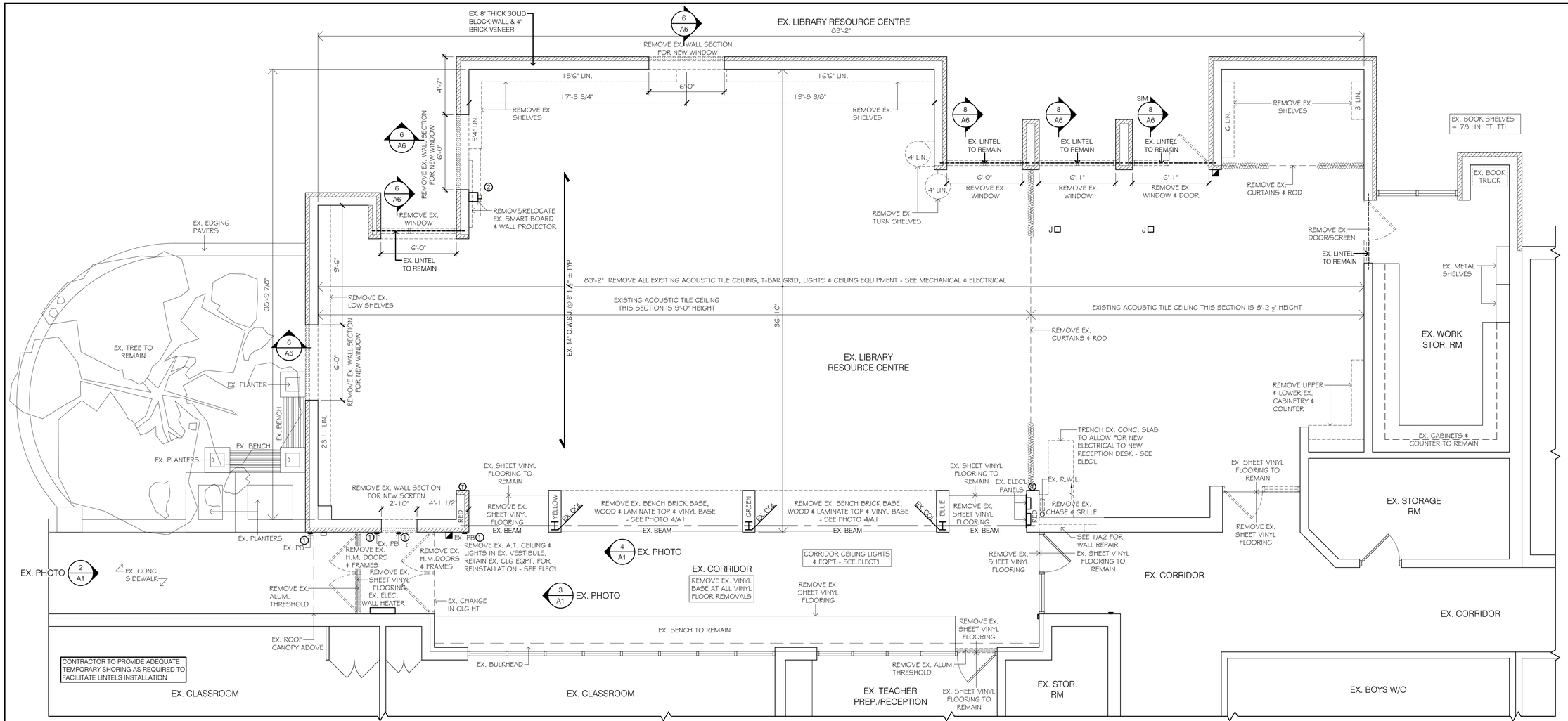


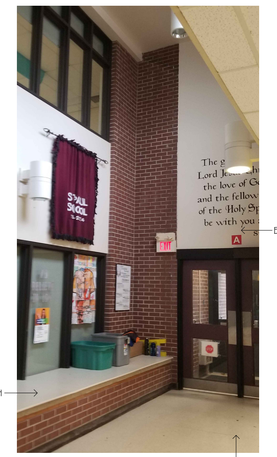
1 A1 MAIN FLOOR PLAN - DEMOLITION PLAN

SCALE: 1/4" = 1'-0"

2 A1 PHOTO

SCALE: N.T.S.

EX. ENTRY DOORS TO BE REMOVED & REPLACED WITH BARRIER FREE DOORS/HARDWARE



3 A1 PHOTO

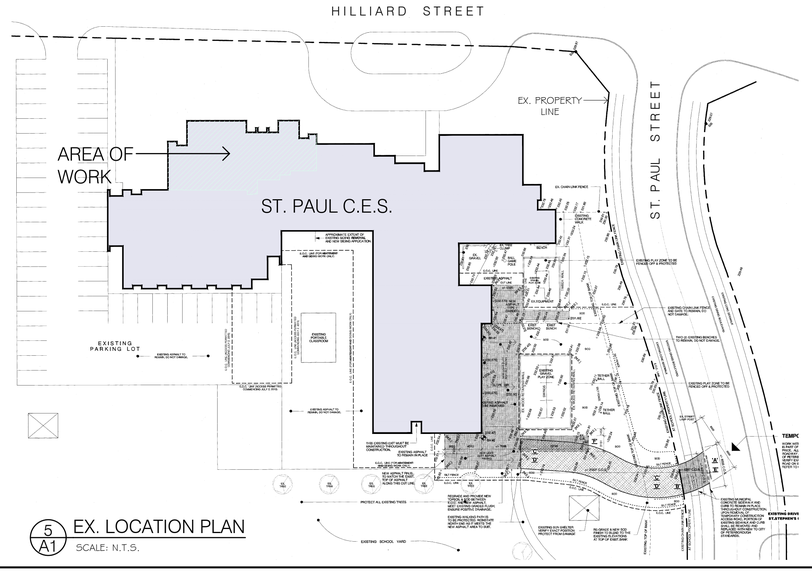
SCALE: N.T.S.

4 A1 PHOTO

SCALE: N.T.S.

ABBREVIATIONS

BF = BARRIER FREE
CO = COUCH (3 SEAT)
CR = CREDENZA
CT = COFFEE TABLE
DR = NEW DOOR
D/SCR = NEW DOOR & SCREEN
ELEC'L = ELECTRICAL
F = NEW FILE
GALV. = GALVANIZED
H.M. = HOLLOW METAL
MBS = NEW MOVABLE BOOK SHELVES
MECH'L = MECHANICAL
MC = NEW MAKER CABINET
PA = PUBLIC ANNOUNCEMENT SYSTEM
PB = PUSH BUTTON
PLAM = PLASTIC LAMINATE
PLY = PLYWOOD
PRIM. TB = EX. PRIMARY TABLE
PT. = PAINT
PTN = PARTITION
SCR = NEW SCREEN
TB = TABLE
W = NEW WINDOW



5 A1 EX. LOCATION PLAN

SCALE: N.T.S.

WILCOX ARCHITECTS INC.
74 LINDSAY ST. SOUTH
LINDSAY, ONTARIO
PHONE: 705-328-0175
wilcox.off@gmail.com

ONTARIO ASSOCIATION OF ARCHITECTS
GLENN A. WILCOX
LICENCE 3966

PROJECT NORTH

Peterborough Victoria Northumberland and Clarington Catholic District School Board

CONSULTANTS:
STRUCTURAL ENGINEERS
AMR ENGINEERING LTD.
MECHANICAL ENGINEERS
NOVADYNE LTD
ELECTRICAL ENGINEERS
KIRKLAND ENGINEERING LTD

NOTES:

ALL REMOVED CABINETS, FIXTURES, EQPT & HARDWARE TO BE RETURNED TO OWNER U.O.N.

REMOVE VINYL BASE FROM ALL ROOMS TO RECEIVE NEW FLOORING

REMOVE ALL WALL BOARDS & RETAIN FOR REINSTALLATION (LOCATIONS TO BE CONFIRMED)

DESIGN LOADS:
Dead Load = 25 psf (1.2 kPa)
Snow Load = 42 psf (2 kPa) + Snow Drift
Total Load = 67 psf + Snow Drift

TYP. NOTES

1. REMOVE EX. PB DOOR OPERATOR AS REQ'D & RETAIN FOR REINSTALLATION - SEE SPEC'S FOR DETAILS
2. REMOVE EX. PROJECTOR & SMART TV & RETAIN FOR REINSTALLATION

LICENCED PROFESSIONAL ENGINEER
JAN 18 2026
D. KOTOBELLI
100150847
PROVINCE OF ONTARIO

FOR DESIGN OF STRUCTURAL COMPONENTS ONLY
DATE: JANUARY 18, 2026
PROJECT No.: 25-2332
PROJECT:
ST. PAUL CATHOLIC ELEMENTARY SCHOOL OFFICE & LIBRARY RENOVATION
PETERBOROUGH, ONTARIO

AMR ENGINEERING LTD.
920 ALNESS STREET, SUITE 205
TORONTO, ONTARIO M3J 2H7
TEL: 416-551-1611
FAX: 416-477-0426

FOR DESIGN OF STEEL LINTELS FOR NEW OPENINGS ONLY.

FOR PERMIT & TENDER	FEB 5, 2026
ISSUED:	DATE:

THIS DRAWING IS COMPLIMENTARY & MUST BE READ IN CONJUNCTION WITH ALL THE OTHER DRAWINGS AND/ OR SPECIFICATIONS. REPORT ANY INCONSISTENCIES TO THE ARCHITECT.

PROJECT:
ST. PAUL CES
OFFICE & LIBRARY
RENOVATION

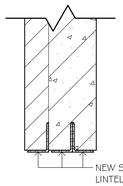
ADDRESS: 1101 HILLIARD STREET
PETERBOROUGH, ON K9H 5S2

DRAWING TITLE:
SITE LOCATION PLAN
MAIN FLOOR PLAN
- DEMOLITION WORK

SCALE: AS NOTED	DRAWING NUMBER: A1 OF 7
DRAWN BY: SV	25041
CHECKED BY: GW	

NOTE:

EXTEND ALL NEW EXTERIOR WALL INSULATION TO u/s OF EX. METAL DECK (TYP.)



TYPICAL LINTEL DETAIL

REVISED LIBRARY RESOURCE CENTRE

REPAIR CONC. & SHEET VINYL WHERE ELEC'L FLOOR BOXES ARE REMOVED - SEE ELEC'L

LINTEL SCHEDULE:
SL1: 3 L'S - 5" x 3½" x 5/16" (LLV)
SL2: 3 L'S - 6" x 3½" x 5/16" (LLV)

NOTES:
1) ALL LINTELS ARE LOOSE LINTELS UNLESS NOTED OTHERWISE.
2) PROVIDE A MINIMUM END BEARING OF 8" AT END FOR ALL LINTELS.
3) ACTUAL THICKNESSES OF THE WALLS SHALL BE SITE VERIFIED PRIOR TO FABRICATION.

NEW BOOK SHELVES = 53'-8" LIN. FT. TTL

ALTERNATE CLASSROOM TABLE ARRANGEMENT - SEE 3/A2

SEE DETAILS ON A2 BELOW

EXTERIOR WALLS
- EXISTING MASONRY WALL
NEW
- 2" RIGID INSULATION (R10)
- ½" D'WALL

NEW PRINCIPAL OFFICE 107

NEW GENERAL OFFICE 104

RECEPTION 103

NEW WAITING 103

NEW COPY RM 106

NEW QUIET RM 109

NEW QUIET RM 108

NEW QUIET RM 112

NEW MECH'L CLOSET 105

NEW VESTIBULE 101

EX. CORRIDOR 102

EX. LIBRARY RESOURCE CENTRE 110

NEW STOREY TIME CIRCLE

EX. WORK STOR. RM 113

EX. STORAGE RM 111

NEW MECH'L CLOSET

EX. CORRIDOR 114

EX. CLASSROOM

EX. CLASSROOM

EX. TEACHER PREP./RECEPTION

EX. STOR. RM

EX. BOYS W/C

EX. BOOK TRUCK

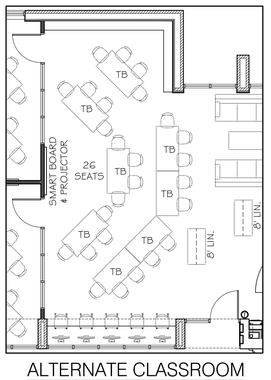
EX. METAL SHELVES

LOUNGE CT

SEE 1/A3 FOR CEILING HEIGHTS

NOTES:
- ALL NEW MOVABLE FURNITURE BY OTHERS U.O.N.
- NEW SHEET VINYL FLOORING & VINYL BASE TO MATCH EX. SHEET VINYL FLOORING AND BASE IN LIBRARY

1 A2 MAIN FLOOR PLAN - NEW WORK
SCALE: 1/4" = 1'-0"

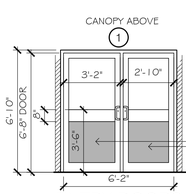


2 A2 ALTERNATE CLASSROOM TABLE ARRANGEMENT
SCALE: 1/8" = 1'-0"

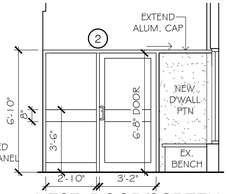
PHOTOCOPIER
CR PRINCIPAL CREDENZA
F FILE (QTY 2)
MINI REF.
PHOTO COPIER
1 TABLE - 4 SEAT (QTY 1)

PRINCIPAL DESK
2 TABLE - 8 SEAT (QTY 5)
PRINCIPAL TABLE
1 TABLE - 6 SEAT (QTY 3)

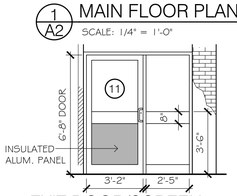
3 A2 EX. FURNITURE INVENTORY
SCALE: 1/8" = 1'-0"



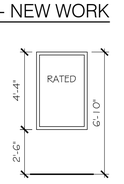
ENTRY DOORS
(ALUMINUM)
(EXTERIOR VIEW)



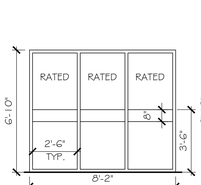
VEST. DOOR/SCREEN
(ALUMINUM)
(VIEW FROM VESTIBULE)



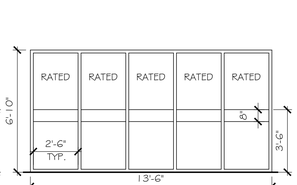
EXIT DOOR/SCREEN
(ALUMINUM)
(EXTERIOR VIEW)



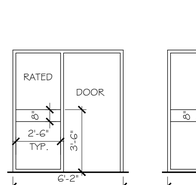
SCREEN 1
(HOLLOW METAL)
(VIEW FROM VESTIBULE)



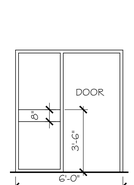
SCREEN 2
(HOLLOW METAL)
(VIEW FROM CORRIDOR)



SCREEN 3
(HOLLOW METAL)
(VIEW FROM CORRIDOR)



SCREEN 4
(HOLLOW METAL)
(VIEW FROM CORRIDOR)



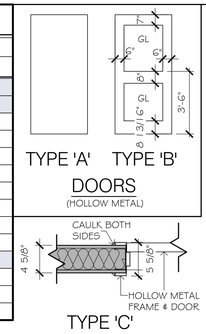
SCREEN 5
(HOLLOW METAL)
(VIEW FROM RECEPTION)

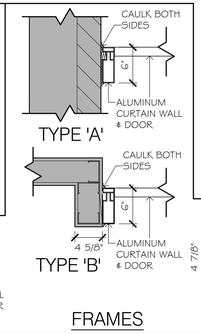
CONFIRM ALL EXISTING DOOR HEIGHTS & REPORT ANY INCONSISTANCIES

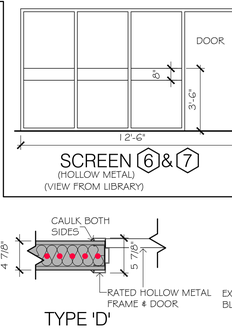
DOOR SCHEDULE

CONFIRM ALL EX. OPENINGS - REPORT ANY INCONSISTANCIES

DOOR					FRAME			COMMENTS
Door No.	SIZE	TYPE	MATERIAL	FINISH	TYPE	MATERIAL	FINISH	
1	3'-2" & 2'-10" x 6'-8"	---	ALUMINUM	---	A	ALUMINUM	---	EXTERIOR DOUBLE DOOR
2	3'-2" x 6'-8"	---	ALUMINUM	---	B	ALUMINUM	---	INTERIOR DOOR WITH SCREEN
3	3'-2" x 6'-8"	B	H.M.	PT.	D	H.M.	PT	¾ HR RATED, CLOSER
4	3'-0" x 6'-8"	A	H.M.	PT.	D	H.M.	PT	¾ HR RATED, SCREEN, CLOSER
5	3'-2" x 6'-8"	B	H.M.	PT.	C	H.M.	PT	SCREEN
6	3'-2" x 6'-8"	B	H.M.	PT.	C	H.M.	PT	
7	3'-2" x 6'-8"	B	H.M.	PT.	C	H.M.	PT	SCREEN
8	3'-2" x 6'-8"	B	H.M.	PT.	C	H.M.	PT	SCREEN
9	3'-2" x 6'-8"	B	H.M.	PT.	G	H.M.	PT	¾ HR RATED, SCREEN, CLOSER
10	3'-0" x 6'-8"	A	H.M.	PT.	D	H.M.	PT	¾ HR RATED, CLOSER
11	3'-2" x 6'-8"	---	ALUMINUM	---	A	ALUMINUM	---	EXTERIOR DOOR WITH SCREEN
12	3'-2" x 6'-8"	B	H.M.	PT.	C	H.M.	PT	SCREEN
13	3'-2" x 6'-8"	B	H.M.	PT.	E	H.M.	PT	SCREEN
14	2'-0" x 3'-9"	A	H.M.	PT.	F	H.M.	PT	PAIR - ACCESS TO MECH'L UNIT ABOVE







WILCOX ARCHITECTS INC.
74 LINDSAY ST. SOUTH
LINDSAY, ONTARIO
PHONE: 705-328-0175
wilcox.off@gmail.com

ONTARIO ASSOCIATION OF ARCHITECTS
GLENN A. WILCOX
LICENCE 3966

PROJECT NORTH

Peterborough Victoria Northumberland and Clarington Catholic District School Board

CONSULTANTS:
STRUCTURAL ENGINEERS
AMR ENGINEERING LTD.
MECHANICAL ENGINEERS
NOVADYNE LTD
ELECTRICAL ENGINEERS
KIRKLAND ENGINEERING LTD

LEGEND

SYMBOL	DESCRIPTION
	WALLS TO BE REMOVED
	WALLS TO BE RETAINED
4 ½"	NEW PARTITION WALL • ½" D'WALL BOTH SIDES • 3 ⅝" METAL STUDS 16" c/c • ½" D'WALL BOTH SIDES
4 ½"	NEW PARTITION WALL • ½" D'WALL BOTH SIDES • 3 ⅝" METAL STUDS 16" c/c w/SOUND BATT INSULATION • ½" D'WALL BOTH SIDES
4 ½"	NEW FIRE RATED PARTITION WALL (1 HR) • ⅝" TYPE 'X' D'WALL • 3 ⅝" METAL STUDS 16" c/c w/SOUND BATT INSULATION • ⅝" TYPE 'X' D'WALL
BRICK CONC. BLOCK	EXTERIOR WALLS • EXISTING MASONRY WALL NEW • 2" RIGID INSULATION (R10) • ½" D'WALL
	AREA OF FLOOR REPAIR & REPAIR TO EX. SHEET VINYL FLOOR - PROVIDE NEW VINYL BASE THESE AREAS

TYP. NOTES
1. REINSTALL EX. PUSH BUTTON DOOR OPERATOR AS REQ'D - SEE SPEC'S FOR DETAILS
2. INSTALL NEW PUSH BUTTON DOOR OPERATOR AS REQ'D - SEE SPEC'S FOR DETAILS
3. INSTALL EX. PROJECTOR & SMART TV - CONFIRM w/OWNER

NOTES:
- SITE VERIFY ALL ROUGH OPENINGS BEFORE FABRICATION OF ANY WINDOW OR SCREEN UNITS
- SECURLY FASTEN THE HEADS OF ALL SCREENS TO THE STRUCTURE PROVIDED
- REFER TO FLOOR PLANS FOR ALL LOCATIONS & QUANTITIES

FOR PERMIT & TENDER	FEB 5, 2026
ISSUED:	DATE:

THIS DRAWING IS COMPLIMENTARY & MUST BE READ IN CONJUNCTION WITH ALL THE OTHER DRAWINGS AND/ OR SPECIFICATIONS. REPORT ANY INCONSISTENCIES TO THE ARCHITECT.

LICENSED PROFESSIONAL ENGINEER
JAN 18 /2026
D. KOTOBELLI
100159847
PROVINCE OF ONTARIO

FOR DESIGN OF STRUCTURAL COMPONENTS ONLY
DATE: JANUARY 18, 2026
PROJECT No.: 25-2332
PROJECT:
ST. PAUL CATHOLIC ELEMENTARY SCHOOL OFFICE & LIBRARY RENOVATION
PETERBOROUGH, ONTARIO
AMR ENGINEERING LTD.
920 ALNESS STREET, SUITE 205
TORONTO, ONTARIO M3J 2H7
TEL: 416-551-1611
FAX: 416-477-0426
FOR DESIGN OF STEEL LINTELS FOR NEW OPENINGS ONLY

PROJECT:
ST. PAUL CES
OFFICE & LIBRARY
RENOVATION

ADDRESS: 1101 HILLIARD STREET
PETERBOROUGH, ON K9H 5S2

DRAWING TITLE:
MAIN FLOOR PLAN
- NEW WORK
ALT. FURN. PLAN
DOOR/SCREEN SCHEDULE

SCALE: AS NOTED	DRAWING NUMBER: A2 OF 7
DRAWN BY: SV	25041
CHECKED BY: GW	

NOTE:

EXTEND ALL NEW EXTERIOR WALL INSULATION TO u/s OF EX. METAL DECK (TYP.)

REVISED LIBRARY RESOURCE CENTRE

INSTALL NEW ACOUSTIC TILE CEILING, T-BAR GRID, BULKHEADS, LIGHTS & CEILING EQUIPMENT - SEE MECHANICAL & ELECTRICAL

INSTALL NEW ACOUSTIC TILE CEILING, T-BAR GRID, BULKHEADS, LIGHTS & CEILING EQUIPMENT - SEE MECHANICAL & ELECTRICAL

NEW PRINCIPAL OFFICE

NEW QUIET RM

NEW QUIET RM

NEW GENERAL OFFICE

RECEPTION

NEW WAITING

NEW COPY RM

NEW VESTIBULE

NEW MECH'L CLOSET

NEW QUIET RM

EX. CORRIDOR

EX. LIBRARY RESOURCE CENTRE

EX. WORK STOR. RM

EX. STORAGE RM

NEW MECH'L CLOSET

EX. CORRIDOR

EX. CORRIDOR

EX. BENCH BELOW

EX. CLASSROOM

EX. CLASSROOM

EX. TEACHER PREP./RECEPTION

EX. STOR. RM

EX. BOYS W/C

D'WALL BULKHEAD

CLG 9'-0"

BLKHD 8'-0"

3'-0"

EX. CEILING TO REMAIN

RUG BELOW

FLUSH w/BRICK

1 A3 REFLECTED CEILING PLAN - NEW WORK

SCALE: 1/4" = 1'-0"

ENLARGEMENT

D'WALL CENTRE

D'WALL BULKHEAD w/METAL FRAMING

PENDANT LIGHT

EX. GALV. METAL DECK

EX. ROOF STRUCTURE

LIGHT

D'WALL BULKHEAD

NEW A.T. CEILING (TYP.)

11'-10"±

RECEPTION

WINDOW BEYOND

NEW COPY RM

NEW QUIET RM

MAKER CABINET

PENDANT LIGHT

WINDOW BEYOND

7'-0" MIN.

9'-0"

EXIT DOOR BEYOND

BOOKCASES

EXTERIOR

2 A3 BUILDING SECTION - NEW WORK

SCALE: 1/4" = 1'-0"

WILCOX ARCHITECTS INC.
74 LINDSAY ST. SOUTH
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ONTARIO ASSOCIATION OF ARCHITECTS
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PROJECT NORTH

Peterborough Victoria Northumberland and Clarington Catholic District School Board

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AMR ENGINEERING LTD.
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NOVADYNE LTD
ELECTRICAL ENGINEERS
KIRKLAND ENGINEERING LTD

ELECTRICAL LEGEND

ALL NEW U.O.N.

SYMBOL	DESCRIPTION
	2'x2' RECESSED LED LIGHT FIXTURE
	SUPPLY AIR GRILLE
	RETURN AIR - EGG CRATE GRILLE
	DECO. PENDANT LIGHT
OP	POT LIGHT
	SINGLE or DUAL EMERGENCY LIGHT
EXIT	EXIT LIGHTS
	SMOKE DETECTOR
J	JIFFY POLE
	PROJECTOR

SEE ELEC'L & MECH'L DWGS FOR ADDITIONAL CLG EQPT & DETAIL

FOR PERMIT & TENDER	FEB 5, 2026
ISSUED:	DATE:

THIS DRAWING IS COMPLIMENTARY & MUST BE READ IN CONJUNCTION WITH ALL THE OTHER DRAWINGS AND/ OR SPECIFICATIONS. REPORT ANY INCONSISTENCIES TO THE ARCHITECT.

PROJECT:
ST. PAUL CES
OFFICE & LIBRARY
RENOVATION

ADDRESS: 1101 HILLIARD STREET
PETERBOROUGH, ON K9H 5S2

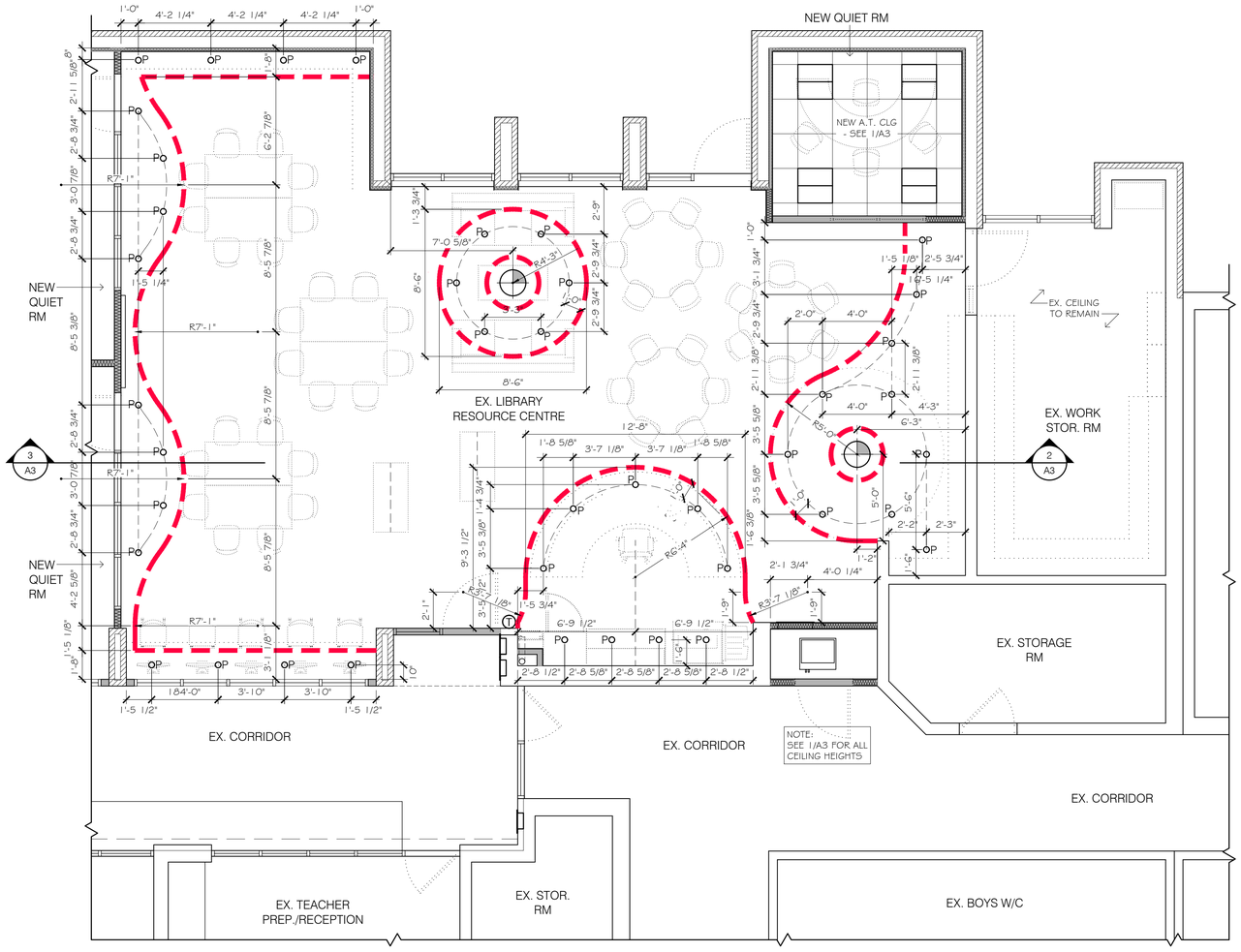
DRAWING TITLE:
MAIN FLOOR PLAN
REFLECTED CEILING PLAN
- NEW WORK
SECTION

SCALE: AS NOTED

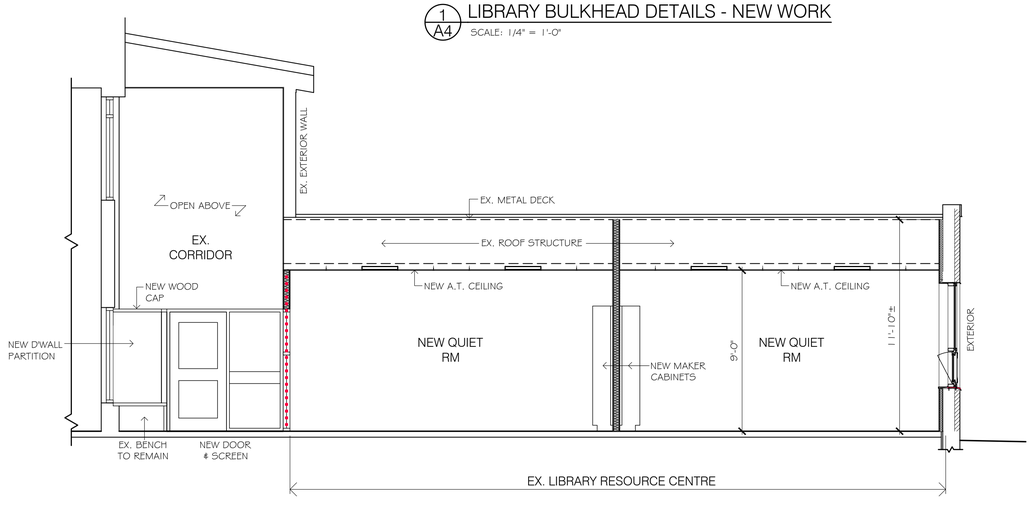
DRAWN BY: SV

CHECKED BY: GW

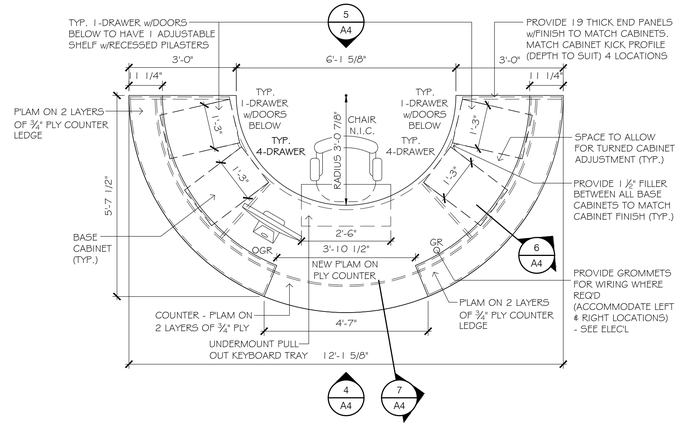
DRAWING NUMBER: A3 OF 7
25041



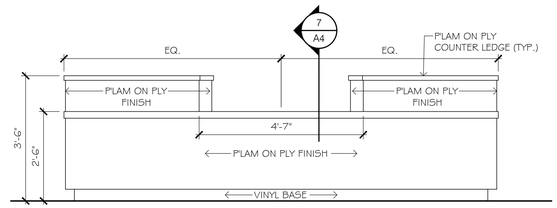
1 A4 LIBRARY BULKHEAD DETAILS - NEW WORK
SCALE: 1/4" = 1'-0"



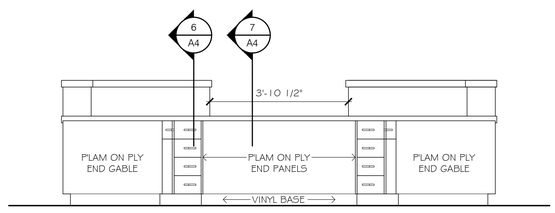
2 A4 BUILDING SECTION - NEW WORK
SCALE: 1/4" = 1'-0"



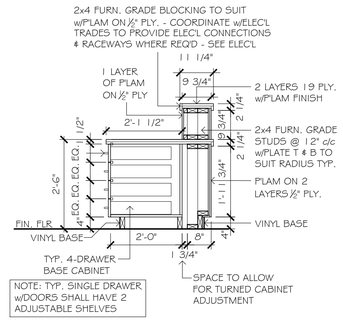
3 A4 NEW LIBRARY CIRCULATION DESK - PLAN
SCALE: 1/2"=1'-0"



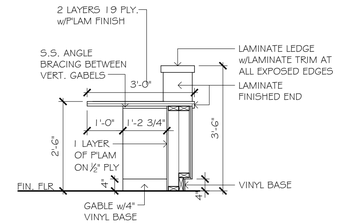
4 A4 NEW LIBRARY CIRCULATION DESK - ELEVATION
SCALE: 1/2"=1'-0"



5 A4 NEW LIBRARY CIRCULATION DESK - ELEVATION
SCALE: 1/2"=1'-0"



6 A4 NEW LIBRARY CIRCULATION DESK SECTION
SCALE: 1/2"=1'-0"



7 A4 NEW LIBRARY CIRCULATION DESK SECTION
SCALE: 1/2"=1'-0"

WILCOX ARCHITECTS INC.
74 LINDSAY ST. SOUTH
LINDSAY, ONTARIO
PHONE: 705-328-0175
wilcox.off@gmail.com

ONTARIO ASSOCIATION OF ARCHITECTS
GLENN J. WILCOX
LICENCE 3966

PROJECT NORTH

Peterborough Victoria Northumberland and Clarington Catholic District School Board

CONSULTANTS:
STRUCTURAL ENGINEERS
AMR ENGINEERING LTD.
MECHANICAL ENGINEERS
NOVADYNE LTD
ELECTRICAL ENGINEERS
KIRKLAND ENGINEERING LTD

FOR PERMIT & TENDER	FEB 5, 2026
ISSUED:	DATE:

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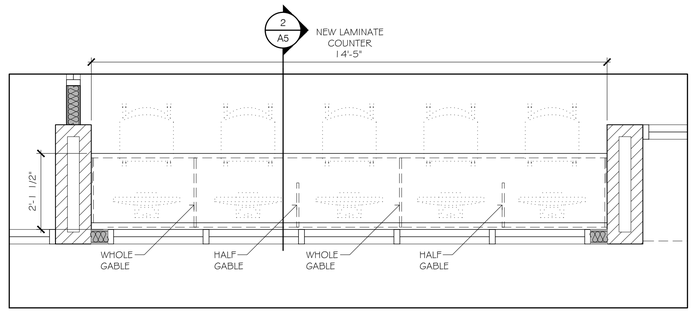
PROJECT:
ST. PAUL CES
OFFICE & LIBRARY
RENOVATION

ADDRESS: 1101 HILLIARD STREET
PETERBOROUGH, ON K9H 5S2

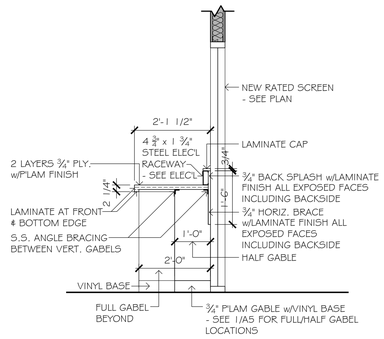
DRAWING TITLE:
LIBRARY CEILING
BULKHEAD PLAN/DETAILS
- NEW WORK
SECTIONS & MILLWORK

SCALE: AS NOTED	DRAWING NUMBER: A4 OF 7
DRAWN BY: SV	25041
CHECKED BY: GW	



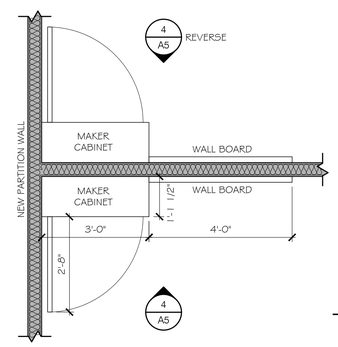
1 A5 NEW LIBRARY COUNTER SHELF - PLAN

SCALE: 1/2"= 1'-0"



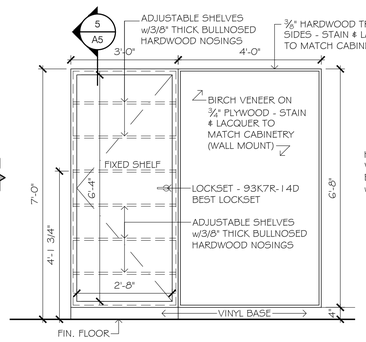
2 A5 NEW LIBRARY COUNTER SHELF - SECTION

SCALE: 1/2"= 1'-0"



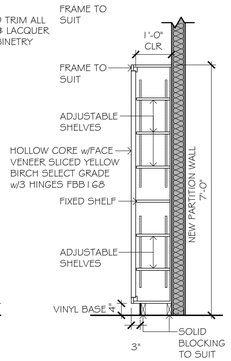
3 A5 NEW LIBRARY MAKER CABINET - ELEVATION

SCALE: 1/2"= 1'-0"



4 A5 NEW LIBRARY MAKER CABINET - ELEVATION

SCALE: 1/2"= 1'-0"



5 A5 NEW LIBRARY MAKER CABINET - SECTION

SCALE: 1/2"= 1'-0"

6 A5 NEW LIBRARY SHELF - ELEVATION

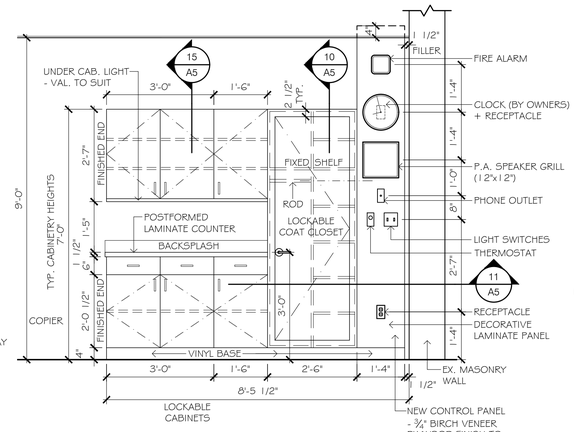
SCALE: 1/2"= 1'-0"

7 A5 NEW LIBRARY SHELF - ELEVATION

SCALE: 1/2"= 1'-0"

8 A5 NEW LIBRARY SHELF - SECTION

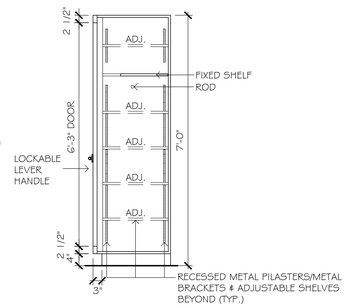
SCALE: 1/2"= 1'-0"



9 A5 NEW LIBRARY CABINETRY

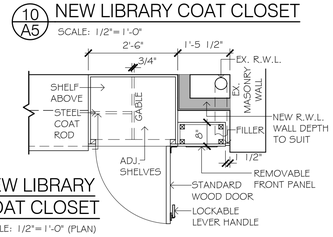
SCALE: 1/2"= 1'-0"

NOTE:
CONTRACTOR TO COORDINATE CUT-OUTS FOR INSTALLATION OF MECH'L & ELEC'L ITEMS BY OTHER DIVISIONS INTO CONTROL PANEL



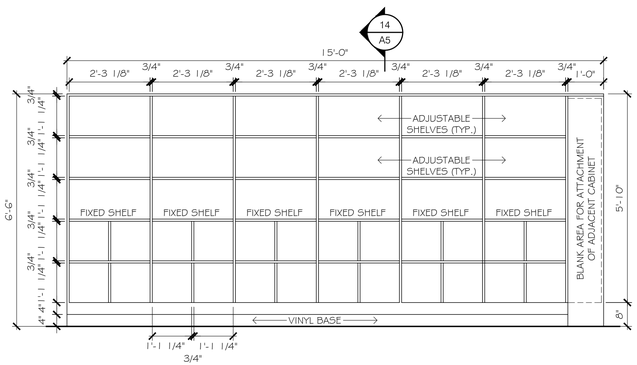
10 A5 NEW LIBRARY COAT CLOSET

SCALE: 1/2"= 1'-0"



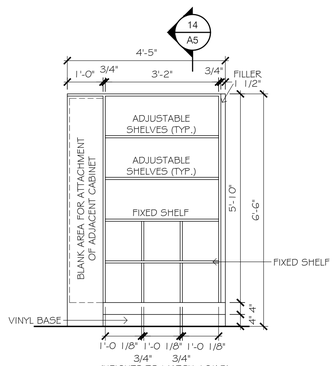
11 A5 NEW LIBRARY COAT CLOSET

SCALE: 1/2"= 1'-0" (PLAN)



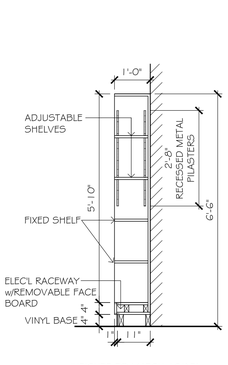
12 A5 NEW LIBRARY SHELF - ELEVATION

SCALE: 1/2"= 1'-0"



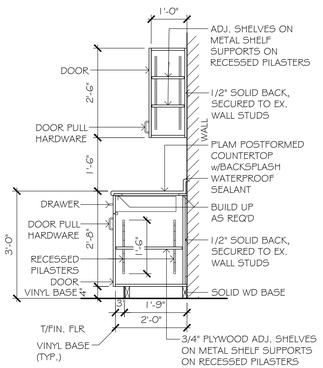
13 A5 NEW LIBRARY SHELF - ELEVATION

SCALE: 1/2"= 1'-0"



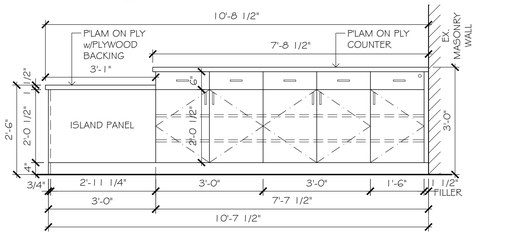
14 A5 NEW LIBRARY SHELF - SECTION

SCALE: 1/2"= 1'-0"



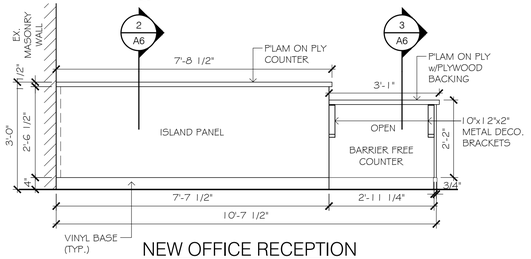
15 A5 NEW LIBRARY CABINETRY

SCALE: 1/2"= 1'-0"



16 A5 NEW OFFICE RECEPTION DESK - ELEVATION (GENERAL OFFICE SIDE)

SCALE: 1/2"= 1'-0"



17 A5 NEW OFFICE RECEPTION DESK - ELEVATION (PUBLIC SIDE)

SCALE: 1/2"= 1'-0"

WILCOX ARCHITECTS INC.
74 LINDSAY ST. SOUTH
LINDSAY, ONTARIO
PHONE: 705-328-0175
wilcox.off@gmail.com

ONTARIO ASSOCIATION OF ARCHITECTS
GLENN A. WILCOX
LICENCE 3966

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FOR PERMIT & TENDER	FEB 5, 2026
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PROJECT:
ST. PAUL CES
OFFICE & LIBRARY
RENOVATION

ADDRESS: 1101 HILLIARD STREET
PETERBOROUGH, ON K9H 5S2

DRAWING TITLE:
MILLWORK

SCALE: AS NOTED	DRAWING NUMBER: A5 OF 7
DRAWN BY: SV	25041
CHECKED BY: GW	

DESIGN CODE

1. THE COMPLETED RENOVATION TO BASE BUILDING STRUCTURE SHOWN ON THE STRUCTURAL DRAWINGS HAS BEEN DESIGNED IN SUBSTANTIAL ACCORDANCE WITH THE ONTARIO BUILDING CODE 2024 WHICH IS BASED ON THE NATIONAL BUILDING CODE OF CANADA 2020.

RENOVATIONS

1. THE CONTRACT DOCUMENTS ARE BASED ON ASSUMED AS-BUILT DIMENSIONS FOR THE EXISTING BUILDING STRUCTURE AND ASSUMPTIONS IN ACCORDANCE WITH DETAILING AND PLACING PRACTICE. THESE ASSUMPTIONS MAY VARY FROM THE ACTUAL ON-SITE CONDITIONS. THE CONTRACTOR SHALL IMMEDIATELY INFORM THE CONSULTANT OF ANY ACTUAL VARIATIONS FROM THE ASSUMED CONDITIONS.

2. MINOR MODIFICATIONS TO SUIT TOLERANCES OF +/- 50mm WILL BE REQUIRED TO THE WORK INDICATED ON THESE DRAWINGS TO REFLECT ACTUAL SITE CONDITIONS. THE CONTRACTOR WILL COOPERATE WITH THE CONSULTANT AND AMR IN THIS REGARD. MINOR MODIFICATIONS WILL BECOME THE RESPONSIBILITY OF THE CONTRACTOR AND WILL NOT RESULT IN A CHANGE IN THE CONTRACT PRICE.

3. ENSURE THAT ALL NECESSARY JOB DIMENSIONS ARE TAKEN AND ALL TRADES ARE COORDINATED FOR THE PROPER EXECUTION OF THE WORK. THE CONTRACTOR SHALL ASSUME COMPLETE RESPONSIBILITY FOR THE ACCURACY AND COMPLETENESS OF SUCH DIMENSIONS, AND FOR COORDINATION.

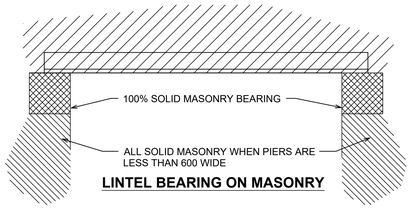
4. PRIOR TO FABRICATION OF ANY STRUCTURAL MEMBERS, THE CONTRACTOR SHALL COMPLETE THIS SITE REVIEW OF CRITICAL "TIE-IN" DIMENSIONS AND CONFIRM ALL DIMENSIONS TO ENSURE PROPER FIT OF NEW WORK TO EXISTING. REPORT ANY DISCREPANCIES TO AMR PRIOR TO STARTING WORK.

5. COMMENCEMENT OF CONSTRUCTION OR ANY PART THEREOF CONSTITUTES ACCEPTANCE OF EXISTING CONDITIONS AND MEANS DIMENSIONS AND ELEVATIONS HAVE BEEN CONSIDERED, VERIFIED AND ARE ACCEPTABLE.

6. ANY OPENINGS THAT ARE NOT SHOWN OR INDICATED ON THE STRUCTURAL DRAWINGS SHALL BE REPORTED TO AMR FOR REVIEW. THESE OPENINGS MAY NOT BE ALLOWED, MAY HAVE TO BE MOVED, OR MAY REQUIRE ADDITIONAL STRUCTURAL WORK AND DETAILING. DO NOT PROCEED WITH THESE OPENINGS WITHOUT WRITTEN PERMISSION FROM AMR.

STEEL LINTELS

- WELD BACK TO BACK ANGLES TOGETHER TOP AND BOTTOM WITH 5mm (3/16") FILLET 50mm (2") LONG AT 450mm (18") MAXIMUM CENTERS.
- MINIMUM BEARING FOR STEEL LINTELS SHALL BE 150mm (6") AND BLOCK LINTELS SHALL BE 200mm (8").
- FOR WALLS OVER 300mm (12") THICK ADD ONE ANGLE FOR EACH ADDITIONAL 100mm (4") OF WALL THICKNESS OR PORTION THEREOF.
- FOR LINTELS ABUTTING STEEL COLUMNS, CONC WALL OR COLUMNS PROVIDE L 90x90x10 SHELF ANGLE.
- FILL VOIDS OF LINTEL BLOCK WITH 12.5 MPa GROUT MIN.
- ALL STEEL LINTELS AND SHELF ANGLES IN THE EXTERIOR MASONRY SHALL BE HOT DIP GALVANIZED.



LINTEL BEARING ON MASONRY

TEMPORARY SHORING NOTES

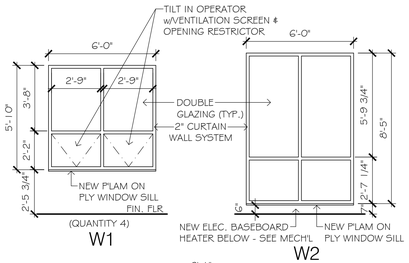
1. THE CONTRACTOR SHALL BE RESPONSIBLE FOR DESIGN OF TEMPORARY SHORING. SUBMIT DRAWING BEARING STAMP OF P.ENG RESPONSIBLE FOR DESIGN WHEN SO DIRECTED BY THE LOCAL BUILDING AUTHORITY.
2. THE CONTRACTOR SHALL CHECK AND VERIFY EXISTING SITE CONDITIONS AFFECTING WORK PRIOR TO STARTING ANY WORK. ANY INCONSISTENCIES AND/OR VARIATIONS IN EXISTING CONDITIONS AFFECTING THIS WORK SHALL BE REPORTED IMMEDIATELY TO THE ENGINEER.
3. THE CONTRACTOR MUST TAKE ALL THE NECESSARY PRECAUTIONS TO CARRY OUT THIS WORK AND BE RESPONSIBLE FOR PROTECTION OF THE EXISTING BUILDING THROUGHOUT CONSTRUCTION.
4. THE CONTRACTOR SHALL PROVIDE ADEQUATE TEMPORARY BRACING IN TWO PERPENDICULAR DIRECTIONS TO PREVENT ANY MOVEMENT IN SHORING.
5. NEW OR SOUND USED MATERIAL MAY BE USED FOR SHORING MEMBERS SUBJECT TO ENGINEERS APPROVAL.
6. PROVIDE WEDGES AS REQUIRED TO ENSURE TIGHT FIT.

STRUCTURAL STEEL

1. STRUCTURAL STEEL SECTIONS SHALL BE NEW AND CONFORM TO THE FOLLOWING:

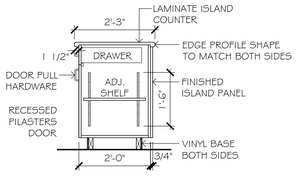
A.	WIDE FLANGE BEAMS AND WWF SECTIONS ---	CSA G40.21 350W
B.	MISCELLANEOUS ROLLED SECTIONS (EXCEPT WIDE FLANGES) ----------	CSA G40.21 300W
C.	HOLLOW STRUCTURAL SECTIONS (CLASS C U.N.O.) ----------	CSA G40.21 350W
D.	ROLLED PLATES ----------	CSA G40.21 300W
E.	BOLTS (SEE PLANS AND DETAILS) ----------	ASTM A325 OR ASTM A490
F.	STRUCTURAL STEEL ANCHOR RODS (U.N.O.) --	ASTM F1554 GRADE 36 MINIMUM
G.	REINFORCING BAR ANCHOR BOLTS ----------	CAN/CSA-G30.18R, GRADE 400

2. ALL CONNECTIONS TO BE DESIGNED BY FABRICATOR UNLESS NOTED OTHERWISE. ALL BEAM CONNECTIONS TO BE STANDARD FRAME BEAM CONNECTIONS OR EQUIVALENT, UNLESS NOTED OTHERWISE. SUBMIT A LETTER OF CERTIFICATION BY P.ENG RESPONSIBLE FOR DESIGN OF CONNECTIONS.
3. SUBMIT SHOP DRAWINGS FOR REVIEW PRIOR TO START OF STEEL FABRICATION.
4. FABRICATION, ERECTION, STRUCTURAL DESIGN, AND DETAILING OF ALL STEEL SHALL BE IN ACCORDANCE WITH CAN/CSA-S16.
5. FILLET WELDS SHALL BE 5 mm MINIMUM U.N.O.
6. BOLTS SHALL BE A325 19 mm Ø MINIMUM U.N.O.
7. BOLTED CONNECTIONS SHALL HAVE A MINIMUM OF TWO BOLTS IN EACH MEMBER U.N.O.

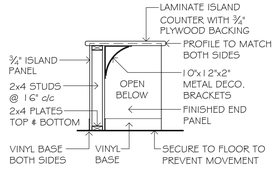


1 A6 NEW WINDOWS
SCALE: 1/4"=1'-0"

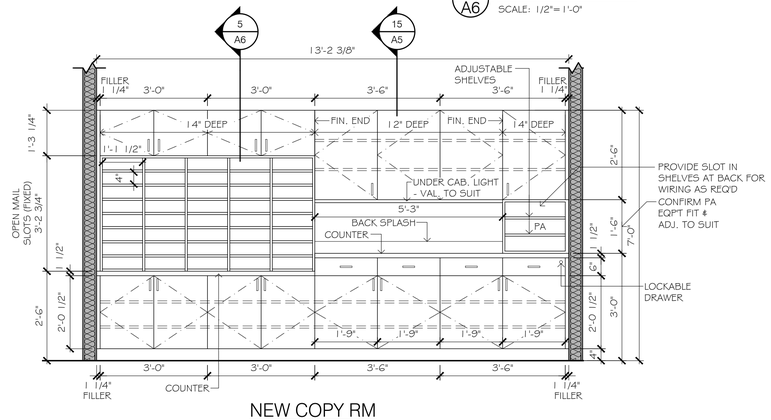
TYPICAL CABINETRY NOTES:
- CONFIRM ALL MATERIALS, TRIMS, HARDWARE, FITTINGS & FINISHES & COLOURS w/OWNER PRIOR TO CONSTRUCTION.
- ALL DOOR/DRAWER FACES, END PANELS, SHELVING TO BE FINISH GRADE ¾" WOOD.
- ALL DRAWER BACKS & BOTTOMS TO BE MIN. ½" THICK WOOD.
- ALL EXPOSED FINISH CABINETRY, FACERS & FILLERS TO HAVE MATCHING FINISH.
- SCRIBE COUNTERTOPS & CONSTRUCT NEW CABINETS TO INCORPORATE ALL BUILDING SITE CONDITIONS.
- PROVIDE ALL COUNTER BUILD UP & FILLERS AS REQ'D.
- ALL COUNTER EDGE PROFILE SHAPES TO BE CONFIRMED WITH OWNER
- LAMINATE COUNTERS TO BE FINISHED w/MATCHING LAMINATE @ ALL EXPOSED SURFACES.
- APPLY CLEAR WATERPROOF SEALANT @ COUNTER BACK & SIDE SPLASHES/WALL JOINTS.
- PROVIDE ¾" THICK PLYWOOD BASE OR HEAVY DUTY LEVELING FEET AND SECURE KICK SUPPORT. ENSURE BASE IS LEVEL & TRUE BEFORE INSTALLATION OF FINISH CABINETRY.
- TOEKICK TO HAVE VINYL BASE FINISH.
- ALL DOUBLE DOOR CABINETS TO HAVE PLYWOOD FRONT EDGE SHELF REINFORCING STRIPS TO PREVENT SAG OR INTERMEDIATE SHELF SUPPORT.
- ALL SHELVES TO BE ADJUSTABLE U.O.N. w/APPROVED METAL SHELF SUPPORTS.
- SECURE NEW CABINET BACKS TO EXISTING WALL STRUCTURE AS REQUIRED.
- DOOR/DRAWER PULLS TO BE STAINLESS STEEL AND ALL HARDWARE TO BE SOFT CLOSE.



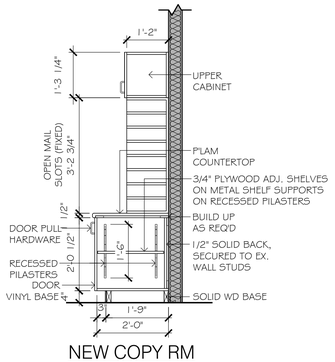
2 A6 NEW OFFICE RECEPTION DESK - SECTION
SCALE: 1/2"=1'-0"



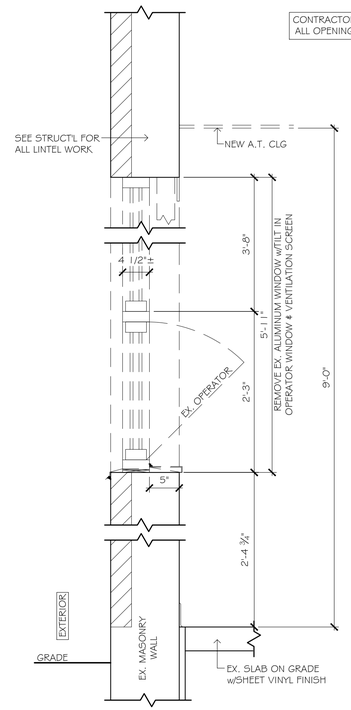
3 A6 NEW OFFICE RECEPTION DESK - BARRIER FREE SECTION
SCALE: 1/2"=1'-0"



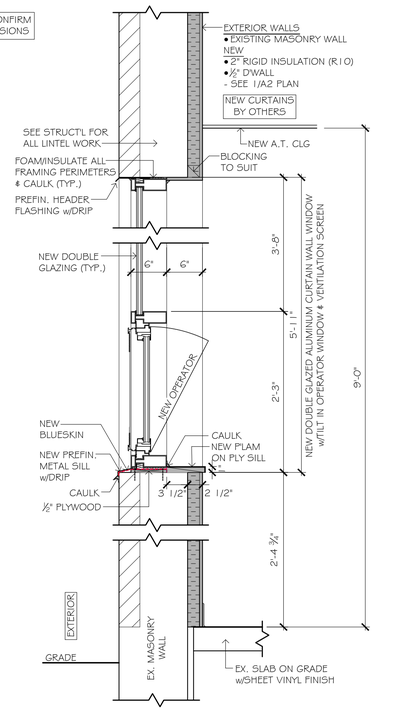
4 A6 NEW COPY RM MAIL - STORAGE - PA
SCALE: 1/2"=1'-0"



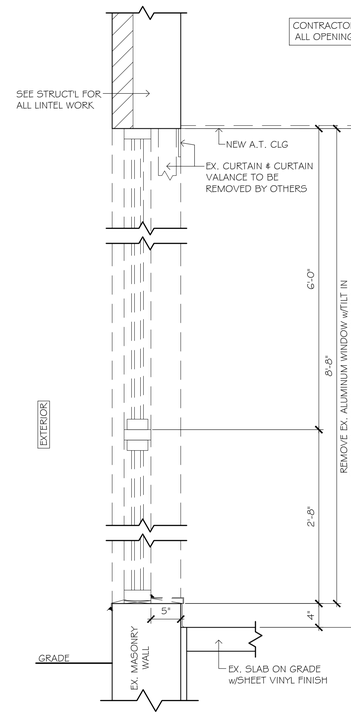
5 A6 NEW COPY RM MAIL - STORAGE - PA
SCALE: 1/2"=1'-0"



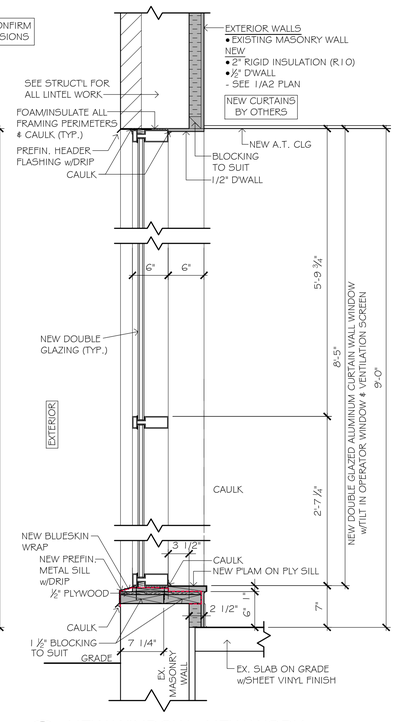
6 A6 EX. WINDOW - DEMOLITION
SCALE: 1" = 1'-0"



7 A6 NEW WINDOW - NEW WORK
SCALE: 1" = 1'-0"



8 A6 EX. WINDOW - DEMOLITION
SCALE: 1" = 1'-0"



9 A6 NEW WINDOW - NEW WORK
SCALE: 1" = 1'-0"

WILCOX ARCHITECTS INC.
74 LINDSAY ST. SOUTH
LINDSAY, ONTARIO
PHONE: 705-328-0175
wilcox.off@gmail.com

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GLENN A. WILCOX
LICENCE 3966

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MECHANICAL ENGINEERS
NOVADYNE LTD
ELECTRICAL ENGINEERS
KIRKLAND ENGINEERING LTD

LICENCED PROFESSIONAL ENGINEER
JAN 18 / 2026
D. KOTOBELLI
100159847
PROVINCE OF ONTARIO

FOR DESIGN OF STRUCTURAL COMPONENTS ONLY
DATE: JANUARY 18, 2026
PROJECT No.: 25-2332
PROJECT:
ST. PAUL CATHOLIC ELEMENTARY SCHOOL OFFICE & LIBRARY RENOVATION
PETERBOROUGH, ONTARIO

AMR ENGINEERING LTD.
920 ALNESS STREET, SUITE 205
TORONTO, ONTARIO M3J 2H7
TEL: 416-551-1611
FAX: 416-477-0426

FOR DESIGN OF STEEL LINTELS FOR NEW OPENINGS ONLY

FOR PERMIT & TENDER	FEB 5, 2026
ISSUED:	DATE:

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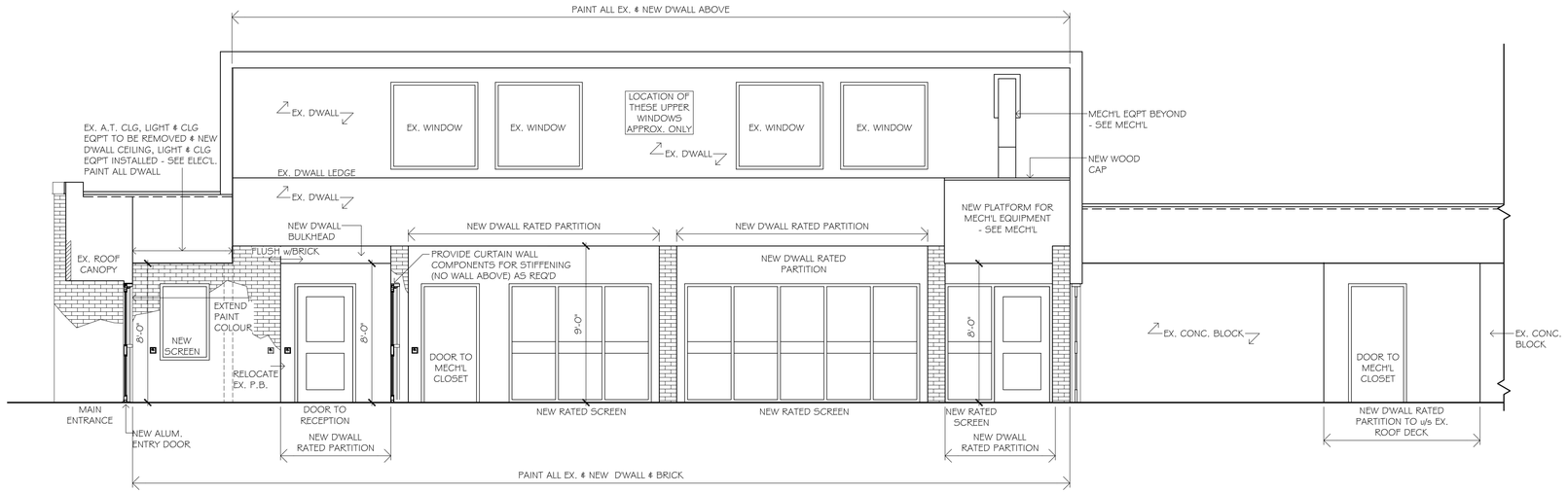
PROJECT:
ST. PAUL CES
OFFICE & LIBRARY
RENOVATION

ADDRESS: 1101 HILLIARD STREET
PETERBOROUGH, ON K9H 5S2

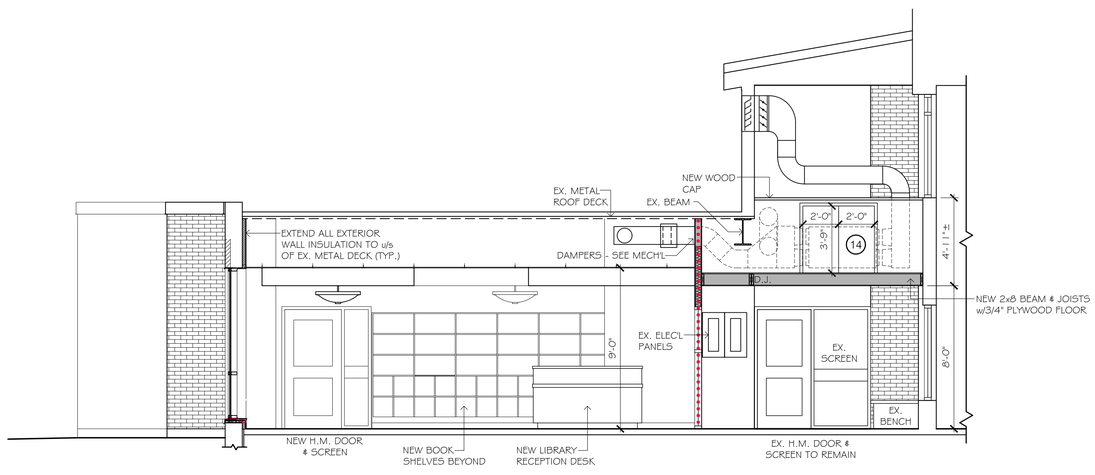
DRAWING TITLE:
MILLWORK
STRUCTURAL NOTES

SCALE: AS NOTED	DRAWING NUMBER: A6 OF 7
DRAWN BY: SV	25041
CHECKED BY: GW	



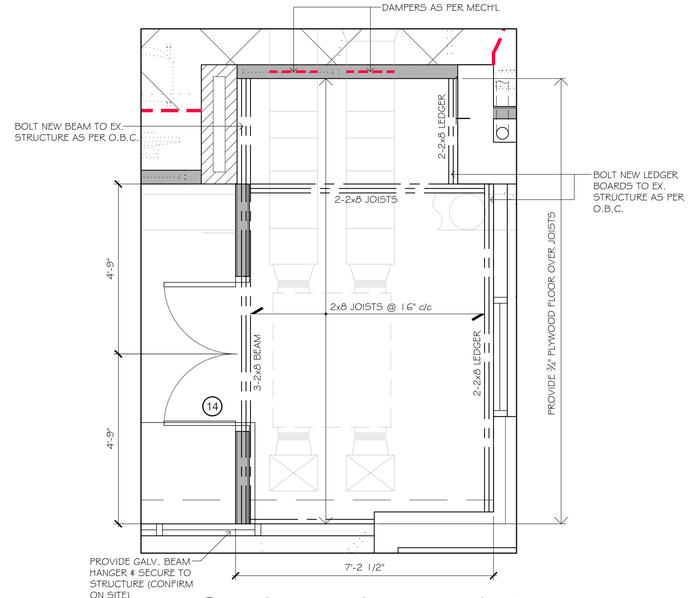
1/A7 BUILDING SECTION @ ENTRANCE & CORRIDOR - NEW WORK

SCALE: 1/4" = 1'-0"



2/A7 SECTION @ MECH'L PLATFORM - NEW WORK

SCALE: 1/4" = 1'-0"



3/A7 MECH'L PLATFORM - NEW WORK

SCALE: 1/2" = 1'-0"

WILCOX ARCHITECTS INC.
74 LINDSAY ST. SOUTH
LINDSAY, ONTARIO
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DRAWING TITLE:
MILLWORK
STRUCTURAL NOTES

SCALE: AS NOTED	DRAWING NUMBER: A7 OF 7
DRAWN BY: SV	25041
CHECKED BY: GW	

15100 BASIC REQUIREMENTS

1.0 SCOPE OF WORK

1.1 The work includes the supply and installation of materials, equipment and services to modify and upgrade the plumbing and HVAC systems for the Library Renovations at St Paul CES, Peterborough, as shown on the drawings.

1.2 Upon completion of the work leave all systems in proper operating order and the premises in a clean and tidy condition to the satisfaction of the Consultant.

2.0 REGULATIONS, CODES AND STANDARDS

2.1 The work shall accord strictly with all rules, regulations, by-laws and the requirements and interpretations of all authorities having jurisdiction.

2.2 Drawings and specifications should not conflict with the above regulations, but where there are apparent discrepancies the Contractor shall notify the Consultant in writing and obtain clarification before proceeding with the work.

2.3 The work of the mechanical division shall conform to the following Codes, Regulations and Standards including, unless referenced otherwise, latest revisions issued up to date of tender submission.

1. The Ontario Building Code.
2. NFPA 90A with respect to Air Conditioning and Ventilating Systems.
3. NFPA 90B with respect to Warm Air Heating and Air Conditioning Systems.
4. ASHRAE Guide and Data Books.
5. SMACNA "HVAC Duct Construction Standards"
6. All other codes, standards, regulations referred to in the above documents, adopted by the authorities having jurisdiction and/or applicable to the work of this Division as shown on the contract documents.
7. Ontario Natural Gas Utilization Code CGA/CSA B149.1.

3.0 EXAMINATION OF SITE

3.1 The actual location of existing services shall be verified in the field before work is commenced.

4.0 DRAWINGS, CHANGES AND INSTALLATIONS

4.1 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. The Consultant reserves the right to make reasonable changes required to accommodate conditions arising during the progress of the work, at no extra cost to the Owner.

5.0 RECORD DRAWINGS

5.1 The Contractor shall clearly mark, as the job progresses, all changes and deviations from that shown on contract drawings. On project completion, the Contractor shall forward to the Consultant one set of drawings indicating the as-built conditions.

6.0 SHOP DRAWINGS

6.1 Submit three copies of shop drawings or digital pdfs which indicate clearly the materials and/or equipment actually being supplied, all details of construction, accurate dimensions, capacity, operating characteristics and performance shall be submitted to the Consultant for approval. Each shop drawing shall give the identifying number of the specific pump, fan, etc. for which it was prepared (e.g. Fan F-7) Shop Drawings in pdf format are acceptable.

6.2 Prior to submission to the Consultant, THE CONTRACTOR SHALL REVIEW ALL SHOP DRAWINGS AND APPROVE THEM, indicating that the drawings have been checked and the described equipment has been co-ordinated.

6.3 Installation of any equipment shall not be commenced until after shop drawings have been reviewed by the Consultant.

6.4 Bind one complete set of reviewed Shop Drawings into each operating and maintenance instruction manual.

7.0 QUALIFICATION OF TRADESMEN

7.1 The Contractor shall maintain at the job site, at all times, qualified personnel and supporting staff, with proven experience in erecting, supervising, testing and adjusting projects of comparable nature and complexity.

8.0 PRODUCT DELIVERY, STORAGE AND HANDLING

8.1 Inspect products delivered to the site, and before acceptance ensure that the product is: new, the best of its respective kind, free from defects, is as specified, and is as per reviewed shop drawings, all in accordance with the Contract Documents.

8.2 Store materials only in designated areas and protect as necessary to maintain materials in new condition.

8.3 Any unpainted steel surface shall be prime coated under this Division.

9.0 WARRANTY

9.1 The Contractor shall provide a warranty of one year for all systems and equipment installed under this contract. The Contractor agrees to correct promptly, at his own expense, defects or deficiencies in the Work which appear prior to and during the period of one year from the date of acceptance by the Owner of the Work or portions of the work.

10.0 OPERATION AND MAINTENANCE INSTRUCTIONS

10.1 Three (3) copies of complete operating and maintenance instructions for all mechanical equipment and systems, bound in hard covered manuals, shall be supplied.

11.0 INSTRUCTIONS TO OWNER

11.1 Instruct the Owner's representative(s) in all respects of the operation and maintenance of systems and equipment. Obtain in writing from the Consultant a list of the Owner's representative(s) qualified to receive instructions.

15200 BASIC MATERIALS AND METHODS

1.0 MATERIALS

1.1 Make and quality of materials in the construction of this project shall be subject to the approval of the Consultant.
1.2 Materials and equipment supplied by this Division shall be new and free from defects and shall be equivalent in physical characteristics and performance to that specified by the manufacturer's name and catalogue number.

2.0 CUTTING, PATCHING, SLEEVES AND ESCUTCHEONS

2.1 The Contractor shall co-ordinate on site the position of all sleeves and openings required for the work.
2.2 Openings shall be made at the expense of the mechanical division, except for louver openings which shall be co-ordinated with the general contractor. Cutting of structural members shall not be permitted without specified written approval by the Consultant.
2.3 All drilling for hangers, rod inserts and work of similar nature shall be done under this contract.
2.4 It shall be the responsibility of the mechanical division to locate and provide anchor bolts, equipment bases and curbs.

3.0 HANGERS AND EQUIPMENT SUPPORTS

3.1 Piping and equipment provided under the mechanical division shall be complete with all necessary supports and hangers required for a safe and workmanlike installation. Auxiliary structural members shall be provided under the mechanical section concerned, where piping, ducts or equipment must be suspended between the joists or beams of the structure.

4.0 ELECTRICAL CHARACTERISTICS

4.1 Electric motors for all driven equipment supplied under the mechanical division shall be provided and installed under this Division.
4.2 Motors shall have the following electrical characteristics, unless otherwise specified:
For 1/3 HP or larger – 208 volt – 3 ph – 60 Hz
For 1/4 HP and smaller – 120 volt – 1 ph – 60 Hz

5.0 ACCESS PANELS AND ACCESSIBILITY

5.1 All parts of the installation requiring periodic maintenance shall be accessible. Wherever valves, dampers, etc. are concealed by the building construction, access doors or panels shall be furnished by this section and installed under this contract. The mechanical division shall be responsible for their proper location.

6.0 CLEANING

6.1 Clean thoroughly all fixtures and equipment from grease, dirt, plaster or any other foreign material. Any dirt, rubbish or grease on walls, floors or fixtures accumulated from the work of the mechanical division shall be removed promptly from the premises by this division.

7.0 COOPERATION WITH OTHER DIVISIONS

7.1 Each section shall confine itself to installing all materials in the spaces shown without encroaching upon space for materials installed under other sections or divisions. Where the space allotted to another section or division is encroached upon, the materials shall be relocated to their proper space allotments in such a manner to complete the work using space allotted to the various sections and divisions. Relocation of materials and work involved shall be paid for by the section responsible for the encroachment at no extra cost to the Owner.

8.0 NAMEPLATES & SIGNS

8.1 Each piece of mechanical equipment shall be complete with a lamacoid nameplate securely fastened in a conspicuous place on the equipment. The nameplate shall be 3/32" thick laminated phenolic plastic 3-3/8" long x 1-5/8" wide with black face and white centre, 7/32" high lettering shall be engraved through to the white lamination with the following –
– Equipment type and number. E.g., Fan. No.1, Pump No. 2 etc.

9.0 MAINTENANCE MATERIALS

9.1 Lubricating oils, greases, spare parts, replacement parts and special maintenance and service tools where called for in the specifications shall be presented to the Owner during the instruction period.

10.0 DUCT CLEANING

10.1 The interiors of all new plenums, casings and ductwork, shall be certified as clean by the mechanical contractor before final air balancing is performed. Copy to be sent to the Consultant.

15300 INSULATION AND LININGS

1.1 Acoustic Lining to be 1" thick rigid, coated liner conforming to NFPA 90A and 90B. Increase duct sizes to compensate for increased thickness. Fasten lining with welded pins and self locking washers. Install lining where indicated on drawings and on all supply and return ductwork to air handling units, furnaces, etc., up to and including the first elbow or a minimum total length of 6'-0".
1.2 Insulation must be dust free, fibre free and resist mold and mildew.
1.3 Insulation materials to have a conductivity of .27 BTU-in/hr-ft2 and have a flame -spread index of less than 25 and a smoke developed index of less than 50.
1.4 Fresh air supply and exhaust ducting to the outdoors is to be insulated with 2" rigid fibreglass and canvas coveredand paintyed to match adjacent walls. Tape all joints with foil backed tape. Hold in place with metal pins and wire.
1.7 Supply ducting from the air handlers is to be insulated with 1" thick .75# fibreglass, equal to Manson Alley Wrap FSK, unless the ducting is accoustically lined. Fasten with wire bands at 12" centres. Tape all joints with foil tape.

15400 PLUMBING SPECIFICATIONS

1.1 Reference: Ontario Building Code
1.2 Scope of work for Plumber: condensate pumps and drains for HVAC equipment
1.3 Architectural drawings to govern the number and location of fixtures, except for floor drains.
1.4 Fixtures to be the product of one manufacturer and of the same type.
1.5 Trim in any one washroom to be the product of one manufacturer.
1.6 Exposed plumbing brass to be chrome plated.
1.7 DCW and DHW above ground main piping to be copper tube, hard drawn, type L to ASTM B88M. Bronze or copper fittings, soldering with lead free solder. Branch piping 1" or less into classrooms, and into washrooms may be PEX piping to CAN/CSA-B137.10
1.8 Isolation valves: Class 150, screwed or soldered, bronze body, chrome plated brass ball, PTFE teflon adjustable packing, brass gland, PTFE teflon seat, plastic coated steel handle.
1.9 Check valves: 200 lb, class, bronze body, Watts CV or equal.
1.10 Below Grade Sanitary: PVC to CAN/CSA B181.2, solvent welded to ASTM D2235.
1.11 Above Grade Sanitary and Venting: PVC to CAN/CSA B182.2, solvent welded to ASTM D2235 with a flame spread rating of 25 or less. Pipe to be IPEX System 15. Pipe in ceiling space acting as a return ar plenum is to be plenum rated with a flame spread of 25 and smoke developed of less than 50. Pipe to be equal to IPEX XFR.
1.12 Domestic water pipe insulation to be 1" thick preformed rigid fibre glass with factory applied vapour barrier and self seal lap joint equal to Manson Alley K with APT jacket. Use premolded PVC covers for fittings over 1" in size.

2.0 Execution

2.1 Slope drains in the direction of flow.
2.2 Flush out and rinse systems. Leak test before plumbing is closed in or buried.
2.3 Seal all penetrations through fire separations (walls between rooms and corridors) to Code and ULC requirements, Use fire proof caulking equal to Hilti FS-1.
2.11 PVC pipe penetrations through fire separations are to be protected with firestop collars, caulking , etc. and be ULC rated for the rating specified. Acceptable manufacturers are Hilti, 3M. Shop drawings are to be provided for all firestopping details.

15600 SHEET METAL DUCTWORK AND SPECIALTIES

1.1 Make all ductwork, unless specifically noted otherwise, of galvanized sheet steel to ASTM A525-83, and according to the requirements of SMACNA for a 1" wg pressure class and a seal class of 'C'. Provide reinforcements fabricated from angles, zees, or channels as per SMACNA. Support ducts with hangers and tie-rods.
1.2 Where ductwork passes through a wall or floor, other than when a fire damper is required, pack around the duct using a fire resistant material to ensure a sound and air-tight joint.
1.3 Make changes in direction of horizontal ducts with elbows having an inside radius not less than the width of the duct. Make a change of direction from horizontal to vertical duct with elbows having an inside radius equal to the depth of the duct. Where this is not possible due to the building construction, use turning vanes. These shall be hollow "Duro Vane Rail" manufactured by Duro Dyne or similar turning vanes acceptable to the Consultant. Square throat elbows are not acceptable.
1.4 Provide flexible connections at each air handling unit and fan to duct connection. The frame shall be galvanized sheet metal with fire-resistant neoprene coated glass fabric, clenched by double locked seams. Temperature rating shall be -40oF to 190oF.
1.5 Provide access panels at all gravity dampers, fire dampers, motorized dampers, coils, fan bearings or similar equipment requiring occasional maintenance or inspections Panels shall be 1" thick, insulated, low leakage, cam lock closure, and equal to Nailor Series 0800. Minimum size to be 6x12 or 2" less than the duct width squared.
1.6 For duct expansions, the angle formed at each side of the duct shall not exceed 20'. For contractions, the angle formed at each side of the duct shall not exceed 30'.
1.7 Provide take-off boots and balancing dampers at all branches according to SMACNA standards.
1.8 Grilles and Diffusers: Refer to schedules on drawings for size, colour and supplier.
1.9 Insulated flexible ducting is to be used to connect ductwork to ceiling diffusers. Maximum length of the flex ducting to be four feet. Ducting and insulation to meet NFPA requirements for to flame spread and smoke developed, 25/ 50. Support flexible ducting a minimum of every 5 feet. Flex ducting to have aluminum core and be accoustically treated, equal to Peppertree TFAPB-M
1.10 Fire Dampers (FD) shall be installed at all fire separations. Dampers shall have a 165oF fusible link, be Type B, ULC listed and be rated for 1½ hours. Where necessary, provide access doors (minimum the height of the ducting squared or 8"x8" whatever is greater) in the ductwork for resetting the dampers. Where necessary, provide drywall access doors, minimum 10" square.
1.11 Combination fire & smoke dampers shall be installed at corridor wall penetrations. Refer to specifications and schedule.

15800 AIR CONDITIONING AND HEATING UNITS

1.0 GENERAL

1.1 This specification applies to all hvac air appliances and equipment.

1.2 SUBMITTALS

1.2.1. Submit Shop drawings and product data in accordance with the specifications
1.2.2. Submittals shall include the following:
– Dimensioned plan and elevation view drawings, required clearances, and location of all field connections.
– Summary of all auxiliary utility requirements, such as electricity, water, compressed air, etc. Summary shall indicate quality and quantity of each required utility
– Single-line schematic drawing of the power field hookup requirements, indicating all items that are furnished.
– Installation and maintenance manuals.

1.3 QUALIFICATIONS

1.3.1 Equipment manufacturer must specialize in the manufacture of the type of products specified and have five years experience with similar equipment and refrigerant offered.
1.3.2 Regulatory Requirements: Comply with the codes and standards specified
1.3.3 Manufacturer's plant must be ISO Registered.

1.4 DELIVERY AND HANDLING

1.4.1 Units shall be delivered to the job site assembled and charged with a holding charge of refrigerant and full oil charge by the manufacturer.
1.4.2 Comply with the manufacturer's instructions for rigging and handling equipment.

1.5 DESIGN CONDITIONS
Summer Inside: 75oFDB, 50% RH, Summer Outside: 87oFDB, 73oFWB,

15801 VRF HEAT PUMP UNITS

1.0 GENERAL

1.1 The VRF heat pump system shall be installed as indicated. Each system shall consist of an outdoor unit and an indoor air handling unit as per the schedule and as shown on the drawings.

1.2 Each heat pump shall be factory assembled, wired and tested. Within the unit shall be all factory wiring, piping, electronic modulating linear expansion device, control circuit board and DC fan motor. The unit shall have a self-diagnostic function, time delay mechanism, an auto restart function, an emergency operation function and test run function. Indoor unit refrigerant pipes shall be charged with dehydrated air before shipment from the factory. The unit shall be ETL certified. A dry air holding charge shall be provided in the indoor section. Refrigerant to meet current regulations. System efficiency shall meet or exceed 18 SEER when part of a 1:1 (indoor/outdoor) system.

1.3 Submittals shall include the following: performance and capacity details of all units at specified indoor and outdoor conditions, estimated piping lengths, refrigerant charge per system, wiring diagrams, and warranty information.

1.4 All units shall be listed and rated by ANSI/AHRI Standard 1230 and meet all current minimum IEER performance requirements units shall be ANSI/UL STD 1995 listed and listed by Electrical Testing Labs (ETL) and bear the cETL label.All wiring shall be in accordance with the Ontario Electric Code.

1.5 The system will be produced in an ISO 9001 and ISO 14001 facility, which are standards set by the International Standard Organization (ISO).

1.6 The system and the design shall be in compliance with CSA B52 Mechanical Refrigerant Code, and ASHRAE 15-2022 and 34-2022.

1.7 Acceptable manufacturer:
– Mitsubishi equipment, distributed by MitsAir Conditioning Inc., Mississauga, ON. Contact Birty Rajapaksha, (905-362-5273)
– the refrigerant will be flammable R454B.

1.8 The warranty period on all parts and compressors shall commence on the date of initial start-up and shall continue for a period of ten (10) years from date of shipment. Proper maintenance of the equipment shall be conducted by certified technicians as per the manufacturer or manufacturer's representative requirements. Maintenance logs shall be supplied by the owner upon request.

1.9 All manufacturer warranty shall be for parts only. All diagnosis and labour warranty shall be carried out by installing contractor as per the warranty requirements of this project.

Part 2- PRODUCTS
2.1 Outdoor Unit
2.1.1 Unit Cabinet:
– The casing shall be fabricated of galvanized steel, bonderized, finished with an electrostatically applied, thermally fused acrylic or polyester powder coating for corrosion protection.
2.1.2 Fan:
– The unit shall be furnished with a direct drive, high performance propeller type fan.
– The condenser fan motor shall be a variable speed, direct current (DC) motor and shall have permanently lubricated bearings.
– Fan speed shall be switch automatically according to outdoor ambient temperature and indoor temperature demand.
– The fan motor shall be mounted with vibration isolation for quiet operation.
– The fan shall be provided with a raised guard to prevent contact with moving parts.
2.1.3 Coil
– The outdoor unit coil shall be of nonferrous construction with lanced or corrugated plate fins on copper tubing.
– The coil shall be protected with an integral guard.
– Refrigerant flow from the outdoor unit to the indoor units shall be independently controlled by means of individual electronic linear expansion valves for each indoor unit.
– All refrigerant lines between outdoor and indoor units shall be of annealed, refrigeration grade copper tubing, ARC Type, meeting ASTM B280 requirements, individually insulated in twin-tube, flexible, closed-cell, CFC-free (ozone depletion potential of zero), elastomeric material for the insulation of refrigerant pipes and tubes with thermal conductivity equal to or better than 0.27 BTU-inch/hour per Sq Ft / ℉,
– All refrigerant connections between outdoor and indoor units shall be flare type.
2.1.4 Compressor:
– The compressor shall be a high performance, hermetic, inverter driven, variable speed, dual rotary type.
– The compressor motor shall be direct current (DC) type equipped with a factory supplied and installed inverter drive package.
– The outdoor unit shall be equipped with a suction side refrigerant accumulator.
– The compressor will be equipped with an internal thermal overload.
– The compressor shall be mounted to avoid the transmission of vibration.
2.1.5 Electrical:
– The outdoor unit electrical power shall be 208/230 volts, 1-phase, 60 hertz.
– The outdoor unit shall be controlled by the microprocessors located in the indoor unit and communicating digitally with microprocessors in the outdoor unit.

2.2 Indoor Units - AIR HANDLING UNIT
2.2.1 Indoor unit shall be a horizontal multi positional air handling unit with ECM motor type fan with auto CFM adjustment, for installation within a conditioned space. The unit shall have an end discharge air. The unit shall be suspended with sprin isolators from supports across the OWSJ.
2.2.2 Units shall have a width and depth of approx 22".
2.2.3
2.2.4 The cabinet shall be constructed with sound absorbing, foil-faced insulation to control air leakage.
2.2.5 The fan shall have a variable speed direct drive ECM type fan with statically and dynamically balanced impeller with 3 user-selectable fan speeds. The automatic fan speed mode shall allow the fan to vary between 5 speeds based on space load. The ECM controller shall continuously and automatically adjust to varying external static pressure on the system.
2.2.6 Units shall be equipped with refrigerant leak detector for R-454B
2.2.7 Unit shall be provided with a standard filter.
2.2.8 Power to be 208-1-60.

2.3 Equipment Controls:
– The control system shall consist of a minimum of one microprocessor on each indoor unit and one in the outdoor unit. The microprocessor located in the indoor unit shall have the capability of monitoring return air temperature and indoor coil temperature, receiving and processing commands from the wired controller, providing emergency operation and controlling the outdoor unit.
– The system shall be capable of automatic restart when power is restored after power interruption. The system shall have self-diagnostics ability, including total hours of compressor run time. Diagnostics codes for indoor and outdoor units shall be displayed on the wired controller panel.
2.4 Wired Remote Controllers
– The Wired Remote Controller shall have a LCD display. There shall be a built-in weekly timer. The controller shall have a built-in temperature sensor. Temperature shall be displayed in either Fahrenheit (℉) or Celsius (℃), and Temperature changes shall be by increments of 1℉ (0.5℃).
– Field wiring shall run directly from the indoor unit to the wired controller with no splices. The voltage to the wired controller from the indoor unit shall be 12 VDC. Up to two wired controllers shall be able to be used to control one unit.
– A BMS gateway shall be provided with the units for control and monitoring by the school's Johnson Controls BMS.

EXECUTION

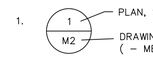
3.1 Install equipment where shown on drawings according to manufacturer's recommendations and performed by an approved manufacturer's contractor. Units shall be mounted straight and level, aligned with structure, for a neat and workmanlike arrangement.
3.2 Power wiring and disconnects shall be provided by Division 16, All power wiring by Division 16. All control wiring is by Division 15 and will be less than 50v. Refer to and follow the manufacturer's wiring requirements.
3.3 Provide a condensate pump equal to Little Giant VCMA20ULS. Pipe 3/4" pvc drain line from the indoor unit to nearest drain in washrooms where indicated.
3.4 Install wall mounted controller in location indicated. Mounting height to meet barrier free requirements (44").
3.5 Route refrigerant tubing to condenser location outside and insulate with foam rubber. Size lines according to manufacturer. Contractor to verify installation distances meet manufacturer's requirements. Purge with nitrogen while welding. Firestop the penetrations at fire rated corridor walls.
3.6 Mount outside heat pump on a 18" raised stand.
3.7 Configure unit controllers to suit the school's schedule.
3.8 Start-up the systems, and demonstrate the units to the Owner.
3.9 Before start-up Contractor to provide documentation to consultant showing the installation requirements for R-454B are met. Refer to manufacturer's installation manual.

15802 REFRIGERANT SYSTEMS

1.1 Completed refrigeration systems must meet the requirements of ANSI B16.22 Wrought Copper and Copper Alloy Solder-joint Pressure Fittings, ANSI B31.5, Refrigeration Piping, ASME Sec VIII, Boiler and Pressure Vessel Code for unfired vessels, ANSI ASHRAE 15 Safety Code for Mechanical Refrigeration, ASTM B280 Seamless Copper Tube for Air Conditioning and Refrigeration Field Service. Meet applicable codes for R-454B refrigerant.
1.2 Install systems as per the manufacturer's requirements.
1.3 Co-ordinate layout and installation of tubing with other trades.
1.4 Support tubing 3/8" and under every 4'-0" and larger than 1/2" diameter every 6'-0".
1.5 Use plastic coated straps on copper tubes.
1.6 Insulate suction and liquid lines as per Section 15300.
1.7 All outside exposed refrigeration piping to be insulated and covered neatly with PVC jacketing.
1.8 Seal all penetrations through fire separations (corridor walls and mechanical room walls) to Code and ULC requirements, Use fire proof caulking equal to Hilti FS-1.

DRAWING LIST – MECHANICAL

GENERAL NOTES

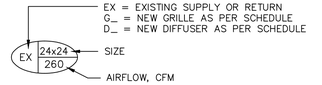
1. 

2. CONTRACTOR SHALL VERIFY SITE CONDITIONS AND REPORT ANY DISCREPANCIES AND INCONSISTENCIES TO THE ENGINEER BEFORE PROCEEDING WITH THE WORK.

LOCATION AND SETTING OUT IS THE RESPONSIBILITY OF THE CONTRACTOR.

UNLESS NOTED OTHERWISE, DIMENSIONS ARE IN IMPERIAL UNITS.

LEGEND



Rev.	Date	Description	By	App.
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0	FEB 6 26	FOR TENDER AND PERMIT	AB	–
P2	JAN 26 26	FOR REVIEW	AB	–

NOVADYNE
269 North Indian Road Tel: (705) 696-2119
Hastings, ON. Canada
K0L 1Y0

REGISTERED PROFESSIONAL ENGINEER A.G.BUCHKOWSKI FEB 6, 2026. PROVINCE OF ONTARIO
MECHANICAL

DWN.	AB	JAN 2026
CHK.		
DSN.	A. BUCHKOWSKI	JAN 2026
SCALE:	AS NOTED	

CLIENT
Peterborough Victoria Northumberland and Clarington Catholic District School Board

PROJECT
ST. PAUL CES
OFFICE & LIBRARY RENOVATION
1101 Hilliard St, Peterborough, ON

TITLE
TITLE & SPECIFICATIONS

FILE No.	DWG. No.	Rev. No.
0667-M1	M1	0
CLIENT FILE No.		

15802 ENERGY RECOVERY VENTILATORS

1.0 GENERAL
1.1 Refer to section 15800.
1.2
2.0 PRODUCTS

2.1.1 Capacities and sizes: refer to ERV schedule.

2.1.2 The Energy Recovery Ventilators shall have the following characteristics:
Casing: Painted galvanized exterior cabinet, and 1" foil faced insulation, drain connections.
Configuration: Horizontal discharge and return, with field configurable outdoor connections.
Mounting: Ceiling Mounted
Exchanger: Energy recovery core. Media to be enthalpic high efficiency core
Blowers: Centrifugal fan with EC motor
Power: 208/240–1–60
Controls: Internal controls to include weekly timer, night purge function, airflow speed control, defrost controls, dry contact for freezestat and damper controls.
Controller BMS compatible controller
Dampers: Provided by Contractor, to be opened from a signal from the ERV
Filters: Standard MERV 8 filters, replaceable

2.1.3 Acceptable Product: Lossnay LGH–FxxxRVX–E models with PZ–62DR controller, and as per schedule
Available from Mits Air Conditioning, Mississauga, ON. Contact Birty Rajapaksha, birtyr@mitsair.com

3.0 EXECUTION

3.1 Install the unit according to the manufacturer's recommendations, suspended from the ceiling.
3.2 Pipe ¾" condensate drain to nearest drain.
3.3 Division 16 to provide non–fused disconnect, 240/ 24v transformer for damper power wiring
3.4 Mount ERV Controller near ERV. Wiring to be by contractor Connect ducting with flexible neoprene connections.
3.5 Mechanical Contractor to configure the unit to provide required functions, & set fan speeds to achieve design air flows.
3.5 Demonstrate the unit to the Owner.

15751 ELECTRIC DUCT HEATER

1.1 Provide an electric duct heater for warming make–up air.

2.1 Coils to be of high grade nickel–chrome alloy and shall be insulated by ceramic bushings. Coil terminal pins to be SS.
2.2 Heaters to be slip in design with flange for side mounting on a duct.
2.3 Duct heaters to be equipped with fail–safe, auto reset, manual reset disc type thermal cutouts.
2.4 Heaters shall be CSA approved.
2.5 Heaters to be equipped with airflow sensor, duct thermostat, SCR (proportional) control, load fuses, solid state relay, contactors, pilot lights, protective screens, built–in disconnect, etc.
2.6 Units to be as per schedule.
2.7 Unit to be a Thermolec Open Coil Heater, available from Thermolec, Montreal, QC, 1–514–336–9130

3.0 Install where indicated and according to manufacturer's instructions.
3.1 Unit to be supplied and installed by Division 15, wired by Division 16.

15900 CONTROLS

1.1 The work of this section includes the following:
– installation of new control components for new VRF split systems and Energy Recovery ventilator. These will be controlled by the school's BMS system They are being ordered with the required gateways.
1.2 BMS controls will be done by the Board's Johnson Controls service contractor. Contact Ken Fredericks at Total Controls, 905–242–7574

1.3 PVNCCDSB Controls Contractor Scope of Work
– provide new BMS components such as field devices, etc. BMS programming, commissioning and testing.
– provide conduit for controls and low voltage wiring for new equipment including control valve actuators.
– disconnect and remove all existing controls in the area of work. mechanical contractor to co–ordinate with PVNCCDSB and give adequate notice. (eg mixing boxes that are being removed or re–located)
– The controls contractor will supply and install all duct sensors, relays, pressure switches, current switches/sensors, panels, etc. including all necessary components to expand the existing controls system to accommodate the new equipment.
– Controls contractor to submit shop drawings and control wiring diagrams for approval to the Consultant. The shop drawings MUST include a points list and wiring diagrams for each system, plus a sequence of operation.
– Controls contractor to supply and install conduit for control wiring and install the wiring.
– Provide a one year warranty for the controls equipment provided.
– Prepare and turnover controls data binders to PVNCCDSB.

1.4 Control Equipment Nameplates
– All switches and status indicators installed on local panels shall be labeled.
– Wording on nameplates shall be subject to approval by Consultant.

1.5 Control Panels
– Provide control enclosures for new HVAC DDC system components where required. Enclosures shall be UL rated for the application, 16–gauge steel cabinet with factory applied enamel finish, and be NEMA 1 type.
– The existing control panels housing the current control system components may be reused if suitable.
– Wording on nameplates shall be subject to approval by Consultant.

3.0 EXECUTION

3.1 All equipment supplied under this section shall be installed complete with all required electric control wiring by Division 15.
3.2 All control wiring will be less than 50 volts and shall be a minimum of #18 gauge wire and be plenum rated.
3.3 All control wiring, conduit, accessories, etc. shall be installed by the controls contractor in accordance with requirements specified by local electrical authority.
3.4 All electrical interlocks shall be the responsibility of this section.
3.5 All power wiring shall be done by a qualified electrician and meet the requirements of the Ontario Electric Code. Refer to Electrical drawings.
3.6 Control circuits and components to be 24VAC. Provide all suitable contactors, relays, transformers etc. as required for a complete functional system.
3.7 Where new control wiring is required in boiler rooms, it shall be routed in conduit.
3.8 All wiring into control panels shall be connected to terminal strips provided by the contractor. All wiring is to be labelled. At the end of the job, the Contractor shall turn over to the Owner, an as–built schematic indicating all wiring connections by number. As–built logic and point diagrams shall also be provided to the Owner.
3.9 Program and graphics shall be updated by the Controls Contractor.
3.10 After all controls are installed and operating the Contractor shall test all systems to verify that the requirements of the Sequence of Operation are met, as per the approved shop drawings. Notify the Consultant in advance of the final test with 72 hours notice.

15950 BALANCING AND TESTING & COMMISSIONING

1.0 Hire an independent balancing contractor and balance and test the new HVAC systems according to the most recent SMACNA standards. Prepare a written air balance report and submit for approval. All air flows are to be measured on forced air systems, along with motor HP, rpm, amperage draw, static pressures, fresh air intake, exhaust air, etc.
1.1 Scope of Work:
– Balance air flows for the new systems ERV–4, AH–1 and AH–2 in the area of renovations.
– Rebalance the rooftop unit HVAC–1.

2.0 Start–Up and Commissioning
2.1 Start up of equipment shall be as per the manufacturer's instructions.
2.2 Once the equipment is commissioned to requirements, the contractor shall arrange for a demonstration and training of the equipment with the Owner and Consultant to verify that the equipment is operating satisfactory. This shall form part of the requirements for project completion before any holdback is released.

3.0 Documentation
3.1 Provide final maintenance manuals and as–built drawings. Final holdback will not be paid until this documentation has been received.

SEQUENCES OF OPERATION THRU THE BMS

UNOCCUPIED: ERV–4 IS OFF, INLET AND OUTLET DAMPERS ARE CLOSED.
AH–1/C–1 AND AH–2/C–2 OPERATE TO MAINTAIN SETBACK TEMPERATURES.
BASEBOARDS OPERATE ACCORDING TO OUTDOOR AIR TEMPERATURE THRU BMS.

OCCUPIED: ERV–4 OPERATES CONTINUOUSLY
AH–1/C–1 AND AH–2/C–2 OPERATE TO MAINTAIN OCCUPIED TEMPERATURES.
BASEBOARDS OPERATE ACCORDING TO OUTDOOR AIR TEMPERATURE THRU BMS.

BASEBOARD HEATERS

Item	Heat (watts)	Length (inches)	Model	Remarks
BB–2 BB–5 BB–6	1250	60"	OUELLET OFM1258	ALMOND ELECTRIC BASEBOARD HEATER, 208–1–60 VOLTS, 250 WATTS/FT, 22 GAUGE CABINET, SS TUBULAR FINNED HEATING ELEMENT, TAMPERPROOF THERMOSTAT – SUPPLIED AND INSTALLED BY DIVISION 15 AND WIRED BY DIV 16. BASEBOARDS FOR EACH AREA ARE TO BE CONTROLLED BY BMS VIA A CONTACTOR LOCATED IN THE CORRESPONDING MECHANICAL CLOSET. SEQUENCE: BASEBOARDS ARE ENERGIZED WHEN OUTDOOR TEMPERATURE REACHES SETPOINT PROGRAMMED INTO THE BMS.
BB–1 BB–3 BB–4	1500	72"	OUELLET OFM1508	

ELECTRIC CABINET HEATERS

Item	Capacity	Model	Remarks
CH–1	4kW/208–1PH	OUELLET OAC 04008–T	ELECTRIC CABINET HEATER, SS TUBULAR ELEMENTS, SURFACE MOUNT, ALMOND, 208/1/60 POWER, c/w TAMPERPROOF BUILT–IN THERMOSTAT, SUPPLIED AND INSTALLED BY DIVISION 15 AND WIRED BY DIV 16.

FIRE & SMOKE DAMPERS

Item	Penetration Size (WxH)	Block	Model
FS–1	10"ø	10"	NAILOR 1290FS ROUND

HEAT PUMP SCHEDULE

System	Item	Cooling (BTU/hr)	Heating (BTU/hr)	Electric Heat (kW)	Air Flow (cfm)	Power MCA	Power Fuse	Power Voltage	Weight (lb.)	Model**	Remarks
OFFICE AREA	AH–1	18,000	24,000	7.5 kW EH10–SVZ–M (separate feed)	660 CFM AT 0.5"WC	–	15	208–1–60	125	MITSUBISHI SVZ–AP30NL	VERTICAL CLOSET AIR HANDLER
	C–1					29	30	208–1–60	230	MITSUBISHI SUZ–AK30NLHZ	ROOF MOUNTED
LIBRARY	AH–2	60,000	60,000	20 kW EH19–MBA–LB (separate feed)	1900 CFM AT 0.7"WC	9.3	15	208–1–60	175	MITSUBISHI SVL–AP60NL	VERTICAL CLOSET AIR HANDLER
	C–2					35	42	208–1–60	265	MITSUBISHI SUZ–CK60NLH	ROOF MOUNTED

– INDOOR SYSTEMS TO BE SUPPLIED WITH THE FOLLOWING ACCESSORIES:
WIRED CONTROLLER PROGRAMMABLE 24/ 7 THERMOSTAT PAR–42MAA & WALL BRACKET TO CONTROL AIR HANDLER.
– PROVIDE BMS INTERFACE AZA16WP2MEL
– INSTALLATION CONTRACTOR TO SUPPLY THREE 24x24 MERV 13 FILTERS AND HOUSING FOR BASE OF AIR HANDLERS. REFER TO DETAIL ON M5.
– PROVIDE OPTIONAL ELECTRIC HEATERS WITH SEPARATE POWER FEED. ELECTRIC HEATER CONTROLLED BY AIR HANDLER
– OUTDOOR UNITS TO BE SUPPLIED WITH: 18" HIGH MOUNTING STAND,
– CONTRACTOR TO ENSURE THAT MANUFACTURER'S REFRIGERANT PIPING LENGTH AND SIZE REQUIREMENTS ARE MET.
– REFRIGERANT IS FLAMMABLE R454B. CONTRACTOR TO STRICTLY FOLLOW MANUFACTURER'S INSTALLATION REQUIREMENTS. CONTRACTOR TO SUBMMIT A REPORT SHOWING THOSE REQUIREMENTS HAVE BEEN MET.

DIFFUSER SCHEDULE

Item	Size	Nozzle	Colour	EH Price Model	Remarks
D1	24x24	6"	WHITE	6/24x24/SCD/3/3C/B12	
D2	24X24	8"	WHITE	8/24x24/SCD/3/3C/B12	
D3	12X12	6"	WHITE	6/12x12/SCD/3/3C/B12	

GRILLE SCHEDULE

Item	Type	Colour	EH Price Model	Remarks
G1	RET	WHITE	24x24/80/F/A/B12	WITH BALANCING DAMPER
G2	RET	WHITE	12x12/80/F/A/B12	WITH BALANCING DAMPER
G3	RET	WHITE	24x36/530/S/F/A/B12	
G4	RET	WHITE	16x24/530/S/F/A/B12	
G5	SUP	WHITE	16x4/RDR/F/A/B12	

ENERGY RECOVERY VENTILATORS

Unit	Area	Airflow (cfm)	Fresh Air (cfm)	Supply Fan E.S.P. ("wc)	Supply Fan Motor HP	Exhaust Fan E.S.P. ("wc)	Exhaust Fan Motor HP	Electrical MCA amps	Electrical Fuse amps	Electrical volts/ph	Model No.
ERV–4	LIBRARY & ATRIUM	800	100%	0.5"	–	0.5"	–	10.1	15	208–1	LOSSNAY LGH–F940RVX2–E

NOTES

1. ERV–4 IS 100% FRESH AIR AND 100% EXHAUST.
2. ERV–4IS TO BE CONTROLLED AND SCHEDULED BY THE BMS. SUPPLIER TO PROVIDE A PZ62DR CONTROLLER
3. PROVIDE MERV 7 FILTERS AS STANDARD.
4. CONNECT CONDENSATE TO DRAIN.
5. DIV 16 TO PROVIDE 120–1–60 AND 24V TRANSFORMER FOR DAMPER OPERATION. DAMPER OPERATION TO BE INTERLOCKED WITH ERV OPERATION.
6. IN THIS DESIGN FIRE SMOKE DAMPERS ARE NOT SPECIFIED AS THE ERV SYSTEM ALSO ACTS AS A SMOKE EXHAUST SYSTEM SINCE THE MOVEMENT OR AIR IS CONTINUOUS, AND THE CONFIGURATION OF THE AIR HANDLING SYSTEM PREVENTS THE RECIRCULATION OF EXHAUST OR RETURN AIR UNDER FIRE EMERGENCY CONDITIONS AS PER OBC 3.1.8.8A, ITEM 1(C) .

LOUVRES, MOTORIZED DAMPERS AND EXHAUST HOODS

ITEM	SIZE	LOUVRE MODEL	DAMPER MODEL**	ACTUATOR MODEL***	REMARKS
ERV–4 INTAKE – L1	18" WIDE X 24" HIGH	TAMCO 3400*	TAMCO 1000	BELIMO NFB24–S	
ERV–4 EXHAUST – L2	18" WIDE X 24" HIGH	TAMCO 3400*	TAMCO 1000	BELIMO NFB24–S	

1. LOUVRES TO BE MANUFACTURED FROM EXTRUDED ALUMINIUM WITH FIXED BLADES AT 45 DEGREES, EXTERIOR FLANGE FRAME, INSECT SCREENS OF FINE MESH MADE FROM GALVANIZED STEEL WIRE, TAMCO PRODUCTS AS INDICATED. UNITS TO HAVE EXTRUDED AIR FOIL DAMPERS c/w EPDM BLADE SEALS, PARALLEL BLADE, LEAKAGE CLASS 1A, FLANGED OR IN–DUCT AS NECESSARY.
2. PROVIDE ON/OFF SPRING RETURN ACTUATORS, 24V, WITH END SWITCH, EQUAL TO BELIMO NFB24–S
3. DAMPERS ARE TO BE CONTROLLED WITH ERV–4 OPERATION EITHER DIRECTLY OR THRU BMS.

ELECTRIC DUCT HEATERS

Item	Duct Size	Airflow (cfm)	Heater Capacity (KW)	Electrical MCA amps	Electrical Fuse amps	Electrical volts/ph	Model No.
DH–1	6"ø	150 CFM	1 KW	5	?	208–1–60	THERMOLEC ZON–6–1–208
DH–4	16" WIDE X 12" HIGH	800 CFM	12 KW	33	?	208–3–60	THERMOLEC XXXX

Rev.	Date	Description	By	App.
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269 North Indian Road Tel: (705) 696-2119
Hastings, ON, Canada
K0L 1Y0

REGISTERED PROFESSIONAL ENGINEER A.G.BUCHKOWSKI FEB 6, 2026 PROVINCE OF ONTARIO
MECHANICAL

DWN.	AB	JAN 2026
CHK.		
DSN.	A. BUCHKOWSKI	JAN 2026
SCALE:	As Noted	

CLIENT
Peterborough Victoria Northumberland and Clarington Catholic District School Board

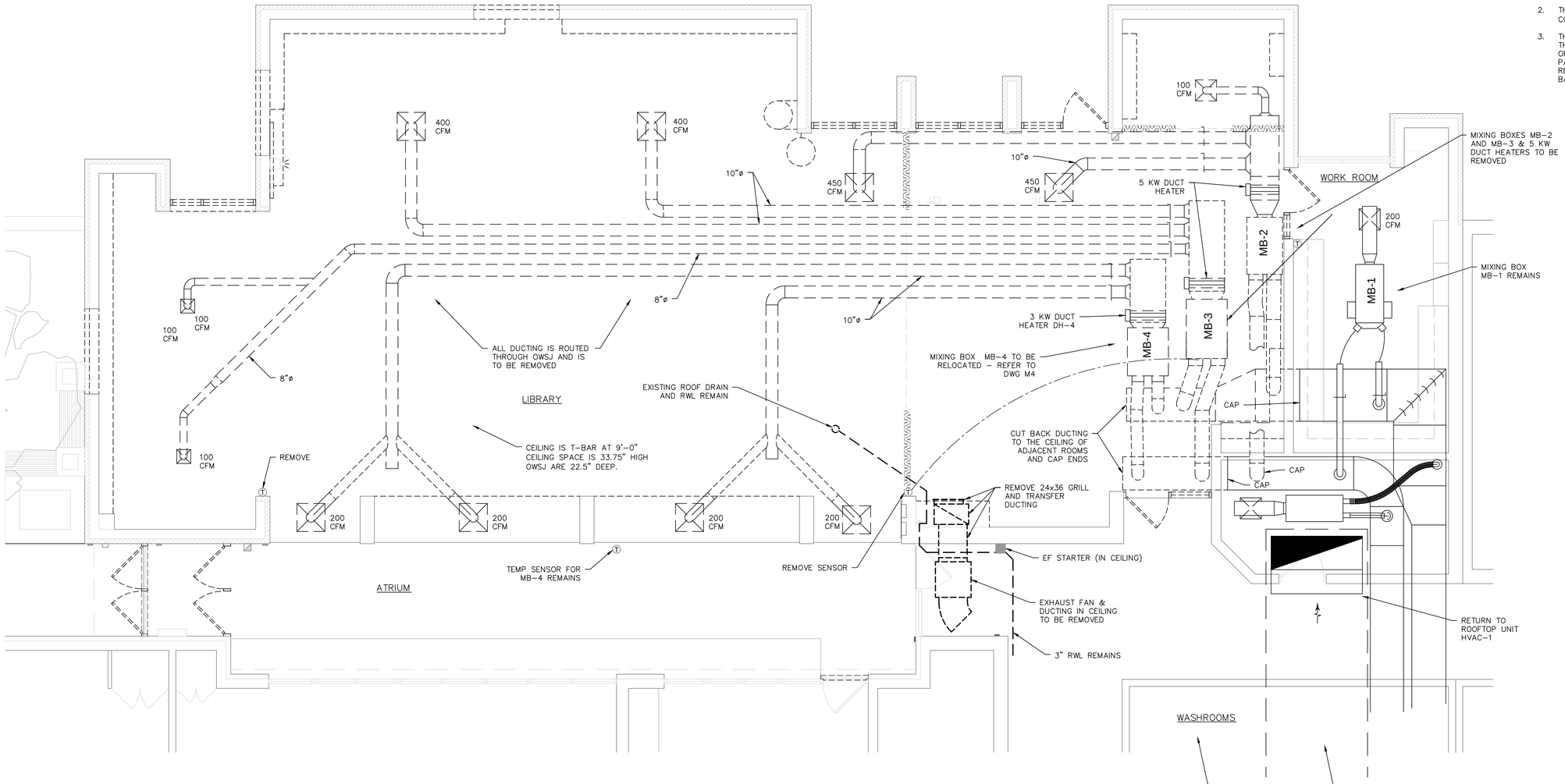
PROJECT
ST. PAUL CES
OFFICE & LIBRARY RENOVATION
1101 Hilliard St, Peterborough, ON

TITLE
SCHEDULES

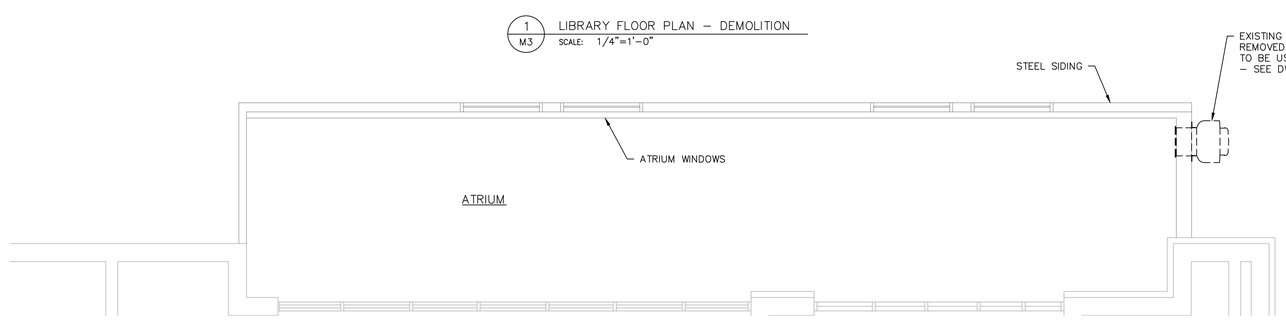
FILE No.	DWG. No.	Rev. No.
0667–M2	M2	0
CLIENT FILE No.		

NOTES

1. THE NORTH WING OF THE SCHOOL IS SERVED BY A ROOFTOP GAS FIRED UNIT HVAC1. THE SYSTEM IS A DUAL DUCT SYSTEM WITH A HOT DUCT AND A COLD DUCT FEEDING NUMEROUS MIXING BOXES THROUGHOUT. THE HEAT IS FROM A GAS FIRED HEAT EXCHANGER, THE COLD IS OUTDOOR AIR. THE TOTAL CAPACITY OF THE UNIT IS 10,000 CFM.
2. THE MIXING BOXES BLEND HOT AND COLD AIR. THEY ARE CONTROLLED BY THE SCHOOL'S JOHNSON CONTROLS BMS.
3. THE PROJECT INVOLVES INSTALLING TWO VRF HEAT PUMPS FOR THE LIBRARY AND OFFICE. THESE SPACES WILL BE TAKEN OFF OF HVAC1 AND RESULT IN A DECREASE OF 2000 CFM. AS PART OF THE PROJECT, THE AIR BALANCE CONTRACTOR SHALL REDUC TO AIR FLOW OF HVAC1 TO 8000 CFM. A PREVIOUS AIR BALANCE REPORT WILL BE PROVIDED.



1 M3 LIBRARY FLOOR PLAN – DEMOLITION
SCALE: 1/4"=1'-0"



2 M3 ATRIUM CEILING PLAN – DEMOLITION
SCALE: 1/4"=1'-0"

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269 North Indian Road
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K0L 1Y0
Tel: (705) 696-2119

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FEB 6, 2026.
PROVINCE OF ONTARIO
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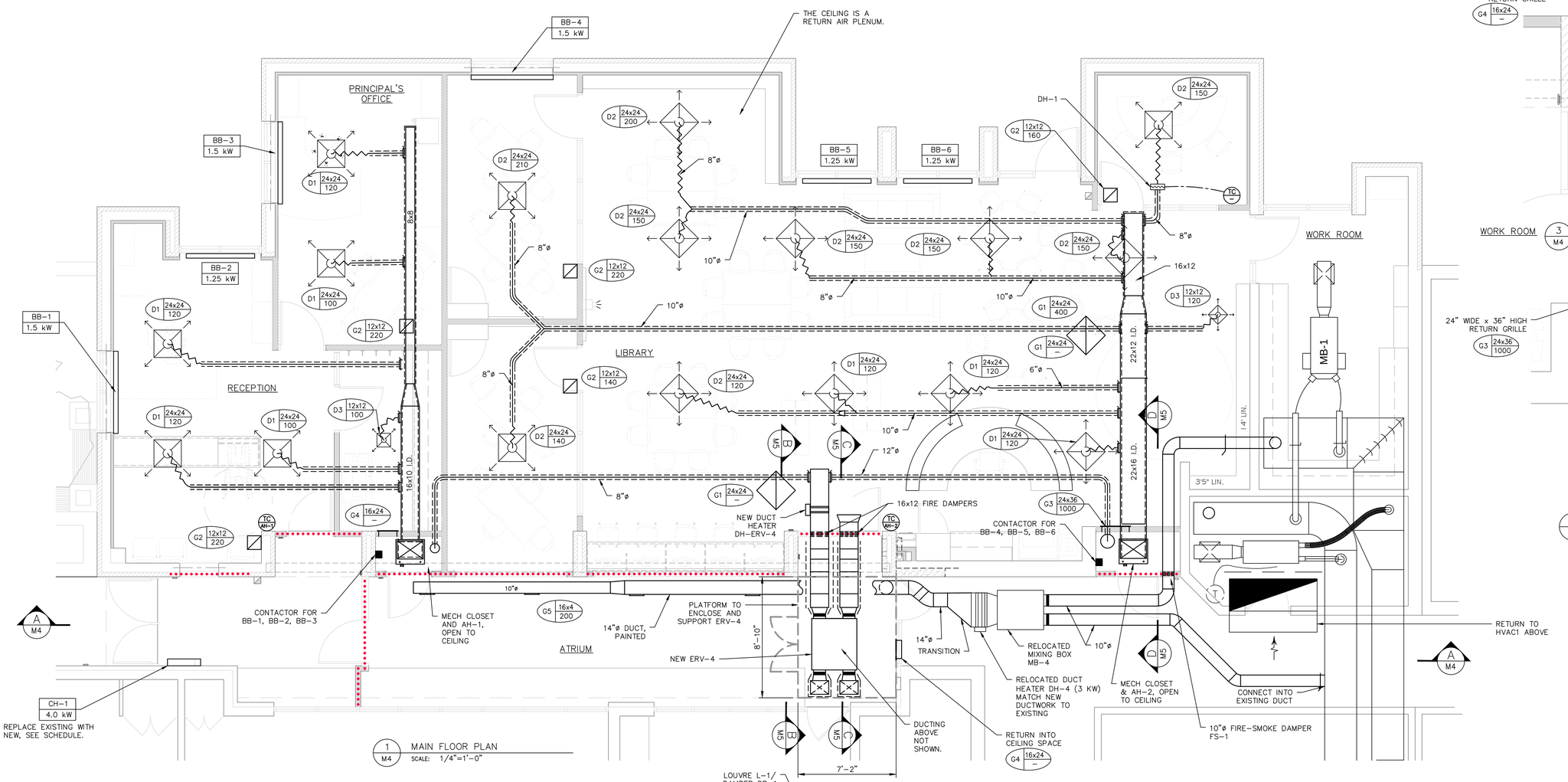
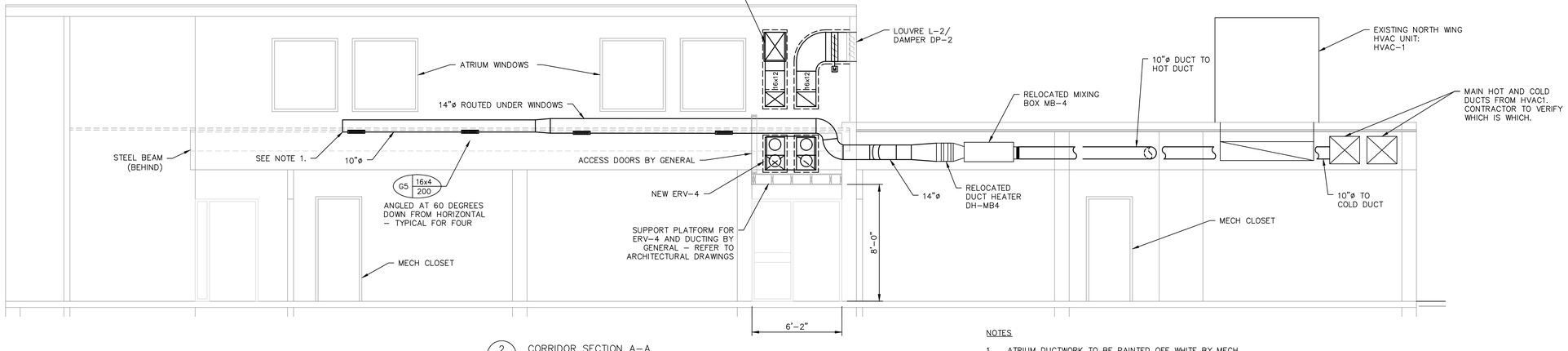
OFFICE & LIBRARY RENOVATION
1101 Hilliard St, Peterborough, ON

TITLE
LIBRARY FLOOR PLAN
- DEMOLITION

FILE No.	DWG. No.	Rev. No.
0667-M3	M3	0
CLIENT FILE No.		



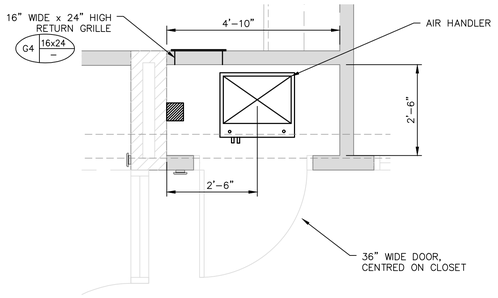
1 / M4 MAIN FLOOR PLAN
SCALE: 1/4"=1'-0"



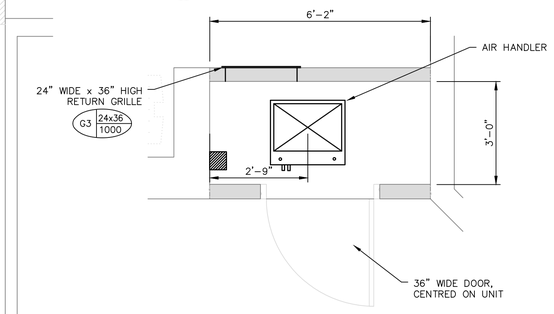
2 / M4 CORRIDOR SECTION A-A
SCALE: 1/4"=1'-0"

NOTES

1. ATRIUM DUCTWORK TO BE PAINTED OFF WHITE BY MECH CONTRACTOR. COLOUR TO BE VERIFIED.



WORK ROOM 3 / M4 OFFICE HVAC CLOSET
SCALE: 1/2"=1'-0"



4 / M4 LIBRARY HVAC CLOSET
SCALE: 1/2"=1'-0"

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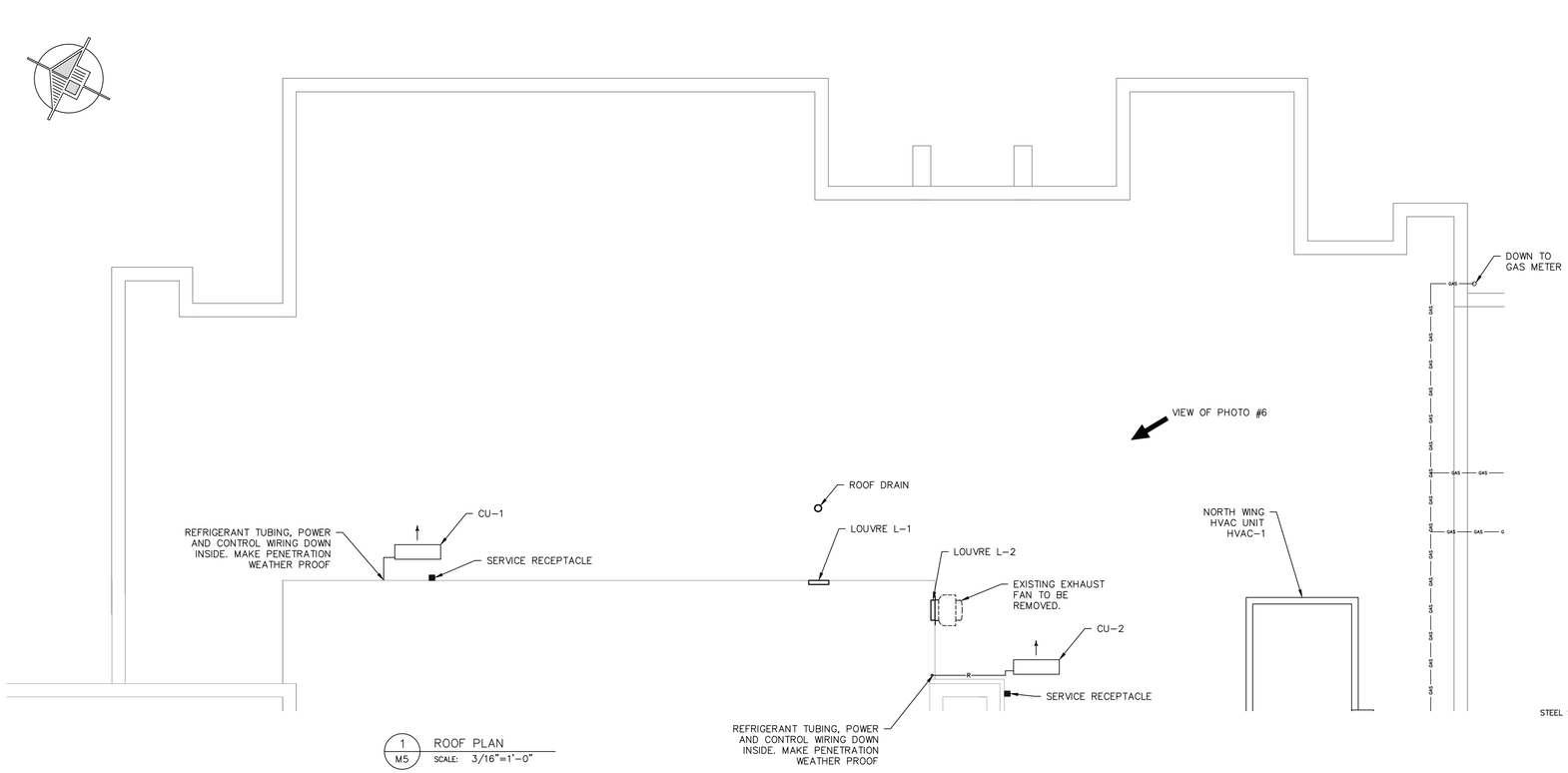
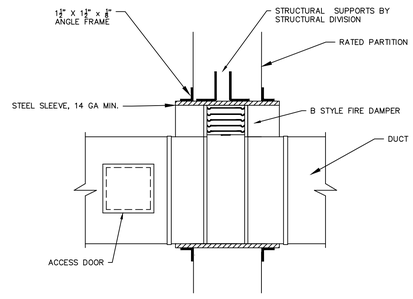
TITLE
MAIN FLOOR PLAN - NEW

FILE No.	DWG. No.	Rev. No.
0667-M4	M4	0
CLIENT FILE No.		

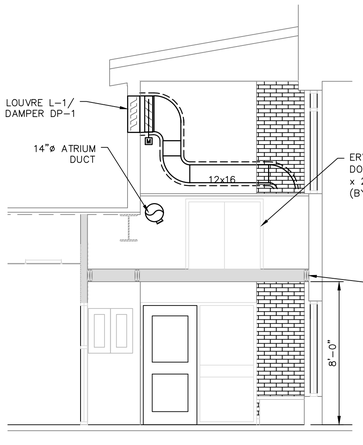


1 M5 ROOF PLAN
SCALE: 3/16"=1'-0"

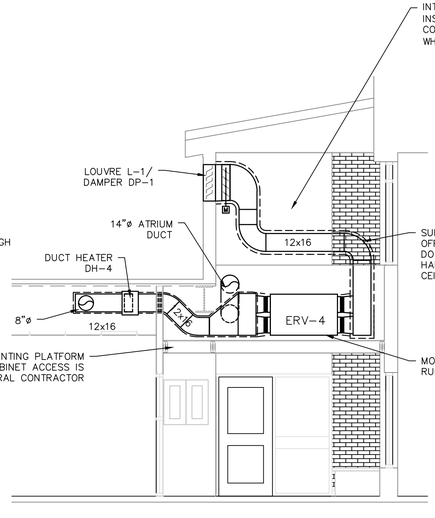
6 M5 PHOTO OF ATRIUM WALL & EXHAUST FAN
SCALE: NTS



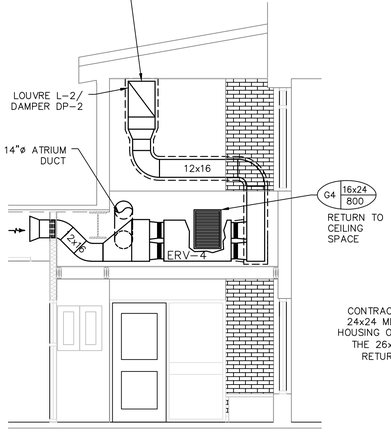
7 M5 FIRE DAMPER STANDARD DETAIL
SCALE: NTS



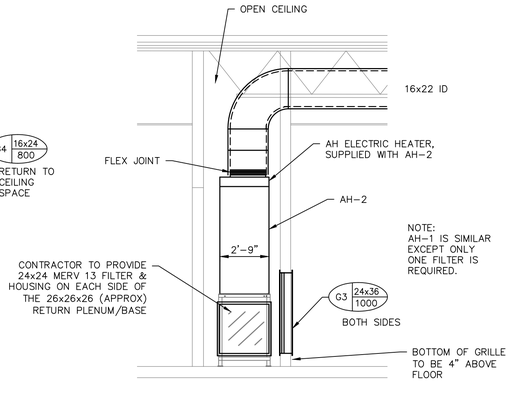
2 M4 SECTION B-B WITH CABINET
SCALE: 1/4"=1'-0"



3 M4 SECTION B-B WITHOUT CABINET
SCALE: 1/4"=1'-0"



4 M5 SECTION C-C
SCALE: 1/4"=1'-0"



5 M4 SECTION D-D
SCALE: 3/8"=1'-0"

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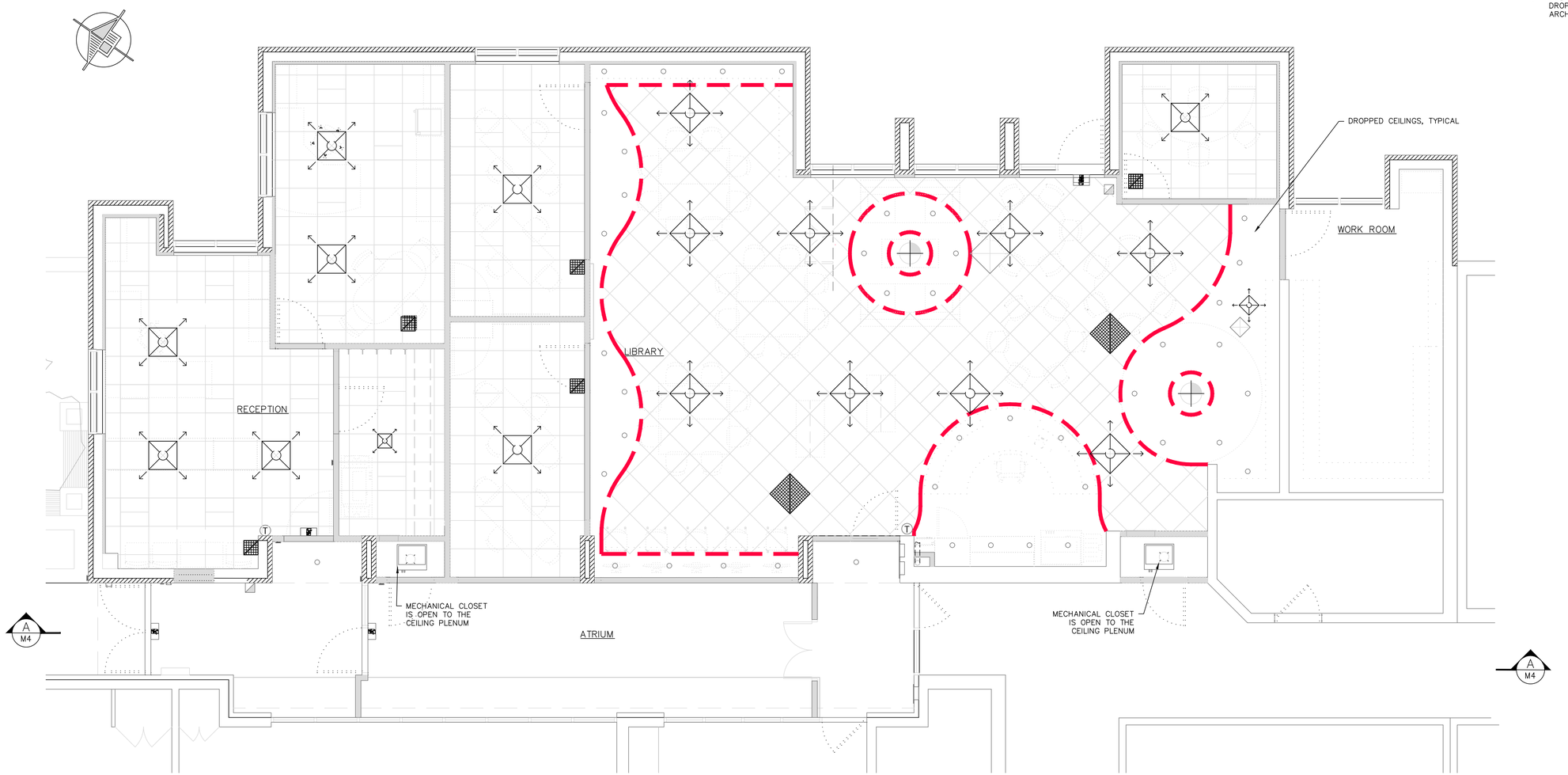
TITLE
HVAC DETAILS

FILE No.	DWG. No.	Rev. No.
0667-M5	M5	0
CLIENT FILE No.		

NOTES

1. T-BAR CEILINGS ARE 9'-0" FROM THE FINISHED FLOOR. DROPPED CEILINGS AND BULKHEADS ARE LOWER: REFER TO ARCHITECTURAL DRAWINGS.



1 M6 REFLECTED CEILING PLAN
SCALE: 1/4"=1'-0"

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269 North Indian Road Tel: (705) 696-2119
Hastings, ON, Canada
K0L 1Y0

REGISTERED PROFESSIONAL ENGINEER
A.G.BUCHKOWSKI
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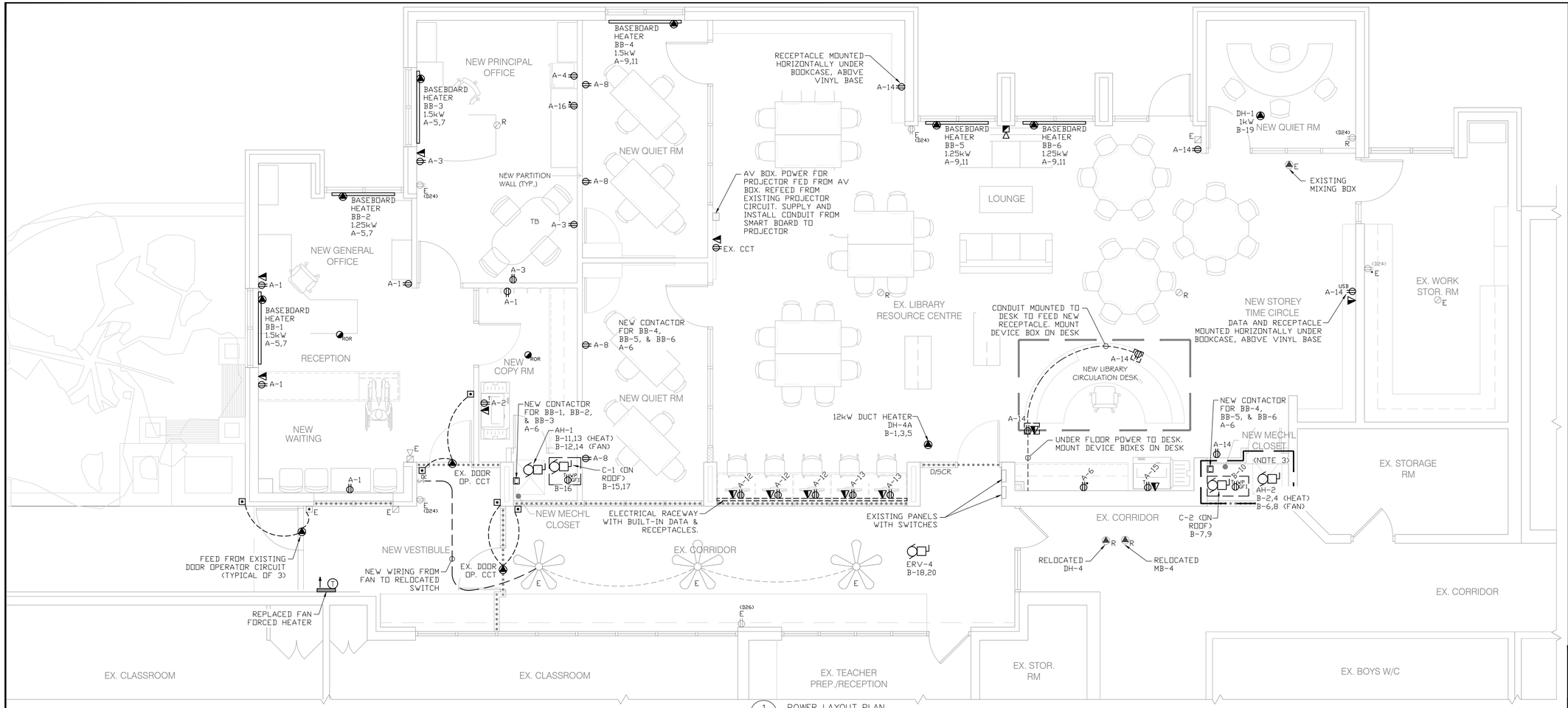
OFFICE & LIBRARY RENOVATION
1101 Hilliard St, Peterborough, ON

TITLE
REFLECTED CEILING PLAN

FILE No.	DWG. No.	Rev. No.
0667-M6	M6	0
CLIENT FILE No. 0		



1 / E1 POWER LAYOUT PLAN
SCALE: 1/4" = 1'-0"

FIRE ALARM LEGEND	
	EXISTING PULL STATION
	EXISTING FIRE ALARM BELL
	NEW FIRE ALARM BELL
ROR	EXISTING HEAT DETECTOR
ROR	NEW RATE OF RISE HEAT DETECTOR

POWER LEGEND	
	DIRECT CONNECTION
$M	MOTOR RATED SWITCH
	SINGLE PHASE MOTOR
	POWER DOOR OPERATOR
	DATA/PHONE OUTLET
E	EXISTING
R	RELOCATED

RECEPTACLE LEGEND	
	RECEPTACLE
•	MOUNTED ABOVE COUNTER
T	20A T-SLOT
E	EXISTING
R	RELOCATED

NOTES:

1. RE-INSTALL WIRELESS/INTERNET DEVICES IN NEW CEILING.
2. CONNECT NEW FIRE ALARM DEVICES TO EXISTING FLOOR ZONE.
3. CONNECT MB-4 SMOKE DAMPER TO FIRE ALARM ON NEW ZONE.

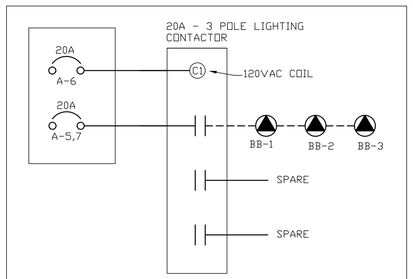
CIRCUITING NOTES:

ALL CIRCUITS SHOWN ARE FOR REFERENCE PURPOSES ONLY. NEW CIRCUITS SHALL BE INSTALLED IN NEAREST PANEL AND WHERE SPACE PERMITS. USE SPARE BREAKER IF POSSIBLE AND PROVIDE NEW BREAKERS ONLY AS REQUIRED. CONTRACTOR SHALL TRY AND FEED CIRCUITS FROM EXISTING MECHANICAL PANELS.

PANEL 'A'
- CIRCUIT A-1 INSTALL NEW 1-POLE, 120V, 15A BREAKER: GENERAL OFFICE RECEPTACLES
- CIRCUIT A-2 INSTALL NEW 1-POLE, 120V, 20A BREAKER: PHOTOCOPIER RECEPTACLE
- CIRCUIT A-3 INSTALL NEW 1-POLE, 120V, 15A BREAKER: PRINCIPAL'S OFFICE RECEPTACLES
- CIRCUIT A-4 INSTALL NEW 1-POLE, 120V, 15A BREAKER: PRINCIPAL'S OFFICE MINI FRIDGE
- CIRCUIT A-5,7 INSTALL NEW 2-POLE, 208V, 20A BREAKER: BB-1, BB-2 AND BB-3
- CIRCUIT A-6 INSTALL NEW 1-POLE, 120V, 20A BREAKER: LIBRARY COUNTER RECEPTACLE
- CIRCUIT A-8 INSTALL NEW 1-POLE, 120V, 15A BREAKER: QUIET ROOM RECEPTACLES
- CIRCUIT A-9,11 INSTALL NEW 2-POLE, 208V, 20A BREAKER: BB-4, BB-5, BB-6
- CIRCUIT A-10 INSTALL NEW 1-POLE, 120V, 20A BREAKER: BASEBOARD HEATERS 4, 5, 6 CONTACTOR
- CIRCUIT A-12 INSTALL NEW 1-POLE, 120V, 15A BREAKER: COMPUTER TERMINAL RECEPTACLES
- CIRCUIT A-13 INSTALL NEW 1-POLE, 120V, 15A BREAKER: COMPUTER TERMINAL RECEPTACLES
- CIRCUIT A-14 INSTALL NEW 1-POLE, 120V, 15A BREAKER: LIBRARY RECEPTACLES
- CIRCUIT A-15 INSTALL NEW 1-POLE, 120V, 20A BREAKER: LIBRARY PHOTOCOPIER RECEPTACLE
- CIRCUIT A-16 INSTALL NEW 1-POLE, 120V, 20A BREAKER: PRINCIPAL OFFICE CREDENZA RECEPATACLE
- CIRCUIT A-17 INSTALL NEW 1-POLE, 120V, 15A BREAKER: OFFICE/QUIET ROOM LIGHTING
- CIRCUIT A-18 INSTALL NEW 1-POLE, 120V, 15A BREAKER: LIBRARY LIGHTING

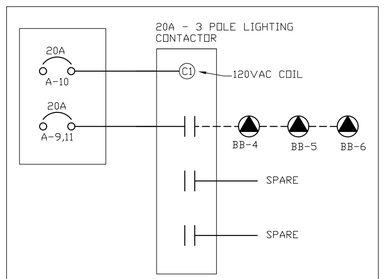
PANEL 'B'
- CIRCUIT B-1,3,5 INSTALL NEW 3-POLE, 208V, 50A BREAKER: DH-4A
- CIRCUIT B-2,4 INSTALL NEW 2-POLE, 208V, 40A BREAKER: AH-2 (HEAT)
- CIRCUIT B-6,8 INSTALL NEW 2-POLE, 208V, 15A BREAKER: AH-2 (FAN)
- CIRCUIT B-7,9 INSTALL NEW 2-POLE, 208V, 30A BREAKER: C-2
- CIRCUIT B-10 INSTALL NEW 1-POLE, 120V, 20A BREAKER: C-2 T-SLOT, WP, GFI REC.
- CIRCUIT B-11,13 INSTALL NEW 2-POLE, 208V, 15A BREAKER: AH-1 (HEAT)
- CIRCUIT B-12,14 INSTALL NEW 2-POLE, 208V, 15A BREAKER: AH-1 (FAN)
- CIRCUIT B-15,17 INSTALL NEW 2-POLE, 208V, 30A BREAKER: C-1
- CIRCUIT B-16 INSTALL NEW 1-POLE, 120V, 20A BREAKER: C-2 T-SLOT, WP, GFI REC.
- CIRCUIT B-18,20 INSTALL NEW 1-POLE, 120V, 15A BREAKER: ERV-4
- CIRCUIT B-19 INSTALL NEW 1-POLE, 120V, 15A BREAKER: DH-1

COMPUTER STATION STEEL RACEWAY SYSTEM		
MODEL NUMBER	MANUFACT.	DESCRIPTION
BASE: V4000B-10 COVER: V4000C DIVIDER: G4000D, c/w DIVIDER CLIPS DIVIDER CLIPS: 4001DA COUPLING (GALVANIZED STEEL PLATED): 4001A BLANK END: V4010B DIVIDED ENTRANCE END FITTING: V401DFO TWO-GANG OVERLAPPING COVER DUPLEX & MODULAR FURNITURE: V4047BF	LEGRAND WIREMOLD	GALVANIZED RACEWAY SYSTEM, c/w ALL PARTS AS REQUIRED FOR A COMPLETE SYSTEM. RUN LENGTH OF RACEWAY SYSTEM IS ~14'. RACEWAY SYSTEM SHALL INCLUDE A GALVANIZED STEEL BASE, COVER AND DIVIDER (c/w DIVIDER CLIPS), COUPLINGS, BLANK ENDS, DIVIDE ENTRANCE END FITTING, AND TWO GANG OVER FOR DUPLEX & MODULAR FURNITURE, FOR 15A & 20A DUPLEX RECEPTACLES, INCLUDES TWO KEYSTONE TWISTOUTS



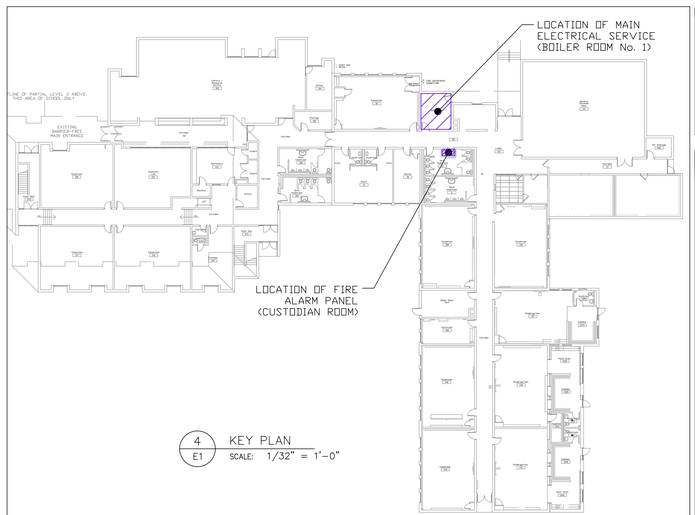
2 / E1 CONTACTOR DETAIL – BB-1, BB-2, BB-3
SCALE: N.T.S.

NOTE: CONTRACTOR TO SUPPLY ENOUGH RELAYS TO BASEBOARD HEATING CIRCUITS AND AT LEAST TWO SPARES



3 / E1 CONTACTOR DETAIL – BB-4, BB-5, BB-6
SCALE: N.T.S.

NOTE: CONTRACTOR TO SUPPLY ENOUGH RELAYS TO BASEBOARD HEATING CIRCUITS AND AT LEAST TWO SPARES



4 / E1 KEY PLAN
SCALE: 1/32" = 1'-0"

Rev.	Date	Description	By	App.
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0	26/02/06	ISSUED FOR PERMIT & TENDER	PGB	–

BERTHELOT ENGINEERING LTD
2193 Lynhaven Rd., Peterborough, ON. K9K 1W8
Tel: (705) 775-1517
Email: pberthelot@bertheloteng.com

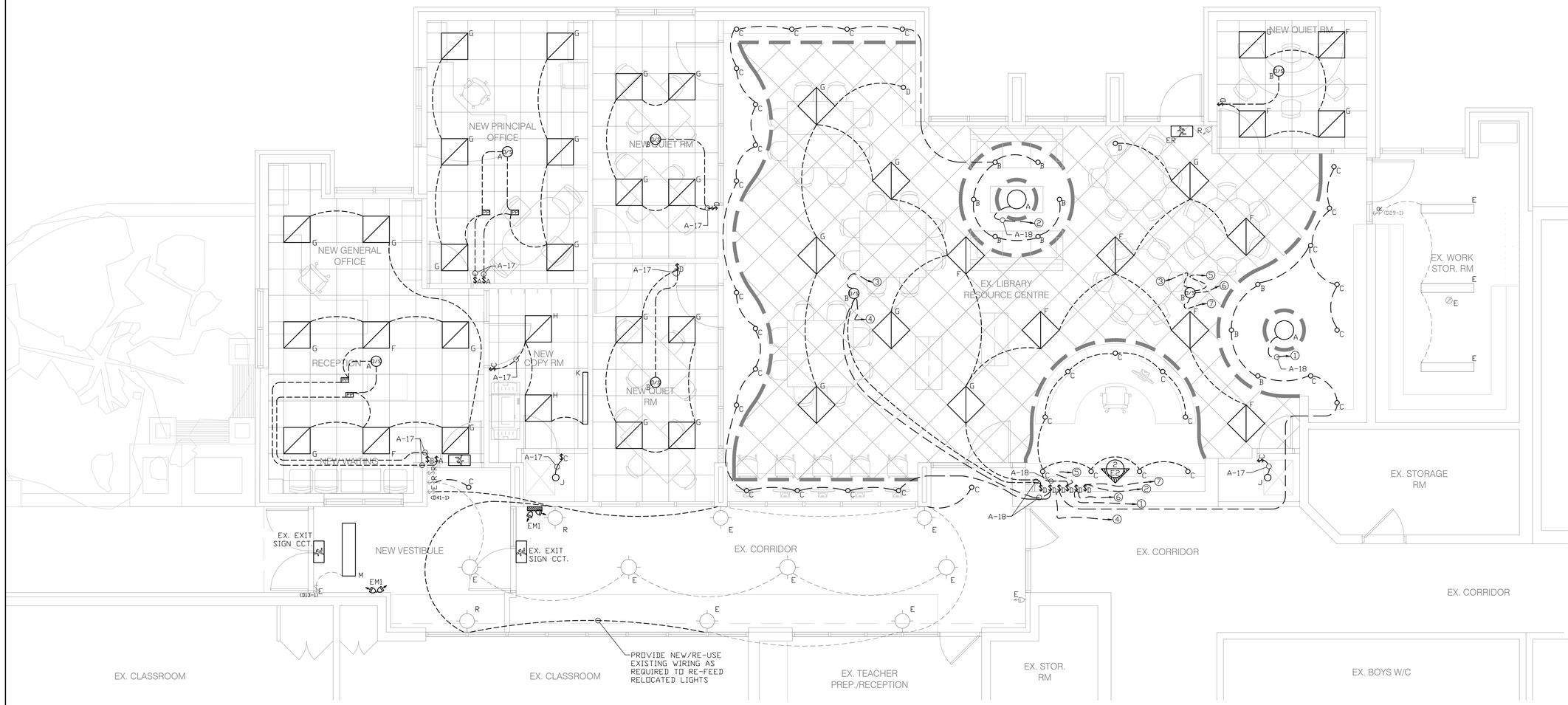
LICENSED PROFESSIONAL ENGINEER — P.G.P. BERTHELOT — Feb. 6/26 — PROVINCE OF ONTARIO — ELECTRICAL — BCIN 23396

DWN.	T. ST. JEAN
CHK.	P. BERTHELOT
DSN.	PGB/TMS
SCALE:	AS NOTED

PROJECT
ST. PAUL CES OFFICE & LIBRARY RENOVATION
1101 Hilliard Street
Peterborough, Ontario

TITLE
POWER LAYOUT PLAN

FILE No.	DWG. No.
799	E1



1 / E2 LIGHTING LAYOUT PLAN
SCALE: 1/4" = 1'-0"

LEGEND	
$	TOGGLE SWITCH
E	EXISTING LIGHT FIXTURES
E	EXISTING LIGHTING
R	RELOCATED LIGHTING

LIGHTING CONTROLS SCHEDULE

SYMBOL	MODEL NUMBER	MANUFACTURER	DESCRIPTION
$A	LVS-M-1-PL-WH	CURRENT OR APPROVED EQUAL	MANUAL ON/OVERRIDE OFF LOW VOLTAGE MOMENTARY SWITCH, WHITE IN COLOUR
$B	LVSD-M-3-WH	CURRENT OR APPROVED EQUAL	MANUAL ON/OVERRIDE OFF LOW VOLTAGE MOMENTARY DIMMING SWITCH, WHITE IN COLOUR
$C	LHMTS1	CURRENT OR APPROVED EQUAL	DUAL TECHNOLOGY WALL SWITCH OCCUPANCY SENSOR, 120V, WHITE IN COLOUR, PROGRAMMED AUTO-ON (WALL PLATE NOT INCLUDED)
$D	---	---	LED COMPATIBLE DIMMER SWITCH
PP	UVPP/UVPPM/MPSA	CURRENT OR APPROVED EQUAL	UNIVERSAL VOLTAGE POWER PACK/AUXILIARY PACK
O/S A	OMNIDT2000	CURRENT OR APPROVED EQUAL	DUAL TECHNOLOGY, 360° CEILING MOUNTED SENSOR, LOW VOLTAGE, WHITE IN COLOUR C/W MANUAL ON/OFF POWER PACK

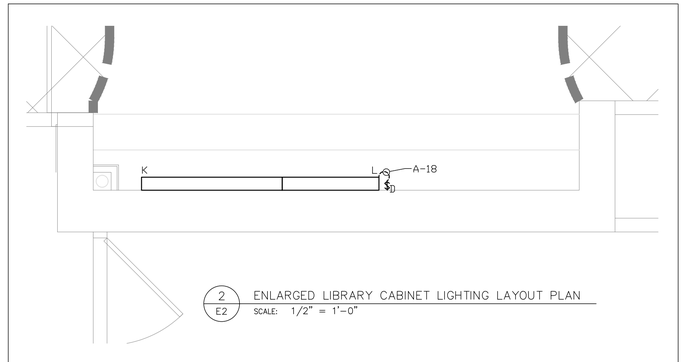
EMERGENCY LIGHTING & EXIT SCHEDULE

SYMBOL	MODEL NUMBER	MANUFACTURER	DESCRIPTION
EM1	12ESLxx/xxx	EMERGILITE OR APPROVED EQUAL	EMERGENCY LIGHTING UNIT, 36W BATTERY CAPACITY, 12VDC, 10 YEAR BATTERY, C/W TWO MR16 LED HEADS AND MOUNTING SHELF
	EF9DM-LI	EMERGILITE OR APPROVED EQUAL	DUAL REMOTE HEAD, 12VDC, 5W, MR16 LED
	EA SERIES	EMERGILITE OR APPROVED EQUAL	SELF POWERED RUNNING EXIT SIGN, SINGLE FACE, WALL OR CEILING MOUNT AS INDICATED, ARROWS AS INDICATED, LED LAMPS FOR 120VAC, CSA-C860-11 LISTED & CERTIFIED

NOTE 1: PROVIDE BATTERY PACKS AS REQUIRED SO THAT ALL EMERGENCY LIGHTINGS SHALL BE PLACED ON THE LIGHTING CIRCUIT FOR THE AREA THE EMERGENCY LIGHTS COVER.

LIGHTING SCHEDULE

SYMBOL	MODEL NUMBER	MANUFACTURER	DESCRIPTION
A	9004-30-60WLED-L-40K-120-SN-OP-DML	TMS LIGHTING OR APPROVED EQUAL	PHOENIX 4 BOWL STYLE PENDANT FIXTURE, 30", 90 CRI, 4000K, 6200 LUMENS (60W), LOW LEVEL LUMEN OUTPUT (50%), SATIN NICKEL FINISH, OPAL-WHITE ACRYLIC DIFFUSER, 0-10V DIMMING, OVERALL HEIGHT SHOULD BE 24". EITHER FIELD CUT STEM, OR CUSTOM ORDER.
B	SMX4RLSFS010 C/W 4" COMPATIBLE HOUSING	COOPER-HALO OR APPROVED EQUAL	4" SURFACE LED DOWNLIGHT, 90CRI, 120V, WHITE, SET TO 4000K, SET TO 650 LUMENS (6.94W), 0-10V DIMMING
C	SMX4RLSFS010 C/W 4" COMPATIBLE HOUSING	COOPER-HALO OR APPROVED EQUAL	4" SURFACE LED DOWNLIGHT, 90CRI, 120V, WHITE, SET TO 4000K, SET TO 1000 LUMENS (11.45W), 0-10V DIMMING
D	HC610D010-HM60525840-61WDWB	COOPER HALO OR APPROVED EQUAL	6" RECESSED DOWNLIGHT, 1000 LUMENS (28.6W), 80 CRI, 4000K, WIDE BEAM ANGLE, WHITE BAFFLE
F	22FP2140C	COOPER-METALUX OR APPROVED EQUAL	2'x2' LED FLAT PANEL, 2494 LUMENS (20.7W), 4000K, 120V
G	22FP3240C	COOPER-METALUX OR APPROVED EQUAL	2'x2' LED FLAT PANEL, 3307 LUMENS (29.2W), 4000K, 120V
H	22FP4240C	COOPER-METALUX OR APPROVED EQUAL	2'x2' LED FLAT PANEL, 4330 LUMENS (38.3W), 4000K, 120V
J	HC630D010-HM60525840-61WDWB	COOPER HALO OR APPROVED EQUAL	6" RECESSED DOWNLIGHT, 3000 LUMENS (28.6W), 80 CRI, 4000K, WIDE BEAM ANGLE, WHITE BAFFLE
K	HU30M-SCTD-48-P	COOPER HALO OR APPROVED EQUAL	48" MODULAR UNDERCABINET LED FIXTURE, 1275 LUMENS (17.3W), SET TO 4000K, WHITE IN COLOUR
L	HU30M-SCTD-36-P	COOPER HALO OR APPROVED EQUAL	36" MODULAR UNDERCABINET LED FIXTURE, 915 LUMENS (12.7W), SET TO 4000K, WHITE IN COLOUR
M	14FP4240C c/w DF-14W-U	COOPER - METALUX	1'x4' SURFACE MOUNTED FLAT PANEL LED LUMINAIRE, 4226 LUMENS (38.6W), 4000K, 120V c/w DRYWALL FRAME KIT



2 / E2 ENLARGED LIBRARY CABINET LIGHTING LAYOUT PLAN
SCALE: 1/2" = 1'-0"

Rev.	Date	Description	By	App.
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0	26/02/06	ISSUED FOR PERMIT & TENDER	PGB	–

BERTHELOT ENGINEERING LTD
2193 Lynhaven Rd., Peterborough, ON. K9K 1W8
Tel: (705) 775-1517
Email: pberthelot@bertheloteng.com

LICENSED PROFESSIONAL ENGINEER — Paul Berthelot — P.G.P. BERTHELOT — Feb. 6/26 — PROVINCE OF ONTARIO — ELECTRICAL BCIN 23396

DWN. T. ST. JEAN
CHK. P. BERTHELOT
DSN. PGB/TMS
SCALE: AS NOTED

PROJECT
ST. PAUL CES OFFICE & LIBRARY RENOVATION
1101 Hilliard Street
Peterborough, Ontario

TITLE
LIGHTING LAYOUT PLAN

FILE No. 799
DWG. No. E2

Part 1 – General

1.1. General

1.1.1. This section covers the general requirements for the electrical work. Read all divisions of the contract documents.

1.1.2. All equipment shall be CSA approved.

1.1.3. All equipment, materials and installation methods shall conform to the best commercial standard practice, and in accordance with the Ontario Electrical Safety Code and all bulletins.

1.2. Outline Scope

1.2.1. The following major items of work shall be supplied and installed under the electrical contract:

1.2.1.1. Provide all labour, materials, equipment and services to complete the work of the electrical division as further specified and as shown on the drawings:
a. Supply and install light fixtures as detailed on the drawings.
c. Supply and install distribution panels as detailed on the drawings.
d. Supply and install exit, emergency lights, fire alarm equipment and receptacles as detailed on drawings.
e. Miscellaneous removals as required.

1.3. Contract Drawings

1.3.1. Drawings for electrical work are performance drawings, diagrammatic, intended to convey scope of work and indicate general arrangement and approximate location of apparatus, fixtures and wiring. Drawings do not show all conduits. Those shown are diagrammatic only.

1.3.2. Additional money over the contract price shall not be paid unless an approved change order is issued by the architect. Claims for extras shall be submitted with a complete breakdown of material, labour, hourly rates, etc.

1.4. Shop Drawings

1.4.1 Submit four reproducible copies of manufacturer's detailed shop drawings, which indicate clearly the materials and/or equipment actually being supplied, all details of construction, accurate dimensions, capacity, operating characteristics and performance for each piece of manufactured equipment and for items listed under each section for review.

1.4.2. Shop drawings submitted for approval that are not stamped and signed in accordance with the preceding requirements will be returned for resubmittal.

1.4.3. Installation of any equipment shall not commence until after shop drawings have been reviewed by the consultant.

1.4.4. Bind one set of approved shop drawings in each operating and maintenance instruction manual.

1.5. Co-Operation with Other Trades

1.5.1. The contractor shall co-operate fully with other trades in such a manner as not to interfere with other work being carried out at the job site. Where other work and equipment has to be installed along with work pertaining to this division, arrange with other trades to install this work to best suit the needs for the particular condition.

1.6. Warranty

1.6.1. The contractor shall guarantee all work for a period of one year after the date of issue of the final certificate by the engineer and for longer periods where specified. If any defects become evident within the guarantee periods all necessary repairs and replacements to the work shall be made without cost to the owner. The contractor shall pay for making good any other work damaged through defects in the work of this section during both construction and guarantee periods.

1.7. Insurance

1.7.1. The contractor shall maintain all necessary insurance to protect the owner and all trades from all possible claims.

1.8. Liability

1.8.1. The contractor shall assume full responsibility for layout of work and for any damage caused by improper location or carrying out of work of these sections.

1.9. Cutting and Patching

1.9.1. The contractor shall complete all required cutting and patching to perform the work of this contract. Cuttings shall be kept to a minimum and be performed with clean cut straight edges. Patching shall be neat, clean and restore to original finish conditions using similar types of materials. Use only trades personnel skilled in the various types of work required. Cutting of structural members shall not be permitted without written approval by the owner.

1.10. Record Drawings

1.10.1 The contractor shall maintain accurate records of changes to the drawings on the job site.
These shall include: all changes included in addenda to the tender documents; site instructions; and contract change notices. Upon project completion, the contractor shall forward to the consultant the set of drawings indicating the as-built conditions.

1.11. Existing Conditions

1.11.1. The contractor shall visit and examine the site and become familiar with all existing conditions affecting the work prior to submitting tender. No allowances in cost will be made by the owner for any difficulties encountered in the work arising out of conditions existing at the time of tendering.

1.12. Product Delivery, Storage and Handling

1.12.1. Inspect products delivered to the site and before acceptance, ensure that the product is: new; free from defects; is as specified; and is as per reviewed shop drawings, all in accordance with the contract documents. Store materials only in designated areas and protect as necessary to maintain materials in new condition.

1.15. Clean-Up

1.15.1. At all times keep the premises free from accumulations of waste material or rubbish caused by employees or work. At the completion of the work, remove all rubbish and all tools, equipment and surplus materials from and about the work and leave the work "broom clean" or its equivalent, unless more exactly specified. All lighting fixtures, light switches, and other operable electrical devices shall be cleaned at the completion of work.

1.16. Codes and Standards

1.16.1. Provide equipment and materials, and do the work, in accordance with the following, and comply with relevant sections as adopted or amended by authorities having jurisdiction:
a. Canadian electrical code (Canada)
b. National Fire Protection Association
c. CAN/ULC Standards
d. Ontario Electrical Safety Code, including current bulletins and amendments.
e. Ontario Building Code
f. Worker's Compensation Board Regulations
g. Governing Fire Codes in the Province Of Ontario

1.17. Permit, Fees and Inspection

1.17.1 The contractor shall apply for, obtain and pay all permits, licenses, inspections, examinations and fees required. The contractor shall arrange for inspection of all work by the authorities having jurisdiction over the work. On completion of the work, present to the owner the final unconditional certificate of approval by the inspection authorities.

1.17.2 Before starting any work, submit the required number of copies of drawings and specifications to the authorities for their approval and comments. Comply with any changes requested as part of the contract, but notify the owner immediately of such changes, for proper processing of these requirements.

Part 2 – Basic Materials and Methods

2.1. Conduits, Conduit Fastenings and Conduit Fittings

2.1.1. Conduit systems shall be electrical metallic tubing, intermediate metal conduit, galvanized rigid steel conduit, or polyvinyl chloride. Minimum size shall be 1/2". Use EMT above-grade for indoor construction except where rigid conduit is required. Where galvanized rigid steel conduit is required, provide lock-nuts and bushing at terminations.

2.1.2. Type BX -90 flexible armoured cable may be used only for final connections to lighting fixtures. Use flexible conduit for final connections to motors and sensors. Lengths should not exceed 18". Use liquid tight PVC jacketed flexible conduit for connections to equipment outdoors or in damp locations.

2.1.3. Conduits shall be of sufficient size to permit easy removal of the conductors at any time. Use one hole steel straps to secure surface conduits 2" and smaller, and two hole steel straps for conduits larger than 2". Use beam clamps to secure conduits to expose steel work. Install fittings manufactured for use with the conduit supplied. Watertight connectors and couplings are required for EMT. Set screws are not acceptable.

2.1.4. Install conduits to conserve headroom in exposed locations and cause minimum interference in spaces through which they pass. Conduits shall be run exposed in service areas, but shall be concealed in finished rooms. Exposed conduits shall be installed parallel and perpendicular to walls and ceilings. Wherever conduits cross building expansion joints, approved means, such as conduit expansion joints or flexible conduit loops shall be provided as necessary to take care of the movement. Conduit shall not be run horizontally in partitions.

2.1.5. All conduits shall be properly supported with spacing not to exceed C.E.C. requirements. Approved electrical hardware, hangers, structural shapes, etc. Shall be used. Perforated strap handlers shall not be permitted. Where run exposed on concrete or masonry walls, conduits shall be supported using conduit clamps and lead anchors or approved preset concrete inserts and where run on building steel, beam clamps shall be used. Conduit clamps shall be heavy duty galvanized malleable iron. Factory "ells" shall be used where 90° bends are required for 1" or larger conduits. Make bends and offsets with a hickey or power bender without flattening or denting the conduits. Bend conduit cold. Replace conduit if kinked or flattened more than 1/10th of its original diameter. Connect conduit lengths with only approved couplings or conduit unions.

2.1.6. Install conduits so that there is no interference with access openings in ceilings or access to equipment in the ceiling space. Install conduit to avoid proximity to water or heating pipes. Do not run within 6" of such pipes. Where crossings are unavoidable, maintain a minimum distance of 1" from the pipe covering.

2.1.7. Square-cut all conduit ends, ream and file to remove all burrs before installation and properly clean and cap all empty conduits. Install fish cord in empty conduits.

2.2. Wires and Cables

2.2.1. All conductors shall be copper, unless otherwise noted. Conductors shall be stranded for #8AWG and larger with 1000v insulation of chemically cross-linked thermo setting polyethylene. 600v insulation can be used for conductors smaller than #8AWG. Base the 600 volt RW 90 conductor ampacities on published CEC 90°C. Rating. Cables shall be loaded to not more than 75% (70% to 80%) of this rating. Minimum #12AWG wiring shall be used.

2.2.2. Neutrals of power systems, although connected to a common ground at the source, shall be electrically separated and isolated from each other beyond this point of origination. Feeders to two or more switches or panels and the tapoffs to same shall all be run using the same size conductors throughout.

2.2.3. All wires shall be carried full size from source to the load. Neutral wires shall be the same size as phase wires. Equipment Ground wires shall be one size smaller than phase wire, except that the conductor shall not be larger than a 4/0 and shall be no. 10 for 30 amp circuits and no. 12 for circuits less than 30 amps. Insulation shall be type RW 90. Multi-circuit branch circuits in same conduit require only one equipment ground wire.

2.3. Junction and Pullboxes

2.3.1. Junction and pullboxes should be of welded steel construction with screw-on flat covers for surface mounting. Install pullboxes in inconspicuous but accessible locations. Install junction and pullboxes so as not to exceed 30m of conduit run between pullboxes. All junction and pullboxes should be labelled to identify equipment or circuit numbers.

2.4. Outlet, Conduit Boxes and Fittings

2.4.1. Size boxes in accordance with CSA C22.1. 100 mm square or larger outlet boxes as required for special devices. Gang boxes where wiring devices are grouped. Provide blank cover plates for boxes without wiring devices. Support boxes independently of connecting conduits. Conduit boxes shall be cast FS boxes with factory threaded hubs and mounting feet for surface wiring. Provide correct size of opening in boxes for conduit and cables. Reducing washers are not allowed.

2.5. Wiring Devices

Switches

2.5.1. Locate light switches as shown on the drawings and on the latch side of doors. Install single throw switches with handle in "up" position when switch closed.

2.5.2 Install switches in gang type outlet box when more than one switch is required in one location.

2.5.3 Provide 20A, 125V single pole specification grade light switches as shown on the contract drawings.

Receptacles

2.5.4. Install receptacles in gang type outlet box when more than one receptacle is required in one location. Combination boxes with barriers shall be used where outlets for more than one system are grouped.

2.5.5 Provide 15A, 120V specification grade duplex convenience outlets as shown on the contract drawings.

2.5.6 Do not install outlets back to back in wall. Allow a minimum 150 mm horizontal clearance between boxes. Change location of outlets at no extra cost or credit, providing distance does not exceed 3000 mm and information is given before installation.

Telephone/Cable T.V./Computer Raceway System, (etc.)

2.5.7. Empty conduit systems shall be provided for telephone from outlet box to accessible ceiling space, or as shown on the drawings.

2.5.8. Contractor is responsible for providing and/or coordinating the size, type and location of the incoming telephone conduit with the telephone company or the building owner.

2.5.9. All interior building raceways shall be EMT.

2.5.10.2 long radius 90 degree bends shall be the maximum allowed between pull boxes.

2.5.11. Pole cords shall be provided in each conduit for future pulling of wires.

2.5.12. Contractor shall provide necessary boxes and associated cover plates as required for the above systems.

Mounting Heights

2.5.13 Mounting heights for wiring devices shall be as follows unless otherwise indicated and shall be from centre line of outlet box to finished floor:
2.5.13.1. Duplex receptacles shall be mounted 300mm above finished floor or 150mm above counter top.

2.5.13.2. Light switches shall be mounted at no less than 900mm and no more than 1100mm above finished floor.

2.5.13.3. Disconnect switches shall be mounted 1200mm above finished floor.

2.5.13.4. Exit lights shall be mounted 300mm above door trim.

2.5.13.5. Emergency lights shall be mounted 2300mm above finished floor, unless otherwise specified or minimum 150mm clearance from ceiling.

2.5.13.6. Panelboards shall be mounted 1200mm above finished floor.

Cover Plates

2.5.14. Cover plates from one manufacturer shall be used throughout the project and supplied for all wiring devices and any pullboxes.

Equipment Nameplates

2.5.15. Nameplates shall be provided for all pieces of electrical equipment including panelboards, junction boxes, pull boxes, splitters, control panels, disconnect switches and motor starters. Nameplates shall be black laminated rigid plastic with 0.25 inch high white engraved letters. Nameplates shall be fastened to equipment in a conspicuous location on equipment. A list of the exact engraving of nameplates shall be submitted for approval prior to fabrication. Nameplates for disconnect switches shall indicate name of equipment being controlled and circuit and panel from which they are fed.

Part 3 – Distribution

3.1. Disconnect Switches

3.1.1. Disconnect switches shall be horsepower rated, quick-make, quick break, with handle interlocked so that switch door cannot be opened unless switch is in de-energized position. Disconnect Switches shall be fusible and nonfusible as indicated on the drawings. Switches shall be heavy duty having visible blade construction, positive pressure fuse clips, and silverplated current carrying parts. Provision shall be made for padlocking switch in "OFF" position. Switches shall have on-off switch position indication on switch enclosure cover.

3.2. Panelboards

3.2.1. Use panelboards of one manufacturer throughout the project. The supplier shall install circuit breakers in panelboards before shipment. Sequence phase bussing shall have odd numbered breakers on left and even on right with each breaker identified by permanent number identification as to circuit number. All panelboards shall have a copper bus. Single phase lighting and distribution panelboards shall have a solid neutral of same ampere rating as mains. Mains shall be suitable for bolt-on breakers. Enclosures shall be EEMAC type 1 surface mounted with trim and floor finish grey.

3.2.2. Complete circuit directory with typewritten legend showing location and load of each circuit. The directory shall be updated from the contract drawings to include all addenda, site instructions, contract change orders and any other circuit changes. Supply two keys for each panelboard and key panelboards alike.

3.2.3. Main breaker shall be separately mounted on top or bottom of panel to suit cable entry. When mounted vertically, down position should open breaker. Lock on devices for certain breakers shall be provided for items such as exit, emergency and night light circuits.

3.2.4. Locate panelboards as indicated and mount securely, plumb, true and square to adjoining surfaces. Install surface mounted panelboards on steel angle or channel framing or on fire rated painted plywood backboards.

Part 4 – Lighting Equipment

Luminaires

4.1. Locate and install luminaires as indicated on contract drawings and connect luminaires to lighting circuits.

Lighting Control

4.2. Locate and install lighting control devices as indicated on the contract drawings, and in accordance with ASHRAE Standard 90.1-2010, Section 9, Lighting.

4.3. Contractor shall provide functional testing of the lighting control system as per Section 9.4.4. (Functional Testing), of ASHRAE Standard 90.1-2010.

4.3.1. Lighting control devices and control systems shall be tested to ensure that control hardware and software are calibrated, adjusted, programmed, and in proper working condition.

4.3.2. When occupant sensors, time switches, programmable schedule controls, or photosensors are installed, at a minimum, the following procedures shall be performed:
a. Confirm that the placement, sensitivity, and time-out adjustments for occupancy sensors yield acceptable performance, lights turn off only after space is vacated and do not turn on unless space is occupied.
b. Confirm that the time switches and programmable schedule controls are programmed to turn the lights off.
c. Confirm that photosensor controls reduce electric light levels based on the amount of usable daylight in the space as specified.

4.3.3. The party responsible for the functional testing shall not be directly involved in either the design or construction of the project and shall provide documentation certifying that the installed lighting controls meet or exceed all documented performance criteria. Certification shall be specific enough to verify conformance.

Emergency lighting

4.4. Install unit equipment and remote mounted fixtures as indicated.

4.5. Emergency lighting shall be installed in such a manner that it will be automatically actuated upon failure of the power supply to the normal lighting in the area covered by that unit equipment.

4.6. Emergency lighting shall have a supply voltage of 120VAC, and an output voltage of 12VDC, and be able to assume the electrical load automatically for a minimum of 30 minutes.

Exit signs

4.7. Install exit signs as per the contract drawings.

4.8. Exit signs shall consist of a green pictogram and white graphic symbol meeting the visibility specifications referred to in ISO 3864-1.

4.9. Exit signs shall be continuously illuminated.

PART 5 – FIRE ALARM SYSTEM

5.1. Contractor shall provide all material, equipment, and labour as required for the complete and adequate installation of the fire alarm system, as shown on the contract drawings, and as described below. Where an existing fire alarm system is present, all new devices shall match the existing system.

5.2. Contractor is responsible for the submittal of shop drawings for the complete system. At a minimum, the following shall be submitted:
5.2.1. Layout of equipment;
5.2.2. Zoning;
5.2.3. Wiring diagrams for connections and devices;
5.2.4. Methods or operation;
5.2.5. Fire alarm device make, model number, and type.

5.3. All components of the system, its installation and the system as a whole shall be ULC listed and labeled and shall meet the requirements of all authorities having jurisdiction of the application. The entire installation shall be carried out in accordance with CAN/ ULC S524 and shall be verified in accordance with CAN/ ULC S537.

5.4. Fire alarm control and booster panel breakers shall be of the lockable type, and shall be painted red.

5.5. Separate circuits from the control panel to each zone of initiating devices shall be provided.

5.6. Fire alarm system shall be single stage operation.
5.2.1. Single stage fire alarm system shall, upon the operation of any manual pull station or fire detector, cause an alarm signal to sound on all audible signal devices in the system.

5.7. The sound pattern of an alarm signal shall conform to the temporal pattern defined in Clause 4.2. of ISO 8201.

5.8. Fire alarm device zones to be clearly indicated on control panel.

5.9. Power supply is 120VAC, 60hz input, 24VDC output from rectifier to operate alarm and signal circuits with standby power gell cell batteries. Minimum expected life of four years, sized in accordance with NBC.

5.10. Fire alarm system riser diagram shall be provided in fire alarm control panel.

5.11. Arrange and pay for on-site lecture and demonstration by fire alarm equipment manufacturer to train operational personnel in use and maintenance of fire alarm system.

5.12. Synchronization modules for strobe lights shall be coordinated as necessary with fire alarm system manufacturer.

5.13. Sufficient output modules shall be provided in fire alarm control panel.

5.14. Output modules shall be provided in the fire alarm control panel as needed.

5.15. All fire alarm junction boxes shall be painted red.

Part 6 – Heating Equipment

6.1. Electrical heaters will be supplied and installed by division 15. Division 16 will be responsible for providing power connections to heating equipment.

Part 7 – Mechanical Equipment

7.1. Provide power and connections to all mechanical equipment as detailed on the drawings.

7.2. Ensure all equipment is properly protected with disconnect switches.

7.3. Confirm with mechanical trade for exact locations of equipment and connection points.

7.4. Verify all motor connections for proper phase rotation.

Part 8 – Removals

8.1. Contractor shall disconnect and remove all existing electrical devices and equipment, as per the contract documents.

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0	26/02/06	ISSUED FOR PERMIT & TENDER	PGB	–
Rev.	Date	Description	By	App.

BERTHELOT ENGINEERING LTD
2193 Lynhaven Rd., Peterborough, ON. K9K 1W8
Tel: (705) 775-1517
Email: pberthelot@bertheloteng.com

LICENSED PROFESSIONAL ENGINEER
Paul Berthelot
P.G.P. BERTHELOT
Feb. 6/26
PROVINCE OF ONTARIO
ELECTRICAL BCIN 23396

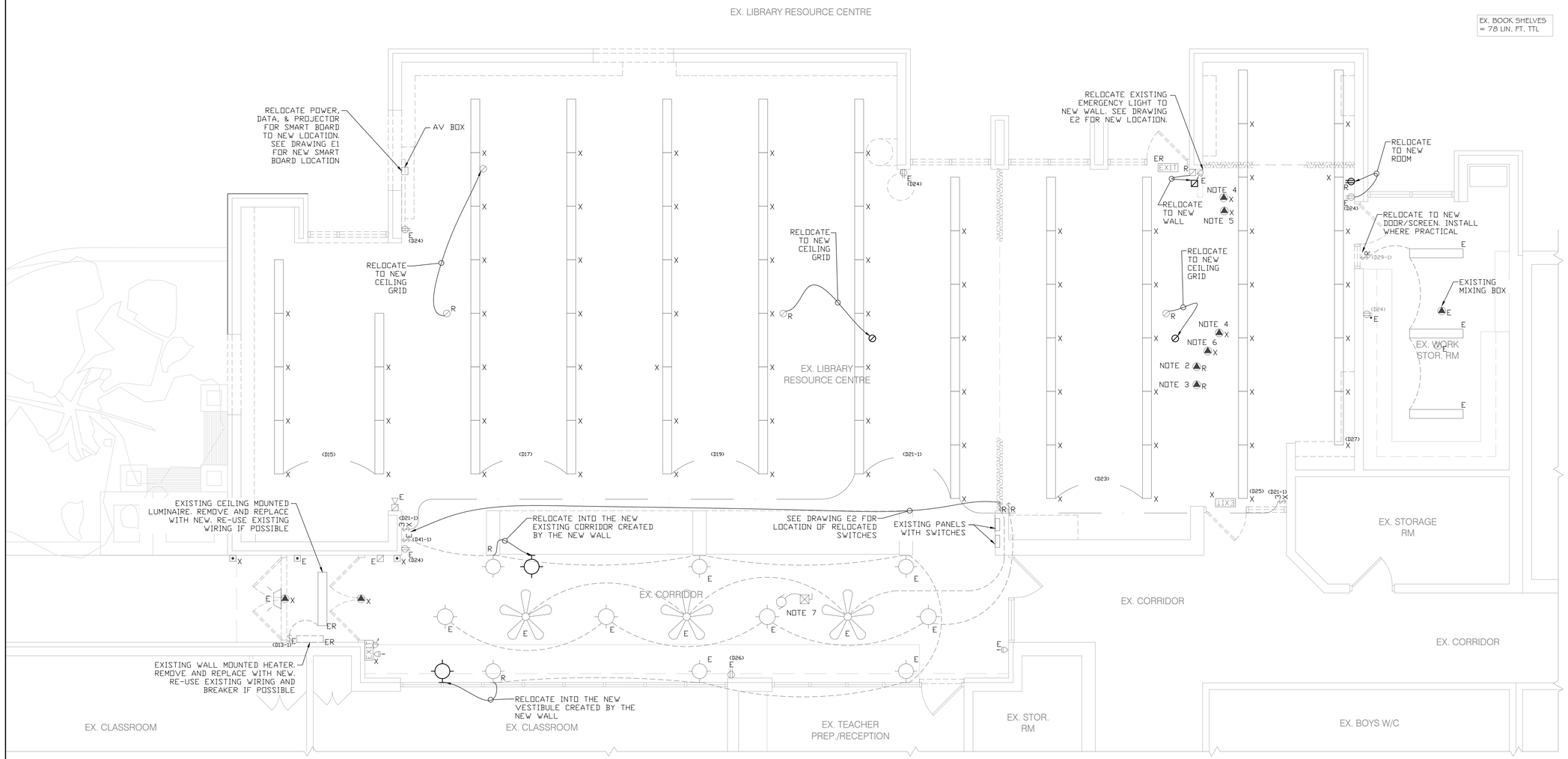
DWN. T. ST. JEAN
CHK. P. BERTHELOT
DSN. PGB/TMS
SCALE: AS NOTED

PROJECT
ST. PAUL CES OFFICE & LIBRARY RENOVATION
1101 Hilliard Street
Peterborough, Ontario

TITLE
SPECIFICATION

FILE No. 799

DWG. No. E3



1 / E4 POWER & LIGHTING DEMO PLAN
SCALE: 1/4" = 1'-0"

NOTES:

1. EXISTING ELECTRICAL EQUIPMENT AND LIGHTING TO REMAIN, EXCEPT AS NOTED. DISCONNECT DEVICES SCHEDULED FOR REMOVAL OR RELOCATION. REMOVE EXISTING WIRING AND CONDUIT BACK TO SOURCE, WHERE PRACTICAL, AND MAKE SAFE.
2. RELOCATED EXISTING DH-3 (3kW). SEE DRAWING E1 FOR NEW LOCATION. RE-USE, EXTEND, OR REPLACE WIRING AS REQUIRED.
3. RELOCATED MIXING BOX MB-4. SEE DRAWING E1 FOR NEW LOCATION. RE-USE, EXTEND, OR REPLACE WIRING AS REQUIRED.
4. EXISTING 5kW DUCT HEATERS TO BE REMOVED. REMOVE EXISTING WIRING AND CONDUIT BACK TO SOURCE, WHERE PRACTICAL, AND MAKE SAFE.
5. EXISTING MIXING BOX MB-2 TO BE REMOVED. REMOVE EXISTING WIRING AND CONDUIT BACK TO SOURCE, WHERE PRACTICAL, AND MAKE SAFE.
6. EXISTING MIXING BOX MB-3 TO BE REMOVED. REMOVE EXISTING WIRING AND CONDUIT BACK TO SOURCE, WHERE PRACTICAL, AND MAKE SAFE.
7. EXISTING EXHAUST FAN AND CEILING LOCATED STARTER SHALL BE REMOVED. REMOVE EXISTING WIRING AND CONDUIT BACK TO SOURCE, WHERE PRACTICAL, AND MAKE SAFE.

RECEPTACLE LEGEND	
⏚	RECEPTACLE
•	MOUNTED ABOVE COUNTER
E	EXISTING TO REMAIN
R	EXISTING TO BE RELOCATED
X	EXISTING TO BE REMOVED

FIRE ALARM LEGEND	
▽	PULL STATION
▽	FIRE ALARM HORN
⊘	HEAT DETECTOR
E	EXISTING EQUIPMENT TO REMAIN
R	EXISTING EQUIPMENT TO BE RELOCATED AS SHOWN
X	EXISTING EQUIPMENT TO BE REMOVED

LEGEND	
$	TOGGLE SWITCH
E	EXISTING LIGHT FIXTURES TO REMAIN, TO BE RELOCATED OR TO BE REMOVED AS INDICATED
EXIT	EXISTING EXIT SIGN
ER	EXISTING TO BE REPLACED WITH NEW EXIT SIGN
E	EXISTING EQUIPMENT TO REMAIN
R	EXISTING EQUIPMENT TO BE RELOCATED AS SHOWN
X	EXISTING EQUIPMENT TO BE REMOVED

Rev.	Date	Description	By	App.
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DSN. PGB/TMS
SCALE: AS NOTED

PROJECT
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1101 Hilliard Street
Peterborough, Ontario

TITLE
POWER AND LIGHTING DEMOLITION LAYOUT PLAN

FILE No. 799
DWG. No. E4