ISSUED FOR TENDER | July 27, 2020

ARLINGTON WOODS FREE METHODIST CHURCH RENOVATION

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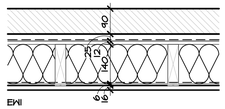
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project
Arlington Woods
Free Methodist
Church Renovation
225 McClellan Rd. Ottawa, ON

HOBIN PROJECT 1846

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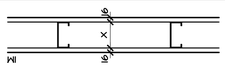
EXTERIOR WALL TYPES



EW1 EXTERIOR MASONRY WALL TO MATCH EXISTING
MINIMUM 415mm, F.R.R.
90mm SALVAGED MASONRY VENEER;
25mm AIR SPACE (TO MATCH EXISTING);
AIR/WEATHER BARRIER,
12mm OSB EXTERIOR SHEATHING
38x140mm WOOD STUDS @ 400 O/C
c/w R24 FIBER GLASS BATT INSULATION
6mil POLY VAPOUR BARRIER
ADD WOOD FURRING AS REQUIRED TO MAKE SYP. BD. FLUSH WITH ADJACENT FIRE PROTECTION SYP. BOARD AROUND COLUMNS
16mm TYPE 'X' GYPSUM BOARD
NOTE: MASONRY VENEER TO KEY INTO EXISTING MASONRY VENEER TO REMAIN; SAW-CUT JOINTS ARE NOT ACCEPTABLE

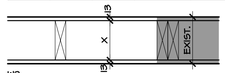
PART. TYPE	STUD SIZE "X"	F.R.R.	VENEER TYPE
EW1	140mm	45min	MASONRY TO MATCH EXISTING

INTERIOR WALL TYPES



W1 INTERIOR PARTITION OR 45min. FIRE RATED PARTITION
16mm GYPSUM BOARD
METAL STUDS @ 400 o/c
16mm GYPSUM BOARD
NOTE: USE TYPE 'X' GYP. BD. FOR FIRE SEPARATIONS

PART. TYPE	STUD SIZE "X"	F.R.R.	ACOUSTIC RATING	F.R.R. / ACOUSTIC TEST	COMMENTS
W1	92mm	-	-		
W1r	92mm	1 HR.	-	F.R.R.: ULC-U411	USE TYPE 'X' GYPSUM BOARD ON BOTH SIDES
W1a	152mm	-	-		



W2 INTERIOR PARTITION INFILL
13mm TYPE X GYPSUM BOARD
18-41mm WOOD STUDS @ 400 o/c
13mm TYPE X GYPSUM BOARD

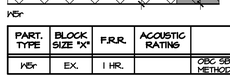
PART. TYPE	STUD SIZE "X"	F.R.R.	ACOUSTIC RATING	COMMENTS	
W2r	184mm	45 min.	-	-	



W3 FURRING WALL
16mm GYPSUM BOARD OR TILE BACKER BOARD AT CERAMIC TILE, REFER TO ROOM FINISH SCHEDULE;
METAL STUDS @ 400 o/c

PART. TYPE	STUD SIZE "X"	F.R.R.	ACOUSTIC RATING	COMMENTS
W3	92mm	-	-	
W3a	152mm	-	-	
W3b	41mm	-	-	
W3c	22mm	-	-	
W3d	64mm	-	-	

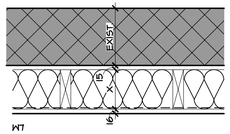
W4 NOT IN USE



W5 CONCRETE BLOCK WALL INFILL
CONCRETE BLOCK WALL TO MATCH EXISTING; SEE STRUC.'L DWGS.

PART. TYPE	BLOCK SIZE "X"	F.R.R.	ACOUSTIC RATING	COMMENTS
W5r	EX.	1 HR.		OBC SB-2 2.3.4 TIME-ASSIGNED METHOD OF CALCULATION

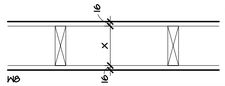
W6 NOT IN USE



W7 FURRING TO EXISTING EXTERIOR CONCRETE BLOCK WALL
EXIST. CONC. BLOCK WALL TO REMAIN
15mm AIR SPACE
WOOD STUDS @ 400 O/C
c/w R22 FIBER GLASS BATT INSULATION
6mil POLY VAPOUR BARRIER
16mm GYPSUM BOARD

NOTE: USE HIGH IMPACT GYPSUM BOARD TO 3050mm A.F.F. AT ALL FELLOWSHIP HALL WALLS EXPOSED BY GYM ACTIVITIES.

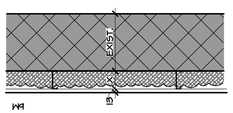
PART. TYPE	STUD SIZE "X"	F.R.R.	ACOUSTIC RATING	COMMENTS
W7	140mm	-		16mm HIGH IMPACT RESISTANT GYP. BD. TO 3050mm ABOVE FLOOR. 16mm GYPSUM BOARD ABOVE
W7a	140mm	-		16mm GYPSUM BOARD TO 3050mm



W8 INTERIOR WOOD FRAME PARTITION
16mm GYPSUM BOARD
WOOD STUDS @ 400 O/C
16mm GYPSUM BOARD

NOTE: USE HIGH IMPACT GYPSUM BOARD TO 3050mm A.F.F. AT ALL FELLOWSHIP HALL WALLS EXPOSED BY GYM ACTIVITIES.

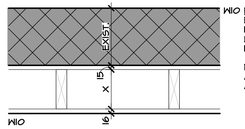
PART. TYPE	STUD SIZE "X"	F.R.R.	ACOUSTIC RATING	F.R.R. / ACOUSTIC TEST	COMMENTS
W8	210mm	-	-		GYPSUM BOARD EXPOSED TO FELLOWSHIP HALL-16mm HIGH IMPACT RESISTANT GYP. BD TO 13050mm ABOVE FLOOR, 16mm GYPSUM BOARD ABOVE TO T/O WALL. 16mm GYPSUM BOARD FLOOR TO CEILING @ 3050mm A.F.F. ONLY IN STORAGE SIDE OF PARTITION
W8a	89mm	-	-		16mm GYPSUM BOARD TO 3050mm
W8b	210mm	-	-		
W8r	89mm	45 min.	-	OBC SB-2 2.3.4 TIME-ASSIGNED METHOD OF CALCULATION	16mm TYPE X GYPSUM BOARD ON BOTH SIDES



W9 FURRING TO EXISTING EXTERIOR CONCRETE BLOCK WALL
EXIST. CONC. BLOCK WALL TO REMAIN
METAL STUDS @ 400 O/C
c/n 50mm MIN. SPRAY FOAM INSULATION
13mm GYPSUM BOARD

PART. TYPE	STUD SIZE "X"	F.R.R.	ACOUSTIC RATING	COMMENTS
W9	64mm	-		13mm GYPSUM BOARD
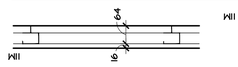
INTERIOR WALL TYPES CONT'D



W10 FURRING TO EXISTING INTERIOR CONCRETE BLOCK WALL
EXIST. CONC. BLOCK WALL TO REMAIN
15mm AIR SPACE
WOOD STUDS @ 400 O/C
16mm GYPSUM BOARD

NOTE: USE HIGH IMPACT GYPSUM BOARD TO 3050mm A.F.F. AT ALL FELLOWSHIP HALL WALLS EXPOSED BY GYM ACTIVITIES.

PART. TYPE	STUD SIZE "X"	F.R.R.	ACOUSTIC RATING	F.R.R. / ACOUSTIC TEST	COMMENTS
W10	38mmx 140mm	-			16mm GYPSUM BOARD

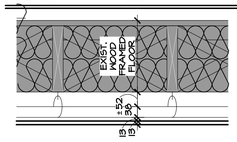


W11 1 HR. VERTICAL SHAFT WALL (ULC W452)
16mm TYPE 'X' GYPSUM BOARD
64mm C-H STUDS 25 GAUGE @ 610 O/C
25.4mm GYPSUM LINER PANELS FRICTION FIT (ENCLOSE TOP AND BOTTOM OF HORIZONTAL SHAFT WALLS PER BMEC 12-06-162 RULING FOR HORIZONTAL SHAFTWALLS) PER W452 FOR VERTICAL

NOTE: USE HIGH IMPACT GYPSUM BOARD TO 3050mm A.F.F. AT ALL FELLOWSHIP HALL WALLS EXPOSED BY GYM ACTIVITIES.

PART. TYPE	STUD SIZE "X"	F.R.R.	ACOUSTIC RATING	F.R.R. / ACOUSTIC TEST	COMMENTS
W11	64mm	1 HR.		F.R.R.: ULC-W452	C-H STUDS, 25 GA.

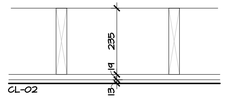
CEILING TYPES



CL-01 NEW CEILING UNDER EXISTING WOOD FRAME FLOOR
MINIMUM 45min. F.R.R.
EXIST. WOOD FRAME FLOOR TO REMAIN
PROVIDE R31 BATT INSULATION BETWEEN EXISTING JOISTS.
38mm SUSPENDED CARRYING CHANNELS
13mm TYPE 'X' GYPSUM BOARD;
13mm TYPE 'X' GYPSUM BOARD
(SEE PLANS FOR ELEVATIONS A.F.F.)

CL-01

PART. TYPE	STUD SIZE "X"	F.R.R.	ACOUSTIC RATING	F.R.R. / ACOUSTIC TEST	COMMENTS
CL-01	-	45 min.		OBC SB-2 TIME ASSIGNED	



CL-02 NEW WOOD FRAMED CEILING ASSEMBLY;
38 x 235 WD. JOISTS @ 400 o.c.
19 x 64 MD. STRAPPING @ 400 o.c.
13mm DRYWALL CEILING

CL-02

GENERAL NOTES

1. ALL WALLS TO BE CONTINUOUS FROM SLAB TO U/S ROOF DECK UNLESS NOTED OTHERWISE c/w DEFLECTION ALLOWANCE.
2. REPLACE GYPSUM BOARD WITH TILE BACKER BOARD IN ALL AREAS HAVING NEW CERAMIC TILE WALL FINISH. INCREASE GAUGE OF METAL STUDS AS REQUIRED BY BOARD MANUFACTURER FOR TILE BACKER BOARD INSTALLATION OR USE TILE BACKER BOARD THAT NOTES ACCEPTABLE METAL STUD GAUGE AS MEETING REQUIREMENTS IN THEIR PRINTED TECHNICAL DATA. CONTRACTOR TO SUBMIT TECHNICAL DATA ALONG WITH CONFIRMATION OF EXISTING STUD GAUGE; REFER TO FINISH SCHEDULE FOR CERAMIC TILE LOCATIONS.
3. PIECEMEALING OF GYPSUM BOARD SHEETS IS NOT ACCEPTABLE; FULL SHEETS OF GYPSUM BOARD SHALL BE USED WHEREVER POSSIBLE.
4. ELECTRICAL BOXES ON OPPOSITE FACES OF WALL SHALL BE LOCATED IN SEPARATE STUD CAVITIES. ALL E-BOXES LOCATED IN ACOUSTICALLY RATED ASSEMBLIES SHALL BE SEPARATED BY AT LEAST ONE STUD SPACE OR OTHERWISE BE SPECIFICALLY DETAILED FOR NOISE. THIS WILL RESULT IN ADDITIONAL STUDS BEING REQUIRED IN WALLS.
5. RUN ACOUSTIC BATT INSULATION BEHIND AND AROUND ALL ELECTRICAL BOXES IN WALL CONSTRUCTION WITH ACOUSTIC INSULATION. INSULATION SHALL BE CAREFULLY FITTED SO AS TO LEAVE NO EMBEDDED GAPS, FILLING CAVITY 100%.
6. ALL PENETRATIONS THROUGH ACOUSTICAL RATED WALLS MUST BE SEALED TIGHT WITH A COMBINATION OF JOINT COMPOUND AND ACOUSTICAL CAULK. NO ACOUSTICAL CAULKING SHALL BE LEFT EXPOSED. ALL PENETRATIONS THROUGH FIRE RATED ASSEMBLIES SHALL BE SEALED WITH FIRE STOP/FIRE RATED SEALANT MATERIALS AS REQUIRED TO MAINTAIN RATING OF ASSEMBLY.
7. PROVIDE WOOD BLOCKING WITHIN STUD WALL TO PROVIDE ANCHORAGE FOR MILLWORK, WASHROOM ACCESSORIES, GRAB BARS, WALL MOUNTED HARDWARE, ETC. BLOCKING SHALL NOT LINK BOTH SIDES OF A WALL. IB 6A. METAL STRIPS MIN. 152mm IN WIDTH c/ CONTINUOUS THROUGHOUT LENGTH OF BLOCKING REQUIREMENT MAY ALSO BE USED.
8. PROVIDE 19mm DOUGLAS FIR PLYWOOD, GOOD ONE SIDE ON 2X4" FRAMING, WITH 2-COATS FIRE RETARDANT PAINT, FOR MOUNTING OF ALL ELECTRICAL PANELS, CEILING, COMMUNICATION BELL AND SECURITY PANELS. REFER TO ELECTRICAL DRAWINGS FOR LOCATIONS. PLYWOOD AND FRAMING TO BE FINISHED WITH FIRE RETARDANT PAINT.
9. THICKEN WALLS AS REQUIRED TO ACCOMMODATE ELECTRICAL PANELS & MECHANICAL SERVICES RECESSED IN WALLS. REFER TO MECHANICAL/ELECTRICAL DRAWINGS FOR LOCATIONS OF SERVICES. NO EXTRAS WILL BE ACCEPTED FOR REQUIREMENT TO PROPERLY ENCLOSE RECESSED SERVICES.
10. ALL TRADES SHALL BE AWARE OF THE REQUIREMENTS OF THESE NOTES AND SHALL ENSURE THAT THEIR WORK DOES NOT COVER UP ANY INCOMPLETE OR DEFICIENT WORK BY OTHERS.
11. CAULK SHALL BE SELECTED ENSURING THAT IT IS APPROPRIATE FOR THE PURPOSES SPECIFIED INCLUDING COMPATIBILITY WITH ADJACENT MATERIALS.
12. ALL FRAMING ELEMENTS THAT ARE PART OF ACOUSTICALLY RATED CONSTRUCTION SHALL BE SEALED TO ADJACENT STRUCTURE (CONCRETE BLOCK) BY 6mm "SILL-SEAL" (SOMETIMES CALLED SILL GASKET), OF THE SAME WIDTH AS THE ASSOCIATED FRAMING. THERE MUST BE NO EMBEDDED GAPS IN THE SILL SEAL, I.E. ONLY CLEAN BUTT JOINTS OR OVERLAP JOINTS PERMITTED. WHERE IRREGULARITIES IN THE ADJACENT MATERIALS EXCEED THE CAPACITY TO BE FILLED BY THE SILL SEAL, THESE MUST BE FILLED WITH APPROPRIATE MATERIAL PRIOR TO PROCEEDING (I.E. GROUT, CAULK OR SIMILAR).

    ALTERNATELY, FRAMING ELEMENTS THAT ARE PART OF THE ACOUSTICALLY RATED CONSTRUCTION SHALL BE CAULKED TO ADJACENT STRUCTURE USING EITHER:
    - TWO PARALLEL BEADS OF CAULK APPLIED BETWEEN THE FRAMING ELEMENT AND ADJACENT MATERIAL PRIOR TO INSTALLATION (I.E. SANDWICHED BETWEEN THE TWO); OR
    - A "HEEL BEAD" OF CAULK, AFTER THE FRAMING ELEMENT HAS BEEN INSTALLED AND THE AREA CLEANED OF ALL CONSTRUCTION WASTE.

    NOTE THAT SHOULD CAULK BE USED, THAT THERE MUST BE NO GAPS OR VOIDS IN THE WORK. WHEN IN DOUBT, SEEK DIRECTION FROM THE PROJECT ARCHITECT OR ACOUSTIC ENGINEER.
13. WALL CAVITIES MUST BE CLEANED OF CONSTRUCTION DEBRIS AND DIRT PRIOR TO CLOSING UP ANY AND ALL CONCEALED WALL CAVITIES.
14. REFER TO MECHANICAL & ELECTRICAL DRAWINGS FOR EXTENT OF EXISTING SERVICES TO BE REMOVED AND/OR RELOCATED.
15. REFER TO STRUCTURAL DRAWINGS FOR EXTENT OF STRUCTURAL REMOVALS, SHORING AND UPGRADES.
16. WHERE CHALKBOARDS, WHITEBOARDS, TACKBOARDS ARE BEING REMOVED FROM BLOCK WALLS AND PAINT FINISH IS SPECIFIED, ALLOW FOR BLOCK FILLER PAINT OVER SURFACE PRIOR TO PAINTING & REMOVAL OF ALL EXISTING ADHESIVES IF NECESSARY. AT COMPLETION OF WORK WALL FINISH SHALL BE CONSISTENT ALONG FULL LENGTH OF WALL.

NOTES FOR RENOVATING EXISTING WASHROOMS/JAN. CLOSET:

1. REPLACE ALL FIXTURES WITH NEW FIXTURES
2. REPLACE FLOORING WITH NEW PORCELAIN CERAMIC TILE.
3. REPLACE FLOOR DRAIN WITH A UNIT THAT MAINTAINS WATER LEVEL IN THE TRAP
4. UPGRADE VENTILATION
5. ADD A POWER OPERATOR TO THE ACCESSIBLE WASHROOM
6. ADD A BOTTLE FILLER/WATER FOUNTAIN IN THE VESTIBULE AREA OUTSIDE THESE WASHROOMS
7. REPLACE THE CABINETRY AND THE LIGHTING
8. CHANGE SWING ON MEN'S ROOM DOOR
9. ADD MOP SINK IN JANITOR CLOSET

DEMOLITION NOTES

D1 REMOVE EXISTING DOOR & FRAME INCLUDING SIDELIGHT AND/OR TRANSOM IF APPLICABLE. TURN DR. HARDWARE OVER TO OWNER. MAKE GOOD WALL SURFACE FOR NEW WORK.

D2 REMOVE EXISTING CONCRETE BLOCK WALL (OR PORTION OF WALL AS INDICATED ON PLANS) C/W ALL MECH. & ELEC. SERVICES LOCATED ON OR WITHIN WALL. SEE M&E DWGS. MAKE GOOD AREA WHERE REMOVED CONC. BLOCK ABUTTED ADJACENT WALLS & FLOOR NOTED AS REMAINING. SHORING AS REQUIRED BY GC.

D2a REMOVE EXISTING WOOD FRAME &GYPSUM WALL BOARD (OR PORTION OF WALL AS INDICATED ON PLANS) C/W ALL MECH. & ELEC. SERVICES LOCATED ON OR WITHIN WALL. SEE M&E DWGS. MAKE GOOD AREA WHERE REMOVED WALL ABUTTED ADJACENT WALLS & FLOOR NOTED AS REMAINING. SHORING AS REQUIRED BY GC.

D3 CAREFULLY CUT OUT OPENING IN EXISTING CONCRETE BLOCK WALL. REFER TO STRUCT. NOTES ON DWGS. FOR OVERHEAD SUPPORT.

D3a CAREFULLY REMOVE PORTION OF EXISTING EXTERIOR BRICK WALL C/N INSULATION, SHEATHING AND WOOD STUD FRAMING. PREPARE ADJACENT WALLS ABUTTING PORTION BEING REMOVED TO RECEIVE NEW FINISHES. SHORING AS REQUIRED BY GC. SEE ALSO M&E DWGS. FOR EXTENT OF M&E REMOVALS

D4 CAREFULLY CUT OUT NEW OPENING IN EXISTING EXTERIOR BRICK MASONRY VENEER, INSULATION. REFER TO STRUCT. NOTES ON DWGS. FOR OVERHEAD SUPPORT.

D5 EXISTING ACT CEILING C/N GRID, GYP. BD, BULKHEADS, LIGHT FIXTURES, MECH. & ELEC. DEVICES TO BE CAREFULLY REMOVED. REFER TO MECH. & ELEC. FOR ITEMS THAT ARE TO BE RELOCATED FOR RE-USE.

D6 REMOVE EXISTING MILLWORK C/N ASSOCIATED MECH. & ELEC. SERVICES. REFER TO M&E DWGS. MAKE GOOD AREAS WHERE REMOVED MILLWORK ABUTTED ADJACENT WALLS NOTED AS REMAINING.

D6a CAREFULLY REPLACE EXISTING COUNTERTOPS WITH NEW P-LAM COUNTERTOPS. PROTECT REMAINING CABINETS DURING KITCHEN WORKS.

D7 REMOVE EXISTING BASEBOARD HEATER. REFER TO M&E DWGS. SALVAGE FOR RE-USE.

D7a REMOVE EXISTING SEMI-RECESSED FAN COIL UNIT. REFER TO M&E DWGS.

D7b REMOVE EXISTING WALL MOUNTED RADIATOR. REFER TO M&E DWGS.

D8 REMOVE EXISTING FLOOR FINISHES & BASE THROUGHOUT ROOM. PREPARE SUBFLOOR TO RECEIVE NEW FLOOR FINISHES.

D9 REMOVE EXISTING PLUMBING FIXTURE(S), SERVICES TO REMAIN FOR NEW PLUMBING FIXTURE(S) IN NEARBY LOCATION; REFER TO ARCH.'L NEW WORK PLANS & MECH.'L DWGS.

D10 REMOVE EXISTING WAINSCOTTING IN WASHROOMS. PATCH AND REPAIR EXISTING GYPSUM WALL BOARD TO RECEIVE NEW WALL FINISHES.

D11 REMOVE EXISTING WALL CABINET. PREPARE WALL TO RECEIVE NEW FINISHES.

D12 REMOVE EXISTING TACKBOARD. PREPARE WALL TO RECEIVE NEW FINISHES.

D13 REMOVE EXISTING APPLIANCES AND TEMPORARILY STORE FOR RE-USE ON THIS PROJECT

D14 CAREFULLY REMOVE EXISTING WASHROOM ACCESSORIES; STORE AND REINSTALL IN SAME LOCATION AFTER WALL RENOVATIONS ARE COMPLETE.

D15 REMOVE EXISTING COAT ROOM SHELVING. PREPARE WALLS AND FLOOR TO RECEIVE NEW FINISHES.

D16 CAREFULLY REMOVE EXISTING WINDOW AND FRAME. PREPARE SURFACES FOR NEW WINDOW AND FRAME TO BE INSTALLED

D17 CAREFULLY REMOVE EXISTING TOILET PARTITIONS, ASSOCIATED FITTINGS AND WASHROOM ACCESSORIES. STORE FOR RE-USE IN SAME LOCATION.

D18 REMOVE EXISTING CONC. PIERS SUPPORTING CANOPY WOOD POSTS. REFER TO STRUCT. DWGS. SHORING AS REQUIRED BY GC.

D19 REMOVE EXISTING WOOD COLUMN. MAKE GOOD ALL AFFECTED SURFACES. REFER TO STRUCT. DWGS. SHORING AS REQUIRED BY GC.

D20 CAREFULLY REMOVE CEILING TILES AND STORE FOR RE-USE UPON COMPLETION OF RNL TIE-IN. PROTECT ALL EXISTING FINISHES AND FURNISHINGS AS REQUIRED.

D21 CUT OUT EXISTING DRYWALL CEILING BETWEEN EXISTING WOOD JOISTS CENTRES TO PROVIDE ACESS FOR NEW ROUTING OF RNL TO CAFE. SEE MECH. DWGS.

D22 CUT OPENING ON EXISTING DRYWALL BULKHEAD AS SHOWN ON CEILING PLAN TO PROVIDE ACESS FOR NEW ROUTING OF RNL TO CAFE. SEE MECH. DWGS.

D23 REMOVE EXISTING PREFINISHED ALUMINUM SOFFIT AND SURFACE-MOUNTED EXTERIOR LIGHT FIXTURES. PROTECT FASCIA AND BEAM AS REQUIRED AND PREPARE SURFACE TO RECEIVE NEW SOFFIT FINISH.

NEW WORK NOTES

1 PREPARE SUB-FLOOR FOR NEW FLOORING. REFER TO FINISH SCHEDULE & FLOOR FINISH DRAWING FOR PATTERN.

2a PATCH AND REPAIR ALL AREAS OF EXISTING GYPSUM BOARD WALLS WITHIN ROOM EITHER DAMAGED BY THIS SCOPE'S DEMOLITION OR EXISTING DAMAGE BY NORMAL USE.

2b PATCH WITH GROUT OR REPLACE INDIVIDUAL CONCRETE BLOCKS IN ALL EXISTING CONCRETE BLOCK WALLS DAMAGED OR EXPOSED BY THIS SCOPE OF DEMOLITION.

3 NEW ACT CEILING & GRID OR NEW GYPSUM BOARD CEILING. REFER TO M&E DWGS. FOR EXTENT OF NEW OR RELOCATED LIGHT FIXTURES & CEILING MOUNTED DEVICES. SEE CEILING PLANS AND SPECIFICATIONS.

3a NEW GYPSUM BOARD BULKHEAD.

4 INFILL ON EACH SIDE OF NEW OPENING IN EXISTING CONCRETE BLOCK WALL (AND INSULATION & BRICK VENEER IF APPLICABLE) WITH NEW CONCRETE BLOCK (AND INSULATION, AIR/VAPOUR BARRIER MEMBRANE & BRICK VENEER IF APPLICABLE) TO ACCOMMODATE NEW WINDOW OPENING AND ALLOW FOR PROPER REINFORCING AND KEYING INTO EXISTING ADJACENT BLOCK AND BRICK. SEE TYPICAL STRUCTURAL DETAIL FOR PROCEDURES.

5 PROVIDE NEW FLAM WINDOW SILL; SEE FINISH SCHEDULE FOR FLAM COLOUR.

6 ALLOW FOR PROPER REINFORCING AND KEYING WHERE NEW CONCRETE BLOCK WALL TIES INTO EXISTING ADJACENT BLOCK. SEE TYPICAL STRUCTURAL DETAIL FOR PROCEDURES.

7 PROVIDE NEW CAULKING AT ALL WINDOW SILLS TO REMAIN; SEE SPEC.S.

8 REINSTATE CEILING TILES THAT WERE TEMPORARILY REMOVED FOR ROUTING OF M&E SERVICES TO PANELS OR ADMIN.

9 PREPARE EXISTING FLOORING W/ SELF-LEVELING CONCRETE FOR NEW CERAMIC TILE FINISH.

10 INSTALL NEW COMMERCIAL BLACK ANODIZED ALUMINUM WINDOW IN EXISTING OPENING. REMOVE APPROX 2" OF THE EXISTING INSULATION AND FILL WITH SPRAY FOAM AROUND THE FULL PERIMETER OF THE OPENING PATCH AND REPAIR AROUND OPENING AS REQUIRED

11 INFILL ON EACH SIDE OF NEW OPENING IN EXISTING WOOD FRAME WALL (AND INSULATION & BRICK VENEER IF APPLICABLE) WITH NEW WOOD FRAME (AND INSULATION, AIR/VAPOUR BARRIER MEMBRANE & BRICK VENEER IF APPLICABLE) TO ACCOMMODATE NEW WINDOW OPENING AND ALLOW FOR PROPER REINFORCING AND KEYING INTO EXISTING ADJACENT BRICK. SEE TYPICAL STRUCTURAL DETAIL FOR PROCEDURES.

12 REPLACE EXISTING TOILET PARTITIONS STORED FOR RE-USE PER DEMOLITION DRAWINGS.

13 PROVIDE NEW CONC. PIERS FOR CANOPY WOOD POSTS. REFER TO STRUCT. FOR DETAILS. SHORING AS REQUIRED BY GC.

14 INSTALL NEW DRINKING FOUNTAIN WITH BOTTLE FILLING FEATURE. SEE MECH. DRAWINGS.

15 PATCH AND MAKE GOOD EXISTING RATED DRYWALL CEILING FOR EXTENT OF DEMOLITION REQUIRED TO ACCESS CEILING TO RE-ROUTE RNL. ENSURE 45MINS. F.R.R. IS ACHIEVED.

TONED AREAS INDICATES PORTION OF CHURCH OUTSIDE THE ARCHITECTURAL SCOPE OF WORK FOR THIS CONTRACT. REFER TO MECH.'L & ELEC.'L DWGS FOR ANY SERVICE CONNECTIONS WHICH MAY EXTEND INTO THESE AREAS OF THE EXISTING BUILDING. PATCH AND MAKE GOOD EXISTING SURFACE AND FINISHES IN THESE AREAS AFFECTED BY MECH.'L & ELEC.'L SERVICE INSTALLATIONS.

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HOBIN ARCHITECTURE

NAME OF PROJECT: ARLINGTON WOODS FREE METHODIST CHURCH RENOVATION

LOCATION: 225 MCCLELLAN RD, OTTAWA, ON K2H 8N5

ONTARIO BUILDING CODE MATRIX

PART 11 - RENOVATION OF EXISTING BUILDING

			OBC REFERENCE
11.1	EXISTING BUILDING CLASSIFICATION: 3.2.2.25, Group A2 Up to 2 storeys Facing 3 streets (Existing Building Area = 1,144m²)	DESCRIBE EXISTING USE: GROUP A, DIVISION 2. CONSTRUCTION INDEX: _____ HAZARD INDEX: _____ ■ NOT APPLICABLE (NO CHANGE OF MAJOR OCCUPANCY)	11.2.1 11.2.1.1A 11.2.1.1B TO N
11.2	ALTERATION TO EXISTING BUILDING IS:	BASIC RENOVATION ■ EXTENSIVE RENOVATION □	11.3.3.1 11.3.3.2
11.3	REDUCTION IN PERFORMANCE LEVEL:		11.4.2
		STRUCTURAL NO ■ YES □	11.4.2.1
		BY INCREASE IN OCCUPANT LOAD: NO ■ YES □	11.4.2.3
		BY CHANGE IN MAJOR OCCUPANCY: NO ■ YES □	11.4.2.4
		PLUMBING: NO ■ YES □	11.4.2.5
		SEWAGE - SYSTEM NO ■ YES □	11.4.2.6
11.4	COMPENSATING CONSTRUCTION:		11.4.3
		STRUCTURAL NO ■ YES □ (EXPLAIN)	11.4.3.2
		BY INCREASE IN OCCUPANT LOAD: NO ■ YES □ (EXPLAIN)	11.4.3.3
		BY CHANGE IN MAJOR OCCUPANCY: NO ■ YES □ (EXPLAIN)	11.4.3.4
		PLUMBING: NO □ YES ■ (EXPLAIN) x	11.4.3.5
		SEWAGE - SYSTEM NO ■ YES □ (EXPLAIN)	11.4.3.6
11.5	COMPLIANCE ALTERNATIVES PROPOSED:	■ NO □ YES (GIVE NUMBER(S)) _____	11.5.1
11.6	ALTERNATIVE MEASURES PROPOSED:	■ NO □ YES (EXPLAIN) _____	11.5.2

PART 3

11	SPATIAL SEPARATION -- CONSTRUCTION OF EXTERIOR WALLS										3.2.3.1.B			
AREA	WALL	AREA OF ESP (m²)	L.D. (%)	L/H OR H/L	PERMITTED MAX. % OF OPENINGS	PROPOSED MAX. % OF OPENINGS	FRR (HOURS)	LISTED DESIGN OR DESCRIPTION			CONST. COMPLY	CONST. COMPLY W/ LIMITING DISTANCE	COMB. CONSTR.	
1	WEST	EXIST. (82.22)	---.-m	na	100%	<100%					NO	NO	YES	
2	WEST	EXIST. (97.62)	---.-m	na	100%	<100%					NO	NO	YES	
	EAST	EXIST. (---.--)	---.-m	na	100%	<100%					NO	NO	YES	
	SOUTH	EXIST. (---.--)	---.-m	na	100%	<100%					NO	NO	YES	

2	JUL. 27/20	ISSUED FOR TENDER
1	MAY. 28/20	ISSUED FOR BUILDING PERMIT
no.	date	revision

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HOBIN ARCHITECTURE

PROJECT/LOCATION:
ARLINGTON WOODS FREE METHODIST CHURCH RENOVATION
225 McClellan Rd, Ottawa, ON K2H 8N5

DRAWING TITLE:
CONSTRUCTION ASSEMBLIES AND GENERAL NOTES

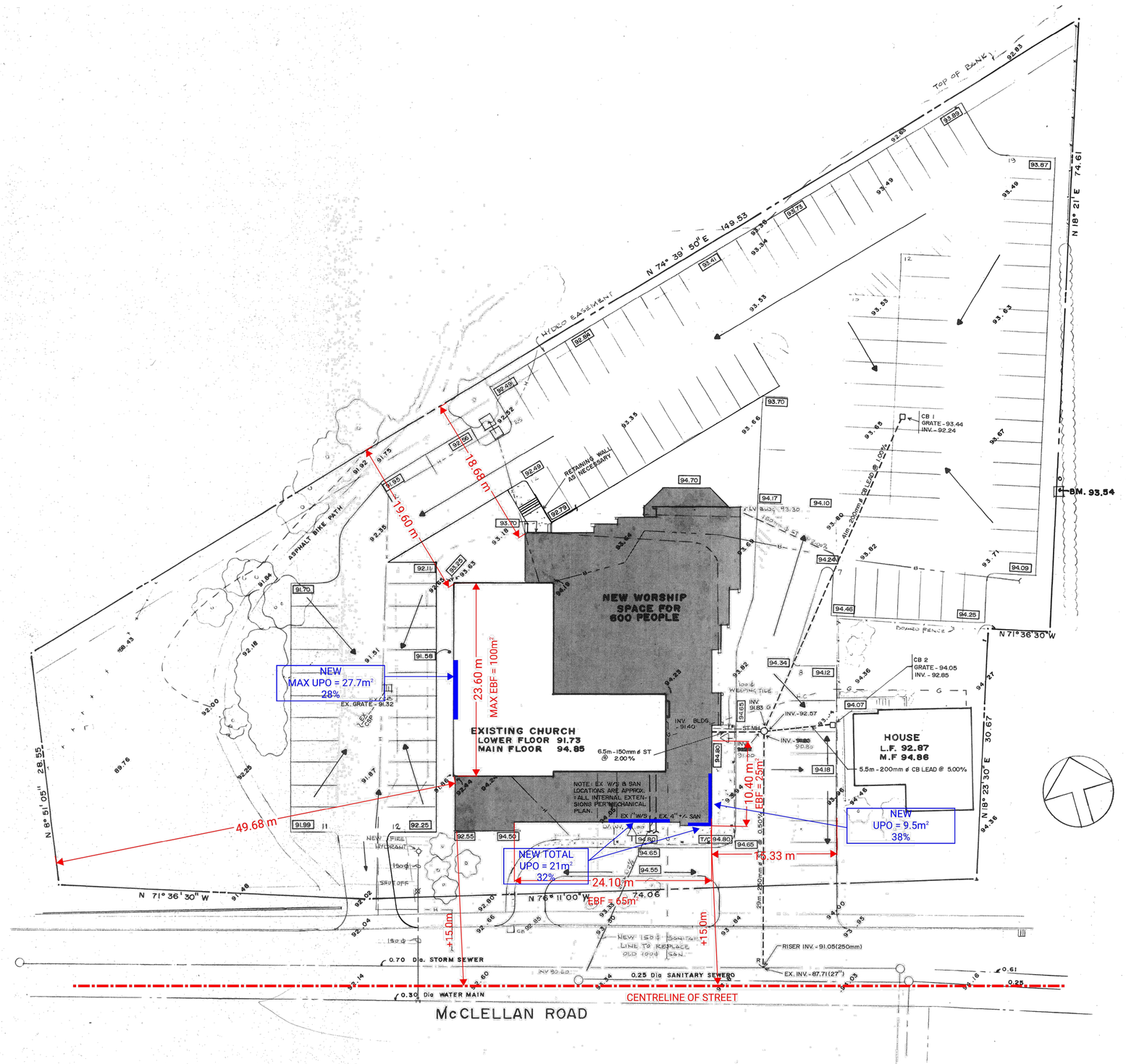
DRAWN BY:	DATE:	SCALE:
JDG	MARCH 2020	N.T.S.

PROJECT: 1846

DRAWING NO.: A0.01

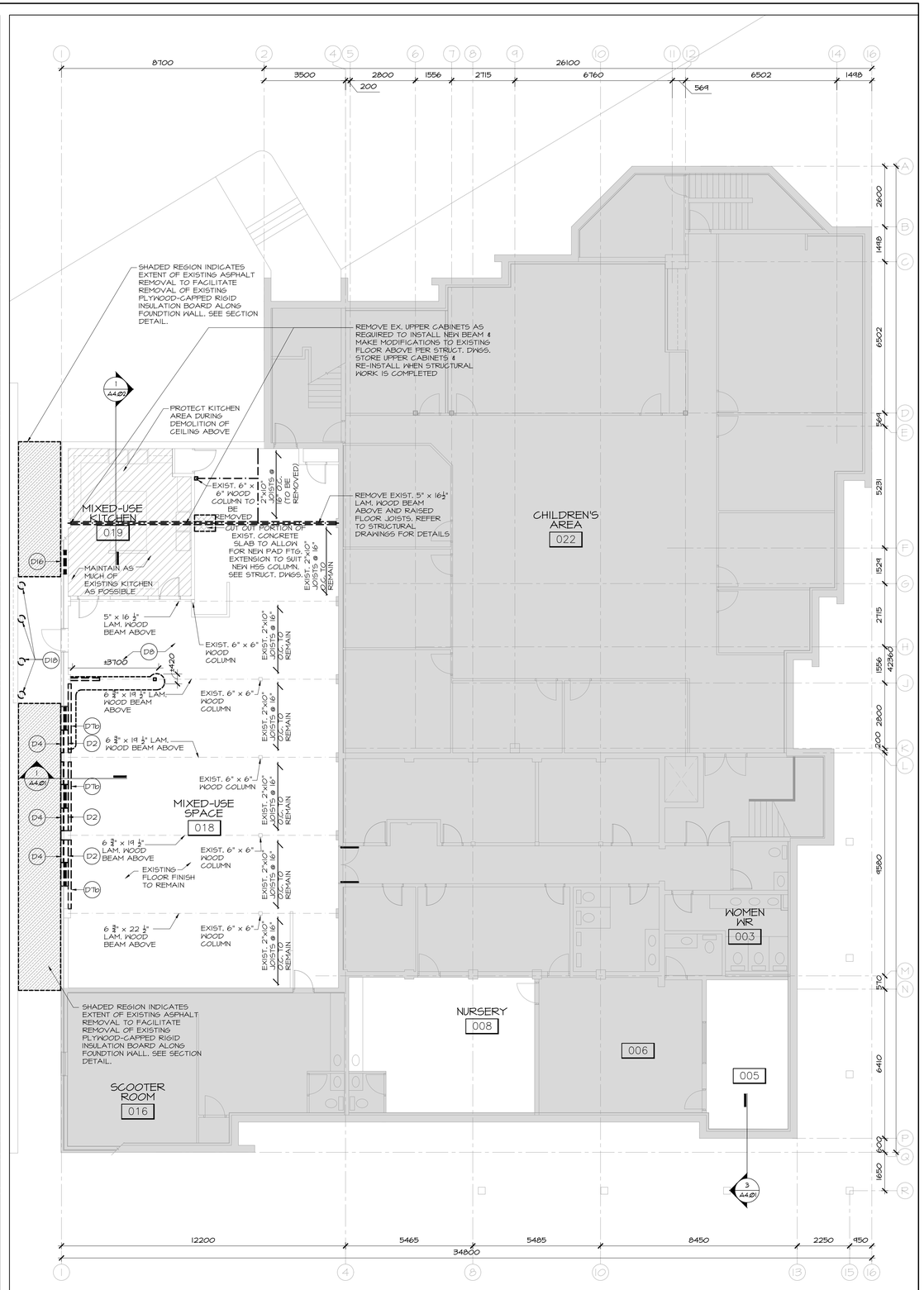
REVISION NO.:

None
DRAWING


TOP OF BANK
HYDRO EASEMENT
N 74° 39' 50" E 149.53
N 18° 21' E 74.61
N 71° 36' 30" W
N 8° 51' 05" E 28.55
N 18° 25' 30" E 30.67
BM. 93.54
CB 1
GRATE - 93.44
INV. - 92.24
CB 2
GRATE - 94.05
INV. - 92.85
RETAINING WALL AS NECESSARY
ASPHALT BIKE PATH
NEW WORSHIP SPACE FOR 600 PEOPLE
EXISTING CHURCH
LOWER FLOOR 91.73
MAIN FLOOR 94.85
HOUSE
L.F. 92.87
M.F 94.86
NEW
MAX UPO = 27.7m²
28%
NEW
UPO = 9.5m²
38%
NEW TOTAL
UPO = 21m²
32%
EBF = 65m²
18.68 m
19.60 m
23.60 m
MAX EBF = 100m²
49.68 m
10.40 m
EBF = 2.5m²
16.33 m
24.10 m
74.06
+15.0m
+15.0m
EX. GRATE - 91.32
NEW FIRE HYDRANT
SHUT OFF
6.5m - 150mm ø ST @ 2.00%
5.5m - 200mm ø CB LEAD @ 5.00%
NOTE: EX W/S & SAN LOCATIONS ARE APPROX. ALL INTERNAL EXTENSIONS PER MECHANICAL PLAN.
EX 1"W/S
EX 4" +/- SAN
NEW 150ø SANITARY LINE TO REPLACE OLD 100ø SAN.
RISER INV. - 91.05(250mm)
EX. INV. - 87.71(27")
0.70 Dia. STORM SEWER
0.30 Dia. WATER MAIN
0.25 Dia SANITARY SEWER
CENTRELINE OF STREET
McCLELLAN ROAD
BOARD FENCE
WEEPING TILE
ST.MH
INV. BLDG - 91.40
INV - 92.57
INV 91.83 G
INV 90.80
INV 90.80
INV 90.80



2 A2.01 BASEMENT RCP - DEMOLITION
SCALE 1 : 100



1 A2.01 BASEMENT - DEMOLITION PLAN
SCALE 1 : 100

GENERAL NOTE(S):

1. REFER TO DRAWING A0.01 FOR GENERAL AND DEMOLITION NOTES, ETC.
2. A SCAN OF ALL BELOW SERVICES MUST BE DONE IN ALL AREAS WHERE TRENCHING OCCURS PRIOR TO WORK COMMENCING.

TYPICAL LEGEND:

- ROOM NAME / XX — ROOM NAME / ROOM NUMBER
- GYP. BD. / XXXX — CEILING MATERIAL / CEILING HEIGHT
- PV — PLUMBING VENT PIPE LOCATION; SEE MECH.'L DWGS.
- FE — FIRE EXTINGUISHER; REFER TO MECH.'L DWGS.
- LIGHT FIXTURE; SEE ELEC.'L DWGS FOR TYPE AND TO DIFFERENTIATE BTW. EX. & NEW
- CEILING DIFFUSER; SEE MECH.'L DWGS. TO DIFFERENTIATE BTW. EX. & NEW.
- RETURN GRILLE; SEE MECH.'L DWGS. TO DIFFERENTIATE BTW. EX. & NEW.
- FIRE ALARM HEAT DETECTOR; SEE ELEC.'L DWGS. TO DIFFERENTIATE BTW. EX. & NEW.
- FIRE ALARM SMOKE DETECTOR; SEE ELEC.'L DWGS. TO DIFFERENTIATE BTW. EX. & NEW.

DEMO SPECIFIC LEGEND:

- Dx — INDICATES DEMOLITION NOTES; REFER TO DRWG. A0.01
- HATCHED AREA INDICATES EXTENT OF EXISTING CONCRETE SLAB TO BE REMOVED; COORDINATE WITH STRUC.'L & MECH.'L

FLOOR FINISHES LEGEND:

- SV — SHEET VYNIL
- CPT — EXISTING CARPET & UNDERLAY
- CT — EXISTING CERAMIC TILE & BASE

no.	date	revision
2	JUL. 27/20	ISSUED FOR TENDER
1	MAY. 28/20	ISSUED FOR BUILDING PERMIT

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HOBIN ARCHITECTURE

PROJECT/LOCATION:
ARLINGTON WOODS FREE METHODIST CHURCH RENOVATION
225 McClellan Rd, Ottawa, ON K2H 8N5

DRAWING TITLE:
BASEMENT DEMOLITION PLANS

DRAWN BY:	DATE:	SCALE:
JDG	MARCH 2020	AS NOTED

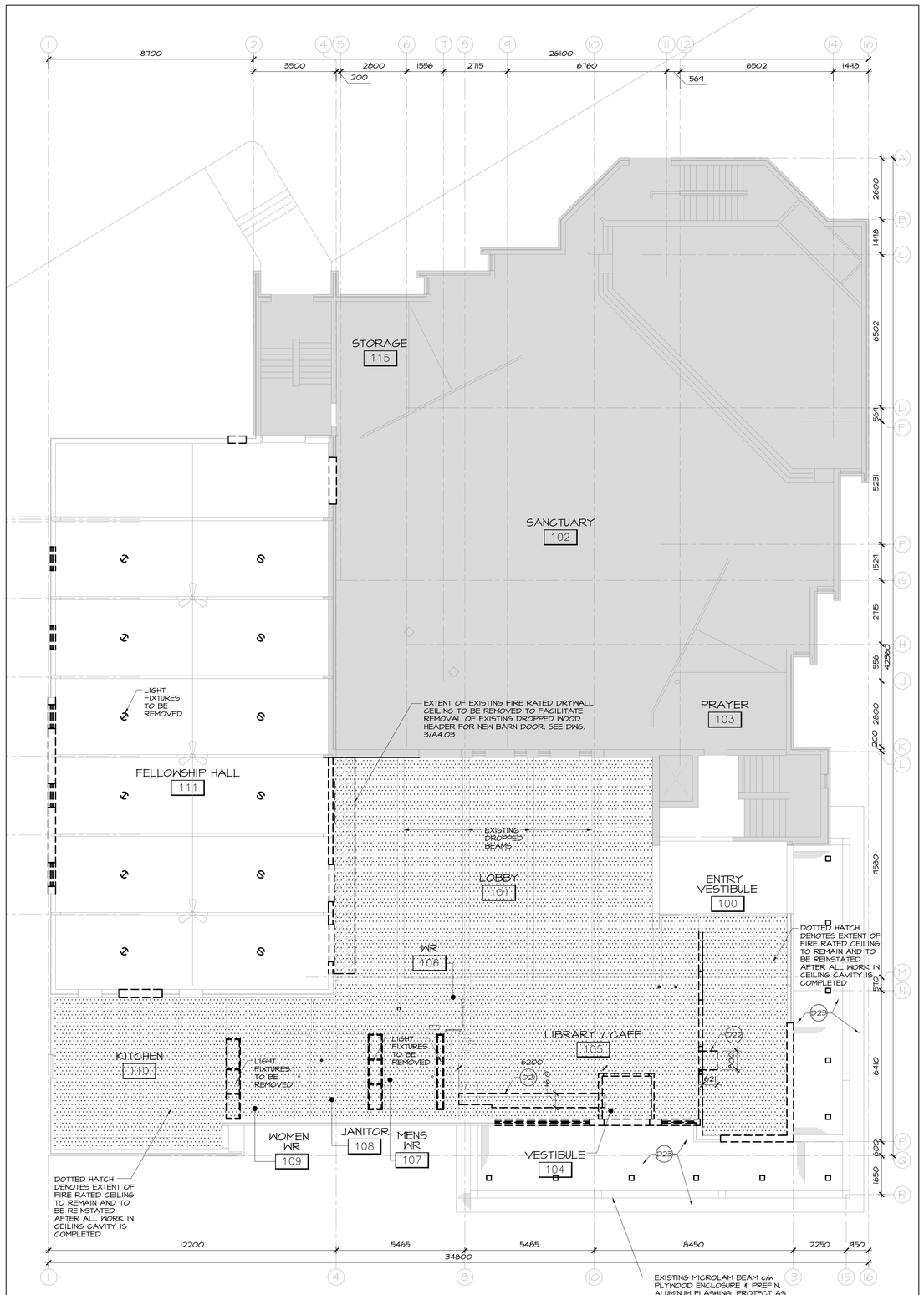
PROJECT: 1846

DRAWING NO.: A2.01

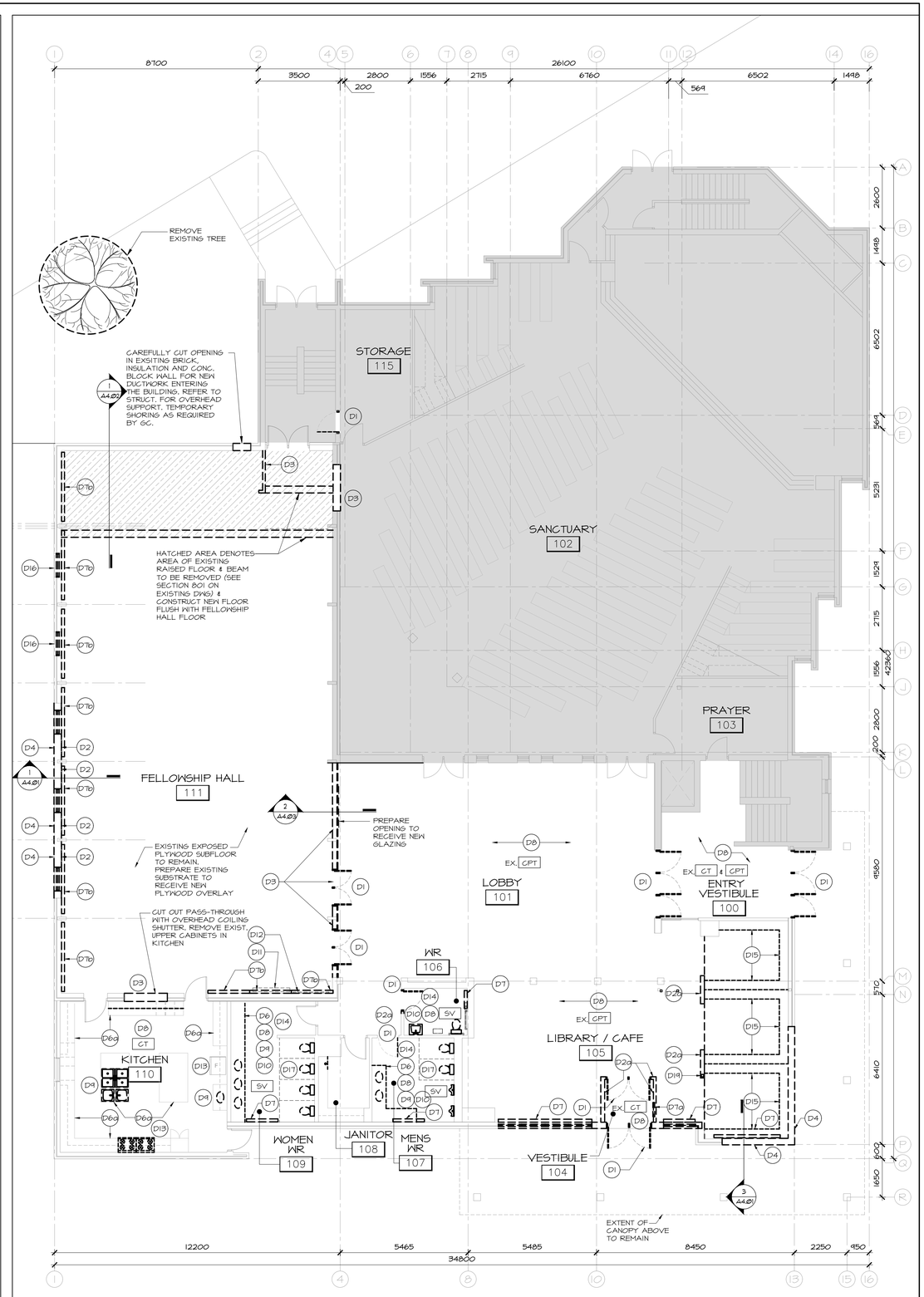
REVISION NO.:

north arrow

None
DRAWING



2 A2.02 GROUND FLOOR RCP - DEMOLITION
SCALE 1 : 100



1 A2.02 GROUND FLOOR - DEMOLITION PLAN
SCALE 1 : 100

GENERAL NOTE(S):

1. REFER TO DRAWING A0.01 FOR GENERAL AND DEMOLITION NOTES, ETC.
2. A SCAN OF ALL BELOW SERVICES MUST BE DONE IN ALL AREAS WHERE TRENCHING OCCURS PRIOR TO WORK COMMENCING.

TYPICAL LEGEND:

- ROOM NAME / XX — ROOM NAME / ROOM NUMBER
- GYP BRD / XXXX — CEILING MATERIAL / CEILING HEIGHT
- PV — PLUMBING VENT PIPE LOCATION; SEE MECH'L DWGS.
- FE — FIRE EXTINGUISHER; REFER TO MECH'L DWGS.
- LIGHT FIXTURE; SEE ELEC'L DWGS FOR TYPE AND TO DIFFERENTIATE BTW. EX. & NEW
- CEILING DIFFUSER; SEE MECH'L DWGS. TO DIFFERENTIATE BTW. EX. & NEW.
- RETURN GRILLE; SEE MECH'L DWGS. TO DIFFERENTIATE BTW. EX. & NEW.
- FIRE ALARM HEAT DETECTOR; SEE ELEC'L DWGS. TO DIFFERENTIATE BTW. EX. & NEW.
- FIRE ALARM SMOKE DETECTOR; SEE ELEC'L DWGS. TO DIFFERENTIATE BTW. EX. & NEW.

DEMO SPECIFIC LEGEND:

- Dx — INDICATES DEMOLITION NOTES; REFER TO DRWG. A0.01
- HATCHED AREA INDICATES EXTENT OF EXISTING CONCRETE SLAB TO BE REMOVED. COORDINATE WITH STRUC.'L & MECH.'L

FLOOR FINISHES LEGEND:

- SV — SHEET VYNIL
- CPT — EXISTING CARPET & UNDERLAY
- CT — EXISTING CERAMIC TILE & BASE

no.	date	revision
2	JUL. 27/20	ISSUED FOR TENDER
1	MAY. 28/20	ISSUED FOR BUILDING PERMIT

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HOBIN ARCHITECTURE

PROJECT/LOCATION:
ARLINGTON WOODS FREE METHODIST CHURCH RENOVATION
225 McClellan Rd, Ottawa, ON K2H 8N5

DRAWING TITLE:
GROUND FLOOR DEMOLITION PLANS

DRAWN BY:	DATE:	SCALE:
JDG	MARCH 2020	AS NOTED

north arrow

PROJECT: 1846

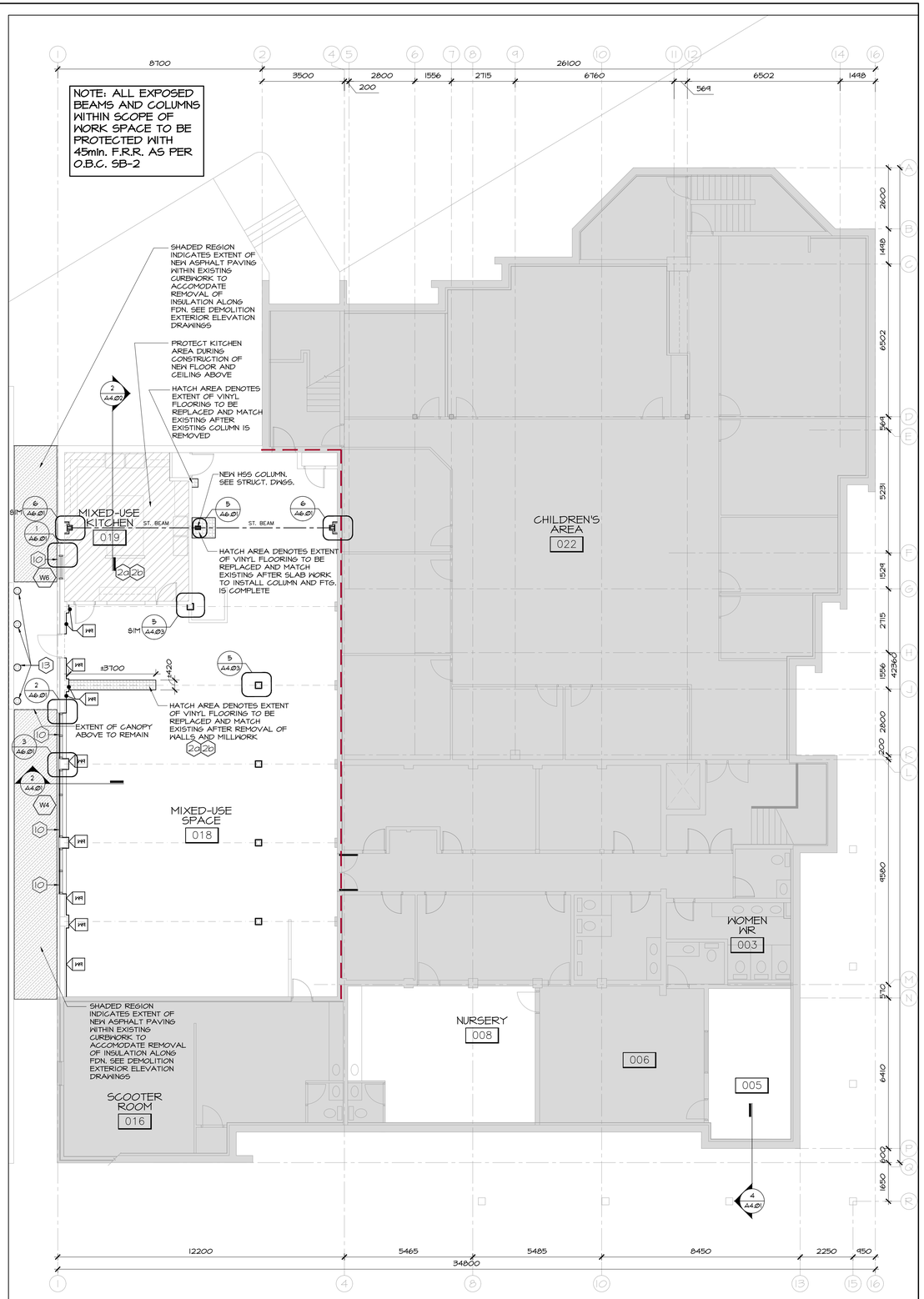
DRAWING NO.: A2.02

REVISION NO.:

None
DRAWING



2 BASEMENT RCP - NEW WORK
A2.03 SCALE 1 : 100



1 BASEMENT - NEW WORK PLAN
A2.03 SCALE 1 : 100

GENERAL NOTE(S):

1. REFER TO DRAWING A0.01 FOR GENERAL AND DEMOLITION NOTES, ETC.
2. A SCAN OF ALL BELOW SERVICES MUST BE DONE IN ALL AREAS WHERE TRENCHING OCCURS PRIOR TO WORK COMMENCING.

TYPICAL LEGEND:

- ROOM NAME / XX — ROOM NAME / ROOM NUMBER
- GWB WALL / XXXX — CEILING MATERIAL / CEILING HEIGHT
- PV — PLUMBING VENT PIPE LOCATION; SEE MECH'L DWGS.
- FE — FIRE EXTINGUISHER; REFER TO MECH'L DWGS.
- LIGHT FIXTURE; SEE ELEC.'L DWGS FOR TYPE AND TO DIFFERENTIATE BTW. EX. & NEW
- CEILING DIFFUSER; SEE MECH.'L DWGS. TO DIFFERENTIATE BTW. EX. & NEW.
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- FIRE ALARM HEAT DETECTOR; SEE ELEC.'L DWGS. TO DIFFERENTIATE BTW. EX. & NEW.
- FIRE ALARM SMOKE DETECTOR; SEE ELEC.'L DWGS. TO DIFFERENTIATE BTW. EX. & NEW.

NEW WORK SPECIFIC LEGEND:

- INDICATES WALL TYPE; REFER TO DRWG. A1.01.
- XXX.X — INDICATES DOOR NUMBER; REFER TO DOOR SCHEDULE IN SPECS.
- XX — INDICATES NEW WORK NOTE; REFER TO DRWG. A0.01
- INDICATES BULLNOSE BLOCK AT CORNER
- HC — INDICATES HCAP PUSH BUTTON; SEE ELEC.'L DWGS.

FIRE RATING LEGEND

45 MIN. FIRE SEPARATION

NOTE: FOR CLARITY, THIS DRAWING TO BE READ IN COLOUR

no.	date	revision
2	JUL. 27/20	ISSUED FOR TENDER
1	MAY. 28/20	ISSUED FOR BUILDING PERMIT

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HOBIN ARCHITECTURE

PROJECT/LOCATION:
ARLINGTON WOODS FREE METHODIST CHURCH RENOVATION
225 McClellan Rd, Ottawa, ON K2H 8N5

DRAWING TITLE:
BASEMENT NEW WORK PLANS

DRAWN BY:	DATE:	SCALE:
JDG	MARCH 2020	AS NOTED

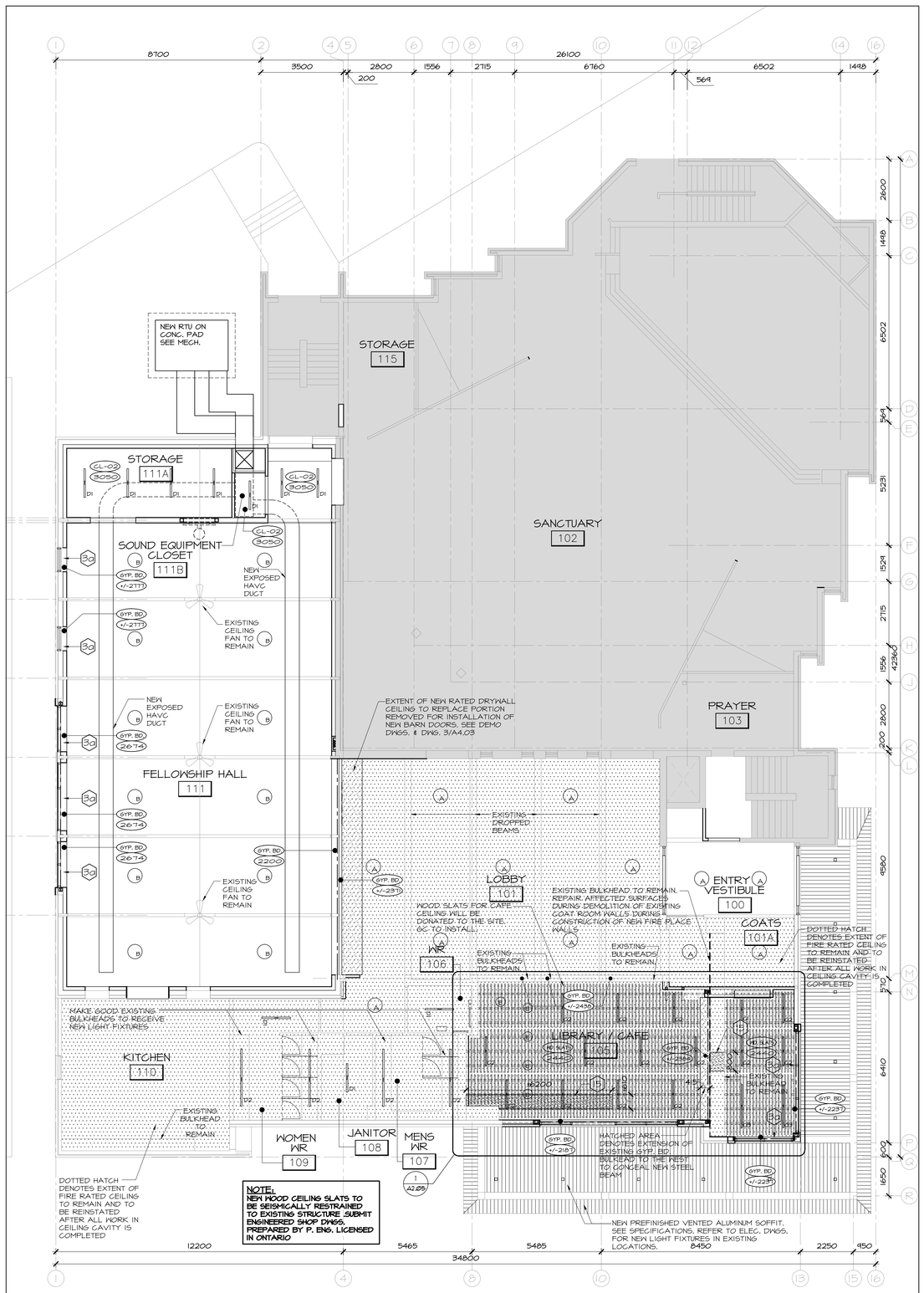
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PROJECT: 1846

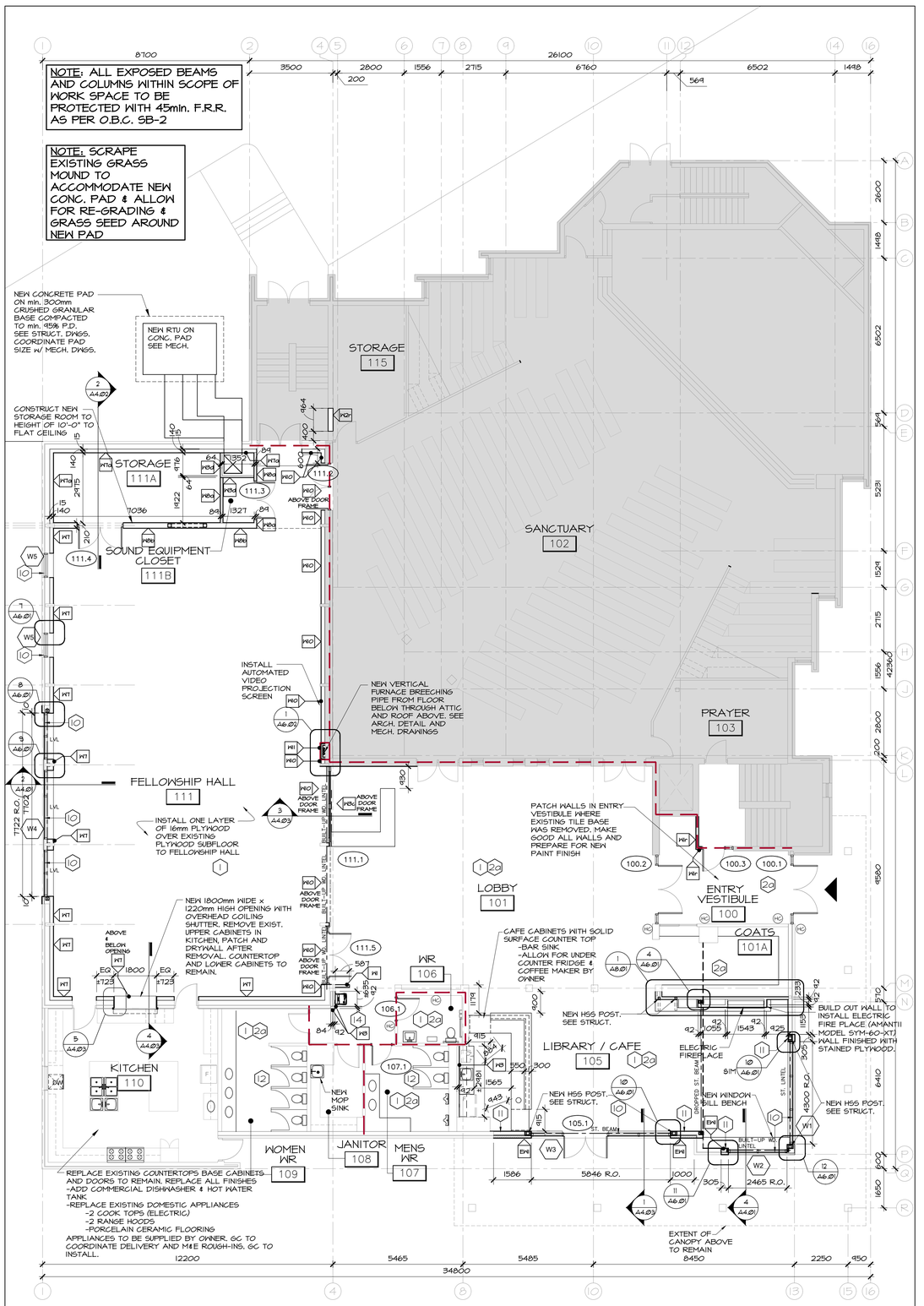
DRAWING NO.: A2.03

REVISION NO.:

None
DRAWING



2 / A2.04 GROUND FLOOR RCP - NEW WORK
SCALE 1 : 100



1 / A2.04 GROUND FLOOR - NEW WORK PLAN
SCALE 1 : 100

None DRAWING

GENERAL NOTE(S):

1. REFER TO DRAWING A0.01 FOR GENERAL AND DEMOLITION NOTES, ETC.
2. A SCAN OF ALL BELOW SERVICES MUST BE DONE IN ALL AREAS WHERE TRENCHING OCCURS PRIOR TO WORK COMMENCING.

TYPICAL LEGEND:

- ROOM NAME / ROOM NAME
- XX — ROOM NUMBER
- GWB MAT'L — CEILING MATERIAL
- XXXXX — CEILING HEIGHT
- PV — PLUMBING VENT PIPE LOCATION; SEE MECH'L DWGS.
- FE — FIRE EXTINGUISHER; REFER TO MECH'L DWGS.
- LIGHT FIXTURE, SEE ELEC.'L DWGS FOR TYPE AND TO DIFFERENTIATE BTW. EX. & NEW
- CEILING DIFFUSER; SEE MECH.'L DWGS. TO DIFFERENTIATE BTW. EX. & NEW.
- RETURN GRILLE; SEE MECH.'L DWGS. TO DIFFERENTIATE BTW. EX. & NEW.
- FIRE ALARM HEAT DETECTOR; SEE ELEC.'L DWGS. TO DIFFERENTIATE BTW. EX. & NEW.
- FIRE ALARM SMOKE DETECTOR; SEE ELEC.'L DWGS. TO DIFFERENTIATE BTW. EX. & NEW.

NEW WORK SPECIFIC LEGEND:

- INXX — INDICATES WALL TYPE; REFER TO DRWG. A1.01.
- XXX.X — INDICATES DOOR NUMBER; REFER TO DOOR SCHEDULE IN SPECS.
- XX — INDICATES NEW WORK NOTE; REFER TO DRWG. A0.01
- INDICATES BULLNOSE BLOCK AT CORNER
- HC — INDICATES HCAP PUSH BUTTON; SEE ELEC.'L DWGS.

FIRE RATING LEGEND

45 MIN. FIRE SEPARATION

NOTE: FOR CLARITY, THIS DRAWING TO BE READ IN COLOUR

no.	date	revision
2	JUL. 27/20	ISSUED FOR TENDER
1	MAY. 28/20	ISSUED FOR BUILDING PERMIT

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HOBIN ARCHITECTURE

PROJECT/LOCATION:
ARLINGTON WOODS FREE METHODIST CHURCH RENOVATION
225 McClellan Rd, Ottawa, ON K2H 8N5

DRAWING TITLE:
GROUND FLOOR NEW WORK PLANS

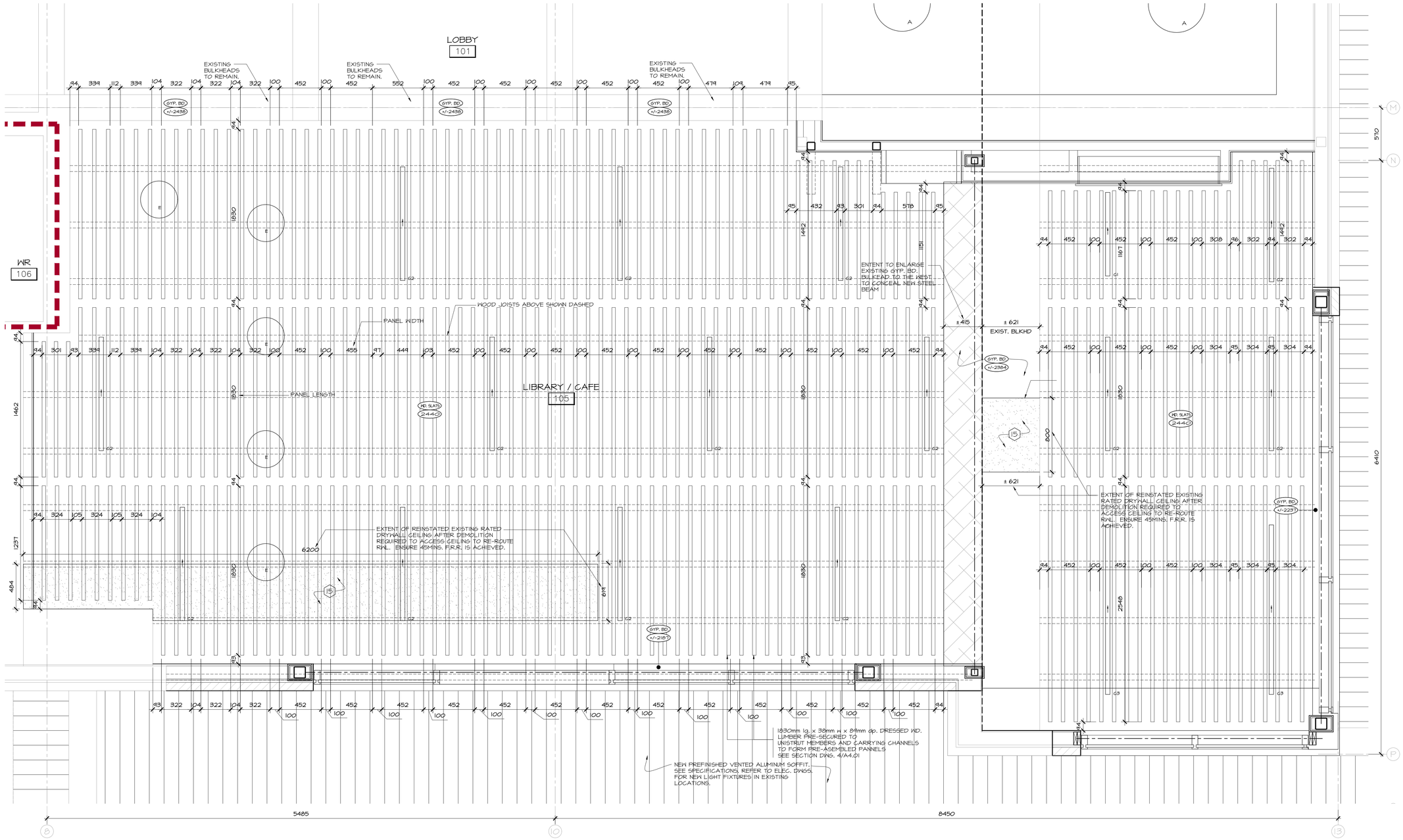
DRAWN BY:	DATE:	SCALE:
JDG	MARCH 2020	AS NOTED

north arrow

PROJECT: 1846

DRAWING NO.: A2.04

REVISION NO.:



1 A2.05 GROUND FLOOR - PART CEILING PLAN -NEW WORK
SCALE 1 : 20

None DRAWING

no.	date	revision
1	JUL. 27/20	ISSUED FOR TENDER

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HOBIN ARCHITECTURE

PROJECT/LOCATION:
ARLINGTON WOODS FREE METHODIST CHURCH RENOVATION
225 McClellan Rd, Ottawa, ON K2H 8N5

DRAWING TITLE:
GROUND FLOOR PART CEILING PLAN NEW WORK

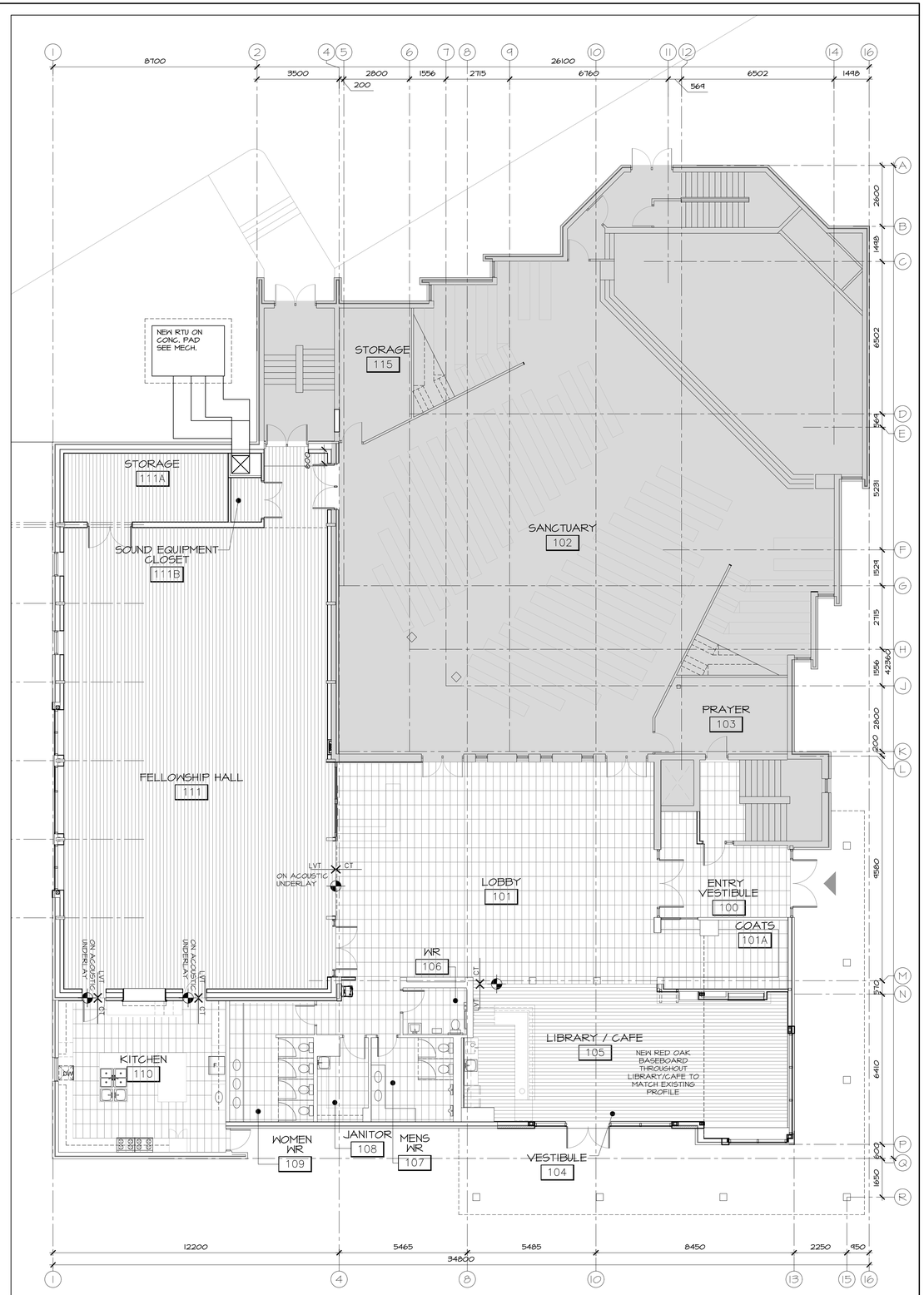
DRAWN BY:	DATE:	SCALE:
JDG	JULY 2020	AS NOTED

north arrow

PROJECT: 1846

DRAWING NO.: A2.05

REVISION NO.:



1 GROUND FLOOR - FLOOR FINISHES PLAN
A2.06 SCALE 1 : 100

GENERAL NOTE(S):

1. REFER TO DRAWING A0.01 FOR ALL NEW WALL TYPES, FLOOR TYPES, GENERAL AND NEW WORK NOTES, ETC.

FINISHES LEGEND:

- FLOOR PATTERN STARTING LOCATION
- CT: CERAMIC TILE TYPE 1; SEE SPECS.
- LVT: LUXURY VINYL TILE TYPE 1; SEE SPECS.

no.	date	revision
1	JUL. 27/20	ISSUED FOR TENDER

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HOBIN ARCHITECTURE

PROJECT/LOCATION:
ARLINGTON WOODS FREE METHODIST CHURCH RENOVATION
225 McClellan Rd, Ottawa, ON K2H 8N5

DRAWING TITLE:
GROUND FLOOR FLOOR FINISHES PLAN

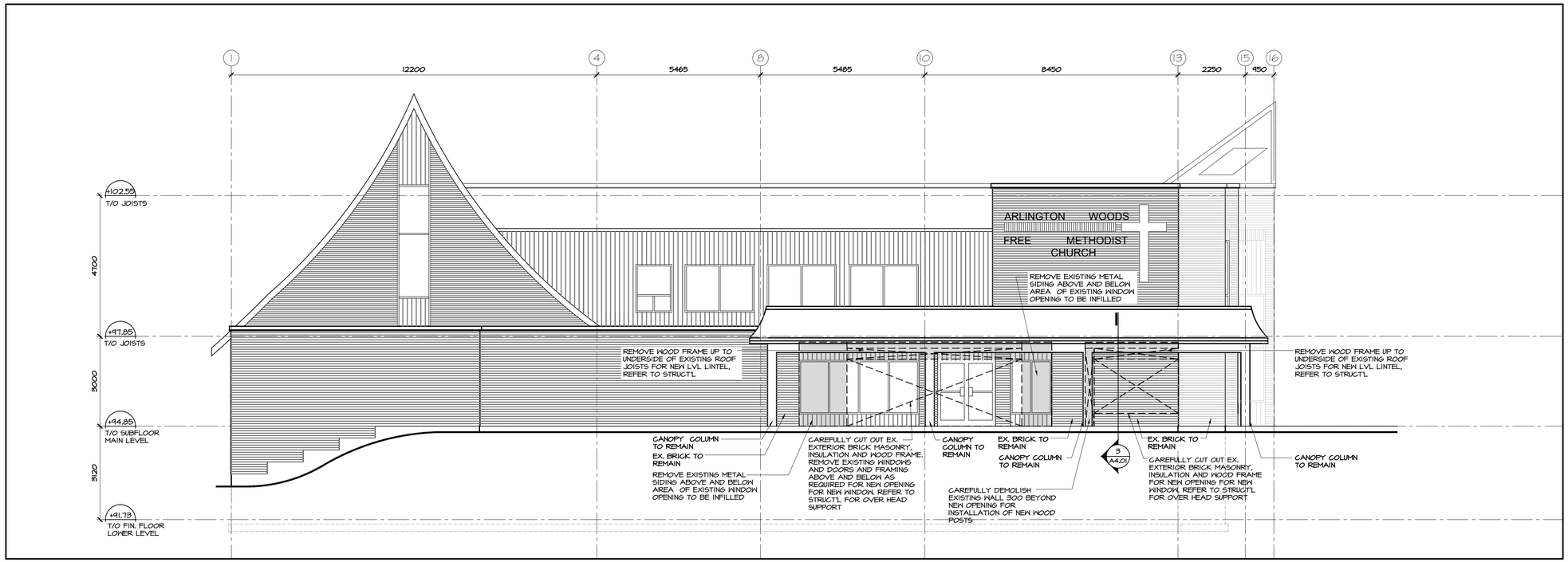
DRAWN BY:	DATE:	SCALE:
JDG	APRIL 2020	AS NOTED

PROJECT: 1846

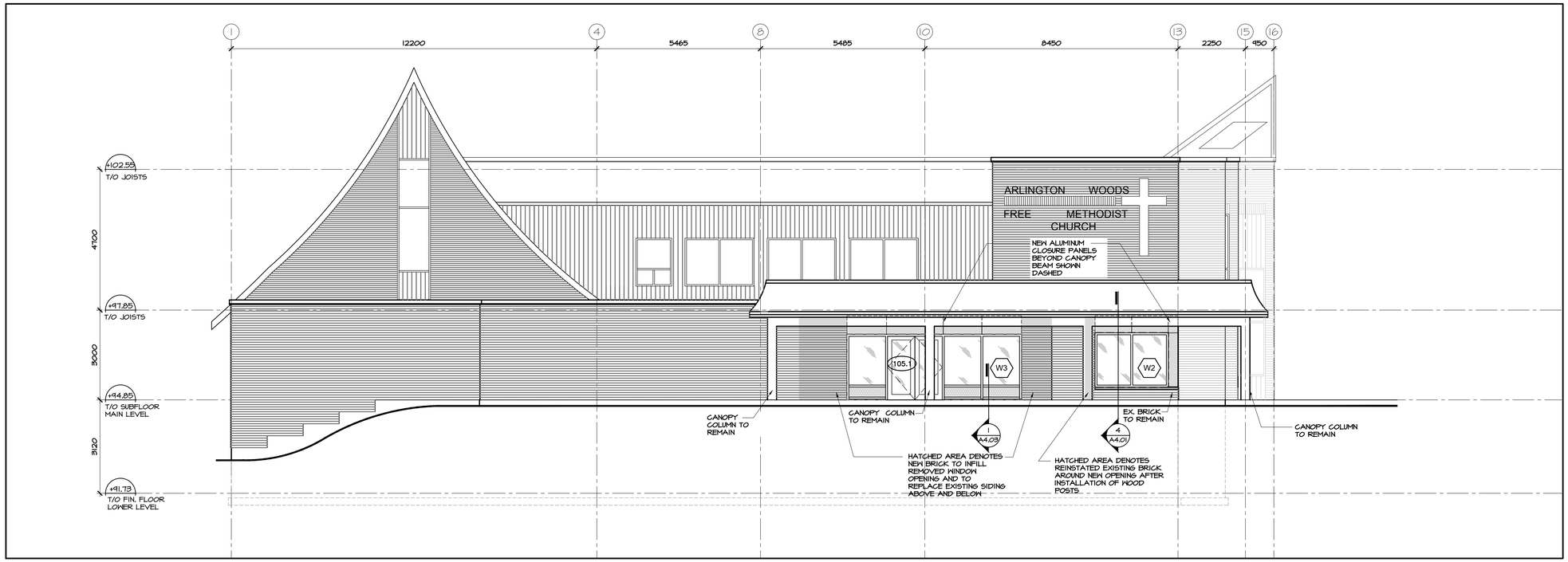
DRAWING NO.: A2.06

REVISION NO.:

None
DRAWING



1 A3.01 SOUTH ELEVATION - DEMOLITION
SCALE 1 : 75



2 A3.01 SOUTH ELEVATION - NEW WORK
SCALE 1 : 75

no.	date	revision
2	JUL. 27/20	ISSUED FOR TENDER
1	MAY. 28/20	ISSUED FOR BUILDING PERMIT

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HOBIN ARCHITECTURE

PROJECT/LOCATION:
ARLINGTON WOODS FREE METHODIST CHURCH RENOVATION
225 McClellan Rd, Ottawa, ON K2H 8N5

DRAWING TITLE:
EXTERIOR ELEVATIONS SOUTH

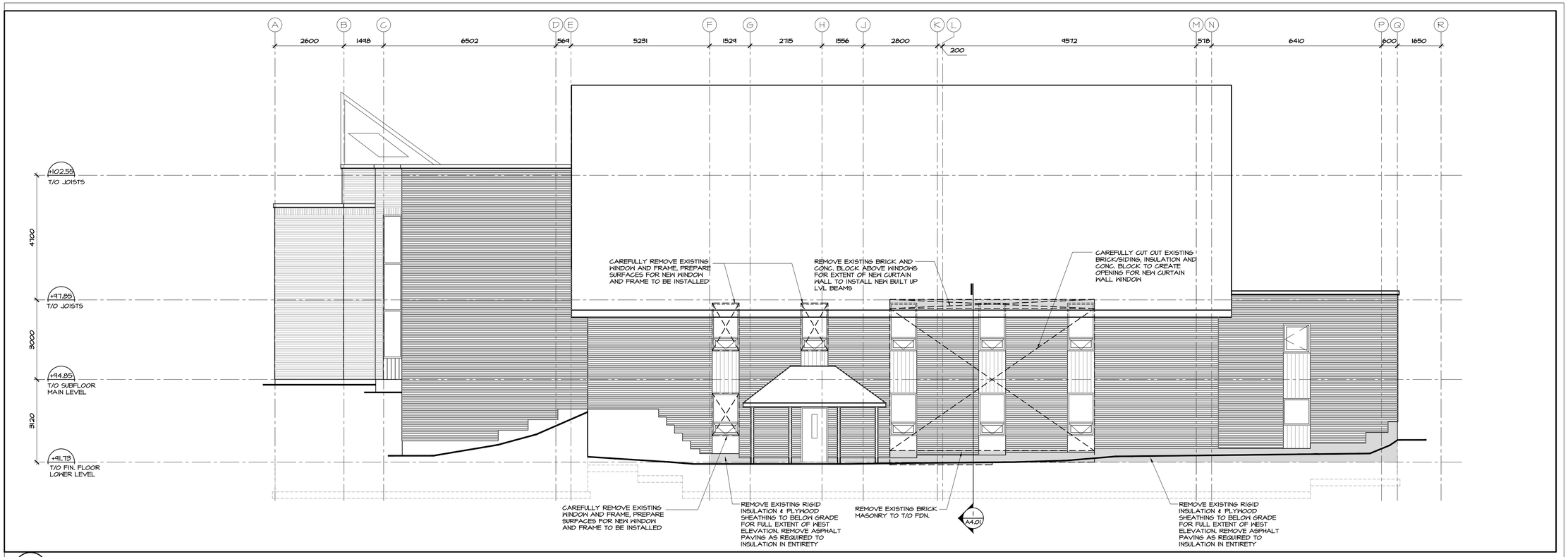
DRAWN BY:	DATE:	SCALE:
JDG	MARCH 2020	AS NOTED

PROJECT: 1846

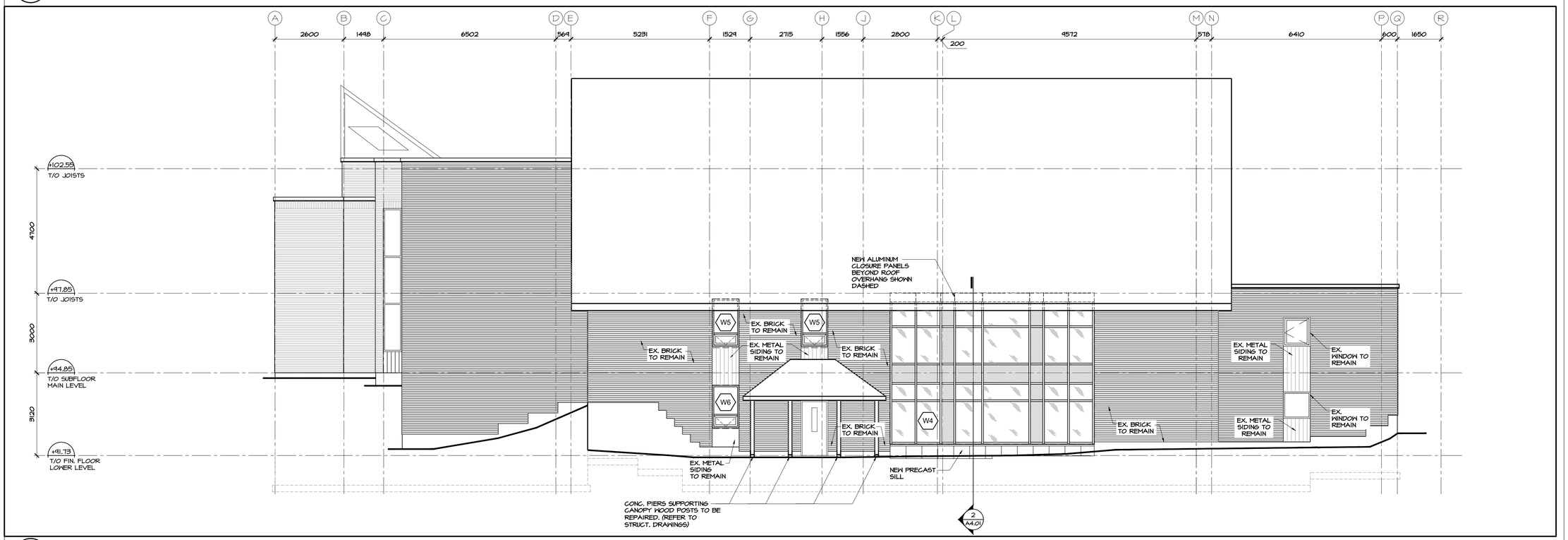
DRAWING NO.: A3.01

REVISION NO.:

None
DRAWING



1 / A3.02 WEST ELEVATION - DEMOLITION
SCALE 1 : 75



2 / A3.02 WEST ELEVATION - NEW WORK
SCALE 1 : 75

None
DRAWING

no.	date	revision
2	JUL. 27/20	ISSUED FOR TENDER
1	MAY. 28/20	ISSUED FOR BUILDING PERMIT

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PROJECT/LOCATION:
ARLINGTON WOODS FREE METHODIST CHURCH RENOVATION
225 McClellan Rd, Ottawa, ON K2H 8N5

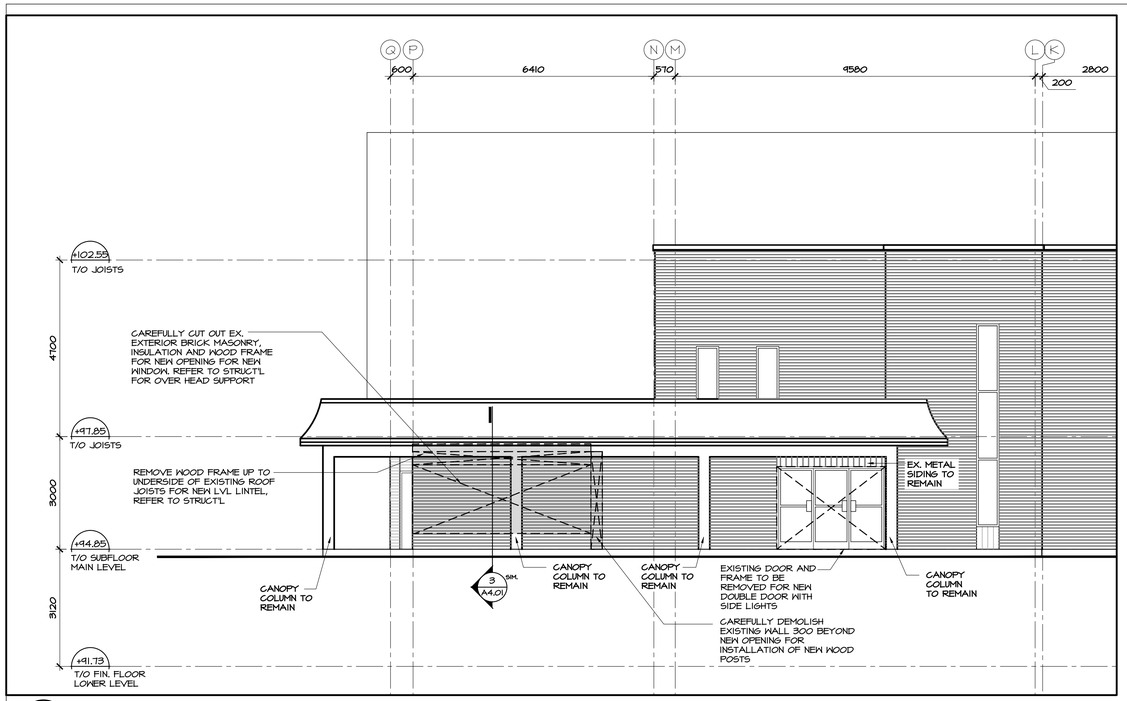
DRAWING TITLE:
EXTERIOR ELEVATIONS WEST

DRAWN BY:	DATE:	SCALE:
JDG	MARCH 2020	AS NOTED

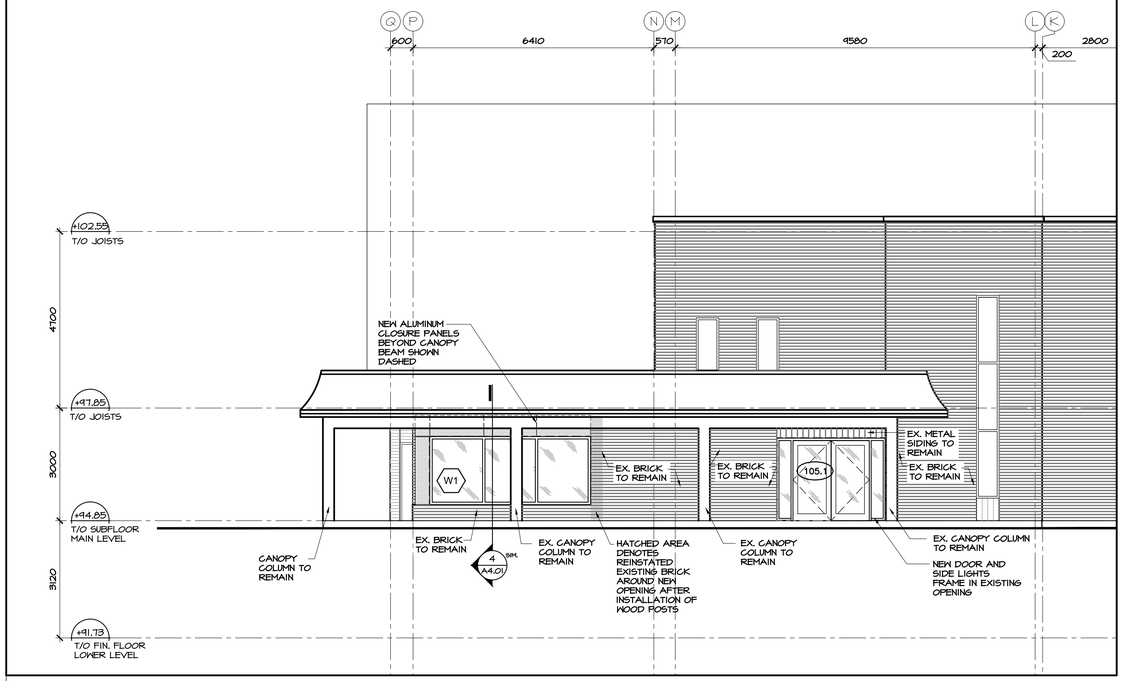
PROJECT: 1846

DRAWING NO.: A3.02

REVISION NO.:



1 A3.03 EAST ELEVATION - DEMOLITION
SCALE 1 : 75



2 A3.03 EAST ELEVATION - NEW WORK
SCALE 1 : 75

None
DRAWING

no.	date	revision
2	JUL. 27/20	ISSUED FOR TENDER
1	MAY. 28/20	ISSUED FOR BUILDING PERMIT

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...\07-Logos\Barry J Hobin OAA Stamp.tif

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HOBIN ARCHITECTURE

PROJECT/LOCATION:
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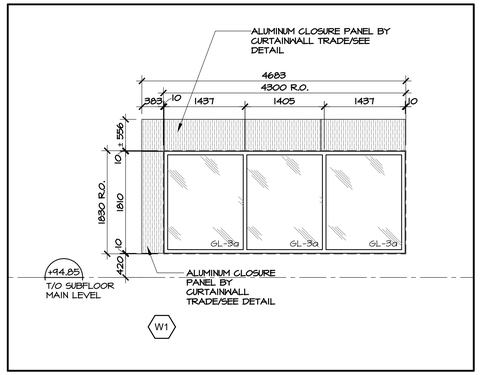
DRAWING TITLE:
EXTERIOR ELEVATIONS EAST

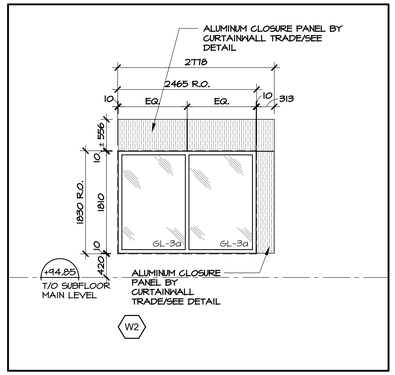
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JDG	MARCH 2020	AS NOTED

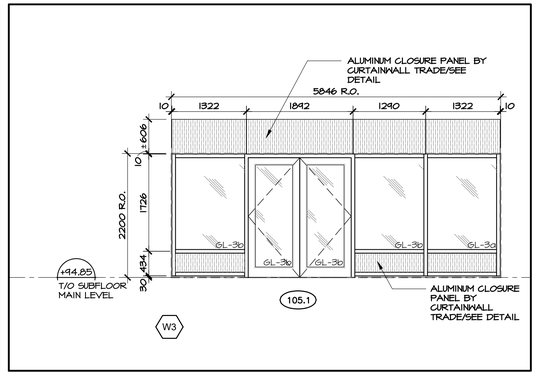
PROJECT: 1846

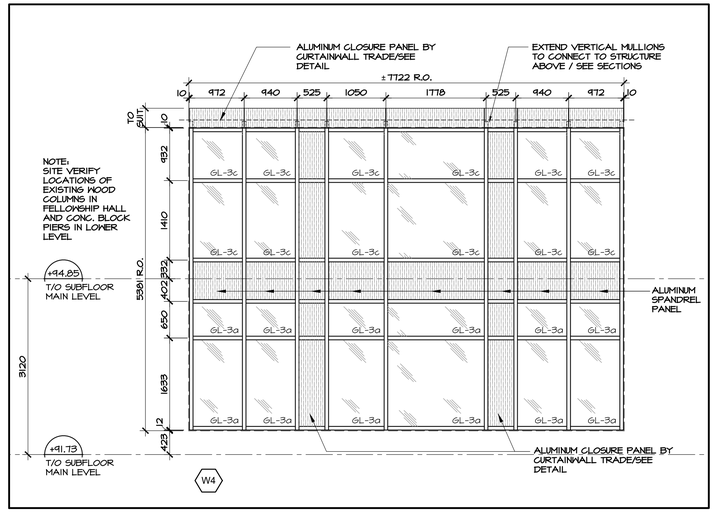
DRAWING NO.: A3.03

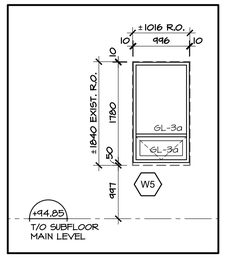
REVISION NO.:

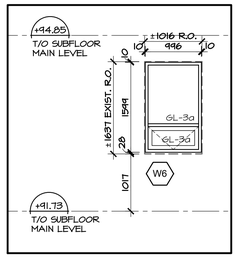












2	JUL. 27/20	ISSUED FOR TENDER
1	MAY. 28/20	ISSUED FOR BUILDING PERMIT
no.	date	revision

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ARCHITECTURE

PROJECT/LOCATION:
ARLINGTON WOODS FREE METHODIST CHURCH RENOVATION
225 McClellan Rd, Ottawa, ON K2H 8N5

DRAWING TITLE:
WINDOW ELEVATIONS
NEW WORK

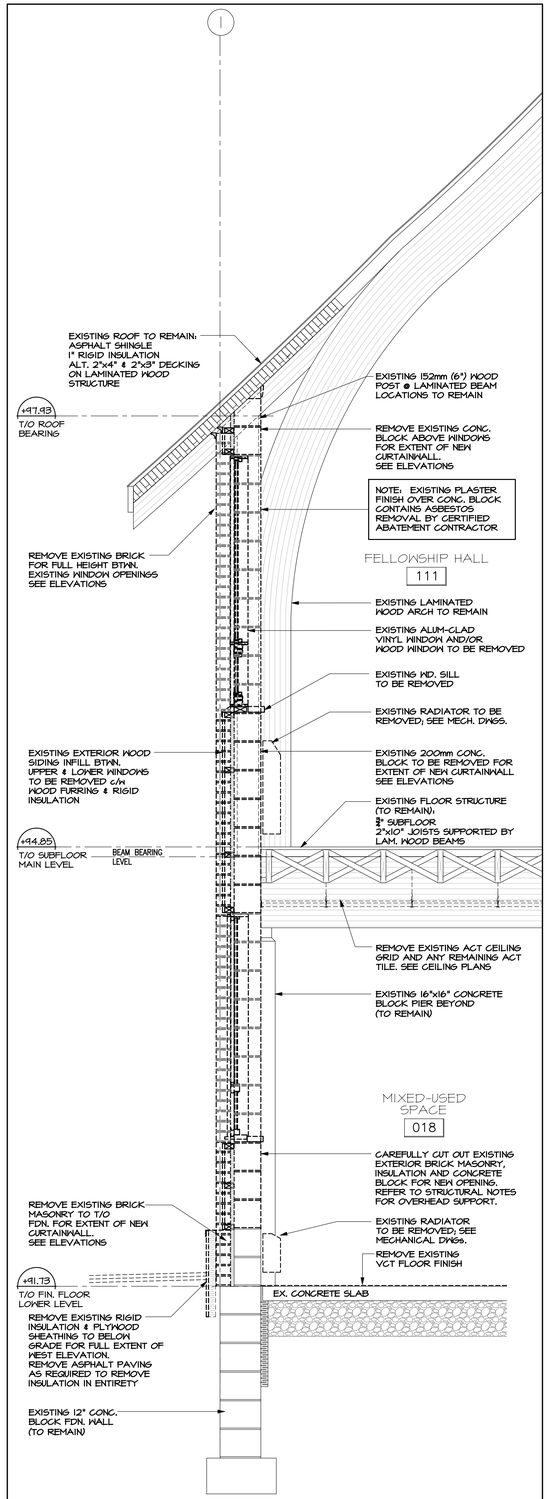
DRAWN BY:	DATE:	SCALE:
JDG	MAY 2020	AS NOTED

PROJECT: 1846

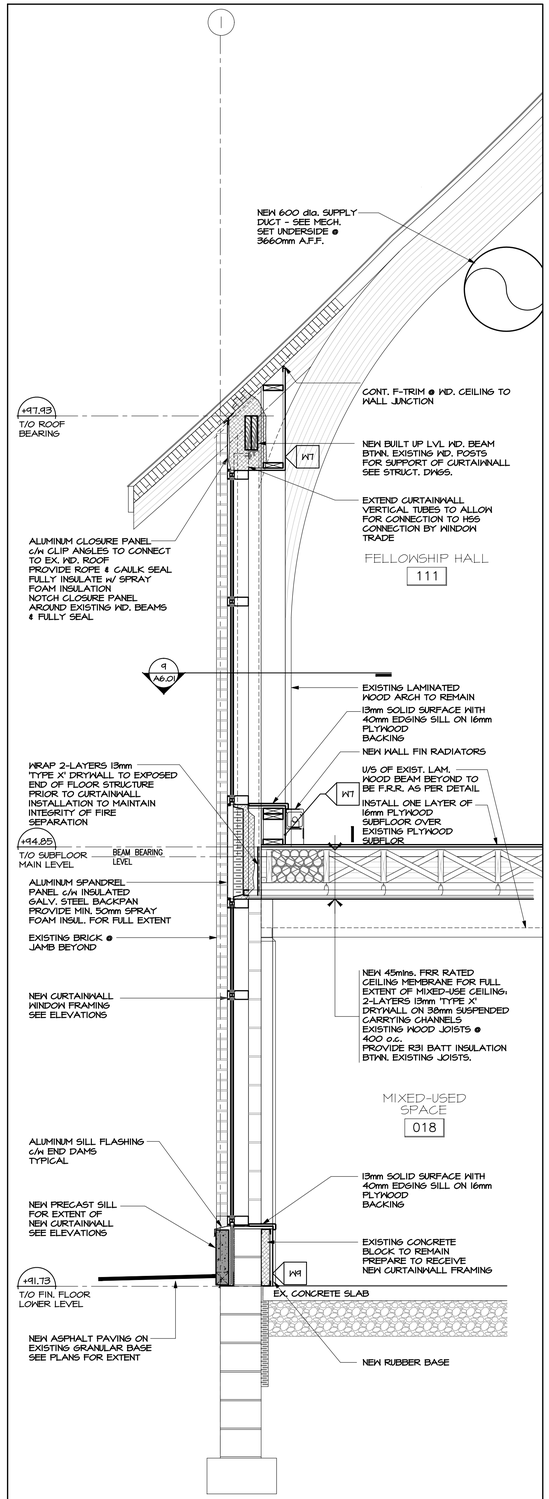
DRAWING NO.: A3.04

REVISION NO.:

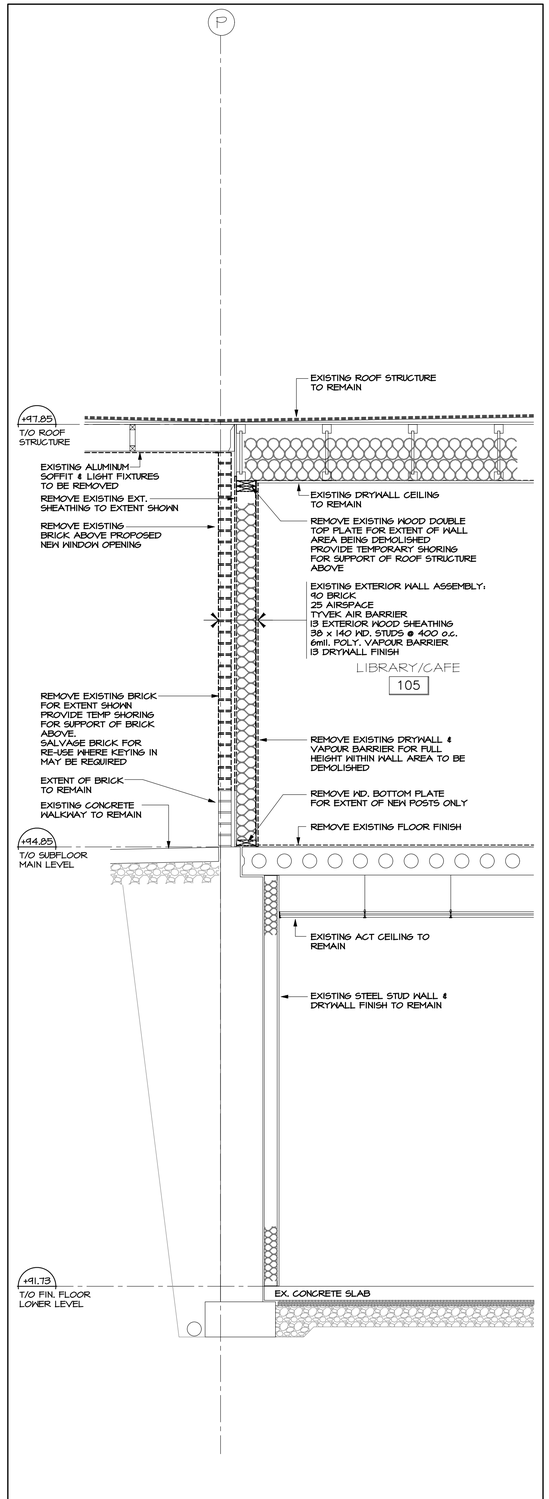
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DRAWING



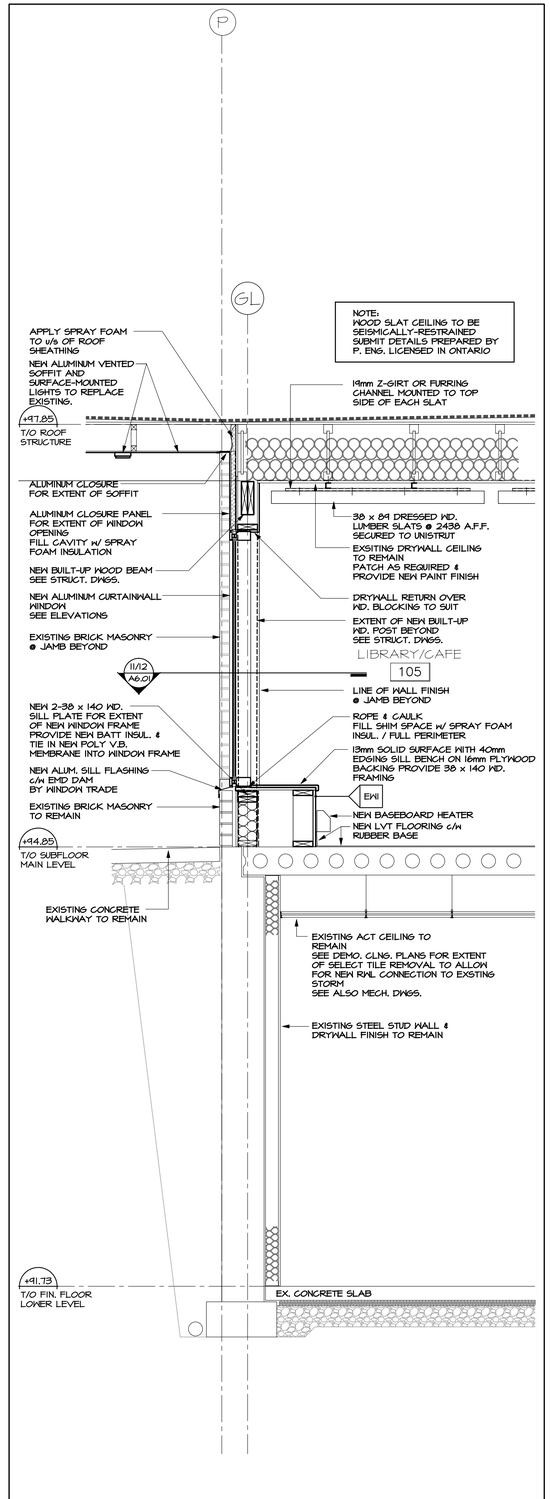
1 A4.01 WALL SECTION AT FELLOWSHIP HALL - DEMOLITION
SCALE 1 : 20



2 A4.01 WALL SECTION AT FELLOWSHIP HALL - NEW WORK
SCALE 1 : 20



3 A4.01 SECTION AT CAFE/LIBRARY NEW WINDOW - DEMOLITION
SCALE 1 : 20



4 A4.01 SECTION AT CAFE/LIBRARY NEW WINDOW - NEW WORK
SCALE 1 : 20

no.	date	revision
2	JUL. 27/20	ISSUED FOR TENDER
1	MAY. 28/20	ISSUED FOR BUILDING PERMIT

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HOBIN ARCHITECTURE

PROJECT/LOCATION:
ARLINGTON WOODS FREE METHODIST CHURCH RENOVATION
225 McClellan Rd, Ottawa, ON K2H 8N5

DRAWING TITLE:
WALL SECTIONS DEMOLITION & NEW WORK

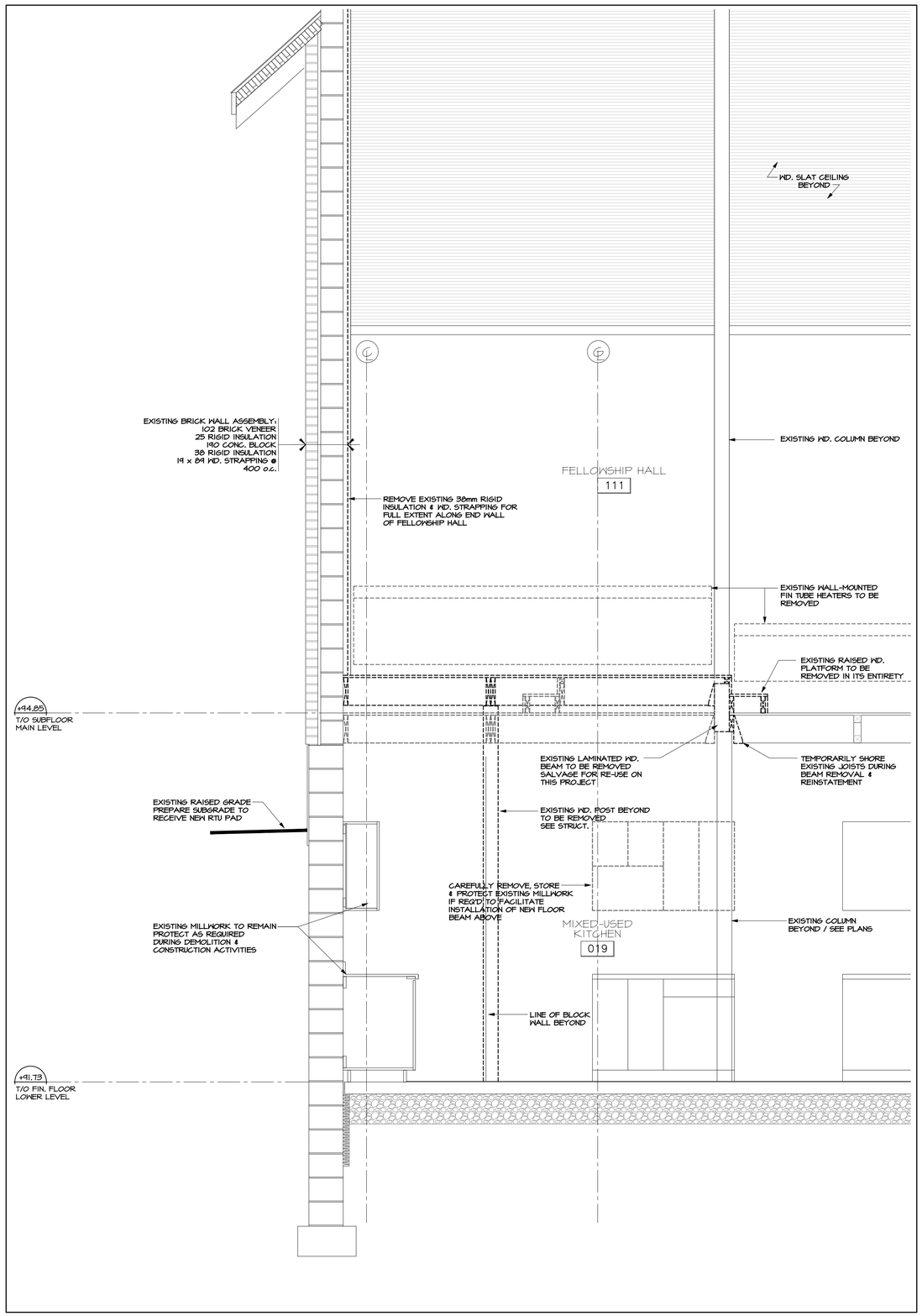
DRAWN BY:	DATE:	SCALE:
RV	MARCH 2020	AS NOTED

PROJECT: 1846

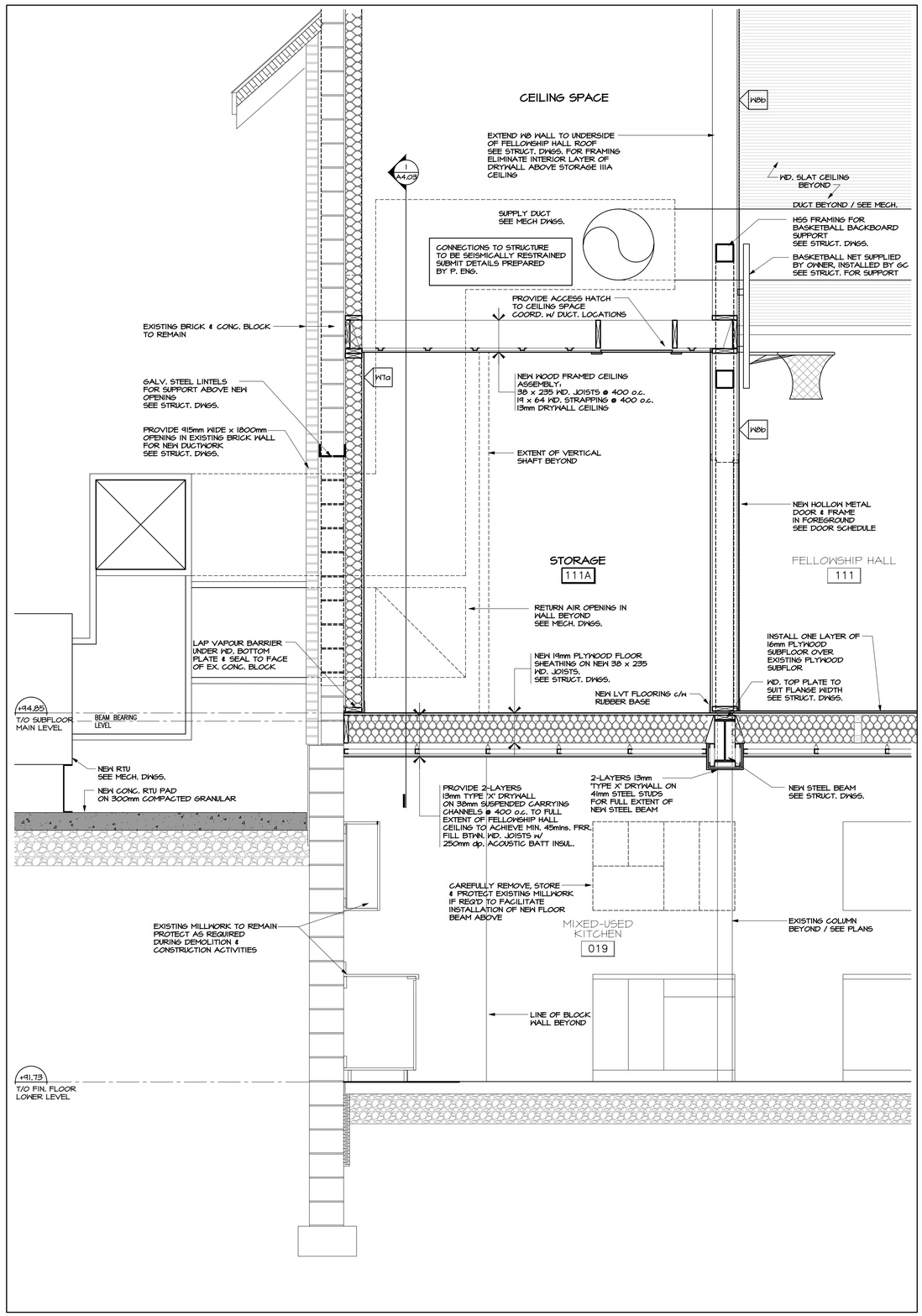
DRAWING NO.: A4.01

REVISION NO.:

None DRAWING



1 / A4.02 SECTION AT FELLOWSHIP HALL RAISED PLATFORM - DEMOLITION
SCALE 1 : 20



2 / A4.02 SECTION AT STORAGE 111A
SCALE 1 : 20

no.	date	revision
2	JUL. 27/20	ISSUED FOR TENDER
1	MAY. 28/20	ISSUED FOR BUILDING PERMIT

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DRAWING TITLE:
WALL SECTIONS DEMOLITION & NEW WORK

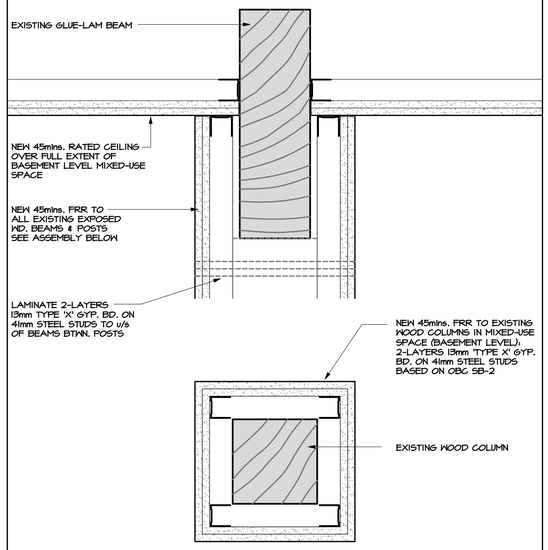
DRAWN BY:	DATE:	SCALE:
RV	MAY 2020	AS NOTED

PROJECT: 1846

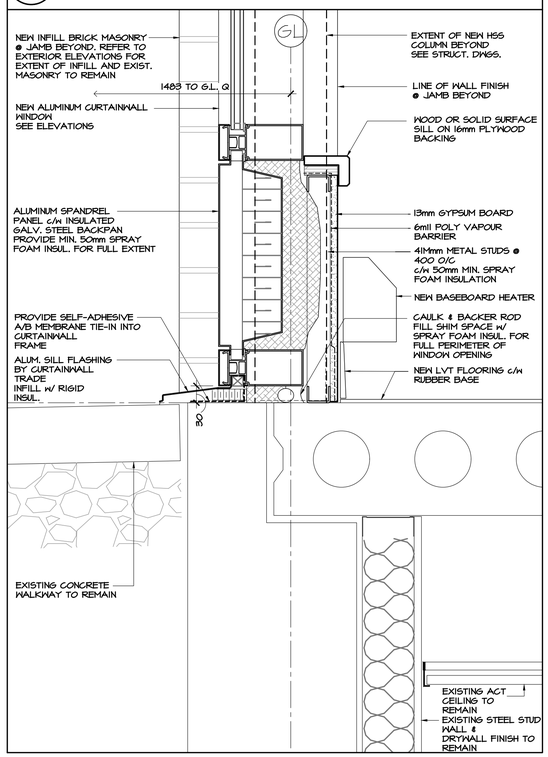
DRAWING NO.: A4.02

REVISION NO.:

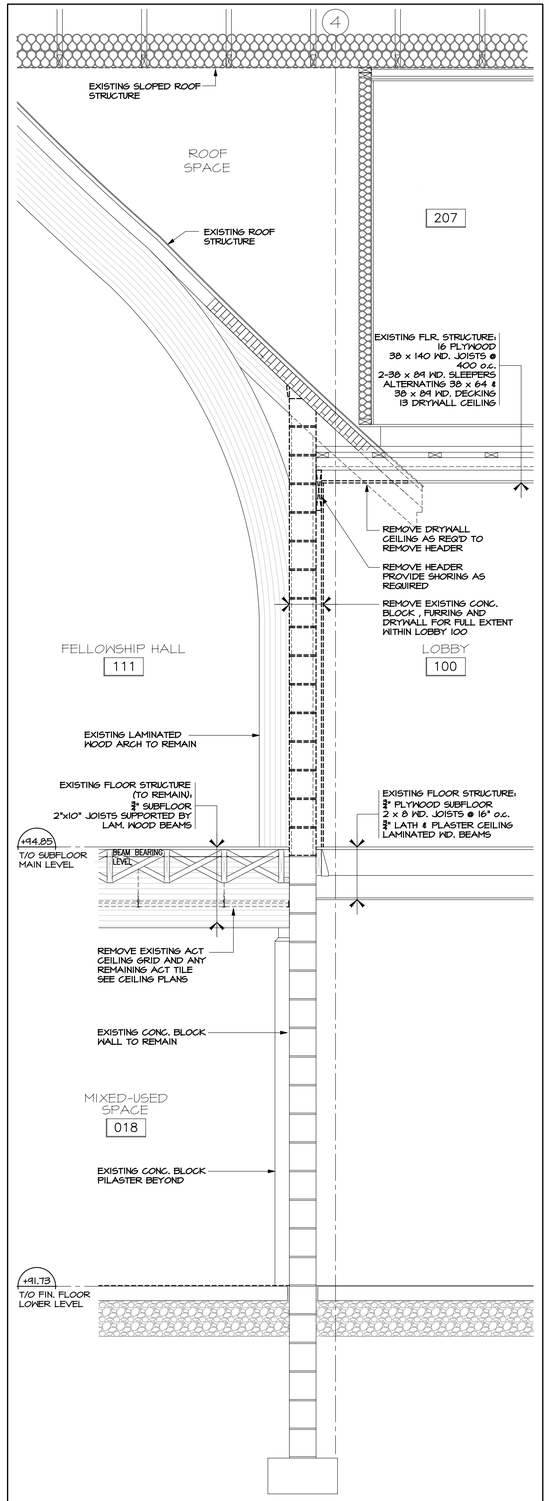
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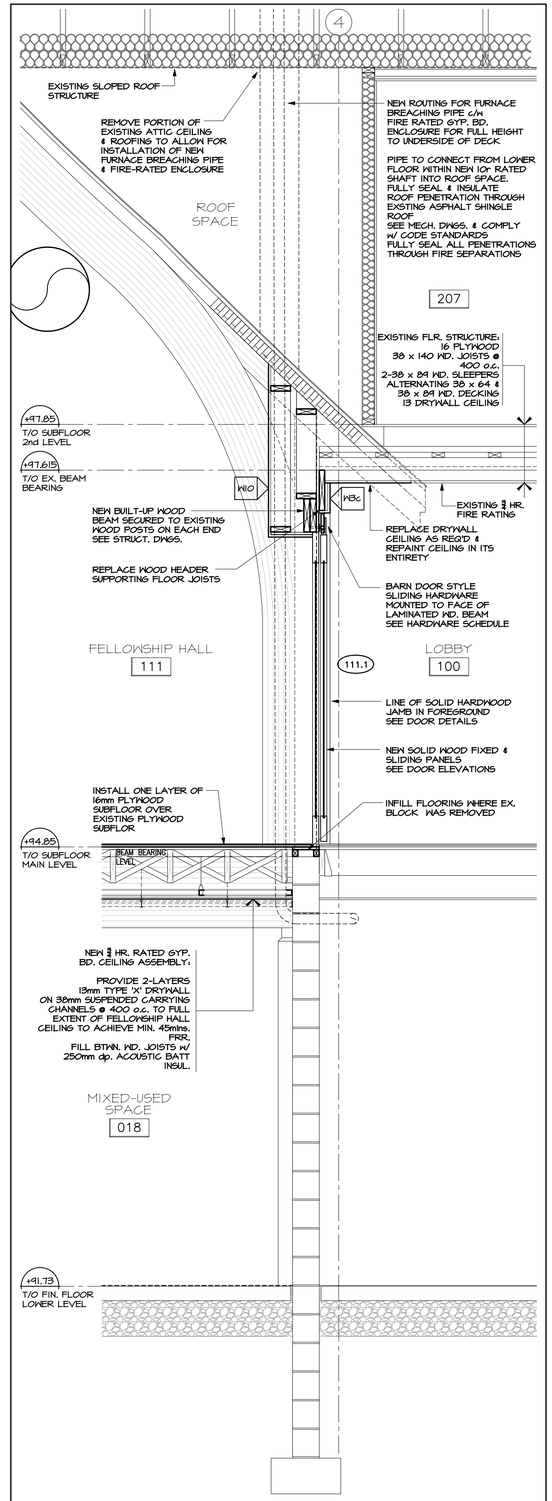
5 A4.03 WOOD COLUMN AND BEAM FIRE PROTECTION
SCALE 1 : 5



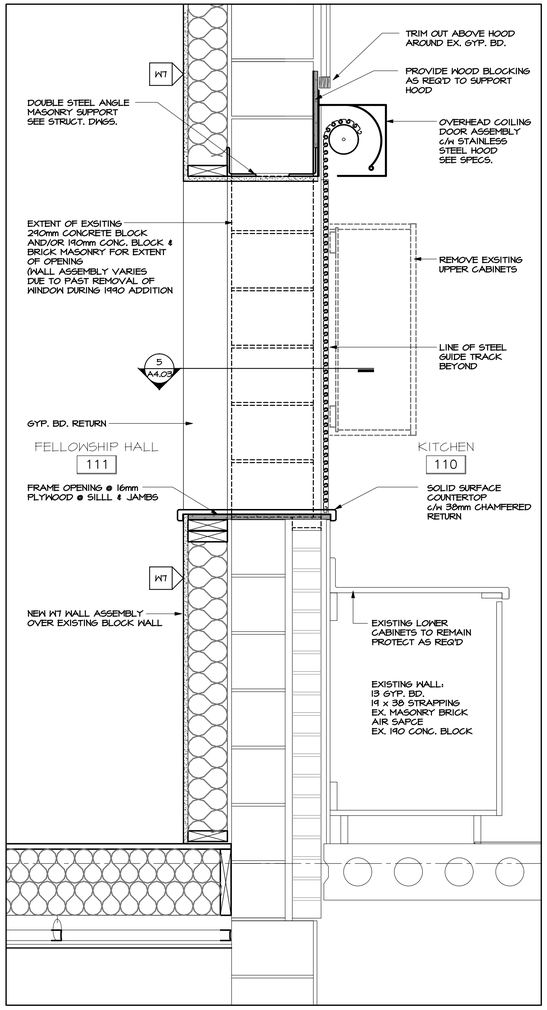
1 A4.03 DETAIL SECTION AT CAFE CURTAIN WALL SILL
SCALE 1 : 5



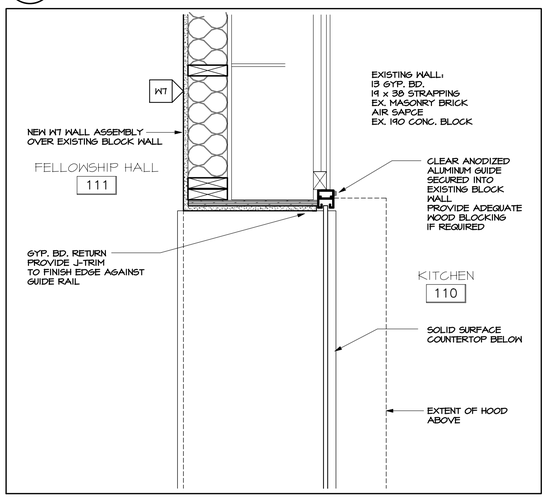
2 A4.03 SECTION AT FELLOWSHIP HALL/LOBBY - DEMOLITION
SCALE 1 : 20



3 A4.03 SECTION AT FELLOWSHIP HALL/LOBBY - NEW WORK
SCALE 1 : 20



4 A4.03 SECTION THROUGH KITCHEN PASS-THRU
SCALE 1 : 10



5 A4.03 PLAN DETAIL @ KITCHEN PASS-THRU
SCALE 1 : 10

no.	date	revision
2	JUL. 27/20	ISSUED FOR TENDER
1	MAY. 28/20	ISSUED FOR BUILDING PERMIT

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PROJECT/LOCATION:
ARLINGTON WOODS FREE METHODIST CHURCH RENOVATION
225 McClellan Rd, Ottawa, ON K2H 8N5

DRAWING TITLE:
WALL SECTIONS DEMOLITION & NEW WORK

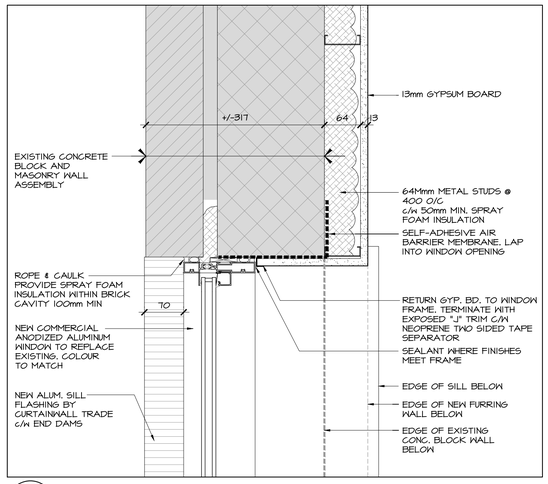
DRAWN BY:	DATE:	SCALE:
RV	MAY 2020	AS NOTED

PROJECT: 1846

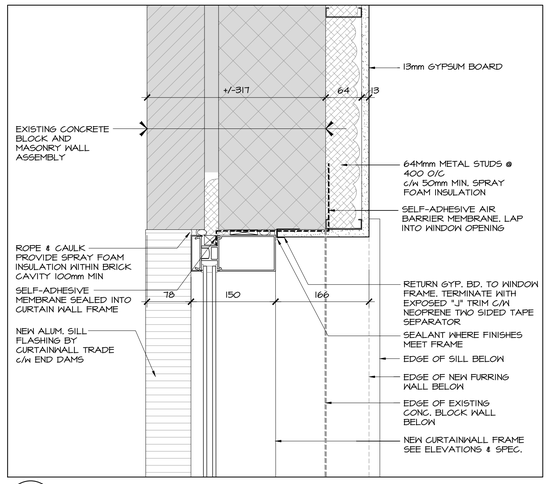
DRAWING NO.: A4.03

REVISION NO.:

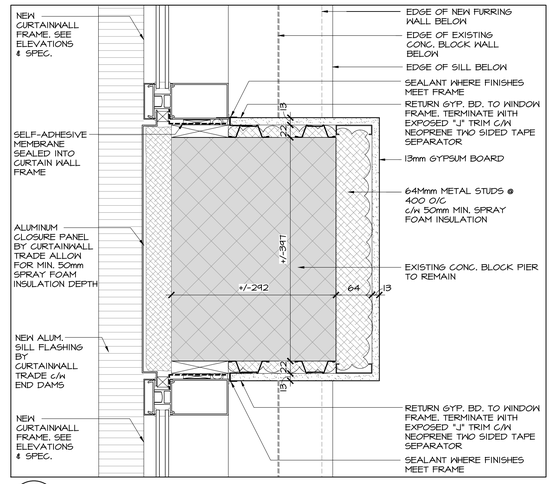
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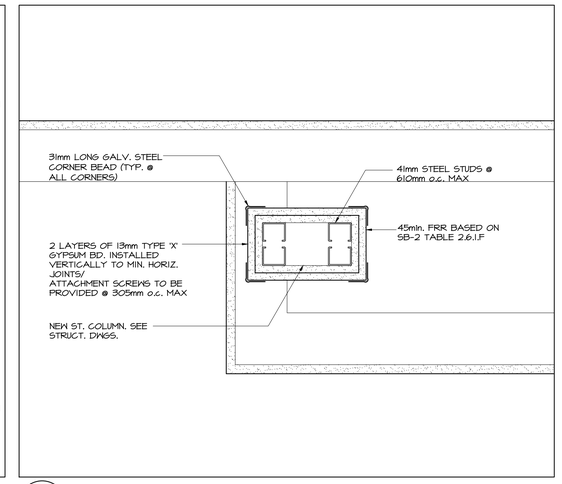
1 A6.01 PLAN DETAIL - BASEMENT
SCALE 1 : 5



2 A6.01 PLAN DETAIL - BASEMENT - CURTAIN WALL JAMB
SCALE 1 : 5



3 A6.01 PLAN DETAIL - BASEMENT -CURTAIN WALL AT EXIST. PIER
SCALE 1 : 5



4 A6.01 PLAN DETAIL - TYP. INTERIOR ST. COLUMN FIRE RATING DETAIL
SCALE 1 : 5

5 A6.01 PLAN DETAIL - BASEMENT
SCALE 1 : 5

6 A6.01 PLAN DETAIL - BASEMENT
SCALE 1 : 5

7 A6.01 PLAN DETAIL - GROUND FLOOR
SCALE 1 : 5

8 A6.01 PLAN DETAIL - GROUND FLOOR
SCALE 1 : 5

9 A6.01 PLAN DETAIL - GROUND FLOOR
SCALE 1 : 5

10 A6.01 PLAN DETAIL - GROUND FLOOR
SCALE 1 : 5

11 A6.01 PLAN DETAIL - GROUND FLOOR
SCALE 1 : 5

12 A6.01 PLAN DETAIL - GROUND FLOOR
SCALE 1 : 5

GENERAL NOTE(S):

1. REFER TO DRAWING A0.01 FOR GENERAL AND DEMOLITION NOTES, ETC.
2. A SCAN OF ALL BELOW SERVICES MUST BE DONE IN ALL AREAS WHERE TRENCHING OCCURS PRIOR TO WORK COMMENCING.

TYPICAL LEGEND:

ROOM NAME — ROOM NAME
XX — ROOM NUMBER
(GWB MAT'L) — CEILING MATERIAL
(XXXX) — CEILING HEIGHT
PV — PLUMBING VENT PIPE LOCATION; SEE MECH.'L DWGS.
FE — FIRE EXTINGUISHER; REFER TO MECH.'L DWGS.
LIGHT FIXTURE; SEE ELEC.'L DWGS FOR TYPE AND TO DIFFERENTIATE BTW. EX. & NEW.
CEILING DIFFUSER; SEE MECH.'L DWGS. TO DIFFERENTIATE BTW. EX. & NEW.
RETURN GRILLE; SEE MECH.'L DWGS. TO DIFFERENTIATE BTW. EX. & NEW.
FIRE ALARM HEAT DETECTOR; SEE ELEC.'L DWGS. TO DIFFERENTIATE BTW. EX. & NEW.
FIRE ALARM SMOKE DETECTOR; SEE ELEC.'L DWGS. TO DIFFERENTIATE BTW. EX. & NEW.

DEMO SPECIFIC LEGEND:

Dx — INDICATES DEMOLITION NOTES; REFER TO DRWG. A0.01

FLOOR FINISHES LEGEND:

SV — SHEET VYNIL
GPT — EXISTING CARPET & UNDERLAY
CT — EXISTING CERAMIC TILE & BASE

no.	date	revision
1	JUL. 27/20	ISSUED FOR TENDER

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HOBIN ARCHITECTURE

PROJECT/LOCATION:
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225 McClellan Rd, Ottawa, ON K2H 8N5

DRAWING TITLE:
PLAN DETAILS

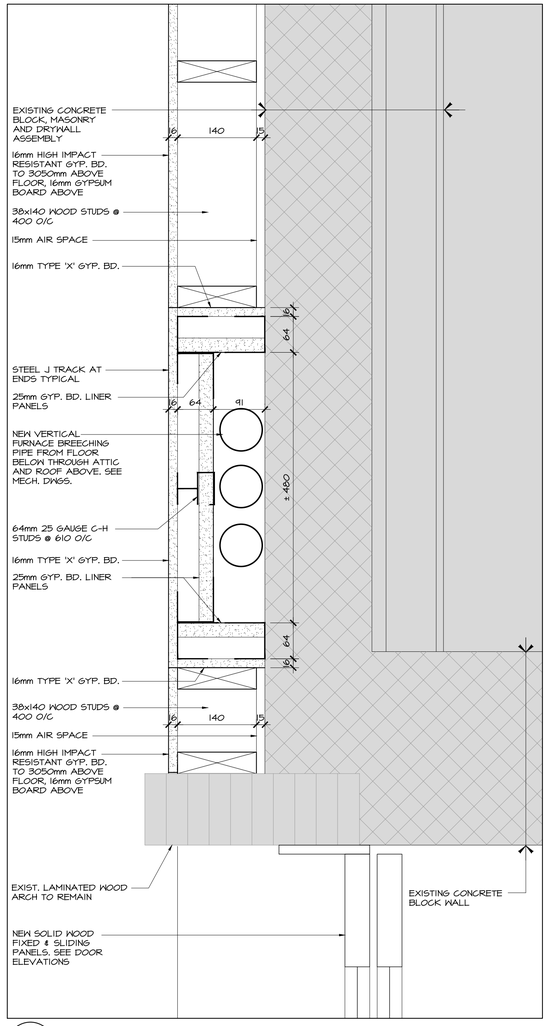
DRAWN BY:	DATE:	SCALE:
JDG	MAY 2020	AS NOTED

PROJECT: 1846

DRAWING NO.: A6.01

REVISION NO.:

None
DRAWING



1 / A6.02 PLAN DET. - GROUND FL. FURNACE BREECHING RATED SHAFT

SCALE 1 : 5

None
DRAWING

no.	date	revision
1	JUL. 27/20	ISSUED FOR TENDER

It is the responsibility of the appropriate contractor to check and verify all dimensions on site and report all errors and/or omissions to the architect.

All contractors must comply with all pertinent codes and by-laws.

Do not scale drawings.

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HOBIN ARCHITECTURE

PROJECT/LOCATION:
ARLINGTON WOODS FREE METHODIST CHURCH RENOVATION
225 McClellan Rd, Ottawa, ON K2H 8N5

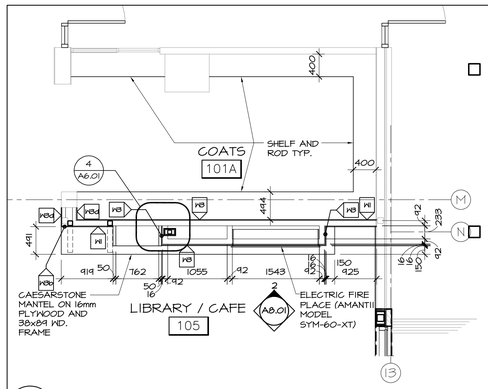
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DRAWN BY:	DATE:	SCALE:
JDG	MAY 2020	AS NOTED

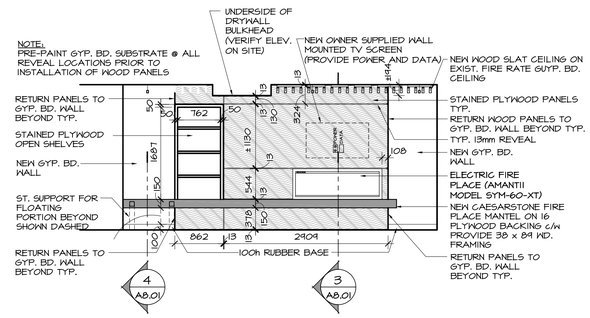
PROJECT: 1846

DRAWING NO.: A6.02

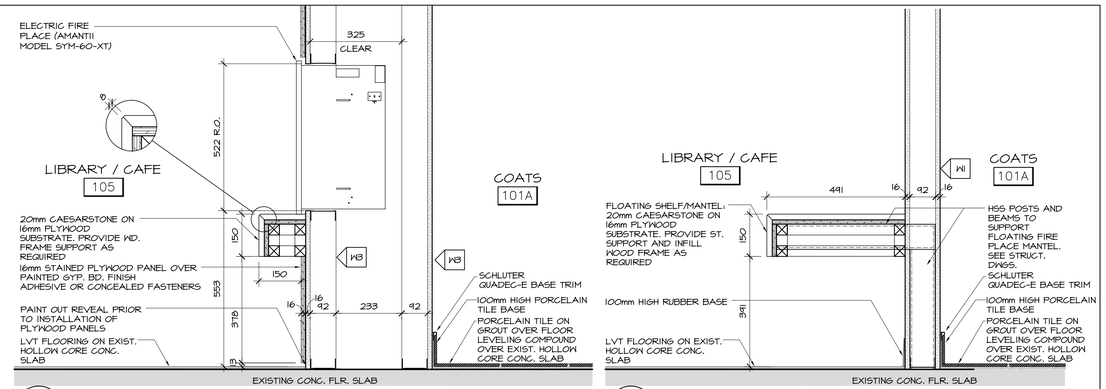
REVISION NO.:



1 A8.01 LIBRARY/CAFE 105 FIRE PLACE WALL PLAN DETAIL
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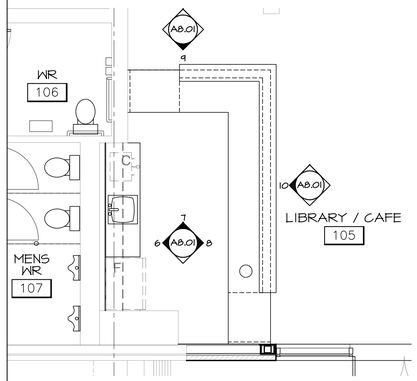


2 A8.01 LIBRARY/CAFE 105 FIRE PLACE WALL SOUTH ELEVATION
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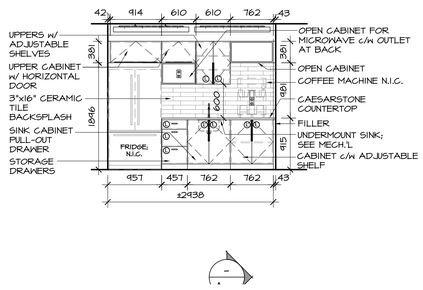


3 A8.01 LIBRARY/CAFE 105 FIRE PLACE SECTION DETAIL
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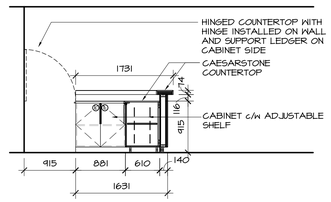
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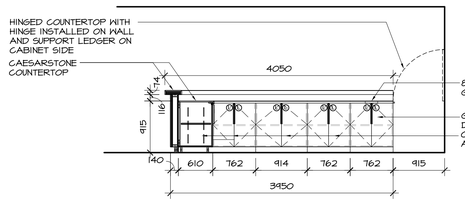
5 A8.01 LIBRARY/CAFE 105 SERVING AREA PLAN DETAIL
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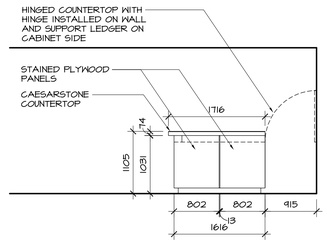
6 A8.01 LIBRARY/CAFE 105 WALL CABINETS WEST ELEVATION
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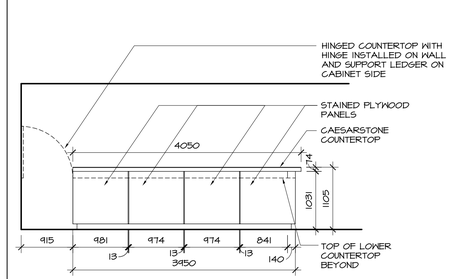
7 A8.01 LIBR./CAFE 105 SERVING AREA NORTH ELEVATION
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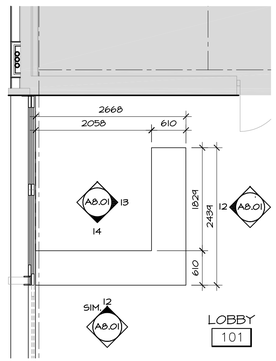
8 A8.01 LIBR./CAFE 105 SERVING AREA EAST ELEVATION
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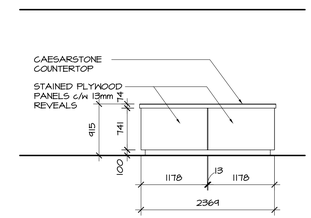
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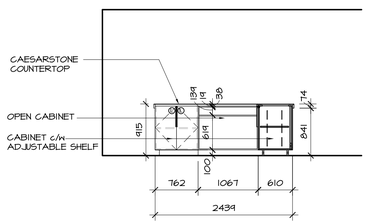
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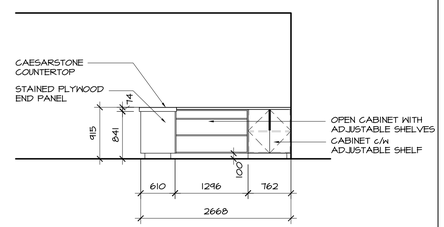
11 A8.01 LOBBY RECEPTION DESK PLAN
SCALE 1 : 50



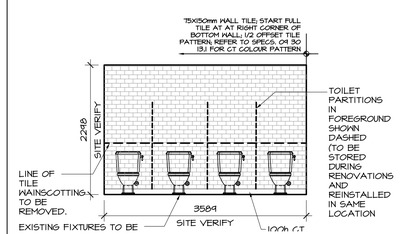
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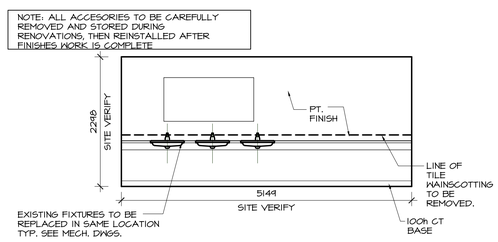
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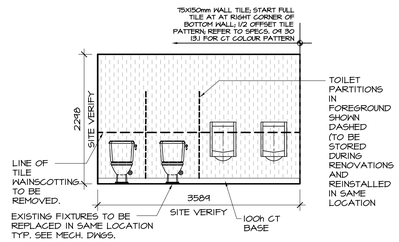
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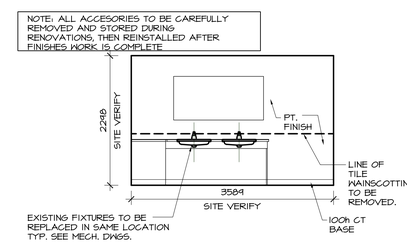
15 A8.01 WOMENS WASHROOM EAST ELEVATION
SCALE 1 : 50



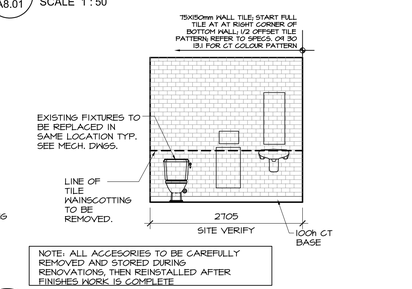
16 A8.01 WOMENS WASHROOM WEST ELEVATION
SCALE 1 : 50



17 A8.01 MENS WASHROOM EAST ELEVATION
SCALE 1 : 50



18 A8.01 MENS WASHROOM WEST ELEVATION
SCALE 1 : 50



19 A8.01 WASHROOM 106 SOUTH ELEVATION
SCALE 1 : 50

no.	date	revision
1	JUL. 27/20	ISSUED FOR TENDER

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HOBIN ARCHITECTURE

PROJECT/LOCATION:
ARLINGTON WOODS FREE METHODIST CHURCH RENOVATION
225 McClellan Rd, Ottawa, ON K2H 8N5

DRAWING TITLE:
INTERIOR ELEVATIONS AND DETAILS

DRAWN BY:	DATE:	SCALE:
JDG	JULY 2020	AS NOTED

PROJECT: 1846

DRAWING NO.: A8.01

REVISION NO.:

None
DRAWING

GENERAL NOTES AND DETAILS

D01) GENERAL

D01-1 GENERAL INFORMATION

1. THE INFORMATION PRESENTED ON THESE DRAWINGS HAS BEEN DESIGNED AND ANALYZED IN ACCORDANCE WITH THE ONTARIO BUILDING CODE 2012 (R19) & 2015 NATIONAL BUILDING CODE OF CANADA. CONSTRUCTION IS TO BE PERFORMED IN ACCORDANCE WITH THIS AND ALL OTHER APPLICABLE CODES.
   - ☐ 1.1 CONCRETE STRUCTURE DESIGNED IN ACCORDANCE WITH CSA A23.3-14
   - ■ 1.2 STEEL STRUCTURE DESIGNED IN ACCORDANCE WITH CAN/CSA-S16-14
   - ■ 1.3 WOOD STRUCTURE DESIGNED IN ACCORDANCE WITH CAN/CSA-086-14
   - ■ 1.4 MASONRY STRUCTURE DESIGNED IN ACCORDANCE WITH CAN/CSA S304-14
2. ALL WORK MUST COMPLY WITH THE PROVISIONS OF THE 2012 (R19) ONTARIO BUILDING CODE, OCCUPATIONAL HEALTH & SAFETY ACT, MUNICIPAL BYLAWS AND BEST CODE PRACTICES. THE CONTRACTOR MUST CONSIDER THAT CONSTRUCTION WORK IS DEPENDENT ON SITE CONDITIONS.
3. ALL DIMENSIONS ARE IN MILLIMETRES AND ELEVATIONS IN METERS, UNLESS INDICATED OTHERWISE.
4. GUARDRAILS/HANDRAILS SHALL BE DESIGNED AND CERTIFIED BY THE FABRICATOR'S PROFESSIONAL ENGINEER LICENSED IN ONTARIO IN ACCORDANCE WITH LOADS PROVIDED IN THE OBC 2012 (R19) / NBC 2015. STAMPED SHOP DRAWINGS TO BE SUBMITTED.
5. THE ROOF HAS BEEN DESIGNED FOR THE REQUIRED STORM WATER FLOW RESTRICTION IN ACCORDANCE WITH OBC 2012 (R19) REQUIREMENTS.
6. CONTRACTOR IS TO VERIFY/COORDINATE ALL DIMENSIONS/PENETRATIONS WITH ARCHITECTURAL/MECHANICAL/ELECTRICAL DRAWINGS PRIOR TO CONSTRUCTION. REPORT INCONSISTENCIES BEFORE PROCEEDING WITH WORK. ANY OPENINGS NOT INDICATED ON STRUCTURAL DRAWINGS ARE TO BE APPROVED BY STRUCTURAL ENGINEER IN WRITING PRIOR TO CONSTRUCTION.
7. CAD OR REVIT VERSIONS OF THE STRUCTURAL DRAWINGS SHALL BE MADE AVAILABLE TO THE CONTRACTOR UPON THE COMPLETION OF A RELEASE FORM INDEMNIFYING THE CONSULTANT FROM ANY ERRORS OR OMISSIONS ASSOCIATED WITH THE CAD OR REVIT FILES.
8. LADDERS SHALL BE DESIGNED AND CERTIFIED BY THE FABRICATOR'S PROFESSIONAL ENGINEER LICENSED IN ONTARIO IN ACCORDANCE WITH LOADS PROVIDED IN PART 4 AND PART 3 OF THE OBC 2012 (R19). STAMPED SHOP DRAWINGS TO BE SUBMITTED.
9. STEEL STAIRS SHALL BE DESIGNED AND CERTIFIED BY THE FABRICATOR'S PROFESSIONAL ENGINEER LICENSED IN ONTARIO IN ACCORDANCE WITH LOADS PROVIDED IN PART 4 AND PART 3 OF THE OBC 2012 (R19). STAMPED SHOP DRAWINGS TO BE SUBMITTED.
10. DEMOLITION DETAILS THAT AFFECT THE STRUCTURAL ELEMENTS HAVE BEEN REVIEWED IN ACCORDANCE WITH THE OBC 2012 (R19). WHERE REQUIRED, SUPPLEMENTARY/TEMPORARY/REMEDIAL FRAMING HAS BEEN PROVIDED.
11. SEISMIC RESTRAINT OF ARCH/MECH/ELECT ELEMENTS NOT NOTED ON THE DRAWINGS ARE THE RESPONSIBILITY OF THE CONTRACTOR'S ENGINEER. RESTRAINT DETAILS ARE TO BE DEVELOPED IN ACCORDANCE WITH THE OBC 2012 (R19). CONTRACTOR'S ENGINEER IS RESPONSIBLE FOR THE DESIGN AND DETAILING OF SEISMIC RESTRAINTS AND ISOLATIONS AS REQUIRED BY SPECIFICATIONS INCLUDING THE VERIFICATION THAT THE EXISTING/NEW STRUCTURE IS CAPABLE OF SAFELY SUPPORTING THE IMPOSED LOADS IN ACCORDANCE WITH THE OBC 2012 (R19). NO ELEMENTS MAY BE CONSTRUCTED WITHOUT WRITTEN CONFIRMATION OF THESE CONDITIONS BY CONTRACTOR'S ENGINEER.
12. NO FOUNDATION ELEMENTS ARE TO BE CONSTRUCTED UNTIL WRITTEN APPROVAL OF THE BEARING SURFACES AND PRESSURES IS PROVIDED BY A GEOTECHNICAL ENGINEER THROUGH ON-SITE INVESTIGATION. FAILURE TO COMPLETE THIS WORK COULD RESULT IN THE REMOVAL/REINSTATEMENT OF ANY/ALL FOUNDATION ELEMENTS AT CONTRACTOR'S OWN COST.
13. NEW OPENINGS IN EXISTING/ERECTED CONCRETE/MASONRY ELEMENTS:
    - REFER TO MECH/ARCH/ELECT DWGS FOR LAYOUTS.
    - SCAN T&B OF SLAB/WALL PRIOR TO REMOVALS. MARK OUT OPENING POSITION ON T&B OF SLAB/E.S. OF WALL.
    - CONTACT ENGINEER FOR REVIEW OF SCANS/MARKS PRIOR TO COMMENCEMENT OF ANY DEMOLITION.
    - NO WORK TO COMMENCE UNTIL RECEIVING WRITTEN APPROVAL FROM ENGINEER.
    - PROVIDE ADEQUATE PROTECTION OF SURROUNDING AREAS DURING REMOVALS.
    - SAWCUT/CORE OUT OPENINGS AS REQUIRED.
    - DO NOT OVERCUT.
    - ANY REQUIRED SUPPLEMENTAL STRENGTHENING/REINFORCING IS TO BE ERECTED PRIOR TO REMOVALS.
14. CONTRACTOR TO PROVIDE PRE-ENGINEERED SHORING AS REQUIRED TO ACCOMMODATE THE CONTRACTOR'S CONSTRUCTION ACTIVITIES AND TO PREVENT DAMAGE TO ANY ADJACENT PROPERTY. ALL CONSTRUCTION ACTIVITIES TO BE LIMITED TO THE LIMITS OF THE CONSTRUCTION SITE AND ALL DAMAGE TO EXISTING PROPERTIES MUST BE REINSTATED.
15. CONTRACTOR IS REQUIRED TO SUBMIT CONDUIT AND SLEEVING SHOP DRAWINGS FOR ALL FLOORS/ROOFS/WALLS/COLUMNS PRIOR TO THE ERECTION/CONSTRUCTION/FABRICATION OF ANY OF THESE ELEMENTS. THE DRAWINGS ARE TO LOCATE/DIMENSION THE CLEAR SIZES OF OPENINGS/SLEEVES/CONDUITS IN PLAN (FLOORS/ROOFS/COLUMNS) AND ELEVATION (WALLS/BEAMS). THE COORDINATION OF THE VARIOUS DISCIPLINES/SUBTRADES TO ENSURE ALL ITEMS ARE CLEARLY INDICATED IS THE SOLE RESPONSIBILITY OF THE CONTRACTOR. DRAWINGS ARE TO BE SUBMITTED A MINIMUM OF 4 WEEKS PRIOR TO THE CONSTRUCTION OF THE AFFECTED ELEMENT.
16. DO NOT SCALE DIMENSIONS DIRECTLY FROM THESE DRAWINGS OR ELECTRONIC FILES.
17. SPECIFIC NOTES AND DETAILS FOUND ON THESE DRAWINGS SHALL TAKE PRECEDENCE OVER GENERAL NOTES AND TYPICAL DETAILS.
18. DO NOT LOAD HEAVY MATERIALS SUCH AS MASONRY, FILL, GRAVEL, DRYWALL, ETC. ON FLOORS, TERRACES OR ROOFS WITHOUT ADEQUATE ADDITIONAL SUPPORTS - SUBMIT DETAILS TO ENGINEER FOR REVIEW.

D01-2 GRAVITY LOADS:

FLOOR: DEAD: 0.8 kPa

LIVE: ASSEMBLY/STORAGE: 4.8 kPa

WIND LOAD - INDIVIDUAL WALLS:

WIND LOAD IMPORTANCE FACTOR:	Iw:	1.0 (ULS), 0.75 (SLS)
1 IN 50 YEAR REFERENCE PRESSURE:	q:	0.41 kPa
EXPOSURE FACTOR:	Ce:	0.9
EXTERNAL PRESSURE COEFFICIENTS:	CpCg:	± 3 (MAX.)
INTERNAL WIND PRESSURE CATEGORY:		2
INTERNAL PRESSURE COEFFICIENTS:	CpiCgi:	± 0.9
RESULTING IN NET WIND PRESSURE:	p:	1.5 kPa (@ ULS)
		1.1 kPa (@ SLS)

D01-3 SHOP DRAWINGS

1. SUBMIT SHOP DRAWINGS FOR ALL STRUCTURAL WORK AND ANY WORK AFFECTING THE STRUCTURE TO THE CONSTRUCTION MANAGER. OBTAIN ARCHITECTS & ENGINEER'S APPROVAL BEFORE PROCEEDING WITH THE FABRICATION.
2. EACH OF THE FOLLOWING SHOP DRAWINGS MUST BEAR THE SIGNATURE AND STAMP OF A QUALIFIED PROFESSIONAL ENGINEER REGISTERED IN THE PROVINCE (PLUS OTHER DRAWINGS AS NOTED).
   a) DRAWINGS FOR ANY TEMPORARY WORK.
   b) DRAWINGS FOR ANY STRUCTURAL PARTS DESIGNED BY THE CONTRACTOR'S FORCES INCLUDING EXTERIOR BUILDING ENVELOPE.
   c) STRUCTURAL STEEL/JOISTS.
   d) FORMWORK
   e) SHORING
3. SHOP DRAWINGS MUST BE REVIEWED AND STAMPED REVIEWED BY THE CONTRACTOR BEFORE ISSUING TO THE ARCHITECT/ENGINEER. SHOP DRAWINGS NOT STAMPED BY THE CONTRACTOR WILL BE REJECTED. ANY DELAYS IN THE CONSTRUCTION SCHEDULE DUE TO NONCOMPLIANCE WITH THIS REQUIREMENT SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR.
4. SUBMIT STRUCTURAL STEEL, STEEL JOIST AND STEEL DECK SHOP DRAWINGS FOR STRUCTURAL ENGINEER'S REVIEW BEFORE FABRICATION. ALL SHOP DRAWINGS SHALL BEAR THE SEAL OF A REGISTERED PROFESSIONAL ENGINEER IN THE PROVINCE OF ONTARIO.
5. SHOP DRAWINGS ARE REVIEWED FOR CONFORMANCE WITH THE GENERAL DESIGN CONCEPT. THIS REVIEW DOES NOT IMPLY APPROVAL OF THE DETAILED DESIGN OR QUANTITIES DESCRIBED IN THE SHOP DRAWINGS. THE RESPONSIBILITY FOR THE QUANTITIES AND DETAILED DESIGN OF THE MATERIALS AND COMPONENTS AS REQUIRED TO PROVIDE THE COMPLETE AND SATISFACTORY JOB DESCRIBED IN THE DESIGN DOCUMENTS REMAINS WITH THE CONTRACTOR.

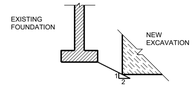
D31) FOUNDATIONS:

D31-1 EXCAVATION , FOUNDATIONS AND BACKFILL:

1. PRIOR TO ANY EXCAVATION, VERIFY LOCATION OF EXISTING SERVICES AND TAKE ALL NECESSARY MEASURES TO MAINTAIN SERVICES WHERE REQUIRED. NOTIFY OWNER AND ENGINEER IF ANY SERVICES NOT SHOWN ON PLAN OR OTHERWISE EXPECTED ARE ENCOUNTERED. DO NOT PROCEED FURTHER UNTIL DIRECTED.
2. CARE MUST BE TAKEN TO AVOID UNDERMINING EXISTING BUILDING FOUNDATIONS OR UNDERGROUND SERVICES.
3. PROTECT SUB-GRADE FROM FREEZING AND FROST ACTION AT ALL TIMES DURING CONSTRUCTION.
4. FOOTINGS MUST BEAR ON APPROVED BEARING SURFACES.
5. BACKFILL TO WITHIN 200mm OF UNDERSIDE OF SLAB WITH GRANULAR 'B' TYPE II IN LAYERS UP TO 12" THICK, COMPACTED TO MINIMUM 100% SPMDD OR AS PER GEOTECHNICAL REPORT.
6. FINAL 200mm UNDER SLAB TO BE GRANULAR 'A' COMPACTED TO MINIMUM 100% SPMDD OR AS PER GEOTECHNICAL REPORT.
7. RE-USE OF EXCAVATED GRANULAR MATERIAL IS SUBJECT TO APPROVAL OF GEOTECHNICAL CONSULTANT

D31-2 PROTECT LATERAL STABILITY OF BEARING STRATA UNLESS NOTED:

UNLESS OTHERWISE OUTLINED IN GEOTECTNICAL REPORT DO NOT EXCAVATE BELOW A LINE EXTENDING DOWNWARD FROM ANY BEARING STRATA AT A SLOPE OF 1 VERTICAL TO 2 HORIZONTAL. ADJUST FOOTING AND TRENCH ELEVATIONS TO MEET THIS REQUIREMENT (SEE DIAGRAM).



D03) CONCRETE

D03-1 CONCRETE COVER (CLEAR TO REINFORCING):

U/S FOOTINGS, PILE CAPS, GRADE BEAMS (AGAINST SOIL)	75mm (3")
FOOTINGS, PILE CAPS, GRADE BEAMS (SIDES & TOP)	50mm (2")
SLABS	25mm (1") U/N
COLUMNS	40mm (1½")(TO TIES)

D03-2 REINFORCING STEEL:

1. SPACING OF BARS SHALL BE APPROXIMATELY UNIFORM WITHIN THE CORRESPONDING STRIPS. DO NOT ELIMINATE OR DISPLACE REINFORCEMENT TO ACCOMMODATE HARDWARE. IF INSERTS CANNOT BE LOCATED AS SPECIFIED, OBTAIN APPROVAL OF ALL MODIFICATIONS FROM ENGINEER BEFORE THE PLACING OF CONCRETE.
2. WHERE TENSION LAPS ARE SPECIFIED, LAP REINFORCING STEEL IN ACCORDANCE WITH THE REQUIREMENTS OF CAN3-A23.3, LATEST EDITION. ALL OTHER LAPS AND EMBEDMENT OF DOWELS SHALL BE 24 BAR DIAMETERS, BUT NOT LESS THAN 600mm IF NOT SPECIFIED OTHERWISE. WIRE MESH LAPS SHALL BE 150mm MINIMUM.

D03-3 CONCRETE MIXES

PROPORTION NORMAL DENSITY CONCRETE IN ACCORDANCE WITH CAN/CSA-A23.1, TO GIVE THE FOLLOWING QUALITY FOR ALL CONCRETE AS INDICATED. (UNLESS OTHERWISE NOTED)

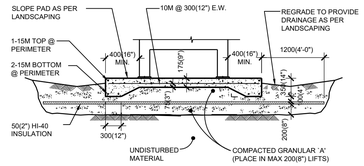
LOCATION	28 DAY STRENGTH	SLUMP	CLASS OF EXPOSURE
SLAB ON GRADE (INTERIOR)	25 MPa	75mm	N
SLAB ON GRADE (EXTERIOR)	32 MPa	75mm	C-2
FOOTINGS	25 MPa	75mm	N
INTERIOR COLUMNS/PIERS	30 MPa	75mm	N
PAVEMENT & WALKS	32 MPa	75mm	C-2
RETAINING WALLS	35 MPa	75mm	C-1
EXTERIOR LANDSCAPE WALL ELEMENTS	35 MPa	75mm	C-1

* NOTE: ALL CONCRETE EXPOSED TO EXTERIOR CONDITIONS TO HAVE MINIMUM 6% AIR ENTRAINMENT

READY-MIXED CONCRETE AND CONCRETE PROPORTIONS SHALL BE IN ACCORDANCE WITH CSA A23.1, CLAUSE 12 AND AS FOLLOWS:

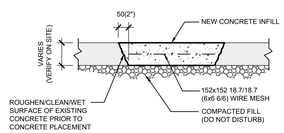
1. MINIMUM ALLOWABLE COMPRESSIVE STRENGTH SHALL BE 25 MPa AT 28 DAYS OF AGE, UNLESS OTHERWISE NOTED OR SHOWN.
2. IF BLENDED NORMAL PORTLAND CEMENT/CEMENTITIOUS HYDRAULIC SLAG IS USED EXCEPT FOR FLOOR MIXES, SLAG CONTENT SHALL NOT BE MORE THAN 25% OF TOTAL MASS OF CEMENT. TOTAL VOLUME OF CEMENT IN CONCRETE FLOOR MIXES SHALL BE 100% NORMAL PORTLAND CEMENT.
3. PROVIDE CERTIFICATION THAT MIX PROPORTIONS SELECTED WILL PRODUCE CONCRETE OF SPECIFIED QUALITY AND YIELD AND THAT STRENGTH WILL COMPLY WITH CAN/CSA-A23.1-09.
4. USE OF CALCIUM CHLORIDE NOT PERMITTED.
5. DO NOT CHANGE CONCRETE MIX WITHOUT PRIOR APPROVAL OF CONSULTANT. SHOULD CHANGE IN MATERIAL SOURCE BE PROPOSED, NEW MIX DESIGN TO BE APPROVED BY CONSULTANT.

D03-4 EXTERIOR EQUIPMENT PADS

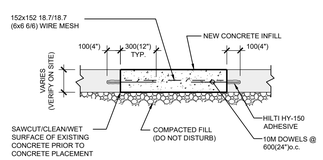


NOTE:
PROVIDE EXTERIOR PADS AS REQUIRED. REFER TO ARCH/LANDSCAPE DWGS FOR LOCATIONS/DIMENSIONS.

D03-5 SLAB ON GRADE REMOVALS/REINSTATEMENT



OPTION 1: NO DOWELS



OPTION 2: DOWELS

D04) MASONRY

D04-1 GENERAL:

1. ALL MASONRY WORK SHALL COMPLY WITH CAN3-S304.1-06, CAN3-A370-M84 AND A371-M84 UNLESS OTHERWISE NOTED.
2. MINIMUM MASONRY REINFORCEMENT (UNLESS OTHERWISE NOTED):

WALL THICKNESS	LOAD BEARING	NON-LOADBEARING
140mm (6")	HORIZ. SMR @ 200(8") OR HDMR @ 400(16") VERT. 1-15M @ 800(32")	SMR @ 400(16") 1-10M @ 1200(48")
190mm (8")	HORIZ. HDMR @ 200(8") & 400(16") (ALTERNATE) VERT. 1-20M @ 1200(48")	HDMR @ 600(24") 1-15M @ 1200(48")
240mm (10")	HORIZ. HDMR @ 200(8") VERT. 2-15M @ 1200(48")	HDMR @ 400(16") 2-10M @ 1200(48")
290mm (12")	HORIZ. HDMR @ 200(8") VERT. 2-20M @ 1200(48")	HDMR @ 400(16") 2-15M @ 1200(48")

3. VERTICAL BARS SHALL BE CONTINUOUS, LAPPED ONLY AT FLOORS, DOWELED INTO SUPPORTS AND GROUTED INTO CLEAR VERTICAL BLOCK CORES SEALED ALL AROUND WITH MORTAR, PROVIDE CLEAN-OUT PORT AT BOTTOM OF EACH GROUTED CORE. DO NOT CLOSE PORT OR PLACE GROUT UNTIL CORE AND STEEL HAVE BEEN INSPECTED. PROVIDE THREE GROUTED REINFORCED (20M) CORES AT EACH CORNER AND INTERSECTION (MIN.).
4. PROVIDE 1-20M IN 2-COURSE DEEP FULLY GROUTED HORIZONTAL BOND BEAM AT THE TOP OF ALL LOAD BEARING WALLS U/N.
5. PROVIDE APPROVED LATERAL SUPPORT TO TOP AND BOTTOM OF MASONRY PANELS AT GROUTED CORE LOCATIONS OR AT 1800mm(6'-0") MAXIMUM SPACING WHERE NO VERTICAL REINFORCEMENT IS REQUIRED; ALSO AT SIDES OF MASONRY PANELS AT 4 TIMES THE WALL THICKNESS.
6. COMPRESSIVE STRENGTH OF MATERIALS USED FOR LOAD BEARING AND PANEL WALLS SHALL BE IN EXCESS OF THE FOLLOWING VALUES:
   a) MASONRY UNITS - HOLLOW CONCRETE BLOCK 15 MPa (2200 psi)
   - SOLID CONCRETE BLOCK (GROSS AREA) 15 MPa (2200 psi)
7. TYPE 'S' MORTAR SHALL BE USED FOR MASONRY BELOW GRADE, MIN. STRENGTH fm = 12.4 MPa. (1800 psi)
   TYPE 'N' MORTAR SHALL BE USED ABOVE GRADE, MIN. STRENGTH fm = 5.2 MPa. (800 psi)
8. GROUT TO BE A MINIMUM OF 15 MPa (2900 psi) MIN. SLUMP OF 200mm (8").
9. MORTAR FOR EXPOSED MASONRY SHALL BE AIR ENTRAINED.
10. PROVIDE LINTELS FOR ALL OPENINGS AND/OR RECESSES IN MASONRY WALLS SHOWN ON THE ARCHITECTURAL OR STRUCTURAL DRAWINGS INCLUDING THOSE FOR MECHANICAL OR ELECTRICAL SERVICES OR EQUIPMENT. (SEE LINTEL SCHEDULE)
11. INTERSECTING OR ABUTTING WALLS SHALL BE BONDED ADEQUATELY TOGETHER.
12. PROVIDE MINIMUM 25mm(1") GROUT UNDER ALL WALL PLATES AND BASE PLATES.

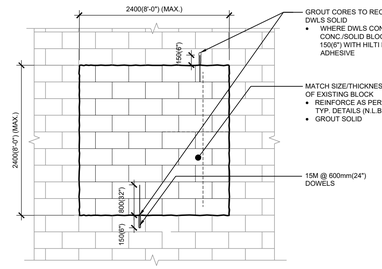
D04-2 LOOSE LINTEL SCHEDULE - 90mm(3½") BRICK MASONRY:

LOOSE LINTEL SCHEDULE

SPANS < 1200(48") L 90x90x6.4 (L3½"x3½"x¼")
SPANS < 1800(72") L 102x90x7.9 (L4"x3½"x⅜")
SPANS < 2400(96") L 127x90x7.9 (L5"x3½"x⅜")
SPANS < 3000(120") L 152x102x10 (L6"x4"x⅜")

PROVIDE LOOSE LINTELS ABOVE ALL MASONRY CLADDING OPENINGS U/N.
ALL LOOSE LINTELS TO BE HOT DIPPED GALVANIZED U/N.

D04-3 TYPICAL DETAILS



DETAIL: BLOCK INFILL

D05) STEEL

D05-1 STRUCTURAL STEEL:

STRUCTURAL STEEL SHALL COMPLY WITH CAN3-S16.1-01(06) UNLESS OTHERWISE NOTED.

ITEM	APPLICABLE SPECIFICATION (UNLESS OTHERWISE NOTED)
ROLLED SECTIONS	G40.21M - 350W
CONNECTION BOLTS	A325 (BEARING TYPE)
ANCHOR BOLTS	A307 (UNLESS OTHERWISE NOTED IN BASEPLATE SCHEDULE)
BRACE FRAME/BEARING PLATES	G40.21M-300W
HSS (TUBE) SECTIONS CONNECTION	G40.21M-350W (CLASS C) OR ASTM A500

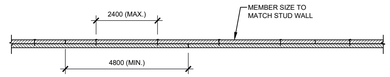
1. ALL STEEL WORK SHALL BE GIVEN ONE COAT OF APPROVED PRIMER.
2. FIELD AND SHOP CONNECTIONS SHALL BE WELDED OR HIGH TENSILE BOLTED (ASTM STANDARD A325).
3. WELDING SHALL CONFORM TO LATEST CSA SPECIFICATION W59 AND BE UNDERTAKEN BY A FABRICATOR APPROVED BY THE CANADIAN WELDING BUREAU TO THE REQUIREMENTS OF CSA SPECIFICATION W47.1.
4. ALL EXPOSED WELDS SHALL BE CONTINUOUS AND BE GROUND SMOOTH.
5. ALL EXTERIOR EXPOSED STRUCTURAL STEEL SHALL BE GALVANIZED OR PAINTED WITH APPROVED RUST INHIBITIVE PAINT.
6. STRUCTURAL STEEL MEMBERS SHALL NOT BE SPLICED UNLESS APPROVED BY THE STRUCTURAL ENGINEER IN WRITING.
7. WHERE STRUCTURAL STEEL MEMBERS SPECIFIED ON THE STRUCTURAL DRAWINGS ARE UNAVAILABLE TO THE CONTRACTOR, THE STRUCTURAL STEEL CONTRACTOR SHALL PROVIDE MEMBERS HAVING ALL SECTION PROPERTIES EQUAL TO OR BETTER THAN THAT OF THE SPECIFIED MEMBERS AT NO ADDITIONAL COST. CONTACT ENGINEER FOR ACCEPTANCE OF ANY AND ALL SUBSTITUTIONS.

D06) WOOD

D06-1 WOOD FRAME:

1. UNLESS NOTED OTHERWISE, JOISTS, TIMBER BEAMS, BUILT-UP BEAMS, BUILT-UP POSTS AND STUD FRAMING INCLUDING TOP AND BOTTOM PLATES SHALL BE KD SPF No.2 OR BETTER. SOLID WOOD POSTS SHALL BE D.Fir No. 1
2. THE USE OF FINGER JOINTED STUDS WILL NOT BE PERMITTED IN LOAD-BEARING WALLS.
3. UNLESS NOTED OTHERWISE, ALL FRAMING, BRIDGING, BLOCKING AND NAILING SHALL BE IN ACCORDANCE WITH PART 9 OF THE ONTARIO BUILDING CODE 2012. PROVIDE 38x38 (2"x2") BRIDGING AT 2100 (7FT) ON CENTRE FOR ALL SPANS GREATER THAN 3000 (10'-0"), WITH 13mm (½") GAP BETWEEN BRIDGING.
4. BUILT-UP BEAMS AND POSTS SHALL CONSIST OF MINIMUM 2 MEMBERS. MINIMUM LINTEL SHALL BE 1-89x241 (3½"x9 ½") LSL TIMBERSTRAND OR 2-38x235 (2-2"x10") UNLESS NOTED OTHERWISE.
5. LAMINATE STUDS SOLID BENEATH ALL BEAM-ENDS AND CARRY THROUGH TO CONCRETE FOUNDATION BELOW. UNLESS NOTED, BUILT-UP BEAMS SHALL MATCH NUMBER OF LAMINATIONS IN BUILT-UP MEMBER BEING SUPPORTED. FULLY BLOCK ALL JOIST SPACES BELOW POINT LOADS. TAKE CARE TO ENSURE BEAMS BEAR FULLY ON SUPPORTING MEMBERS.
6. INSTALL DOUBLE CRIPPLES UNDER LINTELS UNLESS NOTED OTHERWISE.
7. EXTERIOR BEARING WALLS - UNLESS NOTED OTHERWISE:
   a) FASTEN BOTTOM WALL PLATE TO FLOOR SHEATHING WITH 80mm (3 ½") SPIKES AT 100 (4") ON CENTRE AND TO CONCRETE WITH 190x250 (5"0x10") ANCHOR BOLTS COMPLETE WITH 65dx6 (2 ½"dx ¼") PLATE WASHERS AT 600 (2'-0") ON CENTRE MAXIMUM AND AT 200mm (8") FROM END AND CORNER OF WALLS AND EDGE OF WINDOW/DOOR OPENINGS. ADD HOLD DOWN ANCHORS BY SIMPSON WHERE NOTED ON PLAN. ALTERNATIVELY, CONTRACTOR MAY USE 19mmØ HILTI HY-200 ANCHORS WITH 200mm EMBEDMENT.
   b) LAP WALL TOP PLATES 1200 (4'-0") AND CONNECT WITH 12-76mm (3") STAGGERED NAILS MINIMUM, UNLESS NOTED OTHERWISE ON PLAN.
8. SHEATHING - UNLESS NOTED OTHERWISE: ALL SHEATHING SHALL BE D.FIR PLYWOOD (DFP) EXTERIOR GRADE CONFORMING TO CSA-0121-M1978 (R2003). PLACE SHEETS WITH FACE GRAIN RUNNING PERPENDICULAR TO SUPPORTING MEMBERS. MINIMUM SHEATHING REQUIREMENTS SHALL BE AS FOLLOWS:
   a) WALL SHEATHING:
      13mm (½") PLYWOOD FASTENED WITH 75mm (3") COMMON NAILS @ 100 (4") ON CENTRE AT SHEET EDGES AND @ 300 (12") ON CENTRE AT INTERMEDIATE STUDS. ALL UNSUPPORTED EDGES SHALL BE BLOCKED WITH 38x89 (2"x4") BLOCKING ON FLAT AND NAILED AS ABOVE. DRILL ADEQUATE HOLES IN EXTERIOR WALLS FOR VENTILATION.
      UNLESS OTHERWISE APPROVED IN WRITING BY THE CONSULTANT, SHEAR WALLS WITH SHEET EDGE NAIL SPACING OF 76mm (3") o.c. OR LESS, AND WALLS WITH PLYWOOD EACH SIDE SHALL HAVE DOUBLE STUDS AND 38x140 (2"x6") BLOCK ON FLAT AT ALL SHEET EDGES. NAIL DOUBLE STUDS TOGETHER WITH 76mm (3") NAILS @ 50mm (2") STAGGERED OVER FULL HEIGHT.
      NAIL GUN PRESSURE SHALL BE CAREFULLY SET SO THAT NAIL HEADS DO NOT CRUSH INTO THE PLYWOOD SHEET BY MORE THAN 3mm (⅛").
   b) FLOOR SHEATHING:
      16mm (⅝") T&G PLYWOOD GLUE AND FASTEN WITH 65mm (2 ½") NAILS @ 150mm (6") ON CENTRE AT SHEET EDGES AND @ 250mm (10") o.c. AT INTERMEDIATE SUPPORTS.
   c) ROOF SHEATHING:
      19mm (¾") T&G PLYWOOD FASTEN WITH 65mm (2 ½") NAILS @ 150mm (6") ON CENTRE AT SHEET EDGES AND @ 250mm (10") o.c. AT INTERMEDIATE SUPPORTS.
9. UNLESS NOTED OTHERWISE, USE SIMPSON CONNECTORS WHERE REQUIRED. ALL NAIL HOLES IN CONNECTORS, INCLUDING STRAPS, TO BE FILLED WITH NAIL TYPE SPECIFIED BY THE HARDWARE SUPPLIER. USE JOIST HANGERS (MINIMUM 1000 LBS CAPACITY) OR FULLY NAILED PRESSURE BLOCK FOR ALL FLUSH FRAMING.
10. STEEL HARDWARE SHALL BE ASTM A36 OR BETTER AND BOLTS SHALL BE A307, HOT DIPPED GALVANIZED. ALL BOLTS AND LAG BOLTS BEARING AGAINST TIMBER SHALL HAVE STANDARD "CUT" (OVERSIZED) WASHERS U/NO.
11. LAG BOLTS SHALL HAVE THREAD OVER MINIMUM HALF THE BOLT LENGTH, AND SHALL HAVE SHARP THREADS. DULL THREAD LAG BOLTS WITH INSUFFICIENT THREAD LENGTH WILL BE IMMEDIATELY REJECTED.
12. RE-TIGHTEN ALL ACCESSIBLE BOLTS WHERE TIMBER SHRINKAGE MAY HAVE OCCURRED AT END OF PROJECT.
13. ALL TIMBER SPECIFIED AS "TREATED" TO BE PRESSURE TREATED ACCORDING TO CSA-080 SERIES-97 (R2002) "WOOD PRESERVATION"
    WOOD ACCESSIBLE TO REGULAR USER CONTACT: THIS WOULD INCLUDE PLAY STRUCTURES, PLAY AREA DECKS, GUARDRAILS AND OTHER PRESERVED WOOD SURFACES THAT CAN BE TOUCHED BY THE USERS ON A REGULAR BASIS. TREAT USING ACQ OR AC VACUUM PRESSURE IMPREGNATION TO BE 0.4 pcf OR TO REFUSAL.
    WOOD NOT ACCESSIBLE TO REGULAR USER CONTACT: THIS WOULD INCLUDE STRUCTURES CONCEALED OR NOT COMMONLY ACCESSIBLE TO USER CONTACT SUCH AS WALL SILL PLATES, SLEEPERS, SOIL RETAINING STRUCTURES AND TRAFFIC DECKS. TREAT USING CCA VACUUM PRESSURE IMPREGNATION TO BE 0.4 pcf OR TO REFUSAL.
    FIELD APPLY MATCHING PRESERVATION TO EQUIVALENT STANDARDS TO ALL AREAS CUT OR DRILLED.

DETAIL: WALL DOUBLE TOP PLATE SPLICES AND NAILING (TYPICAL)



D06-2 STRUCTURAL COMPOSITE LUMBER - PSL, LVL AND LSL:

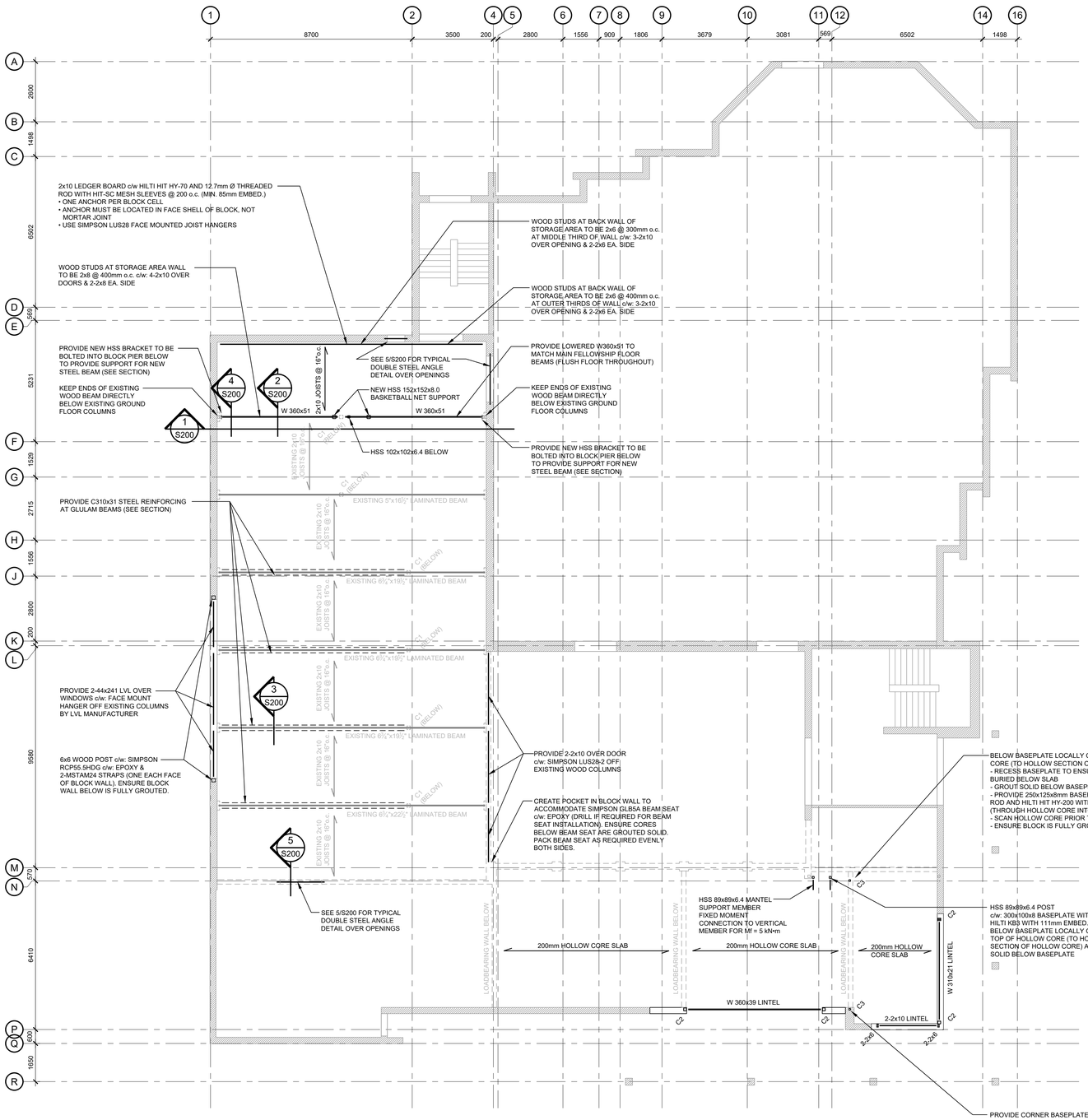
1. WHERE SPECIFIED ON DRAWINGS, THE FOLLOWING STRUCTURAL COMPOSITE LUMBER PRODUCTS ARE ACCEPTABLE

PSL (PARALLEL STRAND LUMBER)	i) 2.0E PARALLAM PSL BY TRUS JOIST
LVL (LAMINATED VENEER LUMBER)	i) 1.9E MICROLLAM LVL BY TRUS JOIST ii) GANG-LAM W2950 FB 2.0E iii) TECLAM 2.0E LVL BY TECTON LAMINATES CORP.
LSL (LAMINATED STRAND LUMBER)	i) 1.5E TIMBERSTRAND LSL BY TRUS JOIST

2. STRUCTURAL COMPOSITE LUMBER SHALL BE IDENTIFIED WITH NAME AND PLANT NUMBER OF THE MANUFACTURER, GRADE OF LUMBER, NER OR CCMC REPORT NUMBER AND NAME OF QUALITY CONTROL AGENCY.
3. SUBSTITUTION OF THE ABOVE STRUCTURAL COMPOSITE LUMBER IS PERMITTED ONLY WITH THE ENGINEER'S WRITTEN APPROVAL.
4. MANUFACTURER IS RESPONSIBLE TO SUPPLY ALL STEEL HANGERS AND BRACKETS REQUIRED TO SUPPORT THE MEMBERS.
5. FOLLOW MANUFACTURER'S RECOMMENDATIONS FOR HANDLING, STORAGE INSTALLATION AND DETAILING OF STRUCTURAL COMPOSITE LUMBER, INCLUDING FASTENING OF MULTIPLE LAMINATIONS.
6. ALL EXPOSED PSL SHALL BE ARCHITECTURAL QUALITY FINISHED UNLESS NOTED OTHERWISE.

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No.	DATE	REVISIONS	BY
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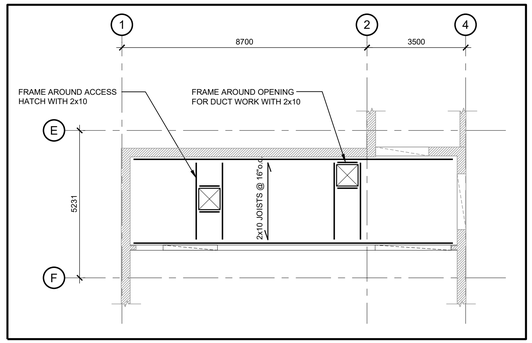
CONTRACTOR TO PROVIDE ALL SHORING FOR TEMPORARY SUPPORT / TO FACILITATE CONSTRUCTION.

GROUND FLOOR PLAN

SCALE: 1:100

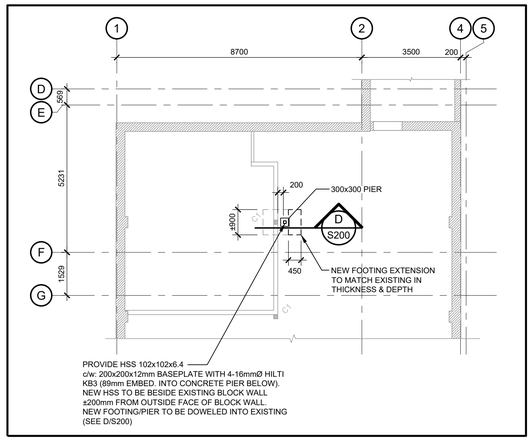
STEEL COLUMN SCHEDULE

MARK	SIZE	NOTES
C1	EXISTING 6"x6" WOOD POST	
C2	HSS 127x127x6.4	STEEL POST TO FOUNDATION CONNECTION: 140x250x8mm BASEPLATE c/w: 4-⅝"Ø HILTI KB3 WITH 89mm EMBED. BELOW BASEPLATE LOCALLY CHIP DOWN TOP OF HOLLOW CORE (TO HOLLOW SECTION OF HOLLOW CORE) AND TOP OF FDN WALL TO PROVIDE EVEN BEARING FOR BASEPLATE. GROUT SOLID BELOW BASEPLATE AT HOLLOW SECTION.
C3	HSS 76x76x6.4	



CEILING SUPPORT ASSEMBLY PARTIAL PLAN

SCALE: 1:100



PARTIAL BASEMENT PLAN

SCALE: 1:100

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NOTE:

1. ALL EXISTING CONDITIONS ARE TO BE CONFIRMED ON SITE PRIOR TO COMMENCEMENT OF CONSTRUCTION.
2. SEE 5/S200 FOR TYPICAL DOUBLE STEEL ANGLE DETAIL OVER ALL OPENINGS MAX. 2.5m WIDE PROVIDE MIN. 200mm BEARING EA. SIDE.

No.	DATE	REVISIONS	BY
2	JUL 27 / 2020	ISSUED FOR TENDER	SH
1	MAY 28 / 2020	ISSUED FOR PERMIT	SH

PROJECT NORTH

STAMP

CLELAND JARDINE ENGINEERING LTD
200-240 TERRY FOX DR.
KANATA, ON K2L 3E5
(6 1 3) 5 9 1 - 1 5 3 3

PROJECT

ARLINGTON WOODS FREE METHODIST CHURCH RENOVATION

225 McClellan Rd., Ottawa, ON

DRAWING

GROUND FLOOR PLAN

DRAWN:	S. HAGEN
DESIGNED:	A. KNOWLES
DATE:	MAY/2020
SCALE:	AS SHOWN
PROJECT No:	19-0225

DRAWING No.

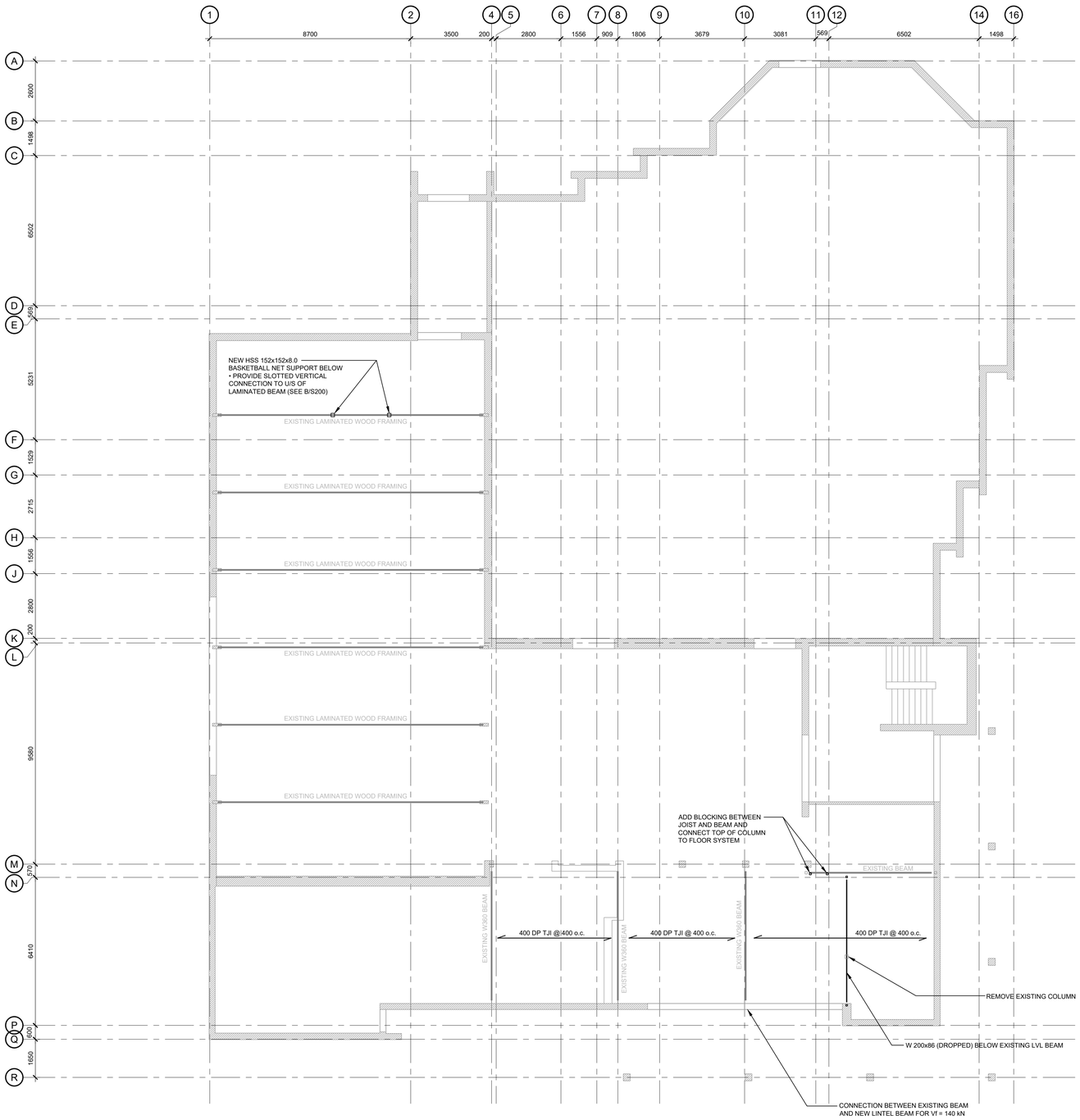
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PLOTTED ON: 23-Jul-2020

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NOTE:

1. ALL EXISTING CONDITIONS ARE TO BE CONFIRMED ON SITE PRIOR TO COMMENCEMENT OF CONSTRUCTION.
2. SEE 5/S200 FOR TYPICAL DOUBLE STEEL ANGLE DETAIL OVER ALL OPENINGS MAX. 2.5m WIDE PROVIDE MIN. 200mm BEARING EA. SIDE.



CONTRACTOR TO PROVIDE ALL SHORING FOR TEMPORARY SUPPORT / TO FACILITATE CONSTRUCTION.

ROOF PLAN
SCALE: 1:100

No.	DATE	REVISIONS	BY
2	JUL 27 / 2020	ISSUED FOR TENDER	SH
1	MAY 28 / 2020	ISSUED FOR PERMIT	SH

PROJECT NORTH

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CLELAND JARDINE ENGINEERING LTD
ARCHITECTURE • CIVIL • STRUCTURAL
2A-1565 TENTH LINE, ORLEANS, ON K4A 4W5
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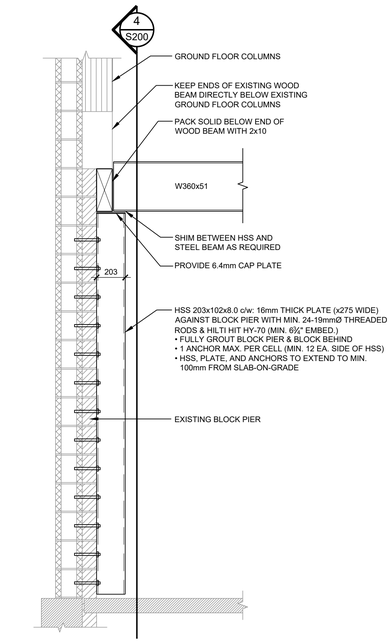
PROJECT
ARLINGTON WOODS
FREE METHODIST CHURCH
RENOVATION
225 McClellan Rd., Ottawa, ON

DRAWING
ROOF PLAN

DRAWN:	S. HAGEN
DESIGNED:	A. KNOWLES
DATE:	MAY/2020
SCALE:	AS SHOWN
PROJECT No:	19-0225

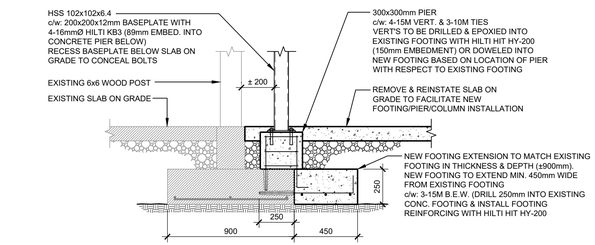
DRAWING No.
S101

PLOTTED ON: 29-Jul-2020



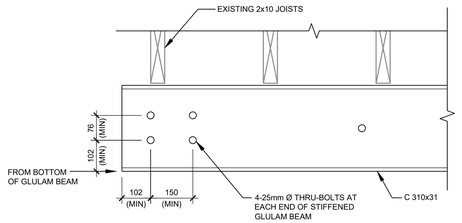
C S200 SECTION: NEW STEEL BEAM TO EXISTING BLOCK PIER

SCALE: 1:20



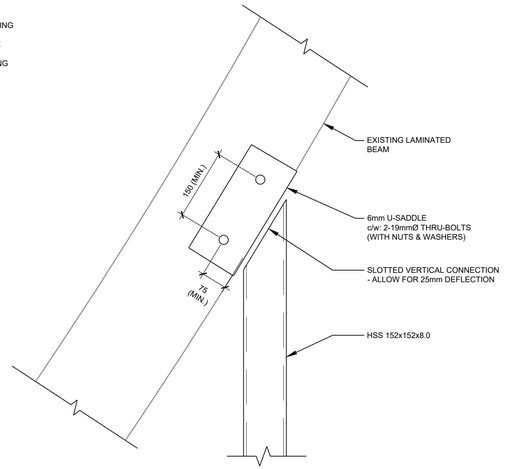
D S200 SECTION: NEW FOOTING AT NEW STEEL POST

SCALE: 1:20



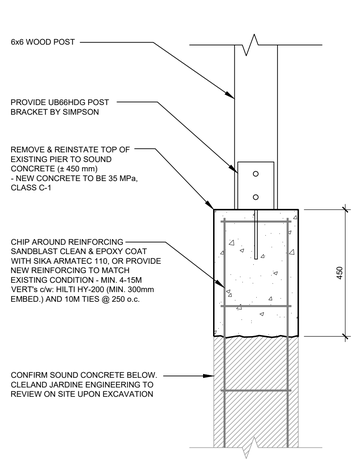
A S200 DETAIL: CHANNEL TO GLULAM BEAM END CONNECTION

SCALE: 1:10



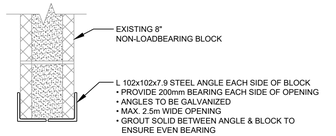
B S200 DETAIL: HSS POST CONNECTION AT LAMINATED ROOF BEAM

SCALE: 1:10



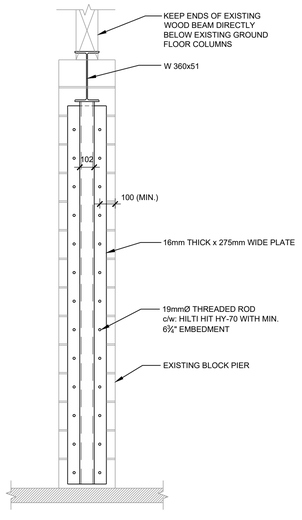
TYPICAL PIER REPAIR DETAIL

SCALE: 1:20 (SEE ARCH. FOR LOCATIONS)



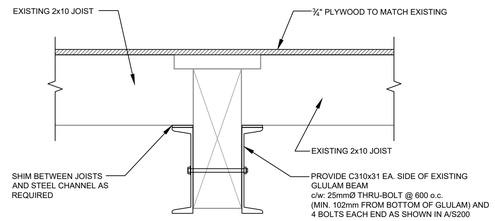
5 S200 DETAIL: TYPICAL DOUBLE STEEL ANGLE OVER OPENINGS

SCALE: 1:10



4 S200 SECTION: HSS CONNECTION TO EXISTING BLOCK PIER

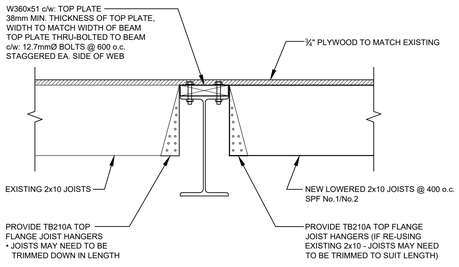
SCALE: 1:20



NOTE: SHORE JOISTS AS REQUIRED TO FACILITATE CONSTRUCTION

3 S200 SECTION: STIFFENING OF EXISTING GLULAM BEAMS

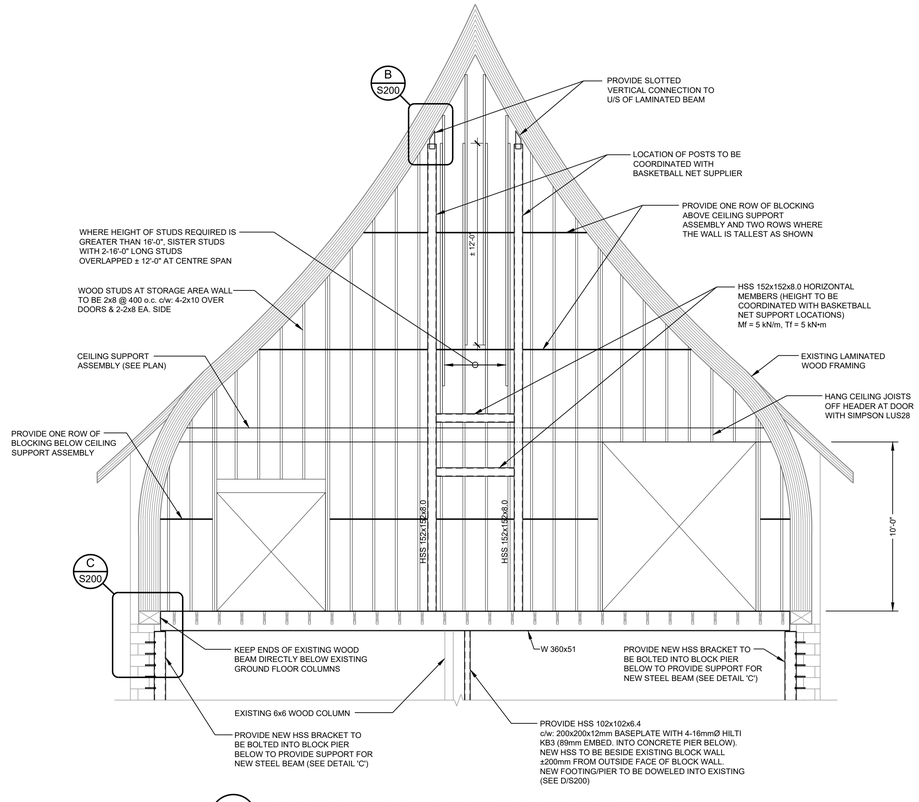
SCALE: 1:10



NOTE: SHORE JOISTS AS REQUIRED TO FACILITATE CONSTRUCTION

2 S200 SECTION: NEW LOWERED BEAM

SCALE: 1:10



1 S200 SECTION: BASKETBALL NET SUPPORT AND STORAGE WALL FRAMING

SCALE: 1:50

The Contractor shall check and verify all dimensions on site. This drawing is not to be used for construction unless stamped and signed by the Engineer. Do not scale drawings. Copyright reserved. This drawing is the exclusive property of Cleland Jardine Engineering Ltd.

NOTE:

1. ALL EXISTING CONDITIONS ARE TO BE CONFIRMED ON SITE PRIOR TO COMMENCEMENT OF CONSTRUCTION.
2. SEE 5/S200 FOR TYPICAL DOUBLE STEEL ANGLE DETAIL OVER ALL OPENINGS MAX. 2.5m WIDE PROVIDE MIN. 200mm BEARING EA. SIDE.

No.	DATE	REVISIONS	BY
2	JUL 27 / 2020	ISSUED FOR TENDER	SH
1	MAY 28 / 2020	ISSUED FOR PERMIT	SH

PROJECT NORTH

STAMP

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OTTAWA, ON K2G 5W2

PROJECT

ARLINGTON WOODS FREE METHODIST CHURCH RENOVATION

225 McClellan Rd., Ottawa, ON

DRAWING

SECTIONS & DETAILS

DRAWN:	S. HAGEN
DESIGNED:	A. KNOWLES
DATE:	MAY/2020
SCALE:	AS SHOWN
PROJECT No:	19-0225

DRAWING No. S200

PLOTTED ON: 23-Jul-2020

ARLINGTON WOODS FREE METHODIST CHURCH RENOVATIONS - DESIGN

225 MCCLELLAN RD., OTTAWA, ON

MECHANICAL

GENERAL LEGEND

SYMBOL	DESCRIPTION
———	EXISTING PIPING/DUCTWORK/EQUIPMENT
- - - - - - -	EXISTING PIPING/DUCTWORK/EQUIPMENT TO BE REMOVED/RELOCATED
———	NEW/RELOCATED PIPING/DUCTWORK/EQUIPMENT
— — — —	EXISTING PIPING/DUCTWORK/EQUIPMENT BELOW SLAB
— — — —	NEW PIPING/DUCTWORK/EQUIPMENT BELOW SLAB
(E)	DENOTES EXISTING EQUIPMENT
(R)	DENOTES RELOCATED EQUIPMENT
(N)	DENOTES NEW EQUIPMENT
(X)	DENOTES EQUIPMENT TO BE REMOVED

DRAWING LIST

SYMBOL	DESCRIPTION
M1	MECHANICAL DRAWING LIST, LEGENDS, GENERAL NOTES AND SPECIFICATIONS
M2	MECHANICAL SPECIFICATIONS, SCHEDULES & DETAILS
M3	MECHANICAL BASEMENT AND GROUND FLOOR – PLUMBING REMOVALS & NEW WORK
M4	MECHANICAL BASEMENT – HVAC AND UTILITIES REMOVALS & NEW WORK
M5	MECHANICAL GROUND FLOOR – HVAC AND UTILITIES REMOVALS & NEW WORK
M6	MECHANICAL ROOF PLAN – GAS PIPING REMOVALS & NEW WORK

CONTROLS LEGEND

SYMBOL	DESCRIPTION
	CONTROL WIRING
T	THERMOSTAT
T	TEMPERATURE SENSOR

FIRE PROTECTION & PLUMBING LEGEND

SYMBOL	DESCRIPTION
⊙	FIRE EXTINGUISHER C/W MOUNTING BRACKET
— — — —	PIPING BELOW GRADE/SLAB
—— DCW ——	DOMESTIC COLD WATER PIPING
—— DHWR ——	DOMESTIC HOT WATER RECIRCULATION PIPING
—— SAN ——	SANITARY PIPING
—— ST ——	STORM PIPING
FD1	FLOOR DRAIN (TYPE)
TP	TRAP PRIMER
—○—	PIPING OFFSET
—○	BRANCH PIPING DOWN
—○	PIPING DOWN
—○	PIPING UP
\	PIPE BREAK
C	CAP
	DRAIN ASSEMBLY
—HCO	CLEAN OUT
⋈	ISOLATION VALVES
—|	HOSE BIB
—NG—	NATURAL GAS PIPING
⊏ ⊐	GAS SUPPORT

HVAC & UTILITIES LEGEND

SYMBOL	DESCRIPTION
	RECTANGULAR DUCTWORK
	ROUND DUCTWORK
	THERMALLY INSULATED DUCTWORK (RETURN OR SUPPLY)
	ROUND DUCTWORK OFFSET
	RECTANGULAR DUCTWORK OFFSET
	DUCTWORK UP
	DUCTWORK DOWN
	RECTANGULAR TO ROUND TRANSITION
	ECCENTRIC RECTANGULAR TO ROUND TRANSITION
	ROUND TAKE-OFF C/W BALANCING DAMPER
FD	FIRE DAMPER (FD)
BD	BALANCING DAMPER (BD)
	WALL GRILLE (TYPE)
	TURNING VANES
AD	ACCESS DOOR
	WALL FIN RADIATION (FT)
SD1 200|95	DIFFUSER TAG DIFFUSER TYPE AIRFLOW (L/S) SIZE (mm)
EXH	FURNACE BREACHING
	PROPELLER FAN
	INTEGRATED DUCT SUPPLY DIFFUSER
	EXHAUST FAN
L	LOUVRE (L)
HWS	HEATING WATER SUPPLY
HWR	HEATING WATER RETURN

GENERAL NOTES:

1. ALL WORK SHOWN OR IMPLIED ON THESE DRAWINGS SHALL BE CARRIED OUT IN ACCORDANCE WITH:
   A. ALL CODES AND LAWS APPLICABLE (OBC)
   B. INSTRUCTIONS TO BIDDERS
   C. IN ACCORDANCE WITH SMACNA–LATEST EDITION (DUCTWORK)
   D. IN ACCORDANCE WITH ULC STANDARDS
2. PRIOR TO SUBMITTING TENDERS, EACH TRADE SHALL EXAMINE THE SITE TO DETERMINE THE CONDITIONS WHICH MAY AFFECT THE PROPOSED WORK. NO CLAIM FOR EXTRA PAYMENT WILL BE CONSIDERED BECAUSE OF FAILURE TO FULFILL THIS CONDITION. START OF WORK WILL BE DEEMED EVIDENCE OF ACCEPTANCE OF, AND SATISFACTION WITH, EXISTING CONDITIONS.
3. THE DRAWINGS SHALL BE CONSIDERED TO SHOW THE GENERAL CHARACTER AND SCOPE OF THE WORK AND NOT THE EXACT DETAILS OF THE INSTALLATION. THE INSTALLATION SHALL BE COMPLETE WITH ALL ACCESSORIES REQUIRED FOR A COMPLETE AND OPERATIVE INSTALLATION.
4. MECHANICAL CONTRACTOR IS RESPONSIBLE TO FIELD MEASURE LOCATION OF NEW OR RELOCATED EQUIPMENT TO VERIFY CLEARANCES WITH THE MANUFACTURER PRIOR TO ORDERING.
5. THESE MECHANICAL DRAWINGS MUST BE READ IN CONJUNCTION WITH THE ARCHITECTURAL AND ELECTRICAL DRAWINGS AND SPECIFICATIONS.
6. THE WORD "PROVIDE" SHALL DENOTE "SUPPLY AND INSTALL". THE WORD "TAB" SHALL DENOTE "TESTING, ADJUSTING, AND BALANCING".
7. CONTRACTOR SHALL FOLLOW THE BIDDING DOCUMENT PROJECT SCHEDULE. UPON AWARD, CONTRACTOR SHALL SUBMIT WORK SCHEDULE TO PROJECT MANAGER & ENGINEER FOR APPROVAL
8. THE MECHANICAL CONTRACTOR SHALL COORDINATE THE WORK WITH ALL OTHER TRADES AND THE OWNER. THE CONTRACTOR IS RESPONSIBLE FOR COMMUNICATING SAFETY REQUIREMENTS TO ITS EMPLOYEES AND COMPLYING WITH OCCUPATIONAL HEALTH AND SAFETY ACT.
9. CONTRACTOR TO PROVIDE, PRIOR TO COMMENCEMENT OF WORK, ONTARIO MINISTRY OF LABOUR CONTRACTOR REGISTRATION FORM AS WELL AS A CURRENT SIGNED AND DATED CORPORATE HEALTH AND SAFETY POLICY.
10. CONTRACTOR TO PROVIDE FOR THE USE OF HIS WORK FORCE A FIRST AID KIT ACCEPTABLE TO WSIB AND MOL.
11. PAY ALL REQUIRED FEES AND PERMITS.
12. WORKMANSHIP AND MATERIALS SHALL MATCH OR EXCEED THAT OF THE EXISTING AS PRESENTED BY THE PROJECT MANAGER.
13. ALL WORK TO BE CONDUCTED DURING HOURS SPECIFIED BY THE PROJECT MANAGER.
14. ALL CHANGES AND CONNECTIONS TO EXISTING SERVICES, REQUIRING THE SHUTDOWN OF THAT SERVICE SHALL BE DONE AT THE TIME DESIGNATED BY THE PROJECT MANAGER, UNLESS OTHERWISE STATED.
15. THE CONTRACTOR SHALL AT ALL TIMES KEEP PREMISES FREE FROM THE ACCUMULATION OF WASTE MATERIAL TO THE SATISFACTION OF THE PROJECT MANAGER. THE CLEANING OF THE AFFECTED AREA SHALL BE CONTINUOUS. PLACE DUST PROTECTION IN THE FORM OF COVER SHEETS OVER EQUIPMENT AND FURNITURE TO ENSURE NO DUST INFILTRATION.
16. EQUIPMENT REQUIRING CONNECTION TO AN ELECTRICAL POWER SOURCE SHALL BE CSA OR ULC APPROVED FOR USE AT LOCATION OF INSTALLATION.
17. COORDINATE MATERIAL STORAGE WITH THE SITE SUPERINTENDENT AND OTHER TRADES.
18. MANUFACTURER'S INSTRUCTIONS REGARDING THE HANDLING, INSTALLATION AND TESTING OF EQUIPMENT SPECIFIED HEREIN SHALL BE CONSIDERED PART OF THIS SPECIFICATION.
19. SUPPLY TOOLS, EQUIPMENT AND PERSONNEL TO DEMONSTRATE AND INSTRUCT OPERATING AND MAINTENANCE PERSONNEL IN OPERATING, CONTROLLING, ADJUSTING, TROUBLESHOOTING AND SERVICING OF ALL SYSTEMS AND EQUIPMENT DURING REGULAR WORK HOURS, PRIOR TO ACCEPTANCE.
20. MECHANICAL CONTRACTOR SHALL OBTAIN AND PAY FOR HOISTING OF MECHANICAL EQUIPMENT. COORDINATE HOISTING SCHEDULE WITH PROJECT MANAGER. TAKE ALL NECESSARY PRECAUTIONS TO PREVENT DAMAGE TO PUBLIC AND PRIVATE PROPERTY. USE PROPER BARRIERS AND/OR PERSONNEL TO ENSURE HOISTING SAFETY FOR EMPLOYEES AND PUBLIC. CONTRACTOR IS RESPONSIBLE FOR ANY DAMAGE TO EQUIPMENT AND/OR PROPERTY DURING HOISTING. ARRANGE AND PAY FOR ANY REQUIRED PERMITS.
21. INSPECT ALL NEW AND/OR RELOCATED EQUIPMENT UPON DELIVERY AND/OR RELOCATION AND NOTIFY PROJECT ENGINEER OF ANY DAMAGE OR DEFICIENCIES.
22. ALL EQUIPMENT, PIPING, DUCTWORK AND WIRING SHALL BE SUSPENDED FROM THE BUILDING STRUCTURE.
23. PROVIDE BLACK WITH WHITE WRITING LAMACOID PLATE ON ALL NEW EQUIPMENT. LABEL UNIT AS SHOWN ON DRAWINGS. LETTERING SIZE TO BE MINIMUM 25MM HIGH. MOUNT NEAR CONTROL SECTION OF THE UNIT.
24. PROVIDE CUTTING, PATCHING AND CORING OF ALL WALLS, CEILING AND OTHER SURFACES AS REQUIRED FOR MECHANICAL WORK. CHECK WITH BUILDING MANAGEMENT PRIOR TO CUTTING OF FLOOR REGARDING BUILDING REQUIREMENTS AND POLICIES. FIRE STOP ALL NEW FIRE RATED PENETRATIONS. OBTAIN WRITTEN VERIFICATION OF LOCATIONS FROM THE STRUCTURAL ENGINEER OF RECORD PRIOR TO CUTTING.
25. PIPING LAYOUT ILLUSTRATED ON DRAWINGS INDICATES GENERAL ROUTING OF PIPE WORK AND DOES NOT SHOW ALL FITTINGS AND OFFSETS REQUIRED FOR COMPLETE INSTALLATION. THE CONTRACTOR SHALL BE RESPONSIBLE FOR ALL PIPING FITTINGS & OFFSETS REQUIRED FOR COORDINATED INSTALLATION WITH OTHER SYSTEMS (DUCTWORK, PIPING, CONDUITS, LIGHTS, ETC.)
26. CONTRACTOR SHALL BE RESPONSIBLE FOR DEACTIVATION, DRAINING AND REFILLING OF DOMESTIC WATER SYSTEMS TO ALLOW PLUMBING FIXTURE REPLACEMENTS.
27. CONTRACTOR SHALL BE RESPONSIBLE FOR DEACTIVATION, DRAINING, AND REFILLING OF HYDRONIC WATER/GLYCOL SYSTEMS AS REQUIRED TO COMPLETE WORK. PROVIDE CHEMICAL TREATMENT / GLYCOL MIXTURE TO MATCH EXISTING.
28. PROTECT EXISTING AIR HANDLING SYSTEM FROM CONSTRUCTION DUST. PROVIDE FILTER MEDIA ON RETURN OPENINGS; FASTEN SECURELY TO THE RETURN DUCT INLET; REPLACE DURING CONSTRUCTION AS REQUIRED. APPROVED MATERIAL: AIRGUARD TR200 OR APPROVED EQUAL.
29. DUCT SIZES INDICATED ON DRAWINGS WHERE ACOUSTICALLY LINED ARE FREE AREA SIZES AND NOT SHEET METAL SIZES.
30. COORDINATE DUCTWORK ROUTING PRIOR TO DUCT FABRICATION; IF MODIFICATIONS ARE REQUIRED, REVISE DUCT SIZE TO MAINTAIN CROSS SECTIONAL AREA.
31. ALLOW FOR 1500 MM OF ADJUSTMENT FOR EXACT LOCATION OF AIR HANDLING UNITS, PUMPS, DUCTS, PIPING, ETC. AT NO EXTRA COST OR CREDIT.
32. ALL MANUFACTURERS AND MANUFACTURER REPRESENTATIVES SHALL SEPARATE PRICING BY MAJOR PIECE OF EQUIPMENT, EQUIPMENT TYPE, AND/OR SERVICE WHEN SUBMITTING TO BIDDING CONTRACTORS. LUMP SUM VALUES ARE NOT TO BE SUBMITTED TO CONTRACTORS. MANUFACTURERS & REPRESENTATIVES PROVIDING ONLY LUMP SUM PRICING WILL BE DISQUALIFIED FROM TENDER.
33. PRIOR TO CLOSING OF CEILINGS, MECHANICAL CONTRACTOR SHALL NOTIFY THE ENGINEER THAT AN INSPECTION IS REQUIRED BEFORE PROCEEDING.
34. CONTRACTOR TO NOTIFY PROJECT MANAGER 3 DAYS BEFORE SCHEDULED SUBSTANTIAL COMPLETION TO ARRANGE INTERIM INSPECTION AND EQUIPMENT COMMISSIONING. NOTIFY PROJECT MANAGER IN WRITING OF ANY CHANGES IN SCHEDULE.
35. UNLESS INDICATED OTHERWISE PROVIDE ONE (1) YEAR WARRANTY STARTING AT SUBSTANTIAL COMPLETION FOR ALL NEW SYSTEMS INCLUDING MATERIALS, EQUIPMENT & LABOUR.
36. SUBMITTALS:
   .1 SUBMIT ONE(1) COPY OF SHOP DRAWINGS AND PRODUCT DATA IN ELECTRONIC PDF FORMAT FOR ENGINEER'S REVIEW PRIOR TO PURCHASING AND ORDERING. HARD COPY SHOP DRAWINGS WILL NOT BE ACCEPTED. REVIEWED ELECTRONIC SHOP DRAWINGS WILL BE RE-DISTRIBUITED AS PER PROJECT MANAGER'S INSTRUCTIONS. SHOP DRAWINGS SHALL INCLUDE ALL SPECIFIED EQUIPMENT & SYSTEMS.
   .2 PROVIDE SUBMITTALS IN ACCORDANCE WITH APPLICABLE CODES REQUIRED FOR OCCUPANCY INCLUDING BUT NOT LIMITED TO THE FOLLOWING:
      .1 PLUMBING & UTILITIES:
         .1 SEISMIC CERTIFICATION LETTER SUBMITTED.
      .2 HVAC:
         .1 SEISMIC CERTIFICATION LETTER SUBMITTED.
   .3 MECHANICAL SCOPE OF WORK CONSIDERED COMPLETE WHEN THE FOLLOWING ITEMS HAVE BEEN RECEIVED AND REVIEWED BY ENGINEER:
      .1 ALL SHOP DRAWINGS LISTED IN THIS SPECIFICATION.
      .2 BALANCING REPORT IN ACCORDANCE WITH TAB SECTION IN SPECIFICATIONS.
      .3 AS–BUILT DRAWINGS SHOWING AS–BUILT CONDITIONS COMPLETE WITH RED LINED MARKUPS TO PROJECT MANAGER WITH CONTRACTOR'S SIGNATURE.
      .4 START–UP REPORT FROM MANUFACTURER OF EQUIPMENT.
      .5 THREE (3) COPIES OF OPERATIONS AND MAINTENANCE MANUALS CONTAINING ALL ITEMS PREVIOUSLY REVIEWED BY ENGINEER IN A THREE RING BINDER AND DIVIDERS ORGANIZING ALL SUBMISSIONS BY EACH MECHANICAL TRADE. OPERATIONS MANUAL TO ALSO INCLUDE THE FOLLOWING BUT SHALL NOT BE LIMITED TO:
         .1 LIST OF TRADES INVOLVED AND CONTACT INFORMATION.
         .2 CONTRACTOR'S LETTER OF WARRANTY.
         .3 ALL LETTERS REQUIRED FOR WORKPLACE CONFORMANCE.

MECHANICAL SPECIFICATIONS:

1. SEISMIC RESTRAINT:

.1 PROVIDE COMPLETE SEISMIC RESTRAINT SYSTEM FOR ALL MECHANICAL SYSTEMS AS PER ONTARIO BUILDING CODE LATEST EDITION.
.2 SEISMIC RESTRAINT DESIGN AND SUPERVISION SHALL BE CONDUCTED AND STAMPED BY A PROFESSIONAL SEISMIC ENGINEER. SUBMIT LETTER AND CALCULATION FOR ENGINEER'S REVIEW PRIOR TO SUBSTANTIAL COMPLETION.
.3 THE FINAL CERTIFICATION LETTER SHALL BE FORMATTED TO IDENTIFY THE FOLLOWING WITHIN THE BODY OF THE LETTER:
   .1 THE DATE OF THE FINAL INSPECTION
   .2 A STATEMENT THAT LISTS ALL CONTRACT DOCUMENTS WHICH WERE REVIEWED INCLUDING BUT NOT LIMITED TO THE MECHANICAL DRAWINGS, PROJECT CHANGE ORDERS, SITE INSTRUCTIONS, ETC.
   .3 A STATEMENT WHICH CLEARLY IDENTIFIES ANY EXCLUSIONS OF SCOPE OF SERVICE, AND
   .4 A STATEMENT THAT CERTIFIES THE COMPLETE MECHANICAL SEISMIC INSTALLATION MEETS THE LATEST VERSION OF OBC & APPLICABLE CODES & STANDARDS.

2. INSTALLATION OF PIPEWORK:

.1 CLEARANCES:
   .1 PROVIDE CLEARANCES AROUND SYSTEMS, EQUIPMENT AND COMPONENTS FOR OBSERVATION OF OPERATION, INSPECTION, SERVICING, MAINTENANCE AND AS RECOMMENDED BY MANUFACTURER.
.2 DRAINAGE:
   .1 INSTALL DRAIN VALVE AT LOW POINTS IN PIPING SYSTEMS AND AT THE BASE OF ALL RISERS.
   .2 DRAIN VALVE: NPS 3/4 FULL PORT BALL VALVES UNLESS INDICATED OTHERWISE, WITH HOSE MALE THREAD, CAP AND DRAIN.
.3 AUTOMATIC AIR VENTS:
   .1 INSTALL AUTOMATIC AIR VENTS AT HIGH POINTS OF PIPING SYSTEMS C/W FULL PORT BALL VALVES. AIR VENTS MUST HAVE A MINIMUM CONNECTION OF 13 MM (1/2").
.4 PIPE WORK INSTALLATION:
   .1 SCREWED FITTINGS TO BE JOINTED WITH POLYTETRAFLUOROETHYLENE (PTFE) THREAD SEAL TAPE.
   .2 PROTECT OPENINGS AGAINST ENTRY OF FOREIGN MATERIAL.
   .3 ASSEMBLE PIPING USING FITTINGS MANUFACTURED TO ANSI STANDARDS.
   .4 EXCEPT WHERE INDICATED OTHERWISE, SLOPE PIPING IN DIRECTION OF FLOW FOR POSITIVE DRAINAGE AND VENTING.
   .5 EXCEPT WHERE INDICATED, INSTALL SO AS TO PERMIT SEPARATE THERMAL INSULATION OF EACH PIPE.
   .6 GROUP PIPING WHEREVER POSSIBLE AND AS INDICATED.
   .7 USE ECCENTRIC REDUCERS AT PIPE SIZE CHANGES TO ENSURE POSITIVE DRAINAGE AND VENTING.
   .8 PROVIDE DIELECTRIC COUPLINGS WHERE DISSIMILAR METALS ARE JOINED.
.5 FIRE STOPPING:
   .1 SEAL ALL PENETRATIONS OF COPPER/STEEL PIPING THROUGH FIRE SEPARATIONS (I.E. WALL/SLAB) WITH ULC LISTED FIRE STOP CAULKING.
   .2 SEAL ALL PENETRATIONS OF NON–METALLIC PIPING THROUGH FIRE SEPARATIONS (I.E. WALL/SLAB) WITH ULC LISTED FIRE STOP COLLARS.
   .3 ALL FIRE STOPPING SHALL BE INSTALLED IN ACCORDANCE WITH ULC LISTING.

3. DOMESTIC HOT & COLD WATER PIPING:

.1 COPPER TUBE, HARD DRAWN, TYPE "L".
.2 WROUGHT COPPER FITTINGS.
.3 LEAD FREE SOLDER, BRAZE OR SILVER SOLDER (SILFOS 5, 5% SILVER)
.4 BALL VALVES:
   .1 NPS 2" AND UNDER, SCREWED OR SOLDERED:
      .1 CLASS 150.
      .2 BRONZE BODY, STAINLESS STEEL BALL, PTFE TEFLON ADJUSTABLE PACKING, BRASS GLAND AND PTFE TEFLON SEAT, STEEL LEVER HANDLE.
      .3 ACCEPTABLE MATERIAL: CRANE OR EQUAL.

4. DRAINAGE, WASTE & VENT PIPING:

.1 COPPER TYPE DWV ABOVE GRADE; SOLDER: 95:5, 50:50 TO ASTM B32–00EL, TYPE 50A.
.2 FIRE & SMOKE RESISTANT COATED DWV PVC PIPING & FITTINGS, IPEX SYSTEM XFR 25/50 PVC–DWV, ABOVE GRADE.
.3 CAST IRON ABOVE GRADE; MECHANICAL JOINTS: PROVIDE HUBLESS SOIL PIPE COUPLINGS CONSTRUCTED OF EXTRA WIDE 4 TO 6 BAND CORRUGATED TYPE 304 STAINLESS STEEL BANDS, WITH HEAVY DUTY WORM DRIVE CLAMPS.
.4 SLOPE SANITARY DRAIN ACCORDING TO CODE.
.5 INSTALL IN ACCORDANCE WITH CANADIAN PLUMBING CODE, PROVINCIAL PLUMBING CODE AND LOCAL AUTHORITY HAVING JURISDICTION.

5. HYDRONIC PIPING:

.1 COPPER PIPING:
   .1 TYPE L HARD DRAWN COPPER TUBING: TO ASTM B 88M.
.2 PIPE JOINTS:
   .1 NPS 2 AND UNDER:
      .1 CAST BRONZE THREADED FITTINGS: TO ANSI/ASME B16.15.
      .2 WROUGHT COPPER AND COPPER ALLOY SOLDER JOINTS PRESSURE FITTINGS: TO ANSI/ASME B16.22.
      .3 CAST COPPER ALLOY SOLDER JOINT PRESSURE FITTINGS: TO ANSI B16.18.
   .4 DI–ELECTRIC COUPLINGS:
      .1 PROVIDE WHEREVER PIPES OF DISSIMILAR METALS ARE JOINTED.
      .2 FOR PIPE SIZES 2 NPS AND UNDER, PROVIDE DI–ELECTRIC UNIONS OR COUPLINGS.
   .5 JOINTS:
      .1 SOLDER, TIN–ANTIMONY, 95:5: TO ASTM B32.
      .2 SILVER SOLDER BCUP: TO AWS A5.8.
      .3 BRAZING: AS INDICATED.

6. THERMAL INSULATION FOR PIPING:

.1 GENERAL:
   .1 ALL COMPONENTS OF INSULATION SYSTEM TO HAVE MAXIMUM FLAME SPREAD RATING OF 25 AND MAXIMUM SMOKE DEVELOPED RATING OF 50 IN ACCORDANCE WITH CAN4–S102.
.2 TIAC CODE A–3 FORMED MINERAL FIBRE WITH FACTORY APPLIED VAPOUR RETARDER JACKET:
   .1 APPLICATION: FOR PIPING, VALVES AND FITTINGS ON:
      .1 HEATING WATER PIPING SYSTEMS.
      .2 DOMESTIC HOT WATER PIPING SYSTEMS.
      .3 DOMESTIC COLD WATER PIPING SYSTEMS.
   .2 MATERIAL:
      .1 MINERAL FIBRE: TO CAN/CGSB–51.9–92.
      .2 JACKET: TO CGSB 51–GP–52MA.
      .3 MAXIMUM "K" FACTOR: TO CAN/CGSB–51.9–92.
   .3 THICKNESS: AS PER TABLE BELOW:

		PIPE SIZES (NPS) AND INSULATION THICKNESS (MM)			
APPLICATION	TEMP (°C)	1/2 TO 1–1/4	1–1/2 TO 3	4 TO 6	>6
HEATING WATER	61–93	40	50	50	50
HEATING WATER	<60	25	40	40	40
DOM.HOT WATER	ALL	25	40	40	40
DOM.COLD WATER	ALL	25	25	25	25

7. VALVES:

.1 BALL VALVES:
   .1 BODY AND CAP: CAST HIGH TENSILE BRONZE TO ASTM B62 OR BRASS TO ASTM B16/B16M C36000.
   .2 STEM: TAMPERPROOF BALL DRIVE.
   .3 STEM PACKING NUT: EXTERNAL TO BODY.
   .4 BALL AND SEAT: REPLACEABLE CHROME PLATED BRASS SOLID FULL PORT BALL AND TEFLON SEATS.
   .5 STEM SEAL: TFE WITH EXTERNAL PACKING NUT.
   .6 OPERATOR: REMOVABLE LEVER HANDLE.
   .7 ACCEPTABLE MATERIAL: CRANE, JENKINS, TOYO, VICTAULIC, KITZ.

8. HYDRONIC SPECIALTIES:

.1 AUTOMATIC AIR VENT:
   .1 CAST IRON BODY AND NPS 3/4 CONNECTION AND RATED AT 1034 KPA WORKING PRESSURE.
   .2 FLOAT: SOLID MATERIAL SUITABLE FOR 115°C WORKING TEMPERATURE.
   .3 INSTALL AUTOMATIC AIR VENTS AT HIGH POINTS OF PIPING SYSTEMS.
   .4 INSTALL FULL PORT BALL AT EACH AUTOMATIC AIR VENT.
   .5 AIR VENTS MUST HAVE MINIMUM CONNECTION OF 13 MM (½")
   .6 ACCEPTABLE MATERIALS: SPIRAX/SARCO.
.2 PIPELINE STRAINER:
   .1 NPS 1/2 TO 2: SOLDER CONNECTIONS, WYE–PATTERN, LEAD–FREE CAST COPPER SILICON ALLOY BODY AND CAP, 304 STAINLESS STEEL #20 MESH SCREEN, TAPPED RETAINER CAP AND CLOSURE PLUG, MAXIMUM WORKING PRESSURE: 2.76 MPA (400 PSI) AT 99°C (210°F) AND 0.86 MPA (125 PSI) AT 178°C (353°F).
   .2 ACCEPTABLE MATERIAL: CRANE, WATTS, VICTAULIC, KITZ, JENKINS, TOYO, CONBRACO.
.3 THERMOMETER WELLS
   .1 FOR COPPER PIPE USE COPPER OR BRONZE. FOR STEEL PIPE, USE BRASS.
.4 PRESSURE GAUGES
   .1 LIQUID FILLED, 112 MM, DIAL TYPE: ASME B40.100, GRADE 2A, HAVING ½ OF 1% ACCURACY OVER ENTIRE RANGE, STEM MOUNTING.
      .1 ACCEPTABLE MATERIALS: ASHCROFT, TAYLOR, WINTERS, WEISS, H.O. TRERICE.
      .2 PROVIDE BALL VALVE AND SNUBBER FOR PULSATING OPERATION (PUMPS).

9. ACCESS DOORS

.1 SUPPLY AND INSTALL AS NECESSARY TO GAIN ACCESS TO ALL CONCEALED MECHANICAL EQUIPMENT FOR OPERATING, INSPECTING, ADJUSTING, SERVICING.
.2 SIZES: EXCEPT AS INDICATED OTHERWISE, TO BE MINIMUM SIZES AS FOLLOWS:
   .1 FOR BODY ENTRY: 600 X 600 MM (24" X 24").
   .2 FOR HAND ENTRY: 300 X 300 MM (12" X 12").
.3 CONSTRUCTION: ROUNDED SAFETY CORNERS, CONCEALED HINGES, SCREWDRIVER LATCH, ANCHOR STRAPS, ABLE TO OPEN 180°.
.4 MATERIALS
   .1 TILED OR MARBLE SURFACES AND OTHER SPECIAL AREAS: STAINLESS STEEL WITH BRUSHED SATIN OR POLISHED FINISH AS DIRECTED BY CONSULTANT.
   .2 ALL OTHER AREAS: PRIME COATED STEEL.
.5 FIRE RATING
   .1 ACCESS DOORS FIRE RATING TO MATCH THAT OF WALL, CEILING OR FLOOR THE ACCESS DOOR IS INSTALLED IN. COORDINATE WITH ARCHITECTURAL DRAWINGS.
.6 LOCATION: ENSURE THAT EQUIPMENT IS CLEARLY WITHIN VIEW AND ACCESSIBLE FOR OPERATING, INSPECTING, ADJUSTING, SERVICING WITHOUT THE NEED FOR SPECIAL TOOLS.

10. BASES, PIPE HANGERS AND SUPPORTS:

.1 GENERAL:
   .1 BASES, HANGERS, SUPPORTS AND SWAY BRACES SHALL BE OF MANUFACTURED TYPE AND ASSEMBLED AS PER MANUFACTURER'S INSTRUCTIONS. ENSURE THAT SUPPORTS, GUIDES AND ANCHORS DO NOT TRANSMIT EXCESSIVE QUANTITIES OF HEAT TO BUILDING STRUCTURE. DESIGN HANGERS AND SUPPORTS TO OPERATE UNDER ALL OPERATING CONDITIONS. ALLOW FOR FREE EXPANSION AND CONTRACTION AND PREVENT THE TRANSMISSION OF EXCESSIVE STRESSES INTO PIPE WORK OR CONNECTED EQUIPMENT. PROVIDE FOR VERTICAL ADJUSTMENT AFTER INSTALLATION. DESIGN SHALL BE IN ACCORDANCE WITH ANSI B31.1 AND MSS–SP58.
   .2 SUPPORT FROM TOP OR BOTTOM OF STRUCTURAL MEMBERS. WHERE STRUCTURAL BEARING DOES NOT EXIST OR INSERTS ARE NOT IN SUITABLE LOCATIONS, PROVIDE SUPPLEMENTARY STRUCTURAL STEEL MEMBERS.
   .3 SUPPORTS MADE FROM WIRE, WOOD, ROPE OR ANY OTHER VULNERABLE MAKE–SHIFT MATERIAL ARE NOT PERMITTED.
   .4 FOR UNINSULATED COPPER PIPE OR TUBING THE CLAMPS AND SUPPORTS SHALL HAVE AN ELECTROPLATED COPPER FINISH.
   .5 PROVIDE ADDITIONAL SUPPORTS AT CHANGES IN PIPE DIRECTION AND FOR CONCENTRATION OF LOADS DUE TO WEIGHT OF VALVES, STRAINERS, ETC.
   .6 PIPE HANGERS AND SUPPORTS SHALL BE PAINTED WITH ZINC RICH PAINT AFTER MANUFACTURE.
   .7 PROVIDE INSULATION PROTECTION SHIELDS AS REQUIRED.
.2 BASE MOUNTED EQUIPMENT:
   .1 PROVIDE A 100MM (4") HIGH AND 50MM (2") LARGER ALL ROUND THAN EQUIPMENT CONCRETE HOUSE KEEPING PAD C/W CHAMFERED EDGES AND ANCHORED TO THE STRUCTURAL SLAB.
   .2 ALL EQUIPMENT TO BE SUPPORTED BY STRUCTURAL GRADE STEEL C/W NEOPRENE PAD VIBRATION ISOLATION AND ANCHORED TO THE BUILDING STRUCTURE.
.3 HANGER SPACING:
   .1 COPPER PIPING UP TO NPS 1/2" EVERY 5FT.
   .2 HANGERS SHALL BE WITHIN 12" OF EACH ELBOW.
   .3 HANGERS SHALL BE SPACED IN ACCORDANCE WITH THE MOST STRINGENT REQUIREMENTS OF MANUFACTURER'S RECOMMENDATIONS, CANADIAN PLUMBING CODE, OBC, AURHORITY HAVING JURISDICTION, AND AS FOLLOWS:

MAXIMUM PIPE SIZE (NPS):	MAXIMUM STEEL PIPE SPACING	MAXIMUM COPPER PIPE SPACING:
UP TO 1–1/4	2.5M	2.5M
1–1/2	2.5M	3.0M
2	2.5M	3.0M
2–1/2	2.5M	3.0M
3	2.5M	3.0M
4	2.5M	3.0M

11. PIPE IDENTIFICATION:

.1 PVC MARKERS, CONTINUOUS OPERATING TEMPERATURE OF 212F, 2" HIGH LETTERING FOR PIPING 3" OR LARGER, 3/4" HIGH LETTERING FOR 2 1/2" OR SMALLER. MATCH EXISTING BASE BUILDING STANDARD OR AS FOLLOWS:

CONTENTS:	BACKGROUND:	LABEL:
DOMESTIC HOT WATER SUPPLY	GREEN	DOM. HW SUPPLY
DOMESTIC COLD WATER SUPPLY	GREEN	DOM. CWS
HOT WATER SUPPLY	YELLOW	HEATING SUPPLY
HOT WATER RETURN	YELLOW	HEATING RETURN
SANITARY	GREEN	SAN.
PLUMBING VENT	GREEN	SAN. VENT

12. PLUMBING SPECIALTIES AND ACCESSORIES:

.1 FLOOR DRAINS:
   .1 FD1: GENERAL DUTY; CAST IRON BODY, ROUND, 5"ø, ADJUSTABLE HEAD, SEDIMENT BASKET, STAINLESS STEEL, TRAP PRIMING CONNECTION, INTEGRAL SEEPAGE PAN, CLAMPING COLLAR AND SEDIMENT BUCKET.
   ACCEPTABLE MATERIAL: WATTS FD–100–A OR EQUIVALENT MIFAB, ZURN & J.R. SMITH.
   ACCEPTABLE MATERIAL: WATTS, MIFAB, ZURN 2N H OR R SERIES & J.R. SMITH.
.2 TRAP SEAL PRIMERS:
   .1 TYPE 1: FOR USE ON URINAL OR WATER CLOSET COLD WATER LINE.
      .1 PRESSURE DROP ACTIVATED TYPE, ALL BRASS CONSTRUCTION WITH "O" RING SEALS, 12 MM (NPT ½) MALE INLET & 12 MM (NPT ½) FEMALE OUTLET DRIP LINE CONNECTION WITH VIEWING HOLES, AND REMOVABLE FITTER SCREEN. TRAP PRIMER SHALL HAVE NO ADJUSTMENT. OPERATING RANGE SHALL BE 138 KPA (20 PSI) TO 861 KPA (125 PSI). OPERATES ON PRESSURE DROP OF MINIMUM 20 KPA (3 PSI). ONE (1) TO SIX (6) DRAIN TAPS PER UNIT.
      .2 IDENTIFY ON AS–BUILT DRAWINGS THE LOCATION OF EACH TRAP SEAL PRIMER.
      .3 ENSURE ALL TRAP SEAL PRIMERS ARE ACCESSIBLE FOR MAINTENANCE PURPOSES AND ARE CONNECTED TO URINAL OR WATER CLOSET COLD WATER LINE. TRAP LINE SHALL BE FROM TOP OF COLD WATER LINE AND INCLUDE A SERVICE VALVE. ALL TO BE SERVICEABLE FROM ACCESS DOORS.
      .4 ACCEPTABLE MATERIALS: MIFAB M–500, WATTS, ZURN.
.3 CLEANOUTS:
   .1 CLEANOUT PLUGS: HEAVY CAST IRON MALE FERRULE WITH BRASS SCREWS AND THREADED BRASS OR BRONZE PLUG.
   SEALING–CAULKED LEAD SEAT OR NEOPRENE GASKET.
      .1 ACCEPTABLE MATERIAL: ANCON, ENPOCO, J.R. SMITH & ZURN.

Client

DATE	REVISION	REF
2020–07–24	ISSUED FOR TENDER	–
2020–05–27	ISSUED FOR PERMIT	–
2020–05–08	ISSUED FOR REVIEW	–

THE ENGINEER WAIVES ANY AND ALL RESPONSIBILITY AND LIABILITY FOR PROBLEMS WHICH ARISE FROM FAILURE TO FOLLOW THESE PLANS, SPECIFICATIONS AND THE DESIGN INTENT THEY CONVEY, OR FOR PROBLEMS WHICH ARISE FROM OTHER FAILURE TO OBTAIN AND / OR FOLLOW THE ENGINEER'S GUIDANCE WITH RESPECT TO ANY ERRORS, OMISSIONS, INCONSISTENCIES, AMBIGUITIES OR CONFLICTS WHICH ARE

13. PLUMBING FIXTURE AND TRIM:

.1 FIXTURE PIPING:
- .1 HOT AND COLD WATER SUPPLIES TO EACH FIXTURE:
  - .1 SUPPLY STOPS SHALL BE ALL BRASS WITH FULL TURN BRASS SEAMS AND REPLACEABLE WASHER ATTACHMENT SHALL BE IPS INLET X COMPRESSION OD OUTLET TO FIXTURE. ALL FIXTURE STOP VALVES SHALL BE SCREW DRIVER TYPE.
  - .2 CHROME PLATED IN ALL EXPOSED PLACES.
- .2 WASTE:
  - .1 CAST BRASS ADJUSTABLE STYLE P-TRAP WITH CLEANOUT ON EACH FIXTURE NOT HAVING INTEGRAL TRAP.
  - .2 CHROME PLATED IN ALL EXPOSED PLACES.
  - .3 SINK AND LAVATORY HEAVY GAUGE P-TRAPS SHALL BE CAST BRASS ADJUSTABLE STYLE WITH 17 GA SEAMLESS BRASS WALL BEND. ATTACHMENT NUTS SHALL BE BRASS, NO ZINC ALLOWED. P-TRAPS TO BE REMOVABLE/UNION TYPE OR TO INCLUDE CLEANOUT.
  - .4 LAVATORY STRAINERS SHALL BE CHROME PLATED CAST BRASS WITH 17 GA. SEAMLESS BRASS TAILPIECE.
  - .5 ALL BARRIER-FREE LAVATORIES AND SINKS SHALL HAVE CHROME PLATED OFFSET TAIL PIECE IN ADDITION TO P-TRAP WITH CLEANOUT. INSULATE P-TRAP AND HOT & COLD WATER PIPES WITH PRE-FORMED & FINISHED SURFACE INSULATION. ARMAFLEX INSULATION AND TAPE NOT ACCEPTABLE.
  - .6 URINAL WASTE PIPE & FITTINGS SHALL BE DWV PVC EQUIVALENT TO IPEX SYSTEM 15. EXTEND PLASTIC PIPING UP TO COMBINED WASTE FROM ADJACENT LAVATORY OR OTHER PLUMBING FIXTURES ALLOWING DILUTION OF WASTE.

.2 FIXTURES:
- .1 MANUFACTURE IN ACCORDANCE WITH CSA B45.
- .2 ALL PRODUCTS, WHERE APPLICABLE, SHALL BE MARKED WITH MANUFACTURER'S NAME OR PRODUCT #.

.3 TRIM, FITTINGS: MANUFACTURE IN ACCORDANCE WITH CSA B125.
.4 NUMBER, LOCATIONS: ARCHITECTURAL DRAWINGS TO GOVERN.
.5 FIXTURES IN ANY ONE LOCATION TO BE PRODUCT OF ONE MANUFACTURER AND OF SAME TYPE.
.6 TRIM IN ANY ONE LOCATION TO BE PRODUCT OF ONE MANUFACTURER AND OF SAME TYPE UNLESS OTHERWISE INDICATED.
.7 CARRIERS: PROVIDE FOR ALL WALL MOUNTED PLUMBING FIXTURES.
.8 ROUGHING-IN OF FIXTURES: ROUGH-IN FOR EQUIPMENT SUPPLIED BY OTHER TO BE COMPLETE WITH VALVED SUPPLIES, WASTES AND VENTS, CAPPED AND ASSOCIATED FITTING PIPING & REDUCERS.
.9 CONTRACTOR IS RESPONSIBLE TO ENSURE INSTALLATION OF FIXTURES MEETS CSA-B651 WHERE BARRIER FREE IS REQUIRED.
.10 CONTRACTOR IS RESPONSIBLE TO ENSURE PROPER OPERATION OF FIXTURES UP TO 80 PSI (550 KPA).
.11 PLUMBING FIXTURES: REFERENCE FIXTURE SCHEDULE ON DRAWINGS.

14. NATURAL GAS PIPING:

.1 STEEL PIPE: TO ANSI/ASME A120.1 OR ASTM A53/A53M, SCHEDULE 40, SEAMLESS AS FOLLOWS:
- .1 NPS ¾ TO 2, SCREWED.
- .2 NPS 2½ AND OVER, WELDED.

.2 JOINTING:
- .1 SCREWED FITTINGS: PULVERIZED LEAD PASTE.
- .2 WELDED FITTINGS: TO CSA W47.1.
- .3 FLANGE GASKETS: TO ANSI/ASME B16.21 OR ANSI/ASME B16.20.

.3 FITTINGS
- .1 STEEL PIPE FITTINGS, SCREWED, FLANGED OR WELDED:
  - .1 MALLEABLE IRON: SCREWED, BANDED, CLASS 150.
  - .2 STEEL PIPE FLANGES AND FLANGED FITTINGS: TO ANSI/ASME B16.5.
- .3 STEEL BUT-WELDING FITTINGS.
  - .4 UNIONS: MALLEABLE IRON, BRASS TO IRON, GROUND SEAT, TO ASTM A47/A47M.
  - .5 BOLTS AND NUTS: TO ANSI/ASME B18.2.1.
  - .6 NIPPLES: SCHEDULE 40, TO ASTM A53/ A53M.

.4 VALVES
- .1 PROVINCIAL CODE APPROVED, LUBRICATED PLUG OR BALL TYPE.

.5 IDENTIFICATION: TO CSA B149.1
.6 INSTALLATION: TO CSA B149.1

15. DUCTWORK:

.1 GENERAL:
- .1 DETAILS, CONSTRUCTION AND MATERIALS HEREIN SHALL BE AS PER SMACNA STANDARDS.
- .2 ALL MATERIALS SHALL CONFORM TO SMOKE AND FLAME SPREAD RATING LIMITATIONS STIPULATED IN THE PROVINCIAL BUILDING CODE OR AS SPECIFIED HEREIN.
- .3 ALL GALVANIZED DUCTWORK INDICATED TO BE FABRICATE FROM 0.2% COPPER CONTENT GALVANIZED SHEET STEEL WITH 1-1/4 CLASS ZINC COATING.
- .4 RECTANGULAR AND FITTINGS: GALVANIZED SHEET STEEL NOT LESS THAN THE FOLLOWING THICKNESS: 24 GA. – 750MM (30") WIDE SMALLER.
- .5 ROUND & OVAL DUCT AND FITTINGS SHALL BE SPIRAL GALVANIZED STEEL MEETING THE ASTM A-527-71 & NOT LESS THAN THE FOLLOWING THICKNESS: 26 GA. – 75MM TO 350MM (3" TO 14")DIA. 24 GA. – 350MM (14") DIA. & LARGER.
- .6 SEAL CLASSIFICATION: SMACNA SEAL CLASS A.

16. THERMAL INSULATION FOR DUCTING:

.1 FLAME AND SMOKE:
- .1 IN ACCORDANCE WITH CAN/ULC S102:
  - .1 MAXIMUM FLAME SPREAD RATING: 25.
  - .2 MAXIMUM SMOKE DEVELOPED RATING: 50.

.2 INSULATION:
- .1 MINERAL FIBRE AS SPECIFIED HEREIN INCLUDES GLASS FIBRE, ROCK WOOL, SLAG WOOL.
- .2 THERMAL CONDUCTIVITY ("k" FACTOR) NOT TO EXCEED SPECIFIED VALUES AT 24°C MEAN TEMPERATURE WHEN TESTED IN ACCORDANCE WITH ASTM C335/C335M.
- .3 RIGID MINERAL FIBRE BOARD TO CAN/CGSB-51.10, WITH FACTORY APPLIED VAPOUR RETARDER JACKET TO CGSB 51-GP-52MA.
- .4 MINERAL FIBRE BLANKET TO CAN/CGSB-51.11 FACED WITH FACTORY APPLIED VAPOUR RETARDER JACKET TO CGSB 51-GP-52MA.
  - .1 MINERAL FIBRE: TO CAN/CGSB-51.11.
  - .2 JACKET: TO CGSB 51-GP-52MA.
  - .3 MAXIMUM "K" FACTOR: TO CAN/CGSB-51.11.
  - .4 DENSITY: 24 KG/M3.

.3 JACKETS:
- .1 FOR ALL EXPOSED DUCTWORK OUTDOORS:
  - .1 ALUMINUM:
    - .1 TO ASTM B209 WITH MOISTURE BARRIER.
    - .2 THICKNESS: 0.50 MM SHEET.
    - .3 FINISH: STUCCO EMBOSSED.
    - .4 JACKET BANDING AND MECHANICAL SEALS:
      - .1 19 MM (3/4") WIDE, 0.5 MM THICK STAINLESS STEEL.

.4 ACCESSORIES:
- .1 VAPOUR RETARDER LAP ADHESIVE: WATER BASED, FIRE RETARDANT TYPE, COMPATIBLE WITH INSULATION.
- .2 INDOOR VAPOUR RETARDER FINISH: VINYL EMULSION TYPE ACRYLIC, COMPATIBLE WITH INSULATION.
- .3 INSULATING CEMENT: HYDRAULIC SETTING ON MINERAL WOOL, TO ASTM C449.
- .4 OUTDOOR VAPOUR RETARDER MASTIC:
  - .1 VINYL EMULSION TYPE ACRYLIC, COMPATIBLE WITH INSULATION.
  - .2 REINFORCING FABRIC: FIBROUS GLASS, UNTREATED 305 G/M2.
- .5 TAPE: SELF-ADHESIVE, ALUMINUM, REINFORCED, 75 MM (3") WIDE MINIMUM.
- .6 CONTACT ADHESIVE: QUICK-SETTING
- .7 CANVAS ADHESIVE: WASHABLE.
- .8 TIE WIRE: 1.5 MM STAINLESS STEEL.
- .9 BANDING: 19 MM (3/4") WIDE, 0.5 MM THICK STAINLESS STEEL.
- .10 FACING: 25 MM (1") GALVANIZED STEEL HEXAGONAL WIRE MESH STITCHED ON ONE FACE OF INSULATION.
- .11 FASTENERS: 2 MM DIAMETER PINS WITH 38 MM (1½") DIAMETER CLIPS, LENGTH TO SUIT THICKNESS OF INSULATION.

.5 DUCTWORK INSULATION SCHEDULE:
- .1 INSULATION TYPES AND THICKNESSES: CONFORM TO FOLLOWING TABLE:

DUCT TYPE:	THICKNESS:
DUCTWORK OUTSIDE	50 (2")

19. ROOFTOP UNIT:

.1 GENERAL:
- .1 ALL UNITS SHALL BE FACTORY ASSEMBLED, INTERNALLY WIRED, FULLY CHARGED WITH R-410A, AND 100 PERCENT RUN TESTED TO CHECK COOLING OPERATION, FAN AND BLOWER ROTATION, AND CONTROL SEQUENCE BEFORE LEAVING THE FACTORY. WIRING INTERNAL TO THE UNIT SHALL BE COLOURED AND NUMBERED FOR SIMPLIFIED IDENTIFICATION. UNITS SHALL BE ULC LISTED AND LABELED, CLASSIFIED FOR CENTRAL COOLING AIR CONDITIONERS.
- .2 ROOFTOP UNIT SHALL MEET OR EXCEED ASHRAE 90.1 COMPLIANCE REQUIREMENTS.

.2 CASING:
- .1 UNIT CASING SHALL BE CONSTRUCTED OF ZINC COATED, HEAVY GAUGE, GALVANIZED STEEL. EXTERIOR SURFACES SHALL BE CLEANED, PHOSPHATIZED, AND FINISHED WITH A WEATHER-RESISTANT BAKED ENAMEL FINISH. UNIT'S SURFACE SHALL BE TESTED IN A SALT SPRAY TEST IN COMPLIANCE WITH ASTM B117. CABINET CONSTRUCTION SHALL ALLOW FOR ALL MAINTENANCE ON ONE SIDE OF THE UNIT. SERVICE PANELS SHALL HAVE HINGED PANELS WHILE PROVIDING A WATER AND AIR TIGHT SEAL. ALL EXPOSED VERTICAL PANELS AND TOP COVERS IN THE INDOOR AIR SECTION SHALL BE INSULATED WITH A CLEANABLE, FOIL-FACED, FIRE-RETARDANT, PERMANENT, ODOURLESS, GLASS FIBRE MATERIAL. THE BASE OF THE UNIT SHALL BE INSULATED WITH 1/8 INCH, FOIL-FACED, CLOSED-CELL INSULATION. ALL INSULATION EDGES SHALL BE EITHER CAPTURED OR SEALED. THE UNIT'S BASE PAN SHALL HAVE NO PENETRATIONS WITHIN THE PERIMETER OF THE CURB OTHER THAN THE RAISED DOWNFLOW SUPPLY/RETURN OPENINGS TO PROVIDE AN ADDED WATER INTEGRITY PRECAUTION, IF THE CONDENSATE DRAIN BACKS UP.

.3 UNIT TOP:
- .1 THE TOP COVER SHALL BE ONE PIECE CONSTRUCTION OR, WHERE SEAMS EXIST, IT SHALL BE DOUBLE-HEMMED AND GASKET-SEALED. THE RIBBED TOP ADDS EXTRA STRENGTH AND ENHANCES WATER REMOVAL FROM UNIT TOP.

.4 COMPRESSORS:
- .1 ALL UNITS SHALL HAVE DIRECT-DRIVE, HERMETIC, SCROLL TYPE COMPRESSORS WITH CENTRIFUGAL TYPE OIL PUMPS. MOTOR SHALL BE SUCTION GAS-COOLED AND SHALL HAVE A VOLTAGE UTILIZATION RANGE OF PLUS OR MINUS 10 PERCENT OF UNIT NAMEPLATE VOLTAGE. INTERNAL OVERLOADS SHALL BE PROVIDED WITH THE SCROLL COMPRESSORS.

.5 CRANKCASE HEATERS SHALL BE INCLUDED ON 6–10 TON UNITS.

.6 INDOOR FANS:
- .1 THE UNITS SHALL BE EQUIPPED WITH A DIRECT DRIVE PLENUM FAN DESIGN. PLENUM FAN DESIGN SHALL INCLUDE A BACKWARD-CURVED FAN WHEEL ALONG WITH AN EXTERNAL ROTOR DIRECT DRIVE VARIABLE SPEED INDOOR MOTOR. ALL PLENUM FAN DESIGNS WILL HAVE A VARIABLE SPEED ADJUSTMENT POTENTIOMETER LOCATED IN THE CONTROL BOX. ALL UNITS (STANDARD EFFICIENCY) SHALL HAVE BELT DRIVE MOTORS WITH AN ADJUSTABLE IDLER-ARM ASSEMBLY FOR QUICK-ADJUSTMENT TO FAN BELTS AND MOTOR SHEAVES. ALL MOTORS SHALL BE THERMALLY PROTECTED. ALL 10 TONS AND 7½–8½ (HIGH EFFICIENCY) SHALL HAVE VARIABLE SPEED DIRECT DRIVE MOTORS. ALL INDOOR FAN MOTORS SHALL MEET ASHRAE 90.1.

.7 OUTDOOR FANS:
- .1 THE OUTDOOR FAN SHALL BE DIRECT-DRIVE, STATICALLY AND DYNAMICALLY BALANCED, DRAW-THROUGH IN THE VERTICAL DISCHARGE POSITION. THE FAN MOTOR SHALL BE PERMANENTLY LUBRICATED AND SHALL HAVE BUILT-IN THERMAL OVERLOAD PROTECTION.

.8 EVAPORATOR AND CONDENSER COILS:
- .1 INTERNALLY FINNED, COPPER TUBES MECHANICALLY BONDED TO A CONFIGURED ALUMINUM PLATE FIN SHALL BE STANDARD. COILS SHALL BE LEAK TESTED AT THE FACTORY TO ENSURE THEIR PRESSURE INTEGRITY. THE EVAPORATOR COIL AND CONDENSER COIL SHALL BE LEAK TESTED. THE ASSEMBLED UNIT SHALL BE LEAK TESTED. A REMOVABLE, REVERSIBLE, DOUBLE-SLOPED CONDENSATE DRAIN PAN WITH THROUGH THE BASE CONDENSATE DRAIN SHALL BE PIPED EXTERNALLY.

.9 CONTROLS:
- .1 UNIT SHALL BE COMPLETELY FACTORY-WIRED WITH NECESSARY CONTROLS AND CONTACTOR PRESSURE LUGS OR TERMINAL BLOCK FOR POWER WIRING. UNIT SHALL PROVIDE AN EXTERNAL LOCATION FOR MOUNTING A FUSED DISCONNECT DEVICE. MICROPROCESSOR CONTROLS PROVIDE FOR ALL 24V CONTROL FUNCTIONS. THE RESIDENT CONTROL ALGORITHMS SHALL MAKE ALL HEATING, COOLING, AND/OR VENTILATING DECISIONS IN RESPONSE TO ELECTRONIC SIGNALS FROM SENSORS MEASURING INDOOR AND OUTDOOR TEMPERATURES. THE CONTROL ALGORITHM MAINTAINS ACCURATE TEMPERATURE CONTROL, MINIMIZES DRIFT FROM SETPOINT, AND PROVIDES BETTER BUILDING COMFORT. A CENTRALIZED MICROPROCESSOR SHALL PROVIDE ANTI-SHORT CYCLE TIMING AND TIME DELAY BETWEEN COMPRESSORS TO PROVIDE A HIGHER LEVEL OF MACHINE PROTECTION. 24-VOLT ELECTROMECHANICAL CONTROL CIRCUIT SHALL INCLUDE CONTROL TRANSFORMER AND CONTACTOR. INCORPORATE TRANE COMMUNICATION INTERFACE FOR BUILDING MANAGEMENT SYSTEM CONNECTIVITY.

.10 HIGH PRESSURE CONTROL:
- .1 ALL UNITS SHALL INCLUDE HIGH PRESSURE CUT-OUT AS STANDARD.

.11 PHASE MONITOR:
- .1 PHASE MONITOR SHALL PROVIDE 100% PROTECTION FOR MOTORS AND COMPRESSORS AGAINST PROBLEMS CAUSED BY PHASE LOSS, PHASE IMBALANCE, AND PHASE REVERSAL. PHASE MONITOR IS EQUIPPED WITH AN LED THAT PROVIDES AN ON OR FAULT INDICATOR. THERE ARE NO FIELD ADJUSTMENTS. THE MODULE WILL AUTOMATICALLY RESET FROM A FAULT CONDITION.

.12 GAS HEATING SECTION:
- .1 THE HEATING SECTION SHALL HAVE A PROGRESSIVE TUBULAR HEAT EXCHANGER DESIGN USING STAINLESS STEEL BURNERS AND CORROSION RESISTANT STEEL THROUGHOUT. AN INDUCED DRAFT COMBUSTION BLOWER SHALL BE USED TO PULL THE COMBUSTION PRODUCTS THROUGH THE FIRING TUBES. THE HEATER SHALL USE A DIRECT SPARK IGNITION (DSI) SYSTEM.

.13 CONVENIENCE OUTLET:
- .1 GFCI, 120V /15AMP, 2 PLUG, CONVENIENCE OUTLET. THE CONVENIENCE OUTLET IS POWERED FROM THE LINE SIDE OF THE DISCONNECT OR CIRCUIT BREAKER.

.14 ECONOMIZER:
- .1 THE ASSEMBLY INCLUDES FULLY MODULATING 0–100 PERCENT MOTOR AND DAMPERS, MINIMUM POSITION SETTING, PRESET LINKAGE, WIRING HARNESS WITH PLUG, SPRING RETURN ACTUATOR AND FIXED DRY BULB CONTROL. THE BAROMETRIC RELIEF SHALL PROVIDE A PRESSURE OPERATED DAMPER THAT SHALL BE GRAVITY CLOSING AND SHALL PROHIBIT ENTRANCE OF OUTSIDE AIR DURING THE EQUIPMENT OFF CYCLE.

.15 THROUGH THE BASE ELECTRICAL WITH DISCONNECT SWITCH:
- .1 AN ELECTRICAL SERVICE ENTRANCE SHALL BE PROVIDED ALLOWING ELECTRICAL ACCESS FOR BOTH CONTROL AND MAIN POWER CONNECTIONS INSIDE THE CURB AND THROUGH THE BASE OF THE UNIT. OPTION SHALL ALLOW FOR FIELD INSTALLATION OF LIQUID-TIGHT CONDUIT AND AN EXTERNAL FIELD-INSTALLED DISCONNECT SWITCH.
- .2 THIS 3-POLE, MOLDED CASE, DISCONNECT SWITCH WITH PROVISIONS FOR THROUGH THE BASE ELECTRICAL CONNECTIONS. THE DISCONNECT SWITCH SHALL BE INSTALLED IN THE UNIT IN A WATER TIGHT ENCLOSURE WITH ACCESS THROUGH A SWINGING DOOR. WIRING SHALL BE PROVIDED FROM THE SWITCH TO THE UNIT HIGH VOLTAGE TERMINAL BLOCK. THE SWITCH SHALL BE UL/CSA AGENCY RECOGNIZED.
- .3 POWERIZER, TO MAINTAIN BETTER BUILDING PRESSURIZATION.

.16 CURB: INSULATED, 600MM HIGH, SEISMICALLY RESTRAINED CURB.
.17 ACCEPTABLE MATERIAL: TRANE YHH SERIES.

20. GRILLES, REGISTERS AND DIFFUSER:

.1 GENERAL:
- .1 TO MEET CAPACITY, PRESSURE DROP, TERMINAL VELOCITY, NOISE LEVEL, NECK VELOCITY AS INDICATED.
- .2 FRAMES:
  - .1 FULL PERIMETER GASKETS.
  - .2 PLASTER FRAMES WHERE SET INTO PLASTER OR GYPSUM BOARD AND AS SPECIFIED.
  - .3 CONCEALED FASTENERS
- .3 CONCEALED OPERATORS
- .4 ACCEPTABLE MANUFACTURER: E.H. PRICE, NAILOR, TITUS, KRUEGER, METALAIRE, NAD KLIMA.

.3 GRILLES:
- .1 TYPE SG1: STEEL CONSTRUCTION, DOUBLE DEFLECTION, HORIZONTAL FACE BARS, OFF-WHITE BAKED ENAMEL FINISH. COMPLETE WITH BALANCING DAMPER SIZE: 200 X 150. ACCEPTABLE MATERIAL: E.H. PRICE MODEL 520D OR EQUAL.

21. ELECTRIC AND ELECTRONIC STANDALONE CONTROLS:

.1 ALL LOW VOLTAGE 24VDC OR HIGH VOLTAGE 120VAC CONTROLS BY MECHANICAL CONTRACTOR.
.2 PROVIDE EMT CONDUIT C/W STEEL COUPLINGS AND FITTINGS FOR CONTROL WIRING IN EXPOSED OR EXTERIOR LOCATIONS. REFER TO ELECTRICAL SPECIFICATIONS FOR INSTALLATION DETAILS.
.3 PROVIDE FT-6 FIRE RATED CABLE FOR CONTROL WIRING IN CONCEALED AREAS.
.4 THERMOSTAT (LINE VOLTAGE)
- .1 WALL MOUNTED, FOR HEATING/COOLING WITH AUTOMATIC CHANGEOVER
- .2 FULL LOAD RATING: 16A AT 120V.
- .3 TEMPERATURE SETTING RANGE: 5°C TO 30°C.
- .4 THERMOMETER RANGE: 5°C TO 30°C.
- .5 MARKINGS IN 5°C INCREMENTS.
- .6 DIFFERENTIAL TEMPERATURE FIXED AT 1.1°C.

.5 THERMOSTAT GUARDS: LOCKABLE, CLEAR, PLASTIC. SLOTS FOR AIR CIRCULATION TO THERMOSTAT.

22. TESTING, ADJUSTING AND BALANCING (TAB):

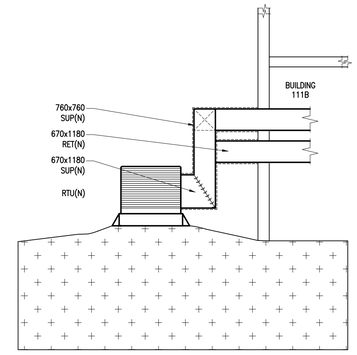
.1 GENERAL:
- .1 TAB MEANS TO TEST, ADJUST AND BALANCE TO PERFORM IN ACCORDANCE WITH REQUIREMENTS OF CONTRACT DOCUMENTS AND TO DO ALL OTHER WORK AS SPECIFIED IN THIS SECTION.
- .2 DO TAB TO FOLLOWING TOLERANCES OF DESIGN VALUES:
  - .1 HVAC SYSTEMS: PLUS OR MINUS 5%.
- .3 ADJUST OR REPLACE SHEAVES AS REQUIRED TO MEET DESIGN PERFORMANCE.
- .4 DO TAB OF COMPLETE MECHANICAL SYSTEMS OVER ENTIRE OPERATING RANGE IN ACCORDANCE WITH MOST STRINGENT CONDITIONS OF AABC (ASSOCIATED AIR BALANCE COUNCIL) & NABC (NATIONAL AIR BALANCE COUNCIL).
- .5 FOR ALL ADJUSTABLE DIFFUSERS/GRILLES: ADJUST AIR PATTERN TO ENSURE PROPER AIR DISTRIBUTION AND TO AVOID DUMPING. AIR VELOCITY SHALL NOT EXCEED 0.25 M/S (50 FPM) IN THE OCCUPIED ZONE (OR AS DIRECTED BY ENGINEER).

.2 TAB REPORT:
- .1 FORMAT TO BE IN ACCORDANCE WITH ASSOCIATED AIR BALANCING COUNCIL (AABC/CAABC).

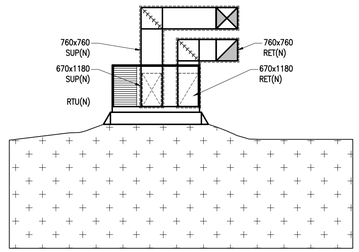
.3 SYSTEMS:
- .1 AIR SYSTEMS:
  - .1 INCLUDE BOTH SPECIFIED AND MEASURED DATA:
    - .1 MINIMUM & MAXIMUM PRIMARY & SECONDARY AIRFLOWS
    - .2 OPERATING PRESSURES
    - .3 DUCT SIZE & TRANSVERSE READINGS
    - .4 MOTOR VOLTS, AMPS & POWER
  - .2 FOR THE FOLLOWING EQUIPMENT:
    - .1 RTU'S
    - .2 SUPPLY DUCTWORK
    - .3 DIFFUSERS/GRILLES

.4 VERIFICATION:
- .1 ALL REPORTED RESULTS SUBJECT TO VERIFICATION BY ENGINEER.
- .2 PROVIDE MANPOWER AND INSTRUMENTATION TO VERIFY UP TO 30% OF ALL REPORTED RESULTS.
- .3 NUMBER AND LOCATION OF VERIFIED RESULTS TO BE AT DISCRETION OF ENGINEER.
- .4 BEAR COSTS TO REPEAT TAB AS REQUIRED TO SATISFACTION OF ENGINEER.
- .5 PRODUCE "AS-BUILT" FULL SYSTEM SCHEMATICS. USE AS-BUILT DRAWINGS FOR REFERENCE.

.6 TAB TO BE CONSIDERED COMPLETE ONLY WHEN FINAL TAB REPORT RECEIVED AND APPROVED BY ENGINEER.



1 M2 RTU & DUCT WORKS ELEVETAION FRONT VIEW
N.T.S



2 M2 RTU & DUCT WORKS ELEVETAION SIDE VIEW
N.T.S

ROOFTOP UNIT SCHEDULE WITH HEAT RECOVERY

TAG	2500	AREA SERVED	SUPPLY FAN DATA (VSD)					GAS HEATING SECTION					DX COOLING COIL DATA					ELECTRICAL DATA		SOUND POWER LEVEL (dB)							BASIS OF DESIGN	REMARKS
			FAN TYPE	AIR FLOW (L/s)	EXTERNAL STATIC PRESSURE (Pa)	TOTAL STATIC PRESSURE (Pa)	MOTOR SIZE (HP)	INPUT (kW)	OUTPUT (kW)	E.A.T. (°C)	L.A.T. (°C)	MODULATION	TOTAL CAPACITY (kW)	SENSIBLE CAPACITY (kW)	E.A.T. (DB/WB) (°C)	L.A.T. (DB/WB) (°C)	STAGES	MCA/MOP	V/PH/Hz	OCTAVE BAND	63	125	250	500	1000	2000		
RTU-1	GROUND FLOOR (BESIDE THE BLD.)	FELLOWSHIP HALL (#111)	FC CENTRIFUGAL	2360	250	260	3	102	82	21	50	2.5 : 1	49.3	37	26.6/19.4	13.8/13.3	2	68/90	208/3/60	DISCHARGE LW(dB)/RETURN LW(dB)	86/92	80/79	71/72	70/67	66/61	67/62	TRANE VOYAGER	YHH180G3RVB

NOTES: 1. FOR DETAILS REFER TO SPECIFICATIONS.
2. MANUFACTURER NAME & MODEL NUMBER REPRESENTS ACCEPTABLE QUALITY STANDARD ONLY. ALTERNATIVE MATERIALS MAY BE APPROVED AFTER REVIEW OF TECHNICAL INFORMATION BY ENGINEER.

FIXTURE CONNECTION SCHEDULE

TAG	DOMESTIC COLD WATER (dmm)	DOMESTIC HOT WATER (dmm)	SANITARY (dmm)	COMMENTS	BASIS OF DESIGN
WC1	13	–	75	381 MM HIGH TOILET, VITREOUS CHINA, FLOOR MOUNTED, 4.8 L PER FLUSH, TWO PIECE, ELONGATED BOWL, HEAVY DUTY TOILET SEAT, SOLID PLASTIC, OPEN FRONT LESS COVER.	AMERICAN STANDARD #215CA.104.020, CADET PRO ELONGATED, CENTOCO #500STSCC.001
WC2	13	–	75	419 MM HIGH TOILET, VITREOUS CHINA, FLOOR MOUNTED, 4.8 L PER FLUSH, TWO PIECE, ELONGATED BOWL, HEAVY DUTY TOILET SEAT, SOLID PLASTIC, OPEN FRONT WITH COVER. PROVIDE BOLTED TANK COVER TO MEET LOCAL CODES.	AMERICAN STANDARD #215AA.164.020, CADET PRO RIGHT HEIGHT ELONGATED, CENTOCO #8205TS.001
U1	20	–	50	URINAL, WHITE FINISH VITREOUS CHINA, OPERATES IN THE RANGE OF 0.5 L TO 3.8 L PER FLUSH, WALL HUNG, CHROME PLATED, NON-METALLIC STRAINER, EXPOSED MANUAL FLUSHOMETER FOR TOP SPUD URINAL, 1.9 L FACTORY SET FLOW. MOUNTED ON CONCRETE FLOOR, FIXTURE CARRIER.	AMERICAN STANDARD #6590.001.020, WASHBROOK FLOWISE SLOAN #REGAL 186-0.5-XL, REGAL WATTS #CA-321
LAV1	13	13	40	BASIN, WHITE FINISH, SELF-RIMMING / DROP-IN, SINGLE HANDLE FAUCET, BELOW DECK MECHANICAL WATER MIXING VALVE, INTEGRAL CHECKS, OPEN GRID DRAIN, POLISHED BRASS FAUCET SUPPLIES	AMERICAN STANDARD #9494.001.020 'CADET UNIVERSAL ACCESS CHICAGO FAUCETS #420-ABCP LAWLER #TMM-1070
LAV2	13	13	40	WALL HUNG BASIN – TWO HANDLES MANUAL FAUCET BELOW DECK MECHANICAL WATER MIXING VALVE, OPEN GRID DRAIN, BASIN CARRIER	AMERICAN STANDARD #0954.004EC.020/0059.020EC.020 'MURRO WITH EVERCLEAN CHICAGO FAUCETS #895-317FCABCP LAWLER #TMM-1070 WATTS #WCA-411-CA-481,
KS	13	13	40	COUNTER MOUNTED COUNTERTOP MOUNT SINK- SINGLE HANDLE FAUCETBELOW DECK MECHANICAL WATER MIXING VALVE	FRANKE COMMERCIAL #LBS6808-1/3 AMERICAN STANDARD #4175300.002, LAWLER #TMM-1070
MS	20	20	75	FLOOR MOUNTED SERVICE / MOP SINK – TWO HANDLES FAUCET, BUMPER GUARD 610 MM (24") EXTRUDED VINYL, MOP HANGER 22 GA. (0.8 MM) TYPE 304 STAINLESS STEEL	FIAT #MSB2424100, 'MODESTO FIAT #830-AA.
BFS1	20	–	50	DRINKING FOUNTAIN & BOTTLE FILLING STATION WITH SINGLE FILTERED WATER COOLER, SENSOR TOUCHLESS ACTIVATION BOTTLE FILLER	ELKAY #LZS8WSLP WATTS #CA-311
FD	–	–	75	REVERSIBLE FLASHING CLAMP WITH PRIMARY AND SECONDARY WEEPHOLES, NO HUB OUTLET, TRAP PRIMER CONNECTION WITH PLUG, 75 MM ADJUSTABLE ROUND STRAINER, 127 MM DIAMETER, NICKEL BRONZE	WATTS FD-103-C-AS-1-7-61

NOTES: 1. COORDINATE EXACT PIPING LOCATIONS ON SITE.
2. VENT TO MEET OBC REQUIREMENTS, VENTING THROUGH SLOPED ROOFS NOT PERMITTED.
3. MANUFACTURER NAME & MODEL NUMBER REPRESENT ACCEPTABLE QUALITY STANDARD ONLY.
4. INSTALLATION OF BARRIER FREE FIXTURES SHALL COMPLY WITH BARRIER FREE REQUIREMENTS OF OBC.
5. FOR BARRIER FREE SINKS & LAVATORIES, INSULATE DOMESTIC HOT WATER AND DRAIN PIPING UNDER COUNTER. SEE ARCH. DWG FOR DETAILS. ACCEPTABLE MATERIAL: SKALLGUARD WHITE OR MINERAL FIBRE WITH WHITE PVC JACKET.

FINNED TUBE RADIATION SCHEDULE

TAG	CABINET (SLOPED TOP / TOP OUTLET / FRONT OUTLET)	ARRANGEMENT (WALL MOUNTED / FREE STANDING)	PIPE SIZE (NPS-mm)	FIN SIZE (mmW x mmH)	FINS/METRE	EWT (°C)	LWT (°C)	EAT (°C)	DIMENSIONS WxH(mm)	BASIS OF DESIGN	REMARKS
WF	FLAT TOP	FLOOR MOUNTED	20	100X100	170	82.2	71.1	18	133x250	ROSMEX-RVP-ARG.A-RAF44C1	–

NOTES: 1. FOR DETAILS REFER TO SPECIFICATIONS.
2. DISCONNECT SWITCH BY DIV. 16.

ELECTRIC DOMESTIC WATER HEATER SCHEDULE

TAG	LOCATION	INPUT (kW)	STORAGE CAPACITY (L)	RECOVERY RATE (L/H) @ 56°C	ELECTRICAL DATA		BASIS OF DESIGN	REMARKS
					AMPS	V/PH/Hz		
DHWT-1	JANITOR ROOM	2 x 3kW	303	46	14.4	208/3/60	RHEEM EDL80	–

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3. ALTERNATIVE MATERIALS MAY BE APPROVED AFTER REVIEW OF TECHNICAL INFORMATION BY ENGINEER.

GRILLE AND DIFFUSER SCHEDULE

UNIT NO.	TYPE	MODULE (mm)	INLET (mm)	MOUNT	FINISH	BASIS OF DESIGN	REMARKS
SSD-1	INTEGRATED DUCT SUPPLY DIFFUSER	AS INDICATED	AS INDICATED	DUCT	CUSTOM	NAD KILMA	2000mm LONG 3 SLOTS
SG1	SUPPLY AIR GRILLE	AS INDICATED	AS INDICATED	DUCT	B12	EH PRICE 520	ADJUSTABLE DOUBLE DEFLECTION
RG1	RETURN AIR GRILLE	AS INDICATED	AS INDICATED	WALL	WHITE	EH PRICE 510 SERIES	–

NOTES: 1. FOR DETAILS REFER TO SPECIFICATIONS.

Client

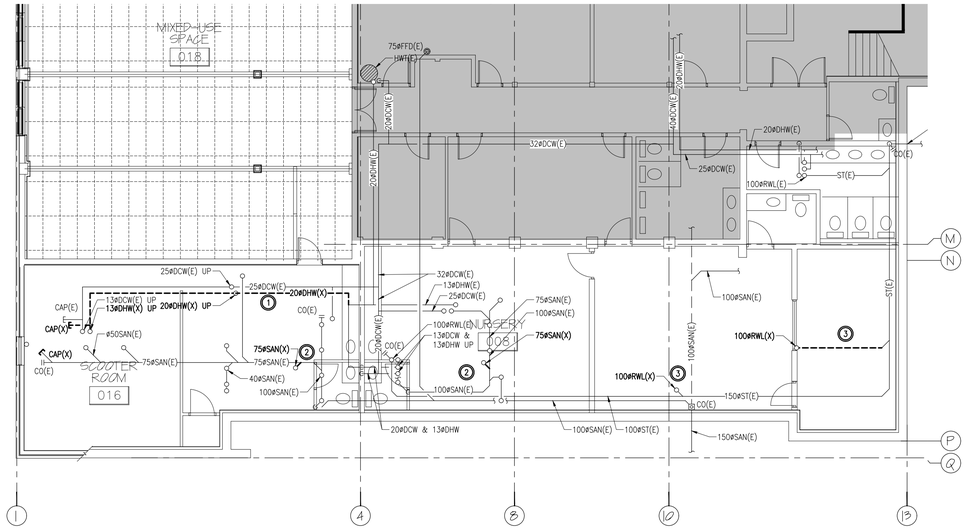
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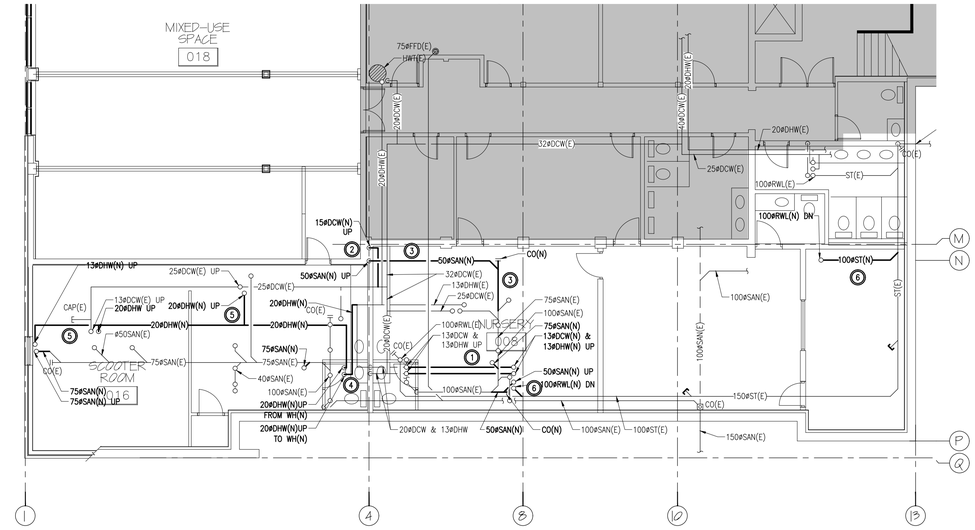


1 M3 BASEMENT LEVEL MECHANICAL - PLUMBING - REMOVALS

1:100

DRAWING NOTES – REMOVALS (BASEMENT)

1. REMOVE DHW PIPING C/W SUPPORTS AND ACCESSORIES.
2. REMOVE SANITARY FLOOR DRAIN PIPING FROM GROUND FLOOR WASHROOM TO ALLOW FOR DRAIN REPLACEMENT.
3. REMOVE THE STORM PIPING AND CAP THE PIPE.

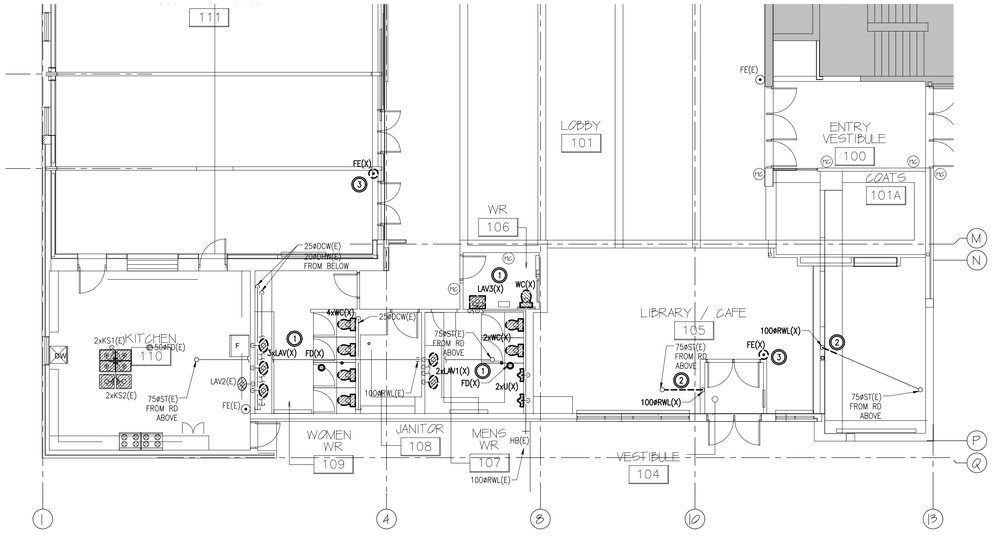


2 M3 BASEMENT LEVEL MECHANICAL - PLUMBING - NEW WORK

1:100

DRAWING NOTES – NEW WORK (BASEMENT)

1. CONTRACTOR TO EXTEND 13mmø DCW & DHW PIPING FROM BASEMENT WASHROOM TO NEW SINK IN CAFE AREA.
2. CONTRACTOR TO EXTEND 13mmø DCW PIPING FROM BASEMENT WASHROOM TO NEW DRINKING FOUNTAIN.
3. CONTRACTOR TO PROVIDE SANITARY PIPING IN CEILING OF BASEMENT FROM NEW CAFE SINK AND NEW DRINKING FOUNTAIN.
4. PROVIDE DOMESTIC WATER PIPING TO NEW GROUND FLOOR HOT WATER TANK C/W SUPPORTS AND ACCESSORIES.
5. PROVIDE NEW DOMESTIC HOT WATER PIPING TO ALL KITCHEN SINKS OF GROUND FLOOR KITCHEN.
6. PROVIDE STORM DRAINAGE PIPING C/W ACCESSORIES.

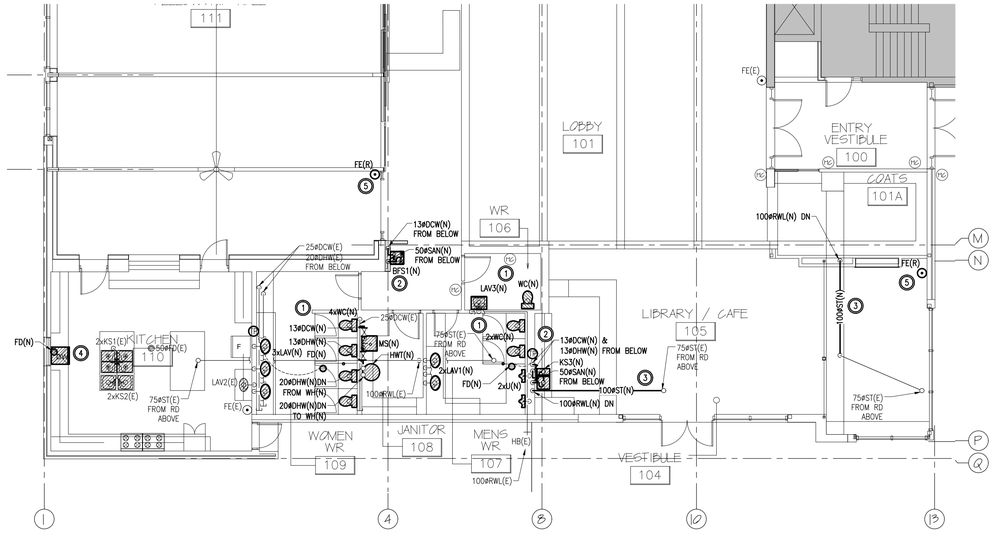


3 M3 GROUND FLOOR LEVEL MECHANICAL - PLUMBING - REMOVALS

1:100

DRAWING NOTES – REMOVALS (GROUND FLOOR)

1. CONTRACTOR TO REMOVE PLUMBING FIXTURES C/W ACCESSORIES. DCW, DHW, SANITARY AND VENT. ROUGHIN ARE TO BE MAINTAINED WITHIN WALLS AND TO BE USED IN NEW WORK.
2. REMOVE STORM PIPING IN THE CEILING AND IN THE VERTICAL WALLS.
3. REMOVE FIRE EXTINGUISHER AND RETAIN FOR NEW WORK.



4 M3 GROUND FLOOR LEVEL MECHANICAL - PLUMBING - NEW WORK

1:100

DRAWING NOTES – NEW WORK (GROUND FLOOR)

1. CONTRACTOR TO PROVIDE NEW FIXTURES AS INDICATED C/W REQUIRED PIPING AND ACCESSORIES.
2. CONTRACTOR TO PROVIDE VENT PIPING FROM NEW CAFE SINK & NEW DRINKING FOUNTAIN/BOTTLE FILLING STATION. CONNECT INTO GROUND FLOOR VENTING PIPING.
3. CONTRACTOR TO PROVIDE STORM PIPING WITHIN CEILING AND IN VERTICAL WALLS.
4. PROVIDE DHW AND SANITARY CONNECTION TO OWNER SUPPLIED DISHWASHER. CONTRACTOR TO CARRY ALLOWANCE TO MAKE DECISIONS TO FIND CONNECTIONS TO APPLIANCES.
5. RELOCATE FIRE EXTINGUISHER.

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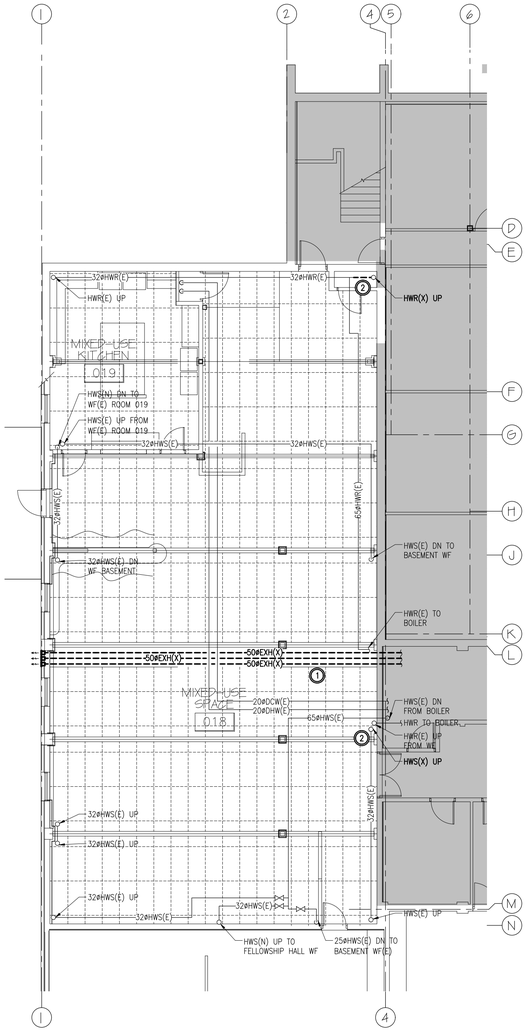
ARLINGTON WOODS
FREE METHODIST CHURCH
RENOVATION

225 McClellan Rd, Ottawa, ON K2H 8N5

Drawing title/Titre du dessin

MECHANICAL
BASEMENT & GROUND FLOOR
PLUMBING
REMOVALS & NEW WORK

Scale / Echelle	AS NOTED	Project no./No. du projet	2019-333-1
Design by / Conçu par	P. LABELLE	Drawing/Dessin	M3
Drawn by / Dessiné par	H. FALLAH		
Reviewed by / Examiné par	F. BANN		OF 6
Date / Date	JULY 2020	Revision no:	–
		Acad file/Fichier:	–

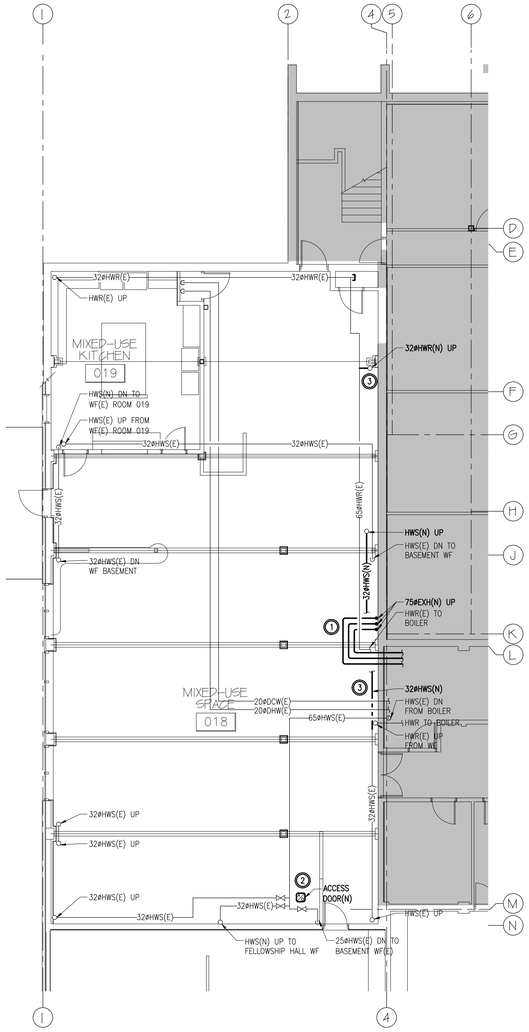


DRAWING NOTES – REMOVALS (BASEMENT)

1. CONTRACTOR TO REMOVE FURNACE BREACHING AS INDICATED.
2. CONTRACTOR TO REMOVE HWS & HWR PIPE SEGMENT AS INDICATED C/W SUPPORTS & ACCESSORIES AND CAP THE PIPE.

1 M4 BASEMENT FLOOR LEVEL MECHANICAL - PLUMBING & UTL - REMOVALS

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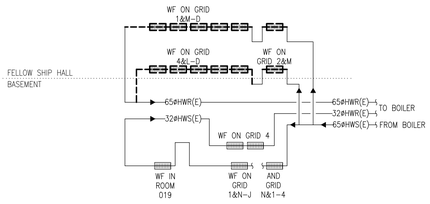


DRAWING NOTES – NEW WORK (BASEMENT)

1. CONTRACTOR TO PROVIDE NEW FURNACE BREACHING AS INDICATED.
2. CONTRACTOR TO PROVED RATED ACCESS DOOR IN NEW DRYWALL ENCLOSURE TO ALLOW USE OF ISOLATION VALVES.
3. CONTRACTOR TO PROVIDE NEW HWS & HWR PIPING AS INDICATED C/W SUPPORTS AND ACCESSORIES.

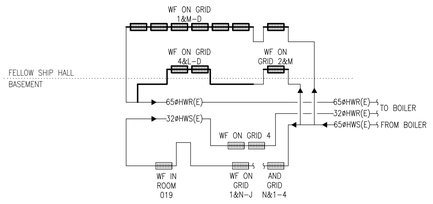
2 M4 BASEMENT FLOOR LEVEL MECHANICAL - PLUMBING & UTL - NEW WORK

1:100



3 M4 HEATING WATER REMOVALS SCHEMATICH

N.T.S



4 M4 HEATING WATER NEW WORKS SCHEMATICH

N.T.S

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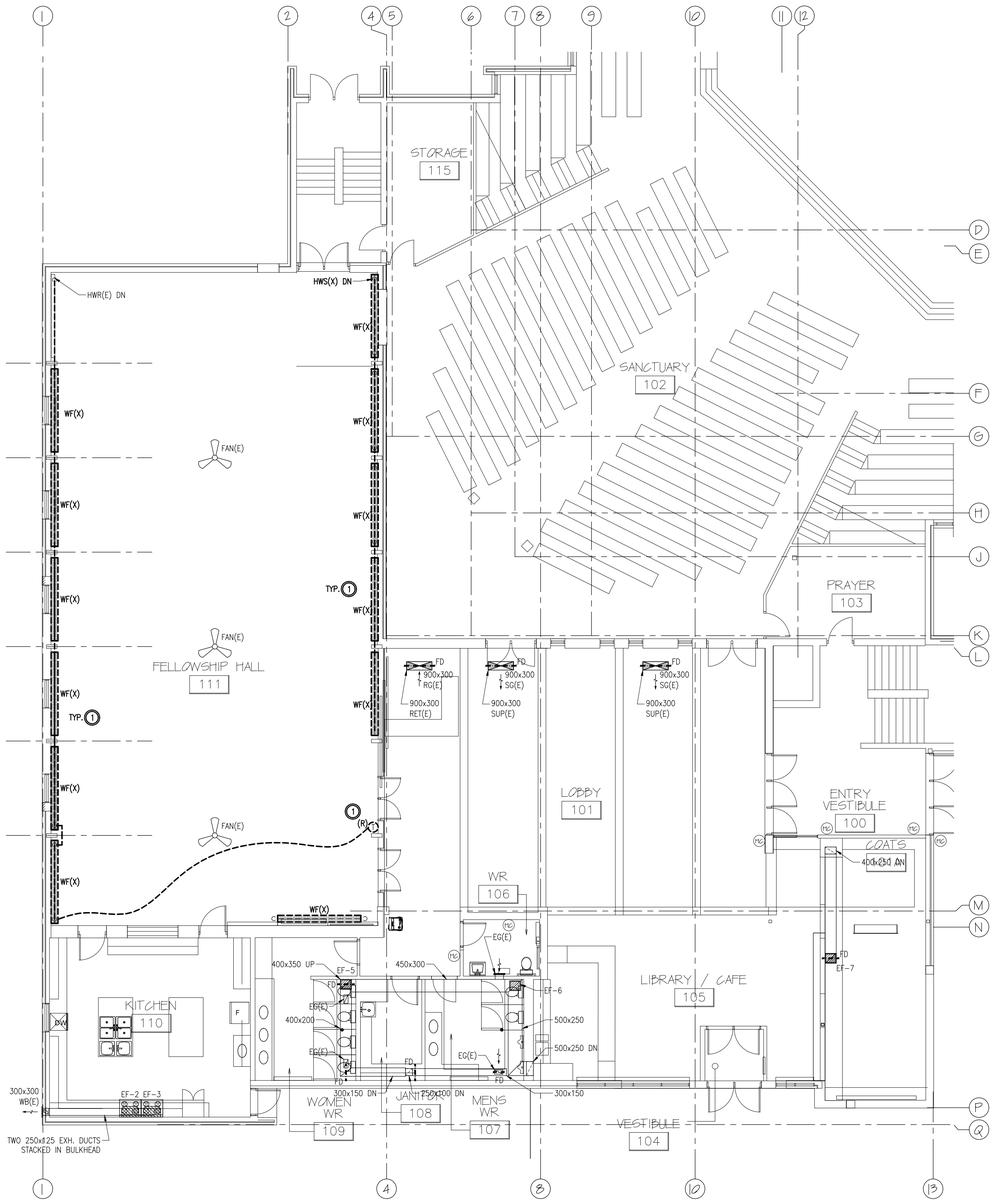
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Drawing title/Titre du dessin

MECHANICAL
BASEMENT LEVEL
PLUMBING AND UTILITIES
REMOVALS & NEW WORK

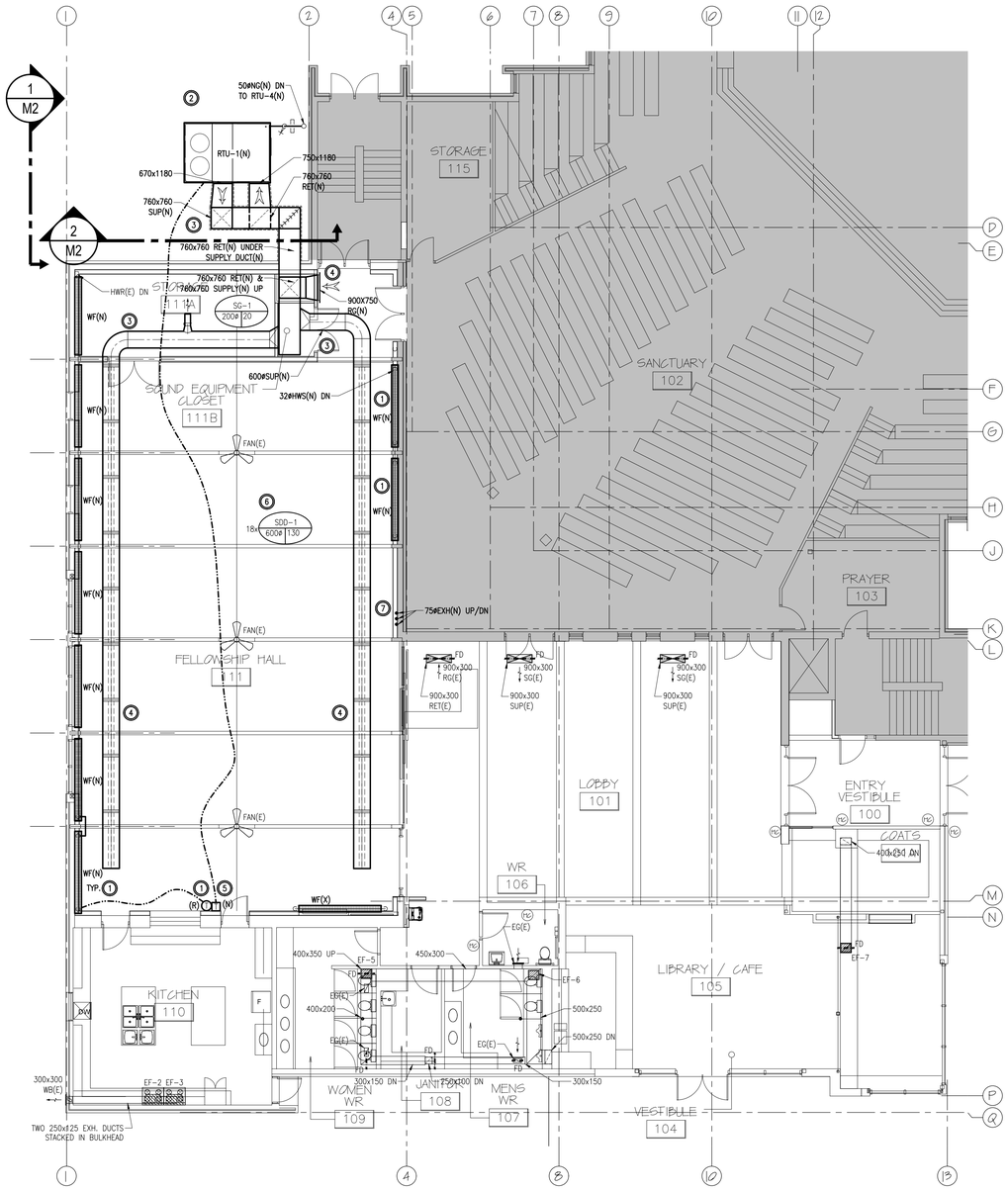
Scale / Echelle	AS NOTED	Project no./No. du projet	2019-333-1
Design by / Conçu par	P. LABELLE	Drawing/Dessin	M4
Drawn by / Dessiné par	H. FALLAH		
Reviewed by / Examiné par	F. BANN		OF 6
Date / Date	JULY 2020	Revision no:	–
		Acad file/Fichier:	–



1 M5 GROUND FLOOR LEVEL
MECHANICAL - HVAC & UTL - REMOVALS
1:100

DRAWING NOTES – REMOVALS (GROUND FLOOR)

1. CONTRACTOR TO REMOVE SECTIONS OF WALL FIN AS INDICATED C/W PIPING AND ACCESSORIES. REMOVE THE THERMOSTAT AND RETAIN FOR NEW WORK.



2 M5 GROUND FLOOR LEVEL
MECHANICAL - HVAC & UTL - NEW WORK
1:100

DRAWING NOTES – NEW WORK (GROUND FLOOR)

1. CONTRACTOR TO PROVIDE NEW WALL FIN C/W PIPING, VALVES AND ACCESSORIES. RELOCATE THERMOSTAT AND PROVIDE REQUIRED ACCESSORIES.
2. CONTROCTOR TO PROVIDE NEW RTU UNIT ON CONCRETE BASE LOCATED AT GRADE.
3. CONTRACTOR TO PROVIDE SUPPLY AND RETURN AIR DUCTWORK C/W INSULAITON, SUPPORTS AND ACCESSORIES.
4. CONTRACTOR TO PROVIDE SUPPLY AIR DUCT DIFFUSER AND RETURN GRILL C/W ACCESSORIRES.
5. CONTRACTOR TO PROVIDE THERMOSTAT C/W CONTROL WIRING FOR NEW RTU.
6. CONTRACTOR TO BALANCE AND ADJUST RTU AND SUPPLY DIFFUSERS TO CAPACITIES INDICATES. SUBMIT REPORT TO ENGINEER FOR REVIEW.
7. CONTRACTOR TO EXTEND THE FURNACE BREACHING FROM BASEMENT THROUGH GROUND FLOOR AND UP TO ROOF LINE WITHIN RATED SHAFT. PROVIDE FIRE CALLER AT CEILING AT UNDER SIDE OF THE ATTIC. CONTRACTOR TO PROVIDE FIRE WRAP ON BREACHING LOCATED IN ATTIC UP TO ROOF LINE.

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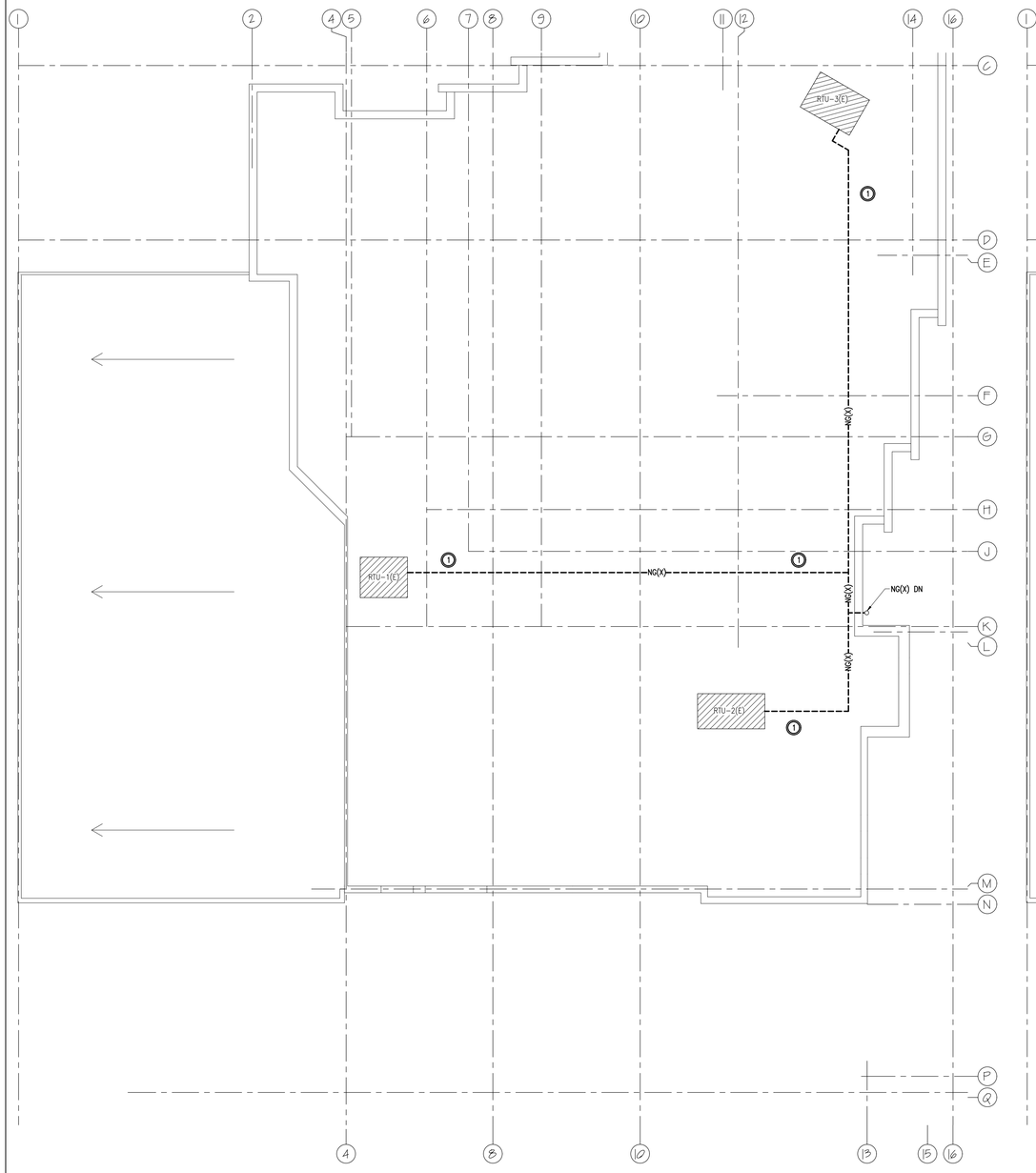
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MECHANICAL
GROUND FLOOR
HVAC AND UTILITIES
REMOVALS & NEW WORK

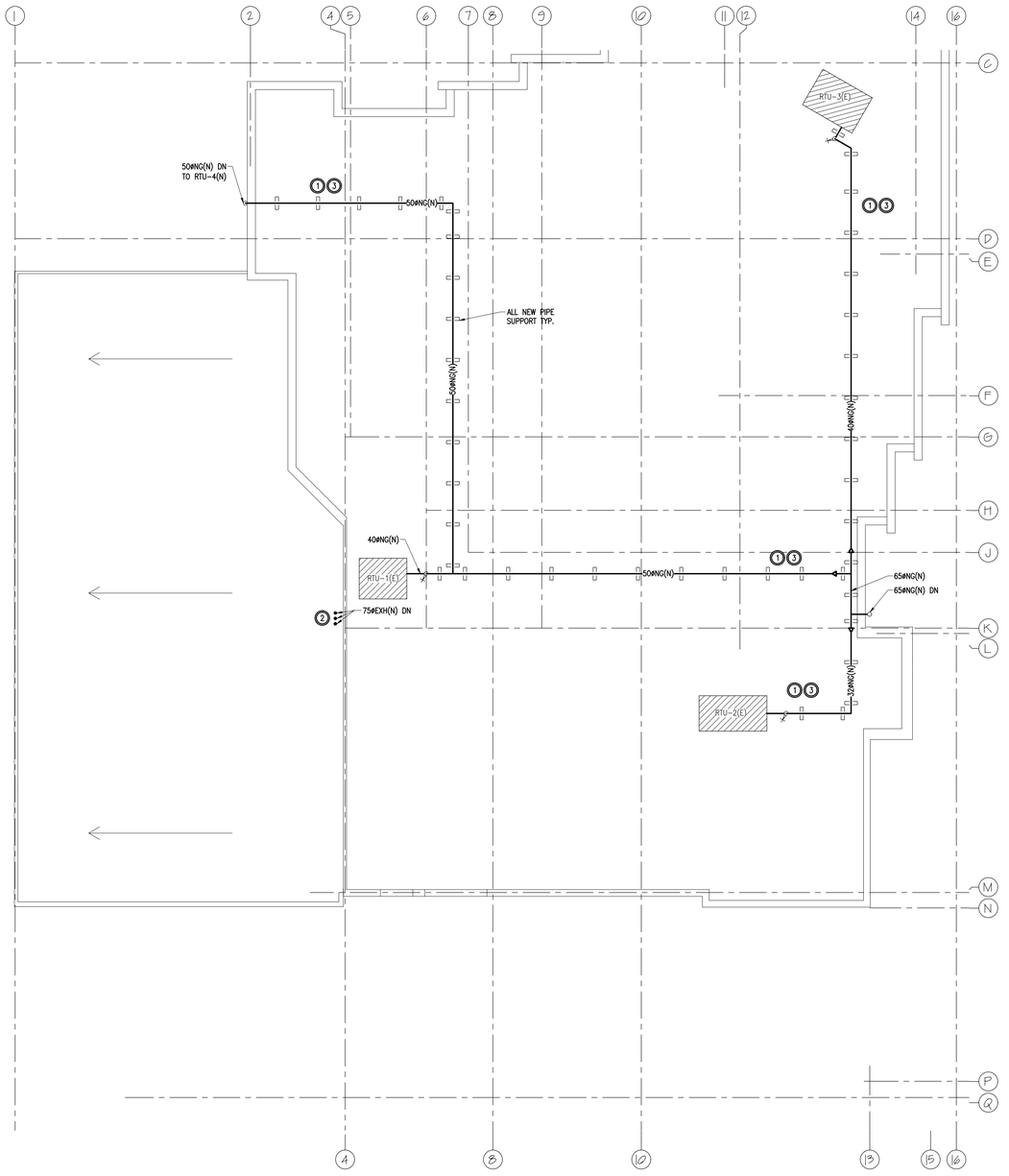
Scale / Echelle	AS NOTED	Project no./No. du projet	2019-333-1
Design by / Conçu par	P. LABELLE	Drawing/Dessin	M5
Drawn by / Dessiné par	H. FALLAH		OF 6
Reviewed by / Examiné par	F. BANN		
Date / Date	JULY 2020	Revision no:	–
		Acad file/Fichier:	–



1 M6 ROOF LEVEL
MECHANICAL - HVAC & UTL - REMOVALS
1:100

DRAWING NOTES – REMOVALS

1. REMOVE ALL GAS PIPE C/W SUPPORTS AND ACCESSORIES.



2 M6 ROOF LEVEL
MECHANICAL - HVAC & UTL - NEW WORK
1:100

DRAWING NOTES – NEW WORK

1. PROVIDE NEW GAS PIPE C/W NEW SUPPORTS AND ACCESSORIES.
2. CONTRACTOR TO EXTEND FURNACE BREACHING TROUGH ROOFLINE AND EXTEND 1METER ABOVE RTU ADJACENT
3. CONTRACTOR TO APPLY PAINT TO ALL EXISTING & NEW GAS PIPING.

Client

2020-07-24	ISSUED FOR TENDER	–
2020-05-27	ISSUED FOR PERMIT	–
2020-05-08	ISSUED FOR REVIEW	–
DATE	REVISION	REF

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NE PAS MESURER LES DESSINS À L'ÉCHELLE

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PROVINCE OF ONTARIO

Project/Projet

ARLINGTON WOODS
FREE METHODIST CHURCH
RENOVATION

225 McClellan Rd, Ottawa, ON K2H 8N5

Drawing title/Titre du dessin

MECHANICAL
ROOF PLAN
GAS PIPING LAYOUT
REMOVAL & NEW WORK

Scale / Echelle	AS NOTED	Project no./No. du projet	2019-333-1
Design by / Conçu par	P. LABELLE	Drawing/Dessin	M6
Drawn by / Dessiné par	H. FALLAH		
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ARLINGTON WOODS FREE METHODIST CHURCH RENOVATION

225 MCCLELLAN RD, OTTAWA, ON K2H 8N5

ELECTRICAL

POWER & SYSTEMS LEGEND

SYMBOL	DESCRIPTION
	15A, 120V WALL MOUNTED DUPLEX RECEPTACLE
	DEDICATED DUPLEX RECEPTACLE
GFI	GROUND FAULT INTERRUPTING RECEPTACLE INSTALLED OVER COUNTER
	RECEPTACLE INSTALLED OVER COUNTER
	5-20R RECEPTACLE
	SPECIAL RECEPTACLE - TYPE AS INDICATED
J	JUNCTION BOX
	SINGLE PHASE ELECTRIC MOTOR
H	DISCONNECT SWITCH
	SURFACE MOUNTED PANEL
	PUSH BUTTON
	BARRIER-FREE DOOR OPERATOR C/W PUSHBUTTONS
	HARD WIRE CONNECTION
	FLEXIBLE CONDUIT
SS	SPEED SWITCH SUPPLIED BY MECHANICAL CONTRACTOR, INSTALLED & WIRED BY ELECTRICAL CONTRACTOR

LIGHTING & FIRE ALARM LEGEND

SYMBOL	DESCRIPTION
A	WALL MOUNTED LIGHT FIXTURE - TYPE AS SHOWN
B	LIGHT FIXTURE - TYPE AS SHOWN
C	CEILING/PENDENT MOUNTED LIGHT - TYPE AS SHOWN
S	WALL MOUNTED SWITCH
^{D}	WALL MOUNTED DIMMING SWITCH
OS	CEILING MOUNTED MOTION SENSOR
	EMERGENCY BATTERY UNIT C/W RECEPTACLE AND LIGHTING HEADS
	WALL/CEILING MOUNTED EXIT LIGHT
	REMOTE EMERGENCY LIGHTING DUAL HEAD - CEILING MOUNTED
	FIRE ALARM HEAT DETECTOR, R57°C
F	FIRE ALARM PULL STATION
F	FIRE ALARM BELL
F	FIRE ALARM STROBE LIGHT

HEATING LEGEND

SYMBOL	DESCRIPTION
	HOT WATER TANK
T	BASEBOARD HEATER
T	FORCE FLOW HEATER

SECURITY & TELECOMMUNICATION LEGEND

SYMBOL	DESCRIPTION
CR	CARD READER
ES	ELECTRICAL STRIKE
	SECURITY MOTION SENSOR
2	DATA OUTLET BOX-NUMBER INDICATED DATA DROPS
	CATV OUTLET BOX
	COMBINATION OF DATA & TELEPHONE OUTLET
WiFi	WIFI OUTLET BOX

DRAWING LIST

ABBREVIATION	DESCRIPTION
E1	ELECTRICAL DRAWING LIST, LEGENDS & LIGHTING FIXTURES SCHEDULE
E2	ELECTRICAL SPECIFICATIONS
E3	ELECTRICAL DEMOLITION WORK PART RISER DIAGRAM & PANEL SCHEDULE
E4	ELECTRICAL NEW WORK PART RISER DIAGRAM & PANEL SCHEDULE
E5	BASEMENT FLOOR ELECTRICAL DEMOLITION WORK LAYOUT
E6	GROUND FLOOR ELECTRICAL DEMOLITION WORK LAYOUT
E7	BASEMENT FLOOR ELECTRICAL LIGHTING & FIRE ALARM NEW WORK LAYOUT
E8	GROUND FLOOR ELECTRICAL LIGHTING & FIRE ALARM NEW WORK LAYOUT
E9	BASEMENT FLOOR ELECTRICAL POWER & SYSTEMS NEW WORK LAYOUT
E10	GROUND FLOOR ELECTRICAL POWER & SYSTEMS NEW WORK LAYOUT

ABBREVIATION LIST

ABBREVIATION	DESCRIPTION
C	CEILING MOUNTED
R	DISCONNECT AND REMOVE C/W WIRING AND CONDUIT BACK TO SOURCE
E	EXISTING TO REMAIN
GFI	GROUND FAULT INTERRUPTING RECEPTACLE, AUTOMATIC SELF-TEST/RESET, GREEN/RED PILOT
OC	OVER COUNTER
ER	EXISTING TO BE REMOVED AND RELOCATED C/W CONDUIT AND WIRING
EN	EXISTING RELOCATED IN NEW LOCATION C/W CONDUIT AND WIRING
AFF	ABOVE FINISHED FLOOR

ONELINE DIAGRAM LEGEND

SYMBOL	DESCRIPTION
100A	CIRCUIT BREAKER - RATING AS INDICATED
	CURRENT TRANSFORMER
	DRY TYPE TRANSFORMER
	GROUND
M	METER

LIGHTING FIXTURE SCHEDULE

TYPE	DESCRIPTION	CATALOG NUMBER	WATTS	COLOUR	VOLT	MOUNTING	REMARKS
A	24" ROUND LIGHT	LUMENWERX	84.31W	3500K	120V	SURFACE	CONFIRM WITH ARCHITECT FOR FINISH
		SHLS-S-24-HLO-SW-90-6000-35-120-D1-IDB-1					MOUNTING HEIGHT 10 FEET
B	PENDENT LIGHT	LUMENWERX	32.5W	3500K	120V	PENDENT	C/W AIR CRAFT CABLE
		POROPD-48-ULO-XX-LED-80-14000-35-120-D1-1-5WAC36-W					MOUNTING HEIGHT 18 FEET
C1	SUSPENDED LIGHTS	EDISON LIGHTING	21W	3500K	120V	SUSPENSION	CONFIRM WITH ARCHITECT FOR FINISH
		ED VECTOR+3FEET-7WFTLED-DD-120V-DL-S4-XX-XX-35K					MOUNTING HEIGHT 8.8 FEET C/W CANOPY AND PENDANTS
C2	SUSPENDED LIGHTS	EDISON LIGHTING	28W	3500K	120V	SUSPENSION	CONFIRM WITH ARCHITECT FOR FINISH
		ED VECTOR+4FEET-7WFTLED-DD-120V-DL-S4-XX-XX-35K					MOUNTING HEIGHT 8.8 FEET C/W CANOPY AND PENDANTS
C3	SUSPENDED LIGHTS	EDISON LIGHTING	42W	3500K	120V	SUSPENSION	CONFIRM WITH ARCHITECT FOR FINISH
		ED VECTOR+6FEET-7WFTLED-DD-120V-DL-S4-XX-XX-35K					MOUNTING HEIGHT 8.8 FEET C/W CANOPY AND PENDANTS
D1	4' LED LIGHTS	CREE LIGHTING	48W	3500K	120V	SURFACE	
		LS4-50L-35K-10V #					
D2	4' LED LIGHTS	CREE LIGHTING	80W	3500K	120V	SURFACE	
		LS8-50L-35K-10V #					
E1	PENDENT LAMP	KUZCO LIGHTING	60W	3500K	120V	PENDENT	C/W CLOTH CABLE
		492316-BK-GD					MOUNTING HEIGHT 7.5 FEET
F	EXTERIOR SOFFIT	KUZCO LIGHTING	15W	4000K	120V	SURFACE	C/W MOUNTING ACCESSORIES
		EC34505-120V-BLACK					

NOTE:-COORDINATE WITH ARCHITECT FOR LIGHT FIXTURE COLOR FINISH

GENERAL NOTES

DEMOLITION NOTES:

1. UNLESS OTHERWISE NOTED, MATERIALS FOR REMOVAL BECOME THE CONTRACTOR'S PROPERTY AND SHALL BE TAKEN FROM SITE AND DISPOSED OF IN ACCORDANCE WITH ALL APPLICABLE CODES, STANDARDS AND REGULATIONS.
2. DISCONNECT AND MAKE SAFE ALL SYSTEMS TO BE DEMOLISHED INCLUDING PANELS, FEEDERS, BRANCH CIRCUITS AND EQUIPMENT BY OTHER DIVISIONS. COORDINATE WITH OTHER DIVISIONS.
3. MAINTAIN EXISTING REMAINING CIRCUITS, SYSTEMS, ETC., WHICH PASS THROUGH AREA OF CONSTRUCTION AND IN CLOSE PROXIMITY. PROVIDE NECESSARY COMPONENTS TO MAINTAIN SYSTEMS. ENSURE COMPONENTS WILL BE CONCEALED WHEN CONSTRUCTION IS COMPLETE.
4. REINSTATE IMMEDIATELY ANY REMAINING EXISTING SYSTEMS IN-ADVERTENTLY INTERRUPTED DURING CONSTRUCTION.
5. THE DRAWINGS INDICATE KNOWN CONDITIONS AND MAY NOT INDICATE ALL DEMOLITION REQUIREMENTS. ELECTRICAL CONTRACTOR SHALL VISIT THE SITE PRIOR TO TENDER SUBMISSION AND VERIFY REQUIREMENTS AND INCLUDE ALL COSTS IN TENDER.
6. REMOVE REDUNDANT CONDUIT AND WIRING BACK TO SOURCE UNLESS OTHERWISE NOTED, AND MAKE SAFE.
7. DEVICES FROM DEMOLITION ARE NOT TO BE REUSED UNLESS NOTED OTHERWISE. NEW DEVICES SHALL BE SUPPLIED WHERE NECESSARY.
8. ALL FIRE ALARM DEVICES TO REMAIN IN OPERATION. PROTECT SMOKE DETECTORS FROM DUST EXPOSURE DURING CONSTRUCTION.
9. ENSURE FIRE ALARM SYSTEM IS OPERATIONAL AT THE END OF EACH SHIFT.
10. AFTER DEMOLITION WORK IS COMPLETE AND MINIMUM THREE (3) WORKING DAYS PRIOR TO PROCEEDING WITH NEW WORK, NOTIFY ENGINEER FOR INSPECTION.
11. PROPERLY DISPOSE OF ALL T8 LIGHT TUBES AND PROVIDE OWNER WITH A COPY OF THE MANIFEST OF DISPOSAL.

GENERAL NOTES:

1. ELECTRICAL WORK TO BE DONE IN ACCORDANCE WITH THE ELECTRICAL SAFETY CODE OF ONTARIO, AND WITH NEW ARCHITECTURAL/INTERIOR DESIGNER'S LAYOUT (LOCATION/MOUNTING HEIGHTS). CONTRACTOR TO OBTAIN ALL NECESSARY PERMITS, PAY ALL APPLICABLE FEES AND INSPECTION COSTS.
2. COORDINATE WORK WITH ALL OTHER TRADES TO AVOID INTERFERENCE.
3. ENSURE ELECTRICAL COMPONENTS (IE. WIRING, CONDUIT, ETC.) RELATING TO THE AREA OF WORK ARE INDEPENDENTLY SECURED TO COMPLY WITH CODE REQUIREMENTS. IT IS NOT ACCEPTABLE TO SECURE THE COMPONENTS TO DUCTWORK, DUCT WORK TO CONDUIT, OR ANY OTHER SYSTEMS.
4. ENSURE ALL EXISTING CEILING MOUNTED BOXES ARE CLOSED PRIOR TO COMPLETION OF PROJECT. PROVIDE LABELLED AND COLOUR CODED COVER PLATES (IE. PANEL NAME AND CIRCUIT NUMBER) AS REQUIRED.
5. MINIMUM THREE (3) WORKING DAYS PRIOR TO CLOSING CEILING, NOTIFY THE ENGINEER FOR CEILING INSPECTION.
6. TIE UP ALL EXISTING CABLEING (ELECTRICAL AND LOW VOLTAGE) IN THE CEILING SPACE USING J HOOKS TO THE BAR JOISTS.

EXIT LIGHTS:

1. CONNECT EXIT LIGHTS TO AC AND DC SUPPLIES.
2. ADD/REMOVE DIRECTIONAL ARROWS TO SUIT FLOOR PLAN LAYOUT.
3. TO MATCH EXISTING.

LIGHTING NOTES:

1. LUMINARES IN CONSTRUCTION AREA ARE TO BE INDEPENDENTLY SUPPORTED, INCLUDING EXISTING TO REMAIN, RELOCATED AND NEW, TO COMPLY WITH CODE REQUIREMENTS.
2. ADD, RELOCATE AND CONNECT LIGHT FIXTURES TO SUIT INDICATED LAYOUT, EXTEND CONDUIT AND WIRING AS NECESSARY AND CONNECT LUMINARES TO EXISTING CIRCUITS. TURN OVER SURPLUS FIXTURES TO OWNER.
3. WHERE AIR SUPPLY TROFFER ARE BEING RELOCATED BY MECHANICAL CONTRACTOR TO EXISTING LIGHT FIXTURE, ELECTRICAL CONTRACTOR TO COORDINATE DISCONNECTION AND RECONNECTION AS REQUIRED.
4. FIXTURE LAMPS SHALL BE PROPERLY DISPOSED. PROVIDE UCDCB PROJECT MANAGER WITH PROOF OF ENVIRONMENTAL DISPOSAL.
5. EXISTING LIGHT FIXTURE IS TO BE REMOVED AND RETURNED OVER TO THE OWNER.

FIRE ALARM NOTES:

1. PROVIDE NEW CIRCUITS AS REQUIRED FOR AUDIBLE AND ALARM CIRCUITS.
2. TEST FINAL INSTALLATION AND PROVIDE VERIFICATION OF FIRE ALARM SYSTEMS IN ACCORDANCE WITH CAN/ULC S537 LATEST EDITION. VERIFICATION REPORT SHALL INCLUDE MEASURED dB LEVELS.
3. ALL NEW DEVICES TO BE EST EDWARDS SYSTEMS TECHNOLOGY AND MATCH EXISTING. PROVIDE SHOP DRAWINGS FOR APPROVAL.

POWER NOTES:

1. ENSURE EXISTING REMAINING OUTLETS IN AFFECTED AREA ARE FUNCTIONAL.
2. DO NOT MOUNT WALL OUTLETS BACK TO BACK. LEAVE MINIMUM 300mm [12"] SPACE BETWEEN OUTLETS. STAGGER OUTLETS WITHIN ALTERNATE STUD CAVITIES. DO NOT ANCHOR BACK TO BACK OUTLETS TO THE SAME STUD.

COMMUNICATION NOTES:

1. PROVIDE PLASTER RINGS FOR OUTLETS WITH OUTLET BOXES 108mm SQUARE X 63mm DEEP [4" SQUARE X 2 1/2" DEEP] EACH WITH 21mm [3/4"] EMPTY CONDUIT TO CEILING SPACE C/W BUSHING AND PULL STRINGS. NEW TEL AND/OR DATA CABLES, TERMINAL DEVICES AND COVER PLATES WILL BE SUPPLIED AND INSTALLED BY ELECTRICAL CONTRACTOR.

ALL DATA AND COMMUNICATION WIRING TO BE COMPLETE BY OWNERS PA & DATA CONTRACTOR.

OUTLETS LOCATION:

1. EXACT LOCATION AND MOUNTING HEIGHTS OF OUTLETS TO BE COORDINATED WITH ARCHITECTURAL DRAWINGS PRIOR TO ROUGH IN. REFER TO ARCHITECTURAL DRAWINGS FOR REQUIREMENTS.
2. BRING TO THE ATTENTION OF THE ARCHITECT DESIGNER AND ENGINEER ANY CONFLICTS OR REQUIRED CLARIFICATION.
3. FAILING TO COORDINATE, THE CONTRACTOR WILL MODIFY THE INSTALLATION AT HIS EXPENSE, IF REQUIRED.

Client

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Seal/Sceau

LICENSED PROFESSIONAL ENGINEER
D.B.VYAS
100133120
July 27, 2020
PROVINCE OF ONTARIO

Project/Projet

ARLINGTON WOODS
FREE METHODIST CHURCH
RENOVATION

225 McClellan Rd, Ottawa, ON K2H 8N5

Drawing title/Titre du dessin

ELECTRICAL DRAWING LIST, LEGENDS & LIGHTING FIXTURES SCHEDULE

Scale / Échelle	AS NOTED	Project no./No. du projet	2019-333-1
Design by / Conçu par	J.ANTALA	Drawing/Dessin	E1
Drawn by / Dessiné par	J.ANTALA		OF 10
Reviewed by / Examiné par	D.VYAS		
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ELECTRICAL SPECIFICATIONS:

1. COMPLY WITH THE REQUIREMENTS OF THE INSTRUCTIONS TO BIDDERS, THE GENERAL CONDITIONS OF THE CONTRACT AND THE SUPPLEMENTARY GENERAL CONDITIONS INCLUDED IN THE TENDER DOCUMENTS.

2. CONTRACTOR SHALL FOLLOW THE BIDDING DOCUMENT PROJECT SCHEDULE. UPON AWARD, CONTRACTOR SHALL SUBMIT WORK SCHEDULE AND EQUIPMENT DELIVERY SCHEDULE TO PROJECT MANAGER & ENGINEER FOR REVIEW AND APPROVAL.

3. ALL WORK TO BE CONDUCTED DURING HOURS SPECIFIED BY THE PROJECT MANAGER.

4. ALL INSTALLATIONS SHALL BE IN ACCORDANCE WITH ALL APPLICABLE CODES AND BY-LAWS AND BE INSTALLED BY LICENSED WORKMEN SKILLED IN THAT PARTICULAR PORTION OF THE CONTRACT.

5. ANY CONFLICT OR QUESTIONS THAT ARISE IN RELATION TO THE DESIGN DOCUMENTS DURING THE TENDER PERIOD SHALL BE BROUGHT TO THE ATTENTION OF THE ENGINEER. IF THIS PROCEDURE IS NOT FOLLOWED, REROUTING AND MODIFICATION AS REQUIRED TO COMPLETE THE WORK SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR.

6. GIVE ALL NOTICES, OBTAIN ALL NECESSARY PERMITS AND PAY ALL APPLICABLE FEES AND INSPECTION COSTS AND DELIVER TO ENGINEER ALL NECESSARY FINAL CERTIFICATES OF INSPECTION AND APPROVAL WHICH MAY BE REQUIRED BY AUTHORITIES HAVING JURISDICTION OVER WORK, AS EVIDENCE THAT WORK INSTALLED CONFORMS WITH LAWS AND REGULATIONS OF ALL GOVERNING AUTHORITIES, BEFORE FINAL CERTIFICATE OF PAYMENT MAY BE CONSIDERED DUE. FURNISH COPIES OF ALL DRAWINGS AS MAY BE REQUIRED TO COMPLY WITH ABOVE. NOTIFY INSPECTION AUTHORITIES IN SUFFICIENT TIME FOR THEM TO INSPECT WORK.

7. EXAMINE SITE AND LOCAL CONDITIONS AFFECTING WORK UNDER THIS DIVISION TO ENSURE THAT WORK UNDER THIS DIVISION CAN BE SATISFACTORILY CARRIED OUT WITHOUT CHANGES TO DRAWINGS. NO ALLOWANCE WILL BE MADE LATER FOR ANY EXPENSE INCURRED THROUGH FAILURE TO MAKE THIS EXAMINATION. START OF WORK WILL BE DEEMED EVIDENCE OF ACCEPTANCE OF, AND SATISFACTION WITH, EXISTING CONDITIONS.

8. GUARANTEE ALL WORK FOR [12 MONTHS] FROM THE DATE OF ACCEPTANCE.

9. ENSURE THAT ALL PRECAUTIONS ARE TAKEN TO PROTECT ALL PERSONNEL FROM HAZARDS DURING THE WORK. PROTECT ALL EQUIPMENT FROM DAMAGE FROM ANY CAUSE INCLUDING WEATHER.

10. USE ONLY NEW, FULLY CSA AND ULC APPROVED FOR USE AS INSTALLED MATERIALS, AND TO MEET THIS SPECIFICATION IN ALL RESPECTS.

11. INSPECT ALL EQUIPMENT UPON DELIVERY AND NOTIFY PROJECT ENGINEER OF ANY DAMAGE OR DEFICIENCIES.

12. COORDINATE MATERIAL STORAGE WITH THE SITE SUPERINTENDENT AND OTHER TRADES.

13. CONTRACTOR TO NOTIFY PROJECT MANAGER IN WRITING MINIMUM OF THREE (3) WORKING DAYS BEFORE SCHEDULED SUBSTANTIAL COMPLETION TO ARRANGE INTERIM INSPECTION AND EQUIPMENT COMMISSIONING. NOTIFY PROJECT MANAGER IN WRITING OF ANY CHANGES IN SCHEDULE.

14. DURING THE COURSE OF CONSTRUCTION AND UPON COMPLETION, REMOVE ALL RUBBISH AND WASTE RESULTING FROM THIS WORK, TO THE SATISFACTION OF THE ENGINEER. CHECK, CLEAN AND REPAINT WHERE NECESSARY, ALL ELECTRICAL EQUIPMENT AND LEAVE IN A FIRST CLASS CONDITION.

15. THE WORK AS COVERED BY THESE SPECIFICATIONS AND PLANS IS INTENDED TO COMPLY EXACTLY WITH THE LATEST RULES AND REGULATIONS OF THE INSPECTION AUTHORITIES, AND THESE RULES ARE TO BE CONSIDERED AN INTEGRAL PART OF THESE SPECIFICATIONS. IN CASE OF CONFLICT, ANY RULING BY THE INSPECTION AUTHORITY SHALL BE FINAL. ALL CHANGES AND ALTERATIONS TO THE CONTRACTOR'S WORK REQUIRED BY AN AUTHORIZED INSPECTOR OR ANY AUTHORITY HAVING JURISDICTION DUE TO THE CONTRACTORS WORK SHALL BE CARRIED OUT AT NO EXPENSE TO THE OWNER.

16. MANUFACTURER'S INSTRUCTIONS REGARDING THE HANDLING, INSTALLATION AND TESTING OF EQUIPMENT SPECIFIED HEREIN SHALL BE CONSIDERED PART OF THIS SPECIFICATION.

17. PROVIDE ELECTRONIC COPY (PDF FORMAT) OF SHOP DRAWINGS FOR ALL SYSTEMS AND EQUIPMENT FOR REVIEW. SHOP DRAWINGS SHALL INCLUDE BUT NOT BE LIMITED TO, THE FOLLOWING INFORMATION:
   a. FLOOR ANCHORING METHOD AND FOUNDATION TEMPLATE.
   b. DIMENSIONED CABLE ENTRY AND EXIT LOCATIONS.
   c. DIMENSIONED POSITION AND SIZE OF BUS.
   d. OVERALL WEIGHT, LENGTH, HEIGHT AND DEPTH, GAUGE AND TYPE OF MATERIALS.
   e. DIMENSIONED LAYOUT OF INTERNAL AND FRONT PANEL.
   f. MOUNTED COMPONENTS.
   g. ELECTRICAL CHARACTERISTICS AND PERFORMANCE DATA.
   h. WIRING DIAGRAMS.
   i. NAME OF CONTRACTOR C/W SIGNED REVIEW STAMP.
   j. NAME OF COMPONENT, SERVICE OR SYSTEM.
   k. NUMBER OF PAGES FOR EACH TYPED PAGE (IE. PG 1 OF 5).

18. SUBMIT ELECTRONIC (PDF FORMAT) COPY OF OPERATION & MAINTENANCE (O&M) MANUALS FOR APPROVAL. PROVIDE A COPY OF THE FOLLOWING IN THE MANUALS:
   a. LETTER OF WARRANTY
   b. ELECTRICAL SAFETY AUTHORITY (ESA) INSPECTION CERTIFICATE.
   c. CITY INSPECTION REPORT
   d. FIRE ALARM VERIFICATION REPORT
   e. UPDATED PANEL SCHEDULES, C/W ELECTRICAL COMPANY'S NAME AND DATED
   f. SHOP DRAWINGS
   g. AS BUILTS
   h. LOAD BALANCING REPORT.
   i. MECHANICAL EQUIPMENT START UP REPORTS.
   j. LIST OF SUPPLIERS C/W ADDRESS AND PHONE NUMBERS.
   k. SEISMIC REVIEW LETTER.

19. SUPPLY ALL NECESSARY TOOLS, EQUIPMENT AND PERSONNEL AND PROVIDE DEMONSTRATION AND TRAINING TO OPERATING AND MAINTENANCE PERSONNEL IN OPERATING, CONTROLLING, ADJUSTING, TROUBLESHOOTING AND SERVICING OF ALL SYSTEMS AND EQUIPMENT DURING REGULAR WORK HOURS, PRIOR TO ACCEPTANCE.

20. AFTER AWARD OF CONTRACT, SUBMIT A DETAILED COST BREAKDOWN INDICATING MATERIAL AND LABOUR COSTS FOR EACH PORTION OF THE WORK, INCLUDING DEMOLITION, LIGHTING, POWER DISTRIBUTION, COMMUNICATIONS, FIRE ALARM, ETC. TO BE APPROVED BY THE ENGINEER.

21. EXISTING ELECTRICAL SYSTEMS HAVE BEEN ONLY PARTIALLY INDICATED. REGARD INFORMATION RELATED TO EXISTING INSTALLATION AS A GUIDE ONLY. DETERMINE STATUS, QUANTITIES AND LOCATION OF EQUIPMENT AND SYSTEMS, ON SITE, PRIOR TO COMMENCEMENT OF REMOVAL AND/OR EXTENSION OF SAME.

22. THE DRAWINGS SHALL BE CONSIDERED TO SHOW THE GENERAL CHARACTER AND SCOPE OF THE WORK AND NOT THE EXACT DETAILS OF THE INSTALLATION. THE INSTALLATION SHALL BE COMPLETE WITH ALL ACCESSORIES REQUIRED FOR A COMPLETE AND OPERATIVE INSTALLATION.

23. THESE ELECTRICAL DRAWINGS AND SPECIFICATIONS MUST BE READ IN CONJUNCTION WITH THE ARCHITECTURAL AND MECHANICAL DRAWINGS AND SPECIFICATIONS.

24. THE WORD "PROVIDE" SHALL DENOTE "SUPPLY, INSTALL, CONNECT AND TEST".

25. LABELING:
   a. FOR ALL NEW, RELOCATED AND EXISTING-TO-REMAIN ELECTRICAL DEVICES WITHIN THE CONTRACT AREA, PROVIDE CLEAR "BROTHER P-TOUCH" LABELS INDICATING CIRCUIT AND PANEL AT ALL EQUIPMENT, DEVICES, RECEPTACLES AND JUNCTION BOXES. FOR DEDICATED RECEPTACLE, INCLUDE THE WORD "DED" C/W CIRCUIT NUMBER. FOR EXIT LIGHTS, PROVIDE [BLACK] LETTERING ON [RED] BACKGROUND.
   b. PROVIDE LAMACOID LABELS ON DISCONNECT SWITCHES, MOTOR STARTERS, TRANSFORMERS AND PANELS. CLEARLY INDICATE EQUIPMENT CONTROLLED OR AREA SERVICED AS WELL AS FEEDER SOURCE. INDICATE FUSE SIZE AND TYPE ON FUSED DISCONNECTS SWITCHES. LETTERING TO BE BLACK ON WHITE BACKGROUND, MINIMUM 25mm [1"] HIGH.
   c. TRACE EXISTING CIRCUITS AND UPDATE PANEL SCHEDULES.

26. PROVIDE CUTTING, PATCHING AND CORING OF ALL WALLS, CEILINGS AND OTHER SURFACES REQUIRED TO FIT THE ELECTRICAL EQUIPMENT. CHECK WITH BUILDING MANAGEMENT PRIOR TO CORE DRILLING AND CUTTING OF FLOOR SLAB, REGARDING BUILDING REQUIREMENTS AND POLICIES. PRIOR TO SLAB CUTTING OR CORING, FIRST SCAN THE SLAB AND COORDINATE DRILLING TO MINIMIZE CUTTING OF THE REINFORCING STEEL. FIRE STOP ALL NEW FIRE RATED PENETRATIONS. THE CONTRACTOR IS TO INCLUDE IN TENDER PRICE ALL WORK ASSOCIATED WITH CORE DRILLING AFTER NORMAL WORKING HOURS. OBTAIN WRITTEN VERIFICATION OF THE LOCATIONS FROM THE ARCHITECT PRIOR TO DRILLING. CUTTING TORCHES SHALL NOT BE USED FOR MAKING HOLES. PATCH ALL HOLES THROUGH SLAB WITH FIRE-STOP CAULKING (ULC LISTED). PATCHED SURFACES ARE TO BE PRIME FINISHED, READY FOR FINAL COVERING BY OTHERS.

27. SEISMIC RESTRAINT SYSTEM (SRS):

   a. GENERAL:
      a.a. PROVIDE DESIGN, SUPPLY AND INSTALLATION OF COMPLETE SRS FOR ALL SYSTEMS, EQUIPMENT SPECIFIED FOR INSTALLATION ON THIS PROJECT AS PER ONTARIO BUILDING CODE (2006) [NATIONAL BUILDING CODE 2010], CSA S832-06(R.2011).
      a.b. DESIGN TO BE BY PROFESSIONAL ENGINEER SPECIALIZING IN DESIGN OF SRS AND REGISTERED IN PROVINCE OF ONTARIO. INCLUDE ALL COSTS ASSOCIATED WITH THIS WORK AS IT RELATES TO DIVISION [16] [26] [27] [28] INSTALLATIONS. SUBMIT DESIGN SKETCHES C/W PROFESSIONAL STAMP PRIOR TO START OF INSTALLATIONS, C/W INSTALLATION REQUIREMENTS.
      a.c. ACCEPTABLE MATERIALS: KORFUND-SAMPSON, MASON INDUSTRIES, TELCOUSTICS, VIBRA-SONIC CONTROL, VIBRON.
      a.d. SUBMITTALS TO INCLUDE FULL DETAILS OF DESIGN CRITERIA.
      a.e. SUBMIT ADDITIONAL COPY OF SHOP DRAWINGS AND PRODUCT DATA TO STRUCTURAL ENGINEER FOR REVIEW OF CONNECTION POINTS TO BUILDING STRUCTURE.
      a.f. INSTALL VIBRATION ISOLATION EQUIPMENT IN ACCORDANCE WITH MANUFACTURER'S INSTRUCTIONS AND ADJUST MOUNTINGS TO LEVEL EQUIPMENT. ENSURE PIPE, DUCT AND ELECTRICAL CONNECTIONS TO ISOLATED EQUIPMENT DO NOT REDUCE SYSTEM FLEXIBILITY. ENSURE THAT PIPE, CONDUIT AND DUCT PASSING THROUGH WALLS AND FLOORS DO NOT TRANSMIT VIBRATIONS.

28. ANCHORING METHODS:
   a. ELECTRICAL EQUIPMENT, FIXTURES, CONDUIT AND CABLING IS TO BE SECURELY ANCHORED OR FASTENED TO THE BUILDING STRUCTURE USING DRILLED HOLE WEDGE ANCHORS FOR CONCRETE STRUCTURES OR STEEL CLAMPS FOR STEEL STRUCTURES.
      a.a. AIR, FUEL OR POWDER ACTUATED DEVICES OR ANY OTHER EQUIVALENT TYPE OF FASTENING DEVICES ARE NOT TO BE USED.
      a.b. WHERE ANCHORING METHOD FORMS PART OF SEISMIC RESTRAINT REQUIREMENTS, ANCHORING METHODS TO COMPLY WITH SEISMIC RESTRAINT SYSTEMS (SRS).

   b. LUMINAIRE SUPPORTS:
      b.a. FOR RECESSED OR SURFACE MOUNTED LIGHTING IN SUSPENDED CEILING INSTALLATIONS, SUPPORT LUMINAIRES INDEPENDENTLY FROM CEILING, BY MEANS OF A MINIMUM OF TWO CHAIN HANGERS BOLTED TO DIAGONAL CORNERS OF THE FIXTURE BODY AND SECURED TO BUILDING STRUCTURE IN ACCORDANCE WITH ESA, AND SEISMIC RESTRAINT SYSTEMS (SRS).
      b.b. FOR GYMNASIUM OR OTHER TYPE OF HIGH-BAY LIGHT FIXTURES, PROVIDE A SAFETY CABLE BETWEEN FIXTURE HOUSING AND LENS OR REFRACTOR.

29. GROUNDING AND BONDING:
   a. PROVIDE GROUNDING AND BONDING OF ALL EQUIPMENT WITH APPROVED FITTINGS AND CONDUCTORS OF AMPLE CAPACITY IN ACCORDANCE WITH ONTARIO ELECTRICAL SAFETY CODE. ALL CONDUCTORS SHALL HAVE GREEN INSULATION OR BE COLOUR CODED WITH PERMANENTLY ATTACHED GREEN TAPE 21MM [3/4"] WIDE AT EACH END. PROVIDE INSULATED GROUND/BONDING CONDUCTOR IN EACH CONDUIT.

30. WIRING AND RACEWAYS:
   a. ALL INTERIOR WIRING SHALL BE COPPER RW90 T90 FOR 120V #12 CONDUCTOR MINIMUM.
   b. ALL EXTERIOR UNDERGROUND WIRING TO BE COPPER RW/-90, MINUS 40 C RATED.
   c. AC-90 (BX) MAY BE USED IN REMOVABLE CEILINGS AND METAL PARTITION WALLS, MAXIMUM LENGTH 3 METERS.
   d. ALL NEW RACEWAYS SHALL BE THIN WALL ELECTRICAL METALLIC TUBING (EMT) RAIN-TIGHT COUPLING AND CONN. UNLESS OTHERWISE INDICATED. CONDUITS TO BE COMPLETE WITH STEEL SET-SCREW COUPLINGS AND CONNECTORS AND NYLON BUSHING.
   e. USE LIQUID TIGHT FLEXIBLE METAL CONDUIT FOR CONNECTION TO MOTORS.
   f. USE LIQUID TIGHT FLEXIBLE METAL CONDUIT FOR CONNECTION TO EQUIPMENT IN DAMP, WET OR CORROSIVE LOCATIONS.
   g. SURFACE CONDUIT TO RUN PARALLEL OR PERPENDICULAR TO BUILDING LINES.
   h. ALL CONDUITS AND JUNCTION BOXES TO BE ANCHORED TO THE BUILDING STRUCTURE.
   i. PROVIDE A POLYPROPYLENE PULL STRING IN ALL EMPTY CONDUITS.
   j. EXISTING FEEDERS RELOCATED UNDER THIS CONTRACT TO BE REWIRED: SPLICE NEW WIRE TO EXISTING WIRE FROM JUNCTION BOX TO JUNCTION BOX, OR FROM JUNCTION BOX TO EXISTING EQUIPMENT.
   k. CONTRACTOR MAY RE-USE EXISTING CONDUIT AND/OR GRID PULL BOXES WHERE SUITABLE FOR RE-USE WITH NEW OR RELOCATED RUNS.
   l. REMOVE AND DISPOSE OF ANY REDUNDANT EXISTING WIRING.
   m. 120V CIRCUITS OF LENGTH GREATER THAN 25m [85'] TO BE #10 AWG MINIMUM OR AS REQUIRED TO LIMIT VOLTAGE DROP WITHIN CODE SPECIFIED VALUE.
   n. MINIMUM SIZE CONDUIT TO BE 21mm [3/4"] UNLESS SPECIFIED OTHERWISE.

31. ALL NEW SURFACE MOUNTED EQUIPMENT IS TO BE SPRINKLERPROOF, EEMAC TYPE 2, IN SPRINKLERED AREAS.

32. DEVICES: SWITCHES AND RECEPTACLES TO BE SPECIFICATION GRADE WITH COVER PLATES AND COLOUR TO CONFORM WITH ARCHITECTURAL DESIGNER'S DRAWINGS. INSTALL & MOUNT TO CODES AND STANDARDS. COORDINATE EXACT LOCATIONS WITH ARCHITECTURAL DESIGNER'S DRAWINGS.

   WIRING DEVICES COLOUR CODING:

DEVICE	COVER	PLATE
STANDARD RECEPTACLE	AS PER ARCH/DESIGNER	AS PER ARCH/DESIGNER-STAINLESS STEEL
ISOLATED GROUND RECEPT.	AS PER ARCH/DESIGNER	AS PER ARCH/DESIGNER-STAINLESS STEEL
LIGHT SWITCH	AS PER ARCH/DESIGNER	AS PER ARCH/DESIGNER-STAINLESS STEEL

CONFIRM DESIRED HEIGHT WITH CLIENT/ARCHITECT/INTERIOR DESIGNER

33. MOUNTING HEIGHTS:

UNLESS NOTED OTHERWISE, MOUNTING HEIGHT FOR ALL ELECTRICAL DEVICES SHALL MEET 'BARRIER-FREE' CODE REQUIREMENTS:

   a. 400mm [18"] A.F.F. FOR RECEPTACLES, VOICE/DATA OUTLETS, ETC.
   b. 1200mm [48"] A.F.F. FOR LIGHT SWITCHES, THERMOSTATS, ETC.
   c. 175mm [6-3/4"] ABOVE TOP OF COUNTERS OR COUNTER BACK SPLASHES.
   d. 1200mm [48"] A.F.F. FOR PULL STATIONS
   e. 2100mm [82-1/2"] A.F.F. FOR WALL MOUNTED SPEAKERS, BELLS, CLOCKS, ETC.

34. LUMINAIRES:
   a. PROVIDE LIGHTING FIXTURES, COMPLETE WITH LAMPS, AS INDICATED IN LIGHT FIXTURE SCHEDULE.

35. FIXTURE INSTALLATION: DO NOT MOUNT FIXTURES ABOVE PIPES, DUCTS OR EQUIPMENT. CHECK LAYOUTS OF WORK BY OTHER TRADES ON PROJECTS AND PLAN COOPERATIVELY WITH OTHERS TO AVOID CONFLICT. PROVIDE LONGER HANGERS TO CLEAR OBSTRUCTIONS, IN EVENT OF UNAVOIDABLY TIGHT LOCATIONS. PROVIDE CHAIN HANGERS FOR ALL FIXTURES IN T-BAR CEILINGS.

36. EXIT LIGHTS:
   a. EXIT:
      a.a. TO CSA C22.2 NO.141[-02][-10] AND CSA C860.
      a.b. HOUSING: EXTRUDED ALUMINUM, BRUSHED ALUMINUM FINISH.
      a.c. FACE AND BACK PLATES: EXTRUDED ALUMINUM.
      a.d. LAMPS: LED WITH 25-YEAR RATED LIFE.

   b. PICTOGRAM: ALUMINUM FRAME, OPAL DIFFUSER PANEL, PICTOGRAM PANEL WITH MULTIPLE FILMS FOR DIRECTION SELECTION, AND CLEAR PROTECTIVE PANEL. PICTOGRAM PANEL SHALL CONSIST OF GREEN PICTOGRAM AND WHITE GRAPHIC SYMBOL MEETING THE VISIBILITY SPECIFICATIONS REFERRED TO IN ISO 3864-1, AND CONFORM TO THE DIMENSIONS INDICATED IN ISO 7010.
   c. SUITABLE FOR 120V NORMAL SUPPLY AND 12VDC EMERGENCY SUPPLY.
   d. DIE CAST MOUNTING BRACKET FOR WALL, CEILING, OR END MOUNTING AS INDICATED.
   e. PROVIDE CIRCUIT LABELS AT ALL EXIT SIGNS.
   f. EQUAL TO: EMERGI-LITE EA SERIES.

37. UNIT EQUIPMENT FOR EMERGENCY LIGHTING:
   a. REMOTE LIGHTING HEADS TO BE [5W], [12V], 100 HOUR MR16 LED LAMPS IN DIE CAST METAL HEAD WITH FULLY ADJUSTABLE AIMING. RUN WIRING IN CONDUIT MINIMUM #10 AWG OR AS RECOMMENDED BY MANUFACTURER, VOLTAGE DROP AT ANY REMOTE HEAD SHALL NOT EXCEED 5%.
   b. FEED EMERGENCY SOCKET IN EXIT LIGHTS FROM A BATTERY UNIT, AND CONNECT REMOTE LIGHTING HEADS.

38. FIRE ALARM:

   a. EXISTING FIRE ALARM SYSTEM IS EDWARDS-6616
   b. ALL NEW FIRE ALARM SYSTEM COMPONENTS TO BE CAN/ULC APPROVED AND MATCH EXISTING.
   c. FIRE ALARM MAINTENANCE CONTRACTOR IS TOTAL FIRE PROTECTION.
   d. ALL NEW DEVICES TO BE LABELED WITH CORRECT IDENTIFICATION, INCLUDING THE LOOP AND THE DEVICE NUMBER, ON THE BASE OF THE DEVICE IN ACCORDANCE WITH BUILDING STANDARD. LABELING OF THE DEVICE MUST BE VISIBLE ON THE OUTSIDE FOR EASY IDENTIFICATION BY MAINTENANCE PERSONNEL.
   e. ALL NEW DEVICES TO BE VERIFIED BY MANUFACTURER & FIRE ALARM AGENCY RESPONSIBLE FOR MAINTENANCE OF THE SYSTEM.
   f. THE FIRE ALARM DEVICE LEGEND MUST BE UPDATED IMMEDIATELY TO ADD NEW DEVICES AND TO REMOVE ANY DEVICES THAT HAVE BEEN ELIMINATED AS A RESULT OF THE PROJECT. AT THE COMPLETION OF THE PROJECT AN UPDATED FIRE ALARM ADDRESSABLE DEVICE LEGEND FOR THE BUILDING MUST BE SUBMITTED TO THE PROJECT MANAGER.
   g. THE SEQUENCE OF OPERATIONS OF FIRE SAFETY SYSTEMS MUST BE PROVIDED TO THE PROJECT MANAGER (ie. DOOR HOLDERS, EPO SHUTDOWNS, FAN SHUTDOWNS, DAMPER OPERATION, AC SHUTDOWNS ETC.)
   h. ALL WORK BEING CARRIED OUT ON THE FIRE SAFETY SYSTEMS MUST BE RECORDED IN THE LOGBOOK EVERY DAY, IN ADDITION TO THE REQUIREMENT OF A SIGNED WORK PERMIT.
   i. IF THE CONTRACTOR DOING WORK ON THE FIRE ALARM SYSTEM IS NOT THE "MAINTENANCE" CONTRACTOR, THE MAINTENANCE CONTRACTOR MUST BE ADVISED IN ADVANCE AND BE PRESENT AT ALL OR PART OF THE VERIFICATION FOR THE PURPOSES OF ACCEPTING THE WORK THAT WAS CARRIED OUT BY THE PROJECT CONTRACTOR. A MINIMUM OF [THREE (3)] HOURS SHALL BE CARRIED FOR THE MAINTENANCE CONTRACTOR.
   j. NOTIFY AND DEMONSTRATE THE COMPLETE SYSTEM TO OWNER'S AND BUILDING INSPECTION'S REPRESENTATIVES ONLY AFTER TESTING AND VERIFICATION PERFORMANCES HAVE BEEN COMPLETED AND ALL DEFICIENCIES RECTIFIED. IN THEIR PRESENCE, DEMONSTRATE THE PROPER FUNCTIONING OF THE SYSTEM. HAVE SYSTEM MANUFACTURER'S CERTIFIED TECHNICIAN PRESENT.

39. DISCONNECT SWITCHES:
   a. HEAVY DUTY FUSIBLE AND NON-FUSIBLE DISCONNECT SWITCH IN CSA ENCLOSURE 2 (SPRINKLER PROOF), SIZED AS INDICATED. CSA 3 ENCLOSURE IN OUTDOOR OR DAMP LOCATIONS. ARC QUENCHER AND VISIBLE BLADE, QUICK MAKE, QUICK BREAK TYPE.
   b. PROVISION FOR PADLOCKING IN [ON-]OFF SWITCH POSITION.
   c. MECHANICALLY INTERLOCKED DOOR TO PREVENT OPENING WHEN HANDLE IN ON POSITION.
   d. FUSES: SIZE AS INDICATED, HRCJ (TIME DELAY TYPE).

40. MOTOR STARTERS:
   a. MANUAL MOTOR STARTERS: HEAVY DUTY C/W ONE OVERLOAD PER PHASE, PILOT LIGHT, QUICK MAKE, QUICK BREAK TOGGLE SWITCH, LOCKING TABS IN "OFF" POSITION. CSA CERTIFIED AS A DISCONNECTING MEANS.

41. MECHANICAL EQUIPMENT WIRING: PROVIDE ALL WIRING TO MECHANICAL EQUIPMENT, OBTAIN MECHANICAL SHOP DRAWINGS AND RECONFIRM FEEDER AND BREAKER REQUIREMENTS PRIOR TO INSTALLATION.

42. PANELBOARDS:
   a. INSTALL CIRCUIT BREAKERS IN PANELBOARDS BEFORE SHIPMENT.
   b. IN ADDITION TO CSA REQUIREMENTS MANUFACTURER'S NAMEPLATE MUST SHOW FAULT CURRENT THAT PANEL INCLUDING BREAKERS HAS BEEN BUILT TO WITHSTAND.
   c. 250V BUSSES AND BREAKERS RATED FOR 10kA AND 14kA (SYMMETRICAL) INTERRUPTING CAPACITY MINIMUM RESPECTIVELY, OR AS INDICATED OTHERWISE.
   d. 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.
   e. MAINS, NUMBER OF CIRCUITS, AND NUMBER AND SIZE OF BRANCH CIRCUIT BREAKERS AS INDICATED.
   f. TWO KEYS FOR EACH PANELBOARD AND KEY PANELBOARDS ALIKE.
   g. MAINS SUITABLE FOR BOLT-ON BREAKERS.
   h. TRIM WITH CONCEALED FRONT BOLTS AND HINGES. 14 GAUGE UP TO 24 CIRCUIT,12 GAUGE FOR LARGER PANELS.
   i. DISTRIBUTION PANELS SHALL BE MINIMUM 12 GAUGE CONSTRUCTION.
   j. COPPER BUSSING AND GROUND.

47. MOLDED CASE CIRCUIT BREAKERS:
   a. BOLT-ON MOLDED CASE CIRCUIT BREAKER: QUICK-MAKE, QUICK-BREAK TYPE, FOR MANUAL AND AUTOMATIC OPERATION WITH TEMPERATURE COMPENSATION FOR 40 C AMBIENT.
   b. COMMON-TRIP BREAKERS: WITH SINGLE HANDLE FOR MULTI-POLE APPLICATIONS.
   c. CIRCUIT BREAKERS WITH INTERCHANGEABLE TRIPS AS INDICATED.
   d. MOLDED CASE CIRCUIT BREAKER TO OPERATE AUTOMATICALLY BY MEANS OF THERMAL AND MAGNETIC TRIPPING DEVICES TO PROVIDE INVERSE TIME CURRENT TRIPPING AND INSTANTANEOUS TRIPPING FOR SHORT CIRCUIT PROTECTION.

48. FIELD QUALITY CONTROL

   a. CONDUCT AND PAY FOR THE FOLLOWING TESTS:
      a.a. POWER GENERATION, 600V AND 120V POWER DISTRIBUTION INCLUDING PHASING, VOLTAGE, GROUNDING AND LOAD BALANCING.
      a.b. LIGHTING AND CONTROLS
      a.c. MOTORS, HEATERS AND ASSOCIATED CONTROL EQUIPMENT
      a.d. INSULATION INTEGRITY TESTING
      a.e. SYSTEMS: FIRE ALARM, COMMUNICATION, ACCESS CONTROL AND SECURITY, PUBLIC ADDRESS.
   b. SUBMIT TEST PROCEDURES AND INFORM ENGINEER AT LEAST 7 DAYS BEFORE SCHEDULED TESTS. ENGINEER TO WITNESS TESTS AT HIS DISCRETION.

PA CONTRACTOR CONTACT INFO

NAME: LEE WEBER
EMAIL: leemanweber@gmail.com
cell number: 226-788-1171

Client

2020-07-24	ISSUED FOR TENDER	-
2020-05-27	ISSUED FOR PERMIT	-
2020-05-08	ISSUED FOR REVIEW	-
DATE	REVISION	REF

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Project north
Nord du projet

Seal/Sceau

LICENSED PROFESSIONAL ENGINEER
D.B.VYAS
100133120
July 27,'20
PROVINCE OF ONTARIO

Project/Projet

ARLINGTON WOODS
FREE METHODIST CHURCH
RENOVATION
225 McClellan Rd, Ottawa, ON K2H 8N5

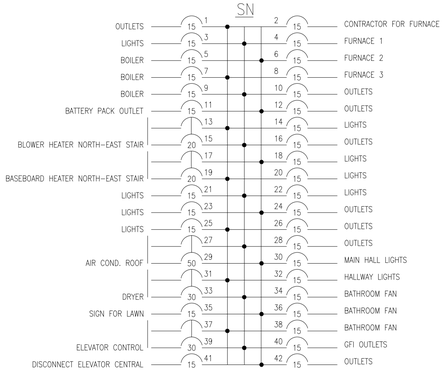
Drawing title/Titre du dessin

ELECTRICAL SPECIFICATIONS

Scale / Échelle	AS NOTED	Project no./No. du projet	2019-333-1
Design by / Conçu par	J.ANTALA	Drawing/Dessin	E2
Drawn by / Dessiné par	J.ANTALA		
Reviewed by / Examiné par	D.VYAS		OF 10
Date / Date	JULY 2020	Revision no:	-
		Acad file/Fichier:	-

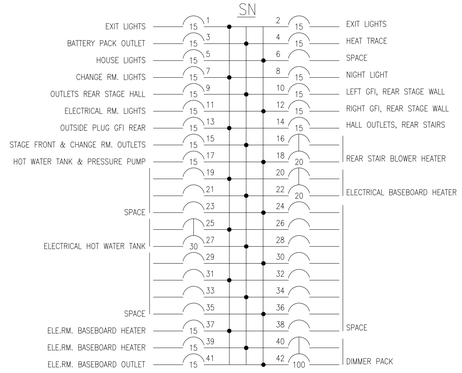
MECHANICAL ROOM
EXISTING PANEL A

VOLTAGE	120/208V
PHASE	3ø
WIRE	4W
RATING AMPS	225A
TRIM	SURFACE



ELECTRICAL ROOM PANEL #1
EXISTING PANEL EB

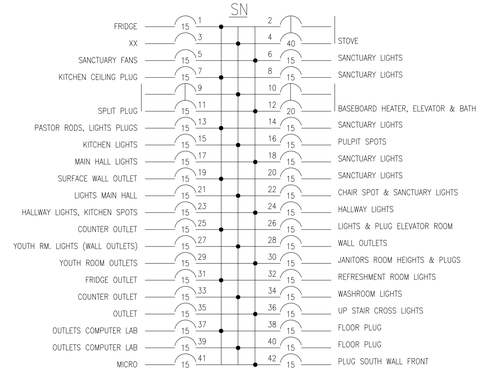
VOLTAGE	120/208V
PHASE	3ø
WIRE	4W
RATING AMPS	225A
TRIM	SURFACE



TYPICAL FOR ALL PANELS
NOTE:- ELECTRICAL CONTRACTOR TO TRACE EXISTING CIRCUIT & UPDATE PANEL DIRECTORY. THERE ARE NO PANEL NAME ON SITE, CONTRACTOR TO ADD PANEL NAME LABELS AS INDICATED ON DRAWINGS.

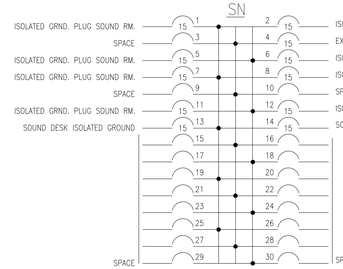
YOUTH ROOM PANEL
EXISTING PANEL Y

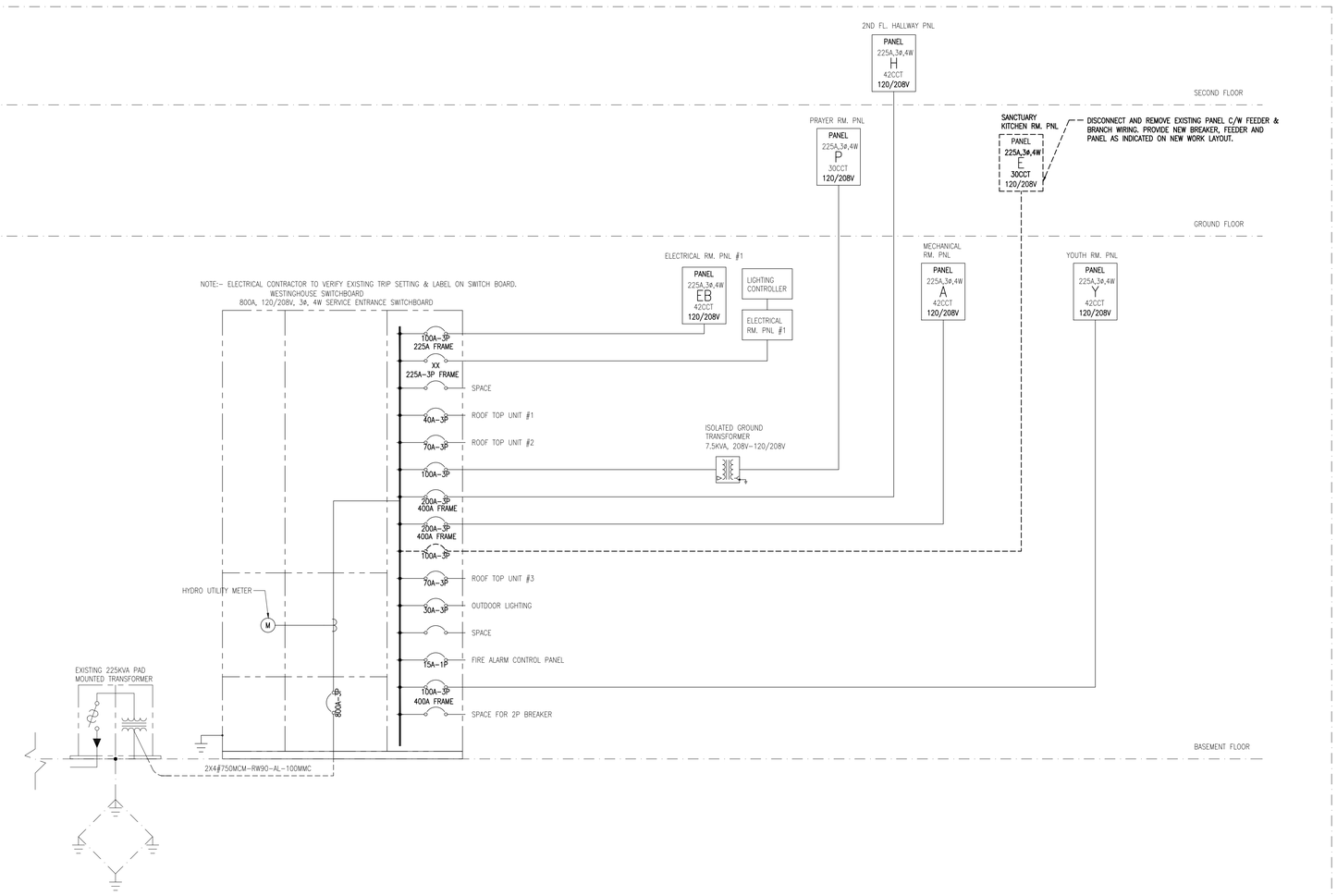
VOLTAGE	120/208V
PHASE	3ø
WIRE	4W
RATING AMPS	225A
TRIM	SURFACE



PRAYER ROOM
EXISTING PANEL P

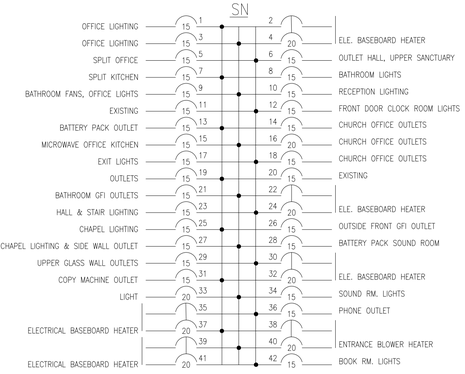
VOLTAGE	120/208V
PHASE	3ø
WIRE	4W
RATING AMPS	225A
TRIM	FLUSH





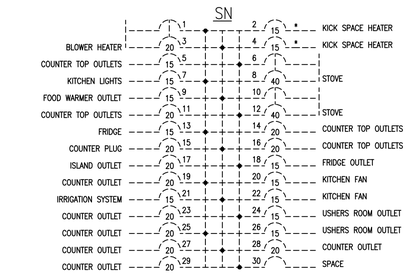
2ND FL. HALLWAY PNL
EXISTING PANEL H

VOLTAGE	120/208V
PHASE	3ø
WIRE	4W
RATING AMPS	225A
TRIM	SURFACE



SANCTUARY KITCHEN RM. PNL
EXISTING PANEL E

VOLTAGE	120/208V
PHASE	3ø
WIRE	4W
RATING AMPS	125A
TRIM	FLUSH



* REPLACE TWO 15A-1P BREAKER WITH ONE 15A-2P BREAKER FOR KICK SPACE HEATER

Client

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2020-05-27	ISSUED FOR PERMIT	–
2020-05-08	ISSUED FOR REVIEW	–
DATE	REVISION	REF

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Project north
Nord du projet

Seal/Sceau

LICENSED PROFESSIONAL ENGINEER D.B.VYAS 100133120 July 27, 2020 PROVINCE OF ONTARIO

Project/Projet

ARLINGTON WOODS
FREE METHODIST CHURCH
RENOVATION

225 McClellan Rd, Ottawa, ON K2H 8N5

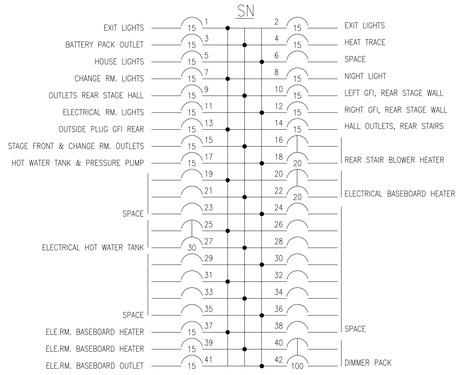
Drawing title/Titre du dessin

ELECTRICAL DEMOLITION WORK PART RISER DIAGRAM & PANEL SCHEDULE

Scale / Echelle	AS NOTED	Project no./No. du projet	2019-333-1
Design by / Conçu par	J.ANTALA	Drawing/Dessin	E3
Drawn by / Dessiné par	J.ANTALA		
Reviewed by / Examiné par	D.VYAS		OF 10
Date / Date	JULY 2020	Revision no:	–
		Acad file/Fichier:	–

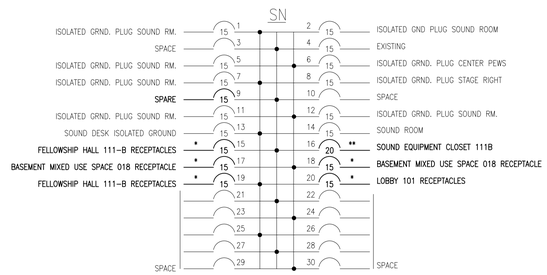
ELECTRICAL ROOM PANEL #1
EXISTING PANEL EB

VOLTAGE	120/208V
PHASE	3ø
WIRE	4W
RATING AMPS	225A
TRIM	SURFACE



PRAYER ROOM
EXISTING PANEL P

VOLTAGE	120/208V
PHASE	3ø
WIRE	4W
RATING AMPS	225A
TRIM	FLUSH

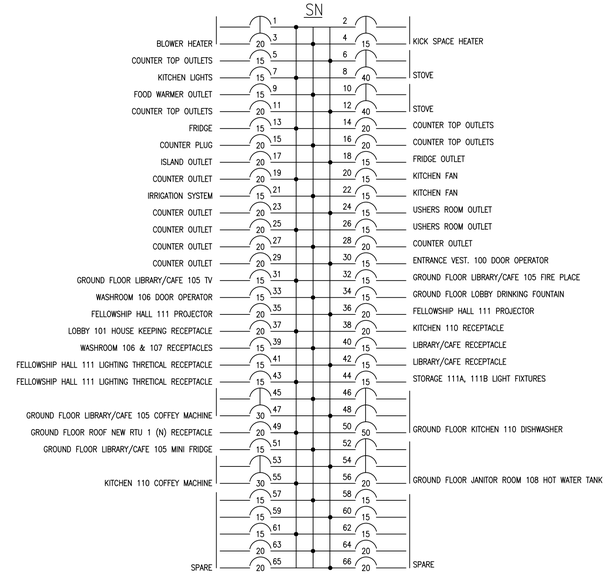


* PROVIDE NEW 6X15A-1P BREAKERS AS INDICATED IN PANEL SCHEDULE

** PROVIDE NEW 1X20A-1P BREAKERS AS INDICATED IN PANEL SCHEDULE

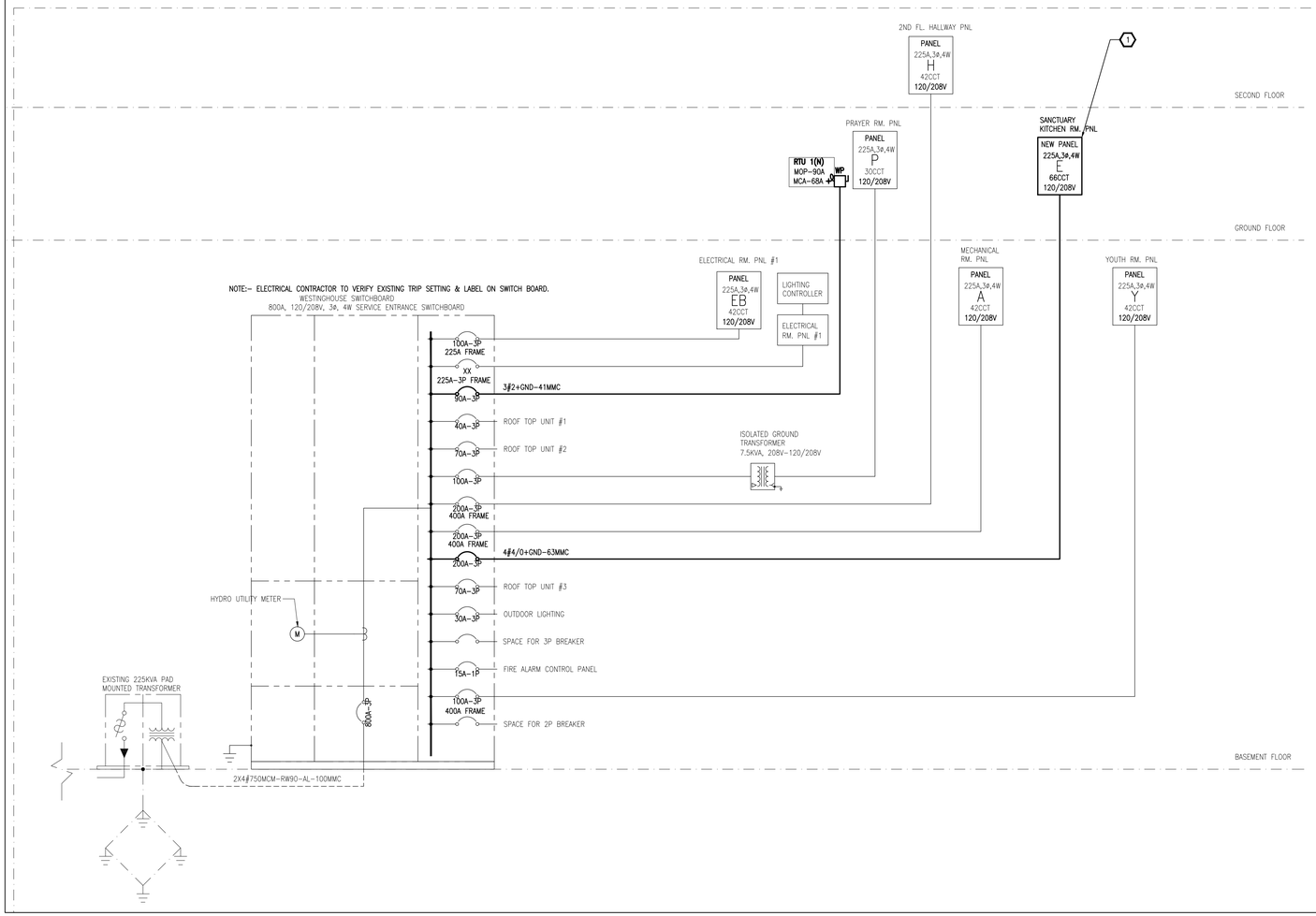
SANCTUARY KITCHEN RM. PNL
NEW PANEL E

VOLTAGE	120/208V
PHASE	3ø
WIRE	4W
RATING AMPS	225A
TRIM	FLUSH



NOTE:- PROVIDE NEW BREAKERS AS INDICATED IN PANEL SCHEDULE. RECONNECT ALL EXISTING TO REMAIN CIRCUIT.

TYPICAL FOR ALL PANELS
NOTE:- ELECTRICAL CONTRACTOR TO TRACE EXISTING CIRCUIT & UPDATE PANEL DIRECTORY. THERE ARE NO PANEL NAME ON SITE, CONTRACTOR TO ADD PANEL NAME LABELS AS INDICATED ON DRAWINGS.



GENERAL NOTES

1. PROVIDE NEW 200A, 3POLE BREAKER IN MAIN SWITCHBOARD C/W NEW FEEDER. PROVIDE NEW PANEL C/W BRANCH BREAKERS, CONDUIT & WIRING. WIRE ALL NEW & EXISTING TO REMAIN BRANCH WIRING. PROVIDE OVERSIZE COVER FOR NEW PANEL. CUT & PATCH EXISTING WALL BY GENERAL CONTRACTOR.

Client

2020-07-24	ISSUED FOR TENDER	–
2020-05-27	ISSUED FOR PERMIT	–
2020-05-08	ISSUED FOR REVIEW	–
DATE	REVISION	REF

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Project north
Nord du projet

Seal/Sceau

LICENSED PROFESSIONAL ENGINEER
D.B.VYAS
100133120
July 27,2020
PROVINCE OF ONTARIO

Project/Projet

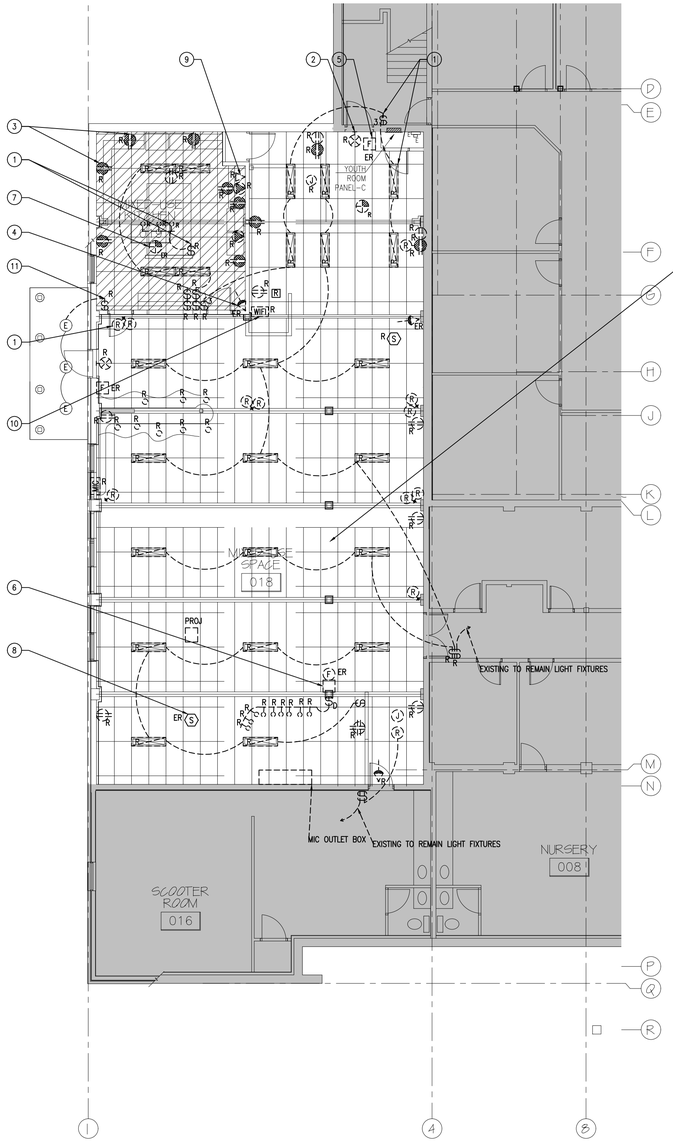
ARLINGTON WOODS
FREE METHODIST CHURCH
RENOVATION

225 McClellan Rd, Ottawa, ON K2H 8N5

Drawing title/Titre du dessin

ELECTRICAL NEW WORK PART RISER DIAGRAM & PANEL SCHEDULE

Scale / Échelle	AS NOTED	Project no./No. du projet	2019-333-1
Design by / Conçu par	J.ANTALA	Drawing/Dessin	E4
Drawn by / Dessiné par	J.ANTALA		OF 10
Reviewed by / Examiné par	D.VYAS		
Date / Date	JULY 2020	Revision no:	–
		Acad file/Fichier:	–



1 / E5 BASEMENT FLOOR ELECTRICAL DEMOLITION WORK LAYOUT

1:100

DEMOLITION NOTES

1. TYPICAL
DISCONNECT & REMOVE EXISTING LIGHT FIXTURES C/W SWITCHES, JUNCTION BOXES, CONDUIT & WIRING BACK TO SOURCE. TRACE & REUSE EXISTING CIRCUIT FOR NEW LIGHT FIXTURES.

2. TYPICAL
DISCONNECT & REMOVE EXISTING EXIT LIGHTS C/W CONDUIT & WIRING BACK TO SOURCE. TRACE & REUSE EXISTING CIRCUIT FOR NEW EXIST LIGHTS.

3. TYPICAL
DISCONNECT & REMOVE EXISTING RECEPTACLES C/W CONDUIT & WIRING BACK TO SOURCE. TRACE & REUSE EXISTING CIRCUIT FOR NEW RECEPTACLES.

4. TYPICAL
DISCONNECT, REMOVE & REINSTALL EXISTING SECURITY DEVICES C/W WIRING.

5. TYPICAL
DISCONNECT, REMOVE & REINSTALL EXISTING FIRE ALARM PULL STATION C/W CONDUIT & WIRING.

6. TYPICAL
DISCONNECT, REMOVE & REINSTALL EXISTING FIRE ALARM BELL C/W CONDUIT & WIRING.

7. TYPICAL
DISCONNECT, REMOVE & REINSTALL EXISTING FIRE ALARM HEAT DETECTOR C/W CONDUIT & WIRING.

8. TYPICAL
DISCONNECT, REMOVE & REINSTALL EXISTING SPEAKERS. WIRING BY PA CONTRACTOR.

9. DISCONNECT & REMOVE DATA OUTLET C/W CABLING.

10. DISCONNECT & REMOVE WIFI OUTLET C/W CABLING.

11. DISCONNECT & REMOVE EXISTING SWITCH C/W WIRING & CONDUIT FOR EXTERIOR LIGHTS. PROVIDE NEW SWITCH & RECONNECT EXTERIOR LIGHTS C/W CONDUIT & WIRING ONCE DEMOLITION WORK IS DONE.

Client

2020-07-24	ISSUED FOR TENDER	–
2020-05-27	ISSUED FOR PERMIT	–
2020-05-08	ISSUED FOR REVIEW	–
DATE	REVISION	REF

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Project north / Nord du projet

Seal/Sceau

LICENSED PROFESSIONAL ENGINEER
D. B. VYAS
100133120
July 27, 2020
PROVINCE OF ONTARIO

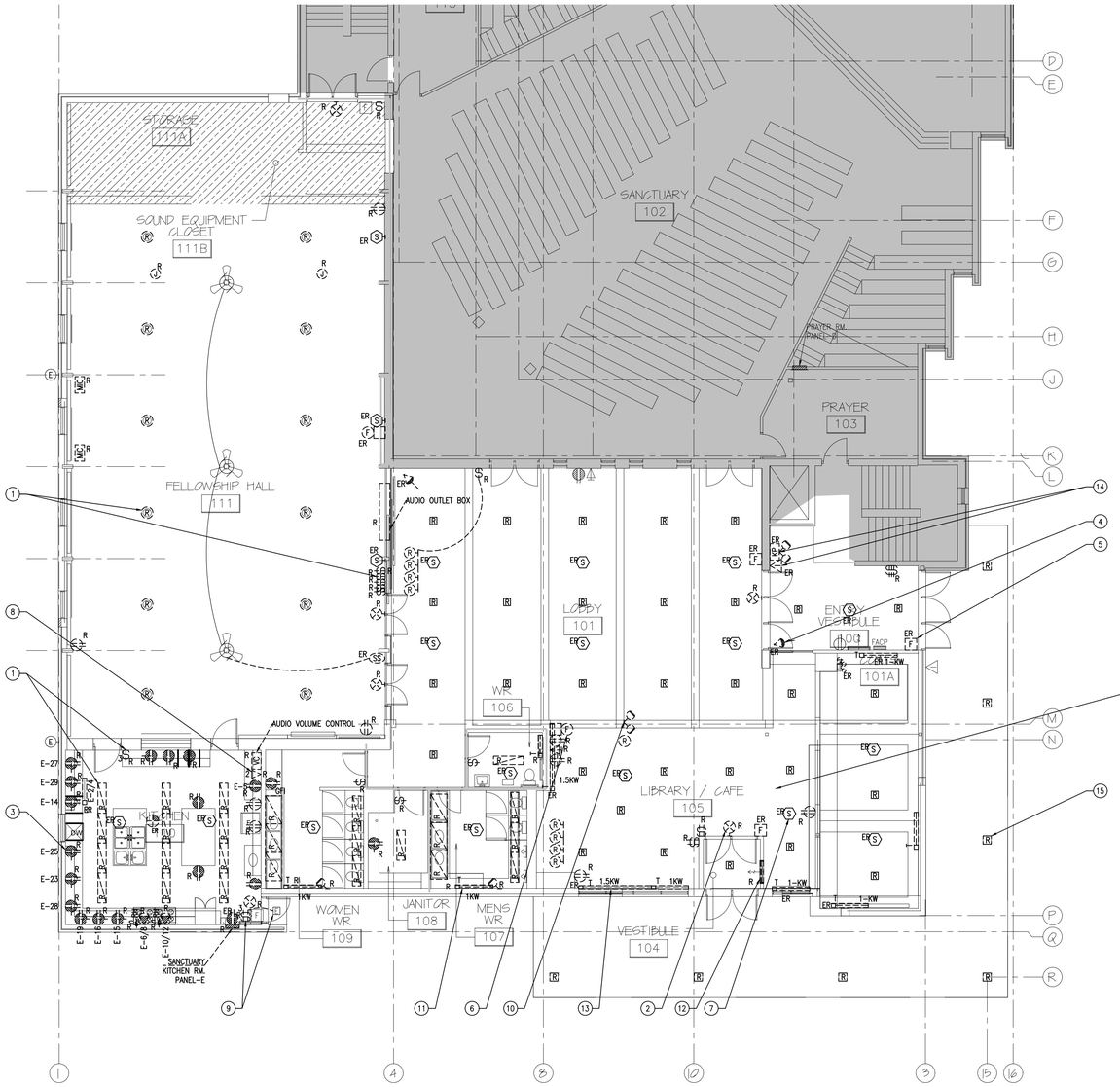
Project/Projet

ARLINGTON WOODS
FREE METHODIST CHURCH
RENOVATION
225 McClellan Rd, Ottawa, ON K2H 8N5

Drawing title/Titre du dessin

BASEMENT FLOOR
ELECTRICAL DEMOLITION
WORK LAYOUT

Scale / Échelle	AS NOTED	Project no./No. du projet	2019-333-1
Design by / Conçu par	J.ANTALA	Drawing/Dessin	E5
Drawn by / Dessiné par	J.ANTALA		OF 10
Reviewed by / Examiné par	D.VYAS		
Date / Date	JULY 2020	Revision no:	–
		Acad file/Fichier:	–



GROUND FLOOR
ELECTRICAL DEMOLITION WORK LAYOUT

1
E6

1:100

DEMOLITION NOTES

1. TYPICAL
DISCONNECT & REMOVE EXISTING LIGHT FIXTURES C/W SWITCHES, JUNCTION BOXES, CONDUIT & WIRING BACK TO SOURCE. TRACE & REUSE EXISTING CIRCUIT FOR NEW LIGHT FIXTURES.

2. TYPICAL
DISCONNECT & REMOVE EXISTING EXIT LIGHTS C/W CONDUIT & WIRING. TRACE & REUSE EXISTING CIRCUIT FOR NEW EXIST LIGHTS.

3. TYPICAL
DISCONNECT & REMOVE EXISTING RECEPTACLES C/W CONDUIT & WIRING BACK TO SOURCE. TRACE & REUSE EXISTING CIRCUIT FOR NEW RECEPTACLES.

4. TYPICAL
DISCONNECT, REMOVE & REINSTALL EXISTING SECURITY DEVICES C/W WIRING.

5. TYPICAL
DISCONNECT, REMOVE & REINSTALL EXISTING FIRE ALARM PULL STATION C/W CONDUIT & WIRING.

6. TYPICAL
DISCONNECT, REMOVE & REINSTALL EXISTING FIRE ALARM BELL STATION C/W CONDUIT & WIRING.

7. TYPICAL
DISCONNECT, REMOVE & REINSTALL EXISTING SPEAKERS C/W WIRING.

8. DISCONNECT & REMOVE DATA OUTLET C/W CABLING.

9. DISCONNECT & REMOVE EXISTING SWITCH C/W WIRING & CONDUIT FOR EXTERIOR LIGHT. PROVIDE NEW SWITCH & RECONNECT EXTERIOR LIGHTS C/W CONDUIT & WIRING ONCE DEMOLITION WORK IS DONE.

10. TYPICAL
DISCONNECT & REMOVE EMERGENCY REMOTE HEADS C/W CONDUIT & WIRING.

11. TYPICAL
DISCONNECT & REMOVE EXISTING ELECTRIC BASEBOARD HEATERS C/W CONDUIT & WIRE BACK TO JUNCTION BOX IN WASHROOMS. PROVIDE NEW 1KW BASEBOARD HEATERS & REUSE EXISTING CIRCUIT.

12. DISCONNECT & REMOVE EXISTING FORCE FLOW HEATER C/W CONDUIT & WIRING. LABEL BREAKER AS SPARE.

13. TYPICAL
DISCONNECT & TEMPORARY REMOVE EXISTING ELECTRIC BASEBOARD HEATERS C/W CONDUIT & WIRE BACK TO JUNCTION TO ALLOW DEMOLITION WORK. EXTEND WIRING & REINSTALL EXISTING BASEBOARD HEATERS C/W CONDUIT AT NEW LOCATION AS INDICATED ON NEW WORK LAYOUT.

14. TEMPORARY REMOVE & REINSTALL EXISTING SECURITY KEYPAD & TELEPHONE BY PA CONTRACTOR TO ALLOW DEMOLITION WORK.

15. TYPICAL
DISCONNECT & REMOVE EXTERIOR SOFFIT LIGHT FIXTURE C/W CONDUIT & WIRING. TRACE & REUSE EXISTING CIRCUIT FOR NEW LIGHT FIXTURES.

Client

2020-07-24	ISSUED FOR TENDER	–
2020-05-27	ISSUED FOR PERMIT	–
2020-05-08	ISSUED FOR REVIEW	–
DATE	REVISION	REF

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Project north
Nord du projet

Seal/Sceau

LICENSED PROFESSIONAL ENGINEER
D. B. VYAS
100133120
July 27, 2020
PROVINCE OF ONTARIO

Project/Projet

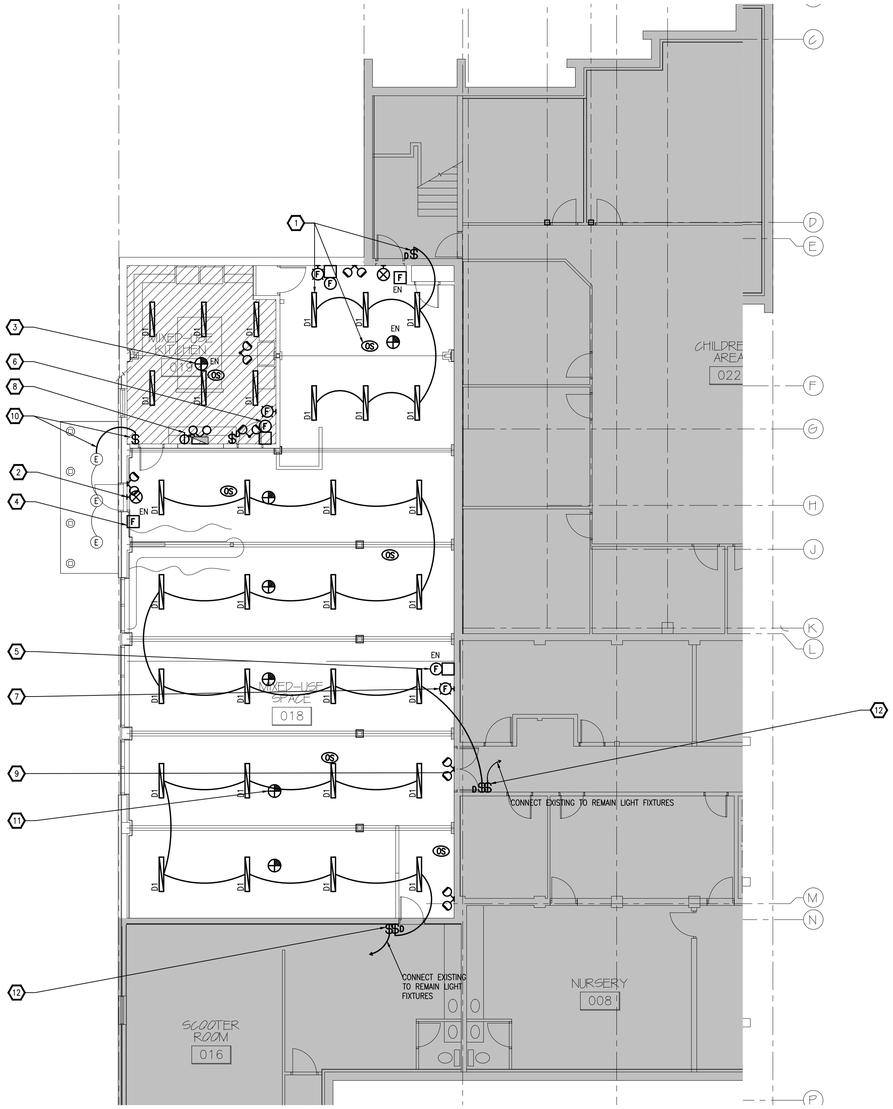
ARLINGTON WOODS
FREE METHODIST CHURCH
RENOVATION

225 McClellan Rd, Ottawa, ON K2H 8N5

Drawing title/Titre du dessin

GROUND FLOOR
ELECTRICAL DEMOLITION
WORK LAYOUT

Scale / Échelle	AS NOTED	Project no./No. du projet	2019-333-1
Design by / Conçu par	J.ANTALA	Drawing/Dessin	E6
Drawn by / Dessiné par	J.ANTALA		
Reviewed by / Examiné par	D.VYAS		OF 10
Date / Date	JULY 2020	Revision no:	–
		Acad file/Fichier:	–



1 / E7 BASEMENT FLOOR
ELECTRICAL LIGHTING & FIRE ALARM NEW WORK LAYOUT
1:100

NEW WORK NOTES

1. TYPICAL
PROVIDE NEW LIGHT FIXTURES C/W LOW VOLTAGE DIMMING SWITCH, OCCUPANCY SENSORS, CONDUIT, WIRING & POWER PACK AS REQUIRED. REUSE EXISTING RECESSES BOX & CONDUIT. REFER TO PANEL SCHEDULE. REUSE EXISTING CIRCUIT FOR NEW LIGHT FIXTURES. OCCUPANCY SENSOR WILL CONTROL EACH ZONE INDEPENDENTLY.

2. TYPICAL
PROVIDE NEW EXIT LIGHT C/W CONDUIT & WIRING. TRACE & REUSE EXISTING CIRCUIT FOR NEW EXIT LIGHTS & CONNECT TO EMERGENCY BATTERY UNITS.

3. TYPICAL
REINSTALL EXISTING HEAT DETECTOR C/W CONDUIT & WIRING. VERIFY & UPDATE PROGRAMMING.

4. TYPICAL
REINSTALL EXISTING FIRE ALARM PULL STATION C/W CONDUIT & WIRING. VERIFY & UPDATE PROGRAMMING.

5. TYPICAL
REINSTALL EXISTING FIRE ALARM BELL C/W CONDUIT & WIRING. VERIFY & UPDATE PROGRAMMING.

6. TYPICAL
PROVIDE NEW FIRE ALARM BELL C/W CONDUIT & WIRING.

7. TYPICAL
PROVIDE NEW FIRE ALARM STROBE LIGHTS. PROVIDE NEW CIRCUIT FROM THE FIRE ALARM PANEL.

8. PROVIDE NEW 250W EMERGENCY BATTERY UNIT C/W LED 5W REMOTE HEAD CONDUIT & WIRING & CONNECT TO LIGHTING CIRCUIT.

9. TYPICAL
PROVIDE NEW 5W REMOTE HEADS C/W WIRING & CONNECT TO EMERGENCY BATTERY UNIT.

10. PROVIDE NEW SWITCH FOR EXTERIOR LIGHTS C/W CONDUIT & WIRING & CONNECT TO EXTERIOR LIGHTS.

11. TYPICAL
PROVIDE NEW HEAT DETECTOR C/W CONDUIT & WIRING. VERIFY & UPDATE PROGRAMMING.

12. TYPICAL
PROVIDE NEW LIGHT SWITCH & CONNECT TO EXISTING TO REMAIN LIGHT FIXTURES.

Client

DATE	REVISION	REF
2020-07-24	ISSUED FOR TENDER	-
2020-05-27	ISSUED FOR PERMIT	-
2020-05-08	ISSUED FOR REVIEW	-

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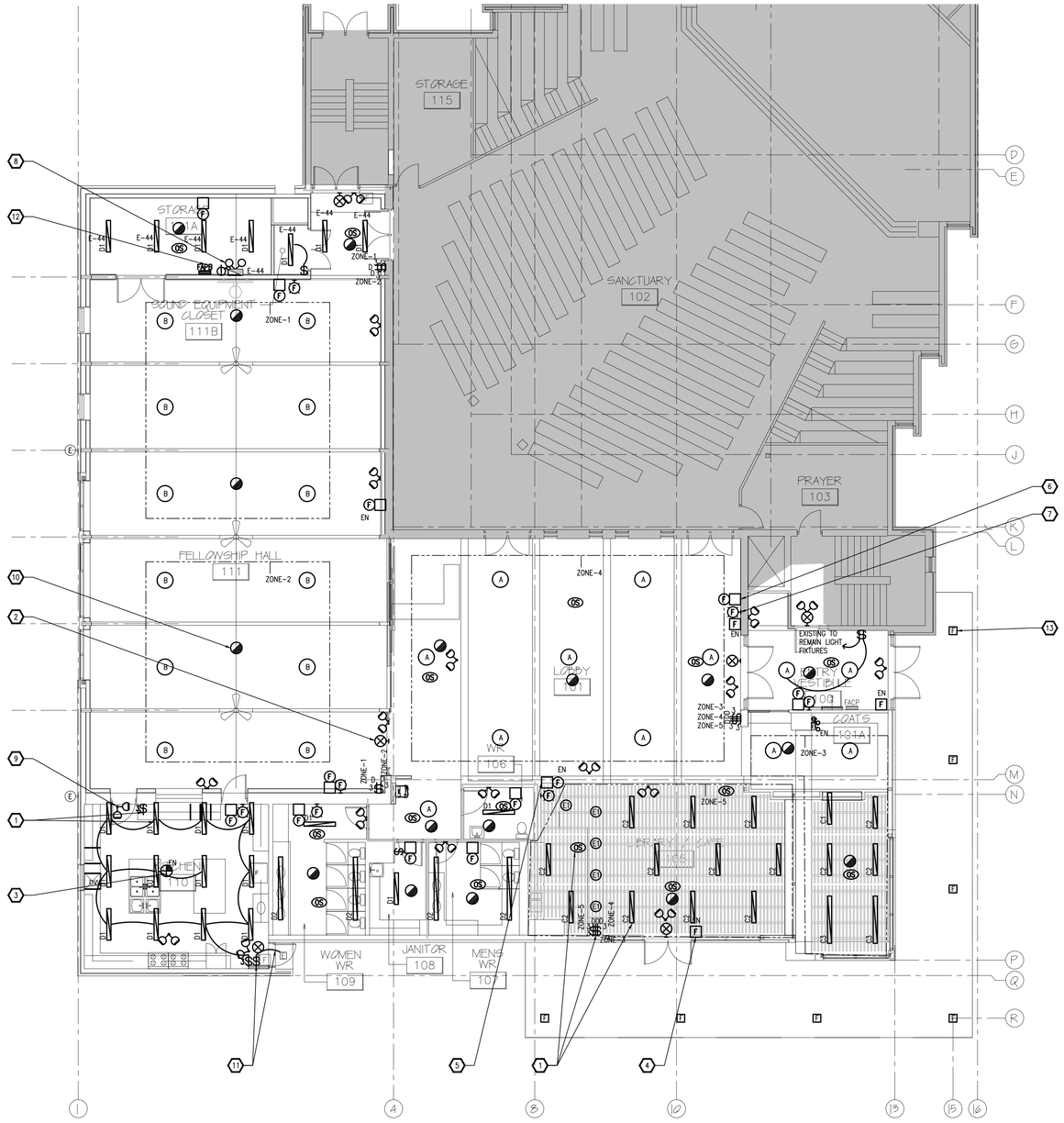
Project north
Nord du projet

Seal/Sceau
LICENSED PROFESSIONAL ENGINEER
D. B. VYAS
100133120
July 27, 2020
PROVINCE OF ONTARIO

Project/Projet
ARLINGTON WOODS
FREE METHODIST CHURCH
RENOVATION
225 McClellan Rd, Ottawa, ON K2H 8N5

Drawing title/Titre du dessin
BASEMENT FLOOR
ELECTRICAL LIGHTING &
FIRE ALARM
NEW WORK LAYOUT

Scale / Échelle	AS NOTED	Project no./No. du projet	2019-333-1
Design by / Conçu par	J.ANTALA	Drawing/Dessin	E7
Drawn by / Dessiné par	J.ANTALA		OF 10
Reviewed by / Examiné par	D.VYAS		
Date / Date	JULY 2020	Revision no:	-
		Acad file/Fichier:	-



1 / E8 GROUND FLOOR
ELECTRICAL LIGHTING & FIRE ALARM NEW WORK LAYOUT
1:100

NEW WORK NOTES

1. TYPICAL
PROVIDE NEW LIGHT FIXTURES C/W LOW VOLTAGE DIMMING SWITCHES, OCCUPANCY SENSORS, CONDUIT, WIRING & POWER PACK AS REQUIRED. REFER TO PANEL SCHEDULE. REUSE EXISTING CIRCUIT FOR NEW LIGHT FIXTURES. OCCUPANCY SENSOR WILL CONTROL EACH ZONE INDEPENDENTLY.

2. TYPICAL
PROVIDE NEW EXIT LIGHT C/W CONDUIT & WIRING. TRACE & REUSE EXISTING CIRCUIT FOR NEW EXIT LIGHTS & CONNECT TO EMERGENCY BATTERY UNITS.

3. TYPICAL
REINSTALL EXISTING HEAT DETECTOR C/W CONDUIT & WIRING. VERIFY & UPDATE PROGRAMMING.

4. TYPICAL
REINSTALL EXISTING FIRE ALARM PULL STATION C/W CONDUIT & WIRING. VERIFY & UPDATE PROGRAMMING.

5. TYPICAL
REINSTALL EXISTING FIRE ALARM BELL C/W CONDUIT & WIRING. VERIFY & UPDATE PROGRAMMING.

6. TYPICAL
PROVIDE NEW FIRE ALARM BELL C/W CONDUIT & WIRING.

7. TYPICAL
PROVIDE NEW FIRE ALARM STROBE LIGHTS C/W CONDUIT & WIRING.

8. PROVIDE NEW 200W EMERGENCY BATTERY UNIT C/W REMOTE HEADS CONDUIT & WIRING & CONNECT TO LIGHTING CIRCUIT.

9. TYPICAL
PROVIDE NEW 5W EMERGENCY REMOTE HEADS C/W WIRING & CONNECT TO EMERGENCY BATTERY UNIT.

10. TYPICAL
PROVIDE NEW SMOKE DETECTORS C/W CONDUIT & WIRING.

11. PROVIDE NEW SWITCH FOR EXTERIOR LIGHTS C/W CONDUIT & WIRING & CONNECT TO EXTERIOR LIGHTS.

12. PROVIDE FIRE ALARM POWER BOOSTER C/W CONDUIT & WIRING.

13. TYPICAL
PROVIDE NEW EXTERIOR SOFFIT LIGHTS C/W CONDUIT & NEW WIRING. TRACE & REUSE EXISTING CIRCUIT. REFER TO PANEL SCHEDULE.

Client

DATE	REVISION	REF
2020-07-24	ISSUED FOR TENDER	–
2020-05-27	ISSUED FOR PERMIT	–
2020-05-08	ISSUED FOR REVIEW	–

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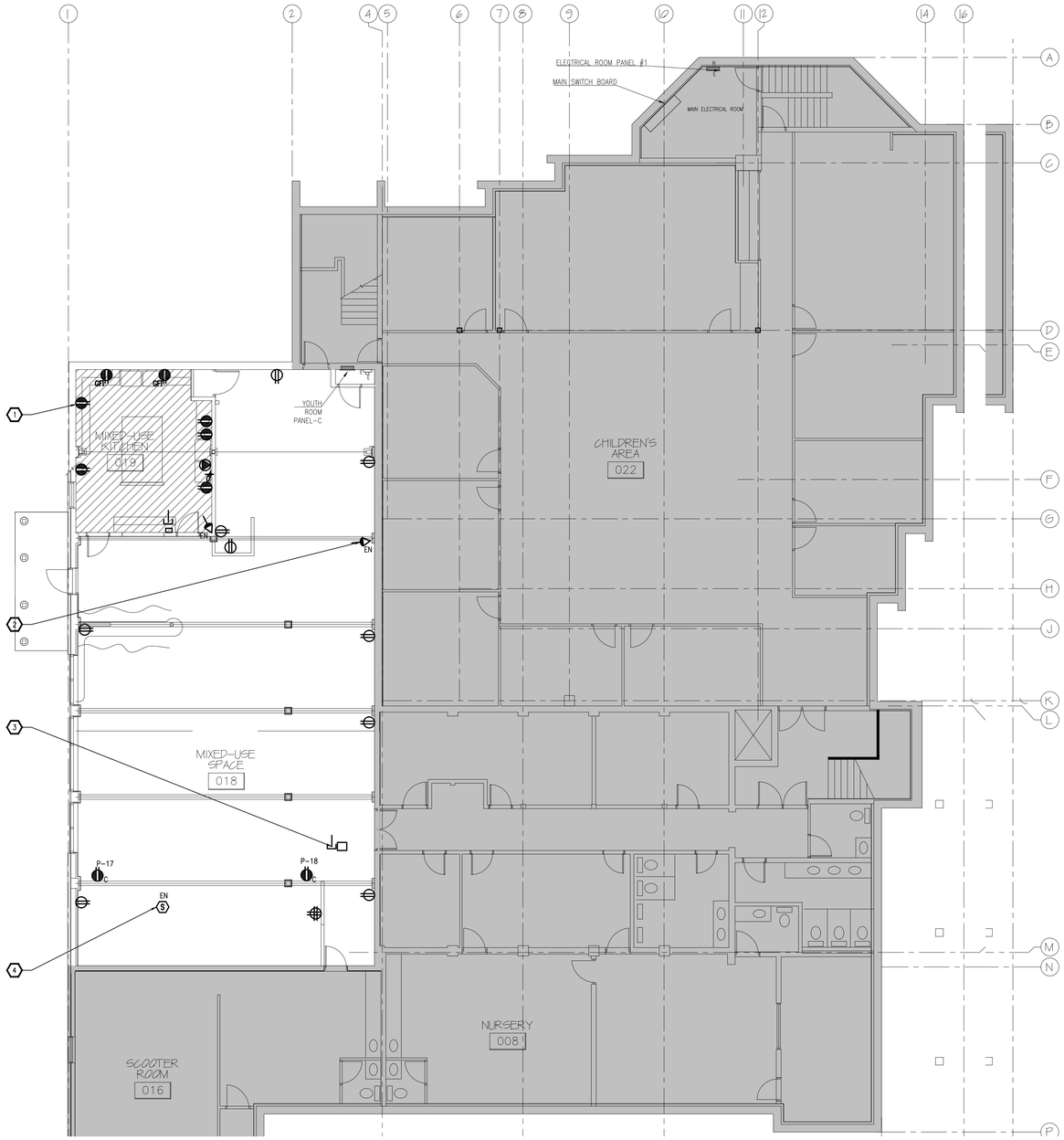
Project north / Nord du projet

Seal/Sceau
LICENSED PROFESSIONAL ENGINEER
D.B.VYAS
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225 McClellan Rd, Ottawa, ON K2H 8N5

Drawing title/Titre du dessin
GROUND FLOOR
ELECTRICAL LIGHTING &
FIRE ALARM
NEW WORK LAYOUT

Scale / Echelle	AS NOTED	Project no./No. du projet	2019-333-1
Design by / Conçu par	J.ANTALA	Drawing/Dessin	E8
Drawn by / Dessiné par	J.ANTALA		
Reviewed by / Examiné par	D.VYAS		OF 10
Date / Date	JULY 2020	Revision no:	–
		Acad file/Fichier:	–



1 / E9 BASEMENT FLOOR
ELECTRICAL POWER & SYSTEMS NEW WORK LAYOUT
1:100

NEW WORK NOTES

1. TYPICAL
PROVIDE NEW RECEPTACLES C/W CONDUIT & WIRING. REUSE EXISTING CIRCUIT FOR NEW RECEPTACLES. ALL RECEPTACLES SHALL BE RECESSED

2. TYPICAL
REINSTALL EXISTING SECURITY DEVICES C/W WIRING.

3. PROVIDE OCTAGON BACK BOX C/W 21MM CONDUIT & PULL ROPE FROM SOUND EQUIPMENT CLOSET 111B LOCATED IN GROUND FLOOR FOR WIFI. COORDINATE EXACT CONDUIT ROUTE ON SITE.

4. TYPICAL
REINSTALL EXISTING PA SPEAKERS. WIRING BY PA CONTRACTOR.

GENERAL NOTES

1. TYPICAL
ALL EXISTING TO REMAIN AND NEW WIRING IN CEILING SPACE SHALL BE IN CONDUIT ONLY. TIE NEATLY ALL COMMUNICATION AND SECURITY CABLING. PROVIDE REQUIRED JUNCTION BOXES, FIRE RATED ACCESS PANELS AS REQUIRED.COORDINATE WITH OWNERS DATA, PA AND SECURITY CONTRACTOR. PROVIDE REQUIRED CONDUITS AND POWER.

Client

2020-07-24	ISSUED FOR TENDER	–
2020-05-27	ISSUED FOR PERMIT	–
2020-05-08	ISSUED FOR REVIEW	–
DATE	REVISION	REF

THE ENGINEER WAIVES ANY AND ALL RESPONSIBILITY AND LIABILITY FOR PROBLEMS WHICH ARISE FROM FAILURE TO FOLLOW THESE PLANS, SPECIFICATIONS AND THE DESIGN INTENT THEY CONVEY, OR FOR PROBLEMS WHICH ARISE FROM OTHER FAILURE TO OBTAIN AND / OR FOLLOW THE ENGINEER'S GUIDANCE WITH RESPECT TO ANY ERRORS, OMISSIONS, INCONSISTENCIES, AMBIGUITIES OR CONFLICTS WHICH ARE ALLEGED.

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Project north
Nord du projet

Seal/Sceau

LICENSED PROFESSIONAL ENGINEER
D. B. VYAS
100133120
July 27, 2020
PROVINCE OF ONTARIO

Project/Projet

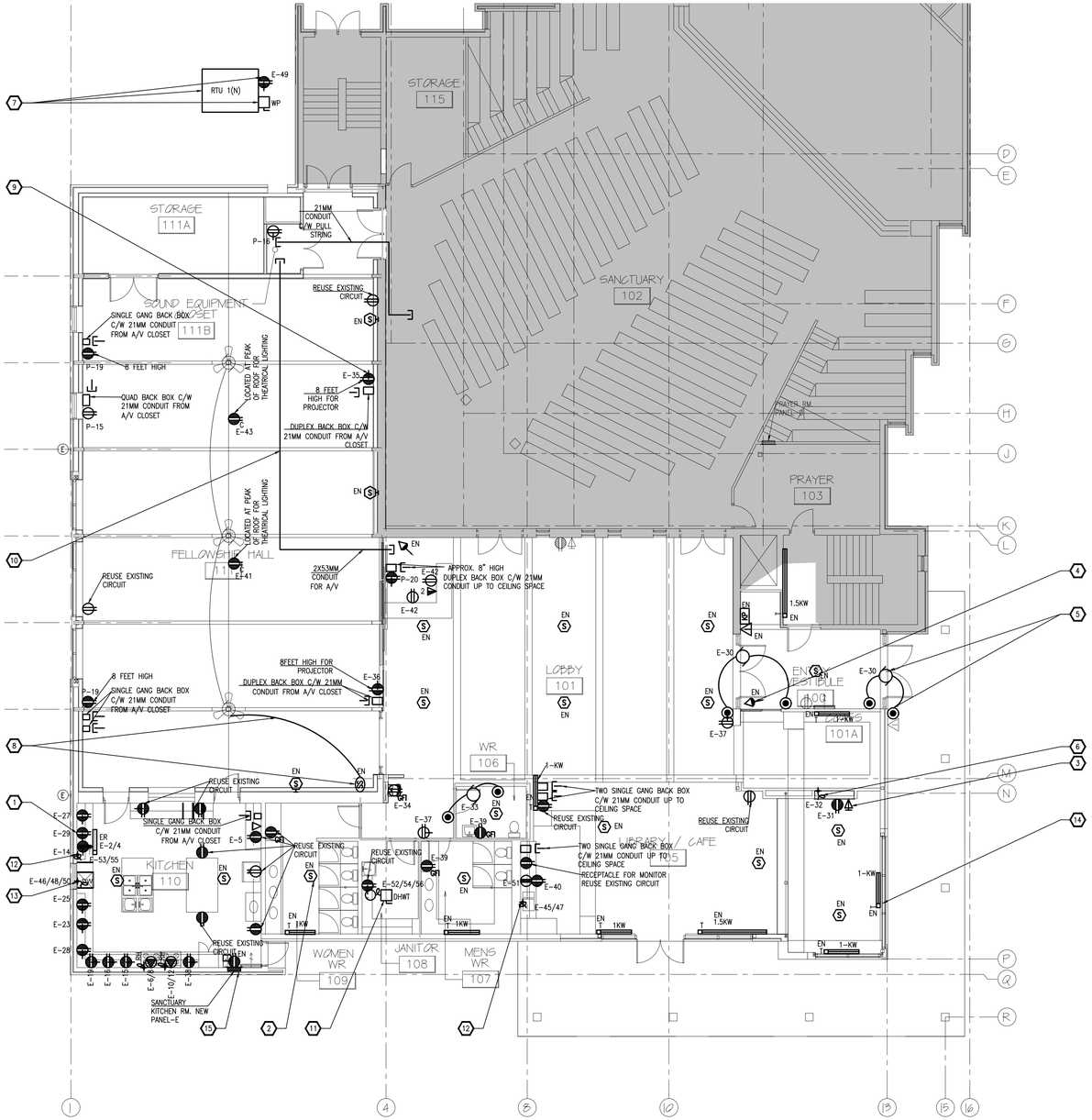
ARLINGTON WOODS
FREE METHODIST CHURCH
RENOVATION

225 McClellan Rd, Ottawa, ON K2H 8N5

Drawing title/Titre du dessin

BASEMENT FLOOR ELECTRICAL POWER & SYSTEMS NEW WORK LAYOUT

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NEW WORK NOTES

1. TYPICAL
PROVIDE NEW RECEPTACLES C/W CONDUIT & WIRING. REUSE EXISTING CIRCUIT FOR NEW RECEPTACLES. ALL NEW RECEPTACLES SHALL BE RECESSED.

2. TYPICAL
REINSTALL EXISTING SPEAKERS. WIRING BY PA CONTRACTOR.

3. PROVIDE TV OUTLET C/W 21MM CONDUIT UP TO CEILING SPACE. COORDINATE EXACT LOCATION ON SITE WITH PA CONTRACTOR.

4. TYPICAL
REINSTALL EXISTING SECURITY DEVICES C/W WIRING.

5. PROVIDE 120V WIRING FOR DOOR OPERATOR. PROVIDE BACK BOX C/W 21MM CONDUIT & NYLON PULL STRING TO PUSH BUTTON.

6. PROVIDE HARDWIRE CONNECTION FOR ELECTRICAL FURNACE C/W CONDUIT & WIRING. CCT AS INDICATED.

7. RTU-1(N) 208V, 3ø, MCA-64A, MOP 90A. PROVIDE WEATHER PROOF DISCONNECT C/W CONDUIT & WIRING FROM MAIN SWITCHBOARD. REFER TO RISER DIAGRAM. COORDINATE EXACT CONDUIT ROUTE IN SITE. 5-20R RECEPTACLE COMES WITH UNIT, ELECTRICAL CONTRACTOR TO PROVIDE WIRING C/W CONDUIT FROM KITCHEN PANEL E. CIRCUIT AS INDICATED.

8. EXTEND WIRING & RELOCATE EXISTING SPEED SWITCH FOR CEILING FAN C/W CONDUIT.

9. TYPICAL
PROVIDE 2X 20A RECEPTACLES FOR PROJECTOR C/W CONDUIT & WIRING. PROVIDE 2X21MM CONDUIT FROM SOUND EQUIPMENT CLOSET 111B. COORDINATE EXACT MOUNTING HEIGHT WITH OWNERS PA CONTRACTOR.

10. PROVIDE TWO 53MM CONDUIT FROM SOUND EQUIPMENT CLOSET 111B TO LOBBY 101 FOR PA. COORDINATE WORK WITH OWNERS PA CONTRACTOR.

11. HOT WATER TANK 6KW, 208V, 3ø. PROVIDE DISCONNECT C/W CONDUIT & WIRING. CIRCUIT AS INDICATED. COORDINATE WORK WITH MECHANICAL CONTRACTOR & FINAL BREAKER SIZE WITH EQUIPMENT SHOP DRAWING.

12. TYPICAL
COFFEE MACHINE 120-208V, 1ø, 3W+GWD. PROVIDE HARD WIRE CONNECTION C/W CONDUIT & WIRING. CIRCUIT AS INDICATED. COORDINATE FINAL BREAKER SIZE WITH EQUIPMENT SHOP DRAWING. COORDINATE EXACT LOCATION ON SITE WITH CLIENT PRIOR ROUGH-IN.

13. DISHWASHER 120/208V, 3ø, 4W+GND. PROVIDE HARD WIRE CONNECTION C/W CONDUIT & WIRING. CIRCUIT AS INDICATED. COORDINATE FINAL BREAKER SIZE WITH EQUIPMENT SHOP DRAWING.

14. TYPICAL
EXTEND EXISTING WIRING C/W CONDUIT & RELOCATE EXISTING ELECTRIC BASEBOARD HEATERS. RATING AS INDICATED. COORDINATE EXACT LOCATION ON SITE. TRACE & REUSE EXISTING CIRCUIT.

15. PROVIDE NEW 200A-3P BREAKER IN MAIN SWITCHBOARD. PROVIDE NEW PANEL C/W JUNCTION BOX, CONDUIT, BRANCH BARKERS & WIRING. RECONNECT ALL EXISTING TO REMAIN CIRCUIT. CUT & PATCH EXISTING WALL BY GENERAL CONTRACTOR. REFER TO RISER DIAGRAM.

GENERAL NOTES

1. TYPICAL
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2. TYPICAL
PA & SECURITY WIRING & DEVICES BY OWNERS PA CONTRACTOR.

3. TYPICAL
PATCH & REPAIR EXISTING WALL & CEILING BY GENERAL CONTRACTOR. PROVIDE PULL BOX AT EVERY 3RD BEND & IDENTIFY CIRCUIT NUMBER ON PULL BOX. SCAN SLAB PRIOR CORING. PROVIDE FIRE AND SMOKE AT ALL NEW PENETRATIONS IN FIRE RATED WALLS/SLAB WITH FIRE STOP AND SEALANT. COORDINATE EXACT CONDUIT ROUTE ON SITE.

4. COORDINATE KITCHEN EQUIPMENT(COFFEE MACHINES, DISHWASHER & DHWT LOCATION WITH ARCHITECT & CLIENT PRIOR ROUGH-IN.

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