR GROUT-FILLED MASONRY UNITS BELOW MASONRY, CONCRETE AND STEEL LINTELS AT BEARING LOCATIONS, PROJECTING AT LEAST 150 (6") BEYOND EDGE OF BEARING PLATES.
12. NON-LOAD BEARING WALLS:
    - 12.1. PROVIDE THE MINIMUM REINFORCING SHOWN IN THE NON-LOAD BEARING MASONRY WALL REINFORCING TABLE.
    - 12.2. PROVIDE ADDITIONAL REINFORCING AS SHOWN IN THE DRAWINGS AND TYPICAL DETAILS.
13. MASONRY REINFORCING:
    - 13.1. PROVIDE MASONRY REINFORCING WHERE INDICATED ON THE DRAWINGS, TYPICAL DETAILS AND SPECIFICATIONS.
    - 13.2. PROVIDE REINFORCING BAR EMBEDMENT AND LAP SPLICES IN ACCORDANCE WITH CSA, AND NOT LESS THAN THE VALUES IN THE MASONRY REINFORCING EMBEDMENT AND LAP SPLICE LENGTHS TABLE.
    - 13.3. ALL TENSION LAP SPLICES ARE CLASS B UNLESS NOTED OTHERWISE.
    - 13.4. LAP BED JOINT REINFORCING MINIMUM 300 (12").
    - 13.5. PROVIDE 1-15M VERTICAL BAR EACH SIDE OF CONTROL JOINTS, FULL HEIGHT.
    - 13.6. KEEP CELLS CONTAINING REINFORCING FREE FROM MORTAR DROPPINGS.
14. LINTELS:
    - 14.1. PROVIDE LINTELS OVER ALL OPENINGS THROUGH MASONRY WALLS SHOWN ON THE ARCHITECTURAL DRAWINGS, AND AS REQUIRED FOR MECHANICAL AND ELECTRICAL TRADES.
    - 14.2. PROVIDE STEEL LINTELS UNLESS NOTED OTHERWISE. REFER TO ARCHITECTURAL DRAWINGS.
    - 14.3. REFER TO THE STEEL LINTELS FOR NON-LOAD BEARING MASONRY WALLS TABLE FOR LINTEL REQUIREMENTS FOR ALL NON-LOAD BEARING WALLS, UNLESS NOTED OTHERWISE.
15. BOND BEAMS:
    - 15.1. PROVIDE BOND BEAMS IN ALL WALLS PER THE BOND BEAMS IN CONCRETE MASONRY UNIT WALLS TABLE, AND WHERE INDICATED ON THE STRUCTURAL DRAWINGS.
    - 15.2. EXTEND BOND BEAMS 200 (8") BEYOND OPENINGS WHERE NOT CONTINUOUS, UNLESS NOTED OTHERWISE.

K. STRUCTURAL CONCRETE

1. PERFORM WORK IN ACCORDANCE WITH CSA A23.1 AND CSA A23.3.
2. DO NOT LOAD CONCRETE ELEMENTS UNTIL DESIGN STRENGTH HAS BEEN REACHED.
3. SUPPLY AND PLACEMENT:
   - 3.1. CONCRETE IS SPECIFIED UNDER THE PERFORMANCE ALTERNATIVE,AND RESPONSIBILITIES OF THE CONTRACTOR AND CONCRETE SUPPLIER, ARE AS DEFINED IN CSA A23.1 TABLE 5. THE CONTRACTOR SHALL WORK WITH THE SUPPLIER TO ESTABLISH THE CONCRETE MIX PROPERTIES TO MEET PERFORMANCE CRITERIA FOR PLASTIC AND HARDENED CONCRETE, CONSIDERING THE CONTRACTOR'S CRITERIA FOR CONSTRUCTION AND PLACEMENT AND THE SPECIFIED PERFORMANCE CRITERIA.
   - 3.2. PROTECT CONCRETE FROM FREEZING AND HOT WEATHER IN ACCORDANCE WITH THE COLD AND HOT WEATHER CONCRETE PROCEDURES OF CSA A23.1.
   - 3.3. PLACE CONCRETE IN A MANNER TO MINIMIZE SEGREGATION AND VIBRATE AFTER PLACEMENT.
4. REFER TO TYPICAL DETAILS FOR DETAILING OF REINFORCING, JOINTS AND DIMENSIONS.
5. REINFORCING:
   - 5.1. DETAIL AND PLACE REINFORCING STEEL IN ACCORDANCE WITH CSA A23.1, CSA A23.3 AND THE REINFORCING STEEL INSTITUTE OF CANADA MANUAL OF STANDARD PRACTICE.
   - 5.2. PROVIDE REINFORCING BAR EMBEDMENT AND LAP SPLICES IN ACCORDANCE WITH CSA A23.3, AND NOT LESS THAN THE VALUES IN THE CONCRETE REINFORCING EMBEDMENT AND LAP SPLICE LENGTHS TABLE.
   - 5.3. PROVIDE LAP SPLICES FOR WELDED WIRE REINFORCEMENT AS FOLLOWS:

SPACING	MINIMUM LAP
50x50 (2x2)	250 (10")
100x100 (4x4)	350 (14")
150x150 (6x6)	500 (18")

   - 5.4. ALL TENSION LAP SPLICES ARE CLASS B UNLESS NOTED OTHERWISE.
   - 5.5. PROVIDE DOWELS OF SAME SIZE AND SPACING WHERE REINFORCING IS SPLICED, AND AT FOUNDATIONS, UNLESS NOTED OTHERWISE.
   - 5.6. DOWEL EMBEDMENT SHALL BE THE GREATER OF A STRAIGHT TENSION EMBEDMENT OR 600 (2'-0"), UNLESS NOTED OTHERWISE. DOWELS FOR FOOTINGS AND PILE CAPS SHALL HAVE STANDARD HOOKS AND EXTEND TO THE BOTTOM MAT OF REINFORCING BARS, UNLESS NOTED OTHERWISE.
   - 5.7. DETAIL REINFORCING IDENTIFIED AS CONTINUOUS WITH CLASS B TENSION LAP SPLICES, TYPICAL CORNER BARS AT CORNERS AND INTERSECTIONS OF SIMILAR ELEMENTS, AND TERMINATE WITH STANDARD HOOKS.
   - 5.8. REINFORCING LENGTHS, QUANTITIES, SPACING AND SIZES SHOWN IN TYPICAL DETAILS ARE MINIMUM REQUIREMENTS, UNLESS NOTED OTHERWISE.
   - 5.9. FABRICATE AND INSTALL REINFORCING USED WITH COUPLERS AND END ANCHORS IN ACCORDANCE WITH MANUFACTURER'S REQUIREMENTS.
   - 5.10. TIE AND SECURE ALL REINFORCING IN PLACE USING PURPOSE MADE ACCESSORIES, WITH MAXIMUM SPACING 1200 (48") BETWEEN SUPPORT POINTS, IN ORDER ACHIEVE SPECIFIED COVER AND MAINTAIN POSITION DURING CONCRETE PLACEMENT. PROVIDE SIDE CHAIRS IN ALL VERTICAL ELEMENTS.
   - 5.11. REINFORCING STEEL SHALL BE FREE OF ALL DIRT, FORM OIL, SIGNIFICANT CORROSION, GREASE, AND OTHER DELETERIOUS MATERIALS PRIOR TO PLACING CONCRETE.
   - 5.12. DO NOT FIELD-BEND OR FIELD-CUT REINFORCING STEEL UNLESS DETAILED ON THE DRAWINGS OR APPROVED BY THE CONSULTANT.
6. CONSTRUCTION AND CONTROL JOINTS:
   - 6.1. JOINT LOCATIONS SHALL BE REVIEWED AND APPROVED BY THE CONSULTANT UNLESS SHOWN ON THE STRUCTURAL DRAWINGS.
   - 6.2. HORIZONTAL JOINTS ARE ONLY PERMITTED IN COLUMNS, SLABS, BEAMS, AND WALLS WHERE SHOWN.
   - 6.3. LOCATE VERTICAL JOINTS AT MID-SPAN OF BEAMS AND SLABS.
   - 6.4. LOCATE VERTICAL JOINTS WITHIN ONE-THIRD SPAN SUPPORTS FOR FOUNDATION WALLS NOT SUPPORTED ON STRIP FOOTINGS.
   - 6.5. PROVIDE VERTICAL CONTROL JOINTS IN FOUNDATION WALLS SPACED AT 30000 (100'-0") ON CENTER MAXIMUM AND AS SHOWN ON THE DRAWINGS AND TYPICAL DETAILS. ALIGN WITH MASONRY CONTROL JOINT LOCATIONS, REFER TO ARCHITECTURAL DRAWINGS.
   - 6.6. PROVIDE CONTROL JOINTS IN SLABS-ON-GRADE AND UNBONDED TOPPING SLABS SPACED AT 3750 (12'-0") ON CENTER MAXIMUM AND AS SHOWN ON THE DRAWINGS AND TYPICAL DETAILS.
7. OPENINGS, SLEEVES AND EMBEDDED CONDUIT:
   - 7.1. FORM SLEEVE OPENINGS IN WALLS AND SLABS REQUIRED BY OTHER TRADES PRIOR TO POURING CONCRETE. DO NOT CUT OPENINGS IN STRUCTURAL MEMBERS WITHOUT ENGINEER'S APPROVAL.
   - 7.2. VERTICAL OR HORIZONTAL SLEEVES ARE NOT PERMITTED THROUGH BEAMS OR COLUMNS UNLESS SHOWN ON THE STRUCTURAL DRAWINGS OR REVIEWED AND APPROVED BY THE CONSULTANT.
   - 7.3. OPENINGS ARE NOT PERMITTED IN COLUMN STRIPS OF FLAT SLABS (WITH/WITHOUT DROP PANELS), EXCEPT PER THE TYPICAL DETAILS, UNLESS SHOWN ON THE STRUCTURAL DRAWINGS OR REVIEWED AND APPROVED BY THE CONSULTANT.
8. COVER:
   - 8.1. PROVIDE MINIMUM CONCRETE COVER TO REINFORCING AS PER THE MINIMUM REQUIREMENTS OF CSA A23.1 AND CSA S413.
   - 8.2 PROVIDE CONCRETE COVER TO REINFORCING STEEL CORRESPONDING TO THE GREATEST APPLICABLE VALUE AS LISTED BELOW [AS LISTED IN THE TYPICAL CONCRETE COVER TABLE].

A.	CONCRETE CAST AGAINST AND PERMANENTLY EXPOSED TO EARTH	75mm (3")
B.	CONCRETE CAST IN FORMS (NOT EXPOSED TO CHLORIDES, CHEMICALS OR WEATHER)	
a.	SLAB TOP BARS	25mm (1")
b.	SLAB BOTTOM BARS	25mm (1")
c.	PIERS AND COLUMNS, TO TIES	40mm (1-1/2")
d.	WALLS (EXPOSED TO FIRE BOTH SIDES)	50mm (2")
e.	WALLS	25mm (1")
f.	MISCELLANEOUS INTERIOR CONCRETE NOT LISTED ABOVE	40mm (1-1/2")
g.	MISCELLANEOUS INTERIOR CONCRETE NOT LISTED ABOVE	60mm (2-1/2")

9. REPAIR ANY DEFECTS IN HARDENED CONCRETE USING APPROVED METHODS, AND OBTAIN CONSULTANT'S APPROVAL OF FINISHED REPAIR PRIOR TO BACKFILLING OR COVERING.

L. STRUCTURAL STEEL

1. PERFORM WORK IN ACCORDANCE WITH CSA-S16 AND THE CISC CODE OF STANDARD PRACTICE.
2. CONNECTIONS ARE SHOWN ON THE STRUCTURAL DRAWINGS TO INDICATE DESIGN INTENT. ALL CONNECTIONS ARE BEARING TYPE WITH A MINIMUM OF 2-19 (3/4") ⌀ BOLTS UNLESS NOTED OTHERWISE.
3. DESIGN CONNECTIONS FOR FORCES INDICATED ON THE STRUCTURAL DRAWINGS. WHERE CONNECTION FORCES ARE NOT PROVIDED, DESIGN CONNECTIONS FOR THE FOLLOWING FORCES:
   - 3.1. FACTORED SHEAR FORCE OF 50% OF THE TOTAL UNIFORMLY DISTRIBUTED FACTORED LOAD FOR LATERALLY SUPPORTED BEAMS LISTED IN THE BEAM LOAD TABLES OF THE CISC HANDBOOK OF STEEL CONSTRUCTION FOR END CONNECTIONS OF SIMPLY SUPPORTED NON-COMPOSITE BEAMS.
4. PROVIDE 50 (2") NON-SHRINK, NON-METALLIC GROUT UNDER BASE PLATES UNLESS NOTED OTHERWISE.
5. REFER TO ARCHITECTURAL DRAWINGS FOR STAIRS, LADDERS, HANDRAILS, PLATFORMS, AND OTHER ELEMENTS NOT DETAILED ON THE STRUCTURAL DRAWINGS.
6. PROVIDE FIRE PROTECTION FOR STRUCTURAL STEEL IN ACCORDANCE WITH THE ARCHITECTURAL REQUIREMENTS. PROVIDE COMPATIBLE COATINGS OR SURFACE PREPARATION FOR STEEL MEMBERS TO FIRE-SPRAYED OR COATED WITH INTUMESCENT PAINT.
7. ALL BOLTS ARE TO BE INSTALLED SNUG-TIGHT, AS DEFINED IN CSA S16.
8. GRIND SMOOTH ALL WELDS AND FLAME-CUT EDGES EXPOSED TO VIEW.

NON-LOAD BEARING MASONRY WALL REINFORCING

WALL THICKNESS	LOCATION	VERTICAL REINF.	SPACING	HORIZONTAL REINF.
90	INTERIOR PARTITION	N/A	N/A	BLOK-LOK BL-10 X-HEAVY @ 400
140	INTERIOR PARTITION	1-10M	600	BLOK-LOK BL-10 X-HEAVY @ 400
190	INTERIOR PARTITION	1-15M	1200	BLOK-LOK BL-10 STD @ 200

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

TABLE M4: MASONRY REINFORCING EMBEDMENT AND LAP SPLICE LENGTHS

BAR SIZE	VERTICAL REINFORCEMENT		HORIZONTAL REINFORCEMENT	
	TENSION EMBEDMENT	TENSION LAP	TENSION EMBEDMENT	TENSION LAP
10M	575mm (23")	750mm (30")	750mm (30")	950mm (38")
15M	800mm (32")	1050mm (42")	1050mm (42")	1350mm (54")
20M	975mm (39")	1275mm (51")	1275mm (51")	1650mm (66")
25M	1575mm (63")	2050mm (82")	2050mm (82")	2650mm (106")

NOTES:
1. BAR DIAMETER NOT TO EXCEED 25M PER CSA S304-14.

TABLE M2: BOND BEAMS IN CONCRETE MASONRY UNIT WALLS

WALL TYPE	LOCATION	HEIGHT	REINFORCING (PER COURSE)
ALL	BELOW ALL OPENINGS	1 COURSE	1-10M
	ABOVE ALL PIPES GREATER THAN 100 (4") DIAMETER THROUGH WALL	1 COURSE	1-10M

NOTES:
1. REFER TO STRUCTURAL MASONRY GENERAL NOTES.

CONCRETE REINFORCING EMBEDMENT AND LAP SPLICE LENGTHS

CONCRETE STRENGTH / BAR SIZE	MINIMUM TENSION EMBEDMENT 25MPa	MINIMUM TENSION EMBEDMENT 30MPa	MINIMUM TENSION EMBEDMENT 35MPa	MINIMUM COMPRESSION EMBEDMENT	MINIMUM TENSION LAP SPLICE 25MPa	MINIMUM TENSION LAP SPLICE 30MPa	MINIMUM TENSION LAP SPLICE 35MPa	MINIMUM COMPRESSION LAP SPLICE
TOP BARS								
10M	400mm (16")	375mm (15")	350mm (14")	250mm (10")	550mm (22")	500mm (20")	450mm (18")	350mm (14")
15M	600mm (24")	550mm (22")	525mm (21")	350mm (14")	775mm (31")	700mm (28")	650mm (26")	500mm (20")
20M	800mm (32")	750mm (30")	700mm (28")	400mm (16")	1025mm (41")	925mm (37")	850mm (34")	600mm (24")
25M	1200mm (48")	1100mm (44")	1025mm (41")	500mm (20")	1550mm (62")	1425mm (57")	1325mm (53")	750mm (30")
30M	1450mm (58")	1225mm (49")	1150mm (46")	600mm (24")	1850mm (78")	1700mm (68")	1600mm (64")	900mm (36")
35M	1675mm (67")	1550mm (62")	1325mm (53")	700mm (28")	2150mm (86")	2000mm (80")	1850mm (78")	1050mm (42")
BOTTOM BARS								
10M	300mm (12")	300mm (12")	300mm (12")	250mm (10")	400mm (16")	400mm (16")	400mm (16")	400mm (16")
15M	450mm (18")	400mm (16")	400mm (16")	350mm (14")	600mm (24")	600mm (24")	600mm (24")	450mm (18")
20M	600mm (24")	550mm (22")	500mm (20")	400mm (16")	800mm (32")	800mm (32")	800mm (32")	600mm (24")
25M	950mm (38")	850mm (34")	800mm (32")	500mm (20")	1200mm (48")	1100mm (44")	1000mm (40")	750mm (30")
30M	1100mm (44")	1000mm (40")	950mm (38")	600mm (24")	1450mm (58")	1300mm (52")	1200mm (48")	900mm (36")
35M	1300mm (52")	1200mm (48")	1100mm (44")	750mm (30")	1650mm (66")	1500mm (60")	1400mm (56")	1050mm (42")

NOTES:
1. PROVIDE "TOP BAR" SPLICES AND EMBEDMENTS FOR HORIZONTAL BARS WHERE MORE THAN 300mm (12") OF FRESH CONCRETE IS CAST BELOW THE SPLICE.
2. TABULATED VALUES APPLY TO UNCOATED BARS IN NORMAL DENSITY CONCRETE. FOR COATED BARS AND STRUCTURAL LOW DENSITY CONCRETE, APPLY FACTORS AS PER CSA A23.3
3. TABULATED VALUES APPLY TO REINFORCING BARS WITH CLEAR COVER GREATER THAN 1.0db AND CLEAR SPACING NOT LESS THAN 1.4dbIN BEAMS OR COLUMNS, OR 2.0db IN SLABS.

CONCRETE DESIGN PROPERTIES

ELEMENT	LOCATION	COMPRESSIVE STRENGTH (MPa)	EXPOSURE CLASS	CHLORIDE EXPOSURE	FREEZE/ THAW EXPOSURE	REMARKS
FOOTINGS	--	30	N	NO	NO	--
PIERS AND FOUNDATION WALLS	INTERIOR	30	N	NO	NO	--
SLAB-ON-GRADE	INTERIOR	25	N-CF	NO	NO	NO SUPPLEMENTARY CEMENTING MATERIEALS
MISCELLANEOUS CONCRETE	INTERIOR	25	N	NO	NO	--

NOTES:
1. USE HIGHEST STRENGTH AND MOST-SEVERE EXPOSURE CONDITION WHERE MULTIPLE CONDITIONS ARE APPLICABLE.
2. COMPRESSIVE STRENGTH DENOTED IS A MINIMUM VALUE AT 28 DAYS, UNLESS NOTED OTHERWISE.
3. SEE SPECIFICATION 03 30 00 FOR ADDITIONAL CONCRETE REQUIREMENTS.
4. ALL CONCRETE MIXES TO BE PROPORTIONED AS NORMAL DENSITY CONCRETE, UNLESS NOTED OTHERWISE.
5. NOMINAL AGGREGATE SIZE IS 20mm (3/4") UNLESS NOTED OTHERWISE.

STEEL LINTELS FOR NON-LOAD BEARING MASONRY WALLS

MAXIMUM OPENING SIZE / LINTEL TYPE WALL THK.	90 VENEER	140mm	190mm	240mm	290mm
UP TO 1200mm	L89x89x6.4	(2) L89x64x6.4	(2) L89x89x6.4	L102x76x6.4 LLH + L127x76x6.4 LLH	(3) L89x89x6.4
1200mm TO 1800mm	L102x89x7.9	(2) L89x64x7.9	(2) L102x89x7.9	L102x102x6.4 + L127x76x6.4 LLH	(3) L102x89x7.9
1800mm TO 2400mm	L127x89x7.9	(2) L89x64x9.5	(2) L127x89x7.9	L102x102x7.9 + L127x76x7.9 LLH	(3) L127x89x7.9
2400mm TO 3000mm	L152x89x9.5	(2) L89x64x9.5	(2) L152x89x9.5	L152x102x9.5 LLV + L127x127x9.5	(3) L152x89x9.5

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

CLIENT LOGO

No.	ISSUANCE	DATE
1	ISSUED FOR 90% OWNER REVIEW	2024.02.26
2	ISSUED FOR BID AND PERMIT	2024.03.13

CLIENT

WATERLOO REGION DISTRICT SCHOOL BOARD

PROJECT

PRESTON HIGH PS - RAMP AND WASHROOM RENOVATIONS

550 Rose St. Cambridge, ON N3H 2E6

TITLE

GENERAL NOTES AND TABLES

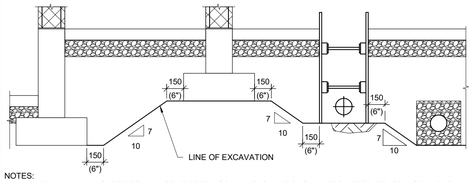
WALTERFEDY

KITCHENER | HAMILTON | TORONTO

800.685.1378 walterfedy.com

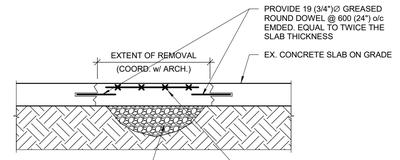
LICENSED PROFESSIONAL ENGINEER
M. F. VALDERRAMA VARGAS
100533072
2024.03.07
WF# 2023-0705-11
PROVINCE OF ONTARIO

SCALE :	1 : 1	SHEET NO :
DATE :	02/15/2024	S001
WRDSB PROJECT NO :	23-7377-RFT	
PROJECT NO :	2023-0705-10	
DRAWN BY :	TA/DM	
CHECKED BY :	MV	



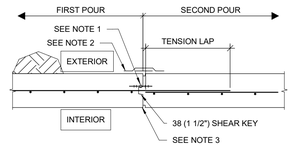
NOTES:
1. MAINTAIN MINIMUM SLOPE TO ADJACENT FOOTINGS AND EXCAVATIONS UNLESS NOTED OTHERWISE IN THE GEOTECHNICAL REPORT.
2. LOWER FOOTINGS AS NECESSARY TO ACHIEVE SLOPE NOTED.
3. ENSURE SPECIFIED SLOPE IS NOT COMPROMISED BY DISTURBED SOIL BETWEEN THE EXCAVATIONS.

ADJACENT FOOTINGS AND EXCAVATIONS — C101

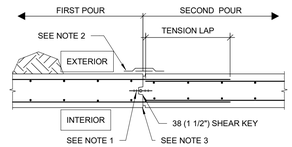


NOTE:
1. REFER TO ARCH. FOR LOCATION AND SIZE OF SLAB REPAIR.

SLAB-ON-GRADE REPAIR — C206



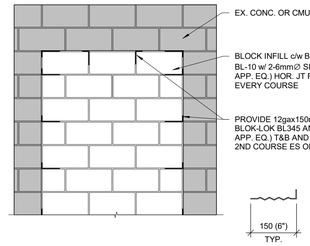
ONE-LAYER OF REINFORCEMENT



TWO-LAYERS OF REINFORCEMENT

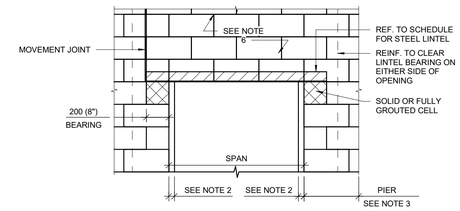
NOTES:
1. THIS DETAIL APPLIES TO FOUNDATION WALLS, PITS, AND CONCRETE WALLS RETAINING SOIL.
2. REFER TO ARCHITECTURAL DRAWINGS AND SPECIFICATIONS FOR WATERPROOFING REQUIREMENTS OF CONSTRUCTION JOINTS FOR FOUNDATION WALLS.
3. PROVIDE 19x19 (¾"x¾") REGLET IN WALLS EXPOSED TO VIEW. WHERE WALLS ARE DESIGNATED ARCHITECTURALLY EXPOSED CONCRETE, REFER TO ARCHITECTURAL DRAWINGS AND SPECIFICATIONS.
4. FOR WALLS SUPPORTED ON CAISSONS OR PIERS, LOCATE CONSTRUCTION JOINTS AT THE MID SPAN BETWEEN SUPPORTS.
5. CONSTRUCTION JOINTS AR THE BE LOCATED A MINIMUM OF 1200mm (4'-0") FROM ANY PENETRATIONS OR OPENINGS THROUGH THE WALL.
6. HORIZONTAL CONSTRUCTION JOINTS ARE NOT PERMITTED.
7. ALL TENSION LAP SPLICES SHALL BE CLASS "B" UNLESS NOTED OTHERWISE.

CONSTRUCTION JOINTS IN FOUNDATION WALLS — C111



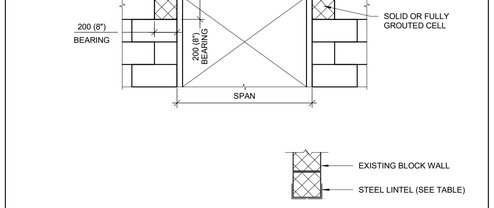
NOTE:
1. REFER TO ARCH. FOR LOCATION OF BLOCK WALL OPENINGS TO BE INFILLED.

INFILL EXISTING OPENINGS IN MASONRY WALLS — M113



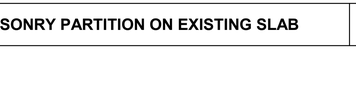
NOTES:
1. REFER TO SCHEDULE FOR STEEL LINTEL SIZE.
2. CONNECT BACK TO BACK ANGLES USING MINIMUM 16 (5/8")Ø BOLTS AT 450 (1'-6") ON CENTRE, OR BY WELDING TOP & BOTTOM WITH 6 (1/4") FILLET WELDS x 50 (2") LONG AT 450 (1'-6") ON CENTRE. FIRST CONNECTION SHALL BE NO MORE THAN 75 (3") FROM END OF LINTEL.
3. WHERE WALL THICKNESS IS REDUCED BY RECESSES, INCLUDE IN LINTEL SPAN.
4. IF PIER DIMENSION TO END OF WALL IS 600 (2'-0") OR LESS, FULLY GROUT PIER FOR FULL WALL HEIGHT.
5. PROVIDE STEEL PACKING AS REQUIRED FOR UNIFORM BEARING OF LINTELS.
6. FOR NON-LOAD BEARING MASONRY PARTITIONS WITH STACKED BOND, THE UNSUPPORTED WALL HEIGHT ABOVE LINTEL NOT TO EXCEED 1/2 x SPAN.

STEEL LINTELS FOR MASONRY WALLS — M105



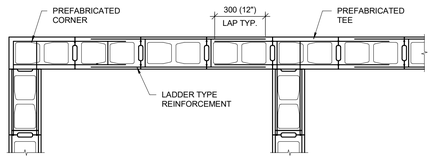
NOTES:
1. REFER TO SCHEDULE FOR STEEL LINTEL SIZE.
2. GROUT LINTEL BEARING PRIOR TO SAW CUTTING THE EXISTIG WALL.
3. PROVIDE STEEL PACKING AS REQUIRED FOR UNIFORM BEARING OF STEEL LINTELS.
4. STANDARD LINTELS ARE NOT NECESSARILY SHOWN ON STRUCTURAL DRAWINGS FOR OPENING LOCATIONS. REFER TO ARCHITECHTURAL DRAWINGS FOR OPENING LOCATIONS.

STEEL LINTELS FOR EXISTING NON-LOAD BEARING MASONRY PARTITIONS — M107



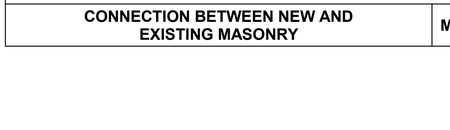
NOTE:
1. SAWCUT SLAB-ON-GRADE 6 TO 18 HOURS AFTER PLACING CONCRETE.
2. CONTRACTOR TO ENSURE REINFORCING IS NOT CUT.
3. DO NOT CUT REINFORCING DURING SAW CUTTING OPERATION.

SAWCUT CONTROL JOINTS — C202



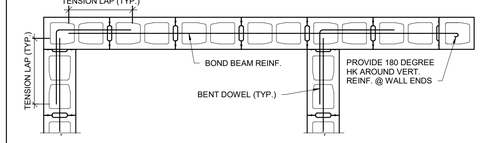
NOTE:
1. ALL BED JOINT REINFORCEMENT SHALL BE LADDER TYPE, UNLESS NOTED OTHERWISE.
2. ALL CORNER AND TEES REINFORCEMENT SHALL BE PREFABRICATED.

BED JOINT REINFORCEMENT — M102



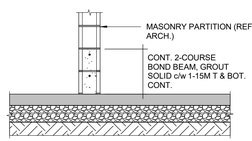
NOTES:
1. REFER TO SCHEDULE FOR SIZE AND SPACING OF REINFORCEMENT.
2. WHERE OPENINGS ARE LESS THAN THE VERTICAL REINFORCEMENT SPACING, PROVIDE 1 VERTICAL BAR ON EACH SIDE OF THE OPENING UNLESS NOTED OTHERWISE.
3. WHERE OPENINGS ARE WIDER THAN THE VERTICAL REINFORCEMENT SPACING, BUT LESS THAN 3000 (10'-0"), PROVIDE 2 VERTICAL BARS ON EACH SIDE OF OPENING UNLESS NOTED OTHERWISE.

VERTICAL REINFORCEMENT IN MASONRY WALLS — M101

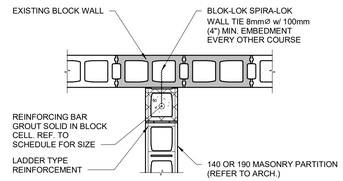


NOTES:
1. ALL BOND BEAM REINFORCING SHALL BE CONTINUOUS.
2. ALL TENSION LAPS SHALL BE CLASS 'B', UNLESS NOTED OTHERWISE.
3. REFER TO SCHEDULE FOR TENSION LAP LENGTHS.

BOND BEAM REINFORCING SCHEMATIC — M103



MASONRY PARTITION ON EXISTING SLAB — M109



CONNECTION BETWEEN NEW AND EXISTING MASONRY — M114

CLIENT LOGO

No.	ISSUANCE	DATE
1	ISSUED FOR 90% OWNER REVIEW	2024.02.26
2	ISSUED FOR BID AND PERMIT	2024.03.13

CLIENT

WATERLOO REGION DISTRICT SCHOOL BOARD

PROJECT

PRESTON HIGH PS - RAMP AND WASHROOM RENOVATIONS

550 Rose St. Cambridge, ON N3H 2E6

TITLE

TYPICAL DETAILS

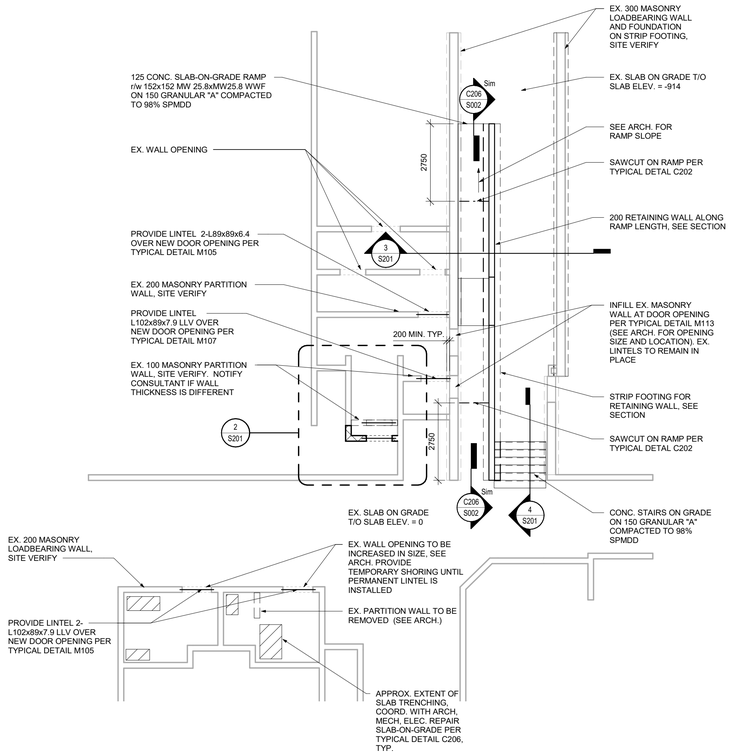
WALTERFEDY
KITCHENER | HAMILTON | TORONTO
800.685.1378 walterfedy.com

LICENSED PROFESSIONAL ENGINEER
M. F. VALDERRAMA VARGAS
100533072
2024.03.07
WF# 2023-0705-11
PROVINCE OF ONTARIO

SCALE :	1 : 25
DATE :	05/14/20
WRDSB PROJECT NO :	23-7377-RFT
PROJECT NO :	2023-0705-10
DRAWN BY :	Author
CHECKED BY :	Checker

SHEET NO :

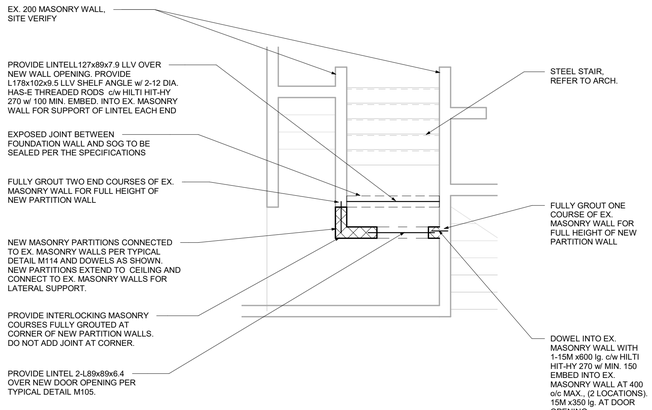
S002



1 S201 PARTIAL GROUND FLOOR PLAN

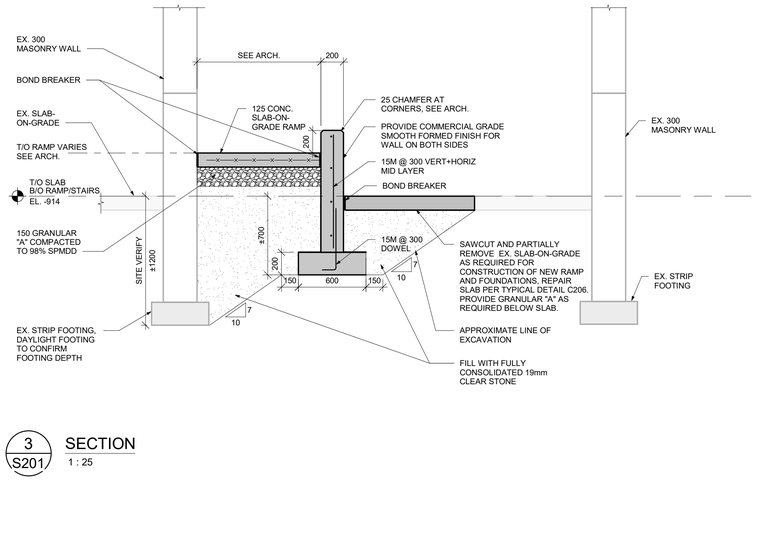
1 : 100

PLAN NOTES:
1. TOP OF EXISTING SLAB ON GRADE AS NOTED ON PLAN TO BE SITE VERIFIED.
2. REFER TO ARCHITECTURAL DRAWINGS FOR RAMP AND STAIR DIMENSIONS AND EXTENTS OF SLAB-ON-GRADE DEMOLITION.
3. REFER TO ARCHITECTURAL DRAWINGS FOR SIZE AND LOCATIONS OF NEW OPENINGS IN EX. MASONRY WALLS.
4. DO NOT UNDERMINE EXISTING FOUNDATIONS AND SLAB.
5. PROVIDE REINFORCING FOR NEW MASONRY PARTITIONS PER THE NON-LOAD BEARING MASONRY WALL REINFORCING TABLE AND TYPICAL DETAILS.



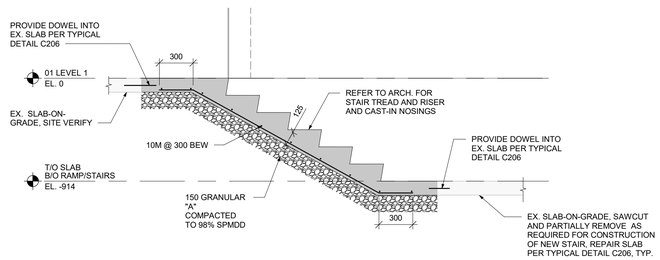
2 S201 ENLARGED PLAN

1 : 50



3 S201 SECTION

1 : 25



4 S201 SECTION

1 : 25

CLIENT LOGO

TRUE NORTH

PROJECT NORTH

No.	ISSUANCE	DATE
1	ISSUED FOR 90% OWNER REVIEW	2024.02.26
2	ISSUED FOR BID AND PERMIT	2024.03.13

CLIENT

WATERLOO REGION DISTRICT SCHOOL BOARD

51 ARDELT AVE, KITCHENER, ON N2C 2R5

PROJECT

PRESTON HIGH PS - RAMP AND WASHROOM RENOVATIONS

550 Rose St. Cambridge, ON N3H 2E6

TITLE

PARTIAL GROUND FLOOR PLAN AND SECTIONS

WALTERFEDY

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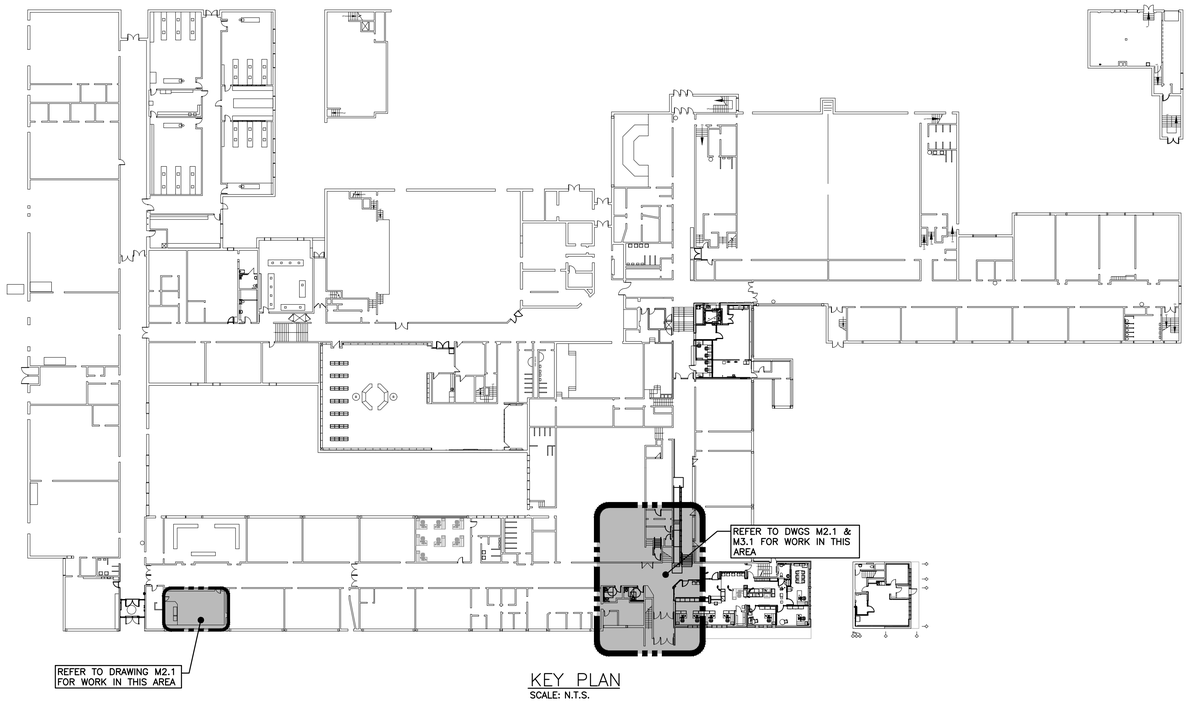
LICENSED PROFESSIONAL ENGINEER
M. F. VALDERRAMA VARGAS
100533072
2024.03.07
WF# 2023-0705-11
PROVINCE OF ONTARIO

SCALE :	As indicated
DATE :	02/09/2024
WRDSB PROJECT NO :	23-7377-RFT
PROJECT NO :	2023-0705-10
DRAWN BY :	TA/DM
CHECKED BY :	M/V

SHEET NO :

S201



KEY PLAN
SCALE: N.T.S.

MECHANICAL LEGEND

Item	Description	Item	Description
	CUT EXISTING & CONNECT NEW PIPING	HWS	HEATING WATER SUPPLY PIPING
	FLOW DIRECTION	HWR	HEATING WATER RETURN PIPING
	DOMESTIC COLD WATER PIPING	FD	FLOOR DRAIN
	DOMESTIC HOT WATER PIPING		TRAP PRIMER
	DOMESTIC HOT WATER RECIRC. PIPING		TEE CONNECTION
EX–SAN	EXISTING SANITARY PIPING ABOVE FLOOR		PIPE DOWN
EX–SAN	EXISTING SANITARY PIPING BELOW FLOOR		PIPE UP
SAN	SANITARY PIPING ABOVE FLOOR	CO	FLOOR CLEANOUT
SAN	SANITARY PIPING BELOW FLOOR		REDUCER/INCREASER
EX–STM	EXISTING STORM PIPING ABOVE FLOOR		CHECK VALVE
EX–STM	EXISTING STORM PIPING BELOW FLOOR		UNION
SP	SPRINKLER PIPING		STRAINER
FD	FIRE DAMPER		DRAIN (SCHEMATICS)
FSD	COMBINATION FIRE/SMOKE DAMPER		SCREWED OR WELDED PIPE CAP
SD	SMOKE DAMPER		RISER VALVE
G T	THERMOSTAT (WITH OR WITHOUT GUARD)	BV	BALANCING VALVE
G M	CARBON DIOXIDE (CO2) SENSOR (WITH OR WITHOUT GUARD)	TCV	TEMPERATURE CONTROL VALVE
BD	BALANCING DAMPER		BALL VALVE
RIC	RETURN IN CABINET	OBD	OPPOSED BLADE DAMPER
AFF	ABOVE FINISHED FLOOR	AD	ACCESS DOOR
AFR	ABOVE FINISHED ROOF	Type / Size / Cap.	DIFFUSER/GRILLE SIZE (imp), TYPE & CAPACITY (cfm)
CTE	CONNECT TO EXISTING	Type / Size 1 / Size 2 / Capacity	HYDRONIC HEATING SIZE, TYPE & CAPACITY
		EX	EXISTING DUCT (SIZE AS INDICATED)
			RIGID ROUND DUCT

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, 16" HIGH (HANDS–FREE)		25		80	40	AMERICAN STANDARD MADERA 3043.001 KOHLER HIGHCREST K–4302 ZURN	BARRIER FREE, 16" 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–WMSHWA MOEN COMMERCIAL SLOAN	EXPOSED, POLISHED CHROME PLATTED, 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 LITRES (1.6 GAL) PER FLUSH (NON–ADJUSTABLE).	SEAT: CENTOCO AM500STS BEMIS	SEAT: BLACK, ELONGATED, OPEN FRONT LESS COVER, MOLDED SOLID ANTIMICROBIAL PLASTIC, STAINLESS STEEL CHECK HINGES, STAINLESS STEEL OR SOLID BRASS INSERT POST. REFER TO ARCHITECTURAL DOCUMENTS FOR VERTICAL BACKREST. MIN. 1000 MAP PERFORMANCE.
L–1	B.F. WALL HUNG LAV (HANDS–FREE)	15	15		32	32	AMERICAN STANDARD MURRO 0954.004EC KOHLER BRENHAM K–1997 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 591T0230 MOEN COMMERCIAL SLOAN	HARDWIRED ELECTRONIC FAUCET. CAST BRASS ONE PIECE BODY WITH INTEGRAL WATER PROOF INFRA–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 1.5GPM (5.7 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) IN RECESSED CONTROL BOX #591T		WASTE FITTING: NPS 32 MM (1¼") OFFSET WASTE WITH OPEN GRID STRAINER. PROVIDE FLOOR MOUNTED WALL CARRIER PROVIDE SHROUD/KNEE CONTACT GUARD THERMOSTATIC MIXING VALVE UNDER LAV. DELTA R3070–MIXLF, POWERS LM490 OR EQUAL.
FD–1	FLOOR DRAIN				NOTED	40	ZURN ZN415B MIFAB F1100–C WATTS FD–100–C–A SMITH	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				

GRILLE SCHEDULE

Item	Type	Manufacturer & Model	Finish	Remarks
R1	CEILING RETURN/EXHAUST	KRUEGER S580	BRITISH WHITE	ALUMINUM, C/W SCREWED FASTENING, 1/2" BLADE SPACING, FIXED DEFLECTION

GENERAL NOTES

- ALL DRAWINGS ARE TO BE READ IN CONJUNCTION WITH THE PREPARED SPECIFICATION.
- 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)
  - NFPA–13 SPRINKLER CONTRACTOR'S MATERIAL & TEST CERTIFICATE
  - FIRE PROTECTION ENGINEER'S INSPECTION/CONFORMANCE LETTER

ALL CERTIFICATES ARE TO BE SUBMITTED TOGETHER IN A SINGLE PACKAGE.

CLIENT LOGO

WATERLOO REGION DISTRICT SCHOOL BOARD

KEYPLAN

TRUE NORTH | PROJECT NORTH

No.	ISSUANCE	DATE
1	ISSUED FOR BID AND PERMIT	2024–03–13

55 Northland Road,
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Phone: 519-725-3555
Website: deiassociates.ca
Project Number: 23058

DEI Consulting Engineers
MECHANICAL | ELECTRICAL | AQUATIC

CLIENT

WATERLOO REGION DISTRICT SCHOOL BOARD

51 Ardelt Ave, Kitchener, ON N2C 2R5

PROJECT

PRESTON HS - RAMP AND WASHROOM RENOVATIONS

550 Rose St. Cambridge, ON N3H 2E6

TITLE

KEY PLAN, LEGEND & SCHEDULES

WALTERFEDY
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800.685.1378 walterfedy.com

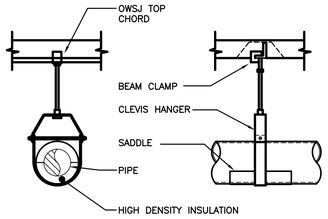
SEAL

LICENSED PROFESSIONAL ENGINEER
7 Mar 24
M.B. WHITE
100149074
PROVINCE OF ONTARIO

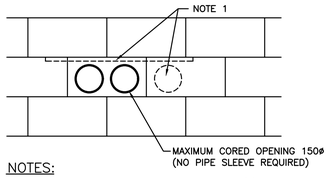
SCALE :	As indicated
DATE :	2024-01-30
PROJECT NO :	2023-0705-11
DRAWN BY :	AP
CHECKED BY :	SO

SHEET NO :

M1.1



PIPE HANGER

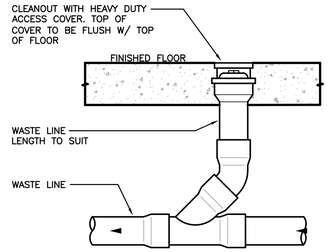


NOTES:

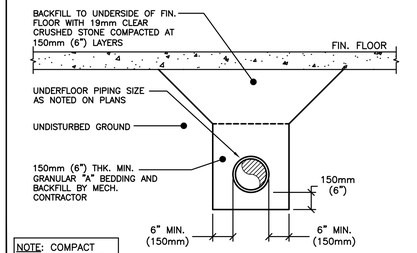
1. WHERE PENETRATIONS EXTEND BEYOND ONE (1) BLOCK OR WHERE THREE (3) OR MORE PENETRATIONS ARE INSTALLED WITHIN 800mm, PROVIDE LINTEL AS PER STRUCTURAL DRAWINGS

2. IN FIRE RATED WALLS (INCLUDING NON-RATED FIRE SEPARATIONS) AND PARTITIONS PROVIDE PIPE SLEEVES FOR ALL PIPING AS SPECIFIED

PIPE PENETRATION THROUGH BLOCK WALL
(NON RATED BLOCK WALL)

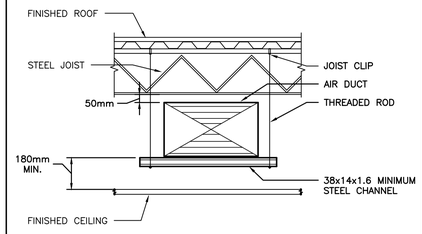


CLEANOUT

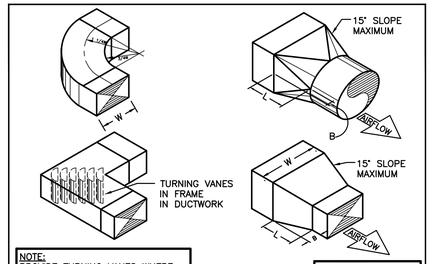


NOTE: COMPACT BACKFILL TO 95% STANDARD PROCTOR

INTERIOR PIPE BEDDING



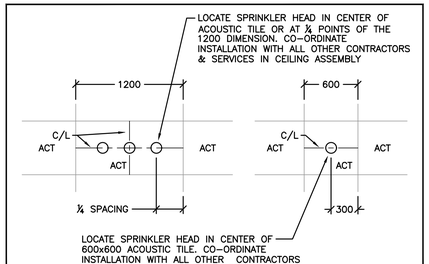
DUCT SUPPORT IN CEILING FROM STEEL FRAME



NOTE:
PROVIDE TURNING VANES WHERE CENTRELINE RADIUS IS < 1 1/4 W

B=OFFSET
L=3.7 * B (MINIMUM)

DUCT ELBOWS AND TRANSITIONS



SPRINKLER HEAD PLACEMENTS IN ACOUSTIC TILE

CLIENT LOGO

KEYPLAN

No.	ISSUANCE	DATE
1	ISSUED FOR BID AND PERMIT	2024-03-13

55 Northland Road,
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Project Number: 23258

Consulting Engineers
MECHANICAL | ELECTRICAL | AQUATIC

CLIENT

WATERLOO REGION DISTRICT SCHOOL BOARD

51 Ardelt Ave, Kitchener, ON N2C 2R5

PROJECT

PRESTON HS - RAMP AND WASHROOM RENOVATIONS

550 Rose St. Cambridge, ON N3H 2E6

TITLE

DETAILS

WALTERFEDY
KITCHENER | HAMILTON | TORONTO
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SEAL

LICENSED PROFESSIONAL ENGINEER
7 Mar 24
M.B. WHITE
100149074
PROVINCE OF ONTARIO

SCALE :	As indicated
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DRAWN BY :	AP
CHECKED BY :	SO

SHEET NO :

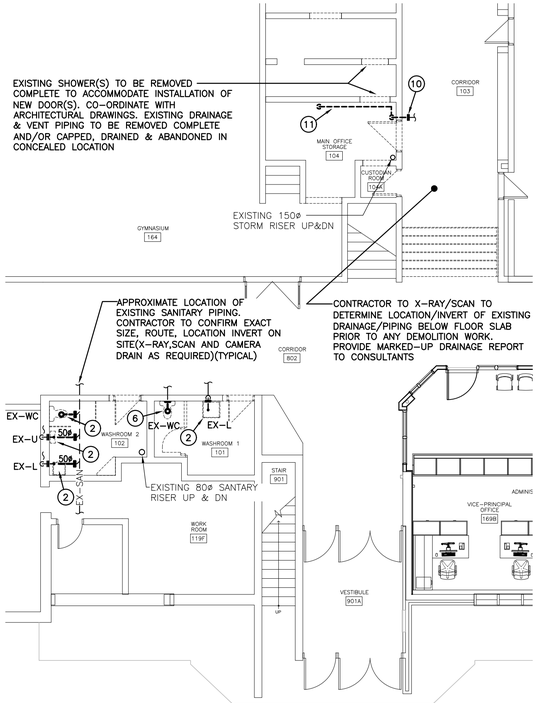
M1.2

GENERAL DEMOLITION NOTES

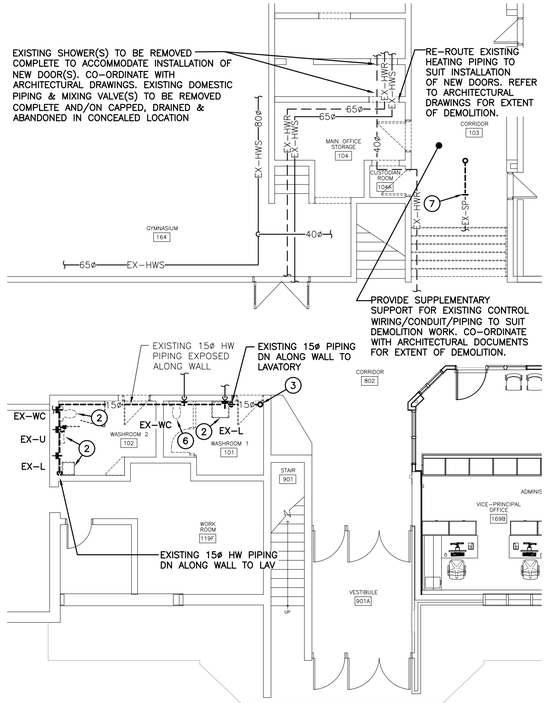
- EXISTING MECHANICAL ITEMS NOT SHOWN SHALL REMAIN UNLESS NOTED OTHERWISE.
- EXISTING MECHANICAL ITEMS SHOWN BUT NOT NOTED AS BEING REMOVED OR RENOVATED SHALL REMAIN AS PRESENTLY INSTALLED AND OPERATING.
- THIS CONTRACTOR SHALL BE RESPONSIBLE FOR VERIFYING ON SITE ALL LOCATIONS AND SIZES OF ALL SERVICES & 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.
- CONTRACTOR TO CARRY IN THEIR PRICING TO DRAIN SYSTEM OR FREEZE PIPING TO COMPLETE WORK

SPECIFIC DEMOLITION NOTES

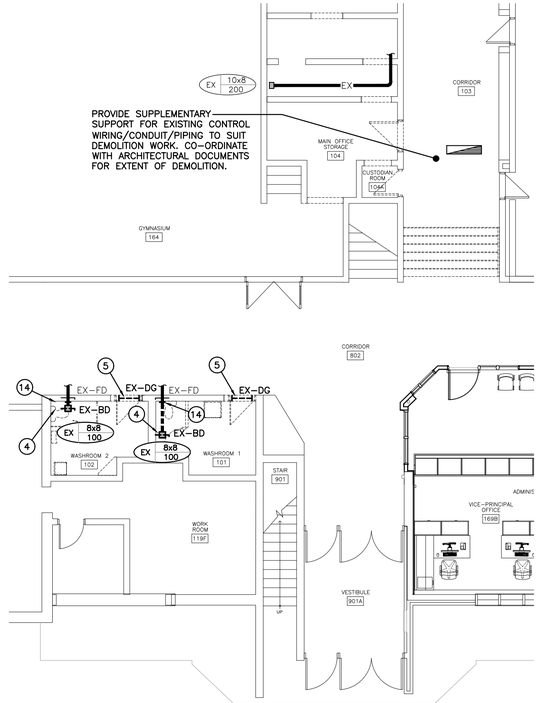
1. EXISTING DOMESTIC PIPING TO BE CUT AND REMOVED BEYOND COMPLETE.
2. EXISTING PLUMBING FIXTURE TO BE REMOVED COMPLETE. EXISTING DOMESTIC/SANITARY/VENTING TO BE CUT & CAPPED IN WALL/BELOW FLOOR AND REMOVED BEYOND COMPLETE.
3. EXISTING DOMESTIC PIPING TO BE CUT ON RISER AND REMOVE BEYOND COMPLETE.
4. EXISTING GRILLE TO BE REMOVED COMPLETE.
5. EXISTING DOOR GRILLE TO BE REMOVED COMPLETE.
6. EXISTING PLUMBING FIXTURE TO BE REMOVED COMPLETE. EXISTING SANITARY/DOMESTIC/VENTING PIPING TO BE CUT AND REMOVED BEYOND COMPLETE. PREPARE PIPING FOR RE-CONNECTION TO NEW.
7. EXISTING SPRINKLER PIPING TO BE CUT AND RE-ROUTED TO AVOID EXISTING DUCT BRANCH. MAINTAIN MAXIMUM HEIGHT TO ACCOMMODATE NEW RAMP HEADROOM. RELOCATE EXISTING SPRINKLER HEAD TO SUIT.
8. EXISTING GAS PIPING AT DESK TO BE REMOVED COMPLETE. CAP IN CONCEALED LOCATION/REMOVE BACK TO SOURCE (TYPICAL ALL STUDENT/TEACHER STATIONS).
9. EXISTING CLEANOUT/COVER TO BE TEMPORARILY REMOVED TO ACCOMMODATE NEW FLOORING. RE-INSTALL SAME AFTER FLOORING WORK.
10. EXISTING DOMESTIC PIPING TO BE CUT AND REMOVED BEYOND COMPLETE.
11. EXISTING PLUMBING FIXTURE TO BE REMOVED COMPLETE. EXISTING SANITARY/VENTING/DOMESTIC PIPING TO BE REMOVED COMPLETE AND/OR CAPPED IN CONCEALED LOCATION/BACK TO SOURCE TO ACCOMMODATE INSTALLATION OF NEW DOOR.
12. EXISTING THERMOSTAT TO BE REMOVED COMPLETE. EXISTING PNEUMATIC TUBING TO BE REMOVED BACK TO SOURCE. SOLDER/CRIMP IN CONCEALED LOCATIONS. PROVIDE NEW DDC THERMOSTAT & CONTROL WIRING. FISH EXISTING WALL AS REQUIRED.
13. EXISTING ISOLATION, BALANCING AND TEMPERATURE CONTROL VALVES TO BE REMOVED AND REPLACED WITH NEW.
14. EXISTING DUCTWORK TO BE CUT & REMOVED BEYOND COMPLETE.
15. EXISTING GAS PIPING SERVING STUDENT DESKS TO BE CAPPED AT RISER IN TEACHER'S DESK & REMOVED BEYOND COMPLETE. EXISTING LOCKING GAS VALVES & TEACHER'S DESK GAS TO REMAIN IN CURRENT CONDITION/OPERATION.



DRAINAGE



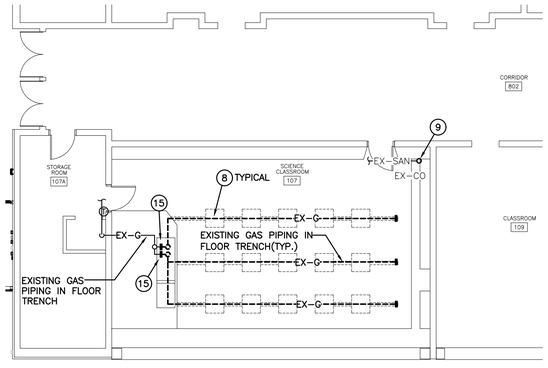
PIPING & SPRINKLER



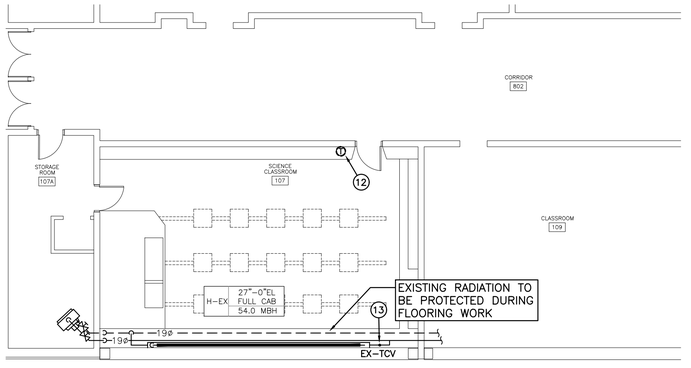
DUCTWORK

GROUND FLOOR PART PLAN 'A'– DEMOLITION

SCALE: 1:100



DRAINAGE & PIPING



HEATING

GROUND FLOOR PART PLAN 'B'– DEMOLITION

SCALE: 1:100

CLIENT LOGO

KEYPLAN

TRUE NORTH PROJECT NORTH

No.	ISSUANCE	DATE
1	ISSUED FOR BID AND PERMIT	2024-03-13

55 Northland Road,
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Phone: 519-725-3555
Website: deiassociates.ca
Project Number: 23298

Consulting Engineers
MECHANICAL | ELECTRICAL | AQUATIC

CLIENT

WATERLOO REGION DISTRICT SCHOOL BOARD

51 Ardelt Ave, Kitchener, ON N2C 2R5

PROJECT

PRESTON HS - RAMP AND WASHROOM RENOVATIONS

550 Rose St. Cambridge, ON N3H 2E6

TITLE

GROUND FLOOR PART PLANS 'A' & 'B' - DEMOLITION - DRAINAGE, PIPING , HEATING & DUCTWORK

WALTERFEDY
KITCHENER | HAMILTON | TORONTO
800.685.1378 walterfedy.com

SEAL

LICENSED PROFESSIONAL ENGINEER
7 Mar 24
M.B. WHITE
100149074
PROVINCE OF ONTARIO

SCALE :	As indicated
DATE :	2024-01-30
PROJECT NO :	2023-0705-11
DRAWN BY :	AP
CHECKED BY :	SO

SHEET NO :

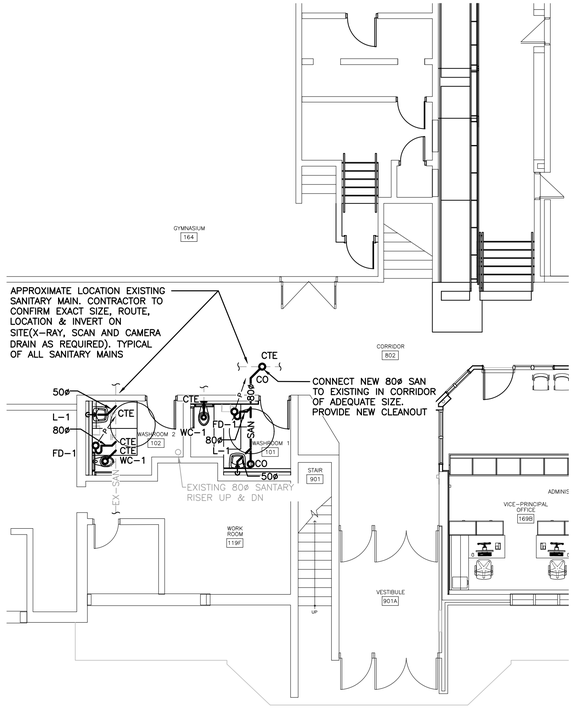
M2.1

GENERAL RENOVATION NOTES

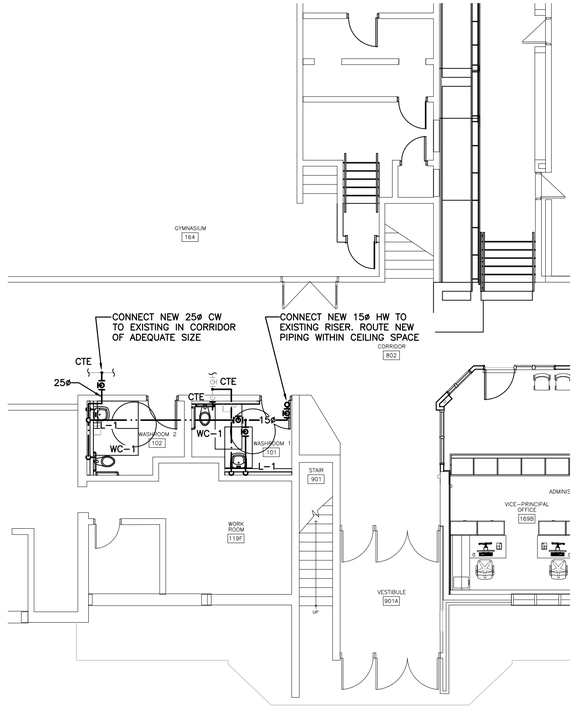
- SANITARY VENT PIPING IS NOT SHOWN. PROVIDE ALL NECESSARY VENT PIPING FROM ALL FIXTURES FOR A COMPLETE SYSTEM TO ALL LOCAL PLUMBING CODE & LOCAL AUTHORITY REQUIREMENTS, CONNECTED TO EXISTING VENTS OR NEW VENTS AS REQUIRED. CO-ORDINATE VENT LOCATION(S) WITH GENERAL CONTRACTOR. MAINTAIN MINIMUM 3700mm (12'-0") FROM ANY AIR INLET. INSTALL VENT PIPING HIGH IN JOIST SPACE.
- REFER TO ARCHITECTURAL CEILING PLANS FOR GRILLES/DIFFUSERS LOCATIONS. CO-ORDINATE FINAL LOCATION ON SITE.
- CO-ORDINATE ROUGH-IN AND MOUNTING HEIGHTS OF FIXTURES WITH MILLWORK AND ARCHITECTURAL DETAILS.
- CONTRACTOR TO CARRY IN THEIR PRICING TO DRAIN SYSTEM OR FREEZE PIPING TO COMPLETE WORK

GENERAL SPRINKLER NOTES

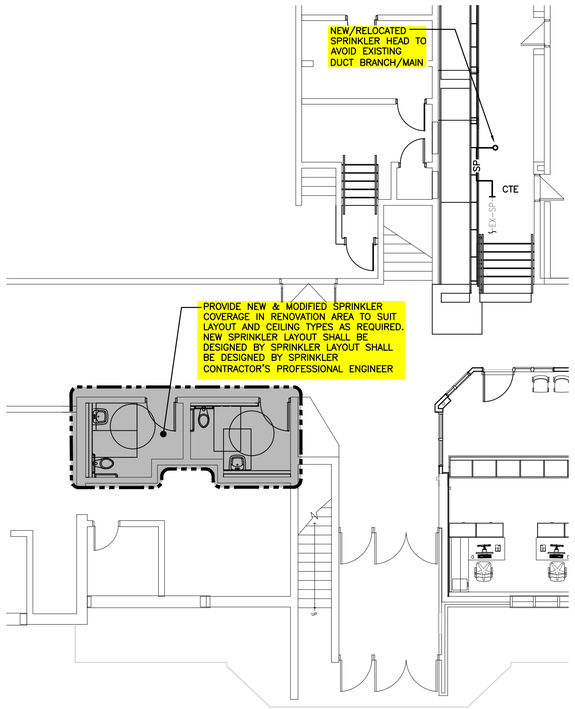
- SUBMIT PRELIMINARY DESIGN & HYDRAULIC CALCULATIONS STAMPED BY A PROFESSIONAL ENGINEER, AND MANUFACTURERS' PRODUCT SHEETS FOR SHOP DRAWING SUBMISSION AS SPECIFIED PRIOR TO COMMENCING WORK.
- ENSURE DESIGN MEETS OR EXCEEDS PRESENT NFPA 13 STANDARDS. ENSURE SPRINKLER SYSTEMS ARE INSTALLED TO NFPA 13 STANDARDS. UPON COMPLETION, SPRINKLER CONTRACTOR TO PROVIDE REPRODUCIBLE DRAWING (AT 1=100 SCALE) AND HYDRAULIC CALCULATIONS OF AS-BUILT CONDITION.
- SPRINKLER CONTRACTOR'S 'PROFESSIONAL ENGINEER' TO PROVIDE O.B.C. AND NFPA REQUIRED INSPECTION AND CERTIFICATION.
- REFER TO ARCHITECTURAL DRAWINGS FOR REFLECTED CEILING PLAN.
- PROVIDE SPRINKLER HEAD TYPES AS FOLLOWS:
  - •• PROVIDE UPRIGHT HEADS WITHIN 12" OF EXPOSED DECK THROUGHOUT EXPOSED STRUCTURE AREAS. PROVIDE HEAD GUARDS IN GYM, AREAS WHERE HEADS ARE BELOW 8'-0" & STORAGE ROOMS.
  - •• PROVIDE CONCEALED PENDENT HEADS IN CEILINGS OF UNSUPERVISED AREAS (CORRIDORS, CHANGE ROOMS AND WASHROOMS). COVER PLATE FINISH SELECTED BY CONSULTANT.
  - •• PROVIDE CONCEALED HEADS IN ALL OTHER CEILING AREAS OF SUPERVISED AREAS (CLASSROOMS, OFFICES, SEMINAR ROOMS, etc.). COVER PLATE FINISH SELECTED BY CONSULTANT.
- SPRINKLER HEADS TO BE IN CENTRELINE OF CEILING TILE. MINIMUM 150mm (6") FROM EDGE.
- FINAL NUMBER AND LOCATION OF SPRINKLER HEADS TO BE DETERMINED BY CONTRACTOR'S HYDRAULIC CALCULATIONS AND APPROVED DRAWINGS.
- SPRINKLER PIPING TO BE COORDINATED WITH OTHER SERVICES PRIOR TO INSTALLATION
- COORDINATE LOCATION OF INSPECTOR'S TEST CONNECTION WITH CONSULTANT PRIOR TO INSTALLATION.
- PROVIDE SPRINKLER HEADS UNDER ALL DUCTWORK AND EQUIPMENT OVER 1200mm WIDE.
- COMMISSIONING OF INTEGRATED TESTING OF FIRE PROTECTION AND LIFE SAFETY SYSTEM.
  - •• SPRINKLER CONTRACTOR TO PROVIDE SERVICES WITH THE FIRE COMMISSIONING AGENT (FCA) TO MEET THEIR REQUIREMENTS OF ADMINISTRATION, VERIFICATION, AND FINAL SIGNOFF TO THE LOCAL AUTHORITIES AND CONSULTANT. THE FCA IS BEING RETAINED BY THE ELECTRICAL CONTRACTOR, HOWEVER, THIS CONTRACTOR'S WORK TO SATISFY THE FCA REQUIREMENTS SHALL BE INCLUDED IN THE TENDER PRICE.
  - •• CHECK/TEST: MOVEMENT OF ALL VALVES, CREATE WATER FLOW AT ALL DEVICES TO VERIFY DETECTION AT FIRE ALARM PANEL, OPERATION OF ALL PUMPS &/OR COMPRESSORS.
  - •• PERFORM ALL WORK IN ACCORDANCE WITH NFPA 13.
  - •• RETURN SPRINKLER/STANDPIPE SYSTEM TO NORMAL OPERATION ON COMPLETION OF TESTING



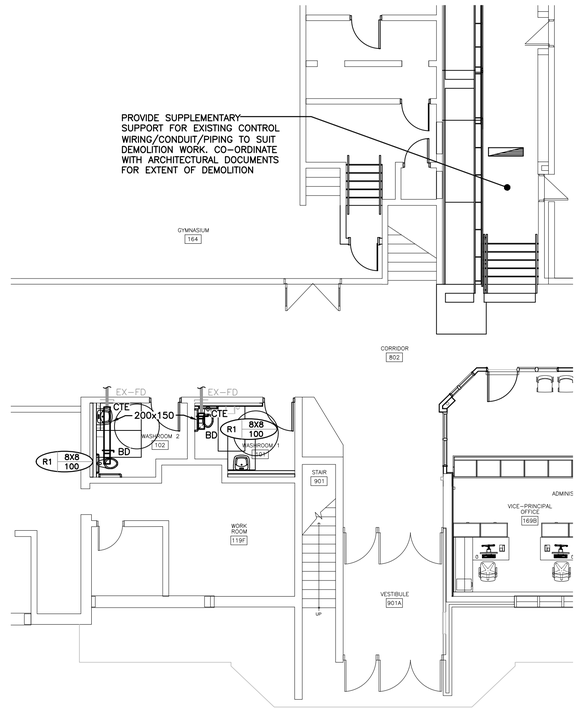
DRAINAGE



PIPING



SPRINKLER



DUCTWORK

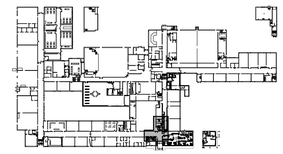
GROUND FLOOR PART PLAN 'A'- RENOVATION

SCALE: 1:100

CLIENT LOGO

WATERLOO REGION DISTRICT SCHOOL BOARD

KEYPLAN



TRUE NORTH PROJECT NORTH

No.	ISSUANCE	DATE
1	ISSUED FOR BID AND PERMIT	2024-03-13

DEI Consulting Engineers
MECHANICAL | ELECTRICAL | AQUATIC
55 Northland Road,
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Website: deiassociates.ca
Project Number: 23258

CLIENT

WATERLOO REGION DISTRICT SCHOOL BOARD

51 Ardelt Ave, Kitchener, ON N2C 2R5

PROJECT

PRESTON HS - RAMP AND WASHROOM RENOVATIONS

550 Rose St. Cambridge, ON N3H 2E6

TITLE

GROUND FLOOR PART PLANS 'A' - DRAINAGE, PIPING, DUCTWORK & SPRINKLER

WALTERFEDY
KITCHENER | HAMILTON | TORONTO
800.685.1378 walterfedy.com

SEAL

LICENSED PROFESSIONAL ENGINEER
7 Mar 24
M.B. WHITE
100149074
PROVINCE OF ONTARIO

SCALE :	As indicated
DATE :	2024-01-30
PROJECT NO :	2023-0705-11
DRAWN BY :	AP
CHECKED BY :	SO

SHEET NO :

M3.1

MECHANICAL SPECIFICATION

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. PROVIDE TWO MARKED COPIES OF "AS-BUILT DRAWINGS" SHOWING THE SYSTEM AS INSTALLED. THE CAD DRAWINGS FILES WILL BE PROVIDED TO THE OWNER AS PART OF THE MAINTENANCE MANUALS.
8. 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.
9. ALL EQUIPMENT AND MATERIAL SHALL BE NEW. REPLACE ALL DAMAGED EQUIPMENT.
10. MATERIAL AND EQUIPMENT ARE NAMED IN THE SPECIFICATION TO ESTABLISH AN ACCEPTABLE STANDARD OF MATERIALS AND THE QUALITY OF WORKMANSHIP BY WHICH TO ADHERE.
11. 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.
12. 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.
13. 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.
14. 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.
15. PROVIDE STRUCTURAL SUPPORTS, PLATFORMS, SUPPORTING RODS, HANGERS, INSERTS AND BRACKETS FOR EQUIPMENT AND SERVICES. DO NOT SUPPORT SERVICES FROM STEEL DECK.
16. INSTRUCT THE OWNER'S STAFF IN THE CARE, MAINTENANCE AND OPERATION OF THE SYSTEMS.
17. SUBMIT THREE (3) COPIES OF OPERATING AND MAINTENANCE INSTRUCTIONS IN A 3 RING BINDER LABELED FOR THE PROJECT.
18. 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.
19. ALL SURPLUS AND WASTE MATERIALS SHALL BE PROMPTLY REMOVED FROM THE PREMISES.
20. ALL AREAS NOT AFFECTED BY RENOVATION OR DEMOLITION SHALL REMAIN AS PRESENTLY INSTALLED UNLESS NOTED OTHERWISE.
21. 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.
22. ALL ELECTRICAL LINE AND LOW VOLTAGE WIRING WHICH IS TO BE PROVIDED BY THE MECHANICAL CONTRACTOR AS SPECIFIED ELSEWHERE HEREIN SHALL BE RUN IN EMT CONDUIT TO STANDARDS OF THE ELECTRICAL DIVISION.
23. WARRANTY ALL MATERIAL AND EQUIPMENT FOR A PERIOD OF ONE (1) YEAR AFTER FINAL ACCEPTANCE OF SYSTEM.
24. 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 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.
25. 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.
26. 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 BURIED 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.
27. EXCAVATING AND BACKFILLING
    PROVIDE ALL EXCAVATING AND BACKFILLING INSIDE 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.
28. 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 FILLER. COAT EXPOSED EXTERIOR SURFACES OF FERROUS SLEEVES WITH HEAVY APPLICATION OF ZINC RICH PAINT TO CGSB 1-GP-181M+AMDT-MAR-78.

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.
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 THE DUST PRODUCED AND RISK TO INJURY OF 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 FROM A RECOGNIZED TESTING LABORATORY UPON COMPLETION OF THE PROJECT. WATER IS TO BE TAKEN FROM 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. ALL GAS PIPING SHALL CONFORM TO THE CANADIAN GAS CODE AND THE LOCAL GAS DISTRIBUTORS REQUIREMENTS.
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. GAS PIPING: ALL GAS PIPING SHALL BE PRESSURE TESTED TO THE LATEST ONTARIO GAS UTILIZATION CODE AND LOCAL GAS DISTRIBUTORS REQUIREMENTS. ALL GAS PIPING SHALL CONFORM TO THE CANADIAN GAS CODE AND THE LOCAL GAS DISTRIBUTORS REQUIREMENTS.

   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 COPPER PIPE. 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. GAS PIPING: GAS PIPING SHALL BE SCHEDULE 40 BLACK STEEL PIPE WITH SCREWED MALLEABLE IRON FITTINGS FOR PIPING 2" DIAMETER AND SMALLER, AND WELDED JOINTS FOR PIPE 2 1/2" DIAMETER AND LARGER UNLESS OTHERWISE NOTED HEREIN. ALL GAS PIPING SHALL BE PAINTED WITH TWO COATS OF YELLOW PAINT.
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-ENC-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 INSTALLTION IN WALL AND HAVE INTEGRAL AIR GAP FOR BACKFLOW PREVENTION, PROVIDE ACCESS DOOR.
9. AIR CHAMBERS
   AIR CHAMBERS: SHALL BE ONE PIPE SIZE LARGER THAN THE BRANCH PIPE END AND AT LEAST 2'-0" HIGH.
10. DRAIN VALVES
    DRIP COCKS: SUPPLY AND INSTALL 1/2" DIAMETER MUELLER OR EQUAL DRAIN VALVES AT ALL LOW POINTS IN THE WATER SYSTEMS TO COMPLETELY DRAIN THE SYSTEMS. ALL DRIP COCKS SHALL BE INSTALLED IN ACCESSIBLE LOCATIONS.
11. 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. REFER TO DETAIL SCHEDULE.
12. PIPE INSULATION
    INSULATE ALL DOMESTIC HOT AND COLD WATER 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 E SPRINKLER NOTES

1. SERVICES
   CONNECT TO EXISTING SERVICES WHERE SHOWN ON DRAWINGS.
2. CODES AND REGULATIONS
   ALL SPRINKLER PIPING, SPACING AND EQUIPMENT SHALL CONFORM TO THE ONTARIO BUILDING CODE, NFPA-13 AND THE AUTHORITIES HAVING JURISDICTION.
3. TESTING
   PIPING SHALL BE TESTED TO NFPA-13 REQUIREMENTS.
4. PRODUCTS
   PIPE AND FITTINGS:
   50 MM (2") AND SMALLER: SCHEDULE 40 STEEL PIPE WITH SCREWED FITTINGS.
   65 MM (2 1/2") AND LARGER: SCHEDULE 10 STEEL PIPE WITH VICTAULIC FITTINGS.
   PIPE HANGERS:
   ULC LISTED FOR FIRE PROTECTION SERVICES.
5. SPRINKLER HEADS:
   GENERAL: TO NFPA-13 AND ULC LISTED FOR FIRE SERVICES.
   SPRINKLER HEADS SHALL BE FULLY CONCEALED WITH WHITE COVER. VIKING MODEL B-1 OR EQUAL. COORDINATE LOCATION WITH REFLECTED CEILING PLANS.
   RELOCATE EXISTING SPRINKLER HEADS AS INDICATED. INSTALL IN NEW/EXISTING CEILING.
6. ENGINEERING DESIGN CRITERIA
   DESIGN SYSTEM IN ACCORDANCE WITH ONTARIO FIRE MARSHALL, LOCAL AUTHORITY HAVING JURISDICTION, OWNERS, UNDERWRITERS AS REQUIRED, AND NFPA 13, USING FOLLOWING PARAMETERS:
   HAZARD TO SUIT OCCUPANCY.
   PIPE SIZE AND LAYOUT:
   HYDRAULIC DESIGN OR PIPE SCHEDULE SIZING DESIGN.
   SPRINKLER HEAD LAYOUT: TO NFPA 13 OR AS DIRECTED BY AUTHORITIES HAVING JURISDICTION, AND/OR AS INDICATED.
7. PROVIDE COMPLETE DRAWINGS AND CALCULATIONS STAMPED BY A QUALIFIED PROFESSIONAL ENGINEER REGISTERED IN THE PROVINCE OF ONTARIO.
8. PROFESSIONAL ENGINEER SHALL PROVIDE ON SITE REVIEW AND CERTIFICATION FOR LOCAL BUILDING CODE REVIEW.
9. INSTALLATION: INSTALL, INSPECT AND TEST TO ACCEPTANCE IN ACCORDANCE WITH ANSI/NFPA-13. TESTING TO BE WITNESSED BY AUTHORITY HAVING JURISDICTION. SPACE HANGERS AND SUPPORT OF SPRINKLER PIPING IN ACCORDANCE WITH NFPA REGULATIONS. PROTECT EXPOSED WORK. DO NOT COVER OR CONCEAL PIPING ACCESSORIES OR WORK PRIOR TO INSPECTION AND APPROVAL BY AUTHORITIES HAVING JURISDICTION. ADJUST EQUIPMENT TO SATISFACTION OF AUTHORITY HAVING JURISDICTION AND CONSULTANT. PROTECT EQUIPMENT DURING PAINTING. REPLACE DAMAGED AND PAINTED COMPONENTS. COORDINATE THE SPRINKLER PIPING AND EQUIPMENT WITH THAT OF OTHER TRADES ON THE JOB. MAINS AND BRANCHES SHALL BE RUN SO AS NOT TO INTERFERE WITH BUILDING'S STRUCTURE, MECHANICAL OR ELECTRICAL INSTALLATIONS. GUARANTEE THAT THE SYSTEMS AND EQUIPMENT BE INSTALLED IN ACCORDANCE WITH ALL LOCAL AND PROVINCIAL BY-LAWS AND THE RULES AND REGULATIONS OF THE INSURANCE UNDERWRITERS AND THE BUILDING CODE OF ONTARIO.

PART F HYDRONIC HEATING

1. HEATING WATER PIPING:
   SCHEDULE 40 STEEL PIPE TO ASTM 53, GRADE B
   PIPING NPS 2 AND UNDER SHALL BE MALLEABLE IRON 150 LB SCREWED FITTINGS WITH PULVERIZED LEAD PASTE.
   PIPING NPS 2½ AND OVER SHALL BE WELDED FITTINGS AND STEEL FLANGES TO ANSI/ASME B16.5.
2. PIPE INSULATION:
   INSULATE ALL HEATING WATER PIPING WITH 1½" FIBERGLASS INSULATION WITH VAPOUR BARRIER. INSTALL AS PER MANUFACTURERS RECOMMENDATIONS. RECOVER EXPOSED PIPING WITH PVC JACKET.
3. FILLING OF SYSTEM
   REFILL SYSTEM WITH CLEAN WATER ADDING WATER TREATMENT AS SPECIFIED.
   THIS CONTRACTOR SHALL CONTACT WATER TREATMENT SUPPLIER AND CO-ORDINATE WATER TREATMENT OF NEW SYSTEM.
4. EXISTING SYSTEM DRAINAGE
   DRAIN EXISTING HOT HYDRONIC SYSTEM AS REQUIRED TO FACILITATE SYSTEM RENOVATIONS.
   DISPOSAL OF EXISTING SYSTEM SHALL BE TO THE REQUIREMENTS OF THE LOCAL AND/OR PROVINCIAL REGULATIONS.
5. BOILERS:
   PROVIDE TWO (2) DE DETRICH MODEL 412-2838 MBH INPUT 2370 MBH OUTPUT GAS FIRED CAST IRON BOILERS WHERE INDICATED ON DRAWINGS COMPLETE WITH MODULATING GAS BURNER. GAS BURNER TO BE SUITABLE FOR 208/3/60.
   PROVIDE FOR EACH BOILER AND TO MEET ANSI/ASME REQUIREMENTS THE FOLLOWING:
   RELIEF VALVES: ANSI/ASME RATED, SET AT TO RELEASE ENTIRE BOILER CAPACITY.
   PRESSURE GAUGE: 90 MM DIAMETER COMPLETE WITH SHUT-OFF COCK.
   THERMOMETER: 115 MM DIAMETER RANGE 10 TO 150C. LOW WATER CUT-OFF: WITH VISUAL AND AUDIBLE ALARMS.
   ISOLATING BUTTERFLY VALVE: ON SUPPLY AND RETURN CONNECTIONS. DRAIN VALVE: NPS 1½. ONE SET OF CLEANING TOOLS. INSTALL TO MANUFACTURERS RECOMMENDATIONS AND REQUIREMENTS AND ANSI/ASME BOILER AND PRESSURE VESSEL CODE SECTION IV.
6. FLUSHING AND CLEANING
   PROCEDURE: FLUSHING AND CLEANING SHOULD ONLY TAKE PLACE AFTER SUCCESSFUL PIPING PRESSURE TESTING. TERMINAL DEVICE (REHEAT COILS, HEAT PUMPS, PERIMETER RADIATION, ETC.), INSTRUMENTS SUCH AS FLOW METERS, FLOW METERING VALVES AND ORIFICE PLATES SHOULD ONLY BE INSTALLED AFTER FLUSHING AND CLEANING.

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. ROUND AND OVAL DUCTS: FACTORY FABRICATED, SPIRAL WOUND, WITH MATCHING FITTINGS AND SPECIALS TO SMACNA. TRANSVERSE JOINTS UP TO 900 MM (36"): SLIP TYPE WITH TAPE AND SEALANTS.
3. SQUARE AND RECTANGULAR DUCTS:TO SMACNA. TRANSVERSE JOINTS, LONGEST SIDE UP TO AND INCLUDING 750 MM (30"): SMACNA PROPRIETARY DUCT JOINTS.
4. DAMPERS
   ALL DAMPERS TO TO SMACNA RECOMMENDATIONS AS MINIMUM ACCEPTABLE STANDARD. SPLITTER DAMPERS OF SAME MATERIAL AS DUCT BUT ONE SHEET METAL THICKNESS HEAVIER WITH APPROPRIATE STIFFENING, CUT AIRFOIL SHAPE, PIANO HINGE PIVOT, WITH CONTROL ROD WITH LOCKING DEVICE AND POSITION INDICATOR ON EXTERIOR OF DUCT. SINGLE BLADE BALANCING ROUND AND RECTANGULAR, MAXIMUM 100MM (4") HIGH, OR SAME MATERIAL AS DUCT BUT ONE SHEET METAL THICKNESS HEAVIER (MINIMUM 16 GAUGE), V-GROOVE STIFFENED WITH LOCKING QUADRANT. MULTI-LEAF OPPOSED BLADE DAMPERS DESIGNED TO SMACNA DETAILS, SELF-LUBRICATING NYLON BEARINGS, SHAFT EXTENSION TO ACCOMMODATE INSULATION THICKNESS, WITH LOCKING QUADRANT. MANUFACTURED ADJUSTABLE EXTRACTORS TO BE WITH ADJUSTMENT ROD. ACCEPTABLE PRODUCTS: TITUS, NAILOR OR EQUAL.
5. 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 & BAILEY, METALAIR.
6. CONTROL NOTES
   PROVIDE A DDC CONTROL SYSTEM AS AN EXPANSION OF THE EXISTING BUILDING AUTOMATION CONTROLS.
   THE EXISTING CONTROLS ARE DISTECH BEING PROVIDED BY ENERGY CONTROLS.
   MODULATE THE HEATING VALVES TO MAINTAIN ROOM TEMPERATURE.
7. SYSTEM BALANCING
   BALANCE AIR SYSTEMS USING NEBB CERTIFIED FIRM AND AS PER NEBB REQUIREMENTS TO WITHIN 5% OF TOTAL SYSTEM CAPACITY. PROVIDE 3 COPIES OF BALANCING REPORTS C/W SYSTEM SCHEMATICS.

CLIENT LOGO

WATERLOO REGION DISTRICT SCHOOL BOARD

KEYPLAN

No.	ISSUANCE	DATE
1	ISSUED FOR BID AND PERMIT	2024-03-13

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Project Number: 23058

CLIENT

WATERLOO REGION DISTRICT SCHOOL BOARD

51 Ardelt Ave, Kitchener, ON N2C 2R5

PROJECT

PRESTON HS - RAMP AND WASHROOM RENOVATIONS

550 Rose St. Cambridge, ON N3H 2E6

TITLE

MECHANICAL SPECIFICATION

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SEAL

LICENSED PROFESSIONAL ENGINEER
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M.B. WHITE
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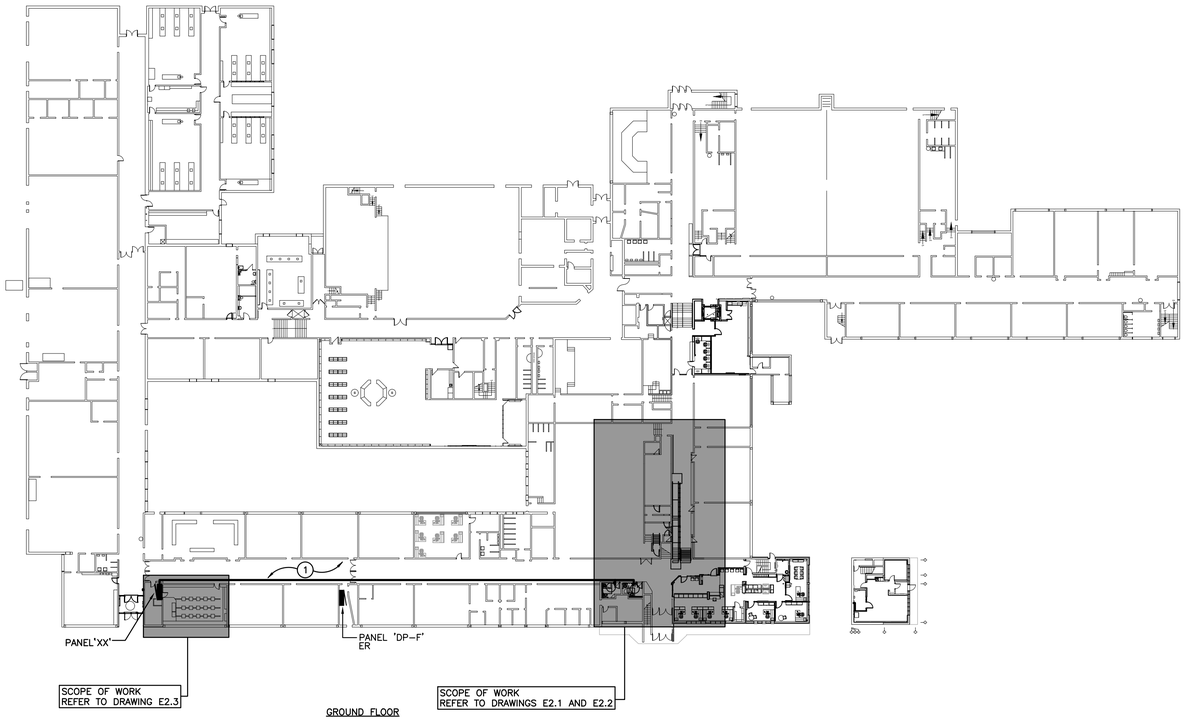
PROVINCE OF ONTARIO

SCALE :	As indicated
DATE :	2024-01-30
PROJECT NO :	2023-0705-11
DRAWN BY :	AP
CHECKED BY :	SO

SHEET NO :

M4.1



GROUND FLOOR

KEY PLAN
SCALE: 1:500

ELECTRICAL SYMBOLS

NOTE: ALL SYMBOLS MAY NOT BE USED

LIGHTING		POWER	
X	LIGHT FIXTURE TYPE AS INDICATED		WALL MOUNTED RECEPTACLE (15A–120V)
X	LIGHT FIXTURE (HATCHING DENOTES NIGHTLIGHT)		WALL MOUNTED T–SLOT RECEPTACLE (20A–120V)
	CEILING OR WALL MOUNTED LIGHT FIXTURE TYPE AS INDICATED		T–SLOT RECEPTACLE MTD. ABOVE COUNTER (20A–120V)
	CEILING MOUNTED EXIT LIGHT ARROWS DENOTE DIRECTION SHADING INDICATES FACE		QUAD RECEPTACLE
	SINGLE OR TWIN EMERGENCY LIGHTING FIXTURE		PANEL AS INDICATED
EM–X DC–X X–X	BATTERY UNIT WITH INTEGRAL EMERGENCY FIXTURE (EM–X INDICATES BATTERY UNIT TYPE, DC–X INDICATES DC CIRCUIT, AND X–X INDICATES AC SOURCE CIRCUIT)	HD	HAND DRYER
			SOLENOID VALVE
$	SINGLE POLE SWITCH (3=3 WAY, 4=4 WAY, P=PILOT LIGHT, K=KEYED, DM=DIMMER, M=MOTOR RATED)		
$OS	OCCUPANCY SENSOR (PASSIVE)		
OS	CEILING MOUNTED MOTION SENSOR	SECURITY	
WOS	WALL MOUNTED MOTION SENSOR		SECURITY DETECTOR (SURFACE MOUNTED)
FIRE ALARM			CEILING MOUNTED CAMERA
	HEAT DETECTOR (135 DEGREE RATE OF RISE AND FIXED TEMPERATURE)	ACCESS CONTROL	
S	SMOKE DETECTOR (RL=RELAY BASE)	EM	EMERGENCY PUSH BUTTON STATION
	PULLSTATION	DLH	"ASSISTANCE REQUIRED" DOME LIGHT WITH SOUNDER
	ALARM BELL	GENERAL	
COMMUNICATIONS		ER	INDICATED EXISTING ITEM TO REMAIN
	SINGLE WALL MOUNTED TELEPHONE OUTLET C/W ½" (13mm) C TO CABLE MANAGEMENT SYSTEM.	D	INDICATES EXISTING ITEM TO BE DELETED
	SINGLE COMPUTER OUTLET C/W ¾" (21mm) C TO CABLE MANAGEMENT SYSTEM.	R	INDICATES EXISTING ITEM TO BE RELOCATED/IN RELOCATED POSITION
	CLOCK AS PER SPECIFICATIONS	GF	GROUND FAULT
	WALL MOUNTED SPEAKER (CS=COLUMN SPEAKER)	CLG	CEILING MOUNTED
	CEILING MOUNTED SPEAKER	X	NOTE INDICATOR
A	AUXILIARY ROUGH–IN FOR USE AS NOTED.	ELECTRIC HEAT	
STANDARD CIRCUIT LABELING		X	BASEBOARD ELECTRIC HEATER (TYPE AS INDICATED)
A–1–1 POWER PANEL LABEL, CIRCUIT INDICATION, SWITCH LEG (IF APPLICABLE)			

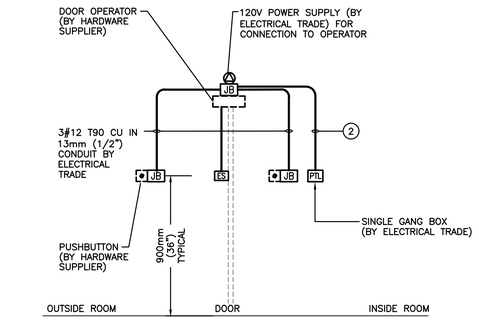
NOTES

1 CONTRACTOR IS RESPONSIBLE TO REMOVE AND RE–INSTALL CEILING TILE TO SUIT RENOVATION. ANY DAMAGED OR FINGER–PRINTED TILE MUST BE REPLACED.

LIGHT FIXTURE SCHEDULE

Item	Manufacturer/Catalog Number	Voltage	Lamp	Mounting	CRI	Listings	Description
A	COOPER CAT. #4SNLED–LD5–44SL–LW–UNV–L840–CD–1–AYC–WG/SNF–4FT LITHONIA CAT. #CLX L48 5000LM SEF RDL WD MVOLT GZ10 40K 80CRI WH/WGCLX48	120V	LED 4601 LUMENS 4000K 38W	SUSPENDED	80	DLC DAMP LOC.	4' (1220mm) SURFACE LED STRIP LIGHT C/W WIDE LENSED OPTICAL DISTRIBUTION, CHAIN SUSPENSION KIT, 10% 0–10V DIMMING DRIVER, AND WIRE GUARD. NOTE: SUSPEND TO MAINTAIN MAXIMUM HEADROOM.
B	LITHONIA CAT. #WF6 LED 30K40K50K 90CRI MW M6	120V	LED 1190 LUMENS 4000K 14W	RECESSED	80	ENERGY STAR	RECESSED 6" (150mm) DIAMETER LED PANEL DOWNLIGHT.
C	COOPER CAT. #24FPSL2SCT3 LITHONIA CAT. #CPX 2X4 ALO8 SWW7 M2	120V	LED 4620 LUMENS 4000K 40.2W	RECESSED	80	DLC DAMP LOC.	2'X4' (610mmX1220mm) LED BACKLIT FLAT PANEL FIXTURE C/W FIELD SELECTABLE LUMENS AND COLOUR TEMPERATURE, WHITE FROSTED LENS, 10% 0–10V DIMMING DRIVER, AND WHITE FINISH.
C1	COOPER CAT. #24FPSL2SCT3 LITHONIA CAT. #CPX 2X4 ALO8 SWW7 M2	120V	LED 3180 LUMENS 4000K 27.2W	RECESSED	80	DLC DAMP LOC.	SIMILAR TO FIXTURE 'C' WITH 'LOW' LUMEN SETTING.
E	LITHONIA CAT. #WF3 ADJ LED 30K 90CRI MW	120V	LED 530 LUMENS 4000K 7.5W	RECESSED	90	ENERGY STAR	RECESSED 3" (75mm) DIAMETER LED PANEL DOWNLIGHT.
F	LITHONIA LIGHTING CAT. #FMMCL–840–PIR–M4	120V	LED 570 LUMENS 4000K 10.4W	SURFACE	80	ENERGY STAR	INDOOR LED 7" (180mm) GLOSS WHITE FLUSH MOUNT CEILING LIGHT C/W MOTION SENSOR
EMERG. BATT.	BEGHELLI TEMPESTA SERIES: EM–3 #TA–LED–EM–120–S–90P AIMLIGHT CAT. #RMWL–12–014–WHT–TP–90 STANPRO CAT. #SWL–EM–WH–120–AT–TP–90 ABB LUMACELL CAT. #LBL–EM C/W KIT–SR–L	120V	LED 17W	SURFACE	N/A	N/A	SURFACE MOUNTED VANDAL RESISTANT LONG LIFE, SEALED BATTERY, C/W 17W LED MODULES, POLYCARBONATE BODY AND 90 MINUTE BATTERY DURATION.

NOTES:
1. 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.
2. EQUAL MANUFACTURERS/SUPPLIERS MUST CONFIRM THE PROPOSED FIXTURE BY EMAIL WITH CONSULTANTS OFFICE A MINIMUM OF 10 DAYS PRIOR TO TENDER CLOSE.
3. IF THERE ARE ANY DISCREPANCIES BETWEEN THE FIXTURE PART NUMBER AND DESCRIPTION, IT IS THE RESPONSIBILITY OF THIS CONTRACTOR TO BRING THESE TO THE ELECTRICAL CONSULTANT'S ATTENTION PRIOR TO TENDER CLOSE. NO EXTRAS WILL BE ENTERTAINED FOR FAILURE TO DO SO. FINAL FIXTURE CHARACTERISTICS AND DESCRIPTION WILL BE MARKED BY CONSULTANT AT TIME OF SHOP DRAWING REVIEW.



1. THIS CONTRACTOR IS TO MAKE ALL CONNECTIONS TO ALL DEVICES AS SUPPLIED BY THE HARDWARE CONTRACTOR.
2. PROVIDE LOW VOLTAGE INTERCONNECT WIRING TO SUIT SUPPLIER. FOR PRICING PURPOSES ALLOW 4c#18 IN 13mmC

A–DOOR OPERATOR DETAIL
SCALE: NTS

CLIENT LOGO

WATERLOO REGION DISTRICT SCHOOL BOARD

KEYPLAN

TRUE NORTH PROJECT NORTH

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1	ISSUED FOR BID AND PERMIT	2024–03–13

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Project Number: 23258

DEI Consulting Engineers
MECHANICAL | ELECTRICAL | AQUATIC

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WATERLOO REGION DISTRICT SCHOOL BOARD

51 Ardelt Ave, Kitchener, ON N2C 2R5

PROJECT

PRESTON HS - RAMP AND WASHROOM RENOVATIONS

550 Rose St. Cambridge, ON N3H 2E6

TITLE

KEY PLAN AND LEGEND

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J.J. JACKSON
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PROVINCE OF ONTARIO

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CHECKED BY :	SD

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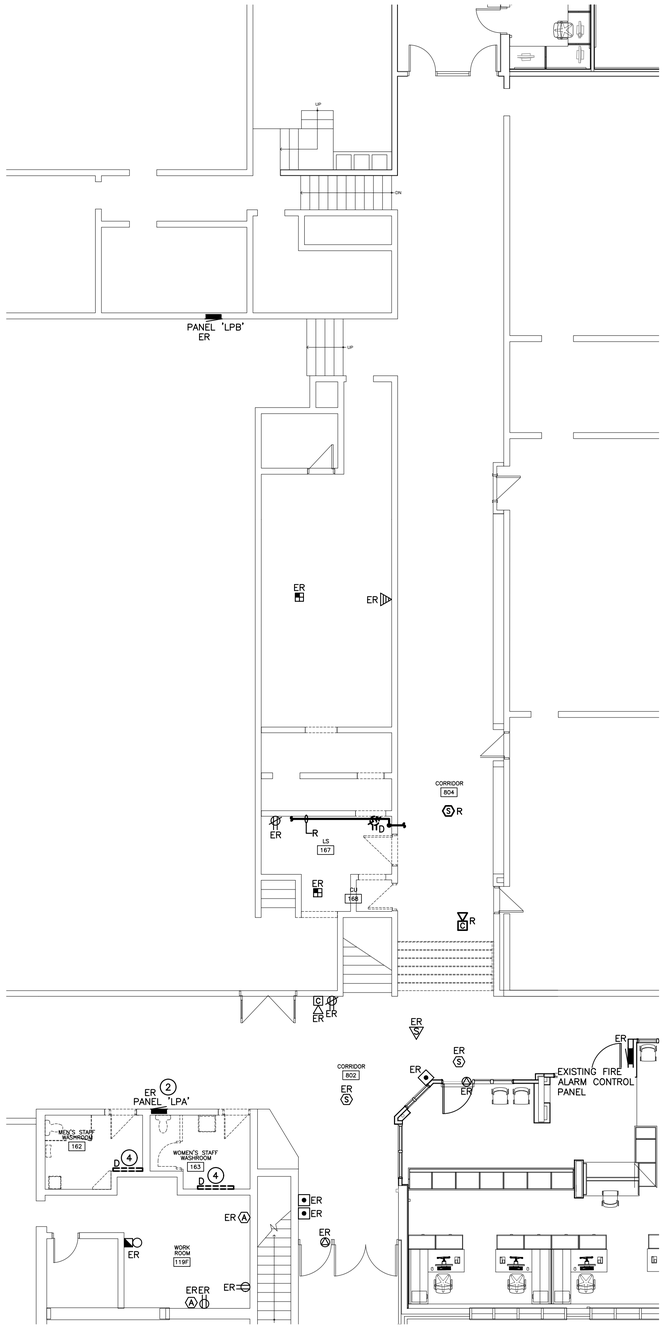
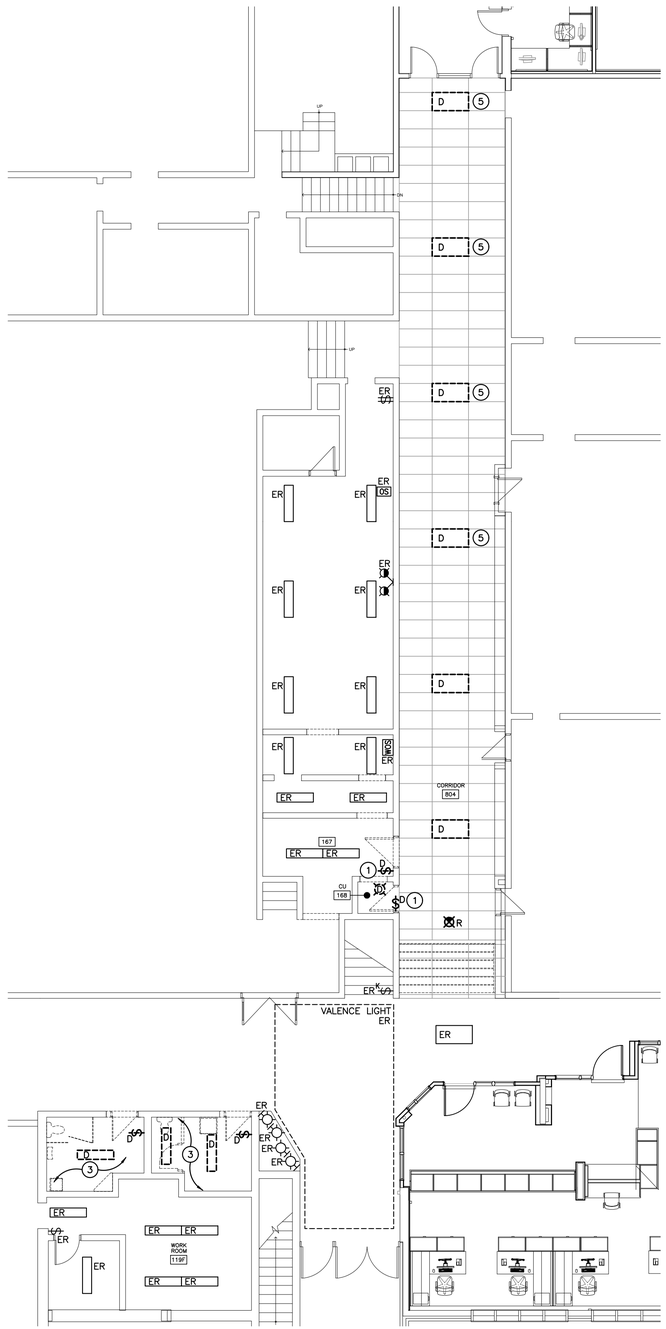


WASHROOMS/CORRIDOR POWER & SYSTEMS – DEMOLITION

SCALE: 1:100



WASHROOMS/CORRIDOR LIGHTING – DEMOLITION

SCALE: 1:100

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 DELETED. UNLESS OTHERWISE NOTED DISCONNECT AND REMOVE NOTED DEVICE AND WIRING BACK TO SOURCE.
- ALL LIGHTING FIXTURES BEING RELOCATED SHALL BE CLEANED AND CHECKED PRIOR TO BEING REINSTALLED.

SPECIFIC DEMOLITION NOTES

1 EXISTING SWITCH TO BE REMOVED. EXISTING LINE AND LOAD WIRING IS TO BE PULLED BACK TO ACCESSIBLE CEILING SPACE FOR RECONNECTION TO NEW CONTROLS. PROVIDE BLANK STAINLESS STEEL COVERPLATE TO SUIT EXISTING BACKBOX IF REQUIRED. REFER TO RENOVATION PLANS.

2 EXISTING SQUARE D TYPE 'NQ' 100A 120/208V 3PH 4W 10kA PANEL TO REMAIN.

3 MAINTAIN EXISTING LIGHTING CIRCUIT WITHIN THIS AREA FOR RECONNECTION TO NEW CONTROLS. REFER TO RENOVATION PLANS FOR ADDITIONAL INFORMATION.

4 EXISTING BASEBOARD HEATERS TO BE REMOVED COMPLETE. MAINTAIN CIRCUIT FOR RE-USE DURING RENOVATION. REFER TO RENOVATION DRAWINGS.

5 MAINTAIN LIGHTING CIRCUIT WITHIN THIS AREA FOR RECONNECTION TO NEW LIGHT FIXTURES. EXISTING LIGHTING CONTROLS TO REMAIN.

CLIENT LOGO

WATERLOO REGION DISTRICT SCHOOL BOARD

KEYPLAN

TRUE NORTH

PROJECT NORTH

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Project Number: 23258

DEI Consulting Engineers
MECHANICAL | ELECTRICAL | AQUATIC

CLIENT

WATERLOO REGION DISTRICT SCHOOL BOARD

51 Ardelt Ave, Kitchener, ON N2C 2R5

PROJECT

PRESTON HS - RAMP AND WASHROOM RENOVATIONS

550 Rose St. Cambridge, ON N3H 2E6

TITLE

WASHROOMS/ CORRIDOR PARTIAL GROUND FLOOR - DEMOLITION PLANS

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J.J. JACKSON
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PROVINCE OF ONTARIO

SCALE :	As indicated
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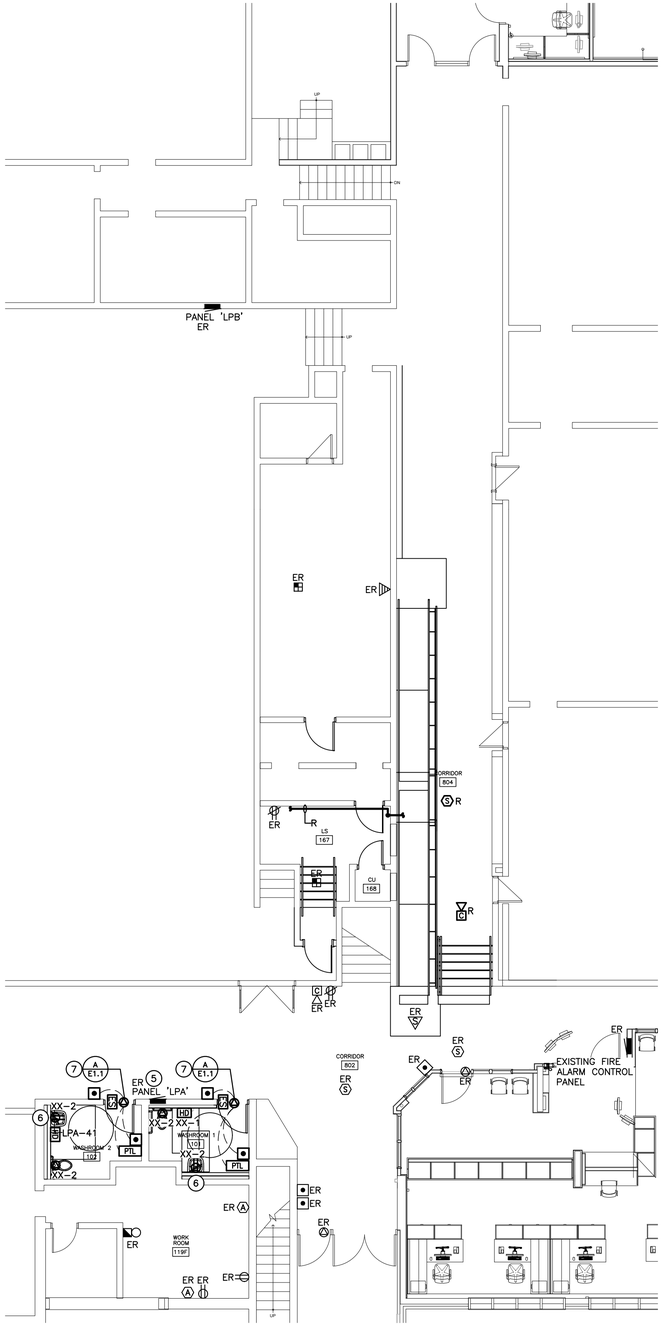
DRAWN BY :	KZ
CHECKED BY :	SD

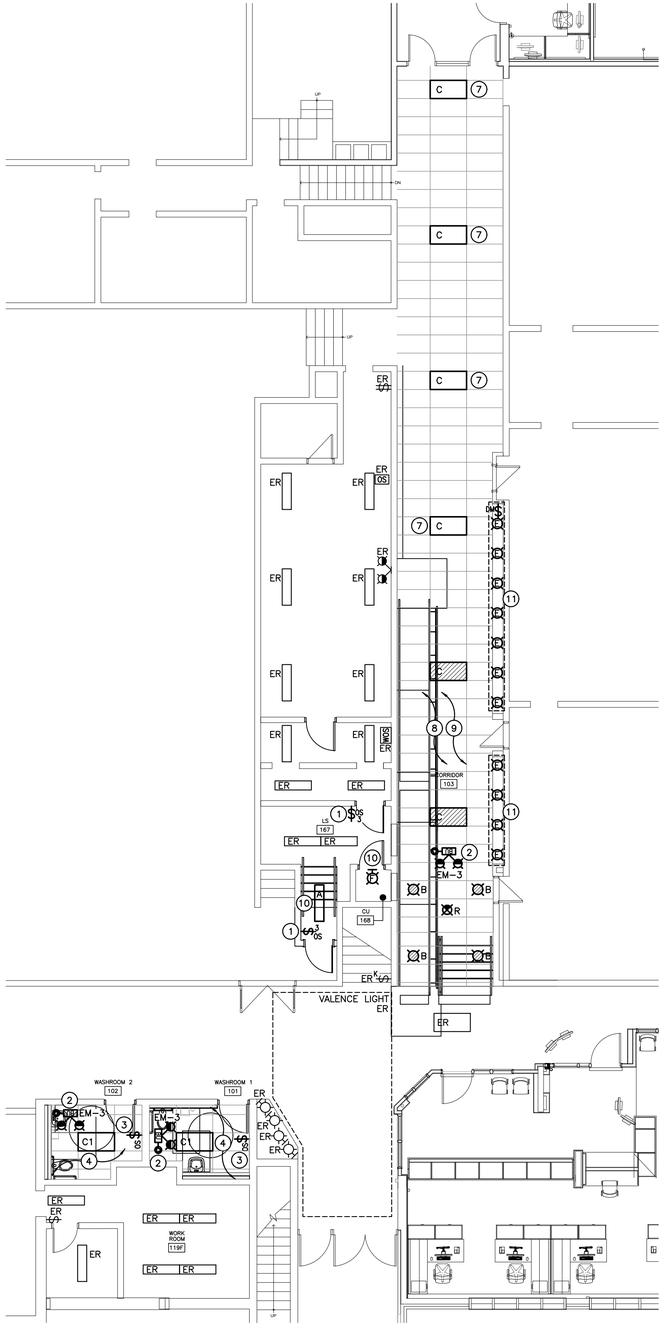
SHEET NO :

E2.1



WASHROOMS/CORRIDOR POWER & SYSTEMS – RENOVATION

SCALE: 1:100



WASHROOMS/CORRIDOR LIGHTING – RENOVATION

SCALE: 1:100

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

1 INDICATES NEW LIGHTING CONTROLS. RE-WORK EXISTING LINE AND LOAD SIDE WIRING TO SUIT. CONNECT TO EXISTING LIGHTING CIRCUIT.

2 CONNECT DEVICE TO THE LINE SIDE OF THE LOCAL LIGHTING CIRCUIT.

3 MOUNT SWITCH IN EXISTING BACKBOX MADE AVAILABLE DURING DEMOLITION PHASE. PROVIDE NEW STAINLESS STEEL COVERPLATE TO SUIT NEW DEVICE.

4 REWORK EXISTING LIGHTING CIRCUIT WITHIN THIS AREA TO SUIT NEW LIGHTING CONTROL AS DETAILED. PATCH CEILING AS REQUIRED TO SUIT THE REMOVAL OF LIGHTING FIXTURES.

5 WITHIN LOCAL EXISTING PANEL 'LPA' (SQUARE D TYPE 'NQ' 100A 120/208V 3PH 4W 10kA) PROVIDE THE FOLLOWING BREAKERS:

CIRCUIT	BREAKER	DEVICE
LPA-41	20A-1P 5mA GF	STAFF WASHROOM #102 HAND DRYER

6 INDICATES CONNECTION FOR SINK. PROVIDE RECEPTACLE WITHIN SHROUD FROM A GROUND FAULT BREAKER. COORDINATE EXACT LOCATION AND CONNECTION WITH MECHANICAL TRADE AND MECHANICAL SHOP DRAWINGS.

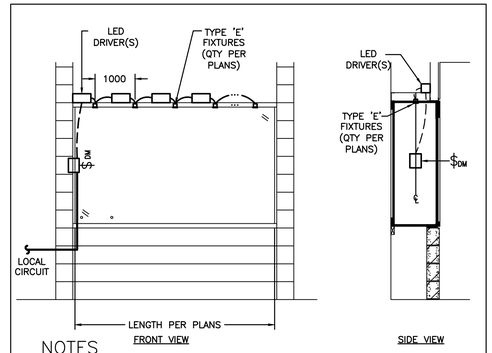
7 CONNECT TO EXISTING LOCAL CIRCUIT MADE AVAILABLE DURING DEMOLITION PHASE.

8 CONTRACTOR IS RESPONSIBLE TO REMOVE AND RE-INSTALL CEILING TILE TO SUIT RENOVATION. ANY DAMAGED OR FINGER-PRINTED TILE MUST BE REPLACED.

9 PROVIDE NEW SUPPORTS FOR EXISTING CONDUITS AND AC90 WIRING ABOVE CEILING TO SUIT DEMOLITION WORK. CO-ORDINATE WITH ARCHITECTURAL DOCUMENTS FOR EXTENT OF DEMOLITION.

10 REWORK EXISTING LIGHTING CIRCUIT WITHIN THIS AREA TO SUIT NEW LIGHT FIXTURES AS DETAILED.

11 FIXTURES ARE TO BE INSTALLED WITHIN DISPLAY CASE. REFER TO ARCHITECTURAL MILLWORK DRAWINGS AND DETAIL A/E2.2 FOR ADDITIONAL INFORMATION.



NOTES

1. ELV DIMMER SWITCH ($_{DW}$) FLUSH MOUNTED TO SIDE OF DISPLAY CASE STRUCTURE.
2. REFER TO ARCHITECTURAL DETAILS FOR EXACT STRUCTURE/CONSTRUCTION OF DISPLAY CASE.
3. COORDINATE PLACEMENT OF RECEPTACLE WITH INTERIOR SHELVING.

A-DISPLAY CASE LIGHTING DETAIL

SCALE: N.T.S.

CLIENT LOGO

WATERLOO REGION DISTRICT SCHOOL BOARD

KEYPLAN

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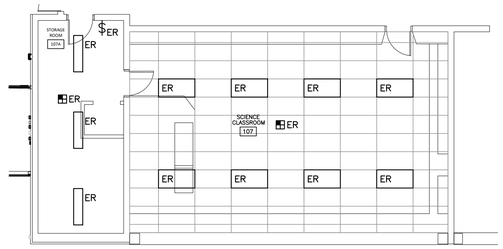
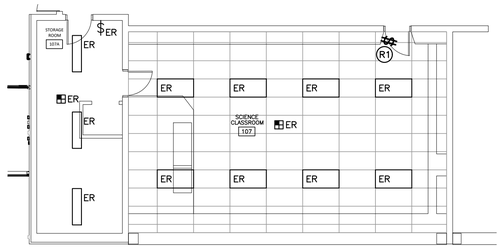


SCIENCE LAB #107 LIGHTING – DEMOLITION
SCALE: 1:100



SCIENCE LAB #107 LIGHTING – RENOVATION
SCALE: 1:100

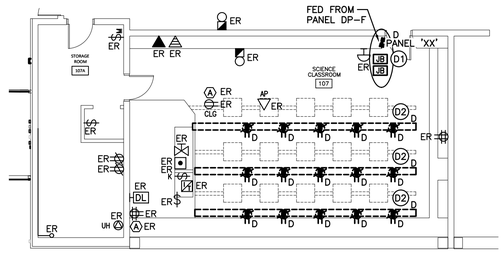
GENERAL DEMOLITION NOTES

- '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 DELETED. UNLESS OTHERWISE NOTED DISCONNECT AND REMOVE NOTED DEVICE AND WIRING BACK TO SOURCE.
- ALL LIGHTING FIXTURES BEING RELOCATED SHALL BE CLEANED AND CHECKED PRIOR TO BEING REINSTALLED.

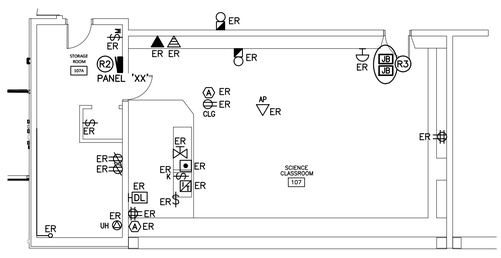
SPECIFIC DEMOLITION NOTES

D1 INDICATES EXISTING BULLDOG PUSHMATIC PANEL TO BE REMOVED COMPLETE. PULL MAINS AND BRANCH CIRCUIT WIRING UP TO NEW JUNCTION BOXES WITHIN ACCESSIBLE CEILING SPACE. PROVIDE TERMINAL STRIPS AND RE-TERMINATE BRANCH AND MAINS WIRING TO SUIT. PROVIDE PAINTED 16GA STEEL COVER ON EXISTING PANEL TUB.

D2 INDICATES WIRE TROUGH AND RECEPTACLE MOUNTED IN MILLWORK TO BE DISCONNECTED REMOVED COMPLETE. ALL WIRING TO BE REMOVED COMPLETE BACK TO SOURCE. LABEL SOURCE BREAKER AS SPARE.



SCIENCE LAB #107 POWER AND SYSTEMS – DEMOLITION
SCALE: 1:100



SCIENCE LAB #107 POWER AND SYSTEMS – RENOVATION
SCALE: 1:100

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

R1 REWORK EXISTING LIGHTING CIRCUIT WITHIN THIS AREA TO SUIT NEW LIGHTING CONTROL. MOUNT SWITCHES IN OLD PANEL TUB.

R2 PANEL SHALL BE AS FOLLOWS;
SURFACE MOUNTED
XXA 120/208V 3PH 4W (CONFIRM PANEL SIZE)
MAIN LUGS ONLY
RECESSED MOUNT
100% NEUTRAL
30 CIRCUIT MINIMUM C/W –

14 X 15A-1P BREAKERS

PROVIDE THE FOLLOWING NEW BREAKERS:

CIRCUIT	BREAKER	DEVICE
XX-1	20A-1P 5mA GF	STAFF WASHROOM #101 HAND DRYER
XX-2	15A-1P 5mA GF	WASHROOM FAUCETS REC.

NOTE: RECONNECT BRANCH CIRCUITS MADE AVAILABLE DURING DEMOLITION PHASE AND BACK FEED PANEL.

R3 FROM JUNCTION BOXES, PROVIDE NEW MAINS WIRING (4#8 T90 CU IN 21mmC) AND BRANCH CIRCUIT WIRING TO NEW PANEL BOARD LOCATION. TERMINATE WIRING ON TERMINAL STRIPS TO SUIT RECONNECTION. VERIFY EXACT CONDITIONS ON SITE AND COORDINATE RE-FEED METHOD WITH CONSULTANT.

CLIENT LOGO

WATERLOO REGION DISTRICT SCHOOL BOARD

KEYPLAN

TRUE NORTH

PROJECT NORTH

No.	ISSUANCE	DATE
1	ISSUED FOR BID AND PERMIT	2024-03-13

55 Northland Road,
Waterloo, ON, N2V 1Y8
Phone: 519-725-3555
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Project Number: 23258

Consulting Engineers
MECHANICAL | ELECTRICAL | AQUATIC

CLIENT

WATERLOO REGION DISTRICT SCHOOL BOARD

51 Ardelt Ave, Kitchener, ON N2C 2R5

PROJECT

PRESTON HS - RAMP AND WASHROOM RENOVATIONS

550 Rose St. Cambridge, ON N3H 2E6

TITLE

SCIENCE LAB #107 - DEMOLITION AND RENOVATION PLANS

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SEAL

LICENSED PROFESSIONAL ENGINEER
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3/7/24
PROVINCE OF ONTARIO

SCALE :	As indicated
DATE :	2024-01-30
PROJECT NO :	2023-0705-11
DRAWN BY :	KZ
CHECKED BY :	SD

SHEET NO :

E2.3

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 TWO (2) YEARS 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")
- PANEL BOARDS: 1400mm (4'-8") OR AS REQUIRED BY CODE.
- SECURITY SYSTEM MOTION DETECTORS: 300mm (12") BELOW FINISHED CEILING OR CEILING MOUNTED AS DIRECTED BY MANUFACTURER.

.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. (WRITER TO EDIT)

SYSTEM	COLOUR
UP TO 208V	YELLOW
SECURITY	BROWN
FIRE ALARM	RED
EMERGENCY LIGHTING	PINK

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

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 PANELBOARDS.
.2 LUMINAIRES
.3 FIRESTOPPING MATERIALS
.4 SURFACE RACEWAYS
.5 HAND DRYERS
.6 WIRING DEVICES
.7 OCCUPANCY SENSORS

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 PANELBOARDS AND MISCELLANEOUS DISTRIBUTION EQUIPMENT
.5 FEEDER CONDUITS
.6 BRANCH CONDUITS
.7 FEEDER CABLES
.8 BRANCH WIRING
.9 LIGHTING FIXTURES
.10 SECURITY SYSTEM
.11 WIRING FOR MECHANICAL EQUIPMENT
.12 CASH ALLOWANCES (ITEMIZED)
.13 COMMISSIONING AND CLOSEOUT DOCUMENTS (MINIMUM 3%)

.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.

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 SYSTEMS TO HAVE AN F OR FT RATING (AS APPLICABLE) NOT LESS THAN THE FIRE PROTECTION RATING REQUIRED FOR CLOSURES IN A FIRE SEPARATION. PROVIDE 'FIREWRAP' BLANKET AROUND SERVICES PENETRATING FIREWALLS.

.5 EXTENT OF BLANKET MUST CORRESPOND TO ULC RECOMMENDATIONS. IN GENERAL WRAP INDIVIDUAL CONDUITS WITH APPROVED FIREWRAP MATERIALS ON EACH SIDE OF FIREWALL. REFER TO ARCHITECTURAL DRAWINGS FOR FT RATINGS. PROVIDE 1 AND/OR 2 LAYERS OF FIREWRAP WITH TRANSVERSE AND LONGITUDINAL SEAMS OVERLAPPED AND/OR BUTTED (SECOND LAYER OFFSET FROM FIRST LAYER). CUT EDGES ARE TO BE SEALED WITH ALUMINUM FOIL TAPE. PROVIDE 50 MM STAINLESS STEEL BANDING AT 200 MM INTERVALS. INSTALL FIREWRAP TO MANUFACTURERS' RECOMMENDATIONS FOR PROPER FT RATING. ACCEPTABLE MANUFACTURERS ARE 3M FIREMASTER DUCTWRAP OR APPROVED EQUAL.

.6 THE FIRESTOPPING MATERIALS ARE NOT TO SHRINK, SLUMP OR SAG AND BE FREE OF ASBESTOS, HALOGENS AND VOLATILE SOLVENTS.

.7 FIRESTOPPING MATERIALS ARE TO CONSIST OF A COMPONENT SEALANT APPLIED WITH A CONVENTIONAL CAULKING GUN AND TROWEL.

.8 FIRESTOP MATERIALS ARE TO BE CAPABLE OF RECEIVING FINISH MATERIALS IN THOSE AREAS, WHICH ARE EXPOSED AND SCHEDULED TO RECEIVE FINISHES.

.9 FIRESTOPPING SHALL BE INSPECTED AND APPROVED BY LOCAL AUTHORITY PRIOR TO CONCEALMENT OR ENCLOSURE.

.10 INSTALL MATERIAL AND COMPONENTS IN ACCORDANCE WITH ULC CERTIFICATION, MANUFACTURERS INSTRUCTIONS AND LOCAL AUTHORITY.

.11 SUBMIT PRODUCT LITERATURE AND INSTALLATION MATERIAL ON FIRESTOPPING IN SHOP DRAWING AND PRODUCT DATA MANUAL.

.12 ACCEPTABLE MANUFACTURERS:
RECTORSEAL CORPORATION (METACAULK)
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.

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

WIRING DEVICES

.1 GENERAL PURPOSE AC SWITCHES MUST CONFORM TO CSA C22.2 NO. 111 (LATEST EDITION).

.2 15 OR 20 A, 120 V, SINGLE POLE, DOUBLE POLE, THREE-WAY, OR FOUR-WAY SWITCHES.

.3 MANUALLY-OPERATED GENERAL PURPOSE AC SWITCHES WITH THE FOLLOWING FEATURES:
.1 TERMINAL HOLES APPROVED FOR NO. 10 AWG WIRE.
.2 SILVER ALLOY CONTACTS.
.3 UREA OR MELAMINE MOLDING FOR PARTS SUBJECT TO CARBON TRACKING.
.4 SUITABLE FOR BACK AND SIDE WIRING.
.5 TOGGLE COLOUR AS SELECTED BY ARCHITECT.

.4 ACCEPTABLE MATERIALS:
.1 SINGLE POLE: HUBBELL CAT. #1201 OR EQUAL
.2 THREE-WAY: HUBBELL CAT. #1203 OR EQUAL

.5 INSTALL SINGLE THROW SWITCHES WITH HANDLE IN "UP" POSITION WHEN SWITCH IS CLOSED.

.6 INSTALL SWITCHES IN GANG TYPE OUTLET BOX WHEN MORE THAN ONE SWITCH IS REQUIRED IN ONE LOCATION.

.7 RECEPTACLES, PLUGS, AND OTHER SIMILAR WIRING DEVICES MUST CONFORM TO CSA C22.2 NO. 42 (LATEST EDITION).

.8 DUPLEX RECEPTACLES, CSA TYPE 5-15 R, 125 V, 15 A, U GROUND, WITH THE FOLLOWING FEATURES:
.1 UREA MOLDED HOUSING WITH COLOUR AS SELECTED BY ARCHITECT.
.2 SUITABLE FOR NO. 10 AWG FOR BACK AND SIDE WIRING.
.3 BREAK-OFF LINKS FOR USE AS SPLIT RECEPTACLES.
.4 EIGHT BACK WIRED ENTRANCES, FOUR SIDE WIRING SCREWS.
.5 TRIPLE WIRE CONTACTS AND RIVETED GROUNDING CONTACTS.

.9 ACCEPTABLE MATERIALS:
.1 STANDARD DUPLEX RECEPTACLE: HUBBELL CAT. #HBL5252CN
.2 DECORA STYLE DUPLEX RECEPTACLE: HUBBELL CAT. #HBL2152 COMPLETE WITH DECORA STYLE COVERPLATE TO SUIT SPECIFICATION BELOW.

.10 OTHER RECEPTACLES WITH AMPACITY AND VOLTAGE AS INDICATED. COLOUR BY ARCHITECT.

.11 ACCEPTABLE ALTERNATE MANUFACTURERS INCLUDE:
PASS & SEYMOUR
LEVITON

.12 WALL MOUNTED OCCUPANCY SENSORS (PASSIVE TECHNOLOGY), OCCUPANCY SENSORS USED IN STORAGE AND SERVICE ROOMS SHALL BE EITHER:
.1 HUBBELL CAT. #AP1277XIN (COLOUR BY ARCHITECT)
.2 WATTSTOPPER CAT. #PW-100-VOLT-X (COLOUR BY ARCHITECT)
.3 LEVITON CAT. #ODS-15-ID-VOLT-X (COLOUR BY ARCHITECT)
.4 SENSOR SWITCH CAT. #WSD-VOLT-X (COLOUR BY ARCHITECT)

.13 PROVIDE OTHER OCCUPANCY SENSORS TO SUIT THE DETAIL(S) ON THE DRAWINGS.

.14 ALL SENSORS SHALL BE SET TO 5 MINUTES "DELAY TO OFF" UNLESS OTHERWISE DIRECTED.

.15 OCCUPANCY SENSORS:
.1 INSTALL POWER PACKS IN ACCESSIBLE MAINTENANCE AREAS.

.2 PROVIDE ACCESS DOORS IF POWER PACKS ARE INSTALLED ABOVE DRYWALL CEILINGS.

.3 IT SHALL BE THE CONTRACTOR'S RESPONSIBILITY TO LOCATE AND AIM SENSORY 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.

.4 IT IS THE CONTRACTOR'S RESPONSIBILITY TO ARRANGE A PRE-INSTALLATION MEETING WITH THE MANUFACTURER'S FACTORY AUTHORIZED REPRESENTATIVE, AT THE FACILITY, TO VERIFY PLACEMENT TO SENSORS AND INSTALLATION CRITERIA.

.5 THE CONTRACTOR SHALL ALSO PROVIDE THE ON-SITE TRAINING NECESSARY TO FAMILIARIZE THE OWNER'S PERSONNEL WITH THE OPERATION, USE, ADJUSTMENT AND PROBLEM SOLVING DIAGNOSIS OF THE OCCUPANCY SENSING DEVICES SYSTEMS.

.6 UPON COMPLETION OF THE INSTALLATION, THE SYSTEM SHALL BE COMPLETELY COMMISSIONED BY THE MANUFACTURER'S FACTORY AUTHORIZED TECHNICIAN WHO WILL VERIFY ALL ADJUSTMENTS AND SENSOR PLACEMENT TO ENSURE A TROUBLE-FREE OCCUPANCY-BASED LIGHTING CONTROL. SUBMIT COMMISSIONING REPORT WITH CLOSE-OUT DOCUMENTS.

.16 INSTALL DEVICES IN GANG TYPE OUTLET BOX WHEN MORE THAN ONE DEVICE IS REQUIRED IN ONE LOCATION.

.17 SHEET STEEL UTILITY BOX COVER FOR WIRING DEVICES INSTALLED IN SURFACE MOUNTED UTILITY BOXES.

.18 STAINLESS STEEL, VERTICALLY BRUSHED, 1mm THICK, COVER PLATES FOR WIRING DEVICES MOUNTED IN FLUSH-MOUNTED OUTLET BOXES.

.19 SHEET METAL COVER PLATES FOR WIRING DEVICES MOUNTED IN SURFACE-MOUNTED FS OR FD TYPE CONDUIT BOXES.

.20 PROTECT STAINLESS STEEL COVER PLATE FINISH WITH PAPER OR PLASTIC FILM UNTIL PAINTING AND OTHER WORK IS FINISHED.

.21 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.
.8 OTHER THAN FOR SPECIALTY FIXTURES, AND UNLESS OTHERWISE INDICATED, THE MAXIMUM DRIVER CURRENT IS TO BE 750 MA.

.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 CONNECT UNIT EQUIPMENT TO CIRCUITS AS INDICATED.

.7 ALIGN LUMINAIRES MOUNTED IN CONTINUOUS ROWS TO FORM STRAIGHT UNINTERRUPTED LINES.

.8 ALIGN LUMINAIRES MOUNTED INDIVIDUALLY PARALLEL OR PERPENDICULAR TO BUILDING GRID LINES.

.9 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

.8 TESTING/CERTIFICATION

.1 AT THE COMPLETION OF THE PROJECT AND IN THE PRESENCE OF THE CONSULTANT, TEST ALL EXIT AND EMERGENCY FIXTURES. ON COMPANY LETTERHEAD, THE CONTRACTOR IS TO PREPARE A CHART INDICATING:
- PROJECT
- DATE
- EQUIPMENT TYPE
- CERTIFICATION OF CORRECT CONNECTION
- CERTIFICATION OF CORRECT OPERATION
- DURATION OF TEST IN MINUTES (MINIMUM 30)
- ACTUAL PERIOD OF TESTING (TIME OF DAY)

PANEL BOARDS

.1 PANEL BOARDS MUST CONFORM TO CSA C22.2 NO. 29 (LATEST EDITION).

.2 IN ADDITION TO CSA REQUIREMENTS MANUFACTURER'S NAMEPLATE MUST SHOW FAULT CURRENT THAT PANEL INCLUDING BREAKERS HAS BEEN BUILT TO WITHSTAND. SERIES RATING IS ACCEPTABLE-SUBMIT INFORMATION WITH SHOP DRAWINGS.

.3 BUS AND BREAKERS/SWITCHES MUST BE RATED FOR 10KA (SYMMETRICAL) INTERRUPTING CAPACITY OR AS INDICATED.

.4 SEQUENCE PHASE BUSSING WITH ODD NUMBERED BREAKERS ON LEFT AND EVEN ON RIGHT, WITH EACH BREAKER IDENTIFIED BY PERMANENT NUMBER IDENTIFICATION AS TO CIRCUIT NUMBER AND PHASE.

.5 PANEL BOARD MAINS, NUMBER OF CIRCUITS, AND NUMBER AND SIZE OF BRANCH CIRCUIT AS INDICATED.

.6 TWO KEYS FOR EACH PANEL BOARD AND KEY PANEL BOARDS ALIKE.

.7 ALUMINUM BUS WITH NEUTRAL OF SAME AMPERE RATING AS MAINS.

.8 MAINS MUST BE SUITABLE FOR BOLT-ON BREAKERS. PROVIDE MAIN (IF APPLICABLE) AND BRANCH BREAKERS AS BOLT-ON STYLE.

.9 TRIM AND DOOR FINISH MUST BE BAKED GRAY ENAMEL.

.10 BREAKERS WITH THERMAL AND MAGNETIC TRIPPING IN PANEL BOARD EXCEPT AS INDICATED OTHERWISE.

.11 PROVIDE NAMEPLATE FOR EACH PANEL BOARD WITH ENGRAVED DESCRIPTION AS INDICATED.

.12 FOR EACH NEW AND EXISTING PANEL PROVIDE COMPLETE CIRCUIT DIRECTORY WITH TYPEWRITTEN LEGEND SHOWING LOCATION OF EACH CIRCUIT.

.13 LOCATE PANEL BOARDS AS INDICATED AND MOUNT SECURELY, PLUMB, TRUE AND SQUARE, TO ADJOINING SURFACES.

.14 INSTALL SURFACE MOUNTED PANEL BOARDS ON PLYWOOD BACKBOARDS. WHERE PRACTICAL, GROUP PANEL BOARDS ON COMMON BACKBOARD.

.15 CONNECT LOADS TO CIRCUITS.

.16 CONNECT NEUTRAL CONDUCTORS TO COMMON NEUTRAL BUS.

.17 BRANCH CIRCUIT PANEL BOARDS MUST BE ONE OF THE FOLLOWING:
- CUTLER HAMMER CAT. #POW-R-LINE-C PRL-1 OR PRL-2
- SCHNEIDER ELECTRIC CAT. #NQOD SERIES
- SIEMENS CAT. #SENTRON P1 SERIES

.18 ALL REDUNDANT BREAKERS ARE TO REMAIN AND BE RE-LABELED AS "SPARE".

.19 EXISTING PANELS MUST BE REVIEWED FOR LOOSE AND/OR FAULTY BREAKERS AND WIRING. ALL REQUIRED MODIFICATIONS MUST BE PERFORMED TO CORRECT ANY UNCOVERED PROBLEMS.

CLIENT LOGO

WATERLOO REGION DISTRICT SCHOOL BOARD

KEYPLAN

TRUE NORTH PROJECT NORTH

No.	ISSUANCE	DATE
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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.

DEI Consulting Engineers
MECHANICAL | ELECTRICAL | AQUATIC
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Phone: 519-725-3555
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Project Number: 23258

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

PROJECT
PRESTON HS - RAMP AND WASHROOM RENOVATIONS
550 Rose St. Cambridge, ON N3H 2E6

TITLE
ELECTRICAL SPECIFICATIONS 1 OF 2

WALTERFEDY
KITCHENER | HAMILTON | TORONTO
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J.J. JACKSON
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3/7/24
PROVINCE OF ONTARIO

SCALE :	As indicated
DATE :	2024-01-30
PROJECT NO :	2023-0705-11
DRAWN BY :	KZ
CHECKED BY :	SD

SHEET NO : E3.1

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 NEW FIRE ALARM DETECTION AND SIGNALING DEVICES ADDED DUE TO RENOVATIONS AND ADDITIONS SHALL BE CONNECTED TO EXISTING LOCAL ZONE OR NEW ZONE AS INDICATED.

.4 ONCE INSTALLATION IS COMPLETE THE MANUFACTURER'S REPRESENTATIVE MUST MAKE AN INSPECTION OF THE DEVICES INSTALLED.

.5 THIS TEST MUST CONFORM TO THE ONTARIO BUILDING CODE AND THE LATEST EDITION OF ULC CAN4–S537.

.6 ALL COSTS ASSOCIATED WITH THIS INSPECTION BY THE CONTRACTOR AND MANUFACTURER MUST BE CARRIED IN THE TENDER PRICE.

.7 UPON SUCCESSFUL COMPLETION OF TESTING THE MANUFACTURER MUST SUBMIT TO THE CONTRACTOR AND CONSULTANT:
- A CERTIFICATE OF VERIFICATION
- FIELD TECHNICIAN VERIFICATION SHEETS FOR EACH DEVICE VERIFIED (INCLUDE COPIES OF SAME IN MAINTENANCE MANUALS)

EQUIPMENT

.1 HAND DRYERS
- .1 HAND DRYERS WHERE NOTED ON THE DRAWINGS ARE TO BE SUPPLIED AND INSTALLED BY THIS DIVISION WITH THE FOLLOWING FEATURES:
  - .1 SURFACE MOUNTING.
  - .2 FIXED NOZZLE.
  - .3 WHITE FINISH WITH AUTOMATIC ACTIVATION.
  - .4 RATING OF 1800W (20A) AT 120V.
  - .5 NOVA 4–0412
  - .6 APPROVED ALTERNATE: WORLD DRYER CAT. #XA5–2–974.

.2 CABLE MANAGEMENT HANGERS
- .1 HANGERS ARE TO BE APPROXIMATELY 150mm (6") X 80mm (3 1/4") CONSTRUCTED FROM 5mm (3/16") X 20mm (3/4") FLAT STEEL BAR FORMED TO RESEMBLE THE LETTER 'G' AND COMPLETE WITH SEVEN (7) MOUNTING HOLES AROUND THE HANGER PERIMETER.
- .2 HANGERS ARE TO BE MATTE BLACK FINISH AND MUST BE SUITABLE FOR WALL OR SUSPENDED MOUNTING.
- .3 COORDINATE LOCATIONS ON SITE WITH ALL OTHER SERVICES WITHIN CEILING SPACE.
- .4 ACCEPTABLE MANUFACTURES ARE AS FOLLOWS:
  - .1 EMF CAT. #H–533–S
  - .2 WIREMOLD CAT. #GH030406
  - .3 MONO SYSTEM CAT. #THE HOOK H–644–A
- .5 AS AN ALTERNATE TO THE HANGER SYSTEM THE CONTRACTOR MAY USE AS AN EQUAL, ONE RUN OF 50mm (2") X 150mm (6") WIRE MESH CABLE MANAGEMENT SYSTEM EQUAL TO CABLOFIL CAT.# CF–54/150 COMPLETE WITH CAT.# FASL150 WALL BRACKET OR CAT.#FASC200 SUSPENSION BRACKET. HANGERS TO BE INSTALLED AT A MAXIMUM OF 2400mm (8'–0").

CLIENT LOGO

KEYPLAN

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