This Addendum forms part of the Bid Documents and amends the Bid Documents as described below.

1. **ARCHITECTURAL DETAILS - PROJECT MANUAL VOLUME 2**

1 .1 **Detail D242**

.1 Spray fireproof beam, reduce gyp. layers from 2 to 1, see attached revised detail D242.

1 .2 **Details D230, D231, D234, D238, D243, D244, D247, D250, D256, D276, D279**

.1 Change references of "Spray Fireproofing ULC #F906" to "Spray Fireproofing ULC #J957".

2. **ARCHITECTURAL DRAWINGS**

2 .1 **Drawing A1.5**

.1 For the "Floor/Beam/Column Fire Ratings" Legend, remove section for "Beams (Gypsum Clad)", as indicated on A1.5 attached in this Addendum.

.2 For the same legend, change the UL Design No. Of "Beams (Spray Fireproofing)" to ULC J957", as indicated on A1.5 attached in this Addendum.

2 .2 **Drawing A2.2**

.1 In Boiler Room 226, move the mop sink to the left side of the eyewash station, 250mm away from edge of the eyewash. See Mechanical Addendum M2 for detailed plumbing changes.

2 .3 **Drawing A3.2**

.1 For faux louvre types FL1, FL2, & FL3, correct the detail references from D305 & D307 to D305A & D307A respectively.

2 .4 **Drawing A6.1**

.1 Change acoustic panel note to "610 x 1220mm Cementitious Acoustic Panels (2 Panels Tall)", and overall height of acoustic wall to 2440mm, as indicated on A6.1 attached in this Addendum.

2 .5 **Drawing 5/A6.4**

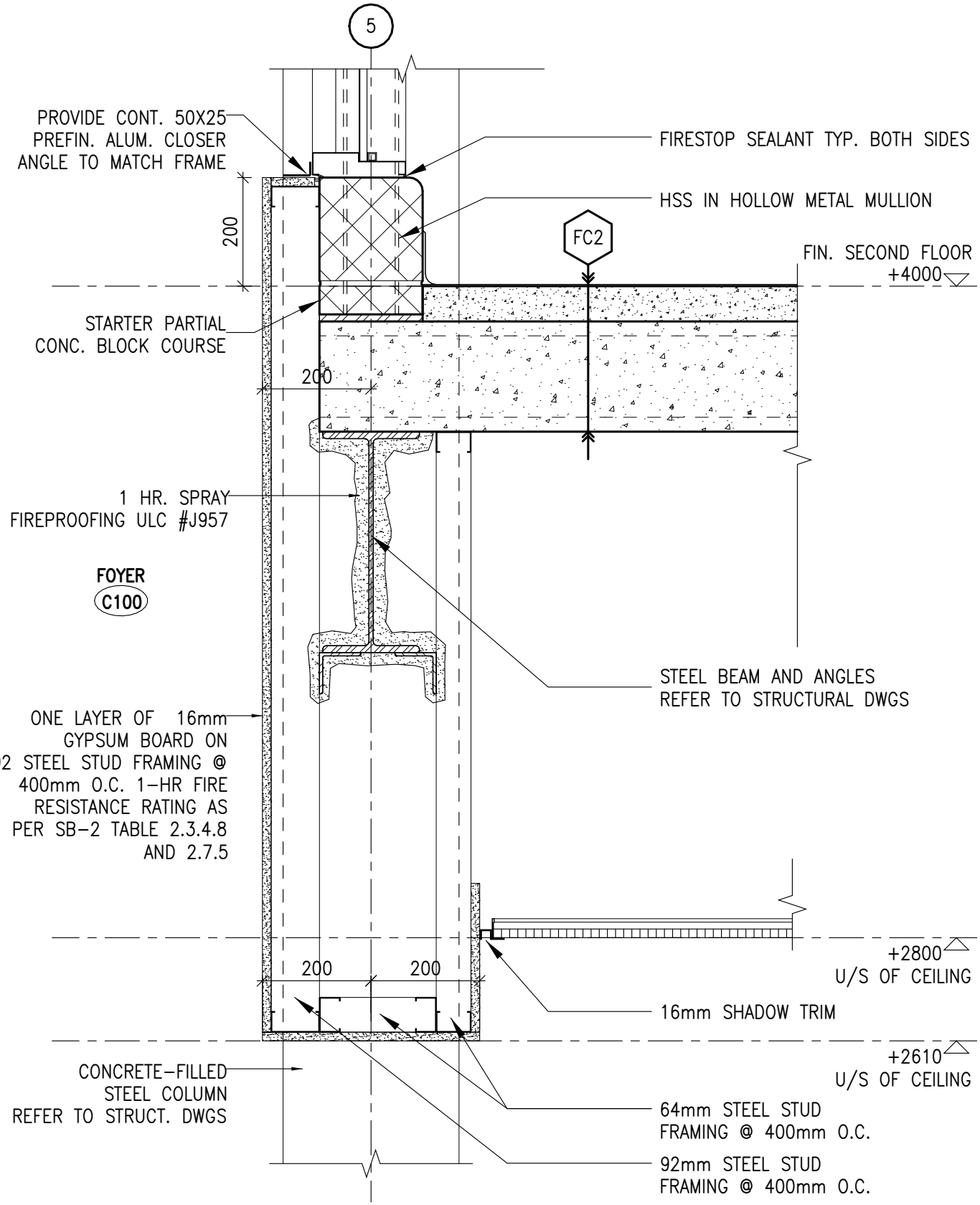
.1 Change acoustic panel note to "610 x 1220mm Cementitious Acoustic Panels (P2) (2 Panels Tall, Trimmed To Suit Height), Cover Extent of CMU".

2 .6 **Drawing 21 & 22 / A7.2**

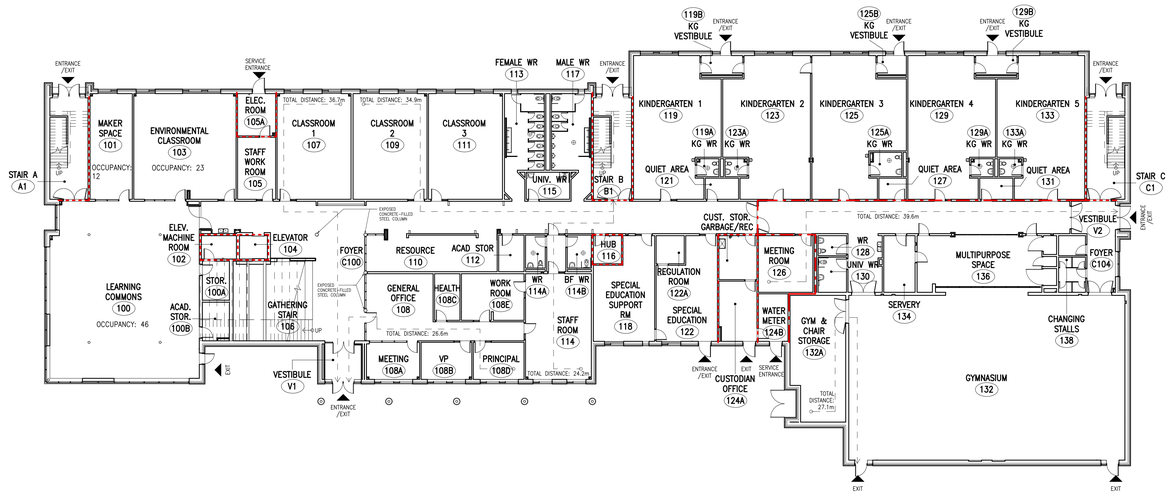
.1 Add spray fireproofing to beams, reduce layers of gypsum from 2 to 1 (except where there is a fire separation), as indicated on A7.2 attached in this Addendum.

Attach: Detail D242 Rev 1
Drarings A1.5 / A.16 / A7.2

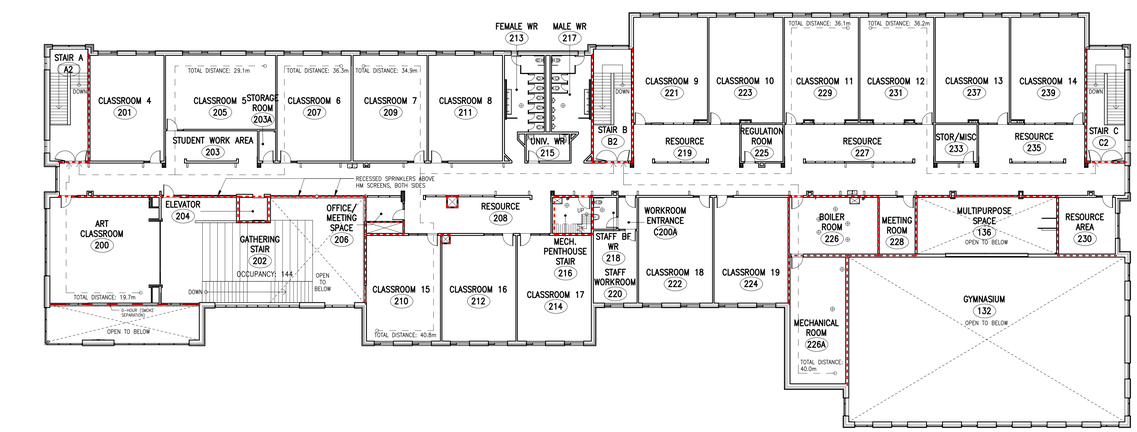
END OF ARCHITECTURAL ADDENDUM NO. 2



KEDRON EAST CATHOLIC ELEMENTARY SCHOOL DURHAM CATHOLIC DISTRICT SCHOOL BOARD Fire Rated Hollow Metal Screen Sill at Foyer	SCALE: 1 : 10	DWG NO. D242 REV. 1
MOFFET & DUNCAN ARCHITECTS INC. 5052 DUNDAS ST. WEST, TORONTO, ONT. M9A 1B9 TELEPHONE: (416)-239-2775	JOB #: 2402	



1 A1.5 Ground Floor – Fire Separations
1 : 200



2 A1.5 Second Floor – Fire Separations
1 : 200

OCCUPANT LOADING CALCULATIONS

ITEM 1.0 — TOTAL STUDENT AND STAFF FOR ENTIRE SCHOOL INCLUDING FUTURE ADDITION:

STUDENT LOADING (PROPOSED BUILDING):

KINDERGARTENS	= 5 X 26	= 130
STANDARD CLASSROOMS	= 19 X 23	= 437
ART ROOM	= 1 X 23	= 23
ENVIRONMENTAL CLASSROOM	= 1 X 23	= 23
SPECIAL EDUCATION	= 1 X 9	= 9
TOTAL STUDENT LOADING		= 622

TEACHER LOADING (PROPOSED BUILDING):

TEACHERS	= 1 X 21	= 21
KG SUPERVISORS	= 2 X 5	= 10
SPEC ED. SUPERVISORS	= 2 X 1	= 2
ADMIN. & CUSTODIAL	= 1 X 10	= 10
TOTAL TEACHER LOADING		= 43

FUTURE ADDITION

STUDENTS= 8 X 23		= 184
TEACHERS= 8 X 1		= 8

TOTAL = 622 + 43 + 184 + 8 = 857

ITEM 2.0 — PLUMBING FIXTURE REQUIREMENTS: OBC 3.7.4.3

STUDENTS:

OBC 3.7.4.3.(14) REQUIRES 1 WC FOR EACH 30 MALES AND 1 WC FOR EACH 26 FEMALES IN A2 OCCUPANCY (806 / 2 = 403 EACH SEX)

FROM OBC 3.7.4.2 (6), WASH FOUNTAINS SUBSTITUTED FOR LAV'S; 1168mm WIDE BY 650mm DEEP = 4 LAV'S

		PROVIDED	OBC REQUIREMENTS
BOYS			
403 / 30 = 14	WC	10	
TOTAL	URINALS	8	
	TOTAL WC	18 WC	14 WC & URINALS
	LAVATORIES	8 LAVS.	7 LAVS.
GIRLS			
403 / 26 = 16	WC	19 WC	16 TOTAL WC
	LAVATORIES	9 LAVS.	8 LAVS.

STAFF:

STAFF WASHROOMS SHALL CONFORM TO OBC 3.7.4.3 (1) = (31/2 = 26 EACH SEX)

		PROVIDED	OBC REQUIREMENTS
STAFF – MALE	WC	1	1
	LAVATORIES	1	1
STAFF – FEMALE	WC	2	2
	LAVATORIES	2	1

FIRE RESISTANCE RATED CONCRETE BLOCK PARTITIONS

	NORMAL WEIGHT (N OR S CONCRETE)		LIGHT WEIGHT (L-20S CONCRETE)	
REQUIRED RATING	MIN. EQUIVALENT THICKNESS REQUIRED *	MIN. CONCRETE BLOCK SIZE AND RATING PROVIDED †	MIN. EQUIVALENT THICKNESS REQUIRED *	MIN. CONCRETE BLOCK SIZE AND RATING PROVIDED †
1/2 HOUR	44 mm	90 BLOCK 66 MM – 45 MIN	42 MM	90 BLOCK 66 MM – 1.1 HR.
1 HOUR	73 mm	140 BLOCK 81 MM – 1.1 HR.	64 MM	90 BLOCK 66 MM – 1.1 HR.
2 HOUR	113 mm	240 BLOCK 127 MM – 2.4 HR.	94 MM	190 BLOCK 106 MM – 2.5 HR.
2 HOUR	142 mm	290 BLOCK 149 MM – 3.2 HR.	116 MM	240 BLOCK 127 MM – 3.5 HR.

* AS REQUIRED BY TABLE 2.1.1. SB-2 OBC 2024
† AS CALCULATED AND PROVIDED BY THE CANADIAN CONCRETE MASONRY PRODUCERS, TECHNICAL MANUAL, CHAPTER 5

7

FLOOR / BEAM / COLUMN FIRE RATINGS (UL AND/OR SB-2)

FLOORS (CONC. HOLLOW CORE SLAB)

SLAB THICKNESS (MIN)	EQUIVALENT THICKNESS	FRR OF FLOOR OR ROOF SLAB, PRESTRESSED & REINF., TYPE N CONC. (PER TABLE 2.2.1.A. SB-2 OBC 2024)	FRR OF CONCRETE COVER OVER REINF. IN CONC. SLABS, PRESTRESSED TYPE S, N, L405 OR L CONC. (PER TABLE 2.2.1.B. SB-2 OBC 2024)
8 IN (203 mm)	5 IN (127 mm)	2HR (FOR 124mm MIN. THICKNESS)	2HR (FOR 38mm MIN. THICKNESS)

BEAMS (SPRAY FIREPROOFING)

BEAM TYPE	FIRE RESISTANCE RATING	UL DESIGN NO.
STRUCTURAL STEEL BEAMS SUPPORTING PRE-CAST CONC. FLOOR SLABS (NOT CLAD WITH 2 LAYERS OF GYP)	1HR SPRAY FIREPROOFING	ULC J957
STRUCTURAL STEEL BEAMS SUPPORTING POURED CONC. ON STEEL DECK	1HR SPRAY FIREPROOFING	ULC 0804

COLUMNS (WITH INTUMESCENT PAINT)

COLUMN	FIRE RESISTANCE RATING	UL DESIGN NO.
ALL STRUCTURAL STEEL COLUMNS SUPPORTING FLOORS (NOT CLAD WITH CONC BLOCK, GYPSUM, OR FILLED WITH CONC.)	1HR INTUMESCENT PAINT	UL 723, CAN/ULC-S102 (REFER TO ARCH. SPEC. SECTION 09 96 46 FOR FS AND SD RATINGS)

COLUMNS (CONCRETE-FILLED)

COLUMN	FIRE RESISTANCE RATING	SB-2 REF.
324mm DIA, 9.5mm THICK CONCRETE FILLED COLUMN	60 MIN	SB-2, 2.6.6

Ontario Building Code Data Matrix Part 3

			Building Code Reference
3.00	Building Code Version:	O. Reg. 163/24 — Latest Amendment O. Reg. 119/26	
3.01	Project Type	☒ New ☐ Alteration ☐ Renovation; ☐ Change of use ☐ Addition & Renovation; Description: Elementary School	(A) 1.3.3.2.
3.02	Major Occupancy Classification	Occupancy: A2 — Use: Elementary school	3.1.2.1.(1)
3.03	Superimposed Major Occupancies	☒ No ☐ Yes; Description: Elementary School	3.2.2.7.
3.04	Building Area (m²)	Description — Existing / New / Total: N/A / 3156.4 m² / 3156.4 m²; Total: N/A / 3156.4 m² / 3156.4 m²	(A) 1.4.1.2.
3.05	Gross Area (m²)	Description — Existing / New / Total: Ground Floor N/A / 3141.6 m² / 3141.6 m²; Second Floor N/A / 2497.0 m² / 2497.0 m²; Total N/A / 5638.6 m² / 5638.6 m²	(A) 1.4.1.2.
3.06	Mezzanine Area (m²)	Description — Existing / New / Total: N/A / N/A / N/A; Total N/A / N/A / N/A	3.2.1.1.
3.07	Building Height	2 Storeys above grade, 12.3 (m) Above grade; 0 Storeys below grade	(A) 1.4.1.2. & 3.2.1.1.
3.08	High Building	☒ No ☐ Yes	3.2.6.
3.09	Number of Streets/ Firefighter Access	2	3.2.2.10. & 3.2.5.
3.10	Building Classification	(A) — Group/Div 2 (3.2.2.24)	3.2.2.20 – 93.
3.11	Sprinkler System	☒ Required ☐ Not Required; Proposed: ☒ Entire Building ☐ Selected Compartments ☐ Selected Floor Areas ☐ Basement Only ☐ In Lieu of Roof Rating ☐ None	3.2.1.5. & 3.2.2.18
3.12	Standpipe System	☐ Required ☒ Not Required	3.2.5.8–11.
3.13	Fire Alarm Required	☒ Required ☐ Not Required; Proposed: ☒ Single Stage ☐ Two Stage ☐ Non	3.2.4.
3.14	Water Service/ Supply is Adequate	☐ No ☒ Yes	3.2.5.7.
3.15	Construction Type	Restriction: ☐ Combustible Permited ☒ Non-Combustible required; Actual: ☐ Combustible ☒ Non-Combustible required ☐ Combination; Heavy Timber Construction ☒ No ☐ Yes	3.2.2.20.–93. & 3.1.6.
3.16	Importance Category	☐ Low ☐ Low human occupancy ☐ Post-disaster shelter ☐ Normal ☒ High ☐ Minor storage building ☐ Explosive or hazardous substances ☐ Post-disaster	4.1.2.1.(3) & 7.4.1.2.1.
3.17	Seismic Hazard Index:	(Ie Fa Sa (0.2)) = 0.341; Seismic design required for table 4.1.8.18. Item 6 to 21: (Ie Fa Sa (0.2)) > .35 or Post-disaster ☒ No ☐ Yes	4.1.8.4.(1) 7–4.1.8.5.–B; 4.1.8.18.
3.18	Occupant Load	Floor Level/Area — Occupancy Type — Based On — Occupant Load (Persons): 1st Floor A2 Design Of Building 257; 2nd Floor A2 Design Of Building 408; Future Addition A2 Design Of Building 192; * Total 857; * Refer to Occupant Load Table In This Sheet For More Details	3.1.17.
3.19	Barrier-Free Design	☒ Yes ☐ No	3.8.
3.20	Hazardous Substances	☐ Yes ☒ No	3.3.1.2.,
3.21	Required Fire Resistance Rating	Horizontal Assembly — Rating — Support Assembly (H) — Noncombustible in lieu of rating: Floors over basement N/A / N/A ☐ No ☐ Yes ☐ N/A; Floors 1 Hour / 1 Hour ☐ No ☐ Yes ☐ N/A; Wezzonine N/A / N/A ☐ No ☐ Yes ☐ N/A; Roof Not Required / Not Required ☐ ☐ Yes ☐ N/A	3.2.2.20 – 93, 3.2.1.4.,
3.22	Spatial Separation	Wall — EBF Area (m²) — L.D. (m) — L/H or H/L — Permitted Max. % of Openings — Proposed % of Opening — Required FRR(H) — Construction Type Required — Cladding Type Required: North 863.4 105.4 N/A 100% 24.6% NR ☒ Noncombustible ☒ Noncombustible; South 863.4 21.9 N/A 100% 28.7% NR ☒ Noncombustible ☒ Noncombustible; East 329.6 31.3 N/A 100% 14.3% NR ☒ Noncombustible ☒ Noncombustible; West 329.6 18.5 N/A 100% 24.7% NR ☒ Noncombustible ☒ Noncombustible	3.2.3.
3.23	Plumbing Fixtures Requirements	Ratio Male:Female = 50:50 Except as noted otherwise: Floor Level/Area — Occupant Load — OBC Reference — Fixtures Required — Fixtures Provided: REFER TO OCCUPANT LOAD TABLE FOR MORE DETAILS — REFER TO OCCUPANT LOAD TABLE FOR MORE DETAILS — 3.7.4.3.(14) — 3.7.4.3.(14) — 1 PER 30 MALE STUDENTS; 1 PER 26 FEMALE STUDENTS — REFER TO OCCUPANT LOAD TABLE FOR MORE DETAILS	3.7.4., & 3.8.2.3.
3.24	Energy Efficiency	Compliance Path: Prescriptive; Climatic Zone: 5	
3.25	Notes		

SITE PLAN FILE NO. S12/23

FIRE SEPARATION LEGEND

FIRE SEPARATIONS

- MIN. 0 HOUR (ZERO) FIRE SEPARATION
- MIN. 1/2 HOUR FIRE SEPARATION
- MIN. 1 HOUR FIRE SEPARATION

No.	DATE	REVISIONS
7	SEP 24, 2026	ARCHITECTURAL ADD. No. A2
6	SEP 1, 2026	ISSUED FOR TENDER
5	AUG 25, 2026	ISSUED FOR SPA – 3RD SUBMISSION
4	JUN 11, 2026	ISSUED FOR BUILDING PERMIT
3	APR 14, 2026	ISSUED FOR SPA – 2ND SUBMISSION
2	DEC 23, 2025	ISSUED FOR CLASS B COSTING
1	OCT 24, 2025	ISSUED FOR SPA – 1ST SUBMISSION

KEDRON EAST CATHOLIC ELEMENTARY SCHOOL

1280 BRITANNIA AVE. EAST — OSHAWA, ON

DURHAM CATHOLIC DISTRICT SCHOOL BOARD
Learning and Living in Faith

DRAWING: GROUND & SECOND FLOOR PLANS – FIRE SEPARATIONS AND OBC MATRIX

ONTARIO ASSOCIATION OF ARCHITECTS — ROBERT F. FERKUL — LICENCE 4695

TRUE NORTH | DWG. NORTH

JOB NO. 2402

SCALE 1:100

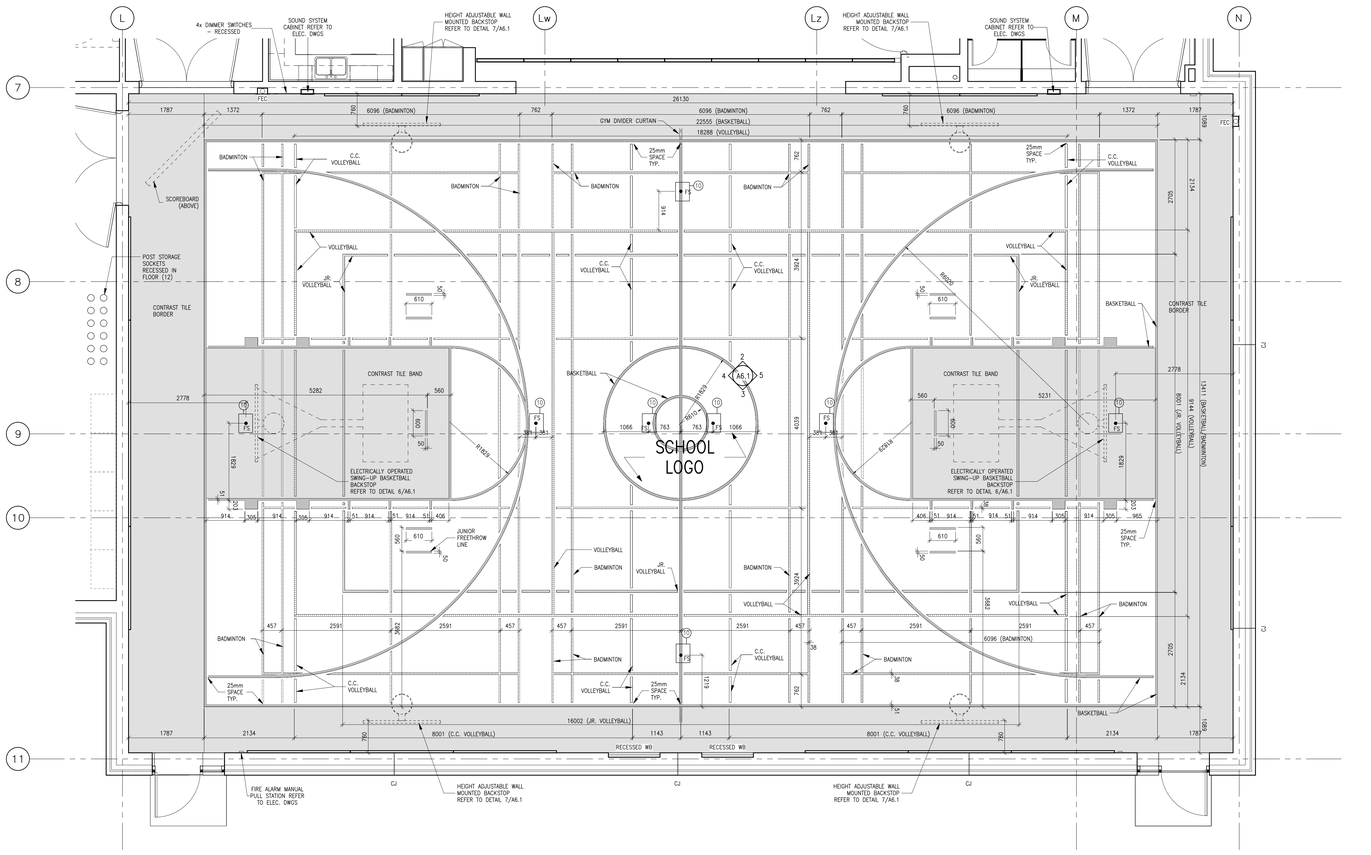
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PRINTED

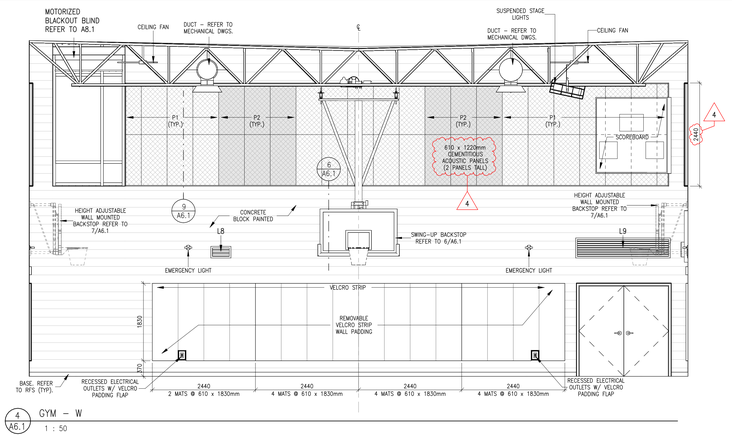
DWG. NO. A1.5

MOFFET & DUNCAN architects inc.
5052 DUNDAS STREET WEST
TORONTO, ON M9A 1B9
TEL: (416) 239-2775
FAX: (416) 239-8729
EMAIL: mdarch@mdarch.ca
WEBSITE: www.mdarch.ca

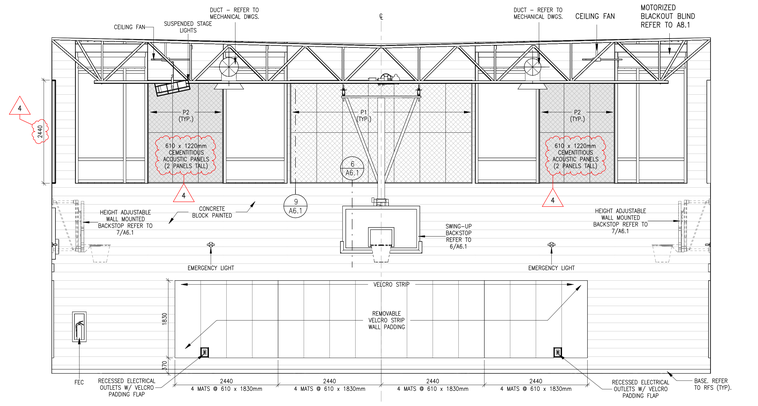
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Plotted By: Jeremy Chumbley
Xrefs: C03 - 8X22X34_vgarrow8X22x34.dwt



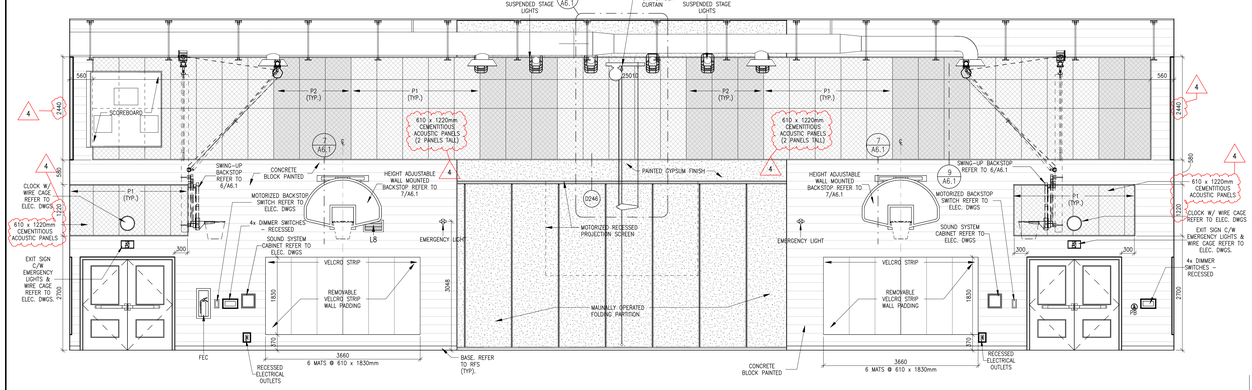
1 A6.1 GYMNASIUM – ENLARGED PLAN
1 : 50



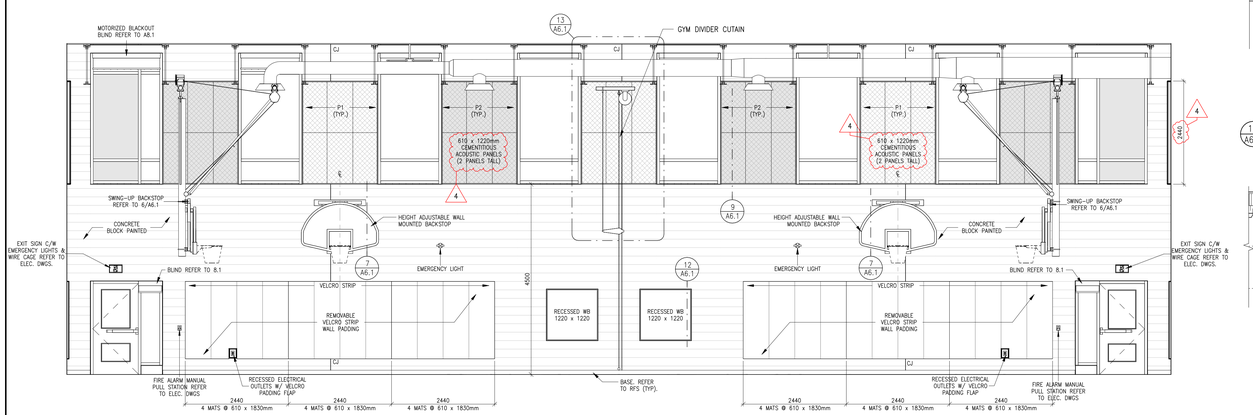
4 A6.1 GYM – W
1 : 50



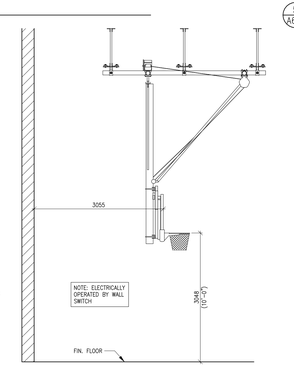
5 A6.1 GYM – E
1 : 50



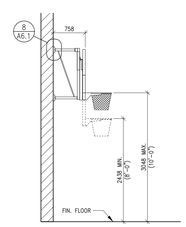
2 A6.1 GYM – N
1 : 50



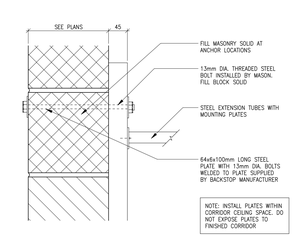
3 A6.1 GYM – S
1 : 50



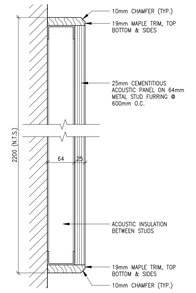
6 A6.1 SWING UP BASKETBALL NET
1 : 50



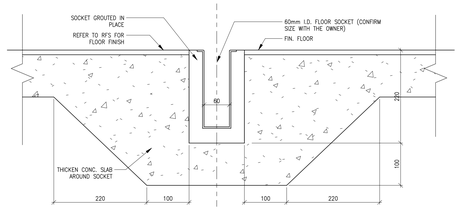
7 A6.1 WALL MOUNTED BACKSTOP
1 : 50



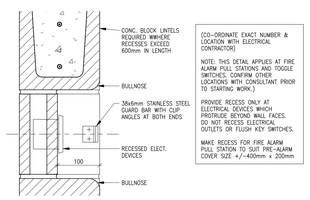
8 A6.1 WALL MOUNTED BACKSTOP DETAIL
1 : 5



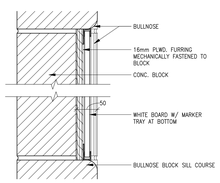
9 A6.1 CEMENTITIOUS ACOUSTIC PANEL
1 : 5



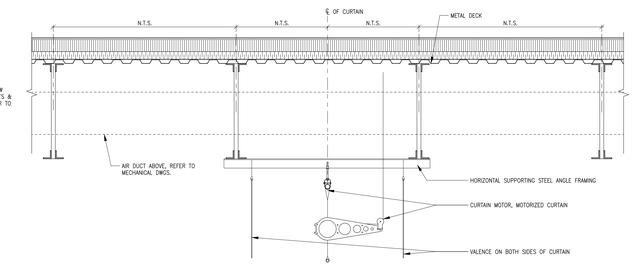
10 A6.1 RECESSED FLOOR SOCKET
1 : 5



11 A6.1 WALL RECESS FOR ELEC DEVICES
1 : 5



12 A6.1 RECESSED WHITEBOARD
1 : 5



13 A6.1 GYM DIVIDER CURTAIN
1 : 20

MAIN COURT BASKETBALL (BLACK)
13.411m x 22.555m (44'0" x 74'0")
– 50mm (2") BLACK COLOUR SOLID LINE

MAIN COURT VOLLEYBALL (GREEN)
9.144m x 18.288m (30'0" x 60'0")
– 50mm (2") GREEN COLOUR SOLID LINE

BADMINTON (YELLOW)
6.096m x 13.411m (20'0" x 44'0")
– 38mm (1 1/2") YELLOW COLOUR SOLID LINE

JUNIOR COURT VOLLEYBALL (ORANGE)
8.00m x 16.00m (26'3" x 52'6")
– 50mm (2") ORANGE COLOUR SOLID LINE

CROSS COURT JUNIOR VOLLEYBALL (BLUE)
8.00m x 13.411m (26'3" x 44'0")
– 50mm (2") BLUE COLOUR SOLID LINE

HIERARCHY OF LINES TO BE:
1. BASKETBALL
2. VOLLEYBALL
3. BADMINTON

GENERAL NOTES

1. REFER TO ELECTRICAL DRAWINGS FOR EXACT LOCATION OF FIRE ALARMS, SPEAKERS AND EXIT SIGNS, ETC.
2. REFER TO MECHANICAL DRAWINGS FOR LOUVERS

MILLWORK NOTES:

1. WHERE BASE CABINETS ARE SET TO ACCOMMODATE SLOPE IN FLOOR, THE DISTANCE BETWEEN BOTTOM OF SUPPORT FRAMING AND FLOOR WHEN GREATER THAN 10MM MUST BE PROVIDED WITH CONTINUOUS WOOD BACKING SUPPORT TO ACCOMMODATE FULL SUPPORT OF CONTINUOUS APPLIED BASE MATERIAL (TYP.)
2. WHERE MILLWORK COUNTERTOPS ABUT MASONRY WALL CONDITIONS OR MILLWORK GABLE CONDITIONS AND HAVE A SINK, PROVIDE SIDESPLASH FOR FULL EXTENT OF COUNTER DEPTH (TYP)
3. MINTAIN INTEGRITY OF FIRE RATING WHERE PLUMBING FIXTURE IS IN RATED WALLS
4. ALL COUNTERTOPS WITH SINKS TO HAVE DRIPLESS COUNTER EDGE
5. AT OPEN ENDED CABINET COUNTERTOPS, EXTEND COUNTER BY 25MM UNLESS DIMENSIONED OTHERWISE
6. MILLWORK CONTRACTOR TO PROVIDE 25MM FILLER TRIM BETWEEN EDGES OF MILLWORK AND FACE OF MASONRY WALL. FINISH TO MATCH ADJACENT MILLWORK. AT CORNER CONDITIONS WHERE CABINET DOORS OPEN PARALLEL TO ADJACENT SURFACES, (E.G. CONC. BLK. WALL & OTHER MILLWORK), PROVIDE ADEQUATE SPACE, (MORE THAN 25MM IF REQUIRED), SO THAT DOOR CAN OPEN TO FULL 90° POSITION WITHOUT INTERFERENCE WITH THOSE SURFACES.
7. PROVIDE FILLER PANELS BETWEEN FACE OF WALL AND ALL MILLWORK CABINET DOORS PROVIDING SUFFICIENT SPACING TO ALLOW DOOR TO FULLY OPEN. FINISH TO MATCH ADJACENT MILLWORK.
8. PROVIDE LOCK'S ON ALL MILLWORK UNITS
9. MILLWORK SHOP DRAWINGS ARE TO SHOW REQUIRED FILLER
10. REFER TO ELECTRICAL DRAWINGS FOR ALL OUTLETS

ABBREVIATION LEGEND

REFER TO SPECIFICATIONS FOR COMPLETE LIST OF ABBREVIATION

ACT	ACOUSTIC CEILING TILE
AFF	ABOVE FINISHED FLOOR
BF	BARRIER-FREE
CJ	CONTROL JOINT
CMU	CONCRETE MASONRY UNIT
CR	COAT RACK
CT	CERAMIC TILE
CW	CURTAIN WALL
CWT	CERAMIC WALL TILE
DS	DIGITAL SIGNAGE
DW	DISH WASHER
EC	EMERGENCY CALL
ECS	EMERGENCY CALL SIGN
EP	ELECTRICAL PANEL
EW	EYE WASH
FCP	FIBREGLASS COMPOSITE PANEL
FG	LOW 'E' GLAZING
FB	FIRE BLANKET
FD	FLOOR DRAIN
F.EX	FIRE EXTINGUISHER
FEC	FIRE EXTINGUISHER CABINET
FS	FLOOR SOCKET
FRO	FROSTED GLASS
GC	GAS COCK (DOUBLE)
GWB	GYPSUM WALL BOARD
HD	HAND DRYER
HS	HORN SPEAKER
LF	LIGHT FIXTURE
M	MIRROR
NIC	NOT IN CONTRACT.
OG	OPERABLE GLAZING
PG	PLATE GLASS
PAP	PREFINISHED ALUMINUM PANEL
PB	PUSH BUTTON (DOOR OPERATOR)
PLAM	PLASTIC LAMINATE
PMS	PREFINISHED METAL SIDING
PTD	PAPER TOWEL DISPENSER
RCH	RECESSED CABINET HEATER
RFS	ROOM FINISH SCHEDULE
RSF	RUBBER SAFETY FLOORING
RWL	RAIN WATER LEADER
SCH	SAFETY COAT HOOK
SG	SAFETY GLASS
SD	SOAP DISPENSER (LIQUID)
SLS	SLOP SINK
SNR	SANITARY NAPKIN RECEPTACLE
SNV	SANITARY NAPKIN VENDOR
SP	SPANDREL PANEL
TB	TACK BOARD
TPD	TOILET PAPER DISPENSER
U/C	UNDER COUNTER
VCT	VINYL COMPOSITE TILE
W	WINDOW
WG	WIRE CAGE
WB	WHITEBOARD (CONFIRM LOCATION WITH OWNER PRIOR TO INSTALATION)

No.	DATE	REVISIONS
4	SEP 24, 2026	ARCHITECTURAL ADD. No. A2
3	SEP 1, 2026	ISSUED FOR TENDER
2	JUN 11, 2026	ISSUED FOR BUILDING PERMIT
1	DEC 23, 2025	ISSUED FOR CLASS B COSTING

KEDRON EAST CATHOLIC ELEMENTARY SCHOOL

1280 BRITANNIA AVE. EAST OSHAWA, ON

DURHAM CATHOLIC DISTRICT SCHOOL BOARD
Learning and Living in Faith

DRAWING
GYMNASIUM – GAME LINE LAYOUT, INTERIOR ELEVATIONS, AND DETAILS

ONTARIO ASSOCIATION OF ARCHITECTS – ROBERT F. FERKUL – LICENCE – 4695

TRUE NORTH | DWG. NORTH

JOB NO. 2402

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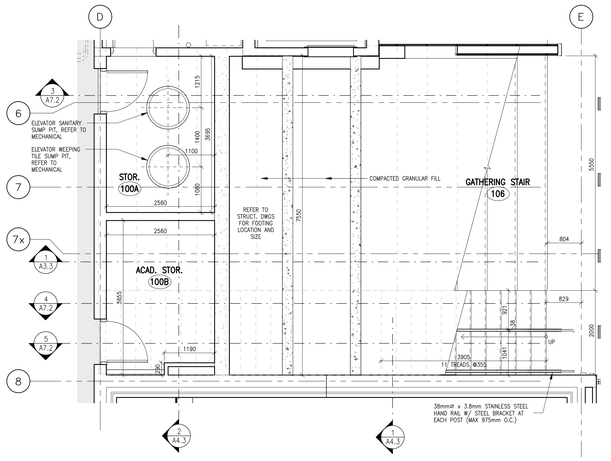
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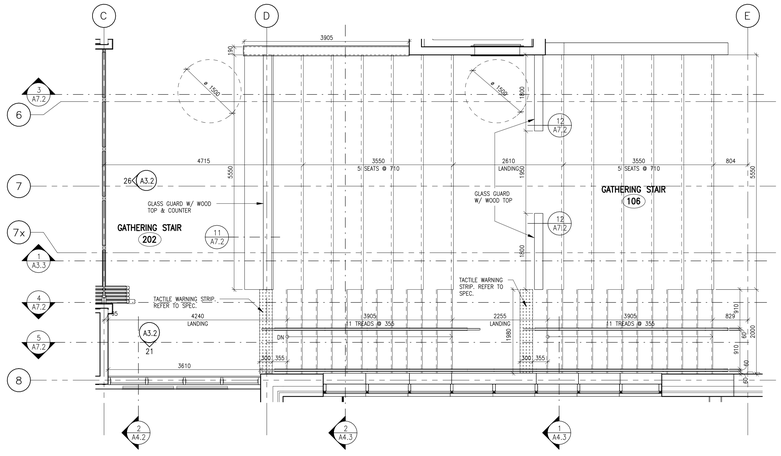
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MOFFETT & DUNCAN architects inc.
5052 DUNDAS STREET WEST
TORONTO, ON M9A 1B9
TEL: (416) 239-2775
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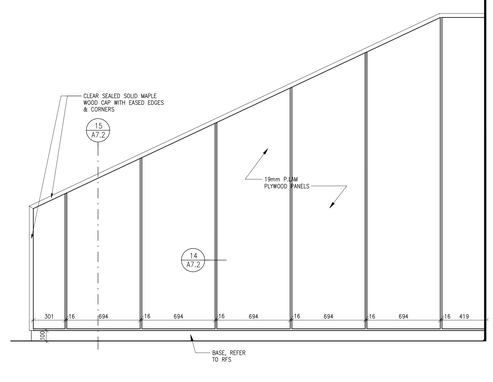
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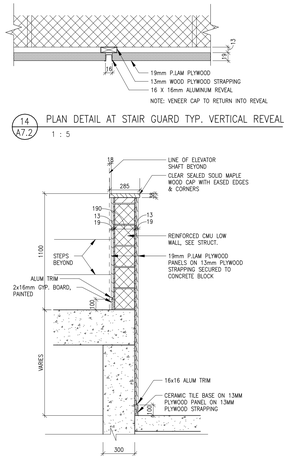
1 A7.2 STAIR F – GROUND FLOOR PLAN
1 : 50



2 A7.2 STAIR F – SECOND FLOOR PLAN
1 : 50

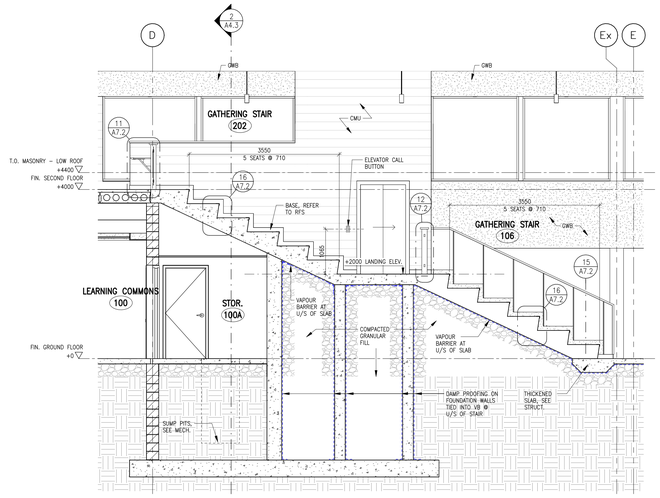


6 A7.2 STAIR F – SIDE ELEVATION
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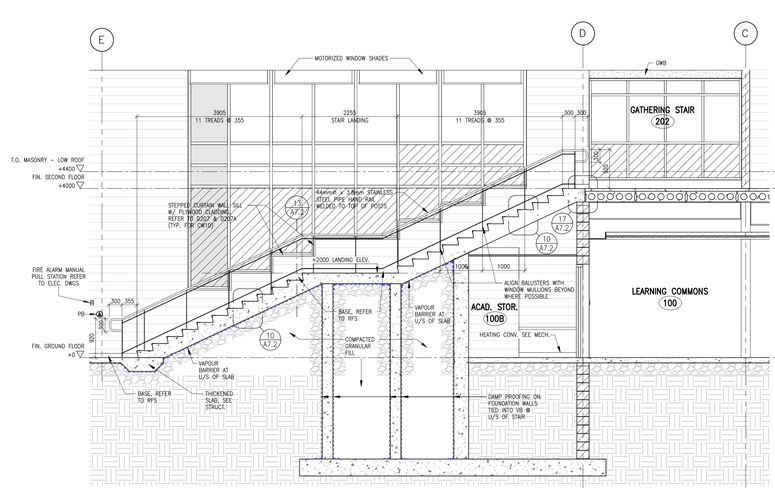


14 A7.2 PLAN DETAIL AT STAIR GUARD TYP. VERTICAL REVEAL
1 : 5

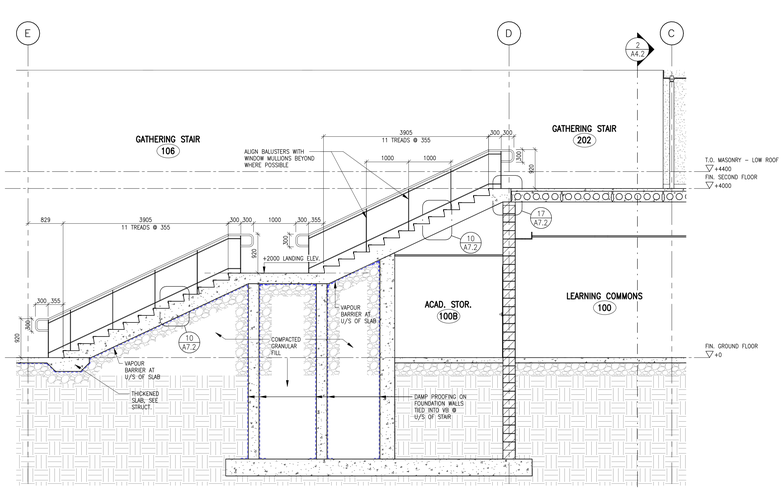
15 A7.2 STAIR GUARD SECTION
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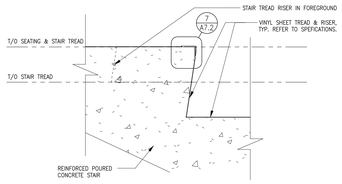
3 A7.2 STAIR F – SECTION THROUGH STAIR AT ELEVATOR
1 : 50



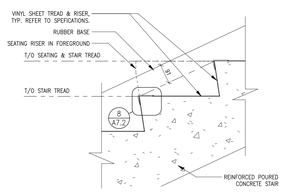
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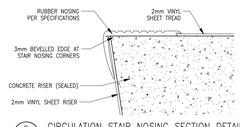
4 A7.2 STAIR F – SECTION THROUGH STAIR AT ELEVATOR
1 : 50



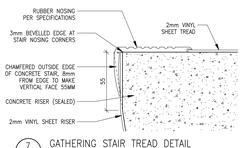
16 A7.2 SEATING RISER / TREAD DETAIL
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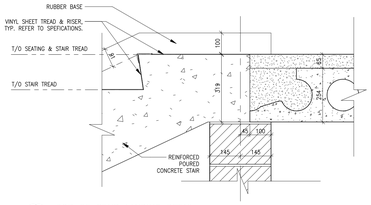
10 A7.2 STAIR RISER / TREAD DETAIL
1 : 10



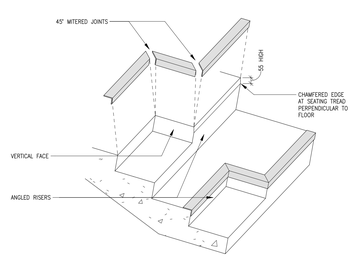
8 A7.2 CIRCULATION STAIR NOSING SECTION DETAIL
1 : 2



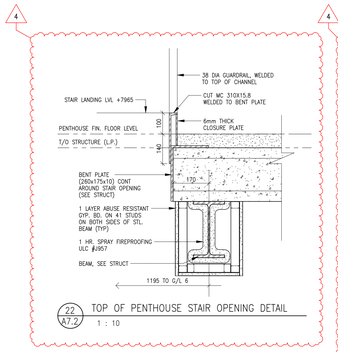
7 A7.2 GATHERING STAIR TREAD DETAIL
1 : 2



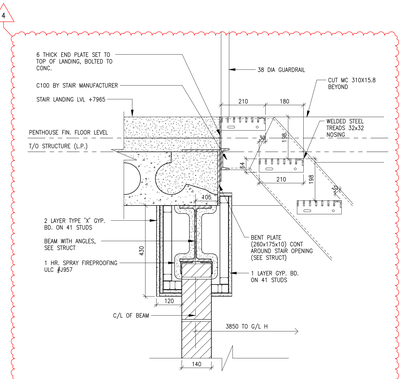
17 A7.2 TOP OF STAIR LANDING DETAIL
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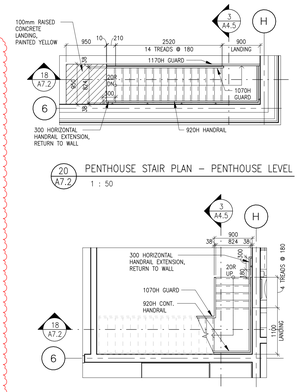
9 A7.2 GATHERING STAIR NOSING EXPLODED VIEW
1 : 20



22 A7.2 TOP OF PENTHOUSE STAIR OPENING DETAIL
1 : 10

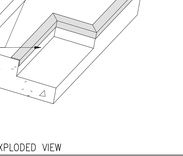


21 A7.2 TOP OF PENTHOUSE STAIR LANDING DETAIL
1 : 10

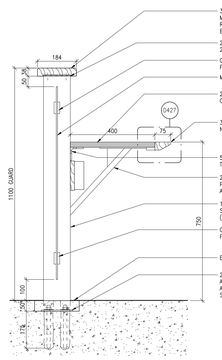


20 A7.2 PENTHOUSE STAIR PLAN – PENTHOUSE LEVEL
1 : 50

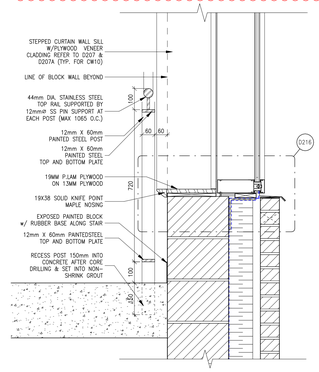
19 A7.2 PENTHOUSE STAIR PLAN – SECOND FLOOR
1 : 50



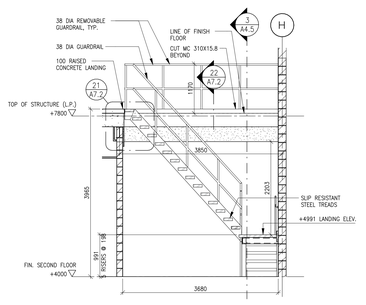
12 A7.2 GLASS GUARD AT GATHERING STAIR
1 : 10



11 A7.2 GLASS GUARD WITH COUNTER AT GATHERING STAIR
1 : 10



13 A7.2 GATHERING STAIR HANDRAIL DETAIL @ GLAZING
1 : 10



18 A7.2 PENTHOUSE STAIR SECTION
1 : 50

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KEDRON EAST CATHOLIC ELEMENTARY SCHOOL

1280 BRITANNIA AVE. EAST OSHAWA, ON

DURHAM CATHOLIC DISTRICT SCHOOL BOARD
Learning and Living in Faith

DRAWING
ENLARGED GATHERING STAIR PLANS AND SECTIONS

ONTARIO ASSOCIATION OF ARCHITECTS — ROBERT F. FERKUL — LICENCE 4695

JOB NO. 2402
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DWG. NO. **A7.2**

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PLOT DATE: Jan 11, 2026 - 10:49 AM

STRUCTURAL ADDENDUM 02

Project No: 25090 **Date:** 2026-09-23

Project: Kedron East Catholic Elementary School

This Addendum forms part of the Contract Documents and amends the original Drawings, Specifications, Schedules and Details.

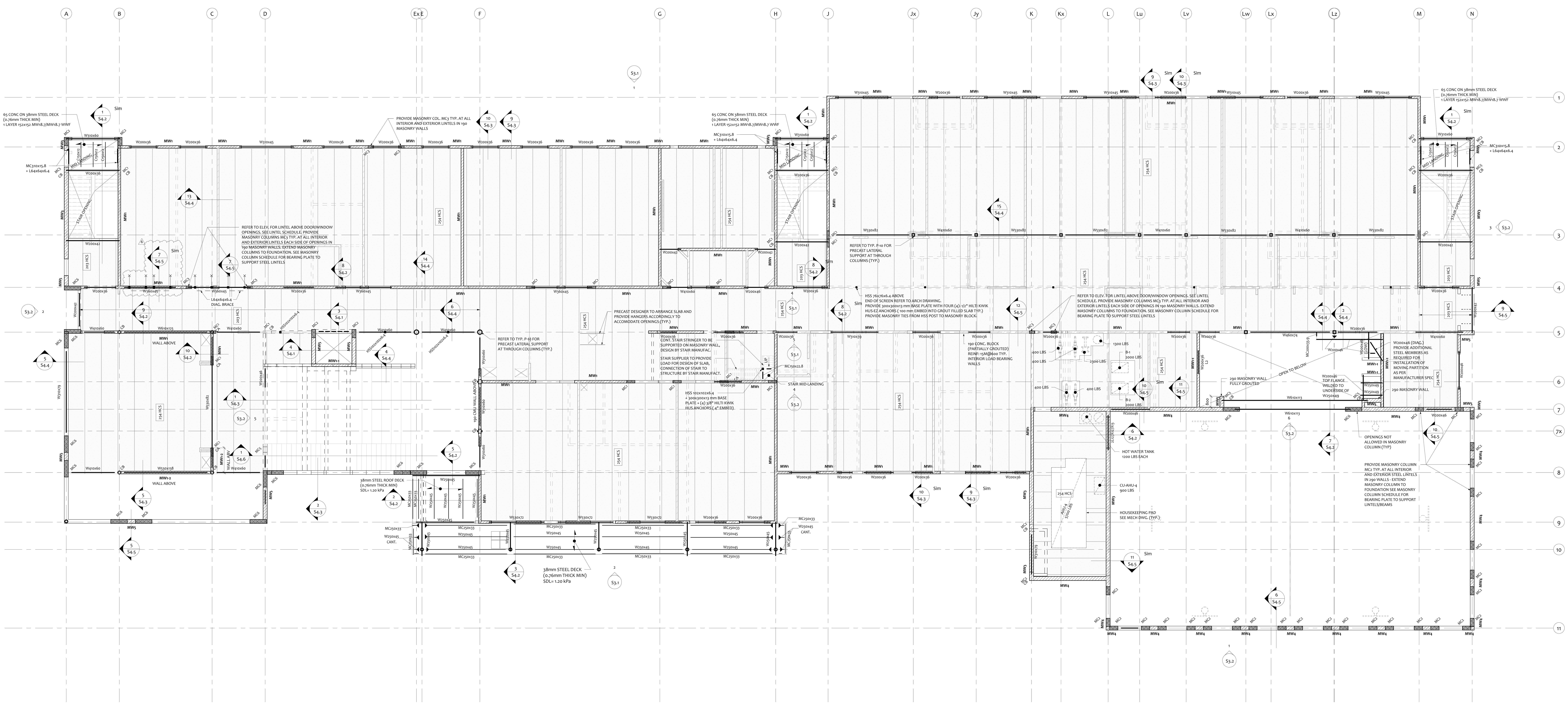
1. Drawings

1.1. Drawing S2.3 & S3.1

1.1.1. Update steel framing to support HM Frame in opening

1.2. Drawing S2.5, S 3.2 & 4.3

1.2.1. Refer to cloud for faux louvre support detail.



SECOND FLOOR FRAMING PLAN

1 : 100

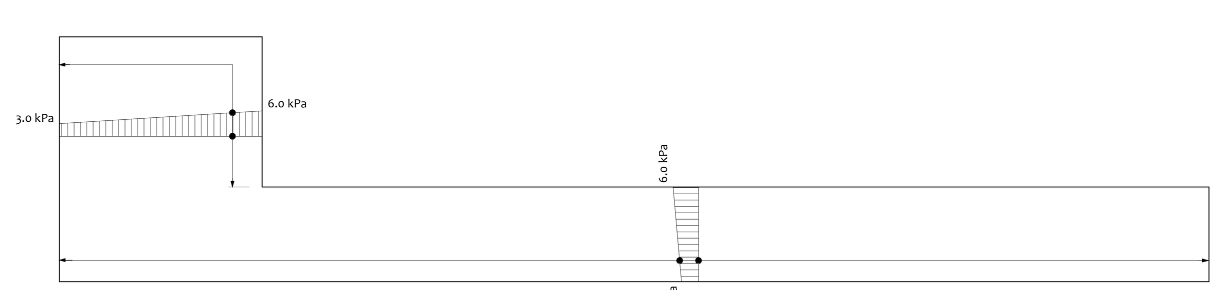
1. TOP OF PRECAST SLABS IS 65mm BELOW FINISHED FLOOR EXCEPT AS CROSSED AND NOTED.
2. TOP OF STEEL BEAMS IS 319mm BELOW FINISHED FLOOR EXCEPT AS OTHERWISE SHOWN ON PLAN OR SECTION.
3. PROVIDE 65mm BONDED CONCRETE TOPPING OVER PRECAST CONCRETE SLABS. SAWCUT TOPPING OVER ABUTTING END JOINTS IN SLABS AND AT 5mc/c MAXIMUM PARALLEL WITH SLAB SPAN. SAWCUTS TO BE 3mm X 25mm DEEP. TOPPING SHALL BE USED AS SUPERIMPOSED LOAD FOR PRECAST SLAB DESIGN. TOPPING SHALL NOT BE USED TO INCREASE PRECAST SLAB CAPACITY.
4. LOADING FOR P.C. SLABS (SPECIFIED LOAD).

-CLASSROOMS: SUPERIMPOSED DEAD LOAD:	PARTITIONS	1.0 kN/m2
	TOPPING	1.56 kN/m2
	MECH. & CEILING	0.5 kN/m2
	LIVE LOAD	2.4 kN/m2
-ASSEMBLY AREAS: SUPERIMPOSED DEAD LOAD: (STAIR - CORRIDOR - RESOURCE CENTRE AND STORAGE AREAS)	TOPPING	1.56 kN/m2
	MECH. & CEILING	0.75 kN/m2
	LIVE LOAD	4.8 kN/m2

-MECHANICAL/BOILER ROOM SUPER IMPOSED DEAD LOAD: TOPPING 1.56 kN/m2
MECH & CEILING 0.75 kPa
PLUS WEIGHT OF HOUSEKEEPING PADS AS SHOWN ON DRAWINGS.
LIVE LOAD: GREATER OF 6.0 kPa OR WEIGHT OF MECHANICAL UNITS AS SHOWN ON DRAWINGS.

FOR ADDITIONAL LOADS REFER TO PLAN.

5. UNLESS NOTED OTHERWISE PROVIDE (MC4) 170 x 12 x 400 BEARING PLATES EACH END OF ALL STEEL BEAMS. ALL BEARING PLATES SHALL BE WITH 2-190 WELDED ANCHORS X 250 LG. WELD BEAMS TO BEARING PLATES.
6. SEE ALSO TYPICAL DETAILS AND GENERAL NOTES.
7. P.C. SUPPLIER SHALL PROVIDE ALL HANGERS REQUIRED TO SUPPORT CUT SLAB ON ADJOINING SLABS. TYPICAL.
8. PROVIDE AT LEAST 2 SOLID OR GROUTED BLOCK COURSES UNDER P.C. SLAB BEARING, ALL BEARING PLATES AND CONCRETE PADS. REFER TO TYPICAL DETAIL SHEET.
9. BLOCK VOIDS WITH REINFORCING OR MASONRY CALLED AS "FILLED SOLID" SHALL BE FILLED SOLID WITH 20MPa CONCRETE WITH PEA GRAVEL ORCOARSE GROUT.
10. ALL MASONRY PARTITIONS SHALL BE CONSTRUCTED ON TOP OF BONDED TOPPING.
11. REFER TO TYP. DETAIL M-011 FOR LINTELS OVER MECHANICAL UNITS IN LOAD BEARING WALLS. REFER TO MECHANICAL DRAWING FOR OPENING LOCATION AND SIZE.
12. MECHANICAL PIPES, CONDUITS AND DUCT PENETRATIONS ARE NOT ALLOWED IN REINF. MASONRY CELLS. ADJUST MECHANICAL SERVICES ACCORDINGLY.
13. PROVIDE MINIMUM 400mm MASONRY BETWEEN TWO DUCT OPENINGS. PIER SHOULD HAVE 2-15M VERTICAL AND BE FILLED SOLID.
14. FLOOR STRUCTURE WAS DESIGNED TO ACCOMODATE REQUIREMENTS OF FIRE RATING ASSEMBLY ULC F906, CUL N782, CUL/ULI N823.
15. PRECAST SLAB SHALL BE DESIGNED TO ACT AS A DIAPHRAGM FOR LATERAL LOADS. PROVIDE POSITIVE FASTENING/CONNECTIONS FROM THE PRECAST SLAB DIAPHRAGM TO EXTERIOR LOAD-BEARING ELEMENTS TO TRANSFER AND RESIST A DESIGN DIAPHRAGM SHEAR OF 12 kN/m.



SNOW DRIFT DIAGRAM - CANOPY

1 : 100



WIND UPLIFT DIAGRAM CANOPY

1 : 100

WIND UPLIFT	
ZONE	DECK (kPa)
CORNER, C	2.75 kPa
EDGES,	1.50 kPa
FIELD, r	1.20 kPa

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No	DATE	REVISIONS
6	2026-09-24	ISSUED FOR STRUCTURAL ADDENDUM #2
5	2026-09-18	ISSUED FOR STRUCTURAL ADDENDUM #1
4	2026-08-31	ISSUED FOR TENDER
3	2026-08-20	ISSUED FOR CITY COMMENTS
2	2026-06-10	ISSUED FOR BUILDING PERMIT
1	2025-12-23	ISSUED FOR CLASS B COSTING

KEDRON EAST CATHOLIC ELEMENTARY SCHOOL

DURHAM CATHOLIC DISTRICT SCHOOL BOARD
Learning and Living in Faith

DRAWING
SECOND FLOOR FRAMING PLAN

REGISTERED PROFESSIONAL ENGINEER
2026.09.24
P. MARCELLO
100159215
PROVINCE OF ONTARIO

TRUE DWG.

JOB NO. 25090

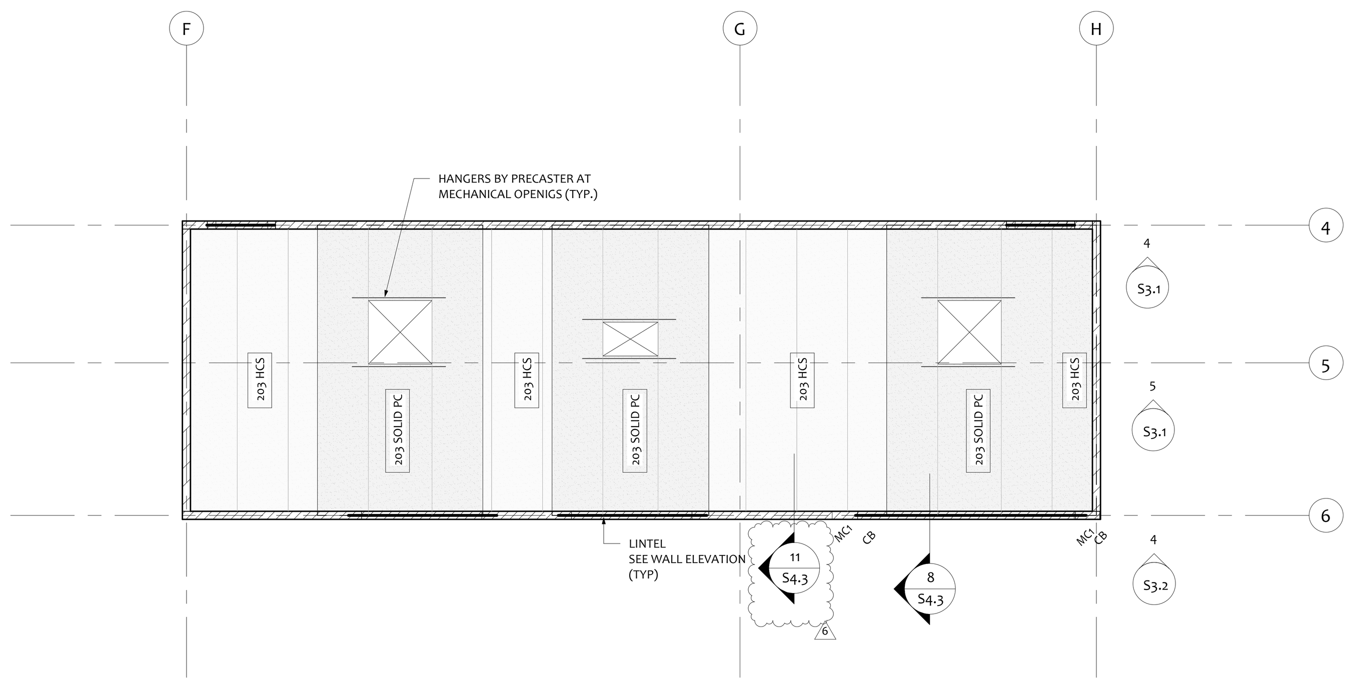
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Address: 7600 HIGHWAY - UNIT 9B, Vaughan, ON L4H 4K9
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Email: info@algisa.ca

DWG. S2.3



PENTHOUSE ROOF FRAMING PLAN

1 : 100

1. FOR ROOF SLOPES AND ELEVATIONS SEE ARCHITECTURAL DRAWIGS. TOP OF STEEL BEAMS IS 250mm BELOW ROOF ELEVATION U/N OTHERWISE.
2. SEE ALSO TYPICAL DETAILS AND GENERAL NOTES ON THESE DRAWINGS.

LOADING:

SUPER IMPOSED DEAD LOAD =3.4 kPa
SNOW LOAD = 2.3 kPa

No	DATE	REVISIONS
6	2026-09-24	ISSUED FOR STRUCTURAL ADDENDUM #2
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KEDRON EAST CATHOLIC ELEMENTARY SCHOOL

DURHAM CATHOLIC DISTRICT SCHOOL BOARD
Learning and Living in Faith

DRAWING
PENTHOUSE ROOF FRAMING PLAN

REGISTERED PROFESSIONAL ENGINEER
2026.09.24
P. MARCELLO
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PROVINCE OF ONTARIO

TRUE DWG.

JOB NO. 25090

SCALE

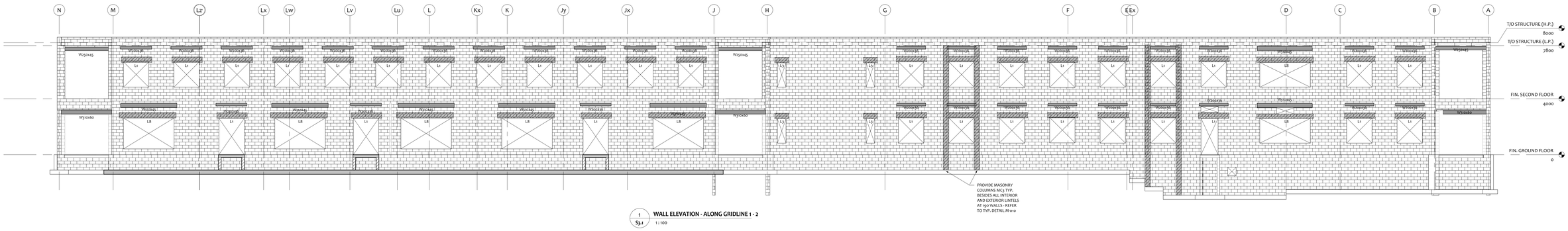
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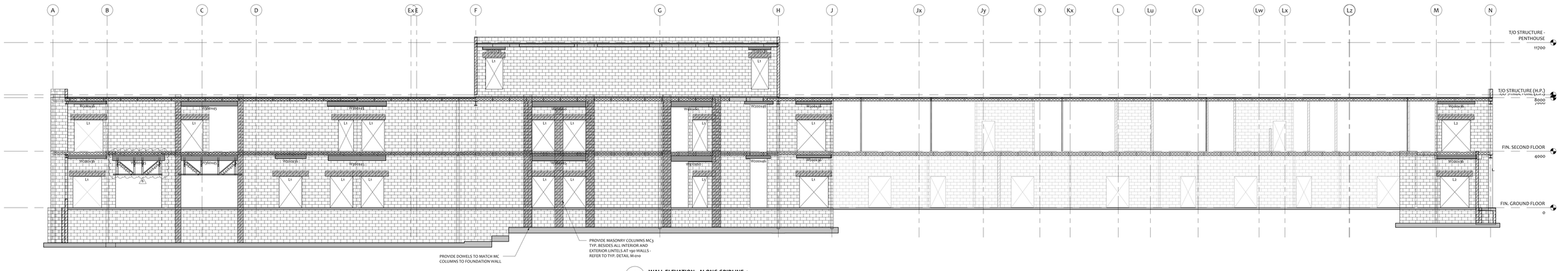
ALGISA CONSULTING LIMITED
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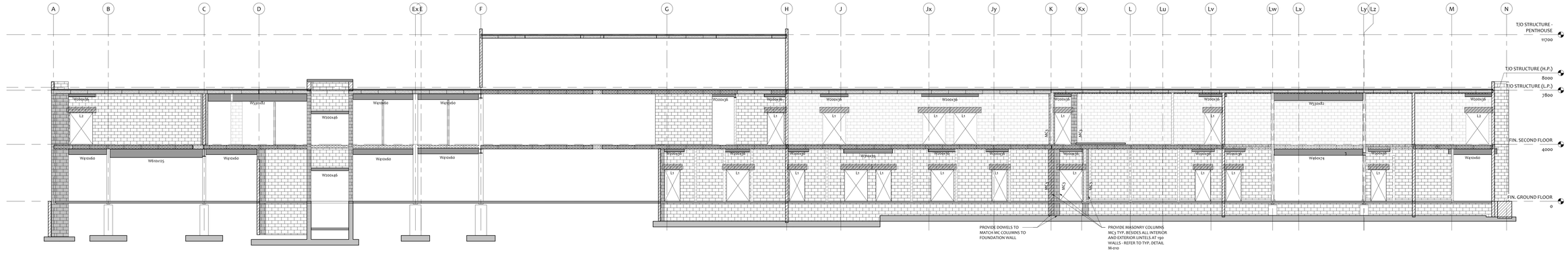
1 S3.1 **WALL ELEVATION - ALONG GRIDLINE 1 - 2**

1 : 100



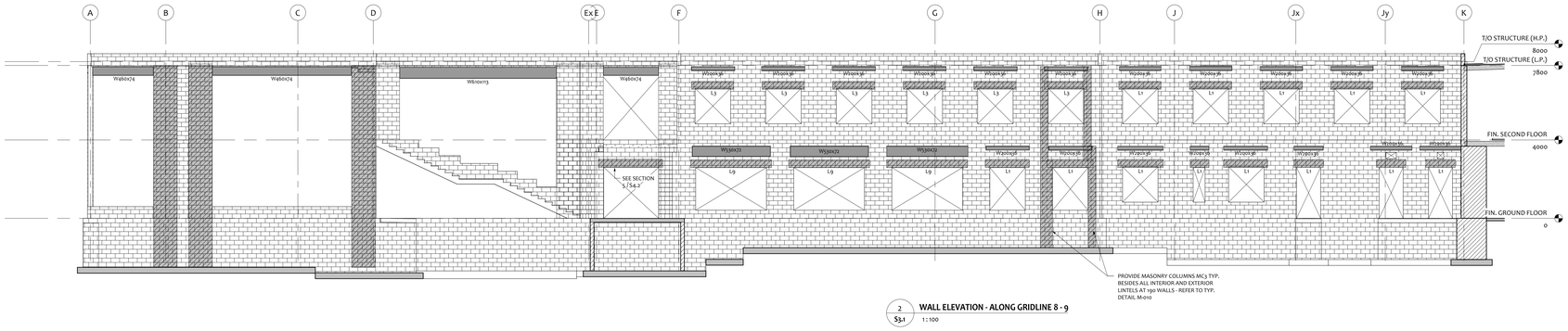
4 S3.1 **WALL ELEVATION - ALONG GRIDLINE 4**

1 : 100



5 S3.1 **WALL ELEVATION - ALONG GRIDLINE 5**

1 : 100



2 S3.1 **WALL ELEVATION - ALONG GRIDLINE 8 - 9**

1 : 100

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6	2026-09-24	ISSUED FOR STRUCTURAL ADDENDUM #2
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KEDRON EAST CATHOLIC ELEMENTARY SCHOOL

DURHAM CATHOLIC DISTRICT SCHOOL BOARD
Learning and Living in Faith

DRAWING

WALL ELEVATIONS

REGISTERED PROFESSIONAL ENGINEER
2026.09.24
P. MARCELLO
100159215
PROVINCE OF ONTARIO

TRUE | DWG.

JOB NO.
25090

SCALE

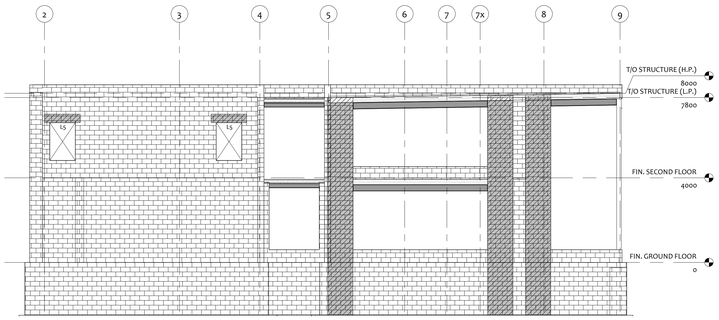
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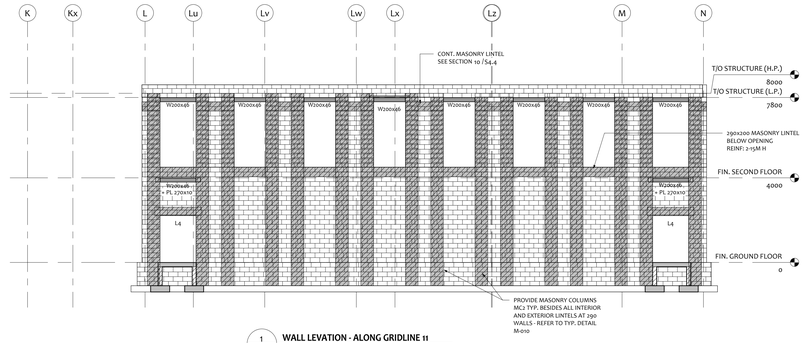
DWG.
S3.1

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Email: info@algisa.ca

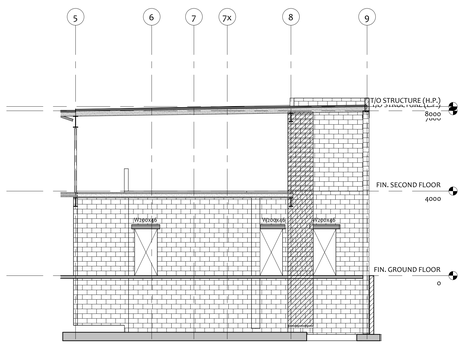
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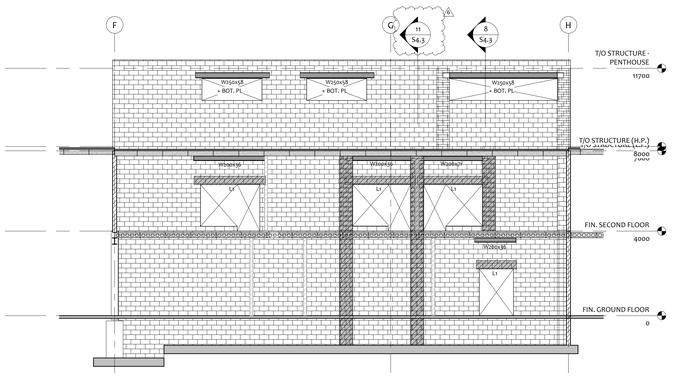
2 WALL ELEVATION - ALONG GRIDLINE A
S3.2 1:100



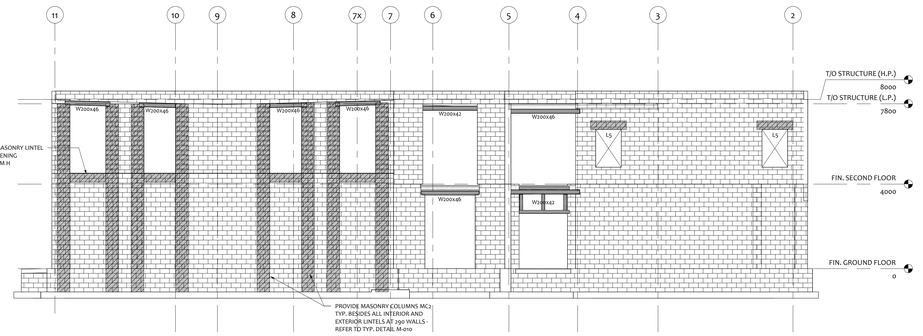
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S3.2 1:100



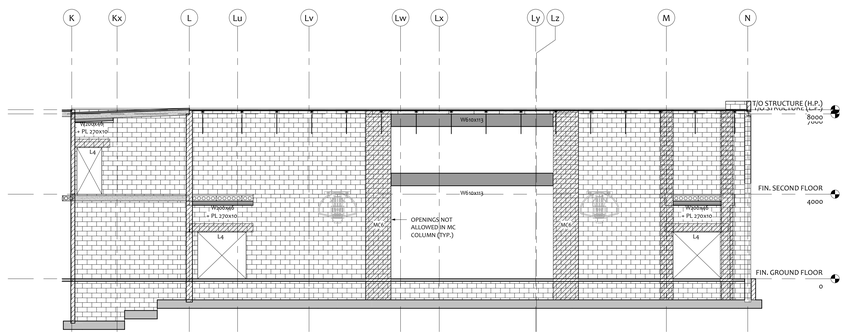
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S3.2 1:100



4 WALL ELEVATION - ALONG GRIDLINE 6
S3.2 1:100



3 WALL ELEVATION - ALONG GRIDLINE N
S3.2 1:100



6 WALL ELEVATION - ALONG GRIDLINE 7
S3.2 1:100

No	DATE	REVISIONS
6	2026-09-24	ISSUED FOR STRUCTURAL ADDENDUM #2
4	2026-08-31	ISSUED FOR TENDER
2	2026-06-10	ISSUED FOR BUILDING PERMIT
1	2025-12-23	ISSUED FOR CLASS B COSTING

KEDRON EAST CATHOLIC ELEMENTARY SCHOOL

DURHAM CATHOLIC DISTRICT SCHOOL BOARD
Learning and Living in Faith

DRAWING

WALL ELEVATIONS

REGISTERED PROFESSIONAL ENGINEER PROVINCE OF ONTARIO
2026.09.24
P. MARCELLO
100159215

TRUE | DWG.

JOB NO.
25090

SCALE

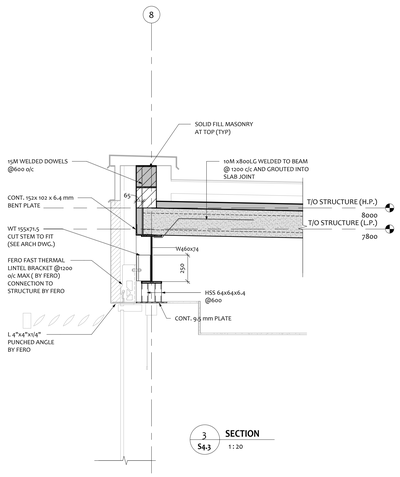
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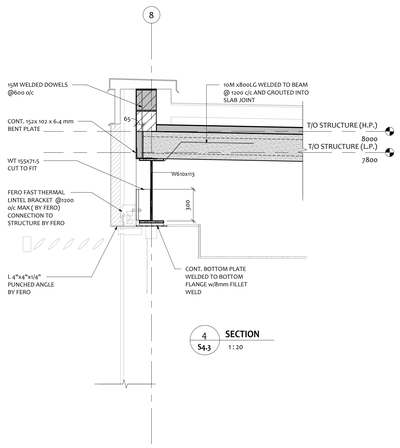
DWG.
S3.2

ALGISA CONSULTING LIMITED
Website: www.algisa.ca
Address: 7600 HUMAN - UNIT 98, Vaughan, ON L4H 4K9
Phone: +1(647) 994-0446
Email: info@algisa.ca

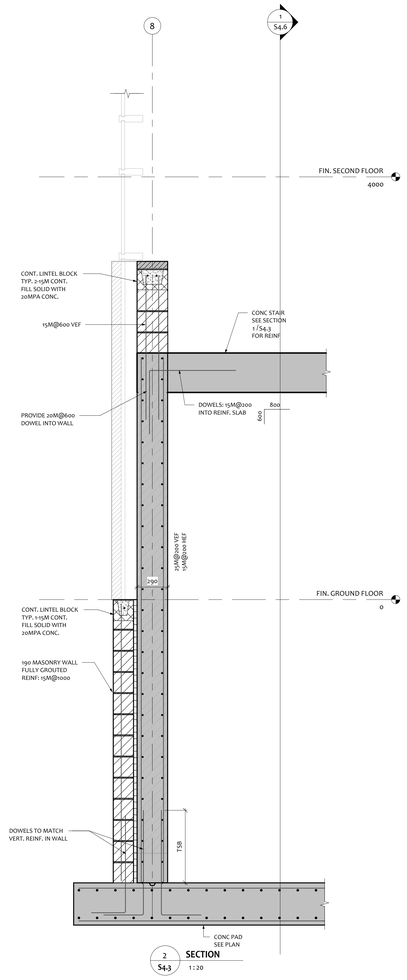
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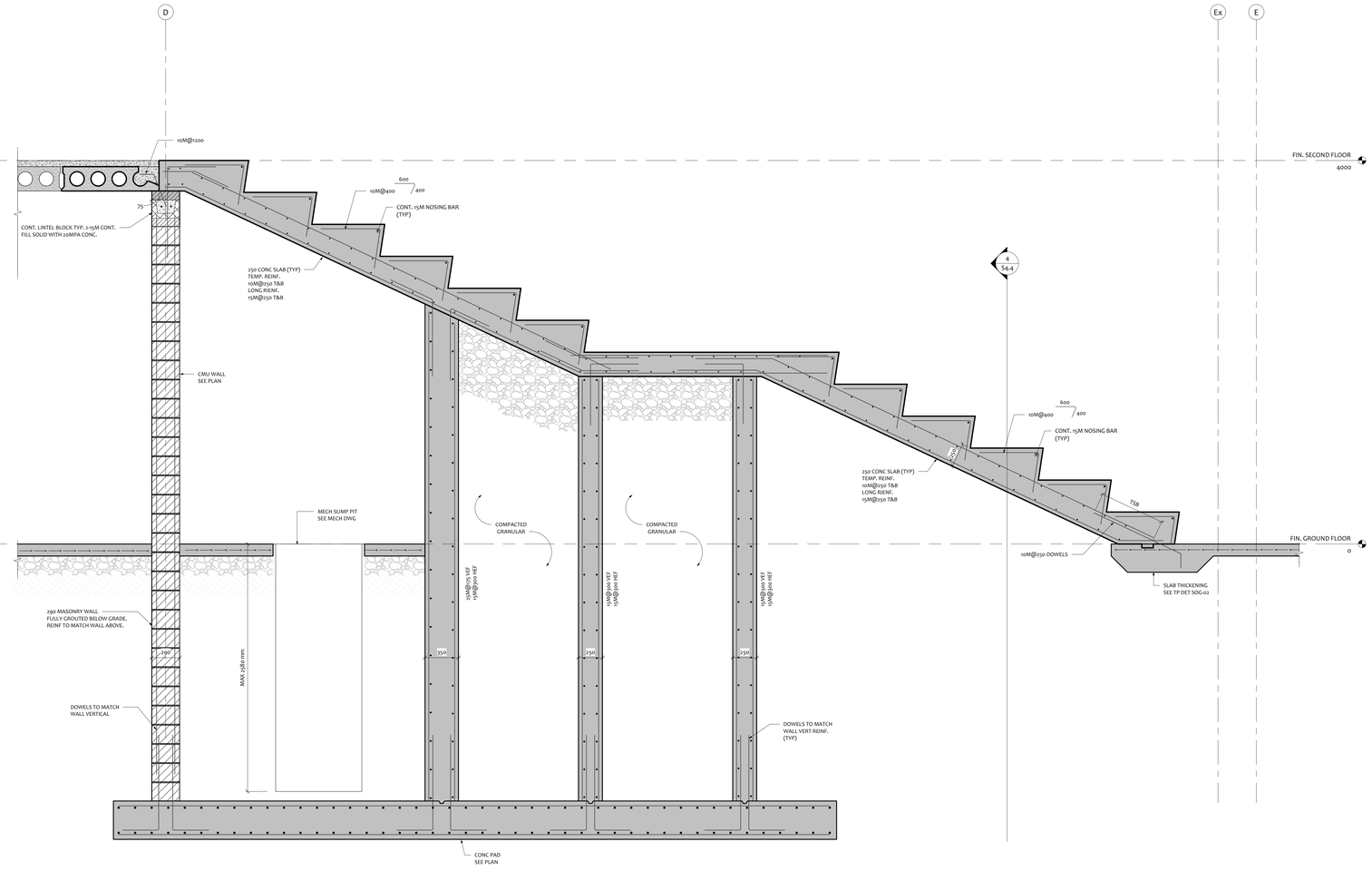
3 / S4-3 **SECTION** 1:20



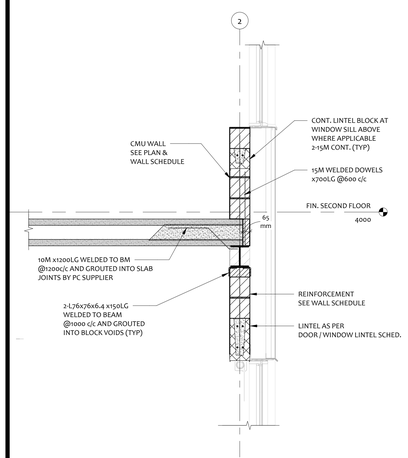
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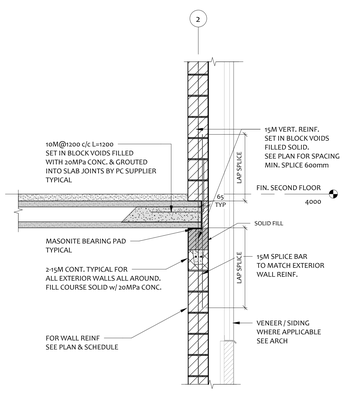
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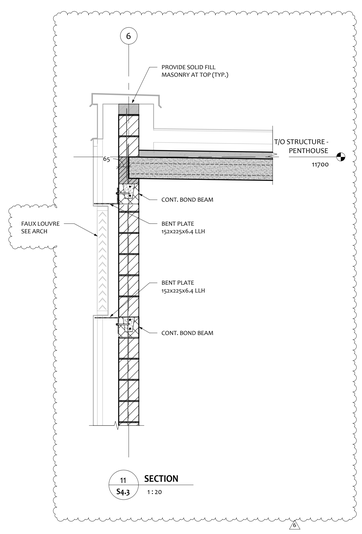
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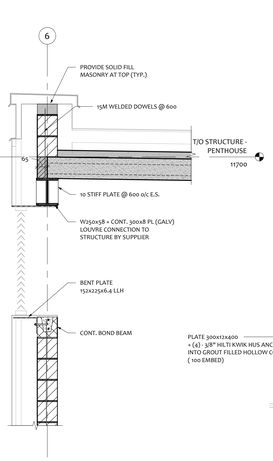
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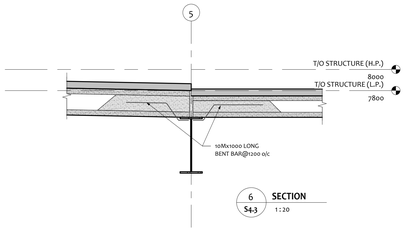
9 / S4-3 **SECTION** 1:20



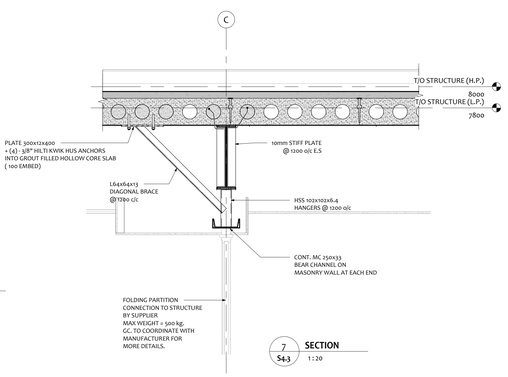
11 / S4-3 **SECTION** 1:20



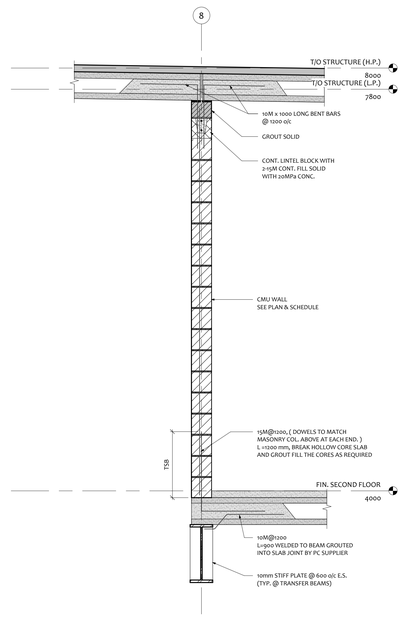
8 / S4-3 **SECTION** 1:20



6 / S4-3 **SECTION** 1:20



7 / S4-3 **SECTION** 1:20



5 / S4-3 **SECTION** 1:20

No	DATE	REVISIONS
5	2026-09-24	ISSUED FOR STRUCTURAL ADDENDUM #2
4	2026-08-31	ISSUED FOR TENDER
2	2026-06-10	ISSUED FOR BUILDING PERMIT

KEDRON EAST CATHOLIC ELEMENTARY SCHOOL

DURHAM CATHOLIC DISTRICT SCHOOL BOARD
Learning and Living in Faith

DRAWING
SECTIONS

REGISTERED PROFESSIONAL ENGINEER — 2026.09.24 — P. MARCELLO 100159215 — PROVINCE OF ONTARIO

TRUE | DWG.

JOB NO.
25090

SCALE

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DWG.
S4.3

ALGISA CONSULTING LIMITED
Website: www.algisa.ca
Address: 7600 HIGHWAY - UNIT 9B, Vaughan, ON L4H 4K9
Phone: +1 (647) 294-6488
Email: info@algisa.ca

DRAWN BY: AJay
FIL...T\25090\Drawings\S4\25090_ACCDB Kedron School_RCH_4Hotel_FTEM.rvt

rybka Ellard Willson
23 Lesmill Rd, Unit 410
North York, ON, Canada M3B 3P6
647.479.3785

The following additions, deletions, amendments and/or items of clarification are hereby made an integral part of the Tender Documents. All revisions shall be made to the drawings and/or specifications and all costs for same shall be included in the Stipulated Price.

CHANGES TO SPECIFICATIONS

Specification Section 23 00 00 Mechanical Supplementary Bid Form

1. Article 1. Manufacturers and Suppliers, revise following items to read as follows:

ITEM	BASE BID BASIS OF DESIGN	ACCEPTABLE ALTERNATE
Hot Water Unit Heaters and Cabinet Heaters	Eng. Air	Dunham-Bush, Trane, Sterling, Sigma, Airtherm, Rosemex
Finned Tube Radiation And Convectors	Eng. Air	Dunham-Bush, Trane, Sterling, Sigma, Slantfin, Rosemex
Radiant Ceiling Panels	Airtex	Frenger, Sigma, Airtite Sunrise Enterprise, Rosemex
Packaged Air Handling Units	Daikin/HTS	Eng. Air, Aaon, Trane, York/Johnson Controls
Heat Pump Air Cooled Condensing Unit	Daikin/HTS	Aaon, Trane, Mitsubishi York/Johnson Controls

CHANGES TO DRAWINGS

Drawing PD1, Rev. #1 (Drawing Issued)

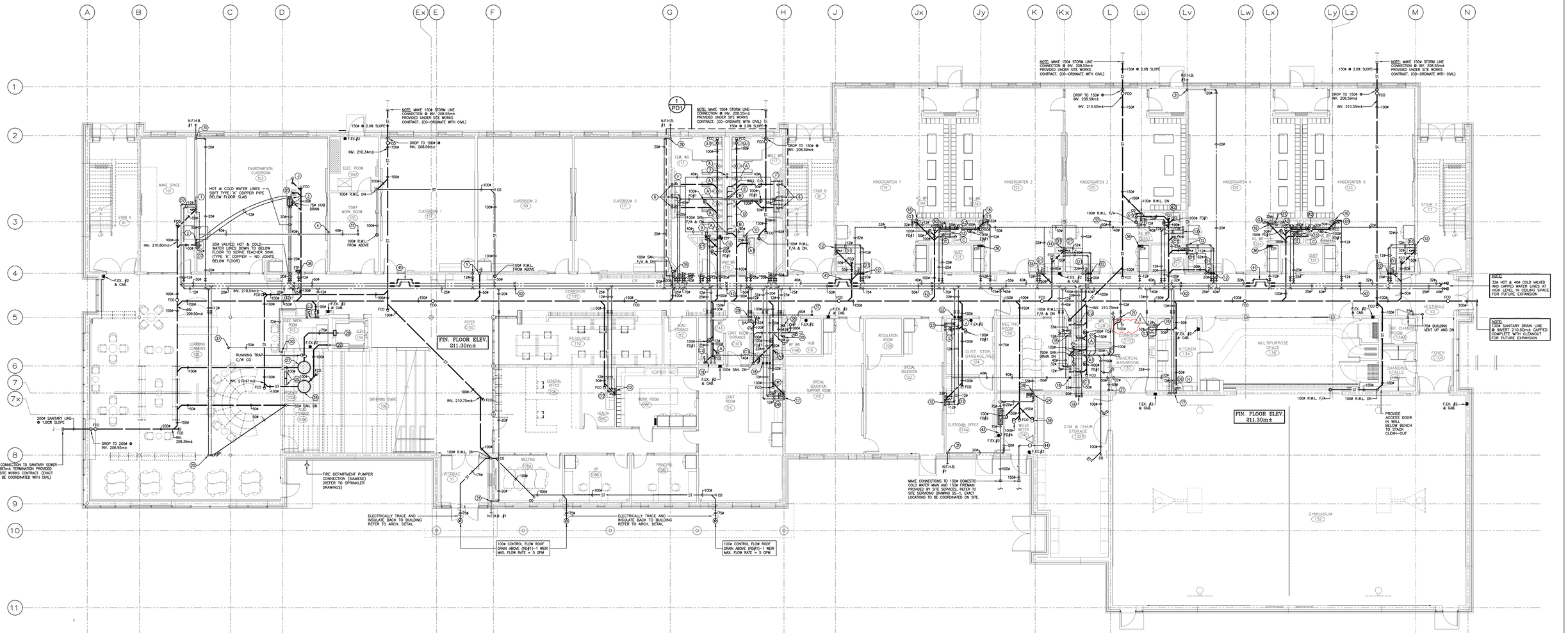
1. Relocated the Mop Sink drain as shown on the drawing.

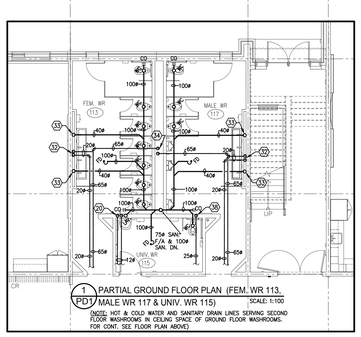
Drawing PD2, Rev. #1 (Drawing Issued)

2. Relocated the Mop Sink in Boiler Room 226 as shown on the drawing.

END OF MECHANICAL ADDENDUM M2

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1 PD1 PARTIAL GROUND FLOOR PLAN (FEM. WR 113, MALE WR 117 & UNIV. WR 115) SCALE 1:100

NOTE: HOT & COLD WATER AND SANITARY DRAIN LINES SERVING SECOND FLOOR WASHROOMS IN CEILING SPACE OF GROUND FLOOR WASHROOMS. FOR CONT. SEE FLOOR PLAN ABOVE)

DRAWING NOTES

1. 12ø VALVED HOT & COLD WATER LINES DN, 40ø SAN. LINE DOWN AND 32ø VENT LINE UP TO SERVE 1–SINK.
2. 12ø VALVED HOT & COLD WATER LINES UP FROM BELOW FLOOR, 40ø SAN. LINE DOWN AND 32ø VENT LINE UP TO SERVE 1–SINK.
3. 20ø VALVED HOT & COLD WATER LINES UP FROM BELOW FLOOR TO TEACHERS BENCH SINK AND EYEWASH AND 12ø HOT & COLD WATER LINES DOWN TO SERVE STUDENT BENCH SINKS REFER TO DETAIL 3/PD3
4. 40ø VENT LINE DN TO SERVE 1–HUB DRAIN, 1–EYEWASH DRAIN & 1–SINK DRAIN (TRAPS BELOW FLOOR).
5. 12ø VALVED COLD WATER LINE UP AND 32ø DRAIN LINE F/A & DN WITH 50ø THRU FLOOR.
6. 20ø VALVED HOT & COLD WATER LINES, 2–40ø DRAIN LINES DN WITH 50ø THRU FLOOR AND 2–32ø VENT LINES UP TO SERVE THROUGH SINK.
7. 75ø VENT LINE UP F/A. 75ø VENT LINE DN TO SERVE 10–WC's, 4–UR's & 2–FD's.
8. 65ø VALVED COLD WATER LINE DOWN TO SERVE 7–W.C's & 1–FD. (FEMALE'S WASHROOM #113) 65ø VALVED COLD WATER LINE DOWN TO SERVE 3–W.C's, 4–UR's & 1–FD. (MALE'S WASHROOM #117)
9. 12ø VALVED HOT & COLD WATER LINES DOWN, 32ø DARIN LINE DN & 32ø VENT LINE UP TO SERVE 1–LAV..
10. 20ø VALVED COLD WATER LINE TO ELECTRONIC TRAP PRIMER MTD. AT HIGH LEVEL IN CEILING SPACE. RUN PRIMER LINE DN IN WALL TO FD's. 20ø VALVED COLD WATER LINE UP TO F/A.
11. 25ø VALVED COLD WATER LINE & 40ø VENT LINE DN. TO SERVE 1–WC AND 1–FD.
12. 12ø VALVED HOT & COLD WATER LINES DOWN, 40ø SAN. DRAIN DN WITH 50ø THRU FLOOR & 32ø VENT LINE UP TO SERVE SINK.
13. 12ø VALVED HOT & COLD WATER LINES DOWN, 40ø VENT LINE DN. TO SERVE 1–WC, 1–LAV. AND 1–FD.
14. 20ø VALVED HOT & COLD WATER LINES DOWN, 40ø SAN. DRAIN DN WITH 50ø THRU FLOOR & 32ø VENT LINE UP TO SERVE 2–SINK's.
15. 20ø VALVED HOT & 25ø VALVED COLD WATER LINES DOWN, 50ø VENT LINE DN. TO SERVE 2–WC's, 2–LAV.'s AND 2–FD's.
16. 12ø VALVED COLD WATER LINE DOWN, 32ø SAN. DRAIN DN AND 50ø THRU FLOOR & 32ø VENT LINE UP TO SERVE DRINKING FOUNTAIN(S).
17. 12ø VALVED HOT & COLD WATER LINES, 40ø SANITARY DRAIN AND 32ø VENT LINE DOWN TO SERVE SINK & DISHWASHER.
18. 12ø HOT & 25ø COLD VALVED WATER LINES DOWN, 40ø VENT LINE DN. TO SERVE 1–WC, 1–LAV. AND 1–FD.
19. 50ø HOT & COLD WATER AND 20ø RECIR. LINES UP.
20. 12ø VALVED HOT & COLD WATER LINES UP.
21. 12ø VALVED COLD WATER LINE UP AND 32ø DRAIN LINE F/A.
22. 12ø VALVED HOT & COLD WATER LINES DN, 32ø SAN. DN AND 32ø VENT LINE UP TO SERVE EYEWASH. (COMPLETE MIXING VALVE BELOW EYEWASH TO SUPPLY BLENDED WATER TO EYEWASH)
23. 12ø VALVED HOT & COLD WATER LINES DN AND 40ø VENT LINE DN. TO SERVE 1–JAN. SINK & 1–FD.
24. 20ø VALVED COLD WATER LINE TO ELECTRONIC TRAP PRIMER MTD. AT HIGH LEVEL IN CEILING SPACE. RUN PRIMER LINE DN IN WALL TO FD's.
25. NOTE: SAN. & STM. SUMP PIT HIGH WATER ALARM PANELS LOCATED IN STORAGE SPACE.
26. 914mmø x 2286mm DEEP ELEVATOR WEEPING TILE SUMP PIT c/w PUMP REFER TO DETAIL 5/PD3 (EXACT LOCATION BY ARCHITECT) (NOTE: SUMP PIT 761mm BELOW ELEVATOR PIT, CONFIRM ELEV. PIT DEPTH WITH ARCHITECT)
27. 914mmø x 2135mm DEEP ELEVATOR SANITARY SUMP PIT c/w PUMP REFER TO DETAIL 6/PD3 (EXACT LOCATION BY ARCHITECT) (NOTE: SUMP PIT 600mm BELOW ELEVATOR PIT, CONFIRM ELEV. PIT DEPTH WITH ARCHITECT)
28. 75ø ELEVATOR SHAFT DRAIN "ZURN" Z-629-UV (PRIME & VENT TO CODE)
29. 100ø WEEPING TILE CONNECTION @ INV. 209.55m±
30. 50ø VENT LINE DN TO RUNNING TRAP AND ELEVATOR SANITARY SUMP PIT. SEE DETAIL 6/PD3.
31. 20ø VALVED COLD WATER LINE DOWN TO SERVE N.F.H.B. #1 MTD. AT 600mm ABOVE FIN. GRADE.
32. 20ø VALVED HOT & COLD WATER LINES UP.
33. 40ø DRAIN LINE F/A.
34. 2–65ø VALVED CW LINE UP
35. 20ø VALVED COLD WATER LINE UP.
36. 12ø VALVED COLD WATER LINE TO ELECTRONIC TRAP PRIMER MTD. AT HIGH LEVEL IN CEILING SPACE. RUN PRIMER LINE DN IN WALL TO FD's.
37. 50ø VENT LINE UP.
38. 25ø VALVED COLD WATER LINE UP.
39. 150ø STANDING WASTE @ 450mm A.F.F. (TRAPPED, VENTED AND PRIMED TO CODE) FOR SPRINKLER SYSTEM DRAIN DOWN.
40. 50ø VENT DOWN TO SERVE 2–FD's AND 1–STANDING WASTE.
41. EXPANSION LOOPS C/W GUIDES INSTALLED ON DOM. HOT WATER AND HOT WATER RECIRC. LINES.
42. ANCHOR POINTS INSTALLED ON DOM. HOT WATER AND HOT WATER RECIRC. LINES.
43. 100ø DOMESTIC COLD WATER LINE UP TO DOMESTIC WATER METER ASSEMBLY. 100ø COLD WATER LINE TO SYSTEM. REFER TO DETAIL1/PD3 NOTE: INSTALL THRUST BLOCK & TIE RODS ON RISER. (TO LOCAL AUTHORITY STANDARDS)
44. 200ø FIRE MAIN TERMINATED WITH CAPPED FLANGE 300mm AFF. COORDINATE EXACT LOCATION WITH THE SPRINKLER CONTRACTOR PRIOR TO INSTALLATION. NOTE: INSTALL THRUST BLOCK & TIE RODS ON RISER. (TO LOCAL AUTHORITY STANDARDS)

No.	DATE	REVISIONS
2	2026–09–23	ISSUED FOR MECHANICAL ADDENDUM M2

No.	DATE	REVISIONS
	2026–09–09	ISSUED FOR BUILDING PERMIT RESUBMISSION
	2026–08–25	ISSUED FOR TENDER
	2026–06–05	ISSUED FOR PERMIT
	2025–12–23	ISSUED FOR CLASS B COST ESTIMATE
	2025–10–06	ISSUED FOR SCR SUBMISSION

KEDRON EAST CATHOLIC ELEMENTARY SCHOOL

DURHAM CATHOLIC DISTRICT SCHOOL BOARD
Learning and Living in Faith

DRAWING
PLUMBING AND DRAINAGE GROND FLOOR PLAN

TRUE NORTH | DWG. NORTH

JOB NO. 2402

SCALE 1:100

PRINTABLE SIZE

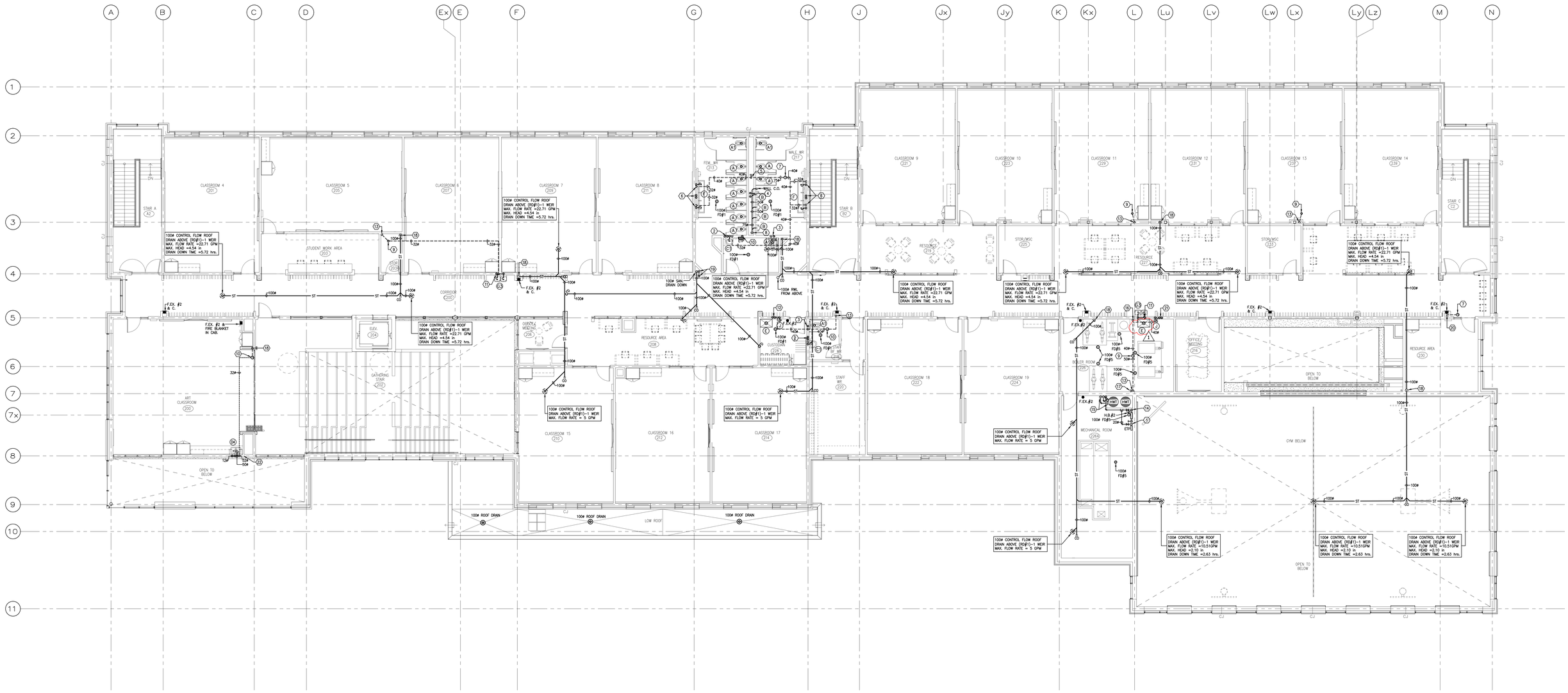
PRINTED 10 06 2025

DWG. NO. **PD1**

rybka Eliard Willson

25046

NOT TO BE PLOTTED

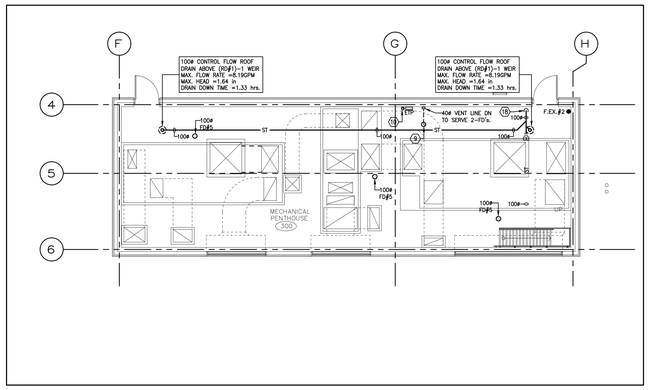


1 PD2 PLUMBING AND DRAINAGE - SECOND FLOOR PLAN

SCALE: 1:100

DRAWING NOTES

1. 20# VALVED COLD WATER LINE DN TO SERVE ELECTRONIC PRIMER SYSTEM. (COORDINATE LOCATION OF PRIMER WITH ALL OTHER TRADES AND EQUIPMENT)
2. 12# VALVED HOT & COLD WATER LINES UP FROM BELOW, 32# DRAIN LINE DN AND 32# VENT LINE UP TO SERVE LAV.
3. 25# VALVED COLD WATER LINE UP FROM BELOW AND 40# VENT LINE DOWN TO SERVE 1-WC & 1-FD.
4. 65# VALVED COLD WATER LINE FROM BELOW TO SERVE 7-WC's. (FEMALE WR - 213). 65# VALVED COLD WATER LINE FROM BELOW TO SERVE 3-#UC's & 4-UR.s (MALE WR - 217)
5. 75# VENT LINE DN FLOOR BELOW. 75# VENT LINE DN TO SERVE 10-W.C's, 4-UR's & 2-FD's.
6. 20# VALVED HOT & COLD WATER LINES UP FROM BELOW, 2-40# SAN LINES DOWN AND 2-32# VENT LINES UP TO SERVE 1-TROUGH SINK.
7. 75# VENT LINE UP AND 100# VENT THROUGH ROOF.
8. 75# SANITARY LINE DOWN.
9. 50# VENT LINE UP AND 100# VENT THROUGH ROOF.
10. 20# VALVED COLD WATER LINE FROM BELOW TO SERVE ELECTRONIC PRIMER SYSTEM AT HIGH LEVEL. RUN WATER LINE DN IN PIPE SPACE/WALL TO FD(S).
11. 12# VALVED COLD WATER LINE UP FROM BELOW, 32# SAN LINE DOWN AND 32# VENT LINE UP TO SERVE DRINKING FOUNTAIN.
12. 12# VALVED HOT & COLD WATER LINES FRONT BELOW, 40# VENT LINE DN. TO SERVE 1-JAN. SINK, 1-EYEWASH & 1-FD. (COMPLETE MIXING VALVE BELOW EYEWASH TO SUPPLY BLENDED WATER TO EYEWASH)
13. 50# VENT LINE DN TO FLOOR BELOW.
14. 12# VALVED COLD WATER LINE TO HOSE BIBB #2 MOUNTED APPROXIMATELY 600mm A.F.F. & 50# VALVED AND CAPPED COLD WATER LINE c/w APPROVED B.F.P. FOR H.V.A.C. PIPE B.F.P. DRAIN TO FLOOR DRAIN. (LOCATE B.F.P. 900mm A.F.F. AND SUPPORT FROM WALL)
15. DOMESTIC WATER HEATERS TYPE 'A' 50# HOT & COLD AND 25# RECIRC. WATER LINES UP FROM BELOW TO DOMESTIC HOT WATER TANKS - SEE DETAIL 9/PD3
16. 40# VENT LINE DN TO SERVE 4-FD's.
17. 40# VENT LINE DN TO SERVE 3-FD's.
18. 100# RWL DOWN
19. 20# VALVED COLD WATER LINE FROM BELOW, OFFSET AND UP
20. 75# VENT LINE DN TO FLOOR BELOW.
21. 12# VALVED HOT & COLD WATER LINES FROM BELOW, 40# VENT LINE DN. TO SERVE 1-JAN. SINK & 1-EYEWASH. (COMPLETE MIXING VALVE BELOW EYEWASH TO SUPPLY BLENDED WATER TO EYEWASH)
22. 12# VALVED HOT & COLD WATER LINES FROM BELOW, 50# SAN LINE DOWN AND 32# VENT LINE UP TO SERVE 1-DOUBLE BOWL SINK.



2 PD2 PLUMBING AND DRAINAGE - MECHANICAL PENHOUSE PLAN

SCALE: 1:100

No.	DATE	REVISIONS
1	2026-09-23	ISSUED FOR MECHANICAL ADDENDUM #2

No.	DATE	REVISIONS
	2026-09-09	ISSUED FOR BUILDING PERMIT RESUBMISSION
	2026-08-25	ISSUED FOR TENDER
	2026-06-05	ISSUED FOR PERMIT
	2025-12-23	ISSUED FOR CLASS B COST ESTIMATE
	2025-10-06	ISSUED FOR 50% SUBMISSION

KEDRON EAST CATHOLIC ELEMENTARY SCHOOL

DURHAM CATHOLIC DISTRICT SCHOOL BOARD
Learning and Living in Faith

DRAWING

PLUMBING AND DRAINAGE SECOND FLOOR PLAN

TRUE NORTH | DWG. NORTH

JOB NO. 2402

SCALE 1:100

PRINTABLE SIZE

PRINTED 10 06 2025

DWG. NO. **PD2**

rybka Eliard Willson

25046

PLOT DATE:

KEDRON EAST CES
Electrical Addendum No. E2
Project No. 2402
Page 1
Sept. 21, 2026

rybka Ellard Willson
23 Lesmill Rd, Unit 410
North York, ON, Canada M3B 3P6
647.479.3785

The following additions, deletions, amendments and/or items of clarification are hereby made an integral part of the Tender Documents. All revisions shall be made to the drawings and/or specifications and all costs for same shall be included in the Stipulated Price.

CHANGES TO SPECIFICATIONS

1. **Section 26 09 70, Integrated Audio-Video Systems and Equipment For Classrooms**
- Replace this section in its entirety. See section attached.

2. **Section 26 09 71, Digital Signage Audio Video Communications**
- Replace this section in its entirety. See section attached.

3. **Section 26 09 72, Paging System**
- Replace this section in its entirety. See section attached.

For the following system.
1. Integrated audio-video systems and equipment for classrooms
2. Digital signage audio video communications
3. Paging system

Contactors shall contact the board approved Compugen for pricing.
Contact Info.: Dan Po dpo@compugen.com and Dylan Rodriguez drodriguez@compugen.com

CHANGES TO DRAWINGS

1. **Drawing E3 (Drawing issued)**

1.1 Different system symbols are added and revised in certain areas as shown in attached revised drawing.
1.2 Detail #3/E3 is revised as shown in attached revised drawing.

2. **Drawing E5 & E7 (Drawings issued)**

2.1 Speaker types and locations are revised in certain areas as shown in attached revised drawings.

3. **Drawing E6 & E8 (Drawings issued)**

3.1 Device types are revised at classroom control panels and in certain areas as shown on attached revised drawings.
3.2 Hub room #116 equipment revised to new requirement as shown on attached revised drawing.

4. **Drawing E9 (Drawing issued)**

4.1 Speakers and data drops are added in certain areas as shown on attached revised drawing.

END OF ELECTRICAL ADDENDUM E2

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LEGEND OF SYMBOLS

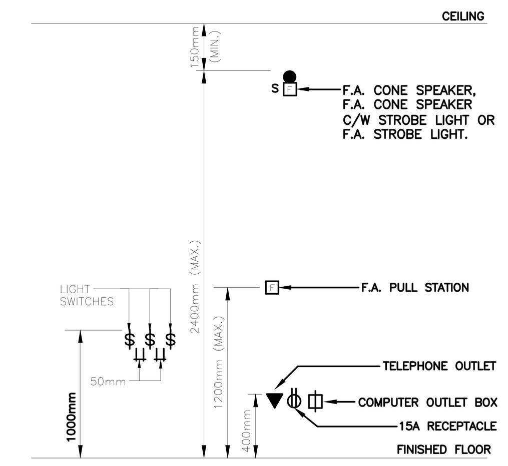
Symbol	Description
	RECESSED OR SURFACE MOUNTED LED FIXTURE
	LED STRIP LIGHT SURFACE MOUNTED.
	LED LIGHT FIXTURE WALL OR CEILING MOUNTED
	EMERGENCY BATTERY UNIT C/W ASSOCIATED RECEPTACLE & HEAD(S) AS SHOWN
	REMOTE EMERGENCY LIGHTING HEAD(S) (CONNECT TO EMERGENCY BATTERY UNIT)
	EXIT SIGN WALL OR CEILING MOUNTED – ARROW DENOTES DIRECTION OF TRAVEL
$ WP 3	120 VOLT LIGHTING TOGGLE SWITCH – 3 DENOTES THREE WAY. WP DENOTES WEATHER PROOF. (SWITCHES SHALL BE GANGED TOGETHER)
$ P	120 VOLT HORSEPOWER RATED SWITCH C/W PILOT LIGHT, SUPPLIED AND INSTALLED BY ELECTRICAL DIV.
D	120V DIMMER (SIZED TO SUIT LIGHTING LOAD)
MW U W H	15A, 120V DUPLEX RECEPTACLE. (W–WASHER, MW–FOR SHELF MOUNTED MICROWAVE, H–FOR TAMPER–RESISTANT, U–USB HUBBELL #USB15AC5WWR)
GFI	15A, 120V GROUND FAULT INTERRUPTER DUPLEX RECEPTACLE (HUBBEL #GF5262)
C	15A, 120V DUPLEX RECEPTACLE MOUNTED IN CEILING SPACE.
20A	20A, 120V DUPLEX RECEPTACLE
	15A, 120V QUAD RECEPTACLE (H–FOR CHILDPROOF)
H	15A, 120V DUPLEX RECEPTACLE CONTROLLED BY OCCUPANCY SENSOR THROUGH RECEPTACLE RATED SWITCHPACK/ROOM CONTROLLER. HUBBELL CAT.#BR15C2GRY. H–FOR TAMPER–RESISTANT. REFER TO DETAIL #1/DWG.E3
WP GFI	15A, 120V WEATHERPROOF GFI TYPE DUPLEX RECEPTACLE C/W "IN–USE" ALUMINUM COVER (LOCK TYPE)
GFI	15A, 120V GROUND FAULT INTERRUPTER DUPLEX RECEPTACLE (HUBBEL #GF5262) MOUNTED ABOVE COUNTER (150mm ABOVE BACK SPLASH).
H	15A, 120V DUPLEX RECEPTACLE MOUNTED ABOVE COUNTER (H–DENOTES CHILDPROOF)
	15A, 120V SPLIT WIRED DUPLEX RECEPTACLE MOUNTED ABOVE COUNTER (2 CIRCUITS C/W 3#12 FEEDER)
T	15A, 120V DUPLEX RECEPTACLE LOCATED IN TOE SPACE
	15/20A, 120V, 1ø COMBINATION DUPLEX RECEPTACLE ("NEMA" 5–20R 125V, 2POLE, 3 WIRE, GROUNDED)
20A	20A, 250V, 3ø SINGLE RECEPTACLE.
WP GFI	15/20A, 120V, 1ø WEATHERPROOF GFI TYPE RECEPTACLE COMPLETE WITH ALUMINUM LIFT "IN–USE" COVER (SIMILAR TO HUBBEL CAT.#WP26M)
	15A, 120V DUPLEX RECEPTACLE COMPLETE WITH USB CHARGER (HUBBELL #USB15X2W)
D	30A, 250V, 1PH SINGLE RECEPTACLE (FEEDER 3#8–25mmC) D–DENOTES FOR DRYER
	50A, 250V, 3W RANGE RECEPTACLE (FEEDER 3#6–25mmC)
	120V OUTLET FOR HOOD (CONNECT TO UNIT)
DW	OUTLET FOR DISHWASHER (FEEDER 3#10–25mmC) CONNECT TO UNIT
	JUNCTION BOX COMPLETE WITH 15A, 120V CIRCUIT MOUNTED IN CEILING SPACE
	SPECIAL OUTLET (SIZE AND EQUIPMENT AS NOTED, CONNNECT TO EQUIPMENT)
B	15A, 120V OUTLET FOR BRADLY UNIT (CONNECT TO UNIT)
C MD	15A, 120V OUTLET FOR C – CONTROLS; MD – MOTORIZED DAMPER (CONNECT TO EQUIPMENT)
FSD	15A, 120V OUTLET FOR FSD – FIRE/SMOKE DAMPER (CONNECT TO EQUIPMENT)
PT	OUTLET FOR PIPE TRACING (CONNECT TO TERMINAL BLOCK)
HD	HAND DRYER C/W 2#10 FEEDER (CONNECT TO UNIT)
S P FAX EM	WALL MOUNTED TELEPHONE SYSTEM OUTLET BOX C/W 19mm CONDUIT TERMINATED IN CORRIDOR CABLE TRAY. PROVIDE COVER PLATE, JACK AND WIRING. P–DENOTES PUBLIC PHONE. FAX–DENOTES FAX MACHINE. EM–DENOTES EMERGENCY PHONE. S–DENOTES SYMPHONY CLASSROOM PHONE.
W S M	WALL MOUNTED SOUND SYSTEM JACK OUTLET (M – DENOTES MICROPHONE, S – DENOTES SPEAKER, W – DENOTES COMPLETE WITH WIREGUARD)
TV	OUTLET BOX FOR T.V. (RUN 19mm CONDUIT AND TERMINATE IN CORRIDOR CABLE TRAY).
(0)	WALL MOUNTED COMPUTER OUTLET BOX COMPLETE WITH ASSOCIATED 19mmC TERMINATED IN ACCESSIBLE CEILING SPACE AND BLANK COVER PLATE. NO WIRING AND JACK REQUIRED. TERMINATION OF CONDUITS IN EXPOSED OR DRY WALL CEILING AREAS IS NOT ACCEPTABLE.
	WALL MOUNTED COMPUTER SYSTEM OUTLET BOX (FOR SINGLE JACK COMPUTER OUTLET) C/W 19mmC TERMINATED IN CORRIDOR CABLE TRAY. (REFER TO COMPUTER SYSTEM RISER DIAGRAM).
(2)	WALL MOUNTED COMPUTER SYSTEM OUTLET BOX (FOR DOUBLE JACK COMPUTER OUTLET) C/W 19mmC TERMINATED IN CORRIDOR CABLE TRAY. (REFER TO COMPUTER SYSTEM RISER DIAGRAM).
C	SINGLE JACK COMPUTER OUTLET MOUNTED IN CEILING SPACE FOR WIRELESS ACCESS POINT. PROVIDE COMPUTER CABLE (WITH 7500mm SLACK COILED IN CEILING SPACE) COMPLETE WITH JACK ON ONE END AND CONNECT THE OTHER END TO ASSOCIATED PATCH PANEL. NO OUTLET BOX IS REQUIRED. COORDINATE EXACT LOCATION WITH ARCHITECT AND ON SITE.
C P	TWO CELL RACEWAY (ONE CELL FOR POWER AND ONE CELL FOR DATA) C/W RECEPTACLES AND DATA OUTLET BOXES. RUN EMPTY CONDUIT FOR DATA SYSTEM AND TERMINATE IN CORRIDOR CABLE TRAY. FOR SIZE OF CONDUIT REFER TO COMPUTER SYSTEM EMPTY CONDUIT RISER DIAGRAM. FOR LOCATION AND QUANTITY REFER TO FLOOR PLANS.
(1,V)	WALL MOUNTED COMPUTER/V.O.I.P. SYSTEM OUTLET COMPLETE WITH DUPLEX JACK COVER PLATE. RUN ASSOCIATED CONDUIT AND TERMINATED IN CORRIDOR CABLE TRAY. TERMINATION OF CONDUITS IN EXPOSED OR DRY WALL CEILING AREAS IS NOT ACCEPTABLE.
AV1	FLUSH WALL MOUNTED AUDIO–VIDEO (AV) OUTLET (MTD. ABOVE WHITEBOARD, SEE DETAIL 7/E3). PROVIDE FLUSH WALL MOUNTED 4"x4"x4" BACK BOX C/W 41mm CONDUIT TERMINATED IN ASSOCIATED ROOM ACCESSIBLE CEILING SPACE (TERMINATION OF CONDUIT ABOVE GYPSUM BOARD CEILINGS OR IN EXPOSED CEILING AREAS IS NOT ACCEPTABLE),
AV2	FLUSH WALL MOUNTED AUDIO–VIDEO (AV) OUTLET (400mm A.F.F. TO TOP OF OUTLET BOX). PROVIDE FLUSH WALL MOUNTED 4"x4"x4" BACK BOX C/W 41mm CONDUIT TERMINATED IN ASSOCIATED ROOM ACCESSIBLE CEILING SPACE (TERMINATION OF CONDUIT ABOVE GYPSUM BOARD CEILINGS OR IN EXPOSED CEILING AREAS IS NOT ACCEPTABLE),
P	FLUSH FLOOR MOUNTED OUTLET C/W 15A, 120V RECEPTACLE
	UNIT HEATER C/W BUILT–IN THERMOSTAT
	ELECTRIC MOTOR (WIRING & EQUIPMENT AS NOTED)
	EMERGENCY PUSHBUTTON (RED MUSHROOM TYPE WITH LARGE BUTTON)
EXP RT WP	DISCONNECT SWITCH (WP DENOTES WEATHERPROOF, RT DENOTES RAINTIGHT, EXP DENOTES EXPLOSION PROOF)
T	TEN MINUTE TIMER (SUPPLIED AND INSTALLED BY ELECTRICAL DIV.)
P	MANUAL MOTOR STARTER (P – DENOTES PILOT LIGHT, SUPPLIED BY MECHANICAL DIV., INSTALLED BY ELECTRICAL DIV.). PROVIDE DISCONNECT SWITCH AHEAD OF MANUAL MOTOR STARTER.
SC	SPEED CONTROLLER FOR CEILING FAN (SUPPLIED BY MECHANICAL DIV., INSTALLED BY ELECTRICAL DIV.)
P	MAGNETIC MOTOR STARTER (P – DENOTES PILOT LIGHT, SUPPLIED BY MECHANICAL DIV., INSTALLED BY ELECTRICAL DIV.). PROVIDE DISCONNECT SWITCH AHEAD OF MANUAL MOTOR STARTER.
	FUSED COMBINATION MAGNETIC MOTOR STARTER (SUPPLIED BY MECHANICAL DIV., INSTALLED BY ELECTRICAL DIV.)
TS	TIMESWITCH
C	H.O.A. CONTACTOR C/W PILOT LIGHT
T	LINE VOLTAGE THERMOSTAT (SUPPLIED BY MECHANICAL DIV. AND INSTALLED BY ELECTRICAL DIV.)
	FLUSH WALL MOUNTED OUTLET BOX COMPLETE WITH C/W 21MMEC TERMINATED IN ACCESSIBLE CEILING SPACE (TERMINATION OF CONDUIT IN EXPOSED OR DRYWALL CEILING AREAS IS NOT ACCEPTABLE) FOR TEMPERATURE SENSOR (TEMPERATURE SENSOR AND WIRING BY CONTROLS DIVISION)
P	OUTLET FOR HANDICAPPED PUSH BUTTON
	SURFACE OR FLUSH MOUNTED ELECTRICAL PANELS
	DISTRIBUTION PANEL OR SPLITTER TROUGH
	CONDUIT RUN CONCEALED IN WALL & CEILING ETC.
	CONDUIT RUN IN OR UNDER FLOOR SLAB OR GRADE
F WP	FIRE ALARM MANUAL PULL STATION – WP DENOTES WEATHERPROOF
S F W	FLUSH MOUNTED FIRE ALARM CONE SPEAKER. (W DENOTES C/W WIREGUARD, S DENOTES C/W STROBE LIGHT)
S W	FIRE ALARM SMOKE DETECTOR (W DENOTES C/W WIREGUARD)
H W	FIRE ALARM HEAT DETECTOR (W DENOTES C/W WIREGUARD)
DSD WP	FIRE ALARM DUCT SMOKE DETECTOR MOUNTED IN SUPPLY DUCT AND/OR DUCT C/W PILOT LIGHT AND ALL ASSOCIATED COMPONENTS (WP–DENOTES COMPLETE WITH HEATER AND WEATHER PROOF ENCLOSURE)
	FIRE ALARM SUPERVISORY VALVE
	FIRE ALARM SPRINKLER FLOW SWITCH
B WP	WEATHERPROOF P.A. SYSTEM PROGRAM BELL. PROVIDE OUTLET BOX, 19mm CONDUIT TERMINATED IN CORRIDOR CABLE TRAY, WIRING AND ALL ASSOCIATED COMPONENTS (REFER TO P.A. SYSTEM RISER DIAGRAM).
H WP	P.A. HORN. PROVIDE OUTLET BOX, 19mm CONDUIT TERMINATED IN CORRIDOR CABLE TRAY, WIRING AND ALL ASSOCIATED COMPONENTS (REFER TO P.A. SYSTEM RISER DIAGRAM)
A	WALL MOUNTED P.A. OUTLET C/W BOX, 19mm C TERMINATED IN CORRIDOR CABLE TRAY FOR ADMINISTRATION (MASTER) HANDSET (SYMPHONY COMMAND CENTER)) PROVIDE COVER PLATE, JACK, WIRING AND HANDSET. REFER TO P.A. SYSTEM RISER DIAGRAM.
(0) A	WALL MOUNTED OUTLET BOX FOR FUTURE ADMINISTRATION P.A. SYSTEM HANDSET. PROVIDE 19mm EMPTY CONDUIT TERMINATED IN CABLE TRAY AND BLANK COVER PLATE. (REFER TO P.A. SYSTEM RISER DIAGRAM).
	P.A. DOOR BELL PUSH BUTTON C/W 19mm CONDUIT TERMINATED IN CORRIDOR CABLE TRAY
DH	OUTLET FOR DOOR HOLD OPEN DEVICE
DC	SECURITY SYSTEM DOOR CONTACT C/W 21mmEC TERMINATED IN CORRIDOR CABLE TRAY.
	REMOTE SECURITY SYSTEM KEY PAD C/W 21mmEC TERMINATED IN CORRIDOR CABLE TRAY.
MD	DUAL SENSING SECURITY SYSTEM MOTION DETECTOR C/W 21mmEC TERMINATED IN CORRIDOR CABLE TRAY.
MG	CEILING MOUNTED 360° SECURITY SYSTEM MOTION DETECTOR C/W 21mmEC TERMINATED IN CORRIDOR CABLE TRAY.
OS	OCCUPANCY SENSOR.
MC	OUTLET FOR MOMENTARY CONTACT
ES	ELECTRIC STRIKE C/W 21mmEC TERMINATED IN ACCESSIBLE CEILING SPACE.
W	CLOCK (SEE SPECIFICATION). W – DENOTES COMPLETE WITH WIREGUARD. PROVIDE RECESSED DUPLEX RECEPTACLE FOR CLOCK, HUBBELL CAT. #RR1510W. CONNECT TO SAME CIRCUIT ON RECEPTACLE BELOW OR AS SHOWN ON DWG.
S	REMOTE SECURITY ALARM HORN C/W 21mmEC TERMINATED IN ACCESSIBLE CEILING SPACE.
CP	CONTROL PANEL (REFER TO DETAIL #3, THIS DRAWING)
JB	JUNCTION OR PULL BOX
R	RELAY
ezE	ez ROOM VOICE AND ALERT OUTLET COMPLETE WITH 27mmC TERMINATED IN ACCESSIBLE CEILING SPACE. SUSPENDED LIGHTWEIGHT CEILING PLATE BY DIV.26. PROVIDE INDEPENDENT SUPPORT OF CEILING PLATE BY DIV.26 (TYPICAL FOR 4 AT EACH CORNER OF PLATE).
AA	ZipControl Audio and Alert 2G OUTLET COMPLETE WITH 27mmEC TERMINATED IN ACCESSIBLE CEILING SPACE
IPS	SYMPHONIC SOLO IP SPEAKER KIT 2G OUTLET COMPLETE WITH 27mmEC TERMINATED IN ACCESSIBLE CEILING SPACE
A	ZipControl Alert 1G OUTLET COMPLETE WITH 27mmEC TERMINATED IN ACCESSIBLE CEILING SPACE
H	WALL MOUNTED 25/70V P.A. HORN C/W BACK BOX, 19mm CONDUIT TERMINATED IN CORRIDOR CABLE TRAY, P.A. SYSTEM WIRING AND ALL ASSOCIATED COMPONENTS (REFER TO P.A. SYSTEM RISER DIAGRAM).
S	FLUSH CEILING MOUNTED 25/70V P.A. SPEAKER C/W BACK BOX, 19mm CONDUIT TERMINATED IN CORRIDOR CABLE TRAY, SPEAKER, WIRING AND ALL ASSOCIATED COMPONENTS (REFER TO P.A. SYSTEM RISER DIAGRAM).
S	WALL MOUNTED 25/70V P.A. SPEAKER C/W BACK BOX, 19mm CONDUIT TERMINATED IN CORRIDOR CABLE TRAY, P.A. SYSTEM WIRING AND ALL ASSOCIATED COMPONENTS (REFER TO P.A. SYSTEM RISER DIAGRAM).
S	FLUSH CEILING MOUNTED 8 OHM P.A. SPEAKER C/W BACK BOX, 19mm CONDUIT TERMINATED IN CORRIDOR CABLE TRAY, SPEAKER, WIRING AND ALL ASSOCIATED COMPONENTS (REFER TO P.A. SYSTEM RISER DIAGRAM).
SM10	FLUSH MOUNTED NETWORK AUDIO DECODER C/W BACK BOX, 27mm CONDUIT TERMINATED IN CORRIDOR CABLE TRAY, WIRING AND ALL ASSOCIATED COMPONENTS (REFER TO P.A. SYSTEM RISER DIAGRAM).
SM10 A	FLUSH MOUNTED ADMIN STATION C/W BACK BOX, 41mm CONDUIT TERMINATED IN CORRIDOR CABLE TRAY, SPEAKER, WIRING AND ALL ASSOCIATED COMPONENTS (REFER TO P.A. SYSTEM RISER DIAGRAM).
	WALL MOUNTED STROBE LIGHTS (FOR INCOMMING CALL & SPEAKER) COMPLETE WITH JUNCTION BOXES, WIRINGS, TRIM PLATES, WIREGUARDS AND 21mmC TERMINATED IN ACCESSIBLE CORRIDOR CABLE TRAY MOUNTED AT 2400MM AFF. CONNECT STROBE LIGHTS IN PA SYSTEM. PROVIDE ALL ASSOCIATED REQUIREMENTS/INSTALLATION WITH MANUFACTURER. PROVIDE LAMICOIDE LABEL.
	OUTLET BOX FOR REMOTE DIMMING CONSOLE (RUN 21mm CONDUIT COMPLETE WITH PULL STRING TO ASSOCIATED DIMMING RACK)
ST	SYMPHONIC TEMPO IP SPEAKER CLOCK
SV	SYMPHONIC VISTA IP PANEL
VS	VOLUME CONTROL CEILING SPEAKER 70V
P	SYMPHONY CLASSROOM PHONE

GENERAL NOTES:

1. FOR EXACT LOCATION OF LIGHTING FIXTURES REFER TO ARCH. DRAWINGS
2. FOR EXACT LOCATION OF ALL A/C UNITS, PUMPS, MOTORS, HEATERS, ETC.., SEE MECHANICAL DRAWINGS.
3. ALL RECEPTACLES LOCATED FURTHER THAN 100FT FROM THE CORRESPONDING LIGHTING PANELS SHALL BE WIRED WITH #10 AWG AND ALL RECEPTACLES LOCATED FURTHER THAN 200FT FROM THE CORRESPONDING LIGHTING PANELS SHALL BE WIRED WITH #8 AWG.
4. EXACT LOCATION FOR ALL RECEPTACLES SHALL BE DETERMINED BY THE ARCHITECT PRIOR TO ROUGHING–IN.
5. CO–ORDINATE ALL WORK WITH MECHANICAL CONTRACTOR.
6. STARTERS FOR FANS SHALL BE LOCATED ADJACENT TO CORRESPONDING LIGHTING PANELS UNLESS OTHERWISE SHOWN.
7. ELECTRICAL CONTRACTOR SHALL CO–ORDINATE THEIR WORK TO SUIT THE PROJECT PHASE SCHEDULE.
8. ALL ELECTRICAL EQUIPMENT IN GYM SHALL BE FLUSH MOUNTED IN RECESSED SPACE AND C/W WIRE GUARD.
9. OPENING IN LAB FURNITURE FOR ELECTRICAL EQUIPMENT SHALL BE BY FURNITURE SUPPLIER.
10. ALL DUPLEX RECEPTACLES, F.A. PULL STATIONS AND SWITCHES SHALL BE FLUSH MOUNTED EXCEPT IN MECHANICAL ROOMS WHERE SURFACE MOUNTED INSTALLATION IS ACCEPTABLE.
11. LIGHTING FIXTURES LOCATED IN STORAGE ROOMS, ELECTRICAL AND MECHANICAL ROOMS SHALL BE C/W WIRE GUARD.
12. ALL SLEEVES SHALL BE FILLED WITH FIRE STOP CAULKING AFTER ALL WIRES HAVE BEEN PULLED. COORDINATE WITH ALL TRADES AND ON SITE.
13. FOR DRYWALL CEILING, JUNCTION BOXES/CONDUITS SHALL BE TERMINATED IN ACCESSIBLE CEILING SPACE. TERMINATION OF JUNCTION BOXES/CONDUITS IN DRYWALL CEILINGS AREAS ARE NOT ACCEPTABLE.
14. PROVIDE BLANK COVER PLATE (STAINLESS STEEL) FOR ALL UNUSED OUTLET BOX.
15. ALL LOW VOLTAGE CABLES SHALL BE FT6 RATED.
16. INCLUDE IN CONTRACT COMPLETING OF ALL ELECTRICAL COMMISSIONING FORMS PROVIDED BY COMMISSIONING CONSULTANT i.e. EMERGENCY LIGHTING TEST, INFRA RED SURVEY, INSULATION TEST, INSULATION TEST, PHASE BALANCE, SOUND LEVELS TEST, DISCONNECT SWITCH, DISTRIBUTION PANEL, TRANSFORMER, OCCUPANCY SENSORS, CONTACTORS, PANELS, ETC. COORDINATE ALL WORK WITH COMMISSIONING CONSULTANT AND DCDSB.

ELECTRICAL EQUIPMENT MOUNTING HEIGHTS (HANDICAP ACCESSIBLE AREAS)

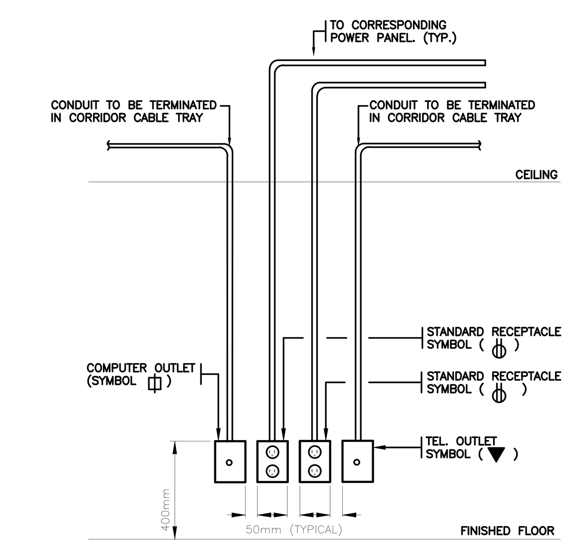
1. ELECTRICAL OUTLETS AND TELEPHONE OUTLETS: 400mm A.F.F. TO TOP OF OUTLET.
2. WALL MOUNTED LIGHT SWITCHES: 1000mm A.F.F. TO TOP OF SWITCHES
3. TEMPERATURE "SENSING" DEVICES: 1500mm A.F.F. TO MIDDLE OF OUTLET BOX NOTE: IF FUNCTIONING THERMOSTAT CONTROL: 1200mm A.F.F. TO MIDDLE OF BOX
4. WALL MOUNTED PAYPHONE: 1200mm A.F.F. TO TOP OF OUTLET.
5. FIRE ALARM PULL STATIONS: 1200mm A.F.F. TO THE MIDDLE OF OUTLET.
6. WALL MOUNTED P/A SPEAKER BOXES: 2200mm A.F.F. TO BOTTOM OF BOX .
7. ELECTRICAL PANELS: 1980mm A.F.F. TO TOP OF PANEL.
8. FIRE ALARM SPEAKERS, SPEAKER/STROBES: 2400mm AFF TO TOP OF OUTLET BOX.
9. COORDINATE ALL MOUNTING HEIGHTS WITH ARCHITECT/OWNER PRIOR TO ANY ROUGH–IN.



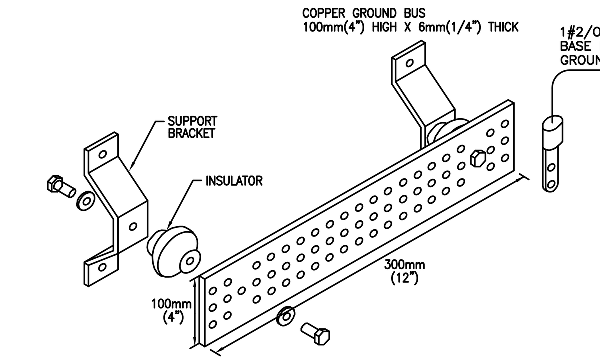
NOTES :

1. IN AREAS WHERE CEILING IS ABOVE 2600mm, ELECTRICAL CONTRACTOR SHALL DO THE FOLLOWING:
   – FIRE ALARM AUDIBLE DEVICES SHALL BE INSTALLED SO THAT THE TOP OF THE DEVICE WILL NOT BE LESS THAN 2300mm AFF. AND NOT MORE THAN 2400mm.
   – FIRE ALARM VISUAL DEVICES SHALL BE INSTALLED SUCH THAT THE ENTIRE LENS IS NOT LESS THAN 2000mm AND NOT MORE THAN 2400mm AFF.
2. IF THERE ARE MORE THAN ONE WIRING DEVICE AT THE SAME LOCATION, THEY SHALL BE MOUNTED VERTICALLY AS SHOWN.

1/E3 TYPICAL INSTALLATION OF ELECTRICAL DEVICES
SCALE: N.T.S.



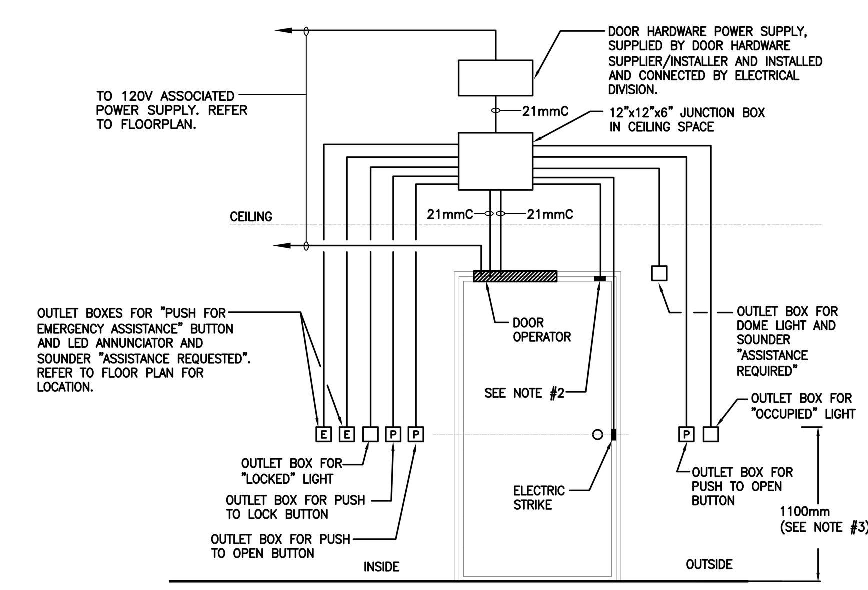
2/E3 TYPICAL INSTALLATION OF RECEPTACLES AND OUTLETS
SCALE: N.T.S.



NOTES:

1. THE ELECTRICAL CONTRACTOR SHALL FURNISH AND INSTALL ONE MOUNTED GROUND BUS AT EACH LAN ROOM AND ELECTRICAL ROOM.
2. THE ELECTRICAL CONTRACTOR SHALL PROVIDE A GROUND CONNECTION BETWEEN THE BASE BUILDING SERVICE ENTRANCE GROUNDING ELECTRODE AND THE TELECOMMUNICATION MAIN GROUNDING BUS BARS (TMGB) LOCATED IN THE MAIN LAN ROOM. ALSO PROVIDE A GROUND CONNECTION BETWEEN THE TMGB AND TELECOMMUNICATIONS GROUNDING BUS BARS (TGB) IN EACH LAN ROOM.
3. ALL BRANCH GROUNDING WITHIN THE LAN ROOMS SHALL BE FURNISHED AND INSTALLED BY THE COMMUNICATIONS CONTRACTOR.
4. GROUND BUS BAR SHALL BE INSTALLED AT THE TOP OF THE BACKBOARD OR 100mm(4") BELOW THE CEILING NEAR THE RACK.
5. ALL GROUNDING TERMINATIONS SHALL BE DONE WITH U.L. LISTED HYPRESS LUGS AND GROUNDING CLAMPS.

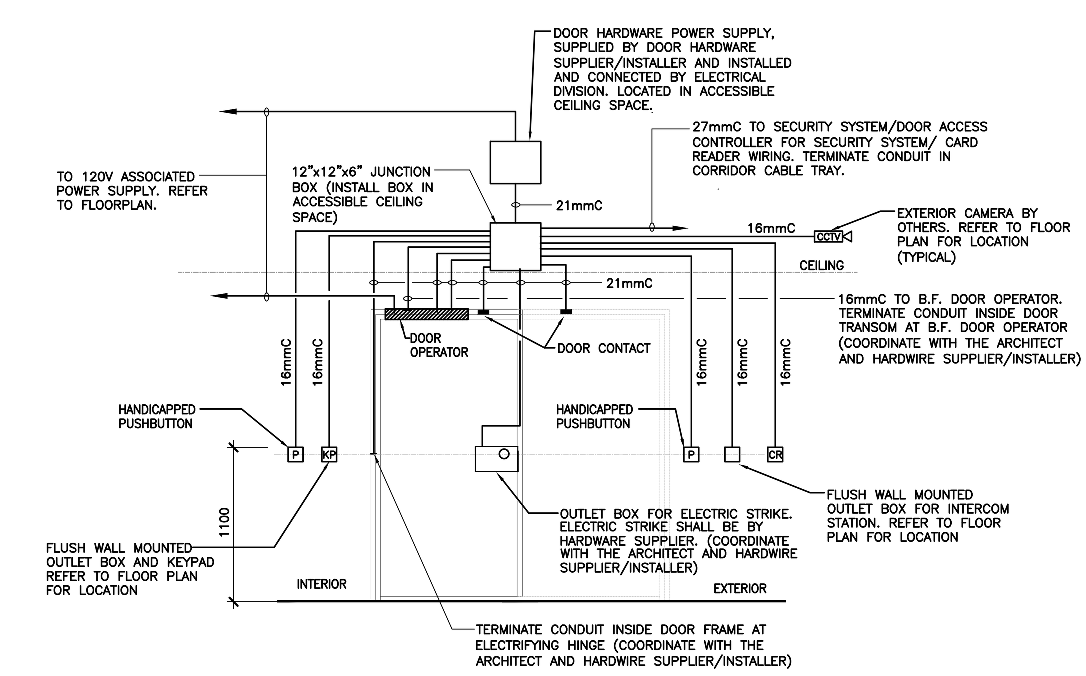
4/E3 TELECOMMUNICATIONS GROUND BUS BAR DETAIL
SCALE: N.T.S.



NOTES :

1. ALL CONDUITS ARE 16mm (1/2") UNLESS OTHERWISE NOTED. ALL EMPTY CONDUIT(S) SHALL COMPLETE WITH PULL STRING(S).
2. LOCAL DOOR CONTACT FOR DOOR OPERATOR INTERLOCK OPERATION (THIS DOOR CONTACT IS NOT REQUIRED TO BE CONNECTED TO THE SECURITY SYSTEM)
3. COORDINATE EXACT MOUNTING HEIGHT OF OUTLETS WITH ARCHITECTURAL DRAWINGS
4. ALL LOW VOLTAGE WIRING SHALL BE MINIMUM 8#18AWG, SUPPLIED AND INSTALLED BY ELECTRICAL DIVISION. COORDINATE ALL WORK WITH DOOR HARDWARE INSTALLER ON SITE.

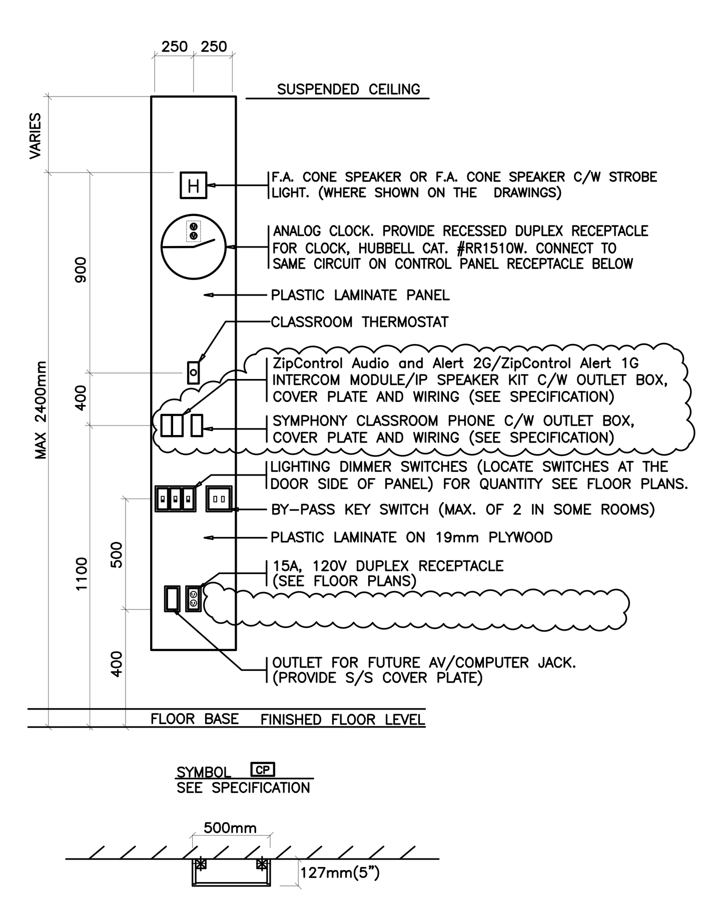
5/E3 UNIVERSAL WASHROOMS BARRIER FREE DOOR OPERATOR SCHEMATIC DIAGRAM (TYPICAL)
SCALE: N.T.S.



NOTES :

1. ALL EMPTY CONDUIT(S) SHALL COMPLETE WITH PULL STRING(S).
2. FOR MORE INFORMATION, REFER TO ELECTRICAL SPECIFICATIONS & DRAWINGS.
3. REFER TO FLOOR PLANS FOR OUTLET BOXES REQUIRED.
4. ALL LOW VOLTAGE WIRING SHALL BE MINIMUM 8#18AWG, SUPPLIED AND INSTALLED BY ELECTRICAL DIVISION. COORDINATE ALL WORK WITH DOOR HARDWARE INSTALLER ON SITE.
5. ALL WIRING RELATED TO SAFE ARRIVAL SYSTEM WILL BE SUPPLIED AND INSTALLED BY OTHERS. COORDINATE ALL ASSOCIATED WORK WITH SCHOOL BOARD AND SAFE ARRIVAL SYSTEM SUPPLIER/INSTALLER AND ON SITE.

6/E3 DOUBLE DOOR CARD READER/ELECTRICAL STRIKE AND DOOR OPERATOR SCHEMATIC DIAGRAM (TYPICAL INSTALLATION OF CONDUITS AND DEVICES FOR SAFE ARRIVAL SYSTEM)
SCALE: N.T.S.



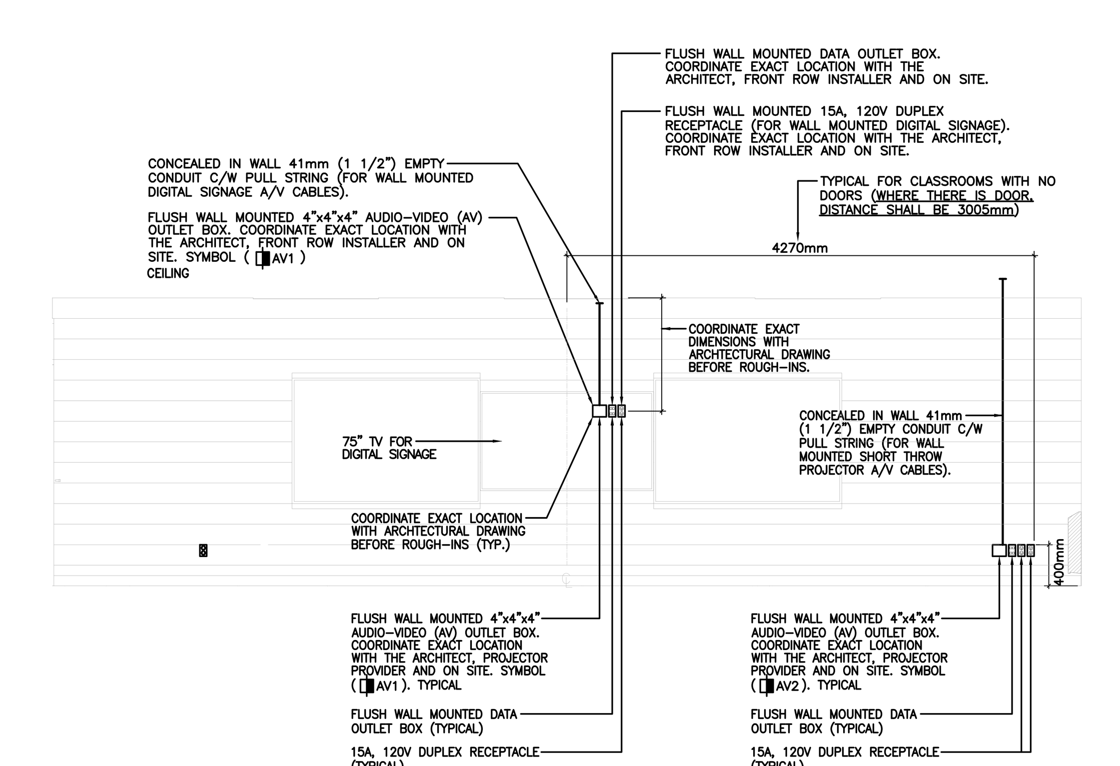
NOTES :

1. CONTROL PANEL SHALL BE PROVIDED AND INSTALLED BY ARCHITECTURAL DIVISION.
2. P.A. SPEAKERS. P.A. SPEAKER BACK BOXES, P.A. SPEAKER GRILL, F.A. CONE SPEAKER, CLOCK, TOUCH SCREEN PANEL, OVERRIDE SWITCHES, DIMMERS, AUDIO OUT, RECEPTACLE, OUTLET BOXES, ETC. SHALL BE BY ELECTRICAL DIVISION. (SEE SPECIFICATION)
3. IN AREAS WHERE CEILING IS ABOVE 2600mm, ELECTRICAL CONTRACTOR SHALL DO THE FOLLOWING:
   – FIRE ALARM AUDIBLE DEVICES SHALL BE INSTALLED SO THAT THE TOP OF THE DEVICE WILL NOT BE LESS THAN 2300mm AFF. AND NOT MORE THAN 2400mm.
   – FIRE ALARM VISUAL DEVICES SHALL BE INSTALLED SUCH THAT THE ENTIRE LENS ARE NOT LESS THAN 2200mm AND NOT MORE THAN 2400mm AFF.

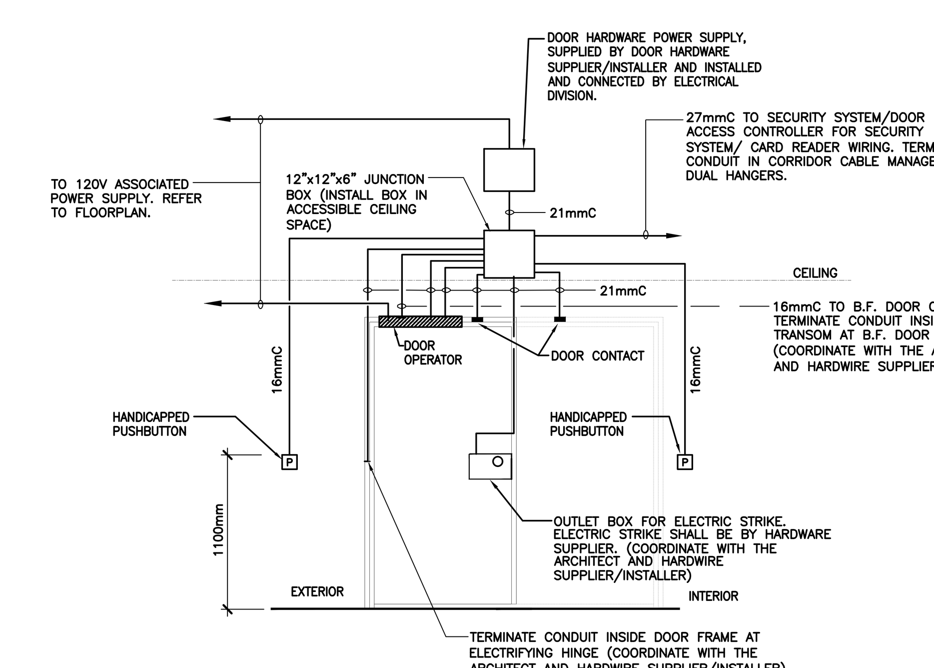
3/E3 WALL MOUNTED MODULAR CLASSROOM CONTROL PANEL
SCALE: N.T.S.

NOTE:

1. COORDINATE EXACT LOCATION OF OUTLETS WITH THE OWNER/ARCHITECT.



7/E3 TYPICAL CLASSROOM TEACHER WALL ELEVATION
SCALE: N.T.S.



NOTES :

1. ALL EMPTY CONDUIT(S) SHALL COMPLETE WITH PULL STRING(S).
2. FOR MORE INFORMATION, REFER TO ELECTRICAL SPECIFICATIONS & DRAWINGS.
3. REFER TO FLOOR PLANS FOR OUTLET BOXES REQUIRED.
4. ALL LOW VOLTAGE WIRING SHALL BE MINIMUM 8#18AWG, SUPPLIED AND INSTALLED BY ELECTRICAL DIVISION. COORDINATE ALL WORK WITH DOOR HARDWARE INSTALLER ON SITE.

8/E3 DOUBLE DOOR CARD READER/ELECTRICAL STRIKE AND DOOR OPERATOR SCHEMATIC DIAGRAM (TYPICAL INSTALLATION OF CONDUITS AND DEVICES)
SCALE: N.T.S.

No.	DATE	REVISIONS
7	SEPT. 21'26	ADDENDUM #E2
6	SEPT. 10'26	ISSUED FOR BUILDING PERMIT RESUBMISSION
5	AUG. 25'26	ISSUED FOR TENDER
4	JUN. 5'26	ISSUED FOR BUILDING PERMIT
3	DEC. 23'25	ISSUED FOR CLASS B COST ESTIMATE
2	OCT. 06'25	ISSUED FOR 50% SUBMISSION
1	SEPT. 09'25	ISSUED FOR PROGRESS DRAWINGS

KEDRON EAST CATHOLIC ELEMENTARY SCHOOL

DURHAM CATHOLIC DISTRICT SCHOOL BOARD
Learning and Living in Faith

DRAWING: ELECTRICAL LEGEND AND DETAILS

TRUE NORTH | DWG. NORTH

JOB NO. 2402

SCALE: AS NOTED

PRINTABLE SIZE

PRINTED: AUGUST 11, 2026

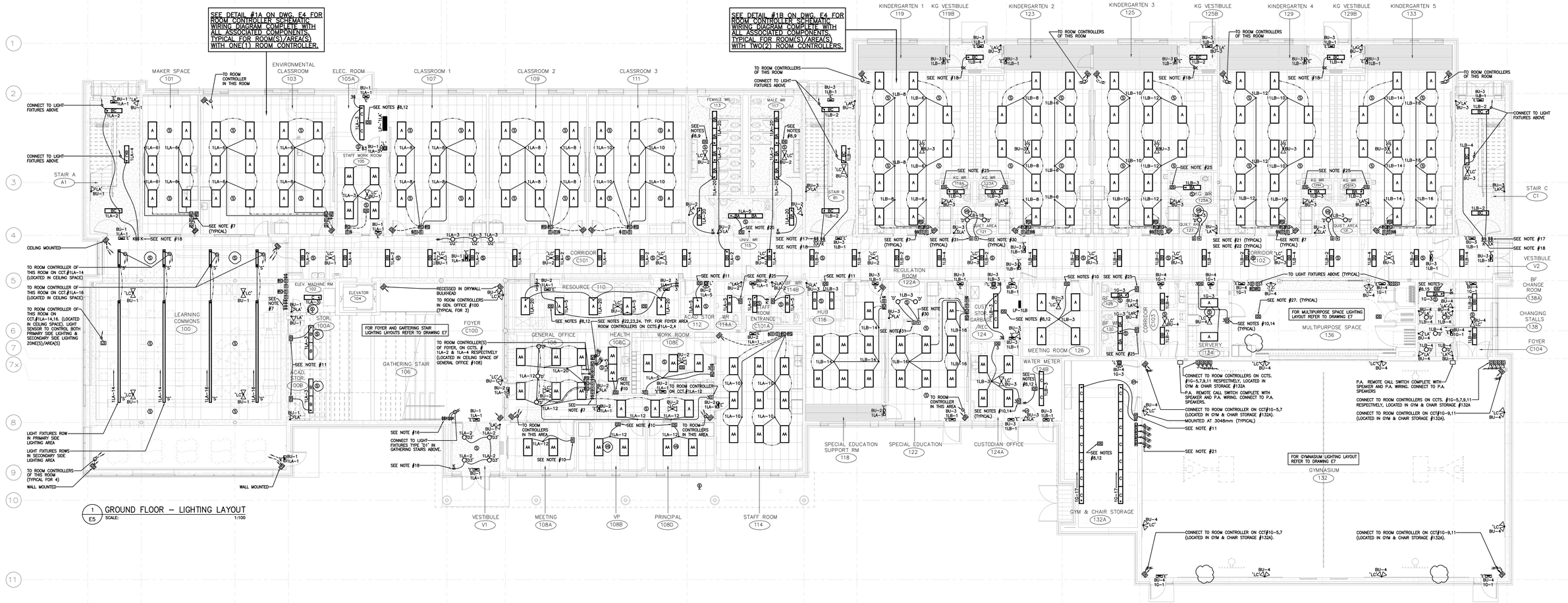
rybka Ellard Willson
23 Lesmill Road, Unit 410
Toronto, ON M3B 3P6

DWG. NO. E3

25046

SEE DETAIL #1A ON DWG. E4 FOR ROOM CONTROLLER SCHEMATIC WIRING DIAGRAM COMPLETE WITH ALL ASSOCIATED COMPONENTS, TYPICAL FOR ROOM(S)/AREA(S) WITH ONE(1) ROOM CONTROLLER.

SEE DETAIL #1B ON DWG. E4 FOR ROOM CONTROLLER SCHEMATIC WIRING DIAGRAM COMPLETE WITH ALL ASSOCIATED COMPONENTS, TYPICAL FOR ROOM(S)/AREA(S) WITH TWO(2) ROOM CONTROLLERS.



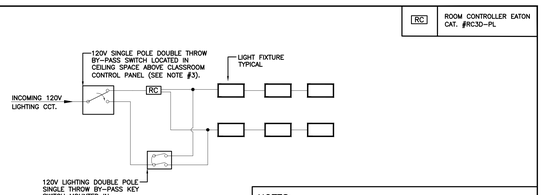
1 / E5 GROUND FLOOR – LIGHTING LAYOUT
SCALE: 1:100

NOTES:

1. ELECTRICAL CONTRACTOR SHALL INCLUDE IN TENDER PRICE FOR INSTALLATION, TESTING, TIME ADJUSTMENT AND COORDINATION OF OCCUPANCY SENSOR, ROOM CONTROLLER, DAYLIGHT SENSOR, LIGHTING PROGRAMMING OF AUTO-ON SEQUENCE OF ROOM CONTROLLER FOR LIGHT FIXTURES ON A ROOM BY ROOM BASIS AS ENTIRE BUILDING BY MANUFACTURER'S PERMIT VERIFICATION/COMMISSIONING REPORT AFTER COMPLETION OF WORK. REFER TO ELECTRICAL SPECIFICATION FOR DETAILS.
2. EXACT LOCATION OF LIGHT FIXTURES SHALL BE DETERMINED AFTER DUCTS, PIPES AND ALL MECH. EQUIPMENT HAVE BEEN INSTALLED. COORDINATE WITH ELECTRICAL CONSULTANT AND MECHANICAL CONTRACTOR (TYPICAL FOR ALL LIGHTING FIXTURES IN MECHANICAL RM. AND FLUID COOLER PENTHOUSE)
3. FOR EXACT LOCATION OF ALL LIGHT FIXTURES REFER TO ARCHITECTURAL DRAWINGS.
4. COORDINATE LOCATION OF LIGHTING FIXTURES WITH MECHANICAL DIVISION.
5. EMERGENCY LIGHTING LOAD PER BATTERY UNIT SHALL NOT EXCEED 490 WATTS PER UNIT. (ELECTRICAL CONTRACTOR TO VERIFY)
6. WIRING FOR EMERGENCY CIRCUITS SHALL BE SIZED IN ACCORDANCE WITH MANUFACTURER'S RECOMMENDATION AND VOLTAGE DROP SHALL NOT EXCEED 5% & MINIMUM WIRE SIZE SHALL BE #10AWG.
7. PROVIDE SINGLE POLE DOUBLE THROW LIGHT SWITCH (WALL MOUNTED IN ACCESSIBLE CEILING SPACE ABOVE WALLSTATIONS/CLASSROOM CONTROL PANEL) AND DOUBLE POLE SINGLE THROW LIGHT SWITCH RECESS MOUNTED ON THE WALL/CLASSROOM CONTROL PANEL (WHERE APPLICABLE) FOR EACH ROOM CONTROLLER. BOTH SWITCHES SHALL OVERRIDE RESPECTIVE ROOM CONTROLLER USED FOR 120V LIGHTING IN THE RESPECTIVE ROOM(S)/SPACE(S) IN CASE OF THEIR FAILURE. PROVIDE ASSOCIATED LAMICOIDE PLATE ON SWITCH LOCATED ABOVE WALL STATIONS/CLASSROOM CONTROL PANEL AND ON CEILING GRID BELOW SWITCH, AS WELL AS THE BY-PASS SWITCH MOUNTED ON CLASSROOM CONTROL PANEL OR ON WALL. ADJUST ALL COMPONENTS TO SUIT. REFER TO DETAIL #2 THIS DRAWING FOR WIRING SCHEMATIC DIAGRAM.
8. PROVIDE OCCUPANCY SENSOR EATON, CAT. OAC-DT-1000-R, WHICH SHALL TURN-OFF CORRESPONDING LIGHT FIXTURES WHEN LIGHT SWITCHE(S) IS (ARE) IN "ON" POSITION AND SPACE IS NOT OCCUPIED AND TURN THEM BACK "ON" WHEN SPACE OCCUPIED. EXACT LOCATION OF OCCUPANCY SENSOR SHALL BE COORDINATED ON SITE AND SHALL COMPLY WITH MANUFACTURER RECOMMENDATION. PROVIDE ALL NECESSARY EQUIPMENT TO SUIT. PROVIDE NUMBER OF POWER PACK(S) TO SUIT NUMBER OF CIRCUIT(S) IN ROOM.
9. ELECTRICAL CONTRACTOR SHALL PROVIDE LIGHT SWITCH (WALL MOUNTED IN CORRIDOR CEILING SPACE ABOVE ENTRANCE TO WASHROOM) WHICH SHALL OVERRIDE (BY PASS) OCCUPANCY SENSOR/POWER PACK(S) IN CASE OF THEIR FAILURE. PROVIDE ASSOCIATED LAMICOIDE PLATE ON SWITCH AND T-BAR GRID BELOW SWITCH. ADJUST ALL COMPONENTS TO SUIT.
10. PROVIDE OCCUPANCY SENSOR, EATON, CAT.# VSW-P-010, WALL SWITCH VACANCY SENSOR (MANUAL-ON/AUTOMATIC-OFF CONTROL) WHICH SHALL TURN OFF ASSOCIATED LIGHT FIXTURES WHEN SPACE IS NOT OCCUPIED. VACANCY SENSOR SHALL BE PRESET TO 50% LIGHTING LEVEL WHEN MANUALLY ACTIVATED TO TURN ON THE ASSOCIATED LIGHT FIXTURES IN THE RESPECTIVE SPACE. PROVIDE ALL NECESSARY EQUIPMENT TO SUIT.
11. PROVIDE OCCUPANCY SENSOR, EATON, CAT. OWM-D-1001-MV, WALL SWITCH VACANCY SENSOR (MANUAL-ON/AUTOMATIC-OFF CONTROL) WHICH SHALL TURN OFF ASSOCIATED LIGHT FIXTURES WHEN SPACE IS NOT OCCUPIED. PROVIDE ALL NECESSARY EQUIPMENT TO SUIT.
12. ELECTRICAL CONTRACTOR SHALL PROVIDE LIGHT SWITCH (WALL MOUNTED IN CEILING SPACE ABOVE LIGHT SWITCHES/ CLASSROOM CONTROL PANEL) WHICH SHALL OVERRIDE (BY PASS) OCCUPANCY SENSOR/POWER PACK(S) IN CASE OF THEIR FAILURE. PROVIDE ASSOCIATED LAMICOIDE PLATE ON SWITCH AND ON T-BAR GRID BELOW SWITCH. ADJUST ALL COMPONENTS TO SUIT.
13. SPARE
14. CONNECT BOTH DIMMER SWITCHES IN THIS ROOM IN 3-WAY CONFIGURATION.
15. ELECTRICAL CONTRACTOR SHALL PROVIDE LIGHT SWITCH (WALL MOUNTED IN GYM STORAGE #132A CEILING SPACE) WHICH SHALL OVERRIDE (BY PASS) OCCUPANCY SENSOR/POWER PACK(S) IN CASE OF THEIR FAILURE. PROVIDE ASSOCIATED LAMICOIDE PLATE ON SWITCH AND T-BAR GRID BELOW SWITCH. ADJUST ALL COMPONENTS TO SUIT.
16. PROVIDE TWO (2) 3-WAY KEY OPERATED SWITCHES AS FOLLOWS:
    - ONE TO CONTROL CORRIDOR LIGHTS ON CCT # 1LA-2
    - ONE TO CONTROL CORRIDOR LIGHTS ON CCT # 1LA-4

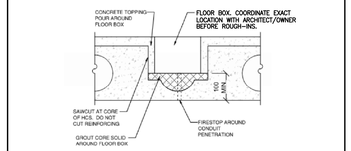
    KEY SWITCHES SHALL REMAIN IN 'ON' POSITION AT ALL TIME TO ALLOW B.M.S. & SECURITY CONTROL FOR ALL CORRIDOR AND STAIR LIGHTING.
17. PROVIDE TWO (2) 3-WAY KEY OPERATED SWITCHES AS FOLLOWS:
    - ONE TO CONTROL CORRIDOR LIGHTS ON CCT # 1LB-2
    - ONE TO CONTROL CORRIDOR LIGHTS ON CCT # 1LB-4

    KEY SWITCHES SHALL REMAIN IN 'ON' POSITION AT ALL TIME TO ALLOW B.M.S. & SECURITY CONTROL FOR ALL CORRIDOR AND STAIR LIGHTING.
18. KEY SWITCHES SHALL REMAIN IN 'ON' POSITION TO ALLOW BAS & SECURITY CONTROL OF STAIR/VESTIBULE LIGHTING.
19. PROVIDE OCCUPANCY SENSOR EATON, CAT. OAWC-DT-120W-R, WHICH SHALL TURN-OFF CORRESPONDING LIGHT FIXTURES WHEN LIGHT SWITCHE(S) IS (ARE) IN "ON" POSITION AND SPACE IS NOT OCCUPIED AND TURN THEM BACK "ON" WHEN SPACE OCCUPIED. EXACT LOCATION OF OCCUPANCY SENSOR SHALL BE COORDINATED ON SITE AND SHALL COMPLY WITH MANUFACTURER RECOMMENDATION. PROVIDE ALL NECESSARY EQUIPMENT TO SUIT. PROVIDE NUMBER OF POWER PACK(S) TO SUIT NUMBER OF CIRCUIT(S) IN ROOM.
20. SPARE
21. CONNECT BOTH 120V WIRING & 0-10V LOW VOLTAGE DIMMING WIRING TO LIGHT FIXTURE TYPE 'G' ABOVE AND RJ45 QUICK CONNECT CABLE TO OCCUPANCY SENSORS IN BOTH HALVES OF GYM. REFER TO DETAIL #1C ON DWG.#E3 FOR ROOM CONTROLLER SCHEMATIC WIRING DIAGRAM. ROOM CONTROLLERS SHALL BE INSTALLED AT CEILING HEIGHT LEVEL IN THIS ROOM.
    ALL RJ45 QUICK CONNECT CABLES FROM OCCUPANCY SENSOR(S) AND DIMMING SWITCH(ES) TO RESPECTIVE CONTROLLER(S) SHALL BE INSTALLED IN CONDUIT. FREE AIR INSTALLATION OF RJ45 QUICK CONNECT CABLES IN GYM AREA WILL NOT BE ACCEPTABLE.
22. PROVIDE 'OCCUPIED' AND 'NON-OCCUPIED' SIGNAL TO ROOM CONTROLLER FOR TIME CLOCK SEQUENCE FROM BMS AS IDENTIFIED IN DETAIL 1D/E4.
23. ALL RJ45 QUICK CONNECT CABLES FROM OCCUPANCY SENSOR(S) AND DIMMING SWITCH(ES) TO RESPECTIVE CONTROLLER(S) SHALL BE INSTALLED IN CONDUIT. FREE AIR INSTALLATION OF RJ45 QUICK CONNECT CABLES IN STAGE AREA WILL NOT BE ACCEPTABLE.
24. ALL 0-10V LOW VOLTAGE DIMMING WIRING FROM ROOM CONTROLLERS TO RESPECTIVE LIGHT FIXTURES SHALL BE INSTALLED IN CONDUIT. FREE AIR INSTALLATION OF 0-10V LOW VOLTAGE DIMMING WIRING IN THIS AREA WILL NOT BE ACCEPTABLE.
25. PROVIDE OCCUPANCY SENSOR, EATON, CAT. ONW-D-1001-MV, WALL SWITCH VACANCY SENSOR (AUTOMATIC-ON/AUTOMATIC-OFF CONTROL) WHICH SHALL TURN OFF ASSOCIATED LIGHT FIXTURES WHEN SPACE IS NOT OCCUPIED. PROVIDE ALL NECESSARY EQUIPMENT TO SUIT.
26. PROVIDE OCCUPANCY SENSOR, EATON, CAT.# VSW-P-010, WALL SWITCH VACANCY SENSOR (AUTOMATIC-ON/AUTOMATIC-OFF CONTROL) WHICH SHALL TURN OFF ASSOCIATED LIGHT FIXTURES WHEN SPACE IS NOT OCCUPIED. SENSOR SHALL BE PRESET TO 50% LIGHTING LEVEL WHEN AUTOMATICALLY ACTIVATED TO TURN ON THE ASSOCIATED LIGHT FIXTURES IN THE RESPECTIVE SPACE. PROVIDE ALL NECESSARY EQUIPMENT TO SUIT.
27. PROVIDE OCCUPANCY SENSOR EATON, CAT.#OXC-P-2MHO-R, FOR THIS LOCATION.
28. INCLUDE IN TENDER PRICE SUPPLY AND INSTALLATION OF 4 TYPE 'E' EXIT SIGNS, 4 TYPE 'LC' FIXTURES, 4 TYPE 'LA' FIXTURES & 4 TYPE 'LB' FIXTURES C/W 15000mm OF CONDUIT AND WIRING AND CONNECTION TO THE NEAREST EXIT SIGN OF EMERGENCY HEAD.
29. INCLUDE IN TENDER PRICE SUPPLY AND INSTALLATION OF 5 TYPE "25/70V P.A. SPEAKER", 5 TYPE "8 OHM P.A. SPEAKER", 2 TYPE "25/70V P.A. HORN", 2 TYPE "STROBE LIGHTS" C/W ASSOCIATED BACK BOX, 15000mm OF CONDUIT AND WIRING AND CONNECTION TO THE NEAREST PA SPEAKER/HORN/STROBE.
30. OUTLET BOX COMPLETE WITH ASSOCIATED CONDUIT FOR VOLUME CONTROL WIRING OF P.A. SPEAKER. (COORDINATE WITH P.A./TEL. SYSTEM INSTALLER.)
31. INSTALL WALL MOUNTED LOW VOLTAGE, 0-10V, DIMMER SWITCH ACUITY CONTROLS SENSOR SWITCH CAT.# SPODMRD. AND OUTLET BOX FOR FUTURE VOLUME CONTROL IN FLUSH WALL MOUNTED LOCKABLE BOX WITH LOCK (FOR CORRIDOR LOCATIONS ONLY). 12"X12"X6" FLUSH MOUNTED BOX (CAT.#B128), CONTACT JOHN ANDERSON (TEL.: 416-292-8630).



NOTES:
1. THIS SCHEMATIC DIAGRAM IS FOR REFERENCE ONLY. ELECTRICAL CONTRACTOR SHALL PROVIDE ALL NECESSARY COMPONENTS TO ACHIEVE INTENT OF WORK AS SHOWN FOR THE REQUIRED AREAS/SPACES.
2. NUMBER OF DOUBLE POLE SINGLE THROW BY PASS KEY SWITCHES MOUNTED ON CLASSROOM CONTROL PANEL/WALL SHALL BE PROVIDED TO SUIT NUMBER OF SWITCHING ZONE(S) OF EACH ROOM CONTROLLER IN RESPECTIVE ROOM/SPACE/AREA.
3. NUMBER OF SINGLE POLE DOUBLE THROW BY PASS SWITCHES LOCATED IN CEILING SPACE SHALL BE PROVIDED TO SUIT NUMBER OF LIGHTING CIRCUITS OF EACH ROOM CONTROLLER IN RESPECTIVE ROOM/SPACE/AREA.

2 / E5 TYPICAL 120V BY-PASS LIGHTING CIRCUIT WIRING SCHEMATIC WITH ROOM CONTROLLER (RC)
SCALE: N.T.S.



3 / E5 TYPICAL FLOOR BOX INSTALLATION
SCALE: N.T.S.

No.	DATE	REVISIONS
7	SEPT. 21'26	ADDENDUM #2
6	SEPT. 10'26	ISSUED FOR BUILDING PERMIT RESUBMISSION
5	AUG. 25'26	ISSUED FOR TENDER
4	JUN. 5'26	ISSUED FOR BUILDING PERMIT
3	DEC. 23'25	ISSUED FOR CLASS B COST ESTIMATE
2	OCT. 06'25	ISSUED FOR 50% SUBMISSION
1	SEPT. 09'25	ISSUED FOR PROGRESS DRAWINGS

KEDRON EAST CATHOLIC ELEMENTARY SCHOOL

DURHAM CATHOLIC DISTRICT SCHOOL BOARD
Learning and Living in Faith

DRAWING
ELECTRICAL
GROUND FLOOR
LIGHTING LAYOUT

TRUE NORTH | DWG. NORTH

JOB NO. 2402

SCALE: AS NOTED

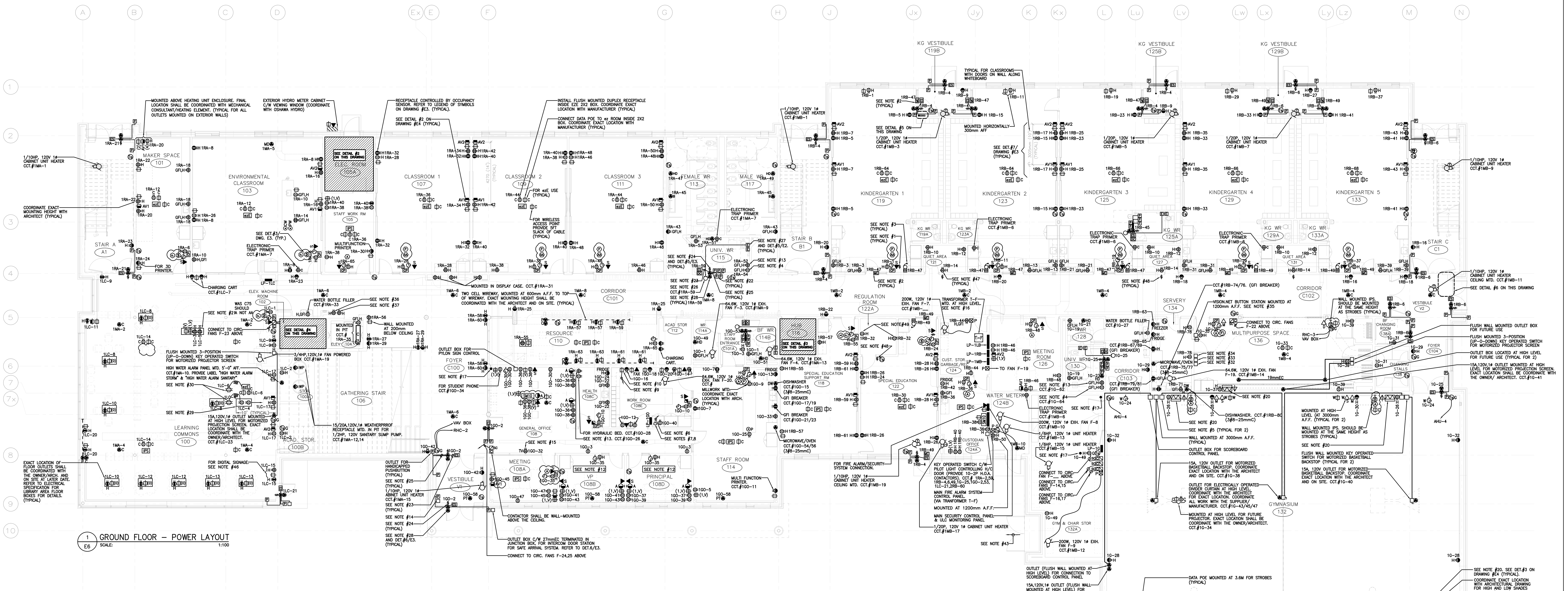
PRINTABLE SIZE

PRINTED: AUGUST 11, 2026

DWG. NO. E5

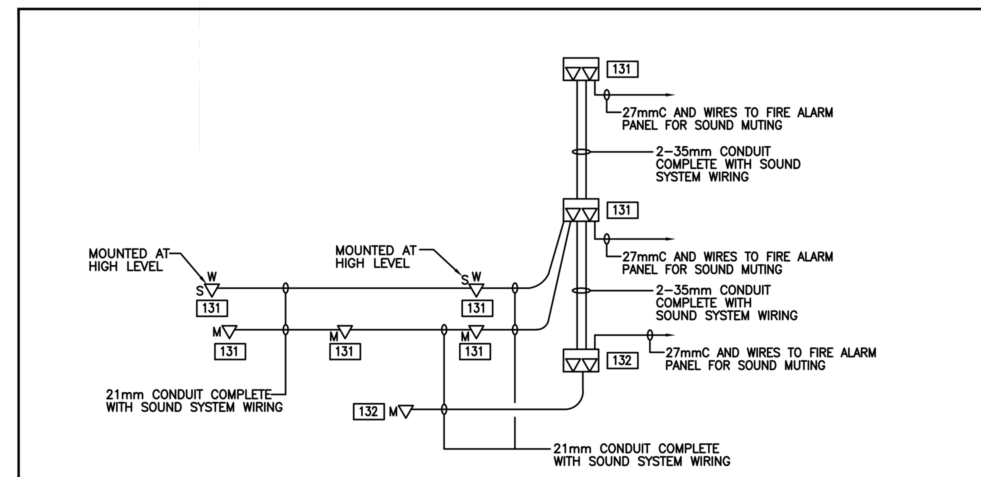
rybka Eldard Willson
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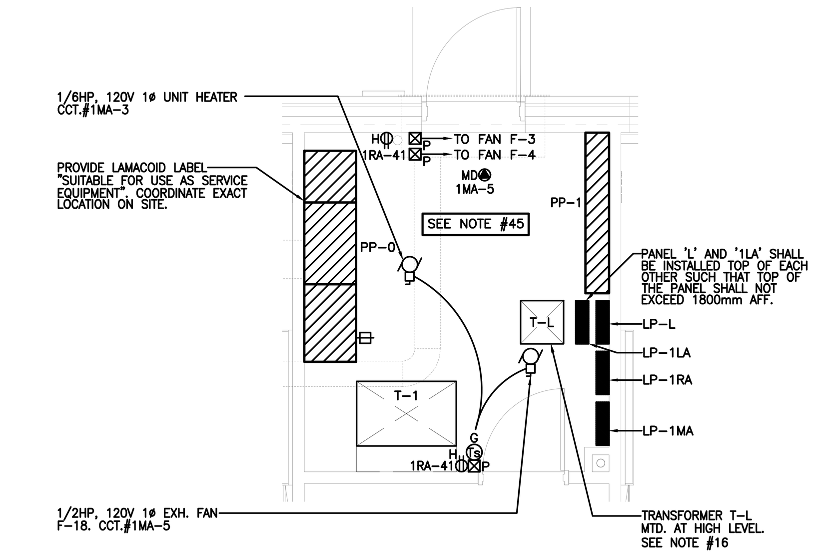
1. WALL MOUNTED OVERRIDE SWITCH FOR DOOR ALARM MOUNTED AT 1200mm TO THE TOP OF THE BOX FOR KINDERGARTENS DOOR ALARM SYSTEM ONLY. PROVIDE LAMACOID LABEL (TYPICAL).
2. FLUSH FRAME MOUNTED MOMENTARY CONTACT (SIMILAR TO G.E. INTERLOGIX #1076/1078 SERIES) FOR DOOR ALARM. CONNECT TO ASSOCIATED OVERRIDE KEY SWITCH AND ALARM BELL OF THE RESPECTIVE ROOM/AREA. PROVIDE ASSOCIATED RELAYS AND ALL COMPONENTS TO SUIT.
3. PROVIDE DOOR BUZZER SYSTEM AS FOLLOWS:
   - BUZZER SHALL SOUND WHEN ONE OF THE DOORS IS OPENED.
   - DOOR BUZZER SYSTEM TO CONSIST OF:
     - BUZZER. CLG. MTD. (EDWARDS #340A-G5, 24VAC)
     - TRANSFORMER (EDWARDS #592A)
     - KEYED BYPASS (OVERRIDE) SWITCH LOCATED IN CONTROL PANEL OR AS SHOWN ON FLOOR PLANS.
4. FOR ADJUSTABLE CHANGE TABLE.
5. FLUSH WALL MTD. KEY OPEARATED SWITCH FOR MOTORIZED PARTITION. (TYP. FOR 2). MOTORIZED PARTITION SHALL WORK ONLY WHEN TWO KEY OPERATED SWITCHES OPERATE AT THE SAME TIME. PROVIDE ADDITIONAL WIRING, AS REQUIRED, BETWEEN SWITCHES TO ACCOMMODATE ABOVE.
6. RUN 41mmC COMPLETE WITH P.A. SYSTEM WIRING. TERMINATE CONDUIT IN CORRIDOR CABLE TRAY AND P.A. SYSTEM WIRING IN P.A. MASTER.
7. FLUSH WALL MOUNTED P.A. SYSTEM OUTLET BOX FOR CONNECTION OF AMPLIFIER, CD PLAYER, RECEIVER & MICROPHONE TO P.A. MASTER. EXACT LOCATION SHALL BE COORDINATED WITH ARCHITECT AND ON SITE.
8. PROVIDE CM800 AUDIO DECODER COMPLETE WITH ASSOCIATED CONDUIT/WIRES TO FIRE ALARM PANEL FOR FIRE ALARM INTEGRATION AND CONNECT.
9. RUN 27mmEC FOR FUTURE SIGN CONTROL WIRING AND STUB-UP INSIDE PYLON SIGN.
10. FLUSH WALL MOUNTED DATA OUTLET BOX FOR SIGN WIRING AND JACK.
11. SPARE
12. ONLY ONE P.A. SYSTEM ADMINISTRATION CONTROL CONSOLE AND TWO NETWORK DROPS (ONE FOR COMPUTER AND ONE FOR TELEPHONE) SHALL BE INSTALLED IN THIS ROOM. FINAL LOCATION SHALL BE COORDINATED WITH THE ARCHITECT/OWNER AND ON SITE.
13. 15A, 120V DUPLEX RECEPTACLE MOUNTED AT 400mm BELOW CEILING FOR H/C LIFT CHARGER. EXACT LOCATION SHALL BE COORDINATED WITH ARCHITECT, B.F. LIFT SUPPLIER/INSTALLER AND ON SITE.
14. FLUSH WALL MOUNTED OUTLET BOX MOUNTED 1050mm AFF FOR KEY OPERATED SWITCH TO DE-ENERGIZE EXTERIOR H/C DOOR. RUN 21mm EMPTY CONDUIT FROM THE BOX AND TERMINATE IN DOOR TRANSOM. IF HORIZONTAL WALL SPACE IS NOT ENOUGH TO INSTALL THE OUTLET BOX, THEN MOUNT THE BOX ABOVE THE PUSH BUTTON AT 1400mm AFF. TO TOP OF THE BOX. COORDINATE EXACT LOCATION WITH ARCHITECT/DOOR HARDWARE SUPPLIER/INSTALLER.
15. PROVIDE 15A, 120V WALL MOUNTED DUPLEX RECEPTACLE LOCATED IN GENERAL OFFICE AT HIGH LEVEL (300mm BELOW CEILING) C/W ASSOCIATED CONDUIT, WIRING AND CONNECTION FOR VIDEO SURVEILLANCE MONITOR. EXACT LOCATION OF RECEPTACLE SHALL BE DETERMINED ON SITE.
16. PROVIDE MOUNTING BRACKET AND ALL NECESSARY STRUCTURAL SUPPORT TO HANG THE TRANSFORMER AT HIGH LEVEL. COORDINATE WITH THE STRUCTURAL ENGINEER. PROVIDE ALL NECESSARY COMPONENTS TO SUIT.
17. AT THIS LOCATION PROVIDE WALL MOUNTED UP/DOWN SWITCH (FOR CONTROLLING MOTORIZED SHADES/BLACKOUT BLINDS). ASSOCIATED MOTOR GROUP CONTROLLER SHALL BE INSTALLED IN THIS ROOM CEILING SPACE. SEE DETAIL #3 ON DRAWING #E4.
18. LOCATION OF UP/DOWN DPDT WALL MOUNTED SWITCH(ES) FOR MOTORIZED BLACKOUT BLINDS/SHADES. REFER TO DETAIL #3 ON DRAWING #E4
19. 30A/F-15A, 120V, 1ø, DISC. SWITCH COMPLETE WITH AUXILLARY CONTACT FOR B.F. LIFT. INSTALL THE SWITCH IN FLUSH WALL MTD. LOCKABLE BOX (14"x14"x6" FLUSH WALL MOUNTED CABINET COMPLETE WITH LOCKABLE COVER). COORDINATE EXACT LOCATION ON SITE.
20. SOUND SYSTEM JACK SELECTOR SWITCH (FOR LOCAL SOUND SYSTEM) AND RECEPTACLE LOCATED IN A 14"x14"x6" FLUSH WALL MOUNTED CABINET (CAT.#R-128). (CONTACT JOHN ANDERSON TEL. (416) 292-8630). (TYPICAL FOR 3).
21. EXACT LOCATION OF FLOOR BOX SHALL BE COORDINATED WITH THE OWNER/ARCH. AND ON SITE AT LATER DATE.
22. OUTLET FOR HANDICAPPED PUSHBUTTON, PUSH TO LOCK BUTTON, LIGHT AND ASSOCIATED COMPONENTS.
23. PROVIDE 16mmC INSIDE DOOR FRAME BETWEEN ELECTRIC STRIKE AND DOOR OPERATOR. COORDINATE WITH DOOR HARDWARE CONTRACTOR FOR EXACT ROUGH-INS.
24. OUTLET AND TOGGLE SWITCH MTD. INSIDE DOOR TRANSOM FOR 120V,1ø DOOR MOTOR (CONNECT TO POWER PACK WITH 2#12).
25. 16mmC TO BE TERMINATED INSIDE DOOR TRANSOM.
26. OUTLET BOX FOR DOME LIGHT AND SOUNDER, "ASSISTANCE REQUIRED".
27. OUTLET BOXES FOR EMERGENCY ASSISTANCE PUSH BUTTON AND LED ANNUNCIATOR AND SOUNDER "ASSISTANCE REQUESTED".
28. DOOR HARDWARE POWER SUPPLY, MOUNTED IN CEILING SPACE ABOVE DOOR OPERATOR (TYPICAL).
29. PROVIDE ONE LIGHTWEIGHT SUSPENDED CEILING PLATE PEERLESS MODEL #CMS445 COMPLETE WITH ALL ASSOCIATED COMPONENTS (i.e. ELECTRICAL RECEPTACLE, INDEPENDENT SUPPORTS, etc.). CONNECT THE 15A, 120V CEILING PLATE MOUNTED DUPLEX RECEPTACLE TO THE 15A, 120V JUNCTION BOX MOUNTED IN CEILING SPACE WITH BX CABLE. ASSEMBLY AND INSTALLATION SHALL BE DONE ACCORDING TO INSTRUCTIONS PROVIDED BY THE MANUFACTURER. EXACT LOCATION SHALL BE COORDINATED WITH OWNER/ARCH. AND ON SITE. PROJECTOR WILL BE SUPPLIED BY OWNER AND INSTALLED BY ELECTRICAL DIVISION.
30. JUNCTION BOX COMPLETE WITH 15A, 120V CIRCUIT MOUNTED IN CEILING SPACE. INSTALL THE JUNCTION BOX 12'-6" FROM PROJECTION SCREEN, ON CENTER LINE. COORDINATE EXACT LOCATION WITH ARCHITECT.
31. WALL MOUNTED DOUBLE GANG OUTLET BOX FOR AMP SENSOR (SUPPLIED BY MECHANICAL CONTRACTOR) AND INSTALLED/WIRED BY THIS CONTRACTOR. (AMP SENSOR SHALL TURN ON DRYER BOOSTER FAN WHEN DRYER IS WORKING AND TURN OFF WHEN DRYER IS NOT WORKING.)
32. VISION.NET INTERFACE LOCATED AT HIGH LEVEL. EXACT LOCATION SHALL BE COORDINATED WITH MANUFACTURER. CCT.#1G-18
33. 12 CIRCUIT RELAY PANEL. CCT.#1G-20
34. 15A, 120V DMX OPTO SPLITTER 1 IN-4 OUT #G/4807. CCT.#1G-22
35. PROVIDE VISION.NET BUTTON STATION (MOUNTED IN FLUSH WALL MOUNTED BOX) AND LAPTOP PC PORT. SEE DETAIL #2 ON DRAWING #E7
36. 15A,120V,1ø OUTLET MTD. IN CEILING SPACE FOR SANITARY SUMP PUMP CONTROL PANEL/HIGH WATER ALARM BUZZER. CCT.#1RA-67. PROVIDE 19mmEC FROM PIT TO HIGH WATER ALARM BUZZER LOCATION FOR LOW VOLTAGE WIRING. LOW VOLTAGE WIRING WILL BE SUPPLIED AND INSTALLED BY MECHANICAL DIVISION. HIGH WATER ALARM SYSTEM WILL BE SUPPLIED BY MECHANICAL DIVISION AND INSTALLED AND CONNECTED BY ELECTRICAL DIVISION.
37. 15A,120V,1ø OUTLET MTD. IN CEILING SPACE FOR STORM SUMP PUMP CONTROL PANEL / HIGH WATER ALARM BUZZER. CCT.#1RA-69. PROVIDE 19mmEC FROM PIT TO HIGH WATER ALARM BUZZER LOCATION FOR LOW VOLTAGE WIRING. LOW VOLTAGE WIRING WILL BE SUPPLIED AND INSTALLED BY MECHANICAL DIVISION. HIGH WATER ALARM SYSTEM WILL BE SUPPLIED BY MECHANICAL DIVISION AND INSTALLED AND CONNECTED BY ELECTRICAL DIVISION.
38. REFER TO DETAIL #3/E8 FOR FAN STARTER SCHEMATIC DIAGRAM FOR WIRING CONNECTION (TYPICAL FOR ALL FANS WITH MANUAL STARTER). CONNECT EXHAUST FAN THROUGH MOTORIZED DAMPER END SWITCH, FAN SHALL START ONLY WHEN DAMPER IS FULLY OPEN AND DAMPER END SWITCH IS ACTIVATED. COORDINATE WITH MECHANICAL CONTRACTOR.
39. MOUNTED ABOVE HEATING UNIT ENCLOSURE. FINAL LOCATION SHALL BE COORDINATED WITH MECHANICAL CONSULTANT/HEATING ELEMENT. (TYPICAL FOR ALL OUTLETS MOUNTED ON EXTERIOR WALLS)
40. 15A, 120V, 1ø OUTLET FOR MOTORIZED SHADES. CONNECT TO SHADES MOTOR, MOTOR GROUP CONTROLLER AND UP-DOWN SWITCH. EXACT LOCATION OF OUTLET(S) SHALL BE COORDINATED WITH THE ARCHITECT AND MOTORIZED SHADES SUPPLIER/INSTALLER.
41. PROVIDE ASSOCIATED 21mm CONDUIT C/W WIRING (3 WIRE – UP/DOWN/COMMON + GRND.) AND CONNECT SHADES MOTOR TO RESPECTIVE MOTOR GROUP CONTROLLER. SEE FLOOR PLAN FOR LOCATION.
42. INCLUDE IN TENDER PRICE SUPPLY, INSTALLATION AND VERIFICATION OF 10 COMPUTER OUTLETS C/W 15000mm OF CONDUIT AND WIRING AND CONNECTION TO THE NEAREST PATCH PANELS.
43. RUN 27mmEC FROM GAS METER TO TO ELECTRICAL ROOM #105A FOR "CARMA INDUSTRY WIRING". EXACT RUN/LOCATION OF TERMINATION POINT AT GAS METER SHALL BE COORDINATED WITH CARMA SYSTEM INSTALLER.
44. INCLUDE IN TENDER PRICE SUPPLY AND INSTALLATION OF 5-COMPUTER OUTLETS COMPLETE WITH 15000mm EC TERMINATED IN ACCESSIBLE CEILING SPACE AND 5-15A/120V DUPLEX RECEPTACLES C/W 15000mm OF CONDUITS/WIRES AND CONNECTION TO 5-15A/1P SPARE BREAKERS IN THE NEAREST AVAILABLE PANEL. EXACT LOCATION OF PROVISIONS FOR ENERGY MANAGEMENT SYSTEM (EMS) PANEL SHALL BE COORDINATED WITH CONTROL CONTRACTOR BEFORE ROUGH-INS.
45. PROVIDE COMPLETE CARMA METERING COMPONENTS AND THEIR i.e. CONDUITS, WIRES, CONNECTIONS, TESTING, VERIFICATION, ETC. CONNECT CARMA METER TO SPARE 15A/1P BREAKER IN CLOSEST 120V PANEL IN ELECTRICAL ROOM #105A. COORDINATE EXACT LOCATION WITH CARMA MANUFACTURER BEFORE ROUGH-INS. ALLOW UP TO 50M OF CONDUIT/WIRING FOR CONNECTION OF CARMA PANEL.
46. OUTLETS SHALL BE INSTALLED AT 2600mm A.F.F. EXACT LOCATION SHALL BE COORDINATED WITH THE ARCHITECT/OWNER AND ON SITE.
47. ALL 15A,120V,1ø DUPLEX RECEPTACLES MTD. 300mm BELOW CEILING (TYPICAL FOR QUIET AREAS)
48. INSTALL WALL MOUNTED TOGGLE SWITCH IN FLUSH WALL MOUNTED LOCKABLE BOX WITH LOCK (FOR CORRIDOR LOCATIONS ONLY). 12"X12"X6" FLUSH MOUNTED BOX (CAT.#R128), CONTACT JOHN ANDERSON (TEL.: 416-292-8630).
49. ALL 15A,120V,1ø DUPLEX RECEPTACLES MTD. 200mm BELOW CEILING (TYPICAL FOR REGULATION ROOMS)



NOTES:

1. PROVIDE CONDUITS, OUTLET BOXES, COVERPLATES, JACKS AND ASSOCIATED SOUND SYSTEM WIRING.
2. PROVIDE CONDUIT C/W WIRING FOR CONNECTION OF SOUND SYSTEM TO SCHOOL P.A. MASTER.
3. SOUND SYSTEM SPEAKERS, AMPLIFIER, MIXER, CD/DVD PLAYER ETC. WILL BE PROVIDED BY ELECTRICAL CONTRACTOR PART OF THIS CONTRACT.
4. FOR MORE INFORMATION REFER TO ELECTRICAL SPECIFICATION

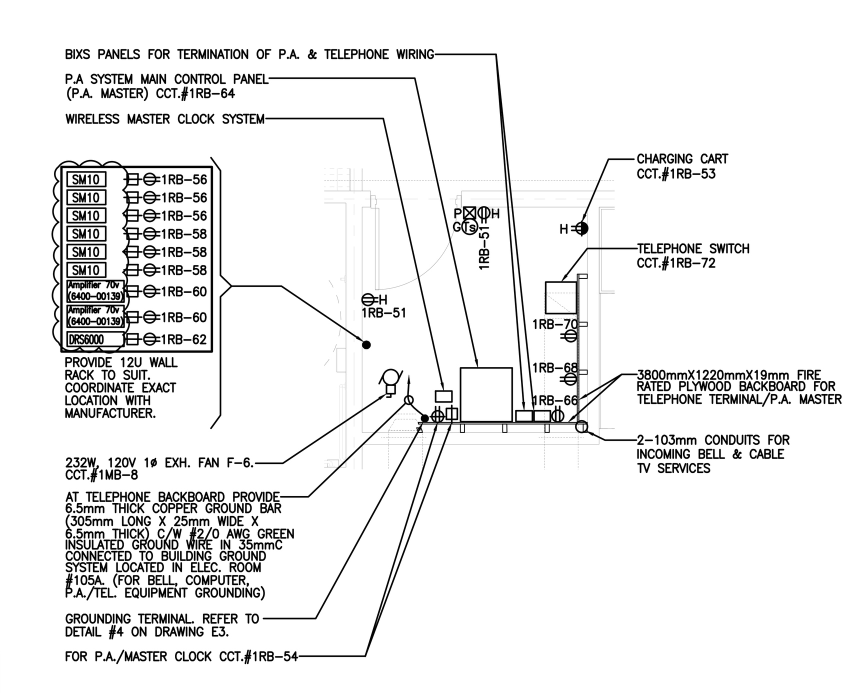
8 PROVISIONS FOR SOUND SYSTEM IN GYMNASIUM AND STAGE
E6 SCALE:



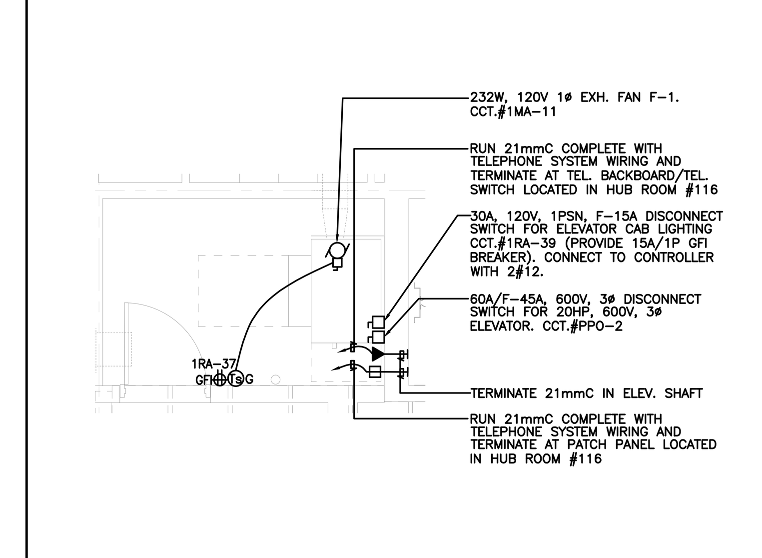
NOTE:

1. RUN 21mmEC FROM CARMA METERING HEAD EQUIPMENT TO CARMA WATER METER IN WATER METER #124B. COORDINATE EXACT LOCATION/TERMINATION ON SITE WITH CARMA SYSTEM INSTALLER.

2 ELECTRICAL ROOM No.105A
E6 SCALE: 1:50



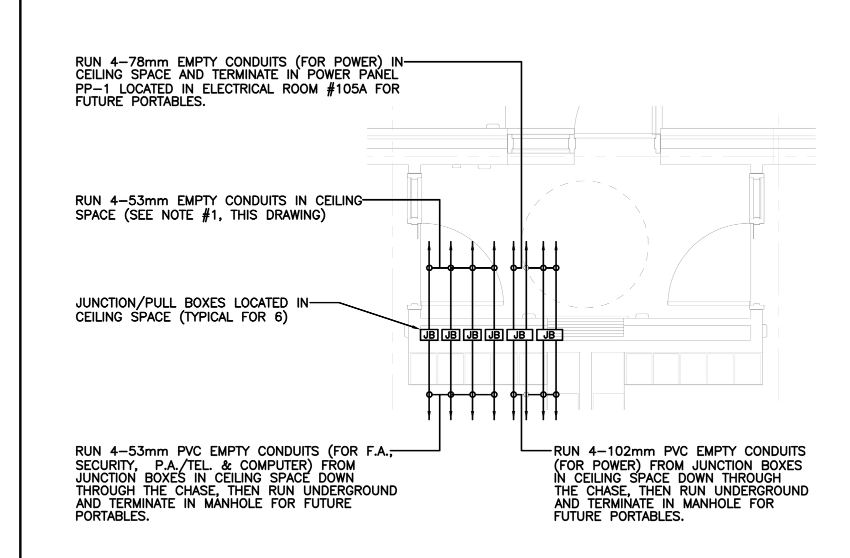
3 HUB ROOM No.116
E5 SCALE: 1:50



NOTE:

1. EXACT LOCATION OF DISCONNECT SWITCHES SHALL BE COORDINATED WITH THE ELEVATOR SUPPLIER/INSTALLER.

4 ELEVATOR MACHINE ROOM No.102
E6 SCALE: 1:50

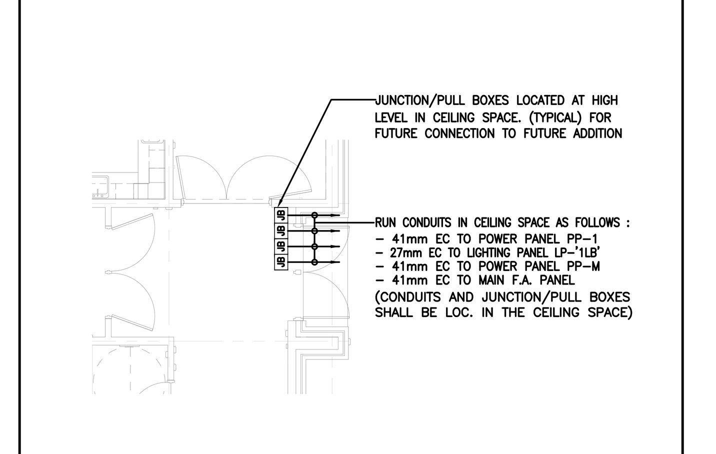


NOTES:

1. PROVIDE EMPTY CONDUITS IN CEILING SPACE AS FOLLOWS:
   1-53mm TO MAIN SECURITY PANEL FOR FUTURE SECURITY WIRING TO PORTABLES
   1-53mm TO CABLE TRAY FOR FUTURE P.A./TEL. WIRING TO PORTABLES
   1-53mm TO CABLE TRAY FOR FUTURE COMPUTER WIRING TO PORTABLES
   1-53mm TO MAIN F.A. CONTROL PANEL FOR FUTURE F.A. WIRING TO PORTABLES

   PROVIDE LAMACOID LABELS ON BOTH ENDS OF EMPTY CONDUITS "FOR FUTURE PORTABLES" FOR ALL EMPTY CONDUITS IN CEILING SPACE AND T-BAR GRID BELOW.

5 PART KG VESTIBULE 119B
E6 SCALE: 1:50



6 PART VESTIBULE V2
E6 SCALE: N.T.S.

No.	DATE	REVISIONS
7	SEPT. 21'26	ADDENDUM #E2
6	SEPT. 10'26	ISSUED FOR BUILDING PERMIT RESUBMISSION
5	AUG. 25'26	ISSUED FOR TENDER
4	JUN. 5'26	ISSUED FOR BUILDING PERMIT
3	DEC. 23'25	ISSUED FOR CLASS B COST ESTIMATE
2	OCT. 06'25	ISSUED FOR 50% SUBMISSION
1	SEPT. 09'25	ISSUED FOR PROGRESS DRAWINGS

KEDRON EAST CATHOLIC ELEMENTARY SCHOOL

DURHAM CATHOLIC DISTRICT SCHOOL BOARD
Learning and Living in Faith

DRAWING
ELECTRICAL GROUND FLOOR POWER LAYOUT

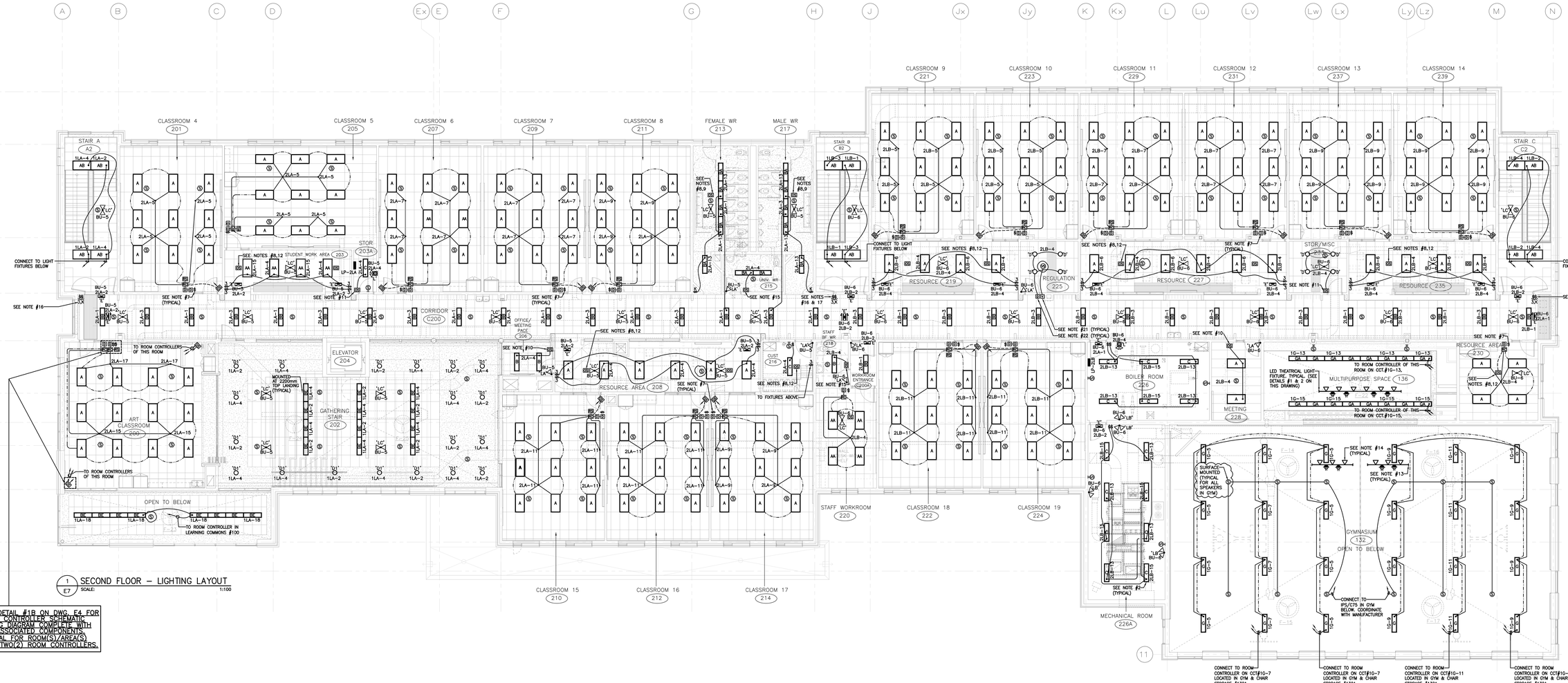
TRUE NORTH | DWG. NORTH

JOB NO. 2402
SCALE AS NOTED
PRINTABLE SIZE
PRINTED AUGUST 11, 2026

rybka Ellard Willson
23 Lesmill Road, Unit 410
Toronto, ON M3B 3P6

DWG. NO. E6

25046



1 / E7 SECOND FLOOR – LIGHTING LAYOUT
SCALE: 1:100

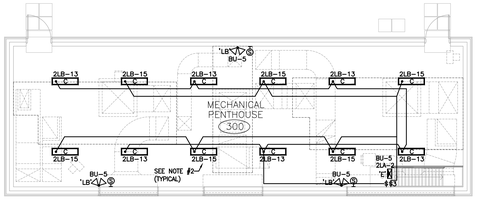
SEE DETAIL #1B ON DWG E4 FOR ROOM CONTROLLER SCHEMATIC WIRING DIAGRAM COMPLETE WITH ALL ASSOCIATED COMPONENTS. TYPICAL FOR ROOM(S)/AREA(S) WITH TWO(2) ROOM CONTROLLERS.

NOTES:

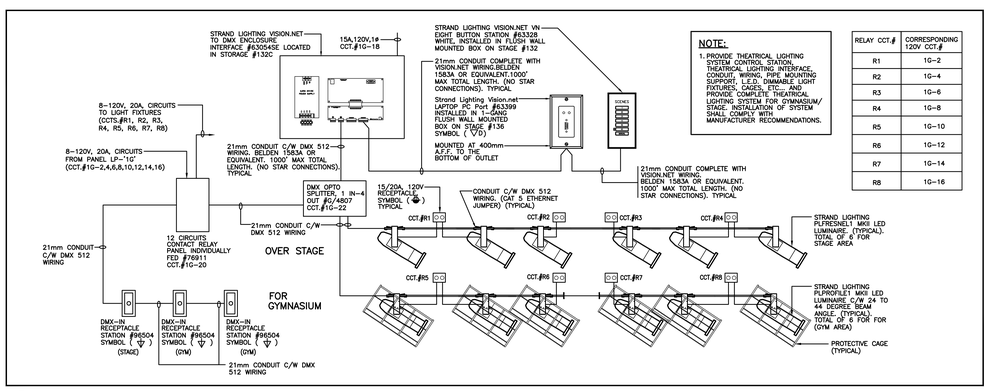
1. ELECTRICAL CONTRACTOR SHALL INCLUDE IN TENDER PRICE FOR INSTALLATION, TESTING, TIME ADJUSTMENT AND COMMISSIONING OF OCCUPANCY SENSORS, ROOM CONTROLLERS, DAYLIGHT SENSORS, AND PROGRAMMING OF AUTO-ON SEQUENCE OF ROOM CONTROLLER FOR LIGHT FIXTURES ON A ROOM BY ROOM BASIS IN ENTIRE BUILDING, BY MANUFACTURER. SUBMIT VERIFICATION/COMMISSIONING REPORT AFTER COMPLETION OF WORK. REFER TO ELECTRICAL SPECIFICATION FOR DETAILS.
2. EXACT LOCATION OF LIGHT FIXTURES SHALL BE DETERMINED AFTER DUCTS, PIPES AND ALL MECH. EQUIPMENT HAVE BEEN INSTALLED. COORDINATE WITH ELECTRICAL CONSULTANT AND MECHANICAL CONTRACTOR (TYPICAL FOR ALL LIGHTING FIXTURES IN MECHANICAL RM. AND FLUID COOLER PENTHOUSE)
3. FOR EXACT LOCATION OF ALL LIGHT FIXTURES REFER TO ARCHITECTURAL DRAWINGS.
4. COORDINATE LOCATION OF LIGHTING FIXTURES WITH MECHANICAL DIVISION.
5. EMERGENCY LIGHTING LOAD PER BATTERY UNIT SHALL NOT EXCEED 490 WATTS PER UNIT. (ELECTRICAL CONTRACTOR TO VERIFY)
6. WIRING FOR EMERGENCY CIRCUITS SHALL BE SIZED IN ACCORDANCE WITH MANUFACTURER'S RECOMMENDATION AND VOLTAGE DROP SHALL NOT EXCEED 5% & MINIMUM WIRE SIZE SHALL BE #10AWG.
7. PROVIDE SINGLE POLE DOUBLE THROW LIGHT SWITCH (WALL MOUNTED IN ACCESSIBLE CEILING SPACE ABOVE WALLSTATIONS/CLASSROOM CONTROL PANEL) AND DOUBLE POLE SINGLE THROW LIGHT SWITCH RECESS MOUNTED ON THE WALL/CLASSROOM CONTROL PANEL (WHERE APPLICABLE) FOR EACH ROOM CONTROLLER. BOTH SWITCHES SHALL OVERRIDE RESPECTIVE ROOM CONTROLLER USED FOR 120V LIGHTING IN THE RESPECTIVE ROOM(S)/SPACE(S) IN CASE OF THEIR FAILURE. PROVIDE ASSOCIATED LAMICOIDE PLATE ON SWITCH LOCATED ABOVE WALL STATIONS/CLASSROOM CONTROL PANEL AND ON CEILING GRID BELOW SWITCH, AS WELL AS THE BY-PASS SWITCH MOUNTED ON CLASSROOM CONTROL PANEL OR ON WALL. ADJUST ALL COMPONENTS TO SUIT. REFER TO DETAIL #2 ON DRAWING #E5 FOR WIRING SCHEMATIC DIAGRAM.
8. PROVIDE OCCUPANCY SENSOR EATON, CAT. OAC-0T-1000-R, WHICH SHALL TURN-OFF CORRESPONDING LIGHT FIXTURES WHEN LIGHT SWITCHE(S) IS (ARE) IN "ON" POSITION AND SPACE IS NOT OCCUPIED AND TURN THEM BACK 'ON' WHEN SPACE OCCUPIED. EXACT LOCATION OF OCCUPANCY SENSOR SHALL BE COORDINATED ON SITE AND SHALL COMPLY WITH MANUFACTURER RECOMMENDATION. PROVIDE ALL NECESSARY EQUIPMENT TO SUIT. PROVIDE NUMBER OF POWER PACK(S) TO SUIT NUMBER OF CIRCUIT(S) IN ROOM.
9. ELECTRICAL CONTRACTOR SHALL PROVIDE LIGHT SWITCH (WALL MOUNTED IN CORRIDOR CEILING SPACE ABOVE ENTRANCE TO WASHROOM) WHICH SHALL OVERRIDE (BY PASS) OCCUPANCY SENSOR/POWER PACK(S) IN CASE OF THEIR FAILURE. PROVIDE ASSOCIATED LAMICOIDE PLATE ON SWITCH AND T-BAR GRID BELOW SWITCH. ADJUST ALL COMPONENTS TO SUIT.
10. PROVIDE OCCUPANCY SENSOR, EATON, CAT.# VSW-P-010, WALL SWITCH VACANCY SENSOR (MANUAL-ON/AUTOMATIC-OFF CONTROL) WHICH SHALL TURN OFF ASSOCIATED LIGHT FIXTURES WHEN SPACE IS NOT OCCUPIED. VACANCY SENSOR SHALL BE PRESET TO 50% LIGHTING LEVEL WHEN MANUALLY ACTIVATED TO TURN ON THE ASSOCIATED LIGHT FIXTURES IN THE RESPECTIVE SPACE. PROVIDE ALL NECESSARY EQUIPMENT TO SUIT.
11. PROVIDE OCCUPANCY SENSOR, EATON, CAT. OWM-D-1001-WV, WALL SWITCH VACANCY SENSOR (MANUAL-ON/AUTOMATIC-OFF CONTROL) WHICH SHALL TURN OFF ASSOCIATED LIGHT FIXTURES WHEN SPACE IS NOT OCCUPIED. PROVIDE ALL NECESSARY EQUIPMENT TO SUIT.
12. ELECTRICAL CONTRACTOR SHALL PROVIDE LIGHT SWITCH (WALL MOUNTED IN CEILING SPACE ABOVE LIGHT SWITCHES/ CLASSROOM CONTROL PANEL) WHICH SHALL OVERRIDE (BY PASS) OCCUPANCY SENSOR/POWER PACK(S) IN CASE OF THEIR FAILURE. PROVIDE ASSOCIATED LAMICOIDE PLATE ON SWITCH AND ON T-BAR GRID BELOW SWITCH. ADJUST ALL COMPONENTS TO SUIT.
13. FOR EXACT LOCATION, COORDINATE WITH THE ARCHITECT/CONSULTANT AND ON SITE (TYPICAL).
14. LED TYPE THEATRICAL LIGHTING FIXTURE SHALL BE C/W WIREGUARD. TYPICAL FOR GYMNASIUM (SEE DETAILS #1, 2 & 3 ON THIS DWG.)
15. PROVIDE OCCUPANCY SENSOR, EATON, CAT. OWM-D-1001-WM, WALL SWITCH VACANCY SENSOR (AUTOMATIC-ON/AUTOMATIC-OFF CONTROL) WHICH SHALL TURN OFF ASSOCIATED LIGHT FIXTURES WHEN SPACE IS NOT OCCUPIED. PROVIDE ALL NECESSARY EQUIPMENT TO SUIT.
16. PROVIDE TWO (2) 3-WAY KEY OPERATED SWITCHES AS FOLLOWS:
    - ONE TO CONTROL CORRIDOR LIGHTS ON CCT.# 2LA-1
    - ONE TO CONTROL CORRIDOR LIGHTS ON CCT.# 2LA-3

    KEY SWITCHES SHALL REMAIN IN 'ON' POSITION AT ALL TIME TO ALLOW B.M.S. & SECURITY CONTROL FOR ALL CORRIDOR AND STAIR LIGHTING.
17. PROVIDE TWO (2) 3-WAY KEY OPERATED SWITCHES AS FOLLOWS:
    - ONE TO CONTROL CORRIDOR LIGHTS ON CCT.# 2LB-1
    - ONE TO CONTROL CORRIDOR LIGHTS ON CCT.# 2LB-3

    KEY SWITCHES SHALL REMAIN IN 'ON' POSITION AT ALL TIME TO ALLOW B.M.S. & SECURITY CONTROL FOR ALL CORRIDOR AND STAIR LIGHTING.
18. ELECTRICAL CONTRACTOR SHALL PROVIDE ALL ASSOCIATED COMPONENTS (I.E. UNISTRUT, HANGERS, BRACKETS ETC.) FOR PROPER INSTALLATION OF LIGHT FIXTURES TYPE 'G' LOCATED BETWEEN STRUCTURAL JOISTS IN GYMNASIUM (TYPICAL).
19. INCLUDE IN TENDER PRICE SUPPLY AND INSTALLATION OF 4 TYPE 'E' EXIT SIGNS. 4 TYPE 'LC' FIXTURES, 4 TYPE 'LA' FIXTURES & 4 TYPE 'LB' FIXTURES C/W 15000mm OF CONDUIT AND WIRING AND CONNECTION TO THE NEAREST EXIT SIGN OR EMERGENCY HEAD.
20. INCLUDE IN TENDER PRICE SUPPLY AND INSTALLATION OF 5 TYPE '25/70V P.A. SPEAKER", 5 TYPE "8 OHM P.A. SPEAKER", 2 TYPE "25/70V P.A. HORN", 2 TYPE "STROBE LIGHTS" C/W ASSOCIATED BACK BOX, 15000mm OF CONDUIT AND WIRING AND CONNECTION TO THE NEAREST PA SPEAKER/HORN/STROBE.
21. OUTLET BOX COMPLETE WITH ASSOCIATED CONDUIT FOR VOLUME CONTROL WIRING OF P.A. SPEAKER. (COORDINATE WITH P.A./TEL. SYSTEM INSTALLER.)
22. INSTALL WALL MOUNTED LOW VOLTAGE, 0-10V, DIMMER SWITCH ACUITY CONTROLS SENSOR SWITCH CAT.# SPDDMRD. AND OUTLET BOX FOR FUTURE VOLUME CONTROL IN FLUSH WALL MOUNTED LOCKABLE BOX WITH LOCK (FOR CORRIDOR LOCATIONS ONLY). 12"X12"X6" FLUSH MOUNTED BOX (CAT.#R128). CONTACT JOHN ANDERSON (TEL: 416-292-8630).



5 / E7 MECHANICAL PENTHOUSE – LIGHTING LAYOUT
SCALE: 1:100

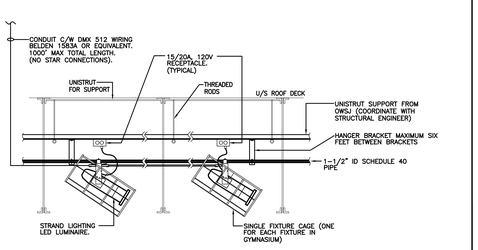


RELAY CCT.#	CORRESPONDING 120V CCT.#
R1	1G-2
R2	1G-4
R3	1G-6
R4	1G-8
R5	1G-10
R6	1G-12
R7	1G-14
R8	1G-16

NOTE:
1. PROVIDE THEATRICAL LIGHTING SYSTEM CONTROL STATION, THEATRICAL LIGHTING INTERFACE, CONDUIT, WIRING, PIPE MOUNTING SUPPORT, L.E.D., DIMMABLE LIGHT FIXTURES, CAGES, ETC... AND PROVIDE COMPLETE THEATRICAL LIGHTING SYSTEM FOR GYMNASIUM/ STAGE. INSTALLATION OF SYSTEM SHALL COMPLY WITH MANUFACTURER RECOMMENDATIONS.

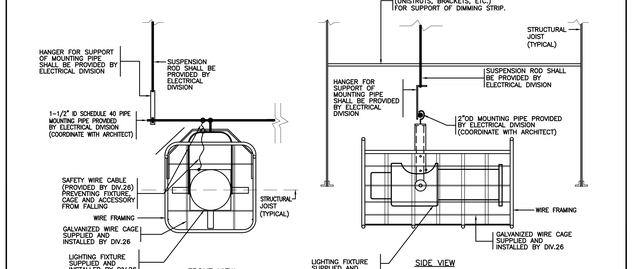
2 / E7 THEATRICAL LIGHTING SYSTEM RISER DIAGRAM
SCALE: N.T.S.

NOTES:
1. LIGHTING CAGE ASSEMBLY, CAGE HANGERS, LIGHTING PIPE UNISTRAT AND ALL ASSOCIATED COMPONENTS FOR PROPER INSTALLATION SHALL BE PROVIDED BY ELECTRICAL CONTRACTOR.
2. PROVIDE INDIVIDUAL CAGE FOR EACH FIXTURE. PROVIDE SHOP DRAWINGS.



3 / E7 THEATRICAL LIGHTING LIGHT FIXTURE MOUNTING DETAIL
SCALE: N.T.S.

NOTES:
1. PROVIDE INDIVIDUAL CAGE FOR EACH FIXTURE LOCATED IN GYM. PROVIDE SHOP DRAWINGS FOR REVIEW PRIOR TO MANUFACTURING PROCESS.
2. COORDINATE INSTALLATION OF THEATRICAL LIGHTING LUMINAIRES AND ASSOCIATED HANGING COMPONENTS WITH ARCHITECT AND MANUFACTURER.



4 / E7 THEATRICAL LIGHTING LIGHT FIXTURE DETAIL
SCALE: N.T.S.

No.	DATE	REVISIONS
7	SEPT. 21'26	ADDENDUM #2
6	SEPT. 10'26	ISSUED FOR BUILDING PERMIT RESUBMISSION
5	AUG. 25'26	ISSUED FOR TENDER
4	JUN. 5'26	ISSUED FOR BUILDING PERMIT
3	DEC. 23'25	ISSUED FOR CLASS B COST ESTIMATE
2	OCT. 06'25	ISSUED FOR 50% SUBMISSION
1	SEPT. 09'25	ISSUED FOR PROGRESS DRAWINGS

KEDRON EAST CATHOLIC ELEMENTARY SCHOOL

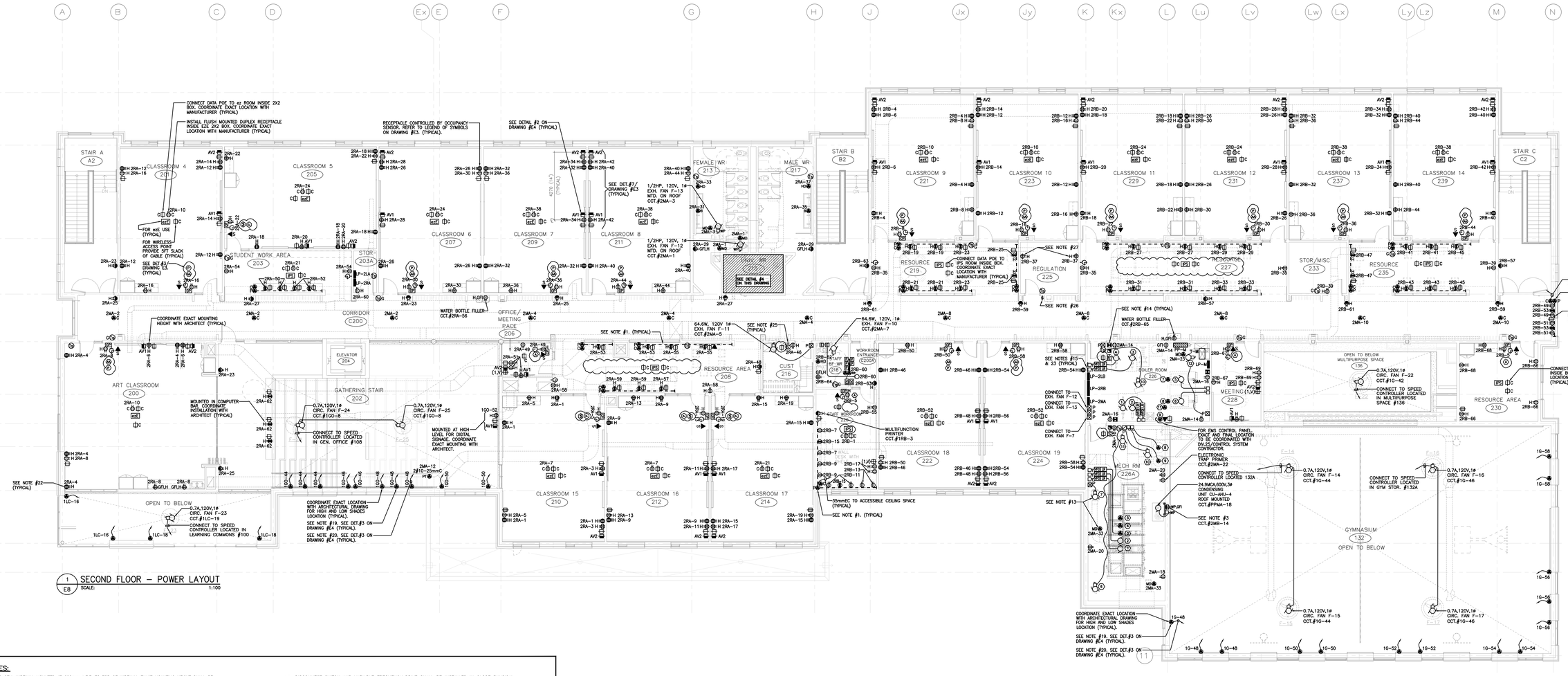
DURHAM CATHOLIC DISTRICT SCHOOL BOARD
Learning and Living in Faith

DRAWING
ELECTRICAL
SECOND FLOOR
LIGHTING LAYOUT

TRUE NORTH | DWG. NORTH
JOB NO. 2402
SCALE: AS NOTED
PRINTABLE SIZE
PRINTED: AUGUST 11, 2026
DWG. NO. E7

rybka Eldard Willson
23 Lesmill Road, Unit 410
Toronto, ON M3B 3P6

25046



1 / E8 SECOND FLOOR – POWER LAYOUT
SCALE: 1:100

NOTES:

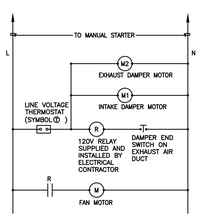
1. TWO CELL WIREWAY, MOUNTED AT 600mm A.F.F. TO TOP OF WIREWAY. EXACT MOUNTING HEIGHT SHALL BE COORDINATED WITH THE ARCHITECT AND ON SITE.
2. OUTLETS SHALL BE INSTALLED AT 2600mm A.F.F. EXACT LOCATION SHALL BE COORDINATED WITH THE ARCHITECT/OWNER AND ON SITE.
3. PROVIDE ONE LIGHTWEIGHT SUSPENDED CEILING PLATE PEERLESS MODEL #CM455 COMPLETE WITH ALL ASSOCIATED COMPONENTS (i.e. 2 ELECTRICAL RECEPTACLES, INDEPENDENT SUPPORTS, etc.). CONNECT THE 15A, 120V CEILING PLATE MOUNTED DUPLEX RECEPTACLES TO THE 15A, 120V JUNCTION BOXES MOUNTED IN CEILING SPACE WITH BX CABLE. ASSEMBLY AND INSTALLATION SHALL BE DONE ACCORDING TO INSTRUCTIONS PROVIDED BY THE MANUFACTURER. EXACT LOCATION SHALL BE COORDINATED WITH OWNER/ARCH. AND ON SITE. PROJECTOR WILL BE SUPPLIED BY OWNER AND INSTALLED BY ELECTRICAL DIVISION.
4. JUNCTION BOX COMPLETE WITH 15A, 120V CIRCUIT MOUNTED IN CEILING SPACE. INSTALL THE JUNCTION BOX 12'-6" FROM PROJECTION SCREEN, ON CENTER LINE. COORDINATE EXACT LOCATION WITH ARCHITECT.
5. OUTLET FOR HANDICAPPED PUSHBUTTON, PUSH TO LOCK BUTTON, LIGHT AND ASSOCIATED COMPONENTS.
6. PROVIDE 16mmC INSIDE DOOR FRAME BETWEEN ELECTRIC STRIKE AND DOOR OPERATOR. COORDINATE WITH DOOR HARDWARE CONTRACTOR FOR EXACT ROUGH-INS.
7. OUTLET AND TOGGLE SWITCH MTD. INSIDE DOOR TRANSOM FOR 120V,1ø DOOR MOTOR (CONNECT TO POWER PACK WITH 2#12).
8. 16mmC TO BE TERMINATED INSIDE DOOR TRANSOM.
9. OUTLET BOX FOR DOME LIGHT AND SOUNDER, "ASSISTANCE REQUIRED".
10. OUTLET BOXES FOR EMERGENCY ASSISTANCE PUSH BUTTON AND LED ANNUNCIATOR AND SOUNDER "ASSISTANCE REQUESTED".
11. DOOR HARDWARE POWER SUPPLY, MOUNTED IN CEILING SPACE ABOVE DOOR OPERATOR (TYPICAL).
12. 15A, 120V DUPLEX RECEPTACLE MOUNTED AT 400mm BELOW CEILING FOR H/C LIFT CHARGER. EXACT LOCATION SHALL BE COORDINATED WITH ARCHITECT, B.F. LIFT SUPPLIER/INSTALLER AND ON SITE.
13. REFER TO DETAIL 3./E8 FOR FAN STARTER SCHEMATIC DIAGRAM FOR WIRING CONNECTION (TYPICAL FOR ALL FANS WITH MAGNETIC STARTER) CONNECT EXHAUST FAN THROUGH MOTORIZED DAMPER END SWITCH, FAN SHALL START ONLY WHEN DAMPER IS FULLY OPEN AND DAMPER END SWITCH IS ACTIVATED. COORDINATE WITH MECHANICAL CONTRACTOR.
14. ILLUMINATED EMERGENCY PUSH BUTTON (RED MUSHROOM TYPE) FOR SHUT DOWN OF BOILERS AND HOT WATER TANKS' GAS BURNERS ON CCTS.#2MA-9,11,13,15,35,37,39 (CCT.#2MA-24 FOR CONTACTOR COIL VOLTAGE). PROVIDE ASSOCIATED CONTACTORS AND CONNECT TO BOILER'S CONTROL PANELS (COORDINATE WITH MECHANICAL DIV.).
15. DISCONNECT SWITCH AND VARIABLE FREQUENCY DRIVE SHALL BE INSTALLED IN CLOSE PHYSICAL PROXIMITY TO MOTOR. EXACT LOCATION OF DISCONNECT SWITCH AND VFD SHALL BE COORDINATED WITH CONTRACTOR/CONSULTANT AND ON SITE. INSTALLATION OF DISCONNECT SWITCH AND VARIABLE FREQUENCY DRIVE ON MECHANICAL EQUIPMENT IS NOT ACCEPTABLE.
16. PROVIDE FIRE RATED BACK BOARD, UNISTRUT/BRACKETS FOR INSTALLATION OF DISCONNECT SWITCH/V.F.D./STARTER AT ACCESS DOOR TO MOTOR COMPARTMENT. EXACT LOCATION OF DISCONNECT SWITCH/V.F.D./STARTER SHALL BE COORDINATED WITH MECHANICAL CONTRACTOR/CONSULTANT AND ON SITE.
17. RUN 35mmC (FOR COMPUTER WIRING) AND TERMINATE IN ACCESSIBLE CORRIDOR CABLE TRAY.
18. 15/20A, 120V WEATHERPROOF GFI DUPLEX RECEPTACLE C/W "IN USE" COVER AND LABEL "EXTRA DUTY".
19. 15A, 120V, 1ø OUTLET FOR MOTORIZED SHADES/BLACKOUT BLINDS, CONNECT TO SHADES/BLINDS MOTOR. MOTOR GROUP CONTROLLER AND UP-DOWN SWITCH. EXACT LOCATION OF OUTLET(S) SHALL BE COORDINATED WITH THE ARCHITECT AND MOTORIZED SHADES SUPPLIER/INSTALLER.
20. PROVIDE ASSOCIATED 21mm CONDUIT C/W WIRING (3 WIRE – UP/DOWN/COMMON + GRND.) AND CONNECT SHADES/BLINDS MOTOR TO RESPECTIVE MOTOR GROUP CONTROLLER. SEE FLOOR PLAN FOR LOCATION.
21. INCLUDE IN TENDER PRICE SUPPLY AND INSTALLATION OF 5-COMPUTER OUTLETS COMPLETE WITH 15000mm EC TERMINATED IN ACCESSIBLE CEILING SPACE AND 5-15A/120V DUPLEX RECEPTACLES C/W 15000mm OF CONDUITS/WIRES AND CONNECTION TO 5-15A/1P SPACE BREAKERS IN THE NEAREST AVAILABLE PANEL. EXACT LOCATION OF PROVISIONS FOR ENERGY MANAGEMENT SYSTEM (EMS) PANEL SHALL BE COORDINATED WITH CONTROL CONTRACTOR BEFORE ROUGH-INS.
22. MOUNTED ABOVE HEATING UNIT ENCLOSURE. FINAL LOCATION SHALL BE COORDINATED WITH MECHANICAL CONSULTANT/HEATING ELEMENT. (TYPICAL FOR ALL OUTLETS MOUNTED ON EXTERIOR WALLS)
23. INSTALLATION OF DISCONNECT SWITCH/VARIABLE FREQUENCY DRIVE (VFD) ON MECHANICAL EQUIPMENT ARE NOT ACCEPTABLE. DISCONNECT SWITCH/VFD SHALL BE INSTALLED IN CLOSE PHYSICAL PROXIMITY TO MOTOR. EXACT LOCATION OF DISCONNECT SWITCH/VFD SHALL BE COORDINATED WITH MECHANICAL CONTRACTOR/CONSULTANT AND ON SITE. ADJUST ALL COMPONENTS TO SUIT.
25. STROBE COMPLETE WITH ASSOCIATED CONDUIT/WIRES. SHALL BE MOUNTED APPROX. 3.6M AFF. COORDINATE EXACT ROUGH-INS WITH MANUFACTURER (TYPICAL)
26. INSTALL WALL MOUNTED TOGGLE SWITCH IN FLUSH WALL MOUNTED LOCKABLE BOX WITH LOCK (FOR CORRIDOR LOCATIONS ONLY). 12"X12"X6" FLUSH MOUNTED BOX (CAT.#1128), CONTACT JOHN ANDERSON (TEL.: 416-292-8630).
27. ALL 15A,120V,1ø DUPLEX RECEPTACLES MTD. 200mm BELOW CEILING (TYPICAL FOR REGULATION ROOMS)

BOILER ROOM No.226 EQUIPMENT SCHEDULE

ITEM NO.	DESCRIPTION	POWER REQUIREMENTS	CCT. NO.	WIRING
1	HEATING WATER PUMP P-1	7.5HP,600V,3ø	PPM-1	3#12-16mmC
2	HEATING WATER PUMP P-2	7.5HP,600V,3ø	PPM-2	3#12-16mmC
3	HEATING GLYCOL PUMP P-3	7.5HP,600V,3ø	PPM-7	3#12-16mmC
4	HEATING GLYCOL PUMP P-4	7.5HP,600V,3ø	PPM-8	3#12-16mmC
5	BOILER #1 BLOWER	20A,120V,1ø	2MA-9	2#10-16mmC
6	BOILER #2 BLOWER	20A,120V,1ø	2MA-11	2#10-16mmC
7	BOILER #1 CONTROL	15A,120V,1ø	2MA-13	2#12-16mmC
8	BOILER #2 CONTROL	15A,120V,1ø	2MA-15	2#12-16mmC
9	OUTLET FOR EMS CONTROL PANEL	15A,120V,1ø	2MA-17	2#12-16mmC
10	UNIT HEATER	1/6HP,120V,1ø	2MA-19	2#12-16mmC
11	FLOW METER	15A,120V,1ø	2MA-21	2#12-16mmC
12	EXHAUST FAN F-2 (ROOF MTD)	1/4HP,120V,1ø	2MA-23	2#12-16mmC

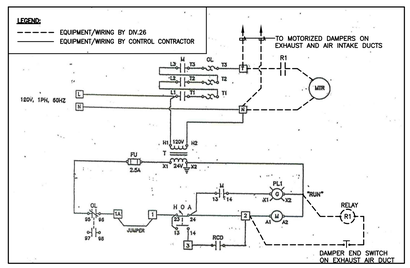
MECHANICAL ROOM No.226A EQUIPMENT SCHEDULE

ITEM NO.	DESCRIPTION	POWER REQUIREMENTS	CCT. NO.	WIRING
1	AIR HANDLING UNIT AHU-4 SUPPLY FAN	7.5HP,600V,3ø	PPM-3	3#12-16mmC
2	AIR HANDLING UNIT AHU-4 RETURN FAN	5.0HP,600V,3ø	PPM-4	3#12-16mmC
3	HEAT RECLAIM WHEEL (AHU-4)	1/2HP,600V,3ø	PPM-5	3#12-16mmC
4	AHU-4 LIGHTS	15A,120V,1ø	2MA-25	2#12-16mmC
5	AHU-4 INTEGRATION KIT	2A,208V,1ø	2MA-27/29	2#12-16mmC
6	UNIT HEATER	1/6HP,120V,1ø	2MA-31	2#12-16mmC
7	EXHAUST FAN F-21	1/6HP,120V,1ø	2MA-33	2#12-16mmC
8	H.W. TANK GAS BURNER	15A,120V,1ø	2MA-35	2#12-16mmC
9	H.W. TANK GAS BURNER	15A,120V,1ø	2MA-37	2#12-16mmC
10	H.W. TANK RECIRC. PUMP	1/6HP,120V,1ø	2MA-39	2#12-16mmC
11	UNIT HEATER	1/6HP,120V,1ø	2MA-41	2#12-16mmC

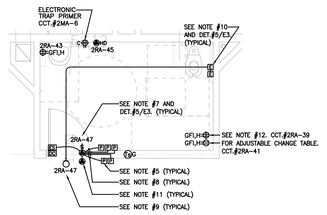


* ALL WIRING/COMPONENTS FOR MANUAL STARTER MOTOR CONTROL TO BE SUPPLIED & INSTALLED BY ELECTRICAL DIVISION.

2 / E8 TYPICAL FAN MANUAL STARTER SCHEMATIC DIAGRAM
SCALE: N.T.S.



3 / E8 TYPICAL FAN MAGNETIC STARTER SCHEMATIC DIAGRAM
SCALE: N.T.S.



4 / E8 UNIVERSAL WASHROOM No.215
SCALE: 1:50

No.	DATE	REVISIONS
7	SEPT. 21'26	ADDENDUM #2
6	SEPT. 10'26	ISSUED FOR BUILDING PERMIT RESUBMISSION
5	AUG. 25'26	ISSUED FOR TENDER
4	JUN. 5'26	ISSUED FOR BUILDING PERMIT
3	DEC. 23'25	ISSUED FOR CLASS 'B' COST ESTIMATE
2	OCT. 06'25	ISSUED FOR 50% SUBMISSION
1	SEPT. 09'25	ISSUED FOR PROGRESS DRAWINGS

KEDRON EAST CATHOLIC ELEMENTARY SCHOOL

DURHAM CATHOLIC DISTRICT SCHOOL BOARD
Learning and Living in Faith

DRAWING
ELECTRICAL
SECOND FLOOR
POWER LAYOUT

TRUE NORTH | DWG. NORTH

JOB NO. 2402

SCALE: AS NOTED

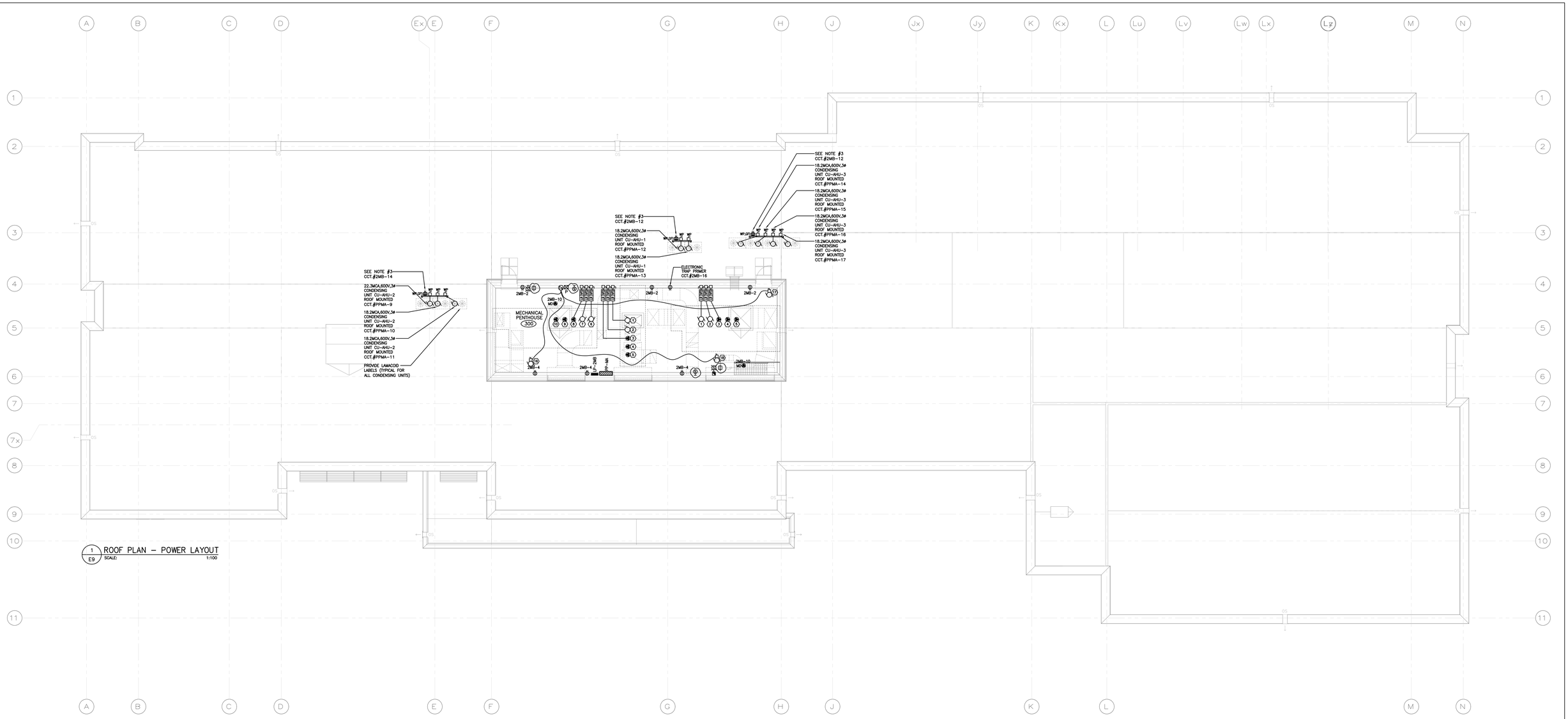
PRINTABLE SIZE

PRINTED: AUGUST 11, 2026

DWG. NO. E8

rybka Eldard Willson
23 Lesmill Road, Unit 410
Toronto, ON M3B 3P6

25046



1 E9 ROOF PLAN – POWER LAYOUT
SCALE: 1:100

NOTES:

1. 15/20A,120V COMBINATION WEATHERPROOF GFI SERVICE DUPLEX RECEPTACLE MOUNTED NEAR THE UNIT C/W WEATHERPROOF "IN-USE" COVER AND LABEL "EXTRA DUTY". FOR MECHANICAL UNIT USE. SIMILAR TO HUBBELL CAT#MX3200. COORDINATE EXACT MOUNTING LOCATION ON SITE.
2. PROVIDE FREE STANDING (BOLTED TO THE FLOOR) STRUTS/MOUNTING BRACKETS FOR INSTALLATION OF 15/20A WEATHERPROOF GFI SERVICE DUPLEX RECEPTACLES AND DISCONNECT SWITCHES. EXACT LOCATION SHALL BE COORDINATED WITH MECHANICAL CONTRACTOR/CONSULTANT AND ON SITE.
3. DISCONNECT SWITCH/SERVICE RECEPTACLE C/W WEATHERPROOF IN-USE COVER ON ROOF, SIMILAR TO HUBBELL CAT# WP26M. PROVIDE ASSOCIATED FREE STANDING (BOLTED TO THE FLOOR) UNISTRUTS/MOUNTING BRACKETS FOR INSTALLATION OF DISCONNECT SWITCH/RECEPTACLE. COORDINATE EXACT MOUNTING DETAILS WITH ARCHITECT AND ON SITE.

MECHANICAL PENTHOUSE No.300 EQUIPMENT SCHEDULE

ITEM NO.	DESCRIPTION	POWER REQUIREMENTS	CCT. NO.	WIRING
1	AIR HANDLING UNIT AHU-1 SUPPLY FAN	7.5HP,600V,3Ø	PPM-1	3#12-16mmC
2	AIR HANDLING UNIT AHU-1 RETURN FAN	5.0HP,600V,3Ø	PPM-2	3#12-16mmC
3	HEAT RECLAIM WHEEL (AHU-1)	---------	------	---------
4	AHU-1 LIGHTS	15A,120V,1Ø	2MB-1	2#12-16mmC
5	AHU-1 INTEGRATION KIT	2A,208V,1Ø	2MB-3/5	2#12-16mmC
6	AIR HANDLING UNIT AHU-2 SUPPLY FAN	15HP,600V,3Ø	PPM-3	3#10-25mmC
7	AIR HANDLING UNIT AHU-2 RETURN FAN	7.5HP,600V,3Ø	PPM-4	3#12-16mmC
8	HEAT RECLAIM WHEEL (AHU-2)	1/2HP,600V,3Ø	PPM-5	3#12-16mmC
9	AHU-2 LIGHTS	15A,120V,1Ø	2MB-7	2#12-16mmC
10	AHU-2 INTEGRATION KIT	2A,208V,1Ø	2MB-9/11	2#12-16mmC
11	AIR HANDLING UNIT AHU-3 SUPPLY FAN	25HP,600V,3Ø	PPM-6	3#8-25mmC
12	AIR HANDLING UNIT AHU-3 RETURN FAN	15HP,600V,3Ø	PPM-7	3#10-25mmC
13	HEAT RECLAIM WHEEL (AHU-3)	1/4HP,600V,3Ø	PPM-8	3#12-16mmC
14	AHU-3 LIGHTS	15A,120V,1Ø	2MB-13	2#12-16mmC
15	AHU-3 INTEGRATION KIT	2A,208V,1Ø	2MB-15/17	2#12-16mmC
16	UNIT HEATER	1/12HP,120V,1Ø	2MB-6	2#12-16mmC
17	UNIT HEATER	1/12HP,120V,1Ø	2MB-8	2#12-16mmC
18	EXHAUST FAN F-20	1/2HP,120V,1Ø	2MB-10	2#10-16mmC

No.	DATE	REVISIONS
7	SEPT. 21'26	ADDENDUM #2
6	SEPT. 10'26	ISSUED FOR BUILDING PERMIT RESUBMISSION
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KEDRON EAST CATHOLIC ELEMENTARY SCHOOL

DURHAM CATHOLIC DISTRICT SCHOOL BOARD
Learning and Living in Faith

DRAWING
ELECTRICAL
ROOF PLAN

TRUE NORTH | DWG. NORTH

JOB NO. 2402

SCALE AS NOTED

PRINTABLE SIZE

PRINTED AUGUST 11, 2026

DWG. NO. E9

rybka Eldard Willson
23 Lesmill Road, Unit 410
Toronto, ON M3B 3P6

25046

PART 1 – GENERAL

.1 Refer to Section 26 00 10, General Electrical Provisions.

.2 Supply and install Integrated AV system complete with conduit, back boxes, outlet boxes, wiring, devices, etc. as shown on drawings and as specified below.

.3 Shop Drawings

.1 Submit shop drawings and product data.

.2 This data is to include a full system riser diagram indicating every proposed device including wiring requirements.

.4 Operation and Maintenance Data

.1 Provide operation and maintenance data for incorporation into manual.

.2 Submit two (2) manuals which shall be labeled:

.1 Operation and maintenance Manual
.2 Project Name
.3 Location

.3 Submit an electronic copy of the manual in Adobe PDF format.

.4 The manual must include (in “tabbed” sections) the following:

.1 Contractors address and contact numbers.
.2 Guarantee letters, approvals, and certification letters from authorities.
.3 Operation data including:
- Riser diagram for the Integrated AV system.
- Description of the system and it’s controls.
- Copies of all submitted shop drawings.
- Description of actions to be taken in event of equipment failure.
- Spare parts equipment list.
- Maintenance data including:
  - Servicing, maintenance, operation and trouble-shooting instructions for each item of equipment.
  - Data to include schedules of tasks, frequency, tools required and task time.
- Commissioning list of entire Integrated AV system.

1.1 SUMMARY

A. Section Includes:

1. AV control and presentation system with user control panel, Bluetooth, and media content switch, including hardware and software.

B. Related Information:

1. Division 12 Section "Window Treatments" for window treatments controlled by the AV control system.
2. Division 25 Section "Integrated Automation Control of Electrical Systems" for software and integration hardware for network lighting controls.
3. Division 27 Section "Common Work Results for Communications".
4. Division 27 Section "Schedules for Communications".
5. Division 26 Section "Instrumentation and Control for Electrical Systems" for lighting controlled by central, modular, or network control system.
6. Division 27 Section "Communications Horizontal Cabling" for communications cabling requirements for modular control system.
7. Division 27 Section "Audio-Visual Communications" for communications and network cabling requirements for Audio-Visual systems and over all control systems communications.

1.2 REFERENCES

A. National Fire Protection Association (NFPA):

1. NFPA 70 - National Electrical Code.
2. ANSI/TIA/EIA-588-C.0 – General Cabling Standards
3. ANSI/TIA/EIA-568-C.1 -- Commercial Building Cabling Standard
4. ANSI/TIA/EIA-568-C.2 -- Balanced Twisted Pair Cabling Standard
5. ANSI/BICSI 001-2009, Information Transport Systems Design Standard for K-12 Educational Institutions
6. ANSI S12.60:2002 Acoustic Performance Criteria, Design Requirements, Guidelines for Schools
7. ANSI/NECA/BICSI 568-2006, Standard for Installing Commercial Building Telecommunications Cabling
8. ANSI/TIA/EIA-569-B -- Commercial Building Standard for Telecommunications Pathways and Spaces
9. ISO/IEC 18010:2002 (2002) – Pathways and Spaces for Customer Premises Cabling
10. ANSI/TIA/EIA-606(A) -- The Administration Standard for the Telecommunications Infrastructure of Commercial Buildings
11. ISO/IEC 14763-1:1999 (1999) – Implementation and Operation of Customer Premises Cabling, Part 1 – Administration
12. J-STD-607-A -- Commercial Building Grounding and Bonding Requirements for Telecommunications
13. IEEE 1100 – IEEE Emerald Book
14. NFPA 780 Standard for the Installation of Lightning Protection

15. Cal/OSHA-Pocket Guide for the Construction Industry (recent edition)
16. BICSI -- Telecommunications Distribution Methods Manual (TDMM)
17. BICSI -- Information Transport Systems Installation Methods Manual
18. BICSI - AV Design Reference Manual
19. BICSI – Network Design Reference Manual
20. Federal Communications Commission
21. Federal, state, and local codes, rules, regulations, and ordinances governing the work

1.3 REFERENCES

A. ABBREVIATIONS

1. AV: Audio Visual.

1.4 SYSTEM DESCRIPTION

A. For each classroom, the Contractor shall furnish and install a complete, networkable, scalable AV control and presentation System. The AV equipment must be housed in lockable enclosures.

B. For classrooms with hard /open ceilings, a surface wall core enclosure must be provided.

Each classroom will have the following equipment:

1. ezRoom Voice & Alert (ELEVATE) 2x2 plenum-rated ceiling mount enclosure with pre-installed UNITY Campus, SM10, POE pass-through switch, PowerLine, Configurable multi colour ClassLight and Z85 Room Mic. Includes 4 cables for securing to structure. Compatible with Conductor or Symphony.
2. Action! Teacher Microphone with ELEVATE based systems. Includes battery, charging cable and magnetic snap-n-go lanyard.
3. Bravo! Student Microphone for ELEVATE based systems. Includes battery and charging cable.
4. FlipCharger for Action! and Bravo! Microphones. Mount on the wall or set on desktop/shelf.
5. ZipControl Audio + 50ft cable, Dual Gang Audio Control Panel with snap-on cover + green 50ft plenum Cat5e cable. Connects to Zipline port on UNITY or ezRoom.
6. SCIP-V61G Symphony Classroom Phone
7. SP-C Cut-In Speaker Quad Kit (Speakers; Cables) 32W with UNITY/EZROOM
8. Preinstalled Bluetooth
9. MyFrontRow Control App.

C. Software: All software necessary to access full functionality of the system shall be licensed to the Owner without further chargers or recurring license fees

D. The System is to include all equipment, cabling, materials, labor, and training as required to install and test a complete and operating System as described herein.

E. Contractor shall follow installation instructions provided by the manufacturer. Installation drawings shall show the location and general arrangement of equipment, electrical systems, and related items. They shall be followed as closely as elements of the construction will permit.

F. Contractor shall examine the installation drawings and verify the conditions governing the work on the job site. Contractor shall arrange accordingly, providing such fittings, horizontal cable raceways, conduits, junction boxes and accessories as may be required to meet such conditions.

G. Deviations from the installation drawings, except for minor changes in routing and other such incidental changes that do not affect the functioning or serviceability of the Systems, shall not be made without the written approval of the Engineer.

1.7 ACTION SUBMITTALS

A. Product Data: For each type of product required, demonstrating compliance with requirements.

B. Shop Drawings: Indicate the following:

1. Schematic diagram of controlled circuits.

2. Circuits and emergency circuits with capacity and phase, control zones, load type and voltage per circuit.

1.6 INFORMATIONAL SUBMITTALS

A. Sample of manufacturer's warranty.

B. Installation and setup guides.

1.7 CLOSEOUT SUBMITTALS

A. Operating and maintenance instructions.

1.8 QUALITY ASSURANCE

A. Manufacturer Qualification: Manufacturer of controller with minimum five years record of satisfactory manufacturing and support of components comparable to basis of design system.

B. Source Requirements: Provide control panel, amplifier/switch, loudspeaker, receiver, microphone hardware and software through a single source from a single manufacturer.

C. All miscellaneous equipment required for a complete, professional installation shall be included in the base bid. No allowances for any additional equipment, hardware, cabling, or miscellaneous will be considered unless specifically excluded from the base bid.

D. All work materials shall be removed at the end of the work day and the work area left in the same condition as found.

E. The work herein specified shall be performed by fully competent workmen, in a thorough manner. All materials furnished by the Contractor shall be new, and all work shall be completed to the satisfaction of the Architect/Engineer.

F. All equipment shall be held firmly in place. This shall include speakers, receiver/amplifiers, cables, etc. Fastenings and supports shall be adequate to support their loads with a safety factor of at least three. All switches, connectors, outlets, etc., shall be clearly, logically, and permanently marked during installation.

G. The Contractor must take such precautions as are necessary to guard against electromagnetic and electrostatic hum and ground loops, to supply adequate ventilation, and to install the equipment to provide maximum safety to the person who operates it.

H. Care shall be exercised in wiring to avoid damage to the cables (e.g., stapling, pinching, excessive bending) and to the equipment. All joints and connections shall be made with lead-free rosin-core solder or with mechanical connectors approved by the Engineer. All wiring shall be executed in strict adherence to standard broadcast/network communication practices.

I. The Contractor shall be manufacturer-certified in their equipment, and currently maintain a locally run and operated business for at least five years, located within 50 miles of the work site. The Contractor shall use equipment supplied by an authorized reseller for this project location with full Manufacturer's warranty privileges.

J. The Contractor shall test the installed System according to the Manufacturer's instructions and verify that the equipment has been installed properly and is functioning as designed.

K. Manufacturer Qualifications: Approved manufacturer of controller listed in this Section with minimum five year's record of satisfactory manufacturing and support of components comparable to basis of design system.

1. Approval of Comparable Products: Submit the following in accordance with project substitution requirements, within time allowed for substitution review:

    a. Product data indicating compliance with requirements of this Section.

    b. Samples of each component.

    c. Sample submittals from similar project.

    d. Project references: Minimum of 5 completed installations, with Owner and Architect contact information.

    e. Sample warranty.

2. Substitutions following award of contract are not allowed except as stipulated in Division 01 General Requirements.

3. Approved manufacturers must comply with separate requirements of Submittals Article.

L. Regulatory Requirements: Provide components and systems that comply with requirements of the following:

1. Refer to Section 1.2 A.

1.9 COORDINATION

A. Coordinate integrated AV controls with systems and components specified in the following sections:

1. Division 11 Section "Audio-Visual Equipment."

2. Division 12 Section "Window Treatments."

3. Division 23 Section "Instrumentation and Control for HVAC."

4. Division 25 Section "Integrated Automation Control of Electrical Systems."

5. Division 26 Section "Wiring Devices."

6. Division 26 Section "Lighting Devices."

7. Division 26 Section "Interior Lighting."

8. Division 27 Section "Communications Horizontal Cabling."

9. Division 27 Section "Audio-Visual Communications."

10. Division 27 Section "Audio-Video Systems."
11. Division 27 Section “Intercom and PA Communications.”
12. Division 28 Section "Electronic Access Control and Intrusion Detection."

1.10 WARRANTY

A. Special Warranty: Manufacturer's standard form in which manufacturer agrees to repair or replace components of controls system that fail in materials or workmanship within the specified warranty period following substantial completion.

1. Warranty Period: Wireless transmitters, wireless receivers, infrared sensors, loudspeakers, and charging stands: 5 years.
2. Warranty Period: Rechargeable batteries, power cords, power supplies: 1 year.
3. Warranty Period: Other components: 3 years.

B. Manufacturer's Extended Support Service: Extended telephone support: Unlimited period.

PART 2 – PRODUCTS

2.1 MANUFACTURERS

A. Basis-of-Design Manufacturer: Subject to compliance with requirements, provide products of FrontRow by BOXLIGHT. 1609 Corporate Circle, Petaluma, CA 94954, Phone +1 707 227 0735, www.gofrontrow.com. The parts numbers in numeral 2.2 below correspond to the kit order number, which includes cables and accessories that are necessary to meet the performance criteria. Substitution request to follow procedure setup in General Conditions and to be approved by the Owner Representative 15 days prior to Bid date.

2.2 CLASSROOM AV SYSTEM COMPONENTS

The AV System will be ezRoom Voice and Alert, Classroom and Campus Audio, Control, and Communication. The following performance parameters for devices includes all parts. For information about individual configuration components refer to section 1.4.

A. Unity Campus:

1. PowerLine – Connect the PowerLine adapter to supply 90 watts of power to UNITY and ancillary components.
2. StreamLine – Not yet active; this is a new technology which will be implemented in a future firmware release.
3. Network / PoE++ - Connect UNITY to the local IP network
    i. • If the network switch is not PoE+ or PoE++ capable, PowerLine must be used
    ii. • With PoE+ UNITY will run in limited power mode
    iii. • With PoE++ UNITY will run in full power mode Inputs: 3.5mm audio, stereo
4. ClassLight – This port is dedicated to the ClassLight (If using ClassLight, connect this before powering the UNITY)
5. ZipLine – provide data, power, ALD out, Microphone, for ZipController modules.

6. Mic Charge – Connect a USB A to Micro USB cable to charge your Action! or Bravo! (Teacher or Student) microphone) (Power Only, no data will be transmitted) NOTE: Does not power the Flip Charger firmware release.
7. 24VDC / 12VDC Aux Power Out - Used to power other components. Most often used in ezRoom applications to power the Trio speakers or TB-14 REQUIRES
8. Speakers - Terminal to connect speakers 2 x 8w (8-Ohm), 2 x 16w (4-Ohm)
9. USB C – Connect to a computer to play audio through the UNITY and/or to use audio from the UNITY in applications on the computer (Audio In and Out) NOTE: At the time of this writing, the iPhone 15, Google Pixel and Samsung SE devices may supply audio to UNITY. using a USB C to USB C cable USB C to Lightning cable does not work
10. Line In 2 – Audio Line In (Stereo 3 5)
11. Line In 1 – Audio Line In (Stereo 3 5)
12. Line Out - Audio output for lesson capture or to send audio to another device (Stereo 3 5)
13. ALD Level – Control the volume level of the ALD mixed audio out
14. ALD Out – Connect an ALD receiver to this port
15. Relay 2 - Allows triggering of third-party devices, like strobes or door locks. Can only be wired for “Normally Open”
16. Relay 1 - Allows triggering of third-party devices, like strobes or door locks. Can be wired for “Normally Open” or “Normally Closed”
17. Alarm & IR Blaster:
    i. Alarm – Connect to an alarm system to trigger events or mute audio when the alarm is triggered; may also initiate other. Actions defined by the user.
    ii. IR Blaster – Can be configured to send IR control signals to other devices via an IR emitter cable. (Require TB18 to be wired inline)
    iii. NOTE: In some cases, the IR emitter can be removed and directly connected Contact FrontRow TSG group for assistance
18. Page Override - Page override interface with 20/70/100V analog paging systems Automatically mutes audio coming from the UNITY system during a paging event; may also initiate other actions defined by the user.
19. GPI 1 & GPI 2 – General purpose inputs which may be configured to initiate user-defined UNITY Events.
20. RS232 – Can be configured to control other devices via serial communications.
21. Faceplate Volume control knob.
22. Faceplate locking feature
23. Microphone Pairing
24. Bluetooth pairing.

B. ZipControl Audio and Alert

1. Volume knob: Adjust the volume up or down and Push to Mute / Unmute When muted the LEDs will be amber

2. Microphone Registration Button: Press to activate mic registration mode on the ezRoom to pair a mic. If equipped, the ClassLight will flash green when in this mode.
3. Lock Button: The LOCK mode, if enabled, prevents students from adjusting volume levels or pairing Bluetooth devices. When locked, the intercom and alert buttons are still available, for safety reasons
4. Bluetooth Button: Press to activate Bluetooth pairing mode, the ClassLight and button will flash blue. When paired, the Bluetooth button will stay solid blue.
5. Intercom Button: Calls the office, the button will be backlit when the call is in session. During a call to the office, the local audio (mics and media) are muted.
6. Alert Button: Press and hold for 2 seconds to send an alert to the office. The Alert Light Ring on the ZipControl will activate, indicating an alert call is in progress. During a call to the office, the local audio (mics and media) are muted.

C. Configurable Classlight default settings

1. System ON: Color – White; Pattern – Solid.
2. Solo: The Action Microphone active, all other audio is muted. Color – Yellow; Pattern – Solid
3. Bluetooth Pairing: Color – Blue, Pattern – Flashing
4. Microphone Registration: Color – Green, Pattern – Flashing
5. Paging/Bell Ring: Color – Magenta, Pattern – Solid
6. Intercom: Color – Blue, Pattern – Solid
7. Alert Delivered: Color – Orange, Pattern – Flashing
8. Alert Acknowledged: Color – Orange, Pattern – Solid
9. Campus Attention: Color – Orange, Pattern – Solid, Strobe – Slow, Play Tone – On
10. Priority Alert Mode 1: Color – Orange, Pattern – Solid, Strobe – Slow
11. Priority Alert, Mode 2: Color – Red, Pattern – Solid, Strobe – Slow
12. Priority Alert, Mode 3: Color – Blue, Pattern – Solid, Strobe – Slow
13. Priority Alert, Mode 4: Color – Magenta, Pattern – Solid, Strobe – Slow
14. Priority Alert, Mode 5: Color – Green, Pattern – Solid, Strobe – Slow

D. Speakers

ezRoom supports 32W of total power over two 16W Channels @ 4Ohms.
Connect two 8Ohm Speakers, one to each side, for a 16W system
Connect two 4Ohm Speakers, or 4 8Ohm speakers (in parallel) for a 32W system.

E. ACTION! Teacher Pendant Microphone

SPECIFICATIONS

1. Battery status Indicator LED
2. Signal status Indicator LED
3. PrivaSee Sensors
4. Mic Volume Up, down, mute/unmute buttons.

5. Call office/PrioriTeach Button
6. Solo (mute everything except Action Mic) button
7. Alert office buttons
8. USB Charge and charge contacts
9. Battery Life (hours) - talk time 8+hrs US / 7+ EU/AUS
10. Recharge Time 3.5 hrs
11. RF Power (dBm) 19dbm peak, 6dbm average - US/CAN, 24/10 in UK/EU/AUS
12. Weight 44.3g / 1.5oz
13. Headset in (jack type) 3.5mm TRRS (T=left, R1=Right, R2=Mic, S=Gnd)
14. Wireless Communication ELEVATE™
15. Operating Territories US/CAN - EU/UK/AUS, selectable
16. Button Programmability All buttons except Mute - Tap/Medium Press/Long Press

F. BRAVO! Student Microphone

SPECIFICATIONS

1. Battery status Indicator LED
2. Signal status Indicator LED
3. Mute/Unmute button
4. USB charge and charge contacts.
5. Battery Type/Voltage/Amperage LiPo 3.7V, 650mA
6. Battery Life (hours) - talk time 8+hrs US/CAN / 7+hrs UK/EU/AUS
7. Recharge Time 3.5 hrs
8. RF Power (dBm) 6dbm average US/CAN / 10dBm average UK/EU/AUS
9. Weight 89.7g / 3.16oz
10. Size (HxWxD) 118 x 36 x 22mm / 4.6 x 1.4 x 0.9 inches
11. Headset in (jack type) 3.5mm TRRS (T=left, R1=Right, R2=Mic, S=Gnd)
12. Wireless Communication ELEVATE™
13. Operating Territories US/CAN - EU/UK/AUS, selectable

G. FLIP Dual Microphone Charger

SPECIFICATIONS

1. Size (HxWxD) 127 x 71 x 38 mm / 5 x 2.8 x 1.5 in
2. Weight 110g/3.9oz
3. Power Supply 5.9V / 700mA
4. The Media Receiver shall be manufactured using a lead-free process and be free of hazardous metals and materials (RoHS compliant)
5. The Media Receiver shall be UL listed

H. Symphony Classroom Phone

1. 2.4-inch 320x240 color screen.
2. Purpose-design for use with Symphony
3. Symphony integrated Phone book
4. HD audio with G.722 and Opus codec support
5. Call Hold / Resume
6. Installation
7. Desktop Stand
8. Wall mountable (optional)
9. Power: PoE or DC5V/1A
10. POE complies with the IEEE 802.3af standard
11. Power Consumption (PoE):1.90~4.60W
12. Power adapter: (not included)
    1. Input:100-240VAC~50/60Hz Output:5V/1A
    2. Power Consumption (Adapter): 1.33~3.00W
13. Environment
    1. Working Temperature: 0~45˚C
    2. Working Humidity: 10~95%
14. Device Dimensions
    1. Desktop Stand (40°): 191.8 x 164.5 x 174.2 mm
    2. Desktop Stand (45°): 191.8 x 154.5 x 181.9 mm
    3. Wall mountable: 191.8 x 91.6 x 215.6 mm

I. Ceiling Enclosure #1000-00090

Plenum rated 2x2 ft enclosure with RF-friendly lid; designed for drop ceilings, includes mounting hardware. ETL Listed for UL 2043 compliance. Dimensions: 23.81” x 23.70” x 3.22.” Weight (enclosure only): 18.5 lbs. Mounting hardware to include 4 cable locks, 2 cable clamps and 1 nylon bushing.

PART 3 – EXECUTION

3.1 EXAMINATION

A. Prior to installation, examine work area to verify measurements, and that commencing installation complies with manufacturer's requirements.

3.2 INSTALLATION

A. Comply with requirements of Division 27 Sections "Common Work Results for Communications."

B. Do not install AV or control devices until space is enclosed, HVAC systems are running, and overhead and wet work in workspace are complete.

C. Install control devices in accordance with manufacturer's instructions.

D. Install speakers in accordance with manufacturer's instructions.

E. Install projector and mount in accordance with manufacturer's instructions.

F. Grounding: Provide electrical grounding in accordance with NFPA 70.

G. Perform setup for each audio-visual equipment component.

3.3 SYSTEM STARTUP

A. Provide system startup and adjustment to occupied conditions in accordance with manufacturer's recommendations.

B. Perform operational testing to verify compliance with Specifications. Adjust as required.

3.4 CLOSEOUT ACTIVITIES

A. Demonstration: The Contractor shall demonstrate the System to operate in accordance with the requirements of these specifications as well as the Manufacturer’s performance specifications. The test shall be performed in the presence of an authorized representative of the Owner.

B. Should such a demonstration of performance show that the Contractor has not properly installed the System, the Contractor shall make all commercially reasonable changes or adjustments at no additional cost to the Owner.

C. Training: Train Owner's personnel to operate, maintain, and program AV controls, two in-service trainings at minimum.

END OF SECTION

PART 1 – GENERAL

.1 Refer to Section 26 00 10, General Electrical Provisions.

.2 Supply and install Digital Signage system complete with conduit, back boxes, outlet boxes, wiring, devices, etc. as shown on drawings and as specified below.

.3 Shop Drawings

.1 Submit shop drawings and product data.

.2 This data is to include a full system riser diagram indicating every proposed device including wiring requirements.

.4 Operation and Maintenance Data

.1 Provide operation and maintenance data for incorporation into manual.

.2 Submit two (2) manuals which shall be labeled:

.1 Operation and maintenance Manual
.2 Project Name
.3 Location

.3 Submit an electronic copy of the manual in Adobe PDF format.

.4 The manual must include (in “tabbed” sections) the following:

.1 Contractors address and contact numbers.
.2 Guarantee letters, approvals, and certification letters from authorities.
.3 Operation data including:
- Riser diagram for the Digital Signage system.
- Description of the system and it’s controls.
- Copies of all submitted shop drawings.
- Description of actions to be taken in event of equipment failure.
- Spare parts equipment list.
- Maintenance data including:
  - Servicing, maintenance, operation and trouble-shooting instructions for each item of equipment.
  - Data to include schedules of tasks, frequency, tools required and task time.
- Commissioning list of entire Digital Signage system.

1. GENERAL

1. WORK INCLUDES

1. Provide and install audio-visual systems and training and warranty services for the systems described herein.

2. SCOPE

    1. Refer to Section 27 00 00 for additional project scope information.
    2. Provide and install Clevertouch/Mimio by Boxlight digital signage series DLED panels in all classrooms and selected common areas.

3. RELATED WORK

    1. Section 27 50 00
    2. In addition to any requirements below, the Contractor shall abide by requirements delineated in 27 00 00 and 27 50 00, including but not limited to:
        a. General: Definition, reference standards codes, qualifications, pre-construction progress submittals, closeout submittals and correction period.
        b. Product: Substitutions, product specifications, miscellaneous material, cable, connectors, power devices and interface panels.
        c. Execution: Coordination, testing, training, warranty and cable management.
    3. Strictly adhere to all Building Industry Consulting Service International (BICSI) and Telecommunications Industry Association (TIA) recommended installation practices when installing communications/data cabling.
    4. Material and work specified herein shall comply with the applicable requirements of the current adopted revision of the following
        a. ANSI/TIA-568 Series Commercial Building Telecommunications Cabling Standard
        b. ANSI/ICEA S-87-640 Standard for Optical Fiber Outside Plant Communications cable
        c. ANSI/TIA-569 Commercial Building Standard for Telecommunications Pathways and Spaces
        d. ANSI/TIA-606 Administrative Standard for the Telecommunications Infostructure. BICSI-Telecommunications Distribution Methods Manual
        e. J-STD-607 Joint Standard for Commercial Building Grounding (Earthing) and bonding requirements for telecommunications.
        f. NFPA 70 National Electric Code
        g. Telcordia, GR-20-CORE, General Requirements for Optical Fiber and Optical Fiber Cable.

4. SUBMITTALS

    1. Provide product data for the following:
        a. Manufacturers cut sheets, specifications for all products (submit with bid)

5. COORDINATION

    1. Coordinate layout and installation of all AV equipment, cabling, and other related materials and components with other trades.

2. PRODUCTS

b. This system involves software and hardware and is subject to requirements, including 65-inch, 75-inch or 86-inch Digital Signage display and CleverLive digital signage platform as manufactured by Clevertouch/Mimio by Boxlight. No exceptions.

c. CL Pro 2 Digital Signage Display no extra hardware and no subscriptions!
    a. With built-in digital signage

b. Seamless content management and real-time alerts,
c. Screen-sharing capabilities
d. Dual display orientation; landscape or portrait
e. Ultra HD resolution & anti-glare surface with 25% haze
f. Capable of full, multi zoned digital signage, no additional media player required.
g. Screen sustainability scheduling power management
h. Up to 5-year warranty
i. One touch messaging & broadcasting
j. QR code interactive functionality
k. Wi-Fi 6E
l. Screen share up to 9 devices
m. 500 cd/m² vibrant brightness
n. Android technology (Android 14)
o. 24/7 operation

d. Included Software
    a. CLEVERSHARE
        a. Any device can download the CleverShare app and connect instantly by typing in the code on the CL Pro 2 screen. Compatible with Android, Windows, iOS, and Chrome devices.
    b. CLEVERLIVE
        a. CleverLive is BOXLIGHT free digital signage cloud management platform that enables the creation, deployment, and management of content deployed across one or multiple displays, which is compatible with any device.
    c. CLEVERMDM
        a. IT team can remotely manage, update, and troubleshoot CleverLive displays and media players, ensuring users always have the latest apps and software. Includes a 1-year licence (upgrade available).

e. CleverLive Digital Signage Platform

    a. CleverLive is a Cloud Content Management platform for all Clevertouch Technology Devices.
    b. Personalized Dashboard at a view glance of: connected displays, your personalized templates, number of users and storage and more.
    c. Enable content creation, deployment and management of content across one or multiple Clevertouch displays regardless of location.
    c. Share attention-grabbing content and display messages that incorporate media formats such:
        a. Text, photos/images, videos, web pages, RSS feeds, social media integrations, and more.
        b. Create a playlist to display content based on time, dates, and seasons.
    d. Interactive Audience Engagement
        a. Incorporate a QR code into template designs
        b. Allow the scan of QR code with mobile devices to view a presentation using your preset selections
        c. Add a web link for quick access to additional information and documents that instantly open in a new browser window
        d. Post event calendars and closures
        e. Display site and building maps
        f. Show lunch menu updates
    e. One Touch Action Trigger
        a. Using a mobile device:
            1. Select from preset virtual buttons to control content on screen with a single touch
            2. Send an alert for fire drills, breaks, or other emergencies
            3. Display videos

f. Alerts and Announcements
   a. Send alerts and announcements to individual screens, groups of screens, or all screens
   b. Schedule messages for “break time” or “weekly fire drill”
   c. Display announcements for a set length of time
   d. Display alerts until the user clicks the screen
   e. Choose from our pre-made templates, including fire alarms, weather warnings, and key times during the school day
g. Flexible design templates
   a. Personalize a library of 200+ easy-to-use design templates or create your own with in-built design software.
h. Security, a simple interface for allocating permissions for editing a zone or uploading content on a user-by-user basis all with a single click.
   a. Assign one or more administrators
   b. One-touch tick allocation
   c. Individual or group user permissions allocation

e. Attention! is a native integration that combines the power of Symphony Campus Platform and CleverLive digital signage cloud service to provide comprehensive and impactful communication throughout a school.
   a. Enables announcements, bells, and alerts to be delivered as both audio and video simultaneously to FrontRow Audio solutions and Mimio or Clevertouch displays
   b. Trigger lockdowns or any other alerts with a single command from anywhere on campus while issuing automated announcements both on campus and to emergency responder off campus.
   c. Provide equity and access to critical alerts is ensured for all students and staff and can provide additional life-saving information thanks to native integration with Mimio or Clevertouch displays.
   d. Control doors, security, digital signage, AV devices, HVAC, cameras, and lighting from the admin office.
   e. Easily display pre-recorded messages or emergency route maps while making automated evacuation announcements and triggering mass notification to parents and first responders.

3. EXECUTION

1. Equipment Location
   a. Coordination: Where device locations are not shown on rack/console elevations and in technology drawings, Contractors shall coordinate with the consultant to identify desired /optimal locations.
   b. Contractor shall verify all wall-mounted mounting heights on pre-construction submittals.

2. Interconnections
   a. Contractor shall be responsible for providing populated grommeted or blank cover plates for all wall and floor box openings intended for AV System

3. Mounts
   a. The contractor shall modify standard mounts as required for optimal mounting configurations.
   b. Mounting solutions and hardware shall be detailed in shop drawings for approval.
   c. The contractor shall provide all hardware required to mount the equipment securely.
   d. All ceiling tile penetrations shall be neatly finished with a plate, grommet and/or escutcheon ring.
   e. Contractor shall provide or coordinate with allied trades to include backing or additional support systems for mounting devices and hardware.

4. Display Mounts
   a. Mounts for Clevertouch/Mimio by Boxlight 65-inch, 75-inch and 86-inch digital signage displays are provided with the displays and must be contractor-installed.
5. Displays
   a. Clevertouch/Mimio by Boxlight 65-inch, 75-inch, and 86-inch digital signage displays shall be owner-furnished and contractor-installed.
6. Cables and Connectors
   a. HDMI Cables under 15 Feet
      1. HDMI Ultra Series Ultra Flexible Premium High-speed Cables
   b. Plenum HDMI Cables over 15 Feet or in plenum airspace
      1. HD Pro Plenum series HDMI Premium High-Speed Optical Cables

7. HDMI Architectural Connectivity
   a. Contractor shall supply and install HDMI products capable of transmitting UHD (4K) resolution.

8. Miscellaneous Parts and Materials
   a. General Information: As required by Section 27 00 00 and 27 50 00

9. Device, Materials and Cable Physical Management
   a. Cable Sleeving shall be back expandable, sleeving with ends neatly turned under 2”, held in place either by nylon tie-wrap or Velcro.
   b. Nylon tie wraps or zip ties shall not be used as the final mounting solution for devices or to secure cabling or components of the AV System.
   c. Hook and loop fasteners or Velcro shall be the only methods of securing or managing AV material or equipment.
   d. Permanent fastening solutions shall be used where feasible in place of double-sided adhesive or Velcro with adhesive.
   e. Permanent fastening solutions include but are not limited to, the physical mounting of devices using low-profile mounting kits with physical contact made via screws or other securing hardware.
   f. Cable umbilical’s connecting to and from wall, floor or ceiling plates consisting of more than one wire.

10. Contractors shall coordinate as necessary to maintain one single umbilical containing all AV and data connections.

4. Equipment Configuration

1. Contractors shall coordinate with the consultant to identify the ideal configuration of the system.
   a. Digital signage operation
   b. Classroom operation
   c. Control operation
   d. Integrations with PA/Intercom System
   e. Integration with the Emergency communication plan
   f. Other relevant integration, e.g.
      a. School bells, Lunch menu, announcements etc.

   b. Labeling
      a. The contractor shall configure all equipment for normal use, including setting levels and presets.
      b. Small adhesive labels shall be affixed to equipment indicating nominal levels and settings

c. Where feasible, the labelling shall be machined, etched, or lasered into the equipment or hardware.

5. System Testing
   a. The contractor shall check that all cables are correctly labelled and secure prior to substantial completion inspection.
   b. The contractor shall ensure that all work areas are clear of debris, tools, empty boxes, and extra parts prior to the substantial completion inspection.
   c. Prior to the substantial completion inspection, contractor shall notify the consultant that all items listed below are completed.
      a. Contractor shall ensure that all standard functions of equipment are functional
      b. Contractor shall verify all input and output of the system for signal quality.
   d. Audio
      a. Contractor shall verify all sources are free of destructive noise (excessive noise floor, hiss, grounding interference) and that speakers function correctly. The audio system shall be optimized for the space (s) served by the audio system.

5. Training

a. General Information: As required by Section 27 00 00 and 27 50 00
b. The contractor shall provide two (2) 30-minute training sessions for each unique audiovisual room type. The training time shall include supervised hands-on end-user operation of the system(s).
   a. Identification of input locations, source devices, control locations, displays, and other devices requiring end-user interaction for successful system operations.
   b. Use of the control system
   c. Use of source device and input locations
   d. Switching inputs for each display
   e. Training shall include operating the system in the event of a control system malfunction, all manual switching, and the use of remotes.
   f. Basic troubleshooting for common user errors.
c. Scheduling: Training shall be scheduled with the owner at least ten (10) days in advance.
d. Quick-reference Guides:
   a. Contractor shall compile quick-reference guides for system operation and basic troubleshooting.
   b. Reference guide shall be provided at the time of the training session.
   c. Training shall include walking through the quick-referencing guide steps.

END OF SECTION

PART 1 – GENERAL

.1 Refer to Section 26 00 10, General Electrical Provisions.

.2 Supply and install Paging system complete with conduit, back boxes, outlet boxes, wiring, devices, etc. as shown on drawings and as specified below.

.3 Shop Drawings

.1 Submit shop drawings and product data.

.2 This data is to include a full system riser diagram indicating every proposed device including wiring requirements.

.4 Operation and Maintenance Data

.1 Provide operation and maintenance data for incorporation into manual.

.2 Submit two (2) manuals which shall be labeled:

.1 Operation and maintenance Manual
.2 Project Name
.3 Location

.3 Submit an electronic copy of the manual in Adobe PDF format.

.4 The manual must include (in “tabbed” sections) the following:

.1 Contractors address and contact numbers.
.2 Guarantee letters, approvals, and certification letters from authorities.
.3 Operation data including:
- Riser diagram for the Paging system.
- Description of the system and it’s controls.
- Copies of all submitted shop drawings.
- Description of actions to be taken in event of equipment failure.
- Spare parts equipment list.
- Maintenance data including:
  - Servicing, maintenance, operation and trouble-shooting instructions for each item of equipment.
  - Data to include schedules of tasks, frequency, tools required and task time.
- Commissioning list of entire Paging system.

1.1 DESCRIPTION

A. This system involves software developed by FrontRow by BOXLIGHT that specifies requirements for a fully integrated, IP-based campus communications system providing bell scheduling, zone paging, SIP-based intercom, emergency alerting, and visual messaging capabilities for K–12 educational facilities. The system shall operate on industry-standard Session Initiation Protocol (SIP) and IP Multicast architectures and shall be administered through a web-based user interface accessible to authorized personnel.

B. Furnish items necessary to make a complete functional system as required by FrontRow by BOXLIGHT. Most major items are mentioned in this specification, but it is contractor's responsibility to provide components even if not specifically mentioned to install and make the system functional in specified locations.

C. In this specification, 'provide' shall mean to supply, install, program, and test an item to ensure that it is in working order.

D. This system will run on the IP network; therefore data cables will be required at many of the devices.

E. Include in scope labor to identify the cables and test the speakers at the district office and the pre-school/child development sites. Include labor for creating as-built drawings.

F. Include in scope labor to demo any existing speakers, wires, terminations, and head-end material.

G. Include in scope labor for a 1-year service contract as discussed in this specification.

H. Some of the major scope of work in this specification includes providing

1. Data cables from the data rack to the paging amplifier/decoders in classrooms, common areas and exterior speakers
2. Data cables from the data rack to the Symphony server (DRS6000), and the Symphony Command Centers.
3. Data cable from the data rack to the SM10 SIP page interface module.
4. For each classroom, furnish and install a complete, networkable, scalable Symphony endpoint. Each System shall include but not be limited to:
    a. One of the following classroom audio endpoints
        i. ezRoom Voice and Alert endpoint.
        ii. Symphonic Solo ISP Speaker.
        iii. Symphonic Tempo Clock Speaker
        iv. Symphonic Vista IP Pannel
    b. Ceiling mount, Wall mount, or Lay-in loudspeakers
    c. ZipControl Audio and Alert wall plate, with volume control, ALD out, built-in microphones, Bluetooth and microphone paring, normal and emergency call, backlit buttons, Panel lock option, volume light ring and Alert light ring.
    d. DECT and IR wireless microphones
    e. One neck-worn teacher transmitter/microphone, including charger cradle
    f. One handheld student transmitter/microphone, including hands-free option and charger cradle
    g. One Symphony classroom phone SCIP-V61G
    h. MyFrontRow Control App

5. For exterior speakers:
    a. SM10 SIP Paging Interface module supports open-standard SIP protocols and offers 15 multicast priority levels. Providing SIP and multicast audio streams to your 70-volt common areas
    b. ALC-404D Campus-wide 70V amplifier is a 4 channel, 400 Watts per channel.
    c. Horn Speaker 70V is a compression type, double re-entrant horn loudspeaker with an integrated 16W, 25/70V rotary select transformer and an adjustable mounting base.

6. For hallways and other common areas:

a. SM10 SIP Paging Interface module supports open-standard SIP protocols and offers 15 multicast priority levels. Providing SIP and multicast audio streams to your 70-volt common areas
b. ALC-404D Campus-wide 70V amplifier is a 4 channel, 400 Watts per channel.
c. Loudspeaker round ceiling mount cut-in 70V speaker, complete with transformer/baffle/backbox/tile bridge assembly; includes two of the following.
    a) 8” O.D. speaker with 10 oz. magnet and a 5W, 25/70V transformer
    b) round, steel, stud-mount baffle
    c) rust-resistant steel, load bearing support bridge
    d) round, steel, 275 CID backbox
d. Loudspeaker round ceiling mount cut-in Volume Control 70V speaker, complete with transformer/baffle/backbox/tile bridge assembly; includes two of the following.
    a) 8” O.D. speaker with 10 oz. magnet and a 5W, 25/70V transformer with a screwdriver or detachable knob (knob included) adjusted volume control
    b) round, steel, stud-mount baffle
    c) rust-resistant steel, load bearing support bridge
    d) round, steel, 275 CID backbox
e. Wall Mounted 70V speaker, complete loudspeaker system consisting of a 20.32 cm/8 in O.D., dual cone loudspeaker with a 0.142kg/0.5 oz magnet and a 5W, 25/70V transformer mounted on a square, screw mount, steel baffle with a square, steel, vandal resistant, surface mount enclosure.

7. For the school office:
    a. Symphony Command Center: streamline communication and enhance responsiveness across the campus, offers a powerful combination of voice, video, and alerting features tailored for seamless integration with the Symphony system. With a 10.1-inch full-colour touch display, high-quality audio, and intuitive interface. Command Center provides a central point of control for daily and emergency communication needs.
        a) Unified Communication Platform: Manage all your communication needs; paging, bells, intercom, and emergency alerts from one intuitive, browser-based system.
        b) Faster, Smarter Communication: Powered by multicast technology, ensures instant, reliable delivery of announcements and alerts without overloading your network.
        c) Flexible, Scalable, and SIP-Ready: Grows with your needs, integrates seamlessly with your existing VoIP/SIP phone systems and allow for phased deployments and expansions.
        d) Enhance Campus Safety: Quickly initiate critical audio and visual alerts campus-wide. Providing staff and students with the time and clarity they need.

1.2 RELATED DOCUMENTS & CONFLICT RESOLUTION

A. In addition to this written specification, the following drawings and documents are to be referenced and included in the scope of this specification:

1. Architectural / Engineer drawings
2. Detail Drawings & Diagrams
3. Manufacturer instruction sheets and installation guidelines
4. Any addendum, hereafter release of specifications

B. Ensure that the manufacture, test, and installation are per the manufacturer's requirements and in accordance with NFPA-70 (National Electrical Code®), provincial codes, territorial codes, state codes, local codes, requirements of authorities having jurisdiction, and particularly the following standards and any addendums for the standards:

1. Cabling Systems

   a) ANSI/TIA/EIA-588-C.0 – General Cabling Standards
   b) ANSI/TIA/EIA-568-C.1 -- Commercial Building Cabling Standard
   c) ANSI/TIA/EIA-568-C.2 -- Balanced Twisted Pair Cabling Standard
   d) ANSI/BICSI 001-2009, Information Transport Systems Design Standard for K-12 Educational Institutions
   e) ANSI/NECA/BICSI 568-2006, Standard for Installing Commercial Building Telecommunications Cabling

2. Pathways and Spaces

   a) ANSI/TIA/EIA-569-B -- Commercial Building Standard for Telecommunications Pathways and Spaces
   b) ISO/IEC 18010:2002 (2002) – Pathways and Spaces for Customer Premises Cabling

3. Cabling Administration

   a) ANSI/TIA/EIA-606(A) -- The Administration Standard for the Telecommunications Infrastructure of Commercial Buildings
   b) ISO/IEC 14763-1:1999 (1999) – Implementation and Operation of Customer Premises Cabling, Part 1 – Administration

4. Grounding and Bonding

   a) J-STD-607-A-- Commercial Building Grounding and Bonding Requirements for Telecommunications
   b) IEEE 1100 – IEEE Emerald Book
   c) NFPA 780 Standard for the Installation of Lightning Protection

5. Cal/OSHA-Pocket Guide for the Construction Industry (recent edition)
6. ANSI S12.60:2002 Acoustic Performance Criteria, Design Requirements, Guidelines for Schools

C. Also, Install systems & infrastructures in accordance with the most recent edition of the following publications:

1. BICSI -- Telecommunications Distribution Methods Manual (TDMM)
2. BICSI -- Information Transport Systems Installation Methods Manual
3. BICSI - AV Design Reference Manual
4. BICSI - Network Design Reference Manual

D. Federal, provincial, territorial, and local codes, rules, regulations, and ordinances governing the work, are as fully part of the specifications as if herein repeated or hereto attached. If contractor shall note items in the drawings or the specifications, construction of which would be code violations, promptly call them to the attention of the owner's representative in writing.

Where the requirements of other sections of the specifications are more stringent than applicable codes, rules, regulations, and ordinances, the specifications shall apply.

E. When the words “should”, “may”, “desirable”, or “will” appear in specifications, standards, codes, and publications listed above replace with the word “shall” to ensure a best practice installation. All suggestions listed in a specification, standard, code, or publication listed above can be enforceable and demanded by owner.

F. When there is a conflict between codes, standards, specifications, drawings, manufacturer recommendations, and publications listed above the stricter requirement will be applied and shall be included in the base bid and scope of work unless a written exception is issued. Codes will never have a written exception. If there is not a stricter requirement when addressing a conflict (Example: different colours for jacks on drawings than in specs) then what is in writing (specs, RFI, etc.), standard industry/owner practice, and approved submittals and who approved them will be used to determine which guideline shall be enforced the policy with the most in favour wins. NOTE: Specifications and other written instructions usually take precedence over drawings and details even if drawings and details are issued at a later date unless otherwise noted (UON).

G. If work is completed that is in conflict prior to submitting an RFI, contractor will proceed at his own risk and cost and will have to furnish whatever labour and materials necessary to correct at no charge to the owner once the resolution to the conflict is established in writing.

1.3 RESPONSIBILITIES

A. Contract documents are detailed only to the extent required to show design intent. It shall be understood and agreed upon by the bidder that all work described herein shall be completed in every detail so as to provide a complete and functioning system.

B. Furnish additional items and labour not mentioned herein to meet the requirements as specified and for a complete and functional system without claim for additional payments. Ex. Adapters, nuts, bolts, etc.

C. The installation contractor shall provide all hardware, cables, devices, and other materials even though not specifically mentioned herein, which are necessary for the proper integration of the system so that the system shall perform the functions listed herein in compliance with all specified requirements.

D. All equipment unless otherwise specified, shall be new, free from defects, and the best craftsmanship in its class.

E. Provide system documentation and labelling as specified without claim for additional payments.

F. Guarantee all equipment and components as specified from date of acceptance.

1.4 SUBMITTALS

A. At least 8 weeks prior to start of the project, submit 3 hard copies of the following items in a binder with a cover page, table of contents, and tabbed dividers; send an electronic version of the following in Microsoft Word or PDF format to:

1. Documentation verifying the qualifications listed in this specification
2. Product data sheets.
3. Block diagrams showing components and relative connections

4. Samples of documentation and warranties
5. Samples of labels and written labelling scheme

B. No work shall proceed without approved submittals. Anything ordered or delivered prior to approval will be at awarded contractor's own risk and cost. Compensation will not be given for re-stocking fees or replacing a purchased item that is rejected.

C. If it is discovered during the submittal process that the awarded contractor does not meet the qualifications listed in this specification, the owner will be permitted one of the two courses of action below. By bidding on this specification, contractor acknowledges and agrees to this provision:

1. Grant permission at contractor's expense to attain the qualifications or hire a third party or personnel with the qualifications. Third party and personnel shall be retained after the project for duration of the warranty.
2. Remove award and give it to the next qualifying bidder. Originally awarded contractor will pay the difference in contract price between their award and the quoted contract price of the next qualifying bidder.

D. A submittal is required even if all products are as specified. If products are as specified, then a single spreadsheet may be submitted in place of product data sheets charting the following columns:

1. Specification numbers & letters where the item is found
2. Manufacturer
3. Manufacturer part number
4. Description
5. Length
6. Color
7. As Specified or Equivalent
8. If submitting an equivalent add an additional column for page number of submittal where the equivalent data sheet is located.

E. All data sheets shall have the SPECIFIC product and part number highlighted.

F. Quantities will not be confirmed when reviewing the submittals. If quantities are given in the submittal package it is still the contractor's responsibility to provide the correct quantity as required for a complete system, per the specifications, and/or drawings. If there is a conflict in quantities between the specifications, drawings, and requirements for a complete system whichever quantity is greater shall be the furnished quantity.

G. When submittals are reviewed, instructions will be given as to why and how to correct. One re-submittal will be allowed. If additional re-submittals are required, then awarded contractor shall be back charged to cover the expenses of the reviewing party. If items are lacking in the first submittal and subsequently need a re-submittal, then awarded contractor shall be back charged to cover the expenses of the reviewing party.

H. The owner's/designer's/architect's approval of shop drawings, product data, and samples shall not relieve the contractor of responsibility for errors or omissions in such shop drawings, product data, and samples.

I. Lack of a submitted or specified item that is essential for a complete and functional system as specified shall not relieve the contractor of responsibility to furnish such item and shall be furnished without claim for additional payments.

1.5 QUALIFICATIONS

Qualifying bidders shall have:

A. Two-year business history selling and installing AV systems.

B. Five references from projects of similar size and scope within the last two years.

C. FrontRow Campus Certification or greater in good standing and valid at least 30 days prior to the bid opening. Note: If this qualification is not met it could lead to immediate rejection of the bidder's quotation or one of the mediation steps mentioned in this specification under submittals.

D. Required insurance (General Liability, etc.) and workman's compensation.

E. Compliance with Certified Payroll and Reporting for projects over $1,000.

F. Installers that have been fingerprinted & cleared by the Department of Justice if working on site while children are present.

PART 2 - PRODUCTS

2.1 MANUFACTURERS

A. Subject to requirements, provide a complete Integrated Bell, Paging, Intercom & Alerting System, Symphony Campus Platform as manufactured by FRONTROW by BOXLIGHT. No exceptions.

B. The Symphony Campus Platform shall be a software-defined, IP-based communications system combining bell scheduling, zone paging, SIP intercom, emergency alerting, visual messaging, and MNS interoperability in a single integrated solution. The platform shall be built on industry-standard SIP (RFC 3261) and IP Multicast protocols and shall be administered via a responsive web user interface accessible from any HTML5-compatible browser without proprietary client software

C. The Symphony Campus Platform is a campus communication system, not a standalone Mass Notification System (MNS). Emergency alerting functions shall be delivered natively by Symphony and/or through interoperability with a separately procured, UL 2572-listed Mass Notification System platform. The dividing line between Symphony's native alerting functions and the MNS platform's responsibilities shall be documented in the system architecture submittal.

D. The system shall provide the following primary functions:

i. Scheduled bell and tone delivery across configurable zones
ii. Zone-based audio paging and announcements
iii. SIP-based two-way intercom communications

iv. Native emergency alert activation with integrated audio and visual messaging
v. Interoperability with UL 2572-listed Mass Notification System platforms via SIP, IP Multicast, and/or GPI interface
vi. Command Center VoIP phone integration for one-touch campus communications
vii. Real-time device health monitoring and map-based visualization

E. Descriptions and details, acceptable manufacturers' names listed, and specific manufacturer and model number items indicated in the Drawings and Specifications shall establish a standard of quality, function, and design. Manufacturers and model numbers listed "no exceptions" shall not be substituted without specific notice in an addendum. Otherwise, where a specific manufacturer's product is indicated, products of other manufacturers listed as acceptable may be submitted for approval based on the substitute product being, in the opinion of the Engineer, of equivalent or better quality than that of the product specified.

F. Proposed contractors wishing to propose any product substitution must do so in writing to the specifying authority at least ten (10) days prior to the proposal opening.

G. For manufacturers' equipment or models other than that specified, the proposed contractor shall supply proof that such substitute equipment equals or exceeds the features, functions, performance, and quality of the specified equipment. Proposals must include detailed information showing all deviations from the system as specified.

H. Substitute products for which the proposed contractor does not obtain prior approval will not be considered acceptable for this project. Final approval of alternate products shall be based on the decision of the Owner and Architect. Prior approval to make a proposal for this project does not automatically ensure products will be an acceptable equivalent.

I. It is the responsibility of the Contractor to provide all features and functions as outlined in these specifications. The functions and features specified are vital to the operation of this facility; therefore, inclusion in the list of acceptable manufacturers does not release the contractor from strict compliance with the requirements of this specification.

2.2 WEB USER INTERFACE

A. Access & User Management:

1) The system shall provide a web-based administrative interface accessible via standard HTML5-compatible web browsers without requiring proprietary client software.

2) The system shall support multiple role-based user accounts allowing granular control over administrative privileges.

3) User roles shall restrict access to system functions based on organizational responsibilities (e.g., district administrator, school administrator, operator).

B. Branding & Customization:

1) The interface shall support customizable district-level branding including logo and color scheme.
2) The interface shall support customizable school-level name branding for multi-site deployments.

2.3 SCHEDULER

A. Schedule Management

- The system shall provide a wizard-based scheduling interface to simplify schedule creation.
- The system shall support an unlimited number of bell schedules.
- Schedules shall support color-coding for visual differentiation and shall be copyable to reduce administrative effort for recurring patterns.
- The system shall support intra-day schedule duplication and multiple bell schedules per day.

B. Scheduled Content

- Schedules shall support scheduled audio delivery (bell tones and audio files), scheduled visual messages, and scheduled workflow execution including announcements and drill-alerts.
- An easy-to-read workflow summary shall be provided for each scheduled item.

C. Calendar Interface

- The system shall provide an apply-schedule-range function supporting single-day, multi-day, multi-week, and multi-month application.
- Shift-click shall allow selection of contiguous daily schedule ranges; control-click shall allow non-contiguous selection.
- Right-click context menus shall allow adding a schedule to a day, clearing a single day's schedule, or clearing all schedules from a day. A global clear-all function shall be provided.

2.4 LOCATIONS & MAPS

A. Location Management

- The system shall allow devices to be grouped into named locations, groupable by floor, building, or school to support multi-site and multi-story facilities.

B. Map Visualization

- The system shall support upload of one or more facility map images.
- Administrators shall be able to draw square, rectangular, or polygon overlay objects on uploaded maps, each assignable to a defined location.
- Map objects shall display real-time device health status (online/offline, SIP registration state) and real-time device lists. Map views shall support filtering by device type.

2.5 DEVICE MANAGEMENT

A. Device Table

The system shall provide a searchable device table with filtering by keyword and sorting by device name, type, extension number, IP address, assigned location, and dashboard assignment.

B. Device Health Monitoring

- The system shall display real-time device health status for each device, including online status (confirmed via ICMP ping) and SIP registration state.
- Each device shall be configurable to appear on the system Dashboard and Command Center interface.

2.6 ZONES

A. Zone Architecture

- The system shall support a zone-based distribution architecture allowing independent or simultaneous audio and visual signal delivery to defined groups of devices.

B. Built-in Priority Zones

Zone	Priority Level	Description
Emergency Alert Zone	1 — Highest	Campus-wide emergency alert delivery with highest signal priority
Emergency Paging Zone	2	Campus-wide emergency voice paging
Campus Page Zone	3	General campus-wide voice paging
Campus Bell Zone	4	Scheduled bell tone delivery across campus

C. Custom Zones

- Administrators shall be able to create additional custom zones beyond the four built-in zones.
- Zones shall support color-coding for visual identification.
- Custom zones shall be available for scheduling bell tones, paging, audio alerting, announcements, visual alerting, and visual announcements.

2.7 AUDIO CHANNELS (MULTICAST)

- The system shall support creation of independent IP Multicast broadcast channels with configurable priority levels to manage simultaneous broadcast conflicts.
- Multicast channels shall be synchronizable with Symphony native devices and shall support direct SIP dial access to initiate a multicast zone broadcast.
- Each Symphonic Series endpoint supports fifteen (15) independent multicast channels, each with independently assignable light ring patterns for visual indication.
- Channels shall be configurable for display on the Dashboard and Command Center.

2.8 COMMAND CENTER

A. Overview

The system shall include a Command Center module providing a dedicated, integrated VoIP phone interface for school communications operations. The Command Center shall support one-touch access to paging, alerting, intercom, and announcement functions.

B. Paging & Alert Functions

- One-touch campus-wide paging and prioritized emergency paging activation.
- Auto-updated alert, announcement, paging, and intercom speed dial lists reflecting current system configurations.

C. Call Groups

- The system shall support multiple Command Center phones configured for inbound group calling.
- Inbound group calls to the Command Center shall activate a connected strobe device as a visual ringer.

D. Hunt Groups

- The system shall support classroom and IP speaker call groups with sequential hunt group behavior (ring-first-device-then-second-device).

E. SIP Bridging

- The system shall support SIP bridging between the campus VoIP phone system and the Symphony Campus server.
- The system shall support Analog Telephone Adapter (ATA) bridge integration for legacy telephony connectivity.

2.9 ALERTS

A. Alert Configuration

- Administrators shall be able to configure alerts as simple audio announcements or advanced multi-step workflows.
- An easy-to-read workflow summary shall be displayed for each configured alert, viewable in card or table format.

B. Default Alert Types

The system shall include the following five (5) pre-configured emergency alerts, aligned with the Standard Response Protocol (SRP) as endorsed by ANSI/NEMA SB40:

Alert Name	Description
Lockdown	Immediate campus lockdown notification — restrict access, secure occupants in place
Hold	Classroom hold notification — remain in place, await further instruction
Shelter In Place	Environmental threat notification — move to designated shelter areas
Evacuation	Campus evacuation notification — proceed to evacuation routes and assembly areas. Audio signal shall conform to Temporal 3 pattern per NFPA 72 unless AHJ approves an alternative.
Secure	Perimeter security notification — secure exterior doors, continue normal internal activities

C. Alert Activation & Integration

- Alerts shall be activatable through the Symphony web user interface, dialed SIP extension, Command Center shortcut, and third-party MNS platforms via SIP, Multicast, or GPI interface.
- Alerts shall support integrated visual delivery via the Symphony Visual Alert system and/or CleverLive digital signage messaging.
- Where a UL 2572-listed MNS platform is designated as the primary emergency notification system, alert initiation authority for life-safety events shall reside with the MNS platform. Symphony shall function as the audio/visual delivery infrastructure, receiving and rendering alert signals from the MNS platform via SIP, Multicast, or GPI.

2.10 ANNOUNCEMENTS

2.10.A Announcement Configuration

- Administrators shall be able to configure announcements as simple audio announcements or advanced multi-step workflows, viewable in card or table format.

2.10.B Announcement Integration

- Announcements shall support integrated visual delivery via Symphony Visual Alert or CleverLive digital signage.
- Announcements shall be activatable through the Symphony web user interface, dialed SIP extension, or Command Center shortcut.

2.11 AUDIO LIBRARY

- The system shall include a minimum of forty-two (42) pre-installed audio files, including Temporal 3-compliant evacuation tones.
- The system shall support user-uploaded custom audio files. Audio file duration shall be displayed, and files shall be previewable directly within the browser.
- Audio files shall support tagging for organizational categorization (Bell, Audio, Announcements, Custom Audio).

2.12 VISUAL MESSAGING

- The system shall support synchronization of visual content between Symphony Cloud and Symphony Campus servers.
- Administrators shall be able to search and filter visuals by name or type (Alert, Announcement, Dashboard).
- The system shall display the version number of each visual asset.
- Administrators shall be able to display (test) a visual on one or more connected devices directly from the management interface.

2.13 SYMPHONIC SERIES ENDPOINT HARDWARE

The following Symphonic Series IP endpoints shall be provided as specified. All three models share the same core hardware platform (NXP IMX8 processor, 4 GB DDR4 RAM, 16 GB eMMC) and protocol stack (SIP RFC 3261, IP Multicast, G.722/G.711/Opus). Differences are noted per model.

Feature	Solo IP Speaker	Tempo IP Speaker Clock	Vista IP Panel
Display	None	12.3" LCD	21.5" LCD
Speakers	1 × 4" full-range	1 × 4" full-range	2 × 4" full-range
Amplifier	10W Class D	10W Class D	10W Class D
Max SPL	101 dB	101 dB	101 dB
Mic Array	4-mic array	4-mic array	4-mic array
SIP Extensions	3 independent	3 independent	3 independent
Multicast Channels	15 independent	15 independent	15 independent
GPI Inputs	3 (SIP or HTTP)	3 (SIP or HTTP)	3 (SIP or HTTP)

Relay Output	1 (NO/NC/COM)	1 (NO/NC/COM)	1 (NO/NC/COM)
Camera	2MP, 120° FOV, ONVIF	2MP, 120° FOV, ONVIF	2MP, 120° FOV, ONVIF
HDMI Output	HDMI 2.0b	HDMI 2.0b	HDMI 2.0b
RGB Light Ring	Yes — 20 patterns	Yes — 20 patterns	Yes — 20 patterns
PoE Standard	IEEE 802.3at (AT)	IEEE 802.3at (AT)	IEEE 802.3bt (BT)
Part Number	1000-00334	1000-00335	1000-00336

PART 3 – EXECUTION

3.1 EXAMINATION

- The contractor shall verify that network infrastructure (cabling, switches, PoE availability) meets the requirements of the Symphony Campus system prior to installation.
- The contractor shall verify that IP addressing, VLAN configuration, and multicast routing are properly configured in coordination with the owner's network administrator.
- The contractor shall verify that SIP trunking or SIP bridge configuration is coordinated with the existing VoIP telephony provider.
- Where a UL 2572-listed MNS platform is included, the contractor shall verify the interface method (SIP / Multicast / GPI) with the MNS platform provider prior to installation.

3.2 INSTALLATION

- All hardware devices shall be installed in accordance with the manufacturer's published installation guides and these specifications.
- IP speakers, intercoms, and display devices shall be connected to PoE-capable network switches meeting IEEE 802.3at or 802.3bt standards as required by the endpoint model.
- SIP devices shall be registered to the Symphony Campus SIP server and verified for proper two-way audio operation.
- Multicast channels shall be configured and verified across all network segments hosting Symphony-connected devices.
- GPI inputs shall be configured and tested where used for FACP priority interface or MNS platform trigger integration.
- Map uploads shall be completed and device-to-location assignments verified in the administrative interface.
- Zone assignments shall be programmed and tested for all bell, paging, alert, and announcement zones.

3.3 COMMISSIONING & TESTING

A. Functional Verification

The contractor shall perform and document functional testing of the following system capabilities prior to owner acceptance:

Test Item	Acceptance Criteria
Bell Schedule Delivery	Scheduled tones delivered to all assigned zones within 1 second of scheduled time
Zone Paging (SIP)	Voice paging activates within designated zones with clear, intelligible audio
Multicast Audio	Simultaneous audio delivery to all multicast zone devices without dropout
Emergency Alert Activation	All five default alerts activate audio and visual components within 3 seconds of initiation
MNS Platform Interface	Alert initiated from MNS platform activates Symphony audio/visual delivery within 3 seconds via configured interface method (SIP/Multicast/GPI)
FACP Priority Override	FACP activation suspends all Symphony audio channels within 2 seconds; fire alarm signal is unobstructed
Temporal 3 Evacuation Tone	Evacuation alert audio file produces three-pulse Temporal 3 pattern at all assigned zone endpoints
GPI Interface	GPI input activation triggers configured SIP or HTTP action within 2 seconds of contact closure
Command Center Functions	All speed dial lists populated; one-touch paging and alerting verified on all configured Command Center phones
Intercom (SIP)	Two-way intercom communication established between endpoints with clear audio and no feedback
Device Health Monitoring	Online and SIP registration status accurately reflected in dashboard and map views within 60 seconds of status change
Visual Messaging	Visual alerts and announcements display on assigned devices upon activation
STI Verification	STI ≥ 0.45 confirmed in minimum three (3) representative rooms per building type using calibrated measurement instrument
ATA/SIP Bridge	Legacy telephony endpoints communicate with Symphony via ATA bridge

B Documentation

- The contractor shall provide a completed functional test report — including STI measurement results — signed by the installing technician and the owner's representative.
- As-built drawings reflecting final device placement, IP addressing, zone assignments, and MNS interface pathway shall be submitted upon project close-out.

3.04 TRAINING

- The contractor shall provide a minimum of four (4) hours of on-site administrator training covering system operation, schedule configuration, alert activation, device management, user account management, and MNS platform interface operation.
- Training materials including user guides and quick-reference cards shall be provided in electronic format.

3.05 WARRANTY

- The system shall be warranted against defects in materials and workmanship for a minimum of one (1) year from the date of substantial completion.
- Software updates and bug fixes shall be provided at no additional cost during the warranty period.
- The contractor shall respond to warranty service requests within one (1) business day.

END OF SECTION

KEDRON EAST CES
Electrical Addendum No. E3
Project No. 2402
Page 1
Sept. 23, 2026

rybka Ellard Willson
23 Lesmill Rd, Unit 410
North York, ON, Canada M3B 3P6
647.479.3785

The following additions, deletions, amendments and/or items of clarification are hereby made an integral part of the Tender Documents. All revisions shall be made to the drawings and/or specifications and all costs for same shall be included in the Stipulated Price.

CHANGES TO SPECIFICATIONS

1. Section 26 05 10, Lighting Fixture Schedule

- Fixture type 'R2' shall be same as Type 'R' except complete with 46 watts Cat. # WDGE2-LED-P4-40K-70CRI-TFTM-347.
- Fixture types 'BD', 'RA' and 'RB' are not required.

CHANGES TO DRAWINGS

1. Drawing E9 (Drawing issued)

1.1 Item #3, Heat reclaim wheel for AHU-1 is not required.
1.2 Equipment tags for AHU-3 are revised to match the equipment schedule as shown on attached revised drawing.

2. Drawing 15 (Drawings issued)

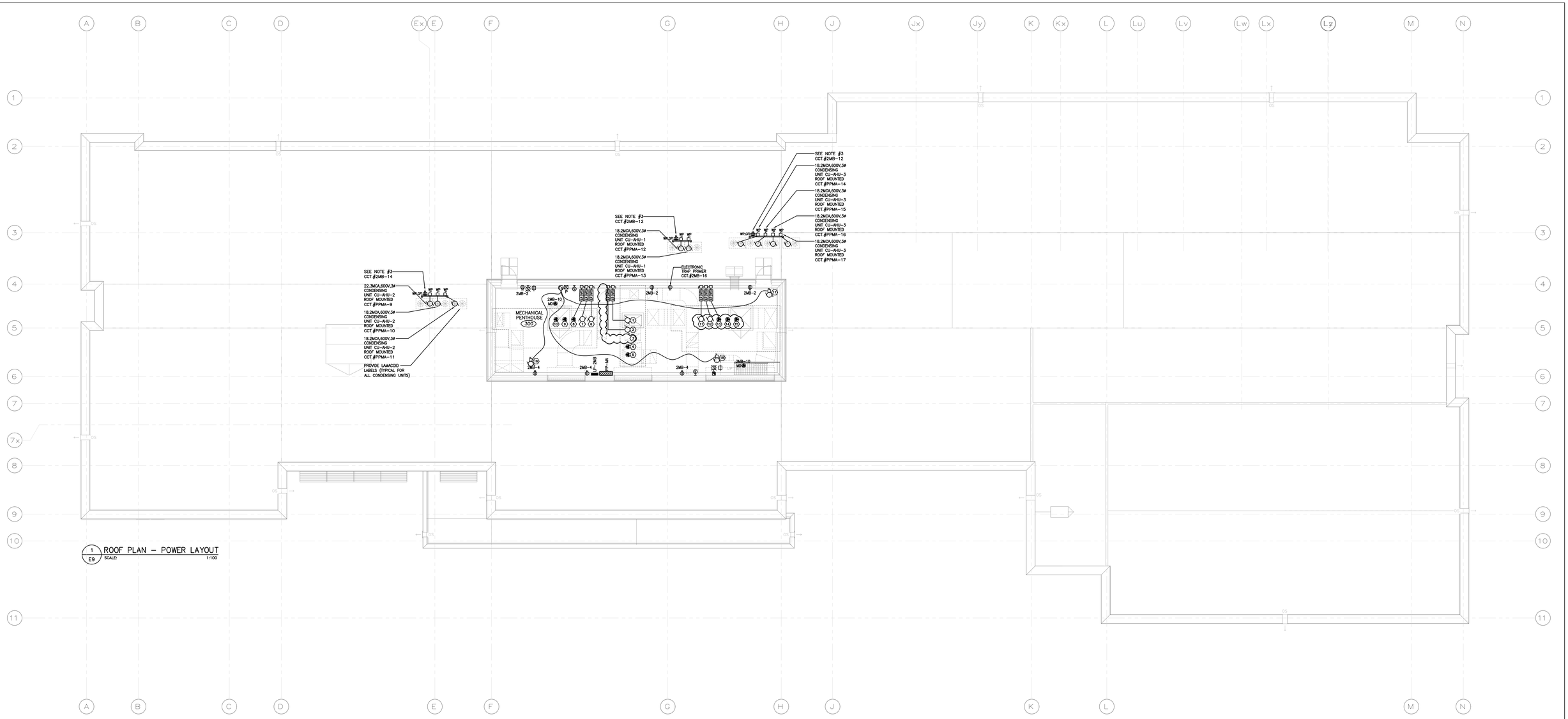
2.1 Fuse sizes for circuits #PPM-7 & PPM-8 are revised as shown on attached revised drawing.

3. Bidder question #17

3.1 PA cabling system vendor refers to Addendum #E2.
3.2 CCTV, Access control and Intercom systems and components are by others. Rough-ins are required as per contract documents.
3.3 The alternate price for the future EV charging station is not required as noted in note 15 on drawings E1.

END OF ELECTRICAL ADDENDUM E3

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1 / E9 ROOF PLAN – POWER LAYOUT
SCALE: 1:100

NOTES:

1. 15/20A,120V COMBINATION WEATHERPROOF GFI SERVICE DUPLEX RECEPTACLE MOUNTED NEAR THE UNIT C/W WEATHERPROOF "IN-USE" COVER AND LABEL "EXTRA DUTY". FOR MECHANICAL UNIT USE. SIMILAR TO HUBBELL CAT#MX3200. COORDINATE EXACT MOUNTING LOCATION ON SITE.
2. PROVIDE FREE STANDING (BOLTED TO THE FLOOR) STRUTS/MOUNTING BRACKETS FOR INSTALLATION OF 15/20A WEATHERPROOF GFI SERVICE DUPLEX RECEPTACLES AND DISCONNECT SWITCHES. EXACT LOCATION SHALL BE COORDINATED WITH MECHANICAL CONTRACTOR/CONSULTANT AND ON SITE.
3. DISCONNECT SWITCH/SERVICE RECEPTACLE C/W WEATHERPROOF IN-USE COVER ON ROOF, SIMILAR TO HUBBELL CAT# WP26M. PROVIDE ASSOCIATED FREE STANDING (BOLTED TO THE FLOOR) UNISTRUTS/MOUNTING BRACKETS FOR INSTALLATION OF DISCONNECT SWITCH/RECEPTACLE. COORDINATE EXACT MOUNTING DETAILS WITH ARCHITECT AND ON SITE.

MECHANICAL PENTHOUSE No.300 EQUIPMENT SCHEDULE

ITEM NO.	DESCRIPTION	POWER REQUIREMENTS	CCT. NO.	WIRING
1	AIR HANDLING UNIT AHU-1 SUPPLY FAN	7.5HP,600V,3ø	PPM-1	3#12-16mmC
2	AIR HANDLING UNIT AHU-1 RETURN FAN	5.0HP,600V,3ø	PPM-2	3#12-16mmC
3				
4	AHU-1 LIGHTS	15A,120V,1ø	2MB-1	2#12-16mmC
5	AHU-1 INTEGRATION KIT	2A,208V,1ø	2MB-3/5	2#12-16mmC
6	AIR HANDLING UNIT AHU-2 SUPPLY FAN	15HP,600V,3ø	PPM-3	3#10-25mmC
7	AIR HANDLING UNIT AHU-2 RETURN FAN	7.5HP,600V,3ø	PPM-4	3#12-16mmC
8	HEAT RECLAIM WHEEL (AHU-2)	1/2HP,600V,3ø	PPM-5	3#12-16mmC
9	AHU-2 LIGHTS	15A,120V,1ø	2MB-7	2#12-16mmC
10	AHU-2 INTEGRATION KIT	2A,208V,1ø	2MB-9/11	2#12-16mmC
11	AIR HANDLING UNIT AHU-3 SUPPLY FAN	25HP,600V,3ø	PPM-6	3#8-25mmC
12	AIR HANDLING UNIT AHU-3 RETURN FAN	15HP,600V,3ø	PPM-7	3#10-25mmC
13	HEAT RECLAIM WHEEL (AHU-3)	1/4HP,600V,3ø	PPM-8	3#12-16mmC
14	AHU-3 LIGHTS	15A,120V,1ø	2MB-13	2#12-16mmC
15	AHU-3 INTEGRATION KIT	2A,208V,1ø	2MB-15/17	2#12-16mmC
16	UNIT HEATER	1/12HP,120V,1ø	2MB-6	2#12-16mmC
17	UNIT HEATER	1/12HP,120V,1ø	2MB-8	2#12-16mmC
18	EXHAUST FAN F-20	1/2HP,120V,1ø	2MB-10	2#10-16mmC

No.	DATE	REVISIONS
8	SEPT. 23'26	ADDENDUM #3
7	SEPT. 21'26	ADDENDUM #2
6	SEPT. 10'26	ISSUED FOR BUILDING PERMIT RESUBMISSION
5	AUG. 25'26	ISSUED FOR TENDER
4	JUN. 5'26	ISSUED FOR BUILDING PERMIT
3	DEC. 23'25	ISSUED FOR CLASS B COST ESTIMATE
2	OCT. 06'25	ISSUED FOR 50% SUBMISSION
1	SEPT. 09'25	ISSUED FOR PROGRESS DRAWINGS

KEDRON EAST CATHOLIC ELEMENTARY SCHOOL

DURHAM CATHOLIC DISTRICT SCHOOL BOARD
Learning and Living in Faith

DRAWING
ELECTRICAL
ROOF PLAN

TRUE NORTH | DWG. NORTH

JOB NO. 2402

SCALE AS NOTED

PRINTABLE SIZE

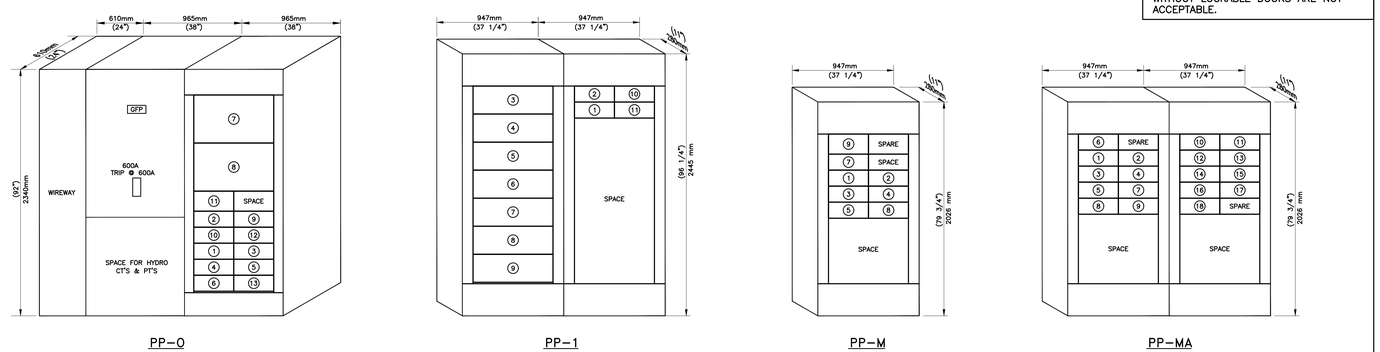
PRINTED AUGUST 11, 2026

DWG. NO. E9

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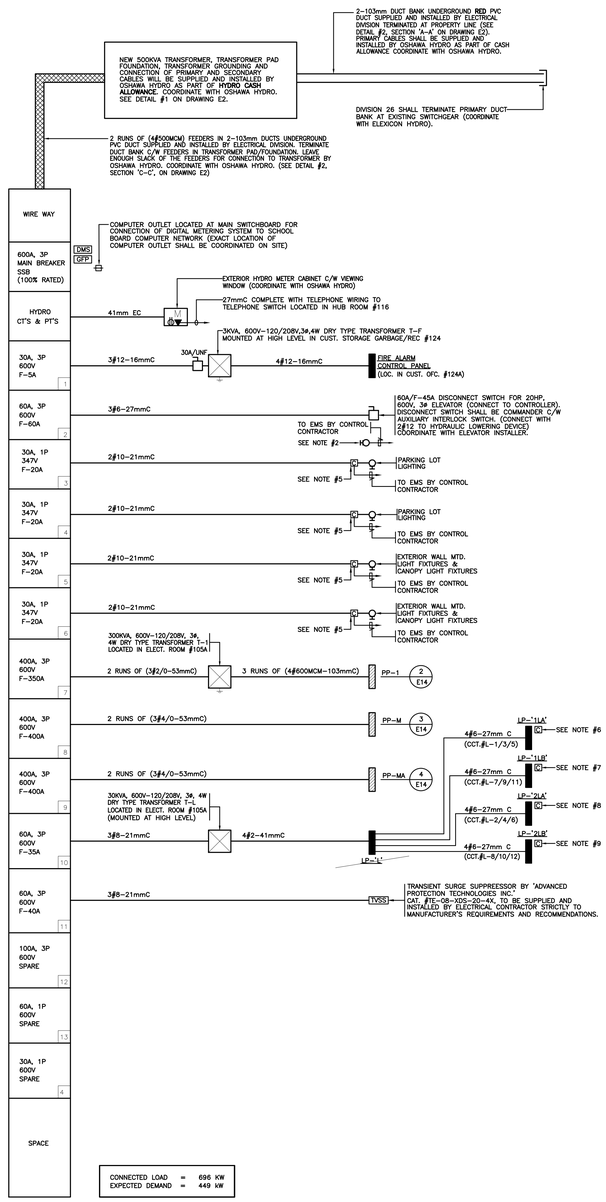
25046

ALL PANELS MUST BE COMPLETE WITH LOCKABLE DOORS AND GASKET. PANELS WITHOUT LOCKABLE DOORS ARE NOT ACCEPTABLE.



PP–0 PP–1 PP–M PP–MA

4 / E14 SWITCHBOARD ELEVATION
SCALE: N.T.S.

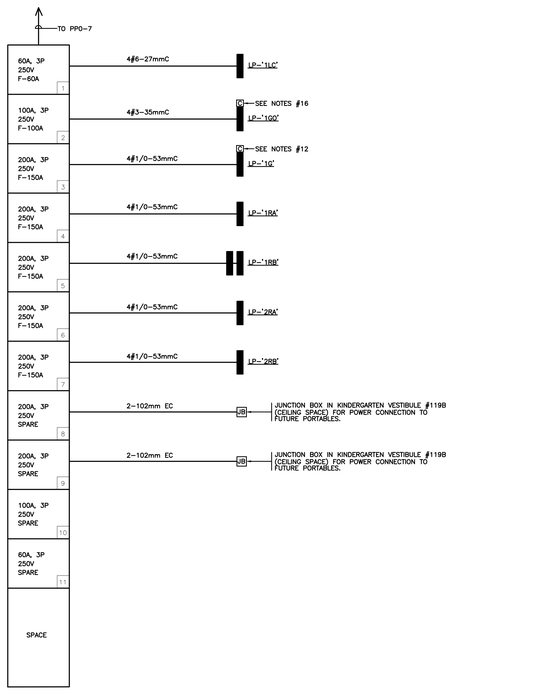


CONNECTED LOAD = 696 KW
EXPECTED DEMAND = 449 KW

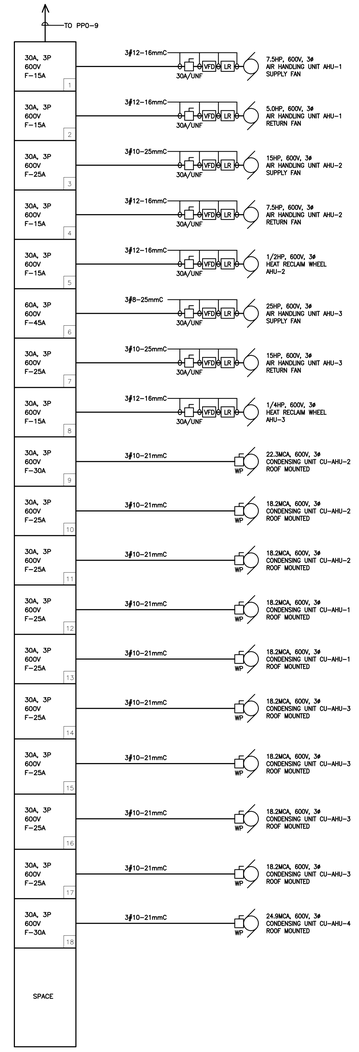
1 / E14 MAIN SWITCHBOARD PP–O
600A, 347/600V, 3Φ, 4W 50KAIC MAIN SWITCHBOARD LOCATED IN ELECTRICAL ROOM #105A

NOTES:

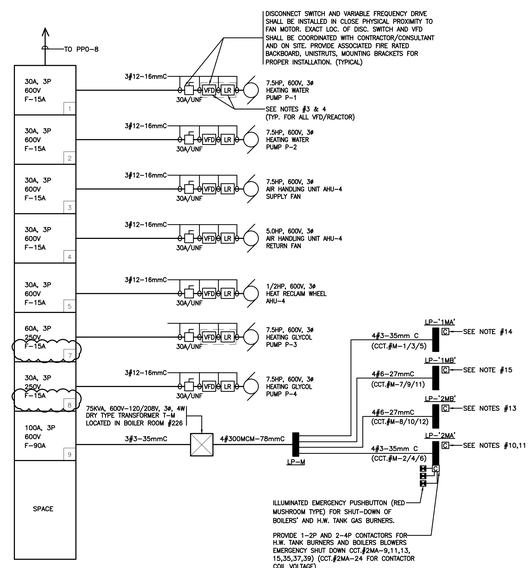
1. A DIGITAL METERING SYSTEMS (EMP) WILL BE SUPPLIED BY CARMA INDUSTRIES (CONTACT: INFO@CARMACORP.COM. PH.:1–888–298–3336, 132 WALSH RD., LINDSAY, ONTARIO, K9V 4R3) COMPLETE WITH SOLID CORE CT'S AND ALL REQUIRED AUXILIARIES (PT'S, POWER SUPPLIES, ETC.) AND WILL BE INSTALLED BY THE ELECTRICAL CONTRACTOR. THE DIGITAL METERING SYSTEM WILL BE COMMISSIONED BY CARMA INDUSTRIES WITH YRDSB STAFF AND ALL ELECTRICAL USAGE DATA TRANSMITTED TO THE DCDSB SERVERS THROUGH THE DCDSB NETWORK CONNECTION. ALL SUB SERVICES AND MAIN BREAKER ON MAIN SWITCHBOARD PP–'O' SHALL HAVE 3 PHASE ELECTRICAL MONITORING. AS PART OF THE DIGITAL METERING SYSTEM–CARMA IS TO PROVIDE A "PROFILER" AND AUXILIARIES TO PICK UP PULSE OUTPUTS FROM THE ENBRIDGE GAS METER AND FROM THE CARMA SUPPLIED WATER METER THAT IS SHOWN ON DETAIL 1/P93. ELECTRICAL CONTRACTOR TO RUN ALL REQUIRED WIRING TO THE ENBRIDGE GAS METER AND WATER METER AS PART OF THE COMPLETE DIGITAL METER SYSTEM. THE COMPLETE DIGITAL METERING SYSTEM WILL BE INCLUDED AS PART OF THE ELECTRICAL CONTRACTORS BASE BID.
2. PHOTOCELL SHALL BE SUPPLIED AND INSTALLED BY CONTROL CONTRACTOR. PHOTOCELL SHALL BE CONNECTED TO EMS PANEL BY CONTROL CONTRACTOR.
3. INSTALLATION OF DISCONNECT SWITCH/VARIABLE FREQUENCY DRIVE (VFD) ON MECHANICAL EQUIPMENT ARE NOT ACCEPTABLE. DISCONNECT SWITCH/VFD SHALL BE INSTALLED IN CLOSE PHYSICAL PROXIMITY TO MOTOR. PROVIDE ASSOCIATED FREE STANDING (BOLTED TO THE FLOOR) UNISTRUTS/MOUNTING BRACKETS, FIRE RATED BACK BOARD FOR INSTALLATION OF DISCONNECT SWITCH/VFD AT ACCESS DOOR TO MOTOR COMPARTMENT. EXACT LOCATION OF DISCONNECT SWITCH/VFD SHALL BE COORDINATED WITH MECHANICAL CONTRACTOR/CONSULTANT AND ON SITE. ADJUST ALL COMPONENTS TO SUIT.
4. VARIABLE FREQUENCY DRIVE (VFD) COMPLETE WITH ASSOCIATED REMOTE INPUT & OUTPUT REACTORS SUPPLIED BY MECHANICAL CONTRACTOR AND WIRED & INSTALLED BY ELECTRICAL CONTRACTOR. COORDINATE THE WIRING AND INSTALLATION OF VFD AND ASSOCIATED REMOTE INPUT & OUTPUT REACTORS WITH MECHANICAL CONTRACTOR AND ON SITE. FLOOR MOUNTED LOAD REACTOR IS NOT ACCEPTABLE.
5. PROVIDE 1–2P H.O.A. CONTACTOR TO CONTROL LIGHTING CIRCUIT BY E.M.S. SYSTEM. COORDINATE WITH EMS SECTION. (TYPICAL).
6. PROVIDE 2–2P H.O.A. CONTACTOR TO CONTROL CORRIDOR LIGHTING ON CCT'S.# 1LA–2 & 4 BY SECURITY SYSTEM, E.M.S. AND LIGHT SWITCHES (EACH CIRCUIT SWITCHED/CONTROLLED SEPARATELY).
7. PROVIDE 2–2P H.O.A. CONTACTOR TO CONTROL CORRIDOR LIGHTING ON CCT'S.# 1LB–2 & 4 BY SECURITY SYSTEM, E.M.S. AND LIGHT SWITCHES (EACH CIRCUIT SWITCHED/CONTROLLED SEPARATELY).
8. PROVIDE 2–2P H.O.A. CONTACTOR TO CONTROL CORRIDOR LIGHTING ON CCT'S.# 2LA–1 & 3 BY SECURITY SYSTEM, E.M.S. AND LIGHT SWITCHES (EACH CIRCUIT SWITCHED/CONTROLLED SEPARATELY).
9. PROVIDE 3–2P H.O.A. CONTACTOR TO CONTROL CORRIDOR LIGHTING ON CCT'S.# 2LB–1 & 3 BY SECURITY SYSTEM, E.M.S. AND LIGHT SWITCHES (EACH CIRCUIT SWITCHED/CONTROLLED SEPARATELY).
10. PROVIDE 1–2P H.O.A. CONTACTOR TO CONTROL PIPE TRACING ON CCT'S.# 2MA–12 BY EMS SYSTEM (COORDINATE WITH EMS SECTION)
11. PROVIDE 3–2P H.O.A. CONTACTOR TO CONTROL UNIT HEATER ON CCT'S.# 2MA–19,31,41 BY EMS SYSTEM (COORDINATE WITH EMS SECTION)
12. PROVIDE 3–2P H.O.A. CONTACTORS TO CONTROL CIRCULATING FANS ON CCT'S.# 1G–42 (F–22), 1G–44 (F–14 & 15), 1G–46 (F–16 & 17) BY SECURITY SYSTEM, E.M.S. AND LIGHT SWITCHES (EACH CIRCUIT SWITCHED/CONTROLLED SEPARATELY).
13. PROVIDE 2–2P H.O.A. CONTACTOR TO CONTROL UNIT HEATER ON CCT'S.# 2MB–6,8 BY EMS SYSTEM (COORDINATE WITH EMS SECTION)
14. PROVIDE 3–2P H.O.A. CONTACTOR TO CONTROL UNIT HEATER ON CCT'S.# 1MA–1,3 ,15 BY EMS SYSTEM (COORDINATE WITH EMS SECTION)
15. PROVIDE 10–2P H.O.A. CONTACTOR TO CONTROL UNIT HEATER ON CCT'S.# 1MB–1,3,5,7,9,11,13,15,17,19 BY EMS SYSTEM (COORDINATE WITH EMS SECTION)
16. PROVIDE 1–2P H.O.A. CONTACTOR TO PIPE TRACING ON CCT'S.# 1GO–58 BY EMS SYSTEM (COORDINATE WITH EMS SECTION)
17. MINIMUM RATING OF CONTACTORS FOR LIGHTINGS AND RECEPTACLES CONTROL SHALL BE 30A.



2 / E14 POWER PANEL PP–1
1200A, 120/208V, 3Φ, 4W 14KAIC QMQB PANEL LOCATED IN ELECTRICAL ROOM #105A



3 / E14 POWER PANEL PP–MA
600A, 600V, 3Φ, 3W 25KAIC QMQB PANEL LOCATED IN MECHANICAL PENTHOUSE #300



3 / E14 POWER PANEL PP–M
600A, 600V, 3Φ, 3W 25KAIC QMQB PANEL LOCATED IN BOILER ROOM #226

No.	DATE	REVISIONS
8	SEPT. 23'26	ADDENDUM #3
7	SEPT. 10'26	ISSUED FOR BUILDING PERMIT RESUBMISSION
6	AUG. 25'26	ISSUED FOR TENDER
5	JUN. 2'26	ISSUED FOR BUILDING PERMIT
4	JAN. 26'26	HYDRO SUBMISSION
3	DEC. 23'25	ISSUED FOR CLASS B COST ESTIMATE
2	OCT. 06'25	ISSUED FOR 50% SUBMISSION
1	SEPT. 09'25	ISSUED FOR PROGRESS DRAWINGS

KEDRON EAST CATHOLIC ELEMENTARY SCHOOL

DURHAM CATHOLIC DISTRICT SCHOOL BOARD
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DRAWING
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dgordon

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647.479.3785

The following additions, deletions, amendments and/or items of clarification are hereby made an integral part of the Tender Documents. All revisions shall be made to the drawings and/or specifications and all costs for same shall be included in the Stipulated Price.

CHANGES TO SPECIFICATIONS

1. **Section 26 00 00, Electrical Supplementary Bid Form**
   Changes in the vendor's names for structured cabling are as follows:
   - Connex Telecommunications Inc.
   - Bosch Building Technologies Inc. (formerly Paladin Technologies Inc.)
   - Core Cabling (formerly Spectrum & Centre Electric)

END OF ELECTRICAL ADDENDUM E4

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